

Installation and Operation Manual V1.02

• Characteristic

- ✓ Automatically switch between main power and backup battery.
- ✓ Anti-protection against lightning surge, electrostatic discharge, electrical transient fast pulse Group interference, conduction disturbance, AC power cycle drop and instant power-down.
- ✓ Reliable performance in different circumstance, such as bad weather, insulation pressure, damp heat etc.
- ✓ There are several status indicated on the panel, including operation, main power, battery, charging, power failure and battery voltage.
- ✓ It is able to recover on itself against short circuit or long-time over current after the fault is removed.
- ✓ Perfect management on battery charge and discharge, two charging modes of normal charge and float charge, as well as anti-protection to over-discharge.

• Technical Specifications

- 1. Working environment: temperature: -10°C~42°C, humidity: ≤ 95%RH(40°C)
- 2. AC input voltage: AC187V~242V, 47~63Hz
- 3. DC output voltage & current

Nominal loop	Output Voltage	Output Current
Output 1,2	24.4±0.5V	10A

Description: (1) Output voltage, output current test environment: 0 ~ 40°C, 45% ~ 75%RH;

(2) Output 1 and Output 2 are connected in parallel within the power supply;

(3) When using battery power, the output voltage is the battery voltage.

4. Output DC voltage ripple noise:

Ripple≤1% Peak≤ 2%

- 5. Insulation resistance (15-35°C,45%-75%RH): Input-chassis>50MΩ; Output-chassis>20MΩ
- 6. Compressive strength (15-35°C,45%-75%RH):

Input-case AC1500V(effective value), frequency 50Hz, time 1 minute (leakage current 5mA)

Output - Enclosure AC500V(effective value), frequency 50Hz, time 1 minute (leakage current 10mA) 7. Protection function

(1) Over-current protection: The output has a long-term over-current and short-circuit protection function, and will automatically recover after the fault is removed.

(2) Under-voltage protection of the battery: Under the working condition of the backup battery, when the battery voltage drops to $21.0\pm1.0V$, the power supply cuts off the discharge circuit and the buzzer alarms at the same time to prevent the battery from being damaged due to over discharge.

(3) Battery protection against reverse polarity: If battery polarity reversal occurs, it will not affect the battery and power supply. After correct wiring, the power supply works normally.

(4) Battery ground protection: When the battery positive and negative terminals are connected to the power supply unit or earth, the battery and power supply are not damaged.

8. Battery charging function

The charging method is two-stage charge-float, and the effective charge current is $0.9\pm0.2A$ (because of the pulse charging method, the current reading will be larger when the measurement is performed with non-effective instruments). The pressure is $27.2\pm0.8V$.

9. Working status indication

The system generates the following six operating status signals, indicated by the LEDs on the panel. Main power: Refers to the AC220V power input that meets the requirements and the system is in normal working output state.



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Standby: Refers to AC220V input voltage is lower than AC170±15V below, the battery is controlled by the system, the power supply to the load alone.

Main power failure: It refers to the situation that the main power supply cannot provide AC power because of under-voltage (voltage lower than 170±15V), power failure and other reasons.

Battery failure: It refers to the short circuit or open circuit of the connection line between the system and the battery.

Battery voltage: When the battery voltage is lower than DC22.0±1.0V when the battery is working. Charging status: The charger in this system is in charge working state.

• Wiring

"PE" terminal grounding wire; 220V mains is connected to two terminals marked "AC220V N, L"; the battery is connected to two terminals marked "Battery", and the polarity should not be reversed. Electrical equipment connected to the output terminal.

Warning: Please ground the "PE" grounding terminal well before connecting the AC220V to protect personnel and equipment safety!

Before wiring, please confirm that the input voltage is within the allowable range. Damage caused by overvoltage is not covered by the warranty!

Note: The positive and negative poles of the power output must not be connected incorrectly so as to avoid damaging the electrical equipment!

• **Dimensions** (unit: mm)



Dimensions

Installation dimension drawing

Battery compartment size: $333 \times 96.5 \times 64.5 \sim 98$ (mm) Intermediate 30mm Separation 2 batteries, including the 64.5mm height is 12V/7Ah battery mounting height, 98mm is 12V/12Ah battery mounting height.

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