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› Warmrmr 18V-40V to 24V 10A DC-DC Power Converter User Manual

Warmrmr 18V-40V to 24V 10A

Warmrmr 18V-40V to 24V 10A DC-DC Power Converter User Manual

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient installation, operation, and maintenance of your Warmrmr 18V-40V to 24V 10A DC-DC Power Converter. Please read this manual thoroughly before use and retain it for future reference.

The Warmrmr 18V-40V to 24V 10A DC-DC Power Converter is a robust, waterproof module designed to convert a wide input voltage range (18V-40V) to a stable 24V DC output with a maximum current of 10A. It features multiple protections for stable operation in various applications, including automotive, solar, and industrial systems.

2. SAFETY INFORMATION

To prevent personal injury or damage to the converter and connected devices, observe the following safety precautions:

- Always disconnect power from the input source before performing any installation, wiring, or maintenance.
- Ensure proper ventilation around the converter to prevent overheating. Do not cover the unit.
- Do not operate the converter in wet, damp, or highly corrosive environments unless specifically designed for such conditions (this unit is IP68 rated for water resistance).
- Observe correct polarity for all input and output connections. Incorrect wiring can cause severe damage to the converter and connected equipment.
- Ensure the input voltage is within the specified range of 18V-40V DC. Exceeding this range may damage the unit.
- Do not exceed the maximum output current of 10A. Overloading the converter can lead to overheating and failure.
- Keep out of reach of children.

3. PRODUCT OVERVIEW

The Warmrrr DC-DC Power Converter is designed for high efficiency and reliability. Its sealed, waterproof casing protects internal components from environmental factors, making it suitable for demanding applications.



Figure 1: Main view of the Warmrrr DC-DC Power Converter. This image shows the compact design of the converter, highlighting its sealed casing and pre-attached input and output wiring.

DC-DC step-down power supply

Foot power



Super Stable

Multiple Protection

9V/40V (18V/40V) TO 24V 2A-30A

Figure 2: Side view of the converter with heat sink fins. A side view of the converter, illustrating the aluminum heat sink fins designed for efficient heat dissipation, ensuring stable performance.

4. SPECIFICATIONS

Feature	Specification
Input Voltage Range	18V - 40V DC
Output Voltage	24V DC
Output Current (Max)	10A
Output Power (Rated)	150W
Efficiency	≥90%
Protection Level	IP68 Waterproof
Operating Temperature	-40°C to +80°C
Dimensions (L*W*H)	74mm * 74mm * 32mm
Weight	0.25 kg (approx. 0.55 lbs)
Certifications	CE, FCC, RoHS, UL

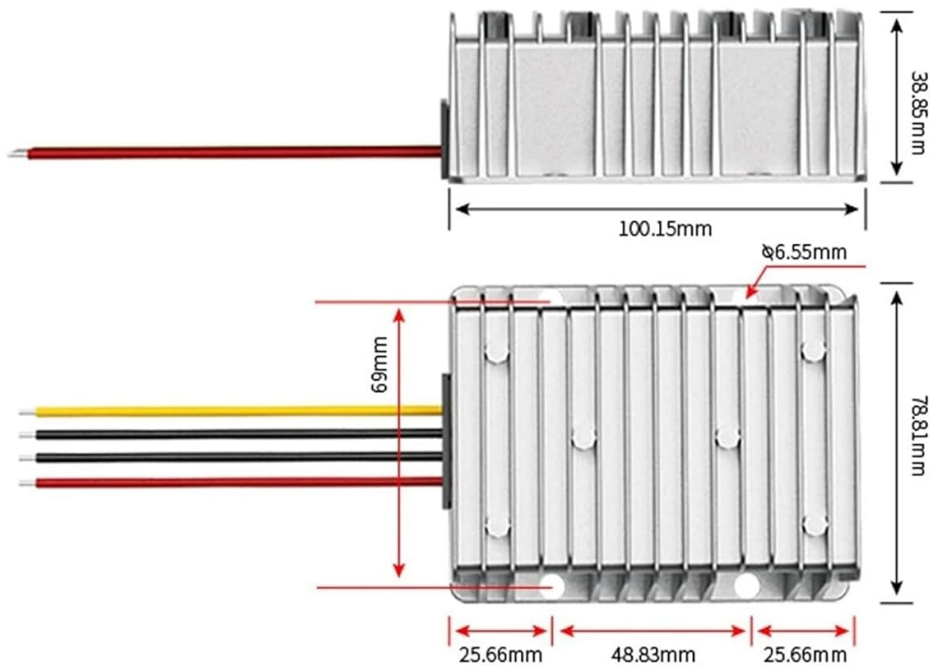


Figure 3: Detailed dimensions of the converter. This image provides precise measurements of the converter's length, width, and height, useful for installation planning.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your DC-DC power converter:

- 1. Prepare for Installation:** Ensure the input power source is disconnected and all safety precautions are observed.
- 2. Identify Wires:** The converter comes with pre-attached wires. Identify them as follows:
 - **Red Wire:** Input Positive (+)
 - **Black Wire (Input):** Input Negative (-)
 - **Yellow Wire:** Output Positive (+)
 - **Black Wire (Output):** Output Negative (-)
- 3. Connect Input Power:** Connect the **Red Wire** to the positive (+) terminal of your 18V-40V DC power source. Connect the **Black Wire (Input)** to the negative (-) terminal of your 18V-40V DC power source. An optional on/off switch can be installed on the positive input line.
- 4. Connect Load Device:** Connect the **Yellow Wire** to the positive (+) terminal of your 24V load device.

Connect the **Black Wire (Output)** to the negative (-) terminal of your 24V load device.

5. **Secure Connections:** Ensure all wire connections are secure, properly insulated, and free from potential short circuits.
6. **Mounting:** Mount the converter in a location that allows for adequate air circulation around its heat sink fins. Avoid mounting in direct sunlight, enclosed spaces without ventilation, or areas prone to excessive heat or moisture.

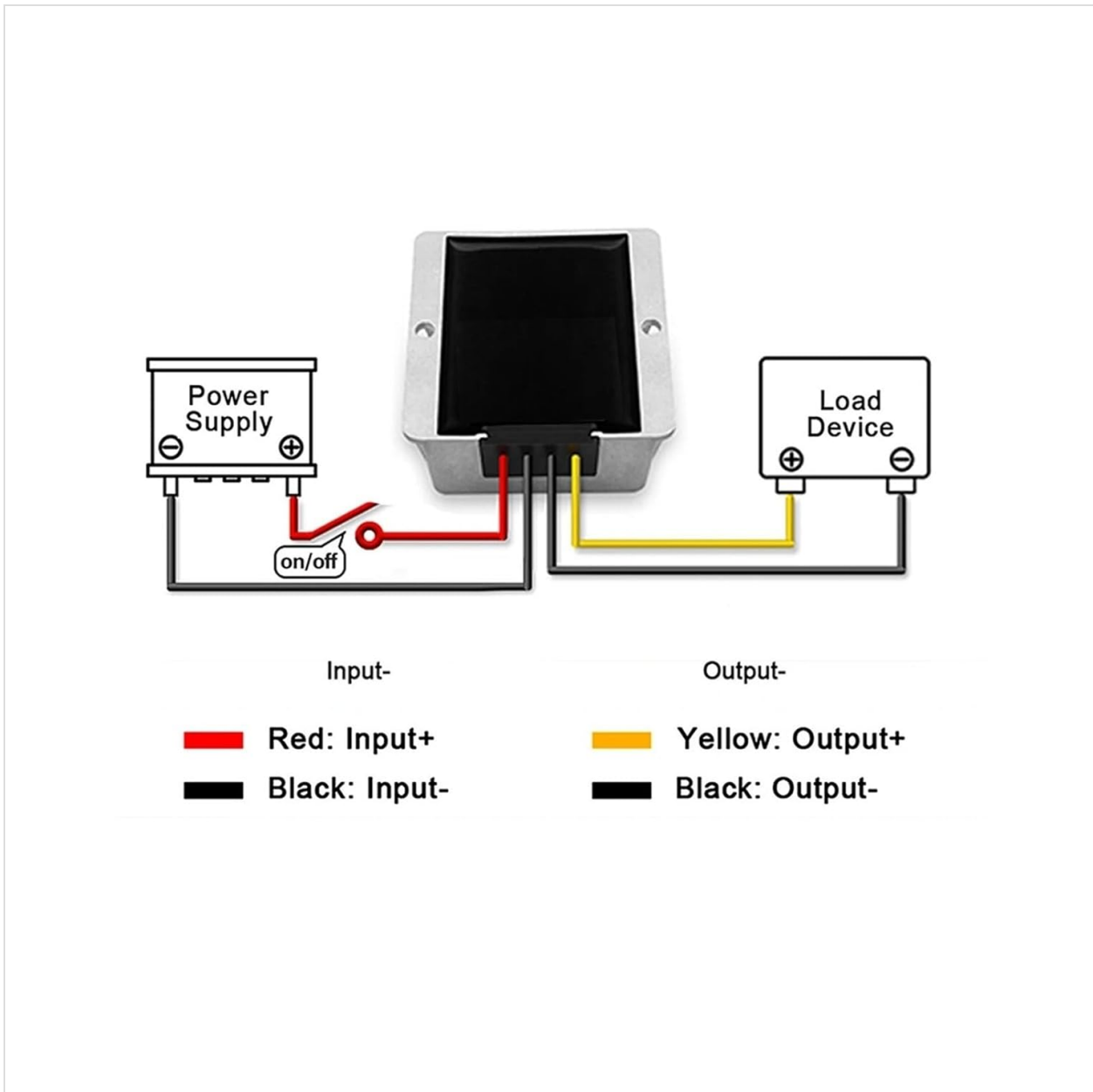


Figure 4: Wiring diagram for the DC-DC converter. This diagram illustrates the correct wiring for the DC-DC converter. Red wire connects to Input+, Black wire to Input-. Yellow wire connects to Output+, and the other Black wire to Output-. An optional on/off switch can be integrated on the positive input line.

6. OPERATION

Once the converter is correctly installed and wired, apply power to the input source. The converter will automatically regulate the input voltage to a stable 24V DC output. No user adjustments are required for voltage regulation.

The unit is designed with multiple internal protections, including over-current, over-voltage, and short-circuit protection, to ensure stable and safe operation of both the converter and your connected devices.

7. MAINTENANCE

The Warmmr DC-DC power converter is designed for maintenance-free operation due to its sealed, waterproof construction. However, periodic checks are recommended:

- **Wiring Inspection:** Periodically inspect all wiring for any signs of damage, fraying, or loose connections. Ensure insulation remains intact.
- **Cleanliness:** Ensure the converter's heat sink fins are free from dust, dirt, and debris to maintain optimal cooling performance. Use a soft, dry cloth or compressed air for cleaning.
- **Environmental Check:** Verify that the operating environment remains within the specified temperature and humidity ranges.
- **Do Not Open:** Do not attempt to open or repair the unit. Doing so will void the warranty and may cause further damage or pose a safety risk.

8. TROUBLESHOOTING

If you encounter issues with your converter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No output voltage	<ul style="list-style-type: none">• No input power• Incorrect input voltage• Incorrect wiring polarity• Short circuit or overload on output	<ul style="list-style-type: none">• Check input power source and connections.• Verify input voltage is within 18V-40V range.• Inspect wiring for correct polarity and secure connections.• Disconnect load and check for short circuits.
Output voltage fluctuates	<ul style="list-style-type: none">• Unstable input voltage• Load exceeds converter capacity	<ul style="list-style-type: none">• Ensure input power source is stable.• Verify load current does not exceed 10A.
Converter is overheating	<ul style="list-style-type: none">• Insufficient ventilation• Ambient temperature too high• Load exceeds converter capacity	<ul style="list-style-type: none">• Ensure adequate airflow around the unit.• Relocate converter to a cooler environment if necessary.• Verify load current does not exceed 10A.

9. WARRANTY AND SUPPORT

For technical support, warranty inquiries, or any questions regarding your Warmmr DC-DC Power Converter, please contact your retailer or the manufacturer, Warmmr. Refer to your purchase documentation for specific warranty terms and contact information.

The manufacturer is committed to providing 24-hour online support for any questions you may have.

