Contact
Copper LAN Product Inquiry
Phone: 717-354-6200
berktek.support@nexans.com

LANmark-1000 Enhanced Category 6 Plenum Rated

LANmark-1000 Plenum

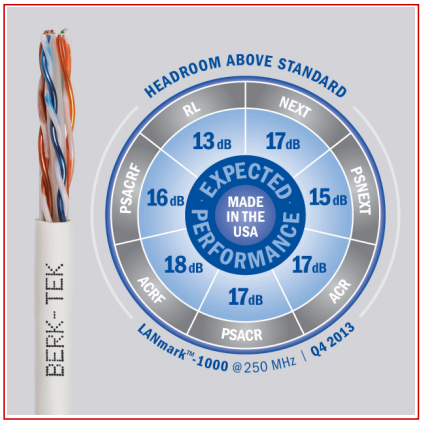
Part Number: 10032094

LANmark-1000 has been improved to offer best-in-class electrical performance. Berk-Tek's engineers completely redesigned LANmark-1000 so that all crosstalk parameters could be improved by four dB. As a result, the Power Sum Attenuation to Crosstalk ratio (PSACR) is nearly 3 times better (at 250 MHz) allowing for much greater signal strength and less vulnerability to noise interference.

Description

Berk-Tek LANmark-1000, Performance Guaranteed

Before any cable can display the Berk-Tek LANmark-1000 legend, it must pass factory tests with a minimum of 5dB of crosstalk margin beyond the CAT 6 standard for NEXT, PSNEXT, ACR and PSACR. If the margin is missing, so is the legend. That is our guarantee to you.

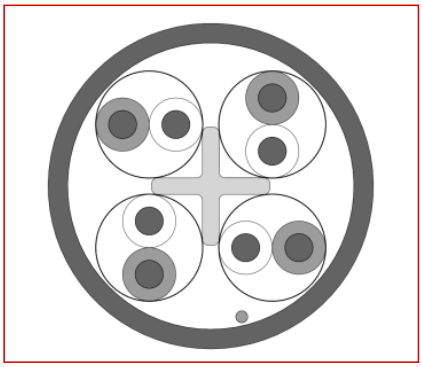


Your business demands continuous performance from your IT network, so our specifications aren't simply numbers on the page. They define the way that we do business. This means that you are guaranteed industry-leading performance and quality for all Berk-Tek products.

Some other manufacturers talk about "typical" values, at Berk-Tek, we hold ourselves to a higher standard. We won't talk about typicals, we talk about what is true, guaranteed, and independently verified.

Keep your business running by relying on Berk-Tek.

Perform Beyond Exectations... Choose Berk-Tek



Construction

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

Flame Rating

Plenum - NFPA 262, CMP, UL Listed

Features

- Full Power Sum Performance
- Documented balance characteristics (LCL, LCTL)
- ETL verified to ANSI/TIA/EIA-568-C.2
- RoHS Compliant

Benefits

- Optimal support for Gigabit Ethernet with headroom
- 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
- Characterized to 550 MHz, 300 MHz greater than the standard

Standards

International ISO/IEC 11801

National ANSI/TIA-568-c.2 Category 6; UL 444

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Characteristics

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

Berk-Tek®
A NEXANS COMPANY

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LANmark-1000 Parametric Data: Electrical

FQ = Frequency (MHz) / TIA = TIA Spec / PG = Product Guarantee

	RL (dB)	NEXT (dB)	PSNEXT (dB)	ACRF (dB)	LCL/TCL
FQ	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	20.00 / 20.00	74.30 / 79.30	72.30 / 77.30	67.80 / 72.80	50.00
4	23.00 / 23.60	65.30 / 70.30	63.30 / 68.30	55.80 / 60.70	44.00
10	25.00 / 26.00	59.30 / 64.30	57.30 / 62.30	47.80 / 52.80	40.00
16	25.00 / 26.00	56.20 / 61.30	54.20 / 59.30	43.70 / 48.70	38.00
20	25.00 / 26.00	54.80 / 59.80	41.80 / 57.80	41.80 / 46.80	37.00
31.25	23.60 / 25.00	51.90 / 56.90	49.90 / 54.90	37.90 / 42.90	35.10
62.5	21.50 / 23.50	47.40 / 52.40	45.40 / 50.40	31.90 / 36.80	32.00
100	20.10 / 22.50	44.30 / 49.30	42.30 / 47.30	27.80 / 32.80	30.00
150	18.90 / 21.60	41.70 / 46.70	39.70 / 44.70	24.30 / 29.30	28.20
200	18.00 / 21.00	39.80 / 44.80	37.80 / 42.80	21.80 / 26.70	27.00
250	17.30 / 20.50	38.30 / 43.30	36.30 / 41.30	19.80 / 24.80	26.00
300	— / 20.10	— / 42.10	— / 40.10	— / 23.30	25.20
350	— / 19.80	— / 41.20	— / 39.20	— / 21.90	24.60
400	— / 19.50*	— / 40.30*	— / 38.30*	— / 20.70*	24.00*
450	— / 19.20*	— / 39.50*	— / 37.50*	— / 19.70*	23.50*
500	— / 19.00*	— / 38.80*	— / 36.80*	— / 18.80*	23.00*

	IL (dB/100 m)	ACR (dB/100 m)	PSACR (dB/100 m)	PSACRF (dB/100 m)	EL TCTL
FQ	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	2.00 / 2.00	72.20 / 77.30	70.30 / 75.30	64.80 / 69.80	35.00
4	3.80 / 3.80	61.50 / 66.60	59.50 / 64.50	52.80 / 57.70	23.00
10	6.00 / 5.90	53.40 / 58.40	51.30 / 56.40	44.80 / 49.80	15.00
16	7.60 / 7.50	48.80 / 53.80	46.70 / 51.70	40.70 / 45.70	10.90
20	8.50 / 8.40	46.40 / 51.40	44.30 / 49.40	38.80 / 43.80	9.00
31.25	10.70 / 10.60	41.40 / 46.40	39.20 / 44.30	37.90 / 39.90	—
62.50	15.40 / 15.30	32.40 / 37.10	30.00 / 35.10	28.90 / 33.80	—
100	19.80 / 19.70	25.20 / 29.70	22.50 / 27.60	24.80 / 29.80	—
150	24.70 / 24.50	16.90 / 22.20	14.90 / 20.20	21.30 / 26.30	—
200	29.00 / 28.80	10.80 / 16.00	8.80 / 14.00	18.80 / 23.70	—
250	32.80 / 32.60	7.30 / 10.80	3.50 / 8.70	16.80 / 21.80	—
300	— / 36.20	— / 6.00	— / 4.00	— / 20.30	—
350	— / 39.50	— / 1.70	— / —	13.90 / 18.90	—
400	— / 42.70*	— / -2.40*	— / —	12.80 / 17.70*	—
450	— / 45.70*	— / -6.20*	— / —	— / 16.70*	—
500	— / 48.60*	— / -9.80*	— / —	10.80 / 15.80*	—

*Values provided for reference only

LANmark-1000 Plenum UTP Physical Data

Technical Data - Physical		
Conductor	23 AWG Bare Copper	
Conductor diameter - in. (mm)	0.022	(0.56)
Insulated conductor dia.-in.(mm)	0.040	(1.02)
Cable diameter - in. (mm)	0.23	(5.84)
Nom. cable wt.-lb./kft. (kg/kft)	30	(13.61)
Max. installation tension - lb. (N)	25	(110)
Min. bend radius - in. (mm)	1.00	(25.40)

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

Temperature Rating (degrees C)	
Installation	0 to +50
Operation	-20 to +75

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LANmark-1000 Plenum Technical Data - Parametric Measurements

Mutual Capacitance	5.1 nF/100 m max.	**Pair to Ground Unbalance**	330 pF/100 m max.
DC Resistance	9.38 Ohms/100 m max.	**Velocity of Propagation**	72% nom.
Skew	45 ns/100 m max.	**DC Resistance unbalance**	5% max.

LANmark-1000 Parametric Equations

RL(dB)	1-10 MHz	20+6*Log(F)
	10-20 MHz	26
	20-350 MHz	26-5*Log(F/20)
Input Impedance (Ohms)	1-100 MHz	100 +/- 13
	100-350 MHz	100 +/- [13+15*Log(F/100)
Insertion Loss (dB/100m)	1-350 MHz	1.797*√F+0.01679*F+0.198/√F
NEXT (dB)	1-350 MHz	49.3-15*Log(F/100)
PS-NEXT (dB)	1-350 MHz	47.3-15*Log(F/100)
ACR (dB/100m)	1-250 MHz	NEXT - Insertion Loss
PS-ACR (dB/100m)	1-250 MHz	PS-NEXT - Insertion Loss
ACRF (dB)	1-350 MHz	32.8-20*Log(F/100)
PS-ACRF (dB)	1-350 MHz	29.8-20*Log(F/100)
LCL/TCL (dB)	1-250 MHz	40-10*Log(F/10)
EL TCTL (dB/100m)	1-30 MHz	30-20*Log(F)
Propagation Delay (ns/100m)	1-30 MHz	534+(36/√F)

Supported Category 6 Applications

STANDARD	APPLICATION	SPEED
IEEE 802.3	1000BASE-T	1 Gb/s
TIA/EIA-854	1000BASE-TX	1 Gb/s
ATM	155Mb/s	155 Mb/s
IEEE 802.3	100BASE-TX	100 Mb/s
CDDI		100 Mb/s
IEEE 802.3	10BASE-T	10 Mb/s
IEEE 802.3 af	PoE	1 Gb/s
IEEE 802.3 at	PoE+, Type 1 & 2	1 Gb/s

LANmark-1000 UTP Plenum Jacket Legend

BERK-TEK LANMARK-1000 23 AWG CMP 75C C(UL)US ETL VERIFIED TIA-568-C.2 CAT 6 [ANY APPLICABLE PATENTS] [DATECODE] [SEQ#] FT

Selling information

PLEASE NOTE: In the interest of product improvement, Berk-Tek, a Nexans company may make improvements or changes in the products, the programs or services described at any time without notice. Additionally, the information contained herein may include typographical errors or technical inaccuracies. Changes will be periodically made to address any such issues.

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