

# BiTLAN<sup>®</sup> S/FTP cat.6A 500 MHz

RoHS 2015/863/EU



LVD 2014/35/EU

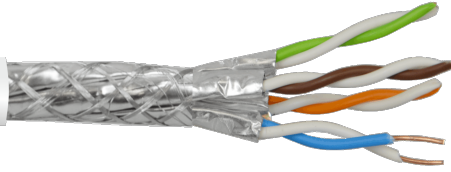
CPR

CPR 305/2011

24 months warranty

Data transmission cable, screened

BITNER BiTLAN S/FTP 4P cat.6A 500MHz



internal application



EN 60332-1-2



data transmission

## Technical data:

### Thermal parameters:

#### Temperature range:

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

### Electrical parameters:

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

**Insulated core diameter:** 1,3 ± 0,03 mm

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

**Insulation resistance (min):** 2 GΩ x km

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

**Mutual capacitance at 1 kHz:** 45 ± 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:** 77 %

**Return loss dB (min):**

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

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x 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):**

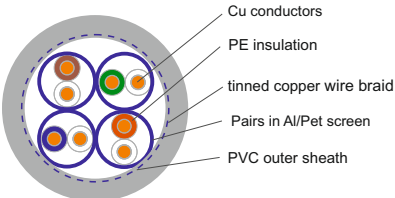
100 mΩ/m

### Mechanical parameters:

#### Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



## Design:

### Conductors:

solid round copper conductors

### Insulation:

special polyolefin compound

### Core identification:

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

### Core arrangement:

cores twisted in pairs, screened pairs twisted together

### Screen 1:

aluminium backed polyester tape on every pair

### Screen 2:

tinned copper wire braid

### Outer sheath:

PVC compound

### Outer sheath colour:

grey RAL 7035, other colours available on customer's request

**Marking:** BITNER BiTLAN S/FTP 4P cat.6A 500MHz 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 S/FTP cat.6A 500MHz cables are applicable to computer networks with operating frequency band up to 500 MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet and collective screen 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 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] |
|----------|--------------|---------|----------------------|-----------------------------|-------------------|-----------------|
| TI0076   | S/FTP cat.6A | 23AWG   | 7,8                  | Eca                         | 63                | 500             |

\*Outer diameter tolerance: +/-5%

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

# BiTLAN<sup>®</sup> S/FTP cat.6A 500 MHz

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 $\leq$ 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

