

CAT6A UTP CMP (Plenum-Rated) Made in the USA



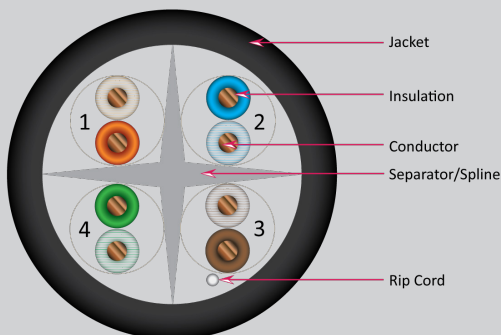
DESCRIPTION

Category 6A UTP CMP (Plenum-Rated)
ETL-Listed Cable

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FEATURES

- Meets or exceeds ANSI/TIA-568.2-D
- Spline -based construction with ribbed jacket ensuring excellent X-talk performance
- Meets PoE Type 4 specifications
- 23 AWG/4 PAIR Solid bare copper conductors
- Unshielded with an overall plenum jacket
- Supports PoE 802.3af, 802.3at, 802.3bt (Type 3, Type 4), 802.3an, 802.3bz, 802.3ab, 802.3u
- Suitable for 10Gb High-Speed Applications
- HDBase-T A & B
- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)



Part# 176 SERIES

Specifications	
Construction	
Conductor Material	23-AWG Solid Copper
Conductor Insulation	Fluoropolymer
Stranding	Solid
Insulation Colors	P1: Blue/White-Blue P2: Orange/White-Orange P3: Green/White-Green P4: Brown/White-Brown
Number of Conductors	8 (4 Pairs)
Jacket Material	PVC: Plenum-Rated, Low-Smoke, Fire-Retardant
Cable Outer Diameter	0.260 in (6.60 mm) nom.
Electrical	
Operating Voltage Rating	300 V RMS
DC Resistance	9.383 Ω/100 m @ 20 °C max.
Resistance Unbalance	<3 %
Mutual Capacitance	5.6 nF/100 m max.
Capacitance Unbalance	330 pF/100 m
Input Impedance	100 Ω±15 Ω (100 MHz) 100 Ω±15 Ω (100–250 MHz) 100 Ω±25 Ω (251–500 MHz)
Delay Skew	45 ns/100 m
NVP	67.7 %
Mechanical	
Max. Recommended Pull Tension	25 lbf (111 N)
Min. Bend Radius (Installed)	Installed: 1 in min.
Cable Weight	45 lb/1 kft nom.
Compliance	
Safety	ETL-Listed (tested per UL 444) RoHS2 (Directive 2011/65/EU)
Fire Safety	NEC CMP (tested per NFPA 262)
Performance	ANSI/TIA-568.2-D (ETL-verified)

Packaging	Height	Width	Diameter	Weight
Spool	14 in	12 in	8 in	50 lb

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Environmental	
Storage Temperature	-20° C to +75° C
Installation Temperature	0° C to +50° C
Operating Temperature	-20° C to +75° C
Operating Humidity	≤93 % RH non-condensing
Application support	
PoE	15-W PoE Type 1 (IEEE 802.3af) 30-W PoE+ Type 2 (IEEE 802.3at) 60-W PoE++/4PPoE Type 3 (IEEE 802.3bt) 100-W PoE++/4PPoE Type 4 (IEEE 802.3bt)
HDBase-T	Class A–Class D
Ethernet	10GBASE-T (IEEE 802.3an) 2.5GBASE-T/5GBASE-T (IEEE 802.3bz) 1000BASE-T (IEEE 802.3ab) Gigabit Ethernet 100BASE-TX (IEEE 802.3u) 100-Mbps Ethernet (Fast Ethernet)
ATM	ATM LAN 25/51/155/622
Jacket Printing	
4010346 CAT6A Augmented 10GIG c(ETL)us CMP-LP (0.5A) 23 AWG 4PR UTP 75C TESTED TO ANSI/TIA-568.2-D ISO 11801 550 MHz MADE IN USA PO#/LOT# ROHS COMPLIANT [JULIAN DATE/YR]	
Colors available	
Black, Blue, Gray, Green, Orange, Pink, Purple, Red, White, Yellow (check availability)	

Ampacity

AWG	Number of 4-pair Cables in a Bundle																				
	1			2-7			8-19			20-37			38-61			62-91			92-192		
	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C
24	2.0	2.0	2.0	1.0	1.4	1.6	0.8	1.0	1.1	0.6	0.7	0.9	0.1	0.1	0.7	0.4	0.5	0.6	0.3	0.4	0.5
23	2.5	2.5	2.5	1.2	1.5	1.7	0.8	1.1	1.2	0.6	0.8	0.9	0.5	0.7	0.8	0.5	0.7	0.8	0.4	0.5	0.6
22	3.0	3.0	3.0	1.4	1.8	2.1	1.0	1.2	1.4	0.7	0.9	1.1	0.6	0.8	0.9	0.6	0.7	0.8	0.5	0.6	0.7

The table above is representative of the one approved the National Fire Protection Agency for use in the next edition of the National Electrical Code known as NFPA-70. The complete table will be found in section 725.144 of the code. It will also be referenced in Article 800 Communication Circuits. The table identifies the ampacity of each conductor (in Amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables.

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Transmission Specifications:

FREQ (MHz)	INSERTION LOSS (dB/100m)	NEXT (dB/100m)	PS NEXT (dB/100m)	ACRF (dB/100m)	PS ACRF (dB/100m)	RETURN LOSS (dB)	PROP. DELAY (ns/100m)	ALIEN CROSSTALK		
								PS ANEXT (dB/100m)	PS AACRN (dB/100m)	PS AACRF (dB/100m)
	max	min	min	min	min	min	max	min	min	min
1.0	2.1	75.3	73.3	71.8	68.8	20.0	570.0	74.5	72.4	74.5
4.0	3.8	66.3	64.3	59.8	56.8	23.0	552.0	74.5	70.7	73.7
8.0	5.3	61.8	59.8	53.7	50.7	24.5	546.7	74.5	69.2	67.6
10.0	5.9	60.3	58.3	51.8	48.8	25.0	545.4	74.5	68.6	65.7
16.0	7.5	57.2	55.2	47.7	44.7	25.0	543.0	74.5	67.0	61.6
20.0	8.4	55.8	53.8	45.8	42.8	25.0	542.0	74.5	66.1	59.7
25.0	9.4	54.3	52.3	43.8	40.8	24.3	541.2	74.5	65.1	57.7
31.25	10.5	52.9	50.9	41.9	38.9	23.6	540.4	74.5	64.0	55.8
62.5	14.9	48.4	46.4	35.9	32.9	21.5	538.6	73.1	58.2	49.8
100.0	19.0	45.3	43.3	31.8	28.8	20.1	537.6	70.0	51.0	45.7
200.0	27.4	40.8	38.8	25.8	22.8	18.0	536.9	65.5	38.1	39.7
250.0	30.8	39.3	37.3	23.8	20.8	17.3	536.5	64.0	33.2	37.7
300.0	34.0	38.1	36.1	22.3	19.3	16.8	536.3	62.8	28.8	36.2
350.0	36.9	37.1	35.1	20.9	17.9	16.3	536.1	61.8	24.9	34.8
400.0	39.7	36.3	34.3	19.8	16.8	15.9	535.9	61.0	21.3	33.7
450.0	42.3	35.5	33.5	18.7	15.7	15.5	535.8	60.2	17.9	32.6
500.0	44.8	34.8	32.8	17.8	14.8	15.2	535.6	59.5	14.7	31.7
550.0	47.2	34.2	32.2	17.0	14.0	14.9	-	58.9	11.7	30.9
600.0	49.5	33.6	31.6	16.2	13.2	14.7	-	58.3	8.8	30.1
650.0	51.7	33.4	31.1	15.5	12.5	14.4	-	57.8	6.1	29.4
750.0	56.0	32.2	30.2	14.3	11.3	14.0	-	56.9	0.9	28.2

ENG SWEEP TO 750MHZ, values above 550 MHz are for internal reference only.

Part Numbers	
176-300/A/P/BK	CAT6A UTP, 1000 FT, PLENUM, BLACK
176-305/A/P/BL	CAT6A UTP, 1000 FT, PLENUM, BLUE
176-310/A/P/GR	CAT6A UTP, 1000 FT, PLENUM, GREEN
176-315/A/P/GY	CAT6A UTP, 1000 FT, PLENUM, GRAY
176-320/A/P/OR	CAT6A UTP, 1000 FT, PLENUM, ORANGE
176-325/A/P/PK	CAT6A UTP, 1000 FT, PLENUM, PINK
176-330/A/P/PR	CAT6A UTP, 1000 FT, PLENUM, PURPLE
176-335/A/P/RD	CAT6A UTP, 1000 FT, PLENUM, RED
176-340/A/P/WH	CAT6A UTP, 1000 FT, PLENUM, WHITE
176-345/A/P/YL	CAT6A UTP, 1000 FT, PLENUM, YELLOW

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