Draka - UC900 SS23 Cat.7 S/FTP, LSHF bzw. LSHF-FR for industrial applications

\*\*UC Industrial cables

Especially in difficult industrial conditions electrical reserves are needed to ensure an operation of Industrial Ethernet in each case. The cable must withstand loads as follows:

• Chemical substances such as oils, solvents etc.
• Permanent movement or vibration such as the use in cable
  carriers
• Advanced ambient electromagnetic interference
• Both the cable and through the cable

\*\*TP Cable

\*\*TECHNISCHE\_DATEN

Application
Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10GBase-T
IEEE 802.5 16 MB; ISDN; TPDDI; ATM

Standards
EN 50173-1; EN 50288-4-1
ISO/IEC 11801; IEC 61156-5

Flame resistance
LSHF(LSOH): IEC 60332-1; IEC 60754-2; IEC 61034
LSHF-FR: IEC 60332-1; IEC 60332-3-24; IEC 60754-2; IEC 61034

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| --- | --- |
| Conductor | bare copper wire, Ø 0.56 mm (AWG 23) |
| Insulation | foamskin PE, Ø 1.4 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 | aluminum tape connected with sheath LSHF (LSOH), black, wall thickness 1.5 mm |
| Sheath LSHF-FR | alternative: aluminum tape connected with sheath LSHF-FR (LSOH-FR), black, wall thickness 1.5 mm |

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| Bending radius | without load | ≥ 40 mm |
|   | with load | ≥ 80 mm |
| Temperature range  | during operation | -20°C to +60°C |
|   | during installation | 0°C to +50°C |

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| Loop resistance |   | ≤ 165 Ω/km |
| Resistance unbalance |   | ≤ 2% |
| Insulation resistance | (500 V) | ≥ 5000 MΩkm |
| Mutual capacitance | at 800 Hz | Nom. 43 nF/km |
| Capacitance unbalance | (pair/ground) | ≤ 1500 pF/km |
| Characteristic impedance | (1-100) 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 |
|   | at 100 MHz | 60 mΩ/m |
| Coupling attenuation |   | 85 dB |

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| F MHZ | Attenuation dB/100m | NEXT dB | PS-NEXT dB | ACR dB/100m | PS-ACR dB/100m | ELFEXT dB/100m | PS-ELFEXT dB/100m | Return loss dB |
| 1 | 1.8 | 100 | 97 | 98 | 95 | 105 | 105 | 27 |
| 4 | 3.4 | 100 | 97 | 97 | 94 | 105 | 102 | 30 |
| 10 | 5.4 | 100 | 97 | 95 | 92 | 97 | 94 | 30 |
| 16 | 6.8 | 100 | 97 | 93 | 90 | 93 | 90 | 30 |
| 20 | 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 | 17.4 | 100 | 97 | 83 | 80 | 77 | 74 | 30 |
| 125 | 19.5 | 95 | 92 | 75 | 72 | 75 | 72 | 26 |
| 155.5 | 21.9 | 94 | 91 | 72 | 69 | 73 | 70 | 26 |
| 175 | 23.3 | 93 | 90 | 70 | 67 | 72 | 69 | 25 |
| 200 | 25.0 | 92 | 89 | 67 | 64 | 71 | 68 | 25 |
| 250 | 28.1 | 90 | 87 | 62 | 59 | 69 | 66 | 24 |
| 300 | 30.9 | 89 | 86 | 58 | 55 | 67 | 64 | 24 |
| 450 | 38.3 | 87 | 84 | 48 | 45 | 64 | 61 | 23 |
| 600 | 44.8 | 85 | 82 | 40 | 37 | 61 | 58 | 22 |
| 750 | 52.0 | 83 | 80 | 31 | 28 | 59 | 56 | 21 |
| 900 | 59.4 | 82 | 79 | 23 | 20 | 58 | 55 | 20 |
| 1000 | 63.1 | 80 | 77 | 17 | 14 | 57 | 54 | 20 |

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| Outerdiameter | 9.5 mm |
| Fire load | 878 MJ/km |
|   | 0.244 kWh/m |
| Weight | 98 kg/km (LSHF); 114 kg/km (LSHF-FR) |
| Copper content | 38 |
| Tensile force | 350 N |