

# SPS-9620 SWITCHED MODE POWER SUPPLY

## USER'S MANUAL

### INTRODUCTION

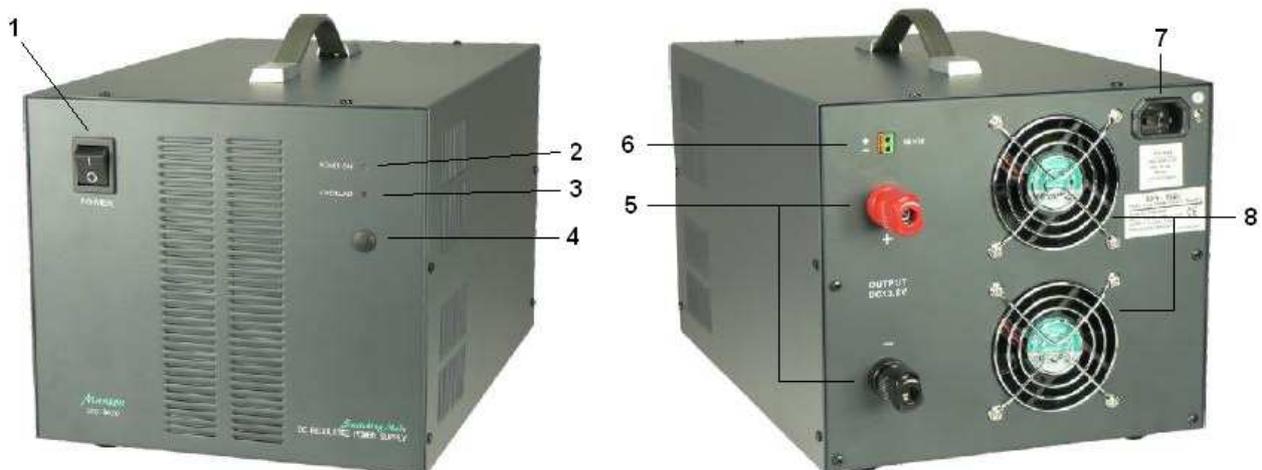
The SPS-9620 Switched Mode DC Power Supply provides high power output for its small size and weight. It is suitable for a variety of applications, for example operating low voltage radio equipment from an AC mains outlet, and provides 13.8Volts at up to 120 Amps. It provides high efficiency, active Power Factor Correction (PFC) and remote voltage sensing to compensate for long cable connections.

Please read these instructions carefully and follow them to prevent abuse or misuse of the power supply. These instructions must be kept for future reference.

### FEATURES

1. Lightweight and small in size: This switch mode power supply has the advantage of small size and weight in comparison to linear mode power supplies.
2. High Efficiency: This unit operates with efficiency greater than 85% under normal conditions.
3. Overload Protection: Current limiting circuitry is used to prevent overloading of the power supply. A front panel indicator will illuminate when overload conditions occur.
4. Over Temperature Protection: To prevent damage to the unit when high temperature conditions occur, the over temperature circuitry operates to reduce the power supplies output to a safe level.
5. Over Voltage Protection: The over voltage circuitry operates to protect the power supply and the load from excessively high output voltage. Remove any external voltage and then switch off the power supply for 30 seconds or more before switching it on again to restore operation.
6. High RFI Stability: Protection circuitry is provided against RFI (Radio Frequency Interference) that ensures stable operation of the power supply in adverse conditions.
7. Output Voltage Adjustment: A variable pot adjusts the output voltage from 11V to 14V enabling the power supply to be used in a variety of applications. Adjustment between 5V and 15V is available from Procon Technology.

### PANEL DESCRIPTION



- |                              |                             |
|------------------------------|-----------------------------|
| 1. Power On/Off Switch       | 5. Output Terminals         |
| 2. Power On LED Indicator    | 6. Remote Sensing Terminals |
| 3. Overload LED Indicator    | 7. AC Input Socket (IEC)    |
| 4. Output Voltage Adjustment | 8. Cooling Fan Air Outlets  |

**CAUTION! The AC inputs are DOUBLE POLE FUSED!**

### INSTALLATION

1. Ensure that the unit is properly grounded through the AC mains plug. This will prevent electric shock due to leakage should a high voltage surge or lightning strike occur.
2. **DO NOT** place the unit in dusty or highly humid locations. **DO NOT** place the unit in direct sun-light or locations subjected to high temperatures.
3. Place the unit on a flat surface in a location which provides unobstructed air circulation.
4. **DO NOT** place the unit close to TV sets or CRT monitors.
5. Connect the unit directly to the AC mains outlet. **DO NOT** use an extension lead or adapter as these may become overheated.
6. Always use appropriate terminal lugs and tighten the screw terminals when operating at high currents to prevent arcing and overheating of the terminals.

7. The unit is for **Indoor Use only**.

## CAUTION

1. **DO NOT** use the unit for powering devices that require higher current than the maximum - otherwise damage may occur to the unit.
2. **DO NOT** use the unit for lamps or motorized equipment which requires higher current than the maximum at startup. Damage to the unit may occur.
3. **DO NOT** replace the fuse and operate the unit before rectifying the problem that caused it to fail. Always replace the fuse with the same rated type. Always unplug the unit before attempting to replace the fuse.
4. If the mains power cable or cord of this unit is damaged, it must be replaced by the same or equivalent unit from the manufacturer or service agent. The supplied cord is for 240VAC input only. If the input voltage is below 190VAC the power cord should be replaced by a 1mm<sup>2</sup> wire size with a maximum length of 2m.

## SAFETY PRECAUTIONS

1. **NEVER** remove the metal cover of the power supply with the AC power connected. Allow the unit to cool before opening the cover. Some components may burn your hand in the event of a component failure. Only qualified personal should open the cover.
2. **NEVER** touch the unit with wet hands or allow it to become wet.
3. **NEVER** operate the unit if foreign materials such as metallic objects, liquids or other debris have fallen inside. Return to the manufacturer or dealer for checking and repair.
4. **NEVER** operate the unit if it has been damaged. This applies particularly if it should be dropped or subjected to a serious jolt. Do not operate the unit until an internal inspection has been carried out by qualified personal.
5. **NEVER** allow foreign objects to come into connect with the DC output terminals.
6. **NEVER** block the vents - including the cooling fan outlets.
7. **ONLY** connect to the AC mains outlet when in use, at all other times disconnect the power supply from the AC mains outlet.
8. **ALWAYS** after switching off, wait 30 seconds before switching on again.

## CONNECTION AND OPERATION

1. Make sure the input AC power source is as per the label before plugging in the unit.
2. This power supply outputs a fixed 13.8V, ensure that the equipment accepts this voltage.
3. Connect your equipment to the output terminals. Positive polarity to red (+) and negative polarity to black (-).
4. If required, connect the Remote Sensing Terminals to the equipment as shown below. Ensure that the sense wires are **AT LEAST 22AWG** wire size.



5. When ready, turn ON the power supply and check that the power-on LED indicator lights up.
6. Then turn ON your equipment and check that the power-on LED indicator remains on and that the Overload LED indicator is OFF.
7. When finished, turn OFF your equipment and then turn OFF the power supply.
8. When disconnecting the power supply from your equipment, disconnect the Remote Sensing wires first, and then disconnect the output cables. **WARNING! Never short-circuit the Remote Sensing Terminals.**

## SPECIFICATIONS

### SPS-9620

OUTPUT VOLTAGE:	13.8V DC (adjustable 12.6~14.3V)
OUTPUT CURRENT:	0~120A
RIPPLE AND NOISE:	50mVp-p
LINE REGULATION:	0.05% + 3mV
LOAD REGULATION:	0.1% + 5mV
POWER SOURCE:	200~240VAC 50Hz
OPERATING TEMPERATURE:	0°C ~ 40°C
CE APPROVALS:	LVD: EN60950, EMC: EN55022
DIMENSIONS (W x H x D):	235 x 218 x 345 mm
WEIGHT:	Approx. 11kg (Net 12.5kg)