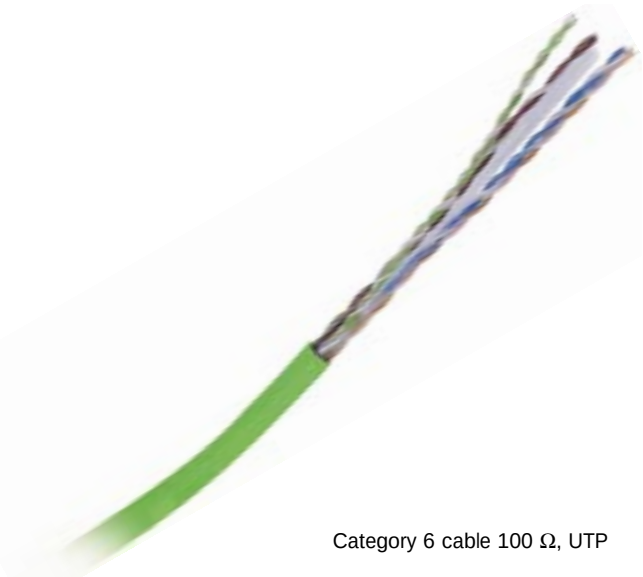
Volition™

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

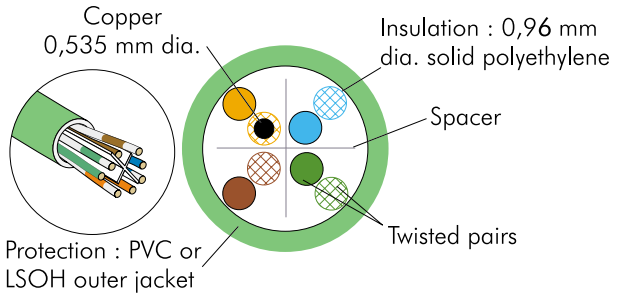
- Good headroom over Category 6 performance
- Installer friendly
- Solutions for all levels of fire protection

Specifications

UTP Category 6
Twisted pair cable

Electrical characteristics at 20º 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



6.4 mm dia.

Cable Performance

Frequency [MHz]		1	4	10	16	20	31.25	62.5	100	200	250	300
Max attenuat.	Typical value	1.9	3.6	5.7	7.3	8.3	10.3	14.8	19.0	27.3	31.0	34.0
[dB/100 m]	Cat 6 (max.)	2.1	3.8	6.0	7.6	8.5	10.8	15.5	19.9	29.2	33.0	-
Min.NEXT	Typical value	77.0	68.0	62.0	59.0	57.0	55.0	50.0	47.0	42.0	41.0	40.0
[dB]	Cat 6 (min.)	75.0	66.0	60.0	57.0	56.0	53.0	48.0	45.0	41.0	39.0	-
Min.ACR	Typical value	75.1	64.4	56.3	51.7	48,7	44.7	35.2	28.0	14.7	10.0	6.0
[dB]	Cat 6 (min.)	72.9	62.2	54,0	49.4	47.5	42.2	32.5	25.1	11.8	6.0	-
PS NEXT	Typical value	74.0	65.0	59.0	56.0	54.0	52.0	47.0	44.0	39.0	38.0	37.0
[dB]	Cat 6 (min.)	72.3	63.3	57.3	54.3	52.8	49.9	45.4	42.3	37.8	36.3	-
ELFEXT	Typical value	80.0	73.0	65.0	61.0	59.0	55.0	49.0	45.0	39.0	37.0	35.0
[dB]	Cat 6 (min.)	68.0	56.0	48.0	44.0	42.0	38.0	32.0	28.0	22.0	20.0	-
PS ELFEXT	Typical value	77.0	70.0	62.0	58.0	56.0	52.0	46.0	42.0	36.0	34.0	32.0
[dB]	Cat 6 (min.)	65.0	53.0	45.0	41.0	39.0	35.0	29.0	25.0	19.0	17.0	-
Return Loss	Typical value	25.0	25.0	25.0	25.0	25.0	25.0	23.8	23.0	21.0	20.0	20.0
[dB]	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

Ref.-No.

Volition™, Category 6 cable, 100 Ω

Volition™ Cat 6 Cable, UTP, PVC, 4 pairs, 305m Box	**VOL-6UP4-305**
Volition™ Cat 6 Cable, UTP, PVC, 4 pairs, 1000m Drum	**VOL-6UP4-1000**
Volition™ Cat 6 Cable, UTP, PVC, 2x4 pairs, 1000m Drum	**VOL-6UP8-1000**
Volition™ Cat 6 Cable, UTP, LSOH, 4 pairs, 305m Box	**VOL-6UL4-305**
Volition™ Cat 6 Cable, UTP, LSOH, 4 pairs, 1000m Drum	**VOL-6UL4-1000**
Volition™ Cat 6 Cable, UTP, LSOH, 2x4 pairs, 1000m Drum	**VOL-6UL8-1000**

Item/unit: 1 box or drum

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