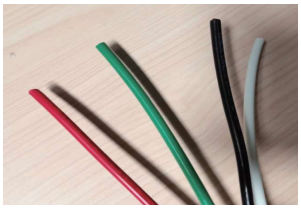
BLUETTI EP900

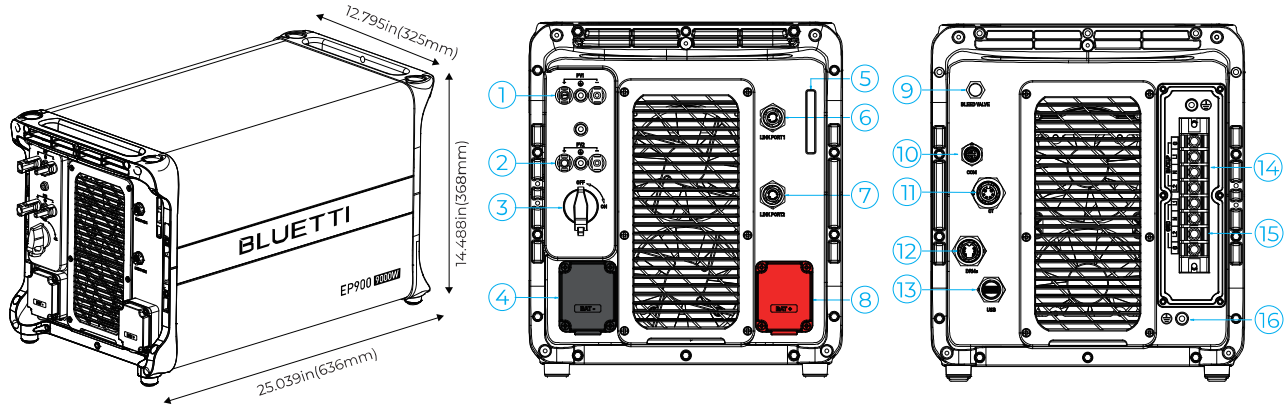
Quick Guide V2.1

Contents

1. Special tools and parts need before installation for EP900

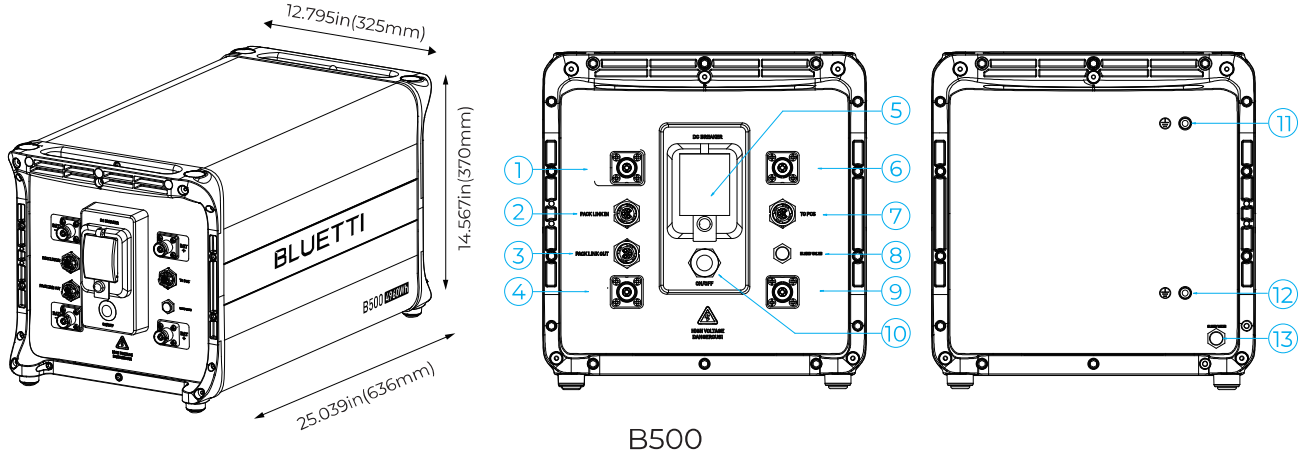
No.	Item	Picture	Remarks
1	Crimping tools		It is not provided by BLUETTI
2	Sub panel (Transfer Switch)		The sub panel with interlock breaker is provided by the BLUETTI
3	AC disconnect		The safety switch is connect-ed between the main panel to the EP800 grid input terminal .60A ,240V. It is not provided by BLUETTI
4	Junction box , and junctions		Recommend to connect the cables from sub panel to EP800 backup teminal or grid teminal. It is not provided by BLUETTI
5	Electric cable		White, black, red ,green , 6 AWG electric cables . It is not provided by BLUETTI
6	Liquid-tight conduit		3/4 inch or above, it is not provided by BLUETTI
7	Electric metallic tube and other accessories		3/4 inch or above, it is not provided by BLUETTI

2. Overview



EP900

1	PV input 1	5	LED indicator	9	Bleed valve	13	USB port
2	PV input 2	6	IoT signal port (Link Port 1)	10	COM Port (For grid communication module)	14	BACKUP Terminal
3	DC switch	7	Battery signal port (Link Port 2)	11	CT	15	GRID Terminal
4	BAT- terminal	8	BAT+ terminal	12	DRMs port (For generator & meter)	16	GND Terminal (Grounding)

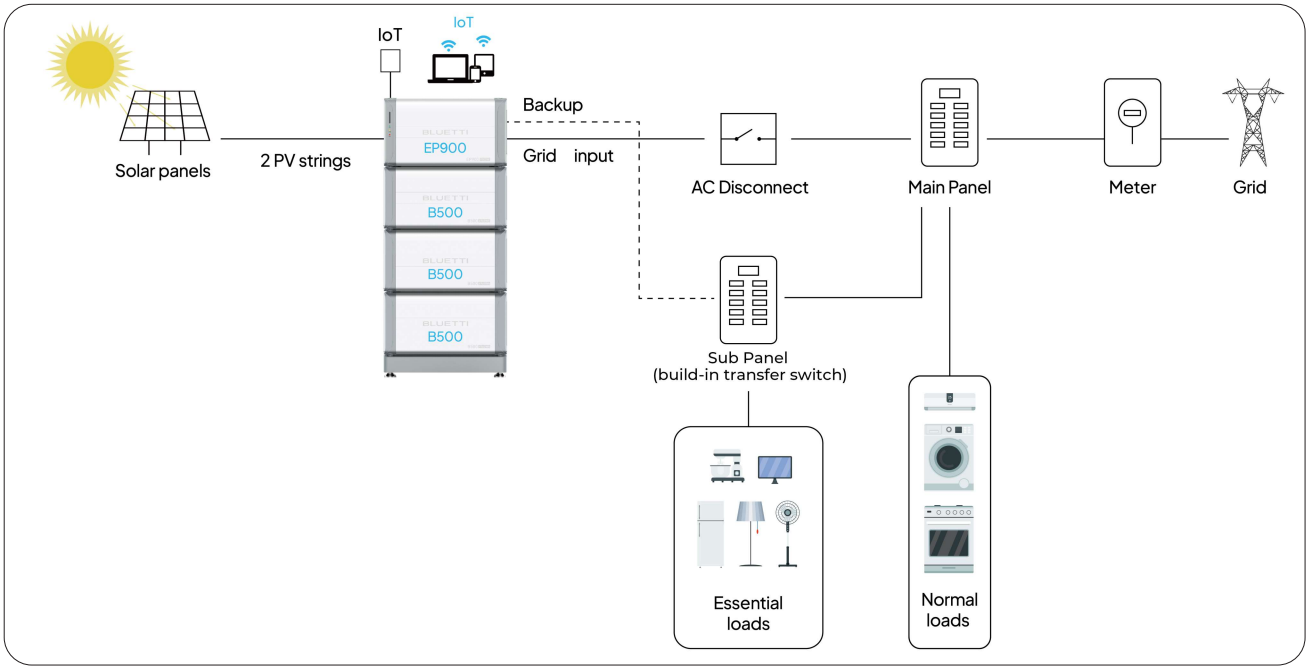


B500

1	BAT- terminal 1	6	BAT+ terminal 1	11	Grounding port 1
2	Pack link-in	7	To Pcs (Inverter signal port)	12	Grounding port 2
3	Pack link-out	8	Bleed valve 1	13	Bleed valve 2
4	BAT- terminal 2	9	BAT+ terminal 2		
5	Breaker switch	10	Power button		

3. Installation

3.1 Overview

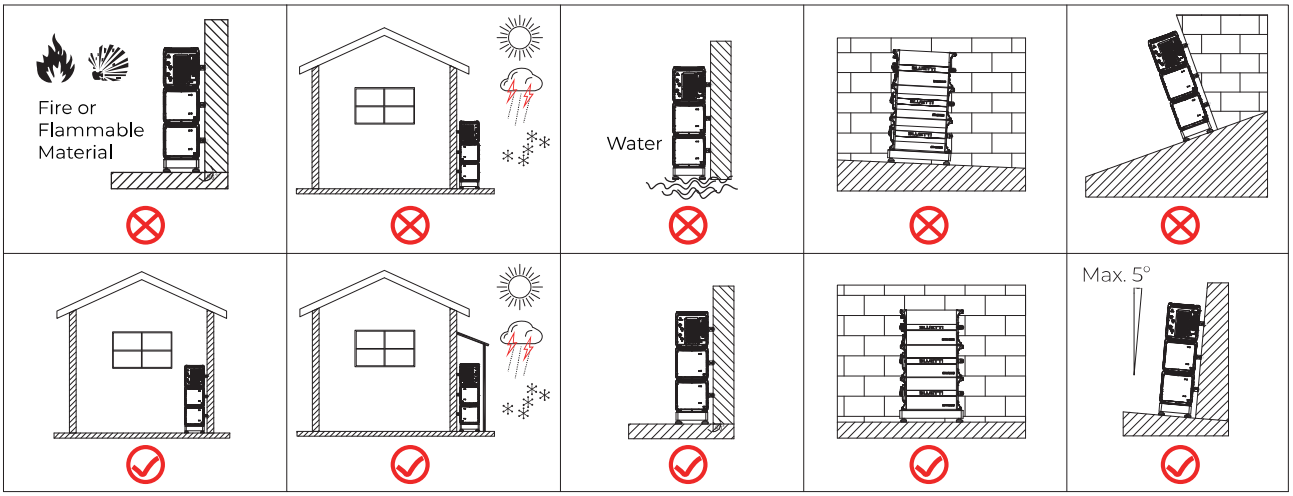


3.2 Installation requirements

Before Installation: Important Notes

- The installation must be performed by a licensed electrician. Improper installation may result in death or serious injury and property damage.
- Prepare necessary tools and accessories.
- Read the EP900 User Manual and Quick Start Guide.
- Recommended the open circuit voltage of solar system is between 240V and 500V.

Select an Appropriate Installation Location



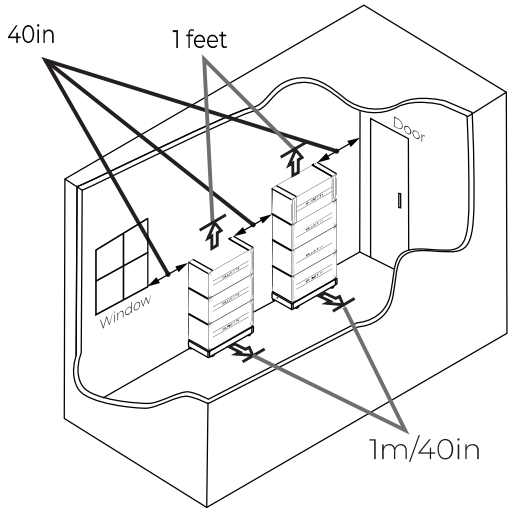
Operating Instructions

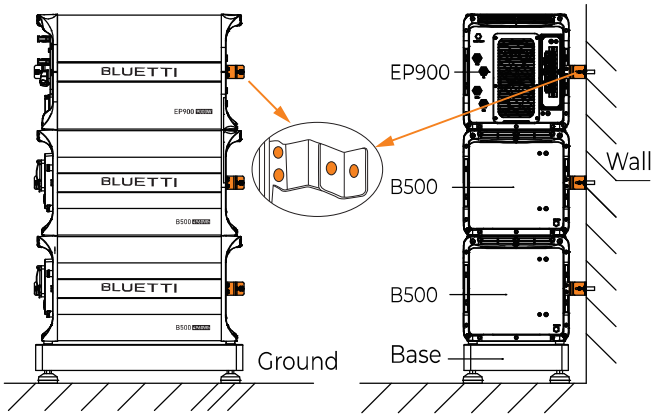
- If there's no power input and the SoC drops to 1%, switch off all battery main switches to prevent over-discharging. Only restart the system when recharging from the grid.
- Charge the batteries when the SoC is below 5% and maintain it at least at 5% for continuous operation.
- For long-term storage, charge the batteries to 40%-60% SoC and perform a full cycle at least every 3 months.

Temperature considerations:

Operating Temperature	Charging	Off-grid: 0°C to 40°C / 32°F to 104°F On-grid: -20°C to 40°C / -4°F to 104°F
	Discharging	-20°C to 40°C / -4°F to 104°F
Storage Temperature	-20°C to 0°C / -4°F to 32°F (Fully cycle monthly) 0°C to 35°C / 32°F to 95°F (Fully cycle every 3 months)	

3.3 Wall mounting





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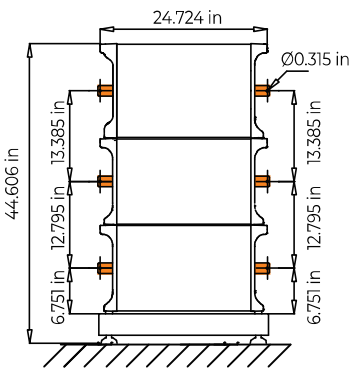

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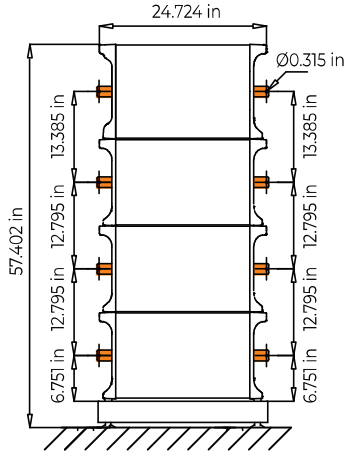

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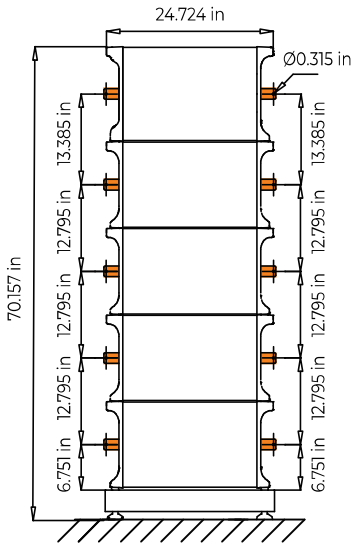
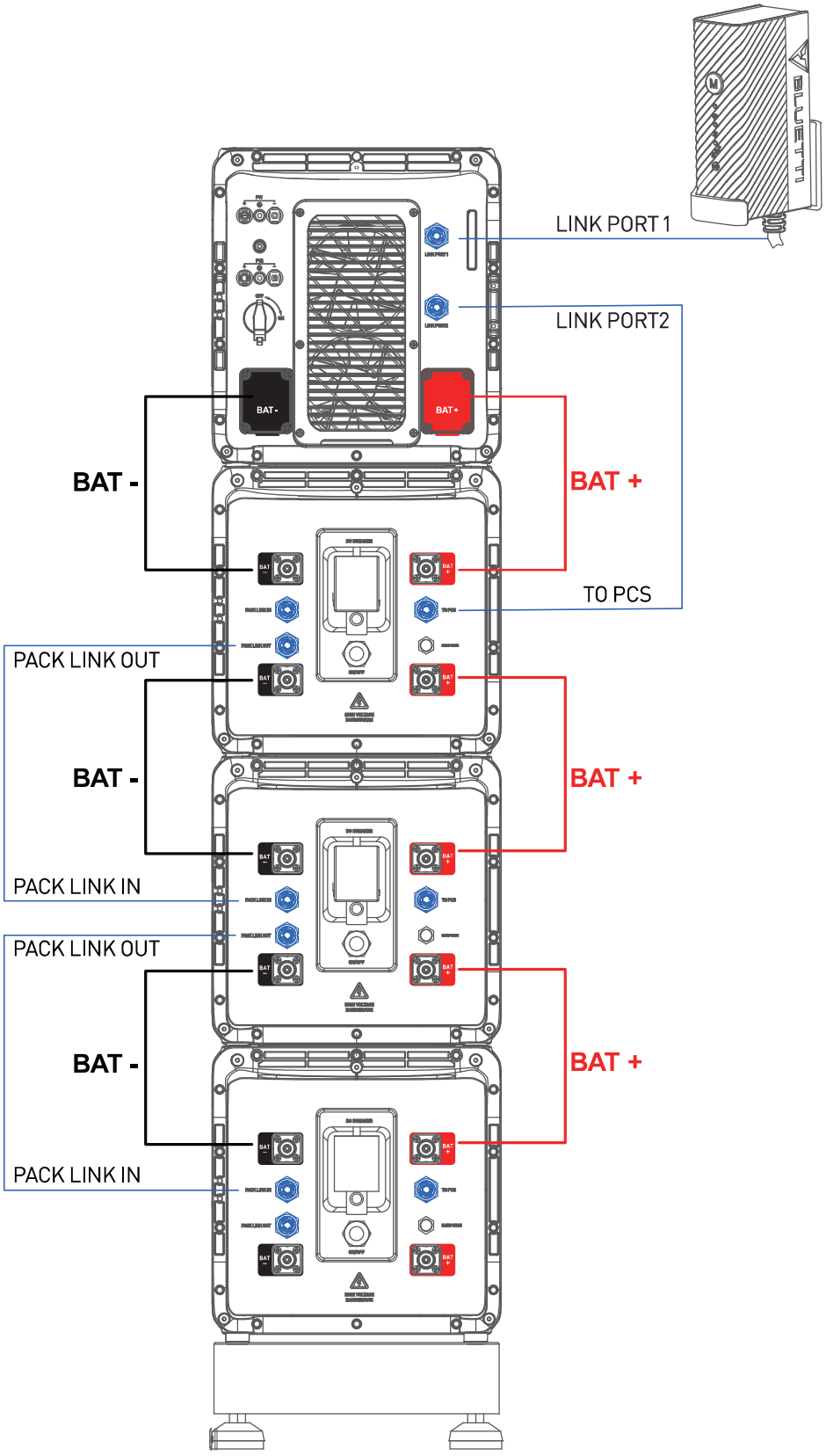
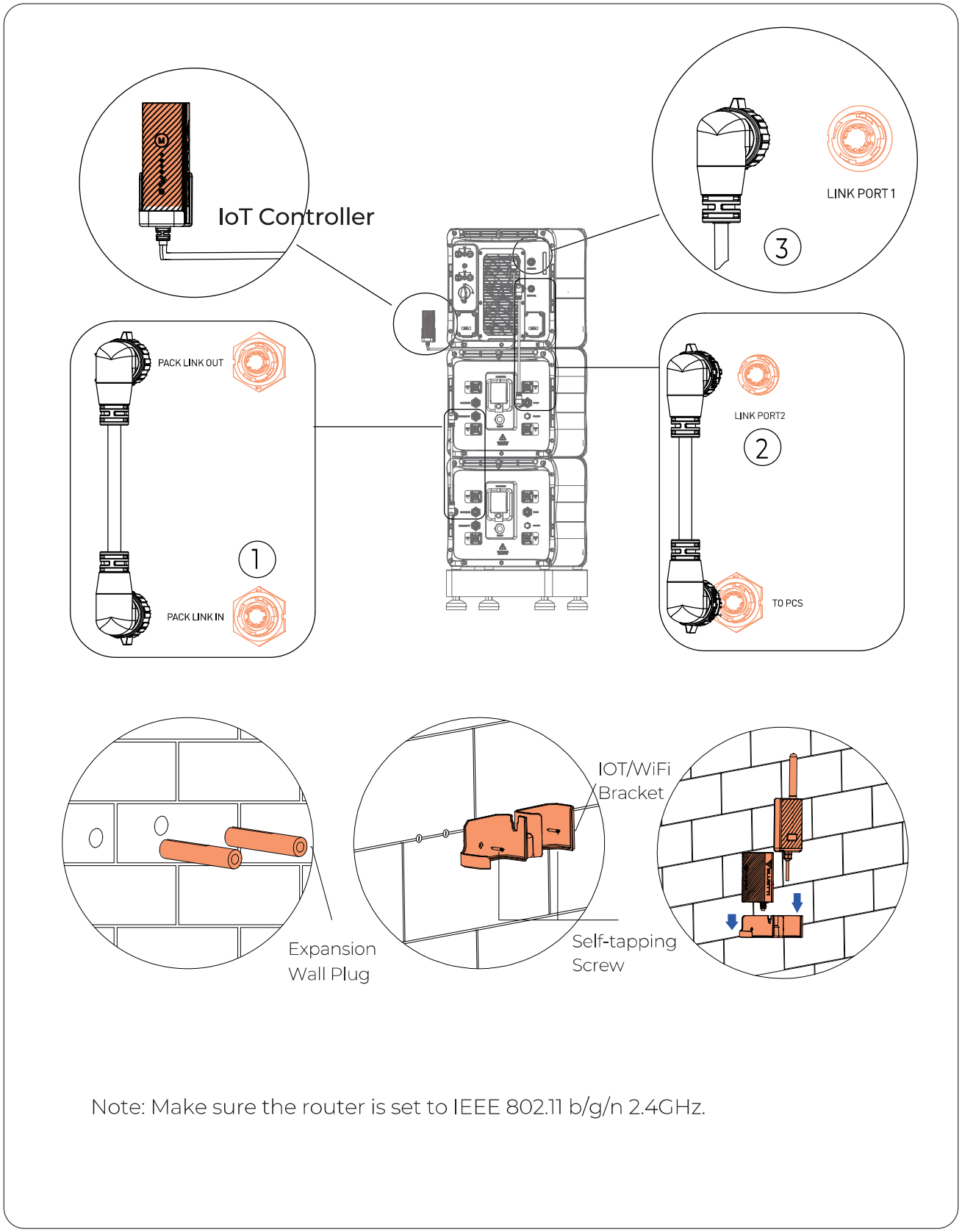


4. Electrical connection

4.1 Overview

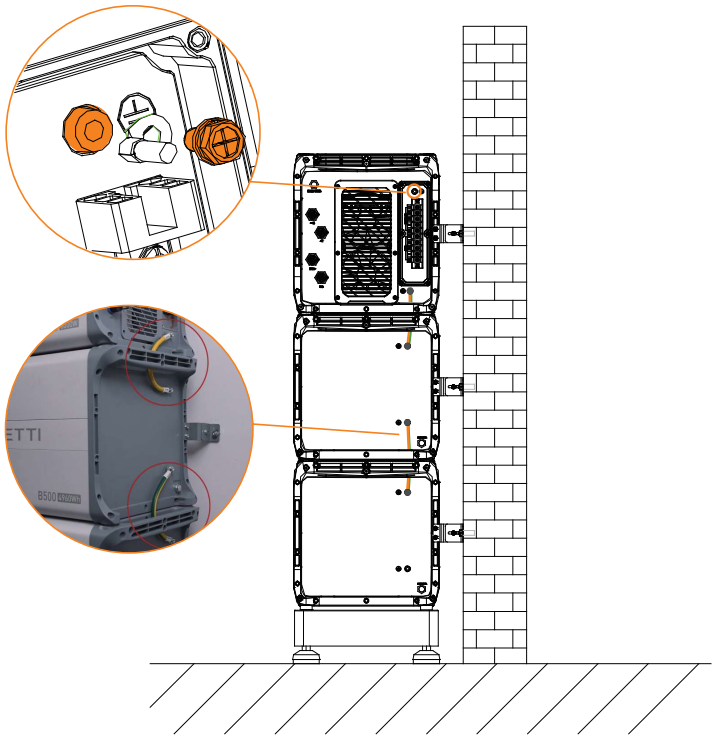


4.2 Connect the communication cable

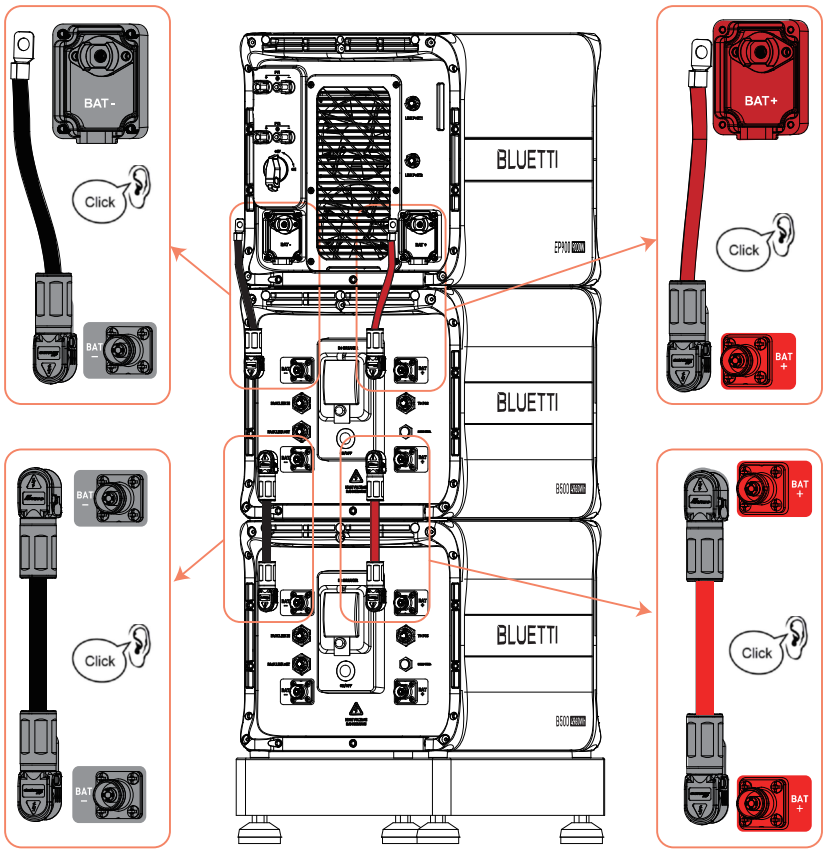


Note: Make sure the router is set to IEEE 802.11 b/g/n 2.4GHz.

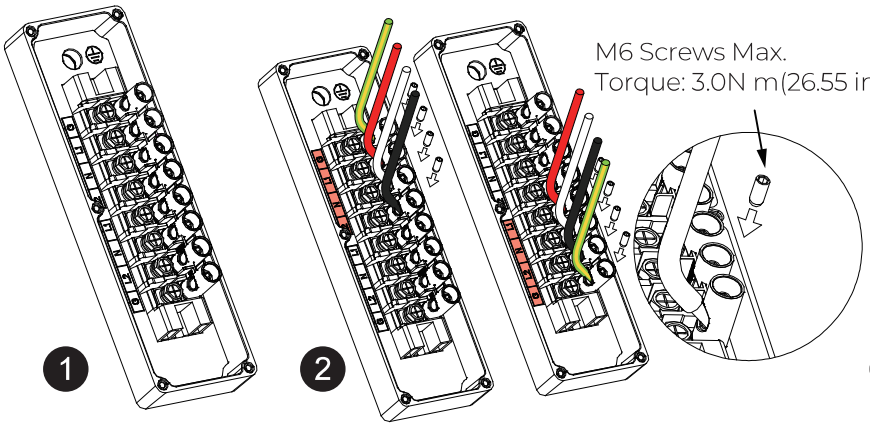
4.3 Connect the Grounding Cables

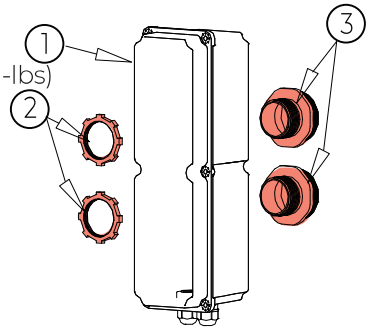


4.4 Connect the battery power cables

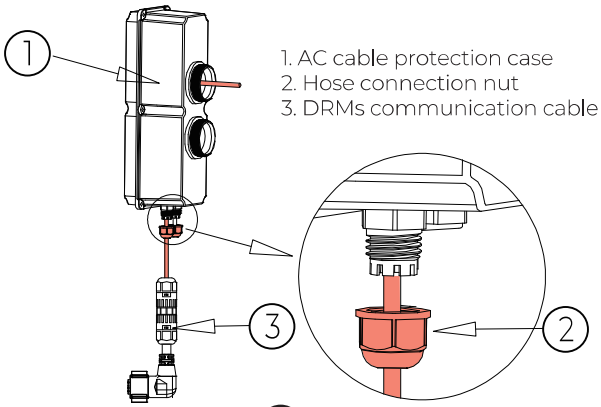


4.5 Connect the GRID and BACKUP cables



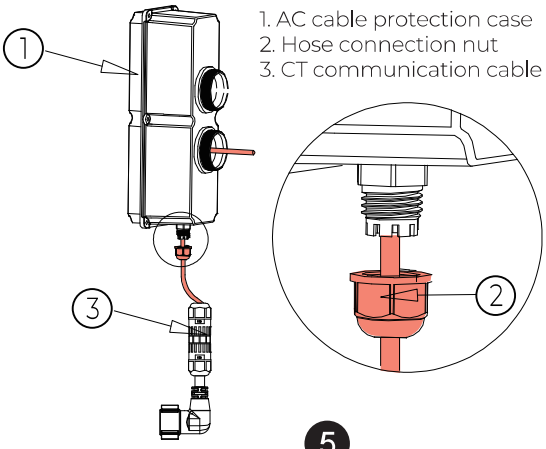


3
1. AC cable protection case
2. Waterproof hose fitting
3. Waterproof hose (3/4 inch)



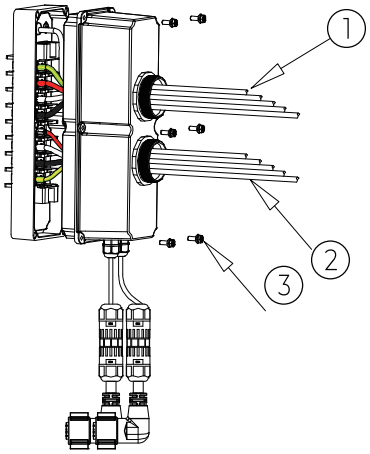
1. AC cable protection case
2. Hose connection nut
3. DRMs communication cable

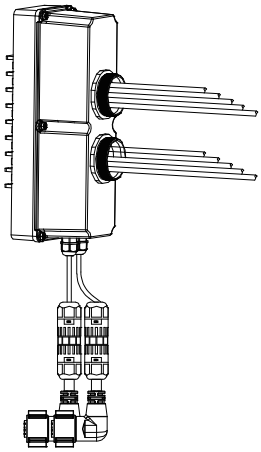
4



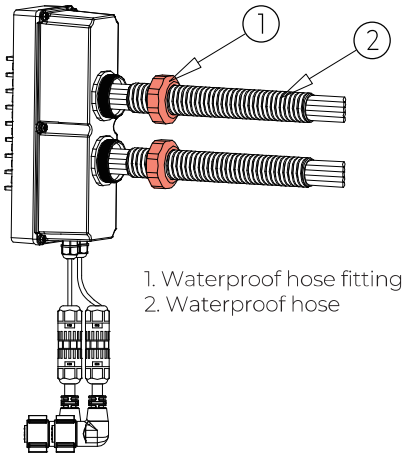
1. AC cable protection case
2. Hose connection nut
3. CT communication cable

5





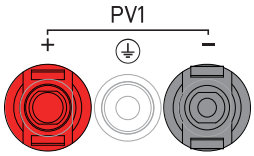
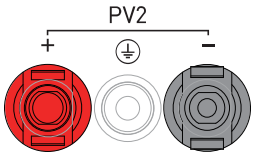
6
1. BACKUP cables
2. GRID cables
3. M4*12 screws, Max. Torque: 1.2N m(10.62 in-lbs)

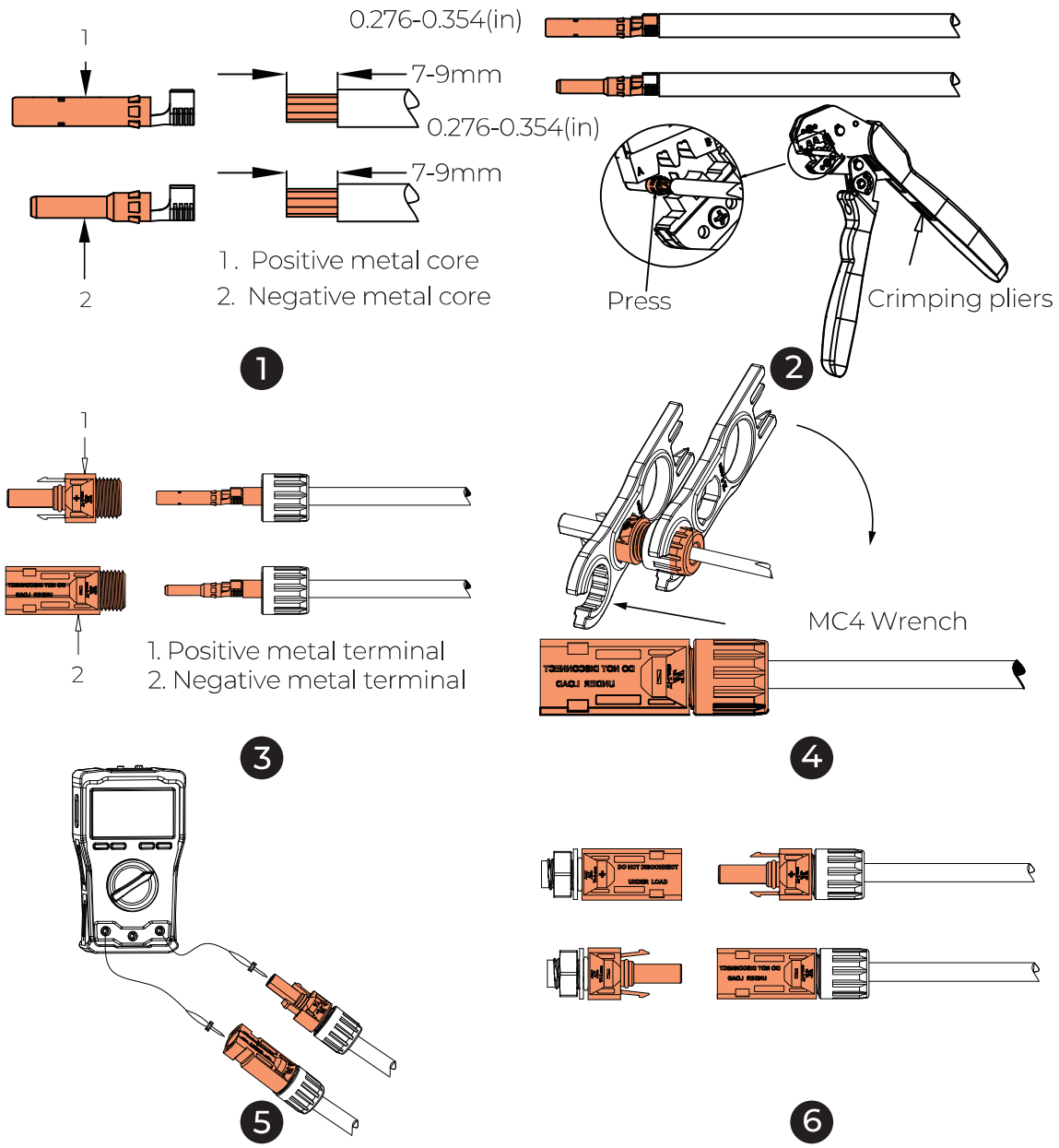


1. Waterproof hose fitting
2. Waterproof hose

7

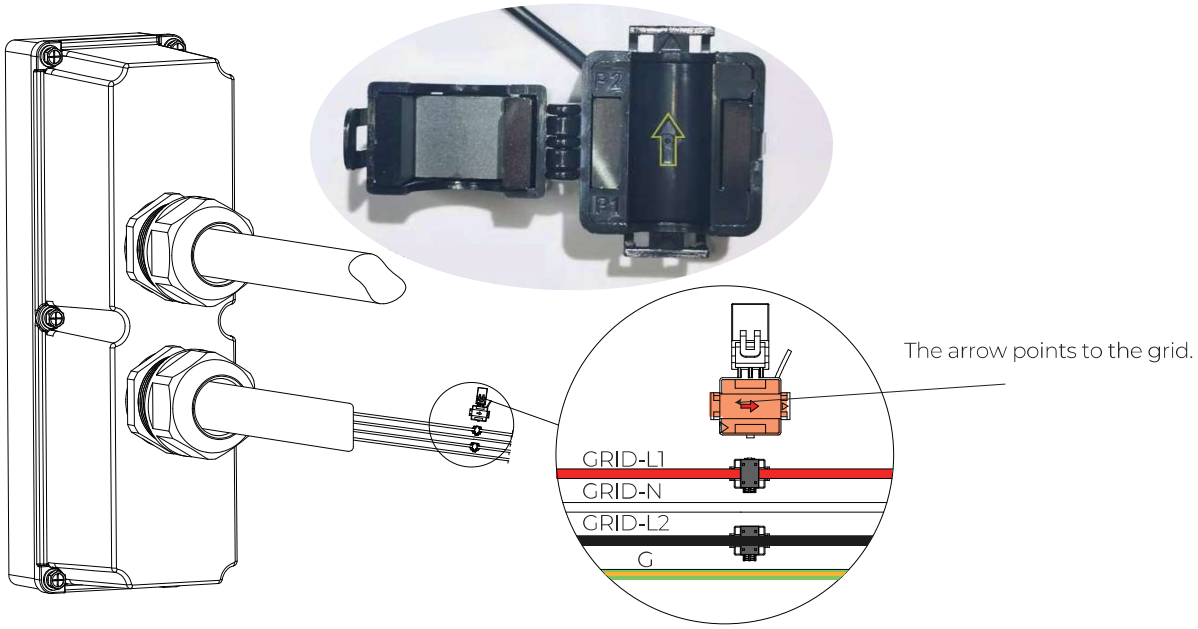
4.6 Connect PV cables

	PV1+： To solar panel positive PV1-： To solar panel negative PV1 PE： PV1 to solar panel ground	Conductor cross-sectional area: PV1 12AWG PV2 10AWG
	PV2+： To solar panel positive PV2-： To solar panel negative PV2 PE： PV2 to solar panel ground	



NOTE: Please check the open circuit voltage of PV arrays, which should be less than 500V.

4.7 Attach the CT



NOTE:

1. The arrow inside the CT points to the grid.
2. Phase sequence: L1-L1, L2-L2.
3. The CT should be tied to the L1, L2 cables of the main circuit breaker of the grid.

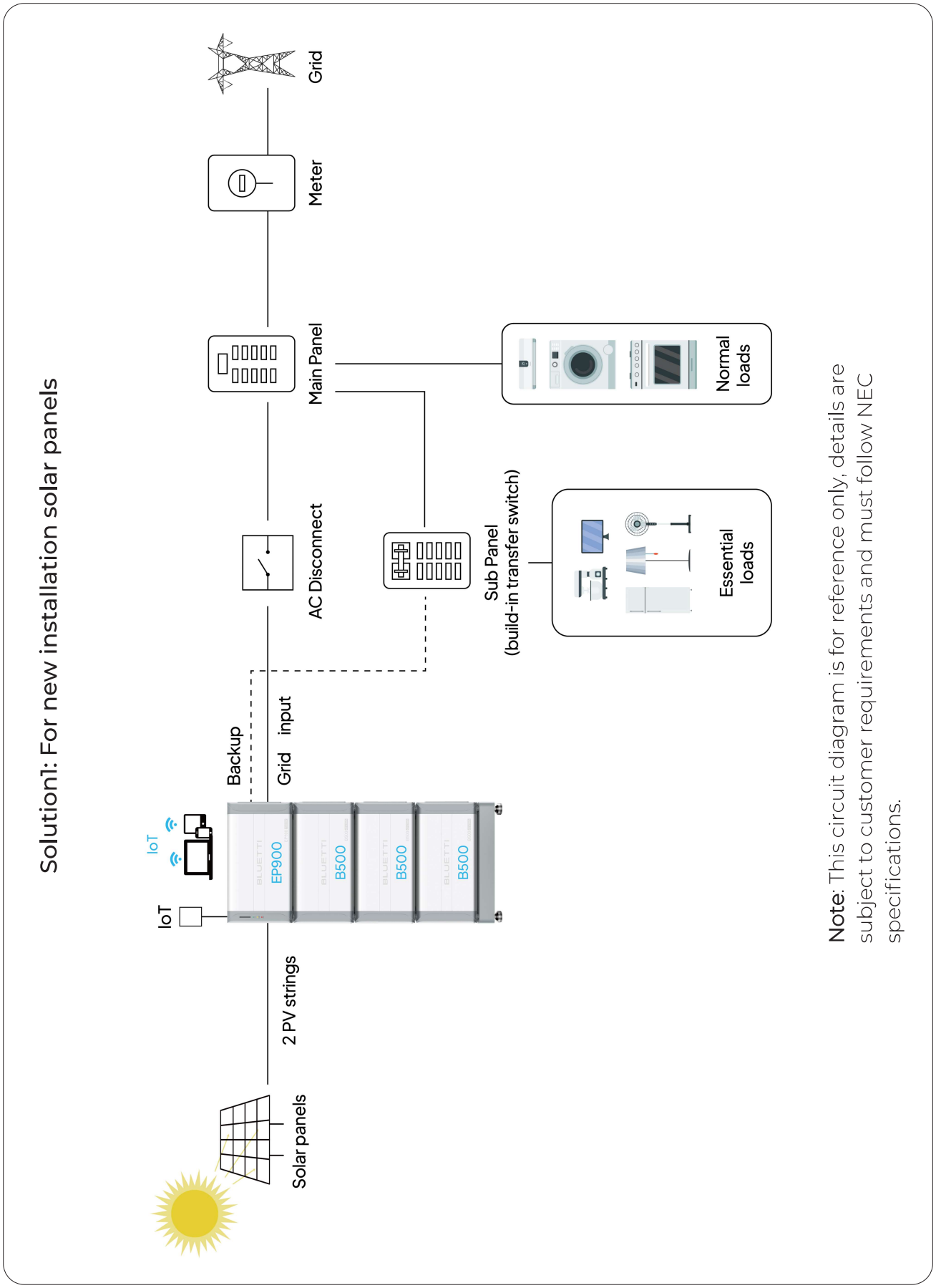
4.8 Install the Sub panel

Connect EP900 ESS to the sub-panel to build a partial home backup system.

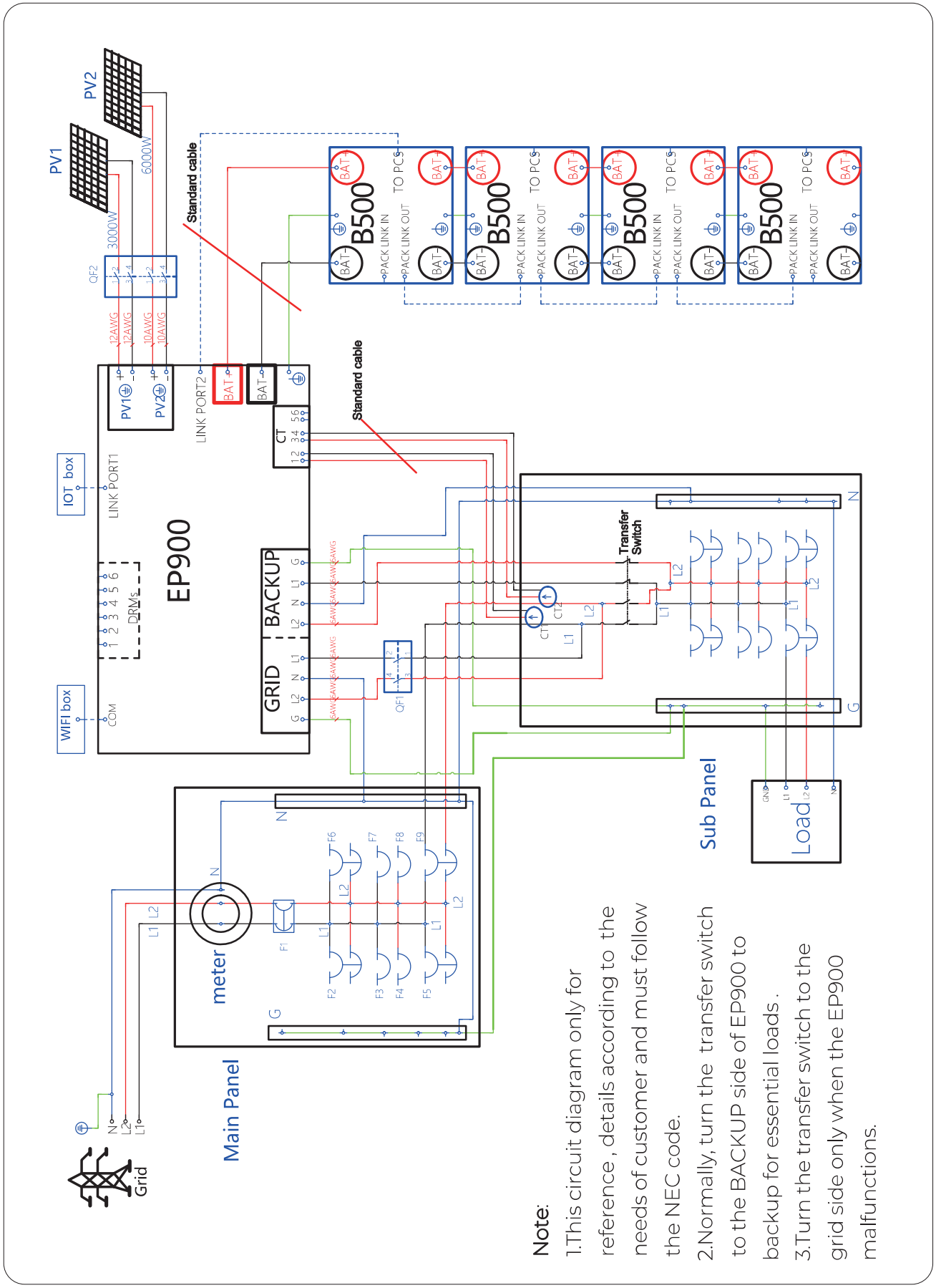
The Panel/Link TRK offers circuit breaker combinations of 50A utility and 50A generator.

1. Connect the Public Grid to utility input of the sub-panel.
2. Connect the EP900 BACKUP output to generator input of the sub-panel.
3. Connect the essential loads to the branch circuit breakers of the sub-panel.

4.9 For new installation solar panels



Connection method 1



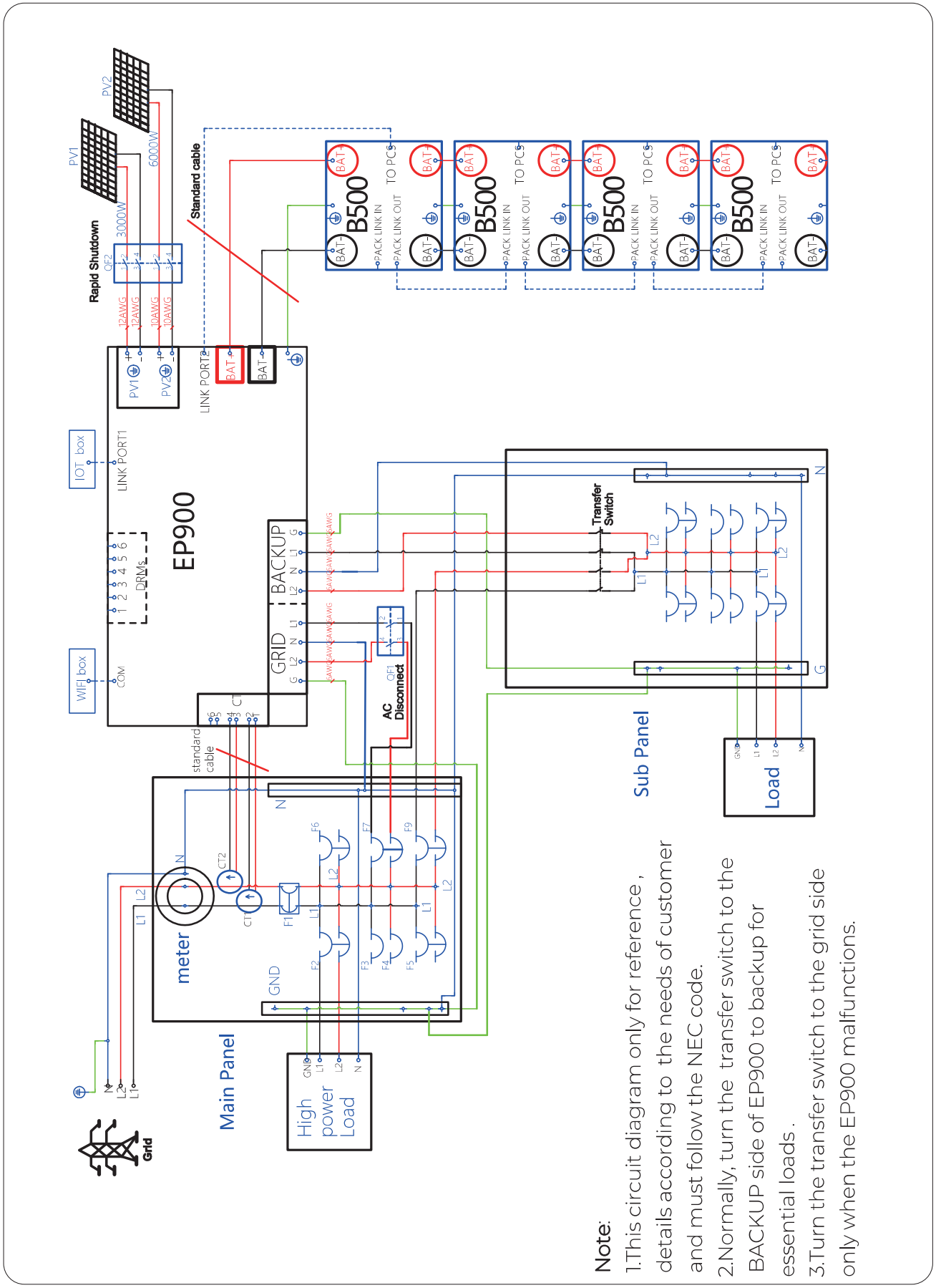
Note:

1.This circuit diagram only for reference , details according to the needs of customer and must follow the NEC code.

2.Normally, turn the transfer switch to the BACKUP side of EP900 to backup for essential loads .

3.Turn the transfer switch to the grid side only when the EP900 malfunctions.

Connection method 2



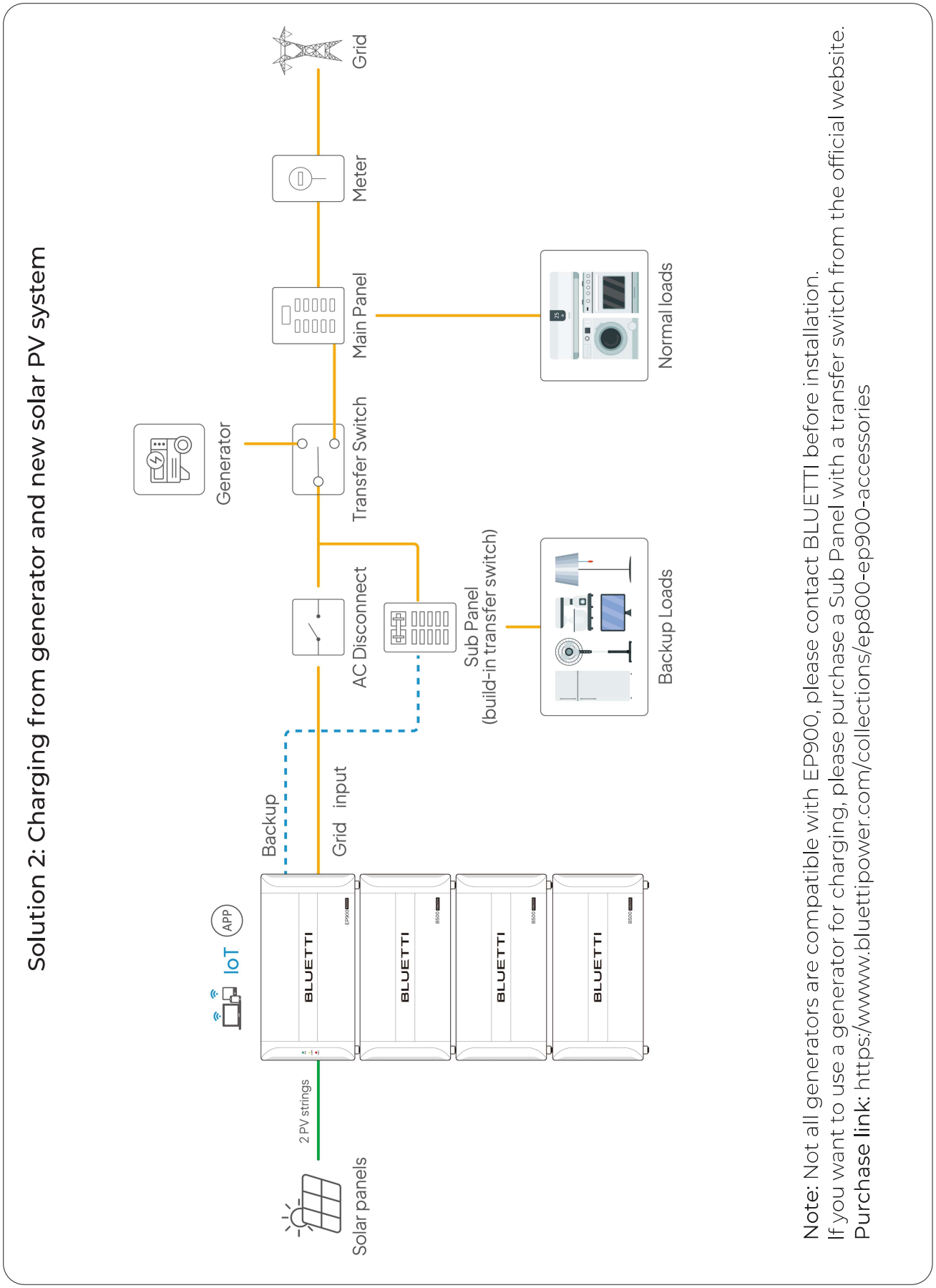
Note:

1.This circuit diagram only for reference , details according to the needs of customer and must follow the NEC code.

2.Normally, turn the transfer switch to the BACKUP side of EP900 to backup for essential loads .

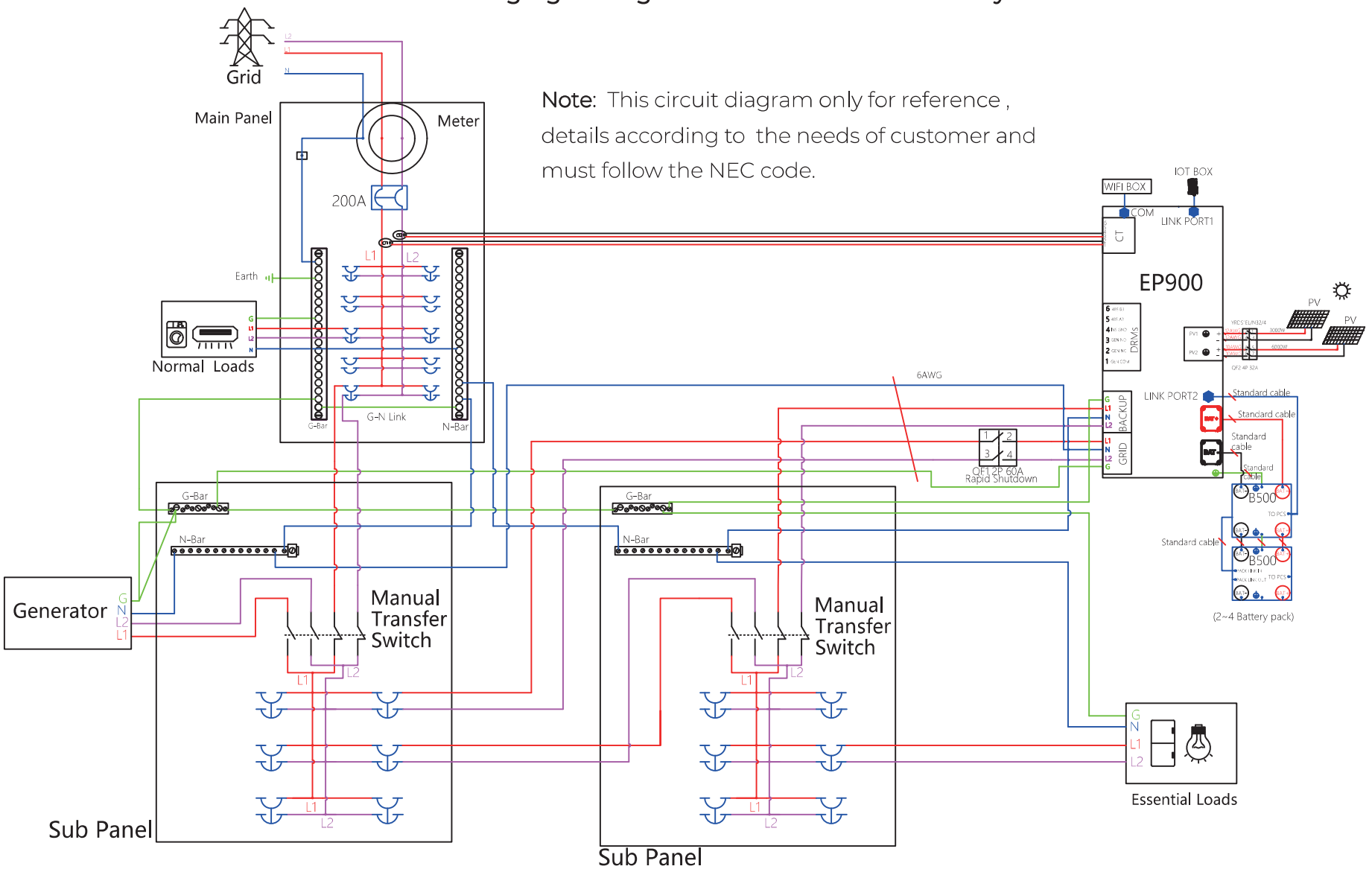
3.Turn the transfer switch to the grid side only when the EP900 malfunctions.

4.10 Charging Using Generator

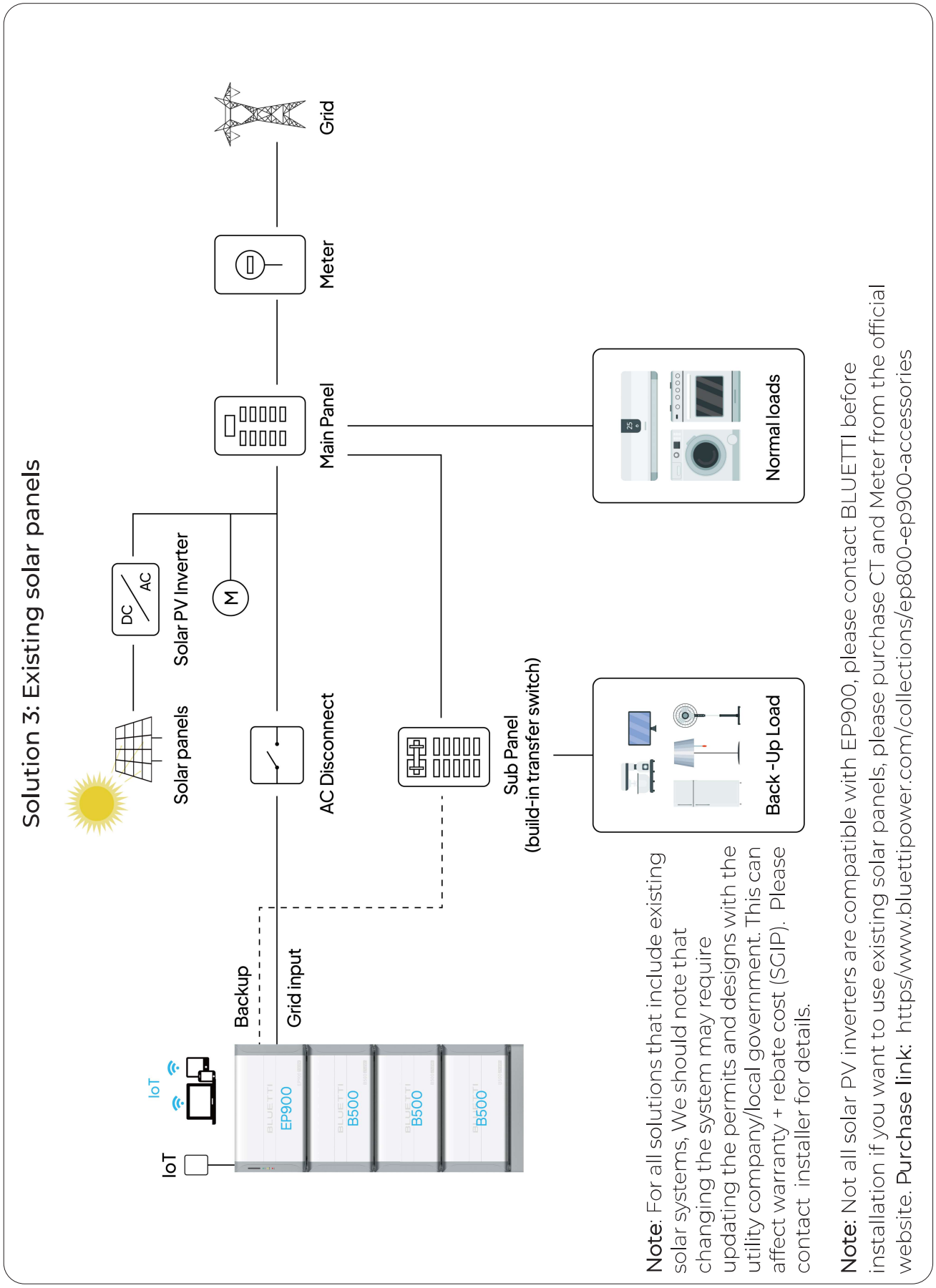


Note: Not all generators are compatible with EP900, please contact BLUETTI before installation.
If you want to use a generator for charging, please purchase a Sub Panel with a transfer switch from the official website.
Purchase link: https://www.bluettipower.com/collections/ep800-ep900-accessories

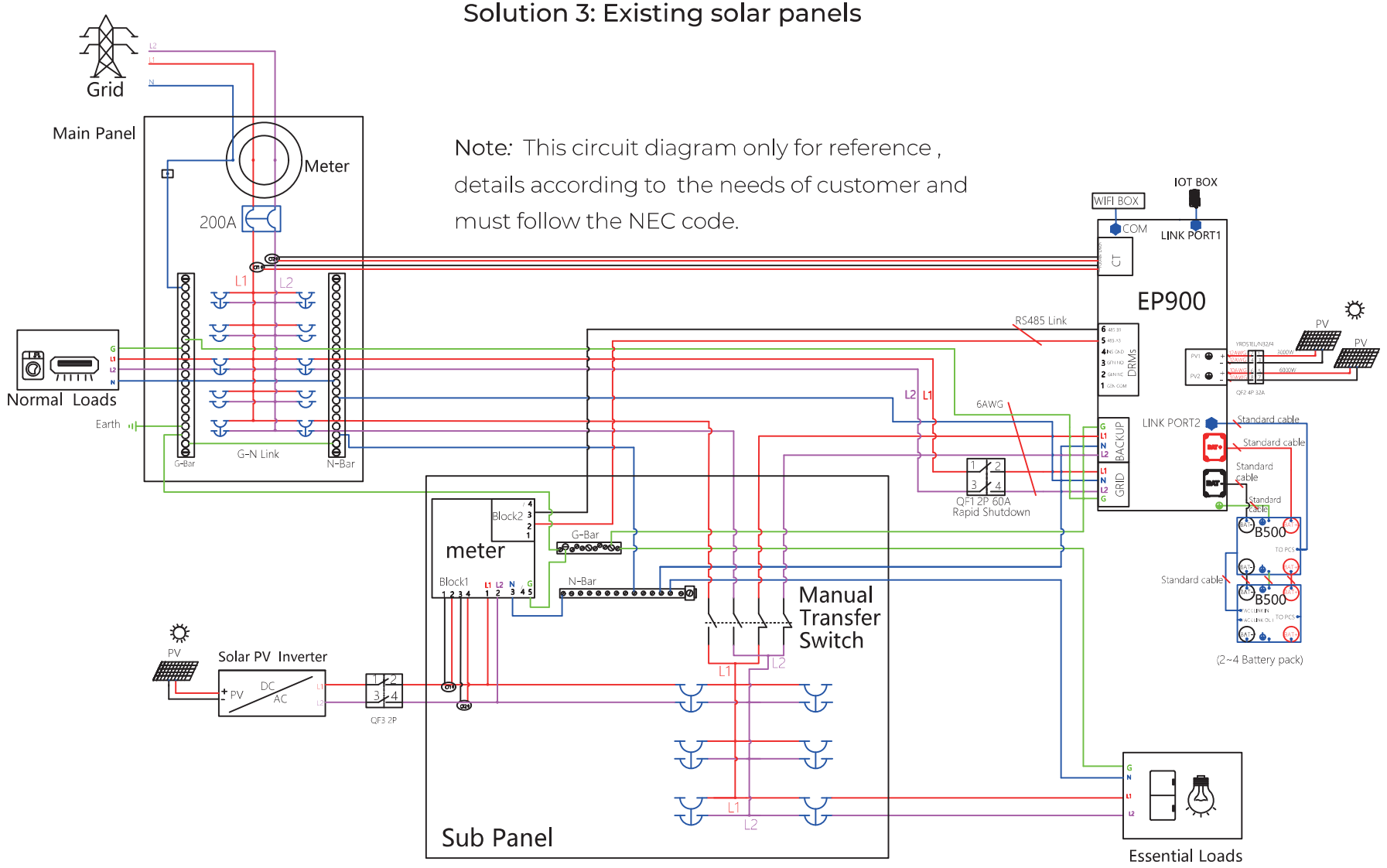
Solution 2: Charging from generator and new solar PV system



4.11 For existing solar panels



Solution 3: Existing solar panels



Note: For all solutions that include existing solar systems, We should note that changing the system may require updating the permits and designs with the utility company/local government. This can affect warranty + rebate cost (SGIP). Please contact installer for details.

5. Power on

Step 1 Switch on the DC circuit breakers on EP900.

Step 2 Switch on the DC circuit breakers on B500 battery packs. Press and hold the power button of any battery pack for about 3 seconds, and the green indicator on the button will light up.

Step 3 About 40 seconds later, the indicator on EP900 will stay green.

Step 4 Switch on the AC circuit breakers connected to the EP900 GRID terminal.

Step 5 Power on the system via BLUETTI app.

Step 6 Check the voltage of BACKUP terminal.

Step 7 Switch on the AC circuit breakers connected to the EP900 load port.

Step 8 Check the EP900 system operation in the App.

Indicator

LED / System Status	Green	Yellow	Red
Run	ON	OFF	OFF
Run +Alarm	ON	ON	OFF
Fault	OFF	OFF	ON
Alarm and fault	OFF	ON	ON

For more information, please visit:

Web: https://www.bluettipower.com

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BLUETTI

Just Power On

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