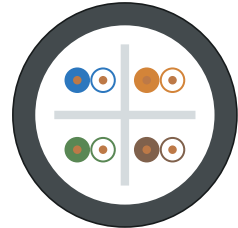


Cat6 U/UTP

4 pairs / 23 AWG / PE / 250 MHz



Ø 6 mm approx.

SCHEMATIC / NOT TO SCALE

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

6.00 mm

APPROX. OUTER DIAMETER

36 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

This 250 MHz Cat6 cable uses solid copper conductors and a cross separator to organise the four twisted pairs. It is intended for fixed structured cabling with an unshielded channel design.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

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

Cat6 U/UTP

4 pairs / 23 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

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	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 48 mm	
D	Actual cable outer diameter	

PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-6-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.