

BiTLAN[®] F/FTP cat.6A 500 MHz

LSOH

Halogen-free, data transmission cable, screened

RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



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



internal application



EN 60332-1-2

halogen-free
EN 60754low smoke emission
EN 61034

data transmission

Technical data:

Thermal parameters:

Temperature range:

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

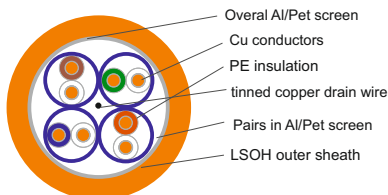
Electrical parameters:

Conductor diameter: $0,54 \pm 0,015$ mm
Insulated core diameter: $1,3 \pm 0,03$ mm
DC loop resistance at 20 °C (max):
 $145 \Omega/\text{km}$
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):
 $100 \text{ m}\Omega/\text{m}$

Mechanical parameters:

Bending radius:

during operation: $\geq 6 \times \varnothing$
during installation: $\geq 8 \times \varnothing$



Design:

Conductors:

solid round copper conductors

Insulation:

special foam-skin polyolefin compound

Core identification:

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

Core arrangement:

cores twisted in pairs, individually 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:

special LSOH compound

Outer sheath colour:

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

Marking: BITNER BiTLAN F/FTP 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:

BiTLAN F/FTP 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 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 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
500mplywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0080	F/FTP cat.6A LSOH	23AWG	8,0	Dca	63	500

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

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	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

