



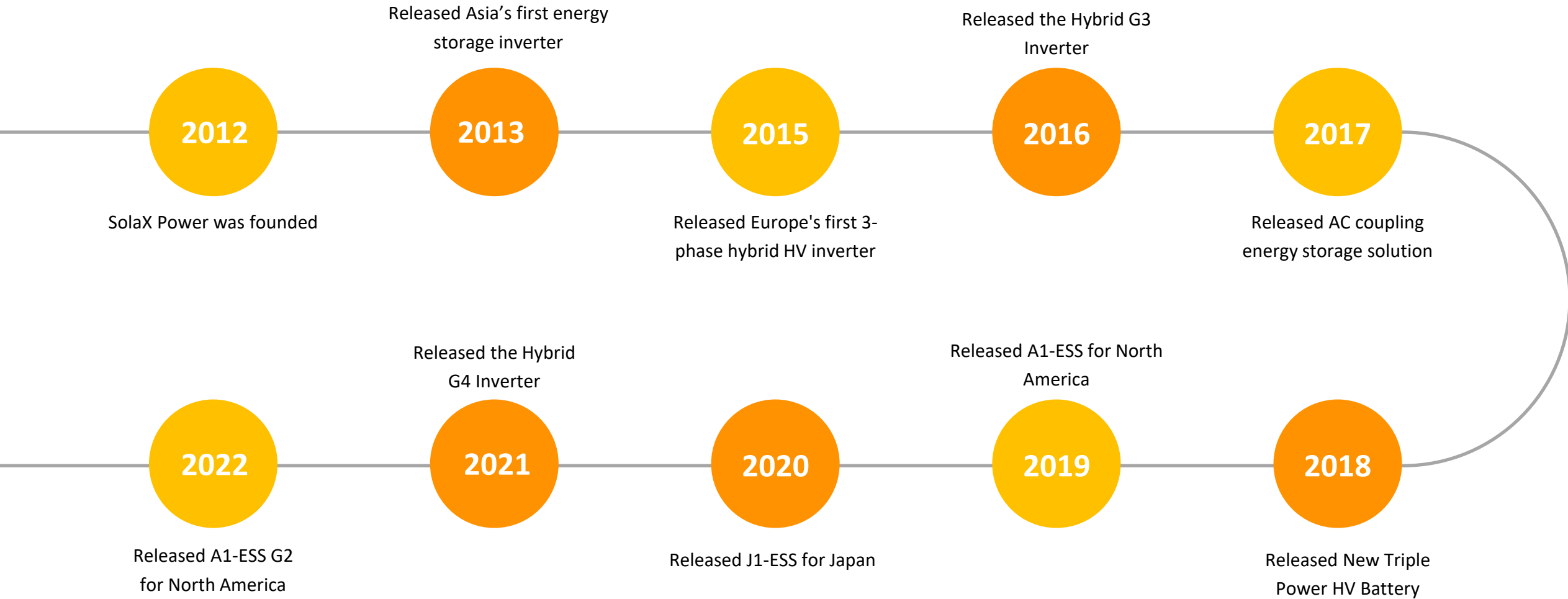
# SOLAX POWER

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**SolaX**  
**Energy Storage System**  
**Introduction**



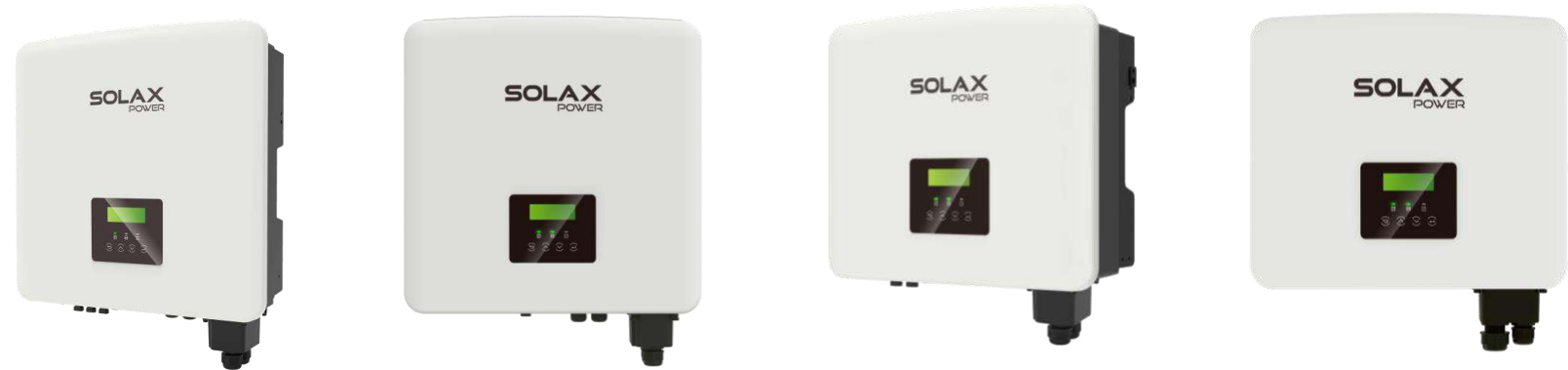
# Key Milestone



# Residential Energy Storage System--ESS Product Portfolio

Residential				
Product Range	Energy Storage Inverter	Battery	Energy Management	Accessories
Hardware	 X3-Hybrid/Fit Series	 T-BAT-SYS-HV-5.8	 Datahub 1000	 Matebox
	 A1-ESS	 T-BAT-SYS-HV-R2.5	 Pocket	 EPS BOX
	 X1-Hybrid/Fit Series	 BMS Parallel Box	 Chint DDSU/DTSU 666-CT	 EPS Parallel Box
Software	 X1-AC	 T-BAT-SYS-HV-3.0	 SDM230	 Adapter Box
	 J1-ESS	 T-BAT-SYS-HV-S2.5/3.6	 SDM630M-CT	
		 SolaX Cloud	 SolaX Design	

# Residential Energy Storage System—Hybrid Inverter



Model	X3-Hybrid-G4	X3-Fit-G4	X1-Hybrid-G4	X1-Fit-G4
Power Rate	5k/6k/8k/10k/12k/15k	6k/8k/10k/15k	3k/3.7k/4.6k/5k/6k/7.5k	3.7k/4.6k/5k/6k/7.5k
Max PV Array Power	200% oversizing	n/a	200% oversizing	n/a
MPPT No./Strings per MPPT	2(1/1) for 5k/6k 2(2/1) for 8k/10k/12k/15k	n/a	2(1/1)	n/a
Max Input Current	16/16A for 5k/6k 26/16A for 8k/10k/12k/15k	n/a	16A	n/a



# Residential Energy Storage System—Battery



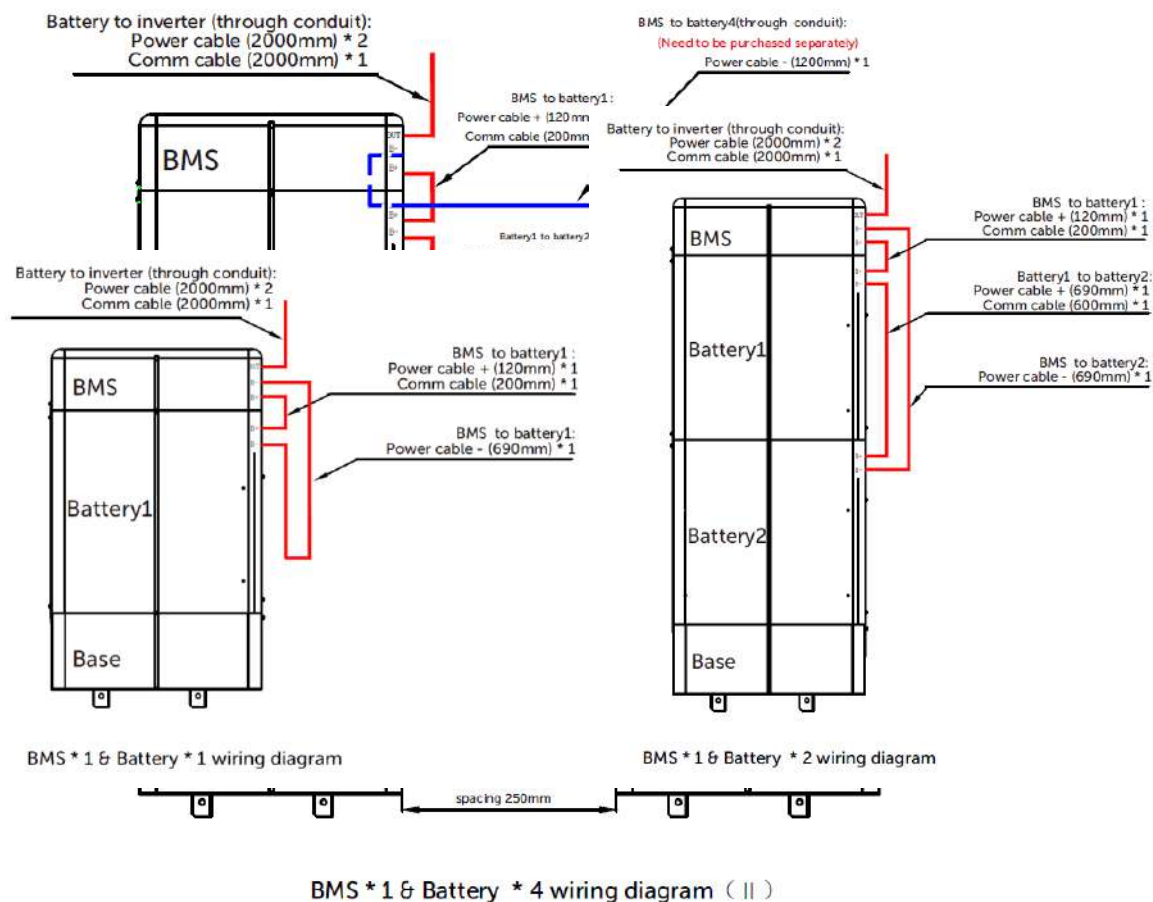
**Model** **T-BAT-SYS-HV-3.0**  
(T30)

**Voltage Per Module** 102.4V

**Capacity** 3.0kWh-12kWh

**Installations** Floor Standing  
(against the wall)

**Max. Current** 30A

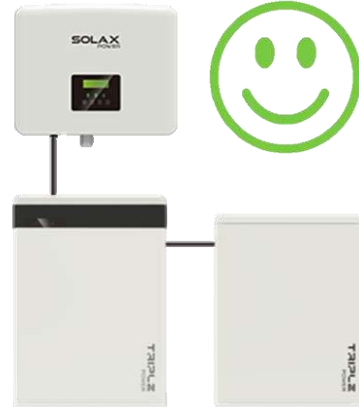


Model	BMS	T30 Slave
X1-HYBRID/FIT-G4	1 pieces	1~4 pieces
X3-HYBRID/FIT-G4	1 pieces	2~4 pieces

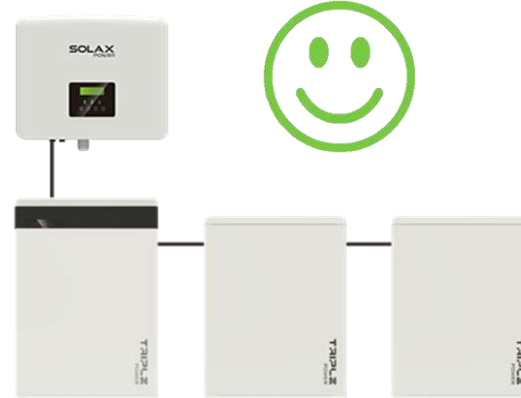
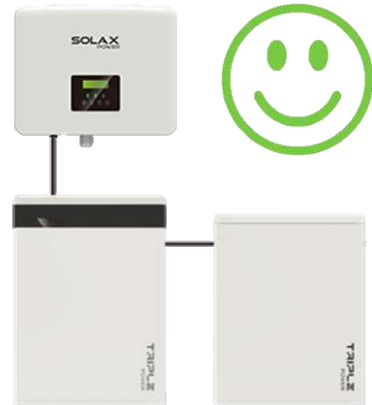


# Residential Energy Storage System—Battery

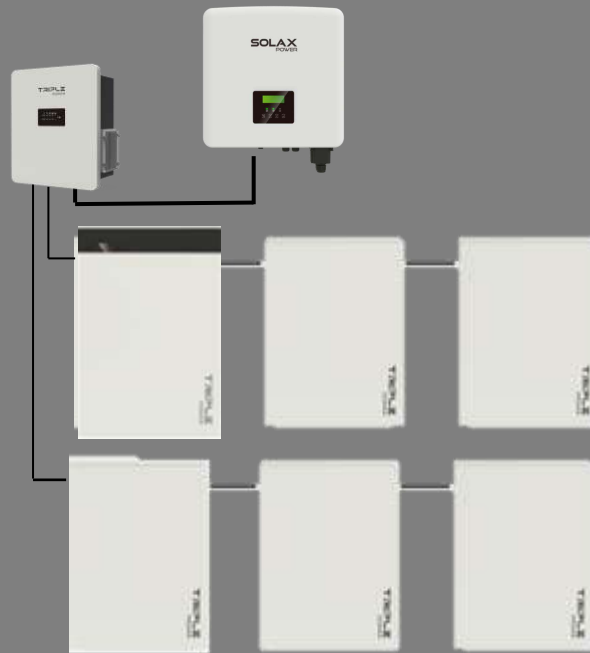
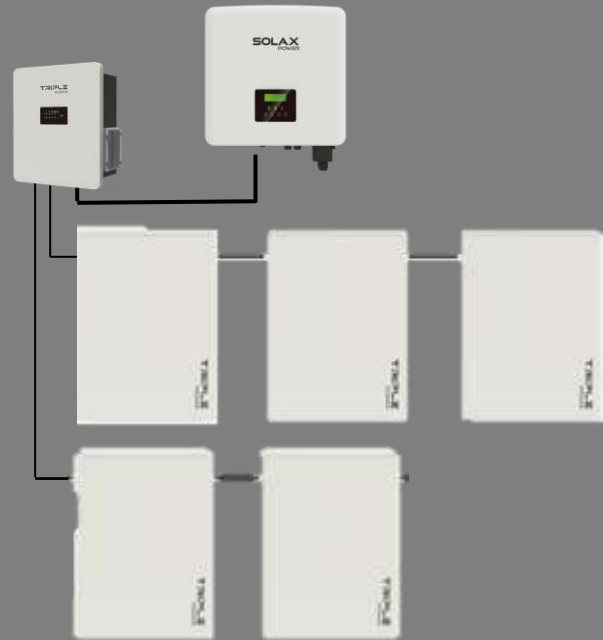
X1-Hybrid



X3-Hybrid



# Residential Energy Storage System—Battery





# Residential Energy Storage System—Energy Management



## Pocket Wifi/LAN/4G

Easy access to cloud

Support Modbus TCP (wifi)

10s Refresh Rate

Support IEEE2030.5

## Datahub1000

Access to cloud for multi inverters

Export control

Ripple control/DRM

## Meters

SolaX Authorized Model

Plug and Play

# Residential Energy Storage System—Accessories



**Matebox**

All in One Design

Easy Installation

Basic/Advanced optional



**EPS Parallel Box**

Support up to 10 Inverters in Parallel

60kW/150kW Optional



**EPS Box**

Whole loads backup

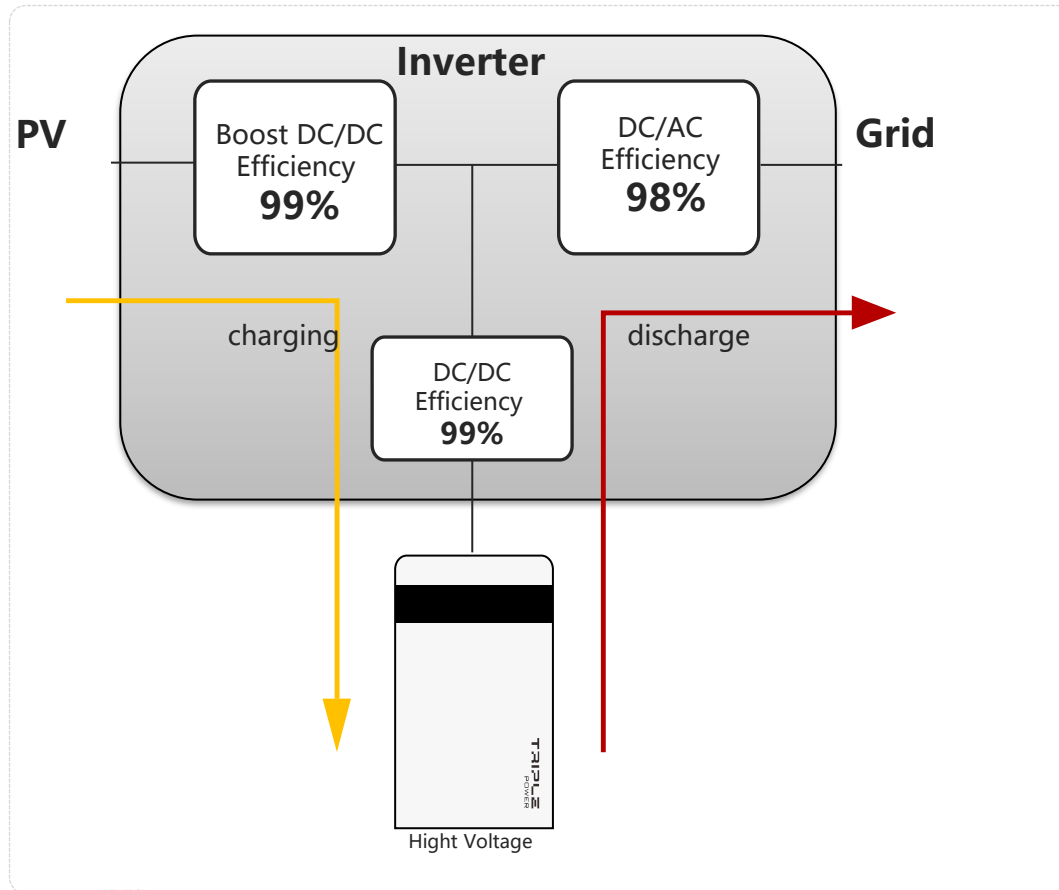


**Adapter Box**

Dry Contact Control for Heat pump

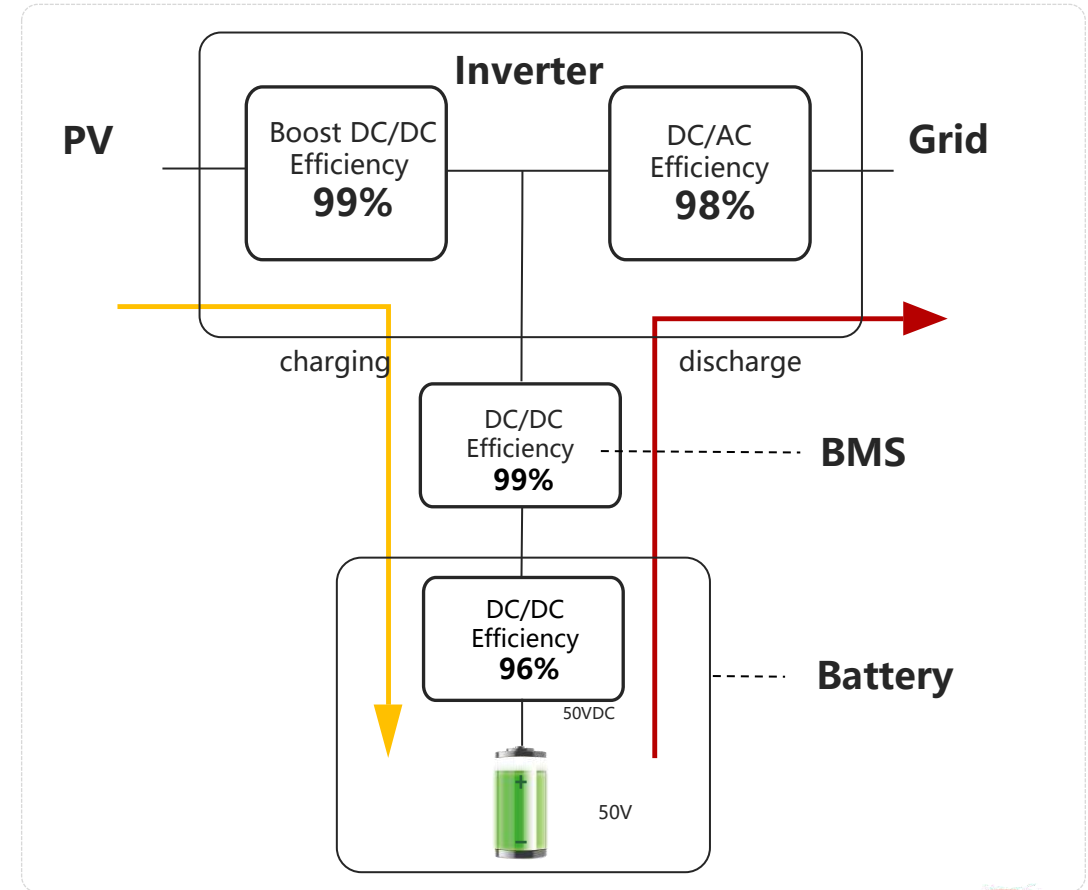
Intelligent Energy Management

## Solax Hybrid System



The DCDC module is in the inverter  
The battery has no DCDC

## Other brand Battery Ready System



Each battery has its own DCDC module  
The BMS also has DCDC module

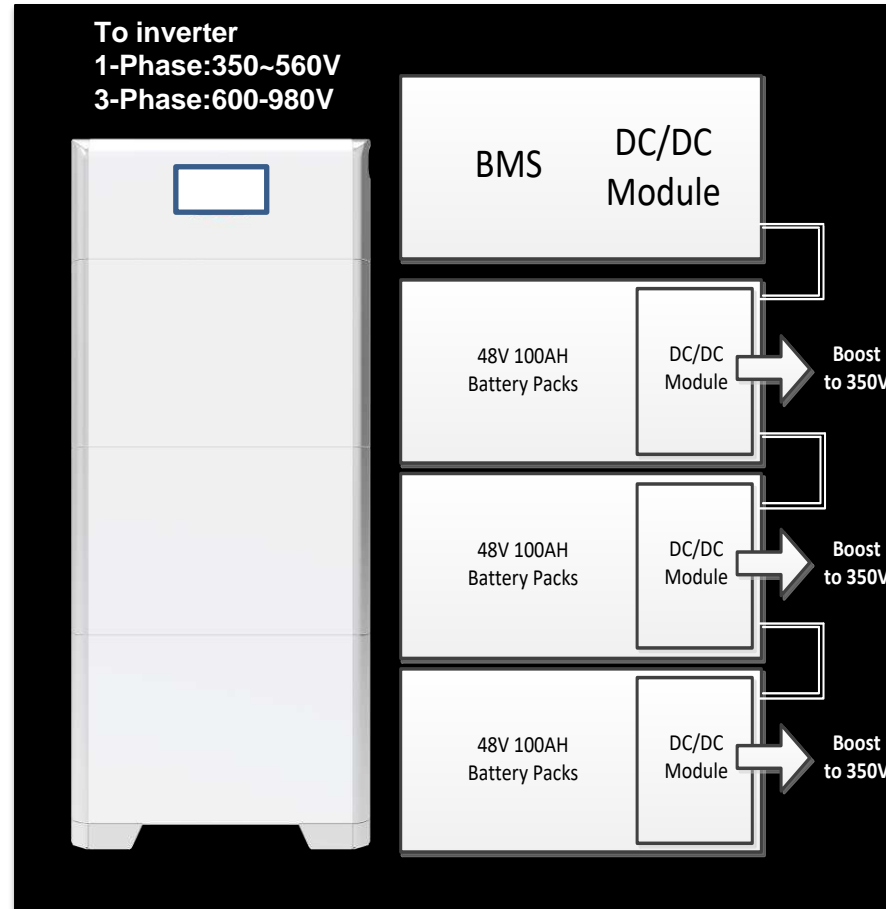


## Solax Hybrid Advantage

- Use high voltage battery in series  
no need DCDC booster in the Battery.
- Simple, reliable and high efficient
- Low cost on the battery



## Battery Ready System Disadvantage



- The Battery-Ready battery system use DC/DC to Boost the low voltage battery to 350V, then BMS DCDC boost to 600V+ which is not high-efficient.
- The battery system have multi DC/DC module, the more complex the higher failure rate.
- The cost of the battery is high.



# EPS function

SolaX



Backup box is not mandatory, only  
for whole home backup  
Built-in ATS, 10ms switchover  
3 phase backup, support unbalancing

Other brand

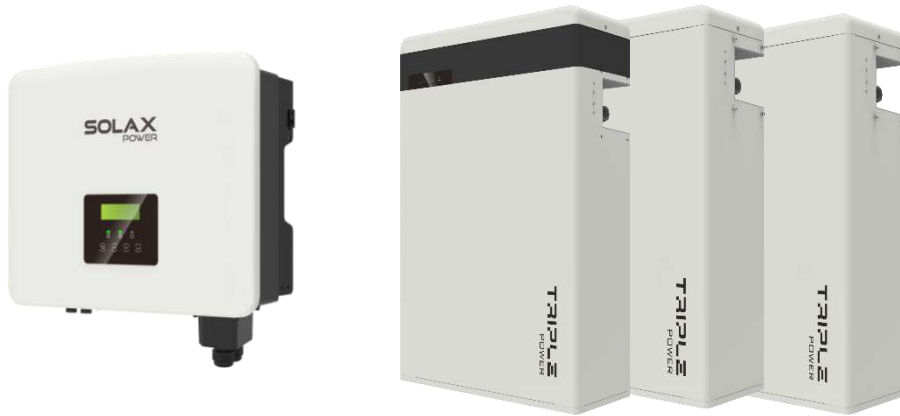


Backup box is mandatory  
Only single phase work under EPS





# Charge/Discharge Power



X3-hybrid-10k  
17.4 kWh

**10kW charging/discharging**

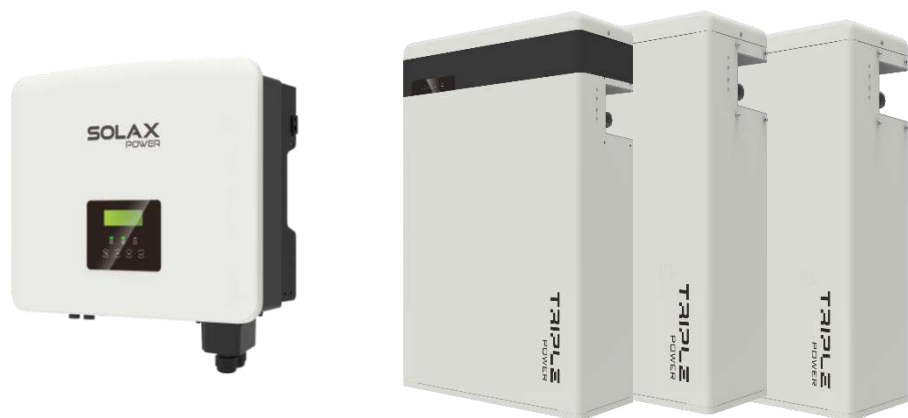


SUN2000-10KTL  
15kWh

**5kW charging/discharging**



# System Max Capacity



**15kW+46.4kWh for single unit**



**150kW+464kWh for parallel**

X3-hybrid-15k \* 10

T5.8 \* 8 \* 10



**10kW+30kWh for single unit**



**30kW+90kWh for parallel**

SUN2000-10KTL \* 3

LUNA-15kWh \* 2 \* 3

# ESS Key Features



All-in-one Design



200% Oversizing



Unbalanced Output



Fast Switchover



Wide Temperature



GMPPT



Cloud Management



EV Charger



Generator Compatible



Peak shaving

# All-in-one Design

## X3-MATEBOX ADVANCED



204\*500\*512  
mm

One Matebox contains:

DPDT  
Devices



Meter



Circuit  
Breaker



RCD



DC switch



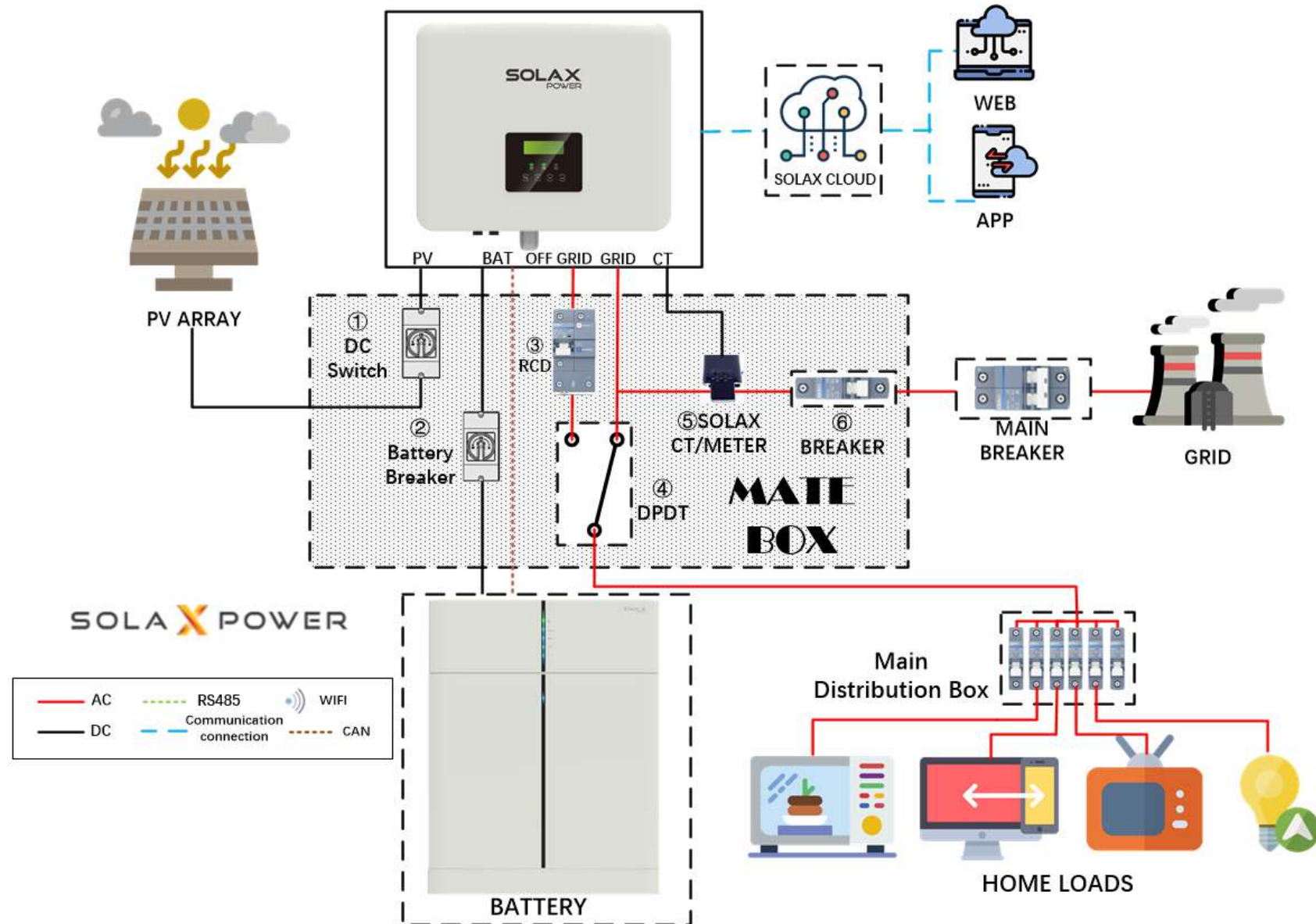


## ALL IN ONE SOLUTION

In this solution, the Mate Box contains all the accessories of the inverter system, including DC and BAT switch, CT and RCD.

All wirings are operated inside the box and cabinet, and the outside of the entire system will be clean and tidy.

Thanks to the pre-wired solution, Mate Box will assemble all accessories and cables in advance, omitting complicated installation steps and saving time and money.





# X3-MATEBOX BASIC



204\*533\*297 mm

One Matebox contains:

Circuit  
Breaker



RCD



DC switch

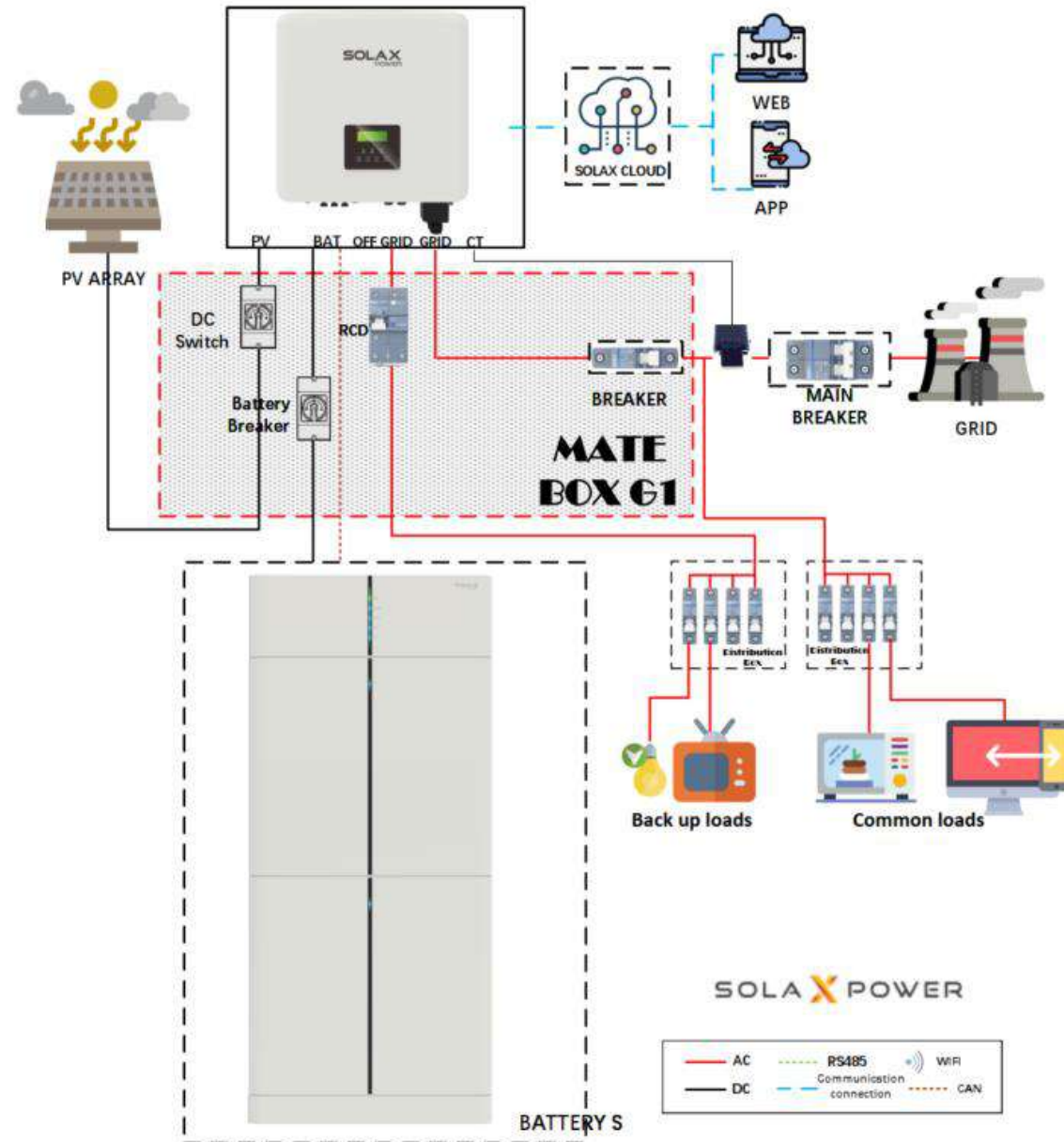


## ALL IN ONE SOLUTION

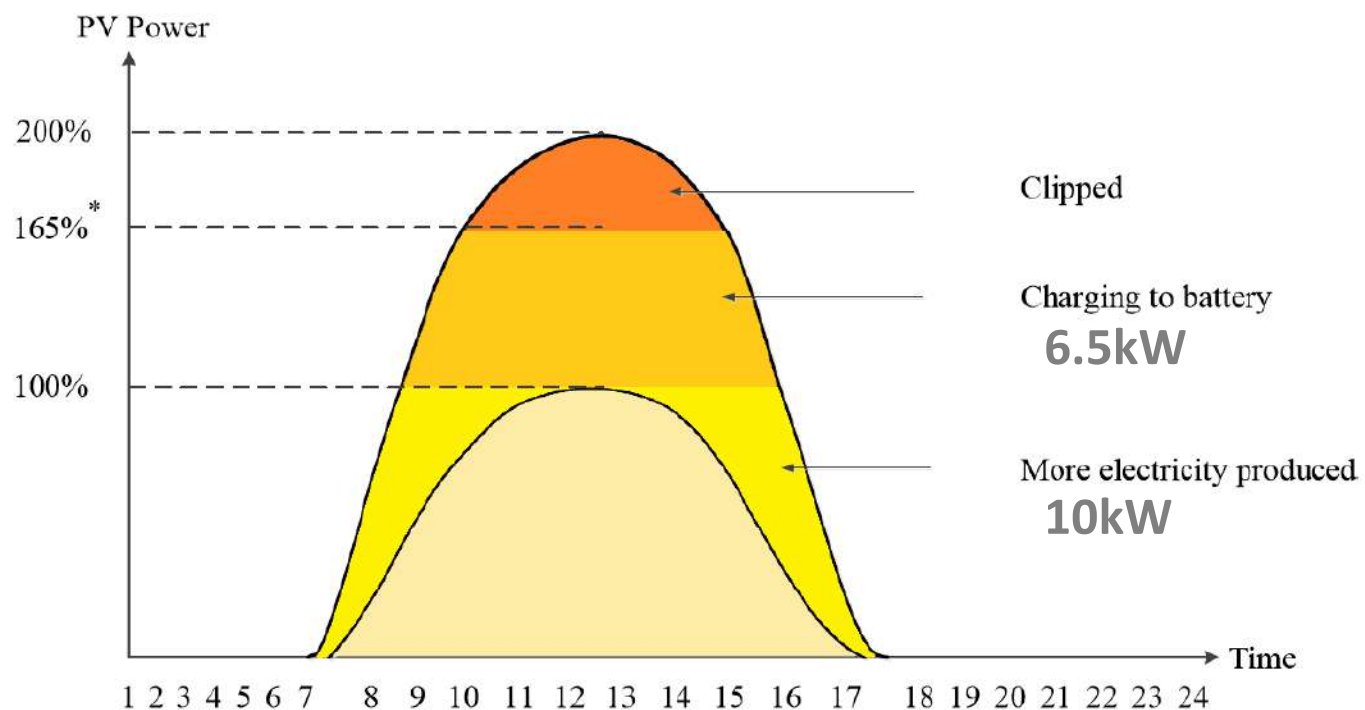
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# Key Features

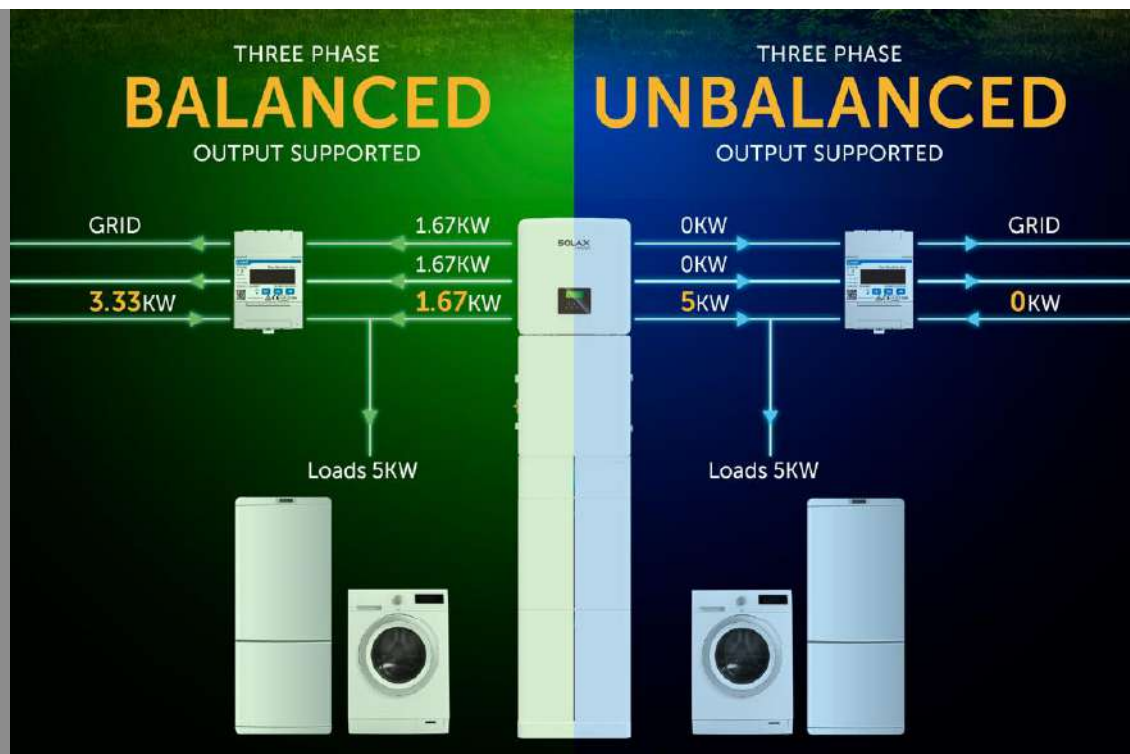


\*X3 Hybrid G4 10kW

## 200% Oversizing

- Other brand normally do 150%
- Part of the energy can be used for batteries charging. (DC to DC)
- Increase the yields of the system.  
**16.5kW** can be used for 10kW hybrid inverter

# Key Features



## 3-Phase Unbalanced output

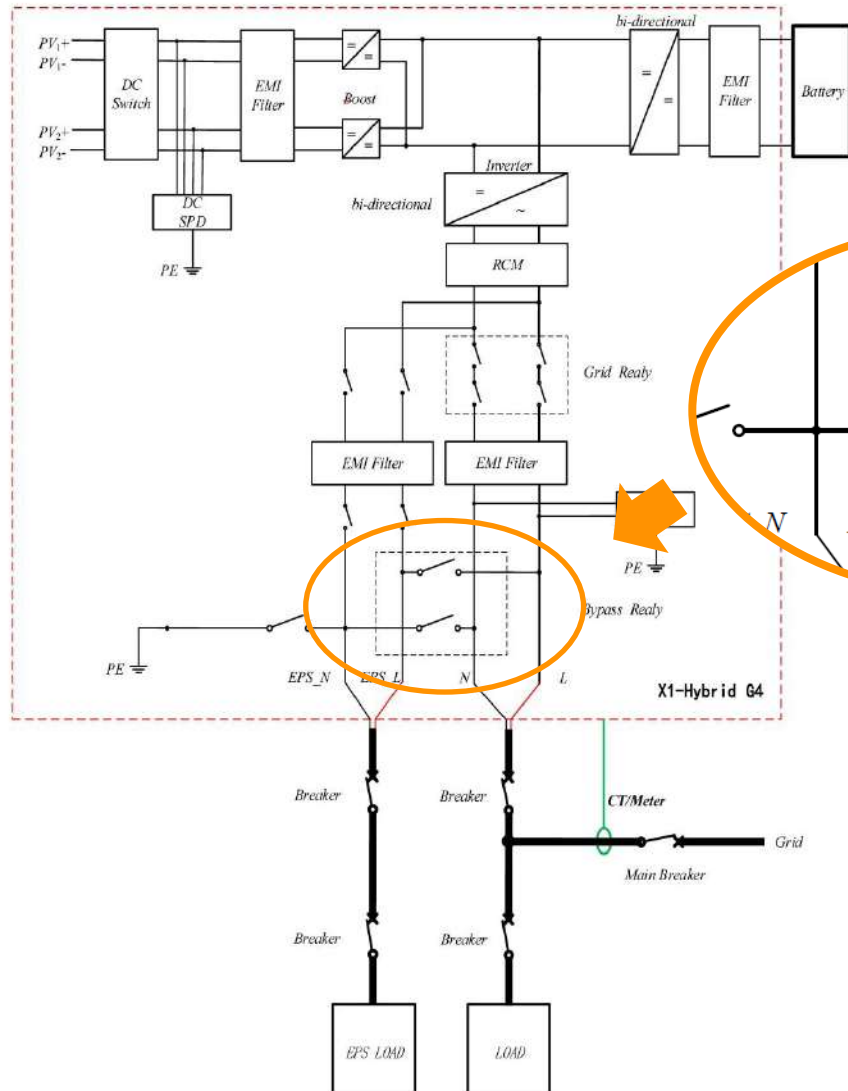
- Support up to 5kW phase unbalanced output\*
- Ideal for the per phase zero injection requirements
- Unbalanced output still working without battery

*\*Max unbalanced output: 10kW/12kW/15kW support 5kW.  
5kW/6kW/8kW support 50% of power rate*



\*Learn more at <https://kb.solaxpower.com>

# Key Features



## Fast Switch-Over

- Less than 10ms switchover time
- Built-in EPS auto-switch for partial home loads backup
- Support External ATS for whole home backup solution, when device with external ATS function is installed (like: EPS box, EPS Parallel Box or Matebox Advanced).



# Key Features



## PERFECT PERFORMANCE In Harsh and Frozen Environment

- IP65 protection can be indoor/outdoor used.
- The inverter has passed HALT testing, which truly simulates the extreme use environment: High temperature, humidity and salt spray environments still work normally.
- The T30 Battery equipped with **Heater**
- Working temperature form **-30°C to 55°C**

# Key Features



## GMPPT (Shadow Fix)

- When the panel with light shadow, the inverter will auto scan to calculate the new MPPT
- Suitable for roofs with slight shade, such as leaves, large trees, chimneys

# Key Features

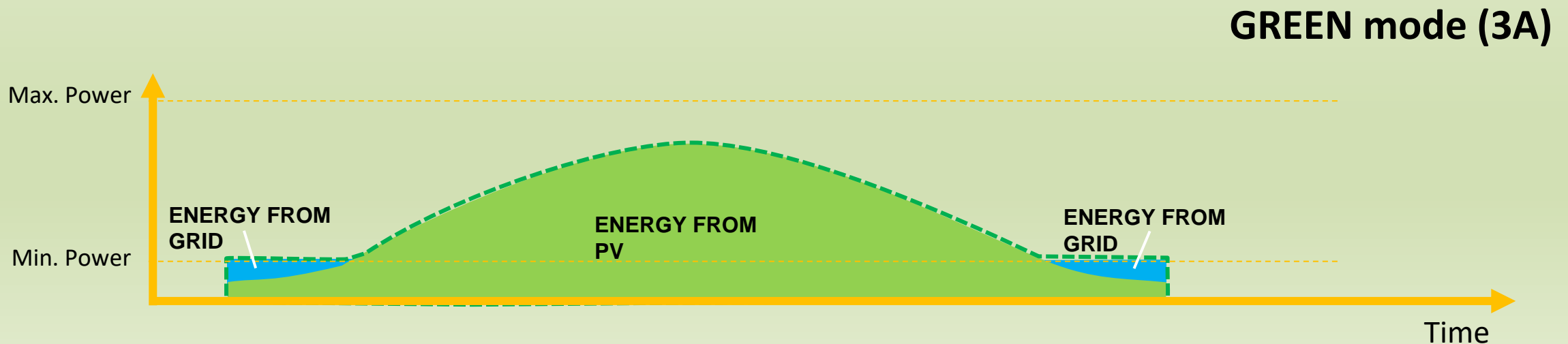
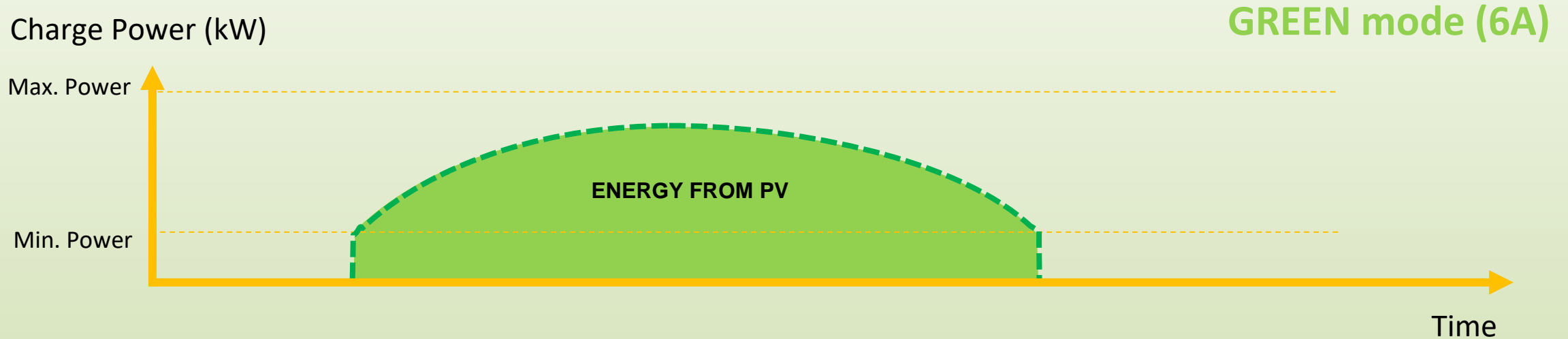


## EV Charger Supported

- Communication between the smart EV charger and Solax Power inverter.
- Multi-charging mode available.
- Use 100% Green energy or semi-green energy to charge your car.
- Dynamic load balancing function

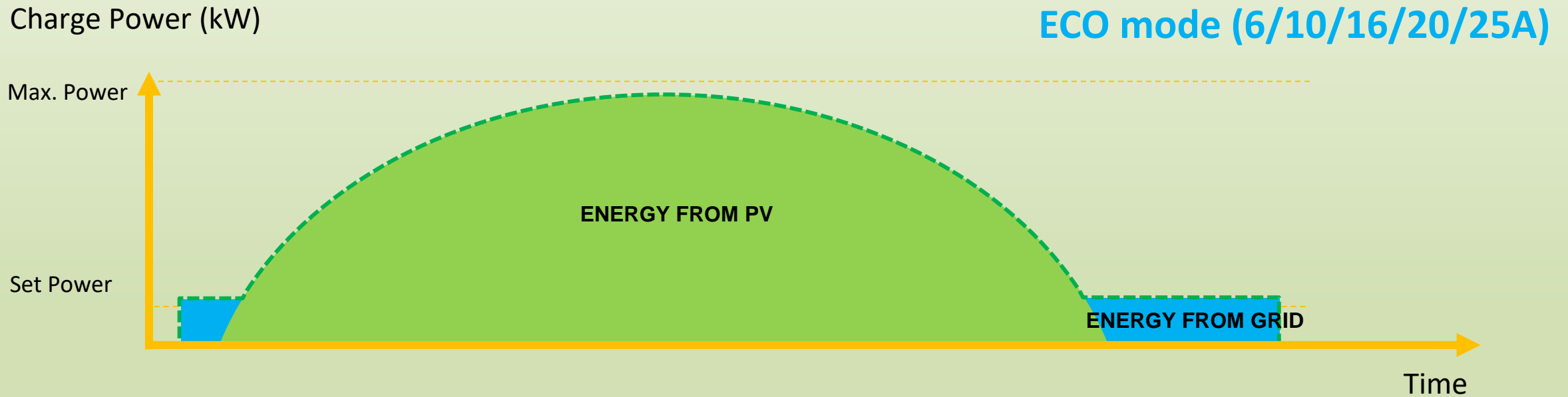
# Adapt to Solax EVC

Thanks to the communication between the charger and inverter, the system has Green/Eco mode to use full-green/Semi-green energy to charge your vehicle



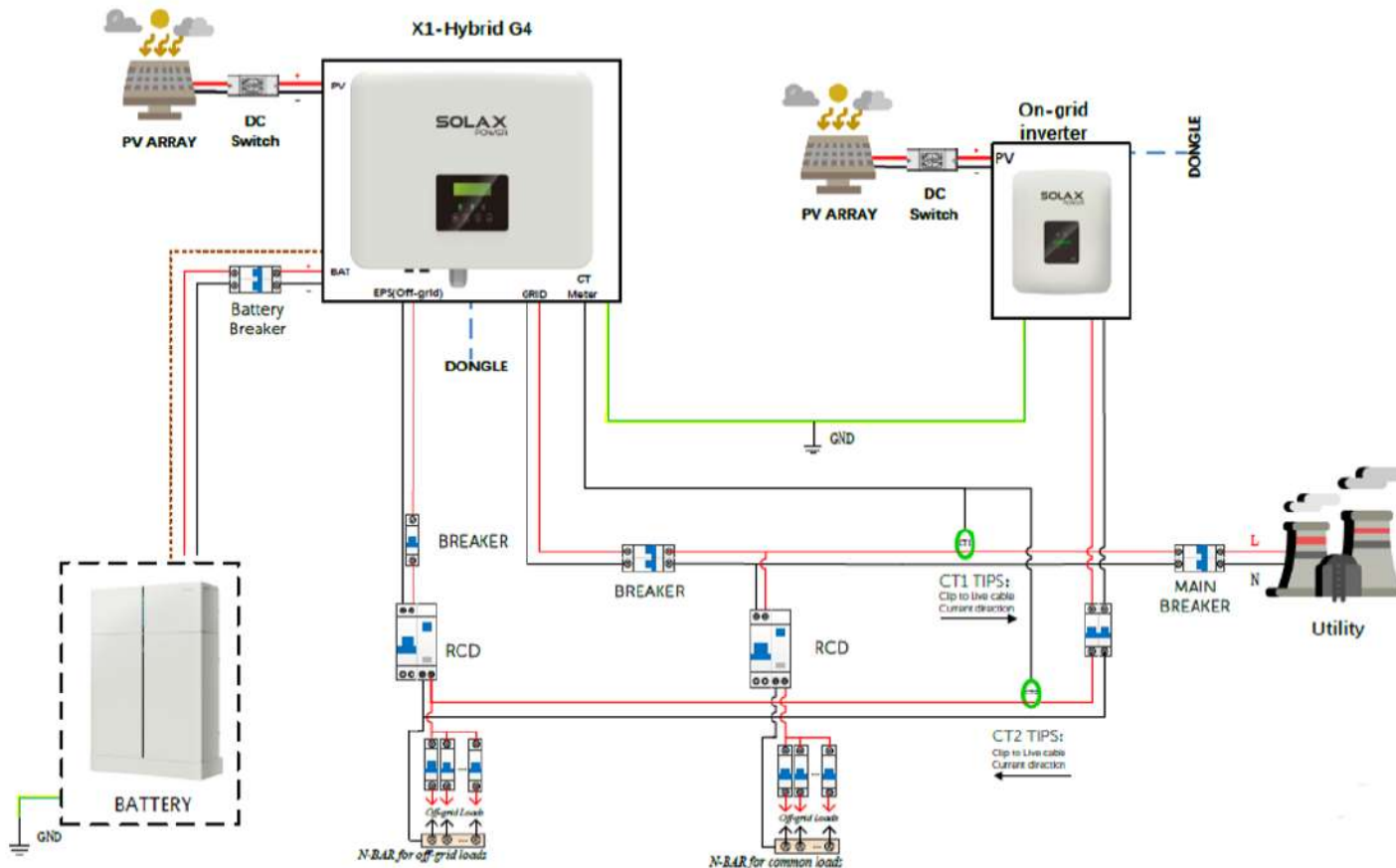
## Adapt to Solax EVC

In Eco mode : it helps users to charge at a minimum power rate (set by user). If there is surplus energy from PV, it can exceed the minimum power rate to make full use the energy. If the PV energy is not enough, it will take the electricity from the grid to charge at the minimum power rate.





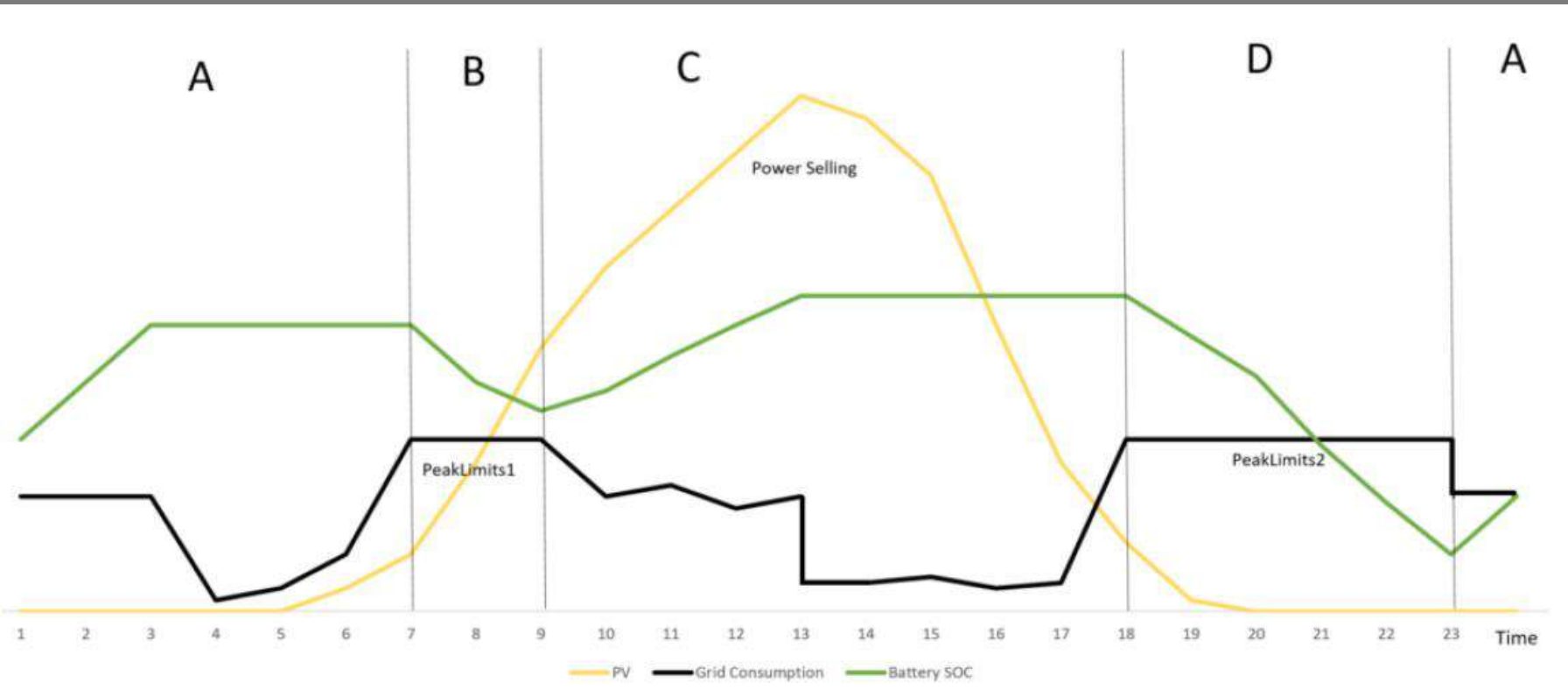
# Key Features



## Micro-grid System

- Wasted on-grid inverter PV energy been saved, lower electricity bill
- No extra devices needed
- Only supported by X1-Hybrid G4
- On grid inverter output power  $\leq$  Max Hybrid inverter EPS output power
- On-grid inverter output power  $\leq$  Max battery charging power

# Key Features



## Peak shaving solution

- Maximize energy self-consumption in a smarter way to save more on electricity bill
- Clean solar energy utilization
- Set period flexibly to meet complex scenarios
- X3 Hybrid need upcoming firmware to support peak shaving function



KNOWLEDGE  
BASE



YOUR SOLAX LIBRARY

\*Learn more at <https://kb.solaxpower.com>

# Comparison summary

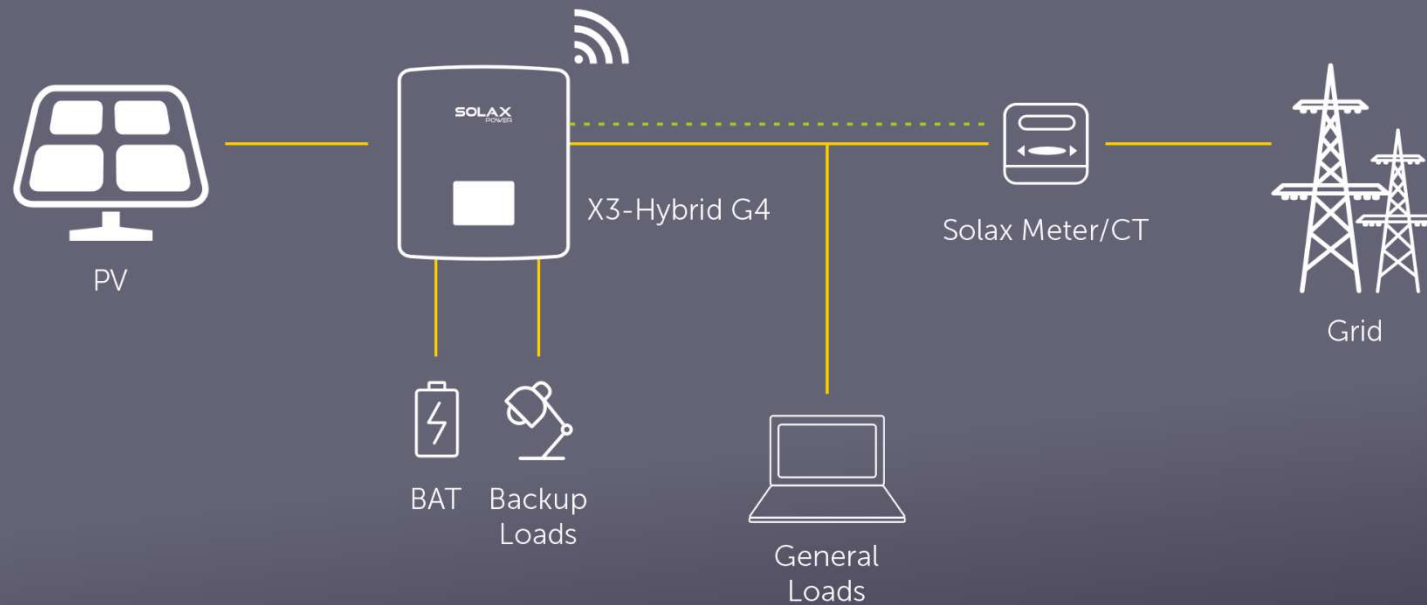
## SOLAX Hybrid

- 😊 • High-efficient
- 😊 • Reliable System
- 😊 • Backup three phase
- 😊 • 10m backup switching time
- 😊 • Unbalanced output (on grid/ backup)
- 😊 • Up to 15kW char/discharge power
- 😊 • Support 10 units in parallel
- 😊 • Support Hybrid + On-grid inverter with  
Zero export control
- 😊 • EVC charger supported
- 😊 • Heat pump supported

## H brand battery-ready

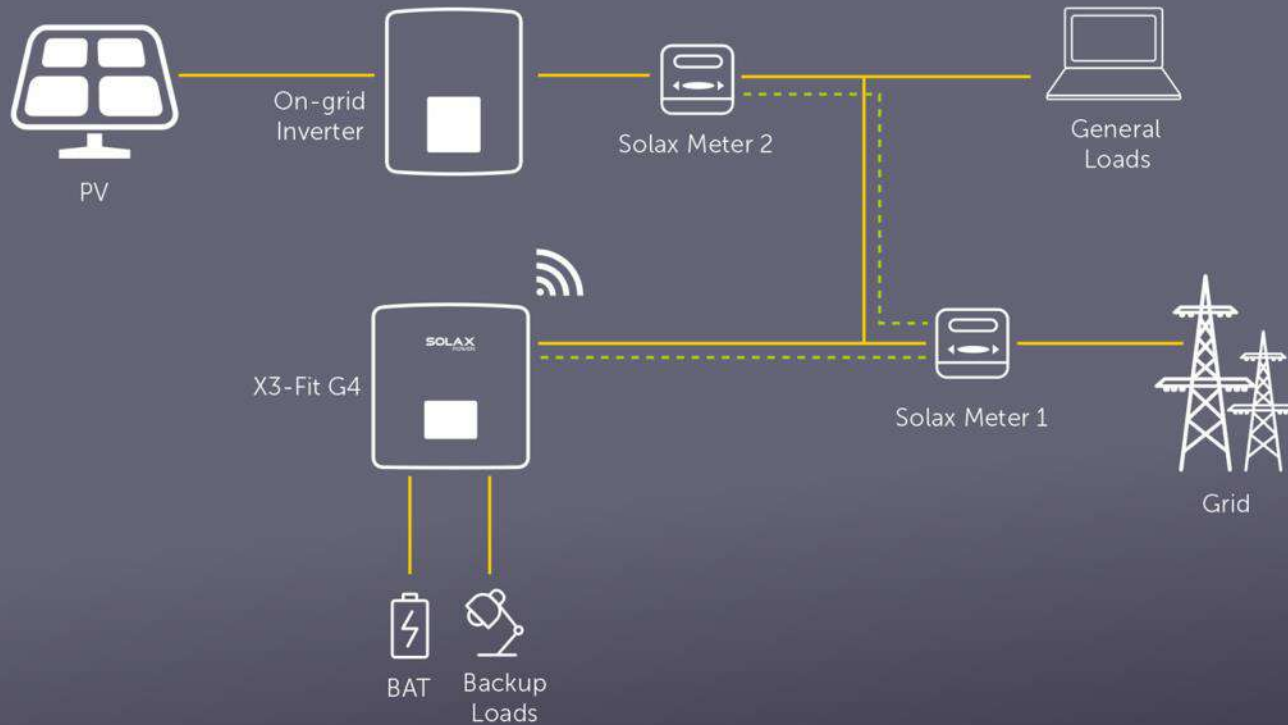
- 😞 • Loss energy during DC/DC
- 😞 • Battery high failure rate
- 😞 • Backup single phase
- 😞 • 3s backup switching time
- 😞 • Not support unbalanced output
- 😞 • Low charging/discharge power (5kW)
- 😞 • Support 3 units in parallel
- 😞 • N/A
- 😞 • N/A
- 😞 • N/A

# System Overview—Standard ESS solution



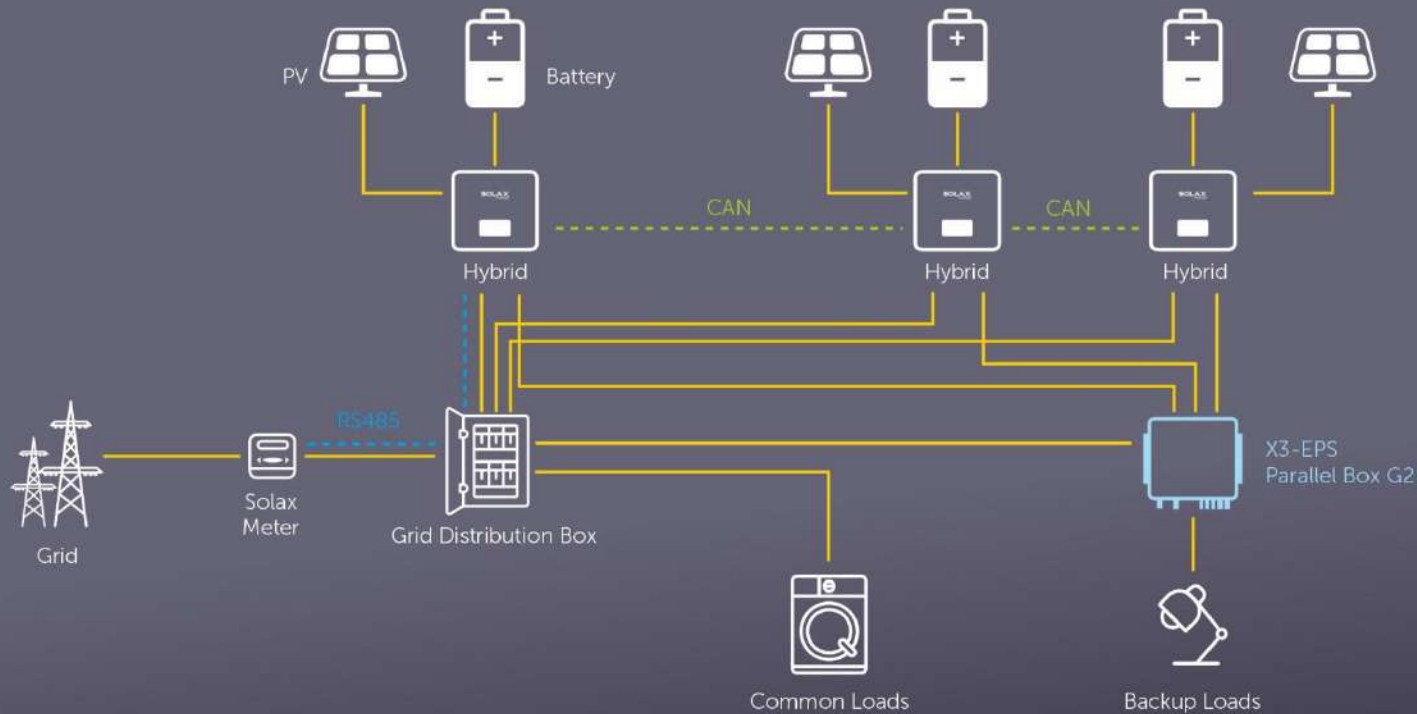
- It is the schematic diagram of a standard ESS system.
- Measuring Device (Meter or CT) is mandatory
- Zero export control is possible.

# System Overview—FIT (Retrofit) solution



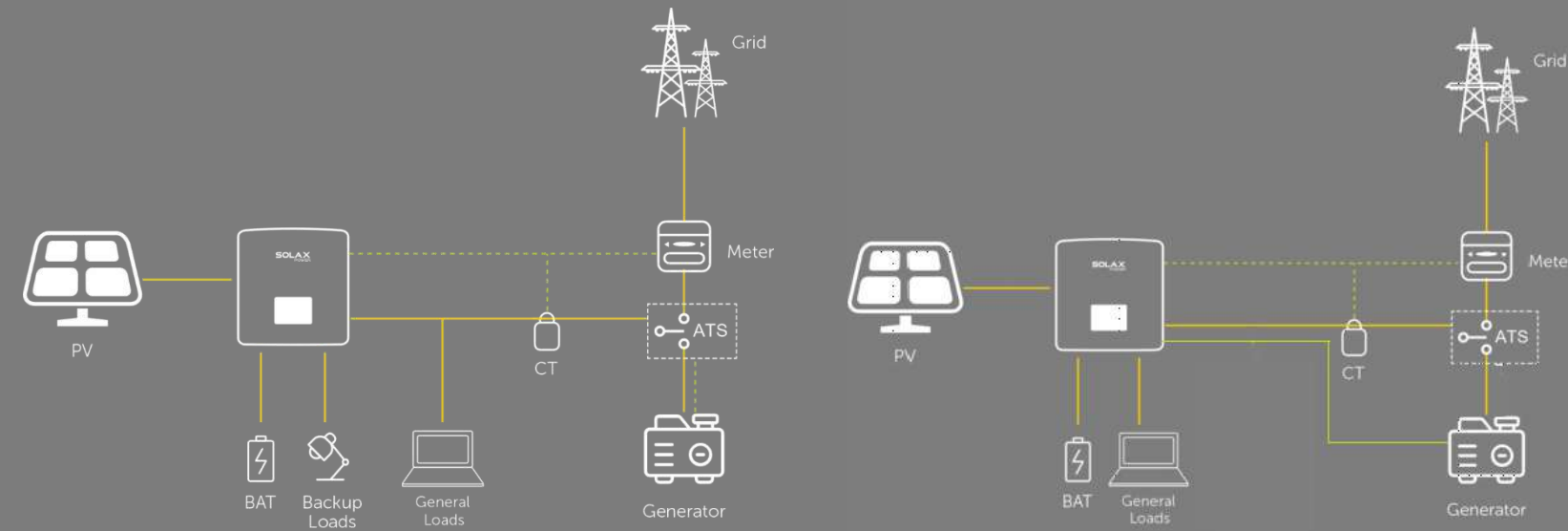
- It supports third part inverters
- Two meters can be used for this system
- The second meter is used for yield monitoring only.
- Zero export control is not applicable in this system

# System Overview—Parallel Solution



- Support up to 10 X3-Hybrid inverters in parallel.
- EPS Parallel Box are needed when more than three hybrid inverters in parallel.
- EPS Parallel Box is not mandatory if it has no backup loads.
- System scalable: support up to 150kW and 464 kWh battery capacity.

# Key Features



## Generator Compatible


- Compatible with most diesel generators in the market
- Support ATS or dry contact control modes
- Support Intelligent control modes
- X3 Hybrid need upcoming firmware to support Intelligent control mode




\*Learn more at <https://kb.solaxpower.com>



# Q&A

 [www.solaxpower.com](http://www.solaxpower.com)

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\*Learn more at <https://kb.solaxpower.com>





A modern house with a dark grey facade and horizontal wooden slats. A white Solax EV charging station is mounted on a grey pillar in the center. To the left is a large green tree and a tall orange planter with a grass-like plant. To the right is another large green tree and a small potted plant. A wooden bench is on the left side of the pillar. The entrance has a dark door with a vertical handle.

# THANK YOU

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