

# BiTLAN<sup>®</sup> F/UTP cat.5e 200 MHz



Data transmission cable, screened



## Technical data:

### Thermal parameters:

#### Temperature range:

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

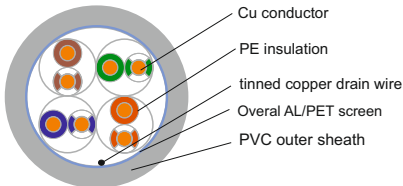
### Electrical parameters:

**Conductor diameter:** 0,5 ± 0,015 mm  
**Insulated core diameter:** 0,92 ± 0,03 mm  
**DC loop resistance at 20 °C (max):** 190 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 dB (min):**  
f = 4 + 10 MHz: 20 + 5 x log<sub>10</sub>(f)  
f = 10 + 20 MHz: 25  
f = 20 + 200 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:

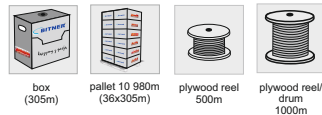
**Conductors:** solid round copper conductors  
**Insulation:** special polyolefin compound  
**Core identification:** wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn  
**Core arrangement:** cores twisted in pairs, pairs twisted together  
**Screen:** Al/Pet screen with tinned copper drain wire  
**Outer sheath:** PVC compound  
**Outer sheath colour:** grey RAL 7035, other colours available on customer's request

**Marking:** BITNER BiTLAN F/UTP 4x2x24AWG(0,5) cat.5e 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

## Application:

BiTLAN F/UTP cat.5e 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/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 classified according to EN 50575 (CPR).

## Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
Tl0007	F/UTP cat.5e	24AWG	6,1	Eca	38	200

\*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	30	45	60	80	100	120	130	155	175	200
Attenuation ≤ dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT ≥ dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT ≥ dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT ≥ dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT ≥ dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

## Transmission parameters graphs - examples of measurement results

