



### 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 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. (Reelx 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

CATEGORY 6E 600MHZ 23AWG 4 PR UTP XXXXXX CMR  
C(ETL)US FT4 ETL LISTED & VERIFIED TO TIA/EIA-568-C.2  
\*\*\*\*ET

www.firefold.com

Tel. 704-979-7100

### Electrical Performance

Frequency (MHz)	Attenuation (dB/100m)	Return loss (dB)	NEXT (dB)	PS-NEXT (dB)
	Max.	Min.	Min.	Min.
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	18.6	36.2	34.2
600	54.5	18.8	37.6	35.6
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	15.9	12.9	17.2	14.2

### 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
CAT6-1KSOL-BLK	Black	1000' Reelx II
CAT6-1KSOL-BLU	Blue	1000' Reelx II
CAT6-1KSOL-GRN	Green	1000' Reelx II
CAT6-1KSOL-GRY	Grey	1000' Reelx II
CAT6-1KSOL-RED	Red	1000' Reelx II
CAT6-1KSOL-WHT	White	1000' Reelx II
CAT6-1KSOL-YEL	Yellow	1000' Reelx II

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