



### Accessories:

- |                            |                                 |
|----------------------------|---------------------------------|
| 1.Handle                   | 8.Cable                         |
| 2. Latches                 | 9.Battery clips/Alligator clips |
| 3. Aluminium frame         | 10 & 14.Anderson plug           |
| 4. Aluminium support legs  | 11.Fuse                         |
| 5.Solar charger controller | 12. Storage carry bag           |
| 6.Junction box             | 13. Corner Protectors           |
| 7.Label                    |                                 |

# Solawatt

## PORTABLE SOLAR PANEL KIT USER MANUAL

## Installation

1. Locate in a clear sunlit area free from over hanging branches or obstructions.
2. Remove solar panel kit from handy carry bag.
3. Unclip the two latches on the side of the unit and fold two panels outward. Extend the two stands to their maximum length and lock in position.
4. Place solar panel kit in a position facing the sun.

**Note: To obtain maximum output it is suggested that the panels' direction be frequently adjusted to track the sun's movement through the day.**

5. Fully extend battery lead and connect to solar charger controller and ensure that battery clips do not come in contact with one another. Connect battery clips to the + positive (red) &-negative (black) battery terminals. Ensure that the connection is secure.

## Operation

### •Charging Status indicator

1. GREEN ON whenever sunlight is available for battery charging,
2. GREEN FAST FLASHING when system is over voltage.

### •Battery Status indicator

1. GREEN ON when battery voltage is in normal range
2. GREEN SLOWLY FLASHING when battery is full
3. ORANGE ON when battery is under voltage
4. RED ON when battery is over discharged

## Warranty:

The warranty for the portable solar panel kit is 2 years.

## FREQUENTLY ASKED QUESTIONS

### Q. What type of batteries can be used with the kit.

A: 1. Sealed lead acid battery    2. Gel battery    3. Flooded battery

### Q. Will the solar panels over charge my battery.

A. The charge regulator ensures that a steady charge is supplied to the battery and will not be over charged.

### Q. Can I extend /lengthen the battery lead.

A. If the lead is extended this can result in a loss of voltage and insufficient power transferred from the solar panels to charge the battery

### Q. How do I clean the solar panel.

A. Dust & dirt should firstly be swept off the panel surface using a soft brush and then use a wet cloth to wipe the panel surface to remove remaining dirt & grime. It is recommended that any bird droppings be removed as soon as possible as if left they can cause damage to the surface.

## Trouble shooting if system does not function

A: Check all connections to ensure they are secure and free from moisture & debris

B: Protection functions of solar charger controller:

### •PV Array Short Circuit

If PV array short circuit occurs, clear it to resume normal operation.

### •Load Short Circuit

Fully protected against load wiring short-circuit. After one automatic load reconnect attempt, the fault must be cleared by reapplying power or pressing the setting switch.

### •Battery Reverse Polarity

Full protection against battery reverse polarity, no damage to the controller will result. Correct the mis-wire to resume normal operation.

### •Overheating Protection

If the temperature of the controller heat sink exceeds 85°C, the controller will automatically start overheating protection.

### •High Voltage Transients

PV is protected against high voltage transients. In lightning prone areas, additional external suppression is recommended.

## Portable Solar Panel Kit Specification

Type	Specifications				
	Max-Power	Max Power Voltage (V)	Max Power Current (A)	Open Circuit Voltage (V)	Short Circuit Current (A)
Module	Wp	Vmp	Imp	Voc	Isc
SW-FM80W	80 (2x40W)	17.5	4.58	21.6	4.94
SW-FM120W	120 (2x60W)	17.5	6.86	21.6	7.4
SW-FM160W	160 (2x80W)	17.5	9.14	21.6	9.87
SW-FM200W	200 (2x100W)	17.5	11.42	21.6	12.34

**Solar Cell: MONO**

Technical data on the solar panel kit can be found on the label on the back of the solar panel.