iMars XG25-40KTR

Quick Installation Guide

- 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 strong electromagnetic 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 input voltage of the PV panel not allowed to exceed the maximum input voltage of the inverter; 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 Packing list of three-phase inverter:

No.	Name	Qty
1	Inverter	1
2	Installation bracket	1
3	AC output waterproof cover	1
4	485 comm. cable	1
5	DC connector (pair)	8/6
6	Quick installation guide	1
7	Expansion bolts M8*60	5
8	M8 combination screw	5
9	M4 combination screw	1
10	AC connector	5

Remarks: 25-33kw (8 pairs), 36-40kw (6 pairs)

❷Before installation

2.1 Installation place

Select installation place based on the following considerations:

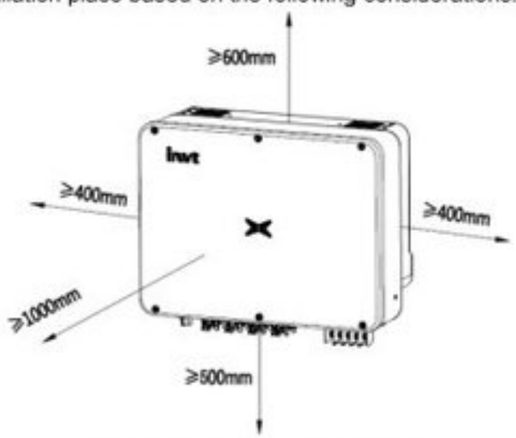


Figure 1 Installation space(mm)

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

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

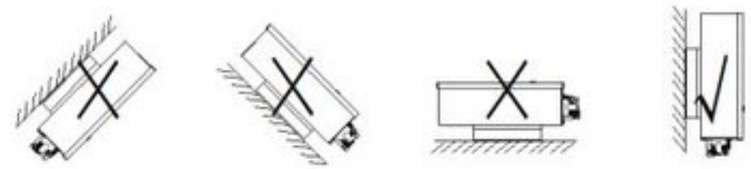


Figure 2 Installation position

2.2 Cable specifications

In order to standardize and be compatible with the specifications of AC / DC connectors or terminals of inverters, the following requirements are made for AC / DC cables connecting corresponding models of inverters:

Table 2 Cable specifications

Model	DC side	AC side
	Recommended min. Cross-section mm² (length ⩽ 50m)	Recommended min. cross-section mm² (length ⩽ 50m)
XG25-33KTR	4-6	16-35
XG36-40KTR	4-6	25-50

Remarks: DC cable: meet the standard 1100V PV cable; AC cable: outdoor 4 / 5 core copper wire / aluminum core wire;

❸Mechanical installation

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

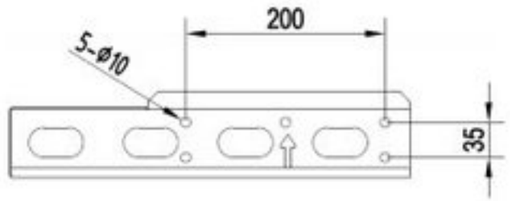


Figure 3 Installation bracket of inverter

The installation steps of inverter are as follows:

(1) Firstly, mark at the appropriate position according to the installation size, and then punch holes. It is recommended to use M8 × 60 stainless steel to press the expansion bolt;

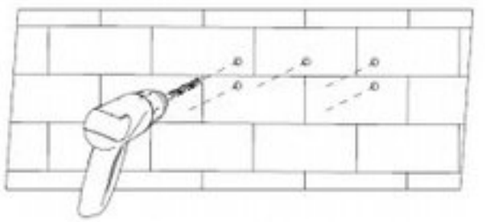


Figure 4 Expansion bolts fixing

(2) The wall hanging plate is driven into the hole with rubber hammer through expansion bolts and locked tightly with the wall, Tightening torque 13N • m;

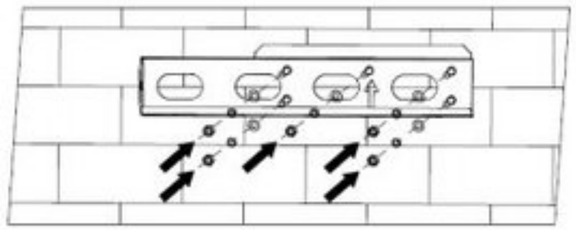


Figure 5 Inverter fixing

❹Electrical installation

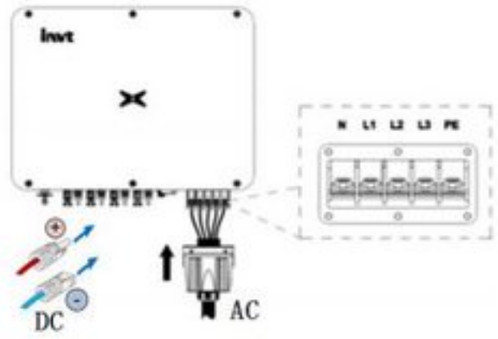
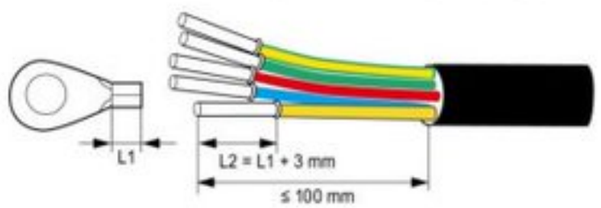


Figure 6 Electrical wiring of the inverter

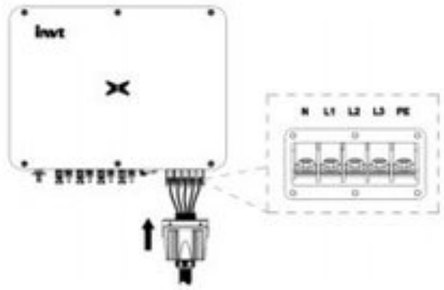
4.1 AC wiring

The steps of electrical connection of inverter are as follows:

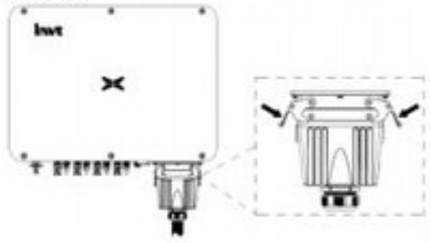
(1) The five conductors L1, L2, L3, N (optional) and PE of three-phase public power grid are connected to the AC connector interface, and ensure that the conductor is not exposed and crimped firmly;



(2) Fix the five cables L1, L2, L3, N and PE with pressed terminals on the corresponding terminals of the AC connecting circuit board. The tightening torque of L1, L2, L3 and N is 7-9N • m, and the tightening torque of PE grounding is 7-9N • m; Then fix the AC waterproof cover with the box;

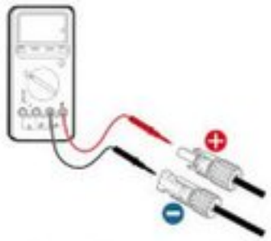


(3) After the AC waterproof cover is close to the terminal base, clamp the fastened waterproof cover down through the clips on the left and right sides of the terminal base.

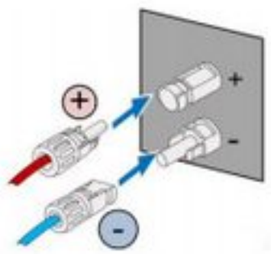


4.2 DC wiring

(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 at the bottom of the inverter and clamp them tightly.



❺Operation

5.1 Inspection before operation

Check as follows before operation:

(1) Check whether the voltage of the PV strings' is in the allowable input voltage range of the inverter or not;

(2) Check whether the voltage of the AC side is normal or not;

(3) Check whether the inverter is grounding connected or not;

(4) Ensure all switches are "off";

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

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

5.2 Accessories and wiring

485 pins definition

1（red）	+5VDC
2（orange）	A（RS485+）
3（brown）	B（RS485-）
4（black）	GND

Comm. optional accessories

Comm. optional accessories	Inverter port	CPU port
Ethernet converter	RS485-M	RS485 signal
WiFi converter	RS485-M	Wireless WiFi signal
GPRS converter	RS485-M	Wireless GPRS signal

5.3 Regular maintenance

When power failure maintenance, overhaul, troubleshooting of the inverter is required, please stop the inverter strictly as follows:

(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.

More information
For complete instruction of relevant parameters, please refer to Operation Manual of INVT iMars Series PV Grid-tied Inverters. You can visit www.invt-solar.com or scan QR code to download. Service line: +86 400 700 9997