

S178 Fusion Splicers

Hand-Held Core-Alignment Fusion Splicer

NEW



The FITEL® S178 Hand-Held Core-Alignment Fusion Splicer is the latest, state-of-the-art addition to the S17X series of splicers. By combining speed, precision, durability and portability in one unit, the S178 Fusion Splicer ushers in an entirely new range of applications for core alignment splicing.

Equipped with a new alignment system that can save up to 20% on splicing time, the S178 Splicer's improved heating mechanism can also reduce protection sleeve shrink time by more than 30%. In addition, a newly incorporated USB 2.0 interface speeds PC communication and image/video transfer, while enhancing reliability.

Although the S178 Fusion Splicer is significantly smaller and lighter in weight than previous models, its canopy design, durable metal body frame and rubber protection corners provide robust protection, enabling use in demanding environments without compromising splicing performance. Along with its rugged durability, the splicer also offers convenience. A new battery system allows up to 200 splicing cycles (splicing/heating) before additional batteries are needed, and an innovative, mirror-free alignment system makes maintenance work a snap.

While the S178 Fusion Splicer is fast and durable, it continues the FITEL tradition of quality and excellence by delivering precise, accurate splices even under rigorous conditions in the field.

The S178 Fusion Splicer is your logical choice for a wide range of uses including FTTX, LAN, backbone, enterprise, long-haul installations, data-center and/or OEM applications. It is also an excellent option for use in the conventional telecommunications industry, along with other industries (including oil and gas).



Key Features

- **Rugged and compact handheld design** endures harsh environmental conditions
- **Fast splicing** (7 seconds) at super low loss and **fast heating** (25 seconds)¹
- **200 cycles** (splicing & heating) with new battery configuration
- **Available for all METRO/LAN/FTTX fibers** including ultra bend-optimized fibers (e.g. EZ-Bend® Fibers)
- **Splicer is compatible with** the OFS, Diamond² and Seikoh Giken³ Splice-on-Connectors (SOC)

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

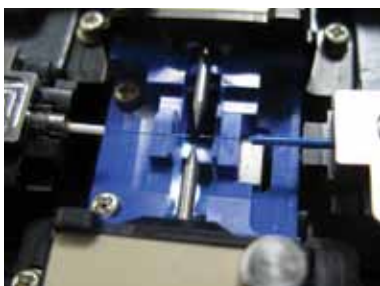
² Diamond is a registered trademark of Diamond SA

³ Seikoh Giken is a registered trademark of SEIKOH GIKEN CO., LTD

- **Easy maintenance** – Easy electrode replacement/ mirror-free alignment system
- **Easy software upgrade** via the Internet
- **Easily exchanged fiber holder systems** (tight holder/fiber holder/SOC holder)
- **PC interface software** to allow user management of splicing recipes and results

- **Auto-start** shrink sleeve oven feature
- **Improved GUI** to further enhance ease of use
- **Large memory** for storage of splice data (2,000) and images (100)
- **RoHS compliant**

Applicable for Splice-on-Connector



Under Tough Environments

The S178A passed testing based on criteria below ⁴ :

- **Drop resistance** – 76 cm drops from 5 different angles
- **Water resistance** – IPX2 rating drip proof (exposed to 3 mm/min drip for 10 mins with 15° tilt)
- **Dust resistance** – IP5X rating dust proof (exposed to dust particles with a diameter of 0.1 to 25 µm for 8 hours)

⁴ Above-listed tests were performed at Furukawa Electric Co. Labs, and do not guarantee that the machine will be undamaged under these conditions.



Drop Test



Water Test



Dust Test

STANDARD PACKAGE:

Item	Part Number	Qty	Remark
S178A Main Body	S178-A-A-0001	1	
Hard Carrying Case	HCC-01	1	
Spare Electrodes	S969	1 pair	
AC Adapter for S178	S976A	1	
AC Cable Cord	—	1	For S976A/S977A
Electrode Sharpener	D5111	1	
Cleaning Brush	VGC-01	1	
User Manual	FTS - 347	1	

SPECIFICATIONS:

Applicable Fibers	SMF, MMF, DSF, NZDSF, BIF/UBIF (bend-optimized fiber)
Fiber Cleave Length	5 – 16 mm for 250 μ m fiber, 10 -16 mm for 900 μ m tight buffer
Cladding Diameter	80 – 150 μ m
Coating Diameter	160 – 900 μ m
Typical Insertion Loss (Similar Fiber Splicing)	0.02 dB for SMF, 0.01 dB for MMF, 0.03 dB for NZDSF, 0.04 dB for EZ-Bend Fiber
Splice Programs	Up to 150
Automatic Splicing Selection	SM: SMF, DSF, NZDSF, BIF/UBIF (bend-optimized fiber) MM: MMF
Heat Program	Up to 18
Auto Heating Start	Available
Dimension	127 W x 199 D x 105 H mm (not including shock absorber) 159 W x 231 D x 130 H mm (including shock absorber)
Fiber Holding	Tight holder (loose tube applicable) or fiber holder system
Weight	1.9 kg (without battery), 2.3 kg (with two batteries)
Splice Time	7 seconds (semi-auto mode), 9 seconds (regular mode)
Applicable Sleeves	40/60 mm
Heating Time	25 seconds for 40 mm and 60 mm sleeves (pre-heating mode) 31 seconds for 40 mm and 60 mm sleeves (regular mode)
Return Loss	> 60 dB
Tension Test	1.96 N
Magnification	101x, 304x or 608x
Monitor	3.5" color LCD monitor
Video Output/Data Interface	USB 2.0
Splice Memory	Maximum 2000 splices
Image Capture Capacity	Last 100 images to be automatically captured + up to 24 images to be stored permanently
Display User Interface	Graphical user interface (GUI)
Battery Capacity	80 splice/heat cycles with single battery 200 splice/heat cycle with dual batteries
Displaying Language	20 languages (e.g. English, Spanish, Japanese, Chinese)
Operating Temperature	-10° C to +50° C (without excessive humidity)
Storage Temperature	-40° C to +60° C (without excessive humidity)
Power Source	AC 100 to 240V (50/60 Hz), DC input 11 to 17 V
Worktable	Available

OPTIONAL COMPONENTS:

Item	Part Number	Qty	Remark
Soft Carrying Case	SCC-01	1	
Cooling Tray	CTX-01	1	
Angled Stand	AGS-01	1	15 degree angled stand
Working Belt	WBT-01	1	
USB Cable	USB-01	1	
Car Cigarette Cable	CDC-01	1	
Transporter	TRP-01	1	
Cleaning Brush	VGC-01	1	For S976A/S977A
Tight Holder 10 mm Cleave length	S712T-010	1 pair	
Fiber Holder			
160 μm coating diameter fiber	S712S-160	1 pair	
250 μm coating diameter fiber	S712S-250	1 pair	
500 μm coating diameter fiber	S712S-500	1 pair	
900 μm coating diameter fiber	S712S-900	1 pair	
SOC Holders			
Seikoh Giken FC/SC connector	S712C-SG-009	1 pair	
Seikoh Giken LC connector (9 mm)	S712C-LC-009	1 pair	
Seikoh Giken LC connector (5 mm)	S712C-LC-005	1 pair	
Diamond E-2000 connector	S712C-DM-012	1 pair	
Diamond F-3000 connector	S712C-DM-025	1 pair	
SmartFuse	SF-01	1	Software interface for machine



Ordering Number Form

Code Syntax: S178A-X-Y

Variable	Category	Code	Remark
X	Fiber Holder Type	A	10 mm fixed tight holder S712T-010
		B	Removable fiber holder – 250 μm S712S-250
		C	Removable fiber holder – 900 μm S712S-900
		D	Removable fiber holders – 250 μm and 900 μm
Y	Number of Battery Pack (S943)	0	Without battery pack
		1	1 pack (with 1 S958 battery charger and 1 S977 AC adapter)
		2	2 packs (with 1 S958 battery charger and 1 S977 AC adapter)

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<http://www.ofsoptics.com>.

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