

SYNCRO 400/600/800 STANDBY UPS



INTRODUCTION

This UPS provides comprehensive protection in a small and economic package. The UPS is more compact and offers greater comprehensive power protection against surges and spikes. This UPS will continue providing stable power to connected equipment and enable to shutdown PC safely during power failure. Its embedded microprocessor controller guarantees high reliability and it's perfect for any home or small office application.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS!!

This manual contains instructions and warnings that should be followed during the installation, operation and storage of the UPS systems.

Installation Warnings

- This UPS utilizes voltage that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user replaceable parts. Only factory service personnel may perform repairs.
- This pluggable type A equipment with battery already installed by the supplier is operator installable and may be operated by laymen.
- The mains socket outlet that supplies the UPS shall be installed near the UPS and shall be easily accessible.
- During the installation of this equipment it should be assured that the sum of the leakage currents of the UPS and the connected loads does not exceed 3.5mA.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard as well as violate local electrical codes.
- In the event of an emergency, press the "OFF" button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Do not allow any liquids or any foreign object to enter the UPS.
- Do not place beverages or any other liquid-containing vessels on or near the unit.
- This unit intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is standing or running water, or excessive humidity.
- To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heater or furnaces.

UPS Connection Warnings

- Do not plug the UPS input into its own output.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or

vacuum cleaners to UPS.

Battery Warnings

- Do not dispose of batteries in a fire as they may explode.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- Do not open or mutilate the battery or batteries. Release electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
 - 1) Remove watches, rings, or other metal objects from the hands.
 - 2) Use tools with insulated handles.
 - 3) Wear rubber gloves and boots.
 - 4) Do not lay tools or metal parts on top of batteries.
 - 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.
- Internal battery voltage is 12VDC. Sealed, lead-acid, 6-cell battery.
- When replacing batteries, replace with the same number and type of sealed lead-acid battery.
- Attention, hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the connectors of the battery when maintenance or service work inside the UPS is necessary.

STORAGE & PLACEMENT

Storage

All connected equipment should be turned off, then disconnect from the UPS to avoid battery drain. Unplug the UPS from the wall outlet. Then press ON/OFF button to turn off the UPS. The UPS is ready for storage. Store the UPS unit covered and upright in a cool, dry location with its battery fully charged. Before storing, charge the UPS unit for at least 4 hours. Disconnect any loads and cables to avoid unnecessary drainage of the battery.

Placement

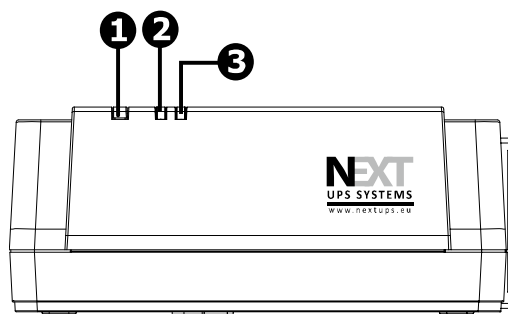
Install the UPS in a protected area that is free of excessive dust and has adequate air flow. Place the UPS away from other units at least 20 cm to avoid interference. For best performance, keep the indoor temperature between 0 °C and 40 °C.

SPECIFICATIONS

MODEL	SYNCRO 400	SYNCRO 600	SYNCRO 800
CAPACITY	400VA 240W	600VA 360W	800VA 480W
Input Voltage	220/230/240 VAC		
Input Voltage Range	180 – 270 VAC		
Output Voltage Regulation (Battery mode)	± 10 %		
Transfer Time (Typical)	2-6 ms		
Waveform	Simulated Sine Wave		
Battery Type & Number	12V 4.5Ah x 1	12V 7Ah x 1	12V 9Ah x 1
Charging Time	8 hours recover to 90% capacity		
Dimension (DxWxH) mm	228 x 82.5 x 207 at vertically stand		
Net Weight (kgs)	2.2	2.7	3.1
Humidity	0-90% RH @ 0-40°C (non-condensing)		
Noise Level	Less than 40dB		

OVERVIEW

Front Look



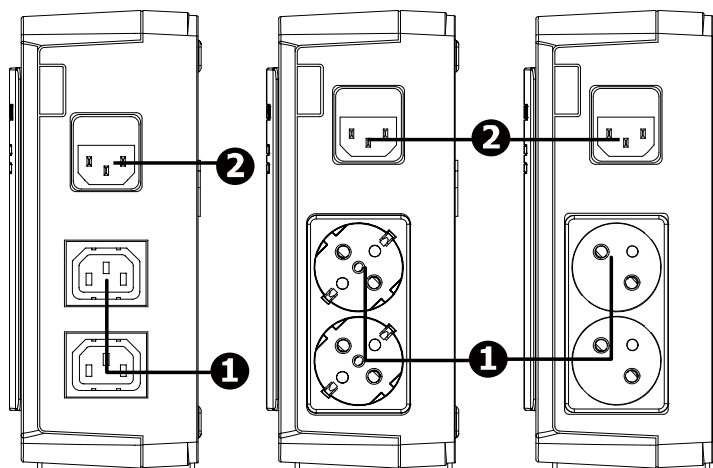
- ❶ Power switch
- ❷ UPS status indicator
- ❸ Fault/Battery status indicator

(Check the Indicator & Alarm Table for the details.)

Indicators & Alarm Table for Operation

Conditions	Visual Indicator	Alarm
AC Mode	Green LED lighting	Off
Battery Mode	Green LED flashing every 10 seconds	Sounding every 10 seconds
Low battery at battery mode	Green LED flashing every second and Red LED lighting	Sounding every second
Fault	Red LED lighting	Continuously sounding

Back Look



- ❶ Output receptacles
- ❷ AC input

INSTALLATION

1. Place the UPS on a proper environment.

Place the UPS to avoid:

- ✗ Direct sunlight
- ✗ Excessive heat
- ✗ Excessive moisture

2. Plug the UPS into a wall outlet.

The UPS must charge for at least 8 hours to ensure full runtime before initial use. Even though UPS is off, it will still automatically charge the battery.

3. Plug your equipment into the UPS.

All output receptacles provide battery backup and surge protection. Plug your computer, monitor, and other critical devices there.



NEVER connect a laser printer or scanner to the UPS unit. This may cause the damage of the unit.

4. Power On

Plug the UPS power cord directly into a wall outlet, not into a surge protector or power strip. Then press the power switch to turn on the unit. The green indicator will light on to confirm the unit is on and ready to provide protection.

When the UPS is off and there no exists utility, it's still possible to turn on the UPS unit to power the loads.

TROUBLESHOOTING

Problem	Possible Cause	Solutions
No LED display on the front panel.	Low battery.	Charge the UPS at least 8 hours.
	Battery fault.	Replace the battery with the same type of battery.
	The UPS is not turned on.	Press the power switch again to turn on the UPS.
Alarm continuously sounds when the mains is normal.	The UPS is overload.	Remove some loads first. Before reconnecting equipment, please verify that the load matches the UPS capability specified in the specs.
	UPS fault	Return the unit to the service center.
Alarm sounds every 2 seconds when the mains is normal.	Battery defect.	Replace the battery with the same type of battery.
	Charging board is damaged.	Return the unit to the service center.
When power fails, back-up time is shorten.	The UPS is overload.	Remove some critical load.
	Battery voltage is too low.	Charge the UPS at least 8 hours.
	Battery defect. It might be due to high temperature operation environment, or improper operation to battery.	Replace the battery with the same type of battery.
The mains is normal but the UPS is in battery mode.	Power cord is loose.	Reconnect the power cord properly.