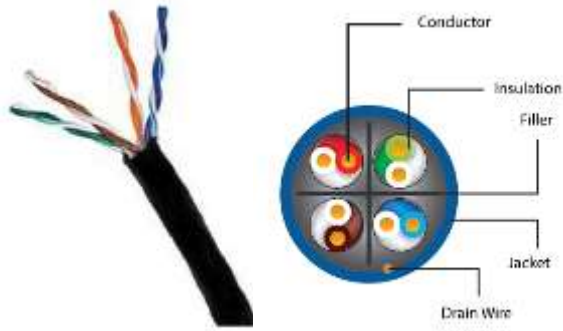


Category 6 – Outdoor Ethernet Cable



Product Overview

Alston Systems, Category 6 U/UTP Outdoor Cable, PE Sheath 4 pairs cable is designed to be installed in PVC ducts in an outdoor environment. This carries the same electrical performance as normal Cat6 UTP cable with PVC sheath.

Application

For horizontal network & voice application in a structured cabling system including IEEE802.3 1000 Base-T, 100 Base-Tx, 10 Base-T 1000 Base-Tx (ANSI/TIA/EIA-854-2001), 155Mb/s ATM, 4/16 Mb/s Token ring

Features

- Characterized and tested to 250MHz.
- Unique product specific packaging for ease of identification.
- Positive PSACR up to 300MHz for future bandwidth requirements.
- Print legend contains footage making from 305M to 0M or 500M to 0M.
- Every master reel is tested to ensure electrical performance compliance.
- Tape design engineered for smaller overall diameter and ease of installation.

Standards

- Delta EC,ETL
- IEC 61156-5:2009 (Ed2.0)
- ANSI/TIA/EIA-568-B.2-1 Cat.6
- ROHS complaint, UL Listed & ETL/ EC Verified

Cable Description

Cable Construction	Solid bare copper conductors insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit. A cross filler is cabled in between to separate the 4pairs insulated conductors Overall jacket with PE compound.
Conductor	Size - 23 AWG Type - Solid bare copper Diameter (mm) 0.55± 0.01
Insulation	Type - PE Diameter (mm) - 0.973± 0.05 Min. Thickness (mm) - 0.186
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 - Cross separator
Jacket	Type - PE Overall Diameter (mm) – 6.1 ± 0.3

Technical Data - Physical

Cold Blend Test	-20 ± 2, X 4hrs no. crack	
Dielectric strength	AC 1.7 KV for 2S.	
Insulation	Before Aging	After Aging
Min. Tension strength (psi)	2400	75% before aging (100, X 48hrs)
Min elongation (%)	300	75% before aging (100,X48hrs)
Min Tension strength (psi)	2400	85 before aging (100, X 168hrs)
Min elongation (%)	300	50% before aging (100. X 168hrs)
Min. bending radius (mm)	180	
Max. pulling tension (lbs)	40	
Installation temperature	-10°C to +50°C	
Operating temperature	-10°C to +50°C	
Packing	305/500/1000m on a wooden drum overall wrapped over by PE film.	

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Technical Data - Electrical

Conductor resistance ($\Omega/100m @20^{\circ}C$)	Max.	9.5	
DC resistance unbalance (%)	Max.	4	
Pair-to-ground capacitance unbalance (pF/km)	Max.	1600	
Delay skew (ns/100m)	Max.	45	$4 \leq f \leq 250MHz$
Insertion Loss (dB/100m)	Max.	$1.82*\sqrt{f} + 0.0091*f + 0.25/\sqrt{f}$	$1 \leq f \leq 250MHz$
Pair to Pair NEXT (dB/100m)	Min.	$75.3 - 15 * \log(f)$	$1 \leq f \leq 250MHz$
		Values greater than 75dB shall be converted to 75dB	
Power Sum pr-pr NEXT (dB/100m)	Min.	$72.3 - 15 * \log(f)$	$1 \leq f \leq 250MHz$
		Values greater than 75dB shall be converted to 75dB	
ELFEXT (dB/100m)	Min.	$68 - 20 * \log(f)$	$1 \leq f \leq 250MHz$
		Values greater than 75dB shall be converted to 75dB	
Power Sum ELFEXT (dB/100m)	Min.	$65 - 20 * \log(f)$	$1 \leq f \leq 250MHz$
		Values greater than 75dB shall be converted to 75dB	
Return Loss (dB)	Min.	$20 + 5 * \log(f)$	$1 \leq f \leq 10MHz$
Propagation Delay (ns/100m)	Max.	$534 + 36 /\sqrt{f}$	$1 \leq f \leq 250MHz$

Electrical Performance

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

Freq. (MHz)	Ins. Loss (db/100m)	RL (db)	Pair to Pair (db/100m)		Power Sum (db/100m)		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			Max.	Min.	Min.	Min.	
1	-	20	-	-	-	-	-
4	3.8	23	66.3	56.0	66.3	53.0	552.0
10	6.0	25	60.3	48.0	57.3	45.0	545.4
16	7.6	25	57.2	43.9	54.2	40.9	543.0
20	8.5	25	55.8	42.0	52.8	39.0	542.0
31.25	10.7	23.6	52.9	38.1	49.9	35.1	540.4
62.5	15.5	21.5	48.4	32.1	45.4	29.1	538.6
100	19.9	20.1	45.3	28.0	42.3	25.0	537.6
200	29.1	18	40.8	22.0	37.8	19.0	536.5
250	33.0	17.3	39.3	20.0	36.3	17.0	536.3

Ordering Information

Part Number	Description
301400063	Alston Systems, Category 6 U/UTP 23 AWG Outdoor Ethernet Cable, PE Sheath, 305m/roll, Black