

PowerCat 6A U/FTP Cable >

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 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 compliant with ISO/IEC 11801 amendment 1 and TIA/EIA 56B.2-10 for the support of 10GBASE-T.



PowerCat 6A U/FTP Cable

FEATURES AND ADVANTAGES

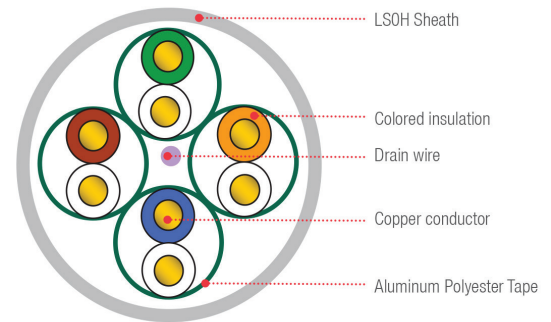
Outstanding signal isolation

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

Color coded for ease of termination



SPECIFICATIONS

Commercial Standards

ISO/IEC 11801 amendment 2:2010
TIA/EIA-568-C.2 Category 6A
IEC 61156-5
ANSI/TIA-568-C.2 & ISO/IEC 11801
2 Connector Permanent Link

Fire Propagation Tests

Complies to IEC 60332-1-1;
Compliant to CPR Fire Class
IEC 60754-2,
Smoke density IEC 61034-2

Mechanical

Conductor Size: 23AWG
Primary Insulation: Foamed Polyethylene
Screen material: Laminated Aluminium
Sheath Type: LSOH
Nominal OD: 7.4 +/- 0.3mm
NVP: 75-77%
Screen: Each pair enclosed in laminated aluminium foil

Drain Wire: Tin-coated copper
Pulling Force:
Short Term: 400N
Long Term: 100N
Short term bend radius: 8 x OD mm
Long Term bend radius: 4 x OD mm

Operating Temperature

Installation: 0°C to +50°C
Operation: -20°C to +70°C

Electrical

Capacitance: < 5.6nF/100m
DC Resistance: ≤ 9.38Ω/100m
Propagation Delay: 514 + 36f/2 nS/100m max @1-500 MHz
Propagation Delay Skew: 45 nS/100 max @ 1-500 MHz
Mean Impedance: 100 ± 15Ω
Voltage Rating: 72V dc maximum
Resistance Unbalance: 5% max.

Coupling Attenuation: 45dB min
@30-100 MHz
40-20 Log (f/100)
@ 100-500 MHz

PoE

Our PowerCat 6A system is suitable for the most demanding PoE applications:

- IEEE 802.3bt from Type 1 to Type 4, and CISCO UPoE+
- IEEE 802.3bt Type 1 up to 15.4W (350mA per pair / 2 pairs energized)
- IEEE 802.3bt Type 2 up to 30W (600mA per pair / 2 pairs energized)
- IEEE 802.3bt Type 3 up to 60W and CISCO UPoE (600mA per pair / 4 pairs energized)
- HD Base-T PoH up to 100W (1000mA per pair / 4 pairs energized)
- RP3 compliant as defined by EN 50174-2:2018, ISO/IEC 14763-2:2019 and AS/NZS 14763.2:2020

www.molex.com/products/copper/cat6a/

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SPECIFICATIONS (CONT)

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.molex.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 6A products be used in a system to maximize cabling and PoE performance
Details on Molex requirements for Warranty can be found at <https://www.molex.com/about-us/our-warranty/>

TRANSMISSION PROPERTIES AND ELECTRICAL SPECIFICATIONS

Frequency MHz	Max Attenuation dB/100m	RL dB	NEXT dB	PSNEXT dB	ELFEXT dB	PSELFEXT dB
1	2.1	20.0	74.3	72.3	67.8	64.8
4	3.8	23.0	65.3	63.3	55.8	52.8
10	5.9	25.0	59.3	57.3	47.8	44.8
16	7.5	25.0	56.2	54.2	43.7	40.7
20	8.4	25.0	54.8	52.8	41.8	38.8
31.25	10.5	23.6	51.2	49.9	37.9	34.9
62.5	15.0	21.5	47.4	45.4	31.9	28.9
100	19.1	20.1	44.3	42.3	27.8	24.8
200	27.6	18.0	39.8	37.8	21.8	18.8
250	31.1	17.3	38.3	36.3	19.8	16.8
300	34.3	16.8	38.1	35.1	18.3	15.3
500	40.3	15.2	34.8	31.8	13.8	10.8

ORDERING INFORMATION

Order No.	SAP No.	Description
CAA-0322L-VL-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 500m Violet
CAA-0322L-0K-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 500m Yellow
CAA-0322L-GR-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 500m Green
CAA-0322L-BL-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 500m Blue
CAA-0322L-08-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 500m Gray
CAA-0322L-VL-305-I	Consult Molex	PowerCat 6A U/FTP LS0H Cable 305m Violet

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