All-In-One Systems

ECONO

ENERGY SOLUTIONS

Let Us Power Your Journey

- Supports parallel operation with up to six inverters sharing one group of batteries.
- High voltage 96V battery lower losses compared to a 48V battery.
- 5kW hybrid inverter, 10kW battery, all in one design.

Our dedication lies in providing energy solutions that perform exceptionally well. These solutions are meticulously crafted by individuals who possess a deep passion for creating energy storage solutions that stand the test of time. We collaborate with Powercent, an esteemed partner, to develop cutting-edge technology for the future. Our brand, Econo Energy Solutions, promises energy solutions that are REAL and reliable to “POWER your journey” for many years to come.

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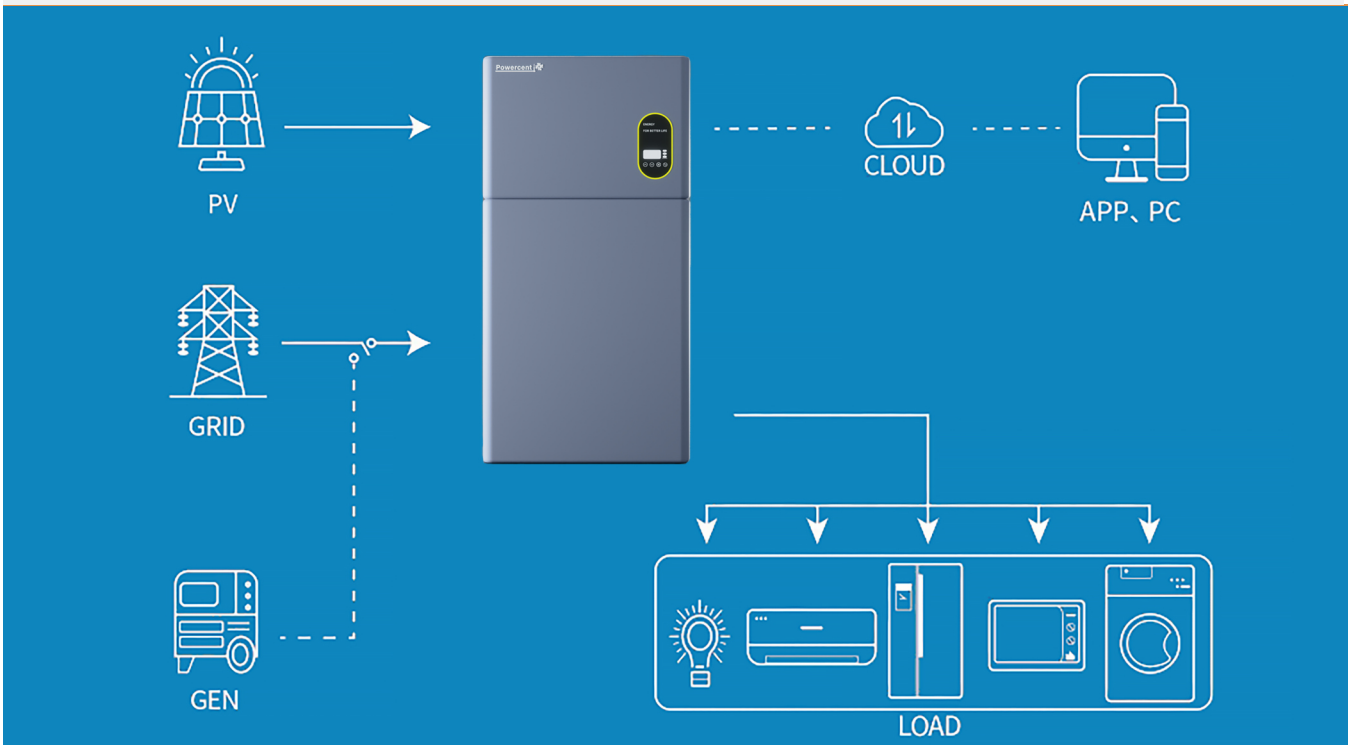


Unleash the POWER of Green Technology – An All-in-One

Approach with Long-Term Performance and "REAL BACKUP"

HIGH PERFORMANCE

- 200% PV over management;
- 200% backup overload capacity, 60A battery current;
- Max. efficiency 97.3%, Battery efficiency 97%;
- Load monitoring accuracy 10W,

HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown;
- Three-level firmware and two-level hardware battery protection;
- Multiple temperature monitoring, delicate thermal management;

HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically;
- PV production forecast;
- **Built-in electric power service, FCAS, VPP, etc.;**
- Online monitoring, online diagnosis,

Parameters

INERTER MODEL	PC-INV-SPH3.6K	PC-INV-SPB5K	PC-INV-SPH5K
PV INPUT			
Max. PV Input Power	7.36kW		10kW
Max. PV Input Voltage	580V		580V
MPPT Range	100-550V		100~550V
Max. Input Current	15A/15A		15A/15A
Max. Short Circuit Current	18.75A/18.75A		18.75A/18.75A
MPPT Trackers	2		2
Strings Per MPPT Tracker	1/1		1/1
AC PORT			
Rated Grid Output Power	3.68kVA	5kVA/4.6kVA(DE)	5kVA/4.6kVA(DE)
Max. Grid Input Power	7.36kVA	10kVA	10kVA
Rated Grid / Backup Voltage		230Vac	
Rated Grid / Backup Frequency		50/60HZ	
Max. Backup Power	7.36kVA/7.36kW	10kVA/10kW	10kVA/10kW
THDi		<3%	
THDv		<3% (Linear Load) / <5%(Non-linear Load)	
DCV		<100mV	
Crest Ratio		3:1	
Transfer Time		<10ms	
EFFICIENCY			
Max. Efficiency	97.30%		97.30%
Round Trip Efficiency	90%	90%	90%
GENERAL DATA			
Operating Temperature Range	-20~60℃		
Topology	Transformerless		
Dimensions (W*H*D)	590x405 x205mm		
Weight	19.5kg	18kg	19.5kg
Load Monitoring	Meter / CT / Backup box		
External Communication	RS-485 / WIFI / 4G / Ethernet		
Grid Regulation	CEI 0-21, VDE 4105-AR-N, VDE 0126-1-1, EN 50438, G99, 6100, AS4777.2 NRS 097, EN 50549, C10/C11, UNE, UTE, NCRfG/PTPiREE		
Safety Regulation	IEC 62109-1&2.IEC 62477		
BATTERY MODEL	PC-BAT-10.1P		
Battery Type	LFP		
Battery Capacity	10.1 kWh		
Usable Capacity	9.6kWh		
Depth of Discharge (DoD)	95%		
Nominal Battery Voltage	96V		
Operating Voltage Range	90-108V		
Max. Charging Current	52.5A		
Max. Discharging Current	52.5A		
Operating Temperature Range	-10~50℃		
Cycle Lifetime	8000		
Parallel	1~6		
Dimensions (W*H*D)	590x750 x205mm		
Weight	90 kg		
Communication	CAN / RS-485 (Optional)		
Safety Regulation	IEC 62619, IEC 62040		
Transportation	UN38.3		
SYSTEM			
Operating Altitude	<4000m		
Relative Humidity	0~95% (No Condensing)		
Protection Degree	IP65		
Cooling	Nature Convection		
Noise	<30dB		
Warranty	5 years / 10 years (optional)		
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		

Note: Specifications are subjected to change without advance notice.

HYBRID INVERTER

DUAL PV INPUT

- Max. 10kw PV input, 5kw for Loads and 5kw for Battery charging. The inverter can ensure that the system operates within its capacity and does not exceed the maximum power output.

PARALLEL FUNC-

- It also supports parallel operation with up to six inverters sharing one group of batteries. Hot-sync parallel technology is employed to minimize internal circulating current.

BATTERY SHARING

- The system allows multiple inverters to share batteries and loads, but significant differences in battery state-of-charge (SOC) can result in reduced total output power and overload if one battery becomes

Parameters

MODEL	PC-INV-SPH3.6K	PC-INV-SPB5K	PC-INV-SPH5K
BATTERY INPUT			
Battery Type		Li-on/Lead-acid	
Nominal Battery Voltage		96V	
Battery Voltage Range		75~400V	
Max. Charging Current	45A	60A	60A
Max. Discharging Current	45A	60A	60A
PV INPUT			
Max. PV Input Power	7.36kW		10kW
Max. PV Input Voltage	580V		580V
MPPT Range	100~550V		100-550V
Full Load MPPT Range	125~550V		180~550V
Startup Voltage	100 V		100V
Max. Input Current	15A/15A		15A/15A
Max. Short Circuit Current	18.75A/18.75A		18.75A/18.75A
MPP Trackers	2		2
Strings Per MPP Trackers	1/1		1/1
GRID PORT			
Rated Output Power	3.68kVA	5kVA/4.6kVA(DE)	5kVA/4.6kVA(DE)
Max. Input Power	7.36kVA	10kVA	10kVA
Rated Grid Voltage		230Vac	
Grid Voltage Range		180~270Vac	
Rated Grid Frequency		50/60 Hz	
Power Factor		-0.8~+0.8	
THDi		<3%	
BACKUP PORT			
Max. Backup Power	7.36kVA/7.36kW	10kVA/10kW	10kVA/10kW
Rated Backup Voltage		230Vac	
Rated Backup Frequency		50/60HZ	
THDv	<3%	(Linear Load) / <5% (Non-linear Load)	
DCV		<100mV	
Crest Ratio		3:1	
Transfer Time		<10ms	
EFFICIENCY			
Max. Efficiency	97.30%		97.30%
Europe Efficieng	96.20%		96.20%
MPPT Efficiency	99.90%		99.90%
Round Trip Effidiency	90%	90%	90%
SYSTEM			
Operating Temperature Range		-20 ~ 60℃	
Relative Humidity		0~95% (No Condensing)	
Operating Altitude		<4000m	
Cooling		Nature Convection	
Noise		<30dB	
Topology		Transformerless	
Dimensions wHD		590x405x205 mm	
Protection Degree		IP65	
Weight	19.5kg	18kg	19.5kg
Warranty		5 years /10 years (optional)	
HMI&COMM			
Communication with BMS		CAN / RS-485	
Load Monitoring		Meter / CT / Backup box	
External Communication		RS-485 / WIFI / 4G / Ethernet	
User Interfac		LED / LCD	
CERTIFICATE			
Grid Regulation		CEI 0-21, VDE 4105-AR-N, VDE 0126-1-1, EN 50438, G99, G100,AS4777.2 NRS 097, EN 50549, 010/011, UNE, UTE, NCRfG/PTPiREE	
Safety Regulation		IEC 62109-1&2, IEC 62477	
EMC		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	

Note: Specifications are subject to change without advance notice.

BATTERY

HIGH SAFETY

- Vehicle-level redundant protection;
- Multiple hardware and firmware protection

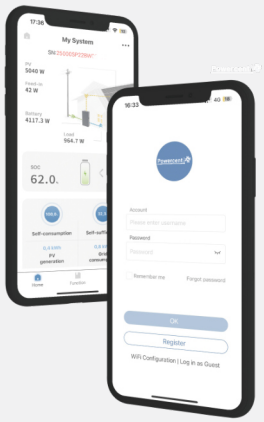
HIGH INTELLIGENCE

- Online cycle lifetime forecast;
- Online monitoring, online diagnosis, online service

MODEL	PC-BAT-10.1
ELECTRICAL	
Battery Capacity	10.1kWh
Usable Capacity	9.6kWh
Depth of Discharge (DoD)	95%
Nominal Voltage	96V
Operating Voltage Range	90 ~ 108V
Internal Resistance	<30mQ
Cycle Lifetime	8000
OPERATION	
Max. Charging Current	52.5 A
Max. Discharging Current	52.5 A
Operating Temperature Range	-10~50℃
Relative Humidity	0~95% (No Condensing)
PHYSICAL	
Battery Type	LFP
Weight	90kg
Dimensions (W*H*D)	590x750x205 mm
Protection Degree	IP65
Warranty	5 years product warranty, 10 years performance warranty
BMS	
Modules	1~6 in parallel
Capacity	10.1 / 20.2 / 30.3 / 40.4 / 50.5 / 60.6 kWh
Usable Capacity	9.6 / 19.2 / 28.8 / 38.4 / 48.0 / 57.6 kWh
Communication	CAN / RS-485 (Optional)
CERTIFICATE	
Transportation	UN38.3
Safety Regulation	IEC 62619, IEC62040
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Note: Specifications are subject to change without advance notice.	

APP COMMISSIONING GUIDE

WIFI CONFIGURATION INSTRUCTION GUIDE



WI-FI CONFIGURATION

Step1 : Open the “POWERCENT” APP and Click “WIFI” Configuration

Step2 : Click “I know, go to continue”

Step3 : Click “Next”

Step4 : Click “Open the Wi-Fi network list”

Step5 : Select the WIFI Model Signal (SN) and input the default Pass Code (12345678) , click “continue”

Step6 : Select the WIFI Router Signal, click “Jump Over”

Step7 : Enter the WIFI Router Password, click “Submit”

Step8 : Wait for a moment

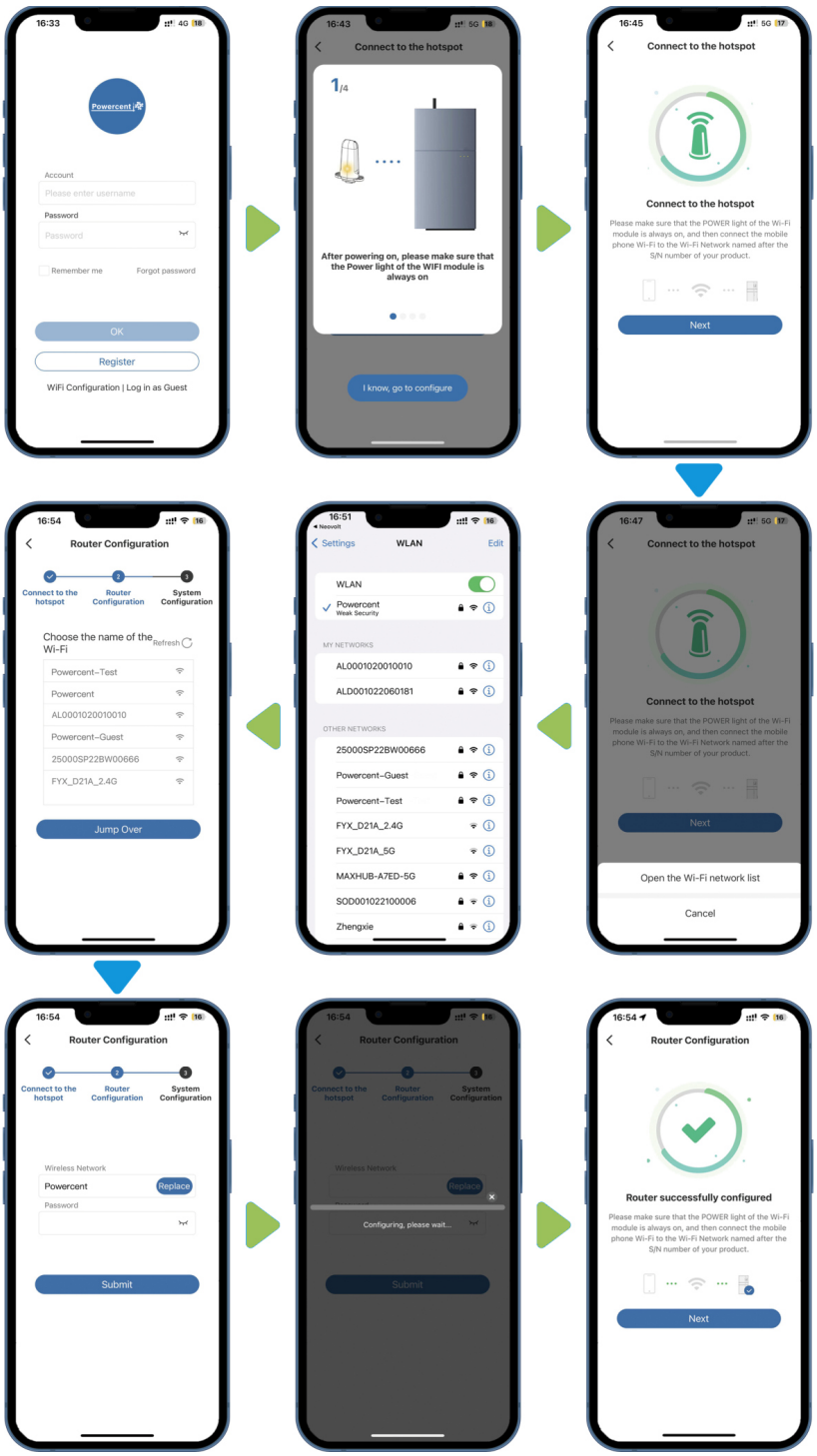
Step9 :Configuration successfully

PREPARING WORK

Step1 : Make sure the Wi-Fi inverter is powered on;

Step2 : Make sure the WIFI router is powered on;

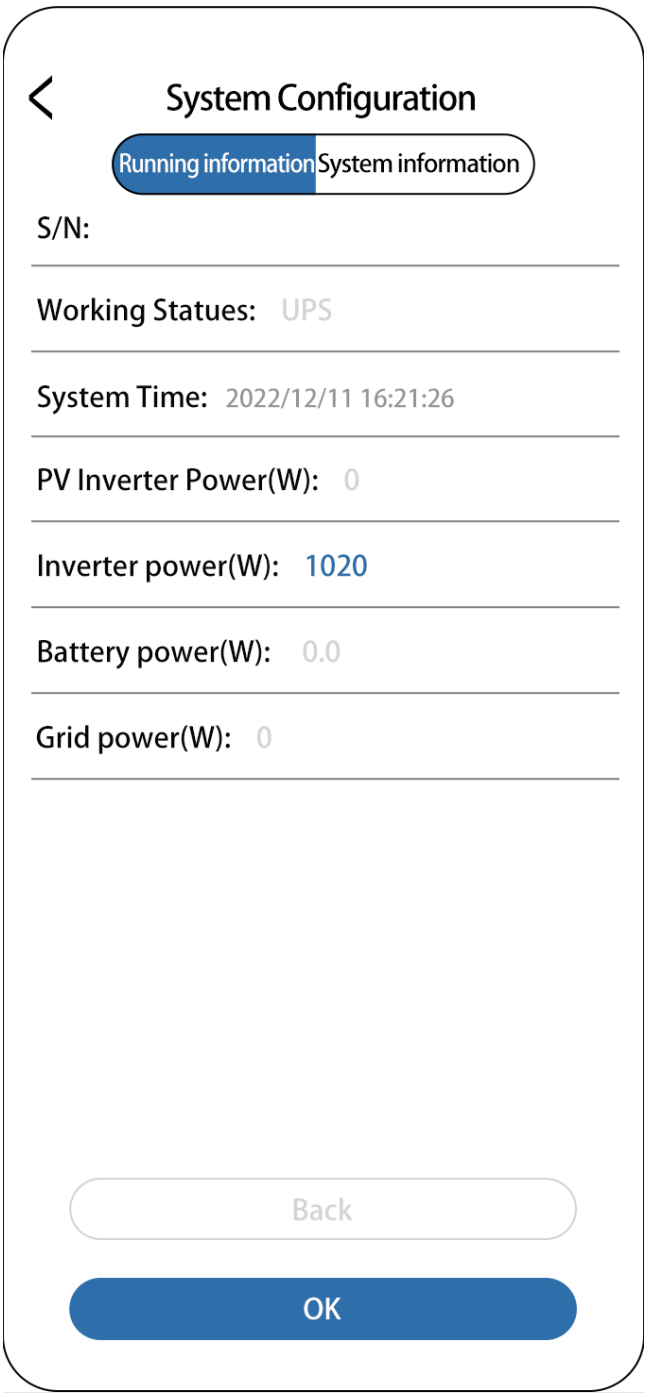
Step3 : Searching “POWERCENT” to Download and install the APP from APP Store.

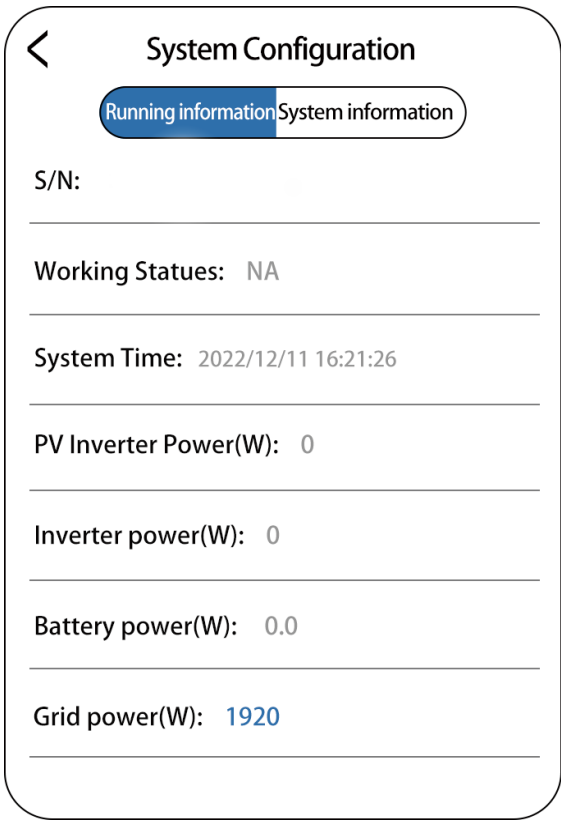


DIRECT COMMISSIONING ON WI-FI CONFIGURATION

CHECK THE RUNNING STATE WITHOUT PV AND

Step1 : Keep the PV switch of the energy storage inverter and AC breaker of the PV-inverter off. Don't power on the batteries.
Step2 : Turn on some larger loads directly connected on the grid to check the grid status, the inverter LED ("SYS") will be red, don't worry, because the battery is not communicated. The grid power should be positive. Otherwise please check the direction of grid CT or grid meter installation.





CHECK THE UPS STATE

Step1 :Please connect an essential electrical appliance to the socket of backup load. Or switch on an essential electrical appliance already connected on the backup load port of the inverter.
Step2 : Switch on the AC breaker on the backup port of the energy storage inverter.
Step3 :Switch off the external AC breaker between the grid and the energy storage inverter.
Step4 : The inverter will enter the UPS mode at once.
Step5 :If the electrical appliance on backup side can work normally, it means that the wiring of the backup has been connected correctly.

CHECK THE RUNNING STATE OF PV

Step1 : Switch off the AC breaker between the grid port on the energy storage inverter and the grid, and switch off the AC breaker between the backup port on the energy storage inverter and the loads.

Step2 :Press the battery button. If there are more than one battery, press the button of each battery and the interval time of powering on any two batteries should be less than 5s.

Step3 : Switch on the AC breaker between the grid port of the energy storage inverter and the grid.

Step4 : Switch on the PV switch on the energy storage inverter if there is any and AC breaker on the PV-inverter if there is any.

Step5 :Switch off all the loads to see the battery charging status and the inverter LED (“SYS”)* will be solid on white. Battery power value should be negative. If the system is in AC or hybrid mode, the PV inverter power value should be positive. If it is not normal, please check the direction of PV CT or PV meter installed.

DC Mode

System Configuration

Running information | System information

S/N:

Working Statues: Normal

System Time: 2022/12/11 16:21:26

PV Inverter Power(W): 0

Inverter power(W): 0

Battery power(W): -891

Grid power(W): 0

Back

OK

AC Mode

System Configuration

Running information | System information

S/N:

Working Statues: Normal

System Time: 2022/12/11 16:21:26

PV Inverter Power(W): 1246

Inverter power(W): -1240

Battery power(W): -1220

Grid power(W): 0

Back

OK

HYBRID Mode

System Configuration

Running information | System information

S/N:

Working Statues: Normal

System Time: 2022/12/11 16:21:26

PV Inverter Power(W): 1246

Inverter power(W): -1240

Battery power(W): -2456

Grid power(W): 0

Back

OK

REAL energy solutions
REAL backup

Econo Energy Solutions specializes in providing solar energy solutions with long life capabilities. The company's focus is on providing calendar year warranties and guarantees using only A-grade and tier products that have high performance, intelligence, and reliability. The innovative and advanced systems they offer work to provide simplified sustainability clean energy solutions, making sustainable energy easier and more accessible to users. Their all-in-one system technology approach ensures minimal losses between inverters and batteries, utilizing a Dual PV Input Battery Sharing Technology that enables multiple inverters to share batteries and loads. The system is designed to allow multiple inverters to share one group of batteries while ensuring that the system operates within its capacity and does not exceed the maximum power output. The system can be configured in series or parallel to best suit the user's needs. The system can operate in parallel with up to six inverters sharing one group of batteries, using Hot-Sync Parallel technology decreasing internal circulating current. Their batteries are ISO26262 approved, with a life duration of 20 years and 8000 cycles, with a DoD of 95%. The same EVE Cells that are used in electrical vehicles are utilized in our batteries. The inverters and batteries are manufactured by the same company, working in unison to offer smart systems with minimal losses. In addition, the system provides multiple hardware, and firmware protection.
Lastly, the system offers online cycle lifetime forecast, and online monitoring, diagnosis, and service to ensure that the system is running smoothly and efficiently.

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Grow Your System