

# Essential-6 U/UTP Cable

Essential-6 U/UTP AWG24 Cat 6 PVC Eca Light Grey 305m box

Nexans Ref.: N100.166-LE

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

## 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.

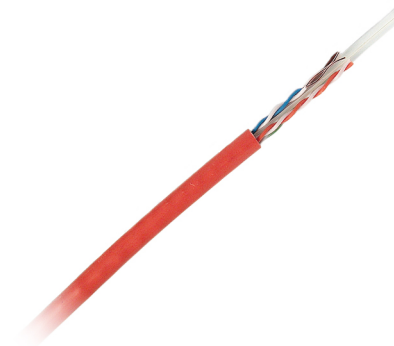
### Performance

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

## DECLARATION OF PERFORMANCE

Eca

## STANDARDS

International ISO/IEC 11801

National ANSI/TIA-568-C.2



Ambient installation T°C range  
-10 ... 60 °C



Operating temp.  
-20 ... 60 °C



Flame retardant  
IEC 60332-1



Fire retardant  
-



Smoke density  
-

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## CHARACTERISTICS

### Construction characteristics

Type of cable	U/UTP
Outer sheath	PVC
Colour	Light grey

### Dimensional characteristics

Diameter over insulation	0.94 mm
Conductor cross-section (AWG/KCMIL)	24
Nominal outer diameter	5.7 mm
Approximate weight	35 kg/km

### Electrical characteristics

Characteristic impedance	100 Ohm
Mutual capacitance	- nF/km
Max. DC resistance of the conductor at 20°C (Ohm/km)	-

### Transmission characteristics

Attenuation Crosstalk Ratio, 250MHz	5.5 dB/100m
Nominal Velocity of Propagation (NVP)	69 %
Propagation delay, max. 100 MHz	536 ns/100m
Skew	30 ns/100m
Coupling attenuation at 30 MHz	-

### Usage characteristics

Category	Cat. 6
Range	essential-6
Minimum Bend Radius - During Installation (under Tension)	46 mm
Minimum Bend Radius - Installed	23 mm
Ambient installation temperature, range	-10 ... 60 °C
Operating temperature, range	-20 ... 60 °C
Flame retardant	IEC 60332-1
Fire retardant	-
Smoke density	-
Length	- m
Packaging	Box 305 m
Field of application	Indoor