

LANmark-7A Cable

LANmark-7A 1250 S/FTP AWG23 Cat 7A 1250MHz LSZH B2ca s1a d1 a1
Orange 1000m reel

Nexans ref.: [N100.371-OB](#)

- 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
- Enhanced reaction-to-fire performance according to CPR classification B2ca-s1a,d1,a1 (h/EN50575:2014+A1:2016)

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

STANDARDS

International EN 50173;
EN 50288-4-1; 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



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	1.45 mm
Nominal outer diameter	7.9 mm
Conductor cross-section (AWG)	23
Approximate weight	61 kg/km

Electrical characteristics

Characteristic impedance	100 Ohm
Max. transfer impedance at 30 MHz (Ohm/km)	50 Ohm/km
Mutual capacitance	45 nF/km
Max. DC resistance of the conductor at 20°C	80 Ohm/km

Transmission characteristics

Skew	25 ns/100m
Nominal Velocity of Propagation (NVP)	82 %
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)	63 mm
Minimum Bend Radius - Installed	32 mm
Flame retardant	IEC 60332-1
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 CHANNEL 1250MHZ

All values are based on Worst Case 4 Connector Channel configurations according ISO11801 Class FA

Frequency (in MHz)	Attenuation (in dB/100m)		NEXT pp (in dB)		ACR-F (in dB)		RL (in dB)		Coupling Att. (in dB)		PSANEXT (in dB)		PSAFEXT (in dB)	
	Std Max	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical
1	4.0	4.0	65.0	104.8	65.0	70.0	19.0	38.0	80.0	106.0	67.0	92.4	80.0	83.0
4	4.1	4.0	65.0	94.6	65.0	70.0	19.0	32.0	68.0	94.0	67.0	92.1	79.8	82.8
10	6.4	6.3	65.0	87.8	65.0	70.0	19.0	28.0	60.0	86.0	67.0	91.0	75.9	78.9
16	8.0	7.9	65.0	84.2	63.3	68.3	18.0	26.0	55.9	81.9	67.0	90.0	73.9	76.9
20	9.0	8.9	65.0	82.5	61.4	66.4	17.5	25.0	54.0	80.0	67.0	89.4	72.9	75.9
31.25	11.2	11.1	65.0	79.1	57.5	62.5	16.5	23.1	50.1	76.1	67.0	88.0	71.0	74.0
62.5	15.9	15.6	65.0	73.7	51.5	56.5	14.0	20.0	44.1	70.1	67.0	85.3	68.0	71.0
100	20.3	19.7	65.0	70.0	47.4	52.4	12.0	18.0	40.0	66.0	67.0	83.1	65.9	68.9
155	25.4	24.5	63.0	66.6	43.6	48.6	10.1	16.1	36.2	62.2	67.0	80.8	63.9	66.9
200	28.9	27.9	60.9	64.6	41.4	46.4	9.0	15.0	34.0	60.0	67.0	79.4	62.8	65.8
250	32.5	31.2	59.1	62.8	39.4	44.4	8.0	14.0	32.0	58.0	67.0	78.1	61.8	64.8
300	35.7	34.1	57.7	61.3	37.8	42.8	8.0	13.2	30.5	56.5	67.0	77.1	60.9	63.9
500	46.7	44.1	53.6	57.2	33.4	38.4	8.0	11.0	26.0	52.0	64.5	75.0	58.6	61.6
600	51.4	48.3	52.1	55.8	31.8	36.8	8.0	10.2	24.4	50.4	63.3	75.0	57.8	60.8
700	55.8	52.1	50.8	54.5	30.5	35.5	7.5	9.5	23.1	49.1	62.3	75.0	57.1	60.1
800	59.9	55.7	49.7	53.5	29.3	34.3	7.0	9.0	21.9	47.9	61.5	75.0	56.4	59.4
900	63.8	59.1	48.8	52.5	28.3	33.3	6.5	8.5	20.9	46.9	60.7	74.0	55.9	58.9
1000	67.6	62.3	47.9	51.6	27.4	32.4	6.0	8.0	20.0	46.0	60.0	73.0	55.4	58.4
1250				42.0		25.0		8.0		40.0		70.0		50.0

Standard Values according ISO11801 ClassFA