S/FTP Patch cord RJ45/RJ45 TM31 grey, UC900 SS27 FRNC Cat6A grey, Length: xxxx

\*\*tML® 24

tML® 24 is a patented, modular cabling system consisting of the three key components module, trunk cable and rack mount enclosure. The system components are 100 percent manufactured, pre-assembled and tested in Germany. They enable plug-and-play installation on site – especially in data centres, but also in industrial environments – within the shortest possible time. Heart of the system are the rear MPO/MTP® 24 fiber and Telco connectors, which can be used to connect at least six or twelve ports at a time. Depending on the module configuration, transfer rates of up to 400G are currently possible with SR4. The fibre optic and TP modules can be used together in a module carrier with a very high port density. The tde offers its tML® cabling system as a proven tML® standard system and in the highly innovative variants tML®Xtended and now tML® 32 for extreme scalability and very easy migration to higher transmission rates such as 40G, 100G, 200G and 400G.

\*\*tML® Xtended

tML® Xtended is a patented, modular cabling system consisting of the three key components module, trunk cable and rack mount enclosure. The system components are 100 percent manufactured, pre-assembled and tested in Germany. They enable plug-and-play installation on site – especially in data centres, but also in industrial environments – within the shortest possible time. Heart of the system are the rear MPO/MTP® 12 fiber and Telco connectors, which can be used to connect at least six or twelve ports at a time. Depending on the module configuration, transfer rates of up to 200G are currently possible with SR4. The fibre optic and TP modules can be used together in a module carrier with a very high port density. The tde offers its tML® cabling system as a proven tML® standard system and in the highly innovative variants tML® 24 system and now tML® 32 system for extreme scalability and very easy migration to higher transmission rates such as 40G, 100G, 200G and 400G.

\*\*tML® - tde Modular Link

tML® is a patented, modular cabling system consisting of the three key components module, trunk cable and rack mount enclosure. The system components are 100 percent manufactured, pre-assembled and tested in Germany. They enable plug-and-play installation on site – especially in data centres, but also in industrial environments – within the shortest possible time. Heart of the system are the rear MPO/MTP® and Telco connectors, which can be used to connect at least six or twelve ports at a time. Depending on the module configuration, transfer rates of up to 200G are currently possible with SR4. The fibre optic and TP modules can be used together in a module carrier with a very high port density. The tde offers its tML® cabling system as a proven tML® standard system and in the highly innovative variants tML® Xtended, tML® 24 System and now tML® 32 System for extreme scalability and very easy migration to higher transmission rates such as 40G, 100G, 200G and 400G.

\*\*tML® - TP Patch cords RJ45/RJ45

RJ45 Patch cord for the employment in the distribution frame or for the connection of terminals.

\*\*TECHNISCHE\_DATEN

|  |  |
| --- | --- |
| Cabletype | Draka UC900 SS27 Cat.7 |
| Configuration | 1:1 |
| Tests | Link Performance Tests, electrical test on short-circuit and visual final inspection |
|   | QS-Managementsystem ISO 9001, ISO 14001 and TL 9000 |

xxxx = Length in cm

\*\*\*Connectors

|  |  |
| --- | --- |
| Type | RJ45 (TM31), with integreted dwell lever protection |
| Shielding | shielded |
| Dimensions Boot | 34 mm length |
|   | 13.4 mm width |
| Manufacturer | Hirose (connector) |
|   | tde (boot) |
| QS-Management Systems Certification | ISO 9001 |
|   | ISO 14001 |
|   | TL 9000 |

\*\*\*TP Cable

|  |  |
| --- | --- |
| Standards | EN 50173-1 |
|   | EN 50288-4-2 |
|   | ISO/IEC 11801 |
|   | IEC 61156-6 |
| Flame resistance LSHF (FRNC) | IEC 60332-1 |
|   | IEC 60754-2 |
|   | IEC 61034 |
| Reaction to fire (Euroclasses) | Eca |

|  |  |
| --- | --- |
| Type | UC900 SS27 Cat.7 S/FTP |
| Conductor | stranded bare copper wire Ø 0.42 mm (AWG 27/7) |
| Insulation | Foam Skin Polyethylene, Ø 0.98 mm |
| Twisting | 2 cores to the pair |
| Pair screen | Al-laminated plastic foil |
| Cable lay up | 4 pairs (PiMF) to the core |
| Screen | Copper braid, tinned |
| Sheath | LSHF, grey |

|  |  |  |
| --- | --- | --- |
| Minimum bending radius | Without load | ≥ 25 mm |
|   | With load | ≥ 50 mm |
| Temperature range | During operation | -20°C up to +60°C |
|   | During installation | 0°C up to +50°C |

|  |  |  |
| --- | --- | --- |
| Loop resistance |   | ≤ 340 Ω/km |
| Resistance unbalance |   | ≤ 3% |
| Insulation resistance | 500 V | ≥ 2000 MΩkm |
| Mutual capacitance | at 800 Hz | Nom. 43 nF/km |
| Capacitance unbalance | (pair/ground) | ≤ 1500 pF/km |
| Mean characteristic impedance | 100 MHz | 100 ± 5 Ω |
| Nominal velocity of propagation |   | ca. 79% |
| Propagation delay |   | ≤ 427 ns/100m |
| Delay skew |   | ≤ 12 ns/100m |
| Test voltage | (DC, 1 min) core/core and core/screen | 1000 V |
| Transfer impedance | at 1 MHz | 10 mΩ/m |
|   | at 10 MHz | 10 mΩ/m |
|   | at 30 MHz | 30 mΩ/m |
| Coupling attenuation |   | 85 dB |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| F MHZ | Attenuation dB/10m | NEXT dB | PS- NEXT dB | ACR dB/100m | ELFEXT dB/100m | PS-ELFEXT dB/100m | Return loss dB |
| 1,0 | 0,3 | 90 | 87 | 90 | 80 | 77 | 23 |
| 4,0 | 0,6 | 90 | 87 | 89 | 80 | 77 | 24 |
| 10,0 | 1,0 | 90 | 87 | 89 | 80 | 77 | 25 |
| 16,0 | 1,3 | 90 | 87 | 89 | 76 | 73 | 25 |
| 20,0 | 1,4 | 90 | 87 | 89 | 74 | 71 | 25 |
| 31,2 | 1,8 | 90 | 87 | 88 | 70 | 67 | 25 |
| 62,5 | 2,6 | 90 | 87 | 87 | 64 | 61 | 23 |
| 100,0 | 3,2 | 87 | 84 | 84 | 60 | 57 | 21 |
| 125,0 | 3,6 | 85 | 82 | 81 | 58 | 55 | 20 |
| 155,5 | 4,0 | 84 | 81 | 80 | 56 | 53 | 19 |
| 175,0 | 4,3 | 83 | 80 | 79 | 55 | 52 | 19 |
| 200,0 | 4,6 | 82 | 79 | 77 | 54 | 51 | 18 |
| 250,0 | 5,1 | 81 | 78 | 76 | 52 | 49 | 18 |
| 300,0 | 5,6 | 80 | 77 | 74 | 50 | 47 | 17 |
| 450,0 | 6,9 | 77 | 74 | 70 | 47 | 44 | 17 |
| 600,0 | 7,9 | 75 | 72 | 67 | 44 | 41 | 17 |
| 750,0 | 8,7 | 73 | 70 | 64 | 42 | 39 |   |
| 900,0 | 9,7 | 72 | 69 | 62 | 41 | 38 |   |
| 1000,0 | 10,2 | 71 | 68 | 61 | 40 | 37 |   |

|  |  |
| --- | --- |
| Outerdiameter | 5.9 mm |
| Fire load | 349 MJ/km |
|   | 0.097 kWh/m |
| Weight | 39 kg/km |
| Copper content | 24 |
| Tensile force | 100 N |