

CU-ALL5 Series Remote Control

User Manual



1. Panel Illustration



2. Keys Function Description

Key areas	Key names	Executive functions	Long press functions	
Setting area	+	A. Menu page down B. Increase the data	A. Continuous increase of data B. In conjunction with the "OFF" key, to lock, unlock parameter adjustment C. In conjunction with the "-" key, to enter remote control type selection interface	
	-	A. Menu page up B. Decrease the data	A. Continuous decrease of data B. In conjunction with the "+" key, to enter remote control type selection interface	
	Set	Set parameters	Return from the [Load Settings] menu to the [Parameter Settings] menu.	
Functional area	Send	Send working parameters	-	
	Receive	State	Receive running state	Go to the [Run Data] menu
		Parameter	Receive working parameters	-
	Test	Send test command	-	
	ON	Activation command	-	
	OFF	Sleep command	In conjunction with the "+" key, to lock, unlock parameter adjustment	

Steps of use of the remote control:

- Power on
- Determine the type of remote control [infrared or wireless]
- Determine if the remote control password is correct
- Determine if the remote is in [locked]state
- Have a pleasant use

3. Remote Control Power On and Power Off

- 2.1 Power on**
In power off state, press any key to turn on the remote control.
- 2.2 Power off**
If there is no key operations within 1 minute, the remote control is automatically turns off.

4. Remote Control Send States Display

Sending	Send succeeded	Send failed

5. Remote Control Type Selection

- 5.1 Go to remote control type selection interface**
- (Press "+" and "-" simultaneously)
To go to the [Remote control type selection interface], and press "Set" to select remote control type: [IR] or [Wireless].

01 Remote control type: IR	01 Remote control type: Wireless
02 Wireless distance: --	02 Wireless distance: 01
03 Current password: ****	03 Current password: ****

IR remote control 2.4G Wireless remote control

⚠ Notice: When the remote control type is IR, the wireless distance is not adjustable.

5.2 Wireless remote control distance adjustment

	Wireless distance adjustment
01 Remote control type: Wireless	Wireless type provides 11 modes: 00~10.
02 Wireless distance: 01	00: distance is about 0.3m
03 Current password: ****	10: distance is about 30m

The wireless distance can be selected according to the actual application environment.

6. Remote Control and Controller Password Settings

User can set password for the controller. When the controller password is set, it is needed to set the same password for the remote control controller to realize successful communication, otherwise the communication will fail. Initial password of the controller is "0000", and initial password of the remote control is also "0000".

- 6.1 Remote control password input**
Remote control password setting method: Press the "Set" key, and the first digit of the password start to flash. Press "+" or "-" to adjust the first digit. After the first digit is adjusted, press the "Set" key to start the second digit adjustment, and then adjust the third and fourth digits. After the password is modified, the parameters can be read or modified normally.

6.2 Controller password modification

- To change the controller password, you need to enter the [Change Password] option.
- | | |
|--|-----------------|
| | Change Password |
| | Back |

	Change Password
01 Old password: 0000	
02 New password: 0000	
	Back

After modification, press [Back] to return to the [Remote Control Settings] option.

⚠ Note: After modifying the password, be sure to press the "Set" key to send the new password to the controller.

7. Remote Control Parameters Lock and Unlock

- In order to avoid artificial change of control parameters, the remote control comes with the capability of locking parameters. After the parameters are locked, the remote control can only send parameters but cannot receive parameters, nor can it modify the parameters, but can receive the running status. This can avoid the problem of batch parameters setting error caused by inadvertent modification by the production personnel.

	Parameters locking method
01 Battery type: Lithium 12V	Press "OFF" and "+" for 3 seconds at the same time. Then, the controller gives two short beeps and the controller parameters are locked.
02 Sensing delay: --	
03 PV wake up: Yes	

	Parameters unlocking method:
01 Battery type: Lithium 12V	In the locked state, press "OFF" and "+" for 3 seconds at the same time, and the controller parameters will be unlocked.
02 Sensing delay: --	
03 PV wake up: Yes	

8. State Reading

- 8.1 Running state reading**
- After the controller works, the controller state can be read using the remote control. Press the "State" key. The data read by default is the controller state
- | | |
|------------------------------|---------------|
| | Running state |
| 01 System state: Discharging | |
| 02 Battery voltage: 12.3V | |
| 03 PV voltage: 17.5V | |

8.2 Running data menu

- Press and hold the "State" key to call up the [Run Data] menu. After selecting the corresponding menu, go to different running interfaces. At this time, press the "State" key, the read data will be that of the selected menu.
- State** Press and hold for 3s

	Running data		Running state
01 Running state		01 System state: Discharging	
02 Past data		02 Battery voltage: 12.3V	
03 Single battery voltage		03 PV voltage: 17.5V	

	Running data		Past data
01 Running state		-----> 1 day before <-----	
02 Past data		02 Min. Voltage: 11.3V	
03 Single battery voltage		03 Max. Voltage: 12.5V	

In the [Past Data] menu, press the "Set" key to set the number of days before to read data. After setting the number of days, press "State" to read the past data of the day.

⚡ Tip: Only part of models of controller provide the [Past Data] menu

	Running data		Single battery voltage
01 Running state		01 Lithium battery 1: 3.64V	
02 Past data		02 Lithium battery 2: 3.62V	
03 Single battery voltage		03 Lithium battery 3: 3.67V	

In the [Single Battery Voltage] menu, press "State" to read the voltage of a single lithium battery.

⚡ Tip: Only part of models of controller provide the [Single Battery Voltage] menu

9. Parameters Reading and Setting

- After the controller works, remote control can be used to read its set parameters. Press the "Param" key to read the current setting parameters.

9.1 Control parameters

① Battery type selection

	Parameter settings
01 Battery type: Lead-acid	
02 Sensing delay: No	
03 PV wake up: Yes	

The battery type can be selected from the storage type and voltage level. The options and default parameters are as follows:

Battery type	Over discharge voltage	Over discharge recovery voltage	Charge voltage (lithium battery) Boost charge (lead acid battery)	Charge return (lithium battery) Floating charge (lithium battery)	Remarks
Lead-acid	11.0V	12.5V	14.4V	13.8V	Automatic identification of 12V and 24V parameters
Lithium 3V	3.1V	3.4V	4.2V	4.0V	
Lithium 6V	6.2V	6.8V	8.4V	8.0V	
Lithium 12V	9.2V	10.2V	12.5V	12.0V	
Lithium 24V	9.2V	10.2V	12.5V	12.0V	Set parameters automatically*2

② Smart power settings

The smart power options allow the user to select an appropriate smart power curve according to their own configuration and lighting strategy. The smart power options include: No, High, Medium, Low, Auto and USE, where, in USE mode, the user can define the smart power derating start value and derating end value as well as minimum current.

	Parameter settings
13 Smart power: USE	
14 Derating start: 12.6V	
15 Derating end: 11.6V	

9.2 Time parameters

To set the time period and power, you need to go to the [Load Parameter Settings] option.

Parameter settings
13 Smart power: Medium
14 Load Parameter Settings
15 Restore default settings: No

① Non-sensing power and time settings

If [Sensing Delay] is selected as [No], the load is set to the non-sensing period time and power, and the load is in the timing operation mode.

Parameter settings	Load settings
01 Battery type: Lithium 12V	01 First time: 00:30
14 Sensing delay: No	02 First power: 100%
15 PV wake up: Yes	03 Second time: 02:00

② Power and time settings under sensing function

If one sensing time is selected in the [Sensing Delay] option, the load is set to the sensing period time and power, and the load is in the timing + sensing operation mode.

Parameter settings	Load settings
01 Battery type: Lithium 12V	01 First time: 00:30
02 Sensing delay: 10S	02 Power with people sensed: 100%
03 PV wake up: Yes	03 Power with people sensed: 50%

9.3 Restore remote control to factory default parameters

If parameters are wrongly adjusted or become disordered, you can restore the remote control to factory default parameters, and then adjust on the default parameters.

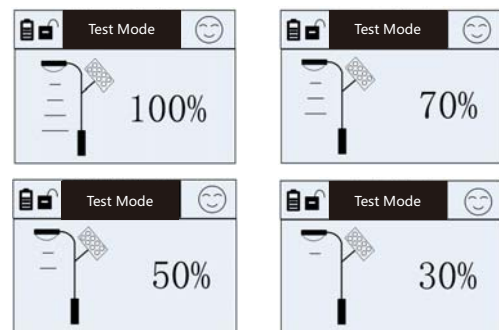
Parameter settings
13 Smart power: Medium
14 Load Parameter Settings
15 Restore default settings: Yes

Tip: Press and hold "+" or "-" in the parameter settings item to quickly change the parameter value.

10. Test Mode

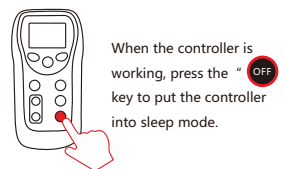


Press the "Test" key, and the remote control sends a test command to the controller. The test powers are 100%, 70%, 50% and 30% in turn.

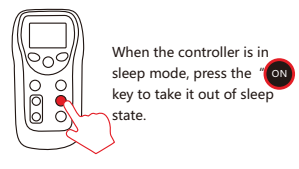


Note: In test mode, the remote control only sends a signal to the controller without receiving parameters from the controller, so the controller will always display the "Send Succeeded" state in test mode.

11. Sleep and Wake up



When the controller is working, press the "OFF" key to put the controller into sleep mode.



When the controller is in sleep mode, press the "ON" key to take it out of sleep state.

Note: Only the infrared remote control allows the use to use the remote control to take controller out of sleep mode. If the controller is a 2.4G wireless remote control type, it must be activated by the solar panel after entering sleep mode.

12. Attention

A. The remote control supports two signal communication modes: infrared and 2.4G wireless. Therefore, it is necessary to select the correct remote control mode according to the remote control type of the controller. If the remote control mode is not correct, the remote control will not communicate.

Difference between Infrared remote control and wireless remote control



B. When the controller with sensor needs time setting, the remote control [Sensing Delay] time has to be set to allow setting of sensing power in the [Load Settings] menu.

C. If the remote control parameters are locked, the control parameters cannot be adjusted. To adjust the parameters, you should unlock them first. But before unlocking, you can read the state.

D. When the remote control shows low battery, please replace the battery in time with battery type 5 or AA battery.

13. Parameters Setting Table

Set items	Default parameters	Data range	Adjustment step length
Battery type:	Lithium 12V	Lead, lithium 3, lithium 6, lithium 12, lithium 24	-
Sensing delay:	No	0S ~ 60M	1S
PV wake up:	Yes	Yes/No	-
Light control voltage:	5.0V	3.0V ~ 11.0V	1V
Light control delay:	10S	0S ~ 60M	1S
Over-discharge voltage:	9.20V	7.5V ~ 17.0V	0.1V
Over-discharge recovery:	10.20V	7.5V ~ 17.0V	0.1V
Charge voltage (lithium battery): Boost charge voltage (lead acid battery):	12.5V	7.5V ~ 17.0V	0.1V
Charge recovery (lithium battery): Floating charge voltage (lead acid battery):	12.0V	7.5V ~ 17.0V	0.1V
Low temperature charge:	-35°C	-40°C ~ -00°C	1°C
High temperature work:	65°C	40°C ~ 90°C	1°C
Load current:	330mA	150mA ~ 10A	10mA
Smart power:	Medium	Auto/Low/Medium/High/No/use	-
Derating start value:	11.3V	7.5V ~ 17.0V	0.1V
Derating end value:	10.5V	7.5V ~ 17.0V	0.1V
Minimum current:	50mA	50mA ~ 1000mA	10mA
Load parameters setting	Enter the load parameters setting interface		
Factory reset:	No	Yes/No	-

14. Load Parameters Setting Table

A. Non-sensing type

Set items	Default parameters	Data range	Adjustment step length
First time:	4:00	0 ~ 15 hours	1 minute
First power:	100%	0 ~ 100%	1%
Second time:	4:00	0 ~ 15 hours	1 minute
Second power:	100%	0 ~ 100%	1%
Third time:	4:00	0 ~ 15 hours	1 minute
Third power:	100%	0 ~ 100%	1%
Fourth time:	0:00	0 ~ 15 hours	1 minute
Fourth power:	100%	0 ~ 100%	1%
Fifth time:	0:00	0 ~ 15 hours	1 minute
Fifth power:	100%	0 ~ 100%	1%
Sixth time:	0:00	0 ~ 15 hours	1 minute
Sixth power:	100%	0 ~ 100%	1%
Seventh time:	0:00	0 ~ 15 hours	1 minute
Seventh power:	100%	0 ~ 100%	1%
Eighth time:	0:00	0 ~ 15 hours	1 minute
Eighth power:	100%	0 ~ 100%	1%
Ninth time:	0:00	0 ~ 15 hours	1 minute
Ninth power:	100%	0 ~ 100%	1%
Pre-dawn time:	2:00H	0 ~ 15 hours	1 minute
Pre-dawn power:	100%	0 ~ 100%	1%

B. Sensing type

Set items	Default parameters	Data range	Adjustment step length
First time:	4:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	70%	0 ~ 100%	1%
Second time:	4:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Third time:	4:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Fourth time:	0:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Fifth time:	0:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Sixth time:	0:00	0 to 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%

Power without human motion sensed:	10%	0 ~ 100%	1%
Seventh time:	0:00	0 ~ 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Eighth time:	0:00	0 ~ 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Ninth time:	0:00	0 ~ 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%
Pre-dawn time:	0:00	0 ~ 15 hours	1 minute
Power with human motion sensed:	100%	0 ~ 100%	1%
Power without human motion sensed:	10%	0 ~ 100%	1%

15. Run Data Table

A. Running state

System state:	Free
Battery voltage:	12.1V
PV voltage:	12.6V
Charge current:	1.5A
Charge power:	18.9W
Charge time:	12.3Ah
Load voltage:	30.5V
Load current:	1.26A
Load power:	30.5W
Lighting-up time:	11:26
Sensing time:	0:47
Discharge Ah:	14.5Ah
Ambient temperature:	23°C
Running days:	15
Over-discharge times:	1
Full charge times:	14
Production date:	1503
Software version:	3.10

B. Past data

->N days before<-	N settable, 0~255
Maximum voltage:	13.6V
Minimum voltage:	10.6V
Maximum temperature:	45°C
Minimum temperature:	-15°C
Maximum charge power:	124W
Charge time:	47Ah
Discharge time:	38Ah
Lighting-up time:	9:48

C. Single lithium battery voltage

Lithium battery 1	3.23V
Lithium battery 2	3.24V
Lithium battery 3	3.23V
Lithium battery 4	3.26V
Lithium battery 5	3.24V
Lithium battery 6	3.23V
Lithium battery 7	3.25V
Lithium battery 8	3.24V

16. Technical Parameters

Power supply battery	No. 5 (AA) × 2
Power supply voltage	3.0V
Effective distance	8m (infrared remote control), 15m (wireless remote control)
Sleep power consumption	< 0.2uA
Normal power consumption	5mA
Transmitting instantaneous power consumption	< 50mA
Backlight power consumption	< 15mA
Product dimensions	122mm×61.5mm×22mm (L × W × H)
Package dimensions	139mm×77mm×44mm (L × W × H)
Weight	60grams (without battery)
Automatic power-off time	65seconds
2000mAh battery setting quantity	30000
Ambient temperature	-25°C ~ 55°C