

**UNITRONIC® LAN 1500 S/FTP Cat. 7<sub>A</sub> LSZH  
4x2xAWG 22/1**DB2170199  
valid from: 23.02.2012**Application**

Data cable for transmission of digital and analog signals up to 1500 MHz. It is designed for horizontal cabling subsystems as connection between a floor distribution and the telecommunication outlets (TO's). Acc. to TIA/EIA-568, ISO/IEC 11801 2<sup>nd</sup> edition, EN 50173, EN 50288-4-1, IEC 61156-5. For application in LANs like IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; IEEE 802.3at: suitable for PoE; FDDI; ISDN; ATM; Cable Sharing.

**Design**

Conductor	bare copper AWG 22/1, massive
Insulation	Skin-Foam-Skin PE, ca. 1.58 mm outer Ø
Core identification code	acc. to IEC 708-1
Pair screening	plastic laminated aluminum foil
Stranding	4 pairs, stranded to bundle
Screening	braid of copper wires, tinned wire ca. 0,10 mm
Outer sheath	halogen free compound (FRNC), yellow similar to RAL 1021, outer Ø: ca. 8.3 mm

**Electrical properties at 20° C**

Resistance (loop)	max. 120 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	<8 ns/100m
Screening attenuation	>85 dB (up to 1000 MHz)
Test voltage	700 V (AC)

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f [MHz]	Attenuation nom. [dB/100m]	NEXT nom. [dB]	ACR nom. [dB/100m]	ELFEXT nom. [dB/100m]	RL nom. [dB]
1	1.7	105	103	105	24
4	3.2	105	102	103	28
10	5.0	105	100	100	30
16	6.3	105	99	98	30
20	7.0	105	98	95	30
31.25	8.9	105	96	93	30
62.5	13.0	105	92	90	30
100	16.2	102	86	85	30
155	21.2	100	79	82	29
200	23.0	98	75	78	28
300	28.5	96	67	70	27
500	36.2	91	55	63	26
600	40.7	88	47	60	25
1000	53.1	78	25	52	21
1200	57.9	76	18	42	19
1500	63.2	72	9	30	14

**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. 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.