

Category 6

CMR/CMP



Specifications

Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 70 CMP: 73
Performance Compliance	UL 444 CSA C22.2 No. 214-08 UL 1666 NFPA 262 ANSI/TIA-568-C.2 Article 800, NEC (NFPA 70) RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL, c(UL) Listed CMR UL, c(UL) Listed CMP

Product Description

Grupo Matel Series 77 product line provides exceptional value for jobs that require standards compliant Category 6 cable at a cost-effective price.

Applications

- 10BASE-T through 1000BASE-T Ethernet
- Power over Ethernet (PoE) – IEEE 802.3af
- PoE+ – IEEE 802.3at Type 1 and 2
- ATM and token ring

Features

- Meets ANSI/TIA-568-C.2 specification
- BrakeBox® payout control system
- CableID® alpha numeric code printed every 2 feet
- QuickCount® marking system in feet and meters
- ColorTip™ circuit identification system
- Color coded box labels

Benefits

- Provides cost effective solution
- Adjustable tension control on reel prevents over spin and entangling of cable
- Allows both ends of a cable run to be easily identifiable without the need to separately label or tone the cable
- Provides remaining length of cable on reel
- Easily identifiable conductor mates even in low-light environments
- Easily identifies jacket colors

Part Numbers and Physical Characteristics

Listing	Part Number ¹	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages per Pallet
CMR	177-246-xA1	0.22 (5.5)	24 (36)	1,000' BrakeBox	27
CMR	177-272-xA1	0.22 (5.5)	24 (36)	1,000' Plywood reel	16
CMR	177-240-xA1	0.22 (5.5)	24 (36)	1,000' POP™ box	20
CMR	177-273-xA1	0.22 (5.5)	24 (36)	2,500' Plywood reel	12
CMP	177-246-xB1	0.22 (5.5)	25 (37)	1,000' BrakeBox	27
CMP	177-272-xB1	0.22 (5.5)	25 (37)	1,000' Plywood reel	16
CMP	177-240-xB1	0.22 (5.5)	25 (37)	1,000' POP box	20
CMP	177-273-xB1	0.22 (5.5)	25 (37)	2,500' Plywood reel	12

Jacket Colors

¹Replace "x" with:

Blue = 2

Gray = 3

White = 4

Green = 5

Yellow = 6

Red = 9

Orange = D

Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m		NEXT Minimum dB/100 m		ACR Minimum dB/100 m		PSNEXT Minimum dB/100 m	
	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.7	74.3	82.9	72.3	82.2	72.3	81.9
4	3.8	3.4	65.3	77.6	61.5	74.2	63.3	75.0
8	5.3	4.8	60.8	74.4	55.4	68.9	58.8	71.9
10	6.0	5.4	59.3	70.1	53.3	64.7	57.3	68.3
16	7.6	6.9	56.2	69.6	48.7	62.5	54.2	67.1
20	8.5	7.8	54.8	68.7	46.3	60.7	52.8	65.7
25	9.5	8.8	53.3	66.1	43.8	58.7	51.3	64.7
31.25	10.7	9.8	51.9	67.8	41.2	56.2	49.9	63.4
62.5	15.4	14.2	47.4	64.0	32.0	47.8	45.4	59.1
100	19.8	18.2	44.3	58.0	24.5	38.7	42.3	55.0
155	25.2	23.0	41.4	54.5	16.3	31.6	39.4	52.1
200	29.0	26.6	39.8	53.8	10.8	26.5	37.8	50.6
250	32.8	30.1	38.3	51.0	5.5	21.1	36.3	48.7
300		33.4		53.8		19.4		49.1
350		36.5		50.1		14.3		47.5
400		39.5		49.1		8.0		44.5
450		42.3		44.6		3.3		43.4
500		45.1		42.9				41.7
550		47.7		41.6				39.1

Frequency MHz	PSACR Minimum dB/100 m		Return Loss Minimum dB/100 m		ELFEXT Minimum dB/100 m		PSELFEXT Minimum dB/100 m	
	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel	TIA-568-C.2	Grupo matel
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	70.3	80.2	20.0	26.0	67.8	78.7	64.8	76.6
4	59.5	71.6	23.0	31.1	55.8	65.9	52.8	64.2
8	53.4	67.1	24.5	34.5	49.7	60.1	46.7	58.4
10	51.3	62.9	25.0	36.3	47.8	58.1	44.8	56.4
16	46.7	60.2	25.0	37.7	43.7	54.0	40.7	52.2
20	44.3	58.1	25.0	36.0	41.8	52.1	38.8	50.3
25	41.8	56.1	24.3	38.6	39.8	50.2	36.8	48.4
31.25	39.2	53.6	23.6	38.3	37.9	48.1	34.9	46.4
62.5	30.0	45.0	21.5	32.8	31.9	41.4	28.9	40.3
100	22.5	37.0	20.1	30.7	27.8	36.8	24.8	35.2
155	14.3	29.1	18.8	28.8	24.0	33.3	21.0	31.9
200	8.8	24.0	18.0	27.6	21.8	32.6	18.8	31.8
250	3.5	18.8	17.3	28.5	19.8	32.5	16.8	31.3
300		15.8		28.6		30.8		28.9
350		11.6		29.0		26.8		25.4
400		5.0		24.9		24.7		23.5
450		1.2		23.9		23.2		21.9
500				25.0		22.5		21.5
550				24.2		22.4		22.0