OOYCYOO KP60 100

OOYCYOO 100 Amp MPPT Solar Charge Controller (Model KP60 100) User Manual

1. Product Overview

The OOYCYOO 100 Amp MPPT Solar Charge Controller, Model KP60 100, is designed for efficient management of solar power systems. It automatically identifies 12V or 24V battery systems and is compatible with various battery types, including AGM, Sealed, Gel, Flooded, and Lithium. This controller features advanced Maximum Power Point Tracking (MPPT) technology to maximize energy harvest from solar panels, ensuring optimal charging for your battery bank.

Key features include a backlit LCD display for real-time monitoring, enhanced safety protections, and a high DC/DC transfer efficiency of up to 98.7%.

Figure 1: Front view of the OOYCYOO 100 Amp MPPT Solar Charge Controller, showing the LCD display and connection terminals.

2. Safety Instructions

Please read all instructions and warnings carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or severe injury.

- Ensure all wiring is correctly polarized and securely connected to prevent damage to the controller and connected devices.
- Always disconnect the solar panel array and battery before installing or adjusting the controller.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.
- Do not disassemble or attempt to repair the controller. Refer to qualified personnel for service.
- Use appropriate circuit breakers or fuses for all connections to protect against overcurrent.
- Wear appropriate personal protective equipment, including eye protection and insulated gloves, during installation.

3. Product Components and Connections

The controller features clearly labeled terminals for solar panel input, battery connection, and load output. It also includes a remote temperature sensor port and USB charging ports.

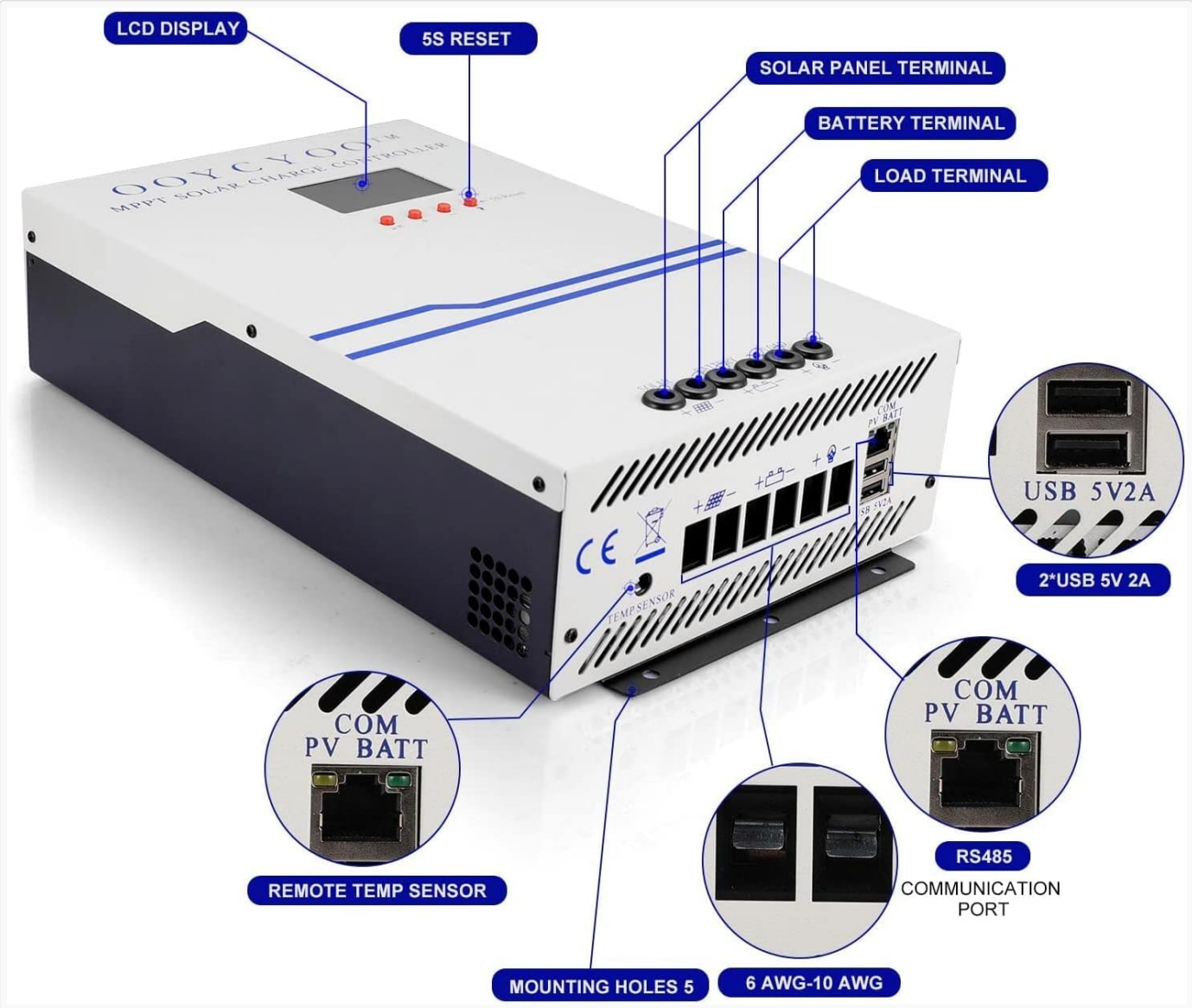


Figure 2: Detailed view of the controller's LCD display, 5S Reset button, Solar Panel Terminal, Battery Terminal, Load Terminal, USB 5V2A ports, Remote Temp Sensor port, and RS485 Communication Port.

Package Contents:

- 1 x OOYCYOO 100A MPPT Solar Charge Controller (Model K2500W)
- 1 x Temperature Sensor
- 1 x User Manual (English)

4. Technical Specifications

The following table outlines the technical specifications for the OOYCYOO 100 Amp MPPT Solar Charge Controller (Model KP60 100).

Parameter	Specification
Rated Charge Current	100A
System Nominal Voltage	12V/24VDC Auto Identifying
12V System Max. PV Input Power	1300W
24V System Max. PV Input Power	2600W
Max. PV Open Circuit Voltage (Voc)	100VDC
Battery Voltage Range	9V ~ 32V
Power Terminal Wire Gauge	10 AWG
Dimensions (L x W x H)	12 x 7.8 x 3.2 inches (30.5 x 19.8 x 8.1 cm)
Weight	8.84 pounds (4 kg)
Display Type	LCD
Operating Temperature	Up to 45°C (113°F)

- Auto identity 12V/24V/48V DC systems voltage.
- Max Power Current:100A,Load output current:40A
- Max. PV Input VOC:60V@12V battery,112V@24V battery,144V@48V battery
- Max. PV Input Power: 1300W@12V battery/2600w @24V battery/5000w@48V battery
- Compattible with Lead-Acid(Lithium/Sealed/Gel/ Flooded) batteries
- Common-Postive Ground MPPT Controller
- A key to open and close the load
- A key to restore the factory settings
- 0 layer display-it will display all information at one time, one screen
- USB 5V charge 2A

Application

System	Solar panel		MAX.PV input power
Bettery voltage	Open circuit voltage	Max.power voltage	100A
12V system	⩽60V (Voc)	⩽96V(Vmp)	1300W
24V system	⩽96V (Voc)	⩽112V(Vmp)	2600W
48V system	⩽112V (Vol)	⩽144V(Vmp)	5000W

Figure 3: Application table detailing maximum PV input power and voltage for 12V, 24V, and 48V systems.

5. Installation Guide

Proper installation is crucial for the safe and efficient operation of your solar charge controller. Follow these steps carefully:

5.1 Mounting the Controller

- Choose a dry, well-ventilated location, protected from direct sunlight, high temperatures, and moisture.
- Ensure sufficient clearance around the controller for proper airflow, especially around the cooling vents.
- Mount the controller vertically on a non-flammable surface using appropriate fasteners.

5.2 Wiring Connections

Connect the components in the following order: Battery > Solar Panel > Load. Always ensure correct polarity.

1. **Connect the Battery:** Connect the battery cables to the battery terminals on the controller. Ensure the positive (+) and negative (-) terminals are correctly matched. The controller will automatically detect the battery voltage (12V or 24V).
2. **Connect the Solar Panel:** Connect the solar panel cables to the PV input terminals on the controller. Verify correct polarity. Ensure the open circuit voltage (Voc) of your solar array does not exceed 100VDC.
3. **Connect the Load:** Connect your DC load to the load output terminals. Ensure the load current does not exceed the controller's rated load current.
4. **Connect Temperature Sensor:** Plug the remote temperature sensor into its designated port. This sensor helps the controller optimize charging based on battery temperature.

The controller is compatible with various battery types:

Figure 4: The controller supports AGM, Sealed, Gel, Flooded, and Lithium-Iron phosphate batteries for 12V/24V/48V systems.

6. Operation Guide

Once installed, the controller will begin operation. The LCD display provides real-time system status and allows for configuration.

6.1 LCD Display

The backlit LCD display shows various parameters such as battery voltage, charging current, solar panel voltage, load status, and accumulated energy (KWH). Use the buttons below the display to navigate through the different screens and access settings.

6.2 Basic Settings

The controller allows users to set parameters for different battery types (Lithium, LiFePO4, Li(NiCoMn)O2, Flooded, Sealed, Gel). Refer to the on-screen menu for specific adjustments to absorption voltage, float voltage, and low voltage disconnect settings. A load timer function is also available for controlling DC loads.

6.3 Cooling Fan Operation

The built-in cooling fan activates automatically when the internal temperature exceeds 45°C (113°F) and turns off when the temperature drops below 40°C (104°F). This mechanism ensures optimal performance and extends the lifespan of the controller.

7. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your solar charge controller.

- **Cleaning:** Periodically clean the controller's exterior with a dry cloth. Ensure cooling vents are free from dust and debris.
- **Connections:** Annually inspect all wiring connections for tightness and corrosion. Loose connections can cause overheating and damage.
- **Environment:** Verify that the installation environment remains dry and well-ventilated.

8. Troubleshooting

The controller incorporates multiple protection functions to safeguard your system. If an issue arises, check the LCD display for error codes or indicators.

8.1 Protection Functions

- PV Over Current/Power Protection
- PV Short Circuit Protection
- PV Reverse Polarity Protection
- Night Reverse Charging Protection
- Battery Reverse Polarity Protection
- Battery Over Voltage Protection
- Battery Over Discharge Protection
- Battery Overheating, Controller Overheating Protection
- Lithium Battery Low Temperature Protection
- Load Short Circuit Protection
- Load Overload Protection
- TVS High Voltage Transients Protection

8.2 Common Issues

- **No Charging:** Check solar panel connections, ensure sufficient sunlight, and verify battery voltage is within operating range.
- **Load Not Working:** Check load connections, ensure battery voltage is above the low voltage disconnect setting, and verify load timer settings.
- **Overheating:** Ensure adequate ventilation around the controller and that cooling vents are clear.
- **Incorrect Voltage Readings:** Verify all connections are secure and the temperature sensor is properly installed.

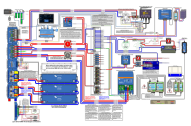
If issues persist after checking these points, please contact customer support.

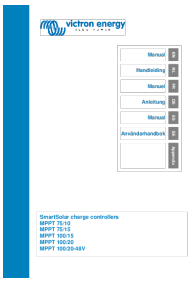
9. Warranty and Support

The OOYCYOO 100 Amp MPPT Solar Charge Controller is a professional product. For any questions or technical assistance, please contact us directly via email. We are committed to providing prompt support and ensuring your satisfaction.

Please refer to your purchase documentation for specific warranty terms and conditions.

Related Documents - KP60 100

OOYCYOO™ MPPT Solar power generation system controller	OOYCYOO MPPT Solar Power Generation System Controller User Manual This document provides comprehensive instructions and technical specifications for the OOYCYOO MPPT Solar Power Generation System Controller. Learn about installation, parameter settings, protection features, and system wiring for optimal solar energy utilization.
	Ooycyoo MPPT 'P' Series 40A/60A Solar Charge Controller User Manual Explore the Ooycyoo MPPT 'P' Series 40A/60A Solar Charge Controller. This user manual details advanced MPPT technology, features like real-time display, USB charging, and multi-stage battery charging, along with essential safety and installation guidance for solar energy systems.
	Victron Energy Power System Wiring Diagram and Component Overview Detailed wiring diagram and system overview for a Victron Energy power system, featuring Quattro inverter/charger, Lynx Smart BMS, Orion XS DC-DC charger, SmartSolar MPPT, and Zeus alternator regulator for RVs and boats.



Victron Energy SmartSolar MPPT Charge Controllers Manual

User manual for Victron Energy SmartSolar MPPT charge controllers (models 75/10, 75/15, 100/15, 100/20, 100/20-48V). Covers features like Bluetooth Smart, VE.Direct, MPPT tracking, load output, battery management, installation, safety, and troubleshooting.