

**UNITRONIC® LAN 250 F/UTP Cat. 6 LSZH  
4x2xAWG 24/1**
**DB2170194**  
 valid from: 20.06.2017

## Application

Data cable for transmission of digital and analog signals up to 250 MHz. The cable is designed for horizontal cabling subsystems as connection between a floor distribution and the telecommunication outlets (TO's). According to TIA/EIA-568-B.2-10, ISO/IEC 11801 2<sup>nd</sup> edition, EN 50173, EN 50288-5-1, IEC 61156-5 Ed. 3.0. For applications 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, approx. 1.14 mm core Ø
Core identification code	acc. to IEC 708-1
Stranding	4 pairs, stranded to bundle with stranding cross
Screening	plastic laminated aluminum foil with drain wire
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. 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	<480 ns/100m
Delay difference	<25 ns/100m
Screening attenuation	>40 dB (up to 250 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]
1	1.8	85	83.2	90	24
4	3.5	80	76.5	80	27
10	5.4	75	69.6	73	30
16	6.9	70	63.1	68	30
20	7.8	67	59.2	66	30
31.25	9.8	65	55.2	63	30
62,5	13.9	64	50.1	59	30
100	17.5	62	44.5	54	28
155	21.8	57	35.2	52	26
200	24.9	55	30.1	48	24
250	29.5	52	22.5	46	22
350	33.0	50	17.0	44	21

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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 60332-3-24, IEC 60332-1-2
Smoke gas test	acc. to to EN 50267-2-1/ EN 50267-2-2, IEC 60754-1/IEC 60754-2, IEC 61034/EN 61034
EU-directives	Dangerous and forbidden substances acc. to RoHS directive (2011/65/EU) are not allowed to the manufacturing.