

LANmark-10G FTP, Category 6a, F/UTP Plenum

Berk-Tek's LANmark-10G FTP is ideal for applications that require the most advanced cable performance and the additional signal isolation advantages of an F/UTP design. The Berk-Tek design incorporates one overall foil shield rather than individually shielding each twisted pair. Having one overall shield reduces the time need for cable termination, results in a smaller outside diameter and reduces material costs.

Description

Construction:

23 AWG, bare copper wire insulated with FEP. Two insulated conductors twisted together with varying lays to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall polyester/aluminum foil with stranded tinned copper drain wire and ripcord and jacketed in flame-retardant PVC.

Standards:

- North American ANSI/TIA/EIA-568-B.2-10, Category 6A and UL444 & C22.2 No.214-02
- International: EU Directive 2002/95/EC (RoHS), IEC 61156-5 ED2.0_46C844CDV

Flame Rating:

- Plenum-NFPA 262
- ETL Listed

Applications:

LANmark-10G FTP cable is intended for high speed data applications up to 500 MHz including:

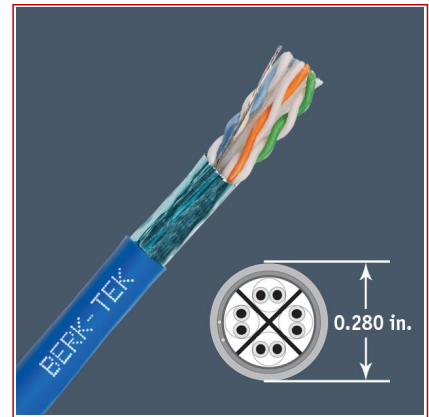
| | | |
|-------------|-------------|----------|
| IEEE 802.3 | 10GBASE-T | 10 Gb/s |
| IEEE 802.3 | 1000BASE-T | 1 Gb/s |
| TIA/EIA-854 | 1000BASE-TX | 1 Gb/s |
| ATM | 155 Mb/s | 155 Mb/s |
| IEEE 802.3 | 100 BASE-TX | 100 Mb/s |
| CDDI | | 100 Mb/s |

Features:

- ETL verified to TIA/EIA-568-B.2-10 Category 6a
- Outstanding signal isolation
- Superior alien crosstalk performance

Benefits:

- Increased signal isolation prevents contaminant noise from entering cabling system
- Completely compliant with IEEE requirements
- Lower bit errors resulting in increased network performance



Standards

National TIA/EIA-568-B.2

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Characteristics

| Dimensional characteristics | |
|-----------------------------|--------------|
| Length per reel | 1000.0 ft |
| Number of pairs | 4 |
| Usage characteristics | |
| Packaging | Reel |
| Field of application | Indoor |
| Category | Cat. 6a |
| Fire safety | Plenum Rated |

Technical Data

| Technical Data - Physical | | | Color Code | | |
|---|--------------------|---------|---------------------|----------------|---------------|
| | | | Pair-1 | White | Blue |
| Conductor | 23 AWG Bare Copper | | Pair-2 | White | Orange |
| Conductor diameter—in. (mm) | 0.022 | (0.56) | Pair-3 | White | Green |
| Insulated Conductor Diameter- in. (mm) | 0.044 | (1.12) | Pair-4 | White | Brown |
| Cable diameter—in. (mm) | 0.28 | (7.11) | | | |
| Nominal cable weight—lb./kft. (kg/km) | 38 | (17.24) | Temperature Rating | | |
| Max. installation tension—lb. (N) | 25 | (110) | Installation | 0°C to +50°C | |
| Min. bend radius—in. (mm) | 1.2 | (30.48) | Operation | -20°C to +60°C | |

Technical Data - Parametric Measurements

| | |
|--|----------------------|
| Mutual Capacitance | 5.6 nF/100 m max. |
| DC resistance | 9.38 Ohms/100 m max. |
| Skew | 45 ns/100 m max. |
| Pair to ground Unbalance | 330 pF/100 m max. |
| Velocity of Propagation | 66% nom. Riser |
| DC Resistance Unbalance of a Pair | 4% max. |
| Transfer Impedance | 45 mOhms/m @ 10 MHz |
| Coupling Attenuation | 75 dB @ 30 MHz |

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Technical Data - Electrical Characteristics

| FREQ MHz | SRL (dB) | RL (dB) | IL (dB/100m) | PS-NEXT (dB) | NEXT (dB) | ACR (dB@100m) | PS-ACR (dB@100m) |
|-------------|-------------|------------|-----------------|-----------------|--------------|------------------|---------------------|
| | min. | min. | max. | min. | min. | min. | min. |
| 1 | NA | 20.0 | 2.1 | 72.3 | 74.3 | 72.2 | 70.2 |
| 4 | NA | 23.0 | 3.8 | 63.3 | 65.3 | 61.5 | 59.5 |
| 10 | 25.0 | 24.5 | 5.9 | 57.3 | 59.3 | 53.4 | 51.4 |
| 16 | 25.0 | 25.0 | 7.5 | 54.3 | 56.3 | 48.8 | 46.8 |
| 20 | 25.0 | 25.0 | 8.4 | 52.8 | 54.8 | 46.4 | 44.4 |
| 31.25 | 23.6 | 23.6 | 10.5 | 49.9 | 51.9 | 41.4 | 39.4 |
| 62.5 | 21.5 | 21.5 | 15.0 | 45.4 | 47.4 | 32.4 | 30.4 |
| 100 | 20.1 | 20.1 | 19.1 | 42.3 | 44.3 | 25.2 | 23.2 |
| 250 | 17.3 | 17.3 | 31.1 | 36.3 | 38.3 | 7.2 | 5.3 |
| 350 | 16.3 | 16.3 | 37.2 | 34.2 | 36.2 | — | — |
| 500 | 15.2 | 15.2 | 45.3 | 31.8 | 33.8 | — | — |
| 600 | 14.7 | 14.7 | 50.1 | 30.6 | 32.6 | — | — |
| 750 | 14.0 | 14.0 | 56.7 | 29.2 | 31.2 | — | — |





Technical Data - Electrical Characteristics



| FREQ MHz | ACRF (dB) | PS-ACRF (dB) | PS-ANEXT (dB) | PS-AACRF (dB) | LCL/TCL (dB) | EL TCTL (dB) |
|-------------|--------------|-----------------|------------------|------------------|-----------------|-----------------|
| | min. | min. | min. | min. | min. | min. |
| 1 | 67.8 | 64.8 | 67 | 67 | 50.0 | 35.0 |
| 4 | 55.7 | 52.7 | 67 | 66.2 | 44.0 | 23.0 |
| 10 | 47.8 | 44.8 | 67 | 58.2 | 40.0 | 15.0 |
| 16 | 43.7 | 40.7 | 67 | 54.1 | 38.0 | 10.9 |
| 20 | 41.7 | 38.7 | 67 | 52.2 | 37.0 | 9.0 |
| 31.25 | 37.9 | 34.9 | 67 | 48.3 | 35.1 | 5.5 |
| 62.5 | 31.8 | 28.8 | 65.6 | 42.3 | 32.0 | — |
| 100 | 27.8 | 24.8 | 62.5 | 38.2 | 30.0 | — |
| 250 | 19.8 | 16.8 | 56.5 | 30.2 | 26.0 | — |
| 350 | 16.9 | 13.9 | 54.3 | 27.3 | 24.6 | — |
| 500 | 13.8 | 10.8 | 52 | 24.2 | 23.0 | — |
| 600 | 12.2 | 9.2 | 50.8 | 22.6 | 22.2 | — |
| 750 | 10.3 | 7.3 | 49.3 | 20.7 | 21.2 | — |

Electrical Characteristics above 500 MHz are for engineering information

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Product List

| Part Number | Description | Colour |
|---|------------------------|--------|
|  10143424 New | LANmark-10G FTP Plenum | Blue |
|  10167485 New | LANmark-10G FTP Plenum | White |
|  10167487 New | LANmark-10G FTP Plenum | Grey |
|  10167488 New | LANmark-10G FTP Plenum | Yellow |

 = Make to order,  = Make to stock

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.