8CM040.12-3

1 General information

- Can be used in cable drag chains
- Assembled specifically for use with ACOPOS 1180/1320 servo drives and B&R servo motors with motor connector size 1

2 Order data

Model number	Short description	Figure
	4 mm² motor cables	
8CM040.12-3	Motor cable, length 40 m, 4x 4 mm² + 2x 0.75 mm² + 2x 1 mm², 8-pin female Intercontec motor connector size 1, can be used in cable drag chains	

Table 1: 8CM040.12-3 - Order data

3 Technical data

Model number	8CM040.12-3
General information	
Cable cross section	4 x 4 mm² + 2 x 0.75 mm² + 2 x 1 mm²
Durability	Oil resistance per HD 22.10 appendix A and DIN EN 60811-404 [1]
Certification	E170315 cRUus AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 [1]
Certifications	
CE	Yes
UL	cULus E225616 Power conversion equipment
Cable construction	
Power lines	
Quantity	4
Wire insulation	PP
Wire colors	Black, brown, blue, yellow/green
Variant	Tinned copper stranded wire
Cross section	4 mm²
Shield	No
Stranding	No
Signal line	
Quantity	4
Wire insulation	PP
Wire colors	White, white/red, white/blue, white/green
Variant	Tinned copper stranded wire
Cross section	2 x 0.75 mm² + 2 x 1 mm²
Shield	Individually shielded in pairs, tinned copper braiding, optical coverage > 85% and foil shield
Stranding	White with white/red and white/blue with white/green
Cable stranding	With filler elements and foil shield
Cable shield	Tinned copper braiding, optical coverage > 85% and foil shield
Outer jacket	
Material	TPU
Color	Orange, similar to RAL 2003 flat
Labeling	B&R 4 G 4 + (2x0.75)C + (2x1)C C E170315 cRUus AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 [1]
Connector	
Type	8-pin female speedtec motor connector, size 1.0
Mating cycles	<500
Contacts	8 (4 power and 4 signal contacts)
Degree of protection per EN 60529	IP66/67 when connected
Electrical properties [1]	
Operating voltage	Max. 1000 V AC (UL)
Test voltage	
Wire/Wire	4 kV
Wire/Shield	4 kV
Conductor resistance	
Power lines	≤5.1 Ω/km
Signal line	0.75 mm²: ≤26.7 Ω/km, 1 mm²: ≤20 Ω/km

Table 2: 8CM040.12-3 - Technical data

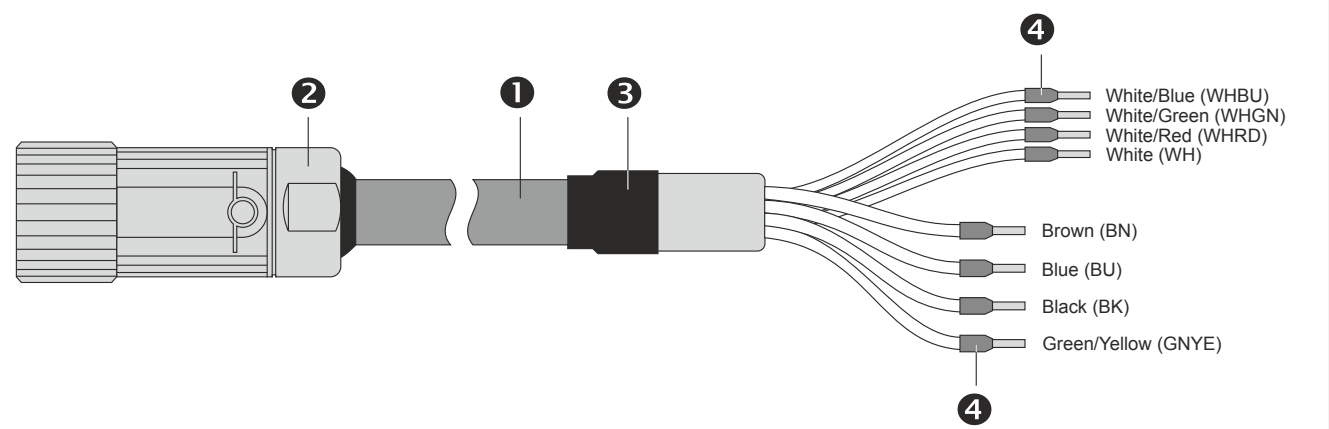
Model number	8CM040.12-3
Insulation resistance	≥500 MΩ*km
Current-carrying capacity per DIN VDE 0298 part 4, table 11	
Wall mounting	30 A [2]
Installed in conduit or cable duct	30 A [2]
Installed in cable tray	30 A [2]
Ambient conditions [1]	
Temperature	
Moving	-20°C to +80°C
Static	-20°C to +90°C
Mechanical properties [1]	
Dimensions	
Length	40 m
Diameter	15.4 mm ±0.4 mm
Bend radius	
Single bend	>48 mm
Moving	>119 mm
Drag chain data	
Acceleration	Max. 50 m/s² (depends on the length of the travel path)
Flex cycles [3]	≥5,000,000
Speed	Max. 300 m/min
Weight	11.1 kg

Table 2: 8CM040.12-3 - Technical data

1) Values refer to the raw cable being used.
2) Limited to 30 A by the motor connector.
3) At an ambient temperature from -20°C to +60°C.

4 Wiring

4.1 Cable construction



Pos.	Description	Note
1	Motor line	4x 0.75 mm² + 2x 2x 0.34 mm² 4x 1.5 mm² + 2x 2x 0.75 mm² 4x 4 mm² + 2x 0.75 mm² + 2x 1 mm² 4x 10 mm² + 2x 0.75 mm² + 2x 1.5 mm²
2	8-pin female circular connector	
3	Heat shrink tubing	
4	Wire end sleeves	

Table 3: Motor cables - Cable construction

4.2 8CMxxx.12-0, 8CMxxx.12-1, 8CMxxx.12-3

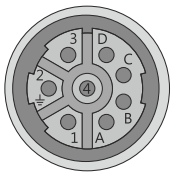
Circular connector	Pin	Description	Function
	1	U	Motor connection U
	2	PE	Protective ground conductor
	3	W	Motor connection W
	4	V	Motor connection V
	A	T+	Temperature +
	B	T-	Temperature -
	C	B+	Brake +
	D	B-	Brake -

Table 4: 8CMxxx.12-0, 8CMxxx.12-1, 8CMxxx.12-3 motor cables - Pinout

4.3 8CMxxx.12-1, 8CMxxx.12-3

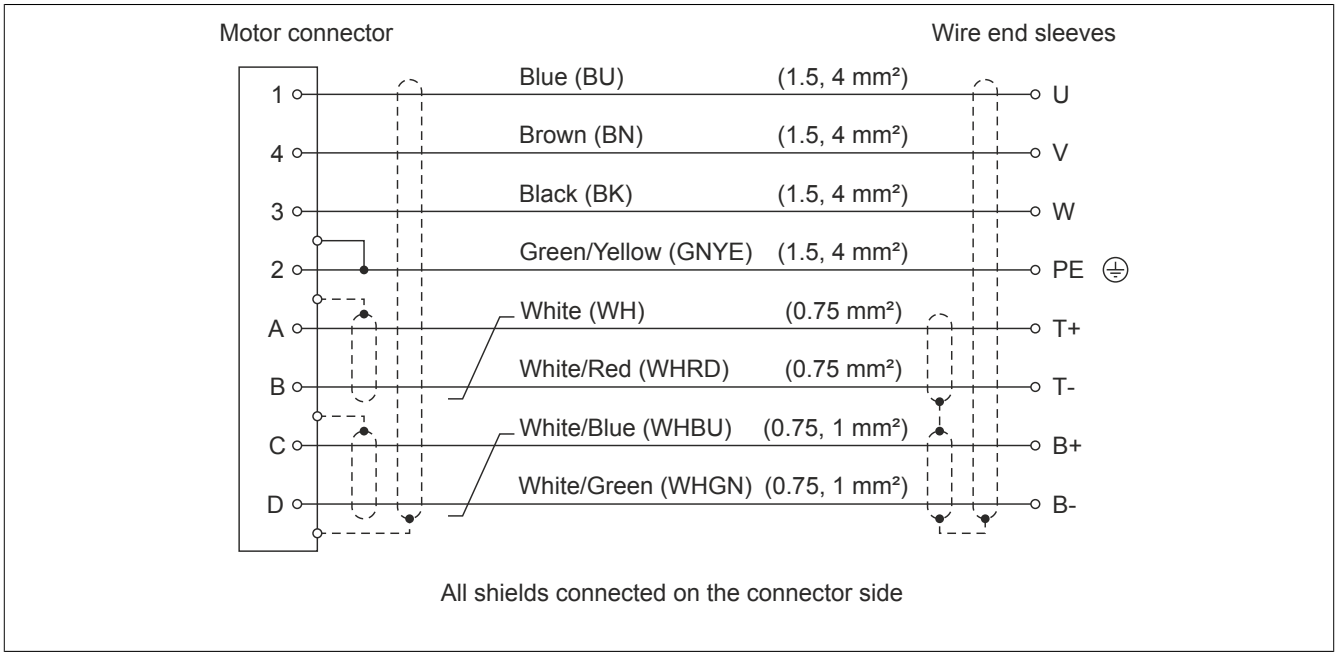


Figure 1: 8CMxxx.12-1, 8CMxxx.12-3 motor cables - Cable diagram