

# Essential-6 Cable

Essential-6 U/UTP Cat 6 LSZH 23AWG 305m reel in box

**Nexans Ref.:** N100.170

- 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 installed in conjunction with Essential-6 outlets and patch panels, a 25 year Class E Link Warranty can be obtained from the Nexans e-service site.

### Design

The conductors are 23 AWG solid copper wires . The central cross filler keeps the pairs in place and reduces the risks of losing performance when bending the cable. The cables are Orange LSZH sheath have flame retardant properties compliant with IEC 60332-1

### Performance

With guaranteed performance to 250 MHz, 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.



**essential-6**

## STANDARDS

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

**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  
IEC 61034

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.

Generated 9/27/23 [www.aginode.net](http://www.aginode.net) Page 1 / 2

# Essential-6 Cable

Essential-6 U/UTP Cat 6 LSZH 23AWG 305m reel in box

## CHARACTERISTICS

### Construction characteristics

Type of cable	U/UTP
Outer sheath	LSZH
Colour	Orange

### Dimensional characteristics

Diameter over insulation	1.0 mm
Conductor cross-section (AWG/KCMIL)	23
Nominal outer diameter	6.1 mm

### 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	45 ns/100m
Coupling attenuation at 30 MHz	

### Usage characteristics

Category	Cat. 6
Range	essential-6
Minimum Bend Radius - During Installation (under Tension)	49 mm
Minimum Bend Radius - Installed	25 mm
Ambient installation temperature, range	-10 ... 60 °C
Operating temperature, range	-20 ... 60 °C
Flame retardant	IEC 60332-1
Fire retardant	
Smoke density	IEC 61034
Length	305 m
Packaging	Reel in a box
Field of application	Indoor