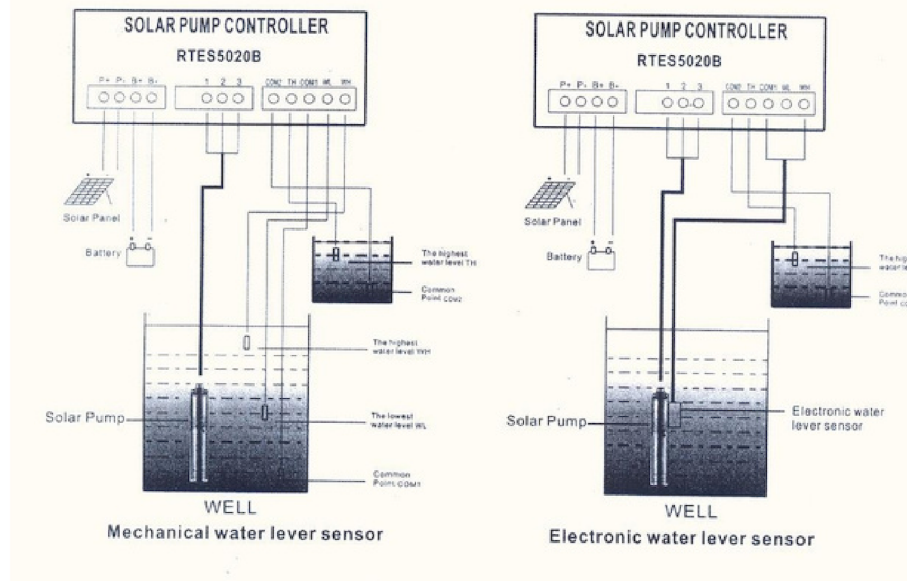


SOLAR PUMP INSTALLATION



Charging function OL

Charging function only can use for RTES5020B controller, Mainly applied to a strict pump-out.

a) After connect the battery input and solar panels input, turn on the switch to the Solar Panel Mode. At first, all the lights on and then went after Is clock "SYS" indicator system into self-check. After Pump "self" indicator, Pump running. Finally, the lights flashing MPPT ", "said system into the maximum power point algorithm. If need to connect the battery, turn on the switch to the Battery Mode.

If no need to use the battery, turn on the switch to the Solar Panel Mode.

b) User can use upper limit of the motherboard maximum output speed potentiometer, Clockwise potentiometer motor speed, Counter-clockwise potentiometer motor speed decreases

c) When the battery power is not enough, Controller will automatically into rechargeable battery mode, This "Pump" indicator and flashing lights and "MPPT ".

This process pump is still in running.

Announcements

a) During the wires connection, please note that must turn on the switch to the middle part "STOP", then the power cut off.

Make sure the solar panel input is the final step of insert. The right connection can avoid damage of wrong operation. b)

Please pay attention to the "p+" terminal and "P-"terminal. Voltage between "B+" terminal and "B-"terminal can not be exceed 100V, Or there would be fatal damage to the controller.

c) Please note the solar pumps controller could only match the relevant or recommended solar pumps' models by our company, can not be changed to other models at will.

d) When the pump start running please make sure it runs in the correct direction(The water would flow out from the water outlet of the pump is the right direction). The incorrect way not only makes the pumps works irregularly, but also will cause mechanical damage to the pump by long term running.

e) Water level sensor for the well:

(1) "The old-style well water level sensor: It acts in detection the water level of the welt. Once the water level is too low and well is going to be dry, the pump will stop pumping. During installation, the sensor connected to the terminal "WL" should installed near the well bottom. Sensors of terminal "WM" and terminal "WH" should be installed above sensor of terminal "WL" in proper way. The pump will stop working when the water level below the sensor connected to terminal " WM" and the pump will work again until the water level recovery above the sensor connected to terminal" WH" o When the system detected the underground water level below the "WM" probe, it will reset automatically and stop work.

Until the water level above the probe, the system would delay according to the lag time the timer set, and at the same time, the "WELL" light starts twinkling till the delay finish, the system moves again. At the first electrify of the system and detected the water level is above the "WH" probe, it will runs without any delay.

(2) The New-style float water level sensor (Substitute for "WH""WL"and "COM 1" probe for the well) : When user choose float water level sensor instead of the old-style sensor, please connect the two wires of sensor with terminal "COM 1" and "WH" of the controller.

Attention : Please make sure the float water level sensor vertically bound above the outlet of solar pump or the outlet pipe.

Controller introduction

Control the pumps to pump water and monitor the system working condition

*No putting in water (electronic component away off water)

*Two way controls input terminal, and it can connect with sensing equipment such as water level probe (idling protection), pressure switch, tele equipment etc.

*

Model name	Withstand voltage	
12V controller		
50V		
24V-48V controller		
100V		
110V controller for 1000W solar pump	150V	
110V controller for 1200W solar pump	200V	

*Controller applies to 12V- 110 V systems. Plastic cover controller is only used for 12V-48V solar pump systems. *Start-up requirement of system: solar panel supplies energy: ?10%

*Start-up time of motor : <_10S

*The switch can automatic switch over of the charge mode and non-charge mode, no need of manual work. *Weak power testing, when the system continuously runs 5 seconds, the actual power <_ 10% rated power of pump, system will automatically turn into weak power, low-power light is on.

When the system detects the water level of ground water is less than the low water level probe (WL), the system automatically reset, and stop working, until the water level is higher than high water level probe (WH), the system will delay according to the delay time of timer, right now Well L light starts to flicker, until finish the delay time, restart to work. When the power of system is on, and detects the water level is higher than high water level probe(WH),it has no delayed time processing, and runs directly.

*It has function such as electropositive protection, overcurrent protection, hyperthermy protection.

*Solar power transition system Based on MPPT (Maximum power point) arithmetic.

When battery voltage is too low, the system will automatically disconnect the power, it will connect the power until the battery voltage returns to normal.

*Maximum conversion efficiency is 88% (motor and controller).

Protection grade: IP54 (Sealed, waterproof)

*Compared with traditional hardware start-up, software control system start-up makes motor start gently, starting current is smaller.

*On the condition of identical current and voltage, software control makes the system efficiency increase 10% to 15%.

~ Controller can prevent the pump starting frequently on the condition of weak soar power through testing the dynamic of solar power, it can protect and extend the worklife of pumps.

Explanation of lights and wiring terminal

Explanation of lights

mark	name explanation	
SYS	power Green color, the power is ok	
Pump	running connected	Green color, it turns on 20 seconds after the power is
MPPT	Max power point	Green color, the system is calculating the max power point
ERR -1	Erroneous current	Red color, over current
Low Power	Erroneous voltage	Yellow color, over voltage or under voltage
Tank -F	Tank water level alarm	Red color, the tank is full
Well -L	Well water level alarm	Red color, the water in well is unavailable