



USER MANUAL

INVERTER / CHARGER

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User Manual 5.1

Dear Customer,

Thank you for using the pure sine wave inverter series produced by Beijing Multifit Electrical Technology Co., Ltd. This user manual includes inverter functions and operation procedures. To ensure the correct use of the inverter, please read the manual carefully before operation. Keep the manual in a safe place for quick reference if you encounter problems.

Note:

- The contents of this manual are subject to change without notice.
- If there is a different understanding of the manual content, the technical department of our company shall prevail.
- Without our permission, any plagiarism or adaptation of this manual in whole or in part is a serious infringement

Chapter I Overview

1.1 Product Confirmation

Before the user unpacks, please confirm: whether the outer packing box is damaged during transportation.

When unpacking, please make sure that: the appearance of the inverter is normal, and the nameplate rating is consistent with the requirements of your order.

1.2 Safety Precautions

Note:

- Do not install damaged inverters or inverters with missing parts!
- When carrying, please support the bottom of the inverter to prevent the main body from falling and hurting your feet!
- Do not place liquids on the inverter!

1.3 Precautions for Use

Danger:

- Please confirm that the input power is cut off before wiring.
- Ask professional engineer to do the wiring work.
- The ground terminal must be reliably grounded.
- Do not touch the terminals with your hands.
- Be sure to determine the voltage and polarity of the battery.



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BEIJING MULTIFIT ELECTRICAL TECHNOLOGY CO.,LTD

Chapter II Product Specifications

Model	500W	1000W	1500W	2000W	3000W	4000W	5000W	6000W	8000W
Rated Power	500W	1000W	1500W	2000W	3000W	4000W	5000W	6000W	8000W
Input	Voltage AC165-275V / 85-135V								
	Frequency 40-65HZ								
Output	Voltage 220/230/240V (110/115/120V) Adjustable								
	Frequency 50HZ-60HZ Adjustable								
	Waveform Pure Sine Wave								
	THD ≤3%								
	Efficiency ≥80%								
Battery	Type Optional								
	Rated Voltage DC12V			DC24V			DC48V		
	Charging Current 0-30A Optional								
Protection	Over Temperature / Over Load / Battery Discharge Voltage / Battery Over Voltage / AC Input High Voltage / Low Voltage Protection								
Operating Mode	Normal, Energy Saving								
Transfer Time	≤10ms								
On Load Capacity	100%-120% 30s Protection, 125%-140% 15s Protection, ≥150% 5s Protection								
Operating Range	Temp 0°C-50°C								
	Humidity 10%-90% (No Condensing)								

Chapter III Inverter Installation and Wiring

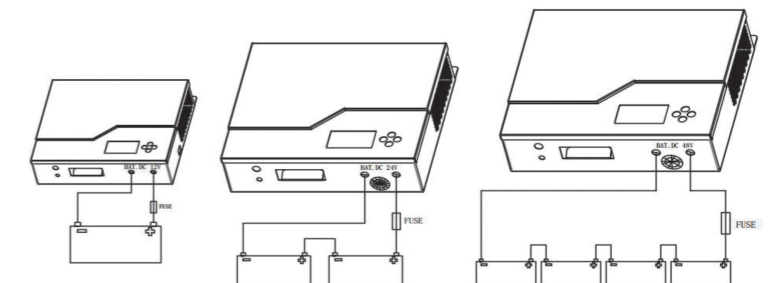
3.1 Installation Environment

- Install in a well-ventilated place.
- The ambient temperature must be within -20°C~50°C.
- The humidity must be at least 95% RH and no condensation of water drops.
- Do not install in places with corrosive or explosive gas!

3.2 Cautions for Inverter Wiring

Note:

- Before wiring, make sure that the power is completely cut off.
- Before wiring, make sure that the AC voltage is consistent with the inverter.
- Before wiring, make sure the battery voltage is consistent with the inverter.
- Before wiring, make sure the battery polarity is correct.



Battery Input Line Configuration

DC	MODEL	500W	1000W	1500W	2000W	3000W	4000W	5000W	6000W	8000W
12V		10mm ²	16mm ²							
24V				16mm ²	16mm ²	25mm ²				
48V							16mm ²	25mm ²	25mm ²	35mm ²

AC110V Input and Output Wire Configuration

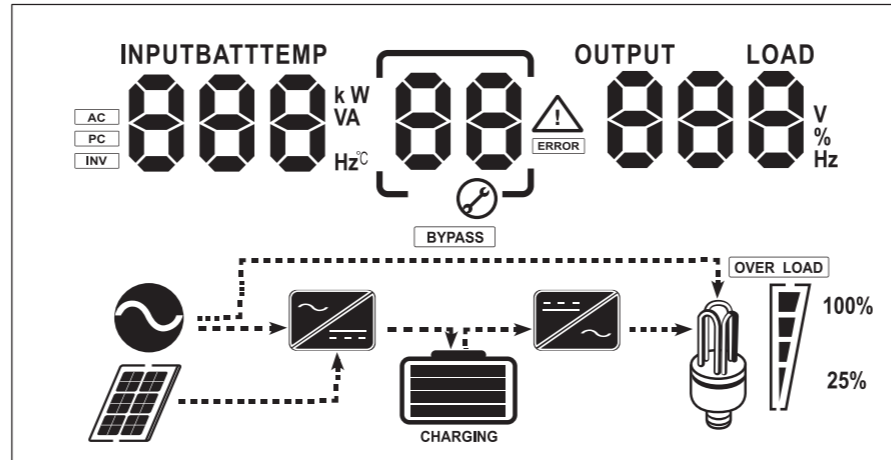
LINE	MODEL	500W 110VAC	1000W 110VAC	1500W 110VAC	2000W 110VAC	3000W 110VAC	4000W 110VAC	5000W 110VAC	6000W 110VAC	8000W 110VAC
L-IN		≥1mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥6mm ²	≥8mm ²	≥10mm ²	≥12mm ²	≥16mm ²
N-IN		≥1mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥6mm ²	≥8mm ²	≥10mm ²	≥12mm ²	≥16mm ²
Ground Wire		≥1mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥6mm ²	≥8mm ²	≥10mm ²	≥12mm ²	≥16mm ²
L-OUT		≥1mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥6mm ²	≥8mm ²	≥10mm ²	≥12mm ²	≥16mm ²
N-OUT		≥1mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥6mm ²	≥8mm ²	≥10mm ²	≥12mm ²	≥16mm ²

AC220V Input and Output Wire Configuration

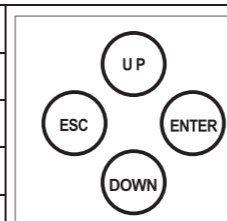
LINE	MODEL	500W 220VAC	1000W 220VAC	1500W 220VAC	2000W 220VAC	3000W 220VAC	4000W 220VAC	5000W 220VAC	6000W 220VAC	8000W 220VAC
L-IN		≥0.5mm ²	≥1mm ²	≥1.5mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥5mm ²	≥6mm ²	≥10mm ²
N-IN		≥0.5mm ²	≥1mm ²	≥1.5mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥5mm ²	≥6mm ²	≥10mm ²
Ground Wire		≥0.5mm ²	≥1mm ²	≥1.5mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥5mm ²	≥6mm ²	≥10mm ²
L-OUT		≥0.5mm ²	≥1mm ²	≥1.5mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥5mm ²	≥6mm ²	≥10mm ²
N-OUT		≥0.5mm ²	≥1mm ²	≥1.5mm ²	≥2mm ²	≥3mm ²	≥4mm ²	≥5mm ²	≥6mm ²	≥10mm ²

Chapter III Inverter Operation Instruction

4.1 Parameter Setting



Menu	Instruction
ESC	Exit Setup Mode
UP	Last setting
DOWN	Next setting
ENTER	Enters SETUP mode or Confirm Setting



LCD Setting

Press and hold "ENTER" for 3 seconds to enter the set mode.

Press the UP or DOWN button to select the setup program. Then press the ENTER button to confirm the selection or ESC button to exit.

Program	Description	Setting	Description
[1]	Output Voltage Setting	[1] 1	220V (110V)
		[1] 2	230V (115V)
		[1] 3	240V (120V)
[2]	Output Frequency Setting	[2] 1	50HZ
		[2] 2	60HZ
[3]	Over-temperature Restart Setting	[3] 1	Restart Output After Over-temperature Recovery
		[3] 2	Do Not Restart Output After Over-temperature Recovery
[4]	Output Short circuit Restart Settings	[4] 1	Restart Output After Short circuit Recovery
		[4] 2	Do Not Restart Output After Short circuit Recovery
[5]	Battery Type Setting	[5] 1	Gel USA Constant Voltage: 14V; Floating Voltage: 13.7V
		[5] 2	AGM1 Constant Voltage: 14.1V; Floating Voltage: 13.4V
		[5] 3	AGM2 Constant Voltage: 14.6V; Floating Voltage: 13.7V
		[5] 4	Sealed Lead Acid Battery Constant Voltage: 14.4V; Floating Voltage: 13.6V

[5]	Battery Type Setting	[5] 5	Gel EURO Constant Voltage: 14.4V; Floating Voltage: 13.8V
		[5] 6	Open Sealed Lead Acid Battery Constant Voltage: 14.8V; Floating Voltage: 13.3V
		[5] 7	Calcium Constant Voltage: 15.1V; Floating Voltage: 13.6V
		[5] 8	LFP 3.2V*4 string 12.8V Constant Voltage: 14.3V; Floating Voltage: 13.8V (LFP 3.2V*8 string 25.6V) (LFP 3.2V*15 string 48V)
[6]	Output Module Setting	[6] 1	Normal Mode
		[6] 2	Energy-saving Mode
[7]	Charging Current Setting	[7] 1	Do not charge the battery
		[7] 2	10A to recharge battery
		[7] 3	20A to recharge battery
		[7] 4	30A to recharge battery
		[7] 5	40A to recharge battery
[8]	Battery Low Voltage Protection Settings	[8] 1	9.5V (Single-battery)
		[8] 2	10V (Single-battery)
		[8] 3	10.5V (Single-battery)
		[8] 4	11V (Single-battery)
[9]	Battery Protection Restart Settings	[9] 1	Output Restarted After The Power Restored
		[9] 2	Do Not Restart Output After Power Recovery

[20]	Battery Restart Voltage Setting	[20] 1	12V (Single-battery)
		[20] 2	12.5V (Single-battery)
		[20] 3	13V (Single-battery)
		[20] 4	13.5V (Single-battery)
[11]	Power Supply Mode Setting	[11] 1	Set priority to city power
		[11] 2	Set priority to batteries
		[11] 3	Set priority to sun energy
[22]	Set priority to Batteries/Sun Energy, Input AC Setting	[22] 1	10.5V (Single-battery)
		[22] 2	11V (Single-battery)
		[22] 3	11.5V (Single-battery)
[23]	Set priority to Batteries/Sun Energy, Input AC Setting	[23] 1	12.5V (Single-battery)
		[23] 2	13V (Single-battery)
		[23] 3	13.5V (Single-battery)
[24]	Buzzer setting	[24] 1	Buzzer on
		[24] 2	Buzzer off

4.1.1 Technical Parameter

- After the frequency setting is completed, close the inverter and restart to complete the setting.
- Over-temperature Protection: 100°C. Recovery Temperature: 45°C.
- Output Energy Saving Mode: When the load is less than 1%, it enters the energy saving mode. When the load is more than 3%, it will output normally.
- Only when option 11 is selected as 2/3, 12 and 13 option can be set.

- The fan is turned on intelligently, and the radiator temperature is turned on at 50°C, turned off at 40°C, or turned on when the load is more than 70%.

4.1.2 Failure Reference Code

Failure Code	Description
[1]	Battery Low-voltage
[2]	Battery Over-voltage
[3]	AC output Low-voltage
[4]	AC output Over-voltage
[5]	Output Over-load
[6]	Output Short-circuit
[7]	Machine Over-temperature
[8]	Battery Damaged
[9]	Other Reasons