

# BiTLAN® U/UTP cat.6 350 MHz

## LSOH

Halogen-free, data transmission cable



BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat. 6 350MHz LSOH



internal application



EN 60332-1-2



data transmission



halogen-free  
EN 60754



low smoke emission  
EN 61034

## Technical data:

### Thermal parameters

#### Temperature range:

operating temperature: -30°C to +70°C  
min. installation temp: -10°C

### Electrical parameters

**Conductor diameter:** 0,54±0,015mm

**Insulated core diameter:** 0,99±0,03mm

**DC loop resistance at 20°C (max):** 165Ω/km

**Insulation resistance (min):** 5GΩxkm

**Resistance unbalance within a pair:** ≤2%

**Mutual capacitance at 1 kHz:** 50±5nF/km

**Capacitance unbalance pair to ground at 1kHz (max):** 1600pF/km

**Nominal voltage:** 150V

**Test voltage at 1min:**

AC 50 Hz: 700V

DC: 1000V

**Characteristic impedance at 100MHz:** 100±5Ω

**NVP value:** 67%

**Return loss dB (min):**

f = 4+10MHz: 20+5xlog<sub>10</sub>(f)

f = 10+20MHz: 25

f = 20+350MHz: 25-7xlog<sub>10</sub>(f/20)

### Mechanical parameters

#### Bending radius:

during operation: ≥ 6xØ

during installation: ≥ 8xØ

## Design:

#### Conductors:

solid round copper conductors

#### Insulation:

special polyolefin compound

#### Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

#### Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

#### Outer sheath:

special LSOH compound

#### Outer sheath colour:

orange RAL 2003, other colours available on customer's request

**Marking:** BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat.6 350MHz LSOH

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

[www.bitner.com.pl](http://www.bitner.com.pl) meters

## Application:

BiTLAN U/UTP cat.6 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences.

Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

## Packaging:



Box  
(305m)



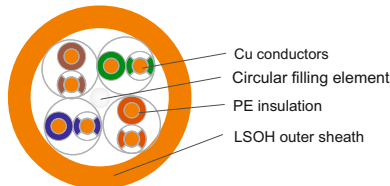
Pallet 9150m  
(30x305m)



Spool/Coil  
500m



Spool/drum  
1000m



Cu conductors

Circular filling element

PE insulation

LSOH outer sheath

| Cat. no. | Construction        | Cu wire     | Outer diameter*<br>[mm] | CPR<br>classification<br>EN 50575 | Cable weight<br>[kg] | Bandwidth<br>[MHz] |
|----------|---------------------|-------------|-------------------------|-----------------------------------|----------------------|--------------------|
| TI0049   | U/UTP cat.6<br>LSOH | 23AWG(0,54) | 5,8                     | Dca                               | 38                   | 350                |

\*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

# BiTLAN<sup>®</sup> U/UTP cat.6 350 MHz

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Requirements of teletransmission data:

| Frequency<br>MHz         | 1    | 4    | 10   | 16   | 20   | 30   | 45   | 60   | 80   | 100  | 120  | 150  | 180  | 200  | 220  | 250  | 280  | 300  | 320  | 350  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Attenuation<br>≤ dB/100m | 2,1  | 3,8  | 6,0  | 7,6  | 8,5  | 10,5 | 13,0 | 15,1 | 17,7 | 19,9 | 22,0 | 24,8 | 27,5 | 29,1 | 30,7 | 33,0 | 35,2 | 36,6 | 38,0 | 40,0 |
| NEXT<br>≥ dB             | 66,0 | 65,3 | 59,3 | 56,2 | 54,8 | 52,1 | 49,5 | 47,6 | 45,8 | 44,3 | 43,1 | 41,7 | 40,5 | 39,8 | 39,2 | 38,3 | 37,6 | 37,1 | 36,7 | 36,1 |
| PS NEXT<br>≥ dB          | 64,0 | 63,3 | 57,3 | 54,2 | 52,8 | 50,1 | 47,5 | 45,6 | 43,8 | 42,3 | 41,1 | 39,7 | 38,5 | 37,8 | 37,2 | 36,3 | 35,6 | 35,1 | 34,7 | 34,1 |
| ELFEXT<br>≥ dB/100m      | 66,0 | 58,0 | 50,0 | 45,9 | 44,0 | 40,5 | 36,9 | 34,5 | 32,0 | 30,0 | 28,4 | 26,5 | 24,9 | 24,0 | 23,1 | 22,0 | 21,0 | 20,5 | 19,9 | 19,1 |
| PS ELFEXT<br>≥ dB/100m   | 64,0 | 55,0 | 47,0 | 42,9 | 41,0 | 37,5 | 33,9 | 31,4 | 28,9 | 27,0 | 25,4 | 23,5 | 21,9 | 21,0 | 20,1 | 19,0 | 18,0 | 17,5 | 16,9 | 16,1 |
| RL<br>≥ dB               | 20,0 | 23,0 | 25,0 | 25,0 | 25,0 | 23,8 | 22,5 | 21,7 | 20,8 | 20,1 | 19,5 | 18,9 | 18,3 | 18,0 | 17,7 | 17,3 | 17,0 | 16,8 | 16,6 | 16,3 |

Transmission parameters graphs - examples of measurement results

