

# PCWork



## PCWORK DC POWER SUPPLY PCW07B User Manual

# DC SWITCHING POWER SUPPLY

## User Manual

### DC Laboratory Power Supply

#### Quick Guide:

The PCWork PCW07B variable power supply is a very stable, regulated DC power supply that allows continuous adjustment of output current and voltage levels.

#### Copyright declaration

In accordance with international copyright law, you may not copy the contents of this manual in any form (including translations) without the written permission of the distributor.

#### General information / safety instructions:

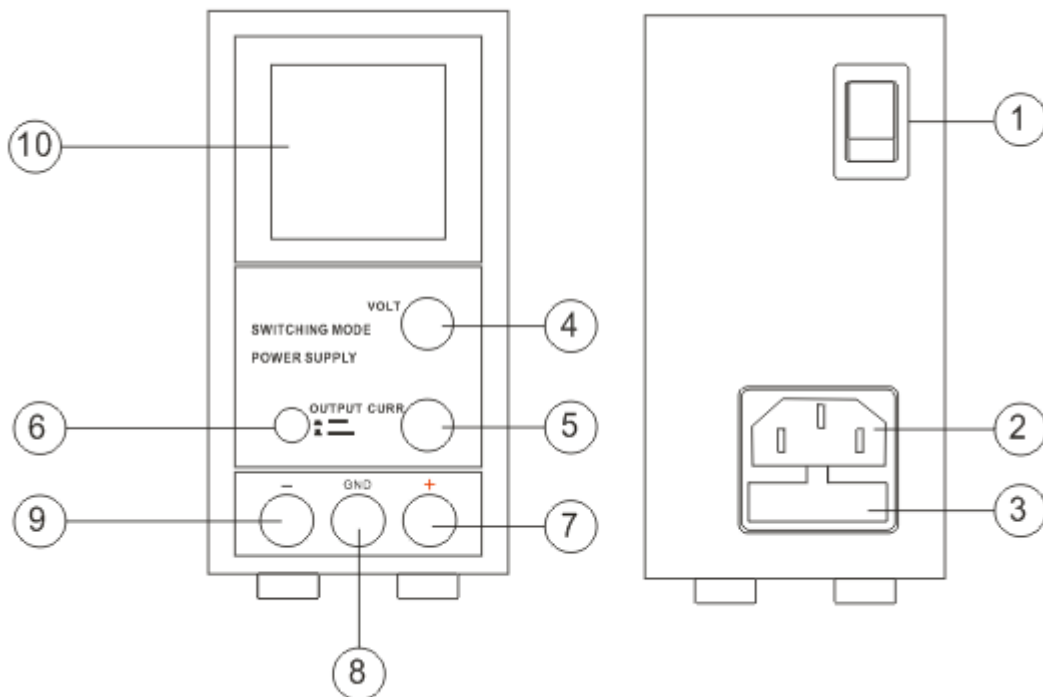
- It is not allowed to change the manual in any way or add content without the written permission of the distributor.
- The user of this power supply is obliged to ensure that any other person using this device has read and understood the manual, in particular the safety instructions. The user is obliged to ensure the functionality of the device before use, to provide the manual and has to ensure that only qualified users operate the device.
- Any modification related to the design or construction of the device is not allowed.
- Any warranty and liability claims for personal injury and property damage are excluded if they are due to one of the following causes:
  - Improper use and operation of the device
  - Non-compliance with the instructions and safety regulations of the manual
  - Operation and use without wearing suitable personal protective equipment
  - Use and installation of unauthorized spare parts
  - Improper maintenance and changes related to the design or construction of the device; removal of the nameplate.
- Please read this manual carefully before using the device and pay special attention to the safety warnings.
- Strictly adhere to this manual when using the device. Also, pay attention to all safety instructions on the device itself. Otherwise, the protective function of the device may be damaged, weakened or otherwise impaired. Safe operation and safety for the user cannot be guaranteed in this case.
- Do not provide children with access to the device. Parents bear full responsibility for all safety risks resulting from non-compliance.
- Before using the device, please check whether it has a crack or plastic damage. If this is the case, do not continue to use the device.
- Maintenance work on the device may only be carried out by trained specialist personnel.

## Overview:

<b>Model</b>	PCW07B
<b>Regulated output voltage</b>	0-50V
<b>Regulated Output current</b>	0-3A



## 1. Technical Data

- 1.1 Input voltage : 230V/115V AC $\pm$ 10% 50HZ/60Hz $\pm$ 2Hz
- 1.2 Line regulation: CV $\leq$ 0.01%+1mV CC $\leq$ 0.2%+1mA
- 1.3 Load regulation: CV $\leq$ 0.01%+5mV CC $\leq$ 0.2%+5mA
- 1.4 Ripple and noise: CV $\leq$ 3mVr.m.s CC $\leq$ 3mAr.m.s
- 1.5 Protection: constant current and short-circuit protection
- 1.6 Voltage indication accuracy: LED $\pm$ 0.5%+5digits,
- 1.7 Current indication accuracy: LED $\pm$ 0.5%+5digits,
- 1.8 Environment: 0 ~ +40 °C relative humidity:<90%



## 2. Operation

### 2.1 Controls and indicators:


- (1) Power 1-0 switch.
- (2) AC Input Socket with Fuse.
- (3) Concealed Fuse box.
- (4) Output Voltage rotary knob; **Tap the knob to toggle between the coarse and fine adjustment.**
- (5) Output Current rotary knob: **Tap the knob to toggle between the coarse and fine adjustment.**
- (6) Output On/Off push button.
- (7) Output Terminal Positive(+)Red color.
- (8) GND Terminal (  )Green color.
- (9) Output Terminal Negative(-)Black color.
- (10) LED Display showing:
  - 4 digits, voltage,current,(CV) constant voltage mode,(CC) constant current mode,
  - Output Terminal on/off state output 
- (11) **Lock-in function:** press knob ④&⑤ together at once for 3seconds, the settings are locked.  
**Unlock function:** press knob ④&⑤ together at once for 3seconds, the settings are unlocked.


### 2.2 Operation

#### 2.2.1 Constant Voltage (CV), Automatic crossover & Constant Current (CC)

The power supply operates as a constant voltage source as long as the load current is lower than the preselected current limit. If the load current is equal to or higher than the preselected limit, the power supply enters the constant current mode. As a result, the voltage decreases, the constant current symbol (CC) is shown in the LED display and the device operates as a constant current source. As soon as the load current falls below the previously selected limit value again, the device switches back to constant voltage mode.

#### 2.2.2 Presetting the current limiting value (CC)

Switch on the power supply, adjust the output voltage to about 3V, turn off the output terminal with the push button(6), the display shows the following output icon: 

Short the black and red output terminals and then turn on the output terminal by pushing the output On/Off button (6); the displays shows icon ; then adjust the current limiting value to your desired value (say x ampere) by turning knob(5).Turn off the output terminal by pushing button (6) and take out the shorting connection.

The current limiting of the power supply has been preset to your chosen value (x Ampere) for the whole range of output voltage.

#### 2.2.3 Connection establishment and operation

2.2.3.1.Plug the power cord of the device into an AC outlet (check rating).

2.2.3.2.Turn on the device; the LED display should turn on at the same time.

2.2.3.3.The constant voltage (CV) symbol should be shown in the display.

2.2.3.4.Turn the output current setting knob (5) clockwise to the maximum value unless you need a lower output current limit. If you do need a lower limit, set it using the steps in 2.2.2.

2.2.3.5.Set the desired output voltage range.

2.2.3.5 Set your desired output voltage and then turn off the output terminal by pushing the button(6).

2.2.3.6. Connect the device to the load (which is to be supplied with current and voltage) by connecting the positive poles and the negative poles (positive to positive; negative to negative).

2.2.3.7.Turn on the output terminal again and make sure that the constant voltage (CV) symbol is shown in the display.

2.2.3.8.If display shows (CC),either your preset current limiting value is too low or your load requires more voltage and current.You need to re-access the voltage and current requirement of your load and increase the voltage or current accordingly until (CV)appears.

#### 2.2.4Output Over Voltage Protection(OVP)

This function is intended to protect the connected load, in case of malfunction of the output voltage control circuit. The maximum output voltage cannot exceed 30% of the voltage set during operation.



### 3. Warning:

3.1 In case of a short circuit at the output, the current is limited according to the previously selected limit value. Nevertheless, the device should be switched off immediately and the short-circuit source should be removed before the device is used any further.

3.2 The unit must be disconnected from the power source and loads before it can be serviced.

Maintenance should only be performed by trained service personnel.

3.3 The device should be stored in a dry and well-ventilated place. The power cable should also be removed if the device is to be stored for a longer period of time.

### 4. ACCESSORIES

4.1 Power cord-----one piece

4.2 Instruction manual-----one piece

### 5. Notes on disposal:

You are not permitted to dispose of this device in household waste. This device complies with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). Please dispose of the device at your local collection point.

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#### Importer / Distributor:

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