

# BL917 solar controller User's Manual

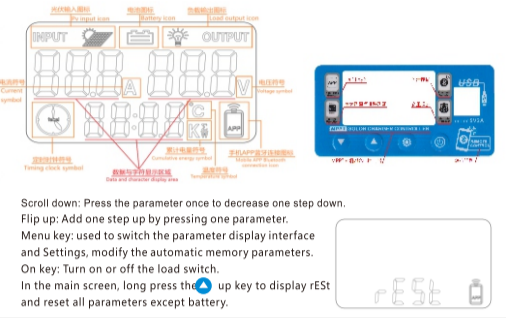
## SAFETY INSTRUCTIONS

- This controller is 12V/24V automatic adaptation, or another version 12/24/36/48/60V manually set the appropriate battery charging mode. When installing for the first time, please make sure that the battery has enough voltage to start and automatically set the controller parameters.
- The battery cable should be as short as possible to minimize loss.
- This controller is suitable for all kinds of lead-acid batteries (including open, sealed, gel and other batteries). **If you charge a lithium battery, you must be familiar with its battery characteristics, and you must set the charging parameters before you can use it.** For example: charge 12V lithium battery. As of output protection setting 9.5V, full protection 12.5V, start charging voltage 11.5V when the battery drops.
- The charge regulator is only suitable for regulating solar modules Never connect another charging source to the charge regulator.
- The battery protection board must be provided when charging the lithium battery, and the products of the lithium battery manufacturer with certification and meeting the national requirements must be selected. It is strictly forbidden to charge directly without a protective plate, and it is strictly forbidden to recharge the lithium battery pack without permission.

## PRODUCT FEATURES

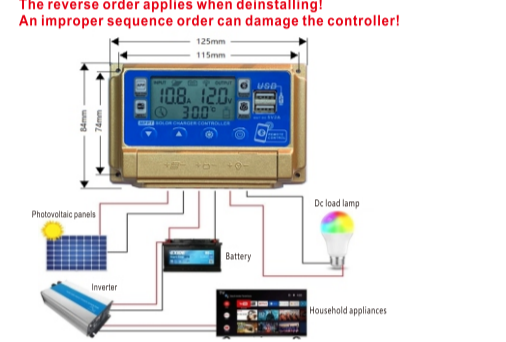
- The industrial-grade master control chip, AD sampling precision, temperature, level 16 charging current, discharge current, the cumulative output real-time display, screen shows at the same time, be clear at a glance.
- Automatic focusing MPPT tracking charging, high charging efficiency, non-stop detection during charging, bidirectional focusing tracking.
- Large-screen LCD display, adjustable charging and discharging parameters. Ultra-wide charge and discharge adjustable, as long as you understand the characteristics of the battery set its corresponding charging parameters, you can charge a battery. When the output is off, the time can be adjusted, which is more convenient (on the market, there is no point adjustment).
- A complete three-phase charge management, effectively protect the battery, the battery is more durable.
- Built-in overcharging, overcurrent, short circuit, open circuit protection, reverse connection protection, when the fault is eliminated, the controller automatically recovers, does not damage the device.
- bidirectional MOS tube anti-backflow circuit, high-power charging mode, ultra-low heat.

## LCD DISPLAY/KEY



## SYSTEM CONNECTION

- Connect the battery to the charge regulator-plus and minus. The controller will automatically detect the battery voltage, the controller automatically set the corresponding charging parameters.
  - Connect the photovoltaic module to the regulator-plus and minus.
  - Connect the consumer to the charge regulator-plus and minus.
- The reverse order applies when reinstalling!**  
**An improper sequence order can damage the controller!**



## Setting Description:

- main interface, press the menu button, select the ▲▼ interface to adjust the corresponding parameter, set working parameters of the equipment.
- Load working mode Cot manual control load output Auto automatic light control mode 00:58/OUT continuous output
- set working parameters showed: 25.0 °C temperature display, 25.7 Kw Σ - the cumulative power display, 01:30 - timing time display, 8888 temperature and total power display in turn.

## DISPLAY/SETTING

- Main interface**  
 Example figure: photovoltaic off, load output off, timing off, Bluetooth not connected.  
 The photovoltaic input and load output (CONS) have three display states: steady on (off), slow blinking (on), fast blinking (the current parameter type of the data field is the corresponding fast flash icon, such as the fast flash volt input icon, the current parameter below is the photovoltaic input current).  
 The clock and Bluetooth connection icon has two display states: steady on (off), blinking (open/connected);  
 The Bluetooth connection icon follows this display mode in any interface.
- Modify the floating charge voltage**  
 Example: The floating charging voltage is 14.2V  
 The left data area is now displayed as the menu number "1-1", indicating the first menu: Modify the floating charge voltage.  
 The left input icon flashes, press the up and down key to adjust the parameters, press the menu key to save the Settings and enter the next menu. 10s will automatically save and return to the main interface if no operation is performed.
- Modify the discharge recovery voltage**  
 Example: The discharge recovery voltage is 12.5V  
 The left data area is now displayed as the menu number "2-", indicating the second menu: Modify the discharge recovery voltage.  
 The load output icon flashes, press the up and down key to adjust the parameters, press the menu key to save the Settings and enter the next menu. 10s will automatically save and return to the main interface if no operation is performed.
- Modify the discharge cut-off voltage**  
 Example: The discharge cut-off voltage is 10.7V  
 The left data area is now displayed as the menu number "3-", indicating the third menu: Modify the discharge cut-off voltage.  
 The battery icon flashes, press the up and down key to adjust the parameters, press the menu key to save the Settings and enter the next menu. 10s will automatically save and return to the main interface if no operation is performed.
- Modify the battery type**  
 Example diagram: The battery type is b02  
 The left data area is now displayed as the menu number "4-", indicating the fourth menu: Modify Battery type.  
 There are three battery types: b01 Lithium, b02 Solid, b03 lead-acid/Lithium iron; The battery icon flashes, press the up and down key to adjust the parameters, press the menu key to save the Settings and enter the next menu. no parameters 10s will automatically save and return to the main screen.
- Modify the load output mode**  
 Example: The load output mode is manual  
 Example: The load output mode is automatic light control mode  
 Example: The load output mode is timing mode  
 Example: The load output mode is continuous output mode  
 The left data area is now displayed as the menu number "5-", indicating the fifth menu: Modify the load output mode.  
 There are four load output modes: Cot manual control load output, according to the load output switch manual control; Auto automatic light control mode, photovoltaic input will close the load output, no photovoltaic input will open the load output; Timing mode, set no sunlight after the load output time, time and minutes can be set separately; OUT continuous output mode, 24 hours output state.  
 The load output icon blinks with the characters in the current mode. Press the up/down key to switch modes. After switching to the timing mode, hold down the menu key and the time display part stops blinking, and the clock icon starts blinking.  
 Press the menu key to save the setting and enter the next menu. 10s will automatically save and return to the main interface if no operation is performed.
- Change the battery voltage type**  
 Example: Modify the battery voltage type  
 Example: Automatically identify battery  
 Example: Manually set to 12V battery  
 Example: Manually set to 24V battery  
 The left data area is now displayed as menu number "6-", indicating the sixth menu: Modify Battery voltage type. The battery icon and the current mode character blink, hold down the menu key to enter the setting, the current mode character stops blinking, press the up/down key to adjust parameters, press the menu key to save the Settings and enter the next menu. 10s will automatically save the Settings and return to the main screen.
- Set the display of working parameters**  
 Example figure: Set to work temperature display  
 Example: Set to the cumulative power display  
 Example: Set to timer time display  
 Example: Set temperature and power to be displayed in turn  
 At this time, the left data area is displayed as menu number "7-", indicating the seventh menu: Modify the display of working parameters.  
 The indicator corresponding to the working parameter flashes, press the up or down key to adjust the parameter, press the menu key to save the setting and return to the main menu. 10s will automatically save and return to the main interface if no operation is performed.

## TROUBLE SHOOTING

Situation	Probable cause	Solution
Sunny but not charging	Solar panels opened	Reconnect
Unable to control the load output	Mode setting error	Resetting to COT manual mode
The display is not bright	The battery voltage is too low or without electricity	The battery charger with the adapter to start with
Fever abnormal	The load flow	Reduce the load power
Output shut down	Short circuit protection	Remove the short circuit, automatic recovery
Controller is not bright	The battery voltage is too low/reverse connection	Replace the battery/check against
Suddenly don't charge	Solar panels to disappear, only the arrow	Overheating protection, equipment to recover

## TECHNICAL PARAMETER

	MODEL	BL917A	BL917B	BL917C	BL917D	BL917E	BL917F
Charge current	10A	20A	30A	40A	50A	60A	
Discharge current	10A	10A	15A	15A	20A	25A	
Equalization	B01 Lithium	B02 Gel	B03 Flood				
12V/24V	12. 2V/24. 4V	14. 2V/28. 4V	14. 6V/29. 2V				
Max Solar input	18V solar panel for 12V battery, 36V solar panel for 24V <40V						
Equalization	B01 Lithium	B02 Gel	B03 Flood				
36V/48V	37V/49V	42V/56V	44V/58V				
Max Solar input	54V solar panel for 36V battery and 72V solar panel for 48V <80V						
Equalization	B01 Lithium	B02 Gel	B03 Flood				
60V	61V	71V	73V				
Max Solar input	80V battery is charged with 90V solar panel, voltage is less than 100V						
12V Float	14. 2V (default, adjus table)	12. 0--15. 0V					
12V Discharge stop	10. 7V (default, adjus table)	9. 0--11. 5V					
12V Discharge reconnect	12. 5V (default, adjus table)	11. 0--13. 0V					
24V Float	28. 4V (default, adjus table)	24. 0--29. 0V					
24V Discharge stop	19. 0V (default, adjus table)	18. 0--22. 0V					
24V Discharge reconnect	22. 0V (default, adjus table)	22. 0--26. 0V					
36V Float	42. 0V (default, adjus table)	36. 0--45. 0V					
36V Discharge stop	30. 0V (default, adjus table)	27. 0--33. 0V					
36V Discharge reconnect	38. 0V (default, adjus table)	36. 0--42. 0V					
48V Float	56. 0V (default, adjus table)	48. 0--60. 0V					
48V Discharge stop	40. 0V (default, adjus table)	36. 0--44. 0V					
48V Discharge reconnect	50. 0V (default, adjus table)	48. 0--56. 0V					
60V Float	71. 0V (default, adjus table)	60. 0--75. 0V					
60V Discharge stop	50. 0V (default, adjus table)	45. 0--55. 0V					
60V Discharge reconnect	63. 0V (default, adjus table)	60. 0--70. 0V					
Self-consume	<10mA						
USB output	5V/2A Max						
Operating temperature	-10+60 °C						
Size/Weight	133*70*35mm/150g						

## Device number binding instructions

**Product support: A. bluetooth short-range B. GPRS in China C. W iF I/Bluetooth use around the world**

Please the customer to choose suitable machines and make the corresponding Settings and operations.

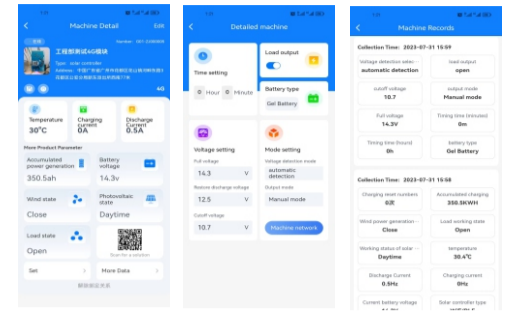
- In the APP store to download and install branch jin jin energy energy ZhiJinPower APP branches to support android and apple mobile phone, please download the corresponding software; ZhiJinPower APP is one to one, at the same time can only be a phone access, can use around the world. GPRS is limited to use in China, W iF I/B T global can use. The 1 two APP schema support management 100 devices, a device or 5 people management. Sweep box or manual q r code to download apps, automatic identification to install android and apple phones.
- In the distribution of interface, click the scanning equipment and device number, taken q r code or manual input device or module.
- Input is completed, click on the binding button, can be bound.

example 1380000000  
password: 123456

## BL-917 APP installation process

- ZhiJinPower download link or search: ZhiJinPower  
 Android: https://tt.app02.com/j73q9l  
 Apple: https://apps.apple.com/cn/app /zhijinpower/id6450771899  
 Download and install the software, enter the phone number registered, installation password is 123456
- The mobile phone on the q r code scanning machines, equipment, input device name, make the operation more equipment projects.

## Working status and modification interface



## Instructions for remote control APP

- APP interface description**  
 The following refers specifically to Bluetooth/WIFI connection and operation:  
 The device is equipped with the network, and the mobile phone Bluetooth is turned on to connect with the controller ZJBE-CXXXX Bluetooth will automatically copy the WIFI used by the current mobile phone, enter the password and press "Confirm". When the machine is only connected to Bluetooth, it can also be used for short-distance APP operation with the machine through Bluetooth. WIFI connection for remote control, mobile phone WIFI or flow card for remote control.  
 1. The corresponding data acquisition and machine, display the current working status of the equipment.  
 2. Data collection corresponds to 5, which displays the current working status of the equipment.  
 3. Parameter configuration can modify the solar control parameters, and automatically memorize them after modification.  
 4. Accumulative total capacity, four is accumulated before, and after four and solar power control Screen synchronization.
- Solar controller remote control adjustment**  
 Use battery type settings: 1. lithium battery, 2. gel battery, 3. lead-acid battery /lithium iron batteries. It is effective in timing output mode. Turn off the light by the hour after no sunlight, the range is 0-23 hours.  
 Effective in timing output mode, turn off the light by minute after no sunlight, the range is 0-59 minutes.  
 Set the battery's full voltage value to prevent over charging damage to the battery. The setting range is 12.0-15.0V. You can also automatically select the appropriate parameters when the battery is selected.  
 Set the use mode of the load: 0 manual control load output, 1 automatic light control mode, 2 load output when there is no sunlight, 3 always output four use states. Set the battery's over-discharge voltage value to prevent over-discharge damage to the battery. The setting range is 9.0-12.0V. You can also choose the battery to automatically select the appropriate parameters.  
 Load output control, close or open, and display the current status through data collection.  
 Battery voltage selection, select the voltage value of the rechargeable battery, automatic detection mode (low-voltage models only 12V and 24V batteries), or high-voltage models lock 12V, 24V, 36V, 48V, 60V batteries.

\* Product specifications are subject to change without prior notice.

# B1917太阳能控制器使用说明书

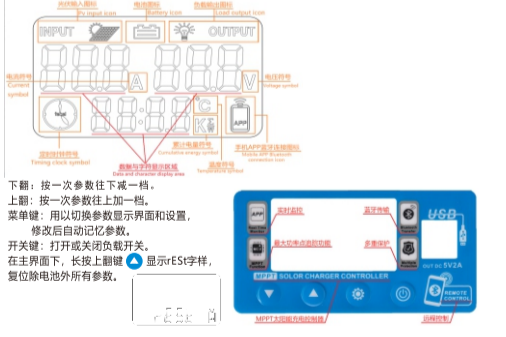
## 安全使用建议

- 本控制器为12V/24V自动适应,或另一种版本12/24/36/48/60V手动设置合适电池充电模式。首次安装时,请确保电池有足够的电压值,以便启动和自动设置好控制器参数。
- 安装控制器时,请尽可能靠近电池安装,避免充电线过长造成电压降,影响正常电压判断。
- 本控制器适用于各种铅酸电池(包括开口,密封,胶体等电池),若充锂电池,要很熟悉其电池特性,接电后必须设置好充电参数才能使用。例如:充12V锂电池,截止输出保护设置9.5V,充满保护12.5V,电池下降时启动充电电压11.5V。
- 本控制器只能使用光伏板作为充电电源,请勿使用直流或其他电源作为充电电源。
- 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。
- 充锂电池时必须带电池保护板,务必选用有认证符合国家要求的锂电池厂商产品。严禁没有保护板直接充电,严禁私自改造锂电池组充电。

## 产品特点

- 工业级主控芯片,16级AD采样精度,温度、充电电流、放电电流、累计发电量实时显示,屏上同时显示,一目了然。
- 自动聚焦MPPT跟踪充电,充电效率高,充电过程不停顿检测,双向聚焦跟踪。
- 大屏幕LCD显示屏,充电参数可调。超宽充电电压,只有理解电池特性设置其对应充电参数,可以充任一电池。输出电流分,可以调节,更方便(市面只有时没有分调节)。
- 完整的阶段充电管理,有效保护电池,电池更耐用。
- 内置过充,过流,短路,开路保护,反接保护,当故障消除,控制器自动恢复,不损伤设备。
- 双向MOS管防倒灌电路,大功率充电模式,超低发热量。

## 图标定义/按键



## 系统连接

- 将蓄电池正极按图示接入控制器,控制器将会自动检测蓄电池电压,控制器自动设置相对应的充电参数。
  - 将负载正负极按图示接入控制器,注意不要反接。
  - 将太阳能板按图示接入控制器。
- 注意:请严格按照以上顺序进行接入,否则可能会损坏控制器拆卸顺序与接线顺序相反。**



## 设置说明

- 主界面 按下菜单键,选择界面▲▼调整相应的参数,设定设备的工作参数。
- 负载的工作模式 Cot手动控制负载输出 Auto自动光控模式00:58/OUT连续输出 00:58 设置无太阳后负载输出的时间,时分和分都可以单独设置。OUT连续输出,24小时输出状态。
- 设置工作参数显示: 25.0 °C——温度显示, 25.7kWΣ——累计电量显示, 01:30——定时时间显示, 8888温度与累计电量轮流显示。

## 显示界面/参数设置

- 主界面**  
 例图:光伏关闭,负载输出关闭,定时关闭,蓝牙未连接。  
 光伏输入与负载输出图标有三种显示状态:常亮(关闭)、慢闪(打开)、快闪(数据域的电流参数类型为对应的快闪图标,如快闪光伏输入图标,则下方电流参数为光伏输入电流);  
 时钟与蓝牙连接图标有两种显示状态:常亮(关闭)、闪烁(打开/连接);  
 蓝牙连接图标在任何界面都遵循此显示方式。
- 修改浮充电压**  
 例图:浮充电压为14.2V  
 左边数据区域此时显示为菜单编号"1-",表示第一个菜单:修改浮充电压。  
 光伏输入图标闪烁,按下下键调整参数,按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 修改放电恢复电压**  
 例图:放电恢复电压为12.5V  
 左边数据区域此时显示为菜单编号"2-",表示第二个菜单:修改放电恢复电压。  
 负载输出图标闪烁,按下下键调整参数,按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 修改放电截止电压**  
 例图:放电截止电压为10.7V  
 左边数据区域此时显示为菜单编号"3-",表示第三个菜单:修改放电截止电压。  
 电池图标闪烁,按下下键调整参数,按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 修改电池类型**  
 例图:电池类型为b02  
 左边数据区域此时显示为菜单编号"4-",表示第四个菜单:修改电池类型。  
 共有三种电池类型:b01锂,b02固体,b03铅酸/铁锂 Lead-acid/Lithium Iron.  
 电池图标闪烁,按下下键调整参数,按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 修改负载输出模式**  
 例图:负载输出模式为手动 例图:负载输出模式为自动光控 例图:负载输出模式为定时模式 例图:负载输出模式为连续输出模式  
 左边数据区域此时显示为菜单编号"5-",表示第五个菜单:修改负载输出模式。  
 共有四种负载输出模式:  
 Cot手动控制负载输出,按负载输出开关手动控制;  
 Auto自动光控模式,有光伏输入就关闭负载输出,无光伏输入就打开负载输出;  
 定时模式,设置无太阳后负载输出的时间,时分和分都可以单独设置;  
 OUT连续输出模式,24小时输出状态。  
 负载输出图标与当前模式字符闪烁,按下下键切换模式,切换至定时模式后长按菜单键时间部分停止闪烁,时钟图标开始闪烁,此时按下下键可设置定时的时间。  
 按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 修改电池电压类型**  
 例图:修改放电电压为12V 例图:手动设置为24V 例图:手动设置为24V  
 左边数据区域此时显示为菜单编号"6-",表示第六个菜单:修改电池电压类型。  
 电池图标与当前模式字符闪烁,长按菜单键进入设置,当前模式字符停止闪烁,按下下键调整参数,按菜单键保存设置并进入下一菜单,无操作10s会自动保存并返回主界面。
- 设置工作参数显示**  
 例图:设置为工作温度显示 例图:设置为累计电量显示 例图:设置为定时时间显示 例图:设置为温度,功率同时轮流显示  
 左边数据区域此时显示为菜单编号"7-",表示第七个菜单:修改工作参数显示。  
 工作参数对应的图标闪烁,按下下键调整参数,按菜单键保存设置并回到主菜单,无操作10s会自动保存并返回主界面。

## 故障指南

异常现象	可能原因	解决办法
阳光充足但不充电	光伏板开路或反接	重新连接好光伏板
不能控制负载输出	模式设置错误	重新设置为COT手动模式
显示屏不亮	电池电压太低或无电	用适配器把电池充到启动才用
发热异常	负载过重	减小负载功率
输出关闭	短路保护	移除短路,自动恢复
控制器不亮	电池电压太低/反接	更换电池/检查反
突然不充电	太阳能板消失,只有箭头	过热保护,设备自行恢复

## 技术参数

型号	BL917A	BL917B	BL917C	BL917D	BL917E	BL917F
额定充电电流	10A	20A	30A	40A	50A	60A
额定放电电流	10A	10A	15A	15A	20A	25A
快速设置充电电压	B01锂电池	B02胶体型	B03开口型			
12V/24V	12. 2V/24. 4V	14. 2V/28. 4V	14. 6V/29. 2V			
最高光伏电压	12V电池用18V太阳能板, 24V用36V太阳能板 <40V					
快速设置充电电压	B01锂电池	B02胶体型	B03开口型			
36V/48V	37V/49V	42V/56V	44V/58V			
最高光伏电压	36V电池用54V太阳能板, 48V用72V太阳能板 <80V					
快速设置充电电压	B01锂电池	B02胶体型	B03开口型			
60V	61V	71V	73V			
最高光伏电压	60V电池用90V太阳能板充电, 电压小于100V					
12V浮充电压	14. 2V (默认值,可调)	12. 0--15. 0V				
12V放电截止电压	10. 7V (默认值,可调)	9. 0--11. 5V				
12V放电恢复电压	12. 5V (默认值,可调)	11. 0--13. 0V				
24V浮充电压	28. 4V (默认值,可调)	24. 0--29. 0V				
24V放电截止电压	19. 0V (默认值,可调)	18. 0--22. 0V				
24V放电恢复电压	22. 0V (默认值,可调)	22. 0--26. 0V				
36V浮充电压	42. 0V (默认值,可调)	36. 0--45. 0V				
36V放电截止电压	30. 0V (默认值,可调)	27. 0--33. 0V				
36V放电恢复电压	38. 0V (默认值,可调)	36. 0--42. 0V				
48V浮充电压	56. 0V (默认值,可调)	48. 0--60. 0V				
48V放电截止电压	40. 0V (默认值,可调)	36. 0--44. 0V				
48V放电恢复电压	50. 0V (默认值,可调)	48. 0--56. 0V				
60V浮充电压	71. 0V (默认值,可调)	60. 0--75. 0V				
60V放电截止电压	50. 0V (默认值,可调)	45. 0--55. 0V				
60V放电恢复电压	63. 0V (默认值,可调)	60. 0--70. 0V				
待机电流	<10mA					
USB输出	5V/2A Max					
工作温度	-10+60 °C					
尺寸/重量	133*70*35mm/150g					

## 设备号绑定说明

本产品支持A蓝牙短距离; B GPRS中国区; C W iF I/蓝牙全球使用。  
 请客户选购合适的机器并做对应的设置和操作。

- 在软件商店下载并安装枝晋能源ZhiJinPower APP  
 枝晋能源支持安卓和苹果手机,请相对应下载软件的软件;  
 蓝牙APP是一一对一使用,同一时间只能一台手机接入,全球能用。  
 GPRS限中国区使用,W iF I/B T全球能用;这两个APP模式支持1人管理100台设备,或5人管理一台设备。  
 扫码或手动输入设备号,自动识别安装安卓和苹果手机。
- 在分配界面,点击扫描设备和设备号,扫描二维码或手动输入设备号或模组号;
- 输入完成后,点击绑定按钮,即可绑定。

例如 13800000000  
密码: 123456

## BL-917 APP安装流程

枝晋能源下载链接,或搜索枝晋能源ZhiJinPower  
 安卓: https://tt.app