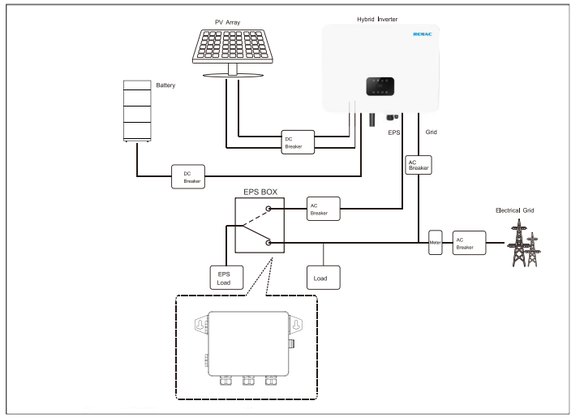
EPS BOX (EPS-100-G2)
Quick Installation

1. Introduction

The EPS BOX (EPS-100-G2) is a device which make EPS load feed from EPS port or grid port of N1 HV series or N1 HL series hybrid inverter. The EPS BOX integrates a contactor to provide users with a simple connection. When the grid outage, the EPS BOX can be fed from EPS port of N1 HV series or N1 HL series hybrid inverter.

2. EPS BOX overview in the PV storage system

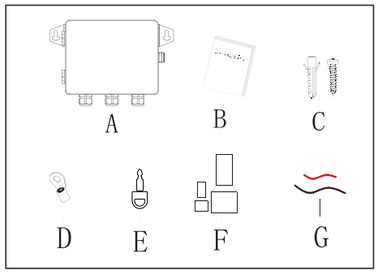
As shown in chart 2.1, the input EPS BOX is connected with 'EPS' port and 'GRID' port of N1 HV series or N1 HL series hybrid inverter, the output is connected with EPS LOAD. EPS load is fed from the grid as default, if the grid outage, EPS load will be fed from EPS port of hybrid inverter.



3. Technical Data

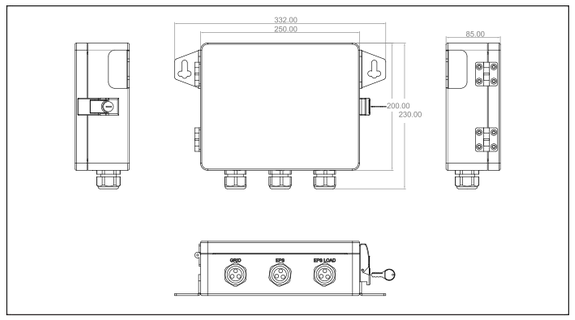
Model Name	EPS BOX (EPS-100-G2)
Grid Normal Voltage	230V 50/60Hz
Grid Max Current	30A
EPS Normal Voltage	230V 50/60Hz
EPS Max Current	30A
Load Normal Voltage	230V 50/60Hz
Load Max Current	30A
Cooling Concept	Natural
Ingress Protection	IP65
Installation	Wall Mountable
Operation Ambient Temperature	-25℃~+50℃
Compatible Model	N1-HV/AC series or N1-HL series inverter

4. Package List



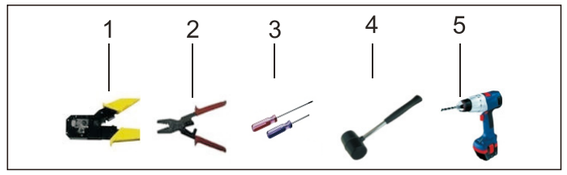
Package List			Package List		
Item	Item Name	Qty	Item	Item Name	Qty
A	EPS BOX (EPS-100-G2)	1	E	Key	2
B	User Manual	1	F	Cold pressed terminal(large /small)	10
C	Anchor Bolt	2	G	Contactor control line	2
D	O -type terminal	3			

5. Dimension & Weight



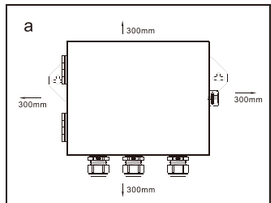
Dimension (L x W x H)：332*250*85mm
Weight : 2.8KG

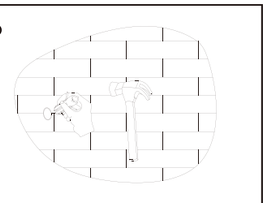
6. Tools

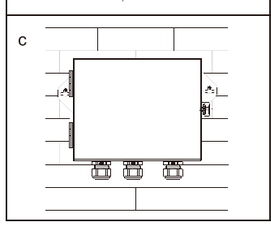


NO	Description	NO	Description
1	Pipe clamp	4	Rubber hammer
2	Diagonal plier	5	Driller
3	Screwdriver		

7. Opening step of EPS box

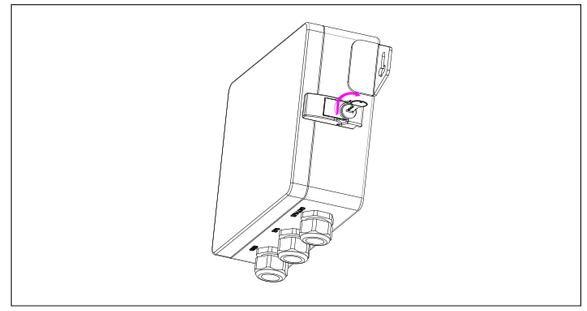






1. To leave at least 300mm space from EPS BOX
2. Make the position of 2 holes(282mm) .
3. Drill holes with φ10 drill Depth: at least 40mm.

8. Open the EPS box



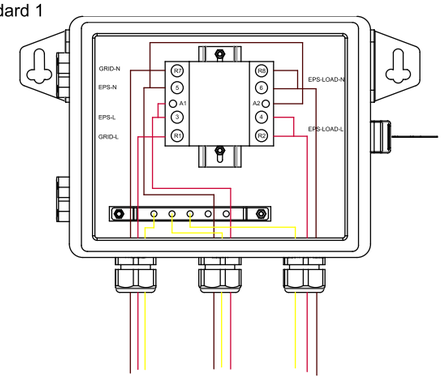
As shown above, please put the key into the Key hole on the EPS BOX right, clockwise rotation of 90°, the lower end of the first lock up gently move Open, remove the lock at the upper end of the buckle, then you can open the cover, Step of locking the cover opposite to the above.

9. Wiring Connection

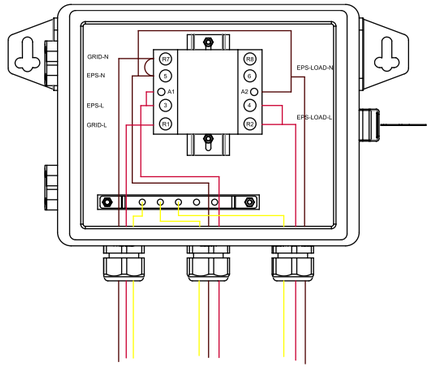
9.1 total wire diagram

There are two types wiring diagram of EPS BOX show as below:

standard 1



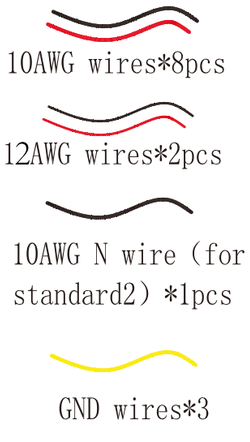
standard 2



Standard 1 is for general use, and standard 2 is for like Australia where Neutral line can't be switched. When wiring for EPS BOX, please follow the local wiring regulations.

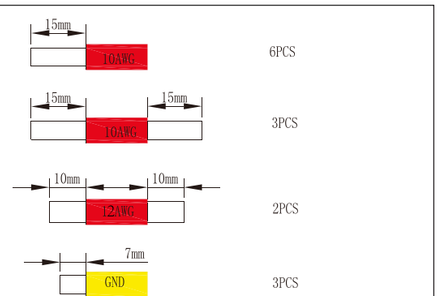
9.2 Wires preparation

1. Wires should be prepared before installation(12AWG wire has been configured in accessory bag).

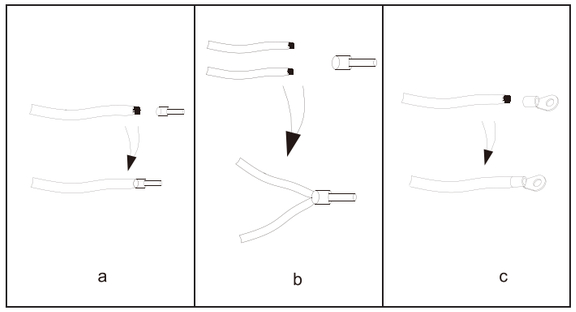


Note:
1.These include 2pcs 10AWG wire (1pcs red, 1pcs black) for shorting contactor ports 2 and 4, 6 and 8, Its length is about 60cm, 10 AWG N wire (for standard2)the length is about 50cm.

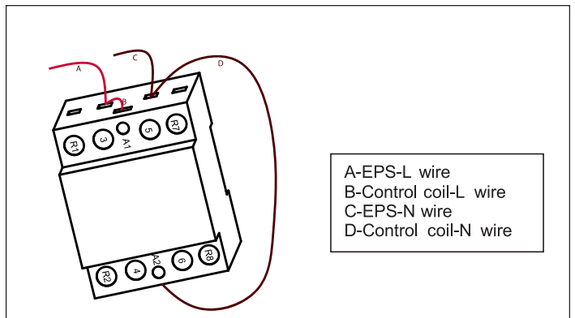
2.Use the diagonal plier to trip 15mm of insulation from one side of the 10AWG wires(6pcs);
Use the diagonal plier to trip 15mm of insulation from two side of the 10AWG wires (2pcs,If it is standard 2, you need 3pcs);
Use the diagonal plier to trip 10mm of insulation from two side of the 12AWG wires(2pcs);
Use the diagonal plier to trip one side of GND wire about 7mm(3pcs).



3.There are three types wire need to be machining, please check ref to 9.1 wiring diagram. The follow three type wire are show as below:



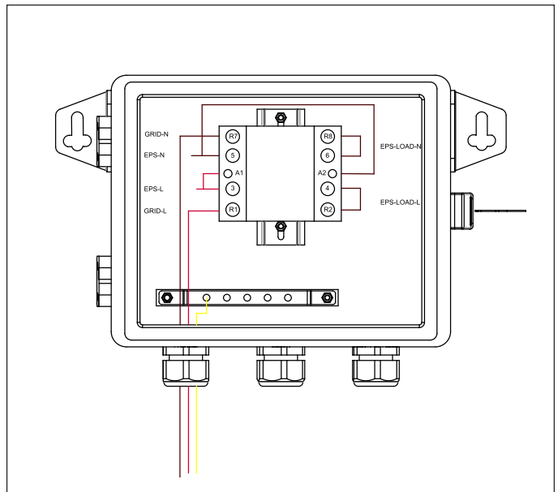
9.3 Control coil-wires Connection



A-EPS-L wire
B-Control coil-L wire
C-EPS-N wire
D-Control coil-N wire

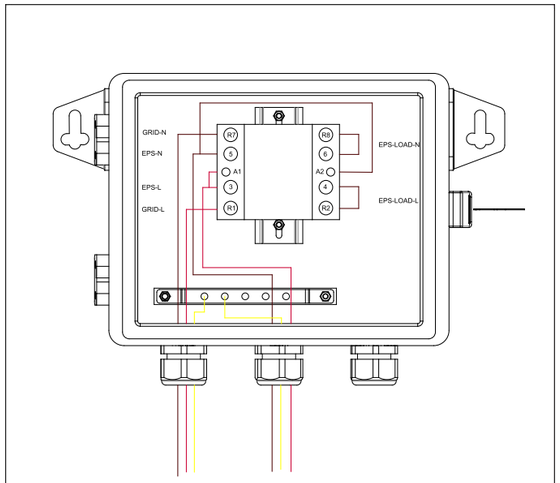
Use the screwdriver to unscrew the nut with position numbers A1，3, A2 and 5 in the contactor, Then the red 12AWG wire ends are inserted into A1 and 3, both ends of the black 12AWG wire are inserted into A2 and 5, and tighten the corresponding nut with a screwdriver.

9.4 GRID-wires Connection



Use the screwdriver to unscrew the nut with position numbers R1 and R7 in the contactor, and then insert GRID-L wire and GRID-N wire into the port of contactor(R1&R7) through the cable nut and tighten them with screwdriver. Use a screwdriver to lock the ground wire on the E-wire copper bar.

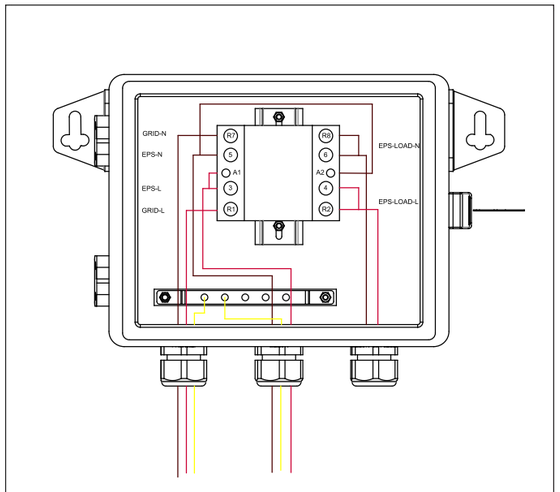
9.5 EPS-wires Connection



Use the screwdriver to unscrew the nut with position numbers 3 and 5 in the contactor, and then insert EPS-L wire and EPS-N wire into the port of contactor(3&5) through the cable nut and tighten them with screwdriver. Use a screwdriver to lock the ground wire on the E-wire copper bar.

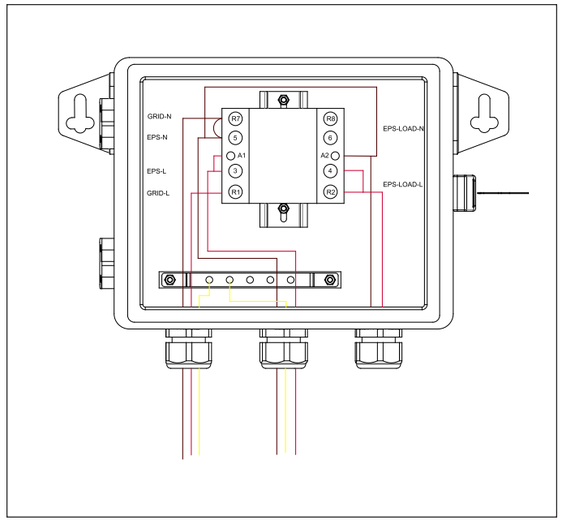
Note:
Please prevent other wires from getting loose during operation.

9.6 EPS LOAD-wires Connection



Use the screwdriver to unscrew the nut with position numbers 2, 4, 6 and 8 in the contactor, and the red 10AWG short wire ends were inserted into the contactor port 2 and 4, The Black 10AWG short wire ends were inserted into the contactor port 6 and 8, then insert EPS load-L wire and EPS load-N wire into the port of contactor(2&6) through the cable nut and tighten them with screwdriver. Use a screwdriver to lock the ground wire on the E- wire copper bar.

Note:
The following step is an example for Australian grid system where neutral line can't be switched. (If you do not have this requirement, ignore the following step)



Use the screwdriver to unscrew the nut with position numbers 5 and 7 in the contactor, and then insert EPS-L wire and EPS-N wire into the port of contactor(5&7) through the cable nut and tighten them with screwdriver.

9.7 Checking

Please make sure that all wiring in the EPS BOX istightened，check the connection diagram with section 9.1.

10. Trouble shooting

In the process of use, if the EPS load does not work when the on-grid, please turn off the Hybird inverter, and then open the EPS BOX cover, check the GRID and EPS load line is connected properly.
If the load does not work when off-grid, please turn off the inverter, and then open the EPS BOX cover, check the control line, the EPS wiring and the EPS LOAD wiring is normal.

11. EPS BOX usage methods

After connecting the EPS BOX internal wire, close the cover, the GRID and EPS end of the EPS BOX are respectively connected with the AC GRID and EPS output of N1 HV series or N1 HL series hybrid inverter, EPS load end access load, run N1 HV series or N1 HL series hybrid inverter, load to normal operation.

12. Caution

Please use the device within the scope of specification. Excessive current or voltage may cause device damage
To avoid personal injury due to energy hazard, remove wristwatches and jewelry when repairing. Use tools with insulated handles.
Repair are to be performed only by qualified technical personal.