

ETHERNET LAN



F/UTP Cat.6 4PR 23AWG LSZH, Conductor Material: Copper, Outersheath Color: Green 6018





Description

LAN Copper Cables, also known as Ethernet cables or twisted pair cables, are a fundamental component of local area networks (LANs). They provide the physical medium for transmitting data signals between devices within a network infrastructure and they can be:

- Unshielded Twisted Pair (UTP): UTP cables are the most common type of LAN cables. They consist of pairs of insulated copper wires twisted together, providing reliable data transmission for short to medium distances.
- Shielded Twisted Pair (STP): STP cables feature an additional metallic shield around the twisted pairs, providing better protection against electromagnetic interference (EMI) and crosstalk. They are ideal for environments with high levels of interference.
- Foiled Twisted Pair (FTP): FTP cables have an overall foil shield that encases all twisted pairs, offering effective EMI protection.

LAN Copper Cables are categorized based on their performance specifications, as defined by the Electronic Industries Association/Telecommunications Industry Association (EIA/TIA):

- Category 5e (Cat5e): Suitable for speeds up to 1 Gbps (Gigabit per second) over distances of up to 100 meters.
- Category 6 (Cat6): Capable of supporting speeds up to 10 Gbps over distances of up to 55 meters.
- Category 6a (Cat6a): Designed for higher-speed applications, supporting speeds up to 10 Gbps over distances of up to 100 meters.
- Category 7 (Cat7): Designed for future-proofing, supporting speeds up to 10 Gbps over distances of up to 100 meters, with improved shielding and reduced crosstalk.

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EN 50288-3-1 IEC/EN 61034-2 EN 50173 IEC 60332-1 ISO/IEC 11801 IEC 61156-6 IEC/EN 60754-1/2 EIA/TIA 568A

Construction

Conductor core: 24 AWG copper soft wire

Insulation: HDPE polyethylene, colored marking of

insulation

Outersheath: PVC

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TELECOMMUNICATION CABLES



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Technical Characteristics

Number of Conductors	8		
Cable Overall Diameter	7.2 mm		
Cable Weight	44 kg/km		
Conductor Material	Copper		
Conductor Cross-Section	0.24 mm²		
Conductor Class	CL-1		
Conductor Type	RE		
Insulation Material	HDPE		
Outersheath Material	LSZH		
Outersheath Color	Green 6018		
Max. Permissible Installation Temperature	-20 >< +50 °C		
Operating Temperature	-40 >< +60 °C		
Rate Tensile Strength (RTS)	100 N		
Crush	1000 N/10cm		
Conductor Resistance	Max. 85 Ω/km		
Resistance unbalance	Max. 2 %		
Insulation Resistance	≥ 5000 MΩ/km		
Nominal Velocity of Propagation	≥ 66 %		
Signal Propagation Delay	Max. 537 ns/100m		
Test Voltage	1000 V		
Minimum Bending Radius (Installing)	8xD		
Minimum Bending Radius (Operating)	4xD		
Packing	Wooden Drum, Plywood Drum, Coil, Rolls, Box		
Delivery Lengths	To be confirmed by offer		
Delivery Length Tolerance	±5 %		

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