Product: APC6FX1

Category 6 Cable, 4 Pair, F/UTP, CMR, AIA

Product Description

Category 6 Premise Horizontal Cable (250MHz), 4 Pair, 23 AWG Solid Bare Copper Conductors, F/UTP - Foil Shielded, Riser-CMR, Aluminum Interlocked Armor

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, Surveillance, PoE++, PoE+, PoE
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents.

Construction Details

Conductor

AWG	Stranding	Material	Number of Pairs
23	Solid	BC - Bare Copper	4

Insulation

Material	Color Code
PO+FEP - Polyolefin + Fluorinated Ethylene Propylene	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	No

Inner Shield Material

Shield Type	Material	Coverage	Drainwire Type
Tape	Polyester + Bi-Laminate (Alum+Poly)	100%	24 AWG (Solid) TC

Inner Jacket Material

Separator	Material	Nom. Diameter
Center Member (Patented X-Spline®)	PVC - Polyvinyl Chloride	0.290 in

Armor

Diameter
0.530 in

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance
93.8 Ohm/km	3%	330 pF/100m	15.5 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	70%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Min. TCL [dB]
1 MHz	2	74.3 dB	72.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	20 dB	100 ± 15	40 dB

4 MHz	3.78	65.28 dB	63.28 dB	61.5 dB	59.5 dB	55.71 dB	52.71 dB	23.01 dB	100 ± 15	40 dB
8 MHz	5.32	60.77 dB	58.77 dB	55.45 dB	53.45 dB	49.69 dB	46.69 dB	24.52 dB	100 ± 15	40 dB
10 MHz	5.95	59.31 dB	57.31 dB	53.36 dB	51.36 dB	47.75 dB	44.75 dB	25 dB	100 ± 15	40 dB
16 MHz	7.55	56.25 dB	54.25 dB	48.7 dB	46.7 dB	43.67 dB	40.67 dB	25 dB	100 ± 15	37.96 dB
20 MHz	8.47	54.8 dB	52.8 dB	46.33 dB	44.33 dB	41.73 dB	38.73 dB	25 dB	100 ± 15	36.99 dB
25 MHz	9.51	53.35 dB	51.35 dB	43.84 dB	41.84 dB	39.79 dB	36.79 dB	24.32 dB	100 ± 15	36.02 dB
31.25 MHz	10.67	51.89 dB	49.89 dB	41.22 dB	39.22 dB	37.86 dB	34.86 dB	23.64 dB	100 ± 15	35.05 dB
62.5 MHz	15.38	47.38 dB	45.38 dB	31.99 dB	29.99 dB	31.83 dB	28.83 dB	21.54 dB	100 ± 15	32.04 dB
100 MHz	19.8	44.31 dB	42.31 dB	24.51 dB	22.51 dB	27.75 dB	24.75 dB	20.11 dB	100 ± 15	30 dB
155 MHz	25.16	41.46 dB	39.46 dB	16.3 dB	14.3 dB	23.95 dB	20.95 dB	18.77 dB	100 ± 15	28.1 dB
200 MHz	28.98	39.8 dB	37.8 dB	10.82 dB	8.82 dB	21.73 dB	18.73 dB	18 dB	100 ± 15	26.99 dB
250 MHz	32.85	38.35 dB	36.35 dB	5.5 dB	3.5 dB	19.79 dB	16.79 dB	17.32 dB	100 ± 15	26.02 dB

Voltage

UL Voltage Rating
300 V (CMR)

Mechanical Characteristics

Temperature

UL Rating.	Operating	Installation	Storage
75°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Installation Min.
5.3 in

Max. Pull Tension:	200 lbs
Bulk Cable Weight:	160 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Flammability / Fire Resistance:	UL 1666 Riser, FT4, FT4, IEC 60332-1-2
NEC / UL Compliance:	800, CMR
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-116-732-2013
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
NEMA Compliance:	ANSI/NEMA WC-66
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 400 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.

History

Update and Revision:	Revision Number: 0.17 Revision Date: 11-06-2020