

LANmark Industry Copper cables

LANmark Industry S/FTP AWG23 PUR black 500m reel

Nexans ref.: N10i.002

- 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 PUR** is a high performance cable with all parameters extended to 1000MHz. It meets the electrical and mechanical requirements of the ISO/IEC 24702 and complies with the MICE rating for environmental conditions. When terminated to LANmark-7 GG45 connectors it meets the Class F requirements (ISO/IEC 11801:2002). It enables to reach the full bandwidth on the link and secures the future proofing of the installation. When used with LANmark-6 Cat 6 connectivity, optimal headroom to 250MHz Class E performance is ensured.

Application

The LANmark Industry S/FTP PUR cable is the appropriate cable for fixed LAN networks in industrial premises. It 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 PUR 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.

Transfer impedance (Grade 1)

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

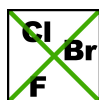
Fire classification



LANmark
Industry

Standards

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



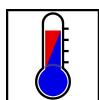
Halogen free
Yes



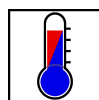
Lead free
Yes



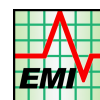
Flame
retardant
IEC 60332-1



Operating temp.
range
-40 .. 70 °C



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



Electro magnetic
interference resistance
Yes



RoHS conform
Yes

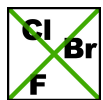
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- Fire test according to IEC 60332-1
- Fire load: 700MJ/km

Cable sheath

- Polyurethane compound for superior abrasion and tear resistance. The PUR compound also has very good resistance to ageing and UVs. It performs well in contact with oils and greases. It is optimal for industrial installations.
- Oil resistant IRM 902, 4h at 70°C, IEC 60811-2-1
- Lead Free - Silicon Free - Halogen Free



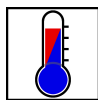
Halogen free
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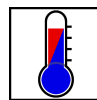
Lead free
Yes



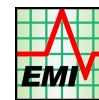
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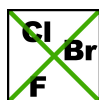
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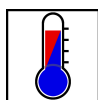
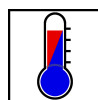
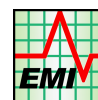
Nexans ref.: N10i.002

Characteristics

Construction characteristics	
Type of cable	S/FTP
Individual screen	Aluminium / Polyester tape
Overall screen	Tinned copper braid
Inner sheath	None
Outer sheath	PUR
Sheath colour	Black
Halogen free	Yes
Lead free	Yes
Dimensional characteristics	
Number of pairs	4
Conductor cross-section (AWG)	23
Diameter over insulation	1.45 mm
Outer Diameter	7.5 mm
Approximate weight	61 kg/km
Electrical characteristics	
Maximal operating frequency	1000 MHz
Characteristic impedance	100 Ohm
Max. transfer impedance at 30 MHz (Ohm/km)	5 Ohm/km
Max. DC resistance of the conductor at 20°C	80 Ohm/km
Mutual capacitance	56 nF/km
Transmission characteristics	
Attenuation Crosstalk Ratio, 250MHz	66.5 dB/100m
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	0.21 kN
Usage characteristics	
Category	Cat. 7
Field of application	Fixed installations
Packaging	Reel
Length	500 m
Fire load	700 MJ/km
Flame retardant	IEC 60332-1


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Lead free
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Ambient installation T°
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Usage characteristics

Operating temperature, range	-40 .. 70 °C
Ambient installation temperature, range	-5 .. 70 °C
Minimum Bend Radius - Installed	30.0 mm
Minimum Bend Radius - During Installation (under Tension)	60.0 mm
Silicon free	Yes
Electro magnetic interference resistance	Yes
RoHS conform	Yes

Electrical Performance

all values are specified at 20°C

Frequency	Attenuation dB/100m		NEXT dB		ACR dB/100m		PSNEXT(*) dB		ELFEXT dB/100m		PSELFEXT dB/100m		RL dB	
	Std	Typ	Std	Typ	Std	Typ	Std	Typ	Std	Typ	Std	Typ	Std	Typ
1	2.0	1.9	>80	100.0	78.0	98.1	>77	100.0	>80	92.0	>77	89.0	20.0	23.0
4	3.6	3.5	>80	100.0	76.4	96.5	>77	100.0	>80	91.0	>77	88.0	23.0	26.0
10	5.7	5.5	>80	100.0	74.3	94.5	>77	100.0	74.0	91.0	71.0	88.0	25.0	28.0
16	7.2	7.0	>80	100.0	72.8	93.0	>77	100.0	69.9	91.0	66.9	88.0	25.0	28.0
20	8.1	7.8	>80	100.0	71.9	92.2	>77	100.0	68.0	91.0	65.0	88.0	25.0	28.0
31.25	10.1	9.9	>80	100.0	69.9	90.1	>77	100.0	64.1	91.0	61.1	88.0	23.6	26.6
62.5	14.5	14.1	75.5	100.0	61.0	85.9	72.5	98.0	58.1	79.0	55.1	76.0	21.5	24.5
100	18.5	18.0	72.4	95.0	53.9	77.0	69.4	93.0	54.0	71.0	51.0	68.0	20.1	23.1
155	23.4	22.7	69.6	90.0	46.2	67.3	66.6	88.0	50.2	63.0	47.2	60.0	18.8	23.1
200	26.8	26.0	67.9	86.0	41.1	60.0	64.9	84.0	48.0	60.0	45.0	57.0	18.0	23.1
250	30.2	29.4	66.5	83.0	36.3	53.6	63.5	81.0	46.0	57.0	43.0	54.0	17.3	23.1
300	33.3	32.5	65.3	80.0	32.0	47.5	62.3	78.0	44.5	55.0	41.5	52.0	17.3	22.0
600	48.9	47.6	60.8	69.0	11.9	21.4	57.8	67.0	38.4	45.0	35.4	42.0	17.3	20.3
1000	-	63.6	-	67.0	-	3.4	-	65.0	-	40.0	-	37.0	-	18.0

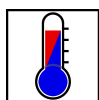
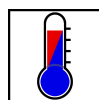
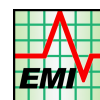
(*) Dual cable versions additionally comply to the additional PSNEXT requirements for multi-unit cables as specified in the relevant TIA and IEC cable standards.

Selling information

The LANmark Industry S/FTP PUR cable can be used in conjunction with LANmark-6 or LANmark-7 GG45 connectors. These connectors will respectively enable to reach the full class E 250MHz or class F 600MHz on the link. Please note that Nexans has a range of patchpanels and outlets for installations in industrial areas.


Halogen free
Yes

Lead free
Yes

Flame
retardant
IEC 60332-1

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