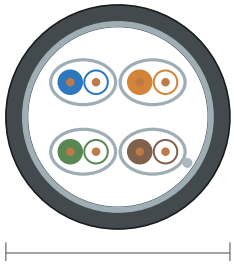
Cat6A F/FTP

4 pairs / 23 AWG / LSZH / 500 MHz

UPCOM series illustration. Jacket colour and conductor size follow the specification below.



Ø 6.9 mm approx.
SCHEMATIC / NOT TO SCALE

6.90 mm	49 kg/km	20 kg/km
APPROX. OUTER DIAMETER	APPROX. CABLE WEIGHT	COPPER WEIGHT

Individual pair foils and an overall foil screen form the shielding arrangement of this 500 MHz Cat6A cable. Foam polyethylene insulation surrounds the solid copper conductors.

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	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 5024 Blue; 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**
Resistance unbalance	**< 1%**
Insulation resistance, 500 V DC / 1 min	**> 5000 MΩ·km**
Mutual capacitance	**43 pF/m**
Capacitance unbalance	**1600 pF/km**
Characteristic impedance at 100 MHz	**100 ± 5 Ω**
Velocity of propagation	**78%**

Delay skew	**< 45 ns/100 m**
Operating voltage	**72 V**
Dielectric test, 1 min	**1000 V**
Transverse conversion loss (TCL)	**Minimum level 2**
Coupling attenuation	**Type 1b**
Transfer impedance	**Grade 1**
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
Minimum bend radius	8 × D / approx. 55.2 mm
D	Actual cable outer diameter

LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.

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.