

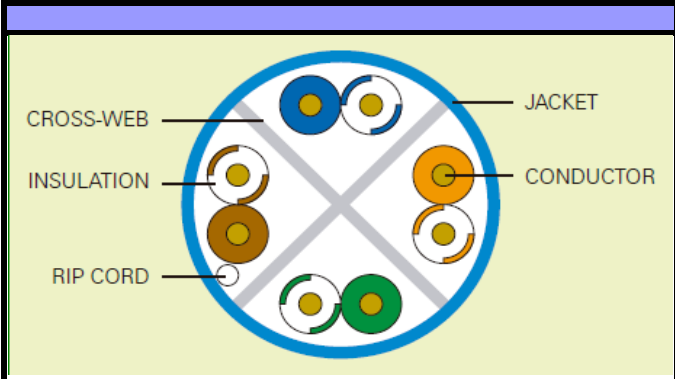


**Industrial electronics, Inc.**  
 Phone (808) 847-4300  
 Fax (808) 841-0960

1353 Mookaula Street  
 Honolulu, HI 96817



# Category 6 Enhanced UTP 4 Pair Cable



### Description

**23 AWG CAT6E CMR, High-Performance Data Cable**

### Applicable Standards

- UTP CABLE CAT6, #23 AWG X 4 PAIR W/HDPE INSULATION AND FLAME-RETARDANT PVC JACKET
- UL Listed Type CMF
- C(UL) listed CMG FT4
- ETL Listed Type CMR
- C(ETL) listed CMG FT4
- TIA/EIA-568-C.2, UL 1666 CMR RATED
- IEC 61156 AND ANSI/TIA-568-C.2
- ROHS Compliant
- ATM 155 Mbps
- Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4,
- 1000 Mbps 1000BASE-T Gigabit Ethernet™ (IEEE 802.3)
- 16 Mbps Token Ring™ (IEEE 802.5)

### Physical Characteristics

Number of Conductor Pairs	4
Size	23 AWG
Stranding	Solid
Conductor Material	Solid Annealed Bare Copper
Shield Material	Unshielded
Rip Cord	Yes
Insulation Material	Polyethylene
Insulation Overall Diameter	0.040 in. ± 0.0002 in.
Insulation Average Thickness	0.0088 in.
Jacket	Flame Retardant PVC
Voltage Rating	300V
Outer Jacket Average Wall Thickness	0.023 in.
Outer Jacket Nominal O.D.	0.244 in. ± 0.008 in.
Nominal Weight	28 lbs. (RIB) / 30 lbs. (Reelex II)

### Mechanical Characteristics

Temperature Rating	Installation	0 to + 60°C
	Operating	-20°C to + 75°C
Tensile Strength	Before	> = 13.8 Mpa
Elongation	Aging	> = 100%
Aging Condition		100°C x 168 hours
	After	> = 85% of unaged
	Aging	> = 50% of unaged

### Color Code

Pair 1	White / Blue	Blue
Pair 2	White / Orange	Orange
Pair 3	White / Green	Green
Pair 4	White / Brown	Brown

### Cable Marking

XXXXXX 23AWG 4 PR UTP CMR C(UL)US 75C FT4 C(ETL)US FT4  
 TESTED TO 600 MHz CATEGORY 6E TIA/EIA-568C.2 ETL  
 VERIFIED TO \*\*\*\*FT

### Electrical Performance

Frequency (MHz)	Attenuation Max. (dB/100m)	Return loss Min. (dB)	NEXT Min. (dB)	PS-NEXT Min. (dB)
1	2.0	20.0	77.3	75.3
4	3.8	23.6	68.3	66.3
8	5.3	25.4	63.8	61.8
10	5.9	26.0	62.3	30.3
16	7.4	26.0	59.3	57.3
20	8.3	26.0	57.8	55.8
25	9.3	25.5	56.3	54.3
31.25	10.4	25.0	54.9	52.9
62.5	14.9	23.5	50.4	48.4
100	19.0	22.5	47.3	45.3
155	23.9	21.6	45.8	43.5
200	27.4	21.0	42.8	40.8
250	30.8	20.5	41.3	39.3
300	34.0	20.1	40.2	38.2
350	37.0	19.8	39.2	37.2
400	39.7	19.5	38.3	36.3
450	42.1	19.2	37.5	35.5
500	44.9	19.0	36.8	34.8
550	47.3	18.8	36.2	34.2
600	50.7	15.7	44.2	42.2

Frequency (MHz)	ELFEXT Min. (dB)	PS-ELFEXT Min. (dB)	ACR Min. (dB)	PS-ACR Min. (dB)
1	70.8	67.8	75.0	73.0
4	58.7	55.7	64.0	62.0
8	52.7	49.7	57.7	55.7
10	50.8	47.8	55.6	53.6
16	46.7	43.7	50.7	48.7
20	44.7	41.7	48.2	16.2
25	42.8	39.8	45.6	13.6
31.25	40.9	37.9	42.8	40.8
62.5	34.8	31.8	32.9	30.9
100	30.8	27.8	24.9	22.9
155	27.0	23.6	21.0	21.5
200	24.7	21.7	18.4	16.4
250	22.8	19.8	13.5	11.5
300	21.2	18.2	9.6	5.0
350	19.9	16.9	5.2	3.2
400	18.7	15.7	1.5	-
450	17.7	14.7	-	-
500	16.8	13.8	-	-
550	15.9	12.9	-	-
600	N/A	N/A	N/A	N/A

### Electrical Characteristics

Maximum Conductor DC Resistance @ 20°C	9.38 Ω / 100 Meters
Maximum DC Resistance Unbalanced @ 20°C	5%
Maximum Pair-to-Pair Ground Capacitance Unbalance	330 pF / 100 Meters
Characteristic Impedance	100 ± 15 Ω
Mutual Capacitance	5.6 nF / 100 Meters
Maximum Delay Skew	40 nS / 100 Meters
NVP Nominal Velocity Propagation	0.7

### Part Numbers

Part Numbers	Color	Put-up	Part Numbers	Color	Put-up
	Black	RIB		Black	Reelex II
	Blue	RIB		Blue	Reelex II
	Green	RIB		Green	Reelex II
	Grey	RIB		Grey	Reelex II
	Red	RIB		Red	Reelex II
	White	RIB		White	Reelex II
	Yellow	RIB		Yellow	Reelex II