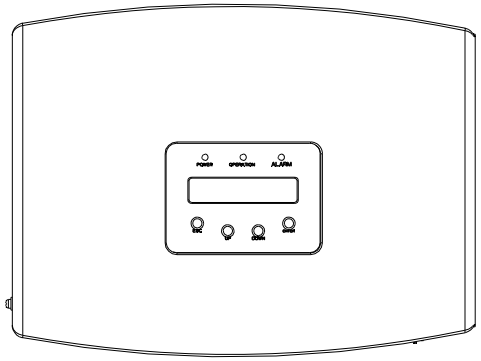
Export Power Manager
Quick Installation Guide
Version 1.0

Solis-EPM3-5G-PRO



Ginlong Technologies Co., Ltd.

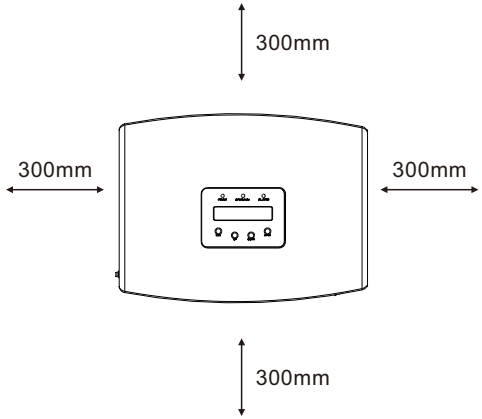
Note: Quick installation is for reference only.
Read the instructions carefully before installing and using the product.

For access to the manual please scan the QR code below or you can go the URL **https://www.ginlong.com/global/service.html**
After entering the page, you can click " " icon to change to preferred language.

Manual Download

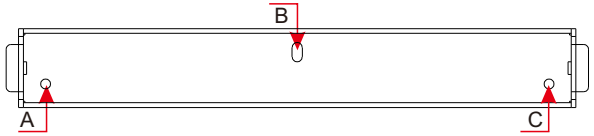
1 Determine location of EPM

Following minimum clearance is required.

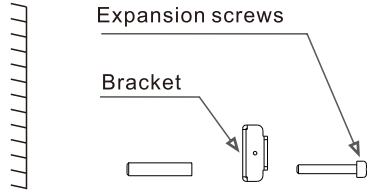


2 Install the EPM

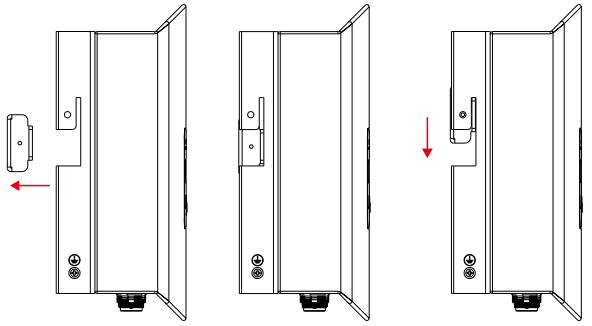
Step 1: Mark A,B,C mounting holes on the wall.



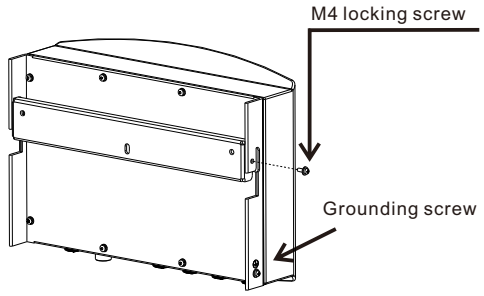
Step 2: Drill three φ8 holes and fix the bracket onto the wall with expansion bolts.



Step 3: Hang the EPM on the bracket by the steps below.



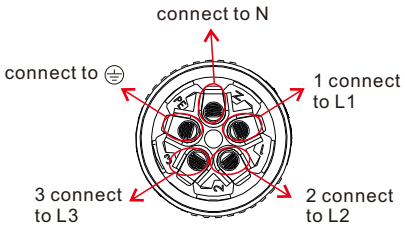
Step 4: Fix the two locking screw on both side of the bracket and connect the grounding wire to the grounding screw.

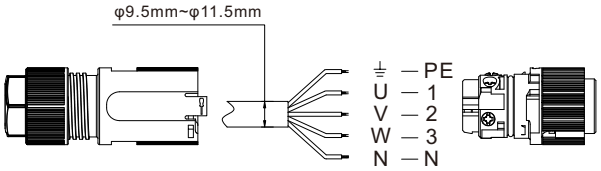


3 Connect cables

3.1 Grid input cable -> Grid Port

Connect the grid input cables to the grid connector and then to the Grid port of the EPM as described below.

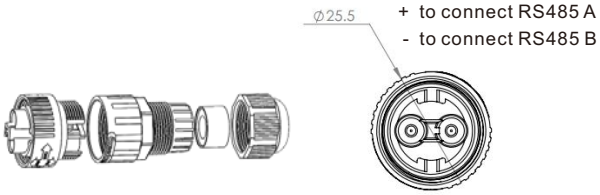




For different grids, refer to the following cable connections
Three phase: L1/L2/L3/(N)/PE

3.2 RS485 cable -> COMM-INV Port

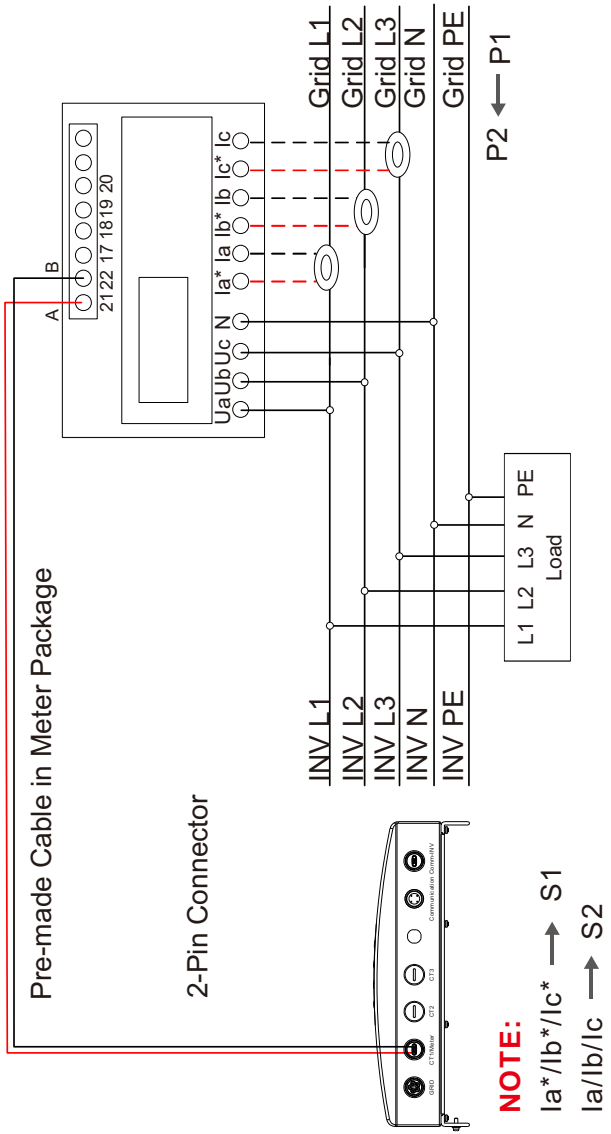
Connect the 2-pin connector to the COMM-INV Port of the EPM and then the other end of the cable to the COM port of the inverter or the daisy chain of the inverters.



3.3 Meter Communication -> CT 1/Meter Port

3.3.1 Connection between EPM and meter

EPM3-5G-PRO needs to connect the RS485 communication of the meter to read and display the power, voltage, and current data on the grid side.

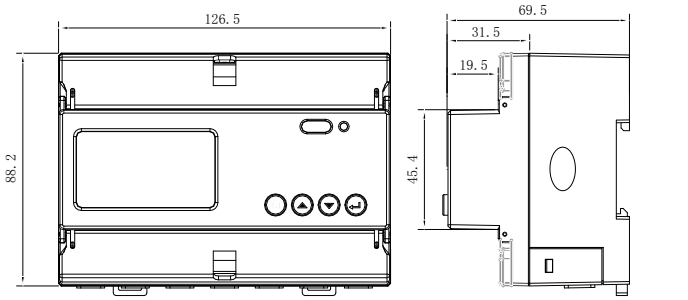


3.3.2 Wiring and installation of meter

3.3.2.1 Specification of electricity meter

Dimension Drawings

unit:mm

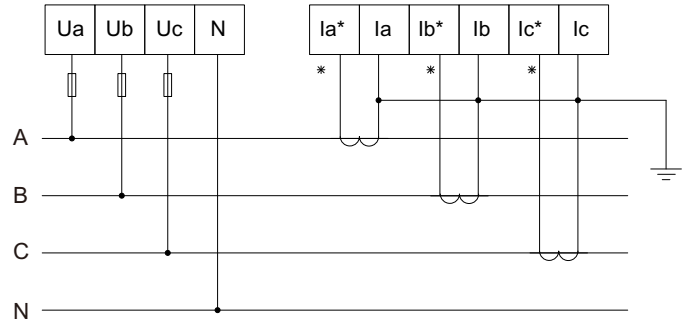


Meter specification

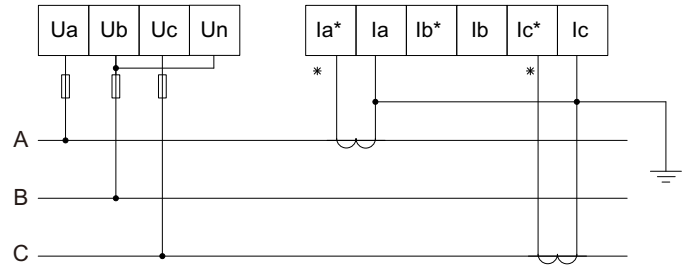
Specification		3 phase 3 wires, 3 phase 4 wires
Voltage	Reference voltage	3-110V, 3-400V, 3-480V, 3-66/115V, 3-230/400V, 3-277/480V
	Input voltage fluctuation	0-120%
	Consumption	<10VA(Single phase)
	Impedance	>2MΩ
	Accuracy class	Error±0.2%
Current	Input current	3-1(6)A
	Consumption	<1VA(Single phase rated current)
	Accuracy class	Error±0.2%
Power		Active, reactive, apparent power, error±0.5%
Frequency		45~65Hz, Error±0.2%
Energy		Active energy(Accuracy class:0.5, 1), reactive energy(Accuracy class 2)
Energy pulse output		1 active optocoupler output, Resistive load (Voltage is not more than 24V, current is not more than 5mA)
Switching input		1 optocoupler input, Maximum allowed voltage: ~ 220V, OVC III
Width of pulse		80±20ms
Pulse constant		400imp/kWh
Interface and communication		RS485：Modbus RTU
Range of communication address		Modbus RTU:1~ 247;
Baud rate		1200bps~19200bps
Working temperature		-25℃~+55℃
Relative humidity		≤95%(No condensation)
Altitude		≤ 2000m
Installation environment		Indoor use
Pollution degree		Class 3

3.3.2.2 Wiring and Installing

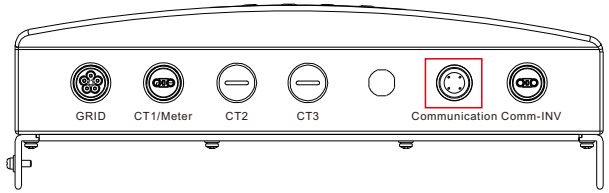
Three phase four lines connect via CT



Three phase four lines connect via CT



3.4 Monitoring -> Communication Port



Communication is a 4-pin RS485 communication port which is used to connect Solis datalogging stick.

NOTE:

Turn off the AC and DC circuits before the installation

1. Insert communication stick to COM port.
2. Rotate the black circle clockwise while pushing the datalogger. (do not rotate the datalogger housing directly)

1 2

4 LCD Setting of EPM

After EPM is powered on, LCD needs to do the following settings.
Setting Path 1: Settings(For 4.1)
Setting Path 2: Advanced Settings -> Password:0010(For 4.2-4.6)
Setting Path 3: Profession Setting -> Password:0010(For 4.7-4.11)

Select “Advanced Info.” from the Main Menu.
The screen will require the password as below:

YES=<ENT> NO=<ESC>
Password:0010

4.1 Set Time

Set time and date.

NEXT=<ENT> OK=<ESC>
01-01-2016 00:00

4.2 Set Inverter Quantity

Set the total capacities of the inverters connected with EPM.

YES=<ENT> NO=<ESC>
Set Capa.: 00000000W

4.3 Set Export Power

Set the allowed power that inverter can generate to the grid.

YES=<ENT> NO=<ESC>
Set Power: +000000W

4.4 Set Meter

4.4.1 Meter Selection

Select related meter type according to the Gird type.
There are 3 meter types: Single Phase, Three Phase, Split Phase.

->Single Phase
Three Phase

4.4.2 Set Meter CT

Set the CT(Current Transformer) ratio according to the actual CT used at site.

YES=<ENT> NO=<ESC>
Set Para: 0030:1

4.4.3 Set Meter PT

Set the PT(Voltage Transformer) ratio according to the actual PT used at site.
This setting is useful when EPM is used in a system voltage larger than 480V, e.g. 10kV or 22kV especially.

YES=<ENT> NO=<ESC>
Set PT Para: 0001:1

4.4.4 CT Direction

Set the CT direction forward or reversed. This setting is useful when CT installation is finished and which direction is wrong, customer do not need to re-install, just use this setting to change direction.

YES=<ENT> NO=<ESC>
Select: Forward

4.5 Select Standard

G100_V1: UK power control.
G100_V2: UK current control.
(1)G100 ON/OFF: G100_V2 standard on/off switch.
(2)Backflow Current: Set the allowed current that inverter can generate to the grid.
(3)Clear Fault: Manually reset function for G100_OVI_PRO alarm required by G100
(4)Reset Setting: Set the customer type as Resi(Residential) or NonResi(Non-Residential).
RD244: Spain power control.
Others: Power control for other scenarios.

YES=<ENT> NO=<ESC>
Standard: G100_V1

4.6 Select Export Work Mode

Average Mode: Each phase of inverter will generate the power that equals to the average of the three-phase load power, and which is more than the minimum load phase power.
Min.Phase Mode: Each phase of inverter will generate the power that equals to minimum phase load power.

YES=<ENT> NO=<ESC>
Mode: Averge mode

4.7 Set Control Limit

Set the maximum control percentage(50%~110%) sent by EPM to inverters.
Setting range is 50~110%. Default is 110%.

YES=<ENT> NO=<ESC>
MaxOutPLmt: 110%

4.8 Set Failsafe

Default is ON. The EPM will detect the communication with meter, if EPM lose meter communication, it will limit the inverter power to 0.

YES=<ENT> NO=<ESC>
Failsafe: ON

4.9 Set Export Compensate

This setting is used to compensate the export power value which is set at 4.3.

YES=<ENT> NO=<ESC>
Output Power: 000.5%

4.10 Set Transmit ON/OFF

Transmit switch is only useful when upgrading inverters.
Turn on the transmit switch to upgrade the inverters.
Turn off the transmit switch after upgrading, otherwise EPM control will be failed.

YES=<ENT> NO=<ESC>
Switch: OFF

4.11 Set CT Check

The default "CT Check Choose" is ON, the EPM will give an alarm when CT connection is fail. When used in single phase or split phase, turn off the corresponding phase_check which is not wired.

→CT_A-Check:OFF
CT_B-Check:OFF
CT_C-Check:OFF

4.12 Set Voltage Check

The default "Vol Check Choose" is ON, the EPM will give an alarm when Voltage connection is fail. When used in single phase or split phase, turn off the corresponding phase_check which is not wired.

→Vol_A-Check:OFF
Vol_B-Check:OFF
Vol_C-Check:OFF

5 Inverter Setting

To match the normal use of EPM, the inverter needs to be set accordingly.
Setting Path: Settings -> Password:0010

5.1 Inverter Set

If 5G EPM is used, please choose "5G EPM", and set "Failsafe Set: ON".
If 2G EPM is used, please choose "Others EPM", and set "Failsafe Set: ON".

Advanced info.
-> Advanced Settings
→ YES=<ENT> NO=<ESC>
Password:0010

-> External EPM Set
→ -> 5G EPM / Others EPM

-> Failsafe ON/OFF

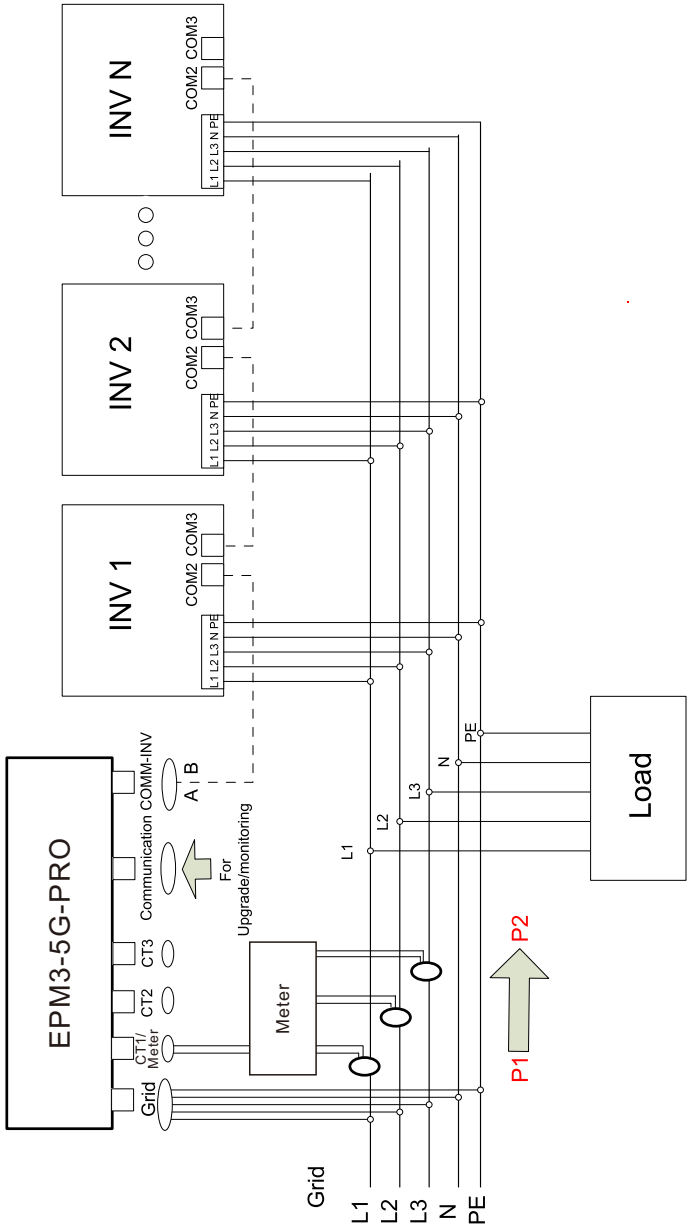
5.2 Set Address

Select the address of the inverter, the default is "01", the range is "01-20", please set a continuous value.

YES=<ENT> NO=<ESC>
Set Address: 01

6 System Diagram

6.1 Three Phase System Diagram



7 Contact us

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