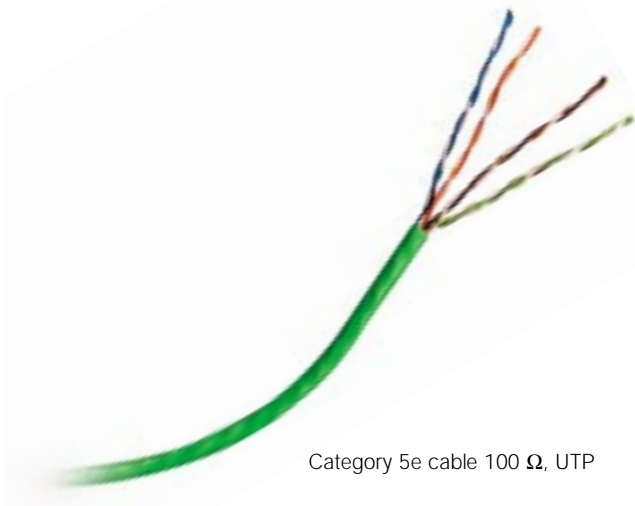




# Volition™

## Category 5e cable 100 Ω, UTP



Category 5e cable 100 Ω, UTP

Part of the 3M™ Volition™ Network Solutions, this 250 MHz UTP cable is a Category 5e TIA/EIA 568 and Class D ISO 11801 and EN 50173 approved range.

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
- IEC 61156-5

### Flammability Performances

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

### Installation Characteristics

Maximum pulling tension (N)	80
Minimum bend radius during installation (mm):	40
Minimum installed bend radius (mm)	20
Nominal weight	30 kg/km
Temperature rating (°C)	
Installation	0 to +50
Operation	-20 to +60

---

### Features

- Excellent electrical performance - tested to 250 MHz
- Length markings on the cable sheath
- Low smoke, zero halogen (LSOH) and PVC versions available

### Benefits

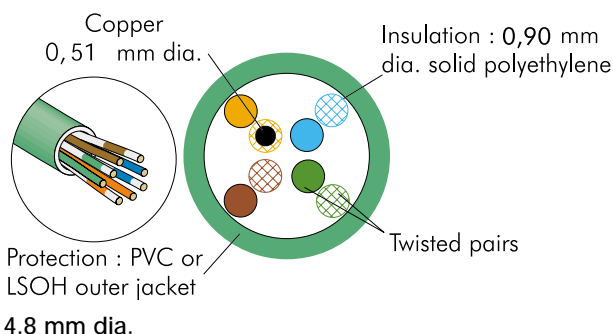
- Good headroom over Category 5e performance
- Installer friendly
- Solutions for all levels of fire protection

## 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 from 1 to 100 MHz	100 +/-15 Ω
Mutual capacitance (nom)	<55 pF/m
Propagation delay skew	10 ns/100 m

## UTP Category 5e Twisted pair cable



## Cable Performance

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200
<b>Max attenuat. (dB/100 m)</b>	Typical value	1.9	3.8	6.0	7.5	8.5	10.6	15.2	19.5	25.0	28.0
	Cat 5e (max.)	2.1	4.1	6.5	8.3	9.3	11.7	17.0	22.0	-	-
<b>Min.NEXT (dB)</b>	Typical value	72.0	63.0	57.0	54.0	52.0	49.0	45.0	42.0	39.0	3.0
	Cat 5e (min.)	65.3	56.3	50.3	47.3	45.8	42.9	38.4	35.3	-	-
<b>Min.ACR (dB)</b>	Typical value	70.1	59.2	51.0	46.5	43.5	38.4	29.8	22.5	14.0	9.0
	Cat 5e (min.)	63.2	52.2	43.8	39.0	36.5	31.2	21.4	13.3	-	-
<b>PS NEXT (dB)</b>	Typical value	69.0	60.0	54.0	51.0	49.0	46.0	42.0	39.0	36.0	34.0
	Cat 5e (min.)	62.3	53.3	47.3	44.3	42.8	39.9	35.4	32.3	-	-
<b>ELFEXT (dB)</b>	Typical value	75.0	63.0	55.0	51.0	48.0	45.0	39.0	35.0	31.0	29.0
	Cat 5e (min.)	64.0	52.0	44.0	40.0	38.0	34.0	28.0	24.0	-	-
<b>PS ELFEXT (dB)</b>	Typical value	72.0	60.0	52.0	48.0	45.0	42.0	36.0	32.0	28.0	26.0
	Cat 5e (min.)	61.0	49.0	41.0	37.0	35.0	31.0	25.0	21.0	-	-
<b>Return Loss (dB)</b>	Typical value	25.0	25.0	25.0	25.0	25.0	25.0	23.8	23.0	22.0	21.0
	Cat 5e (min.)	20.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	-	-

## Ordering Information

**Volition™, Category 5e cable, 100 Ω**

**Volition™ Cat 5e Cable, UTP, PVC, 4 pairs, 305m Box**

**Volition™ Cat 5e Cable, UTP, PVC, 4 pairs, 1000m Drum**

**Volition™ Cat 5e Cable, UTP, PVC, 2x4 pairs, 1000m Drum**

**Volition™ Cat 5e Cable, UTP, LSOH, 4 pairs, 305m Box**

**Volition™ Cat 5e Cable, UTP, LSOH, 4 pairs, 1000m Drum**

Item/unit: 1 box or drum

**3M and Volition are trademarks of 3M. Quante is a trademark of Quante AG.**

### Important Notice

3M does not accept responsibility or liability, direct or consequential arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence. All questions of liability relating to 3M products are governed by the seller's terms of sale subject where applicable to the prevailing law.

If any goods supplied or processed by or on behalf of 3M prove on inspection to be defective in material or workmanship, 3M will (at its option) replace the same or refund to the Buyer the price of the goods or services. Except as set out above, all warranties and conditions, whether express or implied, statutory or otherwise are excluded to the fullest extent permissible at law.



### 3M Telecommunications

Europe, Middle East & North Africa

c/o Quante AG

Carl-Schurz-Straße 1 · 41453 Neuss · Germany

Tel.: ++49 (0)2131 / 14-5999

Fax: ++49 (0)2131 / 14-5998

Internet: [www.3MTelecommunications.com](http://www.3MTelecommunications.com)

## Ref.-No.

**VOL-5EUP4-305**

**VOL-5EUP4-1000**

**VOL-5EUP8-1000**

**VOL-5EUL4-305**

**VOL-5EUL4-1000**