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**ECO-WORTHY L02M170-NK30EUL200-6**

# ECO-WORTHY 4kWh 1000W 24V Solar System Instruction Manual

**Brand:** ECO-WORTHY | **Model:** L02M170-NK30EUL200-6

## 1. INTRODUCTION TO THE ECO-WORTHY SOLAR SYSTEM

This manual provides essential information for the safe and efficient operation of your ECO-WORTHY 4kWh 1000W 24V Solar System. This comprehensive off-grid system includes 6x 170W solar panels, 2x 100Ah LiFePO4 lithium batteries, and a 3000W 24V-220V all-in-one inverter with integrated control. Please read this manual thoroughly before installation and use.



Image: ECO-WORTHY solar panels installed on a house roof, illustrating the system's capability to generate 4kWh per day.

## 2. SYSTEM COMPONENTS

Your ECO-WORTHY solar system includes the following main components:

- **Solar Panels:** 6 units of 170W monocrystalline solar panels.
- **Lithium Batteries:** 2 units of 100Ah 12.8V LiFePO4 batteries.
- **All-in-One Inverter:** 3000W 24V DC to 220V AC pure sine wave inverter with integrated MPPT charge controller.
- **PV Combiner Box:** For simplified wiring and protection.
- **Cables and Connectors:** Necessary cables and MC4 connectors for system assembly.

# DIY- SYSTEME SOLAIRE



Image: A visual representation of the DIY solar system components, including batteries, hybrid inverter, solar panels, and connection accessories.

## 3. SETUP AND INSTALLATION

The ECO-WORTHY solar system is designed for straightforward installation. It is crucial to follow all safety guidelines and local electrical codes during installation. Professional installation is recommended if you are unfamiliar with electrical systems.

### 3.1 Solar Panel Features

The solar panels feature IP65 rated junction boxes, IP67 sealed tempered glass, and pre-drilled mounting holes for easy installation. They utilize plug-and-play connectors for simplified wiring.

## Plug&Play

Connectors



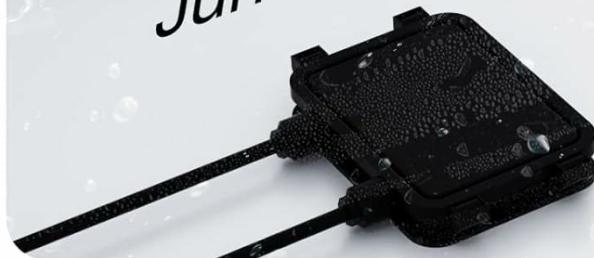
## IP67

Sealed Tempered Glass



## IP65

Junction Box



## Preserved

Mounting Holes



Image: Close-up view of solar panel features, highlighting plug-and-play connectors, an IP65 junction box, IP67 sealed tempered glass, and preserved mounting holes.

### 3.2 Wiring Diagram (5-Step Installation)

The system can be installed in a few simple steps. Refer to the detailed wiring diagram below for proper connection of batteries, inverter, and solar panels.

1. Connect the batteries in series or parallel as required (ensure correct voltage for the inverter).
2. Connect the battery bank to the inverter.
3. Connect the solar panels to the PV combiner box, then to the inverter.
4. Connect the inverter to the main load or distribution panel.
5. Verify all connections and power on the system.

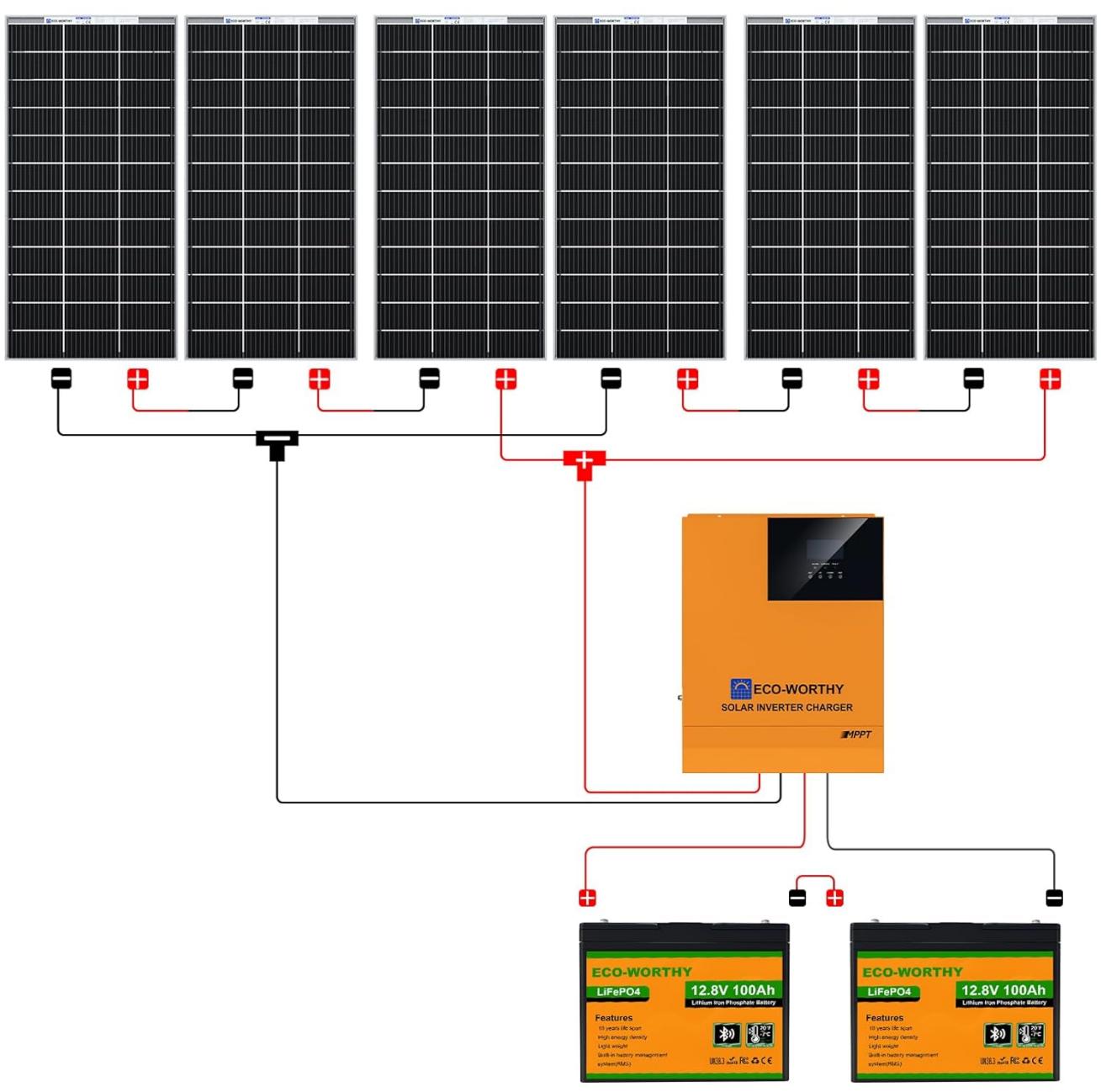


Image: Detailed wiring diagram showing the connections between solar panels, the inverter, and batteries for the ECO-WORTHY solar system.

## Installation en 5 étapes

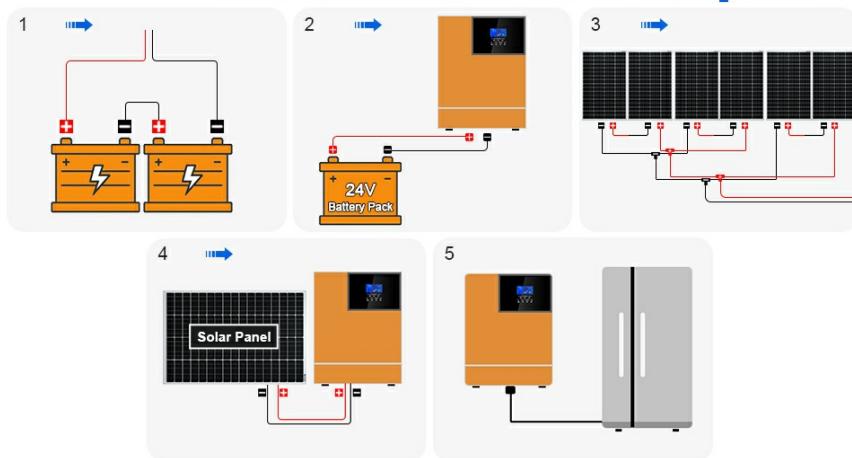


Image: A visual guide illustrating the 5-step installation process for the solar system, from battery connection to final appliance hookup.

### Important Note on Shipping:

Please be aware that your order may be shipped in multiple packages and may arrive at different times. Kindly be patient and wait for all packages to arrive before beginning installation.

## 4. OPERATING INSTRUCTIONS

Once installed, your ECO-WORTHY solar system will convert sunlight into electricity, store it in batteries, and provide AC power for your appliances.

### 4.1 Battery Monitoring

The LiFePO4 batteries can be monitored via a dedicated application. This app provides real-time data on voltage, current, and state of charge, allowing you to manage your power usage effectively.

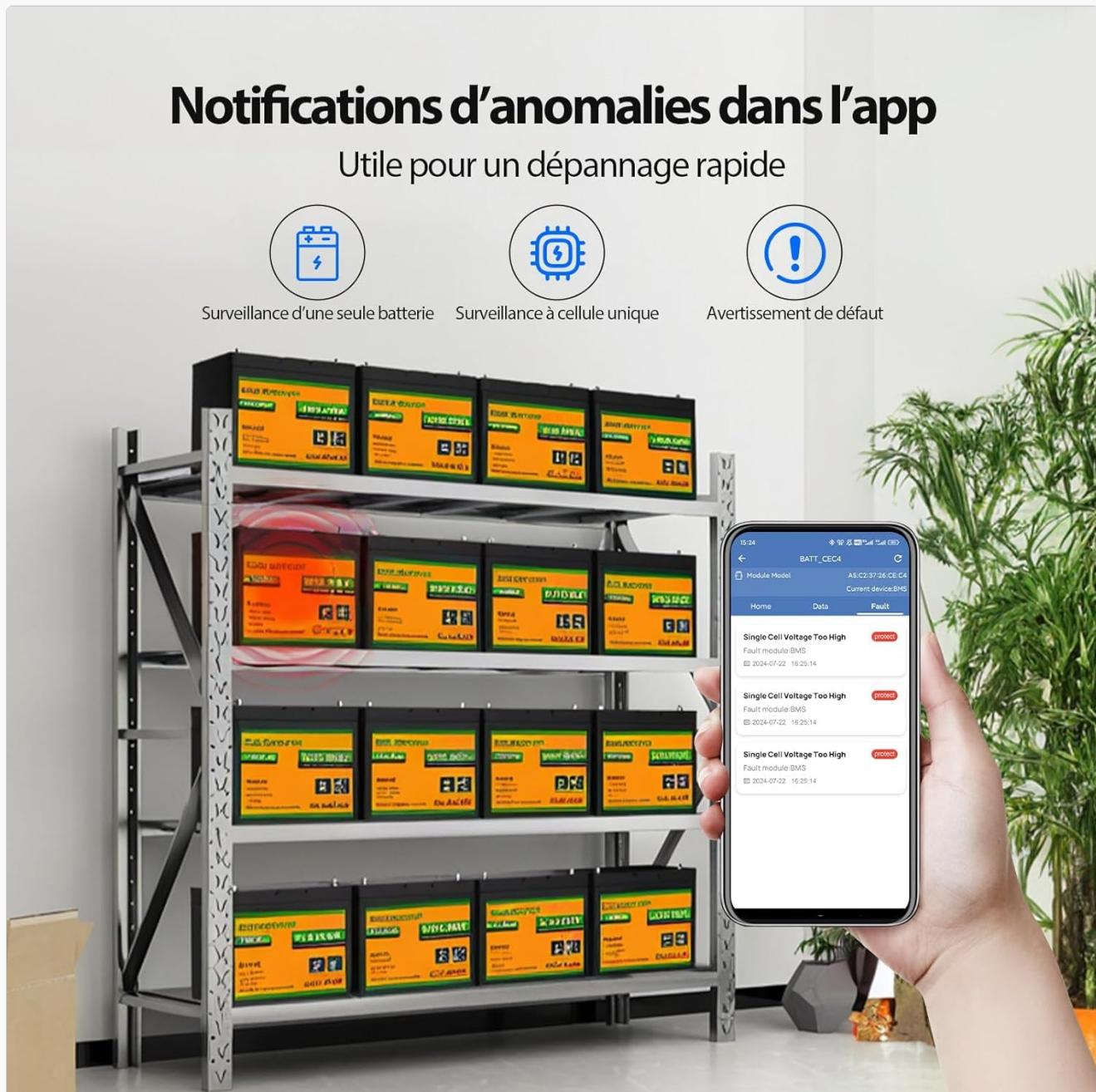


Image: A smartphone screen displaying the battery monitoring application, showing real-time data and anomaly notifications for quick troubleshooting.

### 4.2 Inverter Usage

The 3000W pure sine wave inverter provides stable 220V AC power, suitable for most household appliances. This

includes microwaves, coffee makers, TVs, refrigerators, freezers, and pond pumps. Pure sine wave output protects your appliances from electromagnetic pollution and extends their lifespan compared to modified sine wave inverters.

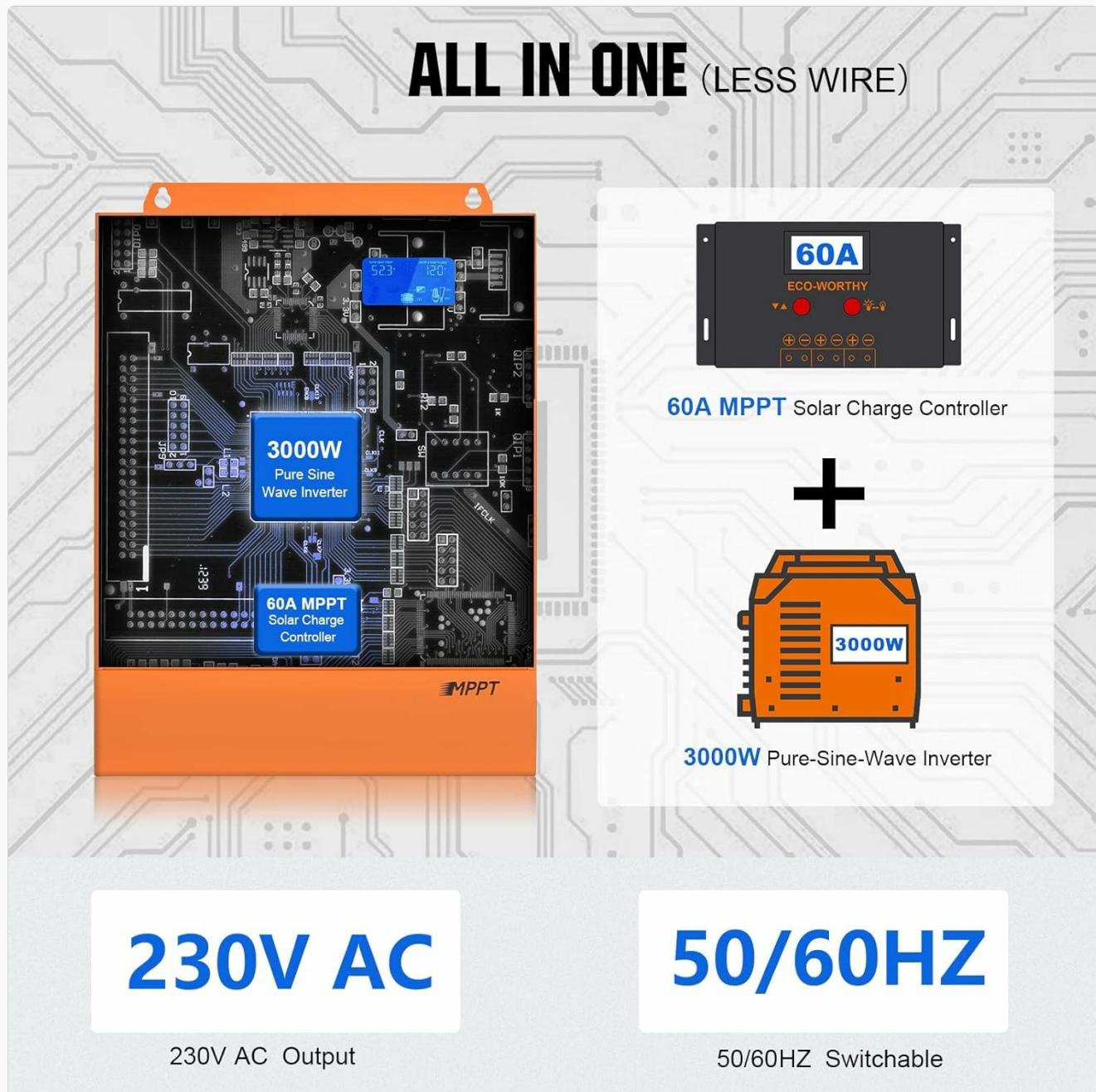


Image: Diagram illustrating the internal components of the all-in-one inverter, including the 3000W pure sine wave inverter and 60A MPPT solar charge controller, with 230V AC output and 50/60Hz switchable frequency.

#### 4.3 Daily Power Output

The system is designed to provide approximately 4000 Wh (4 kWh) of power daily, depending on sunlight availability. This makes it ideal for various applications, including:

- Outdoor use
- RV and caravan power
- Off-grid homes and cabins
- Boats and yachts
- Electric vehicles and golf carts
- Tents and backpacks

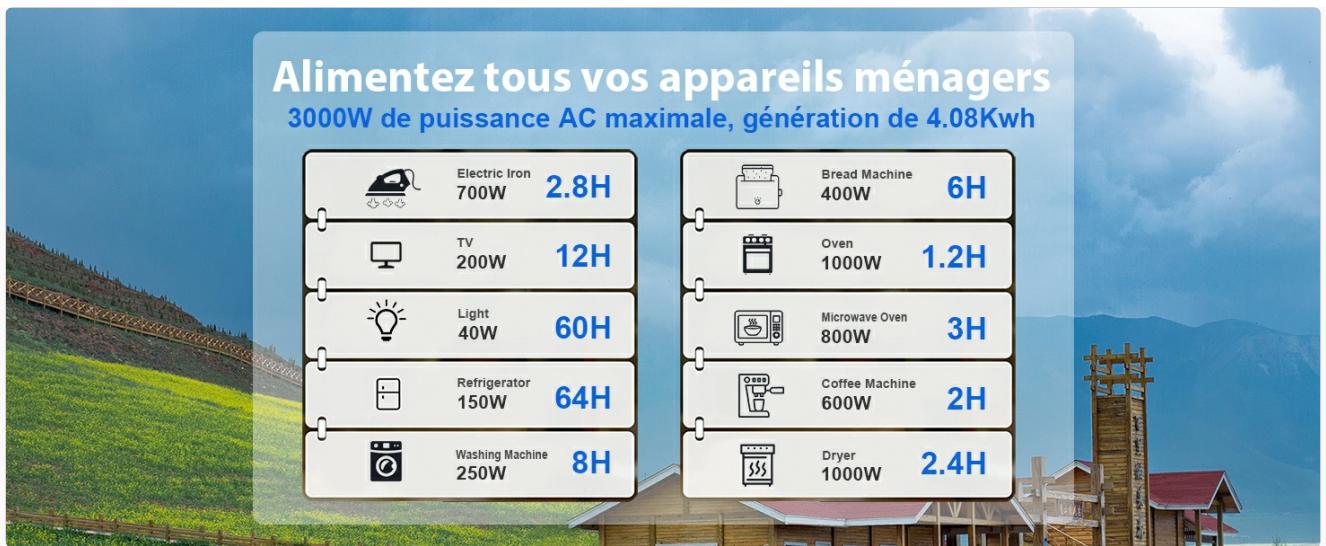


Image: A table showing estimated operating times for various household appliances (e.g., electric iron, TV, refrigerator, microwave, oven) with a 3000W AC power output and 4.08kWh generation.



Image: Examples of the solar system's applications, including residential roof installations, RVs, and boats.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your solar system.

- Solar Panels:** Periodically clean the surface of the solar panels to remove dust, dirt, and debris that can reduce efficiency. Use a soft cloth and water.
- Batteries:** Monitor battery health using the dedicated app. Ensure connections are secure and free from corrosion. LiFePO4 batteries require minimal maintenance compared to lead-acid batteries.
- Inverter:** Keep the inverter's ventilation openings clear to prevent overheating. Ensure it is installed in a dry, well-ventilated area.
- Connections:** Regularly inspect all electrical connections for tightness and signs of wear or damage.

## 6. TROUBLESHOOTING

If you encounter issues with your ECO-WORTHY solar system, refer to the following common troubleshooting steps:

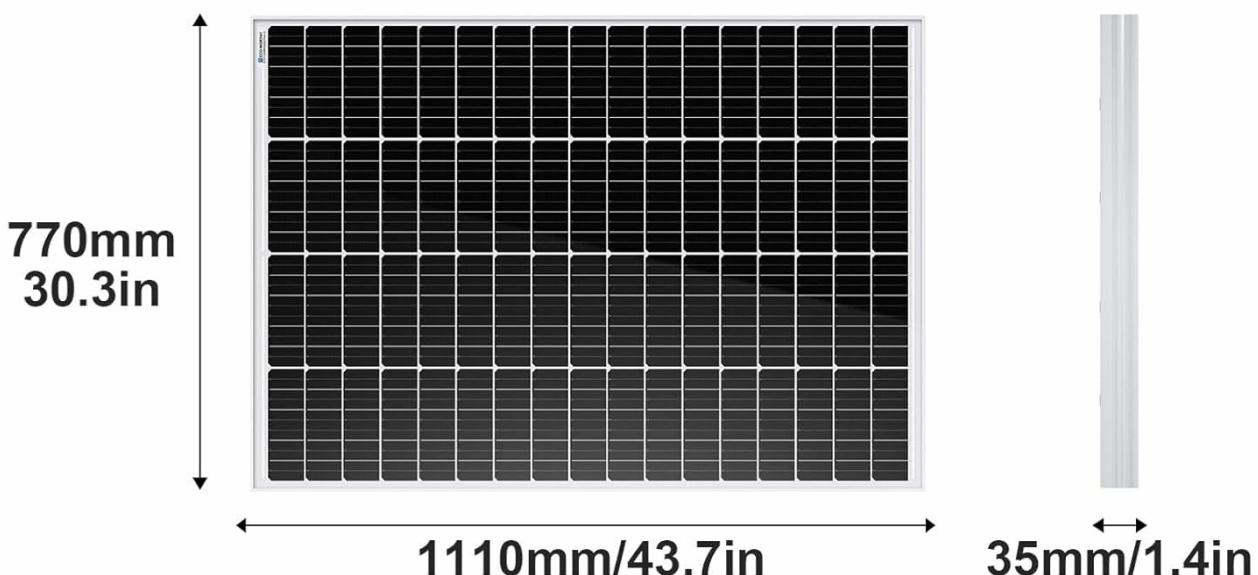
Problem	Possible Cause	Solution
No power output from inverter	Battery low, inverter off, faulty connection, overload.	Check battery charge, ensure inverter is on, inspect all wiring, reduce load.
Low solar panel output	Shading, dirty panels, cloudy weather, incorrect panel angle.	Clear shading, clean panels, adjust panel angle for optimal sun exposure.
Battery not charging	Faulty solar panel connection, charge controller issue, low sunlight.	Verify solar panel connections, check charge controller status, ensure adequate sunlight.
Inverter making unusual noise	Overload, internal fault, fan obstruction.	Reduce load, check for obstructions in fan, contact support if noise persists.

For issues not covered here, or if problems persist, please contact ECO-WORTHY customer support.

## 7. SPECIFICATIONS

Feature	Specification
Manufacturer	ECO-WORTHY
Model Number	L02M170-NK30EUL200-6
System Output (Daily)	4 kWh (4000 Wh)
Total Solar Panel Power	1000 Watt (6 x 170W panels)
Battery Type	LiFePO4 Lithium
Battery Capacity	2 x 100Ah (12.8V each)
Inverter Power	3000 Watt (Pure Sine Wave)
Inverter Input Voltage	24V DC
Inverter Output Voltage	220V AC
Material	Crystalline Silicon (panels)
Efficiency	21% (panels)
Max Temperature	85 Degrees Celsius
UPC	810127130388

# RECOMMEND SOLAR PANEL QUANTITY



<b>Fifth-wheel trailer</b>	<b>Cabin</b>	<b>House</b>
<b>4~8 PCS</b>	<b>2~8 PCS</b>	<b>8~30 PCS</b>

The Above data only for reference

Image: Diagram showing the dimensions of a single solar panel: 770mm (30.3in) x 1110mm (43.7in) x 35mm (1.4in).

## 8. WARRANTY AND SUPPORT

ECO-WORTHY stands behind the quality of its products.

- Warranty:** This product comes with a 1-year warranty.
- Technical Support:** 24/7 technical assistance is available. If you have any questions or concerns, please contact ECO-WORTHY customer service.

For further assistance, please visit the official ECO-WORTHY website or contact their support team directly.