

Features and Benefits

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

Molex PowerCat 6A U/FTP Cable is specifically designed to support high speed data network applications such as 10-Gigabit Ethernet (10GBASE-T). The cable is constructed of 4 screened pairs and a drain wire. This cable minimises 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 maximise cabling performance. This system is compliant with ISO/IEC 11801 amendment 1 and TIA/EIA 56B.2-10 for the support of 10GBASE-T.

- Outstanding signal isolation
- The cable is compliant with ISO/IEC 11801 amendment 2 and TIA/EIA 568-C.2
- Enhanced performance 4 pair U/FTP LSOH cable
- Resistant to alien crosstalk
- Colour coded for ease of termination

Commerical Standards

ISO/IEC 11801 amendment 2:2010
TIA/EIA-568-C.2 Category 6A
IEC 61156-5
ETL independant testing

Fire Propagation Tests

IEC 60332-3-24
IEC 60754 and 61034

Applications

Category 6A U/FTP Cable is intended for high speed data applications up to 500MHz including:
IEEE 802.3 10GBASE-T 10Gb/s
IEEE 802.3 1000BASE-T 1Gb/s
TIA/EIA-854 1000BASE-TX 1Gb/s
ATM 155Mb/s 155Mb/s

Technical Information

Mechanical Characteristics

Conductor Size: 23AWG
Primary Insulation: Polyolefin
Screen material: Laminated Aluminium
Sheath Type: LSOH
Nominal OD: 7.2mm nom.
NVP: 75-77%
Screen: Each pair enclosed in laminated aluminium foil
Drain Wire: tin-coated copper
Pulling Force: 100N maximum
Short term bend radius: 8 x OD mm
Long Term bend radius: 4 x OD mm
Operating Temperature
Storage: -20°C to +60°C
Operation: -20°C to +60°C

Electrical/Optical Characteristics

Capacitance: 40 pF/m nom. @1 KHz.
DC Resistance: 80 Ω/Km max.
Propagation Delay: 514 + 36f^{1/2} nS/100m max @1-500 MHz
Propagation Delay Skew: 45 nS/100 max @ 1-500 MHz
Mean Impedance: 100Ω ± 6 @ 1-500 MHz
Voltage Rating: 72V dc maximum
Resistance Unbalance: 2% max.
Coupling Attenuation: 55dB min @30-100 MHz
55-20 Log (f/100) @ 100-500 MHz

Weight per 500m reel: 48kg/Km nom.

Transmission Properties and Electrical Specifications



FREQ MHz	Insertion Loss dB/100m Max.	NEXT dB Min.	PS NEXT dB Min.	EL FEXT dB/100m Min.	PS ELFEXT dB/100m Min.	RL dB Min.	DELAY nS/100m Max.	TCL dB Min.	EL-TCL dB Min.	PS ANEXT dB Min.	PS AACRF dB Min.
1	2.0	74.3	72.3	67.8	64.8	20.0	570	40.0	35.0	67.0	67.0
10	5.9	59.3	57.3	47.8	44.8	25.0	545	40.0	15.0	67.0	58.2
20	8.3	54.8	52.8	41.8	38.8	25.0	542	37.0	9.0	67.0	52.2
25	9.3	53.3	51.3	39.8	36.8	24.3	541	36.0	7.0	67.0	48.7
30	10.2	52.1	50.1	38.3	35.3	23.8	541	35.2	5.5	67.0	48.7
62.5	14.9	47.4	45.4	31.9	28.9	21.5	539	32.0	NS	65.6	42.3
100	19.0	44.3	42.3	27.8	24.8	20.1	538	30.0	NS	62.5	38.2
200	27.5	39.8	37.8	21.8	18.8	18.0	537	27.0	NS	58.0	32.2
250	31.0	38.3	36.3	19.8	16.8	17.3	536	26.0	NS	56.5	30.2
300	34.2	37.1	35.1	18.3	15.3	16.8	536	25.2	NS	55.3	28.7
400	40.0	35.3	33.3	15.8	12.8	15.9	536	24.0	NS	53.5	26.2
500	45.3	33.8	31.8	13.8	10.8	15.2	536	23.0	NS	52.0	24.2

ORDERING INFORMATION

Order No.	SAP No.	Description
CAA-0334-VL	Consult Molex	PowerCat 6A U/FTP LSOH Cable 500m Violet IEC 60332-3



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