

# Comprehensive Green Energy Solution for Home

PHNXX

MORE FOR FUTURE, MORE FOR YOU



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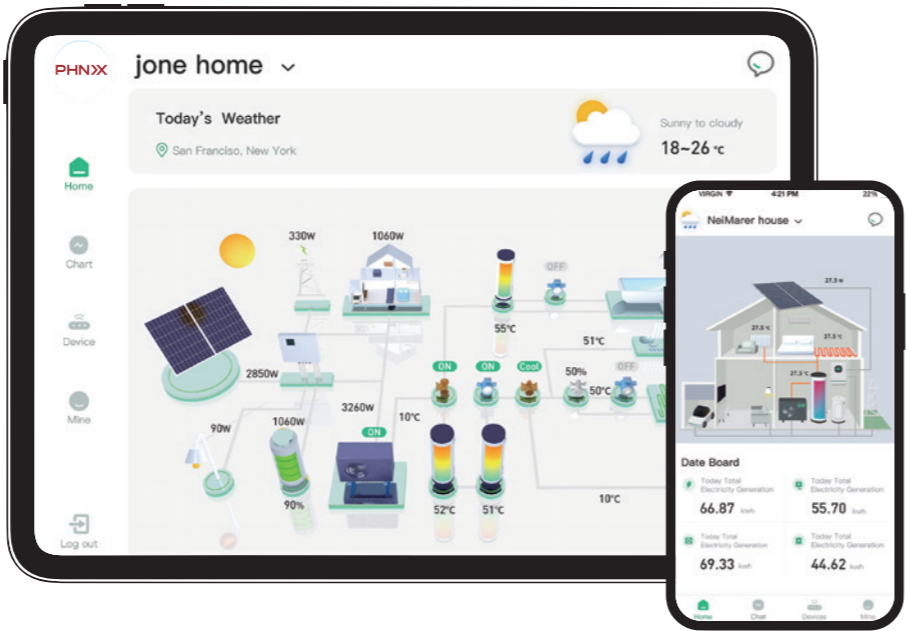
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# PHNIX Smart Home Energy Solution

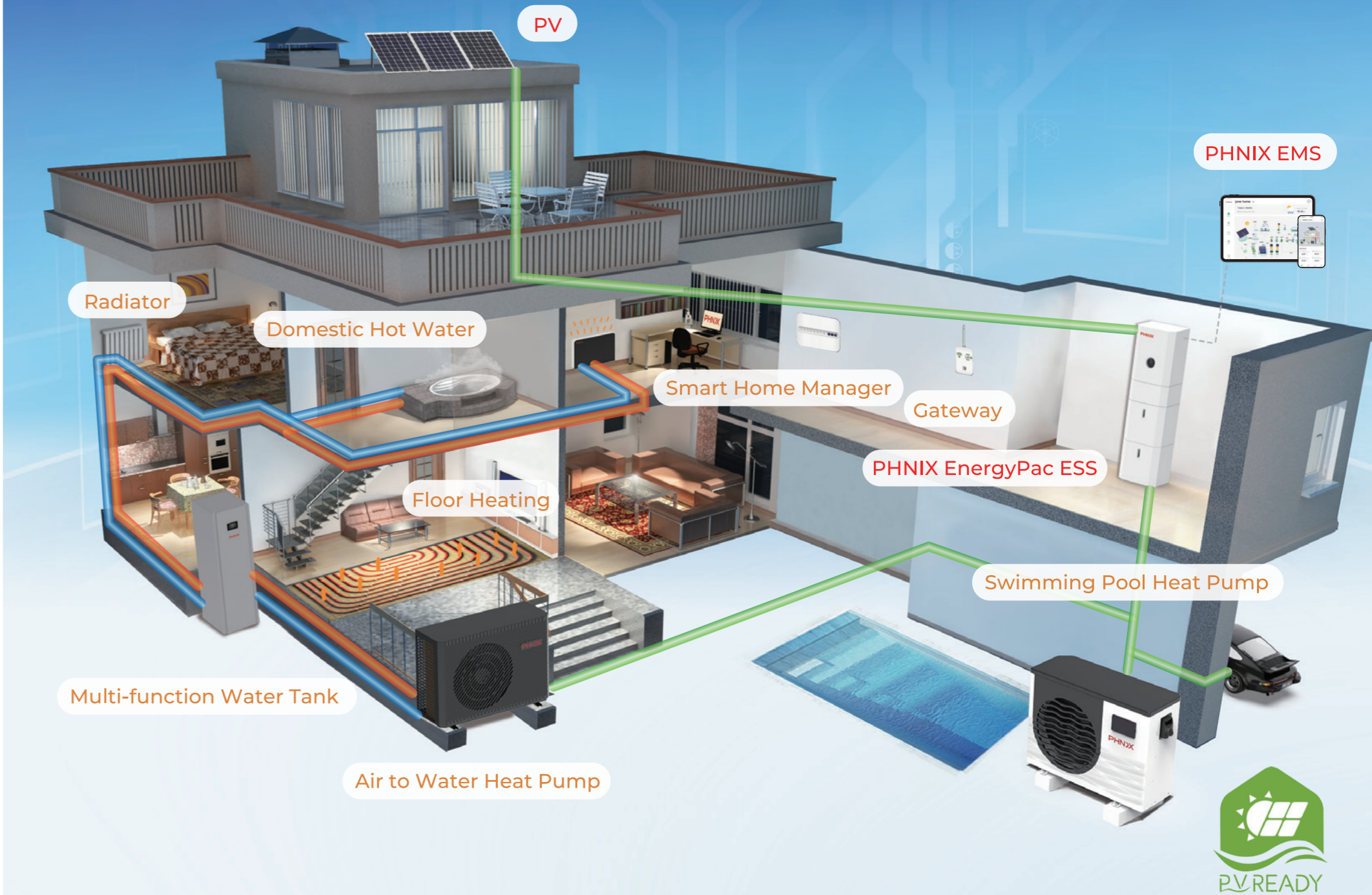
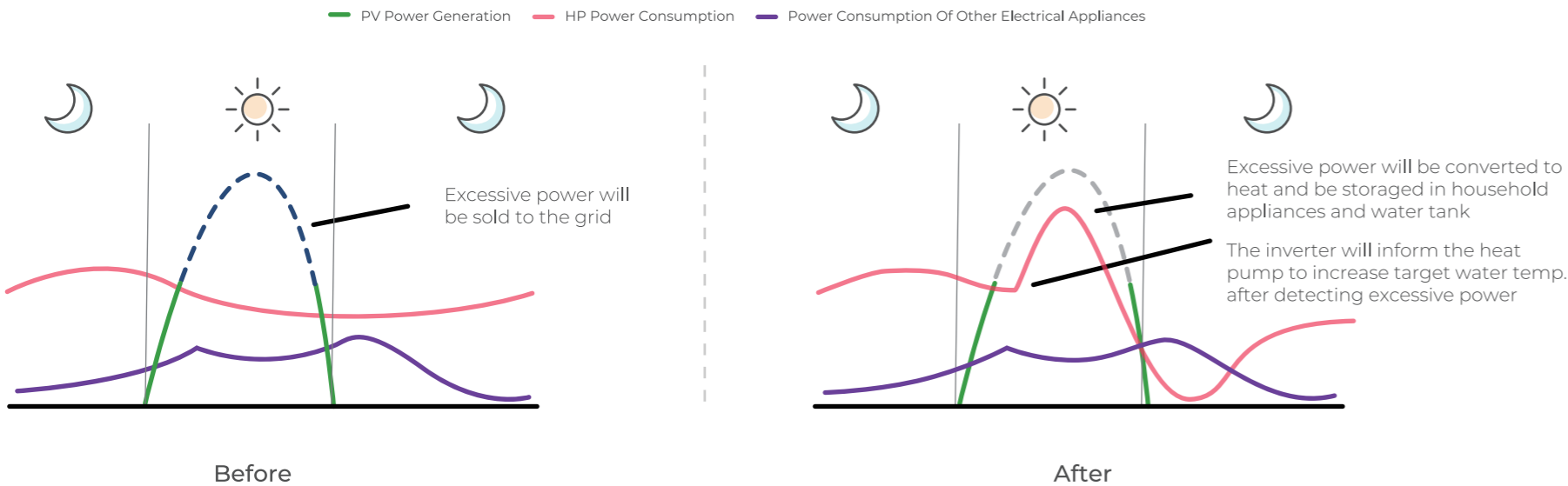
PHNIX heat pump can connect to users' PV system and maximize the use of PV energy.

## EMS

The EMS is an all-round intelligent system designed to monitor variables and meet power or financial consumption targets.



## Integrate Heat Pump with Photovoltaic System



## Air to Water Heat Pump with PV Solution

### More Energy-efficient

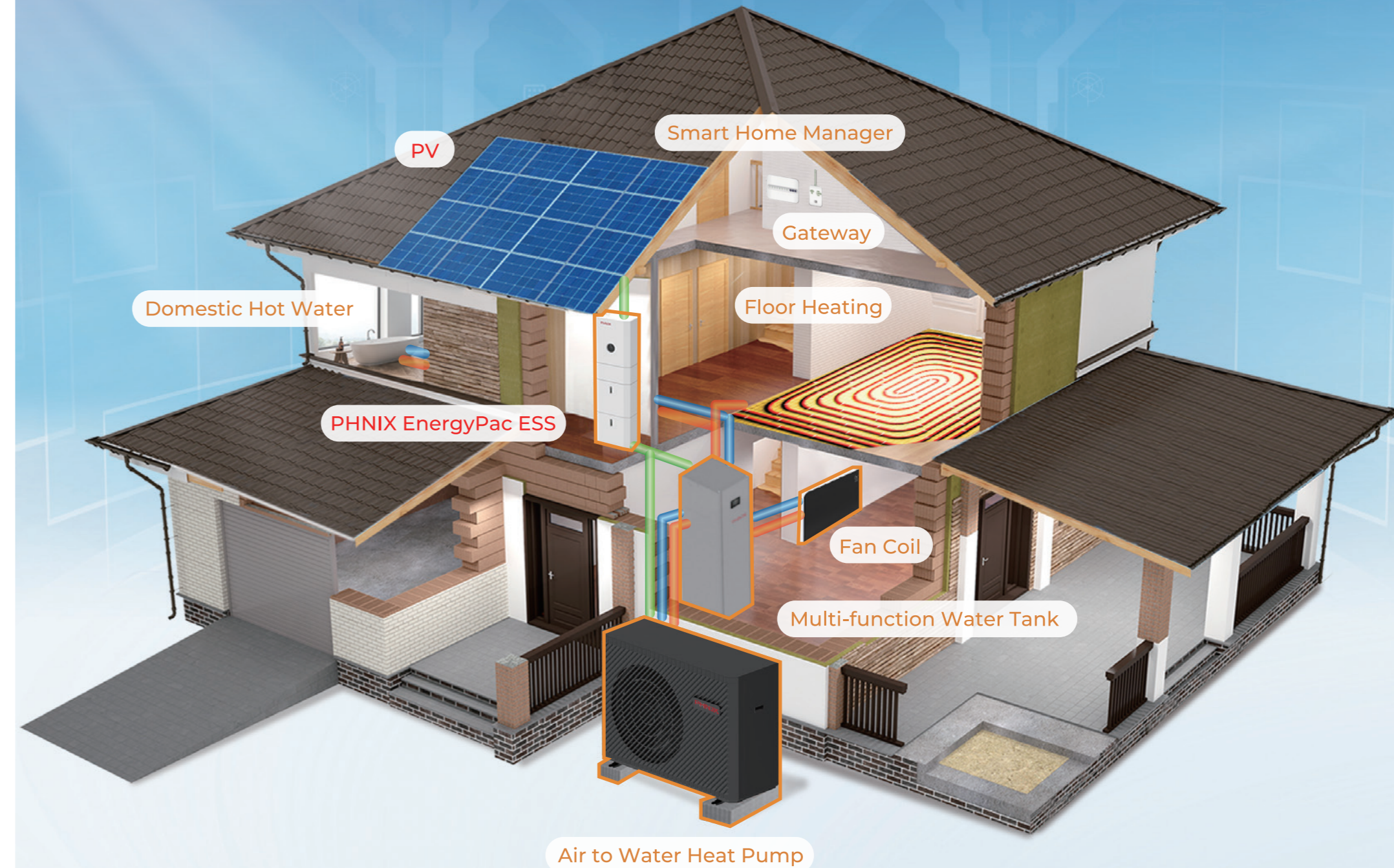
Air to water heat pump with PV energy provides a more energy-efficient house heating solution.

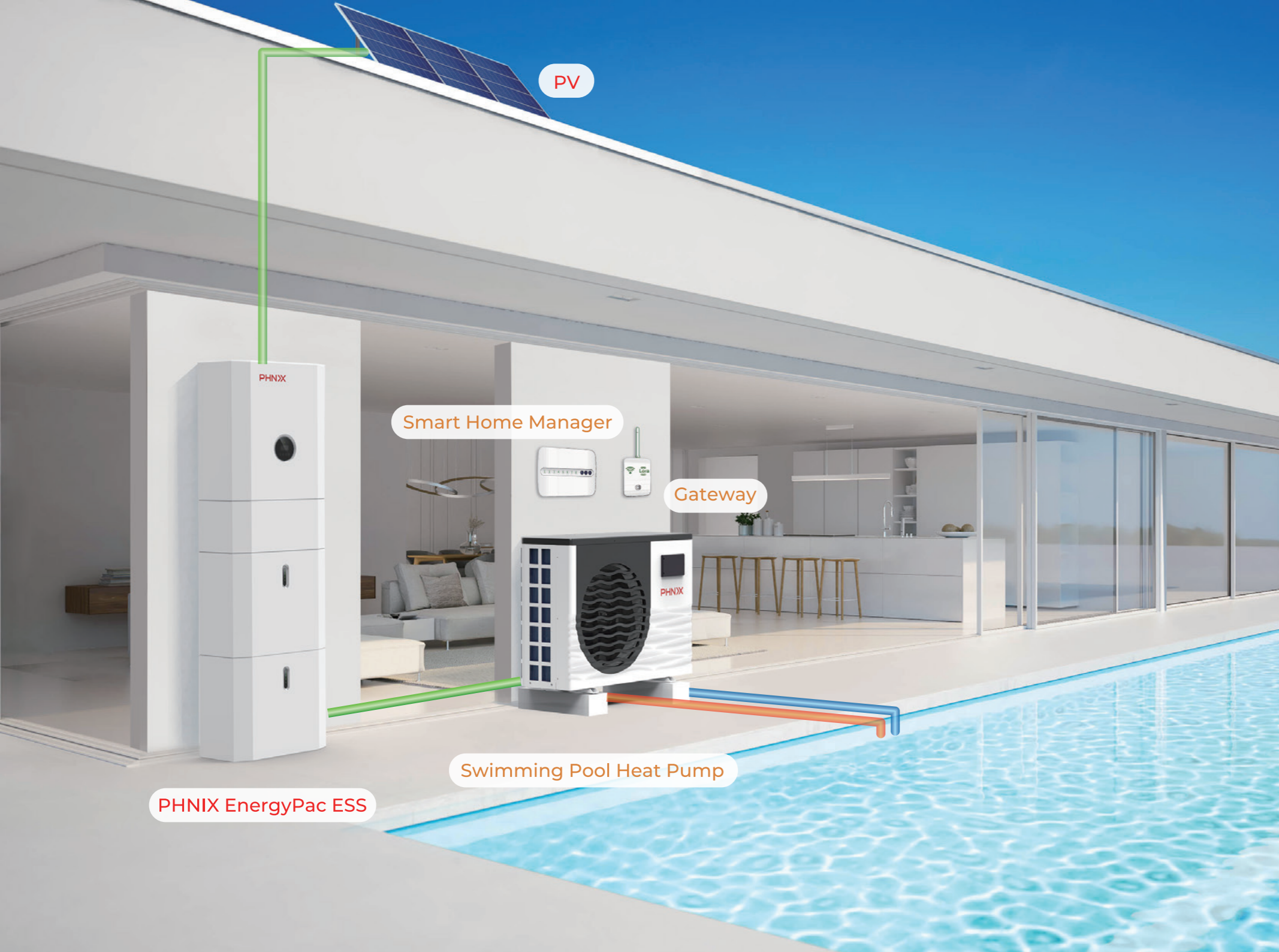
### Ultra Low Noise

The sound pressure of air to water heat pump is kept to as low as 42 dB(A).

### Easy Installation

Air to water heat pump can be used with Multifunctional Water Tank and fan coil, making the installation more convenient. In this way, it can not only fulfill the needs of house heating and hot water in winter, but also the needs of house cooling and hot water in summer, providing green and comfortable life style for users.





## Swimming Pool Heat Pump with PV Solution



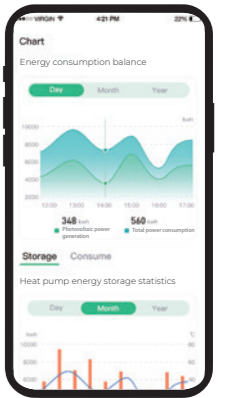
Flowmeter PV Ready Boost

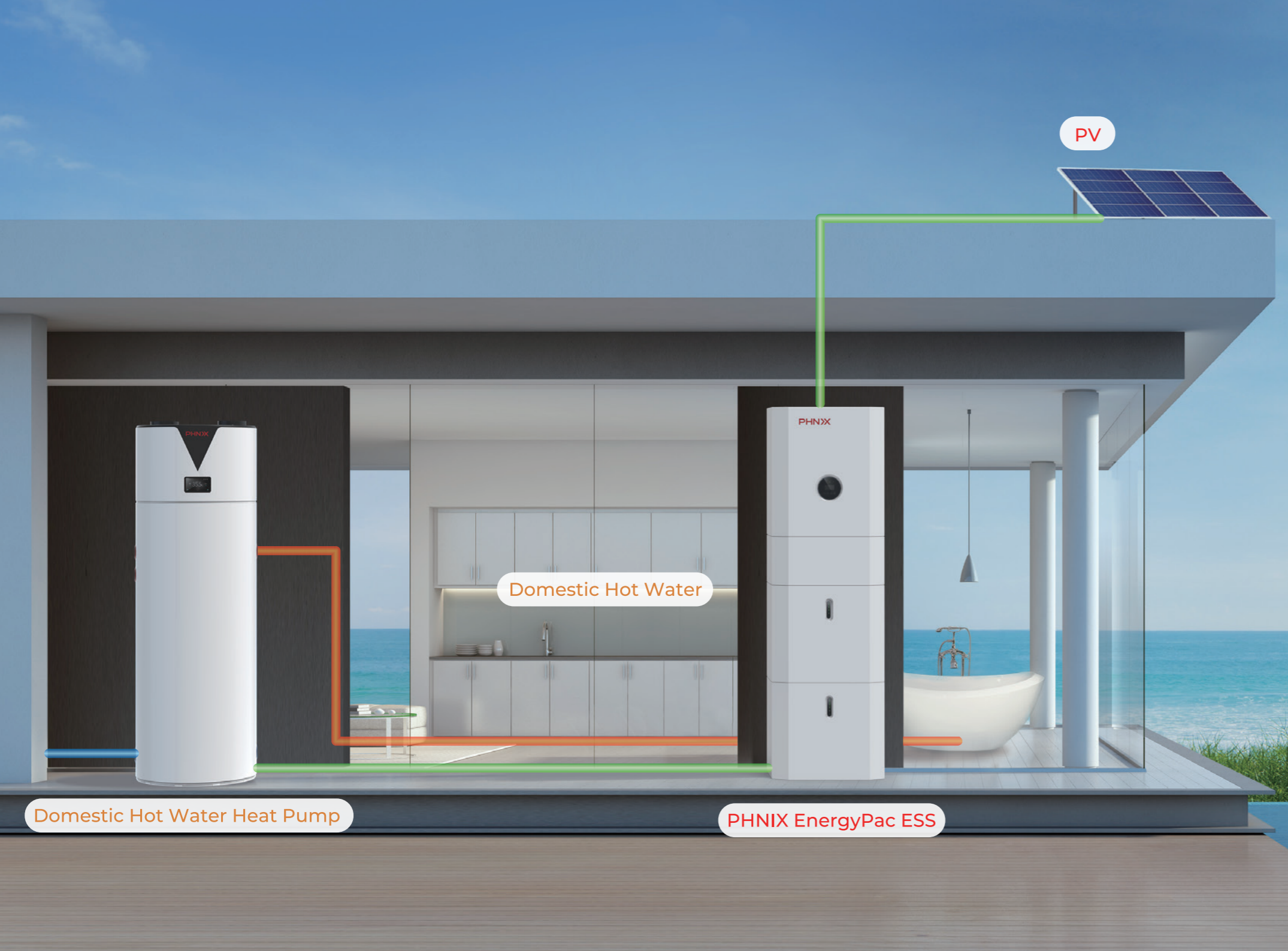
### Smart Touch Display

The PV function can be controlled via a smart display, which gives end users finer control experience.

### SMART Remote Control

Power generation and consumption curve will be shown on the APP or cloud-platform. With SMART remote control, users can monitor the unit whenever and wherever they are.





## All in One Hot Water Heat Pump with PV Solution

### More Energy-efficient

All in one heat pump with PV energy provides a more energy-efficient water heating solution.

### Stable Water Supply

With the outlet water temp. up to 75°C, R290 all in one heat pump can ensure more stable sanitary hot water supply for users' house.



# PHNIX EnergyPac ESS

Energy Storage System



CATL LFP Battery **stable** and **safe**  
Module, pack, system, **triple protection**  
P65, outdoor installation, away from living room



Modular design, single person can carry and install it.  
Plug and play, **30 min** quick installation  
**Space saving**; 0.15 sq. m foot print



The EMS is an all-round **intelligent system**  
designed to monitor variables and meet  
power or financial consumption targets.

Battery Model		PHPAK-LV5.1	
<b>Physical</b>		<b>Operation</b>	
Battery type	LFP (LiFePO4)	Max. Charge/Discharge Current	50A/80A
System Weight	54KG	Rated DC power	4096W
IP Protection	IP65	Max. Charge/Discharge Power	2825W/4096W
Warranty	5 Year Product Warranty	Operating Temperature Range	-10 to 50°C charging -10 to 50°C discharging
<b>Electrical</b>		Humidity	0~95% (No condensation)
Energy Capacity	5.12kwh	<b>BMS</b>	
Usable Capacity	4.6kwh	Modules Connection	Max. 4
Depth of Discharge (DoD)	90%	Capacity	100-400Ah
Nominal Voltage	51.2V	Power Consumption	<2W
DC Circuit Breaker	125A	Communication	CAN & RS485
Operating Voltage Range	44.8-56.5V	Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCB temperature measurement
Internal Resistance	<20mΩ	<b>Certificate</b>	
Cycle Life	10000cycle	Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973

\*Maximum 4 battery pack in parallel.

Hybrid Inverter Model	PHHYB-5KS	PHHYB-10KT
<b>PV String Input</b>		
Max. Continuous PV Input Power	6KW	20kW
Max. DC Voltage	580V	1100V
Nominal Voltage	400V	720V
MPPT Voltage Range	80V-560V	140V-1000V
Start Voltage	130V	130V
Number of MPPT Tracker	2	2
Strings Per MPPT Tracker	1	2
Max. Input Current Per MPPT	15A	15A
<b>AC Output (Grid)</b>		
Nominal AC Output Power	5kW*1	10kW
Max. AC Apparent Power	7.3kVA	11kVA
Nominal AC Voltage	230Vac	400Vac 3W+N+PE
AC Grid Frequency Range	50 / 60Hz	50 / 60Hz
Max. Output Current	22A *2	14.5A
Max. Input Current	32A	16A
Power Factor (cosΦ)	0.8leading-0.8lagging	0.8leading-0.8lagging *
THDi	<3%	<3%
<b>AC Output (Backup)</b>		
Max. Output Apparent Power	5kVA	10kVA
Rated Output Power	4.6kW	9.2kW
Max. Output Current	20A	16A
Nominal Output Voltage	230V	400V
Nominal Output Frequency	50/60Hz	50/60Hz
Output THDv (@Linear Load)	<3% (Linear Load)	<3% (Linear Load)
<b>Efficiency</b>		
Max. PV Efficiency	97.6%	97.6%
Euro. PV Efficiency	97.0%	97.0%
<b>Protection</b>		
Anti-islanding Protection	Yes	Yes
Output Over Current	Yes	Yes
DC Reverse Polarity Protection	Yes	Yes
String Fault Detection	Yes	Yes
AC/DC Surge Protection	DC Type II;AC Type III	DC Type II;AC Type III
Insulation Detection	Yes	Yes
AC Short Circuit Protection	Yes	Yes
<b>General Specifications</b>		
Dimensions W x H x D	540*590*240mm	540*980*240mm
Operating Temperature Range	-25°C~+60°C (Derating > 45°C )	-25°C~+60°C (Derating > 45°C )
Noise (dB)	<25	<25
Cooling Type	Natural Convection	Natural Convection
Max. Operation Altitude	3000m (Derating > 2000m)	3000m (Derating > 2000m)
Operation Humidity	0~95% (No Condensation)	0~95% (No Condensation)
IP Class	IP65	IP65
Certification & Standard	IEC/EN62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21; G98;G99; C10/C11	IEC/EN62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21; G98;G99; C10/C11

\*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.

\*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.

\* 0.95leading-0.95lagging for Germany