Draka - UC900 SS23 Cat.7 S/FTP, PE 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

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

Power over Ethernet (PoE) / PoE+

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

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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 |
| Protective jacket | PE, black, for outdoor installation |

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| Bending radius | without load | ≥ 40 mm |
|   | with load | ≥ 80 mm |
| Temperature range | during operation | -55°C to + 60°C |
|   | during installation | -20°C to + 50°C |

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| --- | --- | --- |
| Loop resistance |   | ≤ 165 Ω/km |
| Resistance unbalance |   | ≤ 2% |
| Insulation resistance | (500V) | ≥ 5000 MΩ\*km |
| Mutual capacitance | at 800 Hz | Nom. 43 nF/km |
| Capacitance unbalance | (pair/ground) | ≤ 1500 pF/km |
| Mean characteristic impedance | (1-100) MHz | (100 ± 5) Ω |
|   | (100 - 250) MHz | (100 ± 18) Ω |
|   | (250 - 600) MHz | (100 ± 25) Ω |
| Nominal velocity of propagation |   | ca. 79% |
| Propagation delay |   | ≤ 427 ns/100m |
| Delay skew |   | ≤ 12ns/100m |
| Test voltage | (DC, 1 min) core/core and core/screen | 1000 V |
| Transfer impedance | at 1 MHz | 12 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 |
| 1.0 | 1.8 | 100 | 97 | 98 | 95 | 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 | 58 | 55 | 20 |
| 1000.0 | 63.1 | 80 | 77 | 17 | 14 | 57 | 54 | 20 |

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| Outerdiameter | 7.9 mm |
| Weight | 95 kg/km |
| Copper content | 38 |
| Tensile force | 340 N |