DUNE 4WD

120W Monocrystalline Solar Blanket

User Manual

Article No.: 90215146

Important Safety Information

1. **Regular Cleaning:** Keep the solar blanket and MPPT controller clean at all times. Prior to connecting, inspect connectors to ensure they are free of grit or debris that could affect their performance.

2. **User Limitations:** This appliance is not intended for use by individuals, including children, with reduced physical or mental capabilities, or those who are under the influence of drugs or alcohol. Only trained and capable individuals should operate this equipment.

3. **Proper Storage:** Always store the solar blanket neatly in its bag, protected from weather conditions, and ensure it is well-ventilated during storage to prevent damage.

4. **Transport Safety:** Take precautions to prevent sharp or heavy objects from potentially damaging the solar blanket during transport or storage.

5. **Battery Ventilation:** All lead-acid batteries produce harmful, explosive gases. The battery should be installed in a well-ventilated area, away from potential ignition sources. Smoking or having an open flame near the charging battery is strictly prohibited.

6. **Battery Compatibility:** Do NOT use the solar blanket to charge non-rechargeable batteries, as it may result in harm to the user and damage to the solar blanket and MPPT controller. Only use the provided solar blanket, regulator, and adapters/wiring included in the kit.

7. **Battery Type Compatibility:** The MPPT controller is suitable for lead-acid batteries such as OPEN, AGM, and GEL. Do not use the Solar Blanket and Controller with nickel-metal hydride, lithium-ion, or other battery types.

8. **Battery Voltage:** Use the solar blanket exclusively to charge 12V batteries.

9. **Controller Suitability:** The MPPT controller is only suitable for regulating solar modules. Do not attempt to use it for other purposes.

10. **Single Charging Source:** Never connect another charging source to the MPPT controller, as it may cause equipment malfunction or damage.

11. **Liquid Exposure Warning:** Ensure that your solar blanket, MPPT controller, and battery are kept away from any liquids at all times. Liquid exposure can damage the equipment and pose safety hazards.

12. **Warranty Voidance:** Never tamper with or disassemble any component of the solar blanket, regulator, or wiring. Such actions will void the warranty.

Prioritize safety at all times when using your solar blanket, MPPT controller, and battery. Failure to follow these safety guidelines may result in equipment damage or personal injury.

Kit Includes

1 x 120W Solar Blanket

1 x 50Amp Extension Lead

1 x 10Amp MPPT Solar Controller

How to connect the MPPT Controller to the Solar Blanket

Note: Please ensure that you follow the below instructions, or this may void your warranty.

Step 1. Establish a connection between the MPPT Solar Controller and a battery, using the 50Amp connector lead provided.

Step 2. Connect the Solar Blanket to the 50Amp Connector labelled "SOLAR" on the MPPT Solar Controller. To disconnect, simply reverse the order of these steps.

The controller has reverse polarity protection internally, but if there is a connection error this may still damage your controller.
(Please make sure the voltage and current are within the rated range of controller.)

Once the MMPT Solar Controller is connected at both ends the charging process starts.

MPPT Solar Controller

Indicators

Solar: when the solar indicator is constantly ON, the controller is in the state of charging. When the solar indicator flickers, the controller is in the state of float charge.

Load Indicator: When the load indicator is constantly ON, output to load is available.

Battery: the battery indicator turns on when a battery is connected with and detected by this MPPT solar controller.

Specifications

Rated charge current	10A
Rated discharge current	10A
Rated voltage	12V/24V auto work
MPPT efficiency	Max:99%
Over load, short circuit protection	≥1.5 rated current
No load current	＜10mA
Over voltage protection	16V; ×2/24V
Voltage of stop charging	14.7V; ×2/24V
Discharge recovery voltage	12.0V; ×2/24V
Over discharge voltage	10.8V; ×2/24V
USB output	5V 1A
Working temperature	-35℃~+55℃
Dimension of controller	CPS:131×99.5×34(mm)（L×W×H） CPY:131×99.5×29.5(mm)（L×W×H）
Packing dimension	150×123×45(mm)（L×W×H）
Weight	275g

Solar Panel Troubleshooting Guide

If you encounter the following issues with your solar panel system, please follow these troubleshooting steps:

Issue: All the indicators are OFF

- Check the battery wiring to ensure it is properly connected and securely tightened.
- Verify the voltage of the battery to ensure it is within the normal range.

Issue: The charge does not respond during daytime when there is proper sunlight.

- Examine the PV and battery wires to ensure they are securely connected.
- Ensure there are no loose connections in the wiring.

Issue: There is no power voltage showing.

- Check the battery voltage, the load will only start when the battery voltage is above 12.2V.
- Connect the solar module and allow it to charge the battery for 3-5 hours until it returns to a normal state.

Other Issues:

- Check all wiring connections for tightness.
- Verify that the system correctly identifies whether it is a 12V or 24V system.

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Maximum Power - (Pmax) 120Wp
Power Tolerance - +/-3%
Maximum Power Voltage (Vmp) - 22.10V
Maximum Power Current (Imp) - 5.43A
Open Circuit Voltage (Voc) - 26.20V
Open Circuit Current (Isc) - 5.99A
Maximum System Voltage - 1000VDC
Operating Temperature - -40°C to +85°C
Product Application - Class A
Weight - 5.5Kgs
Folding Dimensions - 390mm x 450mm x 70mm

All data meets standard test condition
AM1.5 E=1000W/m² t=25°C

Warning! This solar panel produces electricity when exposed directly to light, before exposing juntion box ensure panel is not in direct light.

Made in China