



10 Motor Designs of CMP. Servomotors

10.1 Standard design – encoders

Resolver

Type designation /RH1M

Description SEW servomotors are delivered with 2-pole resolvers as standard. Further information on other resolvers is available on request.

Option: Hiperface® encoder

Type designation /ES1H, /AS1H, /AK0H, /EK0H, /AK1H, /EK1H

Description SEW-EURODRIVE offers Hiperface® encoders also as multi-turn absolute encoders as an alternative to the resolver. Encoders with a high resolution are also available in addition to the standard encoders.



INFORMATION

The encoder signal can be influenced by the speed when the brake is applied. It is therefore important that the inverter defines its encoder position again after this process. This is not necessary in regular operation when the brake is actuated at standstill.

When prefabricating the encoder cables, ensure correct polarity for the supply outputs.

CMP servomotors are delivered with a RH1M resolver as standard.

The following Hiperface® multi/single-turn encoders can be mounted as an option:

Designation	Specification periods / revolution	Motor type	Brake type
EK0H	128	CMP40	BP
AK0H	128	CMP40 - CMP.100	BP
ES1H, AS1H	1024	CMP50 - 63	BP
EK1H, AK1H	1024	CMP.71 - 100	BP, BY



Encoders technical data

Resolver

/RH1M

Part number for RH1M	CMP40 1335 3861	CMP50, 63 0199 0314	CMP.71 - 100 1644 5619
Number of poles	2	2	2
Primary	Rotor	Rotor	Rotor
Input voltage	7 V	7 V	7 V
Input frequency	7 kHz	7 kHz	7 kHz
Gear ratio $\pm 10\%$	0.5	0.5	0.5
Phase shift $\pm 5^\circ$	+13°	+13°	+13°
Input impedance $\pm 15\%$	130 + j120 Ω	130 + j120 Ω	130 + j120 Ω
Output impedance $\pm 15\%$	200 + j270 Ω	200 + j270 Ω	200 + j270 Ω
Input resistance $\pm 10\%$	82 Ω	82 Ω	82 Ω
Output resistance $\pm 10\%$	68 Ω	68 Ω	68 Ω
Maximum electrical fault	$\pm 6'$	$\pm 6'$	$\pm 6'$
Temperature range	-55 °C to +150 °C	-55 °C to +150 °C	-55 °C to +150 °C

Option: Hiperface® encoder

/EK0H, /AK0H

Type	EK0H 0199 7424 CMP40	AK0H ¹⁾ 1335 6615 CMP40 - CMP.100
Attachable to encoder	DC 7 - 12 V polarity reversal protected	
Supply voltage	DC 7 - 12 V polarity reversal protected	
Maximum current consumption (without load)	120 mA	
Maximum operating frequency	26 kHz	
Pulses (sine cycles) per revolution	128	
Output amplitude per track	0.8 - 1.1 V _{pp} sin/cos	
Single-turn resolution	4096 increments/revolution (15 bit)	
Multi-turn resolution	-	4096 revolutions (12 bits)
Transmission protocol	Hiperface®	
Serial data output	Driver according to EIA RS-485	
Vibration resistance (10 - 2000 Hz)	$\leq 100 \text{ m/s}^2$ (DIN IEC 68-2-6)	
Maximum speed	12000 rpm	9000 rpm
Temperature range	-20 °C to +110 °C	

1) Not available in combination with BY brake



Option: Hiperface® encoder

/ES1H, /AS1H

Type	ES1H 1335 6410	AS1H 1335 6402
Attachable to encoder	CMP50, CMP63	
Supply voltage	DC 7 - 8 - 12 V polarity reversal protected	
Max. current consumption	140 mA	
Maximum operating frequency	200 kHz	
Pulses (sine cycles) per revolution	1024	
Output amplitude per track	0.9 - 1.1 V _{pp} sin/cos	
Single-turn resolution	32768 increments/revolution (15 bit)	
Multi-turn resolution	-	4096 revolutions (12 bits)
Transmission protocol	Hiperface®	
Serial data output	Driver according to EIA RS-485	
Vibration resistance (10 - 2000 Hz)	≤ 200 m/s ² (DIN IEC 68-2-6)	
Maximum speed	12000 rpm	
Temperature range	-20 °C to +110 °C	

/EK1H, /AK1H

Type	EK1H 1644 4639	AK1H 1333 7602
Attachable to encoder	CMP71 - 100	
Supply voltage	DC 7 - 8 - 12 V polarity reversal protected	
Max. current consumption	140 mA	
Maximum operating frequency	200 kHz	
Pulses (sine cycles) per revolution	1024	
Output amplitude per track	0.9 - 1.1 V _{pp} sin/cos	
Single-turn resolution	32768 increments/revolution (15 bit)	
Multi-turn resolution	-	4096 revolutions (12 bits)
Transmission protocol	Hiperface®	
Serial data output	Driver according to EIA RS-485	
Vibration resistance (10 - 2000 Hz)	≤ 200 m/s ² (DIN IEC 68-2-6)	
Maximum speed	12000 rpm	
Temperature range	-20 °C to +110 °C	



10.2 Standard design – motor protection

Thermal motor information with KTY

Type designation /KY

Description This type detects the motor temperature continuously using a semi-conductor sensor for further processing in the inverter or controller.

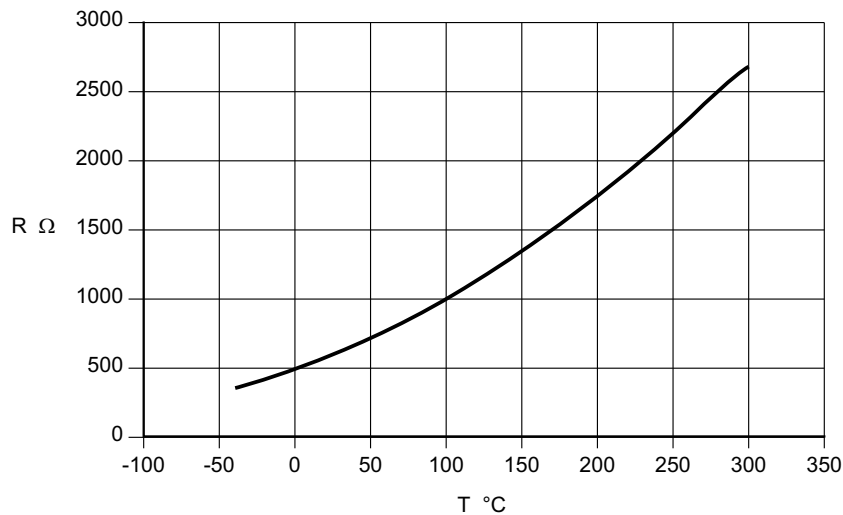
The inverter + /KY option can only take on the function of motor protection when it is used in combination with an inverter containing the thermal motor model.

Thermal motor information with KTY technical data

/KY The temperature sensor KTY84 - 130 continuously detects the motor temperature.

Technical data	KTY84 - 130
Connection	Red (+) Blue (-)
Total resistance at 20 - 25 °C	540 Ω < R < 640 Ω
Test current	<3 mA

Typical characteristic curve of KTY:



63578axx



10.3 Standard design – connection variants

Assignment table for connectors and terminal boxes to CMP servomotors

System voltage 400 V, without forced cooling fan

Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP40S	3000	SM1		SB1	
CMP40S	4500				
CMP40S	6000				
CMP40M	3000	SM1		SB1	
CMP40M	4500				
CMP40M	6000				
CMP50S	3000	SM1	KK	SB1	KK
CMP50S	4500				
CMP50S	6000				
CMP50M	3000	SM1	KK	SB1	KK
CMP50M	4500				
CMP50M	6000				
CMP50L	3000	SM1	KK	SB1	KK
CMP50L	4500				
CMP50L	6000				
CMP63S	3000	SM1	KK	SB1	KK
CMP63S	4500				
CMP63S	6000				
CMP63M	3000	SM1	KK	SB1	KK
CMP63M	4500				
CMP63M	6000				
CMP63L	3000	SM1	KK	SB1	KK
CMP63L	4500				
CMP63L	6000				
CMP.71S	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71S	3000				
CMP.71S	4500				
CMP.71S	6000				
CMP.71M	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71M	3000				
CMP.71M	4500				
CMP.71M	6000				
CMP.71L	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71L	3000				
CMP.71L	4500				
CMP.71L	6000				
CMP.80S	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80S	3000				
CMP.80S	4500				
CMP.80S	6000				

Table continued on next page.



Motor Designs of CMP. Servomotors

Standard design – connection variants

Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP.80M	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80M	3000				
CMP.80M	4500				
CMP.80M	6000	SMB		SBB	
CMP.80L	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80L	3000				
CMP.80L	4500				
CMP.80L ¹⁾	6000	SMB		SBB	
CMP.100S	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.100S	3000				
CMP.100S	4500			SMB	
CMP.100M	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.100M	3000				
CMP.100M	4500			SMB	
CMP.100L	2000	SMB	KK, KKS	SBB	KK, KKS
CMP.100L	3000				
CMP.100L ¹⁾	4500				

1) CSA approval only possible with terminal box

System voltage 400 V, with forced cooling fan

Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP50S/VR	3000	SM1	KK	SB1	KK
CMP50S/VR	4500				
CMP50S/VR	6000				
CMP50M/VR	3000	SM1	KK	SB1	KK
CMP50M/VR	4500				
CMP50M/VR	6000				
CMP50L/VR	3000	SM1	KK	SB1	KK
CMP50L/VR	4500				
CMP50L/VR	6000				
CMP63S/VR	3000	SM1	KK	SB1	KK
CMP63S/VR	4500				
CMP63S/VR	6000				
CMP63M/VR	3000	SM1	KK	SB1	KK
CMP63M/VR	4500				
CMP63M/VR	6000				
CMP63L/VR	3000	SM1	KK	SB1	KK
CMP63L/VR	4500				
CMP63L/VR	6000				
CMP.71S /VR	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71S /VR	3000				
CMP.71S /VR	4500				
CMP.71S /VR	6000				

Table continued on next page.



Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP.71M /VR	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71M /VR	3000				
CMP.71M /VR	4500				
CMP.71M /VR	6000				
CMP.71L /VR	2000	SM1	KK, KKS	SB1	KK, KKS
CMP.71L /VR	3000				
CMP.71L /VR ¹⁾	4500	-		-	
CMP.71L /VR ¹⁾	6000				
CMP.80S /VR	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80S /VR	3000				
CMP.80S /VR	4500				
CMP.80S /VR ²⁾	6000	SMB		SBB	
CMP.80M /VR	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80M /VR	3000				
CMP.80M /VR ²⁾	4500	SMB		SBB	
CMP.80M /VR	6000				
CMP.80L /VR	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80L /VR ²⁾	3000	SMB		SBB	
CMP.80L /VR	4500				
CMP.100S /VR	2000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.100S /VR ²⁾	3000	SMB		SBB	
CMP.100S /VR	4500				
CMP.100M /VR	2000	SMB	KK, KKS	SBB	KK, KKS
CMP.100M /VR	3000				
CMP.100M /VR	4500			-	
CMP.100L /VR	2000	SMB	KK, KKS	SBB	KK, KKS
CMP.100L /VR ³⁾	3000				
CMP.100L /VR	4500	-		-	

- 1) UL and CSA approval only possible with terminal box
- 2) UL and CSA approval only possible with SMB/SBB or terminal box
- 3) CSA approval only possible with terminal box



Motor Designs of CMP. Servomotors

Standard design – connection variants

System voltage 230 V, without forced cooling fan

Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP40S	3000	SM1		SB1	
CMP40S	4500				
CMP40S	6000				
CMP40M	3000	SM1		SB1	
CMP40M	4500				
CMP40M	6000				
CMP50S	3000	SM1	KK	SB1	KK
CMP50S	4500				
CMP50S	6000				
CMP50M	3000	SM1	KK	SB1	KK
CMP50M	4500				
CMP50M	6000				
CMP50L	3000	SM1	KK	SB1	KK
CMP50L	4500				
CMP50L	6000				
CMP63S	3000	SM1	KK	SB1	KK
CMP63S	4500				
CMP63S	6000				
CMP63M	3000	SM1	KK	SB1	KK
CMP63M	4500				
CMP63M	6000				
CMP63L	3000	SM1	KK	SB1	KK
CMP63L	4500				
CMP63L	6000				
CMP.71S	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.71S	4500				
CMP.71S	6000				
CMP.71M	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.71M	4500				
CMP.71L	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.80S	3000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80S	4500	SMB		SBB	
CMP.80S	6000				
CMP.80M	3000	SMB	KK, KKS	SBB	KK, KKS
CMP.80M	4500				
CMP.80L	3000	SMB	KK, KKS	SBB	KK, KKS

Table continued on next page.



Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP.100S	3000	SMB	KK, KKS	SBB	KK, KKS
CMP.100S	4500	-		-	
CMP.100M¹⁾	3000	SMB	KK, KKS	SBB	KK, KKS

1) CSA approval only possible with terminal box

System voltage 230 V, with forced cooling fan

Motor type	Rated speed	Plug connector/terminal box without brake		Plug connector/terminal box with brake	
CMP.71S /VR	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.71S /VR	4500				
CMP.71S /VR¹⁾	6000				
CMP.71M /VR	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.71M /VR¹⁾	4500				
CMP.71L /VR	3000	SM1	KK, KKS	SB1	KK, KKS
CMP.80S /VR²⁾	3000	SM1, SMB	KK, KKS	SB1, SBB	KK, KKS
CMP.80S /VR	4500				
CMP.80S /VR³⁾	6000				
CMP.80M /VR	3000	SMB	KK, KKS	SBB	KK, KKS
CMP.80M /VR	4500	-		-	
CMP.80L /VR	3000	-	KK, KKS	-	KK, KKS

1) UL and CSA approval only possible with terminal box

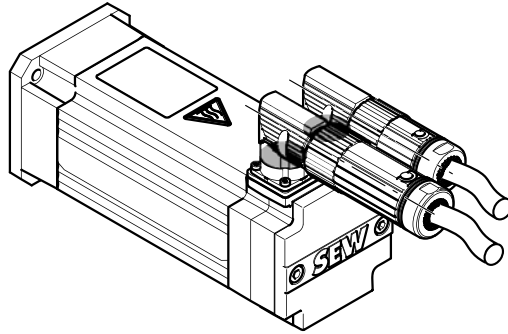
2) UL and CSA approval only possible with SMB/SBB or terminal box

3) CSA approval only possible with terminal box

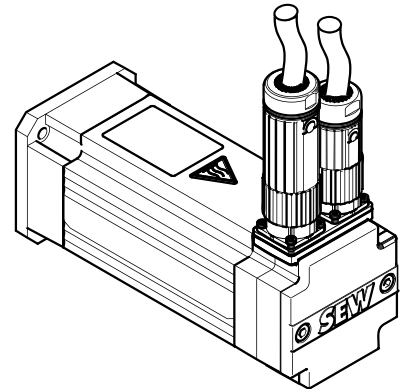


1. Plug connector connection variant

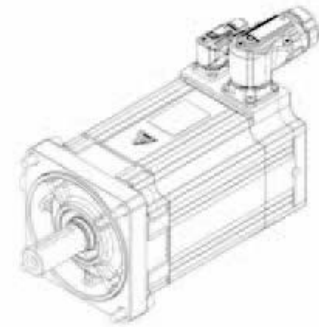
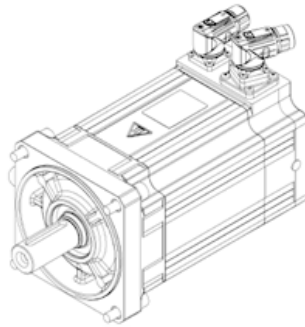
Plug connector "adjustable" and "radial".



SM1/SB1 plug connector



SMB/SBB plug connector





Power cables and plug connectors for CMP motors

Cable type	Connector type	Thread size	Cable cross section mm ²	Part number	
				Prefabricated cables	Spare power plug*
Fixed installation	Motor cable	SM11	4 x 1.5 mm ²	0590 4544	0198 6740
		SM12	4 x 2.5 mm ²	0590 4552	0198 6740
		SM14	4 x 4 mm ²	0590 4560	0199 1639
		SMB6	4 x 6 mm ²	1335 0269	1334 9856
		SMB10	4 x 10 mm ²	1335 0277	1334 9864
		SMB16	4 x 16 mm ²	1335 0285	1334 9872
	Brakemotor cable ¹⁾ BP brake	SB11	4 x 1.5 mm ² + 2 x 1 mm ²	1335 4345	0198 6740
		SB12	4 x 2.5 mm ² + 2 x 1 mm ²	1335 4353	0198 6740
		SB14	4 x 4 mm ² + 2 x 1 mm ²	1335 4361	0199 1639
		SBB6	4 x 6 mm ² + 2 x 1.5 mm ²	1335 0196	1334 9856
		SBB10	4 x 10 mm ² + 2 x 1.5 mm ²	1335 0218	1334 9864
		SBB16	4 x 16 mm ² + 2 x 1.5 mm ²	1335 0226	1334 9872
Cable carrier installation	Motor cable	SM11	4 x 1.5 mm ²	0590 6245	0198 6740
		SM12	4 x 2.5 mm ²	0590 6253	0198 9197
		SM14	4 x 4 mm ²	0590 4803	0199 1639
		SMB6	4 x 6 mm ²	1335 0293	1334 9856
		SMB10	4 x 10 mm ²	1335 0307	1334 9864
		SMB16	4 x 16 mm ²	1335 0315	1334 9872
	Brakemotor cable ¹⁾ BP brake	SB11	4 x 1.5 mm ² + 2 x 1 mm ²	1335 4388	0198 9197
		SB12	4 x 2.5 mm ² + 2 x 1 mm ²	1335 4396	0198 9197
		SB14	4 x 4 mm ² + 2 x 1 mm ²	1342 1603	0199 1639
		SBB6	4 x 6 mm ² + 2 x 1.5 mm ²	1335 0234	1334 9856
		SBB10	4 x 10 mm ² + 2 x 1.5 mm ²	1335 0242	1334 9864
		SBB16	4 x 16 mm ² + 2 x 1.5 mm ²	1335 0250	1334 9872

1) BP brake: 3-core cable, only 2 cores are used

* The complete connector service pack always includes the following parts:

- Power connector
- Insulation inserts
- Socket contacts


Power cables and plug connectors for CMPZ motors

Cable type	Conne- ctor type	Thread size	Cable cross section mm ²	Part number	
				Prefabricated cables	Spare power plug*
Fixed installation	Motor cable	SM11	4 x 1.5 mm ²	0590 4544	0198 6740
		SM12	4 x 2.5 mm ²	0590 4552	0198 6740
		SM14	4 x 4 mm ²	0590 4560	0199 1639
		SMB6	4 x 6 mm ²	1335 0269	1334 9856
		SMB10	4 x 10 mm ²	1335 0277	1334 9864
		SMB16	4 x 16 mm ²	1335 0285	1334 9872
	Brakemotor cable for BY brake	SB11	4 x 1.5 mm ² + 3 x 1 mm ²	1335 4272	0198 6740
		SB12	4 x 2.5 mm ² + 3 x 1 mm ²	1335 4280	0198 6740
		SB14	4 x 4 mm ² + 3 x 1 mm ²	1335 4299	0199 1639
		SBB6	4 x 6 mm ² + 3 x 1.5 mm ²	1335 0129	1334 9856
		SBB10	4 x 10 mm ² + 3 x 1.5 mm ²	1335 0137	1334 9864
		SBB16	4 x 16 mm ² + 3 x 1.5 mm ²	1335 0145	1334 9872
Cable carrier installation	Motor cable	SM11	4 x 1.5 mm ²	0590 6245	0198 6740
		SM12	4 x 2.5 mm ²	0590 6253	0198 9197
		SM14	4 x 4 mm ²	0590 4803	0199 1639
		SMB6	4 x 6 mm ²	1335 0293	1334 9856
		SMB10	4 x 10 mm ²	1335 0307	1334 9864
		SMB16	4 x 16 mm ²	1335 0315	1334 9872
	Brakemotor cable for BY brake	SB11	4 x 1.5 mm ² + 3 x 1 mm ²	1335 4302	0198 9197
		SB12	4 x 2.5 mm ² + 3 x 1 mm ²	1335 4310	0198 9197
		SB14	4 x 4 mm ² + 3 x 1 mm ²	1335 4329	0199 1639
		SBB6	4 x 6 mm ² + 3 x 1.5 mm ²	1335 0153	1334 9856
		SBB10	4 x 10 mm ² + 3 x 1.5 mm ²	1335 0161	1334 9864
		SBB16	4 x 16 mm ² + 3 x 1.5 mm ²	1335 0188	1334 9872

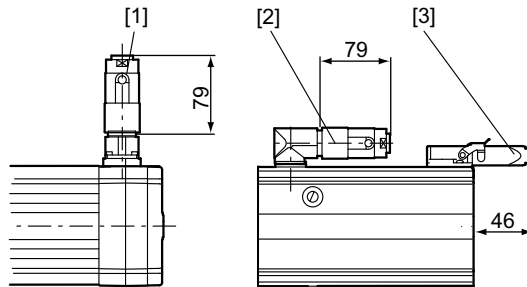
* The complete connector service pack always includes the following parts:

- Power connector
- Insulation inserts
- Socket contacts



Plug connector connection variant technical data

Illustration of the mating connectors:



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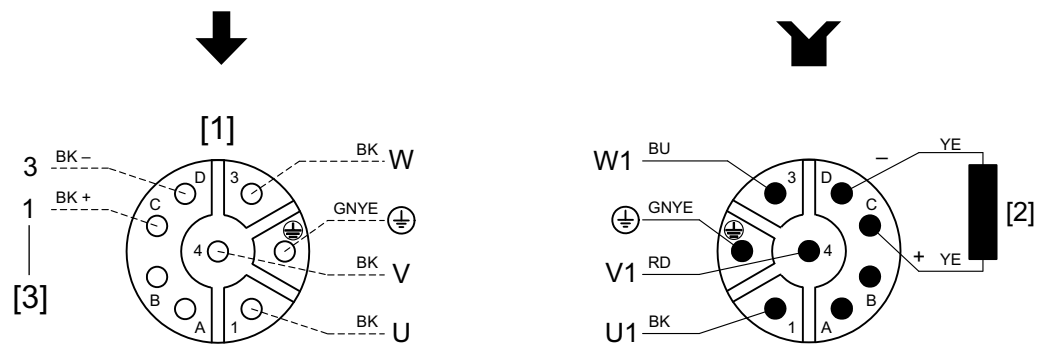
- [1] Radial mating connector
- [2] Angled mating connector
- [3] Mating connector for forced cooling fan

Symbols used

	Plug connector upper part (top view on flange socket) To be connected by the customer
	Plug connector lower part, Connected at the factory

SM1 / SB1 power plug connector (M23)

*Wiring diagram
with/without BP
brake*



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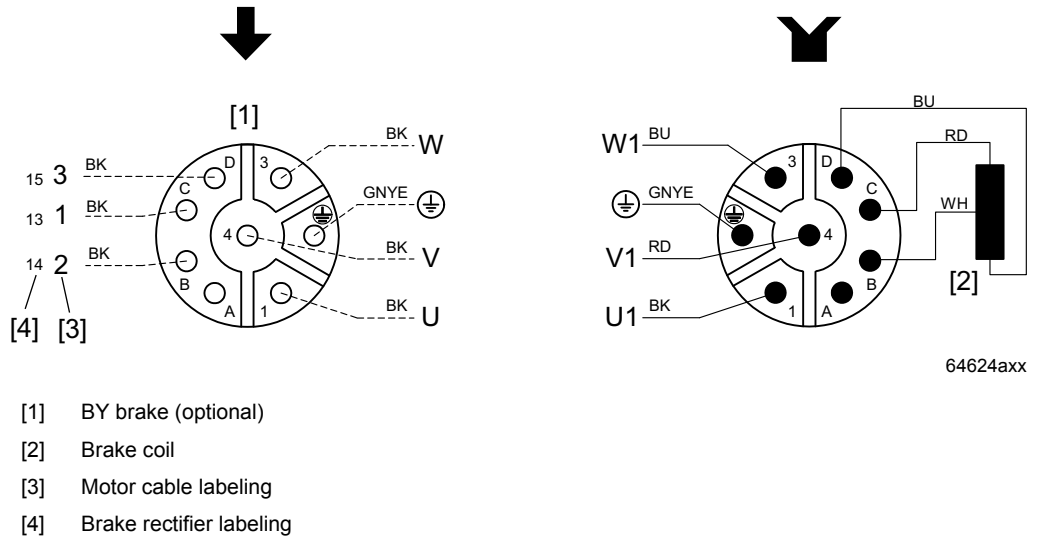
- [1] BP brake (optional)
- [2] Brake coil
- [3] Motor cable labeling



Motor Designs of CMP. Servomotors
Standard design – connection variants

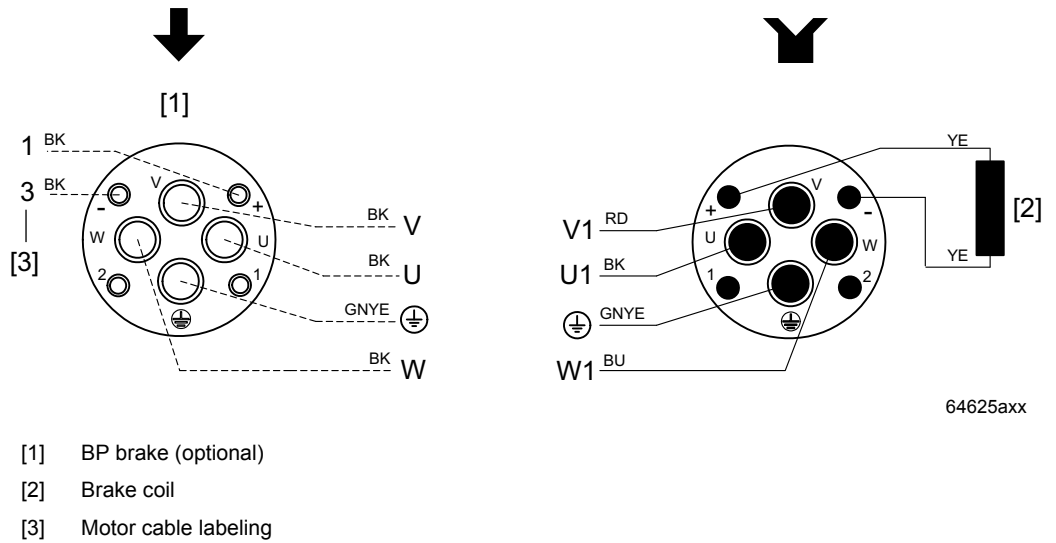
SM1 / SB1 power plug connector (M23)

Wiring diagram with/without BY brake



SMB / SBB power plug connector (M40)

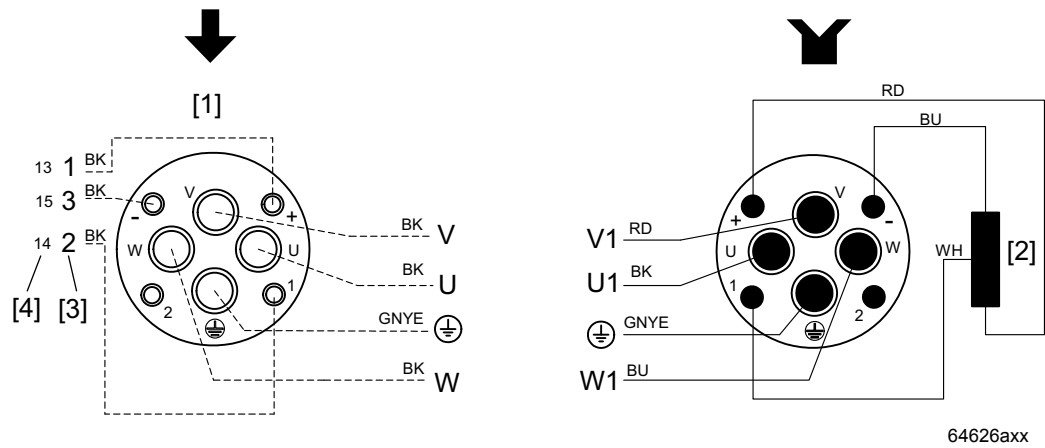
Wiring diagram with/without BP brake





SMB / SBB power plug connector (M40)

Wiring diagram
with/without BY
brake

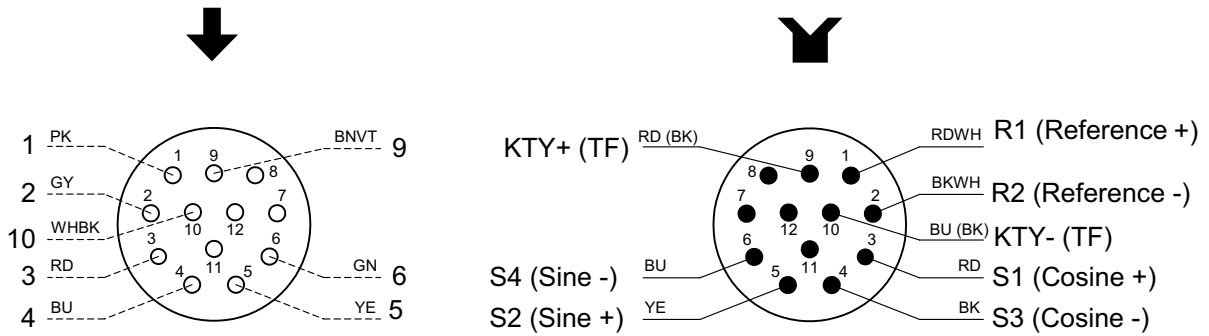


- [1] BY brake (optional)
- [2] Brake coil
- [3] Motor cable labeling
- [4] Brake rectifier labeling



RH1M resolver signal plug connector

Wiring diagram



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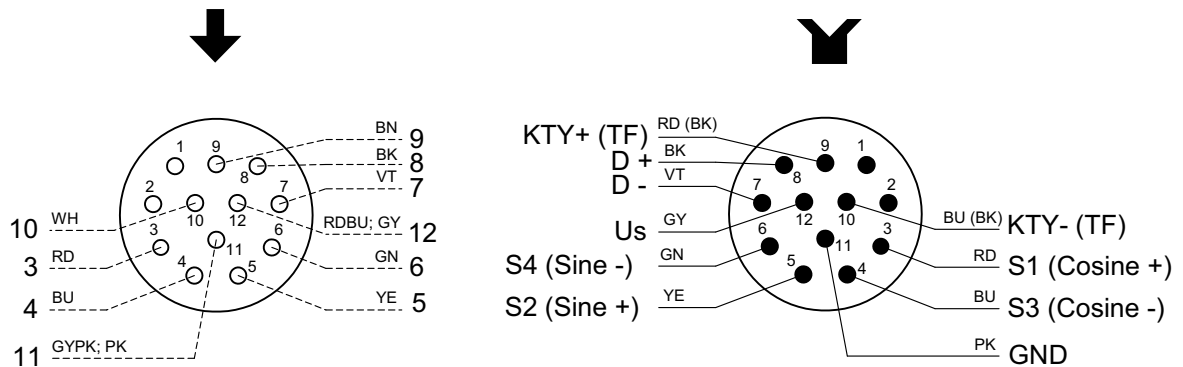
Contact assignment of plug connector lower part

Pin	Color code	Connection
1	RD / WH	R1 (reference +)
2	BK / WH	R2 (reference -)
3	RD	S1 (cosine +)
4	BK	S3 (cosine -)
5	YE	S2 (sine +)
6	BU	S4 (sine -)
7	-	-
8	-	-
9	RD	KTY +
10	BU	KTY -
11	-	-
12	-	-



ES1H, AS1H, AK0H, EK0H, AK1H encoder signal plug connector¹⁾, EK1H¹⁾

Wiring diagram



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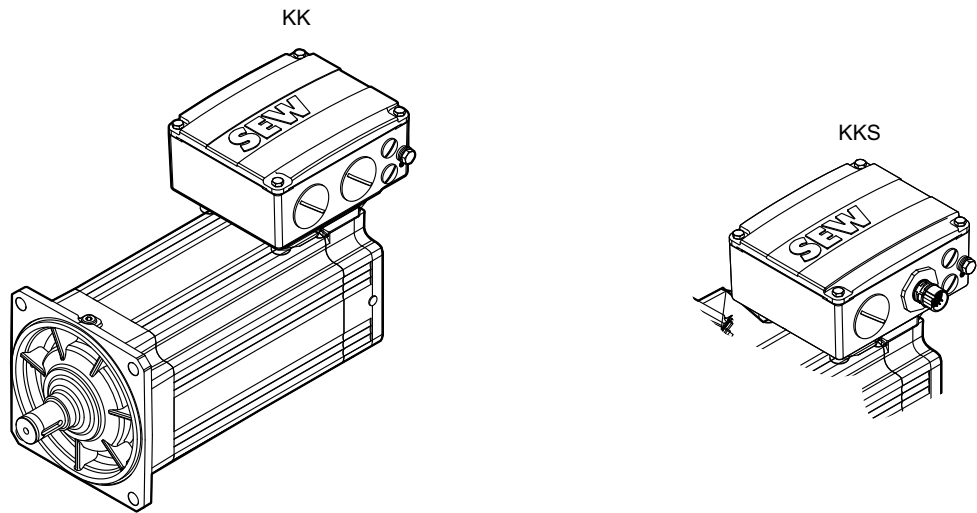
Contact assignment of plug connector lower part

Pin	Color code	Connection
1	-	-
2	-	-
3	RD	S1 (cosine +)
4	BU	S3 (cosine -)
5	YE	S2 (sine +)
6	GN	S4 (sine -)
7	VT	D -
8	BK	D +
9	RD	KTY +
10	BU	KTY -
11	PK	Voltage reference (GND)
12	GY	Supply voltage Vs

1) In preparation



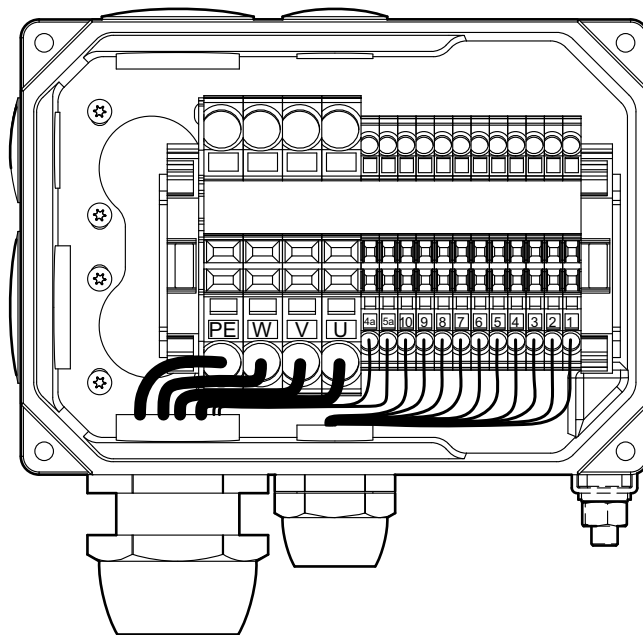
2. Connection variant terminal box KK and KKS



Connection cross section

Motor type	Power connection			Encoder / resolver / thermal motor protection	
	Connection	Maximum connection cross section	Cable entry	Connection	Cable entry
CMP50, CMP63	Spring terminals	6 mm ²	M25	Spring terminals	M20
CMP71, CMP80	M6 stud	10 mm ²	M32		M16
CMP100	M8 stud	25 mm ²	M40		

CMP50 and CMP63



65841axx



Power rating

Pin	Core identification	Connection
U	(BK/WH) Black with white lettering U, V, W	U
V		V
W		W
PE	(GN/YE) green / yellow	Protective earth

BP brake

Auxiliary terminal contacts	Core identification	BMV brake rectifier connection	BS brake controller connection
4a	(BK/WH) Black with white lettering 1, 2, 3	13	3
5a		15	5

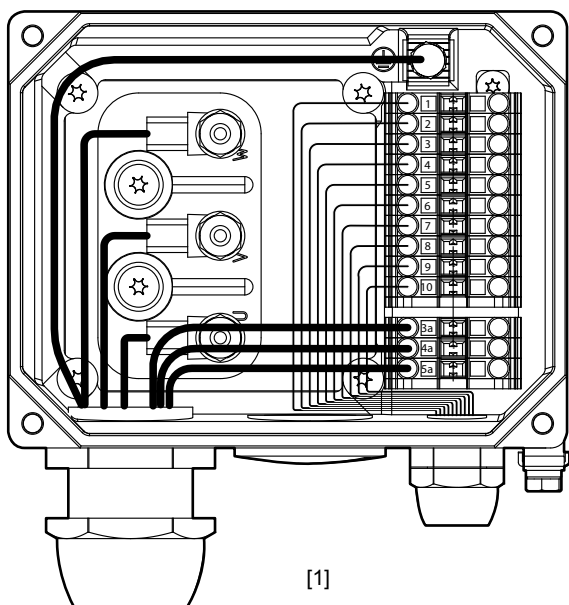
The brake has a standard supply voltage of DC 24 V.

Signal

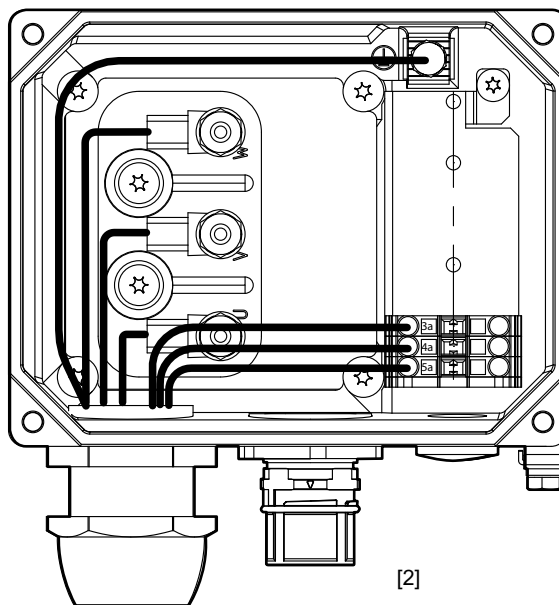
Resolver			Encoder		
1	ref +	Reference	1	cos +	Cosine
2	ref -		2	ref cos	Reference
3	cos +	Cosine	3	sin+	Sine
4	cos-		4	ref sin	Reference
5	sin+	Sine	5	D -	DATA
6	sin-		6	D +	DATA
7	-	-	7	GND	Ground
8	-	-	8	Us	Supply voltage
9	KTY + / (TF)	Motor protection	9	KTY + / (TF)	Motor protection
10	KTY - / (TF)		10	KTY - / (TF)	



CMP71 CMP100



[1]



[2]

68635axx

- [1] KK terminal box
- [2] KKS terminal box

Power rating

Pin	Core identification	Connection
U	(BK/WH) Black with white lettering U, V, W	U
V		V
W		W
PE	(GN/YE) green / yellow	Protective earth

BP brake

Auxiliary terminal contacts	Core identification	BMV brake rectifier connection	BS brake controller connection
4a	(BK/WH) Black with white lettering 1, 2, 3	13	3
5a		15	5

The brake has a standard supply voltage of DC 24 V.



BY brake

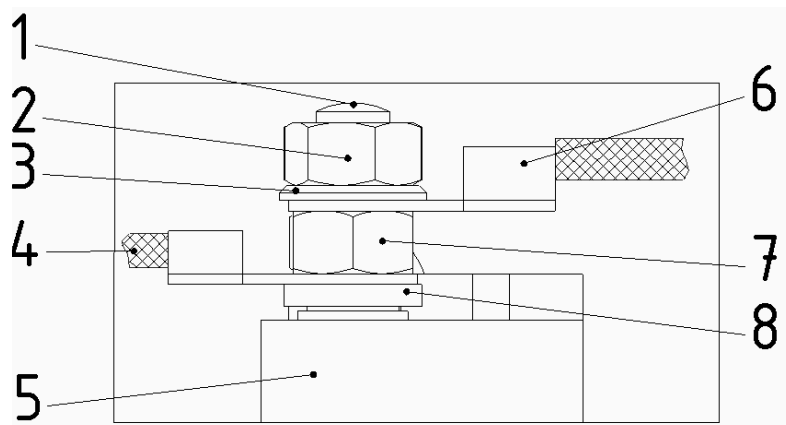
Auxiliary terminal contacts	Core identification	Connection of BME, BMP, BMH, BMK brake rectifiers	Connecting the BSG brake control unit
3a	(BK/WH) Black with white lettering 1, 2, 3	14	1
4a		13	3
5a		15	5

Signal

Resolver			Encoder		
1	ref +	Reference	1	cos +	Cosine
2	ref -		2	ref cos	Reference
3	cos +	Cosine	3	sin+	Sine
4	cos-		4	ref sin	Reference
5	sin+	Sine	5	D -	DATA
6	sin-		6	D +	DATA
7	-	-	7	GND	Ground
8	-	-	8	Us	Supply voltage
9	KTY + / (TF)	Motor protection	9	KTY + / (TF)	Motor protection
10	KTY - / (TF)		10	KTY - / (TF)	

Terminal box connection variant technical data

The following figure shows the power connection in the terminal box.



54670axx

- | | | | |
|-----|---------------|-----|------------------|
| [1] | Terminal stud | [5] | Terminal board |
| [2] | Upper nut | [6] | Customer's cable |
| [3] | Washer | [7] | Lower nut |
| [4] | Motor cable | [8] | Lock washer |

For designing the terminal box, positions 4, 6 and 7 are regarded as current-carrying.




10.4 Additional feature – ventilation

Forced cooling fan

Type designation /VR

Description Synchronous servomotors can be equipped with a forced cooling fan if requested. The VR forced cooling fan is available for DC 24 V (CMP50 - CMP100).

A forced cooling fan can be retrofitted to these motors later using a retrofit set.

	INFORMATION
	The forced cooling fan can only be used up to a maximum oscillation and shock load of 1 g.

Mechanical installation

Mounting the fan guard for the VR forced cooling fan:

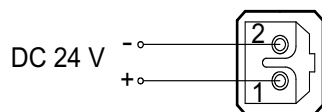
Motor	Screws	Tightening torque
CMP50, CMP63	M4 × 8, self-tapping	4 Nm
CMP.71	M6 × 20	4 Nm ¹⁾
CMP.80, CMP.100	M8 × 20	10 Nm ¹⁾

1) Additional Loctite® thread lock fluid

Electrical connection

The VR forced cooling fan is only available for DC 24 V voltage.

- DC 24 V ± 20%
- Plug connector connection
- Maximum connection cross section 2 x 1 mm²
- Cable gland Pg7 with inside diameter 7 mm



50990AXX

Connector contact	Connection
1	24 V +
2	0 V



Retrofit set for
CMP50/CMP63

	INFORMATION
	The forced cooling fan retrofit set for motors CMP50 - CMP63 may only be mounted by staff authorized by SEW-EURODRIVE.

Forced cooling fan – technical data

VR

Forced cooling fan type Motor size	VR				
	CMP50	CMP63	CMP.71	CMP.80	CMP.100
Supply voltage DC	24 V ± 10%				
DC current consumption	0.15 A	0.25 A	0.88 A	0.88 A	1.67 A
Power consumption	3.5 W	6 W	21 W	21 W	40 W
Air discharge rate	56 m ³ /h	80 m ³ /h	275 m ³ /h	275 m ³ /h	540 m ³ /h
Ambient temperature	-20 °C to + 60 °C				
Degree of protection	IP54/IP55				
Electrical connection	Plug connector				
Max. cable cross section	3 × 1 mm ²				
Inner diameter of the cable gland	7 mm				

10

UWU52A switched-mode power supply

The AC voltage type includes a VR forced cooling fan and the UWU52A switched-mode power supply.

Input: AC 110 - 240 V; 1.04 - 0.63 A; 50 / 60 Hz

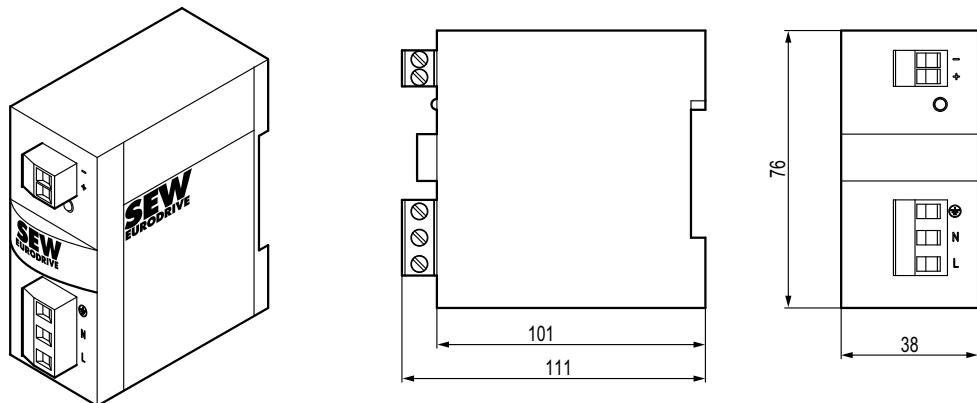
Output: DC 24 V; 2.5 A (40 °C); 2.0 A (55 °C)

Connection: Screw terminals 0.2 - 2.5 mm², separable.

Degree of protection: IP20; attachment to EN 60715 TH35 support rail in the control cabinet.

Part number: 0188 1817.

Dimensions of the UWU52A switched-mode power supply:



59049AXX




Motor Designs of CMP. Servomotors

Additional feature – ventilation

Forced cooling fan,
cpl.

Forced cooling fan for motor type	Part number
CMP50	1332 8697
CMP63	1332 7569
CMP71	1333 7114
CMP.71 /BP1 /BY2	1644 7697
CMP80	1644 4841
CMP80 /BP3	1644 7751
CMPZ80 /BY4	1644 7735
CMP100	1644 4973
CMP.100 /BP5 /BY8	1644 7808

Retrofit set for CMP50 - 100

	INFORMATION
	The forced cooling fan retrofit set for the motors CMP50/63 may only be mounted by staff authorized by SEW-EURODRIVE.

Retrofit set	Part number	Retrofit set	Part number	Retrofit set	Part number
CMP50 VR kit	1333 2414	CMP63 VR kit	1333 2422	CMP71 VR kit	1335 5228
				CMP.71 /BP1 /BY2	1335 5236
Forced cooling fan, cpl.		Forced cooling fan, cpl.		Forced cooling fan, cpl.	
Machine screw M4x8-Tx-ST-A2F		Machine screw M4x8-Tx-ST-A2F		M6x20-8.8-ADB3 machine screw	
Lock washer		Lock washer		Grommet	
CMP50 / AS1H / ES1H / RH1M housing cover		CMP63 / AS1H / ES1H / RH1M housing cover		Sleeve	
Screw		Screw		Washer	
Washer		Washer			
Housing cover seal for CMP50		Housing cover seal for CMP63			
CMP80 VR kKit	1335 5244	CMP100 VR kit	1335 5279		
CMP80 /BP3	1335 5252	CMP.100 /BP5 /BY8	1335 5287		
CMPZ80 /BY4	1335 5260				
Forced cooling fan, cpl.		Forced cooling fan, cpl.			
M6x20-8.8-ADB3 machine screw		M6x20-8.8-ADB3 machine screw			
Grommet		Grommet			
Sleeve		Sleeve			
Washer		Washer			

The forced cooling fan retrofit set is supplied as follows:

- Forced cooling fan, cpl.
- Accessory bag



11 Prefabricated Cables for CMP. Servomotors

11.1 Description

SEW-EURODRIVE offers prefabricated cables with plugs for straightforward and reliable motor connection.

Cable and contact are connected using the crimp technique. The following cables are available in 1 m steps:

- Motor cables
- Brakemotor cables
- Resolver/motor protection cables
- Absolute encoder/motor protection cables
- Forced cooling fan cables

Prefabricated cables are divided into:

- Power cables (motor cable, brakemotor cable, extension cable)
- Feedback cables (resolver cable, encoder cable, extension cable).

Preselection of cables

Prefabricated cables were preselected by SEW-EURODRIVE according to the standard EN 60204. The routing types "fixed installation" and "cable carrier installation" were considered.

Using other standards for the machine construction can result in diverging cross sections.

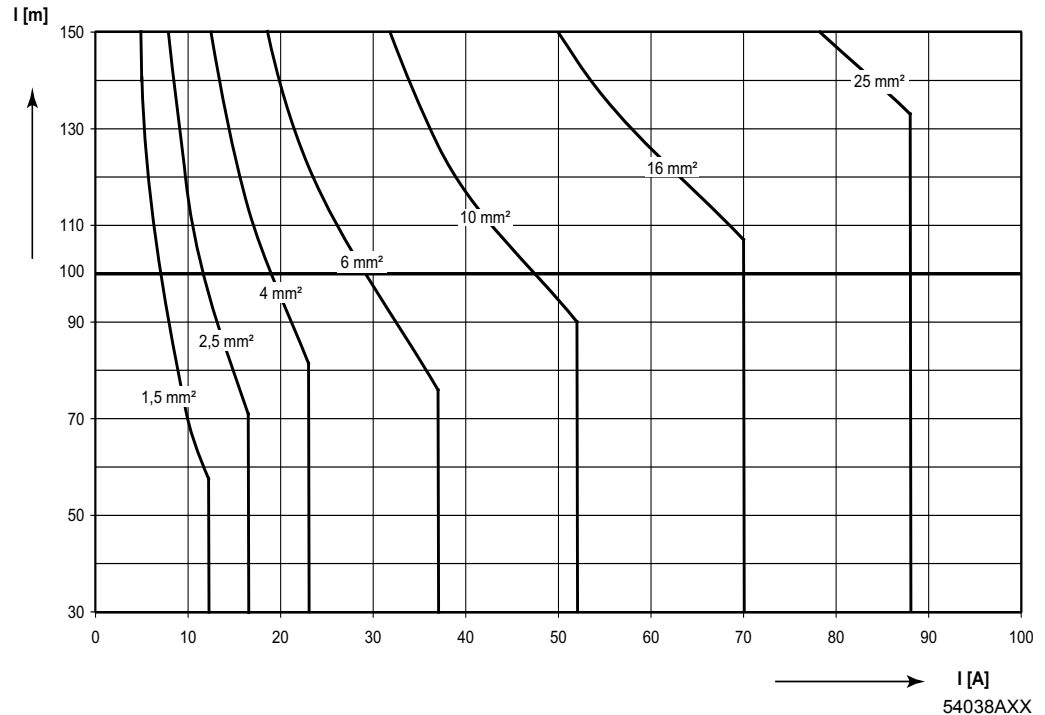


11.2 Dimensioning the cable cross section

Project planning for cable cross section

Cable selection according to EN 60204

The following figure shows the minimum required cable cross section depending on cable length and current.



The hybrid cables with cross sections 1.5 mm² to 10 mm² can be ordered from SEW-EURODRIVE.

Cable load table

Cable load through current I in ampere according to EN 60204-1 table 5, ambient temperature 40 °C.

Cable cross section [mm ²]	Three-core sheathed cable in pipe or cable	Three-core sheathed cable on top of each other on wall	Three-core sheathed cable lined up horizontally
	A	A	A
1.5	12.2	15.2	16.1
2.5	16.5	21.0	22
4	23	28.0	30
6	29	36.0	37
10	40	50.0	52
16	53	66.0	70
25	67	84.0	88
35	83	104.0	114

These data are merely recommended values and are **no substitute for the detailed project planning** of the cables depending on the concrete application considering the applicable regulations.

Observe the voltage drop that occurs along the cable in particular with the DC 24 V brake coil when dimensioning the cross sections for the brake cable. The acceleration current is decisive for the calculation.



11.3 Cable assignment: CMP and CMPZ, 400 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP40S	3000	1.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP40S	4500	1.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP40S	6000	1.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	3000	0.95	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	4500	0.95	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	6000	1.1	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	3000	0.96	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	4500	1.32	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	6000	1.7	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	3000	1.68	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	4500	2.3	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	6000	3	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	3000	2.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	4500	3.15	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	6000	4.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	3000	2.15	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	4500	3.05	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	6000	3.9	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M	3000	3.6	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M	4500	5.4	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M	6000	6.9	100	1.5	0590 4544	0590 6245	1333 2457
CMP63L	3000	4.95	100	1.5	0590 4544	0590 6245	1333 2457
CMP63L	4500	6.9	100	1.5	0590 4544	0590 6245	1333 2457
CMP63L	6000	9.3	75	1.5	0590 4544	0590 6245	1333 2457
CMP63L	6000	9.3	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71S	2000	3.4	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71S	3000	4.9	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71S	4500	7.3	95	1.5	0590 4544	0590 6245	1333 2457
CMP.71S	4500	7.3	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71S	6000	9.6	70	1.5	0590 4544	0590 6245	1333 2457
CMP.71S	6000	9.6	100	2.5	0590 4552	0590 6253	1333 2465

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMP and CMPZ, 400 V system voltage

Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP.71M	2000	5	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71M	3000	7.5	90	1.5	0590 4544	0590 6245	1333 2457
CMP.71M	3000	7.5	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71M	4500	10.9	65	1.5	0590 4544	0590 6245	1333 2457
CMP.71M	4500	10.9	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71M	6000	14.7	80	2.5	0590 4552	0590 6253	1333 2465
CMP.71M	6000	14.7	100	4	0590 4560	0590 4803	1333 2473
CMP.71L	2000	6.3	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71L	3000	9.4	80	1.5	0590 4544	0590 6245	1333 2457
CMP.71L	3000	9.4	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71L	4500	14.1	85	2.5	0590 4552	0590 6253	1333 2465
CMP.71L	4500	14.1	100	4	0590 4560	0590 4803	1333 2473
CMP.71L	6000	18.8	100	4	0590 4560	0590 4803	1333 2473
CMP.80S	2000	6.9	100	1.5	0590 4544	0590 6245	1333 2457
CMP.80S	3000	10	70	1.5	0590 4544	0590 6245	1333 2457
CMP.80S	3000	10	100	2.5	0590 4552	0590 6253	1333 2465
CMP.80S	4500	15.3	80	2.5	0590 4552	0590 6253	1333 2465
CMP.80S	4500	15.3	100	4	0590 4560	0590 4803	1333 2473
CMP.80S	6000	20	95	4	0590 4560	0590 4803	1333 2473
CMP.80S	6000	20	100	6	1335 0269	1335 0293	1335 0021
CMP.80M	2000	9.3	75	1.5	0590 4544	0590 6245	1333 2457
CMP.80M	2000	9.3	100	2.5	0590 4552	0590 6253	1333 2465
CMP.80M	3000	13.4	90	2.5	0590 4552	0590 6253	1333 2465
CMP.80M	3000	13.4	100	4	0590 4560	0590 4803	1333 2473
CMP.80M	4500	20.1	95	4	0590 4560	0590 4803	1333 2473
CMP.80M	4500	20.1	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.80M	6000	26.4	100	6	1335 0269	1335 0293	1335 0021
CMP.80L	2000	12.5	90	2.5	0590 4552	0590 6253	1333 2465
CMP.80L	2000	12.5	100	4	0590 4560	0590 4803	1333 2473
CMP.80L	3000	18.7	100	4	0590 4560	0590 4803	1333 2473
CMP.80L	4500	27.8	100	6	1335 0269	1335 0293	1335 0021
CMP.80L	6000	37.6	100	10	1335 0277	1335 0307	1335 0048
CMP.100S	2000	13.3	85	2.5	0590 4552	0590 6253	1333 2465
CMP.100S	2000	13.3	100	4	0590 4560	0590 4803	1333 2473
CMP.100S	3000	19.6	95	4	0590 4560	0590 4803	1333 2473
CMP.100S	3000	19.6	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.100S	4500	30	98	6	1335 0269	1335 0293	1335 0021
CMP.100S	4500	30	100	10	1335 0277	1335 0307	1335 0048

Table continued on next page. Footnotes at the end of the table.



Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP.100M	2000	14.7	75	2.5	0590 4552	0590 6253	1333 2465
CMP.100M	2000	14.7	100	4	0590 4560	0590 4803	1333 2473
CMP.100M	3000	21.8	85	4	0590 4560	0590 4803	1333 2473
CMP.100M	3000	21.8	100	6 ²⁾	1335 0269	06650293	1335 0021
CMP.100M	4500	33.1	90	6	1335 0269	1335 0293	1335 0021
CMP.100M	4500	33.1	100	10	1335 0277	1335 0307	1335 0048
CMP.100L	2000	21.8	100	6	1335 0269	1335 0293	1335 0021
CMP.100L	3000	32.3	90	6	1335 0269	1335 0293	1335 0021
CMP.100L	3000	32.3	100	10	1335 0277	1335 0307	1335 0048
CMP.100L	4500	48.4	98	10	1335 0277	1335 0307	1335 0048
CMP.100L	4500	48.4	100	16	1335 0285	1335 0315	1335 0056

- 1) Currently there are only cable carrier extension cables
- 2) Change from S.1 to S.B


11.4 Cable assignment: CMP/VR and CMPZ/VR, 400 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation	Cable carrier extension ¹⁾
						Stand-alone motor	
CMP50S/VR	3000	1.25	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S/VR	4500	1.7	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S/VR	6000	2.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M/VR	3000	2.45	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M/VR	4500	3.35	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M/VR	6000	4.4	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L/VR	3000	3.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L/VR	4500	4.6	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L/VR	6000	6.1	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S/VR	3000	3	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S/VR	4500	4.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S/VR	6000	5.4	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M/VR	3000	5.1	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M/VR	4500	7.6	90	1.5	0590 4544	0590 6245	1333 2457
CMP63M/VR	4500	7.6	100	2.5	0590 4552	0590 6253	1333 2465
CMP63M/VR	6000	9.8	70	1.5	0590 4544	0590 6245	1333 2457
CMP63M/VR	6000	9.8	100	2.5	0590 4552	0590 6253	1333 2465
CMP63L/VR	3000	7.2	95	1.5	0590 4544	0590 6245	1333 2457
CMP63L/VR	3000	7.2	100	2.5	0590 4552	0590 6253	1333 2465
CMP63L /VR	4500	10	70	1.5	0590 4544	0590 6245	1333 2457
CMP63L /VR	4500	10	100	2.5	0590 4552	0590 6253	1333 2465
CMP63L /VR	6000	13.5	85	2.5	0590 4552	0590 6253	1333 2465
CMP63L /VR	6000	13.5	100	4	0590 4560	0590 4803	1333 2473
CMP.71S /VR	2000	4.6	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71S /VR	3000	6.7	100	1.5	0590 4544	0590 6245	1333 2457
CMP.71S /VR	4500	9.9	70	1.5	0590 4544	0590 6245	1333 2457
CMP.71S /VR	4500	9.9	100	2,5	0590 4552	0590 6253	1333 2465
CMP.71S /VR	6000	13.1	85	2.5	0590 4552	0590 6253	1333 2465
CMP.71S /VR	6000	13.1	100	4	0590 4560	0590 4803	1333 2473

Table continued on next page. Footnotes at the end of the table.



Motor	Rated speed	Stand- still current I ₀	to cable length	Core cross section	Cable part no.		
	rpm				A	m	mm ²
					Stand-alone motor		
CMP.71M /VR	2000	7.3	95	1.5	0590 4544	0590 6245	1333 2457
CMP.71M /VR	2000	7.3	100	2,5	0590 4552	0590 6253	1333 2465
CMP.71M /VR	3000	10.9	60	1.5	0590 4544	0590 6245	1333 2457
CMP.71M /VR	3000	10.9	100	2,5	0590 4552	0590 6253	1333 2465
CMP.71M /VR	4500	15.9	70	2,5	0590 4552	0590 6253	1333 2465
CMP.71M /VR	4500	15.9	100	4	0590 4560	0590 4803	1333 2473
CMP.71M /VR	6000	21.5	85	4	0590 4560	0590 4803	1333 2473
CMP.71M /VR	6000	21.5	100	6	1335 0269	1335 0293	1335 0021
CMP.71L /VR	2000	10.1	65	1,5	0590 4544	0590 6245	1333 2457
CMP.71L /VR	2000	10.1	100	2,5	0590 4552	0590 6253	1333 2465
CMP.71L /VR	3000	15.1	75	2,5	0590 4552	0590 6253	1333 2465
CMP.71L /VR	3000	15.1	100	4	0590 4560	0590 4803	1333 2473
CMP.80S /VR	2000	9.5	70	1,5	0590 4544	0590 6245	1333 2457
CMP.80S /VR	2000	9.5	100	2,5	0590 4552	0590 6253	1333 2465
CMP.80S /VR	3000	13.8	80	2,5	0590 4552	0590 6253	1333 2465
CMP.80S /VR	3000	13.8	100	4	0590 4560	0590 4803	1333 2473
CMP.80S /VR	4500	21	85	4	0590 4560	0590 4803	1333 2473
CMP.80S /VR	4500	21	100	6	1335 0269	1335 0293	1335 0021
CMP.80S /VR	6000	27.5	100	6	1335 0269	1335 0293	1335 0021
CMP.80M /VR	2000	13.4	85	2,5	0590 4552	0590 6253	1333 2465
CMP.80M /VR	2000	13.4	100	4	0590 4560	0590 4803	1333 2473
CMP.80M /VR	3000	19.3	95	4	0590 4560	0590 4803	1333 2473
CMP.80M /VR	3000	19.3	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.80M /VR	4500	29	95	6	1335 0269	1335 0293	1335 0021
CMP.80M /VR	4500	29	100	10	1335 0277	1335 0307	1335 0048
CMP.80M /VR	6000	38	100	10	1335 0277	1335 0307	1335 0048
CMP.80L /VR	2000	20	90	4	0590 4560	0590 4803	1333 2473
CMP.80L /VR	2000	20	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.80L /VR	3000	30	90	6	1335 0269	1335 0293	1335 0021
CMP.80L /VR	3000	30	100	10	1335 0277	1335 0307	1335 0048
CMP.80L /VR	4500	44.5	100	10	1335 0277	1335 0307	1335 0048
CMP.100S /VR	2000	18.8	95	4	0590 4560	0590 4803	1333 2473
CMP.100S /VR	2000	18.8	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.100S /VR	3000	27.5	100	6	1335 0269	1335 0293	1335 0021
CMP.100S /VR	4500	42.5	100	10	1335 0277	1335 0307	1335 0048

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMP/VR and CMPZ/VR, 400 V system voltage

Motor	Rated speed rpm	Stand- still current I_0 A	to cable length m	Core cross section mm ²	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP.100M /VR	2000	22.3	100	6 ²⁾	1335 0269	1335 0293	1335 0021
CMP.100M /VR	3000	33	85	6	1335 0269	1335 0293	1335 0021
CMP.100M /VR	3000	33	100	10	1335 0277	1335 0307	1335 0048
CMP.100L /VR	2000	32.5	85	6	1335 0269	1335 0293	1335 0021
CMP.100L /VR	2000	32.5	100	10	1335 0277	1335 0307	1335 0048
CMP.100L /VR	3000	48	95	10	1335 0277	1335 0307	1335 0048
CMP.100L /VR	3000	48	100	16	1335 0285	1335 0315	1335 0056

1) Currently there are only cable carrier extension cables

2) Change from S.1 to S.B



11.5 Cable assignment: CMP /BP, 400 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Standstill current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP40S/BP	3000	1.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP40S/BP	4500	1.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP40S/BP	6000	1.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	3000	0.95	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	4500	0.95	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	6000	1.1	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S/BP	3000	0.96	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S/BP	4500	1.32	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S/BP	6000	1.7	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M/BP	3000	1.68	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M/BP	4500	2.3	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP	6000	3	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	3000	2.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	4500	3.15	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	6000	4.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	3000	2.15	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	4500	3.05	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	6000	3.9	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	3000	3.6	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	4500	5.4	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	6000	6.9	100	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	3000	4.95	100	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	4500	6.9	100	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	6000	9.3	75	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	6000	9.3	100	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP	2000	3.4	80	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP	3000	4.9	80	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP	4500	7.3	80	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP	4500	7.3	80	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP	6000	9.6	70	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP	6000	9.6	80	2.5	1335 4353	1335 4396	1335 4248

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMP /BP, 400 V system voltage

Motor type	Rated speed rpm	Standstill current I_0 A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP71M /BP	2000	5	80	1.5	1335 4345	1335 4388	1335 4221
CMP71M /BP	3000	7.5	80	1.5	1335 4345	1335 4388	1335 4221
CMP71M /BP	3000	7.5	80	2.5	1335 4353	1335 4396	1335 4248
CMP71M /BP	4500	10.9	65	1.5	1335 4345	1335 4388	1335 4221
CMP71M /BP	4500	10.9	80	2.5	1335 4353	1335 4396	1335 4248
CMP71M /BP	6000	14.7	80	2.5	1335 4353	1335 4396	1335 4248
CMP71M /BP	6000	14.7	80	4	1335 4361	13421603	1335 4337
CMP71L /BP	2000	6.3	80	1.5	1335 4345	1335 4388	1335 4221
CMP71L /BP	3000	9.4	80	1.5	1335 4345	1335 4388	1335 4221
CMP71L /BP	3000	9.4	80	2.5	1335 4353	1335 4396	1335 4248
CM 71L /BP	4500	14.1	80	2.5	1335 4353	1335 4396	1335 4248
CM 71L /BP	4500	14.1	80	4	1335 4361	13421603	1335 4337
CMP71L /BP	6000	18.8	80	4	1335 4361	13421603	1335 4337
CMP80S /BP	2000	6.9	55	1.5	1335 4345	1335 4388	1335 4221
CMP80S /BP ²⁾	3000	10	55	1.5	1335 4345	1335 4388	1335 4221
CMP80S /BP	3000	10	55	2.5	1335 4353	1335 4396	1335 4248
CMP80S /BP	4500	15.3	55	2.5	1335 4353	1335 4396	1335 4248
CMP80S /BP	4500	15.3	55	4	1335 4361	13421603	1335 4337
CMP80M /BP	2000	9.3	55	1.5	1335 4345	1335 4388	1335 4221
CMP80M /BP	2000	9.3	55	2.5	1335 4353	1335 4396	1335 4248
CMP80M /BP	3000	13.4	55	2.5	1335 4353	1335 4396	1335 4248
CMP80M /BP	3000	13.4	55	4	1335 4361	13421603	1335 4337
CMP80M /BP	4500	20.1	55	4	1335 4361	13421603	1335 4337
CMP80M /BP	4500	20.1	85	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP80L /BP	2000	12.5	55	2.5	1335 4353	1335 4396	1335 4248
CMP80L /BP	2000	12.5	55	4	1335 4361	13421603	1335 4337
CMP80L /BP	3000	18.7	55	4	1335 4361	13421603	1335 4337
CMP80L /BP	4500	27.8	85	6	1335 0196	1335 0234	1335 0099
CMP100S /BP	2000	13.3	45	2.5	1335 4353	1335 4396	1335 4248
CMP100S /BP	2000	13.3	45	4	1335 4361	13421603	1335 4337
CMP100S /BP	3000	19.6	45	4	1335 4361	13421603	1335 4337
CMP100S /BP	3000	19.6	70	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP100S /BP	4500	30	70	6	1335 0196	1335 0234	1335 0099
CMP100S /BP	4500	30	70	10	1335 0218	1335 0242	1335 0102

Table continued on next page. Footnotes at the end of the table.



Motor type	Rated speed rpm	Standstill current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP100M /BP	2000	14.7	45	2.5	1335 4353	1335 4396	1335 4248
CMP100M /BP	2000	14.7	45	4	1335 4361	13421603	1335 4337
CMP100M /BP	3000	21.8	45	4	1335 4361	13421603	1335 4337
CMP100M /BP	3000	21.8	70	6 ³⁾	1335 0196	03350234	1335 0099
CMP100M /BP	4500	33.1	70	6	1335 0196	1335 0234	1335 0099
CMP100M /BP	4500	33.1	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP	2000	21.8	70	6	1335 0196	1335 0234	1335 0099
CMP100L /BP	3000	32.3	70	6	1335 0196	1335 0234	1335 0099
CMP100L /BP	3000	32.3	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP	4500	48.4	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP	4500	48.4	70	16	1335 0226	1335 0250	1335 0110

- 1) Currently there are only cable carrier extension cables
- 2) The maximum cable length can be increased to 70 m or 85 m if a cable with a core cross section of 6 mm² is used (change from S.1 to S.B). In this case, the brake cable cross section increases from 1 mm² to 1.5 mm².
- 3) Change from S.1 to S.B


11.6 Cable assignment: CMP /BP /VR, 400 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP50S /BP /VR	3000	1.25	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S /BP /VR	4500	1.7	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S /BP /VR	6000	2.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP /VR	3000	2.45	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP /VR	4500	3.35	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP /VR	6000	4.4	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP /VR	3000	3.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP /VR	4500	4.6	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP /VR	6000	6.1	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP /VR	3000	3	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP /VR	4500	4.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP /VR	6000	5.4	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP /VR	3000	5.1	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP /VR	4500	7.6	90	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP /VR	4500	7.6	100	2.5	1335 4353	1335 4396	1335 4248
CMP63M /BP /VR	6000	9.8	70	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP /VR	6000	9.8	100	2.5	1335 4353	1335 4396	1335 4248
CMP63L /BP /VR	3000	7.2	95	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP /VR	3000	7.2	100	2.5	1335 4353	1335 4396	1335 4248
CMP63L /BP /VR	4500	10	70	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP /VR	4500	10	100	2.5	1335 4353	1335 4396	1335 4248
CMP63L /BP /VR	6000	13.5	85	2.5	1335 4353	1335 4396	1335 4248
CMP63L /BP /VR	6000	13.5	100	4	1335 4361	13421603	1335 4337
CMP71S /BP /VR	2000	4.6	80	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP /VR	3000	6.7	80	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP /VR	4500	9.9	70	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP /VR	4500	9.9	80	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP /VR	6000	13.1	80	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP /VR	6000	13.1	80	4	1335 4361	13421603	1335 4337

Table continued on next page. Footnotes at the end of the table.



Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP71M /BP /VR	2000	7.3	80	1.5	1335 4345	1335 4388	1335 4221
CMP71M /BP /VR	2000	7.3	80	2.5	1335 4353	1335 4396	1335 4248
CMP71M /BP /VR	3000	10.9	60	1.5	1335 4345	1335 4388	1335 4221
CMP71M /BP /VR	3000	10.9	80	2.5	1335 4353	1335 4396	1335 4248
CMP71M /BP /VR	4500	15.9	70	2,5	1335 4353	1335 4396	1335 4248
CMP71M /BP /VR	4500	15.9	80	4	1335 4361	13421603	1335 4337
CMP71M /BP /VR	6000	21.5	80	4	1335 4361	13421603	1335 4337
CMP71L /BP /VR	2000	10.1	65	1.5	1335 4345	1335 4388	1335 4221
CMP71L /BP /VR	2000	10.1	100	2.5	1335 4353	1335 4396	1335 4248
CMP71L /BP /VR	3000	15.1	75	2.5	1335 4353	1335 4396	1335 4248
CMP71L /BP /VR	3000	15.1	80	4	1335 4361	13421603	1335 4337
CMP80S /BP /VR	2000	9.5	55	1.5	1335 4345	1335 4388	1335 4221
CMP80S /BP /VR	2000	9.5	55	2.5	1335 4353	1335 4396	1335 4248
CMP80S /BP ²⁾ /VR	3000	13.8	55	2.5	1335 4353	1335 4396	1335 4248
CMP80S /BP /VR	3000	13.8	55	4	1335 4361	13421603	1335 4337
CMP80S /BP /VR	4500	21	55	4	1335 4361	13421603	1335 4337
CMP80S /BP /VR	4500	21	85	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP80M /BP /VR	2000	13.4	55	2.5	1335 4353	1335 4396	1335 4248
CMP80M /BP /VR	2000	13.4	50	4	1335 4361	13421603	1335 4337
CMP80M /BP /VR	3000	19.3	55	4	1335 4361	13421603	1335 4337
CMP80M /BP /VR	3000	19.3	85	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP80M /BP /VR	4500	29	85	6	1335 0196	1335 0234	1335 0099
CMP80M /BP /VR	4500	29	85	10	1335 0218	1335 0242	1335 0102
CMP80L /BP /VR	2000	20	55	4	1335 4361	13421603	1335 4337
CMP80L /BP /VR	2000	20	85	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP80L /BP /VR	3000	30	85	6	1335 0196	1335 0234	1335 0099
CMP80L /BP /VR	3000	30	85	10	1335 0218	1335 0242	1335 0102
CMP80L /BP /VR	4500	44.5	85	10	1335 0218	1335 0242	1335 0102
CMP100S /BP /VR	2000	18.8	45	4	1335 4361	13421603	1335 4337
CMP100S /BP /VR	2000	18.8	70	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP100S /BP /VR	3000	27.5	70	6	1335 0196	1335 0234	1335 0099
CMP100S /BP /VR	4500	42.5	70	10	1335 0218	1335 0242	1335 0102

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMP /BP /VR, 400 V system voltage

Motor type	Rated speed rpm	Stand- still current I_0 A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP100M /BP /VR	2000	22.3	70	6 ³⁾	1335 0196	1335 0234	1335 0099
CMP100M /BP /VR	3000	33	70	6	1335 0196	1335 0234	1335 0099
CMP100M /BP /VR	3000	33	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP /VR	2000	32.5	70	6	1335 0196	1335 0234	1335 0099
CMP100L /BP /VR	2000	32.5	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP /VR	3000	48	70	10	1335 0218	1335 0242	1335 0102
CMP100L /BP /VR	3000	48	70	16	1335 0226	1335 0250	1335 0110

1) Currently there are only cable carrier extension cables

2) The maximum cable length can be increased to 70 m or 85 m if a cable with a core cross section of 6 mm² is used (change from S.1 to S.B). In this case, the brake cable cross section increases from 1 mm² to 1.5 mm².

3) Change from S.1 to S.B



11.7 Cable assignment: CMPZ /BY, 400 V system voltage

The following table allows for selecting power cables for CMP servo brakemotors with a system voltage of 400 V and a BY working brake with 400 V, 230 V or 110 V brake voltage.

An additional length for 110 V is specified in parenthesis for cases where the permitted cable length for 110 V is shorter than for 400 V/230 V.

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ71S /BY	2000	3.4	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY	3000	4.9	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY	4500	7.3	96	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY	4500	7.3	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY	6000	9.6	73	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY	6000	9.6	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY	2000	5	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71M /BY	3000	7.5	93	1.5	1335 4272	1335 4302	1335 4221
CMPZ71M /BY	3000	7.5	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY	4500	10.9	64	1.5	1335 4272	1335 4302	1335 4221
CMPZ71M /BY	4500	10.9	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY	6000	14.7	79	2,5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY	6000	14.7	100	4	1335 4299	1335 4329	1335 4337
CMPZ71L /BY	2000	6.3	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71L /BY	3000	9.4	74	1.5	1335 4272	1335 4302	1335 4221
CMPZ71L /BY	3000	9.4	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ 71L /BY	4500	14.1	83	2,5	1335 4280	1335 4310	1335 4248
CMPZ 71L /BY	4500	14.1	100	4	1335 4299	1335 4329	1335 4337
CMPZ71L /BY	6000	18.8	100	4	1335 4299	1335 4329	1335 4337
CMPZ80S /BY	2000	6.9	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ80S /BY	3000	10	70	1.5	1335 4272	1335 4302	1335 4221
CMPZ80S /BY	3000	10	100 (75)	2,5	1335 4280	1335 4310	1335 4248
CMPZ80S /BY	4500	15.3	76 (75)	2,5	1335 4280	1335 4310	1335 4248
CMPZ80S /BY	4500	15.3	100 (75)	4	1335 4299	1335 4329	1335 4337
CMPZ80M /BY	2000	9.3	75	1.5	1335 4272	1335 4302	1335 4221
CMPZ80M /BY	2000	9.3	100	2,5	1335 4280	1335 4310	1335 4248
CMPZ80M /BY	3000	13.4	87 (75)	2,5	1335 4280	1335 4310	1335 4248
CMPZ80M /BY	3000	13.4	100 (75)	4	1335 4299	1335 4329	1335 4337
CMPZ80M /BY	4500	20.1	93 (75)	4	1335 4299	1335 4329	1335 4337
CMPZ80M /BY	4500	20.1	100	6	1335 0129	1335 0153	1335 0099

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMPZ /BY, 400 V system voltage

Motor type	Rated speed rpm	Stand- still current I_0 A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ80L /BY	2000	12.5	93	2.5	1335 4280	1335 4310	1335 4248
CMPZ80L /BY	2000	12.5	100	4	1335 4299	1335 4329	1335 4337
CMPZ80L /BY	3000	18.7	100 (75)	4	1335 4299	1335 4329	1335 4337
CMPZ80L /BY	4500	27.8	100	6	1335 0129	1335 0153	1335 0099
CMPZ100S /BY	2000	13.3	88	2.5	1335 4280	1335 4310	1335 4248
CMPZ100S /BY	2000	13.3	100	4	1335 4299	1335 4329	1335 4337
CMPZ100S /BY	3000	19.6	95 (55)	4	1335 4299	1335 4329	1335 4337
CMPZ100S /BY	3000	19.6	100 (80)	6 ²⁾	1335 0129	1335 0153	1335 0099
CMPZ100S /BY	4500	30	93 (80)	6	1335 0129	1335 0153	1335 0099
CMPZ100S /BY	4500	30	100 (80)	10	1335 0137	1335 0161	1335 0102
CMPZ100M /BY	2000	14.7	79	2.5	1335 4280	1335 4310	1335 4248
CMPZ100M /BY	2000	14.7	100	4	1335 4299	1335 4329	1335 4337
CMPZ100M /BY	3000	21.8	85 (55)	4	1335 4299	1335 4329	1335 4337
CMPZ100M /BY	3000	21.8	100 (80)	6 ²⁾	1335 0129	1335 0153	1335 0099
CMPZ100M /BY	4500	33.1	84 (80)	6	1335 0129	1335 0153	1335 0099
CMPZ100M /BY	4500	33.1	100 (80)	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY	2000	21.8	85	4	1335 4299	1335 4329	1335 4337
CMPZ100L /BY	2000	21.8	100	6	1335 0129	1335 0153	1335 0099
CMPZ100L /BY	3000	32.3	87 (80)	6	1335 0129	1335 0153	1335 0099
CMPZ100L /BY	3000	32.3	100 (80)	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY	4500	48.4	96 (80)	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY	4500	48.4	100 (80)	16	1335 0145	1335 0188	1335 0110

1) Currently there are only cable carrier extension cables

2) Change from S.1 to S.B

Permitted cable lengths for DC 24 V BY working brakes are especially reduced. Note the following guidelines:

CMPZ71 . /BY: maximum 8 m

CMPZ80 . /BY: between 6.4 and 9 m depending on the cable cross section

CMPZ100 . /BY: between 4.5 and 7 m depending on the cable cross section

For project planning with DC 24 V BY working brake, consult SEW-EURODRIVE.



11.8 Cable assignment: CMPZ /BY /VR, 400 V system voltage

The following table allows for selecting power cables for CMP servo brakemotors with a system voltage of 400 V and a BY working brake with 400 V, 230 V or 110 V brake voltage.

An additional length for 110 V is specified in parenthesis for cases where the permitted cable length for 110 V is shorter than for 400 V/230 V.

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ71S /BY /VR	2000	4.6	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY /VR	3000	6.7	100	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY /VR	4500	9.9	70	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY /VR	4500	9.9	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY /VR	6000	13.1	89	2.5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY /VR	6000	13.1	100	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY /VR	2000	7.3	96	1.5	1335 4272	1335 4302	1335 4221
CMPZ71M /BY /VR	2000	7.3	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY /VR	3000	10.9	64	1.5	1335 4272	1335 4302	1335 4221
CMPZ71M /BY /VR	3000	10.9	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY /VR	4500	15.9	73	2.5	1335 4280	1335 4310	1335 4248
CMPZ71M /BY /VR	4500	15.9	100	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY /VR	6000	21.5	85	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY /VR	6000	21.5	100	6	1335 0129	1335 0153	1335 0099
CMPZ71L /BY /VR	2000	10.1	69	1.5	1335 4272	1335 4302	1335 4221
CMPZ71L /BY /VR	2000	10.1	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71L /BY /VR	3000	15.1	76	2.5	1335 4280	1335 4310	1335 4248
CMPZ71L /BY /VR	3000	15.1	100	4	1335 4299	1335 4329	1335 4337
CMPZ 71L /BY /VR	4500	22.5	100	6	1335 0129	1335 0153	1335 0099
CMPZ71L /BY /VR	6000	30	93	6	1335 0129	1335 0153	1335 0099
CMPZ71L /BY /VR	6000	30	100	10	1335 0137	1335 0161	1335 0102
CMPZ80S /BY /VR	2000	9.5	73	1.5	1335 4272	1335 4302	1335 4221
CMPZ80S /BY /VR	2000	9.5	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ80S /BY /VR	3000	13.8	84	2.5	1335 4280	1335 4310	1335 4248
CMPZ80S /BY /VR	3000	13.8	100	4	1335 4299	1335 4329	1335 4337
CMPZ80S /BY /VR	4500	21	89	4	1335 4299	1335 4329	1335 4337
CMPZ80S /BY /VR	4500	21	100	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY /VR	6000	27.5	100	6	1335 0129	1335 0153	1335 0099

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMPZ /BY /VR, 400 V system voltage

Motor type	Rated speed rpm	Stand- still current I_0 A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ80M /BY /VR	2000	13.4	87	2.5	1335 4280	1335 4310	1335 4248
CMPZ80M /BY /VR	2000	13.4	100	4	1335 4299	1335 4329	1335 4337
CMPZ80M /BY /VR	3000	19.3	97	4	1335 4299	1335 4329	1335 4337
CMPZ80M /BY /VR	3000	19.3	100	6	1335 0129	1335 0153	1335 0099
CMPZ80M /BY /VR	4500	29	96	6	1335 0129	1335 0153	1335 0099
CMPZ80M /BY /VR	4500	29	100	10	1335 0137	1335 0161	1335 0102
CMPZ80M /BY /VR	6000	38	100	10	1335 0137	1335 0161	1335 0102
CMPZ80L /BY /VR	2000	20	93	4	1335 4299	1335 4329	1335 4337
CMPZ80L /BY /VR	2000	20	100	6	1335 0129	1335 0153	1335 0099
CMPZ80L /BY /VR	3000	30	93	6	1335 0129	1335 0153	1335 0099
CMPZ80L /BY /VR	3000	30	100	10	1335 0137	1335 0161	1335 0102
CMPZ80L /BY /VR	4500	44.5	100	10	1335 0137	1335 0161	1335 0102
CMPZ80L /BY /VR	6000	60	100	16	1335 0145	1335 0188	1335 0110
CMPZ100S /BY /VR	2000	18.8	100	4	1335 4299	1335 4329	1335 4337
CMPZ100S /BY /VR	3000	27.5	100	6	1335 0129	1335 0153	1335 0099
CMPZ100S /BY /VR	4500	42.5	100	10	1335 0137	1335 0161	1335 0102
CMPZ100M /BY /VR	2000	22.3	100	6	1335 0129	1335 0153	1335 0099
CMPZ100M /BY /VR	3000	33	84	6	1335 0129	1335 0153	1335 0099
CMPZ100M /BY /VR	3000	33	100	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY /VR	2000	32.5	86	6	1335 0129	1335 0153	1335 0099
CMPZ100L /BY /VR	2000	32.5	100	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY /VR	3000	48	97	10	1335 0137	1335 0161	1335 0102
CMPZ100L /BY /VR	3000	48	100	16	1335 0145	1335 0188	1335 0110

1) Currently there are only cable carrier extension cables

Permitted cable lengths for DC 24 V BY working brakes are especially reduced. Note the following guidelines:

CMPZ71 . /BY: maximum 8 m

CMPZ80 . /BY: between 6.4 and 9 m depending on the cable cross section

CMPZ100 . /BY: between 4.5 and 7 m depending on the cable cross section

For project planning with DC 24 V BY working brake, consult SEW-EURODRIVE.



11.9 Cable assignment: CMP and CMPZ, 230 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Fixed installation	Cable part no.	
						Fixed installation	Cable carrier installation
						Stand-alone motor	
						Cable carrier extension ¹⁾	
CMP40S	3000	1.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP40S	4500	1.2	100	1.5	0590 4544	0590 6245	1333 2457
CMP40S	6000	1.36	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	3000	1.09	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	4500	1.5	100	1.5	0590 4544	0590 6245	1333 2457
CMP40M	6000	1.91	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	3000	1.65	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	4500	2.3	100	1.5	0590 4544	0590 6245	1333 2457
CMP50S	6000	3.07	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	3000	2.85	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	4500	4	100	1.5	0590 4544	0590 6245	1333 2457
CMP50M	6000	5.25	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	3000	3.84	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	4500	5.53	100	1.5	0590 4544	0590 6245	1333 2457
CMP50L	6000	7.6	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	3000	3.61	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	4500	5.25	100	1.5	0590 4544	0590 6245	1333 2457
CMP63S	6000	6.78	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M	3000	6.35	100	1.5	0590 4544	0590 6245	1333 2457
CMP63M	4500	9.78	70	1.5	0590 4544	0590 6245	1333 2457
CMP63M	4500	9.78	100	2.5	0590 4552	0590 6253	1333 2465
CMP63M	6000	12.06	55	1.5	0590 4544	0590 6245	1333 2457
CMP63M	6000	12.06	100	4	0590 4560	0590 4803	1333 2473
CMP63L	3000	8.76	75	1.5	0590 4544	0590 6245	1333 2457
CMP63L	3000	8.76	100	2.5	0590 4552	0590 6253	1333 2465
CMP63L	4500	12.01	55	1.5	0590 4544	0590 6245	1333 2457
CMP63L	4500	12.01	100	4	0590 4560	0590 4803	1333 2473
CMP.71S	3000	8.7	75	1.5	0590 4544	0590 6245	1333 2457
CMP.71S	3000	8.7	100	2.5	0590 4552	0590 6253	1333 2465
CMP.71S	4500	12.8	90	2.5	0590 4552	0590 6253	1333 2465
CMP.71S	4500	12.8	100	4	0590 4560	0590 4803	1333 2473
CMP.71S	6000	17	100	4	0590 4560	0590 4803	1333 2473

Table continued on next page. Footnotes at the end of the table.



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMP and CMPZ, 230 V system voltage

Motor	Rated speed rpm	Stand- still current I_0 A	to cable length m	Core cross section mm^2	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP.71M	3000	13.1	85	2.5	0590 4552	0590 6253	1333 2465
CMP.71M	3000	13.1	100	4	0590 4560	0590 4803	1333 2473
CMP.71M	4500	19.2	95	4	0590 4560	0590 4803	1333 2473
CMP.71L	3000	16.8	100	4	0590 4560	0590 4803	1333 2473
CMP.80S	3000	17.7	100	4	0590 4560	0590 4803	1333 2473
CMP.80S	4500	27	100	6	1335 0269	1335 0293	1335 0021
CMP.80S	6000	35.5	75	6	1335 0269	1335 0293	1335 0021
CMP.80S	6000	35.5	100	10	1335 0277	1335 0307	1335 0048
CMP.80M	3000	23.5	100	6	1335 0269	1335 0293	1335 0021
CMP.80M	4500	35	80	6	1335 0269	1335 0293	1335 0021
CMP.80M	4500	35	100	10	1335 0277	1335 0307	1335 0048
CMP.80M	6000	46.9	95	10	1335 0277	1335 0307	1335 0048
CMP.80M	6000	46.9	100	16	1335 0285	1335 0315	1335 0056
CMP.80L	3000	32.5	85	6	1335 0269	1335 0293	1335 0021
CMP.80L	3000	32.5	100	10	1335 0277	1335 0307	1335 0048
CMP.100S	3000	34.2	80	6	1335 0269	1335 0293	1335 0021
CMP.100S	3000	34.2	100	10	1335 0277	1335 0307	1335 0048
CMP.100M	3000	40	100	10	1335 0277	1335 0307	1335 0048

1) Currently there are only cable carrier extension cables



11.10 Cable assignment: CMP/VR and CMPZ/VR, 230 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor	Rated speed rpm	Stand- still current I ₀ A	to cable length m	Core cross section mm ²	Cable part no.		
					Fixed installation	Cable carrier installation	Cable carrier extension ¹⁾
					Stand-alone motor		
CMP.71S /VR	3000	11.8	55	1.5	0590 4544	0590 6245	1333 2457
CMP.71S /VR	3000	11.8	100	4	0590 4560	0590 4803	1333 2473
CMP.71S /VR	4500	17.4	100	4	0590 4560	0590 4803	1333 2473
CMP.71S /VR	6000	23	80	4	0590 4560	0590 4803	1333 2473
CMP.71M /VR	3000	19.1	95	4	0590 4560	0590 4803	1333 2473
CMP.80S /VR	3000	24.5	100	6	1335 0269	1335 0293	1335 0021
CMP.80S /VR	4500	37	75	6	1335 0269	1335 0293	1335 0021
CMP.80S /VR	4500	37	100	10	1335 0277	1335 0307	1335 0048
CMP80S /VR	6000	48.5	95	10	1335 0277	1335 0307	1335 0048
CMP80S /VR	6000	48.5	100	16	1335 0285	1335 0315	1335 0056
CMP.80M /VR	3000	34	80	6	1335 0269	1335 0293	1335 0021
CMP.80M /VR	3000	34	100	10	1335 0277	1335 0307	1335 0048

1) Currently there are only cable carrier extension cables



11.11 Cable assignment: CMP /BP, 230 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Standstill current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP40S/BP	3000	1.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP40S/BP	4500	1.2	100	1.5	1335 4345	1335 4388	1335 4221
CMP40S/BP	6000	1.36	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	3000	1.09	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	4500	1.5	100	1.5	1335 4345	1335 4388	1335 4221
CMP40M/BP	6000	1.91	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S /BP	3000	1.65	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S /BP	4500	2.3	100	1.5	1335 4345	1335 4388	1335 4221
CMP50S /BP	6000	3.07	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP	3000	2.85	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP	4500	4	100	1.5	1335 4345	1335 4388	1335 4221
CMP50M /BP	6000	5.25	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	3000	3.84	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	4500	5.53	100	1.5	1335 4345	1335 4388	1335 4221
CMP50L /BP	6000	7.6	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	3000	3.61	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	4500	5.25	100	1.5	1335 4345	1335 4388	1335 4221
CMP63S /BP	6000	6.78	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	3000	6.35	100	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	4500	9.78	70	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	4500	9.78	100	2.5	1335 4353	1335 4396	1335 4248
CMP63M /BP	6000	12.06	55	1.5	1335 4345	1335 4388	1335 4221
CMP63M /BP	6000	12.06	100	4	1335 4361	13421603	1335 4337
CMP63L /BP	3000	8.76	75	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	3000	8.76	100	2.5	1335 4353	1335 4396	1335 4248
CMP63L /BP	4500	12.01	55	1.5	1335 4345	1335 4388	1335 4221
CMP63L /BP	4500	12.01	100	4	1335 4361	13421603	1335 4337
CMP71S /BP	3000	8.7	75	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP	3000	8.7	80	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP	4500	12.8	80	2.5	1335 4353	1335 4396	1335 4248
CMP71S /BP	4500	12.8	80	4	1335 4361	13421603	1335 4337
CMP71S /BP	6000	17	80	4	1335 4361	13421603	1335 4337

Table continued on next page. Footnotes at the end of the table.



Motor type	Rated speed	Standstill current I_0	to cable lengths	Core cross section	Fixed installation	Cable part no.	
	rpm					A	m
					Brakemotor		
CMP71M /BP	3000	13.1	80	2,5	1335 4353	1335 4396	1335 4248
CMP71M /BP	3000	13.1	80	4	1335 4361	13421603	1335 4337
CMP71M /BP	4500	19.2	80	4	1335 4361	13421603	1335 4337
CMP71L /BP	3000	16.8	80	4	1335 4361	13421603	1335 4337
CMP80S /BP	3000	17.7	55	4	1335 4361	13421603	1335 4337
CMP80S /BP	4500	27	85	6	1335 0196	1335 0234	1335 0099
CMP80M /BP	3000	23.5	85	6	1335 0196	1335 0234	1335 0099
CMP80M /BP	4500	35	80	6	1335 0196	1335 0234	1335 0099
CMP80M /BP	4500	35	85	10	1335 0218	1335 0242	1335 0102
CMP80L /BP	3000	32.5	85	6	1335 0196	1335 0234	1335 0099
CMP80L /BP	3000	32.5	85	10	1335 0218	1335 0242	1335 0102
CMP100S /BP	3000	34.2	70	6	1335 0196	1335 0234	1335 0099
CMP100S /BP	3000	34.2	70	10	1335 0218	1335 0242	1335 0102
CMP100M /BP	3000	40	70	10	1335 0218	1335 0242	1335 0102

1) Currently there are only cable carrier extension cables


11.12 Cable assignment: CMP /BP /VR, 230 V system voltage

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMP71S /BP /VR	3000	11.8	55	1.5	1335 4345	1335 4388	1335 4221
CMP71S /BP /VR	3000	11.8	80	4	1335 4361	13421603	1335 4337
CMP71S /BP /VR	4500	17.4	80	4	1335 4361	13421603	1335 4337
CMP71S /BP /VR	6000	23	80	4	1335 4361	13421603	1335 4337
CMP71M /BP /VR	3000	19.1	80	4	1335 4361	13421603	1335 4337
CMP80S /BP /VR	3000	24.5	85	6	1335 0196	1335 0234	1335 0099
CMP80S /BP /VR	4500	37	75	6	1335 0196	1335 0234	1335 0099
CMP80S /BP /VR	4500	37	85	10	1335 0218	1335 0242	1335 0102
CMP80M /BP /VR	3000	34	80	6	1335 0196	1335 0234	1335 0099
CMP80M /BP /VR	3000	34	85	10	1335 0218	1335 0242	1335 0102

1) Currently there are only cable carrier extension cables



11.13 Cable assignment: CMPZ /BY, 230 V system voltage

The following table allows for selecting power cables for CMP servo brakemotors with a system voltage of 230 V and a BY working brake with 230 V or 110 V brake voltage.

An additional length for 110 V is specified in parenthesis for cases where the permitted cable length for 110 V is shorter than for 230 V.

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ71S /BY	3000	8.7	80	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY	3000	8.7	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY	4500	12.8	90	2.5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY	4500	12.8	100	4	1335 4299	1335 4329	1335 4337
CMPZ71S /BY	6000	17	100	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY	3000	13.1	100	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY	4500	19.2	98	4	1335 4299	1335 4329	1335 4337
CMPZ71L /BY	3000	16.8	100	4	1335 4299	1335 4329	1335 4337
CMPZ80S /BY	3000	17.7	65	2.5	1335 4280	1335 4310	1335 4248
CMPZ80S /BY	3000	17.7	100	4	1335 4299	1335 4329	1335 4337
CMPZ80S /BY	4500	27	100	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY	6000	35.5	78	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY	6000	35.5	100	10	1335 0137	1335 0161	1335 0102
CMPZ80M /BY	3000	23.5	100	6	1335 0129	1335 0153	1335 0099
CMPZ80M /BY	4500	35	80	6	1335 0129	1335 0153	1335 0099
CMPZ80M /BY	4500	35	100	10	1335 0137	1335 0161	1335 0102
CMPZ80M /BY	6000	46.9	100	10	1335 0137	1335 0161	1335 0102
CMPZ80L /BY	3000	32.5	86	6	1335 0129	1335 0153	1335 0099
CMPZ80L /BY	3000	32.5	100	10	1335 0137	1335 0161	1335 0102
CMPZ100S /BY	3000	34.2	82	6	1335 0129	1335 0153	1335 0099
CMPZ100S /BY	3000	34.2	100	10	1335 0137	1335 0161	1335 0102
CMPZ100M /BY	3000	40	100	10	1335 0137	1335 0161	1335 0102

1) Currently there are only cable carrier extension cables



Prefabricated Cables for CMP. Servomotors

Cable assignment: CMPZ /BY, 230 V system voltage

Permitted cable lengths for DC 24 V BY working brakes are especially reduced. Note the following guidelines:

CMPZ71 . /BY: maximum 8 m

CMPZ80 . /BY: between 6.4 and 9 m depending on the cable cross section

CMPZ100 . /BY: between 4.5 and 7 m depending on the cable cross section

For project planning with DC 24 V BY working brake, consult SEW-EURODRIVE.



11.14 Cable assignment: CMPZ /BY /VR, 230 V system voltage

The following table allows for selecting power cables for CMP servo brakemotors with a system voltage of 230 V and a BY working brake with 230 V or 110 V brake voltage.

An additional length for 110 V is specified in parenthesis for cases where the permitted cable length for 110 V is shorter than for 230 V.

The values in the following table are based on the values with a gray background in the "cable load table" on page 246.

The part numbers refer to the smallest connector that can be used:

- 1.5 mm² - 4 mm²: S.1
- 6 mm² - 16 mm²: S.B

For the connector assignment, refer to page 225.

Motor type	Rated speed rpm	Stand- still current I ₀ A	to cable lengths m	Core cross section mm ²	Fixed installation	Cable part no.	
						Cable carrier installation Brakemotor	Cable carrier extension ¹⁾
CMPZ71S /BY /VR	3000	11.8	59	1.5	1335 4272	1335 4302	1335 4221
CMPZ71S /BY /VR	3000	11.8	100	2.5	1335 4280	1335 4310	1335 4248
CMPZ71S /BY /VR	4500	17.4	100	4	1335 4299	1335 4329	1335 4337
CMPZ71S /BY /VR	6000	23	80	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY /VR	3000	19.1	98	4	1335 4299	1335 4329	1335 4337
CMPZ71M /BY /VR	4500	28	100	6	1335 0129	1335 0153	1335 0099
CMPZ71L /BY /VR	3000	27	100	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY /VR	3000	24.5	100	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY /VR	4500	37	76	6	1335 0129	1335 0153	1335 0099
CMPZ80S /BY /VR	4500	37	100	10	1335 0137	1335 0161	1335 0102
CMPZ80S /BY /VR	6000	48.5	97	10	1335 0137	1335 0161	1335 0102
CMPZ80S /BY /VR	6000	48.5	100	16	1335 0145	1335 0188	1335 0110
CMPZ80M /BY /VR	3000	34	83	6	1335 0129	1335 0153	1335 0099
CMPZ80M /BY /VR	3000	34	100	10	1335 0137	1335 0161	1335 0102

1) Currently there are only cable carrier extension cables

Permitted cable lengths for DC 24 V BY working brakes are especially reduced. Note the following guidelines:

CMPZ71 . /BY: maximum 8 m

CMPZ80 . /BY: between 6.4 and 9 m depending on the cable cross section

CMPZ100 . /BY: between 4.5 and 7 m depending on the cable cross section

For project planning with DC 24 V BY working brake, consult SEW-EURODRIVE.


11.15 Encoder cable assignment: Plug connector connection variant / KKS

Encoder	Connection to		Cable part no.			
	MOVIDRIVE®	MOVIAXIS®	Fixed installation	Cable carrier installation	Fixed extension	Cable carrier extension
RH1M	X15		0199 4875	0199 3194	0199 5421	0199 5413
		X13	1332 7429	1332 7437		
AS1H, ES1H AK1H, EK1H AK0H, EK0H	X15		1332 4535	1332 4551	0199 5391	0199 5405
		X13				

11.16 Encoder cable assignment: KK connection variant

Encoder	Connection to		Cable part no.	
	MOVIDRIVE®	MOVIAXIS®	Fixed installation	Cable carrier installation
RH1M	X15		1335 6259	1335 6267
		X13	1335 6356	1335 6364
AK1H, EK1H AK0H	X15		1335 6291	1335 6305
		X13		

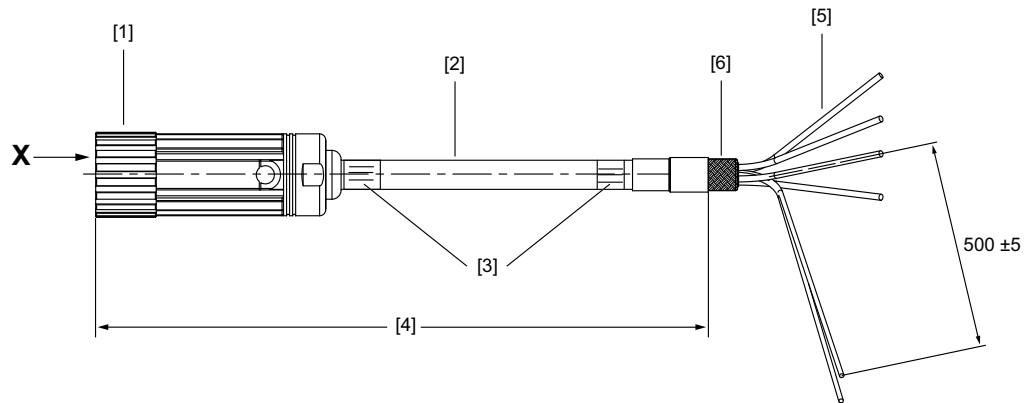
11.17 Forced cooling fan cables

Cable type		Cable cross section	Part number
Fixed installation	Forced cooling fan cables	3 x 1 mm ²	0198 6341
Cable carrier installation		3 x 1 mm ²	0199 560X



11.18 Structure of the prefabricated cables for CMP. servomotors

Motor cables/brakemotor cables for CMP servomotors



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- [1] Connector: Intercontec BSTA 078
- [2] SEW-EURODRIVE logo printed on cable
- [3] Nameplate
- [4] Cable length ≤ 10 m: Tolerance +200 mm.
Cable length ≥ 10 m: Tolerance +2%.
Permitted cable length according to the technical documents.
- [5] Pre-fabricated cable end for inverter.
Required loose parts are supplied with the cable.
- [6] Shielding pulled back approx. 20 mm +5 mm.

Motor side

The power cables on the motor side consist of an 8-pin plug connector and socket contacts.

The shield is connected in the connector housing according to EMC requirements. All plug connectors seal the plug on the cable end with a lamellar seal and ensure cable relief according to EN 61884.

Prefabrication on inverter end

The individual cable cores of the motor and brakemotor cables are exposed and the shield is prepared for connection in the control cabinet. The cable for the inverter end still has to be prefabricated. The loose parts required are supplied with the cable in a separate bag.

Loose parts

The following loose parts are supplied in accordance with the core cross sections for connection to the power terminals on the inverter:

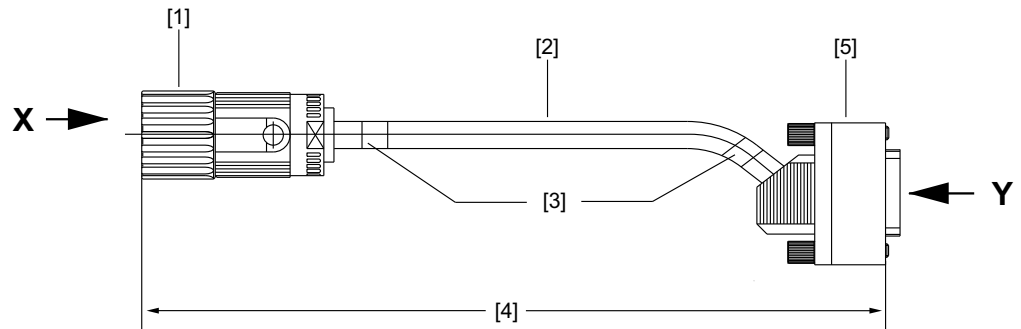
Bag no.	Content
1	4 x conductor end sleeves 1.5 mm ² , insulated 4 x M6 U-shaped cable lugs 1.5 mm ²
2	4 x conductor end sleeves 2.5 mm ² , insulated 4 x M6 U-shaped cable lugs 2.5 mm ²
3	4 x conductor end sleeves 4 mm ² , insulated 4 x M6 U-shaped cable lugs 4 mm ²



Prefabricated Cables for CMP. Servomotors

Structure of the prefabricated cables for CMP. servomotors

Feedback cable



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- [1] Connector: Intercontec ASTA
- [2] Printed on connector: SEW-EURODRIVE
- [3] Nameplate
- [4] Cable length ≤ 10 m: Tolerance +200 mm
Cable length > 10 m: Tolerance +2%
Permitted cable length according to the technical documents.
- [5] D-sub plug

Motor side

A 12-pin EMC signal plug connector from Intercontec with socket contacts is used on the motor end for RH.M/AS1H/ES1H. The shield is connected in the connector housing according to EMC requirements. All plug connectors seal the plug on the cable end with a lamellar seal.

Prefabrication on inverter end

A commercial D-sub EMC connector with pin contacts is used on the inverter end. A 9-pin or 15-pin connector matching the inverter is used.

Hybrid cables

The outer cable sheath on the motor and inverter end bears a nameplate with part number and logo of the prefabricated cable manufacturer. The ordered length and permitted tolerance are interrelated as follows:

- Cable length ≤ 10 m: Tolerance 200 mm.
- Cable length > 10 m: + 2% tolerance



INFORMATION

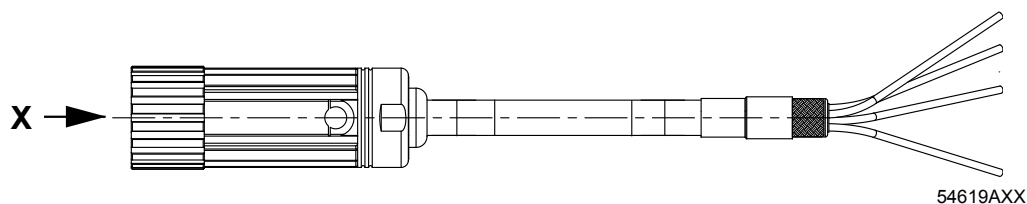
Refer to the system manual of the inverter for determining the maximum cable length. Make sure that an EMC-compliant environment is maintained during project planning.



11.19 Power cables

Motor cables

CMP motor cable



CMP motor cable types

Plug connector type	Number of cores and cable cross section	Part number	Installation
SM11	4 × 1.5 mm ²	0590 4544	Fixed installation
SM11	4 × 1.5 mm ²	0590 6245	Cable carrier installation
SM12	4 × 2.5 mm ²	0590 4552	Fixed installation
SM12	4 × 2.5 mm ²	0590 6253	Cable carrier installation
SM14	4 × 4 mm ²	0590 4560	Fixed installation
SM14	4 × 4 mm ²	0590 4803	Cable carrier installation
SMB6	4 × 6 mm ²	1335 0269	Fixed installation
SMB6	4 × 6 mm ²	1335 0293	Cable carrier installation
SMB10	4 × 10 mm ²	1335 0277	Fixed installation
SMB10	4 × 10 mm ²	1335 0307	Cable carrier installation
SMB16	4 × 16 mm ²	1335 0285	Fixed installation
SMB16	4 × 16 mm ²	1335 0315	Cable carrier installation

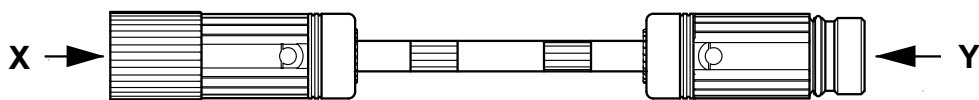


Pin assignment of the CMP motor cable

Plug connector view X	Pin	Cable core color	Assigned	Extra
<p>BSTA 078 SM1</p>	1	(BK) Black	U	Bag of loose parts
	2	(GN/YE) Green/Yellow	PE	
	3	(BK) Black	W	
	4	(BK) Black	V	
<p>CSTA 264 SMB</p>				



CMP motor extension cables



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CMP motor extension cable types

Plug connector type	Number of cores and cable cross section	Part number	Installation
SM11	4 × 1.5 mm ²	1333 2457	Cable carrier installation
SM12	4 × 2.5 mm ²	1333 2465	Cable carrier installation
SM14	4 × 4 mm ²	1333 2473	Cable carrier installation
SMB6	4 × 6 mm ²	1335 0021	Cable carrier installation
SMB10	4 × 10 mm ²	1335 0048	Cable carrier installation
SMB16	4 × 16 mm ²	1335 0056	Cable carrier installation

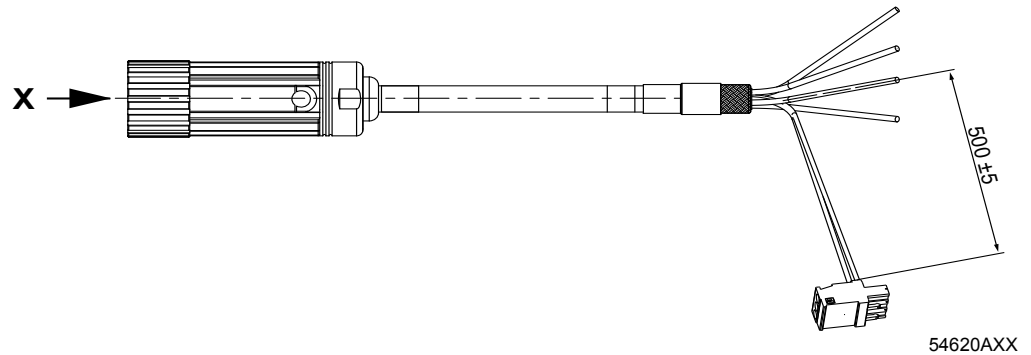
Pin assignment of CMP motor extension cable

Plug connector view X	Pin	Cable core color	Assigned	Pin	Plug connector view Y
BSTA 078 SM1 	1	(BK/WH) Black with white lettering U, V, W	U	1	BKUA 199
	4		V	4	
	3		W	3	
	2	(GR/YE) green / yellow	PE	2	
CSTA 264 SMB 					CKUA 268



Brakemotor cable for BP brake

CMP brakemotor cable



Types of CMP brakemotor cables

Plug connector type	Number of cores and cable cross section	Part number	Installation
SB11	$4 \times 1.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4345	Fixed installation
SB11	$4 \times 1.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4388	Cable carrier installation
SB12	$4 \times 2.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4353	Fixed installation
SB12	$4 \times 2.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4396	Cable carrier installation
SB14	$4 \times 4 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4361	Fixed installation
SB14	$4 \times 4 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 1603	Cable carrier installation
SBB6	$4 \times 6 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0196	Fixed installation
SBB6	$4 \times 6 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0234	Cable carrier installation
SBB10	$4 \times 10 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0218	Fixed installation
SBB10	$4 \times 10 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0242	Cable carrier installation
SBB16	$4 \times 16 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0226	Fixed installation
SBB16	$4 \times 16 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0250	Cable carrier installation



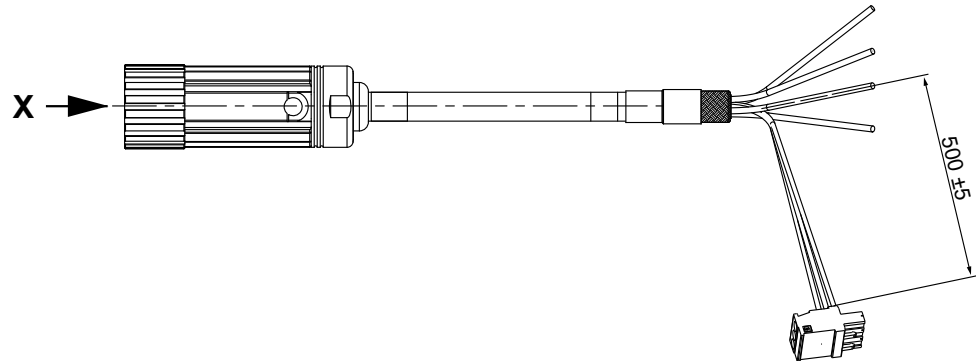
Pin assignment of the CMP brakemotor cable

Plug connector view X	Pin	Cable core color	Assigned	Extra
<p>BSTA 078 SB1</p>	1	(BK/WH) Black with white lettering U, V, W	U	Bag of loose parts
	4		V	
	3		W	
	2	(GN/YE) Green/Yellow	PE	
	A	-	n. c.	
	B	(BK/WH) Black with white lettering	2.	
	C		1	
	D		3	
<p>CSTA 264 SBB</p>				



Brakemotor cable for BY brake

CMP brakemotor cable



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Types of CMP brakemotor cables

Plug connector type	Number of cores and cable cross section	Part number	Installation
SB11	$4 \times 1.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4272	Fixed installation
SB11	$4 \times 1.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4302	Cable carrier installation
SB12	$4 \times 2.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4280	Fixed installation
SB12	$4 \times 2.5 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4310	Cable carrier installation
SB14	$4 \times 4 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4299	Fixed installation
SB14	$4 \times 4 \text{ mm}^2 + 3 \times 1 \text{ mm}^2$	1335 4329	Cable carrier installation
SBB6	$4 \times 6 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0129	Fixed installation
SBB6	$4 \times 6 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0153	Cable carrier installation
SBB10	$4 \times 10 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0137	Fixed installation
SBB10	$4 \times 10 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0161	Cable carrier installation
SBB16	$4 \times 16 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0145	Fixed installation
SBB16	$4 \times 16 \text{ mm}^2 + 3 \times 1.5 \text{ mm}^2$	1335 0188	Cable carrier installation



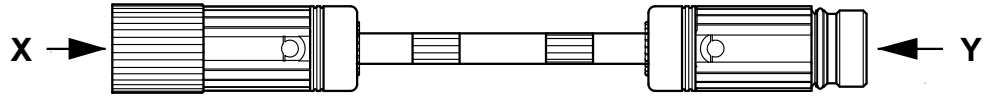
Pin assignment of the CMP brakemotor cable

Plug connector view X	Pin	Cable core color	Assigned	Extra
<p>BSTA 078 SB1</p>	1	(BK/WH) Black with white lettering U, V, W	U	Bag of loose parts
	4		V	
	3		W	
	2	(GN/YE) Green/Yellow	PE	
	A	-	n. c.	
	B	(BK/WH) Black with white lettering	2.	
	C		1	
	D		3	
<p>CSTA 264 SBB</p>				



Extension cable for BP and BY brake

CMP brakemotor extension cables



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CMP brakemotor extension cable types

Plug connector type	Number of cores and cable cross section	Part number	Installation
SB11	4 × 1.5 mm ² + 3 × 1 mm ²	1335 4221	Cable carrier installation
SB12	4 × 2.5 mm ² + 3 × 1 mm ²	1335 4248	Cable carrier installation
SB14	4 × 4 mm ² + 3 × 1 mm ²	1335 4337	Cable carrier installation
SBB6	4 × 6 mm ² + 3 × 1.5 mm ²	1335 0099	Cable carrier installation
SBB10	4 × 10 mm ² + 3 × 1.5 mm ²	1335 0102	Cable carrier installation
SBB16	4 × 16 mm ² + 3 × 1.5 mm ²	1335 0110	Cable carrier installation

Pin assignment of the CMP brakemotor extension cable

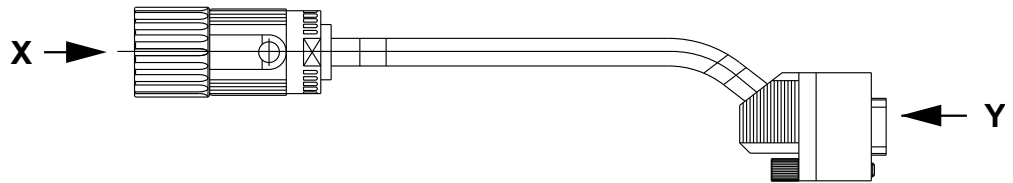
Plug connector view X	Pin	Cable core color	Assigned	Pin	Plug connector view Y
BSTA 078 SB1 	1	(BK/WH) Black with white lettering U, V, W	U	1	BKUA 199
	4		V	4	
	3		W	3	
	2	(GN/YE) Green/Yellow	PE	2	
	A	-	n. c.	A	
	B	(BK/WH) Black with white lettering	2.	B	
	C		1	C	
D	3		D		
CSTA 264 SBB 					CKUA 268



11.20 Encoder cables

Resolver

Resolver cable RH.M for MOVIDRIVE® MDX60B/61B



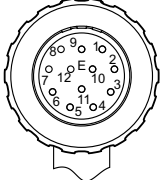
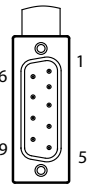
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RH.M resolver cable types for MOVIDRIVE® MDX60B/61B

Type	Number of cores and cable cross section	Part number	Installation
CMP	5 × 2 × 0.25 mm ²	0199 4875	Fixed installation
CMP	5 × 2 × 0.25 mm ²	0199 3194	Cable carrier installation

Pin assignment of resolver cable RH.M for MOVIDRIVE® MDX60B/61B

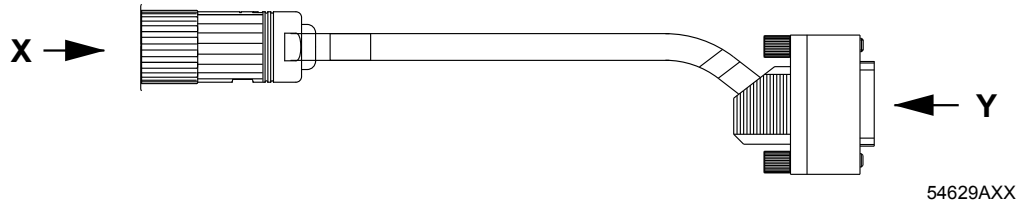
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Motor connection side		Description	Cable core color	Description	MOVIDRIVE® B connection	
Plug connector view X	Pin no.				Pin no.	Plug connector view Y
ASTA 021FR 0198 6732 12-pin with socket contacts 	1	R1 (reference +)	(PK) Pink	R1 (reference +)	3	D-sub 9-pin 
	2	R2 (reference -)	(GY) Gray	R2 (reference -)	8	
	3	S1 (cosine +)	(RD) Red	S1 (cosine +)	2	
	4	S3 (cosine -)	(BU) Blue	S3 (cosine -)	7	
	5	S2 (sine +)	(YE) Yellow	S2 (sine +)	1	
	6	S4 (sine -)	(GN) Green	S4 (sine -)	6	
	7	n. c.	-	-	-	
	8	n. c.	-	-	-	
	9	TF/KTY +	(BN) Brown/(VT) Violet ¹⁾	TF (KTY+)	9	
	10	TF/KTY -	(WH) White/(BK) Black ¹⁾	TF/KTY -	5	
	11	n. c.	-	-	-	
	12	n. c.	-	n. c.	4	

1) Double assignment to increase cross section



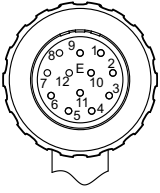
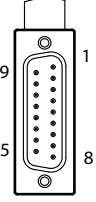
RH.M resolver cables for MOVIAXIS® MX



RH.M resolver cable types for MOVIAXIS® MX

Type	Number of cores and cable cross section	Part number	Installation
CMP	5 × 2 × 0.25 mm ²	1332 7429	Fixed installation
CMP	5 × 2 × 0.25 mm ²	1332 7437	Cable carrier installation

Pin assignment of RH.M resolver cable for MOVIAXIS® MX

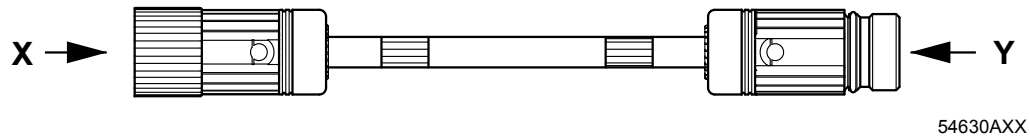
Motor connection side		Connection MOVIAXIS® MX				
Plug connector view X	Pin no.	Description	Cable core color	Description	Pin no.	Plug connector view Y
ASTA 021FR 0198 6732 12-pin with socket contacts 	1	R1 (reference +)	(PK) Pink	R1 (reference +)	5	D-sub 15-pin 
	2	R2 (reference -)	(GY) Gray	R2 (reference -)	13	
	3	S1 (cosine +)	(RD) Red	S1 (cosine +)	2	
	4	S3 (cosine -)	(BU) Blue	S3 (cosine -)	10	
	5	S2 (sine +)	(YE) Yellow	S2 (sine +)	1	
	6	S4 (sine -)	(GN) Green	S4 (sine -)	9	
	7	n. c.	-	n. c.	3	
	8	n. c.	-	n. c.	4	
	9	TF/KTY +	(BN) Brown/(VT) Violet ¹⁾	TF/KTY +	14	
	10	TF/KTY -	(WH) White/(BK) Black ¹⁾	TF/KTY -	6	
	11	n. c.	-	n. c.	7	
	12	n. c.	-	n. c.	8	
	-	-	n. c.	11		
	-	-	n. c.	12		
	-	-	n. c.	15		

1) Double assignment to increase cross section

All connectors are shown with view onto the pins.



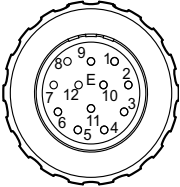
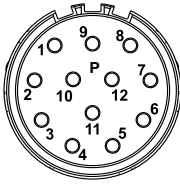
Extension cable for RH.M resolver



Extension cable types for RH.M resolver

Type	Number of cores and cable cross section	Part number	Installation
CMP	5 × 2 × 0.25 mm ²	0199 5421	Fixed installation
CMP	5 × 2 × 0.25 mm ²	0199 5413	Cable carrier installation

Pin assignment of extension cable for resolver RH.M

Plug connector view X	Pin no.	Description	Cable core color	Description	Pin no.	Plug connector view Y
ASTA 021FR 198 673 2 12-pin with socket contacts 	1	R1 (reference +)	(PK) Pink	R1 (reference +)	1	AKUA 020MR 199 647 9 12-pin with pin contacts 
	2	R1 (reference -)	(GY) Gray	R1 (reference -)	2	
	3	S1 (cosine +)	(RD) Red	S1 (cosine +)	3	
	4	S3 (cosine -)	(BU) Blue	S3 (cosine -)	4	
	5	S2 (sine +)	(YE) Yellow	S2 (sine +)	5	
	6	S4 (sine -)	(GN) Green	S4 (sine -)	6	
	7	n. c.	-	n. c.	7	
	8	n. c.	-	n. c.	8	
	9	TF/KTY +	(BN) Brown/(VT) Violet ¹⁾	TF/KTY +	9	
	10	TF/KTY -	(WH) White/(BK) Black ¹⁾	TF/KTY -	10	
	11	n. c.	-	n. c.	11	
	12	n. c.	-	n. c.	12	

1) Double assignment to increase cross section

The extension cable has the same pin assignment as all other contacts.

Alternative plug connector for resolver cable RH.M

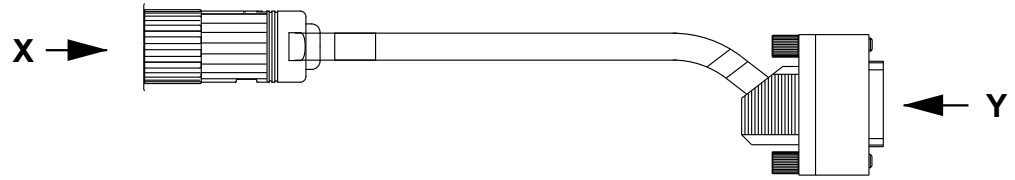
Signal plug connector with socket contacts (complete)

Type	Connectable cross sections	Part no.
RH.M	6 × 2 × 0.06 - 1 mm ²	0198 6732



Hiperface® encoder

Figure of a Hiperface® encoder cable for MOVIDRIVE® B and MOVIAXIS® MX

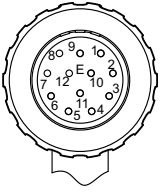
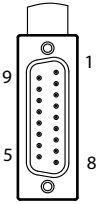


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Hiperface® encoder cable types for MOVIDRIVE® B and MOVIAXIS® MX

Type	Number of cores and cable cross section	Part number	Installation
CMP	6 × 2 × 0.25 mm ²	1332 4535	Fixed installation
CMP	6 × 2 × 0.25 mm ²	1332 4551	Cable carrier installation

Pin assignment of Hiperface® cables for AK0H/EK0H/AS1H/ES1H encoders

Motor connection side					MOVIAXIS® MX, MOVIDRIVE® B connection	
Plug connector view X	Pin no.	Description	Cable core color	Description	Pin no.	Plug connector view Y
ASTA 021FR 0198 6732 12-pin with socket contacts 	1	n. c.	n. c.	n. c.	3	D-sub 15-pole 
	2	n. c.	n. c.	n. c.	5	
	3	S1 (cosine +)	(RD) Red	S1 (cosine +)	1	
	4	S3 (cosine -)	(BU) Blue	S3 (cosine -)	9	
	5	S2 (sine +)	(YE) Yellow	S2 (sine +)	2	
	6	S4 (sine -)	(GN) Green	S4 (sine -)	10	
	7	DATA-	(VT) Violet	DATA-	12	
	8	DATA+	(BK) Black	DATA+	4	
	9	TF/KTY +	(BN) Brown	TF/KTY +	14	
	10	TF/KTY -	(WH) White	TF/KTY -	6	
	11	GND	(GY/PK) (Gray/Pink / (PK) Pink	GND	8	
	12	U _s	(RD/BU) Red/Blue / (GY) Gray	U _s	15	
	-	-	n. c.	7		
	-	-	n. c.	11		
	-	-	n. c.	13		



Extension cable for Hiperface® encoders AK0H/EK0H/AS1H/ES1H

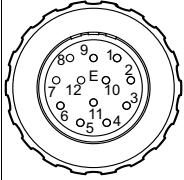
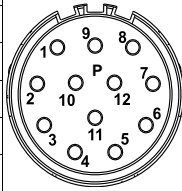


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Extension cable types for Hiperface® encoders AK0H/EK0H/AS1H/ES1H

Type	Number of cores and cable cross section	Part number	Installation
CMP	6 × 2 × 0.25 mm ²	0199 5391	Fixed installation
CMP	6 × 2 × 0.25 mm ²	0199 5405	Cable carrier installation

Pin assignment for extension cable for Hiperface® encoders AK0H/EK0H/AS1H/ES1H

Plug connector view X	Pin no.	Description	Cable core color	Description	Pin no.	Plug connector view Y
ASTA 021FR 198 673 2 12-pin with socket contacts 	1	n. c.	-	n. c.	1	AKUA 020MR 199 647 9 12-pin with pin contacts 
	2	n. c.	-	n. c.	2	
	3	S1 (cosine +)	(RD) Red	S1 (cosine +)	3	
	4	S3 (cosine -)	(BU) Blue	S3 (cosine -)	4	
	5	S2 (sine +)	(YE) Yellow	S2 (sine +)	5	
	6	S4 (sine -)	(GN) Green	S4 (sine -)	6	
	7	DATA-	(VT) Violet	DATA-	7	
	8	DATA+	(BK) Black	DATA+	8	
	9	TF/KTY +	(BN) Brown	TF/KTY +	9	
	10	TF/KTY -	(WH) White	TF/KTY -	10	
	11	GND	(GY/PK) (Gray/Pink / (PK) Pink	GND	11	
	12	U _s	(RD/BU) Red/Blue / (GY) Gray	U _s	12	

The extension cable has the same pin assignment as all other contacts.

Alternative plug connector cable for Hiperface® encoders AK0H/EK0H/AS1H/ES1H

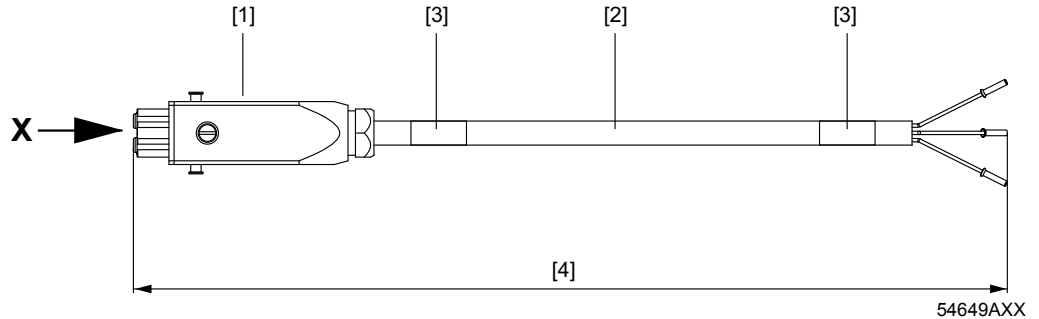
Signal plug connector with socket contacts (complete)

Type	Connectable cross sections	Part no.
AK0H	6 × 2 × 0.06 - 1 mm ²	0198 6732
EK0H		
AS1H		
ES1H		



11.21 Forced cooling fan cable

Cable for motors with VR forced cooling fan

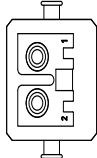


- [1] Connector: STAK 200
- [2] Printed on connector: SEW-EURODRIVE
- [3] Nameplate
- [4] Cable length \leq 5 m: Tolerance +200 mm
Cable length \geq 5 m: Tolerance +2%
Permitted cable length according to the technical documents.

Cable types for motors with VR forced cooling fan

Type	Cross section	Installation	Part number
CMP	3 x 1 mm ² (AWG 18)	Fixed installation	0198 6341
CMP		Cable carrier installation	0199 560X

Pin assignment of cables for motors with VR forced cooling fan

STAK 200 plug connector view X	Pin	Core identification	Assigned	Pin	Connection type
Connector with two socket contacts 	1	Digit 1	24 V +	Cut-off, length ca. 250 mm	Conductor end sleeves
	2	Digit 2	0 V		

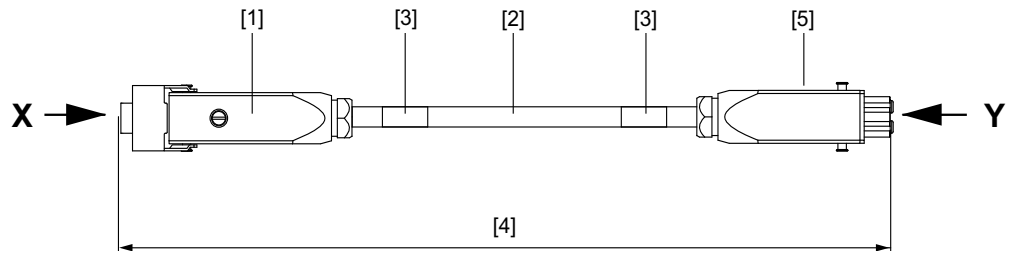
Alternative connector for cable for the VR forced cooling fan

Signal plug connector with socket contacts (complete)

Type	Connectable cross sections	Installation	Part number
VR	3 x 1 mm ² (AWG 18)	Fixed installation/cable carrier installation	0198 4985



Extension cable for motors with VR forced cooling fan



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- [1] Connector: STAS 200
- [2] Printed on connector: SEW-EURODRIVE
- [3] Nameplate
- [4] Cable length ≤ 5 m: Tolerance +200 mm
Cable length ≥ 5 m: Tolerance +2%
Permitted cable length according to the technical documents.
- [5] Socket: STAK 200

Extension cable types for motors with VR forced cooling fan

Type	Cross section	Installation	Part number
CMP	3 x 1 mm ² (AWG 18)	Fixed installation	0199 5618
CMP		Cable carrier installation	0199 5626

Pin assignment of extension cables for motors with VR forced cooling fan

STAS 200 plug connector view X	Pin	Core identification	Assigned	Pin	STAK 200 connection type view Y
Connector with two pin contacts	1	Digit 1	24 V +	1	Connector with two socket contacts
	2	Digit 2	0 V	2	

The extension cable has the same pin assignment as all other contacts.

Alternative connector for cable for the VR forced cooling fan

Signal plug connector with pins (complete)

Type	Cross sections that can be selected	Part number
VR	3 x 1 mm ²	0198 5693



11.22 Cable specification of power cables

Fixed installation

Motor cables

Installation		Fixed				
Cable cross sections		4 x 1.5 mm ² (AWG 16)	4 x 2.5 mm ² (AWG 14)	4 x 4 mm ² (AWG 12)	4 x 6 mm ² (AWG 10)	4 x 10 mm ² (AWG 8)
Manufacturer		HELUKABEL				
Manufacturer designation		LI9YCY				
Operating voltage V ₀ / V AC	V	600 / 1000				
Temperature range	°C	fixed installation - 40 to +80				
Maximum temperature	°C	+80				
Minimum bending radius	mm	45	55	65	73	85
Diameter D	mm	9.0 ± 0.2	11 ± 0.2	13 ± 0.2	14.3 ± 0.3	17.0 ± 0.6
Core designation		BK with lettering WH + GN/YE				
Sheath color		Orange, similar to RAL 2003				
Approval(s)		DESINA / VDE / UL				
Capacitance core/shield	nF/km	110	110	118	125	125
Capacitance core/shield	nF/km	70	70	75	80	80
Halogen-free		no				
Silicon-free		yes				
CFC-free		yes				
Inner insulation (core)		PP				
Outer insulation (sheath)		PVC				
Flame-inhibiting/self-extinguishing		no				
Conductor material		Cu				
Shield		Cu tinned				
Weight (cable)	kg/km	134	202	262	332	601



Brakemotor cables

Installation		Fixed				
Cable cross sections		4 x 1.5 mm ² (AWG 16) + 3 x 1 mm ² (AWG 18)	4 x 2.5 mm ² (AWG 14) + 3 x 1 mm ² (AWG 18)	4 x 4 mm ² (AWG 12) + 3 x 1 mm ² (AWG 18)	4 x 6 mm ² (AWG 10) + 3 x 1.5 mm ² (AWG 16)	4 x 10 mm ² (AWG 8) + 3 x 1.5 mm ² (AWG 16)
Manufacturer		HELUKABEL				
Manufacturer designation		LI9YCY				
Operating voltage V ₀ / V AC	V	600 / 1000				
Temperature range	°C	Fixed installation: - 40 to +80				
Maximum temperature	°C	+80				
Minimum bending radius	mm	60	68	75	85	100
Diameter D	mm	11.8 ± 0.4	13.4 ± 0.4	15.0 ± 0.5	17.0 ± 0.6	20.0 ± 1.0
Core designation		BK with lettering WH + GN/YE				
Sheath color		Orange similar to RAL 2003				
Approval(s)		DESINA / VDE / UL				
Capacitance core/shield	nF/km	105	105	110	115	120
Capacitance core/shield	nF/km	60	60	70	75	78
Haloge-free		no				
Silicon-free		yes				
CFC-free		yes				
Inner insulation (core)		PP				
Outer insulation (sheath)		PVC				
Flame-inhibiting/self-extinguishing		yes				
Conductor material		Cu				
Shield		Cu tinned				
Weight (cable)	kg/km	229	292	393	542	938



Cable carrier installation

Motor cables

Installation		Cable carrier				
Cable cross section		4 x 1.5 mm ² (AWG 16)	4 x 2.5 mm ² (AWG 14)	4 x 4 mm ² (AWG 12)	4 x 6 mm ² (AWG 10)	4 x 10 mm ² (AWG 8)
Manufacturer		Nexans				
Manufacturer designation		PSL(LC)C11Y-J 4 x - mm ²		PSL11YC11Y-J 4 x - mm ²		
Operating voltage V ₀ / V AC	V	600 / 1000				
Temperature range	°C	-20 to +60				
Maximum temperature	°C	+90 (on conductor)				
Minimum bending radius	mm	134	140	135	155	180
Diameter D	mm	12.8 + 0.6 / -0.7	15.7 ± 0.3	13.2 ± 0.4	15.4 ± 0.4	17.8 ± 0.5
Maximum acceleration	m/s ²	20				
Maximum velocity	m/min	200 at max.travel distance of 5 m				
Core designation		BK with lettering WH + GN/YE				
Sheath color		Orange similar to RAL 2003				
Approval(s)		DESINA / VDE / UL / cRUus				
Capacitance core/shield	nF/km	95	95	170	170	170
Capacitance core/core	nF/km	65	65	95	95	95
Halogen-free		yes				
Silicon-free		yes				
CFC-free		yes				
Inner insulation (core)		Polyolefin		TPM		
Outer insulation (sheath)		TPU (PUR)				
Flame-inhibiting/self-extinguishing		yes				
Conductor material		E-Cu blank				
Shield		Braided tinned Cu shield (optically covered > 85%)				
Weight (cable)	kg/km	249	373	311	426	644
Min. bending cycles		≥ 5 million				




Brakemotor cables

Installation		Cable carrier				
Cable cross section		4 x 1.5 mm ² (AWG 16) + 3 x 1 mm ² (AWG 18)	4 x 2.5 mm ² (AWG 14) + 3 x 1 mm ² (AWG 18)	4 x 4 mm ² (AWG 12) + 3 x 1 mm ² (AWG 18)	4 x 6 mm ² (AWG 10) + 3 x 1.5 mm ² (AWG 16)	4 x 10 mm ² (AWG 8) + 3 x 1.5 mm ² (AWG 16)
Manufacturer		Nexans				
Manufacturer designation		PSL(LC)C11Y-J 4x... +3A.../C		PSL11YC11Y-J 4x... +3A.../C		
Operating voltage V ₀ / V AC	V	600 / 1000				
Temperature range	°C	-20 to +60				
Maximum temperature	°C	+90 (conductor)				
Minimum bending radius	mm	159	170	155	175	200
Diameter D	mm	15.0 ± 0.9	16.5 ± 0.7	15.3 ± 0.5	17.4 ± 0.5	20.5 ± 0.5
Maximum acceleration	m/s ²	20				
Maximum velocity	m/min	200 at a max. travel distance of 5 m				
Core designation		BK with lettering WH + GN/YE				
Sheath color		Orange similar to RAL 2003				
Approval(s)		DESINA / VDE / UL / cRUus				
Capacitance core/shield	nF/km	105	105	170	170	170
Capacitance core/core	nF/km	65	65	95	95	95
Halogen-free		yes				
Silicon-free		yes				
CFC-free		yes				
Inner insulation (cable)		TPM				
Outer insulation (sheath)		Polyolefin		TPU (PUR)		
Flame-inhibiting/self-extinguishing		yes				
Conductor material		E-Cu blank				
Shield		Braided tinned Cu shield (optically covered > 85%)				
Weight (cable)	kg/km	335	433	396	522	730
Minimum bending cycles		≥ 5 million				



11.23 Cable specification of encoder cables

Fixed installation of feedback cables

Accessory designation		AS1H / ES1H / AK0H / EK0H / AK1H / EK1H	RH1M
Cable cross sections		6 x 2 x 0.25 mm ²	5 x 2 x 0.25 mm ²
Manufacturer		HELUKABEL	
Manufacturer designation		LI9YCY	
Operating voltage V ₀ /V AC	V	230 / 350	
Temperature range	°C	Fixed installation -40 to +80	
Maximum temperature	°C	+ 80	
Minimum bending radius	mm	43	36.5
Diameter D	mm	8.6 ± 0.2	7.3 ± 0.2
Core designation		DIN 47 100	
Sheath color		Green, similar to RAL 6018	
Approval(s)		DESINA / VDE / 	
Capacitance core/shield	nF/km	110	
Capacitance core/core	nF/km	70	
Halogen-free		no	
Silicon-free		yes	
CFC-free		yes	
Inner insulation (core)		PP	
Outer insulation (sheath)		PVC	
Flame-inhibiting/self-extinguishing		no	
Conductor material		Cu blank	
Shield		Braided tinned Cu shield	
Weight (cable)	kg/km	107	78

Cable carrier installation of feedback cables


Accessory designation		AS1H / ES1H / AK0H / EK0H / AK1H / EK1H	RH1M
Cable cross sections		6 x 2 x 0.25 mm ²	5 x 2 x 0.25 mm ²
Manufacturer		Nexans	
Manufacturer designation		SSL18YC11Y 6 x 2 x 0.25/ SSL11YC11Y 5 x 2 x 0.25	
Operating voltage V ₀ /V AC	V	300	
Temperature range	°C	-20 to + 60	
Maximum temperature	°C	+90 (on conductor)	
Minimum bending radius	mm	100	95
Diameter D	mm	9.8 ± 0.2	9,5 ± 0.2
Maximum acceleration	m/s ²	20	
Maximum velocity	m/min	200	
Core designation		WH/BN, GN/YE, GY/PK, BU/RD, BK/VT, GY-PK/RD-BU	WH/BN, GN/YE, GY/PK, BU/RD, BK/VT
Sheath color		Gray similar to RAL 6018	
Approval(s)		DESINA / VDE / 	
Capacitance core/shield	nF/km	100	
Capacitance core/core	nF/km	55	
Halogen-free		yes	
Silicon-free		yes	
CFC-free		yes	

Table continued on next page



Accessory designation		AS1H / ES1H /AK0H /EK0H /AK1H /EK1H	RH1M
Cable cross sections		6 x 2 x 0.25 mm ²	5 x 2 x 0.25 mm ²
Manufacturer		Nexans	
Inner insulation (core)		PP	
Outer insulation (sheath)		TPE-U	
Flame-inhibiting/self-extinguishing		yes	
Conductor material		E-Cu blank	
Shield		Braided tinned Cu shield	
Weight	kg/km	130	120
Minimum bending cycles		≥ 5 million	

11.24 Cable specification of forced cooling fan cables

Fixed installation of forced cooling fan cables

Accessory designation		VR
Cable cross sections		3 x 1 mm ²
Manufacturer		Lapp
Manufacturer designation		Ölflex 110 Classic
Operating voltage V ₀ /V AC	V	300 / 500
Temperature range	°C	-30 to +70
Maximum temperature	°C	+ 70
Minimum bending radius	mm	24
Diameter D	mm	6.0 ± 0.3
Core designation		VDE 0293
Sheath color		Silver gray, RAL 7001
Approval(s)		VDE
Capacitance core/shield	nF/km	-
Capacitance core/core	nF/km	-
Halogen-free		no
Silicon-free		yes
CFC-free		yes
Inner insulation (core)		PVC
Outer insulation (sheath)		PVC
Flame-inhibiting/self-extinguishing		no
Conductor material		Cu blank
Shield		-
Weight (cable)	kg/km	65



Prefabricated Cables for CMP. Servomotors

Cable specification of forced cooling fan cables

Cable carrier installation of forced cooling fan cables

Accessory designation		VR
Cable cross sections		3 x 1 mm²
Manufacturer		Nexans
Manufacturer designation		PSL 3 x 1.0
Operating voltage V ₀ /V AC	V	300
Temperature range	°C	- 30 to + 70
Maximum temperature	°C	+ 90 (on conductor)
Minimum bending radius	mm	45
Diameter D	mm	5.7 ± 0.2
Maximum acceleration	m/s ²	10
Maximum velocity	m/min	50
Core designation		2 x WH with digit + 1 x GN/YE
Sheath color		Black RAL 9005
Approval(s)		VDE / UL
Capacitance core/shield	nF/km	-
Capacitance core/core	nF/km	-
Halogen-free		yes
Silicon-free		yes
CFC-free		yes
Inner insulation (core)		TPM
Outer insulation (sheath)		TPE-U
Flame-inhibiting/self-extinguishing		yes
Conductor material		E-Cu blank
Shield		-
Weight	kg/km	50
Minimum bending cycles		≥ 5 million






11.25 Crimp tools

An alternative for purchasing the prefabricated cables from SEW-EURODRIVE for motors with plug connectors is to purchase the required plug connectors.

In this case, the customers have to wire the plug connectors themselves. SEW-EURODRIVE offers the matching crimping tools to ensure correct connection of cable core and contact. Please quote the required part number in your order.

Power and brake contacts of CMP servomotors

Tools required for assembly			
Type	for	SEW part number	Figure
Crimping pliers		019 243 0	
For power connector SM1 / SB1			
Positioner	Motor contact 2 mm Ø Core cross section 0.35 - 4 mm ²	019 245 7	
	Brake contact 1mm Ø Core cross section 0.14 - 1 mm ²	019 244 9	
For power connector SMB / SBB			
Crimping pliers		016 243 0	
Positioner	Motor contact 2 mm Ø Core cross section 0.35 - 4 mm ²	019 245 7	
Crimping pliers		029 461 65	
Positioner	Brake contact 1mm Ø Core cross section 1.5 - 4 mm ²	032 560 65	
Positioner	Brake contact 1mm Ø Core cross section 6 - 10 mm ²	032 560 65	
Tools required for disassembly			
Removal tool	Motor contact 2 mm Ø	019 247 3	
	Brake contact 1 mm Ø	019 246 5	
Removal tool ¹⁾	Insulator	019 248 1	

1) The removal tool is only required for removal on the motor end.



Resolver RH1M encoder system, Hiperface® single and multi turn AS1H and ES1H

Tools required for assembly			
Type	for	SEW part number	Figure
Crimping pliers		019 243 0	
Positioner	Contact 1 mm Ø Core cross section 0.06 - 1 mm ²	019 244 9	
Tools required for removal			
Removal tool	Contact 1 mm Ø Core cross section 0.06 - 1 mm ²	019 246 5	
Removal tool 1)	Insulator	019 248 1	

1) The removal tool is only required for **removal on the motor end**.