8BCH0007.5221A-0

1 Order data

Model number	Short description	Figure
	2.5 mm² hybrid motor cable food grade	
8BCH0007.5221A-0	ACOPOSmulti hybrid motor cable, length 7 m, 4x 2.5 mm² + 2x 0.75 mm² + 2x 0.24 mm² + 2x 2x 0.15 mm², 13-pin female circular connector made of stainless steel, food grade, UL/CSA listed	

Table 1: 8BCH0007.5221A-0 - Order data

2 Technical data

Model number	8BCH0007.5221A-0
General information	
Cable cross section	4x 2.5 mm² + 2x 0.75 mm² + (2x 0.24 mm² + 2x 2x 0.15 mm²)
Durability	Oil resistance per EN 60811-2-1 [1)]
Certification	UL AWM style 21223, 80°C, 1000 V and CSA C22.2 no. 210 I/II A/B FT1; FDA Code of Federal Regulations, Title 21 (CFR21), section 177.1550, "Perfluorocarbon resins" [1)]
Certifications	
CE	Yes
UL	cULus E225616 Power conversion equipment
Cable construction	
Power lines	
Quantity	4
Wire insulation	Special thermoplastic material
Wire colors	Black, brown, blue, yellow/green
Design	Tinned copper stranded wire
Cross section	2.5 mm²
Shield	No
Stranding	No
Supply lines	
Quantity	2
Wire insulation	Special thermoplastic material
Wire colors	White/Blue, white/green
Design	Tinned copper stranded wire
Cross section	0.24 mm²
Shield	Yes
Stranding	No
Signal lines	
Quantity	6
Wire insulation	Special thermoplastic material
Wire colors	Blue/Green, white/green, gray/pink, yellow/violet
Design	Tinned copper stranded wire
Cross section	2x 0.75 mm², 4x 0.15 mm²
Shield	0.75 mm² shielding for pairs, complete shielding (4x 0.15 mm²), tinned copper braiding, optical coverage >85% and foil shield
Stranding	White/Blue with white/green, pink with gray and yellow with violet
Cable stranding	With filler elements and foil shield
Complete shielding	Tinned copper braiding, optical coverage >85% and foil shield
Outer jacket	
Material	FEP
Color	Orange, similar to RAL 2003 flat
Labeling	B&R 4x2.5 + 2x0.75 + (2x2x26AWG + 2x1x24AWG) * E130266 * UL AWM STYLE 21619 150°C 1000 V FT1 [1)]
Connector	
Type	13-pin female stainless steel circular connector
Connection cycles	<500
Contacts	13
Additional connectors	9-pin male DSUB connector Connection cycles: <200 Contacts: 9 Degree of protection per EN 60529: IP20 when connected
Degree of protection per EN 60529	IP69K when connected

Table 2: 8BCH0007.5221A-0 - Technical data

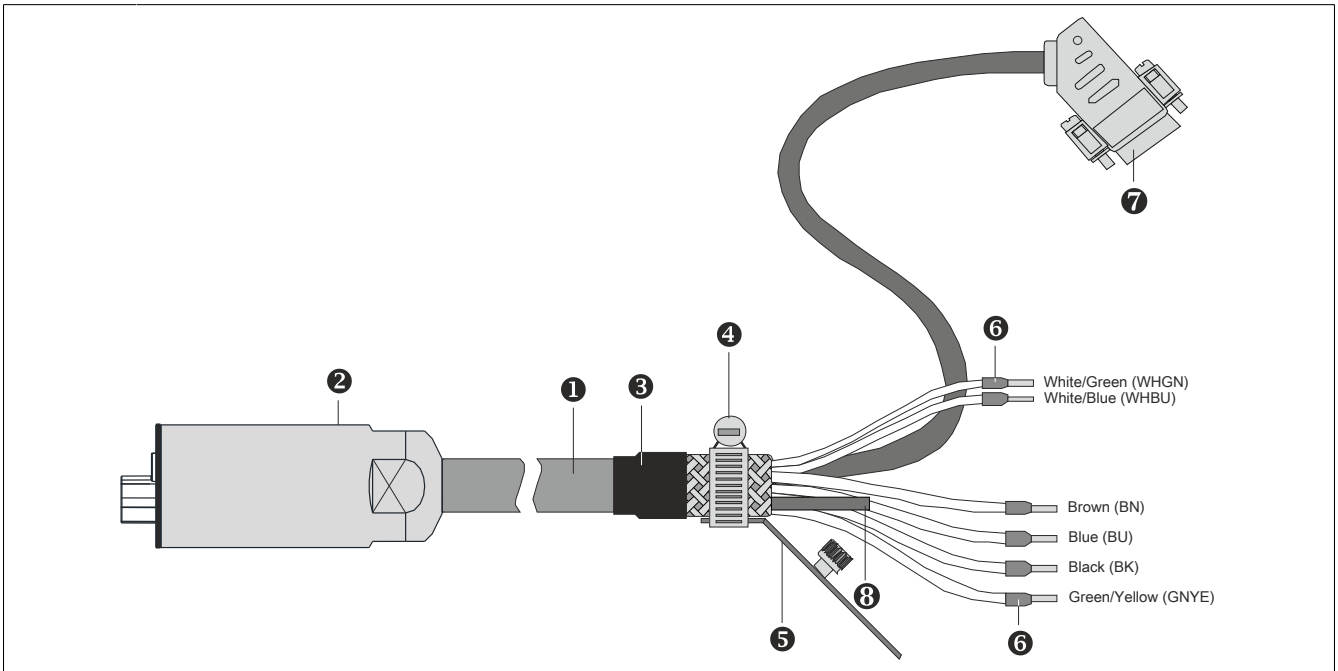
Model number	8BCH0007.5221A-0
Electrical characteristics [1]	
Test voltage	
Wire/Wire	4 kV
Wire/Shield	4 kV
Conductor resistance	
Power lines	≤8.2 Ω/km
Supply lines	≤84 Ω/km
Signal lines	0.75 mm²: ≤26 Ω/km, 0.15 mm²: ≤140 Ω/km
Insulation resistance	≤500 Ω*km
Current-carrying capacity per DIN VDE 0298 part 4, table 11	
Wall mounting	31.9 A
Installed in conduit or cable duct	36.4 A
Installed in cable tray	38.2 A
Environmental conditions [1]	
Temperature	
Moving	-20°C to +150°C
Static	-20°C to +150°C
Mechanical characteristics [1]	
Dimensions	
Length	7 m
Diameter	12.7 mm ± 0.3 mm
Bend radius	
Single bend	>52 mm
Moving	≥104 mm
Weight	2.2 kg

Table 2: 8BCH0007.5221A-0 - Technical data

1) Values refer to the raw cable being used.

3 Wiring

3.1 Cable construction



Pos.	Description	Note
1	Hybrid cable	4x 2.5 mm² + 2x 0.75 mm² + (2x 0.24 mm² + 2x 2x 0.15 mm²) + PA6 hose
2	13-pin stainless steel circular connector	
3	Self-adhesive heat shrink tubing	
4	Cable clamp	
5	Shield mounting	
6	Wire end sleeves	
7	DSUB housing	
8	PA6 tube (length: 3 cm)	

Table 3: 2.5 mm² food-grade hybrid motor cables - Cable construction

3.2 Pinout

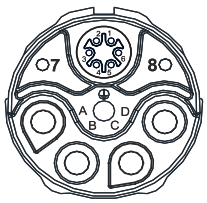
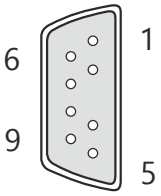
Circular connector	Pin	Description	Function	Pin	DSUB connector
	6	T\	Clock output inverted	9	
	1	U+	Encoder power supply +12 V	1	
	2	COM	Encoder power supply 0 V	6	
	3	D	Data	4	
	4	D\	Data inverted	8	
	5	T	Clock output	5	
	7	B-	Brake 0 V	-	
	8	B+	Brake +24 V	-	
	A	U	Motor connection U	-	
	B	V	Motor connection V	-	
	C	W	Motor connection W	-	
	D	-	-	-	
	⏚	PE	Protective ground conductor	-	

Table 4: 2.5 mm² food-grade hybrid motor cables - Pinout

3.3 Cable diagram

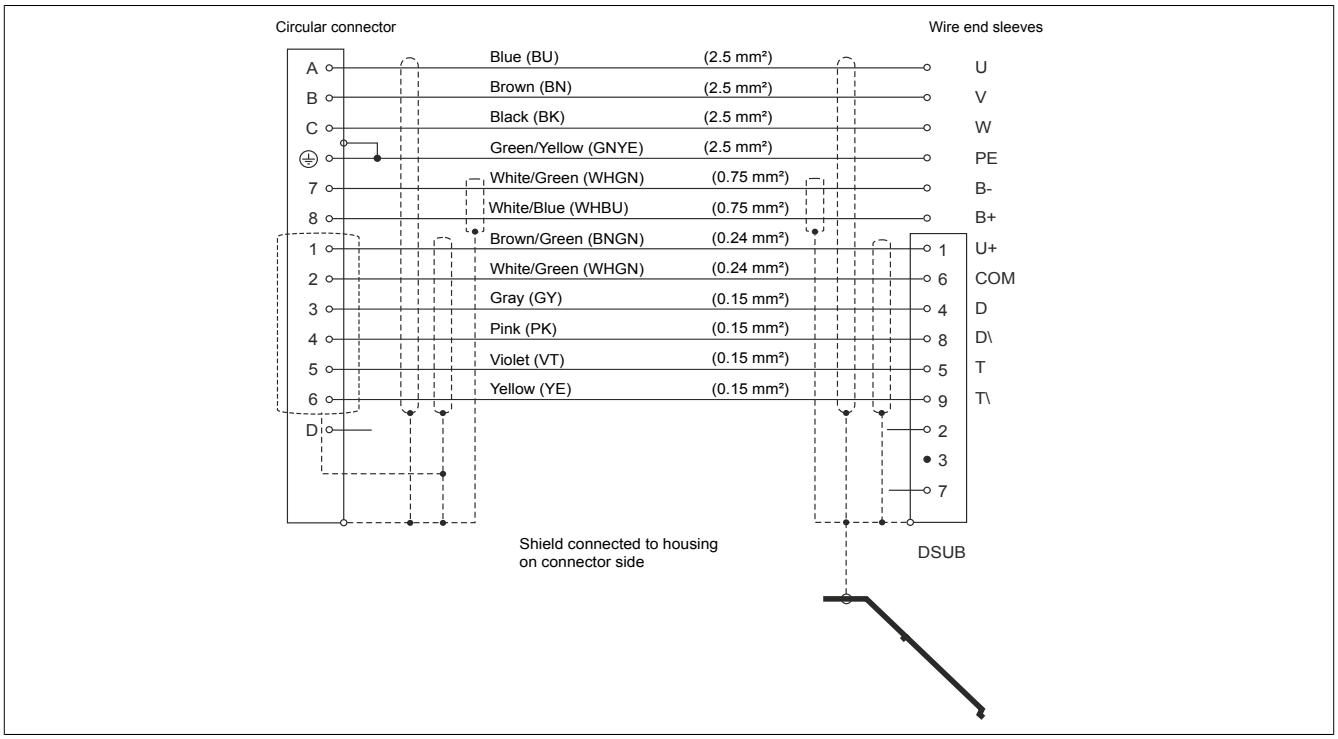


Figure 1: 2.5 mm² food-grade hybrid motor cables - Cable diagram