

ACOPOWER 35W 5A Kit

ACOPOWER 35W 5A 12V Polycrystalline Solar Charge Kit User Manual

Model: 35W 5A Kit | Brand: ACOPOWER

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient use of your ACOPOWER 35W 5A 12V Polycrystalline Solar Charge Kit. This kit is designed for off-grid applications, offering a reliable power source for RVs, trailers, boats, sheds, and camping setups. Please read this manual thoroughly before installation and operation to ensure proper functionality and longevity of your solar kit.

The kit includes a 35W polycrystalline solar panel and a 5A PWM charge controller, along with necessary cables and connectors for a basic setup.



Image 1.1: Overview of the ACOPOWER 35W 5A 12V Solar Charge Kit, showing the solar panel, charge controller, and connection cables with alligator clips.

2. PRODUCT OVERVIEW

2.1 Included Components

- 1 x 35W Polycrystalline Solar Panel (Model: HY035-12P)
- 1 x 5A PWM Solar Charge Controller (Model: LS0512EU)
- 1 x 15ft Cable with SAE adapter and Alligator Clips
- 1 x 5A Fuse
- User Manuals

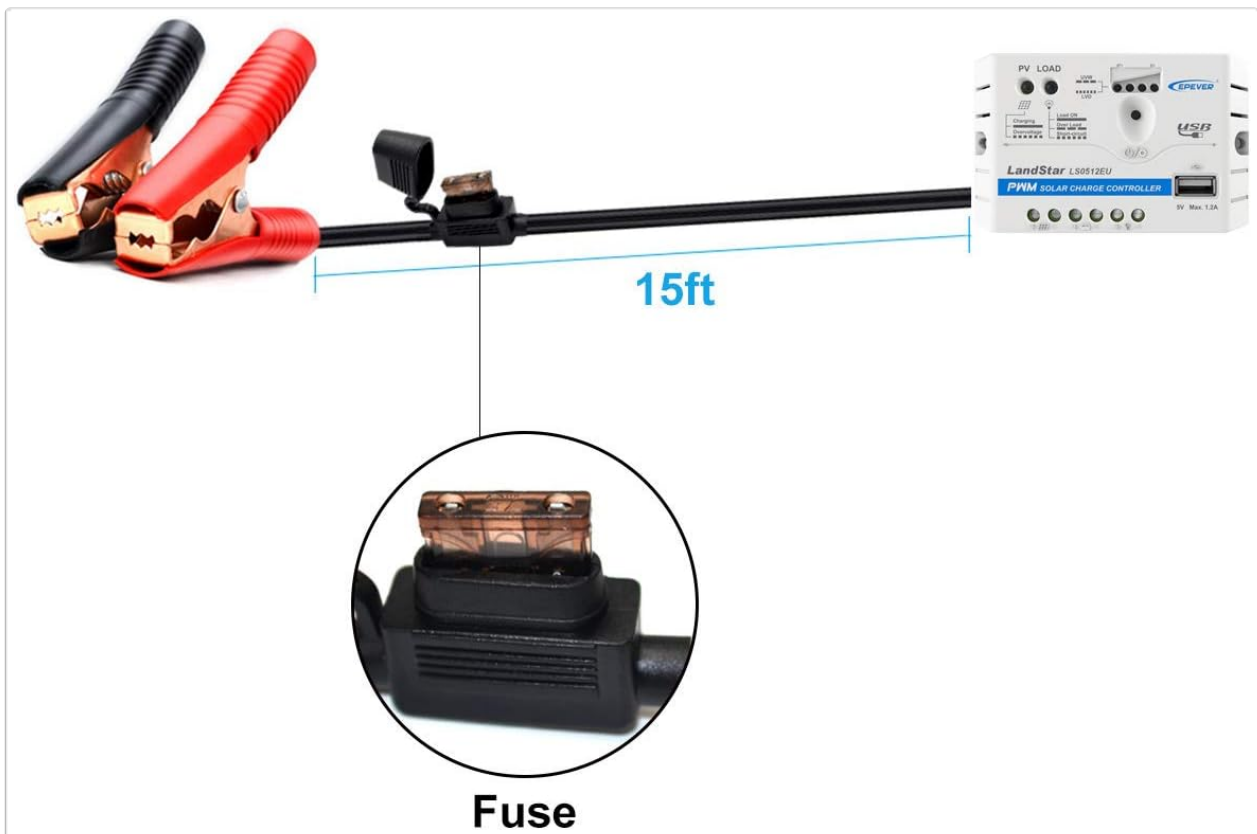


Image 2.1: The 15-foot cable assembly, featuring an inline 5A fuse and alligator clips for secure battery connection.

2.2 Solar Panel Features

The 35W polycrystalline solar panel is designed for high conversion efficiency and durability. It features a lightweight anodized aluminum frame and reinforced safety glass, making it suitable for various outdoor conditions.



Easy to Install



23%-30% Efficiency



Weather-proof



Image 2.2: Diagram showing the multi-layered construction of the solar panel, highlighting its weather-proof design and high efficiency.

High Conversion Efficiency

Solar panel:

Polycrystalline

Easy to install:

Suitable for Novices

**High Conversion
Efficiency**

Quality frame:

**Lightweight Anodized
Aluminum**



Image 2.3: Visual representation of the solar panel's key attributes, including its polycrystalline cell type, ease of installation, high conversion efficiency, and lightweight anodized aluminum frame.

2.3 Charge Controller Features

The 5A PWM charge controller manages the power flow from the solar panel to the battery, preventing overcharging and ensuring battery protection. It includes a 5V/1.2A USB output for charging small electronic devices.



Image 2.4: Detailed view of the LandStar LS0512EU PWM Solar Charge Controller, showing its input/output terminals, indicator lights, and USB charging port.

3. SETUP AND INSTALLATION

3.1 Safety Precautions

- Always connect the charge controller to the battery **first**.
- Ensure all connections are secure and correct polarity is observed (positive to positive, negative to negative).
- Avoid touching exposed wires or terminals when the solar panel is exposed to sunlight.
- The alligator clamps are designed to prevent voltage and current until a proper battery connection is made, minimizing accidental contact risks.

3.2 Connection Steps

1. **Connect to Battery:** Connect the positive (+) and negative (-) terminals of the charge controller to your 12V lead-acid battery (Sealed, Gel, Flooded, or AGM). Use the provided cable with alligator clips.
2. **Connect to Solar Panel:** Connect the positive (+) and negative (-) terminals of the solar panel to the corresponding solar input terminals on the charge controller.
3. **Connect to Load (Optional):** If you have a 12V DC load (e.g., a light bulb), connect its positive (+) and

negative (-) terminals to the load output terminals on the charge controller.

Once all connections are made, the charge controller will automatically begin managing the charging process.

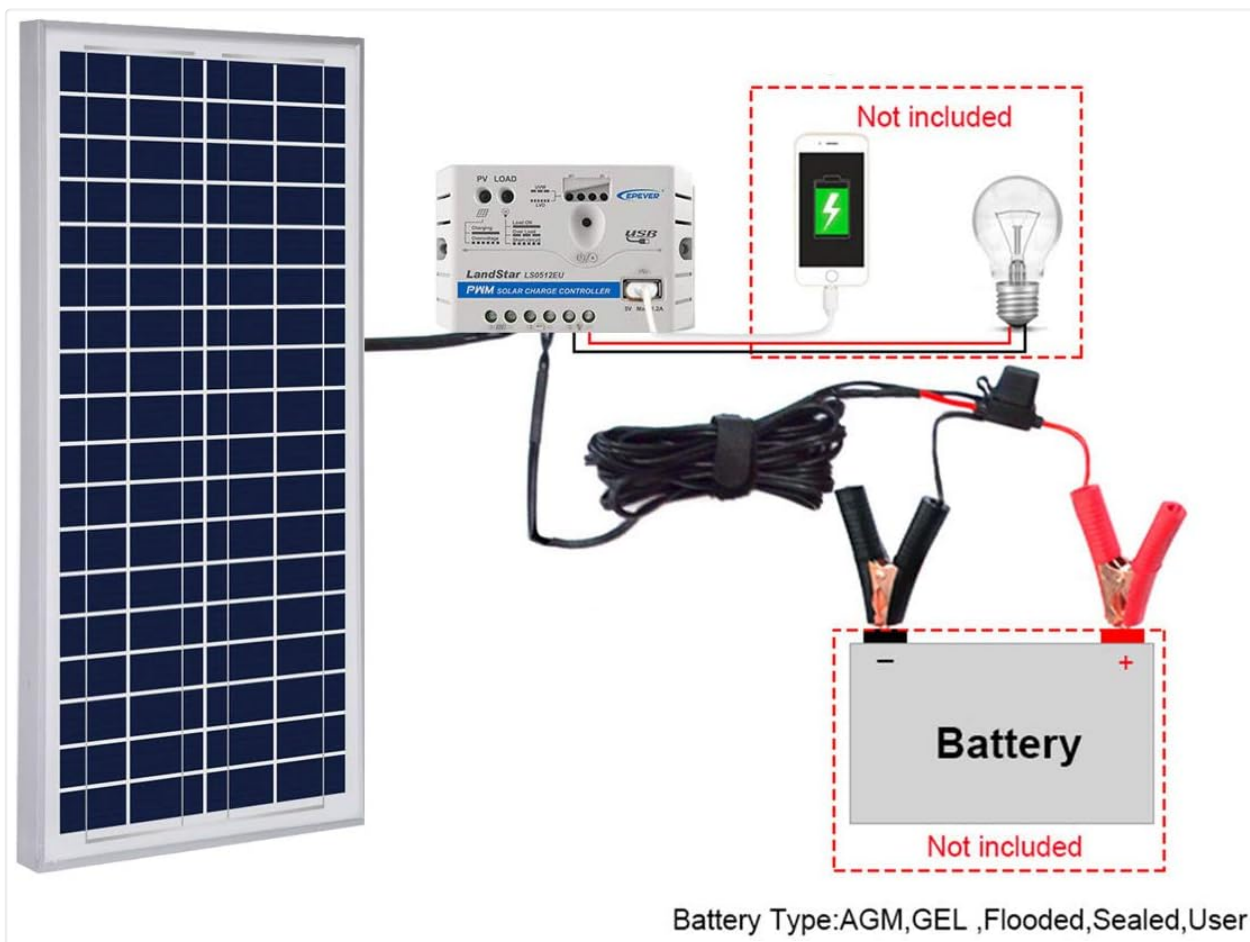


Image 3.1: Diagram illustrating the correct wiring sequence: solar panel connects to the charge controller, which then connects to the battery. Optional load and USB device connections are also shown.

4. OPERATING INSTRUCTIONS

4.1 Charging Process

The 5A PWM charge controller automatically regulates the charging of your 12V lead-acid battery. It will stop charging once the battery is full and resume when the voltage drops, ensuring optimal battery health.

4.2 USB Output

The charge controller features a 5V/1.2A USB terminal output, allowing you to charge compatible USB-powered devices such as smartphones or tablets directly from the controller.

5. MAINTENANCE

5.1 Solar Panel Cleaning

Regularly clean the surface of the solar panel to remove dust, dirt, leaves, or other debris that may reduce its efficiency. Use a soft cloth and mild, non-abrasive cleaning solution with water. Avoid harsh chemicals or abrasive materials that could scratch the panel surface.

5.2 Connection Checks

Periodically inspect all electrical connections for tightness and corrosion. Loose or corroded connections can lead to power loss or system malfunction. Ensure the fuse is intact and functional.

5.3 Battery Health

Monitor your battery's condition according to its manufacturer's guidelines. The charge controller helps maintain battery health, but regular checks are recommended, especially for flooded batteries that may require water level maintenance.

6. TROUBLESHOOTING

6.1 No Charging Indication

- **Check Sunlight:** Ensure the solar panel is receiving direct, unobstructed sunlight.
- **Verify Connections:** Confirm all connections between the solar panel, charge controller, and battery are secure and correctly polarized.
- **Inspect Fuse:** Check the inline 5A fuse on the battery cable for continuity. Replace if blown.
- **Battery Voltage:** Ensure the battery has sufficient voltage for the controller to recognize it. The controller may not initiate charging if the battery is completely depleted.

6.2 Low Power Output

- **Panel Cleanliness:** Clean the solar panel surface as described in the Maintenance section.
- **Shading:** Even partial shading can significantly reduce solar panel output. Reposition the panel if possible.
- **Cable Length/Gauge:** While the provided cable is suitable, excessively long or thin cables in other parts of your system can cause voltage drop.

6.3 USB Device Not Charging

- **Battery Charge Level:** Ensure the battery connected to the controller has sufficient charge.
- **USB Cable/Device:** Test with a different USB cable or device to rule out issues with the peripheral.

7. SPECIFICATIONS

7.1 ACOPOWER 35W Polycrystalline Solar Panel (HY035-12P)

Parameter	Value
Peak Power (Pmax)	35W
Peak Circuit Voltage (Voc)	22V
Max Power Voltage (Vmp)	17.5V
Short Circuit Current (Isc)	2.15A
Max Power Current (Imp)	2.00A
Maximum System Voltage DC	1000V
Application Class	Class A
Material	Polycrystalline Silicon

Frame: 0.8 Inch

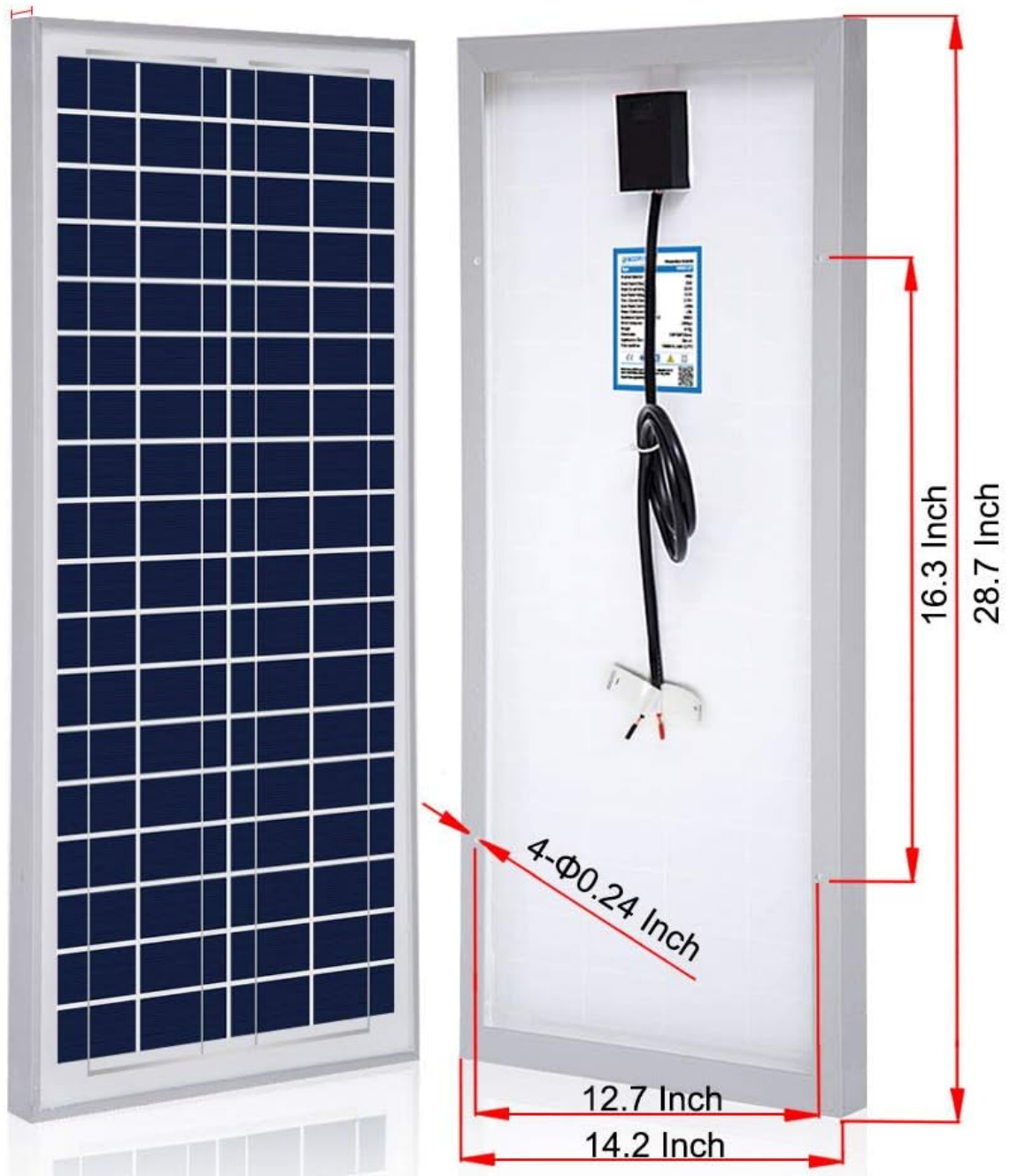


Image 7.1: Detailed dimensions of the 35W solar panel, showing measurements in inches for length, width, and frame thickness.

7.2 5A PWM Charge Controller (LS0512EU)

Parameter	Value
Working Voltage	12V
Working Current	5A
Working Mode	PWM Charging
USB Terminal Output	5V/1.2A
Battery Type Options	Sealed, Gel, Flooded
Special Feature	Positive Grounding Controller

8. WARRANTY AND SUPPORT

8.1 Product Warranty





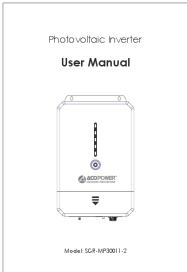
- **Solar Panels:** 5 years material and workmanship warranty, and 25 years power output warranty.
- **Accessories (Charge Controller, Cables, etc.):** 1 year material and workmanship warranty.



Please retain your proof of purchase for warranty claims.

8.2 Customer Support

For technical support, troubleshooting assistance, or warranty inquiries, please contact ACOPOWER customer service. Refer to the contact information provided with your product packaging or visit the official ACOPOWER website for the most current support details.

Related Documents - 35W 5A Kit

 User Manual PLK-2x100W20A <small>400-410-1100 Valley Road, Newark, CA 94703, USA +1 (510) 875-1722 Email: info@acopower.com Website: www.acopower.com</small>	ACOPOWER PLK-2x100W20A Portable Solar Panel Kit User Manual User manual for the ACOPOWER PLK-2x100W20A portable solar panel kit, detailing its features, setup, testing, specifications, and warranty. This guide provides comprehensive instructions for optimal use and maintenance of the solar panel and its integrated charge controller.
	ACOPOWER 90W Foldable Solar Panel User Manual Comprehensive user manual for the ACOPOWER 90W foldable solar panel suitcase, detailing features, setup, testing, specifications, and warranty information for portable solar power solutions.
 MPPT Solar Charge Controller User Manual 	ACOPOWER MPPT Solar Charge Controller User Manual Comprehensive user manual for ACOPOWER MPPT Solar Charge Controller models MY50, MY60, MY80, and MY100. Covers installation, operation, safety, specifications, and troubleshooting for efficient solar energy management.
	ACOPOWER SGR-MP30011-2 Photovoltaic Inverter User Manual Installation & Operation Guide User manual for the ACOPOWER SGR-MP30011-2 Photovoltaic Inverter. This guide details installation, operation, system architecture, safety instructions, specifications, and troubleshooting for this 3000W hybrid solar charger.

 <p>The image shows the cover of the user manual for the ACOPower HY-MPPT Series MPPT Solar Charge Controller. It features the ACOPower logo at the top left, followed by the text 'HY-MPPT Series' and 'MPPT Solar Charge Controller'. Below this is the title 'User Manual' and a photograph of the device, which is a grey rectangular unit with various ports and a small display screen. The background of the cover is white with a blue curved graphic at the bottom.</p>	<p>ACOPower HY-MPPT Series MPPT Solar Charge Controller User Manual</p> <p>Comprehensive user manual for ACOPower HY-MPPT Series MPPT Solar Charge Controllers, detailing installation, operation, safety guidelines, technical specifications, troubleshooting, and maintenance for efficient solar energy management.</p>
 <p>The image shows the cover of the user manual for the ACOPower 30/40/50L Rechargeable SolarFridge Freezer. It features the ACOPower logo at the top left, followed by the text '30/40/50L Rechargeable SolarFridge Freezer'. Below this is the title 'User Manual' and a photograph of the device, which is a black and white refrigerator-freezer unit with a handle. The background of the cover is white with a blue curved graphic at the bottom. There is also a small note at the bottom left: 'Please check the product manual for more details.' and 'Model: X30A/X40A/X50A'.</p>	<p>ACOPower 30/40/50L Rechargeable SolarFridge Freezer User Manual</p> <p>Comprehensive user manual for the ACOPower 30/40/50L Rechargeable SolarFridge Freezer, covering features, safety instructions, operation, charging, battery management, Bluetooth connectivity, FAQs, and technical specifications.</p>