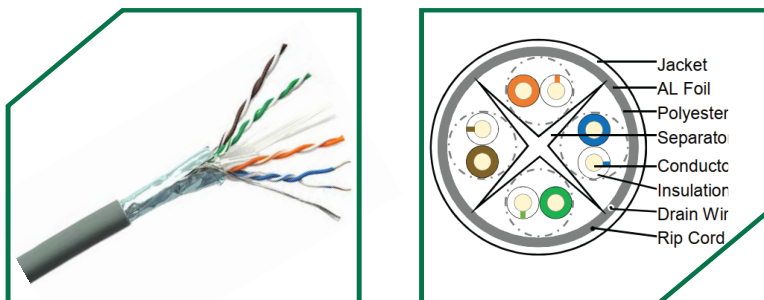


Part Number:

LSZH : PL-CA6AFTL

PVC : PL-CA6AFTP



1. General Description

High-performance Category 6A F/UTP solid bare copper cable, designed for 10GBase-T up to 100m. The cable features an overall aluminium foil shield (F/UTP) with optional drain wire for improved EMI protection. Designed for structured cabling systems, data centres, enterprise networks, and PoE++ (IEEE 802.3bt) applications. Fully compliant with ISO/IEC 11801 Class EA and ANSI/TIA-568.2-D.

2. Construction

Parameter	Specification
Conductor Material	100% Bare Copper (CU)
Conductor Size	23 AWG (0.565–0.57 mm nominal)
Number of Conductors	8 (4 Twisted Pairs)
Insulation Material	High-Density Polyethylene (HDPE)
Pair Separator	Optional: Central cross separator
Shielding	F/UTP (Overall Aluminium Foil + Optional Drain Wire)
Drain Wire	Tinned Copper Cladded Aluminum (Optional / Recommended)
Outer Jacket	PVC / LSZH (Optional)
Jacket Type	Virgin Material (Non-Recycled)
Cable Diameter	6.5 – 7.5 mm (Typical for F/UTP)
Jacket Colour	Grey (Standard) / Red / Black (Optional)

Part Number: LSZH : PL-CA6AFTL PVC : PL-CA6AFTP

3. Electrical Characteristics

Parameter	Specification
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 8.5 Ω/100m
Loop Resistance	≤ 17.0 Ω/100m
Resistance Unbalance	≤ 5%
Capacitance	≤ 5.0 nF/100m
Frequency Range	Up to 500 MHz
Operating Voltage	IEEE 802.3 PoE standard (up to 57V DC)

4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	8 × OD during pulling, 4 × OD after installation
Pulling Force	≤ 110 N
Operating Temperature	-20°C to +60°C
Installation Temperature	0°C to +50°C
Flame Rating	Optional (IEC 60332-1 compliant upon request)

5. Applications

- Structured Cabling Systems
- 10 Gigabit Ethernet (10GBase-T)
- Gigabit Ethernet (1000BASE-T)
- Fast Ethernet (100BASE-TX)
- 10BASE-T Ethernet
- Data Centres & Enterprise Networks
- IP CCTV Systems (High Bandwidth)
- VoIP, PoE, PoE+ & PoE++ Systems
- Smart Buildings & Commercial Infrastructure
- Light Industrial Environments with EMI Exposure

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6. Technical Performance

The following table represents baseline Cat6A F/UTP electrical performance at 100-meter channel up to 500 MHz the overall foil shielding provides effective protection against external EMI while maintaining cost-efficient structured cabling performance suitable for enterprise environments.

MHz	RL ≥dB	ATT ≤dB	NEXT≥dB	ACRF ≥dB	PS NEXTdB	PS ACRF dB
1	20.0	2.9	74.0	72.0	71.0	69.0
4	23.0	3.4	73.0	60.0	70.0	57.0
8	24.5	4.8	68.0	54.0	65.0	51.0
10	25.0	5.3	67.0	52.0	64.0	49.0
16	24.0	6.8	64.0	48.0	61.0	45.0
20	23.5	7.6	62.5	46.0	59.5	43.0
25	23.0	8.6	61.0	44.0	58.0	41.0
31.25	22.5	9.6	59.5	42.0	56.5	39.0
62.5	20.5	13.5	54.5	36.0	51.5	33.0
100	19.0	17.5	51.0	32.0	48.0	29.0
200	17.0	25.5	46.0	26.0	43.0	23.0
250	16.5	28.5	44.5	24.0	41.5	21.0
300	15.0	34.0	41.0	21.0	38.0	18.0
400	14.0	39.5	38.0	18.0	35.0	15.0
500	13.5	42.0	36.5	16.0	33.5	13.0

Typical values measured on 100m channel at 20°C. Actual performance may vary slightly.

7. Transmission Performance

- Supports 10/100/1000 Mbps & 10 Gigabit Ethernet (10GBase-T)
- Bandwidth up to 500 MHz
- Designed for PoE / PoE+ / PoE++ high-power applications
- Good protection against EMI / RFI interference
- Stable NEXT, FEXT, and Return Loss performance

Part Number: LSZH : PL-CA6AFTL PVC : PL-CA6AFTP

8. Key Features

- Overall foil shielding (F/UTP) for EMI protection
- Cost-effective alternative to S/FTP for enterprise networks
- 23AWG solid bare copper conductors for high conductivity
- Reliable 10G performance up to 100 meters
- Reduced signal attenuation and improved stability
- Durable outer jacket (100% virgin material)
- Verified performance through Fluke testing
- Fully compatible with Cisco, Aruba, Juniper, and other major brands
- Suitable for indoor and conduit installations (LSZH or PVC options)

9. Standards Compliance

- ISO/IEC 11801 Class EA
- ANSI/TIA-568.2-D
- EN 50173-1
- IEC 61156-5
- RoHS Compliant
- CE Compliant
- CPR (EN 50575) – upon request
- UL / ETL Verified – upon request

10. Quality Assurance

Manufactured under strict quality control to ensure:

- Consistent electrical performance
- Reliable 10G transmission
- Long-term operational stability
- Full compliance with international standards

Testing:

- 100% Fluke Tested (Channel & Permanent Link)

11. Key Advantages

- More cost-effective than S/FTP cabling
- Easier termination and installation
- Good EMI protection for most commercial environments
- Stable 10 Gigabit performance over 100 meters
- Reduced signal loss and improved network reliability

12. Warranty

25-Year System Warranty

(Subject to proper installation and compliance with standards)