

User's Manual POWER INVERTER

Please download the software "PowerMonitor 1.6.84".
Oversea:<https://bit.ly/2PpyLg6>



Appliances



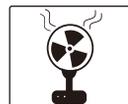
PC



TV



Light



Electric fan

Table Of Contents

GENERAL PRECAUTIONS	1
PERSONNEL PRECAUTIONS	1
INTRODUCTION	2
Features.....	2
Purpose	2
PRODUCT OVERVIEW	3
INSTALLATION	4
Battery connection	4
OPERATION	5
LED Screen Full Disp.....	5
Operating Mode Description.....	5
Error Flash Display indicate.....	5
Key Functions and Display Data.....	6
Battery Type Display and Change Set.....	6
Charging Current Display & Change Set	6
COMMUNICATION	7
SPECIFICATIONS	8

GENERAL PRECAUTIONS

1. Before using it, read all instructions and markings:
(1) inverter (2) the batteries (3) this manual
2. CAUTION -- To reduce risk of injury, charge only
Li Battery : Default is 4 series LiFePO₄ battery
Pb Battery : Sealed Lead--Acid or Gelled Lead-Acid. If customer use other
batteries, they must maintain them. Other types of batteries may cause damage and
injury.
3. Do not expose it to rain, snow or liquids of any type. It is designed for indoor.
4. Do not disassemble it. Take it to a qualified service center when service or repair
is required.
5. To prevent the risk of electric shock, disconnect all wiring before attempting any
maintenance or cleaning. Turning off the unit will not reduce this risk.
6. WARNING: Provide to prevent accumulation and concentration of hydrogen gas
at the top of the compartment.
7. NEVER charge a frozen battery and connect the inverter with 12V .
8. Input/output AC wiring must be no less than 16 AWG gauge copper wire and rated
for 75°C or higher. Battery cable must be rated for 75°C or higher and should be no
less than 6AWG gauge.
9. Be extra cautious when working with metal tools around batteries. Short-
circuiting the batteries could cause an explosion.
10. Read the battery manufacturer's installation and maintenance instructions
prior to operating.

PERSONNEL PRECAUTIONS

1. Have plenty of fresh water and soap nearby in case battery acid contacts
skin, clothing or eyes.
2. Avoid touching eyes while working near batteries.
3. NEVER smoke or allow a spark or flame in vicinity of a battery.
4. Remove personal metal items such as rings, bracelets, necklaces, and watches
when working with batteries. Batteries can provide heavy short-circuit
current, enough to make metal melt and causes severe burn.
5. If a remote or automatic generator start system is used, disable the automatic
starting circuit or disconnect the generator to prevent accident during servicing.

INTRODUCTION

It is a cost effective, intelligent inverter with UPS function. The comprehensive LED offers user-configurable and easy-accessible button adjustment such as battery charge current, battery charge Voltage, frequency, buzzer etc.

Features:

- Sine wave inverter
- Friendly user interface
- 3 steps charging algorithm
- MFD(multi-function display)
- Overload and short-circuit protection
- Deep discharge protection
- Communication with WIFI by USB-A Port, Can Monitor by Web, Phone, PC
- Communication with Li battery by RJ11 BMS Port, Can Auto Fix Battery Setting
- Communication with PC by USB-B Port

PURPOSE

When the utility power is normal, the UPS will transfer the utility power to downstream application.

During a power outage or when the utility power is below the lower AC Voltage or above the higher AC Voltage, the UPS will transfer to inverter mode.

INSTALLATION

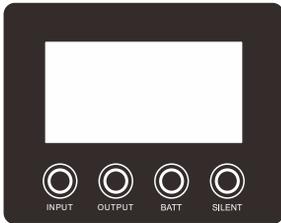
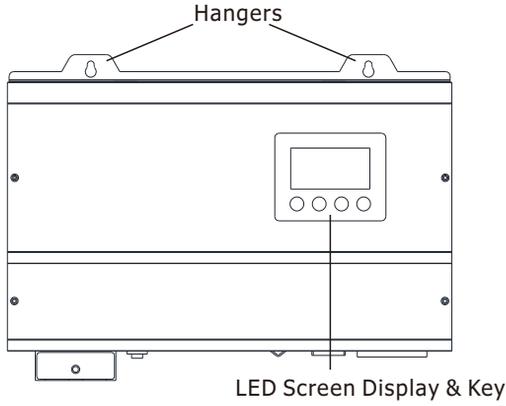
Unpacking and inspection

Before installation, please inspect the unit. Be sure that nothing inside the package is damaged.

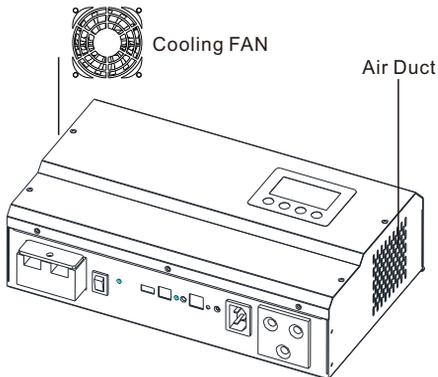
You should have received the following items inside of package.

- The unit X 1
- User manual X 1
- AC input cable X 1
- Communication cable X 1

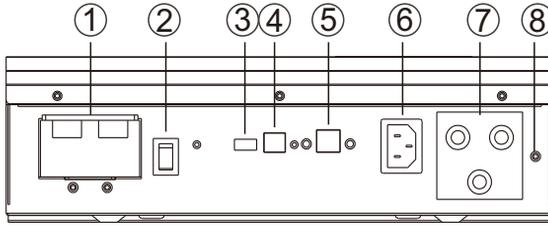
PRODUCT OVERVIEW



INPUT	Select Display Input Data Long Press: Switch Charging Current 10A or 15A
OUTPUT	Select Display Output Data
BATT	Select Display Battery Data Long Press: Switch Battery Type LI or PB
SILENT	Enable / Disable Buzz Alarm



FRONT PANEL OF UPS



1. DC input connector bar (Connected to the battery)
2. Toggle power switch
3. USB-A type WIFI Socket (Use to Communicate)
4. USB-B type COM Socket (Use to Communicate with computer)
5. RJ11 type BMS Socket (Use to Communicate with Li Battery Pack)
6. IEC Socket AC Grid Input
7. AC Output Socket
8. Link Ground



Note that when the toggle power switch is in the "ON" position, voltage may still be present at the output terminals even when the input terminals are disconnected from power. DO NOT transport or attempt to make connections to the terminals when the toggle switch is in the "ON" position.

INSTALLATION

Battery connection

Step1: A way the cover of external battery terminal.

Step2: Following battery polarity guide printed near the battery terminal.

RED cable to the positive terminal(+);

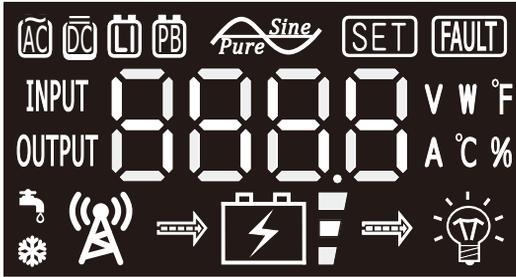
BLACK cable to the negative terminal(-);

WARNING! Please use the appropriate battery cable. Please refer to the following table.

Model	Battery voltage	Wire size
300W	12V	1*10AWG
400W	12V	1*10AWG
500W	12V	1*8AWG
600W	12V	1*8AWG
	24V	1*10AWG
800W	12V	2*10AWG
	24V	1*10AWG
1000W	12V	2*8AWG
	24V	1*8AWG

OPERATION

LED Screen Full Disp



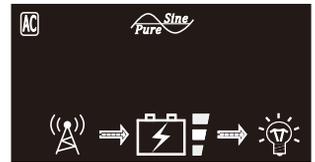
Operating Mode Description



Standby Mode



Battery Inverter Mode



AC Mode

Error Flash Display Indicate

Battery Under Voltage Protect

Error Code : E - b L



Battery Over Voltage Protect

Error Code : E - b H



AC Input exist, but Voltage
or Frequency Error
Error Code : E - A C



Load Output Overload Protect

Error Code : E - o P



Bios Temperature High Protect

Error Code : E - o C / E - o F



TROUBLE SHOOTING

If machine enters into fault mode, please remove input power. And according to the table, deal with the following problems.

Explanation / Possible cause	What to do
Battery voltage is too Low.	Charge the unit at least 8 hours.
Over load.	Decrease your load.
Temperature of machine is too high.	Power off and waiting for minutes.
battery voltage is too high.	Check the battery specifications.
battery voltage is too low.	Check the battery specifications.
Output short circuited.	Remove your load and restart.
Inverter output voltage is high.	Return to repair center.
Over load.	Decrease your load.
Input voltage too low.	Check input power.
Input voltage too high.	
Input frequency too low.	
Input frequency too high.	
Output short circuited.	Check if wiring is connected well and remove abnormal load.
Output voltage is too low.	Decrease your load.

Key Functions and Display Data

-----Input Parameters Display-----



Input City Power Voltage



Input Charging Current

-----Output Parameters Display-----



Output Inverter Voltage



Output Power

-----Battery Parameters Display-----



Input Battery Voltage



Input Battery Percent

-----Buzz Warning Display-----



Set Buzz On



Set Buzz Off

Battery Type Display & Change Set



Li Battery :
Default is 4 series LiFePO4 battery



Pb Battery :
Sealed Lead-Acid or Gelled Lead-Acid



if the battery type is not right, Long Press the BATT key to change the battery type, the LED Screen can display the battery type change at the same time.

Charging Current Display & Change Set



Max Charging Current Set

if the charging current is not fix, Long Press the INPUT key to change the max charging current. The screen can display the setting at the same time for few seconds.

COMMUNICATION

1. Communicate with computer

User can use the Computer Application PowerMonitor to view the UPS state and all datas

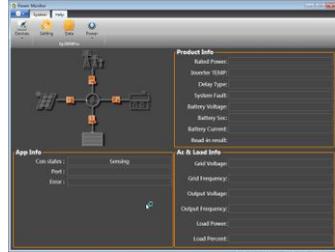
Computer Application



USB-B type COM Socket



Application interface



2. Communicate with WIFI

User can use the WIFI Device to view the UPS state and all datas

USB-A type WIFI Socket



WIFI Device (Optional)



3. Communicate with Li Battery with BMS (Protocol must Same)

if used Li Battery Pack, and the Battery pack can be communicated through the BMS Socket via Uart, the UPS can read the Battery pack's all setting datas and battery states, at the same time configure the UPS automatic.

Note: the Li Battery Pack must fit in the same Protocol with the UPS for communicate!!!



RJ11 type
BMS Socket

PIN 1----6

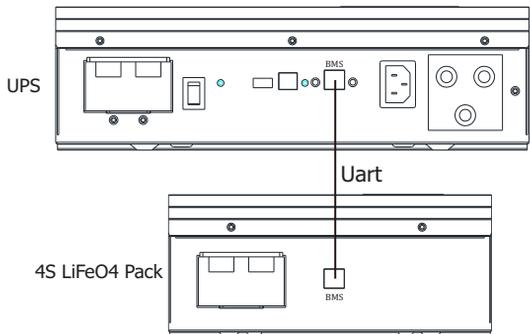
PIN 1,5,6: Not Link

PIN 2: GND

PIN 3: Rs232 RX

PIN 4: Rs232 TX

UPS Rs232 Define



SPECIFICATIONS

MODEL		600WUPS / Inverter	
Nominal Battery System Voltage		12VDC	
INVERTER OUTPUT	Rated Power	600VA/600W	
	Waveform	Pure Sine Wave	
	Nominal Output Voltage RMS	230VAC	
	Output Voltage Regulation	+10/-18%	
	Output Frequency	50Hz/ 60Hz± 1Hz	
	Inverter Efficiency (Peak)	>90%	
	Line Mode Efficiency	>95%	
Typical Transfer Time	Typical<10ms, 15ms max		
ACINPUT	Voltage	230VAC	
	Voltage Range	184 ~ 278VAC ± 3%	
	Frequency Range	45 ~ 65Hz± 2Hz	
BATTERY	Note: Below Parameters (PB) Lead-acid Battery / (LI) 4 series LiFePO4 Lithium Battery Pack		
	Nominal Input Voltage	12VDC	
	Low Battery Cutoff	10.5VDC (PB)	11.5 VDC (LI)
	Low Battery Alarm	11.0VDC (PB)	12.0 VDC (LI)
	Low Battery Voltage Recover	12.5VDC (PB)	12.8 VDC (LI)
	High Voltage Alarm	14.7VDC (PB)	14.5 VDC (LI)
	High Battery Voltage Recover	15.0VDC (PB)	14.8 VDC (LI)
CHARGER	Charger Voltage Boost	14.4VDC (PB)	14.4 VDC (LI)
	Charger Voltage Standby	13.8VDC (PB)	14.4 VDC (LI)
	Charging Current	10A/ 15A ± 2A @ 12V	
	Overcharge Protection S.D.	15.5VDC	
BYPASS & PROTECTION	Nominal Input Frequency	50Hz/ 60Hz [autodetection]	
	Overload Protection (SMPS Load)	FUSE	
	Output Short Circuit Protection	7A	
	Bypass Fuse Rating	7A	
	Max Bypass Current	7A	
MECHANICAL SPECIFICATIONS	Dimensions (W*H*D) (mm)	320x 231 x 96	
	Shipping Dimensions (W*H*D) (mm)	415x 280x 166	
	Shipping Weight (kg)	3.4	
OTHER	Operation Temperature Range	0°C to 40°C	
	Audible Noise	60dB MAX	
	Display	LED Screen	
	Standard Warranty	1 year	
	Communication	PC \ WIFI \ BMS (BMS optional)	

**MUST**[®]

GUARANTEECERTIFICATE

Serial No.: _____

Customer's Name				Contact Person	
Address				Telephone No.	
Product/Model:		Post Code		Fax No.	
Date of purchase			Expire Date		
Dealer Signature			Customer Signature		

**MUST**[®]

GUARANTEECERTIFICATE

Serial No.: _____

Customer's Name				Contact Person	
Address				Telephone No.	
Product/Model:		Post Code		Fax No.	
Date of purchase			Expire Date		
Dealer Signature			Customer Signature		