Type Codes

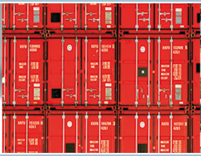
Product Training, Vol. 1

Drive Systems for Decentralized Installation

Edition 02/2020

22288228/EN

SEW-EURODRIVE—Driving the world



Contents

1 MOVIPRO®

1.1 Description

MOVIPRO® is a decentralized drive, positioning and application control for asynchronous and synchronous motors with power ratings from 2.2 kW to 22 kW.

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MOVIPRO® is available in the following designs:

- Drive and positioning control MOVIPRO® SDC – **S**tandard **D**rive **C**ontroller
- Drive and application control MOVIPRO® ADC – **A**pplication **D**rive **C**ontroller

1.1.1 General device properties of MOVIPRO® SDC/ADC

MOVIPRO® has the following functional characteristics:

- Compact system: All important drive functions integrated in one unit
- Robust aluminum housing
- Easy installation due to pluggable connections
- Power: 2.2 kW, 4 kW, 7.5 kW, 11 kW, 15 kW, and 22 kW
- Drive inverter on the MOVIDRIVE® platform
- Connection options for motor and distance encoder
- Asynchronous or synchronous motors can be controlled
- Integrated brake control: DC 24 V, AC 230 V, AC 400 V, and AC 460 V
- Connection option for external braking resistor
- SD memory card for quick device replacement
- Interface box with maintenance switch and energy distribution option for line topologies (power bus)
- Positioning tasks with application modules
- 12 digital inputs and 4 digital inputs/outputs
- Can communicate via the following fieldbus types:
  - PROFINET IO
  - EtherNet/IP™
  - Modbus TCP
  - PROFIBUS DP-V1
  - DeviceNet™
- STO, SS1 safety functions in accordance with EN 61800-5-2
- Performance level d in accordance with EN ISO 13849-1
- PROFIsafe device

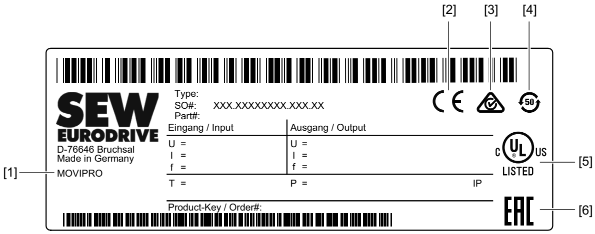
1.1.2 Additional device properties of MOVIPRO® ADC

MOVIPRO® ADC has the following additional functional characteristics:

- Available as parameterizable or programmable unit
- Communication packages for controlling auxiliary axes and sensors via the following interfaces:
  - $\text{SBus}^{\text{PLUS}}$ interface
  - CAN interface (electrically isolated or with DC 24 V)
  - CAN interface (system bus)
  - RS485 interface (electrically isolated or with DC 24 V)
  - MOVISAFE® safety bus interface
- Safe brake control (SBC in accordance with IEC 61800-5-2)
- Energy management interface for connecting MOVI-DPS energy or power interface EKK
- Available with device power of 11 kW and 15 kW with regenerative power supply R15

1.2 Main nameplate

The main nameplate lists information about the device type. The following figure shows an example of a main nameplate:



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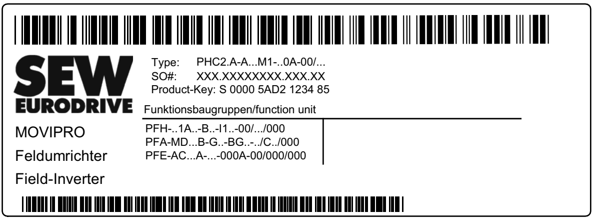
[1] Product name
[2] CE marking
[3] RCM approval (depending on device certification)
[4] China RoHS-2 marking
[5] UL approval (depending on device certification)
[6] EAC marking

Depending on the device design, the following information is listed on the main nameplate:

Value	Specification
Type	Type designation
SO#	Production number
Part#	Part number (for customized devices)
V	Voltage
I	Current
f	Frequency
T	Ambient temperature
P	Rated output power
IP	Degree of protection
Product key	Product key (optional)
Order#	Purchase order number for country variant (for customized devices)

1.3 Nameplate of function units

The nameplate contains information on the device's function units. The following figure shows an example of a nameplate of function units:



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Type designation of the function unit	Designation
PFH-...	Communication and control unit
PFA-MD...	Power section
PFE-AC...	Power supply

1.4 MOVIPRO® SDC type designation

1.4.1 Type designation

PHC2.A	Drive and positioning control MOVIPRO® SDC	
–		
A	Power supply: Three-phase current	
...	Rated input power:	
	022	2.2 kW
	040	4 kW
	075	7.5 kW
	110	11 kW
	150	15 kW
	220	22 kW
M1	1 integrated power section	
–		
..	Fieldbus:	
	P1	PROFIBUS DP-V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™, Modbus TCP
0A	Control type: SDC	
–		
00/...	Device option:	
	00/S11	PROFIsafe option S11
	00/S11B	PROFIsafe option S11B

1.4.2 Type designations of the function units

Power section

PFA-MD	Internal axis on MOVIDRIVE® basis	
...B	Axis type:	
	022B	2.2 kW
	040B	4 kW
	075B	7.5 kW
	110B	11 kW
	150B	15 kW
	220B	22 kW
-		
G..	Encoder interface:	
	G00	Without encoder interface
	G10	Motor encoder resolver Without distance encoder
	G20	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Without distance encoder
	G21	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder CANopen
	G22	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder SSI, HIPERFACE®, sin/cos, HTL, TTL, RS422
-		
BG..	Brake voltage:	
	BG02	DC 24 V
	BG23	AC 230 V
	BG40	AC 400 V
	BG46	AC 460 V
-		
..	Axis connections:	
	11	1 standard motor output with STO interface and 4 axis inputs to 2 × M12
	15	1 standard motor output with STO interface, 2 axis inputs, and 1 analog input to 2 × M12
/		
C../000	Cooling:	
	C01/000	Standard without fan subassembly
	C02/000	Standard with fan subassembly

Communication and control unit

PFH	Control/communication	
–		
..	Fieldbus:	
	P1	PROFIBUS DP-V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™/Modbus TCP
0A	Control type: SDC	
C0	Storage medium/technology level: OMC_T0	
–		
B..	Fieldbus interface:	
	B11	PROFIBUS, bus module 2 × M12
	B12	DeviceNet™, bus module 2 × M12
	B53	Ethernet, 2 × M12
	B63	Ethernet, 2 × push-pull RJ45
	B64	Ethernet, 2 × push-pull SCRJ
–		
I1	12 digital inputs and 4 digital inputs/outputs	
00	Without communication package	
–		
00/.../000	Option:	
	00/000/000	Without option 1
	00/S11/000	PROFIsafe option S11
	00/S1B/000	PROFIsafe option S11B

Energy supply

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

1.5 MOVIPRO® ADC type designation

1.5.1 Type designation

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

1.5.2 Type designations of the function units

Power section

PFA-MD	Internal axis on MOVIDRIVE® basis	
...B	Axis type:	
	022B	2.2 kW
	040B	4 kW
	075B	7.5 kW
	110B	11 kW
	150B	15 kW
	220B	22 kW
-		
G..	Encoder interface:	
	G00	Without encoder interface
	G10	Motor encoder resolver Without distance encoder
	G20	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Without distance encoder
	G21	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder CANopen
	G22	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder SSI, HIPERFACE®, sin/cos, HTL, TTL, RS422
-		
B.	Brake control:	
	BG	Standard brake control
	BS	Brake control with safety-related brake module
..	Brake voltage:	
	02	DC 24 V
	23	AC 230 V
	40	AC 400 V
	46	AC 460 V
-		
..	Axis connections:	
	11	1 standard motor output with STO interface and 4 axis inputs to 2 × M12
	15	1 standard motor output with STO interface, 2 axis inputs, and 1 analog input to 2 × M12
/		
C../000	Cooling:	
	C01/000	Standard without fan subassembly
	C02/000	Standard with fan subassembly

Communication and control unit

PFH	Control/communication	
–		
..	Fieldbus:	
	P1	PROFIBUS DP-V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™/Modbus TCP
	Z1	SBus
..	Control type:	
	1A	ADC
	4A	Slave gateway
.	Storage medium:	
	H	SD memory card OMH for parameterizable and programmable functions
	D	DIP switch
.	Technology level:	
	0	OMH41B-T0 (with storage medium H) Slave without SD memory card (with storage medium D)
	1	OMH41B-T1
	2	OMH41B-T2
	3	OMH41B-T3
	4	OMH41B-T4
–		
B..	Fieldbus interface:	
	B11	PROFIBUS, bus module 2 × M12
	B12	DeviceNet™, bus module 2 × M12
	B13	SBus, bus module 2 × M12
	B53	Ethernet, 2 × M12
	B63	Ethernet, 2 × push-pull RJ45
	B64	Ethernet, 2 × push-pull SCRJ
–		
I1	12 digital inputs and 4 digital inputs/outputs	

22288228/EN – 02/2020

..	Communication package:	
	00	Without communication package
	01	SBus^{PLUS} interface CAN interface – external (electrically isolated) RS485 interface – external (electrically isolated)
	02	SBus^{PLUS} interface CAN interface – external (electrically isolated) S485 interface – external (with DC 24 V)
	03	SBus^{PLUS} interface CAN interface – external (with DC 24 V) RS485 interface – external (with DC 24 V)
	04	SBus^{PLUS} interface CAN interface – external (with DC 24 V) RS485 interface – external (electrically isolated)
	06	Ethernet engineering interface CAN interface – external (with DC 24 V) RS485 interface – external (with DC 24 V)
	10	MOVISAFE® safety bus interface CAN interface – external (electrically isolated) CAN interface – system bus (with DC 24 V)
	11	MOVISAFE® safety bus interface RS485 interface – external (electrically isolated) CAN interface – system bus (with DC 24 V)
	12	Ethernet engineering interface CAN interface – external (electrically isolated) RS485 interface – external (electrically isolated)
–		
00/.../000	Option:	
	00/000/000	Without option 1
	00/S11/000	PROFIsafe option S11
	00/S1B/000	PROFIsafe Option S11B

Energy supply

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

1.6 Accessories

1.6.1 Interface box

Type designation

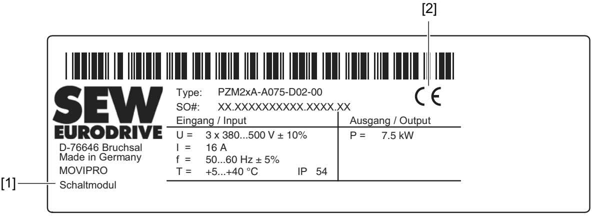
The type designation contains the following data:

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

22288228/EN – 02/2020

Nameplate

The nameplate lists information about the device type of the interface box. The following figure shows an example of a nameplate:



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[1] Product name
[2] CE marking

Depending on the design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Production number
U	Voltage
I	Maximum current carrying capacity
f	Frequency
T	Ambient temperature
IP	Degree of protection
P	Maximum switching capacity

Interface box assignment

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

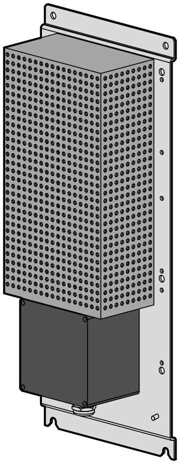
Interface box	Part number	2.2 kW	4 kW	7.5 kW	11 kW	15 kW	22 kW
PZM2xA-A075-D02-00	18250149	•	•	•			
PZM2xA-A150-D03-00	18250157	•	•	•	•	•	
PZM2xA-A220-D04-00	28218264	•	•	•	•	•	•
PZM2xA-A022-M13-00	18250238	•					
PZM2xA-A040-M14-00	18250165		•				
PZM2xA-A075-M16-00	18250173			•			

1.6.2 External braking resistors

Description

For regenerative operation, an external braking resistor is connected to MOVIPRO®. Observe the following technical data regarding the connection.

Flat-type resistors have internal thermal protection (fuse cannot be replaced) that interrupts the current circuit in the event of overload. Additional components for thermal monitoring are not necessary. The following figure shows an example of a size 1 braking resistor:



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Braking resistors – assignment

The following table shows the assignment of the external braking resistors to the different MOVIPRO® devices:

Braking resistor	Part number	Size	Terminal cross section	MOVIPRO®					
				Up to 2.2 kW	Up to 4 kW	Up to 7.5 kW	Up to 11 kW	Up to 15 kW	Up to 22 kW
BW100-004-00	17962188	Size 0	pre-assembled connection cable	•	•	•			
BW050-008-01	17962242	Size 1	6 mm²			•	•	•	•
BW033-012-01	17962196	Size 1	6 mm²				•	•	•
BW017-024-02	17962218	Size 2	6 mm²					•	•
BW014-028-02	17962226	Size 2	6 mm²						•

22288228/EN – 02/2020

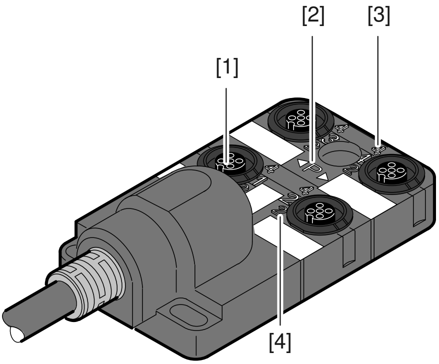
1.6.3 Sensor/actuator box

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

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

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

Design with 4 slots



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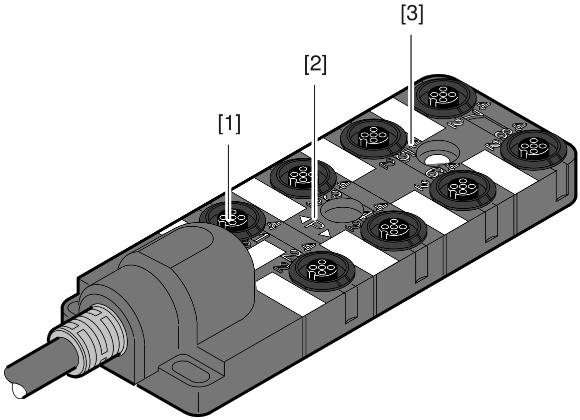
[1]	M12 slot	[3]	Yellow status display signal 1
[2]	Operating display LED	[4]	White status display signal 2

Design with 8 slots



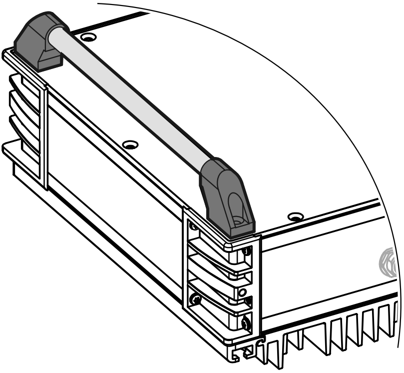
54043196599307403

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

1.6.4 Mounting accessories

Handles

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



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

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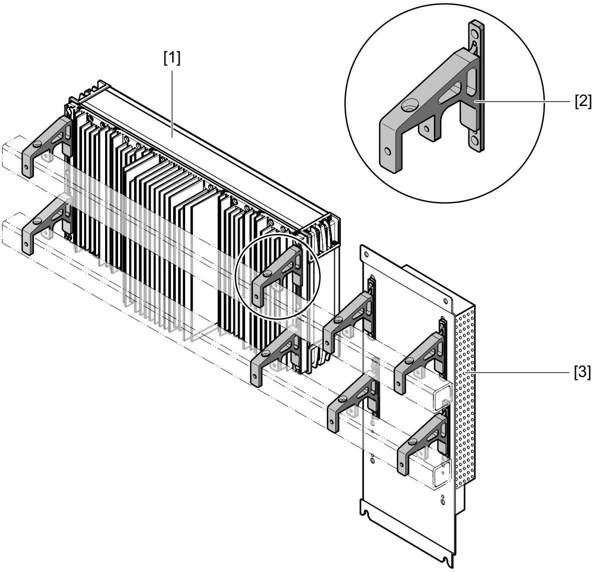
Mounting brackets

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



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

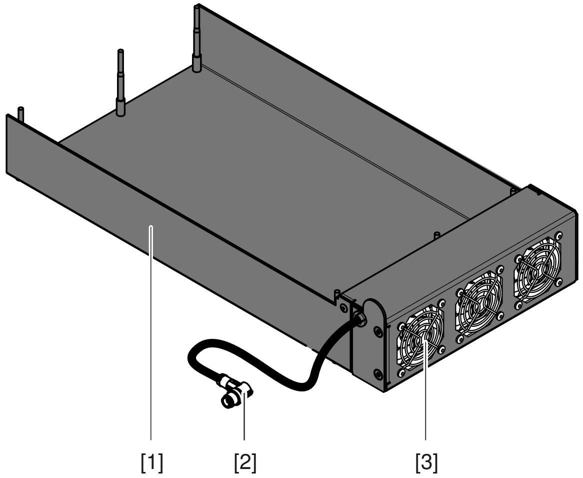
	Mounting bracket	Part number
MOVIPRO®	Mounting bracket kit, large (4 pieces)	12708305
Braking resistors sizes 1 and 2	Mounting bracket kit, BW (4 pieces)	18229689

1.6.5 Fan

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

The fan subassembly is mandatory for MOVIPRO® devices with a power rating of 15 kW and higher; it is included automatically in the configuration here. For devices with 11 kW, you can select the fan subassembly as an option.

The following figure shows the fan subassembly:



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

	Part number
Fan assembly	12709700

22288228/EN – 02/2020

2 MOVITRANS®

2.1 Description

MOVITRANS® is a system of stationary and mobile components for contactless energy transfer.

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2.1.1 Energy transfer

Electrical energy is transferred without contact from a fixed conductor to one or more mobile consumers. The principle of inductive energy transfer is used. The electromagnetic coupling takes place across an air gap.

2.1.2 Overview of the system

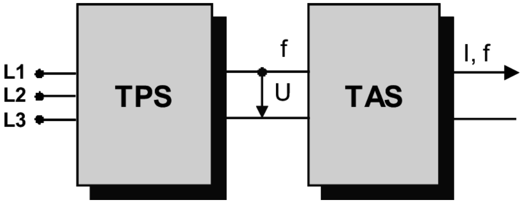
With MOVITRANS®, energy is supplied either centrally as a classic control cabinet installation or with decentrally installed components.

Centralized energy supply

In the classic control cabinet installation, the energy transfer is implemented with a system frequency of 25 kHz.

The centralized energy supply consists of the following components:

- TPS stationary converter
- TAS transformer module



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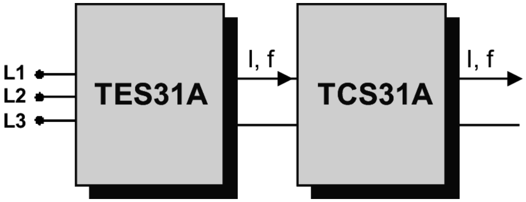
Decentralized energy supply

The energy is supplied decentrally via distributed feeders on the transmission paths and is therefore compact, space-saving and energy efficient.

The new decentralized infrastructure also uses a system frequency of 50 kHz. Therefore, all mobile-side 25 kHz components (THM pick-up, TPM mobile converter) can be used as well as components optimized for the higher system frequency of 50 kHz.

The decentralized energy supply consists of the following components:

- TES31A decentralized supply unit
- TCS31A compensation box



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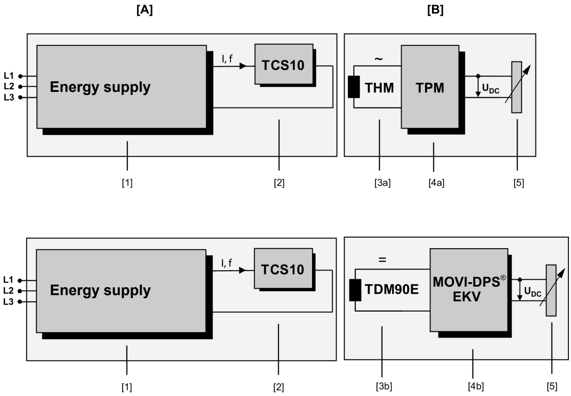
The following figure shows 2 variants of a MOVITRANS® system. The picture above shows a system that uses the THM pick-up on the mobile side. The system shown below uses the TDM90E pick-up.



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[A] Stationary components
[B] Mobile components
[1] Energy supply (centralized or decentralized)
[2] TCS10 transmission path with track compensation
[3a] MOVITRANS® THM pick-up
[4a] MOVITRANS® TPM mobile converter
[3b] MOVITRANS® TDM90E pick-up
[4b] Energy storage unit(s): MOVI-DPS® storage bundle
[5] Mobile consumer

Stationary components [A]

Energy supply

MOVITRANS® TES31A Decentralized Supply Unit

The TES31A decentralized supply unit converts the low-frequency AC voltage (50/60 Hz) taken from the three-phase current supply into an AC voltage with a constant frequency of 25 kHz or 50 kHz and then into a constant sinusoidal alternating current. The output current is galvanically isolated from the three-phase current supply via a transformer.

MOVITRANS® TCS31A compensation box

The TCS31A compensation box is used for the adjustment (fine compensation) of the transmission path. The TCS31A compensation box is able to adjust the effective capacitance value on the basis of a coordinated capacitance cascade by changing bridges in about 30 finely graduated steps. This enables precise, reactive power compensation. The energy supply can thus efficiently provide the maximum active power for the operation of the plant.

MOVITRANS® TPS stationary converter

The TPS stationary converter, which is based on the MOVIDRIVE® device family, converts the incoming low-frequency AC voltage (50/60 Hz) from a three-phase current supply into an alternating voltage with a constant frequency of 25 kHz.

MOVITRANS® TAS transformer module

The TAS transformer module converts the output voltage of the TPS stationary converter into a constant sinusoidal alternating current. The output current is galvanically isolated from the three-phase current supply via a matching transformer. The transmission path is adjusted using the compensation components.

Transmission path with track compensation

TLS power supply cable

The TLS supply cable carries the applied alternating current and thus supplies transmission paths with a maximum of 60 A. The supply cables and return cables are integrated into one cable. The supply cable is therefore not suitable for inductive energy transfer.

TLS line cable

The TLS line cable conducts the applied alternating current. Here, the line cable forms a conductor loop for inductive energy transfer, which consists of a supply cable and a return cable.

TIS installation components

The TIS installation components are used to support the line cable on the transmission path. A distinction is made between systems with flat and systems with U-shaped pick-ups.

If U-shaped THM pick-ups are intended for energy transfer, the TIS profile strip system is used to support the line cable.

In the case of flat THM pick-ups, the line cables are laid as follows:

- Sealed in the ground
- Laid on the floor with TIS installation plates

TCS10 compensation box

The TCS10 compensation box is used for compensating the inductive reactance of the TLS line cable. Each TCS10 compensation box compensates a specific track length.

TVS connection distributor

The TVS connection distributor connects TLS feeder cables and TLS line cables from the energy supply to the transmission path and between the transmission paths.

Mobile components [B]

MOVITRANS® THM pick-up (25 kHz)

The energy transfer is contactless from the line cable to the THM pick-up. The pick-up supplies an applied alternating current to supply the TPM mobile converter. Different mechanical designs and electrical performance ratings are available for the different transmission concepts. The TPM mobile converters must match the THM pick-ups.

The power that can be transmitted per THM pick-up depends on the amount of the TLS line cable current and the electromagnetic coupling between the TLS line cable and the THM pick-up.

MOVITRANS® TPM mobile converter (25 kHz)

The TPM mobile converter converts the current applied from the pick-up into DC voltage. The system is optimized for the use of SEW-EURODRIVE inverters, such as MOVIDRIVE®, MOVITRAC® B and MOVIMOT®.

MOVITRANS® TDM90E pick-up (25 kHz and 50 kHz)

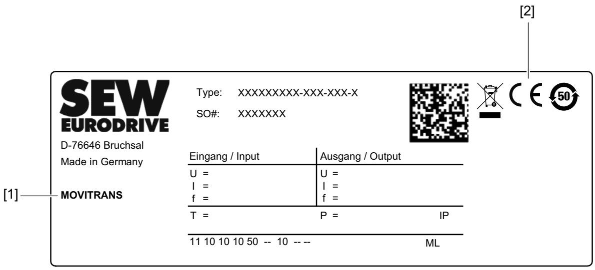
The energy transfer is contactless from the line cable to the TDM90E pick-up. The pick-up supplies an applied alternating current that is rectified and charges the connected capacitive energy storage unit (MOVI-DPS® storage bundle) to the voltage limit. The storage bundle supplies the mobile consumer.

22288228/EN – 02/2020

2.2 TES31A decentralized supply unit

2.2.1 Nameplate

The nameplate lists information about the product type. The following figure shows an example of a nameplate:



9007228575247883

[1] Product name
[2] Approval identification

Depending on the product design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Serial number
U	Voltage
I	Current
f	Frequency
T	Ambient temperature
P	Rated output power
IP	Degree of protection

2.2.2 Type designation

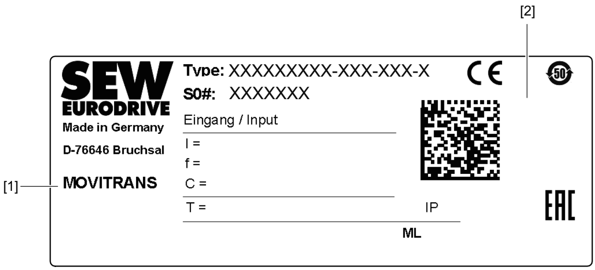
TES31 A	MOVITRANS® stationary supply unit	
...	Nominal power:	
	030	3.2 kW
	080	8 kW
	140	14 kW
	160	16 kW
–		
E	Increased degree of protection	
F	Heat sink and fan	
.	Load current:	
	1	12 A (1 load connection)
	3	30 A (1 load connection)
	4	42.5 A (1 load connection)
	6	60 A (2 load connections)
	7	75 A (2 load connections)
	8	85 A (2 load connections)
–		
5	Connection voltage: AC 400/500 V	
.	Radio interference suppression level:	
	A	C1
	B	C2
3	Connection type: 3-phase	
–		
.	System frequency:	
	A	25 kHz
	B	50 kHz
	C	140 kHz
	E	20 kHz

22288228/EN – 02/2020

2.3 TCS31A compensation box

2.3.1 Nameplate

The nameplate lists information about the device type. The following figure shows an example of a nameplate:



28815232139

[1] Product name
[2] Approval identification

Depending on the product design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Customer order number
I	Current
f	Frequency
C	Nominal capacitance
T	Ambient temperature
IP	Degree of protection

2.3.2 Type designation

T	MOVITRANS®
C	Compensation
S	Stationary
3	Series (analogous to TES)
1	Generation (analogous to TES)
A	Protection class
-	
E	Increased degree of protection
x	System frequency: A = 25 kHz or B = 50 kHz
x	Line cable current: 8 = 85 A or 6 = 60 A
-	
x	xxx = variable capacitance
x	
x	
-	
0	Hole pattern for flange plates (right 2 × M 32, left 2 × M 32)

2.4 TPS10A stationary converter

2.4.1 Nameplate

The nameplate of the TPS10A stationary converter is attached on the left side of the control unit. The following figure shows an example of a nameplate:

9007199401568651

Furthermore, a type label is attached to the front of the control unit (above the TERMINAL option slot). The following figure shows an example of a type label for MOVITRANS® TPS10A stationary converters:

Typ **TPS10A160-NF0-503-1**
Sach.-Nr. **8269807** Serien-Nr. **0001471**

9007199401588235

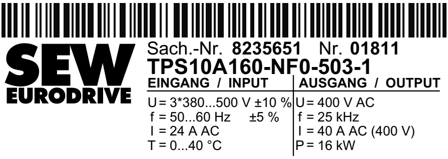
Nameplate of the control unit

The nameplate of the control unit is attached on the left side of the control unit. The following figure shows an example of a control unit nameplate.

2111995531

Nameplate of the power section

The nameplate of the power section, which contains important information, is attached on the right side of the power section cover. The following figure shows an example of a power section nameplate.



2111992843

V	Voltage
f	Frequency
I	Current
T	Ambient temperature
P	Output power

22288228/EN – 02/2020

2.4.2 Type designation

The type designation of the MOVITRANS® TPS10A stationary converter comprises the following device characteristic data:

T P S 1 0 A ... - N F 0 - 5 0 3 - 1

- **Design:** 1 = Standard
- **Connection type:** 3 = 3-phase line connection
- **Radio interference level:** 0 = No radio interference level
- **Connection voltage:**

  5 = Line voltage AC 500 V
- **Line cable current:** 0 = Not specified
- **Type of cooling:** F = With heat sink and fan
- **Housing design:** N = Degree of protection IP10
- **Nominal power:**

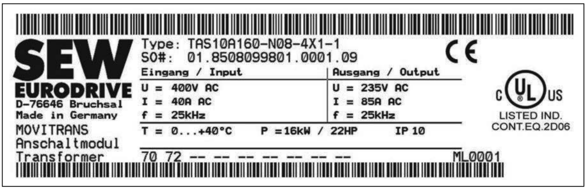
  040 = 4.0 kW

  160 = 16.0 kW
- **Version:** A
- **Series and generation:** 10 = Standard
- **Type of installation:** S = Stationary
- **Component:** P = Power unit
- **Type:** T = MOVITRANS®

2.5 TAS10A transformer module

2.5.1 Nameplate

You can find the nameplate with important information about the TAS10A transformer module at the side of the unit. The following figure shows an example of a nameplate:



147079691

Type	Type designation	f	Frequency
V	Voltage	P	Output power
I	Current	T	Ambient temperature

2.5.2 Type designation

The type designation of the MOVITRANS® TAS10A transformer module comprises the following device characteristic data:

T A S 1 0 A 160 - N 0 . - 4 X 1 - 1

- **Design:** 1 = Standard
- **Connection type:** 1 = single phase
- **Not relevant**
- **Connection voltage:**

  4 = Primary voltage 400 V_{AC}
- **Line cable current:**

  6 = 60 A

  8 = 85 A
- **Type of cooling:** 0 = Without heat sink
- **Housing design:** N = Degree of protection IP10
- **Nominal power:** 040 = 4 kW / 160 = 16 kW
- **Version:** A
- **Series and generation:** 10 = Standard
- **Type of installation:** S = Stationary
- **Component:** A = Transformer module
- **Type:** T = MOVITRANS®

2.6 TLS line cables and supply cables

2.6.1 Type designation

The type designation of the line cables comprises the following characteristic data:

TLS10E

TLS10 E	MOVITRANS® stationary high frequency line cable	
-		
...	Cable cross section:	
	006	6 mm²
	008	8 mm²
	025	25 mm²
	041	41 mm²
-		
..	Design:	
	01	Single-core
	06	6-core
-		
1	Design: default	

TLS10K

TLS10 K	MOVITRANS® stationary high frequency line cable	
-		
...	Cable cross section:	
	003	3 × 3 mm²
-		
..	Design:	
	03	3-core
-		
1	Design: default	

2.7 TIS installation components

2.7.1 Type designation

The type designation of the TIS MOVITRANS® comprises following characteristic data:

Line cable holder for straight sections of track

TIS20A	MOVITRANS® stationary installation components	
-		
008	Cable cross section:	
	008	8 mm²
-		
H04	Straight track section:	
-		
0	Design: standard	

HL/HR line cable holder for bent sections of track

TIS20A	MOVITRANS® stationary installation components	
-		
008	Cable cross section:	
	008	8 mm²
-		
...	Bent section of track:	
	HL4	Bent section of track, left
	HR4	Bent section of track, right
-		
0	Design: standard	

Cable entry frame

TIS20A	MOVITRANS® stationary installation components	
-		
008	Cable cross section:	
	008	8 mm²
-		
...	Cable entry frame:	
	AL4	Cable entry frame, left
	AR4	Cable entry frame, right
-		
0	Design: standard	

2.7.2 Type designation

The type designation of the TIS10A installation component comprises the following characteristic data:

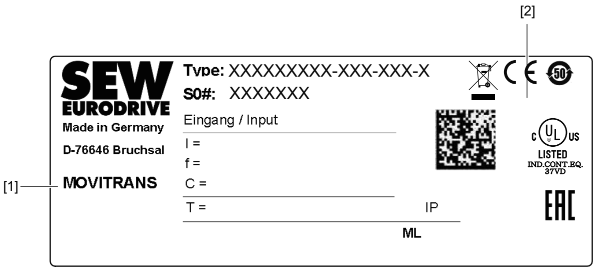
TIS10A	MOVITRANS® stationary installation components	
-		
008	Cable cross section:	
	008	8 mm²

-		
...	Cable bushing:	
	A00	Grommet
-		
0	Design: standard	

2.8 TCS10 compensation box

2.8.1 Nameplate

The nameplate lists information about the product type. The following figure shows an example of a nameplate:



30825961867

[1] Product name
[2] Approval identification

Depending on the product design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Serial number
I	Current
f	Frequency
T	Ambient temperature
IP	Degree of protection

2.8.2 Type designation

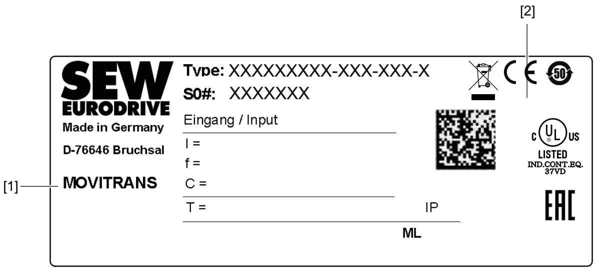
The type designation of the compensation box comprises the following characteristic data:

TCS10	MOVITRANS® stationary compensation box	
.	Housing protection class:	
	A	Housing in protection class I
	B	Housing in protection class II
E	Increased degree of protection IP65	
..	Frequency:	
	0 or A	25 kHz
	B	50 kHz
..	Line cable current:	
	6	60 A
	8	85 A
-		
...	Compensation capacity:	
	042	418 nF (only 60 A, 50 kHz)
	090	900 nF (only 60 A)
	120	1200 nF
-		
...	Design of the flange plate/connections:	
	1	4 × M25, 4 × M25
	3	2 × M32, 2 × M32

2.9 TVS connection distributor

2.9.1 Nameplate

The nameplate lists information about the product type. The following figure shows an example of a nameplate:



30825961867

[1] Product name
[2] Approval identification

Depending on the product design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Serial number
I	Current
f	Frequency
T	Ambient temperature
IP	Degree of protection

2.9.2 Type designation

The type designation of the connection distributor comprises following characteristic data:

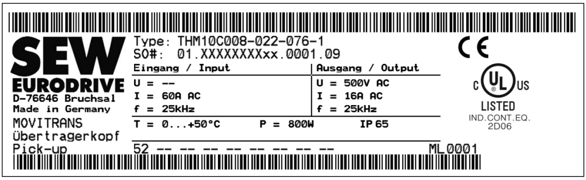
TVS10

TVS10	MOVITRANS® Stationary connection distributor	
.	Housing protection class:	
	A	Housing in protection class I
	B	Housing in protection class II
-		
E	Increased degree of protection IP65	
..	Line cable current:	
	06	60 A
	08	80 A
-		
000	Compensation capacity: not integrated	
-		
.	Design of the flange plate/connections:	
	1	4 x M25, 2 x M32
	2	2 x M32, 2 x M32

2.10 THM10C pick-up

2.10.1 Nameplate

The THM10C pick-up has a nameplate that provides important information. The following figure shows an example of a nameplate:



1530909195

Type	Type designation	f	Frequency
V	Voltage	P	Output power
I	Current	T	Ambient temperature

2.10.2 Type designation

The type designation of the MOVITRANS® THM10C pick-up comprises the following device characteristic data:

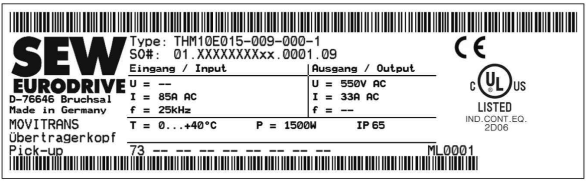
T H M 10 C 008 - 022 - 076 - 1

- **Design:** 1 = Standard
- **Compensation capacity:** 076 = 76 nF
- **Inductance:** 022 = 220 µH
- **Nominal power:** 008 = 0.8 kW
- **Type of pick-up:** C = U shape
- **Series and generation**
- **Type of installation:** M = Mobile
- **Component:** H = Pick-up
- **Type:** T = MOVITRANS®

2.11 THM10E pick-up

2.11.1 Nameplate

The THM10E pick-up has a nameplate that provides important information. The following figure shows an example of a nameplate:



9007200785738123

Type	Type designation	f	Frequency
V	Voltage	P	Output power
I	Current	T	Ambient temperature

2.11.2 Type designation

The type designation of the MOVITRANS® THM10E pick-up comprises the following device characteristic data:

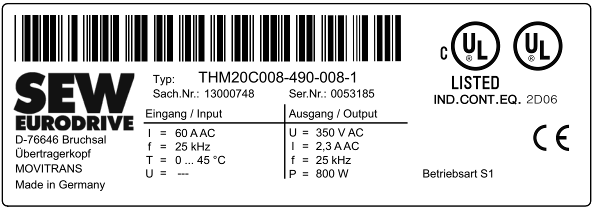
T H M 10 E 015 - 009 - 000 - 1

- **Design:** 1 = Standard
- **Compensation capacity:** 000 = Not integrated
- **Inductance:** 009 = 95 µH
- **Nominal power:** 015 = 1.5 kW
- **Type of pick-up:** E= Flat
- **Series and generation**
- **Type of installation:** M = Mobile
- **Component:** H = Pick-up
- **Type:** T = MOVITRANS®

2.12 THM20C pick-up

2.12.1 Nameplate

The THM20C pick-up has a nameplate that provides important information. The following figure shows the nameplate:



2799663115

Type	Type designation	f	Frequency
V	Voltage	P	Output power
I	Current	T	Ambient temperature

2.12.2 Type designation

The type designation of the MOVITRANS® THM20C pick-up comprises the following device characteristic data:

T H M 20 C 008 - 490 - 008 - 1

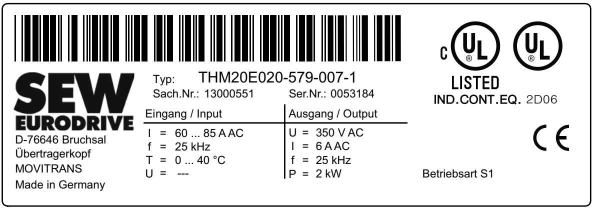
- **Design:** 1 = Standard
- **Compensation capacity:** 008 = 8 nF
- **Inductance:** 490 = 4.9 mH
- **Nominal power:** 008 = 0.8 kW
- **Type of pick-up:** C = U shape
- **Series and generation**
- **Type of installation:** M = Mobile
- **Component:** H = Pick-up
- **Type:** T = MOVITRANS®

22288228/EN – 02/2020

2.13 THM20E pick-up

2.13.1 Nameplate

The THM20E pick-up has a nameplate that provides important information. The following figure shows an example of a nameplate:



2799665931

Type	Type designation	f	Frequency
V	Voltage	P	Output power
I	Current	T	Ambient temperature

2.13.2 Type designation

The type designation of the MOVITRANS® THM20E pick-up comprises the following device characteristic data:

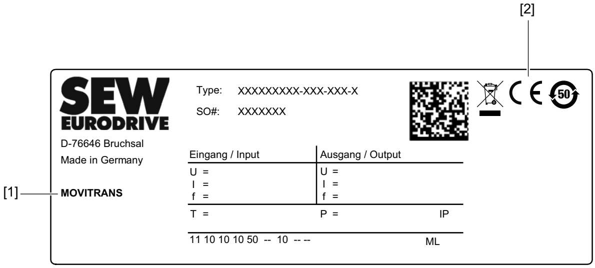
T H M 20 E 020 - 579 - 007 - 1

- **Design:**
  1 = Standard
- **Compensation capacity:** 007 = 7 nF
- **Inductance:** 579 = 5.79 mH
- **Nominal power:** 020 = 2.0 kW
- **Type of pick-up:** E= Flat
- **Series and generation**
- **Type of installation:** M = Mobile
- **Component:** H = Pick-up
- **Type:** T = MOVITRANS®

2.14 TPM12B mobile converter

2.14.1 Nameplate

The nameplate lists information about the device type. The following figure shows an example of a nameplate.



9007228575247883

[1] Product name
[2] Approval identification

Depending on the device design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Serial number
U	Voltage
I	Current
f	Frequency
T	Ambient temperature
P	Rated output power
IP	Degree of protection

2.14.2 Device designation

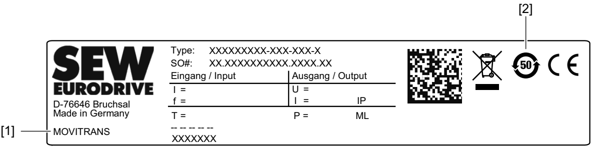
TP-M12B	MOVITRANS® mobile converter	
...	Nominal power	
	030	3 kW
	036	3.6 kW
-		
EN	Increased degree of protection with heat sink	
.	Design of the pick-up	
	E	THM10E015
	C	THM10C008
-		
5	Output voltage: DC 500 V	
A	Integrated line filters	
2	DC voltage output	
-		
2	Version	

22288228/EN – 02/2020

2.15 TDM90E pick-up

2.15.1 Nameplate

The nameplate lists information about the device type. The following figure shows an example of a nameplate:



27021619660663307

[1] Product name
[2] Approval identification

Depending on the device design, the following information is listed on the nameplate:

Value	Specification
Type	Type designation
SO#	Order number
U	Voltage
I	Current
f	Frequency
T	Ambient temperature
P	Nominal power
IP	Degree of protection

22288228/EN – 02/2020

2.15.2 Type designation

TDM90E	MOVITRANS® mobile pick-up with controlled voltage output	
...	Nominal power:	
	007	700 W
	011	1100 W
-		
D	DC	
35	Output voltage: DC 0 – 355 V depending on the state of charge of the energy storage device	
–		
.	System frequency:	
	A	25 kHz
	B	50 kHz
..	Nominal current line cable:	
	06	60 A
	08	85 A
-		
0	Standard design	

22288228/EN – 02/2020

3 MOVI-DPS®

3.1 MOVI-DPS® energy and power interface

Depending on whether you operate your application in energy or power mode, you will need a MOVI-DPS® energy interface or a MOVI-DPS® power interface for intelligent energy management.

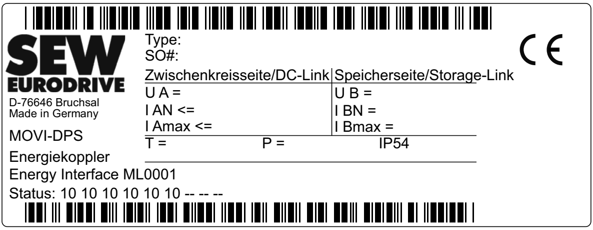
16257842315

22288228/EN – 02/2020

3.1.1 Nameplates

MOVI-DPS® energy interface

The nameplate provides important information about the MOVI-DPS® energy interface. The following figure shows an example of a nameplate:

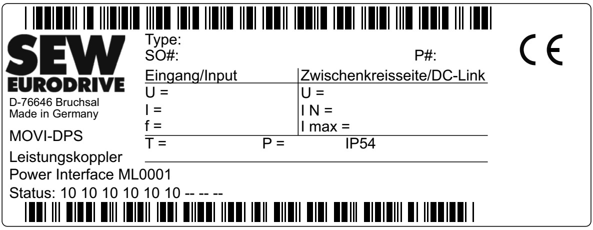


9441232523

Value		Specification
	Type	Type designation
	SO#	Production number
	P#	Part number
DC link end	U A	Voltage
	I AN	Nominal current
	I Amax	Peak current
Storage bundle end	U B	Voltage
	I BN	Nominal current
	I Bmax	Peak current
	T	Ambient temperature
	P	Rated power
	IP	Degree of protection

MOVI-DPS® power interface

The nameplate provides important information about the MOVI-DPS® power interface. The following figure shows an example of a nameplate:



13952137995

Value		Specification
	Type	Type designation
	SO#	Production number
	P#	Part number
Input	U	Nominal voltage
	I	Nominal current
	f	Frequency
DC link end	V	Nominal voltage
	I N	Nominal current
	I max	Peak current
	T	Ambient temperature
	P	Rated power
	IP	Degree of protection

3.1.2 Type designation

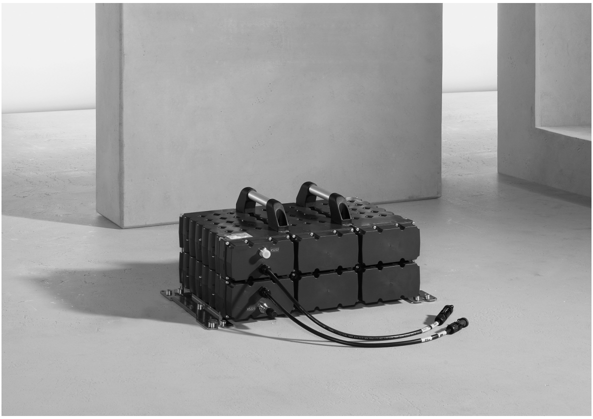
The following device data can be derived from the type designation of the MOVI-DPS® energy and power interfaces EKK-A-....-I06-500-0-0/E..:

EKK-A	MOVI-DPS® energy and power interface
-	
....	Supply voltage A400 = AC 400 V D500 = DC 500 V
-	
I06	Nominal current I06 = 6 A
-	
500	Voltage energy storage bundle in V
-	
0	Option: 0 = Temperature sensor bus
-	
0/E..	Energy management: 11 = Power mode 12 = Energy mode

3.2 MOVI-DPS® storage unit and bundle

The MOVI-DPS® storage unit stores energy and supplies the energy to the application as needed. The MOVI-DPS® storage unit is scalable and can consist of various energy modules.

Several MOVI-DPS® storage units are combined into one MOVI-DPS® storage bundle. The MOVI-DPS® storage bundle is connected directly to the MOVI-DPS® energy or power interface.



9007212062147723

3.2.1 Nameplate

Each MOVI-DPS® storage unit has a nameplate that provides important information. The following figure shows an example of a nameplate with the data of a MOVI-DPS® storage unit:

9007206232519051

S/N	Production number
Type	Type designation
EKS	Number of MOVI-DPS® storage units in a MOVI-DPS® storage bundle (example: 1/3 = MOVI-DPS® storage unit 1 of 3)
U_N	Nominal voltage
C_N	Nominal capacity
U_{max}	Maximum operating voltage
I_{max}	Peak current for 1 s
T	Permitted ambient temperature

3.2.2 Type designation of MOVI-DPS® storage units

The type designation of the MOVI-DPS® storage unit EKS...A-......M...S..-00 comprises the following device characteristic data:

EKS...A	MOVI-DPS® storage unit
-..	Nominal voltage: Value × 10 V
.	Connection: P = Parallel connection S = Series connection
...	Nominal capacitance per cell 350 = 350 F 100 = 100 F
M	Energy modules
.	Number of energy modules at x axis (maximum 4)
.	Number of energy modules at y axis (maximum 3)
S	Cell monitoring = standard
.	Waste heat: P = Passive A = Active, with fan assembly (only for 350 F and number of energy modules on x axis = 3)
..-00	Connection type

3.2.3 Type designation of MOVI-DPS® storage bundle

The type designation of the MOVI-DPS® storage bundle EKV...A-..S...-00 comprises the following device characteristic data:

EKV...A	MOVI-DPS® storage bundle
-	
..	Nominal voltage: Value × 10 V
.	Connection: P = Parallel connection S = Series connection
...-00	Nominal capacitance per cell in F

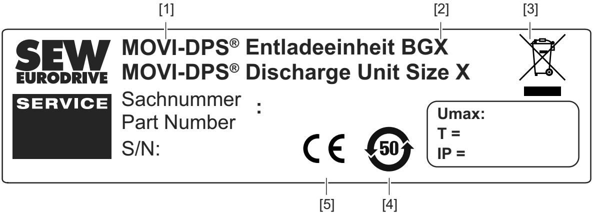
3.3 MOVI-DPS® discharge unit

The device is connected to the MOVI-DPS® energy or power interface and serves to discharge the MOVI-DPS® storage bundle. This is necessary so that you can disconnect the MOVI-DPS® storage bundle from the MOVI-DPS® energy or power interface.

18166899339

3.3.1 Nameplate

The nameplate lists information about the device type. The following figure shows an example of a nameplate:



27021607501569419

[1] Product name (German/English)
[2] Size
[3] Designation in accordance with WEEE Directive
[4] China RoHS-2 marking
[5] CE marking

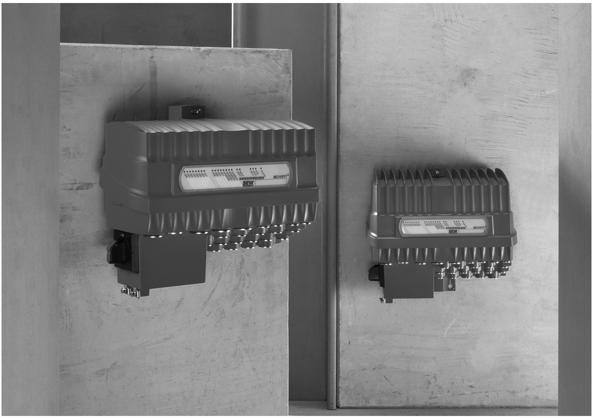
Depending on the device design, the following information is listed on the main nameplate:

Value	Specification
Part Number	Part number
S/N	Serial number
U_{max}	Maximum storage voltage
T	Operating temperature
IP	Degree of protection

4 MOVIFIT®

4.1 Description

MOVIFIT® is a decentralized drive controller for controlling the drive units/AC motors.



11908327819

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

MOVIFIT® units have the following characteristics:

- Aluminum die-cast housing
  - Excellent stability
  - IP65 design (optional hygienic version with increased degree of protection)
- Separation of connection unit (ABOX) and electronics (EBOX)
  - No damage/contamination to the EBOX during installation/maintenance
  - Data backup of user parameters possible
  - Fast replacement of EBOX without wiring work

4.1.1 Designs

MOVIFIT® is available in the following designs:

- MOVIFIT® FDC — Controller for controlling MOVIGEAR® B/DRC.. drive units
- MOVIFIT® MC — Controller for controlling MOVIMOT® drives
- MOVIFIT® SC — Motor starter for controlling AC motors
- MOVIFIT® FC — Frequency inverter for controlling AC motors

4.1.2 MOVIFIT® FDC device properties

MOVIFIT® FDC is a decentralized drive controller for controlling up to 16 drive units.

MOVIFIT® FDC is characterized by the following features:

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

4.1.3 MOVIFIT® MC device properties

MOVIFIT® MC is a decentralized drive controller for controlling up to 3 MOVIMOT® gearmotors.

MOVIFIT® MC is characterized by the following features:

- Up to three MOVIMOT® drives can be connected via hybrid cable
- Voltage range 3 × 380 – 500 V
- Integrated power distribution and line protection
- Optional maintenance switch
- Integrated fieldbus interfaces
  - PROFIBUS
  - PROFINET IO
  - PROFINET POF
  - EtherNet/IP™
  - Modbus TCP
  - DeviceNet™
- Digital inputs/outputs
- CAN/SBus interface
- "Safe torque off" STO function
- S12 safety option with safety-related inputs and outputs
- Simple and fast parameterization via DIP switches or fieldbus

22288228/EN – 02/2020

4.1.4 MOVIFIT® SC device properties

MOVIFIT® SC is a decentralized drive controller with integrated motor starter for controlling up to 2 gearmotors.

MOVIFIT® SC is characterized by the following features:

- Electronic (contactless) motor starter
  - When 2 motors are connected (dual-motor starter): 1 direction of rotation
  - When 1 motor is connected (reversing starter): 2 directions of rotation
- Power range
  - When 2 motors are connected: 2 × 0.37 – 1.5 kW
  - When 1 motor is connected: 1 × 0.37 – 3.0 kW
- Increased safety through three-phase switching
- Integrated energy distribution
- Integrated brake management for SEW-EURODRIVE three-wire brakes
- Optional maintenance switch
- Available fieldbus interfaces
  - PROFIBUS
  - PROFINET IO
  - PROFINET POF
  - EtherNet/IP™
  - Modbus TCP
  - DeviceNet™
- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs
- CAN/SBus interface
- Simple and fast parameterization via DIP switches (Easy mode)
- Extended parameterization via fieldbus/diagnostic interface (Expert mode)

4.1.5 MOVIFIT® FC device properties

MOVIFIT® FC is a decentralized drive controller with integrated frequency inverter for controlling a gearmotor.

MOVIFIT® FC is characterized by the following features:

- Parameterizable open-loop frequency inverter
- Power range from 0.37 to 4 kW (in 2 sizes)
- Integrated energy distribution
- Integrated brake management
- Optional braking resistor
- Optional maintenance switch
- Integrated fieldbus interface
  - PROFIBUS
  - PROFINET IO
  - PROFINET POF
  - EtherNet/IP™
  - Modbus TCP
  - DeviceNet™
- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs
- CAN/SBus interface
- "Safe torque off" STO function
- S12 safety option with safety-related inputs and outputs
- Simple and fast parameterization via DIP switches (Easy mode)
- Extended parameterization via fieldbus or diagnostic interface (Expert mode)

22288228/EN – 02/2020

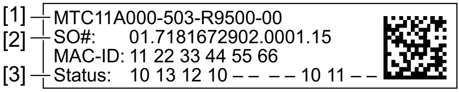
4.2 MOVIFIT® FDC type designation

4.2.1 EBOX

EBOX nameplates

Outer nameplate EBOX

The following figure shows an example of an **outer** nameplate of the EBOX of MOVIFIT® FDC:

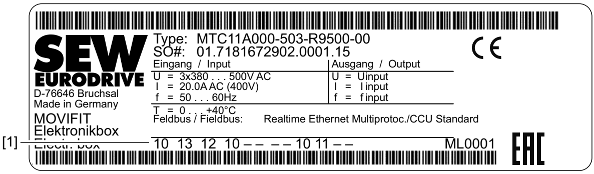


13849000075

[1] EBOX type designation
[2] Serial number
[3] Status field

Inner nameplate EBOX

The following figure shows an example of an **inner** nameplate of the EBOX of MOVIFIT® FDC:



18014401809034891

[1] EBOX status field

EBOX type designation

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

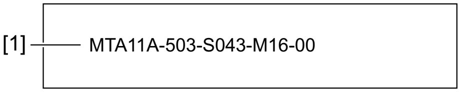
MT	**Series**	MT = MOVIFIT®
C	**Device type**	C = MOVIFIT® FDC
11	**Series**	11 = Standard (IP65) 13 = Design for wet areas (IP65)
A	**Version A**	
000	**Device power**	000 = MTC variant (MOVIFIT® FDC)
-		
50	**Connection voltage**	50 = 380 V – 500 V
3	**Connection type**	3 = 3-phase (AC)
-		
R9500	**Design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

4.2.2 ABOX

ABOX nameplates

ABOX device identification

The following figure shows an example of the ABOX identification tag of MOVIFIT® FDC:

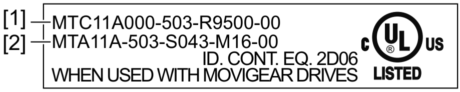


13850947211

[1] ABOX type designation

Outer nameplate ABOX

The following figure shows an example of an **outer** nameplate of the ABOX of MOVIFIT® FDC:

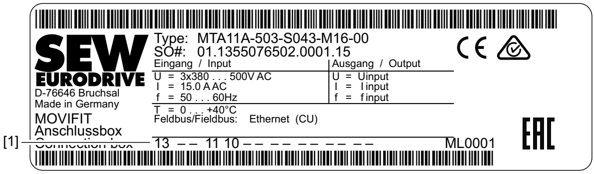


13851078411

[1] EBOX type designation
[2] ABOX type designation

Inner nameplate ABOX

The following figure shows an example of an **inner** nameplate of the ABOX of MOVIFIT® FDC:



18014401814055563

[1] ABOX status field

ABOX type designation

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

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

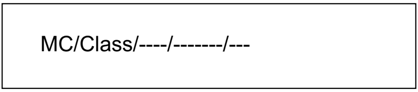
4.3 MOVIFIT® MC type designation

4.3.1 EBOX

EBOX nameplates

EBOX identification tag

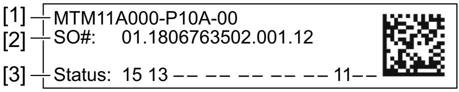
The following figure shows an example of the identification tag of the MOVIFIT® MC EBOX:



13469955083

EBOX external nameplate

The following figure shows an example of the **external** nameplate of the MOVIFIT® MC EBOX:

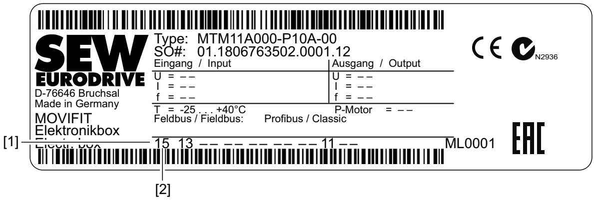


5836399115

[1] EBOX type designation
[2] Serial number
[3] Status field

EBOX internal nameplate

The following figure shows an example of the **internal** nameplate of the MOVIFIT® MC EBOX:



5836380299

[1] EBOX status field
[2] Firmware status of control unit

EBOX type designation

The following table shows an example of the type designation of the MOVIFIT® EBOX **MTM11A000-P10A-00/S11**:

MT	**Series**	MT = MOVIFIT®
M	**Device type**	M = MOVIFIT® MC (Controller)
11	**Series**	11 = Standard (IP65)
A	**Version A**	
000	**Device power**	000 = MTM version (MOVIFIT® MC)
-		
P1	**Fieldbus**	P1 = PROFIBUS E2 = PROFINET IO D1 = DeviceNet™ E3 = EtherNet/IP™, Modbus TCP[1)]
0	**Function level**	0 = Classic 1 = Technology
A	**Version A**	
-		
00	**EBOX design**	00 = Series
/		
S11	**EBOX option**	S11 = PROFIsafe option S11[2)] S12A = S12A safety option S12B = S12B safety option

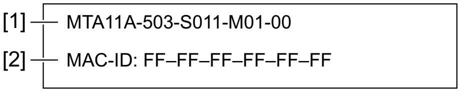
1) Available only in conjunction with "Technology" function level
2) Available only in conjunction with PROFIBUS or PROFINET IO

4.3.2 ABOX

ABOX nameplates

ABOX identification tag

The following figure shows an example of the identification tag of the MOVIFIT® MC ABOX:

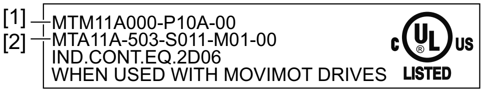


13470606859

[1] ABOX type designation
[2] MAC ID of the fieldbus interface

ABOX external nameplate

The following figure shows an example of the **external** nameplate of the MOVIFIT® MC ABOX:

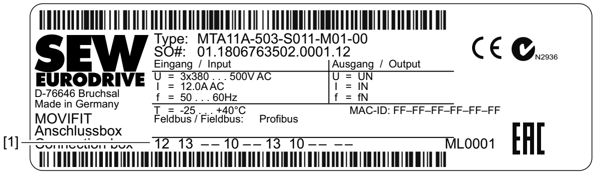


13470300171

[1] EBOX type designation
[2] ABOX type designation

ABOX internal nameplate

The following figure shows an example of the **internal** nameplate of the MOVIFIT® MC ABOX:

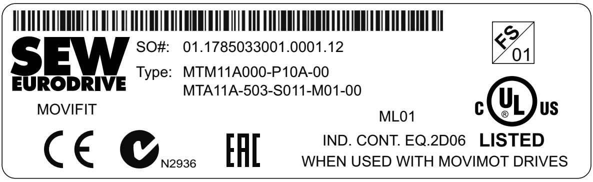


5836636555

[1] ABOX status field

Nameplate of complete unit

The following figure provides an example of a nameplate of the complete MOVIFIT® MC device (EBOX and ABOX):



6872634379

This overall device nameplate is only available if the EBOX and the ABOX have been ordered as one unit.

INFORMATION

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

FS logo description

The FS logo can be displayed on the complete device nameplate of MOVIFIT® in the following design:

FS 01

MOVIFIT® with STO (with or without S11B PROFIsafe option)

For more information about MOVIFIT® with **FS01** logo, refer to the "MOVIFIT® FC – Functional Safety / PROFIsafe Option S11B" manual.

ABOX type designation

The following table shows an example of the type designation of the MOVIFIT® ABOX **MTA11A-503-S011-M01-00/ST1/M11**:

MT	**Series**	MT = MOVIFIT®
A	**Device type**	A = ABOX (connection unit)
11	**Series**	11 = Standard (IP65)
A	**Version A**	
-		
50	**Connection voltage**	50 = AC 380 – 500 V
3	**Connection type**	3 = 3-phase
-		
S01	**Connection configuration**	S01 = Standard ABOX with terminals and cable bushings
		S41 = Hybrid ABOX with M12 for I/Os
		S51 = Hybrid ABOX with M12 for I/Os + bus
		S61 = Hybrid ABOX with M12 for I/Os, push-pull RJ45 for bus
		I51 = Hybrid ABOX with circular connector (TE/Intercontec) 3× MOVIMOT® downward motor output, M12 for I/Os + bus
		G51 = Hybrid ABOX with circular connector (TE/Intercontec) 3× MOVIMOT® motor output at the front, M12 for I/Os + bus
		I61 = Hybrid ABOX with circular connector (TE/Intercontec) 3× MOVIMOT® downward motor output, M12 for I/Os, push-pull RJ45 for bus
		G61 = Hybrid ABOX with circular connector (TE/Intercontec) 3× MOVIMOT® motor output at the front, M12 for I/Os, push-pull RJ45 for bus
1	**Fieldbus**	1 = PROFIBUS
		2 = DeviceNet™
		3 = EtherNet/IP™, PROFINET IO, Modbus TCP
-		
M01	**Maintenance switch**	M01 = Load disconnector and line protection up to 12 A[1)]
		M14 = Load disconnector and line protection up to 9 A[2)]
		M15 = Load disconnector and line protection up to 12 A[2)]
-		
00	**ABOX design**	00 = Series
/		
ST1	**ABOX option 1**	ST1 = Prewired 24V_C, 24V_O, 24V_P

/		
M11	**ABOX option 2**	00S = STO Plug connector[3)]
		M11 = Stainless steel mounting rail
		M1S = Stainless steel mounting rail and STO plug connector[3)]
		M2A = Corrosion-resistant mounting rail
		M2S = Corrosion-resistant mounting rail and STO plug connector[3)]

1) In conjunction with UL, the maintenance switch is only a load disconnector.
2) Only available in conjunction with UL.
3) In conjunction with prewiring (ABOX option 1), the STO plug connector is not available.

22288228/EN – 02/2020

4.4 MOVIFIT® SC type designation

4.4.1 EBOX

EBOX nameplates

EBOX unit identification

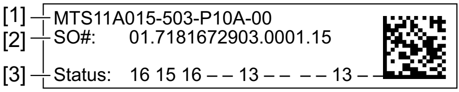
The following figure shows an example of the EBOX unit identification of MOVIFIT® SC:

SC/Class/1,5 kW/-------/--

13843561355

Outer nameplate EBOX

The following figure shows an example of an **outer** nameplate of the EBOX of MOVIFIT® SC:

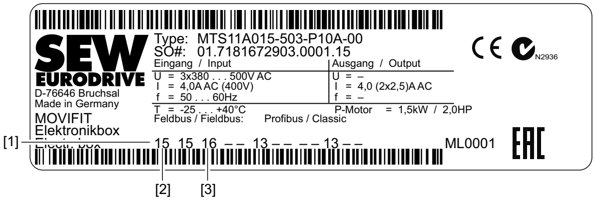


9007204902821515

[1] EBOX type designation
[2] Serial number
[3] Status field

Inner nameplate EBOX

The following figure shows an example of an **inner** nameplate of the EBOX of MOVIFIT® SC:



27021598612816139

[1] EBOX status field
[2] Firmware status control unit
[3] Firmware status power section

22288228/EN – 02/2020

EBOX type designation

The following table shows an example of the type designation of the MOVIFIT® EBOX **MTS11A015- 503 - P10A - 00**:

MT	**Series**	MT = MOVIFIT®
S	**Device type**	S = MOVIFIT® SC (motor starters)
11	**Series**	11 = Standard (IP65)
		12 = Hygienic^plus (IP69K)
A	**Version A**	
015	**Device power**	015 = 1.5 kW
		030 = 3.0 kW
-		
50	**Connection voltage**	50 = AC 380 – 500 V
3	**Connection type**	3 = 3-phase
-		
P1	**Fieldbus**	P1 = PROFIBUS
		E2 = PROFINET IO
		D1 = DeviceNet™
		E3 = EtherNet/IP™, Modbus TCP[1)]
		Z1 = SBus slave
0	**Function level**	0 = Classic
		1 = Technology
A	**Version A**	
-		
00	**EBOX design**	00 = Series

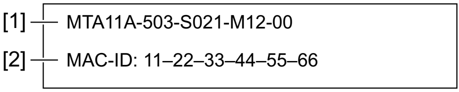
1) Available only in conjunction with "Technology" function level

4.4.2 ABOX

ABOX nameplates

ABOX identification tag

The following figure shows an example of the ABOX identification tag of MOVIFIT® SC:

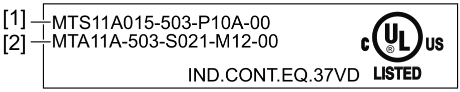


13843641099

[1] ABOX type designation
[2] MAC ID of the fieldbus interface

Outer nameplate ABOX

The following figure shows an example of an **outer** nameplate of the ABOX of MOVIFIT® SC:

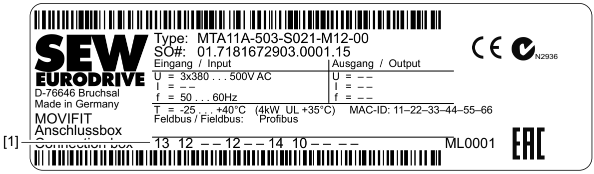


13843722251

[1] EBOX type designation
[2] ABOX type designation

Inner nameplate ABOX

The following figure shows an example of an **inner** nameplate of the ABOX of MOVIFIT® SC:

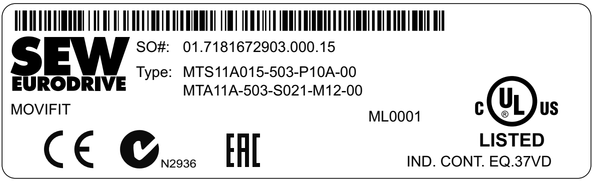


9007205017616523

[1] ABOX status field

Nameplate of the complete unit

The following figure provides an example of a nameplate of the complete MOVIFIT® SC unit (EBOX and ABOX):

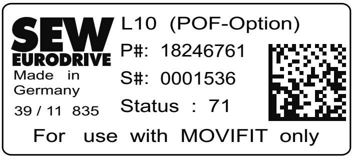


13843838347

This nameplate is only available if the EBOX and the ABOX have been ordered as one unit.

Nameplate of POF option L10

The following figure shows the nameplate of the POF option L10:



9007203097977995

ABOX type designation

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

MT	**Series**	MT = MOVIFIT®	
A	**Device type**	A = ABOX (connection unit)	
11	**Series**	11 = Standard (IP65)	
		12 = Hygienic^{plus} (IP69K)	
A	**Version A**		
-			
50	**Connection voltage**	50 = AC 380 – 500 V	
3	**Connection type**	3 = 3-phase	
-			
S02	**Connection configuration**	S02 =	Standard ABOX with terminals and cable bushings
		S42 =	Hybrid ABOX with M12 for I/Os
		S52 =	Hybrid ABOX with M12 for I/Os + bus
		S53 =	Hybrid ABOX with M12 for I/Os + bus + 24 V output[1)]
		S62 =	Hybrid ABOX with M12 for I/Os, push-pull RJ45 for bus
		I52 =	Hybrid ABOX with circular connector (TE/Intercontec), 2× downward motor output, M12 for I/Os + bus
		G52 =	Hybrid ABOX with circular connector (TE/Intercontec), 2× motor output at the front, M12 for I/Os + bus
		I55 =	Hybrid ABOX with circular connector (TE/Intercontec), 1× downward motor output, M12 for I/Os and bus
		G55 =	Hybrid ABOX with circular connector (TE/Intercontec), 1× motor output at the front, M12 for I/Os + bus
		I62 =	Hybrid ABOX with circular connector (TE/Intercontec), 2× downward motor output, M12 for I/Os, push-pull RJ45 for bus
		G62 =	Hybrid ABOX with circular connector (TE/Intercontec), 2× motor output at the front, M12 for I/Os, push-pull RJ45 for bus
		I65 =	Hybrid ABOX with circular connector (TE/Intercontec), 1× downward motor output, M12 for I/Os, push-pull RJ45 for bus
		G65 =	Hybrid ABOX with circular connector (TE/Intercontec), 1× motor output at the front, M12 for I/Os, push-pull RJ45 for bus

1	**Fieldbus**	1 = PROFIBUS 2 = DeviceNet™ 3 = EtherNet/IP™, PROFINET IO, Modbus TCP
-		
D01	**Maintenance switch**	D01 = Load disconnector M12 = Load disconnector and line protection up to 9 A[2]
-		
00	**ABOX design**	00 = Series
/		
M11	**ABOX option**	M11 = Stainless steel mounting rail M2A = Corrosion-resistant mounting rail L10 = PROFINET interface SCRJ/POF (POF option L10)[1]

1) POF option L10 and S53 connection configuration are available only in combination.
2) Only available in conjunction with UL.

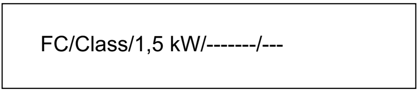
4.5 MOVIFIT® FC type designation

4.5.1 EBOX

EBOX nameplates

EBOX identification tag

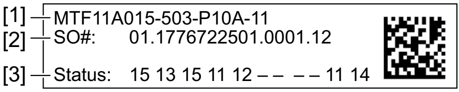
The following figure shows an example of the EBOX identification tag of MOVIFIT® FC:



13324613771

Outer nameplate EBOX

The following figure shows an example of an **outer** nameplate of the EBOX of MOVIFIT® FC:

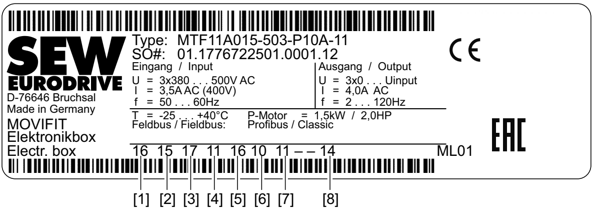


9007203920804107

[1] EBOX type designation
[2] Serial number
[3] Status field

Inner nameplate EBOX

The following figure shows an example of an **inner** nameplate of the EBOX of MOVIFIT® FC:



36028797831543307

[1] Firmware status control unit
[2] Hardware status control unit
[3] Firmware status power section
[4] Version of data set power section
[5] Hardware status power section
[6] Firmware status safety option
[7] Hardware status safety option
[8] Motor data set version

EBOX type designation

The following table shows an example of the type designation of the MOVIFIT® EBOX **MTF11A015-503-P10A -00/S11**:

MT	**Series**	MT = MOVIFIT®
F	**Device type**	F = MOVIFIT® FC (frequency inverters)
11	**Series**	11 = Standard (IP65)
		12 = Hygienicplus (IP69K)
A	**Version A**	
015	**Device power**	003 = 0.37 kW
		005 = 0.55 kW
		007 = 0.75 kW
		011 = 1.1 kW
		015 = 1.5 kW
		022 = 2.2 kW
		030 = 3.0 kW
		040 = 4.0 kW
-		
50	**Connection voltage**	50 = AC 380 – 500 V
3	**Connection type**	3 = 3-phase
-		
P1	**Fieldbus**	P1 = PROFIBUS
		E2 = PROFINET IO
		D1 = DeviceNet™
		E3 = EtherNet/IP™, Modbus TCP[1)]
		Z1 = SBus slave
0	**Function level**	0 = Classic
		1 = Technology
A	**Version A**	
-		
18	**EBOX design**	01 = DAS motor 400 V, 50 Hz
		10 = DRS motor 400 V, 50 Hz
		11 = DRE motor 400 V, 50 Hz
		12 = DRS motor 460 V, 60 Hz
		13 = DRE motor 460 V, 60 Hz
		14 = DRS-DRE motor 380 V, 60 Hz
		15 = DRS-DRE motor 50 – 60 Hz
		16 = DRP motor 400 V, 50 Hz
		17 = DRP motor 460 V, 60 Hz
		18 = DRN motor 400 V, 50 Hz
		19 = DRN motor 460 V, 60 Hz
		20 = DRN motor 50 – 60 Hz

22288228/EN – 02/2020

/		
S11	**EBOX option**	S11 = PROFIsafe option S11[2]
		S12A = S12A safety option
		S12B = S12B safety option

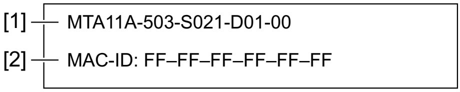
1) Available only in conjunction with "Technology" function level
2) Only available in conjunction with PROFIBUS or PROFINET IO

4.5.2 ABOX

ABOX nameplates

ABOX identification tag

The following figure shows an example of the ABOX identification tag of MOVIFIT® FC:

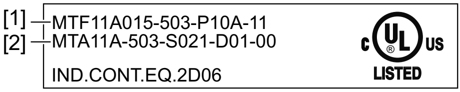


13458059019

[1] ABOX type designation
[2] MAC ID of the fieldbus interface

Outer nameplate ABOX

The following figure shows an example of an **outer** nameplate of the ABOX of MOVIFIT® FC:

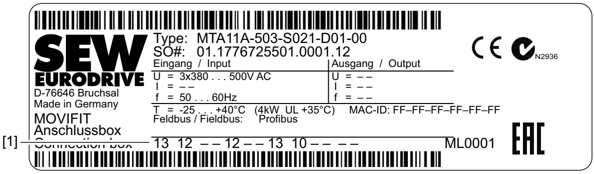


13458448395

[1] EBOX type designation
[2] ABOX type designation

Inner nameplate ABOX

The following figure shows an example of an **inner** nameplate of the ABOX of MOVIFIT® FC:



36028797831544971

[1] ABOX status field

Nameplate of the complete unit

The following figure provides an example of a nameplate of the complete MOVIFIT® FC device (EBOX and ABOX):

27021604655237003

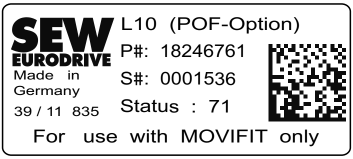
This overall device nameplate is only available if the EBOX and the ABOX have been ordered as one unit.

INFORMATION

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

Nameplate of POF option L10

The following figure shows the nameplate of the POF option L10:



9007203097977995

ABOX type designation

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

MT	**Series**	MT = MOVIFIT®
A	**Device type**	A = ABOX (connection unit)
11	**Series**	11 = Standard (IP65) 12 = Hygienic^plus (IP69K)
A	**Version A**	
-		
50	**Connection voltage**	50 = AC 380 – 500 V
3	**Connection type**	3 = 3-phase
-		
S02	**Connection configuration**	S02 = Standard ABOX with terminals and cable bushings S42 = Hybrid ABOX with M12 for I/Os S52 = Hybrid ABOX with M12 for I/Os + bus S53 = Hybrid ABOX with M12 for I/Os + bus + 24 V output[1)] S62 = Hybrid ABOX with M12 for I/Os, push-pull RJ45 for bus I55 = Hybrid ABOX with circular connector (TE/Intercontec), 1× downward motor output, M12 for I/Os and bus G55 = Hybrid ABOX with circular connector (TE/Intercontec), 1× motor output at the front, M12 for I/Os + bus I62 = Hybrid ABOX with circular connector (TE/Intercontec), 2× downward motor output, M12 for I/Os, push-pull RJ45 for bus[2)] I65 = Hybrid ABOX with circular connector (TE/Intercontec), 1× downward motor output, M12 for I/Os, push-pull RJ45 for bus G65 = Hybrid ABOX with circular connector (TE/Intercontec), 1× motor output at the front, M12 for I/Os, push-pull RJ45 for bus
1	**Fieldbus**	1 = PROFIBUS 2 = DeviceNet™ 3 = EtherNet/IP™, PROFINET IO, Modbus TCP
-		
D01	**Maintenance switch**	D01 = Load disconnector M11 = Load disconnector and line protection up to 4 A[3)] M12 = Load disconnector and line protection up to 9 A[3)]

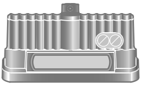
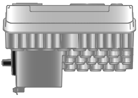
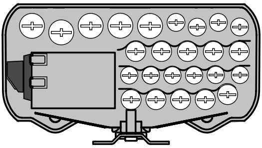
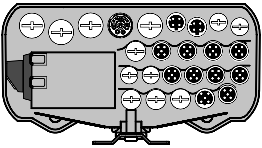
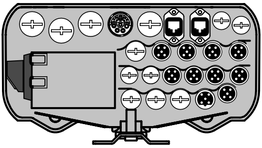
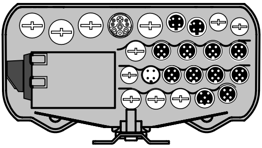
22288228/EN – 02/2020

-		
00	**ABOX design**	00 = Series 30 = Dual-motor operation 33 = Dual-motor group drive
/		
BW1	**ABOX option 1**	BW1/BW2 = Integrated braking resistor
/		
M11	**ABOX option 2**	00S = STO plug connector M11 = Stainless steel mounting rail M1S = Stainless steel mounting rail and STO plug connector M2A = Corrosion-resistant mounting rail M2S = Corrosion-resistant mounting rail and STO plug connector L10 = PROFINET interface SCRJ/POF (POF option L10)[1)] L1S = PROFINET interface SCRJ/POF (POF option L10)[1)] and STO plug connector

1) POF option L10 and S53 connection configuration are available only in combination.
2) Only for the dual motor operation and dual motor group drive designs.
3) Only available in conjunction with UL.

4.6 Combinations with MOVIFIT® FDC

The following figures show the MOVIFIT® FDC variants:

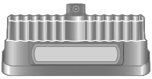
EBOX	ABOX	Design
MTC...-...-00  MOVIFIT® FDC for controlling MOVIGEAR® and DRC.. drive units	 ABOX	**MTA...-S04.-...-0**  Standard ABOX with terminals and cable bushings
		MTA...-S54.-...-00  Hybrid ABOX with M23 plug connectors for MOVIGEAR®/DRC.. and M12 for I/Os and bus
		MTA...-S64.-...-00  Hybrid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

4.7 Combinations with MOVIFIT® MC, SC, and FC

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

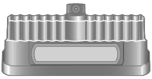
EBOX

MTM...-...-00



MOVIFIT® MC for controlling up to 3 MOVIMOT® drives

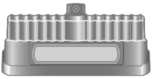
MTS...-...-00



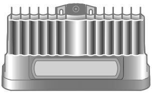
MOVIFIT® SC with integrated motor starter

MTF...-...-00

Size 1

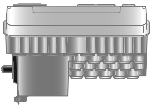


Size 2



MOVIFIT® FC with integrated frequency inverter

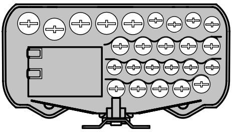
ABOX



ABOX

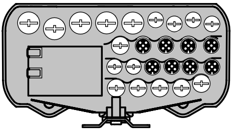
Design

MTA...-S01.-...-00 (MTM)1)
MTA...-S02.-...-00 (MTS/MTF)1)



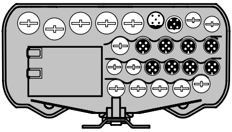
Standard ABOX
with terminals and cable bushings

MTA...-S41.-...-00 (MTM)2)
MTA...-S42.-...-00 (MTS/MTF)2)



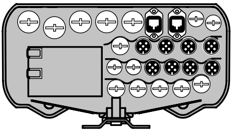
Hybrid ABOX
with M12 for I/Os

MTA...-S51.-...-00 (MTM)1)
MTA...-S52.-...-00 (MTS/MTF)1)
MTA...-S53.-...-00/L103)



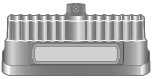
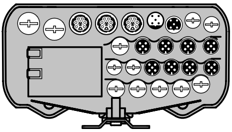
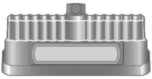
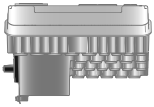
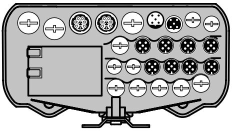
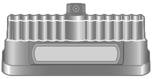
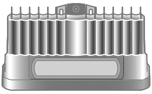
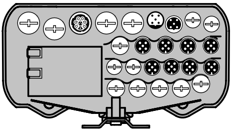
Hybrid ABOX
with M12 for I/Os and bus

MTA...-S61.-...-00 (MTM)4)
MTA...-S62.-...-00 (MTS/MTF)4)



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

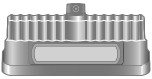
1) In conjunction with DeviceNet™: Micro Style Connector for DeviceNet™
2) Not available in conjunction with DeviceNet™
3) Only in conjunction with MTS/MTF and PROFINET Interface L10
4) Not available in conjunction with DeviceNet™ and PROFIBUS

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

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

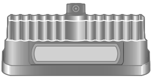
EBOX

MTM...-...-00



MOVIFIT® MC for controlling up to 3 MOVIMOT® drives

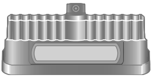
MTS...-...-00



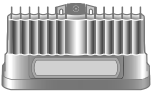
MOVIFIT® SC with integrated motor starter

MTF...-...-00

Size 1

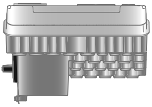


Size 2



MOVIFIT® FC with integrated frequency inverter

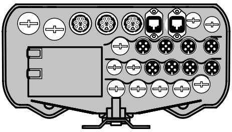
ABOX



ABOX

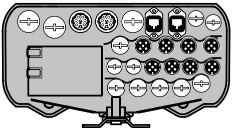
Design

MTA...-I61.-...-00 (MTM)[1)]



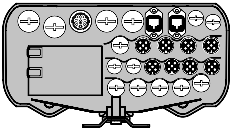
Hybrid ABOX
with 3 circular connectors (TE/Intercontec) (3 × downward MOVIMOT® output), M12 for I/Os and push-pull RJ45 for bus

MTA...-I62.-...-00 (MTS/MTF)[1)]



Hybrid ABOX
with 2 circular connectors (TE/Intercontec) (2 × downward motor output), M12 for I/Os and push-pull RJ45 for bus

MTA...-I65.-...-00 (MTS/MTF)[1)]



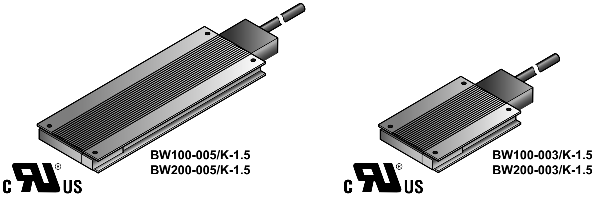
Hybrid ABOX
with 1 circular connector (TE/Intercontec) (1 × downward motor output), M12 for I/Os and push-pull RJ45 for bus

1) Not available in conjunction with DeviceNet™ and PROFIBUS

4.8 External braking resistors for MOVIFIT® FC

4.8.1 Braking resistors with IP65 degree of protection

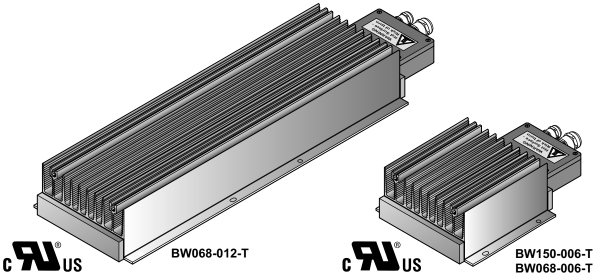
The following figure shows the external braking resistors with IP65 degree of protection:



14022228235

4.8.2 Braking resistors with IP66 degree of protection

The following figure shows the external braking resistors with IP66 degree of protection:

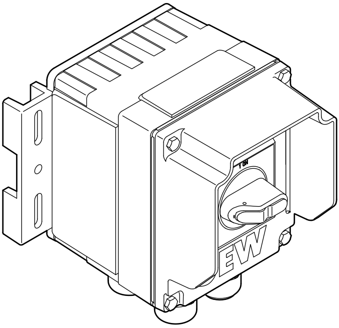


14022245771

5 CSW..B

5.1 Description

The CSW..B maintenance switch is a 3-phase load disconnector used to switch off the voltage supply of the connected drive units.



32209250315

5.1.1 Designs

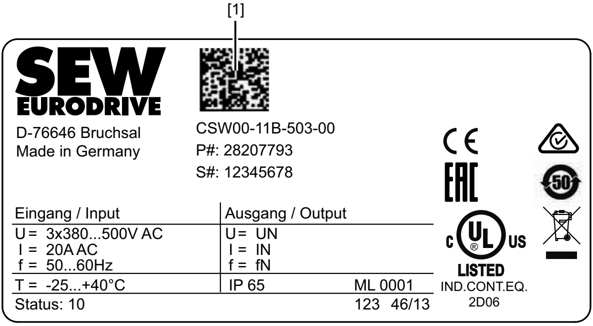
The CSW..B maintenance switch is available in the following designs:

Connection technology	Part number	Loose items	Surface protection
3 × terminal connection + EMC cable gland	28207793	1 closing plug for cable gland (plastic)	Untreated aluminum surface (standard)
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X1203, AC 400 V, encoder ring: black	28207815		
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X1241, AC 400 V, SNI, encoder ring: red	28207807		
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X1301, AC 400 V with SNI, safe disconnection (STO), encoder ring: red/yellow	28268288		
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X2327, PA AC 400 V + DC 24 V (OUT) port, encoding ring: black/green	28268296		
3 × terminal connection + EMC cable gland	28213610	1 hex head screw plug (stainless steel)	HP200 special surface treatment (design for use in wet areas)
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X1203, AC 400 V, encoder ring: black	28213629		
2 × terminal connection + EMC cable gland 1 × Intercontec plug connector X1241, AC 400 V, SNI, encoder ring: red	28213637		

5.2 CSW..B type designation

5.2.1 Nameplate

You can find the nameplate on the maintenance switch housing. The following figure shows an example of the nameplate of the CSW..B maintenance switch:



36028805795006091

[1] The DataMatrix code on the nameplate indicates the unique part number and serial number.

5.2.2 Type designation

The following table shows the type designation of the maintenance switch **CSW02-11B-503-00/IV**:

C	**Device family**	C =	Components/accessories
SW	**Device type**	SW =	Switches
0	**Function**	0 =	Maintenance switch
2	**Connection**	0 =	Cable gland
	Drive unit	1 =	Plug connector X1203, 400 V, encoder ring: black
		2 =	Plug connector X1241, 400 V + SNI, encoder ring: red
		3 =	Plug connector X1301, 400 V + SNI + STO, encoder ring: red/yellow
		4 =	Plug connector X2327, 400 V + 24 V (PA), encoder ring: black/green
-			
1	**Size**	1 =	Size 1
1	**Series**	1 =	Standard (IP65)
		3 =	Design for use in wet areas (IP65/HP200)
B	**Version B**		
-			
50	**Connection voltage**	50 =	AC 380 V – 500 V
3	**Connection type**	3 =	3-phase (AC)

22288228/EN – 02/2020

-			
00	**Design**	00 =	Series
/			
IV	**Option**	IV =	Plug connector

22288228/EN – 02/2020

6 MOVIFIT® compact

6.1 Description

MOVIFIT® compact is a decentralized drive unit for controlling AC motors.

18094511371

The mains connection is made by the integrated Weidmüller Fieldpower® contact block in the ABOX.

6.1.1 Versions

MOVIFIT® compact is available in the following designs:

• Inverter	for 1 motor with clockwise and counterclockwise rotation 4 setpoint speeds with binary or AS-Interface control 1 variable setpoint speed with SBus control
• Dual-motor starter	for 2 motors with 1 direction of rotation each. The direction of rotation depends on the phase sequence.
• Reversing starter	for 1 motor with CW and CCW operation

MOVIFIT® compact is available with the following control units:

- Control unit with AS-Interface
- Control unit with binary signal inputs and outputs
- Control unit with SBus interface

6.1.2 MOVIFIT® compact motor starter MBS.. device properties

- Electronic, contactless motor starter
- When 1 motor is connected (reversing starter): 2 directions of rotation
- When 2 motors are connected (dual-motor starter): 1 direction of rotation
- Power range

  MOVIFIT® compact reversing starter

  – MBS2RB-..: 0.18 – 2.2 kW

  – MBS4RB-..: 2.2 – 4.0 kW

  MOVIFIT® compact dual-motor starter

  – MBS4DB-..: 2 × 0.18 – 2.2 kW
- Voltage range: 3 × 380 V (-10%) – 500 V (+10%)
- Optional maintenance switch
- Integrated Weidmüller FieldPower® technology for quick connection to power grid
- Control:
  – AS-Interface
  – Binary signals
  – SBus
- Integrated motor protection functions
- Adjustable soft start/voltage ramp
- Integrated 24 V supply
- Operator panel as accessory
- Sensor inputs (in AS-Interface design)
- All connections and interfaces come as plugs

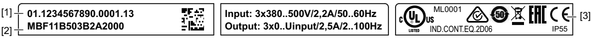
6.1.3 MOVIFIT® compact inverter MBF.. device properties

- Parameterizable, vector-controlled frequency inverter
- Power range:
  - MBF07B-..: 0.09 – 0.75 kW
  - MBF11B-..: 0.09 – 1.1 kW
  - MBF15B-..: 0.09 – 1.5 kW
- Voltage range: 3 × 380 V (-10%) – 500 V (±10%)
- Optional maintenance switch
- Optional EMC filter
- Integrated Weidmüller FieldPower® technology for quick connection to power grid
- Control:
  - AS-Interface
  - Binary signals
  - SBus
- Integrated motor protection functions
- Control mode: V/f and LVFC control
- 4 fixed setpoint speeds, parameterizable
- Integrated 24 V supply
- Operator panel as accessory
- Sensor inputs (AS-Interface version)
- All connections and interfaces come as plugs

6.2 Type designations

6.2.1 Nameplate

The image shows examples of the MOVIFIT® compact inverter nameplates:



9007216019921291

[1] Serial number
[2] Type designation
[3] The right nameplate can be found beneath the motor connections.

6.2.2 Type designation

The following table shows an example of the type designation of the MOVIFIT® compact inverter **MBF11B-503-B2-A2-0-00**:

MB	**Series**	MB = MOVIFIT® compact
F	**Device type**	F = Frequency inverter S = Motor starter
11	**Device power/ design**	07 = 0.75 kW inverter 11 = 1.1 kW inverter 15 = 1.5 kW inverter 2R = 2.2 kW reversing starter 4R = 4.0 kW reversing starter 4D = 2 × 2.2 kW dual-motor starter
B	**Version**	
–		
50	**Connection voltage**	50 = AC 380 – 500 V
3	**Connection type**	3 = 3-phase
–		
B	**Controller**	K = Via AS-Interface B = Binary control S = Via SBus
2	**Version**	
–		
A2	**Connection module**	A1 = ABOX, standard A2 = ABOX with maintenance switch
–		
0	**Filter**	0 = Without filter A = With EMC filter
–		
00	**Design**	00 = Standard design 03 = Special design with AS-Interface compatible with MOVIFIT® basic

7 MOVI4R-U®

7.1 Description

MOVI4R-U® is an inverter for controlling asynchronous motors.

9007213122181003

MOVI4R-U® frequency inverters are the ideal solution for meeting basic drive technology requirements.

7.1.1 Device properties of MOVI4R-U® inverters

The MOVI4R-U® inverter is characterized by the following:

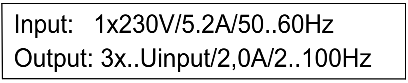
- Robust housing with IP54 protection
- Frequency inverter with V/f control
- Power range:
  - from 0.09 to 1.1 kW (size 1)
  - from 0.25 to 4.0 kW (size 2)
- Digital input control or operation at the unit
- Setpoint selection using the analog input or settings can be made on the unit
- 2 speed setpoints
- Simple startup and operation at the control plate
- Quick replacement of the power section and the control plate
- The housing can be reused

22288228/EN – 02/2020

7.2 MOVI4R-U® inverter type designation

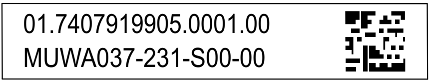
7.2.1 Nameplate of the complete device

The following figure shows an example of the nameplate of the complete MOVI4R-U® inverter device (on the side of the housing):



9007208906083339

The following figure shows an example of the nameplate of the complete MOVI4R-U® inverter device (on the front of the control plate):

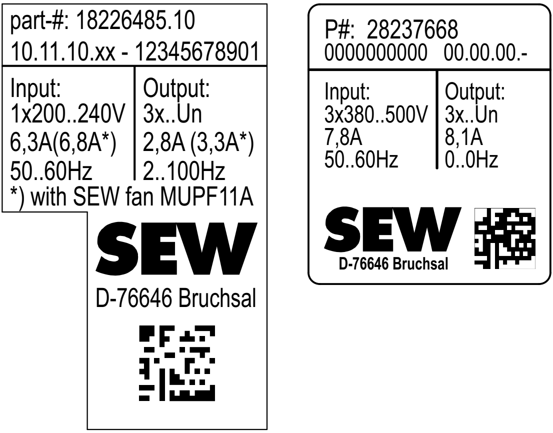


9007208906086795

7.2.2 Power section nameplate

The following figures show examples of the nameplates of the power section:

Size 1 Size 2



The nameplate of the power section can be found on the front of the power section. It is not visible from the outside when the device is closed.

7.2.3 Type designation

The following table shows an example of the type designation of the MOVI4R-U® inverter:

MU	**Series**	MU = MOVI4R-U®
W	**Series**	W = For mounting close to the motor
A	**Version A**	
037	**Output power**	025 = 0.25 kW 037 = 0.37 kW 055 = 0.55 kW 075 = 0.75 kW 110 = 1.1 kW 150 = 1.5 kW 220 = 2.2 kW 300 = 3.0 kW 400 = 4.0 kW
—		
23	**Connection voltage**	23 = AC 200 – 240 V 40 = AC 380 – 400 V 50 = AC 380 – 500 V
1	**Connection type**	1 = 1-phase 3 = 3-phase
—		
S00	**Control plate**	S00 = Standard control unit
—		
00	**Design**	00 = Standard
/		
PF	**Option**	PF = Fan

7.3 Control plate type designation

7.3.1 Control plate nameplate

The following figure shows an example of the nameplate of the control plate:

9007208907436555

The nameplate of the control plate can be found on the control plate (inside the unit). It is not visible from the outside when the device is closed.

7.3.2 Type designation

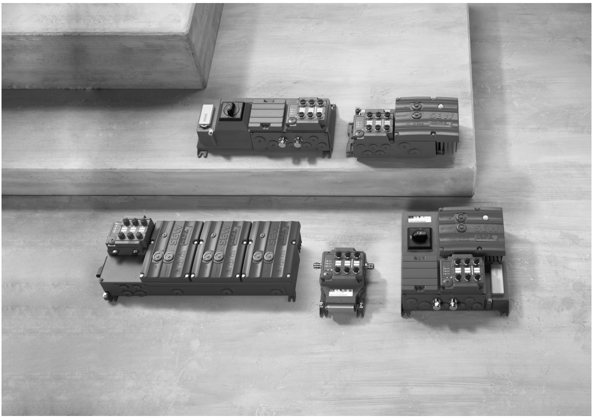
The following table shows an example of the type designation of the control plate **MUOP11A**:

MU	**Series**	MU = MOVI4R-U®
OP	**Component**	OP = Control plate
11	**Design**	11 = Standard
A	**Version**	A = Size 1 B = Size 2

8 Fieldbus interfaces and field distributors

8.1 Description

Field distributors establish an efficient connection between the MOVIMOT® or MOVI-SWITCH® drives and the power supply system, the 24 V control voltage and the fieldbus.

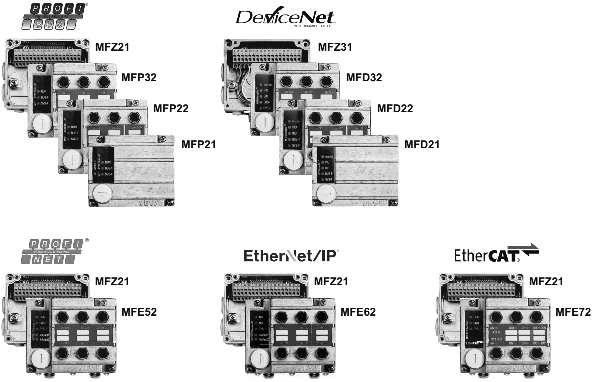


19445653259

They are based on decentralized fieldbus interface technology with additional connection technology for power distribution.

8.2 MF../Z.1 fieldbus interfaces

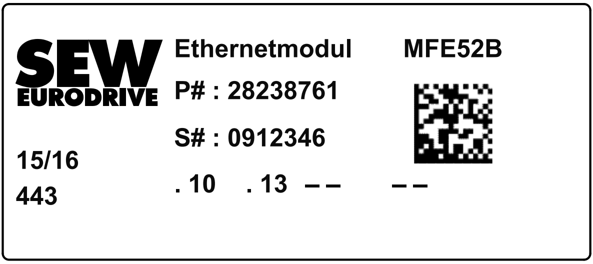
The following figure shows the dimensions of the fieldbus interface MF../Z.1:



36028798432472459

8.2.1 Nameplate

The following figure gives an example for the nameplate of a fieldbus interface:



8.2.2 Example for type designation MF../Z.1

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

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

8.2.3 PROFIBUS variants

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

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

8.2.4 PROFINET IO variant

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

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

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

22288228/EN – 02/2020

8.2.5 EtherNet/IP™ version

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

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

8.2.6 EtherCAT® variants

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

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

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

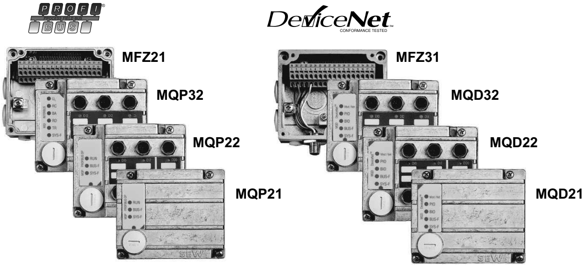
8.2.7 DeviceNet™ variants

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

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

8.3 MQ../Z.1 fieldbus interfaces

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



18014399923590411

8.3.1 Example for type designation MQ../Z.1

The following table shows the type designation of the fieldbus interfaces MQP21D/Z21D as an example:

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

8.3.2 PROFIBUS variants

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

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

8.3.3 DeviceNet™ variants

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

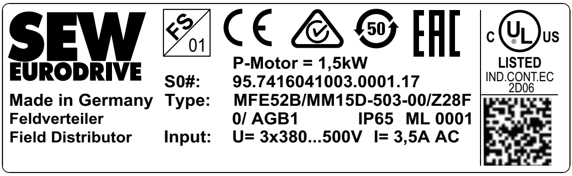
Module type **Part number**	**MQD21A** **8242003**	**MQD22A** **8242011**	**MQD32A** **824202X**
Connection technology sensors/actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box Part number Fieldbus connection technology	MFZ31A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

8.4 Field distributor

8.4.1 Nameplate

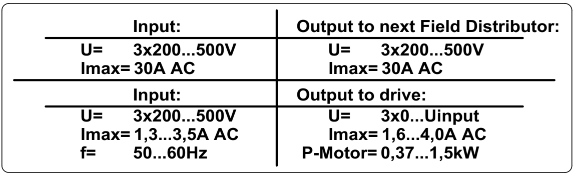
Order-specific nameplate

The following figure shows an example of the order-specific nameplate of the MFE../MM../Z.8 field distributors:



General nameplate

The following figure shows an example of the general nameplate of the MFE../MM../Z.8 field distributors:



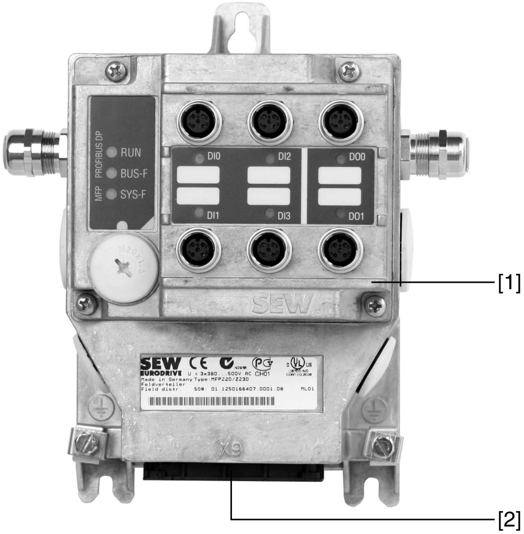
The MF../Z.1 fieldbus interface does not have a general nameplate.

Only field distributors marked with the FS logo for functional safety may be installed in safety applications. For field distributors marked with the FS logo, the safety function must be described in the documentation.

22288228/EN – 02/2020

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

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



1415970827

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

8.5.1 Device properties

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

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

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

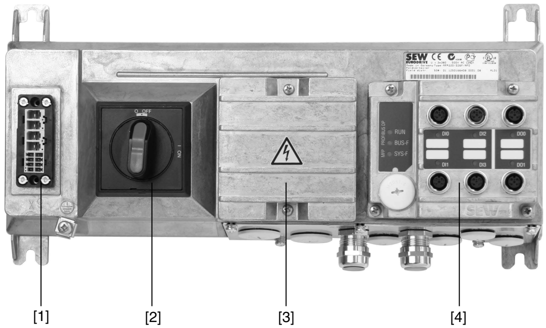
The following table shows the type designation for the field distributor MFP21D/Z23D as an example:

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

22288228/EN – 02/2020

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

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



1481358731

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

8.6.1 Device properties

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

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

22288228/EN – 02/2020

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

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

MFP 21D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™ or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
Z26F	**Connection module for controlling MOVIMOT®**		
	Z26F	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z36F	=	For DeviceNet™
	Connection module for controlling MOVI-SWITCH®		
	Z26W		For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z36W	=	For DeviceNet™
/			
AF0	**Connection technology**		
	AF0	=	Metric cable entry
	AF1	=	With micro-style connector for DeviceNet™
	AF2	=	M12 plug connector for PROFIBUS
	AF3	=	M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply

22288228/EN – 02/2020

8.7 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:

[1]

[2] [3]

1481919115

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

8.7.1 Device properties

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

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

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

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

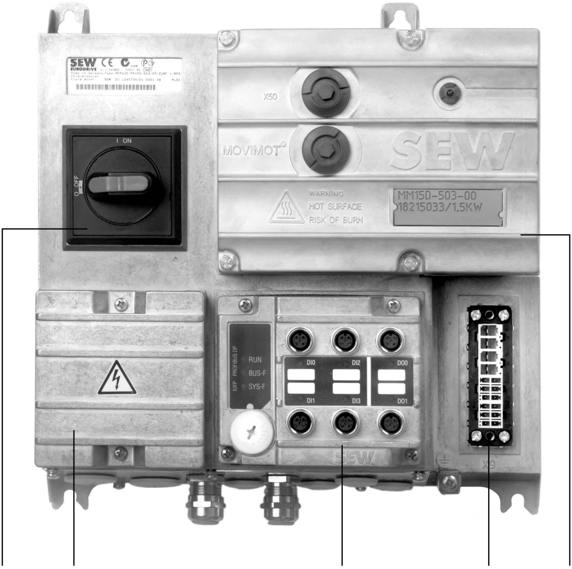
MFP 22D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™, or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
MM15 D-503-00	**MOVIMOT® inverter**		
	MM03D – MM15D...	=	MOVIMOT® inverter
/			
Z27F	**Connection module for controlling MOVIMOT®**		
	Z27F	=	For PROFIBUS, PROFINET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

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

22288228/EN – 02/2020

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

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



[1] [2] [3] [4] [5]

1482338315

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

8.8.1 Device properties

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

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

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

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

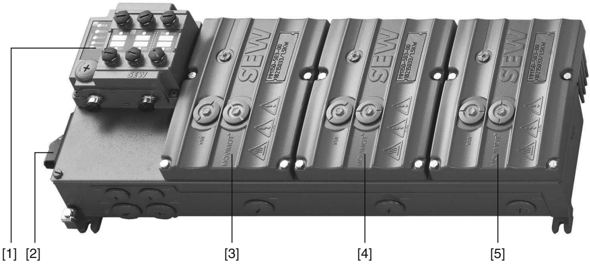
MFP 22D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™, or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
MM15 D-503-00	**MOVIMOT® inverter**		
	MM..D..	=	MOVIMOT® inverter
/			
Z28F	**Connection module for controlling MOVIMOT®**		
	Z28F	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z38F	=	For DeviceNet™
0	**Connection type**		
	0	=	⅄
	1	=	△
/			
BW1	**Braking resistor** (option)		
	BW1	=	Braking resistor for MOVIMOT® MM03 – MM15
	BW2	=	Braking resistor for MOVIMOT® MM22 – MM40
/			
AF0	**Connection technology**		
	AF0	=	Metric cable entry
	AF1	=	With micro-style connector for DeviceNet™
	AF2	=	M12 plug connector for PROFIBUS
	AF3	=	M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply

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

22288228/EN – 02/2020

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

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



19444563851

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

8.9.1 Device properties

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

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

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

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

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

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

9 MGF..-DSM

9.1 Description

MGF..-DSM is a drive unit consisting of a gear unit and a synchronous motor in a compact aluminum die-cast housing.

12728961419

9.1.1 Device properties

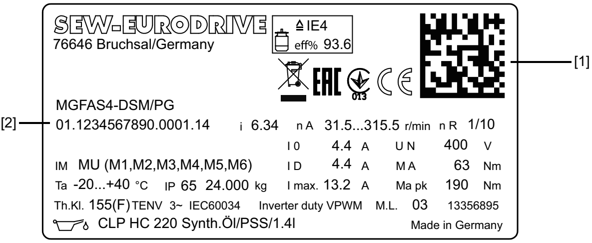
- Control via MOVITRAC® LTP-B frequency inverter
- 2 sizes (200 Nm, 40 Nm)
- Energy efficiency class IE4
- High overload capacity
- Compact design
- Thermal motor protection
- Optional design for use in wet areas
  With HP200 surface coating and IP66 degree of protection

9.2 MGF..-DSM type designation

9.2.1 Drive unit

Nameplate

The following figure gives an example of an MGF..-DSM nameplate. For the structure of the type designation, refer to the chapter "Type designation".



63050397151381771

[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

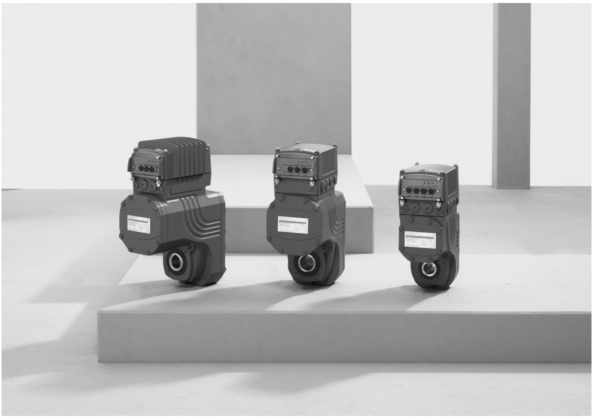
The following table shows the type designation for MGF..-DSM:

MG	**Product family**
F	**Gear unit type** F = Parallel-shaft helical gear unit
A	**Shaft design** A = Shaft-mounted gear unit (hollow shaft with key) T = TorqLOC® hollow shaft mounting system
S	**Housing mounting types** T = Drive with torque arm S = Housing with threads for mounting a torque arm
2	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
DSM	**Motor type**
/	
WA	**Option** WA = Variant for wet areas PE = Pressure compensation fitting electronics PG = Integrated pressure compensation gear unit XT = Increased torque

10 MOVIGEAR® B

10.1 Description

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



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MOVIGEAR® features impressively high system efficiency, which in turn helps lower energy costs.

10.1.1 General device properties

- Wide voltage range, 3 × AC 380 V to AC 500 V
- High overload capacity for all sizes
- 4Q capability due to integrated brake chopper and braking resistor installed as standard
- Line filter integrated as standard. EMC-compliant installation ensures compliance with limit value C3 according 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, overtemperature in the frequency inverter, overtemperature in the drive unit).
- Integrated STO safety function
  – **STO** (Safe Torque Off according to IEC 61800-5-2) by disconnecting the STO input.
  – **SS1(c)** (Safe stop 1, function variant c according to IEC 61800-5-2) by means of suitable external control (e.g. safety relay with delayed disconnection).
  – Performance level e according to EN ISO 13849-1.
  – SIL 3 according to IEC 61800-5-2.

You will find the specific device properties of DBC-B, DAC-B, DSC-B and SNI-B designs in the subsequent chapters.

10.1.2 MOVIGEAR® DBC-B device properties – Direct Binary Communication

- Simple startup without PC via DIP switches and potentiometer
- Parameterizable fixed speeds and ramps
- Binary input control and signal relay evaluation via PLC
- Local mode via binary inputs
- Interface for diagnostics and parameterization

10.1.3 MOVIGEAR® DAC-B device properties – Direct AS-Interface Communication

- Parameterizable fixed speeds and ramps
- Control via standard AS-Interface specifications
- Connection of external sensors on the actuator
- Voltage supply for connected sensor technology
- Local mode via binary inputs
- Interface for diagnostics and parameterization

10.1.4 MOVIGEAR® DSC-B device properties – Direct SBus Communication

- Line wiring
- Single control
- Integrated communication interface
- Fast communication for short cycle times
- Hybrid cables for minimum installation effort
- System bus controller for control cabinet or fieldbus installation with integrated PLC
- High drive dynamics and performance
- Optional motion control inputs (via plug connector) for local mode or sensor inputs

10.1.5 MOVIGEAR® SNI-B device properties – Single Line Network Installation

- Single control
- Reduction in number of components
- Bus cables do not have to be routed in the field
- No risk of hidden faults in the bus wiring
- Reduced startup time
- Shorter project runtimes/reduction of project costs
- Optional motion control inputs (via plug connector) for local mode or sensor inputs

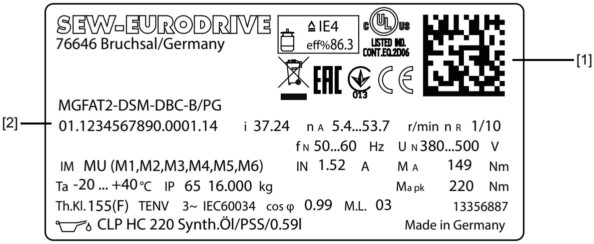
22288228/EN – 02/2020

10.2 MOVIGEAR® DBC-B type designation

10.2.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



45035998641840139

[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

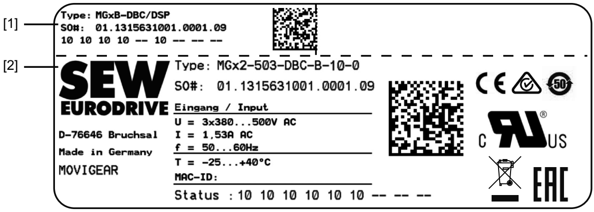
MG	**Product family** MG = MOVIGEAR®
F	**Gear unit type** F = Parallel-shaft helical gear unit
A	**Shaft design** A = Shaft-mounted gear unit (hollow shaft with key) T = TorqLOC® hollow shaft mounting system
S	**Housing mounting types** T = Drive with torque arm S = Housing with threads for mounting a torque arm
2	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
DSM	**Motor type**
–	
DBC	**MOVIGEAR® installation technology** DBC = **D**irect **B**inary **C**ommunication
–	
B	**MOVIGEAR® version**
/	

PG	MOVIGEAR® option
	DSP = Electrodynamic deceleration function DynaStop®
	ECR = Single-turn encoder/Extended control range
	ACR = Multi-turn encoder/Extended control range
	XT = Increased torque
	IV = Plug connector
	WA = Variant for wet areas
	PG = Integrated pressure compensation gear unit
	PE = Pressure compensation fitting electronics
	EBW = Connection option for external braking resistor

10.2.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] Connection unit nameplate
[2] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

MGx	**Product family** MG = MOVIGEAR®
4	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
50	**Connection voltage**1). 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DBC	**MOVIGEAR® installation technology** DBC = **D**irect **B**inary **C**ommunication
–	
B	**MOVIGEAR® version**
–	
10	**Design** 10 = Die-cast design (standard) 11 = Die-cast design (wet areas)
–	
0	**Electronics cover design** 0 = Without application slot
/	
XT	**Electronics cover option** XT = Increased torque

1) MGF..4/XT has a different connection voltage range, see chapter "Technical data"

22288228/EN – 02/2020

Type designation of connection unit

The following table shows the type designation of the connection unit:

MGx	**Product family** MG = MOVIGEAR®
B	**MOVIGEAR® version**
–	
DBC	**MOVIGEAR® installation technology** DBC = **D**irect **B**inary **C**ommunication
/	
DSP	**Connection unit option** DSP = Electrodynamic deceleration function DynaStop®

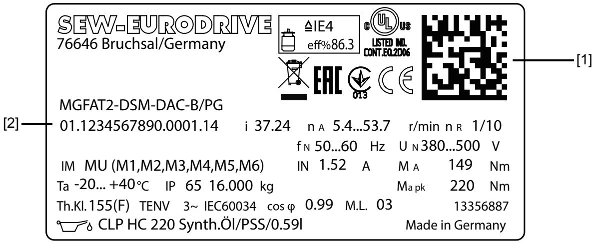
22288228/EN – 02/2020

10.3 MOVIGEAR® DAC-B type designation

10.3.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

MG	**Product family** MG = MOVIGEAR®
F	**Gear unit type** F = Parallel-shaft helical gear unit
A	**Shaft design** A = Shaft-mounted gear unit (hollow shaft with key) T = TorqLOC® hollow shaft mounting system
S	**Housing mounting types** T = Drive with torque arm S = Housing with threads for mounting a torque arm
2	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
DSM	**Motor type**
–	
DAC	**MOVIGEAR® installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
–	
B	**MOVIGEAR® version**
/	

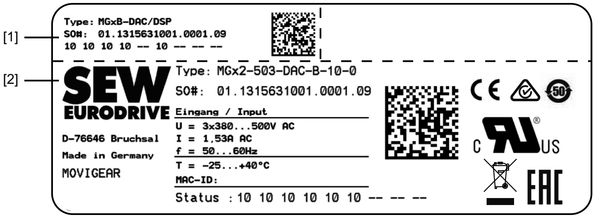
PG	**MOVIGEAR® option**
	DSP = Electrodynamic deceleration function DynaStop®
	ECR = Single-turn encoder/Extended control range
	ACR = Multi-turn encoder/Extended control range
	XT = Increased torque
	IV = Plug connector
	WA = Variant for wet areas
	PG = Integrated pressure compensation gear unit
	PE = Pressure compensation fitting electronics
	EBW = Connection option for external braking resistor

22288228/EN – 02/2020

10.3.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] Connection unit nameplate
[2] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

MGx	**Product family** MG = MOVIGEAR®
4	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
50	**Connection voltage**[1)] 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DAC	**MOVIGEAR® installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
–	
B	**MOVIGEAR® version**
–	
10	**Design** 10 = Die-cast design (standard) 11 = Die-cast design (wet areas)
–	
0	**Electronics cover design** 0 = Without application slot
/	
XT	**Electronics cover option** XT = Increased torque

1) MGF..4/XT has a different connection voltage range, see chapter "Technical data"

Type designation of the connection unit

The following table shows the type designation of the connection unit:

MGx	**Product family** MG = MOVIGEAR®
B	**MOVIGEAR® version**
–	
DAC	**MOVIGEAR® installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
/	
DSP	**Connection unit option** DSP = Electrodynamic deceleration function DynaStop®

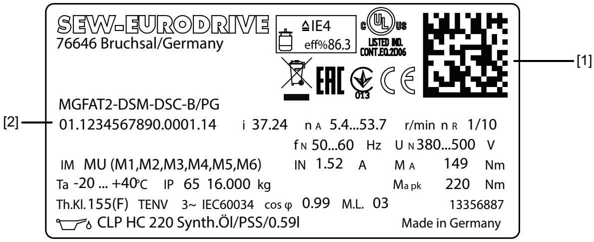
22288228/EN – 02/2020

10.4 MOVIGEAR® DSC-B type designation

10.4.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] The 2D code on the nameplate represents the unique serial number (with period as separator).

[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

MG	**Product family** MG = MOVIGEAR®
F	**Gear unit type** F = Parallel-shaft helical gear unit
A	**Shaft design** A = Shaft-mounted gear unit (hollow shaft with key) T = TorqLOC® hollow shaft mounting system
S	**Housing mounting types** T = Drive with torque arm S = Housing with threads for mounting a torque arm
2	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
DSM	**Motor type**
–	
DSC	**MOVIGEAR® installation technology** DSC = **D**irect **S**Bus **C**ommunication
–	
B	**MOVIGEAR® version**
/	

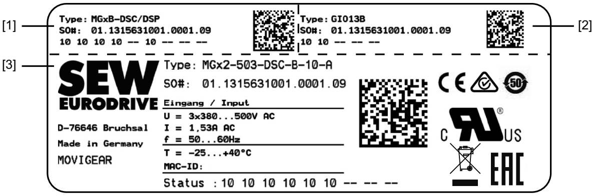
PG	**MOVIGEAR® option**
	DSP = Electrodynamic deceleration function DynaStop®
	ECR = Single-turn encoder/Extended control range
	ACR = Multi-turn encoder/Extended control range
	XT = Increased torque
	IV = Plug connector
	WA = Variant for wet areas
	PG = Integrated pressure compensation gear unit
	PE = Pressure compensation fitting electronics
	EBW = Connection option for external braking resistor
	A = Electronics cover with application slot

22288228/EN – 02/2020

10.4.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] Connection unit nameplate
[2] Nameplate of application option
[3] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

MGx	**Product family** MG = MOVIGEAR®
4	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
50	**Connection voltage**1) 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DSC	**MOVIGEAR® installation technology** DSC = **D**irect **S**Bus **C**ommunication
–	
B	**MOVIGEAR® version**
–	
10	**Design** 10 = Die-cast design (standard) 11 = Die-cast design (wet areas)
–	
A	**Electronics cover design** A = With application slot 0 = Without application slot
/	

XT	**Electronics cover option** XT = Increased torque

1) MGF..4/XT has a different connection voltage range, see chapter "Technical data"

Type designation of the connection unit

The following table shows the type designation of the connection unit:

MGx	**Product family** MG = MOVIGEAR®
B	**MOVIGEAR®** version
–	
DSC	**MOVIGEAR® installation technology** DSC = **D**irect **S**Bus **C**ommunication
/	
DSP	**Connection unit option** DSP = Electrodynamic deceleration function DynaStop®

Type designation application options

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

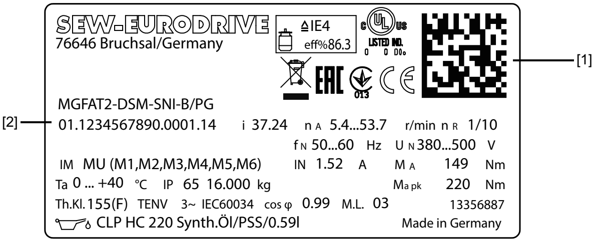
G	**Product family** G = Option for MOVIGEAR®/DRC..
IO	**Functionality** IO = Digital inputs/outputs
12	**Design** 12 = 4 digital inputs + 2 digital outputs 13 = 4 digital inputs (2 of the inputs can be used as primary frequency input) + 1 digital output + 1 analog input + 1 analog output
B	**Version**

10.5 MOVIGEAR® SNI-B type designation

10.5.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

MG	**Product family** MG = MOVIGEAR®
F	**Gear unit type** F = Parallel-shaft helical gear unit
A	**Shaft design** A = Shaft-mounted gear unit (hollow shaft with key) T = TorqLOC® hollow shaft mounting system
S	**Housing mounting types** T = Drive with torque arm S = Housing with threads for mounting a torque arm
2	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
DSM	**Motor type**
–	
SNI	**MOVIGEAR® installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
–	
B	**MOVIGEAR® version**
/	

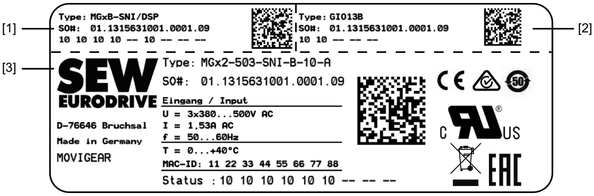
PG	**MOVIGEAR® option**
	DSP = Electrodynamic deceleration function DynaStop®
	ECR = Single-turn encoder/Extended control range
	ACR = Multi-turn encoder/Extended control range
	XT = Increased torque
	IV = Plug connector
	WA = Variant for wet areas
	PG = Integrated pressure compensation gear unit
	PE = Pressure compensation fitting electronics
	EBW = Connection option for external braking resistor
	A = Electronics cover with application slot

22288228/EN – 02/2020

10.5.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] Connection unit nameplate
[2] Nameplate of application option
[3] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

MGx	**Product family** MG = MOVIGEAR®
4	**Size** 2 = Torque class 200 Nm 4 = Torque class 400 Nm
–	
50	**Connection voltage**[1)] 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
SNI	**MOVIGEAR® installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
–	
B	**MOVIGEAR® version**
–	
10	**Design** 10 = Die-cast design (standard) 11 = Die-cast design (wet areas)
–	
A	**Electronics cover design** A = With application slot 0 = Without application slot
/	

XT	**Electronics cover option** XT = Increased torque

1) MGF..4/XT has a different connection voltage range, see chapter "Technical data"

Type designation of the connection unit

The following table shows the type designation of the connection unit:

MGx	**Product family** MG = MOVIGEAR®
B	**MOVIGEAR® version**
–	
SNI	**MOVIGEAR® installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
/	
DSP	**Connection unit option** DSP = Electrodynamic deceleration function DynaStop®

Type designation application options

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

G	**Product family** G = Option for MOVIGEAR®/DRC..
IO	**Functionality** IO = Digital inputs/outputs
12	**Design** 12 = 4 digital inputs + 2 digital outputs 13 = 4 digital inputs (2 of the inputs can be used as primary frequency input) + 1 digital output + 1 analog input + 1 analog output
B	**Version**

22288228/EN – 02/2020

11 DRC..

11.1 Description

The DRC.. electronic motor is a permanent-field synchronous motor with integrated drive electronics.

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11.1.1 General device properties

- Wide voltage range, 3 × AC 380 V to AC 500 V
- High overload capacity for all sizes
- 4Q capability due to integrated brake coil installed as standard
- Line filter integrated as standard. EMC-compliant installation ensures compliance with limit value C3 according to EN 61800-3 (Class A, group 2 according to EN 55011).
- LED display for operating and fault states
- Protective functions for full protection of the frequency inverter and the motor:
  – Short circuit
  – Overload
  – Overvoltage/undervoltage
  – Frequency inverter overtemperature
  – Drive unit overtemperature
- IPOSplus® integrated positioning and sequence control
- Integrated STO safety function
  – **STO** (Safe Torque Off according to IEC 61800-5-2) by disconnecting the STO input.
  – Performance level e according to EN ISO 13849-1.
  – **SS1(c)** (Safe stop 1, function variant c according to IEC 61800-5-2) by means of suitable external control (e.g. safety relay with delayed disconnection).

You will find the specific device properties of DBC-B, DAC-B, DSC-B and SNI-B designs in the subsequent chapters.

22288228/EN – 02/2020

11.1.2 DRC…-DBC device properties – Direct Binary Communication

- Simple startup without PC via DIP switches and potentiometer
- Parameterizable fixed speeds and ramps
- Binary input control and signal relay evaluation via PLC
- Local mode via binary inputs
- Interface for diagnostics and parameterization

11.1.3 DRC.-..-DAC device properties – Direct AS-Interface Communication

- Simple communication connection
- Parameterizable fixed speeds and ramps
- Control via globally standardized AS-Interface
- Connection of external sensors on the drive
- Voltage supply for connected sensor technology
- Local mode via binary inputs
- Interface for diagnostics and parameterization

11.1.4 DRC.-..-DSC device properties – Direct SBus Communication

- Up to 16 SBus actuators can be controlled per controller
- Integrated system interface. Permitted cable length between controller and last actuator when using the recommended hybrid cable per phase:
  - 1 Mbaud: 25 m
  - 500 kBd: 50 m
- Fast communication for short cycle times
- Hybrid cables for minimum installation effort
- System bus controller for control cabinet or fieldbus installation with integrated PLC
- High drive dynamics and performance
- Optional motion control inputs (via plug connector) for local mode or sensor inputs

11.1.5 DRC.-..-SNI device properties – Single Line Network Installation

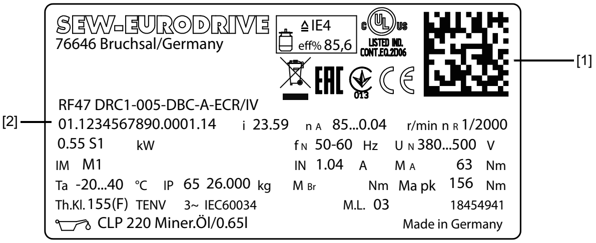
- Power and communication through one power cable
  - Up to 10 SNI actuators in total
  - Permitted cable length between controller and last actuator max. 100 m
- Reduction in number of components
- No fieldbus cabling required
- No risk of hidden faults in the bus wiring
- Reduced startup time
- Shorter project runtime/reduction of project costs
- Optional motion control inputs (via plug connector) for local mode or sensor inputs

11.2 DRC.-..-DBC type designation

11.2.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

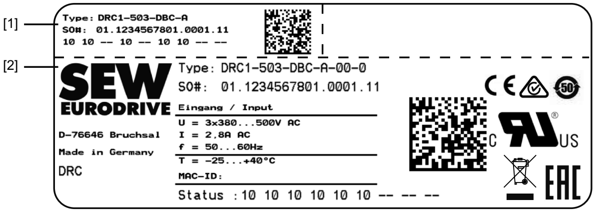
RF	**Gear unit series**
47	**Gear unit size**
DRC..	**Product family** DRC.. = Electronic motor
1	**Electronic motor size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
005	**Power** 005 = 0.55 kW 015 = 1.5 kW 030 = 3.0 kW 040 = 4.0 kW
–	
DBC	**DRC.. installation technology** DBC = **D**irect **B**inary **C**ommunication
–	
A	**Version**
–	
ECR	**Extended control range (standard)**
/	

IV	DRC.. option
	IV = Plug connector
	BY1C = DRC1 brake
	BY2C = DRC2 brake
	BY4C = DRC3/4 brake
	BW1 = Integrated braking resistor DRC1
	BW2 = Integrated braking resistor DRC2
	BW3 = Integrated braking resistor DRC3/4
	PE = Pressure compensation fitting electronics

11.2.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



27021602530651787

[1] Connection unit nameplate
[2] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DBC	**DRC.. installation technology** DBC = **D**irect **B**inary **C**ommunication
–	
A	**DRC.. version**
–	
00	**Design** 00 = Standard
–	
0	**Electronics cover design** 0 = Without application slot

Type designation of the connection unit

The following table shows the type designation of the connection unit:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase (AC)
–	
DBC	**DRC.. installation technology** DBC = **D**irect **B**inary **C**ommunication
–	
A	**DRC.. version**

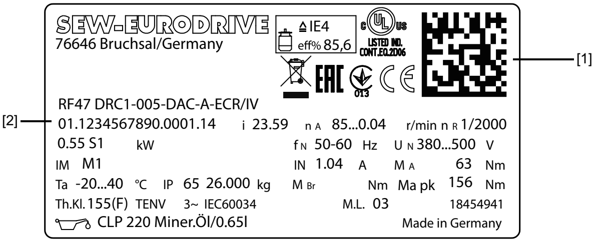
22288228/EN – 02/2020

11.3 DRC.-..-DAC type designation

11.3.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

RF	**Gear unit series**
47	**Gear unit size**
DRC..	**Product family** DRC.. = Electronic motor
1	**Electronic motor size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
005	**Power** 005 = 0.55 kW 015 = 1.5 kW 030 = 3.0 kW 040 = 4.0 kW
–	
DAC	**DRC.. installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
–	
A	**Version**
–	
ECR	**Extended control range (standard)**
/	

22288228/EN – 02/2020

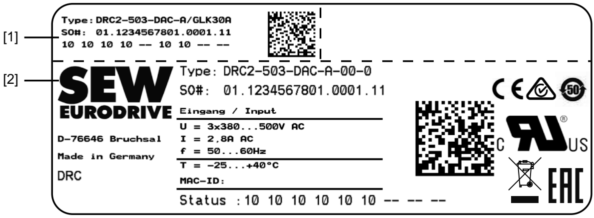
IV	DRC.. option
	IV = Plug connector
	BY1C = DRC1 brake
	BY2C = DRC2 brake
	BY4C = DRC3/4 brake
	BW1 = Integrated braking resistor DRC1
	BW2 = Integrated braking resistor DRC2
	BW3 = Integrated braking resistor DRC3/4
	PE = Pressure compensation fitting electronics

22288228/EN – 02/2020

11.3.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



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[1] Connection unit nameplate
[2] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

DRC..	**Product family** Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DAC	**DRC.. installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
–	
A	**DRC.. version**
–	
00	**Design** 00 = Standard
–	
0	**Electronics cover design** 0 = Without application slot

Type designation of the connection unit

The following table shows the type designation of the connection unit:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase (AC)
–	
DAC	**DRC.. installation technology** DAC = **D**irect **A**S-Interface **C**ommunication
–	
A	**DRC.. version**
–	
/	
GLK30A	**Connection unit option** GLK30A = Binary slave GLK30A GLK31A = Double slave GLK31A

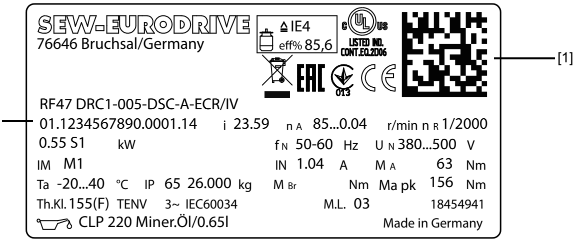
22288228/EN – 02/2020

11.4 DRC.-..-DSC type designation

11.4.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



54043199576783755

[1] The 2D code on the nameplate represents the unique serial number (with period as separator).

[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

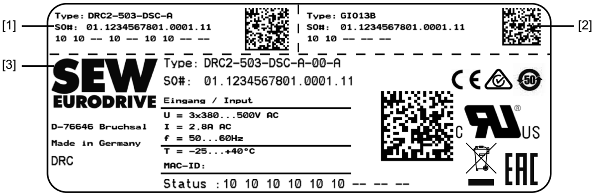
RF	**Gear unit series**
47	**Gear unit size**
DRC..	**Product family**
	DRC.. = Electronic motor
1	**Electronic motor size**
	1 = DRC1
	2 = DRC2
	3 = DRC3
	4 = DRC4
–	
005	**Power**
	005 = 0.55 kW
	015 = 1.5 kW
	030 = 3.0 kW
	040 = 4.0 kW
–	
DSC	**DRC.. installation technology**
	DSC = **D**irect **S**Bus **C**ommunication
–	
A	**Version**
–	
ECR	**Extended control range (standard)**
/	

IV	**DRC.. option**
	IV = Plug connector
	BY1C = DRC1 brake
	BY2C = DRC2 brake
	BY4C = DRC3/4 brake
	BW1 = Integrated braking resistor DRC1
	BW2 = Integrated braking resistor DRC2
	BW3 = Integrated braking resistor DRC3/4
	PE = Pressure compensation fitting electronics
	A = Electronics cover with application slot

11.4.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



27021602530607627

[1] Connection unit nameplate
[2] Nameplate of application option
[3] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
DSC	**DRC.. installation technology** DSC = **D**irect **S**Bus **C**ommunication
–	
A	**DRC.. version**
–	
00	**Design** 00 = Standard
–	
A	**Electronics cover design** 0 = Without application slot A = With application slot

Type designation of the connection unit

The following table shows the type designation of the connection unit:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase (AC)
–	
DSC	**DRC.. installation technology** DSC = **D**irect **S**Bus **C**ommunication
–	
A	**DRC.. version**

Type designation application options

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

G	**Product family** G = Option for MOVIGEAR®/DRC..
IO	**Functionality** IO = Digital inputs/outputs
12	**Design** 12 = 4 digital inputs + 2 digital outputs 13 = 4 digital inputs (2 of the inputs can be used as primary frequency input) + 1 digital output + 1 analog input + 1 analog output
B	**Version**

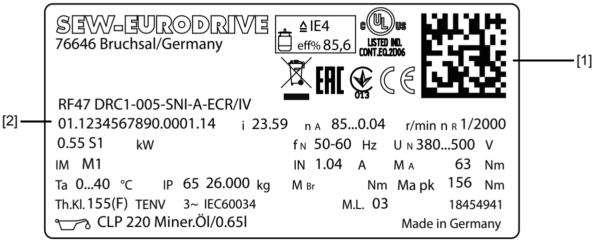
22288228/EN – 02/2020

11.5 DRC.-..-SNI type designation

11.5.1 Drive unit

Nameplate

The following figure shows an example of a drive unit nameplate. For the structure of the type designation, refer to the chapter "Type designation".



54043200290500363

[1] The 2D code on the nameplate represents the unique serial number (with period as separator).
[2] Unique serial number

Type designation

The following table shows the type designation of the drive unit:

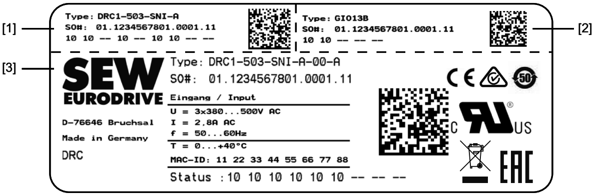
RF	**Gear unit series**
47	**Gear unit size**
DRC..	**Product family** DRC.. = Electronic motor
1	**Electronic motor size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
005	**Power** 005 = 0.55 kW 015 = 1.5 kW 030 = 3.0 kW 040 = 4.0 kW
–	
SNI	**DRC.. installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
–	
A	**Version**
–	
ECR	**Extended control range (standard)**
/	

IV	DRC.. option
	IV = Plug connector
	BY1C = DRC1 brake
	BY2C = DRC2 brake
	BY4C = DRC3/4 brake
	BW1 = Integrated braking resistor DRC1
	BW2 = Integrated braking resistor DRC2
	BW3 = Integrated braking resistor DRC3/4
	PE = Pressure compensation fitting electronics
	A = Electronics cover with application slot

11.5.2 Electronics

Nameplate

The following figure gives an example of an electronics nameplate. For the structure of the type designation, refer to the chapter "Type designation".



27021602530615051

[1] Connection unit nameplate
[2] Nameplate of application option
[3] Electronics cover nameplate

Type designation of the electronics cover

The following table shows the type designation of the electronics cover:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
–	
SNI	**DRC.. installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
–	
A	**DRC.. version**
–	
00	**Design** 00 = Standard
–	
A	**Electronics cover design** 0 = Without application slot A = With application slot

Type designation of connection unit

The following table shows the type designation of the connection unit:

DRC..	**Product family** DRC.. = Electronic motor
1	**Size** 1 = DRC1 2 = DRC2 3 = DRC3 4 = DRC4
–	
50	**Connection voltage** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase (AC)
–	
SNI	**DRC.. installation technology** SNI = **S**ingle Line **N**etwork **I**nstallation
–	
A	**DRC.. version**

Type designation application options

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

G	**Product family** G = Option for MOVIGEAR®/DRC..
IO	**Functionality** IO = Digital inputs/outputs
12	**Design** 12 = 4 digital inputs + 2 digital outputs 13 = 4 digital inputs (2 of the inputs can be used as primary frequency input) + 1 digital output + 1 analog input + 1 analog output
B	**Version**

12 MOVIMOT®

12.1 Description

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

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You can use the MOVIMOT® drives to equip extensive plants with a modular system or flexibly integrate them into existing plants. MOVIMOT® is also the electronic replacement for pole-changing motors or mechanical variable-speed gear units.

12.1.1 Designs

MOVIMOT® is available in the following designs:

• MOVIMOT® Standard	Control of the MOVIMOT® drive via binary signal, RS485 or fieldbus
• MOVIMOT® with AS-Interface	Control of the MOVIMOT® drive via AS-Interface

MOVIMOT® is available as a motor, brakemotor, gearmotor or geared brakemotor in many different standard versions and designs.

The P2.A option is used to mount the MOVIMOT® inverter in close proximity to the motor (i.e. separate from the motor). The inverter is connected to the motor using a prefabricated hybrid cable.

12.1.2 MOVIMOT® device properties

- Frequency inverter with vector-oriented motor control mode
- Power range: 0.37 – 4.0 kW (0.37 – 2.2 kW)
- Voltage range: 3 × 380 – 500 V (3 × 200 – 240 V)
- Application-specific parameterization is possible
- Pluggable parameter memory for data backup (drive ID module)
- Comprehensive protection and monitoring functions
- Low-noise thanks to PWM switching frequency 16 kHz
- Status LED for fast diagnostics
- Diagnostic interface with plug connector as a standard feature
- Diagnostics and manual operation using MOVITOOLS® MotionStudio
- 4Q operation as standard
- Integrated brake management:
  – For motors with a mechanical brake, the brake coil is used as the braking resistor.
  – For motors without a brake, MOVIMOT® is supplied with an internal braking resistor as standard.
- The units are controlled either via binary signals, via the serial interface RS485, or optionally with AS-Interface or one of the common fieldbus interfaces (PROFIBUS, DeviceNet™, PROFINET IO, EtherNET/IP™, EtherCAT®).
- MOVIMOT® can be supplied with UL approval (UL listed) on request.

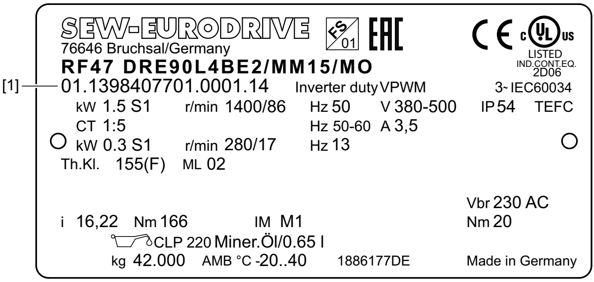
22288228/EN – 02/2020

12.2 MOVIMOT® MM..D type designation

12.2.1 Drive

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is attached to the motor.



18014399029659147

[1] Serial number

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive **RF47 DRE90L4BE2/MM15/MO**:

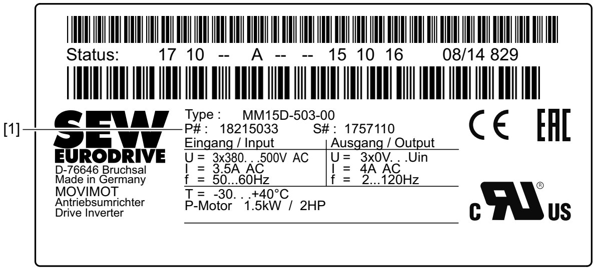
RF	**Gear unit series**
47	**Gear unit size**
DRE	**Motor series** (DRS.., DRE.., DRN..)
90L	**Motor size**
J	**Rotor** C = Copper rotor J = LSPM rotor
4	**Number of motor poles**
BE2	**Additional feature motor (brake)**
/	
MM15	**MOVIMOT® inverter**
/	
MO	**Additional feature: inverter** 1)

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

12.2.2 Inverter

Nameplate

The following figure provides an example of a MOVIMOT® inverter nameplate:



27021599722150283

[1] Part number

Type designation

The following table shows an example of the type designation of the MOVIMOT® inverter **MM15D-503-00**:

MM	**Unit series**	MM = MOVIMOT®
15	**Motor power**	15 = 1.5 kW
D	**Version D**	
-		
50	**Connection voltage**	50 = AC 380 – 500 V 23 = AC 200 – 240 V
3	**Connection type**	3 = 3-phase
-		
00	**Design**	00 = Standard

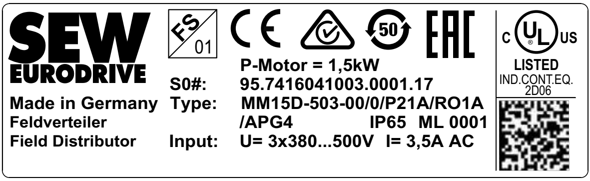
The available designs can be found in the "MOVIMOT® gearmotors" catalog.

12.2.3 Type designation of the "mounted close to the motor" design

Nameplate

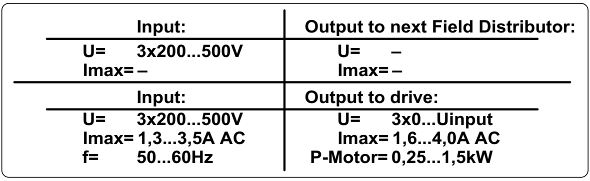
Order-specific nameplate

The following figure provides an example of an order-specific nameplate of the MOVIMOT® inverter for mounting close to the motor:



General nameplate

The following figure provides an example of a general nameplate of the MOVIMOT® inverter for mounting close to the motor:



Type designation

The following table shows the type designation for the MOVIMOT® inverter **MM15D-503-00/0/P21/RO1A/APG4** with mounting close to the motor:

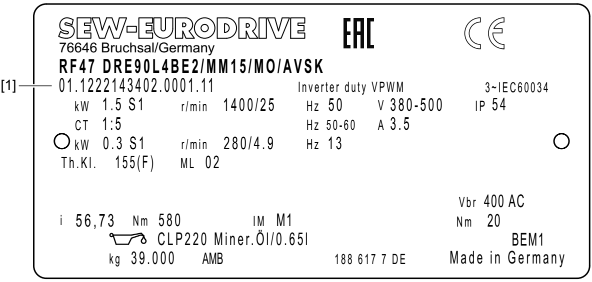
MM15D-503-00	**MOVIMOT® inverter**	
/		
0	**Connection type**	0 = ⅄ 1 = △
/		
P21A	**Adapter for mounting close to the motor**	
/		
RO1A	**Connection box design**	
/		
APG4	**Plug connector** for connection to motor	

12.3 MOVIMOT® MM..D with AS-Interface type designation

12.3.1 Drive

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is attached to the motor.



18014400195306635

[1] Serial number

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive **RF47 DRE90L4BE2 /MM15/MO/AVSK**:

RF	**Gear unit series**	
47	**Gear unit size**	
DRE	**Motor series** (DRS.., DRE.., DRN..)	
90L	**Motor size**	
J	**Rotor**	C = copper rotor J = LSPM rotor
4	**Number of motor poles**	
BE2	**Additional feature motor (brake)**	
/		
MM15	**MOVIMOT® inverter**	
/		
MO	**Additional feature: inverter** 1) (e.g. MLK30A)	
/		
AVSK	**Plug connector for AS-Interface**	

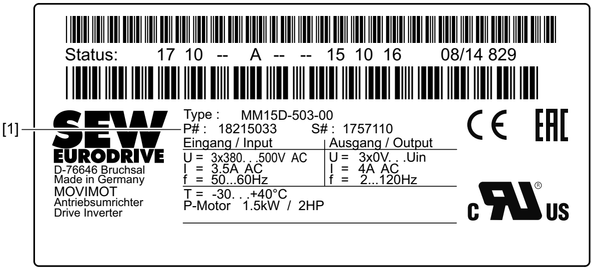
1) The nameplate only displays options installed at the factory.

22288228/EN – 02/2020

12.3.2 Inverter

Nameplate

The following figure provides an example of a MOVIMOT® inverter nameplate:



27021599722150283

[1] Part number

Type designation

The following table shows an example of the type designation of the MOVIMOT® inverter **MM15D-503-00**:

MM	**Unit series**	MM = MOVIMOT®
15	**Motor power**	15 = 1.5 kW
D	**Version D**	
-		
50	**Connection voltage**	50 = AC 380 – 500 V 23 = AC 200 – 240 V
3	**Connection type**	3 = 3-phase
-		
00	**Design**	00 = Standard

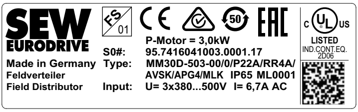
The available designs can be found in the "MOVIMOT® gearmotors" catalog.

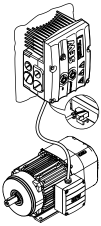
12.3.3 Type designation of the design "mounted close to the motor"

Nameplate

Order-specific nameplate

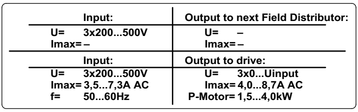
The following figure provides an example of an order-specific nameplate of the MOVIMOT® inverter for mounting close to the motor:





General nameplate

The following figure provides an example of a general nameplate of the MOVIMOT® inverter for mounting close to the motor:



Type designation

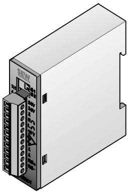
The following table shows the type designation for the MOVIMOT® inverter **MM30D-503-00/0/P22A/RR4A/AVSK/APG4/MLK** with mounting close to the motor:

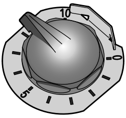
MM30D-503-00	**MOVIMOT® inverter**
/	
0	**Connection type** 0 = ⅄ 1 = △
/	
P22A	**Adapter for mounting close to the motor**
/	
RR4A	**Connection box design**
/	
AVSK	**Plug connector option**
/	
APG4	**Plug connector** for connection to motor
/	
MLK	**Additional feature: inverter**[1]

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

12.4 Options

The following tables show the options for MOVIMOT® MM..D.

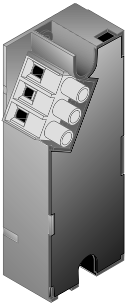
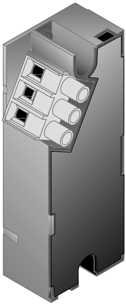
Option	Image	Description
DC 24 V supply **MLU11A** (input voltage AC 380 – 500 V) part number: 08233837 **MLU21A** (input voltage AC 200 – 240 V) part number: 0823387X		The MLU.1A option is mounted with a MOVIMOT® cable gland. The option provides the DC 24 V voltage supply for the MOVIMOT® inverter, including **one** option with a maximum power consumption of 70 mA (MBG11A, MWA21A). An external 24 V auxiliary voltage is not required.
Setpoint adjuster with DC 24 V supply **MLG11A** (input voltage AC 380 – 500 V) part number: 08233845 **MLG21A** (input voltage AC 200 – 240 V) part number: 08233888		The MLG.1A option is mounted with a MOVIMOT® cable gland. The option allows to set the input speed in the range of -100% – +100% f_{max} (potentiometer f1). An external 24 V auxiliary voltage is not required.
Setpoint adjuster MBG11A part number: 08225478		The MBG11A setpoint adjuster has 2 keys and a display. The keys allow for remote speed control in the range of -100% – +100% f_{max} (potentiometer f1). Up to 31 MOVIMOT® drives can be controlled simultaneously (broadcasting).
Setpoint converter MWA21A part number: 08230064		The MWA21A setpoint converter converts an analog setpoint and control signals into an RS485 protocol. This allows to control of the MOVIMOT® drive from the control cabinet remotely. Up to 31 MOVIMOT® drives can be controlled simultaneously (broadcasting).

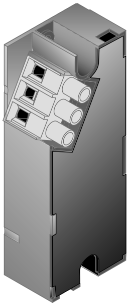
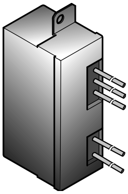
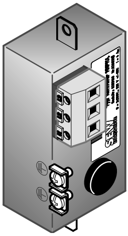
Option	Image	Description
Rotary button **MBK11A** (for MOVIMOT® MMD03 – MMD15..) Part number: 28230035 **MBK12A** (for MOVIMOT® MMD22 – MMD40..) Part number: 28230043		The drive speed can be set in the range of 0 – 100% using the adjusting knob. The MBK.. adjusting knob is mounted onto the setpoint potentiometer f1 of the MOVIMOT® inverter instead of the screw plug. **NOTICE** The MOVIMOT® inverter with adjusting knob has the degree of protection IP54.

12.4.1 Options integrated in connection box

The following table shows the options for MOVIMOT® MM..D that are installed in the connection box:

- The options BEM, BES, URM, MLU13A, and MNF21A are integrated in the MOVIMOT® terminal box.
- The MLU13A and MNF21A options can only be ordered in combination with the modular terminal box.
- The modular terminal box is assigned depending on the ordered option and the MOVIMOT® size.

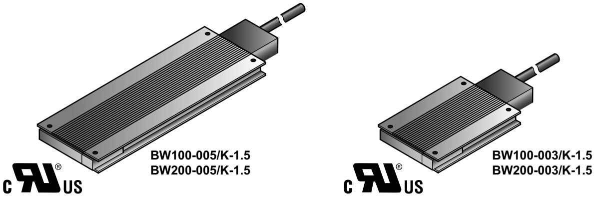
Option	Image	Description
BEM brake control Part number: 08296111		The BEM brake rectifier serves to control the brake of the MOVIMOT® drive. The BEM brake control implements fast release and application of the mechanical brake. **NOTICE: The brake coil must correspond to the connection voltage**.
BES brake control Part number: 08298475		The BES brake rectifier serves to control the DC 24 V brake (not standard) of the MOVIMOT® drive. The brake is controlled by means of parameter setting or activating additional function 7 or 9. The BES brake control implements normal release and fast application of the mechanical brake. **NOTICE: The brake coil must be designed as a DC 24 V coil.**

Option	Image	Description
URM voltage relay Part number: 08276013		The URM voltage relay implements rapid application of the mechanical brake. **NOTICE: The brake coil must correspond to the MOVIMOT® standard (AC 120 V or AC 230 V).**
Internal DC 24 V voltage MLU13A Part number: 18205968		The MLU13A option is installed in the modular connection box of the MOVIMOT® drive as standard. The option provides the DC 24 V voltage supply for the MOVIMOT® inverter, including one option with a maximum power consumption of 70 mA (MBG11A, MWA21A). An external 24 V auxiliary voltage is not required. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by **18 mm**.
MNF21A internal line filter Part number: 08042659		The MNF21A option is mounted in the connection box of the MOVIMOT® (MM03 – MM15). The option allows for implementing a drive system that complies with category C1 in accordance with EN 61800-3 with respect to interference emission. The option requires the modular terminal box with increased dimensions. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by **18 mm**.

12.5 Braking resistors

12.5.1 Braking resistors with IP65 degree of protection

The following figure shows the external braking resistors with IP65 degree of protection:



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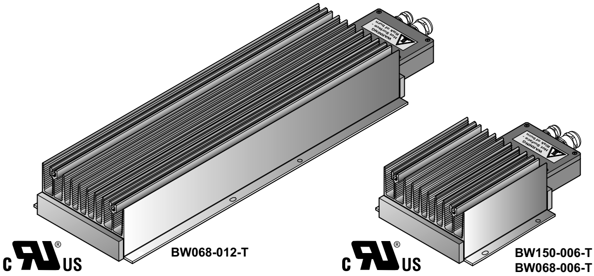
12.5.2 Braking resistors with IP66 degree of protection

The following figure shows the external braking resistors with IP66 degree of protection:



14022245771

13 Explosion-protected MOVIMOT® drives

13.1 Description

MOVIMOT® is also available as explosion-protected drive.

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Explosion-protected MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) in compliance with standard EN 60079-0.

13.2 Sample type designation

13.2.1 Type designation of MOVIMOT® drives

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive **RF47EDRN90L4 BE2/MM15/3D/MO**:

RF	**Gear unit series**
47	**Gear unit size**
E	**Code letter for explosion protection of the motor**
DRN	**Motor series**
90L4	**Size, number of poles on motor**
BE2	**Additional motor feature (brake)**
/	
MM15	**MOVIMOT® inverter**
/	
3D	**Category 3D (explosion protection)**
/	
MO	**Additional feature: inverter** [1]

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

13.2.2 MOVIMOT® inverter type designation

Type designation

The following table shows an example of the type designation of the MOVIMOT® inverter **MM05D-503-14/3D**:

MM	**Series:** MM = MOVIMOT®
05	**Inverter size:** 05 = 0.55 kW
D	**Version D**
-	
50	**Connection voltage:** 50 = AC 380 – 500 V
3	**Connection type** 3 = 3-phase
-	
14	**Design** 14 = Special design 14
/	
3D	**Category 3D (explosion protection)**

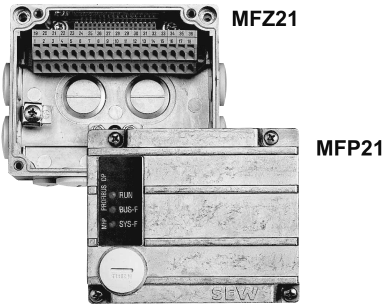
22288228/EN – 02/2020

13.3 Options

The following explosion-protected options for MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) according to EN 60079-0.

13.3.1 Fieldbus interface in category 3D

The following figure shows the available fieldbus interfaces in category 3D:



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Available variants

PROFIBUS variants

Fieldbus interface + module terminal box	**MFP21D/Z21D/3D**
Part number	08236801
Connection technology sensors/actuators	Terminals
Digital inputs	4
Digital outputs	2

Type designation of fieldbus interfaces

Type designation

The following table shows the type designation of the fieldbus interface **MFP21D/ Z21D/3D**:

MFP	**Fieldbus interface** MFP.. = PROFIBUS
21	**Connections** 21 = 4 × I, 2 × O (connection via terminals)
D	**Variant**
/	
Z21	**Connection module** Z21 = For PROFIBUS
D	**Variant**
/	
3D	**Category 3D (explosion protection)**

13.3.2 Setpoint converter MLA12A in category 3D

The following figure shows the setpoint converter MLA12A in category 3D:

Setpoint converter	**MLA12A**
Part number	08232342

The setpoint converter MLA12A in category 3D is available mounted to the MOVIMOT® connection box only.

14 MOVI-SWITCH®

14.1 Description

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

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14.1.1 Designs

MOVI-SWITCH® is available in the following designs:

		Fig.:
• MOVI-SWITCH® 1EM	1 direction of rotation, only with DT56/DR63 motors	back, right
• MOVI-SWITCH® 1E	1 direction of rotation	back, left
• MOVI-SWITCH® 2S	2 directions of rotation, direction of rotation reversal	front

The P22A option allows for mounting the MOVI-SWITCH® 2S in close proximity to the motor (separate from the motor). The inverter is connected to the motor using a prefabricated hybrid cable.

14.1.2 Device properties of MOVI-SWITCH® 1EM

- MOVI-SWITCH® 1EM is a gearmotor of the DT56 or DR63 series with an integrated electronic on/off switch for one direction of rotation and integrated full motor protection.
- Switching the star point with power semiconductors connects or disconnects the current flow to the motor.
- MOVI-SWITCH® 1EM is available in two designs:
  - **B**0: Binary control
  - **K**0: With integrated AS-Interface
- The various operating states are indicated by a status LED.
- MOVI-SWITCH® 1EM is also available with a brake.

14.1.3 Features of MOVI-SWITCH® 1E

- MOVI-SWITCH® 1E is an AC motor with integrated electronic on/off switch for one direction of rotation and integrated full motor protection.
- Switching the star point with power semiconductors connects or disconnects the current flow to the motor.
- The BGW brake control integrated as standard ensures short response times (brake voltage = motor voltage/$\sqrt{3}$, alternatively motor voltage).

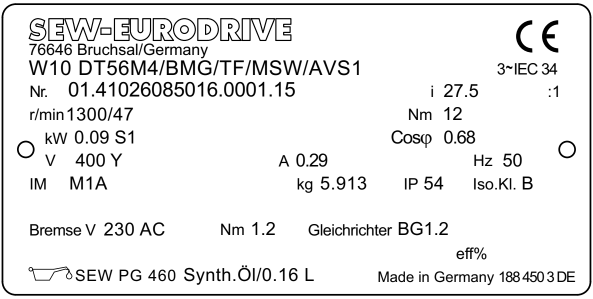
14.1.4 Features of MOVI-SWITCH® 2S

- MOVI-SWITCH® 2S is an AC motor with integrated electronic on/off switch for two directions of rotation and integrated full motor protection.
- The direction of rotation is reversed by a reversing contactor combination with a long service life.
- MOVI-SWITCH® 2S is available in two designs:
  - C**B**0: Binary control
  - C**K**0: With integrated AS-Interface
- Supply system monitoring, brake control as well as switching and protection functions are implemented in the controller.
- The various operating states are indicated by a status LED.
- With the CB0 design (binary control), the connection assignment for clockwise direction of rotation (CW) is compatible with MOVI-SWITCH® 1E.
- With the CK0 design (with integrated AS-Interface), the connection assignment is compatible with MOVIMOT® with integrated AS-Interface.

14.2 Type designation of MOVI-SWITCH® 1EM

14.2.1 Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 1EM drive:



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14.2.2 Type designation

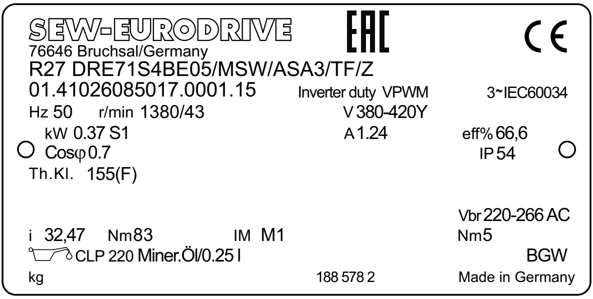
The following table shows the type designation of the MOVI-SWITCH® 1EM drive **W10DT54M4/BMG/TF/MSW/AVS1** as an example:

W	**Gear unit series**
10	**Gear unit size**
DT	**Motor series** (DT.., DR..)
56M	**Motor size**
4	**Number of motor poles**
/	
BMG	**Mechanical brake option**
/	
TF	**Thermistor (standard)**
/	
MSW	**MOVI-SWITCH® motor starter**
/	
AVS1	**Optional M12 plug connector for control signals**

14.3 Type designation of MOVI-SWITCH® 1E

14.3.1 Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 1E drive:



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14.3.2 Type designation

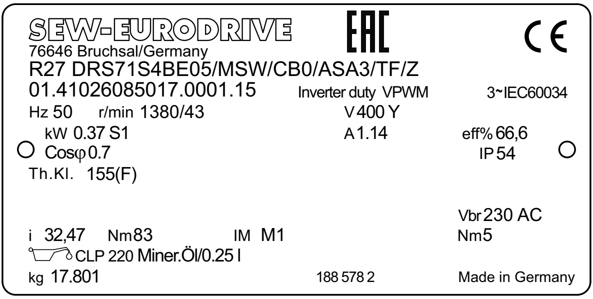
The following table shows the type designation of the MOVI-SWITCH® 1E drive **R27DRE71S4BE05/MSW/ASA3/TF/Z** as an example:

R	**Gear unit series**
27	**Gear unit size**
DRE	**Motor series** (DRS.., DRE.., DRN..)
71S	**Motor size**
4	**Number of motor poles**
BE05	**Optional design motor (brake)**
/	
MSW	**MOVI-SWITCH® motor starter**
/	
ASA3	**Plug connector option**
/	
TF	**Thermistor (standard)**
/	
Z	**Motor option flywheel fan**

14.4 Type designation of MOVI-SWITCH® 2S

14.4.1 Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 2S drive:



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14.4.2 Type designation

The following table shows the type designation of the MOVI-SWITCH® 2S drive **R27DRS71S4/BE05/MSW/CB0/ASA3/TF/Z** as an example:

R	**Gear unit series**	
27	**Gear unit size**	
DRS	**Motor series** (DRS.., DRE.., DRN..)	
71S	**Motor size**	
4	**Number of motor poles**	
/		
BE05	**Optional design motor (brake)**	
/		
MSW	**MOVI-SWITCH® motor starter**	
/		
C	**Control**	
B	**Signal type**	B = Binary K = AS-Interface
0	**Design**	0 = Standard
/		
ASA3	**Plug connector option**	
/		
TF	**Thermistor (standard)**	
/		
Z	**Motor option flywheel fan**	

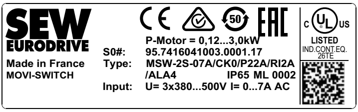
22288228/EN – 02/2020

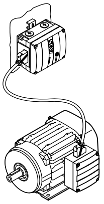
14.4.3 "Mounting close to the motor" design with option P22A

Nameplate

Order-specific nameplate

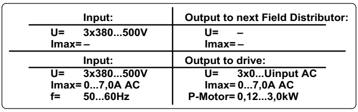
The following illustration gives an example of an order-specific nameplate of the MOVI-SWITCH® motor starter for mounting close to the motor:





General nameplate

The following illustration gives an example of a general nameplate of the MOVI-SWITCH® motor starter for mounting close to the motor:



Type designation

The following table shows the type designation of the MOVI-SWITCH® motor starter **MSW-2S-07A/CB0/P22A/RI2A/ALA4** when mounted close to the motor:

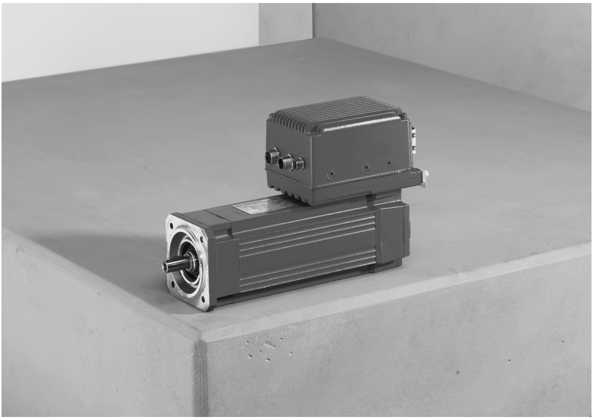
MSW-2S-07A	**MOVI-SWITCH® motor starter**	
/		
C	**Control**	
B	**Signal type**	B = Binary control K = Control via AS-Interface
0	**Design**	0 = Standard
/		
P22A	**Adapter for mounting close to the motor**	
/		
RI2A	**Connection box design**	
/		
ALA4	**Plug connector** for connection to the motor	

15 CMP ELVCD

15.1 Description

The ELVCD decentralized extra-low voltage servo drive is a combination of the following components:

- ELVCD inverter, integrated or mounted in close proximity to the motor.
- CMP/…/ELVCD servomotor
- Gear unit (option)



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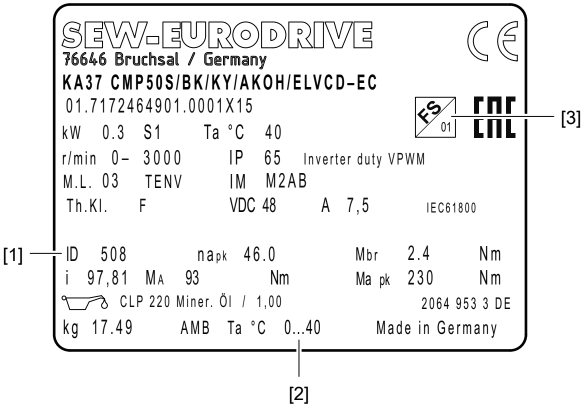
The supply voltage of the DC link is DC 48 V.

The supply voltage of the electronics unit is DC 24 V.

15.2 Nameplate and type designation

15.2.1 Nameplate

The nameplate lists information about the device type. The following figure shows an example of a nameplate:



20929219211

[1] ID number of ELVCD drive
[2] Ambient temperature
[3] FS logo

15.2.2 Type designation

The following table shows an example of the type designation of the **KA37 CMP50S/BK/KY/AK0H/ELVCD-EC** ELVCD drive:

KA	**Gear unit type**	
37	**Gear unit size**	
CMP	**Motor series**	
50S	**Motor size**	50S = Size 50S 50M = Size 50M
/		
BK	**Brake** (option)	BK = Permanent magnet brake BP = Spring-loaded brake
/		
KY	**Temperature sensor**	KY = KTY PK = PT1000
/		
AK0H	**Encoder**	RH1M = Resolver AK0H = HIPERFACE® encoder (multi-turn)
/		
ELVCD -EC	**Drive design**	ELVCD = Drive with integrated inverter ELVCD-EC = Drive with mounting close to the motor

The ELVCD drive is available as a stand-alone motor or gearmotor.

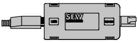
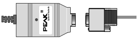
Nearly all gear unit designs that can be combined with the CMP50S and CMP50M motors can be implemented with the ELVCD drive.

16 Common options and accessories

16.1 Options for diagnostics, startup and manual operation

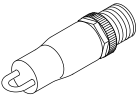
16.1.1 Overview

Option	Description	Type	Part no.	Compatible with
Operator panel	**Features:** • Illuminated text display, range of languages • Keypad with 21 keys • Can be connected via extension cable DKG60B (5 m) • Degree of protection IP40 (EN 60529) **Functions** (examples): • Visualization of process values and status displays • Representation of process output and input data • Indicates fault status and fault reset • Manual control and operation • Status displays of digital inputs/outputs • Parameters can be displayed and set • Data backup and transfer of parameter sets	**DBG60B-10** (DE/EN/FR/IT/ES/PT/NL/FI/SV/DA/TR/RU/PL/CS/ZH) 	28229150	MOVIMOT® MOVIFIT®
Extension cable	• Extension cable for DBG60B (length 5 m)	**DKG60B**	08175837	DBG60B

Option	Description	Type	Part no.	Compatible with
Interface adapter USB to RS485	Option USB11A enables a PC or laptop with a USB interface to be connected to MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces. The USB11A interface adapter supports USB 1.1 and USB 2.0.	**USB11A** 	08248311	MOVIFIT® MOVIMOT® Fieldbus interfaces MF../MQ..
PC-CAN interface from SEW-EURODRIVE	With the PC CAN interface from SEW-EURODRIVE, a PC or laptop with USB interface can be connected to MOVIGEAR® DBC-B or MOVIGEAR® DAC-B. The prefabricated cable included in the scope of delivery cannot be used for MOVIGEAR®.	[1] PEAK-CAN dongle [2] Adapter cable 	[1] 18210597 [2] 18123864	MOVIGEAR® DBC-B MOVIGEAR® DAC-B
Adapter cable	Adapter cable for connecting the PC-CAN interface with MOVIGEAR®.			

16.2 Accessories

The following table shows the accessories for the decentralized components:

Accessories	Description	Type	Part no.	Compatible with
Jumper plug	The jumper plug can be connected to the respective connections of the devices during startup. The jumper plug deactivates the safety functions of the device.		11747099	MOVIPRO® MOVIFIT® MOVIGEAR® B

Index

22288228/EN – 02/2020

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