

LANmark Industry Copper cables

LANmark Industry S/FTP Cat 6A AWG23 LSZH + PE black 500m reel

Contact

Telecom and Data cables
Phone: 040 70 78 444
telecomcable-pc.se@nexans.com

Nexans ref.: [N10i.005](#)

Country ref.: 0233347

- For installation in industrial premises
- High shielding performance for harsh environments
- Enhanced mechanical properties
- Designed to support industrial Ethernet based automation
- Optimised for use with LANmark connectors

DESCRIPTION

Specification

The **LANmark Industry** S/FTP LSZH + PE is a high performance cable meeting all Category 6A parameters. It meets the electrical and mechanical requirements of the ISO/IEC 24702 standard and complies with the MICE rating for environmental conditions. When terminated to LANmark-6A connectors it meets the Class EA requirements (ISO/IEC 11801:2002). When used with LANmark-6 connectivity, optimal headroom to 250MHz Class E performance is ensured.

This cable has a protective PE sheath which is water, UV and moisture resistant. It can be installed outdoors in ducts and is suitable for use indoors when the PE sheath is removed.

Application

The LANmark Industry S/FTP LSZH + PE cable will support industrial Ethernet applications as well as high speed data applications.

- 10Base-T,
- 100 Base-T
- 1GBase-T
- 10GBase-T
- Industrial Ethernet

Screening

The S/FTP LSZH + PE cable consists of individually screened pairs, bundled by an overall braid. It complies to the EMC requirements for screened cables and shows excellent transfer impedance values. It is designed for electrically "noisy" environments.



LANmark

Industry

STANDARDS

International

EN 50173; EN 50288-4-1; IEC 61156-5; ISO/IEC 11801; ISO/IEC 24702



Halogen free
Yes



Lead free
Yes



Flame retardant
IEC 60332-1



Operating temp.
-20 .. 70 °C



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



Electro magnetic
interference resistance
Yes



RoHS compliant
Yes

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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Transfer impedance (Grade 1)

- 10mOhm/m at 1 MHz
- 10mOhm/m at 10 MHz
- 30mOhm/m at 30 MHz
- 60mOhm/m at 100 MHz



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CHARACTERISTICS

Construction characteristics

Type of cable	S/FTP
Individual screen	Aluminium / Polyester tape
Overall screen	Tinned copper braid
Inner sheath	Low smoke, zero halogen thermoplastic compound
Outer sheath	PE
Sheath colour	Black
Halogen free	Yes
Lead free	Yes

Dimensional characteristics

Number of pairs	4
Conductor cross-section (AWG)	23
Diameter over insulation	1.2 mm
Outer Diameter	8.6 mm
Approximate weight	66 kg/km

Electrical characteristics

Maximal operating frequency	600 MHz
Characteristic impedance	100 Ohm
Max. DC resistance of the conductor at 20°C	95 Ohm/km
Mutual capacitance	56 nF/km

Transmission characteristics

Nominal Velocity of Propagation (NVP)	80 %
Skew	25 ns/100m
Propagation delay, max. 100 MHz	535 ns/100m
Coupling attenuation at 30 MHz	80 dB

Mechanical characteristics

Maximum permanent tensile load	0.1 kN
Maximum pulling force by laying	0.12 kN

Usage characteristics

Field of application	Fixed installations
Packaging	Reel
Length	500 m
Fire load	700 MJ/km
Flame retardant	IEC 60332-1
Operating temperature, range	-20 .. 70 °C
Ambient installation temperature, range	-5 .. 70 °C
Minimum Bend Radius - Installed	86 mm
Minimum Bend Radius - During Installation (under Tension)	130 mm
Silicone free	Yes
Category	Cat. 6A
Electro magnetic interference resistance	Yes
RoHS compliant	Yes

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ELECTRICAL PERFORMANCE

	Attn		NEXT		PSNEXT		ACR-F		PS ACR-F		PS ANEXT		PS AACR-F		RL	
Freq	in dB		in dB		in dB		in dB		in dB		in dB		in dB		in dB	
in MHz	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1	2.1	2.1	74.3	104.3	72.3	102.3	67.8	92.8	64.8	89.8	67.0	90.0	67.0	76.7	20.0	26.0
4	3.8	3.8	65.3	95.3	63.3	93.3	55.8	80.8	52.8	77.8	67.0	90.0	66.2	75.9	23.0	29.0
10	5.9	5.9	59.3	89.3	57.3	87.3	47.8	72.8	44.8	69.8	67.0	87.0	58.2	67.9	25.0	31.0
16	7.5	7.5	56.2	86.2	54.2	84.2	43.7	68.7	40.7	65.7	67.0	85.0	54.1	63.8	25.0	31.0
20	8.4	8.4	54.8	84.8	52.8	82.8	41.8	66.8	38.8	63.8	67.0	84.0	52.2	61.9	25.0	31.0
31.25	10.5	10.5	51.9	81.9	49.9	79.9	37.9	62.9	34.9	59.9	67.0	82.1	48.3	58.0	23.6	29.6
62.5	15.0	15.0	47.4	77.4	45.4	75.4	31.9	56.9	28.9	53.9	65.6	79.0	42.3	52.0	21.5	27.5
100	19.1	19.1	44.3	74.3	42.3	72.3	27.8	52.8	24.8	49.8	62.5	77.0	38.2	47.9	20.1	26.1
155	24.1	24.1	41.4	71.4	39.4	69.4	24.0	49.0	21.0	46.0	59.6	74.1	34.4	44.1	18.8	24.8
200	27.6	27.6	39.8	69.8	37.8	67.8	21.8	46.8	18.8	43.8	58.0	72.5	32.2	41.9	18.0	24.0
250	31.1	31.1	38.3	68.3	36.3	66.3	19.8	44.8	16.8	41.8	56.5	71.0	30.2	39.9	17.3	23.3
300	34.3	34.3	37.1	67.1	35.1	65.1	18.3	43.3	15.3	40.3	55.3	69.8	28.7	38.4	16.8	22.8
500	45.3	45.3	33.8	63.8	31.8	61.8	13.8	38.8	10.8	35.8	52.0	66.5	24.2	33.9	15.2	21.2

all values are specified at 20°C