

# 23 AWG /4 Pair UTP UNSHIELDED CAT6A CMR AUGMENTED Cable

Operation Temp: -20°C up to 60°C, 300V RISER RATED

**CONSTRUCTION:**

1. Conductors: 23 AWG SOLID BARE COPPER
2. Insulation: HIGH DENSITY POLYETHYLENE (0.0433" Nom. Diameter over Insulation)  
COLORS: BLUE & WHITE/BLUE STRIPE; ORANGE & WHITE/ORANGE STRIPE; GREEN & WHITE/GREEN STRIPE; BROWN & WHITE/BROWN STRIPE
3. Assembly: 4 PAIRS INDIVIDUALLY UNSHIELDED TWISTED PAIRS –WITH A SPLINE SEPARATOR CABLED AND JACKETED
4. Jacket: PVC

**APPLICATIONS AND FEATURES:**

Southwire Cat 6A unshielded twisted pair cable is a high performance data communication cable. This ethernet cable is designed for indoor and riser network installations type CMR (Riser rated communication cable), may be used in Ethernet Networking system, PoE applications, Video MPEG4 / M JPEG / Digital / Analog / Baseband / Broadband and other Multimedia Voice applications. It supports networks up to 10GIGABIT ETHERNET

**SPECIFICATIONS:**

- Meets or exceeds TIA/EIA 568-C.2
- NEC ARTICLE 800
- Passes IEEE 802.3an
- UL 444 CMR
- UL 1666 RISER FLAME TEST
- RoHS-2
- PoE (IEEE 802.3af) - Without bundle restriction
- PoE+ (IEEE 802.at) - Without bundle restriction
- PoE++ 802.3bt (0.5) 75C spec for up to 128 cables
- 4PPoE (IEEE 802.bt) - 192 bundles
- PoH HDBaseT (100W) - 192 bundles

**SAMPLE PRINT LEGEND:**

6AR AUGMENTED - CAT 6A SOUTHWIRE (R) TAPPAN (TM) I99980 - E160837 23AWG 4PR U/UTP TYPE CMR 75C C(UL)US LISTED -- ETL VERIFIED TO TIA-568-C.2 CATEGORY 6A ROHS-2 COMPLIANT (Date & Lot Info) (Seq. Ftg. Marking)

**PACKAGING** Standard lengths 1000 FT. Consult factory for other jacket colors and packaging options.

**TABLE 1 - Product Electrical Characteristics**

Stock Code	Capacitance Unbalance Pair x GND @ 1 kHz (pF/m)	Max DC Resistance (Ω/100m @ 68°F)	Max Delay Skew (ns/100m)	Nom Velocity of Propagation (%)	Characteristic Impedance (Ω @ 1-100 MHz)	Nominal OD (Inchs)	Nominal OD (mm)	Nominal Weight (Lbs/Mft)	Nominal Weight (kg/km)
I99980	3.3	9.38	45.0	68.0	100 +/- 15%	0.307	7.798	41.0	61.0

Freq. (MHz)	IL (dB)		NEXT (dB)		PSNEXT (dB)		ACRF (dB)		Freq. (MHz)	PSACRF (dB)		RL (dB)		PSANEXT (dB)		PSAACRF (dB)	
	TIA/EIA Max.	Typical	TIA/EIA Min.	Typical	TIA/EIA Min.	Typical	TIA/EIA Min.	Typical		TIA/EIA Min.	Typical	TIA/EIA Min.	Typical	TIA/EIA Min.	Typical	TIA/EIA Min.	Typical
1	2.1	1.9	74.3	85.8	72.3	84.2	67.8	81.1	1	64.9	79.3	20.0	30.0	67.0	67.0	67.0	
4	3.8	3.6	65.3	77.2	63.3	75.3	55.8	67.8	4	52.8	65.7	23.0	33.7	67.0	66.2	66.2	
8	5.3	4.9	60.8	75.7	58.8	73.4	49.7	63.6	8	46.7	61.4	24.5	33.5	67.0	60.1	60.1	
10	5.9	5.4	59.3	74.3	57.3	72.8	47.8	61.9	10	44.8	60.0	25.0	33.3	67.0	58.2	58.2	
16	7.5	6.8	58.2	72.3	54.2	70.1	43.7	57.9	16	40.7	55.9	25.0	32.5	67.0	54.1	54.1	
20	8.4	7.8	54.8	69.0	52.8	67.4	41.8	55.5	20	38.8	53.8	25.0	32.1	67.0	52.2	52.2	
25	9.4	8.6	53.3	68.0	51.3	66.4	39.8	54.1	25	36.8	52.2	24.3	32.3	67.0	50.2	50.2	
31.25	10.5	9.7	51.9	66.8	49.9	65.0	37.9	51.6	31.25	34.9	49.6	23.6	32.1	67.0	48.3	48.3	
62.5	15.0	13.7	47.4	60.1	45.4	58.8	31.9	44.9	62.5	28.8	43.4	21.5	31.1	65.6	42.3	42.3	
100	19.1	17.5	44.3	59.2	42.3	57.3	27.8	43.1	100	24.8	40.8	20.1	30.1	62.5	38.2	38.2	
200	27.6	25.0	39.8	55.8	37.8	53.7	21.8	37.5	200	18.8	35.2	18.0	28.5	58.0	32.2	32.2	
250	31.1	28.2	38.3	52.2	36.3	49.9	19.8	34.9	250	16.8	32.8	17.3	26.8	56.5	30.2	30.2	
300	34.3	30.9	37.1	48.9	35.1	47.2	18.3	32.8	300	15.3	31.1	16.8	26.0	55.3	28.7	28.7	
400	40.1	35.9	35.3	45.8	33.3	43.9	15.8	29.1	400	12.8	27.2	15.9	23.7	53.5	26.2	26.2	
500	45.3	40.3	33.8	45.4	31.8	42.8	13.8	25.2	500	10.8	23.7	15.2	22.5	52.0	24.2	24.2	
550	-	42.4	-	40.2	-	38.1	-	24.9	550	-	23.2	-	23.3	-	-	-	
600	-	44.8	-	42.0	-	40.1	-	24.5	600	-	22.4	-	22.6	-	-	-	
700	-	48.1	-	38.1	-	36.8	-	22.9	700	-	20.9	-	20.7	-	-	-	

Cable Measurements are made at 20 °C in 100 meters cables, pulled out of their packages and released on a non-conductive surface as described in ANSI/TIA-568-C.2.

- Attenuation: Std. is a TIA 568C.2 Maximum (also called "Insertion Loss")
- NEXT: Std. is a TIA 568C.2 Minimum (Near End Crosstalk)
- ACR: NEXT minus Attenuation; ("Attenuation to Crosstalk Ratio")
- PSNEXT: Std. is a TIA 568C.2 Minimum (Power Sum Near End Crosstalk)
- PSACR: PSNEXT minus Attenuation; ("Attenuation to PSNEXT Ratio")
- ACRF: Std. is a TIA 568C.2 Minimum (Attenuation Crosstalk Ratio at Far End)
- PSACRF: Std. is a TIA 568C.2 Minimum (Power Sum Atten to X-Talk Ratio FE)
- RL: Std. is a TIA 568C.2 Minimum (Return Loss)

- Lower is better.
- Higher is better.
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All dimensions are nominal and subject to nominal manufacturing tolerances

The customer will accept all factory lengths and +/- 10 percent of total order requested.

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