

Nexans



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**LAN Systems**



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## Nexans

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### Nexans is the worldwide leader in the cable industry

With energy as the basis of its development, Nexans is a global player in the infrastructure, industry, building and Local Area Network (LAN) markets.

As a worldwide leader in the cable industry, it offers an extensive range of cables and cabling systems to raise **industrial productivity, improve business performance, enhance security, enrich the quality of life, and assure long-term network reliability.**

With an industrial presence in 40 countries and commercial activities worldwide, Nexans employs 23,700 people and had sales in 2010 of 6 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A. More information on [www.nexans.co.uk](http://www.nexans.co.uk)

### Infrastructure

Nexans provides complete cables and cabling solutions for **power transmission and distribution.** New technologies, which are environmentally-friendly, increase capacity and reduce the danger of blackouts.

To reinforce rail safety and efficiency, we have products especially designed for the demanding railroad environment.

And to meet diverse needs of incumbent and new telecoms operators, Nexans has customized solutions aimed at lowering capital expenditure and operating costs.

For the world's busy airports, we offer cables and cabling systems for energy and communication networks, terminals, baggage handling systems, runway lights, control towers, etc.

### Industry

Nexans offers a complete portfolio of cables and solutions for market segments as diverse as the **automotive, rolling stock and aerospace industries, shipbuilding, nuclear power, oil & gas and petrochemicals, medical and wind applications, material handling and automation.**

We add value through advanced technologies and durable high-performance products.

### Building

Nexans supplies cables and network solutions for structures of all types: from small residences to public and office buildings and big industrial complexes.

**Nexans pioneered fire-performance cables for public safety,** created industrial Ethernet solutions to unite the office and the factory floor platform, and ensured the highest standards of environmental friendliness and recyclability.

From standard products to renewable energy solutions, these products contribute to the sustainable buildings of the future.

### Local Area Networks

Nexans provides copper and optical fiber cabling systems for new resource-intensive applications, like Data Centers, Security services, and Storage Area Networks.

Nexans' advanced solutions are handling core business data, protecting operations in sensitive conditions, and giving organizations highspeed transmission and the ability to protect and retrieve vital information.

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## Nexans UK

Nexans UK provides a full range of cables, cabling solutions and accessories to customers in a wide variety of industries including energy networks, building market, rail, handling, telecoms and oil and gas. Nexans UK has a head office and logistics centre in Milton Keynes, Nexans Cabling Solutions (LAN Solutions) offices are situated in Basingstoke, Nexans Power Accessories (a subsidiary of Euromold) in Castleford near Leeds and Tri-wire are located in Normanton.

## Symbols

|                                                   |                                                                                       |
|---------------------------------------------------|---------------------------------------------------------------------------------------|
| Minimum dynamic operating bending radius          |    |
| Operating temperature, range                      |    |
| RoHS conform                                      |    |
| Storage temperature, range                        |    |
| Ambient installation temperature, range           |    |
| Fire retardant                                    |   |
| Mechanical resistance to impacts                  |  |
| Flame retardant                                   |  |
| Mechanical resistance to impacts (IEC 60794-1-E4) |  |
| Minimum static operating bending radius           |  |



## LANsystems Introduction

### Introduction

Modern structured cabling systems for Local Area Networks (LANs) are in demand wherever data is stored, shared or transferred. LAN cabling systems are considered permanent infrastructure of single or multiple buildings, and therefore must comply with current standards regarding system architecture and channel bandwidth, as well as installation.

LAN system connections are arranged using modern high-capacity components, and designed to be adaptable to meet today's bandwidth needs as well as evolving, higher bandwidth applications of the future. Also, LAN topology and architecture should be sufficiently flexible to easily support the ongoing movement of employees and entire departments.

LAN system needs explained

LANs need to provide the following benefits:

- high capacity communication lines to facilitate a rapid response to growth in a company's data requirements; growth;
- ability to support a wide range of network applications, depending on the System Class, by using standards for data transfer, channel length and connection interfaces;
- well-developed and flexible architecture allowing various network configurations to support new LAN equipment;
- ability to increase the number of nodes using the cabling system's reserves planned for at the design stage;
- reliability offered by resilient backbones, which allow bypassing of damaged network segments;
- high performance, allowing long-term use of the system with easy migration paths

How Nexans addresses LAN needs

Nexans Cabling Solutions (NCS) provides exceptional infrastructure design, products, maintenance and support for LANs worldwide. Nexans' products set the standards in their class. The company constantly improves its products and technologies at its own research facility, aided by professionals in the field of data transfer systems and solutions.

Every Nexans' LAN component meets all current standards, yet at the same time, are unique creations in design, features and customer advantages. The company is among the world leaders in the telecommunications equipment market.

Automated assembly processes for the most sensitive cable communication equipment ensure high quality installation. And superior line and channel properties help ensure a level of reliability exemplified by a 25-year warranty on applications and component quality. Official Certified System Partners also offer a highly competitive labour-cost warranty.

### LAN Standards

#### International LAN standards

One of the principal international documents defining LANs is ISO/IEC 11801. This is a joint standard by the International Standards Organisation (ISO) and the International Electrotechnical Commission (IEC). ISO/IEC 11801 sets a standard for structured cabling systems installed in customers' buildings and premises. The requirements apply primarily to administrative or commercial structures. In modern office facilities, however, it is typical to exchange data with a warehouse or production facility, and the recommendations in ISO/IEC 11801 cover such applications as well.

The standard defines the main characteristics of cabling systems including its architecture, cables and connectors, cable parameters, as well as the length and bandwidth of links and channels.

In order to understand the principles of selecting and using cabling systems for transferring data, voice, video or any other information, it is important to read the standards and recommendations in the September, 2002, edition of ISO/IEC 11801, as well as the amendments of 2010. This section provides a brief overview of these requirements as applied to the products in this catalogue.

#### LAN Topology and Architecture

The basis of LAN topology is depicted by the master-slave star architecture, also known as 'tree' topology. Junctions in such architecture are the distributors, and connecting and/or switching equipment supporting various distribution roles.

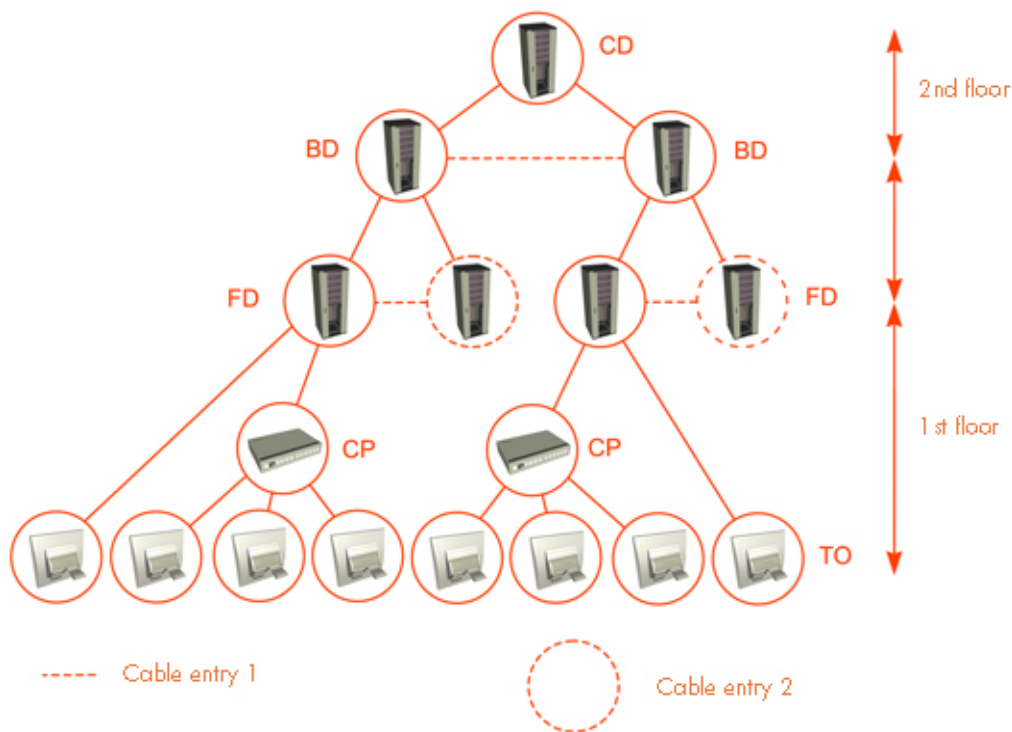


Fig. 1. Hierarchy of a typical LAN cabling system.

CD – Campus Distributor  
 BD - Building Distributor  
 FD – Floor Distributor  
 CP – Consolidation Point  
 TO – Telecommunications Outlet

Structured cabling connects switches, , computers and increasingly, devices like telephones and IP cameras. LANs should therefore have a high degree of flexibility to support widely diverse connections as well as the ability to respond promptly to changeable requirements for the physical channel configuration.

#### Distributors

Patch panels are mounted on racks or in cabinets, and can also be installed beneath floors or behind walls. Normally, the cabinets also house power supply units and various accessories facilitating labels and administration. The cabling system distributors are usually installed in separate technical rooms.

A LAN serving a multi-storey building may have split backbones, each one independent but still forming a star hierarchy. Should the need arise, its communication lines can be directly connected to another backbone. It is possible to reduce the number of backbone links and distributors depending on available space and the number of users. Certain distributors of various levels can also be combined into one. In order to improve the system's reliability, distributors of one level, together with connected lines, can be replicated in various parts of the building. In this case, the user's telecommunication outlets will be connected to separate distributors.

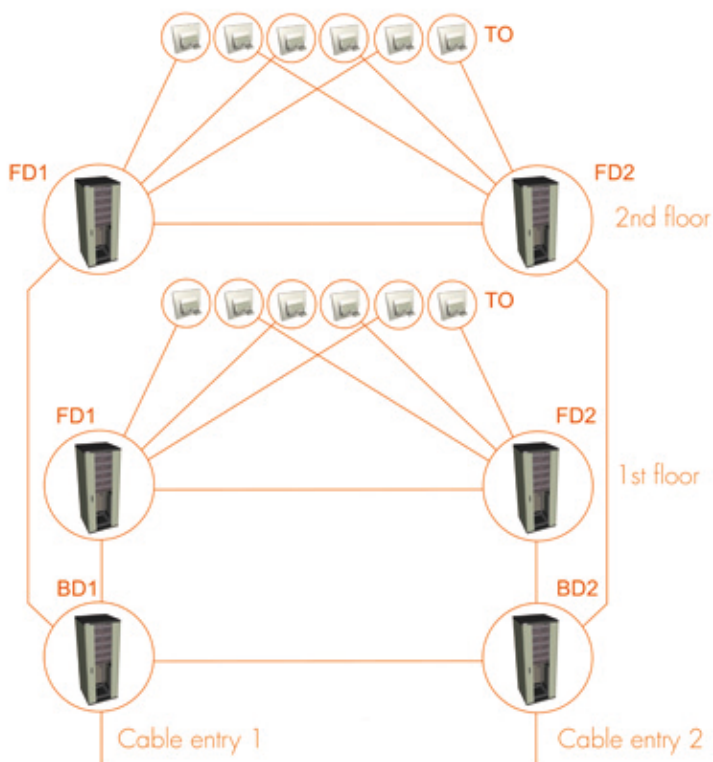


Fig. 2. Hierarchy of a typical LAN cabling system.

BD1,2 - Building Distributor  
FD1,2 - Floor Distributor  
TO - Telecommunications Outlet

In cases where two or more buildings are connected using a single cabling infrastructure, the LAN will have three sections: campus backbone, building backbone, and horizontal cabling (Fig.3).

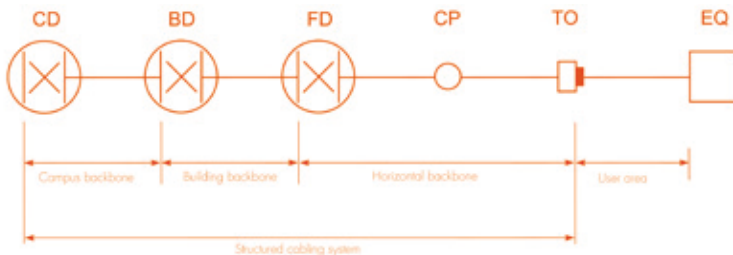


Fig. 3. Hierarchy of a typical LAN cabling system.

CD - Campus Distributor  
BD - Building Distributor  
FD - Floor Distributor  
CP - Consolidation Point  
TO - Telecommunications Outlet  
TE - Terminal Equipment

## Backbones

The Campus backbone connects the Campus distributor with the Building distributors through panels and switches, to which the cables are connected; and patch cords or jumpers. ISO/IEC 11801 provides for entry points to the backbone which facilitate the entry and termination of cables inside the building. These include cables supporting telephone, Internet, cable TV, or technical monitoring systems.

The campus distributor can be housed in the same structure as the building distributor, or even in the same technical room as the floor distributor. Such technical rooms are called equipment rooms, and its respective requirements are set out by ISO/IEC TR 14763-2 (Fig.4).

The building (or vertical) backbone connects separate floor distributors to the building distributor. The building backbone consists of internal trunk cables, patch panels and patch cords for connections within the building distributor.

Horizontal cabling (or floor-by-floor distribution)) connects the floor distributor with desktop or telecommunication outlets (TO's). A consolidation point can also be part of the horizontal cabling in cases of zonal distribution.

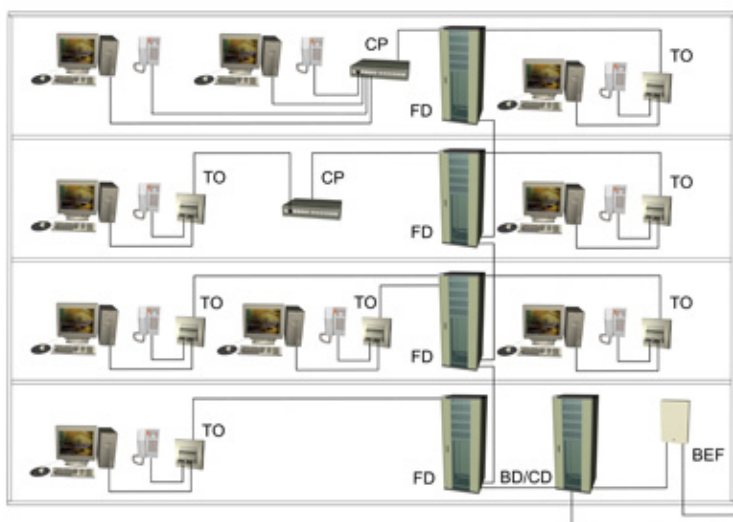


Fig. 4. Location of distributors in a typical cabling system within a building.

- CD- Campus Distributor
- BD – Building Distributor
- FD – Floor Distributor
- CP – Consolidation Point
- TO – Telecommunication Outlet
- ER – Equipment Room
- BEF – Building Entrance Facility

## Cross- and direct-connect explained

The connection between active equipment and backbone or horizontal cables can be build with a degree of flexibility. The most flexible solution is the cross-connect (see Fig.5).

In addition to improving system administration, this solution allows the splitting of specialists' areas of responsibility and facilitates equipment maintenance. However, adding connectors to the communication channel can impair its characteristics.

The alternative to a cross-connect is an interconnect (Fig.6 - next page.)

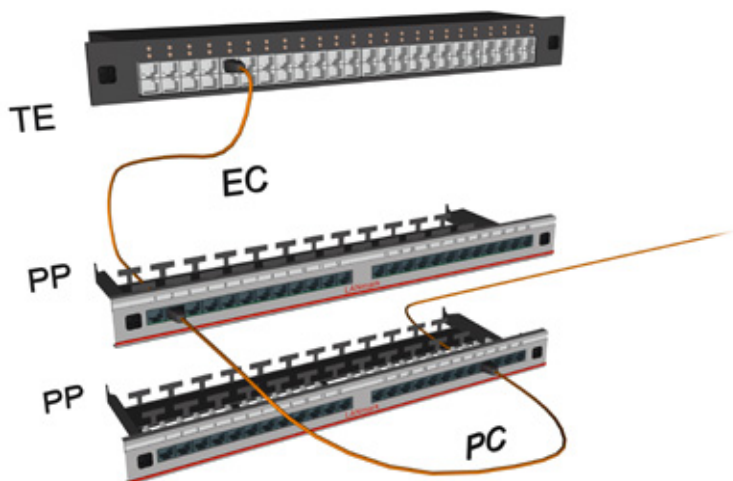


Fig. 5. Example of cross-connect type

TE – Telecommunications Equipment  
 PP – Patch Panel  
 EC – Equipment Cord  
 PC – Patch Cord

In addition to backbones, the standard specifies connections to the desktop or Work Area. ISO/IEC TR 14763-2 requires up to 10m<sup>2</sup> for the Work Area, i.e. where the end-user equipment is connected to the telecommunication outlets. In certain cases, the Work Area can be organised more compactly, providing 4-6 m<sup>2</sup> per user. According to ISO/IEC 11801, at least two telecommunication outlets must be provided for each user.

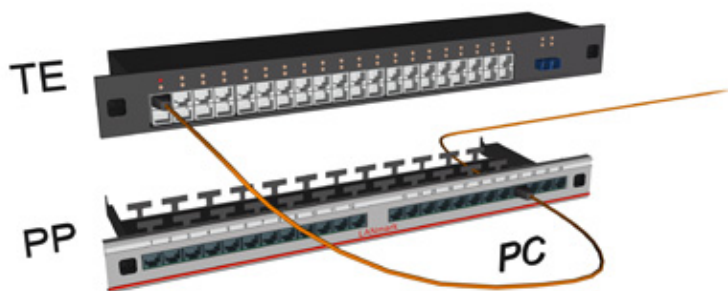


Fig. 6. Example of interconnect type

TE – Telecommunications Equipment  
 PP – Patch Panel  
 EC – Equipment Cord  
 PC – Patch Cord

The number of Floor Distributors (FD) depends on the area to be covered or the number of workplaces per area. Generally, the standard recommends at least one FD for every 1 000 m<sup>2</sup> of office area.

The physical length of a horizontal copper channel is maximized to 100 m. The total length of sections including backbones should not exceed 2 000 m.

### Designing LANs for high speed

Supporting high speed protocols such as Fast Ethernet, 100Base-TX and Gigabit Ethernet 1000Base-T requires a minimum of Class D performance. In order to meet Class D requirements, the components of Cat. 5e cabling should adhere to specifications of the second edition of the ISO/IEC 11801 standard, issued in 2002. As an alternative, installing Class E, Ea, F and Fa systems within a horizontal cabling are permissible: these require components of Cat. 6, 6A, 7 and 7A respectively. These solutions provide a high bandwidth reserve for future applications.

Nexans Cabling Solutions offers LANmark-5, 6, 6A, 7 and 7A systems. Detailed product information for these systems can be found in this catalogue's respective sections.

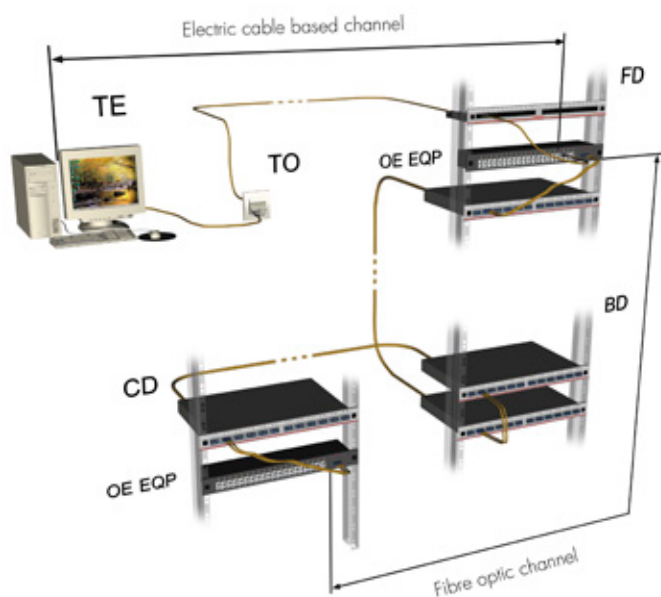


Fig. 7. The use of transfer medium in a typical LAN cabling system.

CD – Campus Distributor  
 BD – Building Distributor  
 FD – Floor Distributor  
 CP – Consolidation Point  
 TO – Telecommunication Outlet  
 TE – Terminal Equipment  
 OE EQP – Opto-electronic equipment

The most important general requirements of ISO/IEC 11801:2002 for twisted pair media are:

- Cables used for Class D, E, Ea, F and Fa systems must have rated characteristic impedance of 100 Ohms;
- Connectors at the 'TO' side must correspond to connector standard RJ45 (IEC 60603-7) for Cat. 5e, 6 and 6A, and to connector standard GG45 (IEC 60603-7-7) for Cat. 7 and 7A.

#### **Fibre optic cabling applications**

The standard recommends fibre optic cable for campus -and building backbones. Its' low signal attenuation, immunity to electromagnetic disturbances and galvanic separation between buildings make fibre a strong alternative. The core of fibre optic cables, can be produced from multi-mode (MM) fibres sized 50/125 mm and 62.5/125 mm with graded index profile, and single-mode (SM) fibres sized 9/125 mm with step index profile. Detailed information on Nexans fibre optic cable specifications is in the section "LANmark-OF Optical Systems".

The standard further recommends the SC- and LC-connectivity as the optical fibre connector interface for all LAN backbones. However, if a higher concentration of connections is required, the standard permits Small Form Factor connectors (SFF) which requires LC connectors.

### **Design Considerations**

#### **Layouts of Horizontal Channels**

The standard allows the use of four channel types within a horizontal distribution to connect user equipment as well as network telecom equipment (see structure below.)

The simplest channel type is shown in Layout A (Fig. 8). The most flexible and complex channel type in a horizontal distribution is shown in Layout D.

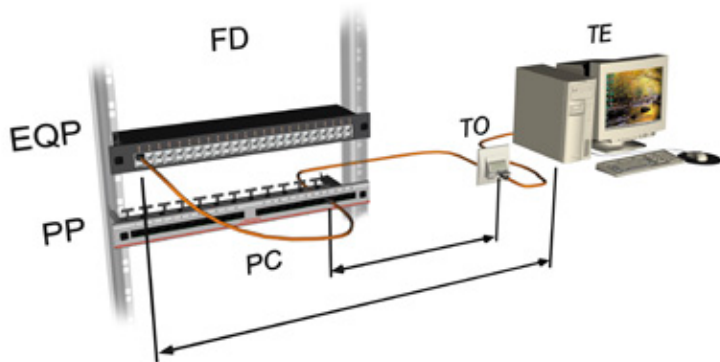
Horizontal channel links have the following limitations:

- Physical length of the channel must not exceed 100 m;
- Physical length of horizontal cable used to build a communication line must not exceed 90 m, depending on the total length of patch cords;
- If total length of patch and equipment cords exceeds 10 m, the length of the horizontal cable must be proportionally reduced according to the algorithm detailed in the standard;
- When using a Consolidation Point (CP) for zonal distribution, it must be installed at least 15 m from the Floor Distributor (FD).

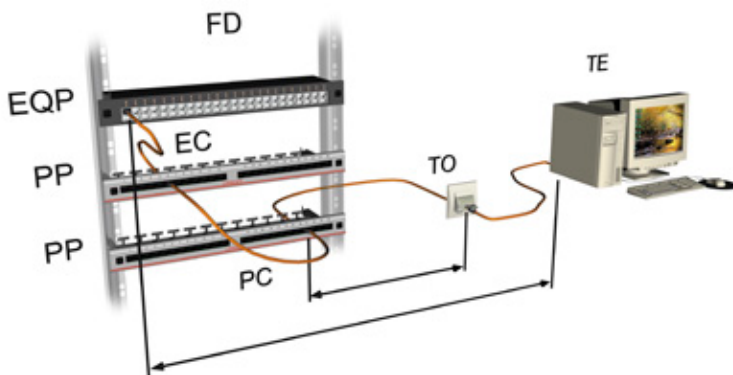
Besides these limitations, the following recommendations for the horizontal backbone should be noted:

- When using a Multi-User Telecommunication Outlet (MUTO), the length of the equipment cord connecting the terminal equipment should not exceed 20 m;
- Recommended length of patch cords is up to 5 m.

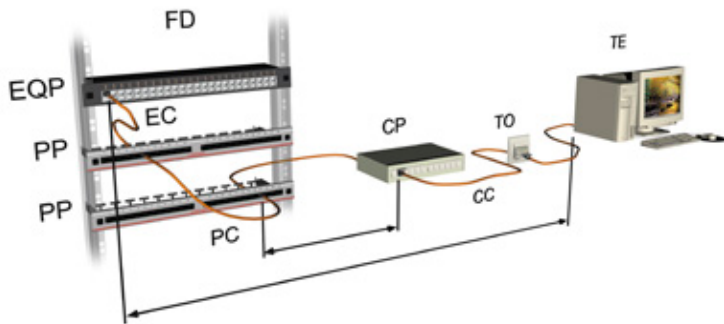
These recommendations allow the use of longer cords should the need arise.



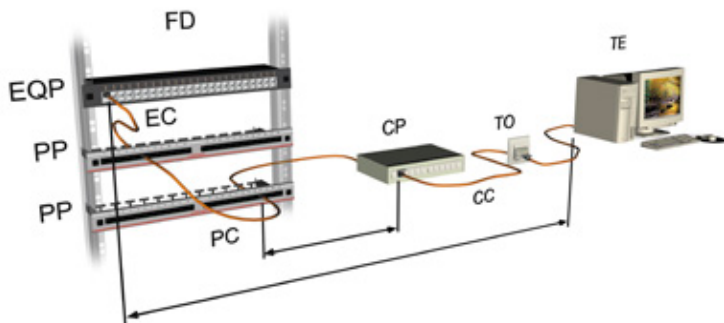
Layout A: Interconnect-TO type



Layout B: Crossconnect-TO type



Layout C: Interconnect-CP-TO type



Layout D: Crossconnect-CP-TO type

Fig. 8. Possible layouts of horizontal backbone channels

BD – Building Distributors  
 FD – Floor Distributor  
 CP – Consolidation Point  
 TO – Telecommunication Outlet  
 TE – Terminal Equipment  
 PC – Patch Cord  
 EC – Equipment Cord  
 CC – Consolidation Point Cable

If a twisted pair based system is used, the most complex and flexible layout is a 4-connector channel (Fig. 9).

The principal limitations for Class D, E, Ea, F and Fa backbone communication channels are:

- Physical length of the channel must not exceed 100 m;
- When using 3 connectors along the channel, the installation or mounting cable must be at least 15 m long.

Depending on the total length of patch cords, the mounting cable's length must be proportionally decreased. To calculate mounting cable length, remember to account for patch and equipment cord length, as well as the category of components and the required channel class. ISO/IEC 11801 provides calculation algorithms

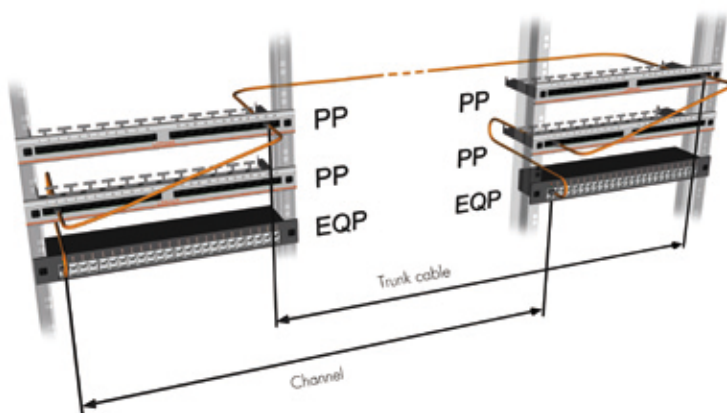


Fig. 9. Typical layout of communication backbone channel.

CD – Campus Distributor  
 BD – Building Distributor  
 FD – Floor Distributor  
 PP – Patch Panel  
 EQP – Equipment

### Layouts of Fibre Optic-Based Channels

Due to low signal attenuation when using fibre optics, it is possible to connect the communication lines of different backbones in a single transmission channel. The following types of combined fibre channels are possible:

- Patched channel allowing cross-connection of lines belonging to different, adjoining backbones (Fig. 10);
- Collapsed backbone model creating a direct link between BD and TO limited to a distance of 300m and only with MM fibre.

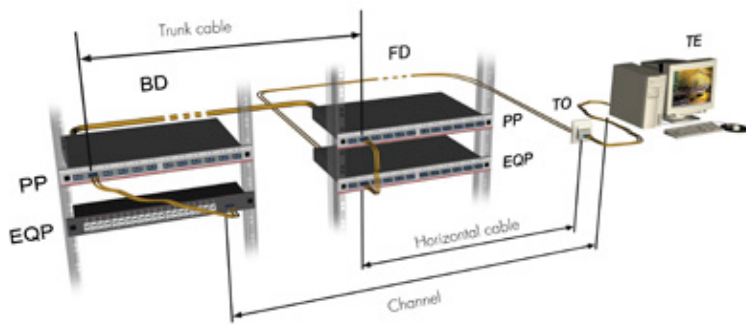


Fig. 10. Patched combined channel layout.

BD – Building Distributors  
 FD – Floor Distributor  
 PP – Patch Panel  
 TO – Telecommunication Outlet  
 EQP - Equipment  
 CC - Consolidation Point Cable  
 TE - Terminal Equipment



## LAN Cabling Systems

Please select 'Products & Services' tab above to browse the product catalogue.

For more information on our brands please view the following links:.

- **LANmark** : Passive LAN infrastructure solutions
- **LANsense** : Intelligent Infrastructure Management (IIM)
  - including **EMAC** Environmental Monitoring & Access Control
- **essential** : component based cabling products

Please see the link to **LAN Systems Main Web Pages** for support documentation and tools.

A vertical stack of three brand logos: 'LANsense' in red and black, 'LANmark' in red and black, and 'essential' in red and black.



## Copper

Nexans offer the full range of copper LAN systems to ensure we can provide the solution most suited for your needs.

- All performance levels: Cat 5e, Cat 6, Cat 7 & voice grade
- All construction types : UTP, FTP, S-FTP, PiMF
- Modular connectivity based on 'Snap-in' and '808' connectivity
- Guaranteed Application support with extended distance





## Category 5e

Nexans offer a choice of Category 5e ranges:

### Full System Offer

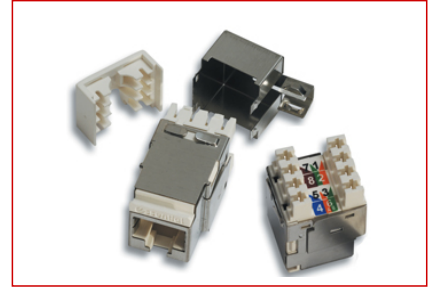
#### **LANmark-5**

- Cat 5e system based on snap-in format connectivity

#### **LANconnect-5**

- Cat 5e system based on 808 style connectivity.

All complete systems offer a comprehensive Certified System Parts & LABOUR Warranty.



### Component based solution

**Essential** - component based 'economy without compromise'

- cost effective solution for basic installations
- instant downloadable Nexans Link Certificate.

## LANmark-5 Cable

- Complies to all Category 5e cable standards
- Supports Class D applications
- Guaranteed performance to 155MHz
- Supports Gigabit Ethernet

### Description

#### Application

Nexans LANconnect/LANmark-5 cables are manufactured and tested to the latest Category 5e specifications defined in the International and American cable standards and are designed to meet the quality and performance criteria needed to support all applications up to 100 MHz.

- 10baseT Ethernet
- 100baseTX Fast Ethernet
- 1000baseTX Gigabit Ethernet
- 155 MBit ATM

#### Design

The LANconnect/LANmark-5 cables have AWG 24 solid copper wires and comply with IEC 60228.

The cables are available with a Dark Grey PVC or an Orange LSZH sheath. Both versions have flame retardant properties compliant with IEC 60332-1.

#### Performance

With a guaranteed performance to 155 MHz, Nexans LANconnect/LANmark-5 cables exceed the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568-C.2.

#### Installation

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.

#### Guarantees

The LANconnect/LANmark-5 cable performance is guaranteed to meet or exceed the requirements of the above mentioned standards.

Traceability codes on both cable and packaging ensure quality validation of the installed cable.

Installations with LANconnect/LANmark-5 cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Channel Performance, Application Support and Labour, as described in the Nexans Certified System Warranty.



## LANmark-5

### Standards

**International** ISO/IEC 11801; ISO/IEC 61156-5

**National** ANSI/TIA-568-C.2



RoHS conform  
Yes

## LANmark-5 Cable

### Characteristics

| Usage characteristics |           |
|-----------------------|-----------|
| Range                 | LANmark-5 |
| RoHS conform          | Yes       |

### Product List

☎ = Make to order, 🏭 = Make to stock

| Nexans ref. | Name                                                         | Type of cable             | Outer sheath             |
|-------------|--------------------------------------------------------------|---------------------------|--------------------------|
| 🏭 N100.403  | LANconnect/LANmark-5 F <sup>2</sup> /UTP Dual LSZH 500m Reel | F <sup>2</sup> TP Shotgun | LSZH                     |
| ☎ N100.413  | LANconnect/LANmark-5 F <sup>2</sup> /UTP Dual PVC 500m Reel  | F <sup>2</sup> TP Shotgun | PVC (Polyvinyl chloride) |
| 🏭 N100.402  | LANconnect/LANmark-5 F <sup>2</sup> /UTP LSZH 1000m Reel     | F <sup>2</sup> TP         | LSZH                     |
| 🏭 N100.421  | LANconnect/LANmark-5 F <sup>2</sup> /UTP LSZH 500m Reel      | F <sup>2</sup> TP         | LSZH                     |
| ☎ N100.412  | LANconnect/LANmark-5 F <sup>2</sup> /UTP PVC 1000m Reel      | F <sup>2</sup> TP         | PVC (Polyvinyl chloride) |
| 🏭 N100.431  | LANconnect/LANmark-5 F <sup>2</sup> /UTP PVC 500m Reel       | F <sup>2</sup> TP         | PVC (Polyvinyl chloride) |
| 🏭 N100.492  | LANconnect/LANmark-5 F <sup>1</sup> /UTP LSZH 1000m Reel     | F/UTP                     | LSZH                     |
| 🏭 N100.491  | LANconnect/LANmark-5 F <sup>1</sup> /UTP LSZH 305m Box       | F/UTP                     | LSZH                     |
| 🏭 N100.494  | LANconnect/LANmark-5 F <sup>1</sup> /UTP LSZH 500m Reel      | F/UTP                     | LSZH                     |
| ☎ N100.442  | LANconnect/LANmark-5 F <sup>1</sup> /UTP PVC 1000m Reel      | F/UTP                     | PVC (Polyvinyl chloride) |
| 🏭 N100.441  | LANconnect/LANmark-5 F <sup>1</sup> /UTP PVC 305m Box        | F/UTP                     | PVC (Polyvinyl chloride) |
| 🏭 N100.444  | LANconnect/LANmark-5 F <sup>1</sup> /UTP PVC 500m Reel       | F/UTP                     | PVC (Polyvinyl chloride) |
| 🏭 N100.502  | LANconnect/LANmark-5 U/UTP LSZH 1000m Reel                   | U/UTP                     | LSZH                     |
| 🏭 N100.507  | LANconnect/LANmark-5 U/UTP LSZH 305m Box                     | U/UTP                     | LSZH                     |
| 🏭 N100.521  | LANconnect/LANmark-5 U/UTP LSZH 500m Reel                    | U/UTP                     | LSZH                     |
| 🏭 N100.512  | LANconnect/LANmark-5 U/UTP PVC 1000m Reel                    | U/UTP                     | PVC (Polyvinyl chloride) |
| 🏭 N100.517  | LANconnect/LANmark-5 U/UTP PVC 305m Box                      | U/UTP                     | PVC (Polyvinyl chloride) |
| 🏭 N100.522  | LANconnect/LANmark-5 U/UTP PVC 500m Reel                     | U/UTP                     | PVC (Polyvinyl chloride) |

☎ = Make to order, 🏭 = Make to stock

### Electrical Performance

all values are specified at 20°C

| Frequency | Attenuation<br>dB/100m | NEXT<br>dB | ACR<br>dB/100m | PSNEXT(*)<br>dB | ELFEXT<br>dB/100m | PSELFEXT<br>dB/100m | RL<br>dB |
|-----------|------------------------|------------|----------------|-----------------|-------------------|---------------------|----------|
| 1         | 2.1                    | 68.3       | 66.2           | 65.3            | 63.8              | 61.0                | 20.0     |
| 4         | 4.0                    | 59.3       | 55.3           | 56.3            | 51.7              | 49.0                | 23.0     |
| 10        | 6.3                    | 53.3       | 47.0           | 50.3            | 43.8              | 41.0                | 25.0     |
| 16        | 8.0                    | 50.3       | 42.3           | 47.3            | 39.7              | 36.9                | 25.0     |
| 20        | 9.0                    | 48.8       | 39.8           | 45.8            | 37.7              | 35.0                | 25.0     |
| 31.25     | 11.4                   | 45.9       | 34.5           | 42.9            | 33.9              | 31.1                | 23.6     |
| 62.5      | 16.5                   | 41.4       | 24.9           | 38.4            | 27.9              | 25.1                | 21.5     |
| 100       | 21.3                   | 38.3       | 17.0           | 35.3            | 23.8              | 21.0                | 20.1     |
| 155       | 27.2                   | 35.5       | 8.3            | 32.5            | 19.9              | 17.2                | 18.7     |



RoHS conform  
Yes

## LANmark-5 Cable

(\*) 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

Installation: Nexans LANconnect/LANmark-5 cables are designed to be installer friendly. The additional performance headroom provides confidence for difficult installations.



RoHS conform  
Yes

## LANmark-5 Snap-In connector

- Available in Screened and Unscreened version
- Version for stranded wire available, both in Screened and Unscreened
- No punchdown tool needed for termination
- Reduced risk of installation errors gives consistent performance
- Compatible with all Snap-in hardware
- Compatible with keystone format using additional clip

### Description

#### Application

The LANmark-5 Snap-in connector range is part of the Nexans modular system and fits in all structural hardware designed for this range. As such it supports all data applications defined for Cat 5 and Cat 5e, such as 10baseT, Fast Ethernet, Gigabit Ethernet, 155 ATM.

#### Performance

The LANmark-5 Snap-in connector is designed to reach the highest performance in Cat5e. It has outstanding performance for attenuation (insertion loss), NEXT/FEXT, Power Sum NEXT/FEXT and Return Loss, exceeding the Cat 5e connector specs as in ISO/IEC 11801:2002. Used with Nexans LANmark-5 cable and patchcords, the connector is tested to exceed the link and stringent four-conductor channel requirements as defined in the ISO/IEC 11801:2002 standard.

#### Guarantees

The LANmark-5 Snap-in connector range is covered by the Nexans guarantee conform The General Terms and Conditions of Sales. In combination with the Nexans LANmark-5 product range, the Nexans Certified System Warranty can be obtained, covering parts, system and labour.

#### Installation

The LANmark-5 Snap-in connector range is designed to be terminated by hand, without punchdown tool. The exclusive construction of the wire organizer makes termination fast and self-evident. To allow an even quicker and easier installation, an optional comfort tool can be used (N420.567). This tool includes an extraction mechanism which makes the connector re-usable. The LANmark-5 snap-in range is Nexans technology inside and user friendly outside.

- Fast and easy termination thanks to wire organiser
- No punchdown tool needed
- Colour code : T568A and T568B
- Re-usable with universal comfort tool (N420.567)
- Fits in all Nexans structural hardware for snap-in format
- Different versions available: for solid wire and for stranded wire, both in screened and unscreened version.



## LANmark-5

#### Standards

**International** ISO/IEC 11801  
**National** TIA/EIA-568-B.2

## LANmark-5 Snap-In connector

### Characteristics

#### Construction characteristics

Connector type RJ45 and Tool-less IDC

#### Dimensional characteristics

Width 17 mm

#### Usage characteristics

Range LANmark-5

### Product List

☎ = Make to order, 🏠 = Make to stock

| Nexans ref. | Name                                                     | Height (mm) | Screen |
|-------------|----------------------------------------------------------|-------------|--------|
| 🏠 N420.555  | LANmark-5 Screened Snap-In connector                     | 23.2        | Yes    |
| ☎ N420.556  | LANmark-5 Screened Snap-In connector for stranded wire   | 23.2        | Yes    |
| 🏠 N420.550  | LANmark-5 Unscreened Snap-In connector                   | 22.9        | No     |
| ☎ N420.551  | LANmark-5 Unscreened Snap-In connector for stranded wire | 22.9        | No     |

☎ = Make to order, 🏠 = Make to stock

## LANmark-5 Patch Panels

- Offers headroom to latest Category 5e standard
- Sliding mechanism version: easy access from front side and including marking strip
- Top connection version supplied with an integrated cable management plate for tie wrap
- LSA+/110 IDC compatible termination
- included marking strip
- Screened and unscreened version
- Suitable for 4 twisted pairs LAN cable and for Voice multipairs cable : access from rear or from side

### Description

#### Application

The LANmark-5 1HU twisted pair patch panel is based on 19" frame dimensions. In the sliding mechanism version, it is easy to manage thanks to the integrated Clip-on. In the top connection version, it is easy to manage thanks to the integrated cable management plate. Both versions provide reliable cable retention and grounding. The use of patch guides (sold separately) allows an orderly arrangement of patchcords.

#### Performance

The LANmark-5 connector has been designed to reach the highest in Cat 5E performance. It has outstanding performances for attenuation (insertion loss), NEXT/FEXT per pair, Power Sum NEXT/FEXT and RETURN LOSS. The LANmark-5 connector module is independently tested and when used with LANmark-5 cable and patchcords, the 4 connector channel exceeds the Class D requirements as defined in the ISO/IEC11801 : 2002

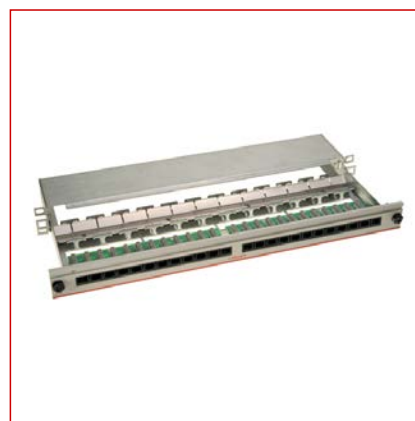
#### Guarantees

The LANmark-5 PCB patch panel is fully compliant with the ISO/IEC11801 : 2002 and exceeds all parameters with large headroom. In combination with the Nexans LANmark product range, this patch panel offers you a full Class D warranted solution.

#### Installation

The patch panel is equipped with a sliding mechanism or with an integrated cable management plate for easy front access when mounted into a cabinet. This time saving mechanism facilitates front side termination.

- Easy to install and modify: all operations are performed at the front side.
- Supplied with fixings.
- Available with Nexans LSA+/110 IDC compatible terminations.
- Unscreened and screened versions available.
- Suitable for multipairs cable
- 9 pins IDC block for easy termination of drain wire for screened version or 8 pins IDC block for unscreened version
- Colour code T568A and T568B.
- Can be used with all types of cables : F2TP, UTP, S-FTP and STP.
- Accepts 24, 23 and 22 AWG cables.



## LANmark-5

### Standards

International ISO/IEC 11801

## LANmark-5 Patch Panels

### Characteristics

| Dimensional characteristics |           |
|-----------------------------|-----------|
| Heightunit                  | 1 U       |
| Usage characteristics       |           |
| Category                    | Cat. 5e   |
| Range                       | LANmark-5 |
| Number of ports             | 24        |

### Product List

| Nexans ref.                                                                                | Name                                         | Screen | Depth (mm) |
|--------------------------------------------------------------------------------------------|----------------------------------------------|--------|------------|
|  N500.115 | LANmark 5 Sliding PCB Patch Panel Screened   | Yes    | 170        |
|  N500.215 | LANmark-5 Fixed PCB Patch Panel Screened     | Yes    | 137        |
|  N500.205 | LANmark-5 Fixed PCB Patch Panel Unscreened   | No     | 137        |
|  N500.105 | LANmark-5 Sliding PCB Patch Panel Unscreened | No     | 170        |

 = Make to order,  = Make to stock

## LANmark-5 Outlet 45x45

- Offers headroom to latest Category 5e standard.
- LSA+ termination
- Screened and unscreened version
- Single and double connection available
- Fits in Nexans structural hardware.

### Description

#### Features

Full Category 5 outlets with better than 40 dB NEXT at 100 MHz between every pair combination. RJ45 ISO 8877 compliant outlets with T 568B and T 568A pin configuration.

Fast Foolproof installation:

- IDC contacts at frontside for convenient installation
- IDC colour coding in conformity with cable colour coding

Integrated Outlet Labelling System for easy management and identification

- Labelling window supplied

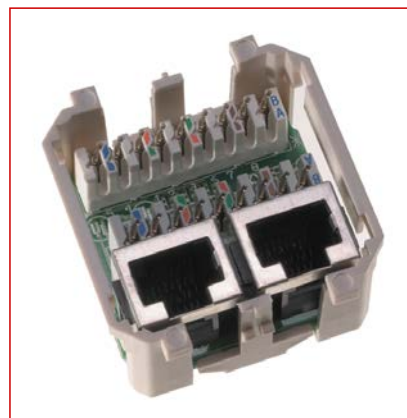
Versions available: single and double RJ45 connectors, screened and unscreened.

Country specific covering plates adapt to national requirements and designs.

The connector module is designed to be compatible with any covering plate by using adaptation rings if required.

These modules fit into a complete range of international Covering Plates.

All plastic material is UL 94V0.



## LANmark-5

### Standards

International ISO/IEC 11801

#### Values

|                       |    |
|-----------------------|----|
| Min. Next Loss (dB)   | 40 |
| Min. Return Loss (dB) | 14 |

## LANmark-5 Outlet 45x45

### Characteristics

|                                     |                          |
|-------------------------------------|--------------------------|
| <b>Construction characteristics</b> |                          |
| Connector type                      | RJ45 and LSA+ IDC        |
| <b>Dimensional characteristics</b>  |                          |
| External dimensions                 | 45 (H)x 45 (W) x 16(D)mm |
| <b>Transmission characteristics</b> |                          |
| Attenuation, max. 100 MHz           | 0.40 dB/100m             |
| <b>Usage characteristics</b>        |                          |
| Range                               | LANmark-5                |

### Product List

☎=Make to order, 🏠=Make to stock

| Nexans ref. | Name                                                        | Colour         | Screen |
|-------------|-------------------------------------------------------------|----------------|--------|
| 🏠 N462.211  | LANmark-5 Double Outlet 45x45 Screened Ivory with Shutter   | Ivory          | No     |
| 🏠 N462.210  | LANmark-5 Double Outlet 45x45 Screened White with Shutter   | White RAL 9010 | Yes    |
| 🏠 N462.201  | LANmark-5 Double Outlet 45x45 Unscreened Ivory with Shutter | Ivory          | Yes    |
| 🏠 N462.200  | LANmark-5 Double Outlet 45x45 Unscreened White with Shutter | White RAL 9010 | No     |
| 🏠 N462.111  | LANmark-5 Single Outlet 45x45 Screened Ivory with Shutter   | Ivory          | Yes    |
| 🏠 N462.110  | LANmark-5 Single Outlet 45x45 Screened White with Shutter   | White RAL 9010 | Yes    |
| 🏠 N462.101  | LANmark-5 Single Outlet 45x45 Unscreened Ivory with Shutter | Ivory          | No     |
| 🏠 N462.100  | LANmark-5 Single Outlet 45x45 Unscreened White with Shutter | White RAL 9010 | No     |

☎ = Make to order, 🏠 = Make to stock

## LANmark-5 UniBoot Patch Cords

- Complies fully with Category 5 standards
- Uses Nexans cable technology
- Fully matched with other components for maximum performance
- LSZH Flame retardant jacket or PVC
- Retrofit Latch Protector available in 8 colours for colour coding

### Description

#### Application

This full Category 5e patch cord maximises the full performance of the channel and will exceed the requirements of the ISO/IEC 4-conductor model, when used as part of a LANmark-5 cabling Class D solution. This provides improved data throughput and allows for the inclusion of a Cross-Connect or Consolidation Points for maximum system flexibility.

Screened and unshielded versions available.

LANmark-5 Patch Cords feature a slim over-moulded boot for mechanical protection, which is kept inside the RJ45 boundaries to enable high density patching with 48 cords in 1 height unit. A 'Retrofittable' Latch Protector is available as accessory, which can be used for colour coding of different services.

#### Guarantees

- When used with the LANmark-5 system, Cat 5e/Class D channel performance complies with the channel limits of TIA/EIA-568B and ISO/IEC 11801: 2002 and a 25 years channel warranty can be obtained.
- Reliable connections.

#### Usage

- Small cross section allows neat installation and simplifies the creation of bundles in cabinets.
- Low Smoke Halogen Free - Flame Retardant and PVC jackets are standard.
- 1, 2, 3, 5, 10 and 20m are standard lengths available from stock; other lengths are available on demand.
- Orange for LSZH and Dark Grey for PVC are standard colours; other colours (Red, Blue, Yellow and Green) are available on request (in PVC only).
- Rugged construction.
- High connector retention force due to moulded connectors.
- External strain relief.
- Self-latching, high reliability RJ45 (ISO 8877) connectors.



## LANmark-5

#### Standards

**International** ISO/IEC 11801

**National** TIA/EIA-568-B.2

## LANmark-5 UniBoot Patch Cords

### Characteristics

|                                   |           |
|-----------------------------------|-----------|
| <b>Electrical characteristics</b> |           |
| Characteristic impedance          | 100 Ohm   |
| <b>Usage characteristics</b>      |           |
| Range                             | LANmark-5 |
| Mechanical durability/matings     | 750       |

### Product List

☎ = Make to order, 🏠 = Make to stock

| Nexans ref.     | Name                                                   | Outer sheath             | Length (m) | Nominal outer diameter (mm) | Colour |
|-----------------|--------------------------------------------------------|--------------------------|------------|-----------------------------|--------|
| 🏠 N115.P1B100OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 10m Orange   | LSZH                     | 10         | 5.5                         | Orange |
| 🏠 N115.P1B010OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 1m Orange    | LSZH                     | 1          | 5.5                         | Orange |
| 🏠 N115.P1B200OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 20m Orange   | LSZH                     | 20         | 5.5                         | Orange |
| 🏠 N115.P1B020OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 2m Orange    | LSZH                     | 2          | 5.5                         | Orange |
| 🏠 N115.P1B030OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 3m Orange    | LSZH                     | 3          | 5.5                         | Orange |
| 🏠 N115.P1B050OU | LANmark-5 Patch Cord Cat 5e Screened LSZH 5m Orange    | LSZH                     | 5          | 5.5                         | Orange |
| 🏠 N115.P2B100DU | LANmark-5 Patch Cord Cat 5e Screened PVC 10m Grey      | PVC (Polyvinyl chloride) | 10         | 5.5                         | Grey   |
| 🏠 N115.P2B010DU | LANmark-5 Patch Cord Cat 5e Screened PVC 1m Grey       | PVC (Polyvinyl chloride) | 1          | 5.5                         | Grey   |
| 🏠 N115.P2B200DU | LANmark-5 Patch Cord Cat 5e Screened PVC 20m Grey      | PVC (Polyvinyl chloride) | 20         | 5.5                         | Grey   |
| 🏠 N115.P2B020DU | LANmark-5 Patch Cord Cat 5e Screened PVC 2m Grey       | PVC (Polyvinyl chloride) | 2          | 5.5                         | Grey   |
| 🏠 N115.P2B030DU | LANmark-5 Patch Cord Cat 5e Screened PVC 3m Grey       | PVC (Polyvinyl chloride) | 3          | 5.5                         | Grey   |
| 🏠 N115.P2B050DU | LANmark-5 Patch Cord Cat 5e Screened PVC 5m Grey       | PVC (Polyvinyl chloride) | 5          | 5.5                         | Grey   |
| 🏠 N115.P1A100OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 10m Orange | LSZH                     | 10         | 5.5                         | Orange |
| 🏠 N115.P1A010OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 1m Orange  | LSZH                     | 1          | 5.5                         | Orange |
| 🏠 N115.P1A200OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 20m Orange | LSZH                     | 20         | 5.5                         | Orange |
| 🏠 N115.P1A020OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 2m Orange  | LSZH                     | 2          | 5.5                         | Orange |
| 🏠 N115.P1A030OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 3m Orange  | LSZH                     | 3          | 5.5                         | Orange |
| 🏠 N115.P1A050OU | LANmark-5 Patch Cord Cat 5e Unscreened LSZH 5m Orange  | LSZH                     | 5          | 5.5                         | Orange |
| 🏠 N115.P2A100DU | LANmark-5 Patch Cord Cat 5e Unscreened PVC 10m Grey    | PVC (Polyvinyl chloride) | 10         | 5.5                         | Grey   |
| 🏠 N115.P2A010DU | LANmark-5 Patch Cord Cat 5e Unscreened PVC 1m Grey     | PVC (Polyvinyl chloride) | 1          | 5.5                         | Grey   |
| 🏠 N115.P2A200DU | LANmark-5 Patch Cord Cat 5e Unscreened PVC 20m Grey    | PVC (Polyvinyl chloride) | 20         | 5.5                         | Grey   |

☎ = Make to order, 🏠 = Make to stock

## LANmark-5 UniBoot Patch Cords

| Nexans ref.                                                                                         | Name                                                 | Outer sheath             | Length (m)                                                                                                             | Nominal outer diameter (mm) | Colour |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------|
|  N115.P2A020DU     | LANmark-5 Patch Cord Cat 5e Unscreened PVC 2m Grey   | PVC (Polyvinyl chloride) | 2                                                                                                                      | 5.5                         | Grey   |
|  N115.P2A030DU     | LANmark-5 Patch Cord Cat 5e Unscreened PVC 3m Grey   | PVC (Polyvinyl chloride) | 3                                                                                                                      | 5.5                         | Grey   |
|  N115.P2A050DU     | LANmark-5 Patch Cord Cat 5e Unscreened PVC 5m Grey   | PVC (Polyvinyl chloride) | 5                                                                                                                      | 5.5                         | Grey   |
|  N115.S1B200OU New | LANmark-5 Solid Cord Cat 5e Screened LSZH 20m Orange | LSZH                     | 20                                                                                                                     | 6.3                         | Orange |
|  N115.S1B300OU New | LANmark-5 Solid Cord Cat 5e Screened LSZH 30m Orange | LSZH                     | 30                                                                                                                     | 6.3                         | Orange |
|                                                                                                     |                                                      |                          | ☎ = Make to order,  = Make to stock |                             |        |

## Essential-5 Cable

- U/UTP, F/UTP and SF/UTP constructions
- Complies with latest Cat 5e standards
- Supports Class D applications up to 100MHz

### Description

#### Application

Essential-5 cables are the standard 100MHz offering from Nexans. Manufactured and tested to the latest Category 5e specifications defined in the International and American cable standards, they are suitable for voice and data installations for applications up to 100 MHz.

#### Design

The Essential-5 cables have AWG 24 solid copper wires and comply with IEC 60228.

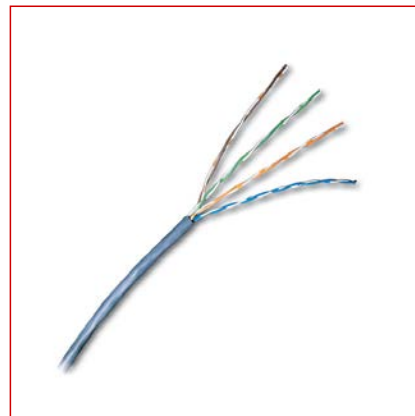
The cables are available with a Light Grey PVC or an Orange LSZH sheath. Both versions have flame retardant properties compliant with IEC 60332-1.

#### Performance

Nexans Essential-5 cables are compliant with the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568-C.2.

#### Installation

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.



**essential**

#### Standards

**International** ISO/IEC 11801

**National** ANSI/TIA-568-C.2

## Essential-5 Cable

### Characteristics

| Usage characteristics |           |
|-----------------------|-----------|
| Range                 | essential |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                             | Type of cable | Length (m) | Packaging | Outer sheath             |
|-------------|--------------------------------------------------|---------------|------------|-----------|--------------------------|
| ☎ N100.453  | Essential F/UTP Cat 5e 0,5MM Dual LSZH 500M REEL | F/UTP Shotgun | 500        | Reel      | LSZH                     |
| ☎ N100.463  | Essential F/UTP Cat 5e 0,5MM Dual PVC 500M REEL  | F/UTP Shotgun | 500        | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.452  | Essential F/UTP Cat 5e 0,5MM LSZH 1000M REEL     | F/UTP         | 1000       | Reel      | LSZH                     |
| 📦 N100.454  | Essential F/UTP Cat 5e 0,5MM LSZH 500M REEL      | F/UTP         | 500        | Reel      | LSZH                     |
| 📦 N100.451  | Essential F/UTP Cat 5e 0,5MM LSZH BOX 305M       | F/UTP         | 305        | Box       | LSZH                     |
| ☎ N100.462  | Essential F/UTP Cat 5e 0,5MM PVC 1000M REEL      | F/UTP         | 1000       | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.464  | Essential F/UTP Cat 5e 0,5MM PVC 500M REEL       | F/UTP         | 500        | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.461  | Essential F/UTP Cat 5e 0,5MM PVC BOX 305M        | F/UTP         | 305        | Box       | PVC (Polyvinyl chloride) |
| ☎ N100.407  | Essential SF/UTP Cat 5e 0,5MM LSZH 1000M REEL    | SF/UTP        | 1000       | Reel      | LSZH                     |
| ☎ N100.476  | Essential SF/UTP Cat 5e 0,5MM PVC 500M REEL      | SF/UTP        | 500        | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.552  | Essential U/UTP Cat 5e 0,5MM LSZH 1000M REEL     | U/UTP         | 1000       | Reel      | LSZH                     |
| 📦 N100.554  | Essential U/UTP Cat 5e 0,5MM LSZH 500M REEL      | U/UTP         | 500        | Reel      | LSZH                     |
| 📦 N100.551  | Essential U/UTP Cat 5e 0,5MM LSZH BOX 305M       | U/UTP         | 305        | Box       | LSZH                     |
| 📦 N100.562  | Essential U/UTP Cat 5e 0,5MM PVC 1000M REEL      | U/UTP         | 1000       | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.564  | Essential U/UTP Cat 5e 0,5MM PVC 500M REEL       | U/UTP         | 500        | Reel      | PVC (Polyvinyl chloride) |
| 📦 N100.561  | Essential U/UTP Cat 5e 0,5MM PVC Box 305M        | U/UTP         | 305        | Box       | PVC (Polyvinyl chloride) |

☎ = Make to order, 📦 = Make to stock

### Electrical Performance

all values are specified at 20°C

| Frequency | Attenuation dB/100m | NEXT dB | ACR dB/100m | PS NEXT (*) dB | ELFEXT dB/100m | PSELFEXT dB/100m | RL dB |
|-----------|---------------------|---------|-------------|----------------|----------------|------------------|-------|
| 4         | 4.1                 | 56.3    | 52.2        | 53.3           | 51.7           | 49.0             | 23.0  |
| 10        | 6.5                 | 50.3    | 43.8        | 47.3           | 43.8           | 41.0             | 25.0  |
| 16        | 8.3                 | 47.2    | 38.9        | 44.3           | 39.7           | 36.9             | 25.0  |
| 20        | 9.3                 | 45.8    | 36.5        | 42.8           | 37.7           | 35.0             | 25.0  |
| 31.25     | 11.7                | 42.9    | 31.2        | 39.9           | 33.9           | 31.1             | 23.6  |

## Essential-5 Cable

|             |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|
| <b>62.5</b> | 17.0 | 38.4 | 21.4 | 35.4 | 27.9 | 25.1 | 21.5 |
| <b>100</b>  | 22.0 | 35.3 | 13.3 | 32.3 | 23.8 | 21.0 | 20.1 |

## Essential Snap-In Connector

- Complies to the latest Category 5e standard
- Fast termination from side or rear
- Fits in all Nexans structural hardware
- 110 and LSA+ termination
- An adaptor can be added to fit the keystone format
- Unscreened or with EMC rear cover

### Description

#### Application

The Nexans Essential Snap-In connector is part of the Nexans modular system and fits in all structural hardware designed for this range. The Nexans Essential Range of Cat 5e cabling products are compliant with ISO/IEC 11801 : 2002.

#### Installation

The Nexans Essential Snap-in connector is a LSA+/110 connector. It is designed to be terminated by hand, using either 110 or LSA+ termination tool.

- Advantage: 110 and/or LSA+ termination.
- Fast termination of cable from side or rear.
- Colour code: T568A and T568B.
- A clip can be added to adapt for keystone format.
- Fits in all Nexans modular structural hardware of Snap-in.
- Modular patch panel also available.
- Can be used with all types of cables: U/UTP, F/UTP, F2/UTP, S/FTP or SF/UTP (24 AWG, 23 AWG).
- Can be used with or without an EMC rear cover.
- Two positions for the drain wire connection



**e**ssential

### Standards

**International** ISO/IEC 11801

## Essential Snap-In Connector

### Characteristics

#### Construction characteristics

Connector type RJ45 and 110/LSA+ IDC

#### Usage characteristics

Range essential

### Product List

| Nexans ref.                                                                                | Name                                                     |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------|
|  N420.426 | Essential Screened Snap-In Cat 5e LSA/110 connectivity   |
|  N420.416 | Essential Unscreened Snap-In Cat 5e LSA/110 connectivity |

 = Make to order, 
  = Make to stock

## Essential-5 Keystone Connector

- Complies with the latest Category 5e standards
- Unscreened
- Fast termination from either side or rear
- Fits in all Nexans keystone hardware designed for Essential-5 and -6
- 110 or LSA+ termination

### Description

#### Application

The Nexans Essential-5 keystone connector is manufactured and tested to the latest Category 5e specifications. It supports Class D applications up to 100 MHz. When installed in conjunction with Essential-5 cable and patch panels, a 25 year Class D Link Warranty can be obtained from the Nexans web site.

#### Design

The Essential-5 keystone connector is designed to match with Essential-5 cable and patch cords and complements all Essential modular components, such as:

- keystone patch panels (black and white)
- keystone outlet modules (UK, US and European formats)

Please follow the links on this page to view the related datasheets.

The modular jack is designed for keystone footprints of 14.78 mm width, 20-20.78 mm height and 1.5 mm wall thickness and is compatible with a variety of keystone formatted structural hardware. (Please check compatibility with Nexans before using 3rd party hardware)

#### Performance

The Essential-5 keystone connector is compliant with the specifications of ISO/IEC 11801 and EN 50173.

#### Installation

- Cable entry from either side or rear.
- Wiring according to colour code T568B or T568A.
- Termination with 110 or LSA+ punchdown tool.
- Accepts 24, 23 and 22 AWG solid core cables.
- Fits Nexans hardware designed for keystone format.



**essential**

#### Standards

International ISO/IEC 11801

## Essential-5 Keystone Connector

### Characteristics

#### Construction characteristics

Connector type RJ45 and 110/LSA+ IDC

#### Usage characteristics

Range essential

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
|  N420.415<br>New                                                                                                        | Essential-5 Keystone Connector Cat 5e Unscreened |
|  = Make to order,  = Make to stock |                                                  |

## Essential-5 Patch Panels

- Complies to the latest Category 5e standard
- Punchdown from the top or the rear side
- Unscreened

### Description

#### Application

The Nexans Essential 1HU twisted pair patch panel is based on 19" frame dimensions. It is easy to manage thanks to the cable guide tie wrap support. The use of patch guides (sold separately) allows an orderly arrangement of patch cords.

#### Performance

The Nexans Essential Range of Cat 5e cabling products are compliant with ISO/IEC 11801 :2002.

#### Guarantees

- 20 years link certificate available when installed as part of a Nexans Essential system.

#### Installation

- Supplied with fixings.
- Unscreened.
- Colour code T568A and T568B (Product dependent).
- Can be used with all types of cables : U/UTP, F/UTP, F2/UTP, S/FTP, SF/UTP (23 AWG , 24 AWG).



**essential**

#### Standards

International ISO/IEC 11801

## Essential-5 Patch Panels

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                              |
|-------------|-------------------------------------------------------------------|
| 📦 N500.202  | Essential 24 port PCB Patch Panel Rear Connection 1 HU Unscreened |
| 📦 N424.510  | Essential 24 port PCB Patch Panel Rear Connection Black           |
| 📦 N424.513  | Essential 24 port PCB Patch Panel Top Connection Black            |
| 📦 N424.511  | Essential 48 port PCB Patch Panel Rear Connection Black           |

☎ = Make to order, 📦 = Make to stock

## Essential Outlet Modules

- Includes 25x50, LJ6C, and triple modules
- Complies to the latest Category 5e standards
- Unscreened
- LSA+ termination
- UK white
- Fits in all UK Nexans structural hardware

### Description

#### Performance

The Nexans Essential Range of Cat 5e cabling products are compliant with ISO/IEC 11801 : 2002.

#### Installation

- Supplied with tie wraps
- Unscreened
- Colour code T568B.
- Labelling windows supplied
- LSA + termination
- UK white
- Fits in all UK Nexans structural hardware



**essential**

#### Standards

**International** ISO/IEC 11801

## Essential Outlet Modules

### Product List

| Nexans ref.                                                                                | Name                              |
|--------------------------------------------------------------------------------------------|-----------------------------------|
|  N424.521 | 25x50 Cat 5e Module               |
|  N424.520 | 25x50 Cat 5e Module - Low Profile |
|  N424.523 | LJ6C Cat 5e Module                |
|  N424.522 | Triple Cat 5e Module              |
| To be removed                                                                              |                                   |

 = Make to order,  = Make to stock

## essential patchcords

- Complies to the latest Category 5e standard
- Light grey PVC
- Screened and unscreened
- Moulded strain relief boot

### Description

#### Application

Nexans Essential patch cords are intended to be used to complete the installation of an "Essential" Category 5e system.

- Flexible grey PVC.
- Moulded strain relief boot.
- 1.5m and 3m standard lengths.



**e**ssential

### Standards

**International** ISO/IEC 11801



Flame retardant  
IEC 60332-1

## essential patchcords

### Characteristics

| Construction characteristics  |                          |
|-------------------------------|--------------------------|
| Colour                        | Grey                     |
| Outer sheath                  | PVC (Polyvinyl chloride) |
| Electrical characteristics    |                          |
| Characteristic impedance      | 100 Ohm                  |
| Usage characteristics         |                          |
| Mechanical durability/matings | 100                      |
| Range                         | essential                |
| Flame retardant               | IEC 60332-1              |
| Category                      | Cat. 5e                  |

### Product List

| Nexans ref.                                                                                   | Name                                           | Screen | Length (m) |
|-----------------------------------------------------------------------------------------------|------------------------------------------------|--------|------------|
|  N101.122DGG | Essential Patch Cord F/UTP Cat 5 1,5m PVC grey | Yes    | 1.5        |
|  N101.122FGG | Essential Patch Cord F/UTP Cat 5 3m PVC grey   | Yes    | 3          |
|  N101.112DGG | Essential Patch Cord U/UTP Cat 5 1,5m PVC grey | No     | 1.5        |
|  N101.112FGG | Essential Patch Cord U/UTP Cat 5 3m PVC grey   | No     | 3          |

 = Make to order,  = Make to stock

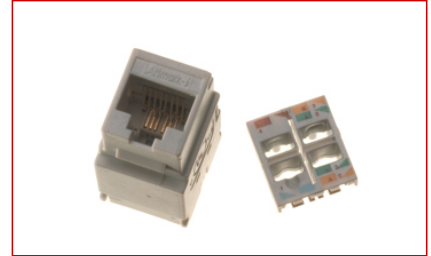


Flame retardant  
IEC 60332-1

## Category 6 / 6A

LANmark-6 is considered the best horizontal solution for most enterprise requirements by combining high performance for today, room for growth tomorrow, and high reliability and efficiency. The range of systems include 10Gigabit solutions offering bandwidth up to 500MHz with extensive headroom on channel performance. Recommended uses:

- Typical 5-10 year building life
- Typical enterprise applications - Fast Ethernet & Gigabit Ethernet
- 10Gigabit variants for high data environments and datacentres
- Where reliability is considered vital for business
- Typical office or indoor light industrial environments



## LANmark-6 Cable

- Complies to all Category 6 cable standards
- Supports Class E applications
- Central cross member maintains geometry and performance
- Tested up to 350MHz

### Description

#### Application

Nexans LANmark-6 cables are the ideal solution for most of today's network requirements in normal office environments. They are manufactured and tested to the latest Category 6 specifications defined in the International and American cable standards and are designed to meet the quality and performance criteria needed to support all applications up to 250 MHz.

- 10baseT Ethernet
- 100baseTX Fast Ethernet
- 1000baseTX Gigabit Ethernet
- 155 MBit ATM
- 622 MBit ATM
- 1.2 Gbit ATM
- Future class E applications

#### Design

The LANmark-6 cables have AWG 23 solid copper wires and comply with IEC 60228.

The PE central cross filler helps maintain the stability of the cable geometry and reduces the risk of a reduction in performance when bending the cable.

The cables are available with a Dark Grey PVC or an Orange LSZH sheath. Both versions have flame retardant properties compliant with IEC 60332-1.

#### Performance

Tested to 350 MHz and with guaranteed performance to 250 MHz, Nexans LANmark-6 cables exceed the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568-C.2.

#### Installation

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.

#### Guarantees

The LANmark-6 cable performance is guaranteed to meet or exceed the requirements of the above mentioned standards.

Traceability codes on both cable and packaging ensure quality validation of the installed cable.

Installations with LANmark-6 cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Channel Performance, Application Support and Labour, as described in the Nexans Certified System Warranty.



## LANmark-6

### Standards

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

**National** ANSI/TIA-568-C.2

## LANmark-6 Cable

### Technical data

| Type of cable | Outer sheath             | Colour |
|---------------|--------------------------|--------|
| U/UTP         | LSZH                     | Orange |
| U/UTP         | PVC (Polyvinyl chloride) | Grey   |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                 | Name                                  | Type of cable             | Outer sheath             | Screen                                  |
|-----------------------------|---------------------------------------|---------------------------|--------------------------|-----------------------------------------|
| 📦 N100.623                  | LANmark-6 F1/UTP Dual LSZH 500m reel  | FTP Shotgun               | LSZH                     | Aluminium foil                          |
| 📦 N100.628<br>To be removed | LANmark-6 F1/UTP Dual PVC 500m reel   | FTP Shotgun               | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.622                  | LANmark-6 F1/UTP LSZH 1000m reel      | F/UTP                     | LSZH                     | Aluminium foil                          |
| 📦 N100.624                  | LANmark-6 F1/UTP LSZH 500m reel       | F/UTP                     | LSZH                     | Aluminium foil                          |
| ☎ N100.627                  | LANmark-6 F1/UTP PVC 1000m reel       | F/UTP                     | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.629                  | LANmark-6 F1/UTP PVC 500m reel        | F/UTP                     | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.603                  | LANmark-6 F2/UTP Dual LSZH 500m reel  | F <sup>2</sup> TP Shotgun | LSZH                     | Aluminium foil                          |
| 📦 N100.613                  | LANmark-6 F2/UTP Dual PVC 500m reel   | F <sup>2</sup> TP Shotgun | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.601                  | LANmark-6 F2/UTP LSZH 1000m reel      | F <sup>2</sup> TP         | LSZH                     | Aluminium foil                          |
| 📦 N100.662                  | LANmark-6 F2/UTP LSZH 500m reel       | F <sup>2</sup> TP         | LSZH                     | Aluminium foil                          |
| 📦 N100.611                  | LANmark-6 F2/UTP PVC 1000m reel       | F <sup>2</sup> TP         | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.661                  | LANmark-6 F2/UTP PVC 500m reel        | F <sup>2</sup> TP         | PVC (Polyvinyl chloride) | Aluminium foil                          |
| 📦 N100.632                  | LANmark-6 SF/UTP LSZH 500m reel       | SF/UTP                    | LSZH                     | Aluminium foil + tinned copper braiding |
| 📦 N100.609                  | LANmark-6 U/UTP Dual LSZH 500m reel   | U/UTP                     | LSZH                     | Unshielded                              |
| ☎ N100.619                  | LANmark-6 U/UTP Dual PVC 500m reel    | U/UTP                     | PVC (Polyvinyl chloride) | Unshielded                              |
| 📦 N100.606                  | LANmark-6 U/UTP LSZH 1000m reel       | U/UTP                     | LSZH                     | Unshielded                              |
| 📦 N100.607                  | LANmark-6 U/UTP LSZH 305m Box         | U/UTP                     | LSZH                     | Unshielded                              |
| 📦 N100.604<br>New           | LANmark-6 U/UTP LSZH 305m reel in box | U/UTP                     | LSZH                     | Unshielded                              |
| 📦 N100.605                  | LANmark-6 U/UTP LSZH 500m reel        | U/UTP                     | LSZH                     | Unshielded                              |
| 📦 N100.616                  | LANmark-6 U/UTP PVC 1000m reel        | U/UTP                     | PVC (Polyvinyl chloride) | Unshielded                              |
| 📦 N100.617                  | LANmark-6 U/UTP PVC 305m Box          | U/UTP                     | PVC (Polyvinyl chloride) | Unshielded                              |
| 📦 N100.614<br>New           | LANmark-6 U/UTP PVC 305m reel in box  | U/UTP                     | PVC (Polyvinyl chloride) | Unshielded                              |

☎ = Make to order, 📦 = Make to stock

## LANmark-6 Cable

| Nexans ref.                          | Name                          | Type of cable | Outer sheath             | Screen     |
|--------------------------------------|-------------------------------|---------------|--------------------------|------------|
| 🏭 N100.608                           | LANmark-6 U/UTP PVC 500m reel | U/UTP         | PVC (Polyvinyl chloride) | Unshielded |
| ☎ = Make to order, 🏭 = Make to stock |                               |               |                          |            |

### Electrical Performance

All values are specified at 20°C

| Frequency | Attenuation<br>dB/100m | NEXT<br>dB | ACR<br>dB/100m | PSNEXT(*)<br>dB | ELFEXT<br>dB/100m | PSELFEXT<br>dB/100m | RL<br>dB |
|-----------|------------------------|------------|----------------|-----------------|-------------------|---------------------|----------|
| 1         | 2.0                    | 74.3       | 72.3           | 72.3            | 70.0              | 67.0                | 20.0     |
| 4         | 3.8                    | 65.3       | 61.5           | 63.3            | 58.0              | 55.0                | 23.0     |
| 10        | 6.0                    | 59.3       | 53.3           | 57.3            | 50.0              | 47.0                | 25.0     |
| 16        | 7.6                    | 56.2       | 48.6           | 54.3            | 45.9              | 42.9                | 25.0     |
| 20        | 8.5                    | 54.8       | 46.3           | 52.8            | 44.0              | 41.0                | 25.0     |
| 31.25     | 10.7                   | 51.9       | 41.2           | 49.9            | 40.5              | 37.5                | 23.6     |
| 62.5      | 15.4                   | 47.4       | 32.0           | 45.4            | 34.1              | 31.1                | 21.5     |
| 100       | 19.8                   | 44.3       | 24.5           | 42.3            | 30.0              | 27.0                | 20.1     |
| 155       | 25.2                   | 41.4       | 16.2           | 39.5            | 26.2              | 23.2                | 18.8     |
| 200       | 29.0                   | 39.8       | 10.8           | 37.8            | 24.0              | 21.0                | 18.0     |
| 250       | 32.8                   | 38.3       | 5.5            | 36.3            | 22.0              | 19.0                | 17.3     |
| 300       | 36.4                   | 37.1       | 1.5            | 35.2            | 20.5              | 17.5                | 16.8     |
| 350       | 39.8                   | 36.1       | -              | 34.2            | 19.1              | 16.1                | 14.1     |

## LANmark-6 Snap-In Connector

- Category 6 Snap-In connector
- Available in unshielded and shielded version
- Fast and easy termination without punch down tool
- Wiring according to colour code T568B or T568A
- Reterminable
- Stranded version available for consolidation points
- Supports POE Plus applications (15 Watts per pair)
- An adapter can be added to fit the keystone format

### Description

#### Application

Nexans LANmark-6 Evo Snap-In connectors are manufactured and tested to the latest Category 6 specifications defined in the International and American cabling standards and are designed to meet or exceed the quality and performance criteria needed to support all applications up to 250 MHz.

- 10 BASE-T Ethernet
- 100 BASE-T Fast Ethernet
- 1000 BASE-T Gigabit Ethernet
- 155 Mb ATM
- 622 Mb ATM
- 1.2 Gb ATM
- Future Class E applications

#### Design

Nexans LANmark-6 Evo Snap-In connectors are designed to match with LANmark-6 cable and patch cords and to complement all LANmark modular components, such as:

- Snap-In patch panels (fixed, sliding and angled) and Zone Distribution Boxes
- Snap-In outlet modules (UK, US, European and German style)

#### Performance

Nexans LANmark-6 Evo Snap-In connectors meet or exceed the requirements for Category 6 connecting hardware as described in ISO/IEC 11801, IEC 60603-7 and EIA/TIA 568-C.2.

#### Installation

The wire organiser guarantees fast and easy termination of the LANmark-6 Evo Snap-In connector without the need for a punchdown tool. An optional comfort tool (N420.567) can be used to increase the ease of installation. A stranded version is available for CP to TO links.

#### Guarantees

The LANmark-6 Evo Snap-In performance is guaranteed to meet or exceed the requirements of the above mentioned standards.

Traceability codes on both connector and packaging ensure quality validation.

Installations with LANmark-6 cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Installation, Channel Performance and Application Support, as described in the Nexans Certified System Warranty.



## LANmark-6

#### Standards

**International** IEC 60603-7-4;  
IEEE 802.3af (PoE);  
IEEE 802.3at (PoE Plus); ISO/  
IEC 11801

## LANmark-6 Snap-In Connector

### Product List

☎ = Make to order, 🏭 = Make to stock

| Nexans ref.            | Name                                                                | Screen |
|------------------------|---------------------------------------------------------------------|--------|
| 🏭 N420.666             | LANmark-6 Evo Snap-In Connector Category 6 Screened                 | Yes    |
| ☎ N420.667             | LANmark-6 Evo Snap-In Connector Category 6 Screened Stranded Wire   | Yes    |
| 🏭 N420.660             | LANmark-6 Evo Snap-In Connector Category 6 Unscreened               | No     |
| 🏭 N420.660ECO24<br>New | LANmark-6 Evo Snap-In Connector Category 6 Unscreened Eco-24        | No     |
| ☎ N420.661             | LANmark-6 Evo Snap-In Connector Category 6 Unscreened Stranded Wire | No     |

☎ = Make to order, 🏭 = Make to stock

### Electrical & mechanical characteristics

|                                |                                           |
|--------------------------------|-------------------------------------------|
| Contact resistance:            | max. 20 m Ohm                             |
| Input to output DC resistance: | max. 200 m Ohm                            |
| Insulation resistance:         | min. 500 M Ohm                            |
| Voltage proof:                 | 1000 V DC or AC peak, contact to contact. |
| Mating cycles:                 | min. 750                                  |
| Insertion cycles:              | min. 20                                   |

### Electrical Performance

| Frequency MHz | Attenuation | NEXT pp | PSNEXT | FEXT pp | PSFEXT | RL   |
|---------------|-------------|---------|--------|---------|--------|------|
| 1             | 0.1         | 94.0    | 90.0   | 83.1    | 80.1   | 30.0 |
| 4             | 0.1         | 82.0    | 78.0   | 71.1    | 68.1   | 30.0 |
| 10            | 0.1         | 74.0    | 70.0   | 63.1    | 60.1   | 30.0 |
| 16            | 0.1         | 69.9    | 65.9   | 59.0    | 56.0   | 30.0 |
| 20            | 0.1         | 68.0    | 64.0   | 57.1    | 54.1   | 30.0 |
| 31.25         | 0.1         | 64.1    | 60.1   | 53.2    | 50.2   | 30.0 |
| 62.5          | 0.2         | 58.1    | 54.1   | 47.2    | 44.2   | 28.1 |
| 100           | 0.2         | 54.0    | 50.0   | 43.1    | 40.1   | 24.0 |
| 125           | 0.2         | 52.1    | 48.1   | 41.2    | 38.2   | 22.1 |
| 155           | 0.2         | 50.2    | 46.2   | 39.3    | 36.3   | 20.2 |
| 175           | 0.3         | 49.1    | 45.1   | 38.2    | 35.2   | 19.1 |
| 200           | 0.3         | 48.0    | 44.0   | 37.1    | 34.1   | 18.0 |
| 250           | 0.3         | 46.0    | 42.0   | 35.1    | 32.1   | 16.0 |

All values are in dB

## LANmark-6 UniBoot Patch Cords

- Complies fully with Category 6 standards
- Uses Nexans cable technology
- Fully matched with other components for maximum performance
- LSZH Flame retardant jacket
- Retrofit Latch Protector available in 8 colours for colour coding

### Description

#### Application

LANmark-6 Patch Cords can be used to deliver a full end-to-end Class E solution.

They provide improved data throughput and allow for the inclusion of a cross-connect or Consolidation Points for maximum system flexibility. They will also maximise the lifetime and long term performance of the system by minimising the risk of wear & tear damage which can be caused by using non-matched cords. .

LANmark-6 Cords feature a slim over-moulded boot which is kept inside the RJ45 boundaries to enable High Density Patching with 48 cords in 1 height unit. They also come with a Retrofit Latch Protector, which can be used for colour coding of different services.

#### Guarantees

When installed in combination with other LANmark-6 components, a 25 years channel warranty can be obtained, covering full Cat 6/Class E compliance.

#### Installation

- Small cross section allows neat installation and simplifies the creation of bundles in cabinets.
- A Low Smoke Zero Halogen - Flame Retardant jacket is standard.
- 1, 2, 3, 5, 10 and 20m are standard lengths; other lengths are available on demand.
- Orange and Dark Grey are standard colours available from stock; other colours are available on demand.
- Default Plug configuration is a black boot with a preinstalled black latch protector; other combinations available on request.



## LANmark-6

#### Standards

**International** EN 50173 Ed.1; ISO/  
IEC 11801:2002/Amd 2:2010/  
Cor 1:2010

**National** TIA/EIA-568-B.3

## LANmark-6 UniBoot Patch Cords

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                                   | Range     | Colour | Screen | Length (m) |
|--------------------------------------|--------------------------------------------------------|-----------|--------|--------|------------|
| 📦 N116.P1A100DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 10m Grey    | LANmark-6 | Grey   | No     | 10         |
| 📦 N116.P1A100OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 10m Orange  | LANmark-6 | Orange | No     | 10         |
| 📦 N116.P1A010DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 1m Grey     | LANmark-6 | Grey   | No     | 1          |
| 📦 N116.P1A010OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 1m Orange   | LANmark-6 | Orange | No     | 1          |
| 📦 N116.P1A200DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 20m Grey    | LANmark-6 | Grey   | No     | 20         |
| 📦 N116.P1A200OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 20m Orange  | LANmark-6 | Orange | No     | 20         |
| 📦 N116.P1A020DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 2m Grey     | LANmark-6 | Grey   | No     | 2          |
| 📦 N116.P1A020OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 2m Orange   | LANmark-6 | Orange | No     | 2          |
| 📦 N116.P1A030DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 3m Grey     | LANmark-6 | Grey   | No     | 3          |
| 📦 N116.P1A030OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 3m Orange   | LANmark-6 | Orange | No     | 3          |
| 📦 N116.P1A050DK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 5m Grey     | LANmark-6 | Grey   | No     | 5          |
| 📦 N116.P1A050OK                      | LANmark-6 Patch Cord Cat 6 Unscreened LSZH 5m Orange   | LANmark-6 | Orange | No     | 5          |
| 📦 N116.S1A200OK<br>New               | LANmark-6 Solid Cord Cat 6 Unscreened LSZH 20m Orange  | LANmark-6 | Orange | No     | 20         |
| 📦 N116.S1A300OK<br>New               | LANmark-6 Solid Cord Cat 6 Unscreened LSZH 30m Orange  | LANmark-6 | Orange | No     | 30         |
| ☎ N116.P9A010DK<br>New               | LANmark-6 UniBoot Patch Cord Unscreened UL PVC Grey 1m | LANmark-6 | Grey   | No     | 1          |
| ☎ N116.P9A020DK<br>New               | LANmark-6 UniBoot Patch Cord Unscreened UL PVC Grey 2m | LANmark-6 | Grey   | No     | 2          |
| ☎ N116.P9A030DK<br>New               | LANmark-6 UniBoot Patch Cord Unscreened UL PVC Grey 3m | LANmark-6 | Grey   | No     | 3          |
| ☎ N116.P9A050DK<br>New               | LANmark-6 UniBoot Patch Cord Unscreened UL PVC Grey 5m | LANmark-6 | Grey   | No     | 5          |
| ☎ = Make to order, 📦 = Make to stock |                                                        |           |        |        |            |

## LANmark-6 10G UniBoot Patch Cords

- High speed RJ45 patch cord to run 10GBase-T (IEEE 802.3an)
- High Density support : 48 cords on 1 height unit
- Frequency up to 500MHz, fully complies to Cat 6A channel requirements
- Screened Design for Alien Crosstalk immunity
- Externally certified
- Retrofit Latch Protector available in 6 colours for colour coding

### Description

#### Application

LANmark-6 10G Cords are developed to support 10 Gigabit Ethernet (IEEE 802.3an).

LANmark-6 10G Cords offer superior performance up to 500MHz and are matched with other LANmark-6 10G components to provide improved data throughput in complex channel configurations. LANmark-6 10G Cords use stranded cable and as such provide maximum system flexibility for the use at Cross Connects and Consolidation points.

LANmark-6 10G Cords feature a robust boot which does not extend outside the RJ45 boundaries to enable High Density Patching with 48 cords in 1 height unit and a Retrofit Latch Protector, which can be used for color coding of different services.

#### Performance

LANmark-6 10G Cords fully comply and exceed the channel requirements of EIA/TIA-568-B.2-10 and ISO11801 A2 and enable to achieve high performing 10G channels.

#### Guarantees

When installed in combination with other LANmark-6 10G components, a 25 years channel warranty can be obtained, covering full 10GBase-T support and full Cat 6A/Class EA compliance.

#### Usage

- The cords are by design fully Alien Crosstalk compliant, so no special installation rules need to be taken into account for ANEXT and AFEXT compliance.
- 1, 2, 3, 5, 10, 20m are standard lengths available from stock, other lengths are available on demand.
- Orange and Dark Grey are standard colours available from stock, other colours are available on demand.
- Default Plug configuration is a black boot with a preinstalled black latch protector, other combinations available on request.



### LANmark-6 10G

#### Standards

**International** IEEE 802.3an; ISO/IEC 11801:2002/Amd 1:2008/Cor 1:2008; ISO/IEC TR24750

**National** TIA/EIA TSB-155; TIA/EIA-568-B.2-10

## LANmark-6 10G UniBoot Patch Cords

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.         | Name                                                           | Range         | Length (m) | Colour | Screen |
|---------------------|----------------------------------------------------------------|---------------|------------|--------|--------|
| 📦 N11G.P1B100DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 10m Grey   | LANmark-6 10G | 10         | Grey   | Yes    |
| 📦 N11G.P1B100OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 10m Orange | LANmark-6 10G | 10         | Orange | Yes    |
| 📦 N11G.P1B010DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 1m Grey    | LANmark-6 10G | 1          | Grey   | Yes    |
| 📦 New               | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 1m Orange  | LANmark-6 10G | 1          | Orange | Yes    |
| 📦 N11G.P1B010OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 1m Orange  | LANmark-6 10G | 1          | Orange | Yes    |
| 📦 N11G.P1B200DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 20m Grey   | LANmark-6 10G | 20         | Grey   | Yes    |
| 📦 N11G.P1B200OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 20m Orange | LANmark-6 10G | 20         | Orange | Yes    |
| 📦 N11G.P1B020DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 2m Grey    | LANmark-6 10G | 2          | Grey   | Yes    |
| 📦 N11G.P1B020OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 2m Orange  | LANmark-6 10G | 2          | Orange | Yes    |
| 📦 N11G.P1B030DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 3m Grey    | LANmark-6 10G | 3          | Grey   | Yes    |
| 📦 N11G.P1B030OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 3m Orange  | LANmark-6 10G | 3          | Orange | Yes    |
| 📦 N11G.P1B050DK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 5m Grey    | LANmark-6 10G | 5          | Grey   | Yes    |
| 📦 N11G.P1B050OK New | LANmark-6 10G Patch Cord Cat 6 500MHz Screened LSZH 5m Orange  | LANmark-6 10G | 5          | Orange | Yes    |

☎ = Make to order, 📦 = Make to stock

**Electrical Performance LANmark-6 10G 100m 4 connector channel**

all values are specified at 20°C

| Freq  | Attn dB |      | NEXT dB |      | PSNEXT dB |      | ELFEXT dB |      | PS ELFEXT dB |      | PS ANEXT dB |      | PS AELFEXT dB |      | RL dB |      |
|-------|---------|------|---------|------|-----------|------|-----------|------|--------------|------|-------------|------|---------------|------|-------|------|
|       | Std     | Guar | Std     | Guar | Std       | Guar | Std       | Guar | Std          | Guar | Std         | Guar | Std           | Guar | Std   | Guar |
| 1     | <4      | <4   | 72.7    | >75  | 70.3      | 74.3 | 63.3      | >60  | 60.3         | >60  | 82.0        | >90  | 77.9          | 87.9 | 19.0  | 21.0 |
| 4     | 4.2     | 4.1  | 63.0    | 66.0 | 60.5      | 64.5 | 51.2      | 57.2 | 48.2         | 57.2 | 76.0        | >90  | 65.9          | 75.9 | 19.0  | 21.0 |
| 10    | 6.6     | 6.5  | 56.6    | 59.6 | 54.0      | 58.0 | 43.3      | 49.3 | 40.3         | 49.3 | 72.0        | 87.0 | 57.9          | 67.9 | 19.0  | 21.0 |
| 16    | 8.3     | 8.2  | 53.2    | 56.2 | 50.6      | 54.6 | 39.2      | 45.2 | 36.2         | 45.2 | 70.0        | 85.0 | 53.8          | 63.8 | 18.0  | 20.0 |
| 20    | 9.3     | 9.2  | 51.6    | 54.6 | 49.0      | 53.0 | 37.2      | 43.2 | 34.2         | 43.2 | 69.0        | 84.0 | 51.9          | 61.9 | 17.5  | 19.5 |
| 31.25 | 11.7    | 11.6 | 48.4    | 51.4 | 45.7      | 49.7 | 33.4      | 39.4 | 30.4         | 39.4 | 67.1        | 82.1 | 48.0          | 58.0 | 16.5  | 18.5 |
| 62.5  | 16.9    | 16.6 | 43.4    | 46.4 | 40.6      | 44.6 | 27.3      | 33.3 | 24.3         | 33.3 | 64.0        | 79.0 | 42.0          | 52.0 | 14.0  | 16.0 |
| 100   | 21.7    | 21.4 | 39.9    | 42.9 | 37.1      | 41.1 | 23.3      | 29.3 | 20.3         | 29.3 | 62.0        | 77.0 | 37.9          | 47.9 | 12.0  | 14.0 |
| 155   | 27.6    | 27.1 | 36.7    | 39.7 | 33.8      | 37.8 | 19.5      | 25.5 | 16.5         | 25.5 | 59.1        | 74.1 | 34.1          | 44.1 | 10.1  | 12.1 |
| 200   | 31.7    | 31.2 | 34.8    | 37.8 | 31.9      | 35.9 | 17.2      | 23.2 | 14.2         | 23.2 | 57.5        | 72.5 | 31.9          | 41.9 | 9.0   | 11.0 |
| 250   | 35.9    | 35.4 | 33.1    | 36.1 | 30.2      | 34.2 | 15.3      | 21.3 | 12.3         | 21.3 | 56.0        | 71.0 | 29.9          | 39.9 | 8.0   | 10.0 |
| 300   | 39.8    | 39.2 | 31.7    | 34.7 | 28.8      | 32.8 | 13.7      | 19.7 | 10.7         | 19.7 | 54.8        | 69.8 | 28.4          | 38.4 | 7.2   | 9.2  |
| 500   | 53.4    | 52.6 | 22.0    | 25.0 | 20.4      | 24.4 | 9.3       | 15.3 | 6.3          | 15.3 | 51.5        | 66.5 | 23.9          | 33.9 | 6.0   | 8.0  |

Guaranteed channel values apply under the condition that General Installation Guidelines from NCS and the Design and Installation Guidelines for LANmark-6 10G are respected and implemented.

## LANmark-6 10G Snap-In Connector

- Complies to 10GBase-T application standards
- Complies with Category 6A and Class EA channel requirements
- Fully screened for alien crosstalk immunity
- Reduces risk of installation errors for consistent performance
- Compatible with all snap-in hardware
- An adapter can be added to fit the keystone format
- Supports POE Plus applications (15 Watts per pair)

### Description

#### Application

LANmark-6 10G consists of screened components specified to frequencies up to 500MHz. They have been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, yet is fully backwards compatible with today's needs. The LANmark-6 10G EVO connector fits in all structural hardware designed for the EVO snap-in range. In addition to the requirements of the EIA/TIA 568-B.2-1 and ISO/IEC 11801:2002 Category 6, the LANmark-6 10G products are additionally specified to 500MHz and are screened to ensure immunity from Alien Crosstalk and other external interference.

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- POE Plus
- future class E 10G applications

#### Performance

The LANmark-6 10G EVO Snap-in connector has been designed to reach the highest performance in Cat 6 and Class E up to 500 MHz. It has outstanding performance for attenuation (insertion loss), NEXT/FEXT, Power Sum NEXT/FEXT and Return Loss, exceeding the Cat 6 connector specs as in IEC 60603-7-5.

When used in combination with Nexans LANmark-6 10G cables and LANmark-6 10G Ultim patch cords, and installed according to the guidelines, the system supports the 10GBase-T applications as defined in IEEE 802.3an, ISO/IEC TR 24750 and TIA/EIA TSB-155. Respecting the Nexans LANmark-6 10G design guidelines, the full 100m four-connector channel moreover meets Category 6A and Class EA requirements as defined in TIA/EIA568B.2 Addendum 10 draft 6.0 and ISO/IEC draft amendment 1.1 (as in draft 25N1324) respectively.

#### Installation

The LANmark-6 10G EVO Snap-in connector makes termination easier and quicker thanks to exclusive design of the wire organizer and of the sliding metal EMC rear cover. The LANmark-6 10G EVO snap-in is designed to be terminated with the universal comfort tool. This tool includes also the exclusive extraction mechanism which makes the EVO series snap-in re-usable. A stranded version is available for reliable termination in consolidation point of 3 or 4 connectors channel models. The LANmark-6 10G EVO snap-in range is Nexans technology inside and user friendly outside



### LANmark-6 10G

#### Standards

**International** IEEE 802.3af (PoE);  
IEEE 802.3an;  
IEEE 802.3at (PoE Plus); ISO/  
IEC 11801:2002/Amd 1:2008/  
Cor 1:2008; ISO/IEC TR24750

**National** TIA/EIA TSB-155; TIA/  
EIA-568-B.2-10

## LANmark-6 10G Snap-In Connector

- Fast termination with exclusive wire organizer and sliding metal EMC rear cover
- Colour code : T568A & T568B
- Full EMC protection with metal rear cover
- Re-usable with universal comfort tool
- Accepts solid wire from 22 to 24 AWG
- Stranded version available for consolidation point
- Snap-in format fits in all Nexans structural hardware
- 2 possibilities to terminate the drain wire : on the housing or on the rear cover
- Passes all tests for POE Plus Requirements (IEC 60512-99-001 Ed.1)

### Guarantees

The LANmark-6 10G EVO Snap-in connector is covered by the guarantee as in The General Terms and Conditions of Sales. When installed in combination with other LANmark-6 10G components, a 25 years channel warranty can be obtained, covering 10GBase-T support in accordance with IEEE 802.3an. Also if following the design guidelines for LANmark-6 10G systems and tested accordingly, a 25 year warranty can be obtained to Category 6A or Class EA requirements.

## LANmark-6 10G Snap-In Connector

### Characteristics

#### Usage characteristics

Range

LANmark-6 10G

#### Product List

| Nexans ref.                                                                                 | Name                                                             |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------|
|  N420.666G | LANmark-6 10G EVO Snap-in connector, screened, for solid wire    |
|  N420.667G | LANmark-6 10G EVO Snap-in connector, screened, for stranded wire |

 = Make to order,  = Make to stock

### Electrical Performance LANmark-6 10G 100m 4 connector channel

all values are specified at 20°C

| Freq  | Attn<br>dB |      | NEXT<br>dB |      | PSNEXT<br>dB |      | ELFEXT<br>dB |      | PS ELFEXT<br>dB |      | PS ANEXT<br>dB |      | PS AELFEXT<br>dB |      | RL<br>dB |      |
|-------|------------|------|------------|------|--------------|------|--------------|------|-----------------|------|----------------|------|------------------|------|----------|------|
|       | Std        | Guar | Std        | Guar | Std          | Guar | Std          | Guar | Std             | Guar | Std            | Guar | Std              | Guar | Std      | Guar |
| 1     | <4         | <4   | 72.7       | >75  | 70.3         | 74.3 | 63.3         | >60  | 60.3            | >60  | 82.0           | >90  | 77.9             | 87.9 | 19.0     | 21.0 |
| 4     | 4.2        | 4.1  | 63.0       | 66.0 | 60.5         | 64.5 | 51.2         | 57.2 | 48.2            | 57.2 | 76.0           | >90  | 65.9             | 75.9 | 19.0     | 21.0 |
| 10    | 6.6        | 6.5  | 56.6       | 59.6 | 54.0         | 58.0 | 43.3         | 49.3 | 40.3            | 49.3 | 72.0           | 87.0 | 57.9             | 67.9 | 19.0     | 21.0 |
| 16    | 8.3        | 8.2  | 53.2       | 56.2 | 50.6         | 54.6 | 39.2         | 45.2 | 36.2            | 45.2 | 70.0           | 85.0 | 53.8             | 63.8 | 18.0     | 20.0 |
| 20    | 9.3        | 9.2  | 51.6       | 54.6 | 49.0         | 53.0 | 37.2         | 43.2 | 34.2            | 43.2 | 69.0           | 84.0 | 51.9             | 61.9 | 17.5     | 19.5 |
| 31.25 | 11.7       | 11.6 | 48.4       | 51.4 | 45.7         | 49.7 | 33.4         | 39.4 | 30.4            | 39.4 | 67.1           | 82.1 | 48.0             | 58.0 | 16.5     | 18.5 |
| 62.5  | 16.9       | 16.6 | 43.4       | 46.4 | 40.6         | 44.6 | 27.3         | 33.3 | 24.3            | 33.3 | 64.0           | 79.0 | 42.0             | 52.0 | 14.0     | 16.0 |
| 100   | 21.7       | 21.4 | 39.9       | 42.9 | 37.1         | 41.1 | 23.3         | 29.3 | 20.3            | 29.3 | 62.0           | 77.0 | 37.9             | 47.9 | 12.0     | 14.0 |
| 155   | 27.6       | 27.1 | 36.7       | 39.7 | 33.8         | 37.8 | 19.5         | 25.5 | 16.5            | 25.5 | 59.1           | 74.1 | 34.1             | 44.1 | 10.1     | 12.1 |
| 200   | 31.7       | 31.2 | 34.8       | 37.8 | 31.9         | 35.9 | 17.2         | 23.2 | 14.2            | 23.2 | 57.5           | 72.5 | 31.9             | 41.9 | 9.0      | 11.0 |
| 250   | 35.9       | 35.4 | 33.1       | 36.1 | 30.2         | 34.2 | 15.3         | 21.3 | 12.3            | 21.3 | 56.0           | 71.0 | 29.9             | 39.9 | 8.0      | 10.0 |
| 300   | 39.8       | 39.2 | 31.7       | 34.7 | 28.8         | 32.8 | 13.7         | 19.7 | 10.7            | 19.7 | 54.8           | 69.8 | 28.4             | 38.4 | 7.2      | 9.2  |
| 500   | 53.4       | 52.6 | 22.0       | 25.0 | 20.4         | 24.4 | 9.3          | 15.3 | 6.3             | 15.3 | 51.5           | 66.5 | 23.9             | 33.9 | 6.0      | 8.0  |

Guaranteed channel values apply under the condition that General Installation Guidelines from NCS and the Design and Installation Guidelines for LANmark-6 10G are respected and implemented.

## LANmark-6A Cable

- Ideal Cable for 10GBase-T application
- Complies fully with new standards for Category 6A and Class EA
- Small diameter
- Guaranteed performance up to 500MHz
- Fully screened for alien crosstalk immunity

### Description

#### Application

LANmark-6A cable is the ideal solution for a 10G Ethernet network. The range consists of cables which have been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, while maintain to be fully backwards compatible with today's needs. All LANmark-6A products are screened cables to ensure immunity from Alien Crosstalk and other external interference and are specified up to frequencies of 500MHz.

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- future Cat 6A and Class EA applications

#### Performance

With guaranteed performance to 500MHz, Nexans LANmark-6A cables provide guaranteed headroom and bandwidth over and above the Category 6A requirements of international, european and american cable standards, including of IEC 61156-5, EN 50173, EN 50288, TIA/EIA 568-B.2-1 Ad.10. When used in combination with Nexans LANmark-6A Evo connectors and LANmark-6A Ultim patch cords, the system supports the 10GBase-T applications as defined in IEEE 802.3an, and the full 100m four-conductor links and channels meet Category 6A and Class EA requirements as defined in TIA/EIA568B.2 Addendum 10 and ISO/IEC11801 2002/A1:2008.

#### Installation

The LANmark-6A cables have the advantage of offering equal dimensions and flexibility as the equivalent LANmark-6 screened cables with the same ease of installation and termination.

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.

#### Guarantees

Nexans LANmark-6A 10G cable is covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with other LANmark-6A 10G components, a 25 year channel warranty can be obtained.



## LANmark-6A

#### Standards

**International** EN 50288-4-1;  
 IEC 61156-5; IEEE 802.3an; ISO/  
 IEC 11801:2002/Amd 1:2008/  
 Cor 1:2008; ISO/IEC 24764; ISO/  
 IEC TR24750; ISO/IEC 11801:2002/  
 Amd 2:2010/Cor 1:2010

**National** ANSI/TIA-568-C.2; TIA/  
 EIA TSB-155

#### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                               | Outer sheath |
|-------------|----------------------------------------------------|--------------|
| 📦 N100.693G | LANmark-6A F/FTP Cat 6A 500MHz Dual LSZH 500m reel | LSZH         |
| 📦 N100.692G | LANmark-6A F/FTP Cat 6A 500MHz LSZH 1000m reel     | LSZH         |
| 📦 N100.694G | LANmark-6A F/FTP Cat 6A 500MHz LSZH 500m reel      | LSZH         |

☎ = Make to order, 📦 = Make to stock

## LANmark-6A Cable

| Nexans ref. | Name                                                | Outer sheath |
|-------------|-----------------------------------------------------|--------------|
| 🏭 N100.623G | LANmark-6A F1/UTP Cat 6A 500MHz Dual LSZH 500m reel | LSZH         |
| 🏭 N100.622G | LANmark-6A F1/UTP Cat 6A 500MHz LSZH 1000m reel     | LSZH         |
| 🏭 N100.624G | LANmark-6A F1/UTP Cat 6A 500MHz LSZH 500m reel      | LSZH         |

☎ = Make to order, 🏭 = Make to stock

## LANmark-6A Cable

### Electrical Performance LANmark-6A 10G F1UTP cable

|              | 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. |
| <b>1</b>     | 2.1   | 2.1  | 74.3  | 79.3 | 72.3   | 77.3 | 67.8  | 92.8 | 64.8     | >60  | 67.0     | 90.0 | 67.0      | 87.9 | 20.0  | 26.0 |
| <b>4</b>     | 3.8   | 3.8  | 65.3  | 70.3 | 63.3   | 68.3 | 55.8  | 80.8 | 52.8     | 57.2 | 67.0     | 90.0 | 66.2      | 75.9 | 23.0  | 29.0 |
| <b>10</b>    | 5.9   | 5.9  | 59.3  | 64.3 | 57.3   | 62.3 | 47.8  | 72.8 | 44.8     | 49.3 | 67.0     | 87.0 | 58.2      | 67.9 | 25.0  | 31.0 |
| <b>16</b>    | 7.5   | 7.5  | 56.2  | 61.2 | 54.2   | 59.2 | 43.7  | 68.7 | 40.7     | 45.2 | 67.0     | 85.0 | 54.1      | 63.8 | 25.0  | 31.0 |
| <b>20</b>    | 8.4   | 8.4  | 54.8  | 59.8 | 52.8   | 57.8 | 41.8  | 66.8 | 38.8     | 43.2 | 67.0     | 84.0 | 52.2      | 61.9 | 25.0  | 31.0 |
| <b>31.25</b> | 10.5  | 10.5 | 51.9  | 56.9 | 49.9   | 54.9 | 37.9  | 62.9 | 34.9     | 39.4 | 67.0     | 82.1 | 48.3      | 58.0 | 23.6  | 29.6 |
| <b>62.5</b>  | 15.0  | 15.0 | 47.4  | 52.4 | 45.4   | 50.4 | 31.9  | 56.9 | 28.9     | 33.3 | 65.6     | 79.0 | 42.3      | 52.0 | 21.5  | 27.5 |
| <b>100</b>   | 19.1  | 19.1 | 44.3  | 49.3 | 42.3   | 47.3 | 27.8  | 52.8 | 24.8     | 29.3 | 62.5     | 77.0 | 38.2      | 47.9 | 20.1  | 26.1 |
| <b>155</b>   | 24.1  | 24.1 | 41.4  | 46.4 | 39.4   | 44.4 | 24.0  | 49.0 | 21.0     | 25.5 | 59.6     | 74.1 | 34.4      | 44.1 | 18.8  | 24.8 |
| <b>200</b>   | 27.6  | 27.6 | 39.8  | 44.8 | 37.8   | 42.8 | 21.8  | 46.8 | 18.8     | 23.2 | 58.0     | 72.5 | 32.2      | 41.9 | 18.0  | 24.0 |
| <b>250</b>   | 31.1  | 31.1 | 38.3  | 43.3 | 36.3   | 41.3 | 19.8  | 44.8 | 16.8     | 21.3 | 56.5     | 71.0 | 30.2      | 39.9 | 17.3  | 23.3 |
| <b>300</b>   | 34.3  | 34.3 | 37.1  | 42.1 | 35.1   | 40.1 | 18.3  | 43.3 | 15.3     | 19.7 | 55.3     | 69.8 | 28.7      | 38.4 | 16.8  | 22.8 |
| <b>500</b>   | 45.3  | 45.3 | 33.8  | 38.8 | 31.8   | 36.8 | 13.8  | 38.8 | 10.8     | 15.3 | 52.0     | 66.5 | 24.2      | 33.9 | 15.2  | 21.2 |

all values are specified at 20°C

## LANmark-6A Snap-In Connector

- High bandwidth RJ45 connector supporting 10 Gigabit Ethernet
- Fully compliant with TIA and ISO Category 6A cabling and connector standards
- Supports very short Category 6A channel configurations, often required in Data Centres
- 360° shielding offering full Alien Crosstalk immunity
- Fast and easy termination without punch down tool
- Wiring according to colour code T568B or T568A
- Reterminable
- Stranded version available for CP to TO links
- Supports POE Plus applications (15 Watts per pair)
- An adapter can be added to fit the keystone format

### Description

#### Application

Nexans LANmark-6A Evo Snap-In Connectors are manufactured and tested to the latest Category 6A specifications defined in the International and American cabling standards and are designed to meet or exceed the stringent quality and performance criteria needed to support all applications up to 500 MHz, including 10 Gigabit Ethernet.

A fully closed metal rear cover providing 360 degrees shielding offers excellent coupling attenuation and ensures immunity from Alien Crosstalk and other external interferences.

Channels built with LANmark-6A cables and jacks do not need on site testing for Alien Crosstalk, as this parameter is met by design. This significantly reduces the installation cost for 10G network cabling.

- 10 BASE-T Ethernet
- 100 BASE-T Fast Ethernet
- 1000 BASE-T Gigabit Ethernet
- 10G BASE-T Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- POE Plus
- Future Cat 6A and Class EA applications

#### Design

Nexans LANmark-6A Evo Snap-In connectors are designed to match with LANmark-6A cable and patch cords and to complement all LANmark modular components, such as:

- Snap-In patch panels (fixed, sliding and angled) and Zone Distribution Boxes
- Snap-In outlet modules (UK, US, European and German style)

#### Performance

Nexans LANmark-6A Evo connectors meet or exceed the requirements for Category 6A connecting hardware as described in ISO/IEC 11801, IEC 60603-7-51 and EIA/TIA 568-C.2.

In conjunction with LANmark-6A cable they support all 2, 3 and 4 connector models as specified in these standards, as well as very short link and channel configurations which are increasingly required in Data Centre environments.

#### Installation

The wire organiser guarantees fast and easy termination of the LANmark-6A Evo Snap-In connector without the need for a punchdown tool. An optional comfort tool (N420.567) can be used to increase the ease of installation.

A stranded version is available for CP to TO links.

#### Guarantees



## LANmark-6A

#### Standards

**International** EN 50173-1;  
IEC 60603-7-51;  
IEEE 802.3af (PoE);  
IEEE 802.3at (PoE Plus); ISO/  
IEC 11801:2002/Amd 1:2008/  
Cor 1:2008; ISO/IEC 24764; ISO/  
IEC 11801:2002/Amd 2:2010/  
Cor 1:2010

**National** ANSI/TIA-568-C.2

## LANmark-6A Snap-In Connector

The LANmark-6A Evo Snap-In performance is guaranteed to meet or exceed the requirements of the above mentioned standards.

Traceability codes on both connector and packaging ensure quality validation.

Installations with LANmark-6A cable and connectivity are qualified for a 25 year full system warranty, which includes Parts, Installation, Channel Performance and Application Support, as described in the Nexans Certified System Warranty.

### Product List

| Nexans ref.                                                                                            | Name                                                                           |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|  N420.66A             | LANmark-6A Evo Snap-In Connector Category 6A 500MHz Screened                   |
|  N420.66ABULK100      | LANmark-6A Evo Snap-In Connector Category 6A 500MHz Screened (bulk pack)       |
|  N420.66AECO24<br>New | LANmark-6A Evo Snap-In Connector Category 6A 500MHz Screened Eco-24            |
|  N420.67A             | LANmark-6A Evo Snap-In Connector Category 6A 500MHz Screened for stranded wire |

 = Make to order,  = Make to stock

## LANmark-6A Snap-In Connector

### Electrical Performance LANmark-6A 4 Connector Channel Part 1

"All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance"

| Freq<br>in MHz | Attn<br>in dB |      | NEXT<br>in dB |      |      | PSNEXT<br>in dB |      |      | ACR-F<br>in dB |      |
|----------------|---------------|------|---------------|------|------|-----------------|------|------|----------------|------|
|                | Max           | Typ  | Std           | Min  | Typ  | Std             | Min  | Typ  | Std            | Typ  |
| 1              | <4            | 4.0  | 65.0          | 67.0 | 85.0 | 62.0            | 64.0 | 74.8 | 63.3           | 69.9 |
| 4              | 4.1           | 4.1  | 63.0          | 65.0 | 72.9 | 60.5            | 62.5 | 65.0 | 51.2           | 57.9 |
| 10             | 6.4           | 6.3  | 56.6          | 58.6 | 65.0 | 54.0            | 56.0 | 58.5 | 43.3           | 49.9 |
| 16             | 8.1           | 8.0  | 53.2          | 55.2 | 60.9 | 50.6            | 52.6 | 55.1 | 39.2           | 45.9 |
| 20             | 9.1           | 9.0  | 51.6          | 53.6 | 59.0 | 49.0            | 51.0 | 53.5 | 37.2           | 43.9 |
| 31.25          | 11.4          | 11.2 | 48.4          | 50.4 | 55.1 | 45.7            | 47.7 | 50.2 | 33.4           | 40.0 |
| 62.5           | 16.3          | 15.9 | 43.4          | 45.4 | 49.1 | 40.6            | 42.6 | 45.1 | 27.3           | 34.0 |
| 100            | 20.8          | 20.2 | 39.9          | 41.9 | 45.0 | 37.1            | 39.1 | 41.6 | 23.3           | 29.9 |
| 155            | 26.2          | 25.4 | 36.7          | 38.7 | 41.2 | 33.8            | 35.8 | 38.3 | 19.5           | 26.1 |
| 200            | 30.0          | 28.9 | 34.8          | 36.8 | 39.0 | 31.9            | 33.9 | 36.4 | 17.2           | 23.9 |
| 250            | 33.8          | 32.5 | 33.1          | 35.1 | 37.0 | 30.2            | 32.2 | 34.7 | 15.3           | 22.0 |
| 300            | 37.3          | 35.7 | 31.7          | 33.7 | 35.4 | 28.8            | 30.8 | 33.3 | 13.7           | 20.4 |
| 500            | 49.3          | 46.7 | 27.9          | 29.9 | 31.0 | 24.8            | 26.8 | 24.9 | 9.3            | 16.0 |

\*Standard values based on ISO 11801 Class EA

### Electrical Performance LANmark-6A 4 Connector Channel Part 2

All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance

| Freq<br>in MHz | PS ACR-F<br>in dB |      | PS ANEXT<br>in dB |      |      | PS AACR-F<br>in dB |      |      | RL<br>in dB |      |      |
|----------------|-------------------|------|-------------------|------|------|--------------------|------|------|-------------|------|------|
|                | Std               | Typ  | Std               | Min  | Typ  | Std                | Min  | Typ  | Std         | Min  | Typ  |
| 1              | 60.3              | 66.9 | 80.0              | 90.0 | 92.0 | 77.0               | 92.0 | 94.0 | 19.0        | 21.0 | 21.0 |
| 4              | 48.2              | 54.9 | 74.0              | 89.0 | 91.0 | 65.0               | 80.0 | 82.0 | 19.0        | 21.0 | 32.0 |
| 10             | 40.3              | 46.9 | 70.0              | 85.0 | 87.0 | 57.0               | 72.0 | 74.0 | 19.0        | 21.0 | 28.0 |
| 16             | 36.2              | 42.9 | 68.0              | 83.0 | 85.0 | 52.9               | 67.9 | 69.9 | 18.0        | 20.0 | 26.0 |
| 20             | 34.2              | 40.9 | 67.0              | 82.0 | 84.0 | 51.0               | 66.0 | 68.0 | 17.5        | 19.5 | 25.0 |
| 31.25          | 30.4              | 37.0 | 65.1              | 80.1 | 82.1 | 47.1               | 62.1 | 64.1 | 16.5        | 18.5 | 23.1 |
| 62.5           | 24.3              | 31.0 | 62.0              | 77.0 | 79.0 | 41.1               | 56.1 | 58.1 | 14.0        | 16.0 | 20.0 |
| 100            | 20.3              | 26.9 | 60.0              | 75.0 | 77.0 | 37.0               | 52.0 | 54.0 | 12.0        | 14.0 | 18.0 |
| 155            | 16.5              | 23.1 | 57.1              | 72.1 | 74.1 | 33.2               | 48.2 | 50.2 | 10.1        | 12.1 | 16.1 |
| 200            | 14.2              | 20.9 | 55.5              | 70.5 | 72.5 | 31.0               | 46.0 | 48.0 | 9.0         | 11.0 | 15.0 |
| 250            | 12.3              | 19.0 | 54.0              | 69.0 | 71.0 | 29.0               | 44.0 | 46.0 | 8.0         | 10.0 | 14.0 |
| 300            | 10.7              | 17.4 | 52.8              | 67.8 | 69.8 | 27.5               | 42.5 | 44.5 | 8.0         | 10.0 | 13.2 |
| 500            | 6.3               | 13.0 | 49.5              | 64.5 | 66.5 | 23.0               | 38.0 | 40.0 | 8.0         | 10.0 | 11.0 |

\*Standard values based on ISO 11801 Class EA

## LANmark-6A Ultim UniBoot Patch Cords

- High speed RJ45 patch cord to run 10GBase-T and future Cat6A applications
- High Density support : 48 cords on 1 height unit
- Frequency range up to 500MHz, fully complies to Cat 6A TIA568C.2 and ISO11801:2011
- Individually screened pairs for reduced Internal Crosstalk and Alien Crosstalk immunity
- Externally certified
- Retrofit Latch Protector available in 8 colours for colour coding

### Description

#### Application

LANmark-6A Ultim cords are developed to support 10 Gigabit Ethernet (IEEE 802.3an) and any other future Cat.6A application.

LANmark-6A Ultim Cords offer superior performance up to 500MHz and are matched with other LANmark-6A components to provide improved data throughput in complex channel configurations. Ultim cords use stranded cable and as such provide maximum system flexibility for the use at Cross Connects and Consolidation points.

They will also maximise the lifetime and longevity of the system by minimising the risk of wear & tear damage. Due to their good electrical performance and mechanical stability, LANmark-6A Ultim cords can be used for accurate field testing of Cat 6A cabling channels. .

Ultim Cords feature a slim boot for mechanical protection, which is kept inside the RJ45 boundaries to enable High Density Patching with 48 cords in 1 height unit.

They also come with a 'Replaceable' Latch Protector, which can be used for colour coding of different services.

#### Performance

The LANmark-6A Ultim cords fully comply and exceed the requirements of EIA/TIA-568-B.2-10 and ISO11801 A2 and enable to achieve high performing Cat 6A channels. Used with other LANmark-6A components, very short Cat 6A link and channel configurations with up to 3 connection points within 10 meters can be supported.

#### Guarantees

When installed in combination with other LANmark-6A components, a 25 years channel warranty can be obtained, covering full 10GBase-T support and full Cat 6A/Class EA compliance.

#### Usage

- The cords are by design fully Alien Crosstalk compliant, so no special installation rules need to be taken into account for ANEXT and AFEXT compliance.
- 1, 2, 3, 5, 10, 20m are standard lengths available from stock, other lengths are available on demand.
- Orange and Dark Grey are standard colours available from stock; other colours are available on demand.
- Default Plug Configuration is a black boot with a preinstalled black latch protector.



## LANmark-6A

#### Standards

**International** EN 50173-1;  
IEEE 802.3an; ISO/IEC 11801:2002/  
Amd 1:2008/Cor 1:2008; ISO/  
IEC TR24750; ISO/IEC 11801:2002/  
Amd 2:2010/Cor 1:2010

**National** ANSI/TIA-568-C.2; TIA/  
EIA TSB-155

### Characteristics

#### Usage characteristics

Range

LANmark-6A

## LANmark-6A Ultim UniBoot Patch Cords

**Product List**

☎ = Make to order, 🏠 = Make to stock

| Nexans ref.            | Name                                                           | Length (m) | Colour | Screen |
|------------------------|----------------------------------------------------------------|------------|--------|--------|
| 🏠 N11A.U1F100DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 10m Grey      | 10         | Grey   | Yes    |
| 🏠 N11A.U1F100OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 10m Orange    | 10         | Orange | Yes    |
| 🏠 N11A.U1F010DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 1m Grey       | 1          | Grey   | Yes    |
| 🏠 N11A.U1F010OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 1m Orange     | 1          | Orange | Yes    |
| 🏠 N11A.U1F200DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 20m Grey      | 20         | Grey   | Yes    |
| 🏠 N11A.U1F200OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 20m Orange    | 20         | Orange | Yes    |
| 🏠 N11A.U1F020DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 2m Grey       | 2          | Grey   | Yes    |
| 🏠 N11A.U1F020OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 2m Orange     | 2          | Orange | Yes    |
| 🏠 N11A.U1F030DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 3m Grey       | 3          | Grey   | Yes    |
| 🏠 N11A.U1F030OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 3m Orange     | 3          | Orange | Yes    |
| 🏠 N11A.U1F050DK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 5m Grey       | 5          | Grey   | Yes    |
| 🏠 N11A.U1F050OK        | LANmark-6A Ultim Patch Cord Cat 6A Screened LSZH 5m Orange     | 5          | Orange | Yes    |
| 🏠 N11A.S1F200OK<br>New | LANmark-6A Ultim Solid Cord Cat 6A Screened LSZH 20m Orange    | 20         | Orange | Yes    |
| 🏠 N11A.S1F300OK<br>New | LANmark-6A Ultim Solid Cord Cat 6A Screened LSZH 30m Orange    | 30         | Orange | Yes    |
| 🏠 N11A.P9F100OK<br>New | LANmark-6A Ultim UniBoot Patch Cord Screened UL PVC 10m Orange | 10         | Orange | Yes    |
| 🏠 N11A.P9F010OK<br>New | LANmark-6A Ultim UniBoot Patch Cord Screened UL PVC 1m Orange  | 1          | Orange | Yes    |
| 🏠 N11A.P9F020OK<br>New | LANmark-6A Ultim UniBoot Patch Cord Screened UL PVC 2m Orange  | 2          | Orange | Yes    |
| 🏠 N11A.P9F030OK<br>New | LANmark-6A Ultim UniBoot Patch Cord Screened UL PVC 3m Orange  | 3          | Orange | Yes    |
| 🏠 N11A.P9F050OK<br>New | LANmark-6A Ultim UniBoot Patch Cord Screened UL PVC 5m Orange  | 5          | Orange | Yes    |

☎ = Make to order, 🏠 = Make to stock

## LANmark-6A Ultim UniBoot Patch Cords

### Electrical Performance LANmark-6A 4 Connector Channel Part 1

"All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance"

| Freq<br>in MHz | Attn<br>in dB |      | NEXT<br>in dB |      |      | PSNEXT<br>in dB |      |      | ACR-F<br>in dB |      |
|----------------|---------------|------|---------------|------|------|-----------------|------|------|----------------|------|
|                | Max           | Typ  | Std           | Min  | Typ  | Std             | Min  | Typ  | Std            | Typ  |
| 1              | <4            | 4.0  | 65.0          | 67.0 | 85.0 | 62.0            | 64.0 | 74.8 | 63.3           | 69.9 |
| 4              | 4.1           | 4.1  | 63.0          | 65.0 | 72.9 | 60.5            | 62.5 | 65.0 | 51.2           | 57.9 |
| 10             | 6.4           | 6.3  | 56.6          | 58.6 | 65.0 | 54.0            | 56.0 | 58.5 | 43.3           | 49.9 |
| 16             | 8.1           | 8.0  | 53.2          | 55.2 | 60.9 | 50.6            | 52.6 | 55.1 | 39.2           | 45.9 |
| 20             | 9.1           | 9.0  | 51.6          | 53.6 | 59.0 | 49.0            | 51.0 | 53.5 | 37.2           | 43.9 |
| 31.25          | 11.4          | 11.2 | 48.4          | 50.4 | 55.1 | 45.7            | 47.7 | 50.2 | 33.4           | 40.0 |
| 62.5           | 16.3          | 15.9 | 43.4          | 45.4 | 49.1 | 40.6            | 42.6 | 45.1 | 27.3           | 34.0 |
| 100            | 20.8          | 20.2 | 39.9          | 41.9 | 45.0 | 37.1            | 39.1 | 41.6 | 23.3           | 29.9 |
| 155            | 26.2          | 25.4 | 36.7          | 38.7 | 41.2 | 33.8            | 35.8 | 38.3 | 19.5           | 26.1 |
| 200            | 30.0          | 28.9 | 34.8          | 36.8 | 39.0 | 31.9            | 33.9 | 36.4 | 17.2           | 23.9 |
| 250            | 33.8          | 32.5 | 33.1          | 35.1 | 37.0 | 30.2            | 32.2 | 34.7 | 15.3           | 22.0 |
| 300            | 37.3          | 35.7 | 31.7          | 33.7 | 35.4 | 28.8            | 30.8 | 33.3 | 13.7           | 20.4 |
| 500            | 49.3          | 46.7 | 27.9          | 29.9 | 31.0 | 24.8            | 26.8 | 24.9 | 9.3            | 16.0 |

\*Standard values based on ISO 11801 Class EA

### Electrical Performance LANmark-6A 4 Connector Channel Part 2

All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance

| Freq<br>in MHz | PS ACR-F<br>in dB |      | PS ANEXT<br>in dB |      |      | PS AACR-F<br>in dB |      |      | RL<br>in dB |      |      |
|----------------|-------------------|------|-------------------|------|------|--------------------|------|------|-------------|------|------|
|                | Std               | Typ  | Std               | Min  | Typ  | Std                | Min  | Typ  | Std         | Min  | Typ  |
| 1              | 60.3              | 66.9 | 80.0              | 90.0 | 92.0 | 77.0               | 92.0 | 94.0 | 19.0        | 21.0 | 21.0 |
| 4              | 48.2              | 54.9 | 74.0              | 89.0 | 91.0 | 65.0               | 80.0 | 82.0 | 19.0        | 21.0 | 32.0 |
| 10             | 40.3              | 46.9 | 70.0              | 85.0 | 87.0 | 57.0               | 72.0 | 74.0 | 19.0        | 21.0 | 28.0 |
| 16             | 36.2              | 42.9 | 68.0              | 83.0 | 85.0 | 52.9               | 67.9 | 69.9 | 18.0        | 20.0 | 26.0 |
| 20             | 34.2              | 40.9 | 67.0              | 82.0 | 84.0 | 51.0               | 66.0 | 68.0 | 17.5        | 19.5 | 25.0 |
| 31.25          | 30.4              | 37.0 | 65.1              | 80.1 | 82.1 | 47.1               | 62.1 | 64.1 | 16.5        | 18.5 | 23.1 |
| 62.5           | 24.3              | 31.0 | 62.0              | 77.0 | 79.0 | 41.1               | 56.1 | 58.1 | 14.0        | 16.0 | 20.0 |
| 100            | 20.3              | 26.9 | 60.0              | 75.0 | 77.0 | 37.0               | 52.0 | 54.0 | 12.0        | 14.0 | 18.0 |
| 155            | 16.5              | 23.1 | 57.1              | 72.1 | 74.1 | 33.2               | 48.2 | 50.2 | 10.1        | 12.1 | 16.1 |
| 200            | 14.2              | 20.9 | 55.5              | 70.5 | 72.5 | 31.0               | 46.0 | 48.0 | 9.0         | 11.0 | 15.0 |
| 250            | 12.3              | 19.0 | 54.0              | 69.0 | 71.0 | 29.0               | 44.0 | 46.0 | 8.0         | 10.0 | 14.0 |
| 300            | 10.7              | 17.4 | 52.8              | 67.8 | 69.8 | 27.5               | 42.5 | 44.5 | 8.0         | 10.0 | 13.2 |
| 500            | 6.3               | 13.0 | 49.5              | 64.5 | 66.5 | 23.0               | 38.0 | 40.0 | 8.0         | 10.0 | 11.0 |

\*Standard values based on ISO 11801 Class EA

## Essential-6 Cable

- Unshielded construction
- Complies to the latest Category 6 standards
- Supports Class E applications up to 250 MHz.
- Central cross maintains geometry and performance

### Description

#### Application

The Nexans Essential-6 cables are manufactured and tested to the latest Category 6 specifications. They are compatible with the complete Essential-6 modular and PCB connectivity range. When the cable is installed in conjunction with Essential-6 outlets and patch panels, a 25 year Class E Link Certificate can be obtained from the Nexans website.

#### Design

The Essential-6 cables have 24 AWG solid copper wires and comply with IEC 60228. The PE central cross filler keeps the pairs in place and reduces the risks of losing performance when bending the cable.

The cables are available with a Light Grey PVC or an Orange LSZH outer jacket.

#### Performance

Nexans Essential-6 cables are compliant with the requirements of the International, European and American cable standards, including ISO/IEC 11801, IEC 61156-5, EN 50173, EN 50288 and TIA/EIA 568-C.2.

#### Installation

The Essential-6 cables are as easy to install as their Category 5e equivalent, due to their small nominal outer diameter.

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.



**essential-6**

### Standards

**International** ISO/IEC 11801  
**National** ANSI/TIA-568-C.2

## Essential-6 Cable

### Characteristics

#### Usage characteristics

Range

essential-6

#### Product List

| Nexans ref.                                                                                                            | Name                                   | Type of cable | Outer sheath             |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------|--------------------------|
|  N100.161<br>New                      | Essential-6 U/UTP Cat 6 LSZH 305m box  | U/UTP         | LSZH                     |
|  N100.164<br>New                      | Essential-6 U/UTP Cat 6 LSZH 500m reel | U/UTP         | LSZH                     |
|  N100.166<br>New                      | Essential-6 U/UTP Cat 6 PVC 305m box   | U/UTP         | PVC (Polyvinyl chloride) |
|  N100.169<br>New                      | Essential-6 U/UTP Cat 6 PVC 500m reel  | U/UTP         | PVC (Polyvinyl chloride) |
| ☎ = Make to order,  = Make to stock |                                        |               |                          |

### Channel Performance

Values given for 2-conductor channel, built with Essential-6 cable, outlet and patch panel. (Values specified at 20°C)

| Frequency MHz | Insertion Loss<br>dB/100m | NEXT PP<br>dB | PS NEXT<br>dB | ACR<br>dB/100m | PS ACR<br>dB/100m | ELFEXT<br>dB/100m | PSELFEXT<br>dB/100m | Return Loss<br>dB |
|---------------|---------------------------|---------------|---------------|----------------|-------------------|-------------------|---------------------|-------------------|
| 1             | 4.0                       | 65.0          | 62.0          | 65.0           | 62.0              | 63.3              | 60.3                | 19.0              |
| 4             | 4.2                       | 63.0          | 60.5          | 58.9           | 56.4              | 51.2              | 48.2                | 19.0              |
| 10            | 6.6                       | 56.6          | 54.0          | 50.0           | 47.4              | 43.3              | 40.3                | 19.0              |
| 16            | 8.3                       | 53.2          | 50.6          | 44.9           | 42.3              | 39.2              | 36.2                | 18.0              |
| 20            | 9.3                       | 51.6          | 49.0          | 42.3           | 39.7              | 37.2              | 34.2                | 17.5              |
| 31.25         | 11.7                      | 48.4          | 45.7          | 36.7           | 34.0              | 33.4              | 30.4                | 16.5              |
| 62.5          | 16.9                      | 43.4          | 40.6          | 26.5           | 23.7              | 27.3              | 24.3                | 14.0              |
| 100           | 21.7                      | 39.9          | 37.1          | 18.2           | 15.4              | 23.3              | 20.3                | 12.0              |
| 155           | 27.6                      | 36.7          | 33.8          | 9.1            | 6.2               | 19.5              | 16.5                | 10.1              |
| 200           | 31.7                      | 34.8          | 31.9          | 3.1            | 0.1               | 17.2              | 14.2                | 9.0               |
| 250           | 35.9                      | 33.1          | 30.2          | -2.8           | -5.8              | 15.3              | 12.3                | 8.0               |

## Essential-6 Keystone Connector

- Complies with the latest Category 6 standards
- Screened and Unscreened versions
- Easy termination without punchdown tool
- Keystone format.

### Description

#### Application

The Nexans Essential-6 keystone connectors are manufactured and tested to the latest Category 6 specifications. They support Class E applications up to 250 MHz. When installed in conjunction with Essential-6 cable and patch panels, a 25 year Class E Link Warranty can be obtained from the Nexans web site.

#### Design

The Essential-6 keystone connectors are designed to match with Essential-6 cable and patch cords and complement all Essential modular components, such as:

- keystone patch panels (black and white)
- keystone outlet modules (UK, US and European formats)

Please follow the links on this page to view the related datasheets.

The modular jack is designed for keystone footprints of 14.78mm width, 20-20.78mm height and 1.5mm wall thickness and is compatible with a variety of keystone formatted structural hardware. (Please check compatibility with Nexans before using 3rd party hardware)

The Essential-6 connectors can be used with all types of Category 6 cable with solid wire from 24 to 22 AWG.

#### Performance

The Essential-6 keystone connectors are compliant with the specifications of ISO/IEC 11801 and EN 50173.

#### Installation

The wire organiser guarantees fast and easy termination of the Essential-6 keystone connector without the need for a punchdown tool. An optional comfort tool (N420.567) can be used to increase the ease of installation.

- Fast and easy termination without punchdown tool.
- Wiring according to colour code T568B or T568A.
- Accepts 24, 23 and 22 AWG solid core cables.
- Fits Nexans hardware designed for keystone format



**essential-6**

#### Standards

**International ISO/IEC 11801**

## Essential-6 Keystone Connector

### Product List

| Nexans ref.                                                                                                            | Name                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
|  N420.136<br>New                      | Essential-6 Keystone Connector Screened               |
|  N420.126<br>New                      | Essential-6 Keystone Connector Screened No Rear Cover |
|  N420.116                             | Essential-6 Keystone Connector Unscreened             |
| ☎ = Make to order,  = Make to stock |                                                       |

### Channel Performance

Values given for 2-connector channel, built with Essential-6 cable, outlet and patch panel. (Values specified at 20°C)

| Frequency MHz | Insertion Loss<br>dB/100m | NEXT PP<br>dB | PS NEXT<br>dB | ACR<br>dB/100m | PS ACR<br>dB/100m | ELFEXT<br>dB/100m | PSELFEXT<br>dB/100m | Return Loss<br>dB |
|---------------|---------------------------|---------------|---------------|----------------|-------------------|-------------------|---------------------|-------------------|
| 1             | 4.0                       | 65.0          | 62.0          | 65.0           | 62.0              | 63.3              | 60.3                | 19.0              |
| 4             | 4.2                       | 63.0          | 60.5          | 58.9           | 56.4              | 51.2              | 48.2                | 19.0              |
| 10            | 6.6                       | 56.6          | 54.0          | 50.0           | 47.4              | 43.3              | 40.3                | 19.0              |
| 16            | 8.3                       | 53.2          | 50.6          | 44.9           | 42.3              | 39.2              | 36.2                | 18.0              |
| 20            | 9.3                       | 51.6          | 49.0          | 42.3           | 39.7              | 37.2              | 34.2                | 17.5              |
| 31.25         | 11.7                      | 48.4          | 45.7          | 36.7           | 34.0              | 33.4              | 30.4                | 16.5              |
| 62.5          | 16.9                      | 43.4          | 40.6          | 26.5           | 23.7              | 27.3              | 24.3                | 14.0              |
| 100           | 21.7                      | 39.9          | 37.1          | 18.2           | 15.4              | 23.3              | 20.3                | 12.0              |
| 155           | 27.6                      | 36.7          | 33.8          | 9.1            | 6.2               | 19.5              | 16.5                | 10.1              |
| 200           | 31.7                      | 34.8          | 31.9          | 3.1            | 0.1               | 17.2              | 14.2                | 9.0               |
| 250           | 35.9                      | 33.1          | 30.2          | -2.8           | -5.8              | 15.3              | 12.3                | 8.0               |

## Essential-6 Patch Panels

- Complies to the latest Category 6 standard
- Punchdown from the top or the rear side
- Unshielded

### Description

#### Application

The Nexans Essential-6 patch panels are based on 19" frame dimensions and have 24 Category 6 RJ45 ports on 1HU. They support Class E applications up to 250 MHz. When the panels are installed in conjunction with Essential-6 cable and outlets, a 20 year Class E Link Certificate can be obtained from the Nexans e-service site.

#### Design

The Essential-6 patch panels are compatible with the complete Essential-6 range and can be used with all types of UTP Category 6 cable with solid wire from 22 to 24 AWG. The panels are available in either black or grey-white finish.

#### Performance

The Essential-6 patch panels are compliant with the specifications of ISO/IEC 11801:2002.

#### Installation

- Fast and easy termination of IDC blocks by LSA+ punchdown tooling.
- Colour code T568A and T568B (Product dependent).
- Supplied with fixings and tie-wraps.



### Standards

**International** ISO/IEC 11801

## Essential-6 Patch Panels

### Product List

| Nexans ref. | Name                                                               |
|-------------|--------------------------------------------------------------------|
| 🔌 N424.610  | Essential-6 Patch panel 1HU 24 Cat 6 ports, rear connection, black |
| 🔌 N424.600  | Essential-6 Patch panel 1HU 24 Cat 6 ports, rear connection, white |
| 🔌 N424.613  | Essential-6 Patch panel 1HU 24 Cat 6 ports, top connection, black  |
| 🔌 N424.603  | Essential-6 Patch panel 1HU 24 Cat 6 ports, top connection, white  |

☎ = Make to order, 🔌 = Make to stock

### Channel Performance

Values given for 2-connector channel, built with Essential-6 cable, outlet and patch panel. (Values specified at 20°C)

| Frequency MHz | Insertion Loss dB/100m | NEXT PP dB | PS NEXT dB | ACR dB/100m | PS ACR dB/100m | ELFEXT dB/100m | PSELFEXT dB/100m | Return Loss dB |
|---------------|------------------------|------------|------------|-------------|----------------|----------------|------------------|----------------|
| 1             | 4.0                    | 65.0       | 62.0       | 65.0        | 62.0           | 63.3           | 60.3             | 19.0           |
| 4             | 4.2                    | 63.0       | 60.5       | 58.9        | 56.4           | 51.2           | 48.2             | 19.0           |
| 10            | 6.6                    | 56.6       | 54.0       | 50.0        | 47.4           | 43.3           | 40.3             | 19.0           |
| 16            | 8.3                    | 53.2       | 50.6       | 44.9        | 42.3           | 39.2           | 36.2             | 18.0           |
| 20            | 9.3                    | 51.6       | 49.0       | 42.3        | 39.7           | 37.2           | 34.2             | 17.5           |
| 31.25         | 11.7                   | 48.4       | 45.7       | 36.7        | 34.0           | 33.4           | 30.4             | 16.5           |
| 62.5          | 16.9                   | 43.4       | 40.6       | 26.5        | 23.7           | 27.3           | 24.3             | 14.0           |
| 100           | 21.7                   | 39.9       | 37.1       | 18.2        | 15.4           | 23.3           | 20.3             | 12.0           |
| 155           | 27.6                   | 36.7       | 33.8       | 9.1         | 6.2            | 19.5           | 16.5             | 10.1           |
| 200           | 31.7                   | 34.8       | 31.9       | 3.1         | 0.1            | 17.2           | 14.2             | 9.0            |
| 250           | 35.9                   | 33.1       | 30.2       | -2.8        | -5.8           | 15.3           | 12.3             | 8.0            |

## Essential-6 Outlet Modules

- Complies to the latest Category 6 standards
- Includes 25x50, LJ6C and 50x50 triple modules
- Unshielded
- LSA+ termination
- UK white
- Fits in all Nexans UK structural hardware

### Description

#### Application

The Nexans Essential-6 unshielded outlet modules are manufactured and tested to the latest Category 6 specifications. They support Class E applications up to 250 MHz. When installed in conjunction with Essential-6 cable and patch panels, a 25 year Class E Link Certificate can be obtained from the Nexans e-service site.

#### Design

The Essential-6 outlet modules are compatible with the complete Essential-6 range and fit into all Nexans UK structural hardware. They can be used with all types of UTP Category 6 cable with solid wire from 22 to 24 AWG. The spring shuttered modules come in glossy white finish, matching with most British style structural hardware. They are available in different versions:

- single module 25x50mm
- single module 25x50mm - low profile
- triple module 50x50mm
- LJ6C module 25x37mm

The modules are equipped with transparent label holders fitted with a blank paper label for customised port identification.

#### Performance

The Essential-6 outlet modules are compliant with the specifications of ISO/IEC 11801: 2002.

#### Installation

- Fast and easy termination by LSA+ punch-down tooling.
- Wiring according to colour code T568B.
- Centrally positioned tie wrap bridges ensure cable strain relief.
- Supplied with tie wraps.
- Labelling windows included.
- Fits in all Nexans UK structural hardware



**essential-6**

#### Standards

**International ISO/IEC 11801**

## Essential-6 Outlet Modules

### Product List

| Nexans ref.                                                                                                 | Name                                                   |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|  N424.623                  | Essential-6 LJ6C outlet module 25x39.5mm               |
|  N424.621                  | Essential-6 single outlet module 25x50mm               |
|  N424.620<br>New           | Essential-6 single outlet module 25x50mm - Low Profile |
|  N424.622<br>To be removed | Essential-6 triple outlet module 50x50mm               |

☎ = Make to order,  = Make to stock

### Channel Performance

Values given for 2-connector channel, built with Essential-6 cable, outlet and patch panel. (Values specified at 20°C)

| Frequency MHz | Insertion Loss<br>dB/100m | NEXT PP<br>dB | PS NEXT<br>dB | ACR<br>dB/100m | PS ACR<br>dB/100m | ELFEXT<br>dB/100m | PSELFEXT<br>dB/100m | Return Loss<br>dB |
|---------------|---------------------------|---------------|---------------|----------------|-------------------|-------------------|---------------------|-------------------|
| 1             | 4.0                       | 65.0          | 62.0          | 65.0           | 62.0              | 63.3              | 60.3                | 19.0              |
| 4             | 4.2                       | 63.0          | 60.5          | 58.9           | 56.4              | 51.2              | 48.2                | 19.0              |
| 10            | 6.6                       | 56.6          | 54.0          | 50.0           | 47.4              | 43.3              | 40.3                | 19.0              |
| 16            | 8.3                       | 53.2          | 50.6          | 44.9           | 42.3              | 39.2              | 36.2                | 18.0              |
| 20            | 9.3                       | 51.6          | 49.0          | 42.3           | 39.7              | 37.2              | 34.2                | 17.5              |
| 31.25         | 11.7                      | 48.4          | 45.7          | 36.7           | 34.0              | 33.4              | 30.4                | 16.5              |
| 62.5          | 16.9                      | 43.4          | 40.6          | 26.5           | 23.7              | 27.3              | 24.3                | 14.0              |
| 100           | 21.7                      | 39.9          | 37.1          | 18.2           | 15.4              | 23.3              | 20.3                | 12.0              |
| 155           | 27.6                      | 36.7          | 33.8          | 9.1            | 6.2               | 19.5              | 16.5                | 10.1              |
| 200           | 31.7                      | 34.8          | 31.9          | 3.1            | 0.1               | 17.2              | 14.2                | 9.0               |
| 250           | 35.9                      | 33.1          | 30.2          | -2.8           | -5.8              | 15.3              | 12.3                | 8.0               |

## Essential-6 Patch Cords

- Comply with latest Category 6 standards
- Screened and unscreened
- Light grey PVC
- Light grey slimline boot with bend relief
- 1, 2, 3 and 5m lengths

### Description

#### Application

The Nexans Essential-6 patch cords are manufactured and tested to the latest Category 6 specifications and support Class E applications up to 250 MHz. They are matched with the complete Essential-6 range in order to deliver a full end-to-end Class E Channel.

#### Design

The Essential-6 patch cords contain a central PE cross member, keeping the pairs in place and reducing the risk of losing performance when bending the cords. Available in standard lengths of 1, 2, 3 and 5m, each cord is individually bagged and carries a traceability code.

#### Performance

The Essential-6 cords are compliant with the specifications of ISO/IEC 11801 and EN 50173.

#### Installation

Thanks to their small outer diameter, the Essential-6 cords are as easy to install and manage in a rack as their Cat 5e equivalent.



**essential-6**

### Standards

**International ISO/IEC 11801**



Flame retardant  
IEC 60332-1

## Essential-6 Patch Cords

### Characteristics

|                                   |             |
|-----------------------------------|-------------|
| <b>Electrical characteristics</b> |             |
| Characteristic impedance          | 100 Ohm     |
| <b>Usage characteristics</b>      |             |
| Range                             | essential-6 |
| Flame retardant                   | IEC 60332-1 |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                            | Screen | Length (m) | Colour     | Outer sheath             |
|--------------------------------------|-------------------------------------------------|--------|------------|------------|--------------------------|
| ☎ N101.22ECGG New                    | Essential-6 Patch Cord FTP Cat 6 LSZH Grey 1m   | FTP    | 1          | Light grey | LSZH                     |
| ☎ N101.22EEGG New                    | Essential-6 Patch Cord FTP Cat 6 LSZH Grey 2m   | FTP    | 2          | Light grey | LSZH                     |
| ☎ N101.22EFGG New                    | Essential-6 Patch Cord FTP Cat 6 LSZH Grey 3m   | FTP    | 3          | Light grey | LSZH                     |
| ☎ N101.22EHGG New                    | Essential-6 Patch Cord FTP Cat 6 LSZH Grey 5m   | FTP    | 5          | Light grey | LSZH                     |
| ☎ N101.12ECGG New                    | Essential-6 Patch Cord FTP Cat 6 PVC Grey 1m    | FTP    | 1          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.12EEGG New                    | Essential-6 Patch Cord FTP Cat 6 PVC Grey 2m    | FTP    | 2          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.12EFGG New                    | Essential-6 Patch Cord FTP Cat 6 PVC Grey 3m    | FTP    | 3          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.12EHGG New                    | Essential-6 Patch Cord FTP Cat 6 PVC Grey 5m    | FTP    | 5          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.21ECOO New                    | Essential-6 Patch Cord UTP Cat 6 LSZH Orange 1m | UTP    | 1          | Orange     | LSZH                     |
| ☎ N101.21EEOO New                    | Essential-6 Patch Cord UTP Cat 6 LSZH Orange 2m | UTP    | 2          | Orange     | LSZH                     |
| ☎ N101.21EFOO New                    | Essential-6 Patch Cord UTP Cat 6 LSZH Orange 3m | UTP    | 3          | Orange     | LSZH                     |
| ☎ N101.21EHOO New                    | Essential-6 Patch Cord UTP Cat 6 LSZH Orange 5m | UTP    | 5          | Orange     | LSZH                     |
| ☎ N101.11ECGG New                    | Essential-6 Patch Cord UTP Cat 6 PVC Grey 1m    | UTP    | 1          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.11EEGG New                    | Essential-6 Patch Cord UTP Cat 6 PVC Grey 2m    | UTP    | 2          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.11EFGG New                    | Essential-6 Patch Cord UTP Cat 6 PVC Grey 3m    | UTP    | 3          | Light grey | PVC (Polyvinyl chloride) |
| ☎ N101.11EHGG New                    | Essential-6 Patch Cord UTP Cat 6 PVC Grey 5m    | UTP    | 5          | Light grey | PVC (Polyvinyl chloride) |
| ☎ = Make to order, 📦 = Make to stock |                                                 |        |            |            |                          |



Flame retardant  
IEC 60332-1

## Essential-6 Patch Cords

### Channel Performance

Values given for 2-connector channel, built with Essential-6 cable, outlet and patch panel. (Values specified at 20°C)

| Frequency MHz | Insertion Loss dB/100m | NEXT PP dB | PS NEXT dB | ACR dB/100m | PS ACR dB/100m | ELFEXT dB/100m | PSELFEXT dB/100m | Return Loss dB |
|---------------|------------------------|------------|------------|-------------|----------------|----------------|------------------|----------------|
| <b>1</b>      | 4.0                    | 65.0       | 62.0       | 65.0        | 62.0           | 63.3           | 60.3             | 19.0           |
| <b>4</b>      | 4.2                    | 63.0       | 60.5       | 58.9        | 56.4           | 51.2           | 48.2             | 19.0           |
| <b>10</b>     | 6.6                    | 56.6       | 54.0       | 50.0        | 47.4           | 43.3           | 40.3             | 19.0           |
| <b>16</b>     | 8.3                    | 53.2       | 50.6       | 44.9        | 42.3           | 39.2           | 36.2             | 18.0           |
| <b>20</b>     | 9.3                    | 51.6       | 49.0       | 42.3        | 39.7           | 37.2           | 34.2             | 17.5           |
| <b>31.25</b>  | 11.7                   | 48.4       | 45.7       | 36.7        | 34.0           | 33.4           | 30.4             | 16.5           |
| <b>62.5</b>   | 16.9                   | 43.4       | 40.6       | 26.5        | 23.7           | 27.3           | 24.3             | 14.0           |
| <b>100</b>    | 21.7                   | 39.9       | 37.1       | 18.2        | 15.4           | 23.3           | 20.3             | 12.0           |
| <b>155</b>    | 27.6                   | 36.7       | 33.8       | 9.1         | 6.2            | 19.5           | 16.5             | 10.1           |
| <b>200</b>    | 31.7                   | 34.8       | 31.9       | 3.1         | 0.1            | 17.2           | 14.2             | 9.0            |
| <b>250</b>    | 35.9                   | 33.1       | 30.2       | -2.8        | -5.8           | 15.3           | 12.3             | 8.0            |



Flame retardant  
IEC 60332-1

## LANmark-6 10G Cable

- Complies to 10GBase-T application standards
- Complies with Category 6A and Class EA channel requirements
- Small diameter
- Guaranteed performance to 500MHz
- Fully screened for alien crosstalk immunity

### Description

#### Application

LANmark-6 10G cables are specially developed to support 10G networking in enterprise building as well as data centres. The range consists of screened cables specified to frequencies up to 500MHz and therefore support the higher frequencies required for 10 Gigabit Ethernet while they remain fully compatible with lower speeds. LANmark-6 10G products are screened to ensure immunity from Alien Crosstalk and other external interference

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- future Cat 6 and Class E applications

#### Performance

With guaranteed performance to 500MHz, Nexans LANmark-6 10G cables provide guaranteed headroom and bandwidth over and above the Category 6 requirements of international, European and American cable standards, including ISO/IEC 11801:2002, IEC 61156-5, EN 50173, EN 50288, TIA/EIA 568-C.2. When used in combination with Nexans LANmark-6 10G Evo connectors and LANmark-6 10G patch cords, and installed according to the guidelines, the system supports the 10GBase-T applications as defined in IEEE 802.3an, ISO/IEC TR 24750 and TIA/EIA TSB-155.

#### Installation

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.

#### Guarantees

Nexans LANmark-6 10G cable is covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with other LANmark-6 10G components, a 25 year channel warranty can be obtained, covering 10GBase-T support in accordance with IEEE 802.3an.



### LANmark-6 10G

#### Standards

**International** IEEE 802.3an; ISO/IEC 11801:2002/Amd 1:2008/Cor 1:2008; ISO/IEC TR24750

**National** TIA/EIA TSB-155; TIA/EIA-568-B.2-10

## LANmark-6 10G Cable

### Product List

| Nexans ref.                                                                                        | Name                                                  | Outer sheath |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------|
|  N100.341G<br>New | LANmark-6 10G DC50 U/FTP AWG26 500MHz LSZH 1000m reel | LSZH         |
|  N100.342G<br>New | LANmark-6 10G DC50 U/FTP AWG26 500MHz LSZH 500m reel  | LSZH         |

 = Make to order,  = Make to stock

### Electrical Performance LANmark-6 10G 100m 4 connector channel

all values are specified at 20°C

| Freq         | Attn dB |      | NEXT dB |      | PSNEXT dB |      | ELFEXT dB |      | PS ELFEXT dB |      | PS ANEXT dB |      | PS AELFEXT dB |      | RL dB |      |
|--------------|---------|------|---------|------|-----------|------|-----------|------|--------------|------|-------------|------|---------------|------|-------|------|
|              | Std     | Guar | Std     | Guar | Std       | Guar | Std       | Guar | Std          | Guar | Std         | Guar | Std           | Guar | Std   | Guar |
| <b>1</b>     | <4      | <4   | 72.7    | >75  | 70.3      | 74.3 | 63.3      | >60  | 60.3         | >60  | 82.0        | >90  | 77.9          | 87.9 | 19.0  | 21.0 |
| <b>4</b>     | 4.2     | 4.1  | 63.0    | 66.0 | 60.5      | 64.5 | 51.2      | 57.2 | 48.2         | 57.2 | 76.0        | >90  | 65.9          | 75.9 | 19.0  | 21.0 |
| <b>10</b>    | 6.6     | 6.5  | 56.6    | 59.6 | 54.0      | 58.0 | 43.3      | 49.3 | 40.3         | 49.3 | 72.0        | 87.0 | 57.9          | 67.9 | 19.0  | 21.0 |
| <b>16</b>    | 8.3     | 8.2  | 53.2    | 56.2 | 50.6      | 54.6 | 39.2      | 45.2 | 36.2         | 45.2 | 70.0        | 85.0 | 53.8          | 63.8 | 18.0  | 20.0 |
| <b>20</b>    | 9.3     | 9.2  | 51.6    | 54.6 | 49.0      | 53.0 | 37.2      | 43.2 | 34.2         | 43.2 | 69.0        | 84.0 | 51.9          | 61.9 | 17.5  | 19.5 |
| <b>31.25</b> | 11.7    | 11.6 | 48.4    | 51.4 | 45.7      | 49.7 | 33.4      | 39.4 | 30.4         | 39.4 | 67.1        | 82.1 | 48.0          | 58.0 | 16.5  | 18.5 |
| <b>62.5</b>  | 16.9    | 16.6 | 43.4    | 46.4 | 40.6      | 44.6 | 27.3      | 33.3 | 24.3         | 33.3 | 64.0        | 79.0 | 42.0          | 52.0 | 14.0  | 16.0 |
| <b>100</b>   | 21.7    | 21.4 | 39.9    | 42.9 | 37.1      | 41.1 | 23.3      | 29.3 | 20.3         | 29.3 | 62.0        | 77.0 | 37.9          | 47.9 | 12.0  | 14.0 |
| <b>155</b>   | 27.6    | 27.1 | 36.7    | 39.7 | 33.8      | 37.8 | 19.5      | 25.5 | 16.5         | 25.5 | 59.1        | 74.1 | 34.1          | 44.1 | 10.1  | 12.1 |
| <b>200</b>   | 31.7    | 31.2 | 34.8    | 37.8 | 31.9      | 35.9 | 17.2      | 23.2 | 14.2         | 23.2 | 57.5        | 72.5 | 31.9          | 41.9 | 9.0   | 11.0 |
| <b>250</b>   | 35.9    | 35.4 | 33.1    | 36.1 | 30.2      | 34.2 | 15.3      | 21.3 | 12.3         | 21.3 | 56.0        | 71.0 | 29.9          | 39.9 | 8.0   | 10.0 |
| <b>300</b>   | 39.8    | 39.2 | 31.7    | 34.7 | 28.8      | 32.8 | 13.7      | 19.7 | 10.7         | 19.7 | 54.8        | 69.8 | 28.4          | 38.4 | 7.2   | 9.2  |
| <b>500</b>   | 53.4    | 52.6 | 22.0    | 25.0 | 20.4      | 24.4 | 9.3       | 15.3 | 6.3          | 15.3 | 51.5        | 66.5 | 23.9          | 33.9 | 6.0   | 8.0  |

Guaranteed channel values apply under the condition that General Installation Guidelines from NCS and the Design and Installation Guidelines for LANmark-6 10G are respected and implemented.

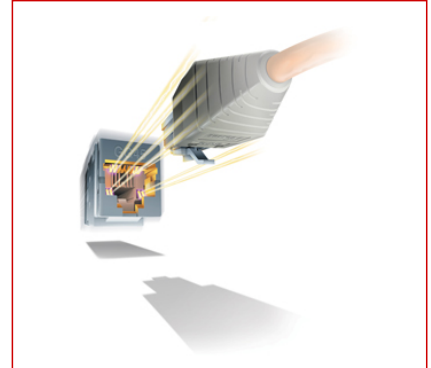


## Category 7 / 7A

LANmark-7 is the highest performance standards compliant, copper solution available in the market. This Category 7 / Class F solution provides backwards compatible performance beyond 600MHz and features the revolutionary GG45 connector.

Recommended uses:

- Very long lifetime needs (>15years)
- Composite analogue & high speed digital data
- Multiple service applications (voice, data, video using different pairs in the same cable)
- Very high electromagnetic noise environments
- Installations where the replacement cost is very high (e.g. ships etc)



## LANmark-7 Cable

- Exceeds Category 7 using 4 individually screened pairs
- Optimised for use with LANmark-7 GG45 connector
- Small outer diameter
- Easy to install due to a tight foil construction

### Description

#### Description

LANmark-7 cable is a 4pr S/FTP with individual pair foils and an overall braid offering superior performance in terms of ACR. It is fully compliant with the Category 7 standards and when installed together with the GG45 LANmark-7 connector as a system is guaranteed to exceed all channel requirements in all configuration scenarios (up to 4-connector channels).

#### Application

LANmark-7 will support all current and planned data applications developed for cabling up to Class F.

- All Ethernet applications including
- 1000Base-T
- 1000Base-TX
- 10GBase-T
- CATV up to 862MHz
- Any future Class F application

#### Installation

Ease of Installation is one of the unique features of LANmark-7 cable. Extra attention has been paid to ensure screen coverage is maintained both during and after installation. The cable has been designed specifically to offer both optimum performance and ease of termination when used in conjunction with the LANmark-7 GG45 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-7

### Standards

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

## LANmark-7 Cable

### Product List

☎ = Make to order, 🏭 = Make to stock

| Nexans ref.       | Name                                                            | Type of cable | Category |
|-------------------|-----------------------------------------------------------------|---------------|----------|
| ☎ N100.376        | LANmark-7 Lloyd's S/FTP Cat 7 23 AWG LSZH Blue 500m Reel        | S/FTP         | Cat. 7   |
| 🏭 N100.365<br>New | LANmark-7 S/FTP Cat 7 600MHz 23 AWG LSZH Orange 1000m Reel      | S/FTP         | Cat. 7   |
| 🏭 N100.367<br>New | LANmark-7 S/FTP Cat 7 600MHz Dual 2x23AWG LSZH Orange 500m Reel | S/FTP Shotgun | Cat. 7   |

☎ = Make to order, 🏭 = Make to stock

### Electrical Performance LANmark-7 600 S/FTP Cable

Electrical Performance LANmark-7 600 S/FTP Cable

| Frequency<br>(MHz) | Attenuation<br>(dB/100m) |      | NEXT<br>(in dB) |       | ACR<br>(in dB) |      | PS-NEXT<br>(in dB) |      | ACR-F<br>(in dB) |      | PS-ACR-F<br>(in dB) |      | Return Loss<br>(in dB) |      |
|--------------------|--------------------------|------|-----------------|-------|----------------|------|--------------------|------|------------------|------|---------------------|------|------------------------|------|
|                    | Max.                     | Typ. | Min.            | Typ.  | Min.           | Typ. | Min.               | Typ. | Min.             | Typ. | Min.                | Typ. | Min.                   | Typ. |
| 1.00               | 4.0                      | 1.8  | 75.0            | 100.0 | 71.0           | 98.2 | 72.0               | 98.0 | 75.0             | 98.0 | 75.0                | 96.0 | 20.0                   |      |
| 4.00               | 4.0                      | 3.5  | 75.0            | 100.0 | 71.0           | 96.5 | 72.0               | 98.0 | 75.0             | 98.0 | 75.0                | 96.0 | 23.0                   | 26.0 |
| 10.00              | 5.9                      | 5.5  | 75.0            | 100.0 | 69.1           | 94.5 | 72.0               | 98.0 | 75.0             | 98.0 | 72.3                | 96.0 | 25.0                   | 28.0 |
| 16.00              | 7.4                      | 6.8  | 75.0            | 100.0 | 67.6           | 93.2 | 72.0               | 98.0 | 71.2             | 96.0 | 68.2                | 94.0 | 25.0                   | 28.0 |
| 20.00              | 8.3                      | 7.7  | 75.0            | 100.0 | 66.7           | 92.3 | 72.0               | 98.0 | 69.3             | 94.0 | 66.3                | 92.0 | 25.0                   | 28.0 |
| 31.25              | 10.4                     | 9.6  | 75.0            | 100.0 | 64.6           | 90.4 | 72.0               | 98.0 | 65.4             | 90.0 | 62.4                | 88.0 | 23.6                   | 26.0 |
| 62.50              | 14.9                     | 14.0 | 75.0            | 100.0 | 60.1           | 86.0 | 72.0               | 98.0 | 59.4             | 84.0 | 56.4                | 82.0 | 21.5                   | 25.0 |
| 100.00             | 19.0                     | 17.7 | 72.4            | 100.0 | 53.4           | 82.3 | 69.4               | 98.0 | 55.3             | 75.0 | 52.3                | 73.0 | 20.1                   | 24.0 |
| 155.00             | 24.0                     | 22.8 | 69.5            | 96.0  | 45.6           | 73.2 | 66.5               | 93.0 | 51.5             | 70.0 | 48.5                | 68.0 | 18.8                   | 23.0 |
| 250.00             | 31.0                     | 29.0 | 66.4            | 94.0  | 35.5           | 65.0 | 63.4               | 91.0 | 47.3             | 66.0 | 44.3                | 64.0 | 17.3                   | 22.0 |
| 300.00             | 34.2                     | 32.1 | 65.2            | 92.0  | 31.1           | 59.9 | 62.2               | 88.0 | 45.8             | 54.0 | 42.8                | 52.0 | 17.3                   | 20.0 |
| 600.00             | 50.1                     | 45.5 | 60.7            | 90.0  | 10.6           | 44.5 | 57.7               | 86.0 | 39.7             | 54.0 | 36.7                | 52.0 | 17.3                   | 20.0 |

all values are specified at 20°C

## LANmark-7 GG45 Connector

LANmark-7 GG45

- High speed '2 in 1' Multimedia Connector
- Supports data applications up to 600 MHz Class F
- Supports CATV VHF and UHF up to 1000MHz
- Backwards compatible
- Switch Inside
- Compatible with ISO 11801 (enterprise cabling)
- Compatible with ISO 15018 (residential cabling)
- Fits in all Nexans modular Snap-In structural hardware
- Supports POE Plus applications (15 Watts per pair)

### Description

#### Description

LANmark-7 GG45 is a standardised High Speed '2 in 1' Snap-In Connector, which contains a full Cat 6 (RJ45) Interface as well as a full Cat 7 Interface, using additional contacts for the 600 MHz transmission.

LANmark-7 offers uniquely backwards compatible services realised through an incorporated switch, which activates a maximum of 8 out of 12 contacts. For 100/250 MHz transmission performance, the upper 8 RJ45 contacts are used, for 600 MHz the 8 contacts in the extreme corners are used.

The LANmark-7 GG45 Snap-In Connector is part of the Nexans modular Snap-In system and fits in all structural hardware designed for this range. It is a full-screened connector with 360° EMC protection. 4 versions of LANmark-7 GG45 are available: one for solid cables, one for stranded cables, a UL version and a Heavy Duty connector for harsh environments. The version of GG45 for stranded wire is especially made for networks, which use 3/4 Connector Links and so called Consolidation Points to achieve higher flexibility. GG45 for stranded wire can terminate single ended flexible patch cords at those Consolidation Points.

An optional adapter clip can be added to fit the outer dimensions of the international well-known keystone format.

#### Application

LANmark-7 GG45 supports all data applications defined for Cat 5, Cat 5E, Cat 6 and Cat 7 such as 10BaseT, 100BaseT, Gigabit Ethernet, 1000BaseTX, 1GBaseTX2 over Class F, 1GBaseTX4 over Class F, 10GBaseT according IEEE802.3.AN, POE Plus, 155 ATM, 622 ATM, 1G ATM (CB1G) .....

#### Performance

The LANmark-7 GG45 Snap-In Connector has been designed to reach the highest performance in Cat 6, Cat 7 and broadcast applications (as for example ISO 15018 residential cabling). It has outstanding performance for attenuation (insertion loss), NEXT/FEXT, Power Sum NEXT/FEXT and RETURN LOSS. A metal cross inside the connector ensures the high NEXT performance in Cat 6 and Cat 7 mode. Excellent Return Loss Values ensure that LANmark-7 GG45 in addition to all Data applications is best suited to support CATV signals up to 1000 MHz.



## LANmark-7

#### Standards

International ISO/IEC 11801

#### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                       |
|-------------|------------------------------------------------------------|
| 📦 N420.730  | LANmark-7 GG45 12C Snap-In Connector Cat 7 600MHz Screened |

☎ = Make to order, 📦 = Make to stock

## LANmark-7 GG45 Connector

| Nexans ref.                                                                                                                                                                                              | Name                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
|  N420.731                                                                                                               | LANmark-7 GG45 12C Snap-In Connector Cat 7 600MHz Screened for stranded wire |
|  = Make to order,  = Make to stock |                                                                              |

### Selling information

#### Guarantees

The LANmark-7 GG45 Snap-In Connector is fully compliant with the current ISO Cat 6 and Cat 7 standard and exceeds all parameters with substantial headroom.

When combined with LANmark Cat 6 or Cat 7 Cables and Patch Cords a full 25 year Class E and F Channel Warranty can be obtained.

#### Installation

The LANmark-7 GG45 Snap-In connector is designed to be terminated without punch down tools. For fast and easy installation of large volumes, an optional Comfort Tool can be used.

- Versions for solid cable: accepts 24, 23 and 22 AWG cable
- Version for stranded cable: accepts 26 AWG flex cable
- Fast termination of cable using Nexans wire organiser
- Colour code : TSB568B preferred
- Passes all tests for POE Plus Requirements (IEC 60512-99-001 Ed.1)

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

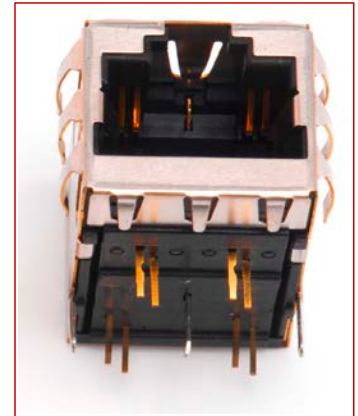
**GG45 8C PCB jack**

LANmark-7 GG45

- Right angled Cat 7A PCB jack up to 1500 MHz
- to be used in active equipment or patch panels
- UL94-V0 plastic components
- RoHS compliant
- Wave solder compatible.

**Description**

Please refer to the datasheet of N420.738 for more detailed information and performance tables.

**LANmark-7****Standards**

**International** ISO/IEC 11801

## GG45 8C PCB jack

### Characteristics

| Construction characteristics |           |
|------------------------------|-----------|
| Colour                       | Black     |
| Screen                       | Yes       |
| Connector type               | Female    |
| Dimensional characteristics  |           |
| Height                       | 13.5 mm   |
| Width                        | 15.24 mm  |
| Depth                        | 21.84 mm  |
| Usage characteristics        |           |
| Component function           | Connector |

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                          | Category | Range      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------|------------|
|  N420.738<br>New                                                                                                        | GG45 Right angle 8 contact jack for PCB mount | Cat. 7A  | LANmark-7A |
|  = Make to order,  = Make to stock |                                               |          |            |

## LANmark-7 Patch Cords

Nexans Cat 7 Patch Cords

- High speed multimedia patch cord
- 600 MHz according IEC61076-3-110
- Allow full 4-connector Class F channels
- Compatible with ISO 11801 (Office environment)
- Compatible with ISO 15018 standard (Residential environment)

### Description

#### Application

Nexans LANmark-7 patch cords with GG45 non switched plugs enable a GG45 permanent link to be used in 600 MHz mode. The protruding part on the plug activates the switch within the GG45 jack and terminates the not used contacts of RJ45 to ground. Using the contacts in the extreme outer corners of the RJ45 interface for transmission, excellent NEXT and Return Loss performance are achieved.

Nexans LANmark-7 patch cords maximise the full performance of the channel and will exceed the requirements of the ISO 4 connector model. This provides improved data throughput up to 600 MHz and allows for the inclusion of additional patching or Consolidation Points for maximum system flexibility and all future data applications according ISO 11801.

- High Speed Multimedia patch cords
- Screened
- 2 x GG45 4-pair, non backwards compatible plugs

#### Guarantees

- Reliable connections over the lifetime of the cabling system.
- Compatible with IEC 61076-3-110
- Compatible with Class F standard (ISO 11801)
- Compatible with Residential standard (ISO 15018) for BCT applications

#### Installation

- Rugged construction
  - high connector retention force due to moulded connectors
  - external strain relief
  - self-latching, high reliability GG45 (IEC61076-3-110) screened connectors
  - sidebars on the plug avoid errors by using the patch cord for RJ45 jacks
- A Low Smoke Zero Halogen - Flame Retardant jacket is standard
- Orange is standard, different colors are available on request, subject to quantity and availability
- 1, 2, 3 and 5m are standard lengths, others lengths are available on demand



## LANmark-7

### Standards

International ISO/IEC 11801



Fire retardant  
IEC 60332 Part 1

## LANmark-7 Patch Cords

### Characteristics

|                                     |                  |
|-------------------------------------|------------------|
| <b>Construction characteristics</b> |                  |
| Colour                              | Orange           |
| Outer sheath                        | LSZH-FR          |
| <b>Electrical characteristics</b>   |                  |
| Characteristic impedance            | 100 Ohm          |
| <b>Usage characteristics</b>        |                  |
| Fire retardant                      | IEC 60332 Part 1 |

### Product List

☎=Make to order, 🏠=Make to stock

| Nexans ref.  | Name                                                                    | Mechanical durability/<br>matings | Length<br>(m) | Nominal outer<br>diameter (mm) | Range     |
|--------------|-------------------------------------------------------------------------|-----------------------------------|---------------|--------------------------------|-----------|
| 🏠 N900.679   | LANmark-7 Measurement Cord Cat 7 GG45 4P/GG45 4P LSZH-FR SCR 2 M ORANGE | 1000                              | 2             | 6.35                           | LANmark-7 |
| 🏠 N101.239EO | LANmark-7 Patch Cord Cat 7 GG45 4P/GG45 4P LSZH FR SCR 2 M ORANGE       | 750                               | 2             | 6.35                           | LANmark-7 |
| 🏠 N101.239FO | LANmark-7 Patch Cord Cat 7 GG45 4P/GG45 4P LSZH-FR SCR 3 M ORANGE       | 750                               | 3             | 6.35                           | LANmark-7 |
| 🏠 N101.239HO | LANmark-7 Patch Cord Cat 7 GG45 4P/GG45 4P LSZH-FR SCR 5 M ORANGE       | 750                               | 5             | 6.35                           | LANmark-7 |
| 🏠 N101.269OO | LANmark-7 Single End Cord Cat 7 GG45 4P LSZH-FR SCR 10 M ORANGE         | 750                               | 10            | 6.35                           | LANmark-7 |

☎ = Make to order, 🏠 = Make to stock



Fire retardant  
IEC 60332 Part 1

## LANmark-7 Splitter Cords

- Patch cords to allow application sharing with GG45
- Up to 4 applications simultaneously
- Compatible with ISO 11801
- Compatible with ISO 15018 draft

### Description

#### Application

LANmark-7 Splitter cords allow to run multiple applications at the same time using only 1 GG45 permanent link.

LANmark-7 cable provides 4 individually shielded cable pairs. The GG45 Connector maintains the individual shields due to its internal metal cross and creates 4 completely shielded end to end communications channels, which can be used by different applications simultaneously. The LANmark-7 splitter cords allow to address each communication channel individually.

Many applications do not use all 4-pairs provided by the cable. Analogue telephony and CATV for example need only 1 pair, many data protocols like Ethernet and Fast Ethernet use 2 pairs.

Broadband Applications supported

LANmark-7 systems support CATV/CCTV applications and comply with the requirement for BCT in the ISO15018 Draft for Home Applications. Each of the 4 communication channels supports the CATV/CCTV applications up to 1000MHZ.

Up to the maximum of 4 pairs different combinations are supported:

- 4 services : eg. 4 x 1 pair applications such as voice, fax, CATV/CCTV
- 3 services: eg. 2 x 1 pair applications plus 1 x 2 application such as Ethernet or Fast Ethernet
- 2 services: eg. 2 x 2 pair applications
- 1 service: eg. 1 x 4 pair application such as Gigabit Ethernet

#### Description

The patch cords always have 1 GG45 Plug on the wall outlet side and multiple connectors on the user side. The GG45 Plugs terminates up to 3 cables, held together by a molded boot. On the user side the patch cords use standard RJ45 or RJ11 connectors.

#### Guarantees

- Reliable connections with LANmark-7 GG45 and User Terminals
- up to 750 insertions
- Compatible with IEC 61076-3-110 and IEC 60603-7 series

#### Properties

- Grey Color



## LANmark-7

#### Standards

International ISO/IEC 11801



Flame retardant  
IEC 60332-1

## LANmark-7 Splitter Cords

### Characteristics

|                                     |             |
|-------------------------------------|-------------|
| <b>Construction characteristics</b> |             |
| Outer sheath                        | LSZH-FR     |
| Sheath colour                       | Light grey  |
| <b>Electrical characteristics</b>   |             |
| Characteristic impedance            | 100 Ohm     |
| <b>Usage characteristics</b>        |             |
| Mechanical durability/matings       | 750         |
| Range                               | LANmark-7   |
| Flame retardant                     | IEC 60332-1 |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.         | Name                                                                           | Length (m) |
|---------------------|--------------------------------------------------------------------------------|------------|
| ☎ N101.2B9CG<br>New | Splitter Patch Cord GG45 - 1xEthernet RJ45 - 2xVoiceRJ11 Screened 1m LSZH Grey | 1          |
| ☎ N101.2B9EG<br>New | Splitter Patch Cord GG45 - 1xEthernet RJ45 - 2xVoiceRJ11 Screened 2m LSZH Grey | 2          |
| ☎ N101.2B9FG<br>New | Splitter Patch Cord GG45 - 1xEthernet RJ45 - 2xVoiceRJ11 Screened 3m LSZH Grey | 3          |
| ☎ N101.2B9HG<br>New | Splitter Patch Cord GG45 - 1xEthernet RJ45 - 2xVoiceRJ11 Screened 5m LSZH Grey | 5          |
| 📦 N101.2A9CG<br>New | Splitter Patch Cord GG45 - 2xEthernet RJ45 Screened 1m LSZH Grey               | 1          |
| 📦 N101.2A9EG<br>New | Splitter Patch Cord GG45 - 2xEthernet RJ45 Screened 2m LSZH Grey               | 2          |
| 📦 N101.2A9FG<br>New | Splitter Patch Cord GG45 - 2xEthernet RJ45 Screened 3m LSZH Grey               | 3          |
| 📦 N101.2A9HG<br>New | Splitter Patch Cord GG45 - 2xEthernet RJ45 Screened 5m LSZH Grey               | 5          |

☎ = Make to order, 📦 = Make to stock



Flame retardant  
IEC 60332-1

## LANmark-7A Cable

- Exceeds Category 7A in terms of ACR and Frequency Range
- Suitable for channels with capacity above 40GBps
- Superior Performance with positive ACR over the full frequency range
- Optimised for use with LANmark-7A GG45 connector
- Easy to install with Cat 7 connectivity through special foil construction

### Description

#### Description

LANmark-7A is a 4 pair S/FTP cable with individual pair foils and an overall braid offering superior performance up to 1200MHz. 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 1000 / 1200MHz the cable is suited for transmission channels with a capacity of >40Gbps.

#### Application

LANmark-7A is the highest performing standardised cabling solution in the market and will support all current data applications and all planned applications using cabling up to Class FA (see discussions at IEEE about 40/100Gbps).

- All Ethernet applications including
- 10/100/1000Base-T
- 1000Base-TX
- 10GBase-T
- CaTV up to 862MHz
- Cable sharing applications including CATV
- 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

## LANmark-7A GG45 Connector

LANmark-7A GG45

- First RJ45-compatible Cat 7A connector using Nexans unique GG45 interface
- Able to support future 40Gigabit Ethernet application
- Able to provide Shannon Capacity of 50Gbps
- Full Class FA channel compliancy according to ISO11801 Amendment 1
- Fully screened for Alien Crosstalk Immunity
- "2 in 1" Connector using 12 contacts to run 2 separate transmission modes
- Compatible with all Snap-In panels and outlets
- Supports POE Plus applications (15 Watts per pair)

### Description

#### Description

LANmark-7A GG45 is a screened RJ45-compatible cable jack specified up to 1000MHz. It is designed specifically to support the high frequencies required for applications beyond 10 Gigabit Ethernet. Combined with LANmark7A Cable and Patch Cords, LANmark-7A GG45 has double the frequency range and half of the crosstalk compared to Cat6A and provides excellent transmission capacity up to 50Gbps (4-times of Cat6A). LANmark-7A GG45 uses 12 contacts: 8 contacts for the 1000MHz transmission (GG-mode) and 4 additional contacts to ensure RJ45 compatibility (RJ Mode). Thanks to its 360° screening and a fully closed rear cover, the connector allows excellent coupling attenuation and ensures immunity from alien crosstalk and other external interference. The LANmark-7A GG45 connector fits in all structural hardware designed for the Snap-In Connectors and can be used in all positions of a 4 connector twisted pair cabling channel (PP, CC, CP, TO).

#### Applications

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3
- 155 Mbit ATM
- 1.2 Gbit ATM
- POE Plus
- CATV up to 862MHz
- all future Cat 6A and Class EA applications
- all future Cat 7 and Class F applications
- all future Cat 7A and Class FA applications

#### Performance

The LANmark-7A GG45 12C Snap-In Connector is the first RJ45 compatible which meets the stringent requirements of Cat 7A up to 1000MHz. It has outstanding performance for Insertion Loss, Return Loss, NEXT/FEXT, Power Sum NEXT/FEXT, and especially Alien Crosstalk.

When used in combination with Nexans LANmark-7A cables and LANmark-7A patch cords, the four-connector channel meets Class FA requirements as defined in ISO/IEC11801 amendment 1.

#### Installation

The LANmark-7A GG45 12C Snap-In Connector makes use of Nexans wire organiser and is therefore very easy and fast to terminate. Using the Nexans patented Easy Termination Tool for GG45 the termination of GG45 is fool-proof and very reliable. A stranded version is available to allow the use of flexible stranded cable in cross connects or consolidation points.



## LANmark-7A

#### Standards

**International** EN 50173-1;  
IEC 60603-7-5; IEEE 802.3af (PoE);  
IEEE 802.3at (PoE Plus); ISO/  
IEC 11801

## LANmark-7A GG45 Connector

- Fast termination with exclusive wire organizer
- Colour code : T568A & T568B
- 360° EMC protection
- Accepts solid wire from 22 to 24 AWG
- Stranded version available for consolidation point
- Snap-in format fits in all Nexans structural hardware
- 2 possibilities to terminate the drain wire : on the housing or on the rear cover
- Can be turned into keystone format using additional adapter
- Passes all tests for POE Plus Requirements (IEC 60512-99-001 Ed.1)

### Guarantees

The LANmark-7A GG45 12C Snap-In Connector is covered by the guarantee as described in "The General Terms and Conditions of Sales". When installed in combination with other LANmark-7A components, a 25 years channel warranty can be obtained, covering full Cat 7A/Class FA compliance.

## LANmark-7A GG45 Connector

### Product List

| Nexans ref. | Name                                                                            | Height (mm) | Width (mm) | Depth (mm) |
|-------------|---------------------------------------------------------------------------------|-------------|------------|------------|
| ☒ N420.735  | LANmark-7A GG45 12C Snap-In Connector Cat 7A 1000MHz Screened                   | 19.5        | 17         | 41.4       |
| ☒ N420.736  | LANmark-7A GG45 12C Snap-In Connector Cat 7A 1000MHz Screened for stranded wire | 19.5        | 17         | 41.4       |

☒ = Make to order, ☒ = Make to stock

### Electrical Performance LANmark-7A

Typical Data given for Worst Case 4-Connector Channel Configurations

| Frequency<br>(in MHz) | Attenuation<br>(in dB) |         | NEXT pp<br>(in dB) |         | ACR-F<br>(in dB) |         | RL<br>(in dB) |         | Coupling Att.<br>(in dB) |         | PSANEXT<br>(in dB) |         | PSAFEXT<br>(in dB) |         |
|-----------------------|------------------------|---------|--------------------|---------|------------------|---------|---------------|---------|--------------------------|---------|--------------------|---------|--------------------|---------|
|                       | Max                    | Typical | Min                | Typical | Min              | Typical | Min           | Typical | Min                      | Typical | Min                | Typical | Min                | Typical |
| 1                     | 4.0                    | 3.6     | 65.0               | 104.8   | 65.0             | 70.0    | 19.0          | 38.0    | 80.0                     | 106.0   | 67.0               | 82.0    | 80.0               | 95.0    |
| 4                     | 4.1                    | 3.7     | 65.0               | 94.6    | 65.0             | 70.0    | 19.0          | 32.0    | 68.0                     | 94.0    | 67.0               | 82.0    | 79.8               | 94.8    |
| 10                    | 6.4                    | 5.7     | 65.0               | 87.8    | 65.0             | 70.0    | 19.0          | 28.0    | 60.0                     | 86.0    | 67.0               | 82.0    | 75.9               | 90.9    |
| 16                    | 8.0                    | 7.2     | 65.0               | 84.2    | 63.3             | 68.3    | 18.0          | 26.0    | 55.9                     | 81.9    | 67.0               | 82.0    | 73.9               | 88.9    |
| 20                    | 9.0                    | 8.1     | 65.0               | 82.5    | 61.4             | 66.4    | 17.5          | 25.0    | 54.0                     | 80.0    | 67.0               | 82.0    | 72.9               | 87.9    |
| 31.25                 | 11.2                   | 10.1    | 65.0               | 79.1    | 57.5             | 62.5    | 16.5          | 23.1    | 50.1                     | 76.1    | 67.0               | 82.0    | 71.0               | 86.0    |
| 62.5                  | 15.9                   | 14.3    | 65.0               | 73.7    | 51.5             | 56.5    | 14.0          | 20.0    | 44.1                     | 70.1    | 67.0               | 82.0    | 68.0               | 83.0    |
| 100                   | 20.3                   | 18.2    | 65.0               | 70.0    | 47.4             | 52.4    | 12.0          | 18.0    | 40.0                     | 66.0    | 67.0               | 82.0    | 65.9               | 80.9    |
| 155                   | 25.4                   | 22.8    | 63.0               | 66.6    | 43.6             | 48.6    | 10.1          | 16.1    | 36.2                     | 62.2    | 67.0               | 82.0    | 63.9               | 78.9    |
| 200                   | 28.9                   | 26.0    | 60.9               | 64.6    | 41.4             | 46.4    | 9.0           | 15.0    | 34.0                     | 60.0    | 67.0               | 82.0    | 62.8               | 77.8    |
| 250                   | 32.5                   | 29.2    | 59.1               | 62.8    | 39.4             | 44.4    | 8.0           | 14.0    | 32.0                     | 58.0    | 67.0               | 82.0    | 61.8               | 76.8    |
| 300                   | 35.7                   | 32.1    | 57.7               | 61.3    | 37.8             | 42.8    | 8.0           | 13.2    | 30.5                     | 56.5    | 67.0               | 82.0    | 60.9               | 75.9    |
| 500                   | 46.7                   | 42.0    | 53.6               | 57.2    | 33.4             | 38.4    | 8.0           | 11.0    | 26.0                     | 52.0    | 64.5               | 79.5    | 58.6               | 73.6    |
| 600                   | 51.4                   | 46.3    | 52.1               | 55.8    | 31.8             | 36.8    | 8.0           | 10.2    | 24.4                     | 50.4    | 63.3               | 78.3    | 57.8               | 72.8    |
| 700                   | 55.8                   | 50.2    | 50.8               | 54.5    | 30.5             | 35.5    | 7.5           | 9.5     | 23.1                     | 49.1    | 62.3               | 77.3    | 57.1               | 72.1    |
| 800                   | 59.9                   | 53.9    | 49.7               | 53.5    | 29.3             | 34.3    | 7.0           | 9.0     | 21.9                     | 47.9    | 61.5               | 76.5    | 56.4               | 71.4    |
| 900                   | 63.8                   | 57.5    | 48.8               | 52.5    | 28.3             | 33.3    | 6.5           | 8.5     | 20.9                     | 46.9    | 60.7               | 75.7    | 55.9               | 70.9    |
| 1000                  | 67.6                   | 60.8    | 47.9               | 51.6    | 27.4             | 32.4    | 6.0           | 8.0     | 20.0                     | 46.0    | 60.0               | 75.0    | 55.4               | 70.4    |

all values are specified at 20°C

## LANmark-7A Patch Cord

LANmark-7A GG45 Patchcords

- High bandwidth patch cord for 40 Gigabit applications and beyond
- Runs the GG45 '2in1' Connector in its high speed GG-Mode
- Both Sides use GG45 8 Contact Plugs up to 1000 MHz according IEC61076-3-110
- Allow full 4-connector Class FA channels
- Compatible with High Density requirements in Data Centres

### Description

#### Description

Nexans LANmark-7A patch cords with GG45 8C non-switched plugs enable a GG45 7A permanent link to be used in 1000 MHz mode. The protruding part on the plug activates the switch within the GG45 7A "2in1" jack and terminates the none used contacts of RJ45 to ground. Using the contacts in the extreme outer corners of the RJ45 interface for transmission, excellent NEXT and Return Loss performances are achieved.

Nexans LANmark-7A patch cords maximise the full performance of the channel and will exceed the requirements of the ISO 4 connector model. This provides improved data throughput up to 1000 MHz and allows for the inclusion of additional patching or Consolidation Points for maximum system flexibility and all future data applications according ISO 11801.

- High Speed patch cords
- Screened
- 2 x GG45 8C 4-pair

#### Guarantees

- Reliable connections over the lifetime of the cabling system.
- Compatible with IEC 61076-3-110
- Compatible with Class F and Class FA standards (ISO 11801:2008)

#### Installation

- Look and Feel of a RJ45 plug (just using different contact positions)
- Self-latching, high reliability GG45 (IEC61076-3-110) screened connectors
- Sidebars on the plug avoid errors by using the patch cord for RJ45 jacks
- Low Smoke Halogen Free - Flame Retardant cable jacket
- Orange color, different colors available on request
- 1, 2, 3 and 5m lengths, others lengths available on request



**LANmark-7A**

#### Standards

**International ISO/IEC 11801**

## LANmark-7A Patch Cord

### Characteristics

#### Construction characteristics

Colour

Orange

#### Product List

☎=Make to order, 📦=Make to stock

| Nexans ref.         | Name                                                               |
|---------------------|--------------------------------------------------------------------|
| 📦 N900.67A<br>New   | CAT7A Measurement Cord GG45 8C LSZH Orange 2m                      |
| 📦 N101.23AOO<br>New | LANmark-7A Patch Cord Cat 7A 1GHz GG45 8C Screened LSZH Orange 10m |
| 📦 N101.23ARO<br>New | LANmark-7A Patch Cord Cat 7A 1GHz GG45 8C Screened LSZH Orange 20m |
| 📦 N101.23AEO<br>New | LANmark-7A Patch Cord Cat 7A 1GHz GG45 8C Screened LSZH Orange 2m  |
| 📦 N101.23AFO<br>New | LANmark-7A Patch Cord Cat 7A 1GHz GG45 8C Screened LSZH Orange 3m  |
| 📦 N101.23AHO<br>New | LANmark-7A Patch Cord Cat 7A 1GHz GG45 8C Screened LSZH Orange 5m  |

☎ = Make to order, 📦 = Make to stock

### Electrical Performance LANmark-7A

Typical Data given for Worst Case 4-Connector Channel Configurations

| Frequency<br>(in MHz) | Attenuation<br>(in dB) |         | NEXT pp<br>(in dB) |         | ACR-F<br>(in dB) |         | RL<br>(in dB) |         | Coupling Att.<br>(in dB) |         | PSANEXT<br>(in dB) |         | PSAFEXT<br>(in dB) |         |
|-----------------------|------------------------|---------|--------------------|---------|------------------|---------|---------------|---------|--------------------------|---------|--------------------|---------|--------------------|---------|
|                       | Max                    | Typical | Min                | Typical | Min              | Typical | Min           | Typical | Min                      | Typical | Min                | Typical | Min                | Typical |
| 1                     | 4.0                    | 3.6     | 65.0               | 104.8   | 65.0             | 70.0    | 19.0          | 38.0    | 80.0                     | 106.0   | 67.0               | 82.0    | 80.0               | 95.0    |
| 4                     | 4.1                    | 3.7     | 65.0               | 94.6    | 65.0             | 70.0    | 19.0          | 32.0    | 68.0                     | 94.0    | 67.0               | 82.0    | 79.8               | 94.8    |
| 10                    | 6.4                    | 5.7     | 65.0               | 87.8    | 65.0             | 70.0    | 19.0          | 28.0    | 60.0                     | 86.0    | 67.0               | 82.0    | 75.9               | 90.9    |
| 16                    | 8.0                    | 7.2     | 65.0               | 84.2    | 63.3             | 68.3    | 18.0          | 26.0    | 55.9                     | 81.9    | 67.0               | 82.0    | 73.9               | 88.9    |
| 20                    | 9.0                    | 8.1     | 65.0               | 82.5    | 61.4             | 66.4    | 17.5          | 25.0    | 54.0                     | 80.0    | 67.0               | 82.0    | 72.9               | 87.9    |
| 31.25                 | 11.2                   | 10.1    | 65.0               | 79.1    | 57.5             | 62.5    | 16.5          | 23.1    | 50.1                     | 76.1    | 67.0               | 82.0    | 71.0               | 86.0    |
| 62.5                  | 15.9                   | 14.3    | 65.0               | 73.7    | 51.5             | 56.5    | 14.0          | 20.0    | 44.1                     | 70.1    | 67.0               | 82.0    | 68.0               | 83.0    |
| 100                   | 20.3                   | 18.2    | 65.0               | 70.0    | 47.4             | 52.4    | 12.0          | 18.0    | 40.0                     | 66.0    | 67.0               | 82.0    | 65.9               | 80.9    |
| 155                   | 25.4                   | 22.8    | 63.0               | 66.6    | 43.6             | 48.6    | 10.1          | 16.1    | 36.2                     | 62.2    | 67.0               | 82.0    | 63.9               | 78.9    |
| 200                   | 28.9                   | 26.0    | 60.9               | 64.6    | 41.4             | 46.4    | 9.0           | 15.0    | 34.0                     | 60.0    | 67.0               | 82.0    | 62.8               | 77.8    |
| 250                   | 32.5                   | 29.2    | 59.1               | 62.8    | 39.4             | 44.4    | 8.0           | 14.0    | 32.0                     | 58.0    | 67.0               | 82.0    | 61.8               | 76.8    |
| 300                   | 35.7                   | 32.1    | 57.7               | 61.3    | 37.8             | 42.8    | 8.0           | 13.2    | 30.5                     | 56.5    | 67.0               | 82.0    | 60.9               | 75.9    |
| 500                   | 46.7                   | 42.0    | 53.6               | 57.2    | 33.4             | 38.4    | 8.0           | 11.0    | 26.0                     | 52.0    | 64.5               | 79.5    | 58.6               | 73.6    |
| 600                   | 51.4                   | 46.3    | 52.1               | 55.8    | 31.8             | 36.8    | 8.0           | 10.2    | 24.4                     | 50.4    | 63.3               | 78.3    | 57.8               | 72.8    |
| 700                   | 55.8                   | 50.2    | 50.8               | 54.5    | 30.5             | 35.5    | 7.5           | 9.5     | 23.1                     | 49.1    | 62.3               | 77.3    | 57.1               | 72.1    |
| 800                   | 59.9                   | 53.9    | 49.7               | 53.5    | 29.3             | 34.3    | 7.0           | 9.0     | 21.9                     | 47.9    | 61.5               | 76.5    | 56.4               | 71.4    |
| 900                   | 63.8                   | 57.5    | 48.8               | 52.5    | 28.3             | 33.3    | 6.5           | 8.5     | 20.9                     | 46.9    | 60.7               | 75.7    | 55.9               | 70.9    |
| 1000                  | 67.6                   | 60.8    | 47.9               | 51.6    | 27.4             | 32.4    | 6.0           | 8.0     | 20.0                     | 46.0    | 60.0               | 75.0    | 55.4               | 70.4    |

all values are specified at 20°C



## Modular Patch Panels

**LANmark**  
**e**ssential

## Snap-In Patch Panels

- Compatible with all Snap-In connectors
- 24 ports
- Sliding and Fixed versions available
- Clip-On mechanism
- Exclusive Auto-Connect Earthing system
- Universal design supporting Unscreened and Screened connectors
- Shuttered versions available

### Description

Nexans Snap-In range of patch panels are designed to accommodate any of the Snap-In connectors in the LANmark product family (LANmark-7A, LANmark-6A, LANmark-6, and LANmark-5).

The Snap-In panels feature an exclusive Clip-On system to secure the connector in the panel and to provide a simple means of earthing shielded connectors to facilitate installation. Connection of the panel to earth is achieved with a unique Auto-Connect feature removing the need for individual bonding conductors.

The panels are Nexans branded and have a series of complementary cable management products such as blank panels and patch cord guides.

The patch panels are designed for standard 19" enclosures, are 1U high, and support the following common features:

- 24 Ports with shutters
- Designed for Screened and Unscreened Snap-In connectors
- Compatible with all performance categories of connector
- Clip-On mechanism for simple earthing
- Exclusive rear cable management facilities
- Robust construction

Nexans offers three main panel versions:

- Angled Panels to support high density environments
- Sliding Panels to allow quick installation and easy maintenance which feature a flexible label for port numbering
- Fixed Panels using screen printed numbering systems for labelling
- The sliding and fixed panels also have LANSense Upgradeable versions



## LANmark

### Standards

**International**  
Manufacturer specification

## Snap-In Patch Panels

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                            |
|--------------------------------------|-------------------------------------------------|
| 📦 N521.671                           | Angled Patch Panel 24 Snap-In Black             |
| 📦 N521.675                           | Angled Patch Panel 24 Snap-In White             |
| 📦 N521.664BK<br>New                  | Patch Panel 24 Snap-In Black                    |
| 📦 N521.661BK                         | Patch Panel 24 Snap-In Fixed Black              |
| 📦 N521.661                           | Patch Panel 24 Snap-In Fixed White              |
| 📦 N521.663BK<br>New                  | Patch Panel 24 Snap-In Sliding Black            |
| 📦 N521.663<br>New                    | Patch Panel 24 Snap-In Sliding White            |
| 📦 N521.881<br>To be removed          | Upgradable Patch Panel 24 Snap-In Fixed Black   |
| 📦 N521.861<br>To be removed          | Upgradable Patch Panel 24 Snap-In Sliding Black |
| 📦 N521.865<br>To be removed          | Upgradable Patch Panel 24 Snap-In Sliding White |
| ☎ = Make to order, 📦 = Make to stock |                                                 |

## Keystone Panels

- Compatible with Nexans keystone connectors
- Designed for Essential-5 and -6 range
- 24 ports on 1HU
- Tie wrap strain relief
- Earthing and grounding features
- Available in black or white

### Description

#### Application

The modular patch panels for keystone connectors are fixed panels based on 19" frame dimensions and can house up to 24 keystone connectors on 1HU.

#### Design

The patch panels are designed to accommodate 24 Nexans Essential keystone connectors. The metalwork at the back of the panel is made of unpainted steel to enable automatic earthing and the necessary grounding when using shielded cable and connectors. The painted front plate allows a neat flush mounting of the connectors. The panels have screen-printed numbering 1-24 above the ports and a labelling field at the right end for patch panel numbering. They are available in black (N521.660BK) and in white (N521.660).

#### Installation

The Nexans keystone connectors can easily be inserted by a simple "one-click" movement, without the need for any tool. They are also easy to remove, when necessary.

The integrated cable fixing plate with tie wrap strain relief ensures cable management and retention.

The panels are supplied with fixings.

An optional 19" outrigger can be used for easy termination access (N500.120).



**essential-6**

#### Standards

**International** ISO/IEC 11801

## Keystone Panels

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|  N521.660BK<br>New                                                                                                      | Essential Patch Panel 24 Keystone Black - New Design |
|  N521.660<br>New                                                                                                        | Essential Patch Panel 24 Keystone White - New Design |
|  = Make to order,  = Make to stock |                                                      |



## Modular Outlets

## Euro hardware for LANmark

- For all 45x45mm fittings.
- Modules, Cover Plates, Surface Box
- Modules include labeling and shutters.
- Suitable for all snap-in connectors.
- Angled modules for restricted depth.
- Easy click-in mechanism.

### Description

#### Application

This range of outlet mounting hardware is suitable for all 45mm fittings and includes cover plates, flat & angled modules for Snap-in connectors, and surface mount boxes.

For the specific information on the Snap-in connectors, refer to the corresponding data sheets.

There are two different faceplates to support all environments:

- The straight version
- The angled version. It offers the ideal solution for cable trays and floor boxes, where depth is restricted. Shutters prevent dust entrance.

#### Guarantees

- All plastic material is UL 94V0

#### Installation

These modular outlets fit into a wide range of international 45x45 covering plates and surface mount boxes.

For easy management and port identification, the outlets all include integrated labelling windows.

The Snap-in connectors are inserted into the modular outlet by a simple click-in mechanism.



## LANmark

### Standards

**International**  
Manufacturer specification

### Product List

☎ = Make to order, 🏠 = Make to stock

| Nexans ref. | Name                                                   | Width (mm) | Colour         | Height (mm) | Depth (mm) |
|-------------|--------------------------------------------------------|------------|----------------|-------------|------------|
| 🏠 N200.051  | LANmark EU style 45 x 45 frame ivory                   | 80         | Ivory          | 80          |            |
| 🏠 N200.050  | LANmark EU style 45 x 45 frame white                   | 80         | White RAL 9010 | 80          |            |
| 🏠 N423.550  | LANmark EU style 45 x 45 module 2 Snap-In flat white   | 45         | White RAL 9010 | 45          |            |
| 🏠 N200.115  | LANmark EU style 45 x 45 surface mount box ivory       | 82         | Ivory          | 82          | 50         |
| 🏠 N200.116  | LANmark EU style 45 x 45 surface mount box white       | 82         | White RAL 9010 | 82          | 50         |
| 🏠 N423.520  | LANmark EU style angled 45 x 45 module 1 Snap-In white | 45         | White RAL 9010 | 45          | 36         |
| ☎ N423.541N | LANmark EU style angled 45 x 45 module 2 Snap-In ivory | 45         | Ivory          | 45          | 36         |
| 🏠 N423.540N | LANmark EU style angled 45 x 45 module 2 Snap-In white | 45         | White RAL 9010 | 45          | 36         |

☎ = Make to order, 🏠 = Make to stock

## German Mounting Hardware for LANmark

- German style mounting hardware
- 50x50 modules, frames and surface mount boxes
- Suitable for fibre and copper
- Colour white or ivory
- Glossy finish

### Description

#### Application

To support the LANmark Snap-In range of products Nexans has developed a set of German style modules, frames and surface mount boxes.

The mounting hardware is common to all performance levels, from LANmark-5 through LANmark-6/6A to LANmark-7/7A. It is also suitable for direct terminated fibre.

Detailed information can be found on the corresponding datasheets.

#### Guarantees

All plastic material is UL 94V0.



# LANmark

### Standards

**International**  
Manufacturer specification

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.       | Name                                                       | Colour         |
|-------------------|------------------------------------------------------------|----------------|
| ☎ N790.981<br>New | LANmark German Style 50x50 Frame Ivory                     | Ivory          |
| 📦 N790.980<br>New | LANmark German Style 50x50 Frame White                     | White RAL 9010 |
| ☎ N900.248<br>New | LANmark German Style 50x50 Surface mount box Ivory         | Ivory          |
| 📦 N900.247<br>New | LANmark German Style 50x50 Surface mount box White         | White RAL 9010 |
| ☎ N423.711<br>New | LANmark German Style Angled 50 x 50 Module 1 Snap-In Ivory | Ivory          |
| ☎ N423.701<br>New | LANmark German Style Angled 50 x 50 Module 1 Snap-In White | White RAL 9010 |
| ☎ N423.712<br>New | LANmark German Style Angled 50 x 50 Module 2 Snap-In Ivory | Ivory          |
| 📦 N423.702<br>New | LANmark German Style Angled 50 x 50 Module 2 Snap-In White | White RAL 9010 |

☎ = Make to order, 📦 = Make to stock

## UK Mounting Hardware for Essential

To support the Essential range of products Nexans has developed a set of UK connecting hardware in Keystone format. For LANmark specific connecting hardware, please refer to "UK Mounting Hardware for LANmark".

Nexans backboxes and cover plates have Euromod dimensions and are common throughout the Essential and LANmark ranges.

### Description

- **LJ6 Keystone Module**

LJ6C shuttered module to accommodate one Keystone connector.

- **25 x 50 Keystone Module**

Euromod 25x50mm shuttered module to accommodate one Keystone connector.

Euromod modules fit Nexans single and double gang cover plates.

- **Single and Double Gang Cover Plates**

Available in flat and bevelled version.

- **Single and Double Back Box**



**e**ssential

### Standards

**International** ISO/IEC 11801

## UK Mounting Hardware for Essential

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                             |
|--------------------------------------|--------------------------------------------------|
| 📦 N423.635<br>New                    | Essential 86x86 Wallplate 1 Keystone White       |
| 📦 N423.630<br>New                    | Essential 86x86 Wallplate 2 Keystone White       |
| 📦 N423.650                           | Essential UK style 25x50 module 1 keystone White |
| 📦 N423.640                           | Essential UK style LJ6C module 1 keystone White  |
| 📦 N424.533                           | UK Back Box - Double Gang                        |
| 📦 N424.532                           | UK Back Box - Single Gang                        |
| 📦 N424.023                           | UK Cover Plate - Double Gang                     |
| 📦 N424.531                           | UK Cover Plate - Double Gang - Bevelled          |
| 📦 N424.013                           | UK Cover Plate - Single Gang                     |
| 📦 N424.530                           | UK Cover plate - Single Gang - Bevelled          |
| 📦 N424.103                           | UK Half Blank                                    |
| 📦 N424.003                           | UK Quarter Blank                                 |
| ☎ = Make to order, 📦 = Make to stock |                                                  |

## UK Mounting Hardware for LANmark

To support the LANmark Snap-In range of products Nexans has developed a set of UK connecting hardware. The mounting hardware is common to all performance levels, from LANmark-5 through LANmark-6/6A to LANmark-7/7A.

### Description

#### LJ6 Modular Outlet

LJ6C dimensions (25mm x 37mm) Single Modular shuttered outlets accommodate one Snap-in connector. Supplied in UK White.

#### 25 x 50 Modular Outlet

Single Modular shuttered outlet 25mm x 50mm suitable to accommodate one Snap-in connector. Supplied in UK White.

Modular Outlet fits Nexans single and double gang cover plates.

#### Single and Double Cover Plates

Single and double gang cover plates supplied in UK White. Flat and beveled version is available.

#### Single and Double back box

Single and double gang back box supplied in UK White.

#### Angled modular outlet

The angled modular shuttered outlet 50x50mm can accommodate 2 snap-in connectors and is supplied in UK White. It can be used to create horizontal or vertical quad outlets.



# LANmark

### Standards

**International ISO/IEC 11801**

## UK Mounting Hardware for LANmark

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.       | Name                                                   |
|-------------------|--------------------------------------------------------|
| 📦 N423.861        | LANmark 86x86 Wallplate 1 Snap-In White                |
| 📦 N423.862        | LANmark 86x86 Wallplate 2 Snap-In White                |
| 📦 N423.864<br>New | LANmark 86x86 Wallplate 4 Snap-In White                |
| 📦 N423.540UN      | LANmark UK style angled 50 x 50 module 2 Snap-In white |
| 📦 N424.203        | LJ6C Angled Module                                     |
| 📦 N424.113        | UK 25x50 Flat Module for Snap-ins                      |
| 📦 N424.204N       | UK Angled 25x50 Module for 1 snap-in                   |
| 📦 N423.540U       | UK Angled Module for 2 snap-ins                        |
| 📦 N424.533        | UK Back Box - Double Gang                              |
| 📦 N424.532        | UK Back Box - Single Gang                              |
| 📦 N424.023        | UK Cover Plate - Double Gang                           |
| 📦 N424.531        | UK Cover Plate - Double Gang - Bevelled                |
| 📦 N424.013        | UK Cover Plate - Single Gang                           |
| 📦 N424.530        | UK Cover plate - Single Gang - Bevelled                |
| 📦 N424.103        | UK Half Blank                                          |
| 📦 N424.213        | UK LJ6C Flat Module for snap-ins                       |
| 📦 N424.003        | UK Quarter Blank                                       |

☎ = Make to order, 📦 = Make to stock

## US Mounting Hardware for LANmark

- US format
- 45x45 and 45x60 series of Cover Plates, for up to 6 snap-in connectors
- Suitable for fiber and copper
- Includes fixings </>
- All plastic material is UL 94V0
- Colour white

### Description

#### Application

This range of mounting hardware is suitable for US fittings and includes:

- 2 types of cover plates
  - N422.001: 45x45mm inner format, with integrated labelling system
  - N423.001: 60x45mm inner format, with integrated labelling system
- 20x45mm module for 2 snap-in connectors (N421.610)
- 20x45mm blanking module (N420.001)

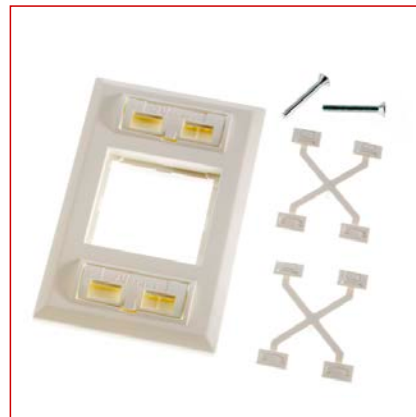
Detailed information can be found on the corresponding datasheets.

#### Guarantees

- All plastic material is UL 94V0

#### Installation

- The cover plates are all supplied with fixing screws.
- All modules can be inserted in the cover plates by a simple click-in mechanism.



**LANmark**

### Standards

**International** UL and CSA approval  
**National** UL 94 V0

## US Mounting Hardware for LANmark

**Product List**

☎ = Make to order, 🏭 = Make to stock

| Nexans ref.                          | Name                                                     | Width (mm) | Colour         | Height (mm) | Depth (mm) |
|--------------------------------------|----------------------------------------------------------|------------|----------------|-------------|------------|
| ☎ N420.001                           | 45x20 Blanking module for US cover plate                 | 45         | White RAL 9010 | 20          | 26.5       |
| ☎ N421.610                           | 45x20 Module for 2 Snap-in connectors for US cover plate | 45         | White RAL 9010 | 20          | 16.5       |
| 🏭 N422.001                           | US Cover plate for 45x45 Outlet with labelling system    | 70.5       | White RAL 9010 | 115         | 14         |
| 🏭 N423.001                           | US Cover plate for 60x45 Outlet with labelling system    | 70.5       | White RAL 9010 | 115         | 14         |
| ☎ = Make to order, 🏭 = Make to stock |                                                          |            |                |             |            |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
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ncs.uk@nexans.com

## 3rd Party Hardware

**Description**

Nexans have a range of floorplates and adaptors designed to integrate Nexans connectivity into various 3rd party products

**Standards**

**International** ISO/IEC 11801

## 3rd Party Hardware

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                                            | Function of the accessory |
|-------------|---------------------------------------------------------------------------------|---------------------------|
| 📦 N800.305  | Snap-In face plate for BTicino Living International range                       | Adaptator                 |
| ☎ N800.306  | Snap-In face plate for BTicino Light range                                      | Adaptator                 |
| ☎ N423.110  | Plate for up to 6 Snap-In connectors for GES6 Ackermann floor box               | Floor Plates              |
| ☎ N423.111  | Plate for up to 9 Snap-In connectors for GES9 Ackermann floor box               | Floor Plates              |
| ☎ N423.120  | Plate (left part) for up to 6 Snap-In connectors for GB2 Electraplan floor box  | Floor Plates              |
| ☎ N423.121  | Plate (right part) for up to 6 Snap-In connectors for GB2 Electraplan floor box | Floor Plates              |
| ☎ N423.122  | Plate for up to 9 Snap-In connectors for GB3 Electraplan floor box              | Floor Plates              |
| ☎ N423.130  | Plate for up to 9 Snap-In connectors for GE12 RK5 Obo Bettermann floor box      | Floor Plates              |

☎ = Make to order, 📦 = Make to stock

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## European Mounting Hardware for Essential Keystone

- European mounting hardware in keystone format
- Designed for Essential-5 and -6 keystone range
- Supplied in glossy white finish
- Also available in UK and US format.

**Description**

To support the Essential-5 and -6 Keystone range, Nexans has developed specific mounting hardware in keystone format. Please refer to the specific datasheets for keystone modules, frames and blanks.



**essential-6**

**Standards**

**International** ISO/IEC 11801

## European Mounting Hardware for Essential Keystone

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|  N423.645                                                                                                               | Essential EU style 22.5 x 45 module 1 Keystone white |
|  N424.102                                                                                                               | Essential EU style 22.5x45 blank module white        |
|  N200.645                                                                                                               | Essential EU style 45x45 frame white                 |
|  = Make to order,  = Make to stock |                                                      |

## US Mounting Hardware for Essential

- US mounting hardware in keystone format
- Designed for Essential-5 and -6 keystone range
- Supplied in textured white finish
- Equipped with labelling windows
- Screws included

### Description

To support the Essential Keystone range Nexans has developed specific mounting hardware in keystone format in European, UK and US style.

Please refer to the related product datasheets for the different available modules, frames and blanks in various country specific versions.



**essential-6**

### Standards

**International** ISO/IEC 11801

## US Mounting Hardware for Essential

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
|  N423.622<br>New                                                                                                        | Essential US style Wallplate 2 Keystone Single Gang White |
|  N423.624<br>New                                                                                                        | Essential US style Wallplate 4 Keystone Single Gang White |
|  = Make to order,  = Make to stock |                                                           |



## Voice grade

The Nexans Voice range includes Voice grade cables and IDC connectivity and is used to integrate telephony applications into a LAN infrastructure.



**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
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## Voice Cables

- 25pr, 50pr, or 100pr
- Suitable for voice and low grade data
- Category 3 and Category 5 compliant

### Description

Voice grade cables are used to integrate telephony applications in the backbone of a LAN infrastructure. They are multipair twisted pair cables and exist in Category 3 and Category 5 performance levels.



### Standards

**International** ISO/IEC 11801

## Voice Cables

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                   | Number of pairs | Outer sheath                         | Type of cable | Category |
|--------------|--------------------------------------------------------|-----------------|--------------------------------------|---------------|----------|
| 📦 N100.819FR | Voice F/UTP 100 pair AWG24 LSZH Grey 250m reel (LYst)  | 100             | LSZH                                 | F/UTP         |          |
| 📦 N100.809N  | Voice U/UTP 100 pair AWG24 Cat 3 PVC Grey 500m reel    | 100             | PVC (Polyvinyl chloride)             | U/UTP         | Cat. 3   |
| 📦 N100.M02   | Voice U/UTP 25 pair AWG24 Cat 5 LSZH Orange 1000m reel | 25              | LSZH                                 | U/UTP         | Cat. 5   |
| 📦 N100.M01   | Voice U/UTP 25 pair AWG24 Cat 5 PVC Grey 1000m reel    | 25              | PVC (Polyvinyl chloride)             | U/UTP         | Cat. 5   |
| 📦 N100.808N  | Voice U/UTP 50 pair AWG24 Cat 3 PVC Grey 500m reel     | 50              | PVC (Polyvinyl chloride)             | U/UTP         | Cat. 3   |
| 📦 N100.M04   | Voice U/UTP 50 pair AWG24 Cat 5 LSZH Orange 500m reel  | 50              | LSZH                                 | U/UTP         | Cat. 5   |
|              |                                                        |                 | ☎ = Make to order, 📦 = Make to stock |               |          |

## IDC connectivity and accessories

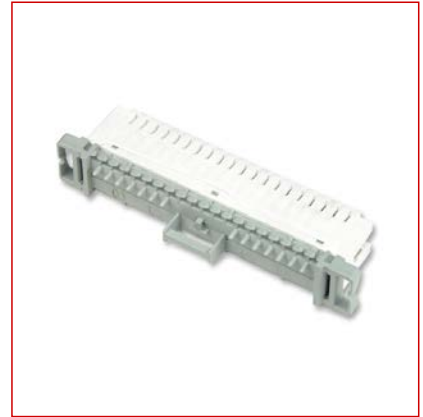
Complete range of LSA+ voice connectivity and accessories

### Description

Nexans offers a complete range of voice IDC module and accessories in order to build a voice backbone in any installation. Nexans uses the LSA+ type connectivity.

The Nexans Voice range includes :

- IDC connection modules
- 19" 3 HU frame
- 3HU patch guide
- Marking cap
- Open contact marking strip
- Surge arrestor and protection magazine
- Patch Cords
- Voice MDF solution : stand alone, wall mounted or wall box
- Accessories and frames



### Standards

**International ISO/IEC 11801**

## IDC connectivity and accessories

**Product List**

☎=Make to order, 📦=Make to stock

| Nexans ref.                          | Name                                              |
|--------------------------------------|---------------------------------------------------|
| 📦 N102.333                           | 10xVoice IDC Label Holder for Module 10 Pairs     |
| 📦 N108.106                           | 3HU Patch Guide for IDC Frame                     |
| 📦 N201.001                           | IDC 1 pair marking cap red                        |
| 📦 N103.203                           | Surge Arrestors                                   |
| 📦 N102.350                           | Voice 3HU distribution frame for 15 IDC blocks    |
| 📦 N102.332                           | Voice IDC Label Holder for Frame                  |
| 📦 N102.310                           | Voice LSA+ Disconnection Module 10 pair           |
| ☎ N102.362                           | Voice MDF 2x26 modules wall box                   |
| ☎ N102.361                           | Voice MDF 2x74 modules stand alone (ETSI format)  |
| ☎ N102.360                           | Voice MDF 81 modules wall mounted                 |
| 📦 N102.321                           | Voice Surge Protector Magazine for 10 Pairs empty |
| ☎ = Make to order, 📦 = Make to stock |                                                   |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Voice Patch Panels

- High density RJ45 panels for voice applications
- Available in black and in white

### Description

Nexans high density Voice Panels are designed to integrate voice circuits in standard structured cabling systems.

- 50 RJ45 ports on 1U
- Mount to standard 19" rack
- LSA/110 punchdown
- Accept multi-pair cables from 22 to 26 AWG
- Supplied with fixings
- Earthing strap included



### Standards

**International** ISO/IEC 11801

## Voice Patch Panels

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|  N500.350BK<br>New                                                                                                      | Voice Patch Panel 50 RJ45 2 pair Black |
|  N500.350                                                                                                               | Voice Patch Panel 50 RJ45 2 pair White |
|  N424.514<br>Substituted                                                                                                | Voice Patch Panel 50 RJ45 3 pair Black |
|  = Make to order,  = Make to stock |                                        |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Voice Patch Cords

- Exists in 3 different types, depending on the application
- Unscreened flexible PVC cable

### Description

#### Application

Nexans offers 3 different types of patch cords for voice applications, for both in the cabinet and in the work area:

- work area cord: 1 RJ45 to 1 RJ11 (N107.001)
- cabinet patch cords:
  - 1 RJ45 to 1 IDC - 1 pair (N108.165 and N108.166)
  - 1 RJ45 to 1 IDC - 2 pairs (N108.209 and N108.210)



### Standards

**International ISO/IEC 11801**

## Voice Patch Cords

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                  | Length (m) |
|-------------|-------------------------------------------------------|------------|
| ☎ N107.001  | Voice 2 pairs Patch Cord RJ45-RJ11 Black 5m           | 5          |
| 📦 N108.165  | Voice 1 pair Patch Cord 100 Ohm IDC - RJ45 Grey 1,5m  | 1.5        |
| 📦 N108.166  | Voice 1 pair Patch Cord 100 Ohm IDC - RJ45 Grey 3m    | 3          |
| ☎ N108.209  | Voice 2 pairs Patch Cord 100 Ohm IDC - RJ45 Grey 1,5m | 1.5        |
| ☎ N108.210  | Voice 2 pairs Patch Cord 100 Ohm IDC - RJ45 Grey 3m   | 3          |

☎ = Make to order, 📦 = Make to stock



## Tools & Accessories

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Cable ties

**Description**

Self gripping cable ties enabling quick and convenient fastening of both fibre and copper cable bundles.

**Standards**

**International** ISO/IEC 11801

## Cable ties

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|  N100.100<br>New                                                                                                        | Hook & Loop Cable Strap 25m Roll |
|  = Make to order,  = Make to stock |                                  |

## Coloured Latch Protectors

- Retrofit coloured latch protectors
- Fit all LANmark UniBoot patch cords
- For differentiation between services
- Available in 8 different colours
- Packed in bags of 50

### Description

The black latch protectors supplied with LANmark UniBoot Patch Cords are removable and can be replaced with coloured versions.

This can be particularly useful to differentiate between services or applications at the patching side in the cabinet and also at consolidation points or user outlets in the work area.

The latch protectors can be installed or replaced very quickly and easily, without the need for any tools.

They are available in 8 different colours (including black) and are a perfect match for the coloured shutters.

Available colours:

- Yellow
- Orange
- Red
- Green
- Blue
- Dark grey
- Black
- White

**LANmark**

### Standards

**International** ISO/IEC 11801

## Coloured Latch Protectors

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                  |
|--------------------------------------|---------------------------------------|
| 📦 N110.LPK<br>New                    | LANmark Latch Protector Black 50x     |
| 📦 N110.LPB<br>New                    | LANmark Latch Protector Blue 50x      |
| 📦 N110.LPD<br>New                    | LANmark Latch Protector Dark Grey 50x |
| 📦 N110.LPG<br>New                    | LANmark Latch Protector Green 50x     |
| 📦 N110.LPO<br>New                    | LANmark Latch Protector Orange 50x    |
| 📦 N110.LPR<br>New                    | LANmark Latch Protector Red 50x       |
| 📦 N110.LPW<br>New                    | LANmark Latch Protector White 50x     |
| 📦 N110.LPY<br>New                    | LANmark Latch Protector Yellow 50x    |
| ☎ = Make to order, 📦 = Make to stock |                                       |

## Coloured Shutters

- Coloured shutters for Nexans Snap-In patch panels, ZD boxes and outlets
- Available in 8 different colours
- Packed in bags of 100

### Description

The white or black shutters supplied with Nexans patch panels, ZD boxes and outlets are removable and can be replaced with coloured versions.

This can be particularly useful to differentiate between services or applications at the patching side in the cabinet and also at consolidation points or user outlets in the work area.

The shutters are available in 8 different colours and are a perfect match for the coloured latch protectors of the LANmark UniBoot patch cords.

Available colours:

- Yellow
- Orange
- Red
- Green
- Blue
- Dark grey
- Black
- White



**LANmark**

### Standards

**International** ISO/IEC 11801

## Coloured Shutters

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                           |
|--------------------------------------|--------------------------------|
| 📦 N421.701BLA<br>New                 | LANmark Shutter Black 100x     |
| 📦 N421.701BLU<br>New                 | LANmark Shutter Blue 100x      |
| 📦 N421.701DGR<br>New                 | LANmark Shutter Dark Grey 100x |
| 📦 N421.701GRE<br>New                 | LANmark Shutter Green 100x     |
| 📦 N421.701ORA<br>New                 | LANmark Shutter Orange 100x    |
| 📦 N421.701RED<br>New                 | LANmark Shutter Red 100x       |
| 📦 N421.701WHI<br>New                 | LANmark Shutter White 100x     |
| 📦 N421.701YEL<br>New                 | LANmark Shutter Yellow 100x    |
| ☎ = Make to order, 📦 = Make to stock |                                |

## Contact

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Tools

### Description

Nexans have a complete range of tools for terminating copper systems



### Standards

**International** ISO/IEC 11801

## Tools

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                                           |
|--------------------------------------|----------------------------------------------------------------|
| 📦 N102.107                           | Tool - LSA+ IDC punchdown tool                                 |
| 📦 N422.117                           | Tool - LANmark-7 Easy Termination tool                         |
| ☎ N422.118                           | Tool - Set of spare knives for LANmark-7 Easy Termination tool |
| 📦 N420.567                           | Tool - Universal Comfort tool for Snap-in connector            |
| 📦 N808.6000                          | Universal Termination Tool for 808 connector                   |
| ☎ N420.110                           | Tool - Nexans cable stripper, 110 punchdown tool               |
| 📦 N500.120                           | 19" support tray for termination                               |
| ☎ = Make to order, 📦 = Make to stock |                                                                |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Keystone Clips

- Adaptor clips for LANmark Snap-In connectors

**Description**

Various clips to turn LANmark Snap-In connectors into Keystone format.

**LANmark****Standards**

**International** ISO/IEC 11801

## Keystone Clips

### Product List

| Nexans ref.                                                                                | Name                                                                                |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  N429.620 | Metal clip for Snap-In to keystone                                                  |
|  N429.625 | Red clip for EVO Snap-In connector to keystone format (wall thickness 1,5-1,75 mm)  |
|  N429.626 | Blue clip for EVO Snap-In connector to keystone format (wall thickness 2,0-2,25 mm) |
|  N429.627 | Yellow clip for EVO Snap-In connector to keystone format (height 19,7 mm)           |

 = Make to order,  = Make to stock



## Pre-terminated Copper

## LANmark Pre-Term Bundles

- Ideal assemblies for high density cabling and datacenters
- Bundles available for Jack-Jack or Jack-Plug or Plug-Plug units
- Bundles available for 6,12 or 24 units
- Cat.6, 6A, 7 or 7A performance supported
- Fully screened and compliant to Alien Crosstalk requirements
- Repeatable and stable level of performance
- Individual units are helically assembled together to form a round and stable bundle
- Bundles are suitable for laying but not pulling operation

### Description

#### Application

LANmark Pre-Term Bundles are assemblies of 6,12 or 24 pre-terminated units. These can be Jack-Jack, Jack-Plug or Plug-Plug units. These units are maintained together as a bundle through spiral wrapping every meter. LANmark Pre-Term Bundles are well suited for areas where installation time is limited. Bundles of shielded units ensure immunity from Alien Crosstalk and other external interference. Bundles of shielded units do not require on-site testing for Alien Crosstalk since this new parameter is met by design.



#### Performance

Cat.6/Class E, Cat.6A/Class EA, Cat.7/Class F or Cat.7A/Class FA units can be bundled. Headroom and bandwidth over and above the given category requirements according to the international, European and American standards especially for NEXT/FEXT, Power Sum NEXT/FEXT and Return Loss are guaranteed. When used in combination with LANmark patch cords of the same category the full 100m four-connector links and channels are guaranteed as well.

#### Standards

**International** ISO/IEC 11801:2002/  
Amd 2:2010/Cor 1:2010

**National** TIA/EIA-568-B.2-10

#### Installation

Nexans LANmark Pre-Term Bundles help reducing the installation time. One assembly needs to be laid instead of 6, 12 or 24 single cables. Furthermore connectors termination is simply eliminated. Connectors are mounted and tested in our factory.

Nexans LANmark Pre-Term Bundles are designed to be laid and are not suitable for pulling.

All structural hardware items designed for the Snap-In range can be used in all positions of a 4 connector twisted pair cabling channel (PP, CC, CP, TO).

- Fast and straightforward installation
- No need for on-site termination
- Reduction of installation time
- 360° EMC protection and alien crosstalk compliance for shielded products
- Support the 4 connectors channel configuration
- **Numbering on each leg (customizable)**
- **Factory tests in paper or electronic format on request**

#### Guarantees

Nexans LANmark Pre-Term bundles are covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with LANmark patch cords of the same category, a 25 year channel warranty can be obtained.

## LANmark Pre-Term Bundles

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                 |
|-------------|--------------------------------------|
|             | ☎ = Make to order, 📦 = Make to stock |

### Selling information

Nexans LANmark Pre-Term Bundles can be ordered in any length up to 90m. Please refer to Nexans Design Guidelines for length calculations and limitations according to the standards. Individual packaging in boxes (L <30m) or one way reel (L >30m). Customized packaging on demand.

## LANmark Pre-Term Units

- Pre-Term units available in Jack-Jack or Jack-Plug or Plug-Plug assemblies
- Cat.6, 6A, 7 or 7A performance supported
- Repeatable and stable level of performance
- Significant reduction of cable laying time

### Description

#### Application

LANmark Pre-Term pre-terminated units can be Jack-Jack, Jack-Plug or Plug-Plug assemblies. LANmark Pre-Term units are well suited for areas where installation time is limited. Shielded units ensure immunity from electromagnetic interferences and do not require on-site testing for Alien Crosstalk since this new parameter is met by design.

#### Performance

Cat.6/Class E, Cat.6A/Class EA, Cat.7/Class F or Cat.7A/Class FA units can be made. Headroom and bandwidth over and above the given category requirements according to the international, european and american standards especially for NEXT/FEXT, Power Sum NEXT/FEXT and Return Loss are guaranteed. When used in combination with LANmark patch cords of the same category the full 100m four-connector links and channels are guaranteed as well.

#### Installation

Nexans LANmark Pre-Term Units help reducing the installation time since connectors termination is simply eliminated. Connectors are mounted and tested in our factory.

Nexans LANmark Pre-Term Units are designed to be laid and are not suitable for pulling.

All structural hardware items designed for the Snap-In range can be used in all positions of a 4 connector twisted pair cabling channel (PP, CC, CP, TO).

- Fast and straight forward installation
- No need for on-site termination
- Reduction of installation time
- 360° EMC protection and alien crosstalk compliance for shielded products
- Support the 4 connectors channel configuration
- **Numbering on each Unit (customizable)**
- **Factory tests in paper or electronic format on request**

#### Guarantees

Nexans LANmark Pre-Term Units are covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with LANmark patch cords of the same category, a 25 year channel warranty can be obtained.

### Standards

**International ISO/IEC 11801**

## LANmark Pre-Term Units

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  N61A.2C21A4XA4X---<br>New                                                                                              | LANmark-6 Pre-Term Cat 6 F1/UTP Solid LSZH Orange Screened Jack Cat 6 unit            |
|  N61B.4G21A6XA6X---<br>New                                                                                              | LANmark-6A Pre-Term 2x4 Pair Cat 6A F/FTP Solid LSZH Orange Screened Jack Cat 6A unit |
|  N61A.4F11A6XC6X---<br>New                                                                                              | LANmark-6A Pre-Term Cat 6A U/FTP Stranded LSZH Orange Screened Jack-Plug Cat 6A unit  |
|  = Make to order,  = Make to stock |                                                                                       |

### Selling information

Nexans LANmark Pre-Term Units can be ordered in any length up to 90m. Please refer to Nexans Design Guidelines for length calculations and limitations according to the standards. Individual packaging in boxes (L <30m) or one way reel (L >30m). Customized packaging on demand.

## LANmark-6A Pre-Term Multipair Cat 6A RJ45 Jack-Jack

- Ideal assemblies for 10GBase-T applications and datacenters
- Fully compliant to the new Category 6A and Class EA standards
- Guaranteed performance in 2, 3 or 4 connectors channels up to 500MHz
- Very short distances for datacenters supported
- Fully screened and compliant to Alien Crosstalk requirements
- Enable fast installation and eliminate field termination
- Repeatable and stable level of performance

### Description

#### Application

LANmark-6A Pre-Term Category 6A U/FTP solid LSZH orange screened Jack Category 6A assemblies have been designed specifically to support the higher frequencies required for 10 Gigabit Ethernet, while maintain to be fully backwards compatible with today's needs. All LANmark-6A products making the assemblies are screened to ensure immunity from Alien Crosstalk and other external interference and are specified up to frequencies of 500MHz. LANmark-6A EVO jacks use a fully closed rear cover providing 360° screening and excellent coupling attenuation. The Multipair cable is made of individually screened pairs assembled in several 4 pair units. These LANmark-6A Pre-Term Category 6A assemblies do not required on-site testing for Alien Crosstalk since this new 10G parameter is met by design.

- 10Base-T Ethernet
- 100Base-TX Fast Ethernet
- 1000Base-TX Gigabit Ethernet
- 10GBase-T 10 Gigabit Ethernet IEEE 802.3an
- 155 Mbit ATM
- 1.2 Gbit ATM
- future Cat 6A and Class EA applications

#### Performance

With guaranteed performance to 500MHz, Nexans LANmark-6A Pre-Term Category 6A assemblies provide guaranteed headroom and bandwidth over and above the Category 6A / Class EA requirements of international, european and american standards especially for NEXT/FEXT, Power Sum NEXT/FEXT and Return Loss. When used in combination with LANmark-6A patch cords, the system supports the 10GBase-T applications as defined in IEEE 802.3an, and the full 100m four-connector links and channels meet Category 6A and Class EA requirements as defined in TIA/EIA568B.2 Addendum 10 and ISO/IEC11801 2002/A1:2008. This enables to achieve high performing 4 connectors channels as well as very short link and channel configurations needed in data centres with up to 3 connection points within 12 meters.

#### Installation

Nexans LANmark-6A Pre-Term Category 6A assemblies have the advantage of offering significantly smaller dimensions and reduced weight compared to the equivalent standard 4 pair cables. They also provide a significant installation advantage. Cable pulling is reduced to one unit. Connectors termination is simply eliminated.

All structural hardware items designed for the EVO Snap-In range can be used in all positions of a 4 connector twisted pair cabling channel (PP, CC, CP, TO).



#### Standards

**International** EN 50173-5;  
IEEE 802.3an; ISO/IEC 24764; ISO/  
IEC 11801:2002/Amd 2:2010/  
Cor 1:2010

**National** ANSI/TIA-568-C.2; TIA/  
EIA-942

## LANmark-6A Pre-Term Multipair Cat 6A RJ45 Jack-Jack

- Fast and straight forward installation
- No need for on-site termination
- 360° EMC protection and alien crosstalk compliance
- Support the 4 connectors channel configuration
- Support short links
- Designed for datacentres
- **Numbering on each leg (customizable)**
- **Factory tests in paper or electronic format on request**

### Guarantees

Nexans LANmark-6A Pre-Term Category 6A assemblies are covered by a parts and labour warranty as described in the Nexans Certified System Warranty. When installed in combination with LANmark-6A patch cords, a 25 year channel warranty can be obtained covering full 10GBase-T support and full Cat 6A/Class EA compliance.

## LANmark-6A Pre-Term Multipair Cat 6A RJ45 Jack-Jack

### Product List

| Nexans ref.                                                                                                 | Name                                                                                       |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
|  N61C.4F21A6XA6X---<br>New | LANmark-6A Pre-Term Multipair 3x4 pair Cat 6A U/FTP Solid LSZH Orange Screened Jack Cat 6A |
|  N61D.4F21A6XA6X---<br>New | LANmark-6A Pre-Term Multipair 4x4 pair Cat 6A U/FTP Solid LSZH Orange Screened Jack Cat 6A |
|  N61E.4F21A6XA6X---<br>New | LANmark-6A Pre-Term Multipair 6x4 pair Cat 6A U/FTP Solid LSZH Orange Screened Jack Cat 6A |

 = Make to order,  = Make to stock

### Electrical Performance LANmark-6A 4 Connector Channel Part 1

"All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance"

| Freq<br>in MHz | Attn  |      | NEXT  |      |      | PSNEXT |      |      | ACR-F |      |
|----------------|-------|------|-------|------|------|--------|------|------|-------|------|
|                | in dB |      | in dB |      |      | in dB  |      |      | in dB |      |
|                | Max   | Typ  | Std   | Min  | Typ  | Std    | Min  | Typ  | Std   | Typ  |
| 1              | <4    | 4.0  | 65.0  | 67.0 | 85.0 | 62.0   | 64.0 | 74.8 | 63.3  | 69.9 |
| 4              | 4.1   | 4.1  | 63.0  | 65.0 | 72.9 | 60.5   | 62.5 | 65.0 | 51.2  | 57.9 |
| 10             | 6.4   | 6.3  | 56.6  | 58.6 | 65.0 | 54.0   | 56.0 | 58.5 | 43.3  | 49.9 |
| 16             | 8.1   | 8.0  | 53.2  | 55.2 | 60.9 | 50.6   | 52.6 | 55.1 | 39.2  | 45.9 |
| 20             | 9.1   | 9.0  | 51.6  | 53.6 | 59.0 | 49.0   | 51.0 | 53.5 | 37.2  | 43.9 |
| 31.25          | 11.4  | 11.2 | 48.4  | 50.4 | 55.1 | 45.7   | 47.7 | 50.2 | 33.4  | 40.0 |
| 62.5           | 16.3  | 15.9 | 43.4  | 45.4 | 49.1 | 40.6   | 42.6 | 45.1 | 27.3  | 34.0 |
| 100            | 20.8  | 20.2 | 39.9  | 41.9 | 45.0 | 37.1   | 39.1 | 41.6 | 23.3  | 29.9 |
| 155            | 26.2  | 25.4 | 36.7  | 38.7 | 41.2 | 33.8   | 35.8 | 38.3 | 19.5  | 26.1 |
| 200            | 30.0  | 28.9 | 34.8  | 36.8 | 39.0 | 31.9   | 33.9 | 36.4 | 17.2  | 23.9 |
| 250            | 33.8  | 32.5 | 33.1  | 35.1 | 37.0 | 30.2   | 32.2 | 34.7 | 15.3  | 22.0 |
| 300            | 37.3  | 35.7 | 31.7  | 33.7 | 35.4 | 28.8   | 30.8 | 33.3 | 13.7  | 20.4 |
| 500            | 49.3  | 46.7 | 27.9  | 29.9 | 31.0 | 24.8   | 26.8 | 24.9 | 9.3   | 16.0 |

\*Standard values based on ISO 11801 Class EA

## LANmark-6A Pre-Term Multipair Cat 6A RJ45 Jack-Jack

### Electrical Performance LANmark-6A 4 Connector Channel Part 2

All values are based on Worst Case 4 Connector Channel configurations according to ISO 11801. Minimal and maximum values represent guaranteed channel performance

| Freq<br>in MHz | PS ACR-F<br>in dB |      | PS ANEXT<br>in dB |      |      | PS AACR-F<br>in dB |      |      | RL<br>in dB |      |      |
|----------------|-------------------|------|-------------------|------|------|--------------------|------|------|-------------|------|------|
|                | Std               | Typ  | Std               | Min  | Typ  | Std                | Min  | Typ  | Std         | Min  | Typ  |
| <b>1</b>       | 60.3              | 66.9 | 80.0              | 90.0 | 92.0 | 77.0               | 92.0 | 94.0 | 19.0        | 21.0 | 21.0 |
| <b>4</b>       | 48.2              | 54.9 | 74.0              | 89.0 | 91.0 | 65.0               | 80.0 | 82.0 | 19.0        | 21.0 | 32.0 |
| <b>10</b>      | 40.3              | 46.9 | 70.0              | 85.0 | 87.0 | 57.0               | 72.0 | 74.0 | 19.0        | 21.0 | 28.0 |
| <b>16</b>      | 36.2              | 42.9 | 68.0              | 83.0 | 85.0 | 52.9               | 67.9 | 69.9 | 18.0        | 20.0 | 26.0 |
| <b>20</b>      | 34.2              | 40.9 | 67.0              | 82.0 | 84.0 | 51.0               | 66.0 | 68.0 | 17.5        | 19.5 | 25.0 |
| <b>31.25</b>   | 30.4              | 37.0 | 65.1              | 80.1 | 82.1 | 47.1               | 62.1 | 64.1 | 16.5        | 18.5 | 23.1 |
| <b>62.5</b>    | 24.3              | 31.0 | 62.0              | 77.0 | 79.0 | 41.1               | 56.1 | 58.1 | 14.0        | 16.0 | 20.0 |
| <b>100</b>     | 20.3              | 26.9 | 60.0              | 75.0 | 77.0 | 37.0               | 52.0 | 54.0 | 12.0        | 14.0 | 18.0 |
| <b>155</b>     | 16.5              | 23.1 | 57.1              | 72.1 | 74.1 | 33.2               | 48.2 | 50.2 | 10.1        | 12.1 | 16.1 |
| <b>200</b>     | 14.2              | 20.9 | 55.5              | 70.5 | 72.5 | 31.0               | 46.0 | 48.0 | 9.0         | 11.0 | 15.0 |
| <b>250</b>     | 12.3              | 19.0 | 54.0              | 69.0 | 71.0 | 29.0               | 44.0 | 46.0 | 8.0         | 10.0 | 14.0 |
| <b>300</b>     | 10.7              | 17.4 | 52.8              | 67.8 | 69.8 | 27.5               | 42.5 | 44.5 | 8.0         | 10.0 | 13.2 |
| <b>500</b>     | 6.3               | 13.0 | 49.5              | 64.5 | 66.5 | 23.0               | 38.0 | 40.0 | 8.0         | 10.0 | 11.0 |

\*Standard values based on ISO 11801 Class EA

### Selling information

Nexans LANmark-6A Pre-Term Category 6A assemblies can be ordered in any length up to 90m. Please refer to Nexans Design Guidelines for length calculations and limitations according to the standards. Individual packaging in boxes (L <30m) or one way reel (L >30m). Customized packaging on demand.



## Optical Fibre

A full spectrum of Nexans LANmark fiber solutions is available for various performance levels and constructions to meet different applications and environmental conditions. LANmark fibre solutions approach offers flexibility and scalability for campus and building backbones, horizontal cabling applications, device termination in data centers and storage area networks.

Nexans fibre solutions are a fully integrated element of our LAN systems and covered within the system warranty.

The range includes:

- Cables
- Connectivity
- Hardware
- Pre-Terminated Fibre Assemblies





## Fibre Cables

A wide variety of cable designs and fibre grade are available, meeting the needs of each mission critical applications. Designed for high performance and scalability for LAN, SAN and Campus applications, LANmark-OF technology deliver premium performance and reliability.

A large number of constructions are available: Tight / loose construction, PE / LSZH., rodent resistant / dielectric, ...

- UT
- UC
- UD
- TB
- TBW+
- ZC



In addition, Nexans proposes the best cost effective solution. 7 different fibre grades are available to best address the level of performance required.p>

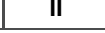
### LANmark-OF OM1, OM2 & OF sm

Standard Multimode & Singlemode performance. LANmark-OF OM1 is the MM62.5 version, LANmark-OF OM2 the MM50 version, LANmark-OF sm the singlemode version.

### LANmark-OF OM3 & OM4

OM3 compliant 50/125 for 10 Gigabit applications up to 300m and up to 550m respectively..

## EIA Fibre Colour Table

| EIA Fibre Colour Coding |           |                                                                                     |       |                  |                                                                                       |
|-------------------------|-----------|-------------------------------------------------------------------------------------|-------|------------------|---------------------------------------------------------------------------------------|
| Fibre                   | Colour    |                                                                                     | Fibre | Colour           |                                                                                       |
| 1                       | Blue      |  | 13    | Blue + 1 ring    |  |
| 2                       | Orange    |  | 14    | Orange + 1 ring  |  |
| 3                       | Green     |  | 15    | Green + 1 ring   |  |
| 4                       | Brown     |  | 16    | Brown + 1 ring   |  |
| 5                       | Grey      |  | 17    | Grey + 1 ring    |  |
| 6                       | White     |  | 18    | White + 1 ring   |  |
| 7                       | Red       |  | 19    | Blue + 2 rings   |  |
| 8                       | Black     |  | 20    | Orange + 2 rings |  |
| 9                       | Yellow    |  | 21    | Green + 2 rings  |  |
| 10                      | Violet    |  | 22    | Brown + 2 rings  |  |
| 11                      | Pink      |  | 23    | Grey + 2 rings   |  |
| 12                      | Turquoise |  | 24    | White + 2 rings  |  |

## Optical cable specifications

- Full range of standard compliant multimode cables
- Singlemode OS2 cables

### Description

#### **LANmark-OF OM3 and OM4: Fibre cables with high performance multimode fibres for 10, 40 and 100 Gb/s Ethernet LAN applications**

LANmark-OF OM3 and OM4 from Nexans Cabling Solutions offers fully OM3 and OM4 standard compliant multimode fibres. LANmark-OF OM3 and OM4 ensures highest bandwidth performance for Premises, Local Area Network (LAN) and Storage Area Network (SAN) while its optimised design for low-cost 850 nm lasers (VCSEL) contributes to overall system cost reduction.

The low attenuation values of 3.0 dB/km @ 850 nm exceed the requirements of the ISO/IEC 11801 standard. The superior geometric tolerances compared to the fibre standard reduce the connector loss due to improved coupling from the light. The effective modal bandwidth is measured with the most stringent DMD characterisation methods: LANmark-OF cables are measured against both the Effective Modal Bandwidth Calculated (EMBc) method and the mask templates standard.



**LANmark-OF**

### Standards

International ISO/IEC 11801

#### **LANmark-OF OM3: Key performance characteristics**

- Guarantees reliable system performance for 10 Gb/s Ethernet serial transmission over 330 m.
- Guarantees reliable system performance for 40 Gb/s and 100 Gb/s Ethernet transmission over 100 m.
- Guaranteed OM3 compliance: Effective Modal Bandwidth (EMB) of 2000 Mhz.km.
- Compliant to annex D2 (DMD template requirements) and annex D3 (EMBc: calculated effective modal bandwidth) of IEC 60793-2-10 ed. 4.
- IEC 60793-2-10 as fibre type A1a.2

#### **LANmark-OF OM4: Key performance characteristics**

- Guarantees reliable system performance for 10 Gb/s Ethernet serial transmission over 550 m
- Guarantees reliable system performance for 40 Gb/s and 100 Gb/s Ethernet transmission over 150 m with LANmark-OF low loss connectivity.
- Guaranteed OM4 compliance: Effective Modal Bandwidth (EMB) of 4700 Mhz.km.
- Compliant to annex D4 (DMD template requirements) and annex D5 (EMBc: calculated effective modal bandwidth) of IEC 60793-2-10 ed. 4.
- Compliant to IEC 60793-2-10 as fibre type A1a.3

#### **Standardization and compliances for LANmark-OF OM3 and LANmark-OF OM4**

- IEC 60793-1-49: differential mode delay (DMD) to measure effective modal bandwidth (EMB)
- IEC 60793-1-41: overfilled mode launch bandwidth (OFL BW)
- ISO/IEC 11801 (2) as OM3 and OM4 fibre

#### **LANmark-OF OS2 Singlemode cables with low water peak**

## Optical cable specifications

### singlemode fibre (G.652.D)

Singlemode OS2 cables from Nexans Cabling Solution are cables with full spectrum fibres and provide enhanced performance across the entire 1260 nm to 1625 nm wavelength range. Due to its long-term low attenuation at the 1383 nm water peak region the fibres allow operation in the expanded band (wavelength across 1360 to 1480 nm).

Its full-spectrum capability allows use of lasers for DWDM and CWDM technologies. LANmark-OF OS2 Singlemode cables have low attenuation values across the entire wavelength range. They are full compatibility and interoperability with the installed fibre base, including standard singlemode fibre according to ITU-T G652A, B and C.

### Standardization and compliances for LANmark-OF Singlemode OS2

- ITU-T as fibre type G.652.D
- Singlemode OS2 cable defined in ISO/IEC 11801 amendment 2
- IEC 60793-1
- IEC 60793-2-50 as fibre type B1.3

### LANmark-OF OM3 and OM4: Optical Performance

| Characteristics                                | OM3 Spec Values | OM4 Spec Values | Unit   |
|------------------------------------------------|-----------------|-----------------|--------|
| Bandwidth (Overfilled Launch) 850 nm           | ≥ 1500          | ≥ 3500          | Mhz.km |
| Bandwidth (Overfilled Launch) 1300 nm          | ≥ 500           | ≥ 500           | Mhz.km |
| Effective Modal Bandwidth (EMB) 850 nm         | ≥ 2000          | ≥ 4700          | Mhz.km |
| Transmission link lengths for 1 Gb/s (SX/LX)   | 880/550         | 900/550         | m      |
| Transmission link lengths for 10 Gb/s (SR/LX4) | 330/300         | 550*/300        | m      |
| Transmission link lengths for 40 Gb/s (SR4)    | 100             | 150*            | m      |
| Transmission link lengths for 100 Gb/s (SR10)  | 100             | 150*            | m      |
| Attenuation 850 nm                             | 3.0             | 3.0             | dB/km  |
| Attenuation 1300 nm                            | 1.0             | 1.0             | dB/km  |
| Attenuation uniformity                         | ≤ 0.2           | ≤ 0.2           | dB     |
| Numerical Aperture                             | 0.20 ± 0.02     | 0.20 ± 0.02     |        |

\* with engineered link of maximum 1.0 dB connector insertion loss

### LANmark-OF OM3 and OM4: Geometrical Characteristics

| Characteristic                   | Spec Values | Unit |
|----------------------------------|-------------|------|
| Core Diameter                    | 50 ± 2.5    | µm   |
| Core Non-Circularity             | ≤ 6.0       | %    |
| Core/Clad Concentricity          | ≤ 1.5       | µm   |
| Cladding Diameter                | 125 ± 1.0   | µm   |
| Cladding Non-Circularity         | ≤ 1.0       | %    |
| Coating Diameter                 | 250 ± 15.0  | µm   |
| Coating/Clad Concentricity Error | ≤ 10.0      | µm   |

## Optical cable specifications

### LANmark-OF OS2 Singlemode cables: Optical Performance

| Characteristics                          | Spec Values | Unit     |
|------------------------------------------|-------------|----------|
| Fibre type                               | G.652.D     |          |
| Transmission link length for 1000Base-LX | 5000        | m        |
| Transmission link length for 10GBase-LR  | 10000       | m        |
| Transmission link length for 10GBase-LX4 | 10000       | m        |
| Transmission link length for 10Gbit-FC   | 10000       | m        |
| Attenuation 1300 nm                      | 0.40        | dB/km    |
| Attenuation 1385 nm                      | 0.40        | dB/km    |
| Attenuation 1550 nm                      | 0.28        | dB/km    |
| Attenuation uniformity                   | ≤ 0.2       | dB       |
| Cut-off wavelength                       | 1150 - 1330 | nm       |
| Dispersion 1285-1330 nm                  | ≤ 3.5       | ps/nm.km |
| Dispersion 1550 nm                       | ≤ 18        | ps/nm.km |
| Zero dispersion                          | 1310 ± 10   | nm       |
| Dispersion mode polarisation             | ≤ 0.2       | ps/√km   |

### LANmark-OF Singlemode OS2 cables: Geometrical Characteristics

| Characteristic           | Spec Values | Unit |
|--------------------------|-------------|------|
| Mode Field Diameter      | 9.2 ± 0.5   | μm   |
| Cladding Diameter        | 125 ± 1.0   | μm   |
| Coating Diameter         | 245 ± 10.0  | μm   |
| Core Non-Circularity     | ≤ 6.0       | %    |
| Cladding Non-Circularity | ≤ 2.0       | %    |
| Proof test               | 100         | psi  |

## LANmark-OF Tight Buffer Indoor

- Tight Buffer Indoor optical fibre cable
- Indoor cable
- Aramid yarns for ease of installation
- Designed for direct termination and splicing
- Up to 24 fibres and available in all fibre grades

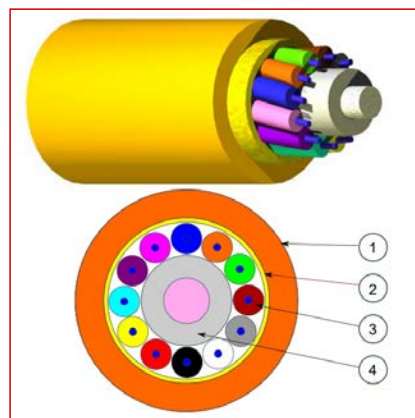
### Description

#### Description and Application

The LANmark-OF Tight buffer Indoor has 900 um buffered fibres. This second coating till 900 um provides additional protection of the fibres and facilitates the handling when terminating the fibres in a patch panel. The easy strip tight buffer design allows stripping the fibre over 10 cm in one action.

The LANmark-OF Tight buffer Indoor is most suitable for direct termination by either anaerobic or hot melt connectors. The tight buffered fibres can also be terminated with splicing of pigtails.

The dry structure of the LANmark-Of Tight Buffer Indoor allows both vertical and horizontal installations. It complies with the indoor fire requirements. The cables can also be installed in a duct by pulling.



#### Construction

Legend accompanying the cross section drawing:

1. Outer sheath in LSZH material
2. Aramid Yarns
3. Optical fibre (900 um)
4. Central Strength element (not for 2 fibres)

## LANmark-OF

#### Standards

International ISO/IEC 11801

#### Characteristics

- Designed for direct termination and splicing
- Indoor cable for horizontal and vertical installations
- Dielectric design
- Flame retardant (IEC 60332-1 and NFC 32070-C2)
- Fire retardant (IEC 60332-3 and NFC 32070-C1)
- Aramid yarns for ease of handling and as strength element
- Available in all fibre grades
- Available till 24 fibres



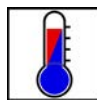
Mechanical resistance to impacts  
100 impacts of 1 N.m



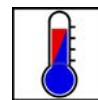
Flame retardant  
IEC 60332-1



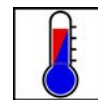
Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-20 .. 60 °C



Storage temperature, range  
-40 .. 60 °C

## LANmark-OF Tight Buffer Indoor

### Characteristics

| Mechanical characteristics              |                      |
|-----------------------------------------|----------------------|
| Mechanical resistance to impacts        | 100 impacts of 1 N.m |
| Crush resistance (IEC 60794-1-E3)       | 100 N/cm             |
| Usage characteristics                   |                      |
| Flame retardant                         | IEC 60332-1          |
| Fire retardant                          | IEC 60332-3          |
| Ambient installation temperature, range | 0 .. 40 °C           |
| Operating temperature, range            | -20 .. 60 °C         |
| Storage temperature, range              | -40 .. 60 °C         |

### Mechanical and Dimensional Characteristics for Tight Buffer Indoor

| Nb optical fibres | Nom. outer diam. [mm] | Approx. weight [kg/km] | static bending rad. [mm] | Min. dynamic operating bending rad. [mm] | Maximum pulling force (IEC 60794-1-2-E1) [N] | Maximum operating pulling force [N] |
|-------------------|-----------------------|------------------------|--------------------------|------------------------------------------|----------------------------------------------|-------------------------------------|
| 2                 | 4.7                   | 17                     | 35                       | 100.0                                    | 800                                          | 400                                 |
| 4                 | 4.6                   | 24                     | 45                       | 100.0                                    | 700                                          | 200                                 |
| 6                 | 4.6                   | 24                     | 45                       | 100.0                                    | 700                                          | 200                                 |
| 8                 | 5.3                   | 33                     | 70                       | 110.0                                    | 1200                                         | 300                                 |
| 12                | 6.6                   | 48                     | 70                       | 135.0                                    | 1200                                         | 300                                 |
| 24                | 7.3                   | 60                     | 75                       | 150.0                                    | 1900                                         | 550                                 |

### N-numbers for Tight Buffer Indoor

| Fiber optic type | Nexans ref. | Name                                                                  |
|------------------|-------------|-----------------------------------------------------------------------|
| OM1 62.5/125     | N160.TBIN02 | LANmark-OF Tight Buffer Indoor 2x Multimode 62,5/125 OM1 LSZH Orange  |
| OM1 62.5/125     | N160.TBIN04 | LANmark-OF Tight Buffer Indoor 4x Multimode 62,5/125 OM1 LSZH Orange  |
| OM1 62.5/125     | N160.TBIN06 | LANmark-OF Tight Buffer Indoor 6x Multimode 62,5/125 OM1 LSZH Orange  |
| OM1 62.5/125     | N160.TBIN08 | LANmark-OF Tight Buffer Indoor 8x Multimode 62,5/125 OM1 LSZH Orange  |
| OM1 62.5/125     | N160.TBIN12 | LANmark-OF Tight Buffer Indoor 12x Multimode 62,5/125 OM1 LSZH Orange |
| OM1 62.5/125     | N160.TBIN24 | LANmark-OF Tight Buffer Indoor 24x Multimode 62,5/125 OM1 LSZH Orange |
| OM2 50/125       | N162.TBIN02 | LANmark-OF Tight Buffer Indoor 2x Multimode 50/125 OM2 LSZH Orange    |
| OM2 50/125       | N162.TBIN04 | LANmark-OF Tight Buffer Indoor 4x Multimode 50/125 OM2 LSZH Orange    |
| OM2 50/125       | N162.TBIN06 | LANmark-OF Tight Buffer Indoor 6x Multimode 50/125 OM2 LSZH Orange    |
| OM2 50/125       | N162.TBIN08 | LANmark-OF Tight Buffer Indoor 8x Multimode 50/125 OM2 LSZH Orange    |
| OM2 50/125       | N162.TBIN12 | LANmark-OF Tight Buffer Indoor 12x Multimode 50/125 OM2 LSZH Orange   |
| OM2 50/125       | N162.TBIN24 | LANmark-OF Tight Buffer Indoor 24x Multimode 50/125 OM2 LSZH Orange   |
| OM3 50/125       | N165.TBIN02 | LANmark-OF Tight Buffer Indoor 2x Multimode 50/125 OM3 LSZH Orange    |
| OM3 50/125       | N165.TBIN04 | LANmark-OF Tight Buffer Indoor 4x Multimode 50/125 OM3 LSZH Orange    |
| OM3 50/125       | N165.TBIN06 | LANmark-OF Tight Buffer Indoor 6x Multimode 50/125 OM3 LSZH Orange    |
| OM3 50/125       | N165.TBIN08 | LANmark-OF Tight Buffer Indoor 8x Multimode 50/125 OM3 LSZH Orange    |
| OM3 50/125       | N165.TBIN12 | LANmark-OF Tight Buffer Indoor 12x Multimode 50/125 OM3 LSZH Orange   |



Mechanical resistance to impacts  
100 impacts of 1 N.m



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-20 .. 60 °C



Storage temperature, range  
-40 .. 60 °C

## LANmark-OF Tight Buffer Indoor

| Fiber optic type | Nexans ref. | Name                                                                |
|------------------|-------------|---------------------------------------------------------------------|
| OM3 50/125       | N165.TBIN24 | LANmark-OF Tight Buffer Indoor 24x Multimode 50/125 OM3 LSZH Orange |
| OM4 50/125       | N167.TBIN02 | LANmark-OF Tight Buffer Indoor 2x Multimode 50/125 OM4 LSZH Orange  |
| OM4 50/125       | N167.TBIN04 | LANmark-OF Tight Buffer Indoor 4x Multimode 50/125 OM4 LSZH Orange  |
| OM4 50/125       | N167.TBIN06 | LANmark-OF Tight Buffer Indoor 6x Multimode 50/125 OM4 LSZH Orange  |
| OM4 50/125       | N167.TBIN08 | LANmark-OF Tight Buffer Indoor 8x Multimode 50/125 OM4 LSZH Orange  |
| OM4 50/125       | N167.TBIN12 | LANmark-OF Tight Buffer Indoor 12x Multimode 50/125 OM4 LSZH Orange |
| OM4 50/125       | N167.TBIN24 | LANmark-OF Tight Buffer Indoor 24x Multimode 50/125 OM4 LSZH Orange |
| SM (G.652D)      | N164.TBIN02 | LANmark-OF Tight Buffer Indoor 2x Singlemode 9/125 OS2 LSZH Yellow  |
| SM (G.652D)      | N164.TBIN04 | LANmark-OF Tight Buffer Indoor 4x Singlemode 9/125 OS2 LSZH Yellow  |
| SM (G.652D)      | N164.TBIN06 | LANmark-OF Tight Buffer Indoor 6x Singlemode 9/125 OS2 LSZH Yellow  |
| SM (G.652D)      | N164.TBIN08 | LANmark-OF Tight Buffer Indoor 8x Singlemode 9/125 OS2 LSZH Yellow  |
| SM (G.652D)      | N164.TBIN12 | LANmark-OF Tight Buffer Indoor 12x Singlemode 9/125 OS2 LSZH Yellow |
| SM (G.652D)      | N164.TBIN24 | LANmark-OF Tight Buffer Indoor 24x Singlemode 9/125 OS2 LSZH Yellow |



Mechanical resistance to impacts  
100 impacts of 1 N.m



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-20 .. 60 °C



Storage temperature, range  
-40 .. 60 °C

## LANmark-OF Tight Buffer Universal

- Tight Buffer Universal optical fibre cable
- Indoor cable and outdoor installation in a duct
- Fully waterproof and rodent retardant
- Designed for direct termination and splicing
- Up to 24 fibres and available in all fibre grades

### Description

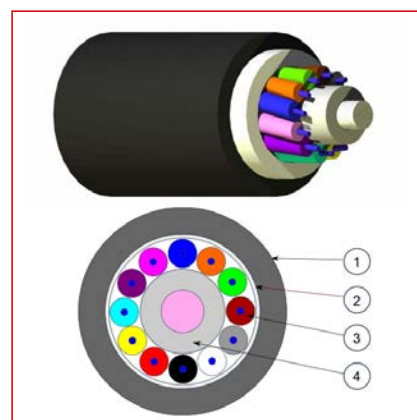
#### Description and Application

The LANmark-OF Tight buffer Universal has 900 um buffered fibres. This second coating till 900 um provides additional protection of the fibres and facilitates the handling when terminating the fibres in a patch panel. The easy strip tight buffer design allows stripping the fibre over 10 cm in one action.

The LANmark-OF Tight buffer Universal is most suitable for direct termination by either anaerobic or hot melt connectors. The tight buffered fibres can also be terminated with splicing of pigtails.

The dry structure of the LANmark-Of Tight Buffer Universal allows both vertical and horizontal installations. It complies with the indoor fire requirements. The cables can also be installed in a duct by pulling.

The LANmark-OF Tight Buffer Universal can be used for outdoor installation in a duct: the water tight glass yarns make the cables fully waterproof and rodent resistant.



**LANmark-OF**

### Standards

**International ISO/IEC 11801**

### Construction

Legend accompanying the cross section drawing:

1. LSZH outer sheath with UV resistant additive
2. Watertight glass yarns
3. Optical fibres (900 um)
4. Central strength element

### Characteristics

- Designed for direct termination and splicing
- Dielectric design
- Indoor cable for horizontal and vertical installations
- Flame retardant (IEC 60332-1 and NFC 32070 C2) and fire retardant (IEC 60332-3 and NFC 32070 C1)
- Outdoor cable for installation in a duct
- Fully waterproof
- Rodent resistant
- UV resistant
- Available in all standard compliant fibre grades
- Available till 24 fibres



Mechanical resistance to impacts  
100 impacts of 1 N.m



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-40 .. 70 °C



Storage temperature, range  
-40 .. 70 °C

## LANmark-OF Tight Buffer Universal

### Characteristics

|                                         |                      |
|-----------------------------------------|----------------------|
| <b>Mechanical characteristics</b>       |                      |
| Mechanical resistance to impacts        | 100 impacts of 1 N.m |
| Crush resistance (IEC 60794-1-E3)       | 100 N/cm             |
| <b>Usage characteristics</b>            |                      |
| Flame retardant                         | IEC 60332-1          |
| Fire retardant                          | IEC 60332-3          |
| Ambient installation temperature, range | 0 .. 40 °C           |
| Operating temperature, range            | -40 .. 70 °C         |
| Storage temperature, range              | -40 .. 70 °C         |

### Mechanical and Dimensional Characteristics for Tight Buffer Universal

| Number of optical fibres                 | 4    | 6    | 8    | 12    | 24    |       |
|------------------------------------------|------|------|------|-------|-------|-------|
| Nominal outer diameter                   | 5.7  | 5.7  | 6.5  | 6.7   | 7.9   | mm    |
| Approximate weight                       | 38   | 38   | 47   | 49    | 75    | kg/km |
| Minimum static operating bending radius  | 55   | 55   | 65   | 70    | 80    | mm    |
| Minimum dynamic operating bending radius | 85.0 | 85.0 | 95.0 | 100.0 | 120.0 | mm    |
| Maximum pulling force (IEC 60794-1-2-E1) | 1000 | 1000 | 1000 | 1000  | 1750  | N     |
| Maximum operating pulling force          | 300  | 300  | 300  | 300   | 500   | N     |

### N-numbers for Tight Buffer Universal

| Fiber optic type | Nexans ref. | Name                                                                    |
|------------------|-------------|-------------------------------------------------------------------------|
| OM1 62.5/125     | N160.TBUN04 | LANmark-OF Tight Buffer Universal 4x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.TBUN06 | LANmark-OF Tight Buffer Universal 6x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.TBUN08 | LANmark-OF Tight Buffer Universal 8x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.TBUN12 | LANmark-OF Tight Buffer Universal 12x Multimode 62,5/125 OM1 LSZH Black |
| OM1 62.5/125     | N160.TBUN24 | LANmark-OF Tight Buffer Universal 24x Multimode 62,5/125 OM1 LSZH Black |
| OM2 50/125       | N162.TBUN04 | LANmark-OF Tight Buffer Universal 4x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.TBUN06 | LANmark-OF Tight Buffer Universal 6x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.TBUN08 | LANmark-OF Tight Buffer Universal 8x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.TBUN12 | LANmark-OF Tight Buffer Universal 12x Multimode 50/125 OM2 LSZH Black   |
| OM2 50/125       | N162.TBUN24 | LANmark-OF Tight Buffer Universal 24x Multimode 50/125 OM2 LSZH Black   |
| OM3 50/125       | N165.TBUN04 | LANmark-OF Tight Buffer Universal 4x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.TBUN06 | LANmark-OF Tight Buffer Universal 6x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.TBUN08 | LANmark-OF Tight Buffer Universal 8x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.TBUN12 | LANmark-OF Tight Buffer Universal 12x Multimode 50/125 OM3 LSZH Black   |
| OM3 50/125       | N165.TBUN24 | LANmark-OF Tight Buffer Universal 24x Multimode 50/125 OM3 LSZH Black   |
| OM4 50/125       | N167.TBUN04 | LANmark-OF Tight Buffer Universal 4x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.TBUN06 | LANmark-OF Tight Buffer Universal 6x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.TBUN08 | LANmark-OF Tight Buffer Universal 8x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.TBUN12 | LANmark-OF Tight Buffer Universal 12x Multimode 50/125 OM4 LSZH Black   |
| OM4 50/125       | N167.TBUN24 | LANmark-OF Tight Buffer Universal 24x Multimode 50/125 OM4 LSZH Black   |



Mechanical resistance to impacts  
100 impacts of 1 N.m



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-40 .. 70 °C



Storage temperature, range  
-40 .. 70 °C

## LANmark-OF Tight Buffer Universal

| Fiber optic type | Nexans ref. | Name                                                                  |
|------------------|-------------|-----------------------------------------------------------------------|
| SM (G.652D)      | N164.TBUN04 | LANmark-OF Tight Buffer Universal 4x Singlemode 9/125 OS2 LSZH Black  |
| SM (G.652D)      | N164.TBUN06 | LANmark-OF Tight Buffer Universal 6x Singlemode 9/125 OS2 LSZH Black  |
| SM (G.652D)      | N164.TBUN08 | LANmark-OF Tight Buffer Universal 8x Singlemode 9/125 OS2 LSZH Black  |
| SM (G.652D)      | N164.TBUN12 | LANmark-OF Tight Buffer Universal 12x Singlemode 9/125 OS2 LSZH Black |
| SM (G.652D)      | N164.TBUN24 | LANmark-OF Tight Buffer Universal 24x Singlemode 9/125 OS2 LSZH Black |



Mechanical resistance to impacts  
100 impacts of 1 N.m



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-40 .. 70 °C



Storage temperature, range  
-40 .. 70 °C

## LANmark-OF Micro-Bundle Indoor

- Micro-Bundle Indoor optical fibre cable
- Indoor cable for backbones and data centres
- Small, but mechanical strong cable
- Designed for splicing with pigtails
- 12-96 fibres and available in all fibre grades

### Description

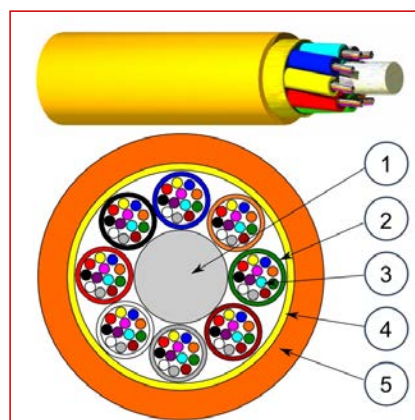
#### Description and Application

The new Micro-Bundle technology from Nexans allows to manufacture a flexible and small tube. This Micro-Bundle is the central part of the new "LANmark-OF Micro-Bundle Indoor" cable design. The Micro-Bundle contains 12 fibres with a fibre diameter of 250  $\mu\text{m}$ . Termination of these fibres is done with splicing with pigtails.

Up to 8 Micro-bundles are arranged around a central strength element. Aramid yarns provide additional strength and make the cable installer friendly. The combination of the Micro-Bundle technology, the central strength element and aramid yarns result in a mechanical robust, but also small and flexible cable. This makes it a optimised cable for data centres and backbones

The small bending radius of the LANmark-OF Micro-Bundle Indoor makes the cable easy to arrange in patch panels, in cable trays and in ducts.

The LANmark-OF Micro-Bundle Indoor complies with the indoor fire requirements. Since there is no drip effect of the very limited amount of gel the cable is optimised for both horizontal and vertical installations.



## LANmark-OF

### Standards

International ISO/IEC 11801

### Construction

Legend accompanying the cross section drawing:

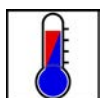
1. Central strength element
2. Micro-Bundle with 12 fibres
3. Optical fibre (250  $\mu\text{m}$ )
4. Reinforced aramid yarns
5. Outer sheath in LSZH material



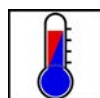
Mechanical resistance to impacts  
10 impacts of 1 N.m



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-10 .. 60 °C



Storage temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1

## LANmark-OF Micro-Bundle Indoor

### Characteristics

- Micro-Bundle design for easy installation
- Indoor cable for horizontal and vertical installations
- Data centre cable
- Flame retardant (IEC 60332-1)
- Fire retardant (IEC 60332-3)
- All dielectric design
- Designed for termination by splicing
- Aramid yarns for ease of handling and as strength element
- 12 fibres per Micro-Bundle
- Available in 12, 24, 48 and 96 fibres
- Available in all fibre grades

### Characteristics

| Mechanical characteristics              |                     |
|-----------------------------------------|---------------------|
| Mechanical resistance to impacts        | 10 impacts of 1 N.m |
| Crush resistance (IEC 60794-1-E3)       | 100 N/cm            |
| Maximum operating pulling force         | 250 N               |
| Usage characteristics                   |                     |
| Ambient installation temperature, range | 0 .. 40 °C          |
| Operating temperature, range            | -10 .. 60 °C        |
| Storage temperature, range              | -20 .. 60 °C        |
| Fire retardant                          | IEC 60332-3         |
| Flame retardant                         | IEC 60332-1         |

### Mechanical and Dimensional Characteristics for Micro-Bundle Indoor

| Nb optical fibres | Nom. outer diam.<br>[mm] | Approx. weight<br>[kg/km] | static bending rad.<br>[mm] | Min. dynamic operating bending rad.<br>[mm] |
|-------------------|--------------------------|---------------------------|-----------------------------|---------------------------------------------|
| 12                | 5.4                      | 37                        | 65                          | 80.0                                        |
| 24                | 5.4                      | 37                        | 65                          | 80.0                                        |
| 48                | 5.4                      | 37                        | 65                          | 80.0                                        |
| 96                | 6.4                      | 50                        | 65                          | 100.0                                       |

### N-numbers for Micro-Bundle Indoor

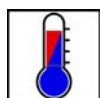
| Fiber optic type | Nexans ref. | Name                                                                  |
|------------------|-------------|-----------------------------------------------------------------------|
| OM1 62.5/125     | N160.MBIN12 | LANmark-OF Micro-Bundle Indoor 12x Multimode 62,5/125 OM1 LSZH Orange |
| OM1 62.5/125     | N160.MBIN24 | LANmark-OF Micro-Bundle Indoor 24x Multimode 62,5/125 OM1 LSZH Orange |
| OM1 62.5/125     | N160.MBIN48 | LANmark-OF Micro-Bundle Indoor 48x Multimode 62,5/125 OM1 LSZH Orange |
| OM1 62.5/125     | N160.MBIN96 | LANmark-OF Micro-Bundle Indoor 96x Multimode 62,5/125 OM1 LSZH Orange |
| OM2 50/125       | N162.MBIN12 | LANmark-OF Micro-Bundle Indoor 12x Multimode 50/125 OM2 LSZH Orange   |
| OM2 50/125       | N162.MBIN24 | LANmark-OF Micro-Bundle Indoor 24x Multimode 50/125 OM2 LSZH Orange   |



Mechanical resistance to impacts  
10 impacts of 1 N.m



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-10 .. 60 °C



Storage temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-3



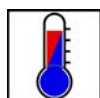
Flame retardant  
IEC 60332-1

## LANmark-OF Micro-Bundle Indoor

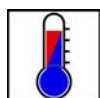
| Fiber optic type | Nexans ref. | Name                                                                |
|------------------|-------------|---------------------------------------------------------------------|
| OM2 50/125       | N162.MBIN48 | LANmark-OF Micro-Bundle Indoor 48x Multimode 50/125 OM2 LSZH Orange |
| OM2 50/125       | N162.MBIN96 | LANmark-OF Micro-Bundle Indoor 96x Multimode 50/125 OM2 LSZH Orange |
| OM3 50/125       | N165.MBIN12 | LANmark-OF Micro-Bundle Indoor 12x Multimode 50/125 OM3 LSZH Orange |
| OM3 50/125       | N165.MBIN24 | LANmark-OF Micro-Bundle Indoor 24x Multimode 50/125 OM3 LSZH Orange |
| OM3 50/125       | N165.MBIN48 | LANmark-OF Micro-Bundle Indoor 48x Multimode 50/125 OM3 LSZH Orange |
| OM3 50/125       | N165.MBIN96 | LANmark-OF Micro-Bundle Indoor 96x Multimode 50/125 OM3 LSZH Orange |
| OM4 50/125       | N167.MBIN12 | LANmark-OF Micro-Bundle Indoor 12x Multimode 50/125 OM4 LSZH Orange |
| OM4 50/125       | N167.MBIN24 | LANmark-OF Micro-Bundle Indoor 24x Multimode 50/125 OM4 LSZH Orange |
| OM4 50/125       | N167.MBIN48 | LANmark-OF Micro-Bundle Indoor 48x Multimode 50/125 OM4 LSZH Orange |
| OM4 50/125       | N167.MBIN96 | LANmark-OF Micro-Bundle Indoor 96x Multimode 50/125 OM4 LSZH Orange |
| SM (G.652D)      | N164.MBIN12 | LANmark-OF Micro-Bundle Indoor 12x Singlemode 9/125 OS2 LSZH Yellow |
| SM (G.652D)      | N164.MBIN24 | LANmark-OF Micro-Bundle Indoor 24x Singlemode 9/125 OS2 LSZH Yellow |
| SM (G.652D)      | N164.MBIN48 | LANmark-OF Micro-Bundle Indoor 48x Singlemode 9/125 OS2 LSZH Yellow |
| SM (G.652D)      | N164.MBIN96 | LANmark-OF Micro-Bundle Indoor 96x Singlemode 9/125 OS2 LSZH Yellow |



Mechanical resistance to impacts  
10 impacts of 1 N.m



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-10 .. 60 °C



Storage temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1

## LANmark-OF Micro-Bundle Universal (24F-72F)

- Micro-Bundle Universal optical fibre cable
- Indoor cable and outdoor installation in a duct
- Fully waterproof and rodent resistant
- Small, but mechanical strong cable
- Designed for splicing with pigtails
- 24-72 fibres and available in all fibre grades

### Description

#### Description and Application

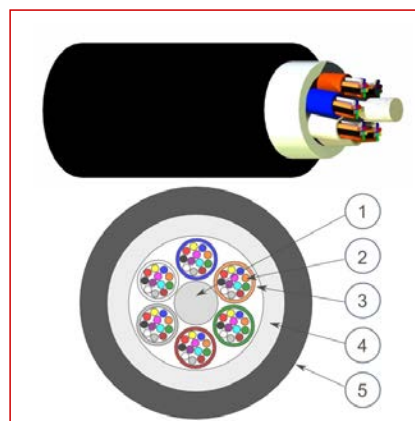
The new Micro-Bundle technology from Nexans allows to manufacture a flexible and small tube. This Micro-Bundle is the central part of the new "LANmark-OF Micro-Bundle Universal" cable design. Each Micro-Bundle contains 12 fibres with a fibre diameter of 250  $\mu\text{m}$ . Termination of these fibres is done with splicing with pigtails.

Up to 6 Micro-Bundles are arranged around a central strength element. The combination of the Micro-Bundle technology, the central strength element and the glass yarns result in a mechanical robust, but also in a small and flexible cable.

The small bending radius of the LANmark-OF Micro-Bundle Universal makes the cable easy to arrange in patch panels, in cable trays and in ducts.

The watertight glass yarns and the very limited amount of gel inside the tube make the LANmark-OF Micro-Bundle Universal design watertight, rodent resistant and suitable for installation outdoor in a duct by pulling.

The LANmark-OF Micro-Bundle Universal complies with the indoor fire requirements. Since there is no drip effect of the very limited amount of gel the cable is optimised for both horizontal and vertical installations.



## LANmark-OF

### Standards

International ISO/IEC 11801

### Construction

Legend accompanying the cross section drawing:

1. Central strength element
2. Optical fibre (250  $\mu\text{m}$ )
3. Micro-Bundle with 12 fibres
4. Reinforced watertight glass yarns
5. Outer sheath in LSZH material with UV resistant additive



Mechanical resistance to impacts  
10 impacts of 1 N.m



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-30 .. 60 °C



Storage temperature, range  
-30 .. 60 °C



Minimum static operating bending radius  
75 mm



Minimum dynamic operating bending radius  
150.0 mm



Fire retardant IEC  
60332-3



Flame retardant IEC  
60332-1

## LANmark-OF Micro-Bundle Universal (24F-72F)

### Characteristics

- Micro-Bundle design for easy installation
- Indoor cable for horizontal and vertical installations
- Flame retardant (IEC 60332-1)
- Fire retardant (IEC 60332-3)
- Outdoor cable for installation in a duct
- Waterproof structure, rodent resistant and UV-resistant
- All dielectric design
- Designed for termination by splicing
- 12 fibres per Micro-Bundle
- Available in 24, 48 and 96 fibres
- Available in all fibre grades

### Characteristics

|                                          |                     |
|------------------------------------------|---------------------|
| <b>Dimensional characteristics</b>       |                     |
| Approximate weight                       | 64 kg/km            |
| Nominal outer diameter                   | 7.2 mm              |
| <b>Mechanical characteristics</b>        |                     |
| Mechanical resistance to impacts         | 10 impacts of 1 N.m |
| Crush resistance (IEC 60794-1-E3)        | 100 N/cm            |
| Maximum operating pulling force          | 600 N               |
| Maximum pulling force (IEC 60794-1-2-E1) | 2000 N              |
| <b>Usage characteristics</b>             |                     |
| Ambient installation temperature, range  | 0 .. 40 °C          |
| Operating temperature, range             | -30 .. 60 °C        |
| Storage temperature, range               | -30 .. 60 °C        |
| Minimum static operating bending radius  | 75 mm               |
| Minimum dynamic operating bending radius | 150.0 mm            |
| Fire retardant                           | IEC 60332-3         |
| Flame retardant                          | IEC 60332-1         |

### N-number for Micro-Bundle Universal (24F-72F)

| Fiber optic type | Nexans ref. | Name                                                                    |
|------------------|-------------|-------------------------------------------------------------------------|
| OM1 62.5/125     | N160.MBUN24 | LANmark-OF Micro-Bundle Universal 24x Multimode 62,5/125 OM1 LSZH Black |
| OM1 62.5/125     | N160.MBUN48 | LANmark-OF Micro-Bundle Universal 48x Multimode 62,5/125 OM1 LSZH Black |
| OM1 62.5/125     | N160.MBUN72 | LANmark-OF Micro-Bundle Universal 72x Multimode 62,5/125 OM1 LSZH Black |
| OM2 50/125       | N162.MBUN24 | LANmark-OF Micro-Bundle Universal 24x Multimode 50/125 OM2 LSZH Black   |
| OM2 50/125       | N162.MBUN48 | LANmark-OF Micro-Bundle Universal 48x Multimode 50/125 OM2 LSZH Black   |
| OM2 50/125       | N162.MBUN72 | LANmark-OF Micro-Bundle Universal 72x Multimode 50/125 OM2 LSZH Black   |
| OM3 50/125       | N165.MBUN24 | LANmark-OF Micro-Bundle Universal 24x Multimode 50/125 OM3 LSZH Black   |



Mechanical resistance to impacts  
10 impacts of 1 N.m



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-30 .. 60 °C



Storage temperature, range  
-30 .. 60 °C



Minimum static operating bending radius  
75 mm



Minimum dynamic operating bending radius  
150.0 mm



Fire retardant IEC 60332-3



Flame retardant IEC 60332-1

## LANmark-OF Micro-Bundle Universal (24F-72F)

| Fiber optic type | Nexans ref. | Name                                                                  |
|------------------|-------------|-----------------------------------------------------------------------|
| OM3 50/125       | N165.MBUN48 | LANmark-OF Micro-Bundle Universal 48x Multimode 50/125 OM3 LSZH Black |
| OM3 50/125       | N165.MBUN72 | LANmark-OF Micro-Bundle Universal 72x Multimode 50/125 OM3 LSZH Black |
| OM4 50/125       | N167.MBUN24 | LANmark-OF Micro-Bundle Universal 24x Multimode 50/125 OM4 LSZH Black |
| OM4 50/125       | N167.MBUN48 | LANmark-OF Micro-Bundle Universal 48x Multimode 50/125 OM4 LSZH Black |
| OM4 50/125       | N167.MBUN72 | LANmark-OF Micro-Bundle Universal 72x Multimode 50/125 OM4 LSZH Black |
| SM (G.652D)      | N164.MBUN24 | LANmark-OF Micro-Bundle Universal 24x Singlemode 9/125 OS2 LSZH Black |
| SM (G.652D)      | N164.MBUN48 | LANmark-OF Micro-Bundle Universal 48x Singlemode 9/125 OS2 LSZH Black |
| SM (G.652D)      | N164.MBUN72 | LANmark-OF Micro-Bundle Universal 72x Singlemode 9/125 OS2 LSZH Black |



Mechanical  
resistance to  
impacts  
10 impacts of 1  
N.m



Ambient  
installation  
temperature,  
range  
0 .. 40 °C



Operating  
temperature,  
range  
-30 .. 60 °C



Storage  
temperature,  
range  
-30 .. 60 °C



Minimum static  
operating  
bending radius  
75 mm



Minimum dynamic  
operating bending  
radius  
150.0 mm



Fire  
retardant  
IEC  
60332-3



Flame  
retardant  
IEC  
60332-1

## LANmark-OF Micro-Bundle Universal (4F-12F)

- Micro-Bundle Universal optical fibre cable
- Indoor cable and outdoor installation in a duct
- Fully waterproof and rodent retardant
- Designed for splicing with pigtails
- 4-12 fibres and available in all fibre grades

### Description

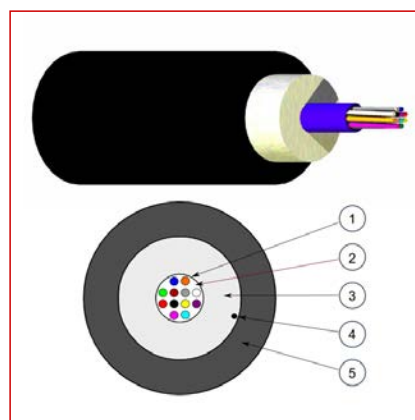
#### Description and Application

The new Micro-Bundle technology from Nexans allows to manufacture a very flexible and small tube that is the central part of the new "LANmark-OF Micro-Bundle Universal" cable design. This results in a small, flexible, but mechanical robust cable. The central tube contains up till 12 fibres with a fibre diameter of 250 µm. Termination of these fibres is done with splicing with pigtails.

The small bending radius of the Micro-Bundle makes the cable easy to arrange in patch panels and for installations in data centres and backbones.

The watertight glass yarns and the very limited amount of gel inside the tube makes this cable design watertight and suitable for installation outdoor in a duct by pulling.

The fire performance of the LANmark-OF Micro-Bundle Universal allows indoor installation as well. Since there is no drip effect of the very limited amount of gel the cable is optimised for both horizontal and vertical installations.



## LANmark-OF

### Standards

International ISO/IEC 11801

### Construction

1. Central Micro-Bundle
2. Optical fibres (250 µm)
3. Reinforced watertight glass yarns
4. Ripcord
5. LSZH outer jacket with UV resistant additive

### Characteristics

- Indoor cable for horizontal and vertical installation
- Outdoor cable for installation in a duct
- Designed for termination by splicing
- Central Micro-Bundle design for easy installation
- All dielectric
- Waterproof structure, Rodent retardant and UV-resistant
- Flame retardant (IEC 60332-1) and fire retardant (IEC 60331-3)
- Available in all fibre grades and from 4-12 fibres



Mechanical  
resistance to  
impacts  
1 impact of 3  
N.m



Flame  
retardant  
IEC  
60332-1



Fire  
retardant  
IEC  
60332-3



Ambient  
installation  
temperature,  
range  
0 .. 40 °C



Operating  
temperature,  
range  
-20 .. 60 °C



Storage  
temperature,  
range  
-40 .. 60 °C



Minimum static  
operating  
bending radius  
60 mm



Minimum dynamic  
operating bending  
radius  
60.0 mm

## LANmark-OF Micro-Bundle Universal (4F-12F)

### Characteristics

| Dimensional characteristics              |                   |
|------------------------------------------|-------------------|
| Approximate weight                       | 42 kg/km          |
| Nominal outer diameter                   | 5.6 mm            |
| Mechanical characteristics               |                   |
| Mechanical resistance to impacts         | 1 impact of 3 N.m |
| Crush resistance (IEC 60794-1-E3)        | 200 N/cm          |
| Maximum operating pulling force          | 700 N             |
| Maximum pulling force (IEC 60794-1-2-E1) | 2200 N            |
| Usage characteristics                    |                   |
| Flame retardant                          | IEC 60332-1       |
| Fire retardant                           | IEC 60332-3       |
| Ambient installation temperature, range  | 0 .. 40 °C        |
| Operating temperature, range             | -20 .. 60 °C      |
| Storage temperature, range               | -40 .. 60 °C      |
| Minimum static operating bending radius  | 60 mm             |
| Minimum dynamic operating bending radius | 60.0 mm           |

### N-numbers for Micro-Bundle Universal

| Fiber optic type | Nexans ref. | Name                                                                    |
|------------------|-------------|-------------------------------------------------------------------------|
| OM1 62.5/125     | N160.MBUN04 | LANmark-OF Micro-Bundle Universal 4x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.MBUN06 | LANmark-OF Micro-Bundle Universal 6x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.MBUN08 | LANmark-OF Micro-Bundle Universal 8x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.MBUN12 | LANmark-OF Micro-Bundle Universal 12x Multimode 62,5/125 OM1 LSZH Black |
| OM2 50/125       | N162.MBUN04 | LANmark-OF Micro-Bundle Universal 4x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.MBUN06 | LANmark-OF Micro-Bundle Universal 6x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.MBUN08 | LANmark-OF Micro-Bundle Universal 8x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.MBUN12 | LANmark-OF Micro-Bundle Universal 12x Multimode 50/125 OM2 LSZH Black   |
| OM3 50/125       | N165.MBUN04 | LANmark-OF Micro-Bundle Universal 4x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.MBUN06 | LANmark-OF Micro-Bundle Universal 6x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.MBUN08 | LANmark-OF Micro-Bundle Universal 8x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.MBUN12 | LANmark-OF Micro-Bundle Universal 12x Multimode 50/125 OM3 LSZH Black   |
| OM4 50/125       | N167.MBUN04 | LANmark-OF Micro-Bundle Universal 4x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.MBUN06 | LANmark-OF Micro-Bundle Universal 6x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.MBUN08 | LANmark-OF Micro-Bundle Universal 8x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.MBUN12 | LANmark-OF Micro-Bundle Universal 12x Multimode 50/125 OM4 LSZH Black   |
| SM (G.652D)      | N164.MBUN04 | LANmark-OF Micro-Bundle Universal 4x Singlemode 9/125 OS2 LSZH Black    |
| SM (G.652D)      | N164.MBUN06 | LANmark-OF Micro-Bundle Universal 6x Singlemode 9/125 OS2 LSZH Black    |
| SM (G.652D)      | N164.MBUN08 | LANmark-OF Micro-Bundle Universal 8x Singlemode 9/125 OS2 LSZH Black    |
| SM (G.652D)      | N164.MBUN12 | LANmark-OF Micro-Bundle Universal 12x Singlemode 9/125 OS2 LSZH Black   |



Mechanical  
resistance to  
impacts  
1 impact of 3  
N.m



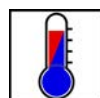
Flame  
retardant  
IEC  
60332-1



Fire  
retardant  
IEC  
60332-3



Ambient  
installation  
temperature,  
range  
0 .. 40 °C



Operating  
temperature,  
range  
-20 .. 60 °C



Storage  
temperature,  
range  
-40 .. 60 °C



Minimum static  
operating  
bending radius  
60 mm



Minimum dynamic  
operating  
bending  
radius  
60.0 mm

## LANmark-OF UD PE

- UD optical fibre cables
- Suitable for outdoor in ducts or direct burial
- Full dielectric armour
- Available in all fibre grades and till 24 fibres
- Rodent resistance

### Description

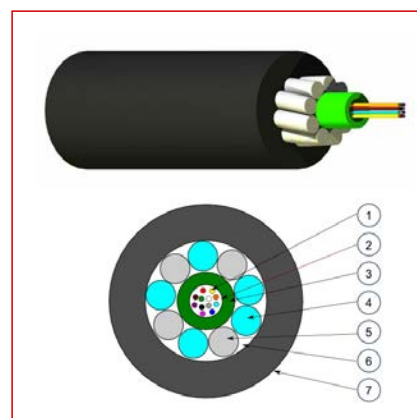
#### Description and Application

The LANmark-OF UD PE cable is designed as a campus cable. It can be pulled in a duct outside or can be direct buried. Its full dielectric armouring does not provide an electrical path and hence the cable can be used to connect 2 buildings.

The central loose tube is surrounded by robust strength elements: Fibre Reinforced Plastic (FRP) elements. These FRP provide the cable with a high rodent resistant and a high resistant against impacts and compression. There are 4 x FRP and 5 x fillers for fibre counts 4-12. For 14-24 fibres there are 5 X FRP and 5 X fillers.

The loose tube design has a capacity of up to 24 fibres. Diameter of the fibres is 250 um. Termination of these fibres is done with splicing of pigtails.

The cable is watertight due to the gel in the loose tube and the watertight glass yarns.



## LANmark-OF

### Standards

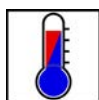
International ISO/IEC 11801

### Construction

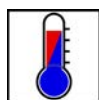
Legend accompanying the cross section drawing:

1. Optical fibres (250 um)
2. Gel
3. Loose tube
4. Fillers
5. Fibre Reinforced Plastic strength elements
6. Reinforced watertight glass yarns
7. PE outer jacket with UV resistant additive

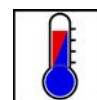
### Characteristics



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-30 .. 60 °C



Storage temperature, range  
-40 .. 70 °C

## LANmark-OF UD PE

- Outdoor cable for installation in a duct or direct burial
- Designed for termination by splicing
- Central loose tube design
- All dielectric design with FRP reinforcement and glass yarns
- Waterproof structure, rodent resistant and UV-resistant
- Available in all fibre grades
- Available from 4-24 fibres
- Excellent friction properties

### Characteristics

#### Usage characteristics

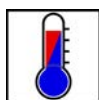
|                                         |              |
|-----------------------------------------|--------------|
| Ambient installation temperature, range | 0 .. 40 °C   |
| Operating temperature, range            | -30 .. 60 °C |
| Storage temperature, range              | -40 .. 70 °C |

### Mechanical and Dimensional Characteristics for LANmark-OF UD PE

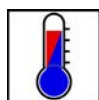
| Nb optical fibres | Nom. outer diam. [mm] | Approx. weight [kg/km] | Min. dynamic operating bending rad. [mm] | static bending rad. [mm] | Crush resistance (IEC 60794-1-E3) [N/cm] | Mechanical resistance to impacts | Maximum pulling force (IEC 60794-1-2-E1) [N] | Maximum operating pulling force [N] |
|-------------------|-----------------------|------------------------|------------------------------------------|--------------------------|------------------------------------------|----------------------------------|----------------------------------------------|-------------------------------------|
| 4                 | 8.1                   | 50                     | 205.0                                    | 160                      | 300                                      | 100 impacts of 3 N.m             | 1150                                         | 560                                 |
| 6                 | 8.1                   | 50                     | 205.0                                    | 160                      | 300                                      | 100 impacts of 3 N.m             | 1150                                         | 560                                 |
| 8                 | 8.1                   | 50                     | 205.0                                    | 160                      | 300                                      | 100 impacts of 3 N.m             | 1150                                         | 560                                 |
| 12                | 8.1                   | 50                     | 205.0                                    | 160                      | 300                                      | 100 impacts of 3 N.m             | 1150                                         | 560                                 |
| 24                | 9.1                   | 73                     | 225.0                                    | 180                      | 400                                      | 100 impacts of 5 N.m             | 1450                                         | 700                                 |

### N-numbers for LANmark-OF UD PE

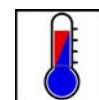
| Nexans ref. | Name                                              |
|-------------|---------------------------------------------------|
| N160.681    | LANmark-OF UD 4x Multimode 62,5/125 OM1 PE Black  |
| N160.682    | LANmark-OF UD 6x Multimode 62,5/125 OM1 PE Black  |
| N160.683    | LANmark-OF UD 8x Multimode 62,5/125 OM1 PE Black  |
| N160.685    | LANmark-OF UD 12x Multimode 62,5/125 OM1 PE Black |
| N160.691    | LANmark-OF UD 24x Multimode 62,5/125 OM1 PE Black |
| N162.681    | LANmark-OF UD 4x Multimode 50/125 OM2 PE Black    |
| N162.682    | LANmark-OF UD 6x Multimode 50/125 OM2 PE Black    |
| N162.683    | LANmark-OF UD 8x Multimode 50/125 OM2 PE Black    |



Ambient installation temperature, range  
0 .. 40 °C



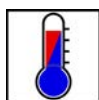
Operating temperature, range  
-30 .. 60 °C



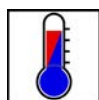
Storage temperature, range  
-40 .. 70 °C

## LANmark-OF UD PE

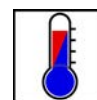
| Nexans ref. | Name                                            |
|-------------|-------------------------------------------------|
| N162.685    | LANmark-OF UD 12x Multimode 50/125 OM2 PE Black |
| N162.691    | LANmark-OF UD 24x Multimode 50/125 OM2 PE Black |
| N164.681    | LANmark-OF UD 4x Singlemode 9/125 OS2 PE Black  |
| N164.682    | LANmark-OF UD 6x Singlemode 9/125 OS2 PE Black  |
| N164.683    | LANmark-OF UD 8x Singlemode 9/125 OS2 PE Black  |
| N164.685    | LANmark-OF UD 12x Singlemode 9/125 OS2 PE Black |
| N164.691    | LANmark-OF UD 24x Singlemode 9/125 OS2 PE Black |
| N165.681    | LANmark-OF UD 4x Multimode 50/125 OM3 PE Black  |
| N165.682    | LANmark-OF UD 6x Multimode 50/125 OM3 PE Black  |
| N165.683    | LANmark-OF UD 8x Multimode 50/125 OM3 PE Black  |
| N165.685    | LANmark-OF UD 12x Multimode 50/125 OM3 PE Black |
| N165.691    | LANmark-OF UD 24x Multimode 50/125 OM3 PE Black |
| N167.681    | LANmark-OF UD 4x Multimode 50/125 OM4 PE Black  |
| N167.682    | LANmark-OF UD 6x Multimode 50/125 OM4 PE Black  |
| N167.683    | LANmark-OF UD 8x Multimode 50/125 OM4 PE Black  |
| N167.685    | LANmark-OF UD 12x Multimode 50/125 OM4 PE Black |
| N167.691    | LANmark-OF UD 24x Multimode 50/125 OM4 PE Black |



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-30 .. 60 °C



Storage temperature, range  
-40 .. 70 °C

## LANmark-OF UC PE

UC optical fibre cables

- Outdoor in ducts or direct burial
- Corrugated steel tape armour
- Available in all fibres grades
- Provides full rodent protection

### Description

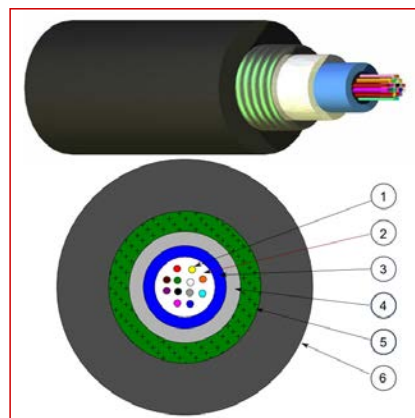
#### Description and Application

The construction is suitable for use outdoor in ducts and for direct burial. It consists of a corrugated steel tape armouring providing full rodent protection. It is surrounded by glass yarns. The cable has a HDPE outer jacket. The loose tube design has a capacity of up to 24 fibres. Diameter of the fibres is 250  $\mu$ m. Termination of these fibres is done with splicing of pigtails. The cable is watertight due to the gel in the loose tube and the watertight glass yarns.

#### Construction

Legend accompanying the cross section drawing:

1. Optical fibres (250  $\mu$ m)
2. Gel
3. Loose tube
4. Reinforced watertight glass yarns
5. Corrugated steel tape armour
6. PE outer jacket with UV resistant additive



**LANmark-OF**

#### Standards

International ISO/IEC 11801

#### Characteristics

- Outdoor cable for installation in a duct or direct burial
- Designed for termination by splicing
- Central loose tube design
- Corrugated steel protection
- Waterproof structure, rodent resistant and UV-resistant
- Available in all fibre grades
- Available from 4-24 fibres



Mechanical  
resistance to  
impacts  
100 impacts of 3  
N.m



Minimum dynamic  
operating bending radius  
200.0 mm



Minimum static  
operating bending  
radius  
140 mm



Operating  
temperature, range  
-20 .. 60 °C



Storage  
temperature, range  
-30 .. 60 °C



Ambient installation  
temperature, range  
0 .. 40 °C

## LANmark-OF UC PE

### Characteristics

| Dimensional characteristics              |                      |
|------------------------------------------|----------------------|
| Nominal outer diameter                   | 9.5 mm               |
| Approximate weight                       | 100 kg/km            |
| Mechanical characteristics               |                      |
| Mechanical resistance to impacts         | 100 impacts of 3 N.m |
| Maximum pulling force (IEC 60794-1-2-E1) | 1500 N               |
| Maximum operating pulling force          | 450 N                |
| Crush resistance (IEC 60794-1-E3)        | 300 N/cm             |
| Usage characteristics                    |                      |
| Minimum dynamic operating bending radius | 200.0 mm             |
| Minimum static operating bending radius  | 140 mm               |
| Operating temperature, range             | -20 .. 60 °C         |
| Storage temperature, range               | -30 .. 60 °C         |
| Ambient installation temperature, range  | 0 .. 40 °C           |

### N-numbers for LANmark-OF UC PE

| Fiber optic type | Nexans ref. | Name                                              |
|------------------|-------------|---------------------------------------------------|
| OM1 62.5/125     | N160.181    | LANmark-OF UC 4x Multimode 62,5/125 OM1 PE Black  |
| OM1 62.5/125     | N160.182    | LANmark-OF UC 6x Multimode 62,5/125 OM1 PE Black  |
| OM1 62.5/125     | N160.183    | LANmark-OF UC 8x Multimode 62,5/125 OM1 PE Black  |
| OM1 62.5/125     | N160.185    | LANmark-OF UC 12x Multimode 62,5/125 OM1 PE Black |
| OM1 62.5/125     | N160.191    | LANmark-OF UC 24x Multimode 62,5/125 OM1 PE Black |
| OM2 50/125       | N162.181    | LANmark-OF UC 4x Multimode 50/125 OM2 PE Black    |
| OM2 50/125       | N162.182    | LANmark-OF UC 6x Multimode 50/125 OM2 PE Black    |
| OM2 50/125       | N162.183    | LANmark-OF UC 8x Multimode 50/125 OM2 PE Black    |
| OM2 50/125       | N162.185    | LANmark-OF UC 12x Multimode 50/125 OM2 PE Black   |
| OM2 50/125       | N162.191    | LANmark-OF UC 24x Multimode 50/125 OM2 PE Black   |
| OM3 50/125       | N165.181    | LANmark-OF UC 4x Multimode 50/125 OM3 PE Black    |
| OM3 50/125       | N165.182    | LANmark-OF UC 6x Multimode 50/125 OM3 PE Black    |
| OM3 50/125       | N165.183    | LANmark-OF UC 8x Multimode 50/125 OM3 PE Black    |
| OM3 50/125       | N165.185    | LANmark-OF UC 12x Multimode 50/125 OM3 PE Black   |
| OM3 50/125       | N165.191    | LANmark-OF UC 24x Multimode 50/125 OM3 PE Black   |
| OM4 50/125       | N167.181    | LANmark-OF UC 4x Multimode 50/125 OM4 PE Black    |
| OM4 50/125       | N167.182    | LANmark-OF UC 6x Multimode 50/125 OM4 PE Black    |
| OM4 50/125       | N167.183    | LANmark-OF UC 8x Multimode 50/125 OM4 PE Black    |
| OM4 50/125       | N167.185    | LANmark-OF UC 12x Multimode 50/125 OM4 PE Black   |
| OM4 50/125       | N167.191    | LANmark-OF UC 24x Multimode 50/125 OM4 PE Black   |
| SM (G.652D)      | N164.181    | LANmark-OF UC 4x Singlemode 9/125 OS2 PE Black    |
| SM (G.652D)      | N164.182    | LANmark-OF UC 6x Singlemode 9/125 OS2 PE Black    |
| SM (G.652D)      | N164.183    | LANmark-OF UC 8x Singlemode 9/125 OS2 PE Black    |
| SM (G.652D)      | N164.185    | LANmark-OF UC 12x Singlemode 9/125 OS2 PE Black   |



Mechanical  
resistance to  
impacts  
100 impacts of 3  
N.m



Minimum dynamic  
operating bending radius  
200.0 mm



Minimum static  
operating bending  
radius  
140 mm



Operating  
temperature, range  
-20 .. 60 °C



Storage  
temperature, range  
-30 .. 60 °C



Ambient installation  
temperature, range  
0 .. 40 °C

## LANmark-OF UC PE

| Fiber optic type | Nexans ref. | Name                                            |
|------------------|-------------|-------------------------------------------------|
| SM (G.652D)      | N164.191    | LANmark-OF UC 24x Singlemode 9/125 OS2 PE Black |



Mechanical  
resistance to  
impacts  
100 impacts of 3  
N.m



Minimum dynamic  
operating bending radius  
200.0 mm



Minimum static  
operating bending  
radius  
140 mm



Operating  
temperature, range  
-20 .. 60 °C



Storage  
temperature, range  
-30 .. 60 °C



Ambient installation  
temperature, range  
0 .. 40 °C

## LANmark-OF UC LSZH

UC optical fibre cables

- Indoor/Outdoor cable
- Corrugated steel tape armour
- Gel filled tube
- All fibre grades
- Provides full rodent protection
- Low Smoke Zero Halogene (LSZH)

### Description

#### Description and Application

The construction is suitable for indoor/outdoor use. It consists of a corrugated steel tape armouring providing full rodent protection. It is surrounded by glass yarns. The cable has a LSZH outer jacket.

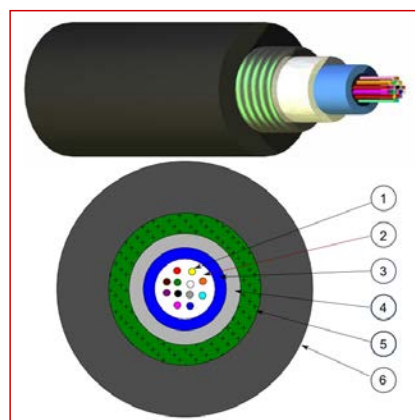
The loose tube design has a capacity of up to 24 fibres. Diameter of the fibres is 250  $\mu$ m. Termination of these fibres is done with splicing of pigtails.

The cable is watertight due to the gel in the loose tube and the watertight glass yarns.

#### Construction

Legend accompanying the cross section drawing:

1. Optical fibres (250  $\mu$ m)
2. Gel
3. Loose tube
4. Reinforced watertight glass yarns
5. Corrugated steel tape armour
6. LSZH outer jacket with UV resistant additive



**LANmark-OF**

#### Standards

International ISO/IEC 11801

### Characteristics

- Indoor/Outdoor cable
- Flame retardant (IEC 60332-1 and NFC 32070 C2) and fire retardant (IEC 60332-3 and NFC 32070 C1)
- Designed for termination by splicing
- Central loose tube design
- Corrugated steel protection
- Waterproof structure, rodent resistant and UV-resistant
- Available in all fibre grades
- Available from 4-24 fibres



Mechanical resistance to impacts  
100 impacts of 3 N.m



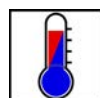
Minimum dynamic operating bending radius  
210.0 mm



Minimum static operating bending radius  
150 mm



Ambient installation temperature, range  
0 .. 40 °C



Operating temperature, range  
-20 .. 60 °C



Storage temperature, range  
-30 .. 60 °C



Fire retardant IEC  
60332-3



Flame retardant IEC  
60332-1

## LANmark-OF UC LSZH

### Characteristics

| Dimensional characteristics              |                      |
|------------------------------------------|----------------------|
| Approximate weight                       | 129 kg/km            |
| Nominal outer diameter                   | 9.5 mm               |
| Mechanical characteristics               |                      |
| Maximum pulling force (IEC 60794-1-2-E1) | 1500 N               |
| Maximum operating pulling force          | 450 N                |
| Mechanical resistance to impacts         | 100 impacts of 3 N.m |
| Crush resistance (IEC 60794-1-E3)        | 300 N/cm             |
| Usage characteristics                    |                      |
| Minimum dynamic operating bending radius | 210.0 mm             |
| Minimum static operating bending radius  | 150 mm               |
| Ambient installation temperature, range  | 0 .. 40 °C           |
| Operating temperature, range             | -20 .. 60 °C         |
| Storage temperature, range               | -30 .. 60 °C         |
| Fire retardant                           | IEC 60332-3          |
| Flame retardant                          | IEC 60332-1          |

### N-numbers for LANmark-OF UC LSZH

| Fiber optic type | Nexans ref. | Name                                                |
|------------------|-------------|-----------------------------------------------------|
| OM1 62.5/125     | N160.471    | LANmark-OF UC 4x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.472    | LANmark-OF UC 6x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.473    | LANmark-OF UC 8x Multimode 62,5/125 OM1 LSZH Black  |
| OM1 62.5/125     | N160.475    | LANmark-OF UC 12x Multimode 62,5/125 OM1 LSZH Black |
| OM1 62.5/125     | N160.481    | LANmark-OF UC 24x Multimode 62,5/125 OM1 LSZH Black |
| OM2 50/125       | N162.471    | LANmark-OF UC 4x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.472    | LANmark-OF UC 6x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.473    | LANmark-OF UC 8x Multimode 50/125 OM2 LSZH Black    |
| OM2 50/125       | N162.475    | LANmark-OF UC 12x Multimode 50/125 OM2 LSZH Black   |
| OM2 50/125       | N162.481    | LANmark-OF UC 24x Multimode 50/125 OM2 LSZH Black   |
| OM3 50/125       | N165.471    | LANmark-OF UC 4x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.472    | LANmark-OF UC 6x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.473    | LANmark-OF UC 8x Multimode 50/125 OM3 LSZH Black    |
| OM3 50/125       | N165.475    | LANmark-OF UC 12x Multimode 50/125 OM3 LSZH Black   |
| OM3 50/125       | N165.481    | LANmark-OF UC 24x Multimode 50/125 OM3 LSZH Black   |
| OM4 50/125       | N167.471    | LANmark-OF UC 4x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.472    | LANmark-OF UC 6x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.473    | LANmark-OF UC 8x Multimode 50/125 OM4 LSZH Black    |
| OM4 50/125       | N167.475    | LANmark-OF UC 12x Multimode 50/125 OM4 LSZH Black   |
| OM4 50/125       | N167.481    | LANmark-OF UC 24x Multimode 50/125 OM4 LSZH Black   |
| SM (G.652D)      | N164.471    | LANmark-OF UC 4x Singlemode 9/125 OS2 LSZH Black    |
| SM (G.652D)      | N164.472    | LANmark-OF UC 6x Singlemode 9/125 OS2 LSZH Black    |



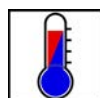
Mechanical  
resistance to  
impacts  
100 impacts of  
3 N.m



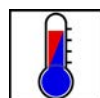
Minimum dynamic  
operating bending  
radius  
210.0 mm



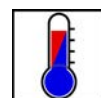
Minimum static  
operating  
bending radius  
150 mm



Ambient  
installation  
temperature,  
range  
0 .. 40 °C



Operating  
temperature,  
range  
-20 .. 60 °C



Storage  
temperature,  
range  
-30 .. 60 °C



Fire  
retardant  
IEC  
60332-3



Flame  
retardant  
IEC  
60332-1

## LANmark-OF UC LSZH

| Fiber optic type | Nexans ref. | Name                                              |
|------------------|-------------|---------------------------------------------------|
| SM (G.652D)      | N164.473    | LANmark-OF UC 8x Singlemode 9/125 OS2 LSZH Black  |
| SM (G.652D)      | N164.475    | LANmark-OF UC 12x Singlemode 9/125 OS2 LSZH Black |
| SM (G.652D)      | N164.481    | LANmark-OF UC 24x Singlemode 9/125 OS2 LSZH Black |



Mechanical  
resistance to  
impacts  
100 impacts of  
3 N.m



Minimum dynamic  
operating bending  
radius  
210.0 mm



Minimum static  
operating  
bending radius  
150 mm



Ambient  
installation  
temperature,  
range  
0 .. 40 °C



Operating  
temperature,  
range  
-20 .. 60 °C



Storage  
temperature,  
range  
-30 .. 60 °C



Fire  
retardant  
IEC  
60332-3



Flame  
retardant  
IEC  
60332-1

## Cables - LANmark-OF ZC (2.0 mm) LSZH

ZipCord optical fibre cables

- Designed for direct termination for especially LC connectors
- Suitable for indoor use in horizontal cabling and risers
- Suitable for use in patch assembly
- Available in all fibre grades

### Description

#### Application

LANmark-OF ZC optical fibre cables have been designed for applications where a high level of installation, environmental and optical performance is required. The ZipCord range is most suitable for direct termination in patch assembly and in risers and horizontal cabling.

The majority of the tight buffered cables are suitable for both internal & external environments and are all dielectric with excellent flame retardance

Applications support :

- FDDI 100 Mbps
- Ethernet 10 base FL
- Fast Ethernet 100 base FX
- Gbit Ethernet 1000 base SX/LX
- 10Gbit Ethernet 10000 base SX(\*)
- Fibre Channel 1.0625 Gbps
- ATM 155 Mbps
- ATM 622 Mbps

(\*) in accordance with IEEE 802.3ae

#### Performance

LANmark-OF Tight Buffered optical fibre cables are available with standard multimode & singlemode fibres whilst the LANmark-OFxt ranges are supplied with Laser Optimised multimode fibres offering extended application distances for Gigabit Ethernet.

#### Construction

Legend accompanying the cross section drawing:

1. 900 µm tight buffered fibre
2. Aramid yarns reinforcement
3. Flame retardant halogen free outer sheath



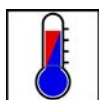
**LANmark-OF**

#### Standards

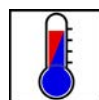
International ISO/IEC 11801



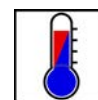
Flame retardant  
IEC 60332 Part 3 Cat. C



Ambient installation temperature,  
range  
0 .. 40 °C



Operating temperature, range  
-10 .. 70 °C



Storage temperature, range  
-30 .. 70 °C

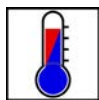
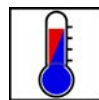
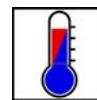
## Cables - LANmark-OF ZC (2.0 mm) LSZH

### Characteristics

| Construction characteristics            |                         |
|-----------------------------------------|-------------------------|
| Type of cable                           | Zip Cord (ZC)           |
| Armour type                             | Unarmoured              |
| Material of filler / inner sheath       | Aramid yarn             |
| Outer sheath                            | LSZH-FR                 |
| Dimensional characteristics             |                         |
| Number of optical fibres                | 2                       |
| Height                                  | 2 mm                    |
| Width                                   | 4 mm                    |
| Approximate weight                      | 12 kg/km                |
| Mechanical characteristics              |                         |
| Crush resistance (IEC 60794-1-E3)       | 100 N/cm                |
| Usage characteristics                   |                         |
| Installation type                       | Indoor                  |
| Flame retardant                         | IEC 60332 Part 3 Cat. C |
| Ambient installation temperature, range | 0 .. 40 °C              |
| Operating temperature, range            | -10 .. 70 °C            |
| Storage temperature, range              | -30 .. 70 °C            |

### Product List

| Nexans ref.                          | Name | Fiber optic type |
|--------------------------------------|------|------------------|
| ☎ = Make to order, 📦 = Make to stock |      |                  |


 Flame retardant  
 IEC 60332 Part 3 Cat. C

 Ambient installation temperature,  
 range  
 0 .. 40 °C

 Operating temperature, range  
 -10 .. 70 °C

 Storage temperature, range  
 -30 .. 70 °C

## Cables - LANmark-OF ZC LSZH

ZipCord optical fibre cables

- Designed for direct termination on ST, SC or LC connectors
- Suitable for indoor use in horizontal cabling and risers
- Suitable for use in patch assembly
- Available in all fibre grades

### Description

#### Application

LANmark-OF ZC optical fibre cables have been designed for applications where a high level of installation, environmental and optical performance is required. The ZipCord range is most suitable for direct termination in patch assembly and in risers and horizontal cabling.

The majority of the tight buffered cables are suitable for both internal & external environments and are all dielectric with excellent flame retardance

Applications support :

- FDDI 100 Mbps
- Ethernet 10 base FL
- Fast Ethernet 100 base FX
- Gbit Ethernet 1000 base SX/LX
- 10Gbit Ethernet 10000 base SX(\*)
- Fibre Channel 1.0625 Gbps
- ATM 155 Mbps
- ATM 622 Mbps

(\*) in accordance with IEEE 802.3ae

#### Performance

LANmark-OF Tight Buffered optical fibre cables are available with standard multimode & singlemode fibres whilst the LANmark-OFxt ranges are supplied with Laser Optimised multimode fibres offering extended application distances for Gigabit Ethernet.

#### Construction

Legend accompanying the cross section drawing:

1. 900 µm tight buffered fibre
2. Aramid yarns reinforcement
3. Flame retardant halogen free outer sheath



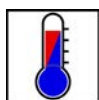
**LANmark-OF**

#### Standards

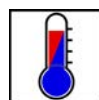
International ISO/IEC 11801



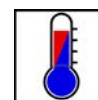
Flame retardant  
IEC 60332 Part 3 Cat. C



Ambient installation temperature,  
range  
0 .. 40 °C



Operating temperature, range  
-10 .. 70 °C



Storage temperature, range  
-30 .. 70 °C

## Cables - LANmark-OF ZC LSZH

### Characteristics

| Construction characteristics            |                         |
|-----------------------------------------|-------------------------|
| Type of cable                           | Zip Cord (ZC)           |
| Armour type                             | Unarmoured              |
| Material of filler / inner sheath       | Aramid yarn             |
| Outer sheath                            | LSZH-FR                 |
| Dimensional characteristics             |                         |
| Number of optical fibres                | 2                       |
| Height                                  | 2.8 mm                  |
| Width                                   | 5.8 mm                  |
| Approximate weight                      | 14 kg/km                |
| Mechanical characteristics              |                         |
| Crush resistance (IEC 60794-1-E3)       | 300 N/cm                |
| Usage characteristics                   |                         |
| Installation type                       | Indoor                  |
| Flame retardant                         | IEC 60332 Part 3 Cat. C |
| Ambient installation temperature, range | 0 .. 40 °C              |
| Operating temperature, range            | -10 .. 70 °C            |
| Storage temperature, range              | -30 .. 70 °C            |

### Product List

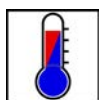
☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                        | Fiber optic type |
|-------------|-------------------------------------------------------------|------------------|
| 📦 N162.001  | LANmark-OF ZC (2,8mm) 2x Multimode 50/125 OM2 LSZH Orange   | OM2 50/125       |
| 📦 N165.001  | LANmark-OF ZC (2,8mm) 2x Multimode 50/125 OM3 LSZH Orange   | OM3 50/125       |
| 📦 N160.001  | LANmark-OF ZC (2,8mm) 2x Multimode 62,5/125 OM1 LSZH Orange | OM1 62.5/125     |
| 📦 N164.001  | LANmark-OF ZC (2,8mm) 2x Singlemode 9/125 OS2 LSZH Yellow   | SM (G.652D)      |

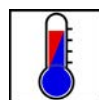
☎ = Make to order, 📦 = Make to stock



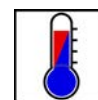
Flame retardant  
IEC 60332 Part 3 Cat. C



Ambient installation temperature,  
range  
0 .. 40 °C



Operating temperature, range  
-10 .. 70 °C



Storage temperature, range  
-30 .. 70 °C



## Fibre Connectors & Connector Accessories

LANmark-OF offers cutting edge connectivity products including connectors, couplers, pigtails, patch cords,...

Each product has been thoroughly developed to ensure best system offering while meeting stringent international standards.

### Small Form Factor products

Full range of pigtails, patchcords and adaptors supporting both small form factor MT-RJ and LC connectors as well as ST and SC connectors.

### Snap-in concept

Nexans 'snap-in' format allows quick and easy installation without screws. They are available in SC format as well as the small form factor LC and MT-RJ connectors.



## LANmark-OF Anaerobic Connectors - Bulk Packaging

- Connectors for on-site termination
- Suitable for installation on 900µm fibre
- Bulk packaging for ease of installation
- Installed using the Nexans anaerobic toolkit

### Description

Nexans offers a large range of Fibre Optics connectors for field termination practices. All these connectors meet most recent standard ISO 11801 releases.

Connector type available in bulk packaging are SC and LC. Both connectors are available in singlemode and multimode versions

For installers' convenience the connector bodies are all packed in one bag. The connectors' boots are packed in another bag separately. This bulk packaging reduces the time to unpack individual packed connectors and eliminates packaging waste.

For optimal installations, Nexans recommends to use its LANmark-OF Toolkit SM & MM Anaerobic Connector (starter kit), ref.: 102.230. This toolkit provides a comprehensive set of tools and consumables for easier on-site jobs and is supplied with illustrated installation manual.

### Detailed description connectors

- Zirconia ceramic ferrule
- Outer diameter ferrule: 2.5 mm for SC and ST connectors and 1.25 mm for LC connectors
- Ferrule hole size: 126 µm for Singlemode connectors and 127 µm for multimode connectors
- Typical insertion loss: 0.2 dB
- Return loss > 35 dB for multimode and 45 dB for Singlemode connectors
- Durability < 0.1 dB typical change after 500 matings

### Compliance to standards

- SC-connector: IEC 61754-04
- LC-connector: IEC 61754-20

### Features/Benefits

- Fast cure anaerobic adhesive with adhesive and activator
- Limited consumable set required
- Overall cost effective technology for small projects: low cost connector, no investment in expensive tools
- No investment in furnace or expensive splicing tool required
- No investment in polishing machine: hand polish suggested
- Does not require electrical power to install
- Installation done within minutes
- Short set up time: No warming up of furnace required
- Reliable solution: No index matching gel in connector



**LANmark-OF**

### Standards

International ISO/IEC 11801

## LANmark-OF Anaerobic Connectors - Bulk Packaging

### Product List

| Nexans ref.                                                                                    | Name                                                    | Fiber optic type | Connector type |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------|----------------|
|  N205.630BULK | LANmark-OF LC Connector Multimode Anaerobic 900µm 100X  | Multimode        | LC             |
|  N205.635BULK | LANmark-OF LC Connector Singlemode Anaerobic 900µm 100X | SingleMode 9/125 | LC             |
|  N205.640BULK | LANmark-OF SC Connector Multimode Anaerobic 900µm 100X  | Multimode        | SC             |
|  N205.645BULK | LANmark-OF SC Connector Singlemode Anaerobic 900µm 100X | SingleMode 9/125 | SC             |

 = Make to order,  = Make to stock

## LANmark-OF Connectors

- Connector for on-site termination
- Installed using the Nexans anaerobic toolkit
- Suitable for installation on 900µm fibre as well as on cable

### Description

Nexans offers a large range of Fibre Optics connectors for field termination practices. All these connectors meet most recent standard ISO 11801 releases.

Connector type available :

- SC
- ST
- LC

For optimal installations, Nexans recommends to use its Anaerobic Toolkit (ref.: 102.220). This toolkit provides a comprehensive set of tools and consumables for easier on-site jobs and is supplied with illustrated installation manual.



## LANmark-OF

### Standards

International ISO/IEC 11801

### Product List

☎ = Make to order, 🏭 = Make to stock

| Nexans ref. | Name                                                                       | Fiber optic type | Connector type |
|-------------|----------------------------------------------------------------------------|------------------|----------------|
| 🏭 N102.461  | LANmark-OF ST Connector Anaerobic Multimode for 900µm / 2.8mm              | Multimode        | ST             |
| 🏭 N102.462  | LANmark-OF Simplex SC Connector Multimode for 900µm / 2.8mm (3M Hot Melt)  | Multimode        | SC             |
| 🏭 N205.120  | LANmark-OF Simplex SC Connector Anaerobic Multimode for 900µm / 2.8mm      | Multimode        | SC             |
| 🏭 N205.121  | LANmark-OF Simplex ST Connector Multimode for 900µm / 2.8mm (3M Hot Melt)  | Multimode        | ST             |
| 🏭 N890.008  | LANmark-OF Simplex SC Connector Singlemode for 900µm / 2.8mm (3M Hot Melt) | SingleMode 9/125 | SC             |
| 🏭 N205.630  | LANmark-OF Simplex LC Connector Anaerobic Multimode for 900µm              | Multimode        | LC             |
| 🏭 N205.631  | LANmark-OF Simplex LC Connector Anaerobic Multimode for 1.6-2.2mm          | Multimode        | LC             |

☎ = Make to order, 🏭 = Make to stock

**Contact**

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## Connector Accessories

**Description**

Tools & accessories for termination of Nexans connectors

**LANmark-OF****Standards**

**International** ISO/IEC 11801

## Connector Accessories

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                                   |
|-------------|------------------------------------------------------------------------|
| 📦 N102.221  | Adhesive & Activator for Anaerobic Connector                           |
| 📦 N102.230  | LANmark-OF Toolkit SM & MM Anaerobic Connector (starter kit)           |
| 📦 N102.214  | LANmark-OF Toolkit for Anaerobic Connector (extension to hotmelt kit ) |
| 📦 N102.220  | LANmark-OF Toolkit for Anaerobic Connector (starter kit)               |
| 📦 N102.222  | Polishing Paper 1 micron for Anaerobic Toolkit (50/bag)                |
| 📦 N102.224  | Polishing Paper 12 micron for Anaerobic Toolkit (10/bag)               |
| 📦 N102.223  | Polishing Paper 3 micron for Anaerobic Toolkit (50/bag)                |
| 📦 N102.225  | Syringes for Anaerobic Toolkit (50/box)                                |
| 📦 N102.226  | Wipes for Anaerobic Toolkit (100/box)                                  |

☎ = Make to order, 📦 = Make to stock

## Pre-Terminated Fibre Assemblies

This added-value offer enables fast network deployment and removes the requirement for specialized termination training, consumables and toolkits. Every assembly is developed and manufactured by optical engineers to individual customer requirements: cable length, connector type, fibre grade, fanouts size, ...

All LANmark-OF Pre-Term assemblies are fully terminated and tested in a quality assured factory environment. They are delivered with test results and benefit from the 25 year LANmark-OF warranty program.

LANmark-OF Pre-Term significantly reduces installation time and cost while guaranteeing full scalability and long lasting reliability for every situation whether campus, backbone, Local/Storage Area Network or Data Centre.



## LANmark-OF OM3, OM4, Singlemode (OS2) Fibre Assembly

Factory Pre-terminated assemblies which combine ease of installation and outstanding performances. 100% customised for your needs, this product meet the most demanding lead-times.

### Description

The solution consist of **indoor cable** assembled in factory with connectors at each end. **Any type of connectors** can be used for the assembly: ST, SC or LC. Fibre types available: Single mode 9/125µm (OS2 cables with G652D fibres) and laser optimised 50/125µm OM3 or OM4 fibres. A **pulling eye system** is positioned at the end of the cable to protect the terminations while pulling the cable. When the cable has been installed, the pulling eye system is cut off and the terminated fibres are fed into a patch panel. Since the assembly is done in factory, all pre-terminated fibre optic cables are **100% tested** and supplied with test results.



### Applications

- Indoor backbones for Local Area Network (**LAN**) applications.
- Horizontal fibre distribution to work area and zone.
- Trunk cables for **Data Centre** and Storage Area Network (**SAN**) applications.

### Fibre types

The Pre-Terms are available with singlemode (9/125 µm) fibre with G652D fibres. This results in OS2 cables.

For multimode laser optimised fibres (50/125 µm) are available with OM3 or OM4 performance.

Details with the exact optical performance can be found in the specific fibre datasheets.

### Benefits

- Short & reliable manufacturing lead-time
- Fast installation times
- No specialised termination training required
- No consumables, termination tool kits
- No cable preparation necessary
- No cable or connector scrap
- No termination errors on site
- Delivered fully tested, labelled and documented
- High performing connectors: Max IL 0,35dB
- Improved end-to-end attenuation
- Improved application migration
- Reduced on-site disruption and installation time
- Highly cost effective solution

### Tailor made solution

Nexans **LANmark-OF** pre-term solutions are **100% tailor made** solutions. You specify your cable and connectivity requirements and our optical engineers develop and manufacture your end-to-end pre-terminated cable solution.

What needs to be specified:

1. Cable type Singlemode OS2-OM3-OM4

**LANmark-OF**

### Standards

International ISO/IEC 11801

## LANmark-OF OM3, OM4, Singlemode (OS2) Fibre Assembly

2. Fibre count: 6-12-24
3. cable length between enclosures
4. Fanout size (900µ or 2.0 mm)
5. Connector type on each end LC- SC-ST
6. Use of pulling system

### Consistent quality

In order to produce high quality, reliable pre-terminated multi-fibre cables, there are a number of physical characteristics that must be addressed. Therefore, all LANmark-OF Pre-term assemblies are fully terminated and tested in a quality assured factory environment. They are delivered with test results protocol and benefit from the 25 years LANmark-OF warranty program.

## LANmark-OF OM3, OM4, Singlemode (OS2) Fibre Assembly

### LANmark-OF Pre-Term Specifications

#### Cable Specifications

| Fibre count | Diameter | Sheath | Min. static bending radius |
|-------------|----------|--------|----------------------------|
| <b>6</b>    | 4.6 mm   | LSZH   | 45 mm                      |
| <b>12</b>   | 6,6 mm   | LSZH   | 70 mm                      |
| <b>24</b>   | 7.3 mm   | LSZH   | 75 mm                      |

| Fibre count | Max Pulling force | Compression | Impacts              | Temp.range  |
|-------------|-------------------|-------------|----------------------|-------------|
| <b>6</b>    | 70 daN            | 100daN/dm   | 100 impacts of 1 N.m | -10°C +60°C |
| <b>12</b>   | 120 daN           | 100daN/dm   | 100 impacts of 1 N.m | -10°C +60°C |
| <b>24</b>   | 190 daN           | 100daN/dm   | 100 impacts of 1 N.m | -10°C +60°C |

#### Measurement Standard Mechanical Performance s

|                               |                 |
|-------------------------------|-----------------|
| <b>Min.bending radius</b>     | IEC-60794-1-E10 |
| <b>Maximum pulling force</b>  | IEC-60794-1-E1  |
| <b>Compression</b>            | IEC-60794-1-E3  |
| <b>Impacts</b>                | IEC-60794-1-E4  |
| <b>Operating temperatures</b> | IEC-60794-1-F1  |

#### Connector specifications

| Type               | Standard Max IL | LANmark-OF Pre-term | Stand. Min RL | LANmark-OF Pre-Term |
|--------------------|-----------------|---------------------|---------------|---------------------|
| <i>Multimode</i>   |                 |                     |               |                     |
| <b>SC/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 20dB          | <b>30 dB</b>        |
| <b>LC/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 20dB          | <b>30 dB</b>        |
| <b>ST/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 20dB          | <b>30 dB</b>        |
| <i>Single Mode</i> |                 |                     |               |                     |
| <b>SC/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 35dB          | <b>40 dB</b>        |
| <b>LC/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 35dB          | <b>40 dB</b>        |
| <b>ST/PC</b>       | 0,75 dB         | <b>0.35 dB</b>      | 35dB          | <b>40 dB</b>        |

## LANmark-OF OM3, OM4, Singlemode (OS2) Fibre Assembly

N-number codification: N15F.ABBCFCFPXXX

|                   |                                |
|-------------------|--------------------------------|
| F: Fibre type     | 4: Singlemode (OS2) with G652D |
|                   | 5: OM3 fibre                   |
|                   | 7: OM4 fibre                   |
| BB: fibre count   | 06: 6 fibres                   |
|                   | 12: 12 fibres                  |
|                   | 24: 24 fibres                  |
| C: Connector type | L: LC                          |
|                   | C: SC                          |
|                   | T: ST                          |
| F: Fan-out type   | 9: 900 um fanout               |
|                   | 2: 2.0 mm fanout               |
| P: pulling eye    | A (standard): one side         |
| XXX               | length in meter                |



## MPO System

### MPO-concept

The Nexans' Plug&Play concept is specially designed for the LAN and data centre environment. It facilitates fast installation of a large number of fibre connections, high density, quick changes with limited down time and an easy migration path to future applications.

The Plug&Play system consists of 3 subcomponents: the MPO-MPO Pre-Term, the Plug&Play modules and the Plug&Play patch panel.

The MPO-MPO Pre-Term provides the connectivity between 2 Plug&Play modules installed in the Plug&Play patch panels in 2 different racks. The MPO connector allows to quickly connecting the 12 fibres of the MPO-MPO Pre-Term at the back of each Plug&Play module. Inside the Plug&Play module the fibres are spread out towards the SC/LC connectors at the front.



### Optical performance and polarity method

Nexans' Plug&Play modules and fibre assemblies are available in 2 performance grades: LANmark-OF MPO connectivity and the newly introduced LANmark-OF MPO low loss connectivity. With the low loss connectivity insertion loss has been reduced by 40 %. It enables more complex data centre configurations, extended reach, more head room and a migration path to 40G/100G.

The fibre assemblies are available as LANmark-OF OM3 and LANmark-OF OM4 for extended reach. The Plug&Play modules have LANmark-OF OM4 performance and are backwards compatible with LANmark-OF OM3.

With LANmark-OF OM4 and the low loss solution up to 8 modules can be installed for an operational 10G channel. For 40G/100G a 4 connector channel up to 120 m can be supported.

Polarity in the optical channel during installation is guaranteed due to a pair flip fibre construction. This is in agreement with standard TIA 568-B-1-7-2006 method C. It allows the continuous use of the standard patch cord eliminating the need to buy optically straight and crossed patch cords. Also polarity is maintained with the same type of cassette on both sides of the channel without the need to flip the cassette on one side.

### Pre-Term assemblies

The Pre-Term assemblies are based on the advanced Micro-Bundle technology. A Micro-Bundle is a small and very flexible tube with 12 fibres and it is the central part of a range of new cable designs. With its small diameter and short bending radius Micro-Bundle cables meet the tight space requirements in data centres.

The Micro-Bundle technology has extremely low skew by its advanced manufacturing process and small diameter. The Pre-Term assemblies easily exceed the skew requirements for 40G and 100G Ethernet.

With the high fibre count of the Pre-Term trunk assemblies the number of installed cables in a data centre can be reduced. The Pre-Terms trunks are available in 12, 24, 48 and 96 fibre counts. The trunk assemblies are very robust due to its central strength element and the aramid yarns, but have still a small diameter of maximum 6.4 mm and a small bending radius of maximum 65 mm. The very flexible MPO fan-out is easy to install in a patch panel. Additional features are a pulling eye and a protective tube.

The slim Pre-Term is available as a 12 core assembly. The small diameter of this solution makes it the preferred solution when space constraints in the cable trays and the racks are key concerns.

To allow the customer the full choice of configuration options cable assemblies are offered with both normal and low loss connectors. The assemblies are available in both LANmark-OF OS2, OM3 and OM4.

### Plug&Play Patch Panel and modules

The new Plug&Play patch panels accommodate high density patching with installation of up to 4 Plug&Play modules. A maximum of 96 LC connections can be installed in one height unit. The patch panels are sliding and have an integrated patch cord guide that sits in front of the modules.

One patch panel (N441.2MPP) is optimised for the installation of the slim Pre-Term. The newly introduced Plug&Play patch panel (N439.3MPP) has optimised slots in the back of the panel for the fixation of the Pre-Term trunks with cable glands.

The modules are available in 3 configurations: 12 SC, 12 LC and 24 LC. Modules with 24 LC connections support very high density solutions, while a module with 12 LC adaptors facilitates the patching.

Modules are available in Singlemode OS2 and multimode LANmark-OF OM4, both in normal LANmark-OF MPO connectivity and low loss performance.

## LANmark-OF MPO-MPO Pre-Term Trunk for Singlemode OS2, OM3 and OM4

- Factory terminated MPO-MPO fibre assembly
- Flexible fan-out for ease of installation in patch panel
- Small cable diameter reduces required data centre space
- Polarity in optical channel is easily maintained by its advanced design
- Only one type of patch cords and one type of cassettes required
- Fibre count between 12 and 96
- Strong fibre assembly with pulling eye
- Fibre type: Singlemode (OS2), OM3 and OM4
- LANmark-OF MPO and low loss MPO connectivity performance

### Description

#### MPO-MPO Pre-Term characteristics

The Pre-Term is based on an advanced Micro-Bundle design for the cable. The central strength element and the aramid yarns result in a mechanical strong cable, while the Micro-Bundle allow to reduce the diameter of the cable.

This round cable design facilitates the installation of the MPO-MPO Pre-Term: the small bending radius in any direction eliminates the problems of preferential bending associated with traditional ribbon MPO cables.

The small diameter of 5.4 mm for cables up to 48 fibres and of 6.4 mm for the cable with 96 fibres of the cable reduces significantly the expensive space required for cabling in a data centre and facilitates the airflow. The small diameter also reduced the weight of the cable putting less requirements on the cable trays.

The Pre-Term is delivered with protecting tubes around the installed MPO-connectors and with a pulling eye on one side. This pulling eye is connected to the internal strength element of the cable.

The MPO fan-out starts at 50 cm from the cable gland and every next connector is 12 cm further away from the cable gland. For the 96 core the MPO connectors are grouped by 2 for easy installation in the patch panel and the distance between 2 pairs of MPO connectors is 12 cm.

The Pre-Term is available with OM3, OM4 and singlemode fibres. The singlemode fibres are according the specifications for G652D and OS2 cables. Details on the fibre specifications can be found in the detailed fibre datasheets.

The typical value for the insertion loss for a normal loss MPO-MPO connection is 0,3 dB. The limit value is 0,6 dB measured according to standard IEC61300-3-45.

The typical value for the insertion loss for a low loss MPO-MPO connection is 0,2 dB. The limit value is 0,35 dB measured according to standard IEC61300-3-45.

Polarity in the optical channel during installation is guaranteed due to a pair flip fibre construction. This is in agreement with standard TIA 568-B-1-7-2006 method C. It allows the continuous use of the standard patch cords eliminating the need to buy optically straight patch cords. Also polarity is maintained with the same type of cassette on both sides of the channel without the need to flip the cassette on one side.

The MPO-MPO Pre-Term has standard non-pinned (female) connectors. This



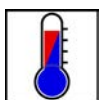
## LANmark-OF

### Standards

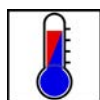
**International** ISO/IEC 11801:2002/  
 Amd 1:2008/Cor 1:2008



Mechanical resistance to impacts  
 10 impacts of 1 N.m



Operating temperature, range  
 -10 .. 60 °C



Storage temperature, range  
 -20 .. 60 °C



Fire retardant  
 IEC 60332-3



Flame retardant  
 IEC 60332-1

## LANmark-OF MPO-MPO Pre-Term Trunk for Singlemode OS2, OM3 and OM4

matches with the pinned (male) connectors in the MPO cassettes.

The Pre-Term meets the requirements for flame non propagation (IEC 60332-1) and fire non-propagation (IEC 60332-3). The outer jacket of the pre-term is LSZH.

The MPO-MPO Pre-Term are custom made to the required customer length.

### Consistent quality

In order to produce high quality, reliable pre-terminated multi-fibre cables, there are a number of physical characteristics that must be addressed. Therefore, all LANmark-OF MPO-MPO Pre-Term are fully terminated and tested in a quality assured factory environment. They are delivered with these test results.

### Characteristics

| Mechanical characteristics        |                     |
|-----------------------------------|---------------------|
| Maximum tensile load              | 1000 N              |
| Max. Load. Long Term              | 250.0 N             |
| Crush resistance (IEC 60794-1-E3) | 100 N/cm            |
| Mechanical resistance to impacts  | 10 impacts of 1 N.m |
| Usage characteristics             |                     |
| Operating temperature, range      | -10 .. 60 °C        |
| Storage temperature, range        | -20 .. 60 °C        |
| Fire retardant                    | IEC 60332-3         |
| Flame retardant                   | IEC 60332-1         |



Mechanical resistance to impacts  
10 impacts of 1 N.m



Operating temperature, range  
-10 .. 60 °C



Storage temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1

## LANmark-OF MPO-MPO Pre-Term Trunk for Singlemode OS2, OM3 and OM4

### Cable Characteristics

|                                            |             |        |
|--------------------------------------------|-------------|--------|
| Fibre count                                | 12F/24F/48F | 96F    |
| Cable Diameter                             | 5.4 mm      | 6.4 mm |
| Cable Weight (kg/km)                       | 31 kg       | 50 kg  |
| Minimum bending radius during installation | 80 mm       | 100 mm |
| Minimum bending radius installed           | 65 mm       | 65 mm  |

### Insertion loss for individual MPO connection

| Fibre type                            | Multimode (OM3 or OM4) | Singlemode (OS2 with G652D) |
|---------------------------------------|------------------------|-----------------------------|
| Normal loss connection - Typical loss | 0.3 dB                 | 0.3 dB                      |
| Normal loss connection - Max loss     | 0.6 dB                 | 0.6 dB                      |
| Low loss connection - Typical loss    | 0.15 dB                | 0.15 dB                     |
| Low loss connection - Max loss        | 0.35 dB                | 0.35 dB                     |

Measured in manufacturing according to standard IEC 61300-3-45

### N-number codification: N15A.MK KP V XXX

| Letter in N-number | Description           | Variations                                                                                                                                                                                    |
|--------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A                  | Fibre type            | 4: SM (OS2) or 5: OM3, 7: OM4                                                                                                                                                                 |
| KK                 | Fibre count           | 12, 24, 48 or 96                                                                                                                                                                              |
| P                  | Performance           | Normal (S) or low loss (L)                                                                                                                                                                    |
| V                  | Fanout type           | A: pulling eye one side + first MPO at 50 cm + sequential MPO every 12 cm (12, 24 and 48 fibres)<br>E: pulling eye one side + first 2 MPO at 50 cm + sequential 2 MPO every 12 cm (96 fibres) |
| XXX                | Length between glands | 001-300 m                                                                                                                                                                                     |

Example: N155.M48LA050: LANmark-OF MPO-MPO Pre-Term with 48 OM3 fibres, low loss connectors, pulling eye on one side, first MPO connector at 50 cm from cable gland and with a length of 50 m between the cable glands



Mechanical resistance to impacts  
10 impacts of 1 N.m



Operating temperature, range  
-10 .. 60 °C



Storage temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1

## LANmark-OF MPO-MPO Slim Pre-Term for Singlemode (OS2), OM3 and OM4

- Factory terminated MPO-MPO fibre assembly
- Easy installation of Pre-Term since assembly can bend in any direction.
- Small diameter of cable to reduce data centre space
- Polarity in optical channel is easily maintained by its advanced design
- Only one type of patch cords and one type of cassettes required
- 12 fibres
- Fibre type: Singlemode (OS2), OM3 and OM4
- Normal and low loss connectivity

### Description

#### MPO-MPO Pre-Term characteristics

The round cable design facilitates the installation of the MPO-MPO Pre-Term: the small bending radius of only 30 mm in any direction eliminates the problems of preferential bending associated with traditional ribbon MPO cables.

Polarity in the optical channel during installation is guaranteed due to a pair flip fibre construction. This is in agreement with standard TIA 568-B-1-7-2006 method C. It allows the continuous use of the standard patch cords eliminating the need to buy optically straight patch cords. Also polarity is maintained with the same type of cassette on both sides of the channel without the need to flip the cassette on one side.

The Pre-Term is available with OM3, OM4 and singlemode fibres. The singlemode fibres are according to the specifications for G652D and OS2 cables. Details on the fibre specifications can be found in the detailed fibre datasheets.

The typical value for the insertion loss for a normal loss MPO-MPO connection is 0,3 dB. The limit value is 0,6 dB measured according to standard IEC61300-3-45.

The typical value for the insertion loss for a low loss MPO-MPO connection is 0,2 dB. The limit value is 0,35 dB measured according to standard IEC61300-3-45.

Mechanical characteristics of the Pre-Term are conform to the IEC-60794-2-20 standard for indoor cables.

The small diameter of 2.5 mm of the cable reduces significantly the expensive space required for cabling in a data centre and facilitates the airflow.

The MPO-MPO Pre-Term has standard non-pinned (female) connectors. This matches with the pinned (male) connectors in the MPO modules.

#### Consistent quality

In order to produce high quality, reliable pre-terminated multi-fibre cables, there are a number of physical characteristics that must be addressed. Therefore, all LANmark-OF MPO-MPO Pre-Term are fully terminated and tested in a quality assured factory environment. They are delivered with these test results.



**LANmark-OF**

#### Standards

International ISO/IEC 11801



Operating temperature,  
range  
0 .. 50 °C



Storage temperature,  
range  
-40 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1

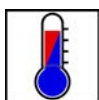


Minimum static operating  
bending  
radius  
30 mm

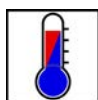
## LANmark-OF MPO-MPO Slim Pre-Term for Singlemode (OS2), OM3 and OM4

### MPO-MPO Pre-Term Benefits

- Short & reliable manufacturing lead-time
- Fast installation times
- No specialised termination training required
- No consumables, termination tool kits
- No cable preparation necessary
- No cable or connector scrap
- No termination errors on site
- Delivered fully tested, labelled and documented
- Improved end-to-end attenuation
- Reduced on-site disruption and installation time
- Cost effective solution



Operating temperature,  
range  
0 .. 50 °C



Storage temperature,  
range  
-40 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1



Minimum static operating  
bending  
radius  
30 mm

## LANmark-OF MPO-MPO Slim Pre-Term for Singlemode (OS2), OM3 and OM4

### Characteristics

|                                          |              |
|------------------------------------------|--------------|
| <b>Dimensional characteristics</b>       |              |
| Approximate weight                       | 5.5 kg/km    |
| Outer Diameter                           | 2.5 mm       |
| <b>Mechanical characteristics</b>        |              |
| Maximum pulling force (IEC 60794-1-2-E1) | 400 N        |
| Crush resistance (IEC 60794-1-E3)        | 50 N/cm      |
| <b>Usage characteristics</b>             |              |
| Operating temperature, range             | 0 .. 50 °C   |
| Storage temperature, range               | -40 .. 60 °C |
| Fire retardant                           | IEC 60332-3  |
| Flame retardant                          | IEC 60332-1  |
| Minimum static operating bending radius  | 30 mm        |

### Insertion loss for individual MPO connection

| Fibre type                            | Multimode (OM3 or OM4) | Singlemode (OS2 with G652D) |
|---------------------------------------|------------------------|-----------------------------|
| Normal loss connection - Typical loss | 0.3 dB                 | 0.3 dB                      |
| Normal loss connection - Max loss     | 0.6 dB                 | 0.6 dB                      |
| Low loss connection - Typical loss    | 0.15 dB                | 0.15 dB                     |
| Low loss connection - Max loss        | 0.3 dB                 | 0.3 dB                      |

Measured in manufacturing according to standard IEC 61300-3-45

### N-number codification: N15A.P12QVXXX

| Letter in N-number | Description           | Variations                                      |
|--------------------|-----------------------|-------------------------------------------------|
| A                  | Fibre type            | 4: SM (OS2) or 5: OM3, 7: OM4                   |
| Q                  | Performance           | Normal (S) or low loss (L)                      |
| V                  | Fanout type           | Default (N): No pulling eye and protection tube |
| XXX                | Length between glands | 001-300 m                                       |

Example: N155.P12LN050: LANmark-OF MPO-MPO Slim Pre-Term with 12 OM3 fibres, low loss connectors with a length of 50 m between the cable glands.



Operating temperature,  
range  
0 .. 50 °C



Storage temperature,  
range  
-40 .. 60 °C



Fire retardant  
IEC 60332-3



Flame retardant  
IEC 60332-1



Minimum static operating  
radius  
30 mm

## LANmark-OF Plug&Play Patch Panels

- Optical patch panels that holds up 4 MPO modules in 1 HU
- Sliding patch panels for ease of installation, upgrade and maintenance
- High density connectivity: up to 48 SC or 96 LC depending on module type.
- Labelling front for port identification and patch cord management within 1 HU

### Description

#### Plug&Play Concept Description

The Nexans' Plug and Play concept is specifically designed for installation in data centres where the high density, integrated patch cord guide and enhanced installation benefits of the patch panel meet the key requirements for implementation. It allows quick changes with limited down time, easy migration to other applications and a transition path to 40G.

The Plug&Play system consists of 3 subcomponents: Plug&Play modules, the MPO-MPO Pre-Term and the Plug&Play patch panel.

The modules provide the transition between the MPO-MPO Pre-Term and the active devices: the Pre-Term connects to the back of the module and inside the module the fibres are spread out towards the SC/LC connectors at the front. Modules are available in a wide variety of port counts and connector style.

#### Plug&Play Patch Panel Characteristics

The Nexans unique patch panel design allows to hold up to 4 MPO cassettes in 1HU of the distribution rack. Depending on the type of the module a high density of up to 96 fibre connections can be accommodated.

The new patch cord guide sits in front of the modules and allows the patch cords to be managed within the same 1 HU saving expensive rack space.

The patch cord guide also provides a labelling facility to identify connections. Additional labelling is provided by printed port numbers on the modules.

The newly developed trays slide for improved access to install new modules and to fix the MPO-MPO Pre-Term easily. The front of the patch panel can be fixed in a flush or recessed position in the rack.

The N439.2MPP is optimised for installation of the trunk MPO-MPO Pre-Term: the cable glands of the Pre-Term allow a fast and solid fixation of the cable. There is ample space inside the patch panel to organise the flexible fan-out of the MPO-MPO Pre-Term.

The N441.2MPP is optimised for installation of multiple slim Pre-Terms. The slim Pre-Terms are fixed with tie wraps.

Panels are fully painted in black for a professional look and feel.

Blank fillers (N441.2MBP) are available as separate accessories for unused positions to give a finished look.



## LANmark-OF

### Standards

International ISO/IEC 11801

## LANmark-OF Plug@Play Module

- Play@Play module with 12SC, 12 LC or 24 LC connections
- Available with LANmark-OF Plug@Play connectivity and low loss connectivity grade
- Available in LANmark-OF OM4 multimode and LANmark-OF OS2 singlemode
- Module can be easily mounted into Nexans' Plug&Play patch panel
- High density: 4 modules fit into 1U
- Plug@Play modules are pre-installed and 100 % factory tested

### Description

The Plug@Play system consists of 3 subcomponents: the MPO modules, the MPO-MPO Pre-Terms and the Plug&Play patch panel.

The central component is the pre-installed Plug@Play module. The MPO connector at the back of the module connects at once 12 fibres of the MPO-MPO Pre-Term. Inside the module the fibres are spread out towards the SC/LC adaptors at the front.



### Plug@Play Module Characteristics

Up to 4 Plug@Play modules can be installed quickly into the Plug&Play patch panel with push rivets. With these 4 modules a medium density of 48 SC or 48 LC connections within 1U can be achieved. With the 24 LC high density module a maximum of 96 LC connections within 1U is also possible.

The insertion loss for the LANmark-OF Plug@Play module is 0,9 dB measured according to standard IEC 61300-3-45.

The insertion loss for the LANmark-OF Plug@Play low loss module is 0,6 dB measured according to standard IEC 61300-3-45.

The modules are available with OM4 fibres for multimode and are backwards compatible with OM3 fibres. The singlemode module has G652D fibres for OS2 compatibility.

The wiring inside the module is straight. This allows to maintain polarity in the MPO-link together with the pair-wise fibre flip inside the MPO-MPO Pre-Term according to method C from standard TIA 568-B-1-7-2007.

Since all connectivity is factory installed and factory tested installation times are short for a quick deployment or for frequent changes.

The Plug@Play module has standard pinned (male) connectors. This matches perfectly with the non-pinned (female) connectors of the MPO-MPO Pre-Term.

**LANmark-OF**

### Standards

**International ISO/IEC 11801**

## LANmark-OF Plug@Play Module

### N-numbers for Plug&Play Modules

|                     |         |              |                                                       |
|---------------------|---------|--------------|-------------------------------------------------------|
| MPO Module          | OM3/OM4 | N441.2M24LC4 | LANmark-OF Plug&Play Module 24 LC OM4                 |
|                     |         | N441.2M12LC4 | LANmark-OF Plug&Play Module 12 LC OM4                 |
|                     |         | N441.2M12SC4 | LANmark-OF Plug&Play Module 12 SC OM4                 |
|                     | SM OS2  | N441.2M24LC0 | LANmark-OF Plug&Play Module 24 LC Singlemode          |
|                     |         | N441.2M12LC0 | LANmark-OF Plug&Play Module 12 LC Singlemode          |
|                     |         | N441.2M12SC0 | LANmark-OF Plug&Play Module 12 SC Singlemode          |
| MPO Low Loss Module | OM3/OM4 | N441.2L24LC4 | LANmark-OF Plug&Play Low Loss Module 24 LC OM4        |
|                     |         | N441.2L12LC4 | LANmark-OF Plug&Play Low Loss Module 12 LC OM4        |
|                     |         | N441.2L12SC4 | LANmark-OF Plug&Play Low Loss Module 12 SC OM4        |
|                     | SM OS2  | N441.2L24LC0 | LANmark-OF Plug&Play Low Loss Module 24 LC Singlemode |
|                     |         | N441.2L12LC0 | LANmark-OF Plug&Play Low Loss Module 12 LC Singlemode |
|                     |         | N441.2L12SC0 | LANmark-OF Plug&Play Low Loss Module 12 SC Singlemode |



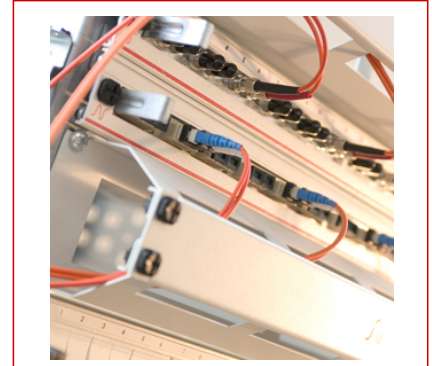
## Fibre Patch Panels

LANmark-OF offers cutting edge hardware products including patch panels, zone distribution boxes and outlets.

Each product has been thoroughly developed to ensure best system offering while meeting stringent international standards.

### **Modular concept**

The fully modular design allows mixing of different Snap-in adaptor types : LC, MT-RJ and SC. Benefits: up to 24 fibres for the Zone Distribution Box and 48 for the Patch Panel. Both are compatible for loose tube and tight buffer cables.



## LANmark-OF Sliding Patch Panels

- Empty OF patch panels with sliding mechanism.
- Suitable for direct termination or splicing.
- Available in two versions 24 ST or modular Duplex or simplex SC, LC, or MT-RJ snap-ins.
- Inner sliding to respect bending radius of patch cord.
- LANmark look.

### Description

#### Application

Accepting the range of ST couplers or LANmark-OF snap-ins, these patch panels with sliding mechanism facilitate front side installation.

#### Compatibility

Suitable for tight buffer cables (direct termination) , Loose tube cables using Splice Cassette / pigtailed terminations. Accepts pre-terminated cable assemblies.

#### Installation

- 19" width. 1U
- Accommodates 24 ST or 24 LANmark-OF snap-ins (or 12DSC).
- 2 positions : flush or recessed with respect of cable bend radius.
- Comes with marking strips to number and categorise ports.



**LANmark-OF**

### Standards

**International ISO/IEC 11801**

## LANmark-OF Sliding Patch Panels

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                         |
|--------------------------------------|----------------------------------------------|
| 📦 N441.204<br>New                    | LANmark-OF Patch Panel Snap-In Sliding Black |
| 📦 N441.203<br>New                    | LANmark-OF Patch Panel Snap-In Sliding White |
| 📦 N441.201                           | LANmark-OF Patch Panel 24 ST Sliding White   |
| ☎ = Make to order, 📦 = Make to stock |                                              |

## LANmark-OF Angled Preloaded Patch Panel

- Preloaded patch panels with adaptors for fast installation in data centres
- High density connectivity: 48 or 96 LC.
- Singlemode and multimode
- Removable tray for ease of installation, upgrade and maintenance
- Optimised for installation of Pre-Term with a cable gland and fibre management features
- Improved splice cassettes with lifting functionality for improved ease of installation and inspection
- Patch panel with reduced depth
- Angled patch panel for improved patch cord management within 1U

### Description

The new preloaded patch panel is specifically designed for installation in data centres where the high density, angled design for improved patch cord management and enhanced installation benefits of the patch panel meet the key requirements for implementation.

The patch panels are preloaded with LC adaptors and are available in medium and high density versions. The medium density patch panel provides 48 LC connections, while the high density version has 96 LC connections. Singlemode and multimode versions are available.

The angular shape is matching the shape of the Nexans copper V-shape panel. This shape is perfectly suited to guide the patch cords horizontally to the side of the panel.

The newly developed tray of the patch panel can be removed from the rack completely to ease installation of direct terminated or spliced fibre and faster installation of Pre-Term fibre.

The preloaded patch panel has extended rear cable management with multiple entries to provide maximum flexibility. It accommodates both cable glands and tie wraps for strain relief of the cables. The cable gland sizes are 20 mm (8x) and 25 mm (2x).

For improved fibre management the fibres can be arranged in 4 separate loops for added flexibility and organisation. The support bases and the rings for these 4 loops are included as standard.

The patch panel tray has multiple, specially designed, slots at the rear to fix the cable glands of Nexans' pre-terminated cables. There is ample space inside the patch panel to organise the flexible fan-out of the pre-terminated cables.

Up to 4 splice cassettes (N890.090 and N890.091) can be installed inside the tray of the patch panel. Only one cover (N890.092) is required to close the splice cassettes at the top. The bottom splice cassette is fixed with screws to the tray of the patch panel. Splice cassettes are fixed with hinges to the cassette below and with such an installation the splice cassettes can be lifted and tilted for improved access to the splices inside the patch panel. This facilitates the inspection of the splices after installation.

Each splice cassette for heat shrink protection (N890.090) can accommodate 12 splices allowing a maximum of 48 splices for the complete patch panel. The splice cassette for aluminium protection (N890.091) has a maximum of 24 splices resulting in a maximum of 96 splices per patch panel. N890.091 can only be used with maxistrap pigtails and cables with 250 um fibres.

Splice cassettes are not included in the patch panel and must be ordered separately.

Panels are fully painted in black for a professional look and feel.



**LANmark-OF**

### Standards

**International ISO/IEC 11801**

## LANmark-OF Angled Preloaded Patch Panel

### Product List

| Nexans ref.                                                                                     | Name                                                           |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  N439.2A48LCMM | LANmark-OF Angled Preloaded Patch Panel 48 LC Multimode Black  |
|  N439.2A48LCSM | LANmark-OF Angled Preloaded Patch Panel 48 LC Singlemode Black |
|  N439.2A96LCMM | LANmark-OF Angled Preloaded Patch Panel 96 LC Multimode Black  |
|  N439.2A96LCSM | LANmark-OF Angled Preloaded Patch Panel 96 LC Singlemode Black |

 = Make to order,  = Make to stock

## LANmark-OF Sliding Preloaded Patch Panels

- Preloaded patch panels with adaptors for fast installation in data centres
- High density connectivity: up to 48 SC or 96 LC.
- Sliding and tilting patch panel for ease of installation, upgrade and maintenance
- Optimised for installation of Pre-Term with a cable gland and fibre management features
- Improved splice cassettes with lifting functionality for improved ease of installation and inspection
- Labelling facility for port identification and patch cord management within 1 U

### Description

The new pre-loaded patch panel is specifically designed for installation in data centres where the high density, integrated patch cord guide and enhanced installation benefits of the patch panel meet the key requirements for implementation.

The patch panels are pre-loaded with SC or LC adaptors and are available in medium and high density versions. The medium density patch panel provides 24 SC or 48 LC connections, while the high density version has 48 SC or 96 LC connections. Singlemode and multimode versions are available.

The new patch cord guide sits in front of the adaptors and allows the patch cords to be managed within the same 1 U saving expensive rack space.

The patch cord guide also provides a labelling facility to identify connections. Additional labelling is provided by printed port numbers on the adaptor plate.

The newly developed chassis of the patch panel can be removed from the rack completely to ease installation of direct terminated or spliced fibre and faster installation of pre-terminated cables. The tray tilts and slides for improved access to the installed fibres for inspection.

The pre-loaded patch panel has extended cable management with multiple entries to provide maximum flexibility. It accommodates both cable glands and tie wraps for strain relief of the cables. The cable gland sizes are 20 mm (8x) and 25 mm (2x).

For improved fibre management the fibres can be arranged in 4 separate loops for added flexibility and organisation. The support bases and the rings for these 4 loops are included.

The patch panel chassis has multiple, specially designed, slots at the rear to fix the cable glands of Nexans' pre-terminated cables. There is ample space inside the patch panel to organise the flexible fan-out of the pre-terminated cables.

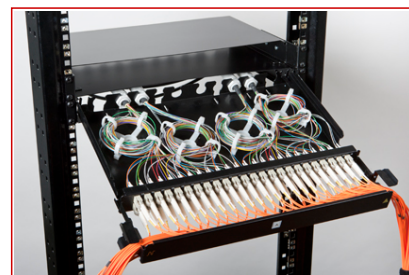
Up to 4 splice cassettes (N890.090 and N890.091) can be installed inside the tray of the patch panel. Only one cover (N890.092) is required to close the splice cassettes at the top. The bottom splice cassette is fixed with screws to the chassis of the patch panel. Splice cassettes are fixed with hinges to the cassette below and with such an installation the splice cassettes can be lifted and tilted for improved access to the splices inside the patch panel. This facilitates the inspection of the splices after installation.

Each splice cassette for heat shrink protectors (N890.090) can accommodate 12 splices allowing a maximum of 48 splices for the complete patch panel.

The splice cassette for aluminium protectors (N890.091) has a maximum of 24 splices resulting in a maximum of 96 splices per patch panel. N890.091 can only be used with maxistrap pigtails and cables with 250 um fibres.

Splice cassettes are not included in the patch panel.

The front adaptor plate can be fixed in a flush or recessed position in the rack using the adjustable side brackets. When the panel is installed recessed the distance between the rack vertical and the rear of the panel is 288 mm. The front cord management projection is 67 mm. When the panel is installed flush the distance between the rack vertical and the rear of the panel is 248 mm. The front cord management projection is 107 mm.



## LANmark-OF

### Standards

**International ISO/IEC 11801**

## LANmark-OF Sliding Preloaded Patch Panels

Panels are fully painted in black for a professional look and feel.

## LANmark-OF Sliding Preloaded Patch Panels

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                                            |
|--------------------------------------|-----------------------------------------------------------------|
| 📦 N439.2B48LCMM                      | LANmark-OF Preloaded Patch Panel 48 LC Multimode Sliding Black  |
| 📦 N439.2B24LCMM                      | LANmark-OF Preloaded Patch Panel 24 LC Multimode Sliding Black  |
| 📦 N439.2B24LCSM                      | LANmark-OF Preloaded Patch Panel 24 LC Singlemode Sliding Black |
| 📦 N439.2B48LCSM                      | LANmark-OF Preloaded Patch Panel 48 LC Singlemode Sliding Black |
| 📦 N439.2B48SCMM                      | LANmark-OF Preloaded Patch Panel 48 SC Multimode Sliding Black  |
| 📦 N439.2B48SCSM                      | LANmark-OF Preloaded Patch Panel 48 SC Singlemode Sliding Black |
| 📦 N439.2B96LCMM                      | LANmark-OF Preloaded Patch Panel 96 LC Multimode Sliding Black  |
| 📦 N439.2B96LCSM                      | LANmark-OF Preloaded Patch Panel 96 LC Singlemode Sliding Black |
| ☎ = Make to order, 📦 = Make to stock |                                                                 |

## Essential-OF Fixed Patch Panel

- Empty OF patch panel without sliding mechanism.
- Suitable for direct termination or splicing.
- Can be used as splitter box.
- Available in two versions 24ST and 24 SC.
- Three positions faceplate for patch cord bending radius.

### Description

#### Application

Nexans Essential 1U Optical Fibre Patch Panel has been designed to support :

- up to 24 ST ports or
- up to 12 Dual SC ports.

It combines a cost effective design with high port density. It is suitable for tight buffer cables (direct termination) or loose tube cables using splice tray (N890.095, N890.096 or N890.097).

It also can be used as a splitter(\*)

#### Features

- 19" width
- Two versions ST and SC
- Blind face plates are available.
- 3 positions :

-flushed

-15 mm recessed

-30 mm recessed

- Easy identification : couplers are numbered on the face plate.
- Cable entrance is possible through a cable gland (PG16) or through a rectangular opening (Using tie wraps).
- Cage-nuts as well as fibre holders are included.

(\*) splitter allows to split multitube cable to at most 6 Nexans E-ssential OF Patch Panels.

For use as splitter, you need:

-Splitter tube (N890.044)

-Cable gland for splitter (N890.043)

-Blind plate (N441.132)



**e**ssential

### Standards

International ISO/IEC 11801

## Essential-OF Fixed Patch Panel

### Characteristics

#### Dimensional characteristics

|            |        |
|------------|--------|
| Heightunit | 1 U    |
| Width      | 19 in  |
| Depth      | 233 mm |

#### Usage characteristics

|                    |             |
|--------------------|-------------|
| Component function | Patch panel |
|--------------------|-------------|

### Product List

| Nexans ref.                                                                                                          | Name                                 | Connector type |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|
|  N441.122                           | Essential-OF Patch Panel 24 SC White | SC             |
|  N441.121                           | Essential-OF Patch Panel 24 ST White | ST             |
| ☎ = Make to order,  = Make to stock |                                      |                |

## Outlets

## LANmark-OF Zone Distribution box

- Empty ZD box optical fiber
- Suitable for direct termination or splicing.

### Description

#### Application

- Designed for the installation of zone wiring, fibre to the office and to the desk

#### Compatibility

Suitable for tight buffer cable (direct termination) or loose tube using splice tray

Compatible with all LANmark-OF accessories

#### Installation

The OF zone distribution box is easy to install in the ceiling, false floor or on the wall with four fixation points in the bottom plate.

To enter the cable there is a pre-perforated hole for a cable gland PG 16 foreseen, at the backside.

There is a fixation point for the Nexans splice tray.

Printed numbering system on the cover



**LANmark-OF**

#### Standards

International ISO/IEC 11801

## LANmark-OF Zone Distribution box

### Characteristics

| Dimensional characteristics |        |
|-----------------------------|--------|
| Depth                       | 200 mm |
| Height                      | 40 mm  |
| Width                       | 230 mm |
| Usage characteristics       |        |
| Field of application        | Indoor |
| Packaging                   | Box    |

### Characteristics ZD box

|                |    |
|----------------|----|
| Connector type | LC |
|----------------|----|

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|  N521.630                                                                                                               | LANmark-OF modular Zone distribution box empty |
|  = Make to order,  = Make to stock |                                                |

## Structural Hardware

- For all 45x45mm fittings
- Fits Surface Mount Boxes, Cover plates and Ducts
- Outlets include labeling and shutters
- Suitable for all snap-in adaptors.
- Easy click-in mechanism.

### Description

#### Application

This range of outlets is suitable for any environment: ducts, cover plates and surface mount boxes (including 45 fittings). The range features Snap-in adaptors for fast and easy installation.

For the specific information on the Snap-in adaptors , refer to the corresponding datasheets.

#### Guarantees

- All plastic material is UL 94V0

#### Installation

These modular outlets fit into a complete range of international 45x45 covering plates and surface mount boxes.

For easy management and identification, the outlets are include an integrated outlet labelling system using transparent windows.

The Snap-in connectors are inserted into the modular outlet by a simple click-in mechanism.



**LANmark-OF**

#### Standards

**International ISO/IEC 11801**

## Structural Hardware

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|  N420.035<br>New                                                                                                        | Modular OF Splicing Outlet 45X45 for 2 Snap-in adaptors |
|  = Make to order,  = Make to stock |                                                         |



## Patch Cords

## LANmark-OF OM1 Patch Cords

- Optical fiber patch cords
- LANmark-OF OM1 performance
- For use in cabinets and workplaces

### Description

#### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed Ethernet protocols.

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).

#### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 30 dB
- Colour of Jacket: Orange
- LANmark-OF OM1 performance: compliant to IEC60793-2-50, subtype A1.3
- Duplex LC-LC, duplex LC-SC and duplex LC-ST patch cords have a duplex cable construction with a diameter of 2 X 2.0 mm.
- Duplex SC-SC, duplex SC-ST and duplex ST-ST patch cords have a duplex cable construction with a diameter of 2 X 2.8 mm.

#### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This conforms to the requirements of IEC 11801 and EN 50174-1:2009.



**LANmark-OF**

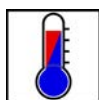
#### Standards

International ISO/IEC 11801

### Characteristics

#### Construction characteristics

|             |             |
|-------------|-------------|
| Armour type | Aramid yarn |
| Colour      | Orange      |



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM1 Patch Cords

### Construction characteristics

|                  |              |
|------------------|--------------|
| Outer sheath     | LSZH-FR      |
| Fiber optic type | OM1 62.5/125 |

### Transmission characteristics

|                             |        |
|-----------------------------|--------|
| Return Loss, maximum, dB    | 30 dB  |
| Insertion Loss, maximum, dB | 0.3 dB |

### Mechanical characteristics

|                                          |          |
|------------------------------------------|----------|
| Maximum pulling force (IEC 60794-1-2-E1) | 200 N    |
| Crush resistance (IEC 60794-1-E3)        | 250 N/cm |

### Usage characteristics

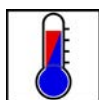
|                                         |                   |
|-----------------------------------------|-------------------|
| Operating temperature, range            | -10 .. 50 °C      |
| Fire retardant                          | IEC 60332-3 Cat.C |
| Minimum static operating bending radius | 40 mm             |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                                   | Connector type |
|--------------|------------------------------------------------------------------------|----------------|
| 📦 N123.0CLOX | LANmark-OF Patch Cord Multimode 62.5/125 OM1 2LC - 2SC LSZH Orange X m | Duplex SC-LC   |
| 📦 N123.0LTOX | LANmark-OF Patch Cord Multimode 62.5/125 OM1 2LC - 2ST LSZH Orange X m | Duplex LC-ST   |
| 📦 N123.0CCOX | LANmark-OF Patch Cord Multimode 62.5/125 OM1 2SC - 2SC LSZH Orange X m | Duplex SC-SC   |
| 📦 N123.0CTOX | LANmark-OF Patch Cord Multimode 62.5/125 OM1 2SC - 2ST LSZH Orange X m | Duplex SC-ST   |
| 📦 N123.0TTOX | LANmark-OF Patch Cord Multimode 62.5/125 OM1 2ST - 2ST LSZH Orange X m | Duplex ST-ST   |
| 📦 N123.0LLOX | LANmark-OF Patch cord Multimode 62.5/125 OM1 2LC - 2LC LSZH Orange X m | Duplex LC-LC   |

☎ = Make to order, 📦 = Make to stock



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM2 Patch Cords

- Optical fiber patch cords
- LANmark-OF OM2 performance
- For use in cabinets and workplaces

### Description

#### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed Ethernet protocols.

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).

#### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 30 dB
- Colour of Jacket: Orange
- LANmark-OF OM2 performance: compliant to IEC60793-2-10, subtype A1a.1
- Duplex LC-LC, duplex LC-SC and duplex LC-ST patch cords have a duplex cable construction with a diameter of 2 X 2.0 mm.
- Duplex SC-SC, duplex SC-ST and duplex ST-ST patch cords have a duplex cable construction with a diameter of 2 X 2.8 mm.

#### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This conforms to the requirements of IEC 11801 and EN 50174-1:2009.



**LANmark-OF**

#### Standards

International ISO/IEC 11801

### Characteristics

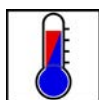
#### Construction characteristics

Armour type

Aramid yarn

Colour

Orange



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM2 Patch Cords

### Construction characteristics

|                  |            |
|------------------|------------|
| Outer sheath     | LSZH-FR    |
| Fiber optic type | OM2 50/125 |

### Transmission characteristics

|                             |        |
|-----------------------------|--------|
| Return Loss, maximum, dB    | 30 dB  |
| Insertion Loss, maximum, dB | 0.3 dB |

### Mechanical characteristics

|                                          |          |
|------------------------------------------|----------|
| Maximum pulling force (IEC 60794-1-2-E1) | 200 N    |
| Crush resistance (IEC 60794-1-E3)        | 250 N/cm |

### Usage characteristics

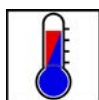
|                                         |                   |
|-----------------------------------------|-------------------|
| Operating temperature, range            | -10 .. 50 °C      |
| Fire retardant                          | IEC 60332-3 Cat.C |
| Minimum static operating bending radius | 40 mm             |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                                 | Connector type |
|--------------|----------------------------------------------------------------------|----------------|
| 📦 N123.2CLOX | LANmark-OF Patch Cord Multimode 50/125 OM2 2LC - 2SC LSZH Orange X m | Duplex SC-LC   |
| 📦 N123.2LTOX | LANmark-OF Patch Cord Multimode 50/125 OM2 2LC - 2ST LSZH Orange X m | Duplex LC-ST   |
| 📦 N123.2CCOX | LANmark-OF Patch Cord Multimode 50/125 OM2 2SC - 2SC LSZH Orange X m | Duplex SC-SC   |
| 📦 N123.2CTOX | LANmark-OF Patch Cord Multimode 50/125 OM2 2SC - 2ST LSZH Orange X m | Duplex SC-ST   |
| 📦 N123.2TTOX | LANmark-OF Patch Cord Multimode 50/125 OM2 2ST - 2ST LSZH Orange X m | Duplex ST-ST   |
| 📦 N123.2LLOX | LANmark-OF Patch cord Multimode 50/125 OM2 2LC - 2LC LSZH Orange X m | Duplex LC-LC   |

☎ = Make to order, 📦 = Make to stock



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM3 Patch Cords

- Optical fiber patch cords
- LANmark-OF OM3 performance
- For use in cabinets and workplaces

### Description

#### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include , but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).



**LANmark-OF**

### Standards

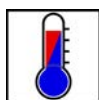
International ISO/IEC 11801

### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 30 dB
- Colour of Jacket: Orange
- LANmark-OF OM3 performance: compliant to IEC60793-2-10, subtype A1a.2
- Duplex LC-LC, duplex LC-SC and duplex LC-ST patch cords have a duplex cable construction with a diameter of 2 X 2.0 mm.
- Duplex SC-SC, duplex SC-ST and duplex ST-ST patch cords have a duplex cable construction with a diameter of 2 X 2.8 mm.

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This conforms to the requirements of IEC 11801 and EN 50174-1:2009.



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM3 Patch Cords

### Characteristics

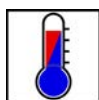
| Construction characteristics            |                   |
|-----------------------------------------|-------------------|
| Armour type                             | Aramid yarn       |
| Colour                                  | Orange            |
| Outer sheath                            | LSZH-FR           |
| Fiber optic type                        | OM3 50/125        |
| Transmission characteristics            |                   |
| Return Loss, maximum, dB                | 30 dB             |
| Insertion Loss, maximum, dB             | 0.3 dB            |
| Mechanical characteristics              |                   |
| Crush resistance (IEC 60794-1-E3)       | 250 N/cm          |
| Usage characteristics                   |                   |
| Operating temperature, range            | -10 .. 50 °C      |
| Fire retardant                          | IEC 60332-3 Cat.C |
| Minimum static operating bending radius | 40 mm             |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                                 | Maximum pulling force (IEC 60794-1-2-E1) (N) | Connector type |
|--------------|----------------------------------------------------------------------|----------------------------------------------|----------------|
| ☎ N123.5CLOX | LANmark-OF Patch Cord Multimode 50/125 OM3 2LC - 2SC LSZH Orange X m | 200                                          | Duplex SC-LC   |
| ☎ N123.5LTOX | LANmark-OF Patch Cord Multimode 50/125 OM3 2LC - 2ST LSZH Orange X m | 200                                          | Duplex LC-ST   |
| ☎ N123.5CCOX | LANmark-OF Patch Cord Multimode 50/125 OM3 2SC - 2SC LSZH Orange X m | 200                                          | Duplex SC-SC   |
| ☎ N123.5CTOX | LANmark-OF Patch Cord Multimode 50/125 OM3 2SC - 2ST LSZH Orange X m | 200                                          | Duplex SC-ST   |
| ☎ N123.5TTOX | LANmark-OF Patch Cord Multimode 50/125 OM3 2ST - 2ST LSZH Orange X m | 200                                          | Duplex ST-ST   |
| ☎ N123.5LLOX | LANmark-OF Patch cord Multimode 50/125 OM3 2LC - 2LC LSZH Orange X m | 200                                          | Duplex LC-LC   |

☎ = Make to order, 📦 = Make to stock



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM4 Patch Cords

- Optical fiber patch cords
- LANmark-OF OM4 performance
- For use in cabinets and workplaces

### Description

#### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include , but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).



**LANmark-OF**

### Standards

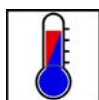
International ISO/IEC 11801

### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 30 dB
- Colour of Jacket: Orange
- LANmark-OF OM4 performance: compliant to IEC60793-2-10, subtype A1a.3
- Duplex LC-LC, duplex LC-SC and duplex LC-ST patch cords have a duplex cable construction with a diameter of 2 X 2.0 mm.
- Duplex SC-SC, duplex SC-ST and duplex ST-ST patch cords have a duplex cable construction with a diameter of 2 X 2.8 mm.

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This conforms to the requirements of IEC 11801 and EN 50174-1:2009.



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF OM4 Patch Cords

### Characteristics

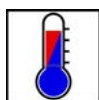
| Construction characteristics             |                   |
|------------------------------------------|-------------------|
| Armour type                              | Aramid yarn       |
| Colour                                   | Orange            |
| Outer sheath                             | LSZH-FR           |
| Fiber optic type                         | OM4 50/125        |
| Transmission characteristics             |                   |
| Return Loss, maximum, dB                 | 30 dB             |
| Insertion Loss, maximum, dB              | 0.3 dB            |
| Mechanical characteristics               |                   |
| Maximum pulling force (IEC 60794-1-2-E1) | 200 N             |
| Crush resistance (IEC 60794-1-E3)        | 250 N/cm          |
| Usage characteristics                    |                   |
| Operating temperature, range             | -10 .. 50 °C      |
| Fire retardant                           | IEC 60332-3 Cat.C |
| Minimum static operating bending radius  | 40 mm             |

### Product List

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                                 | Connector type |
|--------------|----------------------------------------------------------------------|----------------|
| 📦 N123.7CLOX | LANmark-OF Patch Cord Multimode 50/125 OM4 2LC - 2SC LSZH Orange X m | Duplex SC-LC   |
| 📦 N123.7LTOX | LANmark-OF Patch Cord Multimode 50/125 OM4 2LC - 2ST LSZH Orange X m | Duplex LC-ST   |
| 📦 N123.7CCOX | LANmark-OF Patch Cord Multimode 50/125 OM4 2SC - 2SC LSZH Orange X m | Duplex SC-SC   |
| 📦 N123.7CTOX | LANmark-OF Patch Cord Multimode 50/125 OM4 2SC - 2ST LSZH Orange X m | Duplex SC-ST   |
| 📦 N123.7TTOX | LANmark-OF Patch Cord Multimode 50/125 OM4 2ST - 2ST LSZH Orange X m | Duplex ST-ST   |
| 📦 N123.7LLOX | LANmark-OF Patch cord Multimode 50/125 OM4 2LC - 2LC LSZH Orange X m | Duplex LC-LC   |

☎ = Make to order, 📦 = Make to stock


Operating temperature, range  
-10 .. 50 °C

Fire retardant  
IEC 60332-3 Cat.C

Minimum static operating bending radius  
40 mm

## LANmark-OF Singlemode Patch Cords

- Optical fiber patch cords
- LANmark-OF singlemode performance
- For use in cabinets and workplaces

### Description

#### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include, but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).



**LANmark-OF**

### Standards

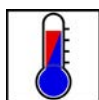
International ISO/IEC 11801

### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 40 dB
- Colour of Jacket: Yellow
- LANmark-OF Singlemode OS2 performance: compliant to IEC60793-2-50, subtype B1.3
- Duplex LC-LC, duplex LC-SC and duplex LC-ST patch cords have a duplex cable construction with a diameter of 2 X 2.0 mm.
- Duplex SC-SC, duplex SC-ST and duplex ST-ST patch cords have a duplex cable construction with a diameter of 2 X 2.8 mm.

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This conforms to the requirements of IEC 11801 and EN 50174-1:2009.



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF Singlemode Patch Cords

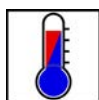
### Characteristics

|                                          |                   |
|------------------------------------------|-------------------|
| <b>Construction characteristics</b>      |                   |
| Armour type                              | Aramid yarn       |
| Colour                                   | Yellow            |
| Outer sheath                             | LSZH-FR           |
| Fiber optic type                         | SingleMode 9/125  |
| <b>Transmission characteristics</b>      |                   |
| Insertion Loss, maximum, dB              | 0.3 dB            |
| <b>Mechanical characteristics</b>        |                   |
| Maximum pulling force (IEC 60794-1-2-E1) | 200 N             |
| Crush resistance (IEC 60794-1-E3)        | 250 N/cm          |
| <b>Usage characteristics</b>             |                   |
| Operating temperature, range             | -10 .. 50 °C      |
| Fire retardant                           | IEC 60332-3 Cat.C |
| Minimum static operating bending radius  | 40 mm             |

### Product List

| Nexans ref. Name                                                                  |  | Return Loss, maximum, dB (dB) | Connector type |
|-----------------------------------------------------------------------------------|--|-------------------------------|----------------|
| ☒ N123.4CLYX LANmark-OF Patch Cord Singlemode 9/125 OS2 2LC - 2SC LSZH Yellow X m |  | 40                            | Duplex SC-LC   |
| ☒ N123.4LTYX LANmark-OF Patch Cord Singlemode 9/125 OS2 2LC - 2ST LSZH Yellow X m |  | 40                            | Duplex LC-ST   |
| ☒ N123.4CCYX LANmark-OF Patch Cord Singlemode 9/125 OS2 2SC - 2SC LSZH Yellow X m |  | 40                            | Duplex SC-SC   |
| ☒ N123.4CTYX LANmark-OF Patch Cord Singlemode 9/125 OS2 2SC - 2ST LSZH Yellow X m |  | 40                            | Duplex SC-ST   |
| ☒ N123.4TTYX LANmark-OF Patch Cord Singlemode 9/125 OS2 2ST - 2ST LSZH Yellow X m |  | 40                            | Duplex ST-ST   |
| ☒ N123.4LLYX LANmark-OF Patch cord Singlemode 9/125 OS2 2LC - 2LC LSZH Yellow X m |  | 40                            | Duplex LC-LC   |

☒ = Make to order, ☒ = Make to stock



Operating temperature, range  
-10 .. 50 °C



Fire retardant  
IEC 60332-3 Cat.C



Minimum static operating bending radius  
40 mm

## LANmark-OF Slimflex Patch Cord Duplex LC OM3

- Optical fibre patch cords
- LANmark-OF OM3 performance
- For use in cabinets and workplaces
- Bend radius reduced to 7.5 mm
- GIGAliteFLEX bend insensitive fibre
- Round patch cord with uniboot design

### Description

#### Optimised for data centres environments

LANmark-OF Slimflex patch cords have a very small bend radius of 7.5 mm due to the use of advanced sheathing material and **GIGAliteFLEX** bend insensitive fibre.

The small bend radius of the patch cord is beneficial in high density patching areas where a lot of bends are common. There is a high risk that the larger bend radius (40 mm) of traditional patch cords is not maintained resulting in high attenuation and loss of transmission.

The round design of the Slimflex patch cord results in a small bend radius in any direction. Traditional patch cords based on a zipcord design have a bend radius that is dependent on the orientation.

The advanced sheathing material allows a very flexible patch cord without any memory or kink effect.

The advanced sheathing material has higher resistance to abrasion and cutting compared to traditional LSZH material. This results in reduced sheath damage when pinched between doors or around sharp bends.

With the round design of the patch cable the area required for the patch cord has also been reduced by 30 % resulting in space savings and reduced disturbance of the airflow for cooling.

For the support of the advanced high speed Ethernet protocols with stringent power budgets the Slimflex patch cord features a low loss performance of 0.3 dB. This increases the headroom in the channel and reduces the risk of down time.

#### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 25 dB
- Color of Jacket: Orange or Aqua
- **GIGAliteFLEX** bend insensitive fibre
- LANmark-OF OM3 performance: compliant to IEC60793-2-10, subtype A1a.2

#### Guarantees and installation



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1



### LANmark-OF

#### Standards

International ISO/IEC 11801

## LANmark-OF Slimflex Patch Cord Duplex LC OM3

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include, but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This complies to the requirements of IEC 11801 and EN 50174-1:2009.

### Characteristics

| Construction characteristics                      |                     |
|---------------------------------------------------|---------------------|
| Armour type                                       | Aramid yarn         |
| Outer sheath                                      | LSZH-FR             |
| Fiber optic type                                  | OM3 50/125          |
| Connector type                                    | Duplex LC-LC        |
| Dimensional characteristics                       |                     |
| Outer Diameter                                    | 2.6 mm              |
| Transmission characteristics                      |                     |
| Return Loss, maximum, dB                          | 25 dB               |
| Insertion Loss, maximum, dB                       | 0.3 dB              |
| Mechanical characteristics                        |                     |
| Mechanical resistance to impacts (IEC 60794-1-E4) | 10 impacts of 1 N.m |
| Maximum pulling force (IEC 60794-1-2-E1)          | 200 N               |
| Crush resistance (IEC 60794-1-E3)                 | 100 N/cm            |
| Usage characteristics                             |                     |
| Minimum static operating bending radius           | 7.5 mm              |
| Operating temperature, range                      | -20 .. 60 °C        |
| Fire retardant                                    | IEC 60332-1         |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC OM3

### Product List

| Nexans ref.                                                                                    | Name                                                        | Colour |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------|
|  N122.5AWA020 | LANmark-OF Slimflex Patch Cord Duplex LC OM3 LSZH 2m Aqua   | Aqua   |
|  N122.5AWO020 | LANmark-OF Slimflex Patch Cord Duplex LC OM3 LSZH 2m Orange | Orange |
|  N122.5AWA050 | LANmark-OF Slimflex Patch Cord Duplex LC OM3 LSZH 5m Aqua   | Aqua   |
|  N122.5AWO050 | LANmark-OF Slimflex Patch Cord Duplex LC OM3 LSZH 5m Orange | Orange |

☎ = Make to order,  = Make to stock

### N-number Slimflex patch cord: N122.FAWCXXX

|                   |                        |
|-------------------|------------------------|
| N122.             | Slimflex patch cord    |
| F: Fibre type     | 4: SM                  |
|                   | 5: OM3                 |
|                   | 7: OM4                 |
| AW                | Fixed                  |
| C: Color          | Y for singlemode       |
|                   | A or O for OM3 and OM4 |
| XXX: length in dm | 010=1m                 |
|                   | 050=5m                 |
|                   | 100=10m                |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC OM4

- Optical fibre patch cords
- LANmark-OF OM4 performance
- For use in cabinets and workplaces
- Bend radius reduced to 7.5 mm
- GIGAliteFLEX bend insensitive fibre
- Round patch cord with uniboot design

### Description

#### Optimised for data centres environments

LANmark-OF Slimflex patch cords have a very small bend radius of 7.5 mm due to the use of advanced sheathing material and **GIGAliteFLEX** bend insensitive fibre.

The small bend radius of the patch cord is beneficial in high density patching areas where a lot of bends are common. There is a high risk that the larger bend radius (40 mm) of traditional patch cords is not maintained resulting in high attenuation and loss of transmission.

The round design of the Slimflex patch cord results in a small bend radius in any direction. Traditional patch cords based on a zipcord design have a bend radius that is dependent on the orientation.

The advanced sheathing material allows a very flexible patch cord without any memory or kink effect.

The advanced sheathing material has higher resistance to abrasion and cutting compared to traditional LSZH material. This results in reduced sheath damage when pinched between doors or around sharp bends.

With the round design of the patch cable the area required for the patch cord has also been reduced by 30 % resulting in space savings and reduced disturbance of the airflow for cooling.

For the support of the advanced high speed Ethernet protocols with stringent power budgets the Slimflex patch cord features a low loss performance of 0.3 dB. This increases the headroom in the channel and reduces the risk of down time.

#### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 25 dB
- Color of Jacket: Orange or Aqua
- **GIGAliteFLEX** bend insensitive fibre
- LANmark-OF OM4 performance: compliant to IEC60793-2-10, subtype A1a.3

#### Guarantees and installation



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1



## LANmark-OF

#### Standards

International ISO/IEC 11801

## LANmark-OF Slimflex Patch Cord Duplex LC OM4

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include, but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This complies to the requirements of IEC 11801 and EN 50174-1:2009.

### Characteristics

| Construction characteristics                      |                     |
|---------------------------------------------------|---------------------|
| Armour type                                       | Aramid yarn         |
| Outer sheath                                      | LSZH-FR             |
| Fiber optic type                                  | OM4 50/125          |
| Connector type                                    | Duplex LC-LC        |
| Dimensional characteristics                       |                     |
| Outer Diameter                                    | 2.6 mm              |
| Transmission characteristics                      |                     |
| Return Loss, maximum, dB                          | 25 dB               |
| Insertion Loss, maximum, dB                       | 0.3 dB              |
| Mechanical characteristics                        |                     |
| Mechanical resistance to impacts (IEC 60794-1-E4) | 10 impacts of 1 N.m |
| Maximum pulling force (IEC 60794-1-2-E1)          | 200 N               |
| Crush resistance (IEC 60794-1-E3)                 | 100 N/cm            |
| Usage characteristics                             |                     |
| Minimum static operating bending radius           | 7.5 mm              |
| Operating temperature, range                      | -20 .. 60 °C        |
| Fire retardant                                    | IEC 60332-1         |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC OM4

### Product List

| Nexans ref.                                                                                    | Name                                                        | Colour |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------|
|  N122.7AWA020 | LANmark-OF Slimflex Patch Cord Duplex LC OM4 LSZH 2m Aqua   | Aqua   |
|  N122.7AWO020 | LANmark-OF Slimflex Patch Cord Duplex LC OM4 LSZH 2m Orange | Orange |
|  N122.7AWA050 | LANmark-OF Slimflex Patch Cord Duplex LC OM4 LSZH 5m Aqua   | Aqua   |
|  N122.7AWO050 | LANmark-OF Slimflex Patch Cord Duplex LC OM4 LSZH 5m Orange | Orange |

☎ = Make to order,  = Make to stock

### N-number Slimflex patch cord: N122.FAWCXXX

|                   |                        |
|-------------------|------------------------|
| N122.             | Slimflex patch cord    |
| F: Fibre type     | 4: SM                  |
|                   | 5: OM3                 |
|                   | 7: OM4                 |
| AW                | Fixed                  |
| C: Color          | Y for singlemode       |
|                   | A or O for OM3 and OM4 |
| XXX: length in dm | 010=1m                 |
|                   | 050=5m                 |
|                   | 100=10m                |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC Singlemode

- Optical fibre patch cords
- LANmark-OF Singlemode performance
- For use in cabinets and workplaces
- Bend radius reduced to 7.5 mm
- GIGAliteFLEX bend insensitive fibre
- Round patch cord with uniboot design

### Description

#### Optimised for data centres environments

LANmark-OF Slimflex patch cords have a very small bend radius of 7.5 mm due to the use of advanced sheathing material and **GIGAliteFLEX** bend insensitive fibre.

The small bend radius of the patch cord is beneficial in high density patching areas where a lot of bends are common. There is a high risk that the larger bend radius (40 mm) of traditional patch cords is not maintained resulting in high attenuation and loss of transmission.

The round design of the Slimflex patch cord results in a small bend radius in any direction. Traditional patch cords based on a zipcord design have a bend radius that is dependent on the orientation.

The advanced sheathing material allows a very flexible patch cord without any memory or kink effect.

The advanced sheathing material has higher resistance to abrasion and cutting compared to traditional LSZH material. This results in reduced sheath damage when pinched between doors or around sharp bends.

With the round design of the patch cable the area required for the patch cord has also been reduced by 30 % resulting in space savings and reduced disturbance of the airflow for cooling.

For the support of the advanced high speed Ethernet protocols with stringent power budgets the Slimflex patch cord features a low loss performance of 0.3 dB. This increases the headroom in the channel and reduces the risk of down time.

#### Characteristics

- Patch cord cable is according to IEC 60794-2-50
- Maximum insertion loss according to IEC 61300-3-4: 0.3 dB
- Typical insertion loss: 0.15 dB
- Minimum return loss according to IEC 61300-3-6: 25 dB
- Color of Jacket: Yellow
- **GIGAliteFLEX** bend insensitive fibre
- LANmark-OF OM4 performance: compliant to IEC60793-2-50, subtype B6.a2, compatible with G652D.



## LANmark-OF

### Standards

International ISO/IEC 11801



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC Singlemode

### Guarantees and installation

Nexans LANmark-OF optical fibre patch cords have been designed for indoor applications in support of high speed protocols.

High speed protocols supported include, but are not limited to

- Ethernet: 1GBase-SX, 10GBase-SR
- Fibre channel Serial: 4G, 8G and 16G

Details on the supported distances can be found in the LANmark-OF warranty modules.

Typical installation environments are:

- Cabinets to connect patch panels to active equipment.
- Cross connects in data centres.
- Suitable for use in the work area to connect the workstation to the wall outlet (Fibre To The Desk).

### Design

Nexans LANmark-OF patchcords designed according to the "Cross-Over" wiring principle to improve field installation (A1-B2, B1-A2). This complies to the requirements of IEC 11801 and EN 50174-1:2009.

### Characteristics

#### Construction characteristics

|                  |              |
|------------------|--------------|
| Armour type      | Aramid yarn  |
| Outer sheath     | LSZH-FR      |
| Fiber optic type | OM4 50/125   |
| Connector type   | Duplex LC-LC |

#### Dimensional characteristics

|                |        |
|----------------|--------|
| Outer Diameter | 2.6 mm |
|----------------|--------|

#### Transmission characteristics

|                             |        |
|-----------------------------|--------|
| Return Loss, maximum, dB    | 25 dB  |
| Insertion Loss, maximum, dB | 0.3 dB |

#### Mechanical characteristics

|                                                   |                     |
|---------------------------------------------------|---------------------|
| Mechanical resistance to impacts (IEC 60794-1-E4) | 10 impacts of 1 N.m |
| Maximum pulling force (IEC 60794-1-2-E1)          | 200 N               |
| Crush resistance (IEC 60794-1-E3)                 | 100 N/cm            |

#### Usage characteristics

|                                         |              |
|-----------------------------------------|--------------|
| Minimum static operating bending radius | 7.5 mm       |
| Operating temperature, range            | -20 .. 60 °C |
| Fire retardant                          | IEC 60332-1  |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

## LANmark-OF Slimflex Patch Cord Duplex LC Singlemode

### Product List

| Nexans ref.    | Name                                                       | Colour |
|----------------|------------------------------------------------------------|--------|
| ☐ N122.4AWY020 | LANmark-OF Slimflex Patch Cord Duplex LC SM LSZH 2m Yellow | Yellow |
| ☐ N122.7AWY050 | LANmark-OF Slimflex Patch Cord Duplex LC SM LSZH 5m Yellow | Yellow |

☎ = Make to order, ☐ = Make to stock

### N-number Slimflex patch cord: N122.FAWCXXX

|                   |                        |
|-------------------|------------------------|
| N122.             | Slimflex patch cord    |
| F: Fibre type     | 4: SM                  |
|                   | 5: OM3                 |
|                   | 7: OM4                 |
| AW                | Fixed                  |
| C: Color          | Y for singlemode       |
|                   | A or O for OM3 and OM4 |
| XXX: length in dm | 010=1m                 |
|                   | 050=5m                 |
|                   | 100=10m                |



Mechanical resistance to impacts (IEC 60794-1-E4)  
10 impacts of 1 N.m



Minimum static operating bending radius  
7.5 mm



Operating temperature, range  
-20 .. 60 °C



Fire retardant  
IEC 60332-1

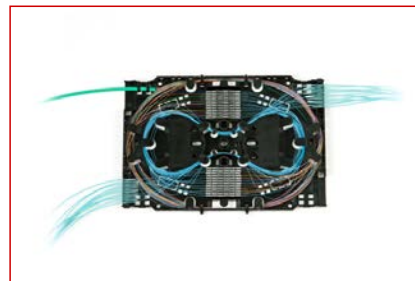
## Pigtails & Splicing Materials

## LANmark-OF Splicing Accessories with Aluminium Protectors Preloaded Sliding Panel

### Description

#### Family Characteristics

- Family of patch panel accessories for termination of a cable with fusion splicing techniques.
- Provides management for cable and pigtails within the fibre patch panel.
- The cassette protects the fusion splices and holds them in position.
- The splice cassette can retain up to 24 fusion splices.
- Four trays can be stacked inside the patch panels resulting in a maximum capacity of 96 fusion splices in a patch panel.
- Splice cassettes are fixed to each other at the back of the cassettes with the provided hinges. This feature facilitates the inspection after installation since the cassettes can be lifted and tilted.
- The larger cassettes facilitates 2 rings of routing: an inner ring for the fibres of the pigtails and an outer ring for the fibres of the cable.
- Splicing with Aluminium protectors can be used for loose tube cables, i.e. fibres with a 250 um coating. Aluminium protectors can not be used with tight buffer cables, i.e. fibres with a 900 um coating.
- Splicing with Aluminium protectors can be used for maxistrap pigtails.
- LANmark-OF Bend Limiting Tube (N890.145) can be used to split up fibres of loose tube cable into different splice cassettes.
- These splice cassettes can be installed in the LANmark-OF and LANsense-OF sliding preloaded patch panels (N439.2B\* and N883.2B\*).



**LANmark-OF**

#### Standards

**International** ISO/IEC 11801:2002/  
Amd 1:2008/Cor 1:2008

## LANmark-OF Splicing Accessories with Aluminium Protectors

### Preloaded Sliding Panel

#### N890.091: LANmark-OF Splice Cassette 24 Aluminium Protection Sliding Preloaded Panel

- Splice Cassette for management of splices with Aluminium protectors.
- Provides support for 2\*12 splices with Aluminium protectors.
- Designed for use with loose tube cables (250 um coated fibres).
- Designed for use with maxistrip pigtails.



#### N890.003: LANmark-OF Fusion Splice Aluminium Protectors

- LANmark OF- accessories to complete the splicing system with Aluminium protectors
- 150 pieces per bag
- Length: 30 mm
- Compatible with loose tube cables (250 um coated fibres)
- Compatible with maxistrip pigtails
- Designed for Nexans' splice cassette for 24 Aluminium fusion splice protectors (N890.091)



#### N890.092: LANmark-OF Cover Splice Cassette Sliding Pre-loaded Panel

- LANmark-OF accessories to complete splice cassette system.
- LANmark-OF splice cassette cover compatible with N890.090 and N890.091.
- When the splice cassettes are stacked only the top splice cassette requires a cover.

## LANmark-OF Splicing Accessories with Aluminium Protectors Preloaded Sliding Panel



### N890.004: Tool for Aluminium Fusion Splice Protectors

- A crimp tool for easy installation of the Aluminium fusion splice protectors.
- Compatible with Nexans Aluminium fusion splice protector (N890.003).

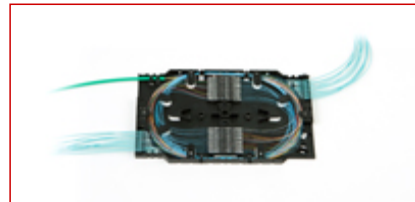


## LANmark-OF Splicing Accessories with Aluminium Protectors Snap-In Panel

### Description

#### Family Characteristics

- Family of patch panel accessories for termination of a cable with fusion splicing techniques.
- Provides management for cable and pigtails within the fibre patch panel.
- The cassette protects the fusion splices and holds them in position.
- The splice cassette can retain up to 24 fusion splices.
- Four trays can be stacked inside the patch panels resulting in a maximum capacity of 96 fusion splices in a patch panel.
- Splicing with Aluminium protectors can be used for loose tube cables, i.e. fibres with a 250 um coating. Aluminium protectors can not be used with tight buffer cables, i.e. fibres with a 900 um coating.
- Splicing with Aluminium protectors can be used for maxistrap pigtails.
- LANmark-OF Bend Limiting Tube (N890.145) can be used to split up fibres of loose tube cable into different splice cassettes.
- These splice cassettes can be installed in the LANmark-OF Snap-In Patch Panel (N441.203 and N441.204) and the LANmark-OF Zone Distribution Box (N521.630).



**LANmark-OF**

### Standards

**International** ISO/IEC 11801:2002/  
Amd 1:2008/Cor 1:2008

## LANmark-OF Splicing Accessories with Aluminium Protectors

### Snap-In Panel

#### N890.096: LANmark-OF Splice Cassette 24 Aluminium Protectors Snap-In Panel

- Splice Cassette for management of splices with Aluminium protectors.
- Provides support for 2\*12 splices with Aluminium protectors.
- Designed for use with loose tube cables (250 um coated fibres).
- Designed for use with maxistrip pigtails.



#### N890.003: LANmark-OF Fusion Splice Aluminium Protectors

- LANmark OF- accessories to complete the splicing system with Aluminium protectors
- 150 pieces per bag
- Length: 30 mm
- Compatible with loose tube cables (250 um coated fibres)
- Compatible with maxistrip pigtails
- Designed for Nexans' splice cassette for 24 Aluminium fusion splice protectors (N890.096)



#### N890.097: Cover for Splice Cassette Snap-In Panel

- LANmark-OF accessories to complete splice cassette system.
- LANmark-OF splice cassette cover compatible with N890.095 and N890.096.

## LANmark-OF Splicing Accessories with Aluminium Protectors Snap-In Panel

- When the splice cassettes are stacked only the top splice cassette requires a cover.



### N890.004: Tool for Aluminium Fusion Splice Protectors

- A crimp tool for easy installation of the Aluminium fusion splice protectors.
- Compatible with Nexans Aluminium fusion splice protector (N890.003).



## LANmark-OF Splicing Accessories with Heatshrink Protectors Preloaded Sliding Panel

### Description

#### Family Characteristics

- Family of patch panel accessories for termination of a cable when using fusion splicing techniques.
- The cassette protects the fusion splices and holds them in position.
- The splice cassette can retain up to 12 fusion splices.
- Four trays can be stacked inside the patch panels resulting in a maximum capacity of 48 fusion splices in a patch panel.
- Splice cassettes are fixed to each other at the back of the cassettes with the provided hinges. This feature facilitates the inspection after installation since the cassettes can be lifted and tilted.
- The large cassettes facilitates 2 rings of routing: an inner ring for the fibres of the pigtails and an outer ring for the fibres of the cable.
- Splicing with heat shrink protectors can be used for both tight buffer and loose tube cables, i.e. heat shrink protectors are compatible with both 250 and 900 um coated fibres.
- Splicing with heat shrink protectors can be used for both maxistrap and tight buffer pigtails.
- LANmark-OF Bend Limiting Tube (N890.145) can be used to split up fibres of loose tube cable into different splice cassettes.
- These splice cassettes can be installed in the LANmark-OF and LANsense-OF sliding preloaded patch panels (N439.2B\* and N883.2B\*).



**LANmark-OF**

### Standards

**International** ISO/IEC 11801:2002/  
Amd 1:2008/Cor 1:2008

## LANmark-OF Splicing Accessories with Heatshrink Protectors

### Preloaded Sliding Panel

**N890.090: LANmark-OF Splice Cassette 12 Heat Shrink Protection Sliding Preloaded Panel**

- Splice cassette for management of splices with heat shrink protectors.
- Provides support for 2\*6 heat shrink splice protectors.
- Designed for use with both loose tube and tight buffer cables, i.e. 250 and 900 um coated fibres.
- Designed for use with both maxistrap and tight buffer pigtails.



**N890.021: LANmark-OF Fusion Splice Heat Shrink protectors (45mm)**

- LANmark OF-accessories to complete the splicing system with heat shrink protectors
- 100 pieces per bag
- Length: 45mm
- Compatible with tight buffer or loose tube cables, i.e. 250 and 900 um coated fibres.
- Compatible with tight buffer and maxistrap pigtails
- Designed for Nexans' splice cassette for 12 heat shrink fusion splice protectors (N890.090)



**N890.092: LANmark-OF Cover Splice Cassette Sliding Preloaded Panel**

- LANmark-OF accessories to complete splice cassette system.
- LANmark-OF splice cassette cover compatible with N890.091 and N890.092.
- When the splice cassettes are stacked only the top splice cassette requires a cover.

## **LANmark-OF Splicing Accessories with Heatshrink Protectors Preloaded Sliding Panel**

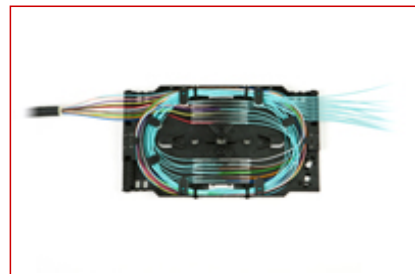


## LANmark-OF Splicing Accessories with Heatshrink Protectors Snap-In Patch Panel

### Description

#### Family Characteristics

- Family of patch panel accessories for termination of a cable when using fusion splicing techniques.
- The cassette protects the fusion splices and holds them in position.
- The splice cassette can retain up to 12 fusion splices.
- Four trays can be stacked inside the patch panels resulting in a maximum capacity of 48 fusion splices in a patch panel.
- Splicing with heat shrink protectors can be used for both tight buffer and loose tube cables, i.e. heat shrink protectors are compatible with both 250 and 900 um coated fibres.
- Splicing with heat shrink protectors can be used for both maxistrip and tight buffer pigtails.
- LANmark-OF Bend Limiting Tube (N890.145) can be used to split up fibres of loose tube cable into different splice cassettes.
- These splice cassettes can be installed in the LANmark-OF Snap-In Patch Panel (N441.203 and N441.204) and the LANmark-OF Zone Distribution Box (N521.630).



**LANmark-OF**

### Standards

**International** ISO/IEC 11801:2002/  
Amd 1:2008/Cor 1:2008

## LANmark-OF Splicing Accessories with Heatshrink Protectors

### Snap-In Patch Panel

N890.095: LANmark-OF Splice Cassette 12 Heat Shrink Protectors Snap-In Panel

- Splice cassette for management of splices with heat shrink protectors.
- Provides support for 2\*6 heat shrink splice protectors.
- Designed for use with both loose tube and tight buffer cables, i.e. 250 and 900 um coated fibres.
- Designed for use with both maxistrap and tight buffer pigtails.



N890.021: LANmark-OF Fusion Splice Heat Shrink protectors (45mm)

- Lanmark OF-accessories to complete the splicing system with heat shrink protectors
- 100 pieces per bag
- Length: 45mm
- Compatible with tight buffer or loose tube cables, i.e. 250 and 900 um coated fibres.
- Compatible with tight buffer and maxistrap pigtails
- Designed for Nexans' splice cassette for 12 heat shrink fusion splice protectors (N890.095)



## LANmark-OF Splicing Accessories with Heatshrink Protectors Snap-In Patch Panel

### N890.097: Cover for Splice Cassette Snap-In Panel

- LANmark-OF accessories to complete splice cassette system.
- LANmark-OF splice cassette cover compatible with N890.095 and N890.096.
- When the splice cassettes are stacked only the top splice cassette requires a cover.



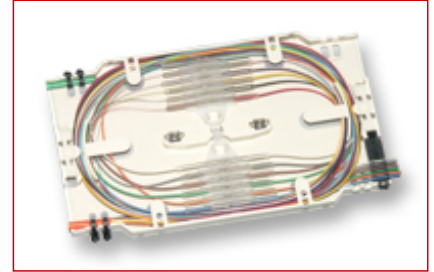
#### Contact

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Splice Materials

#### Description

A range of materials and accessories for splicing



**LANmark-OF**

#### Standards

**International** ISO/IEC 11801

## Splice Materials

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                   |
|-------------|--------------------------------------------------------|
| 📦 N890.145  | LANmark-OF Bend Limiting Tube                          |
| 📦 N890.024  | LANmark-OF Fusion Splice Heat Shrink Protection (65mm) |
| 📦 N890.023  | Splice Holder                                          |
| 📦 N890.044  | Splitter tube                                          |

☎ = Make to order, 📦 = Make to stock

## LANmark-OF Pigtails Maxistrip

- Maxistrip pigtail for ease of splicing and high density
- Insertion loss per connection: 0.3 dB maximum
- Factory terminated fibre assembly
- 100 % factory tested
- Compatible with LANmark-OF splice cassette with heat shrink or Aluminium protection.

### Description

#### Pigtail family characteristics

- Fibre assembly to terminate cable with fusion splicing
- Available with ST, SC, LC and MTRJ connectors
- Suitable for use in patch panels using splice cassettes.
- The pigtails can be stripped in one action over a long distance of up to 1m.
- Insertion loss: typical value is 0.1 dB, maximum value is 0.3 dB.

#### Fibre types

- Nexans LANmark-OF pigtails are available in all standardised optical fibre classes, multimode and singlemode.
- The MM50 version is designed to be used in a OM3 or a OM3xt compliant system and is backwards compliant with OM2 and OM2xt systems. The outer sheath for this type of pigtail is aqua.
- The MM62.5 version is designed for use in OM1 or OM1xt compliant systems. These pigtails are orange.
- The singlemode version is OS2 compliant with G652d fibre inside. These pigtails are yellow.
- The multimode versions can be used in laser optimised systems using the LANmark-OF xt cables.



**LANmark-OF**

#### Standards

International ISO/IEC 11801

#### Compatibility and installation practices

- Maxistrip pigtails are compatible with heat shrink splice cassettes (N890.090 and N890.095) with heat shrink protections (N890.021).
- Maxistrip pigtails are compatible with splice cassettes (N890.091 and N890.096) with Aluminium protections (N890.021).
- Maxistrip pigtails are recommended to be used with loose tube cables, i.e. with 250 um fibres. When using tight buffer cables (900 um fibres) additional stress on the maxistrip pigtails should be limited as much as possible
- For proper alignment in the fusion splice tool the pigtail is fixed on the 250 um coating after stripping the 900 um coating. Fixing the pigtail on the 900 um coating will lead to improper alignment.
- In addition the pigtail needs to be stripped till the cladding around the splice area before insertion in the splice tool.

#### Guarantees

Nexans LANmark-OF pigtails are covered by Nexans warranty as described in the General Terms and Conditions

## LANmark-OF Pigtails Maxistrip

### Product List

| Nexans ref. | Name                                 |
|-------------|--------------------------------------|
|             | ☎ = Make to order, 📦 = Make to stock |

### Optical performance pigtails

| Fibre type | Connector | Polishing | Insertion loss max. | Return loss min. |
|------------|-----------|-----------|---------------------|------------------|
| Multimode  | ST-SC-LC  | PC        | 0,3 dB              | > 30 dB          |
| Multimode  | MT-RJ     | PC        | 0,3 dB              | NA               |
| Singlemode | ST-SC-LC  | PC        | 0.3 dB              | > 40 dB          |
| Singlemode | SC-LC     | APC       | 0,3 dB              | > 55 dB          |
| Singlemode | MT-RJ     | NA        | NA                  | NA               |

### Pigtails maxistrip: available products

| Fibre type | Connector | N-number  | Description                                                     |
|------------|-----------|-----------|-----------------------------------------------------------------|
| SM         | ST        | N123.4MTY | LANmark-OF Pigtail ST Singlemode Maxistrip LSZH 9/125 1m Yellow |
|            | SC        | N123.4MCY | LANmark-OF Pigtail SC Singlemode Maxistrip LSZH 9/125 1m Yellow |
|            | LC        | N123.4MLY | LANmark-OF Pigtail LC Singlemode Maxistrip LSZH 9/125 1m Yellow |
| SM APC     | SC        | N120.4MDY | LANmark-OF Pigtail SC SM APC Maxistrip LSZH 9/125 1m Yellow     |
|            | LC        | N120.4MPY | LANmark-OF Pigtail LC SM APC Maxistrip LSZH 9/125 1m Yellow     |
| OM1        | MTRJ      | N123.0MMO | LANmark-OF Pigtail MTRJ OM1 Maxistrip LSZH 62.5/125 1m Orange   |
|            | ST        | N123.0MTO | LANmark-OF Pigtail ST OM1 Maxistrip LSZH 62.5/125 1m Orange     |
|            | SC        | N123.0MCO | LANmark-OF Pigtail SC OM1 Maxistrip LSZH 62.5/125 1m Orange     |
|            | LC        | N123.0MLO | LANmark-OF Pigtail LC OM1 Maxistrip LSZH 62.5/125 1m Orange     |
| OM3        | MTRJ      | N123.5MMA | LANmark-OF Pigtail MTRJ OM2/OM3 Maxistrip LSZH 50/125 1m Aqua   |
|            | ST        | N123.5MTA | LANmark-OF Pigtail ST OM2/OM3 Maxistrip LSZH 50/125 1m Aqua     |
|            | SC        | N123.5MCA | LANmark-OF Pigtail SC OM2/OM3 Maxistrip LSZH 50/125 1m Aqua     |
|            | LC        | N123.5MLA | LANmark-OF Pigtail LC OM2/OM3 Maxistrip LSZH 50/125 1m Aqua     |
| OM4        | MTRJ      | N123.7MMA | LANmark-OF Pigtail MTRJ OM4 Maxistrip LSZH 50/125 1m Aqua       |
|            | ST        | N120.7MTA | LANmark-OF Pigtail ST OM4 Maxistrip LSZH 50/125 1m Aqua         |
|            | SC        | N120.7MCA | LANmark-OF Pigtail SC OM4 Maxistrip LSZH 50/125 1m Aqua         |
|            | LC        | N120.7MLA | LANmark-OF Pigtail LC OM4 Maxistrip LSZH 50/125 1m Aqua         |

## LANmark-OF Pigtails Tight Buffer

- Tight buffer pigtail for ease of splicing
- Insertion loss per connection: 0.3 dB maximum
- Factory terminated fibre assembly
- 100 % factory tested
- Compatible with LANmark-OF splice cassette with heat shrink protection.

### Description

#### Pigtail family characteristics

- Fibre assembly to terminate cable with fusion splicing
- Available with ST, SC, LC and MTRJ connectors
- Suitable for use in patch panels using splice cassettes.
- The pigtails can be stripped in one action over a distance of 1-2 cm.
- Insertion loss: typical value is 0.1 dB, maximum value is 0.3 dB.

#### Fibre types

- Nexans LANmark-OF pigtails are available in all standardised optical fibre classes, multimode and singlemode.
- The MM50 version is designed to be used in a OM3 or a OM3xt compliant system and is backwards compliant with OM2 and OM2xt systems. The outer sheath for this type of pigtail is aqua.
- The MM62.5 version is designed for use in OM1 or OM1xt compliant systems. These pigtails are orange.
- The singlemode version is OS2 compliant with G652d fibre inside. These pigtails are yellow.
- The multimode versions can be used in laser optimised systems using the LANmark-OF xt cables.



**LANmark-OF**

#### Standards

International ISO/IEC 11801

### Compatibility and installation practices

- Tight buffer pigtails are compatible with heat shrink splice cassettes (N890.090 and N890.095) with heat shrink protections (N890.021).
- Tight buffer pigtails are recommended to be used with tight buffer cables, i.e. with 900 um fibres. When using loose tube cables (250 um fibres) additional stress on the loose tube fibres should be limited as much as possible
- Around the splice area the pigtail needs to be stripped till the cladding before insertion in the splice tool.
- For proper alignment in the fusion splice tool the pigtail is fixed on the 900 um outer sheath. There is no need to strip the outer sheath of the pigtail on the place for fixation for getting a proper fixation.

### Guarantees

Nexans LANmark-OF pigtails are covered by Nexans warranty as described in the General Terms and Conditions

## LANmark-OF Pigtails Tight Buffer

### Optical performance pigtails

| Fibre type | Connector | Polishing | Insertion loss max. | Return loss min. |
|------------|-----------|-----------|---------------------|------------------|
| Multimode  | ST-SC-LC  | PC        | 0,3 dB              | > 30 dB          |
| Multimode  | MT-RJ     | PC        | 0,3 dB              | NA               |
| Singlemode | ST-SC-LC  | PC        | 0.3 dB              | > 40 dB          |
| Singlemode | SC-LC     | APC       | 0,3 dB              | > 55 dB          |
| Singlemode | MT-RJ     | NA        | NA                  | NA               |

### Pigtails tight buffer: available products

| Fibre type | Connector | N-number  | Description                                                      |
|------------|-----------|-----------|------------------------------------------------------------------|
| SM         | ST        | N123.4TTY | LANmark-OF Pigtail ST SM Tight Buffer LSZH 9/125 1m Yellow       |
|            | SC        | N123.4TCY | LANmark-OF Pigtail SC SM Tight Buffer LSZH 9/125 1m Yellow       |
|            | LC        | N123.4TLY | LANmark-OF Pigtail LC SM Tight Buffer LSZH 9/125 1m Yellow       |
| SM APC     | SC        | N120.4TDY | LANmark-OF Pigtail SC SM APC Tight Buffered LSZH 9/125 1m Yellow |
|            | LC        | N120.4TPY | LANmark-OF Pigtail LC SM APC Tight Buffered LSZH 9/125 1m Yellow |
| OM1        | MTRJ      | N123.0TMO | LANmark-OF Pigtail MTRJ OM1 Tight Buffer LSZH 62.5/125 1m Orange |
|            | ST        | N123.0TTO | LANmark-OF Pigtail ST OM1 Tight Buffer LSZH 62.5/125 1m Orange   |
|            | SC        | N123.0TCO | LANmark-OF Pigtail SC OM1 Tight Buffer LSZH 62.5/125 1m Orange   |
|            | LC        | N123.0TLO | LANmark-OF Pigtail LC OM1 Tight Buffer LSZH 62.5/125 1m Orange   |
| OM3        | MTRJ      | N123.5TMA | LANmark-OF Pigtail MTRJ OM2/OM3 Tight Buffer LSZH 50/125 1m Aqua |
|            | ST        | N123.5TTA | LANmark-OF Pigtail ST OM2/OM3 Tight Buffer LSZH 50/125 1m Aqua   |
|            | SC        | N123.5TCA | LANmark-OF Pigtail SC OM2/OM3 Tight Buffer LSZH 50/125 1m Aqua   |
|            | LC        | N123.5TLA | LANmark-OF Pigtail LC OM2/OM3 Tight Buffer LSZH 50/125 1m Aqua   |
| OM4        | MTRJ      | N120.7TMA | LANmark-OF Pigtail MTRJ OM4 Tight Buffer LSZH 50/125 1m Aqua     |
|            | ST        | N120.7TTA | LANmark-OF Pigtail ST OM4 Tight Buffer LSZH 50/125 1m Aqua       |
|            | SC        | N120.7TCA | LANmark-OF Pigtail SC OM4 Tight Buffer LSZH 50/125 1m Aqua       |
|            | LC        | N120.7TLA | LANmark-OF Pigtail LC OM4 Tight Buffer LSZH 50/125 1m Aqua       |



## Adaptors

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark-OF Snap-In Adapter

**Description****Application**

LANmark-OF Snap-In adapters have been designed for snapping into the modular OF patch panels and ZD boxes. They are available in single SC, dual SC, LC duplex and MT-RJ version. The 2 Small Form Factor connector types offer double density, as two fibre connections are offered on the SC-type footprint. Installation time is saved as the snap-in concept replaces the time-consuming screwing attachment of coupling devices.

**Performance**

LC and SC versions are available in Multimode and Singlemode, MT-RJ is only available in Multimode.

**LANmark-OF****Standards**

**International** ISO/IEC 11801

## LANmark-OF Snap-In Adapter

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                                | Connector type |
|-------------|-----------------------------------------------------|----------------|
| 📦 N205.622  | LANmark-OF Duplex LC Snap-In Adaptor Singlemode APC | LC/APC         |
| 📦 N205.625  | LANmark-OF Duplex SC Snap-In Adaptor Singlemode APC | SC/APC         |
| 📦 N205.611  | LANmark-OF Snap-In Adapter 2LC-2LC Multimode        | LC             |
| 📦 N205.621  | LANmark-OF Snap-In Adapter 2LC-2LC Singlemode       | LC             |
| 📦 N205.614  | LANmark-OF Snap-In Adapter DSC-DSC Multimode        | SC Duplex      |
| 📦 N205.624  | LANmark-OF Snap-In Adapter DSC-DSC Singlemode       | SC Duplex      |
| 📦 N205.612  | LANmark-OF Snap-In Adapter MT-RJ - MT-RJ            | MT-RJ          |
| 📦 N205.613  | LANmark-OF Snap-In Adapter SC-SC Multimode          | SC             |
| 📦 N205.623  | LANmark-OF Snap-In Adapter SC-SC Singlemode         | SC             |

☎ = Make to order, 📦 = Make to stock

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Standard Adaptors

**Description**

Standard format adaptors and couplers

**LANmark-OF****Standards**

**International** ISO/IEC 11801

## Standard Adaptors

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                  |
|--------------------------------------|---------------------------------------|
| 📦 N205.127                           | Dual SC coupler MM                    |
| 📦 N205.158                           | Dual SC coupler SM                    |
| 📦 N205.135                           | LANmark-OF MTRJ adapter Multimode     |
| 📦 N205.131                           | LANmark-OF Quad LC Multimode adaptor  |
| 📦 N205.133                           | LANmark-OF Quad LC Singlemode adaptor |
| 📦 N205.153                           | LANmark-OF Singlemode adaptor ST-ST   |
| 📦 N205.123                           | LANmark-OF adaptor Multimode ST-ST    |
| ☎ = Make to order, 📦 = Make to stock |                                       |



## Tools & Accessories

## LANmark-OF Cleaning Tools

- Cleaning tools for cleaning fibre connector and adaptors
- Cleaning tools for single connectors: SC, ST and LC
- Cleaning tools for male and female array connectors

### Description

Cleaning of fibre connectors and adaptors is extremely important to achieve optimal optical performance and low loss connectivity. The Nexans' cleaning tools allow cleaning unmated connectors and can also clean connectors that are installed in a patch panel. The cassette MPO cleaner allows cleaning effectively unmated male MPO connectors.



### Product List

| Nexans ref.                                                                                | Name                                  |
|--------------------------------------------------------------------------------------------|---------------------------------------|
|  N890.122 | LANmark-OF LC Cleaning Tool           |
|  N890.125 | LANmark-OF MPO Cassette Cleaning Tool |
|  N890.120 | LANmark-OF MPO Cleaning Tool          |
|  N890.121 | LANmark-OF SC/ST Cleaning Tool        |

☎ = Make to order,  = Make to stock

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.

## LANmark-OF Fibre Accessories

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref. | Name                                         |
|-------------|----------------------------------------------|
| 📦 N890.043  | Cable gland for splitter tube                |
| 📦 N441.132  | Essential-OF Blind face plate (For splitter) |
| 📦 N890.147  | LANmark-OF Cable gland 20mm                  |
| 📦 N890.146  | LANmark-OF Cable gland 25mm                  |
| 📦 N890.045  | Microtube 0.9 mm                             |

☎ = Make to order, 📦 = Make to stock

## Intelligent Infrastructure Management

LANsense is Nexans Intelligent Infrastructure Management (IIM) solution. It is an internet enabled hardware and software package which can automatically discover and monitor network connectivity in real-time, to ensure network connections are secure and that connectivity documentation is always 100% accurate. LANSense is vendor independent and can be retro-fitted to existing systems.

Benefits:

- Increased Security
- Cost effective change control and management
- Reduced downtime
- Asset Management
- Remote site monitoring
- the ability to integrate, control, and manage building management services (Access Control, intruder systems, CCTV, HVAC etc)

Nexans work in partnership with iTRACS, the leaders in IIM software, and offer three levels of software:

- LANSense
- LANSense Enterprise Edition
- LANSense Data Centre Edition

These software solutions can be configured with different hardware products to deliver specialist solutions for Data Centres, Enterprise, or SME customers with branch networks.

For more information on becoming a Nexans Certified LANSense Partner please contact us at [ncs.uk@nexans.com](mailto:ncs.uk@nexans.com)



## LANsense Software

Choice of software functionality

### Description

LANsense is Nexans Intelligent Infrastructure Management (IIM) solution. It is an internet enabled hardware and software package which can automatically discover and monitor network connectivity in real-time, to ensure network connections are secure and that connectivity documentation is always 100% accurate. LANsense is vendor independent and can be retro-fitted to existing systems.

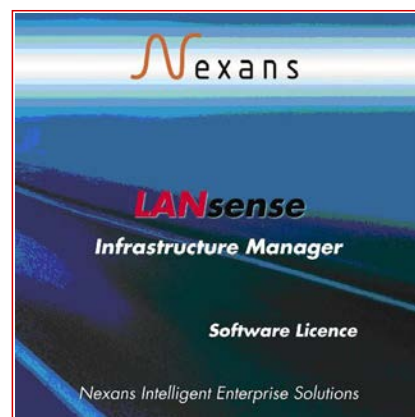
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Nexans work in partnership with iTRACS, the leaders in IIM software, and offer three levels of software:

- LANsense
- LANsense Enterprise Edition
- LANsense Data Centre Edition

These software solutions can be configured with different hardware products to deliver specialist solutions for Data Centres, Enterprise, or SME customers with branch networks.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense EMAC Products

### EMAC Products

#### Description

Corporate data centres are well known as significant power users, with a large sized data centre consuming similar amounts of power to an average sized town. As data centres today generate more heat output and often suffer from inadequate cooling, the need to operate efficiently and cost effectively against infrastructure and power constraints is increasing.

Obviously the greater capacity required, the greater impact on ensuring continuity of supply. Add to this, the escalating cost of energy, and the requirement for management information and control becomes evermore critical.

Nexans provides a range of standard intelligent power management capabilities, for both new and existing builds specified for both power monitoring only, or a combination of power monitoring with individual outlet control.

Defined upper and lower thresholds allow the client to differentiate between warning and critical status, generating various alarms and alerts, with appropriate escalation paths.

Aggregation of configuration information across data centre equipment, for intelligent monitoring and alarm processing, provides 'real time' identification of changes, scheduled polling and the ability to capture detailed data to produce highly sophisticated and graphical management information reports, enabling clients to perform trend analysis and risk management for mission critical services.

Status information can be gathered either locally or remotely via secure authenticated IP access (LDAP) monitoring RMS volts, amps, kVA, kWh, power factor and frequency.

Detailed values and management information across device location, power and cooling, network connectivity, asset application and customer information enable us to present analysis on current and historical trending. This trend analysis can be further utilised to help CIOs make informed decisions on capacity planning, risk analysis, performance benchmarking and policing service level agreements.

To optimise both power consumption and energy use, our intelligent offerings make it possible to meter actual power usage and produce trend data for any single or group of physical systems, enabling:

- Adequate capacity for existing & future needs
- Monitoring, measuring & reporting of power usage via multiple clients
- Billing stream capability for hosted clients
- Prevention of unauthorised use of power outlets / equipment deployment
- System load management (phase balancing, capacity planning etc)
- Recovery of locked servers via remote IP power cycling
- Alarming & trending of system, rack, powerstrip and outlet level overload conditions.



**LANsense™**

#### Standards

**International** Nexans specification



RoHS conform  
Yes

## LANsense EMAC Products

### Characteristics

#### Usage characteristics

RoHS conform

Yes



RoHS conform  
Yes

## LANsense EMAC Products

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.         | Name                                                |
|---------------------|-----------------------------------------------------|
| 📦 N878.21220        | LANsense Dual Supply Link Box 32A                   |
| 📦 N878.32001        | LANsense Humidity Sensor 2m                         |
| 📦 N878.32002<br>New | LANsense Humidity Sensor RJ45                       |
| 📦 N878.41004<br>New | LANsense Magnetic Door Sensor RJ45 4m               |
| 📦 N878.41001        | LANsense Microswitch Door Sensor 4m                 |
| 📦 N878.41003<br>New | LANsense Microswitch Door Sensor RJ45 2m            |
| 📦 N878.NIPM<br>New  | LANsense Non-Invasive Power Monitor                 |
| 📦 N878.22110        | LANsense PDU 32A 12x10A IEC C13 Horizontal          |
| 📦 N878.24210        | LANsense PDU 32A 16x10A IEC C13 Monitor and Control |
| 📦 N878.22210        | LANsense PDU 32A 16x10A IEC C13 Vertical            |
| 📦 N878.22215        | LANsense PDU 32A 24x10A IEC C13 Vertical            |
| 📦 N878.11002<br>New | LANsense Rack Manager II 6 Channel Autosensing      |
| 📦 N878.11003<br>New | LANsense Row Controller 12 Channel Autosensing      |
| 📦 N878.11004<br>New | LANsense Row Controller Expansion Module            |
| 📦 N878.31001        | LANsense Temperature Sensor 2m                      |
| 📦 N878.31002<br>New | LANsense Temperature Sensor RJ45 2m                 |

☎ = Make to order, 📦 = Make to stock


RoHS conform  
Yes

## LANsense Sliding Fibre Panels

- Preloaded patch panels with adaptors for fast installation in data centres
- High density connectivity: up to 48 SC or 96 LC.
- Sliding and tilting patch panel for ease of installation, upgrade and maintenance
- Optimised for installation of Pre-Term with advanced fibre management features
- Improved splice cassettes with hinged trays for ease of installation and inspection
- Labelling facility for port identification and patch cord management within 1 U

### Description

The new pre-loaded patch panel is specifically designed for installation in data centres where the high density, integrated patch cord guide and enhanced installation benefits of the patch panel meet the key requirements for implementation.

The patch panels are pre-loaded with SC or LC adaptors and are available in medium and high density versions. The medium density patch panel provides 24 SC or 48 LC connections, while the high density version has 48 SC or 96 LC connections. Singlemode and multimode versions are available.

The new patch cord guide sits in front of the adaptors and allows the patch cords to be managed within the same 1 U saving expensive rack space.

The patch cord guide also provides a labelling facility to identify connections. Additional labelling is provided by printed port numbers on the adaptor plate.

The newly developed chassis of the patch panel can be removed from the rack completely to ease installation of direct terminated or spliced fibre and faster installation of pre-terminated cables. The tray tilts and slides for improved access to the installed fibres for inspection.

The pre-loaded patch panel has extended cable management with multiple entries to provide maximum flexibility. It accommodates both cable glands and tie wraps for strain relief of the cables. The cable gland sizes are 20 mm (8x) and 25 mm (2x).

For improved fibre management the fibres can be arranged in 4 separate loops for added flexibility and organisation. The support bases and the rings for these 4 loops are included.

The patch panel chassis has multiple, specially designed, slots at the rear to fix the cable glands of Nexans' pre-terminated cables. There is ample space inside the patch panel to organise the flexible fan-out of the pre-terminated cables.

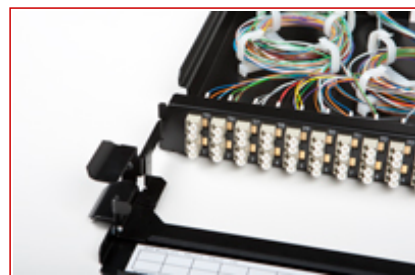
Up to 4 splice cassettes (N890.090 and N890.091) can be installed inside the tray of the patch panel. Only one cover (N890.093) is required to close the splice cassettes at the top. The bottom splice cassette is fixed with screws to the chassis of the patch panel. Splice cassettes are fixed with hinges to the cassette below and with such an installation the splice cassettes can be lifted and tilted for improved access to the splices inside the patch panel. This facilitates the inspection of the splices after installation.

Each splice cassette for heat shrink protectors (N890.090) can accommodate 12 splices allowing a maximum of 48 splices for the complete patch panel.

The splice cassette for aluminium protectors (N890.091) has a maximum of 24 splices resulting in a maximum of 96 splices per patch panel. N890.091 can only be used with maxistrap pigtails and cables with 250 um fibres.

Splice cassettes are not included in the patch panel.

The front adaptor plate can be fixed in a flush or recessed position in the rack using the adjustable side brackets. When the panel is installed recessed the distance between the rack vertical and the rear of the panel is 288 mm. The front cord management projection is 67 mm. When the panel is installed flush the distance between the rack vertical and the rear of the panel is 248 mm. The front cord management projection is 107 mm.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense Sliding Fibre Panels

Panels are fully painted in black for a professional look and feel.

## LANsense Copper Panels

- LANSense IIM compatible
- Empty for use with modular connectors sold separately

### Description

LANsense copper patch panels carry on-board intelligence which remains dormant until enabled by LANSense analysers and software. The panels have in-built sensors to detect the connection status of each port and an I/O connector to link to the analysers.

Manufactured from steel, the panel provides a robust, high density mounting mechanism for Nexans modular connectors.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense Copper Panels

### Characteristics

#### Usage characteristics

I/O Connector - Panel

Type 2

#### Product List

☎=Make to order, 🏭=Make to stock

| Nexans ref.                          | Name                                                                                         |
|--------------------------------------|----------------------------------------------------------------------------------------------|
| ☎ N881.011                           | LANsense 24 Way Patch Panel for 808 connectors                                               |
| ☎ N881.051<br>New                    | LANsense 24 Way Patch Panel for 808 connectors                                               |
| ☎ 195513-1001<br>Substituted         | LANsense 24 Way Patch Panel for 808 connectors (ITT branded)                                 |
| 🏭 N881.671<br>New                    | LANsense Angled Panel 24 Snap-In Black                                                       |
| 🏭 N881.681<br>Substituted            | LANsense Angled Panel 24 Snap-In GG45 Black                                                  |
| ☎ N881.685<br>Substituted            | LANsense Angled Panel 24 Snap-In GG45 White                                                  |
| ☎ N881.675<br>New                    | LANsense Angled Panel 24 Snap-In White                                                       |
| 🏭 N881.411<br>New                    | LANsense Empty Sliding Patch Panel for 24 Snap-In connectors, Black                          |
| 🏭 N881.311<br>New                    | LANsense Panel 24 Snap-In Black                                                              |
| ☎ N881.111<br>Substituted            | LANsense Panel 24 Snap-In GG45 Black                                                         |
| ☎ N881.151<br>Substituted            | LANsense Upgrade Frontplate for Fixed Modular Panel 24 GG45-type snap-in connectors, Black   |
| ☎ N881.351<br>New                    | LANsense Upgrade Frontplate for Fixed Modular Panel 24 Snap-In connectors, Black             |
| ☎ N881.251<br>Substituted            | LANsense Upgrade Frontplate for Sliding Modular Panel 24 GG45-type snap-in connectors, Black |
| ☎ N881.255<br>Substituted            | LANsense Upgrade Frontplate for Sliding Modular Panel 24 GG45-type snap-in connectors, White |
| ☎ N881.451<br>New                    | LANsense Upgrade Frontplate for Sliding Modular Panel 24 Snap-In connectors, Black           |
| ☎ N881.455<br>New                    | LANsense Upgrade Frontplate for Sliding Modular Panel 24 Snap-In connectors, White           |
| ☎ N881.061<br>New                    | LANsense Upgrade for 24 port 808 Modular Panel                                               |
| ☎ = Make to order, 🏭 = Make to stock |                                                                                              |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANsense Copper Cords

- 9th pin for port detection
- Ensures maximum channel performance
- Cat 5e & Cat 6 & Cat 6A/10G
- Screened & Unscreened
- Available in different lengths

### Description

The Nexans LANsense patchcord range is suitable for use in voice or data network installations. The 4 pair construction and robust RJ45 connectors provide for long term network reliability. The patchcords have an unobtrusive external probe built into the plug boot which mates with the sensors built into the patch panels. The patchcords can be supplied in different lengths and with different colour latch protectors to allow differentiation of services and workgroups.



**LANsense™**

### Standards

**International** EN 50265-2-1; ISO/  
IEC 11801

**National** TIA/EIA-568-B.2

## LANsense Copper Cords

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.            | Name                                                 | Category | Length (m) | Colour | Screen |
|------------------------|------------------------------------------------------|----------|------------|--------|--------|
| ☎ LDWPCS010L0U10       | LANsense 5e FTP PVC P/Cord 1m                        | Cat. 5e  | 1          | Grey   | FTP    |
| 📦 LDWPCS020L0U10       | LANsense 5e FTP PVC P/Cord 2m                        | Cat. 5e  | 2          | Grey   | FTP    |
| 📦 LDWPCS030L0U10       | LANsense 5e FTP PVC P/Cord 3m                        | Cat. 5e  | 3          | Grey   | FTP    |
| 📦 LDWPCS050L0U10       | LANsense 5e FTP PVC P/Cord 5m                        | Cat. 5e  | 5          | Grey   | FTP    |
| ☎ LDWPCU010L0U10       | LANsense 5e UTP PVC P/Cord 1m                        | Cat. 5e  | 1          | Grey   | UTP    |
| ☎ LDWPCU020L0U10       | LANsense 5e UTP PVC P/Cord 2m                        | Cat. 5e  | 2          | Grey   | UTP    |
| ☎ LDWPCU030L0U10       | LANsense 5e UTP PVC P/Cord 3m                        | Cat. 5e  | 3          | Grey   | UTP    |
| ☎ LDWPCU050L0U10       | LANsense 5e UTP PVC P/Cord 5m                        | Cat. 5e  | 5          | Grey   | UTP    |
| 📦 LEWPCS010L0U10       | LANsense 6 FTP PVC P/Cord 1m                         | Cat. 6   | 1          | Grey   | FTP    |
| 📦 LEWPCS020L0U10       | LANsense 6 FTP PVC P/Cord 2m                         | Cat. 6   | 2          | Grey   | FTP    |
| 📦 LEWPCS030L0U10       | LANsense 6 FTP PVC P/Cord 3m                         | Cat. 6   | 3          | Grey   | FTP    |
| 📦 LEWPCS050L0U10       | LANsense 6 FTP PVC P/Cord 5m                         | Cat. 6   | 5          | Grey   | FTP    |
| 📦 195600-5010-3        | LANsense 6 UTP PVC P/Cord 1m                         | Cat. 6   | 1          | Grey   | UTP    |
| 📦 195600-5020-3        | LANsense 6 UTP PVC P/Cord 2m                         | Cat. 6   | 2          | Grey   | UTP    |
| 📦 195600-5030-3        | LANsense 6 UTP PVC P/Cord 3m                         | Cat. 6   | 3          | Grey   | UTP    |
| 📦 195600-5050-3        | LANsense 6 UTP PVC P/Cord 5m                         | Cat. 6   | 5          | Grey   | UTP    |
| 📦 N880.LPBLU<br>New    | LANsense Latch Protector Blue 50x                    |          |            | Blue   |        |
| 📦 N880.LPGRN<br>New    | LANsense Latch Protector Green 50x                   |          |            | Green  |        |
| 📦 N880.LPGRY<br>New    | LANsense Latch Protector Grey 50x                    |          |            | Grey   |        |
| 📦 N880.LPORA<br>New    | LANsense Latch Protector Orange 50x                  |          |            | Orange |        |
| 📦 N880.LPRED<br>New    | LANsense Latch Protector Red 50x                     |          |            | Red    |        |
| 📦 N880.LPWHI<br>New    | LANsense Latch Protector White 50x                   |          |            | White  |        |
| 📦 N880.LPYEL<br>New    | LANsense Latch Protector Yellow 50x                  |          |            | Yellow |        |
| 📦 N88A.P1F015OK<br>New | LANsense Patch Cord Cat 6A LSZH Screened 1.5m Orange | Cat. 6a  | 1.5        | Orange | FTP    |
| 📦 N88A.P1F010OK<br>New | LANsense Patch Cord Cat 6A LSZH Screened 1m Orange   | Cat. 6a  | 1          | Orange | FTP    |
| 📦 N88A.P1F020OK<br>New | LANsense Patch Cord Cat 6A LSZH Screened 2m Orange   | Cat. 6a  | 2          | Orange | FTP    |
| 📦 N88A.P1F030OK<br>New | LANsense Patch Cord Cat 6A LSZH Screened 3m Orange   | Cat. 6a  | 3          | Orange | FTP    |
| 📦 N88A.P1F050OK<br>New | LANsense Patch Cord Cat 6A LSZH Screened 5m Orange   | Cat. 6a  | 5          | Orange | FTP    |

☎ = Make to order, 📦 = Make to stock

## LANsense Fibre Panels

- LANSense IIM compatible
- 24, 48 or 96 fibre in 1HU versions
- Available for LC and SC connectors

### Description

The LANSense range of patch panels provide a high density transition between building cables and active equipment.

Very high density versions are available with up to 96 fibre (48 ports) with LC for data centre environments.

Standard 24 or 48 fibre version with SC connections are also available.

A variety of cable entry holes are located at the rear of the panels to allow a wide range of cable variants to be accommodated. Cable entry hole blanks and fibre management are included with the panel. A complementary range of cable glands, that are supplied separately, ensure that cables are secured and enter the panel in a controlled manner. A simple to remove lid gives easy access to the panel interior.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense Fibre Panels

**Product List**

☎=Make to order, 📦=Make to stock

| Nexans ref.                          | Name                                        | Connector type | I/O Connector - Panel |
|--------------------------------------|---------------------------------------------|----------------|-----------------------|
| ☎ N883.131<br>To be removed          | LANsense 24 SC Singlemode Patch Panel       | SC             | Type 1                |
| ☎ N883.221<br>To be removed          | LANsense 48 Fibre LC Multimode Patch Panel  | LC             | Type 2                |
| ☎ N883.261<br>To be removed          | LANsense 48 LC Multimode Patch Panel Black  | LC             | Type 2                |
| ☎ N883.133<br>To be removed          | LANsense 48 SC Singlemode Patch Panel       | SC             | Type 2                |
| ☎ N883.223<br>To be removed          | LANsense 96 LC Multimode Patch Panel        | LC             | Type 2                |
| ☎ N883.233<br>To be removed          | LANsense 96 LC Singlemode Patch Panel       | LC             | Type 2                |
| ☎ N883.182<br>To be removed          | LANsense Fibre Panel 24 SC Multimode Black  | SC             | Type 2                |
| ☎ N883.181<br>To be removed          | LANsense Fibre Panel 24 SC Singlemode Black | SC             | Type 2                |
| ☎ = Make to order, 📦 = Make to stock |                                             |                |                       |

## LANsense Fibre Patchcords

- Additional copper pin for port detection
- High bandwidth OM3 fibre
- Available with LC, MTRJ, or SC connectors

### Description

The MTRJ, SC and LC LANSense patch cord uses the standard MTRJ, SC and LC duplex connector, enabling high-density fiber connections to be achieved. The MTRJ, SC and LC LANSense cord however has an over-boot to incorporate the sensing capability of the LANSense products. The LANSense patch cords are available in both high bandwidth OM4 and single-mode OS2 fibre types and so offer a comprehensive range of patch cords for interfacing with the latest network equipment.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense Fibre Patchcords

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                   | Name                                         | Length (m) | Connector type |
|-------------------------------|----------------------------------------------|------------|----------------|
| 📦 N884.5LLP1                  | LC Duplex LANSense P/Cord 50/125 OM3 - 1m    | 1          | LC             |
| 📦 N884.5LLP2                  | LC Duplex LANSense P/Cord 50/125 OM3 - 2m    | 2          | LC             |
| 📦 N884.5LLP3                  | LC Duplex LANSense P/Cord 50/125 OM3 - 3m    | 3          | LC             |
| 📦 N884.5LLP5                  | LC Duplex LANSense P/Cord 50/125 OM3 - 5m    | 5          | LC             |
| 📦 N884.4LLY1                  | LC Duplex LANSense P/Cord 9/125 OS2 - 1m     | 1          | LC             |
| 📦 N884.4LLY2                  | LC Duplex LANSense P/Cord 9/125 OS2 - 2m     | 1          | LC             |
| 📦 N884.4LLY3                  | LC Duplex LANSense P/Cord 9/125 OS2 - 3m     | 3          | LC             |
| ☎ N884.5MMP1<br>To be removed | MT-RJ Duplex LANSense P/Cord 50/125 OM3 - 1m | 1          | MT-RJ          |
| ☎ N884.5MMP2<br>To be removed | MT-RJ Duplex LANSense P/Cord 50/125 OM3 - 2m | 2          | MT-RJ          |
| ☎ N884.5MMP3<br>To be removed | MT-RJ Duplex LANSense P/Cord 50/125 OM3 - 3m | 3          | MT-RJ          |
| ☎ N884.5MMP5<br>To be removed | MT-RJ Duplex LANSense P/Cord 50/125 OM3 - 5m | 5          | MT-RJ          |
| 📦 N884.5CCP1                  | SC Duplex LANSense P/Cord 50/125 OM3 - 1m    | 1          | SC             |
| 📦 N884.5CCP2                  | SC Duplex LANSense P/Cord 50/125 OM3 - 2m    | 2          | SC             |
| 📦 N884.5CCP3                  | SC Duplex LANSense P/Cord 50/125 OM3 - 3m    | 3          | SC             |
| 📦 N884.5CCP5                  | SC Duplex LANSense P/Cord 50/125 OM3 - 5m    | 5          | SC             |
| 📦 N884.4CCY1                  | SC Duplex LANSense P/Cord 9/125 OS2 - 1m     | 1          | SC             |
| 📦 N884.4CCY2                  | SC Duplex LANSense P/Cord 9/125 OS2 - 2m     | 2          | SC             |
| 📦 N884.4CCY3                  | SC Duplex LANSense P/Cord 9/125 OS2 - 3m     | 3          | SC             |
| 📦 N884.4CCY5                  | SC Duplex LANSense P/Cord 9/125 OS2 - 5m     | 5          | SC             |

☎ = Make to order, 📦 = Make to stock

## LANsense Analysers

- 1U version up to 256 ports
- 6U version from 512 to 2048 ports
- Master and Link variants enabling upto 20480 ports per IP address
- Virtually unlimited scalability

### Description

A LANSense analyser is required to monitor all network ports, record changes in the events log, and continuously update and maintain the connectivity database. It connects to the equipment presentation panel or integration strip and the horizontal distribution panel using I/O cables, and is in turn connected to the LANSense cable management SQL database.

It should be noted that 2 analyser ports (one for the horizontal connection and one for the system connection) are required for each user channel to be monitored.

Master and Link analysers can be connected to form a star wired network capable of monitoring up to 20480 ports in a "patch zone" using a single IP address. Multiple patch zones can be connected to a single database providing almost unlimited scalability.



**LANsense™**

### Standards

**International** UL and CSA approval

## LANsense Analysers

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                 | I/O Connector - Analyser |
|--------------------------------------|--------------------------------------|--------------------------|
| 📦 LXWANLL0101<br>Substituted         | LANsense 1U Link Analyser            | Type A                   |
| 📦 LXWANLM0101<br>Substituted         | LANsense 1U Master Analyser          | Type A                   |
| 📦 LXWANLS0101<br>Substituted         | LANsense 1U Standalone Analyser      | Type A                   |
| 📦 195560-0603<br>Substituted         | LANsense 6U Link Analyser            | Type A                   |
| 📦 195560-0602<br>Substituted         | LANsense 6U Master Analyser          | Type A                   |
| 📦 195560-0601<br>Substituted         | LANsense 6U Standalone Analyser      | Type A                   |
| 📦 N870.1UL<br>New                    | LANsense Analyser 1U Link - MarkII   | Type B                   |
| 📦 N870.1UM<br>New                    | LANsense Analyser 1U Master - MarkII | Type B                   |
| 📦 N870.6UL<br>New                    | LANsense Analyser 6U Link - MarkII   | Type B                   |
| 📦 N870.6UM<br>New                    | LANsense Analyser 6U Master - MarkII | Type B                   |
| ☎ = Make to order, 📦 = Make to stock |                                      |                          |

## LANsense NGA

- Next Generation Analyser
- Seperate analyser and display functions
- Increased density
- Supports additional functionality
- Simplified and more flexible system design

### Description

The Next Generation Analyser is an exciting new development which opens up many possibilities for efficient analyser network design and advanced functionality to support the LANsense platform

#### Key features

- System Master Card (SMC) running Linux OS
- Self diagnostic test and health status
- No Cooling required
- Detects up to 8 connections on a single port
- 9th wire electrostatic protection
- Analyzer Card (AC) hot swap support
- Automated firmware distribution/installation
- Configuration by any Windows XP device
- Multiple deployment options
- Software control of Smart Patch Panel (SPP) interfaces
- "Plug and Play" deployment



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense NGA

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.        | Name                                   |
|--------------------|----------------------------------------|
| 📦 N870.PEN<br>New  | LANsense Analyser Pen                  |
| 📦 N870.PSU2<br>New | LANsense NGA 2 Amp Power Supply Unit   |
| 📦 N870.3UC<br>New  | LANsense NGA 3U Card Cage              |
| 📦 N870.3UL<br>New  | LANsense NGA 3U Card Cage Link Cover   |
| 📦 N870.3UM<br>New  | LANsense NGA 3U Card Cage Master Cover |
| 📦 N870.PSU7<br>New | LANsense NGA 7 Amp Power Supply Unit   |
| 📦 N870.ACC<br>New  | LANsense NGA Analyser Card             |
| 📦 N870.SPP<br>New  | LANsense NGA HMI Panel 1U              |
| 📦 N870.SMC<br>New  | LANsense NGA System Master Card        |
| 📦 N870.TERM<br>New | LANsense NGA Terminator                |
| 📦 N870.UPP<br>New  | LANsense NGA USB Interface Adaptor     |

☎ = Make to order, 📦 = Make to stock

## LANsense I/O and Master/Link cables

- I/O cables for analyser to panel connection
- Master/Link for Master analyser to Link analyser connection

### Description

LANsense accessory cables are divided into two sub families:

Master / Link cables are used to interconnect Master and Link and analysers to form a star wired analyser network capable of monitoring a patch zone of up to 20480 ports. Multiple patch zones can exist within a LANsense database

I/O cords are used to connect LANsense patch panels or integration strips to the analysers. The 12 way adaptor and 3 x 8 Way splitter are used to maximise the usage of analyser ports within an installation.



**LANsense™**

### Standards

**International ISO/IEC 11801**

## LANsense I/O and Master/Link cables

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.           | Name                                            | I/O Connector -<br>Analyser | I/O Connector -<br>Panel | Mat length<br>(m) |
|-----------------------|-------------------------------------------------|-----------------------------|--------------------------|-------------------|
| 📦 LXWCCCL160XOO       | Analyser M/L Cord 16.0m                         | N/A                         | N/A                      | 16                |
| 📦 LXWCCCL030XOO       | Analyser M/L Cord 3.0m                          | N/A                         | N/A                      | 3                 |
| 📦 LXWCCCL040XOO       | Analyser M/L Cord 4.0m                          | N/A                         | N/A                      | 4                 |
| 📦 LXWCCCL080XOO       | Analyser M/L Cord 8.0m                          | N/A                         | N/A                      | 8                 |
| 📦 196102-0019         | I/O Cord 24 way - 1.9m                          | Type A                      | Type 2                   | 1.9               |
| 📦 LXWCCCP021A20       | I/O Cord 24 way - 2.1m                          | Type A                      | Type 1                   | 2.1               |
| 📦 196102-0028         | I/O Cord 24 way - 2.8m                          | Type A                      | Type 2                   | 2.8               |
| 📦 LXWCCCP030A20       | I/O Cord 24 way - 3.0m                          | Type A                      | Type 1                   | 3                 |
| 📦 196102-0040         | I/O Cord 24 way - 4.0m                          | Type A                      | Type 2                   | 4                 |
| 📦 LXWCCCP043A20       | I/O Cord 24 way - 4.3m                          | Type A                      | Type 1                   | 4.3               |
| 📦 N871.CIO0010<br>New | LANsense I/O Cable PVC Type C<br>Rev 2 10m      | Type C                      | Type 2                   | 10                |
| 📦 N871.CIO003<br>New  | LANsense I/O Cable PVC Type C<br>Rev 2 3m       | Type C                      | Type 2                   | 3                 |
| 📦 N871.CIO005<br>New  | LANsense I/O Cable PVC Type C<br>Rev 2 5m       | Type C                      | Type 2                   | 5                 |
| 📦 N871.NIOH0010       | Mark II I/O Cable 24 way - 1.0m                 | Type B                      | Type 2                   | 1                 |
| 📦 N871.NIOH0100       | Mark II I/O Cable 24 way - 10.0m                | Type B                      | Type 2                   | 10                |
| 📦 N871.NIOH0020       | Mark II I/O Cable 24 way - 2.0m                 | Type B                      | Type 2                   | 2                 |
| 📦 N871.NIOH0050       | Mark II I/O Cable 24 way - 5.0m                 | Type B                      | Type 2                   | 5                 |
| 📦 N871.NIOHA2X12      | Mark II I/O Cable Adaptor 12 way -<br>150mm     | Type B                      | N/A                      | 0.2               |
| 📦 N871.NIOH0102       | Mark II I/O Cable Splitter 3 x 8 way -<br>350mm | Type B                      | N/A                      | 0.4               |

☎ = Make to order, 📦 = Make to stock

## LANsense Integration Strips

- LANSense IIM compatible
- Integration Strips designed for specific equipment

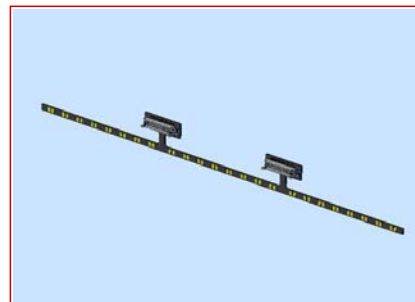
### Description

LANsense Integration Strips are used to provide LANSense port detection functionality on non LANSense enabled products like switches in an interconnect environment.

They are used instead of a system side or port replication panel (used in a cross-connect environment) and allow LANSense cords to be connected directly into active equipment.

Integration strips are usually provided to fit 24 port devices but other port counts can be accommodated.

In order to create an Integration Strip a template is used to accurately communicate the dimensions and port layout of the device.



**LANsense™**

### Standards

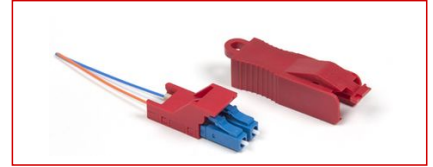
**International** Nexans specification

## Secure IT Environment

Nexans is aware of the need to secure certain types of networks:

- military networking to prevent interconnection with secure systems
- health care where unauthorised disconnection is a potential life safety issue
- education where inquisitive young people may provide a “threat” to network integrity.

The Nexans secure IT environment products are designed to support all of these areas.





## Secure Fibre Products

Secure Lock products are purpose designed to restrict the physical removal of patch cords for applications where security is paramount such as :

- Military
- Education
- Healthcare
- Data centres
- CCTV systems

The Secure Lock range from Nexans is compatible with standard fibre adaptors providing a significant advantage over systems which require a keyed adaptor.



## Secure LC Keys

- Secure LC keys to unlock Secure LC cords and plugs
- Eight standard colours to match cords and plugs
- "Magic" purple administrator key unlocks all colours

### Description

Secure Lock LC products are purpose designed for applications where security is paramount or the removal of patch cords is discouraged such as:

- Military
- Education
- Healthcare
- Data centres
- CCTV systems

The Secure Lock range from Nexans is compatible with STANDARD LC adaptors which is a significant advantage over systems which require a keyed adaptor. Eight coloured keys are available (Black, Red, Grey, Blue, Green, Yellow, Orange and White). There is also a "magic" purple administrator key which will unlock all colours.



**LANmark-OF**

### Standards

**International** ISO/IEC 24764

## Secure LC Plugs

- Secure LC plugs lock ports to prevent connection
- Eight colours available
- Matching keys to unlock

### Description

Secure Lock LC products are purpose designed for applications where security is paramount or the removal of patch cords is discouraged such as:

- Military
- Education
- Healthcare
- Data centres
- CCTV systems

The Secure Lock range from Nexans is compatible with STANDARD LC adaptors which is a significant advantage over systems which require a keyed adaptor. Eight coloured boot options are available (Black, Red, Grey, Blue, Green, Yellow, Orange and White). Red booted plugs and Black booted plugs are available from stock. All other colours are made to order. The Secure Lock LC product set comprises:

- Patch cords – Singlemode OS2 (Yellow) and Multimode OM3 (Aqua)
- Coloured Keys to match the patch cord locking boots and the “magic” purple key which unlocks all colours.
- Port locking plugs
- An extension handle for “hard to reach” places
- Dust covers



**LANmark-OF**

### Standards

**International ISO/IEC 24764**

## Secure LC Cords

- OS2 and OM3 Variants
- Eight boot colours
- 1, 2, 3 & 5m Lengths
- Secure locking system

### Description

Secure Lock LC cords are purpose designed for applications where security is paramount or the removal of patch cords is discouraged such as:

- Military
- Education
- Healthcare
- Data centres
- CCTV systems

The Secure Lock range from Nexans is compatible with STANDARD LC adaptors which is a significant advantage over systems which require a keyed adaptor. Eight coloured boot options are available (Black, Red, Grey, Blue, Green, Yellow, Orange and White). Red booted cords and Black booted cords are available from stock. All other colours are made to order. Patch cords are stocked in 1, 2, 3 and 5m lengths with other lengths available subject to an MOQ and lead time. The Secure Lock LC product set comprises:

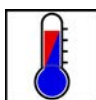
- Patch cords – Singlemode OS2 (Yellow) and Multimode OM3 (Aqua)
- Coloured Keys to match the patch cord locking boots and the “magic” purple key which unlocks all colours.
- Port locking plugs
- An extension handle for “hard to reach” places
- Dust covers



**LANmark-OF**

### Standards

International ISO/IEC 24764



Operating temperature, range  
0 .. 70 °C



Minimum static operating bending radius  
30 mm

## Secure LC Cords

### Characteristics

#### Dimensional characteristics

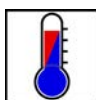
|                |        |
|----------------|--------|
| Outer Diameter | 2.8 mm |
|----------------|--------|

#### Transmission characteristics

|                             |        |
|-----------------------------|--------|
| Return Loss, maximum, dB    | 30 dB  |
| Insertion Loss, maximum, dB | 0.3 dB |

#### Usage characteristics

|                                         |            |
|-----------------------------------------|------------|
| Operating temperature, range            | 0 .. 70 °C |
| Minimum static operating bending radius | 30 mm      |



Operating temperature, range  
0 .. 70 °C



Minimum static operating bending radius  
30 mm



## Industrial LAN & Harsh Environments

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark Industry Copper cables

**Description**

Copper cables for LANs in industrial and exposed areas.



**LANmark**  
Industry

**Standards**

**International** ISO/IEC 11801; ISO/  
IEC 24702

## LANmark Industry Copper cables

### Product List

| Nexans ref. | Name                                                  |
|-------------|-------------------------------------------------------|
| 🏭 N10i.002  | LANmark Industry S/FTP AWG23 PUR black 500m reel      |
| 🏭 N10i.004  | LANmark Industry SF/UTP AWG24 LSZH+PE black 500m reel |

☎ = Make to order, 🏭 = Make to stock

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark Industry Optical Fibre cables

**Description**

Fibre optic cables for LANs in industrial and exposed areas.



**LANmark**  
Industry

**Standards**

**International** ISO/IEC 11801; ISO/  
IEC 24702

## LANmark Industry Optical Fibre cables

### Product List

| Nexans ref.                                                                                                            | Name                                                   |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|  N165.922                             | LANmark Industry TBX 6x multimode 50/125 OM3 PUR black |
| ☎ = Make to order,  = Make to stock |                                                        |

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark Industry DIN-Rail Outlets and boxes

**Description**

DIN-Rail mount Outlets and boxes for LANs in industrial and exposed areas.



**LANmark**  
Industry

**Standards**

**International** ISO/IEC 11801; ISO/  
IEC 24702

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark Industry IP65/67 outlets

LANmark Industry IP67 outlets

**Description**

IP65/67 outlet for LANs in industrial and exposed areas.



**LANmark**  
Industry

**Standards**

**International** ISO/IEC 11801; ISO/  
IEC 24702

## LANmark Industry IP65/67 outlets

### Product List

| Nexans ref.                                                                                | Name                                                            |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
|  N42i.001 | LANmark Industry IP65/67 outlet kit 2 Snap-In Category 6 black  |
|  N42i.002 | LANmark Industry IP65/67 outlet kit 2 Snap-In Category 6A black |

 = Make to order, 
  = Make to stock

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## LANmark Industry patch cord RJ45 IP67/IP20 Cat.6

**Description**

Patchcords IP67/IP20 for LANs in industrial and exposed areas.



**LANmark**  
Industry

**Standards**

**International** ISO/IEC 11801; ISO/  
IEC 24702

## LANmark Industry patch cord RJ45 IP67/IP20 Cat.6

**Product List**

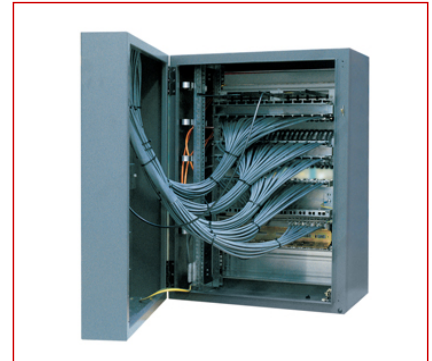
☎=Make to order, 📦=Make to stock

| Nexans ref.  | Name                                                                                |
|--------------|-------------------------------------------------------------------------------------|
| 📦 N10i.E34DJ | LANmark Industry patch cord RJ45 IP67 Single-end Category 6 screened PVC 10m Yellow |
| 📦 N10i.E34DJ | LANmark Industry patch cord RJ45 IP67/IP20 Category 6 screened PVC 1.5m Yellow      |
| 📦 N10i.E34OJ | LANmark Industry patch cord RJ45 IP67/IP20 Category 6 screened PVC 10m Yellow       |
| 📦 N10i.E34FJ | LANmark Industry patch cord RJ45 IP67/IP20 Category 6 screened PVC 3m Yellow        |
| 📦 N10i.E34HJ | LANmark Industry patch cord RJ45 IP67/IP20 Category 6 screened PVC 5m Yellow        |

☎ = Make to order, 📦 = Make to stock

## General Accessories & Cabinets

Nexans have a complete range of accessories and hardware to complete the LAN system



## Accessories for LANmark High-Density Racks and Frames

- Accessories for LANmark High-Density racks and frames

### Description

#### Application

LANmark High-Density racks and frames have been designed to host busy Cross-Connects in data centres. Specific attention has been given to technical constraints of data centres such as cooling and space scarcity. Numerous features contribute to an optimal space utilisation and enable installation on busy data centre floors. These High-Density racks and frames enable excellent front, rear and lateral access. This is of great importance during installation but also during maintenance and upgrade operations. Proper management of large numbers of cords and securing clarity is critical for data centres management and reliability over the life time. Examples of equipment that can be hosted in LANmark High-Density rack and frames are given below:

- Angled panels and accessories
- High Density Fibre optic panels
- MPO panels
- LANSense - Intelligent patching
- Suitable for Cat.6A, 7 and 7A
- Suitable for OM3, OM4 and OS2
- future Cat 6A and Class EA applications
- EMAC - Environmental control

#### Performance

LANmark High-Density racks and frames have been designed to host all LANmark fibre optic and copper products.

#### Installation

LANmark High-Density racks and frames feature accessories and brackets enabling the installation in various configuration and location of a data centre. Please see the datasheet of the products for details.

### Standards

#### International

Manufacturer specification

## LANmark High-Density Racks and Frames for Data Centres

- 19-Inch mounting equipment for high-density cross-connect
- Ideal in Datacenters
- Designed to host both Copper and Fibre cabling
- Robust metal construction
- Enhanced access and cord management

### Description

#### Application

The LANmark High-Density racks and frames have been designed to host busy Cross-Connects in data centres. Specific attention has been given to technical constraints of datacenters such as cooling and space scarcity. Numerous features contribute to an optimal space utilisation and enable installation on busy datacenter floors. These High-Density racks and frames enable excellent front, rear and lateral access. This is of great importance during installation but also during maintenance and upgrade operations. Proper management of large numbers of cords and securing clarity is critical for datacenters management and reliability over the life time. Examples of equipment that can be hosted in LANmark High-Density racks and frames are given below:

- Angled panels and accessories
- High Density Fibre optic panels
- MPO panels
- LANSense - Intelligent patching
- Suitable for Cat.6A, 7 and 7A
- Suitable for OM3, OM4 and OS2
- EMAC - Environmental control

#### Performance

LANmark High-Density racks and frames have been designed to host all LANmark fibre optic and copper products.

#### Installation

LANmark High-Density racks and frames feature accessories and brackets enabling the installation in various configuration and location of a datacenter. Please see the datasheet of the products for details.

### Standards

**International** ISO/IEC 24764; ISO/  
IEC 11801:2002/Amd 2:2010/  
Cor 1:2010

## LANmark High-Density Racks and Frames for Data Centres

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|  N345.000<br>New                                                                                                        | LANmark High-Density Cross-Connect Cabinet 42U - Basic                          |
|  N345.012<br>New                                                                                                        | LANmark High-Density Cross-Connect Cabinet 42U - incl. Doors and Lateral Panels |
|  N345.400<br>New                                                                                                        | LANmark Overhead Patching Frame 4U                                              |
|  = Make to order,  = Make to stock |                                                                                 |

### Selling information

Delivery info: Datacenter racks and frames

## Patch Guides, Blank Panels & Cable Management

- Patch guides to manage and store all patch cords.
- 1 HU and 2 HU for high density.
- 1 HU with rings for easy access.
- Cable guide for all patch panels without clip-on.

### Description

For a correctly managed installation, Nexans offers a full range of cable management accessories to complement our patch panel and cabinet range. The range is suitable for all Nexans Copper and Optical patch panels.

The new offering is Nexans branded to blend with other Nexans products used in a cabinet.

The cable management range is designed for all 19" cabinets. The range includes patch guides and cable guides.

### Patch Guides

The Nexans patch guide range enables orderly patch cord storage. All the Nexans accessories are guaranteed to maintain the required bending radius for patch cords which in turn ensures superior data transmission for the installation. The paint finished metal accessories provide improved stability over plastic guides on the market.

The 1HU and 2HU universal patch guides are delivered with a front plate. The 8 cm depth provides for the bending radius and enough storage space for the patch cords. Two openings designed at the rear face improve the storage and entry possibilities for patch cords.

An alternative 1 HU 5- ring metal patch guide is offered. This accessory similarly allows for orderly patch cord management in any installation.

### Cable Guide

The Nexans cable guide offers fast and reliable cable retention and grounding. The clip-on system is a proprietary Nexans design and improves the flexibility, solidity and the grounding of your installation.



### Standards

**International ISO/IEC 11801**

## Patch Guides, Blank Panels & Cable Management

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.                          | Name                                                              | Colour         |
|--------------------------------------|-------------------------------------------------------------------|----------------|
| 📦 N109.207                           | 1HU Blank Panel                                                   | White RAL 9002 |
| 📦 N109.207BK<br>New                  | 1HU Blank Panel, black                                            | Black          |
| 📦 N102.105BK                         | 1HU Patch Guide with rings, Black                                 | Black          |
| 📦 N102.105                           | 1HU Patch Guide with rings, White                                 | White RAL 9002 |
| 📦 N102.117BK                         | 1HU Universal Patch Guide with front cover, Black                 | Black          |
| 📦 N102.117                           | 1HU Universal Patch Guide with front cover, White                 | White RAL 9002 |
| 📦 N102.127BK                         | 2HU Universal Patch Guide, Black                                  | Black          |
| 📦 N102.127                           | 2HU Universal Patch Guide, White                                  | White RAL 9002 |
| 📦 N521.672<br>New                    | Angled Blank Panel Black                                          | Black          |
| 📦 N521.673<br>New                    | Angled Panel Cover Black                                          | Black          |
| 📦 N521.678<br>New                    | Angled Pass-Through Black                                         | Black          |
| 📦 N424.512                           | Cable management plate for Essential Rear Connect Panels N424.xxx | Black          |
| 📦 N102.115BK                         | Letterbox Patch Guide 1HU Black                                   | Black          |
| ☎ = Make to order, 📦 = Make to stock |                                                                   |                |

## LANmark Zone Distribution Boxes

- For use as consolidation point.
- Compatible with all LANmark snap-in connectors.
- 6 or 12 numbered snap-in ports with shutters.
- Easy to install

### Description

Designed for use as consolidation points, zone distribution boxes significantly increase the flexibility of desk locations in open office environments. They are particularly useful in offices where frequent relocation of outlets in the work area is required.

Nexans ZD boxes are easy to install on walls, under raised floors or in ceiling voids, due to their multiple mounting features.

They are compatible with all LANmark snap-in connectors, which can be easily inserted by a simple "one-click" movement.



## LANmark Zone Distribution Boxes

### Characteristics

#### Construction characteristics

Material

Steel

#### Product List

☎=Make to order, 📦=Make to stock

| Nexans ref.                          | Name                                          | Width (mm) | Colour         | Height (mm) | Number of ports |
|--------------------------------------|-----------------------------------------------|------------|----------------|-------------|-----------------|
| 📦 N521.6121 New                      | LANmark Ruggedised Lockable ZD Box Foot White | 253        | White RAL 9002 | 35          |                 |
| 📦 N521.612 New                       | LANmark Ruggedised Lockable ZD Box White      | 260        | White RAL 9002 | 55          | 12              |
| 📦 N521.600                           | LANmark ZD box 12 Snap-In White               | 230        | White RAL 9002 | 45          | 12              |
| 📦 N521.606 New                       | LANmark ZD box 6 Snap-In White                | 120        | White RAL 9002 | 42          | 6               |
| ☎ = Make to order, 📦 = Make to stock |                                               |            |                |             |                 |

## Cabinets - Quick Mount

### Cabinets and Enclosures

- 19" cabinet and extension 42 HU 800X800
- flat pack : easy and quick installation
- exclusive automatic earthing system
- security
- complete range of accessories

### Description

#### Features

High Quality Cabinet for installation of Nexans Cabling Solutions Products.

Extremely easy and fast to install and hence very cost effective, thanks to

- Delivery in separate parts which can be handled by only one person
- Fast and flexible mounting within a few minutes
- Open structure which allows a free accessibility from all sides
- Easy to add or remove products after the cabinet has been installed
- Automatic earthing
- IP 20 (can be upgraded to IP 30 by adding an extra roof)
- Possibility to fix on the roof one to 8 individual fan
- Easy to add extensions or to replace panels
- Front and rear frames which can be installed in 3 different positions
- Glass mixed front door
- Only one standard tool required
- No small loose parts
- Secure your installation : front and rear door with eurolock and inside opening system for side panels

Light weight cabinet.

All parts are packed in 6 small boxes which are very easy to manoeuvre.

Several accessories are available for enhanced functionality.

Door in tinted safety glass.



#### Standards

**International ISO/IEC 11801**

## Cabinets - Quick Mount

### Product List

| Nexans ref. | Name                                       | Width (mm) | Depth (mm) | Approximate net weight (kg) |
|-------------|--------------------------------------------|------------|------------|-----------------------------|
| 🏠 N340.103  | EXTENSION FOR QUICK MOUNT III 42HU 800x800 | 800        | 800        | 145.0                       |
| 🏠 N340.003  | QUICK MOUNT III 42 HU 800x800              | 800        | 800        | 145.0                       |

☎ = Make to order, 🏠 = Make to stock

## Cabinets - Wall Mountable

### Cabinets and Enclosures

#### Wall Mountable

- 19" wallmount 18HU
- Easy installation

#### Description

19" wall mountable cabinet for locations where space is a premium suitable for copper or fibre accessories.

#### Features

- Hinged 2 parts design for easy access
- Extremely accessible swing frame design. (100mm for back part)
- Top and Bottom cable entry (150x56mm) equipped with sliding panels
- Same functionalities as full size cabinet : 19" mounting frame
- 40 kg balanced load
- Included a 1/1 scale template paper for screw hole preparation before installation
- Ideal for locations where space is at the premium
- Security with a lock on the front door
- Reversible and tinted safety glass mixed front door
- Dimensions : HxWxD 921mmx600mmx500mm
- Useful depth: 470mm



#### Standards

**International**  
Manufacturer specification

## Cabinets - Wall Mountable

### Product List

| Nexans ref.                                                                                                                                                                                              | Name                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|  N102.118                                                                                                               | Wall Mount Cabinet 18 HU Mixed Door New Concept |
|  = Make to order,  = Make to stock |                                                 |

## Cabinet Accessories

### Cabinet and Enclosure Accessories Range

Complete Range : shelves, spare parts, fans, powerbar,...

#### Description

Complete range of accessories for 19" cabinets and enclosures

- Spare parts
- Shelf
- Powerbar
- Ventilator Fan
- ...

#### Standards

**International** ISO/IEC 11801

## Cabinet Accessories

**Product List**

☎ = Make to order, 📦 = Make to stock

| Nexans ref.  | Name                                                      |
|--------------|-----------------------------------------------------------|
| 📦 N108.109BK | 100 x Caged nut (M6) + screw (M6*12), black               |
| 📦 N203.167   | 19 inch SHELF FOR 12/18HU CABINET                         |
| 📦 N303.162   | 19 inch shelf (36-42HU)(max. 70 kg, 2 fixation points)    |
| 📦 N303.163   | 19" SHELF (MAX. 70 KG) WITH 4 FIX.POINTS                  |
| 📦 N333.165   | 4 x ADJUSTABLE FEET FOR QUICK-MOUNT                       |
| 📦 N343.206   | 8xpatch ring                                              |
| 📦 N203.158   | CLOSET DOC.HOLDER                                         |
| 📦 N203.156   | NEON LAMP FOR CABINETS                                    |
| 📦 N203.165   | Power Bar 19 inch 1 HU 6 UK outlet                        |
| 📦 N203.160   | Power Bar 19 inch 1 HU 6 UTE outlet + autofuse            |
| 📦 N203.160A  | Power Bar 19 inch 1 HU 6 schuko outlet + autofuse         |
| 📦 N303.164   | SLIDING SHELF 19 inch pull out 1/3 maximum load of 30 Kg  |
| 📦 N101.001   | Signal grounding key                                      |
| 📦 N201.171   | Ventilator fan (110 V) + Power cable                      |
| 📦 N203.171   | Ventilator fan (230 V) + Power cable                      |
| 📦 N340.185   | additional plinth for quick mount                         |
| 📦 N343.204   | base for quick mount II & III                             |
| 📦 N343.102   | connection kit for quick mount II & III extension cabinet |
| 📦 N343.201   | front door for quick mount II & III                       |
| 📦 N343.213   | rear door for quick mount II & III                        |
| 📦 N343.205   | roof for quick mount II & III                             |
| 📦 N343.203   | side panel for quick mount II & III                       |

☎ = Make to order, 📦 = Make to stock

**Contact**

LAN Systems (Nexans Cabling Solutions)  
Phone: +44 (0)1256 486640  
ncs.uk@nexans.com

## Miscellaneous Accessories

**Description**

Nexans have a complete range of accessories and hardware to complete the LAN system such as multicoloured shutters.

**Standards**

**International** ISO/IEC 11801

## Miscellaneous Accessories

**Product List**

☎ = Make to order, 📦 = Make to stock

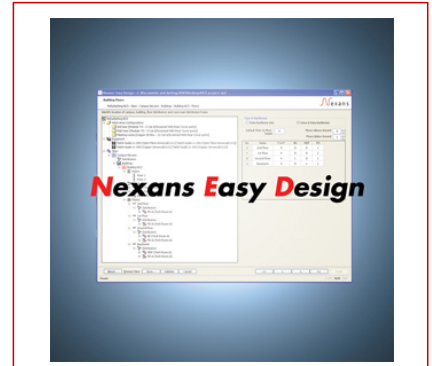
| Nexans ref.  | Name                                        |
|--------------|---------------------------------------------|
| 📦 N420.655   | Blank Snap-In filler for unused port, white |
| 📦 N420.050   | Dust cap for RJ45                           |
| ☎ N420.655BK | Blank Snap-In filler for unused port, black |
| 📦 N108.111   | Dzus quarter-turn fastener                  |

☎ = Make to order, 📦 = Make to stock

## Software, Training, & Services

Adding value to Local Area Networks is about much more than high quality products.

Nexans provide a range of tools and services, either directly or in conjunction with business partners, to provide an unrivalled service & support package to meet the demands of both installers and end users alike.



## System Warranty Programs

A parts guarantee is one thing. But what happens when you put them together?

Many companies may be specialised in one area but what happens if you have an infrastructure problem between buildings – who is responsible for deciding if it is the copper or fibre campus link at fault.

With a Nexans solution you don't have to worry because we cover the complete cabling system, regardless of transmission medium or the building topology:

- Copper, and Fibre
- Horizontal, Backbone or Campus

Nexans understands different cabling technologies and the building infrastructure, so that's what we cover with the warranty.

### Description

A company's communication system is crucial to its industrial and commercial success. Every single day, every company depends on the quality and distribution of information.

With global experience, technological mastery in various building architecture, and a broad portfolio of products, Nexans matches the solution to your needs.

Nexans empowers your local area networking infrastructure to do better and faster business.

Offering Quality of Service to your users and customers is the reference for your success. Quality of Transmission, the performance of your infrastructure, becomes more important and critical.

Our state-of-the-art solutions are your best guarantee for :

- performance
- reliability
- value for money



### Standards

**International**  
Manufacturer specification

## Network Design Tools

- Nexans Visio Templates (NVT)
- LAN Calculation Toolkit

### Description

Download Nexans support software:

- Nexans Visio Template (NVT) to create professional rack layout diagrams
- LAN Calculation Toolkit to assist in planning, design and installation

Both software tools are available free of charge. You will need to login or register on the website to download.



### Standards

**International**  
Manufacturer specification

## Network Design Tools

### Product List

| Nexans ref.                                                                               | Name                                  |
|-------------------------------------------------------------------------------------------|---------------------------------------|
|  Toolkit | LAN Calculation Toolkit               |
|  NVT     | Nexans Visio Template 3.2 with NVT 3D |

 = Make to order,  = Make to stock

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## Training Services

Nexans Cabling Solutions has elaborated its training program.

Training is given at the Competence Centres in Brussels or Basingstoke, or on demand at your premises or in one of our regional Training Centres.

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## Training Services

### Description

No matter what your level is, we'll find the best training program meeting all of your needs. The LAN technology evolution requires a wide and varied range of skills. No two projects are the same and our partner's position is important in this business. The aim is to find the synergy between your needs and our training program.

In order to make this "level training" program possible, the training has been divided into different modules to address different topics aimed at different people.

- Installers
- Project Managers
- Designers, Consultants and Architects
- Commercial Staff that would like to improve their sales techniques End Users
- Anybody involved in cabling that would like to improve his knowledge and skills in this domain

Trainees can obtain a "Nexans Cabling Solutions Expert level certification" when they succeed in the 3-day Expert training.

It is clear that a new VAR, Distributor, or Certified System Installer will be required to succeed in the Expert training. If the new partner has no experience it is recommended that he will first attend the basic training. If the partner has previous experience, he can directly follow the Expert training.

**see our section on TRAINING**

### **UK Installer Training**



### Standards

**International**  
Manufacturer specification

### **Training Modules Overview**

#### **Commercial:**

Module 3: *Nexans Copper Cabling Solutions*

Module 8: *Nexans Optical Fibre Cabling Solutions*

#### **Expert Knowledge:**

Module 1: *Premises Cabling Standards*

Module 2: *Parameter for Copper Cabling*

Module 4: *Installation Rules and Guidelines*

Module 7: *Optical Fibre Theory and Principles*

Module 12: *Design Training: Project Study*

Module 14: *Design Training: Project Engineering*

Module 16: *Project Management*

#### **Hands-on:**

Module 5: *Installation Practice & Testing Class D-E Links*

Module 6: *Installation Practice & Testing Class F Links*

Module 9: *Fibre Installation Practice with Direct Termination*

Module 10: *Fibre Installation Practice on Fusion Splicing*

Module 11: *Testing Optical Fibre Links*

Module 13: *Nexans Easy Design Visio Software*



Global expert in cables and cabling systems

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