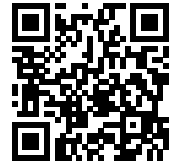
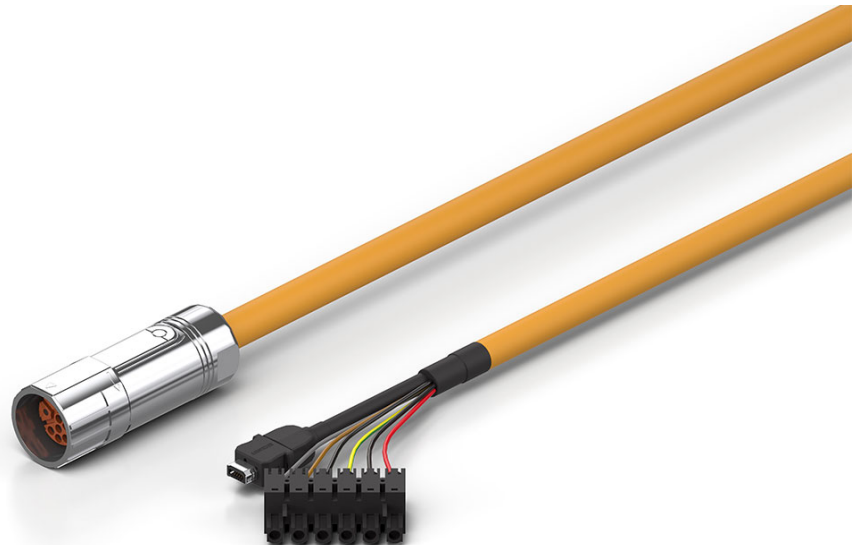


# ZK4100-8101-2xxx | Motor connection cable 0.75 mm<sup>2</sup> with M23 speedtec<sup>®</sup> plug, fixed installation



M23, plug, straight, female, Power: 3+PE, Signal: 5 – ix Industrial<sup>™</sup>, plug, straight, male, 10-pin, Type A – Pitch dimension 7.62 mm, plug, straight, female, 6-pin



## Plugs

| Electrical data                    | Head A      | Head B          | Head D                      |
|------------------------------------|-------------|-----------------|-----------------------------|
| Rated voltage                      | -           | 50 V AC/60 V DC | -                           |
| Rated voltage (power)              | 630 V AC/DC | -               | 600 V (accordig to UL 1059) |
| Rated voltage (signal/24V)         | 250 V AC/DC | -               | -                           |
| Rated current (power)              | 30 A max.   | -               | 20 A DC                     |
| Test voltage                       | -           | 500 V           | -                           |
| Rated current                      | -           | 1.5 A           | -                           |
| Rated current (signal/24V)         | 7 A max.    | -               | -                           |
| Rated impulse voltage (power)      | 6.0 kV      | -               | 6.0 kV                      |
| Rated impulse voltage (signal/24V) | 2.5 kV      | -               | -                           |
| Shielding                          | -           | yes             | -                           |

|                                       |                                  |                                                          |                                      |
|---------------------------------------|----------------------------------|----------------------------------------------------------|--------------------------------------|
| Contact resistance                    | < 5 mΩ (signal), < 3 mΩ (power)  | < 30 mΩ                                                  | < 5 mΩ                               |
| Insulation resistance                 | -                                | ≥ 500 MΩ/km                                              | ≥ 100 MΩ (according to IEC 60512)    |
| Insulation group                      | -                                | -                                                        | IIIa                                 |
| Transmission characteristics          | -                                | Cat.6 Class EA up to 500 MHz, 10/100 Mbit/s, 1/10 Gbit/s | -                                    |
| <b>Mechanical data</b>                |                                  |                                                          |                                      |
| Accessories type                      | Connectors                       | -                                                        | Connectors                           |
| Installation size                     | M23                              | ix Industrial™                                           | Pitch dimension 7.62 mm              |
| Connector type                        | plug                             | plug                                                     | plug                                 |
| Configuration                         | straight                         | straight                                                 | straight                             |
| Contact type                          | female                           | male                                                     | female                               |
| Number of positions (face)            | Power: 3+PE, Signal: 5           | 10-pin                                                   | 6-pin                                |
| Coding                                | -                                | Type A                                                   | -                                    |
| Wire termination                      | crimp connection                 | IDC                                                      | Push-in                              |
| Recommended torque, screw termination | -                                | -                                                        | 0.5...0.6 Nm                         |
| Mating cycles                         | 500                              | ≥ 5000                                                   | 25                                   |
| Insertion force                       | -                                | -                                                        | 8 N/pol                              |
| Way of locking                        | Speedtec®                        | push-pull                                                | locking pin                          |
| Weight                                | 0.143 kg (0.3153 lb)             | -                                                        | 0.015 kg (0.0322 lb)                 |
| Body color                            | metal                            | black                                                    | black, similar to RAL 9011           |
| Body material                         | zinc diecast/nickel plated       | Polycarbonate resin                                      | -                                    |
| Seal                                  | FKM                              | -                                                        | -                                    |
| Clamp ring                            | brass/nickel plated              | -                                                        | -                                    |
| Contact carrier color                 | -                                | -                                                        | black                                |
| Contact carrier material              | PA 6.6 mod., UL 94 V-0           | -                                                        | PBT, UL 94 V-0                       |
| Contact plating                       | -                                | Au                                                       | tinned                               |
| Contact material                      | brass/gold plated                | copper alloy                                             | copper alloy                         |
| Max. wire cross-section               | -                                | AWG24...AWG22 (0.25mm²...0.34mm²)                        | AWG20 ... AWG12 (0.5 mm²...2.50 mm²) |
| Stripping length                      | -                                | -                                                        | 10 mm + 0,5 mm                       |
| Max. cable outer diameter             | -                                | 6.0...7.2 mm                                             | -                                    |
| <b>Environmental data</b>             |                                  |                                                          |                                      |
| Special features                      | Max. height for operation 2000 m | -                                                        | -                                    |
| RoHS compliant                        | -                                | yes                                                      | yes                                  |

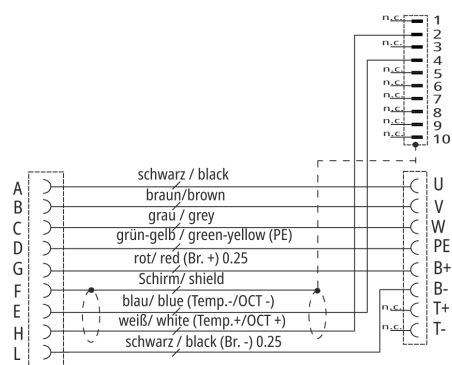
|                                 |                                                 |                                                          |                            |
|---------------------------------|-------------------------------------------------|----------------------------------------------------------|----------------------------|
| Ambient temperature (operation) | -20...+130°C, -4...+266°F                       | -                                                        | -50...+100°C, -58...+212°F |
| Protection rating               | IP66/67 in screwed condition                    | IP20                                                     | IP20                       |
| Pollution level                 | 3 (according to VDE 0110/EN61984 part 6.19.2.2) | -                                                        | 3                          |
| Approvals                       | -                                               | UL 1977 ECBT2.E102079, CSA-C22.2 No. 182.3 ECBT8.E102079 | -                          |
| UL                              | yes, UL E-file number: E247738                  | yes                                                      | yes                        |
| Overvoltage category            | 3 (according to VDE 0110/EN61984 part 6.19.2.2) | -                                                        | 3                          |

## Cable

| Electrical data                         |                                                                                                                                    |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage                       | ≤ 600 V                                                                                                                            |
| Insulation resistance                   | 10 MΩ * km                                                                                                                         |
| Wire resistance (power)                 | ≤ 26.0 Ω/km (DIN EN 50395)                                                                                                         |
| Wire resistance (signal/24V)            | ≤ 87.0 Ω/km (DIN EN 50395)                                                                                                         |
| Wire resistance (brake)                 | ≤ 80.0 Ω/km (DIN EN 50395)                                                                                                         |
| Characteristic impedance                | 100 Ω (100 MHz)                                                                                                                    |
| Dielectric strength wire/wire           | 3 kV                                                                                                                               |
| Dielectric strength wire/shield         | 2 kV                                                                                                                               |
| Mechanical data                         |                                                                                                                                    |
| Cross-section                           | 4 x 0.75 mm <sup>2</sup> + 2 x 0.25 mm <sup>2</sup> + (2 x AWG24)                                                                  |
| Cross-section (power)                   | 0.75 mm <sup>2</sup> (approx. AWG18)                                                                                               |
| Outer cable diameter                    | 8.3 ± 0.3 mm                                                                                                                       |
| Min. bending radius, moved              | 10 x outer cable diameter                                                                                                          |
| Min. bending radius, fixed installation | 5 x outer cable diameter                                                                                                           |
| Conductor material                      | copper bare                                                                                                                        |
| Use                                     | fixed installation                                                                                                                 |
| UL-Style                                | cULus AWM Style 2570 80°C 600V                                                                                                     |
| Jacket color                            | orange                                                                                                                             |
| Material jacket                         | PVC (polyvinyl chloride)                                                                                                           |
| Wire color code                         | power: black, brown, gray, green/yellow brake: black, red signal: white, blue                                                      |
| Wire insulation material                | PVC (polyvinyl chloride)                                                                                                           |
| Printing on the jacket                  | Beckhoff Automation GmbH & Co. KG - D - Verl - 4G0.75 + 2x0.25 + (2xAWG24)/D E63216 (UL) AWM Style 2570 80°C 600V XX/JJ - Desina - |

|                                        |                               |
|----------------------------------------|-------------------------------|
| Printing color                         | black                         |
| <b>Environmental data</b>              |                               |
| Operation temperature range, moved     | -20...+80°C, -4...+176°F      |
| Ambient temperature, transport/storage | -40...+80°C, -40...+176°F     |
| Halogen-free                           | no                            |
| RoHS compliant                         | yes                           |
| UL                                     | yes, UL E-file number: E63216 |
| Approvals                              | UL-Style AWM 2570 80°C 600V   |

## Pin assignment



## Dimensions



|    |          |
|----|----------|
| A1 | 79.00 mm |
| A2 | 28.00 mm |
| B1 | 30.00 mm |
| B2 | 17.00 mm |

## Notes

- Depending on the cable length (L), the following length tolerances apply:  $\pm 2\text{-}3\%$

- Illustrations similar
- The last three digits of the ordering information is the cable length in decimeters, e.g. ZK4xxx-xxxx-x020 = cable length 2.00 m

| CE, UL |     |
|--------|-----|
| CE     | yes |
| UL     | no  |

| Ordering information | Length  |
|----------------------|---------|
| ZK4100-8101-2005     | 0.50 m  |
| ZK4100-8101-2010     | 1.00 m  |
| ZK4100-8101-2030     | 3.00 m  |
| ZK4100-8101-2050     | 5.00 m  |
| ZK4100-8101-2100     | 10.00 m |
| ZK4100-8101-2250     | 25.00 m |



Products marked with a crossed-out wheeled bin shall not be discarded with the normal waste stream. The device is considered as waste electrical and electronic equipment. The national regulations for the disposal of waste electrical and electronic equipment must be observed.

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