POWERWIN

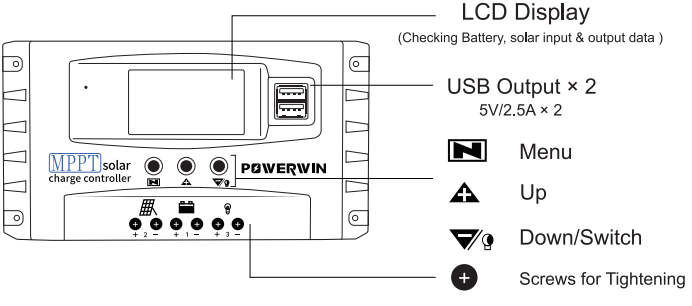
Solar Charge Controller
MT01/50A

Product Introduction

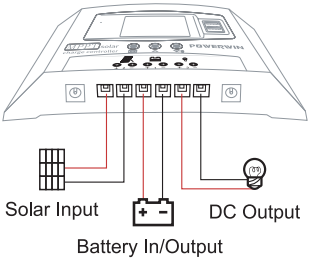
Thank you for choosing **POWERWIN**. Our solar charge controller is compatible, light weight, and functional. It is designed to maximize the solar charging speed, instead of adjusting low/high voltage into a specific value of constant voltage.

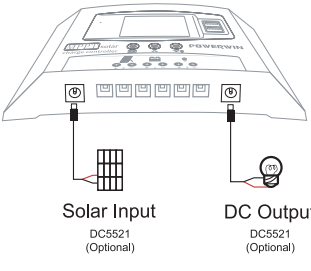
Get to Know Your Product

1. Front



2. Bottom

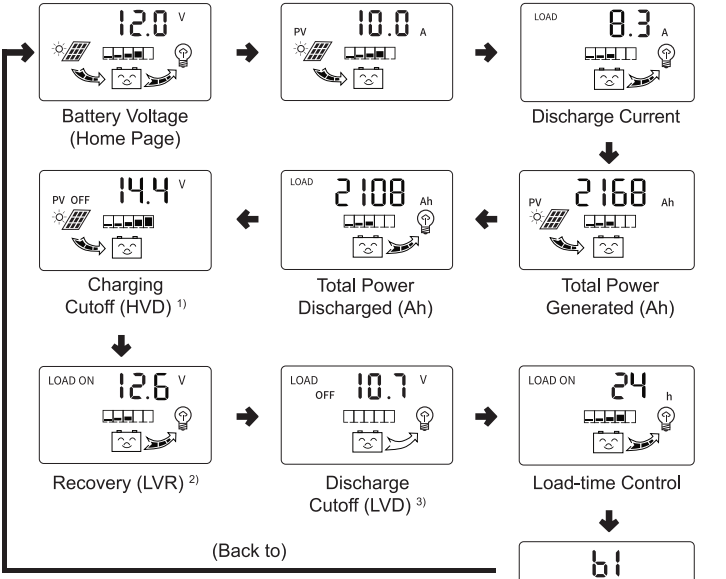




Interface Display & Settings

1. Specs at a Glance

Click [N], the【Menu】button to switch the display of specs.



1) Charging Cutoff (HVD) mode automatically suspends solar charging when the preset battery voltage is reached. This mode is crucial in preventing battery damage caused by overcharging.

2) Recovery (LVR) mode enables the product to resume the output connection when the battery voltage returns to the preset level after being cut off from charge or discharge.

3) Discharge Cutoff (LVD) mode automatically shuts down the load when the battery voltage reaches a preset minimum level, thus safeguarding the battery against overload and potential damage.

2. How to Modify

1. Hold [N], the【Menu】button until the number blinks.
2. Click ▲【Up】or ▼【Down】button to modify specs.
3. Hold [N], the【Menu】button once again to quit. The system will automatically remember the set value.
4. Hold [N], the【Menu】button for 10 seconds to reset.

Set Up Your Battery Type

⚠ ATTENTION

1. When installing the battery, please ensure sufficient voltage for the controller to recognize the correct battery type.

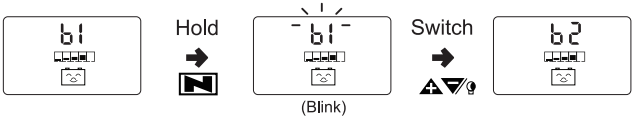
2. When connecting the battery, keep the connection line ≤ 4 ft to avoid voltage reduction caused by excessive wire length, which may affect the product's ability to detect the battery voltage correctly.

3. Avoid reversing the polarity when making the connection!

Lead Acid Battery (LA, 12 / 24V)

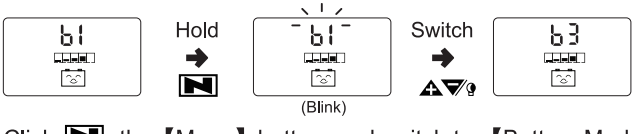
The product will automatically identify the battery as 12 / 24V LA battery upon connection. The default battery mode is 【b1】 for LA battery. After that, you're all set.

Lithium Ion Battery (Li-ion, 3S 11.1V)



1. Click [N], the 【Menu】 button, and switch to 【Battery Mode】.
2. Hold [N], the 【Menu】 button until the number blinks.
3. Click ▲ 【Up】 or ▼ 【Down】 button, and modify to 【b2】 for Li-ion battery.

$LiFePO_4$ Battery (LFP, 4S 12.8V)



1. Click [N], the 【Menu】 button, and switch to 【Battery Mode】.
2. Hold [N], the 【Menu】 button until the number blinks.
3. Click ▲ 【Up】 or ▼ 【Down】 button, and modify to 【b3】 for LFP battery.

Recommend Settings For Lithium Battery

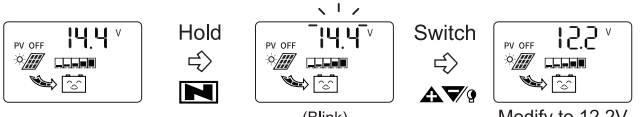
⚠ **ATTENTION**

Please read the following the instruction carefully before connecting with Lithium battery. Improper connections or Settings may cause damage to the product or your battery!

How to Modify

1. Hold [M], the【Menu】button until the number blinks.
2. Click ▲【Up】or ▼【Down】button to modify specs.
3. Hold [M], the【Menu】button once again to quick. The system will automatically remember the set value.

1. Modifying Charging Cutoff Voltage



(Blink)

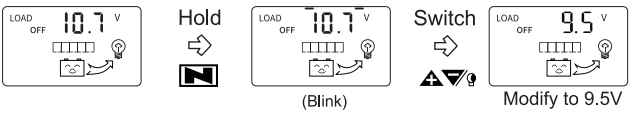
Modify to 12.2V (Recommended)

2. Modifying Discharge Recovery Voltage

(Blink)

Modify to 11.5V (Recommended)

3. Modifying Discharge Cutoff Voltage



(Blink)

Modify to 9.5V (Recommended)

Load-time Control Mode

Function Introduction

This function allows for presetting the number of hours the product's output time limit. There is a total of 4 modes of time control. ***Solar charging required.**

1. 24 h (Constant, Default)

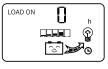
In this constant light mode, it needs to be adjusted manually to switch turning on/off the output.

How to Modify

1. Hold [M], the【Menu】button until the number blinks.
2. Click [▲]【Up】or [▼]【Down】button to modify specs.
3. Hold [M], the【Menu】button once again to quick. The system will automatically remember the set value.

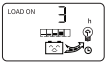
2. 0 h

The output function will start **immediately** after of no input charging.



3. 3 h

The output function will start after **3** hours of no input charging.



4. 8 h

The output function will start after **8** hours of no input charging.

Product Specifications

Battery Voltage	12V	24V Lead Acid
Nominal Input Current	**50A**	
Nominal Output Current	30A	
Solar Input Voltage Range	**15-23V**	**30-46V**
Max Solar Input Power	**650W**	**1300W**
Equalizing Charge Voltage	14.4V	28.8V
Continuous Charging Voltage	13.7V (Default)	27.4V (Default)
Discharge Cutoff Voltage	10.7V (Default)	21.4V (Default)
Discharge Recovery Voltage	12.6V (Default)	25.2V (Default)
Recharge Starting Voltage	13V (Default)	26V (Default)
Rated Solar Voltage in Load-time Control Mode	8V	16V
USB Output	2 × 5V/2.5A	
Standby current	＜10mA	
Working Temperature	-35~60℃ / -31~140°F	

Additional Note

1. The product can only use solar panels as charging source, do not use other power sources as solar input.

2. The product can only be charged with solar panels and cannot use other power sources. Additionally, the product generates heat during use, therefore, it should be installed in a flat and well-ventilated environment.

Warranty & Customer Services

Our company provides a 12-month warranty upon purchase. Any questions, please feel free to contact us at **service@iittechnology.com**

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For more info, please visit:
POWERWINPOWER.COM