SEW EURODRIVE



Drive System for Decentralized Installation DI2009

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Catalog

Color code system for catalogs and system manuals

Our catalogs and system manuals are identified by a color code system at the back to make it easier to work with these publications. The short designation of the publication is indicated as well. In this way you can immediately recognize the publication even if it is standing on a shelf together with other publications. The following overview shows an exemplary assignment of colors to product groups and products.

Mechanics

DR GM	GSE1	GSE2	GK	GSK	DT/DV GM
DR gearmotors	Synchronous servo gearmotors	Asynchronous servo gearmotors	Gear units	Servo gear units	DT/DV gearmotors

Electromechanics

MOT1	MOT2	MOT3
DR series AC motors	CMP servomotors	DT/DV/CT/CV series AC motors

Explosion-proof drives

EXG	EXS	EXM
Explosion-proof gearmotors	Explosion-proof servo gearmotors	Explosion-proof motors

Control cabinet inverters, control technology and HMI

MDX	MC	MX	PLC	HMI
MOVIDRIVE®	MOVITRAC®	MOVIAXIS®	MOVI-PLC®	DOP11B

Decentralized technology

MM	DI	MG
MOVIMOT® DR gearmotors	Decentralized installation	MOVIGEAR®

Industrial gear units

IGX	IGP
Industrial gear units X series	Industrial gear units P002–P082 series

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

We are represented in the most important branches of industry all over the world: with 12 manufacturing plants, 66 assembly plants in 46 countries and our comprehensive range of services, which we consider an integrative service that continues our commitment to outstanding quality.

1.1.2 Always the right drive

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

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

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

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

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

1.1.3 Your ideal partner

Its global presence, extensive product range and broad spectrum 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.

1.2 Products and systems from SEW-EURODRIVE

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

1. Gearmotors and frequency inverters
2. Servo drive systems
3. Decentralized drive systems
4. Industrial gear units

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

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

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

3. Decentralized drive systems		
Decentralized drives	**Communication and installation**	**Contactless energy transfer**
• MOVIGEAR®-SNI drive units • MOVIMOT® gearmotors with integrated frequency inverter • MOVIMOT® motors/ brakemotors with integrated frequency inverter • MOVI-SWITCH® gearmotors with integrated switching and protection function • MOVI-SWITCH® motors/ brakemotors with integrated switching and protection function • Explosion-proof MOVIMOT® and MOVI-SWITCH® gearmotors	• Fieldbus interfaces • Field distributors for decentralized installation • MOVIFIT® product range – MOVIFIT®-SNI for controlling MOVIGEAR®-SNI drive units – MOVIFIT®-MC to control MOVIMOT® drives – MOVIFIT®-SC with integrated electronic motor switch – MOVIFIT®-FC with integrated frequency inverter	• MOVITRANS® system – Stationary components for energy supply – Mobile components for energy consumption – Line cables and installation material

4. Industrial gear units
• Helical gear units • Bevel-Helical Gear units • Planetary gear units

Products and systems covering several product groups
• Operator terminals • MOVI-PLC® drive-based control system

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

- Technical consulting
- Application software
- Seminars and training
- Extensive technical documentation
- International customer service

Visit our homepage at

→ **www.sew-eurodrive.com**

The website provides comprehensive information and services.

1.3 Additional documentation

1.3.1 Content of this publication

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

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

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

- Drives
  - MOVIGEAR®-SNI
  - MOVIMOT® MM..D
  - MOVI-SWITCH®-1E, -2S
  - DRS, DRE, DRP series AC motors

1.3.2 Additional documentation

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

- "MOVIGEAR®-SNI" system manual
- "MOVIMOT® Gearmotors with DRS/DRE/DRP AC Motors" catalog/price catalog
- "DR, CMP Motors" catalog/price catalog
- "DR Gearmotors" catalog/price catalog

	TIP
	For an overview of the components for decentralized installation, refer to section "System Overview" (see page 17). This section also comprises information on additional documentation.

1.4 Copyright

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2 System Description

2.1 Economical decentralization with system solutions

Our many years of experience in drive systems for decentralized installation and the resulting wide range of products allows for realization of essential cost and efficiency advantages in many application areas in the field of automation through consistent standardization and modularization. This is the reason why system manufacturers and operators opting for decentralized drive systems from SEW-EURODRIVE are always ahead of the game technically and economically.

2.1.1 Sample applications

The following figure shows a conveyor system with MOVIFIT®-MC and MOVIMOT® for operation of a high-bay warehouse:



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The following figure shows the use of MOVIFIT®-SNI and MOVIGEAR®-SNI as Single Line Network Installation in a bottle transport plant of a brewery:

SNI stands for Single Line Network Installation and is based on the principle of using a single line for power supply and communication. The signals required for communication are modulated in the high-frequency range of the power line and are available for each connected station.

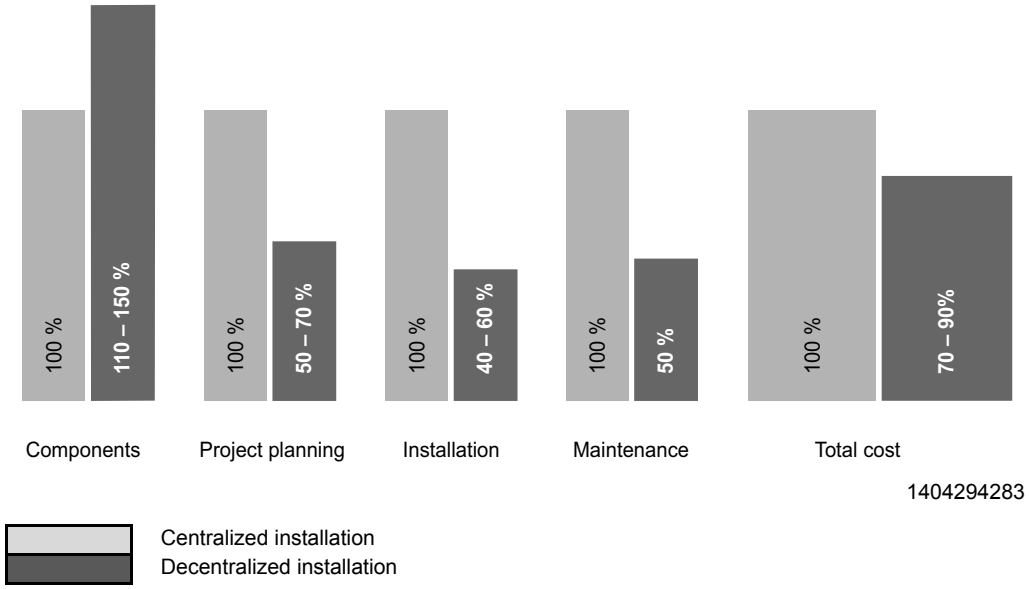


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2.1.2 Cost reduction

Decentralization is the most economical solution for many areas of automation. Closer examination shows that overall costs can be reduced by 10-30% compared to conventional solutions depending on the specific operating conditions.

Modular and standardized function units reduce the project planning effort for large systems to 50-70% of the individual effort. Decentralized installation is very flexible due to its modular structure, and it can be adapted subsequently to new requirements within a very short time. Compared to central installation technology, decentralized drive installations can save 40-60% during mounting, installation and startup.



We continuously combine our practical experience from all areas of application with new, innovative ideas and implement more and more compact and efficient drive systems due to consistent further development.

With the drive system for decentralized installation, SEW-EURODRIVE offers an extensive range of products with future-proof and application-oriented drive and communication functions.

2.2 Overview of components for decentralized installation

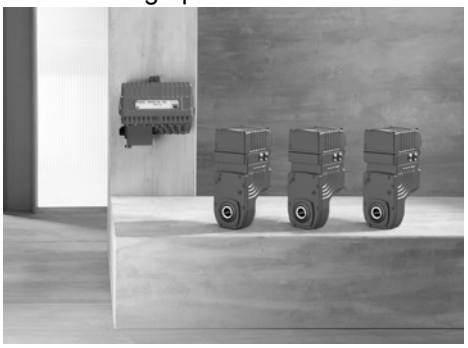
The following sections provide an overview of the components for decentralized installation from SEW-EURODRIVE:

2.2.1 Decentralized drive controllers

- MOVIFIT® – the drive controller for innovative field installation

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

  – MOVIFIT®-SNI: For controlling upo to 10 MOVIGEAR®-SNI drive units.



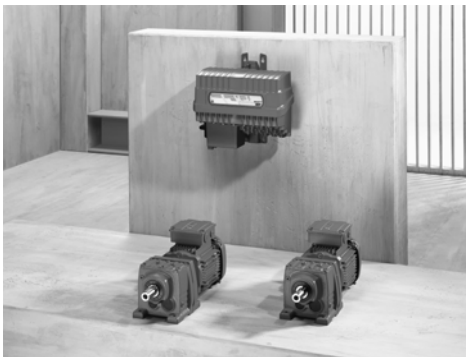
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  – MOVIFIT®-MC: For controlling up to 3 MOVIMOT® drives.



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  – MOVIFIT®-SC: Integrated electronic motor switch for controlling 1 drive with 2 directions of rotation or 2 drives with 1 direction of rotation.



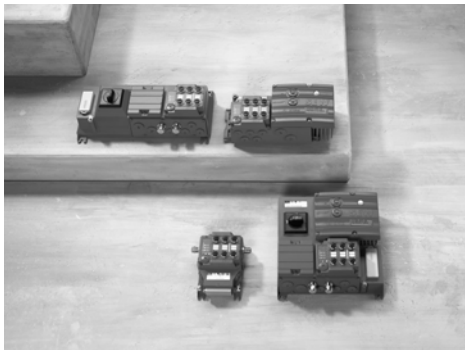
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– MOVIFIT®-FC: Integrated frequency inverter



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- Fieldbus interfaces and field distributors
  - Field distributors rationalize the connection of drives with the power supply system, the 24 V control voltage and the fieldbus.
  - They are based on decentralized fieldbus interface technology with additional connection technology for network distribution.



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- MOVIMOT® for mounting close to the motor
  - The optional field mounting plate allows the MOVIMOT® inverter to be mounted close to the motor.
  - The inverter is connected to the motor using a pre-fabricated hybrid cable.



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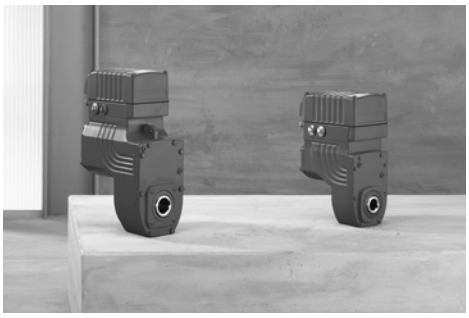
- MOVI-SWITCH®-2S for mounting close to the motor
  - The optional field mounting plate allows the MOVI-SWITCH®-2S control section to be mounted close to the motor.
  - The inverter is connected to the motor using a pre-fabricated hybrid cable.



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2.2.2 Drives

- MOVIGEAR® – the mechatronic drive system
  - MOVIGEAR® is a compact mechatronic drive system comprising a gear unit, a motor and drive electronics.
  - MOVIGEAR® provides a high level of system efficiency contributing to reducing the overall energy expenses.



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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 to 4.0 kW.
  - Despite the integrated frequency inverter, MOVIMOT® is not much larger than a conventional gearmotor.



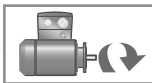
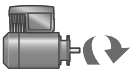
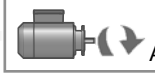
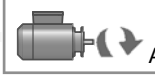
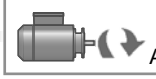
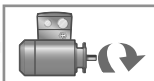
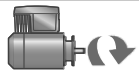
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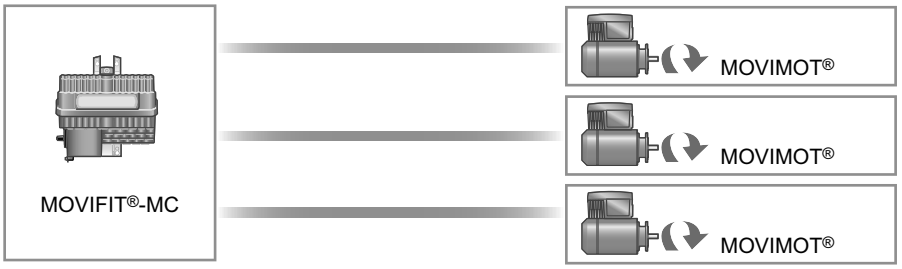
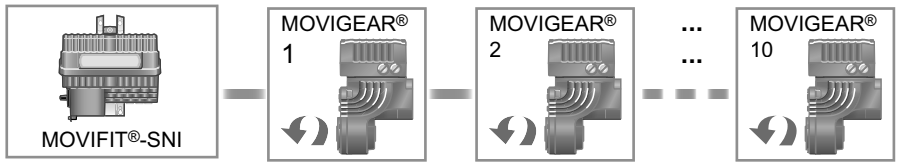
- MOVI-SWITCH® – the gearmotor with integrated switching and protection function
  - MOVI-SWITCH® is a particularly efficient solution when it comes to decentralization at power levels of up to 3 kW.
  - The switching and protection functions integrated into the motor terminal box mean that this compact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



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2.3 System overview

Additional information on controllers	Controllers	Drives	Additional information on drives
–	**Simple applications (without controller)**	**Drives**	**see**
	Power electronics integrated in drive		
–	Control via binary signals or AS-Interface	 MOVI-SWITCH®	Motors/Gearmotors catalog Brief overview section MOVI-SWITCH® (see page 217)
–	Control via binary signals or AS-Interface	 MOVIMOT®	MOVIMOT® Gearmotors catalog Brief overview section MOVIMOT® (see page 195)
see	**Drive controllers**	**Drives**	**see**
	Power electronics integrated in the controller		
Section: Mounting close to the motor MOVI-SWITCH®-2S (see page 176)	 MOVI-SWITCH® close to motor	 AC motor	Motors/Gearmotors catalog
Section: Mounting close to the motor MOVIMOT® (see page 163)	 MOVIMOT® close to motor	 AC motor	
Section Field distributors and fieldbus interfaces (see page 120)	 Field distributor	 AC motor	
see	**Drive controllers**	**Drives**	**see**
	Power electronics integrated in drive		
Section Field distributors and fieldbus interfaces (see page 120)	 Field distributor	 MOVI-SWITCH®	Motors/Gearmotors catalog Brief overview section MOVI-SWITCH® (see page 217)
Section Field distributors and fieldbus interfaces (see page 120)	 Field distributor	 MOVIMOT®	MOVIMOT® Gearmotors catalog Brief overview section MOVIMOT® (see page 195)

Additional information on controllers	Controllers	Drives	Additional information on drives
see	System controllers	Drives	see
	Power electronics integrated in the controller		
Section MOVIFIT® (see page 21)			Motors/Gearmotors catalog
Section MOVIFIT® (see page 23)			
see	System controllers	Drives	see
	Power electronics integrated in drive		
Section MOVIFIT® (see page 20)			MOVIMOT® Gearmotors catalog Brief overview section MOVIMOT® (see page 195)
Section MOVIFIT® (see page 19)			MOVIGEAR®-SNI system manual Brief overview section MOVIGEAR®-SNI (see page 185)

TIP

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

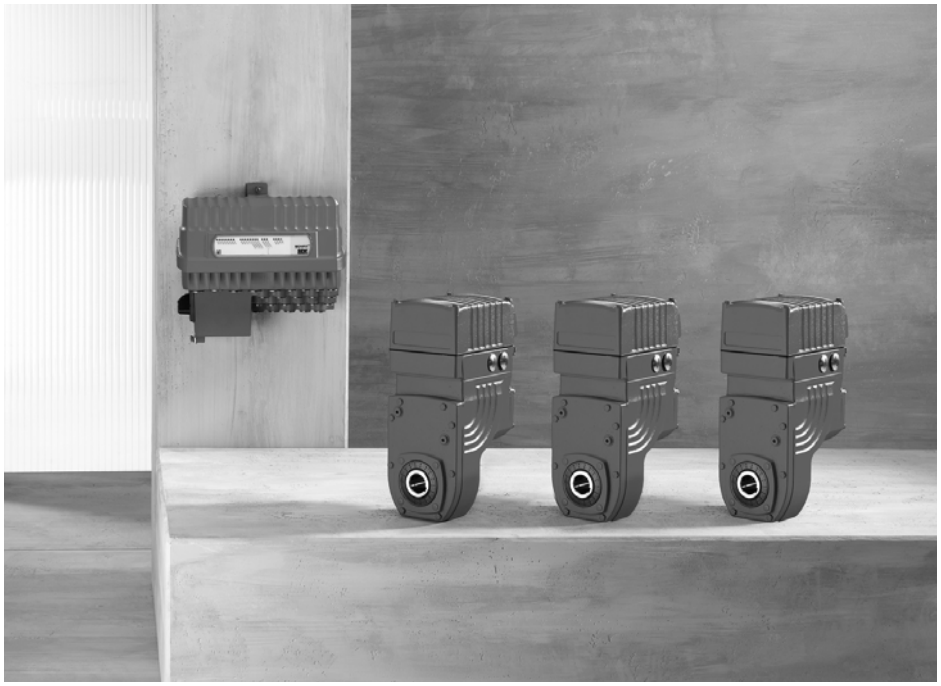
In addition to the brief overviews in this catalo, the following publications contain comprehensive product descriptions, project planning information and dimension sheet:

- "MOVIGEAR®-SNI" system manual
- "MOVIMOT® Gearmotors with DRS/DRE/DRP AC Motors" catalog/price catalog
- "DR, CMP Motors" catalog/price catalog
- "DR Gearmotors" catalog/price catalog

3 MOVIFIT®

3.1 MOVIFIT®-SNI for controlling MOVIGEAR®-SNI drive units

The following figure shows a MOVIFIT®-SNI with assigned MOVIGEAR® drive units:



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3.1.1 MOVIFIT®-SNI characteristics

- Up to 10 MOVIGEAR®-SNI drive units can be connected
- **S**ingle Line **N**etwork **I**nstallation –-SNI (see page 248)
- Voltage range 3 x 380 – 500 V
- Integrated energy distribution
- Integrated communication interface
  - UDP-IP
- Maintenance switch (not for the Hygienic^{plus} design)
- 12 digital inputs + 4 digital inputs/outputs
- Optional DC 24 V switched-mode power supply unit

3.2 MOVIFIT®-MC for controlling MOVIMOT® drives

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



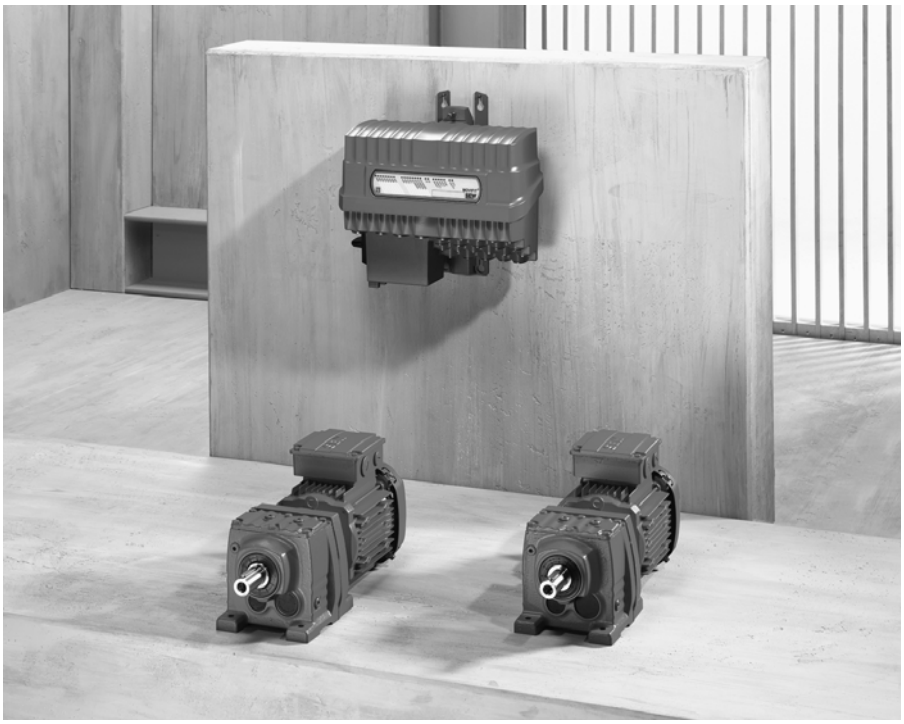
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3.2.1 MOVIFIT®-MC characteristics

- Up to three MOVIMOT® units can be connected via hybrid cable
- Voltage range 3 x 380 – 500 V
- Integrated power distribution and line protection
- Integrated fieldbus interface
  - PROFIBUS
  - PROFINET
  - DeviceNet
  - EtherNet/IP
  - Modbus/TCP
- Maintenance switch
- "Safe disconnection STO function"
  - Safety category 3 according to EN 954-1 as well as PL d to EN ISO 13849-1
  - Stop categories 0 and 1 according to EN
  - 60204-1 (stop category 1 only in combination with external safety device)
- Optional PROFIsafe extension /S11 with 4 x safe inputs and 2 x safe outputs
- 12 digital inputs + 4 digital inputs/outputs
- CAN/SBus interface
- Simple and fast parameter setting via DIP switches or fieldbus

3.3 MOVIFIT®-SC with integrated motor switch

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



1507317387

3.3.1 MOVIFIT®-SC characteristics

- Electronic (contactless) motor starter
  - When 2 motors are connected (dual motor starter): One direction of rotation
  - When 1 motor is connected (reversing starter): Two directions of rotation
- Power range
  - When 2 motors are connected: 2 x 0.37 to 2.2 kW
  - When 1 motor is connected: 1 x 0.37 to 4.0 kW
- Parameterizable soft startup time
- Voltage range 3 x 380 – 500 V
- Increased safety through three-phase switching
- Integrated energy distribution
- Integrated brake management for SEW three-wire brakes
- Optional maintenance switch
- Integrated fieldbus interface
  - PROFIBUS
  - PROFINET
  - DeviceNet
  - EtherNet/IP
  - Modbus/TCP

- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs

  Depends on the unit design, see following table:

Digital inputs/outputs	Function level	Fieldbus interface
12 DI + 4 DI/O	Technology or System	All
12 DI + 4 DI/O	Classic	PROFINET EtherNet/IP Modbus/TCP
6 DI + 2 DI/O	Classic	PROFIBUS DeviceNet
4 DI	none	SBus slave

- CAN/SBus interface
- Simple and fast parameter setting via DIP switches (easy mode)
- Expanded parameter setting via fieldbus or diagnostics interface (expert mode)

3.4 MOVIFIT®-FC with integrated frequency inverter

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



1507302667

3.4.1 Sizes

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

0.37 – 1.5 kW



2.2 – 4 kW



1514058635

3.4.2 MOVIFIT®-FC characteristics

- Parameterizable open-loop frequency inverter
- Power range from 0.37 to 4 kW (in two sizes)
- Voltage range 3 x 380 – 500 V
- Integrated energy distribution
- Integrated brake management
- Optional internal braking resistor (integrated in ABOX)
- Optional external braking resistor
- Optional maintenance switch
- Integrated fieldbus interface
  - PROFIBUS
  - PROFINET
  - DeviceNet
  - EtherNet/IP
  - Modbus/TCP
- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs

  Depends on the unit design, see following table:

Digital inputs/outputs	Function levels	Fieldbus interface
12 DI + 4 DI/O	Technology or System	All
12 DI + 4 DI/O	Classic	PROFINET EtherNet/IP Modbus/TCP
6 DI + 2 DI/O	Classic	PROFIBUS DeviceNet
4 DI	none	SBus slave

- CAN/SBus interface
- "Safe disconnection STO function"
  - Safety category 3 according to EN 954-1 as well as PL d to EN ISO 13849-1
  - Stop categories 0 and 1 according to EN 60204-1 (stop category 1 only in combination with external safety device)
- Optional PROFIsafe extension /S11 with 4 x safe inputs and 2 x safe outputs
- Simple and fast parameter setting via DIP switches (easy mode)
- Expanded parameter setting via fieldbus or diagnostics interface (expert mode)

3.5 Functional safety

3.5.1 MOVIFIT®-MC and FC – basic functions

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

This includes the function:

- STO[1)] = Safe Torque Off – corresponds to stop category 0 according to EN 60204-1 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 and category 3 according to EN 954-1.

3.5.2 Extended safety functionality with PROFIsafe option /S11

For MOVIFIT®-MC and MOVIFIT®-FC in connection with the PROFIsafe option S11, the STO safety function can also be controlled via PROFIsafe as an option on the basis of the fundamental functions.

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

In addition to that, the S11 option has the following safe inputs/outputs:

- 4 safe inputs (F-DI) for connecting up to 4 sensors
- 2 safe outputs (F-DO), each with 2 pins, designed as P-M switch, for connecting up to 2 actuators

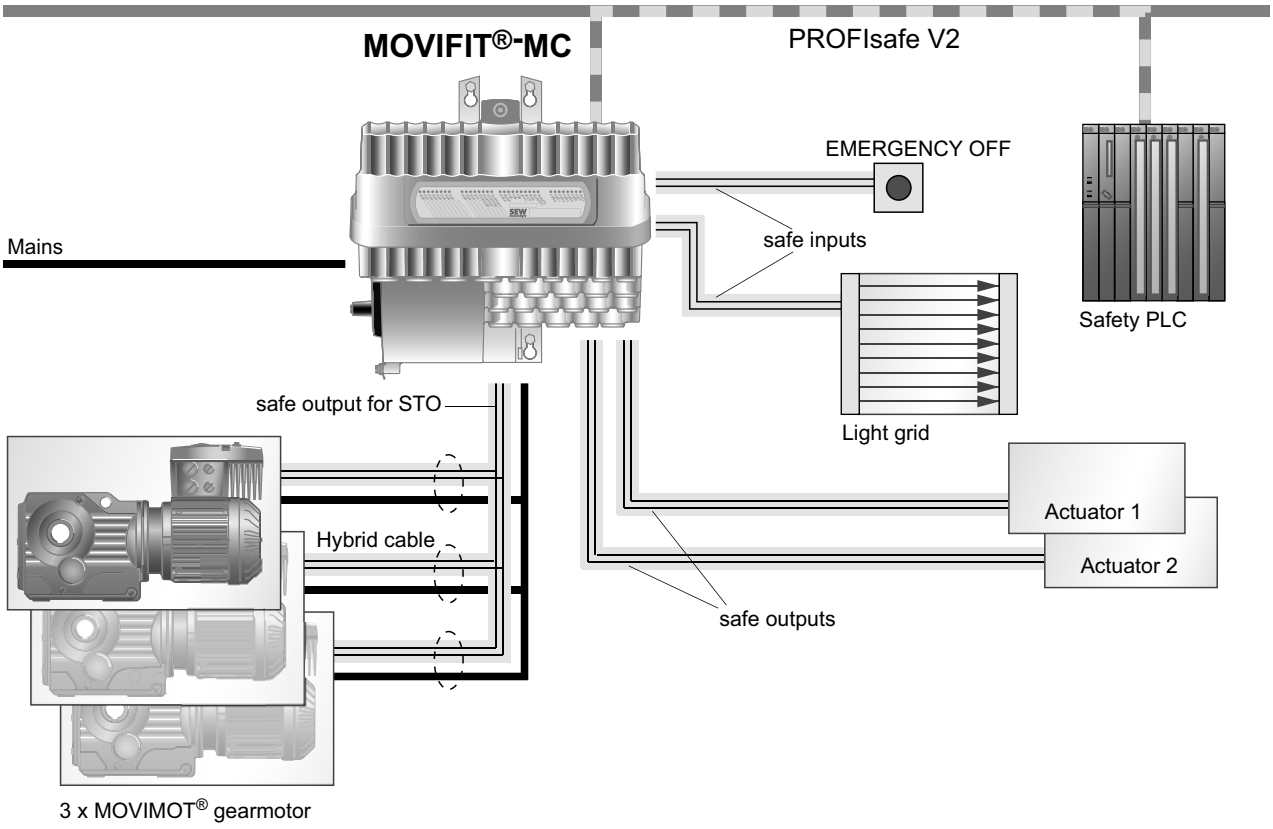
This means that the safe inputs and outputs of the S11 PROFIsafe option are suitable for safety-oriented applications up to SIL3 according to EN 61508, PL e according to EN ISO 13849-1 and safety category 4 according to EN 954-1.

The drive safety function (STO) is suitable for safety-oriented applications up to PL d according to EN ISO 13849-1 and category 3 according to EN 954-1.

1) Definition of terminology according to IEC 61800-5-2

3.5.3 Example for decentralized installation: MOVIFIT®-MC with PROFIsafe option /S11

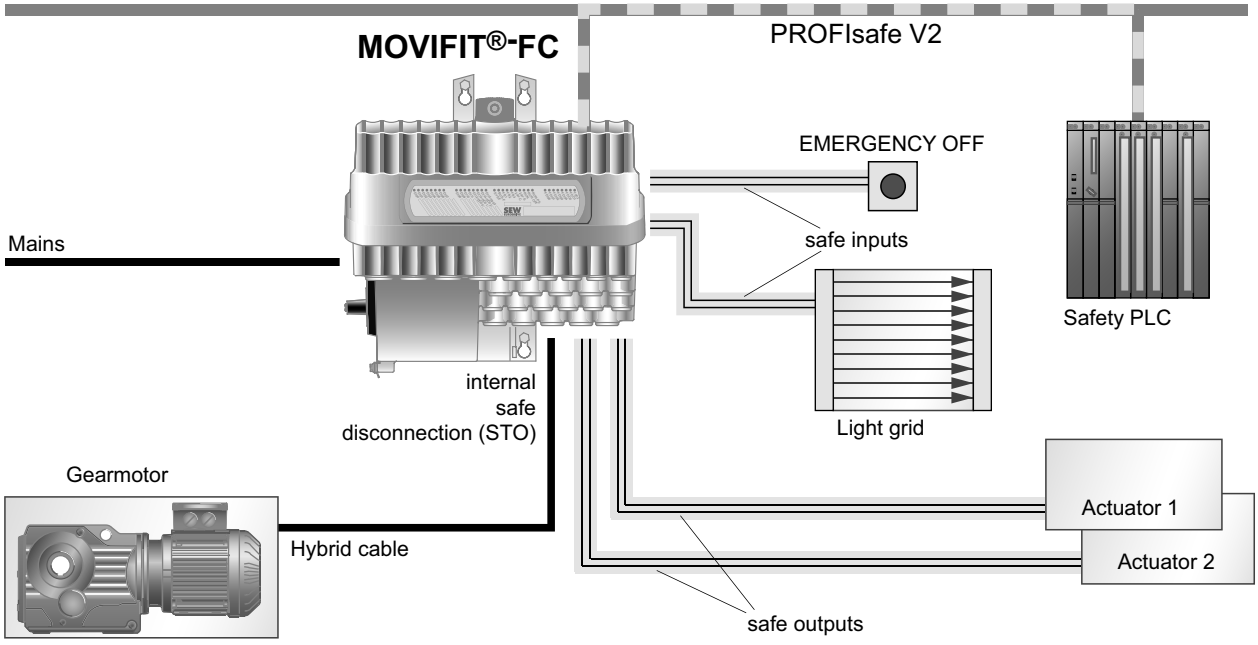
PROFINET/PROFIBUS



1405266059

3.5.4 Example for decentralized installation: MOVIFIT®-FC with PROFIsafe option /S11

PROFINET/PROFIBUS

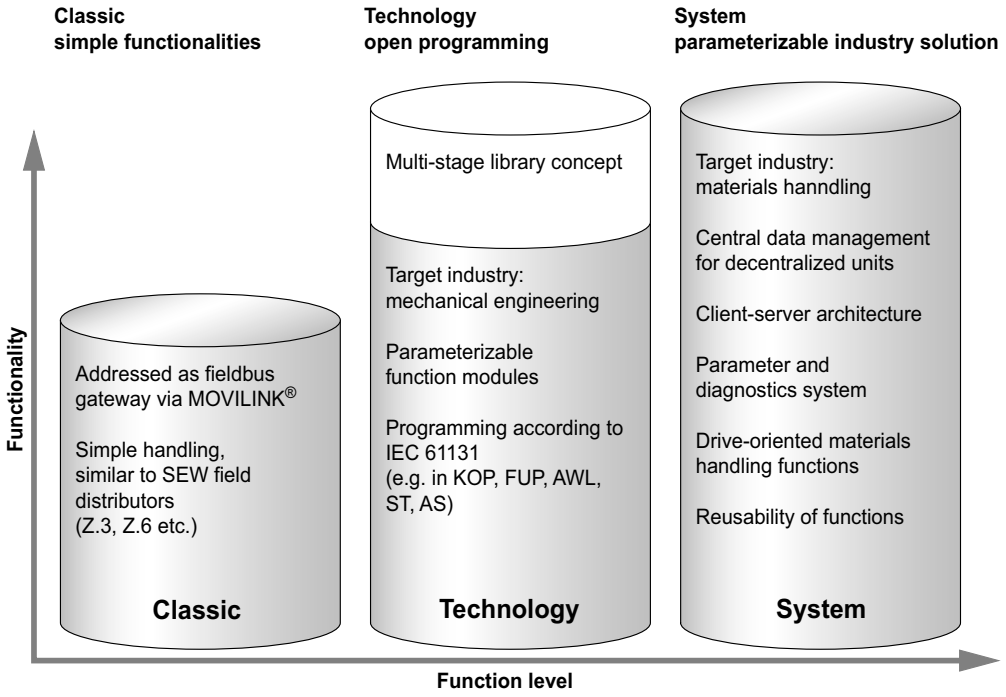


1405264139

3.6 Function levels

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

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



792915083

	TIP
	For detailed information on the MOVIFIT® function levels, refer to the relevant manuals: For MOVIFIT®-MC, SC, FC • "Classic Function Level" manual • "Technology Function Level" manual • "System Function Level" manual For MOVIFIT®-SNI: • "MOVIGEAR®-SNI" system manual

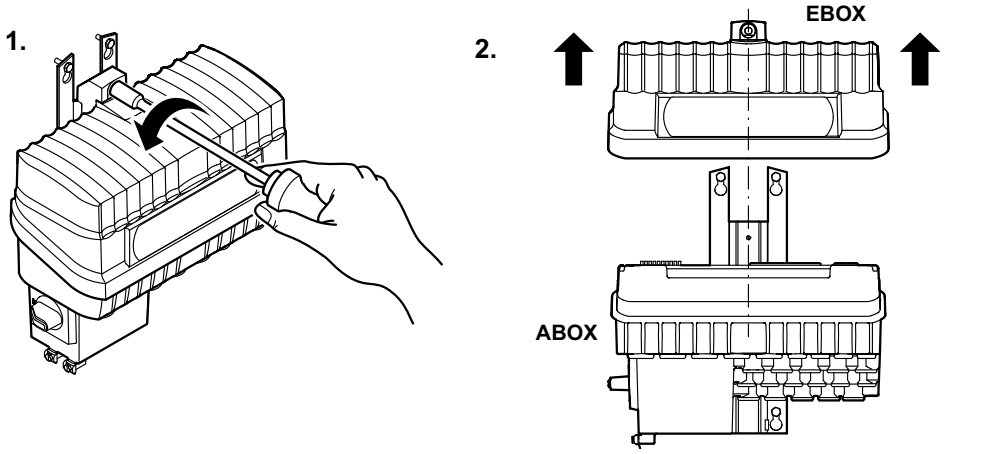
3.7 Unit designation and concept

3.7.1 Characteristics

MOVIFIT® units have the following characteristics:

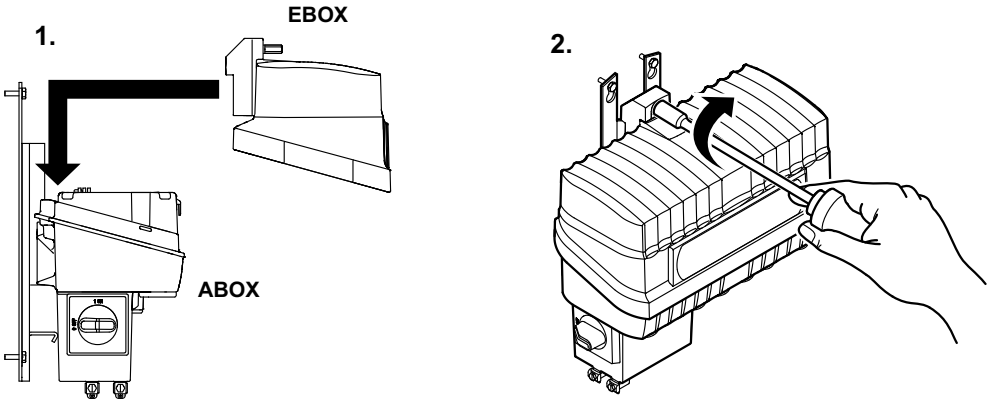
- Aluminum die cast housing
  - High rigidity
  - IP65 design for industrial requirements
  - Hygienic design with increased degree of protection and special surface treatment for the food industry
- Separation of connection unit (ABOX) and electronics (EBOX)
  - No damage/contamination to the electronics during installation and maintenance
  - The bus address remains the same when the electronics (EBOX) is replaced
  - Data backup of user parameters in the ABOX is possible
  - Fast replacement of electronics 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

3.7.2 Sample unit designation

Example: EBOX

MT F 11 A 015- 50 3 - P1 0 A - 00 / S11

MOVIFIT®-SNI (MTN)	MOVIFIT®-MC (MTM)	MOVIFIT®-SC (MTS)	MOVIFIT®-FC (MTF)
EBOX option U11 = DC 24 V SMPS	EBOX option S11 = PROFIsafe option	EBOX option Not available	EBOX option S11 = PROFIsafe option
EBOX design 50 = series	EBOX design 00 = series	EBOX design 00 = series	EBOX design 00 = DT/DV/DZ 400 V, 50 Hz 460 V, 60 Hz 01 = DT/DV/DAS 400 V, 50 Hz 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 400 V, 50 Hz 460 V, 60 Hz 16 = DRP 400 V, 50 Hz 17 = DRP 460 V, 60 Hz
Connection type 3 = 3-phase	Connection type -	Connection type 3 = 3-phase	Connection type 3 = 3-phase
Supply voltage 50 = AC 380...500 V	Supply voltage -	Supply voltage 50 = AC 380...500 V	Supply voltage 50 = AC 380...500 V
Unit power 000 = MOVIFIT®-SNI	Unit power 000 = MOVIFIT®-MC	Unit power 015 = 1.5 kW 040 = 4.0 kW	Unit power 003 = 0.37 kW 005 = 0.55 kW 007 = 0.75 kW 011 = 1.1 kW 015 = 1.5 kW 022 = 2.2 kW 030 = 3.0 kW 040 = 4.0 kW

A = Version

Function level
0 = Classic (not in combination with MTN)
1 = Technology (not in combination with MTN)
2 = System

Fieldbus
In combination with MTM/MTS/MTS:
P1 = PROFIBUS
D1 = DeviceNet
E2 = PROFINET
E3 = EtherNet/IP, Modbus/TCP
Z1 = SBus Slave

In connection with MTN:
E4 = UDP/IP

Version A

Series	Series	Series	Series
11 = Standard 12 = Hygienic^{plus}	11 = Standard	11 = Standard 12 = Hygienic^{plus}	11 = Standard 12 = Hygienic^{plus}

Unit type
N = MOVIFIT®-SNI (MOVIGEAR®-SNI control)
M = MOVIFIT®-MC (MOVIMOT® control)
S = MOVIFIT®-SC (motor starter)
F = MOVIFIT®-FC (frequency inverter)

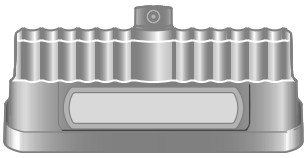
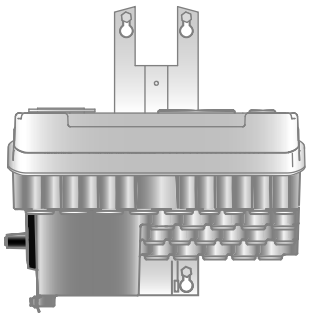
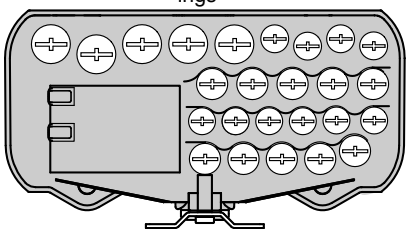
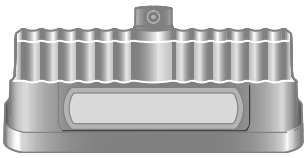
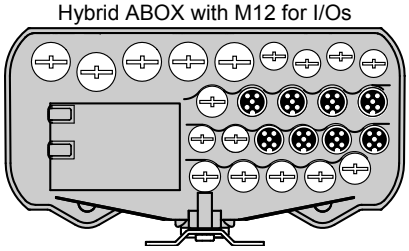
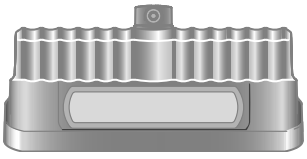
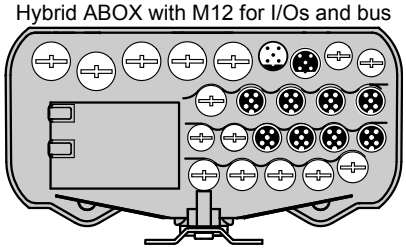
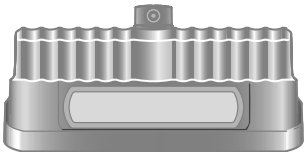
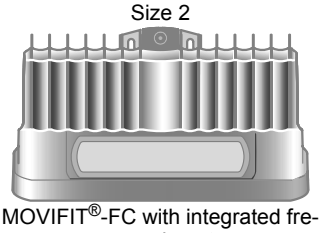
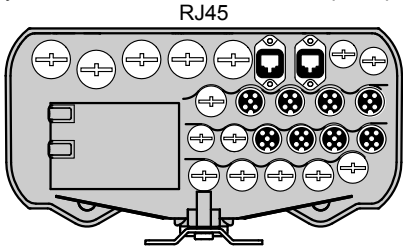
MT = MOVIFIT® series

Example: ABOX

MT A 11 A - 50 3 -S02 1 - D 01 - 00 / BW1

MOVIFIT®-SNI (MTN)	**MOVIFIT®-MC (MTM)**	**MOVIFIT®-SC (MTS)**	**MOVIFIT®-FC (MTF)**
ABOX option M11 = Stainless steel mounting rail	ABOX option M11 = Stainless steel mounting rail	ABOX option M11 = Stainless steel mounting rail	ABOX option M11 = Stainless steel mounting rail BW1/BW2 = Integrated braking resistor
ABOX design 00 = series			
Type of Maintenance switch 13 = with rotary button (ABB-MS325)	Type of Maintenance switch 01 = with rotary button (ABB)	Type of Maintenance switch 01 = with rotary button (ABB)	Type of Maintenance switch 01 = with rotary button (ABB)
Maintenance switch design M = Motor protection switch with line protection	Maintenance switch design M = Motor protection switch with line protection	Maintenance switch design D = switch disconnector	Maintenance switch design D = switch disconnector
Fieldbus 3 = ETHERNET	Fieldbus 1 = PROFIBUS 2 = DeviceNet 3 = ETHERNET	Fieldbus 1 = PROFIBUS 2 = DeviceNet 3 = ETHERNET	Fieldbus 1 = PROFIBUS 2 = DeviceNet 3 = ETHERNET
Connection configuration S03 standard	Connection configuration S01 standard S41 hybrid S51 hybrid S61 hybrid H11 Han-Modular® H21 Han-Modular®	Connection configuration S02 standard S42 hybrid S52 hybrid S62 hybrid H12 Han-Modular® H22 Han-Modular®	Connection configuration S02 standard S42 hybrid S52 hybrid S62 hybrid H12 Han-Modular® H22 Han-Modular®
Connection type 3 = 3-phase (AC)			
Supply voltage 50 = AC 380 V to 500 V			
A = version			
Series 11 = standard 12 = Hygienic^{plus}	Series 11 = standard	Series 11 = standard 12 = Hygienic^{plus}	Series 11 = standard 12 = Hygienic^{plus}
Unit type A = connection box			
MT = MOVIFIT® series			

3.7.3 Possible combinations in connection with standard ABOX and hybrid ABOX

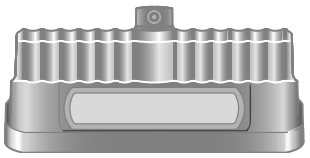
EBOX	ABOX	Design
MTN...-...-00  MOVIFIT®-SNI for controlling up to 10 MOVIGEAR® drive units.	 ABOX	**MTA...-S03.-...-00 (in connection with MTN)** **MTA...-S01.-...-00 (in connection with MTM)** **MTA...-S02.-...-00 (in conn. with MTS/MTF)** Standard ABOX with terminals and cable bushings[1)] 
MTM...-...-00  MOVIFIT®-MC for controlling up to 3 MOVIMOT® drives		**MTA...-S41.-...-00 (in connection with MTM)** **MTA...-S42.-...-00 (in conn. with MTS/MTF)** Hybrid ABOX with M12 for I/Os  Hybrid ABOX not available in connection with MOVIFIT®-SNI (MTN)
MTS...-...-00  MOVIFIT®-SC with integrated motor switch		**MTA...-S51.-...-00 (in connection with MTM)** **MTA...-S52.-...-00 (in conn. with MTS/MTF)** Hybrid ABOX with M12 for I/Os and bus  Hybrid ABOX not available in connection with MOVIFIT®-SNI (MTN)
MTF...-...-00 Size 1  Size 2  MOVIFIT®-FC with integrated frequency inverter		**MTA...-S61.-...-00 (in connection with MTM)** **MTA...-S62.-...-00 (in conn. with MTS/MTF)** Hybrid ABOX with M12 for I/Os and push-pull RJ45  Hybrid ABOX not available in connection with MOVIFIT®-SNI (MTN)

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

3.7.4 Possible combinations in connection with Han-Modular® ABOX

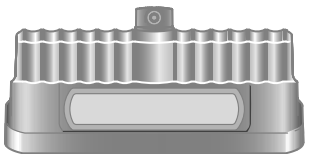
EBOX

MTM...-...-00



MOVIFIT®-MC for controlling up to 3 MOVIMOT® drives

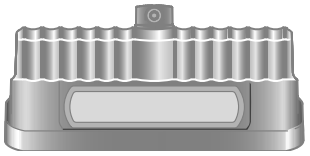
MTS...-...-00



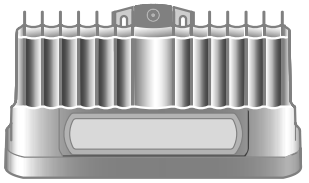
MOVIFIT®-SC with integrated motor switch

MTF...-...-00

Size 1



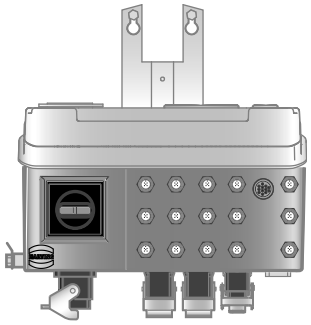
Size 2



MOVIFIT®-FC with integrated frequency inverter

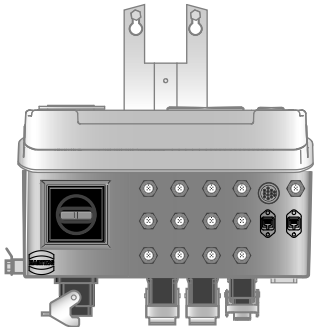
ABOX

MTA...-H11.-...-00 (in connection with MTM)
MTA...-H12.-...-00 (in connection with MTS/MTF)
Han-Modular® ABOX with M12 for I/Os and bus and with industrial connectors[1)]



Han-Modular® ABOX not available in connection with MOVIFIT®-SNI (MTN)

MTA...-H21.-...-00 (in connection with MTM)
MTA...-H22.-...-00 (in connection with MTS/MTF)
Han-Modular® ABOX with M12 for I/Os, Push-Pull RJ45 and industrial connectors



Han-Modular® ABOX not available in connection with MOVIFIT®-SNI (MTN)

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

3.8 Hygienic^{plus} design

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



842731659

3.8.1 Characteristics

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

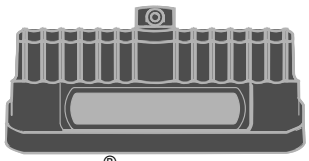
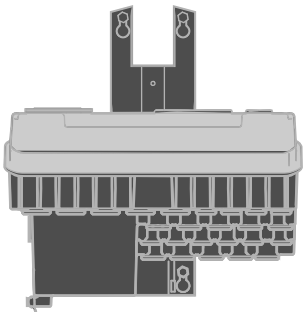
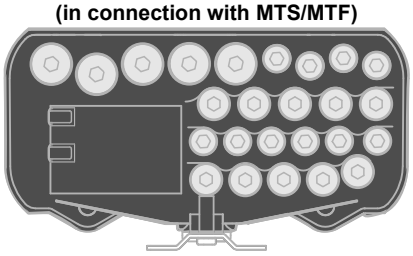
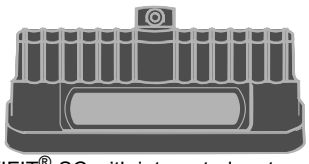
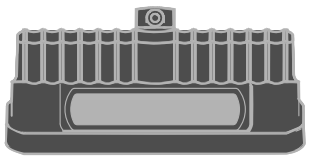
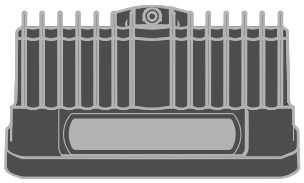
- IP66 in accordance with EN 60529 and IP69K according to DIN 40050-9 (MOVIFIT® housing closed and all cable bushings sealed according to the relevant degree of protection)
- Easy-to-clean housing (self-draining design)
- Surface with non-stick properties
- High impact resistance of the surface against mechanical damage
- Compatibility with cleansing agents having the following properties:
  - Alkaline
  - Acidic
  - Disinfectant
- Resistant to temperature fluctuations[1)]
- Resistant to condensation caused by coated connection boards[1)]
- The Hygienic^{plus} design is the ideal complement to MOVIGEAR® drive units with optional package for wet areas (see page 194) or the DAS ASEPTIG gearmotors.

	TIP
	For additional information, refer to the following publications: • "MOVIFIT®-SC" and "MOVIFIT®-FC" operating instructions • "MOVIGEAR®-SNI" system manual • "DAS ASEPTIC Gearmotors" catalog

1) Not in connection with MOVIFIT®-SNI

3.8.2 Possible combinations in connection with the Hygienic^{plus} design

	TIP
	The Hygienic^{plus} design is only available in connection with the following unit variants: • only in connection with MOVIFIT®-SNI, MOVIFIT®-SC or MOVIFIT®-FC • only in connection with the standard ABOX with terminals and cable bushings

EBOX	ABOX	Design
MTN12.-...-50  MOVIFIT®-SNI for controlling up to 10 MOVIGEAR® drives		**MTA...-S03.-...-00** **(In connection with MTN)** **MTA12.-S02.-...-00** **(in connection with MTS/MTF)**  Standard ABOX with terminals and cable bushings[1]
MTS12.-...-00  MOVIFIT®-SC with integrated motor switch		
MTF12.-...-00  Size 1  Size 2 MOVIFIT®-FC with integrated frequency inverter		

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

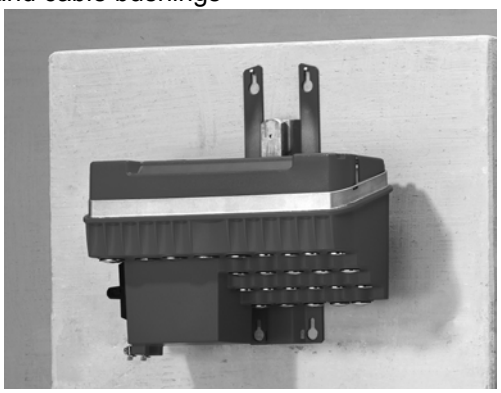
In SEW-EURODRIVE publications, all illustrations of MOVIFIT® in Hygienic^{plus} design are displayed as hatched (= surface coating).

3.9 Flexible connection technology

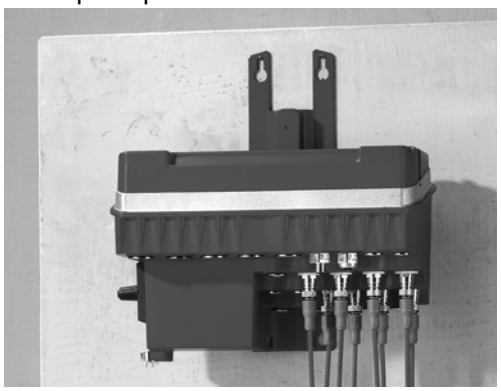
3.9.1 Overview

The flexible connection technology of MOVIFIT® allows the unit to be adjusted to suit various installation philosophies. This flexibility is made possible thanks to the fact that in addition to the standard version that has to be wired up, there are also prewired solutions with industry-standard connectors.

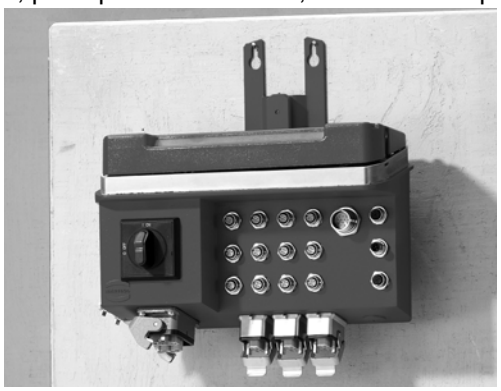
- **Standard ABOX**
  - With terminals and cable bushings



- **Hybrid ABOX (not available in connection with MOVIFIT®-SNI)**
  - with M12 for I/Os
  - with M12 for I/Os and bus
  - with M12 for I/Os and push-pull RJ45 for bus



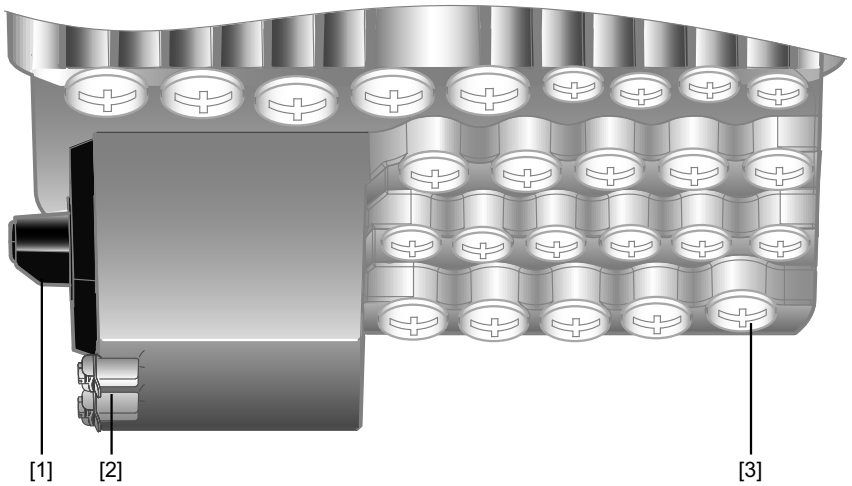
- **Han-Modular® ABOX (not available in connection with MOVIFIT®-SNI)**
  - with M12 for I/Os and bus, and industrial plug connectors
  - with M12 for I/Os, push-pull RJ45 for bus, and industrial plug connectors



3.10 Standard ABOX "MTA...-S01.-...-00", "MTA...-S02.-...-00" , "MTA...-S03.-...-00"

3.10.1 Description

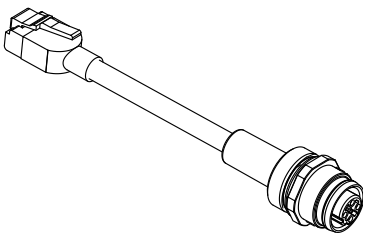
The following figure depicts the Standard ABOX with terminals and cable bushings. In connection with a DeviceNet interface, the Standard ABOX is always supplied with micro-style connector:



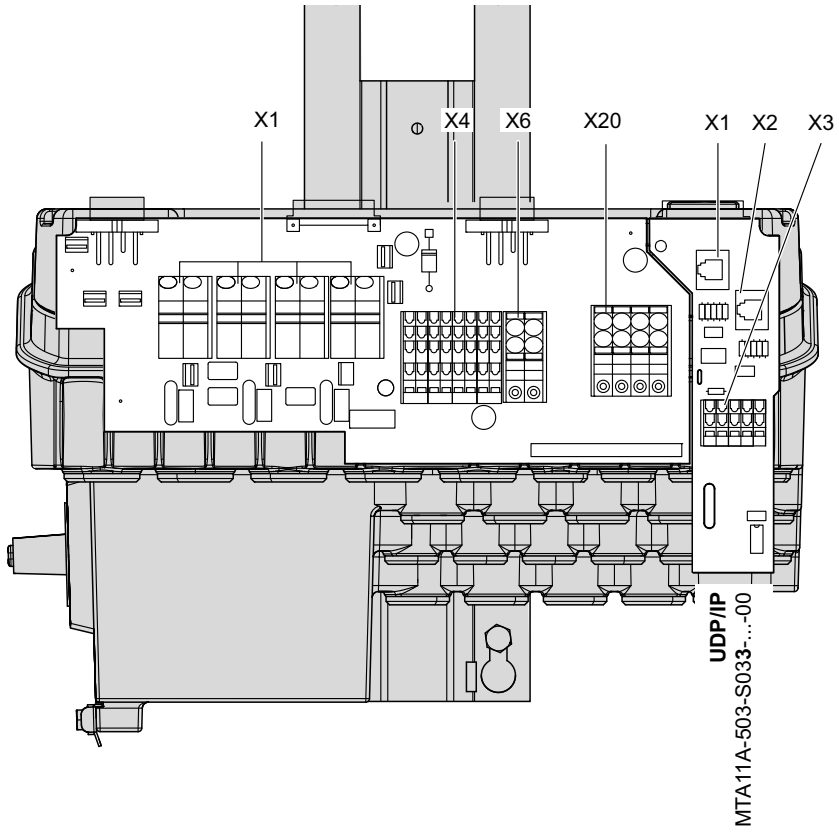
812547723

[1] Maintenance switch (in connection with MOVIFIT®-SNI and MOVIFIT®-MC integrated as a standard)
[2] PE connection
[3] Diagnostic socket (RJ10) below screw fitting (Not in connection with MOVIFIT®-SNI)

Optional Ethernet adapter

Type	Figure	Con-tent	Part number
RJ45-M12 Ethernet adapter RJ45 (internal) M12 (external) 2 required for each unit		1 pc	1328 168 2

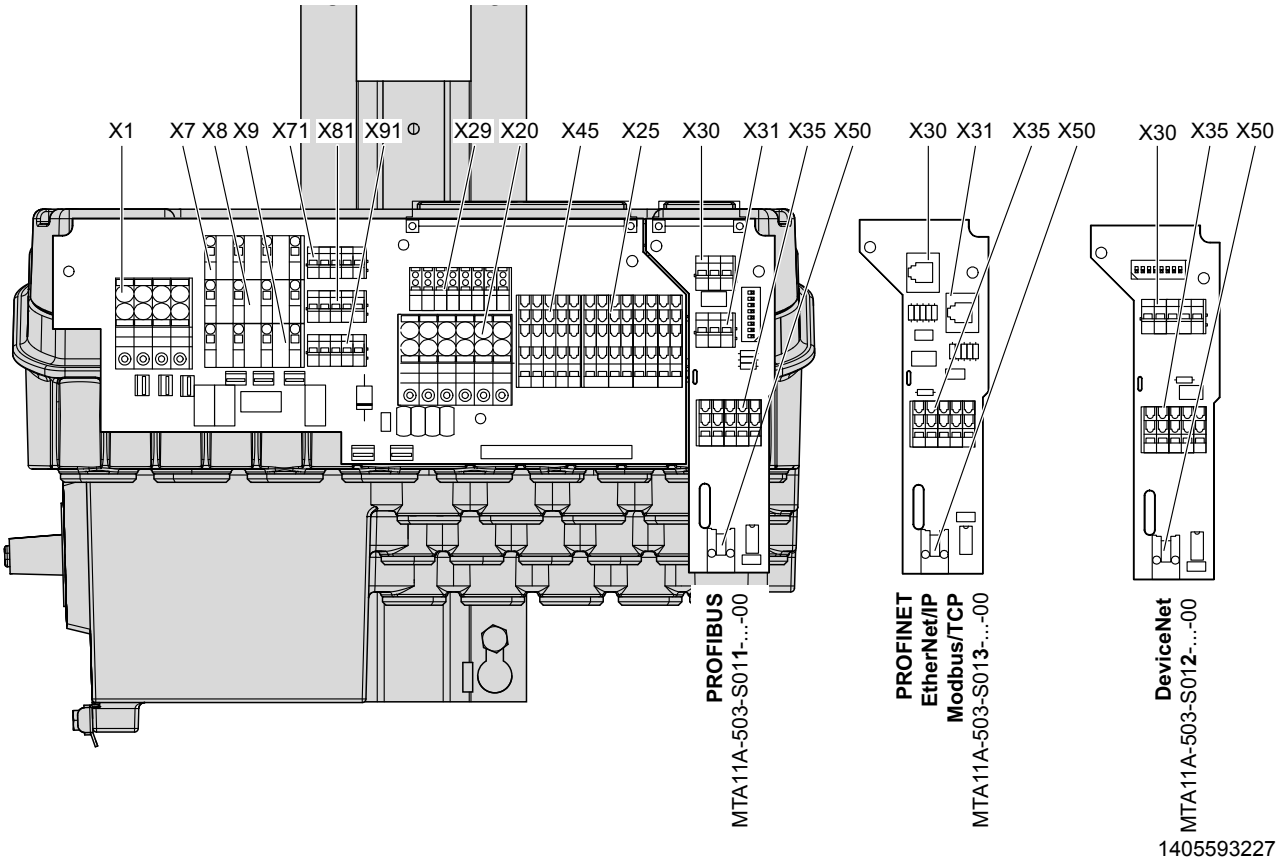
MOVIFIT®-SNI connection options



1518099723

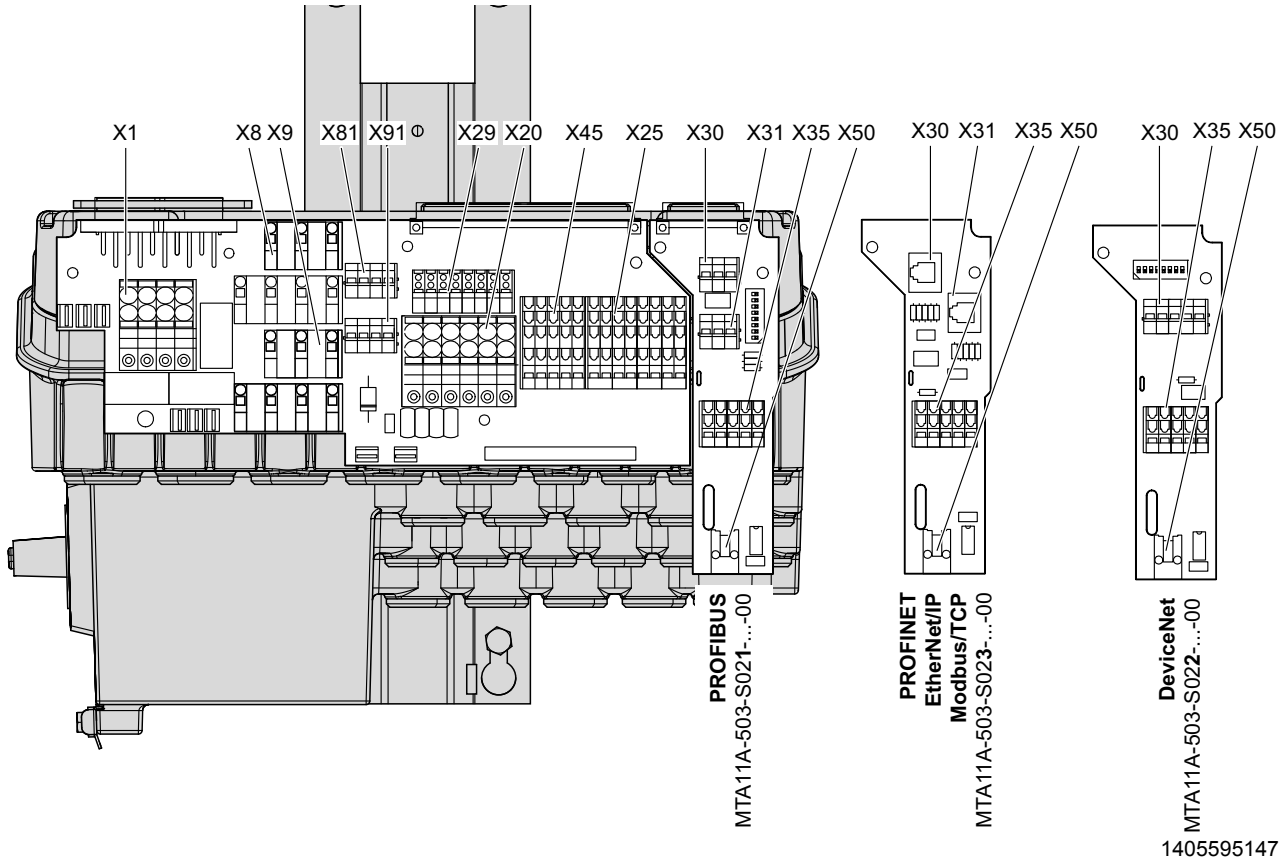
X1 power bus AC 380 – 500 V
X20 MOVIGEAR®-SNI connections 1 to 10 (Single-Line-Installation)
X4 connection terminal for I/Os
X6 terminal for external DC 24 V backup voltage (design with DC 24 V switched-mode power supply)
terminal for external DC 24 V supply voltage (design without DC 24 V switched-mode power supply)
X1 Ethernet port 1
X2 Ethernet port 2
X3 Ethernet connection terminal (alternative to X1/X2)

MOVIFIT®-MC connection options



X1	power bus AC 380 – 500 V
X7, X71	Hybrid cable MOVIMOT® 1 connection
X8, X81	Hybrid cable MOVIMOT® 2 connection
X9, X91	Hybrid cable MOVIMOT® 3 connection
X20	Power bus DC 24 V
X29	DC 24 V distributor terminal
X45	connection terminal for option I/Os
X25	connection terminal for I/Os
X30	in connection with PROFIBUS: PROFIBUS IN in connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 1 in connection with DeviceNet: wired to X11 plug connector (micro-style connector)
X31	in connection with PROFIBUS: PROFIBUS OUT in connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 2
X35	CAN/SBus connection
X50	Diagnostic socket (RJ10)

MOVIFIT®-SC and MOVIFIT®-FC connection options



X1	power bus AC 380 – 500 V
X8, X81	motor connection 1
X9, X91	motor connection 2 (only with MOVIFIT®-SC)
X20	Power bus DC 24 V
X29	DC 24 V distributor terminal
X45	connection terminal for option I/Os
X25	connection terminal for I/Os
X30	in connection with PROFIBUS: PROFIBUS IN in connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 1 in connection with DeviceNet: wired to X11 plug connector (micro-style connector)
X31	in connection with PROFIBUS: PROFIBUS OUT in connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 2
X35	CAN/SBus connection
X50	Diagnostic socket (RJ10)

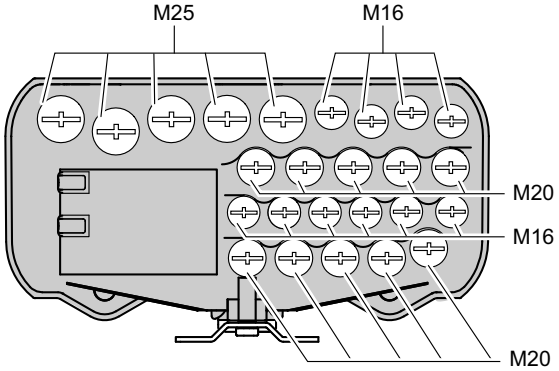
3.10.2 Variants

The Standard ABOX is available in the following variants:

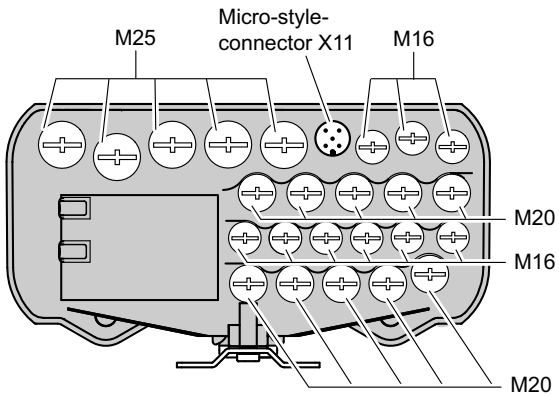
- MTA11A-503-S0**1**.-...-00: Standard ABOX for MOVIFIT®-MC (MTM)
  - Motor protection switch integrated as standard for line protection
- MTA11A-503-S0**2**.-...-00: Standard ABOX for MOVIFIT®-SC (MTS) and FC (MTF)
  - Optional external braking resistor (only MTF)
  - Optional integrated braking resistor (only MTF)
  - Optional switch disconnector
- MTA11A-503-S0**3**.-...-00: Standard ABOX for MOVIFIT®-SNI (MTN)
  - Motor protection switch integrated as standard for line protection

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 (not in connection with MTN)
PROFINET MTA11A-503-S0.**3**-...-00 (not in connection with MTN)
Ethernet/IP MTA11A-503-S0.**3**-...-00 (not in connection with MTN)
Modbus/TCP MTA11A-503-S0.**3**-...-00 (not in connection with MTN)
UDP/IP MTA11A-503-S0.**3**-...-00 (not in connection with MTM, MTS, MTF)



DeviceNet MTA11A-503-S0.**2**-...-00 (not in connection with MTN)



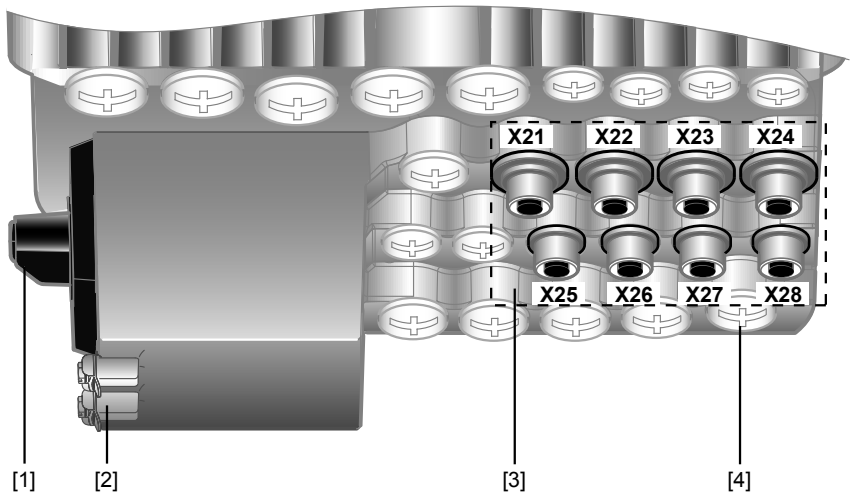
1517831691

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

	TIPS
	• The Hybrid ABOX is based on the Standard ABOX. The following therefore only describes the additional plug connectors in comparison with the Standard ABOX. • For a description of the terminals, refer to section "Standard ABOX". • Customers cannot use terminal strip X25 because the described plug connectors are assigned to it.

3.11.1 Description

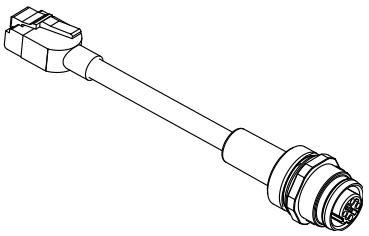
The following figure depicts the Hybrid ABOX with M12 plug connectors for connecting digital I/Os:



915287947

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

Optional Ethernet adapter

Type	Figure	Con-tent	Part number
RJ45-M12 Ethernet adapter RJ45 (internal) M12 (external) 2 required for each unit		1 pc	1328 168 2

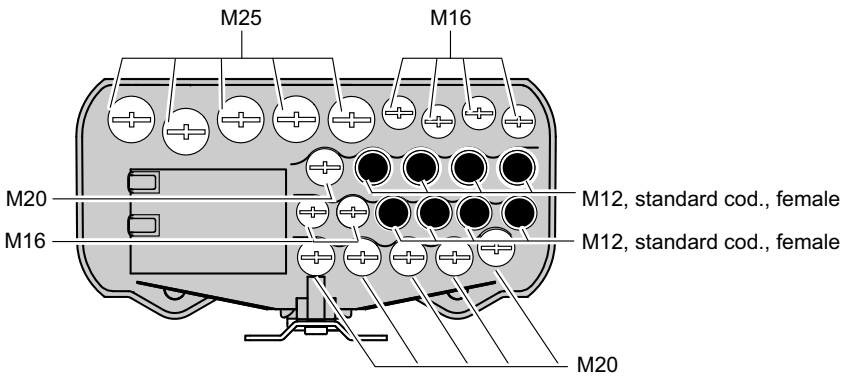
3.11.2 Variants

The Hybrid ABOX is available in the following variants:

- MTA11A-503-S4**1**.-...-00: Hybrid ABOX for MOVIFIT®-MC (MTM)
  - Motor protection switch integrated as standard for line protection
- MTA11A-503-S4**2**.-...-00: Hybrid ABOX for MOVIFIT®-SC (MTS) and FC (MTF)
  - Optional external braking resistor (only MTF)
  - Optional integrated braking resistor (only MTF)
  - Optional switch disconnector

The following figure shows the cable glands and plug connectors of the Hybrid ABOX:

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



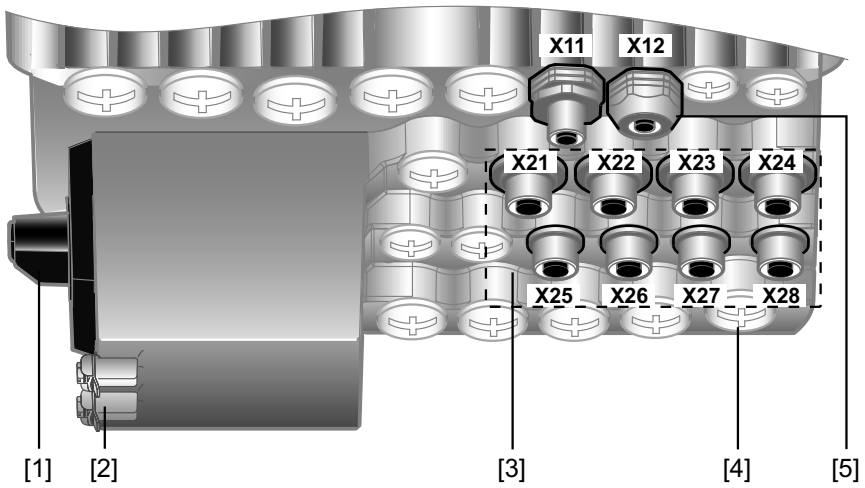
915317771

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

	TIPS
	• The Hybrid ABOX is based on the Standard ABOX. The following therefore only describes the additional plug connectors in comparison with the Standard ABOX. • For a description of the terminals, refer to section "Standard ABOX". • Customers cannot use terminal strips X25, X30 and X31 because the described plug connectors are assigned to them.

3.12.1 Description

The following figure depicts the Hybrid ABOX with M12 plug connectors for connection of digital I/Os and bus:



934768139

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

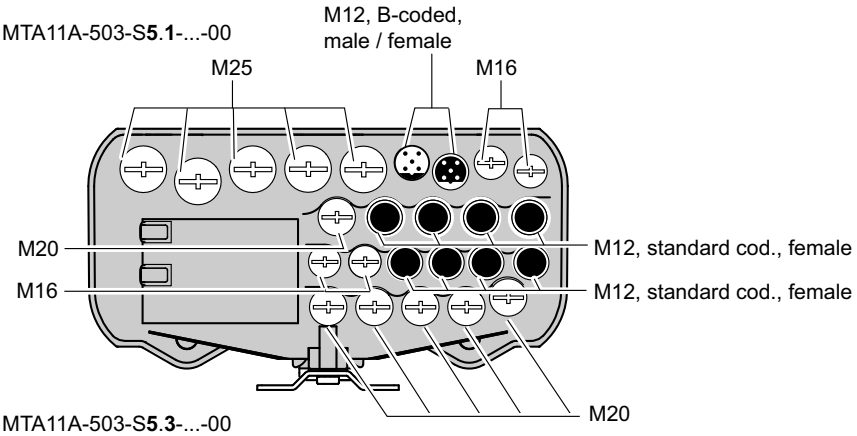
3.12.2 Variants

The Hybrid ABOX is available in the following variants:

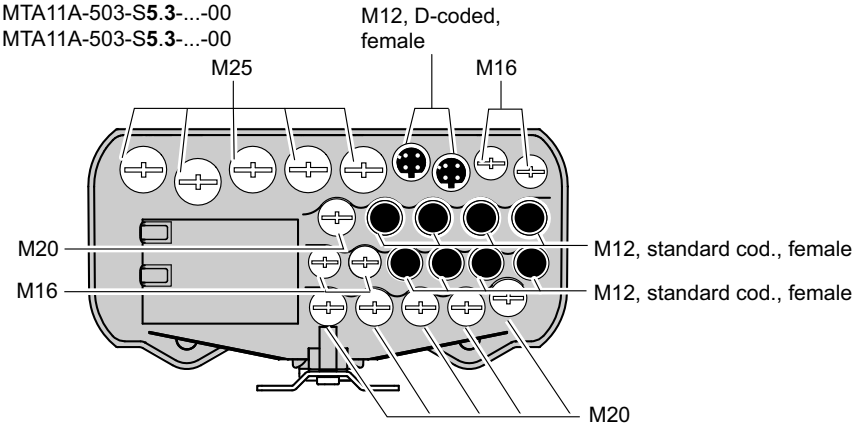
- MTA11A-503-S5**1**.-...-00: Hybrid ABOX for MOVIFIT®-MC (MTM)
  - Motor protection switch integrated as standard for line protection
- MTA11A-503-S5**2**.-...-00: Hybrid ABOX for MOVIFIT®-SC (MTS) and FC (MTF)
  - Optional external braking resistor (only MTF)
  - Optional integrated braking resistor (only MTF)
  - Optional switch disconnector

The following figure shows the cable glands and plug connectors of the Hybrid ABOX:

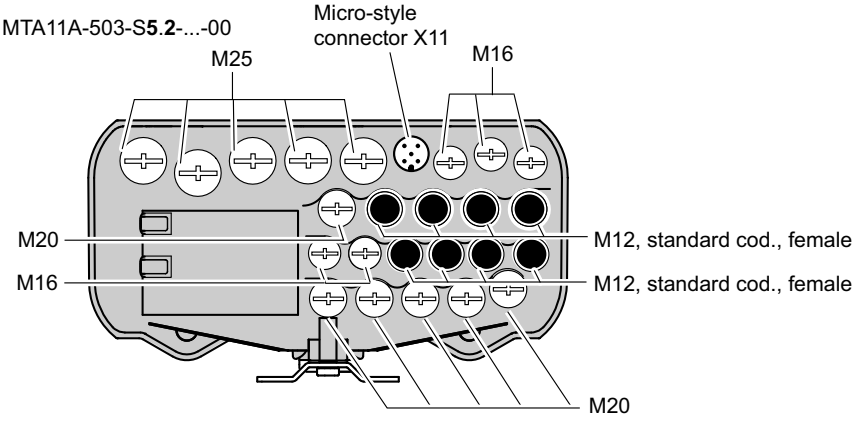
PROFIBUS MTA11A-503-S**5**.**1**-...-00



PROFINET MTA11A-503-S**5**.**3**-...-00
Ethernet/IP MTA11A-503-S**5**.**3**-...-00
Modbus/TCP MTA11A-503-S**5**.**3**-...-00



DeviceNet MTA11A-503-S**5**.**2**-...-00



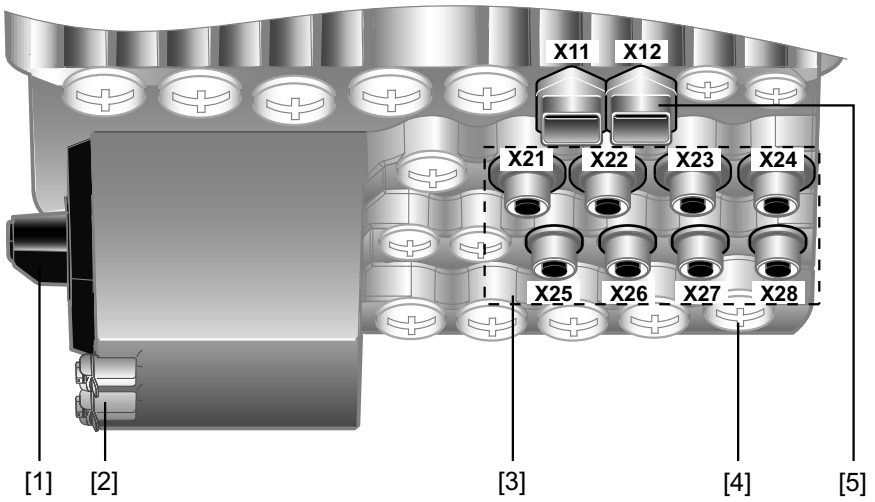
1519889803

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

	TIPS
	• The Hybrid ABOX is based on the Standard ABOX. The following therefore only describes the additional plug connectors in comparison with the Standard ABOX. • For a description of the terminals, refer to section "Standard ABOX". • Customers cannot use terminal strips X25, X30 and X31 because the described plug connectors are assigned to them.

3.13.1 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:

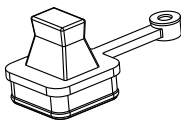


915673995

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

Note: Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC PAS 61076-3-117. Conventional RJ45 patch cables without push-pull connector housing do not latch when plugged. This may damage the socket.

Optional closing plug

Type	Figure	Content	Part number
Ethernet closing plug for push-pull RJ45 socket		10 pc	1822 370 2
		30 pc	1822 371 0

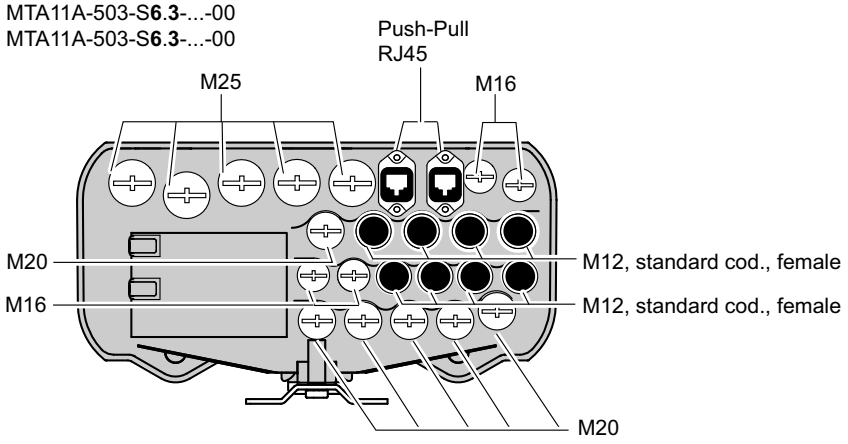
3.13.2 Variants

The Hybrid ABOX is available in the following variants:

- MTA11A-503-S6**1**.-...-00: Hybrid ABOX for MOVIFIT®-MC (MTM)
  - Motor protection switch integrated as standard for line protection
- MTA11A-503-S6**2**.-...-00: Hybrid ABOX for MOVIFIT®-SC (MTS) and FC (MTF)
  - Optional external braking resistor (only MTF)
  - Optional integrated braking resistor (only MTF)
  - Optional switch disconnector

The following figure shows the cable glands and plug connectors of the Hybrid ABOX:

PROFINET MTA11A-503-S**6.3**-...-00
EtherNet/IP MTA11A-503-S**6.3**-...-00
Modbus/TCP MTA11A-503-S**6.3**-...-00

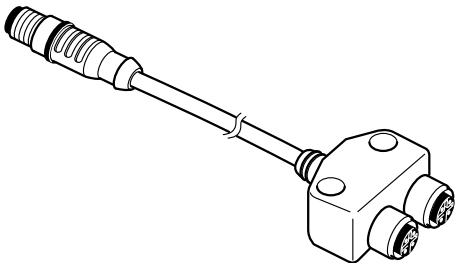


934776075

3.14 Recommended Y adapters for the Hybrid ABOX

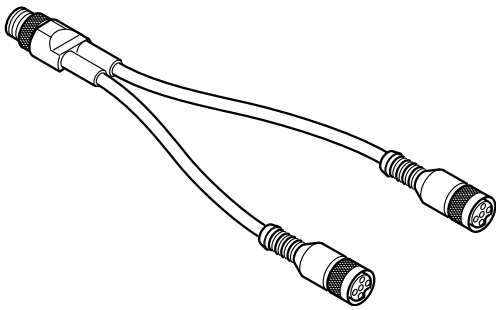
Use a Y adapter with extension for connecting 2 sensors/actuators to a M12 plug connector.

The Y adapter is available from different manufacturers:



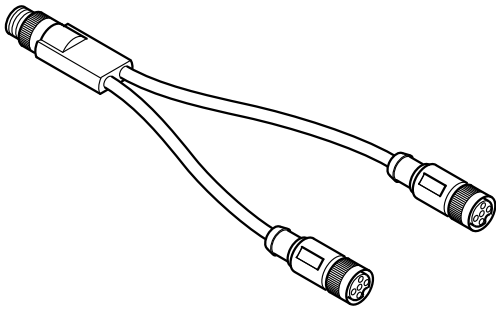
915294347

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



1180380683

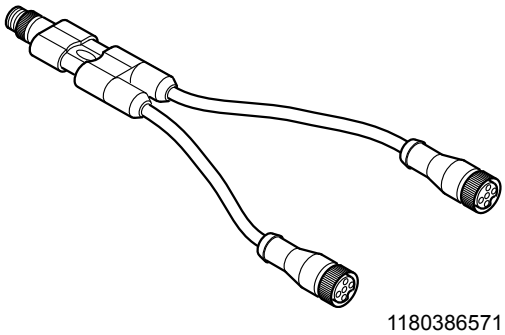
Manufacturer: Binder
Type: 79 5200 ..



1180375179

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

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



1180386571

Manufacturer: Murr-Elektronik
Type: 7000-40721-..

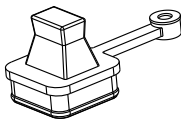
3.15 Han-Modular® ABOX "MTA...-H.1.-...-00", "MTA...-H.2.-...-00"

3.15.1 Variants

The Han-Modular® ABOX is available in the following variants:

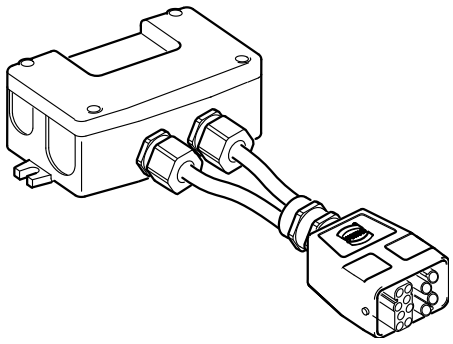
- MTA11A-503-H2**1**.-...-00, MTA11A-503-H1**1**.-...-00:
  Han-Modular® ABOX for MOVIFIT®-MC (MTM)
  - Motor protection switch integrated as standard for line protection
- MTA11A-503-H2**2**.-...-00, MTA11A-503-H1**2**.-...-00:
  Han-Modular® ABOX for MOVIFIT®-SC (MTS) and FC (MTF)
  - Optional external braking resistor (only MTF)
  - Optional integrated braking resistor (only MTF)
  - Switch disconnector integrated as standard

3.15.2 Optional closing plug

Type	Figure	Content	Part number
Ethernet closing plug for push-pull RJ45 socket		10 pc	1822 370 2
		30 pc	1822 371 0

3.15.3 Power distribution and line protection

- We recommend using HARTING Han-Power®-S products when performing the project planning for the power bus.
- 2 cables of max. 6 mm^2 can be routed in the AC 400 V 50/60 Hz and DC 24 V supply cable.
- The spur lines that lead to the MOVIFIT® have a cross section of 4 mm^2 and a maximum length of 1.5 m.
- The Han-Power®-S distributor can be ordered from HARTING via part number 6104 202 1069.



812456203

- Supply for sensor group IV (24V_S)

  In the plug of the above-mentioned Han-Power®-S distributor (part number: 6104 202 1069) the 24V_S supply voltage for sensor group IV is bridged with the 24V_C continuous voltage.

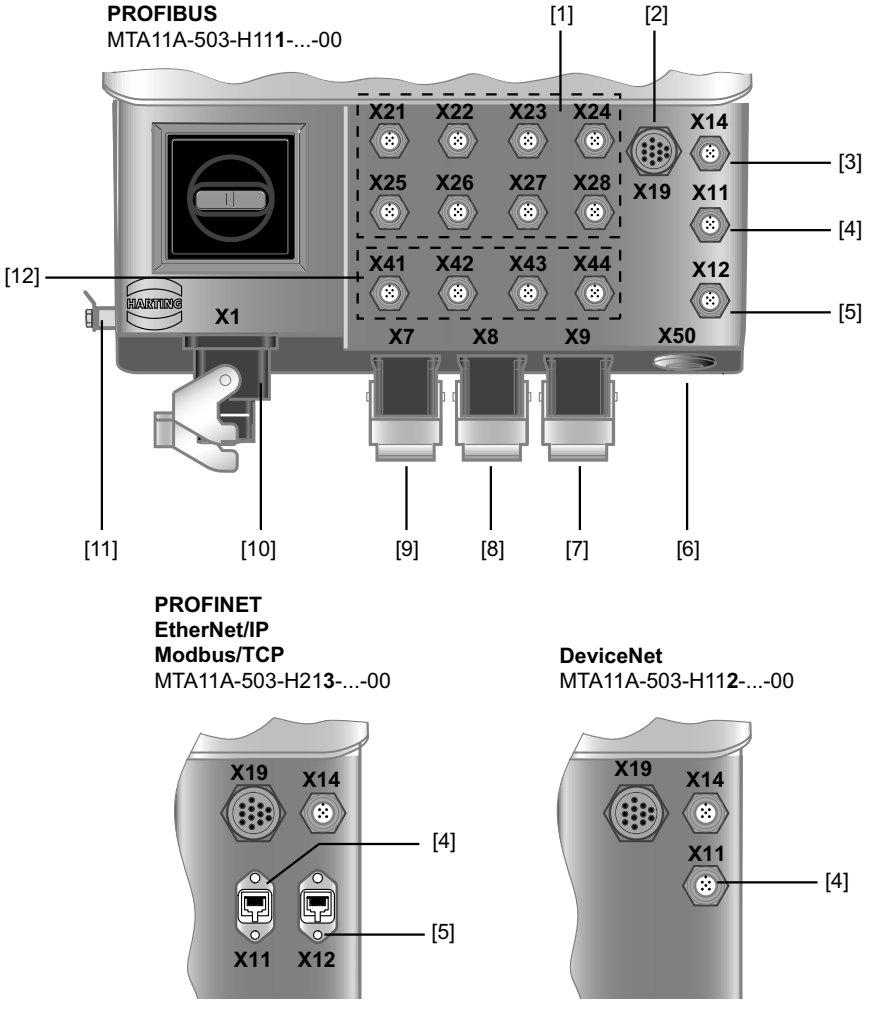
Accessories:

The following accessories for the Han-Power®-S distributor can be ordered from HARTING:

Type	Cable cross section	Part number HARTING
Grommet for small entry	7 – 10 mm	0912 000 9965
	10 – 13 mm	0912 000 9966
	13 – 16 mm	0912 000 9967
Filler plug for small entry		0912 000 9968
Grommet for big entry	7 – 10 mm	0912 000 9969
	10 – 13 mm	0912 000 9970
	13 – 16 mm	0912 000 9971
	16 – 19 mm	0912 000 9972
	19 – 22 mm	0912 000 9973
Filler plug for big entry		0912 000 9974

3.15.4 Han-Modular® ABOX for MOVIFIT®-MC

The following figure shows the Han-Modular® ABOX for MOVIFIT®-MC depending on the fieldbus interface:



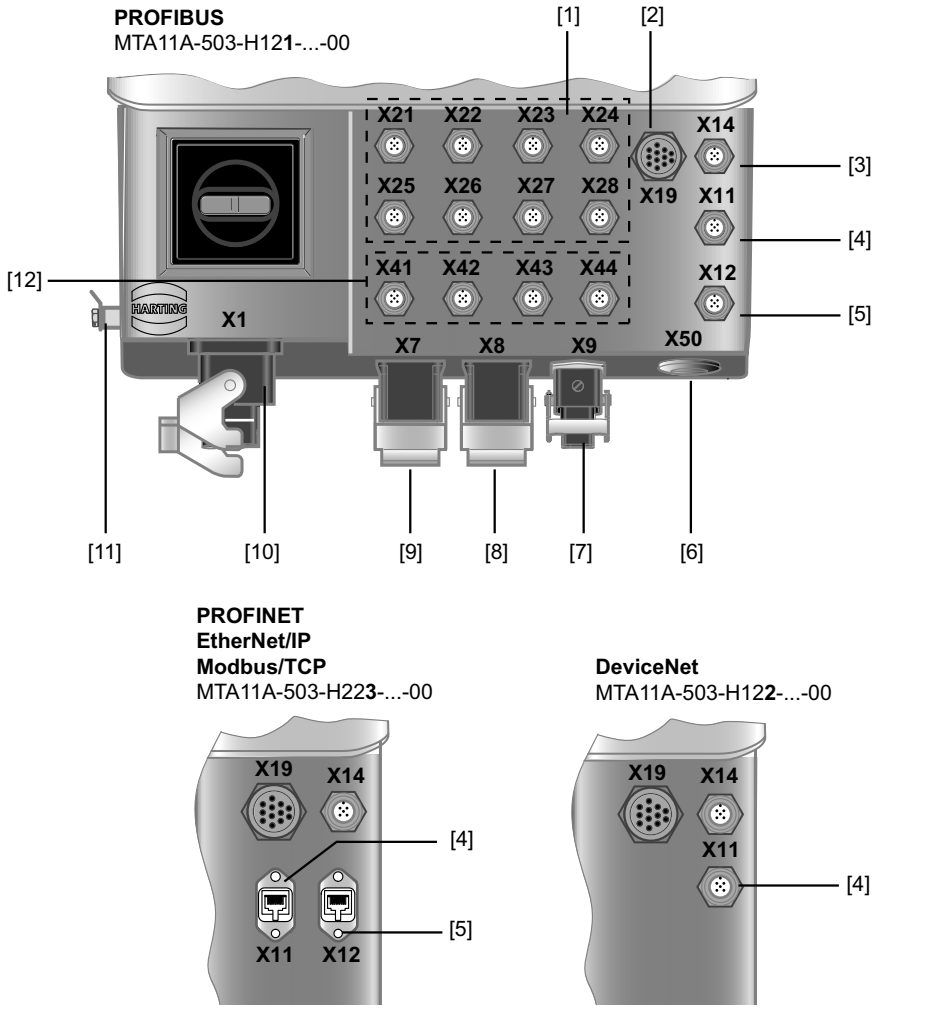
9007200275849227

[1] M12 plug connector for I/Os
[2] M23 plug connector (12-pin) for I/O extension box
[3] SBus (CAN)
[4] In connection with PROFIBUS: PROFIBUS IN
In connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 1
In connection with DeviceNet: wired to X11 plug connector (micro-style connector)
[5] In connection with PROFIBUS: PROFIBUS OUT or terminating resistor
In connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 2
[6] Diagnostic socket (RJ10) below screw fitting
[7] Han-Modular® plug connector for connecting MOVIMOT® 3
[8] Han-Modular® plug connector for connecting MOVIMOT® 2
[9] Han-Modular® plug connector for connecting MOVIMOT® 1
[10] Han-Modular® plug connector for power connection (power distribution with T adapter)
[11] PE connection
[12] M12 plug connector for optional I/Os

Note: Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC PAS 61076-3-117. Conventional RJ45 patch cables without push-pull connector housing do not latch when plugged. This may damage the socket.

3.15.5 Han-Modular® ABOX for MOVIFIT®-SC/FC

The following figure shows the Han-Modular® ABOX for MOVIFIT®-SC/FC depending on the fieldbus interface:



9007200191178507

[1] M12 plug connector for I/Os
[2] M23 plug connector (12-pin) for I/O extension box
[3] SBus (CAN)
[4] In connection with PROFIBUS: PROFIBUS IN
In connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 1
In connection with DeviceNet: wired to X11 plug connector (micro-style connector)
[5] In connection with PROFIBUS: PROFIBUS OUT or terminating resistor
In connection with PROFINET + EtherNetIP + Modbus/TCP: Ethernet port 2
[6] Diagnostic socket (RJ10) below screw fitting
[7] Han-Modular® plug connector for connecting an external braking resistor
[8] Han-Modular® plug connector for connecting motor 2 (only MOVIFIT®-SC)
[9] Han-Modular® plug connector for connection of motor 1
[10] Han-Modular® plug connector for power connection (power distribution with T adapter)
[11] PE connection
[12] M12 plug connector for optional I/Os

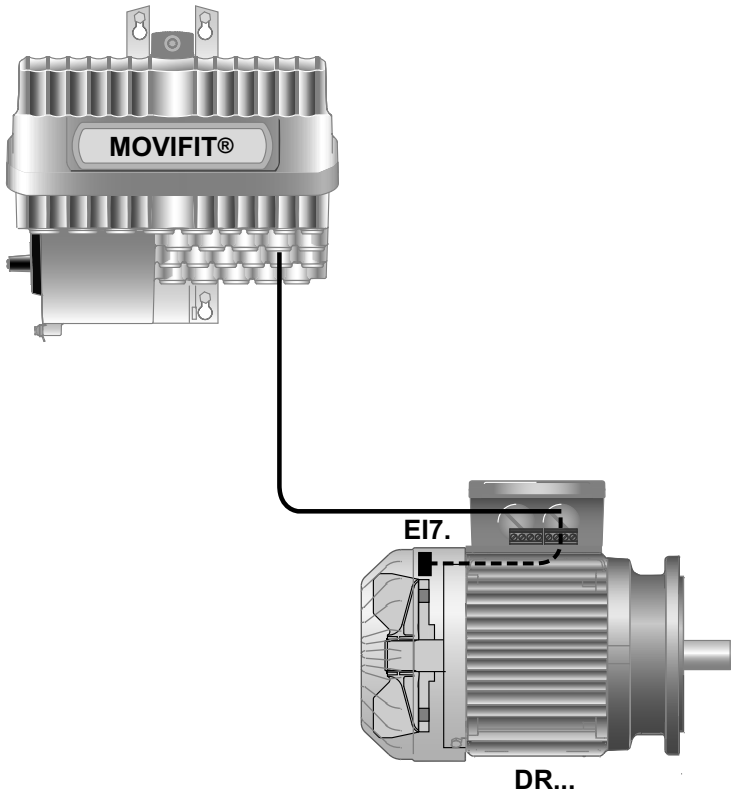
Note: Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC PAS 61076-3-117. Conventional RJ45 patch cables without push-pull connector housing do not latch when plugged. This may damage the socket.

3.16 Connection options for encoders

	TIPS
	• 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.

3.16.1 Example: EI7. incremental encoder

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



1406158987

3.16.2 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® function level "Technology".

3.16.3 Supported encoders in connection with DT/DV motors

NV26 proximity sensor

The NV26 proximity sensor offers the following features:

- 2 sensors with 6 pulses/revolution
- 24 increments/revolution with 4-fold evaluation
- Encoder monitoring and evaluation is possible with MOVIFIT® function level "Technology".

ES16 incremental encoder

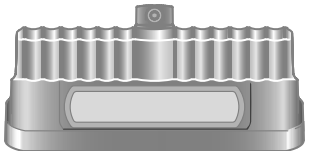
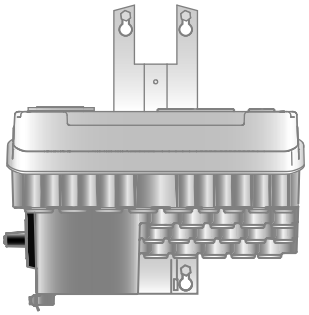
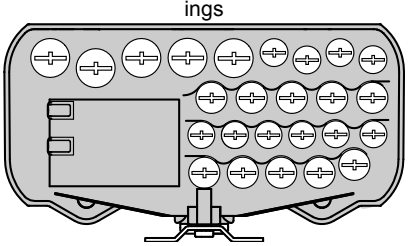
The ES16 incremental encoder offers the following features:

- 6 pulses/revolutions for each track
- 24 increments/revolution with 4-fold evaluation
- Encoder monitoring and evaluation is possible with MOVIFIT® function level "Technology".

3.17 Selection tables in connection with standard and Hybrid ABOX

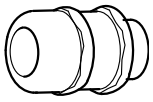
3.17.1 MOVIFIT®-SNI – available combinations

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

	EBOX	ABOX
SNI	**MTN...-...-50** MOVIFIT®-SNI for controlling up to 10 MOVIGEAR®-SNI drive units. 	 **MTA...-S03.-...-00** Standard ABOX with terminals and cable bushings 

Function level	Communication interface	EBOX Type	ABOX Type
System	**UDP/IP**	MTN11A000-503-E42A-50	MTA11A-503-S033-M13-00

Screw fittings

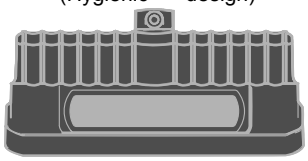
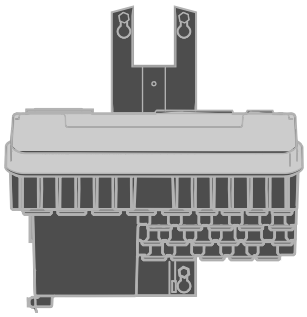
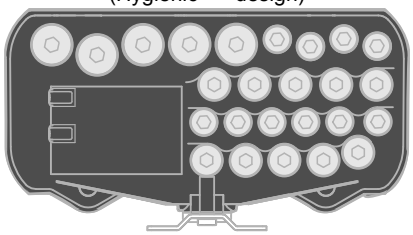
Type of screw fitting	Figure	Content	Size	Part number
EMC cable glands (brass nickel-plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Options

Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
DC 24 V switched-mode power supply	**EBOX**	**/U11**

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

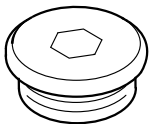
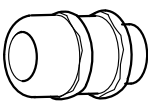
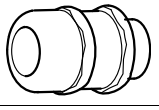
	TIPS
	• Enclosure IP69 is only achieved if the plastic screw plugs delivered as standard are replaced by suitable IP69K screw plugs. • Section "Screw fittings" provides information on screw fittings that can be ordered from SEW-EURODRIVE (see below).

	EBOX	ABOX
SNI	**MTN12...-...-50** MOVIFIT®-SNI for controlling up to 10 MOVIGEAR®-SNI drive units. (Hygienic^{plus} design) 	 **MTA12...-S03.-...-00** Standard ABOX with terminals and cable bushings (Hygienic^{plus} design) 

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

Function level	Communication interface	EBOX Type	ABOX Type
System	**UDP/IP**	MTN12A000-503-E42A-50	MTA12A-503-S033-00

Screw fittings

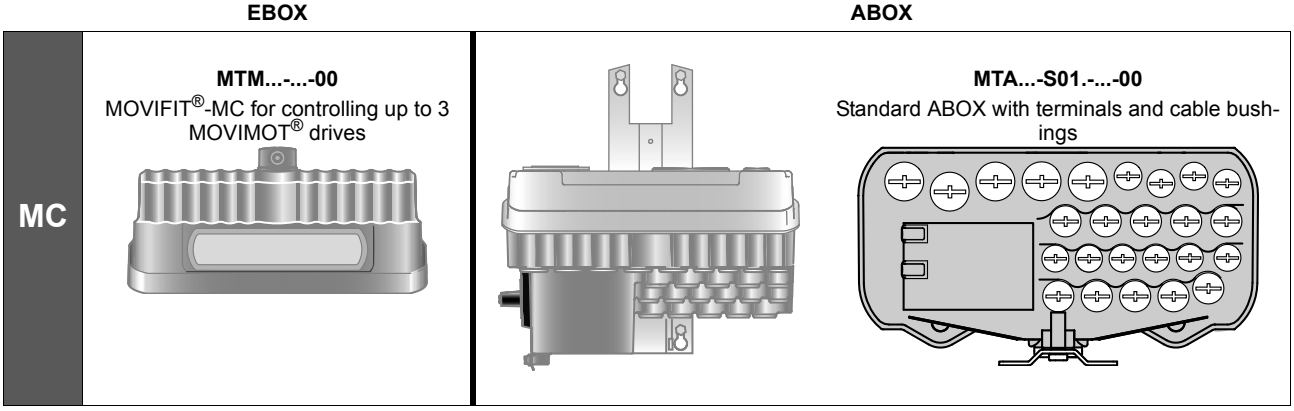
Type of screw fitting	Degree of protection	Figure	Content	Size	Part number
Stainless steel screw plugs	IP69K		10 pc	M16 x 1.5	1820 223 3
			10 pc	M20 x 1.5	1820 224 1
			10 pc	M25 x 1.5	1820 226 8
EMC cable gland (brass, nickel plated)	IP66		10 pc	M16 x 1.5	1820 478 3
			10 pc	M20 x 1.5	1820 479 1
			10 pc	M25 x 1.5	1820 480 5
EMC cable gland (stainless steel)	IP69K		10 pc	M16 x 1.5	1821 636 6
			10 pc	M20 x 1.5	1821 637 4
			10 pc	M25 x 1.5	1821 638 2

Options

Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
DC 24 V switched-mode power supply unit	**EBOX**	**/U11**

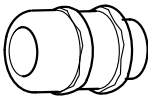
3.17.2 MOVIFIT®-MC – available combinations

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



Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFIBUS**	MTM11A000-P10A-00	MTA11A-503-S011-M01-00
	DeviceNet	MTM11A000-D10A-00	MTA11A-503-S012-M01-00
	PROFINET (Cu)	MTM11A000-E20A-00	MTA11A-503-S013-M01-00
Technology	**PROFIBUS**	MTM11A000-P11A-00	MTA11A-503-S011-M01-00
	DeviceNet	MTM11A000-D11A-00	MTA11A-503-S012-M01-00
	PROFINET (Cu)	MTM11A000-E21A-00	MTA11A-503-S013-M01-00
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	MTM11A000-E31A-00	MTA11A-503-S013-M01-00
System	**PROFIBUS**	MTM11A000-P12A-00	MTA11A-503-S011-M01-00

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

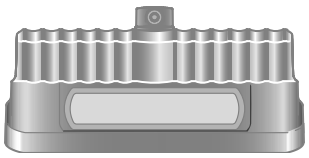
Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with **4 x FDI + 2 x FDO**	**EBOX**	**/S11**

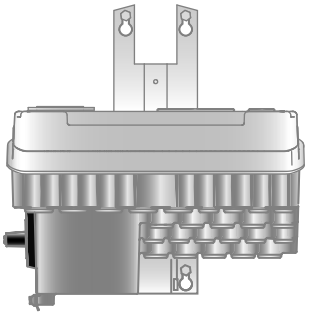
MOVIFIT®-MC in connection with Hybrid ABOX MTA...-S41.-...-00

EBOX | **ABOX**

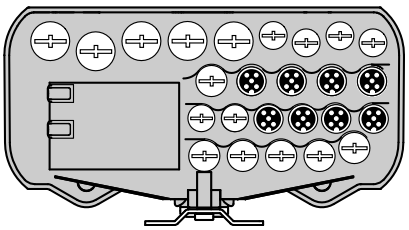
MC

MTM...-...-00
MOVIFIT®-MC for controlling up to 3 MOVIMOT® drives



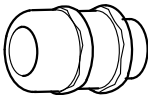


MTA...-S41.-...-00
Hybrid ABOX with M12 for I/Os



Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFIBUS**	MTM11A000-P10A-00	MTA11A-503-S411-M01-00
	PROFINET (Cu)	MTM11A000-E20A-00	MTA11A-503-S413-M01-00
Technology	**PROFIBUS**	MTM11A000-P11A-00	MTA11A-503-S411-M01-00
	PROFINET (Cu)	MTM11A000-E21A-00	MTA11A-503-S413-M01-00
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	MTM11A000-E31A-00	MTA11A-503-S413-M01-00
System	**PROFIBUS**	MTM11A000-P12A-00	MTA11A-503-S411-M01-00

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

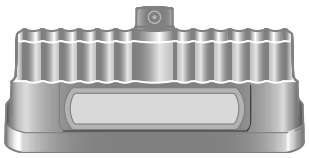
Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

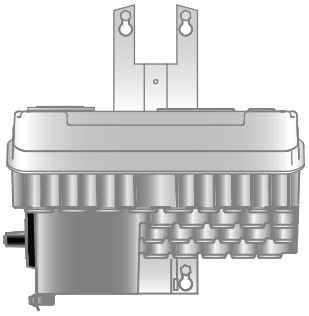
MOVIFIT®-MC in connection with Hybrid ABOX MTA...-S51.-...-00

EBOX | **ABOX**

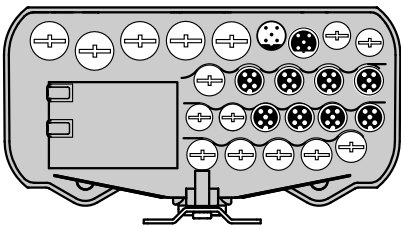
MC

MTM...-...-00
MOVIFIT®-MC for controlling up to 3 MOVIMOT® drives



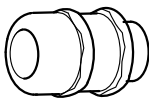


MTA...-S51.-...-00
Hybrid ABOX with M12 for I/Os and bus



Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFIBUS**	MTM11A000-P10A-00	MTA11A-503-S511-M01-00
	DeviceNet	MTM11A000-D10A-00	MTA11A-503-S512-M01-00
	PROFINET (Cu)	MTM11A000-E20A-00	MTA11A-503-S513-M01-00
Technology	**PROFIBUS**	MTM11A000-P11A-00	MTA11A-503-S511-M01-00
	DeviceNet	MTM11A000-D11A-00	MTA11A-503-S512-M01-00
	PROFINET (Cu)	MTM11A000-E21A-00	MTA11A-503-S513-M01-00
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	MTM11A000-E31A-00	MTA11A-503-S513-M01-00
System	**PROFIBUS**	MTM11A000-P12A-00	MTA11A-503-S511-M01-00

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

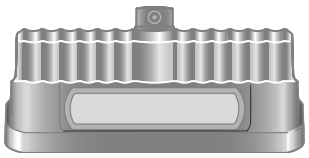
Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

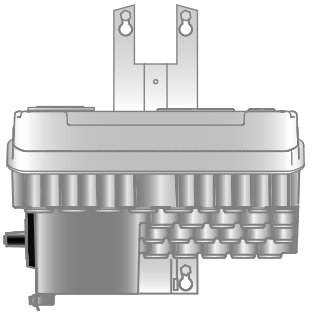
MOVIFIT®-MC in connection with Hybrid ABOX MTA...-S61.-...-00

EBOX **ABOX**

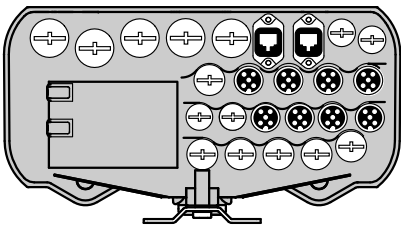
MC

MTM...-...-00
MOVIFIT®-MC for controlling up to 3 MOVIMOT® drives



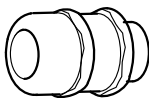


MTA...-S61.-...-00
Hybrid ABOX with M12 for I/Os and push-pull RJ45



Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFINET (Cu)**	MTM11A000-E20A-00	MTA11A-503-S613-M01-00
Technology	**PROFINET (Cu)**	MTM11A000-E21A-00	MTA11A-503-S613-M01-00
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	MTM11A000-E31A-00	MTA11A-503-S613-M01-00

Screw fittings

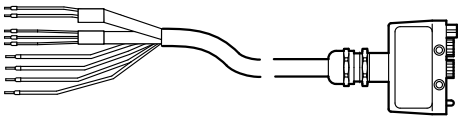
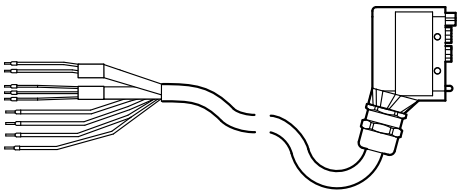
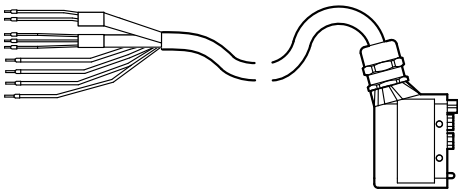
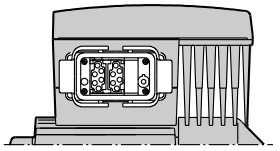
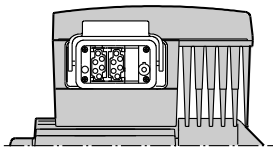
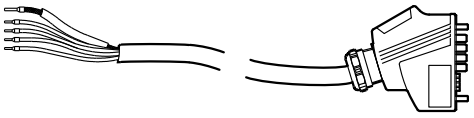
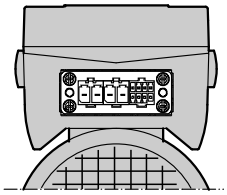
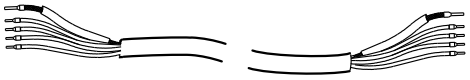
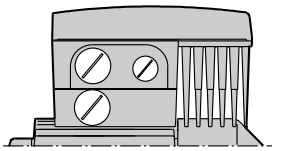
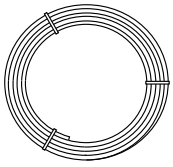
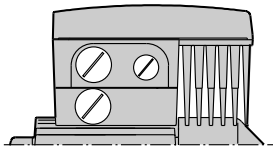
Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

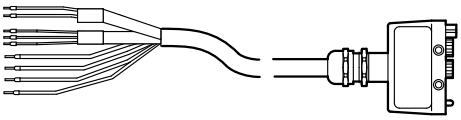
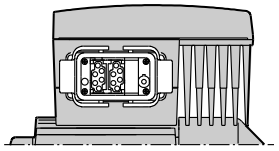
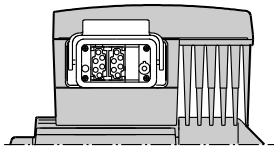
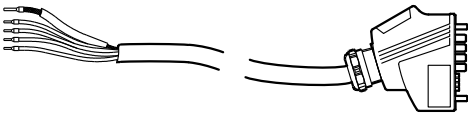
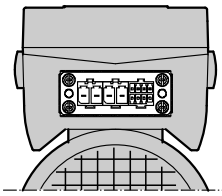
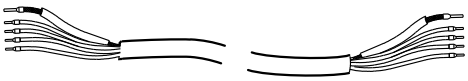
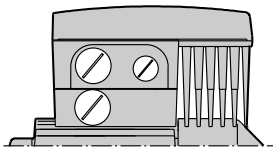
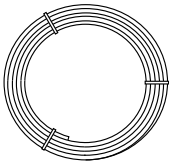
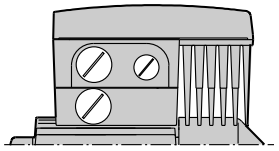
3.17.3 Hybrid cables for connecting MOVIFIT®-MC and MOVIMOT®

The following table lists the available hybrid cables for total currents of up to 12 A (with UL approval only up to 9 A):

	MOVIFIT®-MC	Hybrid cables/Hybrid cable roll	Length	Cable type	Drive
MC	**Standard ABOX:** **MTA...-S01.-...-00** **Hybrid ABOX:** **MTA...-S41.-...-00** **MTA...-S51.-...-00** **MTA...-S61.-...-00**	Part number: 0819 965 5  Part number: 1810 055 4  Part number: 1810 056 2 	variable	B	MOVIMOT® with AMA6 plug connector 
		Part number: 0819 871 3 	variable	B	MOVIMOT® with plug connector AMD6 
		Part number: 0819 966 3 	variable	B	MOVIMOT® with APG6 plug connector 
		Part number: 0819 974 4 	variable	B	MOVIMOT® with Cable glands 
		Part number: 0818 735 5 (hybrid cable roll) Part number: 0593 714 0 (hybrid cable roll) 	30 m 100 m	B	MOVIMOT® with Cable glands 

Hybrid cables for UL-compliant installation up to 12 A (in preparation)

For UL-compliant installation with a total current of up to 12 A, only the following hybrid cables are permitted for connecting MOVIFIT®-MC and MOVIMOT®

	MOVIFIT®-MC	Hybrid cables/Hybrid cable roll	Length	Cable type	Drive
MC	**Standard ABOX:** **MTA...-S01.-...-00** **Hybrid ABOX:** **MTA...-S41.-...-00**	Part number: 1811 299 4 	variable	B/2.5	MOVIMOT® with AMA6 plug connector 
	MTA...-S51.-...-00 **MTA...-S61.-...-00**	Part number: 1811 300 1 	variable	B/2.5	MOVIMOT® with plug connector AMD6 
		Part number: 1811 302 8 	variable	B/2.5	MOVIMOT® with APG6 plug connector 
		Part number: 1811 303 6 	variable	B/2.5	MOVIMOT® with Cable glands 
		Part number: 1811 304 4 (hybrid cable roll) Part number: 1811 305 2 (hybrid cable roll) 	30 m 100 m	B/2.5	MOVIMOT® with Cable glands 

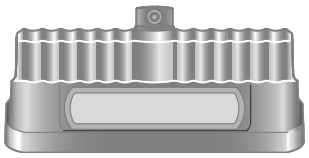
3.17.4 MOVIFIT®-SC – available combinations

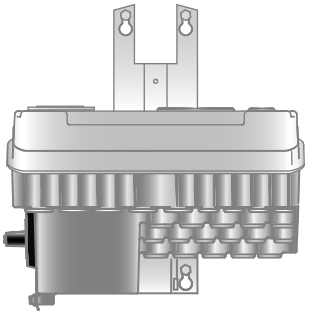
MOVIFIT®-SC in connection with standard ABOX MTA...-S02.-...-00

EBOX | **ABOX**

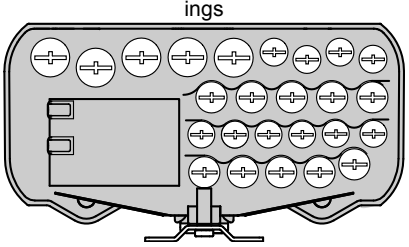
SC

MTS...-...-00
MOVIFIT®-SC with integrated motor switch



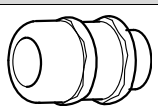


MTA...-S02.-...-00
Standard ABOX with terminals and cable bushings



Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P10A-00	MTA11A-503-S021-00
		4.0 kW	MTS11A040-503-P10A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D10A-00	MTA11A-503-S022-00
		4.0 kW	MTS11A040-503-D10A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E20A-00	MTA11A-503-S023-00
		4.0 kW	MTS11A040-503-E20A-00	
Technology	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P11A-00	MTA11A-503-S021-00
		4.0 kW	MTS11A040-503-P11A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D11A-00	MTA11A-503-S022-00
		4.0 kW	MTS11A040-503-D11A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E21A-00	MTA11A-503-S023-00
		4.0 kW	MTS11A040-503-E21A-00	
	EtherNet/IP (Cu) Modbus/TCP (Cu)	**1.5 kW**	MTS11A015-503-E31A-00	MTA11A-503-S023-00
		4.0 kW	MTS11A040-503-E31A-00	
System	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P12A-00	MTA11A-503-S021-00
		4.0 kW	MTS11A040-503-P12A-00	
SBus slave	**none**	**1.5 kW**	MTS11A015-503-Z10A-00	MTA11A-503-S021-00
		4.0 kW	MTS11A040-503-Z10A-00	

Screw fittings

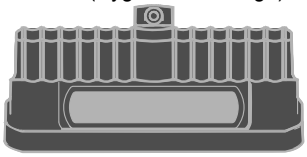
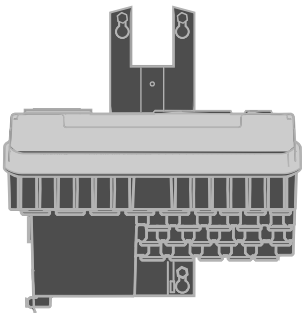
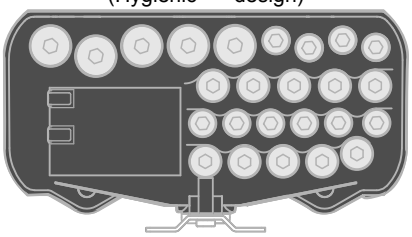
Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Stainless steel mounting rail	**ABOX**	**/M11**

MOVIFIT®-SC in connection with standard ABOX and Hygienic$_{plus}$ design

	TIPS
	• Enclosure IP69 is only achieved if the plastic screw plugs delivered as standard are replaced by suitable IP69K screw plugs. • Section "Screw fittings" (see page 64) provides information on screw fittings that can be ordered from SEW-EURODRIVE.

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

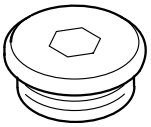
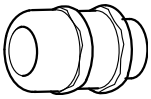
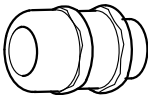
In SEW-EURODRIVE publications, all illustrations of MOVIFIT® in Hygienic^{plus} design are displayed as hatched (= surface coating).

Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFIBUS**	**1.5 kW**	MTS12A015-503-P10A-00	MTA12A-503-S021-00
		4.0 kW	MTS12A040-503-P10A-00	
	DeviceNet	**1.5 kW**	MTS12A015-503-D10A-00	MTA12A-503-S022-00
		4.0 kW	MTS12A040-503-D10A-00	
	PROFINET (Cu)	**1.5 kW**	MTS12A015-503-E20A-00	MTA12A-503-S023-00
		4.0 kW	MTS12A040-503-E20A-00	
Technology	**PROFIBUS**	**1.5 kW**	MTS12A015-503-P11A-00	MTA12A-503-S021-00
		4.0 kW	MTS12A040-503-P11A-00	
	DeviceNet	**1.5 kW**	MTS12A015-503-D11A-00	MTA12A-503-S022-00
		4.0 kW	MTS12A040-503-D11A-00	
	PROFINET (Cu)	**1.5 kW**	MTS12A015-503-E21A-00	MTA12A-503-S023-00
		4.0 kW	MTS12A040-503-E21A-00	
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	**1.5 kW**	MTS12A015-503-E31A-00	MTA12A-503-S023-00
		4.0 kW	MTS12A040-503-E31A-00	
System	**PROFIBUS**	**1.5 kW**	MTS12A015-503-P12A-00	MTA12A-503-S021-00
		4.0 kW	MTS12A040-503-P12A-00	
SBus slave	**none**	**1.5 kW**	MTS12A015-503-Z10A-00	MTA12A-503-S021-00
		4.0 kW	MTS12A040-503-Z10A-00	

Option

Option	Integrated in	Type
Stainless steel mounting rail	**ABOX**	/M11

Screw fittings

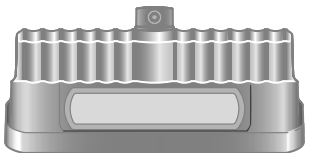
Type of screw fitting	Degree of protection	Figure	Content	Size	Part number
Stainless steel screw plugs	IP69K		10 pc	M16 x 1.5	1820 223 3
			10 pc	M20 x 1.5	1820 224 1
			10 pc	M25 x 1.5	1820 226 8
EMC cable gland (brass, nickel plated)	IP66		10 pc	M16 x 1.5	1820 478 3
			10 pc	M20 x 1.5	1820 479 1
			10 pc	M25 x 1.5	1820 480 5
EMC cable gland (stainless steel)	IP69K		10 pc	M16 x 1.5	1821 636 6
			10 pc	M20 x 1.5	1821 637 4
			10 pc	M25 x 1.5	1821 638 2

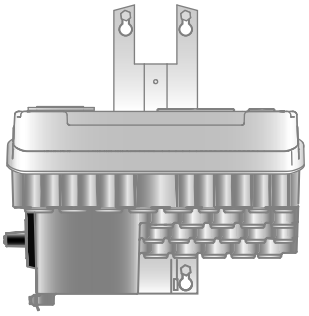
MOVIFIT®-SC in connection with Hybrid ABOX MTA...-S42.-...-00

EBOX | **ABOX**

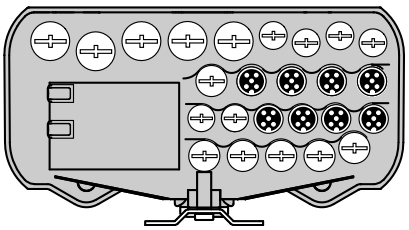
SC

MTS...-...-00
MOVIFIT®-SC with integrated motor switch



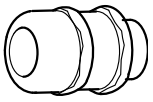


MTA...-S42.-...-00
Hybrid ABOX with M12 for I/Os



Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P10A-00	MTA11A-503-S421-00
		4.0 kW	MTS11A040-503-P10A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E20A-00	MTA11A-503-S423-00
		4.0 kW	MTS11A040-503-E20A-00	
Technology	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P11A-00	MTA11A-503-S421-00
		4.0 kW	MTS11A040-503-P11A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E21A-00	MTA11A-503-S423-00
		4.0 kW	MTS11A040-503-E21A-00	
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	**1.5 kW**	MTS11A015-503-E31A-00	MTA11A-503-S423-00
		4.0 kW	MTS11A040-503-E31A-00	
System	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P12A-00	MTA11A-503-S421-00
		4.0 kW	MTS11A040-503-P12A-00	
SBus slave	**none**	**1.5 kW**	MTS11A015-503-Z10A-00	MTA11A-503-S421-00
		4.0 kW	MTS11A040-503-Z10A-00	

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

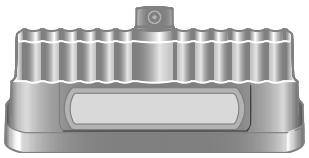
Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Stainless steel mounting rail	**ABOX**	**/M11**

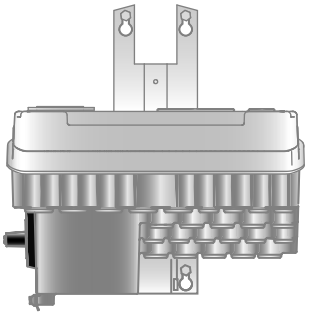
MOVIFIT®-SC in connection with Hybrid ABOX MTA...-S52.-...-00

EBOX | **ABOX**

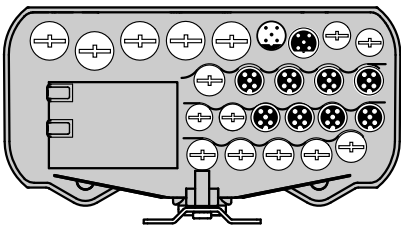
SC

MTS...-...-00
MOVIFIT®-SC with integrated motor switch



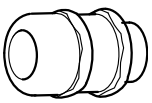


MTA...-S52.-...-00
Hybrid ABOX with M12 for I/Os and bus



Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P10A-00	MTA11A-503-S521-00
		4.0 kW	MTS11A040-503-P10A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D10A-00	MTA11A-503-S522-00
		4.0 kW	MTS11A040-503-D10A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E20A-00	MTA11A-503-S523-00
		4.0 kW	MTS11A040-503-E20A-00	
Technology	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P11A-00	MTA11A-503-S521-00
		4.0 kW	MTS11A040-503-P11A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D11A-00	MTA11A-503-S522-00
		4.0 kW	MTS11A040-503-D11A-00	
	PROFINET (Cu)	**1.5 kW**	MTS11A015-503-E21A-00	MTA11A-503-S523-00
		4.0 kW	MTS11A040-503-E21A-00	
	EtherNet/IP (Cu) Modbus/TCP (Cu)	**1.5 kW**	MTS11A015-503-E31A-00	MTA11A-503-S523-00
		4.0 kW	MTS11A040-503-E31A-00	
System	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P12A-00	MTA11A-503-S521-00
		4.0 kW	MTS11A040-503-P12A-00	

Screw fittings

Type of screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

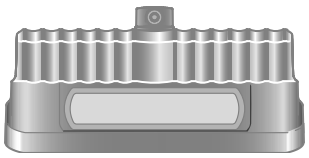
Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Stainless steel mounting rail	**ABOX**	**/M11**

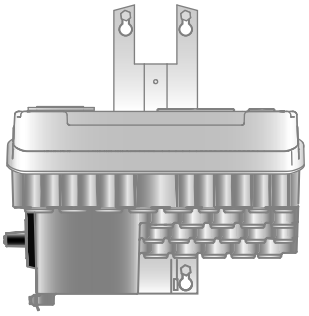
MOVIFIT®-SC in connection with hybrid ABOX MTA...-S62.-...-00

EBOX | **ABOX**

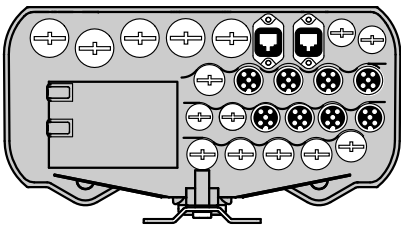
SC

MTS...-...-00
MOVIFIT®-SC with integrated motor switch



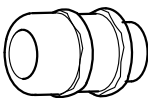


MTA...-S62.-...-00
Hybrid ABOX with M12 for I/Os and push-pull RJ45



Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFINET (Cu)**	**1.5 kW**	MTS11A015-503-E20A-00	MTA11A-503-S623-00
		4.0 kW	MTS11A040-503-E20A-00	
Technology	**PROFINET (Cu)**	**1.5 kW**	MTS11A015-503-E21A-00	MTA11A-503-S623-00
		4.0 kW	MTS11A040-503-E21A-00	
	EtherNet/IP (Cu) **Modbus/TCP (Cu)**	**1.5 kW**	MTS11A015-503-E31A-00	MTA11A-503-S623-00
		4.0 kW	MTS11A040-503-E31A-00	

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Option

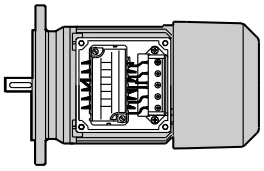
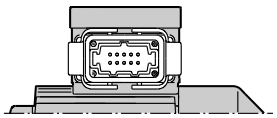
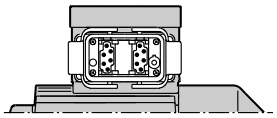
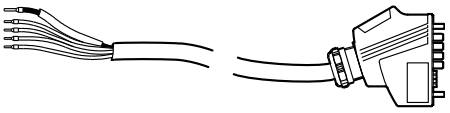
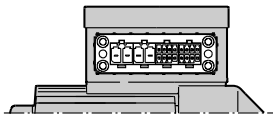
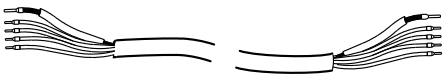
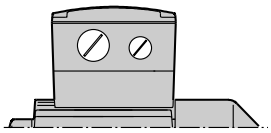
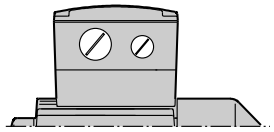
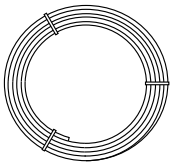
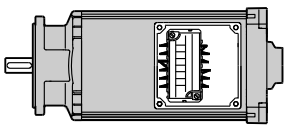
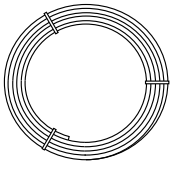
Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Stainless steel mounting rail	**ABOX**	**/M11**

3.17.5 Motor requirements in connection with MOVIFIT®-SC

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

Integral characteristics	Requirements for the assigned AC motor
Permitted motors	Motors within the range 0.25 kW to 4 kW are permitted.
Permitted nominal motor voltage	AC 380 V to AC 500 V
Permitted brakes	no restrictions
Permitted brake voltage	With brakemotors, the brake voltage must correspond to the voltage of the phase voltage (e.g. 400 V mains = 400 V brake coil).
Brake rectifier	Always order the assigned motor **without brake rectifier**.
Permitted plug connectors	The following plug connectors are permitted in connection with the standard or Hybrid ABOX: • ISU4 plug connector • ASB4 plug connector • AMB4 plug connector • APG4 plug connector DAS aseptic gearmotors are always equipped with the IS integrated plug connector. For additional information, refer to section "Hybrid cables for connecting MOVIFIT®-SC and motors" (see page 69).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (positive coefficient thermistor or PTC resistor)

3.17.6 Hybrid cables for connecting MOVIFIT® SC and motors

	MOVIFIT®-SC	Hybrid cables/Hybrid cable roll	Length	Cable type	Drive
SC	**Standard ABOX:** **MTA...-S02.-...-00** **Hybrid ABOX:** **MTA...-S42.-...-00** **MTA...-S52.-...-00** **MTA...-S62.-...-00**	Part no. DR63/DT71-90 (⅄): 0819 967 1 Part no. DR63/DT71-90 (△): 0819 969 8 Part no. DR.71-132, DV100, DV112 (⅄): 0819 970 1 Part no. DR.71-132, DV100, DV112 (△): 0819 874 8 	variable	A	Motor with ISU4 plug connector 
		Part number: 0819 972 8 	variable	A	Motor with ASB4 plug connector 
		Part number: 0819 875 6 	variable	A	Motor with plug connector AMB4 
		Part number: 0819 973 6 	variable	A	Motor with APG4 plug connector 
		Part number: 0819 975 2 	variable	A	Motor with cable glands 
		Part number: 0818 736 3 (hybrid cable roll)	30 m	A	Motor with cable glands 
		Part number: 0818 739 8 (hybrid cable roll) 	100 m	A	
		Part number: 0818 736 3 (hybrid cable roll)	30 m	A	DAS ASEPTIC motor 
		Part number: 0818 739 8 (hybrid cable roll) 	100 m	A	

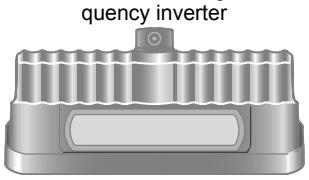
3.17.7 MOVIFIT®-FC – available combinations

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

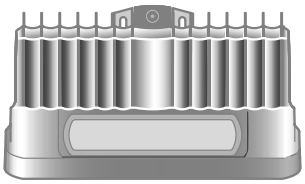
EBOX | **ABOX**

FC

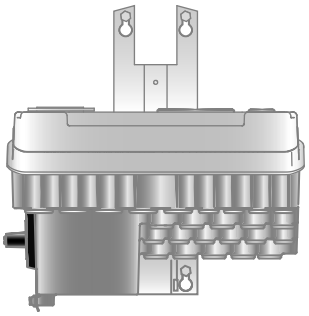
MTF...-...-00
MOVIFIT®-FC with integrated frequency inverter



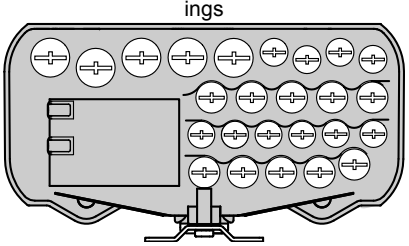
Size 1



Size 2



MTA...-S02.-...-00
Standard ABOX with terminals and cable bushings

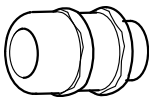


Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 73)	Type of ABOX
Classic	**PROFIBUS**	**0.37 kW**	1	MTF11A003-503-P10A-..	MTA11A-503-S021-00
		0.55 kW		MTF11A005-503-P10A-..	
		0.75 kW		MTF11A007-503-P10A-..	
		1.1 kW		MTF11A011-503-P10A-..	
		1.5 kW		MTF11A015-503-P10A-..	
		2.2 kW	2	MTF11A022-503-P10A-..	
		3.0 kW		MTF11A030-503-P10A-..	
		4.0 kW		MTF11A040-503-P10A-..	
	DeviceNet	**0.37 kW**	1	MTF11A003-503-D10A-..	MTA11A-503-S022-00
		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-..	
	PROFINET (Cu)	**0.37 kW**	1	MTF11A003-503-E20A-..	MTA11A-503-S023-00
		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-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 73)	Type of ABOX
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-..	MTA11A-503-S021-00
		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-..	
	DeviceNet	0.37 kW	1	MTF11A003-503-D11A-..	MTA11A-503-S022-00
		0.55 kW		MTF11A005-503-D11A-..	
		0.75 kW		MTF11A007-503-D11A-..	
		1.1 kW		MTF11A011-503-D11A-..	
		1.5 kW		MTF11A015-503-D11A-..	
		2.2 kW	2	MTF11A022-503-D11A-..	
		3.0 kW		MTF11A030-503-D11A-..	
		4.0 kW		MTF11A040-503-D11A-..	
	PROFINET (Cu)	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-S023-00
		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-..	
	EtherNet/IP (Cu) Modbus/TCP (CU)	0.37 kW	1	MTF11A003-503-E31A-..	MTA11A-503-S023-00
		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-..	
System	PROFIBUS	0.37 kW	1	MTF11A003-503-P12A-..	MTA11A-503-S021-00
		0.55 kW		MTF11A005-503-P12A-..	
		0.75 kW		MTF11A007-503-P12A-..	
		1.1 kW		MTF11A011-503-P12A-..	
		1.5 kW		MTF11A015-503-P12A-..	
		2.2 kW	2	MTF11A022-503-P12A-..	
		3.0 kW		MTF11A030-503-P12A-..	
		4.0 kW		MTF11A040-503-P12A-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 73)	Type of ABOX
SBus slave	**none**	**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 fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Options

Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A015...: **/BW1** (part number 1820 705 7)
	ABOX	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

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:

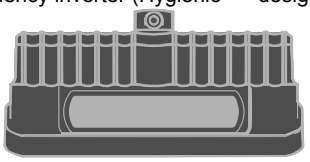
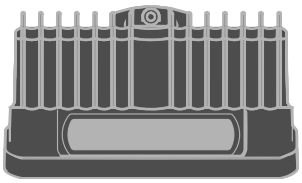
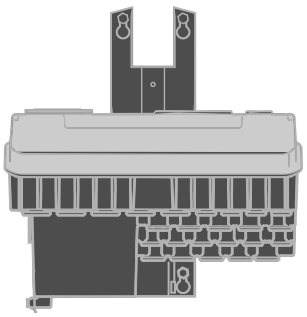
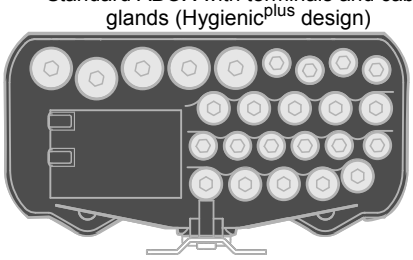
MOVIFIT®-EBOX MTF11A003-503-E20A-[..]

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

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

	TIPS
	• Enclosure IP69 is only achieved if the plastic screw plugs delivered as standard are replaced by suitable IP69K screw plugs. • Section "Screw fittings" (see page 77) provides information on screw fittings that can be ordered from SEW-EURODRIVE.

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

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

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 77)	Type of ABOX
Classic	**PROFIBUS**	**0.37 kW**	1	MTF12A003-503-P10A-..	MTA12A-503-S021-00
		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-..	
	DeviceNet	**0.37 kW**	1	MTF12A003-503-D10A-..	MTA12A-503-S022-00
		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-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 77)	Type of ABOX
Classic	**PROFINET (Cu)**	**0.37 kW**		MTF12A003-503-E20A-..	
		0.55 kW		MTF12A005-503-E20A-..	
		0.75 kW	1	MTF12A007-503-E20A-..	
		1.1 kW		MTF12A011-503-E20A-..	MTA12A-503-S023-00
		1.5 kW		MTF12A015-503-E20A-..	
		2.2 kW		MTF12A022-503-E20A-..	
		3.0 kW	2	MTF12A030-503-E20A-..	
		4.0 kW		MTF12A040-503-E20A-..	
Technol-ogy	**PROFIBUS**	**0.37 kW**		MTF12A003-503-P11A-..	
		0.55 kW		MTF12A005-503-P11A-..	
		0.75 kW	1	MTF12A007-503-P11A-..	
		1.1 kW		MTF12A011-503-P11A-..	MTA12A-503-S021-00
		1.5 kW		MTF12A015-503-P11A-..	
		2.2 kW		MTF12A022-503-P11A-..	
		3.0 kW	2	MTF12A030-503-P11A-..	
		4.0 kW		MTF12A040-503-P11A-..	
	DeviceNet	**0.37 kW**		MTF12A003-503-D11A-..	
		0.55 kW		MTF12A005-503-D11A-..	
		0.75 kW	1	MTF12A007-503-D11A-..	
		1.1 kW		MTF12A011-503-D11A-..	MTA12A-503-S022-00
		1.5 kW		MTF12A015-503-D11A-..	
		2.2 kW		MTF12A022-503-D11A-..	
		3.0 kW	2	MTF12A030-503-D11A-..	
		4.0 kW		MTF12A040-503-D11A-..	
	PROFINET (Cu)	**0.37 kW**		MTF12A003-503-E21A-..	
		0.55 kW		MTF12A005-503-E21A-..	
		0.75 kW	1	MTF12A007-503-E21A-..	
		1.1 kW		MTF12A011-503-E21A-..	MTA12A-503-S023-00
		1.5 kW		MTF12A015-503-E21A-..	
		2.2 kW		MTF12A022-503-E21A-..	
		3.0 kW	2	MTF12A030-503-E21A-..	
		4.0 kW		MTF12A040-503-E21A-..	
	EtherNet/IP (Cu) **Modbus/TCP (CU)**	**0.37 kW**		MTF12A003-503-E31A-..	
		0.55 kW		MTF12A005-503-E31A-..	
		0.75 kW	1	MTF12A007-503-E31A-..	
		1.1 kW		MTF12A011-503-E31A-..	MTA12A-503-S023-00
		1.5 kW		MTF12A015-503-E31A-..	
		2.2 kW		MTF12A022-503-E31A-..	
		3.0 kW	2	MTF12A030-503-E31A-..	
		4.0 kW		MTF12A040-503-E31A-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 77)	Type of ABOX
System	PROFIBUS	0.37 kW	1	MTF12A003-503-P12A-..	MTA12A-503-S021-00
		0.55 kW		MTF12A005-503-P12A-..	
		0.75 kW		MTF12A007-503-P12A-..	
		1.1 kW		MTF12A011-503-P12A-..	
		1.5 kW		MTF12A015-503-P12A-..	
		2.2 kW	2	MTF12A022-503-P12A-..	
		3.0 kW		MTF12A030-503-P12A-..	
		4.0 kW		MTF12A040-503-P12A-..	
SBus slave	none	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-..	

Options

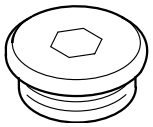
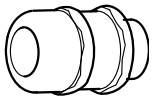
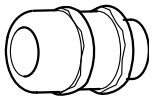
Option	Integrated in	Type
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A015...: **/BW1** (part number 1820 705 7)
	ABOX	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

Screw fittings

Type of screw fitting	Degree of protection	Figure	Content	Size	Part number
Stainless steel screw plugs	IP69K		10 pc	M16 x 1.5	1820 223 3
			10 pc	M20 x 1.5	1820 224 1
			10 pc	M25 x 1.5	1820 226 8
EMC cable gland (brass, nickel plated)	IP66		10 pc	M16 x 1.5	1820 478 3
			10 pc	M20 x 1.5	1820 479 1
			10 pc	M25 x 1.5	1820 480 5
EMC cable gland (stainless steel)	IP69K		10 pc	M16 x 1.5	1821 636 6
			10 pc	M20 x 1.5	1821 637 4
			10 pc	M25 x 1.5	1821 638 2

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-[..]

- 00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
- 01 = DT/DV/DAS 400 V, 50 Hz
- 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 400 V, 50 Hz / 460 V, 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz

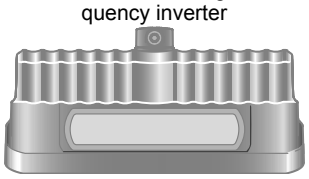
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MOVIFIT®-FC in connection with hybrid ABOX MTA...-S42.-...-00

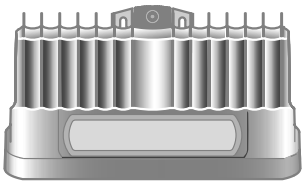
EBOX | **ABOX**

FC

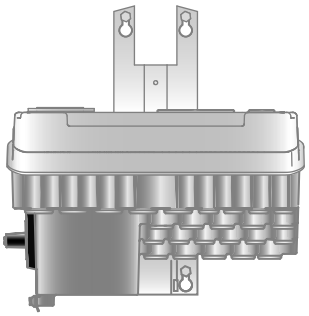
MTF...-...-00
MOVIFIT®-FC with integrated frequency inverter



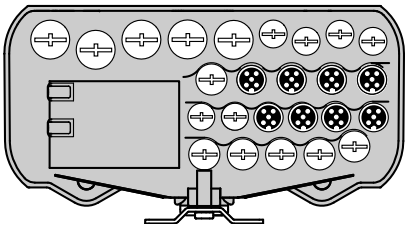
Size 1



Size 2



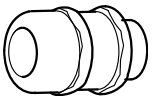
MTA...-S42.-...-00
Hybrid ABOX with M12 for I/Os



Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 80)	Type of ABOX
Classic	**PROFIBUS**	**0.37 kW**	1	MTF11A003-503-P10A-..	MTA11A-503-S421-00
		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-..	
	PROFINET (Cu)	**0.37 kW**	1	MTF11A003-503-E20A-..	MTA11A-503-S423-00
		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-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 80)	Type of ABOX
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-..	MTA11A-503-S421-00
		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-..	
	PROFINET (Cu)	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-S423-00
		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-..	
	EtherNet/IP (Cu) Modbus/TCP (CU)	0.37 kW	1	MTF11A003-503-E31A-..	MTA11A-503-S423-00
		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-..	
System	PROFIBUS	0.37 kW	1	MTF11A003-503-P12A-..	MTA11A-503-S421-00
		0.55 kW		MTF11A005-503-P12A-..	
		0.75 kW		MTF11A007-503-P12A-..	
		1.1 kW		MTF11A011-503-P12A-..	
		1.5 kW		MTF11A015-503-P12A-..	
		2.2 kW	2	MTF11A022-503-P12A-..	
		3.0 kW		MTF11A030-503-P12A-..	
		4.0 kW		MTF11A040-503-P12A-..	
SBus slave	none	0.37 kW	1	MTF11A003-503-Z10A-..	MTA11A-503-S421-00
		0.55 kW		MTF11A005-503-Z10A-..	
		0.75 kW		MTF11A007-503-Z10A-..	
		1.1 kW		MTF11A011-503-Z10A-..	
		1.5 kW		MTF11A015-503-Z10A-..	
		2.2 kW	2	MTF11A022-503-Z10A-..	
		3.0 kW		MTF11A030-503-Z10A-..	
		4.0 kW		MTF11A040-503-Z10A-..	

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Options

Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A015...: **/BW1** (part number 1820 705 7)
	ABOX	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with **4 x FDI + 2 x FDO**	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

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-[..]

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

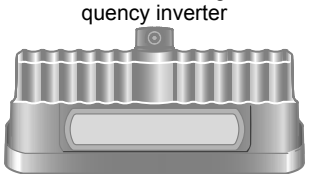
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MOVIFIT®-FC in connection with hybrid ABOX MTA...-S52.-...-00

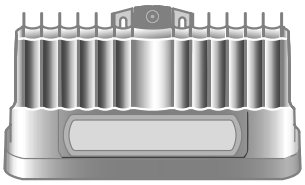
EBOX | **ABOX**

FC

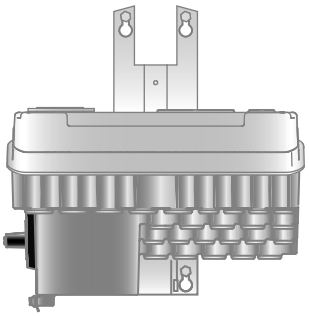
MTF...-...-00
MOVIFIT®-FC with integrated frequency inverter



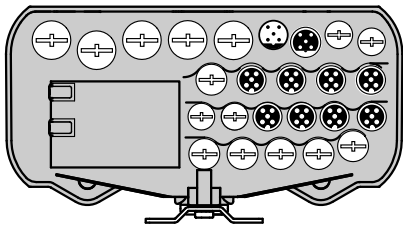
Size 1



Size 2



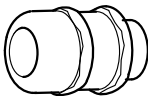
MTA...-S52.-...-00
Hybrid ABOX with M12 for I/Os and bus



Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 83)	Type of ABOX
Classic	**PROFIBUS**	**0.37 kW**	1	MTF11A003-503-P10A-..	MTA11A-503-S521-00
		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-..	
	DeviceNet	**0.37 kW**	1	MTF11A003-503-D10A-..	MTA11A-503-S522-00
		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-..	
	PROFINET (Cu)	**0.37 kW**	1	MTF11A003-503-E20A-..	MTA11A-503-S523-00
		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-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 83)	Type of ABOX
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-..	MTA11A-503-S521-00
		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-..	
	DeviceNet	0.37 kW	1	MTF11A003-503-D11A-..	MTA11A-503-S522-00
		0.55 kW		MTF11A005-503-D11A-..	
		0.75 kW		MTF11A007-503-D11A-..	
		1.1 kW		MTF11A011-503-D11A-..	
		1.5 kW		MTF11A015-503-D11A-..	
		2.2 kW	2	MTF11A022-503-D11A-..	
		3.0 kW		MTF11A030-503-D11A-..	
		4.0 kW		MTF11A040-503-D11A-..	
	PROFINET (Cu)	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-S523-00
		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-..	
	EtherNet/IP (Cu) Modbus/TCP (CU)	0.37 kW	1	MTF11A003-503-E31A-..	MTA11A-503-S523-00
		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-..	
System	PROFIBUS	0.37 kW	1	MTF11A003-503-P12A-..	MTA11A-503-S521-00
		0.55 kW		MTF11A005-503-P12A-..	
		0.75 kW		MTF11A007-503-P12A-..	
		1.1 kW		MTF11A011-503-P12A-..	
		1.5 kW		MTF11A015-503-P12A-..	
		2.2 kW	2	MTF11A022-503-P12A-..	
		3.0 kW		MTF11A030-503-P12A-..	
		4.0 kW		MTF11A040-503-P12A-..	

Screw fittings

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Options

Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A015...: **/BW1** (part number 1820 705 7)
	ABOX	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

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-[..]

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

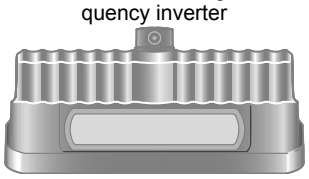
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MOVIFIT®-FC in connection with hybrid ABOX MTA...-S62.-...-00

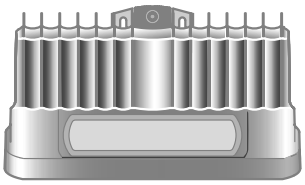
EBOX | **ABOX**

FC

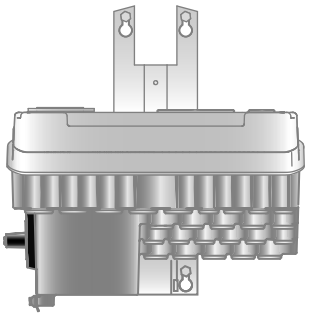
MTF...-...-00
MOVIFIT®-FC with integrated frequency inverter



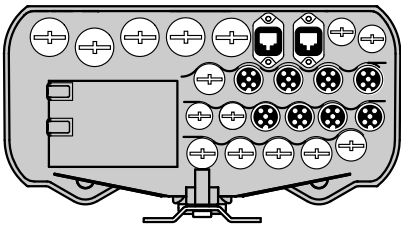
Size 1



Size 2

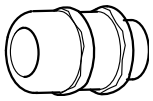


MTA...-S62.-...-00
Hybrid ABOX with M12 for I/Os and push-pull RJ45



Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 85)	Type of ABOX
Classic	PROFINET (Cu)	0.37 kW	1	MTF11A003-503-E20A-..	MTA11A-503-S623-00
		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 (Cu)	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-S623-00
		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-..	
	EtherNet/IP (Cu) Modbus/TCP (CU)	0.37 kW	1	MTF11A003-503-E31A-..	MTA11A-503-S623-00
		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-..	

Cable glands

Type of screw fitting	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pc	M16 x 1.5	1820 478 3
		10 pc	M20 x 1.5	1820 479 1
		10 pc	M25 x 1.5	1820 480 5

Options

Option	Integrated in	Type
Maintenance switch	**ABOX**	MTA.....-....-**D01**-00
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A015...: **/BW1** (part number 1820 705 7)
	ABOX	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
Stainless steel mounting rail	**ABOX**	**/M11**
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

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-[..]

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

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3.17.8 Motor requirements in connection with MOVIFIT®-FC

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

Integral characteristics	Requirements for the assigned AC motor
Permitted motors and brakes	The permitted motors and brakes are listed in section "Assignment of MOVIFIT®-FC to SEW AC motors (see page 87)".
Preferred brake voltage	• Size 1 (MTF11A003.. to MTF11A015..): 230 V • Size 2 (MTF11A022.. to MTF11A040..): 120 V
Brake rectifier	Always order the assigned motor **without brake rectifier**.
Permitted plug connectors	The following plug connectors are permitted in connection with the standard or Hybrid ABOX: • ISU4 plug connector • ASB4 plug connector • AMB4 plug connector • APG4 plug connector DAS aseptic gearmotors are always equipped with the IS integrated plug connector. For additional information, refer to section "Hybrid cables for connecting MOVIFIT®-FC and motors" (see page 91).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (positive coefficient thermistor or PTC resistor)[1)]
Permitted encoder system	In connection with DR motors: • EI71 incremental encoder • EI72 incremental encoder • EI76 incremental encoder • EI7C incremental encoder In connection with DT/DV motors: • NV26 proximity sensor • ES16 incremental encoder Can be evaluated in connection with MOVIFIT® function level Technology. For additional information, refer to section "Connection options for encoders" (see page 52).

1) TF not permitted in connection with group drives

3.17.9 Assignment of MOVIFIT®-FC to SEW AC motors

TIPS

- As a standard, i.e. when MOVIFIT®-FC in Easy mode is parameterized via DIP switches, the following motor/brake combinations can be used (see tables below).
- For the regenerative load capacity of the brake coils, refer to section "4Q operation with motors with mechanical brake" (see page 240).
- Expanded parameterization in Expert mode via fieldbus or diagnostic interface allows for additional motor/brake combinations. Further information can be found in the following publications:
  – "MOVIFIT® Function Level Classic" manual
  – "MOVIFIT® Function Level Technology" manual
- In the function level System, only the standard combinations can be taken into operation (see following tables).

DR motors

DRS				**V =**			**AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz**					
MOVIFIT®	**Assigned DRS motor and brake[1)]**											
	S10/5 = OFF						**S10/5 = ON**					
	⅄ connection			**△ connection**			**⅄ connection**			**△ connection**		
	Motor	**Brake**		**Motor**	**Brake**		**Motor**	**Brake**		**Motor**	**Brake**	
		Stan-dard	**Option**		**Stan-dard**	**Option**		**Stan-dard**	**Option**		**Stan-dard**	**Option**
MTF..003..10 **MTF..003..12**	DRS71 S4	BE05	BE1	DR63 L4[2)]	BR03	-	DR63 L4[2)]	BR03	-	-	-	-
MTF..005..10 **MTF..005..12**	DRS71 M4	BE1	BE05	DRS71 S4	BE05	BE1	DRS71 S4	BE05	BE1	DR63 L4[2)]	BR03	-
MTF..007..10 **MTF..007..12**	DRS80 S4	BE1	BE05	DRS71 M4	BE1	BE05	DRS71 M4	BE1	BE05	DRS71 S4	BE05	BE1
MTF..011..10 **MTF..011..12**	DRS80 M4	BE2	BE1	DRS80 S4	BE1	BE05	DRS80 S4	BE1	BE05	DRS71 M4	BE1	BE05
MTF..015..10 **MTF..015..12**	DRS90 M4	BE2	BE1	DRS80 M4	BE2	BE1	DRS80 M4	BE2	BE1	DRS80 S4	BE1	BE05
MTF..022..10 **MTF..022..12**	DRS90 L4	BE5	BE2	DRS90 M4	BE2	BE1	DRS90 M4	BE2	BE1	DRS80 M4	BE2	BE1
MTF..030..10 **MTF..030..12**	DRS100 M4	BE5	BE2	DRS90 L4	BE5	BE2	DRS90 L4	BE5	BE2	DRS90 M4	BE2	BE1
MTF..040..10 **MTF..040..12**	DRS100 LC4[2)] L4[3)]	BE5	BE2	DRS100 M4[2)]	BE5[2)]	BE2[2)]	DRS100 M4	BE5	BE2	DRS90 L4	BE5	BE2

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

2) Only for AC 3 x 400 V, 50 Hz

3) Only for AC 3 x 460 V, 60 Hz

DRE							V =	AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz				
MOVIFIT®	Assigned DRE 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..11 **MTF..003..13**	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..11 **MTF..005..13**	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..11 **MTF..007..13**	DRE80 M4	BE1	BE05	-	-	-	-	-	-	-	-	-
MTF..011..11 **MTF..011..13**	DRE90 M4	BE2	BE1	DRE80 M4	BE1	BE05	DRE80 M4	BE1	BE05	-	-	-
MTF..015..11 **MTF..015..13**	DRE90 L4	BE2	BE1	DRE90 M4	BE2	BE1	DRE90 M4	BE2	BE1	DRE80 M4	BE1	BE05
MTF..022..11 **MTF..022..13**	DRE100 M4[2] L4[3]	BE5	BE2	DRE90 L4	BE2	BE1	DRE90 L4	BE2	BE1	DRE90 M4	BE2	BE1
MTF..030..11 **MTF..030..13**	DRE100 LC4	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2	DRE90 L4	BE2	BE1
MTF..040..11 **MTF..040..13**	DRE132 S4[2]	BE5	BE11	DRE100 LC4[2]	BE5[2]	BE2[2]	DRE100 LC4	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2

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

2) Only for AC 3 x 400 V, 50 Hz

3) Only for AC 3 x 460 V, 60 Hz

DRP							V = AC 3 x 400 V, 50 Hz					
MOVIFIT®	Assigned DRP 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..16	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..16	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..16	DRP90 M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF..011..16	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2	DRP90 M4	BE1	BE2	-	-	-
MTF..015..16	DRP100 M4	BE2	BE5	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2
MTF..022..16	DRP100 L4	BE5	BE2	DRP100 M4	BE2	BE5	DRP100 M4	BE2	BE5	DRP90 L4	BE2	BE1
MTF..030..16	DRP112 M4	BE5	BE11	DRP100 L4	BE5	BE2	DRP100 L4	BE5	BE2	DRP100 M4	BE2	BE5
MTF..040..16	DRP132 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP100 L4	BE5	BE2

DRP							V = AC 3 x 460 V, 60 Hz					
MOVIFIT®	Assigned DRP 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..17	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..17	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..17	DRP90 M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF..011..17	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2	DRP90 M4	BE1	BE2	-	-	-
MTF..015..17	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2
MTF..022..17	DRP112 M4	BE5	BE11	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1
MTF..030..17	DRP132 S4	BE5	BE11	DRP112 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP90 L4	BE2	BE1
MTF..040..17	-	-	-	-	-	-	DRP132 S4	BE5	BE11	DRP112 M4	BE5	BE11

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

DT motors, DV motors, DAS motors

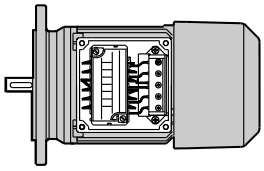
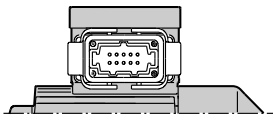
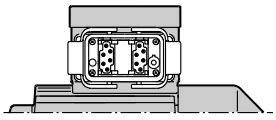
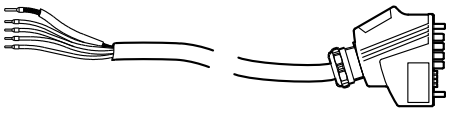
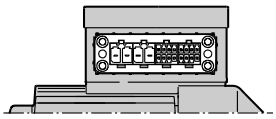
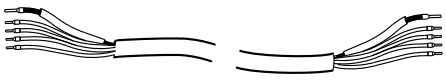
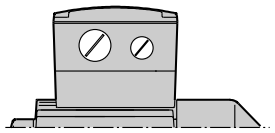
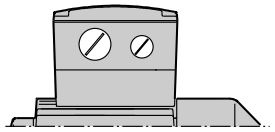
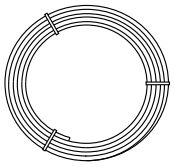
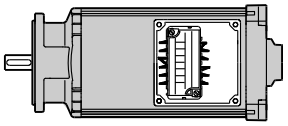
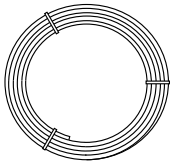
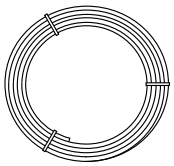
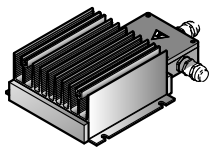
DT/DV					V =	AC 3 x 400 V, 50 Hz		
MOVIFIT®	Assigned DT/DV motor and brake[1]							
	S10/5 = OFF				S10/5 = ON			
	⅄ connection		△ connection		⅄ connection		△ connection	
	Motor	Brake	Motor	Brake	Motor	Brake	Motor	Brake
MTF..003..00	DT71D4	BMG05	DR63L4	BR03	DR63L4	BR03	-	-
MTF..005..00	DT80K4	BMG1	DT71D4	BMG05	DT71D4	BMG05	DR63L4	BR03
MTF..007..00	DT80N4	BMG1	DT80K4	BMG1	DT80K4	BMG1	DT71D4	BMG05
MTF..011..00	DT90S4	BMG2	DT80N4	BMG1	DT80N4	BMG1	DT80K4	BMG1
MTF..015..00	DT90L4	BMG2	DT90S4	BMG2	DT90S4	BMG2	DT80N4	BMG1
MTF..022..00	DV100M4	BMG4	DT90L4	BMG2	DT90L4	BMG2	DT90S4	BMG2
MTF..030..00	DV100L4	BMG4	DV100M4	BMG4	DV100M4	BMG4	DT90L4	BMG2
MTF..040..00	DV112M4	BMG8	DV100L4	BMG4	DV100L4	BMG4	DV100M4	BMG4

1) Possible brake voltages: 110 V, 230 V, 400 V

DAS					V =	AC 3 x 400 V, 50 Hz		
MOVIFIT®	Assigned DAS motor and brake[2]							
	S10/5 = OFF				S10/5 = ON			
	⅄ connection		△ connection		⅄ connection		△ connection	
	Motor	Brake	Motor	Brake	Motor	Brake	Motor	Brake
MTF..003..01	DAS80N4	BR1	DAS80K4	BR1	DAS80K4	BR1	-	-
MTF..005..01	DAS90S4	BR2	DAS80N4	BR1	DAS80N4	BR1	DAS80K4	BR1
MTF..007..01	DAS90L4	BR2	DAS90S4	BR2	DAS90S4	BR2	DAS80N4	BR1
MTF..011..01	DAS100M4	BR2	DAS90L4	BR2	DAS90L4	BR2	DAS90S4	BR2
MTF..015..01	DAS100L4	BR2	DAS100M4	BR2	DAS100M4	BR2	DAS90L4	BR2
MTF..022..01	-	-	DAS100L4	BR2	DAS100L4	BR2	DAS100M4	BR2
MTF..030..01	-	-	-	-	-	-	DAS100L4	BR2
MTF..040..01	-	-	-	-	-	-	-	-

2) Possible brake voltages: BR1 : 230 V, BR2: 230 V and 400 V

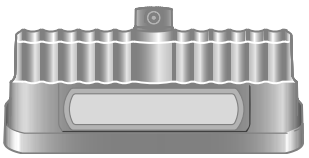
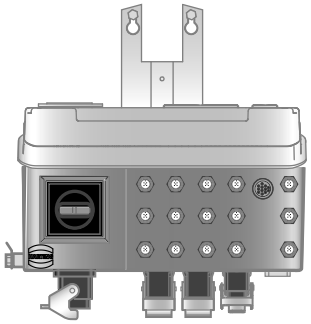
3.17.10 Hybrid cables for connecting MOVIFIT®-FC and motors

	MOVIFIT®-FC	Hybrid cables/cable rolls	Length	Cable type	Drive
FC	**Standard ABOX:** **MTA...-S02.-...-00** **Hybrid ABOX:** **MTA...-S42.-...-00**	Part no. DR63/DT71-90 (⅄): 0819 967 1 Part no. DR63/DT71-90 (△): 0819 969 8 Part no. DR.71-132, DV100, DV112 (⅄): 0819 970 1 Part no. DR.71-132, DV100, DV112 (△): 0819 874 8 	variable	A	Motor with ISU4 plug connector 
	MTA...-S52.-...-00	Part number: 0819 972 8 	variable	A	Motor with ASB4 plug connector 
	MTA...-S62.-...-00	Part number: 0819 875 6 	variable	A	Motor with plug connector AMB4 
		Part number: 0819 973 6 	variable	A	Motor with APG4 plug connector 
		Part number: 0819 975 2 	variable	A	Motor with cable glands 
		Part number: 0818 736 3 (hybrid cable roll)	30 m	A	Motor with cable glands 
		Part number: 0818 739 8 (hybrid cable roll) 	100 m	A	
		Part number: 0818 736 3 (hybrid cable roll)	30 m	A	DAS ASEPTIC motor 
		Part number: 0818 739 8 (hybrid cable roll) 	100 m	A	
		Part number: 1172 378 5 (cable roll) 	30 m	-	External braking resistor 

3.18 Selection tables in conjunction with Han-Modular® ABOX

3.18.1 MOVIFIT®-MC – available combinations

MOVIFIT®-MC in connection with Han-Modular® ABOX MTA...-H11.-...-00

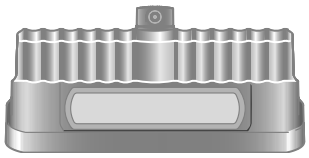
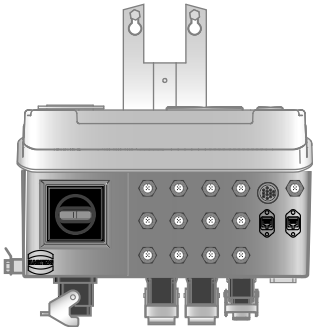
	EBOX	ABOX
MC	**MTM...-...-00** MOVIFIT® MC for controlling up to 3 MOVI-MOT® drives 	**MTA...-H11.-...-00** Han-Modular® ABOX with M12 for I/Os and bus and with industrial connectors 

Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFIBUS**	MTM11A000-P10A-00	MTA11A-503-H111-M01-00
	DeviceNet	MTM11A000-D10A-00	MTA11A-503-H112-M01-00
Technology	**PROFIBUS**	MTM11A000-P11A-00	MTA11A-503-H111-M01-00
	DeviceNet	MTM11A000-D11A-00	MTA11A-503-H112-M01-00
System	**PROFIBUS**	MTM11A000-P12A-00	MTA11A-503-H111-M01-00

Option

Option	Integrated in	Type
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

MOVIFIT®-MC in connection with Han-Modular ABOX MTA...-H21.-...-00

	EBOX	ABOX
MC	**MTM...-...-00** MOVIFIT® MC for controlling up to 3 MOVI-MOT® drives 	**MTA...-H21.-...-00** Han-Modular® ABOX with M12 for I/Os, Push-Pull RJ45 and industrial connectors 

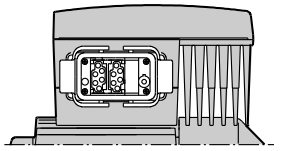
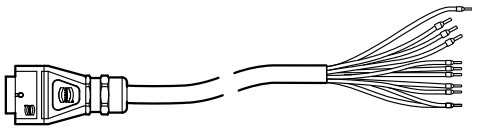
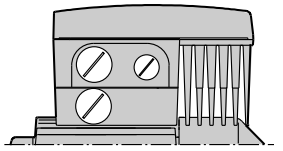
Function level	Fieldbus	EBOX Type	ABOX Type
Classic	**PROFINET (Cu)**	MTM11A000-E20A-00	MTA11A-503-H213-M01-00
Technology	**PROFINET (Cu)**	MTM11A000-E21A-00	MTA11A-503-H213-M01-00
	EtherNet/IP (Cu) **Modbus/TCP (CU)**	MTM11A000-E31A-00	MTA11A-503-H213-M01-00

Option

Option	Integrated in	Type
PROFIsafe extension with **4 x FDI + 2 x FDO**	**EBOX**	**/S11**

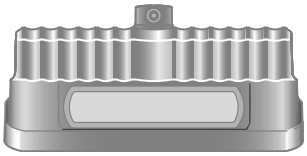
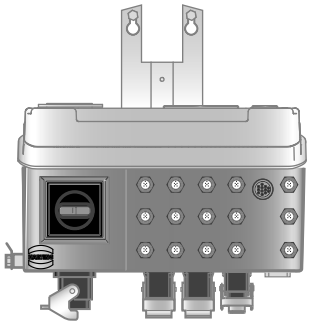
3.18.2 Hybrid cables for connecting MOVIFIT®-MC and MOVIMOT®

The following table lists the available hybrid cables for total currents of up to 12 A (with UL approval only up to 9 A):

	MOVIFIT®-MC	Hybrid cable	Length	Cable type	Drive
MC	**Han-Modular® ABOX:** **MTA...-H11.-...-00** **MTA...-H21.-...-00**	Part number: 1810 050 3 	variable	B	MOVIMOT® with AMA6 plug connector 
		Part number: 1811 120 3 	variable	B	MOVIMOT® with Cable glands 

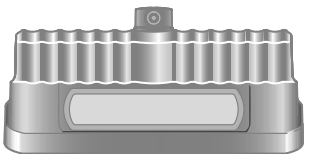
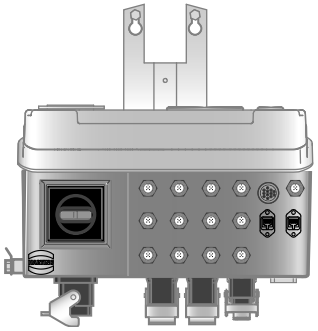
3.18.3 MOVIFIT®-SC – available combinations

MOVIFIT®-SC in connection with Han-Modular® ABOX MTA...-H12.-...-00

	EBOX	ABOX
SC	**MTS...-...-00** MOVIFIT®-SC With integrated motor switch 	**MTA...-H12.-...-00** Han-Modular® ABOX with M12 for I/Os and bus and with industrial connectors 

Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P10A-00	MTA11A-503-H121-D01-00
		4.0 kW	MTS11A040-503-P10A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D10A-00	MTA11A-503-H122-D01-00
		4.0 kW	MTS11A040-503-D10A-00	
Technology	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P11A-00	MTA11A-503-H121-D01-00
		4.0 kW	MTS11A040-503-P11A-00	
	DeviceNet	**1.5 kW**	MTS11A015-503-D11A-00	MTA11A-503-H122-D01-00
		4.0 kW	MTS11A040-503-D11A-00	
System	**PROFIBUS**	**1.5 kW**	MTS11A015-503-P12A-00	MTA11A-503-H121-D01-00
		4.0 kW	MTS11A040-503-P12A-00	

MOVIFIT® SC in connection with Han-Modular® ABOX MTA...-H22.-...-00

	EBOX	ABOX
SC	**MTS...-...-00** MOVIFIT®-SC With integrated motor switch 	**MTA...-H22.-...-00** Han-Modular® ABOX with M12 for I/Os, Push-Pull RJ45 and industrial connectors 

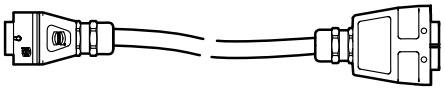
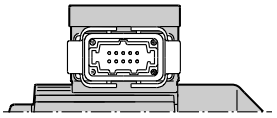
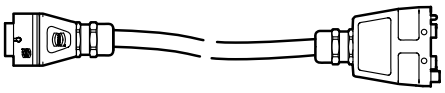
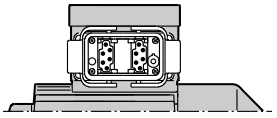
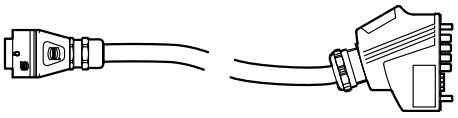
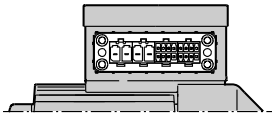
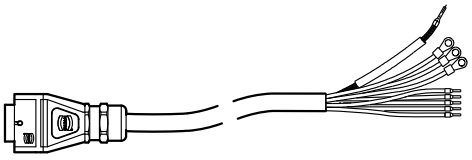
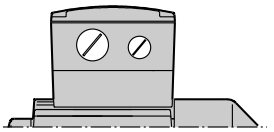
Function level	Fieldbus	Unit power	EBOX Type	ABOX Type
Classic	**PROFINET (Cu)**	**1.5 kW**	MTS11A015-503-E20A-00	MTA11A-503-H223-D01-00
		4.0 kW	MTS11A040-503-E20A-00	
Technology	**PROFINET (Cu)**	**1.5 kW**	MTS11A015-503-E21A-00	MTA11A-503-H223-D01-00
		4.0 kW	MTS11A040-503-E21A-00	
	EtherNet/IP (Cu) **Modbus/TCP (CU)**	**1.5 kW**	MTS11A015-503-E31A-00	MTA11A-503-H223-D01-00
		4.0 kW	MTS11A040-503-E31A-00	

3.18.4 Motor requirements in connection with MOVIFIT®-SC

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

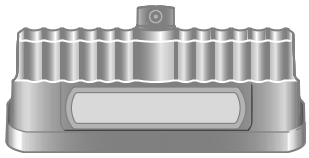
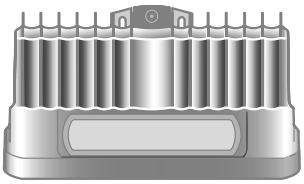
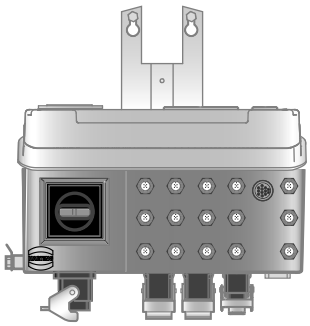
Integral characteristics	Requirements for the assigned AC motor
Permitted motors	Motors within the range 0.25 kW to 4 kW are permitted.
Permitted nominal motor voltage	AC 380 V to AC 500 V
Permitted brakes	no restrictions
Permitted brake voltage	With brakemotors, the brake voltage must correspond to the voltage of the phase voltage (e.g. 400 V mains = 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 Han-Modular® ABOX: • Motor with ASB4 plug connector • Motor with AMB4 plug connector • Motor with APG4 plug connector For additional information, refer to section "Hybrid cables for connecting MOVIFIT®-SC and motors" (see page 98).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (positive coefficient thermistor or PTC resistor)

3.18.5 Hybrid cables for connecting MOVIFIT®-SC and motors

	MOVIFIT®-SC	Hybrid cable	Length	Cable type	Drive
SC	**Han-Modular® ABOX:** **MTA...-H12.-...-00** **MTA...-H22.-...-00**	Part number 1810 096 1 	variable	A	Motor with ASB4 plug connector 
		Part number 1810 098 8 	variable	A	Motor with plug connector AMB4 
		Part number 1810 099 6 	variable	A	Motor with APG4 plug connector 
		Part number DR/DT/DV71-100: 1811 121 1 Part number DR/DV112: 1811 128 9 	variable	A	Motor with cable glands 

3.18.6 MOVIFIT®-FC – available combinations

MOVIFIT®-FC in connection with Han-Modular® ABOX MTA...-H12.-...-00

	EBOX	ABOX
FC	**MTF...-...-00** MOVIFIT®-FC with integrated frequency inverter  Size 1  Size 2	**MTA...-H12.-...-00** Han-Modular® ABOX with M12 for I/Os and bus and with industrial connectors 

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 101)	Type of ABOX
Classic	**PROFIBUS**	**0.37 kW**	1	MTF11A003-503-P10A-..	MTA11A-503-H121-D01-00
		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-..	
	DeviceNet	**0.37 kW**	1	MTF11A003-503-D10A-..	MTA11A-503-H122-D01-00
		0.55 kW		MTF11A005-503-D10A-..	
		0.75 kW		MTF11A007-503-D10A-..	
		1.1 kW		MTF11A011-503-D10A-..	
		1.5 kW		MTF11A015-503-D10A-..	
		2.2 kW	2	MTF11A022-503-D10A-..	
		3.0 kW		MTF11A030-503-D10A-..	
		4.0 kW		MTF11A040-503-D10A-..	

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 101)	Type of ABOX
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-..	MTA11A-503-H121-D01-00
		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-..	
	DeviceNet	0.37 kW	1	MTF11A003-503-D11A-..	MTA11A-503-H122-D01-00
		0.55 kW		MTF11A005-503-D11A-..	
		0.75 kW		MTF11A007-503-D11A-..	
		1.1 kW		MTF11A011-503-D11A-..	
		1.5 kW		MTF11A015-503-D11A-..	
		2.2 kW	2	MTF11A022-503-D11A-..	
		3.0 kW		MTF11A030-503-D11A-..	
		4.0 kW		MTF11A040-503-D11A-..	
System	PROFIBUS	0.37 kW	1	MTF11A003-503-P12A-..	MTA11A-503-H121-D01-00
		0.55 kW		MTF11A005-503-P12A-..	
		0.75 kW		MTF11A007-503-P12A-..	
		1.1 kW		MTF11A011-503-P12A-..	
		1.5 kW		MTF11A015-503-P12A-..	
		2.2 kW	2	MTF11A022-503-P12A-..	
		3.0 kW		MTF11A030-503-P12A-..	
		4.0 kW		MTF11A040-503-P12A-..	

Options

Option	Integrated in	Type
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

Motor assignment

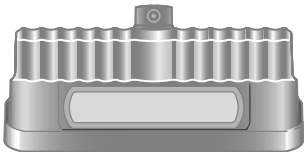
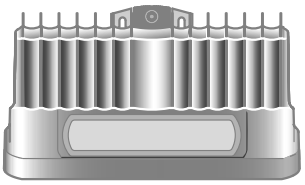
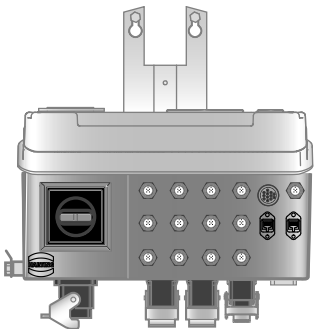
Depending on the motor used, you have to complete the order designations for the MOVIFIT®-EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-[..]

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

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MOVIFIT®-FC in connection with Han-Modular® ABOX MTA...-H22.-...-00

	EBOX	ABOX
FC	**MTF...-...-00** MOVIFIT®-FC with integrated frequency inverter  Size 1  Size 2	**MTA...-H22.-...-00** Han-Modular® ABOX with M12 for I/Os, Push-Pull RJ45 and industrial connectors 

Function level	Fieldbus	Unit power	Size	Type of EBOX .. = Motor assignment (see page 103)	Type of ABOX
Classic	**PROFINET (Cu)**	**0.37 kW**	1	MTF11A003-503-E20A-..	MTA11A-503-H223-D01-00
		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 (Cu)**	**0.37 kW**	1	MTF11A003-503-E21A-..	MTA11A-503-H223-D01-00
		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-..	
	EtherNet/IP (Cu) **Modbus/TCP (CU)**	**0.37 kW**	1	MTF11A003-503-E31A-..	MTA11A-503-H223-D01-00
		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-..	

Options

Option	Integrated in	Type
Integrated braking resistor For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).	**ABOX**	MTF11A003... to MTF11A040...: **/BW2** (part number 1820 754 5)
PROFIsafe extension with 4 x FDI + 2 x FDO	**EBOX**	**/S11**

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	**MTF11A003... to MTF11A015...**	**0 828 291 9**	0 813 152 X
BW200-005/K-1.5		**0 828 283 8**	-
BW150-010		**0 802 285 2**	-
BW100-003/K-1.5	**MTF11A022... to MTF11A040...**	**0 828 293 5**	0 813 152 X
BW100-005/K-1.5		**0 828 286 2**	-
BW068-010		**0 802 287 9**	-
BW068-020		**0 802 286 0**	-

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-..

00 = DT/DV/DZ 400 V, 50 Hz / 460 V, 60 Hz
01 = DT/DV/DAS 400 V, 50 Hz
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 400 V, 50 Hz / 460 V, 60 Hz
16 = DRP 400 V, 50 Hz
17 = DRP 460 V, 60 Hz

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3.18.7 Motor requirements in connection with MOVIFIT®-FC

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

Integral characteristics	Requirements for the assigned AC motor
Permitted motors and brakes	The permitted motors and brakes are listed in section "Assignment of MOVIFIT®-FC to SEW AC motors (see page 105)".
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 Han-Modular® ABOX: • Motor with ASB4 plug connector • Motor with AMB4 plug connector • Motor with APG4 plug connector For additional information, refer to section "Hybrid cables for connecting MOVIFIT®-FC and motors" (see page 109).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (positive coefficient thermistor or PTC resistor)[1)]
Permitted encoder system	In connection with DR motors: • EI71 incremental encoder • EI72 incremental encoder • EI76 incremental encoder • EI7C incremental encoder In connection with DT/DV motors: • NV26 proximity sensor • ES16 incremental encoder Can be evaluated in connection with MOVIFIT® function level Technology. For additional information, refer to section "Connection options for encoders" (see page 52).

1) TF not permitted in connection with group drives

3.18.8 Assignment of MOVIFIT®-FC to SEW AC motors

TIPS

- As a standard, i.e. when MOVIFIT®-FC in Easy mode is parameterized via DIP switches, the following motor/brake combinations can be used (see tables below).
- For the regenerative load capacity of the brake coils, refer to section "4Q operation with motors with mechanical brake" (see page 240).
- Expanded parameterization in Expert mode via fieldbus or diagnostic interface allows for additional motor/brake combinations. Further information can be found in the following publications:
  – "MOVIFIT® Function Level Classic" manual
  – "MOVIFIT® Function Level Technology" manual
- In the function level System, only the standard combinations can be taken into operation (see following tables).

DR motors

DRS				V =	AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz						
MOVIFIT®	Assigned DRS 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..10 **MTF..003..12**	DRS71 S4	BE05	BE1	DR63 L4[2]	BR03	-	DR63 L4[2]	BR03	-	-	-	-
MTF..005..10 **MTF..005..12**	DRS71 M4	BE1	BE05	DRS71 S4	BE05	BE1	DRS71 S4	BE05	BE1	DR63 L4[2]	BR03	-
MTF..007..10 **MTF..007..12**	DRS80 S4	BE1	BE05	DRS71 M4	BE1	BE05	DRS71 M4	BE1	BE05	DRS71 S4	BE05	BE1
MTF..011..10 **MTF..011..12**	DRS80 M4	BE2	BE1	DRS80 S4	BE1	BE05	DRS80 S4	BE1	BE05	DRS71 M4	BE1	BE05
MTF..015..10 **MTF..015..12**	DRS90 M4	BE2	BE1	DRS80 M4	BE2	BE1	DRS80 M4	BE2	BE1	DRS80 S4	BE1	BE05
MTF..022..10 **MTF..022..12**	DRS90 L4	BE5	BE2	DRS90 M4	BE2	BE1	DRS90 M4	BE2	BE1	DRS80 M4	BE2	BE1
MTF..030..10 **MTF..030..12**	DRS100 M4	BE5	BE2	DRS90 L4	BE5	BE2	DRS90 L4	BE5	BE2	DRS90 M4	BE2	BE1
MTF..040..10 **MTF..040..12**	DRS100 LC4[2] L4[3]	BE5	BE2	DRS100 M4[2]	BE5[2]	BE2[2]	DRS100 M4	BE5	BE2	DRS90 L4	BE5	BE2

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

2) Only for AC 3 x 400 V, 50 Hz

3) Only for AC 3 x 460 V, 60 Hz

DRE							V =	AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz				
MOVIFIT®	Assigned DRE 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..11 **MTF..003..13**	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..11 **MTF..005..13**	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..11 **MTF..007..13**	DRE80 M4	BE1	BE05	-	-	-	-	-	-	-	-	-
MTF..011..11 **MTF..011..13**	DRE90 M4	BE2	BE1	DRE80 M4	BE1	BE05	DRE80 M4	BE1	BE05	-	-	-
MTF..015..11 **MTF..015..13**	DRE90 L4	BE2	BE1	DRE90 M4	BE2	BE1	DRE90 M4	BE2	BE1	DRE80 M4	BE1	BE05
MTF..022..11 **MTF..022..13**	DRE100 M4[2] L4[3]	BE5	BE2	DRE90 L4	BE2	BE1	DRE90 L4	BE2	BE1	DRE90 M4	BE2	BE1
MTF..030..11 **MTF..030..13**	DRE100 LC4	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2	DRE90 L4	BE2	BE1
MTF..040..11 **MTF..040..13**	DRE132 S4[2]	BE5	BE11	DRE100 LC4[2]	BE5[2]	BE2[2]	DRE100 LC4	BE5	BE2	DRE100 M4[2] L4[3]	BE5	BE2

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

2) Only for AC 3 x 400 V, 50 Hz

3) Only for AC 3 x 460 V, 60 Hz

DRP							V = AC 3 x 400 V, 50 Hz					
MOVIFIT®	Assigned DRP 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..16	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..16	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..16	DRP90 M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF..011..16	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2	DRP90 M4	BE1	BE2	-	-	-
MTF..015..16	DRP100 M4	BE2	BE5	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2
MTF..022..16	DRP100 L4	BE5	BE2	DRP100 M4	BE2	BE5	DRP100 M4	BE2	BE5	DRP90 L4	BE2	BE1
MTF..030..16	DRP112 M4	BE5	BE11	DRP100 L4	BE5	BE2	DRP100 L4	BE5	BE2	DRP100 M4	BE2	BE5
MTF..040..16	DRP132 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP100 L4	BE5	BE2

DRP							V = AC 3 x 460 V, 60 Hz					
MOVIFIT®	Assigned DRP 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..17	-	-	-	-	-	-	-	-	-	-	-	-
MTF..005..17	-	-	-	-	-	-	-	-	-	-	-	-
MTF..007..17	DRP90 M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF..011..17	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2	DRP90 M4	BE1	BE2	-	-	-
MTF..015..17	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 M4	BE1	BE2
MTF..022..17	DRP112 M4	BE5	BE11	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1	DRP90 L4	BE2	BE1
MTF..030..17	DRP132 S4	BE5	BE11	DRP112 M4	BE5	BE11	DRP112 M4	BE5	BE11	DRP90 L4	BE2	BE1
MTF..040..17	-	-	-	-	-	-	DRP132 S4	BE5	BE11	DRP112 M4	BE5	BE11

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

DT motors, DV motors, DAS motors

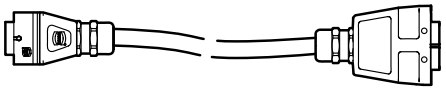
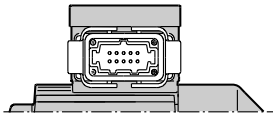
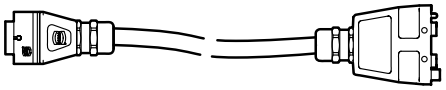
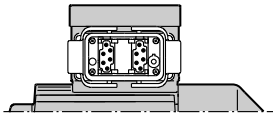
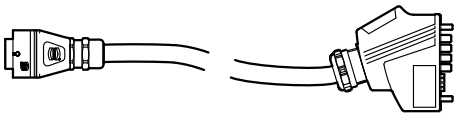
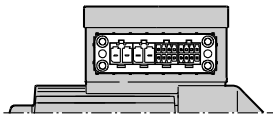
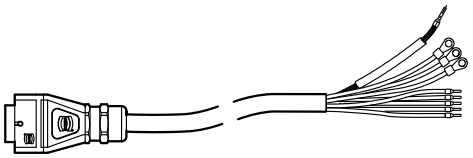
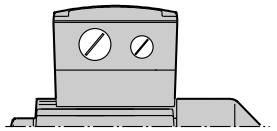
DT/DV			V =		AC 3 x 400 V, 50 Hz			
MOVIFIT®	**Assigned DT/DV motor and brake[1)]**							
	S10/5 = OFF				**S10/5 = ON**			
	⅄ connection		**△ connection**		**⅄ connection**		**△ connection**	
	Motor	**Brake**	**Motor**	**Brake**	**Motor**	**Brake**	**Motor**	**Brake**
MTF..003..00	DT71D4	BMG05	DR63L4	BR03	DR63L4	BR03	-	-
MTF..005..00	DT80K4	BMG1	DT71D4	BMG05	DT71D4	BMG05	DR63L4	BR03
MTF..007..00	DT80N4	BMG1	DT80K4	BMG1	DT80K4	BMG1	DT71D4	BMG05
MTF..011..00	DT90S4	BMG2	DT80N4	BMG1	DT80N4	BMG1	DT80K4	BMG1
MTF..015..00	DT90L4	BMG2	DT90S4	BMG2	DT90S4	BMG2	DT80N4	BMG1
MTF..022..00	DV100M4	BMG4	DT90L4	BMG2	DT90L4	BMG2	DT90S4	BMG2
MTF..030..00	DV100L4	BMG4	DV100M4	BMG4	DV100M4	BMG4	DT90L4	BMG2
MTF..040..00	DV112M4	BMG8	DV100L4	BMG4	DV100L4	BMG4	DV100M4	BMG4

1) Possible brake voltages: 110 V, 230 V, 400 V

DAS			V =		AC 3 x 400 V, 50 Hz			
MOVIFIT®	**Assigned DAS motor and brake[2)]**							
	S10/5 = OFF				**S10/5 = ON**			
	⅄ connection		**△ connection**		**⅄ connection**		**△ connection**	
	Motor	**Brake**	**Motor**	**Brake**	**Motor**	**Brake**	**Motor**	**Brake**
MTF..003..01	DAS80N4	BR1	DAS80K4	BR1	DAS80K4	BR1	-	-
MTF..005..01	DAS90S4	BR2	DAS80N4	BR1	DAS80N4	BR1	DAS80K4	BR1
MTF..007..01	DAS90L4	BR2	DAS90S4	BR2	DAS90S4	BR2	DAS80N4	BR1
MTF..011..01	DAS100M4	BR2	DAS90L4	BR2	DAS90L4	BR2	DAS90S4	BR2
MTF..015..01	DAS100L4	BR2	DAS100M4	BR2	DAS100M4	BR2	DAS90L4	BR2
MTF..022..01	-	-	DAS100L4	BR2	DAS100L4	BR2	DAS100M4	BR2
MTF..030..01	-	-	-	-	-	-	DAS100L4	BR2
MTF..040..01	-	-	-	-	-	-	-	-

2) Possible brake voltages: BR1 : 230 V, BR2: 230 V and 400 V

3.18.9 Hybrid cables for connecting MOVIFIT®-FC and motors

	MOVIFIT®-FC	Hybrid cable	Length	Cable type	Drive
FC	**Han-Modular® ABOX:** **MTA...-H12.-...-00** **MTA...-H22.-...-00**	Part number 1810 096 1 	variable	A	Motor with ASB4 plug connector 
		Part number 1810 098 8 	variable	A	Motor with plug connector AMB4 
		Part number 1810 099 6 	variable	A	Motor with APG4 plug connector 
		Part number DR/DT/DV71-100: 1811 121 1 Part number DR/DV112: 1811 128 9 	variable	A	Motor with cable glands 

3.19 Permitted designs with functional safety

3.19.1 MOVIFIT®-MC

Only the following units are permitted in applications with safe disconnection of the drive (STO) up to safety category 3 to EN 954-1 as well as performance level d to EN ISO 13849-1.

For additional information on the safety function and the safety-related requirements, refer to the "MOVIFIT® – Functional Safety" manual.

EBOX	ABOX
MOVIFIT®-MC	**Standard ABOX**
MTM1.A000-P1.A-00	MTA1.A-503-S011-M..-00
MTM1.A000-E..A-00	MTA1.A-503-S012-M..-00
MTM1.A000-D1.A-00	MTA1.A-503-S013-M..-00
	Hybrid ABOX
	MTA11A-503-S411-M..-00
	MTA11A-503-S413-M..-00
	MTA11A-503-S511-M..-00
	MTA11A-503-S512-M..-00
	MTA11A-503-S513-M..-00
	MTA11A-503-S613-M..-00
	Han-Modular® ABOX
	MTA11A-503-H111-M01-00
	MTA11A-503-H213-M01-00
	MTA11A-503-H112-M01-00

TIP

Note: This certification only applies to the safe disconnection of MOVIFIT®-MC in combination with the safety- oriented MM..-503-00 drive system and its requirements.

3.19.2 MOVIFIT®-FC

Only the following units are permitted in applications with safe disconnection of the drive (STO) up to safety category 3 to EN 954-1 as well as performance level d to EN ISO 13849-1.

For additional information on the safety function and the safety-related requirements, refer to the "MOVIFIT® – Functional Safety" manual.

EBOX			ABOX
MOVIFIT®-FC for DR motors	**MOVIFIT®-FC for DAS motors**	**MOVIFIT®-FC for DT/ DV motors**	**Standard ABOX**
MTF1.A...-503-P1.A-10	MTF1.A...-503-P1.A-01	MTF1.A...-503-P1.A-00	MTA1.A-503-S021-...-00
MTF1.A...-503-E..A-10	MTF1.A...-503-E..A-01	MTF1.A...-503-E..A-00	MTA1.A-503-S023-...-00
MTF1.A...-503-D1.A-10	MTF1.A...-503-D1.A-01	MTF1.A...-503-D1.A-00	MTA1.A-503-S022-...-00
MTF1.A...-503-Z10A-10	MTF1.A...-503-Z10A-01	MTF1.A...-503-Z10A-00	
			Hybrid ABOX
MTF1.A...-503-P1.A-11			MTA11A-503-S421-...-00
MTF1.A...-503-E..A-11			MTA11A-503-S423-...-00
MTF1.A...-503-D1.A-11			MTA11A-503-S521-...-00
MTF1.A...-503-Z10A-11			MTA11A-503-S522-...-00
			MTA11A-503-S523-...-00
MTF1.A...-503-P1.A-12			MTA11A-503-S623-...-00
MTF1.A...-503-E..A-12			
MTF1.A...-503-D1.A-12			**Han-Modular® ABOX**
MTF1.A...-503-Z10A-12			MTA11A-503-H121-D01-00
			MTA11A-503-H223-D01-00
MTF1.A...-503-P1.A-13			MTA11A-503-H122-D01-00
MTF1.A...-503-E..A-13			
MTF1.A...-503-D1.A-13			
MTF1.A...-503-Z10A-13			
MTF1.A...-503-P1.A-14			
MTF1.A...-503-E..A-14			
MTF1.A...-503-D1.A-14			
MTF1.A...-503-Z10A-14			
MTF1.A...-503-P1.A-15			
MTF1.A...-503-E..A-15			
MTF1.A...-503-D1.A-15			
MTF1.A...-503-Z10A-15			
MTF1.A...-503-P1.A-16			
MTF1.A...-503-E..A-16			
MTF1.A...-503-D1.A-16			
MTF1.A...-503-Z10A-16			

3.20 Permitted designs with PROFIsafe option S11

PROFIsafe option S11 is permitted for use in safety-oriented applications up to SIL3 according to EN 61508, safety category 4 according to EN 954-1, and performance level "e" according to EN ISO 13849-1.

For additional information on the safety function and the safety-related requirements, refer to the "MOVIFIT® – Functional Safety" manual.

	TIP
	Note: The certification only applies to the safety-oriented PROFIsafe option S11. The safety-oriented drive function that can be implemented with this depends on the respective MOVIFIT® basic unit.

3.20.1 MOVIFIT®-MC with PROFIsafe option /S11

EBOX	ABOX
MOVIFIT®-MC with PROFIsafe option S11 MTM1.A000-P1.A-00/S11 MTM1.A000-E2.A-00/S11	**Standard ABOX** MTA1.A-503-S011-M..-00 MTA1.A-503-S013-M..-00 **Hybrid ABOX** MTA11A-503-S411-M..-00 MTA11A-503-S413-M..-00 MTA11A-503-S511-M..-00 MTA11A-503-S513-M..-00 MTA11A-503-S613-M..-00 **Han-Modular® ABOX** MTA11A-503-H111-M01-00 MTA11A-503-H213-M01-00

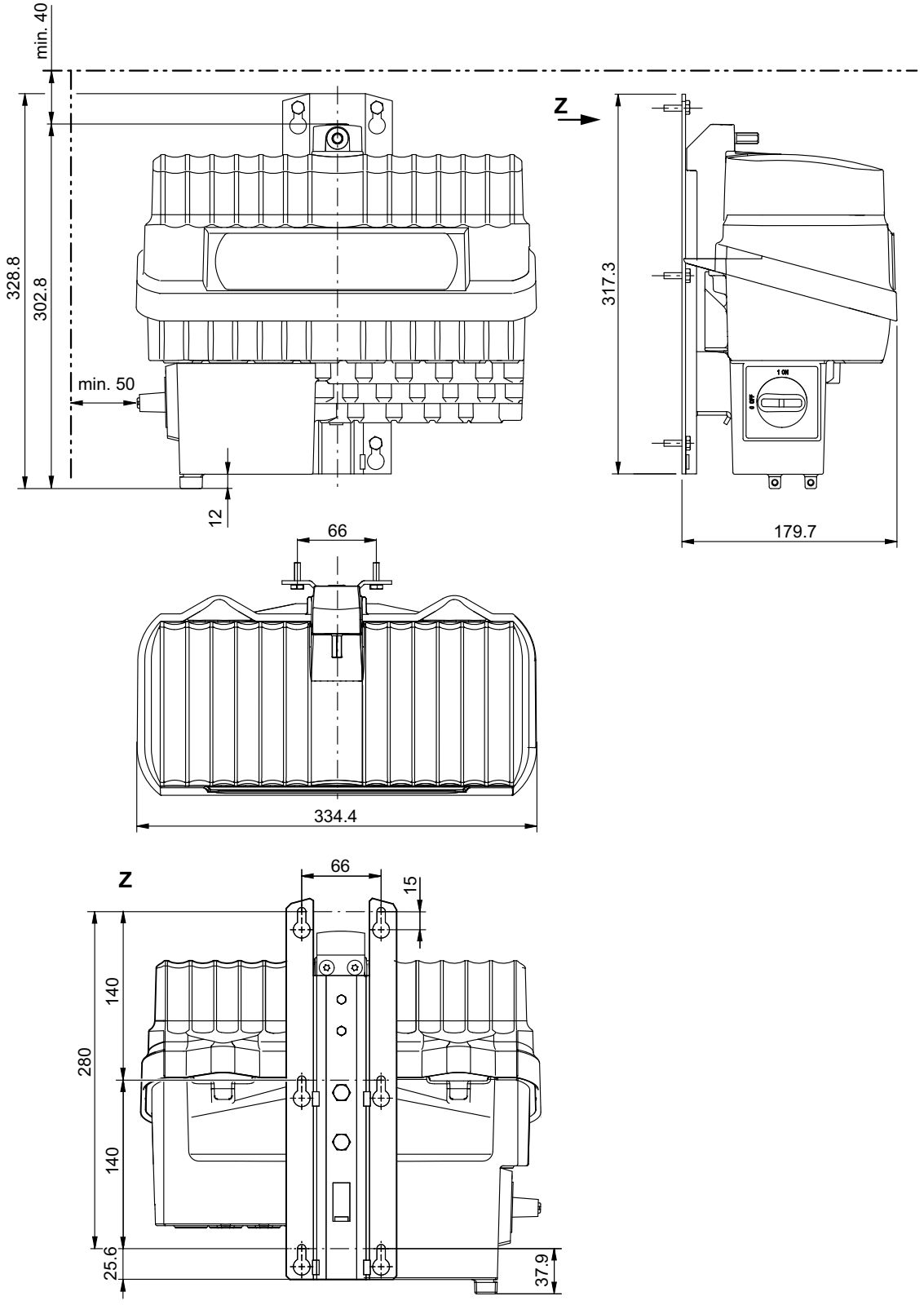
3.20.2 MOVIFIT®-FC with PROFIsafe option /S11

EBOX			ABOX
MOVIFIT®-FC for DR motors	**MOVIFIT®-FC for DAS motors**	**MOVIFIT®-FC for DT/DV motors**	**Standard ABOX**
MTF1.A...-503-P1.A-10/S11	MTF1.A...-503-P1.A-01/S11	MTF1.A...-503-P1.A-00/S11	MTA1.A-503-S021-...-00
MTF1.A...-503-E2.A-10/S11	MTF1.A...-503-E2.A-01/S11	MTF1.A...-503-E2.A-00/S11	MTA1.A-503-S023-...-00
MTF1.A...-503-P1.A-11/S11			**Hybrid ABOX**
MTF1.A...-503-E2.A-11/S11			MTA11A-503-S421-...-00
MTF1.A...-503-P1.A-12/S11			MTA11A-503-S423-...-00
MTF1.A...-503-E2.A-12/S11			MTA11A-503-S521-...-00
MTF1.A...-503-P1.A-13/S11			MTA11A-503-S523-...-00
MTF1.A...-503-E2.A-13/S11			MTA11A-503-S623-...-00
MTF1.A...-503-P1.A-14/S11			**Han-Modular® ABOX**
MTF1.A...-503-E2.A-14/S11			MTA11A-503-H121-D01-00
MTF1.A...-503-P1.A-15/S11			MTA11A-503-H223-D01-00
MTF1.A...-503-E2.A-15/S11			
MTF1.A...-503-P1.A-16/S11			
MTF1.A...-503-E2.A-16/S11			

3.21 Dimension drawings

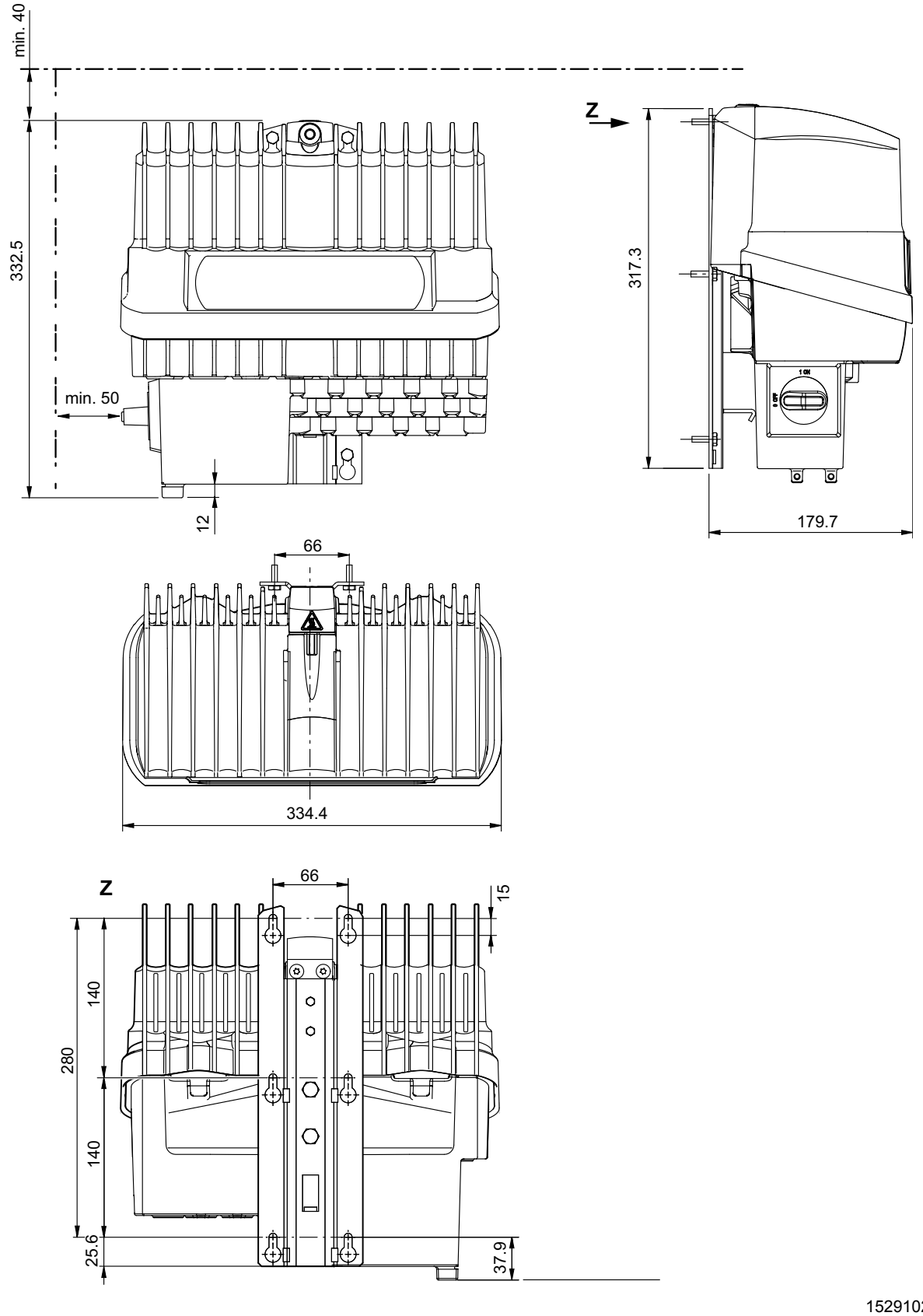
3.21.1 Standard ABOX, Hybrid ABOX (S01, S02, S41, S42, S51, S52, S61, S62)

Size 1 (MOVIFIT®-MC, MOVIFIT®-SC and MOVIFIT®-FC 0.37 to 1.5 kW)



1529110027

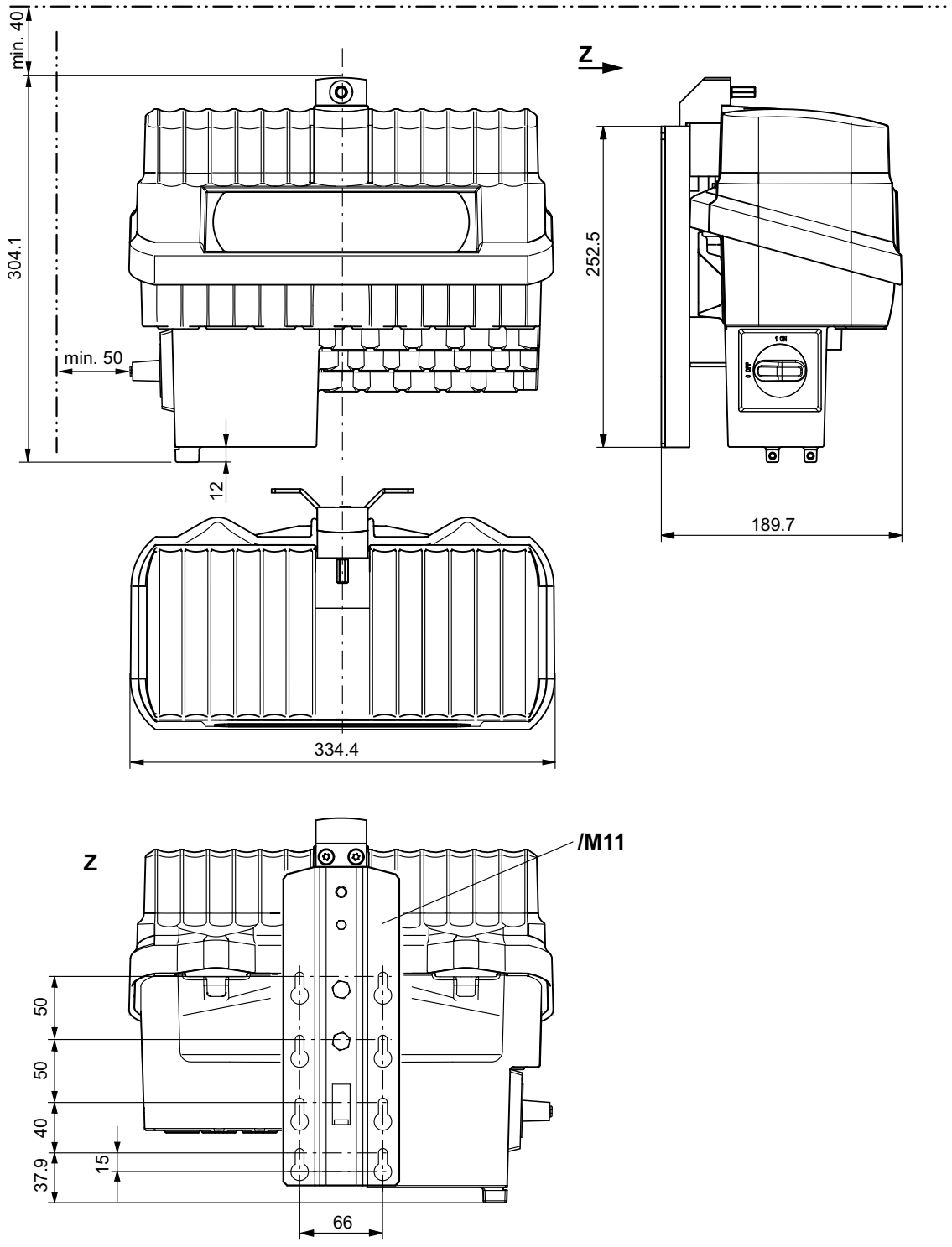
Size 2 (MOVIFIT®-FC 2.2 to 4 kW)



1529102347

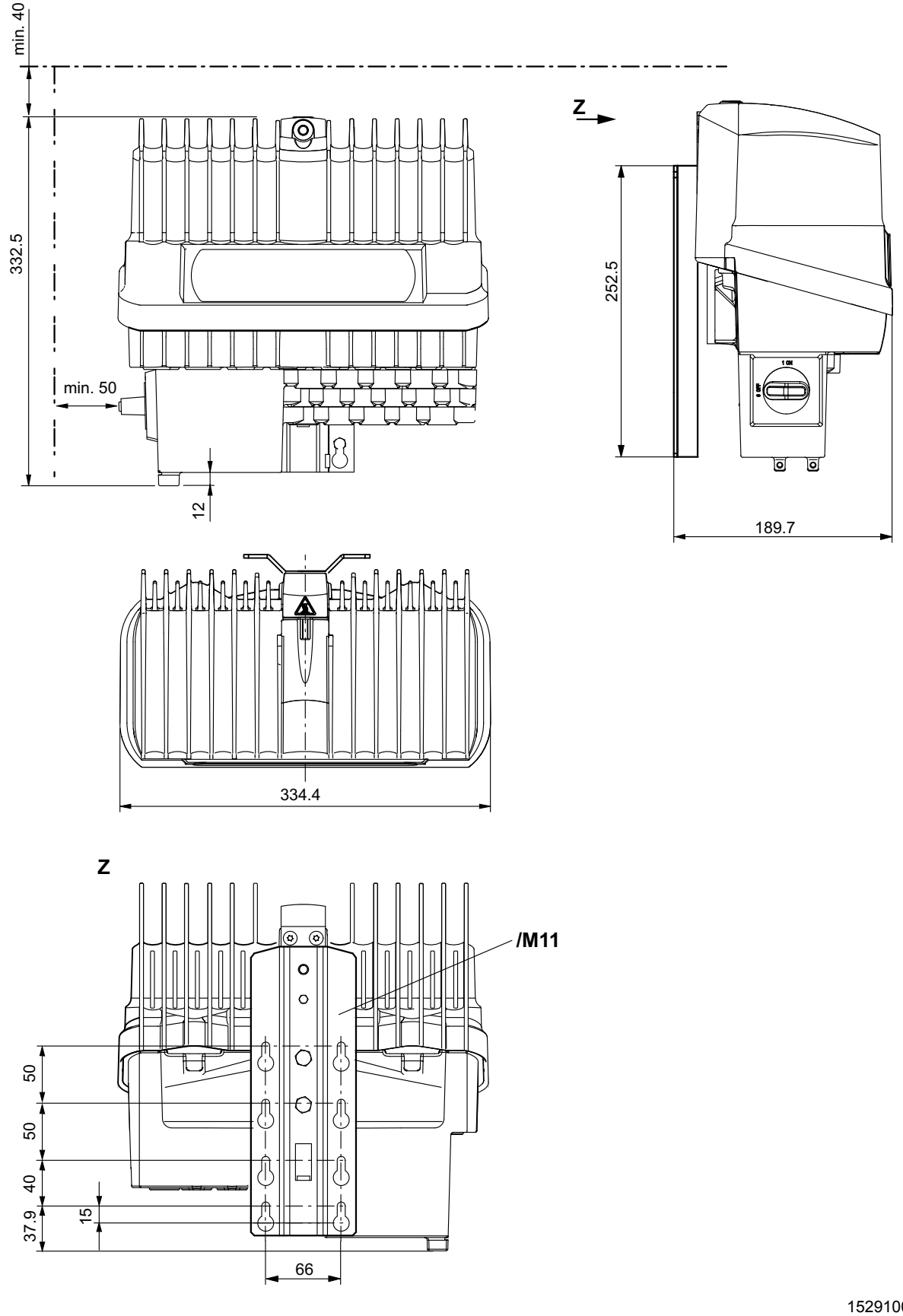
3.21.2 Standard ABOX, Hybrid ABOX (S01, S02, S41, S42, S51, S52, S61, S62) and option /M11

Size 1 (MOVIFIT®-MC, MOVIFIT®-SC and MOVIFIT®-FC 0.37 to 1.5 kW)



1529108107

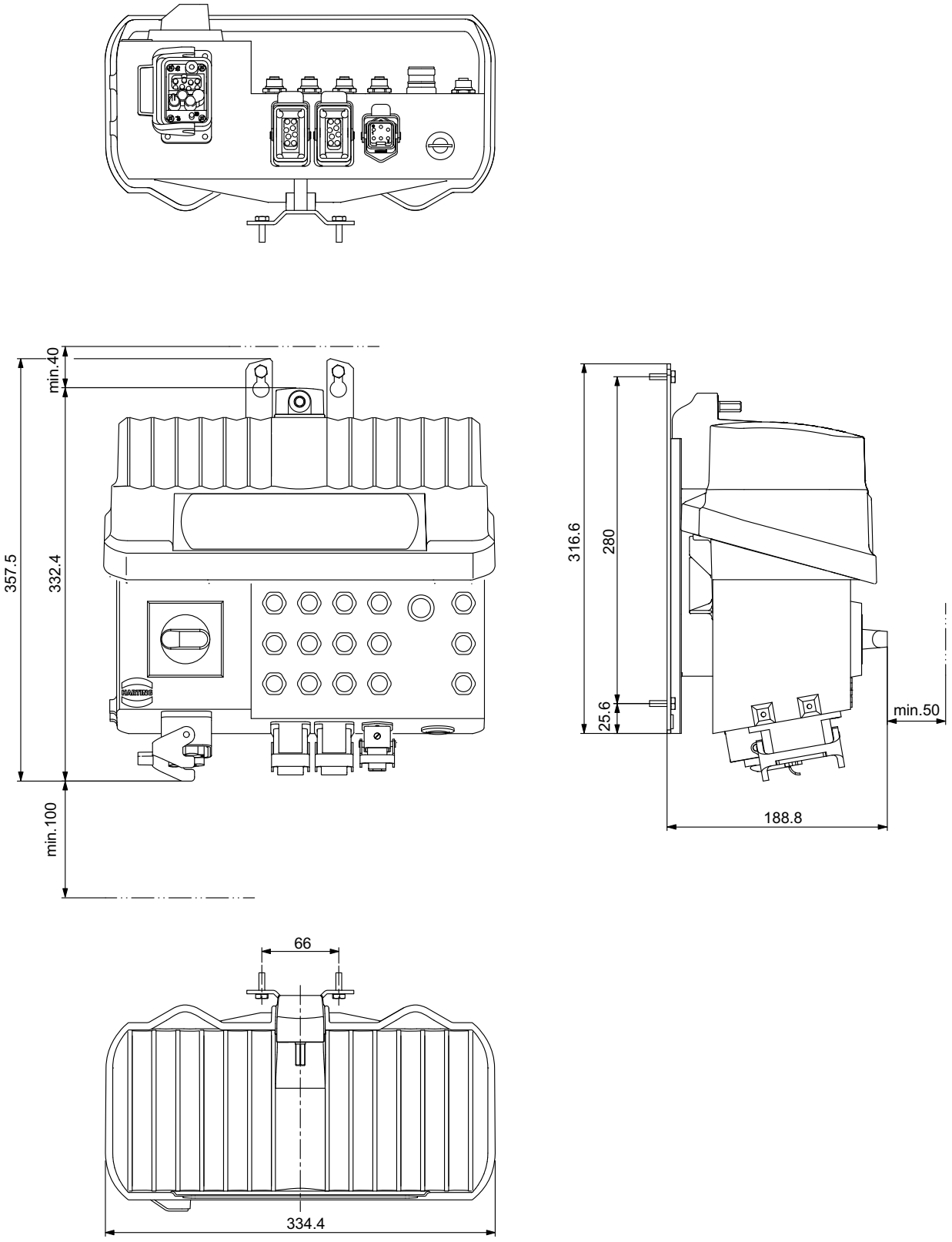
Size 2 (MOVIFIT®-FC 2.2 to 4 kW)



1529100427

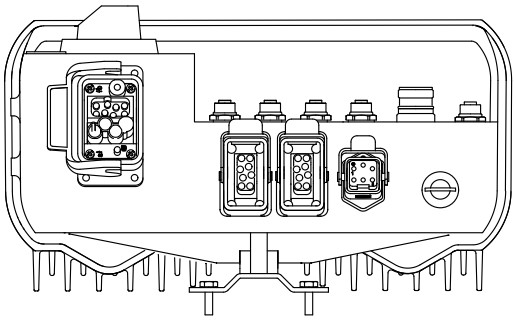
3.21.3 In connection with Han-Modular® ABOX (H11, H12, H21, H22)

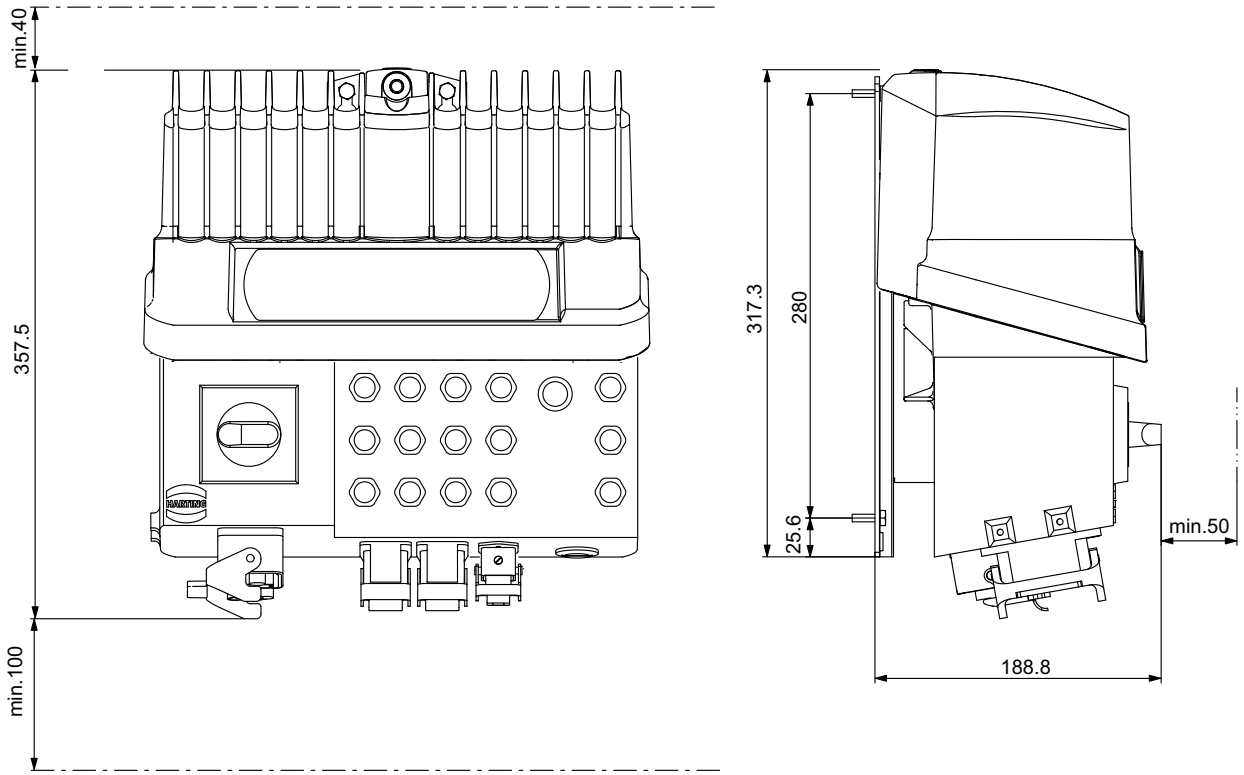
Size 1 (MOVIFIT®-MC, MOVIFIT®-SC and MOVIFIT®-FC 0.37 to 1.5 kW)

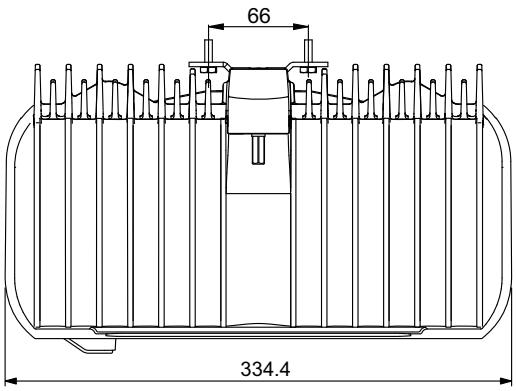


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Size 2 (MOVIFIT®-FC 2.2 to 4 kW)





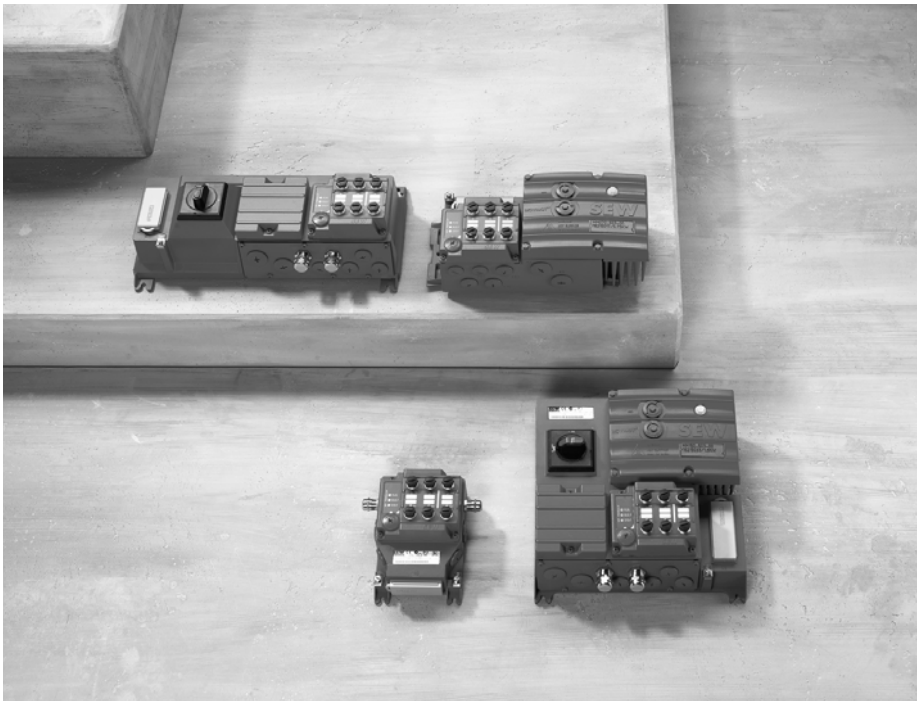


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4 Fieldbus Interfaces and Field Distributors

4.1 Description

The following figure shows field distributors from SEW-EURODRIVE:



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4.1.1 MF.. fieldbus interfaces / 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 input and output terminals. All fieldbus interfaces and field distributors are supplied in protection class IP65 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 using IPOS$^{plus®}$
- Simple positioning with EI76 incremental encoder
- Integrated I/O preprocessing and timing elements
- Protocol modification

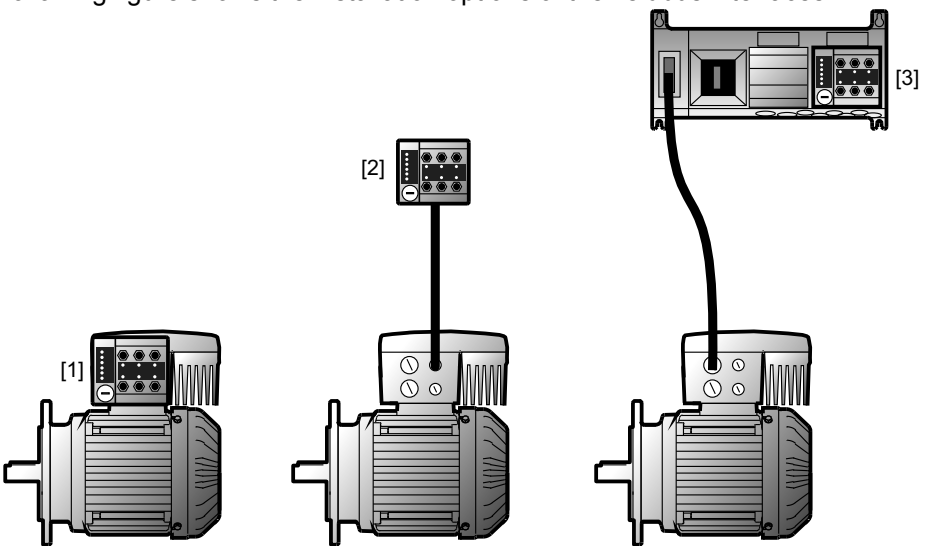
4.1.2 Field distributors

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.

4.1.3 Installation options

The following figure shows the installation options of the fieldbus interfaces MF.. / MQ..:

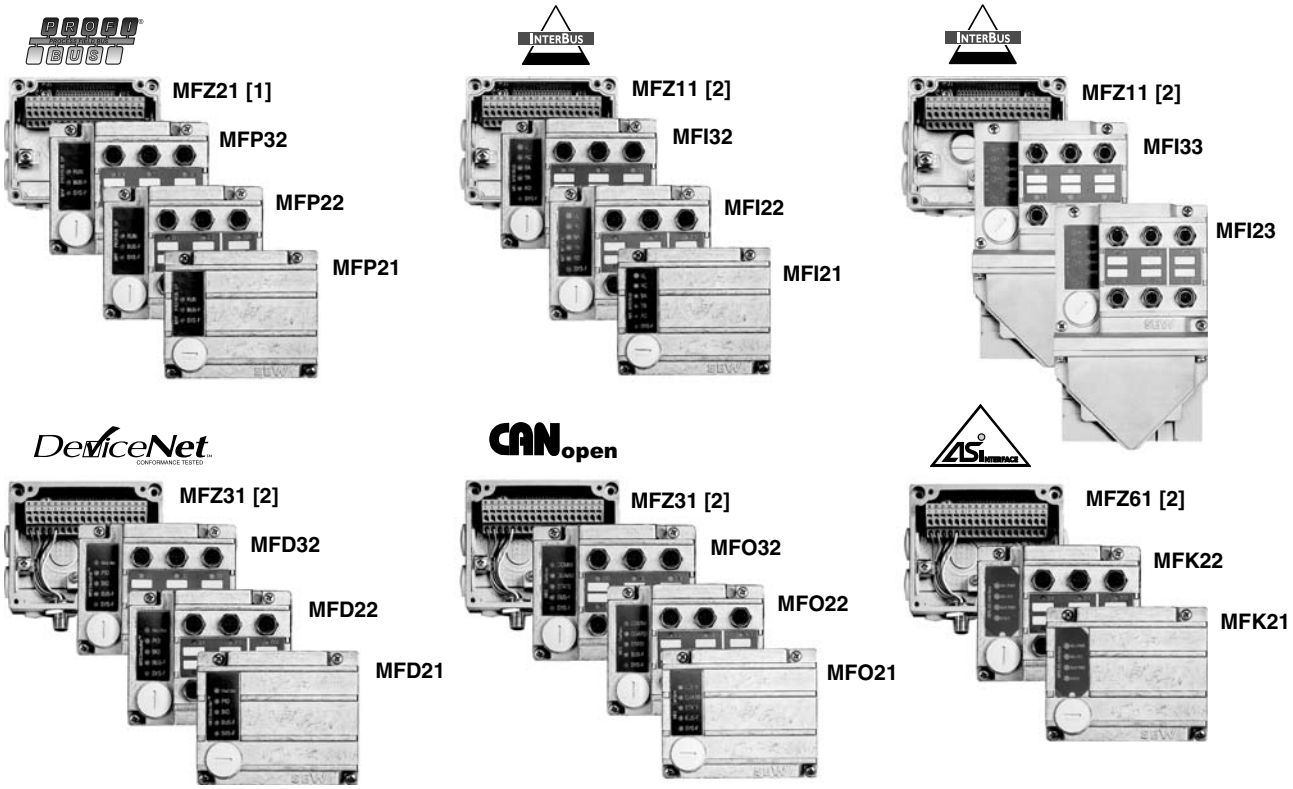


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[1] Installation on the drive
[2] Installation in the field
[3] Installation in field distributor

4.2 Fieldbus interfaces

4.2.1 MF../Z.1 fieldbus interfaces



1413508491

[1] red imprint on terminal
[2] black imprint on terminal

PROFIBUS variants

Module type **Part number**	**MFP21D** **823 624 0**	**MFP22D** **823 625 9**	**MFP32D** **823 626 7**
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 823 627 5 Terminals		MFZ21D/AVT2/AWT2 824 299 2 M12 plug connector
Module + module carrier	**MFP21D/Z21D..**	**MFP22D/Z21D..**	**MFP32D/Z21D..**

INTERBUS variants

Module type **Part number**	**MFI21A** **823 526 0**	**MFI22A** **823 527 9**	**MFI32A** **823 528 7**
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	MFZ11A 823 514 7 Terminals		
Module + module carrier	**MFI21A/Z11A**	**MFI22A/Z11A**	**MFI32A/Z11A**

INTERBUS variant with fiber optic cable and Rugged Line connector (Phoenix Contact)

Module type **Part number**	**MFI23F** **824 335 2**	**MFI33F** **824 336 0**
Connection technology Fieldbus Sensors/actuators	FO (via Rugged Line connector) M12 and terminals	
Digital inputs	4	6
Digital outputs	2	0
Associated module terminal box Part number	MFZ11A 823 514 7	
Module + module carrier	**MFI23F/Z11A**	**MFI33F/Z11A**

DeviceNet variants

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

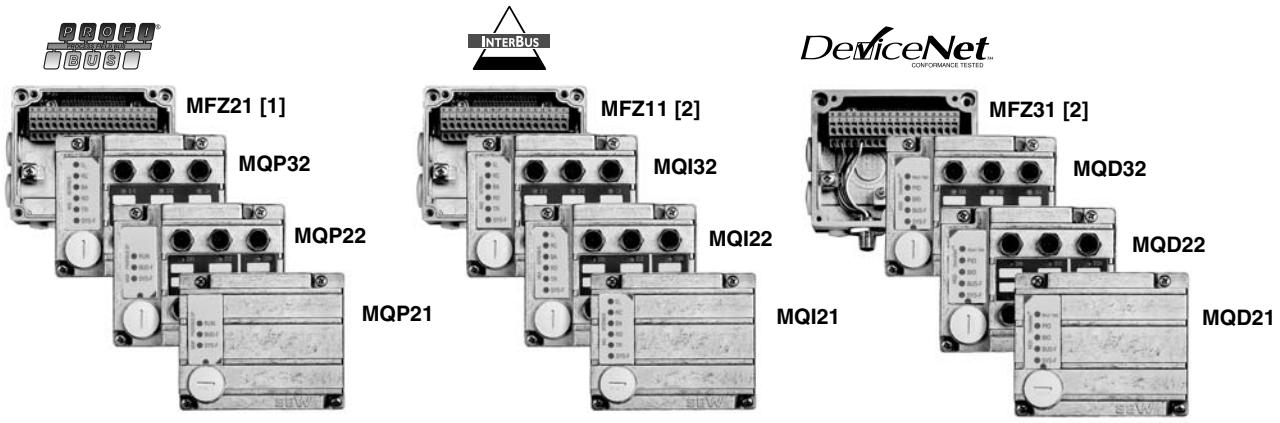
CANopen variants

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

AS-Interface variants

Module type **Part number**	**MFK21A** **824 537 1**	**MFK22A** **824 539 8**
Connection technology **Sensors/actuators**	Terminals	M12 and terminals
Digital inputs	4	4
Digital outputs	2	2
Associated module terminal box Part number AS-interface connection technology	MFZ61A 824 574 6 M12 plug connector	
Module + module carrier	**MFK21A/Z61A**	**MFK22A/Z61A**

4.2.2 MQ../Z.1 fieldbus interfaces



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[1] red imprint on terminal
[2] black imprint on terminal

PROFIBUS variants

Module type **Part number**	**MQP21D** **824 190 2**	**MQP22D** **824 191 0**	**MQP32D** **824 192 9**
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 823 627 5 Terminals		MFZ21D/AVT2/AWT2 824 299 2 M12 plug connector
Module + module carrier	**MQP21D/Z21D..**	**MQP22D/Z21D..**	**MQP32D/Z21D..**

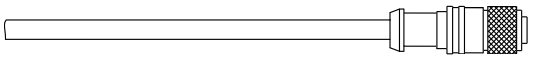
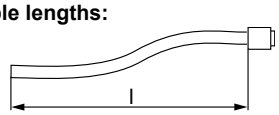
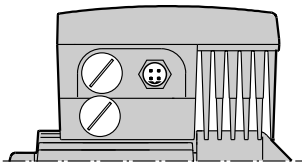
INTERBUS variants

Module type **Part number**	**MQI21A** **824 203 8**	**MQI22A** **824 204 6**	**MQI32A** **824 205 4**
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	MFZ11A 823 514 7 Terminals		
Module + module carrier	**MQI21A/Z11A**	**MQI22A/Z11A**	**MQI32A/Z11A**

DeviceNet variants

Module type **Part number**	**MQD21A** **824 200 3**	**MQD22A** **824 201 1**	**MQD32A** **824 202 X**
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 823 548 1 Micro-style connector		
Module + module carrier	**MQD21A/Z31A**	**MQD22A/Z31A**	**MQD32A/Z31A**

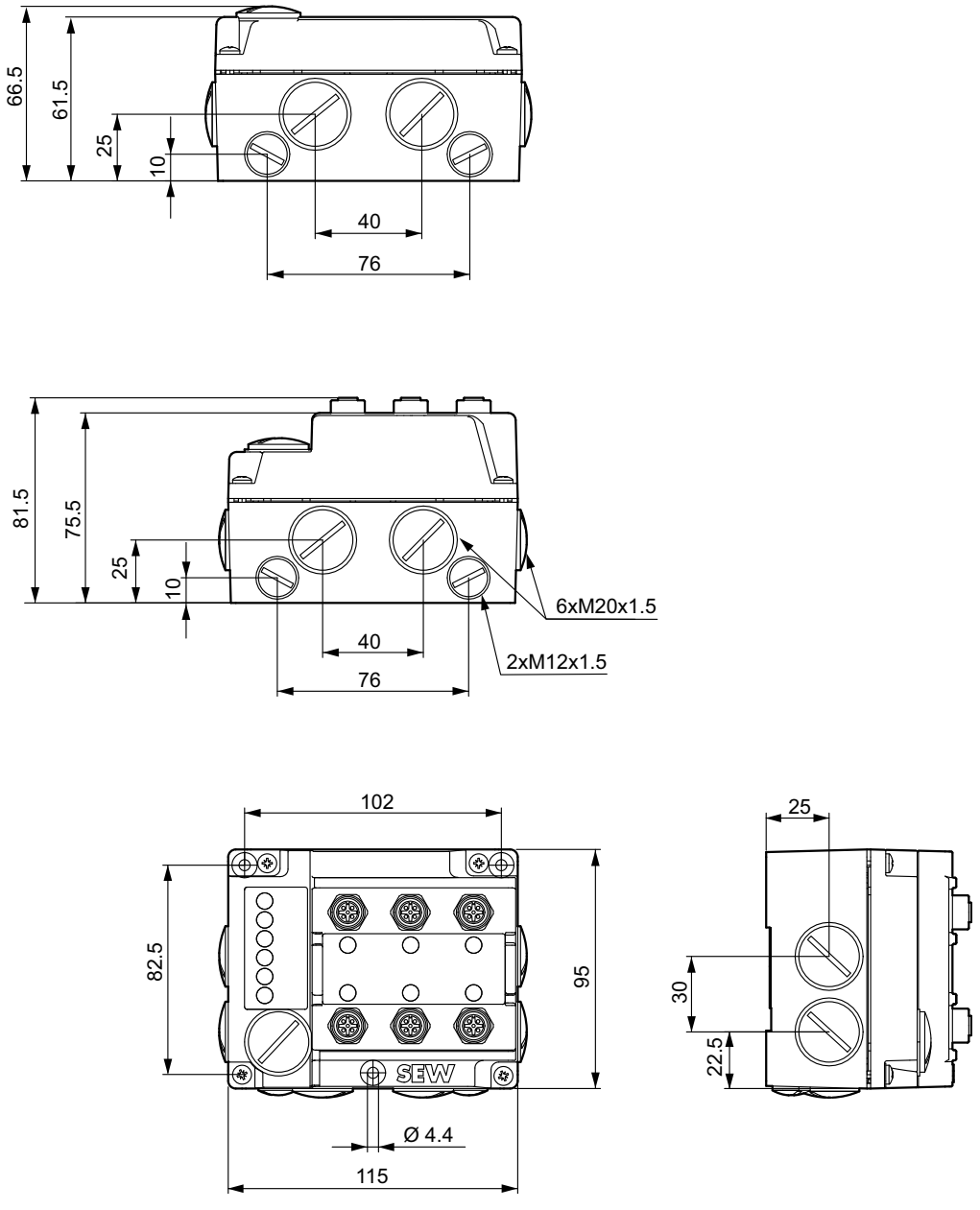
4.2.3 Hybrid cables for connecting fieldbus interfaces and MOVIMOT®

Field distributor Fieldbus interface	Cable	Cable type	Drive
Z.1 or RS-485 master	 **Available cable lengths:**  l = 5 m: Part number 0 815 592 5 l = 10 m: Part number 0 815 593 3	-	MOVIMOT® with AVT1 plug connector 

4.2.4 MF../Z.1, MQ../Z.1 fieldbus interfaces – dimension drawing

MF../MQ.. fieldbus interface – dimension drawing

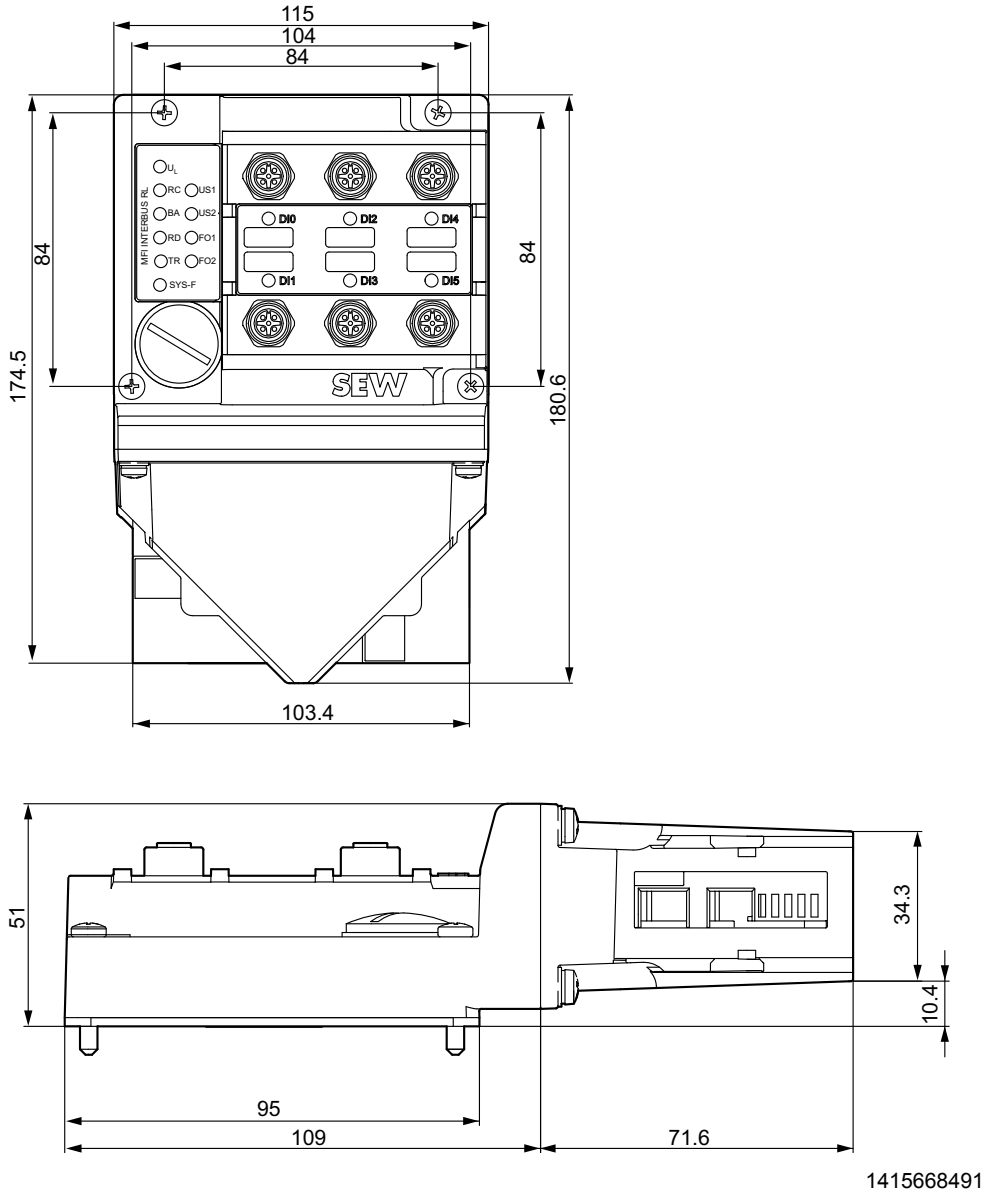
The following figure shows the dimensions of the fieldbus interface MF.. / MQ.. :



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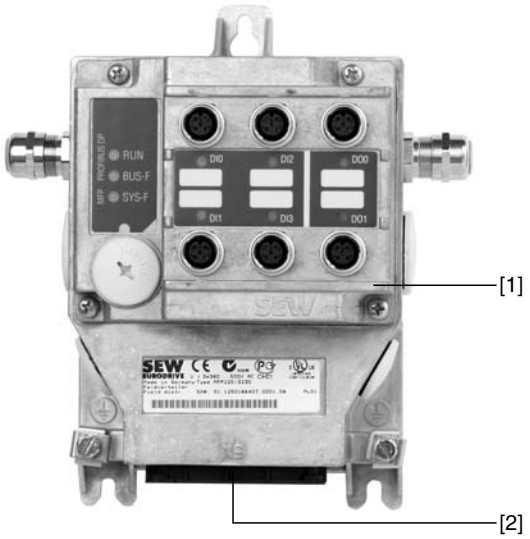
Dimension drawing MFI23 / MFI33 fieldbus interface with Rugged-Line connection

The following figure shows the dimensions of the fieldbus interface MFI23/MFI33:



4.3 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] Pre-fabricated cable connection

4.3.1 Unit properties

- 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)

4.3.2 Sample unit designation

MFP21D/Z23D

Connection module for controlling MOVIMOT®

Z13A	= for INTERBUS
Z23D	= for PROFIBUS
Z23D/AVT2/AWT2	= with M12 plug connector for PROFIBUS
Z33A	= for DeviceNet and CANopen
Z63A	= for AS-Interface

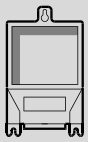
Connection module for controlling MOVI-SWITCH®

Z13W	= for INTERBUS
Z23W	= for PROFIBUS
Z23W/AVT2/AWT2	= with M12 plug connector for PROFIBUS
Z33W	= for DeviceNet and CANopen
Z63W	= for AS-Interface

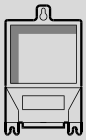
Fieldbus interface

MFI../MQI..	= INTERBUS
MFP.. / MQP..	= PROFIBUS
MFD.. / MQD..	= DeviceNet
MFO..	= CANopen
MFK..	= AS-Interface

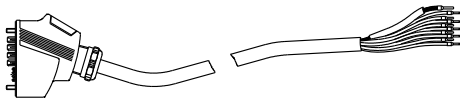
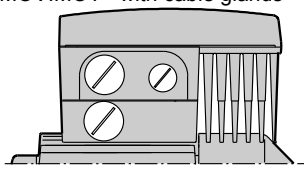
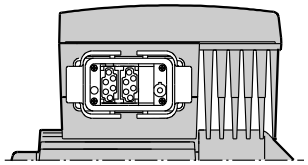
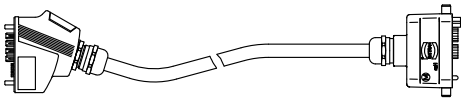
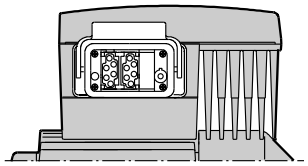
4.3.3 MF../Z.3. – possible combinations (MOVIMOT® control)

	no I/O 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	MFI21A/Z13A	MFI22A/Z13A	MFI32A/Z13A
INTERBUS with FO and Rugged-Line	-	MFI23F/Z13A	MFI33F/Z13A
PROFIBUS	MFP21D/Z23D	MFP22D/Z23D	MFP32D/Z23D
PROFIBUS with M12 plug connector for bus connection	MFP21D/Z23D/ AVT2/AWT2	MFP22D/Z23D/ AVT2/AWT2	MFP32D/Z23D/ AVT2/AWT2
DeviceNet	MFD21A/Z33A	MFD22A/Z33A	MFD32A/Z33A
CANopen	MFO21A/Z33A	MFO22A/Z33A	MFO32A/Z33A
AS-Interface	MFK21A/Z63A	MFK22A/Z63A	-

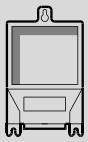
4.3.4 MQ../Z.3. – possible combinations (MOVIMOT® control)

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

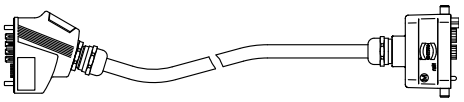
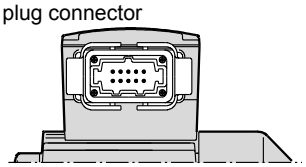
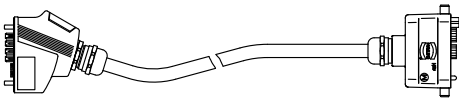
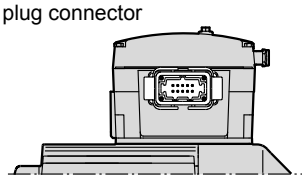
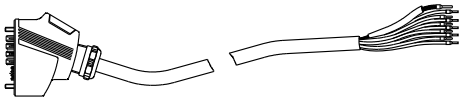
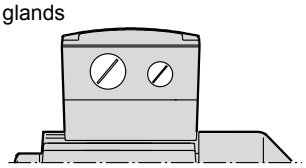
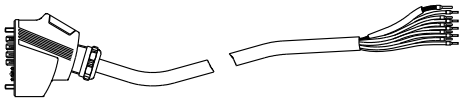
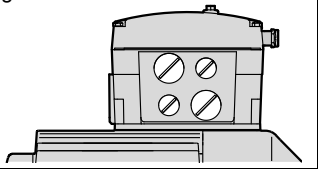
4.3.5 Hybrid cables for connecting Z.3. field distributor and MOVIMOT®

Field distributor	Hybrid cable	Cable type	Drive
Z.3	Part number: 0186 725 3  ***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: 0593 516 4  ***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: 0817 112 2 	**B**	MOVIMOT® with AMD6 plug connector 

4.3.6 MF../Z.3W – possible combinations (MOVI-SWITCH® control)

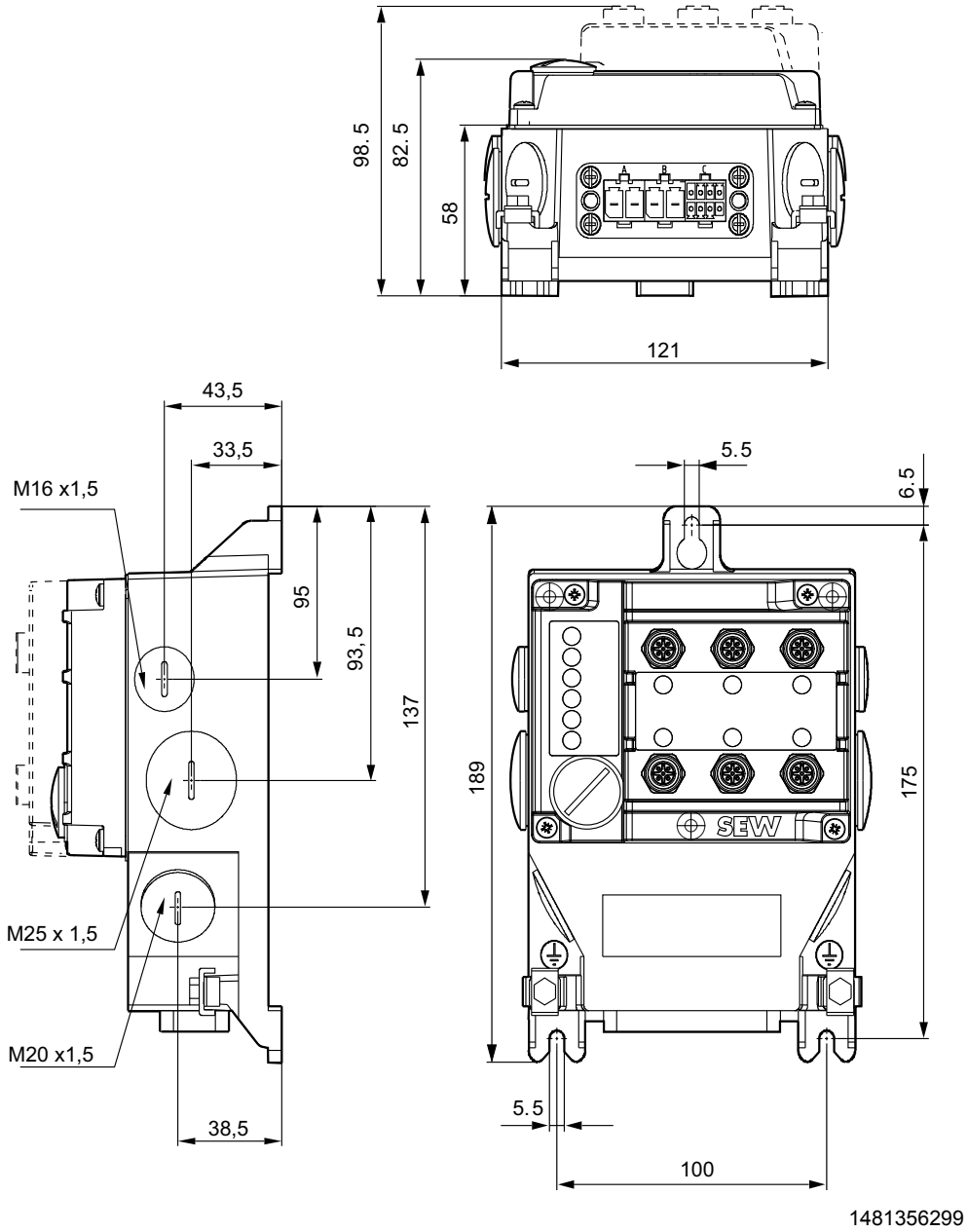
	no I/O 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	MFI21A/Z13W	MFI22A/Z13W	-
INTERBUS with FO and Rugged-Line	-	MFI23F/Z13W	-
PROFIBUS	MFP21D/Z23W	MFP22D/Z23W	-
PROFIBUS with M12 plug connector for bus connection	MFP21D/Z23W/ AVT2/AWT2	MFP22D/Z23W/ AVT2/AWT2	-
DeviceNet	MFD21A/Z33W	MFD22A/Z33W	-
CANopen	MFO21A/Z33W	MFO22A/Z33W	-
AS-Interface	MFK21A/Z63W	MFK22A/Z63W	-

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

Field distributor	Hybrid cable	Cable type	Drive
Z.3W	Part number: 818 368 6 	B	MOVI-SWITCH® 1E with ASAW plug connector 
	Part number: 818 368 6 	B	MOVI-SWITCH® 2S with ASAW plug connector 
	Part number: 818 705 3 	B	MOVI-SWITCH® 1E with cable glands 
	Part number: 818 708 8 	B	MOVI-SWITCH® 2S with cable glands 

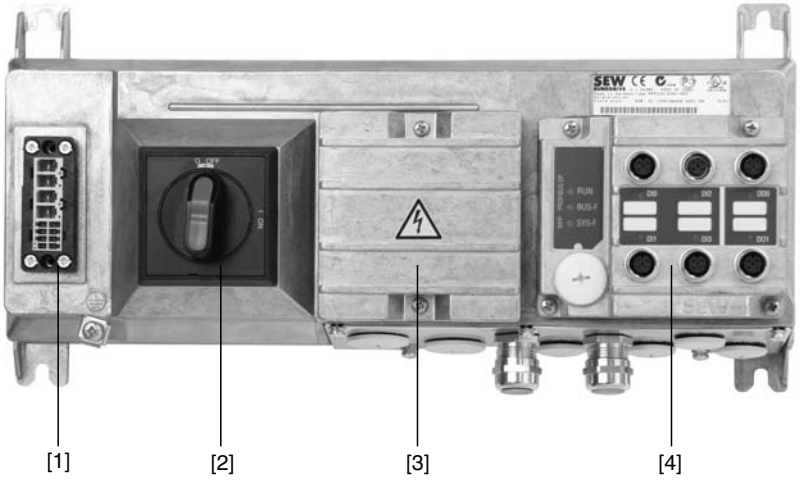
4.3.8 MF../Z.3., MQ../Z.3. field distributors – dimension drawing

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



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

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



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[1] Pre-fabricated cable connection
[2] Maintenance switch
[3] Wiring space for power supply
[4] MF../MQ.. fieldbus interface

4.4.1 Unit properties

- Communication interface with I/Os
- Separate wiring space for bus and power supply
- 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

4.4.2 Sample unit designation

MFP21D/Z26F/AF0

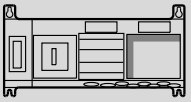
Connection technology
AF0 = Metric cable entry
AF1 = with micro-style connector for DeviceNet and CANopen
AF2 = M12 plug connector for PROFIBUS
AF3 = M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply
AF6 = M12 plug connector for AS-Interface

Connection module for controlling MOVIMOT®
Z16F = for INTERBUS
Z26F = for PROFIBUS
Z36F = for DeviceNet and CANopen
Z66F = for AS-Interface

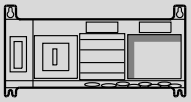
Connection module for controlling MOVI-SWITCH®
Z26W = for PROFIBUS

Fieldbus interface
MFI.. / MQI = INTERBUS
MFP.. / MQP.. = PROFIBUS
MQS.. = PROFIBUS/PROFIsafe
MFD.. / MQD.. = DeviceNet
MFO.. = CANopen
MFK.. = AS-Interface

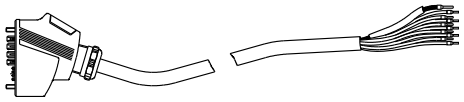
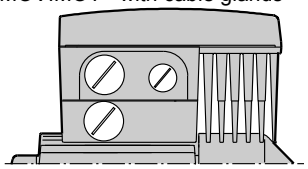
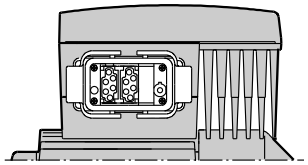
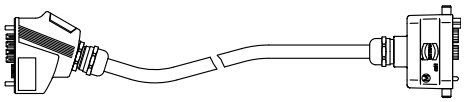
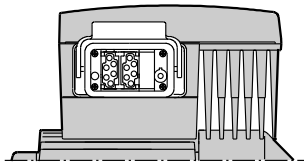
4.4.3 MF../Z.6. – possible combinations (MOVIMOT® control)

	4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	MFI21A/Z16F/AF0	MFI22A/Z16F/AF0	MFI32A/Z16F/AF0
INTERBUS with FO and Rugged-Line	-	MFI23F/Z16F/AF0	MFI33F/Z16F/AF0
PROFIBUS	MFP21D/Z26F/AF0	MFP22D/Z26F/AF0	MFP32D/Z26F/AF0
	MFP21D/Z26F/AF2	MFP22D/Z26F/AF2	MFP32D/Z26F/AF2
	MFP21D/Z26F/AF3	MFP22D/Z26F/AF3	MFP32D/Z26F/AF3
DeviceNet	MFD21A/Z36F/AF1	MFD22A/Z36F/AF1	MFD32A/Z36F/AF1
CANopen	MFO21A/Z36F/AF1	MFO22A/Z36F/AF1	MFO32A/Z36F/AF1
AS-Interface	MFK21A/Z66F/AF6	MFK22A/Z66F/AF6	-

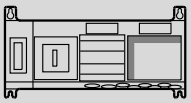
4.4.4 MQ../Z.6. – possible combinations (MOVIMOT® control)

	4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	MQI21A/Z16F/AF0	MQI22A/Z16F/AF0	MQI32A/Z16F/AF0
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
PROFIBUS / PROFIsafe	-	MQS22F/Z26F/AF0 - SafetyDrive	MQS32F/Z26F/AF0 - SafetyDrive
	-	MQS22F/Z26F/AF2 - SafetyDrive	MQS32F/Z26F/AF2 - SafetyDrive
	-	MQS22F/Z26F/AF3 - SafetyDrive	MQD32F/Z26F/AF3 - SafetyDrive
DeviceNet	MQD21A/Z36F/AF1	MQD22A/Z36F/AF1	MQD32A/Z36F/AF1

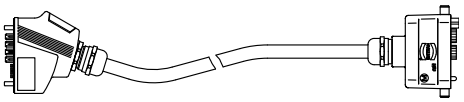
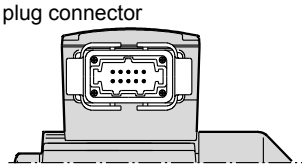
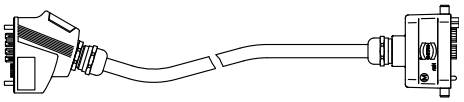
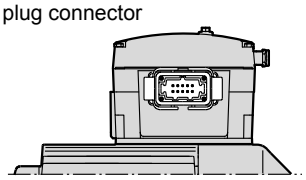
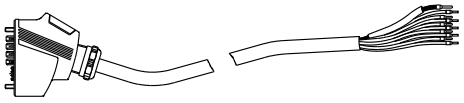
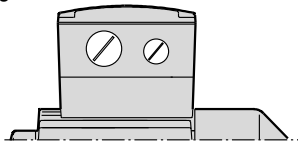
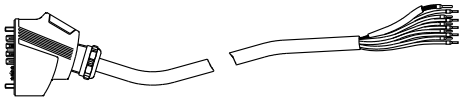
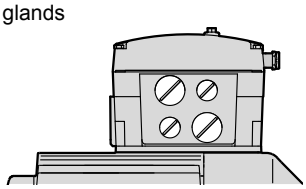
4.4.5 Hybrid cables for connecting Z.6. field distributor and MOVIMOT®

Field distributor	Hybrid cable	Cable type	Drive
Z.6	Part number: 0186 725 3  ***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: 0593 516 4  ***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: 0817 112 2 	**B**	MOVIMOT® with AMD6 plug connector 

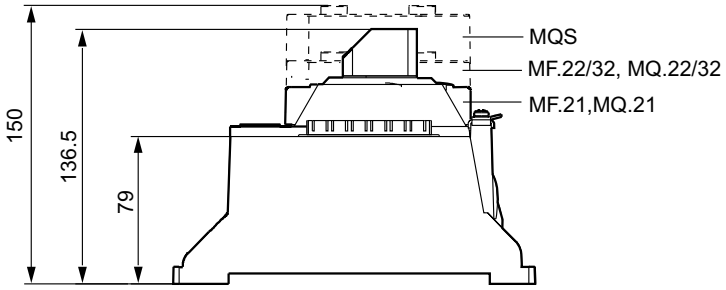
4.4.6 MF../Z.6W – possible combinations (MOVI-SWITCH® control)

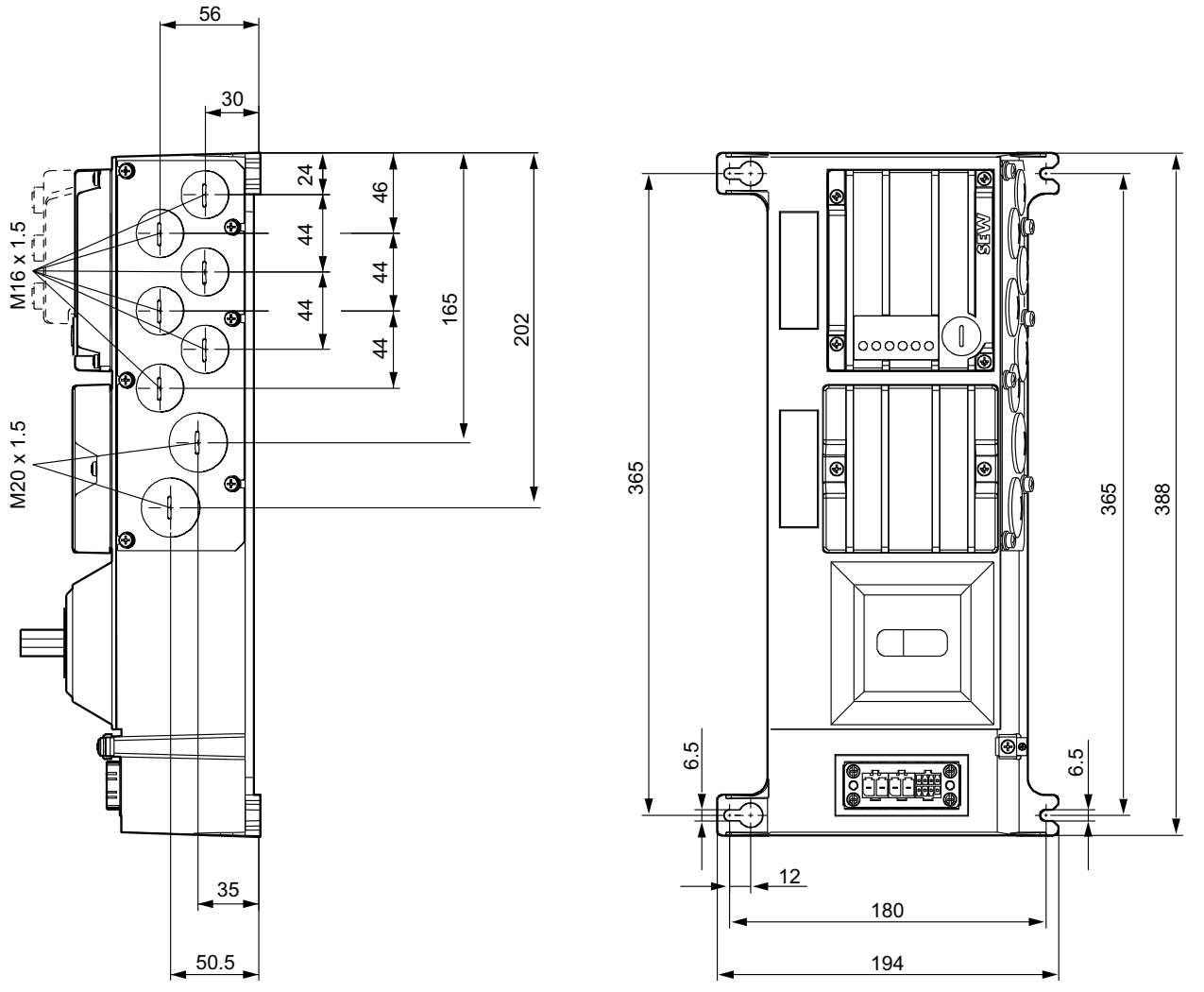
	4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
			
PROFIBUS	MFP21D/Z26W/AF0	MFP22D/Z26W/AF0	-
	MFP21D/Z26W/AF2	MFP22D/Z26W/AF2	-
	MFP21D/Z26W/AF3	MFP22D/Z26W/AF3	-

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

Field distributor	Hybrid cable	Cable type	Drive
Z.6W	Part number: 818 368 6 	**B**	MOVI-SWITCH® 1E with ASAW plug connector 
	Part number: 818 368 6 	**B**	MOVI-SWITCH® 2S with ASAW plug connector 
	Part number: 818 705 3 	**B**	MOVI-SWITCH® 1E with cable glands 
	Part number: 818 708 8 	**B**	MOVI-SWITCH® 2S with cable glands 

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

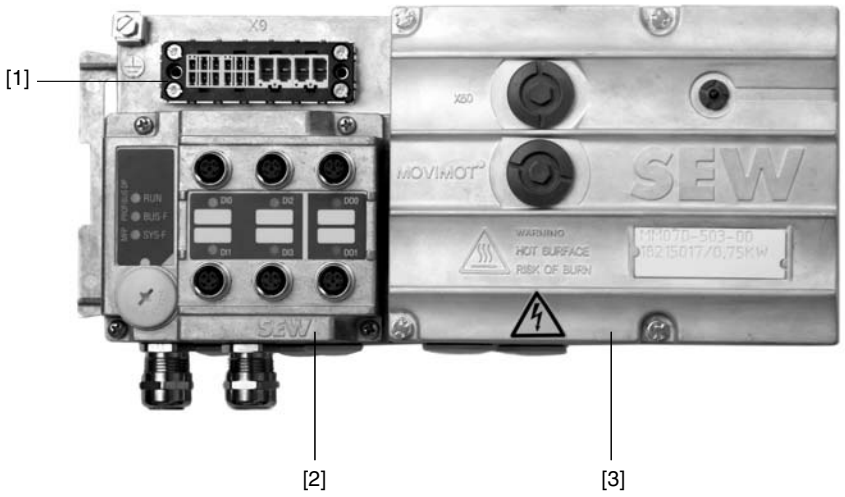




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4.5 MF../MM../Z.7., MQ../MM../Z.7. field distributors

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



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[1] Pre-fabricated cable connection
[2] MF../MQ.. fieldbus interface
[3] MOVIMOT® inverter

4.5.1 Unit properties

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

4.5.2 Sample unit designation

MFP22D/MM15D-503-00/Z27F 0[1)]

Connection type
0 = 人 / 1= △

Connection module
Z17 = for INTERBUS
Z27 = for PROFIBUS
Z37 = for DeviceNet and CANopen
Z67 = for AS-Interface

MOVIMOT® inverter
MM03 to MM15

Fieldbus interface

MFI.. / MQI..	= INTERBUS
MFP.. / MQP..	= PROFIBUS
MQS..	= PROFIBUS/PROFIsafe
MFD.. / MQD..	= DeviceNet
MFO..	= CANopen
MFK..	= AS-Interface

1) If the field distributor is used in combination with a drive without mechanical holding brake, the field distributor must be ordered with integrated braking resistor (according to the following example):

Integrated braking resistor:

MF../MM..D/Z.7../**BW.**

→ MM03 - MM15: **BW1**

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For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).

4.5.3 MF../MM../Z.7. – possible combinations

		4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	⅄	MFI21A/MM..D/Z17F 0	MFI22A/MM..D/Z17F 0	MFI32A/MM..D/Z17F 0
	△	MFI21A/MM..D/Z17F 1	MFI22A/MM..D/Z17F 1	MFI32A/MM..D/Z17F 1
INTERBUS with FO and Rugged Line	⅄	-	MFI23F/MM..D/Z17F 0	MFI33F/MM..D/Z17F 0
	△	-	MFI23F/MM..D/Z17F 1	MFI33F/MM..D/Z17F 1
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
PROFIBUS / PROFIsafe	⅄	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
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
CANopen	⅄	MFO21A/MM..D/Z37F 0	MFO22A/MM..D/Z37F 0	MFO32A/MM..D/Z37F 0
	△	MFO21A/MM..D/Z37F 1	MFO22A/MM..D/Z37F 1	MFO32A/MM..D/Z37F 1
AS-Interface	⅄	MFK21A/MM..D/Z67F 0	MFK22A/MM..D/Z67F 0	-
	△	MFK21A/MM..D/Z67F 1	MFK22A/MM..D/Z67F 1	-

4.5.4 MQ../MM../Z.7. – possible combinations

		4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	⅄	MQI21A/MM..D/Z17F 0	MQI22A/MM..D/Z17F 0	MQI32A/MM..D/Z17F 0
	△	MQI21A/MM..D/Z17F 1	MQI22A/MM..D/Z17F 1	MQI32A/MM..D/Z17F 1
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
PROFIBUS / PROFIsafe	⅄	-	MQS22F/MM..D/Z27F 0 - SafetyDrive	MQS32F/MM..D/Z27F 0 - SafetyDrive
	△	-	MQS22F/MM..D/Z27F 1 - SafetyDrive	MQS32F/MM..D/Z27F 1 - SafetyDrive
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

4.5.5 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:

Integral characteristics	Requirements for the assigned AC motor		
Permitted motors	The permitted motors are listed in section "Motor assignment 1400 rpm" (see page 144) and "Motor assignment 2900 rpm" (see page 145).		
Permitted nominal motor voltage	Depending on motor series:		
	Motor [Type]	**Rated voltage [V]**	**Mains frequency [Hz]**
	DRS	230/400	50
	DRE	230/400	50
	DRS	266/460	60
	DRS / DRE	220/380	60
	DRP	230/400	50
	DRP	266/460	60
Permitted brakes	Depending on motor series:		
	Motor [Type]	**Standard brake [Type]**	**Optional brake [Type]**
	DR.63L4	BR03	–
	DR.71S4	BE05	BE1
	DR.71M4	BE1	BE05
	DR.80S4	BE1	BE05
	DRE80M4	BE1	BE05
	DRS80M4	BE2	BE1
	DRS90M4/DRE90M4	BE2	BE1
	DRP90M4	BE1	BE2
	DRE90L4	BE2	BE1
	DRS90L4	BE5	BE2
Preferred brake voltage	Size 1 (MM03 to MM15): 230 V		
Brake rectifier	Always order the assigned motor **without brake rectifier**.		
Permitted plug connectors	• ASB4 plug connector • APG4 plug connector • ISU4 plug connector For additional information, refer to section "Hybrid cables for connecting Z.7 field distributor and motors" (see page 146).		
Permitted motor protection	Always order the assigned motor with **TH thermostat** (bimetallic switch).		
Permitted encoder system	EI76 incremental encoder (can be evaluated via fieldbus interface with integrated MQ.. minicontroller).		

Motor assignment
1400 rpm

Power [kW]	Motor (230/400 V, 50 Hz)	Field distributor	
		with MF.. fieldbus interface	with MQ.. fieldbus interface
0.25	DFR63L4/TH	– MF../**MM03D**/Z.7F**0**/**BW1**[1)]	– MQ../**MM03C**/Z.7F**0**/**BW1**[1)]
	DFR63L4/**BR**/TH .	– MF../**MM03D**/Z.7F**0**[1)]	– MQ../**MM03D**/Z.7F**0**[1)]
0.37	DR**S**71S4/TH.	MF../**MM03D**/Z.7F**0**/**BW1** MF../**MM05D**/Z.7F**0**/**BW1**[1)]	MQ../**MM03D**/Z.7F**0**/**BW1** MQ../**MM05D**/Z.7F**0**/**BW1**[1)]
	DR**S**71S4/**BE**/TH.	MF../**MM03D**/Z.7F**0** MF../**MM05D**/Z.7F**0**[1)]	MQ../**MM03D**/Z.7F**0** MQ../**MM05D**/Z.7F**0**[1)]
0.55	DR**S**71M4/TH.	MF../**MM05D**/Z.7F**0**/**BW1** MF../**MM07D**/Z.7F**0**/**BW1**[1)]	MQ../**MM05D**/Z.7F**0**/**BW1** MQ../**MM07D**/Z.7F **0**/**BW1**[1)]
	DR**S**71M4/**BE**/TH.	MF../**MM05D**/Z.7F**0** MF../**MM07D**/Z.7F**0**[1)]	MQ../**MM05D**/Z.7F**0** MQ../**MM07D**/Z.7F**0**[1)]
0.75	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4//TH.	MF../**MM07D**/Z.7F**0**/**BW1** MF../**MM11D**/Z.7F**0**/**BW1**[1)]	MQ../**MM07D**/Z.7F **0**/**BW1** MQ../**MM11D**/Z.7F **0**/**BW1**[1)]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MF../**MM07D**/Z.7F**0** MF../**MM11D**/Z.7F**0**[1)]	MQ../**MM07D**/Z.7F**0** MQ../**MM11D**/Z.7F**0**[1)]
1.1	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MF../**MM11D**/Z.7F**0**/**BW1** MF../**MM15D**/Z.7F**0**/**BW1**[1)]	MQ../**MM11D**/Z.7F **0**/**BW1** MQ../**MM15D**/Z.7F **0**/**BW1**[1)]
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MF../**MM11D**/Z.7F**0** MF../**MM15D**/Z.7F**0**[1)]	MQ../**MM11D**/Z.7F**0** MQ../**MM15D**/Z.7F**0**[1)]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**P**100M4/TH.	MF../**MM15D**/Z.7F**0**/**BW1** –	MQ../**MM15D**/Z.7F **0**/**BW1** –
	DR**S**90M4/**BE**/TH. DR**E**90L4/**BE**/TH. DR**P**100M4/**BE**/TH.	MF../**MM15D**/Z.7F**0** –	MQ../**MM15D**/Z.7F**0** –

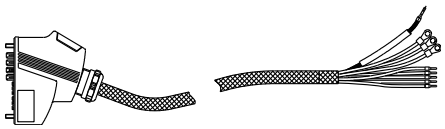
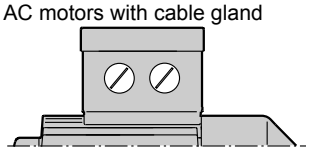
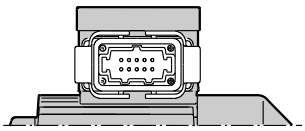
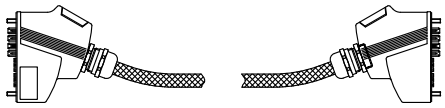
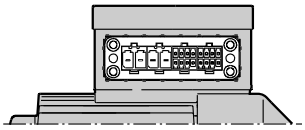
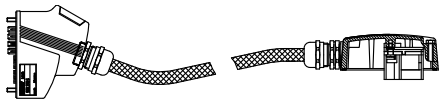
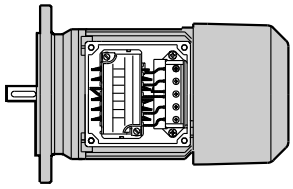
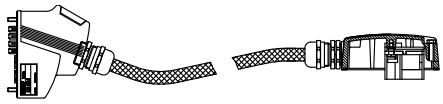
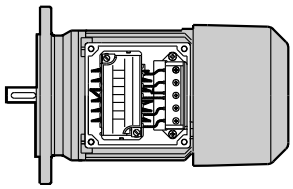
1) Combination with increased short-term torque

Motor assignment 2900 rpm

Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		with MF.. fieldbus interface	with MQ.. fieldbus interface
0.37	DFR63L4/TH	MF../**MM03D**/Z.7F**1**/**BW1** MF../**MM05D**/Z.7F**1**/**BW1**[1)]	MQ../**MM03D**/Z.7F**1**/**BW1** MQ../**MM05D**/Z.7F**1**/**BW1**[1)]
	DFR63L4/**BR**/TH .	MF../**MM03D**/Z.7F**1** MF../**MM05D**/Z.7F**1**[1)]	MQ../**MM03D**/Z.7F**1** MQ../**MM05D**/Z.7F**1**[1)]
0.55	DR**S**71S4/TH.	MF../**MM05D**/Z.7F**1**/**BW1** MF../**MM07D**/Z.7F**1**/**BW1**[1)]	MQ../**MM05D**/Z.7F**1**/**BW1** MQ../**MM07D**/Z.7F **1**/**BW1**[1)]
	DR**S**71S4/**BE**/TH.	MF../**MM05D**/Z.7F**1** MF../**MM07D**/Z.7F**1**[1)]	MQ../**MM05D**/Z.7F**1** MQ../**MM07D**/Z.7F**1**[1)]
0.75	DR**S**71M4/TH.	MF../**MM07D**/Z.7F**1**/**BW1** MF../**MM11D**/Z.7F**1**/**BW1**[1)]	MQ../**MM07D**/Z.7F **1**/**BW1** MQ../**MM11D**/Z.7F **1**/**BW1**[1)]
	DR**S**71M4/**BE**/TH.	MF../**MM07D**/Z.7F**1** MF../**MM11D**/Z.7F**1**[1)]	MQ../**MM07D**/Z.7F**1** MQ../**MM11D**/Z.7F**1**[1)]
1.1	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4/TH.	MF../**MM11D**/Z.7F**1**/**BW1** MF../**MM15D**/Z.7F**1**/**BW1**[1)]	MQ../**MM11D**/Z.7F **1**/**BW1** MQ../**MM15D**/Z.7F **1**/**BW1**[1)]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MF../**MM11D**/Z.7F**1** MF../**MM15D**/Z.7F**1**[1)]	MQ../**MM11D**/Z.7F**1** MQ../**MM15D**/Z.7F**1**[1)]
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MF../**MM15D**/Z.7F**1**/**BW1** –	MQ../**MM15D**/Z.7F **1**/**BW1** –
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MF../**MM15D**/Z.7F**1** –	MQ../**MM15D**/Z.7F**1** –

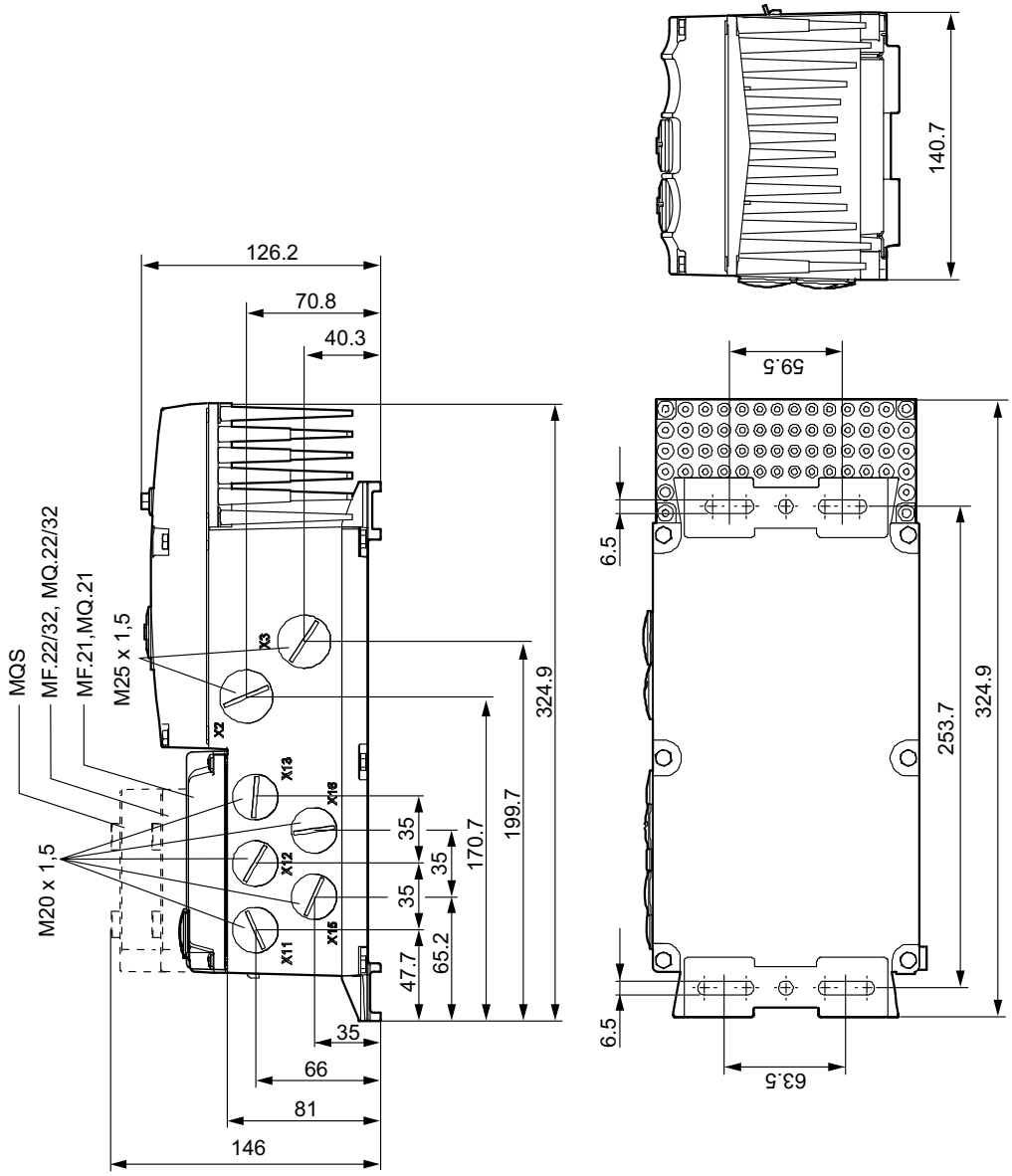
1) Combination with increased short-term torque

4.5.6 Hybrid cables for connecting Z.7. field distributors an motors

Field distributor	Hybrid cable	Cable type	Drive
Z.7	Part number 0186 742 3  ***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: 0593 076 6  ***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 0186 741 5 	**A**	AC motors with APG4 plug connector 
	Part number: 0593 278 5 (人) Part number: 0816 325 1 (△) 	**A**	AC motors with plug connector ISU4  Size DR.63
	Part number: 0593 755 8 (人) Part number: 0816 326 X (△) 	**A**	AC motors with plug connector ISU4  Size DR.71-DR.132

4.5.7 MF../MM03-MM15/Z.7., MQ../MM03-MM15/Z.7. field distributors – dimension drawings

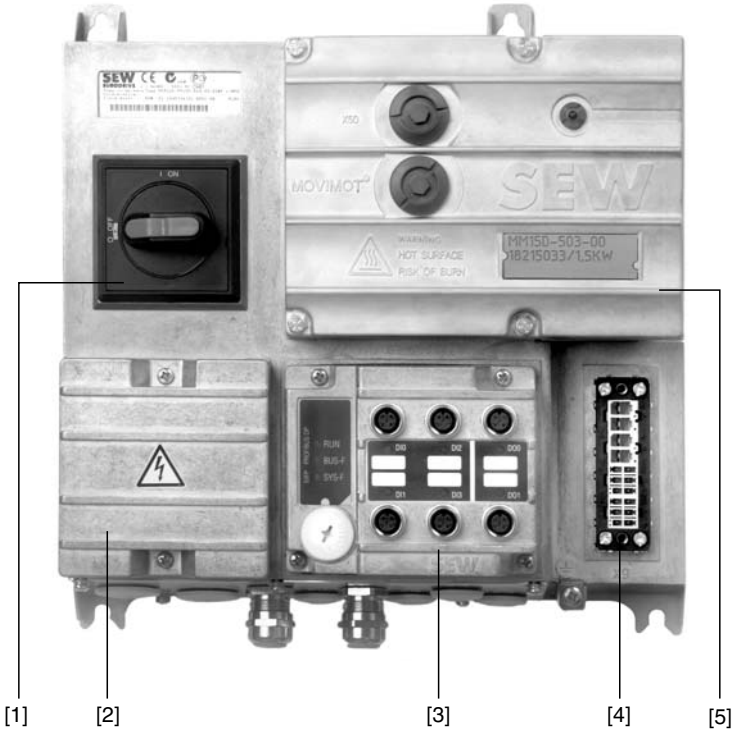
The following figure shows the dimensions of MF../MM03-MM15/Z.7., MQ../MM03-MM15/Z.7. field distributors:



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4.6 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:



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[1] Maintenance switch
[2] Wiring space for power supply
[3] MF../MQ.. fieldbus interface
[4] Pre-fabricated cable connection
[5] MOVIMOT® inverter (here: size 1)

4.6.1 Unit properties

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

4.6.2 Sample unit designation

MFP22D/MM22D-503-00/Z28F 0/AF0[1)]

Connection technology
AF0 = Metric cable entry
AF1 = with micro-style connector for DeviceNet and CANopen
AF2 = M12 plug connector for PROFIBUS
AF3 = M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply
AF6 = M12 plug connector for AS-Interface

Connection type
0 = ⅄ / 1 = △

Connection module
Z18 = for INTERBUS
Z28 = for PROFIBUS
Z38 = for DeviceNet and CANopen
Z68 = for AS-Interface

MOVIMOT® inverter

Fieldbus interface

MFI.. / MQI..	= INTERBUS
MFP.. / MQP..	= PROFIBUS
MQS..	= PROFIBUS/PROFIsafe
MFD.. / MQD..	= DeviceNet
MFO..	= CANopen
MFK..	= AS-Interface

1) If the field distributor is used in combination with a drive without mechanical holding brake, the field distributor must be ordered with integrated braking resistor (according to the following example):

Integrated braking resistor:

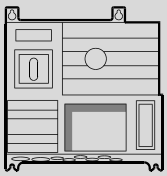
MF../MM..D/Z.8../**BW.**/AF.

→ MM03 - MM15: **BW1**
MM22 - MM40: **BW2**

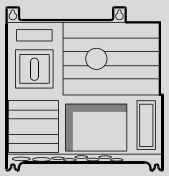
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For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).

4.6.3 MF../MM../Z.8. – possible combinations

		4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	⅄	MFI21A/MM..D/Z18F 0/AF0	MFI22A/MM..D/Z18F 0/AF0	MFI32A/MM..D/Z18F 0/AF0
	△	MFI21A/MM..D/Z18F 1/AF0	MFI22A/MM..D/Z18F 1/AF0	MFI32A/MM..D/Z18F 1/AF0
INTERBUS with FO and Rugged Line	⅄	-	MFI23F/MM..D/Z18F 0/AF0	MFI33F/MM..D/Z18F 0/AF0
	△	-	MFI23F/MM..D/Z18F 1/AF0	MFI33F/MM..D/Z18F 1/AF0
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
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
CANopen	⅄	MFO21A/MM..D/Z38F 0/AF1	MFO22A/MM..D/Z38F 0/AF1	MFO32A/MM..D/Z38F 0/AF1
	△	MFO21A/MM..D/Z38F 1/AF1	MFO22A/MM..D/Z38F 1/AF1	MFO32A/MM..D/Z38F 1/AF1
AS-Interface	⅄	MFK21A/MM..D/Z68F 0/AF1	MFK22A/MM..D/Z68F 0/AF1	-
	△	MFK21A/MM..D/Z68F 1/AF1	MFK22A/MM..D/Z68F 1/AF1	-

4.6.4 MQ../MM../Z.8. – possible combinations

		4 x I / 2 x O (terminals) 	4 x I / 2 x O (M12) 	6 x I (M12) 
INTERBUS	⅄	MQI21A/MM..D/Z18F 0/AF0	MQI22A/MM..D/Z18F 0/AF0	MQI32A/MM..D/Z18F 0/AF0
	△	MQI21A/MM..D/Z18F 1/AF0	MQI22A/MM..D/Z18F 1/AF0	MQI32A/MM..D/Z18F 1/AF0
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
PROFIBUS / PROFIsafe	⅄	-	MQS22F/MM..D/Z28F 0/AF0 - SafetyDrive	MQS32F/MM..D/Z28F 0/AF0 - SafetyDrive
	△	-	MQS22F/MM..D/Z28F 1/AF0 - SafetyDrive	MQS32F/MM..D/Z28F 1/AF0 - SafetyDrive
	⅄	-	MQS22F/MM..D/Z28F 0/AF2 - SafetyDrive	MQS32F/MM..D/Z28F 0/AF2 - SafetyDrive
	△	-	MQS22F/MM..D/Z28F 1/AF2 - SafetyDrive	MQS32F/MM..D/Z28F 1/AF2 - SafetyDrive
	⅄	-	MQS22F/MM..D/Z28F 0/AF3 - SafetyDrive	MQS32F/MM..D/Z28F 0/AF3 - SafetyDrive
	△	-	MQS22F/MM..D/Z28F 1/AF3 - SafetyDrive	MQS32F/MM..D/Z28F 1/AF3 - SafetyDrive
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

4.6.5 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:

Integral characteristics	Requirements for the assigned AC motor		
Permitted motors	The permitted motors are listed in section "Motor assignment 1400 rpm" (see page 153) and "Motor assignment 2900 rpm" (see page 154).		
Permitted nominal motor voltage	Depending on motor series:		
	Motor [Type]	**Rated voltage [V]**	**Mains frequency [Hz]**
	DRS	230/400	50
	DRE	230/400	50
	DRS	266/460	60
	DRS / DRE	220/380	60
	DRP	230/400	50
	DRP	266/460	60
Permitted brakes	Depending on motor series:		
	Motor [Type]	**Standard brake [Type]**	**Optional brake [Type]**
	DR.63L4	BR03	–
	DR.71S4	BE05	BE1
	DR.71M4	BE1	BE05
	DR.80S4	BE1	BE05
	DRE80M4	BE1	BE05
	DRS80M4	BE2	BE1
	DRS90M4/DRE90M4	BE2	BE1
	DRP90M4	BE1	BE2
	DRE90L4	BE2	BE1
	DRS90L4	BE5	BE2
	DRS100M4 / DRE100M4	BE5	BE2
	DRP100M4	BE2	BE5
	DR.100LC4	BE5	BE2
	DR.100L4	BE5	BE2
	DRP112M4	BE5	BE11
	DR.132S4	BE5	BE11
	DRP132M4	BE5	BE11
Preferred brake voltage	Size 1 (MM03 to MM15): 230 V Size 2 (MM22 to MM40): 120 V		
Brake rectifier	Always order the assigned motor **without brake rectifier**.		
Permitted plug connectors	• ASB4 plug connector • APG4 plug connector • ISU4 plug connector For additional information, refer to section "Hybrid cables for connecting Z.8 field distributor and motors" (see page 155).		
Permitted motor protection	Always order the assigned motor with **TH thermostat** (bimetallic switch).		
Permitted encoder system	EI76 incremental encoder (can be evaluated only via fieldbus interface with integrated MQ.. minicontroller).		

Motor assignment 1400 rpm

Power [kW]	Motor (230/400 V, 50 Hz)	Field distributor	
		with MF.. fieldbus interface	with MQ.. fieldbus interface
0.25	DFR63L4/TH	–	–
		MF../ **MM03D**/Z.8F **0**/**BW1**/AF..[1]	MQ../ **MM03D**/Z.8F **0**/**BW1**/AF..[1]
	DFR63L4/**BR**/TH .	–	–
		MF../**MM03D**/Z.8F **0**/AF..[1]	MQ../ **MM03D**/Z.8F **0**/AF..[1]
0.37	DR**S**71S4/TH.	MF../ **MM03D**/Z.8F **0**/**BW1**/AF.. MF../**MM05D**/Z.8F **0**/**BW1**/AF..[1]	MQ../ **MM03D**/Z.8F **0**/**BW1**/AF.. MQ../**MM03C**/Z.8F **0**/**BW1**/AF..[1]
	DR**S**71S4/**BE**/TH.	MF../**MM03D**/Z.8F **0**/AF.. MF../**MM05D**/Z.8F **0**/AF..[1]	MQ../ **MM03D**/Z.8F **0**/AF.. MQ../**MM05D**/Z.8F **0**/AF..[1]
0.55	DR**S**71M4/TH.	MF../**MM05D**/Z.8F **0**/**BW1**/AF.. MF../**MM07D**/Z.8F **0**/**BW1**/AF..[1]	MQ../**MM03C**/Z.8F **0**/**BW1**/AF.. MQ../**MM03D**/Z.8F **0**/**BW1**/AF..[1]
	DR**S**71M4/**BE**/TH.	MF../**MM05D**/Z.8F **0**/AF.. MF../**MM07D**/Z.8F **0**/AF..[1]	MQ../**MM05D**/Z.8F **0**/AF.. MQ../**MM07D**/Z.8F **0**/AF..[1]
0.75	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4//TH.	MF../**MM07D**/Z.8F **0**/**BW1**/AF.. MF../**MM11D**/Z.8F **0**/**BW1**/AF..[1]	MQ../**MM03D**/Z.8F **0**/**BW1**/AF.. MQ../**MM11D**/Z.8F **0**/**BW1**/AF..[1]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MF../**MM07D**/Z.8F **0**/AF.. MF../**MM11D**/Z.8F **0**/AF..[1]	MQ../**MM07D**/Z.8F **0**/AF.. MQ../**MM11D**/Z.8F **0**/AF..[1]
1.1	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MF../**MM11D**/Z.8F **0**/**BW1**/AF.. MF../**MM15D**/Z.8F **0**/**BW1**/AF..[1]	MQ../**MM11D**/Z.8F **0**/**BW1**/AF.. MQ../**MM15D**/Z.8F **0**/**BW1**/AF..[1]
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MF../**MM11D**/Z.8F **0**/AF.. MF../**MM15D**/Z.8F **0**/AF..[1]	MQ../**MM11D**/Z.8F **0**/AF.. MQ../**MM15D**/Z.8F **0**/AF..[1]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**P**100M4/TH.	MF../**MM15D**/Z.8F **0**/**BW1**/AF.. MF../**MM22D**/Z.8F **0**/**BW2**/AF..[1]	MQ../**MM15D**/Z.8F **0**/**BW1**/AF.. MQ../**MM22D**/Z.8F **0**/**BW2**/AF..[1]
	DR**S**90M4/**BE**/TH. DR**E**90L4/**BE**/TH. DR**P**100M4/**BE**/TH.	MF../**MM15D**/Z.8F **0**/AF.. MF../**MM22D**/Z.8F **0**/AF..[1]	MQ../**MM15D**/Z.8F **0**/AF.. MQ../**MM22D**/Z.8F **0**/AF..[1]
2.2	DR**S**90L4/TH. DR**E**100M4/TH. DR**P**100L4/TH.	MF../**MM22D**/Z.8F **0**/**BW2**/AF.. MF../**MM30D**/Z.8F **0**/**BW2**/AF..[1]	MQ../**MM22D**/Z.8F **0**/**BW2**/AF.. MQ../**MM30D**/Z.8F **0**/**BW2**/AF..[1]
	DR**S**90L4/**BE**/TH. DR**E**100M4/**BE**/TH. DR**P**100L4/**BE**/TH.	MF../**MM22D**/Z.8F **0**/AF.. MF../**MM30D**/Z.8F **0**/AF..[1]	MQ../**MM22D**/Z.8F **0**/AF.. MQ../**MM30D**/Z.8F **0**/AF..[1]
3	DR**S**100M4/TH. DR**E**100LC4/TH. DR**P**112M4/TH.	MF../**MM30D**/Z.8F **0**/**BW2**/AF.. MF../**MM40D**/Z.8F **0**/**BW2**/AF..[1]	MQ../**MM30D**/Z.8F **0**/**BW2**/AF.. MQ../**MM40D**/Z.8F **0**/**BW2**/AF..[1]
	DR**S**100M4/**BE**/TH. DR**E**100LC4/**BE**/TH. DR**P**112M4/**BE**/TH.	MF../**MM30D**/Z.8F **0**/AF.. MF../**MM40D**/Z.8F **0**/AF..[1]	MQ../**MM30D**/Z.8F **0**/AF.. MQ../**MM40D**/Z.8F **0**/AF..[1]
4	DR**S**100LC4/TH. DR**E**132S4/TH. DR**P**132M4/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**P**132M4/**BE**/TH.	MF../**MM40D**/Z.8F **0**/AF.. –	MQ../**MM40D**/Z.8F **0**/AF.. –

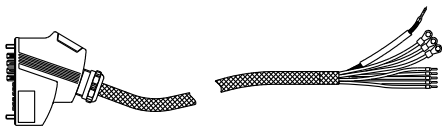
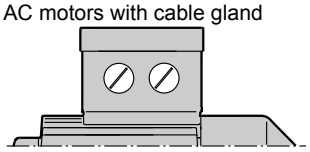
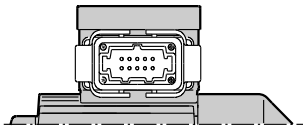
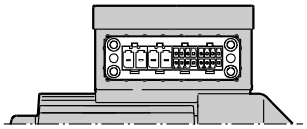
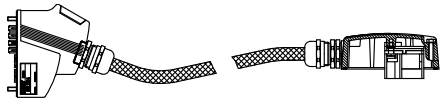
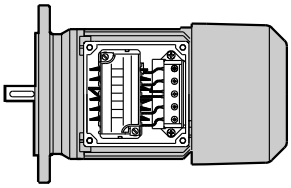
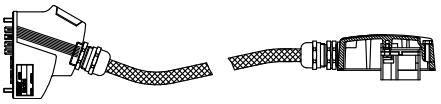
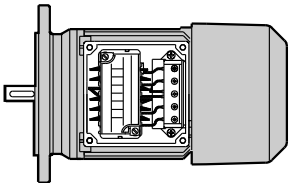
1) Combination with increased short-term torque

Motor assignment 2900 rpm

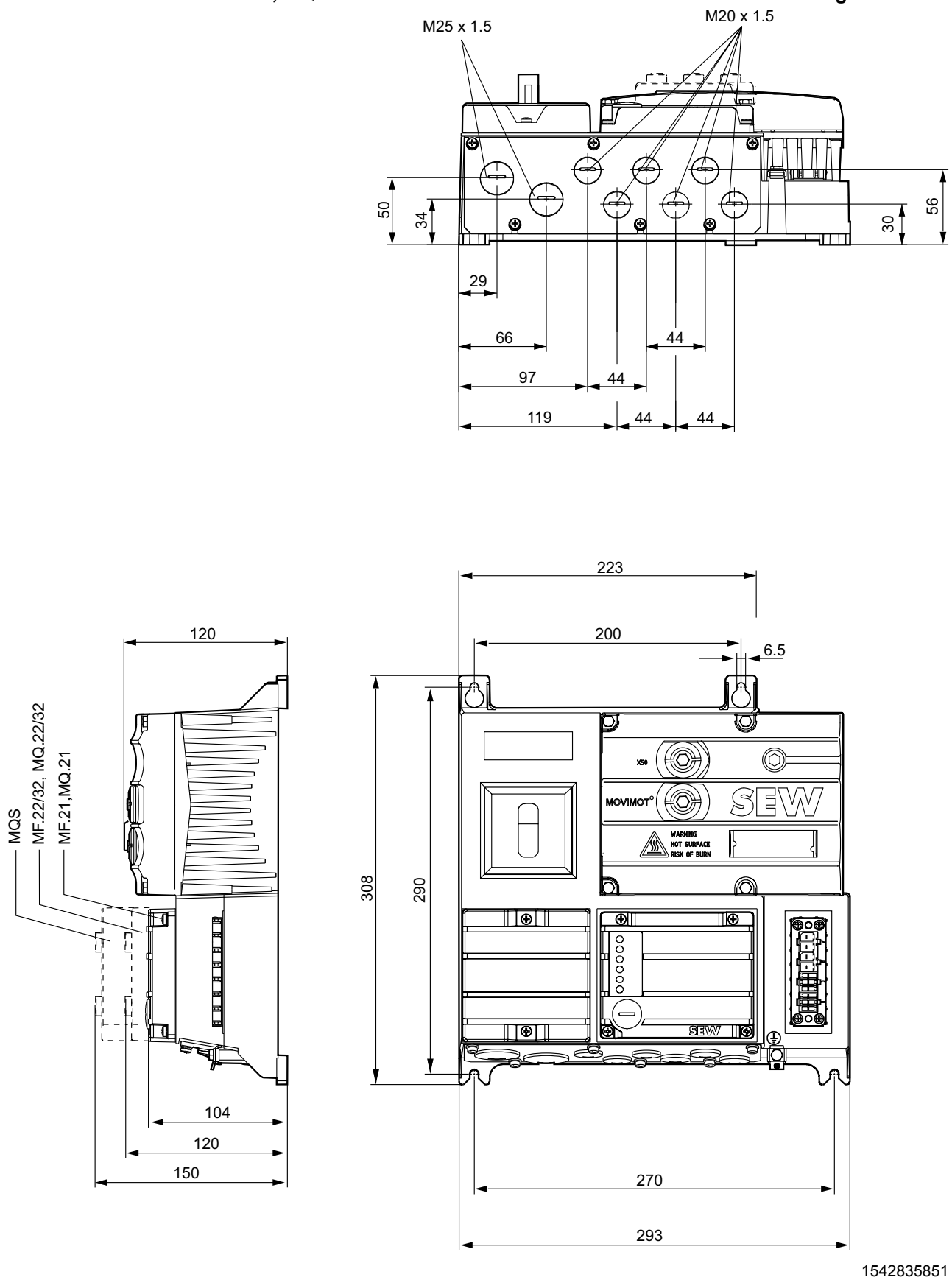
Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		with MF.. fieldbus interface	with MQ.. fieldbus interface
0.37	DFR63L4/TH	MF../ **MM03D**/Z.8F **1**/**BW1**/AF.. MF../**MM05D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../ **MM03D**/Z.8F **1**/**BW1**/AF.. MQ../**MM03C**/Z.8F **1**/**BW1**/AF..[1)]
	DFR63L4/**BR**/TH .	MF../**MM03D**/Z.8F **1**/AF.. MF../**MM05D**/Z.8F **1**/AF..[1)]	MQ../ **MM03D**/Z.8F **1**/AF.. MQ../**MM05D**/Z.8F **1**/AF..[1)]
0.55	DR**S**71S4/TH.	MF../**MM05D**/Z.8F **1**/**BW1**/AF.. MF../**MM07D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM03C**/Z.8F **1**/**BW1**/AF.. MQ../**MM03D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**S**71S4/**BE**/TH.	MF../**MM05D**/Z.8F **1**/AF.. MF../**MM07D**/Z.8F **1**/AF..[1)]	MQ../**MM05D**/Z.8F **1**/AF.. MQ../**MM07D**/Z.8F **1**/AF..[1)]
0.75	DR**S**71M4/TH.	MF../**MM07D**/Z.8F **1**/**BW1**/AF.. MF../**MM11D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM03D**/Z.8F **1**/**BW1**/AF.. MQ../**MM11D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**S**71M4/**BE**/TH.	MF../**MM07D**/Z.8F **1**/AF.. MF../**MM11D**/Z.8F **1**/AF..[1)]	MQ../**MM07D**/Z.8F **1**/AF.. MQ../**MM11D**/Z.8F **1**/AF..[1)]
1.1	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4/TH.	MF../**MM11D**/Z.8F **1**/**BW1**/AF.. MF../**MM15D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM11D**/Z.8F **1**/**BW1**/AF.. MQ../**MM15D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MF../**MM11D**/Z.8F **1**/AF.. MF../**MM15D**/Z.8F **1**/AF..[1)]	MQ../**MM11D**/Z.8F **1**/AF.. MQ../**MM15D**/Z.8F **1**/AF..[1)]
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MF../**MM15D**/Z.8F **1**/**BW1**/AF.. MF../**MM22D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM15D**/Z.8F **1**/**BW1**/AF.. MQ../**MM22D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MF../**MM15D**/Z.8F **1**/AF.. MF../**MM22D**/Z.8F **1**/AF..[1)]	MQ../**MM15D**/Z.8F **1**/AF.. MQ../**MM22D**/Z.8F **1**/AF..[1)]
2.2	DR**S**90M4/TH. DR**E**90L4/TH. DR**P**100M4/TH.	MF../**MM22D**/Z.8F **1**/**BW2**/AF.. MF../**MM30D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM22D**/Z.8F **1**/**BW2**/AF.. MQ../**MM30D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**90M4/**BE**/TH. DR**E**90L4/**BE**/TH. DR**P**100M4/**BE**/TH.	MF../**MM22D**/Z.8F **1**/AF.. MF../**MM30D**/Z.8F **1**/AF..[1)]	MQ../**MM22D**/Z.8F **1**/AF.. MQ../**MM30D**/Z.8F **1**/AF..[1)]
3	DR**S**90L4/TH. DR**E**100M4/TH. DR**P**100L4/TH.	MF../**MM30D**/Z.8F **1**/**BW2**/AF.. MF../**MM40D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM30D**/Z.8F **1**/**BW2**/AF.. MQ../**MM40D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**90L4/**BE**/TH. DR**E**100M4/**BE**/TH. DR**P**100L4/**BE**/TH.	MF../**MM30D**/Z.8F **1**/AF.. MF../**MM40D**/Z.8F **1**/AF..[1)]	MQ../**MM30D**/Z.8F **1**/AF.. MQ../**MM40D**/Z.8F **1**/AF..[1)]
4	DR**S**100M4/TH. DR**E**100LC4/TH. DR**P**112M4/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**P**112M4/**BE**/TH.	MF../**MM40D**/Z.8F **1**/AF.. –	MQ../**MM40D**/Z.8F **1**/AF.. –

1) Combinations with increased short-term torque

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

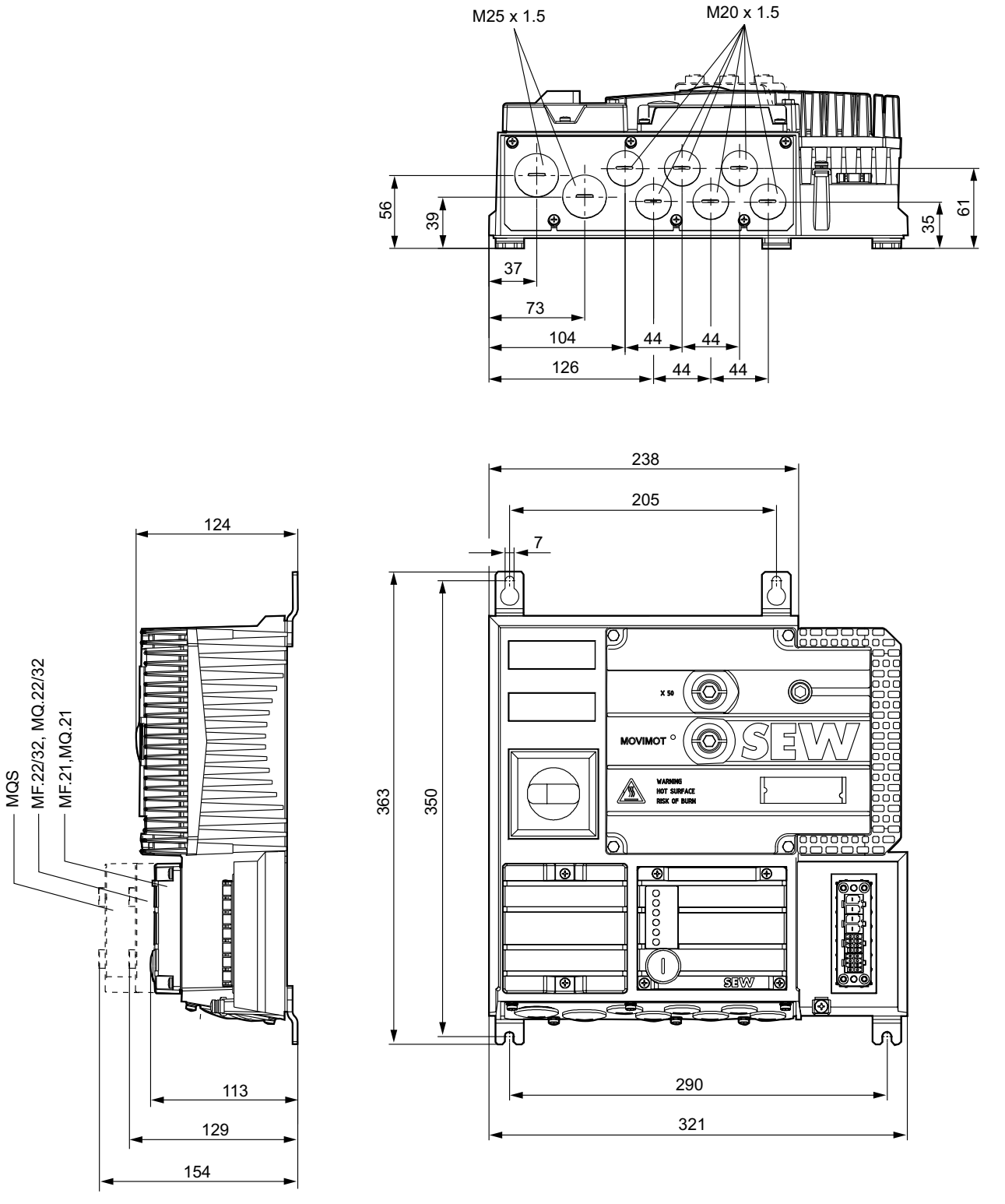
Field distributor	Hybrid cable	Cable type	Drive
Z.8	Part number 0186 742 3  ***Preferred type (preferred lengths 1.5/2/3/5 m)*** *Preferred types with preferred lengths can usually be delivered at short notice*	**A**	AC motors with cable gland 
	Part number: 0593 076 6  ***Preferred type (preferred lengths 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 0186 741 5 	**A**	AC motors with APG4 plug connector 
	Part number: 0593 278 5 (⅄) Part number: 0816 325 1 (△) 	**A**	AC motors with ISU4 plug connectors size DR.63 
	Part number: 0593 755 8 (⅄) Part number: 0816 326 X (△) 	**A**	AC motors with ISU4 plug connectors size DR.71-DR.132 

4.6.7 MF../MM03-MM15/Z.8., MQ../MM03-MM15/Z.8. field distributors – dimension drawing



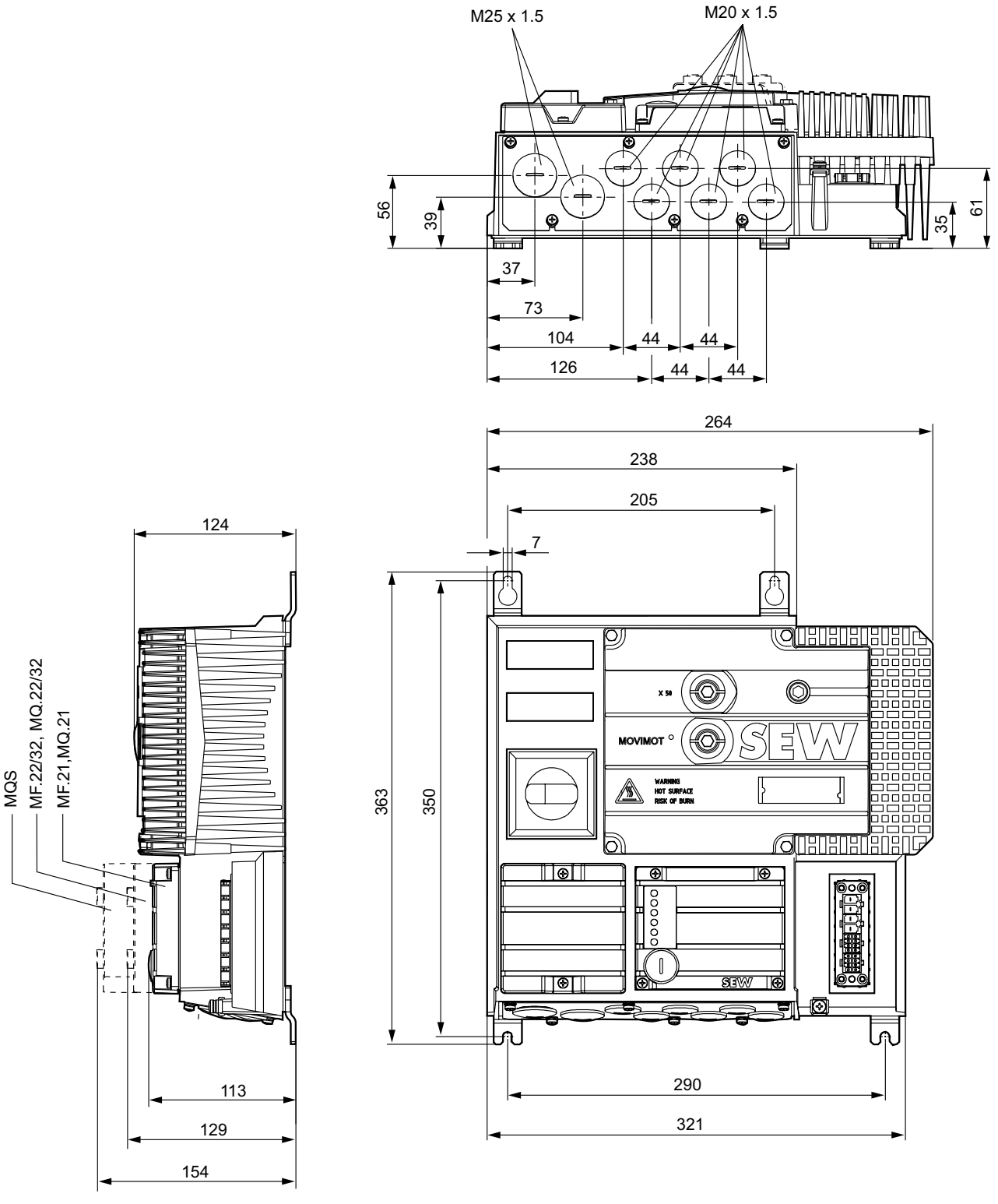
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4.6.8 MF../MM22-MM30/Z.8., MQ../MM22-MM30/Z.8. field distributors – dimension drawing



1542837771

4.6.9 MF../MM40/Z.8., MQ../MM40/Z.8. field distributors – dimension drawing



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4.7 Functional safety

4.7.1 Order information

	TIPS
	• The SafetyDrive design must be ordered explicitly. • For PROFIsafe field distributors, the SafetyDrive design is obligatory. It is always listed in the selection tables. • For all other field distributors, the order note: "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.

4.7.2 Permitted SafetyDrive designs

Only the following unit combinations with MOVIMOT® MM..DD are permitted in applications with safe disconnection of the drive (STO) up to safety category 3 to EN 954-1 as well as performance level d to EN ISO 13849-1 as well as SIL 2 to EN 62061.

For additional information on the safety function and the safety-related requirements, refer to the "MOVIMOT® MM..DD – Functional Safety" manual.

- MOVIMOT® with MFZ.6 field distributor. (Connection via pre-fabricated cable). The following combinations are permitted:

MF../Z.6./A..
MQ../Z.6./A..

Connection technology:

AF0	permitted with Z16F, Z26F, Z26J only
AF1	only permitted with Z36F
AF2, AF3	only permitted with Z26F, Z26J

Connection module:
Z16F, Z26F, Z26J, Z36F

Fieldbus interface:

MFI21A, 22A, 32A MQI21A, 22A, 32A MFI23F, 33F	only permitted with Z16F
MFP21D, 22D, 32D MFP22H, 32H MQP21D, 22D, 32D MQS22F, 32F	only permitted with Z26F, Z26J
MFD21A, 22A, 32A MQD21A, 22A, 32A MFO21A, 22A, 32A	only permitted with Z36F

- MOVIMOT® frequency inverter integrated in the MFZ.7 field distributor. (Connection of the AC motor via pre-fabricated cable). The following combinations are permitted:

MF../MM../Z.7.
MQ../MM../Z.7.

Connection module:
Z17F, Z27F, Z37F

MOVIMOT® inverter:
MM03D to MM15D

Fieldbus interface:

MFI21A, 22A, 32A MQI21A, 22A, 32A MFI23F, 33F	only permitted with Z17F
MFP21D, 22D, 32D MFP22H, 32H MQP21D, 22D, 32D MQS22F, 32F	only permitted with Z27F
MFD21A, 22A, 32A MQD21A, 22A, 32A MFO21A, 22A, 32A	only permitted with Z37F

- MOVIMOT® frequency inverter integrated in the MFZ.8 field distributor. (Connection of the AC motor via pre-fabricated cable). The following combinations are permitted:

MF../MM../Z.8./A..
MQ../MM../Z.8./A..

Connection technology:

AF0	permitted with Z18F, Z28F, Z28J only
AF1, AGA, AGB	only permitted with Z38F, Z38G
AF2, AF3	only permitted with Z28F, Z28J

Connection module:
Z18F, Z28F, Z28J, Z38F, Z38G

MOVIMOT® inverter:
MM03D to MM40D

Fieldbus interface:

MFI21A, 22A, 32A MQI21A, 22A, 32A MFI23F, 33F	only permitted with Z18F
MFP21D, 22D, 32D MFP22H, 32H MQP21D, 22D, 32D MQS22F, 32F	only permitted with Z28F, Z28J
MFD21A, 22A, 32A MQD21A, 22A, 32A MFO21A, 22A, 32A	only permitted with Z38F, Z38G

4.7.3 PROFIsafe field distributors

Brief description

The PROFIsafe MQS.2F/Z2.F field distributors provide a connection between MOVIMOT® drives and the safety-oriented PROFIsafe communication system.

The MQS22F fieldbus interface contains four standard binary inputs and two standard binary outputs. The MQS32F fieldbus interface contains six standard binary inputs and no standard binary outputs.

The PROFIsafe MQS.2F interface also has a safety-oriented binary output and two safety-oriented binary inputs. In conjunction with a safety controller, you can use the safe binary output to control the STO function (safe disconnection) of the MOVIMOT® drive via PROFIsafe.

Unit designations for the MQS PROFIsafe interfaces:

- **MQS22F** 4DI/2DO (via M12 plug connector) + 2F-DI/1F-DO (2-pole)
- **MQS32F** 6DI/0DO (via M12 plug connector) + 2F-DI/1F-DO (2-pole)

Permitted designs

Only the following unit combinations with MOVIMOT® MM..DD are permitted in applications with safe disconnection of the drive (STO) up to safety category 3 to EN 954-1 as well as performance level d to EN ISO 13849-1 as well as SIL 2 to EN 62061.

For detailed information on the safety function and the safety requirements, refer to the "MOVIMOT® MM..D – Functional Safety" manual and the "PROFIsafe Field Distributors" manual.

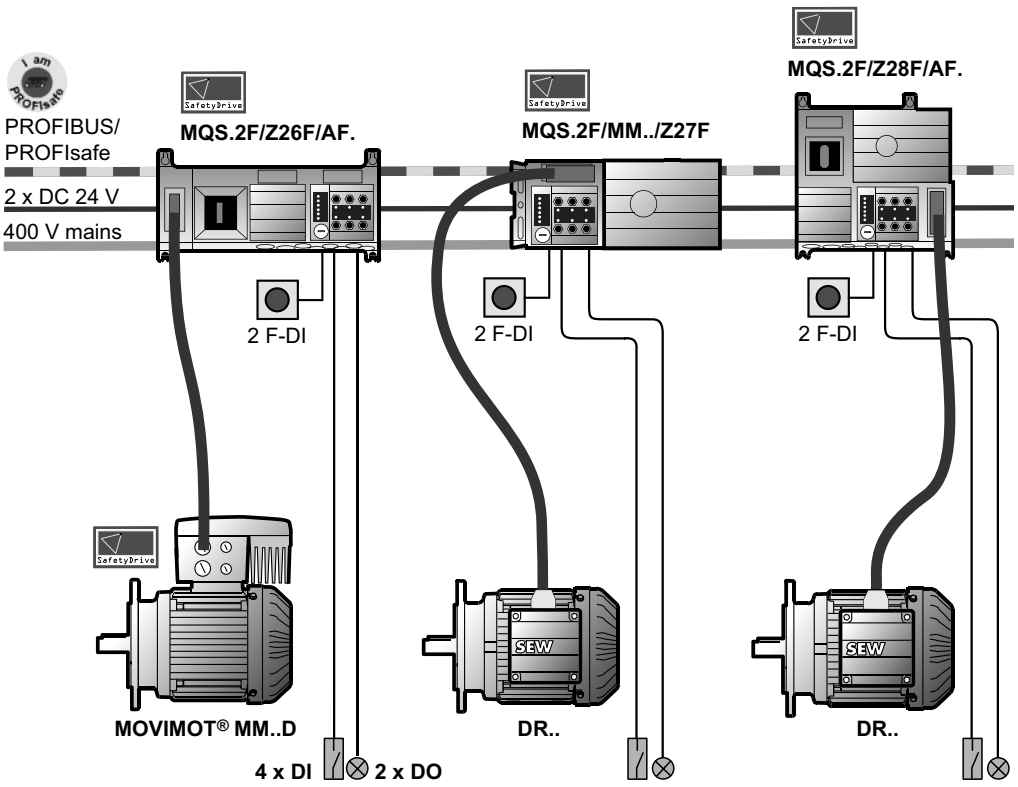
Permitted field distributor combinations		
Z.6 field distributor	MQS22F / Z26F / AF0 MQS22F / Z26F / AF2 MQS22F / Z26F / AF3	MQS32F / Z26F / AF0 MQS32F / Z26F / AF2 MQS32F / Z26F / AF3
Z.7 field distributor	MQS22F / MM..D / Z27F . MQS22F / MM..D / Z27F . /AVT2/AWT2	MQS32F / MM..D / Z27F . MQS32F / MM..D / Z27F . /AVT2/AWT2
Z.8 field distributor	MQS22F / MM..D / Z28F . /AF0 MQS22F / MM..D / Z28F . / AF2 MQS22F / MM..D / Z28F . / AF3	MQS32F / MM..D / Z28F . /AF0 MQS32F / MM..D / Z28F . / AF2 MQS32F / MM..D / Z28F . / AF3

Not permitted are:

- Combinations with Z.1 field distributors
- Combinations with Z.3 field distributors
- Variants without M12

Overview

The following overview lists the possible field distributor variants in conjunction with the PROFIsafe MQS interface. The STO function (safe disconnection) of MOVIMOT® is controlled via the PROFIsafe field distributor via the PROFIBUS standard installation. In this case, the 24 V supply to the MOVIMOT® drive is disconnected via the safe binary output (wired internally).



5 MOVIMOT® Installed Close to the Motor

5.1 Description

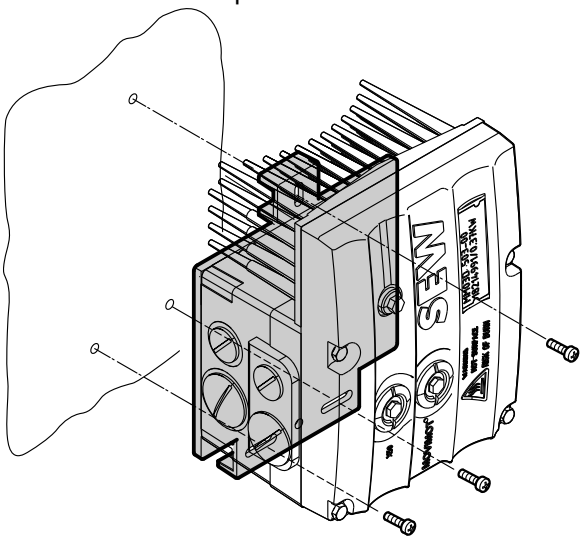
- With the P2.A option, you can install the MOVIMOT® inverter close to the motor.
- The inverter is connected to the assigned motor (see page 167) using a pre-fabricated hybrid cable (see page 169).
- MOVIMOT® with option P2.A complies with IP65.
- The following figure shows the MOVIMOT® design for installation close to the motor using ALA4 plug connectors (left: sizes MM03 to MM15, right: sizes MM22 to MM40):



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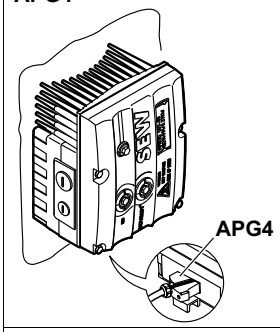
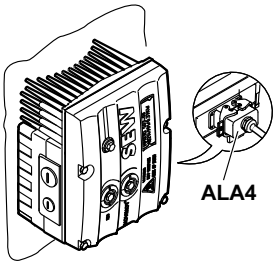
5.2 Available designs

The following figure shows the P21A option for MOVIMOT® sizes MM03 to MM15:



1531353739

The following designs are available:

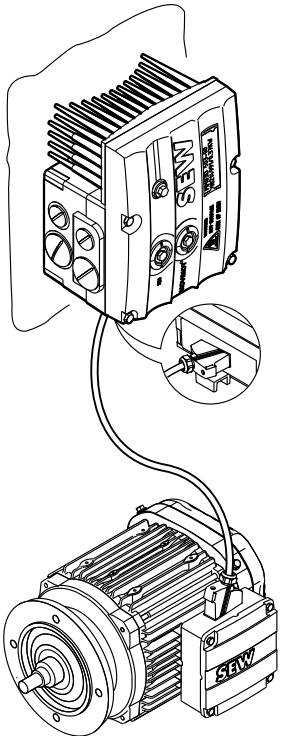
Connection to motor	MOVIMOT® size	1)	MOVIMOT® standard design	MOVIMOT® with integrated AS-Interface2)
APG4 	MM03 to MM15	⅄	MM..D-503-00/0/P21A/ RO1A/APG4	MM..D-503-00/0/P21A/ RR3A/AVSK/APG4/MLK
		△	MM..D-503-00/1/P21A/ RO1A/APG4	MM..D-503-00/1/P21A/ RR3A/AVSK/APG4/MLK
	MM22 to MM40	⅄	MM..D-503-00/0/P22A/ 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
ALA4 	MM03 to MM15	⅄	MM..D-503-00/0/P21A/ RE1A/ALA4	MM..D-503-00/0/P21A/ RR3A/AVSK/ALA4/MLK
		△	MM..D-503-00/1/P21A/ RE1A/ALA4	MM..D-503-00/1/P21A/ RR3A/AVSK/ALA4/MLK
	MM22 to MM40	⅄	MM..D-503-00/0/P22A/ RE2A/ALA4	MM..D-503-00/0/P22A/ RR4A/AVSK/ALA4/MLK
		△	MM..D-503-00/1/P22A/ RE2A/ALA4	MM..D-503-00/1/P22A/ RR4A/AVSK/ALA4/MLK

1) Connection type of connected motor

2) In preparation

5.3 Sample unit designation

For example, a MOVIMOT® inverter with ALA4 plug connector for motor connection has the following unit designation:



1532500619

MM22D-503-00/0/P22A/RE2A/ALA4[1)]

- Plug connector for the connection to the motor
- Terminal box design
- Adapter for installation close to the motor
- Connection type
  0 = ⅄
  1 = △
- MOVIMOT®

1) If the field distributor is used in combination with a drive without mechanical holding brake, an integrated braking resistor must be ordered (according to the following example):

Integrated braking resistor:

MM22D-503-00/0/**BW.**/P22A/RE.A/ALA4

→ MM03...MM15: **BW1**
MM22...MM40: **BW2**

1531434763

For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).

5.4 Motor assignment

5.4.1 Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to MOVIMOT® drive (design for installation close to the motor):

Integral characteristics	Requirements for the assigned AC motor		
Permitted motors	The permitted motors are listed in section "Motor assignment (1400 rpm)" (see page 167) and "Motor assignment (2900 rpm)" (see page 168).		
Permitted nominal voltage	Depending on motor series:		
	Motor [type]	**Rated voltage [V]**	**Mains frequency [Hz]**
	DRS	230/400	50
	DRE	230/400	50
	DRS	266/460	60
	DRS / DRE	220/380	60
	DRP	230/400	50
	DRP	266/460	60
Permitted brakes	Depending on motor series:		
	Motor [type]	**Standard brake [type]**	**Optional brake [type]**
	DR.63L4	BR03	–
	DR.71S4	BE05	BE1
	DR.71M4	BE1	BE05
	DR.80S4	BE1	BE05
	DRE80M4	BE1	BE05
	DRS80M4	BE2	BE1
	DRS90M4/DRE90M4	BE2	BE1
	DRP90M4	BE1	BE2
	DRE90L4	BE2	BE1
	DRS90L4	BE5	BE2
	DRS100M4 / DRE100M4	BE5	BE2
	DRP100M4	BE2	BE5
	DR.100LC4	BE5	BE2
	DR.100L4	BE5	BE2
	DRP112M4	BE5	BE11
	DR.132S4	BE5	BE11
	DRP132M4	BE5	BE11
Preferred brake voltage	Size 1 (MM03 to MM15): 230 V Size 2 (MM22 to 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 • APG4 plug connector • ISU4 plug connector MM../P2.A/RE.A/ALA4: • ASB4 plug connector See section "Hybrid cables" (see page 169) for additional information.		
Permitted motor protection	Always order the assigned motor with **TH thermostat** (bimetallic switch).		
Permitted encoder system	EI76 incremental encoder (can be evaluated only via fieldbus interface with integrated MQ.. minicontroller).		

5.4.2 Motor assignment (1400 rpm)

Power [kW]	Motor (230/400 V, 50 Hz) 人	MOVIMOT® with option P.2A
0.25	DFR63L4/TH	- MM03D-503-00/**0**/**BW1**/P21A..[1)]
	DFR63L4/**BR**/TH .	- MM03D-503-00/**0**/P21A/..[1)]
0.37	DR**S**71S4/TH.	MM03D-503-00/**0**/**BW1**/P21A.. MM05D-503-00/**0**/**BW1**/P21A..[1)]
	DR**S**71S4/**BE**/TH.	MM03D-503-00/**0**/P21A.. MM05D-503-00/**0**/P21A..[1)]
0.55	DR**S**71M4/TH.	MM05D-503-00/**0**/**BW1**/P21A.. MM07D-503-00/**0**/**BW1**/P21A..[1)]
	DR**S**71M4/**BE**/TH.	MM05D-503-00/**0**/P21A.. MM07D-503-00/**0**/P21A..[1)]
0.75	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4//TH.	MM07D-503-00/**0**/**BW1**/P21A.. MM11D-503-00/**0**/**BW1**/P21A..[1)]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MM07D-503-00/**0**/P21A.. MM11D-503-00/**0**/P21A..[1)]
1.1	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MM11D-503-00/**0**/**BW1**/P21A.. MM15D-503-00/**0**/**BW1**/P21A..[1)]
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MM11D-503-00/**0**/P21A.. MM15D-503-00/**0**/P21A..[1)]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**P**100M4/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**P**100M4/**BE**/TH.	MM15D-503-00/**0**/P21A.. MM22D-503-00/**0**/P22A..[1)]
2.2	DR**S**90L4/TH. DR**E**100M4/TH. DR**P**100L4/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**P**100L4/**BE**/TH.	MM22D-503-00/**0**/P22A.. MM30D-503-00/**0**/P22A..[1)]
3	DR**S**100M4/TH. DR**E**100LC4/TH. DR**P**112M4/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**P**112M4/**BE**/TH.	MM30D-503-00/**0**/P22A.. MM40D-503-00/**0**/P22A..[1)]
4	DR**S**100LC4/TH. DR**E**132S4/TH. DR**P**132M4/TH.	MM40D-503-00/**0**/**BW2**/P22A.. -
	DR**S**100LC4/**BE**/TH. DR**E**132S4/**BE**/TH. DR**P**132M4/**BE**/TH.	MM40D-503-00/**0**/P22A.. -

1) Combination with increased short-term torque

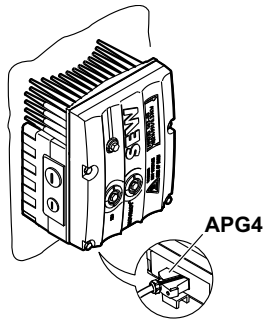
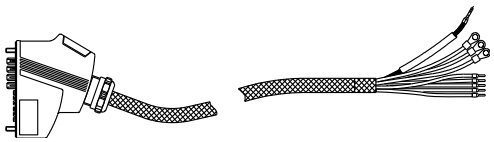
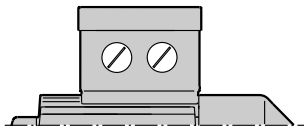
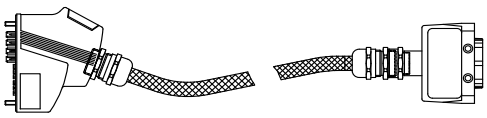
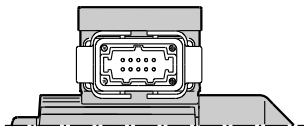
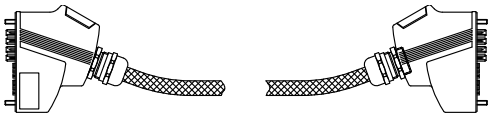
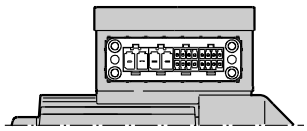
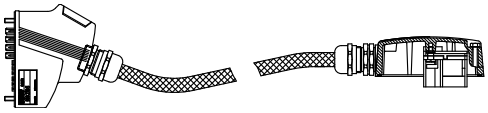
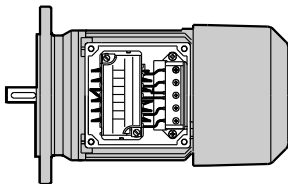
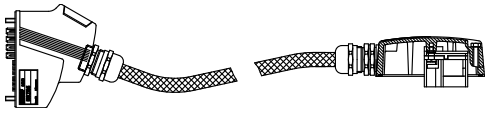
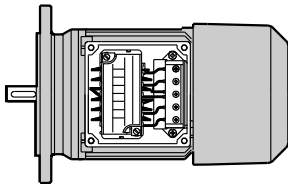
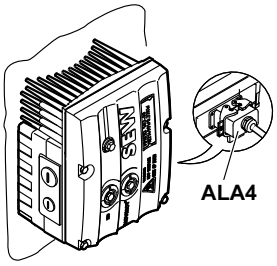
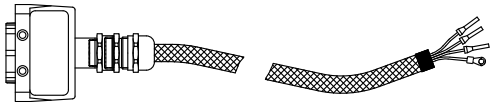
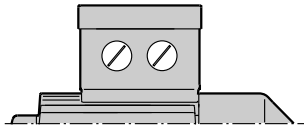
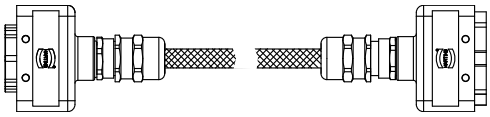
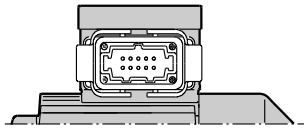
5.4.3 Motor assignment (2900 rpm)

Power [kW]	Motor (230/400 V, 50 Hz) △	MOVIMOT® with option P2A
0.37	DFR63L4/TH	MM03D-503-00/**1**/**BW1**/P21A.. MM05D-503-00/**1**/**BW1**/P21A..[1)]
	DFR63L4/**BR**/TH .	MM03D-503-00/**1**/P21A.. MM05D-503-00/**1**/P21A..[1)]
0.55	DR**S**71S4/TH.	MM05D-503-00/**1**/**BW1**/P21A.. MM07D-503-00/**1**/**BW1**/P21A..[1)]
	DR**S**71S4/**BE**/TH.	MM05D-503-00/**1**/P21A.. MM07D-503-00/**1**/P21A..[1)]
0.75	DR**S**71M4/TH.	MM07D-503-00/**1**/**BW1**/P21A.. MM11D-503-00/**1**/**BW1**/P21A..[1)]
	DR**S**71M4/**BE**/TH.	MM07D-503-00/**1**/P21A.. MM11D-503-00/**1**/P21A..[1)]
1.1	DR**S**80S4/TH. DR**E**80M4/TH. DR**P**90M4/TH.	MM11D-503-00/**1**/**BW1**/P21A.. MM15D-503-00/**1**/**BW1**/P21A..[1)]
	DR**S**80S4/**BE**/TH. DR**E**80M4/**BE**/TH. DR**P**90M4/**BE**/TH.	MM11D-503-00/**1**/P21A.. MM15D-503-00/**1**/P21A..[1)]
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**P**90L4/TH.	MM15D-503-00/**1**/**BW1**/P21A.. MM22D-503-00/**1**/**BW2**/P22A..[1)]
	DR**S**80M4/**BE**/TH. DR**E**90M4/**BE**/TH. DR**P**90L4/**BE**/TH.	MM15D-503-00/**1**/P21A.. MM22D-503-00/**1**/P22A..[1)]
2.2	DR**S**90M4/TH. DR**E**90L4/TH. DR**P**100M4/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**P**100M4/**BE**/TH.	MM22D-503-00/**1**/P22A.. MM30D-503-00/**1**/P22A..[1)]
3	DR**S**90L4/TH. DR**E**100M4/TH. DR**P**100L4/TH.	MM30D-503-00/**1**/**BW2**/P22A.. MM40D-503-00/**1**/**BW2**/P22A..[1)]
	DR**S**90L4/**BE**/TH. DR**E**100M4/**BE**/TH. DR**P**100L4/**BE**/TH.	MM30D-503-00/**1**/P22A.. MM40D-503-00/**1**/P22A..[1)]
4	DR**S**100M4/TH. DR**E**100LC4/TH. DR**P**112M4/TH.	MM40D-503-00/**1**/**BW2**/P22A.. –
	DR**S**100M4/**BE**/TH. DR**E**100LC4/**BE**/TH. DR**P**112M4/**BE**/TH.	MM40D-503-00/**1**/P22A.. –

1) Combination with increased short-term torque

5.5 Hybrid cable

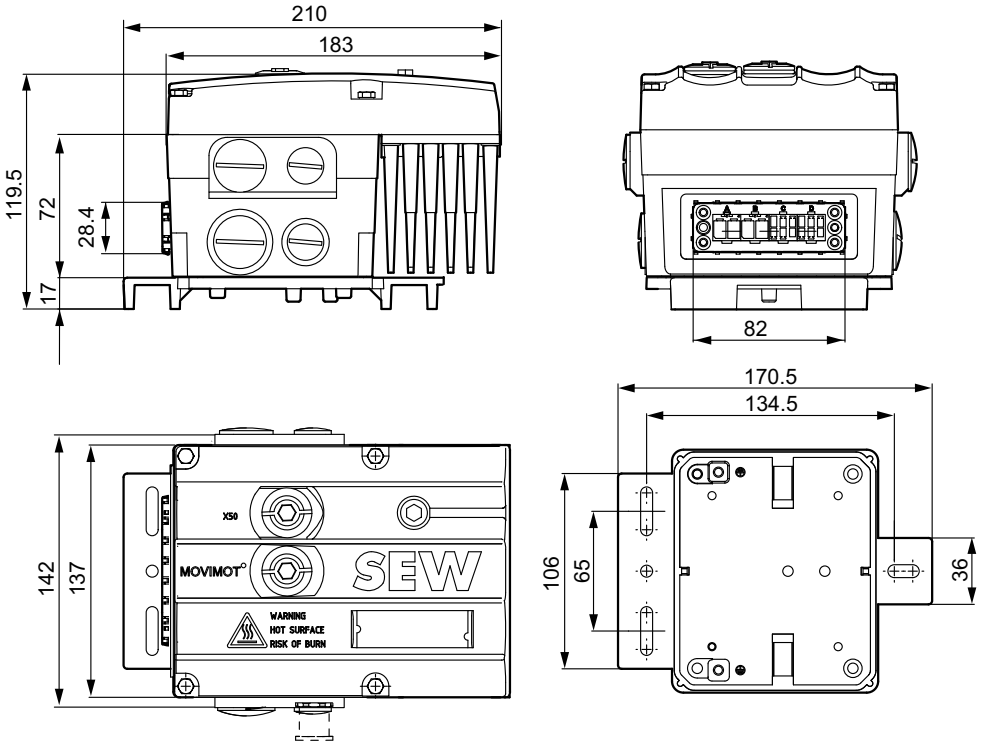
5.5.1 Connection between MOVIMOT® and motor (installation close to the motor)

MOVIMOT® inverter	Hybrid cable	Drive
MM../P2.A/RO.A/APG4 	Part number: 0 186 742 3 	AC motors with cable gland 
	Part number: 0 593 076 6 	AC motors with ASB4 plug connector 
	Part number: 0 186 741 5 	AC motors with APG4 plug connector 
	Part number: 0 593 278 5 (人) Part number: 0 816 325 1 (△) 	AC motors with plug connector ISU4 Size DR.63 
	Part number: 0 593 755 8 (人) Part number: 0 816 326 X (△) 	AC motors with plug connector ISU4 Size DR.71-DR.132 
MM../P2.A/RE.A/ALA4 	Part number: 0 817 948 4 	AC motors with cable gland 
	Part number: 0 816 208 5 	AC motors with ASB4 plug connector 

5.6 Dimension drawings

5.6.1 MM03 to MM15 with option P21A (plug connector APG4) – dimension drawing

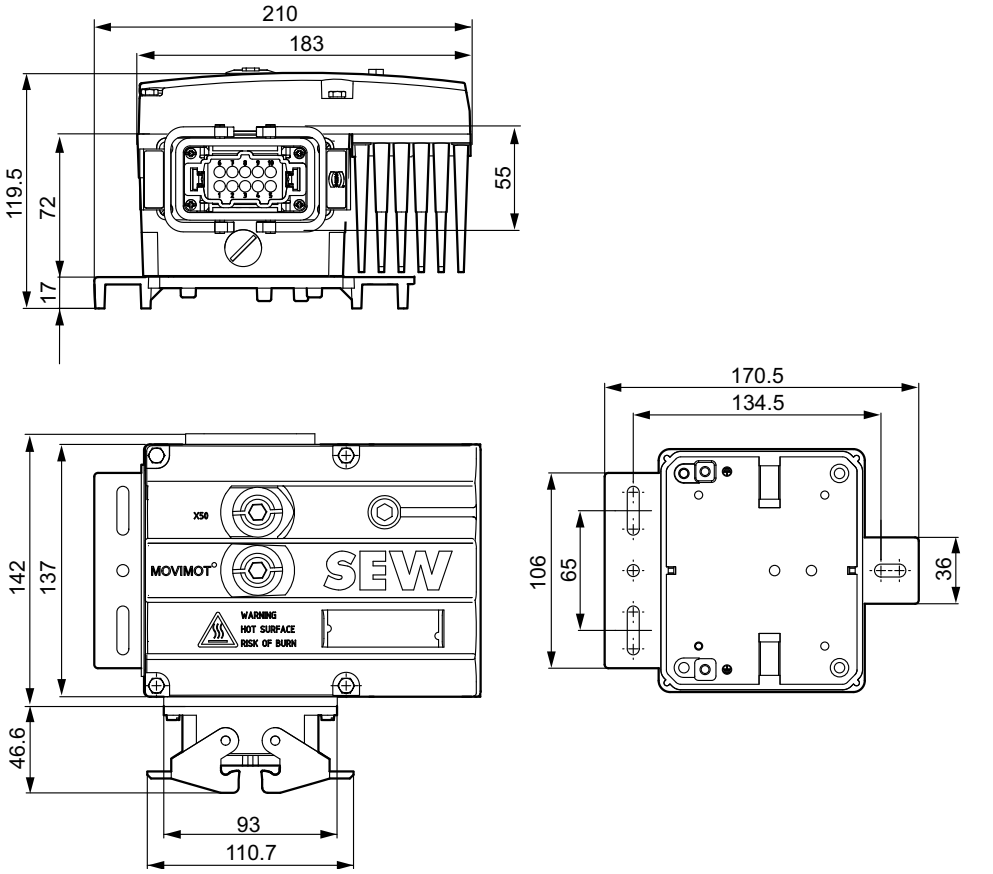
The following figure shows the dimensions of MM03 to MM15 with option P21A (APG4 plug connector):



1531288715

5.6.2 Dimension drawing of MM03 to MM15 with option P21A (ALA4 plug connector)

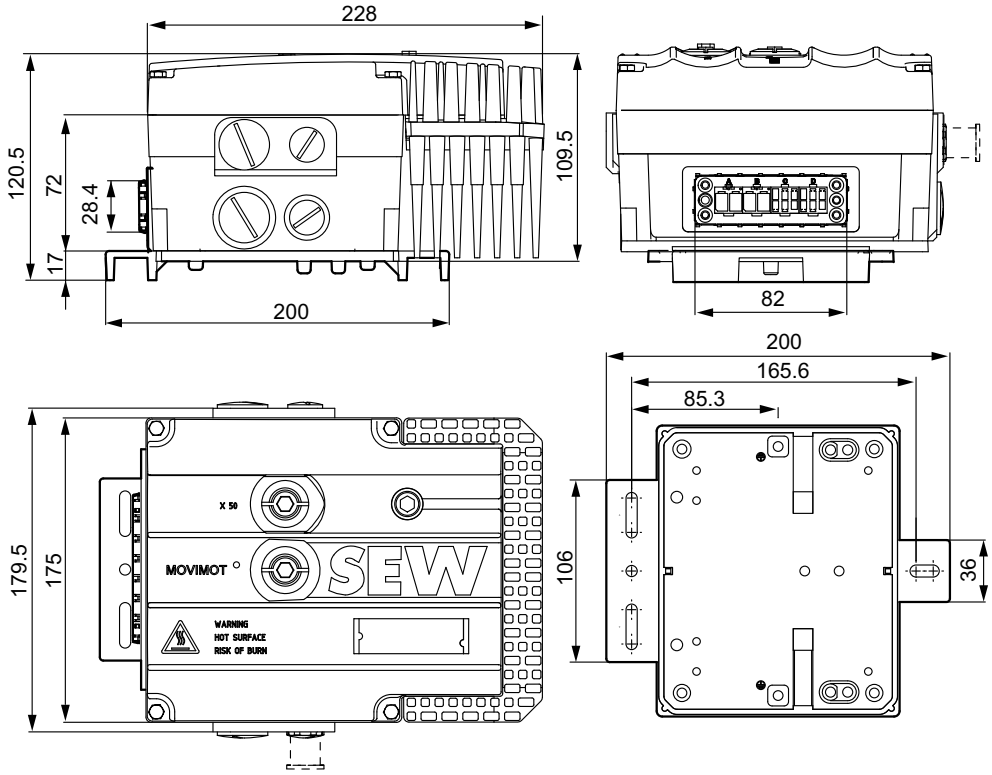
The following figure shows the dimensions of MM03 to MM15 with option P21A (ALA4 plug connector):



1531316235

5.6.3 MM22 to MM30 with option P22A (APG4 plug connector)

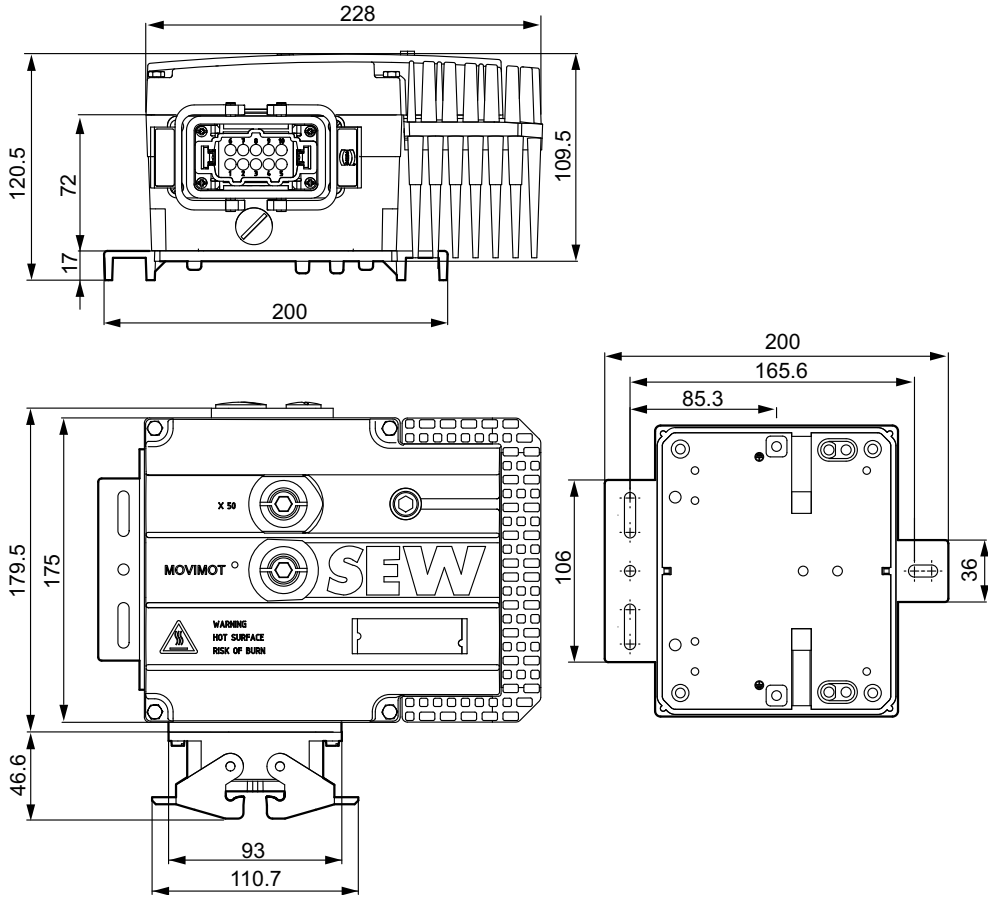
The following figure shows the dimensions of MM22 to MM30 with option P22A (APG4 plug connector):



1531318155

5.6.4 Dimension drawing of MM22 to MM30 with option P22A (ALA4 plug connector)

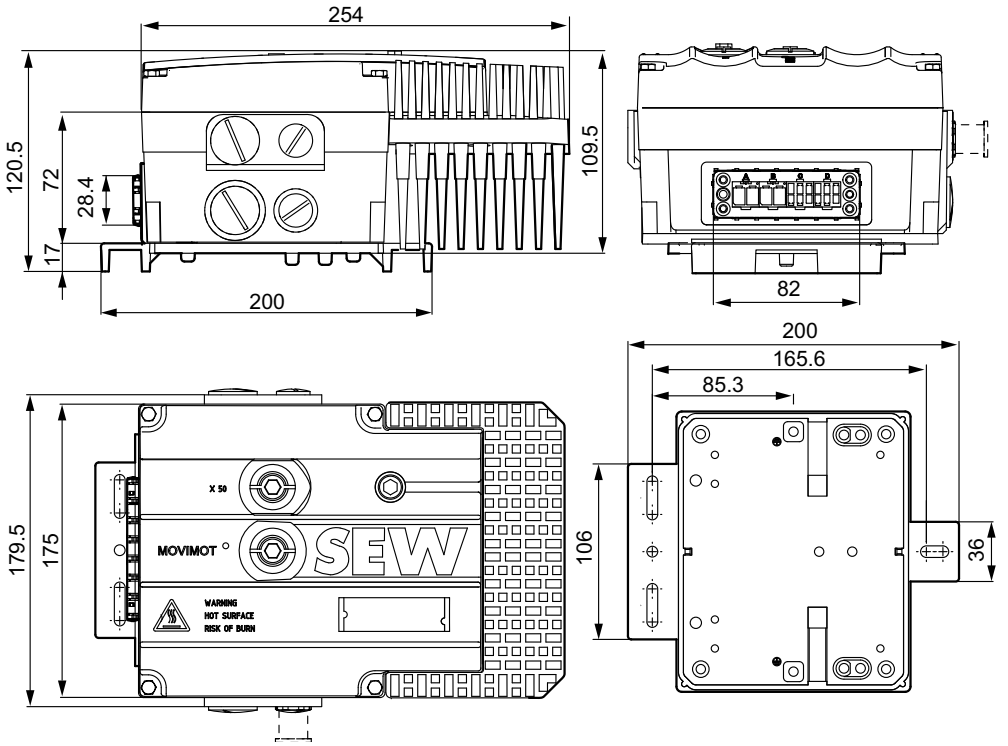
The following figure shows the dimensions of MM22 to MM30 with option P22A (ALA4 plug connector):



1531320075

5.6.5 MM40 dimension drawing with option P22A (APG4 plug connector)

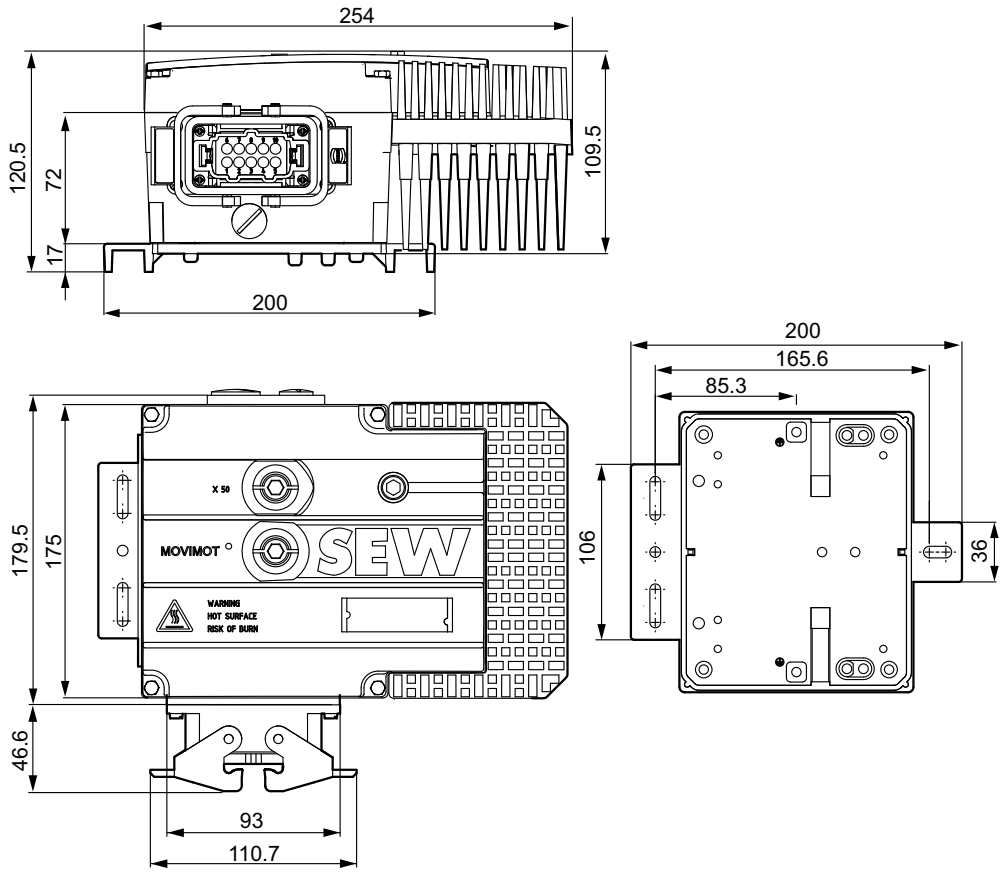
The following figure shows the dimensions of MM40 with option P22A (APG4 plug connector):



1685743883

5.6.6 MM40 dimension drawing with option P22A (ALA4 plug connector)

The following figure shows the dimensions of MM40 with option P22A (ALA4 plug connector):



1685741963

6 MOVI-SWITCH®-2S Installed Close to the Motor

6.1 Description

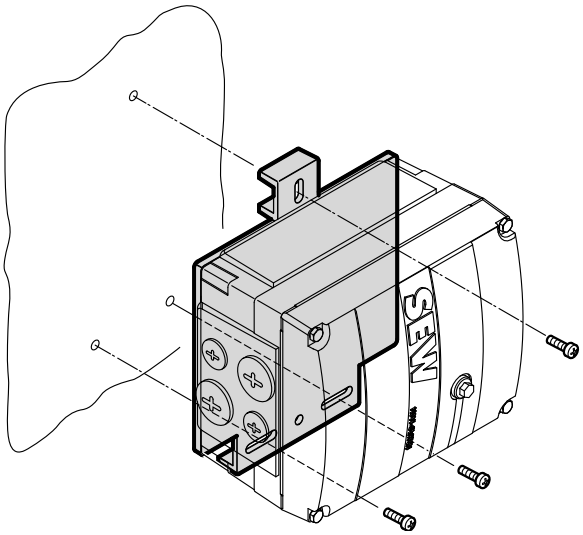
- You can use option P22A to install the MOVI-SWITCH® close to the motor.
- The inverter is connected to the motor using a pre-fabricated hybrid cable (see page 182).
- **With brakemotors, the brake voltage must correspond to the voltage of the phase voltage (e.g. 400 V mains = 400 V brake coil).**
- MOVI-SWITCH® with P22A option is supplied in enclosure IP65.
- The following figure shows the MOVI-SWITCH® design for installation close to the motor:



1507325067

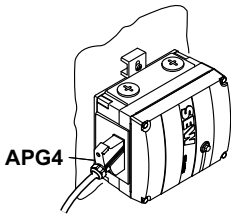
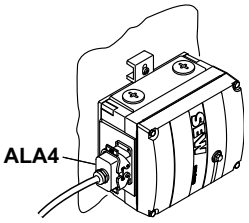
6.2 Available designs

The following figure shows option P22A for installing the MOVI-SWITCH®-2S close to the motor:

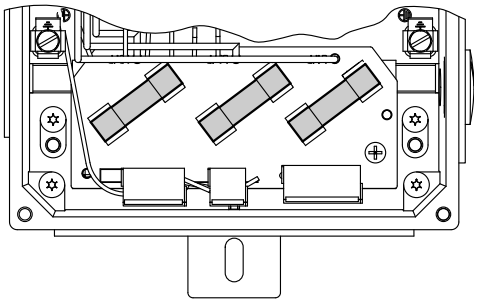


1531957643

The following designs are available. They can be combined with all the motors listed in section "Motor assignment" (see page 179).

Connection to motor	MOVI-SWITCH® binary control	MOVI-SWITCH® with integrated AS-Interface
APG4 	MSW-2S-07A/CB0/P22A/RI2A/APG4	MSW-2S-07A/CK0/P22A/RI2A/APG4
	MSW-2S-07A/CB0/CC15/P22A/RI2A/APG4[1)]	MSW-2S-07A/CK0/CC15/P22A/RI2A/APG4[1)]
ALA4 	MSW-2S-07A/CB0/P22A/RI2A/ALA4	MSW-2S-07A/CK0/P22A/RI2A/ALA4
	MSW-2S-07A/CB0/CC15/P22A/RI2A/ALA4[1)]	MSW-2S-07A/CK0/CC15/P22A/RI2A/ALA4[1)]

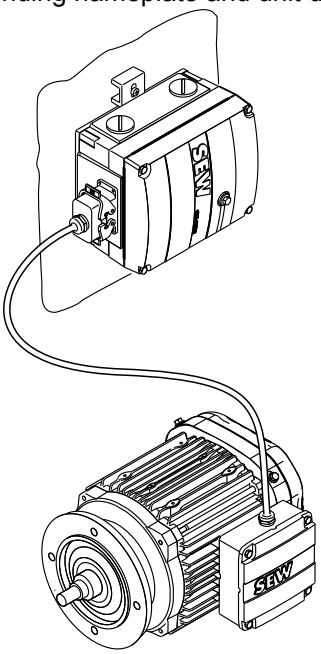
1) with line protection (see figure below)



1475553419

6.3 Sample unit designation

The following illustration shows an example of the MOVI-SWITCH®-2S installed close to the motor with the corresponding nameplate and unit designation:



1475556235

MSW-2S-07A/CB0/P22A/RI2A/ALA4

- Plug connector for the connection to the motor
- Terminal box design
- Adapter for mounting MOVI-SWITCH® close to the motor
- Design: 0 = Standard
- Signal type:
  B = Binary
  K = AS-Interface
- Control
- MOVI-SWITCH®

6.4 Motor assignment

6.4.1 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):

Integral characteristics	Requirements for the assigned AC motor
Permitted motors	The permitted motors are listed in section "DRS: 1500 rpm - S1" (see page 180), "DRE: 1500 rpm - S1" (see page 181) and "DRP: 1500 rpm - S1" (see page 181).
Permitted nominal motor voltage	AC 380 to 500 V
Permitted brakes	no restrictions
Permitted brake voltage	With brakemotors, the brake voltage must correspond to the voltage of the phase voltage (e.g. 400 V mains = 400 V brake coil).
Brake rectifier	Always order the assigned motor **without brake rectifier**.
Permitted plug connectors	MSW-2S../C.0/P22A/RI2A/APG4: MSW-2S../C.0/CC15/P22A/RI2A/APG4: • ASB4 plug connector • APG4 plug connector • ISU4 plug connector MSW-2S../C.0/P22A/RI2A/ALA4: MSW-2S../C.0/CC15/P22A/RI2A/ALA4: • ASB4 plug connector See section "Hybrid cables" (see page 182) for additional information.
Permitted motor protection	Always order the assigned motor with **TF temperature sensor** (positive coefficient thermistor or PTC resistor).

6.4.2 DRS: 1500 rpm – S1 (50 Hz)

Motor type DRS	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A η 75% η 100% [%]1)	B η 75% η 100% [%]2)	I_A/I_N	M_A/M_N M_H/M_N	m [kg]3)	J_{Mot} [10^{-4} kgm^2]
DRS71S4	0.37	2.55	1380	1.14	1.24	0.70	65.3 66.6	66.2 67.7	3.5	1.8 1.8	9.7	4.9
DRS71M4	0.55	3.8	1380	1.55	1.62	0.72	71.9 70.6	73 72.4	3.6	2.1 2.1	11	7.1
DRS80S4	0.75	5.1	1400	1.80	1.82	0.81	76.6 75.3	76.9 75.7	4.3	1.9 1.9	13.4	14.9
DRS80M4	1.1	7.4	1410	2.40	2.50	0.83	80.7 79.1	80.9 79.5	5.1	2.2 1.7	16.2	21.5
DRS90M4	1.5	10.3	1395	3.30	3.40	0.82	82.0 79.6	82.4 80.2	5.0	2.3 2.0	20.3	35.5
DRS90L4	2.2	15	1400	4.85	4.95	0.81	83.1 81.1	83.2 81.3	5.1	2.5 2.2	23.4	43.5
DRS100M4	3	20.5	1400	6.4	6.5	0.82	84.7 82.4	84.8 82.7	5.3	2.8 2.4	27.9	56
									Motors of efficiency class EFF 2			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRS.../FI..)

6.4.3 DRE: 1500 rpm – S1 (50 Hz)

Motor type DRE	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A $\eta_{75\%}$ $\eta_{100\%}$ [%][1]	B $\eta_{75\%}$ $\eta_{100\%}$ [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRE80M4	0.75	5.0	1435	1.68	1.75	0.78	82.1 81.8	82.4 82.3	6.2	2.8 2.1	16.2	21.5
DRE90M4	1.1	7.4	1420	2.45	2.55	0.79	83.5 82.4	84.8 83.8	5.9	2.8 2.3	20.3	35.5
DRE90L4	1.5	10	1430	3.35	3.45	0.77	85.2 84.5	85.8 85.2	6.6	3.2 2.8	23.4	43.5
DRE100M4	2.2	14.7	1425	4.6	4.7	0.80	86.7 85.4	87.5 86.4	6.4	3.3 2.7	267.9	56
DRE100LC4	3	19.7	1455	6.2	6.3	0.81	87.6 86.8	88.2 87.6	7.5	2.7 2.4	32.9	90
DRE112M4	3	19.7	1455	6	6.2	0.82	88.6 87.7	89.3 88.8	7.3	2.4 2	43.4	146
									Motors of efficiency class EFF I			

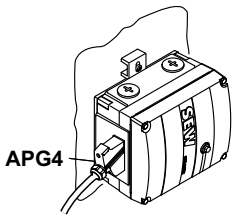
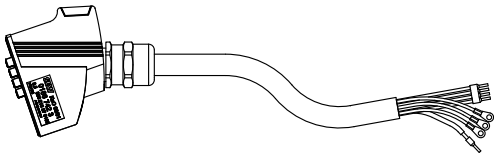
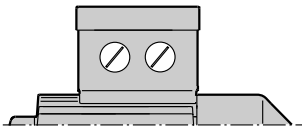
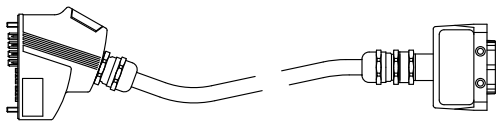
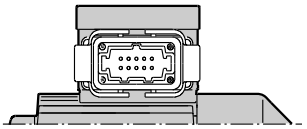
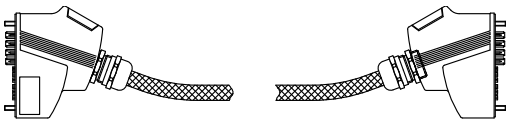
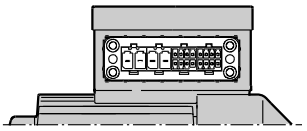
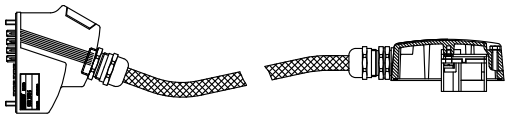
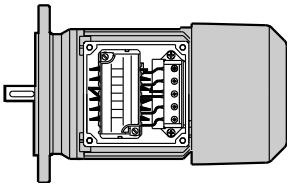
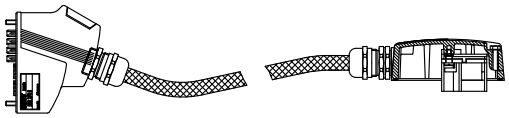
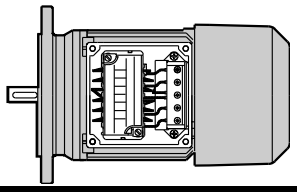
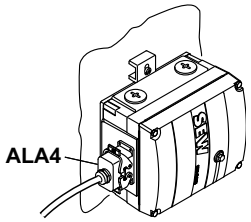
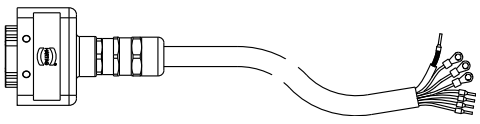
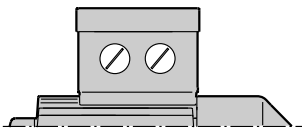
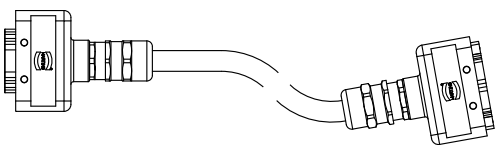
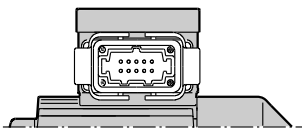
1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRE.../FI..)

6.4.4 DRP: 1500 rpm – S1 (50 Hz)

Motor type DRP	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A $\eta_{75\%}$ $\eta_{100\%}$ [%][1]	B $\eta_{75\%}$ $\eta_{100\%}$ [%^{2}]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRP90M4	0.75	4.95	1450	1.81	1.86	0.72	82.7 83.3	83.4 84	7.3	3.7 3.1	20.3	35.5
DRP90L4	1.1	7.3	1440	2.4	2.5	0.78	86.0 85.3	86 85.3	6.8	3.2 2.7	23.4	43.5
DRP100M4	1.5	9.9	1440	3.2	3.3	0.79	87.2 86.6	87.2 86.6	7.4	3.6 3.1	27.9	56
DRP100L4	2.2	14.6	1440	4.75	4.85	0.77	87.5 87.1	87.9 87.5	7.7	4.2 3.2	30.9	68
DRP112M4	3	19.7	1455	6	6.2	0.82	88.7 88.0	89.2 88.4	7.3	2.4 2	43.4	146
									Motors of efficiency class EFF I			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRP.../FI..)

6.5 Hybrid cables

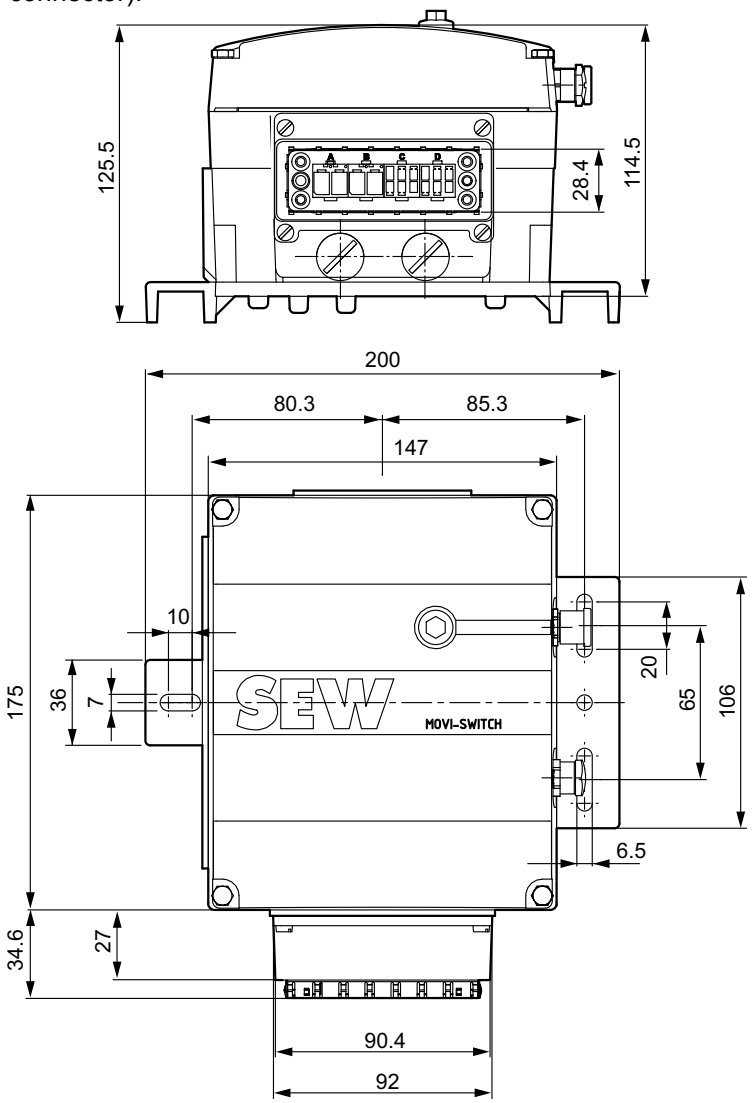
MOVI-SWITCH®	Hybrid cable	Drive
MSW-2S../C.0/P22A/RI2A/APG4 **MSW-2S../C.0/CC15/P22A/RI2A/APG4**[1)]  	Part number: 0817 887 9 	AC motors with cable gland 
	Part number: 0817 889 5 	AC motors with ASB4 plug connector 
	Part number: 0 186 741 5 	AC motors with APG4 plug connector 
	Part number: 0 593 278 5 (人) 	AC motors with plug connector ISU4 Size DR.63 
	Part number: 0 593 755 8 (人) 	AC motors with plug connector ISU4 Size DR.71 - DR.112 
MSW-2S../C.0/P22A/RI2A/ALA4 **MSW-2S../C.0/CC15/P22A/RI2A/ALA4**[1)]  	Part number: 0817 886 0 	AC motors with cable gland 
	Part number: 0817 888 7 	AC motors with ASB4 plug connector 

1) with line protection

6.6 Dimension drawings

6.6.1 MOVI-SWITCH®-2S with option P22A (APG4 plug connector) – dimension drawing

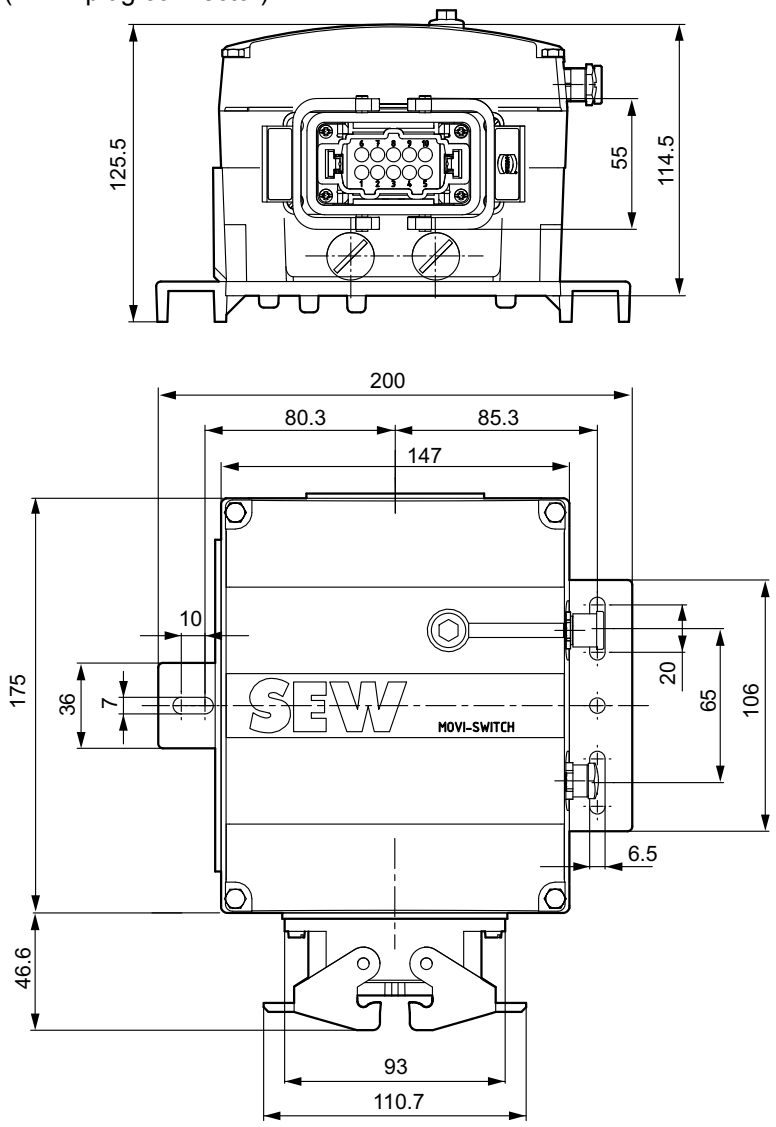
The following figure shows the dimensions of MOVI-SWITCH®-2S with option P22A (APG4 plug connector):



1477170315

6.6.2 MOVI-SWITCH®-2S with option P22A (ALA4 plug connector) – dimension drawing

The following figure shows the dimensions of MOVI-SWITCH®-2S with option P22A (ALA4 plug connector):



1477172235

7 MOVIGEAR®-SNI

	TIPS
	This catalog provides a brief overview of MOVIGEAR® drive units for a quick drive selection. For detailed descriptions, project planning information and dimension drawings, refer to the "MOVIGEAR®-SNI" system manual.

7.1 Description

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

It has an advantageous, compact design and is ideal for ensuring that conveyor systems are structured as efficiently as possible.

MOVIGEAR® provides a high level of system efficiency contributing to reducing the overall energy expenses. The integration and coordination of all drive components makes for a long service life and high system availability.

MOVIGEAR® is an intelligent system with its own control concept. Its high-quality networking features help reduce the startup time and support the monitoring and maintenance tasks.

The following figure shows the MOVIGEAR® drive units (left: torque class MMGF4, right: MGF2):



758839563

7.1.1 Unit properties

- Wide voltage range 3 × AC 380 V ... AC 500 V
- High overload capacity for all sizes
- 4Q capability due to integrated brake chopper and BW1 braking resistor installed as standard

  For the regenerative load capacity of BW1, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).
- Line filter integrated as standard. EMC-compliant installation ensures compliance with limit class C3 to EN 61800-3 (class A, group 2 according to EN 55011).
- LED display for operating and fault states
- Protective features for complete protection of the frequency inverter and motor (short-circuit, overload, overvoltage/undervoltage, excess temperature in the frequency inverter, excess temperature in the drive unit).
- Speed monitoring
- Ramp switch-over
- Fault memory (5 memory locations) with all relevant operating data at the time of the fault
- Elapsed-time counter for hours of operation (unit connected to supply system) and enable hours (output stage energized)

7.1.2 Advantages of MOVIGEAR®

- Compact design: Motor, gear unit and electronics are combined in a single mechatronic drive system
- High breakaway and starting torques
- Simplified system planning and design
- A reduction in the number of variants enables the development and design of standard materials handling systems with ready-made and tested standard modules.
- Functional user software
- The power of the drive engineering components is optimized to suit the application
- Reduction in storage due to reduced number of variants
- High degree of protection
- Hygienic surface design for applications in hygienic areas
- No air, dirt and germ swirls
- Low noise emission due to operation without fans ?(suitable for use in manual work stations)
- Reduced energy costs due to high efficiency of all components (gear unit, motor, electronics)
- High degree of reliability due to systematic development of all components
- Reduced total costs and operating costs of the materials handling system
- Single Line Installation (see page 248) principle: Only one cable has to be installed for energy and information transfer

7.2 Available MOVIGEAR® drive units

7.2.1 MOVIGEAR® drive units

MOVIGEAR® is available in two sizes and two mechanical designs.

MOVIGEAR® sizes

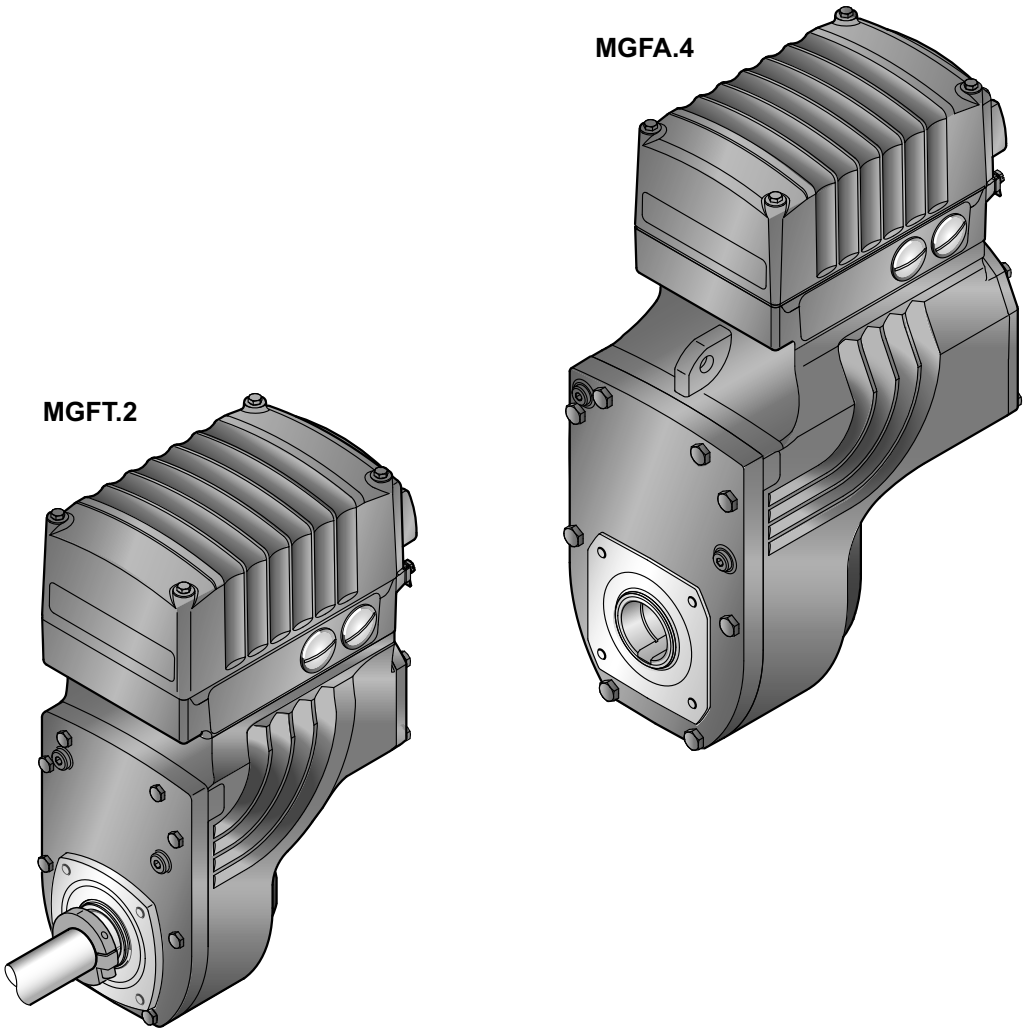
- MGF.2 (torque class: 200 Nm)
- MGF.4 (torque class: 400 Nm)

MOVIGEAR® design types

- MOVIGEAR® with hollow shaft and keyway
- MOVIGEAR® with TorqLOC® hollow shaft mounting system

Examples

The following figure shows a MOVIGEAR® MGFT.2 unit with TorqLOC® hollow shaft mounting system and a MOVIGEAR® MGFA.4 unit with hollow shaft and keyway:

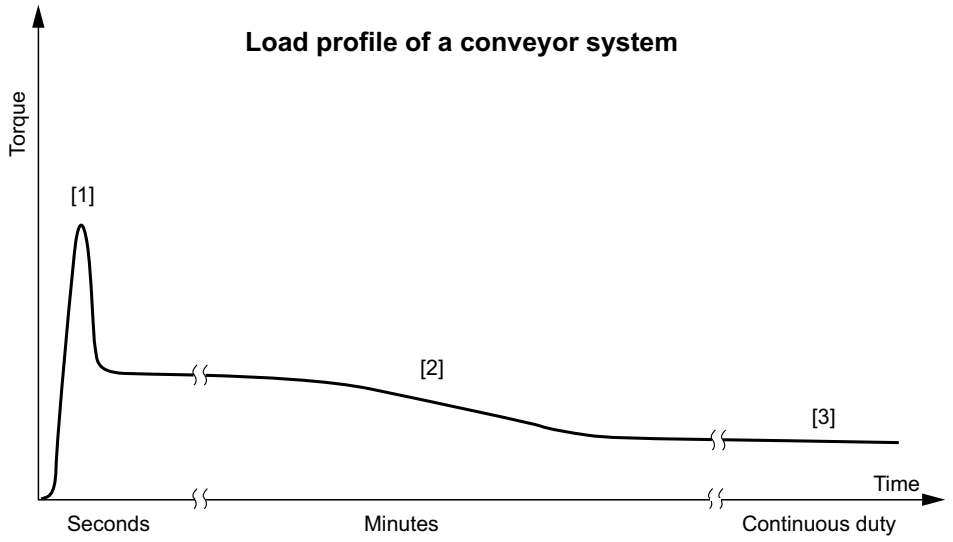


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7.2.2 MOVIGEAR® load profile

The MOVIGEAR® drive unit is specifically designed to match the requirements of horizontal conveyor applications. The following figure shows typical load characteristics.

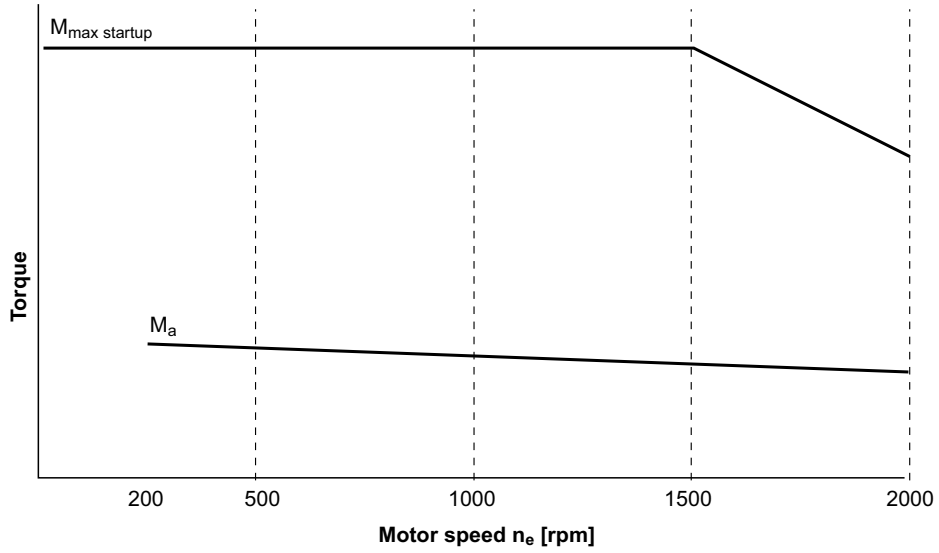
Refer to the following table for the exact values regarding the static breakaway torque and the continuous torque of the drive units.



MOVIGEAR® type	Operating range [1] (static breakaway torque, 5 s)	Operating range [2] (5 min.)	Operating range [3] (duration)
MGF.2	350 % M_a	200 % M_a	100 % M_a
MGF.4	350 % M_a	200 % M_a	100 % M_a

7.2.3 Selecting MOVIGEAR®-SNI

The following figure shows schematic characteristic curves for the maximum torque ($M_{max\ startup}$) and the output torque (M_a) in S1 operation. The tables below list the exact values..



889614987

MGF..2

	n_a		M_a				M_{gdf}	M_{max} startup	i_{tot}	Weight
	with n_e= 200 rpm	with n_e= 2000 rpm	with n_e= 500 rpm	with n_e= 1000 rpm	with n_e= 1500 rpm	with n_e= 2000 rpm				
	[rpm]	[rpm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]		[kg]
3-stage	3.6	36.2	200	200	197	197	200	500[1)]	55.25	16.0
	5.4	53.7	147	140	133	133	200	500[1)]	37.24	
2-stage	10.8	108.0	74	71	67	67	192	281[1)]	18.52	15.7
	20.6	206.0	39	37	35	35	152	147	9.71	
	40.0	400.0	20	19	18	18	94	76	5.00	

1) Permitted frequency of occurrence, on request

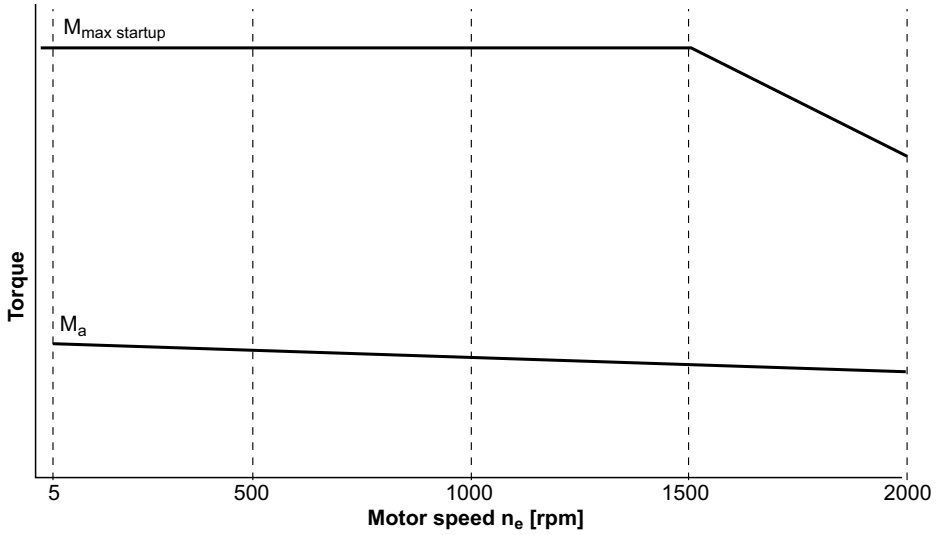
MGF..4

	n_a		M_a				M_{gdf}	M_{max} startup	i_{tot}	Weight
	with n_e= 200 rpm	with n_e= 2000 rpm	with n_e= 500 rpm	with n_e= 1000 rpm	with n_e= 1500 rpm	with n_e= 2000 rpm				
	[rpm]	[rpm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]		[kg]
3-stage	4.2	41.7	309	309	309	309	388	1000[1)]	48.00	24.0
2-stage	7.8	77.8	169	169	169	169	400	616[1)]	25.72	23.6
	15.8	158.0	83	83	83	83	323	303	12.66	
	31.6	315.5	42	42	42	42	212	152	6.34	

1) Permitted frequency of occurrence, on request

7.2.4 Selecting MOVIGEAR®-SNI with extended control range

The following figure shows schematic characteristic curves for the maximum torque ($M_{max\ startup}$) and the output torque (M_a) in S1 operation. The tables below list the exact values..



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MGF..2

	n_a		M_a 1)					M_{gdf}	$M_{max\ startup}$:	i_{tot}	Weight
	with n_e= 1 rpm	with n_e= 2000 rpm	with n_e= 5 rpm	with n_e= 500 rpm	with n_e= 1000 rpm	with n_e= 1500 rpm	with n_e= 2000 rpm				
	[rpm]	[rpm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]		[kg]
3-stage	0.02	36.2	200	200	200	197	197	200	500 2)	55.25	16.0
	0.03	53.7	147	147	140	133	133	200	500 2)	37.24	
2-stage	0.05	108.0	74	74	71	67	67	192	281 2)	18.52	15.7
	0.10	206.0	39	39	37	35	35	152	147	9.71	
	0.20	400.0	20	20	19	18	18	94	76	5.00	

1) For motor speeds n_e < 5 rpm, you have to reduce the output torque M_a by factor 0.9.

2) Permitted frequency of occurrence on request.

MGF..4

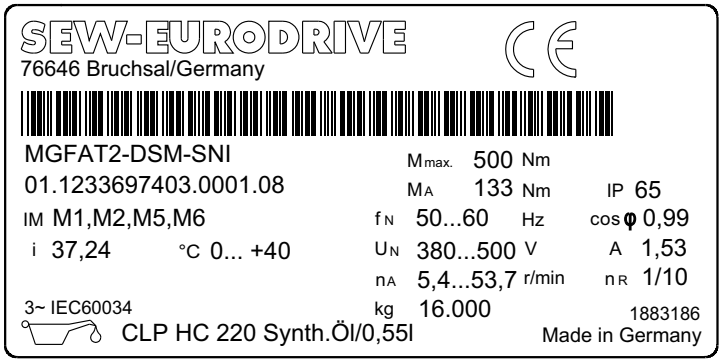
	n_a		M_a 1)					M_{gdf}	$M_{max\ startup}$:	i_{tot}	Weight
	with n_e= 1 rpm	with n_e= 2000 rpm	with n_e= 5 rpm	with n_e= 500 rpm	with n_e= 1000 rpm	with n_e= 1500 rpm	with n_e= 2000 rpm				
	[rpm]	[rpm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]		[kg]
3-stage	0.02	41.7	309	309	309	309	309	388	1000 2)	48.00	24.0
2-stage	0.04	77.8	169	169	169	169	169	400	616 2)	25.72	23.6
	0.08	158.0	83	83	83	83	83	323	303	12.66	
	0.16	315.5	42	42	42	42	42	212	152	6.34	

1) For motor speeds n_e < 5 rpm, you have to reduce the output torque M_a by factor 0.9.

2) Permitted frequency of occurrence on request.

7.3 Sample unit designation

The following table shows the MOVIGEAR®-SNI unit designation:



1533246859

M G F A S 2 – D S M – S N I

Installation technology
SNI = Single Line Network Installation

Motor type

Size
2 = Torque class 200 Nm
4 = Torque class 400 Nm

Housing mounting
T = Drive with torque arm
G = Rubber buffers as torque arm (for MGF.G4 only)
S = Housing with threads for mounting a torque arm

Shaft design
A = Shaft-mounted gear unit (hollow shaft with key way)
T = TorqLOC® hollow shaft mounting system

Gear unit type
F = Parallel shaft helical gear unit

Product family
MG = MOVIGEAR®

7.4 Options

7.4.1 DynaStop® – the electrodynamic deceleration function

Dynastop® allows for creating a speed-dependent torque when the motor is de-energized or "controller inhibit" is activated. This prevents the application from over accelerating due to external forces (e.g. sagging on inclining tracks)

The MOVIGEAR® has the following function when the drive is running: In the event of a voltage failure, the kinetic energy is used to supply the frequency inverter via regeneration. This allows for a controlled deceleration process.

DynaStop® is activated when the regenerative power is insufficient.

The electrodynamic deceleration function, DynaStop® does not allow for a definite stop at a position:

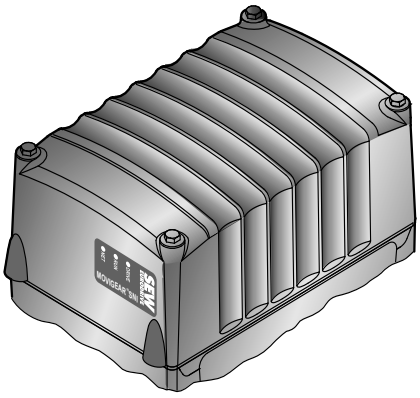
- **The electrodynamic deceleration function must not be used for hoists.**
- **For ascending sections, DynaStop® must only be used following a risk analysis.**

7.4.2 Electronics design

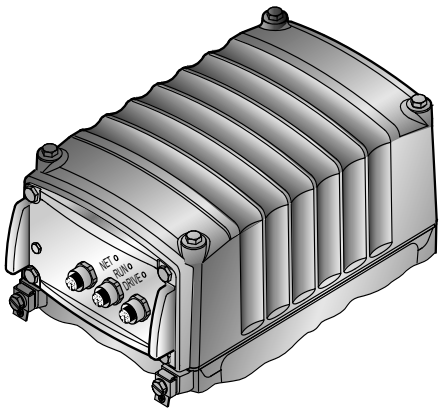
The electronics cover of MOVIGEAR®-SNI is available in the following designs:

- Electronics cover without application slot
- Electronics cover with application slot

The following figure shows the possible designs:



MOVIGEAR® electronics cover without application slot

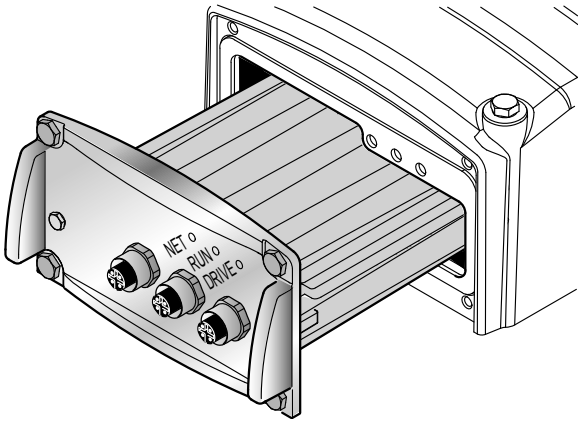


MOVIGEAR® electronics cover with application slot (in this case with GIO12A option)

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7.4.3 GIO12A application GIO12A

The following figure shows the GIO12A application option:



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The GIO12A application option allows for controlling up to 2 digital actuators and processing up to 4 digital sensors. The energy supply of the option and the communication between MOVIGEAR®-SNI and the option are both contactless.

Unit designation

The following table shows the unit designation for the available application options:

G IO 1 2 A

- **Version**
- **Design**
  2 = 4 digital inputs + 2 digital outputs
- **Version**
- **Functionality**
  IO = Digital inputs/outputs
- **Product family**
  G = Option for MOVIGEAR®

7.4.4 MOVIGEAR®SNI extended control range.

This design allows for operating MOVIGEAR®-SNI drive units with an extended control range (speed range from 1 rpm to 2000 rpm)

For additional information refer to section "Selecting MOVIGEAR®-SNI with extended control range" (see page 190).

Take into account that with "extended control range" the contour dimensions of the MOVIGEAR®-SNI drive units change. For additional information refer to section "Selecting MOVIGEAR®-SNI with extended control range".

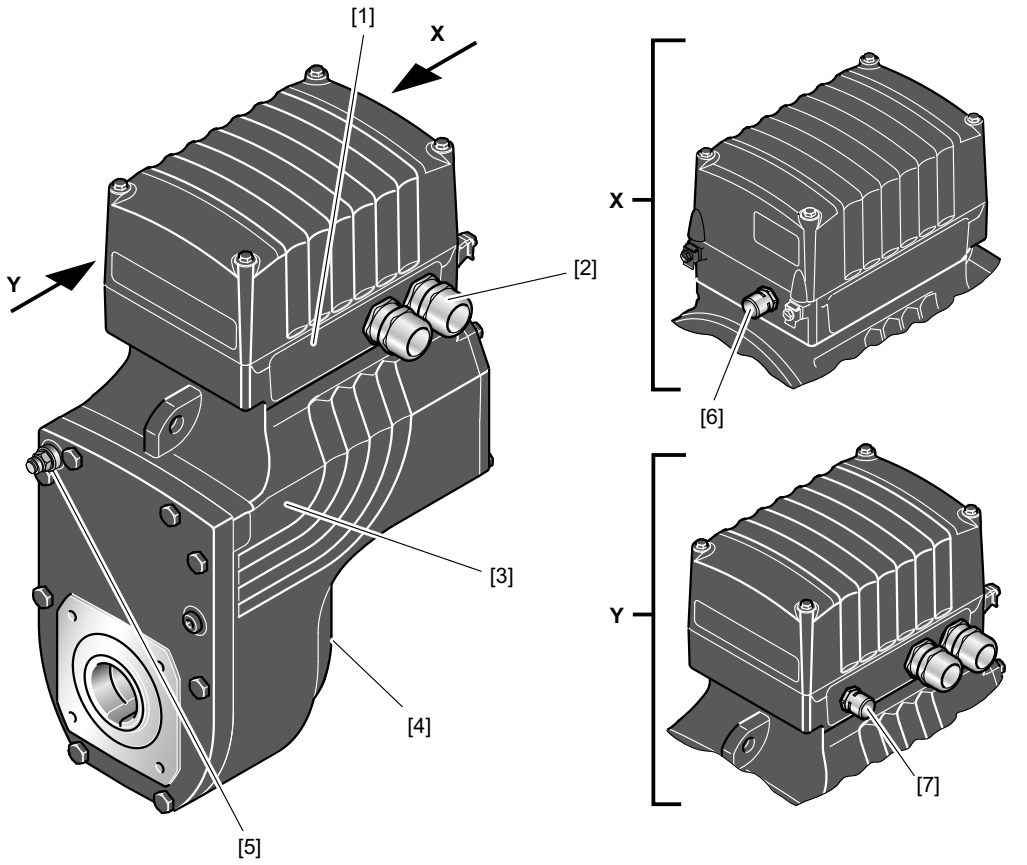
Required order information: Extended control range

7.4.5 Package for wet areas

MOVIGEAR® drive units with the optional package for wet areas have the following characteristics:

- [1] Terminal box with cable outlet on one end
- [2] Pre-installed EMC cable glands (M25) brass nickel-plated
- [3] OS4 surface protection
- [4] Additional cover opposite the output side
- [5] Installed and activated breather valve corresponding to the mounting position,
- [6] Pre-installed pressure compensation fitting (M16) in conjunction with mounting positions M1, M3, M5, M6
- [7] Pre-installed pressure compensation fitting (M16) in conjunction with M2, M4

For further information, refer to the "MOVIGEAR®-SNI" system manual.



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In SEW publications, all illustrations regarding MOVIGEAR® drive units with optional package for wet areas are displayed with a shading (= OS4 surface protection).

8 MOVIMOT®

	TIPS
	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.

8.1 Description

MOVIMOT®, the combination of the new AC (brake)motors DRS, DRE and DRP and a new digital frequency inverter, is available in the power range 0.37 – 4.0 kW. Especially decentralized drive tasks can be solved easily and economically.

MOVIMOT® can be used to equip extensive systems in a modular manner or can be integrated into existing systems. MOVIMOT® is also the electronic replacement for pole-changing motors or mechanical variable speed drives.

MOVIMOT® is available as motor, brake motor, gearmotors or geared brake motor in many different standard versions and mounting positions.

The following figure shows the MOVIMOT® size MM03-MM15:



1507321227

8.1.1 Unit properties

- Power range from 0.37 to 4 kW
- Voltage range: 3 x 380 - 500 V
- Frequency inverter with vector-oriented motor control
- Application-specific parameterization is possible.
- Pluggable parameter memory for data backup.
- Comprehensive protection and monitoring functions.
- Low-noise thanks to PWM switching frequency 16 kHz
- Status LED for fast diagnostics
- Diagnostics interface with plug connector as a standard feature
- Diagnostics and manual operation via MOVITOOLS® MotionStudio
- 4Q operation as standard
- Integrated brake management:
  - For motors with mechanical brake, the brake coil is used as braking resistor.
  - For motors without brake, MOVIMOT® is supplied with internal braking resistor as standard.
- Control takes place either via binary signals, via the serial interface RS-485 or optionally via AS-Interface or all common fieldbus interfaces (PROFIBUS, PROFIsafe, INTERBUS, DeviceNet, CANopen).
- MOVIMOT® can be supplied with UL approval (UL listed) on request.

MOVIMOT® options (/MO)

MOVIMOT® can be supplemented by many different options (see page 212).

/MO in the unit designation is used no matter whether one or several of the following options is used.

Designation	Description
BEM	Brake control system
URM	Voltage relay
MLU13A	Internal DC 24 V voltage supply (380 – 500 V)
MNF21A	Internal line filter option (MM03 – MM15)
MLU11A MLU21A	DC 24 V voltage supply (380 - 500 V) DC 24 V voltage supply (200 - 240 V)
MLG11A MLG21A	Setpoint generator DC 24 V voltage supply (380 – 500 V) Setpoint generator DC 24 V voltage supply (200 – 240 V)
MFP...	Profibus interface
MFI...	Interbus interface
MFD...	DeviceNet interface
MFO...	CANopen interface

AS-Interface (in preparation)

MOVIMOT® drives are available with integrated AS-Interface. There are the following designs:

- MLK30A option (slave on AS-Interface)
- MLK31A option (double slave on AS-Interface)

  for drives with several speed setpoints and ramps.

The AS-Interface is located on the connection board in the terminal box.

MLK30A

Connected to the AS-Interface, the MLK30A slave works like a module with 4 inputs and 4 outputs.

The cyclic output bits control the MOVIMOT® inverter.

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

The acyclic parameter bits are used to select speed scaling factors.

The MLK30A option is compatible with MOVIMOT® MM..C with integrated AS-Interface.

MLK31A

The MLK31A option works as a double slave on the AS-Interface according to the 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.

8.1.2 Advantages of MOVIMOT®

- Small total volume
- Interference-free connection between inverter and motor
- Closed design with integrated protection functions
- Inverter cooling independent of the motor speed
- No space required in the control cabinet
- Optimum parameter presets for the expected applications
- Easy installation, startup and maintenance
- Easy to service for retrofitting and replacement

8.2 Available MOVIMOT® motor combinations

8.2.1 Motor identification for MOVIMOT® (/MI)

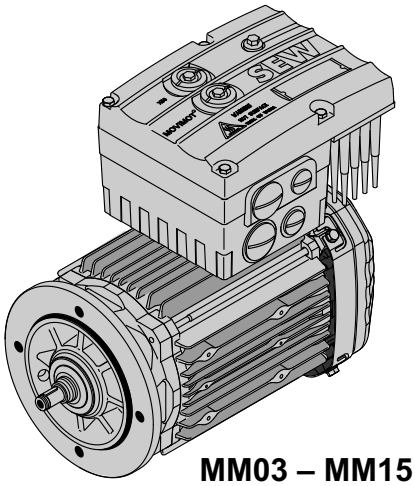
Each MOVIMOT® contains a motor identification module (DIM) for easy and fast startup. The DIM is included in the scope of delivery of the MOVIMOT® motor or MOVIMOT® gearmotor.

If a DR. motor / brakemotor is ordered without MOVIMOT®, a DIM can be supplied for the DR. motor according to its energy efficiency class. The DIM is attached in the standard terminal box of the DR. motor or DR...BE brakemotor. In the unit designation of the DR. motor / brakemotor, the DIM is indicated by /MI.

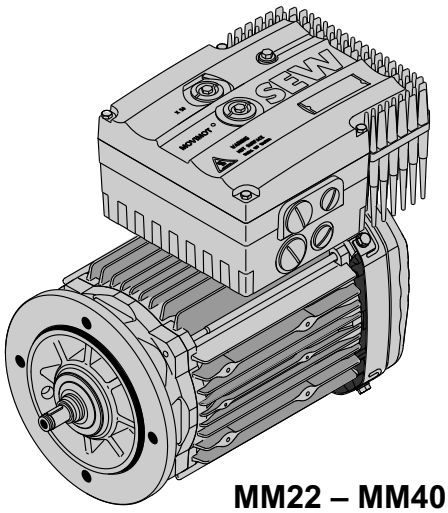
Assignment of the Drive-ID module

Motor			Drive-ID module		
Type	**Rated voltage [V]**	**Mains frequency [Hz]**	**Identification**	**ID color**	**Part number**
DRS	230/400	50	DRS/400/50	White	1 821 437 1
DRE	230/400	50	DRE/400/50	Orange	1 821 439 8
DRS	266/460	60	DRS/460/60	Yellow	1 821 440 1
DRS / DRE	220/380	60	DRS/DRE/380/60	red	1 821 443 6
DRP	230/400	50	DRP/230/400	Brown	1 821 790 7
DRP	266/460	60	DRP/266/460	Beige	1 821 791 5

8.2.2 MOVIMOT® drives with DRS motors



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos ?	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRS71S4 /../MM03	0.37	2.52	1.5	1400	1.3	0.99	4.9	6.2	5	9.9	12.3
DRS71M4 /../MM05	0.55	3.75	1.5	1400	1.6	0.99	7.1	8.4	10	11.2	13.8
DRS80S4 /../MM07	0.75	5.1	1.5	1400	1.9	0.99	14.9	16.4	10	13.6	16.6
DRS80M4 /../MM11	1.1	7.5	1.5	1400	2.4	0.99	21.5	26	14	16.4	20.1
DRS90M4 /../MM15	1.5	10.2	1.5	1400	3.5	0.99	35.5	40	20	20.5	25.1
DRS90L4 /../MM22	2.2	15.0	1.5	1400	5.0	0.99	43.5	49.5	40	24.7	30.7
DRS100M4 /../MM30	3.0	20.5	1.5	1400	6.7	0.99	56	62	40	29.2	35.2
DRS100LC4 /../MM40	4.0	27.3	1.5	1400	7.3	0.99	90	96	50	34.9	40.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

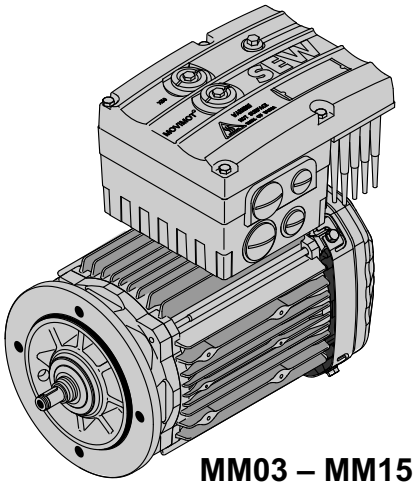
Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos ?	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRS71S4 /../MM05	0.55	1.81	2.0	2900	1.6	0.99	4.9	6.2	5	9.9	12.3
DRS71M4 /../MM07	0.75	2.47	2.0	2900	1.9	0.99	7.1	8.4	10	11.2	13.8
DRS80S4 /../MM11	1.1	3.62	2.0	2900	2.4	0.99	14.9	16.4	10	13.6	16.6
DRS80M4 /../MM15	1.5	4.95	1.6	2900	3.5	0.99	21.5	26	14	16.4	20.1
DRS90M4 /../MM22	2.2	7.25	1.6	2900	5.0	0.99	35.5	40	20	21.6	26.2
DRS90L4 /../MM30	3.0	9.9	1.6	2900	6.7	0.99	43.5	49.5	40	24.7	30.7
DRS100M4 /../MM40	4.0	13.2	1.6	2900	7.3	0.99	56	62	40	29.9	35.9

1) mass of motor without brake

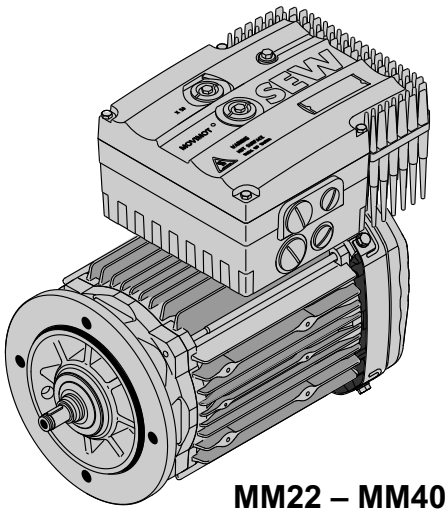
2) mass of motor with brake

Thermal classification F as standard

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



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n [1] f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m [2] [kg]	m [3] [kg]
DRS71S4 /../MM05	0.37	2.52	2.1	1400	1.3	0.99	4.9	6.2	5	9.9	12.3
DRS71M4 /../MM07	0.55	3.75	2.1	1400	1.6	0.99	7.1	8.4	10	11.2	13.8
DRS80S4 /../MM11	0.75	5.1	2.1	1400	1.9	0.99	14.9	16.4	10	13.6	16.6
DRS80M4 /../MM15	1.1	7.5	2.1	1400	2.4	0.99	21.5	26	14	16.4	20.1
DRS90M4 /../MM22	1.5	10.2	2.1	1400	3.5	0.99	35.5	40	20	21.6	26.2
DRS90L4 /../MM30	2.2	15.0	2.1	1400	5.0	0.99	43.5	49.5	40	24.7	30.7
DRS100M4 /../MM40	3.0	20.5	2.0	1400	6.7	0.99	56	62	40	29.9	35.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n [1] f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m [2] [kg]	m [3] [kg]
DRS71S4 /../MM07	0.55	1.81	2.4	2900	1.6	0.99	4.9	6.2	5	9.9	12.3
DRS71M4 /../MM11	0.75	2.47	2.4	2900	1.9	0.99	7.1	8.4	10	11.2	13.8
DRS80S4 /../MM15	1.1	3.62	2.4	2900	2.4	0.99	14.9	16.4	10	13.6	16.6
DRS80M4 /../MM22	1.5	4.95	2.2	2900	3.5	0.99	21.5	26	14	17.5	21.2
DRS90M4 /../MM30	2.2	7.25	2.2	2900	5.0	0.99	35.5	40	20	21.6	26.2
DRS90L4 /../MM40	3.0	9.9	2.0	2900	6.7	0.99	43.5	49.5	40	25.4	31.4

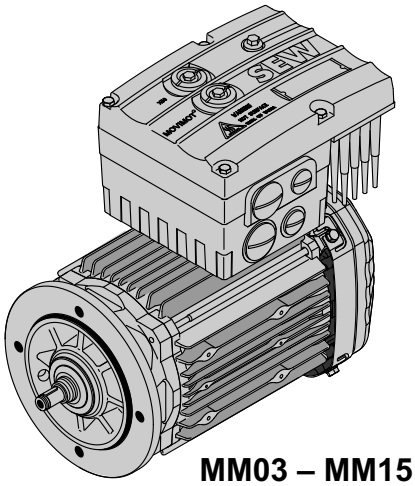
1) Increased short-term torque in S3 operation, 25% cdf

2) mass of motor without brake

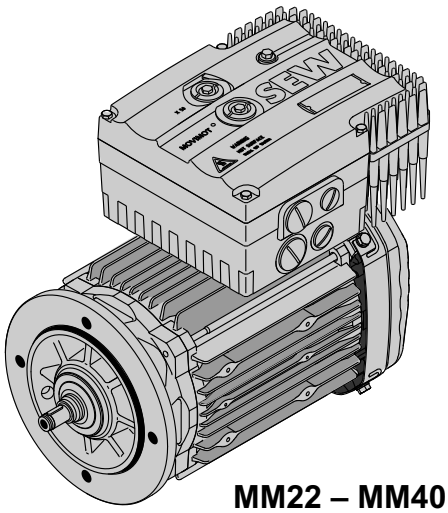
3) mass of motor with brake

Thermal classification F as standard

8.2.4 MOVIMOT® drives with DRE motors



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRE80M4 /../MM07	0.75	5.1	1.5	1400	1.9	0.99	21.5	23	10	16.4	19.4
DRE90M4 /../MM11	1.1	7.5	1.5	1400	2.4	0.99	35.5	40	20	20.5	25.1
DRE90L4 /../MM15	1.5	10.2	1.5	1400	3.5	0.99	43.5	48.5	20	23.6	28.1
DRE100M4 /../MM22	2.2	15	1.5	1400	5.0	0.99	56	62	28	29.2	35.2
DRE100LC4 /../MM30	3.0	20.5	1.5	1400	6.7	0.99	90	96	40	34.2	40.2
DRE132S4 /../MM40	4.0	27.3	1.5	1400	7.3	0.99	190	195	55	47.9	56.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

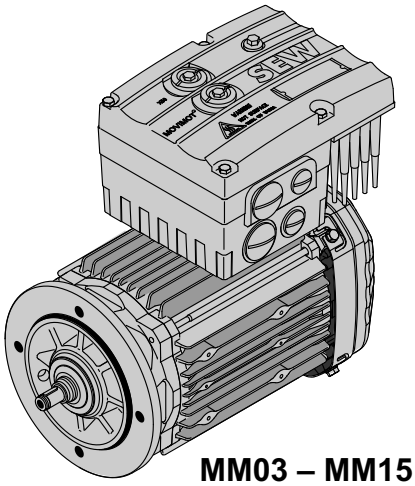
Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRE80M4 /../MM11	1.1	3.62	1.6	2900	2.4	0.99	21.5	23	10	16.4	19.4
DRE90M4 /../MM15	1.5	4.95	1.6	2900	3.5	0.99	35.5	40	20	20.5	25.1
DRE90L4 /../MM22	2.2	7.25	1.6	2900	5.0	0.99	43.5	48.5	20	24.7	29.2
DRE100M4 /../MM30	3.0	9.9	1.6	2900	6.7	0.99	56	62	28	29.2	35.2
DRE100LC4 /../MM40	4.0	13.2	1.6	2900	7.3	0.99	90	96	40	34.9	40.9

1) mass of motor without brake

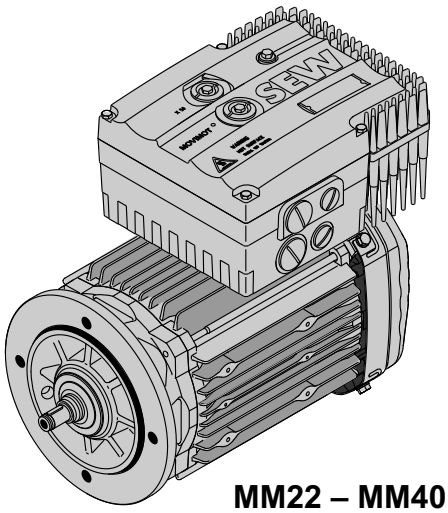
2) mass of motor with brake

Thermal classification F as standard

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



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRE80M4 /../MM11	0.75	5.1	2.1	1400	1.9	0.99	21.5	23	10	16.4	19.4
DRE90M4 /../MM15	1.1	7.5	2.1	1400	2.4	0.99	35.5	40	20	20.5	25.1
DRE90L4 /../MM22	1.5	10.2	2.1	1400	3.5	0.99	43.5	48.5	20	24.7	29.2
DRE100M4 /../MM30	2.2	15.0	2.1	1400	5.0	0.99	56	62	28	29.2	35.2
DRE100LC4 /../MM40	3.0	20.5	2.1	1400	6.7	0.99	90	96	40	34.9	40.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

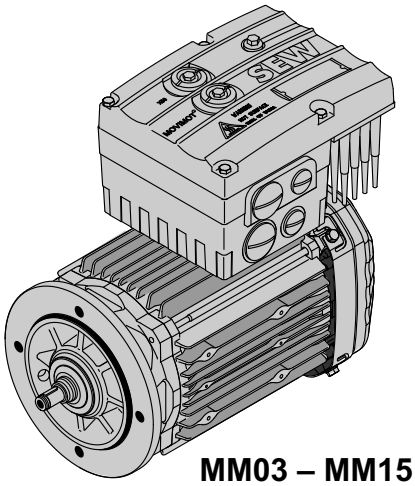
Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRE80M4 /.../MM15	1.1	3.62	2.2	2900	2.4	0.99	21.5	23	10	16.4	19.4
DRE90M4 /.../MM22	1.5	4.95	2.2	2900	3.5	0.99	35.5	40	20	21.6	26.2
DRE90L4 /.../MM30	2.2	7.25	2.2	2900	5.0	0.99	43.5	48.5	20	24.7	29.2
DRE100M4 /.../MM40	3.0	9.9	2.2	2900	6.7	0.99	56	62	28	29.9	35.9

1) mass of motor without brake

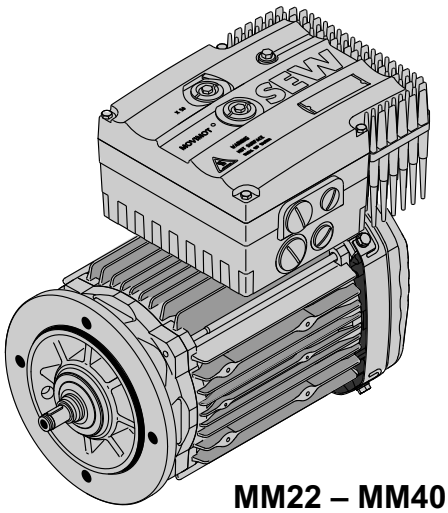
2) mass of motor with brake

Thermal classification F as standard

8.2.6 MOVIMOT® drives with DRP motors



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRP90M4 /../MM07	0.75	5.1	1.5	1400	1.9	0.99	35.5	37	10	20.5	24.6
DRP90L4 /../MM11	1.1	7.5	1.5	1400	2.4	0.99	43.5	48.5	20	23.6	28.1
DRP100M4 /../MM15	1.5	10.2	1.5	1400	3.5	0.99	56	61	20	28.1	32.6
DRP100L4 /../MM22	2.2	15.0	1.5	1400	5.0	0.99	68	74	40	32.2	38.2
DRP112M4 /../MM30	3.0	20.5	1.5	1400	6.7	0.99	146	151	40	45.2	54.2
DRP132M4 /../MM40	4.0	27.3	1.5	1400	7.3	0.99	255	265	80	62.9	76.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

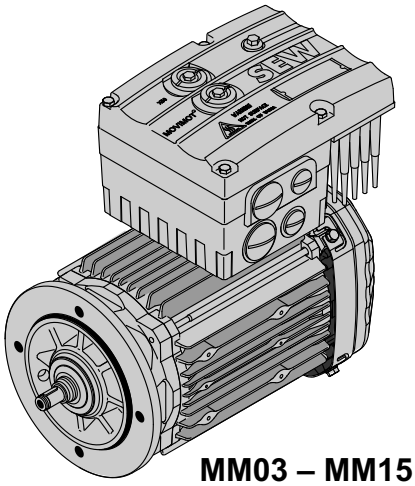
Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRP90M4 /../MM11	1.1	3.62	1.6	2900	2.4	0.99	35.5	37	10	20.5	24.6
DRE90L4 /../MM15	1.5	4.95	1.6	2900	3.5	0.99	43.5	48.5	20	23.6	28.1
DRP100M4 /../MM22	2.2	7.25	1.6	2900	5.0	0.99	56	61	20	29.2	33.7
DRP100L4 /../MM30	3.0	9.9	1.6	2900	6.7	0.99	68	74	40	32.2	38.2
DRP112M4 /../MM40	4.0	13.2	1.6	2900	7.3	0.99	146	151	40	45.9	54.9

1) mass of motor without brake

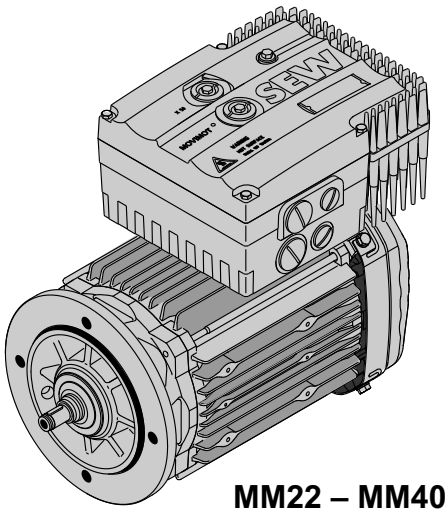
2) mass of motor with brake

Thermal classification F as standard

8.2.7 MOVIMOT® drives with DRP motors and increased short-term torque



MM03 – MM15



MM22 – MM40

1409434251

280 – 1400 rpm ⅄ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRP90M4 /../MM11	0.75	5.1	2.1	1400	1.9	0.99	35.5	37	10	20.5	24.6
DRE90L4 /../MM15	1.1	7.5	2.1	1400	2.4	0.99	43.5	48.5	20	23.6	28.1
DRP100M4 /../MM22	1.5	10.2	2.1	1400	3.5	0.99	56	61	20	29.2	33.7
DRP100L4 /../MM30	2.2	15.0	2.1	1400	5.0	0.99	68	74	40	32.2	38.2
DRP112M4 /../MM40	3.0	20.5	2.1	1400	6.7	0.99	146	151	40	45.9	54.9

290 – 2900 rpm △ 3 x 380 – 500 V (400 V) *IEC or* c UL us

Type	P_n [kW]	M_n [Nm]	M_a/M_n f > 5 Hz	n_n [rpm]	I_{n1} [A]	cos φ	J_{mot} [10^{-4} kgm^2] without brake	J_{mot} [10^{-4} kgm^2] with brake	M_{Bmax} [Nm]	m 1) [kg]	m 2) [kg]
DRP90M4 /../MM15	1.1	3.62	2.2	2900	2.4	0.99	35.5	37	10	20.5	24.6
DRP90L4 /../MM22	1.5	4.95	2.2	2900	3.5	0.99	43.5	48.5	20	24.7	29.2
DRP100M4 /../MM30	2.2	7.25	2.2	2900	5.0	0.99	56	61	20	29.2	33.7
DRP100L4 /../MM40	3.0	9.90	2.2	2900	6.7	0.99	68	74	40	32.9	38.9

1) mass of motor without brake

2) mass of motor with brake

Thermal classification F as standard

8.3 Functional safety

8.3.1 Order information

	TIPS
	• The SafetyDrive design must be ordered explicitly. (Order note: "SafetyDrive"). • Use only those components in safety applications that were designed and delivered for this purpose by SEW-EURODRIVE.

8.3.2 Permitted SafetyDrive designs

Only the following unit combinations with MOVIMOT® MM..DD are permitted in applications with safe disconnection of the drive (STO) up to safety category 3 to EN 954-1 as well as performance level d to EN ISO 13849-1 as well as SIL 2 to EN 62061.

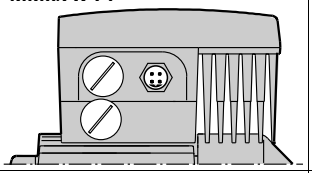
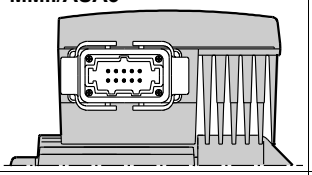
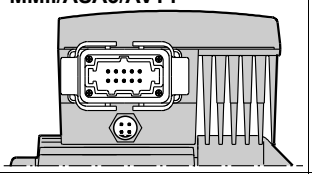
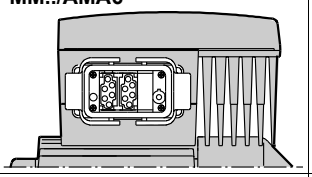
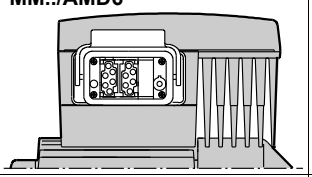
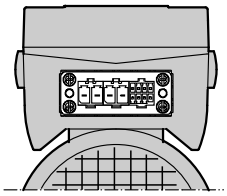
For additional information on the safety function and the safety-related requirements, refer to the "MOVIMOT® MM..DD – Functional Safety" manual.

Permitted designs	MOVIMOT® type
MOVIMOT® with binary control (Control via terminals)	D../MM.. SafetyDrive MM..D-503-00 – SafetyDrive
MOVIMOT® with MBG11A option	
MOVIMOT® with MWA 21A option	
MOVIMOT® with MOVIFIT® MC	
MOVIMOT® with MFZ.6 field distributor	

8.4 Connection technology

8.4.1 Connection technology MOVIMOT® standard design – overview

MOVIMOT® MM..D is supplied without plug connector if not specified otherwise in the order. The plug connectors listed in the following table are available as standard. For other types, please contact SEW-EURODRIVE.

Order designation	Function	Terminal box	Manufacturer designation
MM../AVT1 	• RS-485	Standard	Round plug connector M12 x 1
MM../ASA3 	• Power	Modular	Harting Han® 10 ES pin element (built-on housing with 2 clips)
MM../ASA3/AVT1 	• Power • RS-485	Modular	Harting Han® 10 ES pin element (built-on housing with 2 clips) + Round plug connector M12 x 1
MM../AMA6 	• Power/RS-485	Modular	Harting Han-Modular® pin element (built-on housing with 2 clip)
MM../AMD6 	• Power/RS-485	Modular	Harting Han-Modular® pin element (built-on housing with 1 clip)
MM../APG6 	• Power/RS-485	Modular	Phoenix Contact PLUSCON-VC (3 inserts)

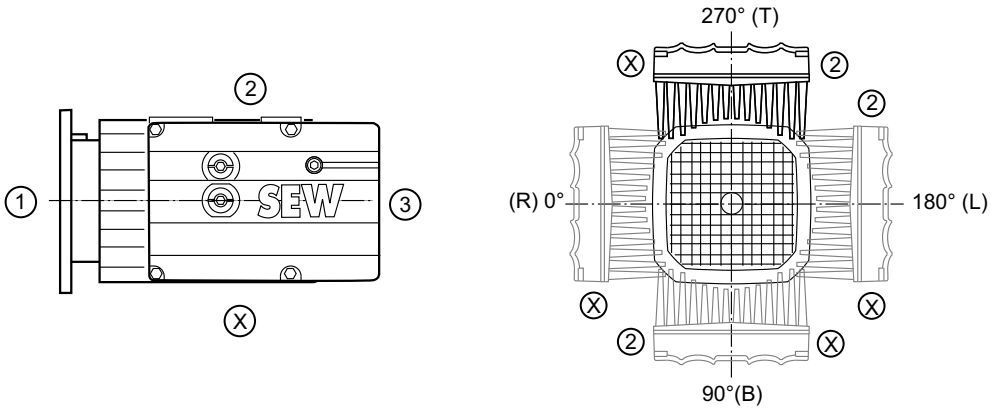
Terminal box design:

The modular terminal box offers the following functions compared to the standard terminal box:

- The position of the cable entries/plug connectors can later be turned to the opposite side (see MOVIMOT® operating instructions).
- Integrated options: Refer to section "Options integrated in the terminal box" (see page 213).

Available plug connector positions (MOVIMOT® standard design)

The following positions are possible for plug connectors:

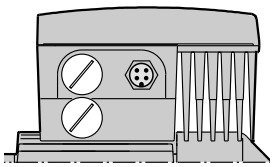
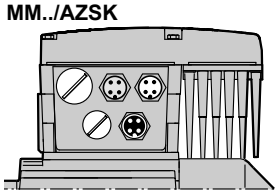
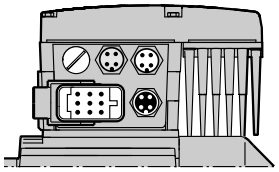
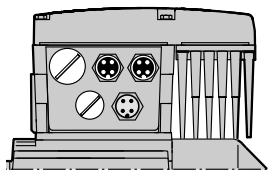
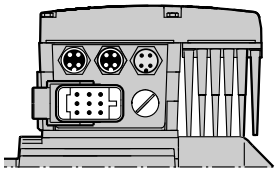


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Plug connector	Possible positions
AVT1	X (standard)
	2
ASA3	X (standard)
	2
ASA3/AVT1	ASA3 = X (standard) + AVT1 = X (standard)
	ASA3 = 2 + AVT1 = 2
AMA6 **AMD6**	X (standard)
	2
APG6 (not available for all motor/ gear unit combinations)	X (standard)
	2

8.4.2 Connection technology, MOVIMOT® with integrated AS-Interface – overview

MOVIMOT® MM..D with integrated AS-Interface is supplied with AVSK plug connector (for AS-Interface) if not specified otherwise in the order. The plug connectors listed in the following table are available as standard. For other types, please contact SEW-EURODRIVE.

Order designation	Function	Terminal box design	Manufacturer designation
MM../AVSK 	• AS-Interface	Standard	1 x M12 x 1 round plug connector
MM../AZSK 	• AS-Interface • AUX PWR • Sensor connection	Modular	3 x M12 x 1 round plug connector
MM../AND3/AZSK 	• Power • AS-Interface • AUX PWR • Sensor connection	Modular	Harting Han® Q8/0 pin element (built-on housing with one clip) + 3 x M12 x 1 round plug connector
MM../AZZK 	• AS-Interface/ AUX-PWR • Sensor connection • Sensor connection	Modular	3 x M12 x 1 round plug connector
MM../AND3/AZZK 	• Power • AS-Interface/ AUX-PWR • Sensor connection • Sensor connection	Modular	Harting Han® Q8/0 pin element (built-on housing with one clip) + 3 x M12 x 1 round plug connector

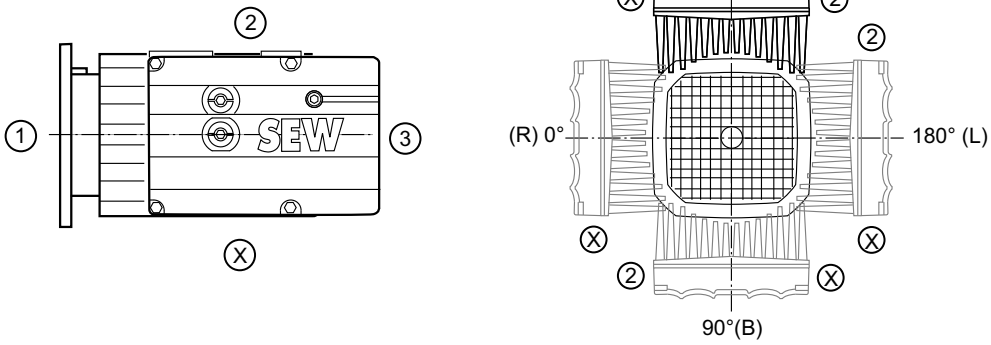
Terminal box design:

The modular terminal box offers the following functions compared to the standard terminal box:

- The position of the cable entries/plug connectors can later be turned to the opposite side (see MOVIMOT® operating instructions).
- Integrated options: Refer to section "Options integrated in the terminal box" (see page 213).

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.

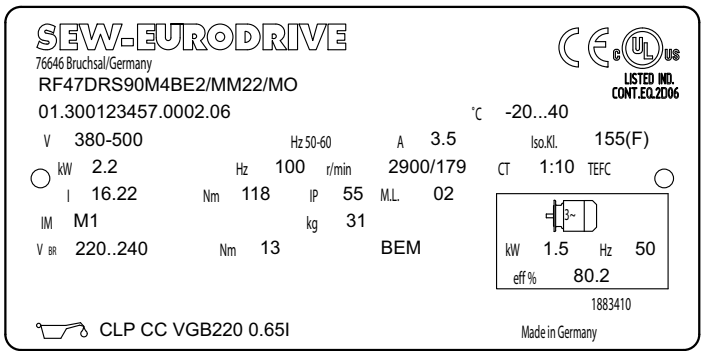


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8.5 Sample unit designation

8.5.1 Standard design

The unit designation of the MOVIMOT® gearmotor starts from the component on the output end.



1456432139

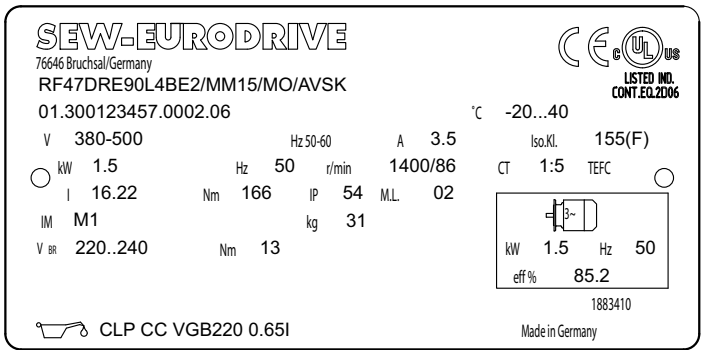
RF 47 DRS 90M4 BE2/MM22/MO

- Additional feature: inverter [1)]
- MOVIMOT® inverter
- Optional design motor (brake)
- Size, number of poles on motor
- Motor series
- Gear unit size
- Gear unit series

1) The nameplate only displays options installed at the factory.

8.5.2 MOVIMOT® with integrated AS-Interface

The unit designation of the MOVIMOT® gearmotor starts from the component on the output end.



1685824651

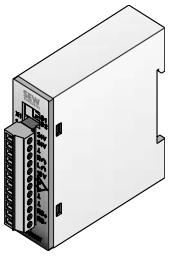
RF 47 DRE 90L4 BE2/MM15/MO/AVSK

- Plug connector for AS-Interface
- Additional feature: inverter [1)] e.g. MLK30A
- MOVIMOT® inverter
- Optional design motor (brake)
- Size, number of poles on motor
- Motor series
- Gear unit size
- Gear unit series

1) The nameplate only displays options installed at the factory.

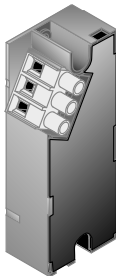
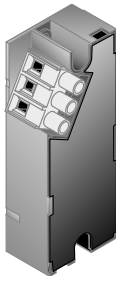
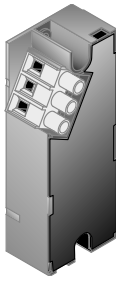
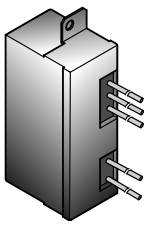
8.6 Options

	TIPS
	For detailed information on MOVIMOT® options, refer to the "MOVIMOT® Gearmotors" catalog. For detailed information on the optional MOVIMOT® fieldbus interfaces, refer to section "Fieldbus interfaces and field distributors" (see page 120).

Option	Figure	Description
DC 24 V supply **MLU11A** **(input voltage AC 380...500 V)** Part number: 0 823 383 7 **MLU21A** **(input voltage AC 200...240 V)** Part number: 0 823 387 X		The MLU.1A option is mounted in a cable gland of the MOVIMOT® and offers the opportunity to operate one MOVIMOT® including **one** option with a current consumption of max. 70 mA (MBG11A, MWA21A) without external 24 V auxiliary power supply.
Speed control module with DC 24 V supply **MLG11A** **(input voltage AC 380...500 V)** Part number: 0 823 384 5 **MLG21A** **(input voltage AC 200...240 V)** Part number: 0 823 388 8		The MLG.1A option is mounted in a cable gland of MOVIMOT® and offers the possibility of adjusting the input speed in the range of –100 % ... +100 % f_{max} (potentiometer f1) as well as of powering the inverter with the DC 24 V auxiliary voltage.
MBG11A speed control module Part number: 0 822 547 8		The MBG11A speed control module has 2 keys and a display. They make it possible to adjust the speed remotely in the range from –100%... +100% f_{max} (potentiometer f1). Up to 31 MOVIMOT® units can be controlled at the same time (broadcasting).
MWA21A setpoint converter Part number: 0 823 006 4		The MWA21A setpoint converter converts an analog setpoint and control signals into an RS-485 protocol. This conversion allows for remote control of the MOVIMOT® from the control cabinet. Up to 31 MOVIMOT® units can be controlled at the same time (broadcasting).

8.6.1 Options integrated in terminal box

	TIPS
	• 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	Figure	Description
BEM brake control Part number: 829 611 1		The BEM brake rectifier can be used in conjunction with the MOVIMOT® MM..D for controlling the brake (refer to MOVIMOT® operating instructions). The brake is controlled by means of parameter setting or activating additional function 7 or 9. The BEM brake controller realizes fast release and application of the mechanical brake. The option is integrated in the MOVIMOT® terminal box. **Important: The brake coil must correspond to the connection voltage**.
BES brake control Part number: 0 829 8475		The BES brake rectifier can be used in conjunction with MOVIMOT® MM..D for controlling a DC 24 V brake (not standard). See also MOVIMOT® operating instructions. The brake is controlled by means of parameter setting or activating additional function 7 or 9. The BES brake controller realizes fast release and application of the mechanical brake. The option is integrated in the MOVIMOT® terminal box. **Important: The brake coil must be designed as DC 24 V coil.**
URM voltage relay Part number: 0 827 601 3		The UMR voltage relay implements rapid application of the mechanical brake. The option is integrated in the MOVIMOT® terminal box. **Important: The brake coil must correspond to the MOVIMOT® standard (AC 120 V or 230 V).**
Internal DC 24 V voltage MLU13A Part number: 1 820 596 8		The MLU13A option is integrated in the terminal box of MOVIMOT® and allows for operating a MOVIMOT® unit including one option with a maximum current consumption of 70 mA (MBG11A, MWA21A) without external 24 V auxiliary voltage. The option is installed in the modular terminal box as standard. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by **18 mm**.

Option	Figure	Description
MNF21A internal line filter Part number: 0 804 265 9		The MNF21A option is integrated in the terminal box of MOVIMOT® (MM03 – MM15) and allows for a drive system that complies with category C1 according to 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**.

8.6.2 Standard options

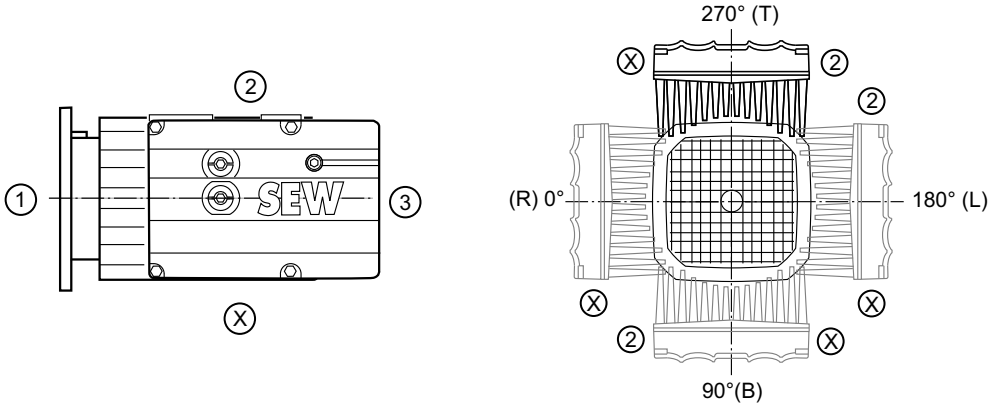
The following options can be installed and supplied if required (mounted and wired ready for operation):

- Local DC 24 V supply (MLU...)
- Local speed control module with DC 24 V supply (MLG.1A)
- PROFIBUS fieldbus interface (MFP../MQP..)
- INTERBUS fieldbus interface (MFI../MQI..)
- DeviceNet fieldbus interface (MFD../MQD..)
- CANopen fieldbus interface (MFO..)
- Hybrid cable for connection between MF.../Z.3. or MF../.6. field distributor and MOVIMOT® (KPF6, 1...5 m)
- MNF21A line filter
- Brake control (BEM or BES) or voltage relay (URM)

Important order information

The options can be installed in the following positions:

- Position "2"
- Position "X" (normal)



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8.7 Braking resistors

8.7.1 Integrated brake resistors – assignment

The following table shows the assignments of internal braking resistors to MOVIMOT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with integrated BW.. braking resistor" (see page 239).

MOVIMOT® type	Braking resistor	Part number
MM03D-503-00...MM15D-503-00 **MM03D-233-00...MM07D-233-00**	BW1	0 822 897 3[1)]
MM22D-503-00...MM40D-503-00 **MM11D-233-00...MM22D-233-00**	BW2	0 823 136 2[1)]

1) Two screws M4 x 8, included in scope of delivery

8.7.2 External brake resistors – assignment

The following table shows the assignments of external braking resistors to MOVIMOT®. For the regenerative load capacity of the braking resistors, refer to section "4Q operation with brake and external braking resistor" (see page 241).

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	0 828 291 9	0 813 152 X
	BW200-005/K-1.5	0 828 283 8	–
	BW150-010	0 802 285 2	–
MM22D-503-00...MM40D-503-00 **MM11D-233-00...MM22D-233-00**	BW100-003/K-1.5	0 828 293 5	0 813 152 X
	BW100-005/K-1.5	0 828 286 2	–
	BW068-010	0 802 287 9	–
	BW068-020	0 802 286 0	–

8.8 Brake coil – assignment

The following table shows the assignments of the brake coil to the respective motor. For the regenerative load capacity of the brake coils, refer to section "4Q operation with motors with mechanical brake" (see page 240).

Motor	Assigning the brake coil	
	Standard brake	Optional brake
DR.63L4	BR03	–
DR.71S4	BE05	BE1
DR.71M4	BE1	BE05
DR.80S4	BE1	BE05
DRE80M4	BE1	BE05
DRS80M4	BE2	BE1
DRS90M4/DRE90M4	BE2	BE1
DRP90M4	BE1	BE2
DRE90L4	BE2	BE1
DRS90L4	BE5	BE2
DRS100M4 / DRE100M4	BE5	BE2
DRP100M4	BE2	BE5
DR.100LC4	BE5	BE2
DR.100L4	BE5	BE2
DRP112M4	BE5	BE11
DR.132S4	BE5	BE11
DRP132M4	BE5	BE11

9 MOVI-SWITCH®

	TIPS
	This catalog provides a brief overview of MOVI-SWITCH® drive units for a quick drive selection. For detailed descriptions, project planning information and dimension drawings, refer to the "DR, CMP Motors" catalog and the "DR Gearmotors" catalog.

9.1 Description

MOVI-SWITCH® is the gearmotor with integrated switching and protection function.

There are 2 different MOVI-SWITCH® designs, for operation with one direction of rotation (MOVI-SWITCH®-1E) and for operation with two directions of rotation (MOVI-SWITCH®-2S).

The following figure shows the two MOVI-SWITCH® designs (in the back: MOVI-SWITCH®-1E, in the front: MOVI-SWITCH®-2S):



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9.1.1 MOVI-SWITCH®-1E – unit characteristics

- MOVI-SWITCH® 1E is a drive with an integrated electronic on/off switch for one direction of rotation and integrated thermistor-type motor protection.
- Switching the star point with power semiconductors causes the current flow in the motor to be switched on or off.
- The brake control BGW integrated as standard results in short reaction times (brake voltage = motor voltage/$\sqrt{3}$, alternative motor voltage)

9.1.2 MOVI-SWITCH®-2S – unit characteristics

- MOVI-SWITCH® 2S is a gearmotor with an integrated electronic on/off switch for two directions of rotation and integrated thermistor-type motor protection.
- The direction of rotation is reversed using a reversing relay 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 the status LED.
- With the CB0 design (binary control), the connection assignment for clockwise direction of rotation (CW) is compatible to MOVI-SWITCH®-1E.
- With the CK0 design (with integrated AS-Interface), the connection assignment is compatible to MOVIMOT® with integrated AS-Interface.

9.1.3 Advantages of MOVI-SWITCH®

MOVI-SWITCH® provides the following advantages:

- The circuit breaker and protection functions are completely integrated, saving switch cabinet space and cabling.
- Integrated mechatronic solution, robust and compact.
- AC motors and AC brake motors with the same connection configuration, therefore simple installation.

9.2 Available MOVI-SWITCH® motor combinations

9.2.1 Available combinations

MOVI-SWITCH® AC motors and AC brakemotors of sizes DR.71 to DR.100 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.
- Only two brake voltages are possible:
  - Motor voltage / $\sqrt{3}$ or
  - Motor voltage
- Position of the terminal box preferably 270°. Consult SEW-EURODRIVE for other positions.

9.2.2 MOVI-SWITCH®-1E with DRS AC motor: 1500 rpm - S1 (50 Hz)

Motor type DRS	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A $\eta_{75\%}$ $\eta_{100\%}$ [%][1]	B $\eta_{75\%}$ $\eta_{100\%}$ [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRS71S4/MSW	0.37	2.55	1380	1.14	1.24	0.70	65.3 66.6	66.2 67.7	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	73 72.4	3.6	2.1 2.1	9.6	7.1
DRS80S4/MSW	0.75	5.1	1400	1.80	1.82	0.81	76.6 75.3	76.9 75.7	4.3	1.9 1.9	12.1	14.9
DRS80M4/MSW	1.1	7.4	1410	2.40	2.50	0.83	80.7 79.1	80.9 79.5	5.1	2.2 1.7	14.8	21.5
DRS90M4/MSW	1.5	10.3	1395	3.30	3.40	0.82	82.0 79.6	82.4 80.2	5.0	2.3 2.0	18.9	35.5
DRS90L4/MSW	2.2	15	1400	4.85	4.95	0.81	83.1 81.1	83.2 81.3	5.1	2.5 2.2	22	43.5
DRS100M4/MSW	3	20.5	1400	6.4	6.5	0.82	84.7 82.4	84.8 82.7	5.3	2.8 2.4	26.5	56
									Motors of efficiency class EFF 2			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement

3) Applies for foot-mounted motor without brake (DRS.../FI..)

9.2.3 MOVI-SWITCH®-1E with DRE AC motor: 1500 rpm – S1 (50 Hz)

Motor type DRE	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A η 75% η 100% [%][1]	B η 75% η 100% [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRE80M4/MSW	0.75	5.0	1435	1.68	1.75	0.78	82.1 81.8	82.4 82.3	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	84.8 83.8	5.9	2.8 2.3	18.9	35.5
DRE90L4/MSW	1.5	10	1430	3.35	3.45	0.77	85.2 84.5	85.8 85.2	6.6	3.2 2.8	22	43.5
DRE100M4/MSW	2.2	14.7	1425	4.6	4.7	0.80	86.7 85.4	87.5 86.4	6.4	3.3 2.7	26.5	56
DRE100LC4/MSW	3	19.7	1455	6.2	6.3	0.81	87.6 86.8	88.2 87.6	7.5	2.7 2.4	31.5	90
DRE112M4/MSW	3	19.7	1455	6	6.2	0.82	88.6 87.7	89.3 88.8	7.3	2.4 2	42	146
									Motors of efficiency class EFF I			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRE.../FI..)

9.2.4 MOVI-SWITCH®-1E with DRP AC motor: 1500 rpm – S1 (50 Hz)

Motor type DRP	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A η 75% η 100% [%][1]	B η 75% η 100% [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRP90M4/MSW	0.75	4.95	1450	1.81	1.86	0.72	82.7 83.3	83.4 84	7.3	3.7 3.1	18.9	35.5
DRP90L4/MSW	1.1	7.3	1440	2.4	2.5	0.78	86.0 85.3	86 85.3	6.8	3.2 2.7	22	43.5
DRP100M4/MSW	1.5	9.9	1440	3.2	3.3	0.79	87.2 86.6	87.2 86.6	7.4	3.6 3.1	26.5	56
DRP100L4/MSW	2.2	14.6	1440	4.75	4.85	0.77	87.5 87.1	87.9 87.5	7.7	4.2 3.2	29.5	68
DRP112M4/MSW	3	19.7	1455	6	6.2	0.82	88.7 88.0	89.2 88.4	7.3	2.4 2	42	146
									Motors of efficiency class EFF I			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRP.../FI..)

9.2.5 MOVI-SWITCH®-2S with DRS AC motor: 1500 rpm – S1 (50 Hz)

Motor type DRS	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A $\eta_{75\%}$ $\eta_{100\%}$ [%][1]	B $\eta_{75\%}$ $\eta_{100\%}$ [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	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	66.2 67.7	3.5	1.8 1.8	9.7	4.9
DRS71M4/MSW/C.0	0.55	3.8	1380	1.55	1.62	0.72	71.9 70.6	73 72.4	3.6	2.1 2.1	11	7.1
DRS80S4/MSW/C.0	0.75	5.1	1400	1.80	1.82	0.81	76.6 75.3	76.9 75.7	4.3	1.9 1.9	13.4	14.9
DRS80M4/MSW/C.0	1.1	7.4	1410	2.40	2.50	0.83	80.7 79.1	80.9 79.5	5.1	2.2 1.7	16.2	21.5
DRS90M4/MSW/C.0	1.5	10.3	1395	3.30	3.40	0.82	82.0 79.6	82.4 80.2	5.0	2.3 2.0	20.3	35.5
DRS90L4/MSW/C.0	2.2	15	1400	4.85	4.95	0.81	83.1 81.1	83.2 81.3	5.1	2.5 2.2	23.4	43.5
DRS100M4/MSW/C.0	3	20.5	1400	6.4	6.5	0.82	84.7 82.4	84.8 82.7	5.3	2.8 2.4	27.9	56

Motors of efficiency class EFF 2

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRS.../FI..)

9.2.6 MOVI-SWITCH®-2S with DRE AC motor: 1500 rpm – S1 (50 Hz)

Motor type DRE	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A $\eta_{75\%}$ $\eta_{100\%}$ [%][1]	B $\eta_{75\%}$ $\eta_{100\%}$ [%][2]	I_A/I_N	M_A/M_N M_H/M_N	m [kg][3]	J_{Mot} [10^{-4} kgm^2]
DRE80M4/MSW/C.0	0.75	5.0	1435	1.68	1.75	0.78	82.1 81.8	82.4 82.3	6.2	2.8 2.1	16.2	21.5
DRE90M4/MSW/C.0	1.1	7.4	1420	2.45	2.55	0.79	83.5 82.4	84.8 83.8	5.9	2.8 2.3	20.3	35.5
DRE90L4/MSW/C.0	1.5	10	1430	3.35	3.45	0.77	85.2 84.5	85.8 85.2	6.6	3.2 2.8	23.4	43.5
DRE100M4/MSW/C.0	2.2	14.7	1425	4.6	4.7	0.80	86.7 85.4	87.5 86.4	6.4	3.3 2.7	267.9	56
DRE100LC4/MSW/C.0	3	19.7	1455	6.2	6.3	0.81	87.6 86.8	88.2 87.6	7.5	2.7 2.4	32.9	90
DRE112M4/MSW/C.0	3	19.7	1455	6	6.2	0.82	88.6 87.7	89.3 88.8	7.3	2.4 2	43.4	146

Motors of efficiency class EFF 1

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses
2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement
3) Applies for foot-mounted motor without brake (DRE.../FI..)

9.2.7 MOVI-SWITCH®-2S with DRP AC motor: 1500 rpm - S1 (50 Hz)

Motor type DRP	P_N [kW]	M_N [Nm]	n_N [rpm]	I_N 400 V [A]	I_N 380 – 420 V [A]	cos φ	A η 75% η 100% [%]1)	B η 75% η 100% [%2)]	I_A/I_N	M_A/M_N M_H/M_N	m [kg]3)	J_{Mot} [10^{-4} kgm^2]
DRP90M4/MSW/C.0	0.75	4.95	1450	1.81	1.86	0.72	82.7 83.3	83.4 84	7.3	3.7 3.1	20.3	35.5
DRP90L4/MSW/C.0	1.1	7.3	1440	2.4	2.5	0.78	86.0 85.3	86 85.3	6.8	3.2 2.7	23.4	43.5
DRP100M4/MSW/C.0	1.5	9.9	1440	3.2	3.3	0.79	87.2 86.6	87.2 86.6	7.4	3.6 3.1	27.9	56
DRP100L4/MSW/C.0	2.2	14.6	1440	4.75	4.85	0.77	87.5 87.1	87.9 87.5	7.7	4.2 3.2	30.9	68
DRP112M4/MSW/C.0	3	19.7	1455	6	6.2	0.82	88.7 88.0	89.2 88.4	7.3	2.4 2	43.4	146
									Motors of efficiency class EFF I			

1) Efficiency "A" according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Efficiency "B" according to IEC 60034-2 (1972) / Voluntary CEMEP-EU Agreement

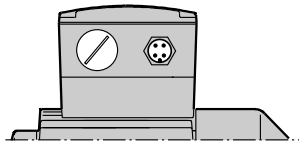
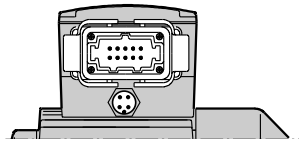
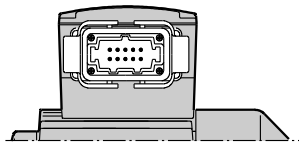
3) Applies for foot-mounted motor without brake (DRP.../FI..)

9.3 Connection technology

9.3.1 MOVI-SWITCH®-1E connection technology

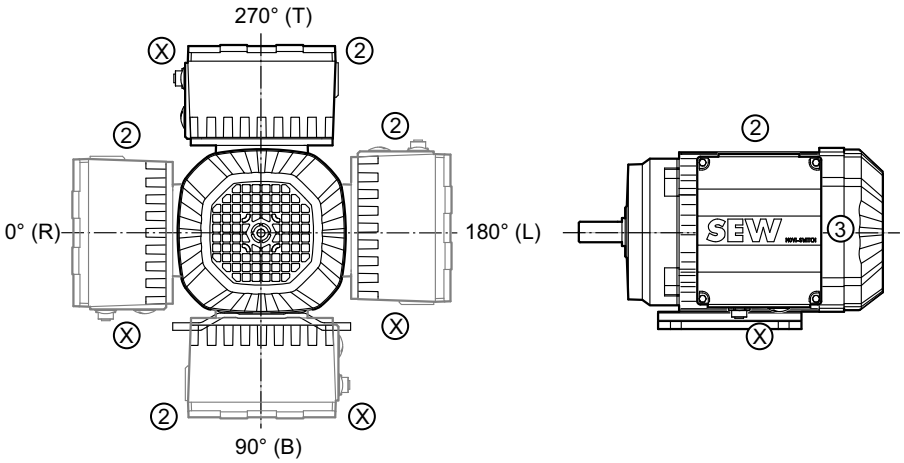
Overview

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. For other types, please contact SEW-EURODRIVE.

Order designation	Function	Manufacturer designation
MSW../AVS1 	Control signals	1 x M12 x 1 round plug connector
MSW../AVS1/ASA3 	Control signals Power	1 x M12 x 1 round plug connector Harting Han® 10 ES pin element (built-on housing with 2 clips)
MSW../ASAW 	Connection to field distributor Z.3W or Z.6W	Harting Han® 10 ES pin element (built-on housing with 2 clips)

Possible plug connector positions

The following positions are possible for ASA3 and AVS1 plug connectors:



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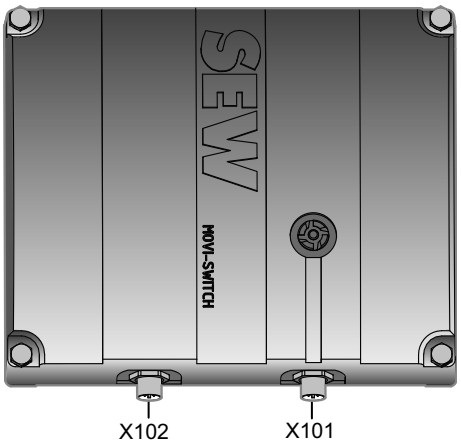
Plug connector	Possible positions
AVS1	X (standard)
	2
	3
ASA3 **ASAW**	X (standard)
	2
	3
AVS1/ASA3	ASA3 = X (standard) + AVS1 = X (standard)
	ASA3 = 2 + AVS1 = 2
	ASA3 = 3 + AVS1 = 3
	ASA3 = X (standard) + AVS1 = 2
	ASA3 = 2 + AVS1 = X (standard)

9.3.2 MOVI-SWITCH®-2S connection technology

CB0 design (binary control) – connection technology

As standard, MOVI-SWITCH®-2S is equipped with two plug connectors for connecting control signals and 24 V supply. The plug connectors are integrated in the control unit, see the following figure.

Order designation of the standard design: MSW/C**B**0/RA2A.

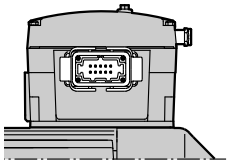
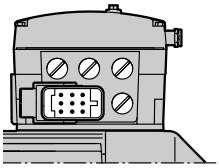
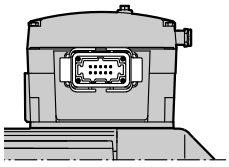


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X102 = DC 24 V supply voltage + control signal (M12 plug connector, standard coding, male)
X101 = DC 24 V supply voltage + feedback (M12 plug connector, standard coding, male)

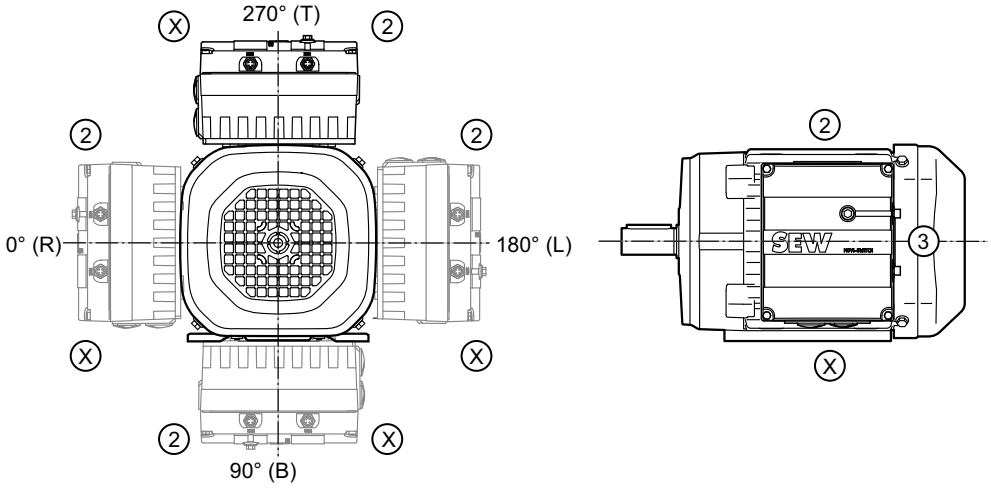
Optional plug connectors

The following table shows the plug connectors in the terminal box that are available as option for MOVI-SWITCH® 2S (CB0 design). For other types, please contact SEW-EURODRIVE.

Order designation	Function	Manufacturer designation
MSW/CB0/ASA3 	Power	Harting Han® 10 ES pin element (built-on housing with 2 clips)
MSW/CB0/AND3 	Power	Harting Han® Q8/0 pin element (built-on housing with 1 clip)
MSW/CB0/ASAW 	Connection to field distributor Z.3W or Z.6W	Harting Han® 10 ES pin element (built-on housing with 2 clips)

Possible plug connector positions

The positions shown in the following figure are possible for plug connectors. Some positions might not be possible for certain gear unit types and mounting positions (contact SEW-EURODRIVE).

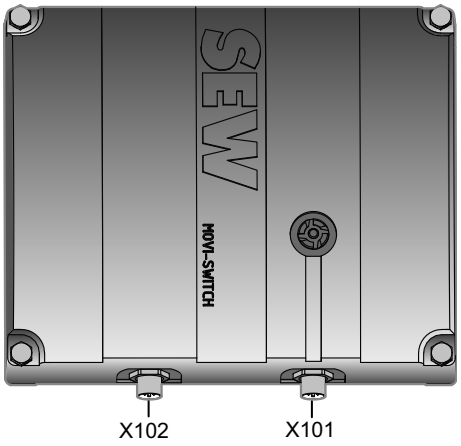


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*C**K**0 design (with integrated AS-Interface) – connection technology*

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.

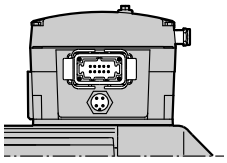
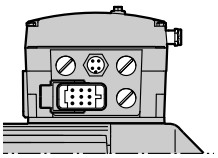


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X102 = DC 24 V supply voltage + AS-Interface
(M12 plug connector, standard coding, male)
X101 = DC 24 V supply voltage + digital inputs
(M12 plug connector, standard coding, female)

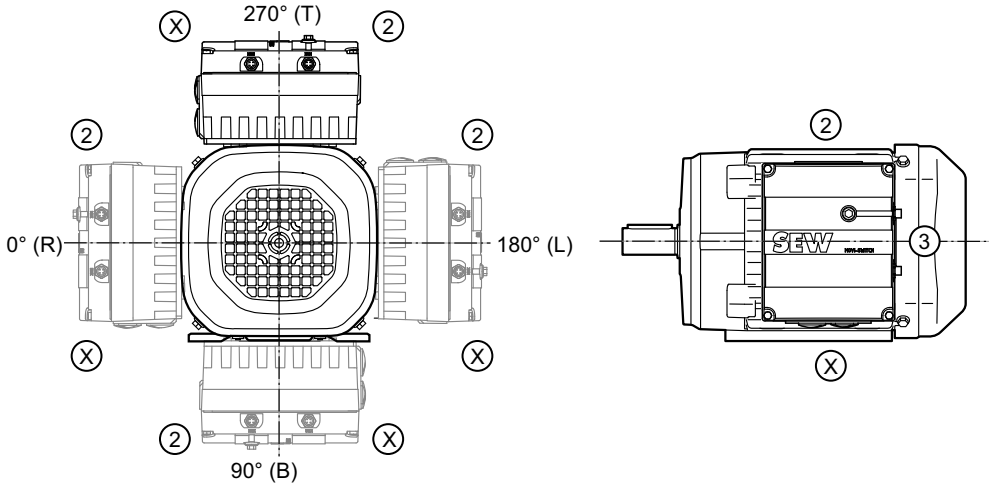
Optional plug connectors

The following table shows the optional plug connectors in the terminal box that are available for MOVI-SWITCH® 2S (CK0 design). For other types, please contact SEW-EURODRIVE.

Order designation	Function	Manufacturer designation
MSW/CK0/ASA3/AVS0 	Power + AUX PWR	Harting Han® 10 ES pin element (built-on housing with 2 clips) + 1 x M12 x 1 round plug connector
MSW/CK0/AND3/AVS0 	Power + AUX PWR	Harting Han® Q8/0 pin element (built-on housing with 1 clip) 1 x M12 x 1 round plug connector

Possible plug connector positions

The positions shown in the following figure are possible for plug connectors. Some positions might not be possible for certain gear unit types and mounting positions (contact SEW-EURODRIVE).

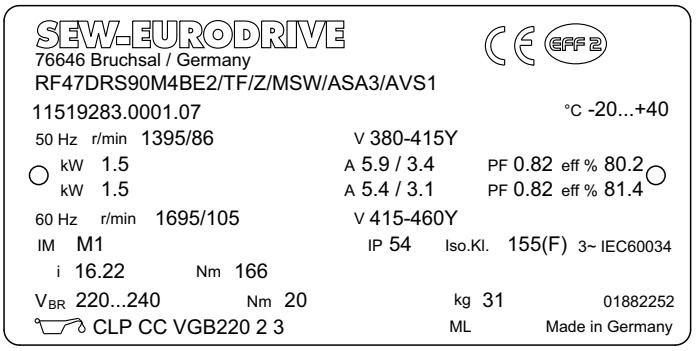


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9.4 Sample unit designation

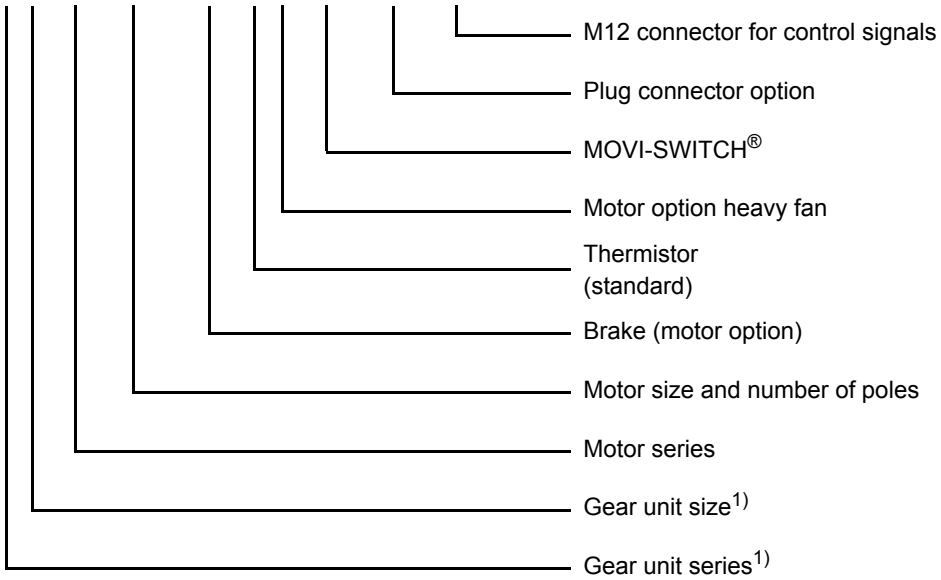
9.4.1 MOVI-SWITCH®-1E – nameplate, unit designation

The unit designation of the MOVI-SWITCH® drive starts from the component on the output end. For example, a MOVI-SWITCH® 1E helical gearmotor with brake and AVS1 and ASA3 plug connector has the following unit designation:



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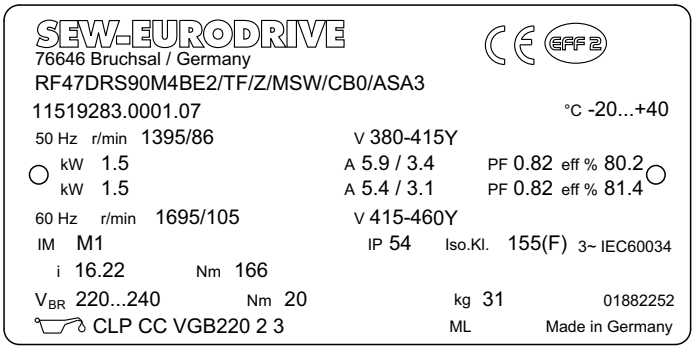
R 47 DRS 90M4 /BE2/TF/Z/MSW/ASA3/AVS1



1) For detailed information about gearmotor combinations, refer to the "Gearmotors" catalog.

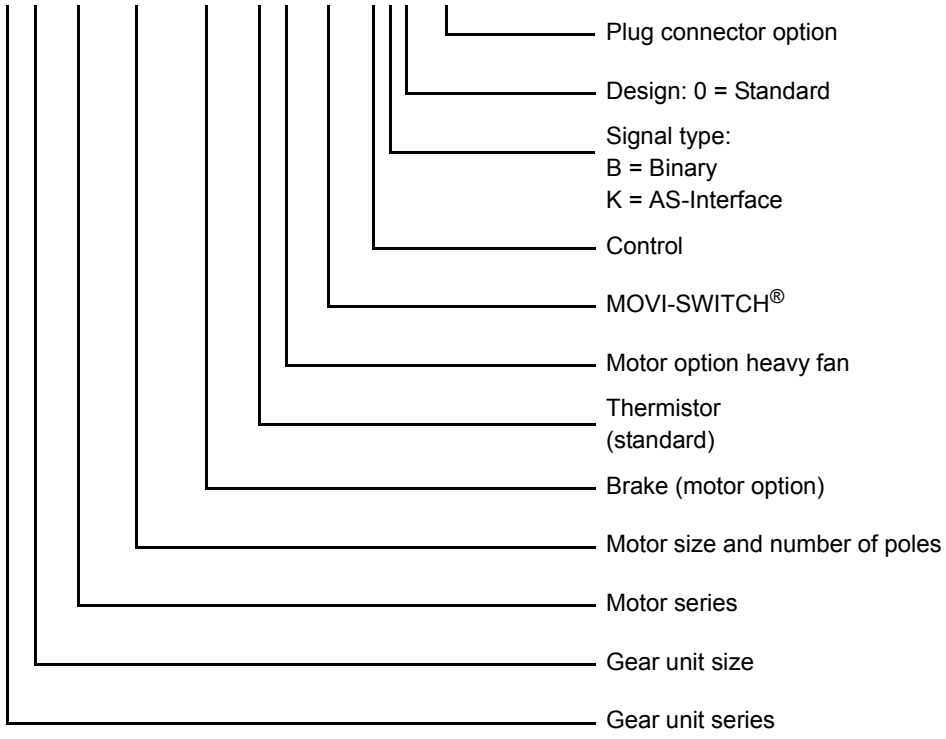
9.4.2 MOVI-SWITCH®-2S – nameplate and unit designation

The unit designation of the MOVI-SWITCH® 2S drive starts from the component on the output end. For example, a MOVI-SWITCH® 2S helical gearmotor with brake and ASA3 plug connector has the following unit designation:



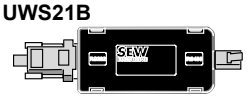
1539179531

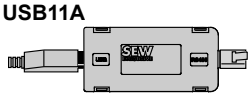
R 47 DRS 90M4 /BE2/TF/Z/MSW/CB0/ASA3



10 Options Regarding Diagnostics, Startup and Manual Operation

	TIPS
	This section 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.

Option	Description	Type	Part number	Compatible with
Keypad	The MFG11A keypad is plugged onto a MFZ.. connection module (not included in the delivery) instead of a fieldbus interface and allows for manual operation of the MOVIMOT® drive.	**MFG11A** 	823 559 7	• Field distributor • MFZ.. connection module (not included in scope of delivery)
Operating panel	Features: • Illuminated text display, range of languages • Keypad with 21 keys • Can be connected via extension cable DKG60B (5 m) • Enclosure IP40 (EN 60529) Functions (examples): • Visualization of process values and status displays • Visualization of process output and input data • Display of the error status and the error reset • Manual control and operation • Status displays of the binary inputs/outputs • Parameters can be displayed and set • Backup and transfer of parameter sets	**DBG60B-01** **(DE/EN/FR/IT/ES/PT/NL)** **DBG60B-02** **(DE/EN/FR/FI/SV/DA/TR)** **DBG60B-03** **(DE/EN/FR/RU/PL/CS)** **DBG60B-04** **(DE/EN/FR/ZH)**  **as of firmware version .14**	1 820 403 1 1 820 405 8 1 820 406 6 1 820 850 9	• MOVIMOT® • MOVIFIT® • Fieldbus interfaces MF../MQ..
Extension cable	• Extension cable for DBG60B (length 5 m)	**DKG60B**	0 817 583 7	• DBG60B
Interface adapter **RS-232 to RS-485**	The UWS21B option converts RS232 signals, for example from the PC, into RS485 signals. These RS485 signals can then be transmitted to the diagnostic interface of MOVIFIT®, MOVIMOT® with integrated AS-Interface or MF../MQ.. fieldbus interfaces. Scope of delivery: • UWS21B • Serial interface cable with 9-pin D-sub socket and 9-pin D-sub connector to connect the UWS21B option to the PC. • Serial interface cable with 2 RJ10 plugs for connection of MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces • CD-ROM with MOVITOOLS® MotionStudio	**UWS21B** 	1 820 456 2	• MOVIMOT® • MOVIFIT® • Fieldbus interfaces MF../MQ..

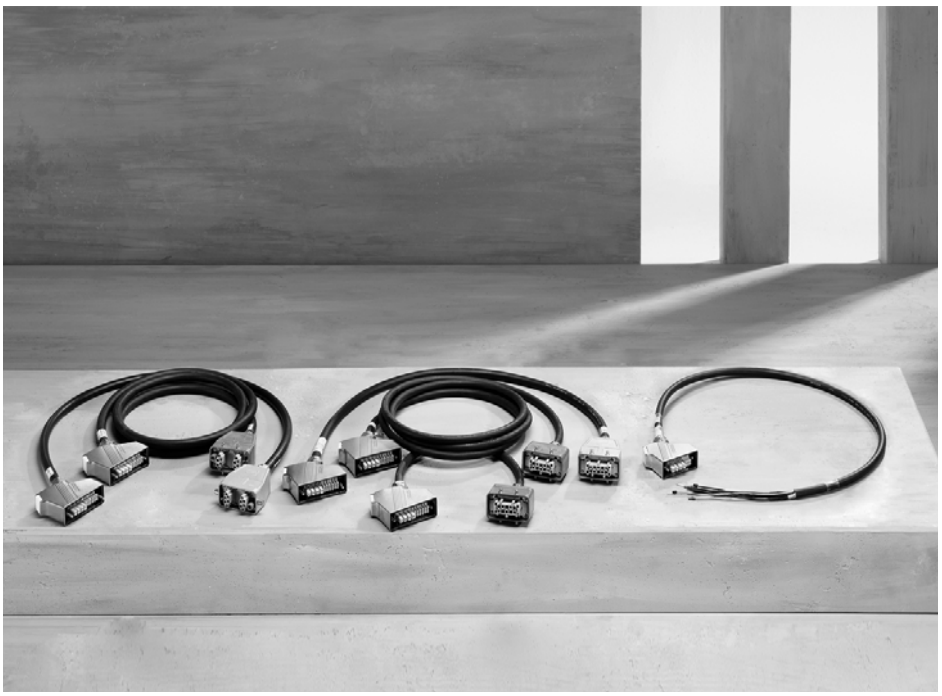
Option	Description	Type	Part number	Compatible with
Interface adapter USB1.1/USB2.0 to RS-485	Option USB11A enables a PC or laptop with a USB interface to be connected to MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces. The USB11A interface adapter supports USB 1.1 and USB 2.0. Scope of delivery: • USB11A interface adapter • USB connection cable to connect USB11A - PC • Serial interface cable with 2 RJ10 plugs for connecting MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces to USB11A • CD-ROM with drivers and MOVITOOLS® MotionStudio	**USB11A** 	0 824 831 1	• MOVIMOT® • MOVIFIT® • Fieldbus interfaces MF../MQ..

11 Hybrid Cables

	TIP
	This section shows the technical data of the hybrid cables available at SEW-EURODRIVE. For assignment of hybrid cables to the products, refer to the respective sections.

11.1 Description

The following figure shows examples of hybrid cables from SEW-EURODRIVE:



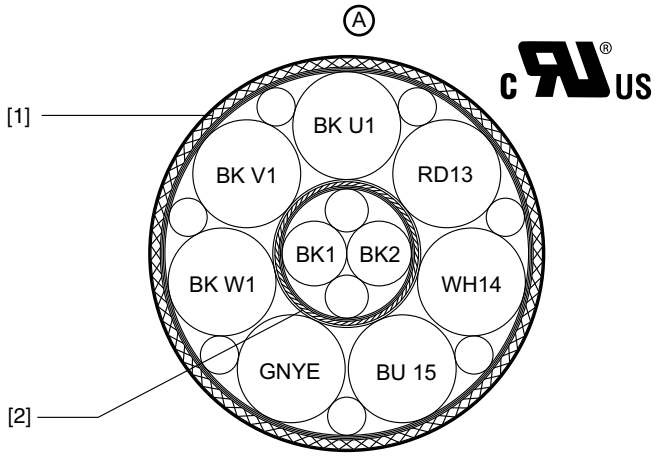
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SEW-EURODRIVE hybrid cables ...

- Connect field distributors with AC motors or MOVIMOT®
- Connect MOVIFIT® units with AC motors or MOVIMOT®
- connect MOVIMOT® or MOVI-SWITCH® 2S units mounted in close proximity to the motor with drives (in combination with option P2.A)
- Combine the power transmission, control voltage and communication in one cable sheath
- Ensure optimum EMC shielding and cable impedances
- Are supplied as pre-fabricated cables with plug connectors

11.2 Hybrid cables – cable type "A"

11.2.1 Mechanical design



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[1] Overall shield
[2] Shield

- SEW works standard W3252 (817 953 0)
- Supply cores: 7 x 1.5 mm^2
- Control core pair: 2 x 0.75 mm^2
- Conductor insulation: TPE-E (polyester)
- Conductor: Bare E-Cu strand, extra fine wires with individual wire 0.1 mm
- Shield: Tinned E-Cu wire.
- Overall diameter: max. 15.9 mm
- Color of outer cable sheath: Black
- Cable sheath insulation: TPE-U (polyurethane)

11.2.2 Electrical properties

- Conductor resist. for 1.5 mm^2 (at 20 °C): max. 13 Ω/km
- Cond. resist. for 0.75 mm^2 (at 20 °C): max. 26 Ω/km
- Operating voltage for 1.5 mm^2 core: max. 600 V according to c UL us
- Operating voltage for 0.75 mm^2 core: max. 600 V according to c UL us
- Insulation resistance at 20 °C: min. 20 MΩ x km

11.2.3 Mechanical properties

- Suitable for cable carriers
  - Bending cycles > 2.5 million
  - Traveling velocity ≤ 3 m/s
- Bending radius in the cable carrier: 10 x diameter
  for fixed routing: 5 x diameter
- Torsional strength (e.g. rotary table applications)
  - Torsion ±180° at a cable length of > 1 m
  - Torsional cycles > 100.000

	TIP
	If reversed bending and high torsional load occur for a length of < 3 m, you must check the mechanical margin conditions more closely. Please contact SEW-EURODRIVE in such cases.

11.2.4 Thermal properties

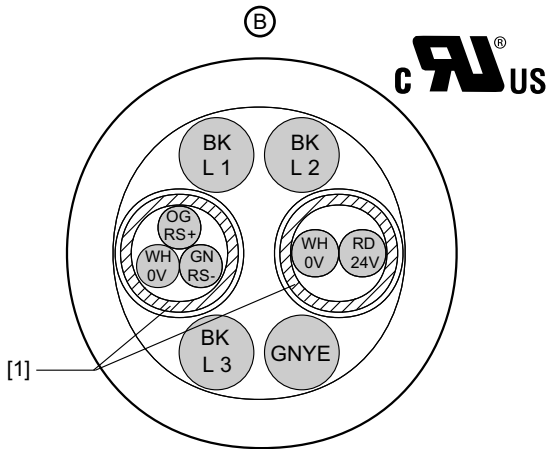
- Processing and operation: –30 °C – +90 °C (load capacity to DIN VDE 0298-4)
  –30 °C – +80 °C according to cULus
- Transport and storage: –40 °C – +90 °C (load capacity to DIN VDE 0298-4)
  –30 °C – +80 °C according to cULus
- Flame-retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame-retardant according to CSA C22.2 Vertical Wiring Flame Test (FT-1)

11.2.5 Chemical properties

- Oil-resistant according to 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 VDE 0472 part 815
- Within the specified temperature range, free from substances interfering with wetting agents (silicone-free)

11.3 Hybrid cable – cable type "B" and "B/2,5"

11.3.1 Mechanical design



1031705739

[1] Shield

Cable type	B	B/2.5
• SEW work std. W3252	(814 517 2)	(1 328 436 3)
• Supply cores:	4 x 1.5 mm^2	4 x 2.5 mm^2
• Control core pair:	2 x 0.75 mm^2	2 x 0.75 mm^2
• Control core group:	3 x 0.75 mm^2	3 x 0.75 mm^2
• Conductor insulation:	TPE-E (polyester)	TPE-E (polyester)
• Conductor:	Bare E-Cu strand, extra fine wires with individual wire 0.1 mm	
• Shield:	Tinned E-Cu wire.	Tinned E-Cu wire.
• Overall diameter:	13.2 – 13.8 mm	14.4 – 15.2 mm
• Outer cable sheath color:	Black	Black
• Cable sheath insulation:	TPE-U (polyurethane)	TPE-U (polyurethane)

11.3.2 Electrical properties

Cable type	B	B/2.5
• Conductor resist. 1.5/2.5 mm^2 (at 20 °C):	max. 13 Ω/km	max. 8 Ω/km
• Conductor resist. 0.75 mm^2 (at 20 °C):	max. 26 Ω/km	max. 26 Ω/km
• Operating voltage for 1.5/2.5 mm^2 core:	max. 600 V according to c UL us	max. 600 V according to c UL us
• Operating voltage for 0.75 mm^2 core:	max. 600 V according to c UL us	max. 600 V according to c UL us
• Insulation resistance at 20 °C:	min. 20 MΩ x km	min. 20 MΩ x km

11.3.3 Mechanical properties

- Suitable for cable carriers
  - Bending cycles > 2.5 million
  - Traveling velocity ≤ 3 m/s
- Bending radius in the cable carrier: 10 x diameter
  for fixed routing: 5 x diameter
- Torsional strength (e.g. rotary table applications)
  - Torsion ±180 ° at a cable length of > 1 m
  - Torsional cycles > 100.000

	TIP
	If reversed bending and high torsional load occur for a length of < 3 m, you must check the mechanical margin conditions more closely. Please contact SEW-EURODRIVE in such cases.

11.3.4 Thermal properties

- Processing and operation: –30 °C – +90 °C (load capacity to DIN VDE 0298-4)
  –30 °C – +80 °C according to cULus
- Transport and storage: –40 °C – +90 °C (load capacity to DIN VDE 0298-4)
  –30 °C – +80 °C according to cULus
- Flame-retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame-retardant according to CSA C22.2 Vertical Wiring Flame Test (FT-1)

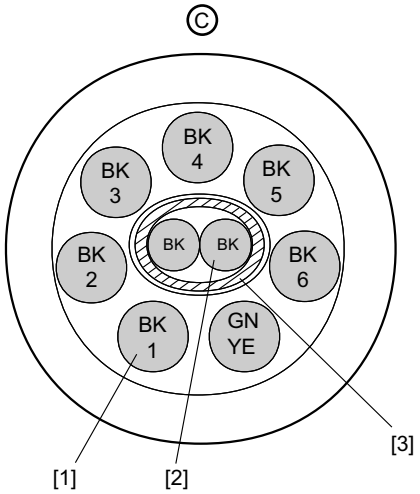
11.3.5 Chemical properties

Cable type	**B**	**B/2.5**
• Oil-resistant:	according to VDE 0472 paragraph 803 method B	according to 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 according to VDE 0472 part 815
- Within the specified temperature range, free from substances interfering with wetting agents (silicone-free)

11.4 Hybrid cables – cable type "C"

11.4.1 Mechanical design



1484841483

[1] Cores 2.5 mm ^{2}
[2] Cores 0.75 mm ^{2}
[3] Shield

- SEW works standard W3252 (015 207 2)
- Supply cores: 7 x 2.5 mm^2
- Control cores: 2 x 0.75 mm^2
- Insulation: PVC
- Conductor: Fine wires to VDE0295 class 5, copper strand conductor
- Shield: Aluminum-laminated foil and tin-plated Cu wires
- Overall diameter: About 15.2 mm
- Color of outer cable sheath: Gray

11.4.2 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 x km

11.4.3 Mechanical properties

- Bending radius
  - in the cable carrier: 20 x diameter
  - for fixed routing: 6 x diameter

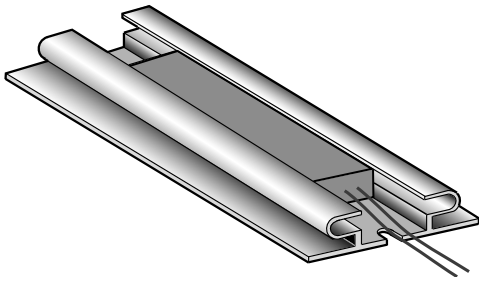
11.4.4 Thermal properties

- Processing and operation:
  - Flexible routing: –5 °C – +70 °C (load capacity to DIN VDE 0298-4)
  - Fixed routing: –30 °C – +80 °C (load capacity to DIN VDE 0298-4)
- Transport and storage: –30 °C – +80 °C (load capacity to DIN VDE 0298-4)

12 Braking Resistors

12.1 4Q operation with integrated BW.. braking resistor

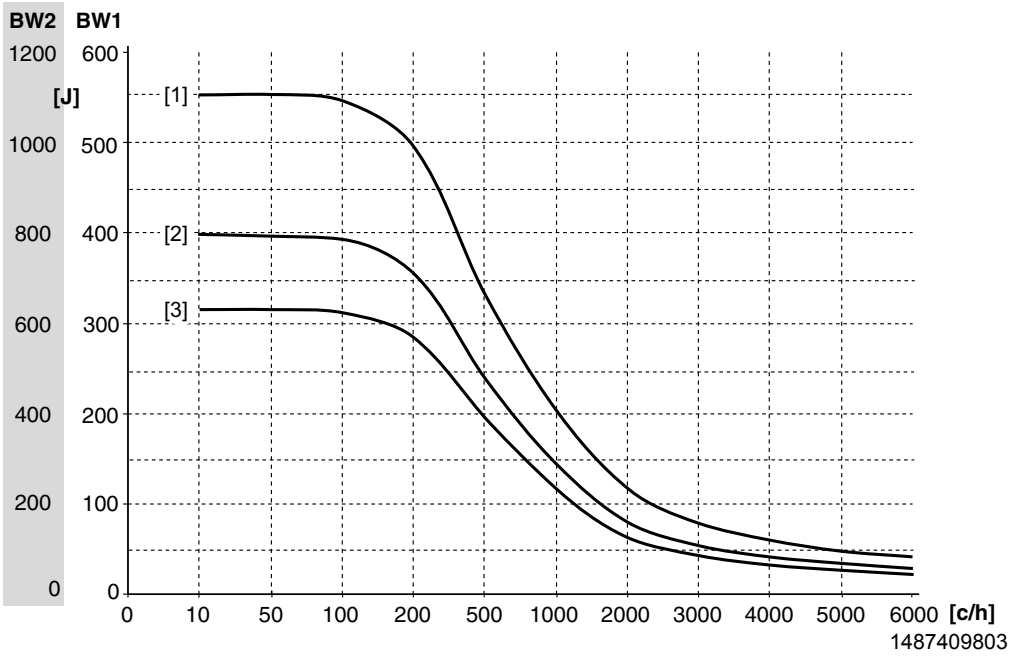
- 4Q operation with integrated braking resistor is recommended for applications in which the level of regenerative energy is low.
- The resistor protects itself (reversible) against regenerative overload by changing abruptly to high resistance and no longer consuming any more energy. The inverter then switches off and signals an overvoltage error (error code 04).



1487411723

12.1.1 Regenerative load capacity of the internal braking resistors

The following figure shows the regenerative load capacity of the internal braking resistors:

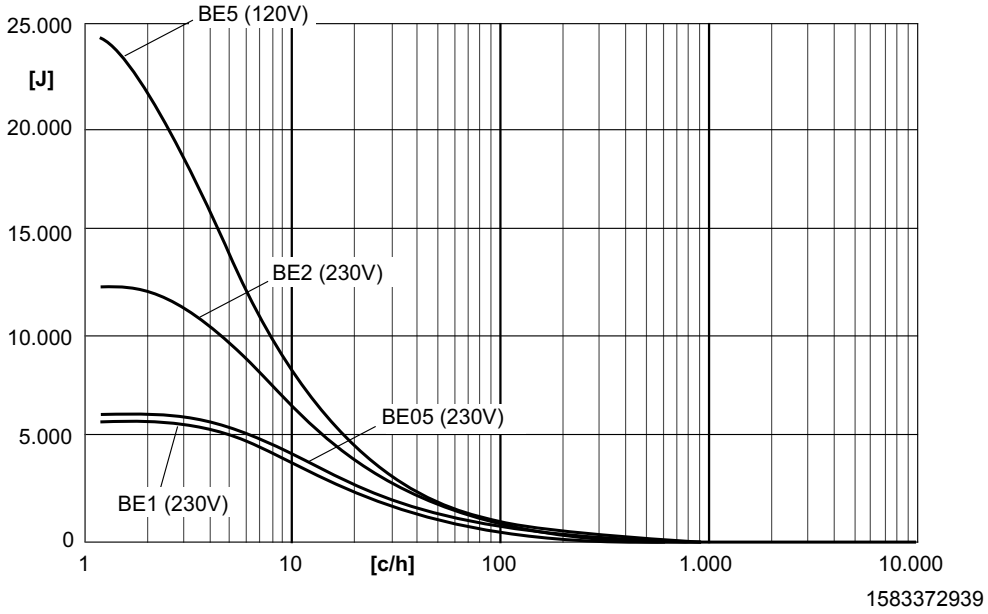


1487409803

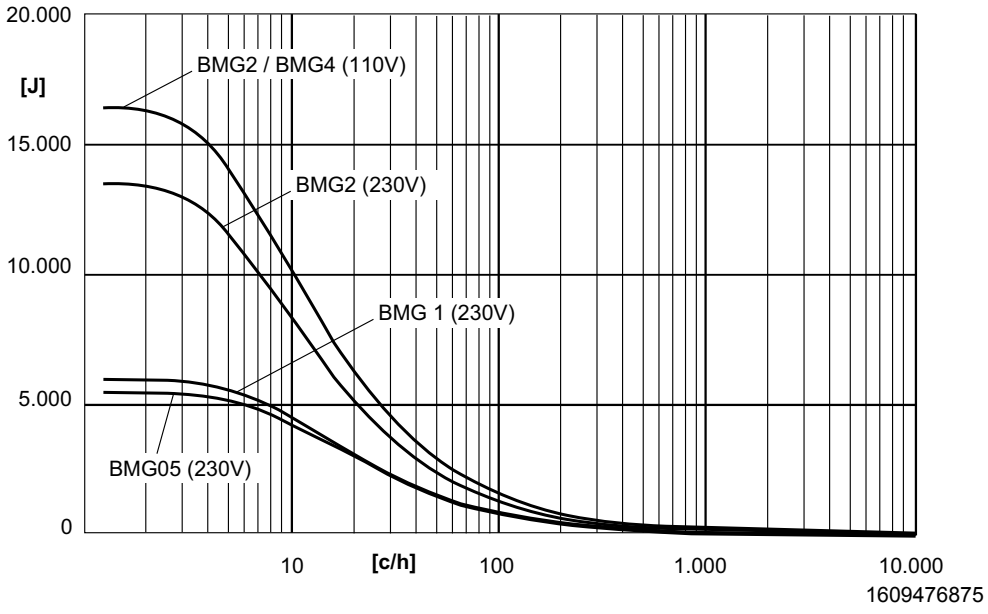
[c/h] cycles per hour
[1] Brake ramp 10 s
[2] Brake ramp 4 s
[3] Brake ramp 0.2 s

12.2 Motors with mechanical brake – 4Q operation

- In 4Q operation, the brake coil can be used as a braking resistor.
- Brake voltage is generated internally within the unit, which means it is mains-independent.
- Should the regenerative load capacity not be sufficient for the application, refer to section "4Q operation with integrated brake and external brake resistor" (see page 241):
- The following figure shows the load capacity of the DR motor brake coils:



- The following figure shows the load capacity of the DT/DV motor brake coils:

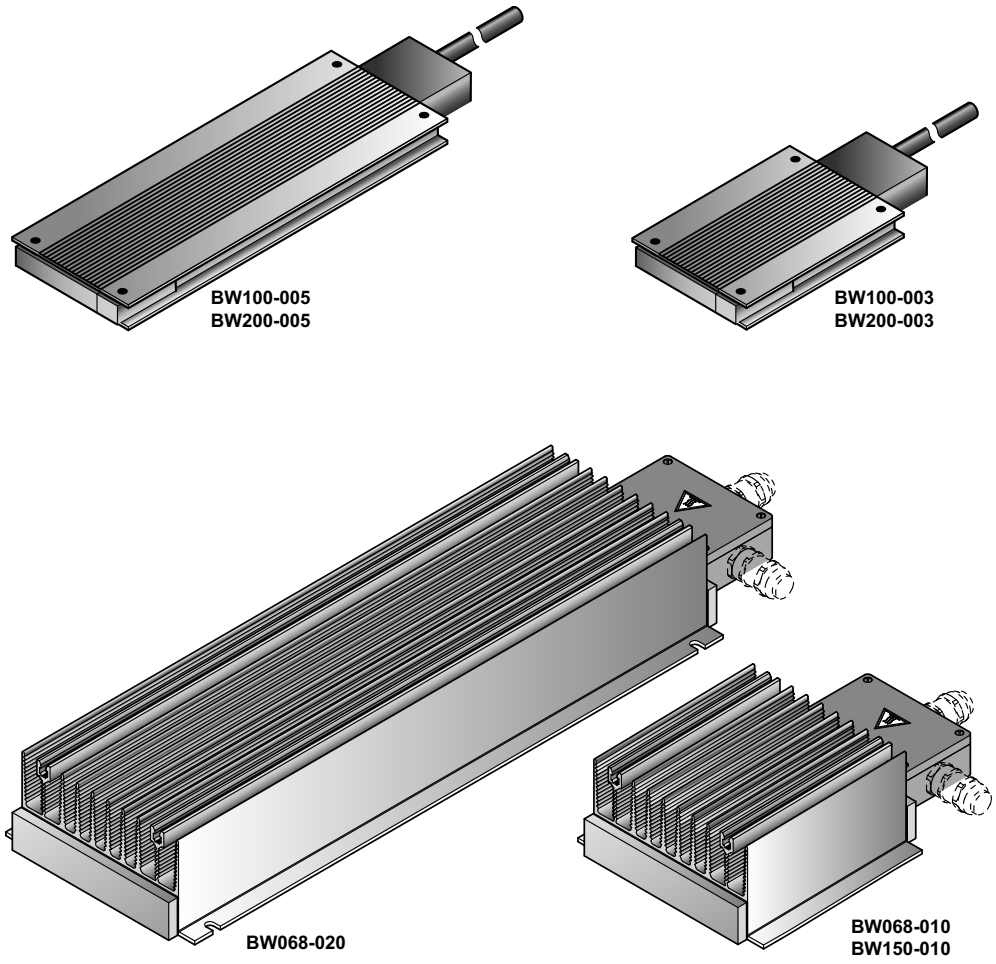


12.3 4Q operation with integrated brake and external braking resistor

4Q operation with external braking resistor is recommended for applications in which the level of regenerative energy is high.

12.3.1 Overview

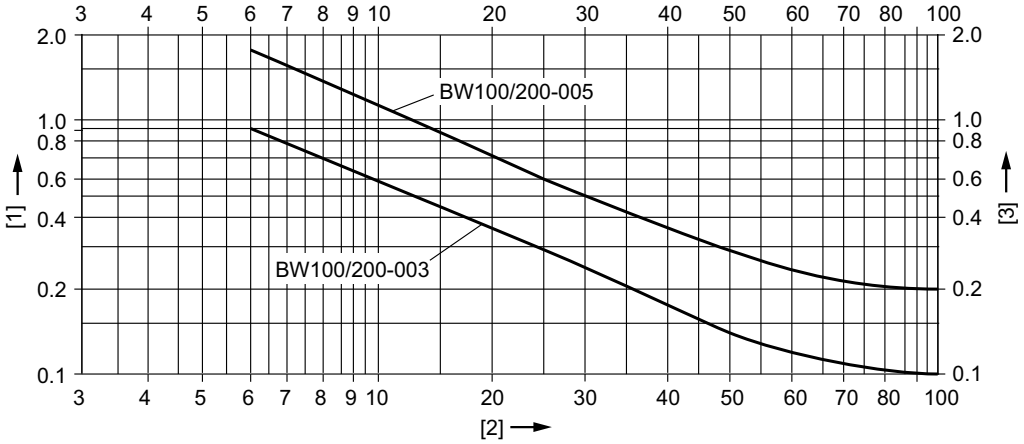
The following figure gives an overview of the external braking resistors:



1490214411

12.3.2 Power diagrams of braking resistors BW100-003, BW200-003, BW100-005 and BW200-005

The following figure shows the power diagrams of braking resistors BW100-003, BW200-003, BW100-005 and BW200-005

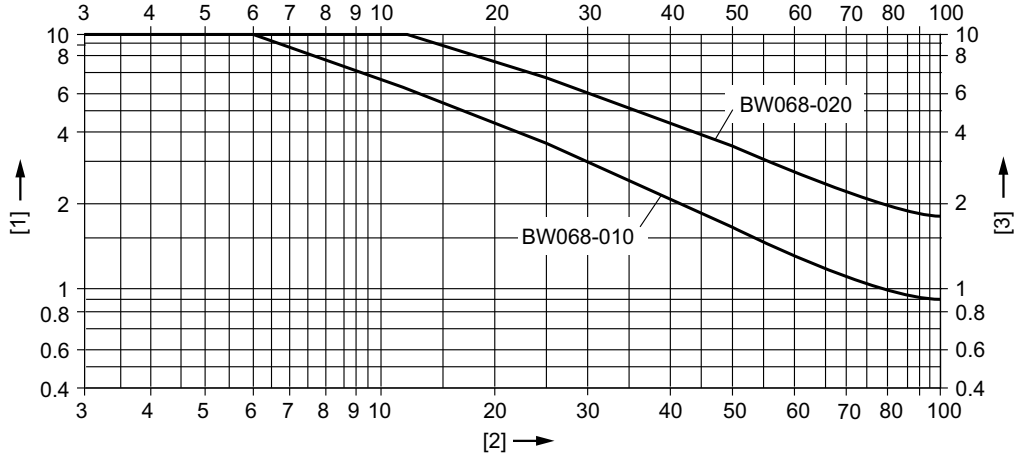


1490064011

[1] Short-time power in kW
[2] Cyclic duration factor cdf in %
[3] Continuous power 100% cdf in kW

12.3.3 Power diagrams of BW068-010 and BW068-020

The following figure shows the power diagrams of braking resistors BW068-010 and BW068-020:



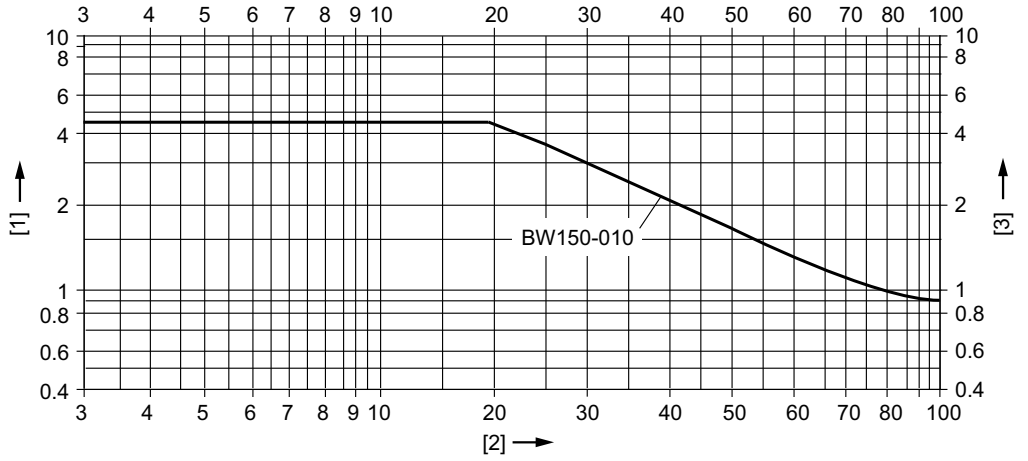
1490065931

[1] Short-time 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.

12.3.4 Power diagrams BW150-010

The following figure shows the power diagrams of the BW150-010 braking resistors:



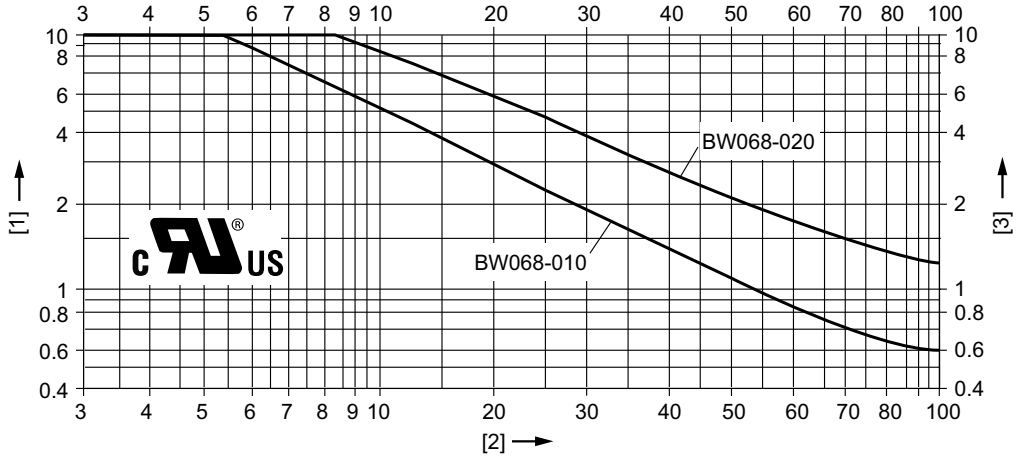
1689642251

[1] Short-time 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.

12.3.5 Power diagrams of BW068-010 and BW068-020 according to UL approval

The following figure shows the power diagrams of braking resistors BW068-010 and BW068-020 according to UL approbation:

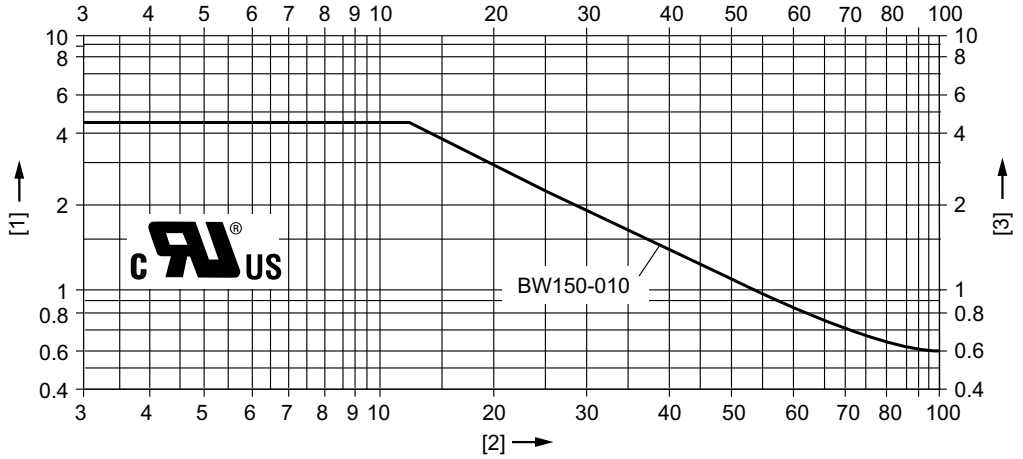


1490208651

[1] Short-time power in kW
[2] Cyclic duration factor cdf in %
[3] Continuous power 100% cdf in kW

12.3.6 BW150-010 – power diagrams according to UL approval

The following figure shows the power diagrams of the BW150-010 braking resistors according to UL approval:



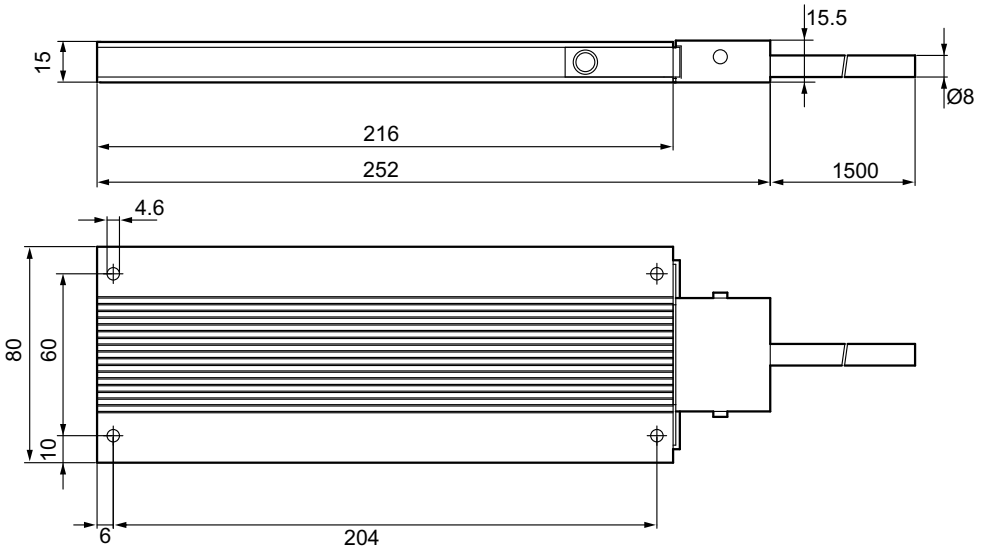
1686015499

[1] Short-time 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.

12.3.7 Dimension drawing for BW100-005 and BW200-005

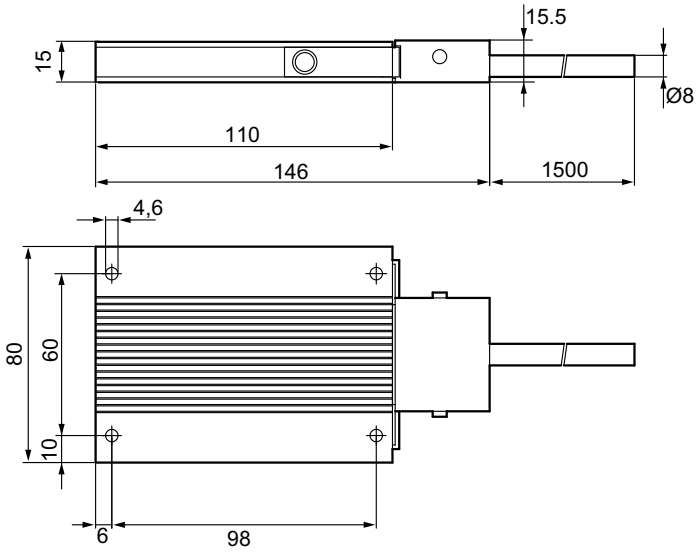
The following figure shows the dimensions of the external braking resistors BW100-005 and BW200-005:



1490210571

12.3.8 Dimension drawing for BW100-003 and BW200-003

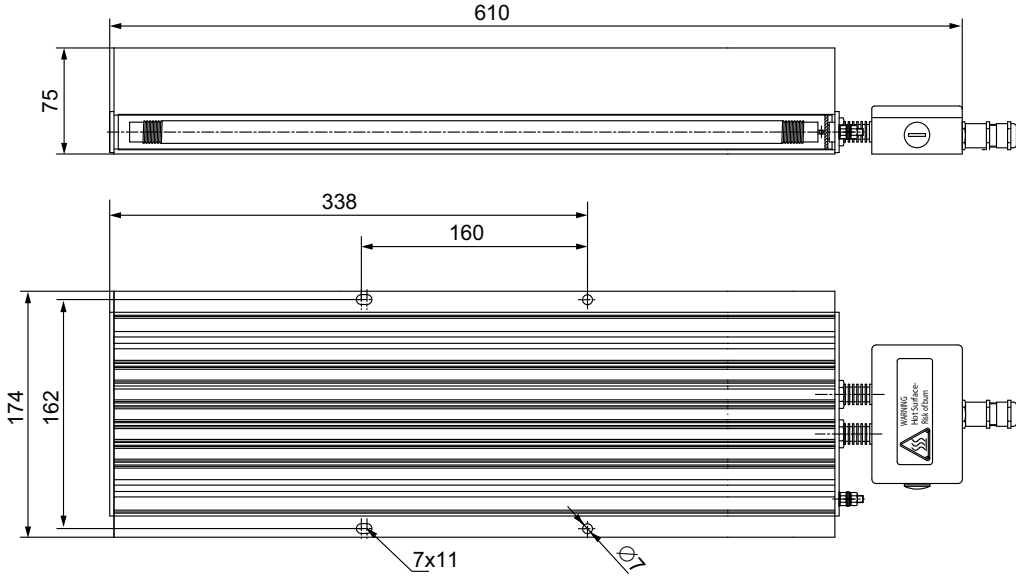
The following figure shows the dimensions of the external braking resistors BW100-003 and BW200-003:



1490212491

12.3.9 Dimension drawing for external braking resistor BW068-020

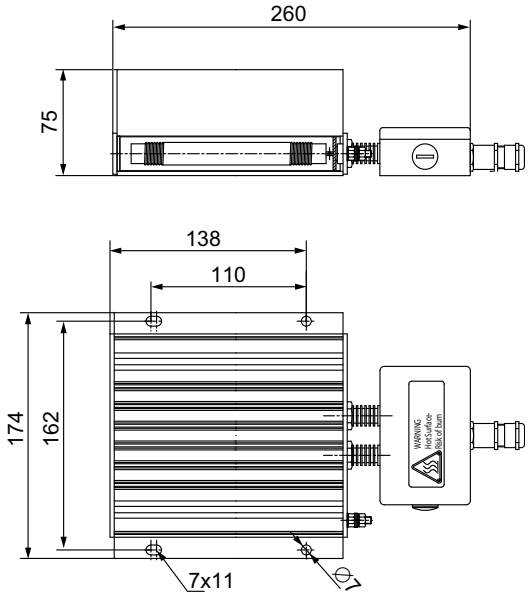
The following figure shows the dimensions of the external braking resistor BW068-020:



1490062091

12.3.10 Dimension drawing for external braking resistors BW068-010 and BW150-010

The following figure shows the dimensions of the external braking resistors BW068-010 and BW150-010:



1490216331

13 Project Planning

13.1 Project planning with the SEW Workbench

13.1.1 Description

The SEW Workbench is a tool that provides for a selection of SEW-EURODRIVE products and the respective system configuration. The user can make use of simple graphical elements to configure even complex systems and check their functionality quickly and easily. A variety of new functions offers all SEW-EURODRIVE customers the opportunity to find a drive solution to meet their individual requirements and discuss the results with a sales representative.

The SEW Workbench offers catalog selection functions for gearmotors, electronic components, decentralized drive systems and accessories, such as prefabricated cables, as well as other useful options.

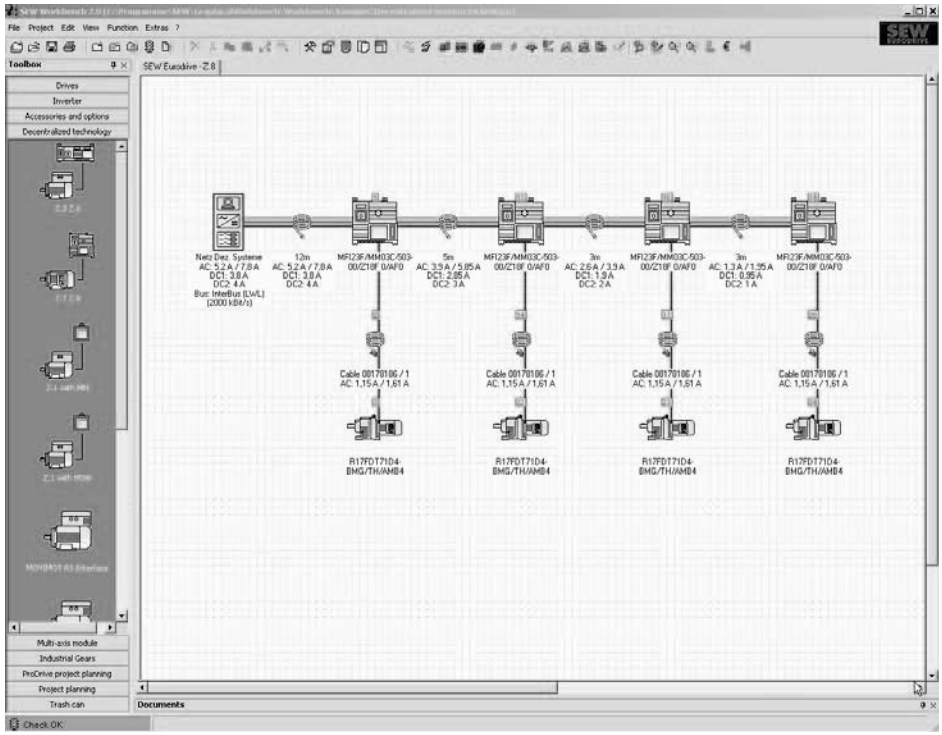
CAD data is calculated in order to create scale drawings of the SEW-EURODRIVE products in the 2D-formats DXF and DWG and in the 3D-formats SAT, STEP, IGES, VRML, VDAFS and 3D-DXF. Thanks to the high functionality, spare parts lists, mounting position sheets, dimension sheets and operating instructions are determined automatically.

To use SEW Workbench, all you need to do is to register via the SEW-EURODRIVE customer portal DriveGate (https://portal.drivegate.biz) once you have received the data DVD. An Internet update service ensures that products and functions are always up-to-date.

The SEW Workbench is available in the following languages: German, English, French, Dutch, Spanish, Portuguese, Russian, Czech, and Polish.

13.1.2 Project planning example with field distributor

The following figure shows a project planning example of SEW Workbench for a decentralized installation concept with Z.8 field distributor:



1550119691

13.2 Decentralization concepts

13.2.1 Installation concept with MOVIFIT®-SNI and MOVIGEAR®-SNI

Description

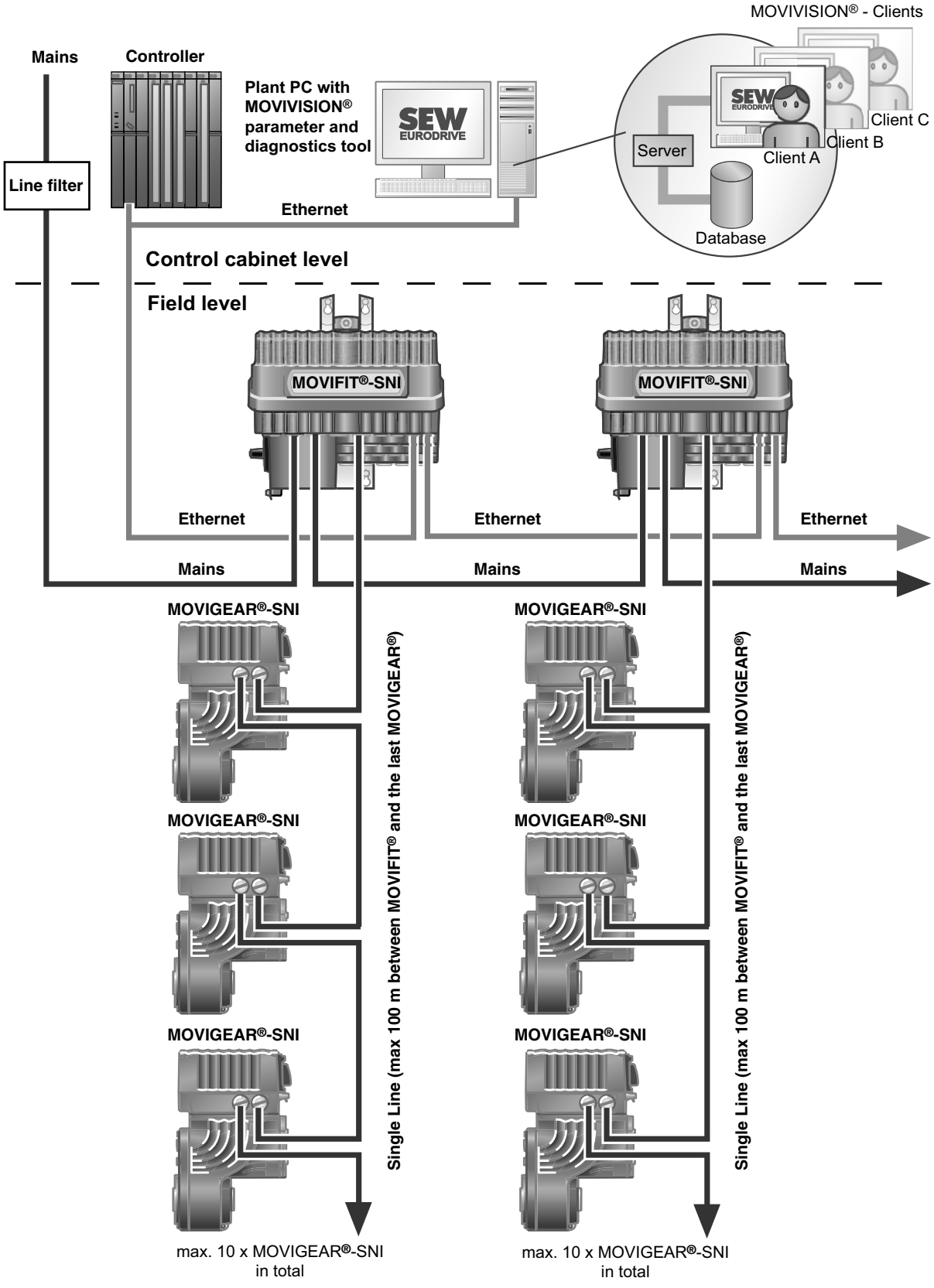
SNI stands for **S**ingle **L**ine **N**etwork Installation and is based on the principle of using a single line for power supply and communication. The signals required for communication are modulated in the high-frequency range of the power line and are available for each connected station.

The innovative **S**ingle Line **N**etwork **I**nstallation concept (SNI) allows for a completely new plant topology for a consistent decentralization. Compared to conventional decentralized technology, this new technology reduces installation effort, time and cost. Only one standard cable is required instead of three lines (400 V, 24 V, bus). This reduces the installation time and cost and results in a reduction of the overall cost. The Single Line principle also reduces the risk of hidden faults in the wiring for the communication lines. Single Line Network Installation (SNI) almost completely makes separate bus cables redundant.

Benefits

- Each drive can be addressed individually
- Reduction in the number of components
- Bus cables do not have to be routed in the field
- Reduced risk of hidden faults in the bus cabling
- Allows for pre-assembled conveyor modules
- Reduced startup times
- Less installation/project cost
- Shorter project runtimes

"Installation concept with MOVIFIT-SNI® and MOVIGEAR-SNI®" – schematic diagram



1416858507

13.2.2 MOVIFIT®-MC installation concept

The following section describes the "MOVIFIT®-MC" (see page 251) installation concept:

Functional group "Roller conveyor 1"

3 x roller conveyor segment with

- 2 x sensors for stop position (per segment)
- 2 x sensors for changeover between fast / slow movement (per segment)
- 1 x control light (per segment)



1 x MOVIFIT®-MC to control MOVIMOT® with

- 3 x MOVIMOT® units
- 12 x DI
- 3 x DO

Functional group "Rotary table"

1 x rotatable roller conveyor segment with

- 2 x sensors for rotation stop position
- 2 x sensors for changeover between fast / slow rotations
- 2 x sensors for roller conveyor stop position
- 2 x sensors for changeover between fast / slow roller conveyor movement
- 1 x control light



1 x MOVIFIT®-MC to control MOVIMOT® with

- 2 x MOVIMOT® units
- 8 x DI
- 1 x DO

Functional group "Roller conveyor 2"

2 x roller conveyor segment with

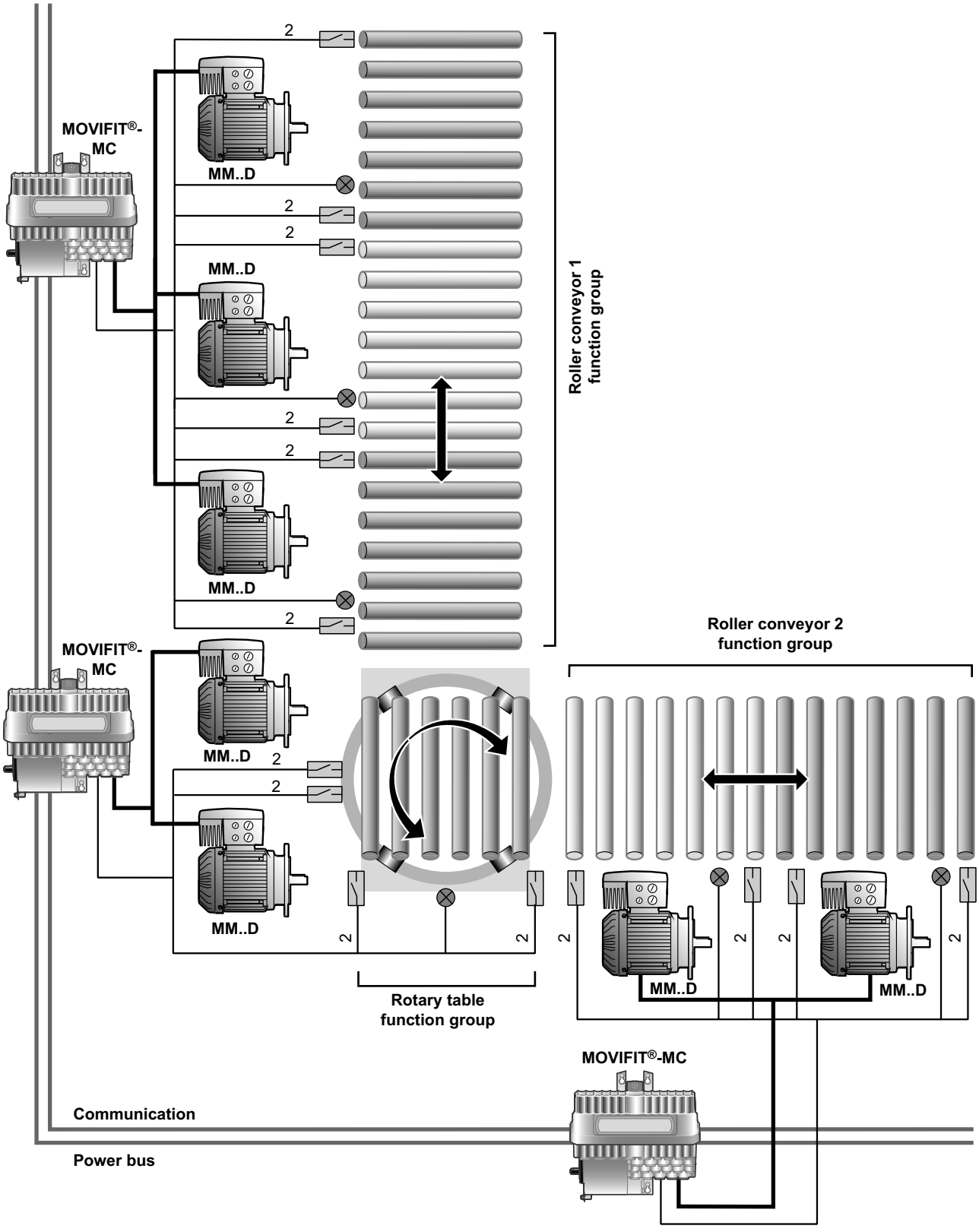
- 2 x sensors for stop position (per segment)
- 2 x sensors for changeover between fast / slow movement (per segment)
- 1 x control light (per segment)



1 x MOVIFIT®-MC to control MOVIMOT® with

- 2 x MOVIMOT® units
- 8 x DI
- 2 x DO

"MOVIFIT®-MC installation concept" schematic diagram



13.2.3 MOVIFIT®-SC installation concept

The following section describes the "MOVIFIT®-SC" (see page 253) installation concept:

Functional group "Roller conveyor 1 to 2"

2 x roller conveyor segments (one direction of rotation) with

- 2 x sensors for stop position (per segment)
- 1 x control light (per segment)



1 x MOVIFIT®-SC (switch) with

- 2 x AC motor (one direction of rotation)
- 4 x DI
- 2 x DO

Functional group "Eccentric hoist"

1 x eccentric hoist with

- 2 x sensors for stop position



1 x MOVIFIT®-SC (switch) with

- 1 x AC motor (two directions of rotation)
- 2 x DI

Functional group "Chain conveyor"

2 x chain conveyor segments (one direction of rotation) with

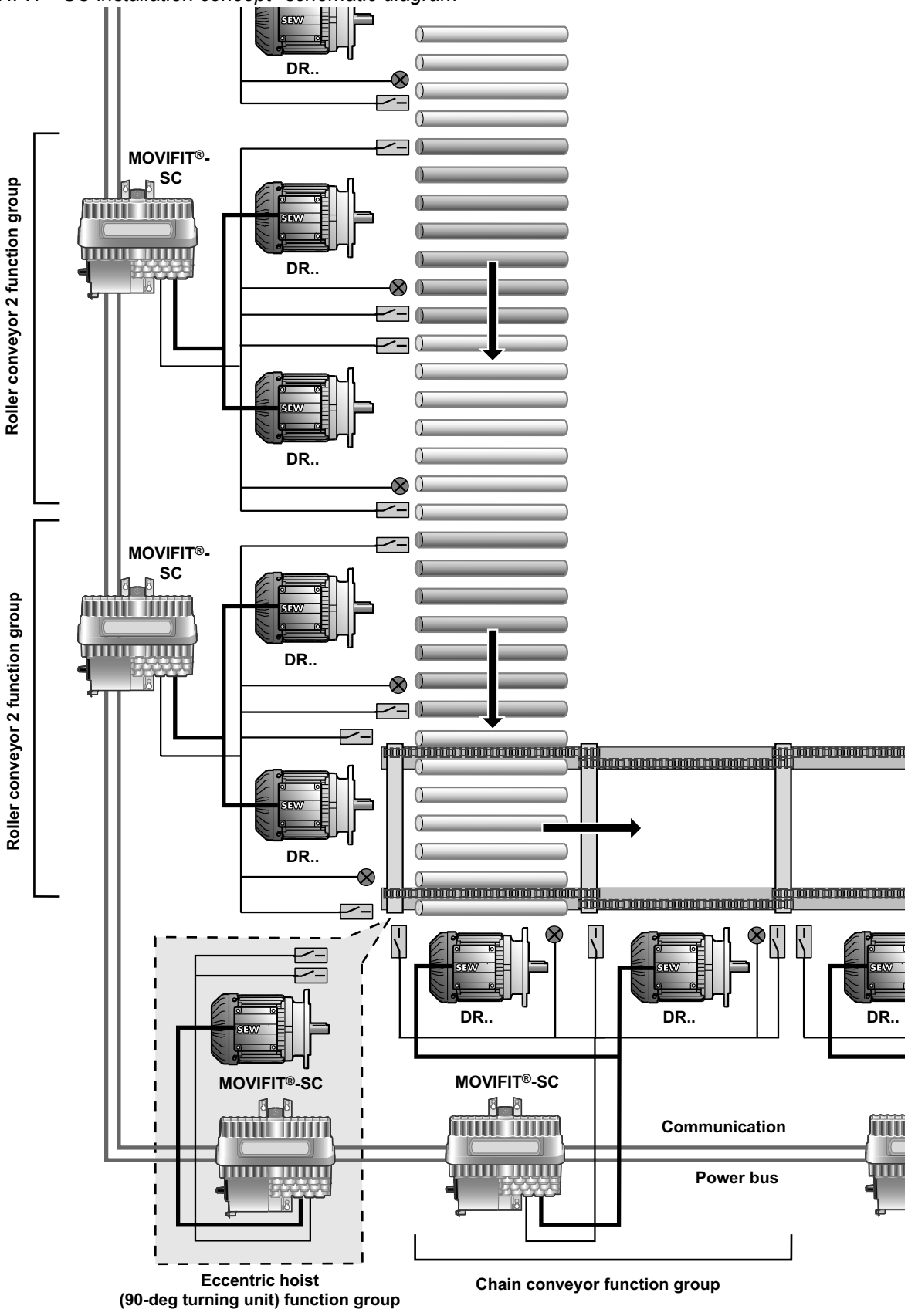
- 2 x sensors for stop position (per segment)
- 1 x control light (per segment)



1 x MOVIFIT®-SC (switch) with

- 2 x AC motor (one direction of rotation)
- 4 x DI
- 2 x DO

"MOVIFIT®-SC installation concept" schematic diagram



1549352971

13.2.4 MOVIFIT®-FC installation concept

The following section describes the "MOVIFIT®-FC" (see page 255) installation concept:

Functional group "Roller conveyor 1 to 6"

1 x roller conveyor segment with

- 2 x sensors for stop position
- 2 x sensors for fast/slow changeover
- 1 x control light



1 x MOVIFIT®-FC (frequency inverter) with

- 1 x AC motors
- 4 x DI
- 1 x DO

Functional group "Rotary table"

1 x rotatable roller conveyor segment with

- 2 x sensors for rotation stop position
- 2 x sensors for changeover between fast / slow rotations
- 2 x sensors for roller conveyor stop position
- 2 x sensors for changeover between fast / slow roller conveyor movement
- 1 x control light



1 x MOVIFIT®-FC (frequency inverter) with

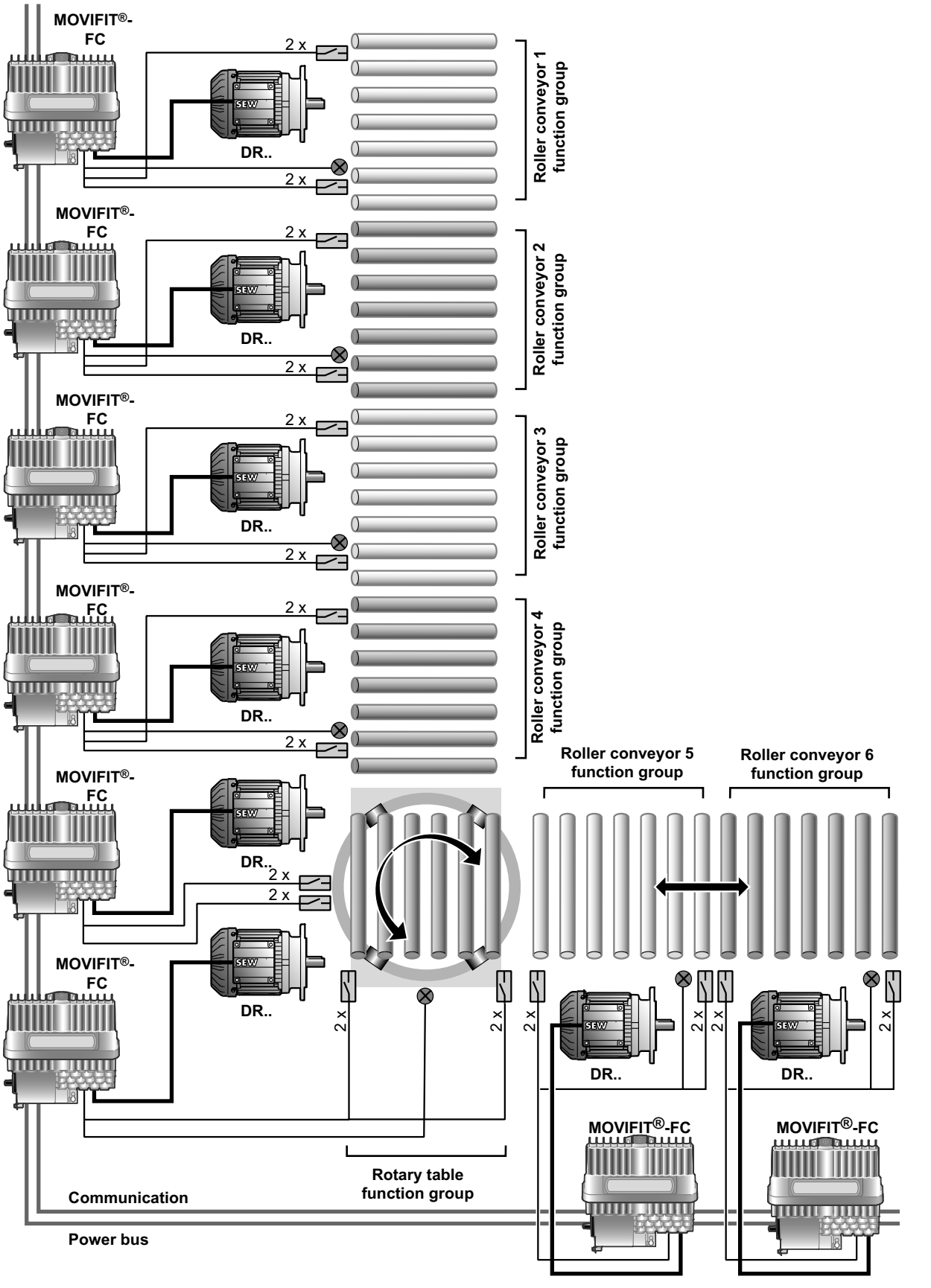
- 1 x AC motors
- 4 x DI



1 x MOVIFIT®-FC (frequency inverter) with

- 1 x AC motors
- 4 x DI
- 1 x DO

"MOVIFIT®-FC installation concept" schematic diagram



13.2.5 Installation concept with master-slave topology

Description

In a master/slave installation, the master unit takes on the communication link for a maximum of 6 slave units. The slave units are connected to the master unit via a system bus (SBus).

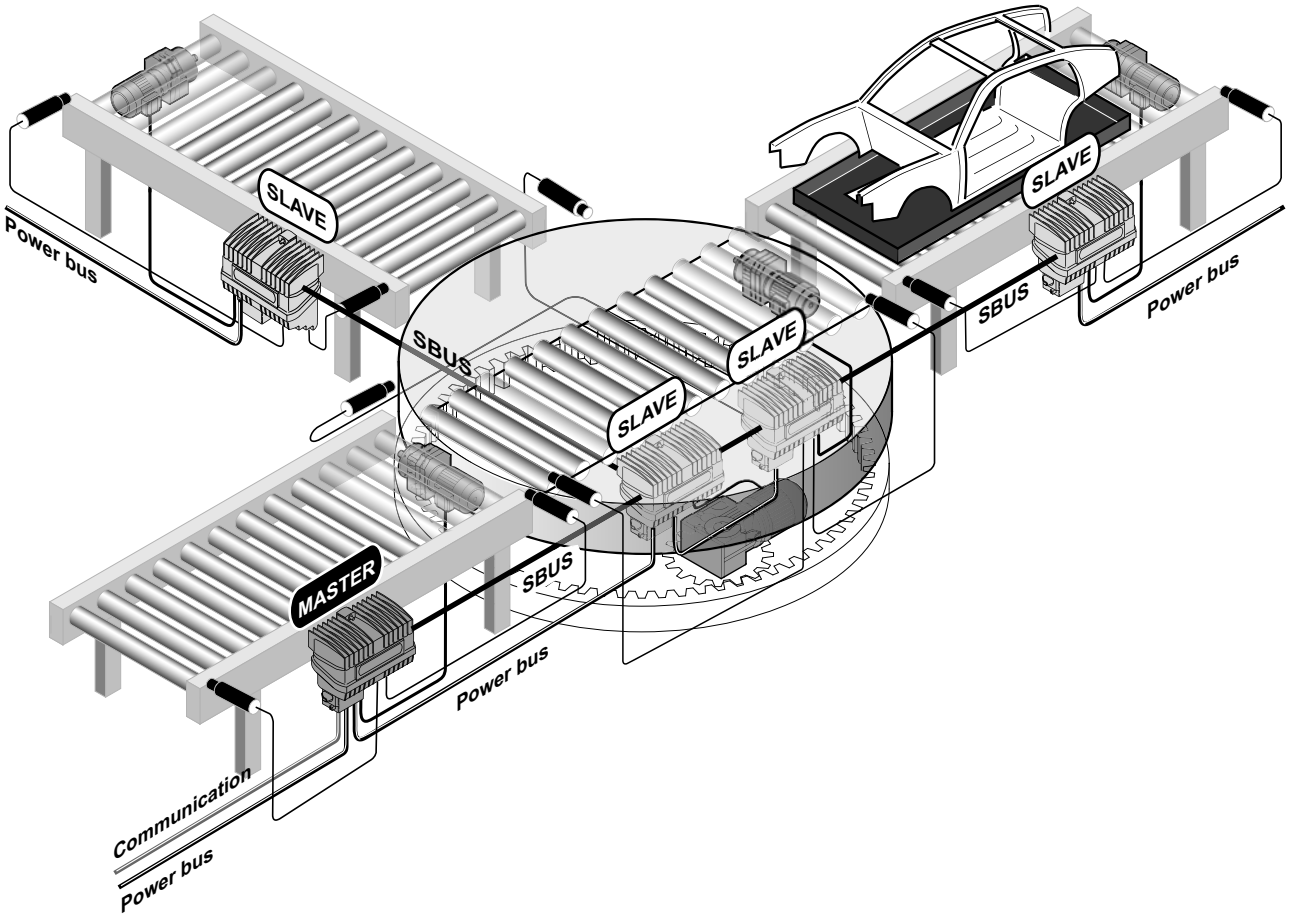
Master unit	Slave unit
A master unit is a standard MOVIFIT®-MC, SC or FC with integrated communication interface and a technology or system function level.	A slave unit is a MOVIFIT®-SC or FC unit without fieldbus interface, only with power section (frequency inverter or switch).

Benefits

- Only one fieldbus node for a function line
- Simple and cost-effective implementation of multi-axis applications (roller conveyors, hoists, rotary tables)
- Drive-oriented application functions are executed in the master unit. The intelligent fieldbus interface controls the following power sections (there is no synchronous operation).

Example

The following figure shows an installation concept with master/slave topology using the example of a roller conveyor with rotary station for handling car bodies:

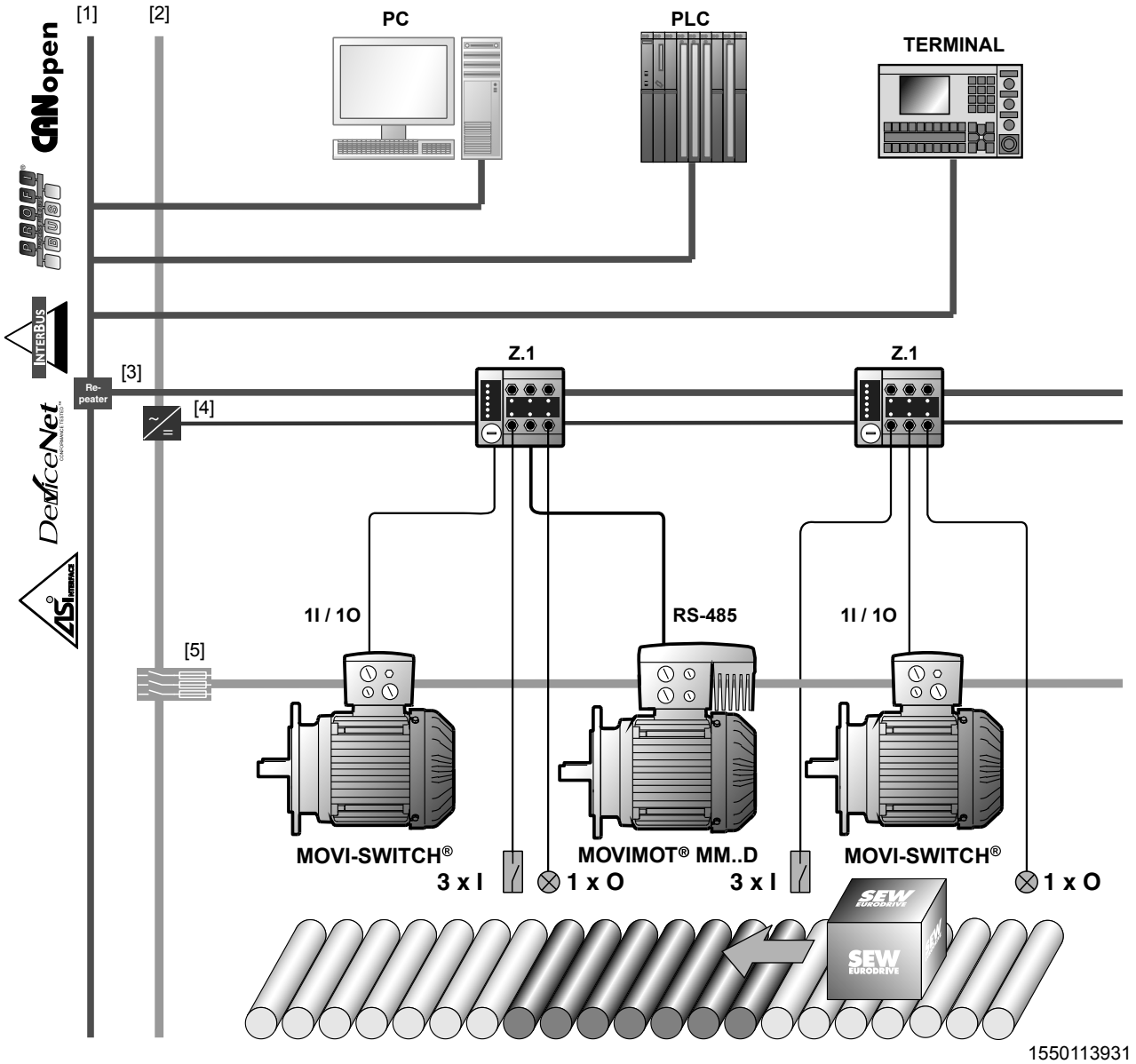


1549354891

13.2.6 MOVIMOT® and MOVI-SWITCH® with fieldbus connection

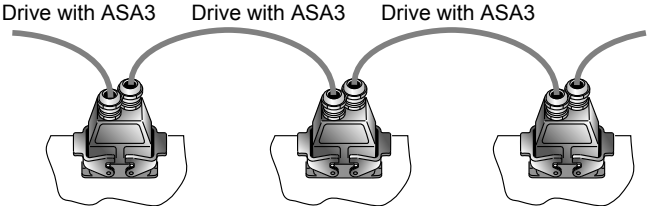
Characteristics

- Connection of data cable and DC 24 V to the fieldbus interface
- Connection of supply system cable directly on the motor
- Connection of sensors and actuators possible via M12 connecting sockets or terminals



1550113931

[1] Communication
[2] Mains
[3] Fieldbus
[4] 24 V supply
[5] Mains (the drives are optionally equipped with plug connectors for daisy-chaining power)

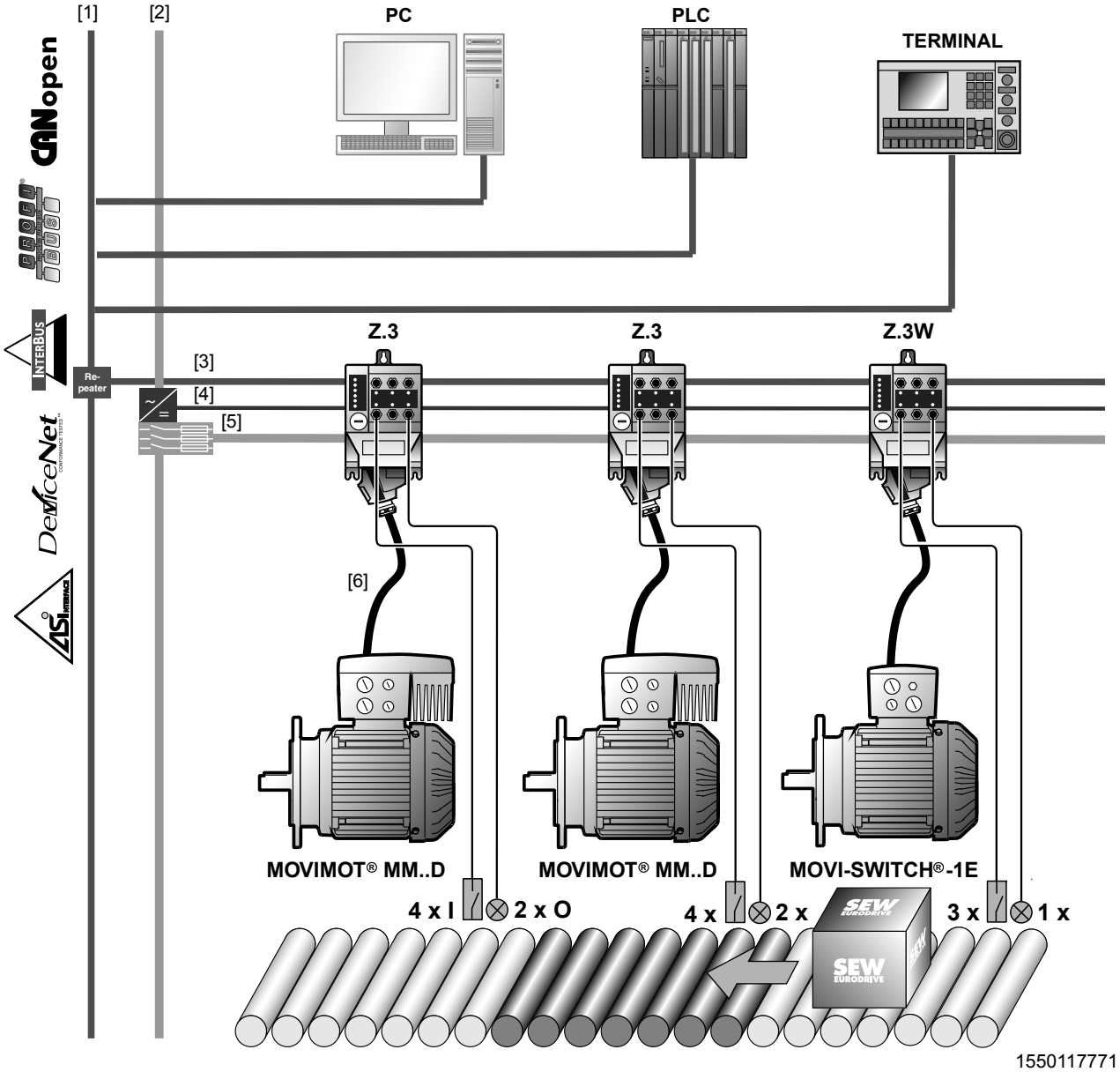


1550121611

13.2.7 MOVIMOT® and MOVI-SWITCH®, field distributor with integrated fieldbus interface

Characteristics

- Standard field distributor for cost-effective solutions
- Connection of sensors and actuators only via M12 connecting sockets
- pre-fabricated cables with plug connector for connecting the MOVIMOT® or MOVI-SWITCH®
- High operational reliability and electromagnetic compatibility

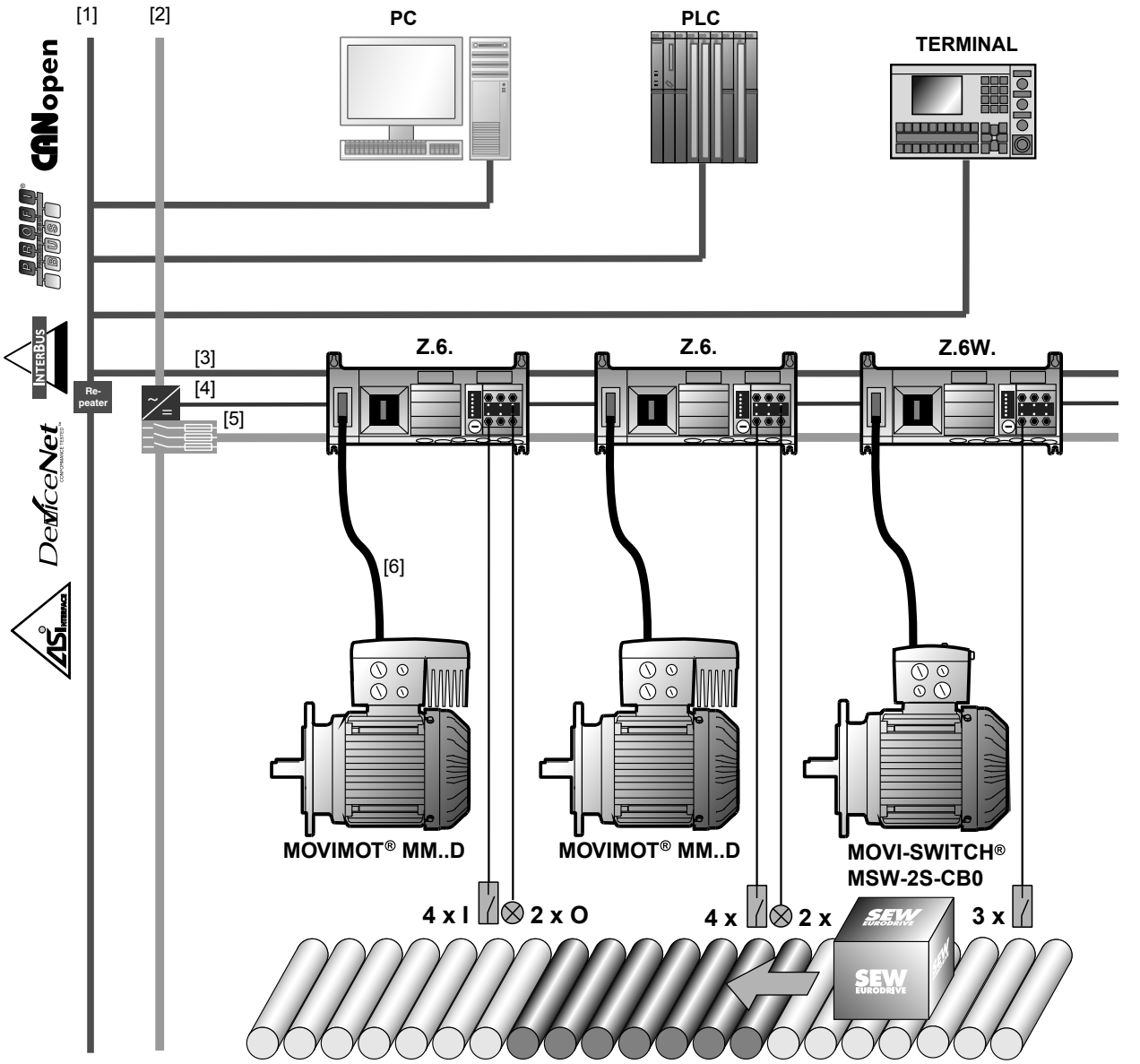


[1] Communication
[2] [5] Mains
[3] Fieldbus
[4] 24 V supply
[6] Hybrid cable

13.2.8 MOVIMOT® and MOVI-SWITCH®, field distributor with integrated fieldbus interface and maintenance switch

Characteristics

- Maintenance switch for disconnecting individual drives when bus is in operation
- Circuit-breaker for protection of drive supply cable
- Separate wiring space for power and signal level
- Connection of sensors and actuators possible via M12 connecting sockets or terminals
- pre-fabricated cables with plug connector for connecting the MOVIMOT® or MOVI-SWITCH®
- High operational reliability and electromagnetic compatibility

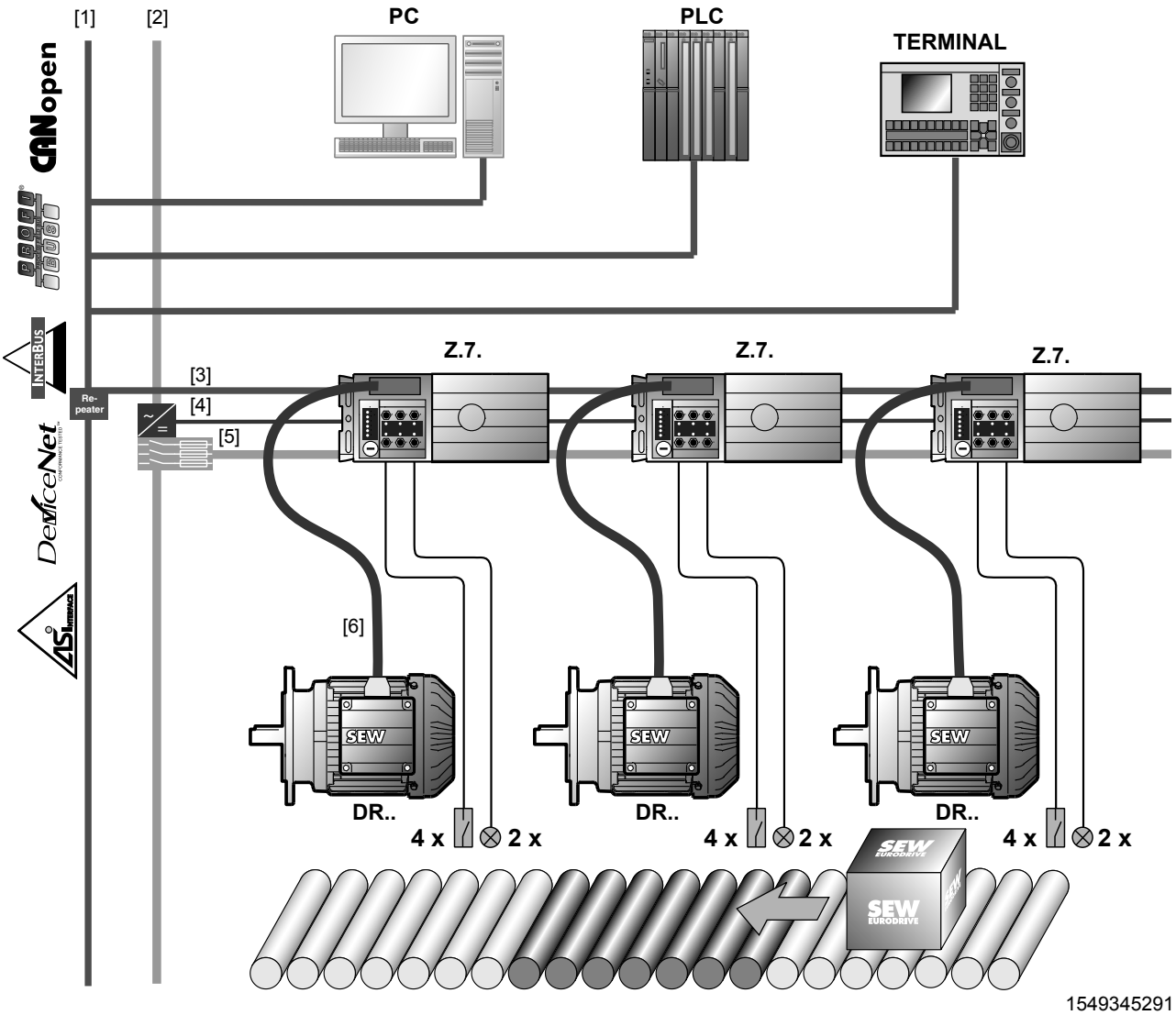


[1] Communication
[2] [5] Mains
[3] Fieldbus
[4] 24 V supply
[6] Hybrid cable

13.2.9 AC motor, field distributor with integrated fieldbus interface and MOVIMOT® frequency inverter

Characteristics

- Frequency inverter installed close to the motor, advantageous for inaccessible drives i.e. simple maintenance
- Pre-fabricated cable for connecting the field distributor with MOVIMOT® (with connectors at both ends)
- Separate wiring space for power and signal level
- Connection of sensors and actuators possible via M12 connecting sockets or terminals
- High operational reliability and electromagnetic compatibility



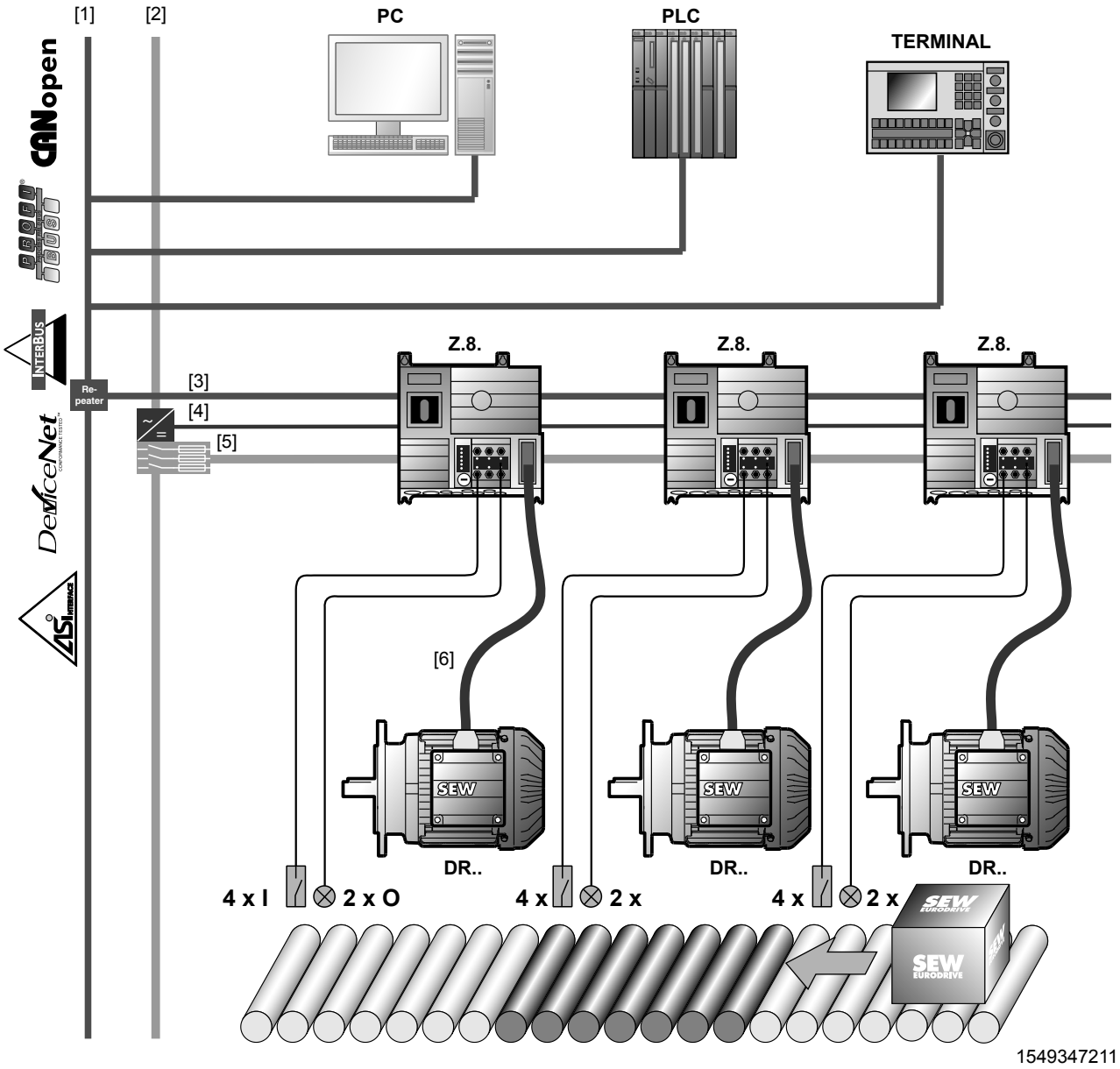
1549345291

[1] Communication
[2] [5] Mains
[3] Fieldbus
[4] 24 V supply
[6] Hybrid cable

13.2.10 AC motor, field distributor with integrated fieldbus interface, maintenance switch and MOVIMOT® frequency inverter

Characteristics

- Frequency inverter installed close to the motor, advantageous for inaccessible drives i.e. simple maintenance
- Maintenance switch for disconnecting individual drives when bus is in operation
- Pre-fabricated cable for connecting the field distributor with MOVIMOT® (with connectors at both ends)
- Separate wiring space for power and signal level
- Connection of sensors and actuators possible via M12 connecting sockets or terminals
- High operational reliability and electromagnetic compatibility

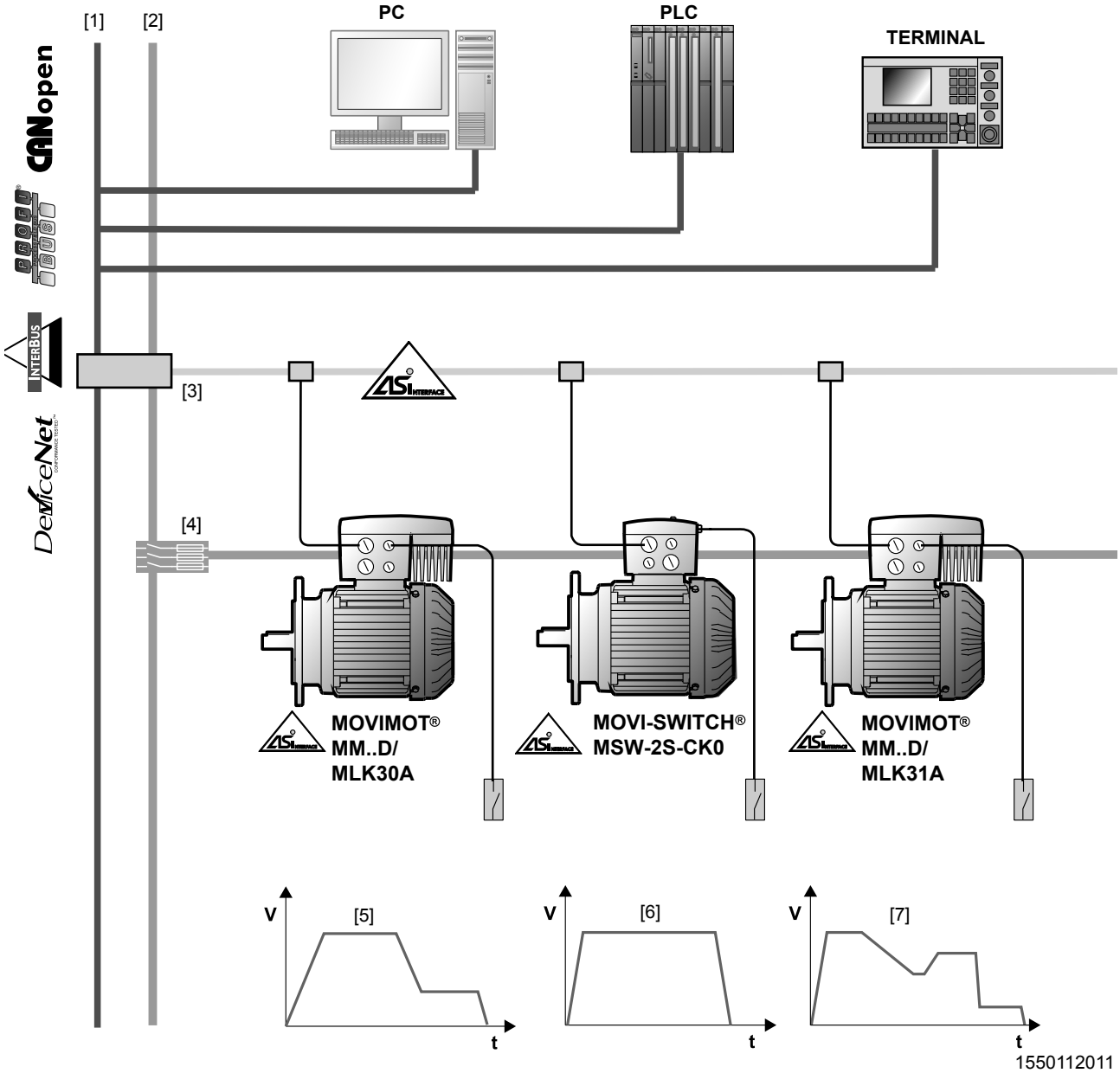


[1] Communication
[2] [5] Mains
[3] Fieldbus
[4] 24 V supply
[6] Hybrid cable

13.2.11 MOVIMOT® or MOVI-SWITCH® with AS-Interface

Characteristics

- MOVIMOT®, MOVI-SWITCH® or field distributor with integrated AS-Interface
- Very compact design
- Simple connection to AS-Interface
- Covers all conventional applications in materials handling technology, such as multiple-speed drives with soft start or motors with one speed.



[1] Communication
[2] Mains
[3] AS-Interface
[4] Mains

[5] Drive with fixed setpoints and one ramp
[6] Single speed drive
[7] Multiple-speed drive with variable ramp

14 Address Directory

Germany			
Headquarters **Production** **Sales**	**Bruchsal**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 • D-76642 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de
Production	**Graben**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf P.O. Box Postfach 1220 • D-76671 Graben-Neudorf	Tel. +49 7251 75-0 Fax +49 7251 75-2970
	Östringen	SEW-EURODRIVE Östringen GmbH Franz-Gurk-Straße 2 D-76684 Östringen P.O. Box Postfach 1174 • D-76677 Östringen	Tel. +49 7253 92540 Fax +49 7253 925490 oestringen@sew-eurodrive.de
Service Competence Center	**Central**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 sc-mitte@sew-eurodrive.de
	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 40-42 D-30823 Garbsen (near Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 sc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 D-08393 Meerane (near Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-30 sc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (near München)	Tel. +49 89 909552-10 Fax +49 89 909552-50 sc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (near Düsseldorf)	Tel. +49 2173 8507-30 Fax +49 2173 8507-55 sc-west@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 sc-elektronik@sew-eurodrive.de
	Drive Service Hotline / 24 Hour Service		+49 180 5 SEWHELP +49 180 5 7394357
Technical Offices	**Augsburg**	SEW-EURODRIVE GmbH & Co KG August-Wessels-Straße 29 D-86156 Augsburg	Tel. +49 821 22779-10 Fax +49 821 22779-50 tb-augsburg@sew-eurodrive.de
	Berlin	SEW-EURODRIVE GmbH & Co KG Lilienthalstraße 3a D-12529 Schönefeld	Tel. +49 33762 2266-30 Fax +49 33762 2266-36 tb-berlin@sew-eurodrive.de
	Bodensee	SEW-EURODRIVE GmbH & Co KG Burgbergring 91 D-88662 Überlingen	Tel. +49 7551 9226-30 Fax +49 7551 9226-56 tb-bodensee@sew-eurodrive.de
	Bremen	SEW-EURODRIVE GmbH & Co KG Bornstr.19 ... 22 D-28195 Bremen	Tel. +49 421 33918-10 Fax +49 421 33918-22 tb-bremen@sew-eurodrive.de
	Dortmund	SEW-EURODRIVE GmbH & Co KG Hildastraße 10 D-44145 Dortmund	Tel. +49 231 912050-10 Fax +49 231 912050-20 tb-dortmund@sew-eurodrive.de
	Dresden	SEW-EURODRIVE GmbH & Co KG Hauptstraße 32 D-01445 Radebeul	Tel. +49 351 26338-0 Fax +49 351 26338-38 tb-dresden@sew-eurodrive.de

Germany			
	Erfurt	SEW-EURODRIVE GmbH & Co KG Blumenstraße 70 D-99092 Erfurt	Tel. +49 361 21709-70 Fax +49 361 21709-79 tb-erfurt@sew-eurodrive.de
	Güstrow	SEW-EURODRIVE GmbH & Co KG Am Gewerbegrund 3 D-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 Bramfelder Straße 119 D-22305 Hamburg	Tel. +49 40 298109-60 Fax +49 40 298109-70 tb-hamburg@sew-eurodrive.de
	Hannover/Garbsen	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Str.40-42 D-30823 Garbsen P.O. Box Postfach 1104 53 • D-30804 Garbsen	Tel. +49 5137 8798-10 Fax +49 5137 8798-50 tb-hannover@sew-eurodrive.de
	Heilbronn	SEW-EURODRIVE GmbH & Co KG Zeppelinstraße 7 D-74357 Bönnigheim	Tel. +49 7143 8738-0 Fax +49 7143 8738-25 tb-heilbronn@sew-eurodrive.de
	Herford	SEW-EURODRIVE GmbH & Co KG Radewiger Straße 21 D-32052 Herford P.O. Box Postfach 4108 • D-32025 Herford	Tel. +49 5221 9141-0 Fax +49 5221 9141-20 tb-herford@sew-eurodrive.de
	Karlsruhe	SEW-EURODRIVE GmbH & Co KG Ettlinger Weg 2 D-76467 Bietigheim P.O. Box Postfach 43 • D-76463 Bietigheim	Tel. +49 7245 9190-10 Fax +49 7245 9190-20 tb-karlsruhe@sew-eurodrive.de
	Kassel	SEW-EURODRIVE GmbH & Co KG Lange Straße 14 D-34253 Lohfelden	Tel. +49 561 95144-80 Fax +49 561 95144-90 tb-kassel@sew-eurodrive.de
	Koblenz	SEW-EURODRIVE GmbH & Co KG Bahnstraße 17a D-56743 Mendig	Tel. +49 2652 9713-30 Fax +49 2652 9713-40 tb-koblenz@sew-eurodrive.de
	Lahr	SEW-EURODRIVE GmbH & Co KG Europastraße 3/1 D-77933 Lahr / Schwarzwald	Tel. +49 7821 90999-60 Fax +49 7821 90999-79 tb-lahr@sew-eurodrive.de
	Langenfeld	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld	Tel. +49 2173 8507-10 Fax +49 2173 8507-50 tb-langenfeld@sew-eurodrive.de
	Magdeburg	SEW-EURODRIVE GmbH & Co KG Breiteweg 53 D-39179 Magdeburg	Tel. +49 39203 7577-1 Fax +49 39203 7577-9 tb-magdeburg@sew-eurodrive.de
	Mannheim	SEW-EURODRIVE GmbH & Co KG Radeberger Straße 2 D-68309 Mannheim	Tel. +49 621 71683-10 Fax +49 621 71683-22 tb-mannheim@sew-eurodrive.de
	München	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim	Tel. +49 89 90955-110 Fax +49 89 90955-150 tb-muenchen@sew-eurodrive.de
	Münster	SEW-EURODRIVE GmbH & Co KG Von-Vincke-Straße 14 D-48143 Münster	Tel. +49 251 41475-11 Fax +49 251 41475-50 tb-muenster@sew-eurodrive.de
	Nürnberg	SEW-EURODRIVE GmbH & Co KG Plattenäckerweg 6 D-90455 Nürnberg	Tel. +49 911 98884-50 Fax +49 911 98884-60 tb-nuernberg@sew-eurodrive.de

Germany			
	Regensburg	SEW-EURODRIVE GmbH & Co KG Im Gewerbepark A15 D-93059 Regensburg	Tel. +49 941 46668-68 Fax +49 941 46668-66 tb-regensburg@sew-eurodrive.de
	Rhein-Main	SEW-EURODRIVE GmbH & Co KG Niederstedter Weg 5 D-61348 Bad Homburg	Tel. +49 6172 9617-0 Fax +49 6172 9617-50 tb-rheinmain@sew-eurodrive.de
	Stuttgart	SEW-EURODRIVE GmbH & Co KG Friedrich-List-Straße 46 D-70771 Leinfelden-Echterdingen	Tel. +49 711 16072-0 Fax +49 711 16072-72 tb-stuttgart@sew-eurodrive.de
	Ulm	SEW-EURODRIVE GmbH & Co KG Dieselstraße 14 D-89160 Dornstadt	Tel. +49 7348 9885-0 Fax +49 7348 9885-90 tb-ulm@sew-eurodrive.de
	Würzburg	SEW-EURODRIVE GmbH & Co KG Nürnbergerstraße 118 D-97076 Würzburg-Lengfeld	Tel. +49 931 27886-60 Fax +49 931 27886-66 tb-wuerzburg@sew-eurodrive.de
	Zwickau / Meerane	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg1 D-08393 Meerane	Tel. +49 3764 7606-0 Fax +49 3764 7606-20 tb-zwickau@sew-eurodrive.de

France			
Production **Sales** **Service**	**Haguenau**	SEW-USOCOME 48-54, route de Soufflenheim B. P. 20185 F-67506 Haguenau Cedex	Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocome.com sew@usocome.com
Production	**Forbach**	SEW-EUROCOME Zone Industrielle Technopôle Forbach Sud B. P. 30269 F-57604 Forbach Cedex	Tel. +33 3 87 29 38 00
Assembly **Sales** **Service**	**Bordeaux**	SEW-USOCOME Parc d'activités de Magellan 62, avenue de Magellan - B. P. 182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Lyon	SEW-USOCOME Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 00 Fax +33 4 72 15 37 15
	Paris	SEW-USOCOME Zone industrielle 2, rue Denis Papin F-77390 Verneuil l'Etang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88
Technical Offices	**Alsace Franche-Comté**	SEW-USOCOME 1, rue Auguste Gasser F-68360 Soultz	Tel. +33 3 89 74 51 62 Fax +33 3 89 76 58 71
	Alsace Nord	SEW-USOCOME 15, rue Mambourg F-68240 Sigolsheim	Tel. +33 3 89 78 45 11 Fax +33 3 89 78 45 12
	Aquitaine	SEW-USOCOME Parc d'activités de Magellan 62, avenue de Magellan B.P.182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Ardennes Lorraine	SEW-USOCOME 1, rue de la Forêt F-54250 Champigneulles	Tel. +33 3 83 96 28 04 Fax +33 3 83 96 28 07

France			
	Bourgogne	SEW-USOCOME 10, rue de la Poste F-71350 Saint Loup Géanges	Tel. +33 3 85 49 92 18 Fax +33 3 85 49 92 19
	Bretagne Ouest	SEW-USOCOME 4, rue des Châtaigniers F-44830 Brains	Tel. +33 2 51 70 54 04 Fax +33 2 51 70 54 05
	Centre Auvergne	SEW-USOCOME 27, avenue du Colombier F-19150 Laguenne	Tel. +33 5 55 20 12 10 Fax +33 5 55 20 12 11
	Centre Pays de Loire	SEW-USOCOME 9, rue des Erables F-37540 Saint Cyr sur Loire	Tel. +33 2 47 41 33 23 Fax +33 2 47 41 34 03
	Champagne	SEW-USOCOME Impasse des Ouises F-10120 Saint André les Vergers	Tel. +33 3 25 79 63 24 Fax +33 3 25 79 63 25
	Lyon Nord-Est	SEW-USOCOME Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 03 Fax +33 4 72 15 37 15
	Lyon Ouest	SEW-USOCOME Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 04 Fax +33 4 72 15 37 15
	Lyon Sud-Est	SEW-USOCOME Montée de la Garenne F-26750 Génissieux	Tel. +33 4 75 05 65 95 Fax +33 4 75 05 65 96
	Nord	SEW-USOCOME 30, rue Léon Garet F-62520 Le Touquet	Tel. +33 3 21 90 21 40 Fax +33 3 21 90 21 44
	Normandie	SEW-USOCOME 5 rue de la Limare F-14250 Brouay	Tel. +33 2 31 37 92 86 Fax +33 2 31 74 68 15
	Paris Est	SEW-USOCOME 45, rue des Cinelles F-77700 Bailly Romainvilliers	Tel. +33 1 64 17 02 47 Fax +33 1 64 17 66 49
	Paris Ouest	SEW-USOCOME 42 avenue Jean Jaurès F-78580 Maule	Tel. +33 1 30 90 89 86 Fax +33 1 30 90 93 15
	Paris Picardie	SEW-USOCOME 25 bis, rue Kléber F-92300 Levallois Perret	Tel. +33 1 41 05 92 74 Fax +33 1 41 05 92 75
	Paris Sud	SEW-USOCOME 6. chemin des Bergers Lieu-dit Marchais F-91410 Roinville sous Dourdan	Tel. +33 1 60 81 10 56 Fax +33 1 60 81 10 57
	Provence	SEW-USOCOME Résidence Les Hespérides Bât. B2 67, boulevard des Alpes F-13012 Marseille	Tel. +33 4 91 18 00 11 Fax +33 4 91 18 00 12
	Pyrénées	SEW-USOCOME 179, route de Grazac F-31190 Caujac	Tel. +33 5 61 08 15 85 Fax +33 5 61 08 16 44
	Sud-Atlantique	SEW-USOCOME 12, rue des Pinsons F-44120 Vertou	Tel. +33 2 40 80 32 23 Fax +33 2 40 80 32 13

Algeria			
Sales	**Alger**	Réducom 16, rue des Frères Zaghnoun Bellevue El-Harrach 16200 Alger	Tel. +213 21 8222-84 Fax +213 21 8222-84 reducom_sew@yahoo.fr

Argentina			
Assembly **Sales** **Service**	**Buenos Aires**	SEW EURODRIVE ARGENTINA S.A. Centro Industrial Garin, Lote 35 Ruta Panamericana Km 37,5 1619 Garin	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 sewar@sew-eurodrive.com.ar http://www.sew-eurodrive.com.ar

Australia			
Assembly **Sales** **Service**	**Melbourne**	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au
Sales **Service**	**Adelaide**	SEW-EURODRIVE PTY. LTD. 9C Park Way Mawson Lakes, SA 5095	Tel. +61 8 8161 4000 Fax +61 8 8161 4002 enquires@sew-eurodrive.com.au
	Brisbane	SEW-EURODRIVE PTY.LTD. 1 /34 Collinsvale St Rocklea, Queensland, 4106	Tel. +61 7 3272-7900 Fax +61 7 3272-7901 enquires@sew-eurodrive.com.au
	Perth	SEW-EURODRIVE PTY. LTD. 105 Robinson Avenue Belmont, W.A. 6104	Tel. +61 8 9478-2688 Fax +61 8 9277-7572 enquires@sew-eurodrive.com.au
Technical Office	**Townsville**	SEW-EURODRIVE PTY. LTD. 12 Leyland Street Garbutt, QLD 4814	Tel. +61 7 4779 4333 Fax +61 7 4779 5333 enquires@sew-eurodrive.com.au

Austria			
Assembly **Sales** **Service**	**Wien**	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://sew-eurodrive.at sew@sew-eurodrive.at
Technical Offices	**Linz**	SEW-EURODRIVE Ges.m.b.H. Reuchlinstr. 6/3 A-4020 Linz	Tel. +43 732 655 109-0 Fax +43 732 655 109-20 tb-linz@sew-eurodrive.at
	Graz	SEW-EURODRIVE Ges.m.b.H. Grabenstraße 231 A-8045 Graz	Tel. +43 316 685 756-0 Fax +43 316 685 755 tb-graz@sew-eurodrive.at
	Dornbirn	SEW-EURODRIVE Ges.m.b.H. Lustenauerstraße 27/1 A-6850 Dornbirn	Tel. +43 5572 3725 99-0 Fax +43 5572 3725 99-20 tb-dornbirn@sew-eurodrive.at

Bangladesh			
Sales	**Dhaka**	Jainex Industrial and Engineering Ltd B 12 Apon Nibash East Nasirabad Bangladesh	Tel. +880 1713103502 Fax +880 31 613041 jainexbd@onlinectg.net

Belarus			
Sales	**Minsk**	SEW-EURODRIVE BY RybalkoStr. 26 BY-220033 Minsk	Tel.+375 (17) 298 38 50 Fax +375 (17) 29838 50 sales@sew.by

Belgium			
Assembly **Sales** **Service**	**Brüssel**	**SEW Caron-Vector** Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.sew-eurodrive.be info@caron-vector.be
Service Competence Center	**Industrial Gears**	**SEW Caron-Vector** Rue de Parc Industriel, 31 BE-6900 Marche-en-Famenne	Tel. +32 84 219-878 Fax +32 84 219-879 http://www.sew-eurodrive.be service-wallonie@sew-eurodrive.be
	Antwerp	**SEW Caron-Vector** Glasstraat, 19 BE-2170 Merksem	Tel. +32 3 64 19 333 Fax +32 3 64 19 336 http://www.sew-eurodrive.be service-antwerpen@sew-eurodrive.be

Brazil			
Production **Sales** **Service**	**Sao Paulo**	SEW-EURODRIVE Brasil Ltda. Avenida Amâncio Gaiolli, 152 - Rodovia Presidente Dutra Km 208 Guarulhos - 07251-250 - SP SAT - SEW ATENDE - 0800 7700496	Tel. +55 11 2489-9133 Fax +55 11 2480-3328 http://www.sew-eurodrive.com.br sew@sew.com.br
	Additional addresses for service in Brazil provided on request!		

Bulgaria			
Sales	**Sofia**	BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia	Tel. +359 2 9151160 Fax +359 2 9151166 bever@fastbg.net

Cameroon			
Sales	**Douala**	Electro-Services Rue Drouot Akwa B.P. 2024 Douala	Tel. +237 33 431137 Fax +237 33 431137

Canada			
Assembly **Sales** **Service**	**Toronto**	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, Ontario L6T3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca marketing@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. 7188 Honeyman Street Delta. B.C. V4G 1 E2	Tel. +1 604 946-5535 Fax +1 604 946-2513 marketing@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger LaSalle, Quebec H8N 2V9	Tel. +1 514 367-1124 Fax +1 514 367-3677 marketing@sew-eurodrive.ca
	Additional addresses for service in Canada provided on request!		

Chile			
Assembly **Sales** **Service**	**Santiago de Chile**	SEW-EURODRIVE CHILE LTDA. Las Encinas 1295 Parque Industrial Valle Grande LAMPA RCH-Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 75770-00 Fax +56 2 75770-01 http://www.sew-eurodrive.cl ventas@sew-eurodrive.cl

China			
Production **Assembly** **Sales** **Service**	**Tianjin**	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25322611 info@sew-eurodrive.cn http://www.sew-eurodrive.cn
Assembly **Sales** **Service**	**Suzhou**	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021	Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew-eurodrive.cn
	Guangzhou	SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530	Tel. +86 20 82267890 Fax +86 20 82267891 guangzhou@sew-eurodrive.cn
	Shenyang	SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141	Tel. +86 24 25382538 Fax +86 24 25382580 shenyang@sew-eurodrive.cn
	Wuhan	SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan	Tel. +86 27 84478398 Fax +86 27 84478388

Colombia			
Assembly **Sales** **Service**	**Bogotá**	SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 http://www.sew-eurodrive.com.co sewcol@sew-eurodrive.com.co

Croatia			
Sales **Service**	**Zagreb**	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@inet.hr

Czech Republic			
Sales	**Praha**	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Lužná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 255 709 601 Fax +420 220 121 237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz
Technical Offices	**Brno**	SEW-EURODRIVE CZ S.R.O. K?enová 52 CZ -60200 Brno	Tel. +420 543 256 151 +420 543 256 163 Fax +420 543 256 845
	Hradec Králové	SEW-EURODRIVE CZ S.R.O. ?echova 498 CZ-50202 Hradec Králové	Tel. +420 495 510 141 Fax +420 495 521 313
	Plze?	SEW-EURODRIVE CZ S.R.O. Areal KRPA a.s. Zahradni 173/2 CZ-32600 Plze?	Tel. +420 378 775 300 Fax +420 377 970 710
	Klatovy	SEW-EURODRIVE CZ S.R.O. Technická kancelá? Klatovy Domažlická 800 CZ-33901 Klatovy	Tel. +420 376 310 729 Fax +420 376 310 725

Denmark			
Assembly **Sales** **Service**	**Kopenhagen**	SEW-EURODRIVEA/S Geminivej 28-30 DK-2670 Greve	Tel. +45 43 9585-00 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk

Egypt			
Sales **Service**	**Cairo**	Copam Egypt for Engineering & Agencies 33 El Hegaz ST, Heliopolis, Cairo	Tel. +20 2 22566-299 + 1 23143088 Fax +20 2 22594-757 http://www.copam-egypt.com/ copam@datum.com.eg
Service	**Sharjah**	Copam Middle East (FZC) Sharjah Airport International Free Zone P.O. Box 120709 Sharjah **United Arabian Emirates**	Tel. +971 6 5578-488 Fax +971 6 5578-499 copam_me@eim.ae

Estonia			
Sales	**Tallin**	ALAS-KUUL AS Reti tee 4 EE-75301 Peetri küla, Rae vald, Harjumaa	Tel. +372 6593230 Fax +372 6593231 veiko.soots@alas-kuul.ee

Finland			
Assembly **Sales** **Service**	**Lahti**	SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2	Tel. +358 201 589-300 Fax +358 3 780-6211 sew@sew.fi http://www.sew-eurodrive.fi
Technical Offices	**Helsinki**	SEW-EURODRIVE OY Luutnantintie 5 FIN-00410 Helsinki	Tel. +358 201 589-300 Fax + 358 9 5666-311 sew@sew.fi
	Vaasa	SEW-EURODRIVE OY Hietasaarenkatu 18 FIN-65100 Vaasa	Tel. +358 201 589-300 Fax +358 6 3127-470 sew@sew.fi
	Rovaniemi	SEW-EURODRIVE OY Valtakatu 4 A FIN-96100 Rovaniemi	Tel. +358 201 589-300 Fax +358 201 589-239 sew@sew.fi
Production **Assembly** **Service**	**Karkkila**	SEW Industrial Gears Oy Valurinkatu 6, PL 8 FI-03600 Karkkila, 03601 Karkkila	Tel. +358 201 589-300 Fax +358 201 589-310 sew@sew.fi http://www.sew-eurodrive.fi

Gabon			
Sales	**Libreville**	ESG Electro Services Gabun Feu Rouge Lalala 1889 Libreville Gabun	Tel. +241 741059 Fax +241 741059

Great Britain			
Assembly **Sales** **Service**	**Normanton**	SEW-EURODRIVE Ltd. Beckbridge Industrial Estate P.O. Box No.1 GB-Normanton, West- Yorkshire WF6 1QR	Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk
Technical Offices	**London**	SEW-EURODRIVE Ltd. 764 Finchely Road, Temple Fortune GB-London N.W.11 7TH	Tel. +44 20 8458-8949 Fax +44 20 8458-7417
	Midlands	SEW-EURODRIVE Ltd. 5 Sugar Brook court, Aston Road, Bromsgrove, Worcs B60 3EX	Tel. +44 1527 877-319 Fax +44 1527 575-245
	Scotland	SEW-EURODRIVE Ltd. Scottish Office No 37 Enterprise House Springkerse Business Park GB-Stirling FK7 7UF Scotland	Tel. +44 17 8647-8730 Fax +44 17 8645-0223

Greece			
Sales **Service**	**Athen**	Christ. Boznos & Son S.A. 12, Mavromichali Street P.O. Box 80136, GR-18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr
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

Hong Kong			
Assembly **Sales** **Service**	**Hong Kong**	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 36902200 Fax +852 36902211 contact@sew-eurodrive.hk

Hungary			
Sales **Service**	**Budapest**	SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 office@sew-eurodrive.hu

Iceland			
Sales	**Reykjavik**	Vélaverk ehf. Bolholti 8, 3h. IS - 105 Reykjavik	Tel. +354 568 3536 Fax +354 568 3537 velaverk@velaverk.is

India			
Registered Office **Assembly** **Sales** **Service**	**Vadodara**	SEW-EURODRIVE India Private Limited Plot No. 4, GIDC POR Ramangamdi • Vadodara - 391 243 Gujarat	Tel. +91 265 2831086 Fax +91 265 2831087 http://www.seweurodriveindia.com sales@seweurodriveindia.com subodh.ladwa@seweurodriveindia.com
Assembly **Sales** **Service**	**Chennai**	SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu	Tel. +91 44 37188888 Fax +91 44 37188811 c.v.shivkumar@seweurodriveindia.com
Technical Offices	**Bengaluru**	SEW-EURODRIVE India Private Limited 308, Prestige Centre Point 7, Edward Road Bengaluru - 560052 - Karnataka	Tel. +91 80 22266565 Fax +91 80 22266569 salesbang@seweurodriveindia.com ganesh@seweurodriveindia.com
	Kolkata	SEW EURODRIVE India Private Limited 2nd floor, Room No. 35 Chowringhee Court 55, Chowringhee Road Kolkata - 700 071 - West Bengal	Tel. +91 33 22827457 Fax +91 33 22894204 saleskal@seweurodriveindia.com a.j.biswas@seweurodriveindia.com
	Chandigarh	SEW EURODRIVE India Private Limited Sujit Kumar Mishra H.No.5464/3 Modern Housing Complex Manimajra Chandigarh -160101	Tel. +91 9878469579 Fax +91 1722738664 saleschand@seweurodriveindia.com
	Chennai	SEW-EURODRIVE India Private Limited 2nd Floor, Josmans Complex, No. 5, McNichols Road, Chetpet Chennai - 600031 - Tamil Nadu	Tel. +91 44 42849813 Fax +91 44 42849816 saleschen@seweurodriveindia.com c.v.shivkumar@seweurodriveindia.com

India			
	Coimbatore	SEW-EURODRIVE India Private Limited Office No 60 Arpee Centre (Opp Annapoorna Hotel) 420 N, NSR Road, Saibaba Colony Coimbatore 641 0111 - Tamil Nadu	Tel. +91 422 2455420 Fax +91 422 2443988 salescmb@seweurodriveindia.com p.selvakumar@seweurodriveindia.com
	Cuttack	SEW-EURODRIVE India Private Limited Plot No.- 1764, Nuasahi, Nayapalli Bhubaneswar-12 Orissa	Tel. +91 9937446333 manoranjan.sahoo@seweurodrivein-dia.com
	Madgaon	SEW-EURODRIVE India Private Limited Flat No.-G1, Shivas-Laxmi Prasad Co-Operative Housing Society, Padmanarayan Estate, Near Jivottaam Math, Gagole Madgao, Goa - 403 602	samrat.chakravorty@seweurodrivein-dia.com
	Hyderabad	SEW-EURODRIVE India Private Limited 408, 4th Floor, Meridian Place Green Park Road Amerpeet Hyderabad - 500016 - Andhra Pradesh	Tel. +91 40 23414698 Fax +91 40 23413884 saleshyd@seweurodriveindia.com ma.choudary@seweurodriveindia.com
	Jamshedpur	SEW-EURODRIVE India Private Limited Flat No.: B/2, B.S. Apartment Road No.: 4, Contractor's area, Bistupur Jamshedpur 831 001 - Chhattisgarh	Tel. +91 9934123671 siddaratha.mishra@seweurodrivein-dia.com
	Lucknow	SEW-EURODRIVE India Private Limited 69, Shiv Vihar Colony Vikas Nagar-5 Lucknow 226022 - Uttar Pradesh	Tel. +91 9793627333 amit.nigam@seweurodriveindia.com
	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 p.s.ray@seweurodriveindia.com
	New Delhi	SEW-EURODRIVE India Private Limited 418-419, Suneja Tower-1 District Centre, Janak Puri New Delhi 110 058	Tel. +91 11 25544111 Fax +91 11 25544113 salesdelhi@seweurodriveindia.com vikram.juneja@seweurodriveindia.com
	Pune	SEW-EURODRIVE India Private Limited Office No. 2 & 7, First Floor, Triveni Apartment Model Colony, Gokhale Road Pune 411016 - Maharashtra	Tel. +91 20 25671751 Fax +91 20 25661668 salespune@seweurodriveindia.com praveen.hosur@seweurodriveindia.com
	Raipur	SEW-EURODRIVE India Private Limited Flat No-0-102, First Floor Satyam Appt., Golchha Park Nr Mining Office, Ring Road-1 Raipur 492 001 - Chhattisgarh	Tel. +91 9893290624 sutanu.sarkar@seweurodriveindia.com

Indonesia			
Technical Office	**Jakarta**	SEW-EURODRIVE Pte Ltd. Jakarta Liaison Office, Menara Graha Kencana Jl. Perjuangan No. 88, LT 3 B, Kebun Jeruk, Jakarta 11530, Indonesia	Tel. +62 21 5359066 Fax +62 21 5363686 Service Hotline: +65 61000 739 sew@cbn.net.id

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 info@alperton.ie http://www.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

Italy			
Assembly **Sales** **Service**	**Milano**	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano)	Tel. +39 02 96 9801 Fax +39 02 96 799781 http://www.sew-eurodrive.it sewit@sew-eurodrive.it
Technical Offices	**Bologna**	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via della Grafica, 47 I-40064 Ozzano dell'Emilia (Bo)	Tel. +39 051 65-23-801 Fax +39 051 796-595
	Caserta	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Viale Carlo III Km. 23,300 I-81020 S. Nicola la Strada (Caserta)	Tel. +39 0823 219011 Fax +39 0823 421414
	Pescara	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Viale Europa,132 I-65010 Villa Raspa di Spoltore (PE)	Tel. +39 085 41-59-427 Fax +39 085 41-59-643
	Torino	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Filiale Torino c.so Unione Sovietica 612/15 - int. C I-10135 Torino	Tel. +39 011 3473780 Fax +39 011 3473783
	Verona	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via P. Sgulmero, 27/A I-37132 Verona	Tel. +39 045 89-239-11 Fax +39 045 97-6079

Ivory Coast			
Sales	**Abidjan**	SICA Ste industrielle et commerciale pour l'Afrique 165, Bld de Marseille B.P. 2323, Abidjan 08	Tel. +225 2579-44 Fax +225 2584-36

Japan			
Assembly **Sales** **Service**	**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	**Fukuoka**	SEW-EURODRIVE JAPAN CO., LTD. C-go, 5th-floor, Yakuin-Hiruzu-Bldg. 1-5-11, Yakuin, Chuo-ku Fukuoka, 810-0022	Tel. +81 92 713-6955 Fax +81 92 713-6860 sewkyushu@jasmine.ocn.ne.jp
	Osaka	SEW-EURODRIVE JAPAN CO., LTD. B-Space EIRAI Bldg., 3rd Floor 1-6-9 Kyoumachibori, Nishi-ku, Osaka, 550-0003	Tel. +81 6 6444--8330 Fax +81 6 6444--8338 sewosaka@crocus.ocn.ne.jp
	Tokyo	SEW-EURODRIVE JAPAN CO., LTD. Izumi-Bldg. 5 F 3-2-15 Misaki-cho Chiyoda-ku, Tokyo 101-0061	Tel. +81 3 3239-0469 Fax +81 3 3239-0943 sewtokyo@basil.ocn.ne.jp

Korea			
Assembly **Sales** **Service**	**Ansan-City**	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate 1048-4, Shingil-Dong Ansan 425-120	Tel. +82 31 492-8051 Fax +82 31 492-8056 http://www.sew-korea.co.kr master@sew-korea.co.kr
	Busan	SEW-EURODRIVE KOREA Co., Ltd. No. 1720 - 11, Songjeong - dong Gangseo-ku Busan 618-270	Tel. +82 51 832-0204 Fax +82 51 832-0230 master@sew-korea.co.kr
Technical Offices	**Daegu**	SEW-EURODRIVE KOREA Co., Ltd. No.1108 Sungan officetel 87-36, Duryu 2-dong, Dalseo-ku Daegu 704-712	Tel. +82 53 650-7111 Fax +82 53 650-7112
	DaeJeon	SEW-EURODRIVE KOREA Co., Ltd. No. 1502, Hongin officetel 536-9, Bongmyung-dong, Yusung-ku Daejeon 305-301	Tel. +82 42 828-6461 Fax +82 42 828-6463
	Kwangju	SEW-EURODRIVE KOREA Co., Ltd. 4fl., Dae-Myeong B/D 96-16 Unam-dong, Buk-ku Kwangju 500-170	Tel. +82 62 511-9172 Fax +82 62 511-9174
	Seoul	SEW-EURODRIVE KOREA Co., Ltd. No.504 Sunkyung officetel 106-4 Kuro 6-dong, Kuro-ku Seoul 152-054	Tel. +82 2 862-8051 Fax +82 2 862-8199

Latvia			
Sales	**Riga**	SIA Alas-Kuul Katlakalna 11C LV-1073 Riga	Tel. +371 7139253 Fax +371 7139386 http://www.alas-kuul.com info@alas-kuul.com

Lebanon			
Sales	**Beirut**	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 4947-86 +961 1 4982-72 +961 3 2745-39 Fax +961 1 4949-71 ssacar@inco.com.lb

Lithuania			
Sales	**Alytus**	UAB Irseva Naujoji 19 LT-62175 Alytus	Tel. +370 315 79204 Fax +370 315 56175 info@irseva.lt http://www.sew-eurodrive.lt

Luxembourg			
Assembly **Sales** **Service**	**Brüssel**	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.sew-eurodrive.lu info@caron-vector.be

Malaysia			
Assembly **Sales** **Service**	**Johore**	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 sales@sew-eurodrive.com.my

Malaysia			
Technical Offices	**Kota Kinabalu**	SEW-EURODRIVE Sdn Bhd (Kota Kinabalu Branch) Lot No. 2,1st Floor, Inanam Baru Phase III, Miles 5.1 /2, Jalan Tuaran, Inanam 89350 Kota Kinabalu Sabah, Malaysia	Tel. +60 88 424792 Fax +60 88 424807
	Kuala Lumpur	SEW-EURODRIVE Sdn. Bhd. No. 2, Jalan Anggerik Mokara 31/46 Kota Kemuning Seksyen 31 40460 Shah Alam Selangor Darul Ehsan	Tel. +60 3 5229633 Fax +60 3 5229622 sewpjy@po.jaring.my
	Kuching	SEW-EURODRIVE Sdn. Bhd. Lot 268, Section 9 KTLD Lorong 9, Jalan Satok 93400 Kuching, Sarawak East Malaysia	Tel. +60 82 232380 Fax +60 82 242380
	Penang	SEW-EURODRIVE Sdn. Bhd. No. 38, Jalan Bawal Kimsar Garden 13700 Prai, Penang	Tel. +60 4 3999349 Fax +60 4 3999348 seweurodrive@po.jaring.my

Mauritania			
Sales	**Zouérate**	AFRICOM - SARL En Face Marché Dumez P.B. 88 Zouérate	Tel. +222 54 40134 Fax +222 54 40538 cybertiris@mauritel.mr

Mexico			
Assembly **Sales** **Service**	**Quéretaro**	SEW-EURODRIVE MEXICO SA DE CV SEM-981118-M93 Tequisquiapan No. 102 Parque Industrial Quéretaro C.P. 76220 Quéretaro, México	Tel. +52 442 1030-300 Fax +52 442 1030-301 http://www.sew-eurodrive.com.mx scmexico@seweurodrive.com.mx

Morocco			
Sales	**Casablanca**	Afit 5, rue Emir Abdelkader MA 20300 Casablanca	Tel. +212 22618372 Fax +212 22618351 ali.alami@premium.net.ma

Netherlands			
Assembly **Sales** **Service**	**Rotterdam**	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu

New Zealand			
Assembly **Sales** **Service**	**Auckland**	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 http://www.sew-eurodrive.co.nz sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz
Technical Office	**Palmerston North**	SEW-EURODRIVE NEW ZEALAND LTD. C/-Grant Shearman, RD 5, Aronui Road Palmerston North	Tel. +64 6 355-2165 Fax +64 6 355-2316 sales@sew-eurodrive.co.nz

Norway			
Assembly **Sales** **Service**	**Moss**	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. +47 69 24 10 20 Fax +47 69 24 10 40 http://www.sew-eurodrive.no sew@sew-eurodrive.no

Peru			
Assembly **Sales** **Service**	**Lima**	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 http://www.sew-eurodrive.com.pe sewperu@sew-eurodrive.com.pe

Philippines			
Technical Office	**Manila**	SEW-EURODRIVE Pte Ltd Manila Liaison Office Suite 110, Ground Floor Comfoods Building Senator Gil Puyat Avenue 1200 Makati City	Tel. +63 2 894275254 Fax +63 2 8942744 sewmla@i-next.net

Poland			
Assembly **Sales** **Service**	**Lodz**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 PL-92-518 ?ód?	Tel. +48 42 676 53 00 Fax +48 42 676 53 45 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl
		24 Hour Service	Tel. +48 602 739 739 (+48 602 SEW SEW) sewis@sew-eurodrive.pl
Technical Office	**Tychy**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Nad Jeziorem 87 PL-43-100 Tychy	Tel. +48 32 32 32 610 Fax +48 32 32 32 649
	Bydgoszcz	SEW-EURODRIVE Polska Sp.z.o.o. ul. Fordo?ska 246 PL-85-959 Bydgoszcz	Tel. +48 52 3606590 Fax +48 52 3606591
	Poznan	SEW-EURODRIVE Polska Sp.z.o.o. ul. Romana Maya 1 PL-61-371 Pozna?	Tel. +48 61 8741640 Fax +48 61 8741641
	Szczecinek	SEW-EURODRIVE Polska Sp.z.o.o. ul. Mickiewicza 2 pok. 36 PL-78-400 Szczecinek	Tel. +48 94 3728820 Fax +48 94 3728821

Portugal			
Assembly **Sales** **Service**	**Coimbra**	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt
Technical Offices	**Lisboa**	SEW-EURODRIVE, LDA. Núcleo Empresarial I de São Julião do Tojal Rua de Entremuros, 54 Fracção I P-2660-533 São Julião do Tojal	Tel. +351 21 958-0198 Fax +351 21 958-0245 esc.lisboa@sew-eurodrive.pt
	Porto	SEW-EURODRIVE, LDA. Av. 25 de Abril, 68 4440-502 Valongo	Tel. +351 229 350 383 Fax +351 229 350 384 MobilTel. +351 9 32559110 esc.porto@sew-eurodrive.pt

Romania			
Sales **Service**	**Bucure?ti**	Sialco Trading SRL str. Madrid nr.4 011785 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro

Russia			
Assembly **Sales** **Service**	**St. Petersburg**	ZAO SEW-EURODRIVE P.O. Box 36 195220 St. Petersburg Russia	Tel. +7 812 3332522 +7 812 5357142 Fax +7 812 3332523 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru
Technical Office	**Yekaterinburg**	ZAO SEW-EURODRIVE Kominterna Str. 16 Office 614 RUS-620078 Ekaterinburg	Tel. +7 343 310 3977 Fax +7 343 310 3978 eso@sew-eurodrive.ru
	Irkutsk	ZAO SEW-EURODRIVE 5-Armii Str., 31 RUS-664011 Irkutsk	Tel. +7 3952 25 5880 Fax +7 3952 25 5881 iso@sew-eurodrive.ru
	Moskau	ZAO SEW-EURODRIVE RUS-107023 Moskau	Tel. +7 495 9337090 Fax +7 495 9337094 mso@sew-eurodrive.ru
	Novosibirsk	ZAO SEW-EURODRIVE pr. K Marksa, d.30 RUS-630087 Novosibirsk	Tel. +7 383 3350200 Fax +7 383 3462544 nso@sew-eurodrive.ru
	Togliatti	ZAO SEW-EURODRIVE Sportivnaya Str. 4B, office 2 Samarskaya obl. RUS-445057 Togliatti	Tel. +7 8482 710529 Fax +7 8482 810590

Senegal			
Sales	**Dakar**	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 338 494 770 Fax +221 338 494 771 senemeca@sentoo.sn

Serbia			
Sales	**Beograd**	DIPAR d.o.o. Ustanicka 128a PC Košum, IV floor SCG-11000 Beograd	Tel. +381 11 347 3244 / +381 11 288 0393 Fax +381 11 347 1337 office@dipar.co.yu

Singapore			
Assembly **Sales** **Service**	**Singapore**	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 http://www.sew-eurodrive.com.sg sewsingapore@sew-eurodrive.com

Slovakia			
Sales	**Bratislava**	SEW-Eurodrive SK s.r.o. Rybni?ná 40 SK-831 06 Bratislava	Tel. +421 2 33595 202 Fax +421 2 33595 200 sew@sew-eurodrive.sk http://www.sew-eurodrive.sk
	Žilina	SEW-Eurodrive SK s.r.o. Industry Park - PChZ ulica M.R.Štefánika 71 SK-010 01 Žilina	Tel. +421 41 700 2513 Fax +421 41 700 2514 sew@sew-eurodrive.sk
	Banská Bystrica	SEW-Eurodrive SK s.r.o. Rudlovská cesta 85 SK-974 11 Banská Bystrica	Tel. +421 48 414 6564 Fax +421 48 414 6566 sew@sew-eurodrive.sk

Slovakia			
	Košice	SEW-Eurodrive SK s.r.o. Slovenská ulica 26 SK-040 01 Košice	Tel. +421 55 671 2245 Fax +421 55 671 2254 sew@sew-eurodrive.sk

Slovenia			
Sales **Service**	**Celje**	Pakman - Pogonska Tehnika d.o.o. UI. XIV. divizije 14 SLO - 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net

South Africa			
Assembly **Sales** **Service**	**Johannesburg**	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 http://www.sew.co.za info@sew.co.za
	Cape Town	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 cfoster@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaco Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 cdejager@sew.co.za
	Nelspruit	SEW-EURODRIVE (PTY) LTD. 7 Christie Crescent Vintonia P.O.Box 1942 Nelspruit 1200	Tel. +27 13 752-8007 Fax +27 13 752-8008 robermeyer@sew.co.za
Technical Offices	**Port Elizabeth**	SEW-EURODRIVE PTY LTD. 8 Ruan Access Park Old Cape Road Greenbushes 6000 Port Elizabeth	Tel. +27 41 3722246 Fax +27 41 3722247 dtait@sew.co.za
	Richards Bay	SEW-EURODRIVE PTY LTD. 103 Bulion Blvd Richards Bay P.O. Box 458 Richards Bay, 3900	Tel. +27 35 797-3805 Fax +27 35 797-3819 jswart@sew.co.za

Spain			
Assembly **Sales** **Service**	**Bilbao**	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 94 43184-70 Fax +34 94 43184-71 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es
Technical Offices	**Barcelona**	Delegación Barcelona Avenida Francesc Maciá 40-44 Oficina 4.2 E-08208 Sabadell (Barcelona)	Tel. +34 93 7162200 Fax +34 93 7233007
	Lugo	Delegación Noroeste Apartado, 1003 E-27080 Lugo	Tel. +34 639 403348 Fax +34 982 202934

Spain			
	Madrid	Delegación Madrid Gran Via. 48-2° A-D E-28220 Majadahonda (Madrid)	Tel. +34 91 6342250 Fax +34 91 6340899
	Seville	MEB Pólogono Calonge, C/A Nave 2 - C E-41.077 Sevilla	Tel. +34 954 356 361 Fax +34 954 356 274 mebsa.sevilla@mebsa.com
	Valencia	MEB Músico Andreu i Piqueres, 4 E-46.900 Torrente (Valencia)	Tel. +34 961 565 493 Fax +34 961 566 688 mebsa.valencia@mebsa.com

Sri Lanka			
Sales	**Colombo**	SM International (Pte) Ltd 254, Galle Raod Colombo 4, Sri Lanka	Tel. +94 1 2584887 Fax +94 1 2582981

Sweden			
Assembly **Sales** **Service**	**Jönköping**	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442 00 Fax +46 36 3442 80 http://www.sew-eurodrive.se jonkoping@sew.se
Sales	**Göteborg**	SEW-EURODRIVE AB Gustaf Werners gata 8 S-42132 Västra Frölunda	Tel. +46 31 70968 80 Fax +46 31 70968 93 goteborg@sew.se
	Stockholm	SEW-EURODRIVE AB Björkholmsvägen 10 S-14146 Huddinge	Tel. +46 8 44986 80 Fax +46 8 44986 93 stockholm@sew.se
	Malmö	SEW-EURODRIVE AB Borrgatan 5 S-21124 Malmö	Tel. +46 40 68064 80 Fax +46 40 68064 93 malmo@sew.se
	Skellefteå	SEW-EURODRIVE AB Trädgårdsgatan 8 S-93131 Skellefteå	Tel. +46 910 7153 80 Fax +46 910 7153 93 skelleftea@sew.se

Switzerland			
Assembly **Sales** **Service**	**Basel**	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 417 1717 Fax +41 61 417 1700 http://www.imhof-sew.ch info@imhof-sew.ch
Technical Offices	**Rhaetian Switzerland**	André Gerber Es Perreyres CH-1436 Chamblon	Tel. +41 24 445 3850 Fax +41 24 445 4887
	Bern / Solothurn	Rudolf Bühler Muntersweg 5 CH-2540 Grenchen	Tel. +41 32 652 2339 Fax +41 32 652 2331
	Central Switzerland and Ticino	Beat Lütolf Baumacher 11 CH-6244 Nebikon	Tel. +41 62 756 4780 Fax +41 62 756 4786
	Central Switzerland, Aargau	Armin Pfister Stierenweid CH-4950 Huttwill, BE	Tel. +41 62 962 54 55 Fax +41 62 962 54 56
	Zürich, Ticino	Gian-Michele Muletta Fischerstrasse 61 CH-8132 Egg bei Zürich	Tel. +41 44 994 81 15 Fax +41 44 994 81 16
	Bodensee and East Switzerland	Markus Künzle Eichweg 4 CH-9403 Goldach	Tel. +41 71 845 2808 Fax +41 71 845 2809

Taiwan (R.O.C.)			
Sales	**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
	Taipei	Ting Shou Trading Co., Ltd. 6F-3, No. 267, Sec. 2 Tung Hwa South Road, Taipei	Tel. +886 2 27383535 Fax +886 2 27368268 Telex 27 245 sewtwn@ms63.hinet.net

Thailand			
Assembly **Sales** **Service**	**Chonburi**	SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com
Technical Offices	**Bangkok**	SEW-EURODRIVE (Thailand) Ltd. 6th floor, TPS Building 1023, Phattanakarn Road Suanluang Bangkok,10250	Tel. +66 2 7178149 Fax +66 2 7178152 sewthailand@sew-eurodrive.com
	Hadyai	SEW-EURODRIVE (Thailand) Ltd. Hadyai Country Home Condominium 59/101 Soi.17/1 Rachas-Utid Road. Hadyai, Songkhla 90110	Tel. +66 74 359441 Fax +66 74 359442 sewthailand@sew-eurodrive.com
	Khonkaen	SEW-EURODRIVE (Thailand) Ltd. 4th Floor, Kaow-U-HA MOTOR Bldg, 359/2, Mitraphab Road. Muang District Khonkaen 40000	Tel. +66 43 225745 Fax +66 43 324871 sew-thailand@sew-eurodrive.com

Tunisia			
Sales	**Tunis**	T. M.S. Technic Marketing Service Zone Industrielle Mghira 2 Lot No. 39 2082 Fouchana	Tel. +216 71 4340-64 + 71 4320-29 Fax +216 71 4329-76 tms@tms.com.tn

Turkey			
Assembly **Sales** **Service**	**Istanbul**	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419164, 3838014, 3738015 Fax +90 216 3055867 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr
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