

# Violetta Solargear VS12-B20LA-230V Battery Compartment

## Operating Instructions

Thank you very much for purchasing our product. Please read this manual thoroughly before using this product, and retain it for future reference in order to use the product safely, and to make the most of its features. If you use other products together with this product, please read the operating instructions of those products thoroughly before use as well.

### Product Summary

An AGM deep cycle battery compartment for IP67 dust and waterproof mobile PV systems designed for powering a broad range of appliances. Composed of a combination of an ultra-thin, light and unbreakable solar panel and a compact, lightweight yet rugged battery compartment for ultimate portability, reliability, safety, impact resistance, weather resistance and ruggedness in business, disaster prevention, leisure and everyday living.

### Applications

Charging the built-in AGM deep cycle battery by sunlight, and powering a broad range of appliances through AC230V and DC12V output.

### Features

- An IP67 dust and water proof Pelican Case with a fail-safe automatic pressure equalization valve as the battery compartment.
- A built-in 12V 20Ah AGM deep cycle battery which offers exceptional 650 cyclic use at 50% discharge with maintenance-free operation and high safety for air transport.
- A built-in Morningstar SHS-6 charge controller which offers efficient 4 stage charging and reliable battery protection with LED indicators for charging status and battery status.
- IP67 dust and water proof input connectors for weather resistant outdoor installations.
- 2 input connectors for 2 solar panels for quick charging.
- A 200W modified sine wave (square wave) DC-AC inverter with an AC230V BF (British) type socket.

### Important Safety Instructions

**Caution** Please follow the instructions below. Failure to comply may damage this device, cause the built-in battery to burst or result in leakage, fire and injury.

- Charge only the specified batteries.
- Do not allow metal objects to touch the input/output connectors.
- Do not block the automatic pressure equalization valve on the battery compartment.
- Do not short circuit, or disassemble this device.
- Do not put this device into water.
- Do not use or leave this device near fire.
- Do not use or leave this device in enclosed spaces.
- Do not use or leave this device in unstable high places.
- Stop charging in case of leakage from the battery.
- Stop charging in case the battery becomes unusually hot.

### Important Note

We are not responsible for any physical damage to appliances, any loss of memorized data, any interruption of business, and any loss of business opportunities caused by this product.

### Specifications

- Built-in battery: AGM deep cycle battery
- Nominal capacity\*: 240.0Wh (12.0V 20.0Ah)
- Max output: 200W (AC230V inverter socket)  
100W (charge controller DC12V output)
- Operating temperature (charge)\*\*: -10 - 50°C
- Operating temperature (discharge)\*\*: 0 - 40°C (AC230V inverter output)  
-20 - 50°C (charge controller DC12V output)
- Dimensions (W×D×H): 270×175×246mm
- Weight: approx. 7.8kg (incl. accessories)
- Input terminals: IP67 dust and water proof connector X 2
- Output terminals: AC230V BF (British) type inverter socket X 1  
DC12V charge controller terminal X 1
- Safety features: Morningstar SHS-6 charge controller
- Cycle life: 1500 cycles / 30% discharge  
650 cycles / 50% discharge  
500 cycles / 75% discharge
- Accessories: iFONIX IC200 200W DC-AC inverter

\*20 hr rate at 25°C  
\*\*No freezing

### Feature Diagram



### How to Use

#### Charging the built-in Battery

- Please read the operating instructions manual of the solar panel.

#### Powering Appliances

- 1 After charging the built-in battery, open the lid of the battery compartment.
- 2 To power appliances with AC230V input, turn on the provided DC-AC inverter, and connect the appliance to the inverter. To power appliances with DC12V input, connect the input cables of the appliance to DC12V output terminals of the built-in charge controller.

AC230V

DC12V



**Note:** You do not need to fully charge the built-in battery before powering appliances, but the operating time varies widely depending on the battery status and the power consumption of appliances.

**Note:** To power appliances with AC230V input that consume more than 200W, use other DC-AC inverters with higher capacity. In such cases, connect DC-AC inverters directly to the built-in battery. If you connect DC-AC inverters to DC12V output terminals of the built-in charge controller, it may be damaged by overcurrent.

**Note:** To power appliances that cannot be powered through the provided modified sine wave (square wave) DC-AC inverter, such as scientific testing equipments and rapid-start fluorescent lamps, use other pure (true) sine wave DC-AC inverters. In such cases, connect DC-AC inverters directly to the built-in battery. If you connect DC-AC inverters to DC12V output terminals of the built-in charge controller, it may be damaged by overcurrent.

- 3 To monitor the battery status, refer to the battery status indicator of the built-in charge controller. Green LED turns on when battery level is full. Yellow LED turns on when battery level is medium. Red LED blinks when battery level is low. Red LED turns on when load cuts off for battery protection.



**Note:** When you are in an emergency or mission critical operations, monitor the status of the battery frequently.

- 4 After you have finished powering appliances with AC230V input, turn off the provided DC-AC inverter, and disconnect the appliance from the inverter. After you have finished powering appliances with DC12V input, disconnect the input cables of the appliance from DC12V output terminals of the built-in charge controller.

- 5 To keep away from dust and water, and to avoid short circuit, close the lid of the battery compartment once you have finished powering appliances.

### About Maintenance

- Clean this product with a dried or dampened cloth. Do not use oil, solvents, petrol or paint thinners for cleaning.
- The life of the built-in AGM deep cycle battery varies widely depending on the operating environment. Replace the battery every 2 - 5 years, or when the operating time becomes notably short.

### Warranty

- 1 year from the date of purchase

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