

EP600 Energy Storage System

Installation SOP

Version 1.2



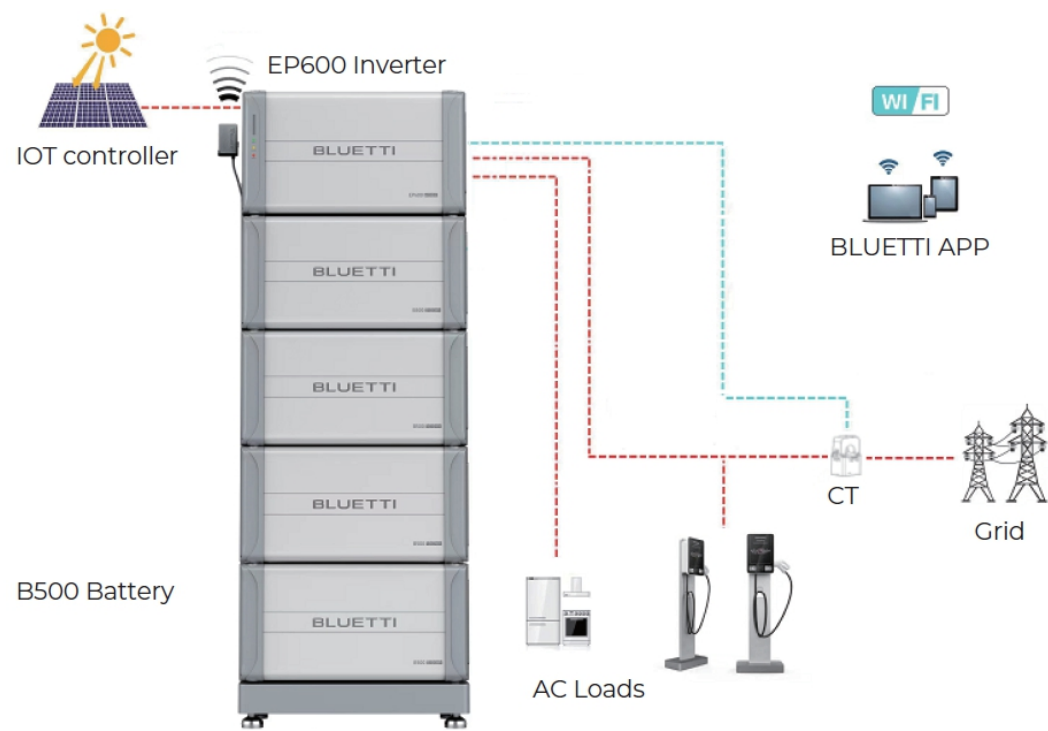
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1.Declaration

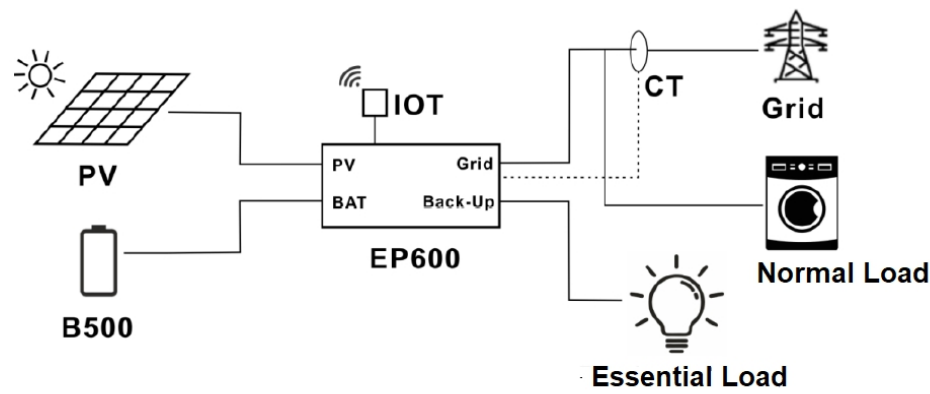
- The installation should be performed by a licensed electrician. Improper installation may result in death or serious injury and property damage.
 - This document is provided for reference purpose ONLY and does not constitute legal advice. Please consult the local licensed electrician for details.
- BLUETTI shall not be liable for any damage or injury caused by improper installation of the backup system.

2.EP600 energy storage system introduction



2.1Electrical connection modes 1: DC coupling

DC coupling

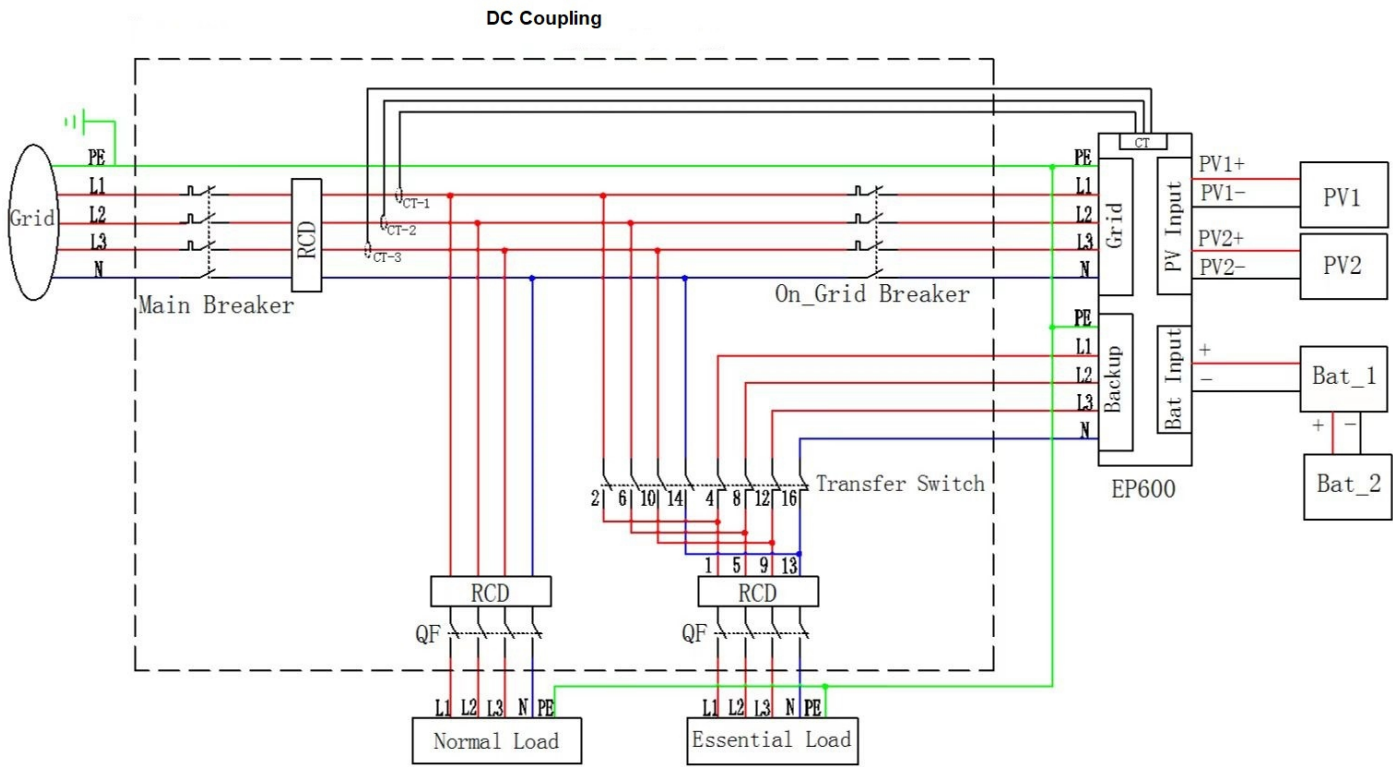


NOTES:

For single-phase household appliances with a power larger than 2000W or three-phase loads with a total power larger than 6000W, such as the Embedded induction cooker and air conditioner ,they need to be connected to the grid.

Through the energy management system, our energy storage system can intelligently output single-phase 2000W or three-phase 6000W electric energy to household appliances, and the rest of the power supply is provided by the power grid to achieve the purpose of reducing electricity costs.

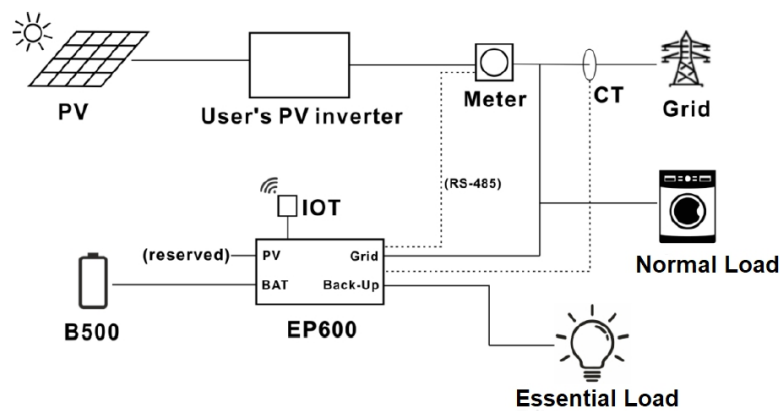
The single phase load with power greater than 2000W shall not be connected to the BACKUP terminal.



2.2Electrical connection modes 2: AC coupling

If you have a three-phase solar PV inverter, please install a Meter which is in the accessories box.

AC coupling

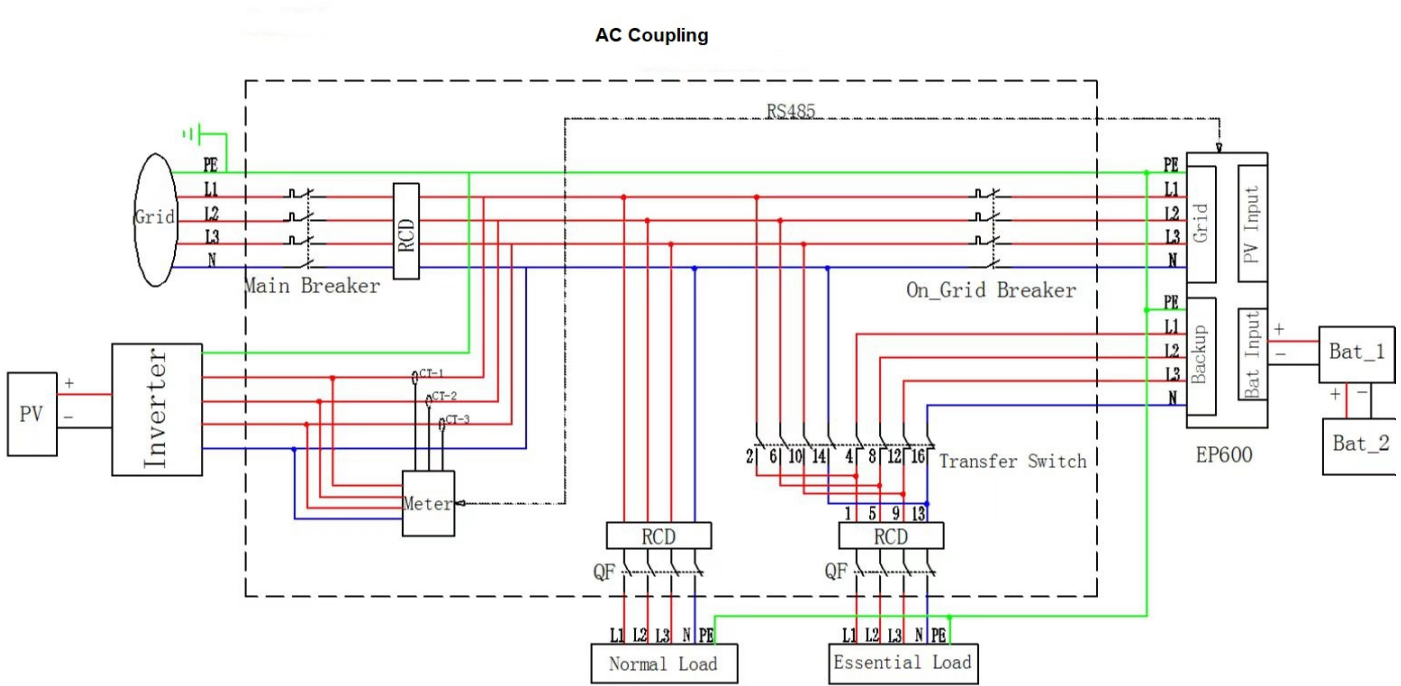


NOTES:

For single-phase household appliances with a power larger than 2000W or three-phase loads with a total power larger than 6000W, such as the Embedded induction cooker and air conditioner ,they need to be connected to the grid.

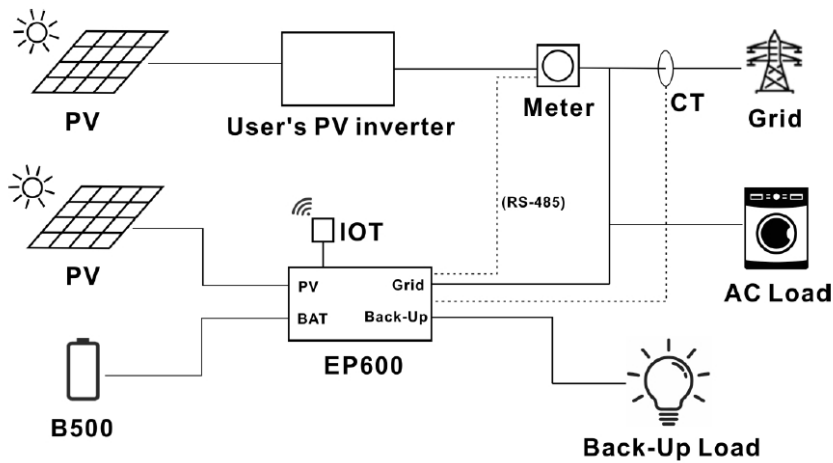
Through the energy management system, our energy storage system can intelligently output single-phase 2000W or three-phase 6000W electric energy to household appliances, and the rest of the power supply is provided by the power grid to achieve the purpose of reducing electricity costs.

The single phase load with power greater than 2000W shall not be connected to the BACKUP terminal.



2.3 Electrical connection mode 3: AC/DC coupling

AC-DC coupling



3. Structure Installation of the ESS

3.1 Installing the base, Keep 55mm distance between the base and wall.

3.2 Put the units on the base



3.3 Install the mounting brackets

Step 1 Fix the brackets.



Step 2 Mark the drilling position. Remove the inverter and batteries from the base and drill the holes on the wall.

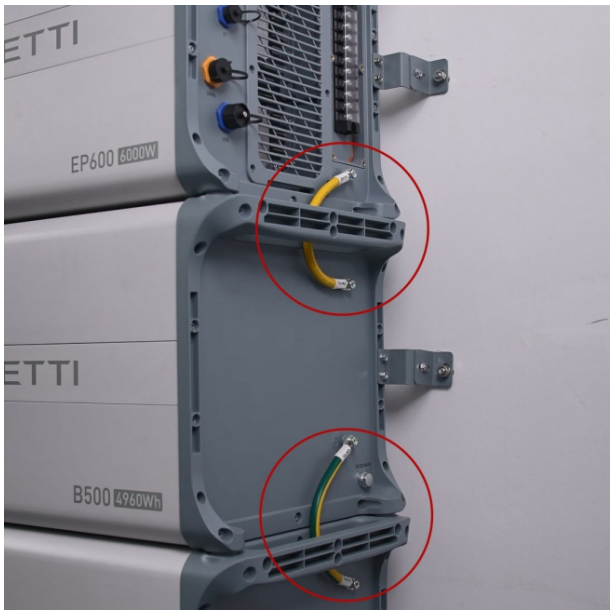


Step 3 Put back the inverter and batteries, and install the screws to fix the mounting brackets.



4. Electrical connections of the ESS

4.1 Connecting the grounding cables



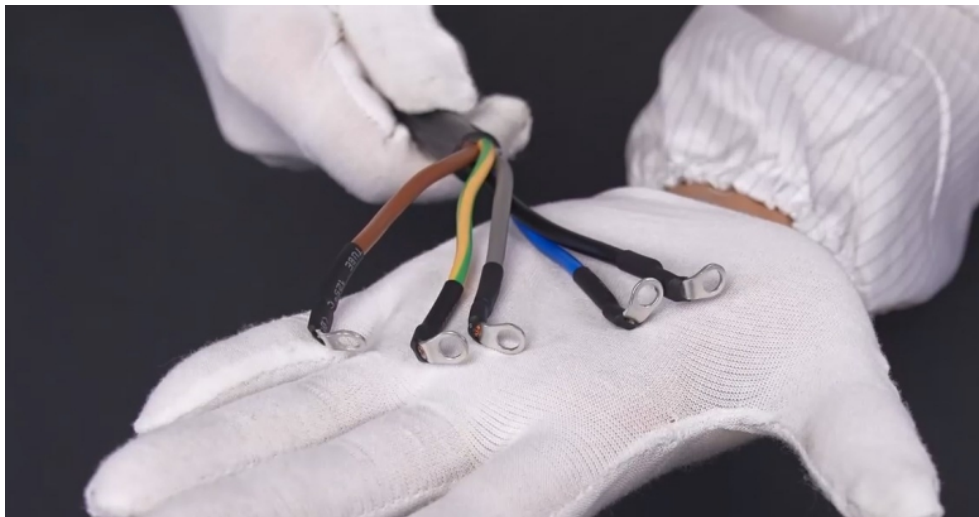
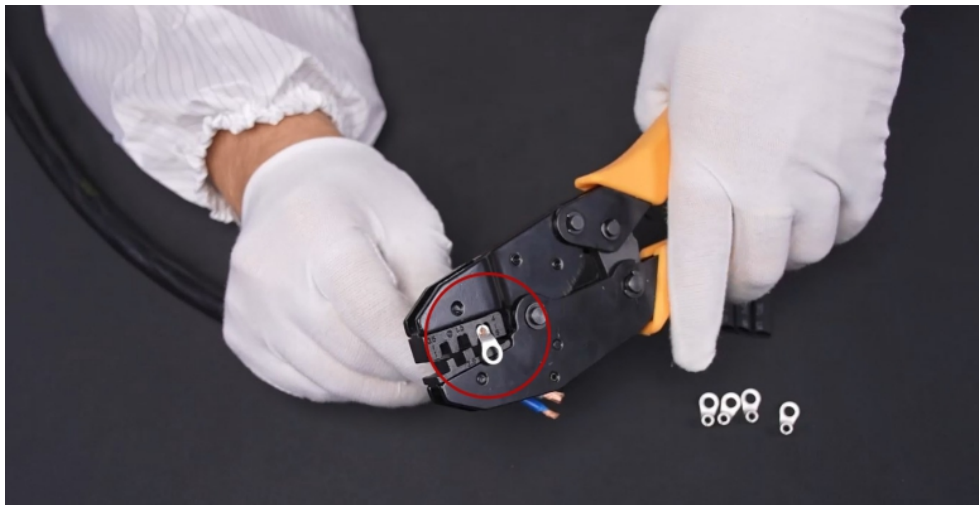
4.2 Connecting the Grid and Backup interface cables

4.2.1 Prepare the cables

Step 1 Strip the wires.



Step 2 Install the OT terminals.



Step 3 Connect the Backup cable (Sequence: L1, L2, L3, N, PE).



Step 4 Connect the Grid cable (Sequence: L1, L2, L3, N, PE).



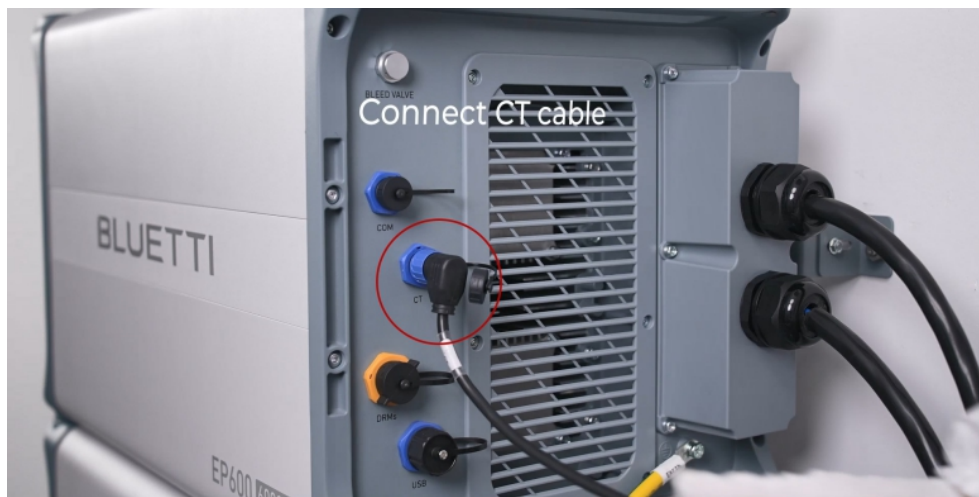
4.2.2 Install the AC cable protection case

Install the AC cable protection case to EP600.



4.3 Connecting the CT signal cable

Connect the CT signal cable to the CT port of EP600.



4.4 Connecting the battery power cables

Step 1 Connect the black battery power cable to EP600.



Step 2 Install the black protection cover (BAT- Input) back to EP600.



Step 3 Connect the black battery power cable to B500.



Step 4 Connect the red battery power cable to B500.

4.5 Connecting the communication cable between EP600 and B500

Connect the communication cable between EP600 (LINK PORT2) and B500 (TO PCS).

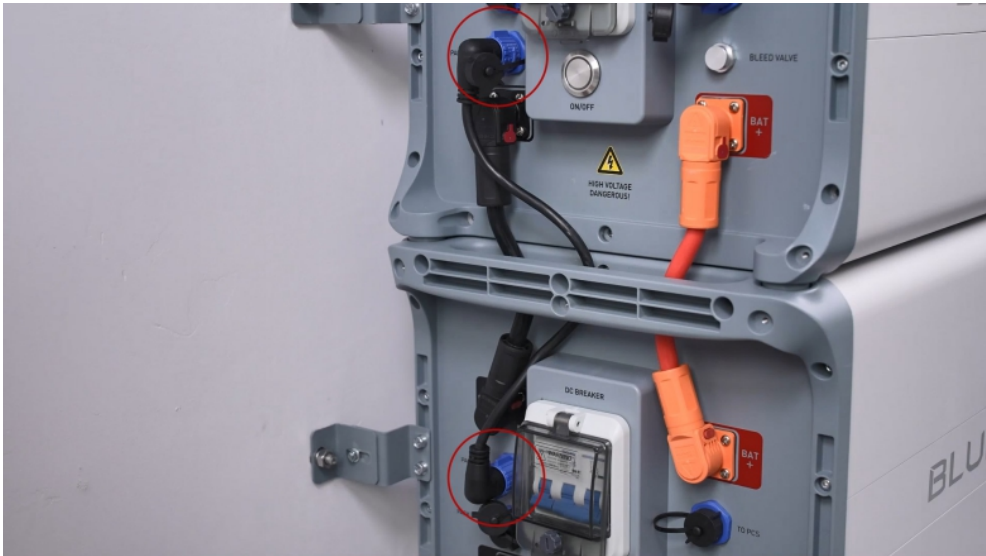


4.6 Connecting the battery expansion cables between B500s

Step 1 Connect the black and red battery expansion cables.



4.7 Connecting the communication cables between B500s



4.8 Installing the IoT controller

Step 1 Connect the signal cable to LINK PORT1 on EP600.



Step 2 Drill the installation holes and mount the IoT controller on the wall.



4.9 Connecting the PV cables

Step 1 Install the metal core to the PV-/PV+ cable.



Step 2 Install the plastic housing the PV-/PV+ cable.



Step 3 Connect the PV cables to EP600.

4.10 Installing the auxiliary parts

Install the plastic cover (PV) to EP600 and install the plastic cover (AC, with label) to EP600.



4.11 Connecting to the main panel

4.11.1 Find out the essential household appliances

NOTE:

- Before installing the EP600 energy storage system, you should consider whether to make a partial backup system. If there is a lot of power outage, you need to build a backup system.
- Please make sure the total rated power of the essential appliances connected to the BACKUP of EP600 such as the fridge and lights is less than 2000W each phase, in case three phase is less than 6000W.

NOTE: Other high-power appliances must be connected to the public grid.

4.11.2 Create a plan for the essential backup appliances

Before installing EP600 energy storage system, please create a plan for the essential appliances such as the refrigerator and lights . EP600 can output rated 2000VA each phase or three phase 6000VA. Please allocate the circuit breakers to your residential essential appliances.

Load Balancing Example:

Circuit Breaker Connections: Three 230 V single pole circuit breakers, or one three pole circuit breakers

PHASE ONE		PHASE TWO		PHASE THREE	
Main Appliance Hooked Up	Appliance Running Watts	Main Appliance Hooked Up	Appliance Running Watts	Main Appliance Hooked Up	Appliance Running Watts
Refrigerator	800	TV	200	Computer	200
Indoor Lighting	800	Vacuum Cleaner	1000	Hair Dryer	1600
Total Running Watts Phase One:	1600	Total Running Watts Phase two:	1400	Total Running Watts Phase three:	1800

Total essential Running Watts Phase One: <2000W,

Total Running Watts Phase Two: <2000W,

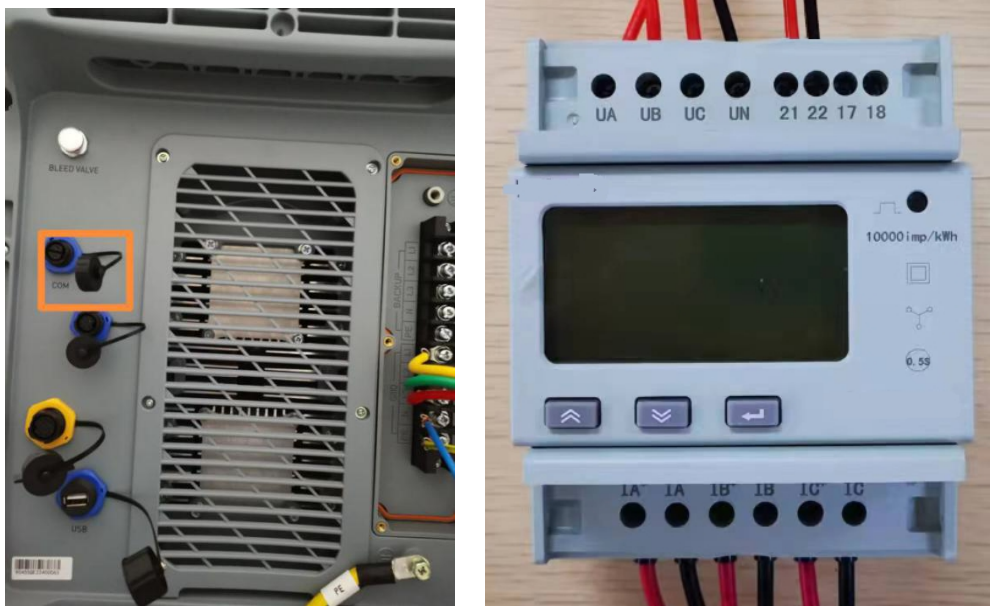
Total Running Watts Phase Three: <2000W,

It's OK!

4.11.3 Please connect the Meter communication cables to the COM Port of the EP600;

The Meter is **only** applicable to the case where the PV grid-tied inverters have been installed.

- 1) Connect the cables of UA UB UC UN to the L1/L2/L3/N of the PV inverter,
- 2) Connect the cables of the CT to the Meter and tied to the wires of L1/L2/L3 of the PV inverter.
- 3) Please connect the 485-A red wire to pin 21,485-B black wire to pin 22.



4.11.4 Transfer Switch circuit connection

4.11.4.1 About Transfer Switch

Transfer switch is necessary for building a partial residential backup system.

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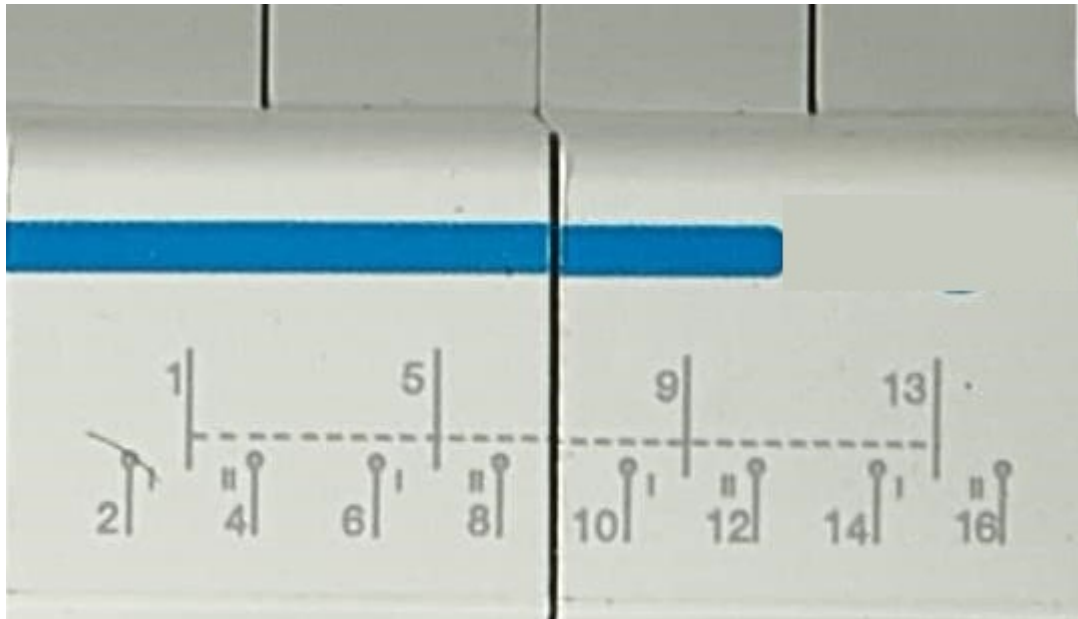
NOTES:

Before installing the EP600, please read following notes carefully:

- 1) Switch to I means the electrical power is from the EP600. Owners can switch to I until faults occur to EP600.
- 2) When faults occur to EP600, we need to switch to II to use the public grid.
- 3) If the public power grid is always outage, please switch to I to use EP600 UPS mode, if not, switch to II.

删除[3010291]: appliance.

Switch to II

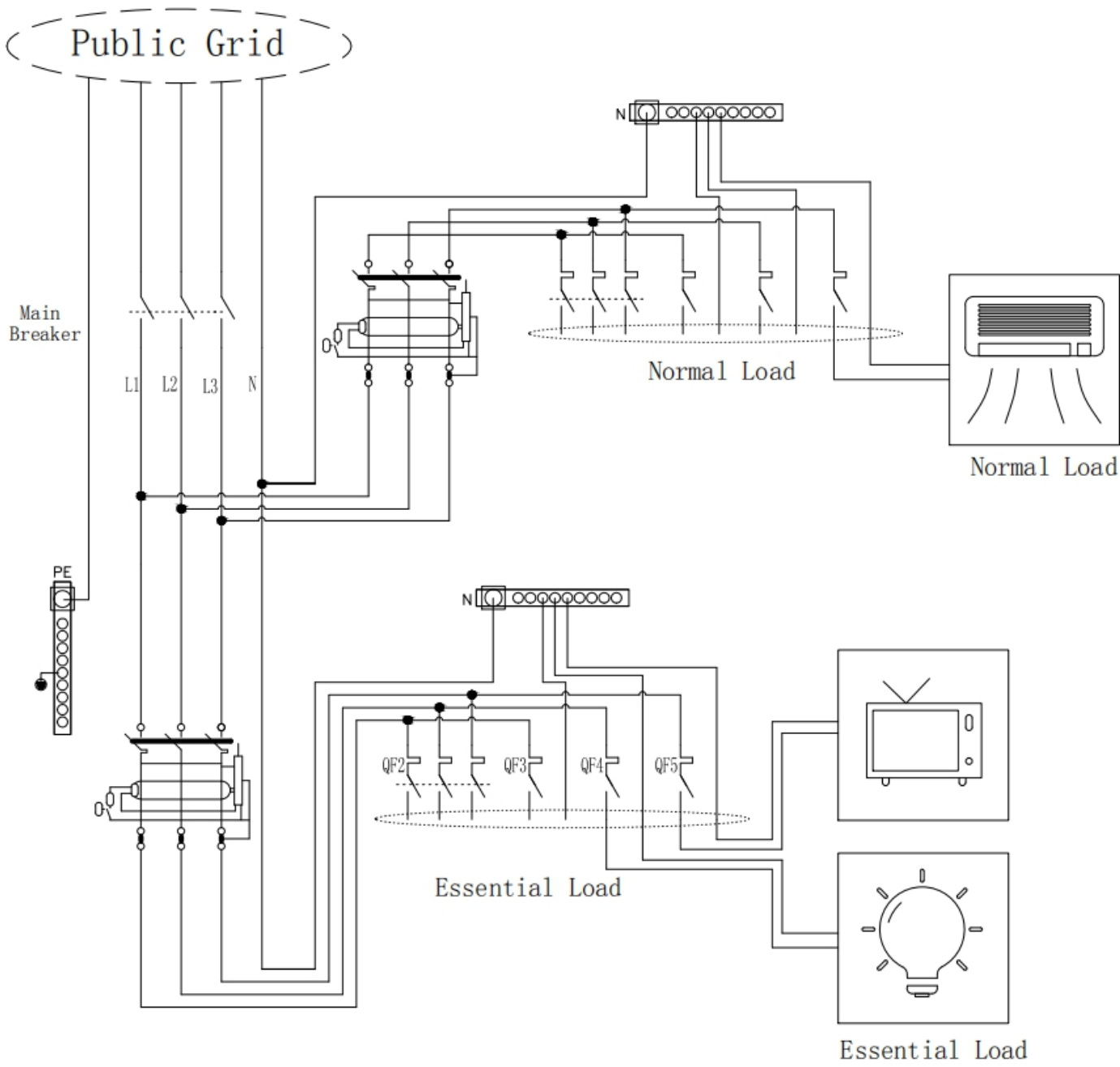


4.11.4.2 How to connect the transfer switch to the **residential** circuit

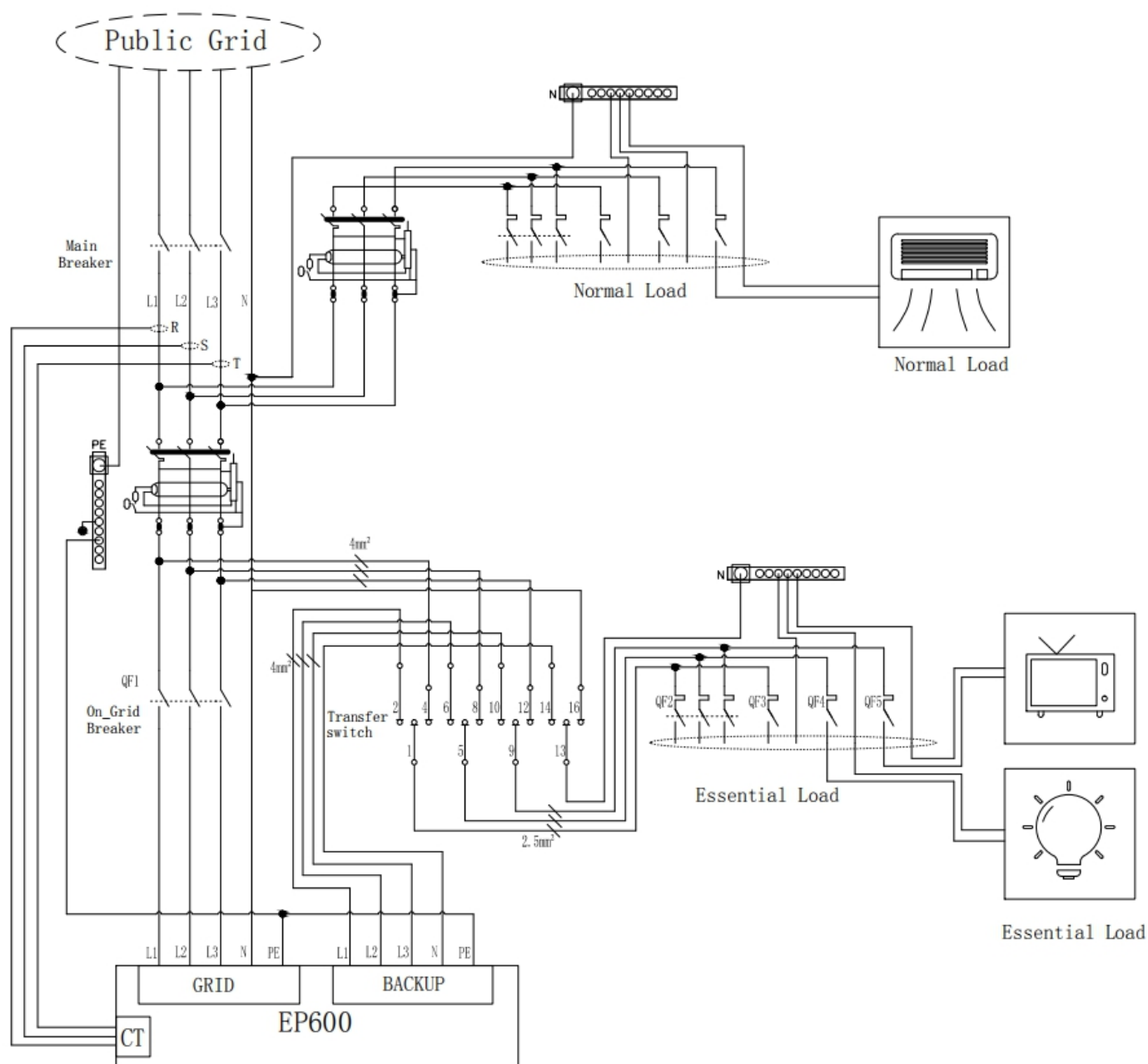
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Following is a example **residential** circuit before EP600 installation

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Then, connect the EP600 and transfer switch to the residential circuit as following:

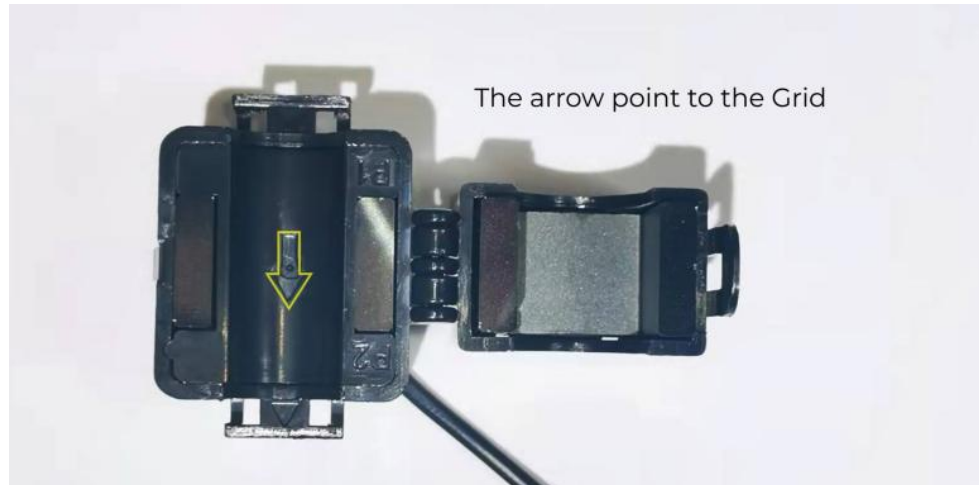


NOTES:

- Connect the L1/L2/L3/N wires from EP600 BACKUP to the pin 2(L1), pin 6(L2), pin 10(L3), pin 14(N) of transfer switch;
- Connect the L1/L2/L3/N wires from public grid to the pin 4(L1), pin 8(L2), pin 12(L3), pin 16(N) of transfer switch;
- Move away the wires of the circuit breaker connected to essential appliances, then connect pin1(L1), pin 5(L2), pin9(L3), pin 13(N) of transfer switch.
- The CT is used for detecting the current, please follow our installation video.

4.11.5 Installing the CT to grid power cables.

- The arrow inside the CT points to the grid.



- Pay attention to the phase sequence.

L1 to R, L2 to S, L3 to T

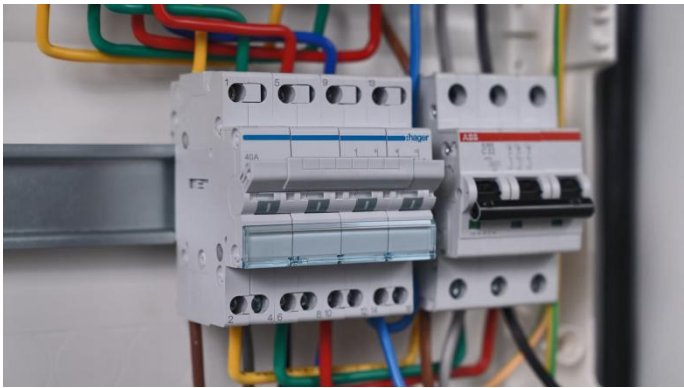


4.11.6 Turn on the transfer switch

Step 1 Turn the transfer switch to position II. The current flows from the Grid to the loads.



Step 2 Turn the transfer switch to position I. The current flows from the Backup port of EP600 to the loads.



5. Powering on the ESS

Step 1 Switch on the DC circuit breakers on B500 battery packs. Press and hold the power button of any battery pack for 3 seconds and the green indicator on the button lights up.

Step 2 Wait for 40 seconds until the green indicator of the inverter is always on.

Step 3: When connecting to the solar panel , please switch on the DC circuit breakes on EP600.

Step 4 Switch on the AC circuit breakers connected to the EP600 grid port.

Step 5 Power on the system via the BLUETTI app.

删除[Wang Ying（王颖）]: **Step 1** Switch on the DC circuit breakers on EP600.

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6. Using BLUETTI App

BLUETTI App allows you to monitor and control the EP600 energy storage system (ESS) in the palm of your hand via Bluetooth or WiFi, with features like Real-time Alarm, Error Message, Data Collection, Operation Status, Parameter Configuration, and Firmware Upgrade.

Note:

Apply to operating systems: Android 8.0 or above, iOS 11.0 or above.

Bluetooth is available on your phone.

The router applies to WiFi of IEEE 802.11 b/g/n, 2.4GHz, please turn off the 5G option.

BLUETTI recommends a router with WPA or WPA2_PSK encryption. EP600 ESS doesn't support enterprise encryption (commonly used on public WiFi networks that require user authentication, like airport hot spots) and WEP and WPA TKIP encryption.

Pictures shown below are for illustration only. Actual UI may vary.

Scan the QR code to download the BLUETTI app. Or search for the app from App Store or Google Play Store.

For more details, refer to the “EP600 App User Manual.”



7. More information

Website: www.bluettipower.eu Email: sale-eu@bluettipower.com sale-uk@bluettipower.com