legrand®

PREMIUS EDGE

1 kVA - 3 kVA RM UPS

User Manual

FOREWORD

Summary

Thank you for purchasing this series UPS. This UPS is an intelligent, single-phase in / single-phase out, high-frequency online UPS designed by our R&D team with years of experience in UPS design. With excellent electrical performance, advanced intelligent monitoring and networking functions, and a smart appearance, the UPS meets international standards.

Please read this manual carefully before installation. This manual provides technical support for operators of the equipment.

When discarding the product or its components, please contact the nearest hazardous waste disposal facility.

Please read this manual carefully before installation.
This manual provides technical guidance for the operation of the equipment.

For disposal:
Please contact the nearest authorized hazardous waste disposal facility when disposing of the product or its components.

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1. Important Safety Warning

Important Safety Instructions – Save These Instructions

Please comply with all warnings and operating instructions in this manual strictly.

Keep this manual properly and read the following instructions carefully before installing the unit.

Do not operate this unit without first reading all safety information and operating instructions thoroughly.

Dangerous voltage and high temperature exist inside the UPS. During installation, operation, and maintenance, please follow local safety regulations and applicable laws. Failure to do so may result in personal injury or equipment damage.

The safety instructions in this manual are intended as a supplement to local safety regulations. The company assumes no liability for consequences arising from failure to follow these safety instructions.

1-1 Transportation

- Always transport the UPS system only in its original packaging to ensure protection against shock and impact.

1-2 Preparation

- Condensation may occur if the UPS system is moved directly from a cold to a warm environment. Ensure the UPS is completely dry before installation. Allow at least two hours for the unit to acclimate to the new environment.
- Do not install the UPS system near water or in a damp environment.
- Do not install the UPS system in direct sunlight or near a heat source.
- Do not block the ventilation openings of the UPS housing.

1-3 Installation

- Do not connect appliances or devices that may overload the UPS system (e.g., laser printers) to the UPS output sockets.
- Do not connect domestic appliances such as hair dryers to the UPS output sockets.
- The UPS must not be operated by individuals without prior experience or training.
- Place all cables so that they cannot be stepped on or cause tripping hazards.
- Connect the UPS system only to a properly earthed, shockproof outlet that is easily accessible and located close to the UPS system.
- Use only VDE-tested, CE-marked, or ISI-marked mains cables (e.g., your computer's mains cable) to connect the UPS to the building wiring outlet.
- Use only VDE-tested, CE-marked, or ISI-marked power cables to connect the loads to the UPS system.
- When installing the equipment, ensure that the total leakage current of the UPS and all connected devices does not exceed 3.5 mA.
- Before installation, carefully evaluate the environment. Do not install the UPS in locations with high temperature, high humidity, excessive dust, or other adverse conditions.
- Installation and wiring must be carried out strictly in accordance with local electrical laws and regulations.

1-4 Operation

WARNING!

Do not disconnect the mains cable from the UPS system or the building wiring outlet (shockproof socket) during operation. Doing so will disable the protective earthing of both the UPS system and all connected loads.

- The UPS system contains an internal power source (batteries). The UPS output sockets or terminal block may remain 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 before disconnecting the mains.

CAUTION!

Prevent liquids or any foreign objects from entering the UPS system to avoid risk of short-circuit, fire, or equipment damage.

1-5 Safety Instructions – UPS System and Batteries

WARNING!

Hazardous Voltages

- The UPS system operates with hazardous voltages. Repairs must only be performed by qualified maintenance personnel.
- Risk of electric shock: Even after the unit is disconnected from the mains (building wiring outlet), internal components remain connected to the battery and may be electrically live and dangerous.
- The battery circuit is not isolated from the input voltage. Hazardous voltages may exist between the battery terminals and ground. Verify no voltage is present before touching.

CAUTION!

Service and Maintenance

- Before carrying out any service or maintenance:
  - Disconnect the batteries.
  - Verify that no current is present.
  - Ensure no hazardous voltage exists at the terminals of high-capacity components such as bus capacitors.
  - Only personnel familiar with batteries and proper safety precautions may replace or handle batteries. Unauthorized persons must be kept away.

CAUTION!

Battery Handling

- Batteries can cause electric shock and have high short-circuit current. Always take the following precautions:
  - Remove wristwatches, rings, and other metallic objects.
  - Use only tools with insulated grips and handles.
- When replacing batteries, always install the same number and type of batteries.
- Do not attempt to dispose of batteries by burning, as this may cause an explosion.
- Do not open or destroy batteries. Escaping electrolyte can cause injury to the skin and eyes, and may be toxic.
- Replace fuses only with the same type and rating (amperage). Using an incorrect fuse may create a fire hazard.
- Do not dismantle the UPS system. All service must be carried out by qualified personnel only.

1-6 Symbols used in this guide

WARNING!

Risk of electric shock

CAUTION!

Read this information to avoid equipment damage

2. Installation and setup

NOTE!

Before Installation

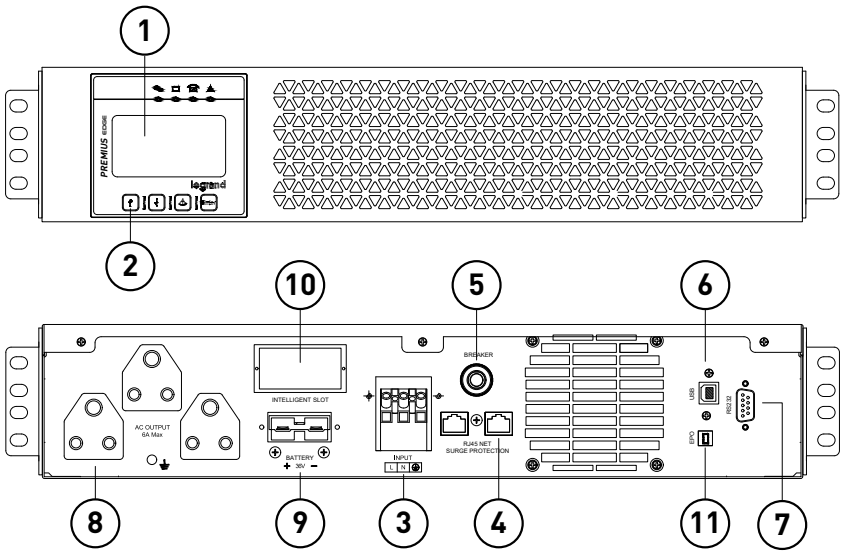
- Inspect the UPS unit carefully before installation.
- Ensure that nothing inside the package is damaged.
- Retain the original packaging in a safe place for future transportation or storage.

2.1 Unpacking and Inspection

- Do not tilt or lean the UPS while removing it from the packaging.
- Inspect the UPS for any visible damage that may have occurred during transportation.
  - Do not switch on the UPS if any damage is found.
  - Contact your dealer immediately in case of damage.
- Verify the accessories against the packing list. Contact your dealer if any parts are missing.
- Standard accessories include:
  - USB cable
  - Power cable (Input or Output)
  - RS232 cable

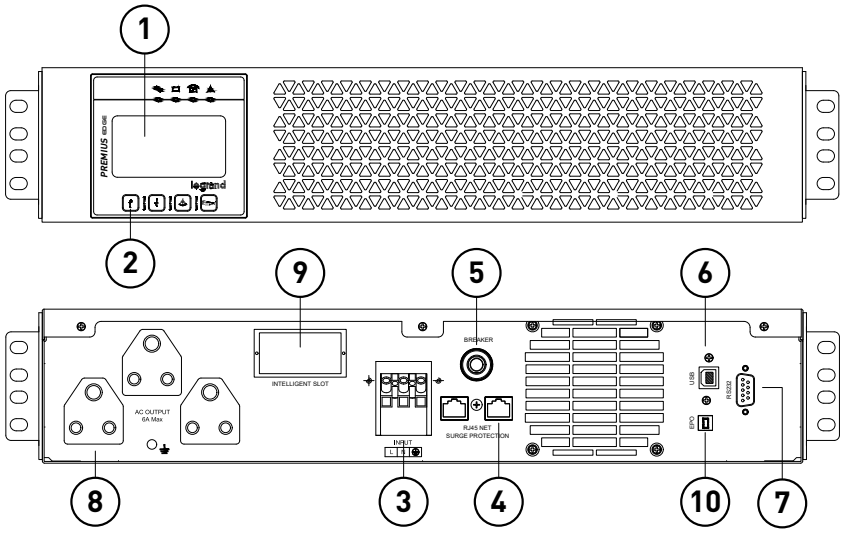
2.2 Real panel view

1 kVA



1. LCD
2. LCD Button
3. Input Terminal
4. Surge protection
5. Input Resettable breaker
6. USB port
7. RS232 port
8.Output Socket
9. Battery Connector
10. Intelligent Slot
11. EPO

1 kVA IBB



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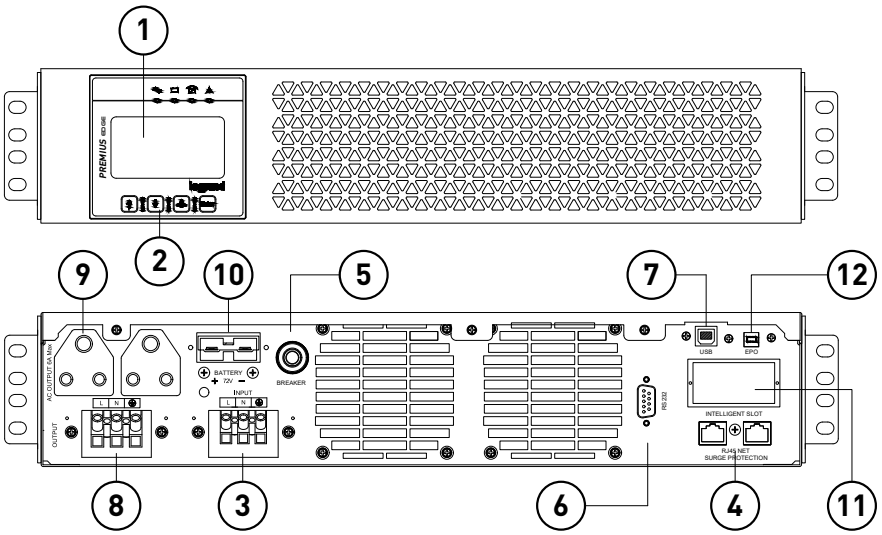
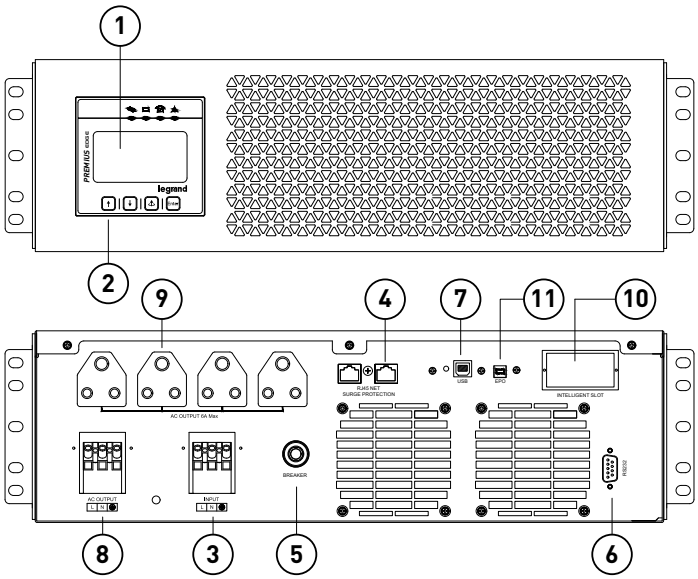
3 kVA



1. Lcd
2. Lcd Button
3. Input Terminal
4. Surge Protection
5. Input Resettable Breaker
6. Rs232 Port
7. Usb Port
8. Output Terminal
9. Output Socket
10. Battery Connector
11. Intelligent Slot
12. Epo Port

3 kVA IBB



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11. Epo Port

2.3 Setup the UPS

STEP 1 UPS input connection

Connect the UPS into a 1P, three-wire, grounded terminal /receptacle only. Avoid using extension cords.

Model	Wire Size in sqmm / No of runs
1 kVA Rack / Rack IBB	1.5 sqmm / 3
3 kVA Rack / Rack IBB	2.5 sqmm / 3

STEP 2 UPS output connection

For socket-type outputs:

- Simply connect the devices directly to the output sockets.

For terminal-type inputs or outputs:

Please follow the steps below for proper wiring configuration:

a) Remove the small cover of the terminal block.

b) Use the recommended power cables:

- 3 kVA models (200/208/220/230/240 Vac): AWG12 or 2.5 mm²
- 1 kVA models (200/208/220/230/240 Vac): AWG16 or 1.0 mm²

c) After completing the wiring, ensure that all wires are securely fixed.

d) Reattach the small cover to the rear panel.

STEP 3 Communication connection

Communication port:

To enable unattended UPS shutdown/start-up and status monitoring, connect the communication cable:

- One end to the USB/RS-232 port of the UPS.
- The other end to the communication port of your PC.

After installing the monitoring software, you can:

- Schedule UPS shutdown/start-up.
- Monitor UPS status directly from your PC.

The UPS is equipped with an intelligent slot, which supports either an SNMP card or a Relay card. Installing one of these cards provides advanced communication and monitoring options.

NOTE! The USB port and RS-232 port cannot be used simultaneously.

STEP 4 **Turn on the UPS**

Press the ON 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

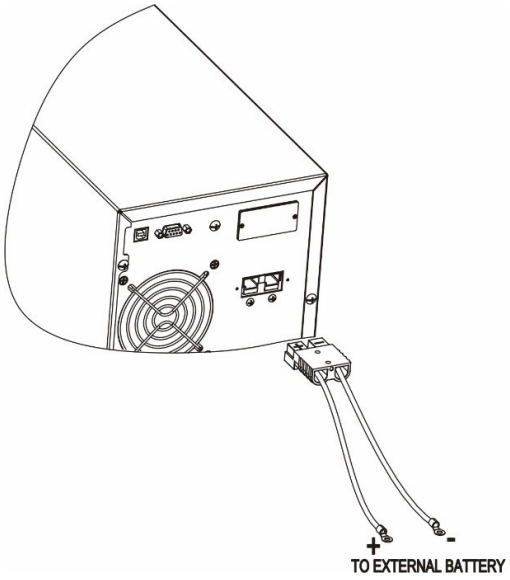
STEP 5 **Install software**

Visit the official website.

Locate and download the corresponding software package for your UPS model.

Run the installer and follow the on-screen instructions to complete the installation.

STEP 6 **External battery connection**



If your UPS does not include internal batteries, connect external batteries according to the required UPS system voltage.

2.4 UPS startup and turn off

Startup Operation

1. **Turning on the UPS in Line Mode (with mains power)**
   a) When mains power is connected, the UPS enters standby mode:
      - Bypass is active but no output is supplied.
      - All indicator lights are off.
      - Battery charging starts automatically.
      - To switch to inverter output mode, press the ON key.
   b) Starting the UPS:
      - Press and hold the ON key for more than 3 seconds.
      - The inverter will start.
   c) Self-test:
      - After starting, the UPS performs a self-test.
      - LEDs will light up in a circular and orderly sequence.
      - When the self-test is complete, the UPS enters line mode, indicated by the corresponding LEDs. The UPS is now operating in line mode.

2. Turning on the UPS by DC (without mains power)

a) When mains power is disconnected, press and hold the ON key for more than 0.5 seconds to start the UPS.

b) Startup operation is similar to when mains power is present:

- After the self-test, the corresponding LEDs light up.
- The UPS operates in battery mode.

Turn-Off Operation

1. Turning off the UPS in Line Mode (with mains power)

a) Press and hold the OFF key for more than 0.5 seconds to turn off the UPS and inverter.

b) After shutdown:

- All LEDs go off.
- There is no output.
- If output is needed again, you can enable bypass (BPS) through the LCD setting menu.

2. Turning off the UPS by DC (without mains power)

a) Press and hold the OFF key for more than 0.5 seconds to turn off the UPS.

b) During shutdown:

- The UPS performs a self-test first.
- LEDs light up and turn off in a circular and orderly sequence.
- Once complete, all LEDs go off.

Operation and Display Panel

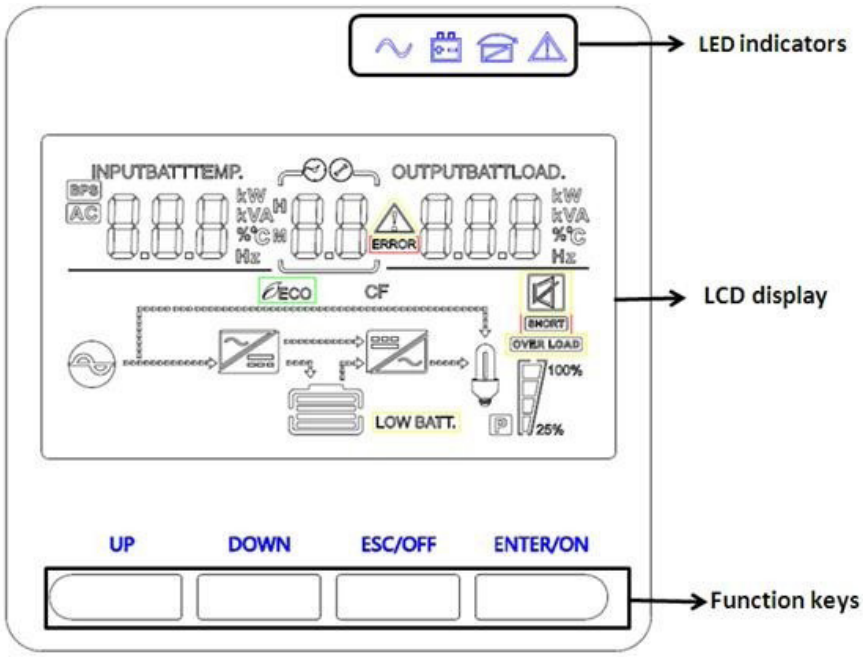
a) The operation and display panel is located on the front of the inverter and includes:

- Four indicator LEDs
- Four function keys
- LCD display

b) The panel shows:

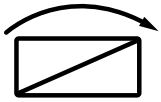
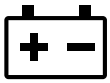
- Operating status
- Input and output power information
- Detailed LCD control panel introduction follows in the next section.

LCD control panel introduction



1. LED (from right to left: “alarm”, “bypass”, “battery”, “inverter”);
2. On-Line UPS LCD display;
3. Function keys

LED Indicator

Indicator	Description
 RED	The UPS has an active alarm or fault.
 Yellow	The UPS is in Bypass mode. When on, the UPS is operating normally on bypass during High Efficiency operation.
 Yellow	The UPS is in Battery mode.
 Green	The UPS is operating normally.

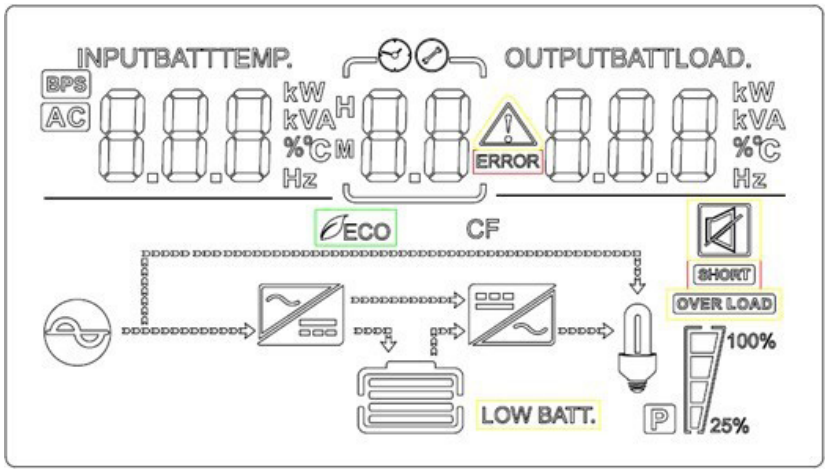

NOTE!

During power-on or startup, these indicators will turn on and off sequentially.
In different operation modes, the indicators may display differently.

Function Keys

Function Key	Description
ESC/OFF	Turn off the UPS or exit setting mode without saving changes.
UP	Move to the previous selection in the menu.
Down	Move to the next selection in the menu.
ENTER/ON	Turn on the UPS, confirm a selection in setting mode, or enter setting mode

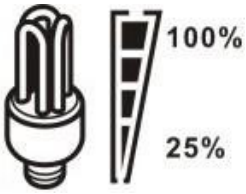
LCD Display Icons



Icon	Function description
Input Source Information	
	Indicates the AC input.
	Indicates input voltage, input frequency, battery voltage and Temperature.
Configuration Program and Fault Information	
	Indicates the setting programs.
	Indicates the warning and fault codes.
	Warning:  flashing with warning code.
	Fault:  lighting with fault code
Output Information	
	Indicate output voltage, output frequency, load percent, load in VA, load in Watt
Battery Information	
	Indicates battery level by 0-24%, 25-49%, 50-74% and 75-100% in battery mode and charging status in line mode.

In AC mode, it will present battery charging status.

Status	Battery capacity	LCD Display
Floating mode	0-24%	4 bars will flash in turns
	25-49%	Bottom bar will be on and the other three bars will flash in turns
	50-74%	Bottom two bars will be on and the other two bars will flash in turns
	75-100%	Bottom three bars will be on and the top bars will flash

Icon	Function description
Load Information	
	Indicates overload.
	Indicates the load level by 0-24%, 25-49%, 50-74% and 75-100%. 0% ~ 24% 25% ~ 49% 50%~74% 75%~100% 
Mode Operation Information	
	Indicates unit connects to the mains.
	Indicates load is supplied by utility power.
	Indicates the utility charger circuit is working.
	Indicates the DC/AC inverter circuit is working.
Mute Operation	
	Indicates unit alarm is disabled.

3. Operations

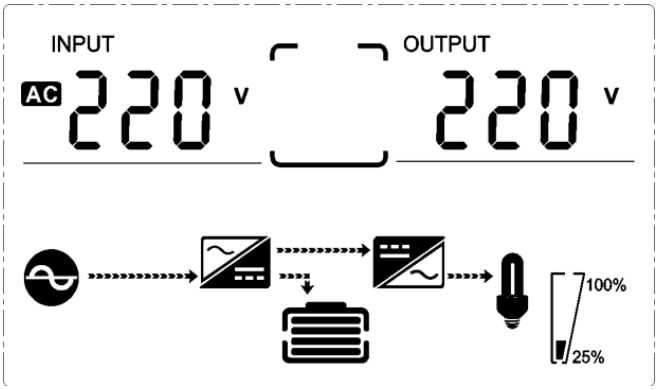
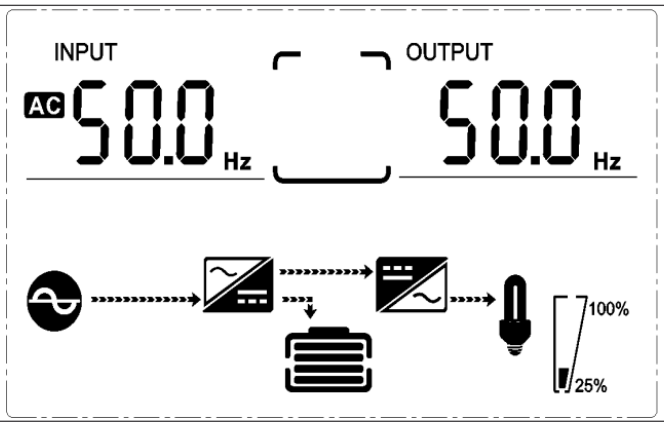
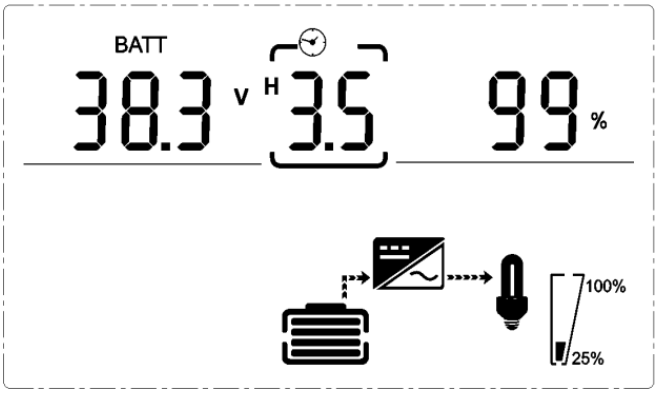
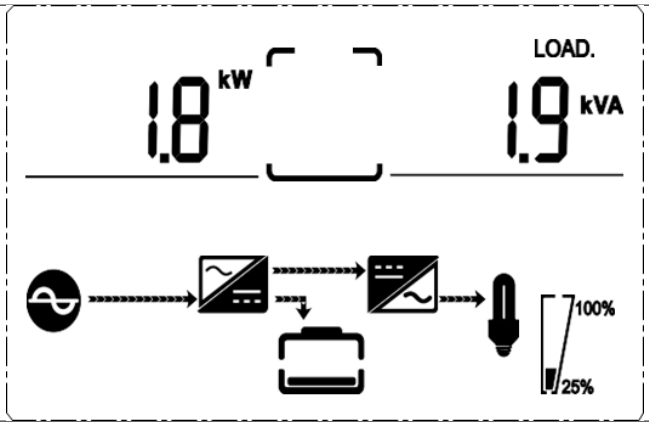
3-1 Button operation

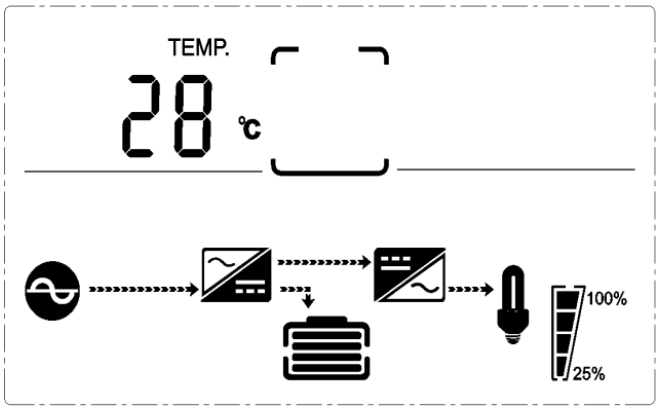
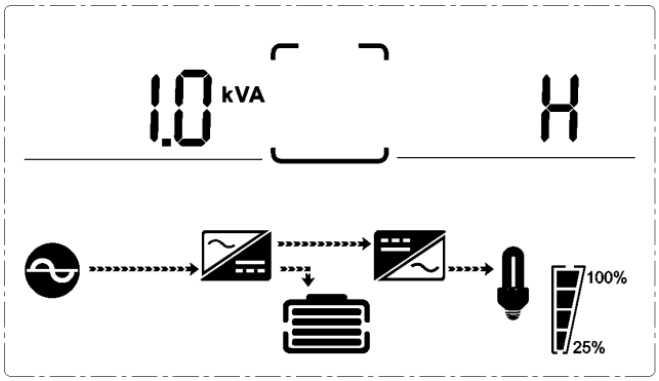
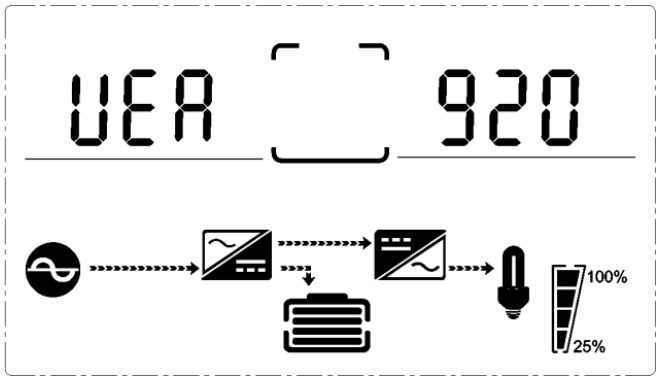
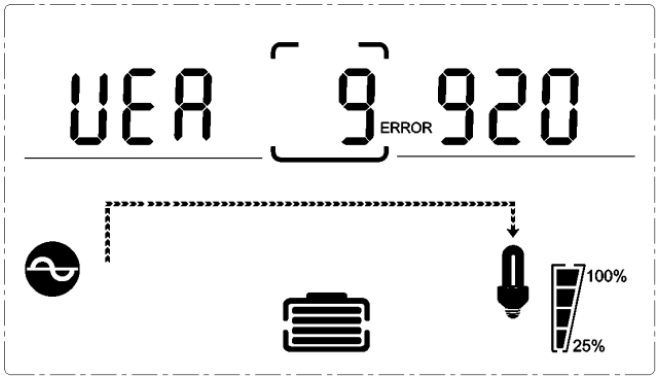
Button	Function
ON /ENTER Button	**Turn on the UPS:** • Press and hold the ON button for at least 2 seconds to turn on the UPS. **Confirm current settings:** • When the UPS enters setting mode, press the ON button to confirm the selected value. • Use the UP / DOWN buttons to navigate or change the settings before confirming. **Exit bypass mode:** • When the UPS is in bypass mode, press and hold the ON button to switch back to normal mode. **Switch to UPS self-test mode:** • While in AC mode, press and hold the ON button for 2 seconds to enter self-test mode.
OFF/ESC Button	**Turn off the UPS:** • Press and hold the OFF button for at least 2 seconds to turn off the UPS while in battery mode. • When mains power is present, the UPS will enter standby mode or switch to bypass mode if bypass is enabled. **Exit setting mode:** • Press the OFF button to exit setting mode without saving any changes.
UP Button	Press the UP button to display the previous selection while in UPS setting mode.
DOWN Button	• Press the DOWN button to display the next selection while in UPS setting mode. • Press the ENTER / ON button to confirm the current selection. • If the LCD is displaying the last selection in UPS setting mode, pressing this button will exit the setting mode.
UP + DOWN Button	• Press and hold the ENTER / ON button for 5 seconds to access UPS setting mode.

3-2 LCD display

Part one: Rack display

There are 8 interfaces available in the LCD display.

Item	Interface Description	Content Displayed
01	Input voltage & Output voltage	
02	Input frequency & Output frequency	
03	Battery voltage & Battery capacity	
04	Load	

Item	Interface Description	Content Displayed
05	Environment Temperature	
06	UPS model	
07	Firmware Version	
08	Alarm Code(Warming Message) All alarm codes are present when abnormal behavior (s) occur (s)	

3-3 UPS setting

The UPS supports user-configurable settings, which can be adjusted under any UPS operating mode. Settings will take effect under specific conditions. The table below describes how to configure the UPS.

Control of Setting Functions

The setting functions are controlled using four buttons: UP (▲), DOWN (▼), ON/ENTER, OFF/ESC.

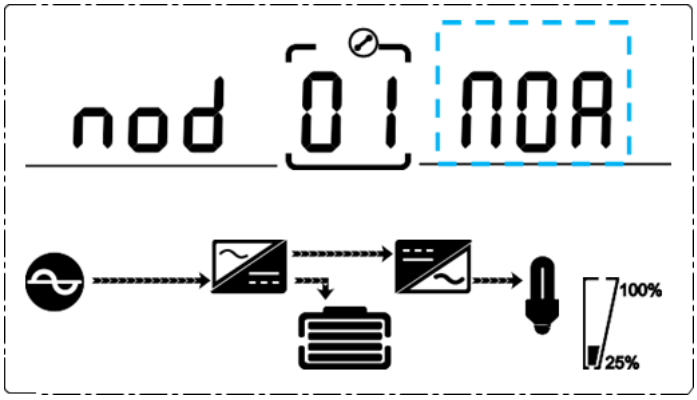
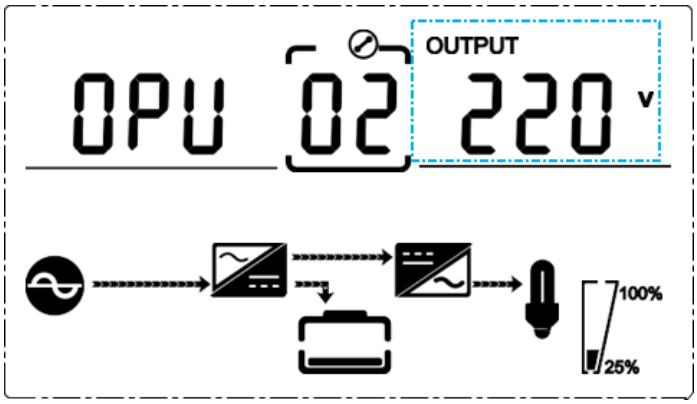
Buttons	Function
UP (▲)/ DOWN (▼) + OFF/ESC	Enter the setting page.
ON/ENTER	Confirm the selected setting option.
UP (▲) / DOWN (▼)	Adjust values or navigate between different pages.

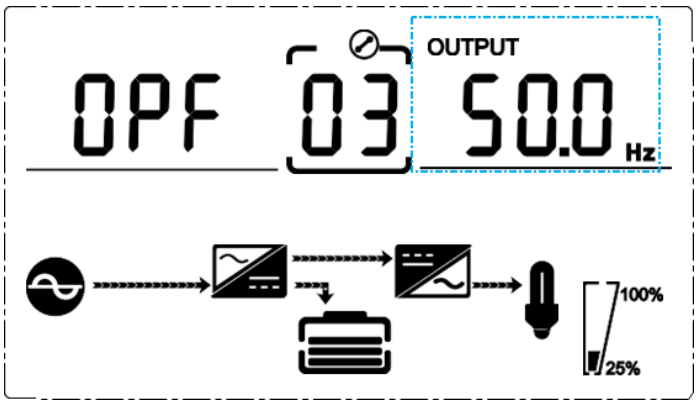
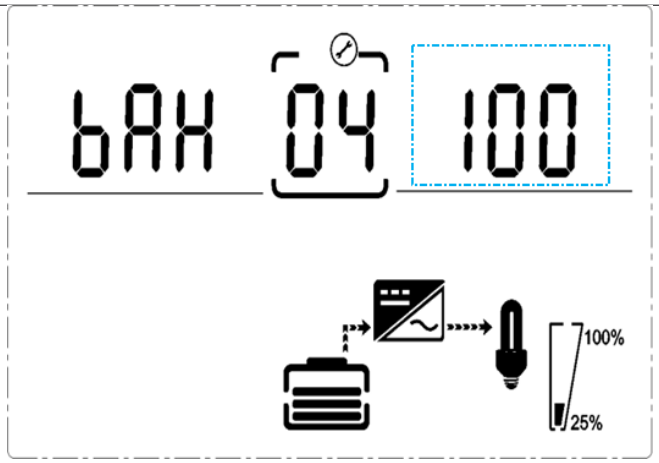
Accessing the Setting Interface

After the UPS is turned ON, press and hold the UP (▲) and DOWN (▼) buttons simultaneously for 5 seconds to enter the setting interface page.

NOTE!

Press the DOWN (▼) button to confirm the selection and exit setting mode when the LCD displays the last selection in UPS setting mode.

Item	Settings	Content display
01	**Mode setting** • Press the ENTER button to change the current setting (e.g., ECO, NOR, CF, or GEN). • Press the UP (▲) button to select the previous setting. • Press the DOWN (▼) button to select the next setting.	
02	**Output voltage setting** • Press the ENTER button to change the voltage setting (200, 208, 220, 230, 240 V). • Press the UP (▲) button to select the previous voltage setting. • Press the DOWN (▼) button to select the next voltage setting.	

03	**Frequency setting** • Press the ENTER button to change the frequency setting (50 Hz or 60 Hz). • Press the UP (▲) button to select the previous frequency. • Press the DOWN (▼) button to select the next frequency.	
04	**Battery capacity setting** • Press the ENTER button to change the battery capacity setting (1–200 Ah). • Press the UP (▲) button to select the previous value. • Press the DOWN (▼) button to select the next value.	
05	**Battery EOD voltage setting (Segment 1)** • Press the ENTER button to change the voltage factor setting (1.75 / 1.84 / 1.92). • Press the UP (▲) button to select the previous value. • Press the DOWN (▼) button to select the next value.	
06	**Battery EOD voltage setting (Segment 2)** • Press the ENTER button to change the charging voltage setting (1.60 / 1.70 / 1.75 / 1.80 V). • Press the UP (▲) button to select the previous value. • Press the DOWN (▼) button to select the next value.	

07	**Bypass voltage upper limit setting** • Press the ENTER button to change the bypass voltage upper limit (230–264 V AC). • Press the UP (▲) button to select the previous value. • Press the DOWN (▼) button to select the next value.	
08	**Bypass voltage lower limit setting** • Press Enter button to change the setting (The bypass voltage lower limit range is 176-220Vac). Press UP button (▲) to select the previous setting. • Press DOWN button (▼) to select the next setting.	
09	**Mute setting** • Press the ENTER button to change the bypass voltage lower limit (176–220 V AC). • Press the UP (▲) button to select the previous value. • Press the DOWN (▼) button to select the next value.	
10	**BYPASS enable/disable setting** • Press Enter button to change the setting (ON or OFF). • Press UP button (▲) to select the previous setting. • Press DOWN button (▼) to save and exit the setup	

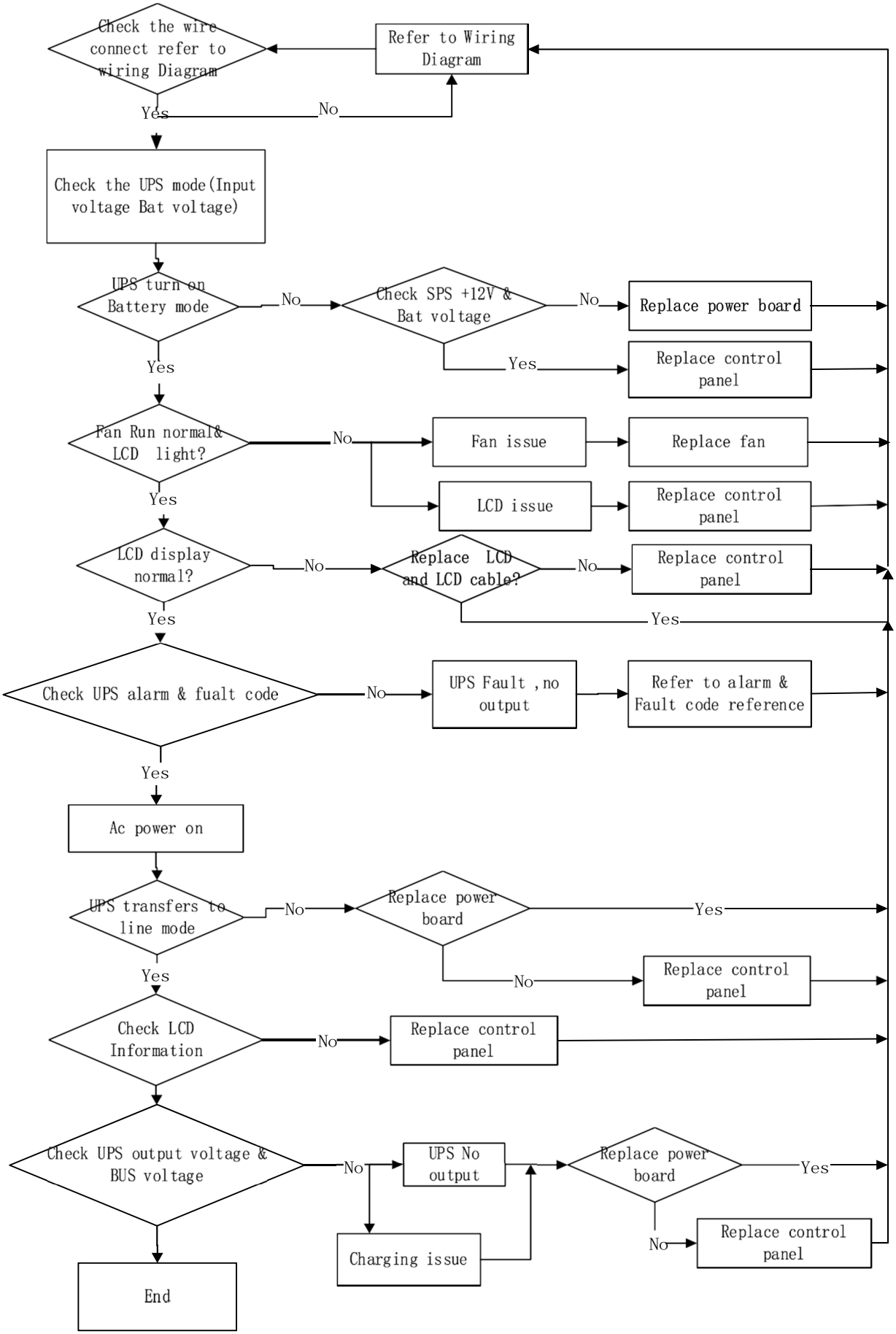
3-4 Alarm or Fault reference code

Event log	UPS Alarm Warning	Buzzer	LED
1	Rectifier Fault	Beep continuously	Fault LED lit
2	Inverter fault (Including Inverter bridge is shorted)	Beep continuously	Fault LED lit
9	Fan fault	Beep continuously	Fault LED lit
12	Self-test fault	Beep continuously	Fault LED lit
13	Battery Charger fault	Beep continuously	Fault LED lit
15	DC Bus over voltage	Beep continuously	Fault LED lit
16	DC Bus below voltage	Beep continuously	Fault LED lit
17	DC bus unbalance	Beep continuously	Fault LED lit
18	Soft start failed	Beep continuously	Fault LED lit
19	Environment temperature Over Temperature	Twice per second	Fault LED blinking
20	Inverter model Over Temperature	Twice per second	Fault LED blinking
26	Battery over voltage	Twice per second	Fault LED blinking
27	Mains Input reverse	Once per second	Fault LED blinking
28	Bypass Input reverse	Once per second	Fault LED blinking
29	Output Short-circuit	Beep continuously	Fault LED lit
30	Input current limit	Once per second	Fault LED blinking
31	Bypass over current	Once per second	BPS LED blinking
32	Overload	Once per second	INV or BPS LED blinking
33	No battery	Once per second	Battery LED blinking
34	Battery under voltage	Once per second	Battery LED blinking
35	Battery low pre-warning	Once per 2 seconds	Battery LED blinking
36	Over load time out	Once per 2 seconds	Fault LED blinking
37	DC component over limit.	Once per 2 seconds	INV LED blinking
39	Mains volt. Abnormal	Once per 2 seconds	BPS LED blinking
40	Mains freq. abnormal	Once per 2 seconds	BPS LED blinking
41	Bypass Not Available	None	BPS LED blinking
42	Bypass out of tracking range	None	BPS LED blinking
45	EPO Enable	Beep continuously	Fault LED lit

4. Troubleshooting

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

Symptom	Possible cause	Remedy
No indication and alarm even though the mains is normal.	The AC input power is not connected well.	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.
Alarm code is shown as “33” and battery led blinking.	The external or internal battery is incorrectly connected.	Check if all batteries are connected well.
Alarm code is shown as “26” and battery led blinking.	Battery voltage is too high or the charger is fault.	Contact your dealer.
Alarm code is shown as “34” and battery led blinking	Battery voltage is too low or the charger is fault.	Contact your dealer.
Alarm code is shown as “32” and INV or BYPASS led blinking.	UPS is overload	Remove excess loads from UPS output.
Alarm code is shown as “27&28” and FAULT led light.	Mains Input reverse& Bypass Input reverse	Check input L/N wiring Reverse connection
Alarm code is shown as “29” and FAULT led light.	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.
Alarm code is shown as “9” and FAULT led light.	Fan fault.	Contact your dealer.
Alarm code is shown as “01, 02, 15, 16, 17, 18”	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.



Trouble Shooting Chart

Contacting After-Sales Service

If the problem persists, contact the nearest after-sales service department by:

Website: www.numericups.com

Toll-Free: 0484-3103266 / 4723266

Provide the following information:

- Model number and serial number
- Date when the problem occurred
- LCD/LED display status and buzzer alarm status
- Utility power condition, load type and capacity, ambient temperature, and ventilation condition
- External battery information (capacity, quantity), if applicable
- Any other relevant information for a complete description of the problem

Disposal Guidelines

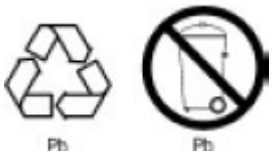
Reference Standard: ISO 14001:2004

- After unpacking the UPS and battery, dispose of packaging materials (polythene, thermocol, carton boxes, nylon belts, nylon threads) through an authorized recycler.
- Faulty or damaged batteries must be handed over to an authorized recycler or to NUMERIC for proper disposal.
- Batteries contain harmful metals and chemicals (nickel-cadmium, alkaline, mercury, nickel-metal hydride, lead-acid) that can contaminate the environment if disposed improperly.
- Cadmium-containing batteries, when dissolved, can release toxic substances into water supplies, posing serious health hazards.
- Recycling batteries prevents pollution and conserves resources.

5. Storage and Maintenance

Operation

- The UPS system contains no user-serviceable parts.
- If the battery service life (typically 3–5 years at 25°C ambient temperature) has been exceeded, the batteries must be replaced.
- Please contact your dealer for battery replacement.



Always deliver spent batteries to a recycling facility or return them to your dealer using the replacement battery's packing material.

Storage

Before storing the UPS, ensure the battery is charged for 5 hours. Store the UPS covered and upright in a cool, dry location. During storage, recharge the battery periodically according to the recommended schedule to maintain battery health.

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. Options

SNMP Card (Optional/Internal)

Installation Instructions

- Loosen the two torque screws on each side of the card.
- Carefully insert the SNMP card into the slot and lock the screws securely.

Features

- The KPM220 is a built-in network SNMP card.
- Supports SNMP v1, v2, and v3 protocols.
- Provides features such as e-mail alarms, historical events, and historical data storage.

Refer to the picture for the SNMP card layout.

Download installation files from numeric website.

Relay card (Options)

The Mini Dry Contact Card provides an interface for UPS peripheral monitoring. Its contact signals reflect the UPS operating status and connect to peripheral monitoring devices via a terminal board, enabling effective real-time monitoring and timely feedback in case of abnormal conditions, such as UPS failure, mains interruption, or bypass activation. The card is installed in the UPS's intelligent slot and includes six output ports and one input port. Please refer to the following table for details.

Pins definition of connecting terminal on the board

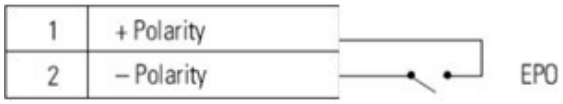
Terminal No.	Terminal function	Terminal No.	Terminal function
1	Common source	9	Bypass enable NO
2	UPS on NC	10	Bypass enable NC
3	AC fail NO	11	UPS fail NO
4	AC fail NC	12	UPS fail NC
5	Batt low NO	CN4-1	Remote shutdown
6	Batt low NC	CN4-2	GND
7	UPS alarm NO		
8	UPS alarm NC		

Relay card electrical parameter

	Max	Type
Relay card contact	(Max Switched Voltage) • AC:120V • DC:24V	AC:120V
		DC:5~12V
	(Max Switched Current) • AC:1A • DC:1A	AC:1A
		DC:1A

Emergency Power-off (EPO) (Options)

The EPO (Emergency Power Off) function allows the UPS to be shut down remotely. This feature can be used to turn off both the UPS and its load, for example, via a thermal relay in the event of room over-temperature. When the EPO is activated, the UPS immediately shuts down its output and all power converters, while remaining powered on to signal a fault alarm.



EPO Connections

NOTE!

Note: Depending on the user configuration, the EPO pins must be shorted or opened to keep the UPS running. To restart the UPS after an EPO shutdown, reconnect (re-open) the EPO connector pins and turn on the UPS manually. The maximum resistance in the shorted loop should not exceed 10 ohms. Always test the EPO function before connecting critical loads to prevent accidental load loss. Even if the EPO function is not required, the EPO connector should remain installed on the UPS port.

7. Specification Premius Edge Rack

PARAMETER	1 kVA	3 kVA
Output Power Capacity (Watts)	1000	3000
Technology	Online Double Conversion (VFI-SS-111)	
OVCD	Available	
Waveform	Sinusoidal	
Display	LCD display + LED panel	
Architecture	Rack	
INPUT CHARACTERISTICS		
Input Voltage	230 VAC	
Input Frequency	40 – 70 Hz	
Voltage Range	176–264 VAC @100% load ± 5%; 110–300 VAC up to 50% load ± 5%	
Input Power Factor	0.99	
THDi	< 3% at full linear load and normal voltage	
Connection	Terminal block	
OUTPUT CHARACTERISTICS		
Output voltage	230 VAC (adjustable 220 / 230 / 240 VAC) ±1%	
Output frequency	50 / 60 Hz ±0.1 Hz	
Frequency synchronization	46 to 54 Hz	
Crest factor	3:1	
THD of output voltage	< 3% @ Full inear load	< 5% @ Full Non linear load
Output connection	3 Nos 6 A, IS1293	2 Nos 6 A, IS1293 & 1No 30 A, Terminal Block
AC–AC efficiency	≥89% @ 100% Load	≥91% @ 100% Load
ECO mode	≥95% @ 100% Load	≥97% @ 100% Load
Convertible mode	Available	
Configurable bypass	Available	
Overload Capability Line Mode	105–125%: 1min · 126–130%: 30Sec · >130 Trip	
Overload Capability Battery Mode	105–125%: 1min · 126–130%: 10Sec · >130 Trip	
BATTERIES & BATTERY CHARGER CHARACTERISTICS		
Number of batteries	3	6
Battery capacity	Depending on the capacity of external batteries	
Battery Type	VRLA / Lithium-Ion	
Rated battery voltage	36 VDC	72 VDC
Battery charging current	10 A default ± 10% (7–100 Ah selectable via display)	
Recharge time	9 hours	
COMMUNICATION & MANAGEMENT		
Communication	RS-232, USB	
Connector for network interface	SNMP / Dry contacts (optional)	
MECHANICAL CHARACTERISTICS		
Dimensions (W × D × H) in mm	440 x 465 x 88.8 (2U)	
Net weight (kg)	7.3	10.2
ENVIRONMENTAL CONDITIONS		
Operating temperature	0 °C to + 40 °C	
Protection index	IP20	
Relative humidity	0–90% (non-condensing)	
Storage temperature	–10 °C to + 50 °C	
Noise level	< 55 dBA	
COMPLIANCE & STANDARDS		
Safety	IS 16242 (Part 1): 2025 IEC 62040-1:2017 + AMD1:2021 + AMD2:2022 (CSV)	
EMC	IEC 62040-2:2016, EN IEC 62040-2:2018	
Performance	IEC 62040-3	
Certification	BIS, CE, RoHS, PEP, REACH	

7. Specification Premius Edge Rack - IBB

PARAMETER	1 kVA	3 kVA
Output Power Capacity (Watts)	1000	3000
Technology	Online Double Conversion (VFI-SS-111)	
OVCD	Available	
Waveform	Sinusoidal	
Display	LCD display + LED panel	
Architecture	Rack	
INPUT CHARACTERISTICS		
Input Voltage	230 VAC	
Input Frequency	40 – 70 Hz	
Voltage Range	176–264 VAC @100% load ± 5%; 110–300 VAC up to 50% load ± 5%	
Input Power Factor	0.99	
THDi	< 3% at full linear load and normal voltage	
Connection	Terminal block	
OUTPUT CHARACTERISTICS		
Output voltage	230 VAC (adjustable 220 / 230 / 240 VAC) ±1%	
Output frequency	50 / 60 Hz ±0.1 Hz	
Frequency synchronization	46 to 54 Hz	
Crest factor	03:01	
THD of output voltage	< 3% @ Full inear load	< 5% @ Full Non linear load
Output connection	3 Nos 6 A, IS1293	4 Nos 6 A, IS1293 & 1No 30 A, Terminal Block
AC–AC efficiency	⩾89% @ 100% Load	⩾91% @ 100% Load
ECO mode	⩾95% @ 100% Load	⩾97% @ 100% Load
Convertible mode	Available	
Configurable bypass	Available	
Overload Capability Line Mode	105–125%: 1min · 126–130%: 30Sec · >130 Trip	
Overload Capability Battery Mode	105–125%: 1min · 126–130%: 10Sec · >130 Trip	
BATTERIES & BATTERY CHARGER CHARACTERISTICS		
Number of batteries	3	6
Battery capacity	7AH / 9AH - Inbuilt	
Battery Type	VRLA	
Rated battery voltage	36 VDC	72 VDC
Battery charging current	0.7 -1 Amps	
Recharge time	9 hours	
COMMUNICATION & MANAGEMENT		
Communication	RS-232, USB	
Connector for network interface	SNMP / Dry contacts (optional)	
MECHANICAL CHARACTERISTICS		
Dimensions (W × D × H) in mm	440 x 465 x 88.8 (2U)	440 x 625 x 133.3 (3U)
Net weight (kg)	15.3	26.8
ENVIRONMENTAL CONDITIONS		
Operating temperature	0 °C to + 40 °C	
Protection index	IP20	
Relative humidity	0–95% (non-condensing)	
Storage temperature	–10 °C to + 50 °C	
Noise level	< 55 dBA	
COMPLIANCE & STANDARDS		
Safety	IS 16242 (Part 1): 2025 IEC 62040-1:2017 + AMD1:2021 + AMD2:2022 (CSV)	
EMC	IEC 62040-2:2016, EN IEC 62040-2:2018	
Performance	IEC 62040-3	
Certification	BIS, CE, RoHS, PEP, REACH	

SCAN TO FIND OUR
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NUMERIC®

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