



ZK7714-CB00-0xxx | B23, ECP cable, PUR, 5 G 4.0 mm² + (1 x 4 x AWG22), drag chain suitable, key 2 (400 V AC)

B23, flange front assembly, straight, long, male+male, pins 4+PE+4, P-coded – M8 EtherCAT-P-coded + 5 x open end, plug, straight, male, 4-pin, P-coded

Plugs

| Electrical data | Head A | Head B |
|----------------------------------|---|------------------------------------|
| Rated voltage (Ethernet) | 24 V DC | 24 V DC |
| Rated current (Ethernet) | 3 A at 40 °C | 3 A at 40 °C |
| Rated voltage (power) | 630 V AC / 850 V DC, 600V AC / DC (UL) | - |
| Rated current (power) | 28 A at 40 °C | - |
| Rated current (power) | 28 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) | ≥ 100 GΩ (according to IEC 60512) |
| Mechanical data | | |
| Installation size | B23 | M8 EtherCAT-P-coded + 5 x open end |
| Connector type | flange front assembly | plug |
| Configuration | straight, long | straight |
| Contact type | male+male | male |
| Number of positions (face) | pins 4+PE+4 | 4-pin |
| Coding | P-coded | P-coded |
| Mechanical coding | key 3 (user-defined voltage) | - |
| Wire termination | crimp connection | crimp connection |
| Recommended torque, nut | - | 0.4 Nm |
| Mating cycles | ≥ 100 | ≥ 100 |
| Way of locking | bayonet | screw |
| Weight per piece | 0.200 kg (0.441 lb) | - |
| Body colour | - | black |
| Body material | - | TPU, UL 94 |

| | | |
|-----------------------------------|---|---|
| Flange housing material | GD-Zn, Ni | - |
| Coupling nut material | - | CuZn, Ni |
| Seal | NBR, FPM | FPM |
| Contact carrier colour | - | red |
| Contact carrier material | PA 6, UL 94 V0 | PA, UL 94 |
| Contact carrier colour (Ethernet) | red | - |
| Contact carrier colour (power) | red | - |
| Contact plating | Au over Ni | Ni, Au gal. |
| Contact material | copper alloy | CuZn |
| 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 | - |
| UV resistance | - | yes |
| RoHS compliant | yes | yes |
| Ambient temperature (operation) | -30...+80 °C, -22...+176 °F | -30...+70 °C, -22...+158 °F |
| Protection class | IP 65/67 in screwed condition (according to IEC 60529) | IP 67 in screwed condition (according to IEC 60529) |
| Pollution level | 3/2 (according to IEC 60664-1) | 3/2 (according to IEC 60664-1) |
| Approvals | UL 2237: File E484763 | - |

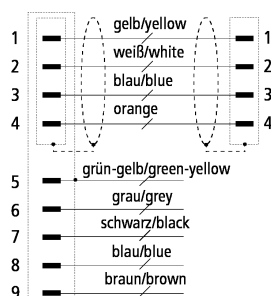
Cable

| | | |
|---|---|--|
| Electrical data | | |
| Rated voltage (Ethernet) | max. 300 V (peak value, not for high voltage purposes) | |
| Rated voltage (power) | 600 V | |
| Operating voltage | ≤ 125 V (peak value, not for high voltage purposes) | |
| Attenuation of shielding | ≥ 65 dB (30...100 MHz) | |
| Insulation resistance | ≥ 5GΩ * km | |
| Unbalanced capacitance to ground | ≤ 2000 pF/km | |
| Mutual capacitance | 48 nF/km | |
| Characteristic impedance (Ethernet) | 100 Ω ±15 Ω | |
| Loop resistance | ≤ 110.8 Ω/km | |
| Signal running time (Ethernet) | 5.3 ns/m | |
| Electrical parameters (Ethernet) | CAT 5e, according to EN 50288-2-2 | |
| Test voltage | 1000 V, 50 Hz, 1 min. (wire/wire and wire/screen) | |
| Mechanical data | | |
| Cable structure (Ethernet) | star quad | |
| Conductor construction (power) | 19 x 0.30 mm | |
| Cross section (power) | 5 x 4.0 mm ² (approx. AWG12) | |
| Cross section (Ethernet) | 1 x 4 x 0.34 mm ² (AWG 22) | |
| Min. bending radius, moved | 8 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, coupling | |
| Optical covering factor of shielding (Ethernet) | ≥ 85 % | |
| Use | drag-chain suitable | |
| Max. acceleration | 3 m/s ² | |
| Max. speed | 3 m/s | |
| Max. travel distance | 4.5 m | |
| Max. number of cycles | 3 million | |
| Jacket colour | black (similar to RAL 9005) with red stripe (similar to RAL 3020) | |
| Material jacket | PUR (polyurethane) | |
| Wire colour code | yellow, orange, white, blue (Ethernet) grey, green/yellow, black, blue, brown (Power) | |
| Wire insulation material | PP polypropylene (Ethernet), PPE polyphenyl ether (Power) | |
| Printing on the jacket | Beckhoff Automation GmbH & Co. KG - Germany - EtherCATp Cat5e AWG22/7 E170315 AWM 21198 AWM I/II A/B 80°C 300 V | |
| Printing colour | white | |
| Environmental data | | |

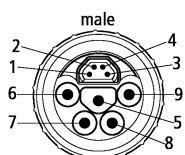
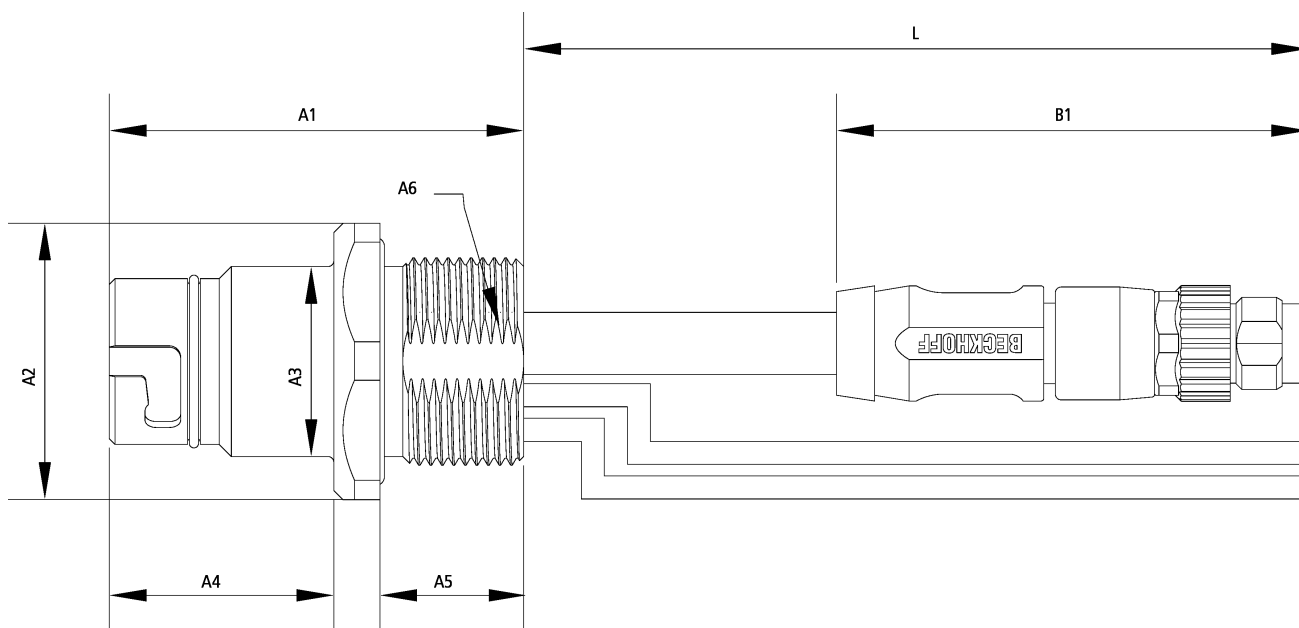
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|---|---|
| Operation temperature range, moved | -30...+70 °C, -22...+158 °F |
| Operation temperature range, fixed installation | -40...+80 °C, -40...+176 °F |
| UV resistance | good |
| Oil resistance | according to IEC 60811-2-1 respectively according to DIN VDE 0282 part 10 |
| Flame-retardant | Horizontal flame test according to UL 1581 part 1090 |
| Halogen-free | according to IEC 60754 respectively DIN VDE 0472 part 815 |

| Attenuation | | | | | | | | |
|-------------------------------------|---|------|------|------|------|-------|------|------|
| Max. insertion loss | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | - | 4.9 | 7.8 | 9.9 | 11.1 | 14.1 | 20.4 | 26.4 |
| [db/100 ft] | - | 1.5 | 2.4 | 3 | 3.4 | 4.3 | 6.2 | 8 |
| Min. near-end crosstalk attenuation | | | | | | | | |
| Frequency [MHz] | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 |
| [db/100 m] | - | 56.3 | 50.3 | 47.2 | 45.8 | 42.9 | 38.4 | 35.3 |
| [db/100 ft] | - | 17.2 | 15.3 | 14.4 | 14 | 13.1 | 11.7 | 10.8 |

Contact assembly



Dimensions



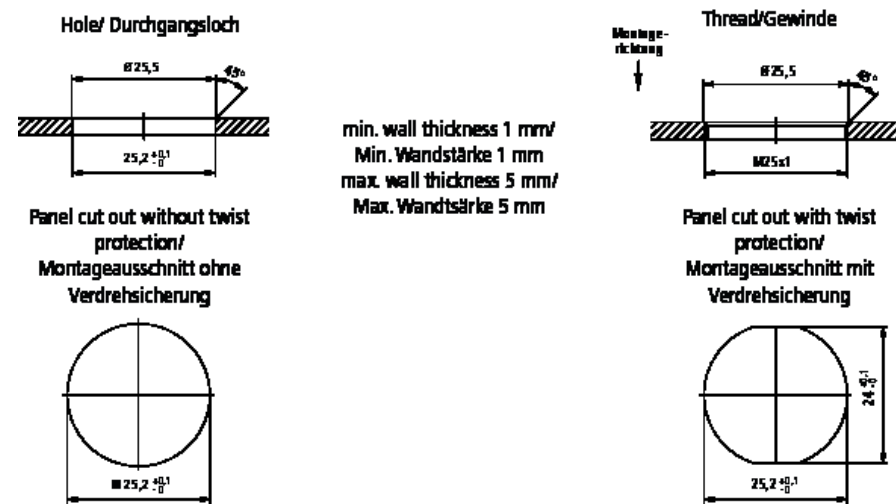
| | |
|----|----------|
| A1 | 47.50 mm |
| A2 | 30.00 mm |

| | |
|----|----------|
| A3 | 24.90 mm |
| A4 | 32.50 mm |
| A5 | 10.00 mm |
| A6 | M25 |
| B1 | 41.00 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
- Delivery with counter nut
- 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 | Length |
|----------------------|--------|
| ZK7714-CB00-0xxx | — |

| Accessories | |
|-------------|--|
| ZS7300-B001 | B23 protection cap, socket/flange, plastic, IP 67, packaging unit = 10 pieces |
| ZS7300-B002 | B23 protection cap, socket/flange, metal, IP 67, packaging unit = 5 pieces |
| ZS7300-B009 | B23 colour coding flange for front/rear assembly, red, packaging unit = 10 pieces |
| ZS7300-B010 | B23 colour coding flange for front/rear assembly, yellow, packaging unit = 10 pieces |
| ZS7300-B011 | B23 colour coding flange for front/rear assembly, blue, packaging unit = 10 pieces |
| ZS7300-B012 | B23 colour coding flange for front/rear assembly, green, packaging unit = 10 pieces |
| ZS7300-B013 | B23 colour coding flange for front/rear assembly, orange, packaging unit = 10 pieces |
| ZS7300-B014 | B23 colour coding flange for front/rear assembly, grey, packaging unit = 10 pieces |

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