# ZK4701-0421-2xxx | Motor extension cable 0.75 mm² with itec® plug for motors with OCT, drag-chain suitable

## itec® (Series 915), plug, straight, female, Power: 3+PE, Signal: 5 – itec® (Series 915), socket, straight, male, Power: 3+PE, Signal: 5



## Plugs

| Electrical data | Head A | Head B |
|---|---|---|
| Rated voltage (power) | 630 V AC/DC | 630 V AC/DC |
| Rated voltage (signal/24V) | 63 V AC/DC | 63 V AC/DC |
| Rated current (power) | 14 A | 14 A |
| Rated current (signal/24V) | 3.6 A | 3.6 A |
| Rated impulse voltage (power) | 6.0 kV | 6.0 kV |
| Rated impulse voltage (signal/24V) | 1.5 kV | 1.5 kV |
| Contact resistance | < 5 mΩ | < 5 mΩ |
| **Mechanical data** | | |
| Accessories type | Connectors | Connectors |
| Installation size | itec® (Series 915) | itec® (Series 915) |
| Connector type | plug | socket |
| Configuration | straight | straight |

| | | |
|---|---|---|
| Contact type | female | male |
| Number of positions (face) | Power: 3+PE, Signal: 5 | Power: 3+PE, Signal: 5 |
| Wire termination | crimp connection | crimp connection |
| Mating cycles | 500 | 500 |
| Way of locking | bayonet | bayonet |
| Weight | 0.035 kg (0.0772 lb) | 0.035 kg (0.0772 lb) |
| Body color | black, similar to RAL 9011 | - |
| Body material | zinc diecast/plastic | zinc diecast/plastic |
| Seal | FKM | FKM |
| Clamp ring | brass/nickel plated | brass/nickel plated |
| Contact carrier material | PBT, PA, UL 94 V-0 | PBT, PA, UL 94 V-0 |
| Contact material | brass/gold plated | brass/gold plated |
| Max. wire cross-section | - | AWG16 (1.5 $mm^2$) |
| Max. cable outer diameter | - | 10.5...12.0 mm |
| **Environmental data** | | |
| Special features | Max. height for operation 2000 m | Max. height for operation 2000 m |
| Shock resistance | 30 g (conforms to EN 60060-2-27), 11 ms; 18 shocks per direction, 3 axes | 30 g (conforms to EN 60060-2-27), 11 ms; 18 shocks per direction, 3 axes |
| Vibration resistance | 10 g (conforms to EN 60068-2-27), 50 Hz...2000 Hz; 1 Octave/min.; 10 cycles per axis | 10 g (conforms to EN 60068-2-27), 50 Hz...2000 Hz; 1 Octave/min.; 10 cycles per axis |
| Ambient temperature (operation) | -20...+130°C, -4...+266°F | -20...+130°C, -4...+266°F |
| Protection rating | IP66/67 in screwed condition | IP66/67 in screwed condition |
| Pollution level | 3 (according to VDE 0110/EN61984 part 6.19.2.2) | 3 (according to VDE 0110/EN61984 part 6.19.2.2) |
| UL | yes, UL E-file number: E247738 | - |
| Overvoltage category | 3 (according to VDE 0110/EN61984 part 6.19.2.2) | 3 (according to VDE 0110/EN61984 part 6.19.2.2) |

## Cable

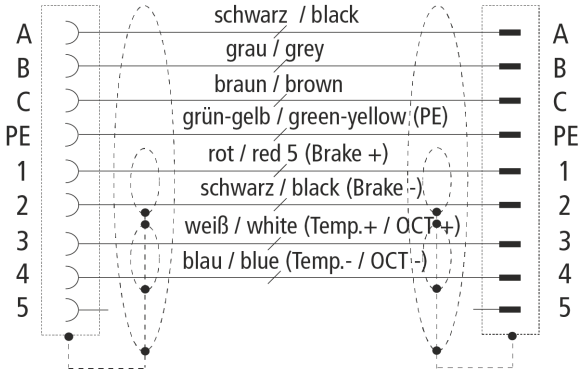
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|---|---|
| **Electrical data** | |
| Rated voltage | ≤ 300 V |
| Operating voltage | max. 300 V AC (UL), Uo/U 300/500 V (VDE) |
| Insulation resistance | ≥ 500 MΩ * km (DIN EN 50395) |
| Mutual capacitance | Signal: 45 ± 15 pF/m, Power: 90 pF/m (at 800 Hz according to EN 50289-1-5) |
| Wire resistance (power) | ≤ 26.0 Ω/km (DIN EN 50395) |
| Wire resistance (signal/24V) | ≤ 55.0 Ω/km (DIN EN 50395) |
| Wire resistance (brake) | ≤ 55.0 Ω/km (DIN EN 50395) |

| | |
|---|---|
| Characteristic impedance | Signal: 110 Ω ± 10 Ω (10 MHz) acc. to EN50289-1-11 |
| Dielectric strength wire/wire (power) | 2 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) |
| Dielectric strength wire/shield (power) | 2 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) |
| Dielectric strength wire/wire (signal/24V) | 2 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) |
| Dielectric strength wire/shield (signal/24V) | 2 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) |
| **Mechanical data** | |
| Cross-section (power) | 0.75 mm² (approx. AWG18) |
| Cross-section (signal) | AWG22 (approx. 0.34 mm²) |
| Cross-section (brake) | 0.34 mm² (AWG22) |
| Outer cable diameter | 11.0 mm ± 0.4 mm (0.433" ± 0.0157") |
| Min. bending radius, moved in drag-chain | 7 x outer cable diameter |
| Min. bending radius, fixed installation | 5 x outer cable diameter |
| Weight | 175.0 kg/km (117.583 lb/1000 ft) |
| Conductor material (signal/24V) | copper bare |
| Optical covering factor of shielding | ≥ 85% |
| Use | drag-chain suitable |
| Max. acceleration | 30 m/s² by 5 m travel distance<br>15 m/s² by 10 m travel distance<br>5 m/s² by 20 m travel distance |
| Max. speed | 4 m/s |
| Max. travel distance | 20 m (horizontal)<br>5 m (vertical) |
| Max. number of cycles | 5 million |
| Wall thickness of wire insulation (power) | 0.4 mm |
| Wall thickness of wire insulation (signal/24V) | 0.6 mm |
| Wall thickness of wire insulation (brake) | 0.33 mm |
| Wall thickness of jacket | 0.9 mm |
| Jacket color | orange |
| Material jacket | PUR (polyurethane) |
| Wire insulation material | PP (polypropylene) |
| Printing on the jacket | Beckhoff Automation GmbH & Co. KG - D - Verl - 4 G 0,75 + (2x0,34)/C + (2x22AWG)/C C E170315 cRUus AWM STYLE 20233 AWM I/II A/B 80°C 300V FT1 XX/YY - DESINA –<br>XX/YY = week of production / year of production |
| Printing color | black |
| Torsion angle in °/m | max. ± 30 °/m |
| Max. tensile load, dynamic | 20 N/mm² |

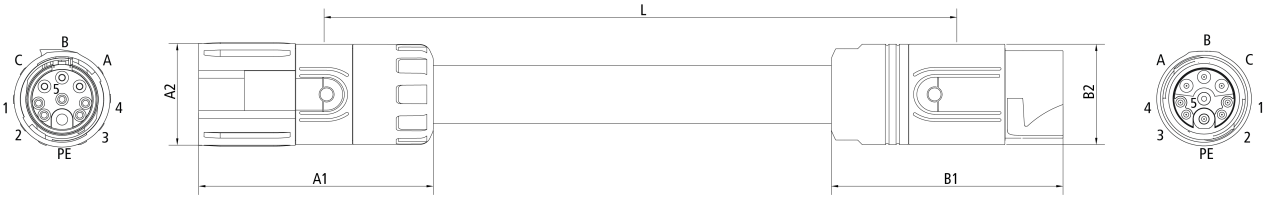
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|---|---|
| Max. tensile load, static | 50 N/mm² |

| Environmental data | |
|---|---|
| Operation temperature range, moved | -20...+80°C, -4...+176°F. In drag-chain with mechanical strain: -20...+60°C, -4...+140°F |
| Operation temperature range, fixed installation | -40...+80°C, -40...+176°F |
| Oil resistance | according to DIN EN 60811-2-1, HD22.10 appendix A |
| Flame-retardant | according to IEC 60332-1-2 UL758 cable flame test |
| CFC-free | yes |
| Halogen-free | according to DIN VDE 0472 part 815 |
| Silicone-free | yes |
| RoHS compliant | yes |
| UL | yes, UL E-file number: E170315 |
| Approvals | UL758 (AWM) Style 20233 (jacket) and Style 10493 (core) |

## Pin assignment




## Dimensions




| | |
|---|---|
| A1 | 44.00 mm |
| A2 | 19.00 mm |
| B1 | 44.00 mm |
| B2 | 19.00 mm |

# Notes

- Illustrations similar

| Ordering information | Length |
|---|---|
| ZK4701-0421-2002 | 0.20 m |
| ZK4701-0421-2003 | 0.30 m |
| ZK4701-0421-2005 | 0.50 m |
| ZK4701-0421-2008 | 0.80 m |
| ZK4701-0421-2010 | 1.00 m |
| ZK4701-0421-2012 | 1.20 m |
| ZK4701-0421-2015 | 1.50 m |
| ZK4701-0421-2016 | 1.60 m |
| ZK4701-0421-2020 | 2.00 m |
| ZK4701-0421-2022 | 2.20 m |
| ZK4701-0421-2025 | 2.50 m |
| ZK4701-0421-2027 | 2.70 m |
| ZK4701-0421-2030 | 3.00 m |
| ZK4701-0421-2040 | 4.00 m |
| ZK4701-0421-2045 | 4.50 m |
| ZK4701-0421-2050 | 5.00 m |
| ZK4701-0421-2055 | 5.50 m |
| ZK4701-0421-2060 | 6.00 m |
| ZK4701-0421-2062 | 6.20 m |
| ZK4701-0421-2065 | 6.50 m |
| ZK4701-0421-2067 | 6.70 m |
| ZK4701-0421-2070 | 7.00 m |
| ZK4701-0421-2075 | 7.50 m |
| ZK4701-0421-2080 | 8.00 m |
| ZK4701-0421-2090 | 9.00 m |
| ZK4701-0421-2095 | 9.50 m |
| ZK4701-0421-2100 | 10.00 m |
| ZK4701-0421-2110 | 11.00 m |
| ZK4701-0421-2120 | 12.00 m |
| ZK4701-0421-2130 | 13.00 m |
| ZK4701-0421-2140 | 14.00 m |
| ZK4701-0421-2150 | 15.00 m |
| ZK4701-0421-2160 | 16.00 m |
| ZK4701-0421-2170 | 17.00 m |
| ZK4701-0421-2180 | 18.00 m |
| ZK4701-0421-2190 | 19.00 m |

| | |
|---|---|
| ZK4701-0421-2200 | 20.00 m |

| Accessories | |
|---|---|
| ZS4000-2100 | metal flange for motor cable, Series 615/915 itec® and M23, to adjust the connector, including sealings |



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