What are the differences between FC jumper cables and SC jumper cables

Overview

Compare optical fiber termination types, including SC, LC, FC, and ST. View our chart and learn how to choose the right connector for your network.

Key Takeaways

FC jumper cables feature a round, screw-threaded connector for high reliability in telecom and long-haul networks, while SC jumper cables use a square push-pull design for easy installation in enterprise and data center environments. Connector Design and Latching MechanismFC (Ferrule Connector): Has a round metal body with a screw-threaded connection, which ensures a secure, vibration-resistant fit. This makes FC connectors highly reliable in environments with mechanical stress or long-distance telecom applications.

S

C (Subscriber Connector): Features a square plastic body with a push-pull latch mechanism, allowing for quick and easy insertion and removal without twisting.

S

C connectors are simpler to handle and are widely used in switches, routers, and GBIC transceivers.

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Ferrule Size and Fiber Alignment

Both F

C and SC connectors typically use a 2. 5 mm ceramic ferrule, which aligns the fiber cores precisely to minimize insertion loss and reflection. The ferrule ensures that light passes efficiently between connected fibers, but the FC's threaded design provides slightly better stability under vibration compared to the SC's push-pull latch.

ApplicationsFC Jumper Cables: Commonly used in telecom systems, optical distribution frames (ODFs), and long-haul networks where durability and low signal loss under vibration are critical.

S

C Jumper Cables: Frequently deployed in enterprise LANs, data centers, and residential fiber networks, where ease of installation and removal is more important than extreme mechanical stability. Advantages and DisadvantagesFC Advantages: Rugged, dust-resistant, highly reliable under vibration, ideal for long-term telecom installations.

F

C Disadvantages: Requires careful screwing, slightly slower to connect or disconnect compared to SC.

S

C Advantages: Simple plug-in design, easy to install and remove, cost-effective, widely compatible with network equipment.

S

C Disadvantages: Can disconnect if pulled sharply, larger footprint than LC connectors, less vibration-resistant than FC.

Summary

In essence, FC jumper cables prioritize mechanical stability and reliability, making them suitable for telecom and long-haul applications, whereas SC jumper cables prioritize ease of use and quick deployment, making them ideal for enterprise networks and data centers. Both use the same ferrule size but differ in body shape, latching mechanism, and typical use cases.

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Article Content

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What Is Fiber Patch Cord? Singlemode/Multimode,LC SC FC,UPC Vs

Q1: Difference between fiber patch cord and copper Ethernet cable? Copper transmits electric signals with limited distance and vulnerable to EMI; fiber uses light for larger bandwidth and

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Fiber jumper and fiber optic terminal box analysis

Let me introduce to you what the fiber jumper is, the type of fiber jumper, and the structure of the fiber jumper and the knowledge of the fiber optic terminal

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