

User manual

Set the voltage and current limit with the output disabled, then connect the load and enable the output.

OPERATING PROCEDURE

- 1 Prepare the connection**
Keep the output OFF and disconnect the load. Check the required polarity and the electrical limits of the device to be powered.
- 2 Set voltage**
Press V/A: SET CV appears and one digit flashes. Press SW or the encoder to select a digit; rotate the encoder to change it.
- 3 Set current**
Press V/A again: SET CC appears. Select a digit and set the current limit in the same way.
- 4 Save**
Press V/A once more to save and return to the main screen. Check both voltage and current limit.
- 5 Connect the load**
With the output OFF, connect the red clip to positive and the black clip to negative. Prevent short circuits.
- 6 Enable and monitor**
Press ON/OFF. Monitor voltage, current, power and the CV/CC indicator. Disable the output immediately if operation is abnormal.



Monitoring during operation

- 1** Press SW to alternate output voltage and internal input voltage (IN).
- 2** Press the encoder to cycle through W, Ah, Wh and h.
- 3** Hold ON/OFF for about 2 s to clear the counters.
- 4** Hold the encoder for about 2 s to lock or unlock settings.

READINGS AND SAFETY

W · POWER

Instantaneous power drawn by the load.

Ah · CAPACITY

Total charge delivered since the last reset.

Wh · ENERGY

Total energy delivered since the last reset.

h · TIME

Accumulated output time or the OHP timed limit.

Understanding CV and CC

CV means the power supply is maintaining the set voltage. CC means the current limit has been reached and the voltage is reduced automatically.

ADVANCED CONFIGURATION

Protections and parameters

ENTERING THE MENU

1 ENTER

From the normal screen, hold SW for approximately 2 seconds.

2 BROWSE

Short-press SW to move to the next parameter.

3 EDIT

Press the encoder to select a digit and rotate it to change the value.

4 SAVE

Hold SW for approximately 2 seconds to save and exit.

PARAMETER MEANINGS

LVP LOW VOLTAGE

Protects the internal battery. Do not lower the EMPIREA setting.

OVP OVERVOLTAGE

Stops output above the set voltage threshold.

OCP OVERCURRENT

Stops output above the set current threshold.

OPP OVERPOWER

Stops output above the set power threshold.

OAH MAX CAPACITY

Turns output off when the selected Ah value is reached.

OPH MAX ENERGY

Turns output off when the selected Wh value is reached.

OHP MAX TIME

Turns output off when the selected time is reached.

PON POWER-ON STATE

Selects automatic output at start-up. OFF is recommended.

FET QUICK ADJUST

CV quickly adjusts voltage; CC adjusts current; OFF prevents accidental changes.

OAH, OPH and OHP

In the menu, press ON/OFF to enable or disable these functions; "----" means disabled. For OAH, OPH and OHP, hold ON/OFF to move the decimal point and change scale. When a threshold is reached, output turns off and the related code flashes.

Recommended configuration

For normal use, set PON to OFF and FET to CV so the output voltage can be adjusted quickly. If required, lock the settings by holding the encoder. Reverse-polarity and output anti-backflow protections are also provided.