

ZK7610-1800-Axxx | B17, ENP cable, PUR, 3 G 2.5 mm² + (1 x 4 x AWG22), drag chain suitable, key 2 (230 V AC)

B17, plug, straight, male+female, pins 2+PE+4, EtherCAT-coded – open end

Plugs

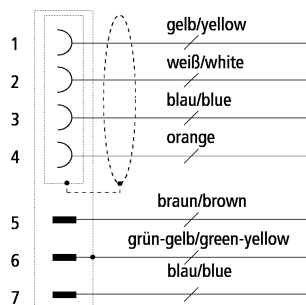
| Electrical data | Head A | Head B |
|-----------------------------------|---|----------|
| Rated voltage (Ethernet) | 60 V DC | - |
| Rated current (Ethernet) | 4 A at 40 °C | - |
| Rated voltage (power) | 250 V AC/DC | - |
| Rated current (power) | 21 A at 60 °C | - |
| Rated current (power) | 21 A | - |
| Rated impulse voltage (power) | 2.5 kV | - |
| Rated impulse voltage (Ethernet) | 1.0 kV | - |
| Voltage proof (contact/contact) | 1.5 kV (power - Ethernet), 3.31 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 | B17 | open end |
| Connector type | plug | - |
| Configuration | straight | - |
| Contact type | male+female | - |
| Number of positions (face) | pins 2+PE+4 | - |
| Coding | EtherCAT-coded | - |
| Mechanical coding | key 2 (230 V AC) | - |
| Wire termination | crimp connection | - |
| Mating cycles | ≥ 100 | - |
| Way of locking | bayonet | - |
| Weight per piece | 0.090 kg (0.198 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) | - |
| Approvals | UL 2237: File E484763 | - |

Cable

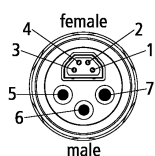
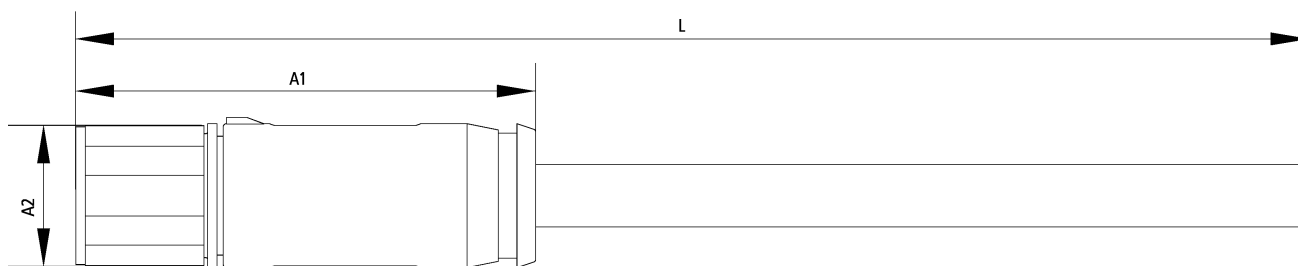
| Electrical data | |
|---|---|
| Operating voltage | ≤ 600 V |
| Mutual capacitance wire/wire (Ethernet) | nom. 55 nF/km |
| Attenuation of shielding | ≥ 40 dB |
| Insulation resistance | ≥ 200 MΩ*km |
| Mutual capacitance | AWG 22: nom. 55 nF/km |
| Wire resistance (power) | ≤ 8.3 Ω/km |
| Wire resistance (Ethernet) | ≤ 58.0 Ω/km (20 °C) |
| 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) | 3 x 2.5 mm ² (approx. AWG14) |
| 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 | 135 kg/km (90.716 lb/1000 ft) |
| Outer cable diameter | 11.1 mm ± 0.2 mm (0.4370" ± 0.0079") |
| Conductor material (power) | copper bare |
| 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 |
| Max. speed | 4 m/s |
| Max. travel distance | 20 m (horizontal) |
| Max. number of cycles | 3 million |
| 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: brown, green/yellow, blue |
| Wire insulation material | PO (Polyolefine) |
| Printing on the jacket | XXXX Beckhoff Automation GmbH & Co. KG-Germany-EtherCAT P- 3G2,5 + (4xAWG22)/C E63216 AWM 21223 AWM I/II A/B 80°C 600V FT1 RoHS MM/JJ |
| Printing colour | white |
| Torsion angle in °/m | max. ± 30 °/m |
| Environmental data | |
| Operation temperature range, moved | -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 |
| CFC-free | yes |
| Halogen-free | yes |
| Silicone-free | yes |
| Approvals | cRUus |

| Attenuation | | | | | | | | |
|-------------------------------------|------|------|------|------|------|-------|------|------|
| Max. insertion loss | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | 2.3 | 4.2 | 6.8 | 8.6 | 9.7 | 12.3 | 18.0 | 23.6 |
| [db/100 ft] | 0.7 | 1.3 | 2.1 | 2.6 | 3 | 3.7 | 5.5 | 7.2 |
| 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 | 73.60 mm |
| A2 | 23.00 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
- B17 3-pin 1.5 mm² and B17 3-pin 2.5 mm² are not pin compatible

| Ordering information | Length |
|----------------------|--------|
| ZK7610-1800-Axxx | - |

| Accessories | |
|-------------|---|
| ZS7200-B003 | B17 protection cap, plug, plastic, IP 67, packaging unit = 10 pieces |
| ZS7200-B004 | B17 protection cap, plug, metal, IP 67, packaging unit = 5 pieces |
| ZS7200-B005 | B17 colour coding connector/square flange, red, packaging unit = 10 pieces |
| ZS7200-B006 | B17 colour coding connector/square flange, yellow, packaging unit = 10 pieces |
| ZS7200-B007 | B17 colour coding connector/square flange, blue, packaging unit = 10 pieces |
| ZS7200-B008 | B17 colour coding connector/square flange, green, packaging unit = 10 pieces |
| ZS7200-B015 | B17 colour coding connector/square flange, orange, packaging unit = 10 pieces |
| ZS7200-B016 | B17 colour coding connector/square flange, grey, packaging unit = 10 pieces |
| ZB8802-0002 | assembly tool for B17 connector, AF22 |

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