

# BiTLAN<sup>®</sup> U/UTP cat.6A 500 MHz



## LSOH Halogen-free, data transmission cable

BITNER BiTLAN U/UTP 4P cat. 6A 500MHz LSOH



internal application



EN 60332-1-2



halogen-free  
EN 60754



low smoke emission  
EN 61034



data transmission

### Technical data:

#### Thermal parameters:

##### Temperature range:

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

#### Electrical parameters:

**Conductor diameter:**  $0,6 \pm 0,015$  mm

**Insulated core diameter:**  $1,05 \pm 0,03$  mm

**DC loop resistance at 20 °C (max):**

145 Ω/km

**Insulation resistance (min):** 5 GΩ x km

**Resistance unbalance within a pair:**  $\leq 2 \%$

**Mutual capacitance at 1 kHz:**  $50 \pm 5$  nF/km

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

**Nominal voltage:** 150 V

**Test voltage at 1 min:**

AC 50 Hz: 700 V

DC: 1000 V

**Characteristic impedance at 100 MHz:**

$100 \pm 5 \Omega$

**NVP value:** 69 %

**Return loss dB (min):**

$f = 4 + 10$  MHz:  $20 + 5 \times \log_{10}(f)$

$f = 10 + 20$  MHz: 25

$f = 20 + 250$  MHz:  $25 - 7 \times \log_{10}(f/20)$

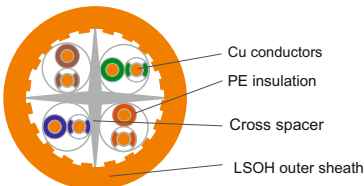
$f = 250 + 500$  MHz: 17,3

#### Mechanical parameters:

##### Bending radius:

during operation:  $\geq 6 \times \varnothing$

during installation:  $\geq 8 \times \varnothing$



### 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 cross spacer

#### Outer sheath:

special LSOH compound

#### Outer sheath colour:

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

**Marking:** BITNER BiTLAN U/UTP cat.6A 500MHz 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.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals with bitrate up to 10Gb/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:



plywood reel  
500m



plywood reel/  
drum  
1000m

Cat. no	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10077	U/UTP cat.6A LSOH	22AWG (0,6)	7,8	Fca	61	500

\*Outer diameter tolerance: +/-5%

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

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### Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation $\leq$ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT $\geq$ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT $\geq$ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT $\geq$ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT $\geq$ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL $\geq$ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

### Transmission parameters graphs - examples of measurement results

