

# PowerCat 6A U/FTP LSOH Cable Dca-s1,d2,a1 >

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

Molex PowerCat 6A U/FTP LSOH Cable is specifically designed to support high speed data network applications such as 10-Gigabit Ethernet (10GBASE-T). The cable is constructed of four screened pairs, with a drain wire and enclosed in a Dca-s1,d2,a1 reaction to fire sheath, compliant with the EU and GB Construction Product Regulation.

The 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. The system is compliant with ISO/IEC 11801:2017 and ANSI/TIA-568.2-D for the support of 10GBASE-T.



## FEATURES AND ADVANTAGES

Outstanding signal isolation

Color coded for ease of termination

Enhanced performance 4 pair U/FTP LSOH cable

Reaction to Fire Euroclass: Dca-s1,d2,a1

Resistant to alien crosstalk

## SPECIFICATIONS

### Commercial Standards:

ISO/IEC 11801:2017 Class EA  
ANSI/TIA-568.2-D Category 6A

TIA/EIA-854 1000BASE-TX 1Gb/s  
ATM 155Mb/s 155Mb/s  
PoE IEEE 802.3

**Operation:** -20°C to +75°C

**Sheath Color:** Violet RAL 4005

### Reaction to Fire:

EU Regulation 305/2011 (CPR)  
EN 50575:2014+A:2016  
EN 60332-1-2  
EN 50399  
EN 60754-2  
EN 13501-6  
Reaction to Fire classification: Dca-s1,d2,a1

### Mechanical:

**Conductor Size:** 23AWG  
**Primary Insulation:** Polyolefin  
**Screen material:** Laminated Al-Mylar  
**Sheath Type:** LSOH  
**Nominal OD:** 6.9 +/- 0.5mm nom.  
**NVP:** 78%  
**Screen:** Each pair enclosed in laminated aluminum foil  
**Drain Wire:** Tin-coated copper  
**Tensile Strength after aging (Mpa) >** 0.8  
**Bend radius:** 4 x OD min

### Electrical Characteristics @ 20°C

**Capacitance unbalanced-to ground (pf/km) max** 1600  
**DC Resistance:** 93.8 Ω/Km max.  
**Propagation Delay Skew:**  
<45 nS/100m  
**Impedance: Ω @ 1-250 0MHz:**  
100 +/- 15  
**Impedance: Ω @ 250-500 0MHz:**  
100 +/- 22  
**Voltage Rating:** 72V dc maximum  
**Resistance Unbalance:** 2% max.

### 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

**Operating Temperature:**

**Storage:** -10°C to +50°C

**Weight per 500m reel:** 26.45kg nom

**RoHS compliant**

[www.molex.com/products/copper/cat6a/](http://www.molex.com/products/copper/cat6a/)

# PowerCat 6A U/FTP LS0H Cable Dca-s1,d2,a1

## SPECIFICATIONS (CONTINUED)

### 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+

HD Base-T PoH up to 100W

RP3 compliant as defined by EN 50174-2:2018, ISO/IEC 14763-2:2019 and AS/NZS 14763.2:2020

### 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	RL ≥dB	ATT ≥dB	NEXT ≥dB	DELAY ≤ns	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.00	-	74.30	570.00	72.3	67.8	64.8
4	23.00	3.80	65.30	552.00	63.3	55.8	52.8
8	24.50	5.30	60.80	546.70	58.8	49.7	46.7
10	25.00	5.90	59.30	545.40	57.3	47.8	44.8
16	25.00	7.50	56.20	543.00	54.2	43.7	40.7
20	25.00	8.40	54.80	542.10	52.8	41.8	38.8
25	24.30	9.40	53.30	541.20	51.3	39.8	36.8
31.25	23.60	10.50	51.90	540.40	49.9	37.9	34.9
62.5	21.50	15.00	47.40	538.60	45.4	31.9	28.9
100	20.10	19.10	44.30	537.60	42.3	27.8	24.8
200	18.00	27.60	39.80	536.50	37.8	21.8	18.8
250	17.30	31.10	38.30	536.30	36.3	19.8	16.8
300	16.80	34.30	37.10	536.10	35.1	18.3	15.3
500	15.2	45.3	33.8	536	31.8	13.8	10.8

## ORDERING INFORMATION

Order No.	SAP No.	Description
CAA-0322L-VI	183020033	PowerCat 6A U/FTP LS0H Cable Dca-s1,d2,a1 Violet 500m reel

[www.molex.com/products/copper/cat6a/](https://www.molex.com/products/copper/cat6a/)