**S182PM-H Fusion Splicer**

Furukawa Electric introduces the S182PM-H Fiber Fusion Splicer. Designed to address the needs of production and research splicing applications in the optical components industry, the S182PM-H Fusion Splicer offers precision high strength splicing for PM, specialty fiber and conventional fiber types including: DS, and EDF fibers. The S182PM-H is ergonomic, easy to use, and optimized for low splice loss and high extinction ratios.

### Key Features

- Fully automated splicing for PM fiber and conventional fiber
- High strength splicing for over 20N with short cleave length
- Fiber holder system for easy use and stable high-strength
- Dissimilar fiber splice for special fibers including EDF
- Fast Panda and Tiger fibers with coating clamp splices in 100 and 170 seconds each.
- Low splice loss 0.07dB and high extinction ratio 32dB for PM fiber
- Ergonomic, easy-to-use machine design for high-productivity and short excess fiber length
- High magnification 246 time and XY-simultaneous observation

### Specifications

#### Applicable Fiber
Silica glass-based optical fibers:
- PM fibers (PANDA, TIGER), SM, MM, DS, EDF fibers
  - Clad diameter: 0.100-0.150mm
  - Coating diameter: 0.25/0.40/0.90mm

#### Splice Performance
- **Extinction ratio for PM fiber (typical):** 32dB(1.4degree) or higher
- **Reflection:** -60dB or lower
- **Splice strength (typical):** 20N(236kpsi) or higher for 0.25 and 0.40mm coating diameter when fiber is prepared with high strength splicing tools

#### Operating Time
- **Splice:**
  - SM/MM/DS: 20sec (with clad clamp), 100sec (with coating clamp)
  - PANDA: 85sec (with clad clamp), 170sec (with coating clamp)
  - 3M TIGER: 140sec (with clad clamp), 170sec (with coating clamp)

- **Protection:** 90s (typical for 60mm length sleeve)
- **Tension test:** Switchable with 1.96N (200g/0.4lbs) or off.

#### Reinforce Heater
- **Applicable sleeve length:** 20, 25, 40 or 60mm
- **Built-in cooling fan and mechanical pretension fiber clamp**

#### Operating Environment
- **Temperature:** -10 to +50°C (14 to 122°F)
- **Humidity:** 90% at 38°C (100°F)
- **Altitude:** 3,658m/12,000ft (484mmHg)
- **Storage:** -40 to 60°C (-40 to 140°F)

#### Equipment
- **LCD:** 5" color with anti-reflection coating and protection cover
- **Video:** NTSC (PIN connector)
- **DATA:** RS232C (D-sub 9 pins male)
- **Memory:** 400 splice losses and 100 arc-test results
- **Sensor:** air pressure, temperature, humidity

#### Function
- **Axis aligning method:**
  - PM and MM fibers:
    - Clad aligning
  - SM, DS, EDF fibers:
    - Core aligning
- **Phase aligning method:**
  - Automatic by fiber image processing
  - Manual adjustment
- **Other function:**
  - 32 splice programs
  - 8 heat programs, 4 pre-programmed and 4 customizable
  - Inspection: cleave angle, fiber end gap, core eccentricity, offset, tilt, micro bending, splice errors (bubbling, thickening, streak)
  - Remote control program (RCP) available with PC (Option)
  - Connect to PM Analyzer for "live" splices
  - Control Splicer from PC
  - Download New Splice Program
  - Sound cancellation
  - Auto sleep mode
  - Display information: operating and error messages, arc counter, clock, splice status, heater status, estimation loss, extinction ratio, inspection results and fiber image (X and Y views)
  - Message languages: A capacity to store 9 languages. Contact your dealer for details.

#### Size/Weight
- **Main body:** 246W x 269D x 160Hmm/9kg

#### Power
- **AC:** 100-120, 200-240V
- **DC:** 10-16.5V with LED indicator
The S708S High Strength Fiber Holders provide a secure and precise handling system for optical fibers. This helps the user to avoid accidental contact with the bare fiber—essential for high strength splicing. The holders also increase ease-of-use and allow for exact placement of the fibers at each stage of the process. The S182PM-H package includes holders for 250, 400, and 900 µm coating fibers.

The S182X-20 Ultrasonic Cleaner is used to clean the bare fiber after stripping to achieve a high strength splice. With the S708S high strength fiber holder, the fiber is placed into the basin of the cleaner.

- Size (main body): 225 (W) x 115 (D) x 125 (H)mm
- Weight (main body): 1kg
- Power source: selectable from 100-110VAC and 200-240VAC

*The S182P-24 Adapter is required for setting S708S holders into the cleaner.

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The S218 High Strength Fiber Holders are used with the S708S high strength fiber holders and the S182P-22 adapter to safely strip the fiber without damaging the fiber or impacting its strength. Power can be supplied by a slot-in battery that provides cordless operation or by conventional DC and AC power sources.

*The S218X-09 Blade is required for high strength stripping.

The S323/S324 Fiber Cleaver is used with the S708S high strength fiber holder and the S182P-22 adapter to properly cleave the fiber. The cleaver consistently produces an accurate cleave angle.
# STANDARD PACKAGE

<table>
<thead>
<tr>
<th>Part</th>
<th>Part Number</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Main Body</td>
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<tr>
<td>Top Cover</td>
<td>S182P-22</td>
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<td>AC Power Cord</td>
<td>S182X-23</td>
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<td>Squeegee Holders</td>
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<tr>
<td>Standard Holders (Black)</td>
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<td>Broad Holders (white)</td>
<td>S182X-04</td>
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<td>Spare Fuses</td>
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<tr>
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<tr>
<td>L-0.5 (Left-side guide for 250-400 μm coating)</td>
<td>S182P-06</td>
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<tr>
<td>R-0.5 (Right-side guide for 250 μm coating)</td>
<td>S182P-07</td>
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<tr>
<td>L-0.4 (Left-side guide for 400 μm coating and 125 μm coating)</td>
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<td>R-0.4 (Right-side guide for 400 μm coating and 125 μm coating)</td>
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<td>User Manual</td>
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## Optional Components

- DC Power Cord: S182X-01 1
- RS-232C Cord: S182X-02 1
- Mini Sleeve Adapter for the Heat Shrink Oven: S182X-07 1
- Fiber Holder tray for Optical Cleaner: S182P-24

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## S182 PM-H ACCESSORY MATRIX FOR SPLICING 250/400/900 μm FIBERS

### High Strength Splice with Clamp on Coating

<table>
<thead>
<tr>
<th>CoatingDia. (μm)</th>
<th>Fiber Holders</th>
<th>Fiber Guides/ V-Grooves</th>
<th>Stripping</th>
<th>Cleaning</th>
<th>Cleaving</th>
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<tbody>
<tr>
<td>LEFT</td>
<td>RIGHT</td>
<td>LEFT/RIGHT</td>
<td>RIGHT side</td>
<td>LEFT</td>
<td>RIGHT</td>
</tr>
<tr>
<td>250</td>
<td>250</td>
<td>S7085-025(0.25)</td>
<td>S7085-025(0.25)</td>
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<td>S182P-07</td>
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<tr>
<td>250</td>
<td>400</td>
<td>S7085-025(0.25)</td>
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<td>S182P-07</td>
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<td>S182P-07</td>
<td>S182P-08</td>
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<tr>
<td>400</td>
<td>400</td>
<td>S7085-040(0.40)</td>
<td>S7085-040(0.25)</td>
<td>S182P-07</td>
<td>S182P-08</td>
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### Normal Strength Splice with Clamp on Cladding

<table>
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<tr>
<th>CoatingDia. (μm)</th>
<th>Fiber Holders</th>
<th>Fiber Guides/ V-Grooves</th>
<th>Stripping</th>
<th>Cleaning</th>
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<tbody>
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<td>RIGHT side</td>
<td>LEFT</td>
<td>RIGHT</td>
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<tr>
<td>250</td>
<td>250</td>
<td>S7085-025(0.25)</td>
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<tr>
<td>250</td>
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<tr>
<td>400</td>
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<tr>
<td>400</td>
<td>400</td>
<td>S7085-040(0.40)</td>
<td>S7085-040(0.40)</td>
<td>S182P-08</td>
<td>S182P-09</td>
</tr>
</tbody>
</table>

- Bold: Standard components
- Italic: Not Available or Not Inserted

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