

AVANSA®

PREMIUM

UNINTERRUPTIBLE POWER SUPPLY FOR ELECTRIC AND ELECTRONIC DEVICES



Pure Sine Wave

**300W/500VA-12VDC
500W/800VA-12VDC
700W/1000VA-12VDC
1050W/1500VA-24VDC**

User Manual Warranty Certificate



Thank you for purchasing this power supply and for your trust in for your trust in **AVANSA®** product.

Please read carefully and follow these instructions for installation and safe use.

This product belongs to the professional range of automatic uninterruptible power supplies, specifically designed and manufactured for continuous power supply to solid fuel boilers in case of main power failure. In the event of a power failure, the UPS will provide instant power from the battery so the water pumps will keep running and the boiler will be safely cooled down.

ATTENTION!

This is only a safety device that is used only during power failure. When using this device please do not supply any longer the boiler with fuel!

Also, this system can be used to secure other power consumers that require stability and stable parameters of the electrical energy. This product should not be used as an inverter (with unlimited operation from 12VDC source).

The main feature of this device is the output power waveform when operating on battery, which is pure sine wave, identical to the main electricity power network of your house. When the main power of your house is ON, the UPS will charge your battery ensuring a long lasting battery life. The UPS is only working with an external 12V battery (or 24V for the 1050W model UPS). It should be used only lead-acid battery type because the UPS is designed to charge only this type of battery. The use of a gel battery type might end up with the explosion of the battery.

ATTENTION!

Be careful when handling the battery. When connecting the UPS to the battery, avoid wearing personal metal objects (bracelet, chain, watch, rings, etc.) near the battery because it can cause a short circuit current that can weld metal material causing severe burns. Connect the battery respecting the polarity, the red (+ positive) cable will be connected to the battery + terminal and the black (-, negative) wire will be connected to terminal -. The cables for connection to the battery terminals are equipped with metal connectors. Before making the connection it is recommended to clean the battery terminals with a brush. Tighten with a wrench the

connectors to ensure a firm contact. Follow also all the rules from the battery user manual.

Install the UPS in a dry place, without moisture, away from water or snow. The place must be large enough to not obstruct the cooling system of the UPS and free of dust or coal powder that could block the UPS fan. The place should be well ventilated to prevent overheating of the system. To avoid electrical shock verify that all cables are in good condition and free of parts without insulation. The operation of the UPS may produce sparks. It shouldn't be installed in flammable environments.

ATTENTION!

The UPS works only when is connected to the external battery. It should not be used without the battery connected. After connecting the battery, plug the main power cable into a power socket (230V, 50Hz) with ground connection, from the home main power network. At the rear of the source you connect the equipment that you want to be protected during a power failure. Follow this order: connect the battery, connect the main power supply and then connect the consumer to the UPS. To start, press and hold the power button (ON/OFF) for 4 seconds.

The operation of the system begins with the automatic detection of the state of the battery and mains voltage. If the voltage of the battery is under 10,8V the UPS will consider that the battery is damaged and it will not start. If the battery is good and the voltage is low only because of not being charged for a long period of time please charge the battery with a special battery charger until the voltage is higher than 10,8V. If the battery voltage is higher than 10,8V and the main supply voltage is between 150-270 VAC the UPS will supply the consumer and in the same time it will charge the battery, to bring it to full capacity. Normal operation and battery charge level can be viewed on the color LCD.

When the main power is OFF (power failure) or when its parameters are not within normal range the UPS will automatically switch to the battery, this will be indicated on the LCD and the UPS will start emitting the alert sound.

When the battery voltage drops below the minimum value (battery is exhausted) the UPS will increase the frequency of the alert sound and it will cut OFF the power.

Also, if the consumers that are connected to the UPS will exceed the maximum power by 110%, the UPS will emit an intermittent acoustic signal and will automatically close. In case of inductive consumers like water pumps or electric motors it is recommended to use a power consumer up to 50% of maximum power of the UPS because inductive consumers may need a double value of power at start.

ATTENTION! ELECTRIC SHOCK HAZARD!

During operation, you must not touch the battery terminals.

To stop the UPS hold the ON/OFF button for 4 seconds until the UPS emits an acoustic signal and stops.

To extend the battery life it is recommended that you do a cycle of empty and full charge the battery, at least once in 2 months. Perform this task if in this period of 2 months there were no power failures and the battery has been kept full all the time.

MAIN FEATURES

Protection features:

- Thermal: if the UPS is heating up the cooling fan is automatically controlled according to UPS needs, (you don't need to worry if you hear the fan working even if the battery is fully charged or there is no power consumption, the fan is automatically switched on and off depending on the UPS needs).
- Ground: The UPS stops if there is leakage current.
- Battery (alarm and protection) if the battery is discharged to a value of 10,8V the UPS will cut off the power to prevent the destruction of the battery. A fast alarm sound will signalize this.
- Overload protection: if the UPS load exceeds by 110% the rated power the UPS will stop to avoid own destruction.
- Short circuit protection: the UPS stops in case of short circuit.
- Voltage regulator (AVR) provides a constant voltage to consumers in a given interval.
- Switch on the battery: the system switches on the battery if the main power supply disappears, providing uninterrupted power to the consumers.
- Bypass function: if the electric motor requires more power to start, when the system can, it will supplement the necessary difference.
- Microprocessor: all functions are supported by a high frequency

microprocessor (32 bit).

- Automation: if the main power network is not in suitable parameters, the UPS automatically switch to battery.
- Conversion to start the task: in some cases the starting power is required to be higher than the UPS nominal power. In this case the UPS solve this issue by supplying up to 110% of its capacity. Over 110% will beep and will close.
- High charging current: the initial charging current is about 10A, this will charge the battery in less time than conventional chargers. The charging current will decrease as the battery is charging up.
- Preserving battery in stand-by mode: after the battery is full the UPS will keep the battery charged to optimal parameters by giving from time to time a small charging current.

For optimum results the capacity of the battery must be within the range of values: 50Ah - 150Ah.

Do not use less than 50Ah batteries because the high initial charging current of the UPS (up to 10A) will reduce the battery life.

The UPS of 1050W/1500VA will need the use a 24V battery or two 12V batteries connected in serial connection. If you use two 12V batteries they should be similar batteries, having the same age and the same capacity.

Below you can find some teoretical values for a new, fully charged and very good quality battery, with rezistive consumers.

For a consumption of 100W:

- with a battery of 65Ah the UPS will work for 3,5 hours;
- with a battery of 120Ah the UPS will work for 6,5 hours;
- with a battery of 150Ah the UPS will work for 8 hours;

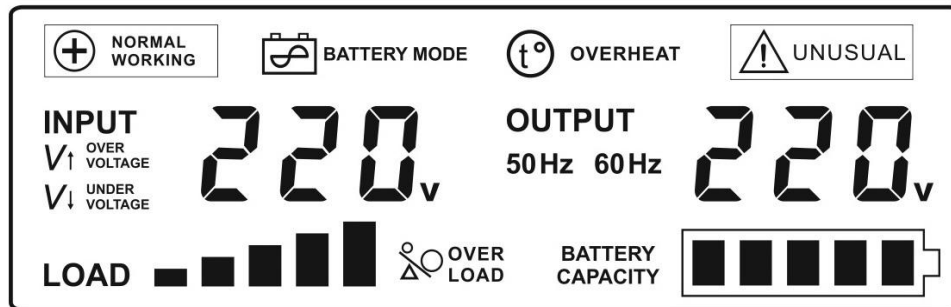
For a consumption of 200W:












- with a battery of 65Ah the UPS will work for 2 hours;
- with a battery of 120Ah the UPS will work for 3 hours;
- with a battery of 150Ah the UPS will work for 4 hours;






For a consumption of 300W:

- with a battery of 65Ah the UPS will work for 1,5 hours;
- with a battery of 120Ah the UPS will work for 2,5 hours;
- with a battery of 150Ah the UPS will work for 3 hours;

Description of signals and alerts from the screen



-  - Normal working mode, main power supply is in good parameters
-  - Battery working mode, main power is missing
-  - Overheating, the UPS will stop
-  - Unusual operation, overloaded battery, short circuit, overheated transistors
-  - High voltage on the main power supply
-  - Low voltage on the main power supply
-  - Overload, the consumer load is higher than the UPS nominal power
-  - Consumer load level
-  - Battery charge level
-  - Input voltage
-  - Output voltage and frequency

Name	Picture	Description
ON/OFF switch		Push this button for about 4 seconds to switch ON or OFF the UPS
Main power plug		Plug this to the main power socket
Output socket		Connect here the consumers Maximum load should be 50% for inductive consumers and 90% for resistive consumers
Smart Fan		The fan is automatically controled depending on the cooling needs of the UPS
Battery connectors		Connect RED wire to + and BLACK wire to -

TEHNICAL PARAMETERS

Maximum capacity	500VA 800VA 1000VA 1500VA
Maximum rated power	300W 500W 700W 1050W
Main input power supply	150 – 270 VCA
Input frequency	45 – 65 Hz
Output power	207 – 241 VCA
Input frequency	50 – 60 Hz
Output waveform	Pure Sine Wave
Switching time	< 4ms
Battery capacity	12V DC / 24V DC (for 1050W)
Overload protection	110% ~ 130% (30 seconds)

POSIBILE PROBLEMS

PROBLEM	POSIBILE CAUSE	WHAT TO DO
UPS doesn't start, LCD not working	ON button not pushed enough Battery not connected Burned fuse UPS damaged	Push ON button over 4 seconds Connect the battery Replace fuse Repair or replace
UPS works only on battery	Main power cable broken Burned fuse Main power is under 160V or over 260V UPS damaged	Replace cable Replace fuse Contact power supply company Repair or replace
Fast beep signal	Overload Battery exhausted	Unplug unnecessary consumers Replace or charge battery
UPS works only short time on battery	Battery exhausted because of intensive work or not fully charged all the time Old or damaged battery	Let the UPS charge the battery for 24 hours Replace battery