DROK e007189c-0178-47c1-ac1f-aaaa980e5527

DROK 5V to 12V Step Up Converter Instruction Manual

Model: e007189c-0178-47c1-ac1f-aaaa980e5527

Introduction

The DROK 5V to 12V Step Up Converter is a robust and waterproof DC-DC boost converter designed to efficiently convert an input voltage range of 5-11V DC to a stable 12V DC output. This device is engineered for reliability in various demanding environments, featuring a durable aluminum shell for enhanced heat dissipation and protection against environmental factors. It is suitable for a wide array of applications, including automotive systems, solar power setups, and industrial equipment.

Specifications

Parameter	Value
Input Voltage	DC 5-11V
Output Voltage	DC 12V
Output Power	120W
Output Current	10A (Continuous)
Transfer Efficiency	Over 93%
Working Temperature	-40 to +85 ℃
Dimensions (L*W*H)	66 x 60 x 22mm (2.60 x 2.36 x 0.87in)
Mounting Wire Length	13-14cm (5.12-5.51in)
Item Weight	8.8 ounces (0.25 Kilograms)
Color	Silver

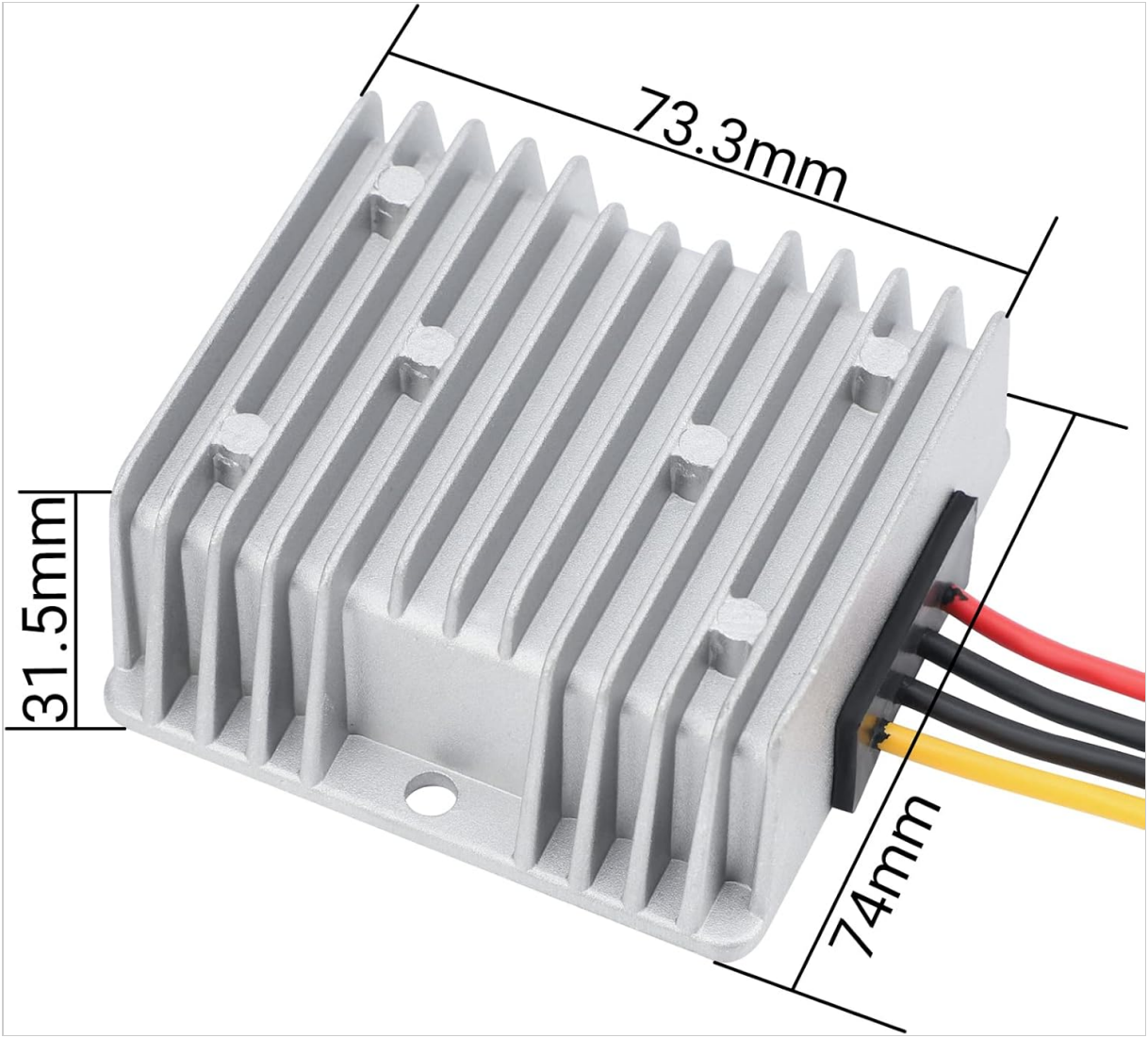

Image: Converter dimensions for installation planning.

Product Features

- **Wide Input Voltage Range:** Accepts DC 5-11V, converting to a stable 12V output.
- **High Power Output:** Delivers up to 10A current and 120W power.
- **High Conversion Efficiency:** Achieves over 93% power transfer efficiency, minimizing energy loss.
- **Durable Construction:** Features a waterproof, dustproof, moisture-proof, and shockproof design, making it suitable for harsh working environments.
- **Aluminum Shell:** The robust aluminum casing provides superior heat dissipation and structural integrity compared to plastic enclosures.
- **Integrated Protection:** Includes essential safety features such as over-current protection, overheat protection, and instant high voltage protection for safe and reliable operation.

Setup

Proper wiring is crucial for the safe and effective operation of the converter. Follow the instructions below carefully:

1. **Input Connection:** Connect the **Red wire** to the positive (+) terminal of your DC 5-11V power source. Connect the **Black wire** (from the input side) to the negative (-) terminal of your DC 5-11V power source.
2. **Output Connection:** Connect the **Yellow wire** to the positive (+) terminal of your 12V DC load. Connect the **Black wire** (from the output side) to the negative (-) terminal of your 12V DC load.

Ensure all connections are secure and that polarity is correct before applying power. Incorrect wiring can damage the converter and connected devices.

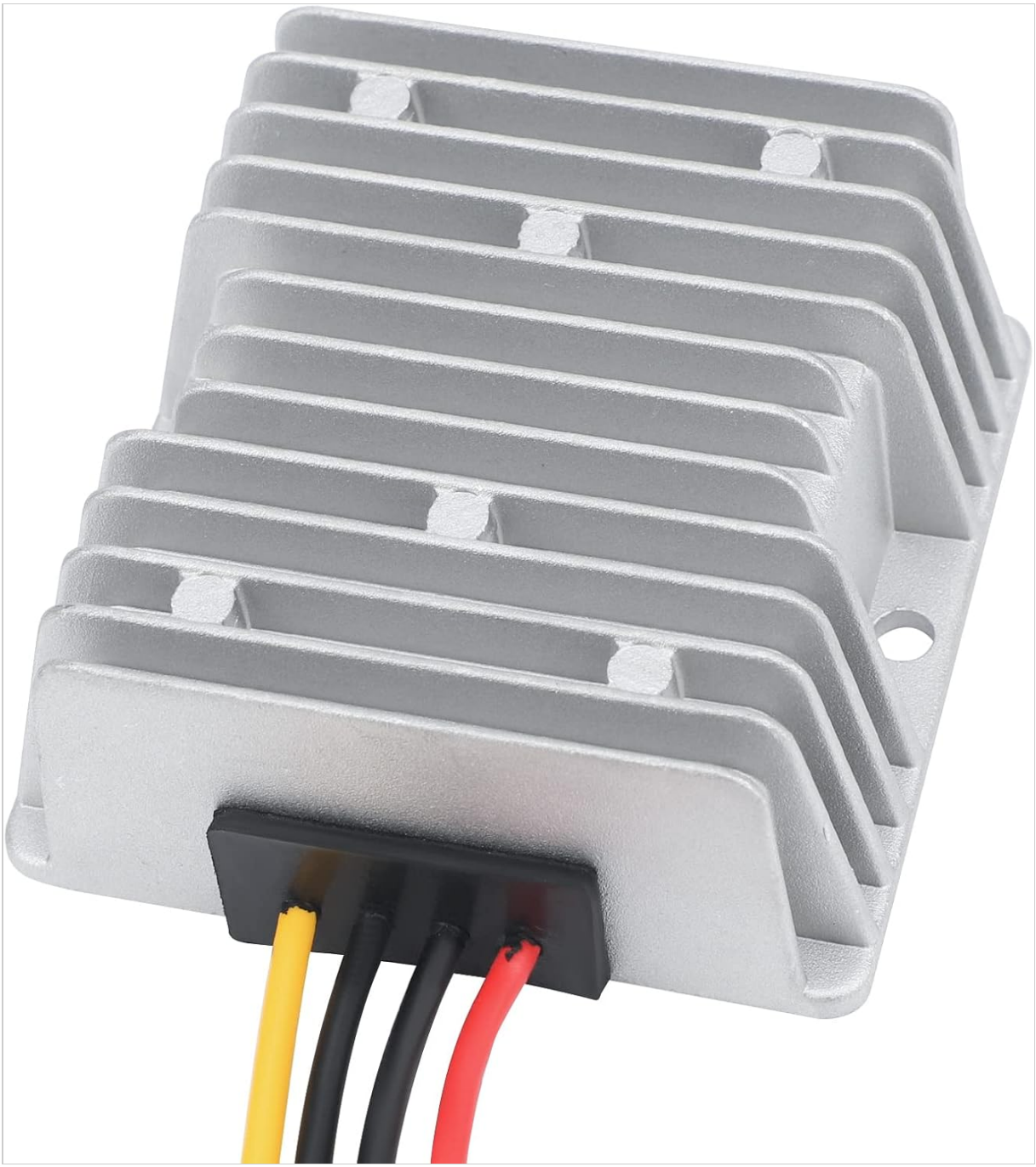

Image: The converter showing input (IN) and output (OUT) wiring terminals. Red and black wires for input, yellow and black wires for output.

Operating Instructions

Once properly installed, the DROK 5V to 12V Step Up Converter operates automatically. Observe the following guidelines for optimal performance:

- **Power On:** After making all connections, apply power to the input side. The converter will automatically boost the voltage to a stable 12V DC.
- **Load Management:** Ensure that the total current draw of your connected 12V devices does not exceed the converter's maximum output current of 10A or power of 120W. Exceeding these limits may trigger the built-in protection mechanisms.
- **Environmental Conditions:** The converter is designed to operate in a wide temperature range (-40 to +85

°C) and is waterproof. However, avoid submerging it for extended periods or exposing it to corrosive liquids.

- **Applications:** This voltage regulator module is suitable for various applications such as car audio systems, radio equipment, walkie-talkie monitoring, electric fans, solar panels, photovoltaic panels, motors, and other industrial equipment requiring a stable 12V supply from a lower voltage source.

Maintenance

The DROK 5V to 12V Step Up Converter is designed for low maintenance. Adhering to these simple practices will help ensure its longevity:

- **Connection Inspection:** Periodically inspect all wiring connections to ensure they remain secure and free from corrosion or damage. Loose connections can lead to poor performance or overheating.
- **Cleanliness:** While the device is dustproof, keeping the exterior clean from excessive dirt or debris can help maintain optimal heat dissipation. Use a dry, soft cloth for cleaning.
- **Physical Protection:** Although shockproof, avoid exposing the converter to severe physical impacts that could compromise its internal components or waterproof seal.
- **Environmental Checks:** Ensure the operating environment remains within the specified temperature range.

Troubleshooting

If you encounter issues with your DROK 5V to 12V Step Up Converter, refer to the following troubleshooting steps:

- **No Output Voltage:**
  - Verify that the input voltage is within the specified range of 5-11V DC.
  - Check all wiring connections for proper polarity (Red to +, Black to - for input; Yellow to +, Black to - for output) and ensure they are securely fastened.
  - The converter features over-current protection. If the connected load exceeds 10A or 120W, the device may shut off the output to prevent damage. Disconnect the input power briefly and then reconnect it to reset the protection. Reduce the load if this was the cause.
- **Overheating:**
  - Ensure there is adequate airflow around the converter. Although its aluminum shell aids in heat dissipation, prolonged operation at maximum load in confined or poorly ventilated spaces can lead to excessive heat.
  - Confirm that the connected load does not exceed the converter's maximum specifications.
- **Unstable Output Voltage:**
  - Check the stability of your input power source. Fluctuations in input voltage can sometimes affect output stability.
  - Ensure connections are solid and free from intermittent contact.

Warranty and Support

DROK is committed to providing high-quality products and customer satisfaction. This product comes with a**one-year service period** from the date of purchase.

- **Warranty Coverage:** If you experience any quality issues with your DROK 5V to 12V Step Up Converter within the one-year service period, you may be eligible for a brand new replacement.
- **Customer Support:** For detailed warranty claims, technical assistance, or any other inquiries, please visit the official DROK Store on Amazon or contact our customer service team directly.