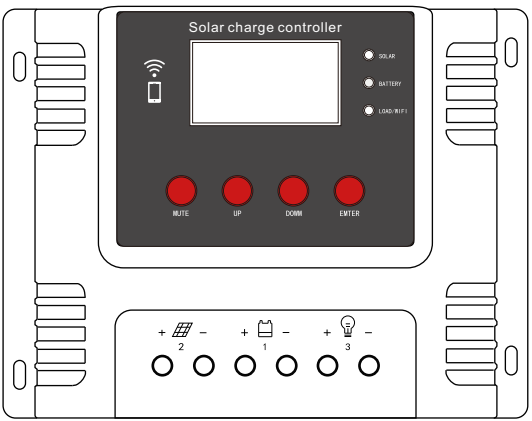
KDY系列太阳能控制器
功能说明

Kdy series solar controller
Function description



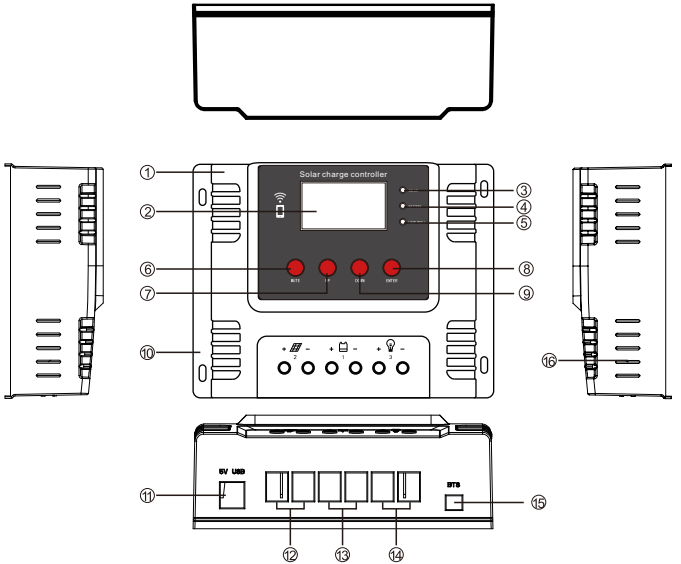
安全使用建议

1、本控制器为12/24/48V自动识别，首次安装时，请确保电池有足够的电压，以便控制器能够识别为正确的电池类型。
2、控制器尽量靠近电池安装，以避免电线过长造成压降，影响正常电压判断。
3、本控制器适用于三元锂，磷酸铁锂，铅酸三种电池充电。
4、本控制器只能使用光伏板作为充电源，请勿用直流或其它电源作为充电源。
5、本控制器运行的时候会发热，请注意将控制器安装在平整，通风良好的表面。

产品特点

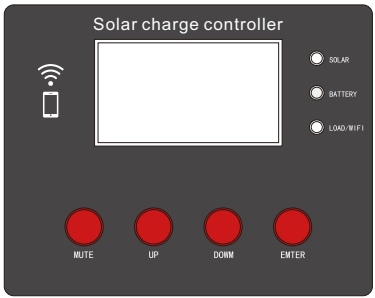
1、采用工业级主芯片。
2、大屏幕，LCD显示，充放电参数可调。
3、完整的3阶段PWM充电管理。
4、内置近充保护，短路保护，开路保护，反接保护均为自恢复，不损伤控制器。
5、WIFI APP 随时查看设置机子的工作状态。
6、电池温度检测功能（选配）。

一、产品描述



序号	名称	序号	名称
1	机壳	9	下翻按键
2	LCD显示屏	10	底板
3	太阳能接入指示灯	11	USB接口
4	电池指示灯	12	太阳能板接线口
5	负载与WIFI状态指示灯	13	电池接线口
6	菜单键	14	负载接线口
7	上翻按键	15	温度传感器接口
8	确认/负载开关按键	16	散热窗口

二、指示灯与按键说明



指示灯

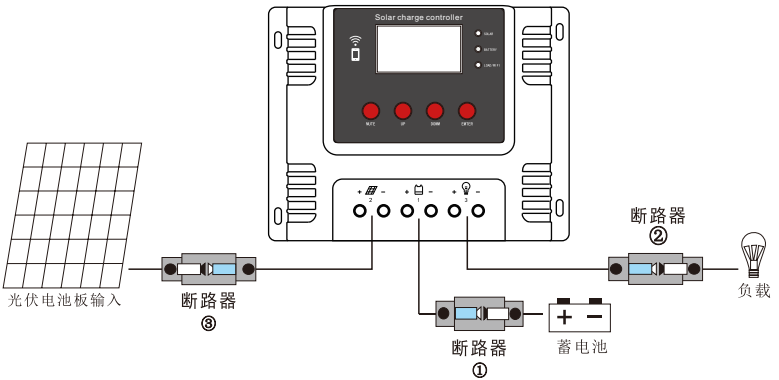
SOLAR	太阳能接入指示灯	检测到有太阳能接入充电时指示灯亮起，没有太阳能时指示灯灭
BATTERY	电池指示灯	接上电池后指示亮，当负载久压保护后指示灯会以0.5秒的开关频率闪烁，电压上升到恢复值后正常亮起
LOAD/WIFI	负载与WIFI指示灯	打开负载时指示灯亮起，关闭负载时指示灯熄灭，打开WIFI后指示灯会以0.5秒的频率闪烁5次，然后回到负载指示状态10秒，再重新返回到WIFI指示状态

按键

MUTE	菜单键	轻按按键可以循环浏览各个菜单
UP	上翻页	在进入菜单设置后上翻设置功能参数
DOWM	下翻页	在进入菜单设置后下翻设置功能参数
ENTER	功能确认与负载开关键	确认进入和退出菜单设置项，负载开关

三、系统连接

（一）、基本连接



1、将蓄电池正负极按图示接入控制器，控制器会自动检测电池电压。

2、将负载正负极按图示接入控制器，注意不要接反。

3、将太阳能板按图接放控制器。

请确保控制器安装正确！

开启过程：步骤1:先打开蓄电池连接的断路器①，确保控制器与蓄电池连接后（控制器LCD将会显示内容），设置好电池类型；

步骤2：如果需要DC输出控制负载，那么先设置输出控制模式，然后再打开DC输出断路器②；

步骤3：然后再连接打开太阳能板PV输入的断路器③，如果PV输入的电压在控制器的充电工作范围内，那么控制器将进入充电状态；

关闭过程：依次断开断路器③②①

（二）、选配件使用说明

连接远程温度传感器线（型号：RT300R47K)将远程温度控制器连接到接口BTS，另一端接近电池。

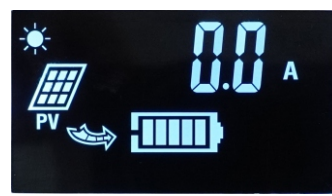
注意：控制器在未连接远程温度传感器的情况下，会默认25度充电环境工作。

注意：控制器在未连接远程温度传感器的情况下，会默认25℃对蓄电池充电或放电，无温度补偿。

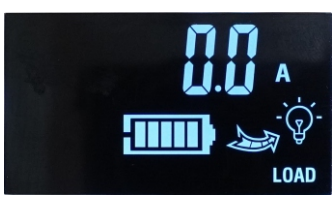
四、显示界面/参数设置

浏览界面

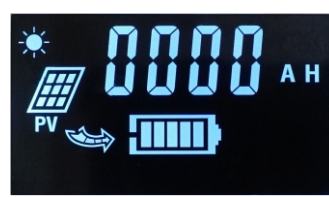
1：主界面



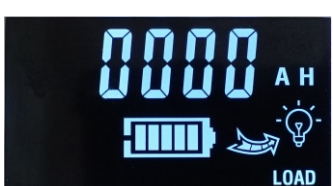
2：太阳能充电电流



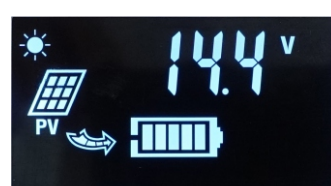
3：放电电流



4：太阳能充电功率



5：负载放电功率

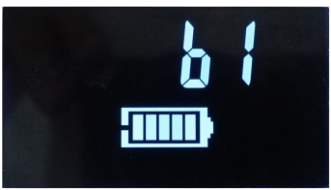


6：浮充电压设置界面

7：放电恢复电压设置界面

8：放电截止电压设置界面

9：负载输出控制模式



10：电池类型

按菜单键循环显示1到10界面，在第6到第10界面下，按确认键进入子菜单，按上下键选择需要的可调值，选择完后按确认键保存设定值并退出子菜单，返回到主界面，也可以不动按键3秒后自动保存返回主界面。

负载输出控制模式：

00纯光控，接通太阳能充电后会有一分钟左右的延迟关闭时间。

01-23光控+延时，如设置为01，就是在断开太阳能充电后负载输出1小时后自动关闭。

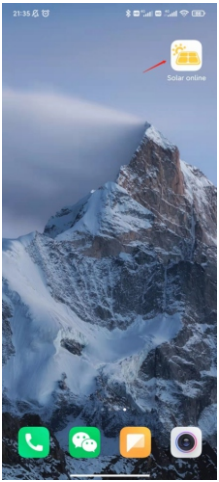
24常开模式，在常开模式下可以按"确认"键控制开关负载（其它模式此功能不可用）。

五、APP 连接说明

KDY控制器wifi连接步骤

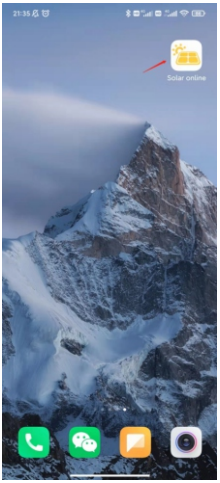
1. 打开手机wifi设置

2. 点击APP图标



3. 点击含有KDY的wifi名称

4. 输入密码12345678（原始密码）



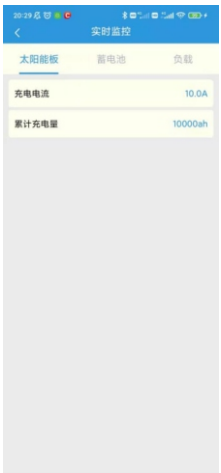
5. 安卓版本10或者以上的手机，会出现以下连接界面，点击允许按钮，然后点击wifi名称连接设备，连接成功后，才能进入设备实时监控页面。

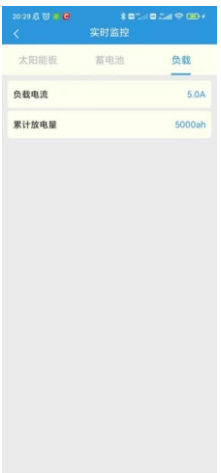
6. 设备实时监控页面。

若手机无法连接控制器wifi时，请打开手机的wifi设置界面，点击更多WLAN设置>WLAN+，关闭WLAN+开关，并重新连接控制器wifi即可。

实施监控页面：

可分别查看太阳能板、蓄电池、负载的实时状态。





参数设置：
点击相应的选项，设置设备参数
浮充电压，放电恢复电压，放电截止电压可调参数
三元锂电池和磷酸锂铁电池的浮充电压不能调节；
负载工作模式可调参数范围为 0~24；
当负载工作模式为24时，负载开关可远程开关，否则禁止操作；

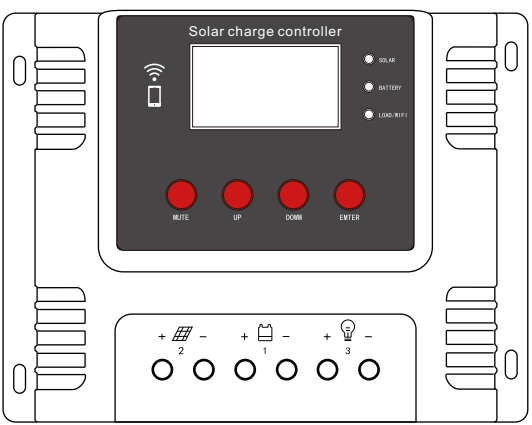
其他操作：
语言切换可以使用中文和英文；
更改wifi名称，可以输入自定义的wifi名称，修改后的wifi名称以KDY开头的8位字符串（不能出现中文）；
修改wifi密码，可以输入自定义的8位密码；

扫描上方二维码下载APP

产品参数

型号	KDY10	KDY20	KDY30	KDY40	KDY50	KDY60
额定充电电流	10A	20A	30A	40A	50A	60A
额定放电电流	10A	20A	30A	40A	50A	60A
最高光伏电压	12V系统＜25V/24V系统＜50V/48V系统＜100V					
USB输出	5V2AMAX					
侍机电流	12V＜80ma；24V＜45ma；48V＜30ma；		12V＜80ma；24V＜45ma；48V＜30ma；		12V＜150ma；24V＜80ma；48V＜50ma；	
外形尺寸	115*145*57mm		135*170*70mm		155*197*86mm	
工作环境温度	-20° C～+50° C					
铅酸电池/BAT/b1						
系统电压	12V系统		24V系统		48V系统	
浮充电压	默认值14.4V	可调值13-15V	默认值28.8V	可调值26-30V	默认值57.6V	可调值52-60V
放电截止电压	默认值10.7V	可调值9.5-11V	默认值21.4V	可调值19-22V	默认值42.8V	可调值38-44V
放电恢复电压	默认值12.6V	可调值11.5-13V	默认值25.2V	可调值23-26V	默认值50.4V	可调值46-52V
三元锂电池/LIT1/b2						
系统电压	12V系统3串		24V系统7串		48V系统13串	
浮充电压	默认值12.6V	不可调	默认值29.4V	不可调	默认值54.6V	不可调
放电截止电压	默认值9V	可调值9-10.5V	默认值21V	可调值21-24.5V	默认值39V	可调值39-45.4V
放电恢复电压	默认值10.5V	可调值10.5-11.7V	默认值24.5V	可调值24.5-27.3V	默认值45.4V	可调值45.5-50.7V
磷酸铁锂电池/LIT2/b3						
系统电压	12V系统4串		24V系统8串		48V系统16串	
浮充电压	默认值14.6V	不可调	默认值29.2V	不可调	默认值58.4V	不可调
放电截止电压	默认值11.8V	可调值11.8-12.5V	默认值23.6V	可调值23.6-25V	默认值47.2V	可调值47.2-50V
放电恢复电压	默认值12.5V	可调值12.5-13.5V	默认值25V	可调值25-27V	默认值50V	可调值50-54V

Kdy series solar controller
Function description



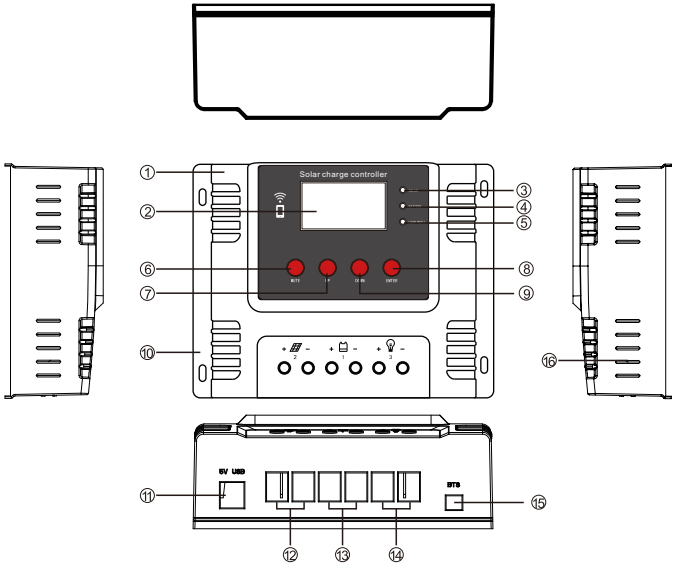
Advice for safe use

1.This charge controller is 12/24/48V auto identified,Make sure your battery has enough voltage for the controller to recognize the battery type before first installation.
2.The battery cable should be as short as possible to minimize loss, to avoid affecting the judgment of normal voltage
3.This controller is suitable for Lithium Ternary， LiFePo4 and Lead acid battery.
4.The charge regulator is only suitable for regulating solar modules. Never connect another charging source to the charge regulator.
5.The controller will generate heat when it is running, please pay attention to install the controller on a flat, well-ventilated surface.

Product features

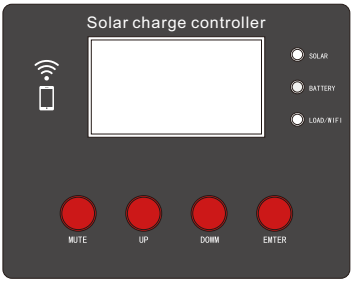
1. Adopt industrial-grade main chip.
2. Large screen, LCD display, adjustable charge and discharge parameters.
3. Complete 3-stage PWM charging management.
4. Built-in near-charge protection, short-circuit protection, open-circuit protection, and reverse connection protection , all self-recovery and will not damage the controller.
5. WIFI APP can check and set it at any time.
6. Battery temperature detection function (optional).

Ⅰ.Product description



No	NAME	No	NAME
1	Housing case	9	Page Down
2	LCD display	10	Base Board
3	PV INPUT	11	USB port
4	Battery	12	PV Panel Terminal
5	Load and WIFI status indicator	13	Battery
6	Menu	14	Load port
7	Page Up	15	Temperature sensor
8	Confirm/load switch button	16	Cooling

Ⅱ.Icon definition/button



Indicator light

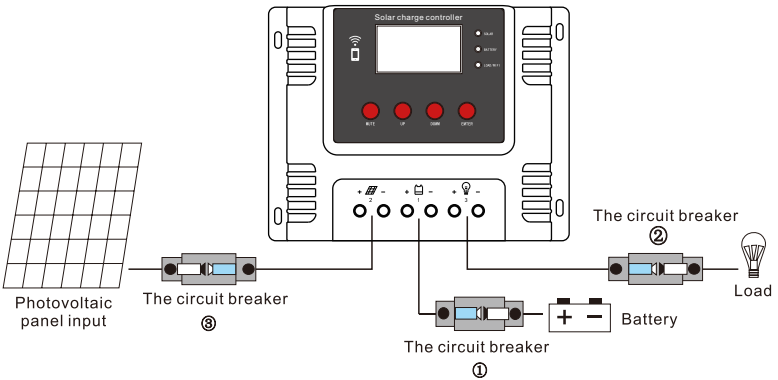
SOLAR	PV INPUT	The indicator lights up when solar energy is detected to charge,The light goes off when there is no solar energy.
BATTERY	Battery indicator light	When the battery is connected, the indicator light will flash at the switching frequency of 0.5 seconds after the load is protected for a long time. After the voltage rises to the recovery value, the indicator light will light up normally.
LOAD/WIFI	Load and WIFI indicator	The indicator light will be on when the load is turned on and off when the load is turned off. After the WIFI is turned on, the indicator light will flash 5 times at a frequency of 0.5 seconds, and then return to the load indicator state for 10 seconds, and then return to the WIFI indicator state again

Button

MUTE	Menu	Tap the button to cycle through the menus
UP	Page up	To set the function parameters after entering the menu setting
DOWM	Page Down	Scroll down to set the function parameters after entering the menu setting
ENTER	Function confirmation and load switch key	Confirm enter and exit menu setting items, load switch

III.System connection

（1）.Basic connection



1. Connect the positive and negative poles of the battery to the controller as shown in the figure, and the controller will automatically detect the battery voltage.
2. Connect the positive and negative terminals of the load to the controller as shown , in the figure, taking care not to connect them reversely.
3. Connect the solar panel to the controller as shown in the figure.

Make sure the controller is installed correctly!

Step 1: First open the circuit breaker connected to the battery. ①Ensure that the controller is connected to the battery (the controller LCD will display the content) and set the battery type.

Step 2: If the DC output control load is required, set the output control mode first, and then open the DC output circuit breaker ②.

Step 3: then connect the circuit breaker ③ to open the PV input of the solar panel. If the VOLTAGE of the PV input is within the charging range of the controller, the controller will enter the charging state;

Closing process: Disconnect circuit breakers ③②① in turn.

(2).Select instructions for accessories

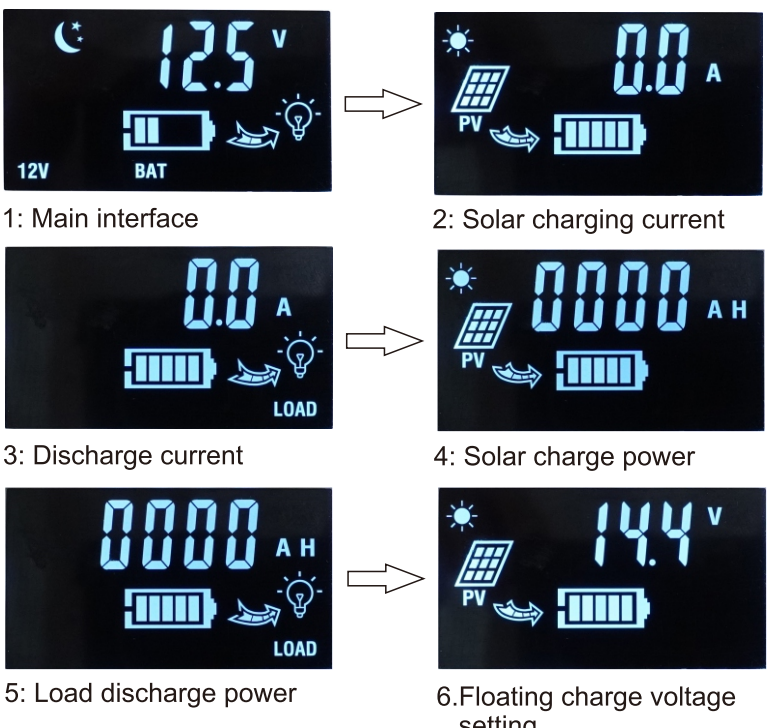
Connect the remote temperature sensor cable (model: RT300R47K) connect the remote temperature controller to the interface BTS, and the other end is close to the battery

Note: When the controller is not connected to the remote temperature sensor, it will work in 25 charging environment by default

Note: If the controller is not connected to a remote temperature sensor, it charges or discharges the battery at 25°C by default without temperature compensation.

Ⅳ.Display/Set

Browsing interface



1: Main interface

2: Solar charging current

3: Discharge current

4: Solar charge power

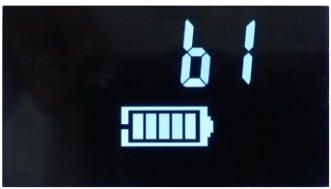
5: Load discharge power

6.Floating charge voltage setting

7: Discharge recovery voltage setting

8: Discharge cut-off voltage setting

9: Load output control mode



10: Battery type

Cycle display in the 6th to 10th interface, press the enter key to enter the sub-menu, press the up and down keys to select the required adjustable value, after the selection is completed.
Press the confirm key to save the set value and exit the sub-menu, and return to the main interface, or you can automatically save after 3 seconds and return to the main interface without pressing the button

Load output control mode:

00 pure light control, there will be a minute or so of delayed shutdown time after solar charging.

01-23 Light control + delay, if set to 01, the load will automatically close after 1 hour after the solar charge is disconnected.

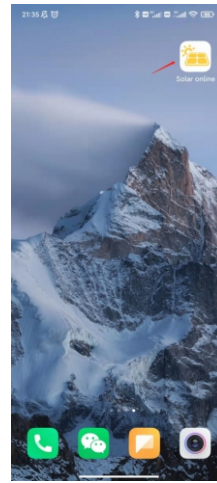
24 In normally open mode, you can press "OK" to control the switch load in normally open mode (this function is unavailable in other modes).

V.APP Connection Instruction

wifi connection steps

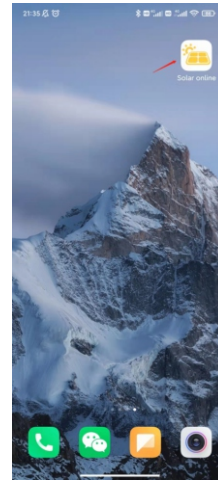
1. Open the phone wifi settings

2. Click on the APP icon

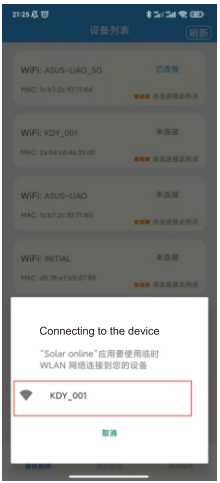


3. Click the wifi name that contains KDY

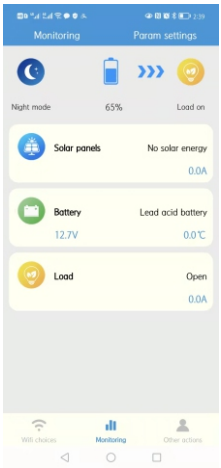
4. Enter password 12345678 (original password)



5. For mobile phones with Android version 10 or above, the following connection interface will appear, click the Allow button, and then click the wifi name to connect to the device



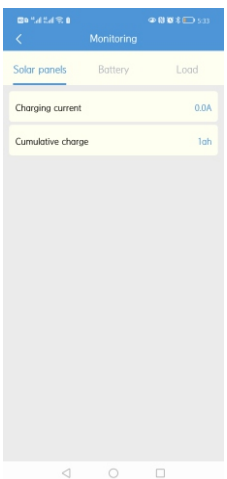
6. After the connection is successful, you can enter the real-time monitoring page of the device;

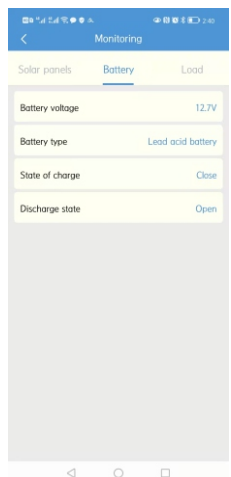


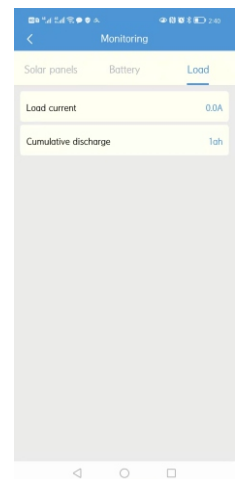
If the phone cannot connect to the controller wifi, please open the wifi setting interface of the phone, click More WLAN settings>WLAN+, turn off the WLAN+ switch, and reconnect the controller wifi.

Implementation monitoring page:

you can view the real-time status of solar panels, batteries, and loads separately.







Parameter setting:

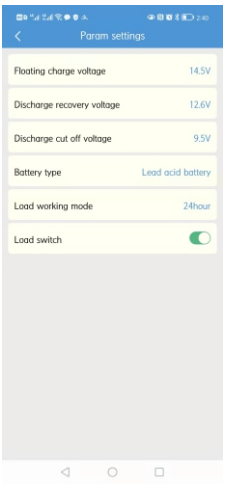
Click the option to set the device parameters.

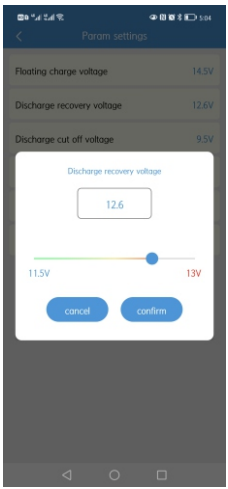
Floating charge voltage, discharge recovery voltage, discharge cut-off voltage, adjustable parameters.

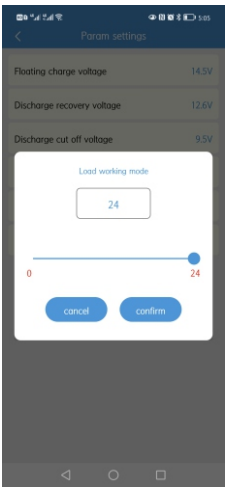
The floating charge voltage of ternary lithium battery and lithium iron phosphate battery cannot be adjusted.

The adjustable parameter range of load working mode is 0~24.

When the load working mode is 24, the load switch can be remotely switched, otherwise the operation is prohibited.





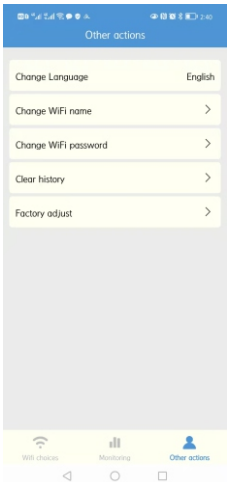


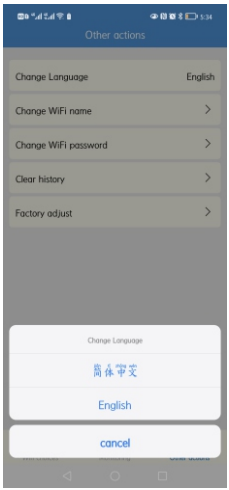
Other operations:

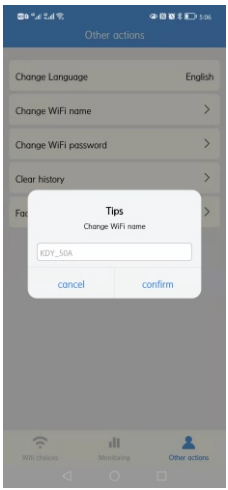
Chinese and English available.

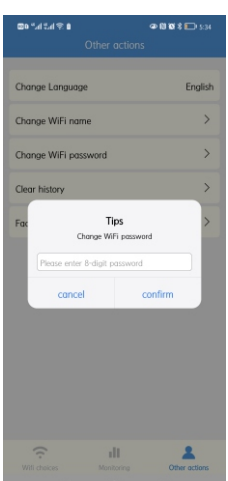
To change the wifi name, you can enter a custom wifi name,and the modified wifi name is an 8-digit string number starting with KDY (Chinese is not allowed).

To modify the wifi password, you can enter a custom 8-digit password.









Scan the QR code above
to download the APP

Parameter

Model	KDY10	KDY20	KDY30	KDY40	KDY50	KDY60
Rated charging current	10A	20A	30A	40A	50A	60A
Rated discharge current	10A	20A	30A	40A	50A	60A
MAX PV Volt	12V system <25V/24V system <50V/48V system <100V					
The USB output	5V2AMAX					
Stand-by Current	12V < 80ma, 24V < 45ma, 48V < 30ma		12V < 80ma, 24V < 45ma, 48V < 30ma		12V < 150ma, 24V < 80ma, 48V < 50ma	
Dimensions	115*145*57mm		135*170*70mm		155*197*86mm	
Work Temperature	-20°C～+50° C					
Lead-acid battery /BAT/ B1						
System Volt	12V system		24Vsystem		48Vsystem	
Float charging Volt	Default 14.4V	Adjustable range 13-15V	Default 28.8V	Adjustable range 26-30V	Default 57.6V	Adjustable range 52-60V
Discharge cut-off Volt	Default 10.7V	Adjustable range 9.5-11V	Default 21.4V	Adjustable range 19-22V	Default 42.8V	Adjustable range 38-44V
Discharge recovery Volt	Default 12.6V	Adjustable range 11.5-13V	Default 25.2V	Adjustable range 23-26V	Default 50.4V	Adjustable range 46-52V
Ternary lithium battery /LIT1/ B2						
System Volt	12V system 3 strings		24V system 7 strings		48V system 13 strings	
Float charging Volt	Default 12.6V	Unadjustable	Default 29.4V	Unadjustable	Default 54.6V	Unadjustable
Discharge cut-off Volt	Default 9V	Adjustable range 9-10.5V	Default 21V	Adjustable range 21-24.5V	Default 39V	Adjustable range 39-45.4V
Discharge recovery Volt	Default 10.5V	Adjustable range 10.5-11.7V	Default 24.5V	Adjustable range 24.5-27.3V	Default 45.4V	Adjustable range 45.5-50.7V
Lithium iron phosphate battery /LIT2/ B3						
System Volt	12V system 4 strings		24V system 8 strings		48V system 16 strings	
Float charging Volt	Default 14.6V	Unadjustable	Default 29.2V	Unadjustable	Default 58.4V	Unadjustable
Discharge cut-off Volt	Default 11.8V	Adjustable range 11.8-12.5V	Default 23.6V	Adjustable range 23.6-25V	Default 47.2V	Adjustable range 47.2-50V
Discharge recovery Volt	Default 12.5V	Adjustable range 12.5-13.5V	Default 25V	Adjustable range 25-27V	Default 50V	Adjustable range 50-54V