Instructions for the use of CNC dc stabilized power supply
Product model WZ5005

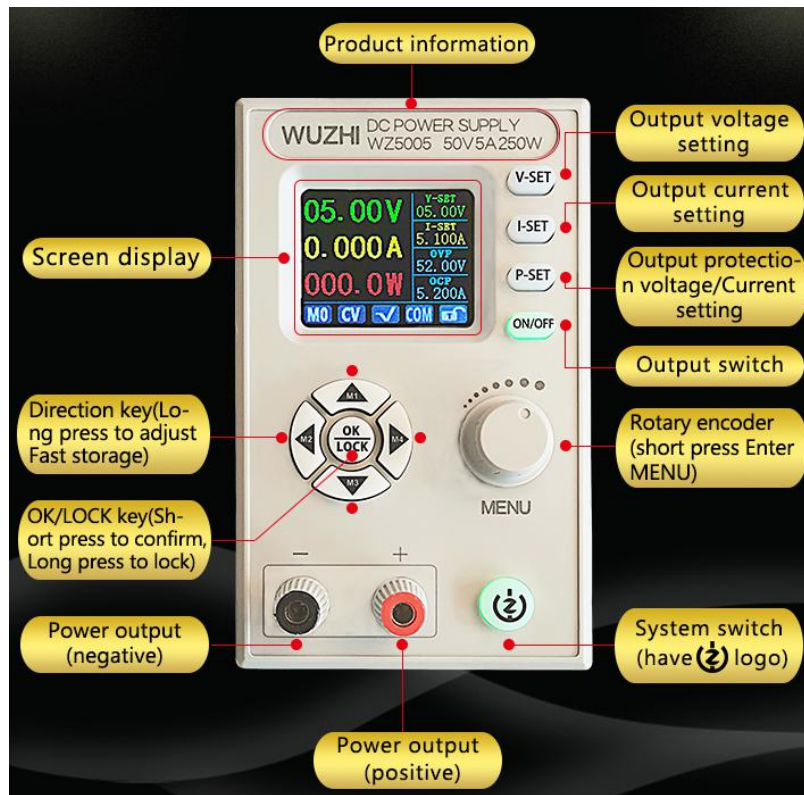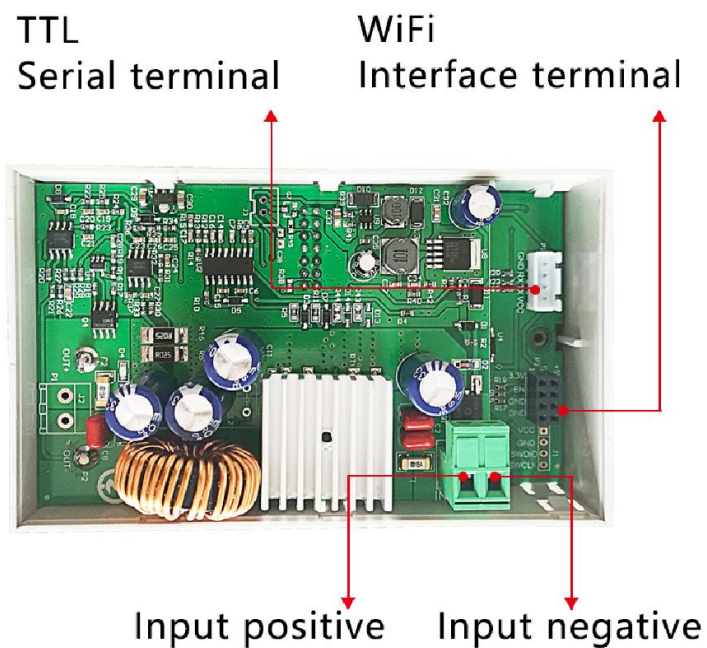**Revision time 2020/8/12**

Version No   V1.0

Version No. note: in order to better understand and use all functions of the product and obtain a good user experience, please read the product manual carefully to avoid misoperation.

1.1 Operation panel description

1.1.1 Front Panel

1.1.2 Rear panel

matters needing attention:

The power input interface must be strictly connected to the regulated dc power of 6-55v (do not connect to ac power or power beyond the voltage range.Otherwise the product will be burnt!)When the current or power or temperature is too high, the fan is turned on; otherwise, the fan is turned off. When the temperature is higher than 80 degrees, the OTP is displayed and the output is turned off.The communication port is a special interface, do not connect other modules or devices.WIFI module, USB module and RS485 module areoptional, please purchase separately.

WIFI Communication Modulex1(Matching)

USB to TTL modulex1 (Matching)

RS485 to TTLmodule (Matching)

1.2 Product technical indicators

Model	WZ5005	Display	1.8 inch LCD
Input voltage range	6-55.00V	Input voltage resolution	0.01V
Output voltage range	0-50.00V	Output voltage resolution	0.01V
Output current range	0-5.000A	Output current resolution	0.001A
Output power range	0-250.0W	Input voltage accuracy	±(1%+5)
Output voltage accuracy	±(0.3%+3)	Output current accuracy	±(0.5%+5)
output ripple	150mV	Temperature	-10℃~40℃
Time range	0-100hour(unit : S)	Energy range	0-9999.99WH
Capacity range	0-9999.99AH	Capacity energy error	±2%
Screen brightness	0-6 7 levels	Differential pressure	>0.05%+1V
Including package weight	About 269g	Product Size	120x74x35mm

1.3 Product core functions

1.8-inch HD color display	Android app / PC upper computer
4 groups of quick storage calls	Multiple display interfaces
Extended external USB / RS485/WIFI	Integrated panel for easy assembly
Multiple protection	

1.4 Operating instructions

After power on, if WiFi mode is set in the menu, connect WiFi server first, and then display the power on interface, otherwise directly display the power on interface, and then enter the main interface.
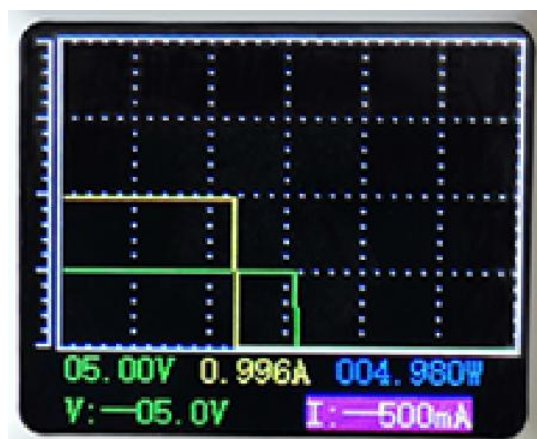
1.4.1 main interface

Data display interface

Statistics interface

Curvilinear interface

1.4.2 instructions

In the menu operation, the red shadow is the currently selected menu, and the blue is not selected. Press the direction key to move the cursor or switch the menu, and then press OK to confirm.

Press up or down direction key to switch data display or statistics interface.

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## 1.4.2.1 Main interface voltage and current settings, protection settings

Voltage setting：Press the voltage setting key $\boxed{\text{V-SET}}$，Voltage setting is selected (curve display interface setting will automatically jump out)，Set the selected bit to display in reverse red，Shift left and right buttons，Turn the rotary encoder to increase clockwise and decrease anticlockwise. Setting complete，Press ⊙(OK LOCK) key、$\boxed{\text{V-SET}}$ Or other setting buttons, exit and save the setting value.

Current setting：Press the current setting key $\boxed{\text{I-SET}}$，Current setting is selected (curve display interface setting will automatically pop up)，Set the selected bit to display in reverse red，Shift left and right buttons，Rotate the rotary encoder to add clockwise and decrease anticlockwise. Setting complete，Press ⊙(OK LOCK) key、$\boxed{\text{I-SET}}$ Or other setting buttons, exit and save the setting value.

Overvoltage protection settings：Press the protection setting key $\boxed{\text{P-SET}}$，Overvoltage protection setting is selected (curve display interface setting will automatically jump out)，Set the selected bit to display in reverse red，Shift the left and right buttons, turn the rotary encoder to increase clockwise and

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decrease anticlockwise. Setting complete，Press **[OK LOCK]** key、**[P-SET]** Or other setting buttons, exit and save the setting value.

Overcurrent protection settings： Press the protection setting key **[P-SET]** ， Overvoltage protection setting is selected (curve display interface setting will automatically jump out)， Press the protection setting key again **[P-SET]** ， The overcurrent protection setting is selected, and the selected bit is displayed in reverse red，Shift the left and right buttons, turn the rotary encoder to increase clockwise and decrease anticlockwise. Setting complete，Press **[OK LOCK]** key、 **[P-SET]** Or other setting buttons, exit and save the setting value.
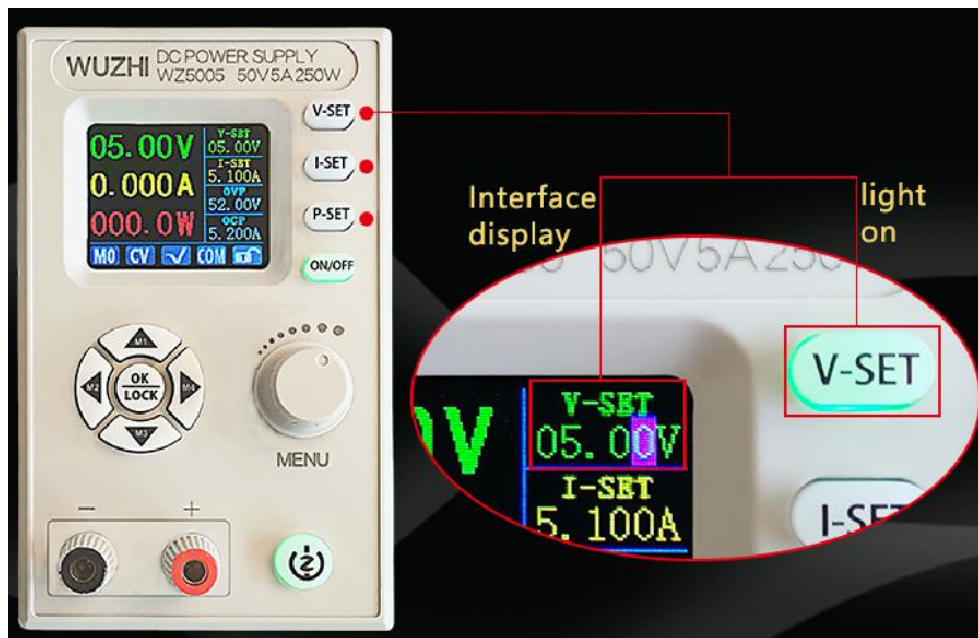
1.4.2.2 Fast storage and recall

Long press up, left and right 4 direction keys to call out M1, M2, m3 and M4. Set the current output voltage, output current, over-voltage protection and over-current protection values, and set the automatic storage.

1.4.2.3 Key lock unlock

Long press [OK LOCK] key More than 2S，You can lock or unlock the keyboard manually. In the communication state, the communication status flag turns green, at this time, the key is automatically locked, the communication is disconnected, the flag bit turns white, and the key is automatically unlocked.

1.4.2.4 Scale adjustment of curve display interface

In the curve display interface, the scale value of coordinate axis is determined by each scale. Select the voltage scale setting by default below, press the left and right direction keys to change the selected setting object, the setting value is displayed in reverse red, and rotate the rotary encoder to change the size of each scale.
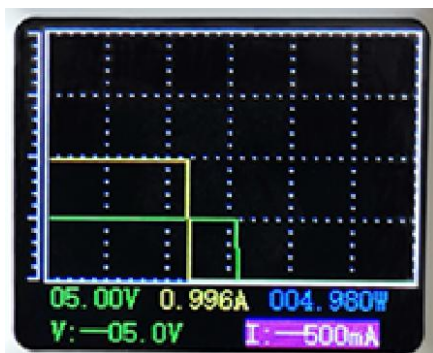
1.4.2.5 System settings

Press the rotary encoder key MENU，Enter the system setting menu interface.

Press the direction key to select the setting option. The red reverse display is the selected position. Rotate the encoding potentiometer to change the setting.

1) Adjust the main display interface, and you can choose digital classic interface or curve display interface.

2) The device address can be set from 1-255.

3) The communication interface can be set as COM or WiFi interface. COM port is the interface connecting RS485 and USB module at the rear，Show when selected COM ；The WiFi port is the interface connecting to the WiFi module, When selected, the communication icon is WIFI ；It turns green in communication state.

4) The communication rate of COM interface can be set as 9600,19200,38400,57600,115200, and the communication rate

under WiFi is fixed as 115200.

5) The system language can be set to simplified Chinese and English.

6) When the power on output is turned on, the power output will be turned on automatically after the power on. When the power is turned off, the power output will be turned off.

7) When the transfer out output is turned on, the output will be turned on automatically after the shortcut transfer out. When the shortcut transfer out is turned off, the output will be turned off automatically.

8) When the button sound is turned on, press the button buzzer to prompt, and when it is turned off, press the button to mute.

9) After opening the boot image, the boot logo image will be displayed before entering the main interface, and then directly entering the main interface after closing.

10) It can be set to 0-6 with seven levels of brightness.

11) The dialog box will be opened after the system zero calibration is confirmed, and this operation will be performed when the system has a small current for a long time. Press the left and right keys to confirm or cancel, and press the OK key to exit.
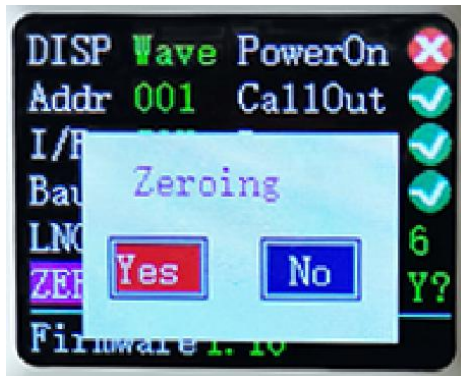
13) The dialog box will be opened after the factory confirmation is restored. This operation can be performed when there is an exception in the use process to restore the factory settings. Press the left and right keys to confirm or cancel, and press the OK key to exit.
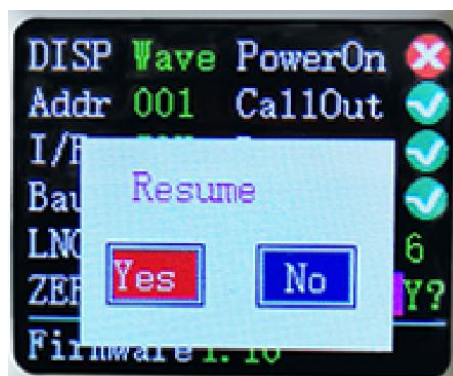
13) System version displays the current system version number.

WiFi version power android mobile APP instructions

1.Mobile APP scan code download and install

2.Attention during installation

This software only supports Android5.1 and above system use, during the installation process will request the location service or to obtain the mobile phone permission, different mobile phone system version will be slightly different.Please agree and open the location service or allow permission requests.

As shown, please select allow
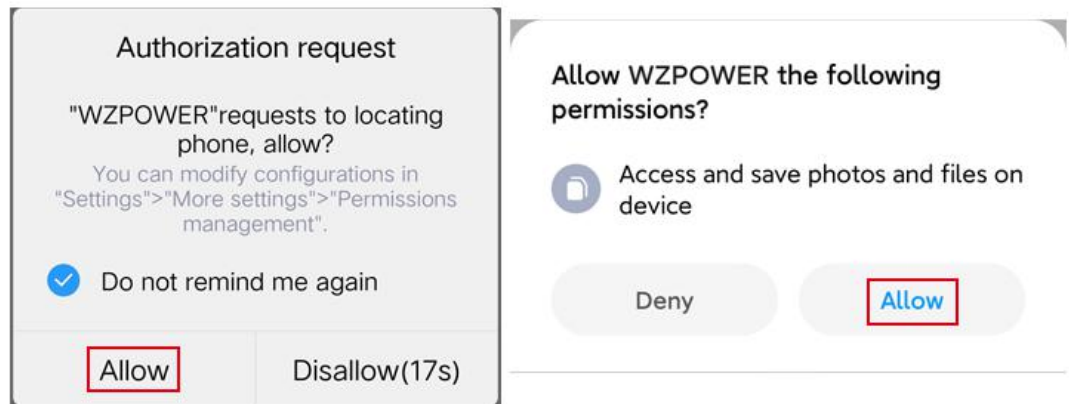
After installation, the APP icon is shown in the following figure:

2.1 Software updates

Click the APP icon, after the APP starts, the system will automatically detect whether the APP version has been updated in the background. If so, the new version will pop up to remind the update.

2.2APP interface display

2.2.1After startup, the main interface of the APP is shown as follows:

Connect Button

Open the sidebar

Export Data

Switch on and off
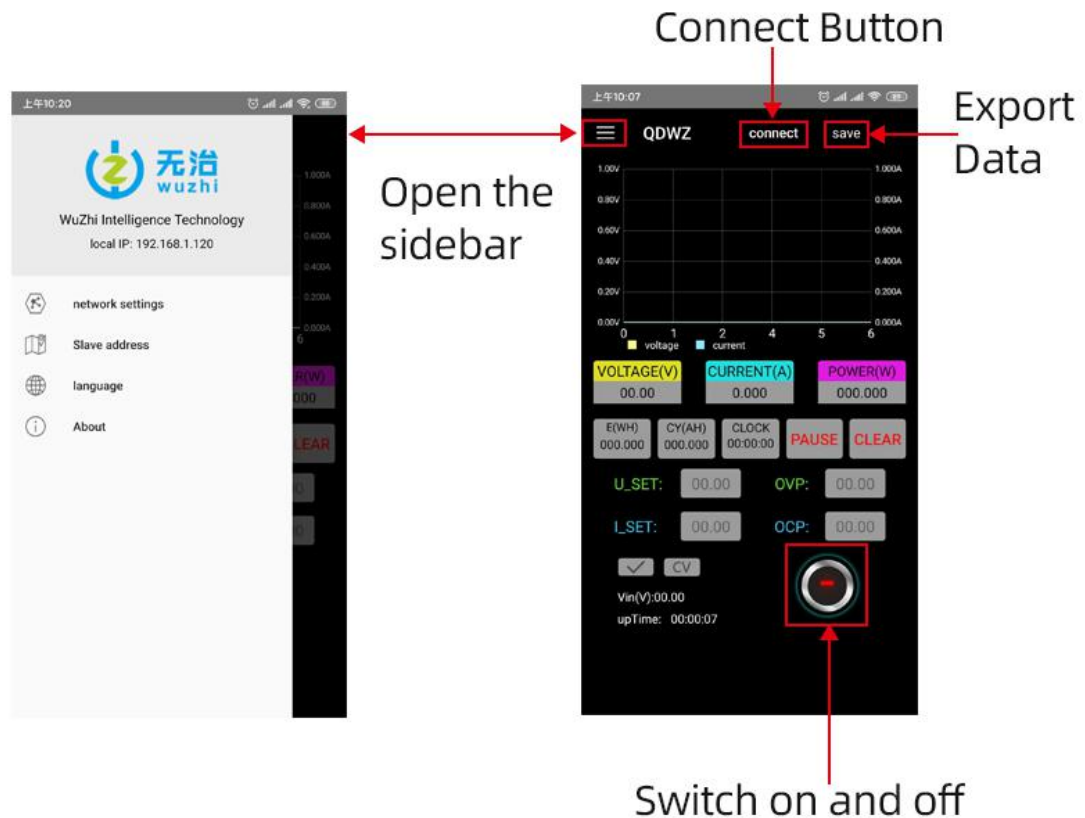
Click the menu icon to open the sideslip interface, click the address selection, and the operation is as shown in the figure.

2.2.3 Click address selection, and the main interface of the APP will display the following figure:
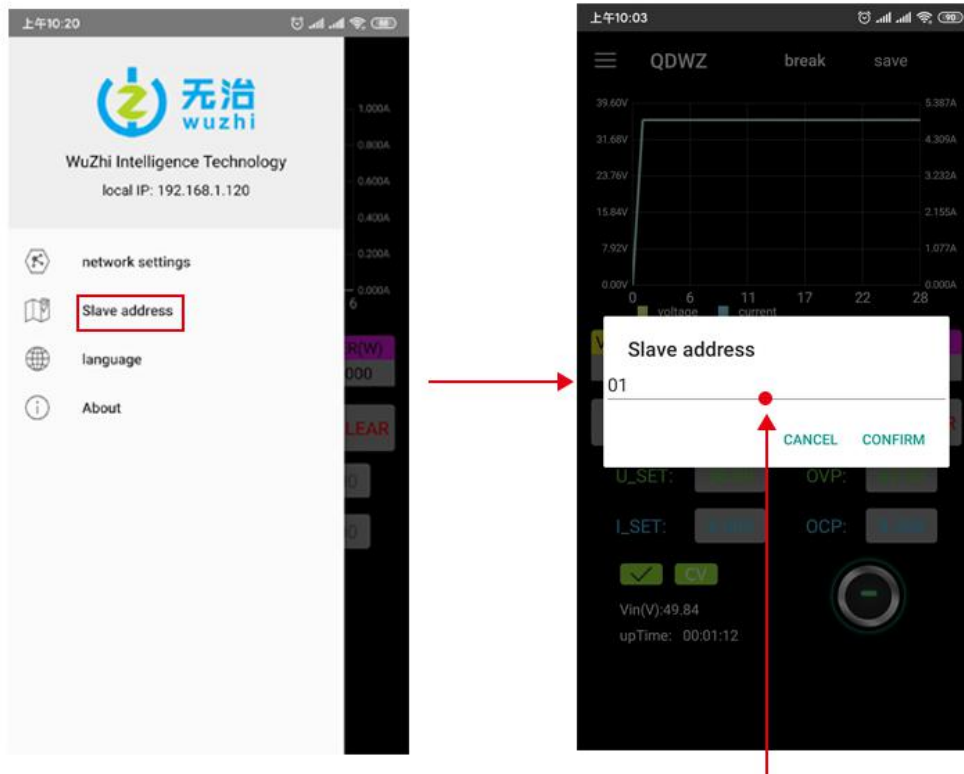
Enter your device address
The input range is integers 01~255

The language option in the sideslip interface is similar to the option operation and address selection. Click to enter the interface for operation.

2.2.4 Click storage, and the mobile app pops up and selects the opening mode, as shown in the following figure:

★★★
The opening method is only for example. Different mobile phones display differently. Select the way you want to open the data table
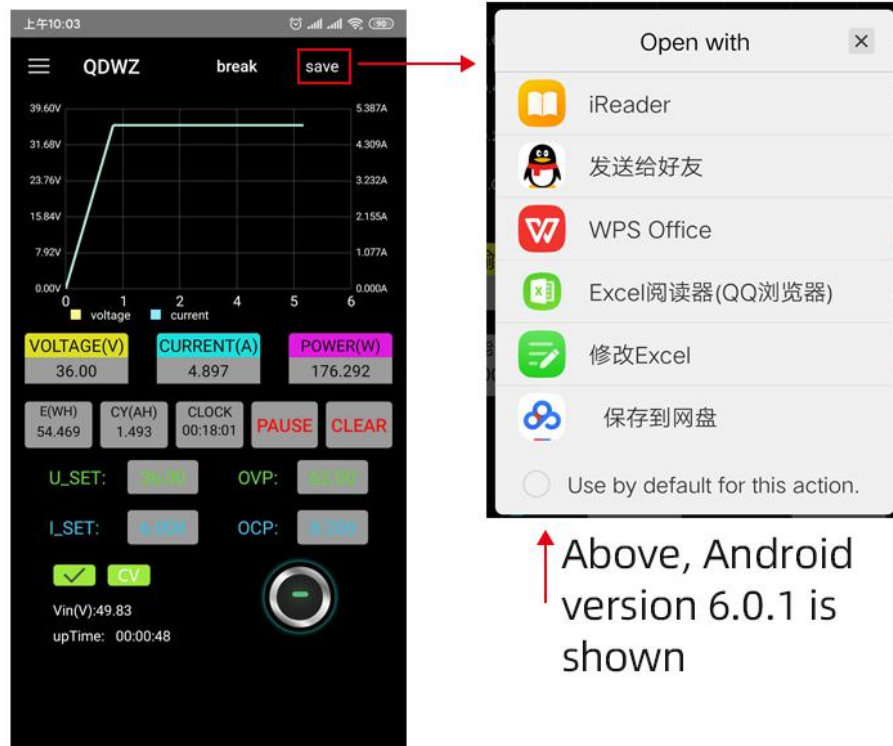
Above, Android version 6.0.1 is shown

Above, xiaomi's Android version 9 is displayed

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After selecting the opening method, open the stored data table, as shown in the following figure:

上午10:04   ⏱ .ıll .ıll 🛜 90

< WZ6008   Q 🔲 📤

Voltage and current...   •••

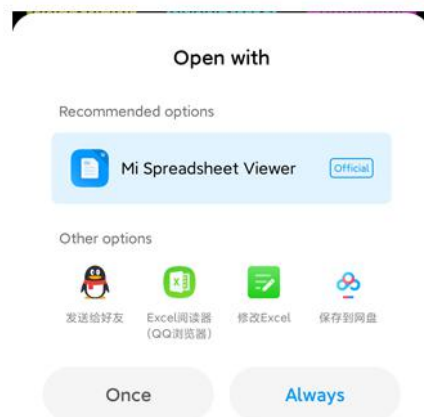|	A	B	C	D	E
1	Time	Voltage	Current	Vin	Date
2	10:3:13	00.00	0.000	00.00	2020-5-6
3	10:3:14	36.00	4.897	49.83	2020-5-6
4	10:3:15	36.00	4.897	49.83	2020-5-6
5	10:3:16	36.00	4.897	49.83	2020-5-6
6	10:3:17	36.00	4.897	49.83	2020-5-6
7	10:3:18	36.00	4.897	49.83	2020-5-6
8	10:3:19	36.00	4.897	49.83	2020-5-6
9	10:3:21	36.00	4.897	49.83	2020-5-6
10	10:3:22	36.00	4.897	49.83	2020-5-6
11	10:3:23	36.00	4.897	49.83	2020-5-6
12	10:3:24	36.00	4.897	49.83	2020-5-6
13	10:3:25	36.00	4.897	49.83	2020-5-6
14	10:3:26	36.00	4.896	49.83	2020-5-6
15	10:3:27	36.00	4.896	49.83	2020-5-6
16	10:3:28	36.00	4.897	49.83	2020-5-6
17	10:3:29	36.00	4.897	49.84	2020-5-6
18	10:3:30	36.00	4.897	49.84	2020-5-6
19	10:3:31	36.00	4.897	49.84	2020-5-6
20	10:3:32	36.00	4.897	49.84	2020-5-6
21	10:3:33	36.00	4.897	49.84	2020-5-6
22	10:3:34	36.00	4.897	49.84	2020-5-6
23	10:3:35	36.00	4.897	49.84	2020-5-6
24	10:3:36	36.00	4.897	49.83	2020-5-6
25	10:3:37	36.00	4.897	49.84	2020-5-6
26	10:3:38	36.00	4.897	49.84	2020-5-6
27	10:3:39	36.00	4.896	49.83	2020-5-6
28	10:3:40	36.00	4.897	49.83	2020-5-6
29	10:3:42	36.00	4.897	49.84	2020-5-6
30	10:3:43	36.00	4.897	49.83	2020-5-6
31	10:3:44	36.00	4.896	49.83	2020-5-6
32	10:3:45	36.00	4.896	49.84	2020-5-6
33	10:3:46	36.00	4.896	49.83	2020-5-6

3. Use of app

3.1 Open WZ6008 and set the communication interface of WZ6008 as WiFi, WZ6008The interface is shown as follows:

★★ Note: after the communication interface is set to WiFi, wz6008 needs to be reset After restart, the interface of wz6008 is as follows:

It should be noted here that the app should be opened first, and then the wz6008 should be opened to set the communication interface mode of wz6008. The app is only used in WiFi mode. The specific operation is shown in the figure above

3.2 Open the app intelligent distribution network

Steps of intelligent distribution network: see the following picture annotation

Step 1: click intelligent distribution network. (Figure ①)

Step 2: the interface shown in Figure 2 appears. Do not proceed to the next step, wait for WZ6008 When the IP address (Figure ③) interface is displayed, click next in figure ②.

Step 3: display the interface of figure ④, input the WiFi password, and click OK.

Step 4: wait for a moment in figure ⑤ and click OK when figure ⑥ is displayed.

Step 5: figure ⑦ interface, click the return arrow to return to the main interface as shown in figure ⑧, and the distribution network is completed.

Step 6: click the connect button, as shown in figure ⑧

Please refer to the following picture for specific operation steps, and pay attention to the operation sequence in the next step 2.

Wait until the IP address appears on the wz6008

interface
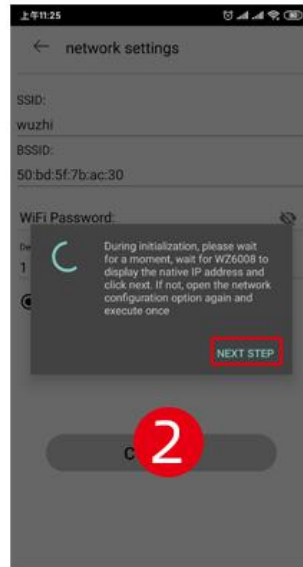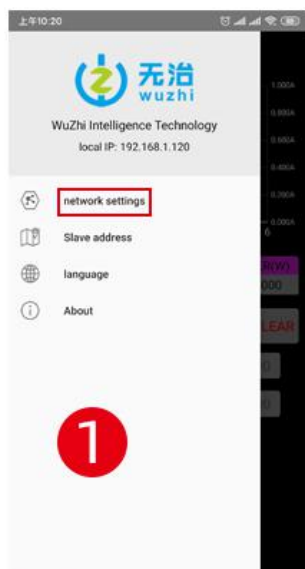
★★ If the IP address is not shown in figure ③, please open the distribution network option again to execute.
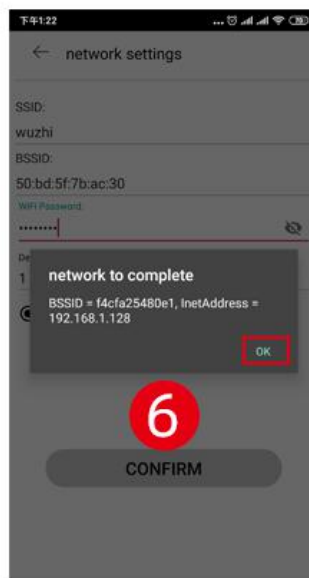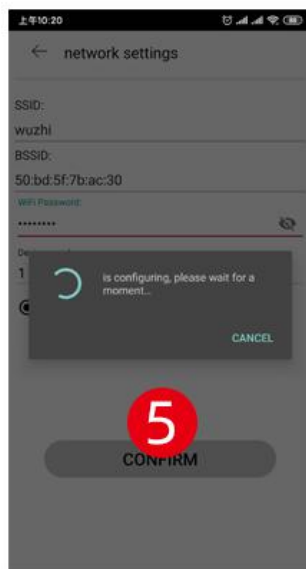
Matters Needing Attention:

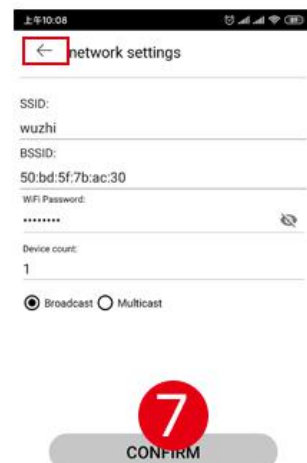1. The first connection of the mobile APP to the device requires intelligent distribution network. If the distribution network fails, please cut off the power and operate it again.If the distribution network is successful, the next time you open the APP, it will be connected automatically. Just click the connection button, and there is no need to redistribute the network.If the mobile phone is replaced or the IP address of the mobile phone is changed, the re-smart distribution network needs to be reset.

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2. After starting WZ6008, it will first connect to WiFi, and then check whether the mobile APP can be connected. If not, make sure that the connection can be rebooted if the mobile APP is opened.When the lock screen or the APP runs in the background, the connection may not be possible.If the IP address of the phone changes, you need to press the left button and then press OK to reset the network, and then execute the intelligent network distribution process again.
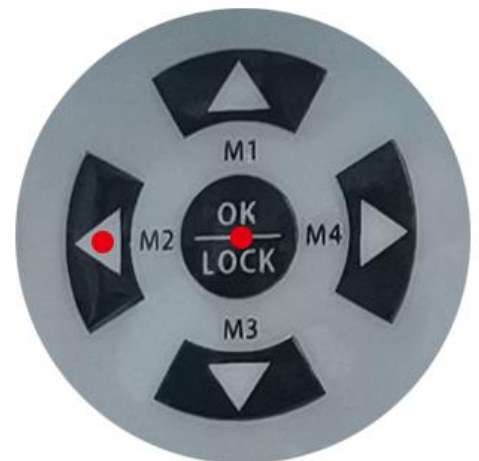
3. There are a variety of android phones, with different system versions, different brands or different resolutions of the same brand.

4. The permission requirement of mobile APP: in addition to the necessary permission when the APP is installed, the permission of the APP should be set in the phone after the installation: for example, the lock screen should not be cleaned, the background is allowed to run, the startup is allowed, etc., to prevent the system from forcing the exit of the APP when the APP keeps recording data.

Instructions for installation and use of upper computer software

Installation software requirements: win7 and above systems need to be installed with net framework 4 or above. If the computer does not have one, please install it yourself.

This software is developed by our company without virus. If the antivirus software prompts, please allow all its functions, otherwise it will affect the normal operation of the software.

Open package software，Double click Icon ，Open the software.
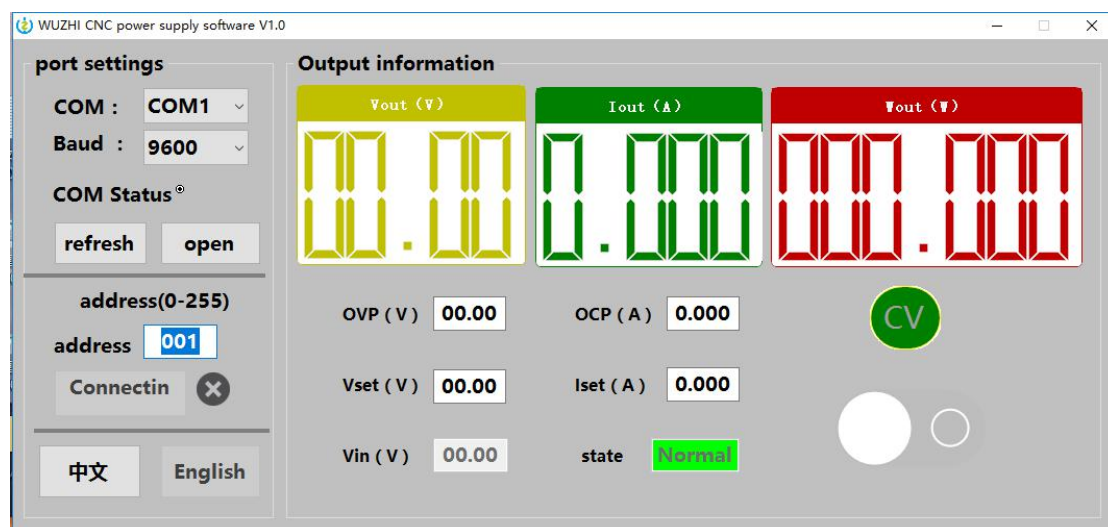
Connect the device with USB or RS485 module through USB data line or USB to RS485. Select the communication port number

and click open, The indicator turns red after success. Then choose the device address，Click to connect device，Indicator state turns green after work. Establish connection between software and equipment for real-time communication.

Through the software, the output voltage, output current, protection voltage, over-current protection and output switch can be simply set. Display the current output voltage, output current, output power, working status, etc.

Appendix 1 Communication Protocol

Frame format command：Frame length is 20, The format is as follows：

Synchro head	Power address	Command word	4-19 bytes are related information content	Check code

When the device receives a frame setting command，The command of this frame will be verified. If the checksum is wrong，Then return parameter 90H；
If the setting parameter is wrong or the parameter overflows，Then return parameterA0H；If the command cannot be executed，Then return parameter B0H；
If the command is invalid，Then parameter C0H is returned；If the command is unknown，Then return parameter D0H；Otherwise, return parameter 80H。

When the load receives a frame read command, it will check the frame command: if the check sum is correct, it will return the corresponding read data. If the check sum is wrong, the check command (90H) is returned.

Command word	register	content
0x20	1	Set operation mode (0 is panel operation mode, 1 is remote operation mode)
0x21	1	Set new address (1-255)
0x22	1	Set power output status (0 is output OFF, 1 is output ON)
0x71	1	Set time capacity energy statistics operation state 0 suspend 1 operation
0x72	1	Clearing time capacity energy statistics
0x23	1	Read the current power output status ((0 is output OFF, 1 is output ON)
	2	Read the current working state (0 - CV mode 1 - CC mode)
	3	Read the current system status (0 – normal 1 – over voltage 2 – over current 3 – over temperature 4 – input under voltage)
0x24 Read product information	1	Read product model
	2	Read product version high byte
	3	Read product version low byte
	4	Read the high byte of the factory number
	5	Read the next highest byte of the factory number
	6	Read the next lower byte of the factory number
	7	Read the low byte of the factory number
0x25/0x26 Read and set system	1	Device address
	2	Power on interface (0 No 1 WZ)
	3	Power on default output (0 No 1 has)

parameters	4	Sound flag 0 turns off key sound 1 turns on key sound
	5	Backlight brightness 0-6
	6	Language 0 simplified Chinese 1 English
	7	Communication interface type 0 TTL 1WiFi 2 Bluetooth 3 USB
	8	Output state 0 does not output 1 output after calling out
	9	Default interface 0 Non digital 1 Curve 2 battery 3 pointer meter
	10	Baud rate 0 9600 1 19200 2 38400 3 57600 4 115200
0x29 Read current information	1	Read the high byte of the current input voltage value
	2	Read the low byte of the current input voltage value
	3	Read the high byte of the current output voltage value
	4	Read the low byte of the current output voltage value
	5	Read the high byte of the current output current value
	6	Read the low byte of the current output current value
	7	Read the high byte of the current power value
	8	Read the next highest byte of the current power value
	9	Read the next lower byte of the current power value
	10	Read low byte of current power value
0x2A Read current information	1	Read the high byte of the current time value
	2	Read the next highest byte of the current time value
	3	Read the next lower byte of the current time value
	4	Read the low byte of the current time value
	5	Read the high byte of the current energy value
	6	Read the next highest byte of the current energy value
	7	Read the second lowest byte of the current energy value
	8	Read the low byte of the current energy value
	9	Read the high byte of the current capacity value
	10	Reads the next highest byte of the current capacity value
	11	Read the next lower byte of the current capacity value
	12	Read the low byte of the current capacity value
	13	Read the high byte of the current temperature value
	14	Read the low byte of the current temperature value
0x2B/0x2C Read and set information	1	High byte of current protection voltage value
	2	Low byte of current protection voltage value
	3	High byte of current protection current value
	4	Low byte of current protection current value
	5	High byte of current set voltage value
	6	Low byte of current set voltage value
	7	High byte of current value currently set
	8	Low byte of current value currently set
	9	
	10	
	11	

	12	
	13	
	14	