

# SWITCHING MODE POWER SUPPLY

## SPA-8250/8400

### USER MANUAL

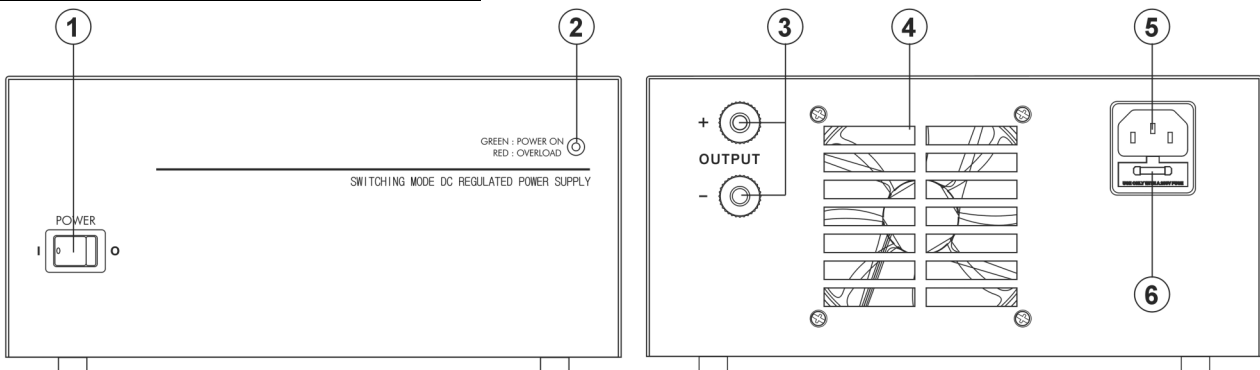
#### 1. INTRODUCTION

This series of high current, fixed voltage, regulated switching mode power supplies are built with Over Voltage Protection (OVP) and dynamic Power Factor Correction features. They are suitable for applications in telecommunications such as radio equipments, RF amplifiers, and other high current applications like car audio, halogen or xenon spot light demonstrations.

#### 2. PRECAUTIONS

- This power supply is intended for Indoor Use Only.
- **Never** remove the metal cover of the power supply while AC power is connected.
- **Never** touch the unit when your hands are wet.
- **Never** block the ventilation slots and cooling fan air intake window
- **Never** attempt to repair the power supply. Incorrect re-assembly may result in a risk of electric shock or fire.
- This power supply gives out 13.8V fixed output voltage. Make sure the DC load accepts 13.8V.
- **Never** use the power supply for the load requiring higher current than the designed value otherwise it may damage the power supply.
- Place the power supply on a flat surface with sufficient clearance, dry, dust free surroundings for ventilation.
- **Do not** expose the power supply to sun, high humid and dusty environment.

#### 3. CONTROL AND INDICATORS



- (1) Power on/off switch  
 (2) Bi-color LED Indicator  
 (3) Output Terminal(13.8V Fixed Output)  
 (4) Cooling fan air intake window  
 (5) AC Input Connector  
 (6) Fuse Holder  
*(LED Indicator : Green – Power ON and in operation, Red – Overload/OverTemp/OVP)*

#### 4. CONNECTION

- 4.1 This series has 2 models. Make sure you have purchased the correct one. They look the same except the rated output current.

Model Number	Rated Output Current
SPA-8250	25A
SPA-8400	40A

- 4.2 Check the rating label of the power supply and make sure it accepts the AC mains voltage. Connect the power supply to the AC Mains using the power cord provided.
- 4.3 Switch on the power supply, and the LED Indicator should lit up in green. Then, Switch off the power supply.
- 4.4 Check the rating label of the equipment you wish to connect and make sure it accepts 13.8VDC.

- 4.5 Connect the positive input of the equipment to the Red output terminal of the power supply.  
Then, connect the negative input of the equipment to the Black output terminal of the power supply.
- 4.6 Switch on the power supply first and the LED Indicator should lit up in green.
- 4.7 Switch on the equipment and the LED Indicator should still remain in green.
- 4.8 You can now operate the equipment.  
When operation is finished, switch off the equipment first and then switch off the power supply.

## **5. FEATURES**

1. Lightweight and Small Size : Switching mode power supply has the advantages of lightweight and small size. Comparing with linear mode power with the same power output, it is much lighter and smaller.
2. Overload Protection : The current foldback circuitry is adopted to prevent from overload. The overload indicator will be lit up when the unit is overloaded.
3. Over Temperature Protection : The over temperature circuitry is triggered when the temperature of the unit is over the safety limit due to insufficient cooling . When the protection is triggered, the output voltage and current will drop down to a safety value and the overloaded indicator will be lit up.
4. Over Voltage Protection at 16.5V : The over voltage circuitry protects the unit and the loading equipment from damage by abnormally high output voltage.
5. High RFI Stability : The high protection circuitry against RFI (Radio Frequency Interference) provides a stable operation.

## **6. SPECIFICATIONS**

	<b>SPA-8250</b>	<b>SPA-8400</b>
<b>Fixed Output Voltage</b>	13.8VDC	
<b>Rated Output Current</b>	25A	40A
<b>Ripple and Noise</b>	50mVp-p	
<b>Load Regulation</b>	200mV	
<b>Line Regulation</b>	50mV	
<b>Input Voltage</b>	230VAC / 50Hz	
<b>Efficiency</b>	>78%	
<b>Dynamic Power Factor Correction</b>	>0.95	
<b>Indicator</b>	Bi-Color LED (Green and Red)	
<b>Cooling Method</b>	Variable Speed thermal static control fan	
<b>Protections</b>	Overload, Short Circuit, Overtemperature and OVP	
<b>Approvals</b>	CE EN60950, EN55022	
<b>Dimension</b>	220 (W) x (H)110 x 220(D) mm	220 (W) x (H)110 x 300(D) mm
<b>Weight</b>	2.7Kg	3.5Kg