

LANmark-1000 Category 6 Plenum

LANmark-1000 is an ANSI/TIA/EIA Category 6 verified cable that is ideal for gigabit network applications. It introduces new electrical performance parameters which are needed for gigabit Ethernet network systems. These electrical characteristics include: PS-NEXT, PS-ACR, PS-ELFEXT, ELFEXT, RL and LCL/TCL/EL TCTL (balance). LANmark-1000 was the first cable in the industry which set requirements for cable balance. Balance is the performance parameter which affects cable missions. Cable balance is a property that helps protect the network from the damaging effects of outside noise sources such as alien crosstalk.

Description

Construction

23 AWG bare copper wire insulated with FEP. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

Standards

North American: ANSI/TIA/EIA-568-B.2-1 Category 6

Flame Rating

Plenum - NFPA 262, CMP

Applications

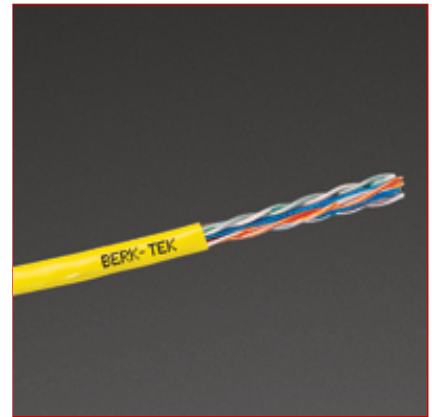
Berk-Tek's LANmark-1000 UTP cable is intended for high speed data applications including:

- IEEE 802.3 1000BASE-T, 100BASE-TX,
- 10BASE-T
- 155 Mb/s ATM
- ANSI X3.263 100 Mb/s
- 1000BASE-TX (ANSI/TIA/EIA-854-2001)
- 4/16 Mb/s Token Ring

Features

- Full duplex operation over four cable pairs
- Full power sum performance
- Increased usable bandwidth up to 250 MHz
- Documented balance characteristics (LCL, LCTL)
- Small, round, easy to install construction
- ETL verified to ANSI/TIA/EIA-568-B.2-1 Category 6 standard gigabit

Benefits



Standards

National TIA/EIA-568-B.2

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- Capable of handling next generation network applications which will utilize full duplex operation and/or simultaneous bidirectional transmission
- Power sum characterization gives highest performance using existing applications
- Provides additional bandwidth required for future applications
- Addition of balance requirements improves overall cable performance and reduces cable emissions which results in reduced transmission errors
- State-of-the-art testing allows high frequency characterization of the cable to 500 MHz

Contact

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Characteristics

Construction characteristics	
Type of cable	UTP
Dimensional characteristics	
Length per reel	1000.0 ft
Number of pairs	4
Usage characteristics	
Field of application	Indoor
Category	Cat. 6
Fire safety	Plenum Rated

Color Code

Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

Temperature Rating

Installation	0°C to +50°C
Operation	-10°C to +60°C

Technical Data - Physical

	CMP	
Conductor diameter-in. (mm)	0.022	(0.56)
Cable diameter-in. (mm)	0.22	(5.6)
Nominal cable weight-lb./kft. (kg/km)	28	(41.3)
Max. installation tension-lb. (N)	25	(110)
Min. bend radius-in. (mm)	1	(25.4)

Parametric Measurements

	HORIZONTAL
Mutual Capacitance	4.4 nF/100 m nom.
DC resistance	9.38 Ohms/100 m max.
Skew	25 ns/100 m max.
Pair to ground Unbalance	330 pF/100 m max.
Velocity of Propagation	72% nom. Plenum
Input Impedance	100 ± 13% 0.772-100 MHz 100 ± [13+15log (F/100)] 100-500 MHz

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Technical Data - Electrical

FREQ	SRL		RL		INSERTION LOSS		PS-NEXT		NEXT		ACR	
	(dB)		(dB)		(dB/100m)		(dB)		(dB)		(dB@100m)	
MHz	min.	typical	min.	typical	max.	typical	min.	typical	min.	typical	min.	typical
1	26.0	40.0	20.0	33.7	2.0	1.7	73.3	81	75.3	84	73.3	82
4	26.0	42.0	23.6	35.4	3.8	3.5	64.3	72	66.3	75	62.5	71
10	26.0	40.0	26.0	30.1	5.9	5.7	58.3	66	60.3	69	54.4	63
16	26.0	41.0	26.0	31.9	7.5	7.3	55.3	63	57.3	66	49.8	59
20	26.0	43.0	26.0	33.3	8.4	8.2	53.8	62	55.8	65	47.4	57
31.25	25.0	41.6	25.0	31.6	10.6	10.3	50.9	59	52.9	62	42.3	52
62.5	23.5	40.5	23.5	31.9	15.3	14.9	46.4	54	48.4	57	33.1	42
100	22.5	37.1	22.5	31.1	19.7	19.1	43.3	51	45.3	54	25.6	35
155	21.6	33.8	21.6	28.8	25.0	24.3	40.4	48	42.4	51	17.4	27
200	21.0	33.0	21.0	28.0	28.8	28.0	38.8	47	40.8	50	11.7	22
250	20.5	27.3	20.5	27.2	32.6	31.7	37.3	45	39.3	48	6.7	16
350	19.8	28.3	19.8	26.2	39.5	38.4	35.2	43	37.2	46	-	-
500	19.0	25.2	19.0	23.2	48.6	47.2	32.8	41	34.8	44	-	-
550	18.8	24.1	18.8	22.9	51.4	49.9	32.2	40	34.2	43	-	-
FREQ	PS-ACR		ELFEXT		PS-ELFEXT		LCL/TCL		EL TCTL			
	(dB@100m)		(dB)		(dB)		(dB)		(dB)			
MHz	min.	typical	min.	typical	min.	typical	min.	typical	min.	typical		
1	71.3	79	68.8	83	65.8	80	50.0	55	35.0	40		
4	60.5	68	56.7	71	53.7	68	43.0	48	22.0	27		
10	52.4	60	48.8	63	45.8	60	40.0	45	15.0	20		
16	47.7	56	44.7	59	41.7	56	37.0	42	10.9	15		
20	45.4	54	42.7	57	39.7	54	36.0	41	9.0	13		
31.25	40.3	49	38.9	53	35.9	50	35.1	40	5.1	11		
62.5	31.1	39	32.8	47	29.8	44	32.0	37	-	-		
100	23.6	32	28.8	43	25.8	40	30.0	35	-	-		
155	15.5	24	24.9	39	21.9	36	28.0	33	-	-		
200	10.0	19	22.7	37	19.7	34	27.0	31	-	-		
250	4.7	13	20.8	35	17.8	32	26.0	30	-	-		
350	-	-	17.9	32	14.9	29	-	-	-	-		
500	-	-	14.8	29	11.8	26	-	-	-	-		
550	-	-	13.9	28	10.9	25	-	-	-	-		

IMPORTANT: Berk-Tek performance guarantees are based on swept-frequency testing and apply to all frequencies for the entire specified frequency range and are not limited to the tables of data shown which are presented to demonstrate our guarantees at "representative" frequencies. Values above 500 MHz are for engineering information. limited combustibile version also available. Other jacket colors available.

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Product List

Berk-Tek P/N	Description	Colour	Packaging
10032025	LANmark-1000 Plenum	Grey	Reel
10032026	LANmark-1000 Plenum	Grey	Box
10065425	LANmark-1000 Plenum	Grey	Reel in a box
10032091	LANmark-1000 Plenum	White	Reel
10032092	LANmark-1000 Plenum	White	Box
10065424	LANmark-1000 Plenum	White	Reel in a box
10032095	LANmark-1000 Plenum	Red	Reel
10033996	LANmark-1000 Plenum	Red	Box
10081066	LANmark-1000 Plenum	Red	Reel in a box
10032108	LANmark-1000 Plenum	Black	Reel
10035304	LANmark-1000 Plenum	Black	Box
10066099	LANmark-1000 Plenum	Black	Reel in a box
10032120	LANmark-1000 Plenum	Pink	Reel
10033811	LANmark-1000 Plenum	Pink	Box
10043530	LANmark-1000 Plenum	Brown	Box
10032089	LANmark-1000 Plenum	Yellow	Reel
10032090	LANmark-1000 Plenum	Yellow	Box
10065247	LANmark-1000 Plenum	Yellow	Reel in a box
10032093	LANmark-1000 Plenum	Blue	Reel
10032094	LANmark-1000 Plenum	Blue	Box
10065423	LANmark-1000 Plenum	Blue	Reel in a box
10032096	LANmark-1000 Plenum	Green	Reel
10032097	LANmark-1000 Plenum	Green	Box
10065428	LANmark-1000 Plenum	Green	Reel in a box
10033897	LANmark-1000 Plenum	Orange	Reel
10033997	LANmark-1000 Plenum	Orange	Box
10066098	LANmark-1000 Plenum	Orange	Reel in a box
10034197	LANmark-1000 Plenum	Violet	Reel
10033809	LANmark-1000 Plenum	Violet	Box
10083461	LANmark-1000 Plenum	Violet	Reel in a box