

TARSHYRY YX851

TARSHYRY YX851 DC 12V 10A Automatic Power Switching Module User Manual

Model: YX851 | Brand: TARSHYRY

1. INTRODUCTION

The TARSHYRY YX851 is a DC 12V 10A Automatic Power Switching Module designed to provide uninterrupted power to a load by seamlessly switching between a main power supply and a backup battery. This module prioritizes the main power supply and automatically transitions to battery power during outages, ensuring continuous operation of your connected devices. Its advanced manufacturing technology guarantees high reliability and stable performance, meeting strict quality standards for dependable use.

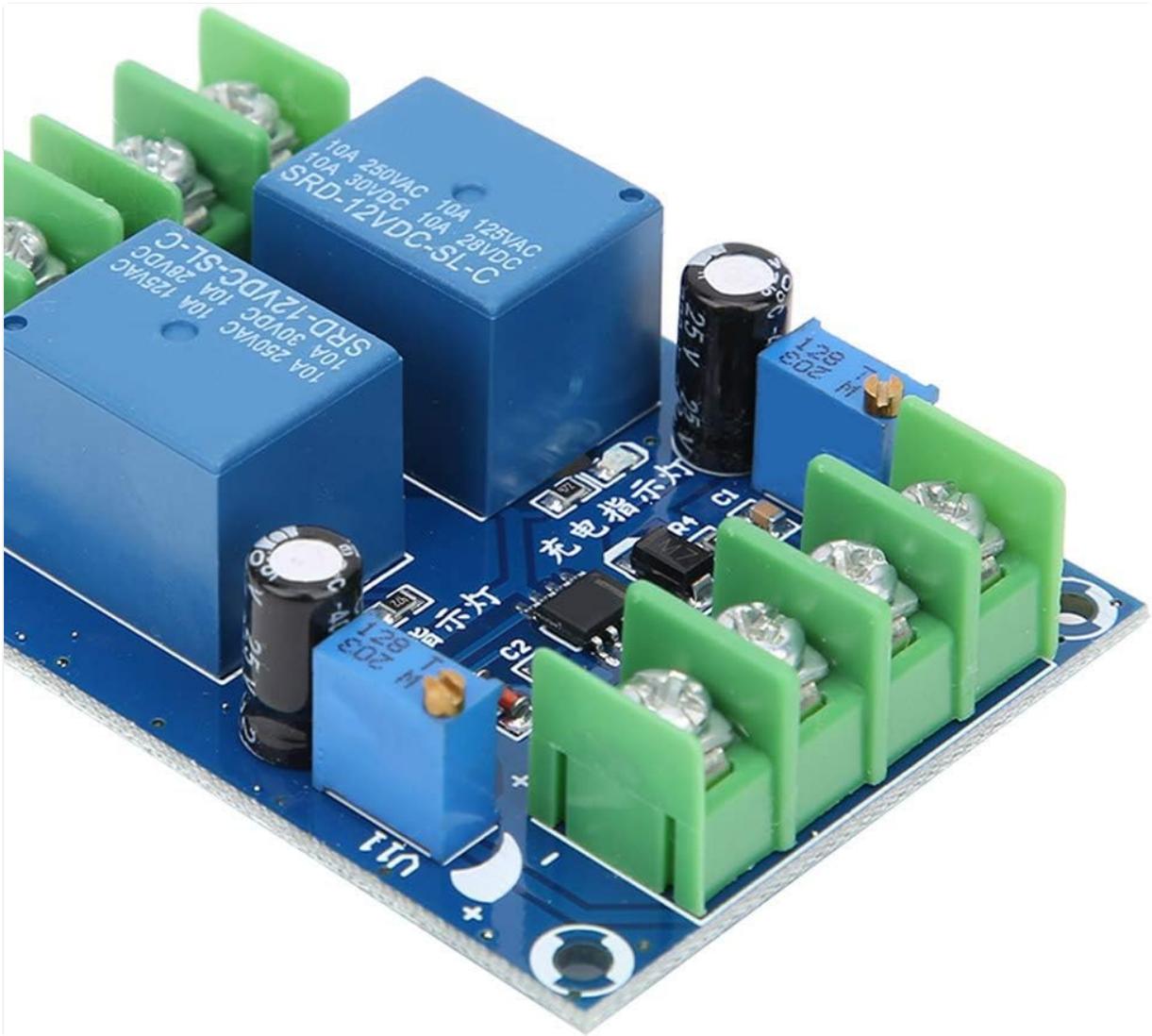


Figure 1: Top view of the TARSHYRY YX851 Automatic Power Switching Module.

2. SETUP AND WIRING

Proper wiring is crucial for the safe and effective operation of the YX851 module. Refer to the wiring diagram below for connection details. Ensure all connections are secure before applying power.

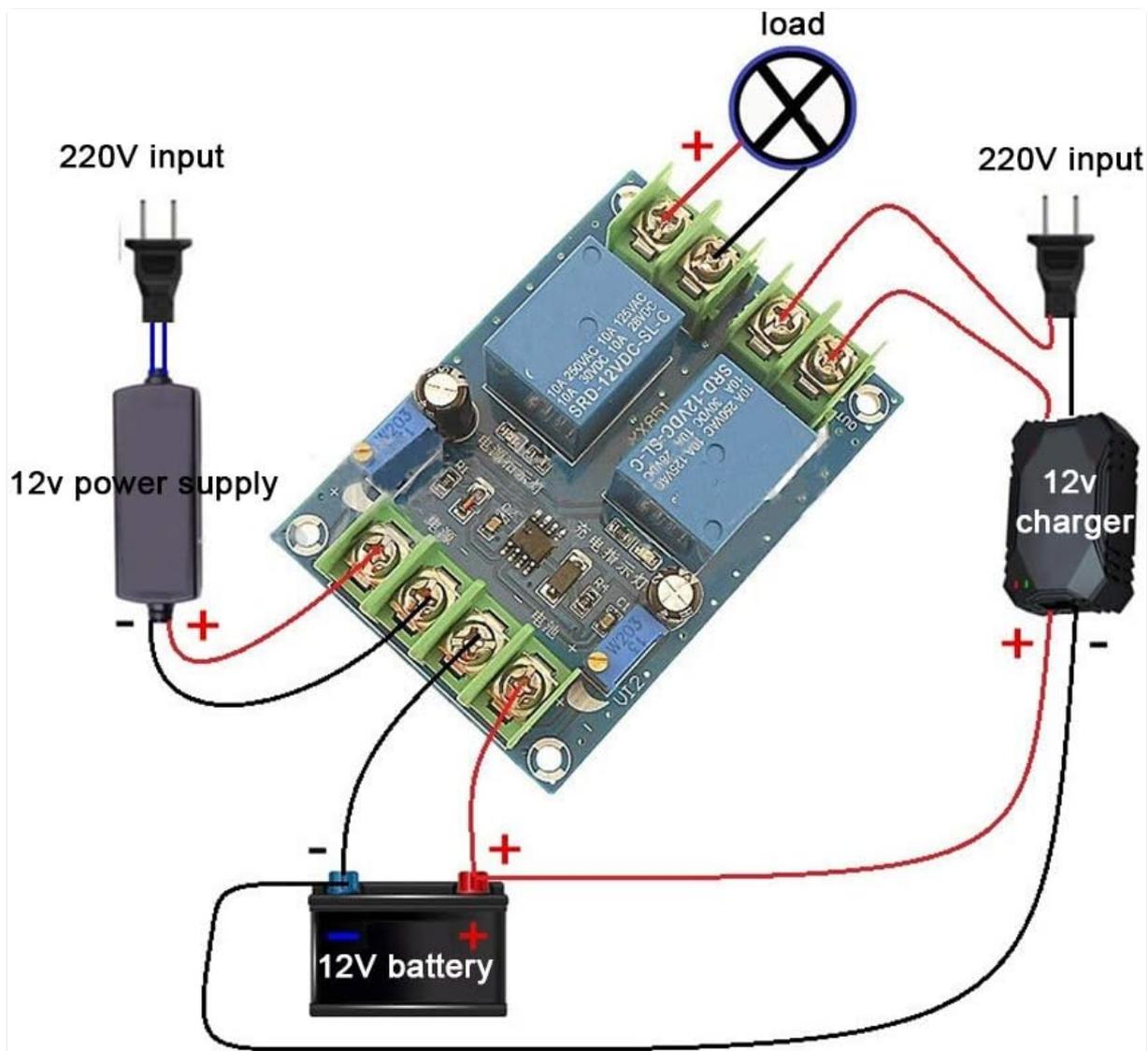


Figure 2: Wiring diagram for the YX851 module. Connect the 12V power supply, 12V battery, and load as shown.

Connection Steps:

- Main Power Supply Connection:** Connect your 12V main power supply (e.g., a 12V power adapter) to the designated input terminals on the module. Ensure correct polarity (+ and -).
- Battery Connection:** Connect your 12V backup battery to the battery terminals on the module. Observe correct polarity (+ and -). The module will charge the battery when the main power is present.
- Load Connection:** Connect your DC 12V load (the device you want to power) to the output terminals. Ensure correct polarity.
- Voltage Adjustment:** Before initial use, adjust the charge start and shutdown voltage settings as described in the Operating Instructions section to match your battery type and desired operation.

3. OPERATING INSTRUCTIONS

The YX851 module operates automatically to manage power distribution. It features user-friendly voltage adjustments for precise control over battery charging and switching thresholds.

Automatic Switching Function:

- When the main 12V power supply is active, the module prioritizes power delivery to the load from the main supply and simultaneously charges the connected 12V battery.
- In the event of a main power failure, the module automatically switches the load to the backup 12V battery,

ensuring continuous power without interruption.

- When the main power supply is restored, the module automatically switches the load back to the main supply and resumes charging the battery.

Voltage Regulation:

The module includes two potentiometers for voltage adjustment, allowing customization for various power and battery needs. These adjustments control the battery charging and discharge thresholds.



Figure 3: YX851 module showing locations for charge start and charge shutdown voltage adjustments.

- **Charge Start Voltage Adjustment:** This potentiometer controls the voltage level at which the module begins charging the battery. Turning clockwise increases the voltage, and counter-clockwise decreases it.
- **Charge Shutdown Voltage Regulation:** This potentiometer sets the voltage level at which the module stops charging the battery (or switches to battery power if the main supply drops below this threshold). Turning clockwise increases the voltage, and counter-clockwise decreases it.

Precautions for Voltage Adjustment: For 12V batteries, adjust a half circle clockwise to add approximately 0.5V, and a half circle counter-clockwise to subtract approximately 0.5V. Do not adjust more than one full circle to avoid damage or incorrect operation.

4. MAINTENANCE

To ensure the longevity and optimal performance of your YX851 module, follow these simple maintenance guidelines:

- **Keep Clean:** Regularly clean the module with a soft, dry cloth to remove dust and debris. Avoid using liquids or abrasive cleaners.
- **Check Connections:** Periodically inspect all wiring connections to ensure they are tight and free from corrosion. Loose connections can lead to intermittent operation or damage.
- **Environmental Conditions:** Operate the module within its specified temperature and humidity ranges. Avoid exposing it to extreme heat, cold, or moisture.

- **Ventilation:** Ensure adequate airflow around the module to prevent overheating, especially during prolonged operation or high current draw.

5. TROUBLESHOOTING

If you encounter issues with your YX851 module, refer to the following troubleshooting steps:

Problem	Possible Cause	Solution
Load not receiving power	<ul style="list-style-type: none"> • Loose connections • Main power supply failure • Battery discharged or faulty • Incorrect voltage settings 	<ul style="list-style-type: none"> • Check all wiring connections for tightness and correct polarity. • Verify the main 12V power supply is active and providing correct voltage. • Check the battery charge level and health. Replace if necessary. • Review and adjust the charge start/shutdown voltage settings.
Module not switching to battery power during outage	<ul style="list-style-type: none"> • Battery not connected or faulty • Battery voltage too low • Incorrect voltage settings 	<ul style="list-style-type: none"> • Ensure the battery is properly connected and functional. • Charge the battery or replace if it cannot hold a charge. • Adjust the charge shutdown voltage setting to a suitable threshold for switching.
Battery not charging	<ul style="list-style-type: none"> • Main power supply not active • Loose battery connections • Faulty battery • Charge start voltage set too high 	<ul style="list-style-type: none"> • Verify the main 12V power supply is active. • Check battery connections. • Test the battery; replace if faulty. • Lower the charge start voltage setting.

If the problem persists after following these steps, please contact customer support.

6. SPECIFICATIONS

Detailed technical specifications for the TARSHYRY YX851 Automatic Power Switching Module:

Feature	Detail
Item Type	Automatic Power Switching Module
Model	YX851
Brand	TARSHYRY

Feature	Detail
Control Current	10A
Material	Plastic
Color	As shown in image
Size (LxWxH)	Approx. 69 x 48 x 18 mm / 2.7 x 1.9 x 0.7 inches
Mounting Size	Approx. 61 x 41 mm / 2.4 x 1.6 inches
Manufacturer	TARSHYRY
Country of Origin	China
Condition	New

7. WARRANTY INFORMATION

This TARSHYRY YX851 Automatic Power Switching Module comes with a **2-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

Please note that spare parts availability and guaranteed software updates are not available for this product.

8. SUPPORT

For technical assistance, troubleshooting beyond the scope of this manual, or warranty inquiries, please contact TARSHYRY customer support through your retailer or the official brand website. When contacting support, please have your product model (YX851) and purchase details ready.