

S178 ver.2 Fusion Splicers

Hand-Held Core-Alignment Fusion Splicer



Features and Benefits

- **Internal battery charging**
- **Illumination lamp** lights up a wide area around V-grooves
- **User friendly LCD display** offers 4 different X/Y image layouts
- **Simplified splice result indicator** red / green icon
- **Rugged and compact handheld design** to endure harsh environmental conditions
- **Fast splice (7 sec)** at super low loss and Fast Heating (25 sec) ¹
- **200 cycles (Splicing & Heating)** with Internal batteries ²
- **Splice programs available for All METRO/LAN/FTTx fibers** including ultra bend-insensitive fibers (e.g. EZ-Bend™)
- **Supported Fibers types:** SM (ITU-T G.652.A,B,C,D), BIF (ITU-T G.657 A1, A2/B2, A3/B3) / MM (ITU-T G.651) / DS (ITU-T G.653) / NZDF (ITU-T G.655)
- Splicer is **compatible** with the **Seikoh Giken** and **Diamond** Splice-on-connector (SOC)
- **Easy maintenance** electrode replacement /mirror free alignment system
- **Easy Software upgrade** via the Internet
- **Simplified program fusion and heater programming**
- **Easily exchanged fiber holder systems** (Tight holder Removable fiber holder/SOC holder)
- **PC interface software** allows user manage splicing recipes and splicing results
- **Auto-start heater** oven option
- **Improved GUI** enhancing ease-of-use
- **Large memory** for storing 2,000 splice records and last 100 splice result images
- **RoHS compliant**

¹ By using semi-auto mode for splicing and pre-heating mode for heating.

² By using 2-batteries, semi-auto mode for splicing and regular mode for heating.

Overview

The S178A is equipped with a core alignment system that can complete a splice in 7 seconds (semiauto mode) and an integrated heater which can shrink a protection sleeve in 25 seconds (pre-heat mode). The USB 2.0 mini interface speeds up PC communication and image / video transfer, whilst enhancing reliability.



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Product Description

The S178A is fast and durable, it continues the FITEL tradition of quality and excellence by delivering precise and accurate splices even under rigorous field conditions.

Although the S178A is significantly smaller and lighter in weight than previous models, its canopy design, durable metal body frame and rubber protection corners provide robust protection. This enables use in demanding environments without compromising splicing performance. Along with its rugged durability, the splicer also offers convenience. An internal battery system allows up to 200 splicing cycles (splicing/heating) and an innovative, mirror-free alignment system reduces maintenance work.

The S178A is a versatile choice for a wide range of applications including FTTx, LAN, backbone, enterprise, long-haul installations, data-center and OEM. It is an excellent option for use in the conventional telecommunications industry, along with other industries (including oil and gas and outside broadcast).

S178A ver.2 NEW features

The S178A Hand-Held Core-Alignment Fusion Splicer has been enhanced and updated to version 2. The battery is automatically charged internally when connected to AC mains power even during operation. The new illumination lamp lights up a wide area around the V-grooves and helps operation in low light environment. The redesigned and strengthened heater simplifies the protection sleeve loading process.

Under Tough Environments

- The S178 ver.2 passed testing based on criteria below ³ :
 - Drop resistant – 76 cm drops from 5 different angles
 - Water resistant – IPX2 rating drip proof ⁴
 - Dust resistant – IP5X rating dust proof ⁵
- ³ Tests to the left were performed at Furukawa Electric Co., Labs, and do not guarantee that the machine will be undamaged under these conditions
- ⁴ IPX2 rating drip proof means that the machine can be exposed to 3 mm/min drip from 4 different angles with 15° tilt for 2.5 min each and still functions
- ⁵ IP5X rating dust proof means that the machine can be exposed to dust particles with a diameter of 0.1 to 25 µm for 8 hours and still functions.



Drop Resistant

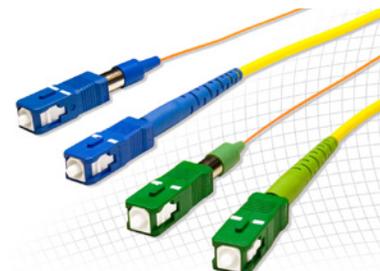
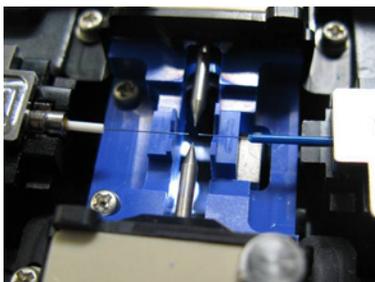


Water Resistant



Dust Resistant

Compatible with Splice-on-Connectors



FITEL Splicer SOC partners



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Product Specifications

Applicable Fibers	SM (ITU-T G.652.A,B,C,D), BIF (ITU-T G.657 A1, A2/B2, A3/B3) / MM (ITU-T G.651) / DS (ITU-T G.653) / NZDF (ITU-T G.655)
Cladding Diameter	80 ~ 150 μ m
Coating Diameter	160 ~ 1000 μ m
Fiber Cleave Length	5 - 16 mm
Average Splice Loss	5 ~ 16 mm
Splice Time	7 seconds (semi-auto mode), 9 seconds (regular mode)
Heat Time ⁶	25 seconds (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (Pre-heat mode) 31 seconds (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (regular mode)
Splice Programs	Max. 150
Automatic Splicing Selection	SM: SM, DSF, NZD, BIF/UBIF, MM: MM
Heat Programs	Max. 18
Automatic Heating Start	Available
Applicable Sleeves	20/40/60 mm
Fiber Holder	Tight Holder (loose tube applicable) or Removable Fiber Holder System
Tension Test	1.96 N
Splice Return Loss	60 dB or greater
Attenuation Splice Function	Intentional high splice loss of 0.1 dB to 10 dB (0.1 dB step) can be made for an inline fixed attenuator
Fiber Image Magnification	304X, 608X
Splice Result Storage	Max. 2,000
Image Capture Capacity	Last 100 images to be automatically captured + Up to 24 images to be stored permanently
Dimension	127W × 199D × 105H mm (not including shock absorber) 159W × 231D × 130H mm (including shock absorber)
Weight	1.9 kg (without battery), 2.3 kg (with two batteries)
Monitor	3.5" color LCD monitor
Data Output	USB ver.2.0 mini
Battery Capacity ⁷	Typical 80 splice/heat cycles with single battery ⁷ Typical 200 splice/heat cycles with 2 batteries ⁸
Altitude	5,000 m
Wind Protection	Max. wind velocity of 15 m/s
Operating Temperature	-10 to + 50 °C (without excessive humidity [Non-Condensing])
Storage Temperature	-40 to +60 °C (without excessive humidity [Non-Condensing])
Humidity	0% to + 95% RH (non-condensing)
Power Source	AC Input 100 to 240 V (50/60 Hz), DC Input 11 to 17 V without any change of hardware

⁶ The first heating after turning on the power can be longer than the usual heating time.

⁷ The number of the splicing and heating the machine can produce using a fully charged brand new battery at room temperature of 20°C, semi-auto mode for splicing and regular mode for Heating. Depending on the condition of the batteries and operation environment, the number can vary.

⁸ The number of the splicing and heating the machine can produce using 2 fully charged brand new batteries at room temperature of 20°C, semi-auto mode for splicing and regular mode for Heating. Depending on the condition of the batteries and operation environment, the number can vary.

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Standard Package

Item	P/N	Quantity
S178A Main Body	S178-A-A-0001	1
Hard Carrying Case	HCC-01	1
Battery Pack Depending on the package	S943B	1 or 2
Spare Electrodes	S969	1 pair
AC Adaptor For S178A and S958C	S979A	1
AC Cable Cord For S976A	-	1
Electrode Sharpener	D5111	1
Cleaning Brush	VGC-01	1
User Manual	FTS - 347	1
Tool Case	TCC-01	1



Ordering Number Form Code Syntax: S178A-X-Y

Variable	Category
X	Fiber Holder Type
Code	Description
1	16 mm Tight Holder S712T-016
2	10 mm Tight Holder S712T-010
3	Fiber Holder System



4 Spare Electrodes



7 Electrode Sharpener



8 Cleaning Brush



9 Tool Case

For additional information please contact your sales representative.

You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.

Fusion Splicer Customer Service, Training and Service Center

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Optional Components		
Item	P/N	Quantity
Soft Carrying Case	SCC-01	1
Battery Charger	S958C	1
AC Adapter for S958C	S977A	1
Cooling Tray	CTX-01	1
Angled Stand	AGS-01	1
Working Belt	WBT-01	1
USB Cable	USB-01	1
Car Cigarette Cable	CDC-01	1
Tripod Adapter	TPA-01	1
Tight Holder 16 mm Cleave Length	S712-T-016	1 pair
10 mm Cleave Length	S712T-010	1 pair
Fiber Holder 160 µm coated fiber	S712S-160	1 pair
250 µm coated fiber	S712S-250	1 pair
500 µm coated fiber	S712S-500	1 pair
900 µm coated fiber	S712S-900	1 pair
Fiber Holder Loose Tube Fiber (Left side)	S712S-LT-L	1 pair
Loose Tube Fiber (Right side)	S712S-LT-R	1 pair
SOC Holders		
Seiko Giken FC/SC connector (9 mm)	S712C-SGS9-L	1
Seiko Giken FC/SC connector (5 mm)	S712C-SGS5-L	1
Seiko Giken LC connector (9 mm)	S712C-SGL9-L	1
Seiko Giken LC connector (5 mm)	S712C-SGL5-L	1
Diamond E-2000/F-3000 connector	S712C-DM25-L	1
For Cordage		
Seiko Giken Cordage (5 mm)	S712C-DMC5-R	1
Seiko Giken Cordage (9 mm)	S712C-SGC9-R	1
Diamond Cordage (5 mm)	S712C-DMC5-R	1
Tool		
Diamond Mount	WTX-01	1
Smart Fuse		
Software Interface for Machine	SF-01	1