

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

1
Inverter×1

2
Battery connector×2

3
User manual×1

4
Warranty card×1

5
Quick installation guidex1

6
WiFi module×1

7
COM connector×8

8
Meter(Optional)×1

9
Expansion screw×4

10
M5 combination screw×2

11
M10 T-wrench×1

12
M5 T-wrench×1

13
Ring×2

14
OT terminals×1

15
ring 1,2,3
Magnetic ring for communication cable of BMS and Meter3 (23x33x15 mm)

16
ring 4,5,6
Magnetic ring for CT x3 (31x29x19 mm)

17
ring 7,8
Magnetic ring for AC wires x2(50x65x25 mm)

18
Solar Photovoltaic Connector Special Spanner x1

19
Parallel cable×2

20
CT×3

21
PV connector×20

22
Wall Mounting Bracket×1

Packing box of magnetic ring

1 4 5 6

2 7 8

1,2,3 : 23x33x15 mm
4,5,6:31x29x19mm
7,8:50x65x25 mm

NO.	Name	Description	Quantity
1	Inverter	Inverter	1
2	Battery connector	Connection ports for batteries and inverter Bat Port	2 pairs
3	User manual	User manual	1
4	Warranty card	Warranty card	1
5	Quick installation guide	Quick installation guide	1
6	WiFi module	For installing the WIFI module	1
7	COM connector	Communication Port Connector (Without short connection)	8
8	Meter	Meter(Optional)	1
9	Expansion screw	Used for securing the product's wall mount	4
10	M5 combination screw	Fixed wall mounts and inverter	2
11	M10 T-wrench	Used for internal connection of the wiring bin	1
12	M5 T-wrench	Used for cover disassembly or internal ground connection	1
13	Ring	Used to connect wall hooks	2
14	OT terminals	For external ground connection	1
15	Magnetic ring	For commuication cable of BMS and Meter(23x33x15 mm)	3
16	Magnetic ring	Magnetic ring for CT(31x29x19 mm)	3
17	Magnetic ring	Magnetic ring for AC wires(50x65x25 mm)	2
18	Solar photovoltaic connector special spanner	Photovoltaic connector installation Spanner	1
19	Parallel cable	Used for parallel wiring	2
20	CT	Anti backflow	3
21	PV connector	PV port connectors	20
22	Wall Mounting Bracket	Used to fix the inverter to the wall	1

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.
	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. Button

4. Breathable Valve

5. PV Switch

6. PV input Connection Port

7. Battery Connection Port

8. PV input Connection Port

9. Power ON/OFF

10. RS485 Port

11. BMS Port

12. Meter Port

13. COM Port

14. LOAD Connection Port

15. Generator Connection Port

16. GRID Connection Port

17. PV Switch

18. DRMS Port

19. PARA Port

20. CAN Port

21. PE Connection Port

Installation Environment

LCD Display Icons

Function Key	Icon	Description
ESC		To exit setting mode
UP		To go to previous selection
DOWN		To go to next selection
ENTER		To confirm the selection
LED Indicator	Icon	Description
Alarm/Fault		Fault or warning

DC/AC		Inverter connection normal
GRID		Grid connection normal
BATTERY		Battery operating normal

Installation Procedure

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

01

02

03

04

05

06

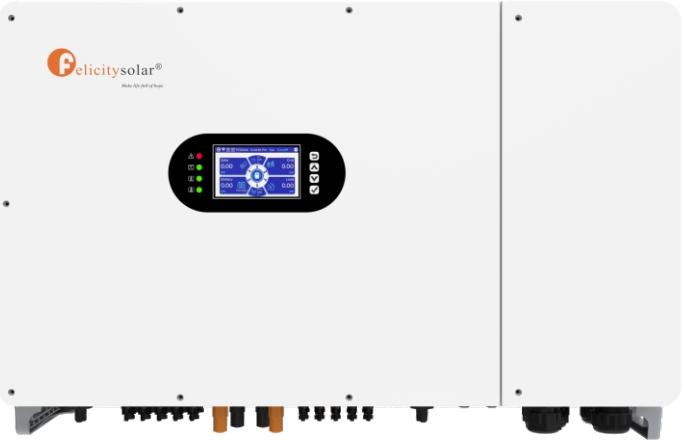
External Grounding Connection

Screw locking torque 2N. m



Quick Installation Guide

Hybrid inverter



Battery Connection

Inverter Model	Wire Size	Strip length
IVGM125KHP3G1 IVGM100KHP3G1 IVGM80KHP3G1 IVGM75KHP3G1	2AWG	35mm ²

01

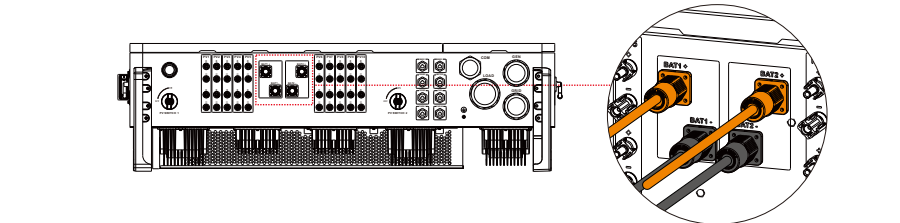
Hydraulic pliers

02

rubber plug cover
Thread wire through rubber grommet (large end out)

03

04



PV Connection

01

7mm

02

10~12AWG

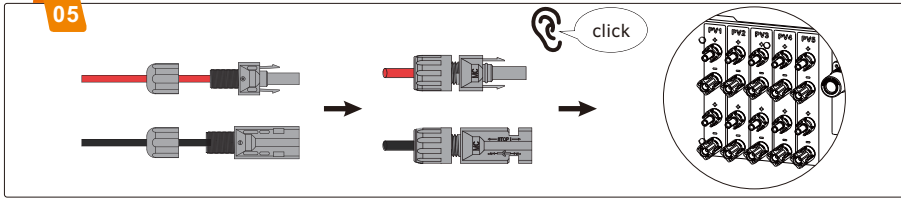
03

A 'click' sound indicates that it has been tightened.

04

Wire Size
10~12AWG

Cable
7mm²(10AWG)

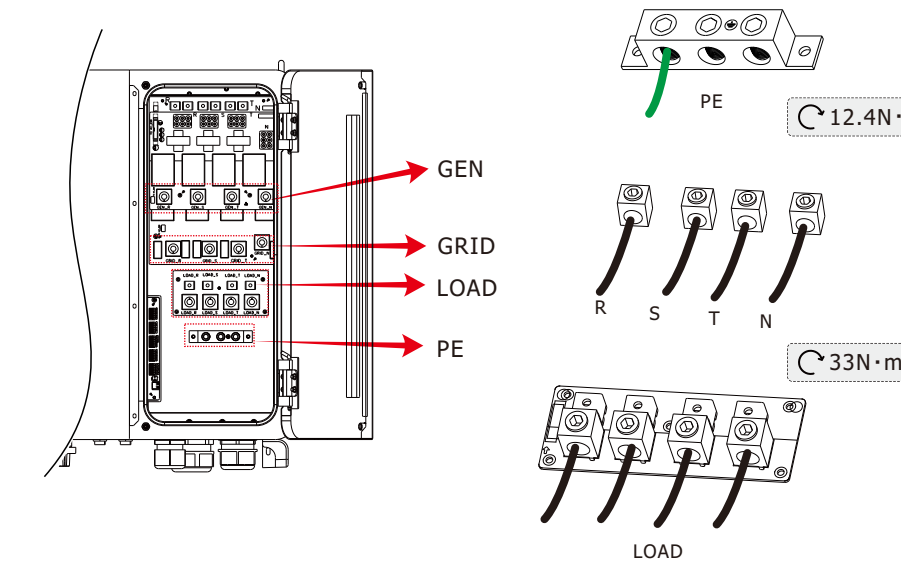


On-Grid & Back-Up Connection

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

An external AC breaker is needed for on-grid connection to isolate from grid when necessary. Recommended AC circuit breaker parameters are 350A/400V.

Inverter Model	GRID Port			LOAD Port			GEN Port		
	Wire Size	Cable (mm ²)	Torque (max)	Wire Size	Cable (mm ²)	Torque (max)	Wire Size	Cable (mm ²)	Torque (max)
IVGM125KHP3G1 IVGM100KHP3G1 IVGM80KHP3G1 IVGM75KHP3G1	00AWG	70	33N.m	00AWG	70	33N.m	00AWG	70	33N.m



Schematic diagrams of the magnetic rings for LOAD and GEN

ring 7

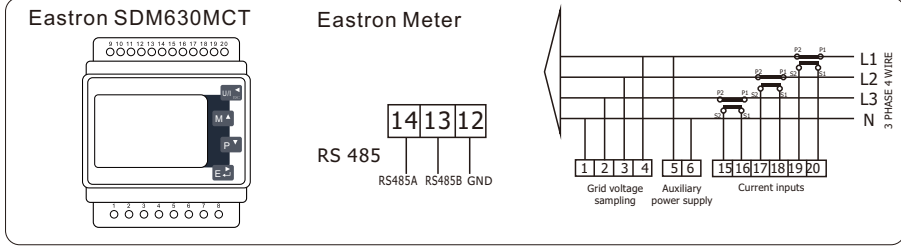
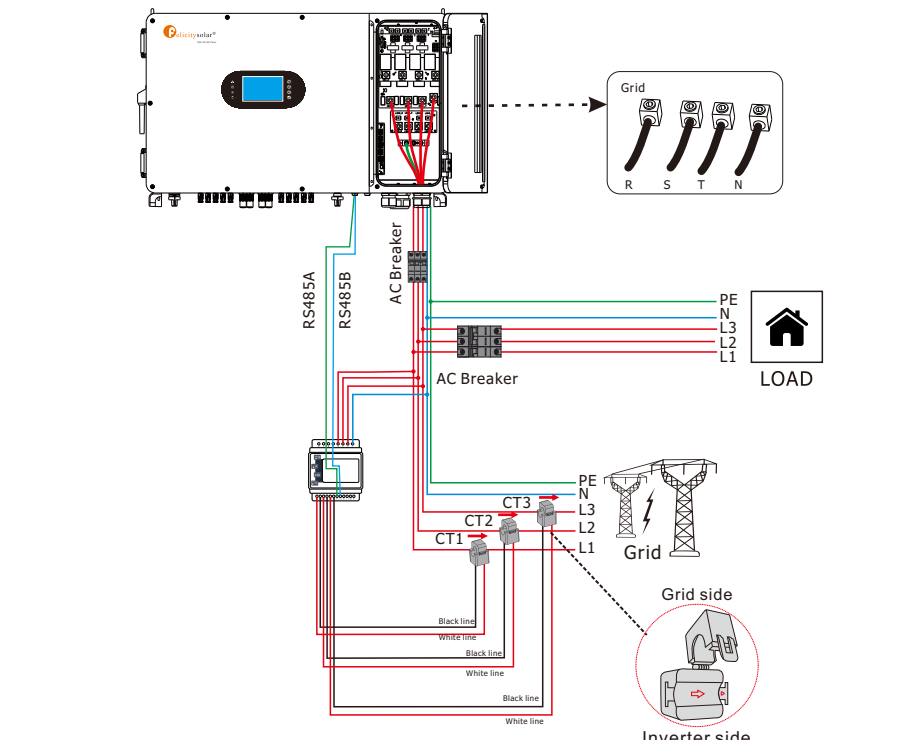
Thread the end of wires through the magnetic ring 7 and connect these wires to the terminals of GEN port corresponding to the indication of polarity.

ring 8

Thread the end of wires through the magnetic ring 8 and connect these wires to the terminals of LOAD port corresponding to the indication of polarity.

Smart Meter & CT Connection

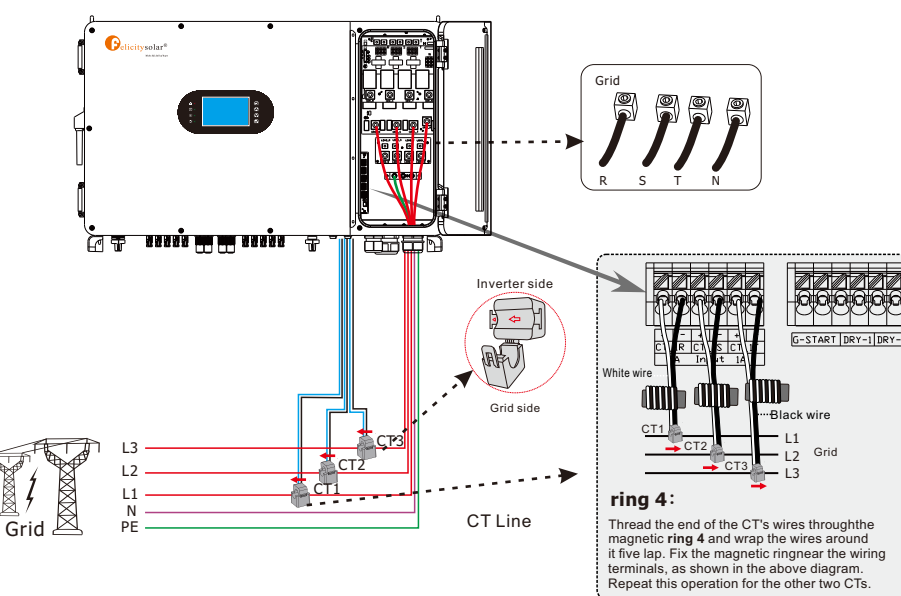
NO.	P1	P2	P3	P4	P5	P6	P7	P8
Function	/	/	RS_485_B	RS_485_A	/	/	Meter_485B	Meter_485A



ring 3

Thread the meter communication cable through the magnetic ring 3 and wrap it around the magnetic ring four times.

Or No Meter, Just three CTs



BMS Cable Connection

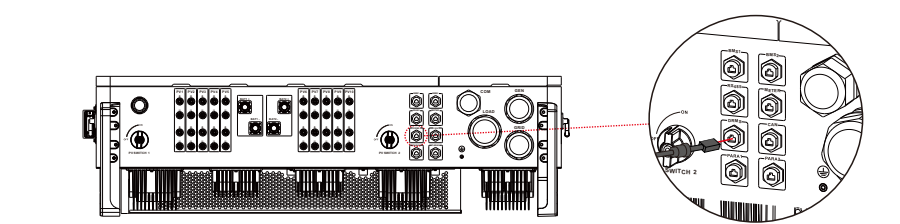
NO.	1	2	3	4	5	6	7	8
Function	/	/	/	BMS/CANH	BMS/CANL	GND	BMS/485A	BMS/485B

DRMS Connection

DRMS(Demand response enabling device) is used for Australia and New Zealand installation (also used as remote shutdown function in European countries), in compliance with Australia and New Zealand safety requirements(or European countries). Inverter integrates control logic and provides an interface for DRMS, The DRMS is not provided by inverter manufacturer, Detailed connection of DRMS & Remote Shutdown are shown below:

- Step 1.** Screw this plate off from the inverter.
- Step 2.** Plug out the RJ45 terminal and dismantle the resistor on it. Plug the resistor out, leave the RJ45 terminal for next step.

NO.	1	2	3	4	5	6	7	8
Function	DRM1/5	DRM2/6	DRM3/7	DRM4/8	REF	COM	/	/



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.

Download The App

- Method 1: Access <https://download.felicitysolar.com> using the mobile phone browser and download the latest installation package.
- Method 2: Scan the following QR code and download the latest installation package.

