ZK1093-3131-1xxx | EtherCAT cable, PUR, AWG22, drag-chain suitable



M8, plug, straight, male, 4-pin, A-coded – M8, plug, straight, male, 4-pin, A-coded



Plugs

| Electrical data | Head A | Head B | |
|----------------------------|--|--|--|
| Rated voltage | 63 V (according to IEC 61076-2-111) | 63 V (according to IEC 61076-2-111) | |
| Rated current | 4 A at 40°C (according to IEC 61076-2-104) | 4 A at 40°C (according to IEC 61076-2-104) | |
| Shielding | yes | yes | |
| Insulation resistance | ≥ 100 G Ω (according to IEC 60512) | ≥ 100 G Ω (according to IEC 60512) | |
| Mechanical data | | | |
| Installation size | M8 | M8 | |
| Connector type | plug | plug | |
| Configuration | straight | straight | |
| Contact type | male | male | |
| Number of positions (face) | 4-pin | 4-pin | |
| Coding | A-coded | A-coded | |
| Recommended torque, nut | 0.4 Nm | 0.4 Nm | |
| Mating cycles | ≥ 100 | ≥100 | |



| Way of locking | screw | screw | |
|---------------------------------|---|---|--|
| Weight per piece | 0.028 kg (0.0617 lb) | 0.028 kg (0.0617 lb) | |
| Body color | black | black | |
| Body material | TPU, UL94 | TPU, UL94 | |
| Coupling nut material | GD-Zn, Ni | GD-Zn, Ni | |
| Seal | FPM | FPM | |
| Contact carrier color | green | green | |
| Contact carrier material | PA 6, UL 94 V0 | PA 6, UL 94 V0 | |
| Contact plating | Ni, Au gal. | Ni, Au gal. | |
| Contact material | CuZn | CuZn | |
| Environmental data | | | |
| Special features | halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1 | halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1 | |
| RoHS compliant | yes | yes | |
| Ambient temperature (operation) | -30+70°C, -22+158°F | -30+70°C, -22+158°F | |
| Protection rating | IP65/67 in screwed condition (according to IEC 60529) | IP65/67 in screwed condition (according to IEC 60529) | |
| Pollution level | 3/2 (according to IEC 60664-1) 3/2 (according to IEC 60664-1) | | |

Cable

| Electrical data | |
|--|---|
| Rated voltage | 600 V |
| Operating voltage | ≤ 125 V (peak value, not for high voltage purposes) |
| 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 |



ZK1093-3131-1xxx www.beckhoff.com/ZK1093-3131-1xxx

| Conductor construction (Ethernet) star quad Conductor construction (Ethernet) 7 x 0.25 mm Cross-section (Ethernet) 1 x 4 x 0.34 mm² (AWG22) Outer cable diameter 6.5 mm ± 0.2 mm (0.2559" ± 0.0079") Min. bending radius, moved 8 x outer cable diameter Min. bending radius, moved in drag-chain 5 x outer cable diameter Min. bending radius, moved in drag-chain 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) 2 85 % Use drag chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. travel distance 4.5 m Max. travel distance 9.375 mm Wall thickness of wire insulation 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire color code yellow, orange, white, blue Wire color code <t< th=""><th>Mechanical data</th><th></th></t<> | Mechanical data | |
|---|---|---|
| Conductor construction (Ethernet) 7 x 0.25 mm Cross-section (Ethernet) 1 x 4 x 0.34 mm² (AWG22) Outer cable diameter 6.5 mm ± 0.2 mm (0.2559° ± 0.0079°) Min. bending radius, moved 8 x outer cable diameter Min. bending radius, moved in drag-chain 15 x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, trinned Shielding aluminum-clad foil, braiding of finned copper wires Opcal covering factor of shielding (Ethernet) 2 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 2 llow Vall thickness of wire insulation 9.375 mm Jacket color yellow Wire color code yellow, orange, white, blue Wire color code yellow, orange, white, blue Wire insulation material PP (Polypropylene) Printing color black Torsion angle in "/m max. ± 30° /m< | | |
| Cross-section (Ethernet) 1 x 4 x 0.34 mm² (AWG22) Outer cable diameter 6.5 mm ± 0.2 mm (0.2559° ± 0.0079°) Min. bending radius, moved 8 x outer cable diameter Min. bending radius, moved in drag-chain 15 x outer cable diameter Min. bending radius, fixed installation 5 x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) aluminum-clad foil, braiding of tinned copper wires Use drag-chain suitable Max. celeration 4 m/s² Max. speed 4 m/s² Max. travel distance 4.5 m Max. travel distance 3 million Max. travel distance 3 million Max. travel distances of wire insulation (Ethernet) vellow Wall thickness of wire insulation 0.375 mm Wall thickness of wire insulation pvl (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Every Exploration travellar in the | | · |
| Outer cable diameter 6.5 mm ± 0.2 mm (0.2559" ± 0.0079") Min. bending radius, moved 8 x outer cable diameter Min. bending radius, moved in dragchalin 5 x outer cable diameter Min. bending radius, fixed installation 5 x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Obtical covering factor of shielding (Ethernet) a luminum-clad foil, braiding of tinned copper wires Use drag-chain suitable Max. sceleration 4 m/s² Max. speed 4 m/s² Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) yellow Wall thickness of wire insulation 0,375 mm Wall thickness of wire insulation yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polygropylene) EckHoff 789024 Industrial Ethernet (EtherCAT Trailing Cable * CATSPLUS** *22xWG (SHELDED) (UI) Etition CMX 75°C VERIED (UI) CAT SE PATCH CABLE FRINC **length in meters** Printing color black | | |
| Min. bending radius, moved in drag- chain Min. bending radius, fixed installation 5 x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding Quital covering factor of shielding Amax. acceleration 4 m/s² Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) Jacket color yellow Waterial jacket Wire color code yellow, orange, white, blue Wire insulation material Printing on the jacket / Ether-CAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT SE PATCH CABLE FRINC **length in meters* Printing color black Torsion angle in */m Environmental date Operation temperature range, moved Operation temperature range, moved Operation temperature range, fixed installation UV resistance Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free Verein diameter 15 x outer cable diameter 4 they found in medium of tinned 4 to verein cable diameter 5 x outer cable diameter 6 they found fitting of tinned copper wires 6 x outer cable diameter 6 x | | |
| Min. bending radius, moved in drag- chain Min. bending radius, fixed installation S x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) Optical covering factor of shielding (Ethernet) Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) Wire color code Wire color code Wire insulation material BECKHOFF ZB9024 Industrial Ethernet Printing on the jacket Printing color Operation temperature range, moved 3-0+80°C, -22+176°F Operation temperature range, moved installation UV resistance Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free Weight Conductor diameter S x outer cable diameter At lb/10000 ft) Copper, thened At lb/10000 ft) A lb/2 mined A m/s A | | |
| chain S x Outer cable diameter Min. bending radius, fixed installation S x outer cable diameter Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) 2 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket ECHOFT Z89024 Industrial Ethernet / Ether CAT Trailing Cable "CATSPLUS" *22AWG (SHELDED) (UL) ET19100 CMX 75°C VERIFIED (UL) CAT SE PATCH CABLE FRNC "length in meters" Printing color black Torsion angle in "/m max ± 30 "/m Environmental data Operation temperature range, fixed installation UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free | Min. bending radius, moved | 8 x outer cable diameter |
| Weight 61 kg/km (41 lb/1000 ft) Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) ≥ 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket BECKHOFF 289024 Industrial Ethernet Printing color black Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Printing cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT SE PATCH CABLE FRNC **length in meters** Operation temperature range, fixed installation 30+80°C, -22+176°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance depends on me | | 15 x outer cable diameter |
| Conductor material (Ethernet) copper, tinned Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) ≥ 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket BECKHOFF ZB9024 Industrial Ethernet / 'EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC **length in meters** Printing color black Torsion angle in "/m max. ± 30 "/m Environmental data | Min. bending radius, fixed installation | 5 x outer cable diameter |
| Shielding aluminum-clad foil, braiding of tinned copper wires Optical covering factor of shielding (Ethernet) Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket EtherCAT Trailing Cable * CATSPILUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC **length in meters** Printing color angle in **/m max. ± 30 **/m Environmental date Operation temperature range, moved 30+80°C, -22+176°F Operation temperature range, fixed installation UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration | Weight | 61 kg/km (41 lb/1000 ft) |
| Optical covering factor of shielding (Ethernet) ≥ 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket PECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC ***length in meters** Printing color black Torsion angle in */m max. ± 30 °/m Environmental data Properation temperature range, moved 30+80°C, -22+176°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance yes Oil resistance depends on medium, concentration, temperature and duration LABS-free yes | Conductor material (Ethernet) | copper, tinned |
| (Ethernet) 2 85 % Use drag-chain suitable Max. acceleration 4 m/s² Max. speed 4 m/s Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket BECKHOFF z89024 Industrial Ethernet / VERIFIED (UL) CAT 5E PATCH CABLE FRNC "length in meters" Printing color black Torsion angle in "/m max. ± 30 "/m Environmental data Torsion angle in "/m Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Shielding | aluminum-clad foil, braiding of tinned copper wires |
| Max. acceleration 4 m/s² Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) BECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free view of wire installation installation yes | | ≥ 85 % |
| Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 2,375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket / EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation upperature range, fixed consistence yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free viewers a million A max. ± 30 °M medium, concentration, temperature and duration | Use | drag-chain suitable |
| Max. travel distance 4.5 m Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket /EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data *** Operation temperature range, moved installation 30+80°C, -22+176°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Max. acceleration | 4 m/s ² |
| Max. number of cycles 3 million Wall thickness of wire insulation (Ethernet) 0.375 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) Printing on the jacket BECKHOFF ZB9024 Industrial Ethernet PERNC **Industrial | Max. speed | 4 m/s |
| Wall thickness of wire insulation (Ethernet) Jacket color yellow Material jacket Wire color code Wire insulation material PP (polypropylene) BECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color Printing color Buck Torsion angle in °/m Environmental data Operation temperature range, moved Operation temperature range, fixed installation UV resistance Jess Guine temperature according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Max. travel distance | 4.5 m |
| (Ethernet) 0.3/5 mm Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) BECKHOFF ZB9024 Industrial Ethernet / Ether CAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free UV resistance | Max. number of cycles | 3 million |
| Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PP (polypropylene) BECKHOFF ZB9024 Industrial Ethernet Printing on the jacket EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation yes UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | | 0.375 mm |
| Wire color codeyellow, orange, white, blueWire insulation materialPP (polypropylene)Printing on the jacketBECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters"Printing colorblackTorsion angle in °/mmax. ± 30 °/mEnvironmental data***Departion temperature range, moved** -30+80°C, -22+176°FOperation temperature range, fixed installation-40+80°C, -40+176°FUV resistanceyesOil resistanceaccording to DIN EN 60811-404 (7x24 h/90 °C)Acid, lye and solvent resistancedepends on medium, concentration, temperature and durationLABS-freeyes | Jacket color | yellow |
| Wire insulation material PP (polypropylene) BECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m Environmental data Operation temperature range, moved Operation temperature range, fixed installation UV resistance Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance LABS-free DECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing on the jacket / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F UV resistance yes UV resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free | Material jacket | PUR (polyurethane) |
| Printing on the jacket BECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" Printing color black Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved Operation temperature range, fixed installation UV resistance Oil resistance oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free BECKHOFF ZB9024 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters" black max. ± 30 °/m max. ± 30 °/m 1-40+80°C, -22+176°F Operation temperature range, fixed installation UV resistance yes oil resistance depends on medium, concentration, temperature and duration LABS-free | Wire color code | yellow, orange, white, blue |
| Printing on the jacket/ EtherCAT Trailing Cable * CATSPLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters"Printing colorblackTorsion angle in °/mmax. ± 30 °/mEnvironmental data | Wire insulation material | PP (polypropylene) |
| Torsion angle in °/m max. ± 30 °/m Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Printing on the jacket | / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C |
| Environmental data Operation temperature range, moved -30+80°C, -22+176°F Operation temperature range, fixed installation UV resistance yes Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Printing color | black |
| Operation temperature range, moved Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Torsion angle in °/m | max. ± 30 °/m |
| Operation temperature range, fixed installation UV resistance Oil resistance Acid, lye and solvent resistance LABS-free Acid. Service according to DIN EN 60811-404 (7x24 h/90 °C) depends on medium, concentration, temperature and duration yes | Environmental data | |
| installation UV resistance Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | Operation temperature range, moved | -30+80°C, -22+176°F |
| Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | | -40+80°C, -40+176°F |
| Acid, lye and solvent resistance depends on medium, concentration, temperature and duration LABS-free yes | UV resistance | yes |
| LABS-free yes | Oil resistance | according to DIN EN 60811-404 (7x24 h/90 °C) |
| , | Acid, lye and solvent resistance | depends on medium, concentration, temperature and duration |
| Flame-retardant VW-1 Flame Test UL 1581 section 1080 and IEC 60332-1-2 | LABS-free | yes |
| | Flame-retardant | VW-1 Flame Test UL 1581 section 1080 and IEC 60332-1-2 |



| CFC-free | yes |
|----------------|--------------------------------|
| Halogen-free | yes |
| Silicone-free | yes |
| RoHS compliant | yes |
| UL | yes, UL E-file number: E119100 |
| Approvals | UL, CMX according to UL 444 |

| 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 |

1 gelb/yellow 1 2 1 2 2 3 4 orange 4

Dimensions



| A1 | 41.00 mm |
|----|-----------|
| A2 | Ø 10.1 mm |
| B1 | 41.00 mm |

| B2 | Ø 10.1 mm |
|----|-----------|
| | |

Notes

- Depending on the cable length (L), the following length tolerances apply: 0 m...<0.2 m: \pm 10 mm | 0.2...4.0 m: \pm 40 mm | \geq 4.0 m: \pm 1%
- Illustrations similar
- Further cable length on request.

| CE, UL | |
|--------|--------------------------------|
| CE | yes |
| UL | yes, UL E-file number: E499669 |

| Ordering information | Length |
|----------------------|---------|
| ZK1093-3131-1003 | 0.30 m |
| ZK1093-3131-1005 | 0.50 m |
| ZK1093-3131-1010 | 1.00 m |
| ZK1093-3131-1030 | 3.00 m |
| ZK1093-3131-1500 | 50.00 m |
| ZK1093-3131-1999 | 100 m |

| Accessories | |
|-------------|---|
| ZB8801-0000 | torque wrench for hexagonal plugs, adjustable |
| ZB8801-0001 | torque cable key, M8/wrench size 9, for ZB8801-0000 |
| ZB8803-0001 | Flange/Panel feed-through for M8 pre-assembled, for fixing the connector, plastic |



Products marked with a crossed-out wheeled bin shall not be discarded with the normal waste stream. The device is considered as waste electrical and electronic equipment. The national regulations for the disposal of waste electrical and electronic equipment must be observed.

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