

3801501	DATA SHEET	
Valid from: 27.09.2023	UNITRONIC® LAN 250 UTP CAT.6 4x2x23AWG/1	

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Drawing not to scale and does not represents detailed image of the respective product

1. Application

Data transfer for horizontal network backbone for wiring office, administration and development buildings. Cable length run should not exceed 100m in accordance to ANSI/TIA-568-C.2, ISO/IEC 11801, EN 50173 (90m in the duct + 10m in the working area). Transmission rate up to 250MHz

2. Reference Standard (s)

ANSI/TIA 568-C.2/ISO11801/EN 50173

3. Cable Construction

- 3.1. Conductor type : Solid bare copper , 4x2x23AWG/1 1
- 3.2. Insulation : PE ; Ø 0.98, nominal
- 3.3. Core Identification :
 - Pair 1 White-Blue,Blue
 - Pair 2 White-Orange ,Orange
 - Pair 3 White-Green,Green
 - Pair 4 White-Brown,Brown
- 3.4. Outer Sheath Material : PVC compound
- 3.5. Overall cable diameter : 6.2mm , nominal

4. Technical Data

- 4.1 DC resistance : $\leq 93.8 \Omega/\text{km}$ (@ 20°C)
- 4.2. Max. Delay Skew @100MHz : $\leq 45\text{ns}/100\text{m}$
- 4.3. DC resistance unbalance : $\leq 5\%$
- 4.4. Nom. Mutual Capacitance@1kHz : $5.6\text{nF}/100\text{m}$
- 4.5. Characteristics Impedance : $100\Omega \pm 15\%$ at $\leq 100\text{MHz}$; $100\Omega \pm 20\%$ at $>100\text{MHz} \approx 250\text{MHz}$
- 4.6. Nominal Velocity of Propagation : 75% approx , at 100MHz
- 4.7. Min. Bending Radius : 4 x OD
- 4.8. Operating Temperature : -20°C to + 70°C
- 4.9. Flame Retardant : IEC 60332-1-2
- 4.10. EU Directive : 2011/65/EU (RoHS)

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Table 1 (All measurement are based on 100 meter at 20°C)

Freq	Attenuation	Return Loss,	NEXT	PS NEXT	ACR	PS ACR	ELFEXT (ACR-F)	PS EL-FEXT (PS ACR-F)	Max Propagation Delay
MHz	Max [dB]	Min.[dB],	Min [dB]	Min [dB]	Min. [dB]	Min.[dB]	Min. [dB]	Min [dB]	[ns]
1	2.0	20	74.3	72.3	72.3	70.3	67.8	64.8	570
4	3.8	23	65.3	63.3	61.5	59.5	55.7	52.7	552
8	5.4	24.5	60.8	58.8	55.4	53.4	49.7	46.7	547
10	6.0	25	59.3	57.3	53.3	51.3	47.8	44.8	545
16	7.6	25	56.3	54.3	48.7	46.7	43.7	40.7	543
20	8.5	25	54.8	52.8	46.3	44.3	41.7	38.7	542
25	9.6	24.3	53.3	51.3	43.7	41.7	39.8	36.8	541
31.25	10.7	23.6	51.9	49.9	41.2	39.2	37.9	34.9	540
62.5	15.5	21.5	47.4	45.1	31.9	29.9	31.8	28.8	539
100	19.9	20.1	44.3	42.3	24.4	22.4	27.8	24.8	538
155	25.3	18.8	41.5	39.5	16.2	14.2	23.9	20.9	537
200	29.2	18.0	39.8	37.8	10.6	8.6	21.7	18.7	537
250	33.0	17.3	38.3	36.3	5.3	3.3	19.8	16.8	535

5. Dimensional Data

Art.No. (Drum)	Art.No. (Pull-Box 305m)	Core Diameter, nominal mm	Outer Diameter, nominal mm	Copper Weight kg/km, approx	Cable Weight kg/km, approx	Outer Sheath colour
3801501	3801501K	0.95	6.20	17.9	40	Pebble Grey RAL 7032
3801511	3801511K	0.95	6.20	17.9	40	Blue, RAL5015
	3804131K	0.95	6.20	17.9	40	White RAL 9010
	3804132K	0.95	6.20	17.9	40	Yellow, RAL 1021

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