tBL® - TP Installation Cable both ends 2x RJ45 Keystone Modules (one enclosed) Cat.6A UC900 SS23 duplex

\*\*tBL® - tde Basic Link (TP)

tBL® tde Basic Link (TP) is a complete system solution for structured cabling in Cat6A for transfer rates of up to 10GbE in real time. The tBL® - cabling link corresponds to a permanent link in accordance with ISO / IEC 11801 (EN 50173). The RJ45 modules are available in the form factors  Keystone (KS) and Data Center (DC). The compact design of the 6fold RJ45 DC module allows a high packing density of up to 48 RJ45 ports on 1U. The RJ45 module is connected to the tBL® - cable termination block by simply plugging. The slim cable termination block can be easily assembled on the cable by using the tBL® - crimp tool and is suitable for preterminated cables. The modular design of individual RJ45 modules are interchangeable at any time without termination. A cost effective alternative product is the RJ45 keystone module without cable termination block in the tool-less design.

The system solution is complemented by an extensive portfolio of carrier systems. These include design-capable data outlets, floor box frames, Consolidation points, DIN rail modules and patch panels in 1/2 and 1U.

\*\*TP Trunk Cables

\*\*TECHNISCHE\_DATEN

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| --- | --- |
| xxxx | Length in cm |

\*\*\*TP RJ45 Modules

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| Type | RJ45 Jack shielded |
| Connector standard | IEC 60603-7-5-1 |
| Installation dimension | 19.3 x 14.7 mm |
| Mating force | ≤ 30 N |
| Mating cycles (RJ45 side) | ≥ 750 |
| Mating cycles (opposite side) | ≥ 100 |
| Housing material | nickel-plated die-cast zinc |
| Insulation components material | PC aqua |
| Gold plating in contact area | 50 µ" |
| Gold plating IDC | 30 µ" |
| Cable diameter | 5-10 mm |

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| Connection class | IP20 |
| Temperature range | -40°C to +70°C |

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| Contact resistance | ≤ 20 mΩ |
| Insulation resistance between contacts | ≥ 500 MΩ |
| Dielectric withstanding voltage contact – contact | ≥ 1000 V DC/AC |
| Dielectric withstanding voltage contact – screen | ≥ 1500 V DC/AC |
| Current-carrying capacity at 50°C | 1.25 A |
| PoE+ per IEEE 802.3at | PoE+ |

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| 10 GbE | supported |
| Cat.6A | ISO/IEC 11801 AM1 and AMD2, Link length: > 1 m |

\*\*\*TP Termination Block

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| Construction | plastic with insulation displacement connection |
| Gold plating termination block | 30 µ" |
| Color | transparent yellow |
| Application | Installation cable with solid wire, AWG 22 to AWG 24 and flex. |
|   | Plug bears small flag-like installation guide with color codes for pin-out according to EIA/TIA 568 A and B. |

\*\*\*TP Cable

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| --- | --- |
| Conductor | bare copper wire, Ø 0.56 mm (AWG 23/1) |
| Insulation | foamskin PE, Ø 1.38 mm |
| Twisting | 2 cores to the pair |
| Pair screen | Al-laminated plastic foil |
| Cable lay up | 4 pairs (PiMF) to the core |
| Sreen | copper braid, tinned |
| Sheath | LSHF orange RAL 2003 |

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| Minimum bending radius | Without load | ≥ 30 mm |
|   | With load | ≥ 60 mm |
| Temperature range  | During operation | -20°C up to +60°C |
|   | During installation | 0°C up to +50°C |

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| Loop resistance |   | ≤ 154 Ω/km |
| Resistance unbalance |   | ≤ 2% |
| Insulation resistance | (500 V) | ≥ 5000 MΩ\*km |
| Mutual capacitance | at 800 Hz | Nom. 43 nF/km |
| Capacitance unbalance | (pair/ground) | ≤ 1500 pF/km |
| Characteristic impedance | 100 MHz | (100 ± 5) Ω |
| Nominal velocity of propagation |   | ca. 79% |
| Propagation delay |   | ≤ 425 ns/100m |
| Delay skew |   | ≤ 9 ns/100m |
| Test voltage | (DC, 1 min) core/core and core/screen | 1000 V |
| Transfer impedance | at 1 MHz | 5 mΩ/m |
|   | at 10 MHz | 5 mΩ/m |
|   | at 30 MHz | 10 mΩ/m |
|  Coupling attenuation |   | 85 dB |
| Segregation classification acc. EN 50174-2 |   | "d" |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| F MHZ | Attenuation dB/10m | NEXT dB | PS- NEXT dB | ACR dB/100m | PS-ACR dB/100m | ELFEXT dB/100m | PS- ELFEXT dB/100m | Return loss dB |
| 1.0 | 1.8 | 104 | 101 | 102 | 99 | 105 | 105 | - |
| 4.0 | 3.4 | 100 | 97 | 97 | 94 | 105 | 102 | 27 |
| 10.0 | 5.4 | 100 | 97 | 95 | 92 | 97 | 94 | 30 |
| 16.0 | 6.8 | 100 | 97 | 93 | 90 | 93 | 90 | 30 |
| 20.0 | 7.7 | 100 | 97 | 92 | 89 | 91 | 88 | 30 |
| 31.2 | 9.6 | 100 | 97 | 90 | 87 | 87 | 84 | 30 |
| 62.5 | 13.7 | 100 | 97 | 86 | 83 | 81 | 78 | 30 |
| 100.0 | 17.4 | 100 | 97 | 83 | 80 | 77 | 74 | 30 |
| 125.0 | 19.5 | 95 | 92 | 75 | 72 | 75 | 72 | 26 |
| 155.5 | 21.9 | 94 | 91 | 72 | 69 | 73 | 70 | 26 |
| 175.0 | 23.3 | 93 | 90 | 70 | 67 | 72 | 69 | 25 |
| 200.0 | 25.0 | 92 | 89 | 67 | 64 | 71 | 68 | 25 |
| 250.0 | 28.1 | 90 | 87 | 62 | 59 | 69 | 66 | 24 |
| 300.0 | 30.9 | 89 | 86 | 58 | 55 | 67 | 64 | 24 |
| 450.0 | 38,3 | 87 | 84 | 48 | 45 | 64 | 61 | 23 |
| 600.0 | 44,8 | 85 | 82 | 40 | 37 | 61 | 58 | 22 |
| 750.0 | 52,0 | 83 | 80 | 31 | 28 | 59 | 56 | 21 |
| 900.0 | 59,4 | 82 | 79 | 23 | 20 | 59 | 55 | 20 |
| 1000.0 | 63,1 | 80 | 77 | 17 | 14 | 57 | 54 | 20 |

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| Outerdiameter | 7.5/15.0 mm |
| Fire load | 1170 MJ/km |
|   | 0.326 kWh/m |
| Weight | 150 kg/km |
| Copper content | 76 |
| Tensile force | 300 N |