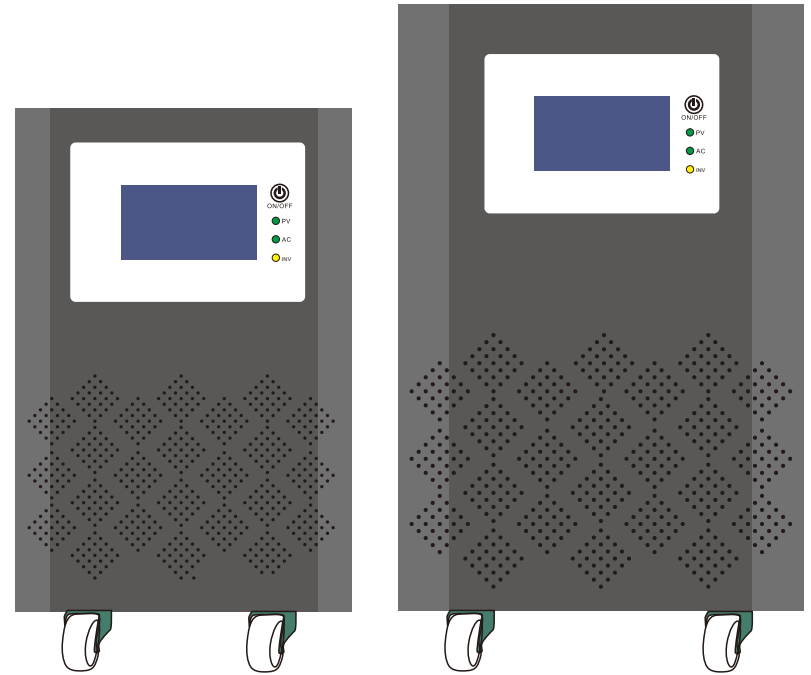


C Series Inverter & Inverter Built-in Controller Installation Instruction



Catalog

1、Product description.....	1
2、Operational requirements.....	1
3、Precautions.....	1
4、Working principle.....	1
5、Front Panel Introduction.....	4
6、Installation.....	5
7、Technical specifications.....	8
8、 Inverter Startup Procedure.....	9
9、Emergency Shutdown Procedure	9
10、Display panel description.....	9
11、Packing List.....	9

11.Packing List:

Number	Name	Quantity	Remarks
1	Host	1	
2	user's Guide	1	
3	Warranty Card	1	
4	Battery connection cable	2	

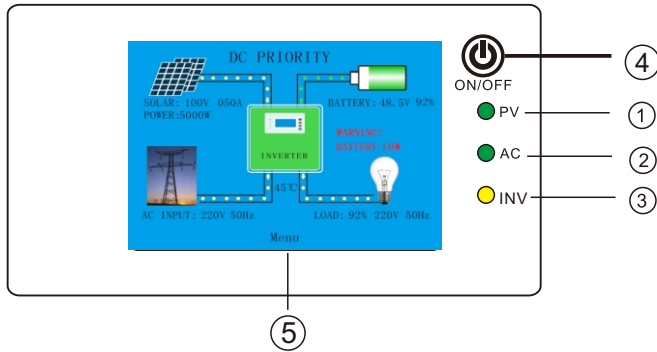
8. Inverter Startup Procedure:

- 8.1. Close the battery input switch;
- 8.2. Press the button to start the machine, the inverter will start normally and output AC power;
- 8.3. And then close the PV input switch to see if everything is normal.

9. Emergency Shutdown Procedure:

This procedure may be operated only in the event of a fire, electric shock, arc or other hazard, but may result in the risk of no AC output.- Disconnect all switches downward

10. Display panel description:



- ① PV charging flicker is bright when charging, the flicker will turn off when the PV voltage less than 16VDC. The flicker flashing when the charging current is 0.
- ② City power supply is always bright, waiting for flashing, no city power is not bright
- ③ Battery power supply is always bright and battery low voltage flashes
- ④ Press 3 seconds long ON/OFF
- ⑤ Display Inverter State Information

NOTE:

1. Need to double touch and restart the inverter if you use the touch control display to choose the operation mode.
2. Under the battery user mode to setting up the volatge, have to touch the user signal 3times quickly to the setting page.
3. The display will on for 1min without touching.

1. Product description:

C Series Inverter&Inverter Built-in MPPT Controller Is the newest product , Set of digital, information technology, network as one of the highly intelligent products , With a powerful information collection system, signal processing system, detection system and improve the protection system 。 Widely used in a variety of electricity environment, personalized design, friendly man-machine dialogue function , Segment LCD display is the most popular and most intuitive graphical interface 。 Compared with the general LCD display data working status more clearly 。

2. Operational requirements:

- Please read this manual carefully before using this product.
- This manual must be read and understood by qualified personnel and kept.
- This manual does not provide a detailed explanation of the specific technology.
- This manual is for the C series only.

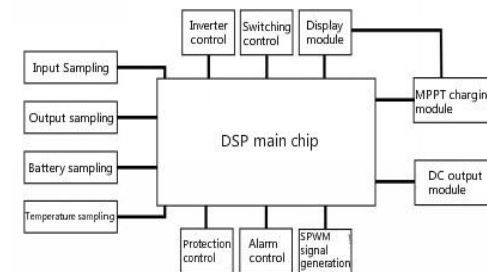
This manual should be used for reference, in the alarm or important working state guidance.

3. Precautions:

- 3.1. Ensure that not less than the corresponding power level of the input, output, battery, cable.
- 3.2. There must be a reliable grounding device.
- 3.3. There are many high-voltage energy storage devices , Do not open the chassis inspection , Or cause personal safety, at your peril 。 The operator must also understand the basic knowledge of electrician and familiar with the instruction manual.
- 3.4. Unauthorized removal of the various connecting cables is prohibited.
- 3.5. As the product size, weight heavier , Not free to move, not strong crack vibration, and maintain good ventilation.
- 3.6. In the case of live, can not go to clean up the dust; Do not use wet towels to remove dirt.
- 3.7. The battery must be replaced by a qualified technician , Replacement batteries must be sent to a special recycling agency for disposal. Battery for "toxic waste".

4. Working principle:

4.1 C Series Inverter&Inverter Built-in MPPT Controller is a high degree of integration of digital technology , Increased MTBF and reliability , DSP high-speed microprocessor control , Ensure that equipment is stable and reliable operation



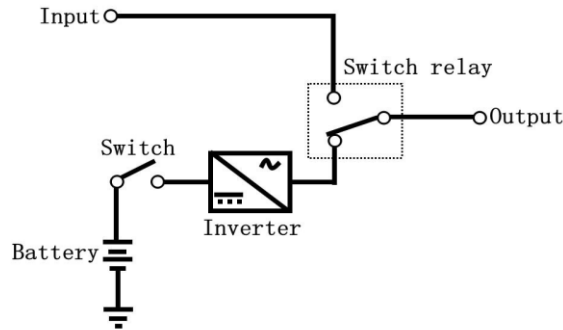
Inverter Built-in MPPT Controller principle

In addition to the above figure, the inverter's other components include: inverter transformer, mos tube, relays, switches, etc.

4.2.The principle of standard inverter

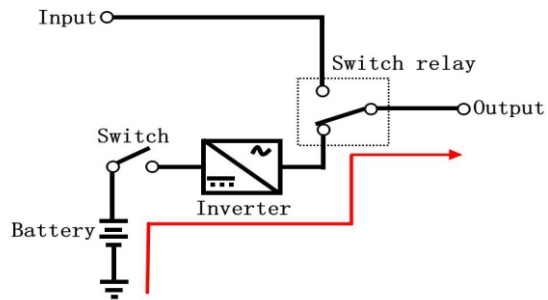
4.2.1 Battery priority mode: When the battery voltage is normal, Regardless of whether the mains input is normal, The output power is supplied by the battery inverter output。 When the battery voltage is too low, The inverter will switch to mains state output power supply, When the battery back to normal, The inverter is again switched to the battery inverter output power supply。

4.2.2 Mains priority mode: When the mains input is normal, The output power is supplied by the mains bypass。 Mains input failure, the output power supply from the battery inverter output。



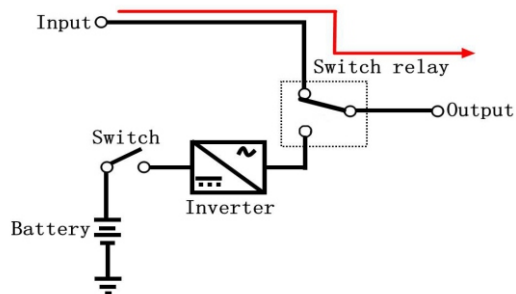
4.3 Battery inverter work:

Battery inverter output power supply.



4.4 Municipal bypass work:

Mains bypass output power supply.

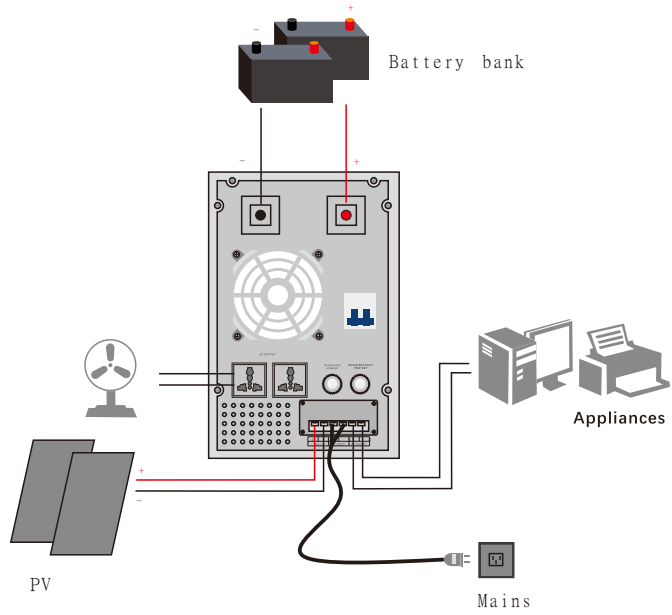


7. Technical specifications

Model	CM150	CM200	CM300	CM400	CM500	CM600
Rated Power	1500W	2000W	3000W	4000W	5000W	6000W
Battery Voltage (V)	48V	24V/48V		48V/96V		
Charging Current	Max. 30A					
AC input range	110V : 85-138VAC ; 220V : 170-275VAC					
Input frequency Range	50Hz : 46Hz~54Hz ; 60Hz : 55Hz~65Hz					
Output Voltage	Inverter mode: 110VAC/220VAC±5%					
Output frequency Range	Inverter mode: 50Hz/60Hz±1Hz					
Output waveform	Pure Sine Wave					
Switching time	<10ms					
Inverter Efficiency	>85%					
Overload	110-120%/30s; >160%/3s					
Protection	Battery overvoltage and low voltage protection , overload protection short circuit protection , over temperature protection					
Display	LCD+LED					
Cooling method	Forced air cooling					
Operating Temperature	0-40℃					
Controller						
Rated current	30A		60A		120A	
DC voltage	24V	48V	24V	48V	24V	48V
Max. PV power	750W	1450W	1400W	3000W	2500W	6000W
Max. voltage	150V					
Dimensions	520*220*360mm			520*250*400mm		
Package Size	560*265*400mm			580*310*450mm		
N.W.	15	20	22	27	29	31
G.W.	17	23	25	30.5	32.5	34

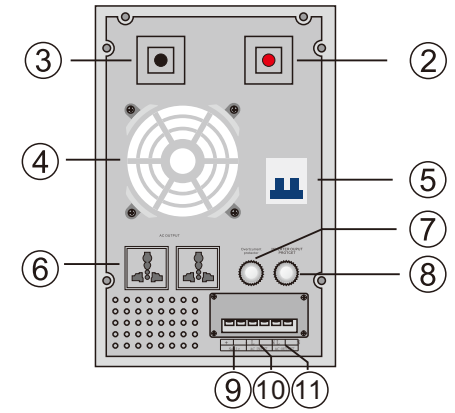
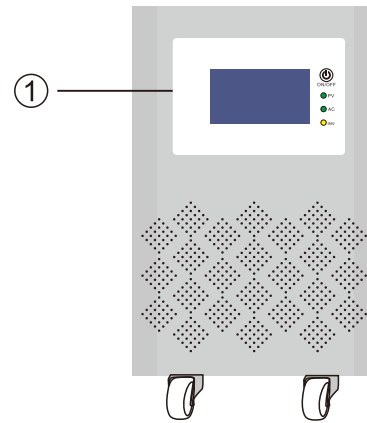
*The above data is the reference data, If there are changes to prevail in kind.

1500W-3000W



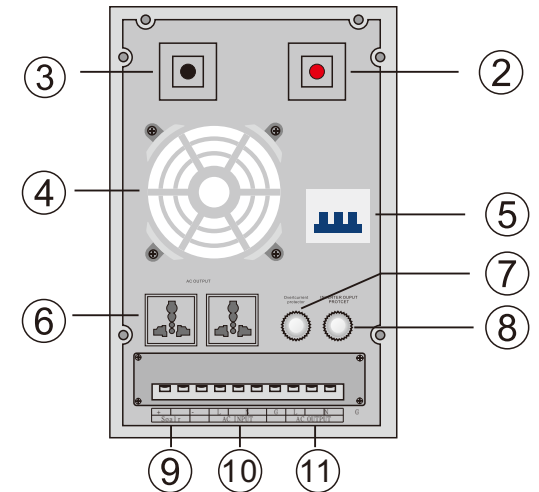
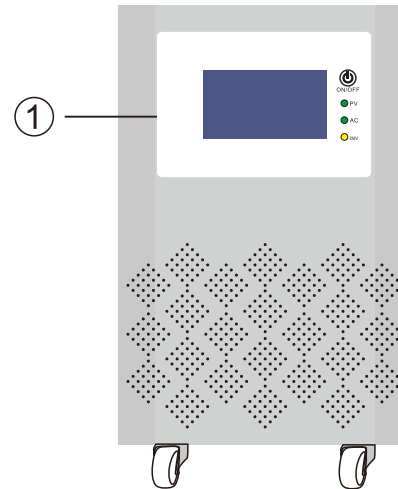
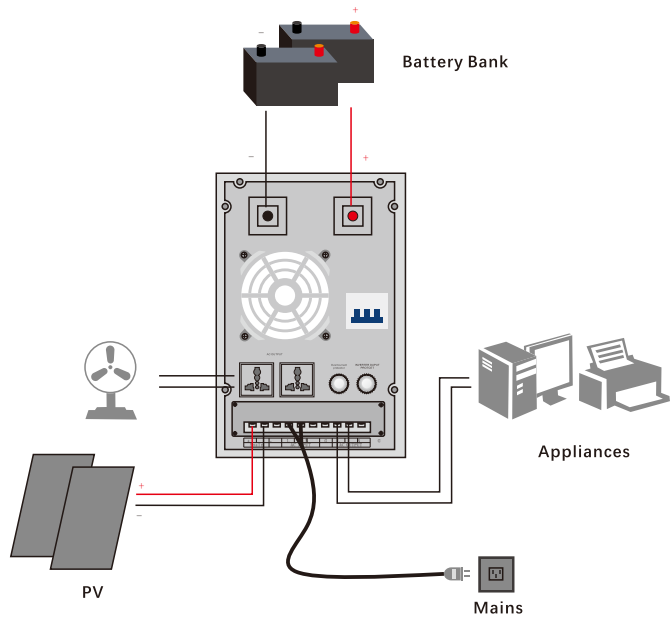
5. Front Panel Introduction:

5.1 1500W-3000W



5.2 3000W-6000W

3000W-6000W



- ① Display module--View various data ,operating status , on/off ;
- ② Battery + ;
- ③ Battery - ;
- ④ Intelligent Fan ;
- ⑤ Battery switch ;
- ⑥ AC output socket ;
- ⑦ Charge input protect ;
- ⑧ Inverter output protect ;
- ⑨ PV input terminal ;
- ⑩ AC input terminal ;
- ⑪ AC OUTPUT

6、 Installation:

When installing this product, please read the "Operating Instructions" section.

6.1.Installation environment requirements:

- Temperature: -10℃~+40℃
- Relative humidity: 30%~90%
- Altitude: 1000M the following, more than the height of the use of derating
- Installation environment size requirements (L × W × H): refer to the technical parameters table requirements
- floor force requirements: refer to the technical parameters table requirements

Ensure that the following indoor environments are installed:

- No dust
- Have the appropriate indoor temperature:The inverter can be operated in an indoor environment of -10 to 40°C,But the temperature at the time of opening is higher than 0°C,The optimum operating temperature is 25 °C.
- To have a good cooling system, the following is a viable method:
 - A.Natural ventilation system: only applies to low-calorie and vast space.
 - B.Artificial ventilation systems: When the temperature of the enclosure (TA) is higher than the ambient temperature (TE), the air conditioning is required. When the temperature is close, the capacity of the ventilation system is relatively increased.

6.2.Check before installation:

- Unpacking When removing the machine, check that the machine is not damaged during transport
- At the same time check that all the switches are disconnected
- Warranty card
- Operating manual
- Packing list (see attached table)

6.3.Installation location:

- No objects can be placed on top
- Adequate maintenance space must be available in front of and above the equipment

6.4.Wiring block connection diagram:

6.4.1 C Series Inverter&Inverter Built-in MPPT Controller Front load wiring diagram(500W-6KW as follows):

6.5. Cable carrying current parameters: see table below (subject to copper cable)

model	Mains input cable mm ²			Inverter output cable mm ²			Battery cable mm ²		PV modules mm ² (250w)	
	L	N	G	L	N	G	+	-	+	-
CN050/CM0520	2.5	2.5	2.5	2.5	2.5	2.5	10	10	2.5	2.5
CN100/CM1020	2.5	2.5	2.5	2.5	2.5	2.5	16	16	2.5	2.5
CN150/CM1520	2.5	2.5	2.5	2.5	2.5	2.5	16	16	2.5	2.5
CN200/CM2030	2.5	2.5	2.5	2.5	2.5	2.5	16	16	2.5	2.5
CN300	24V	2.5	2.5	2.5	2.5	2.5	20	20	2.5	2.5
CM3030	48V	2.5	2.5	2.5	2.5	2.5	16	16	2.5	2.5
CN400/CM4050	2.5	2.5	2.5	2.5	2.5	2.5	20	20	6	6
CN500/CM5050	2.5	2.5	2.5	2.5	2.5	2.5	20	20	6	6
CN600/CM6050	2.5	2.5	2.5	2.5	2.5	2.5	20	20	6	6

Note: the farther away from the cable should be relative to the wire diameter increases.

6.6.Wiring check

Connect all input and output lines and check the following items:

All the battery cables are connected properly and in good contact, the input, output, ground wire has been properly connected to the device on the corresponding terminal block.