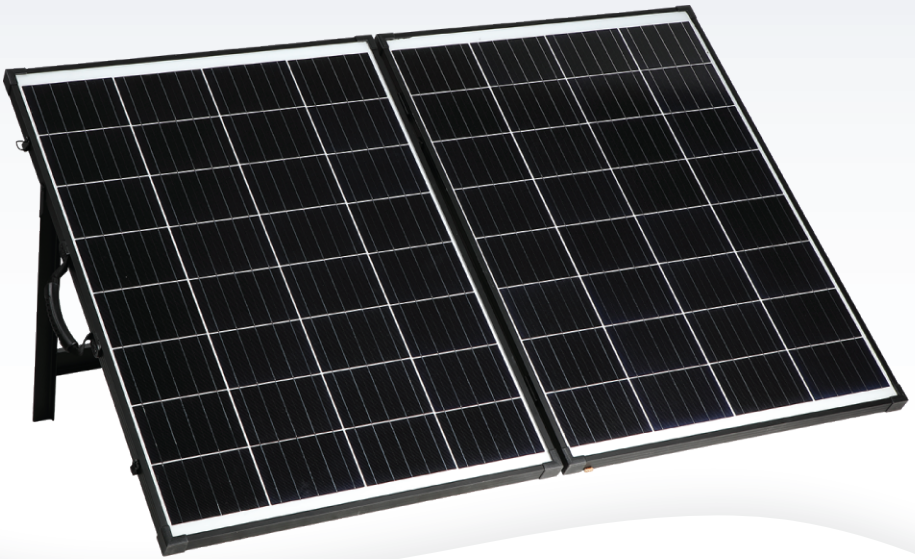# serenelife™

SLSOLBK002

1 Pc. Portable Mono Solar Panel Starter Kit

200W Off-Grid Solar Panel Briefcase
with 20A PWM Controller with LCD Screen

USER GUIDE

Before operating, please read these instructions carefully. This instruction manual contains information for safe use and maintenance of the product. Please keep this instruction manual in a safe place for future reference. The manufacturer does not accept responsibility for any damages due to not following these instructions.

TABLE OF CONTENTS

GENERAL

**Please carefully read the following operation and safety instructions.
Non-compliance with these instructions may void the product warranty.**

This guide contains information regarding the operation and safe handling solar panels and components. All operations must be read and understood before attempting operation. If there are any questions, please contact your dealer or customer support for further information.

The user should conform to all safety precautions in the guide when using solar panels. Before using a solar photovoltaic system (including cable, power station or other electric equipment), the user should be familiar with the mechanical and electrical requirements for photovoltaic systems. Keep this guide in a safe place for future reference.

- All solar panels come with permanently attached output ports. Your dealer can provide additional extension cables to simplify module wiring.
- Exercise caution when wiring or handling solar panels exposed to sunlight.
- Photovoltaic solar panels convert light energy to direct-current electrical energy and are designed for outdoor use.
- Solar panels may be hung, placed flat, or use provided kickstand to face towards the sun.
- Do not frequently connect or disconnect wires attached to solar panels when they are exposed to sunlight in order to extend panel service life.
- Do not attempt to disassemble the solar panel, and do not remove any attached nameplates or components. Doing so will void the warranty.
- Do not apply paint or adhesive to the solar panel.
- Do not use mirrors or other hardware to artificially concentrate sunlight on the solar panel.

Safety Precautions for Using a Portable Solar Panel
- Solar panels produce electrical energy when exposed to sunlight.
- Solar panels can be connected in series. When connected together (either in series or parallel), make sure that each solar panel has the same rated voltage.
  Your dealer can provide additional cables to simplify panel connections.
- Observe the instructions and safety precautions for all other components used in the system, including wiring, cables, connectors, and etc.
- Use only equipment, connectors, wiring, and mounting hardware suitable for use in a photovoltaic system.

- Always use the same type of solar panel in a particular photovoltaic system.
- Under normal operating conditions, solar panels will produce currents and voltages that may vary from those listed in the data sheet.
  Data sheet values are applicable at standard test conditions only.
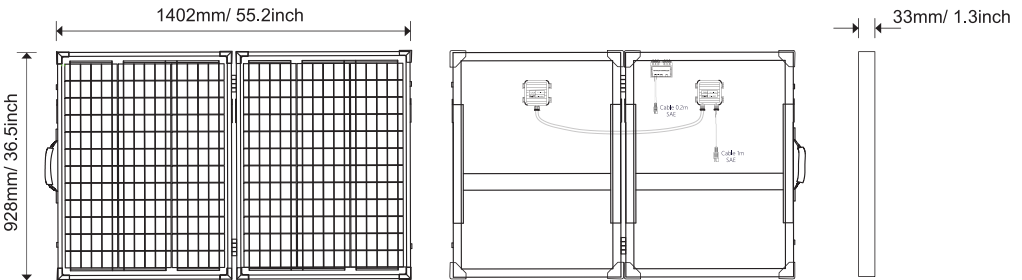
General Operation Notes
- Do not stand or step on the solar panel.
- Do not drop the solar panel or allow objects to fall on the solar panel.
- Do not place any heavy objects on the solar panel.
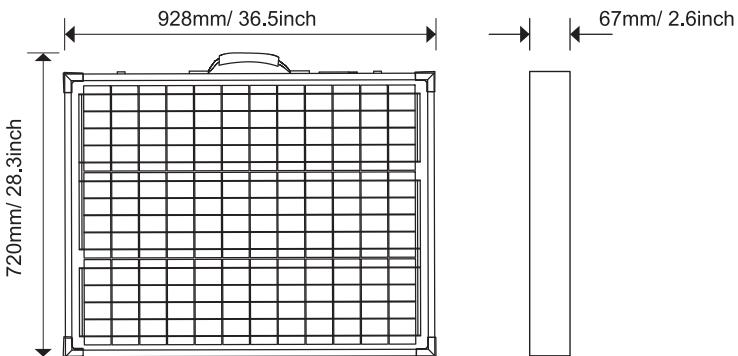
PRODUCT OVERVIEW
200W Solar Panel Briefcase
Solar panels are made of monocrystalline solar cells in series with high efficiency, high transmission rate, and anti-aging EVA. They are designed for easy use, extended longevity, and portable operation.

Unfolded View of the 200W Solar Panel Briefcase:

Folded View of the 200W Panel Briefcase:

Cables

- Passed conduction test, there was no short circuit, open circuit, dislocation, etc.
- Cables are free of dirt, scratches, damage, color difference or other defects.
- All materials meet RoHS environmental standards.

CATEGORY	LOCATION	DESCRIPTION	TOTAL LENGTH	REMARK
Connection	One junction box to the other	Junction box Connection	2.95" (900mm)	Connected
Extension	From controller	Cable with SAE connector	0.66" (200mm)	Connected
	From junction box	Cable with SAE connector	3' (1000mm)	Connected
Accessories		Cable with SAE to Anderson connector	3' (1000mm)	In separate bag
		Cable with SAE to DC8055 connector	3' (1000mm)	
		Cable with bare wire to Alligator connector	10' (3000mm)	

What's in the Box:

- 200W Solar Brief Case
- 3 ft. (1m) Cable with SAE to Anderson Connector
- 3 ft. (1m) Cable with SAE to DC 8055 Male Connector
- 10 ft. (3m) Cable with Bare Wire to Alligator Connector
- 20A PWM Controller: 12V/24V
- Carry bag

Solar Charger Controller (PWM)

Safety Instructions

1. Make sure your battery has enough voltage for the PWM to recognize the battery type before first installation.
2. The battery cable should be as short as possible to minimize loss.
3. The PMW is suitable for lead acid batteries (Flood, AGM, GEL) and lithium ions, (please make sure the PWM is set for the right type of battery before usage). It is not suited for nickel metal hydride, or other types of batteries.
4. The PWM is only suitable for regulating solar modules. Never connect any other charging source to the PWM.
5. It is normal for the PWM to be hot when the PWM is at work. Please install the PWM on a flat and well-ventilated place.
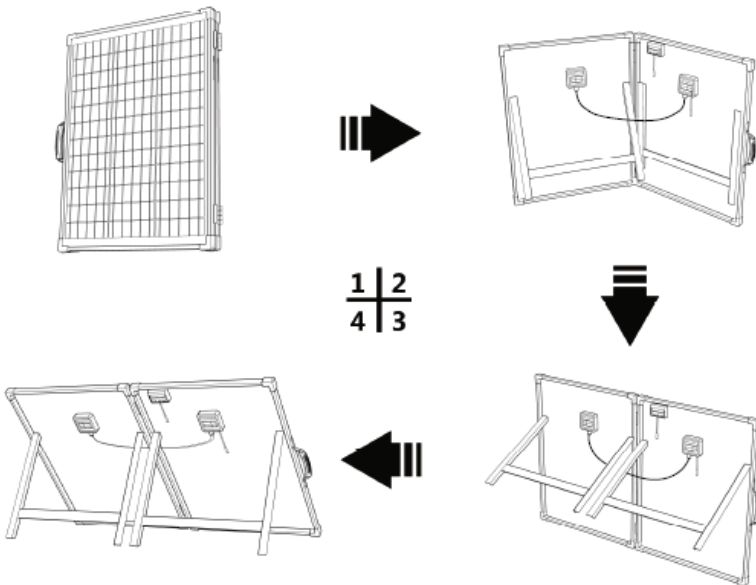
NOTE:
1. Charging parameters may vary based on availability of sunlight on the solar panels.
2. Product specifications are subject to change without notice.
3. Bold italic typeface voltage *2, *4 while using 24/48 system.

OPERATION
Installation
1. Remove the product from the box.
2. Pull the tab upwards to open the locks.
3. **Unfold and support the portable solar panel like the diagram below:**
    • Lift and lay flat the portable solar panel;
    • Unfold the two sides of the panel;
    • Prop up the stands of the portable solar panel;
    • Stand the panels with locked legs on a flat surface
4. Adjust the face of the portable panel toward the sunlight
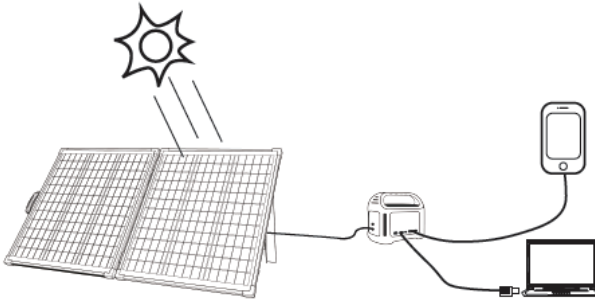

Choose the location
 • Choose a flat location to place the solar panel.
 • Place the solar panel in an open location. Make sure the panel can be exposed to the sun directly and avoid any shadow on the surface.
 • Make sure the angle between panel and the sunlight is close to 90 degrees.

System Connection

There are two popular connections with solar system, including solar panel, power station, electronic equipment, and so on. For the power station as energy storage, the system connection as below:

1. **Charge Power Station**
   - Connect the portable solar panel to power station directly
   - Connect the power station to the electronic equipment, like phone, iPad, laptop and so on.

Note: The electronic equipment can also be charged directly using USB output from the PWM controller while there is no power station.

2. **Charge battery through the PWM (Solar Charge Controller)**
   - Connect the cable from the battery to the PWM battery output terminals first.
   - Wait until the PWM recognizes the battery type.
   - Connect the cable from solar panel to the PWM solar input terminal.
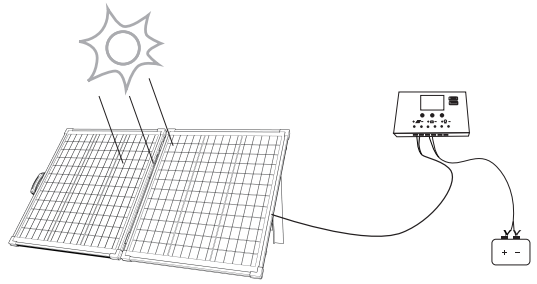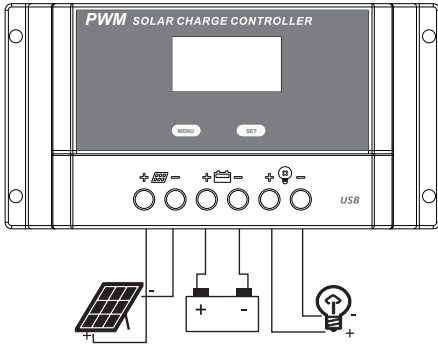
NOTE:
IT IS VERY IMPORTANT TO FOLLOW THE ABOVE-MENTIONED CONNECTION STEPS TO AVOID DAMAGING THE PWM CONTROLLER (SOLAR CHARGE CONTROLLER). ALWAYS CONNECT THE BATTERY TO THE PWM BATTERY TERMINALS BEFORE CONNECTING THE PWM TO THE SOLAR PANEL.

MAINTENANCE

- Clean the surface of the solar panel when needed. Always use a soft sponge or cloth for cleaning. A mild, non-abrasive cleaning detergent may be used to remove stubborn dirt. Don't clean when the panel surface is hot.
- Clean solar panels more frequently during drier months, as they may become covered in dust more quickly. A pressure washer is not recommended.
- **Caution:** Observe the maintenance instructions for all components used in the system, such as support frames, charge controller, batteries, etc.

TROUBLESHOOTING

Situation	Probable	Solution
Charge icon not on when sunny	Solar panel opened or reversed	Reconnect
Load icon off	Mode setting wrong	Set again
	Battery low	Recharge
Load icon slow flashing	Over load	Reduce load watt
Load icon fast flashing	Short circuit protection	Auto reconnect
Power off	Battery too low/ Reverse	Check battery/Connection

Features:

- Includes 20A PWM Controller with LCD Screen
- Portable and Easy Set-Up
- Sleek Design for Aesthetic Quality
- Grade A Mono Solar Cells
- Higher Module Conversion Efficiency
- Produces 600-1200Wh a day
- Generates 10.8 amp Power
- Charges 12V/24V Volt Battery
- Anodized Aluminum Frame and Tempered Glass
- With folding Mounting Stand & Convenient for Installation
- Easy to Set Up and Suites Variety Using Conditions
- Foam Box for Safe Transport and Easy Storage
- Dust Tight and Waterproof with IP67 Rating
- Set Up in Just 5 Minutes for Solar Starters
- Used for Marine, Dry Camp, RVs, and Other Off-grid Applications

Technical Specs:

- Power Supply: 200W
- Short-Circuit Current (Isc):11.2A
- Open-Circuit Voltage (Voc): 22.8V
- Maximum Power Voltage (Vmp): 18.6V
- Maximum Power Current (Imp): 10.8A
- Maximum System Voltage: 1000VDC
- Tolerance of PMax: ±3%
- Series Fuse Rating: 15A
- Operating Temperature: Controller and Inverter: -20°C-50°C
- Solar Panel: -40°C-85°C
- Controller Voltage: 12V/24V
- Max. Input: < 50V
- USB Output: 5V/2A
- Standby Current: < 12mA
- Type of Connector: SAE Connector
- Cell Type: High-Efficiency Monocrystalline
- Battery Type: 12V Lead-acid and Lithium-ion Batteries
  (Battery Not Included in the System)
- Folded Dimension: 36.5" x 28.3" x 2.6" -inches
- Unfolded Dimensions: 55.2" x 36.5" x 1.3" –inches

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