

# LANmark-7A Cable

LANmark-7A 1600 S/FTP AWG22 Cat 7A 1600MHz LSZH Dca s2 d1 a1  
Orange 1000m reel

Nexans Ref.: N100.381-OD

- Exceeds Category 7A in terms of ACR and Frequency Range
- Suitable for channels with capacity above 25Gbps
- AWG22 Wire Size
- Positive Attenuation to Crosstalk Ratio up to 1600MHz
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with Cat 7A connectivity through special foil construction

## DESCRIPTION

### Description

LANmark-7A 1600 is a 4 pair S/FTP cable with individual pair foils and an overall braid offering superior performance up to 1600MHz. It is fully compliant with the new Category 7A standard and offers even large headroom above the Cat 7A requirement. Due to this excellent electrical performance and positive ACR up to 1600MHz the cable is suited for transmission channels with a capacity of more than 25Gbps.

### Application

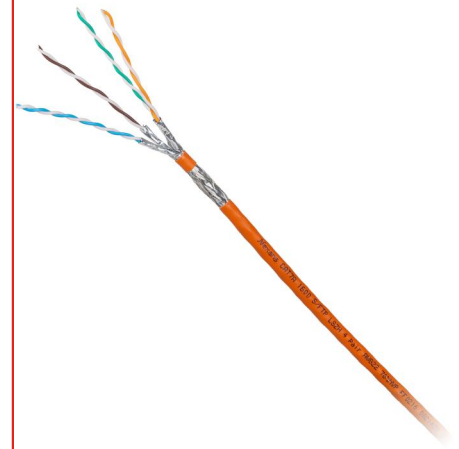
LANmark-7A is the highest performing standardised cabling solution in the enterprise market and will support all current data applications and all planned applications using cabling up to Class FA.

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-T
- 25GBase-T
- CaTV up to 862MHz
- Cable sharing applications including CATV
- Any future Class FA application

### Installation

Ease of Installation is one of the main features of the LANmark-7A cable. Extra attention has been paid to ensure that the screen coverage is maintained and foils do not open during installation. The cable has been specially designed to be used in conjunction with the LANmark-7A GG45 12C connector.

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.



**LANmark-7A**

## DECLARATION OF PERFORMANCE

Dca-s2,d1,a1

## STANDARDS

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



Lead free  
Yes



Ambient installation T°  
C range  
0 ... 50 °C



Operating temp.  
-20 ... 60 °C



Flame retardant  
IEC 60332-1



Fire retardant  
-



Smoke density  
IEC 61034-2



Gases corrosivity  
IEC 60754-1; IEC  
60754-2

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## CHARACTERISTICS

### Construction characteristics

Type of cable	S/FTP
Screen	Aluminium foil + tinned copper braiding
Drain wire	No
Lead free	Yes
Outer sheath	LSZH
Sheath colour	Orange

### Dimensional characteristics

Number of pairs	4
Diameter over insulation	1.58 mm
Nominal outer diameter	7.8 mm
Conductor cross-section (AWG/KCMIL)	22
Approximate weight	72 kg/km

### Electrical characteristics

Characteristic impedance	100 Ohm
Max. transfer impedance at 30 MHz (Ohm/km)	50 Ohm/km
Max. DC resistance of the conductor at 20°C	85 Ohm/km
Mutual capacitance	45 nF/km

### Transmission characteristics

Skew	25 ns/100m
Nominal Velocity of Propagation (NVP)	76 %
Propagation delay, max. 100 MHz	536 ns/100m
Coupling attenuation at 30 MHz	>85 dB

### Mechanical characteristics

Maximum operating pulling force	100 N
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### Usage characteristics

Category	Cat. 7A
Range	LANmark-7A
Ambient installation temperature, range	0 ... 50 °C
Operating temperature, range	-20 ... 60 °C
Minimum Bend Radius - During Installation (under Tension)	69 mm
Minimum Bend Radius - Installed	34 mm
Flame retardant	IEC 60332-1
Fire retardant	-
Smoke density	IEC 61034-2
Gases corrosivity	IEC 60754-1; IEC 60754-2
Length	1000 m
Packaging	Reel

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## ELECTRICAL PERFORMANCE LANMARK-7A 1600 CABLE

Frequency (in MHz)	Attenuation (dB/100m)		NEXT (in dB)		ACR (in dB)		PS-ANEXT (in dB)		ACR-F (in dB)		TCL (in dB)		Return Loss (in dB)	
	Max	Typical	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1,00	2,1	1,9	75,0	105,0	72,9	103,1	80,0	87,5	88,0	83,0	40,0	43,0	20,0	30,0
4,00	3,7	3,5	75,0	105,0	71,3	101,5	80,0	87,5	88,0	83,0	34,0	37,0	23,0	33,0
10,00	5,8	5,4	75,0	105,0	69,2	99,6	80,0	87,5	88,0	83,0	30,0	33,0	25,0	34,0
16,00	7,3	6,8	75,0	105,0	67,7	98,2	80,0	87,5	88,0	83,0	28,0	31,0	25,0	34,0
20,00	8,2	7,6	75,0	105,0	66,8	97,4	80,0	87,5	88,0	83,0	27,0	30,0	25,0	34,0
31,25	10,3	9,5	75,0	105,0	64,7	95,5	80,0	87,5	88,0	83,0	25,1	28,1	23,7	32,7
62,50	14,6	13,4	75,0	105,0	60,4	91,6	80,0	87,5	88,0	83,0	22,1	25,1	21,6	30,6
100,00	18,5	17,1	75,0	102,4	56,5	85,4	80,0	87,5	85,3	80,3	20,0	23,0	20,1	29,1
155,00	23,2	21,3	72,5	97,6	49,3	76,3	80,0	87,5	80,5	75,5	18,1	21,1	18,8	27,8
300,00	32,7	29,9	88,2	90,5	35,6	60,6	80,0	87,5	73,4	68,4	15,2	18,2	17,3	26,3
600,00	47,1	42,7	83,7	82,9	16,6	40,3	75,8	83,3	65,8	60,8	12,2	15,2	17,3	26,3
800,00	54,9	49,6	61,9	79,8	6,9	30,2	74,0	81,5	62,7	57,7	11,0	14,0	16,1	23,8
1000,00	61,9	55,7	60,4	77,4	-1,5	21,7	72,5	80,0	60,3	55,3	10,0	13,0	15,1	21,9
1200,00	68,4	61,3	59,2	75,4	-9,1	14,1	71,3	78,8	58,3	53,3	9,2	12,2	14,3	20,3
1500,00	77,2	69,0	57,8	73,0	-19,5	4,0	69,9	77,4	55,9	50,9	8,2	11,2	13,3	18,3
1600,00	80,0	71,4	57,3	72,3	-22,7	0,9	69,4	76,9	55,2	50,2	8,0	11,0	13,0	17,8

Internal Description	UK MRO 130903 Electrical Performance LM7A 1600
Title	Electrical Performance LANmark-7A 1600 Cable
Description	Typical Electrical Performance LANmark-7A 1600 Cable Maximum/Minimum requirements according to IEC61156-9 NP Draft 2013
Comment	
<div style="border: 1px solid gray; padding: 5px;"> <p>Squared <input checked="" type="checkbox"/></p> <p>Table width <input type="text" value="100"/></p> <p>Centered <input type="checkbox"/></p> <p>Use small font for PDF <input type="checkbox"/></p> <p>Online <input checked="" type="checkbox"/></p> <p>Page break allowed <input type="checkbox"/></p> </div>	