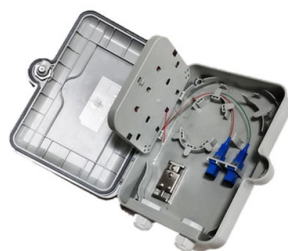


Fiber optic splice box splicing and fixing



Overview

Learn how to perform mechanical fiber cable splicing inside fiber enclosures using fiber splice trays.

Key Takeaways

Proper fixing of a fiber optic splice box involves careful cable preparation, sealing, grounding, fiber arrangement in splice trays, and secure closure installation to ensure long-term network reliability. Cable Preparation

Begin by removing the outer jacket of the optical cable, along with any shielding or armor if present, to expose the loose tubes. Prepare approximately 3 meters of cable for handling. Clean the loose tubes and the strength member sheath using a suitable cleaning solution, remove any excess filling, and abrade the outer jacket for about 150mm to ensure a clean surface for sealing .

Sealing and Securing the Cable

Select sealing rings that match the cable's outer diameter and slide two rings onto the cable. Insert the cable into the designated entry hole of the splice closure. Connect and ground the cable's shield layer. Wrap self-adhesive sealing tape between the two sealing rings to create a sealed cable end. Secure the cable to the closure base using a hose clamp, ensuring it is tightly fastened .

Fiber Arrangement in Splice Trays



Inside the closure, fibers should be carefully coiled and placed in splice trays to prevent stress or pinching. Loose tube cables typically extend from the closure entrance to the tray, with about 1 meter of bare fiber on each side of the splice organized in the tray. For ribbon fibers, ensure proper routing to avoid bending in restricted directions. Use nylon cable ties to secure fibers at the tray entrance .

Splicing Methods

Fiber splicing can be performed using fusion splicing or mechanical splicing. Fusion splicing uses an electric arc to permanently join fibers, offering minimal signal loss and high reliability, while mechanical splicing aligns fibers with an index-matching gel, which is faster but less permanent . After splicing, coil any remaining fiber neatly in the tray and cover the fusion plate securely.

Closure Assembly

Determine the number of stacked splice trays based on the closure's capacity. Ensure trays are properly aligned and stacked, with each layer secured using the closure's built-in clamps or folds. The design should allow easy access for maintenance without stressing the fibers . Finally, close the splice box and verify the seal to protect against moisture, dust, and mechanical stress, ensuring long-term network performance . By following these steps, the fiber optic splice box will be securely fixed, organized, and protected, minimizing signal loss and ensuring reliable operation of the fiber network.

Article Content

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While a cut or damaged fiber optic cable can temporarily take your network down, it is possible to quickly fix the cable

Splicebox

A splice box (also known as splice distributor) is a housing in which fiber optic cables begin or end. Fiber optics are fanned out in

Fiber Optic Cable Splicing Explained

Splicing in optical fiber is the joining two fiber optic cables together. There are 2 methods of cable splicing, mechanical

FOA Lesson Plan: #7, Terminations and Splices

Lesson 7: Termination and Splicing Objectives: From this lesson you should learn: The difference between connectors and splices

Fiber Splice Boxes | Amphenol Network Solutions

The ribbon splice configuration utilizes the base of the enclosure as the splice tray; maximizing technician access to the splicing area

Introduction of optical cable splicing box enclosure

The sheath support part is the skeleton of the splice box, including brackets, optical cable fixing clips and optical fiber

The FOA Reference For Fiber Optics

The proper length of fiber is needed to allow splicing and then neatly storing fiber in the splice tray. Inside splice closures and at each

Fiber Optic Splice Boxes | Indoor & Outdoor Splice Enclosures | Foss ...

Fiber optic splice boxes for indoor and outdoor installations. Secure solutions for fiber splicing, cable management, and network

Complete Guide to Fiber Optic Connectors and Splicing

This article provides an overview of fiber optic connectors, splicing techniques, and maintenance practices. It explains

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