

## LANmark-7A Cable

LANmark-7A S/FTP Cat 7A 1250MHz 23AWG LSZH Orange 1000m Reel

Nexans ref.: N100.371

- 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

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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 at least 1250MHz. 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 at least 1250MHz the cable supports the applications like 10GBASE-T as well as 25GBASE-T

#### Application

LANmark-7A is the highest performing standardised cabling solution in the market and will support all current Ethernet applications up to 25G and all planned applications using cabling up to Class FA.

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-T
- 25GBase-T
- POE, POE+, POE++ (Draft)
- Cable sharing applications including CATV up to 862MHz
- Any future Class FA application



## LANmark-7A

#### Standards

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

#### 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.

						
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 1250 MHz

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

Frequency (in MHz)	Attenuation		NEXT		ACR		PS-NEXT		ACR-F		PS-ACR-F		Return Loss	
	(dB/100m)		(in dB)		(in dB)		(in dB)		(in dB)		(in dB)		(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