

# SOLAR PUMP KIT USER'S MANUAL

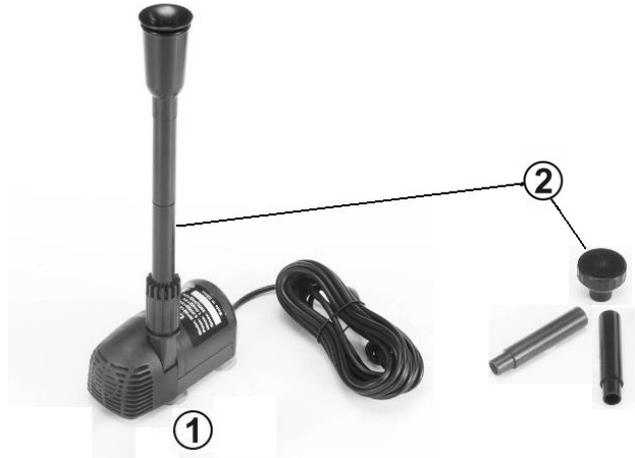
Design for fountain

Item No.: BP501210

## 1. OVERVIEW

- 1) The brushless water pump is designed for outdoor or indoor fountain use, and is powered by a DC power supply such as solar module, rechargeable battery or AC/DC adapter etc..
- 2) The performance of the pump depends on sunlight intensity and the incident angle at which sunlight strikes the panel surface.
- 3) The latest DC brushless motor technology is introduced in the pump design and manufacturing, so that the pump has high efficiency and long service life.

## 2. COMPONENTS



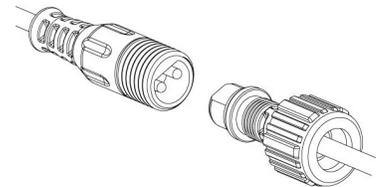
1) Pump 2) Nozzles

## 3. ASSEMBLING

- 1) Unpack all components carefully.
- 2) For the application of producing a waterfall feature, fit the pump outlet to the water inlet of the decoration.
- 3) For the application of creating a small spraying up fountain, please follow the steps below:
  - a) Fit the nozzle on the top of the pump tube, the nozzles can produce 2 different jet shapes.
  - b) Fix the pump at the base of a basin or bottom of a small shallow pond etc..
  - c) It is best to keep the pump off the pond base to avoid drawing the pond waste into the pump, which will lead to blockage in the pump. Use a brick or similar to elevate the pump.
  - d) To produce excellent fountain effect, please leave the fountain head above the water surface by using the extension tubes. If these 4pcs of extension tubes are all used and the pump head is still immersed in the water, please uplift the pump body somehow.
- 4) Connect the pump to a proper DC power supply with an output voltage between 12V to 24V.
- 5) Make sure to keep the pump fully underwater while the pump is operating.
- 6) The pump is now ready to operate.

## 4. CAUTIONS

- 1) Any altering of the product itself or changing of the components voids warranty.
- 2) Do not connect the pump to any AC power supply directly; it's designed ONLY for DC power.
- 3) All the connectors are protected against reverse polarity as shown in the right figure. Don't insert the plug with reverse polarity by using unnecessary force.
- 4) Operate the pump in water only (never above 40°C), especially keep it away from flammable liquids.
- 5) Do not strike the solar panel.
- 6) Do not let the pump run dry.



## 5. CLEANING AND MAINTENANCE



If the pump starts losing power or stops working after operating for a certain time, please clean the pump following the steps below (See the above figures for demonstration):

- 1) Disconnect the pump.
- 2) Pull the filter housing apart from the pump
- 3) Press on the bottom board and meanwhile slide it apart from the pump.
- 4) Turn the impeller cover counterclockwise to the end and then carefully open the impeller cover
- 5) Pull the impeller out of the pump
- 6) Wash every part to clean the debris.
- 7) Assemble the pump in reverse sequence.
- 8) Connect the pump.

**\*Be careful, never drop down the ceramic axis while cleaning the impeller, it breaks easily.**

## 6. TROUBLE SHOOTING

\*Pump does not operate even though the solar panel is in full sunlight.

- 1) No connection to the power supply — check the connection to the power supply.
- 2) Impeller is blocked — clean the pump as described in “**CLEANING AND MAINTENANCE**”.

\*Pump does operate but there is no water running through the tubes: clean the tube and the filter to make sure the tube is through completely.

## 7. TECHNICAL DATA AND PUMP CURVE

Operating voltage	DC 12V-24V
Maximum pump head	1.0m@12V; 3.2m@24V
Maximum flow rate	980L/H@12V; 1560L/H@24V
Dimensions	127 x 58 x 90 mm
Net weight	0.68 KG
Cable length	5 M

**PUMP CURVE      WORK VOLTAGE: 12 & 1**

