

LANmark-7A Cable

LANmark-7A S/FTP Cat 7A 1000MHz 23AWG LSZH Orange 1000m Reel

Nexans ref.: N100.371

- Exceeds Category 7A in terms of ACR and Frequency Range
- Suitable for channels with capacity above 40GBps
- Superior Performance with positive ACR over the full frequency range
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with Cat 7 connectivity through special foil construction

Description

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LANmark-7A is a 4 pair S/FTP cable with individual pair foils and an overall braid offering superior performance up to 1000MHz. 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 1000 MHz the cable is suited for transmission channels with a capacity of >40Gbps.

Application

LANmark-7A is the highest performing standardised cabling solution in the market and will support all current data applications and all planned applications using cabling up to Class FA (see discussions at IEEE about 40/100Gbps).

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-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

Standards

International EN 50173;
 EN 50288-4-1; ISO/IEC 11801; ISO/
 IEC 61156-5



Lead free
Yes



Ambient installation T°
C range
-5 .. 70 °C



Operating temp.
range
-20 .. 60 °C



Electro magnetic
interference resistance
Yes



operation
bending rad.
62 mm



static bending
rad.
31 mm



Flame
retardant
IEC 60332-1

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Characteristics

Construction characteristics	
Type of cable	S/FTP
Screen	Aluminium tape and copper braid
Drain wire	No
Sheath colour	Orange
Lead free	Yes
Outer sheath	LSZH
Dimensional characteristics	
Diameter over insulation	1.45 mm
Number of pairs	4
Nominal outer diameter	7.7 mm
Approximate weight	61 kg/km
Conductor cross-section (AWG)	23
Electrical characteristics	
Characteristic impedance	100 Ohm
Max. transfer impedance at 30 MHz (Ohm/km)	50 Ohm/km
Mutual capacitance	56 nF/km
Max. DC resistance of the conductor at 20°C	80 Ohm/km
Transmission characteristics	
Nominal Velocity of Propagation (NVP)	82 %
Skew	25 ns/100m
Propagation delay, max. 100 MHz	536 ns/100m
Mechanical characteristics	
Maximum pulling force by laying	0.21 kN
Usage characteristics	
Category	Cat. 7A
Ambient installation temperature, range	-5 .. 70 °C
Operating temperature, range	-20 .. 60 °C
Electro magnetic interference resistance	Yes
Laying operation bending radius	62 mm
Minimum static operating bending radius	31 mm
Flame retardant	IEC 60332-1
Fire load	700 MJ/km
Range	LANmark-7A
Length	1000 m
Packaging	Reel
Field of application	Fixed installations


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Electrical Performance LANmark-7A Cable

Electrical Performance LANmark-7A 1000MHz

Frequency (in 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.	Typical	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1.00	4.0	1.7	80.00	100.00	76.00	98.30	77.00	98.0	75.00	98.0	75.00	96.00	20	20.00
4.00	4.0	3.4	80.00	100.00	76.00	96.60	77.00	98.0	75.00	98.0	75.00	96.00	23	26.00
10.00	5.8	5.3	80.00	100.00	74.18	94.70	77.00	98.0	75.00	98.0	72.30	96.00	25	28.00
16.00	7.3	6.6	80.00	100.00	72.66	93.40	77.00	98.0	71.22	96.0	68.22	94.00	25	28.00
20.00	8.2	7.4	80.00	100.00	71.79	92.60	77.00	98.0	69.28	94.0	66.28	92.00	25	28.00
31.25	10.3	9.3	80.00	100.00	69.74	90.70	77.00	98.0	65.40	90.0	62.40	88.00	23.6	26.00
62.50	14.6	13.5	80.00	100.00	65.43	86.50	77.00	98.0	59.38	84.0	56.38	82.00	21.5	24.00
100.00	18.5	17.1	78.40	100.00	59.88	82.90	75.40	98.0	55.30	75.0	52.30	73.00	20.1	23.00
155.00	23.2	25.0	75.55	100.00	52.34	75.00	72.55	98.0	51.49	70.0	48.49	68.00	18.8	21.00
300.00	32.7	31.0	71.24	96.00	38.55	65.00	68.24	92.0	45.76	66.0	42.76	64.00	17.3	20.00
600.00	47.1	44.0	66.73	94.00	19.63	50.00	63.73	88.0	39.74	54.0	36.74	52.00	17.3	20.00
800.00	54.9	51.3	64.85	92.00	9.93	40.70	61.85	78.00	37.24	50.00	34.24	48.00	16	19.00
1000.00	61.9	57.5	63.40	91.00	1.47	33.50	60.40	78.00	35.30	38.00	32.30	34.00	15.1	18.00



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