User Manual

UPS 400 VA-3000 VA

Safety and General Information

Read the instructions carefully before installing, operating or maintaining the UPS.

WARNING

- This UPS is intended only for indoor use in a controlled environment (please refer to the temperature and humidity range specified in this manual). Do not operate the UPS in direct sunlight, in contact with fluids, or where there is excessive heat, humidity or dust.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- Do not connect non-computer-related equipment, such as medical equipment, life-support equipment, microwave ovens, and vacuum cleaners to the UPS.
- Do not plug the UPS power cord into its own power outlet.
- Connect the UPS power cable directly to AC outlet. Do not use surge protectors or extension cords.
- In the event of an emergency, turn off the UPS and unplug the power cord.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Battery cable should be disconnected before servicing the UPS inside.
- Servicing of batteries should be performed by qualified personnel. Replace batteries with the same number and type of batteries as originally installed in the equipment.
- Do not dispose of batteries in a fire. The batteries may explode. Do not open or mutilate batteries. They contain an electrolyte that is toxic and harmful to the skin and eyes.
- The UPS must be connected to an AC outlet which should be properly grounded.
- The UPS contains internal batteries and may present a shock hazard even when disconnected from the mains power.

General Information

- Inspect the package contents upon receipt. Notify the carrier and dealer if there is any damage.
- Charge the battery for more than 8 hours before using the UPS. The battery charges whenever the UPS is connected to the AC outlet.
- Devices that have motors (such as laser printers, heaters, vacuum cleaners, air conditioner and refrigerator) should not be connected to the UPS outlets. Failure to do can result in overload or UPS damage.
- Press the Power ON/OFF button for 3 seconds to turn on the UPS. LED indicators/LCD display screen will illuminate, the UPS will also emit a beeping sound, then load devices can be turned on at this time.
- If the connected equipment exceeds the specified maximum load, the UPS will emit an audible alarm. Turn off the UPS first, and unplug non-essential equipment connected, and then ensure that the circuit breaker/fuse are in proper condition after waiting for 10 seconds, finally restart the UPS.
- Fully charge the battery before storing. Store the UPS covered and upright in a cool, dry location, and recharge the battery every 3 months.

Operation

Front Panel Buttons and Display Interface

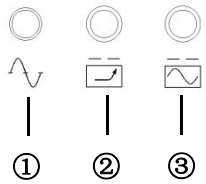
1. Power ON/OFF button

Turn on/off the UPS with LED display: Press the Power ON/OFF button on the front panel

Turn on/off the UPS with LCD display: Press and hold the Power ON/OFF button on the front panel for 3 seconds

2. LED indicators / LCD display screen

LED indicators



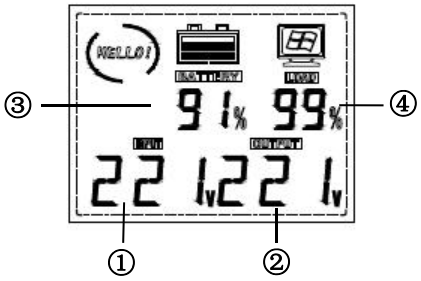
① On Line (green) - is lit when the UPS is supplying utility power to connected equipment after turning on.

② Battery charge state (yellow) - flashes during charging, lights when fully charged.

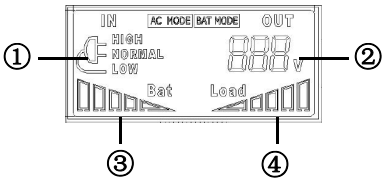
③ On battery (red) - is lit when the UPS is supplying battery power to connected equipment.

LCD display screen

Type A display screen



Type B display screen



① Mains voltage / mains state

② Output voltage

③ Battery capacity

④ Load capacity

Rear Panel

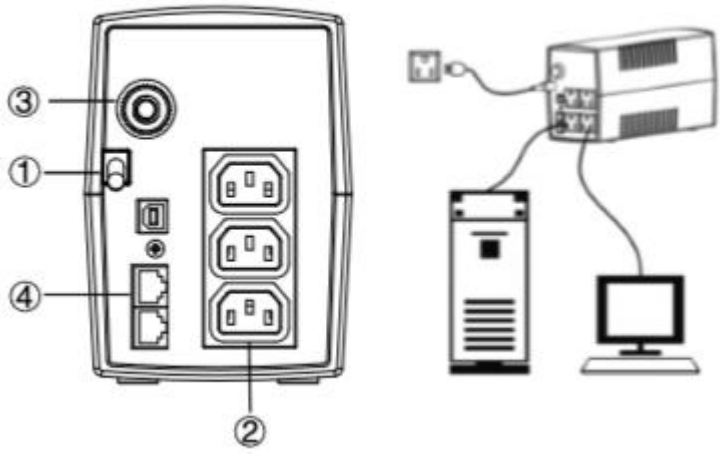
① Input power cord / IEC input outlet - connects the unit to utility power.

② Output outlets - during a power outage or other utility problems, the output outlets receive power for a limited time from the UPS. Connect critical equipment such as computer, monitor, or other data devices into these outlets.

③ Input fuse / circuit breaker - provides input protection.

④ Communication interface (optional) - USB/RS232 communication, RJ11/RJ45 surge protection

Note: The above pictures are for reference only, please in kind prevail.



Specifications

Model	400VA/450VA	600VA/650VA	800VA/850VA	1000VA /1200VA	1500VA /1600VA	2000VA	3000VA
Rated power	240 W	360 W	480 W	720 W	900 W	1200 W	1800W
Input							
Voltage range	100 / 110 / 120 Vac: 80 - 150 Vac; 220 / 230 / 240 Vac: 162 - 295 Vac / 145 - 295 Vac						
Frequency range	50 / 60 Hz (auto-sensing)						
Output							
Output voltage (battery mode)	100 / 110 / 120 Vac ± 10% or 220 / 230 / 240 Vac ± 10%						
Output frequency (battery mode)	60 Hz / 50 Hz ± 1% (auto-sensing)						
Waveform	Mains mode: pure sine wave; Battery mode: simulated sine wave						
Switching time	8 ms (typical), 10 ms (max.)						
Batteries							
Model & numbers	12V/4.5Ah×1	12V/7Ah×1	12V/8Ah×1	12V/7Ah×2	12V/8Ah×2	12V/9Ah×2	12V9AHx4
Recharge time	6 ~ 8 h						
Others							
Operating temperature	0 - 40℃						
Relative humidity	5 - 90%						

Troubleshooting

Problem	Possible Cause	Solution
The UPS fails to be turned on	Mechanical damage to the Power ON/OFF button	Replace the button.
	The batteries have reached the end of service life.	Replace the batteries.
	MOSFETs fail	Replace MOSFETs.
The UPS does not provide the expected amount of backup time.	The batteries are week or shorter due to frequent power outage or elevated temperatures	Charge the batteries for at least 8 hours.
		Replace the batteries. Place the UPS in a temperature controlled environment.
The utility power is available and the power cable is securely connected to the utility power supply, but the UPS is operating on battery power.	Fuse or circuit breaker has been tripped due to overload.	Turn off the UPS, unplug the UPS input power cord, replace the fuse or reset the circuit breaker. Reduce the load on the UPS, re-connect the UPS to utility power and turn it on.