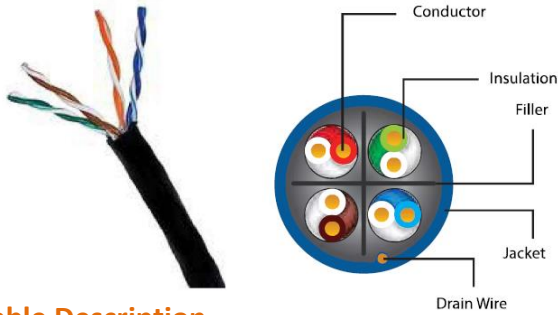


## Category 6A – Outdoor Ethernet Cable



### Product Overview

Alston Systems, Category 6A U/UTP Outdoor Cable, PE Sheath 4 pairs 500 MHz, cable is used for Outdoor installation purpose for horizontal network and voice application in a structured cabling system, including IEEE 802.3an: 10G Base-T Gigabit Ethernet, 2.4/1.2Gb/s ATM, digital video, broadband & baseband analog video.

### Cable Description

Cable Construction	Solid bare copper conductors insulated with thermoplastics polyolefin. Two insulated conductors twisted together to form a pair and four such pairs separated by cross filler. Outer Jacket with PE compound.
Conductor	Size - 23 AWG Type - Solid bare copper Diameter (mm) 0.56± 0.01
Insulation	Type - PE Diameter (mm) - 1.03± 0.05 ; Min. Thickness (mm) - 0.21
Pairs - Color Code	Pair 1 - Blue / White - Blue strip Pair 2 - Orange / White - Orange strip Pair 3 - Green / White - Green strip Pair 4 - Brown / White - Brown strip
Central Element	Type - PE cross filler
Jacket	Type - PE Overall Diameter (mm) – 8.3 ± 0.3

### Technical Data - Physical

Cold Blend Test	-20 ± 2°C X 4hrs no. crack	
Dielectric strength	AC 1.7 KV for 2s	
Insulation	<b>Before Aging</b>	<b>After Aging</b>
Min. Tension strength (psi)	2400	75% before aging (100°C X 48hrs)
Min elongation (%)	300	75% before aging (100°C X 48hrs)
Min. Tension strength (psi)	1400	85% before aging (100°C X 168hrs)
Min elongation (%)	350	50% before aging (100°C X 168hrs)
Min. bending radius (mm)	65	
Max. pulling tension (lbs)	25	
Installation temperature	-10°C to +60°C	
Operating temperature	-10°C to +60°C	
Packing	305/500/1000m on a wooden drum overall wrapped over by PE film	

### Technical Data - Electrical

Conductor resistance (Ω/100m @20°C)	Max.	9.5	
DC resistance unbalance (%)	Max.	4	
Pair-to-ground capacitance unbalance (pF/km)	Max.	1600	
Delay skew (ns/100m)	Max.	45	4 ≤ f ≤ 500MHz
Insertion Loss (dB/100m)	Max.	1.82*√f + 0.0091* f +0.25/√f	1 ≤ f ≤ 500MHz
Pair to Pair NEXT (dB/100m)	Min.	75.3 - 15 * log(f)	1 ≤ f ≤ 500MHz
		Values greater than 75dB shall be converted to 75dB	
Power Sum pr-pr NEXT (dB/100m)	Min.	72.3 - 15 * log(f)	1 ≤ f ≤ 500MHz
		Values greater than 75dB shall be converted to 75dB	
ELFEXT (dB/100m)	Min.	68 - 20 * log(f)	1 ≤ f ≤ 500MHz
		Values greater than 75dB shall be converted to 75dB	
Power Sum ELFEXT (dB/100m)	Min.	65 - 20 * log(f)	1 ≤ f ≤ 500MHz
		Values greater than 75dB shall be converted to 75dB	
Return Loss (dB)	Min.	20 + 5 * log(f)	1 ≤ f ≤ 10MHz
Propagation Delay (ns/100m)	Max.	534 + 36 /√f	1 ≤ f ≤ 500MHz

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### Electrical Performance

Meets IEC 61156-5 ED.2.0 Category 6A Horizontal Cable Parameters

Freq. (MHz)	Ins. Loss (db/100m) Max.	RL (db) Min.	Pair to Pair (db/100m)		Power Sum (db/100m)		Delay Skew (ns/100m) Max	Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT		
			Min.	Min.	Min.			
1	-	20.0	-	-	-	-	--	570.0
4	3.8	23.0	66.3	56.0	63.3	53.0	45	552.0
10	5.9	25.0	60.3	48.0	57.3	45.0	45	545.4
16	7.5	25.0	57.2	43.9	54.2	40.9	45	543.0
20	8.4	25.0	55.8	42.0	52.8	39.0	45	542.0
31.25	10.5	23.6	52.9	38.1	49.9	35.1	45	540.4
62.5	15.0	21.5	48.4	32.1	45.4	29.1	45	538.6
100	19.1	20.1	45.3	28.0	42.3	25.0	45	537.6
200	27.6	18.0	40.8	22.0	37.8	19.0	45	536.5
250	31.1	17.3	39.3	20.0	36.3	17.0	45	536.3
300	34.3	17.3	38.1	18.5	35.1	15.5	45	536.1
400	40.1	17.3	36.3	16.0	33.3	13.0	45	535.8
500	45.3	17.3	34.8	14.0	31.8	11.0	45	535.6

### Ordering Information

Part Number	Description
303100613	Alston Systems, Category 6A U/UTP Outdoor Ethernet Cable, 23 AWG PE Sheath, 305m/roll, Black