

Mini DC Power Supply User Manual

I. Overview

This compact wide-range programmable DC regulated power supply delivers high-quality, stable performance at an economical price. Featuring LED four-digit voltage/current display, it incorporates five robust safeguards: Overvoltage Protection (OVP), Overcurrent Protection (OCP), Overpower Protection (OPP), Overtemperature Protection (OTP), and Short Circuit Protection. Boasting exceptional stability and reliability, it serves as an ideal solution for academic institutions, industrial production lines, and appliance repair shops. The series also offers optional programming interfaces for remote or automated control systems.

II. Product Specifications

Specifications (Rated)	Output voltage (0-Umax)	Output current (0-Imax)	Output power (0-Pmax)
40V/20A	0-40V	0-20A	0-300W
80V/10A	0-80V	0-10A	0-300W
160V/5A	0-160V	0-5A	0-300W

III. Technical Parameters

1. Rated Working Conditions

Working voltage: AC220V±10%,50Hz (optional AC110V±10%,60Hz)

Working conditions: temperature 0-40°C relative humidity: ≤80%RH

Storage conditions: temperature-20-60°C relative humidity: ≤80%RH

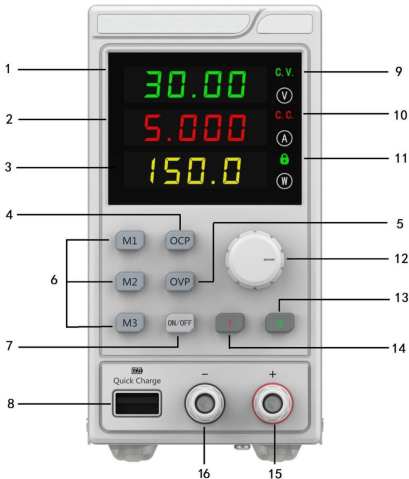
Temperature range to ensure accuracy: 23°C±5°C

2. Specifications

Specifications	40V/20A	80V/10A	160V/5A
Voltage			
Set resolution	<100V : 10mV ; ≥100V : 0.1V		
Set precision	≤0.1%+5digits		
Reading resolution	<100V : 10mV ; ≥100V : 0.1V		
Reading precision	≤0.1%+5digits		
Temperature coefficient	≤0.02%+3mV		
Ripple	≤12mVrms	≤12mVrms	≤12mVrms
Current			
Set resolution	<10A : 1mA; ≥10A: 10mA		
Set precision	≤0.2%+10digits		
Reading resolution	<10A : 1mA; ≥10A: 10mA		
Reading precision	≤0.2%+10digits		
Temperature coefficient	≤0.02%+3mA		
Ripple	≤18mArms	≤18mArms	≤26mArms
Load regulation	≤0.2%Umax+5mV		
Line Regulation			
OVP	0-41V	0-81V	0-161V
OCP	0-20.5A	0-10.5A	0-5.5A
Maximum voltage	40.5V	80.5V	160.5V
Maximum current	20.1A	10.1A	5.1A
Cooling Mode	Air cooling		
Weight	≤2.2KG		
Bare Machine Dimensions	80×150×230 (mm)		

IV. Panel Features

Front panel



1. **Voltage value display** : display the preset voltage value in standby state; display the actual output voltage value when the output is open. Unit: volts (V).

2. **Current value display** : displays the preset current value in standby state, shows the actual output current value when the output is on. Unit: amp(A).

3. **Power value display** : displays the output power value (the product of the output voltage value and the current value). Unit: watt (W).

4. **ON/OFF button** : short press can switch the output state of the power supply. The color is bright red in standby state and bright green in output state.

5. **USB charging output interface**: QC18W(5V-3A,9V-2A,12V-1.5A)

6. **Constant Voltage (CV) Indicator** : This light is lit in the stable voltage working state, bright green.

7. **Constant Current (CC) Indicator** : This light is lit in the stable current working state, bright green.

8. **The keyboard lock indicator** : Long press the current knob to lock or unlock the function. The yellow indicator light is locked. In the locked state of the key, only ON/OFF keys are valid.

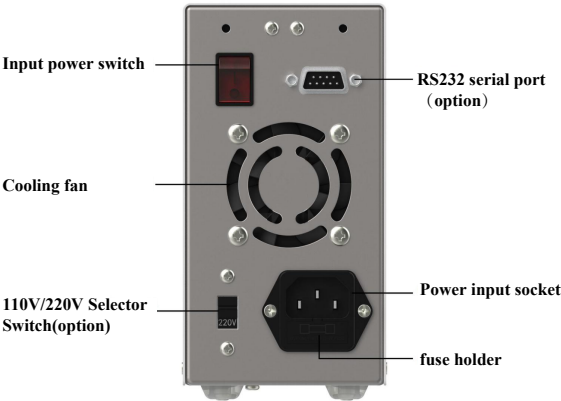
9. **Voltage Adjustment Knob**: Short-pressing the knob activates voltage adjustment mode. In this mode, short-pressing the knob moves the editing position (shown in flashing lights). Turning it clockwise increases voltage, while counterclockwise decreases it. Long-pressing the knob saves the current output status as the initial settings after each power-on, taking effect immediately.

10. **Current adjustment knob**: Short press the knob to enter the current setting mode. In setting mode, short press the knob to move the editing position (flashing display). Rotate clockwise to increase the current, and rotate counterclockwise to decrease the current. Long press the knob to select unlock or lock voltage and current adjustment knobs, which will take effect immediately.

11. **Positive output terminal (red)**

12. **Output terminal negative (black)**

Back panel



V. Instructions for Use and Protective Measures

1. When the power switch is in the off state, connect the power cord attached to this power supply. The "L" end of the power cord plug should be connected to the live wire of the power supply, and the grounding wire in the power cord should be well connected to the ground.

2. Power supply must be grounded.

3. The power supply should be ventilated when in use. The upper, lower, left and right should keep a gap of 10cm with other objects to ensure smooth ventilation. Do not expose the power supply to dust, corrosive gas and other harmful substances.

4. The technical index measurement of the power supply should be carried out after 15 minutes of preheating.

5. Check whether the power input switch is compatible with the mains before power on, otherwise serious faults may occur.

VI. Packing List

- Power supply*1, Power cord*1, Test line*1, instruction manual*1
- Serial communication cable (optional)

VII. Maintenance

1. The AC input voltage is normal, and the digital display window does not show after starting up. It may be due to fuse burnout or other faults. Disconnect the power switch, unplug the power cord, replace the fuse or ask a professional to check.

2. When the power supply is used as a voltage regulator, if the output voltage is less than the determined value and the CC light is on, it is a limited current output. The power supply automatically switches to the steady flow working state. At this time, the load should be checked or the set current value could be increased according to the use (press "I" key, then adjust the knob clockwise).

3. When the power supply is used as a steady current source, if the output current is less than the determined value and the CV light is on, the voltage output is limited. The power supply automatically switches to the steady voltage working state. At this time, the load should be checked or the set voltage value should be increased according to the use (press "U" key, then adjust the knob clockwise).

4. If the fault is serious and cannot be solved, please contact the dealer or our company.