

How to build
a partial home backup system with
EP500Pro

User Manual



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EP500Pro



Thank You!

Thank you for making BLUETTI a part of your family.

From the very beginning, BLUETTI has tried to stay true to a sustainable future through green energy storage solutions for both indoor and outdoor use while delivering an exceptional eco-friendly experience for our homes and our world. That's why BLUETTI makes its presence in 70+ countries and is trusted by millions of customers across the globe.



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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.**

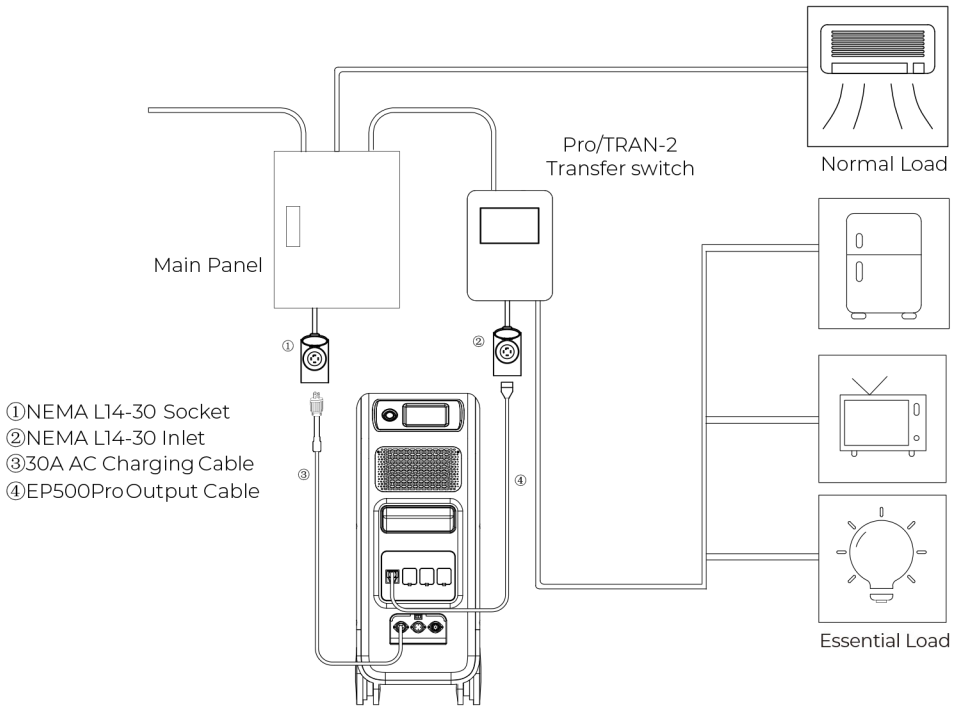
1. 120 Volts EP500Pro Backup System

- EP500Pro's Machine Type is set to "Single Phase" by default. DO NOT change this setting if you are operating a single EP500Pro.
- To build the backup system, you need the following:

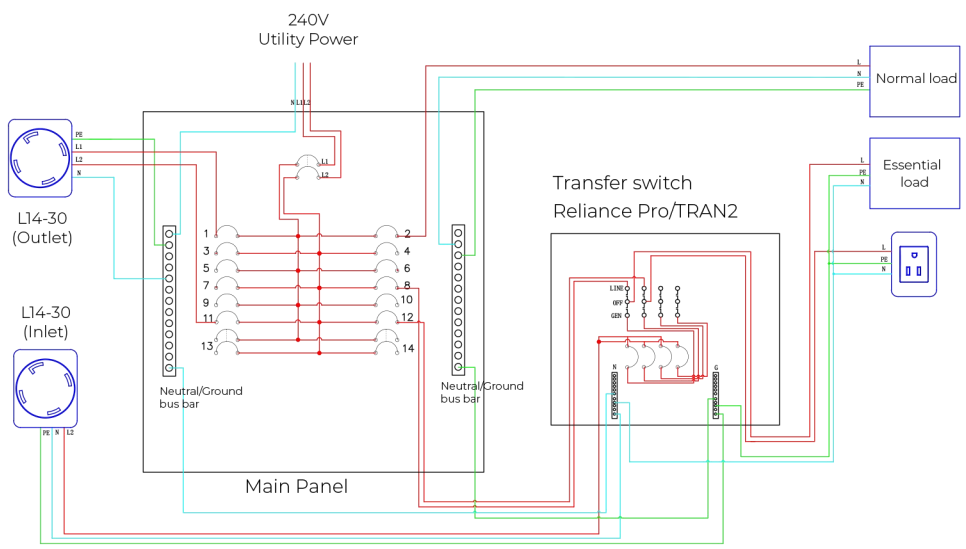
Accessories	Qty.
Transfer switch: Reliance 310A Pro/Tran 2	1
30A AC Charging cable	1
NEMA L14 extension cord	1

NOTE: Please read the Reliance 310A Pro/Tran2 manual before installation.

<http://www.reliancecontrols.com/Documents/PT2%20Loadside%20Installation%20and%20Operating%20Instructions.pdf>



Refer to the diagram below for proper installation of EP500Pro backup system.



NOTE:

- The backup system must be properly installed by a licensed electrician.
- Please check the voltage at outlets before plugging in your household appliances.
- It is a electrical schematic. For the actual wiring diagram, please refer to Reliance 310A PRO/TRAN2 installation instructions.

2. 240 Volts EP500Pro Backup System

You can build the 240V Split Phase System by pairing two EP500Pro units together. The system also has double the available output power and capacity.

Besides Two EP500Pro units, you also need the following:

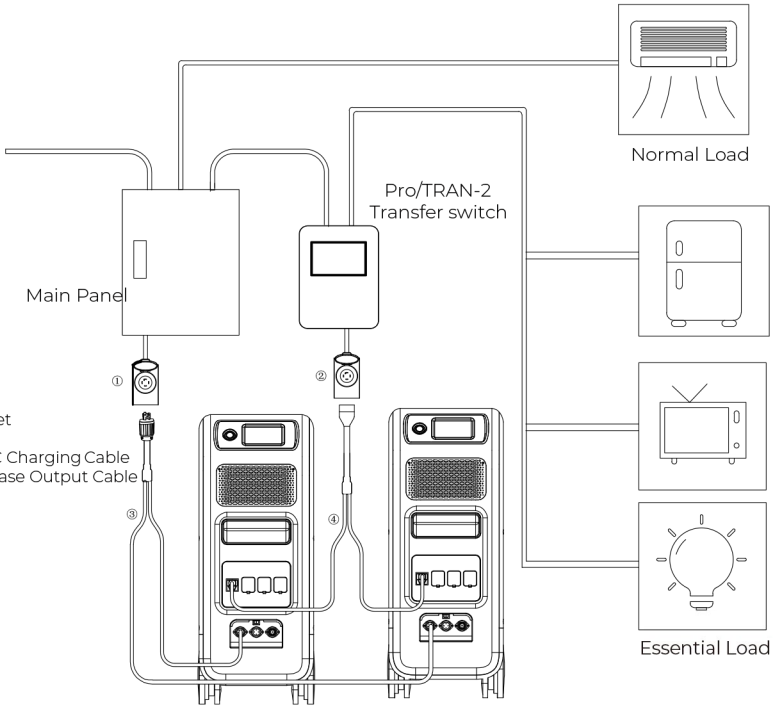
Accessories	Qty.
Transfer switch: Reliance 310A Pro/Tran 2	1
EP500 Pro split-phase output cable(from BLUETTI)	1
NEMA L14-30R outlet	1
BLUETTI 30A-AC-charging-cable	1
Communication cable for split phase function	1

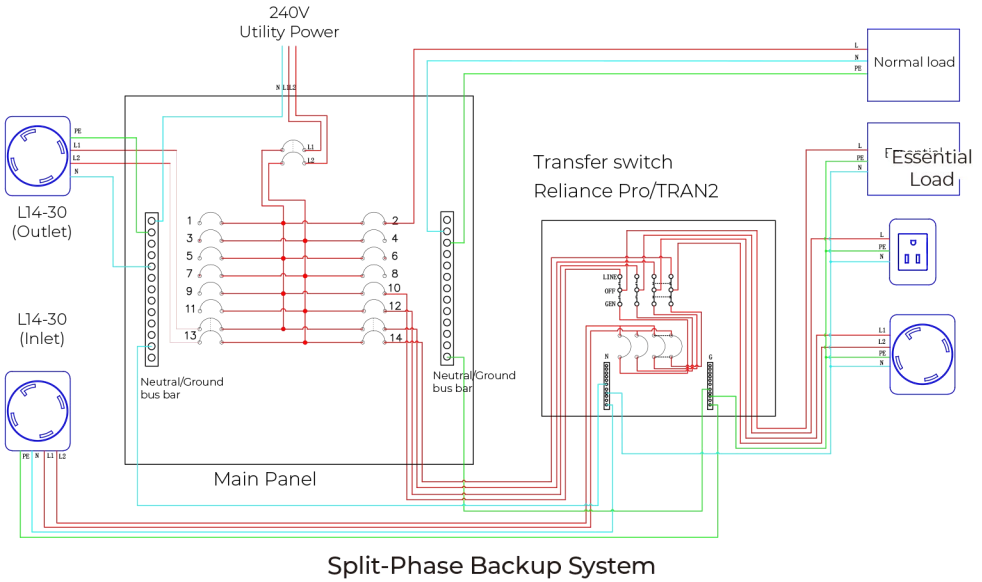
Please read the Reliance 310A Pro/Tran 2 manual before installation.

<http://www.reliancecontrols.com/Documents/PT2%20Loadside%20Installation%20and%20Operating%20Instructions.pdf>

Before installing the Reliance Controls transfer switch system, please make a emergency energy plan that includes which appliances you need during a power outage. It is highly recommended to “balance the load” between the two phases of transfer switch, that’s to say, do not connect high-wattage appliances centrally to a single EP500Pro.

1. NEMA L14-30 Outlet
2. NEMA L14-30 Inlet
3. 30A Split-phase AC Charging Cable
4. EP500Pro Split-phase Output Cable





! Caution! The backup split phase system must be properly installed by a licensed electrician.

How to configure the EP500Pro units:

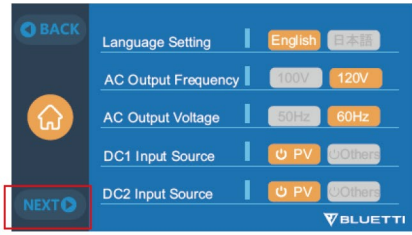
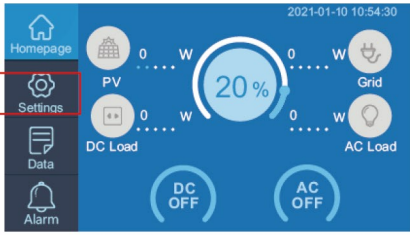
Step 1: Turn off both of the EP500Pro units.

Step 2: Connect the EP500Pro units to transfer switch via the EP500Pro split-phase output cable. One L14-30 plug goes to a unit.

Step 3: Connect the two EP500Pro units via the communication cable.

Step 4: Turn on either EP500Pro unit.

Step 5: Go to “Settings” and tap “Next”.

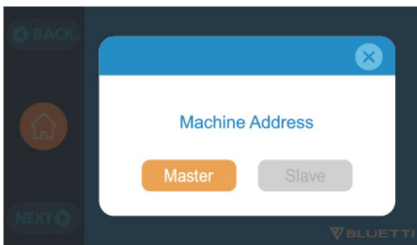


Step 6: Tap “Single Phase”, the machine type option pops up and select “Split phase”.

- Machine Type: Select Split Phase

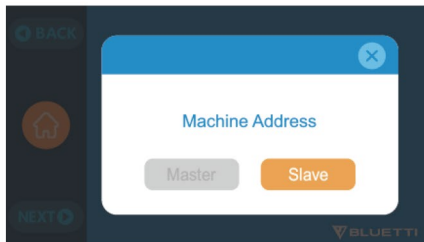


Step 7: Select the “Master” in the Machine Address pop up.

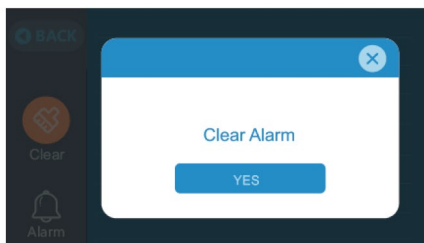


Step 8: Turn on the other EP500Pro. Repeat step 5 and 6 to set its machine type to “Split phase”.

Step 9: Select the “Slave” in the Machine Address pop up.



If the connection fails, clear the alarm history and wait a moment .



Please watch the video from : <https://www.youtube.com/watch?v=aDLxv5oM5kg>

NOTE:

- Disconnect the AC charging cables from EP500Pro units before connecting to the transfer switch.
- The split phase system can be controlled ONLY on the “Master” set.
- If one of the EP500Pro units is out of power, the split phase system fails automatically.

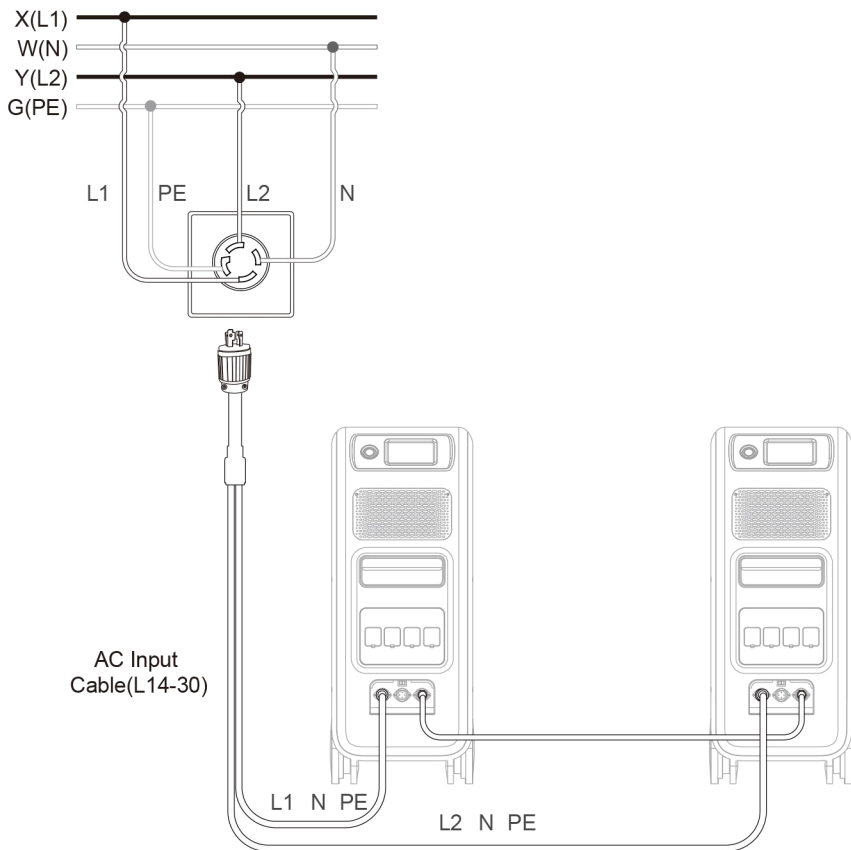
NOTE:

- The backup system must be properly installed by a licensed electrician.
- Please check the voltage at outlets before plugging in your household appliances.
- It is a electrical schematic. For the actual wiring diagram, please refer to Reliance 310A PRO/TRAN2 installation instructions.
- In the main panel, two Neutral/Ground bus bars have been connected together with copper strips.

Connect the EP500Pro units to the main panel

Charge the 240V split phase system with EP500Pro 30A split phase AC charging cable. Plug the cable to a NEMA L14-30 socket (240V)and the other two connectors into the AC input ports of the EP500Pro units.

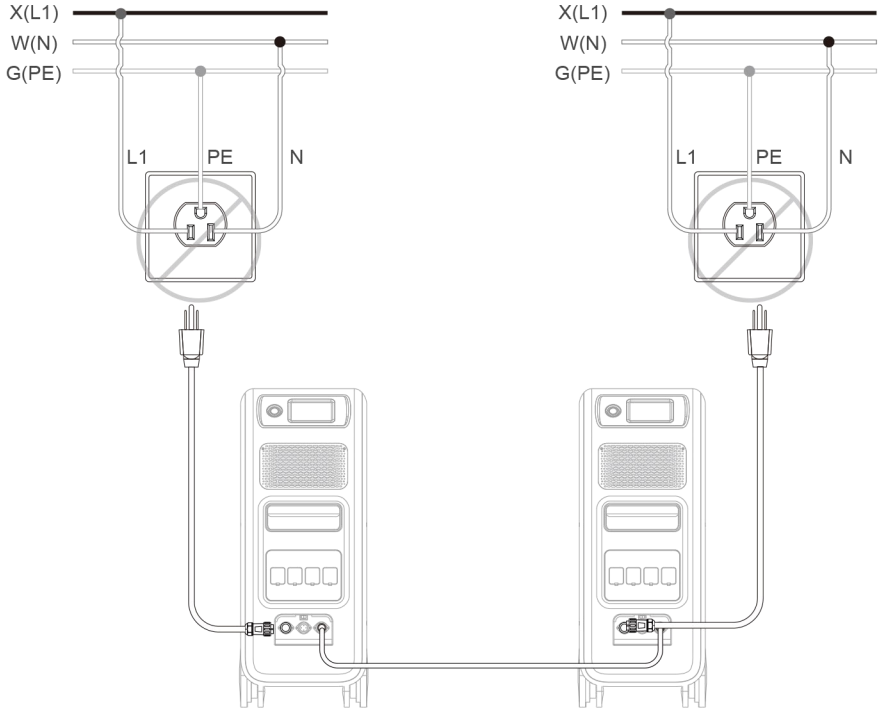
The AC input ports should be connected to L1/N/PE and L2/N/PE, respectively. The current capacity of AC input plug shall be $\geq 30A$.



WRONG CONNECTION

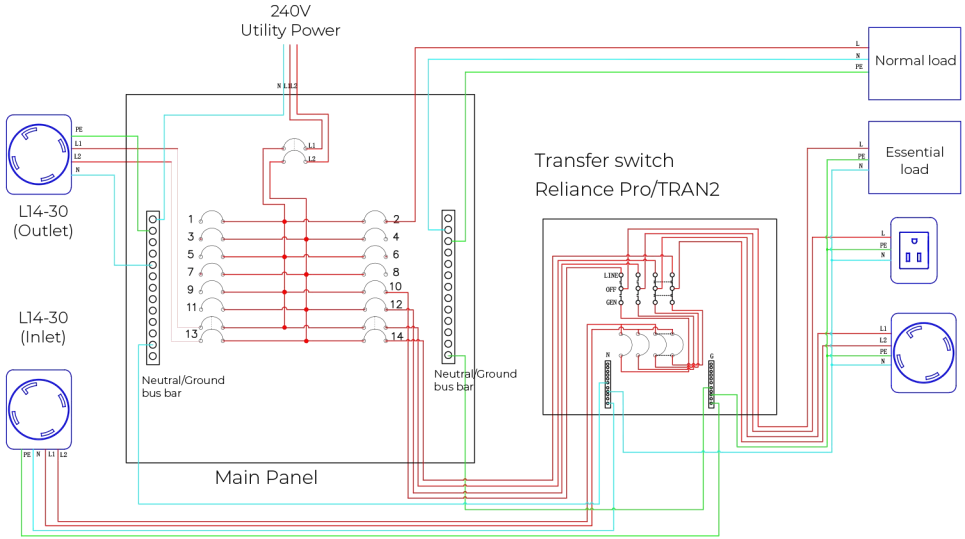
Warning! DO NOT charge EP500 Pro with standard AC charging cable in the split phase system, as this may cause damage to the batteries inside and invalidate your warranty.

L: Live wire N: Neutral wire



NOTE:

The split phase system supports charging via solar panels. You can charge it by PV and the EP500Pro 30A split-phase AC charging cable simultaneously. (AC input only through the EP500Pro 30A split-phase AC charging cable but not the standard AC charging cable).



3. Accessories

3.1 Transfer switch

Recommendation: Reliance Controls 310A PRO/TRAN 2 transfer switch.



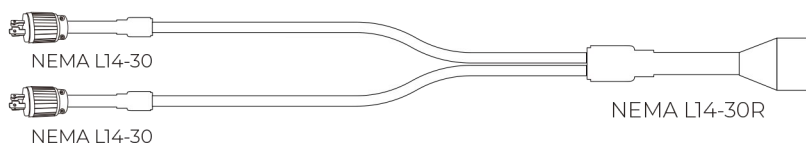
3.2 BLUETTI 30A AC charging cable

Please buy it from BLUETTI official store.

<https://www.bluettipower.com/products/ac300-30a-ac-charging-cable?variant=42518515876059>



3.3 BLUETTI EP500Pro split-phase output cable(purchase from BLUETTI: <https://www.bluettipower.com>)



3.4 BLUETTI EP500Pro 30A split-phase AC charging cable

Please buy it from BLUETTI official store.

<https://www.bluettipower.com/products/30a-ac-charging-cable-for-split-phase-function>



How to build a partial home backup system with EP500Pro (Only for US standard)

3.5 Communication cable for split-phase function

Please buy it from BLUETTI official store.

<https://www.bluettipower.com/products/communication-cable-for-split-phase-function>



3.6 NEMA L14-30R socket

For charging the 240V EP500Pro split phase system.

Recommendation: Journeyman-Pro HJP 2710 NEMA L14-30R socket.

3.7 NEMA L14-30 extension cord

If you want to get 10 FT NEMA L14 extension cord , the referenced purchase address as following

3.8 Circuit breaker & protection box

If you have a residential solar array with a voltage of 12V-150V, you're strongly recommended to use a DC circuit breaker panel to enable or disable solar charging.

NOTE : If there are two solar panel arrays with a total open circuit voltage of 12-150V, you also need two 2P 16A DC circuit breakers.

4. How to install Reliance Controls

Please refer to Reliance Controls website: www.reliancecontrols.com

4.1 How to install Reliance Controls ProTran2 - Part1, Tools and Planning

<https://www.youtube.com/watch?v=xTqjwT6WJ7o&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86>

4.2 How to install Reliance Controls ProTran2 - Part2, Mounting

<https://www.youtube.com/watch?v=wNbBHVHgw0Y&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86&index=2>

4.3 How to install Reliance Controls ProTran2 - Part3, Wiring

<https://www.youtube.com/watch?v=TKruj9BpZM8&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86&index=3>

4.4 How to install Reliance Controls ProTran2 - Part4, Replacing Circuit Breakers

<https://www.youtube.com/watch?v=IkOuauT-YP8&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86&index=4>

4.5 How to install Reliance Controls ProTran2 - Part5, Installing The Power Inlet Box

<https://www.youtube.com/watch?v=OM8sYRhEVPY&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86&index=5>

4.6 How to install dd Controls ProTran2 - Part6, How To Operate

<https://www.youtube.com/watch?v=O4GA9AK8Tmo&list=PLpYCE0n7d22iDNwpVnOF9HULSUYYBBRY86&index=6>

5. More information:

Website: www.bluettipower.com

Email: service@bluettipower.com



Just Power On