# LANmark-7 Cable

**LANMARK-7 S/FTP AWG23 CAT 7 LSZH B2CA S1A D1 A1 ORANGE 1000M REEL**

**Aginode Ref:** N100.365-OB

- S/FTP cable with individually shielded pairs and global braid
- Exceeds Category 7 ACR with >30dB
- Optimised for use with LANmark-7A GG45 connector
- Easy to install
- Enhanced reaction-to-fire performance according to CPR classification B2ca-s1a,d1,a1 (h/EN50575:2014+A1:2016)



## STANDARDS

EN 50173-1
EN 50288-4-1
IEC 60332-3-24
IEC 61156-5
IEEE 802.3bt (PoE++)
ISO/IEC 11801

### Description

LANmark-7 cable has an S/FTP construction with individual pair foils and an overall braid offering superior performance in terms of ACR. It is fully compliant with the Category 7 standards and when installed together with the GG45 LANmark-7A connector, the system is guaranteed to exceed all channel requirements in all configuration scenarios (up to 4-connector channels).

### Application

LANmark-7 will support all current and planned data applications developed for cabling up to Class F.

- All Ethernet applications including
- 1000Base-T
- 1000Base-TX
- 10GBase-T
- CATV up to 862MHz
- Any future Class F application

### Installation

Ease of Installation is one of the unique features of LANmark-7 cable. Extra attention has been paid to ensure screen coverage is maintained both during and after installation. The cable has been designed specifically to offer both optimum performance and ease of termination when used in conjunction with the LANmark-7A GG45 connector.

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

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

cable’s print legend.

## Electrical Performance LANmark-7 Cable

| Frequency (MHz) | Attenuation (dB/100m) | | NEXT (in dB) | | ACR (in dB) | | PS-NEXT (in dB) | | ACR-F (in dB) | | PS-ACR-F (in dB) | | Return Loss (in dB) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. |
| **1,00** | 4,0 | 1,8 | 75,0 | 100,0 | 71,0 | 98,2 | 72,0 | 98,0 | 75,0 | 98,0 | 75,0 | 96,0 | 20,0 | |
| **4,00** | 4,0 | 3,5 | 75,0 | 100,0 | 71,0 | 96,5 | 72,0 | 98,0 | 75,0 | 98,0 | 75,0 | 96,0 | 23,0 | 26,0 |
| **10,00** | 5,9 | 5,5 | 75,0 | 100,0 | 69,1 | 94,5 | 72,0 | 98,0 | 75,0 | 98,0 | 72,3 | 96,0 | 25,0 | 28,0 |
| **16,00** | 7,4 | 6,8 | 75,0 | 100,0 | 67,6 | 93,2 | 72,0 | 98,0 | 71,2 | 96,0 | 68,2 | 94,0 | 25,0 | 28,0 |
| **20,00** | 8,3 | 7,7 | 75,0 | 100,0 | 66,7 | 92,3 | 72,0 | 98,0 | 69,3 | 94,0 | 66,3 | 92,0 | 25,0 | 28,0 |
| **31,25** | 10,4 | 9,6 | 75,0 | 100,0 | 64,6 | 90,4 | 72,0 | 98,0 | 65,4 | 90,0 | 62,4 | 88,0 | 23,6 | 26,0 |
| **62,50** | 14,9 | 14,0 | 75,0 | 100,0 | 60,1 | 86,0 | 72,0 | 98,0 | 59,4 | 84,0 | 56,4 | 82,0 | 21,5 | 25,0 |
| **100,00** | 19,0 | 17,7 | 72,4 | 100,0 | 53,4 | 82,3 | 69,4 | 98,0 | 55,3 | 75,0 | 52,3 | 73,0 | 20,1 | 24,0 |
| **155,00** | 24,0 | 22,8 | 69,5 | 96,0 | 45,6 | 73,2 | 66,5 | 93,0 | 51,5 | 70,0 | 48,5 | 68,0 | 18,8 | 23,0 |
| **250,00** | 31,0 | 29,0 | 66,4 | 94,0 | 35,5 | 65,0 | 63,4 | 91,0 | 47,3 | 66,0 | 44,3 | 64,0 | 17,3 | 22,0 |
| **300,00** | 34,2 | 32,1 | 65,2 | 92,0 | 31,1 | 59,9 | 62,2 | 88,0 | 45,8 | 54,0 | 42,8 | 52,0 | 17,3 | 20,0 |
| **600,00** | 50,1 | 45,5 | 60,7 | 90,0 | 10,6 | 44,5 | 57,7 | 86,0 | 39,7 | 54,0 | 36,7 | 52,0 | 17,3 | 20,0 |

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

# LANmark-7 S/FTP AWG23 Cat 7 LSZH B2ca s1a d1 a1 Orange 1000m reel

## Characteristics

| | |
|---|---|
| **Construction characteristics** | |
| Screen | Aluminium foil + tinned copper braiding |
| Outer sheath | LSZH |
| Sheath colour | Orange |
| Lead free | Yes |
| Type of cable | S/FTP |
| Drain wire | No |
| **Dimensional characteristics** | |
| Approximate weight | 50 kg/km |
| Number of pairs | 4 |
| Conductor cross-section (AWG/KCMIL) | 23 |
| Diameter over insulation | 1.42 mm |
| Nominal outer diameter (mm) | 7.6 mm |
| **Electrical characteristics** | |
| Mutual capacitance | 45 nF/km |
| Characteristic impedance | 100 Ohm |
| Max. transfer impedance at 30 MHz (Ohm/km) | 50 Ohm/km |
| Max. DC resistance of the conductor at 20°C | 80 Ohm/km |
| **Mechanical characteristics** | |
| Maximum operating pulling force | 100 N |
| **Transmission characteristics** | |
| Skew | 25 ns/100m |
| Nominal Velocity of Propagation (NVP) | 82 % |
| Coupling attenuation at 30 MHz | >85 dB |
| Propagation delay, max. 100 MHz | 536 ns/100m |
| **Usage characteristics** | |

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

| | |
|---|---|
| Range | LANmark-7 |
| Gases corrosivity | IEC 60754-1; IEC 60754-2 |
| Length | 1000 m |
| Operating temperature, range | -20...60 °C |
| Fire retardant | IEC 60332-3-24 (cat C) |
| Category | Cat. 7 |
| Flame retardant | IEC 60332-1 |
| Smoke density | IEC 61034-2 |
| Packaging | Reel |
| Ambient installation temperature, range | -10...60 °C |
| Minimum Bend Radius - During Installation (under Tension) | 61 mm |
| Minimum Bend Radius - Installed | 31 mm |

## Documentation

Freetable LM7 600_3.xls xls — 19 KB Download

## Declaration of Performance

LANmark-7 S/FTP AWG23 Cat 7 LSZH B2ca s1a d1 a1 Orange 1000m reel pdf — 141.41 KB Download

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