

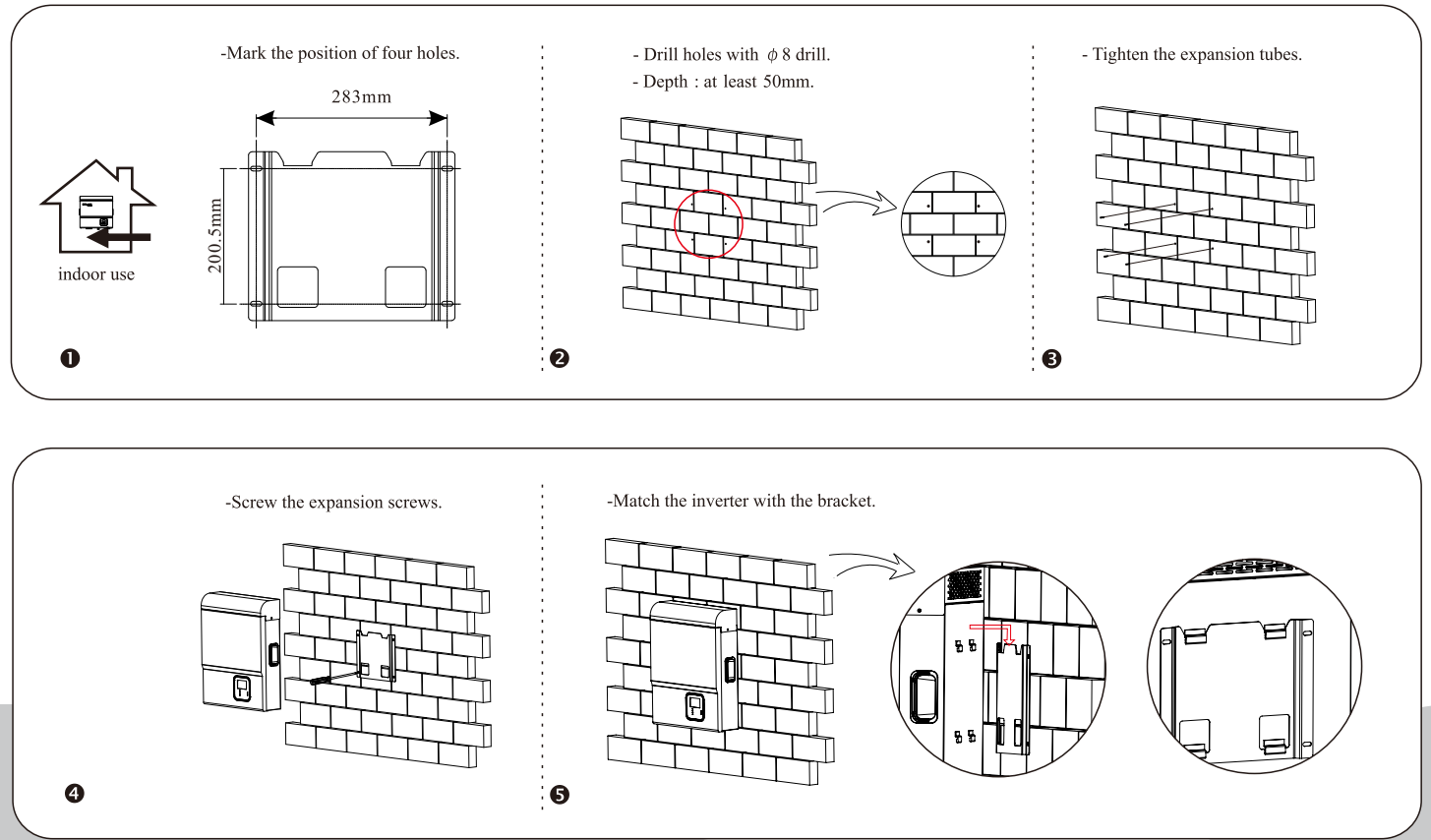


Quick Installation Guide

X-Hybrid Series

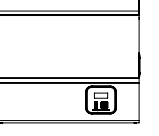
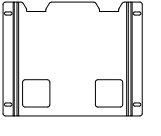


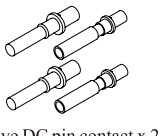
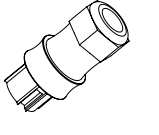
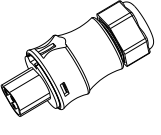
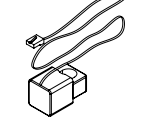

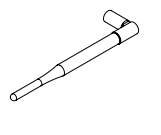
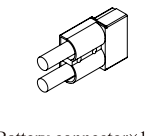
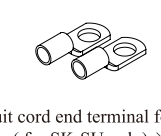
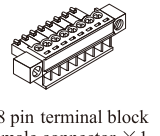
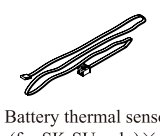





II

Inverter Installation



I

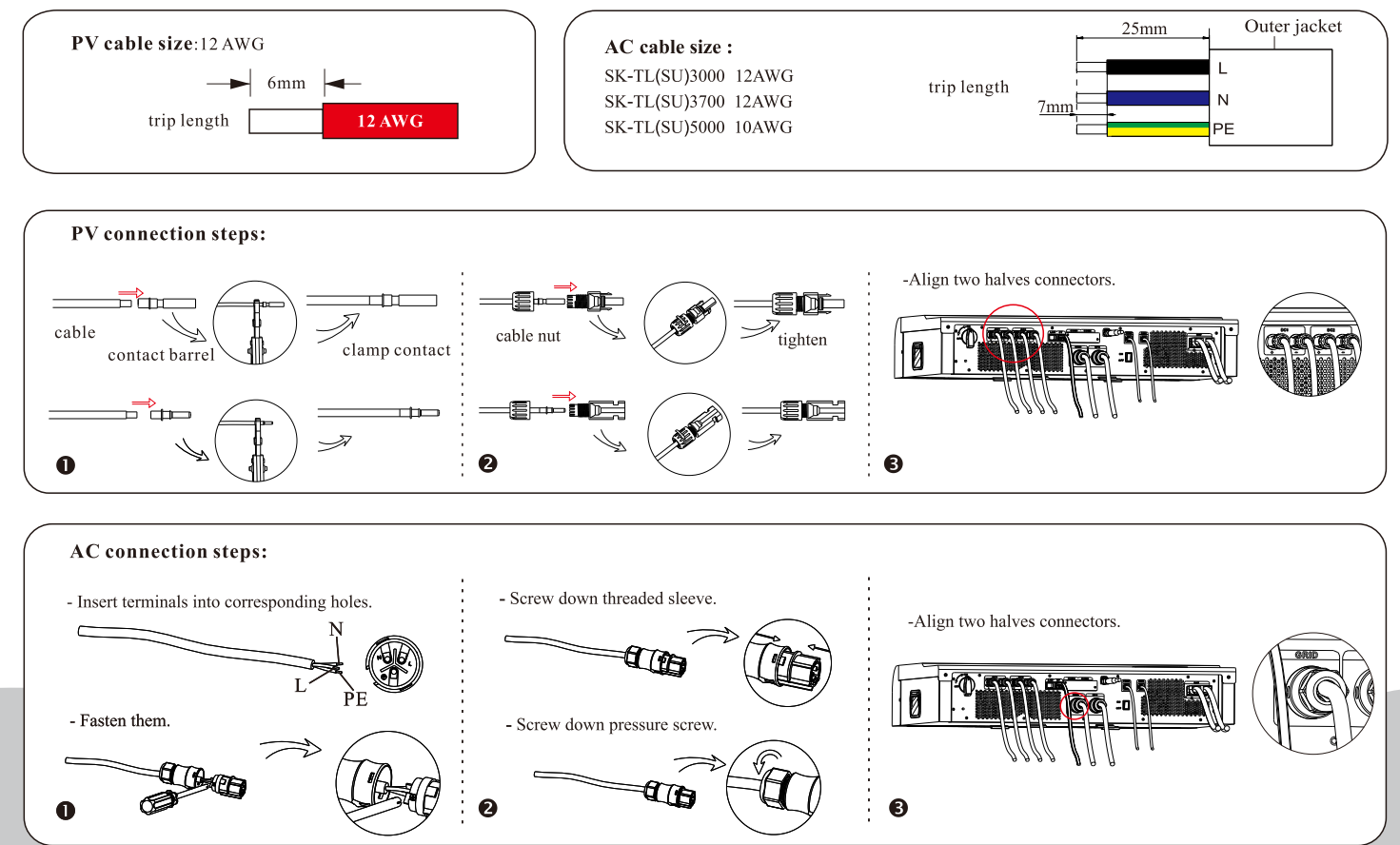
Packing List

 Inverter $\times 1$	 Bracket $\times 1$	 Screw package: Expansion tube $\times 3$ Expansion screw $\times 3$	 Male DC connector $\times 2$ Female DC connector $\times 2$	 Positive DC pin contact $\times 2$ Negative DC pin contact $\times 2$
 AC connector $\times 1$	 EPS connector $\times 1$	 CT $\times 1$	 RJ45 extend port $\times 1$	 WIFI antenna $\times 1$
 Battery connector $\times 1$	 Circuit cord end terminal for battery(for SK-SU only) $\times 2$	 8 pin terminal block male connector $\times 1$	 Battery thermal sensor (for SK-SU only) $\times 1$	 Wrench tool $\times 1$
 User manual $\times 1$	 Warranty card $\times 1$	 Quick installation guide $\times 1$	 WIFI setting guide $\times 1$	

Note:
2 DC pin contacts(1 positive,1 negative) for SK-TL(SU) 3000.
2 DC unit(1 male,1 female) for SK-TL(SU) 3000.

III

PV and AC Connection



IV

WiFi, Earth and CT Connection

WiFi connection steps:

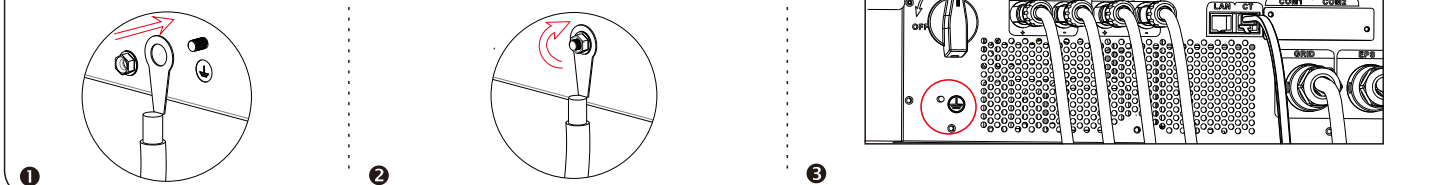
- Tighten WiFi antenna clockwise.



Earth connection steps:

Earth cable size: 12AWG

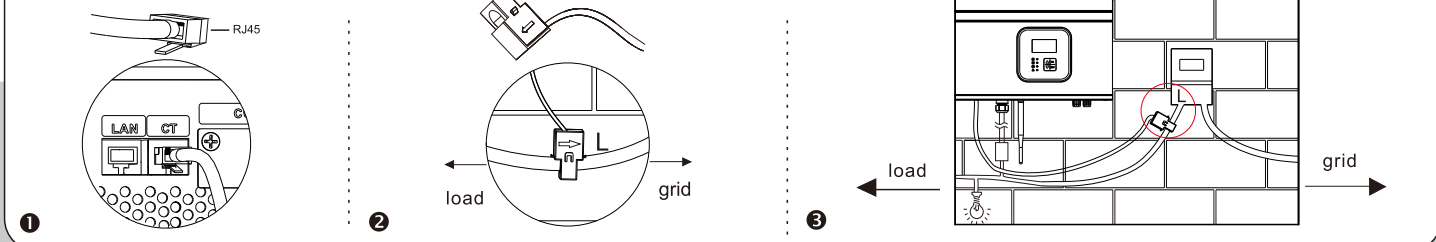
- Tighten the screw of earthing connector clockwise.



CT connection steps:

- Insert RJ45 to CT port.

- Arrow towards the grid.

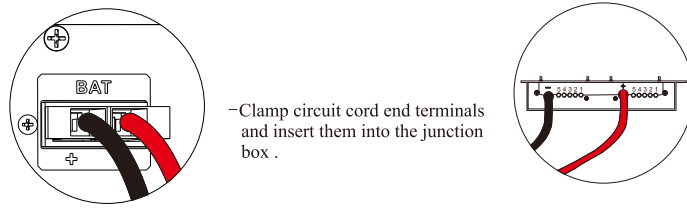


V

Battery Connection (for SK-SU series)

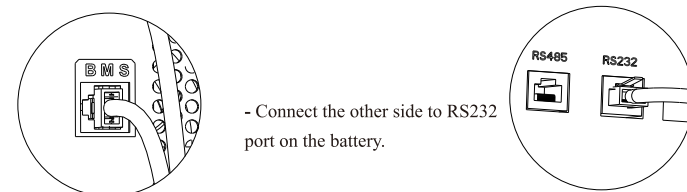
A: Power connection

- Insert battery connector to BAT port on the inverter.



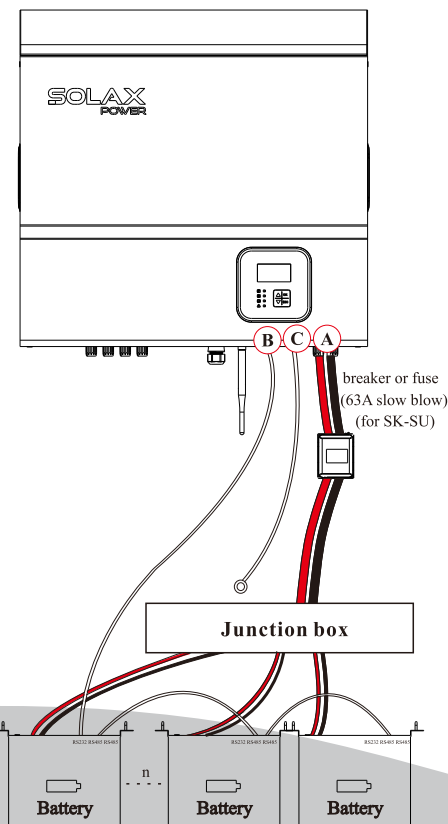
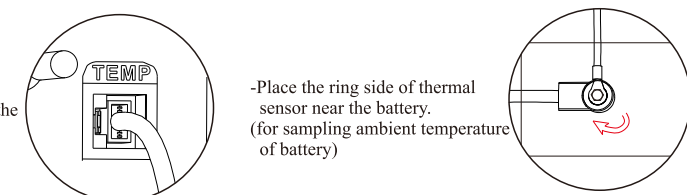
B: Communication connection

- Insert RJ45 side of cable into BMS port on the inverter;



C: Thermal sensor connection

- Insert RJ45 side of cable into the TEMP port on the inverter.

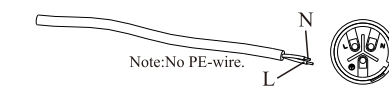


VI

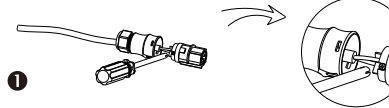
EPS Connection (for E version)

EPS connector connection steps:

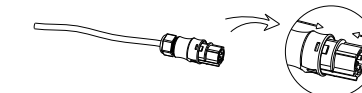
- Insert terminals into the corresponding holes.



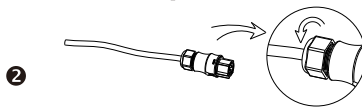
- Fasten them.



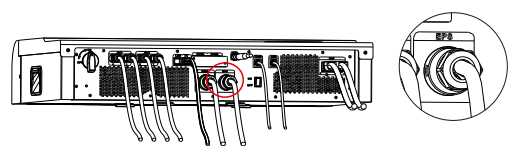
- Screw down the threaded sleeve.



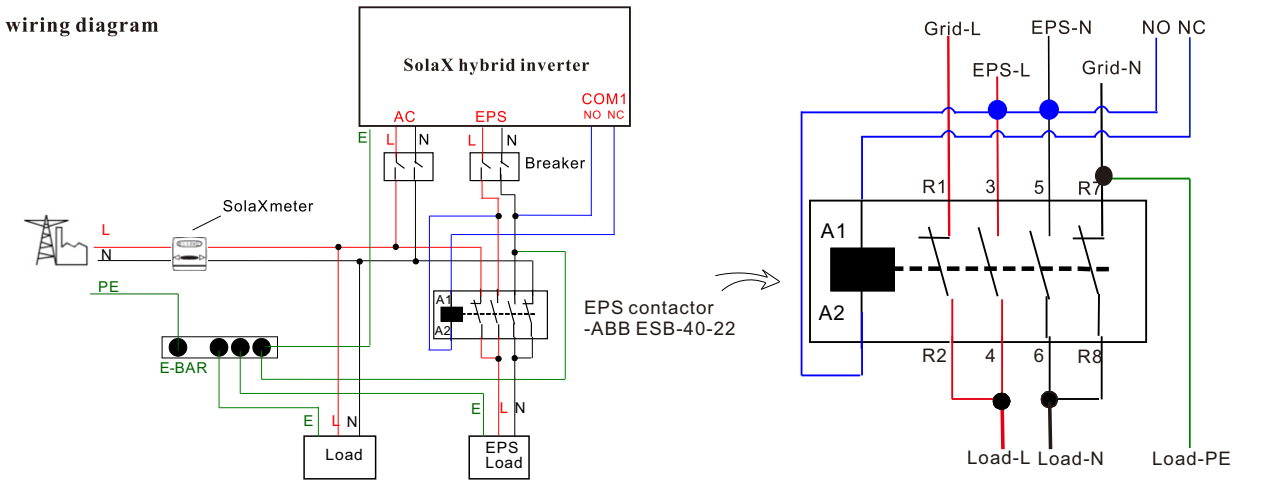
- Screw down the pressure screw.



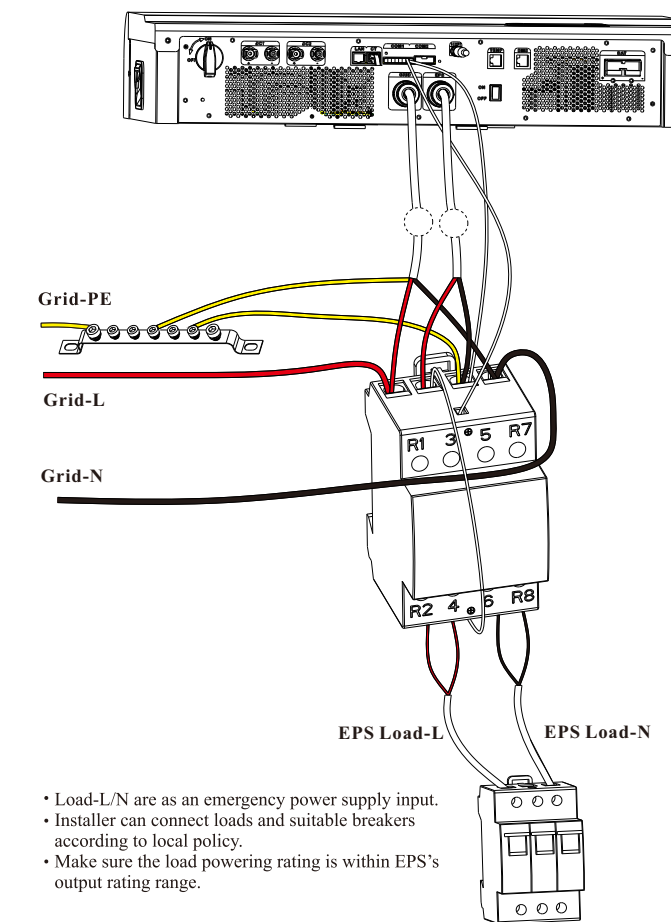
- Align the two halves connectors.



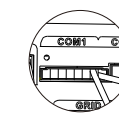
EPS wiring diagram



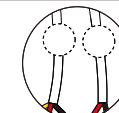
EPS connection



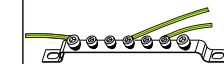
- Load-L/N are as an emergency power supply input.
- Installer can connect loads and suitable breakers according to local policy.
- Make sure the load powering rating is within EPS's output rating range.



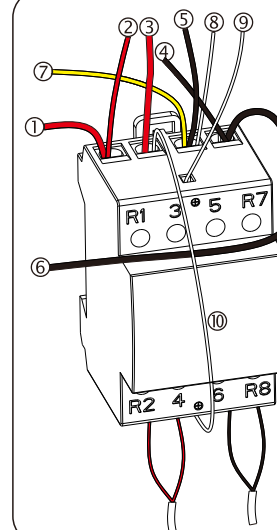
- Make sure two power lines connected to the two ports as picture (seventh & eighth) shows.



- Install a breaker on AC and EPS wires respectively. - Make sure the breaker on EPS wire is exactly same as AC's.



- Connect all PE wires on a Ground Bus. Note: EPS-PE and EPS-N are in parallel in Port "5".

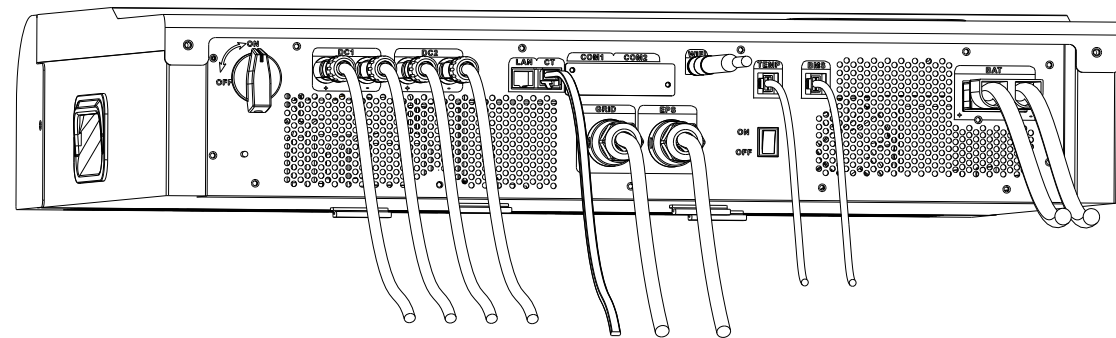


linetype (port to port)

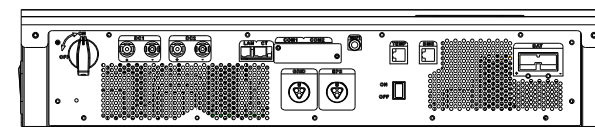
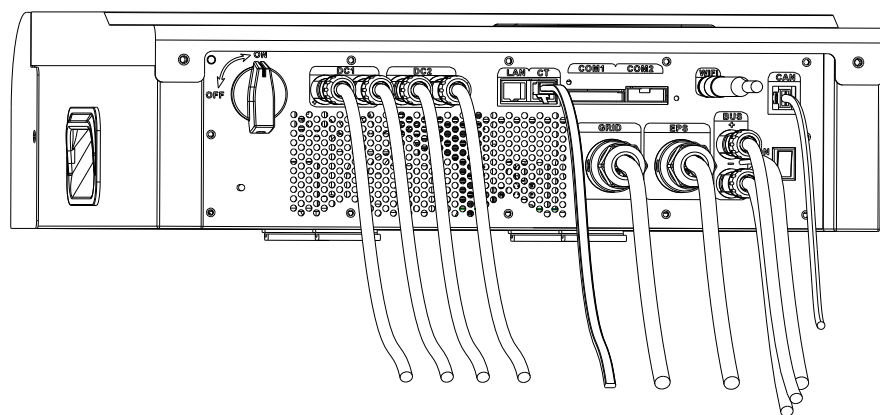
- ① Grid-L: (R1-Grid)
- ② AC-L: (R1-AC)
- ③ EPS-L: (2-EPS)
- ④ AC-N: (R7-AC)
- ⑤ EPS-N: (5-EPS)
- ⑥ Grid-N: (R7-Grid)
- ⑦ EPS-PE: (5-Grid)
- ⑧ power line: (5-NO)
- ⑨ power line: (A1-NC)
- ⑩ power line: (A1-A2)

Note: power line Size >230VAC, 2A

SK-SU



SK-TL

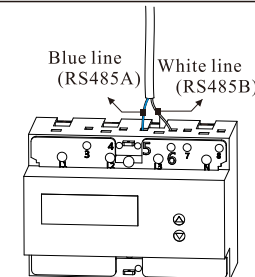


- Make data line to connect meter and inverter.
Insert communication cable into RJ45 connector following PIN definition rule.

Pin	1	2	3	4	5	6	7	8
Meter	×	×	×	RS485A (Blue)	RS485B (White)	×	×	×

1

- Connect communication cable between meter and inverter.
Connect RJ45 to the CT port of the inverter, and wire the other side to meter as below.
White line connect to Port 6.
Blue line connect to Port 5.

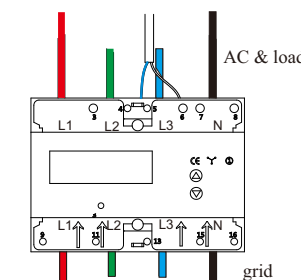


2

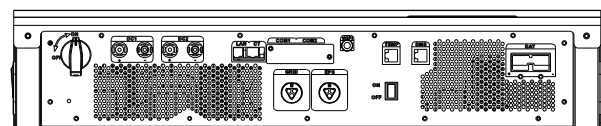
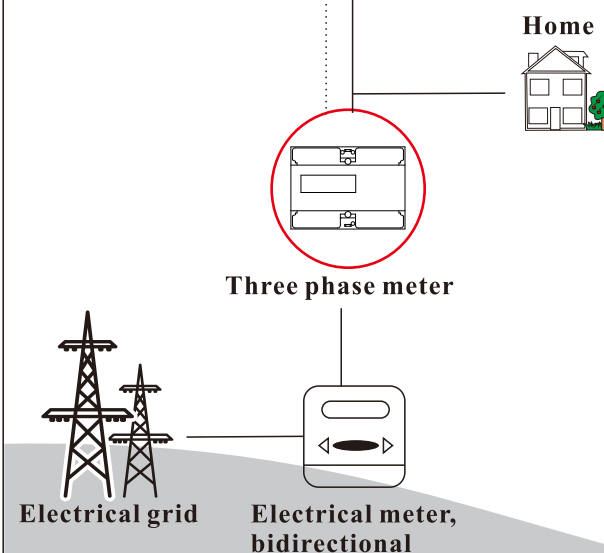
- Connect power cable between meter and inverter.
Choose a pair of L-wire ports (same colours as picture) as L-wire connection ports.

The black wire ports are as N-wire connection ports.
AC wires and load wires should be connected in parallel at the AC&load side.

Arrow towards the AC&load side.



3

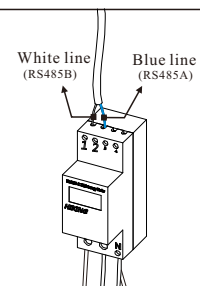


- Make data line to connect meter and inverter.
Insert communication cable into RJ45 connector following PIN definition rule.

Pin	1	2	3	4	5	6	7	8
Meter	×	×	×	RS485A (Blue)	RS485B (White)	×	×	×

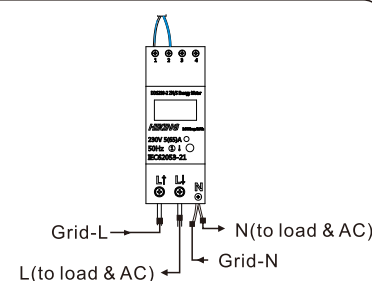
1

- Connect communication cable between meter and inverter.
Connect RJ45 to the CT port of the inverter, and wire the other side to the meter as below.
White line connect to Port 1.
Blue line connect to Port 2.

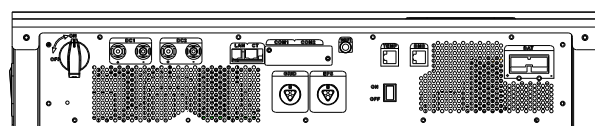
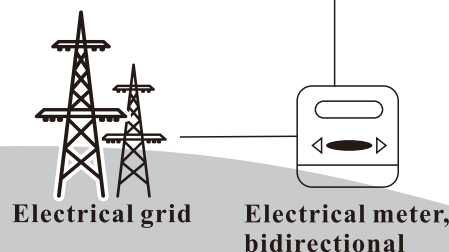


2

- Connect power cable between meter and inverter.
L (to load & AC) means loads-L-wire and AC-L-wire are in parallel at this port.
N (to load & AC) means loads-N-wire and AC-N-wire are in parallel at this port.



3

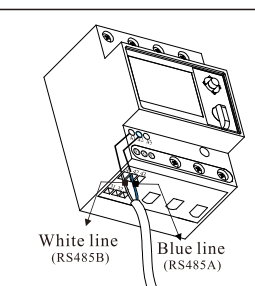


- Make data line to connect meter and inverter.
Insert communication cable into RJ45 connector following PIN definition rule.

Pin	1	2	3	4	5	6	7	8
Meter	×	×	×	RS485A (Blue)	RS485B (White)	×	×	×

1

- Connect communication cable between meter and inverter.
Connect RJ45 to CT port of the inverter, and wire the other side to meter as below.
White line connect to Port 41.
Blue line connect to Port 42.

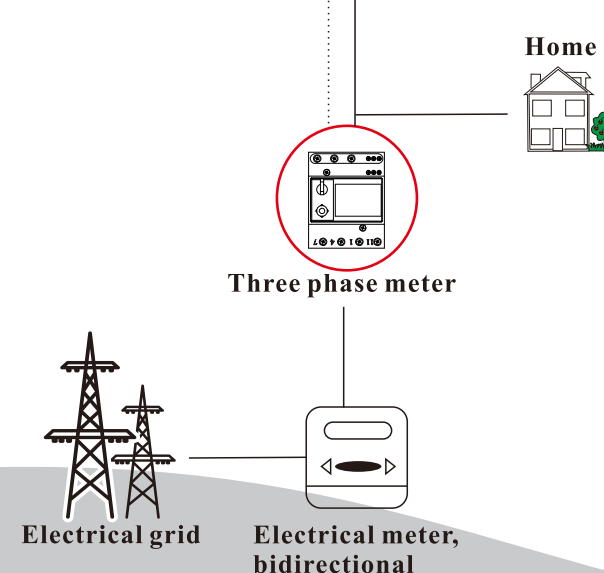
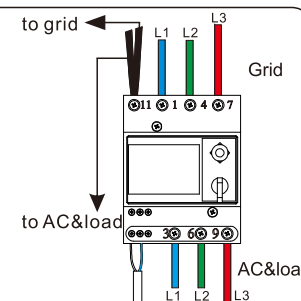


2

- Connect power cable between meter and inverter.
Choose a pair of L-wire ports (same colours as picture) as L-wire connection ports.

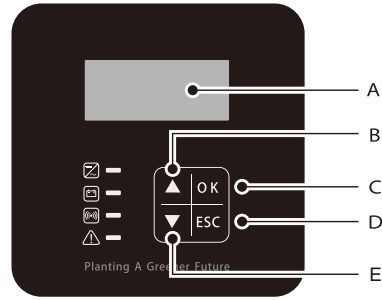
The black wire ports are as N-wire connection ports.
AC wires and load wires should be connected in parallel at the AC&load side.

Pay attention on direction of wires.



Programming Guide

Control Panel



Object	Name	Description
A	LCD Screen	Display the information of the inverter.
B	Function	Up button: Move cursor to upside or increase value.
C	Function	OK button: Confirm the selection.
D	Button	ESC button: Leave from current interface or function.
E	Function	Down button: Move cursor to downside or decrease value.

1. Enter the setting interface, obtain setting password from your distributor.

Menu

Status
History
Settings

Password

X X X X

Settings

Safety
Date Time
New Password

2. Set date time

Date Time

2014->06<-06

12:00

3. Set PV connection

PV Connection

PV Connection
Multi

-Comm:single MPP track,dual MPPT work together.
-Multi:Multi-MPP track,dual MPPT work independently.

4. Set work mode Self use mode

Work Mode

>Mode Select
Self use

-In this mode ,the priority of the PV generated power is:local load>battery>public grid.

Work Mode

>Mode Select
Force time use

Work Mode

>Charge period 1
From Grid
Enable

Work Mode

>Charge period 2
From Grid
Enable

Work Mode

>Charge
Start time 1
08:00

Work Mode

>Charge
End time 1
10:00

Work Mode

>Charge
Start time 2
12:00

Work Mode

>Charge
End time 2
14:00

Work Mode

>Discharge
Start time 1
06:00

Work Mode

>Discharge
End time 1
08:00

Work Mode

>Discharge
Start time 2
19:00

Work Mode

>Discharge
End time 2
21:00

-In this mode you can set two periods of charging and discharging time according to your wishes and can choose if charge from grid.

Programming Guide

4. Set export control.

Export Control

> User value
05000W

00000 means none expert.

5. Set charger.

Lead acid battery

Charger

> Battery type
Lead acid

Charger

> Charge cut voltage
54.0V

Charger

> Discharge cut voltage
47.0V

Charger

> Charge max current
50.0A

Charger

> Discharge max current
50.0A

Charger

> Battery awoken
No

-Without BMS connection,system will set lead acid battery mode as a default battery and update the default value as above.
-You can set the parameters according to battery's requirements manually.
-Battery awoken means if battery voltage drops too low that cannot work,please choose "Yes"to charge battery .(The BUS voltage must excess 300V .)

Lithium battery

Charger

> Battery type
Lithium

Charger

> Min capacity
20%

Charger

> Charge cut voltage
53.5V

Charger

> Discharge cut voltage
47.0V

Charger

> Charge max current
50.0A

Charger

> Discharge max current
50.0A

Charger

> Battery awoken
No

-With BMS connection,system will convert to lithium battery mode and update the default value automatically as above.
-You can also set the parameters according to battery's requirements manually.
-Battery awoken means if battery voltage drops too low that cannot work,please choose "Yes"to charge battery .(The BUS voltage must excess 300V .)

6. Set EPS.

EPS System

> Mute: No
Frequency: 50Hz
Backup setting

EPS System

> Battery Backup discharge Volt.
46.0V

-Discharge cut voltage needs to be higher than Battery backup discharge Volt.

-Mute option can be set "No"or" Yes".
No means there is a beep happened while system under ESP mode.
Yes means no alert no matter if the system under EPS mode.

-Frequency can be set according to the relevant loads.