

[Manuals.plus](#) /

› [DROK](#) /

› DROK CNC DC Buck Converter with Meter (20A 1200W) Instruction Manual

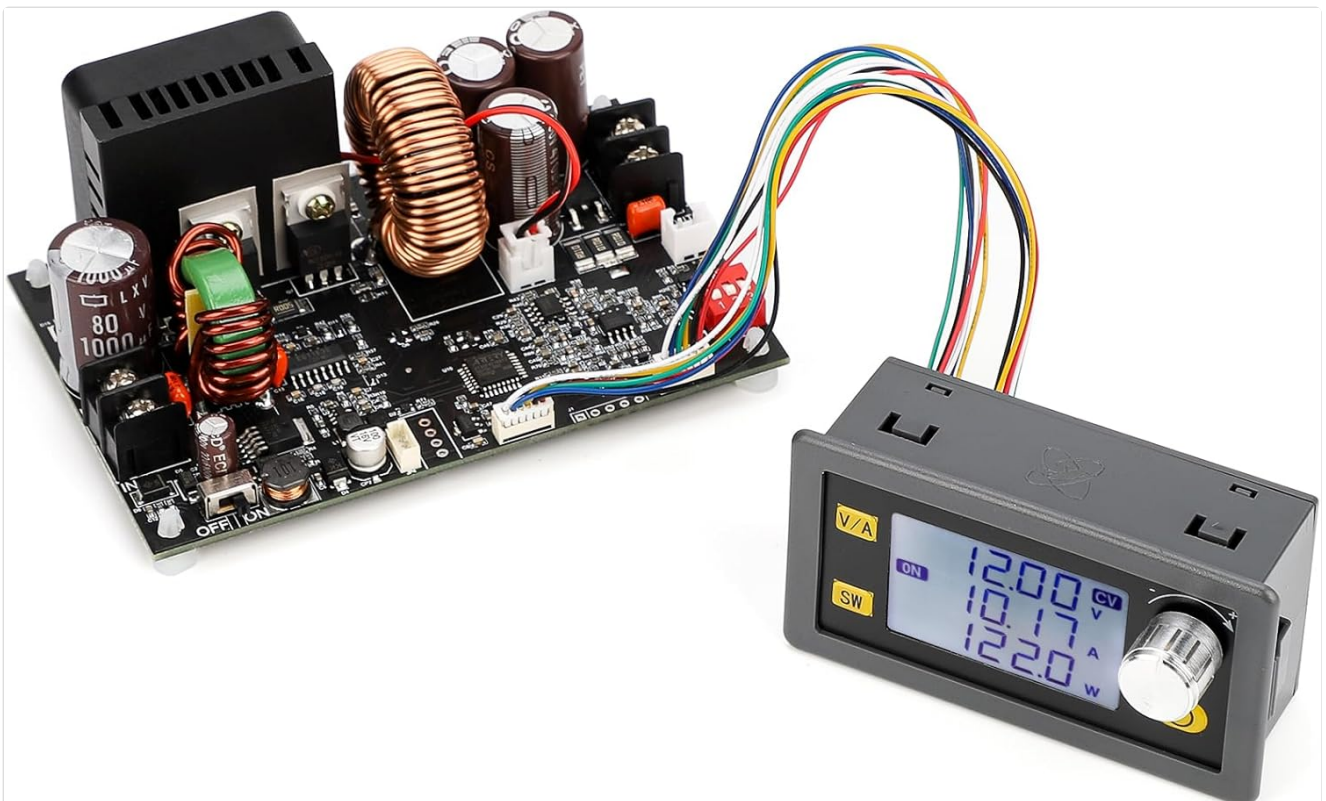
DROK FBA200707

DROK CNC DC Buck Converter with Meter (20A 1200W) Instruction Manual

Model: FBA200707 | Brand: DROK

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the DROK CNC DC Buck Converter with Meter. This adjustable step-down module is designed to convert a higher DC input voltage (6V-70V) to a lower, adjustable DC output voltage (0-60V) with a maximum output current of 20A and power of 1200W. It features an integrated meter for real-time monitoring and various protection functions to ensure safe and reliable operation.



2. SAFETY INFORMATION

Please read and understand all safety warnings and instructions before operating this device. Failure to do so may result in electric shock, fire, or serious injury.

- Ensure the input voltage does not exceed the maximum specified limit of 70V DC.
- Do not reverse the polarity of input or output connections. Incorrect wiring can cause permanent damage to the module and connected devices.
- Always disconnect power before making any wiring changes or adjustments.
- Operate the module in a well-ventilated area to prevent overheating. The integrated cooling fan will activate under certain load conditions.
- Avoid short-circuiting the output. While the module has over-current protection, prolonged short circuits can cause damage.
- This device is intended for use by individuals with appropriate technical knowledge of electronics and power systems.

3. PRODUCT FEATURES

- **Wide Input Voltage Range:** 6V to 70V DC.
- **Adjustable Output Voltage:** 0V to 60V DC.
- **High Output Current:** Up to 20A.
- **High Output Power:** Up to 1200W.
- **Fixed Output Voltage Settings:** Pre-set options for 5V, 9V, 12V, 24V, 36V, 48V, 60V.
- **Low Ripple Output:** Designed for stable power delivery.
- **Temperature-Controlled Cooling Fan:** Activates when current exceeds 2A, power exceeds 50W, or temperature exceeds 50°C (122°F).
- **LCD Color Screen Display:** Clear and convenient monitoring of parameters.
- **Comprehensive Protection Features:**
 - Input Over Voltage Protection (OVP)
 - Input Under Voltage Protection (LVP)
 - Output Over Voltage Protection (OVP)
 - Output Over Current Protection (OCP)
 - Output Over Power Protection (OPP)
 - Over Temperature Protection (OTP)
 - Timeout Protection
 - Over Capacity Protection
 - Over Energy Protection

4. SPECIFICATIONS

Parameter	Value
-----------	-------

Parameter	Value
Input Voltage	6V - 70V DC
Output Voltage	0V - 60V DC
Output Current	0 - 20A
Output Power	0 - 1200W
Input Voltage Measurement Resolution	0.01V
Output Voltage Setting/Measurement Resolution	0.01V
Current Setting/Measurement Resolution	0.01A
Input Voltage Measurement Accuracy	1% + 5 digits
Output Voltage Setting/Measurement Accuracy	0.4% + 1 digit
Output Current Setting/Measurement Accuracy	0.5% + 3 digits
Fan Start-up Condition	Current > 2A, Power > 50W, or Temperature > 50°C (122°F)
Base Board Size	109 × 72 × 32 mm (4.29 × 2.83 × 1.26 inches)
Product Dimensions (Overall)	10.9 x 7.19 x 81.28 cm
Item Weight	0.3 Kilograms

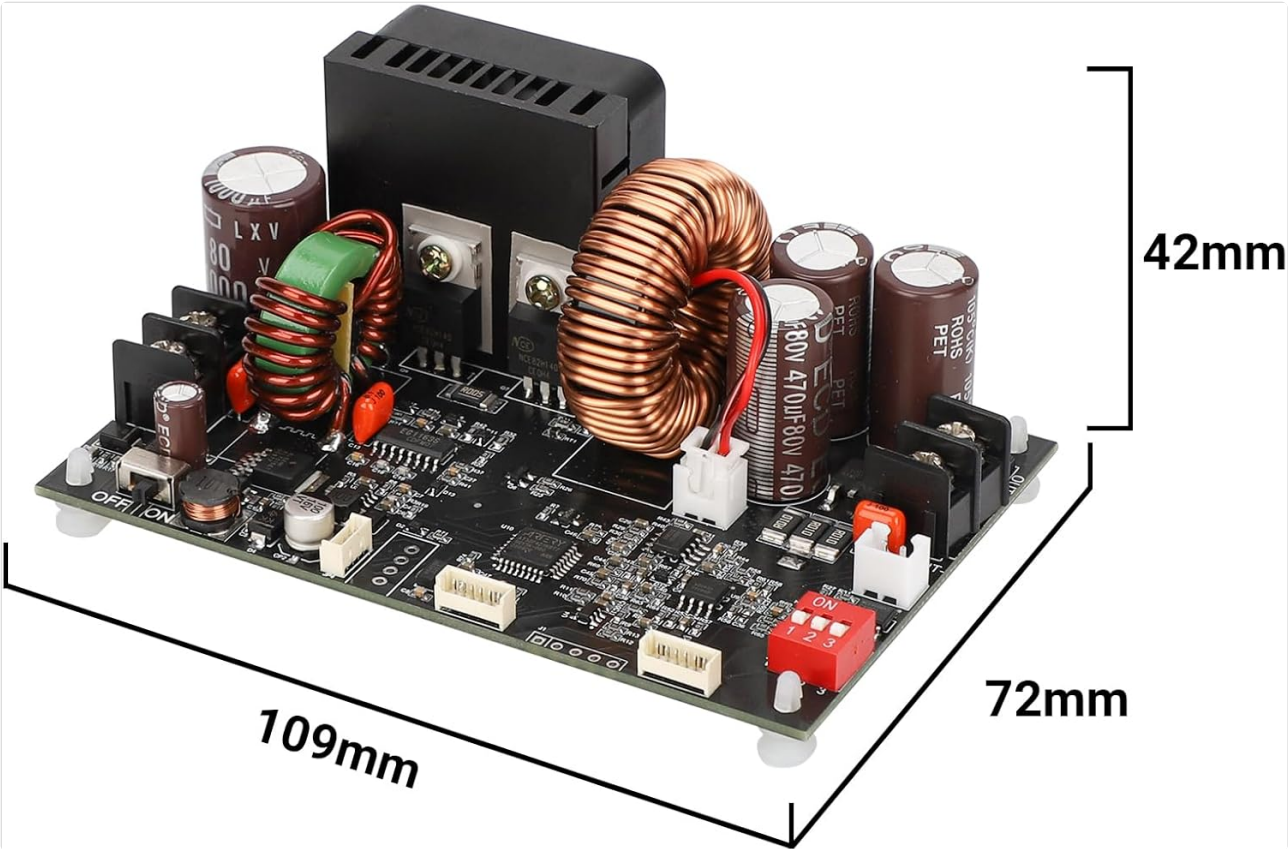


Image 4.1: Dimensions of the converter module.



Image 4.2: Dimensions of the display unit.

5. INSTALLATION AND WIRING

Proper wiring is crucial for the safe and correct operation of the buck converter. Refer to the diagram below for connection points.

- **Input Connection:** Connect your DC power source to the 'IN+' (positive input) and 'IN-' (negative input) terminals. Ensure the input voltage is within the 6V-70V range.
- **Output Connection:** Connect your load to the 'OUT+' (positive output) and 'OUT-' (negative output) terminals.
- **Display Unit Connection:** The display unit connects to the main module via the provided cable.
- **Fixed Output Voltage Setting (DIP Switch):** The module includes a DIP switch for setting common fixed output voltages (5V, 9V, 12V, 24V, 36V, 48V, 60V). Refer to the diagram on the back of the module for specific switch configurations. When using fixed output, the adjustable voltage knob on the display unit will be overridden.

6.1 Adjustable Output Voltage/Current

- **Power On/Off:** Use the dedicated ON/OFF button on the display unit to enable or disable the output.
- **Voltage Adjustment:** Rotate the knob on the display unit to adjust the output voltage. The LCD will show the set voltage.
- **Current Limit Adjustment:** Use the 'I-SET' button to enter current limit adjustment mode. Rotate the knob to set the desired maximum output current. This acts as a constant current (CC) limit.
- **Display Modes:** The 'SW' button cycles through various display parameters such as input voltage, output voltage, output current, and output power.

6.2 Fixed Output Voltage

To use a fixed output voltage, configure the DIP switches on the main module according to the desired voltage (refer to Image 5.2). When DIP switches are set for a fixed voltage, the adjustable knob on the display unit will not control the output voltage.

6.3 Protection Settings

The module includes various protection features. Some parameters, like Over Current Protection (OCP) and Over Voltage Protection (OVP), can be set via the display unit by long-pressing the respective 'I-SET' or 'V-SET' buttons and then using the knob to adjust the threshold.

Your browser does not support the video tag.

Video 6.1: Operation overview and setting adjustments for a DROK buck converter. This video demonstrates general operational principles and interface navigation.

7. MAINTENANCE

- **Cleaning:** Keep the module and display unit clean and free from dust. Use a dry, soft cloth for cleaning. Do not use liquids or abrasive cleaners.
- **Ventilation:** Ensure adequate airflow around the module, especially around the heat sink and fan, to prevent overheating.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Storage:** When not in use for extended periods, store the module in a dry, cool environment.

8. TROUBLESHOOTING

- **No Output Voltage:**
 - Check input power supply: Ensure it is connected correctly and providing voltage within the specified range (6V-70V).
 - Verify output is enabled: Press the ON/OFF button on the display unit to ensure the output is active.
 - Check protection status: The display may indicate an active protection (e.g., OVP, OCP). Address the cause of the protection trigger.
 - Inspect wiring: Ensure all connections are secure and correct polarity is observed.
- **Output Voltage/Current Not Stable:**
 - Check load: Ensure the load is not exceeding the module's maximum current or power rating.
 - Input power stability: Verify the input power source is stable and capable of supplying the required current.

- Overheating: Ensure proper ventilation and that the cooling fan is operating when needed.

- **Display Not Working:**

- Check power input: Ensure the module is receiving power.
- Verify display cable connection: Ensure the cable connecting the display to the main module is securely attached.

- **Fixed Output Voltage Not Correct:**

- Check DIP switch settings: Ensure the DIP switches are configured correctly for the desired fixed voltage as per Image 5.2.

9. WARRANTY AND SUPPORT

This DROK CNC DC Buck Converter comes with a one-year warranty from the date of purchase. For technical support, warranty claims, or further assistance, please contact DROK customer service through your retailer or the official DROK website.

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