

Bolisila RD6018

Bolisila RD6018 DC Adjustable Step Down Voltage Power Supply
User Manual

Model: RD6018

1. INTRODUCTION

The Bolisila RD6018 is a versatile DC adjustable step-down voltage power supply designed for various applications requiring precise voltage and current control. This manual provides essential information for the safe and efficient operation of your device, including setup, operational procedures, and technical specifications.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before operating the device to prevent injury or damage.

- Ensure the input voltage is within the specified range (6-70.00V) to avoid damage.
- Do not operate the device in wet or damp conditions.
- Always connect the load before applying power.
- Verify correct polarity when connecting input and output terminals.
- Do not exceed the maximum output current (18.00A) or power (1080W).
- Keep the device away from flammable materials.
- Only qualified personnel should perform maintenance or repairs.

3. PRODUCT FEATURES

The Bolisila RD6018 offers several key features for efficient and reliable power management:

- Bright display for clear visibility in various lighting conditions.
- Compact design for space-saving on workbenches.
- 3-digit backlit LED display for accurate voltage and current readings.
- Precise and stable output suitable for laboratory, research, and production environments.
- Intelligent temperature-controlled fan and heat sink for effective heat dissipation.

4. PACKAGE CONTENTS

Please check the package contents upon receipt. If any items are missing or damaged, contact your supplier.

- Bolisila RD6018 DC Power Supply Unit
- User Manual (this document)
- Power Cable (if included with your specific model)
- External Temperature Sensor (if included with your specific model)

5. SETUP

Follow these steps to set up your RD6018 power supply:

1. **Unpacking:** Carefully remove the power supply from its packaging.
2. **Placement:** Place the unit on a stable, level surface with adequate ventilation. Ensure no vents are obstructed.
3. **Input Power Connection:** Connect a suitable DC power source (6-70V) to the input terminals, observing correct polarity.
4. **Output Load Connection:** Connect your load to the output terminals. Ensure the load's voltage and current requirements are within the RD6018's specifications.
5. **Optional Connections:** If your model includes a USB communication port or external temperature sensor, connect them as required.



Figure 5.1: Front view of the Bolisila RD6018 DC Power Supply, showing the display, control buttons, and output terminals. This image illustrates the general layout and connections.



Figure 5.2: Bolisila RD6018 DC Power Supply, highlighting the USB Communication feature. This view shows the device with an indication of its data communication capability.

6. OPERATING INSTRUCTIONS

This section outlines the basic operation of the RD6018.

6.1 Power On/Off

- Press the **ON/OFF** button to power on the device.
- Press and hold the **ON/OFF** button to power off the device.

6.2 Setting Voltage and Current

1. Press the **V-SET** button to enter voltage setting mode. Use the rotary encoder or numerical buttons to adjust the desired output voltage.

2. Press the **I-SET** button to enter current setting mode. Use the rotary encoder or numerical buttons to adjust the desired output current limit.
3. Press **ENTER** to confirm the settings.

6.3 Output Control

- After setting voltage and current, press the output control button (often labeled with a power symbol or "Output") to enable or disable the output. The display will indicate the output status.

6.4 Memory Functions (M1-M9)

- To save a setting: Adjust voltage and current, then press and hold one of the memory buttons (M1-M9) until the display confirms saving.
- To recall a setting: Press the desired memory button (M1-M9) briefly.

7. SPECIFICATIONS

Technical specifications for the Bolisila RD6018 DC Power Supply:

Parameter	Value
Model	RD6018
Input Voltage Range	6-70.00V
Output Voltage Range	0-60.00V
Output Current Range	0-18.00A
Output Power Range	0-1080W
Input Voltage Measurement Resolution	0.01V
Output Voltage Setting Resolution	0.01V
Output Current Setting Resolution	0.01A
Battery Voltage Measurement Resolution	0.01V
Input Voltage Measurement Accuracy	±(1%+5 digits)
Output Voltage Accuracy (Setting vs. Measurement)	±(0.3%+3 digits)
Output Current Accuracy (Setting vs. Measurement)	±(0.5%+5 digits)
Battery Voltage Measurement Accuracy	±(0.5%+3 digits)
Automatic Cut-off Current Value (Charging)	100mA
Output Ripple Typical	250mV VPP@6A
Working Temperature Range	-10~40°C
External Sensor Temperature Range	-10~100°C / 0~200°F
External Sensor Temperature Accuracy	±3°C / ±6°F
Constant Voltage Mode Response Time	2ms (0.1A-5A Load)
Constant Voltage Mode Load Regulation	±(0.1%+2 digits)

Parameter	Value
Constant Current Mode Load Regulation	$\pm(0.1\%+3 \text{ digits})$
Capacity Measurement Range	0-9999.99Ah
Energy Measurement Range	0-9999.99Wh
Capacity and Energy Statistical Error	$\pm 2\%$
Buck Working Mode	Voltage drop $>1V$ and $>10\%$
Over Temperature Protection	Temperature $>80^{\circ}C$
Screen Brightness Setting	0-5 (6 levels total)
Screen	2.4 inch color display
Weight (with package)	0.68kg (approx. 1.5 lbs)
Product Dimension	167 x 81 x 69mm
Cooling Fan Start Condition	Output current $>8A$ or System temperature $>45^{\circ}C$
Cooling Fan Shut Down Condition	Output current $<7.9A$ and temperature $<45^{\circ}C$

8. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your RD6018.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure the ventilation openings are free from dust and obstructions. Periodically clean dust from the fan and vents using compressed air.
- **Storage:** When not in use for extended periods, store the device in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Inspection:** Regularly inspect power cables and connections for any signs of wear or damage.

9. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

- **No Power:**
 - Check the input power connection and ensure the power source is active.
 - Verify the input voltage is within the 6-70V range.
 - Ensure the ON/OFF button has been pressed.
- **No Output Voltage/Current:**
 - Ensure the output is enabled (check the display indicator).
 - Verify that the set voltage and current limits are appropriate for the load.
 - Check for short circuits or open circuits in the load connection.
 - The device may be in protection mode (e.g., over-temperature, over-current). Check the display for error messages.
- **Inaccurate Readings:**
 - Ensure all connections are secure and free from corrosion.

- Compare readings with a calibrated multimeter if possible.
- Refer to the accuracy specifications in Section 7.

- **Fan Not Running:**

- The fan is temperature-controlled. It will only activate when the output current exceeds 8A or the system temperature exceeds 45°C. This is normal operation.

10. WARRANTY AND SUPPORT

Bolisila products are designed for reliability and performance. For specific warranty information, please refer to the documentation provided with your purchase or contact your retailer. For technical support or inquiries, please reach out to Bolisila customer service through their official channels.

Note: Product specifications are subject to change without prior notice.

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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.

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