

# Essential-5 Cable

ESS CAT5E U/UTP CMX 4P 24AWG PT 305 I/O

## Contact

Communications Department  
nexans.brazil@nexans.com

**Nexans Ref.:** N100.561231

**Country Ref.:** 17520

**EAN 13:** 7899907130209

Construction U/UTP Complyancy with the latest category 5e standards Supports Class D applications up to 1Gbits

## DESCRIPTION

The Essential-5e Nexans cable line is the 100MHz bandwidth offer for class D applications up to 1Gbits. Nexans ESSENTIAL 5e cables are designed for horizontal applications in structured cabling networks to connect the user outlet to the administration panel or to interconnect administration panels. Their application is limited to 100MHz bandwidth, Class D applications.

## APPLICATION

- FAST ETHERNET 100BASE-TX
- GIGABIT ETHERNET 1000BASE-T
- TOKEN RING (100 Mbps)
- ATM LAN (155 Mbps & 622 Mbps)
- ISDN
- POE - POWER OVER ETHERNET
- POE+ - POWER OVER ETHERNET PLUS
- ANALOGUE AND DIGITAL COMMUNICATION FOR VIDEO AND VOICE

## CONSTRUCTION

- Category 5e U/UTP;
- PVC: CMX | CM or LSZH;
- 4 twisted pairs matching the colour pattern Blue / Light Blue, Orange / White, Green / Light Green, Brown / Light Brown, as for pair insulation.
- 24 AWG;
- Composed of bare copper conductors, insulated in high density thermoplastic polyethylene.

## INSTALATION

### Environment:

Indoor - non-aggressive (7 standard colors : Blue, Red, Grey, Black, White, Yellow, Green e other colours on request)

Indoor/Outdoor- non-aggressive (only the CMX black sheath)

## APPLICABLE STANDARDS

### International:



Ambient dynamic operating temperature, range  
-20 - 60 °C



Bending factor installed  
4 (xD)



Electro magnetic interference resistance  
No



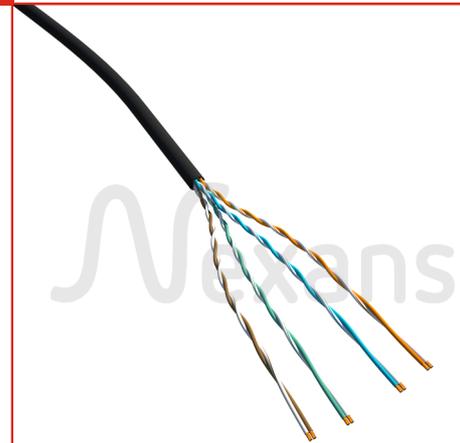
Fire retardant  
IEC 60332-1



Inst. temp. range  
0 - 50 °C



U.V resistance  
Yes



**essential**

## STANDARDS

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

**National** ANSI/TIA 568.2-D

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.

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**Nexans**

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- Directive RoHS

The product complies with the RoHS Directive by restricting the use of heavy metals in the manufacture of products and preservation of the environment.

### National:

- ABNT NBR 14565
- ABNT NBR 14703
- ABNT NBR 14705

## CERTIFICATIONS

- UL Listed
- ANATEL

## PACKAGING

- Box of 100m (CMX)
- Box of 305m (CMX / CM / LSZH)

## CABLE LABEL

### Indoor:

NEXANS ESSENTIAL CABLE CATEGORY 5e U/UTP 24AWG 4PAIRS  
RoHS COMPLIANT 75C ANSI/TIA 568.2-D "SEMANA/ANO" "1 a 305 m"  
ANATEL **yyyyy-yy-yyyyy**

x:CMX | CM | LSZH

**yyyyy-yy-yyyyy**: CMX | CM : 02082-11-05519

**yyyyy-yy-yyyyy**: LSZH : 02084-11-05519

### Indoor/Outdoor:

NEXANS ESSENTIAL CABLE CATEGORY 5e U/UTP 24AWG 4PAIRS CMX  
RoHS COMPLIANT 75C ANSI/TIA 568.2-D INTERNO/EXTERNO "SEMANA/  
ANO" "1 a 305 m" ANATEL**yyyyy-yy-yyyyy**

**yyyyy-yy-yyyyy**:00242-12-05519

## WARRANTY

- 02 years (Consult our 25 years extended warranty program).



Ambient dynamic operating temperature, range  
-20 - 60 °C



Bending factor installed  
4 (xD)



Electro magnetic interference resistance  
No



Fire retardant  
IEC 60332-1



Inst. temp. range  
0 - 50 °C



U.V resistance  
Yes

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## CHARACTERISTICS

### Construction characteristics

Type of cable	U/UTP
Outer sheath	PVC - CMX
Colour	Black
Screen	Unshielded

### Dimensional characteristics

Approximate weight	25.7 kg/km
Conductor cross-section (AWG/KCMIL)	24
Diameter over insulation	0.9 mm
Nominal outer diameter	4.8 mm
Number of pairs	4

### Electrical characteristics

Capacitance unbalance pair to ground at 1kHz	330 pF/100m
Characteristic impedance	100 Ohm
Max. DC resistance of the conductor at 20°C	93.8 Ohm/km
Mutual capacitance at 1kHz	5.6 nF/100m
Nominal velocity propagation	69 %
Resistance unbalance DC max % of loop resistance	5 %

### Transmission characteristics

Propagation delay, max. 100 MHz	545 ns/100m
Skew	45 ns/100m

### Mechanical characteristics

Maximum operating pulling force	110 N
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### Usage characteristics

Length	305 m
Packaging	Box
Installation type	Indoor/Outdoor
Ambient dynamic operating temperature, range	-20 - 60 °C
Bending factor when installed	4 (xD)
Category	Cat. 5e
Electro magnetic interference resistance	No
Fire retardant	IEC 60332-1
Installation temperature, range	0 - 50 °C
U.V resistance	Yes



Ambient dynamic operating temperature, range  
-20 - 60 °C



Bending factor installed  
4 (xD)



Electro magnetic interference resistance  
No



Fire retardant  
IEC 60332-1



Inst. temp. range  
0 - 50 °C



U.V resistance  
Yes

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