



Huijue Polarization-Maintaining Fiber Optic Fusion Splicer

Article Overview

The Huijue PM fiber fusion splicer is designed for precise, low-loss splicing of polarization-maintaining fibers, offering high alignment accuracy, automated fusion, and compatibility with various PM fiber types.

Overview

Polarization-maintaining (PM) fibers are critical in applications such as fiber-optic gyroscopes, sensing systems, medical devices, and high-speed communications because they preserve the polarization state of light. Fusion splicing PM fibers requires precise alignment of the fiber axes to minimize insertion loss and maintain polarization extinction ratio (ER). The Huijue splicer, like other advanced PM splicers, combines manual rotary fiber holders with automated core alignment software to achieve high-precision splicing.

Key Features

- o **Axis Alignment:** The splicer allows manual rotation of fibers to align the fast and slow axes, with visual feedback from stress patterns or optional active ER monitoring, achieving ER values over 25dB.
- o **Automated Fusion:** Once aligned, the fusion process is automated with a single button press, ensuring consistent low-loss splices.
- o **Compatibility:** Supports various PM fiber types, including panda, bowtie, ellipse, and dual-mode fibers, and can handle angular offsets of 0°, 45°, or 90°.
- o **Splicing Quality:** High-strength splices with low insertion loss are achievable, often exceeding 100 kpsi tensile strength and losses as low as 0.5-0.8 dB when splicing PM fibers to photonic crystal fibers.
- o **Comprehensive Kit:** Typically includes fiber strippers, cleavers, battery packs, AC adapters, and carrying cases for field or lab use.

Technical Advantages

- o **High-Precision Alignment:** Reduces coupling loss caused by mode field mismatch and microhole collapse in specialty fibers.
- o **Automation and Efficiency:** Minimizes manual intervention, improving throughput for production or research environments.
- o **Versatility:** Can splice standard single-mode fibers, PM fibers, and specialty fibers such as photonic crystal fibers, with programmable fusion parameters to optimize loss and tensile strength.

Applications

- o **Telecommunications and Data Centers:** Ensures stable polarization for high-speed optical links.



Huijue Polarization-Maintaining Fiber Optic Fusion Splicer

- o Fiber-Optic Sensing: Critical for gyroscopes, current transformers, and interferometric sensors.
- o Medical and Industrial R&D: Used in laboratories for precise fiber assembly and experimental setups.
- o Specialty Fiber Manufacturing: Supports splicing of low-diameter, heat-sensitive, or multi-core fibers .

Summary

The Huijue PM fiber fusion splicer is a high-precision, versatile tool for splicing polarization-maintaining fibers. Its combination of manual axis adjustment, automated fusion, and advanced monitoring ensures low-loss, high-strength splices suitable for industrial, research, and specialty fiber applications. By addressing challenges such as axis alignment, mode field mismatch, and fiber microstructure collapse, it provides reliable performance across a wide range of PM fiber types .

R& D The TUNE PM 500 Splicer is an innovative device designed for fusion splicing polarization-maintaining (PM) fibers. It enhances

Polarization Maintaining (PM) fiber splicing with the Fitel S185 series fusion splicer is based on the polarization observation of the

Fujikura FSM-100P Details Fujikura FSM-100P Fujikura FSM-100P Fusion Splicers Fiber Optic Equipment

R& D The TUNE PM 500 Splicer is a novel solution to fusion splice polarization-maintaining fibers. It directly aligns the fiber end

SHINHO Polarization Maintaining (PM) Fiber Fusion Splicer S-12 SHINHO S-12 Polarization Maintaining

As global fiber optic networks continue to evolve, the demand for higher precision and stability in fiber connections is

Fusion splicing similar fiber types or double clad LDF fibers for high power lasers, the Fujikura

It enhances traditional fusion splicing by incorporating manual rotary fiber holders and specialized

State-of-the-art fiber optic specialty fusion splicers and fusion splicing solutions from FITEL and 3SAE Technologies.

Fusion splicing is used for joining cables during network installation projects, repairing cables, mounting pre-polished



Huijue Polarization-Maintaining Fiber Optic Fusion Splicer

This innovative splicer crushes the traditional PM fiber fusion splicers" technical barrier. It divides the fiber polarization axis angular

We demonstrate a novel method for low-loss splicing Ge-doped holey fibers (HF) with subwavelength core size and

Telecommunication uses Fusion splicer enable splicing of Fiber Optic Cable with low loss and high reliability. For fusion splicer, we

Specialty Fusion Splicer Video Single Fiber Polarization Maintaining Fusion Splicer Similar to Fujikura Fsm-100p Min. Order: 1 Piece

The polarization maintaining fiber fusion splicer mainly solves the problem of the counter-shaft fusion of the polarization maintaining

We introduce an intermediate SMF fiber with thermal expanded core (TEC) at one end as a transition fiber; at the same time, when

Web: <https://in-au.co.za>

