MG4-6KTL-2M-PLUS Series PV Grid-tied Inverter

Quick Installation Guide

(V1.0)

- Only qualified electricians are allowed to install the inverter.
- Do not put and install the inverter on or close to combustible materials.
- Install the inverter away from electronic devices with strongelectromagnetic interference.
- Keep the installation site away from children and other public places.
- Remove the metal jewelry such as ring and bracelet before installation and electrical connection to avoid electric shock.
- The inverter input voltage does not exceed the maximum input voltage; otherwise inverter damage may occur.
- The positive and negative pole of solar modules can not be grounded, otherwise irrecoverable damage may occur.
- Ensure the proper grounding of the inverter, otherwise, improper connection or no grounding may cause stop of the inverter.
- Ensure reliable installation and electrical connection.

❶Unpacking inspection

Inspect the information of the order and the name plate to ensure the product are the ordered one and no damage to the package. If any

problem, contact the supplier as soon as possible.

Table 1 isthe Packinglist of single-phase inverter:

	MG4-6KTL-2M-PLUS
Inverter	1
Quick installation guide	1
Expansion boltsM6*50	2
DC connector（pair）	1
Wall hanging board	1
Cross combination screw	2 (M5*20)

❷Before installation

2.1 Installation place

Select installation place based on the following requirements:

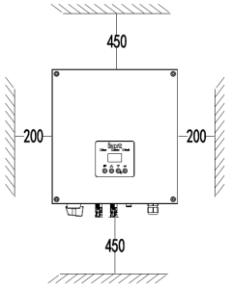


Figure 1 Installation space(mm)

(1) The environment temperature is between -25℃~60℃.

(2) The installation surface should be perpendicular to the horizontal line. Refer to Figure 2.

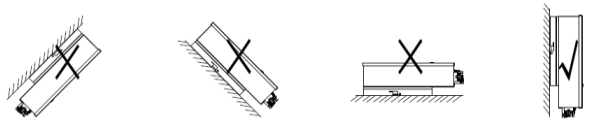


Figure 2 Installation position

2.2 Cable specifications

The user can select connection cable according to the following table:

Table 2 Cable specifications

Model	DC side	AC side
	Mini cross-section mm²(Length≤50m)	Mini cross-section mm²(Length≤50m)
MG4-6KTL-2M-PLUS	4	4

❸Mechanical installation

Take the typical installation environment as the example, the manual describes how to install the inverter on concrete wall.

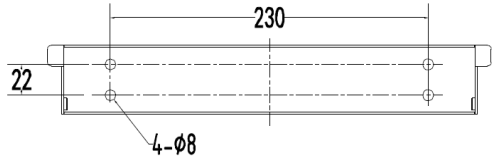


Figure 3 5kW inverter mounting bracket

The installation steps of single-phase photovoltaic inverter are as follows:

(1) use the wall hanging plate in the packing box to determine the drilling position, as shown in Figure 4, use a level ruler to level the hole position, and mark with a marking pen;

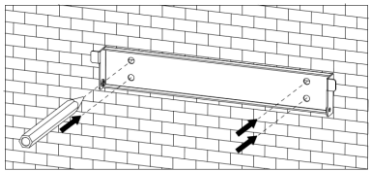


Figure 4 marking hole position

(2) use an electric drill to drill 4 installation holes on the wall with an aperture of φ 8, as shown in Figure 5;

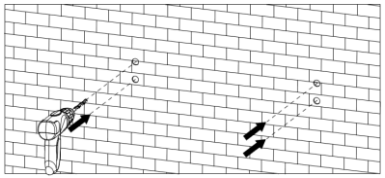


Figure 5 perforation

(3)install the expansion screw, and fix the equipped expansion bolt in 4 installation holes with a hammer,;

(4)fix the mounting bracket on the expansion bolt to ensure the installation is firm, and the tightening torque is 8N · m, as shown in Figure 6 below.;

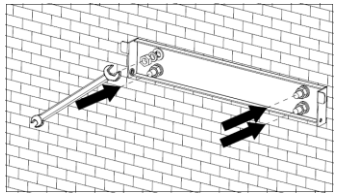


Figure 6installation of wall hanging plate bracket

(5)hang the inverter on the mounting bracket to ensure it is firmly installed. As shown in Figure7.;

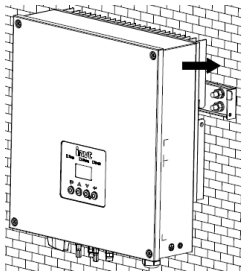


Figure 7installation of inverter

(6)ensure that the inverter is installed in place, and lock the m5x20 bolts in the screw holes on the left and right sides of the chassis, with the tightening torque of 4N · m, as shown in Figure 8 below;

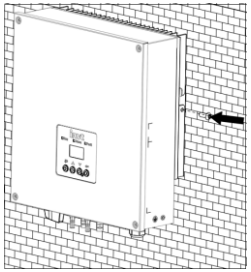


Figure 8installation of limit screw

❹Electrical installation

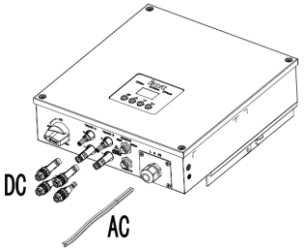
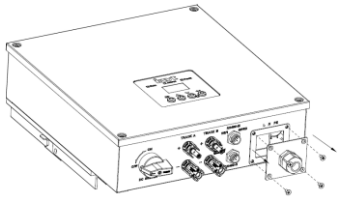


Figure 10Electrical wiring of the inverter

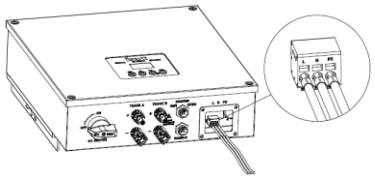
4.1 AC wiring

The electrical connection steps of single-phase inverter are as follows：

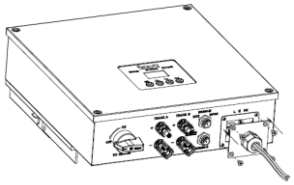
(1) Disassemble the waterproof cover plate of inverter AC junction box；



(2) Connect each wire of AC cable to the connector terminal and insert the wire into the connector, l, N and PE in sequence；

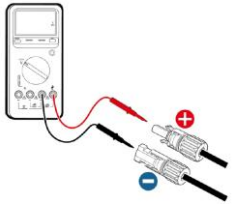


(3) Install the waterproof box of AC wiring and tighten the waterproof terminal

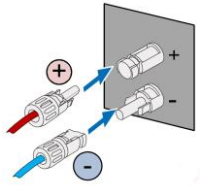


4.2 DC wiring

(1) Check whether the polarity of the connecting cable of the PV string is correct, and ensure that the voltage of each string is within the allowable range of the inverter;



(2) Insert the positive and negative connectors into the input terminal of the inverter and tighten them.



❺ Operation

5.1 Inspection before operation

Before operation, the following items must be strictly checked:

(1) Detect the voltage of the components is in the allowable input voltage range of the inverter;

(2) Detect the voltage of the AC port at AC side is normal;

(3) Check the inverter is in good grounding;

(4) Ensure all switches are “off”;

(5) Ensure all electrical safety precautions are clearly-identified on the installation site.

(6) Confirm the handheld keyboard or communication module is in correct connection.

5.2 Grid-tied operation

Please follow the steps below to turn on the inverter

(1) Switch on the integrated DC switch

(2)Use the handheld keyboard or communication module to set the time and date of the inverter and the area of use;

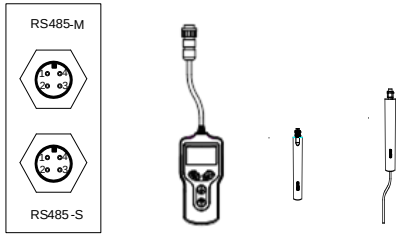
(3) Switch on the switch on AC side

(4) Observe the LED indicators and information displayed on the screen.

Run	Green indicator blinks, others off: the inverter is power on and in self-inspection;
Run	Green indicator on, others off: the inverter is in power generation after self-inspection----successful commissioning.
“Warn” or “Fault” indicators are on or blinking: the inverter is power on, but fault occurs.	

5.3 Accessories and wiring

Optional accessories include handheld terminal, WiFi, ENET, GPRS



Connect the 485 port of accessories to the RS485-M port of the inverter; for the ACF inverter, RS485-M is to the upper PC and RS485-S is to the ammeter. For detailed instructions on the use of the accessories and the anti-reverse function, please refer to the full manual on the website.

5.4 Inverter maintenance

Stop the inverter as follows it needs maintenance, inspection and troubleshooting:

(1) Switch off the breakers at the AC side;

(2) Switch off the integrated DC switch;

(3) Contact with customer service staff or local dealers.