

# UC500 S23 Cat.6<sub>A</sub>

U/FTP



## 4.1. Cable

### Construction

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

### Mechanical properties

<b>Minimum bending radius without load</b>	8 x Outer diameter
<b>Minimum bending radius with load</b>	4 x Outer diameter
<b>Temperature range during operation</b>	-20°C up to + 60°C
<b>Temperature range during installation</b>	0°C up to + 50°C

### Electrical properties at 20°C

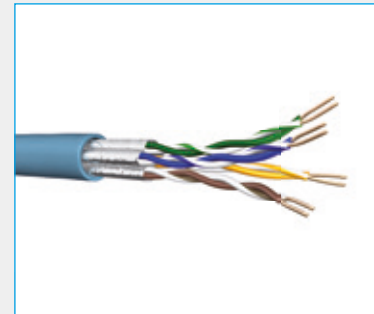
<b>DC loop resistance</b>	≤ 176 Ω /km
<b>Resistance unbalance</b>	≤ 2%
<b>Insulation resistance (500 V)</b>	≥ 2000 MΩ *km
<b>Capacitance at 800 Hz</b>	nom. 43 nF/km
<b>Capacitance unbalance (pair to ground)</b>	≤ 1500 pF/km
<b>Characteristic impedance (1-100 MHz)</b>	(100 ± 15) Ω
<b>Characteristic impedance (100 - 250 MHz)</b>	(100 ± 18) Ω
<b>Nominal velocity of propagation</b>	approx. 79 %
<b>Propagation delay</b>	≤ 450 ns/100m
<b>Delay skew</b>	≤ 15 ns/100m
<b>Test voltage (DC, 1 min) Core/Core</b>	1000 V
<b>Coupling attenuation</b>	≥ 55 dB

### Nominal transmission characteristics at 20°C

f	Attenuation	NEXT	PS-NEXT	ACR	PS-ACR	ELFEXT	PS-ELFEXT	Return loss
MHz	dB/100m	dB	dB	dB/100m	dB/100m	dB/100m	dB/100m	dB
1	1.8	100	97	98	95	105	105	-
10	5.4	100	97	95	92	97	94	30
100	17.4	100	97	83	80	77	74	30
300	30.9	89	86	58	55	67	64	24
400	38.3	87	84	48	45	64	61	23
500	43.0	86	83	43	40	61	58	22

### Technical data

Product code	Product name	Outer diameter	Fire load		Weight	Copper content	Max. tensile force during installation
			MJ/km	kWh/m			
		Mm			kg/km	kg/km	N
<b>6001113</b>	UC500 S23 Cat.6 <sub>A</sub> 4P LSHF	6.9	493	0.137	45	24	100
<b>6001555</b>	UC500 S23 Cat.6 <sub>A</sub> 2x4P LSHF	6.9 x 13.9	986	0.274	90	48	200



### 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  
 EN 50288-10 Draft  
 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