

Essential-6 U/UTP Cat.6 PVC 305m box

Nexans ref.: N100.166

- 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 20 year Class E Link Warranty can be obtained from the Nexans e-service site.

Design

The conductors are 24 AWG solid copper wires complying with IEC 60228. The central cross filler keeps the pairs in place and reduces the risks of losing performance when bending the cable. The cable is available with a Light Grey PVC or an Orange LSZH outer jacket.

Performance

Nexans Essential-6 cables are compliant with the requirements of the TIA 568-B.2-1 and IEC 61156-5.

Installation

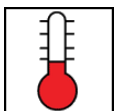
Thanks to their small nominal outer diameter, the Essential-6 cables are as easy to install as their Cat5e equivalent.



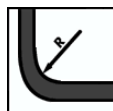
essential-6

Standards

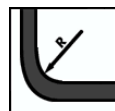
International ISO/IEC 11801
National TIA/EIA-568-B.2



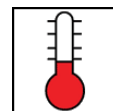
Operating temp. range
-20 .. 60 °C



Min. static operating bending
rad.
23.0 mm



Min. dynamic operating bending
rad.
46.0 mm



Ambient install temp. range
(°C)
0 .. 50 °C

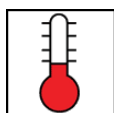


Flame retardant
IEC 60332-1

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Contact

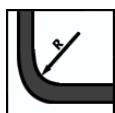
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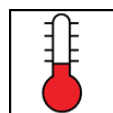
Operating temp. range
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Min. dynamic operating bending
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Ambient install temp, range
(°C)
0 .. 50 °C



Flame retardant
IEC 60332-1

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Characteristics

Construction characteristics

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

Dimensional characteristics

Conductor diameter	0.6 mm
Diameter over insulation	0.98 mm
Nominal outer diameter (mm)	6.3 mm
Approximate weight (kg/km)	37.5 kg/km

Electrical characteristics

Characteristic impedance	100 Ohm
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Transmission characteristics

Velocity of propagation	70.0 %
Propagation delay, max. 100 MHz	536 ns/100m

Usage characteristics

Category	Cat. 6
Range	essential-6
Operating temperature, range	-20 .. 60 °C
Minimum static operating bending radius	23.0 mm
Minimum dynamic operating bending radius	46.0 mm
Fire load (MJ/km)	740 MJ/km
Ambient installation temperature, range (°C)	0 .. 50 °C
Flame retardant	IEC 60332-1

Channel Performance

Values given for 2-connector channel, built with Essential-6 cable, outlet and patch panel.

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

All values are specified at 20°C.