

# S123 Series

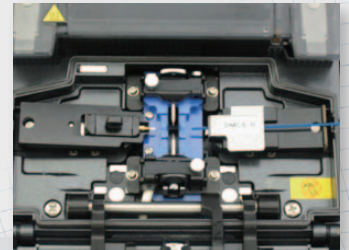
## Hand Held Fusion Splicer

### FITEL New Fusion Splicer

With its low profile and IP-52 rated super rugged body, the FITEL S123 series fusion splicer offers speedy operation in every splicing field, FTTx, LAN, backbone or long-haul installations.

Large battery capacity makes it possible to perform 70 cycles for S123C/M4 with a single battery, and 160 cycles for S123M8/M12 with two batteries.

Combining portability, power flexibility and field ruggedness, the S123 delivers fast and consistent splicing with outstanding mobility and extreme ease-of-use.



#### PRODUCT LINE UP

Model	Application
S123C-A	Splicing for single fiber (with Soft Case)
S123C-B	Splicing for single fiber (with Hard Case)
S123M4-A	Splicing for single to 4 ribbon fiber (with Soft Case)
S123M4-B	Splicing for single to 4 ribbon fiber (with Hard Case)
S123M8	Splicing for single to 8 ribbon fiber
S123M12	Splicing for single to 12 ribbon fiber



S123M8

S123M4

S123M12

S123C



## Key Features

- **IP-52 - Rugged and compact hand held design** for demanding environmental conditions
- **Fast splice (13 sec)** at low loss and **Fast Heating (25 sec)** for single fiber<sup>\*1</sup>
- **Simple operation** with Fixed V-groove
- **Splicer is compatible with the Seikoh Giken and Diamond Splice-on-connector (SOC)**<sup>\*2</sup>
- **70 cycles (Splicing & Heating)** for S123C/M4 with a single battery, and **160 cycles** for S123M8/M12 with two batteries<sup>\*3</sup>
- **Available for All METRO/LAN/FTTx fibers** including **ultra bend-insensitive fibers** (e.g. EZ-Bend)
- **Easy maintenance** - Toolless 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 manage splicing programs and results
- **Auto-start** shrink sleeve oven feature
- **Improved GUI** to further enhance ease-of-use
- **RoHS compliant**

<sup>\*1</sup> By using semi-auto mode for splicing and pre-heating mode for heating.

<sup>\*2</sup> S123M4/M8/M12 are compatible with Seikoh Giken 9 mm cleave length connector only.

<sup>\*3</sup> By using semi-auto mode for splicing and regular mode for heating.

## Under Tough Environment

S123 series passed criteria as below <sup>\*4</sup>

### Drop Resistance

76 cm drops from 5 different angles



### Water Resistance

IPX2 rating drip proof<sup>\*5</sup>



### Dust Resistance

IP5X rating dust proof<sup>\*6</sup>

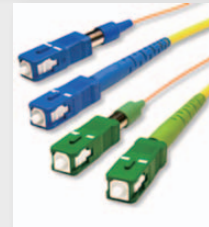
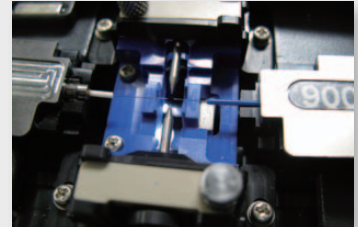


<sup>\*4</sup> Above tests were performed at Furukawa Electric Labs, and do not guarantee that the machine will be undamaged under these conditions.

<sup>\*5</sup> 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.

<sup>\*6</sup> 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.

### Compatible with Splice-on-connector (SOC)



### FITEL Splicer SOC partners



## SPECIFICATIONS

Applicable Fibers	SM (ITU-T G.652), MM (ITU-T G.651), DSF (ITU-T G.653), NZD (ITU-T G655), BIF/UBIF (Bend Insensitive Fiber ITU-T G.657)
Cladding Diameter	125 $\mu$ m
Coating Diameter	250 to 900 $\mu$ m for single fiber, 280 to 400 $\mu$ m for ribbon (thickness) [S123M4, S123M8, S123M12]
Fibers Cleave Length	5 to 10 mm [S123C], 10 mm [S123M4, S123M8, S123M12]
Average Splice Loss	SM: 0.05 dB, MM: 0.03 dB, DSF 0.08 dB, NZD 0.08 dB
Splice Time	Single fiber: 13 seconds Ribbon fiber: 15 seconds
Heat Time	Single fiber: 25 seconds (S922: 40 mm sleeve, S921: 60 mm sleeve) (Pre-heatmode) <sup>*7</sup> [S123C, S123M4] Ribbon fiber: 35 seconds (S924: 40 mm sleeve) (Pre-heat mode) <sup>*7</sup>
Splice Programs	Max. 150
Heat Programs	Max. 18
Automatic Heating Start	Available
Applicable Sleeves	20/40/60 mm
Fiber Holding	Tight holder (Loose tube applicable) or Fiber holder system [S123C] Fiber holder system [S123M4, S123M8, S123M12]
Tension Test	1.96 N
Return Loss of Splice	60 dB or more
Fiber Image Magnification	58X [S123C], 48X [S123M4], 28X [S123M8], 20X [S123M12]
Splice Memory	Max. 1500 [S123C, S123M4], Max. 1000 [S123M8, S123M12]
Image Capture Capacity	Last 100 images to be automatically captured + Up to 24 images to be stored permanently
Dimension	S123C, S123M4: 127W $\times$ 199D $\times$ 81H mm (not including shock absorber) 159W $\times$ 231D $\times$ 104H mm (including shock absorber) S123M8, S123M12: 127W $\times$ 199D $\times$ 105H mm (not including shock absorber) 159W $\times$ 231D $\times$ 130H mm (including shock absorber)
Weight	S123C, S123M4: 1.4 kg (without battery), 1.6 kg (with S943B battery) S123M8, S123M12: 1.6 kg (without battery), 2.0 kg (with two S943B batteries)
Monitor	3.5" color LCD monitor
Data Output	USB ver. 2.0 mini
Displaying Language	20 languages
Battery Capacity <sup>*7</sup>	Typical 70 splice/heat cycles with S943B battery [S123C, S123M4] <sup>*8</sup> Typical 160 splice/heat cycles with two S943 batteries [S123M8, S123M12] <sup>*9</sup>
Wind Protection	Max. wind velocity of 15 m/s.
Operating Temperature	-10 to 50°C (without excessive humidity)
Storage Temperature	-40 to 60°C (without excessive humidity)
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

\*7 The first heating after turning on the power can be longer than usual heating time.

\*8 The number of the splicing and heating the machine can produce using a full charged battery at room temperature of 20°C, semi-auto mode for splicing and regular mode for heating. Depending on the condition of the battery and the operation environment, the number can vary.

\*9 The number of the splicing and heating the machine can produce using two full charged 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 the operation environment, the number can vary.



## STANDARD PACKAGE

Item	P/N	Quantity					
		S123C-A	S123C-B	S123M4-A	S123M4-B	S123M8	S123M12
① S123C Main Body	S123-C-A-0001	1	1	—	—	—	—
① S123M4 Main Body	S123-M4-A-0001	—	—	1	1	—	—
① S123M8 Main Body	S123-M8-0001	—	—	—	—	1	—
① S123M12 Main Body	S123-M12-0001	—	—	—	—	—	1
② Soft Carrying Case	SCC-01	1	—	1	—	—	—
③ Hard Carrying Case	HCC-01	—	—	—	—	1	1
③ Hard Carrying Case	HCC-02	—	1	—	1	—	—
④ Battery Pack	S943B	1	1	1	1	1 or 2	1 or 2
⑤ Battery Charger	S958B	1	1	1	1	1	1
⑥ Spare Electrodes	S969	1	1	1	1	1	1
⑦ AC Adaptor for S123C/M4	S976A	1	1	1	1	1	1
⑧ AC Adaptor for S958B	S977A	1	1	1	1	1	1
⑨ AC Cable Cord	—	2	2	2	2	2	2
⑩ Electrode Sharpener	D5111	1	1	1	1	1	1
⑪ Cleaning Brush	VGC-01	1	1	1	1	1	1
⑫ Fiber Reformer (4)	S122-X-A-0004	—	—	1pair	1pair	—	—
⑫ Fiber Reformer (8/12)	S122-X-A-0008	—	—	—	—	1pair	1pair
User Manual	—	1	1	1	1	1	1



## OPTIONAL COMPONENTS

Item	P/N	Quantity
① Soft Carrying Case	SCC-01	1
② Cooling Tray	CTX-01	1
③ Angled Stand	AGS-01	1
④ Working Belt	WBT-01	1
⑤ USB Cable	USB-01	1
⑥ Car Cigarette Cable	CDC-01	1
⑦ Tight Holder		
16 mm Cleave length	S712T-016	1pair
10 mm Cleave length	S712T-010	1pair
⑧ Fiber Holder		
250 μm coating diameter fiber	S712S-250	1pair
500 μm coating diameter fiber*10	S712S-500	1pair
900 μm coating diameter fiber	S712S-900	1pair
2 Ribbon Fiber Holder	S712A-002	1pair
4 Ribbon Fiber Holder	S712A-004	1pair
8 Ribbon Fiber Holder	S712A-008	1pair
12 Ribbon Fiber Holder	S712A-012	1pair
Loose Tube Fiber (Left side)	S712S-LT-L	1pair
Loose Tube Fiber (Right side)**11	S712S-LT-R	1pair
⑨ SOC Holders		
<For Ferrule>		
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™ LC/SC connector	S712C-DM25-L	1
<For Cordage>		
Seiko Giken Cordage (5 mm)	S712C-SGC5-R	1
Seiko Giken Cordage (9 mm)	S712C-SGC9-R	1
Diamond Cordage (5 mm cleave, 1.8~3 mm cordage)**12	S712-LT-R	1
<Tool>		
Diamond Mount	WTX-01	1
Smart Fuse	SF-01	1
Software Interface for Machine		



③ Angled Stand in Action    ④-1 Working Belt in Action    ④-2 Working Belt in Action

\*10 Used for 400-500 μm coating diameter fiber.

\*11 Also work as diamond cordage holder.

\*12 Also work as loose tube fiber holder (R).

Furukawa Electric Group strives to develop environmentally considerate products.



### eFriendly Logo Mark

This logo mark indicates that the products and services satisfy the standards of environmentally friendly products of the Furukawa Electric Group.



Our Group has configured the environmental management system at each of our plants worldwide, and acquired ISO14001 certification.

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