

# LANmark-6 U/UTP Cable

LANmark-6 U/UTP AWG23 Cat 6 350MHz LSZH Eca Orange 305m box

Nexans Ref.: N100.607-OE

- Comply with all Category 6 cable standards
- Support Class E applications
- Central cross member maintains geometry and performance
- Tested up to 350MHz

## DESCRIPTION

### Application

Nexans LANmark-6 cables are the ideal solution for most of today's network requirements in normal office environments. They are manufactured and tested to the latest Category 6 specifications defined in the International and American cable standards and are designed to meet the quality and performance criteria needed to support all applications up to 250 MHz.

- 10baseT Ethernet
- 100baseTX Fast Ethernet
- 1000baseTX Gigabit Ethernet
- 155 MBit ATM
- 622 MBit ATM
- 1.2 Gbit ATM
- Future class E applications

### Design

The LANmark-6 U/UTP cables have a central cross element which helps maintaining the stability of the cable geometry and reduces the risk of a reduction in performance when bending the cable.

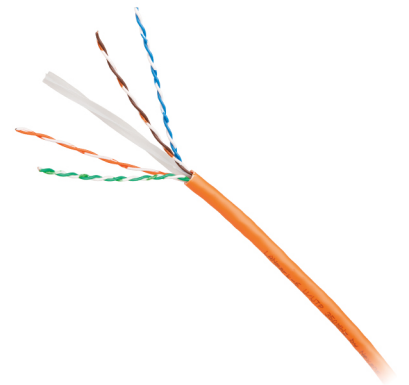
The cables are available with a Dark Grey PVC or an Orange LSZH sheath. Both versions have flame retardant properties compliant with IEC 60332-1 and are compliant with EuroClass Eca according to EN50575:2014 +A1:2016.

EuroClass Dca and Cca versions are also available.

### Performance

Tested to 350 MHz and with guaranteed performance to 250 MHz, Nexans LANmark-6 cables exceed the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568-C.2.

### Installation



**LANmark-6**

## DECLARATION OF PERFORMANCE

Eca

## STANDARDS

**International** EN 50173-1;  
EN 50288; IEC 61156-5; ISO/  
IEC 11801

**National** ANSI/TIA-568-C.2



Ambient installation T°C range  
-10 ... 60 °C



Operating temp.  
-20 ... 60 °C



Flame retardant  
IEC 60332-1



Fire retardant  
-



Smoke density  
IEC 61034

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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To support the correct set-up of hand held analysers for installation testing, the actual cable NVP value is given in the cable's print legend.

## Guarantees

The LANmark-6 cable performance is guaranteed to meet or exceed the requirements of the above mentioned standards.

Traceability codes on both cable and packaging ensure quality validation of the installed cable.

Installations with LANmark-6 cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Channel Performance, Application Support and Labour, as described in the Nexans Certified System Warranty.



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Operating temp.  
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## CHARACTERISTICS

### Construction characteristics

|               |            |
|---------------|------------|
| Type of cable | U/UTP      |
| Outer sheath  | LSZH       |
| Colour        | Orange     |
| Screen        | Unshielded |

### Dimensional characteristics

|                                     |          |
|-------------------------------------|----------|
| Minimum outer diameter              | - mm     |
| Maximum outer diameter              | - mm     |
| Diameter over insulation            | 1.02 mm  |
| Conductor cross-section (AWG/KCMIL) | 23       |
| Approximate weight                  | 43 kg/km |
| Nominal outer diameter              | 6.3 mm   |
| Number of pairs                     | -        |

### Electrical characteristics

|   |           |
|---|-----------|
| Characteristic impedance                    | 100 Ohm   |
| Max. DC resistance of the conductor at 20°C | 85 Ohm/km |
| Mutual capacitance                          | 56 nF/km  |

### Transmission characteristics

|                                       |             |
|---------------------------------------|-------------|
| Attenuation Crosstalk Ratio, 250MHz   | 5.5 dB/100m |
| Coupling attenuation at 30 MHz        | 45 dB       |
| Nominal Velocity of Propagation (NVP) | 68 %        |
| Propagation delay, max. 100 MHz       | 536 ns/100m |
| Skew                                  | 30 ns/100m  |

### Mechanical characteristics

|                                 |       |
|---------------------------------|-------|
| Maximum operating pulling force | 100 N |
|---------------------------------|-------|

### Usage characteristics

|   |               |
|---|---------------|
| Category  | Cat. 6        |
| Range   | LANmark-6     |
| Minimum Bend Radius - During Installation (under Tension) | 50 mm         |
| Minimum Bend Radius - Installed                           | 25 mm         |
| Ambient installation temperature, range                   | -10 ... 60 °C |
| Operating temperature, range                              | -20 ... 60 °C |
| Flame retardant   | IEC 60332-1   |
| Fire retardant  | -             |
| Smoke density   | IEC 61034     |
| Length  | 305 m         |
| Packaging   | Box           |
| Field of application                                      | Indoor        |

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## ELECTRICAL PERFORMANCE LANMARK-6 U/UTP CABLE

| Freq.<br>in MHz | IL         |      | NEXT  |      | PSNEXT |      | ACR-F |      | PS ACR-F |      | RL    |      |
|-----------------|------------|------|-------|------|--------|------|-------|------|----------|------|-------|------|
|                 | in Db/100m |      | in dB |      | in dB  |      | in dB |      | in dB    |      | in dB |      |
|                 | Max.       | Typ. | Min.  | Typ. | Min.   | Typ. | Min.  | Typ. | Min.     | Typ. | Min.  | Typ. |
| 1               | 2,0        | 2,0  | 74,3  | 80,3 | 72,3   | 78,3 | 67,8  | 72,8 | 64,8     | 69,8 | 20,0  | 22,0 |
| 4               | 3,8        | 3,8  | 65,3  | 71,3 | 63,3   | 69,3 | 55,8  | 60,8 | 52,8     | 57,8 | 23,0  | 25,0 |
| 10              | 6,0        | 6,0  | 59,3  | 65,3 | 57,3   | 63,3 | 47,8  | 52,8 | 44,8     | 49,8 | 25,0  | 27,0 |
| 16              | 7,6        | 7,6  | 56,2  | 62,2 | 54,2   | 60,2 | 43,7  | 48,7 | 40,7     | 45,7 | 25,0  | 27,0 |
| 20              | 8,5        | 8,5  | 54,8  | 60,8 | 52,8   | 58,8 | 41,8  | 46,8 | 38,8     | 43,8 | 25,0  | 27,0 |
| 31,25           | 10,7       | 10,7 | 51,9  | 57,9 | 49,9   | 55,9 | 37,9  | 42,9 | 34,9     | 39,9 | 23,6  | 25,6 |
| 62,5            | 15,4       | 15,4 | 47,4  | 53,4 | 45,4   | 51,4 | 31,9  | 36,9 | 28,9     | 33,9 | 21,5  | 23,5 |
| 100             | 19,8       | 19,8 | 44,3  | 50,3 | 42,3   | 48,3 | 27,8  | 32,8 | 24,8     | 29,8 | 20,1  | 22,1 |
| 155             | 25,2       | 25,2 | 41,4  | 47,4 | 39,4   | 45,4 | 24,0  | 29,0 | 21,0     | 26,0 | 18,8  | 20,8 |
| 200             | 29,0       | 29,0 | 39,8  | 45,8 | 37,8   | 43,8 | 21,8  | 26,8 | 18,8     | 23,8 | 18,0  | 20,0 |
| 250             | 32,8       | 32,8 | 38,3  | 44,3 | 36,3   | 42,3 | 19,8  | 24,8 | 16,8     | 21,8 | 17,3  | 19,3 |
| 300             | -          | 36,4 | -     | 43,1 | -      | 41,1 | -     | 23,3 | -        | 20,3 | -     | 18,8 |
| 350             | -          | 39,8 | -     | 42,1 | -      | 40,1 | -     | 21,9 | -        | 18,9 | -     | 18,3 |