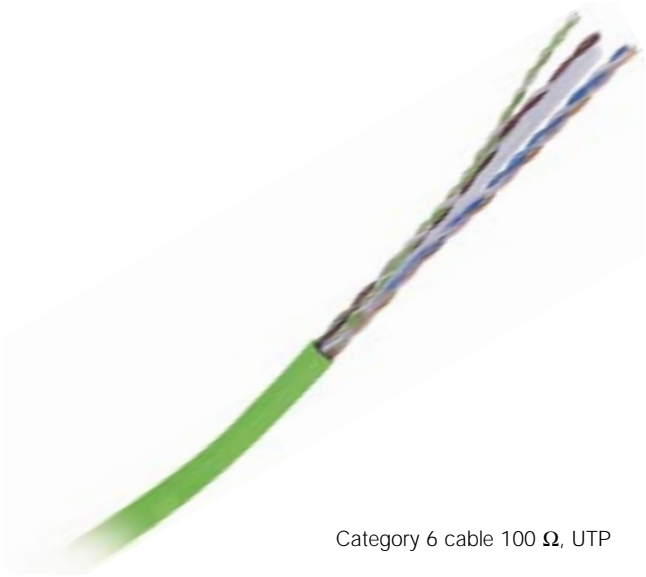




# Volition™

## Category 6 cable 100 Ω, UTP



Category 6 cable 100 Ω, UTP

Belonging to the 3M™ Volition™ Network Solutions, this 350 MHz UTP Category 6 cable will deliver the best performance when used with the 3M™ RJ45 K6 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 green sheath has length marking which is easy and convenient for the installer and gives a clear identification of cable and link lengths.

A polyester tape between the sheath and twisted pairs allows easier stripping.

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

### Applications

- IEEE 802.3-IEEE802.5
- FDDI
- ATM
- RNIS

### Standards

- EN 50288-1
- EN 50173
- ISO/IEC 11801
- TIA/EIA 568-B
- IEC 61156-5

### Flammability Performances

- |                              |             |
|------------------------------|-------------|
| Fire retardant               | IEC 60332-1 |
| Halogen free (LSOH versions) | IEC 60754-1 |

### Installation Characteristics

Maximum pulling tension (N)	90
Minimum bend radius during installation (mm):	55
Minimum installed bend radius (mm)	27
Nominal weight	40 kg/km
Temperature rating (°C)	
Installation	0 to +50
Operation	-20 to +60

### Features

- Excellent electrical performance - tested to 350 MHz
- Length markings on the cable sheath
- Low smoke, zero halogen (LSOH) and PVC versions available

### Benefits

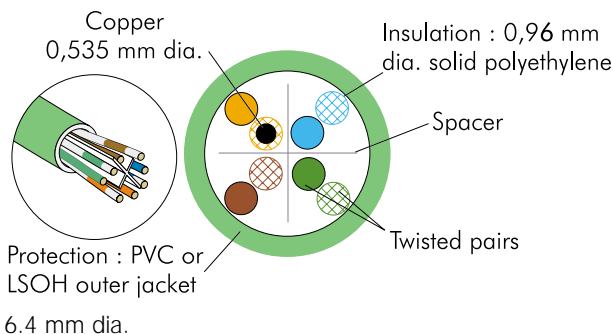
- Good headroom over Category 6 performance
- Installer friendly
- Solutions for all levels of fire protection

## Specifications

### Electrical characteristics at 20° C :

Conductor resistance at 20° C (max.)	98,6 Ω/km
Dielectric strength at 50 Hz	1 kV/1min
Insulation resistance (min.)	5000 MΩ/km
Velocity (nom.)	66%
Characteristic impedance	100 +/-15 Ω (1 to 100 MHz)
Mutual capacitance (nom)	<55 pF/m.
Propagation delay skew	<20 ns/100m

## UTP Category 6 Twisted pair cable



## Cable Performance

Frequency [MHz]		1	4	10	16	20	31.25	62.5	100	200	250	300
<b>Max attenuat. [dB/100 m]</b>	Typical value	1.9	3.6	5.7	7.3	8.3	10.3	14.8	19.0	27.3	31.0	34.0
	Cat 6 (max.)	2.1	3.8	6.0	7.6	8.5	10.8	15.5	19.9	29.2	33.0	-
<b>Min.NEXT [dB]</b>	Typical value	77.0	68.0	62.0	59.0	57.0	55.0	50.0	47.0	42.0	41.0	40.0
	Cat 6 (min.)	75.0	66.0	60.0	57.0	56.0	53.0	48.0	45.0	41.0	39.0	-
<b>Min.ACR [dB]</b>	Typical value	75.1	64.4	56.3	51.7	48.7	44.7	35.2	28.0	14.7	10.0	6.0
	Cat 6 (min.)	72.9	62.2	54.0	49.4	47.5	42.2	32.5	25.1	11.8	6.0	-
<b>PS NEXT [dB]</b>	Typical value	74.0	65.0	59.0	56.0	54.0	52.0	47.0	44.0	39.0	38.0	37.0
	Cat 6 (min.)	72.3	63.3	57.3	54.3	52.8	49.9	45.4	42.3	37.8	36.3	-
<b>ELFEXT [dB]</b>	Typical value	80.0	73.0	65.0	61.0	59.0	55.0	49.0	45.0	39.0	37.0	35.0
	Cat 6 (min.)	68.0	56.0	48.0	44.0	42.0	38.0	32.0	28.0	22.0	20.0	-
<b>PS ELFEXT [dB]</b>	Typical value	77.0	70.0	62.0	58.0	56.0	52.0	46.0	42.0	36.0	34.0	32.0
	Cat 6 (min.)	65.0	53.0	45.0	41.0	39.0	35.0	29.0	25.0	19.0	17.0	-
<b>Return Loss [dB]</b>	Typical value	25.0	25.0	25.0	25.0	25.0	25.0	23.8	23.0	21.0	20.0	20.0
	Cat 6 (min.)	20.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.0	17.3	-

## Ordering Information

### Volition™, Category 6 cable, 100 Ω

- Volition™ Cat 6 Cable, UTP, PVC, 4 pairs, 305m Box
- Volition™ Cat 6 Cable, UTP, PVC, 4 pairs, 1000m Drum
- Volition™ Cat 6 Cable, UTP, PVC, 2x4 pairs, 1000m Drum
- Volition™ Cat 6 Cable, UTP, LSOH, 4 pairs, 305m Box
- Volition™ Cat 6 Cable, UTP, LSOH, 4 pairs, 1000m Drum
- Volition™ Cat 6 Cable, UTP, LSOH, 2x4 pairs, 1000m Drum

Item/unit: 1 box or drum

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## Ref.-No.

- VOL-6UP4-305
- VOL-6UP4-1000
- VOL-6UP8-1000
- VOL-6UL4-305
- VOL-6UL4-1000
- VOL-6UL8-1000