8CM003.12-5

1 General information

- Can be used in cable drag chains
- Assembled specifically for use with ACOPOS 1640/128M servo drives and B&R servo motors with motor connector size 1.5

2 Order data

Model number	Short description	Figure
	10 mm² motor cables	
8CM003.12-5	Motor cable, length 3 m, 4x 10 mm² + 2x 0.75 mm² + 2x 1.5 mm², 8-pin female Intercontec motor connector size 1.5, can be used in cable drag chains	

Table 1: 8CM003.12-5 - Order data

3 Technical data

Model number	8CM003.12-5
General information	
Cable cross section	4x 10 mm² + (2x 0.75 mm²)C + (2x 1.5 mm²)C
Durability	Oil resistance per HD 22.10 appendix A 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	10 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	2x 0.75 mm² + 2x 1.5 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 10 + (2x0.75)C + (2x1.5)C C E170315 cRU-us AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 [1)]
Connector	
Type	Intercontec 8-pin female motor connector, size 1.5
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

Table 2: 8CM003.12-5 - Technical data

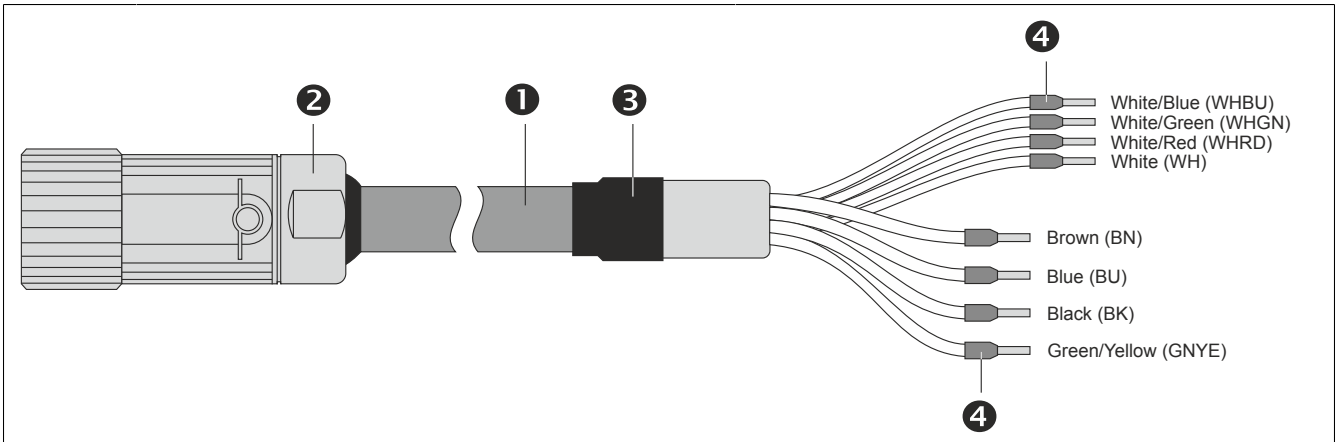
Model number	8CM003.12-5
Conductor resistance	
Power lines	≤2 Ω/km
Signal line	0.75 mm²: ≤26.7 Ω/km, 1.5 mm²: ≤13.7 Ω/km
Insulation resistance	≥500 MΩ*km
Current-carrying capacity per DIN VDE 0298 part 4, table 11	
Wall mounting	64.6 A
Installed in conduit or cable duct	54.6 A
Installed in cable tray	68.3 A
Ambient conditions [1]	
Temperature	
Moving	-20°C to +80°C
Static	-20°C to +90°C
Mechanical properties [1]	
Dimensions	
Length	3 m
Diameter	20.1 mm ±0.4 mm
Bend radius	
Single bend	>62 mm
Moving	>154 mm
Drag chain data	
Acceleration	Max. 50 m/s² (depends on the length of the travel path)
Flex cycles [2]	≥5,000,000
Speed	Max. 300 m/min
Weight	1.6 kg

Table 2: 8CM003.12-5 - Technical data

1) Values refer to the raw cable being used.
2) 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.19-3, 8CMxxx.12-5

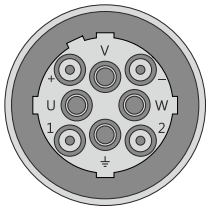
Circular connector	Pin	Description	Function
	U	U	Motor connection U
	⏚	PE	Protective ground conductor
	W	W	Motor connection W
	V	V	Motor connection V
	1	T+	Temperature +
	2	T-	Temperature -
	+	B+	Brake +
	-	B-	Brake -

Table 4: 8CMxxx.19-3, 8CMxxx.12-5 motor cables - Pinout

4.3 8CMxxx.19-3, 8CMxxx.12-5

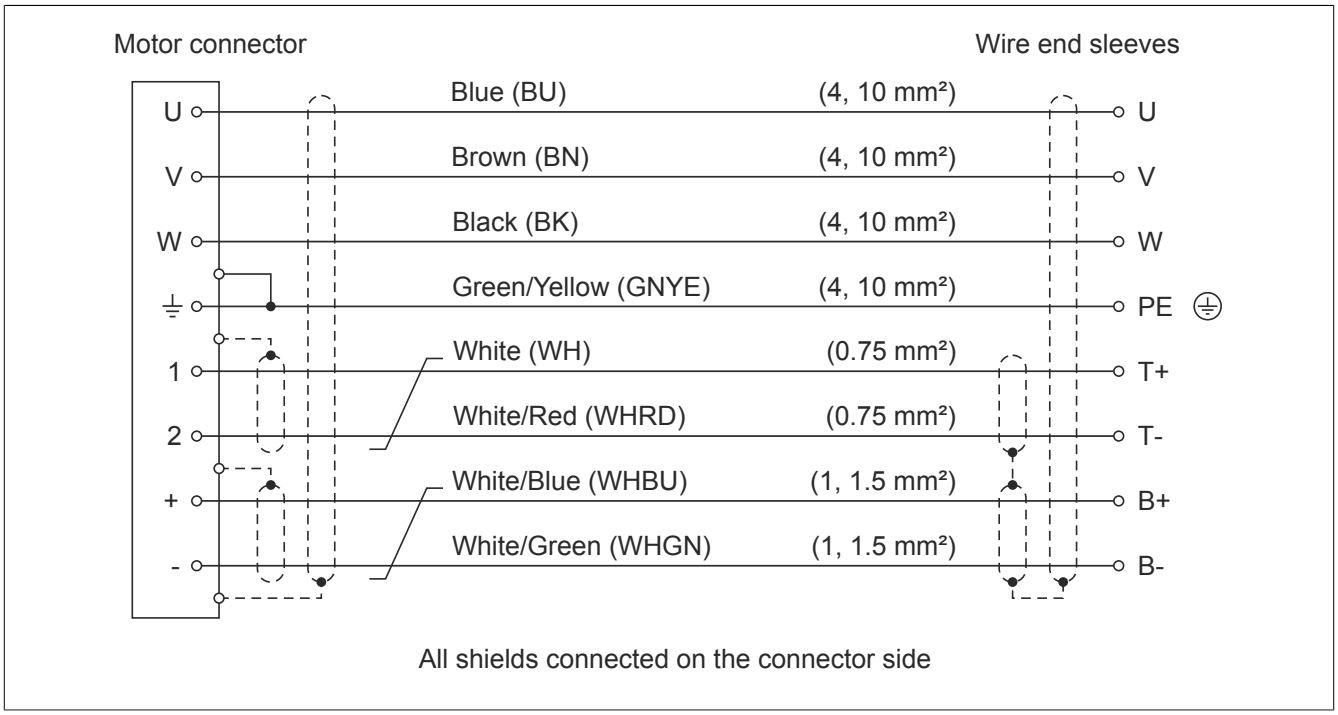


Figure 1: 8CMxxx.19-3, 8CMxxx.12-5 motor cables - Cable diagram