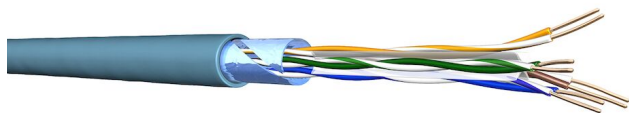


## UC500 23 Cat.6A U/UTP Z1S 4P LSHF-FR D<sub>ca</sub>

Data horizontal cable Cat.6A U/UTP



### CABLE FEATURES

Draka installation cable for indoor use UC500 23 Cat.6A U/UTP Z1S LSHF-FR D<sub>ca</sub>

- Copper data cable of Cat.6A for structured cabling with a bandwidth of 500 MHz.
- the cable is unshielded.
- The 4-pair simplex installation cable with 8 copper wires AWG23 is suitable for the connection of sockets, patch fields and modules, also with IDC technology, for installation in buildings, in ducts and flush mounting
- the product exceeds the requirements of EN50173-1; EN50288-11-1, ISO/IEC11801; IEC61156-5 and IEEE802.3af/at/bt.
- The jacket is made of halogen-free, flame-retardant material according to IEC60332-1; IEC60754-2; IEC61034; EN50399 and Euro fire class D<sub>ca</sub> s2 d2 a1.
- the product fulfills segregation class B according to EN50174 with a coupling attenuation of 40 dB.
- The cable is future-proof for all applications according to Class C, D, E and EA and suitable for the operation of PoE and PoE+ over a channel length of up to 100m. It is suitable for the following applications: Telephony, Ethernet, Fast Ethernet, Gigabit Ethernet and 10Gigabit Ethernet, 10BaseT, 100BaseT, 1000BaseT, 1GBase-T, 10GBaseT or up to 10,000 Mbit/s.

Latest version of this data sheet is available for download: [ProductFamily238902](#)

### GENERAL INFO

Primary (Campus), Secondary (Riser), Tertiary (Horizontal); IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; IEEE802.5; ISDN, TPDDI, ATM, CATV, IP Cameras, Broadband Video, SOHO-Cabling; Power over Ethernet (PoE) / Type 1-4

### CERTIFICATIONS AND DESIGN STANDARDS



IEC 61156-5

Datacom cables

## CABLE CONSTRUCTION

|                                       |                                                                 |
|---------------------------------------|-----------------------------------------------------------------|
| Conductor category                    | Class 1 = solid                                                 |
| Conductor material                    | Copper                                                          |
| Conductor surface                     | Bare                                                            |
| AWG size                              | 23                                                              |
| Core insulation material              | Polyethylene (PE)                                               |
| Nominal diameter over insulation [mm] | 1.4                                                             |
| Screen over stranding element         | None                                                            |
| Number of stranding elements          | 4                                                               |
| Identification of stranding elements  | Core colors: blue/white; orange/white; green/white; brown/white |
| Screen material                       | Not applicable                                                  |
| Screen over stranding                 | None                                                            |
| Material outer sheath                 | Halogenfree polymer                                             |
| Cable shape                           | Round                                                           |
| Nominal outer diameter [mm]           | 7.7                                                             |

## APPLICATION PROPERTIES

|                                     |                                                                 |            |    |
|-------------------------------------|-----------------------------------------------------------------|------------|----|
| Operation temperature (min) [°C]    | -20                                                             | (max) [°C] | 60 |
| Installation temperature (min) [°C] | 0                                                               | (max) [°C] | 50 |
| Bending radius (rule)               | Installation: 8 x outer diameter; Installed: 4 x outer diameter |            |    |

## FIRE PROPERTIES

|                                                         |                                      |
|---------------------------------------------------------|--------------------------------------|
| Flame retardant                                         | In accordance with EN/IEC 60332-3-24 |
| Halogen free                                            | acc. IEC/EN 60754-1/2                |
| Low smoke                                               | acc. IEC/EN 61034-2                  |
| Reaction-to-fire class (acc. EN 13501-6)                | Dca                                  |
| Smoke development class (acc. EN 13501-6)               | s2                                   |
| Euro class flaming droplets/particles (acc. EN 13501-6) | d2                                   |
| Euro class acidity (acc. EN 13501-6)                    | a1                                   |
| Fire load [MJ/km]                                       | 765                                  |
| DOP number                                              | 1001012                              |

## ELECTRICAL PROPERTIES

|                                              |          |
|----------------------------------------------|----------|
| Test voltage [kV]                            | 1        |
| Category                                     | 6A (IEC) |
| NVP value [%]                                | 67       |
| Propagation delay (max) [ns/100m]            | 535      |
| Delay skew (max) [ns/100m]                   | 20       |
| Characteristic impedance [Ohm]               | 100      |
| Nominal mutual capacitance [pF/m]            | 48       |
| Loop resistance [Ohm]                        | 154      |
| Coupling attenuation [dB]                    | 40       |
| Insulation resistance [MΩ·km]                | 5,000    |
| Transfer impedance at 10 MHz [mOhm/m]        |          |
| Segregation classification (acc. EN 50174-2) | b        |

## CAT 6A TRANSMISSION CHARACTERISTICS (AT 20°C)

| Frequency (MHz) | Attenuation (dB/100 m) | NEXT (dB) | PS-NEXT (dB) | ACR (dB/100 m) | PS-ACR (dB/100 m) | ACRF (dB/100m) | PS-ACRF (dB) | ANEXT (dB) | PS-ANEXT (dB) | AFEXT (dB) | PS-AFEXT (dB) | Return Loss (dB) |
|-----------------|------------------------|-----------|--------------|----------------|-------------------|----------------|--------------|------------|---------------|------------|---------------|------------------|
| 1               | 2.1                    | 75        | 72           | 73             | 70                | 67             | 64           | 70         | 67            | 70         | 67            | 20               |
| 4               | 3.8                    | 66        | 63           | 62             | 59                | 55             | 52           | 70         | 67            | 69.2       | 66.2          | 23               |
| 10              | 5.9                    | 60        | 57           | 54             | 51                | 47             | 44           | 70         | 67            | 61.2       | 58.2          | 25               |
| 16              | 7.5                    | 57        | 54           | 50             | 47                | 43             | 40           | 70         | 67            | 57.1       | 54.1          | 25               |
| 20              | 8.4                    | 56        | 53           | 48             | 45                | 41             | 38           | 70         | 67            | 55.2       | 52.2          | 25               |
| 31.2            | 10.5                   | 53        | 50           | 42             | 39                | 37             | 34           | 70         | 67            | 51.3       | 48.3          | 24               |
| 62.5            | 15                     | 48        | 45           | 33             | 30                | 31             | 28           | 68.6       | 65.6          | 45.3       | 42.3          | 22               |
| 100             | 19.1                   | 45        | 42           | 26             | 23                | 27             | 24           | 65.5       | 62.5          | 41.2       | 38.2          | 20               |
| 125             | 21.5                   | 44        | 41           | 22             | 19                | 25             | 22           | 64         | 61            | 39.3       | 36.3          | 19               |
| 155.5           | 24.1                   | 42        | 39           | 18             | 15                | 23             | 20           | 62.6       | 59.6          | 37.4       | 34.4          | 19               |
| 175             | 25.7                   | 42        | 39           | 16             | 13                | 22             | 19           | 61.9       | 58.9          | 36.3       | 33.3          | 18               |
| 200             | 27.6                   | 41        | 38           | 13             | 10                | 21             | 18           | 61         | 58            | 35.2       | 32.2          | 18               |
| 250             | 31.1                   | 38        | 35           | 7              | 4                 | 19             | 16           | 59.5       | 56.5          | 33.2       | 30.2          | 17.3             |
| 500             | 45.3                   | 34        | 31           | -11            | -14               | 13             | 10           | 55         | 52            | 27.2       | 24.2          | 17.3             |

## PRODUCT ORDER DATA

| Product name                          | Nominal outer diameter [mm] | Max. tensile strength during installation [kN] | Copper weight [kg/km] | SAP code | Packaging type | Standard packaging quantity | Gross weight |
|---------------------------------------|-----------------------------|------------------------------------------------|-----------------------|----------|----------------|-----------------------------|--------------|
| UC500 23 Cat.6A U/UTP Z1S LSHF-FR Dca | 7.7                         | 0.1                                            | 24                    | 60049103 | Drum           | 500                         | 29.91        |

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