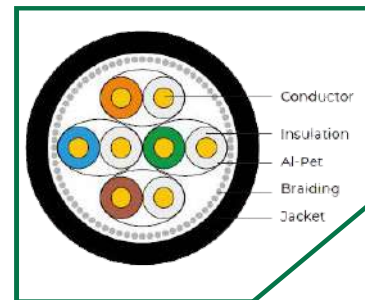
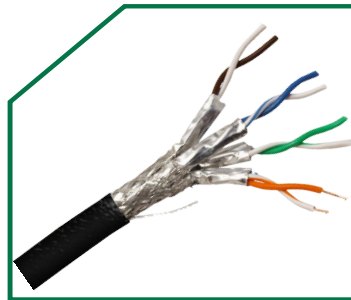


Part Number:

PE: PL-CA6ASTH



Category 6A S/FTP outdoor cable with 100 Ω nominal impedance, four individually foil-screened twisted pairs, one overall aluminium-magnesium alloy (LMS) braid, 23 AWG solid bare-copper conductors, foamed-polyethylene (FOPE) insulation and a standard black LDPE jacket.

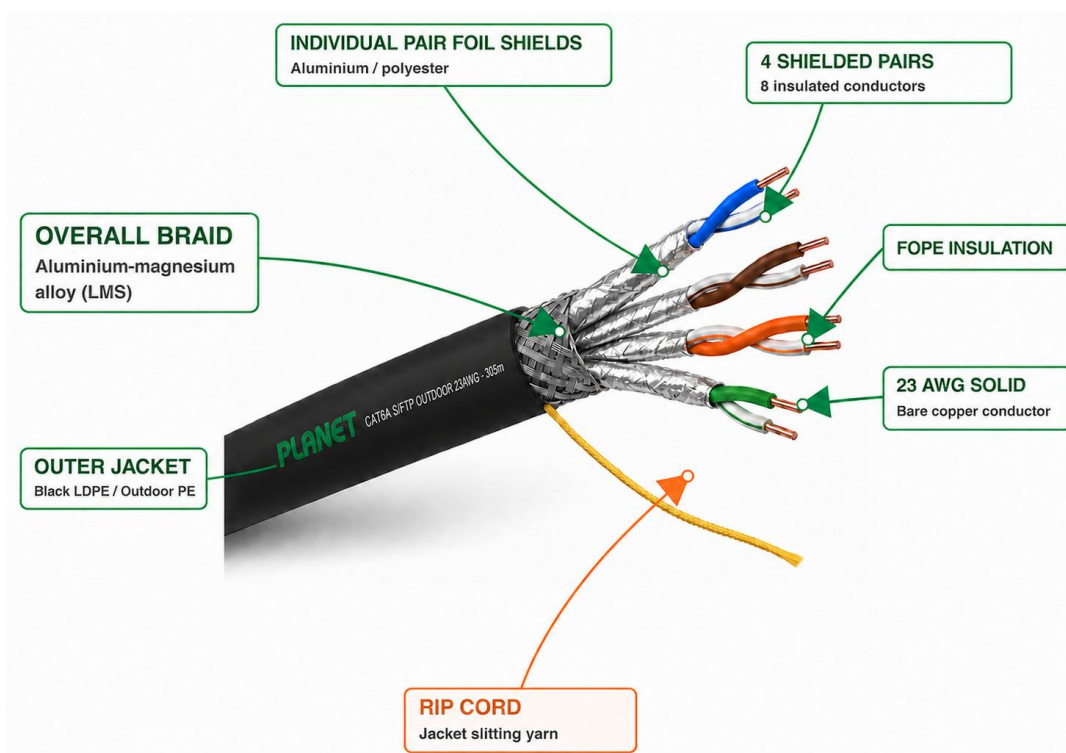
Unless explicitly marked Optional, the values below define the standard black-LDPE/LMS outdoor model. Optional items require written order confirmation and supporting evidence where applicable.

S/FTP LMS Overall Braid	23 AWG 0.570 mm Copper	500 MHz Category 6A	LDPE Outdoor Jacket
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"Engineered for Performance. Built for Reliability."

1. Product Overview

The standard model is a 500 MHz black-LDPE-jacketed S/FTP outdoor cable intended for 10GBASE-T over a standards-compliant installed channel. Use shielded connecting hardware and continuous bonding. UV/weathering, direct-burial and water-blocking claims apply only when separately ordered and evidenced.



Part Number: PE : PL-CA6ASTH

2. Construction - Standard Outdoor LDPE/LMS Model

Parameter	Specification
Cable Design	S/FTP: 4 individually foil-screened twisted pairs (8 conductors) plus one overall braid
Conductor	23 AWG solid bare annealed copper; 0.570 ± 0.005 mm
Insulation	FOPE; nominal O.D. 1.38 ± 0.10 mm; average thickness 0.40 mm
Pair Colours	White/Blue-Blue; White/Green-Green; White/Orange-Orange; White/Brown-Brown
Filler / Central / Drain	None in the standard construction
Individual Pair Shield	Aluminium/polyester foil around each individual twisted pair
Overall Braid	Standard LMS braid, 16/4/0.12 mm, coverage $\geq 30\%$; optional tinned-copper braid
Outer Jacket	Standard black LDPE, 0.55 ± 0.05 mm
Overall Diameter	7.60 ± 0.40 mm
Jacket Colour / Printing	Black jacket; white sequential metre marking; unverified certification marks excluded

TECHNICAL SPECIFICATIONS

CAT6A S/FTP | OUTDOOR LDPE BASE

3. Electrical Characteristics - Standard Outdoor Model

Parameter	Specification
Frequency Range	1-500 MHz
Characteristic Impedance	$100 \pm 15 \Omega$ over 1-500 MHz
DC Resistance, Single Conductor	$\leq 9.0 \Omega/100$ m at 20°C
DC Resistance Unbalance	Within pair: $\leq 2\%$; between pairs: $\leq 4\%$
Insulation Resistance	$\geq 5000 \text{ M}\Omega \cdot \text{km}$ at 20°C , DC 100-500 V
Wire-to-Ground Capacitance Unbalance	$\leq 160 \text{ pF}/100$ m at 0.8 kHz or 1 kHz
Delay Skew	$\leq 45 \text{ ns}/100$ m
Enhanced DC Resistance	$\leq 8.5 \Omega/100$ m at 20°C
Propagation Delay	$\leq 538 \text{ ns}/100$ m at 100 MHz.
Loop Resistance	$\leq 17.0 \Omega/100$ m at 20°C
Mutual Capacitance	$\leq 5.0 \text{ nF}/100$ m
PoE Operating Voltage	IEEE 802.3 PoE application up to 57 V DC
Installed-Cabling / PoE Verification	90 m Permanent Link / 100 m Channel and PoE Types 1-4 reports, upon request

Part Number: PE : PL-CA6ASTH

4. Mechanical Characteristics - Standard Outdoor LDPE Model

Parameter	Value
Sheath Tensile Strength	≥ 14.0 MPa
Sheath Elongation	≥ 600%
Insulation Tensile Strength	≥ 10.0 MPa
Insulation Elongation	≥ 200%
Ageing Condition	100°C ± 2°C for 7 days (168 h)
Sheath Tensile Strength After Ageing	≥ 9.8 MPa
Sheath Elongation After Ageing	≥ 420%
Temperature Rating	-20°C to +75°C
Cold Bend	-20°C ± 2°C × 4 h; 8× cable O.D.; no visible cracks

OPTIONAL INSTALLATION / OUTDOOR DECLARATIONS: Bend radius ≥ 8× cable O.D. during pulling and ≥ 4× after installation; pulling force ≤ 110 N; installation temperature 0°C to +50°C; UV/weathering, direct-burial, water-blocking and flame/CPR claims require the applicable ordered construction and evidence.

CAT6A PERFORMANCE REQUIREMENTS

CAT6A S/FTP | 500 MHz

5. Mandatory CAT6A Cable Performance

The following 1-500 MHz cable limits are mandatory for the CAT6A designation. Factory test evidence is required for the ordered model; independent certification is optional.

Category 6A Performance Requirements - ANSI/TIA-568.2-E

Frequency (MHz)	RL (≥ dB)	IL (≤ dB)	NEXT (≥ dB)	ACRF (≥ dB)	PS NEXT (≥ dB)	PS ACRF (≥ dB)
1	20.0	2.1	75.3	68.0	72.3	65.0
4	23.0	3.8	66.3	56.0	63.3	53.0
10	25.0	5.9	60.3	48.0	57.3	45.0
16	25.0	7.5	57.2	43.9	54.2	40.9
31.25	23.6	10.5	52.9	38.1	49.9	35.1
62.5	21.5	15.0	48.4	32.1	45.4	29.1
100	20.1	19.1	45.3	28.0	42.3	25.0
125	19.4	21.5	43.8	26.1	40.8	23.1
200	18.0	27.6	40.8	22.0	37.8	19.0
250	17.3	31.1	39.3	20.0	36.3	17.0
300	17.3	34.3	38.1	18.5	35.1	15.5
500	17.3	45.3	34.8	14.0	31.8	11.0

CAT6A ACCEPTANCE: Applicable balance and alien-crosstalk parameters must also comply with the selected standard. Factory evidence is mandatory; optional third-party certification does not replace product compliance.

Part Number: PE : PL-CA6ASTH

6. Typical CAT6A Applications

- 10GBASE-T (10 Gigabit Ethernet)
- 1000BASE-T Gigabit Ethernet
- 100BASE-TX and 10BASE-T Ethernet
- Outdoor enterprise and industrial structured cabling with continuous shield bonding

7. Standards and Compliance

Standard / Certification	Status
ANSI/TIA-568.2-E	Mandatory Category 6A baseline from 1-500 MHz; factory test evidence required
ISO/IEC 11801 (jacket marking)	Optional verified claim; do not print as certified without supporting evidence
ISO/IEC 11801-1 Class EA / EN 50288-10-1	Optional verified compliance for Class EA / screened 500 MHz cable
EN 50173-1 / IEEE 802.3an	EN 50173-1 system verification is optional; 10GBASE-T is a CAT6A application
IEC 61156-5	Optional only with supporting cable-component test evidence
IEEE 802.3af/at/bt	Optional PoE Types 1-4 claim subject to channel and thermal validation
IEC 60332-1-2 / CPR EN 50575	Optional alternative construction only with applicable flame report and CPR classification
RoHS / CE / UL / ETL	Optional only with declarations or valid listings covering the ordered outdoor model

8. Warranty - Optional

25-Year System Warranty

Subject to proper installation and certified components usage.