

ZK7502-0700-Axxx | B12, ENP cable, PUR, 2 x 0.75 mm² + (1 x 4 x AWG22), drag chain suitable, key 2 (user-defined voltage)

B12, plug, straight, female+male, pins 2+4, EtherCAT-coded – open end

Plugs

| Electrical data | Head A | Head B |
|----------------------------------|--|----------|
| Rated voltage (Ethernet) | 60 V DC | - |
| Rated current (Ethernet) | 4 A at 40 °C | - |
| Rated voltage (power) | 60 V DC | - |
| Rated current (power) | 10 A at 60 °C | - |
| Rated current (power) | 10 A | - |
| Rated impulse voltage (power) | 1.5 kV | - |
| Rated impulse voltage (Ethernet) | 1.0 kV | - |
| Voltage proof (contact/contact) | 1.5 kV (power - Ethernet), 1.5 kV AC (power), 1.0 kV AC (Ethernet) | - |
| Shielding (Ethernet) | yes | - |
| Contact resistance | < 10 mΩ (signal), < 5 mΩ (power) | - |
| Insulation resistance | ≥ 100 MΩ (according to IEC 60512) | - |
| Mechanical data | | |
| Installation size | B12 | open end |
| Connector type | plug | - |
| Configuration | straight | - |
| Contact type | female+male | - |
| Number of positions (face) | pins 2+4 | - |
| Coding | EtherCAT-coded | - |
| Mechanical coding | key 2 (user-defined voltage) | - |
| Wire termination | crimp connection | - |
| Mating cycles | ≥ 100 | - |
| Way of locking | bayonet | - |
| Weight per piece | 0.050 kg (0.110 lb) | - |
| Body colour | black | - |
| Body material | TPU, UL 94 HB | - |

| | | |
|-----------------------------------|--|---|
| Coupling nut material | GD-Zn, Ni | - |
| Seal | NBR | - |
| Contact carrier material | PA, UL 94 | - |
| Contact carrier colour (Ethernet) | yellow | - |
| Contact carrier colour (power) | red | - |
| Contact plating | Au over Ni | - |
| Contact material | copper alloy | - |
| Environmental data | | |
| Shock resistance | 50 g (490 m/s ²) conforms to IEC 60512-6c, 11 ms; 18 shocks per direction, 3 axes | - |
| Vibration resistance | 5 g (50 m/s ²) conforms to IEC 60512-6d, 10 Hz. ... 500 Hz.; 10 cycles per axis; 6 h full duration | - |
| RoHS compliant | yes | - |
| Ambient temperature (operation) | -30...+80 °C, -22...+176 °F | - |
| Protection class | IP 65/67 in screwed condition (according to IEC 60529) | - |
| Pollution level | 3/2 (according to IEC 60664-1) | - |

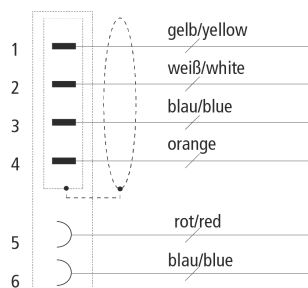
Cable

| | | |
|---|---|--|
| Electrical data | | |
| Operating voltage | ≤ 1000 V AC | |
| Attenuation of shielding | 0,01 - 4 MHz ≤ 20 mΩ/m 10 MHz ≤ 50 mΩ/m 30 MHz ≤ 150 mΩ/m | |
| Insulation resistance | ≥ 500 MΩ * km (DIN EN 50395) | |
| Mutual capacitance | AWG 22: 50 ± 15 pF/m at 800 Hz according to EN 50289-1-5 | |
| Wire resistance (power) | ≤ 26,0 Ω/km (DIN EN 50395) | |
| Wire resistance (Ethernet) | ≤ 55,0 Ω/km (DIN EN 50395) | |
| Characteristic impedance (Ethernet) | 100 Ω ± 5 Ω (100 MHz) (EN 50289-1-11) | |
| Dielectric strength wire/wire (power) | 4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) | |
| Dielectric strength wire/shield (power) | 4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C) | |
| Dielectric strength wire/wire (Ethernet) | 2 kV (50 Hz, 1 min) | |
| Dielectric strength wire/shield (Ethernet) | 2 kV (50 Hz, 1 min) | |
| Mechanical data | | |
| Cable structure (Ethernet) | star quad | |
| Conductor construction (Ethernet) | 7-strand | |
| Cross section (power) | 2 x 0.75 mm ² (approx. AWG18) | |
| Cross section (Ethernet) | 1 x 4 x 0.34 mm ² (AWG 22) | |
| Min. bending radius, moved | 7 x outer cable diameter | |
| Min. bending radius, fixed installation | 4 x outer cable diameter | |
| Weight | 110 kg/km (73.9 lb/1000 ft) | |
| Outer cable diameter | 9.0 mm ± 0.2 mm (0.3543" ± 0.0079") | |
| Conductor material (power) | copper bare, Class 6 according to DIN EN 60228 | |
| Conductor material (Ethernet) | bare copper | |
| Shielding | braiding of tinned copper wires, metallised plastic fleece, aluminium-clad foil | |
| Optical covering factor of shielding (Ethernet) | ≥ 85 % | |
| Optical covering factor of shielding (total) | no | |
| Use | drag-chain suitable | |
| UL-Style Conductor | UL758 (AWM) Style 21223 (jacket) and Style 10492 (core) | |
| Max. acceleration | 30 m/s ² by 5 m travel distance 15 m/s ² by 10 m travel distance 5 m/s ² by 20 m travel distance | |
| Max. speed | 4 m/s | |
| Max. travel distance | 20 m (horizontal) 5 m (vertical) | |
| Max. number of cycles | 3 million | |
| Wall thickness of wire insulation (power) | 0.4 mm | |

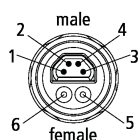
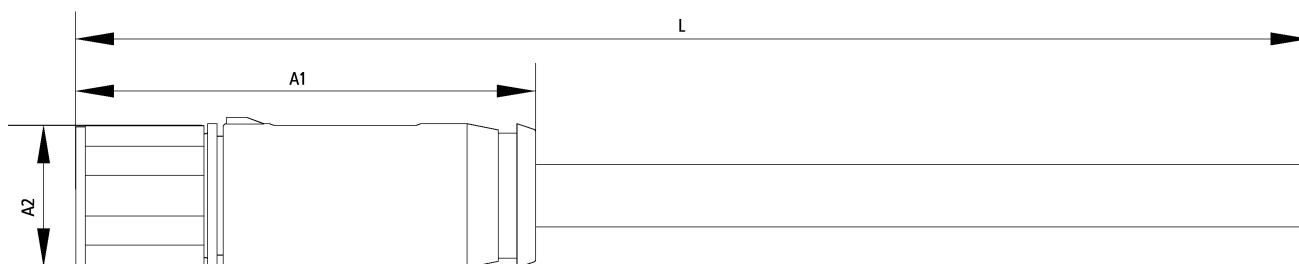
| | |
|---|--|
| Wall thickness of wire insulation (Ethernet) | 0.38 mm |
| Jacket colour | black (similar to RAL 9005) with yellow stripe (similar to RAL 1003) |
| Material jacket | PUR (polyurethane) |
| Wire colour code | white, yellow, blue, orange power: red, blue |
| Wire insulation material | PP (polypropylene) |
| Printing on the jacket | "length in meters" Beckhoff Automation GmbH & Co. KG - Germany - EtherCATp 2 x x0,75 + (4xAWG22)/C E-number cRUus AWM21223 AWM A/B 80 °C 1000V FT1 XX/YY RoHS production month/production year |
| Printing colour | white |
| Torsion angle in °/m | max. ± 30 °/m |
| Environmental data | |
| Operation temperature range, moved | -30...+80 °C, -22...+176 °F, in drag-chain applications: -20...+60 °C, -4...+140 °F |
| Operation temperature range, fixed installation | -40...+80 °C, -40...+176 °F |
| UV resistance | yes |
| Oil resistance | according to DIN EN 60811-404 |
| Flame-retardant | according to IEC 60332-1-2 |
| CFC-free | yes |
| Halogen-free | DIN VDE 0472 part 815 |
| Silicone-free | yes |
| Approvals | cRUus |

| | | | | | | | | |
|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Attenuation | | | | | | | | |
| Max. insertion loss | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | ≤ 2.5 | ≤ 5.0 | ≤ 8.0 | ≤ 10.0 | ≤ 11.5 | ≤ 14.5 | ≤ 20.0 | ≤ 27.0 |
| [db/100 ft] | ≤ 0.8 | ≤ 1.5 | ≤ 2.4 | ≤ 3 | ≤ 3.5 | ≤ 4.4 | ≤ 6.1 | ≤ 8.2 |
| Min. near-end crosstalk attenuation | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | ≥ 80 | ≥ 76.0 | ≥ 70.0 | ≥ 65.0 | ≥ 63.0 | ≥ 60.0 | ≥ 55.0 | ≥ 50.0 |
| [db/100 ft] | ≥ 24.4 | ≥ 23.2 | ≥ 21.3 | ≥ 19.8 | ≥ 19.2 | ≥ 18.3 | ≥ 16.8 | ≥ 15.2 |

Contact assembly



Dimensions



| | |
|----|----------|
| A1 | 64.60 mm |
| A2 | 18.00 mm |

Notes

- Depending on the cable length (L), the following length tolerances apply:

0 m...3.0 m: + 100 mm | 3.0...10.0 m: ± 100 mm | ≥ 10.0 m: ± 2 %

- Illustrations similar

- Further cable length on request. The last three digits of the ordering information is the cable length in decimeters, e.g. ZKxxxx-xxxx-x020 = cable length 2.00 m

| Ordering information | Length |
|----------------------|--------|
| ZK7502-0700-Axxx | – |

| Accessories | |
|-------------|---|
| ZB8802-0001 | assembly tool for B12 connector, AF17 |
| ZS7100-B003 | B12 protection cap, plug, plastic, IP 67, packaging unit = 10 pieces |
| ZS7100-B004 | B12 protection cap, plug, metal, IP 67, packaging unit = 5 pieces |
| ZS7100-B005 | B12 colour coding connector/square flange, red, packaging unit = 10 pieces |
| ZS7100-B006 | B12 colour coding connector/square flange, yellow, packaging unit = 10 pieces |
| ZS7100-B007 | B12 colour coding connector/square flange, blue, packaging unit = 10 pieces |
| ZS7100-B008 | B12 colour coding connector/square flange, green, packaging unit = 10 pieces |
| ZS7100-B015 | B12 colour coding connector/square flange, orange, packaging unit = 10 pieces |
| ZS7100-B016 | B12 colour coding connector/square flange, grey, packaging unit = 10 pieces |

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