

1.Description

The main functions:

- ① Automatically or manually switch AC Power and DC power.
- ② Combined with water level detection function, automatically controlling the pump.

Three modes: AC mode, DC mode and AUTO mode.

AC mode: Pump will only work under AC power

DC mode: Pump will only work under DC power

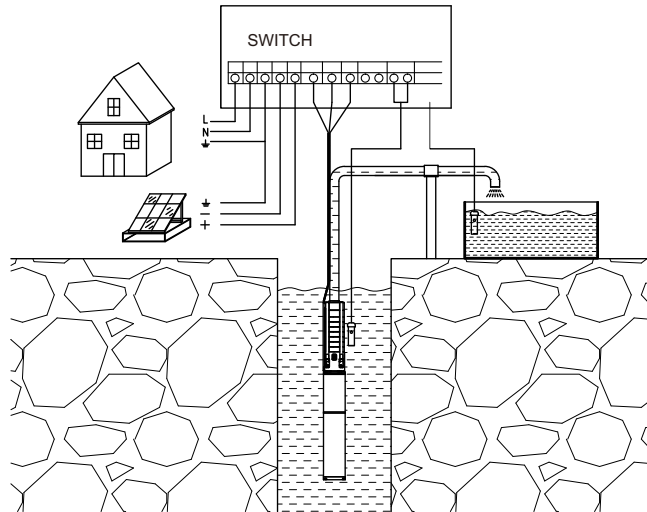
AUTO mode: DC power is prioritized, when DC input voltage is lower than 40V, switch to AC power automatically, when DC power exceeds 60V, re-switch to DC power.

If it is cloudy or rainy, the electric current of solar panel can not make pump work or automatically switch to AC power, it may need to artificially adjust mode.

The switch has water level detection function, when connect water level sensors, pump will stop in 4 seconds after detecting tank full / well low, pump will resume to work in a set time (5mintues, 15mintues, 30mintues) conversely.

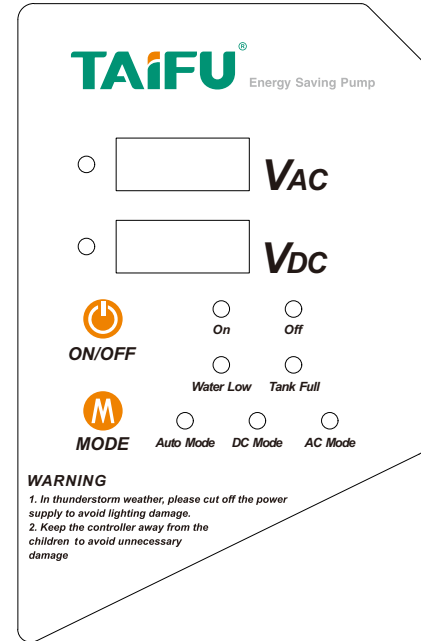
2.AC/DC switch

2.1 Wiring manual



Mark	Note
L	Connect electric supply (AC)
N	Connect electric supply (AC)
PE	Connect earth wire
P-	Connect negative pole of solar panel/DC power
P+	Connect positive pole of solar panel/DC power
M+	Connect positive pole of motor
M-	Connect negative pole of motor
WL	Connect well water level sensor
TF	Connect tank water level sensor

2.2 Display Board Introduction



Picture

Sign

Instruction

VAC

AC voltage: when working under both AC and DC power, if AC voltage is higher than 60V, the indicator turns green, if AC voltage is lower than 60v, the indicator turns red; the indicator goes out if only input AC power but can not make controller work

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Real-time display of AC electric supply

VDC

DC voltage / solar power, when working with both AC and DC power, if DC voltage is higher than 40V, the indicator turns green, if DC voltage is lower than 40V, the indicator turns red; the indicator goes out if only input DC power but can not make controller work

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Real-time display of solar power/DC power

WATER LOW

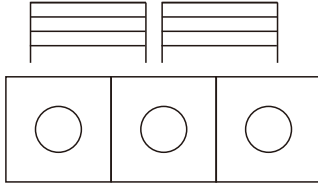
Well water level indicator, the indicator turns green under normal working, the indicator turns red when dry running, pump stops working until the water level recovered.

TANK FULL

Tank water level indicator, the indicator turns green when tank is empty

2.3 Soft start function

Wire Jumper



Find the wire jumper setting position on the PCB of the AC/DC switch

(The wire cap is attached inside the controller by warning label)

- 1.Factory default without jumper cap, delay 15 minutes
- 2.When the jumper cap is inserted into the 2 jumpers on the left, delay 5 minutes
- 3.When the jumper cap is inserted into the 2 jumpers on the right, delay 30 minutes
- 4.Press ON/OFF button twice to cancel the set time

2.4 Failures

1	When VAC shows 0, check whether the connection between the AC power and controller is reliable. If the wiring is reliable, measure whether the FUSE1 on the left is in good condition.
2	When VDC shows 0, check whether the connection between solar panel and controller is reliable. If the wiring is reliable, measure whether the FUSE2 on the right is in good condition and check whether the positive and negative poles are connected reversely .
3	When VAC and VDC display normal but no output, please check whether the output terminals and the water level sensors are reliable.
4	Make sure lower water level sensor is under the water, and the upper water level sensor is over the water
5	Install air switch before connecting AC power and DC power to controller, the electric current should be within 15A , and the voltage should be within 240V(AC)and 400V(DC).
6	If the buttons on the controller is invalid, check the connecting wires. If it is reliable, test weather the power button is in good condition. Test method: press the power button, detecting the resistance of 4 contacts which are located under the button
7	When the LED on the controller is invalid, check whether the connecting wires are reliable.