

Senzooe ZK-JVA-12K

Senzooe ZK-JVA-12K DC 12A Buck Converter Module User Manual

Model: ZK-JVA-12K | Brand: Senzooe

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of the Senzooe ZK-JVA-12K DC 12A Buck Constant Voltage Constant Current Module. This module is designed for applications requiring step-down voltage conversion with precise control over output voltage and current, such as solar charging systems and LED drivers.

2. SAFETY INSTRUCTIONS

- Always ensure correct input and output polarity to prevent damage to the module and connected devices.
- Do not exceed the maximum input voltage or output current ratings specified in the specifications.
- Operate the module in a well-ventilated area to prevent overheating.
- Avoid short circuits on the output terminals.
- Keep the module away from moisture, dust, and corrosive substances.
- Installation and adjustments should only be performed by individuals familiar with electronics and electrical safety procedures.

3. PRODUCT FEATURES

- DC-DC Buck Converter: Steps down input voltage to a lower, regulated output voltage.
- Constant Voltage (CV) Mode: Maintains a stable output voltage.
- Constant Current (CC) Mode: Maintains a stable output current.
- Suitable for solar charging applications.
- Ideal for driving LEDs requiring constant current.
- Compact design.

4. SPECIFICATIONS

Parameter	Value
Model	ZK-JVA-12K
Type	DC-DC Buck Converter (Constant Voltage, Constant Current)
Maximum Output Current	12A
Approximate Size	71mm x 40mm
Approximate Weight	54g

Note: Specific input/output voltage ranges are typically provided by the manufacturer. Always refer to the product labeling or official documentation for precise operating parameters.

5. SETUP AND CONNECTIONS

Before connecting, ensure all power sources are disconnected. Observe proper polarity for all connections.

- Input Connection:** Connect your DC power source to the **IN+** and **IN-** terminals. Ensure the input voltage is within the module's specified operating range.
- Output Connection:** Connect your load (e.g., LED array, battery for charging) to the **OUT+** and **OUT-** terminals.
- Power On:** Once all connections are secure, apply power to the input terminals.



Figure 1: Top view of the ZK-JVA-12K module, highlighting connection points and main components.



Figure 2: Bottom view of the ZK-JVA-12K module, showing the protective casing and ventilation holes.

6. OPERATING INSTRUCTIONS

The ZK-JVA-12K module features adjustable constant voltage (CV) and constant current (CC) modes. Adjustments are typically made via onboard potentiometers.

1. Voltage Adjustment (CV Mode):

With the module powered on and a load connected, use a voltmeter to monitor the output voltage. Carefully turn the voltage adjustment potentiometer (often labeled **CV** or **V-ADJ**) clockwise to increase the voltage and counter-clockwise to decrease it, until the desired output voltage is reached.

2. Current Adjustment (CC Mode):

To set the constant current limit, first set the output voltage slightly higher than the required load voltage. Then, connect an ammeter in series with the load. Carefully turn the current adjustment potentiometer (often labeled **CC** or **I-ADJ**) clockwise to increase the current limit and counter-clockwise to decrease it, until the desired output current is reached. For LED drivers, this sets the maximum current flowing through the LEDs.

3. **Monitoring:** It is recommended to use external multimeters to accurately monitor output voltage and current during initial setup and critical operations.

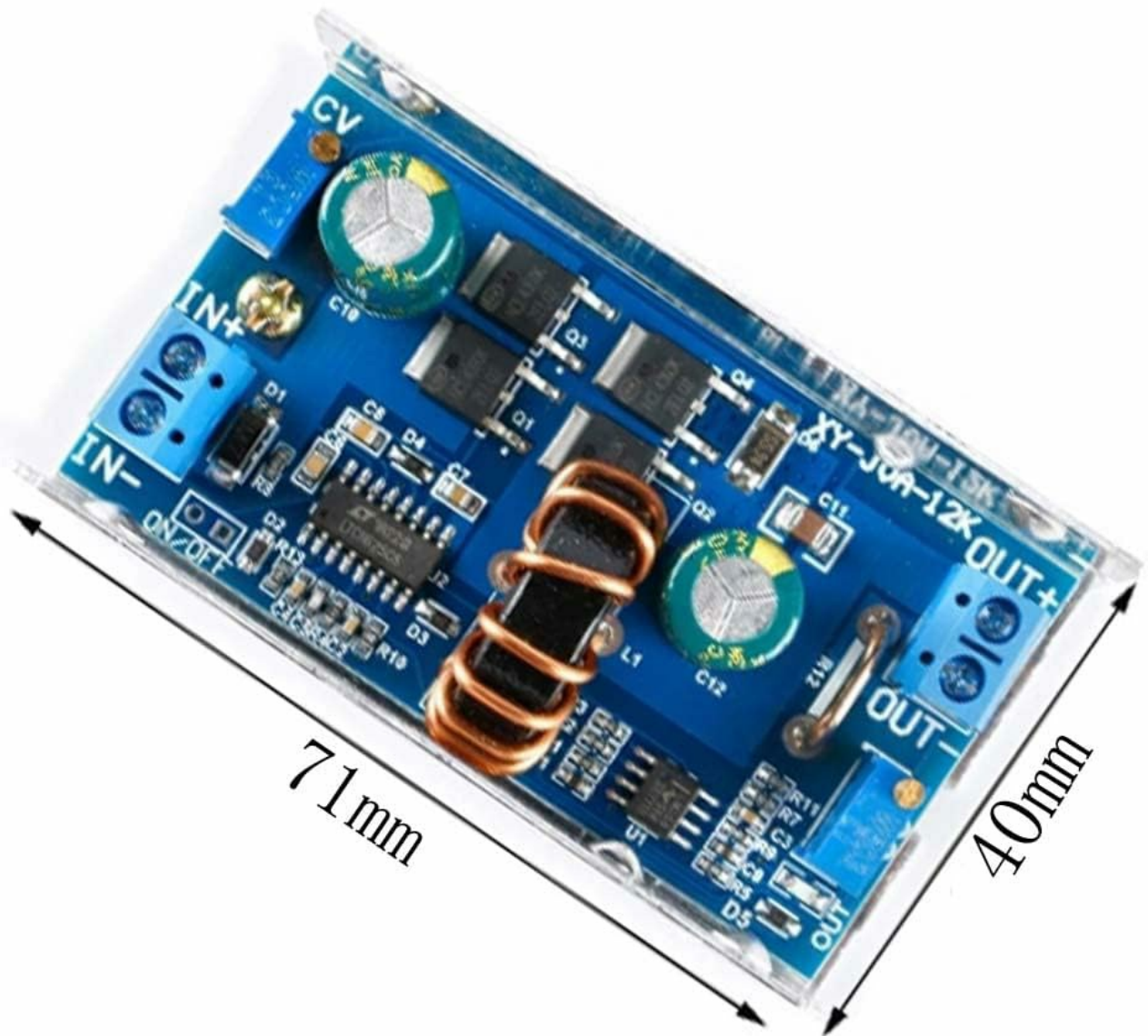


Figure 3: Dimensions of the ZK-JVA-12K module, measuring approximately 71mm x 40mm.

7. MAINTENANCE

- Keep the module clean and free from dust and debris.
- Periodically check connections for tightness and signs of corrosion.
- Ensure adequate airflow around the module, especially during high-current operation, to prevent thermal shutdown.
- Do not attempt to modify the module's circuitry, as this may void any potential warranty and could lead to malfunction or damage.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No output voltage/current	No input power; incorrect wiring; module fault.	Check input power supply; verify all connections for correct polarity and tightness; test module with a known good input and simple load.
Output voltage/current unstable	Input power fluctuations; faulty load; potentiometer issues.	Ensure stable input power; test with a different load; gently adjust potentiometers.
Module overheating	Excessive load current; insufficient ventilation; short circuit.	Reduce load current; ensure proper airflow; check for short circuits on output.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the seller or manufacturer's official website. Keep your purchase receipt for any warranty claims.

For further assistance, you may contact the seller through the platform where the product was purchased.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

