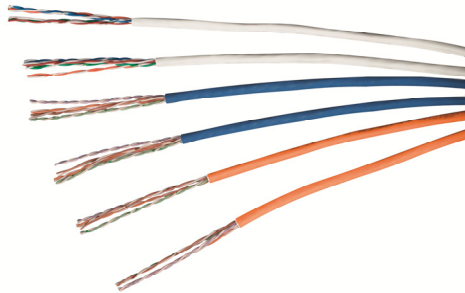


# Volition™ Category 6 cable 100Ω, UTP



Belonging to the 3M™ Volition™ Network Solutions, UTP Category 6 cable will deliver the best performance when used with the 3M™ RJ45 jacks, to give highest margins over Category 6 / TIA/EIA 568 and ISO 11801 and EN 50173 Class E standards.

An integral cross separator structure ensures permanent stability of the physical structure for enhanced long term performance and reduced crushing risk at cable anchorage points.

The cable sheath has length marking which is easy and convenient for the installer and gives a clear identification of cable and link lengths.

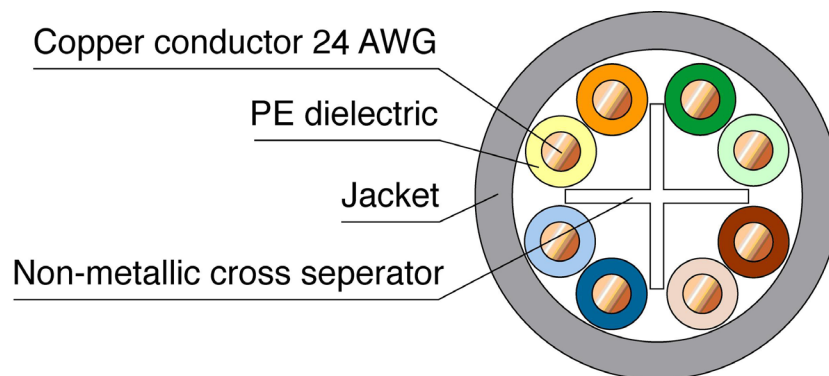
As a 3M™ branded product, it offers 3M™ system identity for corporate and warranty approval.

## Features

- Excellent electrical performance
- Length marking on the cable sheath
- Low smoke zero halogen(LSOH) and PVC versions available

## Benefits

- Good headroom over Category 6 Performance
- Installer friendly
- Solution for all levels of fire protection



## Reference Standards

IEC 61156-5; ANSI/TIA-568-C.2

## Transmission Performance according to ANSI/TIA 568-C.2 Cat.6

Frequency (MHz)	Fitted Impedance ( $\Omega$ )	Attenuation (dB) Max.	NEXT (dB) Min.	PSNEXT (dB) Min.	ACRF (dB) Min.	PSACRF (dB) Min.
1	100 $\pm$ 15	2.0	74.3	72.3	67.8	64.8
4		3.8	65.3	63.3	55.8	52.8
10		6.0	59.3	57.3	47.8	44.8
16		7.6	56.3	54.3	43.7	40.7
20		8.5	54.8	52.8	41.8	38.8
31.25		10.7	51.9	49.9	37.9	34.9
62.5		15.4	47.4	45.4	31.9	28.9
100		19.8	44.3	42.3	27.8	24.8
125		22.4	42.8	40.8	25.9	22.9
200		29.0	39.8	37.8	21.8	18.8
250		32.8	38.3	36.3	19.8	16.8

Frequency (MHz)	Return Loss (dB) Min.	Propagation Delay (ns) Max.	Delay Skew (ns) Max.
1	20.0	570.0	45
4	23.0	552.0	
10	25.0	545.4	
16	25.0	543.0	
20	25.0	542.0	
31.25	23.6	540.4	
62.5	21.5	538.6	
100	20.1	537.6	
125	19.4	537.2	
200	18.0	536.6	
250	17.3	536.3	

## Specification

### Construction

Conductor : Bare copper wire AWG24  
 Insulation : Polyethylene, nom. 0.95mm  
 Outer jacket : PVC or LOSH  
 Cable diameter : 5.4mm $\pm$  0.3mm

### Technical characteristics at 20°C

DC resistance : Max. 9.38  $\Omega$  / 100m  
 Resistance unbalance : max. 2%  
 Insulation resistance(500V) : min. 5000 M  $\Omega$ /Km  
 Mutual capacitance : nom. 5.1 nf/100m at 1kHz  
 Capacitance unbalance(pair to ground) : max. 160 pf/100m  
 Nominal velocity of propagation : nom. 67%  
 Dielectric strength : 1kV/ 1min.

## Ordering Information

Volition™, Category 6 cable, 100  $\Omega$   
 Volition™ Cat.6 Cable, UTP, PVC, 24AWG, 4 pairs, 305m box  
 Volition™ Cat.6 Cable, UTP, LSOH, 24AWG, 4 pairs, 305m box

## Ref. No.

VOL-6UP4-305  
 VOL-6UL4-305

### Important Notice

The details contained in this literature have been carefully prepared from information available to 3M at the time of its production. However, it is not intended to be relied upon for purposes of product specification and you should contact your sales representative if specification details are required. Because of the wide variety of processes and conditions in which these products may be used, the user should first carry out tests to determine the suitability of the products for the particular use intended. All questions of warranty and liability relating to 3M products are governed by the selling 3M subsidiary's Terms of Sale subject where applicable to the prevailing law.  
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