UNITRONIC® LAN 500 S/FTP Cat. 6_A Y 4x2xAWG 23/1

DB2170143
valid from: 21.03.2012

Application

Data cable for transmission of digital and analog signals up to 500 MHz. The cable is designed for horizontal cablings sub-systems as connection between a floor distribution and the telecommunication outlets (TO's). According to TIA/EIA-568, ISO/IEC 11801 2nd edition, EN 50173, EN 50288-5-1, prEN 50288-10:2010, IEC 61156-5. For application in LANs like IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; FDDI; ISDN; ATM; Cable sharing; PoE suitable.

Design

Conductor	bare copper AWG 23/1, massive
Insulation	Skin-Foam-Skin PE, ca. 1.33 mm outer Ø
Core identification code	acc. to IEC 708-1
Pair screening	plastic laminated aluminium foil
Stranding	4 pairs, stranded to bundle
Screening	braid of copper wire, tinned wire 0,10 mm
Outer sheath	PVC, light ivory similar to RAL 1015, outer Ø: ca. 7.3 mm

Electrical properties at 20° C

Resistance (loop)	max. 160 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. 0.79 c
Signal propagation time	<425 ns/100m
Delay difference	<15 ns/100m
Screening attenuation	>60 dB (up to 600 MHz)
Test voltage	700 V (AC)

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Transmission properties

f [MHz]	Attenuation nom. [dB/100m]	NEXT nom. [dB]	ACR nom. [dB/100m]	ELFEXT nom. [dB/100m]	RL nom. [dB]
1	1.9	100	98	95	25
4	3.4	100	97	93	28
10	5.5	100	94	92	30
16	6.9	100	93	90	30
20	7.7	100	92	89	30
31,25	9.7	100	90	85	30
62,5	14.0	98	84	81	30
100	17.6	95	77	76	30
155	23.0	92	69	72	30
200	25.3	90	65	70	29
300	31.2	87	56	67	27
400	36.3	84	48	63	26
500	40.4	80	40	60	24
550	44.1	77	33	58	23

Mechanical and thermal properties

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. to IEC 60332-1-2
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.

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