

Features and Benefits

The PowerCat 6A Shielded Cable is a key component of the PowerCat 6A end-to-end solution.

Molex PowerCat 6A F/UTP Cable is specifically designed to support high speed data network applications such as 10-Gigabit Ethernet (10GBASE-T). The cable is constructed of four insulated copper twisted pairs that are wrapped around aluminum foil and polyester jacket. This cable minimizes alien crosstalk, provides excellent signal isolation and provides superior electromagnetic interference (EMI) protection.

Molex recommends that the full range of PowerCat 6A Shielded products be used in a system to maximize cabling performance.

This system is fully compliant with channel requirements specified by the TIA/EIA 568-C.2, Cat 6A and ISO/IEC 11801 2nd Ed. Am. 1, Class EA for 10GBASE-T applications

- Outstanding signal isolation
- ETL verified to TIA/EIA-568-C.2 Cat 6A
- 1000 foot to 0 foot markers
- Resistant to alien crosstalk

Commercial Standards

North American: TIA/EIA-568-C.2 Cat 6A and UL444 & C22.2 No.214-02
 International: EU Directive 2002/95/EC (RoHS), IEC 61156-5 ED2.0_46C844CDV

Fire Propagation Tests

Plenum:-NFPA 262
 Non-Plenum: UL1666
 ETL Listed

Reference Information

Applications
 Category 6A F/UTP Cable is intended for high speed data applications up to 500MHz including:
 IEEE 802.3an 10GBASE-T 10Gb/s
 IEEE 802.3 1000GBASE-T 1Gb/s
 ATM 155Mb/s 155Mb/s
 IEEE 802.3 100BASE-TX 100Mb/s
 CDDI 100Mb/s

Technical Information

Mechanical Characteristics

Materials:
 0.57 mm (23 AWG), bare copper wire insulated with FEP (Plenum) or PE (polyethylene). Two insulated conductors twisted together with varying lays to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall polyester/aluminum foil with stranded tinned copper drain wire and jacketed in flame-retardant PVC

Temperature Rating

Installation: 0°C to +50°C
 Operation: -20°C to +60°C

Color Code

Pair 1: White/Blue Blue
 Pair 2: White/Orange Orange
 Pair 3: White/Green Green
 Pair 4: White/Brown Brown

Conductor diameter - in. (mm): 0.023 (0.58)

Insulated Conductor diameter - in. (mm): 0.046 (1.04)

Cable diameter - in. (mm): 0.280 (7.11)

Nominal cable weight - lb./kft. (kg/km): 40 (18.14)

Max installation tension - lb. (N): 25 (110)

Min. bend radius - in. (mm): 1.12 (28.45)

Pulling tension: 110 N (25 lbf)

Electrical/Optical Characteristics

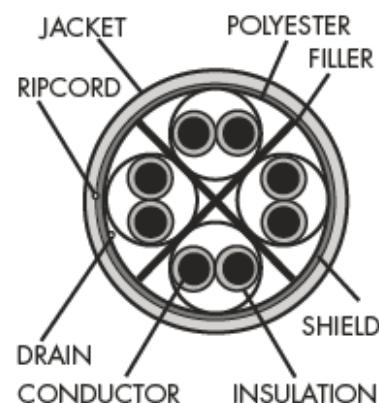
Mutual Capacitance: 5.6 nF/100 m max
 DC resistance maximum: 9.38 Ohms/100m maximum

Skew: 45 ns/100m maximum

Pair to ground Unbalance: 330 pF/100m max

Nominal Velocity of Propagation (NVP):
 See cable jacket for NVP setting

Coupling Attenuation: 75dB @ 30 MHz



MOLEX PREMISE NETWORKS

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Technical Information

Electrical/Optical Characteristics

HORIZONTAL													
FREQ	SRL (dB)	RL (dB)	IL (dB)	PS-NEXT (dB)	NEXT (dB)	ACR (dB)	PS-ACR (dB)	ACRF (dB)	PS-ACRF (dB)	PS-ANEXT (dB)	PS-AACRF (dB)	LCL/TCL (dB)	EL/TCL (dB)
MHz	min.	min.	max.	min.	min.	min.	min.	min.	min.	min.	min.	min.	min.
1	N/A	20.0	2.1	72.3	74.3	72.2	70.2	67.8	64.8	67	67	50.0	35.0
4	N/A	23.0	3.8	63.3	65.3	61.5	59.5	55.7	52.7	67	66.2	44.0	23.0
10	25.0	24.5	5.9	57.3	59.3	53.4	51.4	47.8	44.8	67	58.2	40.0	15.0
16	25.0	25.0	7.5	54.3	56.3	48.8	46.8	43.7	40.7	67	54.1	38.0	10.9
20	25.0	25.0	8.4	52.8	54.8	0	44.4	41.7	38.7	67	52.2	37.0	9.0
31.25	23.6	23.6	10.5	49.9	51.9	41.4	39.4	37.9	34.9	67	48.3	35.1	5.5
62.5	21.5	21.5	15.0	45.4	47.4	32.4	30.4	31.8	28.8	67	42.3	32.0	—
100	20.1	20.1	19.1	42.3	44.3	25.2	23.2	27.8	24.8	65.6	38.2	30.0	—
250	17.3	17.3	31.1	36.3	38.3	7.2	5.3	19.8	16.8	56.5	30.2	26.0	—
350	16.3	16.3	37.2	34.2	36.2	—	—	16.9	13.9	54.3	27.3	24.6	—
500	15.2	15.2	45.3	31.8	33.8	—	—	13.8	10.8	52	24.2	23.0	—
600	14.7	14.7	50.1	30.6	32.6	—	—	12.2	9.2	50.8	22.6	22.2	—
750	14.0	14.0	56.7	29.2	31.2	—	—	10.3	7.3	20.7	21.2	21.2	—

IMPORTANT: Molex performance guarantees are based on swept-frequency testing and apply to all frequencies for the entire specified frequency range and are not limited to the tables of data shown which are presented to demonstrate our guarantees at “representative” frequencies. Electrical characteristics above 500MHz are for engineering information.

ORDERING INFORMATION

Order No.	SAP No.	Description
CAA-0320P-02	0183020005	PowerCat 6A F/UTP Cable, Plenum - White
CAA-0320P-08	0183020003	PowerCat 6A F/UTP Cable, Plenum - Gray
CAA-0320P-BL	0183020004	PowerCat 6A F/UTP Cable, Plenum - Blue
CAA-0320R-02	183020008	PowerCat 6A F/UTP Cable, Non-Plenum - White
CAA-0320R-08	183020006	PowerCat 6A F/UTP Cable, Non-Plenum - Gray
CAA-0320R-BL	183020007	PowerCat 6A F/UTP Cable, Non-Plenum - Blue



Standard Lengths: 1,000 feet (305 meters). Specifications subject to change without notice. Part numbers listed are for reels.

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