

YIPIN HEXHA 12V/24V to 5V 30A

YIPIN HEXHA DC Voltage Regulator Buck Converter (12V/24V to 5V 30A) Instruction Manual

Model: 12V/24V-5V-30A

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient use of your YIPIN HEXHA DC Voltage Regulator Buck Converter. This device is designed to convert an unstable DC input voltage of 12V or 24V into a stable 5V DC output, capable of supplying up to 30 Amperes of current. It is suitable for various applications requiring a stable 5V power source from a higher voltage DC supply.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure the input voltage is within the specified range (9V-35V DC) to prevent damage to the converter and connected devices.
- Do not exceed the maximum output current of 30A or power of 150W.
- Always disconnect power before making any wiring connections.
- Ensure proper polarity when connecting input and output wires. Incorrect polarity can damage the device.
- Install the converter in a well-ventilated area to prevent overheating.
- This device is not waterproof. Avoid exposure to moisture or liquids.
- Keep out of reach of children.

3. PRODUCT OVERVIEW

The YIPIN HEXHA DC Buck Converter is a robust power module designed for reliable voltage regulation. It features an aluminum shell with a honeycomb design for efficient heat dissipation, ensuring stable performance and longevity.



Image 3.1: Top-down view of the YIPIN HEXHA DC Voltage Regulator Buck Converter, showing the aluminum casing with honeycomb ventilation and terminal blocks.

Key Features:

- **Input Voltage:** DC 12V/24V (operating range 9V-35V)
- **Output Voltage:** Fixed DC 5V
- **Output Current:** 30A (Maximum)
- **Output Power:** 150W (Maximum)
- **Conversion Efficiency:** 96%
- **Protection Features:** Over-voltage, over-current, over-temperature, and short-circuit auto protection. The device can return to normal operation conditions automatically after protection is triggered.
- **Construction:** Durable aluminum case with honeycomb design for enhanced heat dissipation.



Image 3.2: Icons illustrating the built-in protection features: Short-circuit Protection, Over-temperature Protection, Over-voltage Protection, and Over-current Protection.

Applications:

This converter is widely used in various fields including:

- Automotive systems (e.g., car audio, 5V car products, especially in 24V vehicles)
- Surveillance systems
- Railway signals
- Medical equipment
- Instrumentation and meters
- LED products (e.g., LED light bars, copper light strings)
- Cable TV systems
- Other low-power test systems



Wide Range of Applications

Image 3.3: Visual representation of various applications for the buck converter, including solar panels, industrial machinery, audio systems, and control panels.

4. SPECIFICATIONS

Detailed technical specifications for the YIPIN HEXHA DC Voltage Regulator Buck Converter (12V/24V to 5V 30A).

- Model : 12V / 24V-5V-30A**
- Input voltage : 12V / 24V (9V-35V)**
- Output voltage : DC5V**
- Output current : 30A**
- Output power : 150W**
- Conversion efficiency : 96%**
- Working temperature : -20C~ 80C**
- Waterproof level : not waterproof**
- Module nature : non-isolated**
- L * W * H : 130 * 70 * 26MM**
- Weight : 30g**



Image 4.1: Diagram showing the key specifications of the converter, including model, input/output voltage/current, power, efficiency, temperature, and dimensions.

Parameter	Value
Model	12V/24V-5V-30A
Input Voltage Range	DC 9V-35V
Nominal Input Voltage	DC 12V/24V
Output Voltage	DC 5V (Fixed)
Output Current	30A (Max)
Output Power	150W (Max)
Conversion Efficiency	96%
Working Temperature	-20°C to +80°C
Waterproof Level	Not waterproof

Parameter	Value
Module Nature	Non-isolated
Dimensions (L x W x H)	130mm x 70mm x 26mm (5.12" x 2.76" x 1.02")
Weight	240g (7.1 ounces)
Manufacturer	YIPIN HEXHA
ASIN	B095J1LPXG
UPC	738780941748

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your DC Buck Converter. Always ensure power is disconnected before wiring.

Wiring Diagram:

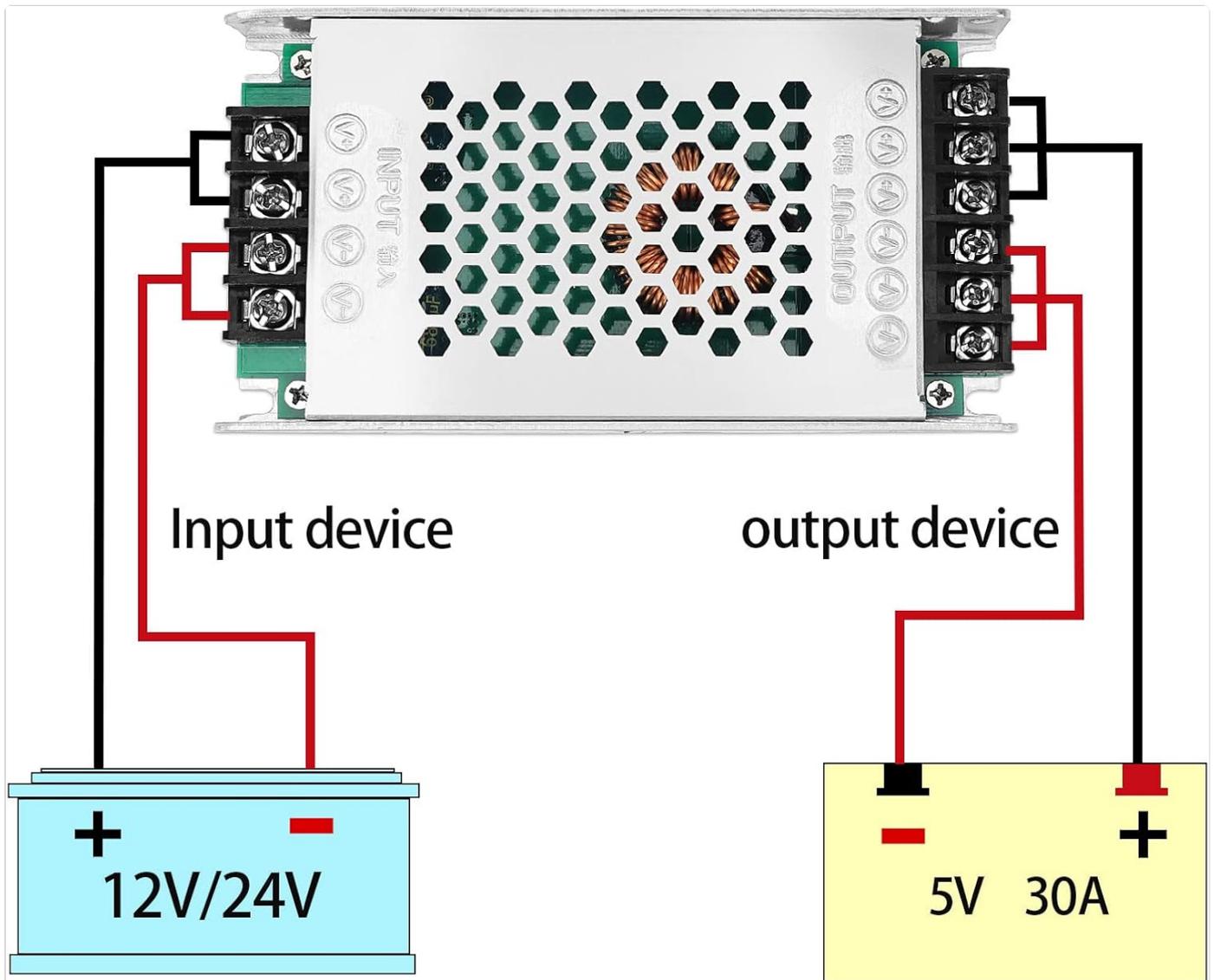


Image 5.1: Wiring diagram showing connections for input (12V/24V battery) and output (5V 30A device). Red wires are positive, black wires are negative.

Connection Steps:

- 1. Identify Terminals:** The converter has two sets of screw terminals. One set is for "INPUT" and the other for

"OUTPUT". Each set typically has two terminals for positive (+) and two for negative (-).

2. Input Connection:

- Connect the positive (+) terminal of your 12V/24V DC power source (e.g., battery) to the "INPUT +" terminal on the converter.
- Connect the negative (-) terminal of your 12V/24V DC power source to the "INPUT -" terminal on the converter.
- *Note:* Some units may have color-coded wires. Typically, red is positive input, and black is negative input. Verify with a multimeter if unsure.

3. Output Connection:

- Connect the positive (+) terminal of your 5V device to the "OUTPUT +" terminal on the converter.
- Connect the negative (-) terminal of your 5V device to the "OUTPUT -" terminal on the converter.
- *Note:* Typically, yellow is positive output, and black is negative output. Verify with a multimeter if unsure.

4. **Secure Connections:** Ensure all wire connections are tight and secure to prevent loose contacts, which can cause overheating or intermittent operation.

5. **Mounting:** Mount the converter in a location that allows for adequate airflow around the aluminum casing to facilitate heat dissipation.

Important Note on Wiring Labels:

While the product is designed for clear labeling, some users have reported instances where the wiring diagram sticker on the unit might be misleading or reversed compared to standard color codes (e.g., red/black for input, yellow/black for output). It is highly recommended to use a multimeter to verify the input and output terminals and their polarities before connecting any devices. Incorrect wiring can lead to damage to the converter or the connected load.

6. OPERATING INSTRUCTIONS

Once properly installed, operating the YIPIN HEXHA DC Buck Converter is straightforward:

1. **Power On:** After all connections are securely made and verified, apply the 12V/24V DC input power to the converter.
2. **Output Verification:** The converter will automatically regulate the input voltage to a stable 5V DC output. You can use a multimeter to confirm the 5V output at the output terminals before connecting sensitive devices.
3. **Connect Load:** Connect your 5V DC device(s) to the output terminals. Ensure the total current draw does not exceed 30A.
4. **Monitoring:** Periodically check the converter for excessive heat during operation, especially under heavy loads. While designed for efficient heat dissipation, proper ventilation is crucial.
5. **Protection Activation:** In case of over-voltage, over-current, over-temperature, or short-circuit conditions, the converter's built-in protection mechanisms will activate to safeguard itself and connected devices. The unit should automatically resume normal operation once the fault condition is removed.

7. MAINTENANCE

The YIPIN HEXHA DC Buck Converter is designed for minimal maintenance. However, following these guidelines can help ensure its longevity and reliable performance:

- **Regular Inspection:** Periodically inspect the converter and its wiring for any signs of damage, corrosion, or loose connections.

- **Cleaning:** Keep the unit clean and free from dust and debris, especially the ventilation areas on the aluminum casing, to maintain optimal heat dissipation. Use a dry, soft cloth for cleaning. Do not use liquids.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature range (-20°C to +80°C) and free from moisture.
- **Avoid Overloading:** Do not continuously operate the converter at its maximum current or power limits for extended periods without adequate cooling.

8. TROUBLESHOOTING

If you encounter issues with your YIPIN HEXHA DC Buck Converter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No output voltage	No input power; Incorrect wiring; Blown fuse (external); Internal fault.	Check input power source. Verify all wiring connections and polarity using a multimeter. Check for external fuses in the input line. If problem persists, contact support.
Output voltage is incorrect (e.g., same as input)	Incorrect wiring (input/output terminals reversed or mislabeled).	Immediately disconnect power. Carefully re-verify input and output wiring and polarity using a multimeter. Ensure input is connected to "INPUT" and output to "OUTPUT". Refer to the wiring diagram (Image 5.1).
Converter is overheating	Excessive load; Insufficient ventilation; High ambient temperature.	Reduce the load on the converter. Ensure it is installed in a well-ventilated area. Check if the ambient temperature is within the operating range.
Output cuts out intermittently	Overload protection activating; Loose connections; Intermittent short circuit.	Check if the load exceeds 30A/150W. Inspect all wiring for loose connections. Check the connected device for intermittent short circuits.
Device not functioning as expected	Incompatible device; Faulty connected device.	Ensure the connected device is compatible with a 5V DC power supply. Test the connected device with another known good 5V power source if possible.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your YIPIN HEXHA DC Voltage Regulator Buck Converter, please refer to the purchase documentation or contact your retailer. You may also visit the official YIPIN HEXHA store on Amazon for additional product information and support resources:

[Visit the YIPIN HEXHA Store on Amazon](#)

