

## ATEM POWER 300W

# ATEM POWER 300W Portable Foldable Solar Panel User Manual

Model: 300W

## 1. INTRODUCTION

This manual provides instructions for the safe and efficient use of your ATEM POWER 300W Portable Foldable Solar Panel. Please read this manual thoroughly before operating the product and retain it for future reference. This solar panel is designed to provide portable power for 12V/24V batteries and various power stations, making it suitable for outdoor activities such as camping, RV travel, and hiking.



*Image 1.1: The ATEM POWER 300W Portable Foldable Solar Panel kit, including the unfolded panel, carry bag, MPPT charge controller, and various connection cables.*

## 2. SAFETY INFORMATION

Observe the following safety precautions to prevent personal injury or damage to the product:

- Do not attempt to disassemble, repair, or modify the solar panel or controller. Unauthorized modifications can be dangerous and will void the warranty.
- Ensure all connections are secure and correct before operating. Incorrect wiring can cause damage or fire.
- Avoid touching exposed wires or terminals when the panel is exposed to sunlight, as it generates electricity.
- Keep the solar panel and controller away from water, excessive heat, and flammable materials.
- Do not step on or place heavy objects on the solar panel.
- Always use appropriate personal protective equipment when handling electrical components.
- Ensure proper ventilation around the MPPT controller during operation.

## 3. PRODUCT OVERVIEW

### 3.1 Components

The ATEM POWER 300W Portable Foldable Solar Panel kit typically includes:

- 300W Foldable Solar Panel
- 20A MPPT Solar Charge Controller
- MC4 to Multi-connector Adapter Cable
- Battery Clamp Cable
- Carry Bag

### 3.2 Key Features

- **HPBC Cell Technology:** The panel utilizes HPBC (Heterojunction with Back Contact) cells, which relocate metal contacts to the rear. This design minimizes shading on the front surface, enhancing sunlight absorption and contributing to a high power conversion efficiency of 25.8%.

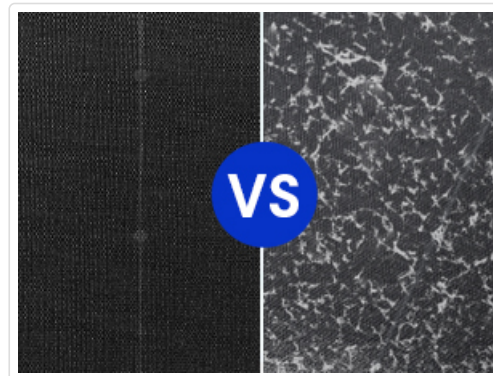


Image 3.1: Diagram illustrating the HPBC chip technology, showing light absorption, photoelectric conversion, and electric transmission layers.

- **Durable ETFE Coating:** The panel features an anti-crack, flexible ETFE film. This coating provides strength, thermal stability, and resistance to physical stress, protecting the cells. It is corrosion-resistant, stain-proof, and has a self-cleaning, non-stick surface that improves light transmission.



*Image 3.2: Illustration of the anti-crack flexible film used in the solar panel construction.*



*Image 3.3: Comparison showing the difference between a surface with anti-cracking coating and one without.*

- **Integrated MPPT Charge Controller:** The included 20A MPPT (Maximum Power Point Tracking) controller optimizes charging for 12V/24V batteries, including Lead Acid, AGM, GEL, Calcium, and LiFePO4 types. It also features USB-A (18W Max) and USB-C (60W Max) ports for charging small electronic devices.



# FAST CHARGING AND BATTERY SELECTION

Equipped with type a&type c sockets



Image 3.4: The MPPT charge controller, highlighting its USB-A and USB-C output ports for device charging.

- **Portability:** The 300W solar panel weighs approximately 7.8kg (17.2 lbs) and folds into a compact size of 500x610x75mm (19.68"x24"x2.95") for easy transport and storage. It includes a sturdy carry handle and hanging loops.



Image 3.5: A person carrying the folded solar panel, demonstrating its compact size and portability.



Image 3.6: Visual representation of the solar panel's folding and unfolding mechanism.

- **Safety Protections:** The system includes protection against reverse polarity, overcurrent, undervoltage, overvoltage, and short circuits.



Image 3.7: Icons representing the various safety protections integrated into the MPPT controller, such as reverse current, overheat, short circuit, and overcharge protection.

## 4. SETUP INSTRUCTIONS

### 4.1 Unfolding the Solar Panel

1. Place the folded solar panel on a flat, stable surface.
2. Carefully unfold the panel sections until it is fully extended.
3. Position the panel to face the sun directly for optimal performance.

### 4.2 Connecting the MPPT Controller

The MPPT controller is typically integrated or connected via MC4 connectors. Ensure the controller is connected to the solar panel before connecting to a battery or power station.

### 4.3 Connecting to a Battery or Power Station

The solar panel system offers wide compatibility for various charging scenarios:

- **For 12V/24V Batteries:** Connect the MPPT controller's battery terminals to your 12V or 24V battery using the provided battery clamp cable. Ensure correct polarity (positive to positive, negative to negative).



Image 4.1: Diagram showing the connection of the solar panel and MPPT controller to a 12V/24V battery.

- **For Power Stations:** Use the MC4 to multi-connector adapter cable to connect the solar panel directly to compatible portable power stations. The adapter typically includes various DC plugs (e.g., DC7909, DC5525, DC35135, DC5521, Anderson Plug, XT60).



# PERFECT COMPATIBILITY

Comes with various connectors formost 12V/24V batteries  
and portablesolargenerators.



Image 4.2: Diagram illustrating the various connectors for compatibility with different power stations and battery types.

## Wide compatibility



Image 4.3: Visual guide to the wide range of connectors provided for compatibility with various portable power stations and devices.

### 4.4 Selecting Battery Type (MPPT Controller)

To ensure optimal charging and battery longevity, select the correct battery type on the MPPT controller:

1. Locate the 'BATTERY TYPE' button on the MPPT controller.



2. Press and hold the button until the indicator light begins to flash.
3. Cycle through the battery types (Lead Acid, AGM, GEL, Calcium, LiFePO4) by short-pressing the button.
4. Release the button when the desired battery type's indicator light is solid. The controller will save the setting.

## SELECT BATTERY TYPE

Compatible with 99% battery, Quick charging for Your Devices

- ▶ Long press the batterytype button, wait for the indicator light to flash.
- ▶ Switch to the desired battery type, and wait until the indicator light remains on.

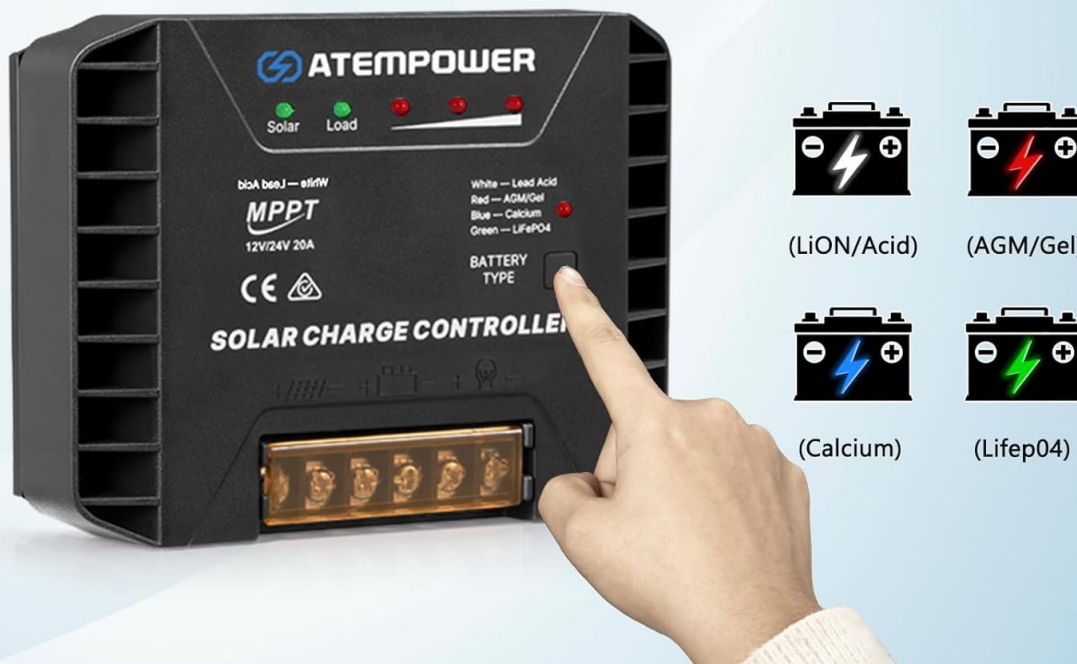


Image 4.4: Close-up of the MPPT controller showing the battery type selection button and indicator lights.

## 5. OPERATING INSTRUCTIONS

### 5.1 Optimal Panel Placement

For maximum power generation, position the solar panel directly facing the sun. Adjust the angle periodically throughout the day to track the sun's movement. Avoid shaded areas, as even partial shading can significantly reduce output.



Image 5.1: Illustration demonstrating how parallel wiring helps maintain efficiency even with partial shading on the solar panel.

## 5.2 Monitoring Charging

The MPPT controller features indicator lights for solar input and load status. Refer to the controller's specific LED indicators to monitor charging activity and battery status.

## 5.3 USB Output Usage

Connect compatible USB devices (smartphones, tablets, etc.) to the USB-A or USB-C ports on the MPPT controller for direct charging. Ensure the solar panel is receiving sufficient sunlight for stable power output.

# 6. MAINTENANCE

## 6.1 Cleaning the Solar Panel

The ETFE coating is designed to be self-cleaning. However, for optimal performance, periodically clean the panel surface with a soft, damp cloth to remove dust, dirt, or debris. Do not use abrasive cleaners or harsh chemicals.





# Weather resistant

Using high-quality ETFE film technology,  
it is easy to clean and not afraid of wind and rain

Image 6.1: The solar panel being rinsed with water, demonstrating its weather-resistant and easy-to-clean ETFE surface.

## 6.2 Storage

When not in use, fold the solar panel and store it in its carry bag in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure all cables are neatly coiled to prevent damage.

## 7. TROUBLESHOOTING

If you encounter issues with your solar panel, refer to the following common troubleshooting steps:

- **No Power Output:**

- Ensure the panel is in direct sunlight and not shaded.
- Check all cable connections for tightness and correct polarity.
- Verify the battery type setting on the MPPT controller is correct.
- Inspect cables and connectors for any visible damage.

- **Low Charging Current:**

- Ensure the panel surface is clean and free of dirt or debris.
- Adjust the panel's angle to face the sun more directly.
- Check for partial shading from trees, buildings, or other objects.

- Consider ambient temperature; extreme heat can reduce panel efficiency.
- **Controller Not Responding:**
  - Disconnect and reconnect all power sources (solar panel first, then battery).
  - Ensure the battery voltage is within the controller's operating range.

## 8. SPECIFICATIONS

Feature	Specification
Model	300W
Maximum Power	300 Watts
Efficiency	25.8% (HPBC Chip)
Item Weight	7.8 kg (17.2 lbs)
Product Dimensions (Folded)	500 x 610 x 75 mm (19.68 x 24 x 2.95 inches)
Product Dimensions (Open)	Approx. 77.37 x 38 x 0.2 inches (based on similar models, not explicitly stated for 300W in input)
MPPT Controller Output	20A (12V/24V Auto)
USB Output	USB-A (18W Max), USB-C (60W Max)
Compatible Battery Types	Lead Acid, AGM, GEL, Calcium, LiFePO4
Coating Material	ETFE (Anti-Cracking)

## 9. WARRANTY AND SUPPORT

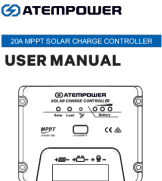
The ATEM POWER 300W Portable Foldable Solar Panel comes with a two-year warranty from the date of purchase, covering manufacturing defects. Please retain your proof of purchase for warranty claims.

For technical support, troubleshooting assistance, or warranty inquiries, please contact ATEM POWER customer service through the retailer's platform or the official ATEM POWER website.

For more information, visit: [ATEM POWER Store](#)

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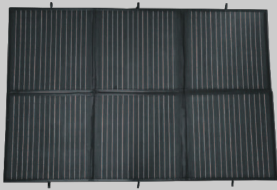
### Related Documents - 300W

	<p><a href="#">ATEMPOWER 20A MPPT Solar Charge Controller User Manual</a></p> <p>User manual for the ATEMPOWER 20A MPPT Solar Charge Controller, covering setup, operation, specifications, troubleshooting, and warranty information.</p>
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 <p><b>ATEM POWER</b> 10W/60W/130W/200W/250W Solar Panel <b>USER MANUAL</b></p>	<p><a href="#">ATEM POWER 10W/60W/130W/200W/250W Solar Panel User Manual</a></p> <p>User manual for ATEM POWER solar panels (10W, 60W, 130W, 200W, 250W), covering product features, safety information, installation, troubleshooting, and warranty details.</p>
 <p><b>ATEMPOWER</b> DC-DC CHARGER VABG008A <b>USER MANUAL</b></p>	<p><a href="#">ATEMPOWER VABG008A DC-DC Charger User Manual</a></p> <p>Comprehensive user manual for the ATEMPOWER VABG008A DC-DC charger, detailing features, installation, operation, safety instructions, troubleshooting, technical specifications, and warranty information for 12V vehicle and solar charging applications.</p>
 <p><b>ATEM POWER</b> <b>Battery Box</b> USER MANUAL</p>	<p><a href="#">ATEM POWER Battery Box User Manual (Model K-VABB004A)</a></p> <p>Official user manual for the ATEM POWER Battery Box, model K-VABB004A. Details product features, safety precautions, installation, maintenance, and warranty for this portable power solution.</p>
 <p><b>ATEMPOWER</b> Maximum Power Point Tracking (MPPT) Solar Charge Controller AP20MT <b>USER MANUAL</b></p>	<p><a href="#">ATEMPOWER AP20MT MPPT Solar Charge Controller User Manual</a></p> <p>Comprehensive user manual for the ATEMPOWER AP20MT MPPT Solar Charge Controller. Covers installation, operation, safety, technical specifications, troubleshooting, and warranty information for 12V/24V systems.</p>
 <p><b>ATEMPOWER</b> DC-DC CHARGER AP20DC <b>USER MANUAL</b></p>	<p><a href="#">ATEM POWER AP20DC DC-DC Charger User Manual and Installation Guide</a></p> <p>Comprehensive user manual for the ATEM POWER AP20DC DC-DC charger. Covers features, safety instructions, installation, usage, deep cycle battery maintenance, troubleshooting, technical specifications, and warranty information for charging auxiliary batteries in vehicles, caravans, and RVs using DC or solar power.</p>

## USER MANUAL



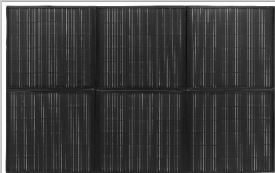
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## USER MANUAL



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