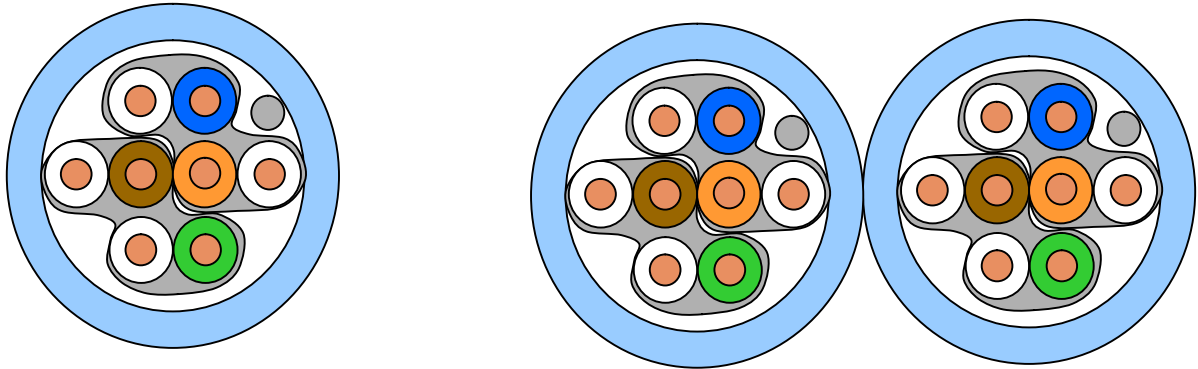




## UC500 S23 Cat.6a

### U/FTP



### Application

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

### Standards

EIA/TIA-568-B.2-10 Draft 5.0  
ISO/IEC 11801 2<sup>nd</sup> ed.  
EN 50173-1  
IEC 61156-5 (46C/783/CDV)

### Flame resistance

LSHF(FRNC): IEC 60332-1; IEC 60754-2; IEC 61034  
LSHF-FR(FRNC-C): IEC 60332-3-24, ; IEC 60754-2; IEC 61034

### Construction

|              |  |
|--------------|--|
| Conductor    | bare copper wire, Ø 0.56 mm (AWG23)  |
| Insulation   | Foamskin Polyethylene, Ø 1.35 mm   |
| Twisting     | 2 cores to the pair  |
| Pair screen  | <b>High Performance STP:</b> Al-laminated plastic foil, patented wrapping of two pairs each, drain wire AWG26 tinned |
| Cable lay up | 2x2 pairs to the core  |
| Sheath       | LSHF, LSHF-FR, blue RAL 5024   |



## UC500 S23 Cat.6a

### Mechanical properties

|                   |                     |                    |
|-------------------|---------------------|--------------------|
| Bending radius    | Installation        | 8 x Outer diameter |
|                   | Installed           | 4 x Outer diameter |
| Temperature range | During operation    | -20°C to + 60°C    |
|                   | During installation | 0°C to + 50°C      |

### Electrical properties

at 20°C± 5°C

|                                 |  |               |
|---------------------------------|--|---------------|
| Loop resistance                 |  | ≤ 176 Ω /km   |
| Resistance unbalance            |  | ≤ 2%          |
| Insulation resistance           | (500 V)                                | ≥ 2000 MΩ *km |
| Mutual capacitance              | at 800 Hz                              | Nom. 43 nF/km |
| Capacitance unbalance           | (pair/ground)                          | ≤ 1500 pF/km  |
| Characteristic impedance        | (1-100 MHz)                            | (100 ± 15)    |
|                                 | (100 - 250) MHz                        | (100 ± 18) Ω  |
| Nominal velocity of propagation |  | Ca. 79 %      |
| Propagation delay               | Nominal                                | < 450 ns/100m |
| Delay skew                      | Nominal                                | < 15 ns/100m  |
| Test voltage                    | (DC, 1 min) core/ core and core/screen | 1000 V        |
| Transfer impedance              | at 1 MHz                               | ≤ 50 mΩ /m    |
|                                 | at 10 MHz                              | ≤ 100 mΩ /m   |
|                                 | at 30 MHz                              | ≤ 200 mΩ /m   |
|                                 | at 100MHz                              | ≤ 1000 mΩ /m  |

### Electrical data (nominal)

(at 20°C)

| F<br>(MHZ) | Attenuation<br>(dB/100m) | NEXT<br>(dB) | PS-NEXT<br>(dB) | ACR<br>(dB/100m) | PS-ACR<br>(dB/100m) | ELFEXT<br>(dB/100m) | PS-ELFEXT<br>(dB/100m) | Return loss<br>(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                  |
| 400.0      | 38.3                     | 87           | 84              | 48               | 45                  | 64                  | 61                     | 23                  |
| 500.0      | 43.0                     | 86           | 83              | 43               | 40                  | 61                  | 58                     | 22                  |



## UC500 S23 Cat.6a

### Technical data

| Product code | Cable type             | Brand name                  | Outer diameter<br>mm | Fire load |       | Weight<br>kg/km | Copper content | Tensile force |
|--------------|------------------------|-----------------------------|----------------------|-----------|-------|-----------------|----------------|---------------|
|              |                        |                             |                      | MJ/km     | kWh/m |                 |                | N             |
| 1003514      | J-02YS(St)H 4x2x0.56   | UC500 S23 Cat.6a 4P LSHF    | 6.5                  | 501       | 0.139 | 44              | 24             | 100           |
| 1003515      |                        | UC500 S23 Cat.6a 4P LSHF-FR |                      |           |       |                 |                |               |
| 1014100      | J-02YS(St)H 2x4x2x0.56 | UC500 S23 Cat.6a 2x4P LSHF  | 6.5 x 13.1           | 1002      | 0.278 | 88              | 48             | 200           |