

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.

APLUS[®] is a trademark of APLUS POWER CORP. and is manufactured under its authority. All designs and contents are subject to changes without prior notice. © Copyright 2022 APLUS[®] all rights reserved.

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, AVR protected outlets, 2/10/30 seconds delay reconnection and LCD status display in a compact 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)
- Modem / 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

2 CAUTION

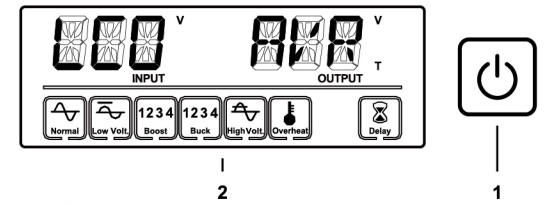
- Failure to follow the safety instructions may cause serious injury and also equipment damage.
- Be sure to operate within the power rating of the AVR.
- The AVR must be installed in a protected environment that provides adequate airflow around and is free from dust, corrosive fumes and conductive contaminants. **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

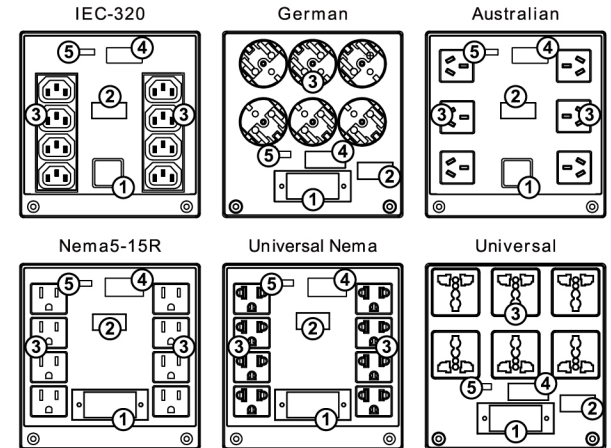
► Front Panel

1. Power Switch: ON/OFF button
2. LCD screen

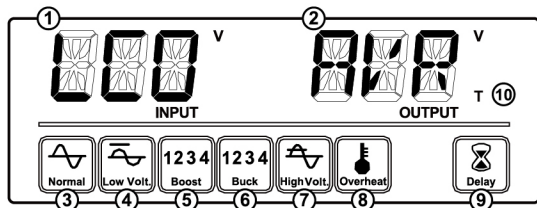


► Rear Panel

1. AC input line cord
2. Power switch with resettable circuit breaker
3. AVR & surge protection outlets
4. Modem / phone line surge protection
5. Delay reconnection 2/10/30 seconds selector



4 INDICATION TABLE



Indicators	Description
1	Input Voltage Indicate input line voltage.
2	Output Voltage Indicate output voltage.
3	Normal Icon Icon is ON when AVR is on normal status and supplying AC power to loads.
4	Low Voltage Icon Icon is ON when input voltage is too low and AVR output will be cut off.
5	Boost Icon Icon is ON when AVR is stabilizing the low voltage of input AC power. When AVR is on 1st boost step, the number "1" icon will be shown ; when AVR is on 2nd boost step, the number "2" icon will be shown...etc.
6	Buck Icon Icon is ON when AVR is stabilizing the high voltage of input AC power. When AVR is on 1st buck step, the number "1" icon will be shown ; when AVR is on 2nd buck step, the number "2" icon will be shown...etc.
7	High Voltage Icon Icon is ON when input voltage is too high and AVR output will be cut off.
8	Overheat Icon Icon is ON when AVR is overheated. Buzzer will beep continuously.
9	Delay Time Icon Icon will flash once every second before delay countdown is finished.
10	Countdown " T " Icon Delay time can be set at 2 sec, 10 sec, or 30 sec. If delay time is set at 2 sec, the icon "T" is shown and display countdown started from 2 to 0, after countdown is finished, AVR will be turned on, then icon "T" will vanish.

5 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 LCD is not ON	Utility power exceeds voltage rating	Make sure the voltage matches the AVR capacity specified in the label
Overheat icon shown 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.
Overheat icon shown and it has no output	AVR is overheated and input voltage is not in rated range	

6 SPECIFICATION

INPUT	
Voltage	110/115/120Vac or 220/230/240Vac
Voltage Range	-25%, +20%
Frequency	50/60Hz auto sensing
OUTPUT	
Capacity	Label specified
Voltage	110/115/120Vac or 220/230/240Vac
Voltage Range	-10%, +10%
Frequency	50Hz or 60Hz
Steps of Regulation	2 boost + 1 buck
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	
LCD	Programmed LCD
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.