

# AI-12

## OPTICAL FIBER FUSION SPLICER

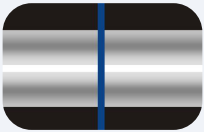
Suitable for medium to long-distance trunk fiber optic cable fusion projects

### 3

#### golden standards

#### ▶ 1. The fiber core is "visible":

Fiber core is visible during the whole process  
Alignment effect is visible to the naked eye



#### ▶ 2. "True Fiber Core" Display:

Splicing loss can be verified

**0.01**db

#### ▶ 3. "Accurate" core alignment:

Stable output under all operating conditions  
Accuracy remains unaffected in extreme environments

**H 5000m**  
**-25°C**



**0.05**  $\mu\text{m}$

Core alignment  
accuracy



Six motors



Fiber core  
alignment

**6s**

6s splicing

**15s**

15s heating

**OPM**

Within OPM  
function

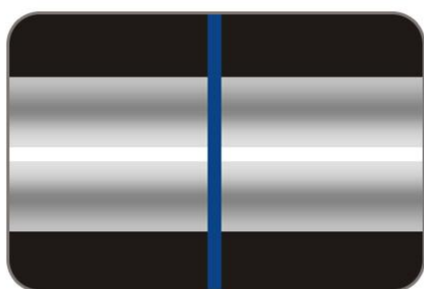
**VFL**

Within VFL  
function

Signal fire AI-12 trunk line fiber fusion splicer adopts the latest and most cutting-edge patented technology of the fusion splicer, combined with top-notch hardware and the most advanced algorithms, with an astonishing fiber precision of  $0.05 \mu\text{m}$ , which can adapt to long-distance fiber fusion splicing projects in all temperature and all domain environments. Allowing you to achieve exceptional returns with the most cost-effective investment and a relaxed and enjoyable experience.

# CAN SEE CLEARLY, ACCURATELY AND SPLICE STEADILY

Splice once and 'become' once, Almost zero rework, Work harder and earn more money, and pass the inspection of the main line once!



**320x**  
MAGNIFICATION

Automatic fiber type identification

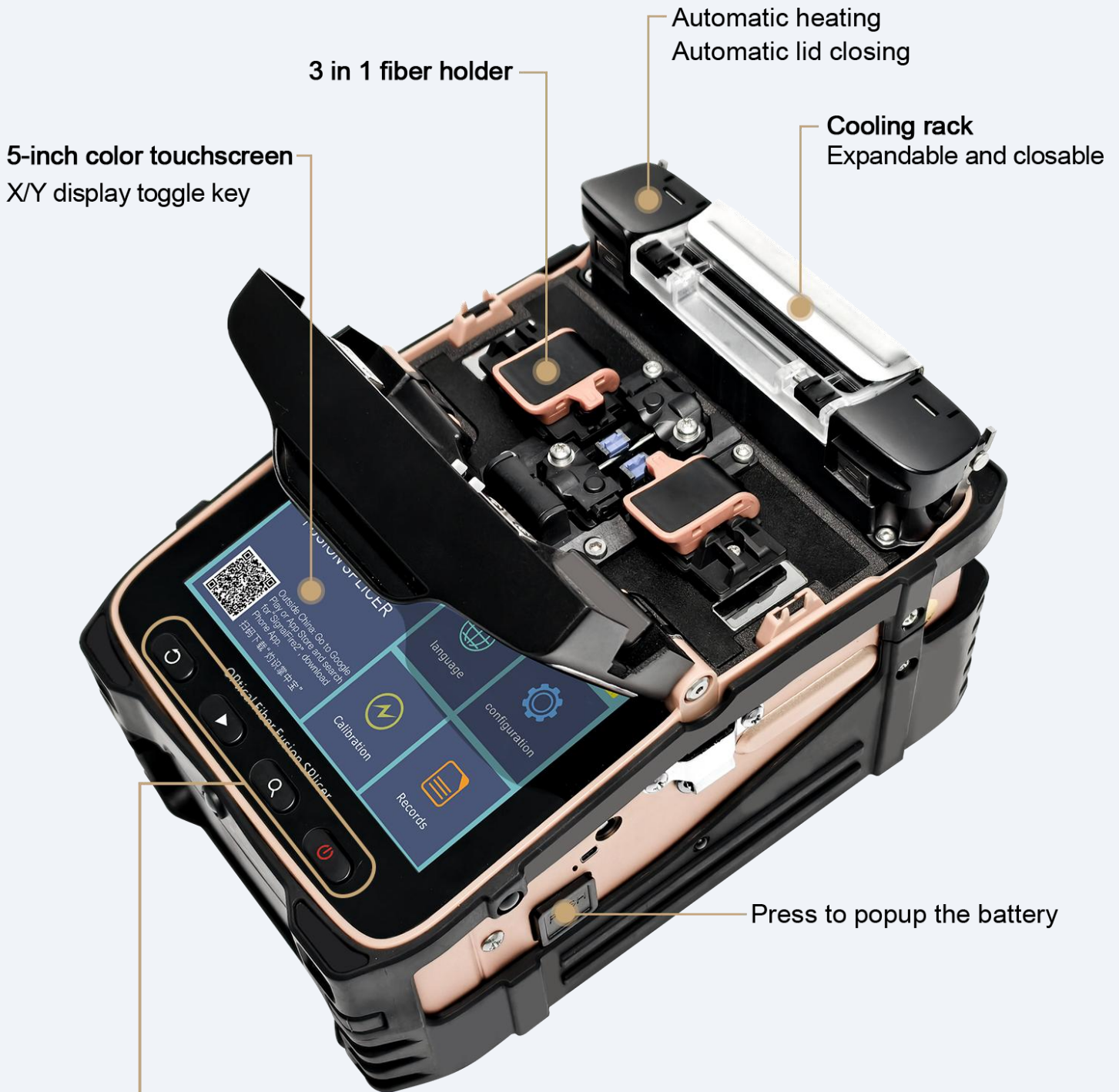
The fiber core can be seen very clearly

One thousandth of a hair gap can be recognized at a glance! Accurate, visible!



# WITH MICRON-LEVEL CRAFTSMANSHIP

Defining high standards of splicing fiber



Reset



Continue



Magnification key

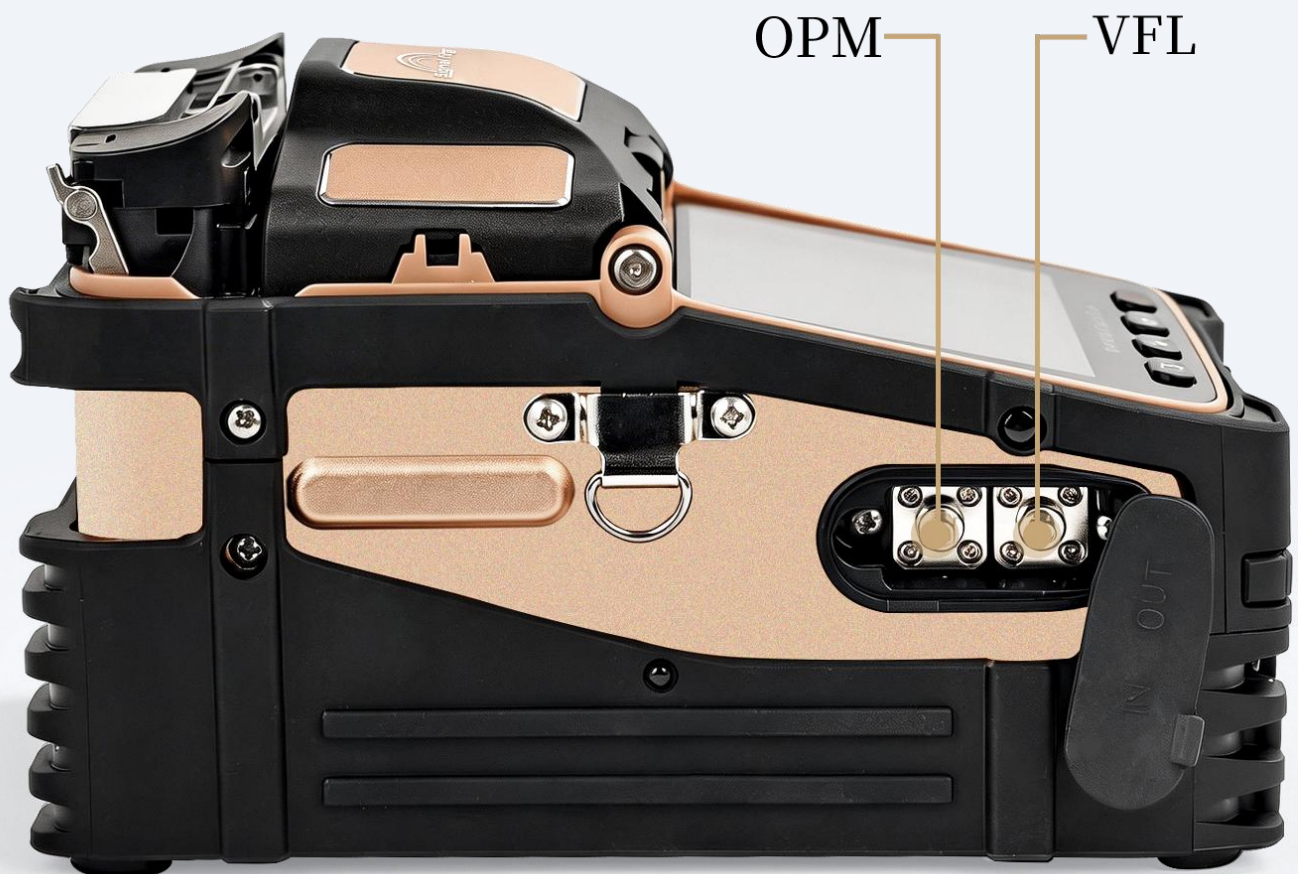


Power button

# SPlicing AND TESTING ARE COMPLETED IN ONE MACHINE

making on-site construction more efficient

Within VFL and OPM function



Effectively measure connection losses, verify continuity, and help evaluate fiber link transmission quality

**OPM**

**Switch between ten states**

Wavelength: 850nm、1300nm、1310nm、1490nm、1550nm、1625nm、980nm、1270nm、1577nm、1650nm

**VFL**

**Switch between three states**

power: 15mW, 2Hz flashing and steady on mode

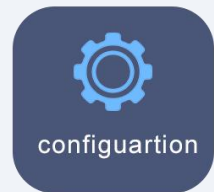
# One click switch to local language

Zero obstacles, no 'picking' people

5-inch color touchscreen



language



configuration



calibration



records

## 12 LANGUAGES TO SWITCH FREELY

Multilingual Settings, covering the global market



Chinese

Russian

English

French



Ukrainian

Turkish

Italian

Thai



Portuguese

Spanish

Arabic

Polish

Fiber type

<input type="checkbox"/> SM	<input type="checkbox"/> MM	<input checked="" type="checkbox"/> AUTO	<input type="checkbox"/> G654E
<input type="checkbox"/> BIF	<input type="checkbox"/> 80um	<input type="checkbox"/> NZ	<input type="checkbox"/> DS

Auto power off  15min

Heating time  15S

Heater Pre-heating

Pause splicing process

Auto-focus

Activate battery

Self test

Angle check  3.0°

Endface check

Basic  Standard  Precision

Tensile test

A whole day in the wilderness  
no need to carry a charging power source

# Go into battle light and not suffer!



Charging time  $\leq 3.5$  hours

**7800mAh**  
**lithium battery**

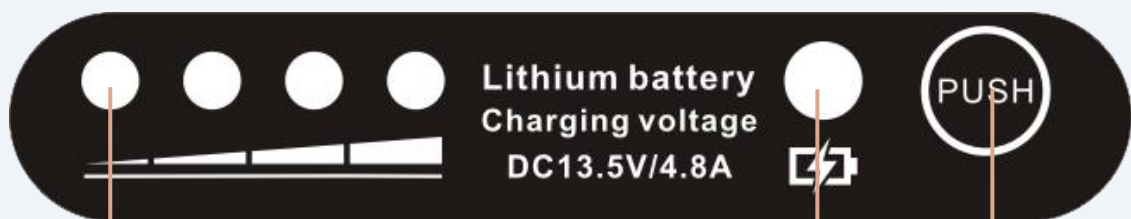
**260**

In full state, 260 cores  
can be continuously  
fused and heated



## Three charging ports

The battery can be removed for charging, Type-C supports bidirectional charging and discharging (can charge mobile phones), with a maximum power of 45W.



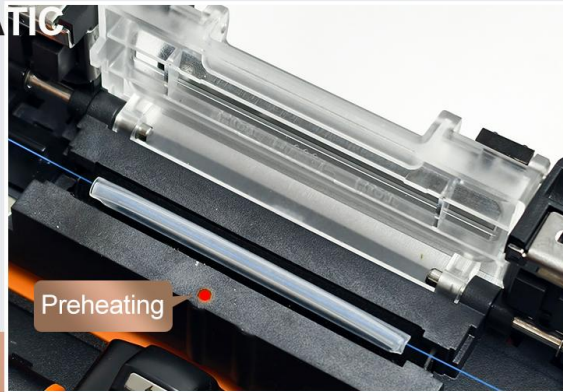
Power indicator light

Charge indicator light  
Indicator light turns off  
when fully charged

Press to check  
the power level

## HEATING PART AUTOMATIC LID CLOSING ACTIVATE PREHEATING FUNCTION IN WINTER

The fiber fusion is successful. At the same time as opening the windproof cover, the heating tank automatically starts preheating for 6 seconds.



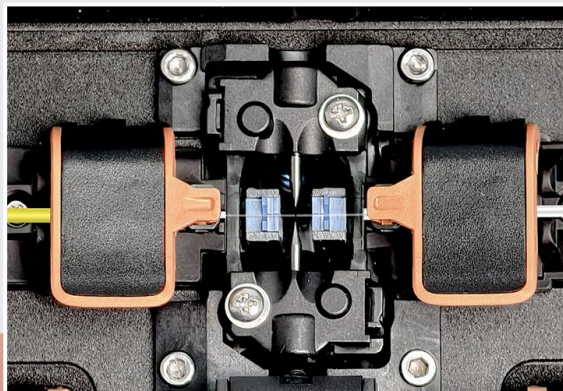
## COOLING RACK INTEGRATION NO NEED TO SEARCH AROUND

Expandable and closable



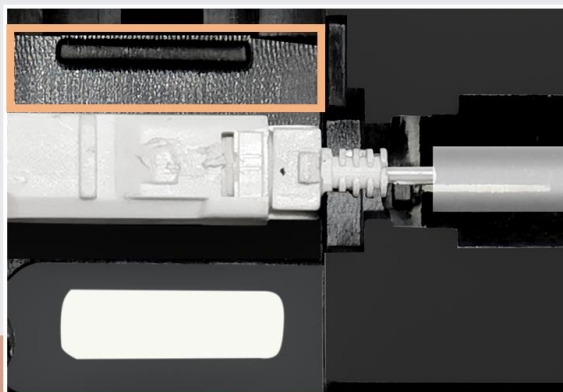
## 3 IN 1 FIBER HOLDER

SM, MM, bare fiber, pigtail,  
Drop cable , multi fiber cable



## HEATING PART COMPATIBLE WITH SOC FIBER

SOC Fiber: Push up  
Ordinary fiber: Push down



Full temperature and global environment adaptation

Can all projects across the country accept

# DIFFERENT SCENARIOS



-25°C



5000m above  
sea level



Dry and dusty



*Stable fusion without lagging*



It has been sold in hundreds of countries and regions around the world



# Clean, dignified, and effortless work

The thoughtful design that has obtained patents reflects respect and care for workers



Stool can bear: **100KG**



Do not need to take out the splicer machine from the toolbox while working

Two layers:  
Tool layer&Accessory layer



## Toolbox with stool

Patent no.ZL 2016 3 0402585.X

# Basic parameter

<b>Fiber alignment</b>	Core/cladding
<b>Motor number</b>	6 motors (accurate of fiber alignment: 0.05μm)
<b>Splicing time</b>	6s
<b>Heating mode</b>	15s, can be customized according to the external environment
<b>Fiber type</b>	Single-mode fiber (SMF/G.652), multimode fiber (MMF/G.651), dispersion-shifted fiber (DSF/G.653), G.654 fiber, non-zero dispersion-shifted fiber (NZ-DSF/G.655), and bend-insensitive fiber (BIF/G.657); suitable for splicing bare fiber, pigtail, drop fiber, patch cord, and invisible fiber.
<b>The cladding diameter</b>	80-150 μm
<b>Splicing loss</b>	0.02dB (SM) 、0.01dB (MM) 0.04dB (DS/NZDS)
<b>Fiber identification</b>	Automatic fiber recognition (in AUTO mode)
<b>Splicing mode</b>	Automatic focusing core alignment, conventional/high precision welding
<b>Splicing way</b>	Automatic, semi-automatic
<b>Fiber holder</b>	Three in one fixture, no need to change, suitable for single/multi-mode, multi-core cable/bare fiber, tail fiber, jumper fiber, drop cable
<b>VFL</b>	The machine comes with: power: 15mW, 2Hz flashing and steady on mode
<b>OPM</b>	Wavelength: 850nm、1300nm、1310nm、1490nm、1550nm、1625nm、980nm、1270nm、1577nm、1650nm/Measurement range: -50+26dbm Absolute error: <0.3dB (-50dbm ~+3dBm range)
<b>Battery capacity</b>	7800mAh large capacity lithium battery charging time ≤3.5; It can continuously weld and heat about 260 cores
<b>Magnification</b>	320x (X or Y axis single display) , 200x (x and Y axis dual display)
<b>Fiber diameter</b>	Coating diameter: 80-150μm/Coating diameter: 100-1000μm
<b>Cutting length</b>	Coating layer 250μm below: 8-16mm/coating layer 250-1000μm: 16mm
<b>Heat shrink tube</b>	60mm、50mm、40mm、25mm
<b>Tensile testing</b>	standard 2N
<b>Display</b>	5-inch color touchscreen
<b>Boot time</b>	1s, boot can enter the working mode
<b>Data is stored</b>	Unlimited, machine storage 1000 groups, the excess part can be stored in the server, can export data.
<b>Wireless communication</b>	Based on bluetooth 4.2 protocol standard, the working band is 2.4GHz, the maximum transmission range is 60m
<b>Software upgrade</b>	Mobile phone APP Internet update, enable Bluetooth synchronization upgrade machine software
<b>Management function</b>	The equipment owner can be bound as the highest authority, and can remotely view the welding records, welding time, loss, etc. through the mobile phone APP. The number of welding times or working time of the equipment can be set. The manager can effectively manage a single or multiple equipment.
<b>Return loss</b>	Better than 60 db
<b>Product protection</b>	Waterproof, dustproof and fall proof
<b>Charging method</b>	Three charging ports: The battery can be removed for charging, Type-C supports bidirectional charging and discharging (can charge mobile phones), with a maximum power of 45W.
<b>Power supply</b>	Input AC100-240V 50/60Hz, output DC13.5V/4.8A, the current power mode can be identified, real-time monitoring of the current battery level
<b>The work environment</b>	Temperature: -15 ~ +50°C, humidity: < 95%RH (no condensation), working altitude: 0 ~ 5000m, maximum wind speed: ≤15m/s

# Randomly configure **A** (recommended) and choose one of them



- ① Toolcase    ② Fusion Splicer    \*③ versatile fighter(Integrated fiber stripper and cleaver)
- ④ 10 cleaning cotton balls    ⑤ Spare electrode    ⑥ Alcohol Bottle    ⑦ Brush
- ⑧ Toolbox strap    ⑨ Belt    ⑩ Power Adapter    ⑪ key    ⑫ Allen key    ⑬ Fiber for ARC
- ⑭ User's manual / packing list / Warranty Card / Quality Certificate

\*③ Versatile Fighter (Integrated fiber stripper and cleaver) Functions: Fiber cleaver / Three-port Miller Stripper / Fiber Pliers / Fiber Cleaning / Kevlar Fiber Scissors

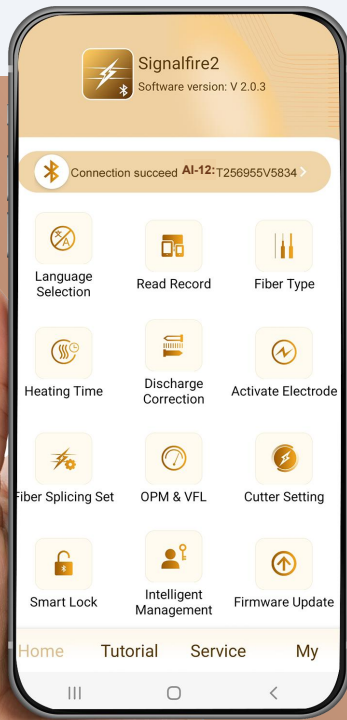
# Randomly configure **B** and choose one of them



- ① Toolcase    ② Fusion Splicer    \*③ Signal fire stripper    ④ 10 cleaning cotton balls
- ⑤ S15 One-step Fiber Cleaver    ⑥ Spare electrode    ⑦ Alcohol Bottle    ⑧ Brush
- ⑨ Toolbox strap    ⑩ Belt    ⑪ Power Adapter    ⑫ key    ⑬ Allen key    ⑭ Fiber for ARC
- ⑮ User's manual / packing list / Warranty Card / Quality Certificate

# SUPPORT BLUETOOTH BLUETOOTH CONNECTION

Intelligent interaction, avoid tedious

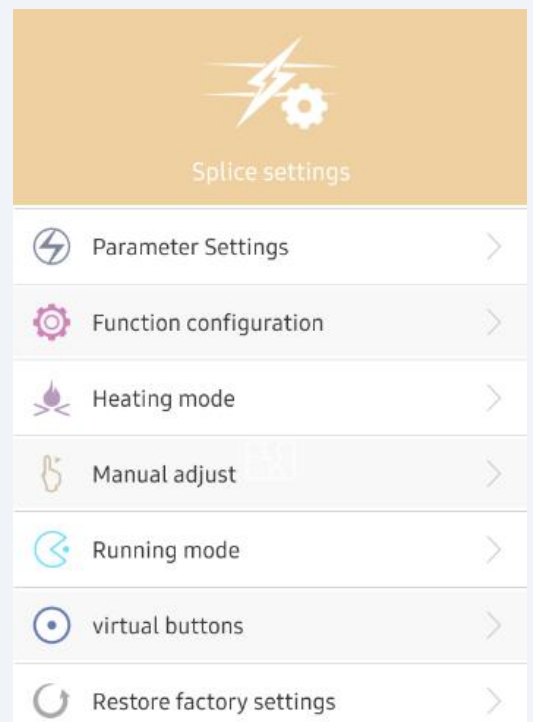


## Bluetooth™

Scan the QR code of the welding machine startup screen to download the Mobile APP The phone connects to the splicer via Bluetooth



- ✓ Welding record can be read through mobile phone, and the data can be exported;
- ✓ You can set the parameters of the welding machine, such as selecting the machine language, changing the heating time, selecting the fiber optic alignment mode, etc;
- ✓ You can manage the welding machine, such as setting the use time of the machine, welding times, etc;
- ✓ Upgrade the phone APP, bluetooth connected to the machine to upgrade the machine software;



Most of the menu settings for the fusion splicer can be operated through touch screen on the device Okay, but the mobile app has more comprehensive applications. Please download it!

# Size and weight



135mm  
198mm  
122mm

Machine weight

**2.10kg** (with battery)

**1.68kg** (without battery)



270mm  
237mm  
293mm

Toolbox weight

**6.95kg**

(including machine  
and accessories)



330mm  
310mm  
370mm

Total weight

**8.20kg**

## SERVICE COMMITMENT

**Three years warranty, but these circumstances are not within the scope of this provision.**

01. Except for the cleaver, miller clamp, stripping pliers, fiber holders and other tools whose life depends on the frequency of use and the use of the environment. Also electrodes are consumption material which are not in the warranty.

02. Battery and power adapter are warranty for one year, it is in free warranty where it is damaged or can not be charged in one year.



Signal Fire Technology Co., Ltd. is a high-tech joint-stock enterprise specializing in the research and development, production, and sales of communication equipment, with a registered capital of 10 million. It is a national high-tech enterprise. Our main products include fiber optic fusion splicers, electric fiber cleaver, OTDR (Optical Time Domain Reflectometer), and 9-in-1 optical fiber stripper. They are widely used in the construction, maintenance, emergency repair, security monitoring, and research and teaching of optical cable lines in telecommunications, mobile, China Unicom, radio and television operators, post and telecommunications, railway, engineering companies, and public institutions.





The factory is located in Chengdu High tech International Enterprise Port, with a modern production factory and standardized office buildings. We have passed the ISO9001 international quality management system certification, and our products have passed the EU CE, ROHS. International certifications such as FCC in the United States and UKCA in the United Kingdom have been passed by the National Institute of Quality Supervision and Inspection, China Academy of Information and Communications Technology.







The qualified testing of Taier Laboratory has obtained nearly a hundred domestic and international patents at the same time. The "Signal Fire" series products have been sold to over 100 countries and regions including North America, South America, Europe, Africa, and Asia, and have received unanimous praise from customers.



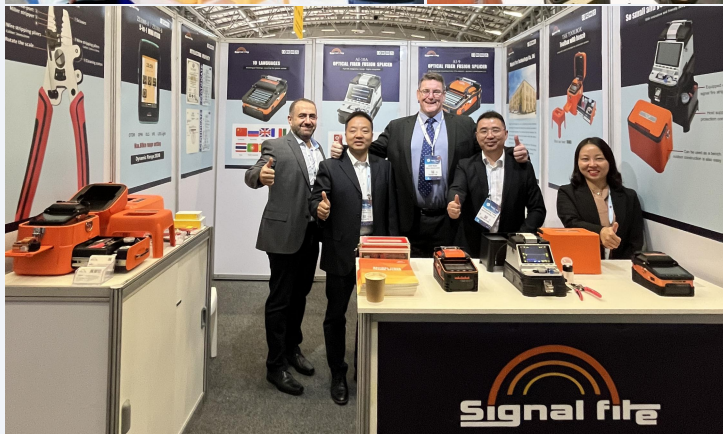
# Operator winning bid brand



Telecom installation and maintenance skills competition, Signal fire fusion splicer excellent performance, won the group first prize



# Exhibition photos



# Product testing certificate

Signal Fire Technology Co., Ltd. has passed the ISO9001 international quality management system certification. The product has passed international certifications such as the CE, RoHS, the United States FCC, and UKCA in the United Kingdom, and passed the qualified test through National Quality Supervision Institute, China Xintong Institute, and Tel Laboratory. At the same time, we obtained nearly 100 patents.

CERTIFICATE



**CERTIFICATE**  
Of Conformity  
Directive 2014/53/EU  
On The Radio Equipment Directive

**Certificate No.:** AT18220WC202819  
**Certificate Holder:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liando U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
**Manufacturer:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liando U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
**Product Name:** OPTICAL FIBER FUSION SPLICER  
**Model No.:** AI-9, AI-6C, AI-6V, AI-7C, AI-8C, AI-8X, AI-7V, AI-X, S9  
**Trade Mark:** Signal fire  
**Rating:** Input: 13.5V/4.8A DC (with DC 11V, 7800mAh Battery inside)

The radio equipment meets the following essential requirements	Complied
Article 3(1)(a) ■ Safety EN IEC 62368-1:2020/A11:2020	Yes
Article 3(1)(a) ■ Health EN 50683: 2017; EN 62479: 2010	Yes
Article 3(1)(b) ■ EMC ETSI EN 301 488-1 V2.2.3 (2019-11) ETSI EN 301 488-17 V2.2.4 (2020-09)	Yes
Article 3(2) ■ Radio ETSI EN 300 328 V2.2.2 (2019-07)	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Certified by  
  
 Jan. 03, 2023  
 Date  
 Kingkong Jin

The CE Marking may only be used if all relevant and effective EU Directives are complied with




Shenzhen Anbotek Compliance Laboratory Limited  
 1/F, Building D, Sogood Science and Technology Park, Samwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
 Tel: (86)755-26066440 Fax: (86)755-26014772  
 Http://www.anbotek.com Email: service@anbotek.com

CE

CERTIFICATE



**CERTIFICATE**  
Of Conformity  
Radio Equipment Regulations 2017  
(SI 2017 No. 1206)

**Certificate No.:** AT18220WC202820  
**Certificate Holder:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liando U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
**Manufacturer:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liando U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
**Product Name:** OPTICAL FIBER FUSION SPLICER  
**Model No.:** AI-9, AI-6C, AI-6V, AI-7C, AI-8C, AI-8X, AI-7V, AI-X, S9  
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CHAPTER 1 (General)(1)(a) ■ Health BS EN 50683: 2017; BS EN 62479: 2010	Yes
CHAPTER 1 (General)(1)(b) ■ EMC ETSI EN 301 488-1 V2.2.3 (2019-11) ETSI EN 301 488-17 V2.2.4 (2020-09)	Yes
CHAPTER 1 (General)(2) ■ Radio ETSI EN 300 328 V2.2.2 (2019-07)	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Certified by  
  
 Jan. 03, 2023  
 Date  
 Kingkong Jin

The UKCA Marking may only be used if all relevant and effective UK Regulations are complied with




Shenzhen Anbotek Compliance Laboratory Limited  
 1/F, Building D, Sogood Science and Technology Park, Samwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
 Tel: (86)755-26066440 Fax: (86)755-26014772  
 Http://www.anbotek.com Email: service@anbotek.com

UKCA

TCB

GRANT OF EQUIPMENT AUTHORIZATION

Certification

Issued Under the Authority of the Federal Communications Commission

By:

LGAI Technological Center S.A. (APPLUS)  
 Ronda de la Font del Carme, s/n <BR>P.O. Box 08193, Barcelona, Spain

Date of Grant: 01/17/2024  
 Application Dated: 01/17/2024

TCB

Signal Fire Technology Co., Ltd.  
 No. B-6 Qingyang Zone, Jiaolong Industrial Park  
 Qingyang District, Chengdu, China  
 Chengdu, China  
 Attention: Jason Yang

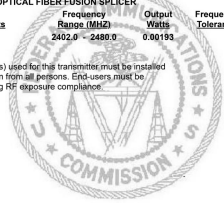
**NOT TRANSFERABLE**

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

**FCC IDENTIFIER:** 2AB98-AI-10A  
**Name of Grantee:** Signal Fire Technology Co., Ltd.  
**Equipment Class:** Digital Transmission System  
**Notes:** OPTICAL FIBER FUSION SPLICER

FCC Rule Parts	Frequency Range (MHz)	Output Watts	Frequency Tolerance	Emission Designer
15C	2402.0 - 2489.0	0.001W		

Output power listed is conducted. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons. End users must be provided with operating procedures for satisfying RF exposure compliance.

  
 FEDERAL COMMUNICATIONS COMMISSION

FCC



**QUALITY MANAGEMENT SYSTEM CERTIFICATE**

Certificate No.: 11423Q45347R2M

This is to certify that the Quality Management System of

**SIGNAL FIRE TECHNOLOGY CO., LTD.**

Unified Social Credit Code: 91510100072411028D

Registered Address: No. 1111 Changsheng Bridge, Hongguang Town, Small and Micro Enterprise Innovation Park, North Area of Chengdu Modern Industrial Port, Pidu District, Chengdu

Production Office Address: Building 18, Chengdu High-tech International Enterprise Park, Liando U Valley, No. 1111 Changsheng Bridge Road, Pidu District, Chengdu City, Sichuan Province, China

Has been audited to conform to the following Quality Management System standard

**GB/T19001-2016/ISO9001:2015**

The Applicable Scope

The production of optical fiber fusion splicer

Date of initial issuance: Aug. 22, 2017  
 Date of issuance: Jul. 11, 2023  
 Date of expiry: Jul. 31, 2026

Issued by: *Wu Jinyun* Beijing East Allreach Certification Center Co., Ltd.



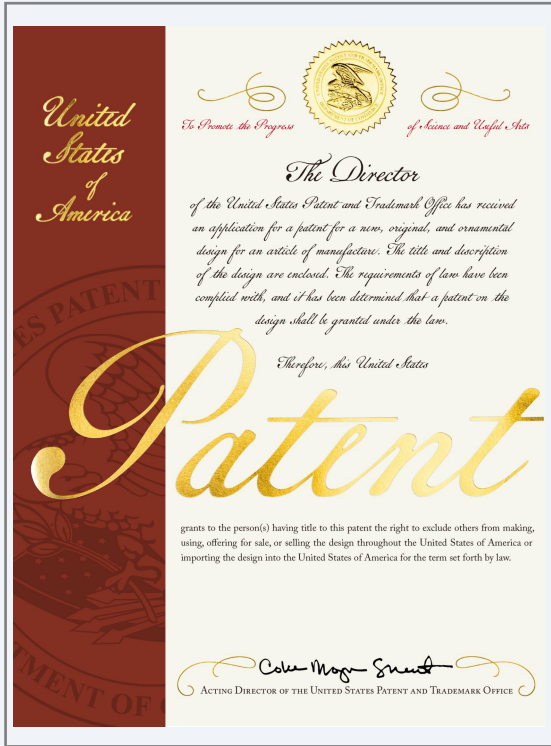


中国认证认可协会  
 北京东阿莱奇认证中心有限公司  
 MANAGEMENT SYSTEM  
 CNAS C114-M

The certificate will remain valid only if the certified organization accepts surveillance audits or regular re-audits and is audited to be qualified. The information of this certificate is available at EACC website (www.eacc.com.cn) and CNCA's official website (www.cnca.gov.cn), and it's also available by entering the QR Code in the lower right corner.  
 Address: 3rd Floor, No. 123 Building, No. 17, Jingdeguang Street, Jingde Science & Technology Industrial Base, Tangshan Park of Zhongguancun Science & Technology Zone, Tangshan District, Beijing 101302

ISO9001

# International Patent



US Design Patent Certificate



European PCT Patent

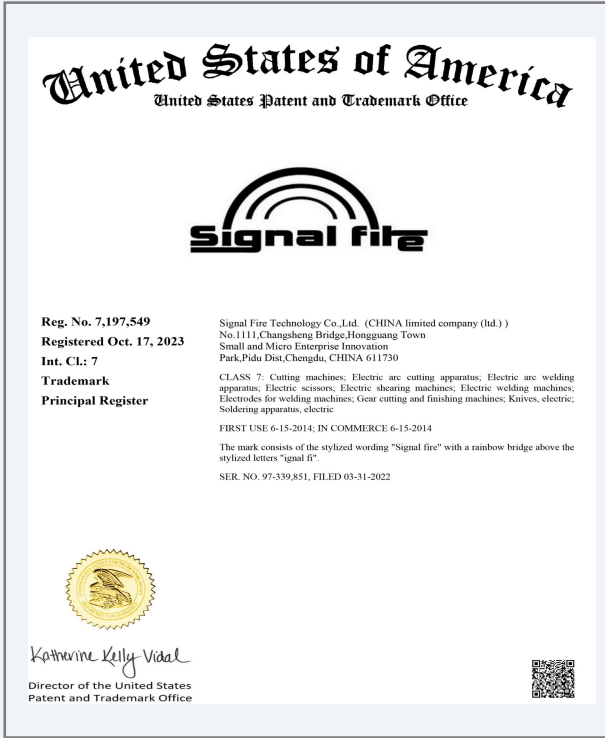


European Unified Patent



EU design patent

# International trademark



U.S. Trademark



EU trademark



Australian trademark



Russian trademark

