

**UNITRONIC® LAN 500 F/FTP Cat. 6A LSZH  
4x2xAWG 23/1**
**DB2170196**  
 valid from: 20.02.2012

**Application**

Data cable for transmission of digital and analog signals up to 500 MHz. The cable is designed for horizontal cabling systems as connection between a floor distribution and the telecommunication outlets (TO's). According to TIA/EIA-568-B.2-10, ISO/IEC 11801 2nd edition, EN 50173, EN 50288-5-1, IEC 61156-5. For application in LANs like IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; FDDI; ISDN; ATM; Cable Sharing.

**Design**

Conductor	bare copper AWG 23/1, massive
Insulation	Skin-Foam-Skin PE, ca. 1.32 mm outer Ø
Core identification code	acc. to IEC 708-1
Pair screening	plastic laminated aluminum foil with 1 drain wire
Stranding	4 pairs, stranded to bundle
Screening	Plastic laminated aluminum foil
Outer sheath	halogen free compound (FRNC), orange similar to RAL 2003, outer Ø: ca. 7.4 mm

**Electrical properties at 20° C**

Resistance (loop)	max. 150 Ω/km, acc. to VDE 0812
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	nom. 45 nF/km
Characteristic impedance	100 Ω ±5 Ω (at 100 MHz)
Velocity of propagation	ca. 0.78 c
Signal propagation time	<425 ns/100m
Delay difference	<10 ns/100m
Screening attenuation	>55 dB (up to 500 MHz)
Test voltage	700 V (AC)

**Transmission properties**

f [MHz]	Attenuation nom. [dB/100m]	NEXT nom. [dB]	ACR nom. [dB/100m]	ELFEXT nom. [dB/100m]	RL nom. [dB]
<b>1</b>	1.9	100	98.1	103	24
<b>4</b>	3.5	100	96.5	103	28
<b>10</b>	5.6	100	94.4	98	30
<b>16</b>	7.0	100	93.0	96	30
<b>20</b>	7.9	100	92.1	95	30
<b>31,25</b>	9.8	100	90.2	91	30
<b>62,5</b>	14.2	100	85.8	87	30
<b>100</b>	17.8	98	80.2	80	30
<b>155</b>	22.1	95	72.9	78	29
<b>200</b>	25.1	93	67.9	72	28
<b>300</b>	31.0	88	57.0	70	26
<b>400</b>	36.4	85	48.6	68	24
<b>500</b>	41.8	83	41.2	62	23

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Minimum bending radius	during installation: 8 x cable Ø static: 4 x cable Ø
Permissible temperature range	during installation: 0° C up to +50° C static: -20° C up to +60° C
Flame propagation	flame retardant acc. IEC 60332-3-24, IEC 60332-1-2
Smoke gas test	acc. to EN 50267-2-1/EN 50267-2-2, IEC 60754-1/IEC 60754-2, IEC 61034/EN 61034
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.