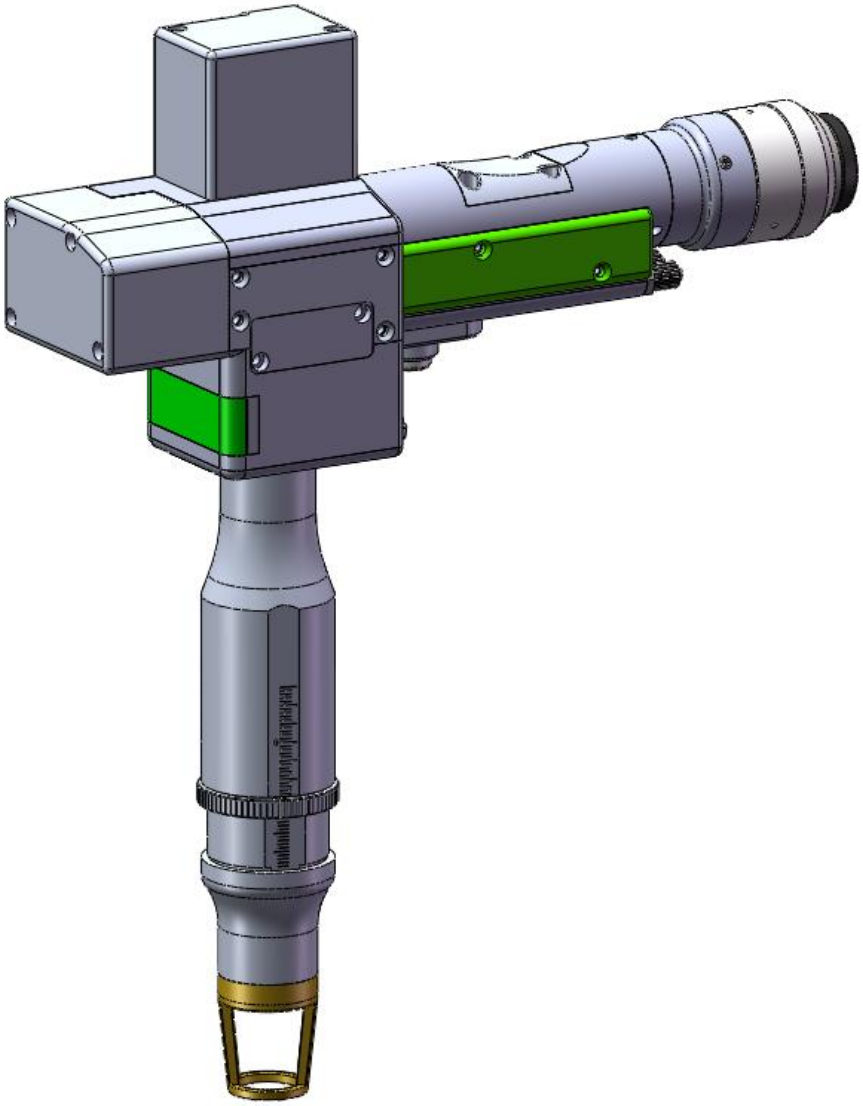
Shenzhen RelFar Intelligent Technology Co., Ltd.

FWH20-ES10A-V4 Intelligent double swing hand holding energy storage welding head



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Introduction

Thanks for choosing our products!

To ensure you an overall understanding about this product, the manual has made a detailed introduction on features, structure, technical parameters, instructions and maintenance of this product. Before using the product, please read the manual carefully to help you use it better.

For the constant renovation of function for the product, I want to apologize for that there may be differences between the product and the manual. If you have any question when using it, please call us in time. We will help you as possible as we can.

Table of Contents

Chapter 1 Overview

1.1 Product parameter

Name	Intelligent double swing hand holding energy storage welding head				
Type	FWH20-ES10A-V4				
Fiber interface	QBH				
Wavelength scope	1070 ± 20nm				
Rated Power	≤3000W				
Collimation focal length	50mm				
Focus focal length	200mm				
Scanning speed	20000mm/s				
Scanning type	○	▭	—	֍	〓
Scanning range	ϕ20mm	L40mm*W4mm	L40mm	ϕ20mm	L40mm*W4mm
Scanning range	≥0.5～0.8Mpa				
Scanning type	Φ22				
Auxiliary pressure	1.26Kg				

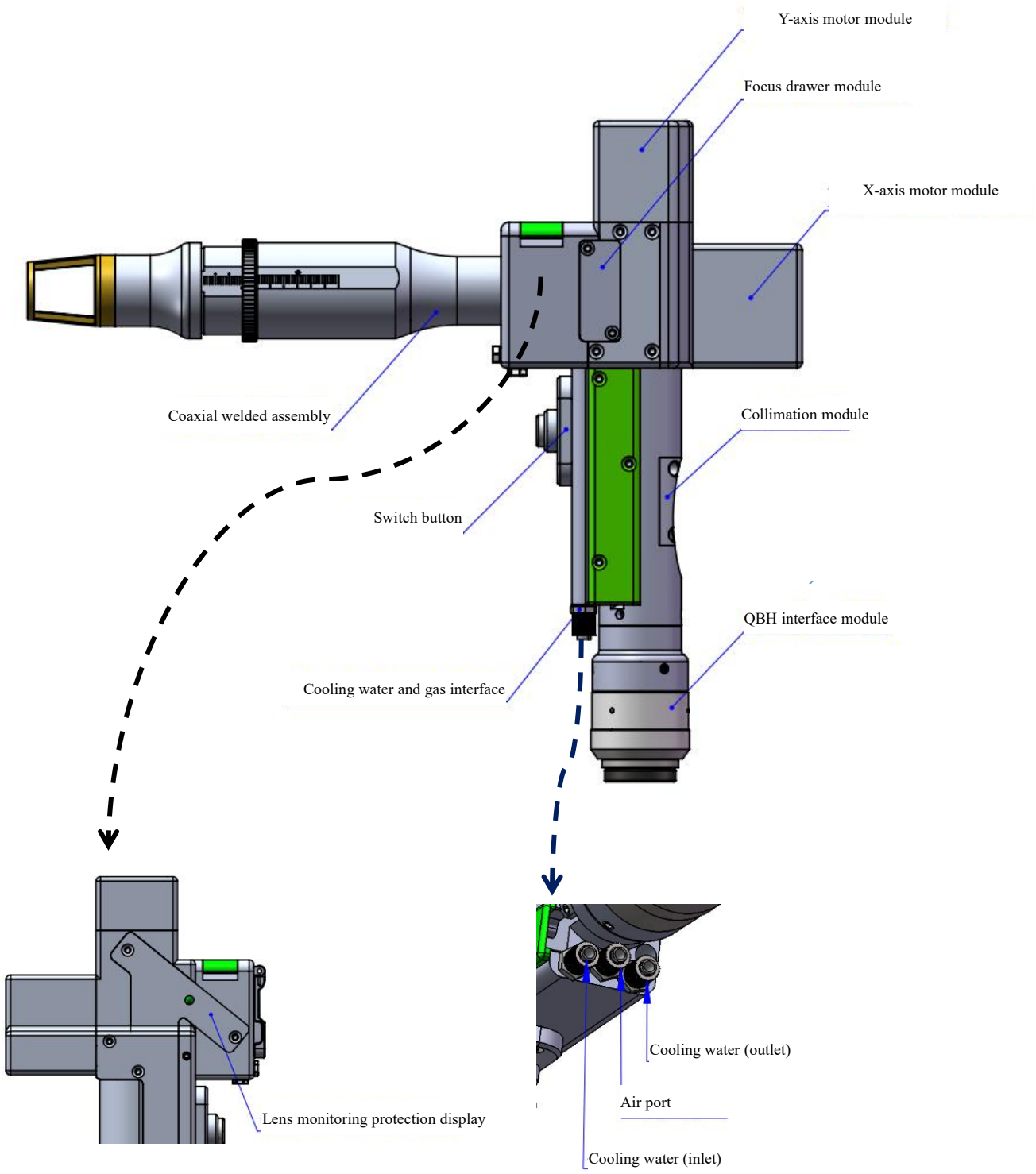
1.2 Precautions

※ To ensure personal safety, wear the special fiber laser protective glasses before operation.

※ It is necessary to keep the product clean and prevent the cooling liquid, condensate water or other foreign matter from intruding into the cavity, or the functional contamination and functional impact of related parts will be incurred.

Chapter 2 Structural Characteristics

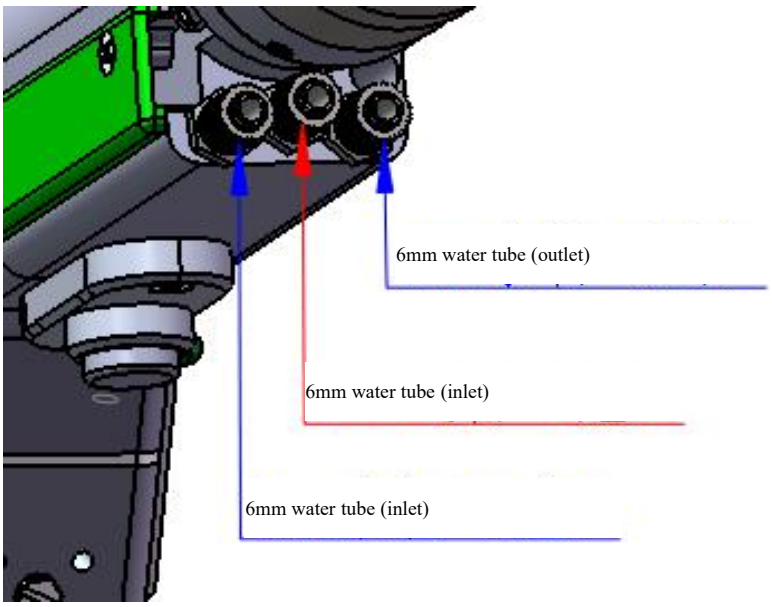
2.1 Product structure



Chapter 3 Product Installation

3.1 Pipe connection

Cooling water circuit and auxiliary protective gas connection



Connection of cooling water and shielding gas and usage requirements:

Notes: Regularly used gases: Compressed air (oil-water filtration required)

Regularly used gases are: argon, nitrogen and compressed air (oil-water filtration required).

3.1.1 Cooling water

The 6mm air tube is connected. The main function is that the excess heat is taken away by cooling through the internal structural member water route when the heat is produced by the light path in the cavity to ensure the cleaning performance. The

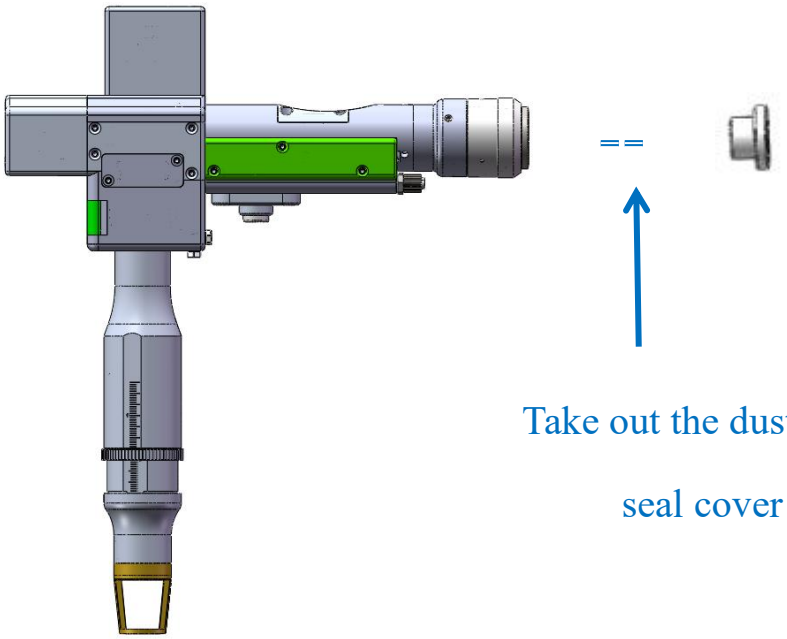
series connection of cooling water pipeline is required, with one-in and one-out water circulation connected.

3.1.2 Maintained gas

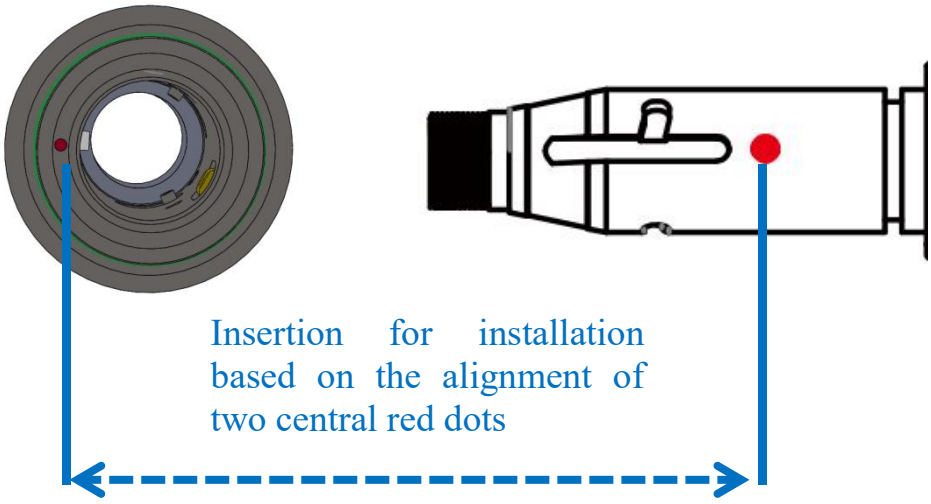
The 6mm air tube is connected for butt welding gas protection, with input pressure ≥0.5~0.8MPa.

3.2 Optical fiber input installation

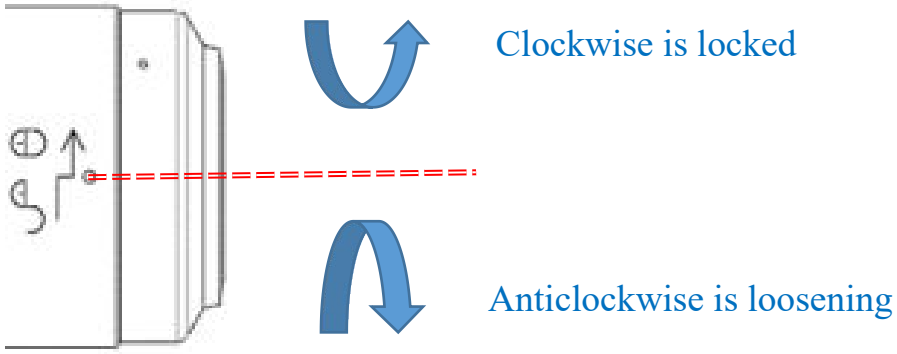
※ The QBH is a horizontal arrangement to take out the dustproof seal cover.



※ Align the red dot on the fiber optic head with the QBH red dot, and slowly insert the fiber optic head into the QBH.



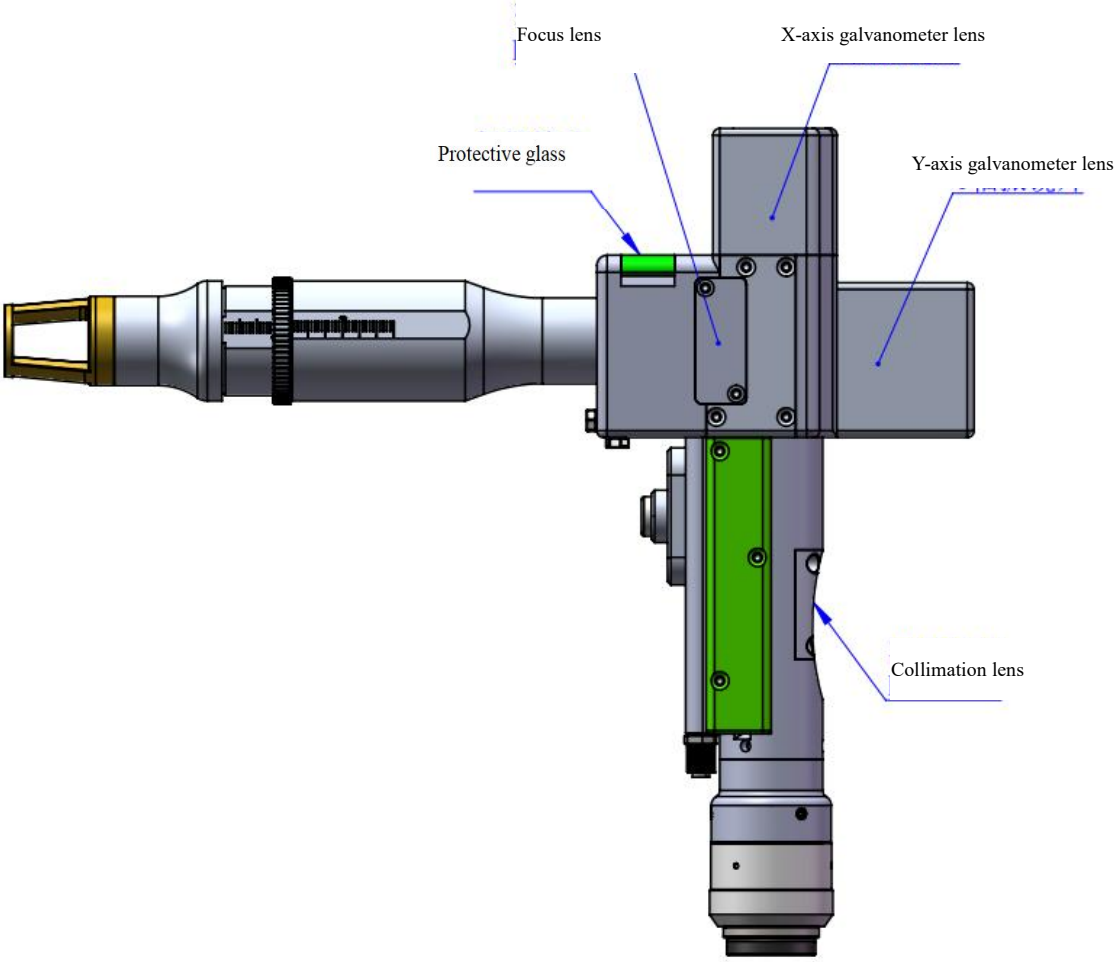
※ The QHB is screwed to the locking state: Rotate it to the limiting position clockwise (hearing the "click"), lift up the rotating mantle, and clockwise rotate the mantle until the head of optical fiber is compressed.



Chapter 4 Maintenance

4.1 Structure of optics lens

※ The assembly is completed in the dust-free plant at the time of replacement of parts. In principle, except for the front-end first protective glass can be disassembled and assembled, other modules are forbidden to be dismounted. If it is necessary to check the collimation lens, focus lens and galvanometer lens, the product shall be put into a clean environment for disassembly.



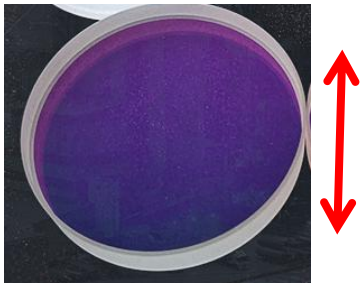
4.2 Cleaning of optics lens

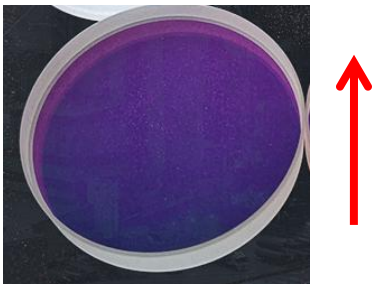
Tool: dust-free gloves or dust-free fingertips, dust-free cotton swab, isopropyl alcohol and canned dry pure compressed air.

Spray the isopropyl alcohol onto the dust-free cotton swab, make the lens face your eyes, gently pinch the side edge of the lens with the thumb and forefinger of your left hand, wipe the front and back of the lens in one direction from left to right or from top to bottom with dust-free cotton swab held in the right hand (remember not to wipe the lens back and forth to avoid the second contamination), and blow the surface of the lens with dry pure compressed air to ensure there is no dust on the lens.

Tool: 2mm inner hexagon wrench, special fixture wrench, clean cotton swab and alcohol.

The disassembly of lens should be operated with hand wearing dust-free gloves or fingertips in clean environment.





4.3 Disassembly and assembly of optics lens

4.3.1 Disassembly and assembly of collimation lens

Tools: 2mm inner-hexagon wrench, dust-free cotton swab, alcohol.

※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

※ Disassembly and assembly steps:

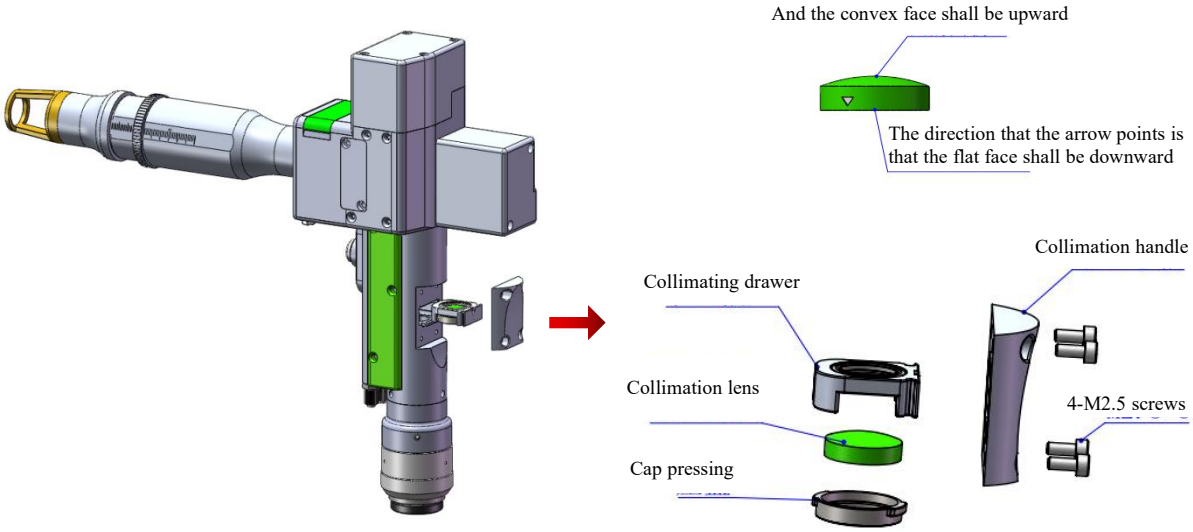
Step 1: Clean up all the dust on the surface of the laser head firstly.

Step 2: Loosen the 4-M2.5*6 screw in the figure with 2mm inner-hexagon wrench.

Step 3: Take out the collimating drawer module and seal the port with textured paper to prevent the dust from entering the cavity.

Step 4: When the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens. (Note that the orientation of lens installation can be divided into plane and convex surface. After disassembly, record it; otherwise, the optical path will be affected.)

Notes: The drawer gap shall be installed upwards.



4.3.2 Disassembly and assembly of focus lens

Tools: 2mm inner-hexagon wrench, dust-free cotton swab, alcohol

※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

※ Disassembly and assembly steps:

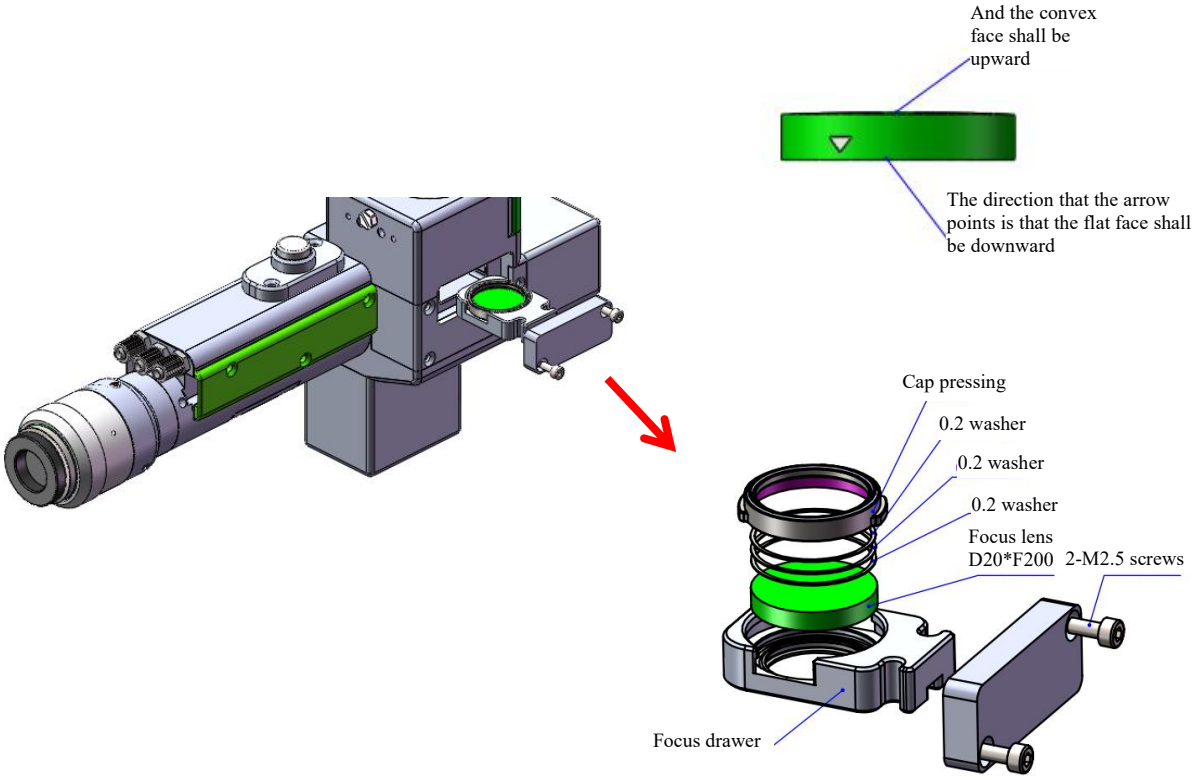
Step 1: Loosen lateral 2-M2.5 screws.

Step 2: Remove the focus drawer assembly horizontally and seal the exposed sealing surface of the cavity with textured paper to prevent dust from entering.

Step 3: When the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens. (Note that the orientation of lens

installation can be divided into plane and convex surface. After disassembly, record it; otherwise, the optical path will be affected.)

Notes: The drawer gap shall be installed upwards.



4.3.3 Disassembly and assembly of protective glass

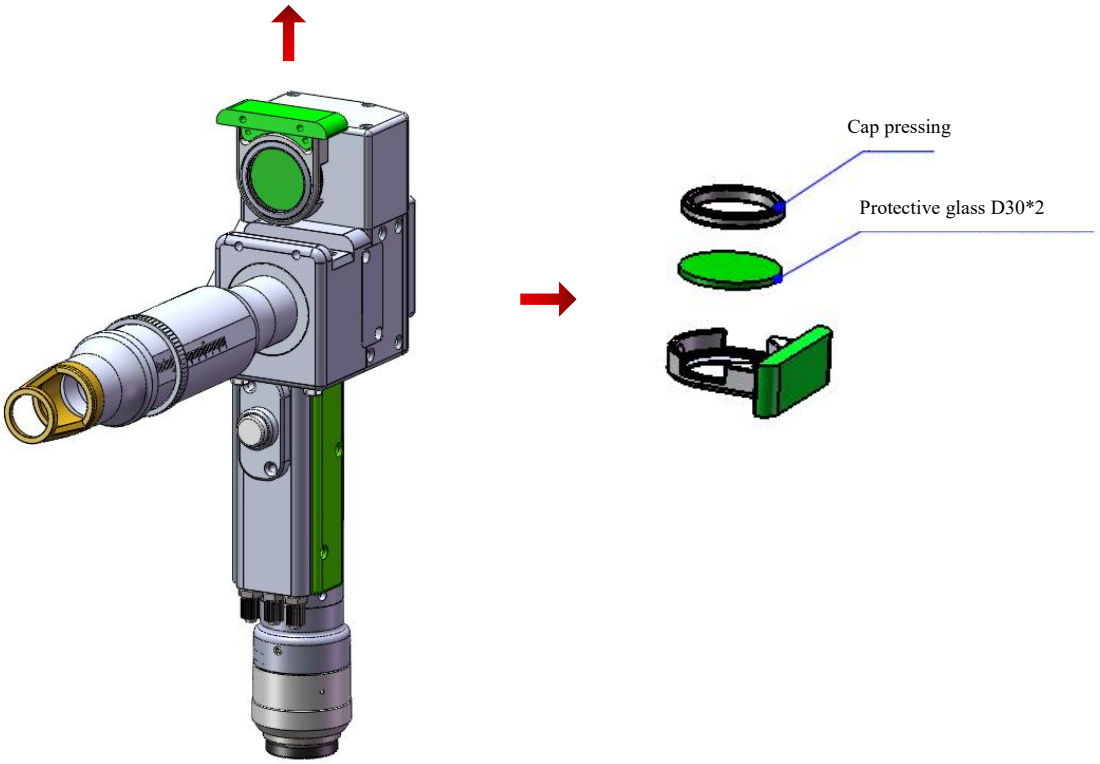
※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

Change the protective lens

The first step is to take both sides of the drawer in hand and pull out the protective drawer seat upward. After taking it out, seal

the window exposed on the cavity with textured paper to prevent dust from entering.

Step II, when the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens.



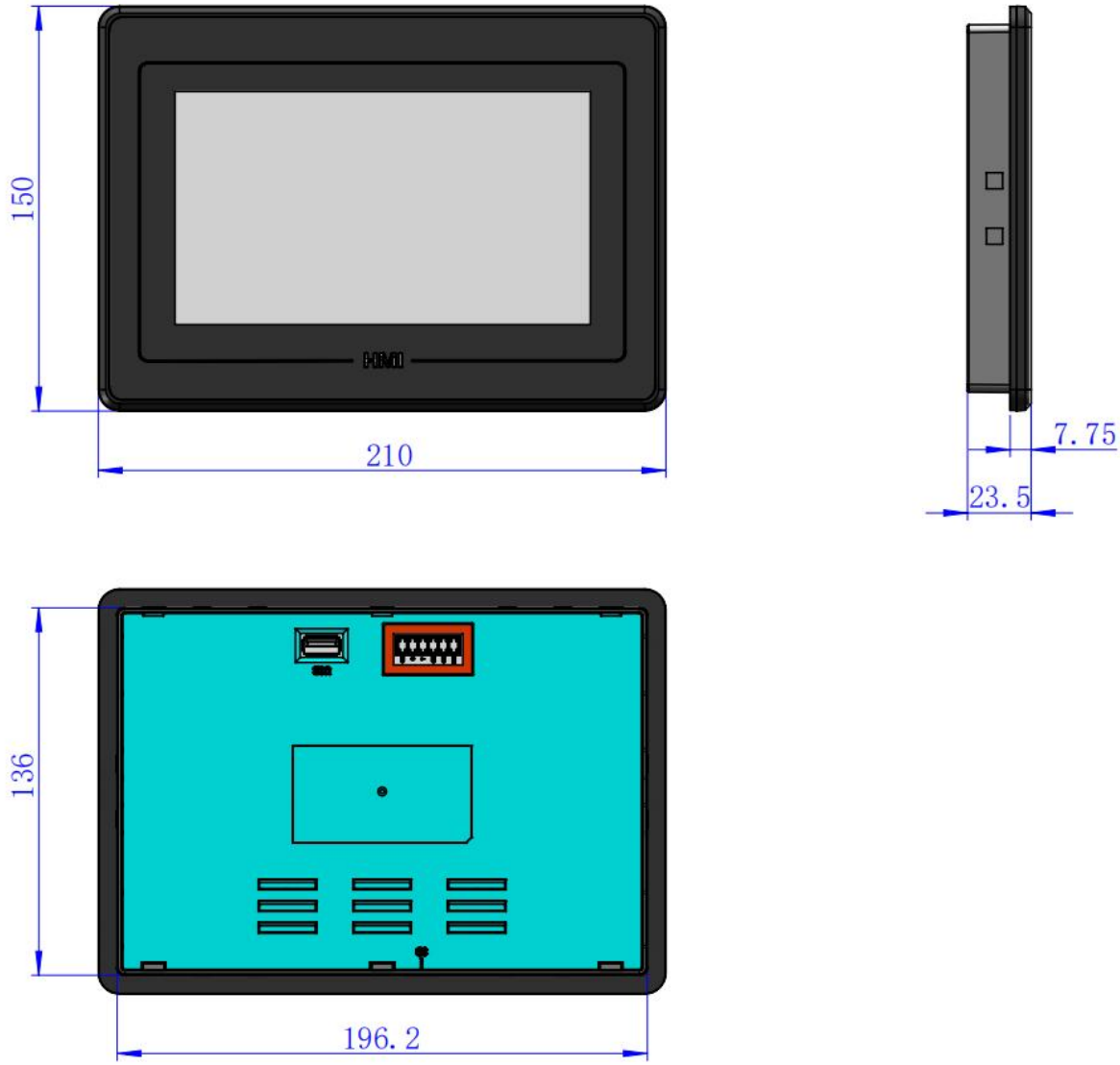
Chapter V Laser Cleaning System

5.1Product dimension figure

5.1.1 Installation dimension of touch screen

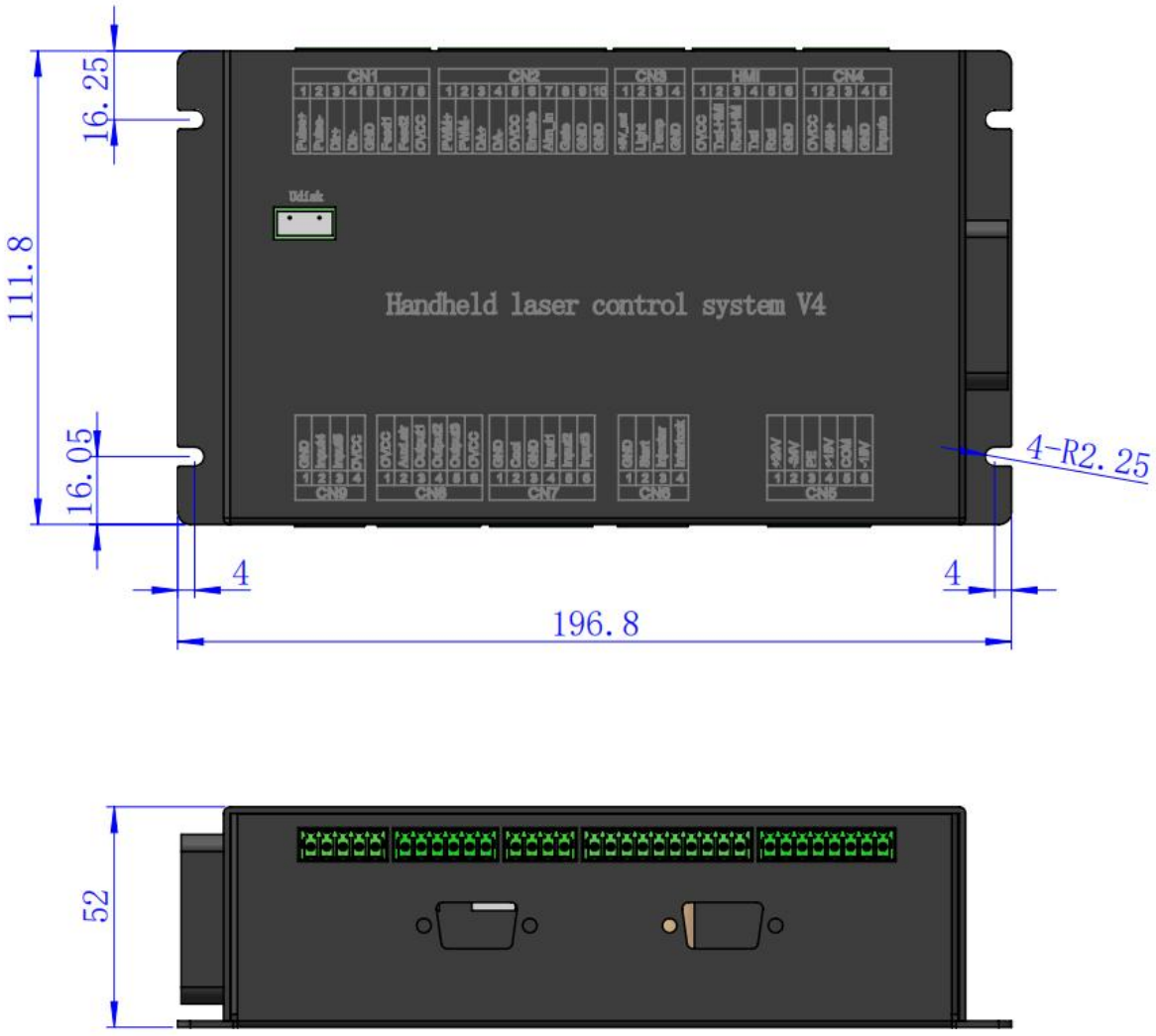
External dimensions: (210*150*23.5) mm

The installation dimensions of the touch screen are as shown in the following figure.:



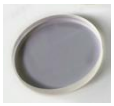
5.1.2 Installation dimension of main board

Overall dimensions: (196.8 * 111.8 * 52) mm



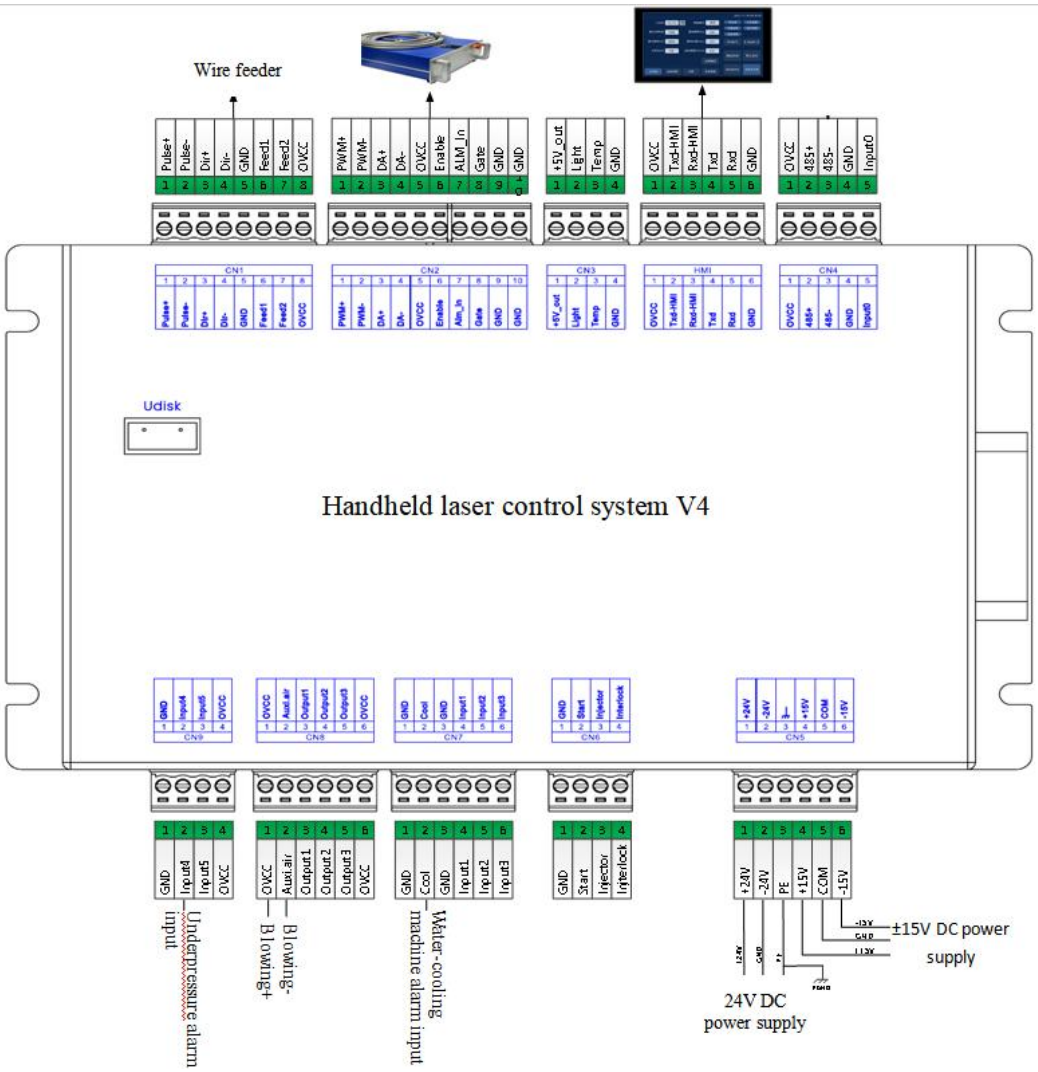
Chapter 6 Supplies

6.1 Electrical material list

List				
S/N	Name	Illustration	Quantity	Remarks
1	Intelligent dual-swing hand-held energy storage welding head		1PCS	
2	24V power box		1PCS	
3	15V power box		1PCS	
4	Display screen: 7 inches Touchscreen 6-core connection cable -1.5m-black		1PCS	
			1PCS	
5	Handheld laser welding system V4		1PCS	
7	Protect the lens		4PCS	
8	Energy storage guiding component		1PCS	

6.2 System wiring

The following figure is a schematic diagram for wiring of the whole system. Refer to the schematic diagram for system wiring. Refer to relevant chapters for detailed interface definition.



Note:
Don't connect the reserved pin in the mainboard.

6.3 CN5 power supply interface

The power supply interface allsinto6PINgreenterminal,providing a power interface for mainboard and galvanometer externally, with voltage: DC 24V (DC 24V) and DC ±15V (DC ±15).
Table 6.3.1 shows the definition of CN5 power supply interface.

Table 6.3.1

Pin	Signal	Definition	Instruction
1	24V+	Power supply input	+24V external power input and power supply output current: above 2A
2	24V-	Power reference ground	—
3	PGND	External shielding ground	Generally connecting to ground or enclosure
4	+15V	Power supply input	+15V external power input and power supply output current: above 2A
5	GND	Power reference ground	—
6	-15V	Power supply input	-15V external power input and power supply output current: above 2A

6.4 CN1 wire feeder interface

The interface CN1 of the wire feeding machine is an 8-pin green terminal, which supports both motor wire feeding and IO wire feeding. Table 6.4.1 provides the definition of the wire feeding machine interface.

Table 6.4.1

Pin	Signal	Definition	Instruction
1	Pulse+	Motor wire feed pulse + interface	The motor wire feed is used, and the driver PUL+ is connected
2	Pulse-	Motor wire feed pulse - interface	Motor wire use, connected to drive PUL-
3	DIR+	Motor wire feed direction + interface	Motor wire wire, connected to driver Dir +
4	DIR-	Motor wire feed direction - interface	Motor wire used, connected to drive Dir-
5	GND	Reference ground	—

6	Feed	Wire feed control interface	Used for automatic wire feed of IO control wire feeder
7	Backoff	Wire withdrawal control interface	Used for automatic wire withdrawal of IO control wire feeder
8	OVCC	+24V power output	Power supply, maximum output is 500mA

6.5 CN2 laser interface

The laser interface is a 8PIN green terminal. Table 6.5.1 shows the definition of laser interface.

Table 6.5.1

Pin	Signal	Definition	Instruction
1	PWM+	Modulated signal +	Duty cycle adjustable from 1% to 99%, 24V level
2	PWM-	Modulated signal-	Duty cycle adjustable from 1% to 99%, 24V level
3	DA	Simulated voltage output	0-10V analog voltage, used for adjusting the peak power of the laser
4	GND	Power reference ground	Generally, it connects to the laser control interface DA-
5	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA
6	Enable	Laser enable signal	24V voltage level, with high level as the valid state
7	Alarm_in	Laser failure alarm input	—
8	GATE	Red light indication signal	24V voltage level, with low level as the active state
9	GND	Signal reference ground	—
10	GND	Signal reference ground	—

6.6 CN3 temperature sensor interface

The temperature sensor interface CN3 is a 4PIN green terminal. Table 6.6.1 shows the definition of temperature sensor. The user directly inserts the supporting connection line with terminal.

Table 6.6.1

Pin	Signal	Definition	Instruction
1	+5V_out	Sensor P interface	+5V power supply, maximum output is 500mA
2	Light	Sensor L interface	—
3	Temp	Sensor T interface	—
4	GND	Sensor G interface	—

6.7 HMI touch screen interface

The HMI interface is a 6PIN green terminal and power supply to and communication with HMI by the mainboard are performed via the port. Table 6.7.1 shows the definition of HMI interface.

Table 6.7.1

Pin	Signal	Definition	Instruction
1	OVCC	+24V power output, 500mA	Panel power supply
2	TXD_HMI	Connecting to the HMI sending end	Serial port communication TXD signal
3	RXD_HMI	Connecting to the HMI receiving end	Serial port communication RXD signal
4	TXD	Reserved communication interface	RS232 reserved communication interface
5	RXD	Reserved communication interface	RS232 reserved communication interface
4	GND	Power reference ground	—

6.8 CN4 reserved serial port interface

CN4 reserved serial port interface is a 5-pin green terminal without wiring. Chart 6.8.1 shows the definition of CN4 interface.

Table 6.8.1

Pin	Signal	Definition	Description
1	OVCC	+24V power supply, 500mA	Power supply
2	485+	TXD signal	Serial communication TXD signal
3	485-	RXD signal	Serial communication RXD signal
4	GND	GND	—
5	Input0	Reserved input interface	

6.9 CN6 external start and interlock interface

The CN6 interface is a 4PIN green terminal. Table 6.9.1 shows the definition of CN6 interface.

Table 6.9.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	Generally connecting to the start button switch on the welding head-
2	Start	External start switch input	Generally connecting to the start button switch on the welding head+
3	Injector	Safety clamp signal input	The pin must be connected to the safety clamp and the safety clamp shall be clamped onto the metal material before welding.
4	Interlock	Safety lock signal input	The pin must be connected to the nozzle of the handheld head. The nozzle touches the metal material at the moment of welding.

6.10 CN7 general input interface 1

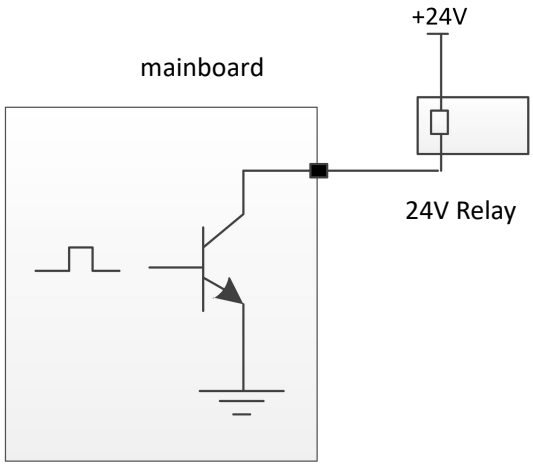
The CN7 interface is a 6PIN green terminal and of NPN type. Table 6.10.1 shows the definition of CN7 interface.

Table 6.10.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	—
2	Cool	Water-cooling machine alarm input	NPN type input
3	GND	Reference ground	—
4	Input1	Reserved	NPN type input
5	Input2	Reserved	NPN type input
6	Input3	Reserved	NPN type input

6.11 CN8 general output interface

The CN8 interface is a 6-pin green terminal. By using the OC output, it can directly drive relays, with a maximum current of up to 500mA. The wiring diagram is shown in Table 6.11.1.



Output terminal relay wiring diagram

Table 6.11.1

Pin	Signal	Definition	Instruction
1	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA
2	Auxi.air	shielding gas	Used for gas blowing control protection, it can directly drive the solenoid valve
3	Output1	retain	OC output, capable of driving relays
4	Output2	retain	OC output, capable of driving relays
5	Output3	retain	OC output, capable of driving relays
6	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA

6.12 CN9 common input interface 2

The CN9 interface is a 4-pin green terminal of NPN type. The definition of the CN9 interface is given in Table 6.12.1.

Table 6.12.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	—
2	Input4	Underpressure alarm input	
3	Input5	Reserved	—
4	OVCC	+24V power output	Power supply, maximum output is 500mA

6.13 Galvanometer interface

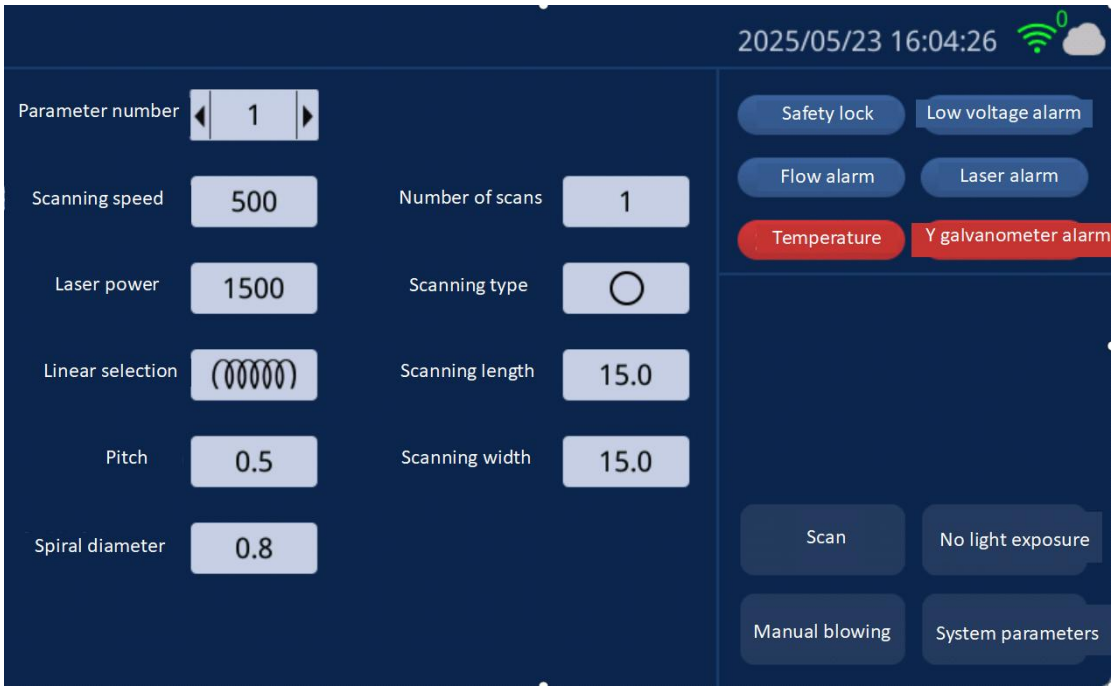
The system provides two DB9 galvanometer interfaces, one DB9 male connector and one DB9 female connector.

Chapter 7 HMI Operating Instruction

7.1 HMI function introduction

Handheld laser welding control system operating panel (“HMI” for short) adopts a 7-inch configuration TFT touch screen with beautiful interface and convenient operation. It can set laser related parameters. On the main interface, the input and output IO status, alarm information and motion state can be displayed in real time. Refer to the following figure for the HMI main interface.

Main interface of HMI



【 Scanning Parameters 】 : It is used to set the relevant parameters during galvanometer scanning processing.

Parameter number: The system supports the storage of 9 groups of parameters.

Scanning speed: Used to set the scanning speed of the galvanometer.

Laser power: Set the output light power during welding.

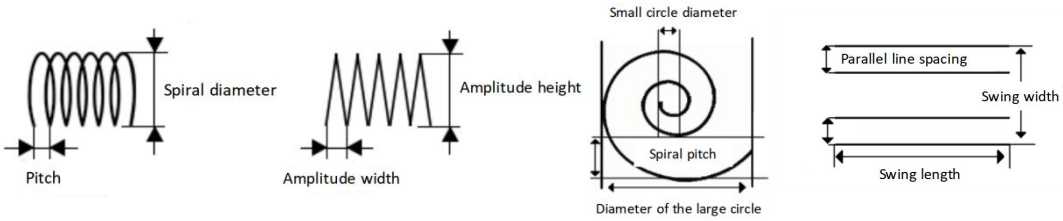
Scanning length: It is used to set the length of the laser scanning in the X direction.

Scanning width: It is used to set the width in the Y direction of the laser scanning.

Scanning type: It is used to set 5 types of scanning waveforms, supporting circular, rectangular, single straight line, spiral circle, and multiple straight lines ‘  ’ ‘  ’ ‘  ’ ‘  ’ ‘  ’

The number of scans: When the start button is continuously pressed to emit light, the maximum number of scans before the light emission stops. If it is ∞ times, it will loop infinitely until the start button is released.

Linear selection: Set four differentiated linear types, and multiple scanning waveforms can be formed through scanning types. Supports helix, sawtooth, point, and spiral point ‘  ’ ‘  ’ ‘  ’ ‘  ’ When blank is selected, the linear type is not enabled



Pitch: The pitch when the linearity is set to helical. The linearity is a dedicated parameter for the helical mode.

Spiral diameter: The spiral diameter when the linearity is set to spiral, and the linearity is the dedicated parameter for the spiral mode.

Amplitude height: Set the linearity to the tooth height when the linearity is serrated, and the linearity is a dedicated parameter for the serrated mode.

Amplitude width: Set the tooth width when the linearity is set to sawtooth, and the linearity is the dedicated parameter for the sawtooth mode.

Number of points: The quantity of light output dots when selecting points or spiral points for the line.

Helical circle pitch: The distance between helical lines when the helical point is linearly selected or the swing type is a helical circle.

Large circle diameter: When the swing type is set to spiral circle, it is the length of the maximum diameter of the spiral circle and a dedicated parameter for the spiral circle mode.

Small circle diameter: The length of the minimum diameter of the spiral circle when the swing type is set to spiral circle, a dedicated parameter for the spiral circle mode.

Number of parallel lines: When the swing type is parallel lines, the number of single-sided lines of the parallel lines, the number of main lines = number of parallel lines * 2.

Parallel line spacing: The spacing of parallel lines when the swing type is parallel.

Light output time: Set the light output time of each point when the linearity is a point, and the linearity is a dedicated parameter for the point mode.

【 Alarm Status Area 】 : Once the alarm signal is enabled, it will display in real time the low pressure alarm of the protective gas, the cold water flow alarm, the laser alarm, the temperature alarm, and the galvanometer status. When the safety lock is enabled, the safety lock status will be displayed in real time. When the alarm signal is not triggered, the corresponding alarm state is in blue. When an alarm occurs, the corresponding alarm icon will flash alternately in red and blue.

【 System Parameters 】 : Click to enter the system Settings page and modify the system function parameters.

【 Red Light | On/Off 】 : The red light switch can control the switch indicated by the red light of the laser.

【 Allow/Prohibit | Laser Emission 】 : This button can be used to allow or prohibit laser emission.

When light emission is allowed, pressing the start light emission button will emit laser for welding. When the light output is prohibited, pressing the start light output button will not result in laser welding.

【 Manual Blowing 】 : Clicking on the manual blowing area will continue the blowing process. Clicking on it again will turn off the blowing.

7.2 HMI operation introduction

System parameter Settings: After parameter modifications, they need to be saved to take effect.

Early vent time: When starting the processing, a delayed vent can be set. When the external start button is pressed, air is blown and delayed for a period of time, and then the laser starts to come out.

Delayed gas shut-off time: When processing stops, a delayed gas shut-off can be set. When processing is stopped, first stop the laser output, delay for a period of time, and then stop the air blowing.

Opening power: It is used to set the initial power of the laser, which is a percentage of the welding power.

Progressive opening time: Controls the time it takes for the laser's output to slowly rise to the set power.

Light-off power: It is used to set the light-off power of the laser, which is a percentage of the welding power.

Progressive turn-off time: The time used to control the slow decrease of the laser's turn-off power.

Language: Used for switching languages.

The length of the early deceleration: Control the distance of the early deceleration in the gradual time of turning off the light.

Laser frequency: Used to set the PWM frequency of the laser.

Duty cycle: Set the duty cycle of the PWM modulation signal, with the setting range being 1% ～ 100%.

(" >>""<<", switch the parameters within the display interface)

Double-click light output enable: Select the light output mode and whether to double-click the button. If not enabled, click the button

Enable security lock: Select whether to perform security lock protection.

Proportional coefficient: It is used to set the maximum range of the X-axis and

Y-axis of the galvanometer. This parameter needs to be consistent with the actual range of the galvanometer; otherwise, the actual light output length and width may not be accurate. The default parameter does not need to be set.

Field lens type: Reserved for switching between different field lenses. Reserved parameters do not need to be set.

【 Device Parameters 】 : It is used to switch to the device parameters page and requires entering the password 666888.Pulse on time: the time to start light emission in pulse mode

【 Authorization 】 : Perform the operation of reading and decrypting the authorization code, as well as display the relevant information of the panel and motherboard version number.

【 Center Offset 】 : Used for setting the center offset of red light.

7.3 Equipment Parameters

【 Device Parameters 】 : It is used to set the maximum and minimum values of the restricted parameters. These parameters will restrict the laser parameters. Password input is required to enter. After parameter modification, it needs to be saved to take effect.

Maximum scanning speed: Used to set the maximum galvanometer swing speed

Minimum scanning speed: Used to set the minimum galvanometer swing speed

Maximum scan length: Used to set the maximum scan length allowed by the device

Minimum scan length: Used to set the maximum scan length allowed by the device

Rated power of laser: It is used to set the rated power of the laser

Maximum laser frequency: Used to set the maximum laser frequency

Minimum laser frequency: Used to set the minimum laser frequency

Laser alarm enable: It is used to set whether to enable laser alarm. When enabled, a laser alarm prompt will be generated when the laser alarm input triggers the alarm.

Laser alarm level: Used to set the logic of the laser alarm trigger level.

Water cooling machine alarm enable: It is used to set whether to enable the water cooling machine alarm. When enabled, when the water cooling machine alarm input triggers the alarm, an alarm prompt for the water cooling machine will be generated.

Alarm level of water cooler: It is used to set the logic of the alarm trigger level of the water cooler.

Under-voltage alarm enable: It is used to set whether to enable the gas under-voltage alarm. When enabled, a under-voltage alarm prompt will be generated when the under-voltage alarm input triggers the alarm.

Under-voltage alarm level: Used to set the logic of the under-voltage alarm trigger level.

Temperature alarm enable: Enable the lens temperature alarm. When the temperature exceeds the limit value, an alarm signal will be generated.

Temperature alarm limit value: Lens temperature limit value.

7.4 Alarm Information

The alarm information includes: safety clip alarm and machine alarm.

The safety clamp alarm is caused by the safety clamp not being reliably connected to the cleaning head.

The machine alarms include three types: laser alarm, water-cooling machine alarm and low voltage alarm. In the alarm information interface, multiple alarm messages can be displayed, with a maximum of 3 pages. They can be switched between the previous page and the next page.

When the alarm is triggered, the laser output will be stopped at this time, the galvanometer will stop moving, and the corresponding alarm information will be prompted. Users can check the relevant hardware problems and clear the alarm according to the alarm prompt. After the alarm is cleared, the alarm record of the machine's alarm will still exist in the alarm information. At this time, you can manually clear the alarm by entering the alarm information interface. If the alarm is not cleared, it will continue to prompt when the alarm is manually cleared.

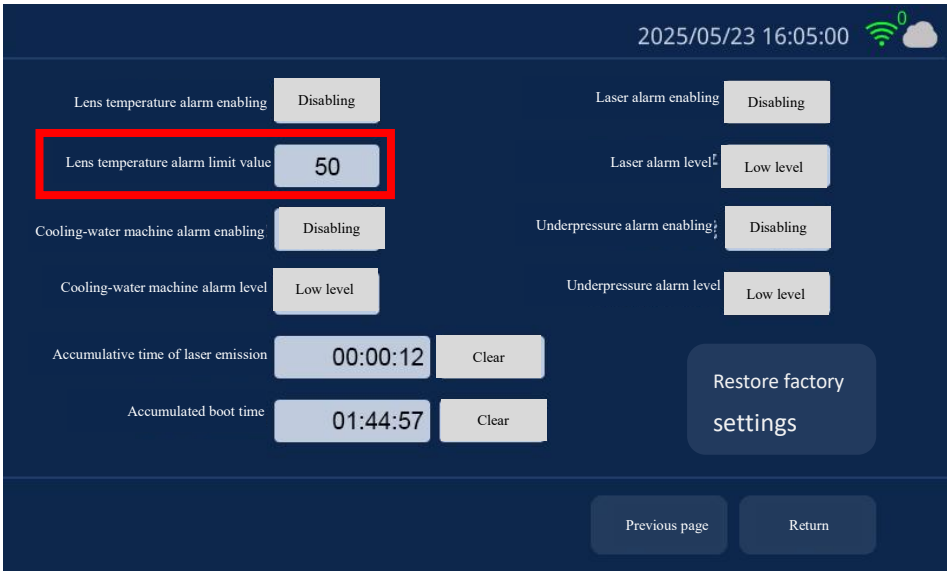
(Gun head light emission control logic: Click the switch button to preview the graphic with red light. After clicking, continuously double-click the switch button to emit laser.)

Chapter 8 Monitoring Protection Device

8.1Temperature parameter setting of Protective Lens

[Home Page]→[System Parameter]→[Equipment Parameter]→[Input Password: 666888] →[next page]→ [lens temperature alarm limit value].

It is suggested to set the set value of lens temperature to 50. After the lens temperature exceeds the set value, the alarm caution will arise on the home page and the display light on the side of the handheld plumb joint will turn to red.



Chapter 9 Introduction to the APP

9.1 Function Introduction

The RDWelder mobile APP is an application suitable for remote control of handheld welding products, supporting various types of product applications such as single pendulum welding, double pendulum welding, single pendulum cleaning, and double pendulum cleaning. Users can connect the board card through this APP to achieve the purpose of wireless connection control. It can effectively solve the problem of the processing station being far from the equipment and constantly traveling back and forth. It supports remote viewing of equipment status and parameter adjustment, facilitating equipment management and maintenance. The APP also has rich technical center resources. It is provided for customers to install and maintain equipment, review process data, assist in troubleshooting, and refer to application cases.

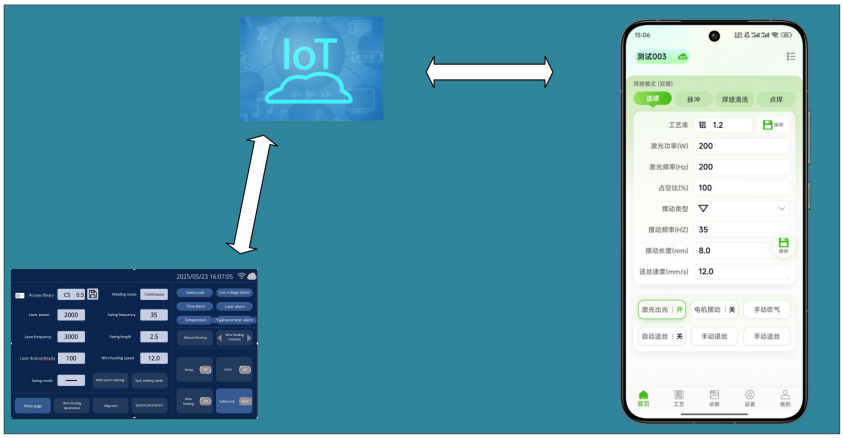
9.2 Equipment connection

9.2.1 Connection mode

The handheld APP and control card support two connection modes: AP mode and STA mode.

- In AP mode, the APP is directly connected to the control card. The control card emits a WIFI hotspot signal. Customers can use mobile devices such as mobile phones to connect to the WIFI hotspot signal emitted by the control card. After the connection is completed, the board card can be controlled using the APP. Both the touchscreen and the APP use WIFI ICONS for status display.

- In STA mode, the APP and the control card are connected to the cloud via the Internet. After setting the control card to STA mode, it is necessary to connect to WIFI to access the network. Access the server through traffic data to obtain the device status and perform operation control. Both the touchscreen and the APP use Internet of Things cloud ICONS for status display.

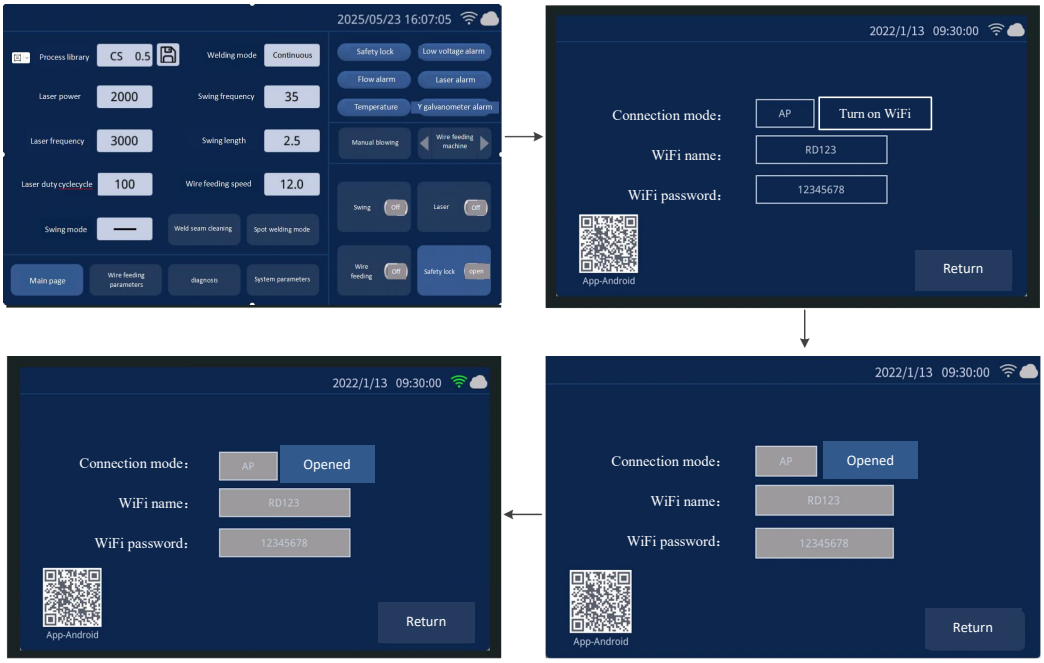


9.2.2 AP mode connection

Board card Settings:

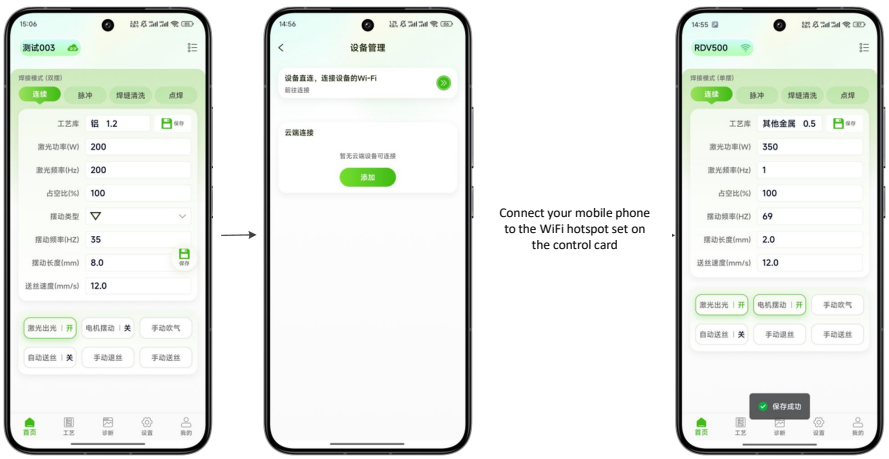
- Click the upper right corner of the touch screen to enter the WIFI configuration page and configure the WIFI hotspot.
- Set the connection mode to AP and set the name and password of the WIFI hotspot. If the WIFI is turned on, you need to first click the < Turned On > button to turn off the WIFI. When the WIFI icon goes off, you will enter the configurable WIFI setting state.
- After the configuration is completed, click the < Turn on WIFI> button, and the system will turn on WIFI again.

- After the WIFI hotspot configuration is completed, the WIFI configuration mode will be turned off, the WIFI icon will light up, and the mobile phone APP can connect to the WIFI on the board card.



APP Settings:

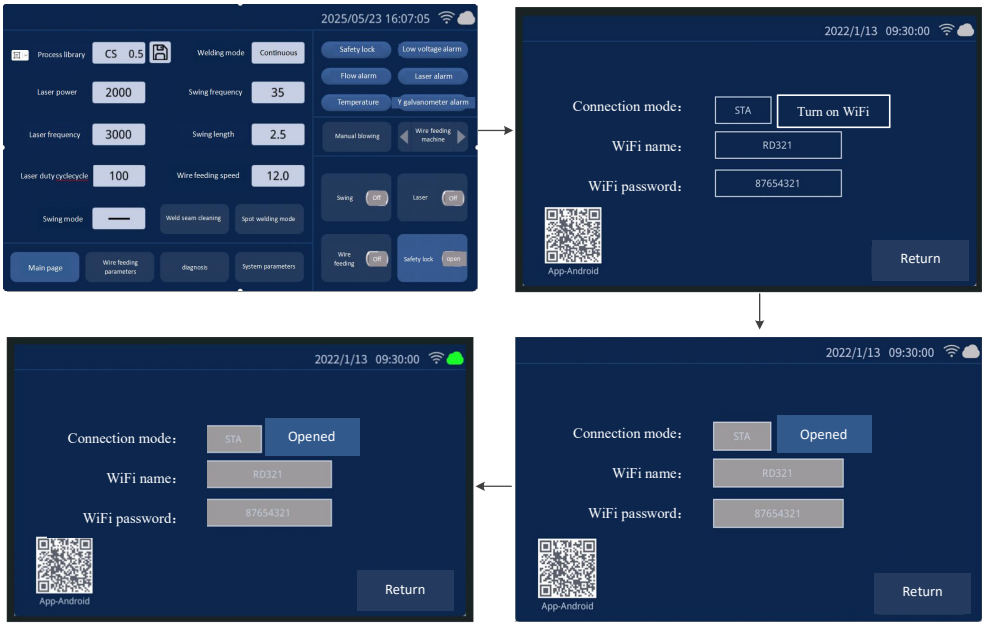
- Click the icon on your mobile phone to launch the APP.
- The device connection status in the upper left corner of the motor enters the < Device Management > page.
- Select the direct connection of the device, enter the phone Settings page to set up the WIFI connection, and connect to the WIFI hotspot of the control card.
- After the connection is completed, you can enter the APP to check that the mobile APP has been connected to the device.



9.2.3 STA mode connection

Board card Settings:

- Click the upper right corner of the touch screen to configure the WIFI hotspot and enter the WIFI configuration page.
- Set the connection mode to STA and connect to an external WIFI. If the WIFI is turned on, you need to first click the < Turned On > button to turn off the WIFI. When the WIFI icon goes off, you will enter the configurable WIFI setting state.
- After the configuration is completed, click the < Turn on WIFI> button, and the system will connect to an external WIFI.
- After the WIFI connection is completed, the WIFI configuration mode will be turned off, the remote icon will light up, and the device will be in an online state.



APP Settings:

Click the icon on your mobile phone to launch the APP.

The device connection status in the upper left corner of the motor enters the < Device Management > page.

You can view the added cloud devices on the device management page. The highlighted cloud logo indicates that the device is online, while the grayish-white status indicates that it is offline.

After selecting the online device, click "Connect" to complete the device connection.

Note: The STA mode requires users to register an account and then add the device serial number to their personal account before remote management can be carried out.

9.3 APP download method

Android：

https://mantisolo.com/versionQrCode.html?qrform=6a7a10d4f48d72e6e02b0b9af8e3bc10&company_code=003&platform=APP

Apple: Search for "RDWelder" in the App store

9.4 APP function

Welding mode

Cleaning

The RDWelder mobile APP supports single pendulum welding, single pendulum cleaning, double pendulum welding and double pendulum cleaning. After the APP is connected to the board card, it can automatically adapt to the current processing mode of the control card.

Welding mode:

[Home Page] : Supports management of process parameters, processing status, blowing adjustment, and wire feeding control. The entry to < Technology Center > is located in the upper right corner.

【 Process 】 : Welding process library, where users can manage process parameters.

【 Diagnosis 】 : Manage the status of the equipment, support the query of alarm records, and enable central correction.

【 Settings 】 : Go to the parameter setting page to manage ordinary setting parameters. You can enter the authorization management. After entering the password, you can manage advanced parameters.

[My] : Personal user page for managing personal information.

Cleaning mode:

[Home Page] : Supports management of process parameters, processing status, and blowing adjustment. The entry to < Technology Center > is located in the upper right corner.

【 Diagnosis 】 : Manage the status of the equipment, support the query of alarm records, and enable central correction.

【 Settings 】 : Go to the parameter setting page to manage ordinary setting parameters. You can enter the authorization management. After entering the password, you can manage advanced parameters.

[My] : Personal user page for managing personal information. Style.

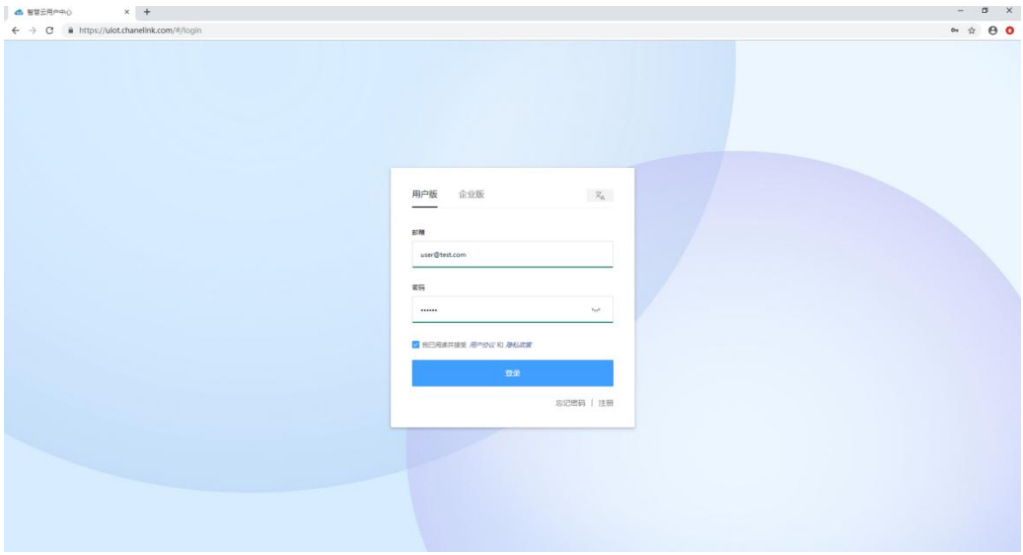
Chapter 10 Introduction to Wisdom Cloud

10.1 Function Introduction

The smart cloud system enables devices to access the Internet, allowing users to view the device status on the web page for remote management.

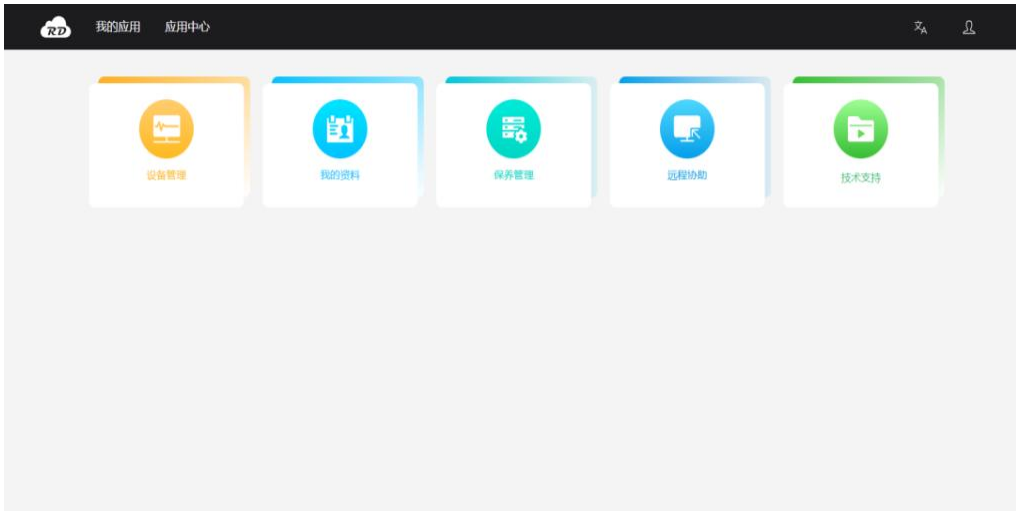
10.2 Smart Cloud Login

By visiting https://fiot.chanelink.com/ address, see page client login page, the following figure, the user account login, new user registration, password can be recovered, and so on.



10.3 User Center

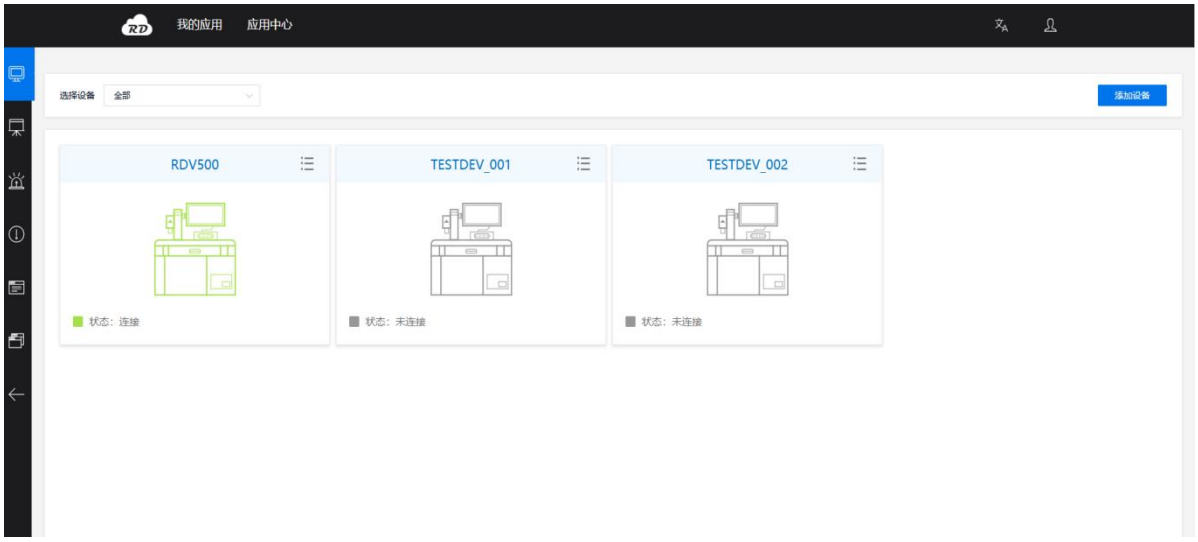
After successful login, you will be redirected to the home page of the User Center, as shown in the following figure. Users can view the added application functions, such as device management, My Profile, remote assistance, technical support, etc.



My application, as seen in the above picture, the one added by this user, can manage the added applications.
Application Center, where applications can be added.
Personal information, click this button to go to my profile, you can modify person information.
Log out. Click this button to exit to the login page.

10.4 Equipment Management

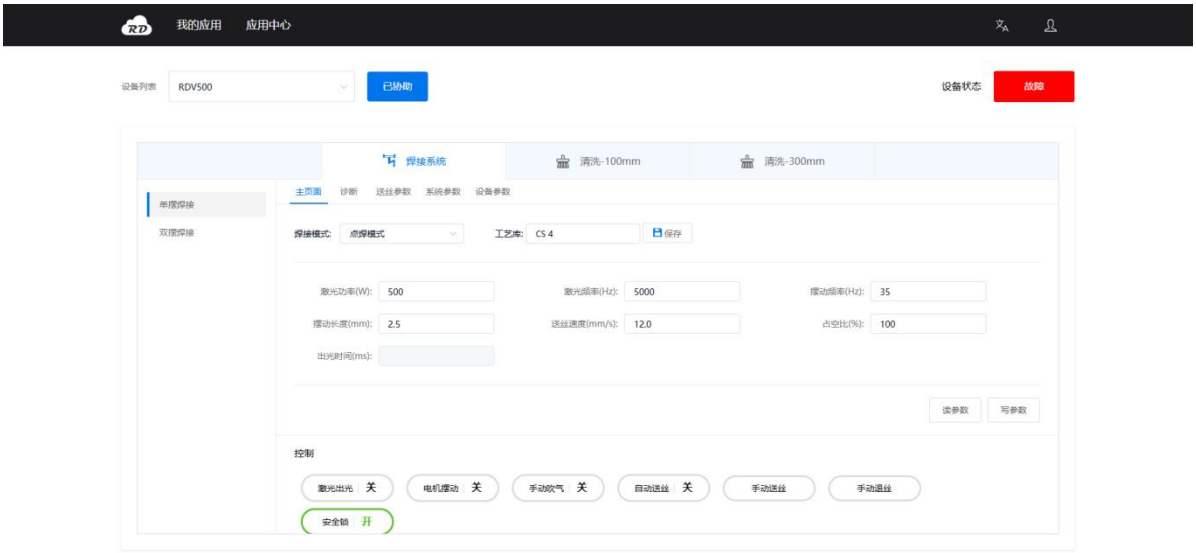
In "My Applications", click on "Device Management" to jump to the "Device Management" page, as shown in the following figure.



The left side is the menu bar, which opens the device monitoring page by default.
The device nickname entered when adding the device.
The connection status of this device indicates whether the device is connected to the Internet.
Equipment operation list (expands when the mouse hovers).
The equipment operation list has the functions of editing, detailing and unbinding.
The device can be edited, unbound and details viewed.
The "Add Device" button allows you to add devices to your personal account.

10.5 Remote assistance

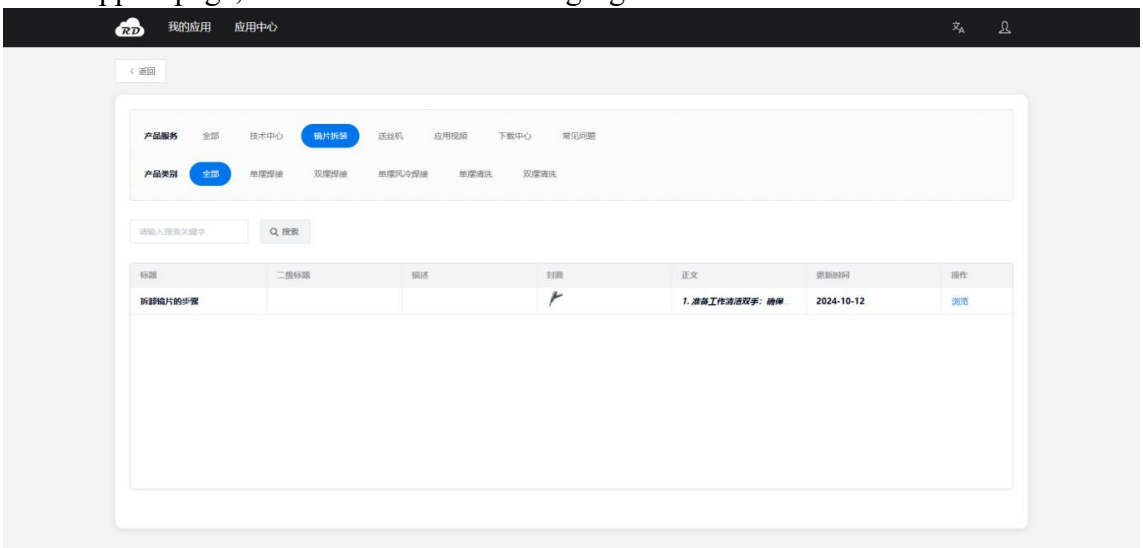
In "My Apps", click on "Remote Assistance" to be redirected to the Remote assistance page, as shown in the following figure.



You can view the devices under the added personal account in the device list. After confirming the need for a remote assistance device, a remote connection can be made to check the device status and manage parameter configuration.

10.6 Technology Center

In "My Applications", click on "Technical Support" to be redirected to the technical support page, as shown in the following figure.



On the technical center page, you can query various product information, including downloading instruction manuals and viewing application videos in the download center.

Thanks for using our products!

Web: www.relfar.com

Tel: 0755-2393635

Address:2F, Building 7, Jiuyang Industrial Park, 57 Hexiu West Road, Baoan District, Shenzhen, Guangdong Province