

# 8BCM0014.1312A-0

## 1 General information

- Can be used in cable drag chains
- Assembled specifically for use with ACOPOSmulti drive systems and B&R servo motors with motor connector size 1
- speedtec - Innovative connector system for secure connections
- Integrated shield plate

### Information:

A shield plate is attached to ACOPOSmulti 8BCM motor cables. If this shield plate is correctly installed on the respective ACOPOSmulti 8BVI inverter module, no additional shielding measures are necessary.

## 2 Order data

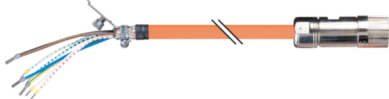
| Order number     | Short description                                                                                                                                                                                                     | Figure                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                  | <b>4 mm<sup>2</sup> motor cables</b>                                                                                                                                                                                  |                                                                                     |
| 8BCM0014.1312A-0 | ACOPOSmulti motor cable, length 14 m, 4x 4 mm <sup>2</sup> + 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup> , 8-pin female speedtec motor connector size 1, integrated shield plate, can be used in cable drag chains |  |

Table 1: 8BCM0014.1312A-0 - Order data

## 3 Technical data

| Order number               | 8BCM0014.1312A-0                                                                                                        |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>General information</b> |                                                                                                                         |
| Cable cross section        | 4 x 4.0 mm <sup>2</sup> + 2 x 0.75 mm <sup>2</sup> + 2 x 1.0 mm <sup>2</sup>                                            |
| Durability                 | Oil resistance per HD 22.10 appendix A and DIN EN 60811-404 <sup>1)</sup>                                               |
| Certification              | UL AWM style 20234, 80°C, 1000 V, E63216 and CSA AWM I/II A/B, 90°C, 1000 V, FT2 LL46064                                |
| Certifications             |                                                                                                                         |
| CE                         | Yes                                                                                                                     |
| UKCA                       | Yes                                                                                                                     |
| UL                         | cULus E225616                                                                                                           |
| EAC                        | Power conversion equipment                                                                                              |
|                            | Yes                                                                                                                     |
| <b>Cable construction</b>  |                                                                                                                         |
| Power lines                |                                                                                                                         |
| Quantity                   | 4                                                                                                                       |
| Wire insulation            | PP                                                                                                                      |
| Wire colors                | Black, brown, blue, yellow/green                                                                                        |
| Variant                    | Tinned copper stranded wire                                                                                             |
| Cross section              | 4 mm <sup>2</sup>                                                                                                       |
| 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 mm <sup>2</sup> + 2 x 1.0 mm <sup>2</sup>                                                                      |
| 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                   | BERNECKER + RAINER 4x4,0+2x2x1,0 FLEX UL AWM STYLE 20234<br>80°C 1000 V E63216 CSA AWM I/II A/B 90°C 1000 V FT2 LL46064 |

Table 2: 8BCM0014.1312A-0 - Technical data

| Order number                                                | 8BCM0014.1312A-0                                                    |
|-------------------------------------------------------------|---------------------------------------------------------------------|
| Connector                                                   |                                                                     |
| Type                                                        | 8-pin female speedtec motor connector, size 1                       |
| Mating cycles                                               | <500                                                                |
| Contacts                                                    | 8 (4 power and 4 signal contacts)                                   |
| Degree of protection per EN 60529                           | IP66/67 when connected                                              |
| Electrical properties <sup>1)</sup>                         |                                                                     |
| Operating voltage                                           | Max. 1000 VAC (UL)                                                  |
| Test voltage                                                |                                                                     |
| Wire - Wire                                                 | 4 kV                                                                |
| Wire - Shield                                               | 4 kV                                                                |
| Conductor resistance                                        |                                                                     |
| Power lines                                                 | ≤5.1 Ω/km                                                           |
| Signal line                                                 | 0.75 mm <sup>2</sup> : ≤26.7 Ω/km, 1 mm <sup>2</sup> : ≤20 Ω/km     |
| Insulation resistance                                       | ≥500 MΩ*km                                                          |
| Current-carrying capacity per DIN VDE 0298 part 4, table 11 |                                                                     |
| Wall mounting                                               | 30 A <sup>2)</sup>                                                  |
| Installed in conduit or cable duct                          | 30 A <sup>2)</sup>                                                  |
| Installed in cable tray                                     | 30 A <sup>2)</sup>                                                  |
| Ambient conditions <sup>1)</sup>                            |                                                                     |
| Temperature                                                 |                                                                     |
| Moving                                                      | -20°C to +80°C                                                      |
| Static                                                      | -20°C to +90°C                                                      |
| Mechanical properties <sup>1)</sup>                         |                                                                     |
| Dimensions                                                  |                                                                     |
| Length                                                      | 14 m                                                                |
| Diameter                                                    | 15.4 mm ±0.4 mm                                                     |
| Bend radius                                                 |                                                                     |
| Single bend                                                 | >48 mm                                                              |
| Moving                                                      | >119 mm                                                             |
| Drag chain data                                             |                                                                     |
| Acceleration                                                | Max. 50 m/s <sup>2</sup> (depends on the length of the travel path) |
| Flex cycles <sup>3)</sup>                                   | ≥5,000,000                                                          |
| Velocity                                                    | Max. 300 m/min                                                      |
| Weight                                                      | 3.9 kg                                                              |

Table 2: 8BCM0014.1312A-0 - 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 0.75 mm<sup>2</sup> - 4 mm<sup>2</sup> motor cables

### Construction

| Pos. | Description                     | Note                                                                                                                                                                                                                                          |
|------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Motor line                      | 4x 0.75 mm <sup>2</sup> + 2x 2x 0.34 mm <sup>2</sup> (8BCMxxxx.x011A-0)<br>4x 1.5 mm <sup>2</sup> + 2x 2x 0.75 mm <sup>2</sup> (8BCMxxxx.1111A-0)<br>4x 4 mm <sup>2</sup> + 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup> (8BCMxxxx.1312A-0) |
| 2    | 8-pin female circular connector | Dimensions: ø 28 x 78 mm                                                                                                                                                                                                                      |
| 3    | Heat shrink tubing              |                                                                                                                                                                                                                                               |
| 4    | Wire end sleeves                |                                                                                                                                                                                                                                               |
| 5    | Cable clamp                     |                                                                                                                                                                                                                                               |
| 6    | Shield plate                    |                                                                                                                                                                                                                                               |

Table 3: 0.75 mm<sup>2</sup> - 4 mm<sup>2</sup> motor cables - Construction

Pinout

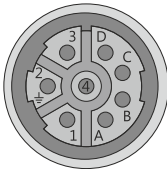
| Circular connector                                                                | Pin | Description | Function                    |
|-----------------------------------------------------------------------------------|-----|-------------|-----------------------------|
|  | 1   | U           | Motor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

Table 4: 0.75 mm² - 4 mm² motor cables - Pinout

Cable diagram

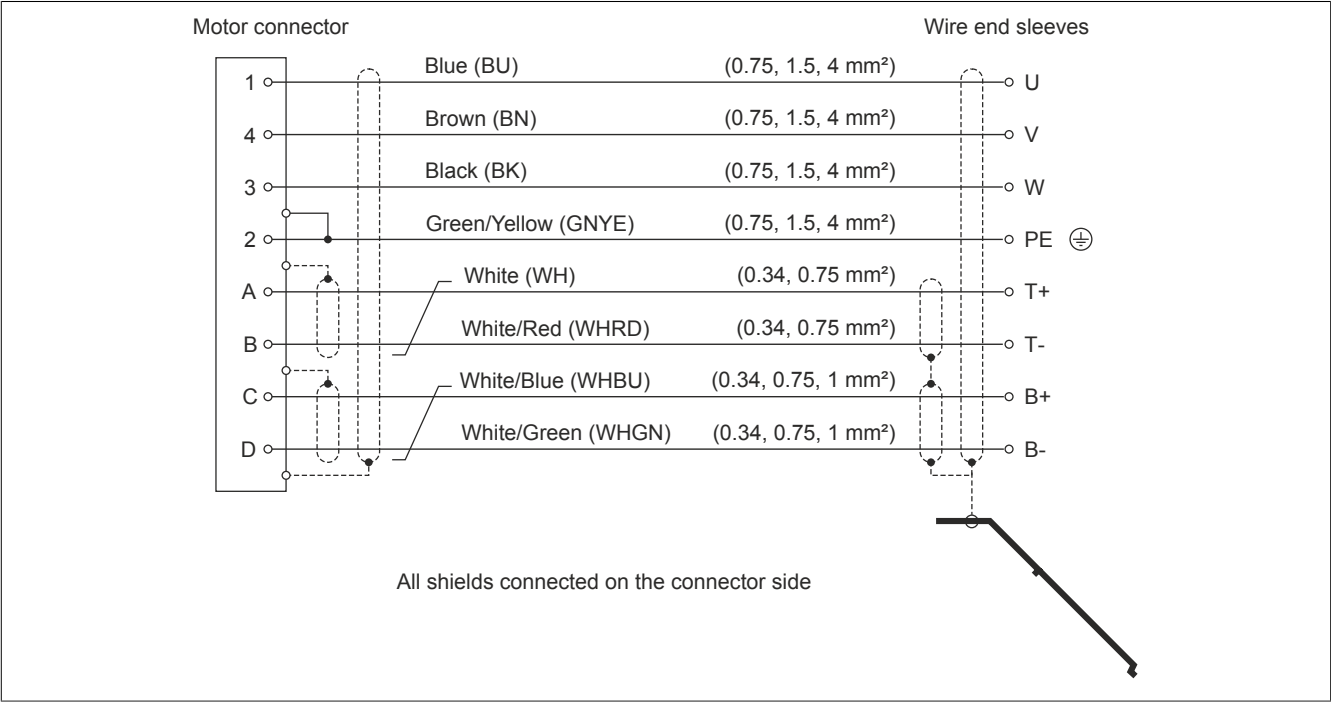


Figure 1: 0.75 mm² - 4 mm² motor cables - Cable diagram