

# Violetta Solargear VS12-B22NHM 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

A Ni-MH rechargeable battery compartment for dust and waterproof mobile PV systems designed for powering a broad range of appliances. Composed of a combination of an ultra-thin, light and efficient solar panel and a compact, lightweight yet weather resistant battery compartment for versatility, expandability, portability, weather resistance and durability at low cost in disaster prevention, business, leisure and everyday living.

### Applications

Charging the built-in Ni-MH batteries by sunlight, and powering a broad range of appliances through AC100V pure sine wave (inverter outlet), DC5V (USB) or DC12V (cigar lighter receptacle or dust and water proof connectors) output.

### Features

- An IP67 dust and water proof Pelican Case with a fail-safe automatic pressure equalization valve as the battery compartment.
- 2 pcs. of built-in 12V 11Ah Ni-MH batteries with superior charge efficiency at high temperatures under the sun, excellent overcharge endurance, long service life and high safety for air transport.
- IP68 dust and water proof connectors mating with solar panels, Extension Cables, DC12V Output Cables and DC Power Cables for weather resistant outdoor installations.
- A 400W pure sine wave DC-AC inverter with 2 AC100V outlets, a DC12V cigar lighter receptacle and 2 DC5V USB receptacles.
- A solar checker with a LED for easy monitoring of the status of the solar panel.
- A battery checker with 5 LEDs for easy monitoring of the status of the batteries.
- Dust and water proof power supply to appliances with DC12V input with DC12V Output Cables (sold separately).
- 2 input connectors in parallel for 30W or smaller solar panels for quick charging.
- 2 input connectors for DC Power Cables (sold separately) to double the output capacity.

### Important Safety Instructions

**Caution** Please follow the instructions below. Failure to comply may damage this device, cause the built-in batteries 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 batteries.
- Stop charging in case the batteries become 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

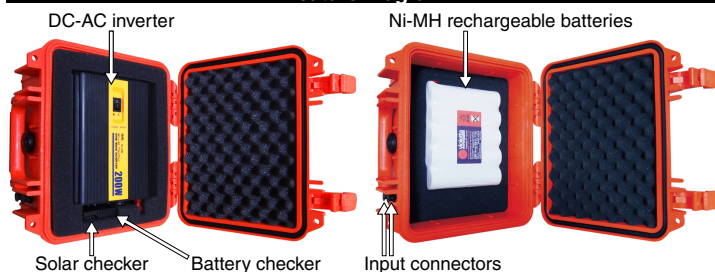
- Built-in batteries: Ni-MH rechargeable batteries
- Nominal capacity\*\*: 264Wh (12V 11Ah X 2)
- Max output: 200W (AC100V inverter outlet)  
2.4A (DC5V USB)  
17A (DC12V dust and water proof connectors)  
10A (DC12V cigar lighter receptacle)
- Operating temperature (charge)\*\*: 0 - 45°C
- Operating temperature (discharge)\*\*: 0 - 40°C (AC100V inverter outlet, DC5V USB and DC12V cigar lighter receptacle)  
-20 - 50°C (DC12V dust and water proof connectors)
- Operating temperature (storage)\*\*: -20 - 35°C  
-20 - 60°C (1 week)
- Dimensions (WXDXH): 270X175X246mm
- Weight: approx. 6.0kg (incl. accessories)
- Input/output terminals: IP68 dust and water proof connector X 2
- Output terminals: AC100V inverter outlet X 2  
DC5V USB receptacle X 2  
DC12V cigar lighter receptacle X 1
- Safety features: a thermostat for overcharging prevention  
a thermostat for short circuit prevention  
Schottkey diode for reverse current prevention X 2
- Cycle life: 500 cycles
- Accessories: Ohashi Sangyo 1787 400W pure sine wave DC-AC inverter

\*Panel temperature 25°C AM1.5 1kW/m2

\*\*Discharge at 0.2C to 10.0V at 20°C

\*\*\*No freezing

### Feature Diagram



### How to Use

#### Connecting the solar panel/AC battery charger

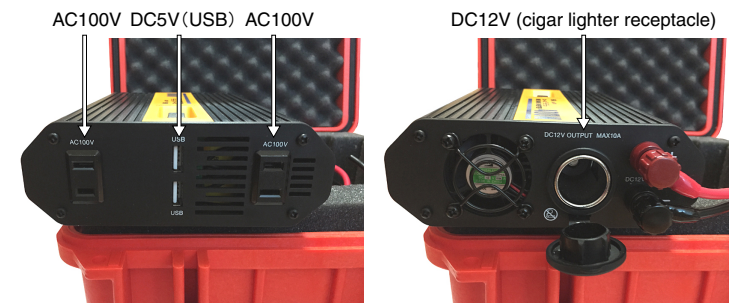
- 1 Connect the DC12V Output Cables of the solar panel or AC battery charger to this product. Screw anticlockwise the cover off one of the dust and water proof connectors. Align the ▲ marks of both connectors and screw the ring clockwise

#### Charging the built-in Battery

- 1 Face the solar panel towards the sunlight, and charge the built-in battery. To mount the solar panel on the fence or on the ground, s-hooks, fixing ties or fixing pegs can be used. For the most efficient charging, adjust the direction and angle of the solar panel 90 degrees in opposition to the sun rays. Use the AC battery charger in the night and in bad weather.

#### Powering Appliances

- 1 After charging the built-in battery, open the lid of the battery compartment.
  - ⚠ **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.
- 2 To power appliances with AC100V or DC5V input, turn on the provided DC-AC inverter, and connect the appliances to the inverter. To power appliances with DC12V input, connect the cigar lighter plug of the appliance to the cigar lighter receptacle of the inverter.



- 3 To power appliances with DC12V input outdoors, connect the DC12V Output Cables to dust and water proof connectors and the processed end to the appliances.
- 4 To monitor the status of the solar panel, press the button of the solar checker, and refer to the LED indicator. A white LED turns on when the solar panel is charging. Press the button again to turn it off.

- ⚠ **Note:** You do not need to turn off the LED for better charging performance, as it's power consumption is very small.

- 5 To monitor the status of the batteries, press the button of the battery checker, and refer to the LED indicator. A green LED turns on when battery level is OK. An orange LED turns on when battery level is low. A red LED or no LED turns on when batteries are discharged and needs to be charged immediately.

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

- 6 After you have finished powering appliances with AC100V or DC5V input, turn off the provided DC-AC inverter, and disconnect the appliances from the inverter. After you have finished powering appliances with DC12V input, disconnect the appliances from the cigar lighter receptacle of the inverter or from dust and water proof connectors.

- 7 To keep away from dust and water, and to avoid short circuit, close the lid of this product and cover the dust and water proof connectors, once you have finished powering appliances.

- 8 You can connect another battery compartment with DC Power Cables to double the output capacity to power appliances.

- ⚠ **Note:** You cannot use DC Power Cables to power appliances with power consumption of over 200W.

### Maintenance

- To protect the built-in batteries from over-discharging, charge them at least once 6 months.
- The life of the built-in batteries vary widely depending on the operating environment. Replace the batteries every 3 - 5 years, or when the operating time becomes notably short.
- Clean this product with a dried or dampened cloth. Do not use oil, solvents, petrol or paint thinners for cleaning.

### Warranty

- 1 year from the date of purchase

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Design and specifications are subject to change without notice.

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