

PowerCat 5e U/UTP Cable

Molex PowerCat 5e U/UTP Cable is ideal for supporting Gigabit Ethernet networks.

APPLICATIONS

PowerCat 5e U/UTP is intended for high speed data applications up to 100 MHz including:

IEEE 802.3 1000BASE-T, 100BASE-TX,
10BASE-T 155 Mb/s ATM
ANSI X3.263 100 Mb/s
4/16 Mb/s Token Ring

FEATURES AND ADVANTAGES

Specified and tested to 100 MHz

ETL verified to TIA-568-C.2 and ISO/IEC 11801

1000 foot to 0 foot markers

RoHS Compliant



SPECIFICATIONS

Commercial Standards

North American: TIA-568-C.2 Category 5e
International: ISO/IEC 11801 Category 5e
European: EN 50173

Flame Rating

Non-plenum: UL 1666, CMR, CMG,
IEC 332-1, C(UL)

Plenum: NFPA 262, CMP

Technical Information

Mechanical Characteristics

Materials:

0.52 mm (24 AWG), bare copper wire insulated with polyethylene (non-plenum) or FEP (plenum). Two insulated conductors twisted together to form a pair and four such

pairs laid up to form the basic unit jacketed with flame-retardant PVC.

Pulling Tension: 110N (25 lbf)

PoE

Our PowerCat 5e system is suitable for PoE applications as defined below:

IEEE 802.3bt from Type 1 to Type 4, and CISCO UPoE+

Notes:

For new installations of PoE Type 3 / Class 5 and above that wish to be eligible for the Molex 25 year Application Assurance Warranty, we require Category 6A cable to be used throughout.

To confirm your PoE / RP3 cabling design is eligible for the Molex 25 year Application Assurance Warranty, your design must be verified and validated with the Molex PoE Calculator. Read more

<https://www.molexces.com/poe-calculator>

Molex recommends that the PoE feature on an individual switch port are power disabled prior to unplugging the associated powered Device. Molex recommends that the full range of PowerCat 5e products be used in a system to maximize cabling and PoE performance. Details on Molex requirements for Warranty can be found at

<https://www.molexces.com/about-us/our-warranty/>

www.molexces.com/products/copper/cat5e/

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SPECIFICATIONS - CONTINUED

Technical Data - Physical

	Non-Plenum	Plenum
Conductor diameter - in. (mm)	24AWG	24 AWG
Cable diameter - in. (mm)	.187 (4.8)	.165 (4.2)
Nominal cable weight - lb./kft. (kg/km)	20 (30)	20 (30)
Max installation tension - lb. (N)	25 (110)	25 (110)
Min. bend radius - in. (mm)	1.0 (25.4)	1.0 (25.4)

Parametric Measurements

	Horizontal
Mutual Capacitance	4.6nF/100 m nom.
DC resistance	9.38 Ohms/100 m max.
Skew	25 ns/100 m max.
Nominal Velocity of Propagation (NVP)	see cable jacket for NVP setting
Input Impedance (Ohms)	100Ω ± 15% 0.772-100 MHz

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

www.molex.com/products/copper/cat5e/

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SPECIFICATIONS - CONTINUED

FREQ MHz	SRL (dB)		RL (dB)		INSERTION LOSS (dB/100m)		PS-NEXT (dB)		NEXT (dB)	
	min.	typical	min.	typical	max.	typical	min.	typical	min.	typical
1	25.0	36.9	22.0	39.0	2.0	1.7	62.3	77.0	66.3	84.0
4	25.0	42.2	23.0	27.6	4.1	3.5	53.3	68.3	57.3	84.5
10	25.0	39.1	25.0	38.0	6.5	5.6	47.3	65.0	51.3	72.4
16	25.0	28.6	25.0	37.0	8.2	7.2	44.3	58.6	48.3	77.5
20	24.3	47.0	25.0	46.4	9.3	8.1	42.8	57.3	46.8	71.8
31.25	23.6	24.6	23.6	34.5	11.7	10.1	39.9	53.5	43.9	67.9
62.5	21.5	33.7	21.5	33.0	17.0	14.6	35.4	53.2	39.4	63.6
100	20.1	36.4	20.1	37.3	22.0	18.7	32.3	45.8	36.3	57.7
250	17.3	31.6	17.3	30.9	36.9	30.7	26.3	45.1	30.3	54.8
350	16.3	34.2	16.3	33.2	44.9	36.9	24.2	36.7	28.2	49.3

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.

FREQ MHz	ACR (dB@100m)		PS-ACR (dB@100m)		ELFEXT (dB)		PS-ELFEXT (dB)	
	min.	typical	min.	typical	max.	typical	min.	typical
1	64.3	77.5	60.3	75.1	63.8	88.8	60.8	79.4
4	53.2	66.6	49.2	64.4	51.7	78.9	48.7	68.7
10	44.8	60.9	40.8	58.7	43.8	68.0	40.8	60.0
16	40	52.8	36.0	50.6	39.7	60.5	36.7	50.9
20	37.5	49.6	33.5	48.3	37.7	58.2	24.7	54.6
31.25	32.2	44.4	28.2	42.3	33.9	53.9	30.9	47.1
62.5	22.4	38.9	18.4	37.0	27.8	47.7	24.8	42.4
100	14.3	27.6	10.3	25.1	23.8	43.3	20.8	38.1
250	-	12.5	-	11.2	15.8	33.6	12.8	24.8
350	-	-2.3	-	-4	12.9	28.0	9.9	19.5

www.molex.com/products/copper/cat5e/

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ORDERING INFORMATION

Order No.	SAP No.	Description
CAA-0184R-BL	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMR, PVC - Blue
CAA-0184R-02	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMR, PVC - White
CAA-0184R-08	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMR, PVC - Light Gray
CAA-0184P-BL	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMP, PVC Alloy - Blue
CAA-0184P-02	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMP, PVC Alloy - White
CAA-0184P-08	Consult Molex	PowerCat 5e U/UTP Cable, 4 Pair, CMP, PVC Alloy - Light Gray

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

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