

## For C<sup>3</sup>V Series 2010 4005 6003 Programmable DC Power Supplies

### IMPORTANT SAFETY INSTRUCTIONS

For your own safety and the safety of other people, and to prevent the product from damage, we suggest you following the instructions not only for operating and maintaining the product, but also for keeping it in storage.



### Environment

- \* The product is constructed for indoor use.
- \* Condensation may occur after the product has been shipped from cold to warm area. Await the product two hours or longer to be totally dry before powering on to it.
- \* Before performing any service, disconnect the product from the mains and await it until no harmful voltage remains at the terminals of bulk capacitors. **WARNING**
- \* Please replace the fuse only with the same ratings of amperage and voltage to avoid risk of fire.
- \* This is a Class A device which can cause RF interference within the home.
- \* The product is operated only when the case is securely closed and screwed up.
- \* While operating the product, the wearing of metal or other conducting jewelry such as chains, bracelets, rings, etc. is not recommended.
- \* Never place the product near water side or in wet area.
- \* Never place the product under direct sunlight or near heat source.
- \* Never block the ventilation openings at the enclosure of the product.
- \* Never place any heavy object on the product and severe impact or rough handling that could lead damage to it.

### Storage

- \* Location: indoor
- \* Relative humidity: <80%
- \* Temperature: -10°C ~ 70 °C

### Operation

- \* The product is rated at AC input 85~264V, 47~63Hz mains
- \* Connect the product to an earthed wall receptacle with an international safety approved power cord.
- \* Be careful. A power circuit changes from open to short could cause high current sparks to injure eyes. A power circuit changes from short to open instantly induce high voltage and arc, to shock people and injure their eyes. **DANGER**

### Service and maintenance

- \* The product operates with hazardous high voltage ( near DC 380V or AC 267V) inside. Only qualified personnel can carry out the service. **DANGER**
- \* The product still keeps hazardous voltage inside even after it has been switched off for a while. **WARNING**

### Knowing about front panel



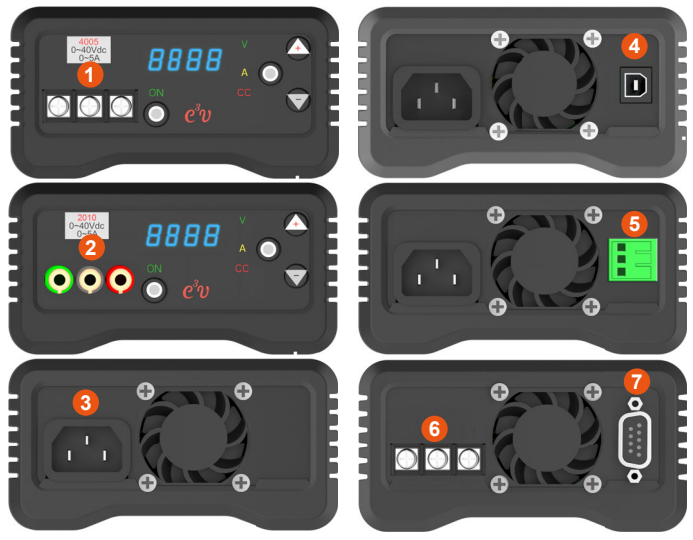
1	Meter & display	4-digit meter measures and displays the values of voltage, current and inside temperature. Also for auxiliary uses of system parameters setup.
2	Output key	Press to turn the output on/off.
3	Enter key	Circulatory modes selection, Up/Down inputs termination.
4	Up key	Input increments.
5	Down key	Input increments.
6	V-LED	Green "V" denotes unit = " VOLT" for meter display. Lit state : shows meter display in Reading mode. Blinking : shows meter display in Setting mode.
7	A-LED	Orange "A" denotes unit = " AMPERE" for meter display. Lit state : shows meter display in Reading mode. Blinking : shows meter display in Setting mode.
8	cc-LED	Red symbol "cc" . Off state : denotes output in constant voltage (CV) mode. Lit state: denotes output in constant current (CC) mode.
9	Output LED	Green symbol "ON" . Off state : denotes output Off. Lit state : denotes output On.

# C<sup>3</sup>V Brief Operation

10	Output Terminals	Ground terminal, negative terminal and positive terminal respectively.		
11	Model Nr.	2010	4005	6003
	Voltage	0 - 20V	0 - 40V	0 - 60V
	Current	0 - 10A	0 - 10A	0 - 3.5A
	Power	200W	200W	210W

## KNOWING ABOUT REAR PANEL

The following table and graphic illustrate all kinds of input/ output connection as well as communication interfaces on panels.



1	Terminal board output	USB type B interface	4
2	Banana socket output	RS-485 interface	5
3	IEC ac input w/o interface	Terminal board ac input and RS-232 interface	6

## OPERATION

1. Use at least index finger to press on unit's top.
2. Use the thumb to push the button for input.



## Reading mode

Please refer to the figure 1, left half part. Upon AC powering on the C<sup>3</sup>V Series, the unit unconditionally enters the "Reading mode" with the green V-LED lit. The value on the "Meter & display" was the last time setting in memories. By pressing Enter key momentarily (PEK), user can read the voltage, the current (as long as a load is connected and the Output key is pressed) and the inside temperature in circulation. The "Meter & display" is now measuring and displaying both the output voltage and current values for user to read.

The unit guarantees to output <= the maximum values. Once you leave the Setting mode, the two values will be updated and saved in memories till next setting.

### Note 1:

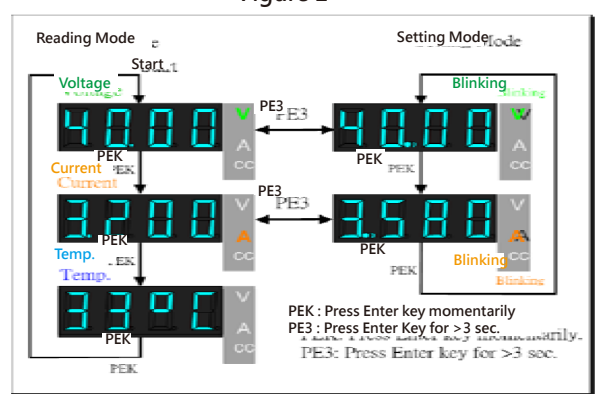
In CV operation, the setting voltage is always the same as output voltage while the setting current is greater than the real output current. In CC operation, the setting current is always the same as output current while the setting voltage is greater than the real output voltage.

### Note 2:

If the red "cc- LED" is lit, the unit is working in CC operation otherwise in CV operation.

## Setting mode

Figure 1



Please refer to figure 1, right half part. By pressing the Enter key for >3 seconds (PE3), the unit will be in "Setting mode" after a short beeping. A blinking V-LED or a blinking A-LED and a blinking decimal point on the "Meter & display" are together to prompt the user for setting input. By pressing the Enter key momentarily, blinking V-LED or blinking A-LED will be selected. Now the user can push the Up key or Down key to adjust (or set) the voltage or current for output. At last the user can use the same PE3 to end this Setting mode and go back to Reading mode, and vice versa. In fact, the setting values of both voltage and current are the maximum output limits of the unit.

## Between the two modes

By pressing the Enter key for >3 seconds (PE3), the unit will go directly from voltage reading to voltage setting and vice versa. This function makes user more efficiency in circuit experiment.

