

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

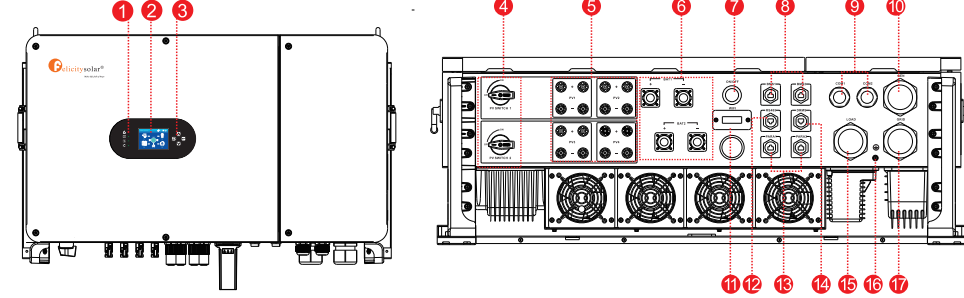
		Caution: The IVGM50kW and IVGM40kW inverter models are configured with 8 sets of PV input ports; the IVGM30kW and IVGM29.9kW inverter models come with 6 sets of PV input ports; and the IVGM25kW inverter model is equipped with 4 sets of PV input ports. The specific number of configured PV input ports shall be subject to the rated power of the inverter.		

NO.	Name	Description	Quantity
1	Inverter	Inverter	1
2	Battery connector	Connection ports for batteries and inverter Bat Port	2
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)	6
8	Meter	Meter	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 communication 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 IVGM50kw/40kw:PV connectors x 8PCS IVGM30kw/29.9kw:PV connectors x 6PCS IVGM25kw:PV connectors x 4PCS	/
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.		

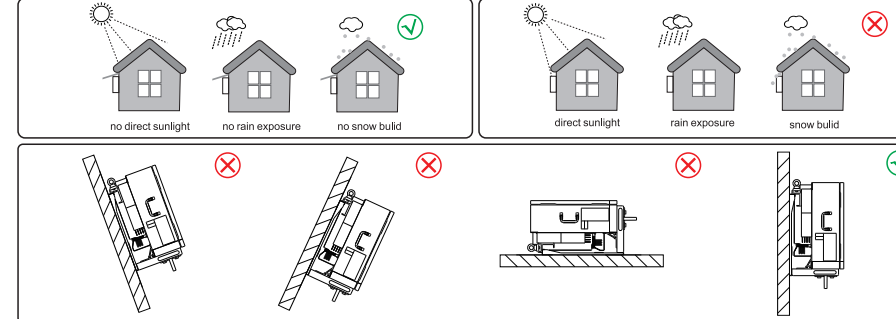
Product Overview



- | | | |
|---|-------------------------------|--------------------------|
| 1. Inverter Indicators | 6. Battery Connection Port | 12. RS485 Port |
| 2. LCD Display | 7. Power ON/OFF | 13. PARA Port |
| 3. Button | 8. BMS Port | 14. DRMS Port |
| 4. PV Switch | 9. COM Port | 15. LOAD Connection Port |
| 5. PV input Connection Port
(The number of PV modules is determined by the power rating) | 10. Generator Connection Port | 16. PE Connection Port |
| | 11. WIFI Communication Port | 17. GRID Connection Port |

Caution:
The diagrams provided in this document apply to the IVGM50kW and IVGM40kW inverter models. The IVGM30kW and IVGM29.9kW inverter models are equipped with six sets of PV input ports, while the IVGM25kW inverter model is equipped with four sets of PV input ports. The IVGM30kW, IVGM29.9kW, and IVGM25kW inverters share the same functional specifications as the IVGM40kW and IVGM50kW inverters. Next, the specifications will be illustrated with the diagrams of the IVGM50kW and IVGM40kW inverters.

Installation Environment



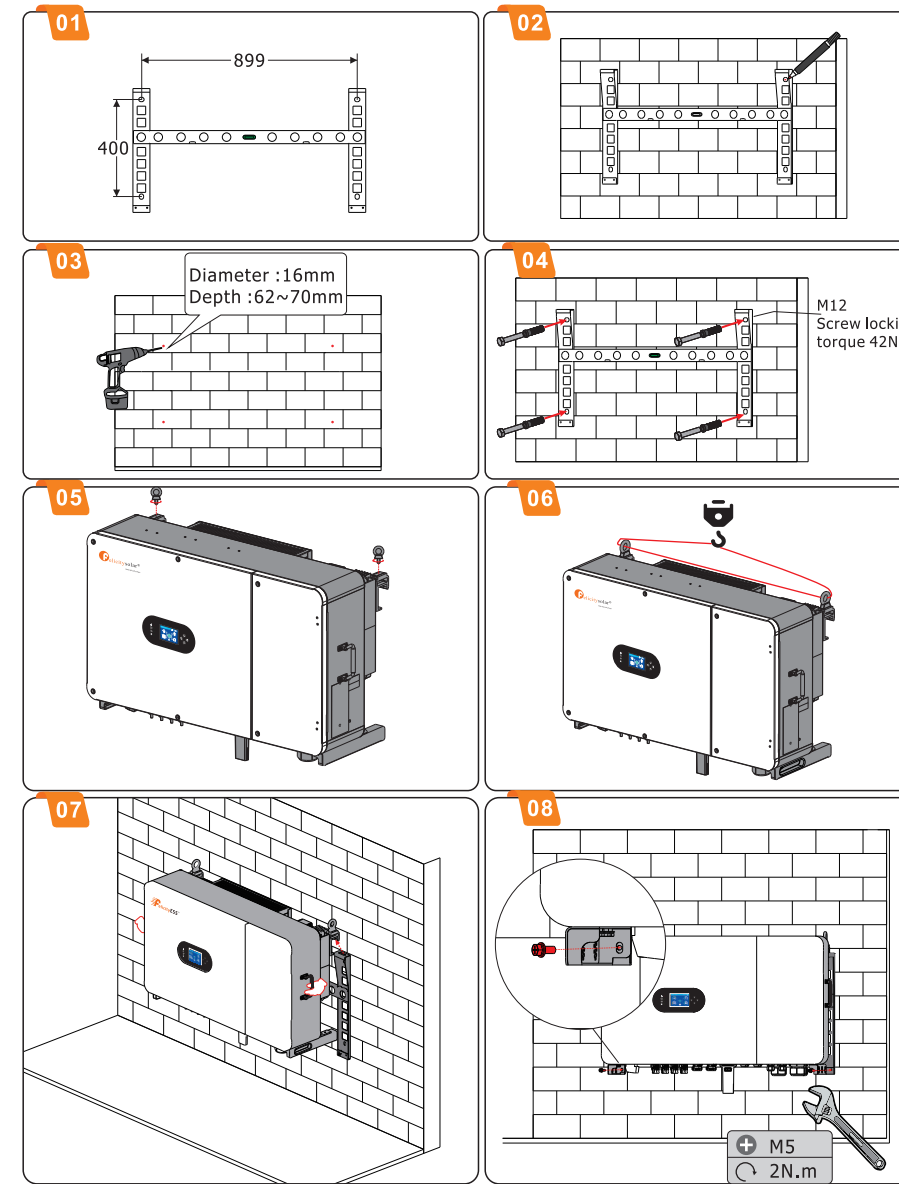
LCD Display Icons

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.

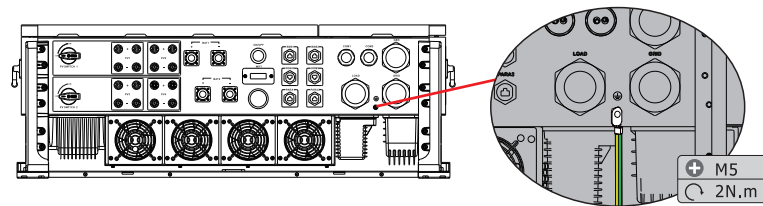


Quick Installation Guide

Hybrid inverter



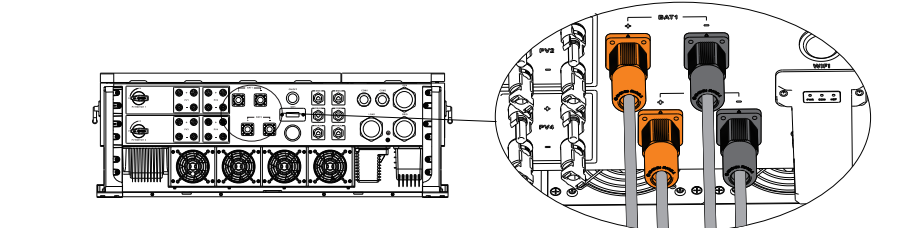
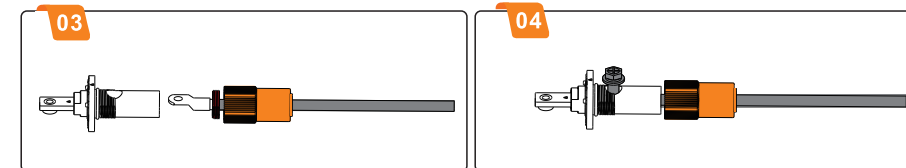
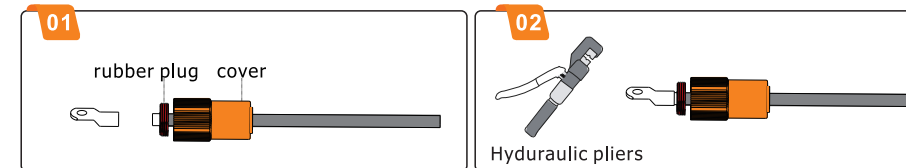
External Grounding Connection



Screw locking torque 2N. m

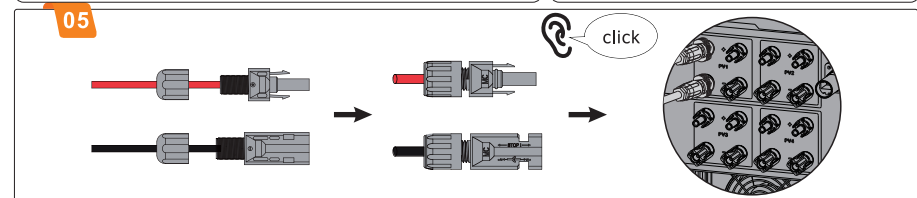
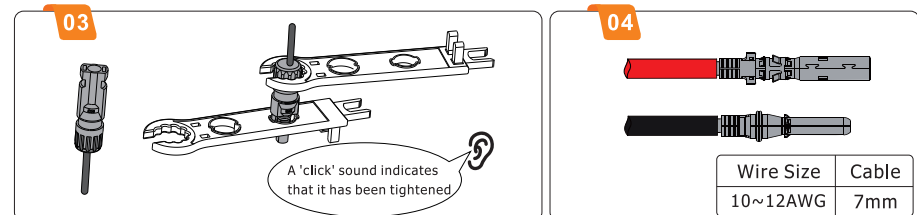
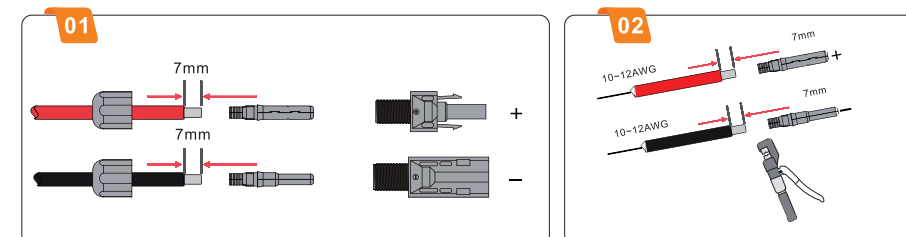
Battery Connection

Inverter Model	Wire Size	Strip length
IVGM50KHP3G2	4AWG	16mm ²



PV Connection

Caution: Except for the IVGM50kW and IVGM40kW inverter models which need to be configured with 8 sets of PV input ports, the IVGM30kW and IVGM29.9kW inverter models only require 6 sets of PV input ports. The IVGM25kW inverter model only needs to be configured with 4 sets of PV input ports.

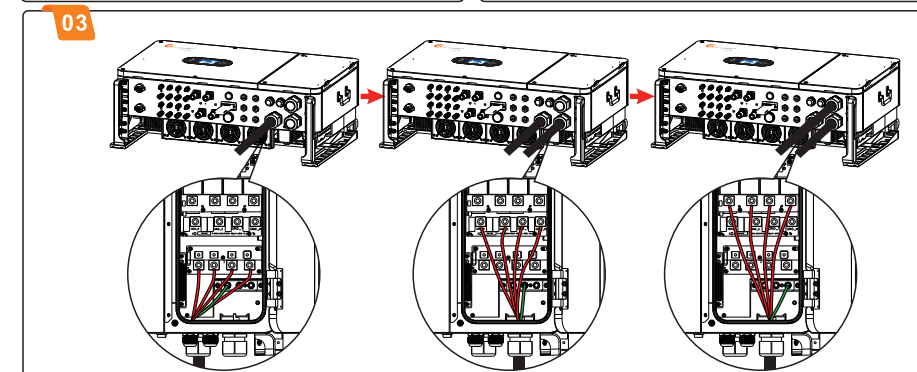
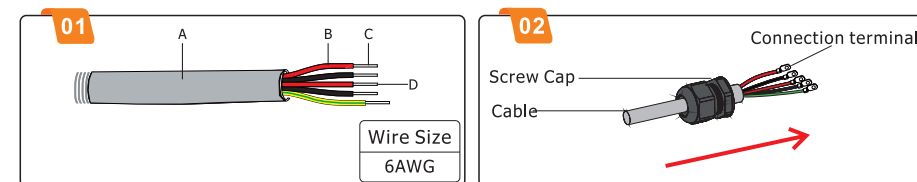


On-Grid & Back-Up Connection

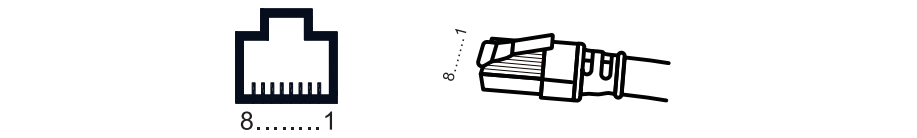
Make sure the inverter is totally isolated from any DC or AC power before connecting AC cable.

An external AC breaker is needed for on-grid connection to isolate from grid when necessary. Recommended AC circuit breaker parameters are 240A/400V.

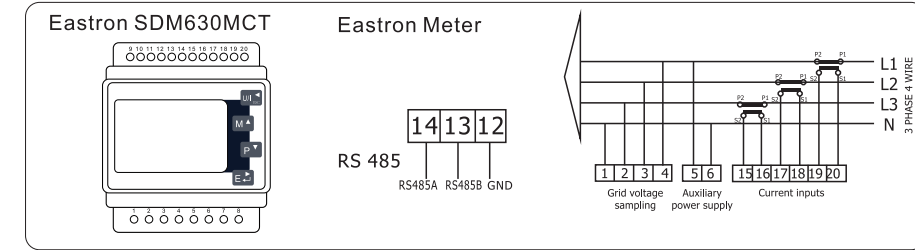
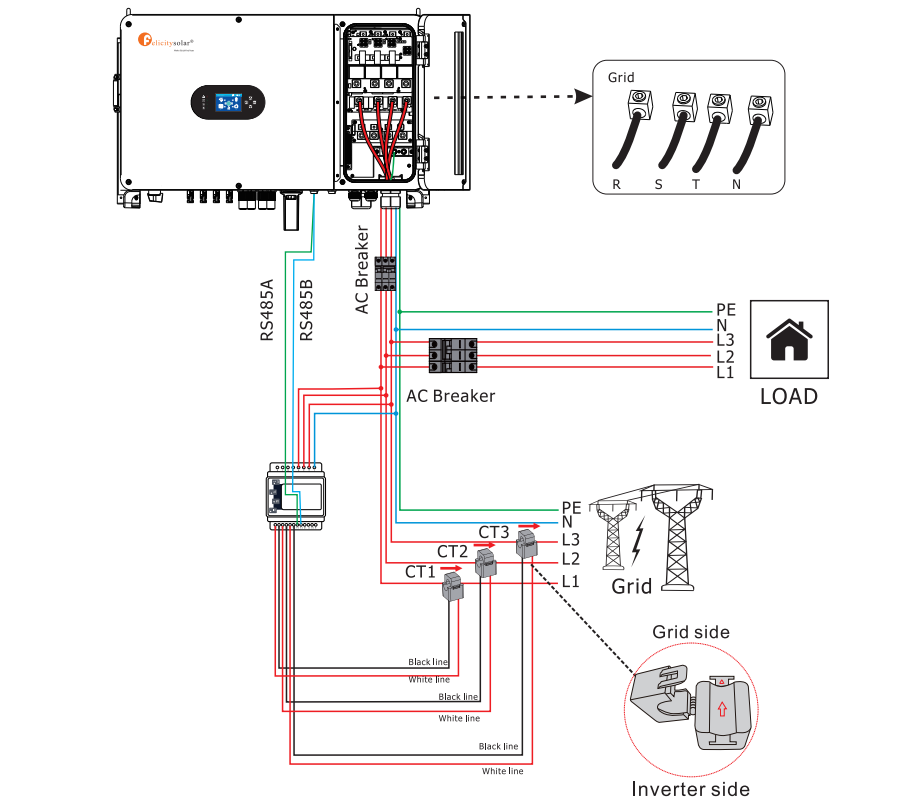
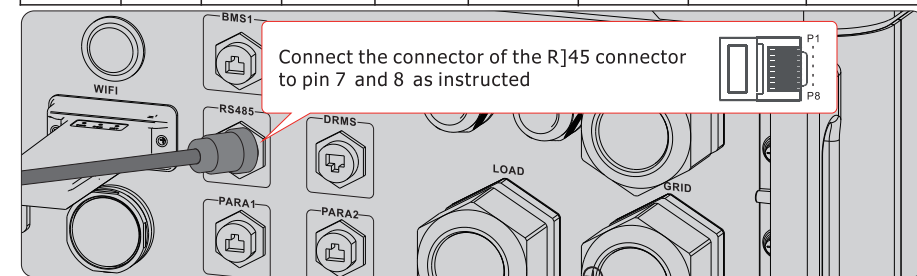
Grade	Description	Value
A	Outside diameter	30-40mm
B	Separated wire length	200-250mm
C	Conductor wire length	20-25mm
D	Conductor core section	15-20mm



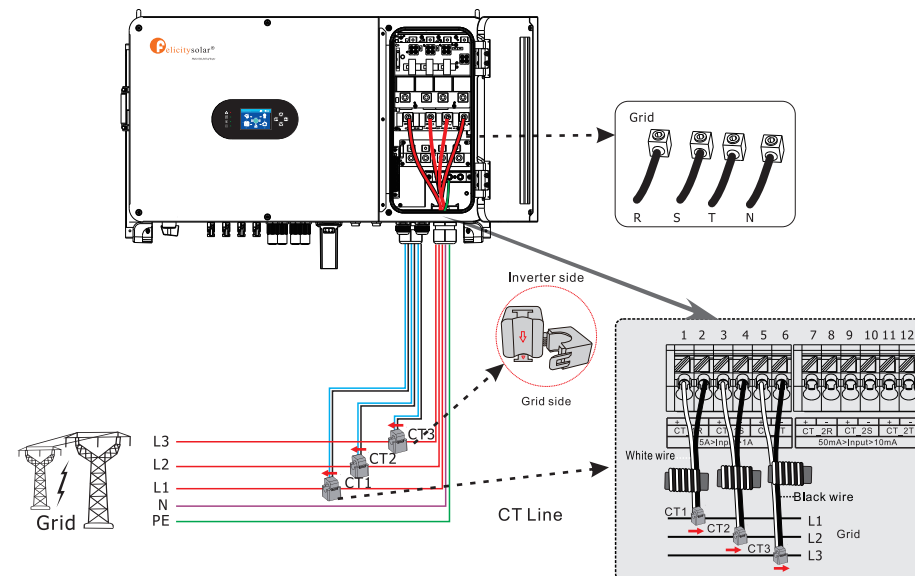
Smart Meter & CT Connection



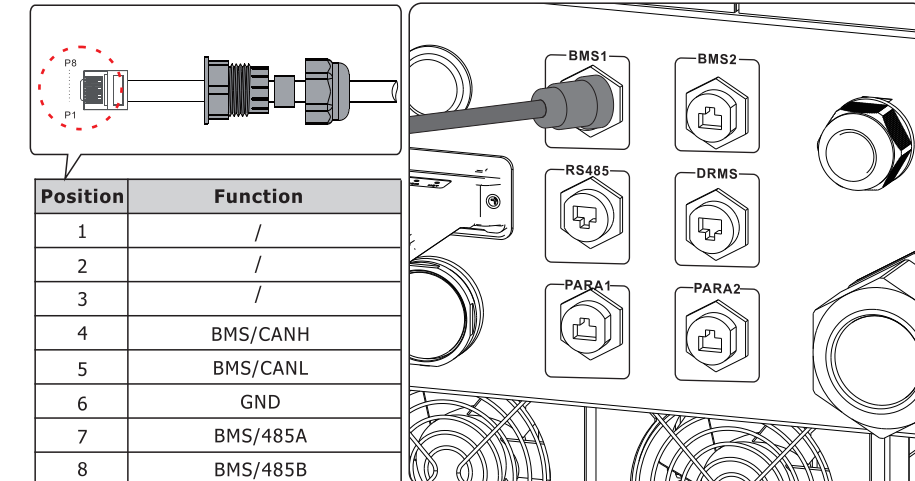
NO.	P1	P2	P3	P4	P5	P6	P7	P8
Function	/	/	RS_485_B	RS_485_A	/	/	Meter_485B	Meter_485A



Or No Meter, Just a CT



BMS Cable Connection

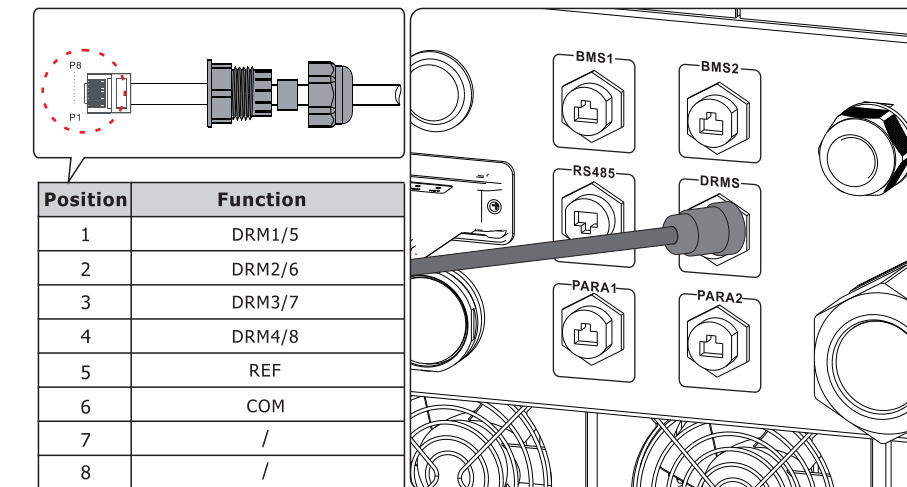


DRMS Connection

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.



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.



User Manual

User Manual in the QR code or at <https://www.felicitysolar.com/>

