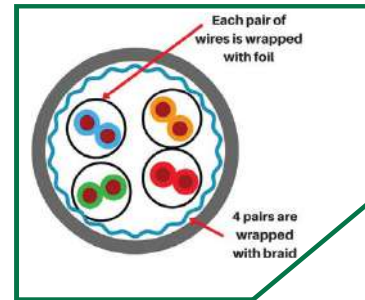
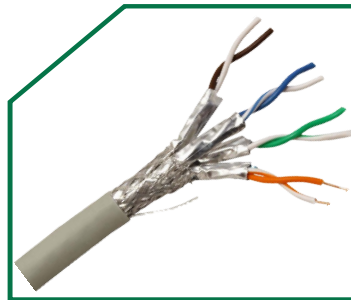


Part Number:

LSZH : PL-CA6STL

PVC : PL-CA6STP



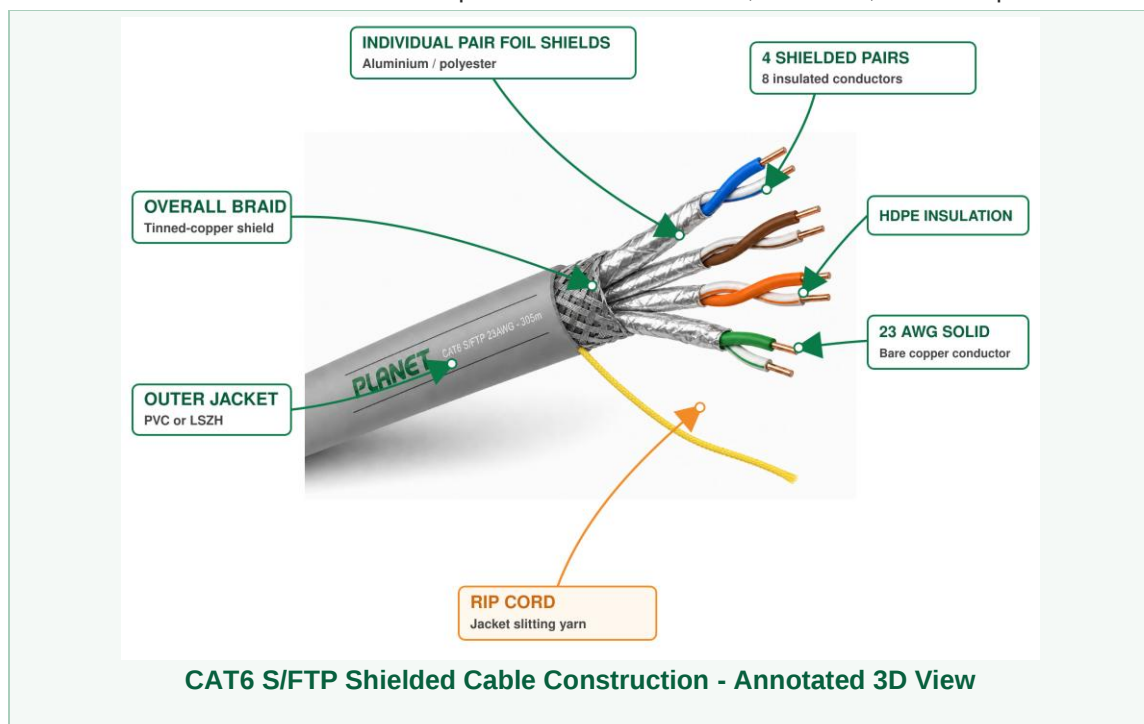
High-performance Category 6 S/FTP cable engineered for advanced structured cabling systems and designed to meet the baseline standards stated in this datasheet. Its individually foil-screened pairs and overall braid provide stable high-speed transmission and enhanced EMI/RFI protection in commercial, industrial, and enterprise environments.

100% CU Bare Copper	23 AWG Solid Conductor	250 MHz Category 6	S/FTP Foil + Overall Braid
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"Engineered for Performance. Built for Reliability."

1. General Description

High-performance Category 6 S/FTP cable engineered for advanced structured cabling systems and designed to meet the baseline standards stated in this datasheet. Its individually foil-screened pairs and overall braid provide stable high-speed transmission and enhanced EMI/RFI protection in commercial, industrial, and enterprise environments.



Part Number: **LSZH** : PL-CA6STL **PVC** : PL-CA6STP

2. Construction

Parameter	Specification
Conductor Material	100% Bare Copper (Cu)
Conductor Size	23 AWG solid bare copper (0.570 ± 0.005 mm)
Number of Conductors	8 (4 individually foil-screened twisted pairs with standard pair identification)
Insulation Material	High-Density Polyethylene (HDPE)
Individual Pair Shield	Aluminum/polyester foil (Al/PET)
Overall Shielding	Standard: aluminum-magnesium braid; Optional premium: tinned-copper braid
Shielding Type	S/FTP - overall braid with individually foil-screened twisted pairs
Cable Diameter	7.60 ± 0.40 mm
Drain Wire	Optional tinned-copper drain wire
Outer Jacket	Standard PVC model: PL-CA6STP; Optional LSZH model: PL-CA6STL
Jacket Type	Virgin Material (Non-Recycled)

TECHNICAL SPECIFICATIONS

CAT6 S/FTP | PVC / LSZH

3. Electrical Characteristics

Parameter	Specification
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 9.38 Ω/100 m at 20°C
DC Loop Resistance	≤ 18.8 Ω/100 m at 20°C
Resistance Unbalance	≤ 5% within a pair (cable value; installed PoE channel verification recommended)
Mutual Capacitance	≤ 5.6 nF/100 m
Frequency Range	Up to 250 MHz
Remote Powering Support	IEEE 802.3af / 802.3at / 802.3bt PoE applications (up to 57 V DC), subject to installed-channel and thermal limits

4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	4 × cable diameter after installation
Pulling Force	≤ 110 N
Operating Temperature	-20°C to +60°C
Installation Temperature	0°C to +50°C
Flame Rating	No base flame-rating claim; IEC 60332-1 is optional upon verification

Part Number: LSZH : PL-CA6STL PVC : PL-CA6STP

5. Technical Performance

Category 6 Permanent Link reference limits up to 250 MHz (maximum 90 m). These are installed-link limits, not individual bulk-cable component values; the complete channel may be up to 100 m.

Frequency (MHz)	RL (≥ dB)	ATT (≤ dB)	NEXT (≥ dB)	ACRF (≥ dB)	PS NEXT (≥ dB)	PS ACRF (≥ dB)
1	19.1	3.0	65.0	64.2	62.0	61.2
4	21.0	3.5	64.1	52.1	61.8	49.1
8	21.0	5.0	59.4	46.1	57.0	43.1
10	21.0	5.5	57.8	44.2	55.5	41.2
16	20.0	7.0	54.6	40.1	52.2	37.1
20	19.5	7.9	53.1	38.2	50.7	35.2
25	19.0	8.9	51.5	36.2	49.1	33.2
31.25	18.5	10.0	50.0	34.3	47.5	31.3
62.5	16.0	14.4	45.1	28.3	42.7	25.3
100	14.0	18.6	41.8	24.2	39.3	21.2
200	11.0	27.4	36.9	18.2	34.3	15.2
250	10.0	31.1	35.3	16.2	32.7	13.2

APPLICATIONS, FEATURES & COMPLIANCE

CAT6 S/FTP | PVC / LSZH

6. Applications

- Structured Cabling Systems
- Gigabit Ethernet Networks (1000Base-T)
- Office Buildings & Enterprise Network Environments
- Industrial & High EMI Environments
- IP CCTV Systems
- Data Centres
- PoE / PoE+ / 4PPoE systems and HD video transmission, subject to IEEE 802.3af/at/bt installation limits
- Smart Home & Industrial Networks

7. Transmission Performance

- Supports 10/100/1000 Mbps (Gigabit Ethernet)
- Bandwidth up to 250 MHz
- Designed for IEEE 802.3af / 802.3at / 802.3bt PoE applications, subject to installation and thermal limits
- Excellent NEXT, ACRF, and Return Loss performance
- Superior EMI/RFI shielding protection
- Shielded construction helps reduce external interference; no Category 6A alien-crosstalk compliance claim

8. Key Features

- 23 AWG Solid Bare Copper Conductors for optimal conductivity
- Individual foil shielding on each pair for enhanced signal isolation
- Overall braid for EMI/RFI protection; use shielded connecting hardware with continuous bonding/grounding per applicable codes
- Low attenuation for long-distance stable transmission
- Precision twisted pairs for reduced crosstalk
- Designed for IEEE 802.3af / 802.3at / 802.3bt Types 1-4, subject to installation and thermal limits
- Durable outer jacket (100% virgin material) for long service life
- Design validated using representative Fluke 90 m Permanent Link and 100 m Channel tests; report available upon request

Part Number: LSZH : PL-CA6STL PVC : PL-CA6STP

9. Standards Compliance

Standard / Certification	Status
ISO/IEC 11801-1 (Class E cabling support)	Baseline design support
ANSI/TIA-568.2-E	Baseline compliance
EN 50173-1 (Class E cabling support)	Baseline design support
RoHS	Compliant
CE Marking	Subject to applicable EU conformity documentation
CPR (EN 50575)	Upon request
UL / ETL Verification	Optional; valid listing/file required

QUALITY, OPTIONS & WARRANTY

CAT6 S/FTP | 305 m OPTION

10. Quality Assurance

Manufactured under strict quality control to ensure:

- Consistent electrical performance
- Reliable long-term operation
- Enhanced shielding efficiency
- Compliance with the stated baseline standards, subject to supporting documentation

Validation: Representative 90 m Permanent Link and 100 m Channel configurations tested using a Fluke Networks cable analyzer; test report available upon request.

11. Key Advantages

- Superior shielding against EMI/RFI interference
- Enhanced signal stability in noisy environments
- High copper purity for maximum signal transmission efficiency
- Ideal for industrial and enterprise installations

12. Warranty

25-Year System Warranty

Subject to proper installation and certified components usage.