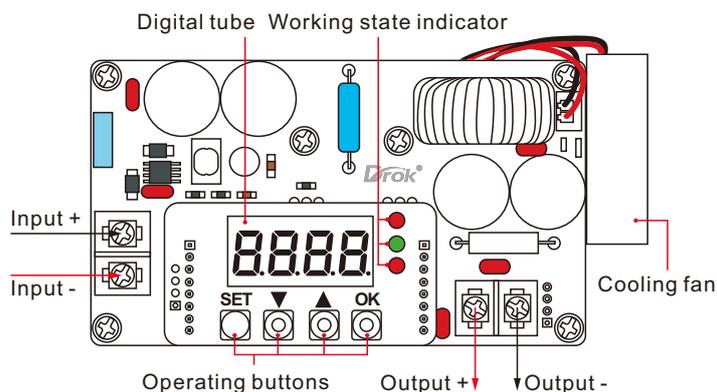## Product Features:

- Adopts advanced microprocessor control and the voltage and current can be precisely adjusted by the button
- Adopts four-digit bright digital tube, which can real-time display output voltage, current, capacitance, time
- Can set automatically out when the module is powered on
- Can lock the value setting button to avoid mistaken adjustment of output voltage and current
- There is reserved port which can be connected to the single-chip microcomputer or computer communication for further exploration
- Adopts high-quality power components and the external precise designed CC and CV loop, which effectively
- Adopts two 0.8mm dual-wire winding high current inductors. Input adopts two 470uF/100V electrolytic capacitors and the output adopts two 1000uF/63V electrolytic capacitors. Cooling with fan, low temperature raise
- With digital display, easy and convenient to use
- Support constant voltage and constant current output
- With working states indicators (OUT for output; CV for constant voltage; CC for constant current), you can check the real-time working state more convenient

## Technical Parameters:

- Input Voltage Range: 6-65V
- Output Voltage Adjusting Range: 0-60V
- Output Current Adjusting Range: 0-8A
- Output Power: 0-400W
- Output Voltage Setting Resolution: 10mV
- Output Current Setting Resolution: 10mA
- Power Supply Effect: CV< 0.5%+10mV  CC< 1%+10mA
- Load Effect: CV< 0.5%+10mV  CC< 1%+10mA
- Output Ripple: <40m Vpp (Input 54V, output 12V,current 5A)
- 100Hz Wave Transmission Ratio: <1/10000
- Typical Efficiency: 88% (Input 54V, output 36V,current 3A)
- Display Accuracy of Voltage & Current: 10mV, 10mA
- Display Error of Voltage: ±1%+20mV
- Display Error of Current: ±2%+20mA
- Response Time: < 50ms
- Storage Operation: M0-M9, a total of 10 groups of data
- Cooling Mode: The module owns heat sink, please pay attention to ventilation
- Operating Ambient temperature: 0-40℃
- Stored Ambient temperature: -20-70℃
- Working Environment: Indoor use, max. humidity: 80%
- Dimension (L×W×H): 135×95×38mm

## Each Pin of Control Interface:



Digital tube  Working state indicator

Input +

Input -

Cooling fan

SET  ▼  ▲  OK

Operating buttons    Output +    Output -

## Display Illustration:

| Display on the digital tube | Illustration |
|---|---|
| 00.00 | Value of voltage, 00.00-60.00V |
| 0.00A | Value of current, 0.00-7.99A |
| 0.00C | Value of Capacitance, 0.00-99.9AH |
| 0.00H | Value of time, 0.00-9.59H |

## Using Instruction:

### Wiring
- Correctly connecting the input and output, cannot be reversed polarity connected

- And ensure that the input voltage range must be within the required range (DC 6-65V)

### Setting the value of voltage and current
- The module will display the set voltage value in default when it is powered on. The display format of voltage is "00.00" and the unit is "V", e.g. "12.00" means "12.00V". Press "SET" button can switch to the set value of current. The display format of current is "0.00A" and the unit is "A", e.g. "1.20" means "1.20A"
- Setting method: ▲ button is for increasing the value and the ▼ button is for reducing value. Short-press can precisely set the value and long-press can fast set the value. Press "SET" button can switch to set the value of voltage or current
- After finishing the setting of the value, press "OK" button can turn on output directly. The OUT indicator will be on. Then you can also press the "OK" button to switch the display of the voltage and the current

### Adjusting the value of voltage and current in the state with output
- In the state with output (the OUT indicator is on), press the "OK" button to display voltage value and then you can press ▲/▼ button to increase or reduce the value of the voltage

### Shut down the output
- In the state with output, press "SET" button can shut down the output

### Automatically output function
- Turn on automatically output function: Long press "SET" button to enter into the value setting interface. Press "▲" button to adjust to "-F2-" and then press "OK" button. The module will display "Yo-0". At this time, press "▲" button, the display will be switched to "Yo-1", which means the automatically output function is turned on. At last, press "OK" button to save the setting
- Turn off automatically output function: Long press "SET" button to enter into the value setting interface. Press "▲" button to adjust to "-F2-" and then press "OK" button. The module will display "Yo-1". At this time, press "▼" button, the display will be switched to "Yo-0", which means the automatically output function is turned off. At last, press "OK" button to save the setting

### Output capacitance and time display function
- In the state of displaying current, long press "OK" button for more than 3 seconds, the display will be switched to x.xxC, which is the value of the capacitance. Short press "OK" button can switch back to display current
- In the state of displaying voltage, long press "OK" button for more than 3 seconds, the display will be switched to x.xxH, which is the value of the time. Short press "OK" button can switch back to display voltage

### Store and recall the stored data
- Storing data:
  After finishing the data setting, long press "SET" button to enter into data setting interface and then press ▲/▼ button to reach "-F0-". At this time, press "OK" button, the module will display "Sn-0". You can use ▲/▼ button to switch to other data group and then press "OK" button. The data will be stored to the corresponding data group
- Recalling the stored data:
  Long press "SET" button to enter into data setting interface and then press ▲/▼ button to reach "-F1-". At this time, press "OK" button, the module will display "Lo-0". You can use ▲/▼ button to switch to other data group and then press "OK" button. The corresponding data will be recalled. There are 0-9 ten data group. The module will output the value of 0 data group in default when it is powered on

### Locking button function
- When the locking button function is turned on, the ▲ and ▼ button will be locked. At this time, the output voltage and current cannot be adjusted, which can effectively prevent the values of output from mistaken adjusting. However, the "SET" and "OK" are active
- Turn on locking button function:
  In the state of shutting down output, press "SET" button. When the module display the set value of voltage, long press "OK" button until the module displays "-LoC" then release the button. The ▲ and ▼ button are locked
- Turn off locking button function:
  In the state of shutting down output, press "SET" button. When the module display the set value of current, long press "OK" button until the module displays "-ULoC" then release the button. The locking button function is turned off

## Note:
- Please use this meter within the working voltage and current range, otherwise, the module will be damaged.
- Please correctly wire this module. Reverse polarity connecting will damaged the module
- The working temperature of this module is -10 to 80 ℃; the storage temperature is -20 to 70℃. Please keep this module in dry environment
- When the module is working normally, please not violently move the module which may cause damage to the module.