

# 3M

## Volition™

### Cat. 6 Cable

Part of the 3M™ Volition™ Category 6 Cabling System, this Cat. 6 cable meets the TIA/EIA 568-B .2-1 requirements for Category 6. Volition Cat. 6 cable is available with both plenum and riser ratings in blue, orange and white colors. Volition Cat. 6 cable matches or exceeds bandwidth needs for Ethernet, fast Ethernet and gigabit Ethernet applications as well as copper legacy system and 155 Mbps, 622 Mbps and 1.2 Gbps ATM.



#### Features

- Cat. 6 compliant
- CMP and CMR rated
- Cross-separator for improved performance
- Multiple colors (white, blue, orange)
- Footage markings
- Reel-in-a-box

#### Electrical Characteristics

FREQ. (MHz)	Attenuation (dB/100 m)		NEXT (dB)		PSNEXT (dB)		ACR (dB/100 m)		PSACR (dB/100 m)		ELFEXT (dB/100 m)		PSELFEXT (dB/100 m)		RL (dB)
	Typical	Max	Typical	min.	Typical	min.	Typical	min.	Typical	min.	Typical	min.	Typical	min.	min
0.772	1.5	1.8	97.7	76.0	91.5	74.0	96.2	74.2	90.0	72.2	87.8	70.0	81.3	67.0	-
1	1.7	2.0	94.5	74.3	88.5	72.3	92.8	72.3	86.8	70.3	89.6	67.8	80.8	64.8	20.0
4	3.3	3.8	86.1	65.3	78.3	63.3	82.9	61.5	75.0	59.5	76.8	55.7	69.1	52.7	23.0
8	4.6	5.3	80.9	60.8	73.6	58.8	76.3	55.5	69.0	53.5	73.0	49.7	63.5	46.7	24.5
10	5.1	6.0	76.2	59.3	70.7	57.3	71.1	53.3	65.6	51.3	70.0	47.8	61.5	44.8	25.0
16	6.4	7.6	75.5	56.3	69.1	54.3	69.1	48.7	62.7	46.7	66.0	43.7	57.9	40.7	25.0
20	7.2	8.5	74.7	54.8	69.2	52.8	67.6	46.3	62.0	44.3	66.0	41.7	56.0	38.7	25.0
25	8.0	9.5	74.0	53.3	64.5	51.3	66.0	43.8	56.5	41.8	63.9	39.8	54.7	36.8	24.3
31.25	9.0	10.7	72.8	51.9	66.6	49.9	63.9	41.2	57.6	39.2	61.9	37.9	52.6	34.9	23.6
62.5	12.7	15.4	68.1	47.4	62.2	45.4	55.4	32.0	49.5	30.0	55.2	31.8	47.8	28.8	21.5
100	16.1	19.8	62.6	44.3	55.4	42.3	46.5	24.5	39.4	22.5	51.6	27.8	44.9	24.8	20.1
155	20.3	25.2	62.9	41.5	53.1	39.5	42.6	16.3	32.8	14.3	48.4	23.9	42.0	20.9	18.8
200	23.2	29.0	58.5	39.8	50.9	37.8	35.3	10.8	27.7	8.8	46.4	21.7	39.5	18.7	18.0
250	26.1	32.8	58.0	38.3	51.4	36.3	32.0	5.5	25.3	3.5	47.4	19.8	37.9	16.8	17.3

#### Technical Characteristics

Standards	Meets TIA/EIA 568-B .2 -1 Cat. 6
Conductor DCR	9.38 $\Omega$ /100 m maximum (28.6 $\Omega$ /1000 ft.)
DCR Unbalance	3% maximum
Mutual Capacitance	55.8pF/m (17pF/ft.) maximum
Capacitance Unbalance Pair/Ground	330 pF/100 m maximum
Characteristic Impedance	100 +/- 15% (1-250 MHz)
Delta Delay (Skew)	18 ns/100 m maximum
Nominal Velocity of Propagation (NVP)	69% (Riser), 72% (Plenum)

## Specifications

Category 6, ETL verified	
Unshielded twisted pair (UTP)	
Four pairs of 23 AWG solid bare copper insulated conductors	
Plenum and riser ratings in accordance with Article 800 of the National Electric Code	
Insulation = Plenum rated Thermoplastics (plenum); Polyethylene (riser)	
Sequential footage markings every two feet (starting at 1000 feet)	
Pair 1	White-blue and blue
Pair 2	White-orange and orange
Pair 3	White-green and green
Pair 4	White-brown and brown
Pair assembly	Two primaries twisted varied lays
Cable assembly	Four pairs cabled together around a central separator
Ripcord	High strength nylon ripcord
Jacket	*
Nominal cable OD	Plenum - 0.210 in.; Riser - 0.240 in.
Jacket colors available	Blue, white or orange
Package	Reel-in-a-box
Temperature rating	Plenum: -10° to 75° C (14° to 167° F); Riser: -20° to 75° C (-4° to 167° F)
Listed	UL/cUL

\*Plenum: Hiflex - plus plenum; Riser-flame retardant PVC

## Ordering Information

Model Number	Description	Minimum Order Quantity	Packaging
VOL-C6PW	Cat. 6 4 Pair 23 AWG UTP Plenum, white	1 reel	1000 ft. reel
VOL-C6PU	Cat. 6 4 Pair 23 AWG UTP Plenum, blue	1 reel	1000 ft. reel
VOL-C6PO	Cat. 6 4 Pair 23 AWG UTP Plenum, orange	1 reel	1000 ft. reel
VOL-C6RW	Cat. 6 4 Pair 23 AWG UTP Riser, white	1 reel	1000 ft. reel
VOL-C6RU	Cat. 6 4 Pair 23 AWG UTP Riser, blue	1 reel	1000 ft. reel
VOL-C6RO	Cat. 6 4 Pair 23 AWG UTP Riser, orange	1 reel	1000 ft. reel

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