

## DATA-LINE U/UTP, Kat. 6A - 500 MHz, 4P AWG 23/1



### Anwendung

Datenkabel zur Übertragung analoger und digitaler Signale im Frequenzbereich bis 500 MHz. Es ist konzipiert für die Verkabelung im Primär(Campus)-, Sekundär(Riser)- und Tertiär- (Horizontal)-bereich. LANs wie IEEE 802.3; 10GBase-T; FDDI, Breitband Video ISDN, ATM, Multimedia, PoE.

### Normen

EN 50288-6-1; IEC 61156-5; EN 50173-1; ISO/IEC 11801 2. Ausgabe IEC 60332-1; IEC 60754-2; EN 61034; IEC 61034, TIA/EIA 568, RoHS 2002/95/EG

### Aufbau

|                   |  |
|-------------------|--|
| Leiter Ø          | Kupfer, massiv, blank, AWG 23/1                          |
| Aderisolation     | PE   |
| Aderkennzeichnung | wsbl/bl, wsor/or, wsgn/gn, wsbr/br                       |
| Verseilung        | 4 Paare verseilt   |
| Schirmung         | keine  |
| Mantel            | FR-LSOH, gelb  |
| Außendurchmesser  | 6,5 mm   |
| Mantelwanddicke   | 0,6 mm   |
| Aufdruck          | DATA-LINE 500 MHz Kat.6A U/UTP<br>4P AWG24/1 FR-LSOH <m> |

### Elektrische Eigenschaften

|                             |                       |
|-----------------------------|-----------------------|
| Schleifenwiderstand         | max. 15 Ohm/100 m     |
| Isolationswiderstand        | nom. 5 GOhm*km @ 20°C |
| Wellenwiderst. 1-100 MHz    | 100 ±15 Ω             |
| Wellenwiderst. 100-250 MHz  | 100 ±22 Ω             |
| Wellenwiderst. 250-500 MHz  | 100 ±25 Ω             |
| Kopplungsämpf. (10 MHz)     | 45 dB                 |
| Betriebskapazität nom.      | nom. 50 nF/km         |
| Signalgeschwindigkeit (NVP) | ca. 0,67 c (67 %)     |
| Schirmdämpfung              | -                     |
| Prüfspannung                | 700 V/AC              |

### Thermische & Mechanische Eigenschaften

|                           |                 |
|---------------------------|-----------------|
| Temperaturbereich bewegt  | 0°C ... +50°C   |
| Temperaturbereich verlegt | -20°C ... +60°C |
| Biegeradius mehrmals      | 8xD             |
| Biegeradius einmalig      | 4xD             |
| Max. Zugkraft             | 90 N            |

### Application

Data cable for the transmission of analog and digital signals with frequencies up to 500 MHz. It is designed for the wiring in the primary (campus) - secondary (riser) - and tertiary (horizontal) sector. Usage in LANs such as IEEE 802.3; 10GBase-T, FDDI, Video Broadband ISDN, ATM, multimedia, PoE.

### Standards

EN 50288-6-1; IEC 61156-5; EN 50173-1; ISO/IEC 11801 2. Edition IEC 60332-1; IEC 60754-2; EN 61034; IEC 61034, TIA/EIA 568, RoHS 2002/95/EG

### Construction

|                  |  |
|------------------|--|
| Conductor Ø      | Copper, solid, bare, AWG 23/1                            |
| Core insulation  | PE   |
| Core ID          | whbl/bl, whor/or, whgn/gn, whbr/br                       |
| Stranding        | 4 Pairs stranded   |
| Shield           | none   |
| Sheath           | FR-LSOH, yellow  |
| Outer diameter   | 6,5 mm   |
| Sheath thickness | 0,6 mm   |
| Print            | DATA-LINE 500 MHz Kat.6A U/UTP<br>4P AWG24/1 FR-LSOH <m> |

### Electrical Properties

|                          |                       |
|--------------------------|-----------------------|
| Loop resistance          | max. 15 Ohm/100 m     |
| Insulation resistance    | nom. 5 GOhm*km @ 20°C |
| Loop resist. 1-100 MHz   | 100 ±15 Ω             |
| Loop resist. 100-250 MHz | 100 ±22 Ω             |
| Loop resist. 250-500 MHz | 100 ±25 Ω             |
| Coupling att. (10 MHz)   | 45 dB                 |
| Operating capacity nom.  | nom. 50 nF/km         |
| Signal speed (NVP)       | ca. 0,67 c (67 %)     |
| Screening attenuation    | -                     |
| Test voltage             | 700 V/AC              |

### Thermal & Mechanical Properties

|                          |                 |
|--------------------------|-----------------|
| Moving temperature range | 0°C ... +50°C   |
| Temperature range moved  | -20°C ... +60°C |
| Bending radius often     | 8xD             |
| Bending radius one time  | 4xD             |
| Max. tensile strength    | 90 N            |

## DATA-LINE U/UTP, Kat. 6A - 500 MHz, 4P AWG 23/1

### Übertragungseigenschaften

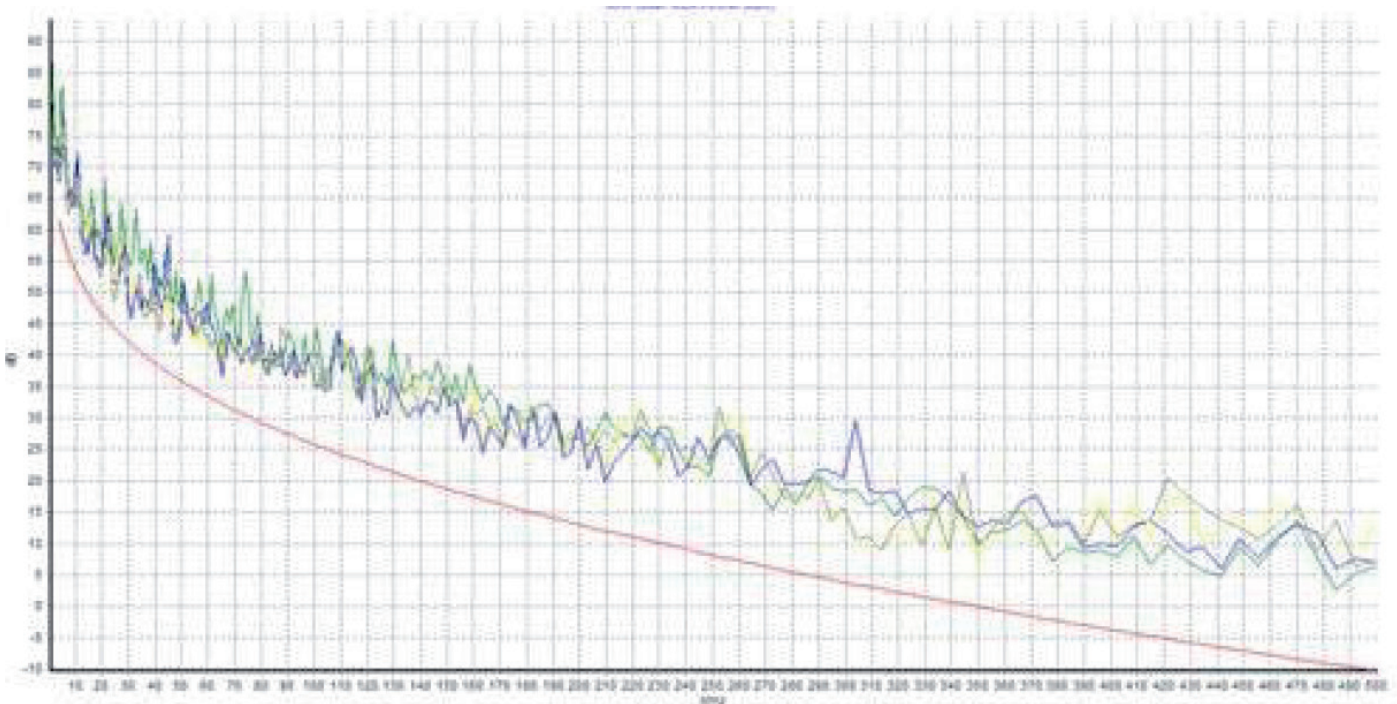
### Transmission Properties

| FREQUENCY [MHz] | ATTENUATION [dB/100 m] | NEXT [dB] | ACR [dB/100 m] | RL [dB] | EL-FEXT [dB/100 m] |
|-----------------|------------------------|-----------|----------------|---------|--------------------|
| 1               | 1,8                    | 87        | 85,2           | 23      | 85                 |
| 4               | 3,5                    | 76        | 72,5           | 27      | 72                 |
| 10              | 5,6                    | 72        | 66,4           | 30      | 63                 |
| 16              | 7,0                    | 70        | 63,0           | 30      | 60                 |
| 20              | 7,9                    | 68        | 60,1           | 30      | 58                 |
| 100             | 18,2                   | 63        | 44,8           | 29      | 43                 |
| 155             | 22,9                   | 60        | 37,1           | 28      | 40                 |
| 200             | 26,0                   | 57        | 31,0           | 26      | 38                 |
| 300             | 32,5                   | 55        | 22,5           | 25      | 36                 |
| 400             | 35,7                   | 54        | 18,3           | 23      | 35                 |
| 500             | 39,8                   | 53        | 13,2           | 22      | 34                 |

Die angegebenen Leistungsdaten sind typische Meßwerte. / The performance data are typical measured values.

### ACR Powersum [dB/100 m]

### ACR Powersum [dB/100 m]



### Bestellinformation

### Order Information

| Art. Nr. | Ausführung / Type           | Lieferform / Packaging | Gewicht / Weight | CU-Zahl | Brandlast / fire load |
|----------|-----------------------------|------------------------|------------------|---------|-----------------------|
| 02224001 | 4x2xAWG23/1 Kat. 6A FR-LSOH | 1000 m                 | 52 kg            | 20      | 420 MJ/km             |