

Cat6A S/FTP

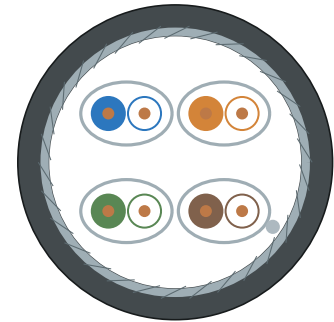
4 pairs / 23 AWG / LSZH / 500 MHz

CONSTRUCTION DETAIL

Pair foils and overall braid

Solid copper transmission core
Foam polyethylene (PE) insulation
LSZH outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 6.9 mm approx.

6.90 mm

APPROX. OUTER DIAMETER

50 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

Four individually foil-screened pairs are enclosed by a tinned copper braid. The 500 MHz Cat6A cable combines pair screening, foam polyethylene insulation and an LSZH outer jacket.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Tinned copper braid
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 4001 Violet; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

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ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1b
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	90	80	23
10	5.6	95	90	26
16	7.1	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	90	25
100	18.3	90	90	23
250	29.5	90	75	20
400	36	75	75	23
500	42	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.2 mm	
D	Actual cable outer diameter	

Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-10-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.