SEW EURODRIVE

Revision

Decentralized Drive and Positioning Controller

MOVIPRO® SDC

Edition 12/2019

29212251/EN

Contents

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1 Revision

This revision applies to the "MOVIPRO® SDC" operating instructions, part number 19299214/EN, edition 05/2016.

Replacements

- Chapter 3.1 "Type designation" is replaced by "Type designation" (→ 🗎 5)
- Chapter 3.5.2 "Communication and control unit" is replaced by "Communication and control unit" (→ 🗎 6)
- Chapter 3.7.2 "Accessory components" replaced by "Accessory components" (→ 🗎 7)
- Chapter 4 "Integrated safety technology" is replaced by "Integrated safety technology" (→ 🗎 9)
- Chapter 7.12.5 "X1214: AC 400 V input/DC 24 V supply for supply cable" is replaced by "X1214: AC 400 V input/DC 24 V supply for supply cable" (→ 🗎 11)
- Chapter 7.12.6 "X2011: Motor with brake control" replaced by "X2011: Motor with brake control" (→ 🗎 19)
- Chapter 7.12.7 "X2012: Motor with brake control" replaced by "X2012: Motor with brake control" (→ 🗎 25)
- Chapter 7.12.8 "X2016: Motor with brake control" replaced by "X2016: Motor with brake control" (→ 🗎 36)
- Chapter 9.4.3 "Status messages" replaced by "Status messages" (→ 🗎 48)
- Chapter 10.2 "Device replacement" replaced by "Device replacement" (→ 🗎 57)
- Chapter 12 "Declaration of conformity" replaced by"Declaration of conformity" (→ 🗎 60)

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2 Device structure

2.1 Type designation

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

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2.2 Type designations of the function units

2.2.1 Communication and control unit

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

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2.3 Accessory components

The following accessories are available depending on the device design. For further information, refer to the following documentation: “MOVIPRO® Accessories” addendum to operating instructions. If you are not sure which accessories you need, the SEW-EURODRIVE staff will be glad to help you with your selection.

	Part number
Power interfaces For further information, refer to chapter Electrical connections.	
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
Connection cable Refer to the corresponding connections in the Electrical connections chapter for information on connection cables for motors, encoders, braking resistors, etc.	
Sensor/actuator boxes For further information, refer to chapter Electrical connections.	
Sensor/actuator box 1 m (4 connections)	18255477
Sensor/actuator box 3 m (4 connections)	18255485
Sensor/actuator box 1 m (8 connections)	13309269
Sensor/actuator box 2 m (8 connections)	13309277
Sensor/actuator box 3 m (8 connections)	13309285
Sensor/actuator box 5 m (8 connections)	13309293
Sensor/actuator box 10 m (8 connections)	13309307
Braking resistors For further information, refer to chapter Technical data.	
BW100-004-00 (including mounted connection cable 1.5 m) size 0	17962188
BW050-008-01 size 1	17962242
BW033-012-01 size 1	17962196
BW017-024-02 size 2	17962218
BW014-028-02 size 2	17962226
Mounting accessories For further information, refer to chapter Mechanical installation.	
Mounting kit with large mounting brackets (4 pieces)	12708305
Handle option 270	18222781
Handle option 390	18222803
Mounting accessories for braking resistors	

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	Part number
Mounting bracket kit, BW sizes 1 and 2	18229689
Connection components	
STO jumper plug	11747099
Fan subassembly	
Fan subassembly	12709700

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3 Integrated safety technology

3.1 Prerequisites

INFORMATION

Startup must be performed correctly, to prevent hazards caused by failure of the safety components. Only use the device in combination with functional safety technology if you have read the "Functional Safety" manual and if all requirements for operation are fulfilled.

3.2 Assignment of "Functional Safety" manuals

Safety function	Safety concept	Applicable manual
STO, SS1(c)	–	"MOVIPRO® ADC/SDC Functional Safety / PROFIsafe option S11B" manual
STO, SS1(c)	S11	"MOVIPRO® SDC Functional Safety" manual
STO, SS1(c)	S11B	"MOVIPRO® ADC/SDC Functional Safety / PROFIsafe option S11B" manual

3.3 Standards

For the versions of the standards valid during development and testing of the device, refer to the declaration of conformity.

3.4 Safety functions

You can use the following drive-related safety functions with the basic device:

- STO (Safe Torque Off):

  Safe Torque Off according to EN 61800-5-2
- SS1(c) (Safe Stop 1):

  Safe Stop 1, function variant c according to EN 61800-5-2

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3.5 Safety concept

You can realize the safety concept "Axis module with safe torque off" with the basic device.

3.5.1 Additional safety concepts

Depending on the device configuration, additional safety concepts can be realized.

PROFIsafe option S11

Refer to the type designation of the device to find out if your device is configured for this:

Type designation	Device configured
PHC2.A-A...M1-...A-00/**S11**	Yes
PHC2.A-A...M1-...A-00/**000**	No

PROFIsafe Option S11B

Refer to the type designation of the device to find out if your device is configured for this:

Type designation	Device configured
PHC2.A-A...M1-...A-00/**S11B**	Yes
PHC2.A-A...M1-...A-00/**000**	No

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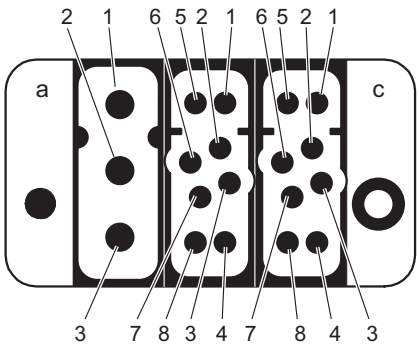
4 X1214: AC 400 V input/DC 24 V supply for supply cable

Function
• AC 400 V input to supply devices up to 22 kW • Output and input for DC 24 V • Signal contact for external maintenance switch • For connecting the connection cable

Connection type
Han-Modular® 10 B, male, 1 locking latch

Wiring diagram



[a] Han® C module, male		
No.	**Name**	**Function**
1	L1	Supply system phase 1
2	L2	Supply system phase 2
3	L3	Supply system phase 3

[b] Han® EE module, male
Coding of the device power, see chapter "Coding" (→ 🗎 13)

[c] Han® EE module, male		
No.	**Name**	**Function**
1	+24V_C	DC 24 V input – backup voltage
2	SC	Signal contact for maintenance switch
3	VO24	DC 24 V output
4	n.c.	Not connected
5	0V24_C	0V24 reference potential – backup voltage
6	n.c.	Not connected
7	GND	Reference potential
8	n.c.	Not connected

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Hinged frame		
No.	**Name**	**Function**
–	PE	PE connection

4.1 Important information about the DC 24 V supply

The internal components can be supplied with DC 24 V either from the device or via an external DC 24 V backup voltage.

To use the **internal** DC 24 V supply, you must jumper the following contacts:

- [c].1 and [c].3
- [c].5 and [c].7

INFORMATION

If you use an external DC 24 V backup voltage, do not connect contacts [c].3 and [c].7.

To use an **external** DC 24 V backup voltage, connect it to the following contacts:

- [c].1
- [c].5

4.2 Signal contact for external maintenance switch

The device has a signal contact for an external maintenance switch.

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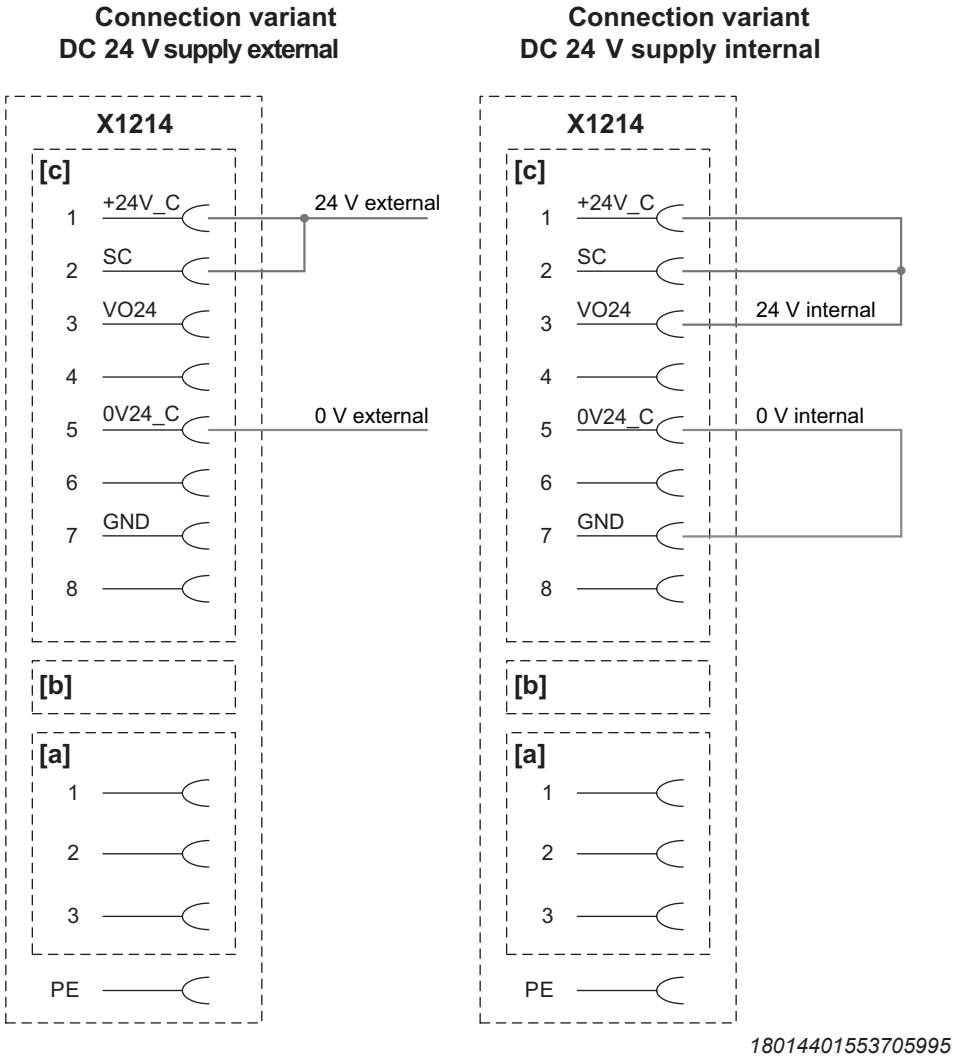
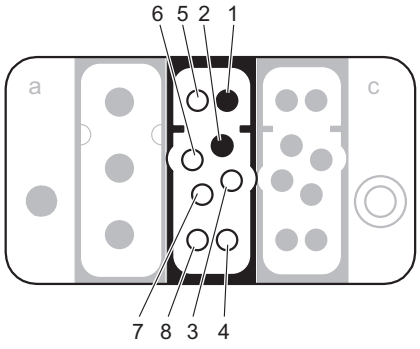
If you do not use an external maintenance switch, you must jumper the DC 24 V to the signal contact (SC).

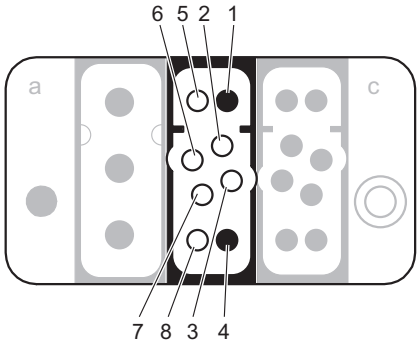
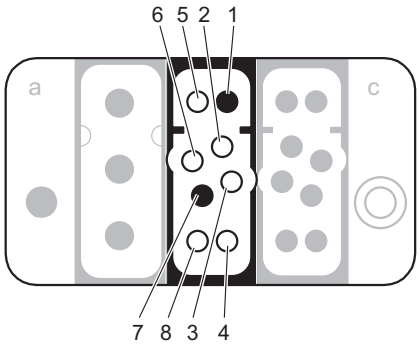
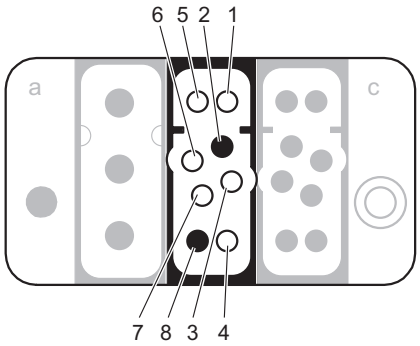
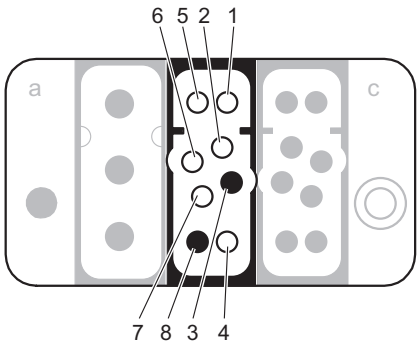


18014401553705995

4.3 Coding

The following table shows the assignment of the individual coding to the respective device power rating:

Device power	Coding of the connections
2.2 kW	

Device power	Coding of the connections
4 kW	
7.5 kW	
11 kW	
15 kW	

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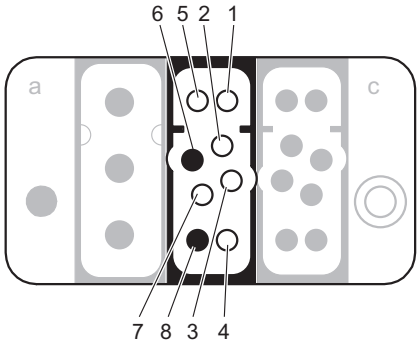
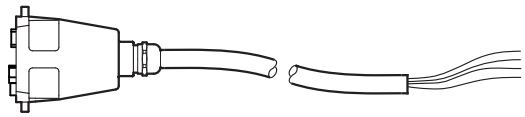
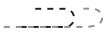
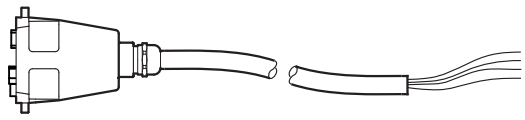
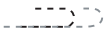
Device power	Coding of the connections
22 kW	

4.4 Connection cable

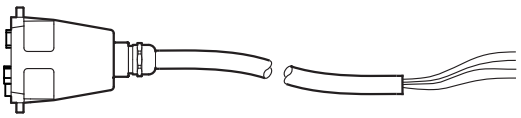
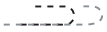
4.4.1 2.2 kW/4 kW device power IEC/UL

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

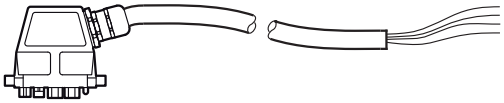
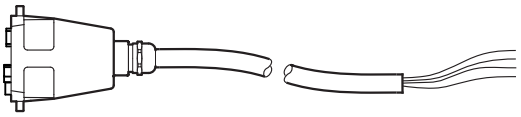
4.4.2 7.5 kW device power IEC

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

4.4.3 7.5 kW device power UL

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

4.4.4 11 kW device power IEC

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

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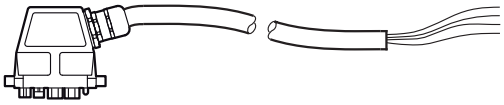
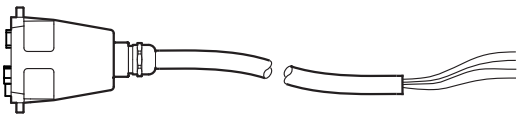
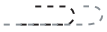
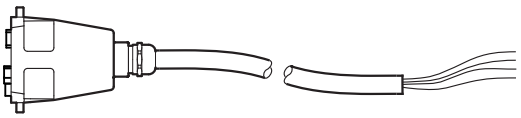
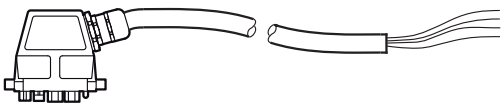
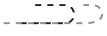
4.4.5 11 kW device power UL

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

4.4.6 15 kW device power IEC

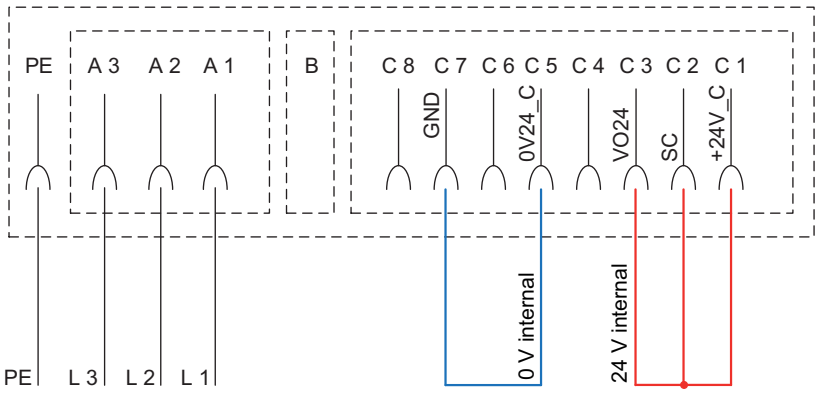
Cables	Length/installation type	Type	Component
Part number: 18131468 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–
Part number: 18174183 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–

4.4.7 Conductor assignment

Part number	Signal name	Core color
18131433	L1	Black/1
18131468	L2	Black/2
18174183	L3	Black/3
18195237 18195253	PE	Green/yellow

4.4.8 Wiring diagram

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



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5 X2011: Motor with brake control

NOTICE

Damage or malfunction due to motors with built-in brake rectifiers.

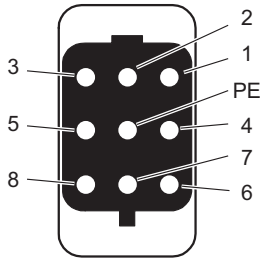
Damage to the drive system or its environment.

- Do not use motors with built-in brake rectifiers in conjunction with this device.

Function
Power connection for motor with brake up to 4 kW

Connection type
Han® Q 8/0, female

Connection image



No.	Name	Function
1	U	Motor phase U output
2	14	Brake terminal 14 (white)
3	W	Motor phase W output
4	15	Brake terminal 15 (blue)
5	TF/TH/KTY+	Motor temperature sensor (+)
6	13	Brake terminal 13 (red)
7	V	Motor phase V output
8	TF/TH/KTY-	Motor temperature sensor (-)
PE	PE	PE connection

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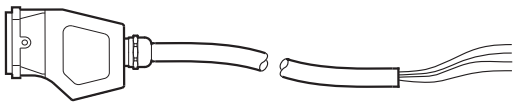
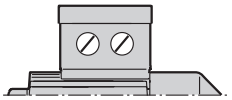
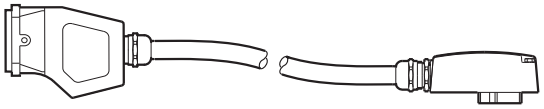
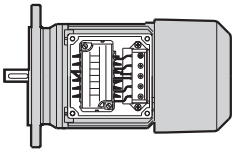
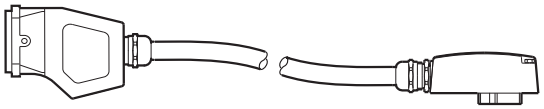
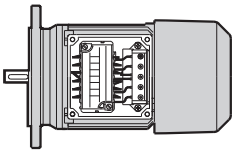
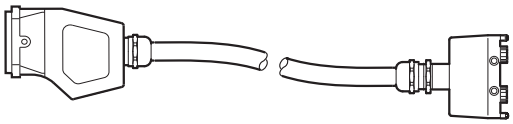
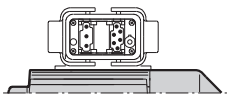
5.1 Connection cable

5.1.1 2.2 kW device power IEC

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

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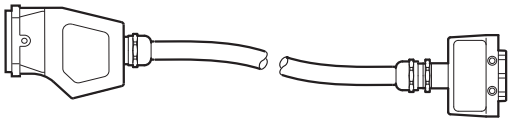
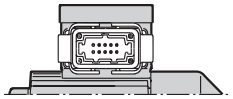
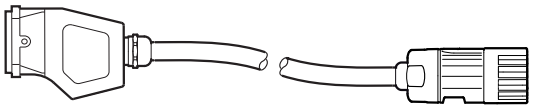
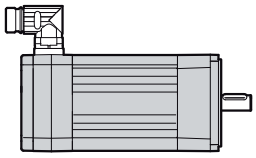
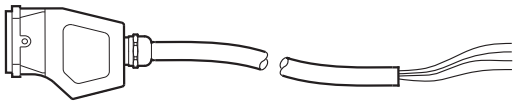
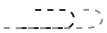
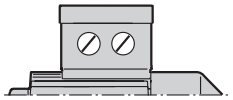
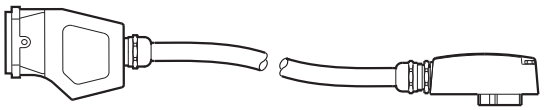
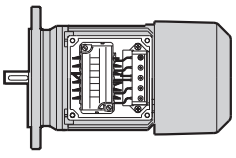
Cable	Length/installation type	Type	Component
Part number: 18127738 Cable design: 4G1.5  Han® Q 8/0 ↔ ASB8	Variable length 	D/1.5	DRN80 – 100 DRL71 – 80 
Part number: 18125859 Cable design: 4G1.5  Han® Q 8/0 ↔ SB11	Variable length 	E/1.5	CMP63 – 80 

5.1.2 2.2 kW device power UL

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

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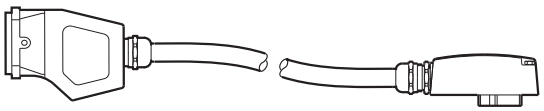
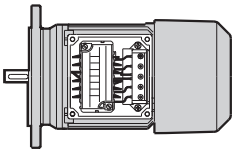
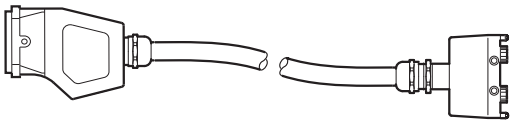
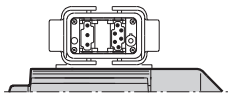
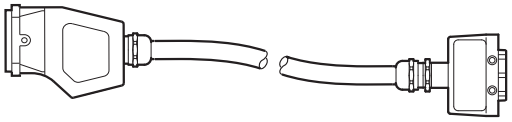
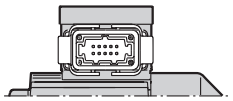
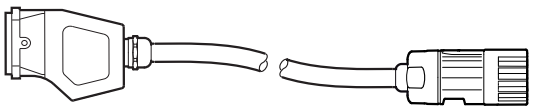
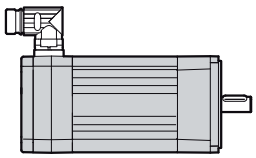
Cable	Length/installation type	Type	Component
Part number: 18144284△ Cable design: 4G2.5  Han® Q 8/0 ↔ IS △	Variable length 	D/2.5	DRN80 – 100△ DRL71 – 80△ 
Part number: 18174442 Cable design: 4G2.5  Han® Q 8/0 ↔ ABB8	Variable length 	D/2.5	DRN80 – 100 DRL71 – 80 
Part number: 18174434 Cable design: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

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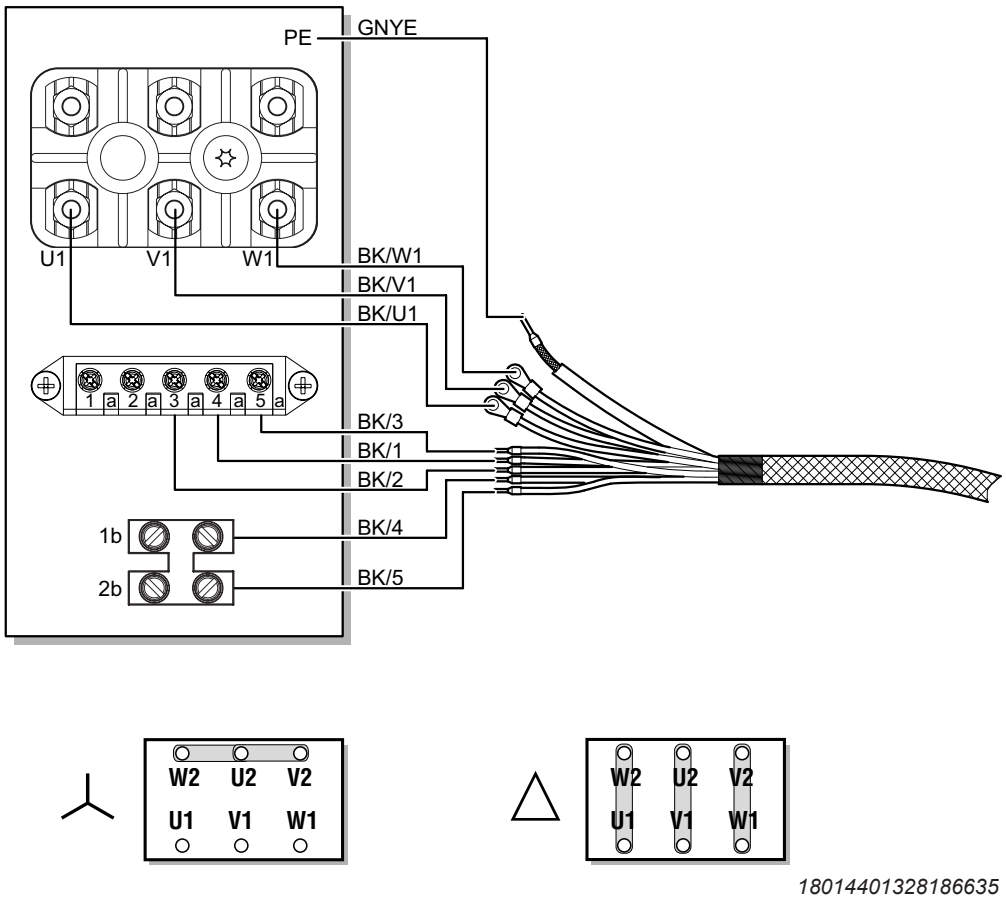
5.1.3 Conductor assignment

Part number	Signal name	Color coding
18125794 18143776	U1	Black/U1
	V1	Black/V1
	W1	Black/W1
	4a	Black/1
	3a	Black/2
	5a	Black/3
	1b	Black/4
	2b	Black/5
	PE connection	Green-yellow + shield end (Inner shield)

Connecting the hybrid cable

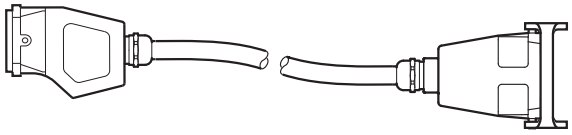
The following figure shows the connection of the hybrid cable to the terminal box of the motor. Also observe the wiring diagram of the respective motor.



18014401328186635

5.1.4 Adapter cable

2.2 kW device power IEC/UL

Cable	Length/installation type	Type	Component
Part number: 18161243 Cable design: 4G2.5  Han® Q 8/0 ↔ Han® 6 B	Variable length 	D/2.5	All connection cables with Han® 6B Note the motor assignments to the device (only 2.2 kW).

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6 X2012: Motor with brake control

NOTICE

Damage or malfunction due to motors with built-in brake rectifiers.

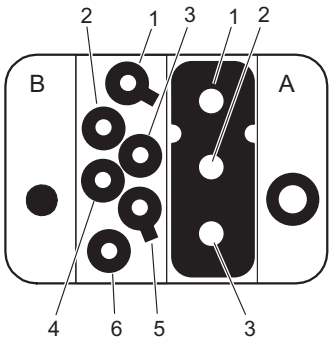
Damage to the drive system or its environment.

- Do not use motors with built-in brake rectifiers in conjunction with this device.

Function
Power connection for motor with brake up to 7.5 kW

Connection type
Han-Modular® 6 B, female, 1 locking latch

Connection diagram



[A] Han® C module, female		
No.	**Name**	**Function**
1	U	Motor phase U output
2	V	Motor phase V output
3	W	Motor phase W output

[B] Han® E protected module, female		
No.	**Name**	**Function**
1	TF/TH/KTY+	Motor temperature sensor (+)
2	15	Brake terminal 15 (blue)
3	13	Brake terminal 13 (red)
4	14	Brake terminal 14 (white)
5	n.c.	Not connected
6	TF/TH/KTY-	Motor temperature sensor (-)

Hinged frame		
No.	**Name**	**Function**
–	PE	PE connection

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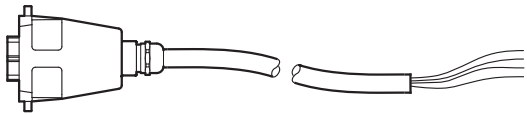
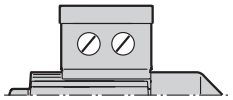
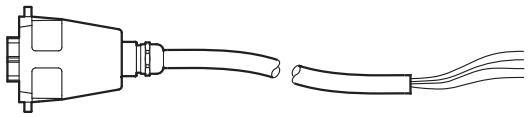
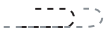
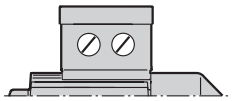
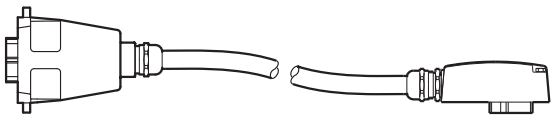
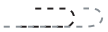
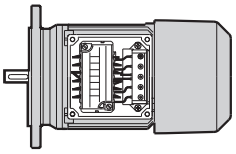
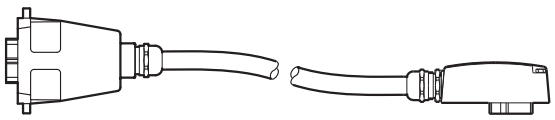
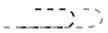
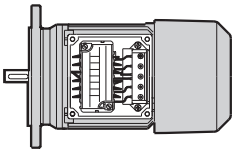
6.1 Connection cable

6.1.1 4 kW device power IEC

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

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Cable	Length/installation type	Type	Component
Part number: 18118186 Cable design: 4G1.5 Han® 6 B ↔ ABB8	Variable length	D/1.5	DRN80 – 112 DRL71 – 132
Part number: 18118194 Cable design: 4G1.5 Han® 6 B ↔ ASB8	Variable length	D/1.5	DRN80 – 112 DRL71 – 132
Part number: 18122027 Cable design: 4G1.5 Han® 6 B ↔ SB11	Variable length	E/1.5	CMP63 – 80
Part number: 18110525 Cable design: 4G2.5 Han® 6 B ↔ SB12	Variable length	E/2.5	CMP63 – 80

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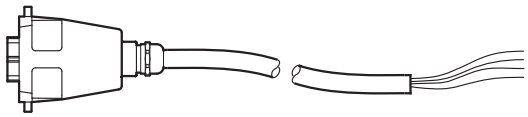
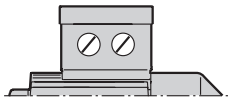
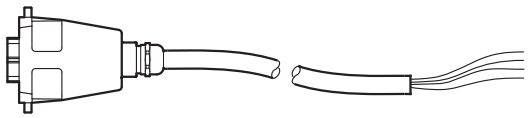
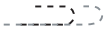
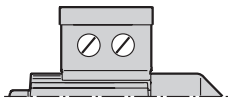
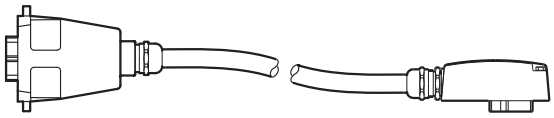
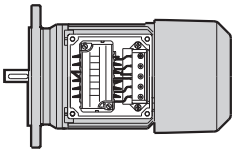
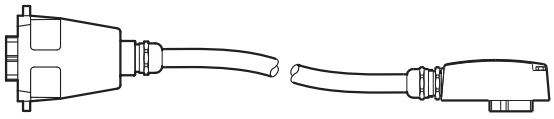
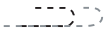
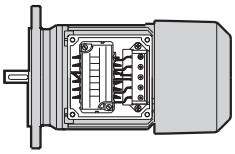
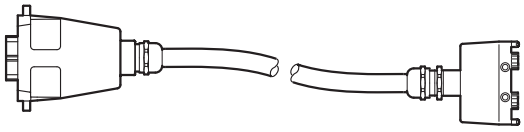
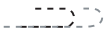
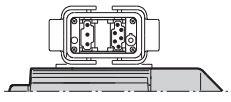
6.1.2 4 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18108334 Cable design: 4G2.5  Han® 6 B ↔ open (terminal box connection M4)	Variable length 	D/2.5	DRN80 – 100 DRL71 – 100 
Part number: 18108342 Cable design: 4G2.5  Han® 6 B ↔ open (terminal box connection M5)	Variable length 	D/2.5	DRN112 DRL112 – 132 
Part number: 18108326 ⅄ Cable design: 4G2.5  Han® 6 B ↔ IS ⅄	Variable length 	D/2.5	DRN80 – 112 ⅄ DRL71 – 100 ⅄ 
Part number: 18108318 △ Cable design: 4G2.5  Han® 6 B ↔ IS △	Variable length 	D/2.5	DRN80 – 112 △ DRL71 – 100 △ 
Part number: 18108245 Cable design: 4G2.5  Han® 6 B ↔ ABB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 

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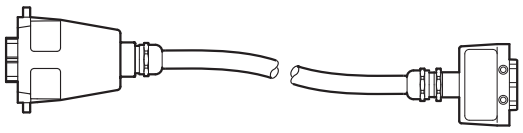
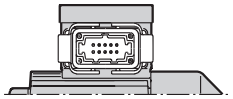
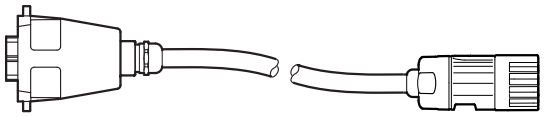
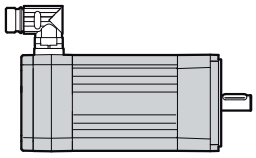
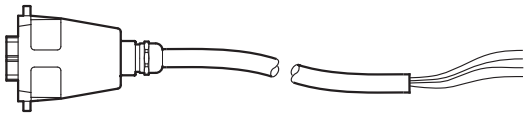
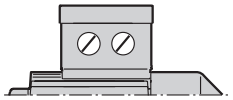
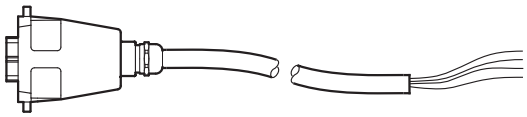
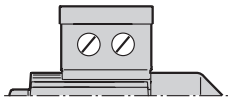
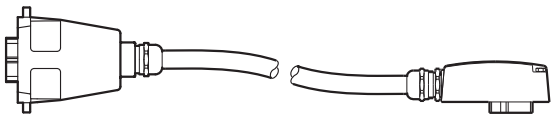
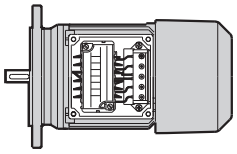
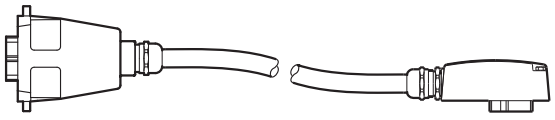
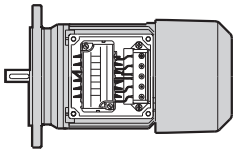
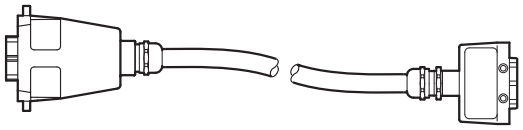
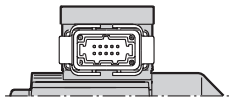
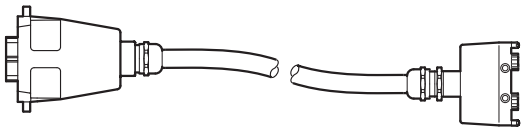
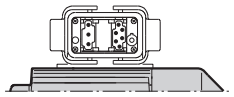
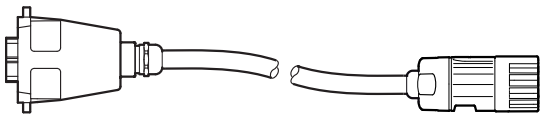
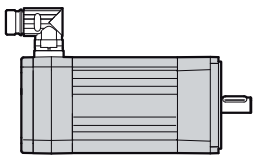
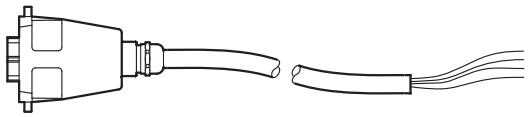
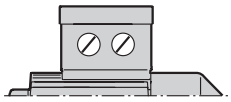
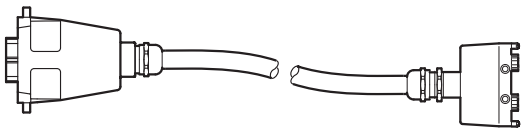
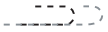
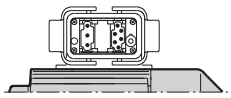
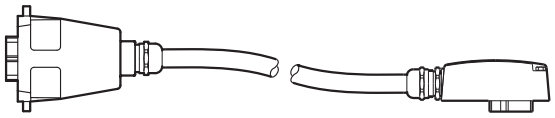
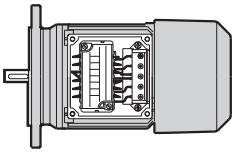
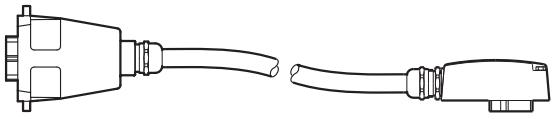
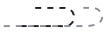
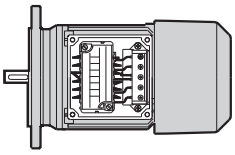
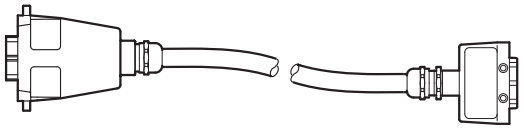
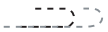
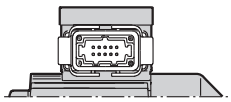
Cable	Length/installation type	Type	Component
Part number: 18108202 Cable design: 4G2.5  Han® 6 B ↔ ASB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18110525 Cable design: 4G2.5  Han® 6 B ↔ SB12	Variable length 	E/2.5	CMP63 – 80 

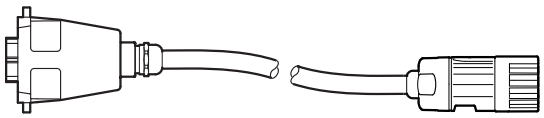
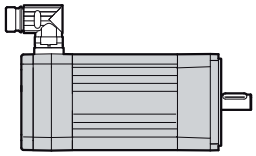
6.1.3 7.5 kW device power IEC

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

Cable	Length/installation type	Type	Component
Part number: 18108318 △ Cable design: 4G2.5  Han® 6 B ↔ IS △	Variable length	D/2.5	DRN80 – 112 △ DRL71 – 100 △ 
Part number: 18108326 人 Cable design: 4G2.5  Han® 6 B ↔ IS 人	Variable length	D/2.5	DRN80 – 112 人 DRL71 – 100 人 
Part number: 18108202 Cable design: 4G2.5  Han® 6 B ↔ ASB8	Variable length	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18108245 Cable design: 4G2.5  Han® 6 B ↔ ABB8	Variable length	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18122035 Cable design: 4G4  Han® 6 B ↔ SB14	Variable length	E/4.0	CMP63 – 100 

6.1.4 7.5 kW device power UL

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

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

6.1.5 Conductor assignment

Part number	Motor terminal DR.. motor	Color coding	Hybrid cable designation	Connection device
18108334 18108342 18118135 18118143 18120601	U1	Black	U1	Motor phase U
	V1	Black	V1	Motor phase V
	W1	Black	W1	Motor phase W
	4a	Black	1	Brake 13 (red)
	3a	Black	2	Brake 14 (white)
	5a	Black	3	Brake 15 (blue)
	1b	Black	4	TF/TH +
	2b	Black	5	TF/TH -
	PE connection	Green-yellow + shield end (Inner shield)		PE

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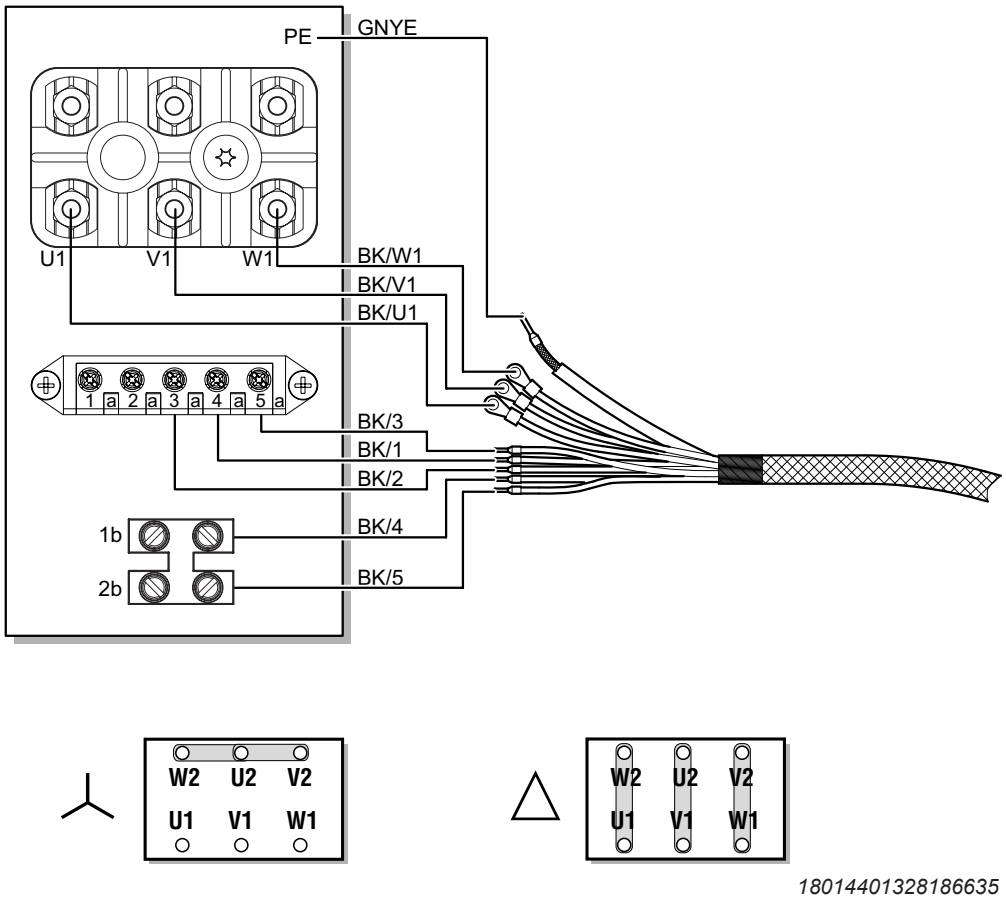
Connecting the hybrid cable

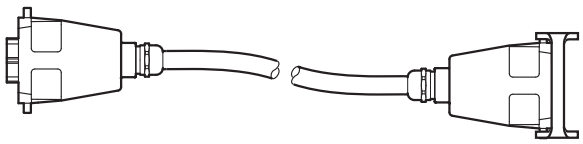
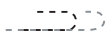
The following figure shows the connection of the hybrid cable to the terminal box of the motor. Also observe the wiring diagram of the respective motor.



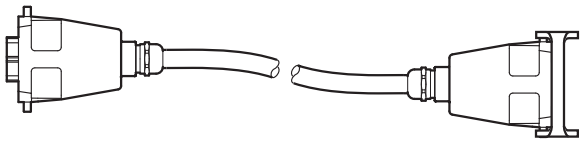
18014401328186635

6.1.6 Extension cable

4 kW device power IEC/UL

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

7.5 kW device power IEC/UL

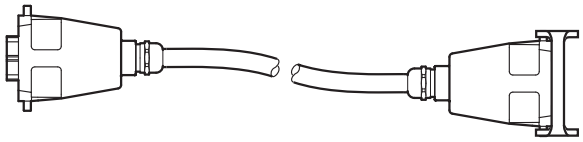
Cable	Length/installation type	Type	Component
Part number: 18157475 Cable design: 4G6  Han® 6 B ↔ Han® 6 B	Variable length	D/6.0	Connection cable: Motor cable with Han® 6B

6.1.7 Phase reversal cable

INFORMATION

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

4 kW device power IEC/UL

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

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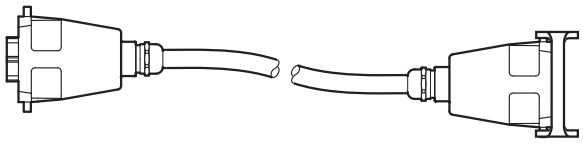
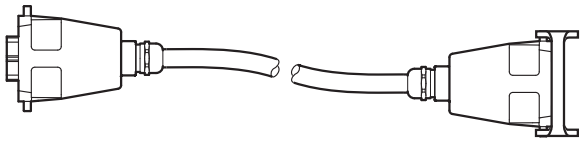
7.5 kW device power IEC

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

7.5 kW device power UL

Cable	Length/installation type	Type	Wiring diagram
Part number: 18122000 Cable design: 4G6  Han® 6 B ↔ Han® 6 B	Fixed length	D/6.0	**U1 – V1** **V1 – U1** W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

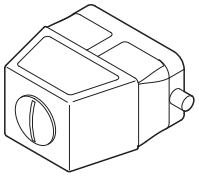
6.2 Connection component

6.2.1 Jumper plug temperature sensor

Part number: 18180264

Structure	
Modules	**Jumpered pins**
[B] – [B]	1 – 6

Connection: Han® 6 B, male-male



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7 X2016: Motor with brake control

NOTICE

Damage or malfunction due to motors with built-in brake rectifiers.

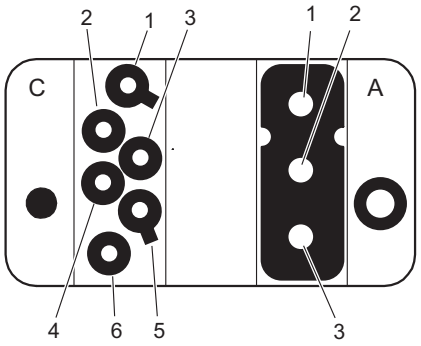
Damage to the drive system or its environment.

- Do not use motors with built-in brake rectifiers in conjunction with this device.

Function
Power connection for motor with brake up to 22 kW

Connection type
Han-Modular® 10 B, female, 1 single locking latch

Connection diagram



[A] Han® C module, female		
No.	**Name**	**Function**
1	U	Motor phase U output
2	V	Motor phase V output
3	W	Motor phase W output

[C] Han® E protected module, female		
No.	**Name**	**Function**
1	TF/TH/KTY+	Motor temperature sensor (+)
2	15	Brake terminal 15 (blue)
3	13	Brake terminal 13 (red)
4	14	Brake terminal 14 (white)
5	n.c.	Not connected
6	TF/TH/KTY-	Motor temperature sensor (-)

Hinged frame		
No.	**Name**	**Function**
–	PE	PE connection

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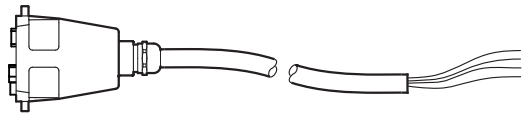
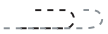
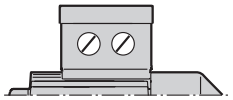
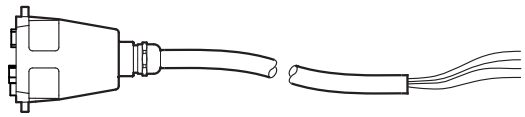
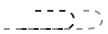
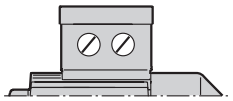
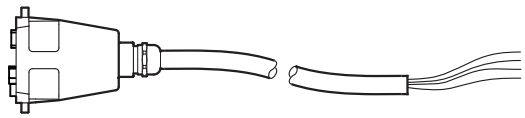
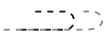
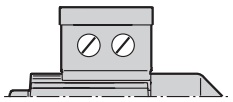
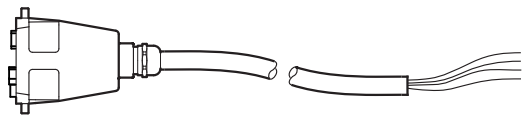
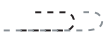
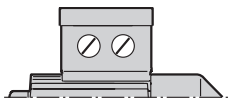
7.1 Connection cables

7.1.1 11 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18110452 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M5)	Variable length 	D/6.0	DRN112 – 132 DRL112 – 132 
Part number: 18110479 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/6.0	DRN160 DRL160 
Part number: 18120644 Cable design: 4G4  Han® 10 B ↔ open (terminal box connection M5)	Variable length 	D/4.0	DRN112 – 132 DRL112 – 132 
Part number: 18120741 Cable design: 4G4  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/4.0	DRN112 – 132 DRL112 – 132 

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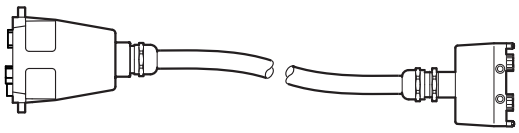
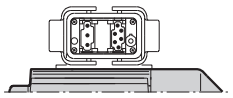
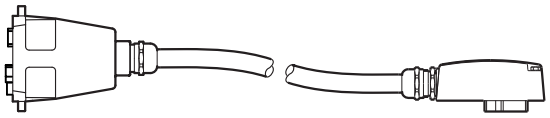
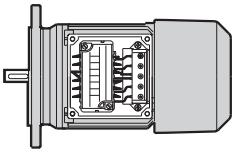
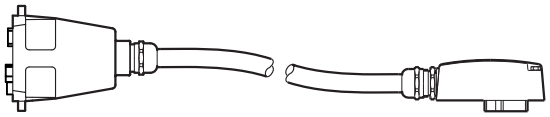
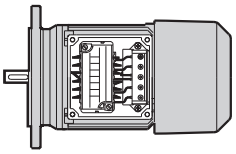
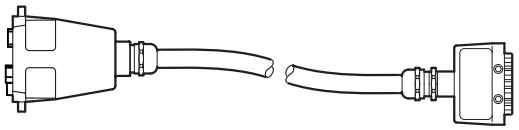
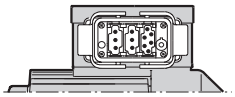
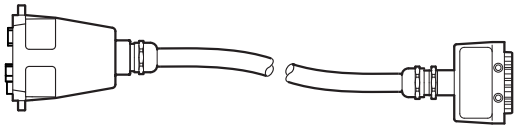
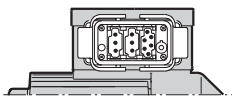
Cable	Length/installation type	Type	Component
Part number: 18120652 Cable design: 4G4  Han® 10 B ↔ ABB8	Variable length	D/4.0	DRN112 – 160 DRL112 – 132 
Part number: 18146252 △ Cable design: 4G4  Han® 10 B ↔ IS2 △	Variable length	D/4.0	DRN80 – 132△ DRL71 – 90△ 
Part number: 18146228 人 Cable design: 4G4  Han® 10 B ↔ IS2 人	Variable length	D/4.0	DRN80 – 132人 DRL71 – 90人 
Part number: 18123562人 Cable design: 4G6  Han® 10B ↔ ADB2 人	Variable length	D/6.0	DRN160人 DRL160人 
Part number: 18123570△ Cable design: 4G6  Han® 10B ↔ ADB2 △	Variable length	D/6.0	DRN160△ DRL160△ 

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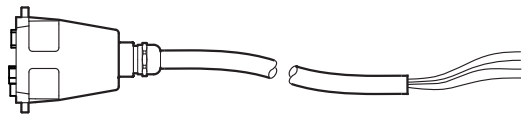
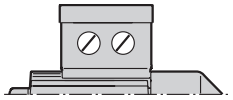
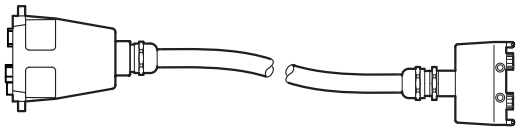
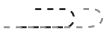
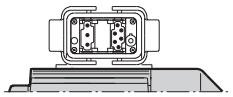
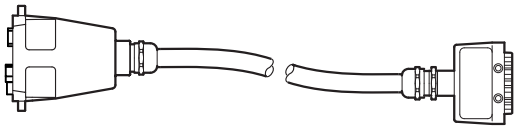
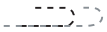
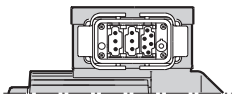
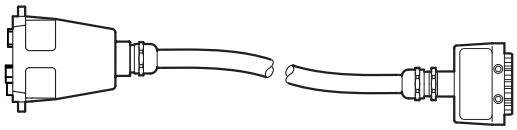
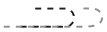
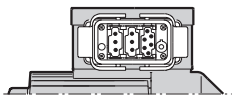
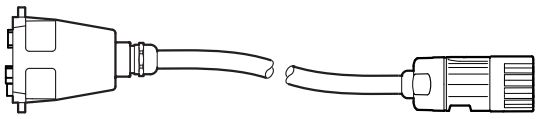
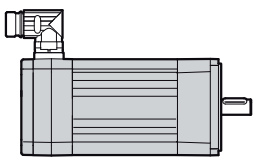
Cable	Length/installation type	Type	Component
Part number: 18110436 Cable design: 4G6 Han® 10 B ↔ ABB8	Variable length	D/6.0	DRN160 DRL160
Part number: 18110533 Cable design: 4G6 Han® 10 B ↔ SBB6	Variable length	E/6.0	CMP80 – 100
Part number: 18122051 Cable design: 4G4 Han® 10 B ↔ SB14	Variable length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

7.1.2 11 kW device power UL

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

Cable	Length/installation type	Type	Component
Part number: 18110479 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/6.0	DRN180 DRL180 
Part number: 18110436 Cable design: 4G6  Han® 10 B ↔ ABB8	Variable length 	D/6.0	DRN180 DRL180 
Part number: 18123562人 Cable design: 4G6  Han® 10B ↔ ADB2 人	Variable length 	D/6.0	DRN180人 DRL180人 
Part number: 18123570△ Cable design: 4G6  Han® 10B ↔ ADB2 △	Variable length 	D/6.0	DRN180△ DRL180△ 
Part number: 18110533 Cable design: 4G6  Han® 10 B ↔ SBB6	Variable length 	E/6.0	CMP80 – 100 

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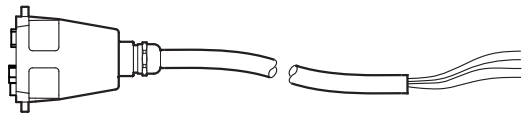
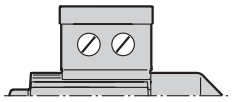
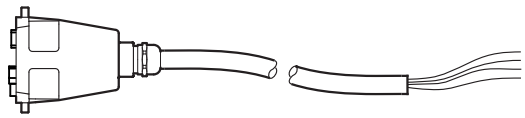
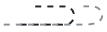
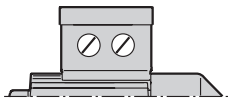
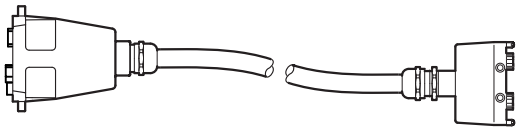
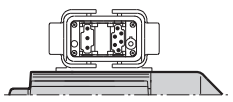
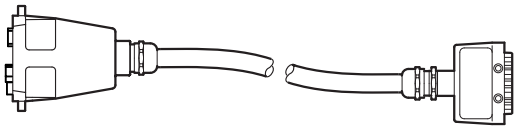
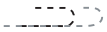
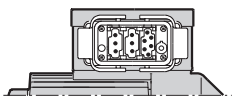
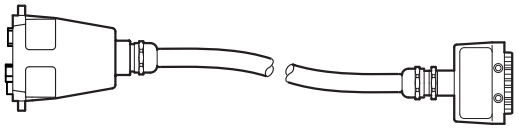
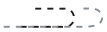
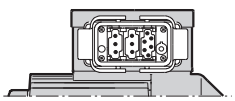
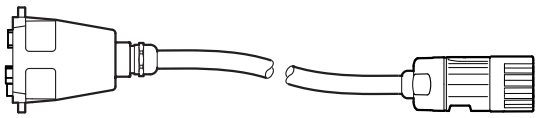
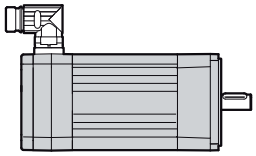
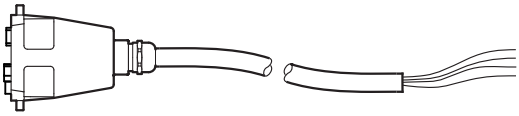
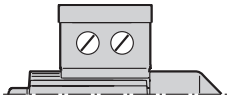
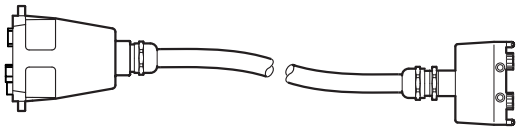
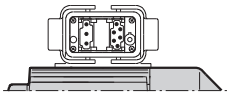
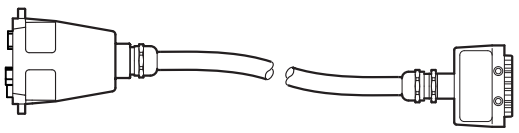
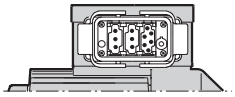
7.1.3 15 kW device power IEC

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

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

7.1.4 15 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18121985 Cable design: 4G10  Han® 10 B ↔ open (terminal box connection IO)	Variable length	D/10.0	DRN180 DRL180 
Part number: 18118208 Cable design: 4G10  Han® 10 B ↔ ABB8/AKB8	Variable length	D/10.0	DRN180 DRL180 
Part number: 18123589人 Cable design: 4G10  Han® 10B ↔ ADB2 人	Variable length	D/10.0	DRN180人 DRL180人 

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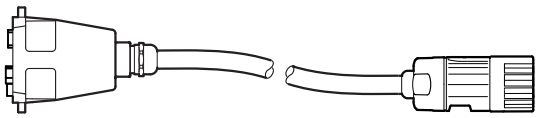
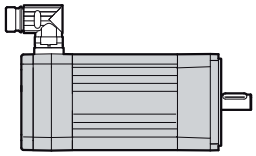
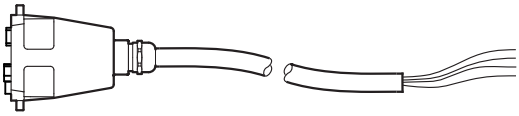
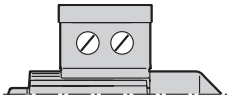
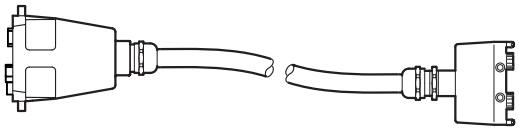
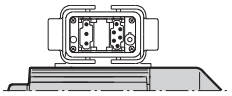
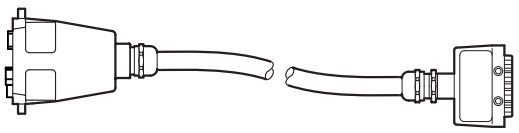
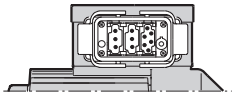
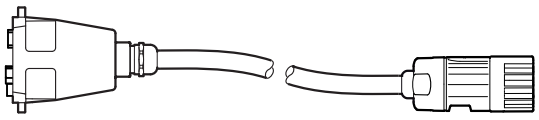
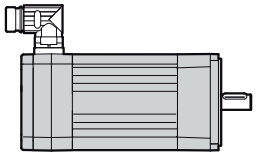
Cable	Length/installation type	Type	Component
Part number: 18182151 Cable design: 4G10.0  Han® 10B ↔ SBB10	Variable length	D/10	CMP80 – 112 

7.1.5 22 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18121985 Cable design: 4G10  Han® 10 B ↔ open (terminal box connection IO)	Variable length	D/10.0	DRN180 DRL180 
Part number: 18118208 Cable design: 4G10  Han® 10 B ↔ ABB8/AKB8	Variable length	D/10.0	DRN180 DRL180 
Part number: 18123589人 Cable design: 4G10  Han® 10B ↔ ADB2 人	Variable length	D/10.0	DRN180人 DRL180人 

Cable	Length/installation type	Type	Component
Part number: 18182151 Cable design: 4G10.0  Han® 10B ↔ SBB10	Variable length 	D/10	CMP80 – 112 

7.1.6 Conductor assignment

Part number	Motor terminal DR.. motor	Color coding	Hybrid cable designation	Connection device
18110452 18110479 18121985	U1	Black	U1	Motor phase U
	V1	Black	V1	Motor phase V
	W1	Black	W1	Motor phase W
	4a	Black	1	Brake 13 (red)
	3a	Black	2	Brake 14 (white)
	5a	Black	3	Brake 15 (blue)
	1b	Black	4	TF/TH +
	2b	Black	5	TF/TH -
	PE connection	Green-yellow + shield end (Inner shield)		PE

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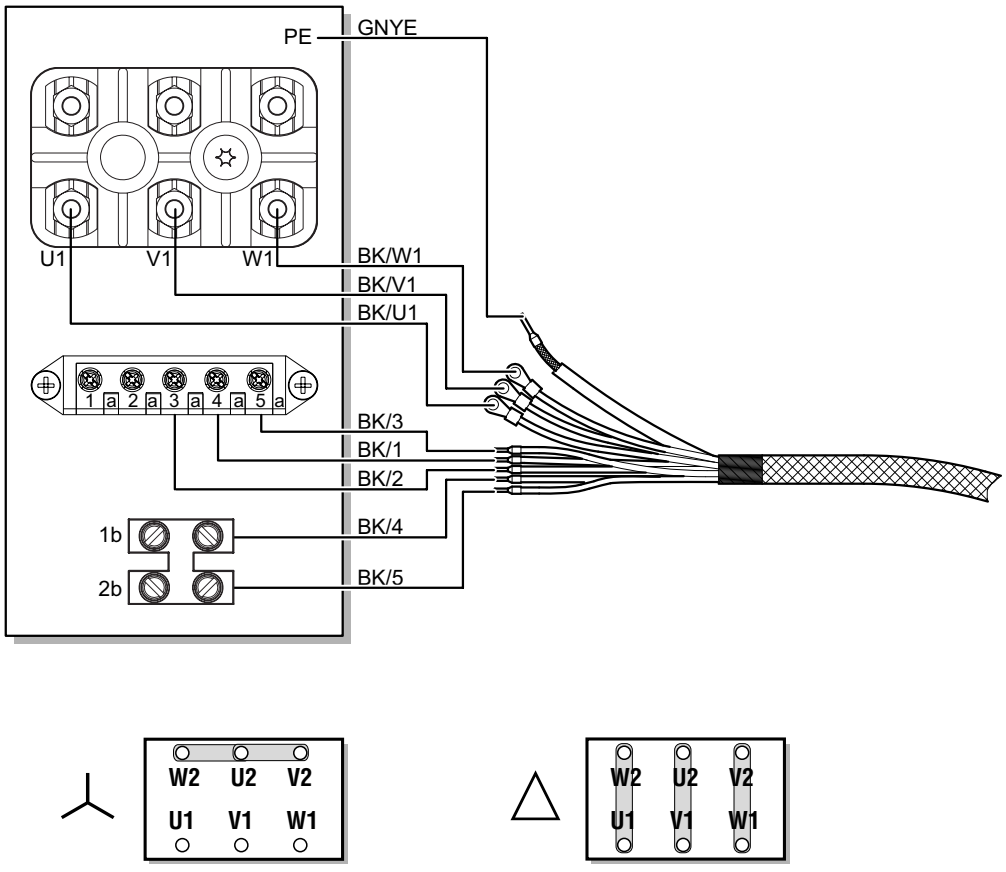
Connecting the hybrid cable

The following figure shows the connection of the hybrid cable to the terminal box of the motor. Also observe the wiring diagram of the respective motor.



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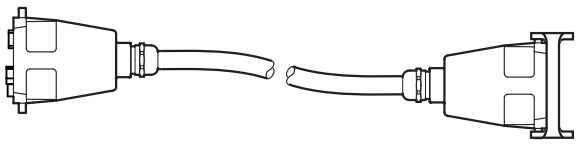
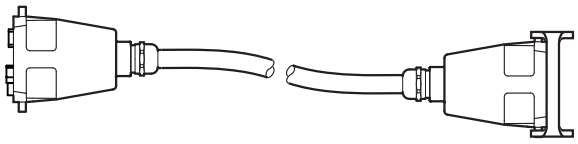
7.1.7 Extension cable

11 kW device power IEC/UL

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

15 kW device power IEC

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

7.1.8 Phase reversal cable

INFORMATION

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

11 kW device power IEC/UL

Cable	Length/installation type	Type	Wiring diagram
Part number: 18119638 Cable design: 4G6  Han® 10 B ↔ Han® 10 B	Fixed length	D/6.0	**U1 – V1** **V1 – U1** W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

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15 kW device power IEC/UL

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

22 kW device power IEC

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

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8 Status messages

If the transition function of the status display is disabled using the processing unit, the bus is no longer monitored. If an error occurs in this case, the status display may still display the last status before occurrence of the error. This is why you should only switch off the monitoring function in exceptional cases, and inform the respective personnel accordingly.

If you use a parameterizable device, the following status messages are possible.

Code	Meaning	Measure
A1.0	DC 24 V operation, frequency inverter not ready	
A1.1	Controller inhibit active	
A1.2	No enable	
A1.3	Standstill current	
A1.4	Approval	
A1.5	n-control (speed control)	
A1.6	M-control (torque control)	
A1.7	Hold control	
A1.8	Factory setting	
A1.9	Limit switch hit	
A1.A	Technology option	
A1.c	Reference travel IPOS$^{plus®}$	
A1.D	Flying start	
A1.E	Encoder calibration	
A1.F	Error info	
A1.U	"Safe Torque Off" active ⚠ **WARNING!** Risk of injury due to incorrectly interpreted display **U = "Safe Torque Off" active** – Severe or fatal injuries. The display **U = "Safe Torque Off"** active is not safety-related. Thus it must not be used safety-related.	
Flashing dot	Application module of the "PFA-..." power section is running.	
888 **S2:** Flashing green **S3:** Off	• No application module loaded	• Create a configuration with the Application Configurator and load the application into the device.

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Code	Meaning	Measure
BUS ERR	Fault • Fault in fieldbus parameters or fieldbus stations incorrectly set	• Check the fieldbus wiring to the higher-level controller. • Check the fieldbus parameter setting of the device and the higher-level controller.
INI	Status • Initialization: A connection is established to all internal components. This can take several minutes after a device replacement.	• Wait several minutes.
OFF	Status • The maintenance switch is switched off.	• Switch on the maintenance switch. **Devices without power interface:** Check the DC 24 V cabling and the cabling of the switch feedback.
OFL	Status • Internal communication error	**While backing up data or restoring a data backup:** Wait a few minutes until the display changes. **In normal operation:** • Disconnect the device from the AC 400 V supply and the DC 24 V supply voltage for at least 30 s. • Restart the device.
RUN	Status • Connection was successfully established. After 3 seconds, the component or application status is shown.	

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Code	Meaning	Measure
SF1	Fault Communication error with the power section, caused by e.g.:	
	• Parameter channel 2 not activated *(P889)*	• Activate parameter channel 2.
	• Manual operation not finished	• Activate manual operation. Deactivate it afterwards.
	• Parameter lock power section activated *(P803)*	• Deactivate the parameter lock.
	• Configuration in the Application Configurator not completed or not completely loaded	• Create a configuration with the Application Configurator and load the application into the device. Other possible measures: • Disconnect the device from the AC 400 V supply and the DC 24 V supply voltage for at least 30 s. • Restart the device.
SF2	Fault • Error in external periphery	• Check the cabling of the digital inputs and outputs as well as the connections of the communication package.
SF3	Fault • Non-enabled application module loaded	• Load an enabled application module into the "PFA-..." power section • If you do not use an application module, set parameter P802 "Factory setting" of the "PFA-..." power section to "Delivery state". **NOTICE!** The device has to be started up again.
SF10	Fault • Configuration with Application Configurator not completed.	• Complete the configuration with the Application Configurator. Load it into the device.
SF20	Warning • Error during data management, data backup on SD memory card failed	• Start the data management again.
SF21	Warning • Error during data management, data backup on SD memory card failed, SD memory card may be write protected.	• Switch off the device. Remove write protection from SD memory card. Switch on the device again.

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Code	Meaning	Measure
SF22	Warning • Error during data management, data recovery to device failed	• Start the data management again.
SF23	Warning • Error during data recovery to device, controller inhibit not set	Set the device to one of the following states: • Controller inhibit (A1.1) • Safe Torque Off (A1.U)
SF24	Fault • Corrupt data backup detected	• Perform the data backup again.
SF25	Fault • Corrupt data backup detected	• Perform the data backup again.
SF99	• Internal system error	
SF110	Fault • Actuator voltage overload error	• Check the cabling of the digital inputs and outputs.
SF120	Fault • Error due to overload in sensor voltage of group 1	• Check the cabling of the digital inputs and outputs.
SF121	Fault • Error due to overload in sensor voltage of group 2	• Check the cabling of the digital inputs and outputs.
SF130	Fault • SNI fuse tripped	• Check the SNI fuse.
SF 881	• The SD memory card is not inserted. • The data system of the SD memory card is corrupt. • Boot process has failed.	• Switch the device off and back on again. If the system fault is displayed repeatedly, contact SEW-EURODRIVE Service.
SF 888	• The device cannot boot after switch-on. The communication and control unit has a serious error.	• Please contact the SEW-EURODRIVE service.
NO_ → CNF **S2:** Flashing green **S3:** Lights up green	• No application module is loaded.	• Load your application module into the device.
SEW	• DC 24 V voltage supply is present. • The user program starts. This process can take up to 30 seconds. • No user program has been loaded or started.	• If the status message is shown for more than 30 s, load the user program into the device.

Code	Meaning	Measure
BtL	• The bootloader update is being executed.	• Do not switch off the device. • Wait until the bootloader update has been completed. If the device does not respond as expected after 5 minutes, proceed as described in chapter "SD memory card as spare part" (→ 🗎 59). • If the error occurs again, replace the device or contact SEW-EURODRIVE Service.
DAT	Status Data management active, triggered by e.g.: • Data is loaded to the SD memory card or into the device. • Previous device replacement • Automatic upload of the power section data • Data management started via fieldbus • Data management started via MOVITOOLS® MotionStudio	• Wait until data backup and restore has been completed.
Data	• Data backup is created. • Data is restored from a data backup.	• Wait until data backup and restore has been completed.
.....	• The user program has not updated the values of the status display within 3 s. An error has occurred in the user program, the device or the internal system bus.	• Restart the device. Check whether the device starts correctly. If the device does not start, reload the user program into the device. • If the status message is displayed repeatedly, contact SEW-EURODRIVE Service.

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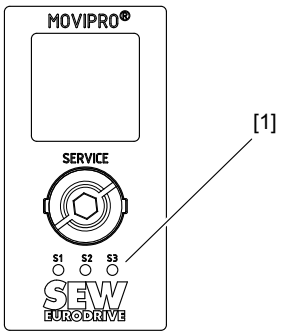
8.1 Status LEDs

The status LEDs are located on the service unit. They show the fieldbus and device status.



1954344587

[1] Status LEDs S1, S2, S3

8.1.1 Status LED S1 PROFINET IO

Status LED	Possible cause	Measure
Off	• PROFINET IO device is currently exchanging data with the PROFINET IO controller (Data Exchange).	-
Flashing green Flashing green/red	• The flashing function in the PROFINET IO controller configuration is activated to visually locate the stations.	-
Lights up red	• Connection to the PROFINET IO controller has failed. • PROFINET IO device does not detect a link. • Bus interruption • PROFINET IO controller is not in operation.	• Check the PROFINET connection of the device. • Check the PROFINET IO controller. • Check the cabling of your PROFINET network.
Flashing yellow Lights up yellow	• The STEP 7 hardware configuration contains a module that is not permitted.	• Set the STEP 7 hardware configuration to ONLINE. Analyze the component status of the slots in the PROFINET IO device.

8.1.2 Status LED S1 PROFIBUS

Status LED	Possible cause	Measure
Off	Device is currently exchanging data with the DP master (data exchange).	–

Status LED	Possible cause	Measure
Flashes	• Device has detected the baud rate, but is not addressed by DP master. • Device was not configured in DP master or configured incorrectly.	• Check the PROFIBUS address set in the device and in the configuration software of the DP master. • Check the project planning of the DP master.
Lights up red	• Connection to the DP master has failed. • Device does not detect PROFIBUS baud rate. • Bus interruption • DP master not in operation.	• Check the PROFIBUS DP connection of the device. • Check the configuration of the DP master. • Check the cabling of your PROFIBUS network.

8.1.3 Status LED S1 EtherNet/IP™ and Modbus/TCP

Status LED	Meaning
Off	The device does not yet have any IP parameters.
Flashing green/red	The device performs an LED test.
Flashing green	There is no controlling I/O connection.
Lights up green	There is a controlling EtherNet/IP™ I/O connection.
Lights up red	A conflict has been detected in the assigned IP addresses. Another node in the network uses the same IP address.
Flashing red	The previously established controlling I/O connection is in timeout state. The state is reset by restarting communication.

8.1.4 Status LED S1 DeviceNet™

Status LED	Meaning
Off	• Device is offline. • Device is performing a DUP MAC check. • Device is switched off.
Flashing green	• Device is online • A connection has not yet been established with a master. • DUP-MAC check performed successfully. • Missing, incorrect or incomplete configuration.
Lights up green	• Device is online • Connection has been established with a master. • Connection is active (established state).

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Status LED	Meaning
Flashing red	• A correctable error has occurred. • A device error is active. • Timeout • Polled I/O and/or bit-strobe I/O connections are in timeout state.
Lights up red	• A correctable error has occurred. • BusOff status • DUP-MAC check has detected an error.

8.1.5 Status LED S2

Status LED	Possible cause	Measure
Flashing green	The firmware of the fieldbus gateway is running properly.	–
Flashing green/orange	Data backup is created/restored.	–
Lights up orange	Boot is active.	–
Flashing orange	Firmware is being updated.	–
Flashes red	• SD card is not inserted. • File system on the SC card is corrupt. • Boot process has failed.	Switch the device off and back on again. Contact SEW-EURODRIVE service if the error reoccurs.

8.1.6 Status LED S2

Status LED	Possible cause	Measure
Flashing green	The firmware of the communication and control unit is running correctly.	–
Flashing green/orange	Data backup is created/restored.	–
Lights up orange	Boot is active.	–
Flashing orange	• Firmware is being updated or • Bootloader update required.	–
Flashes red	• SD memory card is not inserted. • File system on the SD memory card is corrupt. • Boot process has failed.	Switch the device off and back on again. Contact SEW-EURODRIVE service if the error reoccurs.

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8.1.7 Status LED S3

Status LED	Possible cause	Measure
Lit green	Program is running.	–
Off	No program is loaded.	Replace the SD card.

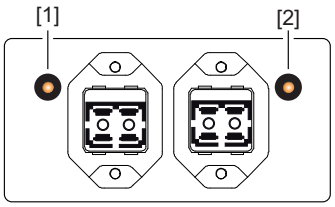
8.1.8 Status LED S3

Status LED	Possible cause	Measure
Lit green	User program is running.	–
Flashing green	• Program sequence has stopped. • Bootloader update required.	Start the user program.
Off	No program is loaded.	Load an user program into the communication and control unit.

8.1.9 Status LEDs FO1 and FO2 Ethernet connection push-pull SCRJ

The two LEDs "FO1" and "FO2" indicate the signal quality of the respective optical transmission path.

The LEDs are on the left and the right of both Ethernet fieldbus ports push-pull SCRJ:



4083348491

[1] FO1
[2] FO2

Status LED	Possible cause	Measure
Off	The signal level is 2 dB or more. The signal quality is good.	–
Lights up red	The optical signal level has fallen below 2 dB. This can have the following reasons: • Aging effect of the polymer fiber • The plug connector is not properly connected. • The externally connected cable is faulty or damaged.	• Check whether the plug connector is inserted correctly. • Check the damping of the externally connected cable.

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9 Device replacement

The device allows for a quick device replacement. It is equipped with a replaceable SD memory card on which all device data is stored. If the device has to be replaced, the plant can be started up again quickly by simply exchanging the SD memory card.

9.1 Prerequisites for successful device replacement

Observe the following:

- The devices that you want to exchange must be identical. If the devices have different configurations, a successful device replacement cannot be guaranteed.
- You must save the data of the device to be replaced on the SD memory card **before** you replace the device. SEW-EURODRIVE recommends to always backup the data right after starting up a device.
- Insert or remove the SD memory card only when the device is switched off.
- With programmable devices, note that the status display depends on programming. The module for the data backup function (data management) must be integrated in the program.

9.2 Replacing the device

Proceed as follows:

1. Perform a data backup via MOVITOOLS® MotionStudio if you are not certain whether the current device parameterization is stored on the SD memory card.
2. Disconnect the device from the supply system.
3. Remove it from the system.
4. Remove the memory card cover from the housing cover.
5. To do so, remove the SD memory card from the device to be replaced.
6. Insert the SD memory card into the new device.
7. Install the new device in the plant. Connect it to the supply system.
8. Switch on the new device.

INFORMATION

The device performs several initialization steps. Do not switch off the device during this time.

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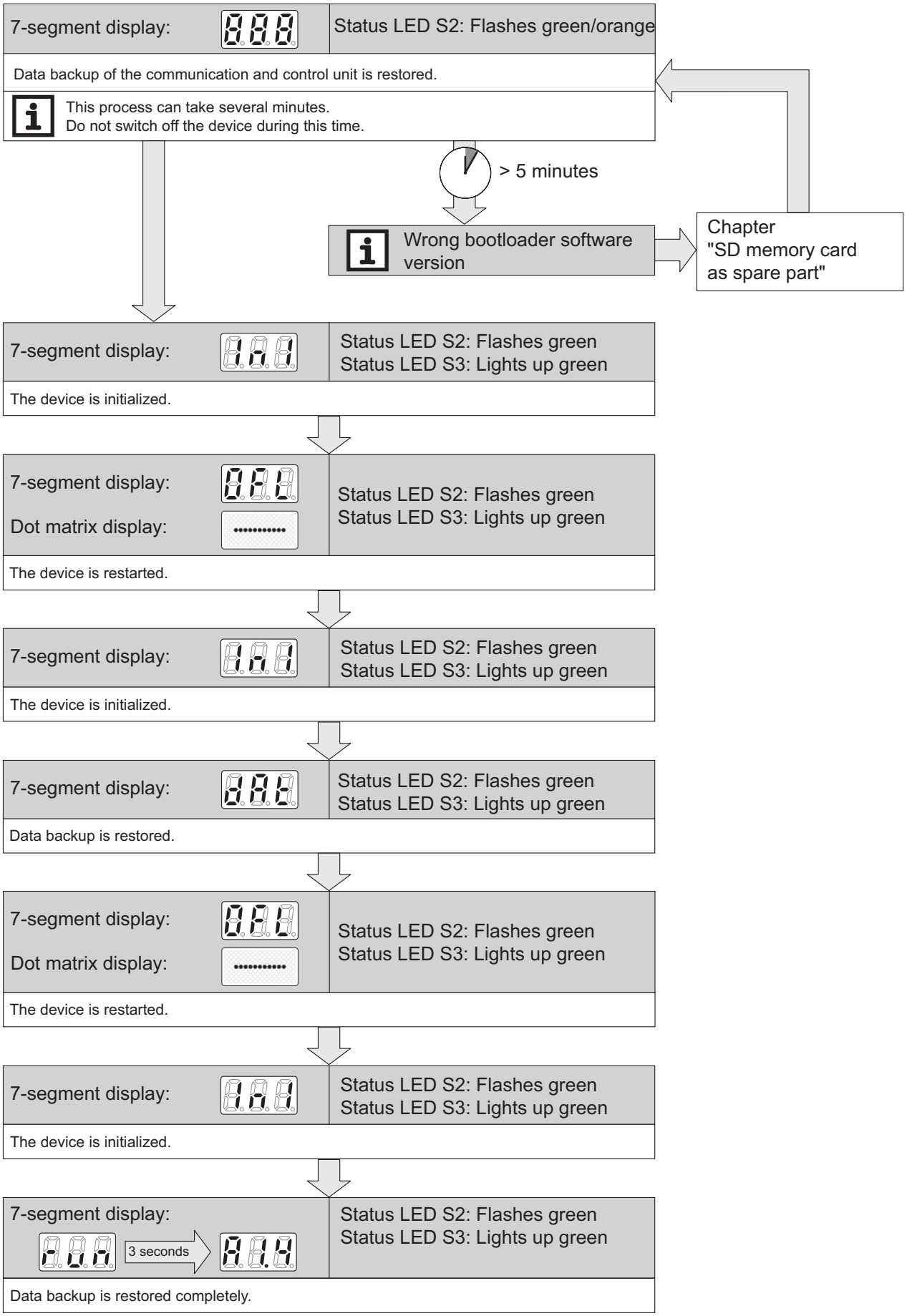

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- The parameters saved on the SD memory card are now available again. If a different parameter set is needed for the new device, change the parameter set now. Back up the changed data on the SD memory card again after startup.
- For applications with encoders, observe the chapter Reference travel after device or encoder replacement.

9.3 SD memory card as spare part

If you have ordered an SD card as spare part, it is possible that the versions of the bootloader software are different for the SD memory card and your device.

In this case, the device remains in the following state **for more than 5 minutes**:

7-segment display	Status LED S2
8.8.8 flashing	Flashing green/orange

Proceed as follows:

1. Disconnect the device from the supply system.
2. Unscrew the memory card cover.
3. Remove the SD memory card.
4. Connect an SD card reader to your PC.
5. Insert the SD memory card in the SD card reader. On your PC, go to [Computer] > [SD] > [System] > "BootConfig.cfg".
6. Open the file "BootConfig.cfg" with a text editor.
7. Search the file for the following expression:

   ```
   <!-- Confirm bootloader update with reset button? -->
   <ConfirmBlUpdateWithResetBtn>true</ConfirmBlUpdateWithReset-
   Btn>
   ```

8. Change the value "`true`" to the value "`false`" for the parameter.

   The expression must now be:

   ```
   <ConfirmBlUpdateWithResetBtn>false</ConfirmBlUpdateWithReset-
   Btn>
   ```

9. Save the file.
10. In the status bar, click [Safely remove hardware]. As soon as the PC confirms this, you can remove the SD memory card from the SD card reader.
11. Insert the SD memory card into the slot of the device and screw the memory card cover back on.
12. Connect the device to the supply system.
13. Observe the instructions in chapter "Device replacement" (→ 🗎 57) from step 8 onwards.

10 Declaration of conformity

EU Declaration of Conformity

SEW EURODRIVE

Translation of the original text **901500116/EN**

SEW-EURODRIVE GmbH & Co. KG
Ernst-Blickle-Straße 42, D-76646 Bruchsal
declares under sole responsibility that the following products

Drive systems of the product family	**MOVIPRO® SDC PHC2.A-A...M1-..0A-00/...** **MOVIPRO® ADC PHC2.A-A...M1-..1A-00/...**
in accordance with	
Machinery Directive	**2006/42/EC** **(L 157, 09.06.2006, 24-86)**

This includes the fulfillment of the protection targets for "electrical power supply" in accordance with annex I No. 1.5.1 according to the Low Voltage Directive 73/23/EEC -- Note: 2014/35/EU is currently valid

EMC Directive	**2014/30/EU** **(L 96, March 29, 2014, 79-106)**	**4)**
RoHS Directive	**2011/65/EU** **(L 174, July 1, 2011, 88-110)**	
Applied harmonized standards:	**EN ISO 13849-1:2008/AC:2009** **EN 61800-5-2:2007** **EN 61800-5-1:2007** **EN 61800-3:2004/A1:2012** **EN 50581:2012**	

4) According to the EMC Directive, the listed products are not independently operable products. EMC assessment is only possible after these products have been integrated in an overall system. For the assessment, the product was installed in a typical plant configuration.

Bruchsal	**05.07.2017**	Johann Soder Managing Director Technology	a) b)
Place	Date		

a) Authorized representative for issuing this declaration on behalf of the manufacturer
b) Authorized representative for compiling the technical documents

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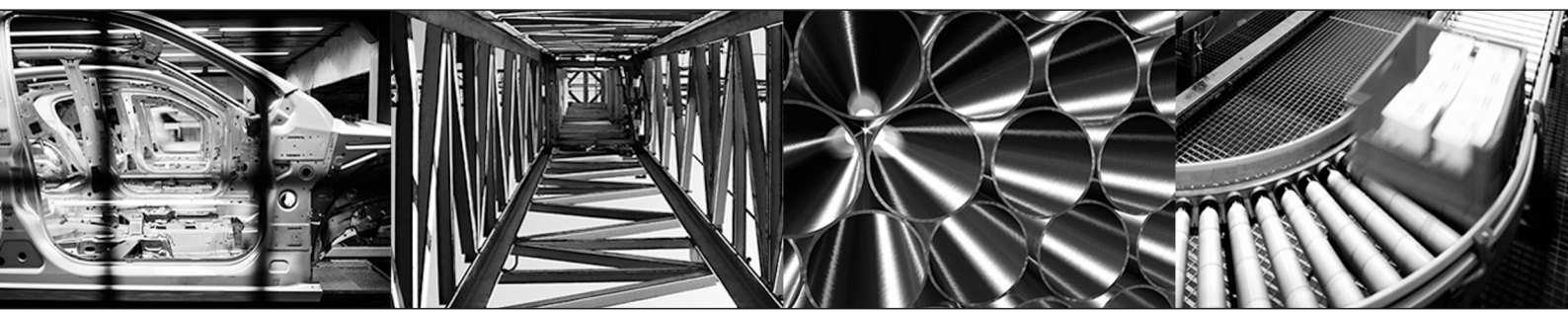

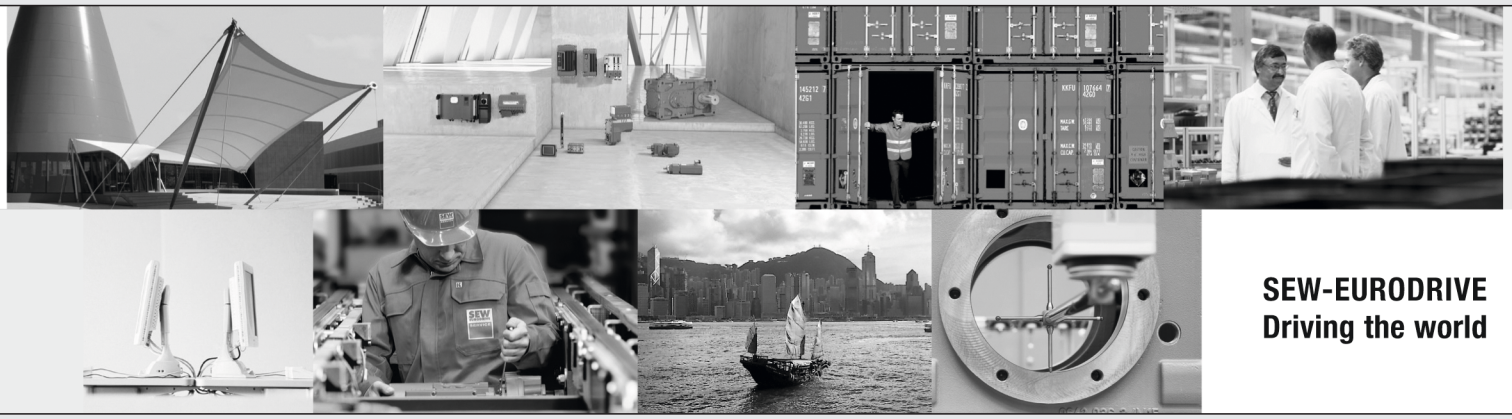

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Driving the world

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