Mini Programmable DC Power Supply Manual

1. Overview

Mini programmable DC regulated power supply is a high quality, high stability economical DC regulated power supply, 4 digit LCD display with over voltage protection (OVP), over current protection (OCP), over temperature protection (OTP), over power protection (OPP), OVP/OCP can be set according to requirements. Extremely high stability, extremely strong reliability, is the ideal tool for colleges and universities, enterprise production lines, home appliance maintenance units, etc. At the same time, this series of power supplies can be equipped with an optional programming interface to achieve remote control or automatic control.

2. Specifications

Specifications(rated)	Output voltage range (0-Vmax)	Output current range(0-Cmax)	Output power range(0-Pmax)
30V/5A	0-30V	0-5A	0-150W
30V/10A	0-30V	0-10A	0-300W
40V/20A	0-40V	0-20A	0-300W

3. Technical parameters

(1) Rated working conditions

Operating voltage: AC220V±10% 50Hz or AC110V±10% 60Hz

Working conditions: Temperature 0 ~ 40℃ Relative humidity: ≤80%RH

Storage conditions: temperature -20 ~ 60℃ Relative humidity: ≤80%RH

To ensure accuracy of the temperature range: 23℃±5℃

(2) Technical instructions

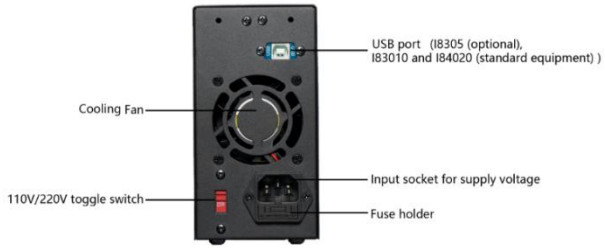
Model number	I8305	I83010	I84020
Voltage			
Set resolution	10mV		
Setting accuracy	≤0.1%+5digits		
Read back resolution	10mV		
Read back accuracy	≤0.1%+5digits		
Ripple	≤10mVrms	≤10mVrms	≤12mVrms
Current			
Set resolution	1mA	1mA	10mA
Set accuracy	≤0.1%+10digits		
Read back resolution	1mA	1mA	10mA
Read back accuracy	≤0.1%+10digits		
Ripple	≤10mArms	≤10mArms	≤18mArms
Load regulation rate	≤0.1%Vmax+5mV	≤0.2%Vmax+5mV	
Power regulation			
OVP	0-33V	0-33V	0-41V
Maximum voltage	32V	32V	40.5 V
OCP	0-5.5A	0-10.5 A	0-20.5 A
Maximum current	5.1A	10.1A	20.1A
Heat dissipation method	Air cooling		
Weight	About 2KG	About 2KG	About 2KG
Size (bare machine)	230*80*150 (MM)		

4. Panel features

(1) Front panel

1. **Output status display**: "OFF" indicates that the output is off; "CV" indicates that the output is constant voltage; "CC" means the current output is constant current; "OVP" indicates that an over voltage protection output interrupt has occurred; "OCP" indicates that an over current protection output interrupt has occurred.
2. **Voltage output display value (V)**
3. **Current output display value (A)**
4. **Time display value (s)**: Displays the time of the output.
5. **Power display value(W)**
6. **Preset voltage current display value**: voltage setting value (V), current setting value (A) (from left to right)
7. **OVP**: The value indicates the over voltage protection threshold (V), The string indicates the over voltage protection status, "ON" for over voltage protection on, "OFF" for over voltage protection off.
8. **OCP**: The value indicates the over current protection threshold (A), The string indicates the over current protection status, "ON" for over current protection on, "OFF" for over current protection off.
9. **Power switch**: press "-" to turn on the power, press "O" to turn off the power.
10. **"U/I" voltage current setting button**: Press this button to switch between voltage setting and current setting , highlighted by the data setting position.
11. **"MENU" button**: Press this button to enter or exit the system menu when the output is off. In the system menu, you can set the output power on mode, communication address, communication baud rate and the corresponding voltage and current parameter values of 3 groups of shortcut parameter groups.
12. **"OVP/OCP" setting button**: Press this button to switch between over voltage protection setting and over current protection setting, highlighted by the data setting position; By using "↑" and "↓" up and down arrow buttons, you can turn on or turn off the over voltage protection, over current protection function.
13. **"1" to "3" three sets of shortcut parameter keys**: Press "1" to "3" to quickly bring up the pre-stored voltage and current parameters; enter the "MENU" menu, you can set "1" ~ "3" three groups of shortcut parameter storage.
14. **"←" , "→" Left and right arrow buttons**: In data editing mode, press the arrow buttons to move the highlighted setting digit to the left or right position by one digit.
15. **"↑" , "↓" up and down arrow buttons**: In data editing mode, press the arrow buttons to add or subtract 1 digit to the highlighted setting data; Enter the "Menu", "↑" and "↓" buttons can only move. When setting over voltage and over current protection, you can use ↑ and ↓ to change the status of the protection.
16. **Adjust knob**: In data editing mode, rotate clockwise to increase the digit; rotate counterclockwise to decreases the digit, press the knob to change the position of the digit.
17. "**Output" button:** Press this button to switch power on output and power off output.
18. **"Output terminal" :** Output terminal positive(red) and negative(black).
19. "**5V2A":** USB charging port

(2) Back panel



5. Use and safety precautions

(1) Power switch set to OFF, connect the power supply to the power cord, plug L of the power cord should be connected to the live wire of power outlet, plug G of the power cord should be connected to the ground.

(2) The power supply should be grounded.

(3) The power supply should be well ventilated, the top, bottom, left, right should be kept 10cm away from other objects to ensure good ventilation, do not expose the power supply to heavy dust, corrosive gases and other harmful substances in the environment.

(4) Measure the technical parameters of the power supply after 15 minutes of start-up preheating.

(5) Please check whether the power supply voltage switch is compatible with the the local utility before use, otherwise it will cause serious failure.

6. Packing list

(1) 1 x Power Supply

(2) 1 x Power cord

(3) 1 x User manual

(4) 1 x Test Clip

(5) 1 x USB cable (I8305 optional, I83010 and I84020 included)

7. Troubleshooting

(1) If the supply voltage is normal, but the screen doesn't light up after power on, the fuse may be blown or there are other faults, please set the power switch to OFF, unplug the power cord, replace the fuse or ask for a professional to check.

(2) If the constant voltage source is in use, the output voltage is less than the preset value, CC light up means current protection, the machine automatically switches to the constant current working status, please check the load or increase the maximum current(press "U/I" button, current adjustment, clockwise to adjust the knob).

(3) If the constant current source is in use, the output current is less than the preset value, CV light up means voltage protection, the machine automatically switches to the constant voltage working status, please check the load or increase the maximum voltage(press "U/I" key, voltage adjustment, clockwise to adjust the knob).

(4) If the problem is serious and cannot be solved, please contact your dealer or our company.

Certificate/Warranty Card

【After-sales service details】

1. The use of software version for free upgrade. Free replacement and maintenance of quality problems caused by product design, manufacturing and installation process, materials, etc.

2. The damage caused by irresistible factors (such as flood, fire, earthquake, war, etc.) and user's artificial factors (such as construction, cleaning and other unintentional human factors, etc.) will be solved by the both parties in coordination.

3. "One year warranty, lifetime maintenance", after the end of the warranty period, the system lifetime maintenance, replacement parts will only charge cost fees.

4. The company will not be responsible for any other losses caused by use.

5. Warranty period within 12 months to enjoy free warranty service (without attachments), freight who sent who (only for mainland customers).

6. The following circumstances do not belong to the scope of warranty:

1）Due to the use of harsh environment (such as electroplating and other corrosive environment) caused by the power supply internal line damage.

2）The product has been repaired or modified by non-technical personnel of the company or non-approved service stations of the company.

3）The product has been damaged by misuse, negligent use, etc.

4）Failure to operate or maintain the product in accordance with the instructions provided by the original manufacturer.

5）The product has been discontinued for 5 years or more.

Certificate of Conformity	
Specification	
Number	
Date of manufacture	
Checker	
The product has been checked to meet the required quality standards and is ready to leave the factory.	

Warranty Card	
Specification	
Date of purchase	
Unit of sale	
Client Name	
Client address	
Client Phone	
Fault description	
Note: This card is the product warranty certificate, please make sure to keep it properly!	

迷你可程控直流稳压电源使用手册

一、概述

迷你可程控直流稳压电源是高品质，高稳定性的经济型直流稳压电源，LCD四位电压电流显示，具有过压保护（OVP）、过流保护（OCP）、过温保护（OTP），过载保护（OPP）四种保护功能，OVP/OCP可按需求设置。极高的稳定性，极强的可靠性，是大专院校、企业生产线、家电维修单位等的理想工具，同时本系列电源可选配编程接口，实现远程控制或自动化控制。

二、产品规格

规格（额定）	输出电压(0-Vmax)	输出电流(0-Cmax)	输出功率(0-Pmax)
30V/5A	0-30V	0-5A	0-150W
30V/10A	0-30V	0-10A	0-300W
40V/20A	0-40V	0-20A	0-300W

三、技术参数

（一）额定工作条件

工作电压：AC220V±10% 50Hz或AC110V±10% 60Hz

工作条件：温度 0～40℃　　相对湿度：≤80%RH

储存条件：温度-20～60℃　　相对湿度：≤80%RH

保证精度的温度范围：23℃±5℃

（二）技术指示

型号	I8305	I83010	I84020
电压			
设定分辨率	10mV		
设定精度	≤0.1%+5 digits		
回读分辨率	10mV		
回读精度	≤0.1%+5 digits		
纹波	≤10mVrms	≤10mVrms	≤12mVrms
电流			
设定分辨率	1mA	1mA	10mA
设定精度	≤0.1%+10digits		
回读分辨率	1mA	1mA	10mA
回读精度	≤0.1%+10digits		
纹波	≤10mArms	≤10mArms	≤18mArms
负载调节率	≤0.1%Vmax+5mV	≤0.2%Vmax+5mV	
电源调节率			
OVP	0-33V	0-33V	0-41V
最大电压	32V	32V	40.5V
OCP	0-5.5A	0-10.5A	0-20.5A
最大电流	5.1A	10.1A	20.1A
散热方式	风冷		
重量	约2KG	约2KG	约2KG
尺寸(裸机)	230*80*150（MM）		

四、面板特征

（一）前面板

1.输出状态显示：“OFF”表示当前输出关闭；“CV”表示当前输出为恒压状态；“CC”表示当前输出为恒流状态；“OVP”表示发生了过压保护输出中断；“OCP”表示发生了过流保护输出中断。

2.电压输出显示值（V）

3.电流输出显示值（A）

4.时间显示值（s）：显示输出打开后开始计时的时间值。

5.功率显示值（W）

6.预设电压、电流值显示值：依次是电压设置值（V）、电流设置值（A）（从左往右）。

7.过压保护：数值表示过压保护阈值（V）；字符串表示过压保护开启状态，“ON”为过压保护开启，“OFF”为过压保护关闭。

8.过流保护：数值表示过压保护阈值（A）；字符串表示过流保护开启状态，“ON”为过流保护开启，“OFF”为过流保护关闭。

9.电源开关：“-”为打开电源，按下“O”为关闭电源。

10.“U/I”电压、电流设置键：可实现电压、电流设置的切换，由当前数据设置位闪烁显示。

11.“MENU”菜单键：在输出关断状态下按此键进入或退出系统菜单，在系统菜单下，可设置上电输出模式、通信地址、通信波特率以及3组快捷参数组对应的电压电流参数值。

12.“OVP/OCP”过压、过流设置键：可实现过压、过流设置的切换，由当前过压、过流数据设置位闪烁显示；通过“↑”、“↓”上下移方向键，可打开或关闭过压、过流保护功能。

13.“1”~“3”三组快捷参数存储键：按下“1”~“3”，可以快速调出预先存储的电压、电流参数；进入“MENU”菜单，可进行“1”~“3”三组快捷参数的存储。

14.“←”、“→”左右移方向键：数据编辑模式下短按此键可使闪烁的设置位向左或向右移一位。

15.“↑”、“↓”上下移方向键：数据编辑模式下短按此键可使闪烁的设置位加“1”或减“1”；进去菜单“MENU”，“↑”、“↓”键仅有移动的功能；在设置过压、过流保护时， 可通过“↑”、“↓”键改变保护开启状态。

16.调节旋钮：在表头数字位闪烁状态下，顺时针旋动，数值增大，逆时针旋动，数值减小，往里按旋钮可以改变数字闪烁数字位。

17.“Output”输出键：该键可实现输出和关断两个状态的切换。

18.“输出端子”：电源输出口。

19.“5V2A快充接口”

（二）后面板

五、使用说明及防护措施

1.POWER开关置于关断状态，并将本电源所附带的电源线连接好，电源线插头L端和电源的插座火线相连，电源线中的接地线应确保和大地有良好的连接。

2.电源使用必须接地。

3.本电源在使用时应注意通风，上、下、左、右应和其它物品保持10cm的间隙以保证通风顺畅，不要让电源暴露在多灰尘、腐蚀性气体及其它有害物质的环境中。

4.对本电源的技术指标测量应开机预热15分钟后进行。

5.通电前检测电源电压输入转换开关是否和市电相符合，否则会导致严重故障。

六、装箱单

1.整机一台

2.电源线一条

3.使用说明书一本

4.测试线一条

5.USB连接线一条（I8305选配，I83010和I84020标配）

七、故障维修

1.当供电电压正常，开机后屏幕不亮，可能是保险管烧断或有其它故障，断开电源开关，拔下电源线，更换保险管或请专业人员查看。

2.稳压源使用时，输出电压小于预定值并且CC灯亮是电流保护，本机自动切换到稳流工作转态，此时应检查负载或根据使用情况增加最大电流（按下“U/I”键，调电流，顺时针调节旋钮）。

3.稳流源使用时，输出电流小于预定值并且CV灯亮是电压保护，本机自动切换到稳压工作转态，此时应检查负载或根据使用情况增加最大电压（按下“U/I”键，调电压，顺时针调节旋钮）。

4.如果故障严重不能解决，请与经销商或本公司联系。

合格证/保修卡

【售后服务细节】

1.对使用软件版本实行免费升级。对产品因设计、制造安装工艺、材料等引起的质量问题，进行无偿的更换维修。

2.因不可抗拒因素（如水灾、火灾、地震，战争等）及用户人工因素（如施工、清洁等无意的人为因素等）造成的损坏，由双方协调解决。

3.“一年质保，终身维护”，保修期结束后对系统终身维护，更换配件只收取成本费用。

4.本公司将不负责任何于使用时引致的其它损失。

5.保修期 12 个月内享受免费保修服务（不含附件），运费谁寄谁出 (只限大陆客户)。

6.下列情况不属于保修范围：

1）因使用环境恶劣（如电镀等腐蚀性较强的环境）造成电源内部线路的损坏。

2）产品曾被非本公司技术人员或者非本公司认可之服务站修理或者改装。

3）产品曾被错误操作，疏忽使用等事件引致损坏。

4）不按照原厂提供之说明书的指示操作或者保养。

5）本产品已经停止生产五年或以上。

产品合格证	
规格型号	
产品编号	
出厂日期	
检验员	
本产品经检验符合规定的质量标准，准予出厂	

保修卡	
产品型号	
购买日期	
售货单位	
客户名称	
客户地址	
客户电话	
故障描述	
注：此卡为产品保修凭证，请务必妥善保管	