



## 5 INDICATION TABLE

Status		
AC normal	LED is ON	LED is OFF
Low voltage	LED is ON	LED is ON
High voltage	LED is ON	LED is ON
Input voltage is too low or too high	LED is ON by turns	
Over-temperature	LED is flashing	
AVR start the delay	LED is flashing	LED is ON or OFF depends on input voltage condition

## 6 SPECIFICATION

INPUT	
Voltage	208/220/230Vac
Voltage Range	172-276Vac
Frequency	50/60Hz auto sensing
OUTPUT	
Capacity	Label specified
Voltage	208/220/230Vac
Voltage Range	207-252Vac
Frequency	50Hz or 60Hz
Steps of Regulation	2 boost + 1 buck
Outlet	Universal Nema socket 8pcs
PROTECTION	
Overload	Manual Reset Circuit Switch
Over-temperature	Thermal Switch
Over-voltage Cut-off	Yes
Low-voltage Cut-off	Yes
Surge Suppression	320 Joules
Delay Timer	Selectable 2 sec / 10 sec / 30 sec
STATUS INDICATOR	
AC Normal	Green
Regulation	Yellow
ENVIRONMENT	
Operating Temperature	0-40°C (32°F - 104°F)
Noise Level	<40dB at 1M
Relative Humidity	<95% (Non-condensing)

\*Product specifications are subject to change without further notice.

# A+ Plus®

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## USER'S MANUAL



This manual provides safety, installation and operation instructions which will guide you to the best performance of your equipment. Please read and keep this manual.

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## 1 INTRODUCTION

### ► System Description

The Product is Automatic Voltage Regulator (AVR) designs to automatically maintain a constant voltage level to protect sensitive electronics from unsafe fluctuations such as power sag, surge, spike or over voltage. The AVR integrated with 3 steps regulation, 8 protected outlets, 2/10/30 seconds delay reconnection and LED status indicator in a compact wall-mount slim unit, to protect any sensitive electronics at home or office.

### ► Features

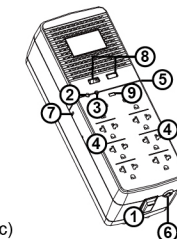
- ◆ Provide stable output voltage through boost and buck stabilizer
- ◆ Delay reconnection selector (2/10/30 seconds)
- ◆ Phone line surge protection
- ◆ Surge suppression 320 Joules
- ◆ High/low voltage cut-off and overload protection
- ◆ Built-in thermal switch for over-temperature protection
- ◆ Power switch with resettable circuit breaker
- ◆ Smart 5VDC USB charging station for smart devices power charging (Optional)

## 2 CAUTION

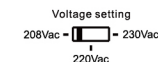
- Failure to follow the safety instructions may cause serious injury and also equipment damage.
- Be sure to operate within the power rating of the AVR.
- The AVR must be installed in a protected environment that provides adequate airflow around and is free from dust, corrosive fumes and conductive contaminants. **DO NOT** install the AVR near excessive humidity, under sunshine or near heating appliances such as a radiator or heater.
- If AVR is out of order, disconnect the power cord and contact with your dealer right away.
- The AVR should be installed near to wall socket and equipment and be easily accessible.
- **DO NOT** plug the AVR's power cord into AVR's output socket. That will result in a safety hazard.
- **DO NOT** attempt to disassemble the AVR. The AVR contains no user-serviceable parts inside. A qualified technician or electrician in accordance with local electrical code should perform maintenance.
- **DO NOT** connect AVR with loading like washing machines, hair dryers, heaters, multifunction printers or any other large electrical devices with power consumption of equal or above in AVR label specified. The current drawn by those loads can cause the AVR to overload.

## 3 OVERVIEW

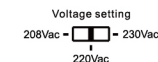
1. Power switch with resettable circuit breaker
2. Power ON LED
3. Regulation LED
4. Outlets
5. Phone line surge protection RJ-11 port
6. AC input line cord
7. Delay reconnection 2/10/30 seconds selector
8. Smart 5VDC USB charging station (Optional)
9. Adjustable voltage dip switch (208Vac/220Vac/230Vac)



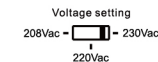
9-1) If you are located in 208Vac country, please set the adjustable voltage dip switch of AVR unit at 208Vac.



9-2) If you are located in 220Vac country, please set the adjustable voltage dip switch of AVR unit at 220Vac.



9-3) If you are located in 230Vac country, please set the adjustable voltage dip switch of AVR unit at 230Vac.



## 4 TROUBLESHOOTING

Check AVR with below steps when you face failure problem:

- ◆ Is the power switch of AVR turned on?
- ◆ Is AVR plugged into a working wall outlet?
- ◆ Is line voltage within the rating specified?
- ◆ Is circuit breaker on the AVR active?
- ◆ Is AVR overloaded?

Use the table below to solve the AVR operation problems. If the problems cannot be resolved, please provide model name, serial number, date of purchase, date of the problem occurred and full description of the problem including load status, AVR LED status, installation environment...etc. when call for service.

Problem	Probable Cause	Solution
AVR shut down after a few seconds and resettable circuit breaker is tripped	AVR is overloaded	Remove some loads and reset the circuit breaker of power switch
AVR fail to turn on and LED is not ON	Utility power exceeds voltage rating	Make sure the voltage matches the AVR capacity specified in the label
LED is flashing and it has output	AVR is overheated and input voltage is in rated range	Wait until AVR cool down before using it again within the rated load.
LED is flashing and it has no output	AVR is overheated and input voltage is not in rated range	