

# BiTLAN<sup>®</sup>F/UTP cat.6 outdoor

## 350 MHz

Data transmission cable, screened,  
suitable for external applications

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



underground installation



external application



data transmission



UV resistance



oil resistant  
EN 60811-2-1

## Technical data:

### Thermal parameters

#### Temperature range:

operating temperature: -30 °C to 80 °C  
min. installation temp: -10 °C

### Electrical parameters

**Conductor diameter:** 0,54±0,015mm

**Insulated core diameter:** 1,06 ± 0,03 mm

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

165 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 50Hz: 700 V

DC: 1000 V

**Characteristic impedance at 100 MHz:**

100 ± 5 Ω

**NVP value:** 69 %

**Return loss dB (min):**

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

f = 10 + 20 MHz: 25

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

**Coupling attenuation within the range of 30 + 100 MHz (min.):** 55 dB

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

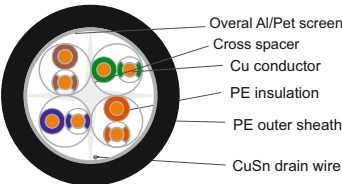
100 mΩ/m.

### 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-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 PE compound

#### Outer sheath colour:

black

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

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<sup>®</sup>F/UTP cat.6 outdoor 350MHz 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. Additional collective Al/Pet screen with CuSn drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within 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. UV resistant outer sheath enables external application. 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]
TI0066	F/UTP cat.6 outdoor	23AWG(0,54)	8,0	Fca	51	350

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	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation $\leq$ 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 $\geq$ 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 $\geq$ 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 $\geq$ 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 $\geq$ 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 $\geq$ 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

