LANmark Industry Copper cables

LANMARK INDUSTRY S/FTP AWG23 CAT 6A LSZH CCA ORANGE + PE FCA BLACK 500M REEL



Aginode Ref: N10i.005-OCKF

- For installation in harsh environments
- High EMC performance for industrial premises
- Enhanced mechanical properties
- Supports industrial Ethernet based automation
- Optimised for use with LANmark connectors
- PE outer jacket for outdoor use
- LSZH inner jacket with enhanced reaction-to-fire performance according to CPR classification Cca-s1a,d1,a1 (h/EN50575:2014+A1:2016)
- Installation can continue indoors when PE sheath is removed
- Ripcord facilitates outer PE jacket removal

STANDARDS

EN 50173
EN 50288-4-1
IEC 61156-5
IEEE 802.3bt (PoE++)
ISO/IEC 11801

Specification

The high performing LANmark Industry S/FTP LSZH + PE cables meet or exceed all Category 6A parameters. They comply with the electrical and mechanical requirements of the ISO/IEC 11801-3:2017 standard for industrial premises and with the MICE rating for environmental conditions.

When terminating the cable with LANmark-6A connectors, the Class EA Permanent Link requirements of ISO/IEC 11801 are met.

When used with LANmark-6 connectivity, optimal headroom to 250MHz Class E performance is ensured.

Design and installation

The cable offers a protective PE sheath which is UV- and weather-resistant, and is designed to be installed outdoors. (the cable is not suitable for direct burial)

When the cable is stripped from its PE jacket, installation can continue indoors. This offers the huge benefit that the outdoor rated cable does not need to be terminated at the building entry, but only needs its PE jacket to be removed. This can be easily done, even over longer lengths, thanks to the ripcord placed between the two cable jackets.

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

This cable version is made with an inner LSZH jacket complying with reaction-to-fire performance Cca-s1a,d1,a1 according to the European CPR classification. The cable with its outer PE jacket is classified Fca.

A version with PE + LSZH Dca fire performance is also available. (N10i.005-ODKF)

Application

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

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

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

Screening

LANmark Industry S/FTP LSZH + PE cables consist of individually screened pairs, bundled by an overall braid. They comply with the EMC requirements for screened cables and show excellent transfer impedance values. They are designed for electrically noisy environments.

Transfer impedance (Grade 1)

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

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

LANmark Industry S/FTP AWG23 Cat 6A LSZH Cca Orange + PE Fca Black 500m reel

Characteristics

Construction characteristics	
Halogen free	Yes
Individual screen	Aluminium / Polyester tape
Inner sheath	Low smoke, zero halogen thermoplastic compound
Lead free	Yes
Outer sheath	PE
Overall screen	Tinned copper braid
Sheath colour	Orange / Black
Type of cable	S/FTP
Dimensional characteristics	
Approximate weight	66 kg/km
Conductor cross-section (AWG/KCMIL)	23
Diameter over insulation	1.2 mm
Number of pairs	4
Outer Diameter	9.2 mm
Electrical characteristics	
Characteristic impedance	100 Ohm
Max. DC resistance of the conductor at 20°C	95 Ohm/km
Maximal operating frequency	600 MHz
Mutual capacitance	56 nF/km
Mechanical characteristics	
Maximum permanent tensile load	0.1 kN
Maximum pulling force by laying	0.12 kN
Transmission characteristics	
Coupling attenuation at 30 MHz	80 dB
Nominal Velocity of Propagation (NVP)	82 %

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

Propagation delay, max. 100 MHz	535 ns/100m
Skew	25 ns/100m
Usage characteristics	
Ambient installation temperature, range	-5...70 °C
Category	Cat. 6A
Electro magnetic interference resistance	Yes
Field of application	Fixed installations
Fire load	700 MJ/km
Flame retardant	IEC 60332-1
Length	500 m
Minimum Bend Radius - During Installation (under Tension)	130 mm
Minimum Bend Radius - Installed	86 mm
Operating temperature, range	-20...70 °C
Packaging	Reel
RoHS compliant	Yes
Silicone free	Yes

Documentation

Freetable LM6A FFTP V3.xls xls — 25.5 KB Download

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