Kepeida®

Solar pump system

APPLICATION ARE

This project products are mainly used in dry region for irrigation of agriculture, It can be used for drinking water and living water. The living condition could be much improved. It also can be used for fountains.

ADVANTAGE OF DC SOLAR PUMP

1. Permanent magnet DC brushless synchronous motor: The efficiency is improved by 15%-20%,Save energy;Reduce the consumption of solar panels.
2. 304S/ S pump shaft.
3. Brass or stainless steel outlet/connector/ oil cylinder.
4. Double bearing motor base: can work under more axial pressure.
5. Alloy mechanical seal: Longer working life and high reliability.
6. Motor coil is made by automatic winding machine with centralized winding technology,motor efficiency is much improved.
7. Intelligent water shortage protection: The pump stops working automatically when there is no water in the well,and automatically start working 30 minutes later.

PRINCIPLE OF OPERATION

Solar panel collects sunlight---->DC electricity energy---->solar controller (rectification, stabilization, amplification filtering)---> available Doelectricity---->(charge the batteries)---> pumping water

ADVANTAGES OF SOLAR PUMP SYSTEM

A. It is easier and more widely used than any other dynamoelectric driven pumps

B. It is more economical and more environmental friendly

ADVANCED TECHNOLOGY

1. Application innovation

Compared with the traditional alternating current machine, the efficiency is improved 25% by the permanent magnetism, direct current, brushless, non-sensor motor.

2. Technics innovation

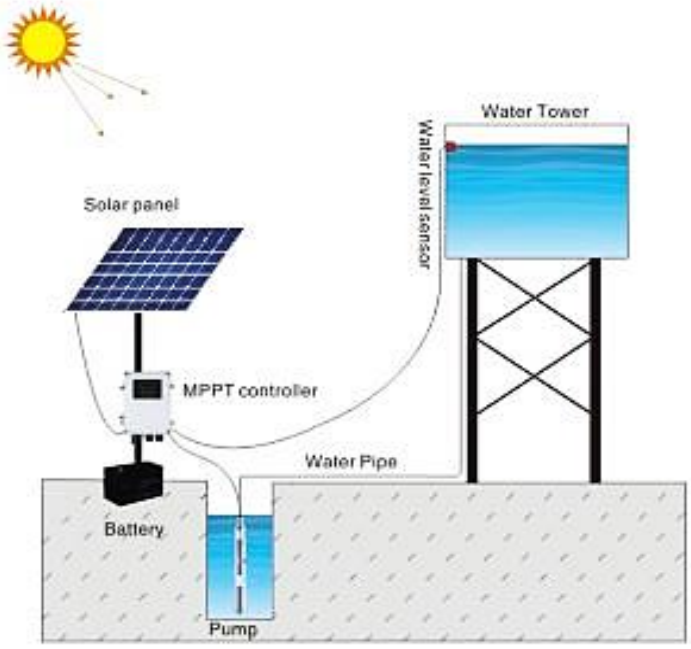
Adopt double plastic package for rotor and stator, motor insulation≥300MΩ, the motor security is much improved.

3. Structure innovation

Oil filling, convenient installation and environmental protection.

HIGHLIGHTS

- Energy-saving and environment-protected green products
- High technique products adopting MPPT and DSP chip technique
- 100% copper wire, cold-rolled silicon steel sheet
- CE certificate
- Advanced three phase brushless DC motor
- Stainless steel 316 screws &nuts



MODEL SELECTION

a. The power of solar panel=power of pump × (1.3-1.6)
The voltage of solar panel=the voltage of pump
The controller should be matched

b. Select the batteries according to the following formulas:
The use hour of Battery=The battery capacity is 100AH, the voltage is 12V,and the battery is fully charged, then the use hour is:
For example, the machine power is 200w, the battery capacity is 100AH,the voltage is 12V, and the battery is fully charged, then the use hour is:
100 ÷ (200 ÷ 12) × 0.6=3.6 hours

c. The battery capacity=The use hour ÷ 0.6 × (The machine ÷ The battery voltage)
For example, the machine power is 200w, the battery voltage is 12V, and the battery need to be used for 3.6 hours, then the battery capacity is:
3.6 ÷ 0.6 × (200 ÷ 12)=100AH

CONTROLLER

(1) Waterproof grade: IP65
(2) Ambient temperature:-15℃-60℃
(3) MPPT function, the solar power utilization rate is higher.
(4) Automatic charging function: Guarantee the pump normally working, meanwhile charge the battery;And when there is no sunshine, the battery can make the pump continuously working.
(5) LED displays the power, voltage, current, speed etc working condition.
(6) Frequency conversion function: It can automatically run with frequency conversion according to the solar power,and user also can change the speed of pump manually.
(7) Automatically start and stop working.
(8) Water proof and leak-proof Double seal effect.
(9) Soft start: No impulse current, protect the pump motor.
(10) High voltage/Low voltage/Over-current/High temperature protection.

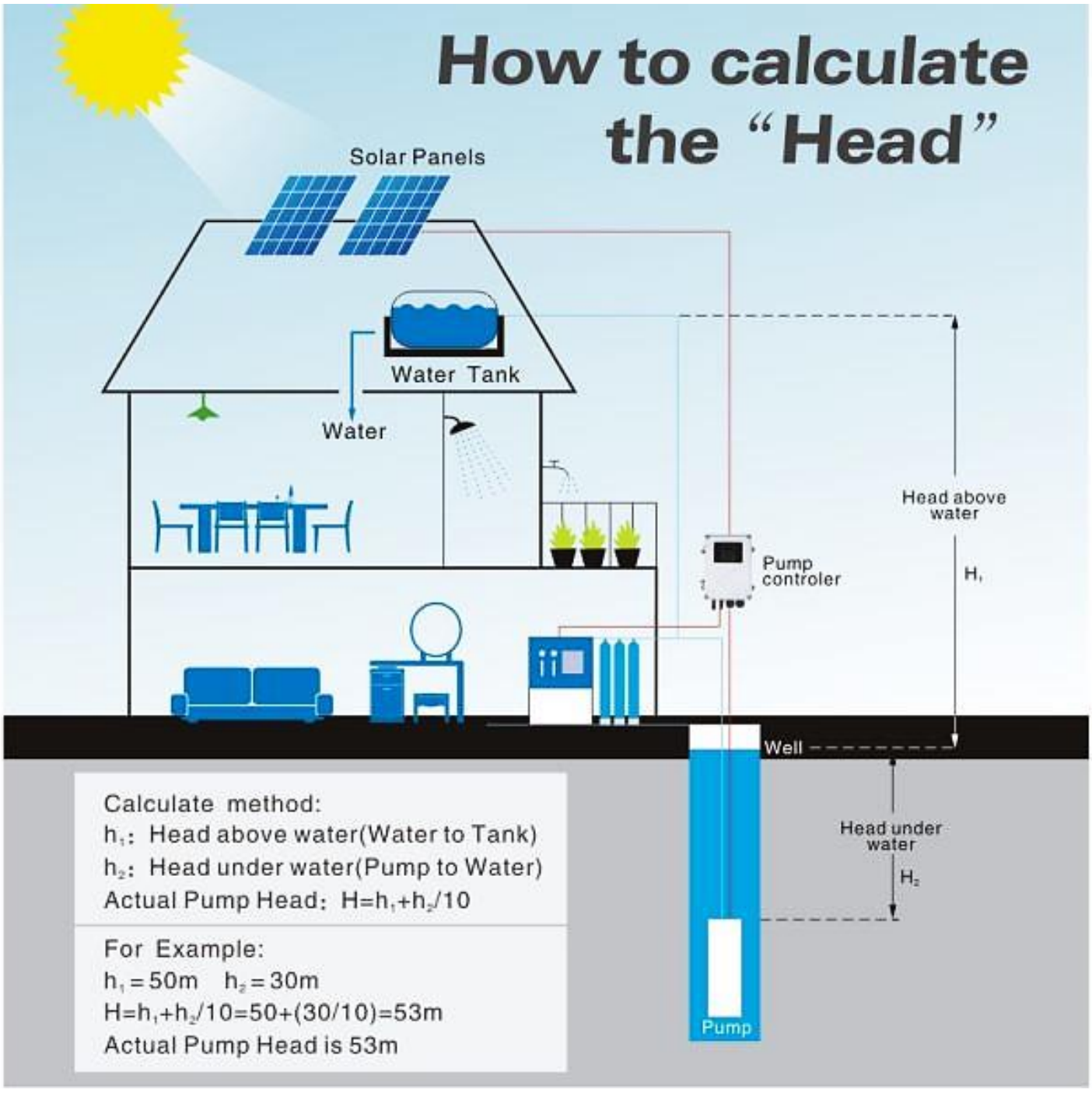
HOW TO CHOOSE

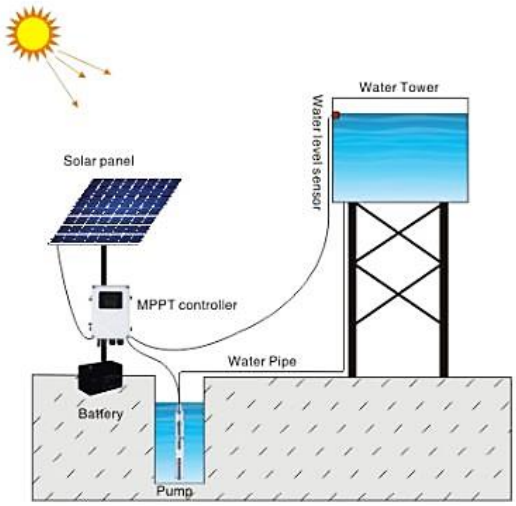
1.Confirm your technical requiremt

How deep is your well(bore hole)?
How far is the distance between tank and well?
What ' s your requirement about the flow(L/H)?

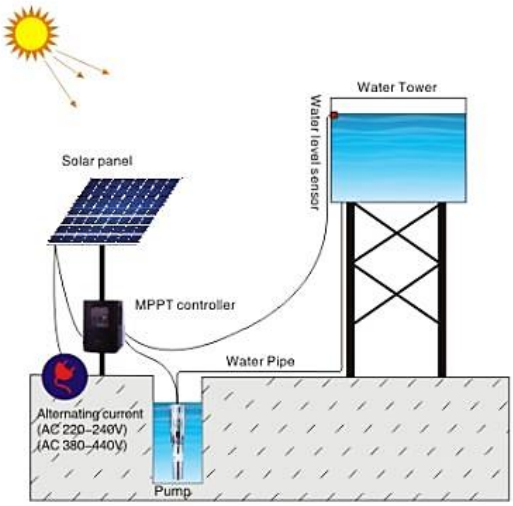
2.Compare your requiremt with our product

Calculate "Actual Pump Head" and find the proper pump with the right head.



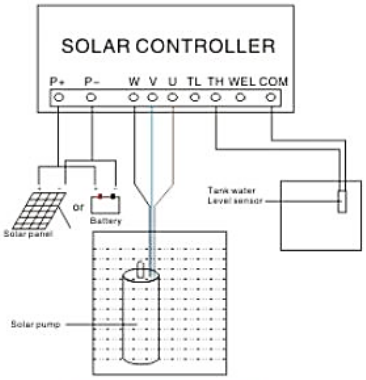


DC EXTERNAL CONTROLLER TYPE

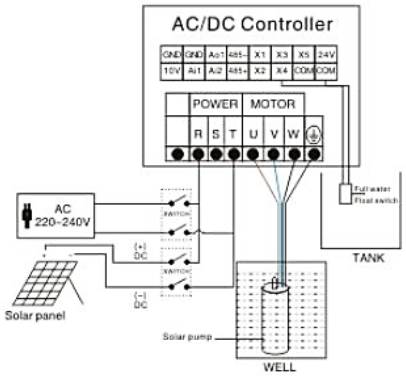


AC/DC EXTERNAL CONTROLLER TYPE

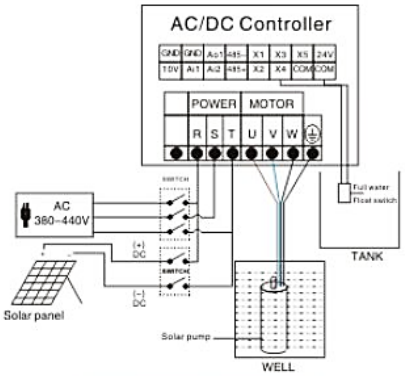
SYSTEM INSTALLATION DRAWING



DC : 12~110V



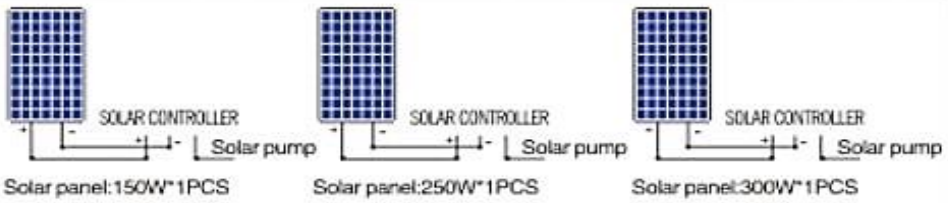
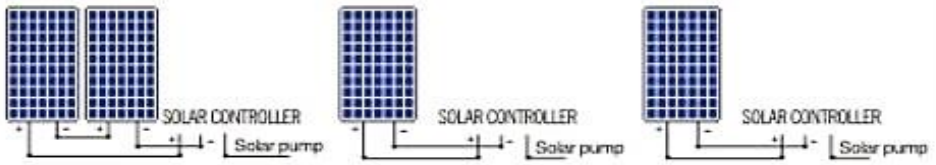
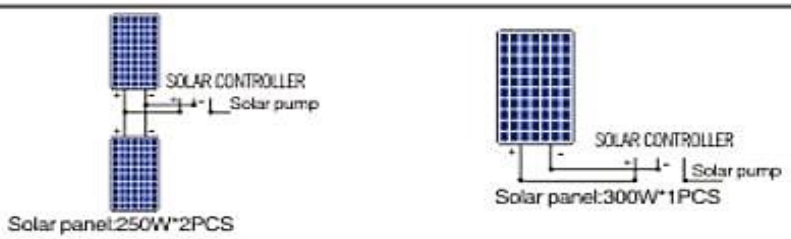
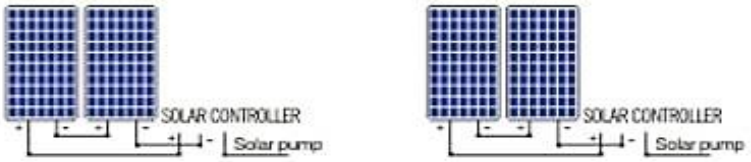
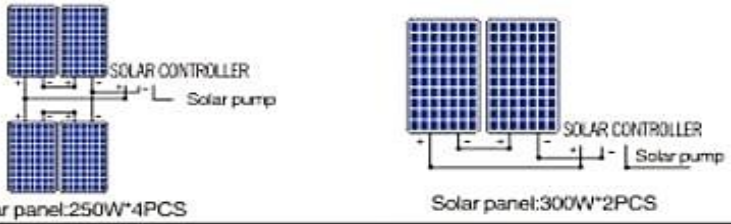
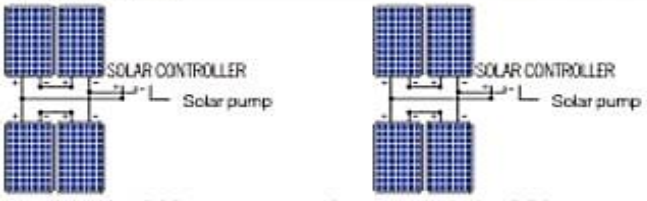
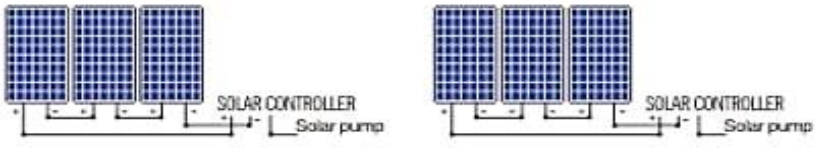
AC/DC : 220/300V

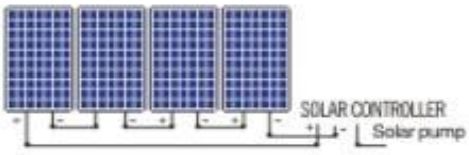
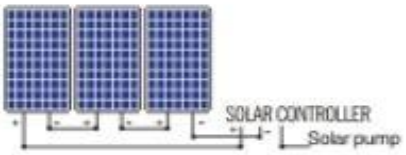
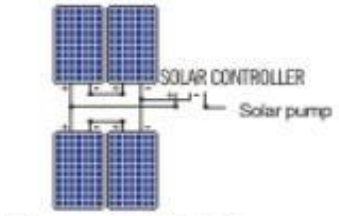
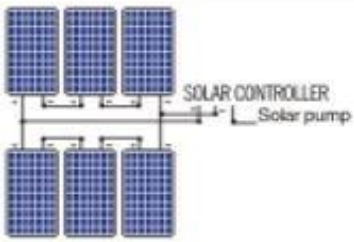
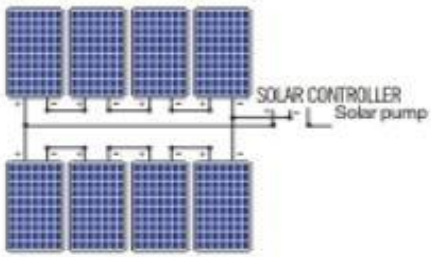
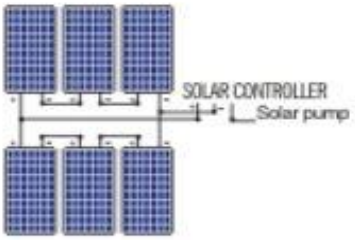
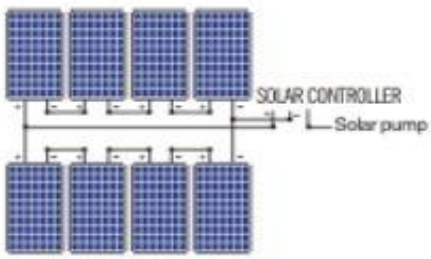
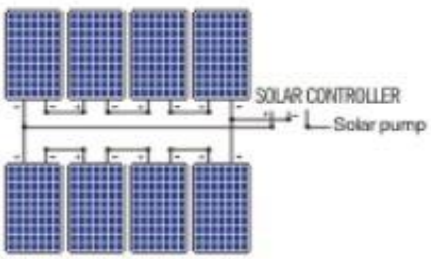


AC/DC : 380/550V

FAULT TYPE OF DC CONTROLLER			
Fault Code	**Fault Description**	**Causes and Solutions of Fault**	**Recovery Procedure**
P0	Hardware Overcurrent	• Motor model is mismatch, please choose matchingpumps • UVW three-phase short-circuit connection, pleaseewiring to ensure the normal installation of UVW	Automatically remove after 30s
P43	Phase Protection	• UVW three-phase open circuit, please rewiring to ensure it reliable contact	Automatically remove after 30s
P46	Stall Protection	• Motor model is mismatch, please choose matching pumps • Pump extension cord is too long, please reduce the extension cord • Power is too low, increase the power supply • Pump bearing is stuck, please clean pump bearings	Automatically remove after 30s
P49	Software Overcurrent	• Water pump bearing stuck, clean pump bearings • UVW three-phase short-circuit connection, please rewiring to ensure the normal installation of UVW	Automatically remove after 30s
P50	Low Voltage Protection	• The input voltage is too low, please distribute power refer to the electrical characteristics	Voltage return to normal. remove the fault immediately
P51	High Voltage Protection	• The input voltage is too high, please distribute power refer to the electrical characteristics	Voltage return to normal. remove the fault immediately
P48	Dry-run Protection	• Not all of air in the pump is exhausted, cut off the power, re-power and start the pump drainage after 30 seconds • There is no water in the water tank waiting for water. it will restart	Automatically clear alter 30 minutes or re-power to clear
P60	High Temperature Protection	• The temperature of controller MCU is more than 90℃	Automatically clear alter the temperature is normal
E8	Current Sampling Failure	• Cut off the power and restart after 30 seconds	Restart the power
PL	Power Shortage	• No sunlight, waiting for the sunlight to restart • Solar panel matching error, refer to the recommendation to match correctly	At the first 5 times, it will removal after 30 seconds, and then 30 minutes to removal
ALARM	Reverse connection protect	• Exchange the positive and negative wire	Restart the power

Solar panel recommendation for 12V–110V DC soalr pump

PUMP POWER 80W–12V Voc: 18V–50V	 Solar panel:150W*1PCS Solar panel:250W*1PCS Solar panel:300W*1PCS
PUMP POWER 120W–24V 180W–24V 200W–24V 210W–24V 210W–36V Voc: 18V–50V	 Solar panel:150W*2PCS Solar panel:250W*1PCS Solar panel:300W*1PCS
PUMP POWER 280W–24V 300W–24V Voc: 18V–50V	 Solar panel:250W*2PCS Solar panel:300W*1PCS
PUMP POWER 400W–36V Voc: 18V–50V	 Solar panel:250W*2PCS Solar panel:300W*2PCS
PUMP POWER 370W–48V 400W–48V Voc: 30V–100V	 Solar panel:250W*2PCS Solar panel:300W*2PCS
PUMP POWER 500W–48V 550W–48V Voc: 30V–100V	 Solar panel:250W*4PCS Solar panel:300W*2PCS
PUMP POWER 600W–48V Voc: 30V–100V	 Solar panel:250W*4PCS Solar panel:300W*4PCS
PUMP POWER 600W–72V Voc: 50V–150V	 Solar panel:250W*3PCS Solar panel:300W*3PCS

PUMP POWER 750W–48V Voc: 30V–100V	 Solar panel:250W*4PCS	 Solar panel:300W*4PCS
PUMP POWER 750W–72V Voc: 50V–150V	 Solar panel:250W*4PCS	 Solar panel:250W*3PCS
PUMP POWER 900W–72V Voc: 50V–150V	 Solar panel:250W*4PCS	 Solar panel:300W*4PCS
PUMP POWER 1100W–72V Voc: 50V–150V	 Solar panel:250W*6PCS	 Solar panel:300W*6PCS
PUMP POWER 1100W–110V Voc: 60V–200V	 Solar panel:250W*6PCS	 Solar panel:300W*6PCS
PUMP POWER 1300W–110V Voc: 60V–200V	 Solar panel:250W*8PCS	 Solar panel:300W*6PCS
PUMP POWER 1500W–110V Voc: 60V–200V	 Solar panel:250W*8PCS	 Solar panel:300W*8PCS