

Uninterruptible Power System

User Manual

Budget Pro series 650-2200VA
EOS650-2200

***U**ninterruptible **P**ower **S**upply*

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1. INTRODUCTION

This UPS is specially designed for personal computers with multi-functions. Its light weight and compact design fits perfectly into limited workspaces. The UPS-input is equipped with automatic voltage regulation (boost and buck AVR) to stabilize input voltage range. It has also a built-in cold start function, which enables the UPS for start-up without mains supply.

Although it's a small UPS, it disposes the main features listed below:

- control by microprocessor guarantees a high reliability;
- equipped with automatic voltage regulation (boost and buck AVR);
- green power function for energy saving;
- cold start function;
- automatic restart while mains supply recovery;
- compact size, light weight;
- provides mains supply overload protection.

2. SAFETY INSTRUCTIONS

- This UPS uses voltages that may be dangerous. Do not attempt to disassemble the unit; it contains no user serviceable parts. Repairs should only be executed by plant service.
- The battery voltage is 12Vdc. These are internal, sealed, maintenance-free, 6 cells lead-acid batteries.
- The UPS must be connected to a mains socket with circuit-breaker. Connect the appliance only to a mains socket with grounding.
- In case of an emergency, press the OFF-button and pull the mains plug for interrupting completely the power supply to the UPS.
- Do not let attain any liquids or foreign objects into the UPS appliance; that's why no beverage or other liquid-containing vessels should be placed on or near the appliance.
- This unit is intended for installation in a controlled environment (temperature and humidity). Do not install it in locations with standing or flowing water or excessive humidity.
- Do not plug the input cable of the UPS in its own output.
- Do not connect multiple plugs or surge protections to the UPS unit.
- Only connect computer-related elements to the UPS unit.
DO NOT CONNECT medical applications or life-support equipment.

DO NOT CONNECT AS WELL laser printer, labelling machines, copy machines, generators, vacuum cleaners, drain pumps, microwave ovens or other larger electric appliances to the output connectors. The electricity consumption would cause an overload and possibly even the damage of the UPS.

- To reduce the risk of overheating: do not cover or block the vent of the UPS unit, do not expose the appliance to direct sunlight, do not install it near heat emitting appliances such as space heaters or furnaces/ovens.
- Pull the mains plug out of the socket before cleaning. Do not use liquid or spray detergents.
- Do not expose the batteries to fire because they may explode.
- Do not open and/or damage the batteries on their outside: released electrolyte (lead-acid-accumulator) is harmful to skin and eyes. It may be toxic.
- A battery holds the risk of electric shocks and short circuits. The following precautions should be considered when working with batteries:
 - 1) Remove watches, rings or other metal objects from your hands.
 - 2) Use tools with insulated handles.
 - 3) Wear rubber gloves and rubber boots.
 - 4) Do not deposit tools and/or metal parts on the battery.
 - 5) Disconnect the appliance from the mains each time you are connecting or disconnecting the battery terminals.
- The maintenance of the batteries should be executed by battery-knowledgeable personnel. Observe the recommended and necessary precautions. Keep unauthorised personnel away from the batteries.
- When the batteries are replaced, utilize the same quantity and type of sealed lead-acid battery. The ambient temperature may not exceed 40°C. For maintaining the battery lifetime, we advise an ambient operating temperature of 20°C to 25°C.
- Ensure during the installation of the appliance, that the sum of the residual current of the UPS and of the connected load does not exceed 3.5mA.
- Caution of electric shocks. Even when the unit is disconnected from the mains, dangerous voltages could be achieved via power supply from the battery. For that reason, interrupt the battery on its plus and minus poles when maintenance and servicing activities are necessary and undertaken.
- The mains socket outlet that supplies the UPS shall be installed near the UPS unit and shall be easily accessible.

3. SPECIFICATIONS

LED Model	BP650	BP850	BP1100	BP1300	BP1600	BP2200
& LCD Model	BP650D	BP850D	BP1100D	BP1300D	BP1600D	BP2200D
Capacity	650VA	850VA	1100VA	1300VA	1600VA	2200VA
Input						
Voltage	220 / 230 / 240 Vac					
Voltage range	162-290 Vac					
Frequency range	60/50 Hz (automatic recognition)					
Output						
Voltage in battery mode	230 Vac ±10% (no block sinus)					
Frequency in battery mode	50/60 Hz ±1%					
Transfer time	typically : 2 à 6 ms					
Batteries						
Recharge time	6-8 hours to reach 90% of capacity					
Number and type of battery	1 x 12V7Ah	1 x 12V9Ah	2 x 12V7Ah	2 x 12V7Ah	2 x 12V9Ah	2 x 12V9Ah
LED Indicator						
Mains mode (AC)	green LED lighting					
Battery-Modus	green and orange LED lighting					
Protection						
Overvoltage / overload	surge protection					
Audible alarm						
Battery mode	sounding every 10s					
Weak autonomy	sounding every 1s					
Overload	sounding every 0.5s					
Replace batteries	sounding every 2s					
Fault	continuously sounding					
Size ratio						
Dimensions – mm (W x D x H)	101 x 298 x 142		149.3 x 338 x 162		158 x 380 x 198	
Net weight – kg	4.25	4.9	7.8	8	11.1	11.5
Operating environment						
Ambient temperature	0°C à 40°C					
Operating humidity	< 90% without condensation					

4. SYSTEM DESCRIPTION

4.1. Front panel

① Mains power switch

② LED Indicators:

Mains mode:

The green LED is lighting (650-1300VA). The left green LED is lighting & the 1st to 4th green LED are gradually lighting and in line with the load level (1600-2200VA).

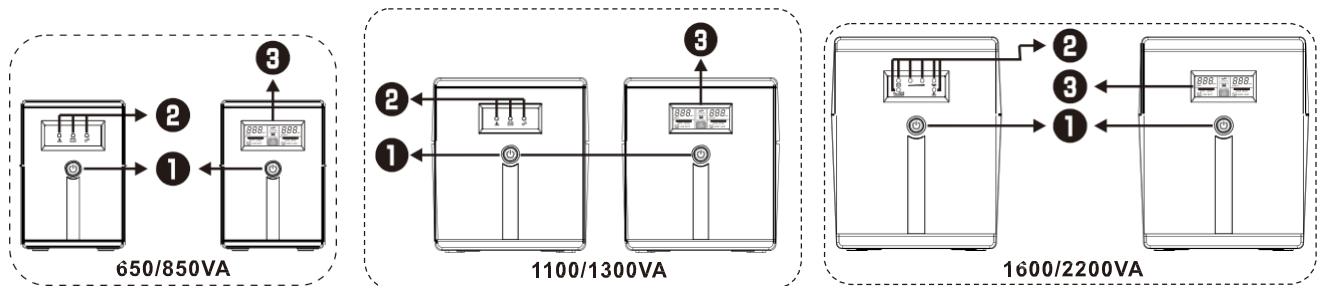
Battery mode:

The yellow LED is flashing (650-1300VA). The left green LED is flashing & the 1st to 4th green LED are gradually lighting and in line with the autonomy level (1600-2200VA).

Fault mode:

The red LED is lighting.

③ LCD



4.2. Back panel

① Input mains power supply

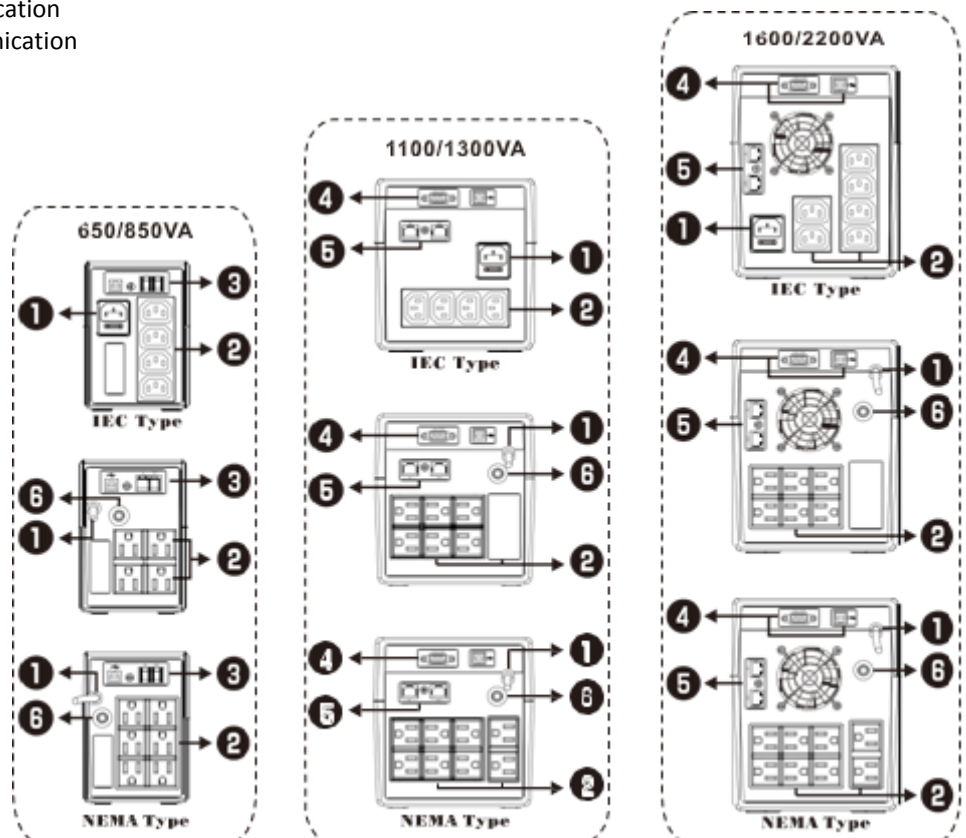
② Output receptacles

③ USB & RJ11 data communication

④ USB & RS232 data communication

⑤ RJ45

⑥ Circuit breaker



5. INSTALLATION & OPERATION

5.1. Unpacking and control

Remove the packaging from the UPS and inspect it for eventual transport damage. If any damage is discovered, repack the unit and send it back to the seller.

5.2. Charging before first use

This unit was sent ex-factory with its internal battery fully charged; anyhow it can discharge during the transportation. That's why it has to be charged before first use. Turn on the UPS, plug it into an appropriate power supply and allow the UPS to charge totally by leaving it plugged in for at least 6 hours with no load (no electrical devices such as computers, monitors, etc.) connected.

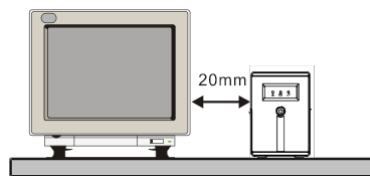


5.3. Placement

Install the UPS unit in a protected environment that provides adequate ventilation around the unit and that's free from excessive dust, corrosive vapours and conducting polluting substances. Do not operate your UPS in an environment where the ambient temperature or humidity is high.



Furthermore, maintain a minimum distance of 20 cm between UPS unit and a monitor for avoiding harmful interference.



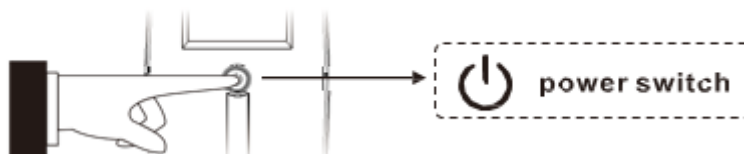
5.4. Connection

Plug the UPS into a 2-pole grounded mains socket (phase and neutral). Afterwards, connect by means of the delivered cable one computer or computer-related device to each connection jack on the back side of the UPS.



5.5. Turn On/Off

To turn the UPS on, press the power switch. To turn the UPS off, press the power switch again.



5.6. Cold start in battery mode

All UPS appliances are equipped with a cold start function in battery mode. To start the UPS when mains power is not available, simply press the power switch.

6. TROUBLE SHOOTING

Symptom	Possible cause	Solution
No LED indication on the front panel display.	1. The battery is weak. 2. Battery fault. 3. The power switch is not pressed.	1. Charge the battery during 8 hours. 2. Replace the battery with a new one of same type. 3. Press the power switch (again).
Alarm buzzer beeps continuously when mains supply is normal.	Overload of the UPS.	Verify if the connected load is in accordance with the denoted performance (see specifications).
When the power failures, back-up time is shorten.	1. Overload of the UPS. 2. The battery voltage is too low. 3. Battery fault because of too high operating temperature, or because of malfunction of the battery.	1. Remove some non-critical loads. 2. Charge the battery during 8 hours or more. 3. Replace the battery with a new one of same type.
Mains power is normal, but the yellow LED is flashing.	The Power cord is loose.	Reconnect the power cord properly and firmly.

If any abnormal situations occur that are not listed above, please contact immediately the client service.

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