

Contact

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

LANmark-1000 Enhanced Category 6 Riser Rated

LANmark-1000 Riser

Part Number: 10032461

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. At Berk-Tek, we understand that your business runs through us.

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 Expectations... Choose Berk-Tek

Construction

23 AWG bare copper wire insulated with polyethylene. 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

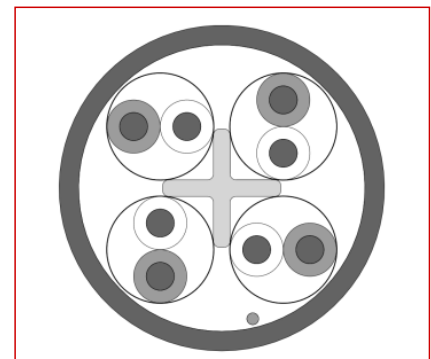
Riser - UL 1666, CMR, UL Listed

Features

- Full Power Sum Performance
- Documented balance characteristics (LCL, LCTL)
- ETL verified to ANSI/TIA/EIA-568-C.2 standard
- 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; UL 444

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Characteristics

Construction characteristics	
Type of cable	UTP
Colour	Yellow
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	CMR - Riser Rated

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LANmark-1000 Parametric Data: Electrical

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

FQ	RL (dB)		NEXT (dB)		PSNEXT (dB)		ACRF (dB)		LCL/TCL
	TIA / PG	TIA / PG	TIA / PG	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*				

FQ	IL (dB/100 m)		ACR (dB/100 m)		PSACR (dB/100 m)		PSACRF (dB/100 m)		EL TCTL
	TIA / PG	TIA / PG	TIA / PG	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 Riser UTP Physical Data

Technical Data - Physical			Color Code		
Conductor	23 AWG Bare Copper		Pair-1	White/Blue	Blue
Conductor diameter - in. (mm)	0.022	(0.56)	Pair-2	White/Orange	Orange
Insulated conductor dia.-in.(mm)	0.039	(0.99)	Pair-3	White/Green	Green
Cable diameter - in. (mm)	0.23	(5.84)	Pair-4	White/Brown	Brown
Nom. cable wt.-lb./kft. (kg/kft)	25	(11.34)	Temperature Rating (degrees C)		
Max. installation tension - lb. (N)	25	(110)	Installation	0 to +50	
Min. bend radius - in. (mm)	1.00	(25.40)	Operation	-20 to +75	

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LANmark-1000 Riser 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	68% nom.
Skew	45 ns/100 m max.	DC Resistance unbalance	5% max.

LANmark-1000 Parametric Equations

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

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 Riser Jacket Legend

BERK-TEK LANMARK-1000 23 AWG CMR 75C C(UL)JUS 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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