

LANmark-7A Cable

LANmark-7A 1250 S/FTP AWG23 Cat 7A 1250MHz LSZH Dca s2 d1 a1
Orange 500m reel

Nexans ref.: N100.372-OD

- High Quality Data Cables for simultaneous use with POE+ and POE++
- All Cable exceed Category 7A in terms of ACR and Frequency Range
- Superior Performance with positive ACR over the full frequency range
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with GG45 connectivity through special foil construction

DESCRIPTION

Description

LANmark-7A are 4 pair S/FTP cables with individual pair foils and an overall braid offering upper frequencies of at least 1250MHz but up to 1800MHz. All cables are fully compliant with Category 7A standard and offer even large headroom above the Cat 7A requirement. Due to this excellent electrical performance and positive ACR all cables supports applications beyond 10GBASE-T, including 25GBASE-T.

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 up to 30m
- POE, POE+, POE++ (Draft)
- Cable sharing applications including CATV up to 862MHz
- 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

Reaction to fire: Dca-s2,d1,a1
according to EN50575:2014
+A1:2016

STANDARDS

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



Reaction to fire
Dca-s2,d1,a1



Lead free
Yes



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



Operating temp.
-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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Generated 17/07/17

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CHARACTERISTICS

Construction characteristics

Type of cable	S/FTP
Screen	Aluminium tape and copper braid
Drain wire	No
Outer sheath	LSZH
Sheath colour	Orange
Lead free	Yes

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
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Usage characteristics

Category	Cat. 7A
Ambient installation temperature, range	0 .. 50 °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	500 m
Packaging	Reel
Field of application	Fixed installations

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ELECTRICAL PERFORMANCE LANMARK-7A CABLE 1250 MHZ

Minimum and Typical Electrical Performance LANmark-7A Cable 1250MHz

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	2.1	2.1	80.0	100.0	76.0	98.3	77.0	98.0	75.0	98.0	75.0	96.0	20.0	20.0
4.00	3.7	3.7	80.0	100.0	76.0	96.6	77.0	98.0	75.0	98.0	75.0	96.0	23.0	26.0
10.00	5.8	5.8	80.0	100.0	74.2	94.7	77.0	98.0	75.0	98.0	72.3	96.0	25.0	28.0
16.00	7.3	7.3	80.0	100.0	72.7	93.4	77.0	98.0	71.2	96.0	68.2	94.0	25.0	28.0
20.00	8.2	8.2	80.0	100.0	71.8	92.6	77.0	98.0	69.3	94.0	66.3	92.0	25.0	28.0
31.25	10.1	10.0	80.0	100.0	69.7	90.7	77.0	98.0	65.4	90.0	62.4	88.0	23.6	26.0
62.50	14.6	14.4	80.0	100.0	65.4	86.5	77.0	98.0	59.4	84.0	56.4	82.0	21.5	24.0
100.00	18.5	18.3	78.4	100.0	59.9	82.9	75.4	98.0	55.3	75.0	52.3	73.0	20.1	23.0
155.00	23.2	22.8	75.5	100.0	52.3	75.0	72.5	98.0	51.5	70.0	48.5	68.0	18.8	21.0
300.00	32.7	31.9	71.2	96.0	38.6	65.0	68.2	92.0	45.8	66.0	42.8	64.0	17.3	20.0
600.00	47.1	45.6	66.7	94.0	19.6	50.0	63.7	88.0	39.7	54.0	36.7	52.0	17.3	20.0
800.00	54.9	52.9	64.9	92.0	9.9	40.7	61.9	78.0	37.2	50.0	34.2	48.0	16.0	19.0
1000.00	61.9	59.4	63.4	91.0	1.5	33.5	60.4	78.0	35.3	38.0	32.3	34.0	15.1	18.0
1250.00		66.8		85.0		33.5		78.0		38.0		34.0		18.0