General



The Fusion Splicer UJS-S200 is designed specifically for optical fiber submarine cable jointing technology, which is typically carried out on board cable ships.
This fusion splicer automatically aligns a pair of optical fibers in both the X and Y (horizontal and vertical) planes and then fuses them together with heat from an electric arc to form a low-loss splice. Improved image processing software of this fusion splicer enables precise core alignment and accurately estimated splice loss.
A tensile proof test that is carried out by applying tension to the fusion splice verifies the long-term reliability of the fiber splice. Following a successful proof test, a heat-shrinkable splice protection sleeve is installed over the bare glass fiber and cured in the built-in heater.

Applicability of Numerous Fiber Splicing Conditions

Since the beginning of optical submarine cable installation, a wide range of optical fibers have been qualified with Universal Jointing and in each case, the specific fiber splicing conditions have been provided for repairing and installation of the Universal Joints and the Universal Couplings. As supplied, the fusion splicer UJS-S200 is pre-loaded with over 430 fiber splicing conditions, so it is ready to splice the fibers deployed in the optical submarine cables.

Long Term Reliability with Low Failure Probability of Fiber Splice Point

Conventionally long term reliability with low failure probability requires a high rate of fiber splice proof testing. By utilizing the specific fiber handling mechanism, and with providing 3mm of fiber cleave length, the fusion splicer UJS-S200 minimizes the strains such as twist, bend and tension to the fiber splice with a relatively lower proof test level. By incorporating this advanced technology, a low failure probability of $1x10^{-6}$ % for the fiber splice can be achieved for 25 years of submarine cable service life.

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