

LANmark-1000 Category 6 Plenum

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

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.

Standards

North American: ANSI/TIA/EIA-568-B.2-1 Category 6, UL 444 and C22.2 No. 214-02

International: ISO/IEC 11801-2nd Edition Category 6, EU Directive 2002/95/EC (RoHS)

Flame Rating

Plenum - NFPA 262, CMP, UL Listed

Applications:

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

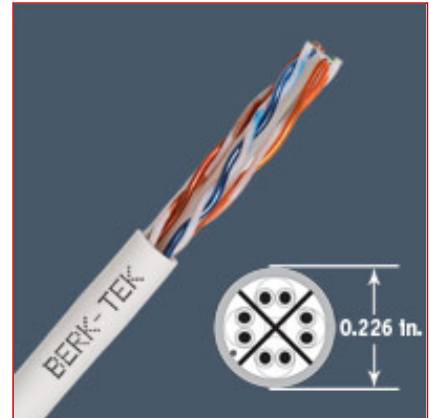
- | | | |
|---------------|-------------|----------|
| • IEEE 802.3 | 1000BASE-T | 1 Gb/s |
| • TIA/EIA-854 | 1000BASE-TX | 1 Gb/s |
| • ATM | 155 Mb/s | 155 Mb/s |
| • IEEE 802.3 | 100BASE-TX | 100 Mb/s |
| • CDDI | | 100 Mb/s |
| • IEEE 802.3 | 10BASE-T | 10 Mb/s |

Features

- Full Power Sum Performance
- Documented balance characteristics (LCL, LCTL)
- ETL verified to ANSI/TIA/EIA-568-B.2-1 Category 6 standard

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 TIA/EIA-568-B.2

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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 |

Technical Data - Physical

| Technical Data - Physical | | | Color Code | | |
|---|--------------------|--------|---------------------------|---------------------|---------------|
| | | | Pair-1 | White/Blue | Blue |
| Conductor | 23 AWG Bare Copper | | Pair-2 | White/Orange | Orange |
| Conductor diameter-in. (mm) | 0.022 | (0.56) | Pair-3 | White/Green | Green |
| Insulated Conductor Diameter- in. (mm) | 0.037 | (0.94) | Pair-4 | White/Brown | Brown |
| Cable diameter-in. (mm) | 0.226 | (5.7) | | | |
| Nominal cable weight-lb./kft. (kg/km) | 29 | (44.3) | Temperature Rating | | |
| Max. installation tension-lb. (N) | 25 | (110) | Installation | 0°C to +50°C | |
| Min. bend radius-in. (mm) | 1 | (25.4) | Operation | -20°C to +60°C | |

Parametric Measurements

| | |
|---------------------------------|---|
| Mutual Capacitance | 4.4 nF/100 m nom. |
| DC resistance | 9.38 Ohms/100 m max. |
| Skew | 35 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)] 100-350 MHz |

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Technical Data - Electrical

| FREQ MHz | SRL (dB) | | RL (dB) | | INSERTION LOSS (dB/100m) | | PS-NEXT (dB) | | NEXT (dB) | | ACR (dB@100m) | |
|-------------|-------------|---------|------------|---------|-----------------------------|---------|-----------------|---------|--------------|---------|------------------|---------|
| | min. | typical | min. | typical | max. | typical | min. | typical | min. | typical | min. | typical |
| 1 | 26.0 | 34.7 | 20.0 | 41.2 | 2.0 | 1.7 | 77.3 | 88.4 | 79.3 | 95.6 | 77.3 | 88.2 |
| 4 | 26.0 | 43.1 | 23.6 | 38.7 | 3.8 | 3.5 | 68.3 | 82.3 | 70.3 | 91.6 | 66.5 | 80.1 |
| 10 | 26.0 | 45.4 | 26.0 | 40.7 | 5.9 | 5.6 | 62.3 | 74.7 | 64.3 | 80.4 | 58.4 | 71.3 |
| 16 | 26.0 | 39.4 | 26.0 | 41.7 | 7.5 | 7.2 | 59.3 | 75.8 | 61.3 | 82.7 | 53.8 | 70.3 |
| 20 | 26.0 | 41.8 | 26.0 | 46.0 | 8.4 | 8.1 | 57.8 | 69.9 | 59.8 | 76.3 | 51.4 | 63.9 |
| 31.25 | 25.0 | 45.5 | 25.0 | 43.6 | 10.6 | 10.1 | 54.9 | 67.7 | 56.9 | 75.7 | 46.3 | 59.1 |
| 62.5 | 23.5 | 39.4 | 23.5 | 37.2 | 15.3 | 14.6 | 50.4 | 67.3 | 52.4 | 74.2 | 37.1 | 54.3 |
| 100 | 22.5 | 37.5 | 22.5 | 35.3 | 19.7 | 18.7 | 47.3 | 63.8 | 49.3 | 71.4 | 29.6 | 47.0 |
| 250 | 20.5 | 34.5 | 20.5 | 32.5 | 32.6 | 30.7 | 41.3 | 56.0 | 43.3 | 62.4 | 10.7 | 26.6 |
| 350 | 19.8 | 32.2 | 19.8 | 30.6 | 39.5 | 36.9 | 39.2 | 52.1 | 41.2 | 59.5 | 1.7 | 15.6 |
| 500 | 19.0 | 33.6 | 19.0 | 31.2 | 48.6 | 45.1 | 36.8 | 51.6 | 38.8 | 57.7 | — | 7.0 |
| 550 | 18.8 | 33.8 | 18.8 | 32.3 | 51.4 | 47.3 | 36.2 | 50.5 | 38.2 | 55.7 | — | 3.6 |

RL, SRL, IL, NEXT, PSNEXT, ELFEXT, PSELFEXT and impedance are guaranteed to 350 MHz. Data above 350 MHz is for engineering information.

Technical Data - Electrical

| FREQ Mhz | PS-ACR (dB@100m) | | ELFEXT (dB) | | PS-ELFEXT (dB) | | LCL/TCL (dB) | EL TCTL (dB) |
|-------------|---------------------|---------|----------------|---------|-------------------|---------|-----------------|-----------------|
| | min. | typical | min. | typical | min. | typical | min. | min. |
| 1 | 75.3 | 86.8 | 72.8 | 95.7 | 69.8 | 87.4 | 50.0 | 35.0 |
| 4 | 64.5 | 78.8 | 60.7 | 83.7 | 57.7 | 77.1 | 44.0 | 23.0 |
| 10 | 56.4 | 69.1 | 52.8 | 74.8 | 49.8 | 68.1 | 40.0 | 15.0 |
| 16 | 51.7 | 68.7 | 48.7 | 70.0 | 45.7 | 63.3 | 38.0 | 10.9 |
| 20 | 49.4 | 61.9 | 46.7 | 66.9 | 43.7 | 60.3 | 37.0 | 9.0 |
| 31.25 | 44.3 | 57.7 | 42.9 | 62.3 | 39.9 | 55.7 | 35.1 | 5.5 |
| 62.5 | 35.1 | 52.7 | 36.8 | 55.0 | 33.8 | 49.5 | 32.0 | — |
| 100 | 27.6 | 45.0 | 32.8 | 55.1 | 29.8 | 45.8 | 30.0 | — |
| 250 | 8.7 | 24.7 | 24.8 | 40.6 | 21.8 | 33.8 | 26.0 | — |
| 350 | — | 14.2 | 21.9 | 43.6 | 18.9 | 33.0 | 24.6 | — |
| 500 | — | 4.5 | 18.8 | 36.0 | 15.8 | 27.4 | 23.0 | — |
| 550 | — | 0.8 | 17.9 | 39.4 | 14.9 | 29.5 | 22.6 | — |

RL, SRL, IL, NEXT, PSNEXT, ELFEXT, PSELFEXT and impedance are guaranteed to 350 MHz. Data above 350 MHz is provided for engineering information.

Product List

☎ = Make to order, 📦 = Make to stock

| Part Number | Description | Colour | Packaging |
|-------------|---------------------|--------|-----------|
| 📦 10032025 | LANmark-1000 Plenum | Grey | Reel |
| 📦 10032026 | LANmark-1000 Plenum | Grey | Box |

☎ = Make to order, 📦 = Make to stock

LANmark-1000 Category 6 Plenum

| Part Number | Description | Colour | Packaging |
|-------------|---------------------|--------|---------------|
| 10032089 | LANmark-1000 Plenum | Yellow | Reel |
| 10032090 | LANmark-1000 Plenum | Yellow | Box |
| 10032091 | LANmark-1000 Plenum | White | Reel |
| 10032092 | LANmark-1000 Plenum | White | Box |
| 10032093 | LANmark-1000 Plenum | Blue | Reel |
| 10032094 | LANmark-1000 Plenum | Blue | Box |
| 10032095 | LANmark-1000 Plenum | Red | Reel |
| 10032096 | LANmark-1000 Plenum | Green | Reel |
| 10032097 | LANmark-1000 Plenum | Green | Box |
| 10032108 | LANmark-1000 Plenum | Black | Reel |
| 10032120 | LANmark-1000 Plenum | Pink | Reel |
| 10033809 | LANmark-1000 Plenum | Violet | Box |
| 10033811 | LANmark-1000 Plenum | Pink | Box |
| 10033897 | LANmark-1000 Plenum | Orange | Reel |
| 10033996 | LANmark-1000 Plenum | Red | Box |
| 10033997 | LANmark-1000 Plenum | Orange | Box |
| 10034197 | LANmark-1000 Plenum | Violet | Reel |
| 10035304 | LANmark-1000 Plenum | Black | Box |
| 10043530 | LANmark-1000 Plenum | Brown | Box |
| 10065427 | LANmark-1000 Plenum | Yellow | Reel in a box |
| 10065423 | LANmark-1000 Plenum | Blue | Reel in a box |
| 10065424 | LANmark-1000 Plenum | White | Reel in a box |
| 10065425 | LANmark-1000 Plenum | Grey | Reel in a box |
| 10065428 | LANmark-1000 Plenum | Green | Reel in a box |
| 10066098 | LANmark-1000 Plenum | Orange | Reel in a box |
| 10066099 | LANmark-1000 Plenum | Black | Reel in a box |
| 10081066 | LANmark-1000 Plenum | Red | Reel in a box |
| 10083461 | LANmark-1000 Plenum | Violet | Reel in a box |
| 10120387 | LANmark-1000 Plenum | Pink | Reel in a box |

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Selling delivery 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.