

Special tools for splicing power cables and optical fibers



Overview

Fiber Optic Splicing Equipment Fiber Instrument Sales has a wide variety of fiber optic splicing equipment such as fusion splicers from AFL, Sumitomo, FITE.

Key Takeaways

Splicing power cables and optical fibers requires specialized tools for preparation, joining, and testing to ensure safety, signal integrity, and long-term reliability. Tools for Optical Fiber Splicing

Preparation Tools: Before splicing, optical fibers must be stripped of protective layers without damaging the glass core. Essential tools include high-precision strippers for removing the outer jacket, buffer, and acrylate coating, as well as Kevlar shears for cutting aramid yarn reinforcement. Mid-span slitters allow access to individual fibers in armored cables without cutting the entire cable.

Cleaving Tools: Fiber cleavers create precise, geometric cuts on the fiber endface, which is critical for low-loss fusion splicing. Both single-fiber and ribbon cleavers are used depending on the cable type.

Splicing and Termination Tools: Fusion splicers join fibers permanently, while mechanical splices provide temporary or field-ready connections. Crimp tools are used for connector attachment, compatible with SMA, ST, SC, LC, and other connector types.

Testing and Verification Tools: Optical power meters, OTDRs (Optical Time-Domain Reflectometers), and inspection microscopes verify splice quality, measure attenuation, and detect faults. Cleaning kits are essential to remove contamination that can degrade signal performance.

Tools for Power Cable Splicing

Cable Preparation Tools: For medium- and high-voltage power cables, specialized cable strippers, slitting knives, and jacket removal tools are used to expose conductors safely. Kevlar or steel-reinforced jackets require heavy-duty cutters or shears. **Conductor Joining Tools:** Compression or hydraulic crimping tools are used to join conductors securely. For high-voltage applications, heat-shrink tubing or cold-shrink insulation kits provide electrical insulation and mechanical protection. **Testing Tools:** After splicing, insulation resistance testers, high-voltage testers, and continuity meters ensure the splice is electrically sound and safe for operation.

Key Considerations

- **Precision and Safety:** Both optical and power cable splicing require tools that minimize damage to the core or conductor and protect the technician from electrical hazards.
- **Cable Type Compatibility:** Tools must match the cable diameter, jacket material, and fiber or conductor type.
- **Portability and Field Use:** Many splicing kits include carts, cases, or portable kits for outdoor or remote installations. Using certified, high-quality tools ensures reliable splices, minimal signal loss, and long-term network or power system performance. For optical fibers, brands like Jonard, Corning, and AFL provide specialized splicing and testing tools, while power cable splicing often relies on industry-standard crimpers, strippers, and insulation kits.

Article Content

Fiber Optic Splicing Equipment

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Essential Guide to Selecting Fiber Optic Splicing Tools and Kits

Selecting the right fiber optic splicing tools and kits is vital for achieving optimal network performance and reliability.

Amazon : Fiber Splicing Tools

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The FOA Reference For Fiber Optics

In addition to the splicer and cleaver, the tech doing the splicing will need a set of cable preparation and fiber stripping tools. Since

Fusion splicing: Tools and techniques

The fusion splicer is a long-used tool in outside plant (OSP) fiber-optic installation, and in recent years has been more commonly

Amazon : Fiber Optic Tool Kit

Tackle fiber optic installations with comprehensive tool kits. Discover reliable solutions with precision tools for termination, splicing,

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The Complete Step-by-Step Guide to Fiber Optic Splicing

In this guide, we cover the basics of fiber optic splicing, how to perform splicing using two different methods, and finally some best

Fiber Tools, Consumables & Accessories

CommScope features a family of tools and components for the installation, repair and maintenance of fiber cables, including prep

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

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In the ever-evolving world of high-speed connectivity, fiber optic technology serves as the backbone of modern

Fiber Optic Splicing

Fiber Optic Center has fiber optic splicing equipment, including splicers, cleavers, protection sleeves, mechanical splicing tools and

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