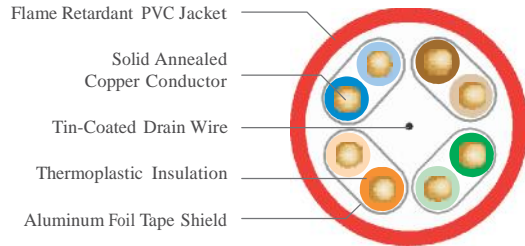


# Category 6A STP (U/FTP)

CMR/CMP



OSP CABLE

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## Specifications

Configuration	Copper pairs each surrounded by aluminum/Mylar® foil with center drain wire and jacket
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
Drain Wire	Tinned copper
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 73 CMP: 77
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, c(UL) or ETL, c(ETL) Listed CMR UL, c(UL) or ETL, c(ETL) Listed CMP

## Part Numbers and Physical Characteristics

Listing	Part Number <sup>1</sup>	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages per Pallet
CMR	16S-220-xA1	0.32 (8.1)	44 (66)	1,000' Plywood reel	15
CMP	16S-220-xB1	0.32 (8.1)	51 (76)	1,000' Plywood reel	15

## Jacket Colors

<sup>1</sup>Replace "x" with: Blue = 2 Gray = 3 White = 4 Green = 5 Yellow = 6 Red = 9 Orange = D Black = E



## Product Description

Grupo Matel offers Shielded Twisted Pair (STP) Category 6A cables in both plenum and riser versions. The cable has guaranteed performance to 600 MHz and meets or exceeds ANSI/TIA-568-C.2 for CAT 6A cables required for 10GBASE-T applications. The cable consists of four (4) balanced 23 AWG copper pairs. Each pair is wrapped with a Mylar® backed aluminum foil with the drain wire in the center of all 4 copper pairs. The wrapped pairs are then jacketed with an appropriate flexible PVC jacket for either plenum or riser applications.

## Applications

- 10BASE-T through 10GBASE-T Ethernet
- Power over Ethernet (PoE) – IEEE 802.3af
- PoE+ – IEEE 802.3at Type 1 and 2
- ATM and token ring
- Backward compatible to legacy protocols and applications

## Features

## Benefits

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Individually foil shielded pairs</li> <li>• Exceeds specification ANSI/TIA-568-C.2 for CAT 6A cable performance</li> <li>• Riser and plenum rated designs</li> <li>• QuickCount® marking system in feet and meters</li> <li>• ColorTip™ circuit identification system</li> </ul> | <ul style="list-style-type: none"> <li>• Protects against EMI/RFI and provides exceptional NEXT, PSNEXT, ELFEXT, and electrical performance</li> <li>• Meets 10GBASE-T application requirements for both Insertion Loss and Return Loss and exceeds requirements for alien and internal crosstalk performance</li> <li>• UL 1666 and NFPA 262 fire rating options help to reduce additional expensive materials required to meet building safety codes</li> <li>• Provides remaining length of cable on reel</li> <li>• Easily identifiable conductor mates even in low-light environments</li> </ul> |
|---|---|

**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	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.1	2.1	2.1	65.0	74.2	74.2	62.9	76.2	78.2	72.2	76.2	78.2
4	3.8	3.8	3.7	65.0	69.2	74.2	61.2	65.4	70.5	63.2	67.2	72.2
8	5.3	5.3	5.2	60.7	64.7	74.2	55.4	59.4	69.0	58.7	62.7	72.2
10	5.9	5.9	5.8	59.2	63.2	74.2	53.3	57.3	68.4	57.2	61.2	72.2
16	7.4	7.4	7.4	56.2	60.2	74.2	48.7	52.7	66.8	54.2	58.2	71.2
20	8.3	8.3	8.2	54.7	58.7	72.7	46.4	50.4	64.4	52.7	56.7	69.7
25	9.3	9.3	9.2	53.3	57.3	71.3	43.9	47.9	62.0	51.3	55.3	68.3
31.25	10.5	10.5	10.4	51.8	55.8	69.8	41.3	45.3	59.4	49.8	53.8	66.8
62.5	14.9	14.9	14.8	47.3	51.3	65.3	32.3	36.3	50.5	45.3	49.3	62.3
100	19.1	19.1	18.9	44.2	48.2	62.2	25.1	29.1	43.3	42.2	46.2	59.2
200	27.5	27.5	27.3	39.7	43.7	57.7	12.2	16.2	30.4	37.7	41.7	54.7
250	31.1	31.1	30.7	38.3	42.3	56.3	7.2	11.2	25.5	36.3	40.3	53.3
300	34.2	34.2	33.9	37.1	41.1	55.1	2.8	6.8	21.2	35.1	39.1	52.1
350	37.2	37.2	36.8	36.1	40.1	54.1		2.9	17.2	34.1	38.1	51.1
400	40.1	40.1	39.6	35.2	39.2	53.2			13.6	33.2	37.2	50.2
500	45.2	45.2	44.8	33.8	37.8	51.8			7.0	31.8	35.8	48.8
600		50.1	49.5		36.6	50.6			1.1		34.6	47.6

Frequency MHz	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT (ACRF) Minimum dB/100 m			PSELFEXT (PSACRF) 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	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.2	74.2	76.2	20.0	20.0	20.6	67.7	69.7	73.7	64.7	66.7	70.7
4	59.4	63.4	68.5	23.0	23.0	23.7	55.7	57.7	61.7	52.7	54.7	58.7
8	53.4	57.4	67.0	24.5	24.5	25.3	49.7	51.7	55.7	46.7	48.7	52.7
10	51.3	55.3	66.4	25.0	25.0	25.8	47.7	49.7	53.7	44.7	46.7	50.7
16	46.7	50.7	63.8	25.0	25.0	25.8	43.7	45.7	49.7	40.7	42.7	46.7
20	44.4	48.4	61.4	25.0	25.0	25.8	41.7	43.7	47.7	38.7	40.7	44.7
25	41.9	45.9	59.0	24.3	24.3	25.1	39.8	41.8	45.8	36.8	38.8	42.8
31.25	39.3	43.3	56.4	23.6	23.6	24.3	37.8	39.8	43.8	34.8	36.8	40.8
62.5	30.3	34.3	47.5	21.5	21.5	22.2	31.8	33.8	37.8	28.8	30.8	34.8
100	23.1	27.1	40.3	20.1	20.1	20.7	27.8	29.8	33.7	24.8	26.8	30.8
200	10.2	14.2	27.4	18.0	18.0	18.5	21.7	23.7	27.7	18.7	20.7	24.7
250	5.2	9.2	22.5	17.3	17.3	17.8	19.8	21.8	25.8	16.8	18.8	22.8
300	0.8	4.8	18.2	16.8	16.8	17.3	18.2	20.2	24.2	15.2	17.2	21.2
350		0.9	14.2	16.3	16.3	16.8	16.9	18.9	22.9	13.9	15.9	19.9
400			10.6	15.9	15.9	16.4	15.7	17.7	21.7	12.7	14.7	18.7
500			4.0		15.2	15.7	13.8	15.8	19.8	10.8	12.8	16.8
600			-1.9			15.1		14.2	18.2		11.2	15.2