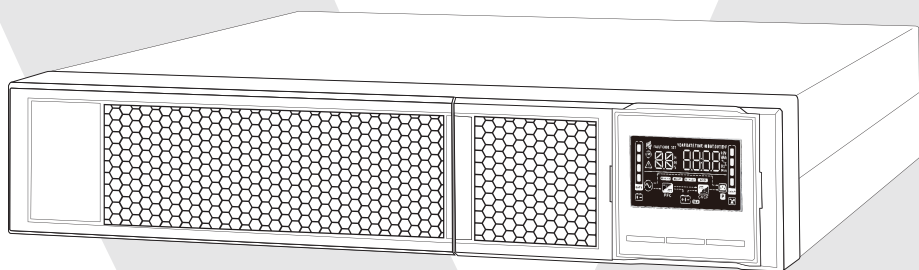


UPS2URM3000DC-NC-1N

User Guide

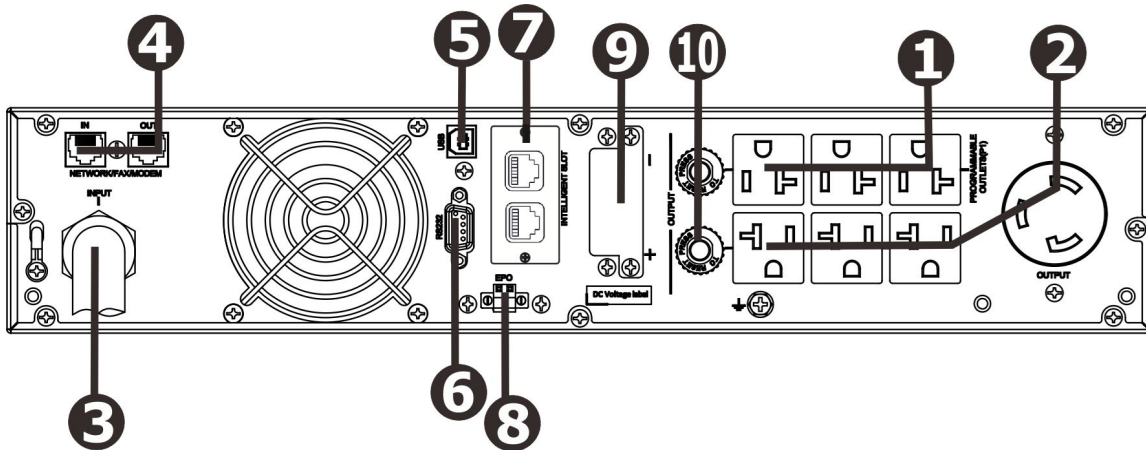


IMPORTANT SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries.

1. Rear Panel View

NOTE: Before installation, please inspect the unit for shipping damage.

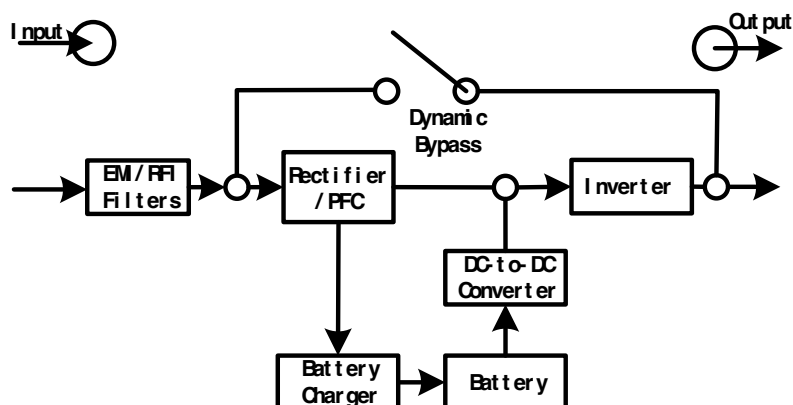
NEMA TYPE



1. Programmable outlets: connect to non-critical loads.
2. Output receptacles: connect to mission-critical loads.
3. AC input cord
4. Network/Fax/Modem surge protection
5. USB communication port
6. RS-232 communication port
7. SNMP intelligent port
8. Emergency power off function connector (EPO)
9. External battery connection (not supported)

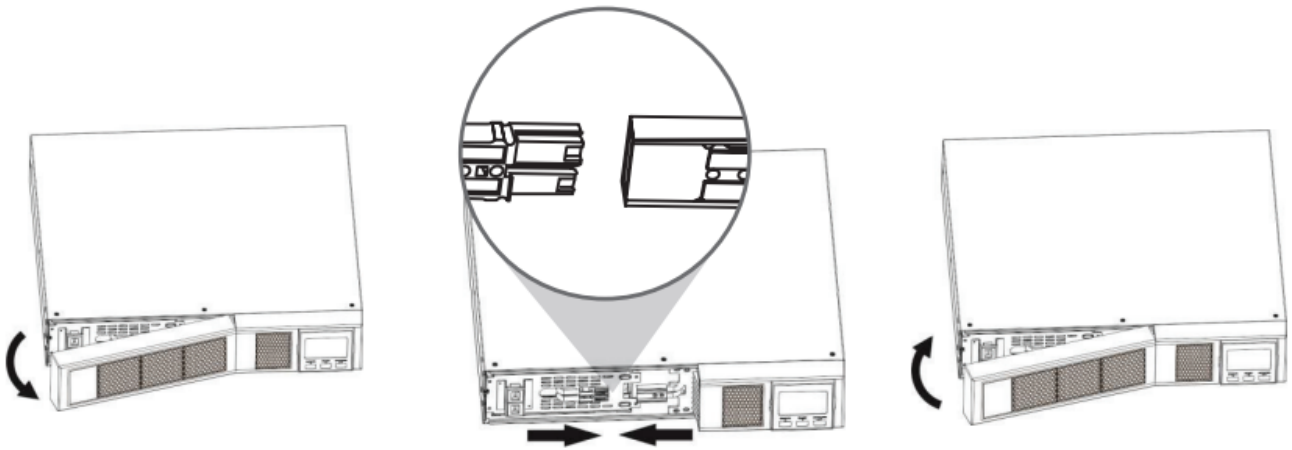
1.1 Operation

The UPS is composed of mains input, EMI/RFI filters, rectifier/PFC, inverter, battery charger, DC-to-DC converter, battery, dynamic bypass, and UPS output.



1.2 Installation

For safety consideration, the UPS is shipped out from factory without connecting battery wires. Before installation of the UPS, please follow the steps below to re-connect the battery wires.



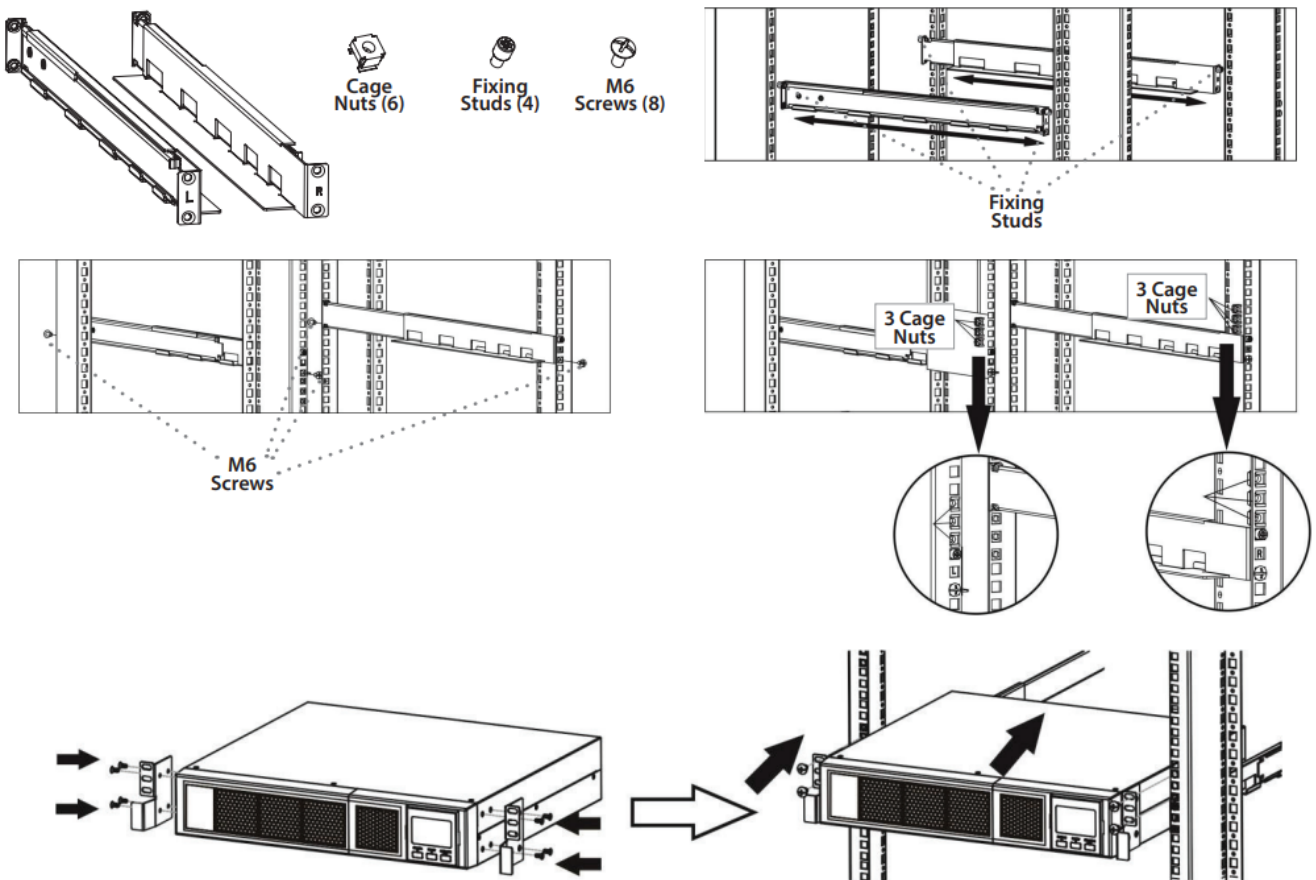
Remove Front Panel

Connect the AC Input and re-connect battery wires

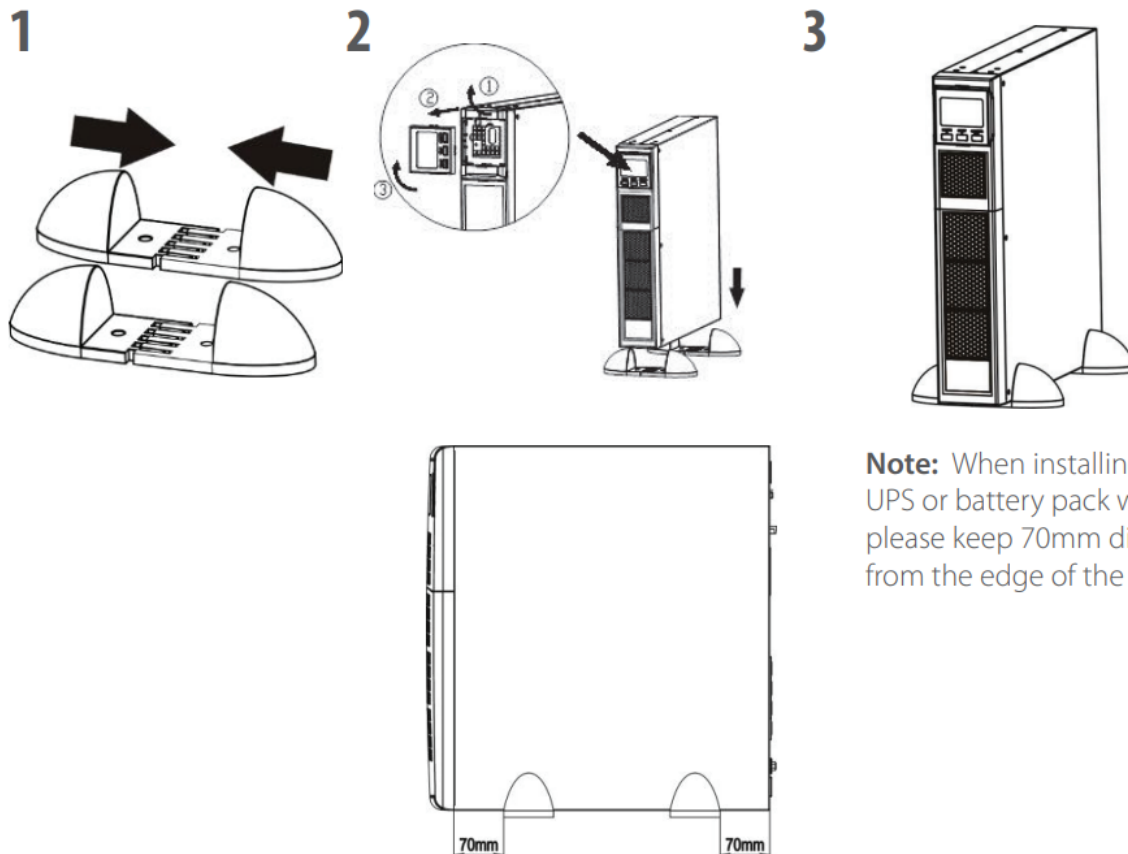
Put the front panel back on the unit

Rack-Mount Installation

Caution! – DO NOT use the mounting brackets to lift the unit. The mounting brackets are only for securing the unit to the rack.



Tower Installation



1.3 Setup

1. Select a proper location to operate the UPS

- The UPS should only be operated indoors in a clean environment, away from windows and doors. Place on a flat surface away from dust, humidity, high temperatures, liquids, gases, or corrosive and conductive contaminants.
- Maintain a minimum clearance of 100mm from the bottom of the UPS. Be certain to place in a well-ventilated area; avoid blocking the fan's air flow by maintaining a minimum clearance 100mm to the front and 300mm in the rear of the UPS.
- Operate at or below a maximum altitude of 3000m for normal operation at full load.

2. UPS input connection

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

- The power cord is attached to the UPS. The input plug is a NEMA L5-30P. To reduce the risk of fire, connect only to a circuit provided with a 40A maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFP*-A 70.
- **Note:** The LCD display will light up and then go off when the power cord is attached to power, but the UPS is not powered on until the power button is pressed for two seconds (see #7).

3. UPS output connection

There are two kinds of outputs: programmable outlets and general outlets. 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.

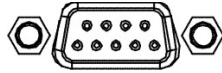
4. Communication connections

Communication ports:

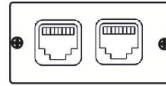
USB port



RS-232 port



SNMP port



To allow for 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. With the monitoring software installed, you can schedule UPS shutdown/start-up and monitor UPS status through PC.

The UPS is equipped with an SNMP Network card. When installing either SNMP for advanced communications and monitoring.

5. Network connection

Network/Fax/Phone surge port



Connect a single modem/phone/fax line into the surge protected "IN" outlet on the back panel of the UPS. Connect another modem/fax/phone line cable to the "OUT" outlet and to the equipment

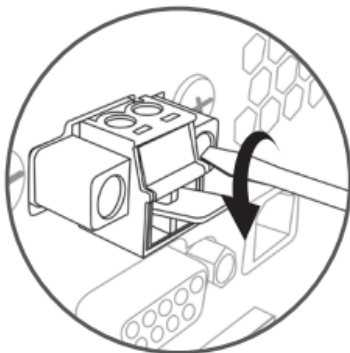
6. Disable and enable EPO function

This UPS is equipped with EPO function. Pin 1 and pin 2 closed by default for normal UPS operation. To activate, remove the protective metal plate and attach to your EPO system.

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

Remove two front screws

Pull out the entire green connector



7. Powering on the UPS

NOTE: The battery will charge fully during the first five hours of normal operation. Full battery run capability is not possible during the initial charge period.

Press the ON/Mute button on the front panel **for two seconds** to turn on the power to the UPS.



8. Install software

For optimal computer system protection, install UPS monitoring software to fully configure UPS shutdown. Please follow steps below to download and install monitoring software.

1. Go to the website <https://www.v7world.com/ups-downloads>
2. Select ViewPower software for your operating system to download the software.
3. Follow the on-screen instructions to install the software.

1.4 Internal Battery Replacement

Note: This UPS is equipped with internal batteries and only a trained technician should replace the batteries. Replace with V7 Replacement Battery Cartridge RBC1RM2U3000V7

Replace the batteries if icons  and  are flashing in the LCD display and alarm is sounding every 2 seconds.

Do not disconnect battery connectors under load. To remove input power to change the batteries, press the OFF button on the front panel for two seconds to power off the UPS and switch off utility power where the UPS is connected.

DO NOT DISCONNECT the batteries while the UPS is in Battery mode.

A small arc may occur when connecting the internal batteries. This is not harmful to the UPS or personnel. Connect the cables quickly and firmly.

CAUTION - Risk of electric shock. After the UPS is disconnected from the mains (building wiring outlet), internal components are still connected to the battery and pose an electric hazard.

Before performing service and/or maintenance, disconnect the batteries and verify that no current or hazardous voltage exists in the terminals of high capability capacitors.

To avoid electrical shock, turn off the unit and unplug it from the AC power source before servicing the battery

CAUTION - Risk of electric shock. The battery circuit is not isolated from the input voltage. Hazardous voltages may exist between the battery terminals and the ground. Before touching, please verify that no voltage is present.

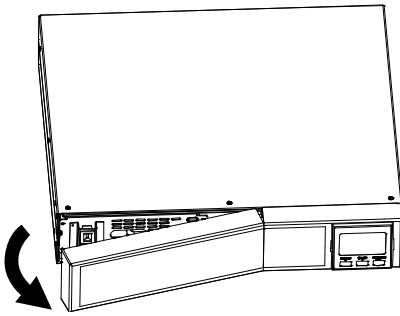
CAUTION - Do not dispose of batteries in a fire, they could explode.

CAUTION - Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes and may be toxic.

CAUTION - A battery can cause a risk of electrical shock and high short-circuit current. Contact with any part of a grounded battery can result in electrical shock. Observe the following precautions when working with batteries:

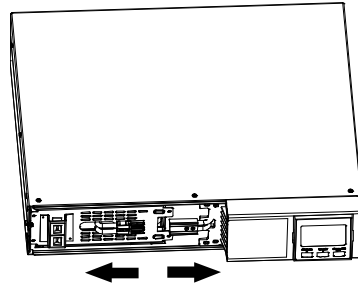
- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.
- Wear rubber gloves and boots.
- Do not lay tools or metal parts on top of batteries.
- Disconnect charging source prior to connecting or disconnecting battery terminals.
- Remove battery grounds during installation and maintenance to reduce the risk of shock.
- Remove the connection from ground if any part of the battery is determined to be grounded.

Step 1



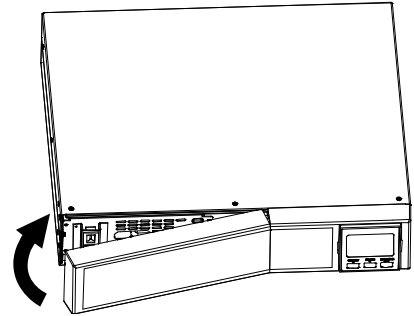
Remove front panel.

Step 2



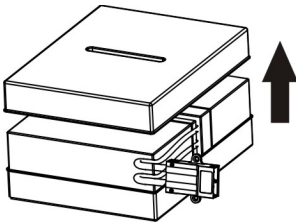
Disconnect battery wires.

Step 3



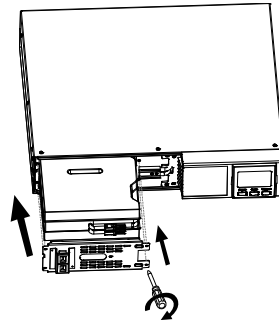
Pull out the battery box by removing two screws on the front panel.

Step 4



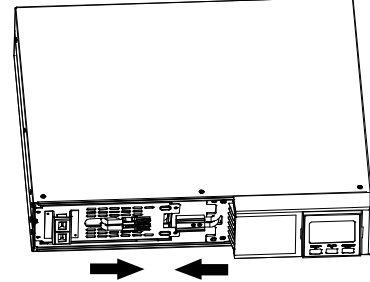
Remove the top cover of battery box and replace the inside batteries.

Step 5



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

Step 6

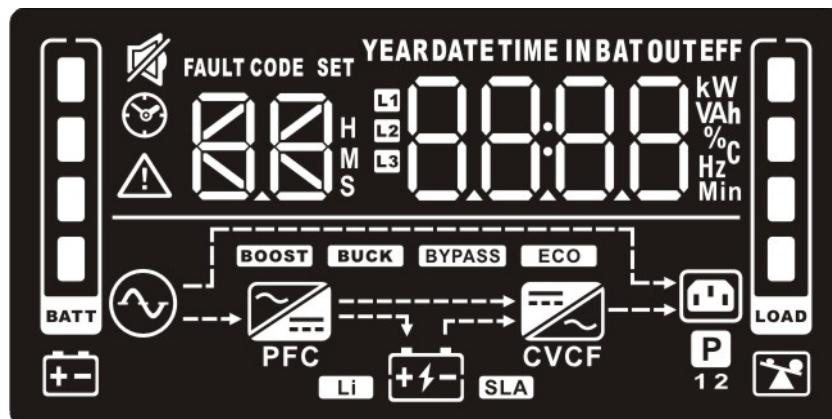



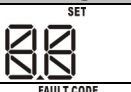
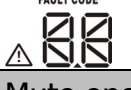

















Re-connect the battery wires and then replace the front panel.

2. Button Operations

Button	Function
ON/Mute Button	<p>Turn on the UPS: Press and hold ON/Mute button for at least 2 seconds to turn on the UPS.</p> <p>Mute the alarm: After the UPS is turned on and in battery mode, press and hold this button for at least 3 seconds to disable or enable the alarm system. (N/A for warnings or errors)</p> <p>Up key: Press this button to display previous selection in UPS setting mode.</p> <p>Self-test mode: Press ON/Mute buttons for 3 seconds to enter UPS self-testing while in AC mode, ECO mode, or converter mode.</p>
OFF/Enter Button	<p>Turn off the UPS: Press and hold this button at least 2 seconds to turn off the UPS. The UPS will be in standby mode under power normal or transfer to Bypass mode if the Bypass setting is enabled.</p> <p>Confirm selection key: Press this button to confirm selection in UPS setting mode.</p>
Select Button	<p>Switch LCD message: Press this button to change the LCD message for input voltage, input frequency, input current, battery voltage, battery current, battery capacity, ambient temperature, output voltage, output frequency, load current and load percent.</p> <p>Setting mode: Press and hold this button for 3 seconds to enter UPS setting mode when in Standby and Bypass mode.</p> <p>Down key: Press this button to display next selection in UPS setting mode.</p>
ON/Mute + Select Button	<p>Switch to bypass mode: When the main power is normal, press ON/Mute and Select buttons simultaneously for 3 seconds and the UPS will enter bypass mode. This will not function if the input voltage is out of range.</p> <p>Exit setting mode or returning to the last menu: In setting mode, press the ON/Mute and Select buttons simultaneously for 0.2 seconds to return to the upper menu. Once in the main menu, exit settings mode by pressing these two buttons simultaneously.</p>

2.1 LCD Panel



Display	Function
Backup time information	
	Indicates the estimated backup time. H: hours, M: minute, S: second.
Configuration and fault information	
	Indicates the configuration items. Configuration items are listed in detail in section 2-5.
	Indicates the warning and fault codes. Codes are listed in detail in sections 2-7 and 2-8.
Mute operation	
	Indicates that the UPS alarm is disabled.
Input, Battery, Temperature, Output & Load information	
	Indicates the input voltage, input frequency, input current, battery voltage, battery current, battery capacity, ambient temperature, output voltage, output frequency, load current and load percent. k: kilo, W: watt, V: voltage, A: ampere, %: percent, °C: centigrade degree, Hz: frequency
Load information	
	Indicates the load level by 0-24%, 25-49%, 50-74% and 75-100%.
	Indicates overload.
Programmable outlets information	
	Indicates that programmable management outlets are working.
Mode operation information	
	Indicates the UPS connects to the mains.
	Indicates the battery is working.
	Indicates charging status
	Indicates the bypass circuit is working.
	Indicates the ECO mode is enabled.
	Indicates the AC to DC circuit is working.
	Indicates the PFC circuit is working.
	Indicates the inverter circuit is working.
	Indicates the UPS is working in converter mode.
	Indicates the output is working.
Battery information	
	Indicates the battery level by 0-24%, 25-49%, 50-74%, and 75-100%.
	Indicates low battery.

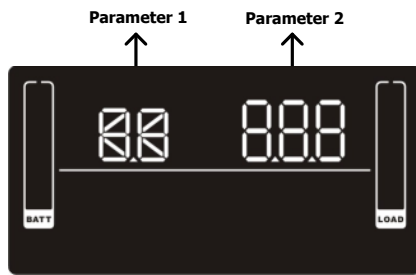
2.2 Audible Alarm

Battery Mode	Sounds every 5 seconds
Low Battery	Sounds every 2 seconds
Overload	Sounds every second
Fault	Continuously sounding
Bypass Mode	Sounds every 10 seconds

2.3 LCD display wording index

Abbreviation	Display content	Meaning
ENA	ENR	Enable
DIS	di S	Disable
ESC	ESC	Escape
HLS	HLS	High loss
LLS	LLS	Low loss
AO	AO	Active open
AC	AC	Active close
EAT	EAt	Estimated autonomy time
RAT	rAt	Running autonomy time
SD	Sd	Shutdown
OK	OK	OK
ON	ON	ON
BL	bL	Battery Low
OL	OL	Overload
OI	OI	Over input current
NC	nC	Battery No Connect
OC	OC	Over Charge
SF	SF	Site wiring fault
EP	EP	EPO
TP	tP	Temperature
CH	CH	Charger
BF	bF	Battery Fault
BV	b ^v	Bypass Out Range
FU	FU	Bypass frequency unstable
BR	bR	Battery Replace
EE	EE	EEPROM error

2.4 UPS Setting



There are two parameters to set up the UPS.

Parameter 1: Program alternatives. Refer to below table.

Parameter 2: Setting options or values for each program.

● 01: Output voltage setting

Interface	Setting
	<p>Parameter 2: Output voltage For 100/110/115/120/125/127VAC models, you may choose the following output voltage:</p> <p>100: presents output voltage is 100VAC 110: presents output voltage is 110VAC 115: presents output voltage is 115VAC 120: presents output voltage is 120VAC (Default) 125: presents output voltage is 125VAC 127: presents output voltage is 127VAC (127VAC is not applicable in US region)</p>

● 02: Frequency Converter enable/disable

Interface	Setting
	<p>Parameter 2: Enable or disable converter mode.</p> <p>CF ENA: converter mode enable CF DIS: converter mode disable (Default)</p>

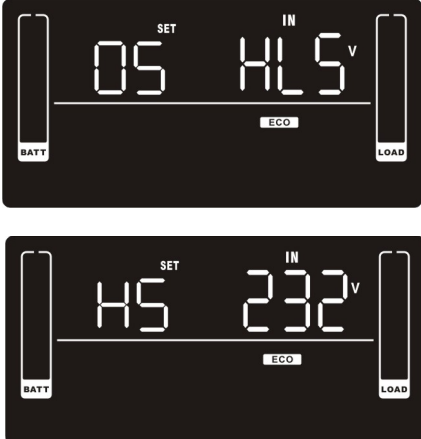
● 03: Output frequency setting

Interface	Setting
	<p>Parameter 2: Output frequency setting.</p> <p>BAT 50: presents output frequency is 50Hz BAT 60: presents output frequency is 60Hz If converter mode is enabled, choose from these frequencies: CF 50: presents output frequency is 50Hz CF 60: presents output frequency is 60Hz</p>

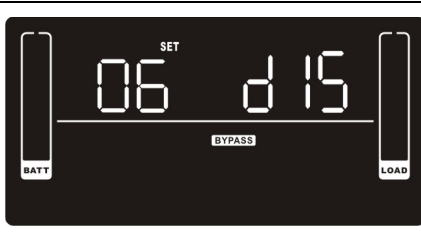
● 04: ECO enable/disable

Interface	Setting
	<p>Parameter 2: Enable or disable ECO function.</p> <p>ENA: ECO mode enable DIS: ECO mode disable (Default)</p>

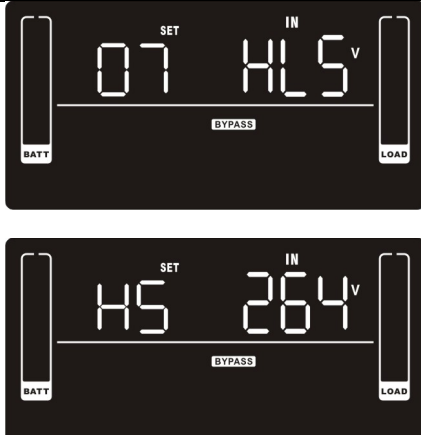
● **05: ECO voltage range setting**

Interface	Setting
	<p>Parameter 2: Set the acceptable high voltage point and low voltage point for ECO mode by pressing Down key or Up key.</p> <p>HLS: High loss voltage in ECO mode in parameter 2. For 100/110/115/120/125/127VAC models, the setting range in parameter 3 is from +3V to +12V of the nominal voltage. (Default: +6V)</p> <p>LLS: Low loss voltage in ECO mode in parameter 2. For 100/110/115/120/125/127VAC models, the setting voltage in parameter 3 is from -3V to -12V of the nominal voltage. (Default: -6V)</p>

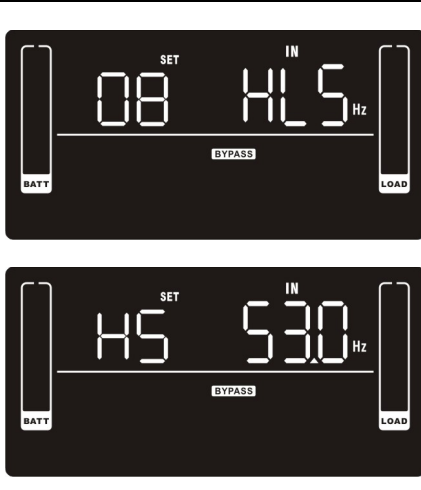
● **06: Bypass enable/disable when UPS is off**

Interface	Setting
	<p>Parameter 2: Enable or disable Bypass function.</p> <p>ENA: Bypass enable</p> <p>DIS: Bypass disable (Default)</p>

● **07: Bypass voltage range setting**

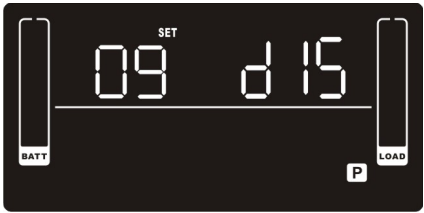
Interface	Setting
	<p>Parameter 2: Set the acceptable high voltage point and acceptable low voltage point for Bypass mode by pressing the Down key or Up key.</p> <p>HLS: Bypass high voltage point For 100/110/115/120/125/127VAC models: 120-140: Set the high voltage point from 120VAC to 140VAC. (Default: 132VAC)</p> <p>LLS: Bypass low voltage point For 100/110/115/120/125/127VAC models: 85-115: Set the low voltage point from 85VAC to 115VAC. (Default: 85VAC)</p>

● **08: Bypass frequency range setting**


Interface	Setting
	<p>Parameter 2: Set the acceptable high frequency point and acceptable low frequency point for Bypass mode by pressing the Down key or Up key.</p> <p>HLS: Bypass high frequency point For 50Hz output frequency models: 51-55Hz: Set the frequency high loss point from 51Hz to 55Hz. (Default: 53Hz)</p> <p>For 60Hz output frequency models: 61-65Hz: Set the frequency high loss point from 61Hz to 65Hz. (Default: 63Hz)</p> <p>LLS: Bypass low Frequency point For 50Hz output frequency models: 45-49Hz: Set the frequency low loss point from 45Hz to</p>

	<p>49Hz. (Default: 47Hz) For 60Hz output frequency models: 55-59Hz: Set the frequency low loss point from 55Hz to 59Hz. (Default: 57Hz)</p>
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● **09: Programmable outlets enable/disable**

Interface	Setting
	<p>Parameter 2: Enable or disable programmable outlets. ENA: Programmable outlets enable DIS: Programmable outlets disable (Default)</p>

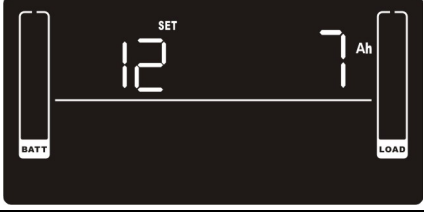
● **10: Programmable outlets setting**

Interface	Setting
	<p>Parameter 2: Set the backup time limits for programmable outlets. 0-999: Set the backup time limits in minutes from 0-999 for programmable outlets which connect to non-critical devices on battery mode. (Default: 999)</p>

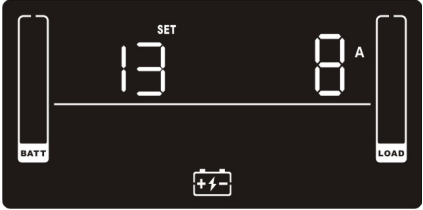
● **11: Autonomy limitation setting**

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


● **12: Battery total AH setting**

Interface	Setting
	<p>Parameter 2: Set the battery total AH of the UPS. 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>


● **13: Maximum charger current setting**

Interface	Setting										
	<p>Parameter 2: Set the charger maximum current. 1/2/4/6/8: Set the charger maximum current 1/2/4/6/8 in Ampere. (Default: 2A) Note: Set the appropriate charger current based on battery capacity used. The recommended charging current is 0.1C~0.3C of battery capacity as following table for reference.</p> <table border="1"> <thead> <tr> <th>Battery capacity (AH)</th> <th>Total charging current (A)</th> </tr> </thead> <tbody> <tr> <td>7~20</td> <td>2</td> </tr> <tr> <td>20~40</td> <td>4</td> </tr> <tr> <td>40~60</td> <td>6</td> </tr> <tr> <td>60~</td> <td>8</td> </tr> </tbody> </table>	Battery capacity (AH)	Total charging current (A)	7~20	2	20~40	4	40~60	6	60~	8
Battery capacity (AH)	Total charging current (A)										
7~20	2										
20~40	4										
40~60	6										
60~	8										

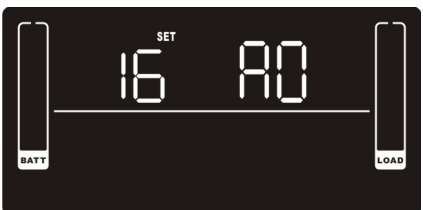
● **14: Charger boost voltage setting**

Interface	Setting
	<p>Parameter 2: Set the charger boost voltage. 2.25-2.40: Set the charger boost voltage from 2.25 V/cell to 2.40V/cell. (Default: 2.36V/cell)</p>


● **15: Charger float voltage setting**

Interface	Setting
	<p>Parameter 2: Set the charger float voltage. 2.20-2.33: Set the charger float voltage from 2.20 V/cell to 2.33V/cell. (Default: 2.28V/cell)</p>


● **16: EPO logic setting**

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


● **17: Site fault detection enable/disable**

Interface	Setting
	<p>Parameter 2: Enable or disable site fault detection. You may choose the following two options: ENA: Site fault detection enable (Default) DIS: Site fault detection disable</p>

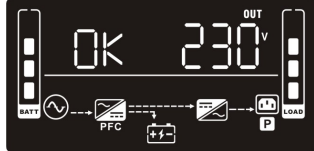
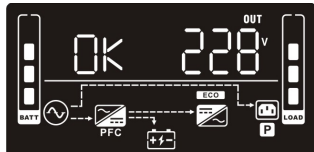
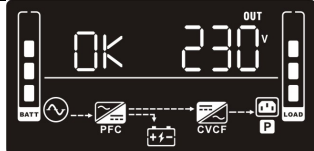

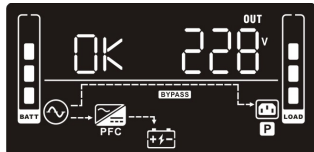
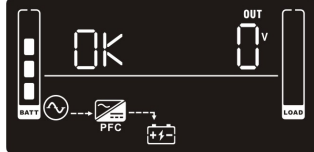
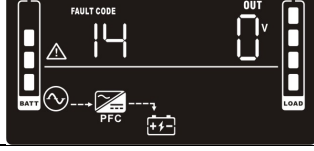
● **18: Display setting for autonomy time**

Interface	Setting
	<p>Parameter 2: Set the display setting for autonomy time</p> <p>EAT: If EAT is selected, it will display the remaining autonomy time. (Default)</p> <p>RAT: If RAT is selected, it will show accumulated autonomy time so far.</p>


● **00: Exit setting**

Interface	Setting
	<p>Exit the setting mode.</p>















2.5 Operating Mode Description

Operating mode	Description	LCD display
Online mode	When the input voltage is within acceptable range, the UPS will provide pure and stable AC power to output. The UPS also charges the battery in Online mode.	
ECO mode	Energy saving mode: When the input voltage is within voltage regulation range, the UPS will bypass voltage to output for energy saving. The UPS also charges the battery in ECO mode.	
Frequency Converter mode	When input frequency is within 40 Hz to 70 Hz, the UPS can be set to a constant output frequency of 50 Hz or 60 Hz. The UPS still charges the battery in this mode.	
Battery mode	When the input voltage is beyond the acceptable range or in power failure, the UPS provides power from battery and the alarm will sound every 5 seconds.	
Bypass mode	When input voltage is within acceptable range, but the UPS is in overload, the UPS will enter bypass mode or bypass mode can be selected through the front panel. The alarm will sound every 10 seconds.	
Standby mode	The UPS is off and not outputting power. The UPS still charges the battery in this mode.	
Fault mode	If a fault occurs, the ERROR icon and the fault code will be displayed.	

2.6 Faults Code Reference

Fault event	Fault code	Icon	Fault event	Fault code	Icon
Bus start fail	01	x	Battery voltage too high	27	x
Bus over	02	x	Battery voltage too low	28	x
Bus under	03	x	Charger output short	2A	x
Inverter soft start fail	11	x	Over temperature	41	x
Inverter voltage high	12	x	Overload	43	
Inverter voltage Low	13	x	Charger failure	45	x
Inverter output short	14	x	Over input current	49	x













2.7 Warning indicator

Warning	Icon (flashing)	Code	Alarm
Low Battery		BL	Sounds every 2 seconds
Overload		OL	Sounds every second
Over input current		OI	Sounds 2 beeps every 10 seconds
Battery is not connected		NC	Sounds every 2 seconds
Over Charge		OC	Sounds every 2 seconds
Site wiring fault		SF	Sounds every 2 seconds
EPO enable		EP	Sounds every 2 seconds
Over temperature		EP	Sounds every 2 seconds
Charger failure		CH	Sounds every 2 seconds
Battery fault		BF	Sounds every 2 seconds (The UPS will shut off)
Out of bypass voltage range		bV	Sounds every 2 seconds
Bypass frequency unstable		FU	Sounds every 2 seconds
Battery replacement		bT	Sounds every 2 seconds
EEPROM error		EE	Sounds every 2 seconds

Note: "Site Wiring Fault" function can be enabled/disabled via software. Please check software manual for the details.

3. Troubleshooting

If the UPS system does not operate correctly, refer to the table below.

Symptom	Possible cause	Remedy
No indicators or alarms though mains power is normal.	The AC input power is not 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  flash on LCD display and alarm is sounding every 2 seconds.	EPO function is activated.	Set the circuit in closed position to disable EPO function.
The icons of  and  , and the warning code  flash on LCD display. 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 icons of  and  and the warning code  flash on LCD display. Alarm is sounding every 2 seconds.	The internal battery is incorrectly connected.	Confirm batteries are properly connected
Fault code 27 is displayed on the LCD and the alarm is continuously sounding.	Battery voltage is too high or there is a charger fault.	Contact your reseller or techsupport@v7-world.com
Fault code 28 is displayed on the LCD and the alarm is continuously sounding.	Battery voltage is too low or there is a charger fault.	Contact your reseller or techsupport@v7-world.com
The icons  and  and the warning code  flash on LCD display. Alarm is sounding every second.	UPS is overloaded	Remove excess loads from the UPS.
	UPS is overloaded. Devices connected to the UPS are fed directly by the electrical network via Bypass.	Remove excess loads from the UPS.
	After repeat overloads, the UPS is locked in the Bypass mode. Connected devices are fed directly by mains.	First, remove excess loads from UPS. Then shut down the UPS and restart it.
Fault code 49 is displayed on the LCD and the alarm is continuously sounding.	UPS is over input current.	Remove excess loads from UPS.
Fault code 43 and the icon  is displayed on the LCD and the alarm is continuously sounding.	The UPS shuts down automatically because of an overload of the UPS output.	Remove excess loads from UPS and restart it.
Fault code 14 is displayed on the LCD and alarm is continuously sounding.	The UPS shuts down automatically because of a short circuit on the UPS output.	Check output wiring and if connected devices have short circuited

Fault code 01, 02, 03, 11, 12, 13 or 41 is displayed on the LCD and the alarm is continuously sounding.	A UPS internal fault has occurred. There are two possible results: 1. The load is still supplied, but directly from AC power via bypass. 2. The load is no longer supplied by power.	Contact your reseller or techsupport@v7-world.com
Battery backup time is shorter than nominal value.	Batteries have not been fully charged	Charge the batteries for at least 5 hours and then check capacity. If the problem persists, consult your reseller, or contact techsupport@v7-world.com
	Possible batteries defect	Contact your reseller or techsupport@v7-world.com
Fault code 2A is displayed on the on LCD and the alarm is continuously sounding.	A short circuit of the charger output has occurred.	Check the wiring of a connected external battery pack for short-circuited
Fault code 45 is displayed on the on the LCD display and the alarm is continuously sounding.	No charger output and battery voltage is less than 10V/PC.	Contact your reseller or techsupport@v7-world.com

4. Storage and Maintenance

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. Contact your reseller or techsupport@v7-world.com.



Be sure to deliver the spent battery to a recycling facility or ship it to your dealer in the replacement battery packing material.

Storage

Prior to storing, charge the UPS for 5 hours. Store the UPS covered and upright in a cool, dry location. To protect battery performance and limit degradation, 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

5. Specifications

MODEL (VPN)		UPS2URM3000DC-NC-1N
CAPACITY*		3000VA / 2740W
INPUT		
Voltage Range	Low Line Transfer	80VAC/70VAC/60VAC/55VAC \pm 5 % (based on load percentage 100% - 80 % / 80 % - 70 % / 70 - 60 % / 60 % - 0)
	Low Line Comeback	87VAC/77VAC/67VAC/62VAC \pm 5 %
	High Line Transfer	150 VAC \pm 5 %
	High Line Comeback	145 VAC \pm 5 %
Frequency Range		40Hz ~ 70 Hz
Phase		Single phase with ground
Power Factor		\geq 0.99 @ full load
THDI		\leq 5% @ 80~140VAC THDU < 1.6% @ input and full linear load condition
OUTPUT		
Output voltage		100/110/115/120/125/127 VAC**
AC Voltage Regulation		\pm 1% (Batt. Mode)
Frequency Range (Synchronized Range)		47 ~ 53 Hz or 57 ~ 63 Hz
Frequency Range		50 Hz \pm 0.1 Hz or 60Hz \pm 0.1 Hz (Batt. Mode)
Current Crest Ratio		3:1
Harmonic Distortion		\leq 2 % THD (Linear Load); 4 % THD (Non-linear Load)
Transfer Time	AC Mode to Batt. Mode	Zero
	Inverter to Bypass	< 4 ms
Waveform (Batt. Mode)		Pure Sinewave
EFFICIENCY		
AC Mode		\geq 91% @ full charged battery
ECO Mode		\geq 96% @ full charged battery
Battery Mode		\geq 90%
BATTERY		
Battery Type		12V/9AH
Number		6
Recharge Time		3 hours recover to 95% capacity for internal battery@ 2A charging current
Charging Current		Default: 2A, Max: 8A adjustable
Charging Voltage		82.1 VDC \pm 1%
PHYSICAL		
Dimension, D X W X H (mm)		630 x 438 x 88
Net Weight (kgs)	With battery	27.5
	Without battery	12.4
ENVIRONMENT		
Operation Humidity		20-95 % RH @ 0- 40°C (non-condensing)
Noise Level		Less than 50dBA @ 1 Meter (With fan speed control)
MANAGEMENT		
Smart RS-232 or USB		Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux, Unix, and MAC
SNMP Network		Power management from SNMP manager and web browser

* Derate capacity to 90% of capacity when the output voltage is adjusted to 100VAC.

**For 120VAC system, the output power ratings are different based on different input voltage. (127 is not applicable to USA region)

*** Product specifications are subject to change without further notice.

6. Runtime Chart

Model (VPN)	UPS2URM3000DC-NC-1N
Battery Load percentage	Minutes
100.00%	2.64
90.00%	3.36
80.00%	4.34
70.00%	5.53
60.00%	7.33
50.00%	9.79
40.00%	13.51
30.00%	19.90
20.00%	32.61
10.00%	72.53

7. Instructions & Safety Warnings

7.1 Transportation

- Transport the UPS system only in the original package to protect from damage.

7.2 Preparation

- Condensation may occur if the UPS is moved directly from cold to warm environments. The UPS system must be completely dry before being operated. Allow at least two hours for the UPS system to acclimate to a new environment.
- Do not install the UPS near water or wet, high humidity environments.
- Do not install the UPS where it will be exposed to direct sunlight or near heat sources.
- Avoid blocking ventilation holes in the UPS enclosure.

7.3 Installation

- Do not connect appliances or devices which can overload the UPS system (e.g., laser printers).
- Route cables to avoid stepping on or tripping over them.
- Do not connect domestic appliances (such as hair dryers) to the UPS.
- Connect the UPS system only to an earth-grounded shockproof outlet which must be easily accessible and near the UPS system.
- Use only VDE-tested, or UL-marked mains cables (e.g., the mains cable of your computer) to connect the UPS system to the building wiring outlet (shockproof outlet).
- Use only VDE-tested, UL-marked power cables to connect the loads to the UPS.
- When installing the equipment, ensure that the sum of the leakage current of the UPS and the connected devices does not exceed 3.5mA.
- Temperature Rating - Units are considered acceptable for use in a maximum ambient of 40°C (104°F).

- FOR PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.
- CAUTION: The unit is heavy. Lifting the unit requires a minimum of two people.

7.4 Operation

- Do not disconnect the mains cable on the UPS system or the building wiring outlet (shockproof socket outlet) during operations since this would cancel the protective earthing of the UPS system and of all connected loads.
- The UPS system features its own, internal current source (batteries). The UPS output sockets, or output terminals block may be electrically live even if the UPS system is not connected to the building wiring outlet.
- To fully disconnect the UPS system, first press the OFF/Enter button to disconnect the mains.
- Prevent fluids and other foreign objects from entering the UPS.
- The EPO and USB circuits are an IEC 60950-1 safety extra low voltage (SELV) circuit. This circuit must be separated from any hazardous voltage circuits by reinforced insulation.

7.5 Maintenance, service, and faults

- The UPS system operates with hazardous voltages. Repairs may be carried out only by qualified maintenance personnel.
- **Caution** - risk of electric shock. Even after the unit is disconnected from the mains (building wiring outlet), components inside the UPS system are still connected to the battery and electrically live and dangerous.
- Before carrying out any kind of service and/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.
- To avoid electrical shock, turn off the unit and unplug it from the AC power source before servicing the battery.
- Only persons are adequately familiar with batteries and with the required precautionary measures may replace batteries and supervise operations.
- **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, verify that no voltage is present!
- **Caution** - Do not dispose of batteries in a fire. The batteries may explode.
- **Caution** - Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can may cause a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:
 - a) Remove watches, rings, or other metal objects
 - b) Use tools with insulated handles.
 - c) Wear rubber gloves and boots.
 - d) Do not contact batteries with tools or other metal parts.
 - e) Disconnect charging source prior to connecting or disconnecting battery terminals.
 - f) Determine if battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electrical shock.