



ZK7721-AZ00-Axxx | B23, ENP cable, PUR, 4 G 4.0 mm² + 2 x 2.5 mm² + (1 x 4 x AWG22), drag chain suitable, key 2 (user-defined voltage)

B23, square flange, straight, short, male+female, pins 3+PE+2+4, EtherCAT-coded – RJ45 + 6 x open end, 8-pin

Plugs

| Electrical data | Head A | Head B |
|----------------------------------|---|------------------------------------|
| Rated voltage (Ethernet) | 60 V DC | 24 V DC |
| Rated current (Ethernet) | 4 A at 40 °C | 1.1 A at 30 °C |
| Rated voltage (power) | 630 V AC / 850 V DC, 600V AC / DC (UL) | - |
| Rated current (power) | 22 A + 25 A at 40 °C | - |
| Rated current (power) | 22 A + 25 A | - |
| Rated impulse voltage (power) | 6.0 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 | yes |
| Contact resistance | < 10 mΩ (signal), < 5 mΩ (power) | - |
| Insulation resistance | ≥ 100 MΩ (according to IEC 60512) | ≥ 10 GΩ (according to IEC 60512-2) |
| Mechanical data | | |
| Installation size | B23 | RJ45 + 6 x open end |
| Connector type | square flange | - |
| Configuration | straight, short | - |
| Contact type | male+female | - |
| Number of positions (face) | pins 3+PE+2+4 | 8-pin |
| Coding | EtherCAT-coded | - |
| Mechanical coding | key 2 | - |
| Wire termination | crimp connection | - |
| Mating cycles | ≥ 100 | ≥ 750 |
| Way of locking | bayonet | - |
| Weight per piece | 0.200 kg (0.441 lb) | - |
| Body colour | - | black |
| Body material | - | PC UL 94 V0 |

| | | |
|-----------------------------------|--|-----------------------------|
| Flange housing 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 | 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 | yes |
| Ambient temperature (operation) | -30...+80 °C, -22...+176 °F | -40...+85 °C, -40...+185 °F |
| Protection class | IP 65/67 in screwed condition (according to IEC 60529) | IP 20 |
| Pollution level | 3/2 (according to IEC 60664-1) | - |
| Approvals | UL 2237: File E484763 | - |

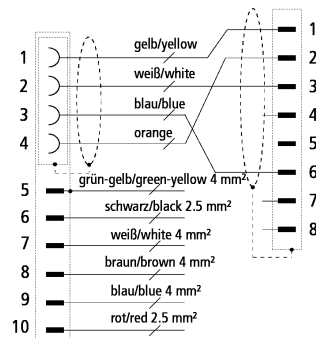
Cable

| | | |
|---|--|--|
| Electrical data | | |
| Rated voltage (Ethernet) | max. 300 V (peak value, not for high voltage purposes) | |
| Rated voltage (power) | 600 V | |
| Attenuation of shielding | ≥ 40 dB | |
| Insulation resistance | ≥ 500 MΩ/km | |
| Unbalanced capacitance to ground | 1600 pF/km | |
| Mutual capacitance | 52 nF/km (1 kHz) | |
| Characteristic impedance (Ethernet) | 100 Ω ±15 Ω (100 MHz) | |
| Loop resistance (Ethernet) | ≤ 115 Ω/km | |
| Differential impedance (Ethernet) | 250 Ω/km | |
| Unbalanced resistance (Ethernet) | 2 % | |
| Dielectric strength wire/wire (Ethernet) | 1000 V DC/700 V AC | |
| Dielectric strength wire/shield (Ethernet) | 1000 V DC/700 V AC | |
| Signal running time (Ethernet) | 5.3 ns/m | |
| Electrical parameters (Ethernet) | based on CAT 5 | |
| Test voltage | ≥ 2000 V | |
| Mechanical data | | |
| Cable structure (Ethernet) | star quad | |
| Conductor construction (power) | 19 x 0.30 mm | |
| Conductor construction (Ethernet) | 7 x 0.25 mm | |
| Cross section (power) | 4 x 4.0 mm ² (approx. AWG12) + 2 x 2.5 mm ² (approx. AWG14) | |
| Cross section (Ethernet) | 1 x 4 x 0.34 mm ² (AWG 22) | |
| Min. bending radius, moved | 7.5 x outer cable diameter | |
| Min. bending radius, fixed installation | 5 x outer cable diameter | |
| Outer cable diameter | 6.5 mm ± 0.2 mm (0.2559" ± 0.0079") | |
| Conductor material (Ethernet) | copper, tinned | |
| Shielding | aluminium-clad foil, braiding of tinned copper wires | |
| Optical covering factor of shielding (Ethernet) | ≥ 85 % | |
| Use | drag-chain suitable | |
| Max. acceleration | 4 m/s ² | |
| Max. speed | 4 m/s | |
| Max. number of cycles | 3 million | |
| Wall thickness of wire insulation (Ethernet) | 0.375 mm | |
| Jacket colour | green | |
| Material jacket | PUR (polyurethane) | |
| Wire colour code | yellow, orange, white, blue (Ethernet), black, red (2.5 mm ²), white, green/yellow, brown, blue (4.0 mm ²) | |
| Wire insulation material | PP polypropylene (Ethernet), PPE polyphenyl ether (Power) | |

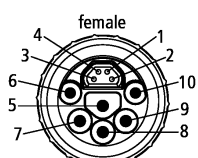
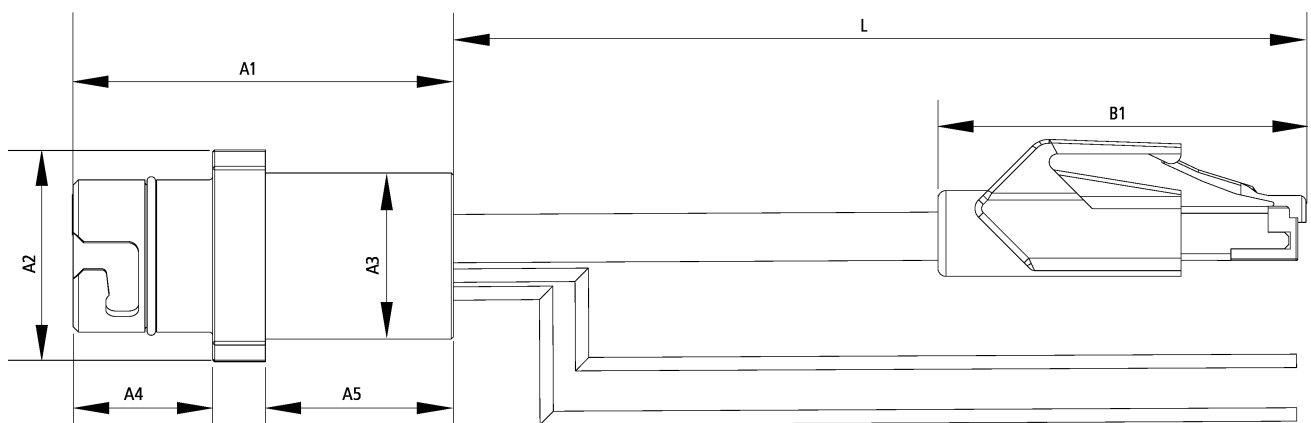
| | |
|---|--|
| Printing on the jacket | BECKHOFF ZB9020 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC * "length in meters" |
| Printing colour | black |
| Environmental data | |
| Operation temperature range, moved | -40...+70 °C, -40...+158 °F |
| Operation temperature range, fixed installation | -20...+60 °C, -4...+140 °F |
| UV resistance | yes |
| Oil resistance | according to DIN EN 60811-2-1 |
| Acid, lye and solvent resistance | depends on medium, concentration, temperature and duration |
| LABS-free | yes |
| Flame-retardant | yes |
| CFC-free | yes |
| Halogen-free | yes |
| Silicone-free | yes |
| Approvals | UL-Style AWM 20963 |

| | | | | | | | | |
|-------------------------------------|------|------|------|------|------|-------|------|------|
| Attenuation | | | | | | | | |
| Max. insertion loss | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | 2.1 | 4.0 | 6.3 | 8.0 | 9.0 | 11.4 | 16.5 | 21.3 |
| [db/100 ft] | 0.6 | 1.2 | 1.9 | 2.4 | 2.7 | 3.5 | 5 | 6.5 |
| 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



male

| | |
|----|----------|
| A1 | 47.50 mm |
| A2 | 26.00 mm |
| A3 | 23.70 mm |
| A4 | 32.00 mm |
| A5 | 10.50 mm |
| B1 | 43.80 mm |

Notes

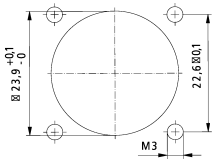
- Depending on the cable length (L), the following length tolerances apply:

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

Installation dimensions



Ordering information

| Ordering information | Length |
|----------------------|--------|
| ZK7721-AZ00-Axxx | – |

Accessories

| | |
|-------------|--|
| ZS7300-B003 | B23 protection cap, plug, plastic, IP 67, packaging unit = 10 pieces |
| ZS7300-B004 | B23 protection cap, plug, metal, IP 67, packaging unit = 5 pieces |
| ZS7300-B005 | B23 color coding connector/square flange, red, packaging unit = 10 pieces |
| ZS7300-B006 | B23 color coding connector/square flange, yellow, packaging unit = 10 pieces |
| ZS7300-B007 | B23 color coding connector/square flange, blue, packaging unit = 10 pieces |
| ZS7300-B008 | B23 color coding connector/square flange, green, packaging unit = 10 pieces |
| ZS7300-B015 | B23 color coding connector/square flange, orange, packaging unit = 10 pieces |
| ZS7300-B016 | B23 color coding connector/square flange, gray, packaging unit = 10 pieces |

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