

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



## LSOH Halogen-free, data transmission cable, screened

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



### Technical data:

#### Thermal parameters:

##### Temperature range:

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

#### Electrical parameters:

**Conductor diameter:** 0,57 ± 0,015 mm

**Insulated core diameter:** 1,12 ± 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:** ≤ 2 %

**Mutual capacitance at 1 kHz:** 50 ± 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 ± 5 Ω

**NVP value:** 69 %

**Return loss (min):**

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

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 × log<sub>10</sub>(f/20)

f = 250 + 500 MHz: 17,3

**Coupling attenuation within the range**

**of 30 + 100 MHz (min.):** 70 dB

**Transfer impedance at 10 MHz (max):**

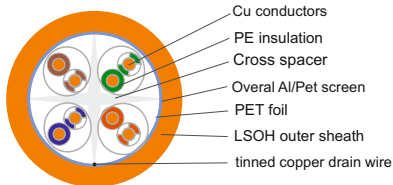
50 mΩ/m.

#### Mechanical parameters:

##### Bending radius:

during operation: ≥ 6 × Ø

during installation: ≥ 8 × Ø



### 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

#### Screen:

aluminium backed polyester tape and tinned copper drain wire

#### Outer sheath:

special LSOH compound

#### Outer sheath colour:

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

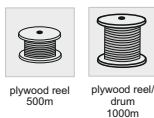
Marking: BITNER BiTLAN F/UTP 4P cat.6A 500MHz LSOH EN 50173-1

ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

### Application:

BITNER F/UTP 4P 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. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. 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 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	O.D. [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0078	F/UTP cat.6A LSOH	23AWG	8,0	Dca	62	500

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

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**LSOH** Halogen-free, data transmission cable, screened

## Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ 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 ≥ 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 ≥ 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 ≥ 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 ≥ 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 ≥ 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

