

Cat5e SF/UTP

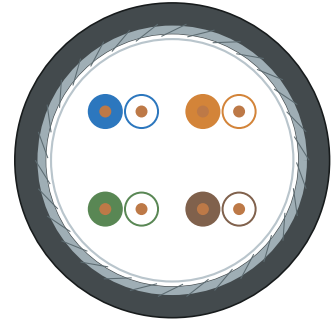
4 pairs / 24 AWG / PE / 100 MHz

CONSTRUCTION DETAIL

Overall foil and braid screens

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

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



Ø 5.9 mm approx.

5.90 mm

APPROX. OUTER DIAMETER

35 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

Four twisted pairs sit inside a combined foil and tinned copper braid screen. This Cat5e construction adds two overall screening layers while retaining unshielded individual pairs.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
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.

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4 pairs / 24 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 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	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

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. 47.2 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 50288-2-1, ANSI/TIA-568.2-D.

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