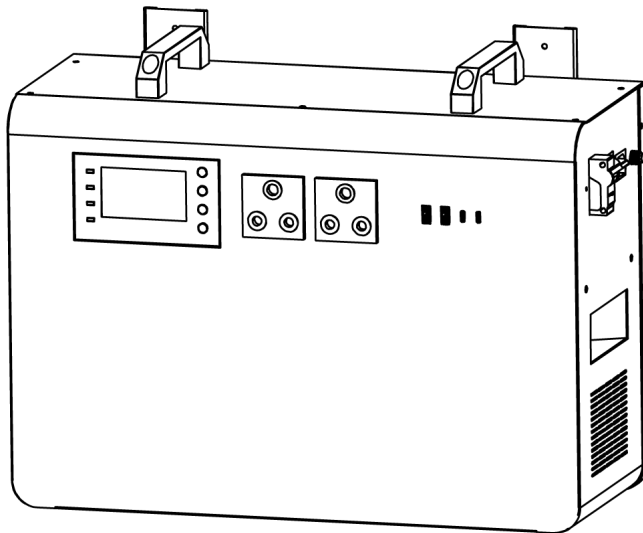


# CFE PVG1 Pro

## User Manual



## Disclaimers

- After reading, keep the user's manual in a safe place for future reference.
- If you do not operate this product accurately, you may cause serious injury to yourself or others, or damage to the product and property damage.
- By using this product, you will be deemed to have understood, acknowledged and accepted the terms and content of this document in its entirety. Users undertake to be responsible for their own actions and all consequences arising therefrom. The company shall not be liable for all losses caused by the user's failure to use the product in accordance with the User Manual.
- Subject to compliance with laws and regulations, the Company has the final right of interpretation of this document and all related documents of this product. As the product information is updated, revised or terminated without notice, please pay attention to the latest product information on the official website.

## Special Important Notice

In any case, the voltage of the PV input is not allowed to exceed 180 V (calculated by open circuit voltage series value of PV module), otherwise this equipment will be irreversibly damaged, and the resulting damage is not covered by the warranty.

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## **Product Profile**

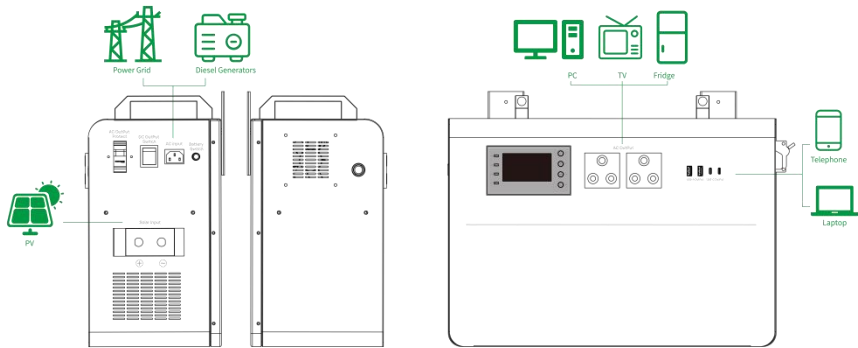
This product is developed to meet the power supply needs for home or outdoor work, and our company independently owns all software and hardware patents and intellectual property rights under this product.

The product adopts digital design concept, intelligent sine wave output, adapts to various loads and has a rich selection of external output interfaces; excellent output short-circuit protection design, can withstand the impact of high-current starting loads; one-touch intelligent switch design, easy to operate; widely used in household electrical equipment, communication equipment, as well as single-phase power equipment, and even industrial equipment, etc.

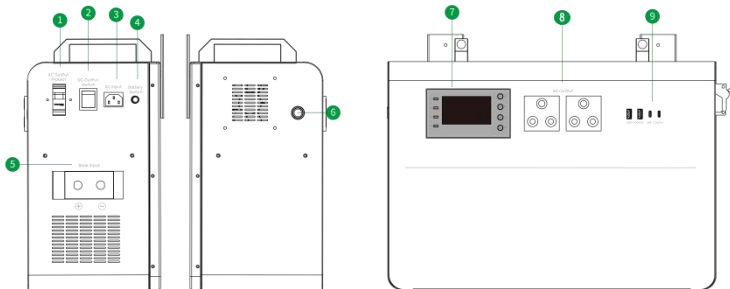
## **Product Features**

- Intelligent chip control, superior performance
- High robustness, pure sine wave AC output, strong ability to bear different loads
- Strict short circuit protection design, very reliable working
- Simple LCD display, clear display of working status
- Intelligent charging control, extend the service life of the battery
- All-round protection, safe and reliable
- Adapt to a wide range of temperatures and high altitude areas
- Adapt to unstable grid charging environment
- Lightweight and portable, ultimate volume energy density and weight energy density

# Solar System Connection



# Product Overview



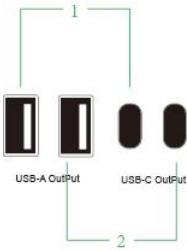
- ① AC Output Switch
- ③ AC Input
- ⑤ Solar Input
- ⑦ LCD
- ⑨ USB-A&C Output

- ② DC Output Switch
- ④ Fuse
- ⑥ Power Switch
- ⑧ AC Output

## \*⑥ Power Switch Button operation instructions:

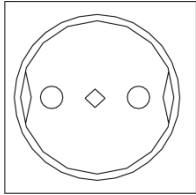
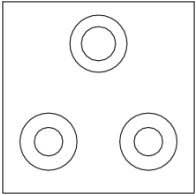
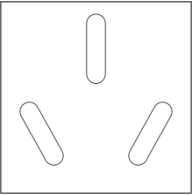
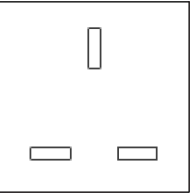
Short press to turn on, Long press to shut down

# Fast charge protocol



- ① Support PD 3.0/ PD 2.0
- ② Support QC 4+/ QC 3+/QC 3.0/QC 2.0
- ③ Support AFC
- ④ Support FCP
- ⑤ Support PE 2.0/ PE 1.1

For single-port output, fast charge output is supported. For dual-port output, 5V output is supported, and each port limits the current independently.

□	☑	□	□
			
EN/EU	ZA/SA	CN/AU	BS

AC output can choose European standard, South African standard, national standard plug, the actual product is mainly based on the current national electricity standard for sale

## Product Specification

PVG1 Pro		
Product Information	Product Capacity	1280Wh (25.6V 50Ah)
	Certified	CE, ROHS, UL, UN3480
	Product Size	471*190*359 mm
	Conversion Efficiency	≥90%
	Cycle Life	3000 times +
	Material	SPCC
	Weight	23.5±0.5 kg
Output Port	AC Output	220~230VAC, 50HZ/60HZ4.5A, 1000W(MAX)
	Usb-A Port (×2)	QC3.0: 3.6V ~ 6.5V@2A, .5V ~ 9V@2A, 9V ~ 2V@1.5A(MAX=18W)
	Usb-C Port (×2)	QC4.0+: 5V=3A, 9V=3A, 12V=2.25A(MAX=27W)

Input Port	AC Input	190-250 VAC,50HZ/60HZ
Battery Information	Battery Type	Lithium iron phosphate
	Protective Function	Overvoltage protection, undervoltage protection, overcurrent protection, short circuit protection, temperature protection
	Discharge Temperature	-20 ~ 60°C
	Charge Temperature	0 ~ 55°C
	Working Humidity	< 90 %RH
	Storage Humidity	< 90 %RH

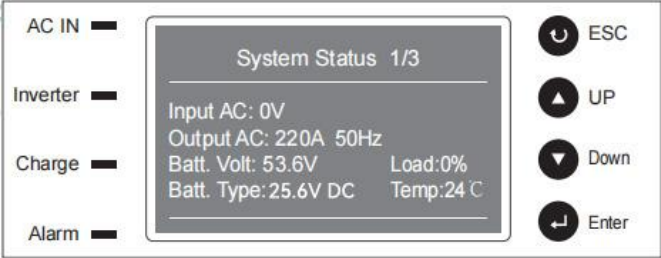
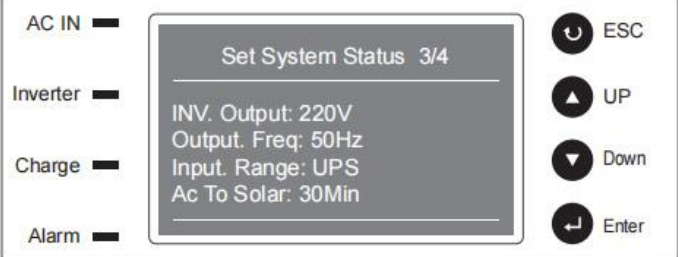
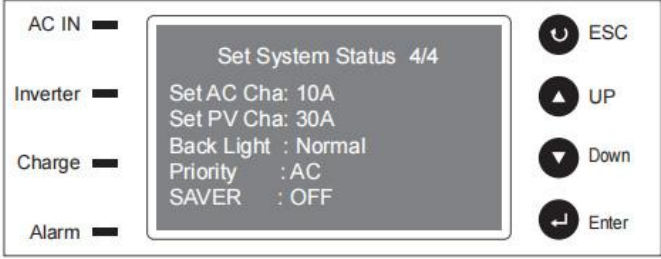


## Installation Procedures

1. Before connect the cables, please check the product to ensure that the start button, AC input protection switch and inverter output protection switch are off.
2. Connect with solar panels: Red PV+ is the solar input positive terminal, black PV- is the solar output negative terminal. In any case, the voltage of the PV input is not allowed to exceed 180 V (calculated by open circuit voltage series value of PV module), otherwise this equipment will be irreversibly damaged, and the resulting damage is not covered by the warranty.
3. AC cable connection. The AC input is AC/mains input. L is the live line and N is the neutral line.
4. Connect with loads: AC output is the inverter output, L is the fire wire, N is the null wire, and the AC output protection switch should be installed by yourself.
5. Double-check the wiring to prevent wrong connections, missed connections, or short circuits.
6. press the power on button first, after the machine beeps. In turn, close the power input protection switch, photovoltaic switch, as well as the addition of all switches.
7. Check the LCD data to ensure that the machine has been working properly, the correct installation is complete; (independent installation errors lead to machine can not work, man-made intentional damage, independent dismantling, force majeure factors, the above are not in the scope of free repair)
8. If you are unable to determine the installation, please contact the factory customer service and technical personnel.

# Front LCD Display Panel Operation Procedures

Step No.	LCD Display & Operation Process
1	<div data-bbox="300 344 949 598" data-label="Image"> </div> <ol style="list-style-type: none"> <li>1) Connect the loads, battery and AC, switch the power button (ON), enter into the first page as above photo.</li> <li>2) All English operation display, can intuitive inverter all running state and alarm state;</li> <li>3) The first button is "return" second button is "turn up", the third button is "turn down", the fourth button is "confirm"</li> </ol>
2	<div data-bbox="293 927 954 1185" data-label="Image"> </div> <ol style="list-style-type: none"> <li>1) Press "turn down "button, enter into the page as second photo;</li> <li>2) Page shows: PV voltage, charging current, generation power, gross generation, MPPT module (status, temperature, output voltage ).</li> </ol>

3	 <p>The screenshot shows a control panel with four indicator lights on the left: AC IN, Inverter, Charge, and Alarm. The central LCD screen displays 'System Status 1/3' and the following information: Input AC: 0V, Output AC: 220A 50Hz, Batt. Volt: 53.6V, Load: 0%, Batt. Type: 25.6V DC, and Temp: 24 C. On the right side of the panel are four buttons: ESC (power), UP (up arrow), Down (down arrow), and Enter (enter arrow).</p> <ol style="list-style-type: none"> <li>1) Press "turn down "button, enter into the page as third photo;</li> <li>2) Page shows: AC input voltage, inverter output voltage, battery voltage, battery types, output frequency, loads percentage and inverter running temperature.</li> </ol>
4	 <p>The screenshot shows the same control panel. The LCD screen displays 'Set System Status 3/4' and the following settings: INV. Output: 220V, Output. Freq: 50Hz, Input. Range: UPS, and Ac To Solar: 30Min. The buttons on the right are the same as in the previous screenshot.</p> <ol style="list-style-type: none"> <li>1) Press "DOWN" button , enter into the setting page as fourth photo;</li> <li>2) This page shows: shows AC output voltage, frequency .</li> <li>3) Recover to battery discharge delay time.</li> </ol>
5	 <p>The screenshot shows the same control panel. The LCD screen displays 'Set System Status 4/4' and the following settings: Set AC Cha: 10A, Set PV Cha: 30A, Back Light : Normal, Priority : AC, and SAVER : OFF. The buttons on the right are the same as in the previous screenshots.</p> <ol style="list-style-type: none"> <li>1) Press "DOWN" button, enter into the page as fifth photo;</li> <li>2) This page shows: AC charging current , MPPT charging current, backlight, priority mode.</li> </ol>

6	
	<ol style="list-style-type: none"> <li>1) The battery capacity is 50Ah.</li> <li>2) The maximum battery temperature is 25°C</li> <li>3) The battery charging voltage is 28.6V.</li> <li>4) The battery low voltage is 22.8V.</li> <li>5) The battery shutdown voltage is 22.4V.</li> </ol>

### The meanings of the indicators are as follows:

Screen indicator		ON	Flashing	Off
AC IN ■	AC input status	Grid is on	Grid is abnormal	Grid is off
Inverter ■	Inverter output status	Output is on	N/A	Output is off
Charge ■	Charge status	Float charge	Bulk charge	Not Charging
Alarm ■	Alarm status	There is alarm	N/A	There is no alarm

## **Suggested Wire Diameter Of Connected Cable**

Wire Diameter Of Cable (mm) = Single Circuit Rated Current (A) / (6A/mm)

- 1) PVC insulated copper core wire (@70°C).
- 2) Temperature is lower than 40°C.
- 3) If the above conditions can not be reached, please use strong cables.

## CAUTION

- Installation is to be performed by qualified technicians in accordance with relevant local safety standards.
- This product is suitable for charging batteries from solar modules of the same voltage level and power.
- Do not allow the solar input to be connected to other types of charging power sources, as this will damage the controller.
- There should be 2.5CM space on the top and around the product for air circulation.
- DC output is not allowed to connect to motor type load and the load current is less than the rated current.
- Solar module connection: Press the "solar switch" on the rear panel, the "BATTERY" indicator light is on, the voltage and power of the solar module should be within the input range of the charger. The positive terminal of the solar module is connected to the red terminal "S+", and the negative terminal is connected to the black terminal "S-". The "SOLAR" light is on to indicate that the solar module input is normal; when the inverter is not used for a long time and the solar module is not charging its battery, the "SOLAR SWITCH" can be turned down to reduce the battery depletion.
- AC load connection: Press "ON/OFF" for three seconds, when the sound of buzzer release is heard, the inverter operation starts, at this time, the AC output voltage pointer on the panel is the DC output voltage of the inverter, to ensure the power of the AC load is within the range of the inverter, connect the power and load plug to the "OUTPUT" of the panel.

## **Transportation & Storage**

### **Transportation**

Please check the package for damage upon receipt of the shipment. If there are missing accessories or the product is damaged, please notify the dealer within 7 days after receipt of the goods.

### **Open Package**

Be careful when opening the package and confirm if the machine is complete with relevant parts and if there is any damage.

Carefully confirm that the machine is complete with the relevant parts and that there is no damage. If there is any damage, please contact your seller.

### **Storage**

Machine should be stored in the clean, dry (0°C-35°C) environment.

### **Transportation**

Machine must keep stand and transported cautiously, any fall or strong shock may spoil machine.



First-class power battery system supplier  
First-class supplier of energy storage and microgrid

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