

**UNITRONIC® LAN 250 U/UTP Cat. 6 Y  
4x2xAWG 24/1****DB2170186**  
valid from: 09.02.2012**Application**

Data cable for transmission of digital and analog signals up to 250 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-2-1, ISO/IEC 11801 2<sup>nd</sup> edition, EN 50173, EN 50288-6-1, IEC 61156-5. For application in LANs like IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T; FDDI; ISDN; ATM.

**Design**

Conductor	bare copper AWG 24/1, massive
Insulation	PE, ca. 0.98 mm core Ø
Core identification code	acc. to IEC 708-1
Stranding	4 pairs, stranded to bundle with stranding cross
Outer sheath	PVC, light ivory similar to RAL 1015, outer Ø: ca. 6.3 mm

**Electrical properties at 20° C**

Resistance (loop)	max. 190 Ω/km, acc. to VDE 0812
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	nom. 50 nF/km
Characteristic impedance	100 Ω ±5 Ω (at 100 MHz)
Velocity of propagation	ca. 0.67 c
Signal propagation time	<510 ns/100m
Delay difference	<20 ns/100m
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]
1	1.8	87	85.2	85	23
4	3.5	76	72.5	72	27
10	5.6	72	66.4	63	30
16	7.0	70	63.0	60	30
20	7.9	68	60.1	58	30
100	18.2	63	44.8	43	29
155	22.9	60	37.1	40	28
200	26.0	57	31.0	38	26
300	32.5	55	22.5	36	24
350	35.2	54	18.8	35	22

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