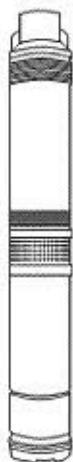
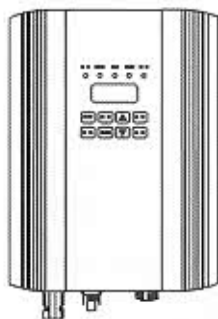
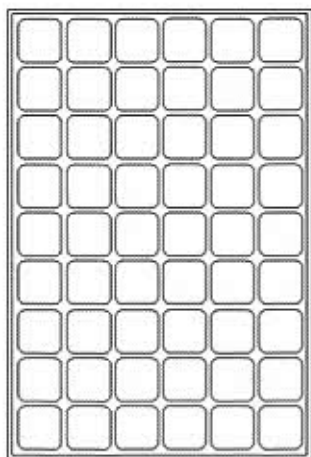





# Solar Pumping System Installation Instruction



## Safety Instruction

Safe operation of this product depends on its correct transportation, installation, operation and maintenance. Before doing these, please be sure to notice the safety-related prompt. There are 3 kinds of safety-related warning signs in this manual as follows:

-  Warning: Misuse will result in fire, serious injury to person or even death.
-  Caution: Misuse will cause low or middle-grade injury to person or equipment damage.
-  Prompt: Point out some useful information.

### ◆ Installation

#### Caution

1. Never install if you find inverter damage or lack of component, or else it will cause occurrence of accident.
2. To ensure a good convective cooling effect, the inverter must be installed vertically with at least 10 cm space left in the top and bottom.
3. Install it in the indoor location which is possessed of ventilation opening or ventilating device. It is forbidden to install where exposes directly to the sunlight.
4. Adjust partial control parameters according to the steps indicated by the manual before its first running. Do not change the control parameters of the inverter randomly, or else it will cause damage to the equipment.

#### Warning

1. Maintenance and inspection must be performed by the qualified electric professionals.
2. Please confirm that input power had been cut off before connection, or else it will cause electrocution or fire.
3. Earth terminal must be reliably grounded, or else the inverter shell will have a danger of being electrified.


#### Prompt

Solar Water Pumping Inverter:

1. 750W-2200W:  $V_{mpp}$  (Optimum operating voltage): 300-350VDC,  $V_{oc}$ (Open-circuit voltage): 360-430VDC
2. 3.7KW-55KW:  $V_{mpp}$  (Optimum operating voltage): 530-600VDC,  $V_{oc}$ (Open-circuit voltage): 630-750VDC

Submersible Pump:

Make sure submersible pump head can satisfy the actual application head, please consult factory if not clear.

 Caution: Prepare the installation according to above instructions; otherwise system can not run smoothly.

## Solar Pumping System Installation Instruction

### Installation of Solar Array:

1. In order to prevent silt spattering and damaging by small animals, the solar arrays should be installed one meter high above ground.
2. The azimuth angle of solar array should be set towards south (on the Northern hemisphere) or set towards north (on the Southern hemisphere). Use a compass, but remember to take the local declination into consideration.
3. The Angle of inclination of solar arrays is fixed for large systems. It would be better if the angle of inclination can accord with the local latitude, but also can set the angle considering the season with maximal demand of water.
4. The material of brackets should be steel or aluminum and their strength can withstand typhoon force 10. The metal surface should be galvanized and aluminum-plated or smeared by antirust paint to prevent rust corrosion.

### Submersible pumps installation:

1. When pumping water from deep borehole, pay attention to the drilling and cleaning as well as the pipe verticality, make sure these are as requested. The inner diameter of borehole should be larger than the pump size. The depth of pump installed should meet the following requirements: at least 1 meter below the dynamic water level; above the well pipe inlet filter; at least five meters from the bottom of borehole.
2. When pumping water from other water sources, the submersible pump should be fixed stably to avoid transverse force.

### Notice:

1. Using wire rope and buckle to fix the submersible pump and hanging in the borehole, wellhead needs to add the bracket to fix the pump.
2. We suggest PVC pipe or iron pipe when head below 80 meters, for PVC pipe, using special glue to connect the elbow and straight connected devices, putting the pump in water after 15 minutes when the glue sticks well.
3. Head above 80 meters we recommend iron pipe, tapping is needed, using water tape to connect elbow and straight connected devices, tightening the pipe connection by pipe wrench.
4. The installation distance for Submersible, solar pumping inverter and solar array should be in 100 meters, over 100 meters we suggest add a reactor.
5. Please check the water outlet diameter of the pump first, then purchase the correspond pipe.

## Wiring Diagram for Solar Pumping System

