

RIVO MULTITRADE OPTICAL SYSTEMS

Butterfly-shaped optical cable fixing device



Overview

The invention provides an optical fiber coupling fixing method of a butterfly laser device assembly.

Key Takeaways

Butterfly-shaped optical cables are fixed using specialized suspension devices and hooks to ensure stable, safe, and efficient installation in overhead and FTTH applications. Cable Structure and Advantages

Butterfly-shaped optical cables feature a flat, wing-like profile with optical fibers in the center and parallel strength members on either side, typically made of Fiber Reinforced Plastic (FRP) or steel for outdoor self-supporting variants . This design allows minimal stress when bent along the flat plane, reduces the risk of kinks, and provides directional stability during installation . They are commonly used in FTTH (fiber to the home) networks for both indoor and outdoor deployments .

Fixing Methods Overhead Installation

For outdoor overhead wiring, butterfly optical cables are fixed using suspension devices such as ring hooks, tight hoop hooks, and fixed seats . The process involves winding the cable's suspension wire into the slot of the fixed seat, performing an S-shaped winding, and securing it with the hook and ring. This method stabilizes the cable along poles, walls, or other structures, preventing shaking, displacement, and signal loss .

Material Considerations

- Plastic parts: Typically made of ABS, resistant to high/low temperatures, aging, and environmental stress.
- Metal hooks: Made of stainless steel, rust-proof, and deformation-resistant for long-term reliability .

Structural Design Benefits

- Multi-curve path winding accommodates temperature-induced expansion/contraction and wind-induced strain.
- Maintains safe curvature and tension of the cable, extending service life.
- Allows quick replacement or upgrades without complex tools .

Connection Techniques

Once fixed, butterfly-shaped optical cables can be connected using several methods:

- Fusion splicing: Aligning and fusing individual fibers for a permanent, low-loss connection .
- Ribbon splicing: Fusing the entire fiber ribbon at once, ideal for high-density applications .
- Connectorization: Attaching connectors to fibers for plug-and-play connections, though it introduces slight signal loss .
- Pre-terminated solutions: Factory-prepared ends for rapid deployment .

Best Practices

- Ensure proper tension and curvature to avoid fiber stress.
- Use weather-resistant materials for outdoor installations.
- Wrap cable ends and suspension wires with insulating tape for additional protection.
- Select appropriate cable type (indoor FRP-only vs. outdoor self-supporting with steel messenger) based on deployment environment . By following these methods, butterfly-shaped optical cables can be securely fixed, ensuring stable signal transmission and long-term reliability in both indoor and outdoor FTTH networks.

Article Content

SC type butterfly lead-in cable connector

The SC type butterfly drop optical cable connector of the present invention adopts a pre-terminated connection scheme, the product

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Butterfly optical cable is currently the most used access optical cable, and plays a huge role in networks such as fiber-optic entry,

Four -end connection methods of butterfly -shaped optical fiber optic ...

There are four common end connection methods used with butterfly-shaped optical fiber optic cables, and in this

Drop cable stripper FTS-01 Optical Fiber Stripper Suitable for 3.0 * 2 ...

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10pcs SC/APC Fiber Fast Connector for 2x3mm Butterfly Fiber Cable ...

About this item □Simple Operation□SC fiber optic quick connector is a kind of connector that can well solve the field wiring and fiber

FTTH Butterfly Optic Cables: Types, Specs & Installation Guide

Learn how FTTH butterfly optic cables work, when to choose G.657.A1 vs A2, indoor vs self-supporting variants, and

Butterfly -shaped optical fiber optical cable side connection method

Butterfly-shaped optical fiber cables are a popular type of fiber optic cable that is commonly used for data transmission in

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Butterfly Indoor FTTH Drop Cable

Butterfly FTTH drop cable is a popular type of fiber access optical cable, according to the different application environment and laying

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These cables are widely used in FTTH networks, fiber optic drop cable systems, and building entry solutions where

From Installation to Longevity: A Complete Guide to FTTH Butterfly ...

Learn how to install FTTH butterfly optical cables correctly, avoid common mistakes, and maximize service life with

Unveiling the Beauty and Efficiency of FTTH Butterfly Optic Cables

One of the hallmark features of FTTH butterfly optic cables lies in their ability to optimize bandwidth utilization and

How Do FTTH Butterfly Optic Cables Contribute to Fiber-to-the-Home ...

An FTTH butterfly optic cable, sometimes referred to as a flat drop cable, is a special type of optical fiber cable

How do FTTH butterfly optic cables handle mechanical stress and how ...

The FTTH butterfly optic cable is an engineering marvel designed to handle a range of mechanical stresses without

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The invention relates to the field of optical cable production, in particular to a butterfly-shaped optical cable production device which

FTTH Butterfly Optic Cable Manufacturers, Custom Factory

Butterfly optical cables, as the name suggests, exhibit a unique design reminiscent of butterfly wings, emphasizing a unique and

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The invention provides an optical fiber coupling fixing method of a butterfly laser device assembly. The optical fiber coupling fixing

How do FTTH butterfly optic cables ensure signal integrity over long ...

FTTH butterfly optic cables are designed to minimize both of these issues. By using high-quality, low-loss materials

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