

LANmark-6A Cable

LANmark-6A F/FTP AWG23 Cat 6A LSZH Dca s2 d1 a1 Orange 500m reel

Nexans Ref.: N100.694G-OD

- Ideal cable for 10GBase-T application
- Full compliance to latest standards for Category 6A and Class EA
- Guaranteed performance up to 500MHz
- Individual pair shielding offering Alien Crosstalk immunity

DESCRIPTION

Application

LANmark-6A cables are the ideal solution for a 10G Ethernet network. The range has been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, while maintaining full backwards compatibility with today's needs. All LANmark-6A cables are shielded, in order to ensure immunity to Alien Crosstalk and other external interferences.

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- future Cat 6A and Class EA applications

Performance

With guaranteed performance to 500MHz, Nexans LANmark-6A 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.

When used in combination with Nexans LANmark-6A Evo connectors and LANmark-6A Ultim patch cords, the system supports the 10GBase-T applications as defined in IEEE 802.3an and meets or exceeds the link and channel requirements for Category 6A and Class EA as defined in TIA/EIA 568-C.2 and ISO/IEC 11801.

Installation

The LANmark-6A cables have the advantage of offering equal dimensions and flexibility as the equivalent LANmark-6 screened cables with the same ease of installation and termination.

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



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



Operating temp.
-20 ... 60 °C



Flame retardant
IEC 60332-1



Smoke density
IEC 61034



Gases corrosivity
IEC 60754-1; IEC 60754-2



LANmark-6A

DECLARATION OF PERFORMANCE

Dca-s2,d1,a1

STANDARDS

International EN 50173-1;
EN 50288-4-1; IEC 61156-5;
IEEE 802.3bt (PoE++); ISO/
IEC 11801

National ANSI/TIA-568-C.2

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

Installations with LANmark-6A 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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CHARACTERISTICS

Construction characteristics

Type of cable	F/FTP
Outer sheath	LSZH
Colour	Orange
Conductor material	-
Type of conductor	-

Dimensional characteristics

Approximate weight	49 kg/km
Conductor cross-section (AWG/KCMIL)	23
Diameter over insulation	1.36 mm
Nominal outer diameter	7.0 mm

Electrical characteristics

Characteristic impedance	100 Ohm
Max. DC resistance of the conductor at 20°C	80 Ohm/km
Max. transfer impedance at 30 MHz (Ohm/km)	120 Ohm/km
Mutual capacitance	45 nF/km

Transmission characteristics

Attenuation Crosstalk Ratio, 250MHz	37.2 dB/100m
Coupling attenuation at 30 MHz	>85 dB
Nominal Velocity of Propagation (NVP)	82 %
Propagation delay, max. 100 MHz	536 ns/100m
Skew	30 ns/100m

Mechanical characteristics

Maximum operating pulling force	100 N
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Usage characteristics

Category	Cat. 6A
Range	LANmark-6A
Ambient installation temperature, range	-10 ... 60 °C
Operating temperature, range	-20 ... 60 °C
Minimum Bend Radius - During Installation (under Tension)	56 mm
Minimum Bend Radius - Installed	28 mm
Flame retardant	IEC 60332-1
Smoke density	IEC 61034
Gases corrosivity	IEC 60754-1; IEC 60754-2
Length	500 m
Packaging	Reel

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ELECTRICAL PERFORMANCE LANMARK-6A FFTP CABLE

Freq in MHz	Attn in dB		NEXT in dB		PSNEXT in dB		ACR-F in dB		PS ACR-F in dB		PS ANEXT in dB		PS AACR-F in dB		RL in dB	
	Max	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ
1	2,1	2,1	74,3	104,3	72,3	102,3	67,8	92,8	64,8	89,8	67,0	90,0	67,0	76,7	20,0	26,0
4	3,8	3,8	65,3	95,3	63,3	93,3	55,8	80,8	52,8	77,8	67,0	90,0	66,2	75,9	23,0	29,0
10	5,9	5,9	59,3	89,3	57,3	87,3	47,8	72,8	44,8	69,8	67,0	87,0	58,2	67,9	25,0	31,0
16	7,5	7,5	56,2	86,2	54,2	84,2	43,7	68,7	40,7	65,7	67,0	85,0	54,1	63,8	25,0	31,0
20	8,4	8,4	54,8	84,8	52,8	82,8	41,8	66,8	38,8	63,8	67,0	84,0	52,2	61,9	25,0	31,0
31,25	10,5	10,5	51,9	81,9	49,9	79,9	37,9	62,9	34,9	59,9	67,0	82,1	48,3	58,0	23,6	29,6
62,5	15,0	15,0	47,4	77,4	45,4	75,4	31,9	56,9	28,9	53,9	65,6	79,0	42,3	52,0	21,5	27,5
100	19,1	19,1	44,3	74,3	42,3	72,3	27,8	52,8	24,8	49,8	62,5	77,0	38,2	47,9	20,1	26,1
155	24,1	24,1	41,4	71,4	39,4	69,4	24,0	49,0	21,0	46,0	59,6	74,1	34,4	44,1	18,8	24,8
200	27,6	27,6	39,8	69,8	37,8	67,8	21,8	46,8	18,8	43,8	58,0	72,5	32,2	41,9	18,0	24,0
250	31,1	31,1	38,3	68,3	36,3	66,3	19,8	44,8	16,8	41,8	56,5	71,0	30,2	39,9	17,3	23,3
300	34,3	34,3	37,1	67,1	35,1	65,1	18,3	43,3	15,3	40,3	55,3	69,8	28,7	38,4	16,8	22,8
500	45,3	45,3	33,8	63,8	31,8	61,8	13,8	38,8	10,8	35,8	52,0	66,5	24,2	33,9	15,2	21,2