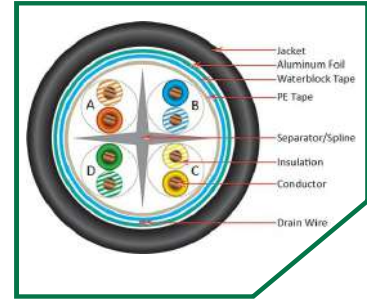
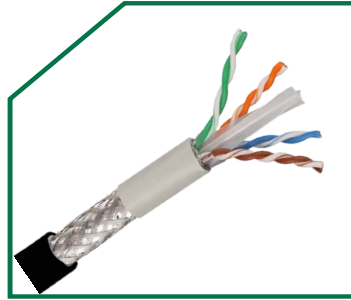


Part Number:

PE+PVC : PL-CA6STO



1. General Description

High-performance Category 6 S/FTP Outdoor Double Jacket cable engineered for advanced structured cabling systems, fully compliant with international standards. Designed for superior mechanical protection, enhanced shielding performance, and stable high-speed data transmission in harsh outdoor and direct burial environments. The dual jacket construction provides maximum resistance against UV exposure, moisture, soil pressure, and mechanical stress, making it ideal for industrial and infrastructure applications.

"Engineered for Performance. Built for Reliability."

2. Construction

Parameter	Specification
Conductor Material	100% Bare Copper (Cu)
Conductor Size	23 AWG (0.565 – 0.57 mm)
Number of Conductors	8 (4 Shielded Twisted Pairs)
Insulation Material	High-Density Polyethylene (HDPE)
Individual Pair Shield	Aluminium Foil (Al/Mylar)
Overall Shielding	Aluminum-magnesium wire braiding (Optional Tinned Copper Braiding)
Shielding Type	S/FTP (Screened Foiled Twisted Pair)
Cable Diameter	8.8± 0.5 mm
Inner Jacket	Protective PE Layer
Outer Jacket	Double jacket HDPE / black + PVC Inner Jacket
Water Blocking	Optional (upon Request)
Drain Wire	Optional (Tinned Copper)
Jacket Type	Double Layer Virgin Material (Non-Recycled)
Installation Type	Outdoor / Direct Burial / Industrial
Rip Cord	Nylon Rip Cord
Jacket Color	Black + Gray

Part Number: PE+PVC : PL-CA6STO

3. Electrical Characteristics

Parameter	Specification
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 9.38 Ω/100m
Loop Resistance	≤ 18.76 Ω/100m
Resistance Unbalance	≤ 5%
Capacitance	≤ 5.6 nF/100m
Frequency Range	Up to 250 MHz
Operating Voltage	IEEE 802.3 PoE standard (up to 57V DC)

4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	6 × Cable Diameter
Pulling Force	≤ 150 N
Operating Temperature	-40°C to +75°C
Installation Temperature	-20°C to +50°C
UV Resistance	High UV Stability (Outdoor Grade)
Water Resistance	Waterproof / Moisture Resistant
Mechanical Protection	High Impact & Compression Resistant
Flame Rating	Optional (IEC 60332-1 compliant upon request)

5. Applications

- Outdoor Structured Cabling Systems
- Direct Burial Installations
- Industrial & Harsh Environment Networks
- Gigabit Ethernet Networks (1000Base-T)
- Outdoor IP CCTV Systems
- Smart City & Infrastructure Networks
- Building-to-Building Backbone Links
- PoE / PoE+ / PoE++ Systems
- Data Centers External Connectivity
- Underground Conduit Installations

Part Number: PE+PVC : PL-CA6STO

6. Technical Performance

The following table represents Cat6 S/FTP baseline performance at 100-meter channel. Double jacket outdoor construction ensures enhanced mechanical durability and UV protection, while maintaining standard Cat6 S/FTP electrical performance.

Frequency (MHz)	RL (≥ dB)	ATT (≤ dB)	NEXT (≥ dB)	ACRF (≥ dB)	PS NEXT (≥ dB)	PS ACRF (≥ dB)
1	19	3	65	64	62	61
4	21	3.8	64	52	61	49
8	21	5.3	59	46	57	43
10	21	6	57	44	55	41
16	20	7.6	54	40	52	37
20	19	8.5	53	38	50	35
25	19	9.5	51	36	49	33
31.25	18	10.7	50	34	47	31
62.5	16	15	45	28	42	25
100	14	19	41	24	39	21
200	11	28	36	18	34	15
250	10	32	35	16	32	13

7. Transmission Performance

- Supports 10/100/1000 Mbps (Gigabit Ethernet)
- Bandwidth up to 250 MHz
- Designed for PoE / PoE+ / PoE++ applications
- Excellent NEXT, FEXT, and Return Loss performance
- Superior EMI/RFI shielding protection
- Reduced Alien Crosstalk (AXT) for stable transmission
- Suitable for long-distance horizontal cabling up to 100 meters
- Stable performance in harsh environmental conditions

Part Number: PE+PVC : PL-CA6STO

8. Key Features

- 23AWG Solid Bare Copper Conductors for optimal conductivity
- Dual Jacket Construction for maximum mechanical protection
- UV-resistant PE outer jacket for long-term outdoor durability
- Inner protective jacket for enhanced core safety
- Individual foil shielding on each pair for signal isolation
- Overall braided shielding for EMI/RFI protection
- Optional water-blocking gel/tape for moisture protection
- High tensile strength for direct burial applications
- Fully optimized for PoE / PoE+ / PoE++ applications
- High performance verified through Fluke testing

9. Standards Compliance

- ISO/IEC 11801 Class E
- ANSI/TIA-568.2-D
- EN 50173-1
- EN 50288-6-1
- 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
- High mechanical durability for direct burial use
- UV and moisture resistance validation
- Enhanced shielding efficiency
- Full compliance with international standards

Testing:

- 100% Fluke Tested (Channel & Permanent Link)

Part Number: PE+PVC : PL-CA6STO

11. Key Advantages

- Maximum mechanical protection with dual jacket system
- Superior resistance for direct burial installations
- Excellent EMI/RFI shielding performance
- High copper purity for optimal signal transmission
- Stable performance under PoE / PoE++ load conditions
- Ideal for industrial and infrastructure projects
- Long service life in harsh environments

12. Warranty

25-Year System Warranty

(Subject to proper installation and certified components usage)