

# 8BCM0005.13140-0

## 1 General information

- Can be used in cable drag chains
- Assembled specifically for 8BCMxxxx.1312A-0 motor cables
- speedtec - Innovative connector system for secure connections

## 2 Order data

| Model number     | Short description                                                                                                                                                            | Figure                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 8BCM0005.13140-0 | <b>Motor cables 4 mm<sup>2</sup></b><br>Cable extension for 4 mm <sup>2</sup> motor cables with speedtec or standard connector, length 5 m, can be used in cable drag chains |  |

Table 1: 8BCM0005.13140-0 - Order data

## 3 Technical data

| Model number                               | 8BCM0005.13140-0                                                                                          |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>General information</b>                 |                                                                                                           |
| Cable cross section                        | 4x 4 mm <sup>2</sup> + 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup>                                     |
| Durability                                 | Oil resistance per HD 22.10 appendix A and DIN EN 60811-404 <sup>1)</sup>                                 |
| Certification                              | E170315 cRUus AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 <sup>1)</sup>                                  |
| Certifications                             |                                                                                                           |
| CE                                         | 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                              | 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup>                                                            |
| Shield                                     | Separate shielding for 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 <sup>1)</sup> |
| <b>Connector</b>                           |                                                                                                           |
| Type                                       | 8-pin female speedtec motor connector                                                                     |
| Mating cycles                              | <500                                                                                                      |
| Contacts                                   | 8 (4 power and 4 signal contacts)                                                                         |
| Additional connectors                      | 8-pin male coupling                                                                                       |
|                                            | Connection cycles: <500                                                                                   |
|                                            | Contacts: 8                                                                                               |
|                                            | Degree of protection per EN 60529: IP66/67 when connected                                                 |
| Degree of protection per EN 60529          | IP66/67 when connected                                                                                    |
| <b>Electrical properties <sup>1)</sup></b> |                                                                                                           |
| Operating voltage                          | Max. 1000 V AC (UL)                                                                                       |

Table 2: 8BCM0005.13140-0 - Technical data

| Model number                                                | 8BCM0005.13140-0                                                    |
|-------------------------------------------------------------|---------------------------------------------------------------------|
| 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>                                                  |
| <b>Ambient conditions <sup>1)</sup></b>                     |                                                                     |
| Temperature                                                 |                                                                     |
| Moving                                                      | -20°C to +80°C                                                      |
| Static                                                      | -20°C to +90°C                                                      |
| <b>Mechanical properties <sup>1)</sup></b>                  |                                                                     |
| Dimensions                                                  |                                                                     |
| Length                                                      | 5 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                                                      | 1.4 kg                                                              |

Table 2: 8BCM0005.13140-0 - 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 Wiring

### 4.1 Cable construction

#### Construction

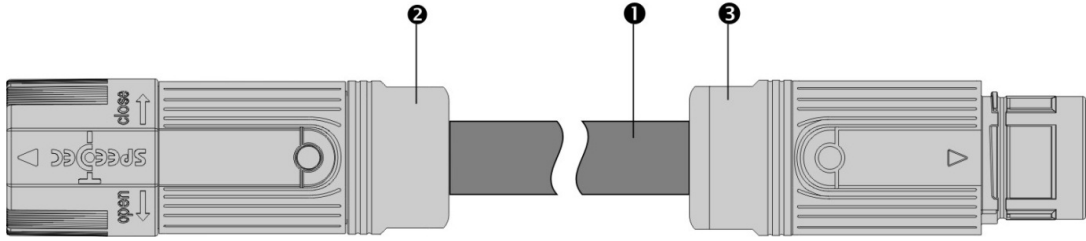
|  |                                 |                                                                                                                                                                  |
|--------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pos.                                                                                 | Description                     | Note                                                                                                                                                             |
| 1                                                                                    | Motor line                      | 4x 1.5 mm <sup>2</sup> + 2x 2x 0.75 mm <sup>2</sup> (8BCMxxx.11140-0)<br>4x 4 mm <sup>2</sup> + 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup> (8BCMxxx.13140-0) |
| 2                                                                                    | 8-pin female circular connector |                                                                                                                                                                  |
| 3                                                                                    | 8-pin male coupling             |                                                                                                                                                                  |

Table 3: Cable construction

4.2 Pinout

Pinout

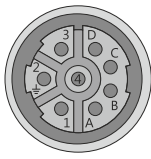
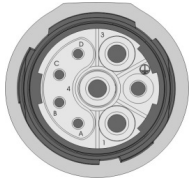
| Circular connector                                                                | Pin | Description | Function                    | Coupling                                                                            |
|-----------------------------------------------------------------------------------|-----|-------------|-----------------------------|-------------------------------------------------------------------------------------|
|  | 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: Pinout

4.3 Cable diagram

Cable diagram

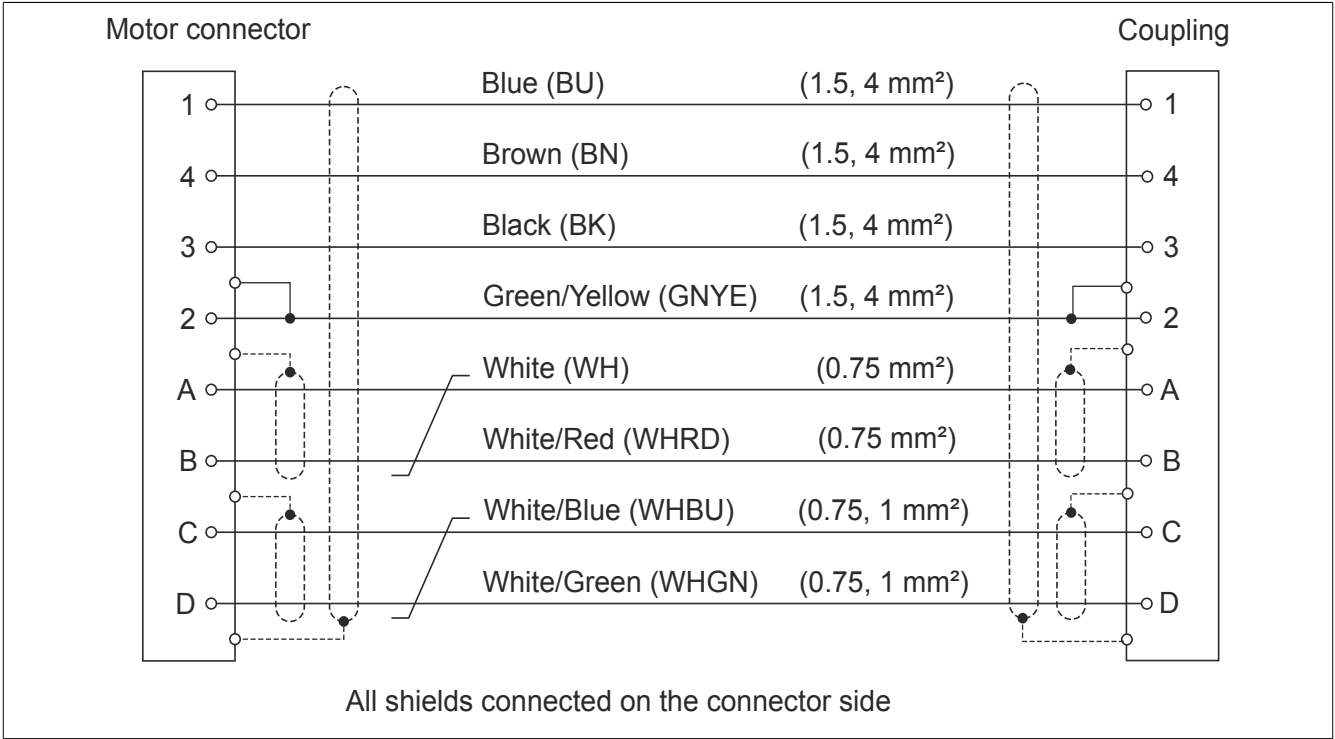


Figure 1: Motor cables - Cable diagram