



## S600PLUS v1.0

PFC programmable Power supply  
High efficiency wide input voltage  
100V~265VAC Input  
5V~26V DC Output  
25Amps 600W max.



**T**hanks for your purchasing the intelligent and powerful power supply.

**R**ead the ENTIRE instruction manual to become familiar with the features/functions of the device before operating.

**F**eel free to send an email to [jasonwang3a@163.com](mailto:jasonwang3a@163.com) or call at 86 755 2643 6165 should you have any questions and suggestions.

A handwritten signature in black ink, appearing to be 'Jason Wang' in Chinese characters.

Jason Wang



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**S600PLUS** is a high efficiency wide input voltage PFC power supply, the device can output 600W at AC100V~265V in a smaller size. Many creative technology help to realize up to 91% of efficiency, and the internal temperature is still under 85°C. The following are some new features:

### **Features**

- Intelligent control output voltage and current by microprocessor, 100% calibration before delivery
- Active PFC: smaller AC input current less interference, and Conform to European Commission Regulation no 278/2009 and Energy Star Version 2.0
- AC 100-265V worldwide use: need not any alternative switcher, worldwide safe operation
- Up to 91% of convert efficiency
- Programming output voltage from 5 to 26V, suitable for more application
- Digital display output voltage and current on time
- Over current, over voltage, over load and over temperature protection, and resume automatically
- Short-circuit protection on output, safer and more reliable
- Intelligent cooling fans speed adjust automatically, the start temperature can be set up
- 2 outputs can do more chargers simultaneously
- Synchronous Rectification make sure the high efficiency and small size
- High power density: 495W/Kg
- Start at no load or full load perfectly
- Approved by CE
- 12 months warranty

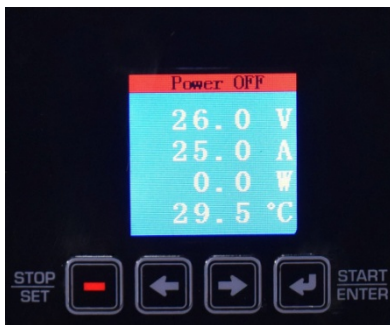
### **Application**

- Home application
- 10-30V DC charger, balance charger for RC mode
- E-bike, E-scooter battery charger.

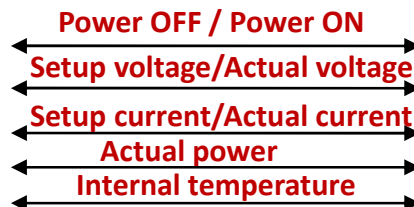


## Operation

1. Connect S600PLUS to AC 110 / 220V outlet
2. Move the AC switcher to ON position, 2 seconds later, default output voltage (26V) and maximal output current can be displayed, actual power and internal temperature is also displayed, but S600LUS is at idle mode(power off) to save power consumption, as the following picture 1. Confirm the voltage and current is suitable for your charger and other load, then press **START/ENTER** button turn on S600PLUS, the LCD will display actual output voltage, current, output power and internal temperature as the following picture 2.



Picture 1: Idle mode



Picture 2: work mode

If the voltage is NOT suitable for your charger or other load, press **INC** or **DEC** button setup the voltage. It is easy to adjust as same as a potential meter and need not confirm the change, because the voltage will be updated with your operation. Finish the voltage setup, the device can remember the new value till next change.

**You can also change the voltage at any time whether power on or power off status.**

**If need change the maximal current or other items, please operate according to the following steps.**

3. Press **STOP/SET** button for 2 seconds enter into Program Setup menu, The LCD displays the following information in sequence and you can change the value. When you want to alter a parameter



Picture 3 Program setup

value, press the **START/ENTER** button to the value blink then change the value with the **DEC** or **INC** buttons. The new value will be confirmed and saved by pressing the **START/ENTER** button



CHARGERY

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again. Press **DEC** or **INC** buttons alternate different items, and press **STOP/SET** to quit the setup menu.

Max current  
---> 25A

Setup the maximal output current, range from 2A~25A, step 0.1A, default 25A. The maximal current can protect your charger or loads from damaged.

Fan ON Temp.  
---> 35°C

Setup the fan starting temperature, range from 30~50°C, step 1°C, default 35°C. the fan speed will increase with the temperature go up.

Shut Down Temp.  
---> 80°C

Setup over temperature protection, range from 70~100°C, step 1°C, default 80°C.

Buzzer  
---> ON

The beeper sounds for each button press to confirm your action. These sounds can be ON or OFF. Default ON.

BACK-LIGHT  
---> 5MIN

This menu sets the back-light time of LCD screen backlight. Options: **1MIN, 5MIN, 10MIN, 20MIN** and **Always on, default 5MIN**. At default 5min, LCD back-light will be off to save the power, **press any button resume the back-light**.

Temp. Unit  
---> °C

Setup the Temperature unit, °C or °F, default °C.

### Note:

- All parameters will be remembered by the S600PLUS till next change.
- After increase setup voltage, if actual voltage doesn't increase, please enter into program setup menu, and then increase the maximal current limitation.
- After increase maximal current limitation, if actual current limitation doesn't increase, please increase setup voltage value.
- You can setup all parameters on Power ON and Power OFF status at any time. Voltage can be setup press **DEC** or **INC** button directly, but other items must be enter into the setup menu and then change it.
- At any time you can press the **STOP/SET** button turn off the power supply, S600PLUS will work in idle mode to save power consumption till move AC switcher to OFF position. Generally you



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needn't disconnect S600PLUS from AC outlet, because the S600PLUS consume under 1W power at idle mode. When you need power your load such as charger and so on, what you do is press the **START/ENTER** button again.

### Environment Requirements

- Ambient Temperature : -10 ~ 45°C
- Ambient Humidity : 5% ~ 95%
- Storage Temp. : -20°C ~ 70°C
- Storage Humidity : 30% ~ 90%

### Input

- Rated Voltage : AC110 / 220V
- Voltage allowed : AC100 ~ 265V
- Rated Freq. : 50/60Hz
- Freq. Allowed : 47~63Hz
- Max Current : 8A @90V, 3.3A @220V
- Efficiency: 91% at 60% load and 220Vac input.
- Active PFC: PF>0.99 at 90VAC and 100% of load; PF>0.97 at 220VAC and 100% of load



### Output

- Voltage : 5 ~ 26V programmed
- Voltage accuracy:  $\pm 1\%$
- Ripple voltage: 150mV.
- Current: 0 ~ 25A (26A MAX.)
- USB: 5VDC, 0~500mA.

### Protection

- Over voltage protection, over 2V setup value.
- Over current protection, over 2A setup value.
- Over load protection, 600W max.
- Over temperature protection, 100°C max.
- Short- circuit protection on output.





## Mechanical Characteristics

- Size : 223\*106\*55 (L\*W\*H, mm) or 8.7 \* 4.2 \* 2.16 (L\*W\*H, inch)
- Weight: 1.25Kg without input cable
- Output DC connector: 2 pairs 4mm gold banana female connector, each connector for 25A maximal current.

## Error Information

When the following error events triggered, the beeper will sound for 10 seconds and error information will flash, you can press **STOP/SET** to turn off the beeper and flash.

Error information	DESCRIPTION	DISPLAY
Over voltage	Output voltage over 2V of setup value for 2 seconds, S600PLUS turn off automatically and turn on manually	On power off page, OVER voltage is displayed
Over current	Output current over 2A of setup for 2 seconds, S600PLUS turn off automatically and turn on manually	On power off page, OVER CURRENT is displayed.
Over temperature	The heat sink temperature over 100°C for 2 seconds, S600PLUS turn off automatically, and turn on automatically	On power off page, OVER TEMPERATURE is displayed.
Short circuit	Output voltage is under 4V for 2 seconds and 3 times repeatedly, S600plus turn off automatically, and turn on manually	On power off page, SHORT CIRCUIT is displayed

## Related parts

The following parts are similar to the S600PLUS and maybe of interest:

MODEL	DESCRIPTION	COMMENTS
<a href="#">S400</a>	High efficiency wide input voltage PFC power supply	6~15V 25A 400W output
<a href="#">S600plus</a>	High efficiency wide input voltage PFC power supply	5~26V 25A 600W output
<a href="#">S1500</a>	High efficiency wide input voltage PFC power supply	10~30V 60A 1500W output
<a href="#">S1200</a>	High efficiency wide input voltage PFC power supply	12~24V 50A 1200W output

## Warnings

- Never leave the power supply unattended when it turn on. If any malfunction is observed, please turn off the power supply as fast as possible.
- Keep away the power supply from dust, damp, rain, heat direct sunshine and vibration. Do



**CHARGER**

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not drop it.

- The power supply should be set up on non-inflammable and non-conductive surface. Never place on a car seat, carpet or similar.
- Keep all the inflammable volatile materials well away from operating area.
- Do not attempt to charge any types of battery including below:
  - Lead acid battery or VRLA
  - NIMH/NICd battery pack
  - Li-ion and lithium polymer battery

### **Version history**

<b>version</b>	<b>Output Voltage</b>	<b>Output Current</b>
V1.0	5~26V	2~25A

#### **4. Warranty and Service**

Chargery Power Co., Ltd. as manufacture of R/C model power warrants S600PLUS power supply to be free of defects in material and workmanship. This warranty is effective for 12 months from date of purchase. If within the warranty period the customer is not satisfied with the products performance resulting from a manufacturing defect, the accessory will be replaced or repaired. This warranty does not cover the damage due to wear, overloading, incompetent handling or using of incorrect accessories.

Shenzhen, Feb. 8, 2017



#### **Chargery Power Co., LTD.**

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