

BiTLAN® F/FTP cat.6A 500 MHz

Data transmission cable, screened

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



LVD 2014/35/EU



CPR 305/2011



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

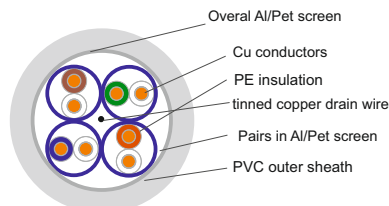
Electrical parameters:

Conductor diameter: $0,54 \pm 0,015$ mm
Insulated core diameter: $1,29 \pm 0,03$ mm
DC loop resistance at 20 °C (max):
145 Ω/km
Insulation resistance (min): $2 \text{ G}\Omega \times \text{km}$
Resistance unbalance within a pair: $\leq 2 \%$
Mutual capacitance at 1 kHz: $45 \pm 5 \text{ nF/km}$
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: 77 %
Return loss dB (min):
 $f = 4 + 10 \text{ MHz: } 20 + 5 \times \log_{10}(f)$
 $f = 10 + 20 \text{ MHz: } 25$
 $f = 20 + 250 \text{ MHz: } 25 - 7 \times \log_{10}(f/20)$
 $f = 250 + 500 \text{ MHz: } 17,3$
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: $\geq 6 \times \varnothing$
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, screened pairs twisted together
Screen 1: aluminium backed polyester tape on every pair
Screen 2: aluminium backed polyester tape, 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/FTP 4P cat.6A 500MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/FTP cat.6A 500MHz 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 individual and collective Al/Pet screens 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:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0075	F/FTP cat.6A	23AWG	8,0	Eca	63	500

*Outer diameter tolerance: $\pm 0,5\%$

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

BiTLAN[®] F/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 ≤ 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

