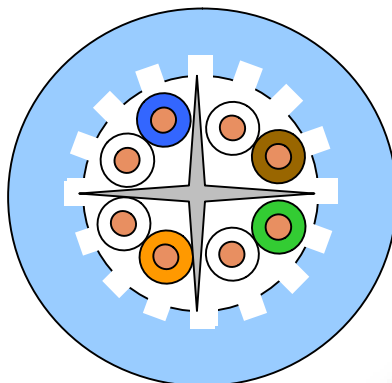


# UC500 23 Cat.6<sub>A</sub> U/UTP

## U/UTP AWG23/1



### Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)  
IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10GBase-T  
Power over Ethernet (PoE) / PoE+

### Standards

ISO/IEC 11801; IEEE 802.3at  
IEC 61156-5  
EN 50173-1  
EN 50288-11-1 Draft  
EIA/TIA-568-C.2

### Fire rating

LSHF: IEC 60332-1; IEC 60754-2; IEC 61034;

### Construction

|              |                                                                                         |
|--------------|-----------------------------------------------------------------------------------------|
| Conductor    | Bare copper wire Ø 0.6 mm (AWG23/1)                                                     |
| Insulation   | Polyolefin, Ø 1.1 mm (coloured + white)                                                 |
| Twisting     | 2 cores to the pair                                                                     |
| Cable lay up | 4 pairs to the cable core together with a separator                                     |
| Outer Sheath | Halogen free flame retardant material according to EN50290-2-27, Ø 8,8 mm, blue RAL5024 |

### Mechanical Properties

|                   |                     |                 |
|-------------------|---------------------|-----------------|
| Bending radius    | Without load        | ≥ 35 mm         |
|                   | With load           | ≥ 70 mm         |
| Temperature range | During operation    | -20°C to + 60°C |
|                   | During installation | 0°C to + 50°C   |

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## Electrical Properties

at 20°C

|                                 |                |               |
|---------------------------------|----------------|---------------|
| Loop resistance                 |                | ≤ 165 Ω/km    |
| Resistance unbalance            |                | ≤ 2%          |
| Insulation resistance           | 500V           | ≥ 5000 MΩkm   |
| Mutual capacitance              | 800 Hz         | nom. 50 nF/km |
| Capacitance unbalance           | Pair to ground | ≤ 1500 pF/km  |
| Mean characteristic impedance   | 100 MHz        | (100 ± 5) Ω   |
| Nominal velocity of propagation |                | ca. 65% c     |
| Propagation delay               |                | ≤ 535 ns/100m |
| Delay skew                      |                | ≤ 45 ns/100m  |
| Test voltage                    | DC, 1 min      | 1000 V        |
| Coupling attenuation            |                | ≥ 40 dB       |

## Transmission characteristics

acc. to Cat 6<sub>A</sub> at 20°C

| F<br>(MHZ) | Attenuation<br>(dB/100m) | RL<br>dB<br>Min. | NEXT<br>dB<br>min. | PSNEXT<br>dB<br>min. | ACR-F<br>dB/100m<br>min. | PSACR-F<br>dB/100m<br>min. | PSExNEXT<br>dB<br>min. | PSExELFEXT<br>dB<br>min. |
|------------|--------------------------|------------------|--------------------|----------------------|--------------------------|----------------------------|------------------------|--------------------------|
| 1.0        | 2.1                      | 20.0             | 75.3               | 72.3                 | 68.0                     | 65.0                       | 67.0                   | 67.0                     |
| 4.0        | 3.8                      | 23.0             | 66.3               | 63.3                 | 56.0                     | 53.0                       | 67.0                   | 66.2                     |
| 10.0       | 5.9                      | 25.0             | 60.3               | 57.3                 | 48.0                     | 45.0                       | 67.0                   | 58.2                     |
| 16.0       | 7.5                      | 25.0             | 57.2               | 54.2                 | 43.9                     | 41.9                       | 67.0                   | 54.1                     |
| 20.0       | 8.4                      | 25.0             | 55.8               | 52.8                 | 42.0                     | 39.0                       | 67.0                   | 52.2                     |
| 31.2       | 10.5                     | 23.6             | 52.9               | 49.9                 | 38.1                     | 35.1                       | 67.0                   | 48.3                     |
| 62.5       | 15.0                     | 21.5             | 48.4               | 45.4                 | 32.1                     | 29.1                       | 65.6                   | 42.3                     |
| 100.0      | 19.1                     | 20.1             | 45.3               | 42.3                 | 28.0                     | 25.0                       | 62.5                   | 38.2                     |
| 125.0      | 21.5                     | 19.4             | 43.8               | 40.8                 | 26.1                     | 23.1                       | 61.0                   | 36.3                     |
| 155.5      | 24.1                     | 18.8             | 42.4               | 39.4                 | 24.2                     | 21.2                       | 59.6                   | 34.4                     |
| 175.0      | 25.7                     | 18.4             | 41.7               | 38.7                 | 23.1                     | 20.1                       | 58.9                   | 33.3                     |
| 200.0      | 27.6                     | 18.0             | 40.8               | 37.8                 | 22.0                     | 19.0                       | 58.0                   | 32.2                     |
| 250.0      | 31.1                     | 17.3             | 39.3               | 36.3                 | 20.0                     | 17.0                       | 56.5                   | 30.2                     |
| 300.0      | 34.3                     | 17.3             | 38.1               | 35.1                 | 18.5                     | 15.5                       | 55.3                   | 28.7                     |
| 500.0      | 45.3                     | 17.3             | 34.8               | 31.8                 | 14.0                     | 11.0                       | 52.0                   | 24.2                     |

## Product order data

| Product code | Cable type    | Brand name            | Outer diameter | Fire load |       | Weight | Copper content | Tensile force |
|--------------|---------------|-----------------------|----------------|-----------|-------|--------|----------------|---------------|
|              |               |                       |                | MJ/km     | kWh/m |        |                |               |
| 60025517     | J-2YH 4x2x0.6 | UC500 23 U/UTP Cat.6A | 8.8            | 1040      | 0.290 | 80     | 25             | 100           |

## Product Code Table

| Product Description     | Product Code | PG Reference Code | PG Part Number  |
|-------------------------|--------------|-------------------|-----------------|
| UC500 23 C6A U/UTP LSHF | 60025517     | 60025517          | <b>60025517</b> |