



800/1100/1500/2000/2500/3000 VA



English version



User guide

1. SAFETY INSTRUCTIONS – Security

IMPORTANT!

Save this manual properly and read carefully the following instructions before installing the unit. Do not operate this unit before reading through all safety information and operating instructions carefully. Installation and Wiring must be performed in accordance with the local electrical laws and regulations. Installing and connecting UPS system in a way that does not comply with accepted practices releases Infosec Communication from any liability.

▪ **Transportation**

1. Please transport the UPS system only in the original package to protect against shock and impact.

▪ **Preparation and good disposals of the device:**

1. Condensation may occur if the UPS system is moved directly from cold to warm environment. The UPS system must be absolutely dry before being installed. Please allow at least two hours for the UPS system to acclimate the environment.
2. Do not install the UPS system near water or in moist environments.
3. Do not install the UPS system where it would be exposed to direct sunlight or near heater.
4. Do not block air vents in the housing of UPS. The UPS must be installed in a location with good ventilation. Ensure enough space on each side for ventilation.
5. The mains outlet that supplies the UPS must be located near the UPS and be eonduleurly accessible.
6. Install the UPS in a temperature and humidity-controlled room free of conductive interference.
7. Disconnect the UPS from AC power and switch it off before cleaning with a damp cloth (no cleaning products).
8. Do not leave any recipients containing liquid on or near the UPS.
9. Place cables in such a way that no one can step on or trip over them.
10. Prevent no fluids or other foreign objects from inside of the UPS system
11. It is recommended that a qualified technician change the protective components, such as fuses.

▪ **Risk of electric shock:**

1. The UPS unit uses potentially hazardous voltages. Do not attempt to disassemble this equipment as it does not contain accessible components that can be repaired by users, fuse change excepted.
2. Caution -risk of electric shock. The battery circuit is not isolated from the input voltage. Hazardous voltages may occur between the battery terminals and the ground. Before touching, please verify that no voltage is present!
3. The UPS system operates with hazardous voltages. Repairs may be carried out only by qualified maintenance personnel.
4. The utility power outlet must be near the equipment and be eonduleurly accessible. To isolate the UPS from AC input and swith it off, remove the plug from the utility power outlet.

5. Do not disconnect the mains cable on the UPS system or the building wiring outlet (earthed shockproof socket outlet) during operations since this would cancel the protective earthing of the UPS system and of all connected loads.
6. The UPS has its own internal power supply (battery). There is a risk that output sockets may still be live after the UPS has been disconnected from the mains power supply.
7. In an emergency situation, switch the UPS to the "Off" position and disconnect the unit from the AC power supply.
8. When the UPS is out of order, please refer to section: "**trouble shooting**" and call the hot line.
9. Equipotential earth bonding must be checked with external battery bank if any

- **Installation for UPS with terminal(s).**

1. An appropriate disconnect device as short-circuit backup protection should be provided in the building wiring installation.
2. An integral single emergency switching device which prevents further supply to the load by the UPS in any mode of operation should be provided in the building wiring installation according to local electrical laws.
3. Connect the earth before connecting to the building wiring terminal.

- **Connected products:**

1. Combined UPS and connected equipment leakage current should not exceed 3,5 mA.
2. Make sure that the connected load does not exceed UPS capabilities. To ensure improved backup time and longer battery life, we recommend a load equivalent to 1/3 of nominal power.
3. Do not connect appliances or devices which would overload the UPS (e.g. big motor-type equipment) to the UPS output sockets or terminal.
4. Do not plug the UPS input into its own output socket.
5. Do not plug the UPS into a power strip or surge suppressor.
6. The UPS has been designed for personal computers. It should not be used with electrical or electronic equipment with inductive loads such as motors or fluorescent lights.
7. Do not connect any household appliances such as microwaves, vacuum cleaners, hair dryers or life-support systems to the UPS.
8. Due to excessive consumption, laser printers should not be connected to the UPS.
9. Please replace the fuse only with the same type and amperage in order to avoid fire hazards.

- **About batteries:**

1. It is recommended that a qualified technician change the battery.
2. Before carrying out any kind of service or maintenance, disconnect the batteries and verify that no current is present and no hazardous voltage exists in the terminals of high capability capacitor such as BUS-capacitors.
3. Do not dispose of the battery in a fire as it may explode.
4. **Do not open or damage the battery!** The electrolyte, fundamentally sulphuric acid, can be toxic and harmful to the skin and eyes. If you come into contact with it, wash thoroughly with water and clean dirtied clothes.
5. Do not throw the battery into a fire. It may explode. It has to be disposed of separately at the end of its useful life. Refer to local legislation and regulations.
6. The UPS contains one or two large-capacity batteries. To avoid any danger of electric shock do not open it/them. If a battery needs servicing or has to be replaced, please contact the distributor.

7. Servicing should be performed or supervised by competent personnel who take the necessary precautions. Keep unauthorised personnel away from batteries.
8. A battery may present a risk of electric shock and cause short circuits. The following precautions should be taken by the qualified technician:
 - ✓ Remove watches, rings or other metal objects from hands.
 - ✓ Use tools with insulated handles.
 - ✓ Disconnect the charging source prior to connecting or disconnecting battery terminals.
 - ✓ When replacing batteries, use the same type and number of sealed lead-acid batteries.

AFTER SALES SERVICE

IMPORTANT!

When calling the After-Sales Department, please have the following information ready, it will be required regardless of the problem: UPS model, serial number and date of purchase.

Please provide an accurate description of the problem with the following details: type of equipment powered by the UPS, indicator led status, alarm status, installation and environmental conditions.

You will find the technical information you require on your guarantee or on the identification plate on the back of the unit. If convenient you may enter the details in the following box.

Model	Serial number	Date of purchase
E3 Performance ...		

! Please keep the original packaging. It will be required in the event the USP is returned to the After-Sales Department.

▪ **CE conformity:**



This logo means that this product answers to the EMC and LVD standards (regarding to the regulation associated with the electric equipment voltage and the electromagnetic fields) and comply with RoHS directives.

This is a category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures (only for 220/230/240 VAC).

IMPORTANT



A UPS belongs to the electronic and electrical equipment category. At the end of its useful life it must be disposed of separately and in an appropriate manner.

This symbol is also affixed to the batteries supplied with this device, which means they too have to be taken to the appropriate place at the end of their useful life.

Contact your local recycling or hazardous waste centre for information on proper disposal of the used battery.

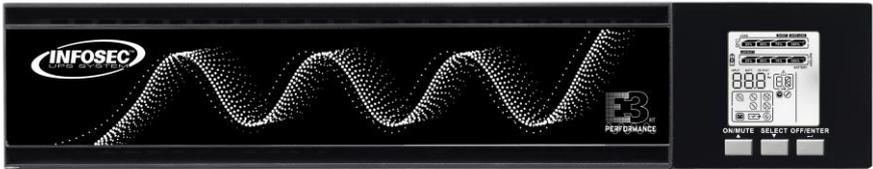
2. INSTALLATION AND SETUP

NOTE: It is recommended that a qualified technician install the UPS. Before the installation of the unit, please inspect it. Be sure that nothing inside the package is damaged. Please keep the original package in a safe place for future use.

Unpack the package and check the package contents. The shipping package contains:

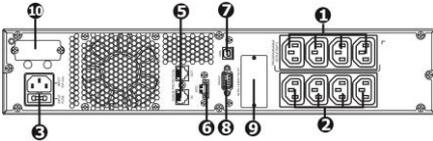
- 1 UPS
- 1 input cable
- 1 output cable
- 1 USB cable
- 1 Infopower software
- 1 pedestal and Rackmounting kit
- 1 user's manual

2.1. Front panel view

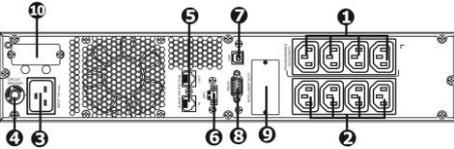


2.2 Rear panel view

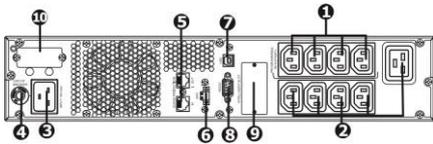
E3 Performance 800/1100/1500 RT IEC



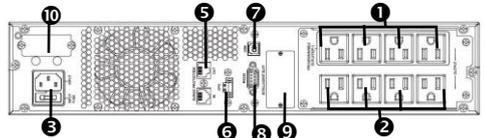
E3 Performance 2000 RT IEC



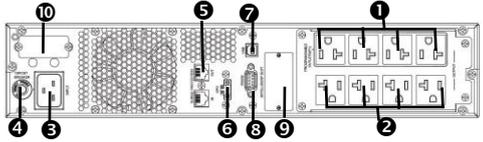
E3 Performance 2500/3000 RT IEC



E3 Performance 800/1100/1500 RT NEMA HV



E3 Performance 2000/2500/3000 RT NEMA HV

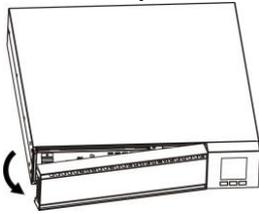


- 1 - Programmable outlets: connect to non-critical loads.
- 2 - Standard output outlets: connect to mission-critical loads.
- 3 - AC input.
- 4 - Input circuit breaker.
- 5 - Tel/Network/Fax/Modem surge protection.
- 6 - Emergency Power Off function connector (EPO).
- 7 - USB communication port.
- 8 - RS-232 communication port.
- 9 - SNMP intelligent slot.
- 10 - External battery connector

2.3 Install the UPS

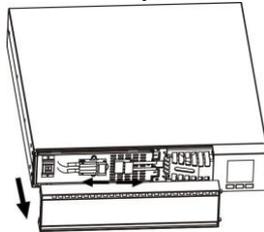
For safety consideration, the E3 Performance is shipped without connecting battery wires. Before installing the UPS, please follow the steps below to re-connect battery wires.

▪ **Step 1**



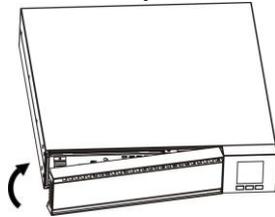
Remove front panel.

▪ **Step 2**



Connect the AC input and re-connect battery wires.

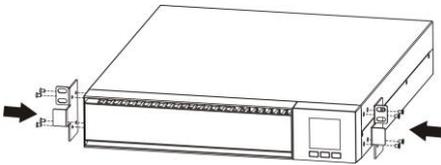
▪ **Step 3**



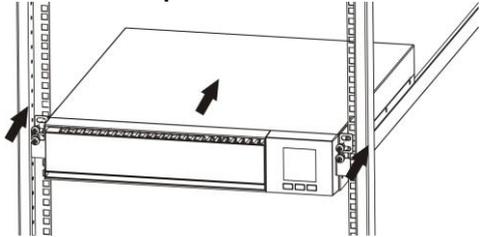
Put the front panel back to the unit.

Rack-mount installation

▪ **Step 1**

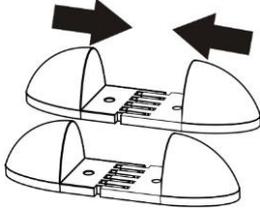


▪ **Step 2**

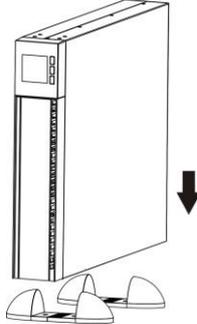


Tower installation

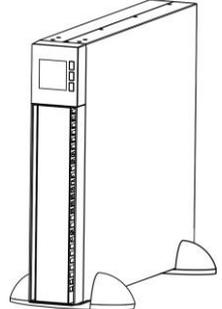
▪ **Step 1**



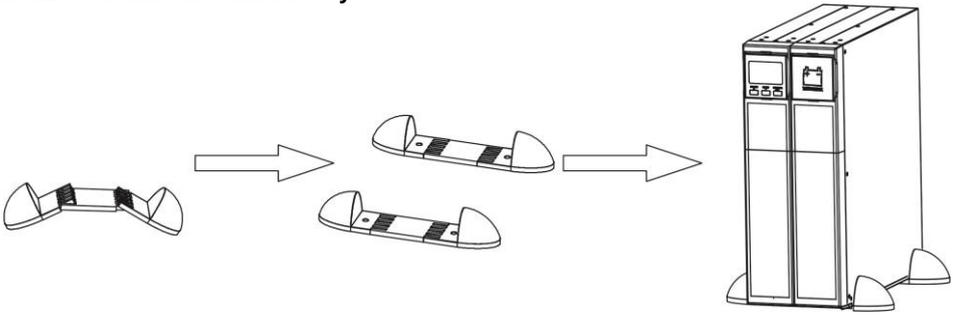
▪ **Step 2**



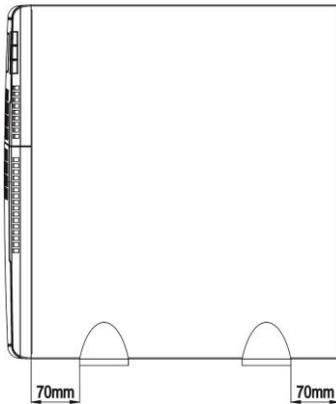
▪ **Step 3**



Install UPS and external battery



NOTE: When installing the UPS or battery pack with feet, please keep 70mm distance from the edge of the unit.



2.4 Setup the UPS

▪ Step 1 - UPS input connection

Plug the UPS into a two-pole, three-wire, grounded receptacle only. Avoid using extension cords.

▪ Step 2 - UPS output connection

For socket-type outputs, there are two kinds of outputs: programmable outlets and general outlets. Please connect non-critical devices to the programmable outlets and critical devices to the general outlets. During power failure, you may extend the backup time to critical devices by setting shorter backup time for non-critical devices.

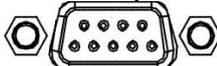
▪ Step 3 - Communication connection

Communication ports:

USB port



RS-232 port



Intelligent slot



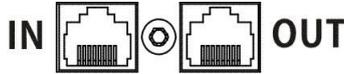
To allow unattended UPS shutdown/start-up and status monitoring, connect the communication cable one end to the USB/RS-232 port and the other to the communication port of your PC. Once the software Infopower installed on your computer, you can schedule UPS shutdown/start-up and monitor UPS status through PC.

The UPS is equipped with intelligent slot perfect for either SNMP or AS400 card. When installing either SNMP or AS400 card in the UPS, it will provide advanced communication and monitoring options.

PS: USB port and RS-232 port can't work at the same time.

- **Step 4 - Network connection**

Network/Fax/Phone surge port:

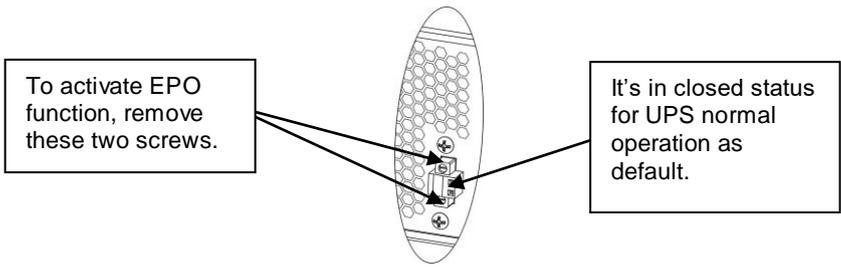


Connect the modem/phone/fax line into surge-protected “IN” outlet on the back panel of the UPS unit. Connect from “OUT” outlet to the equipment with another modem/fax/phone line cable.

- **Step 5 - Disable and enable EPO function**

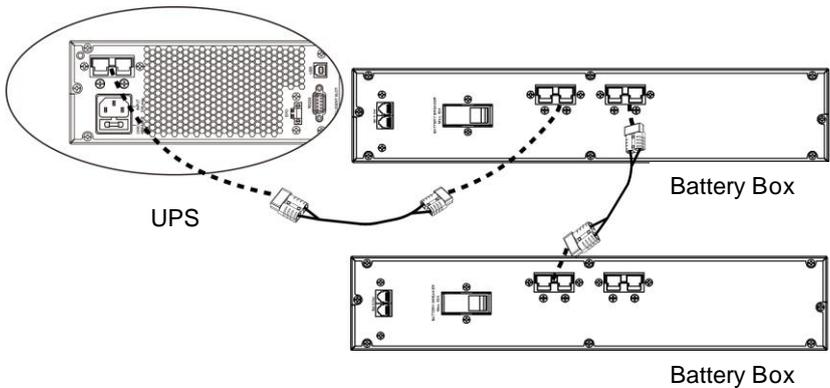
This UPS is equipped with EPO function. By default, the UPS is delivered from factory with Pin 1 and pin 2 closed (a metal plate is connected to Pin 1 and Pin2) for UPS normal operation. To activate EPO function, remove two screws on EPO port and green connector will be removed.

Note: The EPO function logic can be set up via LCD setting. Please refer to program 16 in UPS setting for the details.



▪ **Step 6 - External battery connection**

Connect the external battery to the UPS thanks to an optional battery connector (in case of extended backup time).



NOTE: Maximum connected external battery boxes up to 4 units.
 If connecting more one external battery box, it's requested to connect load at 80% of UPS capacity.

▪ **Step 7 - Turn on the UPS**

Press the ON/Mute button on the front panel for two seconds to power on the UPS.
 Note: The battery charges fully during the first five hours of normal operation. Do not expect full battery run capability during this initial charge period.

▪ **Step 8 - Install software**

For optimal computer system protection, refer to the InfoPower software CD to fully configure UPS shutdown.

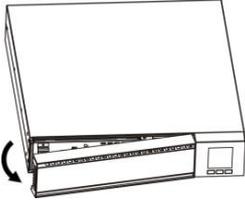
2.5 Battery replacement

NOTICE: This UPS is equipped with internal batteries and user can replace the batteries without shutting down the UPS or connected loads (hot-swappable battery design). Replacement is a safe procedure, isolated from electrical hazards.

CAUTION! Consider all warnings, cautions, and notes before replacing batteries.

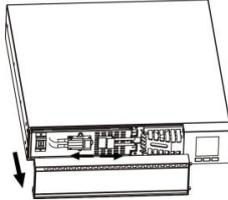
Note: Upon battery disconnection, equipment is not protected from power outages.

▪ Step 1



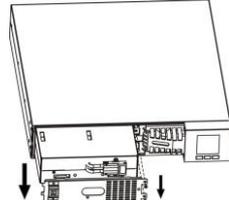
Remove front panel.

▪ Step 2



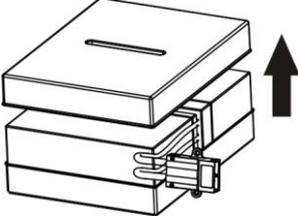
Disconnect battery wires.

▪ Step 3



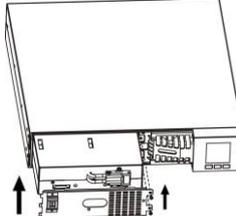
Pull out the battery box by removing two screws on the front panel.

▪ Step 4



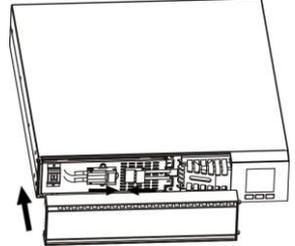
Remove the top cover of battery box and replace the inside batteries.

▪ Step 5



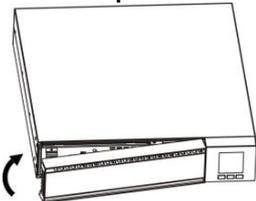
After replacing the batteries, put the battery box back to original location and screw it tightly.

▪ Step 6



Re-connect the battery wires.

▪ Step 7



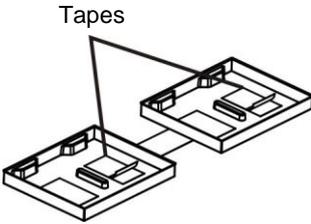
Put the front panel back to the unit.

2-6 Battery Kit Assembly (option)

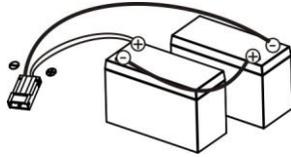
NOTICE: Please assemble battery kit first before installing it inside of UPS. Please select correct battery kit procedure below to assemble it.

2.6.1 – 2 battery kit

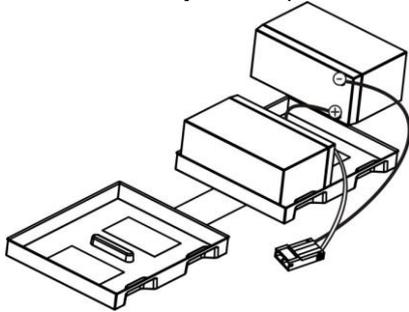
Step 1: Remove adhesive tapes.



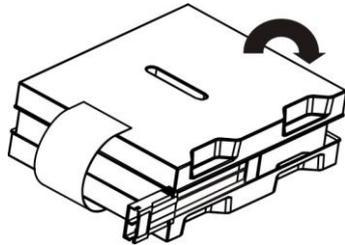
Step 2: Connect all battery terminals by following below chart.



Step 3: Put assembled battery packs on one side of plastic shells and insert one more defect battery on the space.

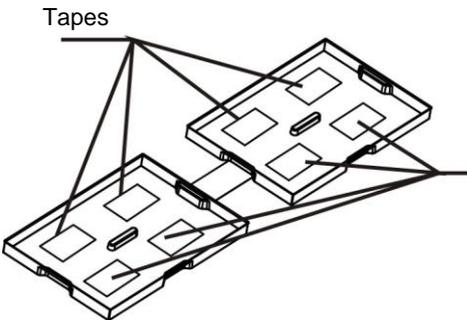


Step 4: Cover the other side of plastic shell as below chart. Then, battery kit is assembly well.

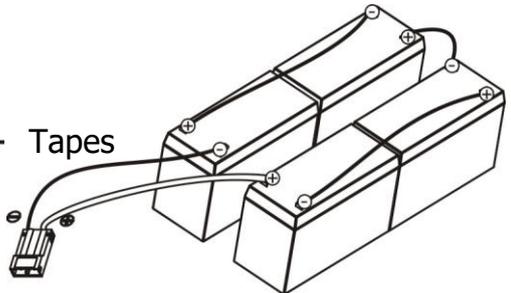


2.6.2 – 4 battery kit

Step 1: Remove adhesive tapes.

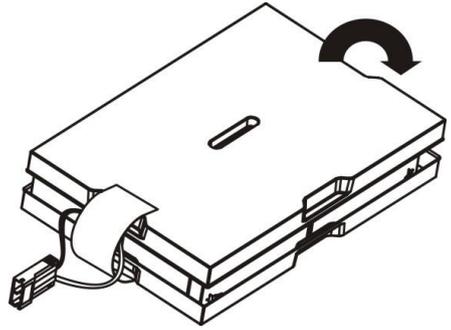
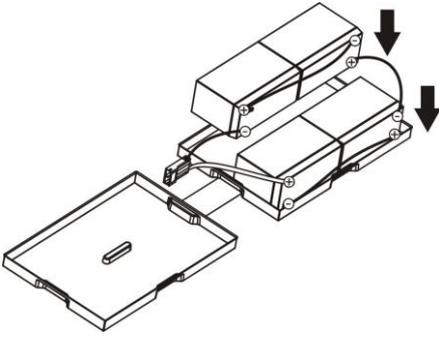


Step 2: Connect all battery terminals by following below chart.



Step 3: Put assembled battery packs on one side of plastic shells.

Step 4: Cover the other side of plastic shell as below chart. Then, battery kit is assembly well.

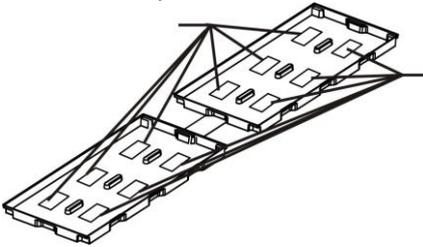


2.6.3 - 6 battery kit

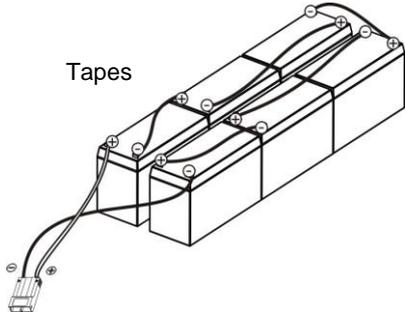
Step 1: Remove adhesive tapes.

Step 2: Connect all battery terminals by following below chart.

Tapes

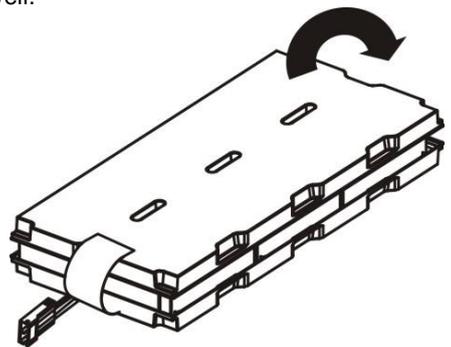
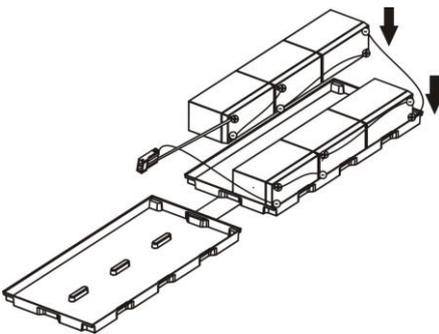


Tapes



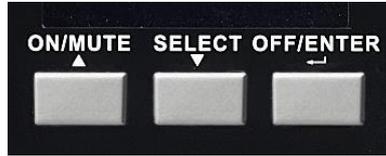
Step 3: Put assembled battery packs on one side of plastic shells.

Step 4: Cover the other side of plastic shell as below chart. Then, battery kit is assembly well.



3. OPERATIONS

3.1 Buttons operation

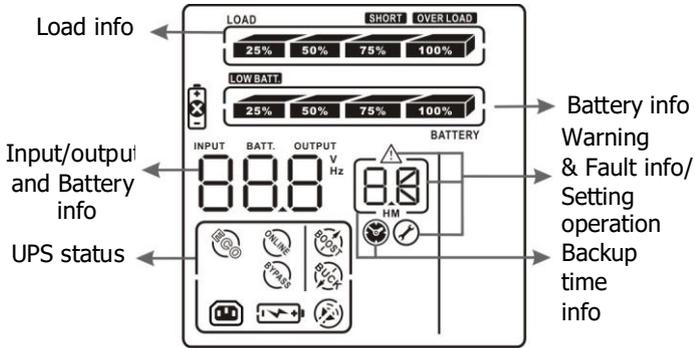


Button view

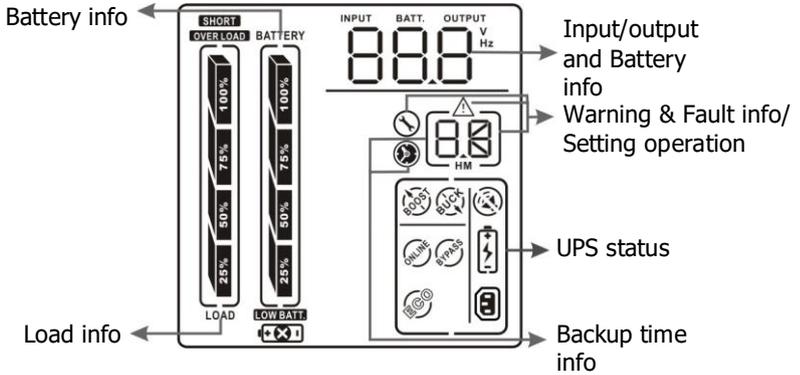
Buttons	Functions
ON/MUTE button	<ul style="list-style-type: none">➤ Turn on the UPS: Press and hold ON/MUTE button for at least 2 seconds to turn on the UPS.➤ Mute the alarm: When the UPS is turned on in battery mode, press and hold this button for at least 3 seconds to disable or enable the alarm system. This is not applied to the situations when warnings or errors occur.➤ Up selection key: Press this button to display previous selection in UPS setting mode.➤ Switch to UPS self-test mode: Press and hold ON/MUTE buttons for 3 seconds to enter UPS self-testing while in AC mode.
OFF/ENTER button	<ul style="list-style-type: none">➤ Turn off the UPS: Press and hold this button at least 2 seconds to turn off the UPS.➤ Confirm selection key: Press this button to confirm selection in UPS setting mode.
SELECT button	<ul style="list-style-type: none">➤ Switch LCD message: Press this button to change the LCD message for input voltage, input frequency, battery voltage, output voltage and output frequency.➤ Setting mode: Press and hold this button for 3 seconds to enter UPS setting mode only when UPS is off.➤ Down selection key: Press this button to display next selection in UPS setting mode.
Select + OFF/Enter Button	<ul style="list-style-type: none">➤ Rack or Tower display switch: Press Select and OFF/Enter buttons simultaneously for 3 seconds. The display change from/to Rack to/from Tower.

3.2 LCD panel

Rack display



Tower display



Display	Functions
Backup time information	
	Indicates the backup time in pie chart.
	Indicates the backup time in numbers. H: hours; M: minute.
Warning & fault information	
	Indicates that warning and fault occur.
	Indicates the warning and fault codes (codes are listed in details chapters 3.7 and 3.8).
Setting operation	
	Indicates the setting operation.
Input/Output & battery information	
	Indicates the input/output voltage, input/output frequency or battery voltage. BATT = battery; V = voltage; Hz = frequency.
	Indicates the external battery pack number.
Load information	
	Indicates the load level by 0-24%, 25-49%, 50-74%, and 75-100%.
	Indicates overload.
	Indicates that the load or the UPS output is short circuited.
UPS status	
	Indicates that programmable management outlets are working.
	Indicates that the UPS alarm is disabled.
	Indicates the UPS powers the output directly from the mains (see details page 13).
	Indicates that the battery charger is working (see details page 15).
	Indicates that the UPS is working in boost mode (see details page 15).
	Indicates that the UPS is working in buck mode (see details page 15).
Battery information	
	Indicates the battery level by 0-24%, 25-49%, 50-74%, and 75-100%.
	Indicates low battery.
	Indicates a problem with the battery.

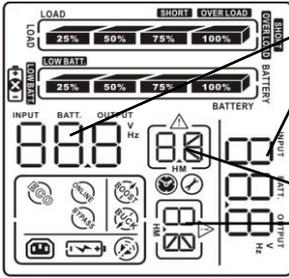
3.3 Audible alarms

Battery mode	Sounding every 10 seconds.
Low battery	Sounding every 2 second.
Overload	Sounding every second.
Fault	Continuously sounding.

3.4 LCD display wording index

Abbreviation	Display content	Meaning
ENA	ENR	Enable
DIS	di S	Disable
ESC	ESC	Escape
ON	ON	ON
OK	OK	OK
EP	EP	EPO
AO	AO	Active open
AC	AC	Active close
TP	TP	Temperature
CH	CH	Charger
RAC	RAC	Rack display
TOE	TOE	Tower display
SF	SF	Site Fault
EE	EE	EEPROM error
BR	BR	Battery Replacement

3.5 UPS setting



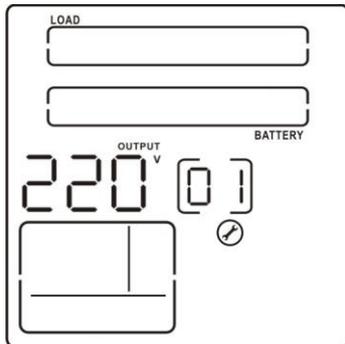
Parameters 2 & 3

There are three parameters to set up the UPS.

Parameter 1: It's for program alternatives. Refer to below table. Parameter 2 and parameter 3 are the setting options or values for each program

Parameters 1

01: Output voltage setting Interface

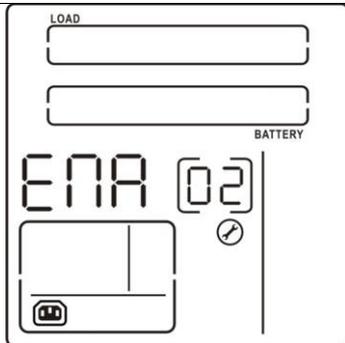


Setting

For 208/220/230/240 VAC models, you may choose the following output voltage:
 208: presents output voltage is 208Vac
 220: presents output voltage is 220Vac
 230: presents output voltage is 230Vac (Default)
 240: presents output voltage is 240Vac
 For 110/115/120/127 VAC models, you may choose the following output voltage:
 110: presents output voltage is 110Vac (Default)
 115: presents output voltage is 115Vac
 120: presents output voltage is 120Vac
 127: presents output voltage is 127Vac

02: Programmable outlets enable/disable

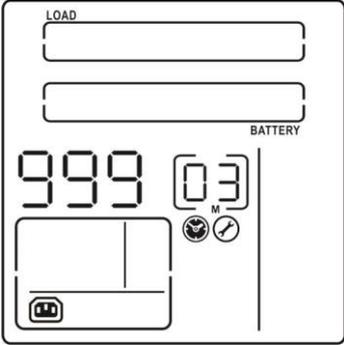
Interface



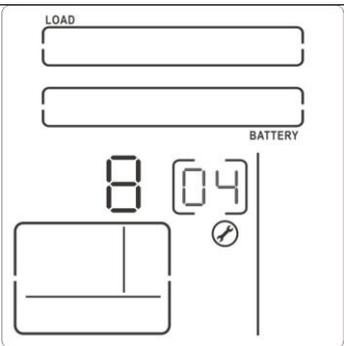
Setting

ENA: Programmable outlets enable (Default)
 DIS: Programmable outlets disable

03: Programmable outlets setting

Interface	Setting
 <p>The LCD display shows two empty input fields for 'LOAD' and 'BATTERY'. The main display shows '999' and a smaller display shows '03'. There are also icons for a globe and a power button.</p>	<p>Setting the backup time limits in minutes from 0-999 for programmable outlets which connect to non-critical loads on battery mode.</p>

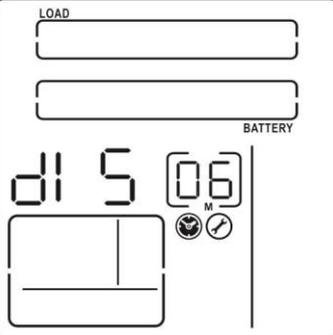
04: Maximum charger current setting

Interface	Setting
 <p>The LCD display shows two empty input fields for 'LOAD' and 'BATTERY'. The main display shows '8' and a smaller display shows '04'. There is also a power button icon.</p>	<p>Set up the maximum charger current. 1/2/4/6/8: setting the maximum charger current at 1/2/4/6/8 Ampere. (Default: 8A) Note: This setting is only effective for super charger (S version). Standard version : battery current charger : 1.5A regardless of the value of this setting</p>

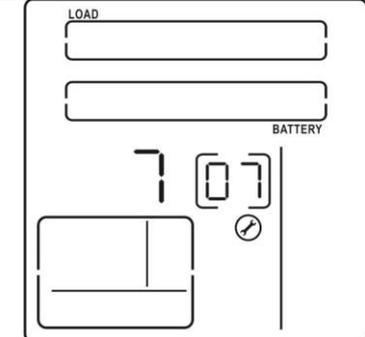
05: LCD display direction setting

Interface	Setting
 <p>The LCD display shows two empty input fields for 'LOAD' and 'BATTERY'. The main display shows 'RAC' and a smaller display shows '05'. There is also a power button icon.</p>	<p>RAC: the LCD display is horizontal. TOE: the LCD display is vertical.</p>

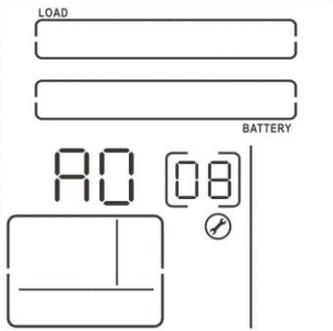
06: Autonomy limitation setting

Interface	Setting
	<p>Parameter 2 : Set up backup time on battery mode for general outlets.</p> <p>0-999: setting the backup time in minutes from 0-999 for general outlets on battery mode.</p> <p>DIS: Disable the autonomy limitation and the backup time will depend on battery capacity. (Default)</p> <p>Note: When setting as "0", the backup time will be only 10 seconds.</p>

07: Battery total AH setting

Interface	Setting
	<p>Parameter 2 : Set up the battery total AH of the UPS.</p> <p>7-999: setting the battery total capacity from 7-999 in AH. Please set the correct battery total capacity if external battery bank is connected.</p>

08: EPO logic setting

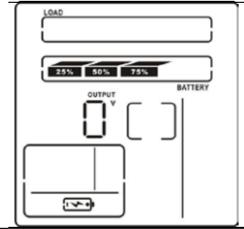
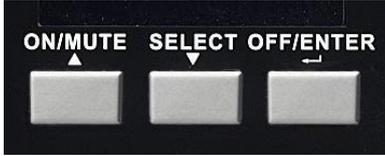
Interface	Setting
	<p>Set up the EPO function control logic.</p> <p>AO: Active Open (Default). When AO is selected as EPO contact logic, it will activate EPO function with Pin 1 and Pin 2 in open status.</p> <p>AC: Active Close. When AC is selected as EPO logic, it will activate EPO function with Pin 1 and Pin 2 in close status.</p>

00: Exit setting

Steps for setting programmable outlet

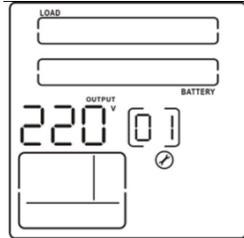
Step 1:

Before entering setting mode, the UPS should be in Stand-by mode (off-charging) and make sure the battery is connected. The LCD display is shown as right.



Step 2:

Press and hold the "SELECT" button for 3 seconds to enter Setting mode.



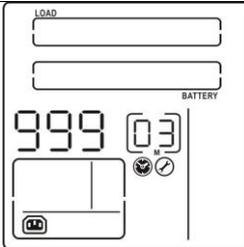
Step 3:

Press the "Up" button (ON/MUTE) to switch to "02" of program list. Then press "Enter" button to enter value setting of parameter 2. Press the "Up" button to validate the value to "ENA" to enable the programmable outlet function. Then press "Enter" button again to confirm the setting.



Step 4:

Press the "Up" button (ON/MUTE) again to switch to "03" of program list. Then press "Enter" button for setting programmable outlet time. Push "Up" button to change the value of backup time according your demand. Then press "Enter" to confirm the setting.



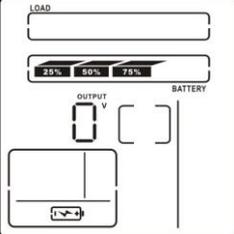
Step 5:

Press "Up" button (ON/MUTE) to switch to "00" of program list. Then press "Enter" button to exit setting menu.

Step 6:

Disconnect AC input and wait until the LCD display is off. The new setting will be activated when turning on the UPS again.

3.6 Operating mode and description

Operating modes	Descriptions	LCD displays
ECO mode	When the input voltage is within voltage regulated range, UPS will power the output directly from the mains. ECO is the abbreviation of Efficiency Corrective Optimizer. In this mode, when the battery is full charged, the fan stops working for an energy saving.	 <p>The LCD display for ECO mode shows two load bars at the top, both with 25%, 50%, and 75% markers. The output voltage is 220V and the status is OK. A fan icon is present in the bottom right corner of the display area.</p>
Buck mode when AC is normal	When the input voltage is higher than the voltage regulation range but lower than high loss point, the buck AVR will be activated.	 <p>The LCD display for Buck mode shows two load bars at the top, both with 25%, 50%, and 75% markers. The output voltage is 220V and the status is OK. A fan icon is present in the bottom right corner of the display area.</p>
Boost mode when AC is normal	When the input voltage is lower than the voltage regulation range but higher than low loss point, the boost AVR will be activated.	 <p>The LCD display for Boost mode shows two load bars at the top, both with 25%, 50%, and 75% markers. The output voltage is 220V and the status is OK. A fan icon is present in the bottom right corner of the display area.</p>
Battery mode	When the input voltage is beyond the acceptable range or power failure and alarm is sounding every 10 seconds, UPS will backup power from battery.	 <p>The LCD display for Battery mode shows a top load bar with 25% and 50% markers, and a 'LOW BATT' indicator below it. The output voltage is 220V and the status is 18M. A fan icon is present in the bottom right corner of the display area.</p>
Standby mode	UPS is powered off, there is no output supply power, but the batteries can be charged.	 <p>The LCD display for Standby mode shows a top load bar with 25%, 50%, and 75% markers. The output voltage is 0V and the status is empty. A fan icon is present in the bottom right corner of the display area.</p>

3.7 Faults reference code

Fault event	Fault code	Icon	Fault event	Fault code	Icon
Bus start fail	01	x	Inverter output short	14	SHORT
Bus over	02	x	Battery voltage too high	27	X
Bus under	03	x	Battery voltage too low	28	
Inverter internal soft start fail	11	x	Over temperature	41	X
Inverter internal voltage high	12	x	Over load	43	OVER LOAD
Inverter internal voltage high	13	x	Charger failure	45	x

3.8 Warning indicators

Warning	Icon (flashing)	Alarm
Low Battery	 LOW BATT.	Sounding every 2 seconds
Overload	 OVER LOAD	Sounding every second
Battery is not connected	 	Sounding every 2 seconds
Over Charge	 	Sounding every 2 seconds
Site wiring fault	 SF	Sounding every 2 seconds
EPO enable	 EP	Sounding every 2 seconds
Over temperature	 EP	Sounding every 2 seconds
Charger failure	 CH	Sounding every 2 seconds
Battery fault	 	Sounding every 2 seconds (At this time, UPS is off to remind users of something wrong with battery)
EEPROM error	 EE	Sounding every 2 seconds
Battery replacement	 bt	Sounding every 2 seconds

4. TROUBLESHOOTING

If the UPS system does not operate correctly, please solve the problem by using the table below.

Symptoms	Possible causes	Remedy
No indication and alarm even though the main is normal.	The AC input power is not correctly connected.	Check if input power cord firmly connected to the mains.
	The AC input is connected to the UPS output.	Plug AC input power cord to AC input correctly.
The icon  and the warning code EP flashing on LCD display and alarm is sounding every 2 seconds.	EPO function is activated.	Set the circuit in close position to disable EPO function.
The icon  and SF flashing on LCD display and alarm is sounding every 2 seconds.	Line and neutral conductors of UPS input are reversed.	Rotate mains power socket by 180° and then connect to UPS system.
The icon  and  flashing on LCD display and alarm is sounding every 2 seconds.	The external or internal battery is incorrectly connected.	Check if all batteries are connected well.
Fault code is shown as 27 and the icon  is lighting on LCD display and alarm is continuously sounding.	Battery voltage is too high or problem with the charger.	Contact your dealer.
Fault code is shown as 28 and the icon  is lighting on LCD display and alarm is continuously sounding.	Battery voltage is too low or problem with the charger.	Contact your dealer.
The icon  and the icon OVER LOAD are flashing on LCD display and alarm is sounding every second.	UPS is overloaded.	Remove excess loads from UPS output.
Fault code is shown as 43 and The icon OVER LOAD is lighting on LCD display and alarm is continuously sounding.	The UPS shut down automatically because of an overload at the UPS output.	Remove excess loads from UPS output and restart it.
Fault code is shown as 14 and alarm is continuously sounding.	The UPS shut down automatically because short circuit occurs on the UPS output.	Check output wiring and if connected devices are in short circuit status.
Fault code is shown as 1, 2, 3, 11 and 41 on LCD display and alarm is continuously sounding.	A UPS internal fault has occurred.	Contact your dealer

Battery backup time is shorter than nominal value	Batteries are not fully charged.	Charge the batteries for at least 5 hours and then check capacity. If the problem still persists, consult your dealer.
	Batteries defect.	Contact your dealer to replace the battery.
Fault code is shown as 45 on LCD display. At the same time, alarm is continuously sounding.	The charger does not have output and battery voltage is less than 10V/PC.	Contact your dealer.

5. STORAGE AND MAINTENANCE

5.1 Warning indicator

The UPS system contains no user-serviceable parts. If the battery service life (3~5 years at 25°C ambient temperature) has been exceeded, the batteries must be replaced. In this case, please contact your dealer.

5.2 Storage

Before storing, charge the UPS 5 hours. Store the UPS covered and upright in a cool, dry location. During storage, recharge the battery in accordance with the following table:

Storage Temperature	Recharge Frequency	Charging Duration
-25°C - 40°C	Every 3 months	1-2 hours
40°C - 45°C	Every 2 months	1-2 hours

6. Available options

Here are the options available :

Designation	Ref.
SNMP I Pro communication card	61156
SNMP vm Minislot card (Virtual environment)	61142
RS485 protocol card	61439
Kit Rack	61429
Dry contact card	61454
External Bypass RM-IEC (External Bypass manual)	61442
External Bypass RM-FR (External Bypass manual)	61443

7. Specifications

	E3 Performance 800 RT	E3 Performance 1100 RT	E3 Performance 1500 RT	E3 Performance 2000 RT	E3 Performance 2500 RT	E3 Performance 3000 RT
GENERAL CHARACTERISTICS						
CAPACITY*	800 VA 720W	1100 VA 990 W	1500 VA 1350 W	2000 VA 1800 W	2500 VA 2250 W	3000 VA 2700 W
Dimension, DXWXH (mm)	425 x 438 x 88 (2U)		525 x 438 x 88 (2U)		645 x 438 x 88 (2U)	
Net Weight (kg)	12,9	13,4	19,5	21,5	26	29,3
INPUT						
Acceptable Voltage Range	162-290 VAC					
Frequency Range	60/50 Hz (auto sensing)					
OUTPUT						
Voltage Regulation (normal Mode)	208/220/230/240 VAC					
Voltage Regulation (Batt. Mode)	±1.5%(before battery alarm)					
Frequency Range (Batt. Mode)	50 Hz or 60 Hz ± 1 Hz					
Current Crest Ratio	3:1					
Harmonic Distortion	2% max @ 100% linear load, 5% max @ 100% non-linear load (before low battery alarm)					
Waveform (Batt. Mode)	Pure Sine Wave					
EFFICIENCY						
Normal Mode	97%					
AVR Mode	95%					
Battery Mode	89%		91%		92%	
BATTERY						
Battery Type & Number	12 V/7 Ahx2	12 V/9 Ahx2	12 V/7 Ahx4	12 V/9 Ahx4	12 V/7 Ahx6	12 V/9 Ahx6
Charging Voltage	27.4 VDC ± 1%		54.8 VDC ± 1%		82.1 VDC ± 1%	
Recharge Time	4 hours recover to 90% capacity					
PROTECTION						
Full Protection	Overload, short, discharge, and overcharge protection					
INDICATORS & ALARM						
Indicator	LCD screen					
Alarms	Battery Mode, Low Battery, Overload, Battery Replacement, Fault					
ENVIRONMENT						
Operating Humidity	0-90 % RH @ 0- 40°C (non-condensing)					
Noise Level	Less than 45dB at 1 meter					
MANAGEMENT/COMMUNICATION						
Smart RS-232/USB	Supports Windows® 2000/2003/XP/Vista/2008, 7/8/10, Linux, Unix, and MAC					
Optional SNMP	Power management from SNMP (VMWare® compatible) manager and web browser					
NORMS						
Standards	CE RoHS					
EMC	EN62040-2: 2006+AC: 2006 (EN 61000-3-2: 2014, EN61000-4-2:2009, EN61000-4-3:2006+A2: 2010, EN61000-4-4: 2012, EN61000-4-5: 2006, EN61000-4-6: 2014, EN61000-4-8: 2010, EN61000 -2-2: 2002)					
LVD	EN62040-1:2008+A1:2013					
SALES INFORMATION						
Warranty	2 years					
PN IEC (HV)	67023	67024	67025	67026	67027	67028
PN IEC (HV) UK input	67029	67030	67031	67032	67033	67034
PN NEMA (HV)	68234	68235	68236	68237	68238	68239

* Derate capacity to 80% of capacity when the output voltage is adjusted to 208VAC.
Product specifications are subject to change without further notice.