felicitysolar®

Make life full of hope

Quick Installation Guide

Hybrid inverter



358-030049-00

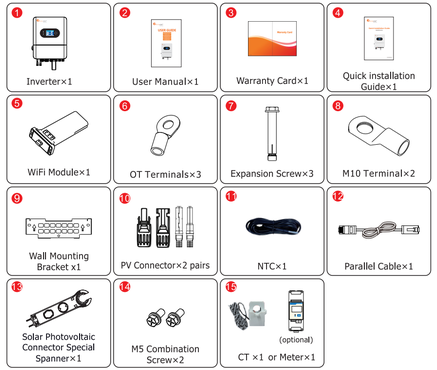
Disclaimer

- Please read the user's manual carefully before performing all operations; this installation guide does not supersede the use of the product's user's manual;
- Product information is subject to change without notice. This manual is frequently updated, please contact your salesperson for the latest version.
- After unpacking, please check the product for damages and missing parts.
- Do not open the battery to repair or disassemble. Only Felicitysolar is allowed to carry out any such repairs. Only qualified personnel can install this device with battery.
- In case of fire, use only dry powder fire extinguisher. Liquid extinguishers should not be used.
- Before using the inverter, please read the instructions and warning signs of the battery and corresponding sections in the instruction manual. Improper reassembly may result in electric shock or fire.
- To reduce risk of electric shock, disconnect all wires before attempting any maintenance or cleaning. Turning off the unit will not reduce this risk.
- Never charge a frozen battery.
- Never cause AC output and DC input short circuited. Do not connect to the mains when DC input short circuits.

Installation Video

You can watch the installation video by scanning the QR code to the right

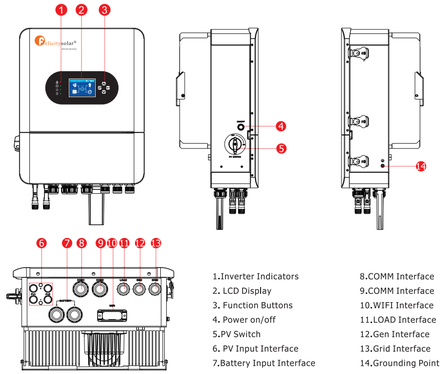
Packing List



Explanation of the Symbols

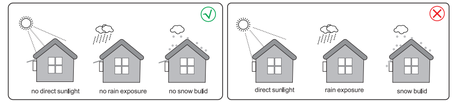
Danger: Serious physical injury or even death may occur if not follow the relative requirements	Instruction manual:Read the instruction manual before starting installation and operation.
Warning: Physical injury or damage to the devices may occur if not follow the relative requirements	EU WEEE mark: Product should not be disposed as household waste.
Hot surface: Sides of the device may become hot. Do not touch!	NOTE Note: The procedures taken for ensuring proper operation.
Electrostatic sensitive: Damage may occur if not follow the relative requirements	CE mark: The inverter complies with the CE directive.
RoHS Directive on the restriction of the use of certain hazardous components in electrical and electronic equipment	Earth terminal:The inverter must be reliably grounded.
Caution: Ensure that DC and AC side circuit breakers have been disconnected and wait at least 5 minutes before wiring and checking.	

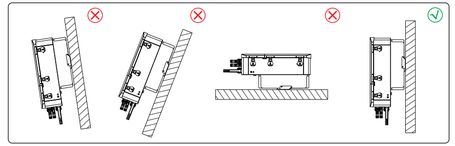
Product Overview

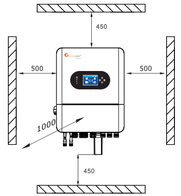


1.Inverter Indicators
2. LCD Display
3. Function Buttons
4. Power on/off
5.PV Switch
6. PV Input Interface
7.Battery Input Interface
8.COMM Interface
9.COMM Interface
10.WIFI Interface
11.LOAD Interface
12.Gen Interface
13.Grid Interface
14.Grounding Point

Installation Environment



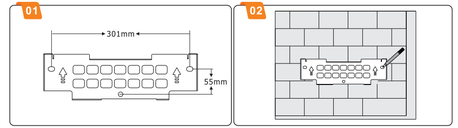


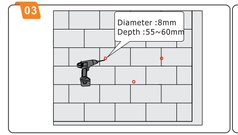


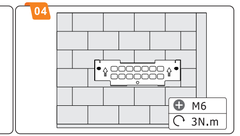
Space	Minimum clearance
Lateral	500mm
Top	450mm
Bottom	450mm
Front	1000mm

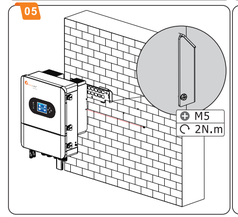
Installation Procedure

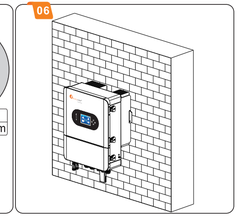
The inverter is suitable for mounting on concrete or other non-combustible surface only.





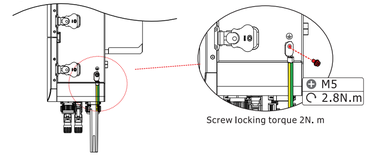






External Grounding Connection

Ground cable shall be connected to ground plate on grid side,this prevents electric shock if the original protective conductor fails.

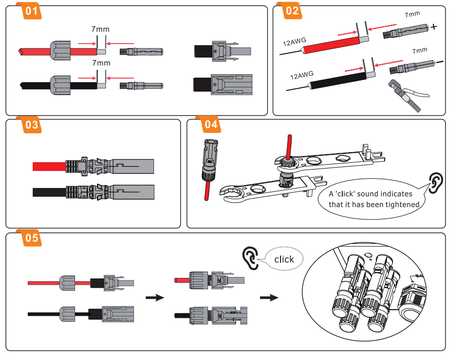


Screw locking torque 2N. m

Inverter Model	Wire Size	Cable(mm²)
IVGM3KLP1G2-24 IVGM3KLP1G2	10AWG	4
IVGM3K6LP1G2 IVGM5KLP1G2 IVGM6KLP1G2	8AWG	6

PV Connection

Inverter Model	Wire Size	Cable(mm²)
IVGM3KLP1G2-24 IVGM3KLP1G2 IVGM3K6LP1G2 IVGM5KLP1G2 IVGM6KLP1G2	12AWG	4



BMS Cable Connection



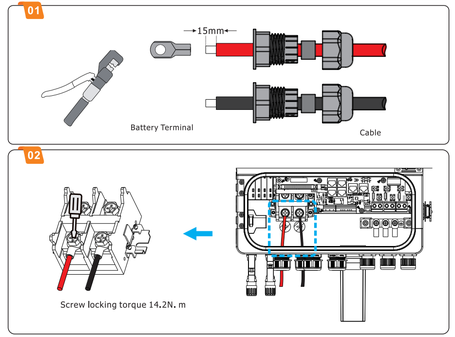
NO.	1	2	3	4	5	6	7	8
Function	/	/	BMS_CANL	BMS_CANH	BMS_485B	BMS_485A	/	/

Battery Connection

Please be careful about any electric shock or chemical hazard.Make sure there is an external DC breaker connected to the battery. **The recommended wire diameter is single wire diameter.**

Inverter Model	DC Breaker specification	Wire Size	Cable(mm²)
IVGM3KLP1G2-24	150A	0AWG	50
IVGM3KLP1G2 IVGM3K6LP1G2	100A	2AWG	25
IVGM5KLP1G2 IVGM6KLP1G2	150A	0AWG	50

·The polarity of battery cannot be connected reversely, otherwise the inverter could be damaged.

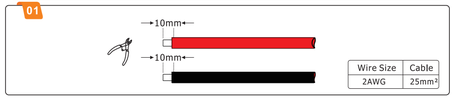


Grid, Load and Gen Port Connection

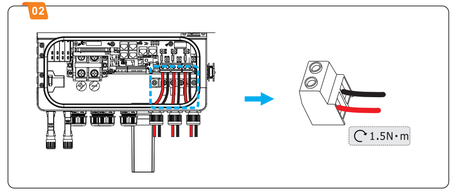
·Make sure the inverter is totally isolated from any DC or AC power before connecting AC cable.

LOAD,GRID,GEN,PE:Please strip the cables to the dimensions shown in the following picture with professional tools before installation.

Inverter Model	Wire Size	Cable(mm²)
IVGM3KLP1G2-24 IVGM3KLP1G2	10AWG	4
IVGM3K6LP1G2 IVGM5KLP1G2 IVGM6KLP1G2	8AWG	6

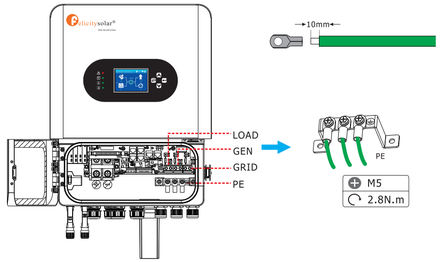


Remove insulation sleeve 10mm length, unscrew the bolts.Insert these wires into the terminals according to polarities indicated on the terminal block. Tighten the terminal screws and make sure the wires are completely and safely connected.Be sure to connect corresponding N wires and PE wires to related terminals as well.



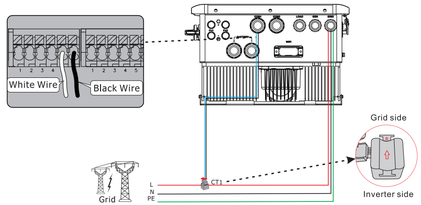
After the GRID and LOAD are connected, please connect the ground wire as shown in the schematic diagram.

Inverter Model	Wire Size	Cable(mm²)
IVGM3KLP1G2-24 IVGM3KLP1G2	10AWG	4
IVGM3K6LP1G2 IVGM5KLP1G2 IVGM6KLP1G2	8AWG	6



• All wiring must be carried out by professionals!

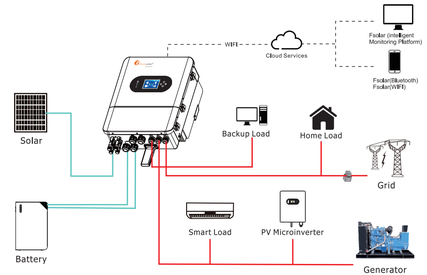
CT Connection



Basic System Architecture

The following illustration shows basic application of this inverter.
It also includes following devices to have a complete running system.
- Generator or Utility
- PV modules

Consult with your system integrator for other possible system architectures depending on your requirements.
This inverter can power all kinds of appliances in home or office environment, including motor type appliances such as refrigerator and air conditioner.



Installation of Wifi module

For detailed instructions on how to install WIFI Module, you can scan the QR code to the right to view the WiFi Module installation instructions.

WIFI Module

User Manual

User Manual in the OR code or at https://www.felicitysolar.com/

User Manual