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SAKO[®]
SINCE 1997

SAKO SOLAR · 天德普储能

Powering Homes · Empowering Families

Top Brand Solar Inverter & Lithium Battery & Energy Storage System & C&I ESS Manufacturer



European Middle East Asia Africa
Solar Energy Storage System

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Version: SK-IN 26.09



Company Mission: Powering Homes Empowering Families
TRUSTED PARTNERSHIP WITH PROFESSIONAL TALENTS

About SAKO

Established in 1993, with its brand name registered in 1997, SAKO is a professional manufacturer integrating R&D, production, sales, and service of high-quality power and solar products. Headquartered in Shenzhen, SAKO has an R&D center in Dongguan and a production base in Jiangxi, covering over 90,000 square meters, with more than 80 engineers and 800 employees.

SAKO's main products include solar inverters, lithium battery packs, all-in-one systems, C&I BESS solutions, and power batteries for two-wheelers and three-wheelers. SAKO develops 3–5 new products annually and also supports OEM/SKD and customized products. As SAKO manufactures its products in-house, it has clear advantages in cost and quality control. Customers can enjoy one-stop shopping and whole-system warranty coverage.

SAKO and its products have obtained relevant export certifications, including ISO 9001/14001, CE, CB, and IECEE, and can apply for COC, SABER, and SONCAP as required. 99% of SAKO's products are exported. Currently, SAKO has 50+ agents, 15 warehouses and service centers, 160+ partners, and has served thousands of customers in over 89 countries.

With over 30 years of experience, SAKO is committed to providing reliable products and satisfactory services.

Chilin•Shouken: Our spiritual embodiment



- Safety Stability**
Chilin symbolizes protection and represents our commitment to providing users with safe and stable energy solutions.
- Innovation**
Its unique energy crystal corners and technological patterns reflect our determination to continuously innovate and lead in energy technology.
- Good Fortune**
As a traditional auspicious animal, the red dragon also symbolizes that we bring good luck and blessings to our users, and together we move towards a bright future.



COMPANY DEVELOPMENT ROUTES





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Off Grid MPPT Solar Inverter



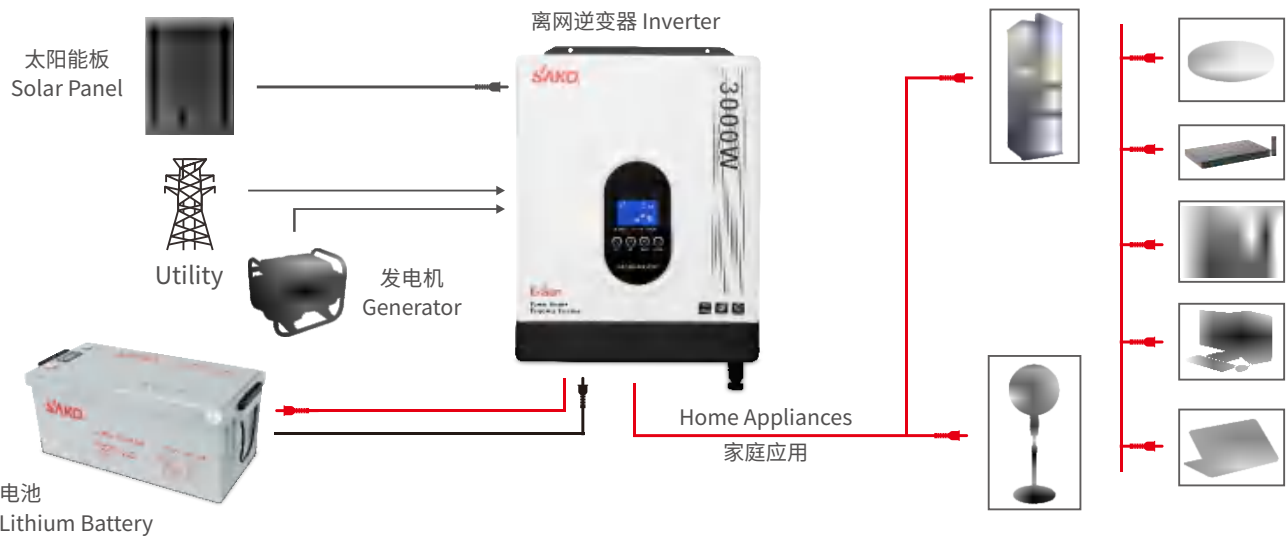
TECHNICAL PARAMETER

Model	E-SUN 1.2K	E-SUN 2K	E-SUN 3K
The rated power	1200VA/1200W	2000VA/1800W	3000VA/3000W
INPUT			
Voltage	230VAC		
Selectable Voltage Range	170-280VAC (UPS), 90-280VAC (Appliances)		
Frequency Range	50Hz/60Hz (Auto sensing)		
OUTPUT			
AC Voltage Regulation (Batt. Model)	230VAC ± 5%		
Surge Power	2400VA	4000VA	6000VA
Power factor	1.0	0.9	1.0
Efficiency(Peak)	> 92.5%	> 94%	> 94%
Transfer Time	10ms (UPS), 20ms (Appliances)		
Wave form	Pure sine wave		
No load power consumption	<23W	<35W	
BATTERY			
Battery voltage	12VDC	12VDC	24VDC
Low battery alarming voltage	11.0VDC	11.0VDC	22.0VDC
Low battery cut off protection voltage	10.5VDC	10.5VDC	21VDC
Low battery recovery voltage	11.5VDC	11.5VDC	23.0VDC
Floating Charge Voltage	13.5VDC	13.5VDC	27VDC
Overcharge Protection	16.0VDC	16.0VDC	32VDC
MPPT SOLAR CHARGER & AC CHARGER			
Maximum PV Array Power	800W	2000W	3000W
MPPT Range Operation Vol	20-100VDC	50-430VDC	50-430VDC
Maximum PV Array Open Circuit Vol.	120VDC	450VDC	450VDC
Number of MPPT trackers / Max output current	50A	80A	80A
Maximum AC Charge Current	50A	60A	60A
Maximum Efficiency	98%	98%	98%
BEST PANEL CONFIGUTATION			
Maximum PV Array Power	800W	2000W	3000W
Best Panel configuration	600W 1PCS in 1 S	600W 2-4 PCS in 1 S	600W 2-5 PCS in 1 S
CHARACTERISTIC			
Display	LCD	LCD	LCD
Communication Interface	W/O	RS485(BMS) communication port	
Parallel Capabillty	W/O	W/O	W/O
PHYSICAL			
Packing size, D*W*H(mm)	347mm*247mm*103mm	473*391*174mm	473*391*174mm
N.W. kg	3.7kg	6.0kg	6.7kg
G.W. kg	4.2kg	6.5kg	7.2kg
OPERATING ENVIRONMENT			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating Temperature Range	0°C to 55°C	0°C to 55°C	0°C to 55°C
Storage Temperature	-15°C-60°C	-15°C-60°C	-15°C-60°C

MAIN FEATURES

- MPPT Solar Charge Controller Inside
- Wide PV Input Range
- Reliable quality, economic design
- Smart battery protection. Compatible with LiFePO4
- Configurable battery & AC/Solar priority via LCD setting
- With BMS for lithium battery communication

Solar System Connection





On&Off Grid MPPT Solar Inverter



TECHNICAL PARAMETER

Model	E-SUN 4.2K	E-SUN 6.2K	E-SUN 12K
The rated power	4200VA/3600W	6200VA/5500W	12000W(PV+BAT)
INPUT			
Voltage	230VAC		
Selectable Voltage Range	170-280VAC (UPS), 90-280VAC (Appliances)		
Frequency Range	50Hz/60Hz (Auto sensing)		
OUTPUT			
AC Voltage Regulation (Batt. Model)	230VAC ± 5%		
Surge Power	8400VA	12400VA	24000VA
Power factor	0.85	0.88	1.0
Efficiency(Peak)	> 93.5%	> 94%	> 94%
Transfer Time	10ms (UPS), 20ms (Appliances)		
Wave form	Pure sine wave		
No load power consumption	<30W	<40W	<110W
BATTERY			
Battery voltage	24VDC	48VDC	48VDC
Low battery alarming voltage	22.0VDC	44.0VDC	44.0VDC
Low battery cut off protection voltage	21.0VDC	42.0VDC	42.0VDC
Low battery recovery voltage	23.0VDC	46.0VDC	46.0VDC
Floating Charge Voltage	28.0VDC	56.0VDC	56.0VDC
Overcharge Protection	32.0VDC	64.0VDC	64.0VDC
MPPT SOLAR CHARGER & AC CHARGER			
Maximum PV Array Power	5000W	6000W	15000W
MPPT Range Operation Vol	60-450VDC	60-450VDC	60-450VDC
Maximum PV Array Open Circuit Vol.	500VDC	500VDC	500VDC
Number of MPPT trackers / Max output current	120A	120A	160A
Maximum AC Charge Current	100A	100A	160A
Maximum Efficiency	98%	98%	98%
BEST PANEL CONFIGUTATION			
Maximum PV Array Power	5000W	6000W	15000W
Best Panel configuration	600W/8PCS/8S1P	650W/9PCS/9S1P	650W/18PCS/9S2P
CHARACTERISTIC			
Display	LCD&APP	LCD&APP	LCD&APP
Communication Interface	RS485(BMS) communication port		
Parallel Capabillty	W/O	W/O	W/O
PHYSICAL			
Packing size, D*W*H(mm)	560*393*196mm	560*393*196mm	595*515*212mm
N.W. kg	8.2kg	8.2kg	15kg
G.W. kg	8.8kg	9.2kg	17.5kg
OPERATING ENVIRONMENT			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating Temperature Range	0°C to 55°C	0°C to 55°C	0°C to 55°C
Storage Temperature	-15°C-60°C	-15°C-60°C	-15°C-60°C

MAIN FEATURES

- Dual AC ouptut
- Remote wifi built inside
- BMS for lithium battery communication
- Built-in 2*27A MPPT, Max PV input 15kW
- Max AC output 12kW(Battery+PV), without PV max AC output 10.5kW
- Excellent high temperature performance:
- No power derating at 45°C ambient, power derates 5% per 1°C above 45°C.

Solar System Connection





On&Off Grid MPPT Solar Inverter



TECHNICAL PARAMETER

TECHNICAL PARAMETER		
Model	5KVA	6.5KVA
The rated power	With PV & BATT. 5KW, W/O PV. 4.2KW	6500W
INPUT		
Voltage	230Vac	
Selectable Voltage Range	170-280Vac (UPS),90-280Vac (Appliances)	
Frequency Range	50Hz/60Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Model)	230VAC ± 5%	
Surge Power	8400VA	13000VA
Power factor	1.0	1.0
Efficiency(Peak)	>93.5%	> 94%
Transfer Time	10ms (UPS), 20ms (Appliances)	
Wave form	Pure sine wave	
No load power consumption	<35W	<30W
BATTERY		
Battery voltage	24Vdc	48Vdc
Low battery alarming voltage	22.0Vdc	44.0Vdc
Low battery cut off protection voltage	21.0Vdc	42.0Vdc
Low battery recovery voltage	23.0Vdc	46.0Vdc
Floating Charge Voltage	28.0Vdc	56.0Vdc
Overcharge Protection	32.0Vdc	64.0Vdc
MPPT SOLAR CHARGER & AC CHARGER		
Maximum PV Array Power	9000W	9000W
MPPT Range Operation Vol	60-450Vdc	60-450Vdc
Maximum PV Array Open Circuit Vol.	500Vdc	500Vdc
Number of MPPT trackers / Max output current	160A	120A
Maxmum AC Charge Current	160A	120A
Maximum Efficiency	98%	98%
BEST PANEL CONFIGUTATION		
Maximum PV Array Power	9000W	9000W
Best Panel configuration	550W/16PCS/8S2P	550W/16PCS/8S2P
PHYSICAL		
Packing size, D*W*H(mm)	500*415*186mm	500*415*186mm
N.W. kg	7.59	7.92
G.W. kg	9	9.3
Communication Interface	RS485(BMS) communication port	RS485(BMS) communication port
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature Range	0°C to 55°C	0°C to 55°C
Storage Temperature	-15°C-60°C	-15°C-60°C

MAIN FEATURES

- MPPT Solar Charge Controller Inside
- Wide PV Input Range
- Reliable quality, economic design
- Remote WIFI optional
- Smart battery protection. Compatible with LiFePO4
- Configurable battery & AC/Solar priority via LCD setting
- With BMS for lithium battery communication

Solar System Connection





On&Off Grid MPPT Solar Inverter



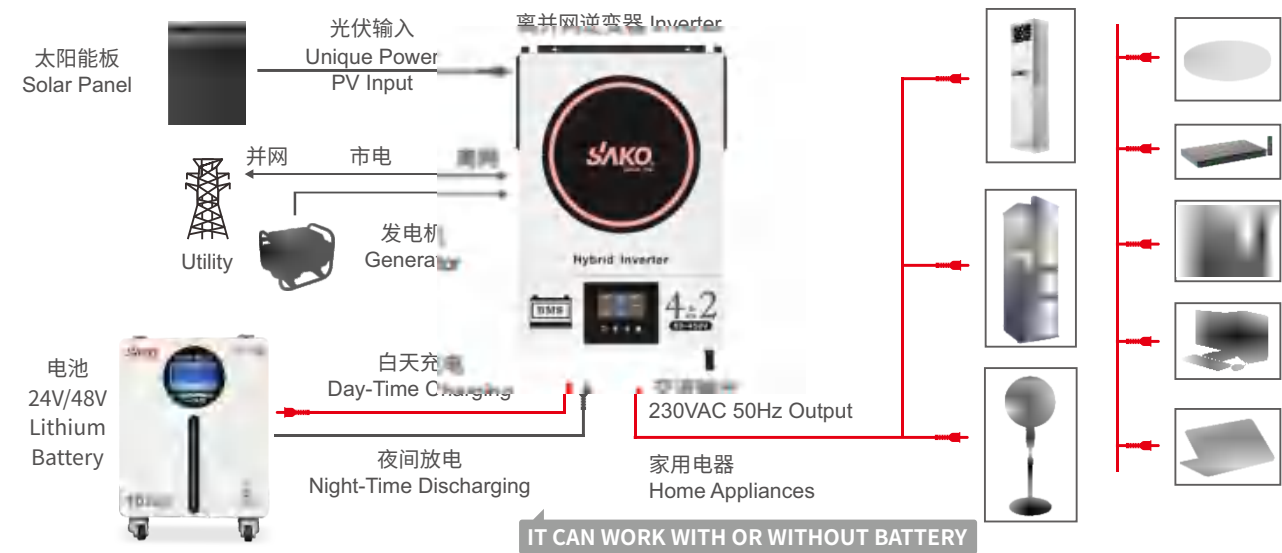
TECHNICAL PARAMETER

NEW MODEL	SUNON-ULTRA 4.2KW	SUNON-ULTRA 6.2KW
Max.PV Power	6200W	6500W
Rated Power	4200W	6200W
Max.Charge Current	120A	120A
BATTERY		
Battery Voltage	24VDC	48VDC
Floating Charge Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
Battery Type	Compatible with GEL, AGM, Llithium Battery	
GRID INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280VAC(For Personal Computers);90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Efficiency(AC Mode)	98%	
AC OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%	
Surge Power	8400VA	12400VA
Efficiency (Peak)	93%	
Transfer Time	10ms typical (UPS) ; 20ms typical (Appliances)	
Waveform	Pure sine mave	
DUAL LOADS AC OUTPUT		
Full Load	4200W	6200W
Maximum Main Load	4200W	6200W
Main Load Cut Off Voltage	22VDC	44VDC
Main Load Return Voltage	27VDC	54VDC
SOLAR CHARGER &AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	6200W	6500W
Max. input Current	27A	27A
MPPT Range @ Operating Voltage	60~500VDC	60~500VDC
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Solar Charge Current	120A	120A
Maximum AC Charge Curent	100A	100A
Maximum Charge Curent	140A	120A
PHYSICAL		
Packing Dimension,DXWXH(mm)	555*385*220mm	555*385*220mm
Weight (kgs)	10.9	11.6
Communication Interface	USB/RS232/WIFI/GPRS	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

MAIN FEATURES

- Pure sine wave, Hybrid, on/off grid inverter can feed into grid
- Inverter running with or without battery
- Build-in Lithium battery automatic activation
- Build-in 120A MPPT solar charge controller
- High PV input voltage rang (60~500VDC)
- Battery independent design
- User-friendly LCD operation
- BMS optional for lithium battery communication.

Solar System Connection





On&Off Grid MPPT Solar Inverter



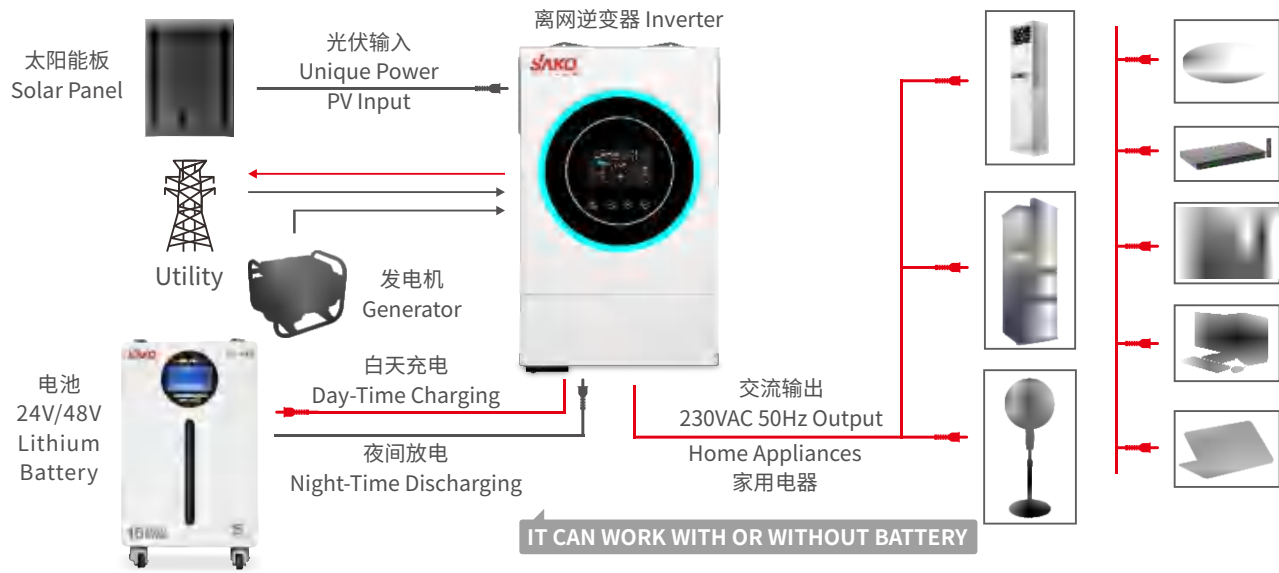
TECHNICAL PARAMETER

MODEL	SUNON V 4.5KVA/24V	SUNON V 6.5KVA/48V
Rated Power	4200W	6200W
BATTERY		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%	
Surge Power	8400VA	12400VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	5000W	6000W
Max. Input Current	27A	27A
MPPT Range @ Operating Voltage	60-450V	60-450V
Maximum PV Array Open Circuit Voltage	500 VDC	
Maxmum Solar Charge Current	120 A	120 A
Maximum AC Charge Current	100 A	100 A
Maximum Charge Current	120 A	120 A
PHYSICAL		
Packing Dimension,D X W X H (mm)	583mm*380mm*214mm	583mm*380mm*214mm
Weight (kgs)	11.9	12.6
Communication Interface	USB/RS232/RS485(BMS)/Local WiFi/Dry-contact	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

MAIN FEATURES

- Built-in Remote WiFi for mobile monitoring (App is available)
- With OTG function,supports data events stored
- Optional for RGB or movable LCD case design
- Reserved communication port (RS485, CAN-BUS or RS232) for BMS
- Battery independent design
- Battery equalization extends lifecycle
- Dual(Twin) AC Output
- Enhanced charging power
- Built-in anti-dust kit
- Hybrid can work as off grid or on grid inverter

Solar System Connection



We Can Provide All Kinds Of Solar Solutions According To Your Demands.



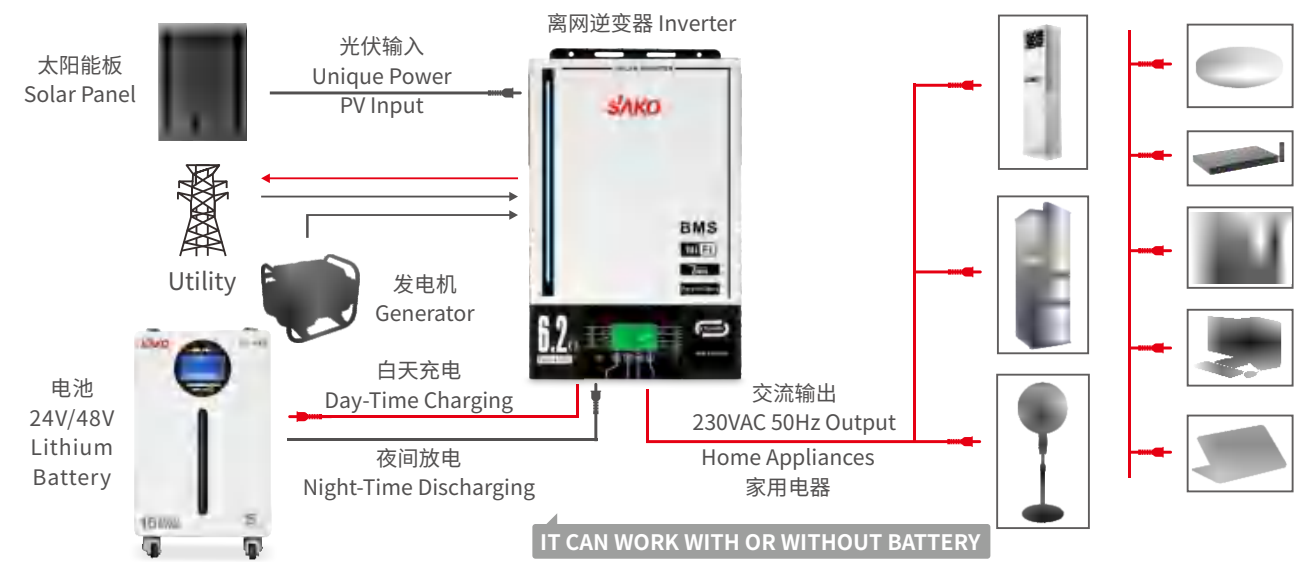


SUNPOLO-KING 4.2KW
6.2KW Off Grid MPPT
Solar Inverter Zero-
transfer Time+
AVR function

MAIN FEATURES

- 120A MPPT solar charger inside, max pv input 6000W (27A)
- Optional for bypass mode or AVR mode when there is AC
- Optional for parallel operation up to 9 units
- With BMS for lithium battery communication,Compatible with Lead acid, AGM, Gel, flooded, tubular,LiFePo4.
- Various communication such as USB/RS232/RS485(BMS)/ dry contact/WIFI.
- Movable LCD.
- Zero-transfer Time
- Twin output
- Wifi monitor built inside
- Wide PV input range (Up to 450Vdc), support no battery working during the day time.

Solar System Connection



We Can Provide All Kinds Of Solar Solutions According To Your Demands.

Off Grid MPPT Solar Inverter



TECHNICAL PARAMETER

Model No.	4.2KW	6.2KW
Max. PV Input Power	5000W	6000W
Rated AC Output Power	4200W	6200W
PV Input (DC)		
Nominal DC Volt/Max DC Voltage	360Vdc/450Vdc	
Start-up Voltage/Initial Feeding Voltage	120Vdc	
MPPT Voltage Range	120-430Vdc	
Max. Input Current	27A	
Output (AC)		
Nominal Output Volt	230Vac, Single Phase	
Output Voltage Range	230Vac±5% （nline mode） or 110-280Vac (ECO Mode)	
Transfer Time	Line mode--Battery mode 0ms, Inverter--Bypass 4ms	
Nominal Output Current	17.4A	27A
Power Factor	1	
Efficiency		
Max. Conversion Efficiency (DC/AC)	93%(Peak Efficiency)	
AC Input (AC)		
AC Start-up Voltage/Auto Restart Volt.	120Vac-140Vac/180Vac	
Acceptable Input Voltage Range	110-280Vac	
Max. AC Input Current	30A	40A
Battery & Charger		
Battery Type Supported	AGM, Gel, flooded, tubular, LiFePo4	
Battery nominal voltage	24Vdc	48Vdc
Max Solar Charge Current	120A	
Max AC Charge Current	120A	
Max Total Charge Current	120A	
Physical		
Products Dimension,D X W X H (mm)	468x295x140 mm	468x295x140 mm
Packing Dimension,D X W X H (mm)	530x377x225 mm	530x377x225 mm
Product Net Weight(Kg)	12.0Kg	12.3Kg
Product Gross Weight(Kg)	13.5Kg	13.8Kg
Parallel functions Optional	Yes, optional, max. 9pcs	
Communication Interface	USB/RS232/RS485(BMS)/dry contact/WIFI.	
Environment		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	
Enclosure	IP20	

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On&Off Grid MPPT Solar Inverter



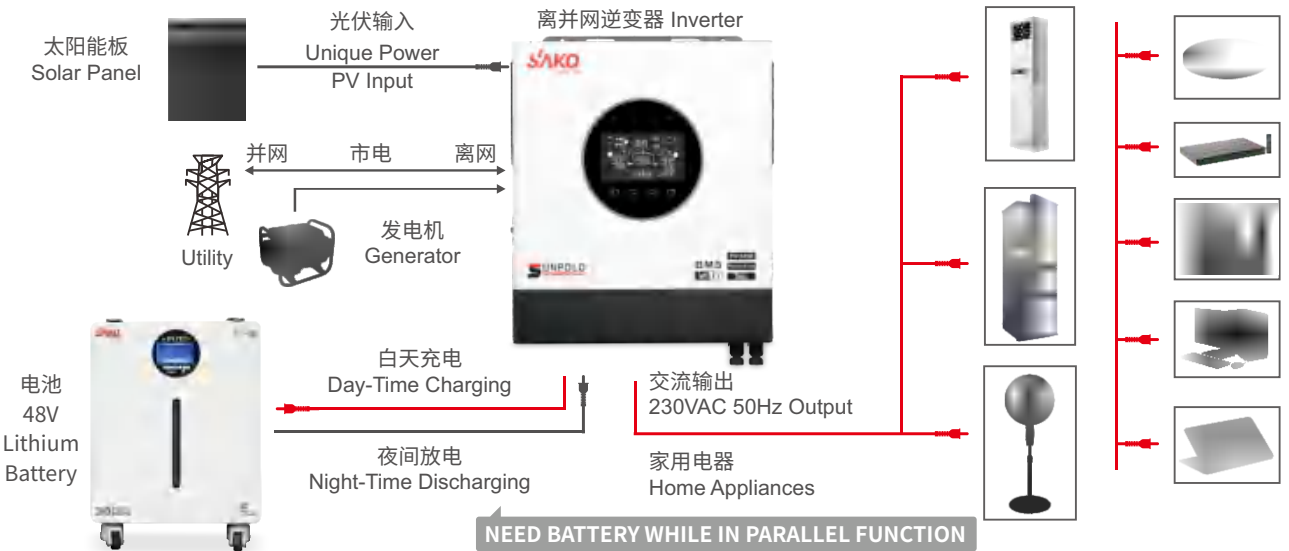
TECHNICAL PARAMETER

Model	SUNPOLO-6KW	SUNPOLO-12KW	SUNPOLO-14KW
The rated power	6000W	12000W(PV+BAT)	14000W(PV+BAT)
INPUT			
Voltage	230VAC		
Selectable Voltage Range	170-280VAC (UPS), 90-280VAC (Appliances)		
Frequency Range	50Hz/60Hz (Auto sensing)		
OUTPUT			
AC Voltage Regulation (Batt. Model)	230VAC ± 5%	230VAC ± 5%	230VAC ± 5%
Surge Power	12000VA	24000VA	28000VA
Power factor	1	1	1
Efficiency(Peak)	> 94%	> 94%	> 94%
Transfer Time	10ms (UPS), 20ms (Appliances)	10ms (UPS), 20ms (Appliances)	10ms (UPS), 20ms (Appliances)
Wave form	Pure sine wave	Pure sine wave	Pure sine wave
No load power consumption	<30W	<30W	<65W
BATTERY			
Battery voltage	48VDC	48VDC	48VDC
Low battery alarming voltage	44.0VDC	44.0VDC	44.0VDC
Low battery cut off protection voltage	42.0VDC	42.0VDC	42.0VDC
Low battery recovery voltage	46.0VDC	46.0VDC	46.0VDC
Floating Charge Voltage	56.0VDC	56.0VDC	56.0VDC
Overcharge Protection	64.0VDC	64.0VDC	64.0VDC
MPPT SOLAR CHARGER & AC CHARGER			
Maximum PV Array Power	9000W	15000W	18000W
MPPT Range Operation Vol	60-450VDC	60-450VDC	90-450VDC
Maximum PV Array Open Circuit Vol.	500VDC	500VDC	500VDC
Number of MPPT trackers / Max output current	120A	160A	250A
Maxmum AC Charge Current	120A	160A	210A
Maxmum Efficiency	98%	98%	98%
BEST PANEL CONFIGUTATION			
Maximum PV Array Power	9000W	15000W	18000W
Best Panel configuration	600W/16PCS/8S2P	550W/27PCS/9S3P	600W/28PCS/7S4P
CHARACTERISTIC			
Number of AC output	2		
Display	LCD&APP		
Communication Interface	RS485(BMS) communication port		
Parallel Capabillty	supports 6pcs		
PHYSICAL			
Packing size, D*W*H(mm)	500*415*186mm	595*515*210mm	725*515*195mm
N.W. kg	8Kg	15Kg	18.0Kg
G.W. kg	9.5Kg	16.5Kg	20.5Kg
Communication Interface	RS485(BMS) communication port		
OPERATING ENVIRONMENT			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating Temperature Range	0°C to 55°C		
Storage Temperature	-15°C-60°C		

MAIN FEATURES

- Smart battery management. Compatible with different types of batteries: Lead acid, AGM, Gel, flooded, tubular, LiFePo4
- Two independent AC power sources (Utility + generator) connected and switched automatically (grid power get the priority)
- Built-in Remote WIFI for mobile monitoring(Android/IOS)
- Dual outputs (L1/L2) for smart load management for 6K/12K
- 120/160/250A MPPT solar charger inside, max pv input (2*27A, Max. 40A)
- Wide PV input range (Up to 500Vdc), support no battery working during the day time.
- On grid and off grid solar inverter, support self-consumption and feed into the grid.
- Max. PV input current 40A
- Built-in BMS
- Parallel up to 6 units

Solar System Connection





TECHNICAL PARAMETER

Model No.	SUNIN 6.6K	SUNIN 9.2K	SUNIN 11.2K
Rated Output Power	6600W	9200W	11200W
Battery Input Data			
Battery Type	Lead-acid or Li-Ion	Lead-acid or Li-Ion	Lead-acid or Li-Ion
Nominal DC Voltage (V)	48 VDC	48 VDC	48 VDC
Battery Voltage Range (V)	40-60V	40-60V	40-60V
Max Charge Current (A)	135A	190A	210A
Max Discharging Current (A)	135A	190A	210A
Charge Curve	3 Stages / Equalization	3 Stages / Equalization	3 Stages / Equalization
Charging Strategy for Li-Ion Battery	Self-adaption to BMS	Self-adaption to BMS	Self-adaption to BMS
PV String Input Data			
Max. PV Input Power (W)	12000W	16000W	18000W
Max. PV Array Open Circuit Voltage (V)	500 VDC	500 VDC	500 VDC
MPPT Range Operating Voltage (V)	120 VDC~450 VDC	120 VDC~450 VDC	120 VDC~450 VDC
Nominal operating voltage (V)	360 VDC	360 VDC	360 VDC
PV Input Current (A)	21A+21A	27A+27A	27A+27A
Max. PV Isc(A)	26.25A+26.25A	34A+34A	34A+34A
No. of MPPT Trackers	2	2	2
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage (V)	220/230/240 VAC	220/230/240 VAC	220/230/240 VAC
Frequency Range (Hz)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)
Output Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Efficiency (DC to AC)	93%	93%	93%
GRID-TIE OPERATION			
GRID OUTPUT (AC)			
Nominal Output Voltage (V)	220/230/240 VAC	220/230/240 VAC	220/230/240 VAC
Nominal Output Current (A)	28.7A	37.4A	46.1A
Power Factor Range	>0.99	>0.99	>0.99
Maximum Conversion Efficiency (DC/AC)	97%	97%	97%
OFF-GRID, HYBRID OPERATION			
GRID INPUT			
Acceptable Input Voltage Range (V)	90 - 300 VAC or 170 - 300 VAC	90 - 300 VAC or 170 - 300 VAC	90 - 300 VAC or 170 - 300 VAC
Frequency Range (Hz)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)
Transfer Time	< 10ms (for UPS) < 20ms (for home appliances) < 50ms (for parallel system operation)		
Rating of AC Transfer Relay	40A	60A	60A
GENERATOR INPUT			
Acceptable Input Voltage Range (V)	90 - 300 VAC	90 - 300 VAC	90 - 300 VAC
Frequency Range (Hz)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)
Rating of AC Transfer Relay	40A	60A	60A
General Data			
Parallel functions Optional	Yes, optional, max 9pcs	Yes, optional, max 9pcs	Yes, optional, max 9pcs
Operating Temperature Range (°C)	-25°C to 50°C	-25°C to 50°C	-25°C to 50°C
Communication Interface	USB or RS232 / RS 485/WIFI	USB or RS232 / RS 485/WIFI	USB or RS232 / RS 485/WIFI
Products Dimension,D X W X H (mm)	/	/	/
Product Net Weight(kgs)	/	/	/
Protection Degree	IP65		
Insulation Style	Wall-mounted		
Wall-mounted	The Warranty Period Depends the Final Installation Site of Inverter,More info Please Refer to Warranty Policy		

MAIN FEATURES



IP65 protection degree



Parallel up to 9 units



Built-in remote WIFI



BMS communication supported



Battery grid-connectable



2 PV inputs

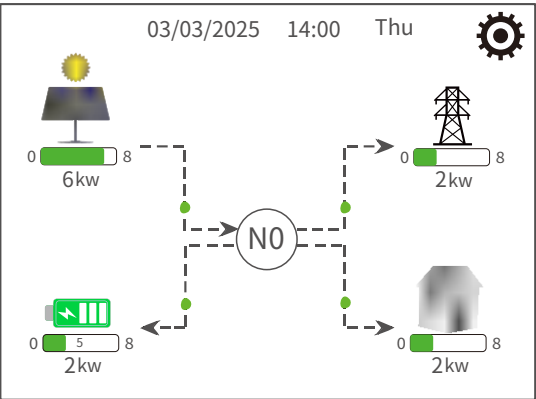


With generator interface

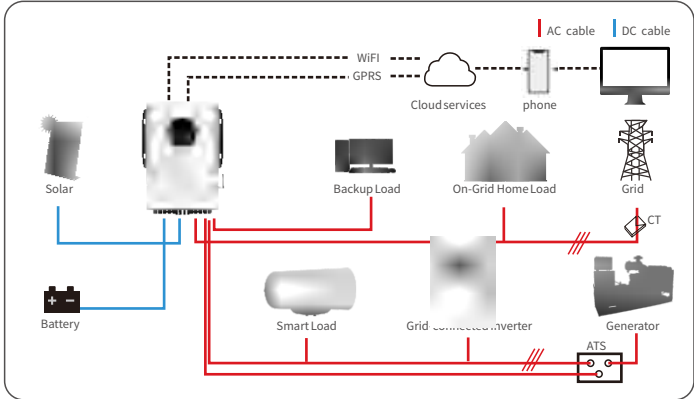


Touch display

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE





IP66 Residential Energy Storage Hybrid Inverter



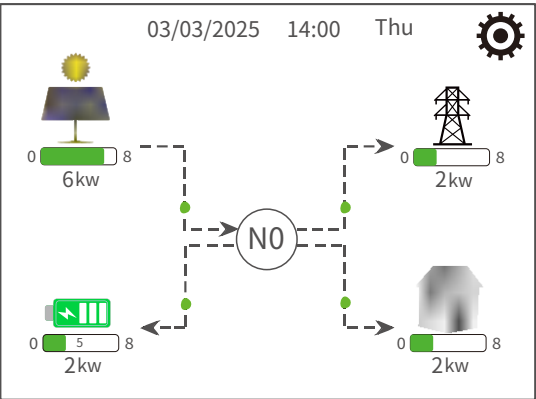
TECHNICAL PARAMETER

Product Models	SUNIN-6KM2-L1P1-ATEU	SUNIN-8KM2-L1P1-ATEU	SUNIN-10KM3-L1P1-EU	SUNIN-12KM3-L1P1-EU	SUNIN-16KM3-L1P1-EU
Battery Input Parameters					
Battery Type	Lithium or Lead-acid Battery				
Rated Battery Voltage (V)	48V				
Maximum Charging Voltage (V)	≤60(configurable)				
Maximum Charging/Discharging Current (A)	125A	190A	220A	250A	275A
PV Input Parameters					
Maximum DC Input Power (W)	12000W	16000W	18000W	20000W	22500W
Maximum DC Input Voltage (V)	500V				
MPPT Voltage Range (V)	150~450V				120~480V
Start-up Voltage(V)	125V				120V
Maximum Input Current(A)	20A/20A	30A/18A	32A/32A/32A	32A/32A/32A	39A/39A/39A
Number of MPPT Trackers	2	2	3	3	3/2+2+2
AC Output Parameters (Grid-tied)					
Maximum Apparent Output Power (VA)	6600	8800	11000	13200	17600
Rated Output Voltage (V)	220/230V				
Rated Output Frequency (Hz)	50/60Hz				
Maximum Output Current (A)	30A/28.7A	40A/38.2A	50A/47.9A	60A/57.4A	80A/76.5A
Output Power Factor	1(0.8 leading ~ 0.8 lagging)				
AC Output Parameters (Off-grid)					
Rated Output Power (W)	6000	8000	10000	12000	16000
Peak Output Power (W)	>200%,15sec				
Rated Output Voltage (V)	220/230V				
Rated Output Frequency (Hz)	50/60Hz				
Rated Output Current (A)	26.1A	34.8A	43.5A	52.2A	69.6A
Efficiency					
Max. Efficiency (PV)	98%				
Max. Efficiency (Battery)	94.5%				
European Efficiency	97.5%				
Protection					
PV Reverse Polarity Protection	Integrated				
PV Insulation Resistance Detection	Integrated				
Residual Current Detection	Integrated				
Output Overcurrent Protection	Integrated				
Output Short-circuit Protection	Integrated				
Output Overvoltage Protection	Integrated				
General Parameters					
Operating Temperature (°C)	-40~60°C(derating above 45°C)				
Storage Temperature (°C)	-30~65°C				
Relative Humidity	0~95%				
Operating Altitude (m)	≤4000(derating above 2000m)				
Cooling Method	Intelligent Forced Air Cooling				
Noise (dB)	<55dB				
Weight (kg)	21.5kg				40kg
Dimensions (W × H × D mm)	198*427*554mm				466*600*252mm
IP Rating	IP66				
Topology	High-frequency Isolation (Battery Side)				
Safety / EMC Certification	IEC62109, IEC61000, IS16169 & IS16221(BIS)				
Grid Compliance	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140				
Other Certifications	IEC61683, IEC62116, EN50530, IEC60068				

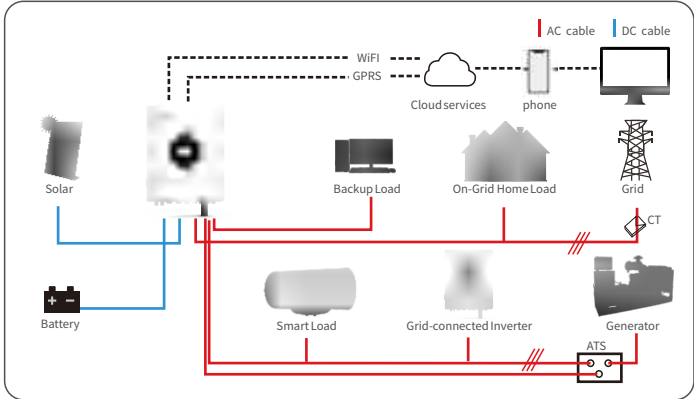
MAIN FEATURES

- Colorful touch LCD, IP66 protection degree
- AC coupling to retrofit existing solar system
- Max. 6 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- Max. charging/discharging current of 125A/190A/220A/250A/275A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE





IP66 Residential Energy Storage Hybrid Inverter



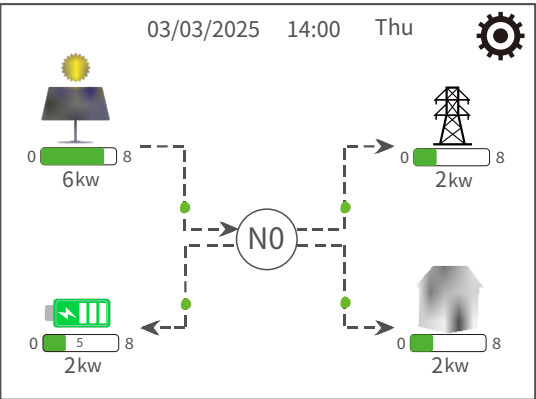
TECHNICAL PARAMETER

Product Models	SUNIN-6KM3-L1P3-EU	SUNIN-8KM3-L1P3-EU	SUNIN-10KM2-L1P3-ATEU	SUNIN-12KM2-L1P3-ATEU	SUNIN-15KM2-L1P3-ATEU
Battery Input Parameters					
Battery Type	Lithium or Lead-acid Battery				
Rated Battery Voltage (V)	48V				
Maximum Charging Voltage (V)	≤60V(configurable)				
Maximum Charging/Discharging Current (A)	120A	160A	210A	250A	280A
PV Input Parameters					
Maximum DC Input Power (kW)	10kW	12kW	20kW	24kW	30kW
Maximum DC Input Voltage (V)	1000				
MPPT Voltage Range (V)	200~800V				
Start-up Voltage (V)	150V				
Maximum Input Current (A)	20A/20A	20A/20A	36A/18A	36A/18A	36A/18A
Number of MPPT Trackers	2	2	2	2	2
AC Output Parameters (Grid-tied)					
Maximum Apparent Output Power (VA)	6600	8800	11000	13200	16500
Rated Output Voltage (V)	380/400V				
Rated Output Frequency (Hz)	50/60Hz				
Maximum Output Current (A)	10A	13.4A	16.7A	20A	25A
Output Power Factor	1(0.8 leading ~ 0.8 lagging)				
AC Output Parameters (Off-grid)					
Rated Output Power (W)	6000	8000	10000	12000	15000
Peak Output Power (W)	>200%,15sec				
Rated Output Voltage (V)	380/400V				
Rated Output Frequency (Hz)	50/60Hz				
Rated Output Current (A)	9.1A	12.1A	15.2A	18.2A	22.8A
Efficiency					
Max. Efficiency (PV)	98%				
Max. Efficiency (Battery)	94.5%				
European Efficiency	97.5%				
Protection					
PV Reverse Polarity Protection	Integrated				
PV Insulation Resistance Detection	Integrated				
Residual Current Detection	Integrated				
Output Overcurrent Protection	Integrated				
Output Short-circuit Protection	Integrated				
Output Overvoltage Protection	Integrated				
General Parameters					
Operating Temperature (°C)	-25~60°C(derating above 45°C)				
Storage Temperature (°C)	-30~65°C				
Relative Humidity	0~95%				
Operating Altitude (m)	≤4000m(derating above 2000m)				
Cooling Method	Intelligent Forced Air Cooling				
Noise (dB)	<55dB				
Weight (kg)	38kg				
Dimensions (W × H × D mm)	475*683*256mm				
IP Rating	IP66				
Topology	High-frequency Isolation (Battery Side)				
Safety / EMC Certification	IEC62109, IEC61000, IS16169 & IS16221(BIS)				
Grid Compliance	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140				
Other Certifications	IEC61683, IEC62116, EN50530, IEC60068				

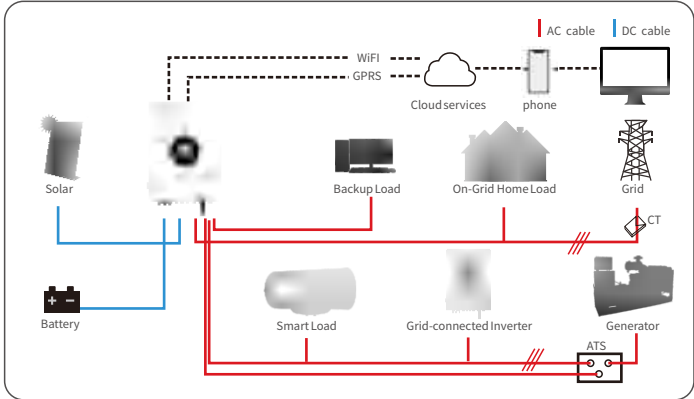
MAIN FEATURES

- 100% three-phase unbalanced output, with each phase capable of delivering up to 50% of the rated power.
- Max. charging/discharging current of 120A/160A/210A/250A/280A
- Max. 6 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 48V low voltage battery, transformer isolation design
- AC coupling to retrofit existing solar system
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE



SUNIN-20K/25KM2 -L1P3-EU

Three Phase Hybrid Inverter



MAIN FEATURES



Extreme Climate Adaptability
Full-load operation,
45°C without derating



High Battery Compatibility
Max. 415A charge/discharge,
supports three battery inputs



Wide Grid Adaptability
154V-286V per phase input, 50/60Hz
autoadaptation, built-in SPD



High Surge&Unbalanced Output
2x load surge for 10s,
150% three-phase
unbalanced output

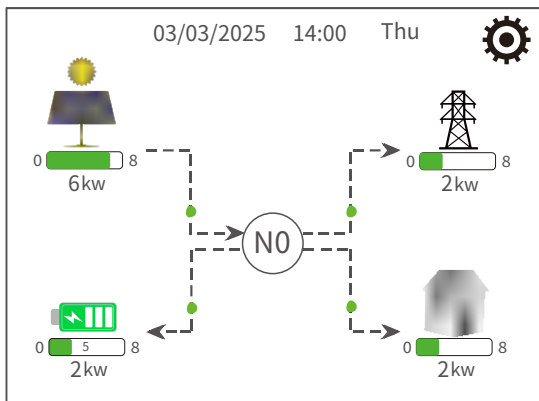


Flexible System Expansion
Up to 8 units parallel,
supports AC coupling
for retrofit

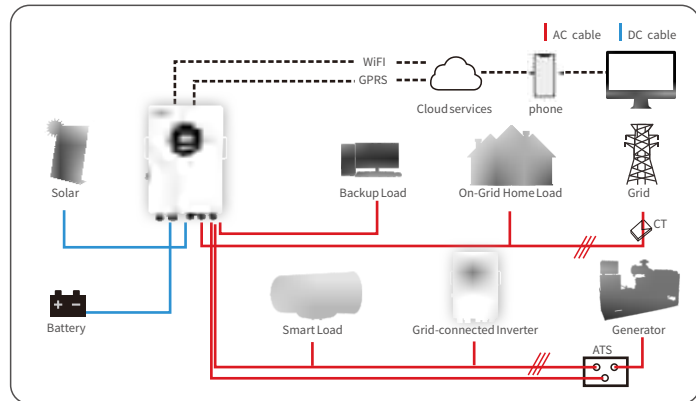


SiC + Full Aluminum + IP66
High efficiency, lightweight,
IP66 protection

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE



IP66 Residential Energy Storage Hybrid Inverter



TECHNICAL PARAMETER

Product Models	SUNIN-20KM2-L1P3-EU	SUNIN-25KM2-L1P3-EU
Inverter Input/Output(grid)		
Rated Power (kw)	20/20	25/25
Rated Voltage	380/400Vac, 3W+N+PE	
Rated Frequency (Hz)	50/60	
Rated Factor Range	0.8 leading~0.8 lagging	
Switch Time (ms)	<20	
Current (Maximum/Continuons) (A a.c.)	58/29	60/35
Max Output Overcurrent Protection	400Vac/100Aac	
Battery		
Battery Type	Lithium/ Lead-acid	
Battery Voltage Range (V d.c.)	40~60	
Rated Battery Voltage (V d.c.)	48	
Max Charge Current (A)	390	415
Max Discharge Current (A)	390	415
PV Input		
No. of MPPT Tracker/Strings	2/2+2	
Max. PV Array Power(kW)	40	50
Max DC Voltage (V d.c.)	1000	
MPPT Voltage Range (V d.c.)	150~950Vdc	
Start-up Voltage (V d.c.)	180	
Max. Input Current A d.c.)	4*20	
Isc PV (Absolute Maximum) (A d.c.)	4*30	
AC Output (EPS)		
EPS Rated Output Voltage	380/400Vac, 3W+N+PE	
EPS Rated Output Frequency (Hz)	50/60	
EPS Rated Output Active Power (kW)	20	25
EPS Rated Output Apparent Power (kVA)	20	25
EPS Rated Output Current (A a.c.)	29	35
Overload Capacity (Off Grid)	100% 600s/120% 300s/150% 60s/200% 10s	
Efficiency		
MPPT Efficiency	99.90%	
Euro-Efficiency	97.20%	
Max. Efficiency	98.00%	
Protection &Feature		
Insulation Monitoring	Yes	
Residual Current Monitoring	Yes	
Parallel Function	Yes	
Protection Degree	IP66	
Certifications	IEC62109-1/2, IEC62477-1,IEC 61000-6-1,IEC 61000-6-3,EN 50549-1&-10,NRS 097-2-1,IEC61727,IEC61683,IEC62116	
Other Protection	Output over voltage, Output over current, Short circuit, Surge, Temperature, Anti-Islandmg	
General Parameter		
Storage Temperature	-25℃~+60℃	
Operating Temperature	-25℃~+60℃(Linely derating to 60% when exceed +45℃~+60℃)	
Humidity	0~95%(Non-condensing)	
Altitude (m)	4000(>2000 Derating)	
Noise (dB)	<75	
Machine Dimensien(W*H*D) (mm)	448*660*265	
Machine Weight/N.W.(kg)	48	
Display& Communication		
Display	LCD+APP	
Interface	RS485/WIFI/CAN/DRM (Optional: Bluetooth/LAN/Meter)	

SUNIN-30KM3/40KM3/ 50KM4-H1P3-EU

Three Phase Hybrid Inverter



MAIN FEATURES



Supports up to 2x rated PV input, maximizing solar energy utilization



Smart remote control, AI optimisation, and instant troubleshooting - all in one platform



Supports fast battery charging with a maximum charging current of 140A



Supports multi-unit parallel operation up to 500kW (Solis STS cabinet recommended for systems over 6 units)

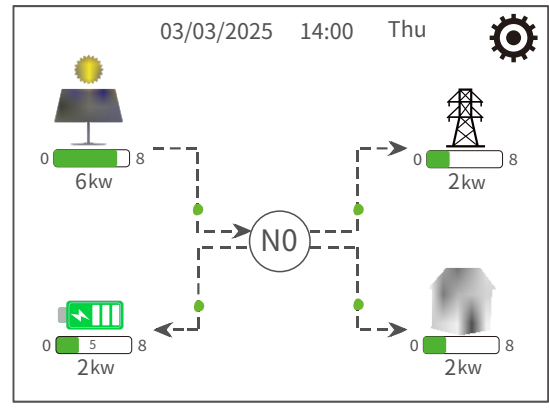


Delivers 160% overload for 2s in off-grid mode, ensuring stable startup of heavy loads

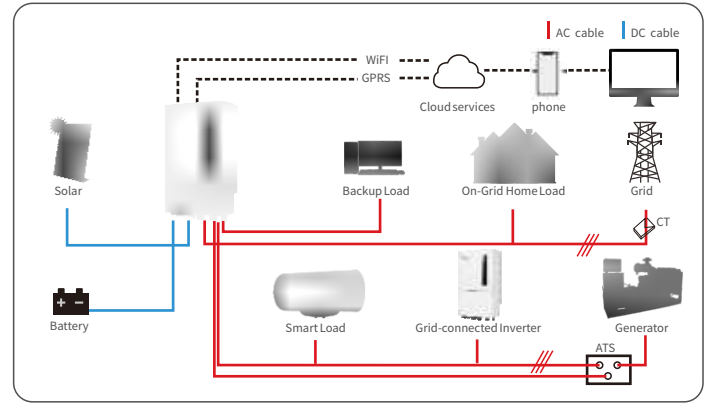


Achieves on- and off-grid transitions in less than 10ms, ensuring an uninterrupted power supply

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE



IP66 Residential Energy Storage Hybrid Inverter



TECHNICAL PARAMETER

Product Models	SUNIN-30KM3-H1P3-EU	SUNIN-40KM3-H1P3-EU	SUNIN-50KM4-H1P3-EU
Input DC (PV side)			
Recommended max. PV array size	60 kW	80 kW	100 kW
Max. usable PV input power	60 kW	80 kW	96 kW
Max. input voltage		1000 V	
Rated voltage		600 V	
Start-up voltage		180 V	
MPPT voltage range		150 - 850 V	
Max. input current	40 A / 40 A / 40 A	4 × 40 A	4 × 40 A
Max. short circuit current	60 A / 60 A / 60 A	4 × 60 A	4 × 60 A
MPPT number / Max. input strings number	3 / 6	4 / 8	4 / 8
Battery			
Battery type		Li-ion	
Battery voltage range		150 - 800 V	
Max. charge / discharge power	33 kW	44 kW	55 kW
Max. charge / discharge current		70 A × 2 ^①	
Number of battery ports		2	
Max. charge / discharge power of each input	33 kW	35 kW	35 kW
Communication		CAN / RS485	
Output AC (Grid side)			
Rated output power	30 kW	40 kW	50 kW
Max. apparent output power	30 kVA	40 kVA	50 kVA
Rated grid voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated grid frequency		50 Hz / 60 Hz	
Rated grid output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Max. output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
Input AC (Grid side)			
Max. AC passthrough current	91.2 A / 86.6 A	121.6 A / 115.4 A	152 A / 144.4 A
Rated input voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
Input Generator			
Max. input power	30 kW	40 kW	50 kW
Rated input current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Rated input voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
Output AC (Back-up)			
Rated output power	30 kW	40 kW	50 kW
Max. apparent output power		1.6 times of rated power, 2 s	
Back-up switch time		< 10 ms	
Rated output voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated frequency		50 Hz / 60 Hz	
Rated output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
THDv (@linear load)		< 2%	
Efficiency			
Max. efficiency		97.8%	
EU efficiency		97.4%	
BAT charged by PV max. efficiency		98.5%	
BAT charged / discharged to AC max. efficiency		97.5%	
Protection			
Anti-islanding protection		Yes	
Output over current protection		Yes	
Short circuit protection		Yes	
Integrated DC switch		Yes	
DC reverse-polarity protection		Yes	
Surge protection		DC Type II / AC Type II	
Integrated AFCI 2.0		Optional	
General Data			
Dimensions (W × H × D)		530 × 880 × 290 mm	
Weight		73 kg	
Topology		Transformerless	
Self-consumption (night)		< 35 W	
Operating ambient temperature range		-25 ~ +60°C	
Relative humidity		0 - 100%	
Ingress protection		IP66	
Cooling concept		Intelligent fan-cooling	
Max. operation altitude		4000 m	
Safety / EMC standard		IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011	
Features			
PV connection		MC4 Quick connection plug	
Battery connection		Terminal connector	
AC connection		Terminal Block	
Display		LED indicator & Bluetooth + APP	
Communication		CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LA	





IP66 Residential Energy Storage Hybrid Inverter



TECHNICAL PARAMETER

Product Models	SUNIN-80KM10-H1P3-EU	SUNIN-100KM10-H1P3-EU	SUNIN-125KM10-H1P3-EU
Input DC (PV side)			
Recommended max. PV array size	160 kW	200 kW	250 kW
Max. usable PV input power	160 kW	200 kW	250 kW
Max. input voltage		1000 V	
Rated voltage		600 V	
Start-up voltage		180 V	
MPPT voltage range		150 - 950 V	
Max. input current		10x42 A	
Max. short circuit current		10x60 A	
MPPT number / Max. input strings number		10 / 20	
Battery			
Battery type		Li-ion	
Battery voltage range		300 - 950 V	
Max. charge / discharge current		200A/100A+100A	
Number of battery ports		2	
Max. charge / discharge current of each port		100A	
Communication		CAN / RS485	
Output AC (Grid side)			
Rated output power	80 kW	100 kW	125 kW
Max. apparent output power	80 kVA	100 kVA	125 kVA
Rated grid voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated grid frequency		50 Hz / 60 Hz	
Rated grid output current	121.6 A / 115.5 A	151.9 A / 144.3 A	189.9 A / 180.4 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
Input AC (Grid side)			
Max. input current		250 A	
Output AC (Back-up)			
Rated output power	80 kW	100 kW	125 kW
Max. apparent output power	75-100K: 1.2 times of rated power, 10 mins; 1.4 times of rated power, 100 s; 1.6 times of rated power, 10 s; 2 times of rated power, 200 ms; 125K: 1.2 times of rated power, 100 s; 1.4 times of rated power, 10 s; 1.6 times of rated power, 200 ms		
Back-up switch time		< 10 ms	
Rated output voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated frequency		50 Hz / 60 Hz	
THDv (@linear load)		< 2%	
Input AC (Generator)			
Max. input power	80 kW	100 kW	125 kW
Rated input current	121.6 A / 115.5 A	151.9 A / 144.3 A	189.9 A / 180.4 A
Rated input voltage		3/N/PE, 220 V / 380 V; 3/N/PE, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
Efficiency			
Max. efficiency		97.6%	
EU efficiency		97.2%	
BAT charged / discharged to AC max. efficiency		97.0%	
Protection			
Anti-islanding protection		Yes	
Output over current protection		Yes	
Short circuit protection		Yes	
Integrated DC switch		Yes	
DC reverse-polarity protection		Yes	
Surge protection		DC Type II / AC Type II	
Integrated AFCI 2.0	Optional	Optional (Brazil: Yes)	Optional (Brazil: Yes)
Protection class / Over voltage category		I/ DC II, AC III	
General Data			
Max. allowable phase imbalance (grid & back-up)		100%	
Max. power per phase (grid & back-up)	26.66 kW	33.33 kW	41.66 kW
Dimensions (W × H × D)		1174 × 814 × 400 mm	
Weight		170 kg	
Topology		Transformerless	
Operating ambient temperature range		-25 ~ +60°C	
Relative humidity		0 - 100%	
Ingress protection		IP66	
Cooling concept		Intelligent fan-cooling	
Max. operation altitude		3000 m	
Safety / EMC standard		IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011	
Features			
PV connection		MC4 Quick connection plug	
Battery connection		Terminal connector	
AC connection		Terminal block	
Display		7.0" LCD display & Bluetooth + APP	
Communication		CAN, RS485-115200, Ethernet, Optional: Wi-Fi, Cellular, LAN	

MAIN FEATURES



Supports up to 2x rated PV input, maximizing solar energy utilization



Supports both DC and AC coupling, for flexible retrofits and system expansions



Delivers 160% overload for 200ms in off-grid mode, ensuring stable startup of heavy loads



Smart remote control, AI optimisation, and instant troubleshooting - all in one platform

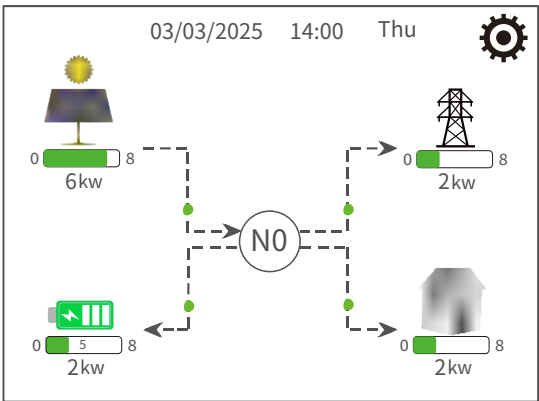


Supports multi-unit parallel operation up to 1.25MW (Solis STS cabinet recommended for systems over 6 units)

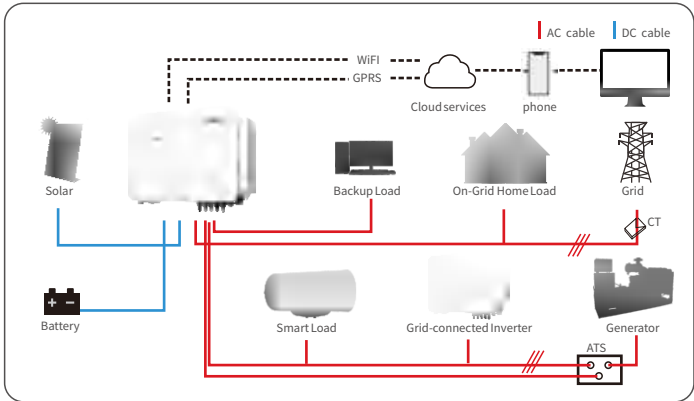


Achieves on- and off-grid transitions in less than 10ms, ensuring an uninterrupted power supply

LCD DISPLAY ICONS



BASIC SYSTEM ARCHITECTURE



Li-Sun Wall/Stand-Mounted Lithium Battery Pack

100Ah-400Ah With 6000/8000+ Cycles

25.6V 100Ah/200Ah/320Ah/400Ah



Main Features

- Top brand new LiFePO4 cells, super safety.
- Supports wall mounted or floor stand installation.
- All around protection and unattended operation.
- With Wifi/Bluetooth for easy monitor
- Built inside with fire protection devices
- With battery cable
- 5 Years warranty, 6000/8000+ cycles, 10+ years life design.
- 100A/150A/200A Smart BMS matches well with solar system.
- 51.2V battery Integrated with multiple communication protocols for 10+ brands of inverters.
- Multilingual Optional: Chinese, English, Arabic/عربي, Français, Deutsch, Español, Italiano, Russian/Русский, Nederlands, Ukraine/українська, Polish/Polski, Burmese/မြန်မာစာ, Tiếng Việt, Farsi/فارسی, etc.

SAKO leading technology:

- Internal battery temperature reaches 100°C within 10mins, the cover remains at normal temperature.

SAKO | GROWATT | Deye | SMA | Must | invt | MEGAREVO | LU POWERTEK | victron energy | SOFAR

We Can Provide All Kinds Of Solar Solutions According To Your Demands.

Lithium Battery Pack



MODEL SPECIFICATION	SK-25.6V 100Ah	SK-25.6V 200Ah	SK-25.6V 320Ah	SK-25.6V 400Ah
Battery Type	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Total Energy	2560Wh	5120Wh	8192Wh	10240Wh
Usable Energy (90%DOD)	2304Wh	4608Wh	7373Wh	9216Wh
Voltage window	22.4~29.2V	22.4~29.2V	22.4~29.4V	22.4~29.4V
Fast Charge Voltage	28.8V	28.8V	28.8V	28.8V
Flaot Charge Voltage	28.0V	28.0V	28.0V	28.0V
Low DC Cut-off Voltage	24.0V	24.0V	24.0V	24.0V
Max.continue discharge current	100A	150A	200A	200A
Max.pulse discharge current	150A 1Sec.	200A 1Sec.	300A 1Sec.	300A 1Sec.
Max.continue charge current	50A	100A	160A	200A
Scalable	1~15 in parallel			
Communication	RS485	RS485	RS485	RS485
Cycle life	>6000 Cycles @(+25°C, 0.2C, 80%DOD, 60%EOL)	>6000 Cycles @(+25°C, 0.2C, 80%DOD, 60%EOL)	>8000 Cycles @(+25°C, 0.2C, 80%DOD, 60%EOL)	>6000 Cycles @(+25°C, 0.2C, 80%DOD, 60%EOL)
Terminal	double M8			
Storage temperature	0°C~ 30°C			
Storage duration	6 months at 25°C			
Safety standard	UN38.3,MSDS			
IP degree	IP20			
PROTECTION				
Protection	Over charge protection, Over discharge protection, Over current protection, Shortcircuit protection, Over temperature protection			
AMBIENT				
Working Temperature	-10°C~ +50°C			
Humidity	0~95% (no condensation)			
DIMENSION				
L×W×H (products size)MM	520*390*178	640*390*178	690*455*190	697*530*178
L×W×H (package size)MM	566*440*240 (UN carton)	684*460*240 (UN carton)	735*485*380 (UN carton)	742*575*370 (UN wooden cases)
Weight(NW)	29.9	50.4	64.0	101.0
Weight(GW)	30.4	50.9	75.6	116.1

Smart BMS supports communication with different brand of hybrid inverter

www.sakopower.com



Li-Sun Wall/Wheel/Stand-Mounted Lithium Battery Pack 100Ah-640Ah With 6000/8000+ Cycles

51.2V 100Ah/200Ah/320Ah/400Ah/600Ah/640Ah



Main Features

- Top brand new LiFePO4 cells, super safety
- The machine 5KWh above with wheels
- All around protection and unattended operation
- With Wifi/Bluetooth for easy monitor
- With battery cable + battery breaker
- Multilingual Optional: Chinese, English, Arabic/عربي, Français, Deutsch, Español, Italiano, Russian/Русский, Nederlands, Ukraine/українська, Polish/Polski, Burmese/မြန်မာစာ, Tiếng Việt, Farsi/فارسی, etc.
- 5 year warranty, 6000/8000+ cycle times, 10+ years life design
- 100A/150A/200A/300A Smart BMS matches well with solar system
- With multiple communiation protocols for 10+ brands of Inverters
- With touch screen (with 7-inch touch screen or 4.3-inch touch screen)
- Built inside with Fire Protection & Temperature Sensor devices

SAKO leading technology:

- Internal battery temperature reaches 100°C within 10mins, the cover remains at normal temperature.

SAKO | GROWATT | Deye | SMA | Must | invt | MEGAREVO | LU POWERTEK | victron energy | SOFAR

We Can Provide All Kinds Of Solar Solutions According To Your Demands.

Lithium Battery Pack



MODEL SPECIFICATION	SK-51.2V 100Ah	SK-51.2V 200Ah	SK-51.2V 320Ah	SK-51.2V 400Ah	SK-51.2V 600Ah	SK-51.2V 640Ah
Battery Type	LiFePO4	LiFePO4	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Total Energy	5120Wh	10240Wh	16384Wh	20480Wh	30720Wh	32768Wh
Usable Energy (90%DOD)	4608Wh	9216Wh	14746Wh	18432Wh	27648Wh	29491Wh
Voltage window	44.8~58.4V	44.8~58.4V	44.8~58.4V	44.8~58.4V	44.8~58.4V	44.8~58.4V
Fast Charge Voltage	57.6V	57.6V	57.6V	57.6V	57.6V	57.6V
Float Charge Voltage	56.0V	56.0V	56.0V	56.0V	56.0V	56.0V
Low DC Cut-off Voltage	48.0V	48.0V	48.0V	48.0V	48.0V	48.0V
Max.continue discharge current	100A	150A	200A	300A	300A	300A
Max.pulse discharge current	150A 1Sec.	150A 1Sec.	300A 1Sec.	300A 1Sec.	450A 1Sec.	450A 1Sec.
Max.continue charge current	50A	100A	160A	200A	300A	300A
Scalable	1~15 in parallel					
Communication	CAN,RS485					
Cycle life	>6000 Cycles@ (+25°C,0.2C,80%DOD,60%EOL)		>8000 Cycles@ (+25°C,0.2C, 80%DOD,60%EOL)	>6000 Cycles@ (+25°C,0.2C, 80%DOD,60%EOL)	>8000 Cycles@ (+25°C,0.2C,80%DOD,60%EOL)	
Terminal	double M8					
Storage temperature	0°C~ 30°C					
Storage duration	6 months at 25°C					
Safety standard	UN38.3,MSDS					
IP degree	IP20					
PROTECTION						
Protection	Over charge protection, Over discharge protection, Over current protection, Shortcircuit protection, Over temperature protection					
AMBIENT						
Working Temperature	-10°C~ +50°C					
Humidity	0~95% (no condensation)					
DIMENSION						
L×W×H (products size)MM	640*390*178	850*560*178	850*560*178	957*560*260	970*791*245	970*791*245
L×W×H (package size)MM	665*530*276 (UN carton)	897*575*340 (UN wooden cases)	897*575*470 (UN wooden cases)	1042*575*460 (UN wooden cases)	1055*821*457 (UN wooden cases)	1055*821*457 (UN wooden cases)
Weight(NW)	49.3	84	115.0	188.5	233.0	235.7
Weight(GW)	49.8	102	133.5	207.5	250.4	265.7

Smart BMS supports communication with different brand of hybrid inverter

www.sakopower.com



Li-Cube Rack/Stack-Mounted Lithium Battery with 6000 Cycles Cells

51.2V100Ah, 51.2V200Ah, 51.2V314Ah



Main Features

- Flexible expansion.
- 4U rack mounted design.
- 5 Years warranty, 6000 cycles cells, 10+ years life design.
- Integrated with multiple communication protocols for 10+ brands of inverters.

Lithium Battery Pack

MODEL	SK-51.2V100Ah	SK-51.2V200Ah	SK-51.2V 314Ah
Battery Type	LiFePO4		
Total Energy	5120Wh	10240Wh	16076Wh
Usable Energy(90%DOD)	4608Wh	9216Wh	14469Wh
Voltage window	44.8 ~ 58.4V	44.8 ~ 58.4V	44.8 ~ 58.4V
Fast Charge Voltage	57.6V	57.6V	57.6V
Float Charge Voltage	56.0V	56.0V	56.0V
Low DC Cut-off Voltage	48.0V	48.0V	48.0V
Max.continue discharge current	100A	150A	200A
Max.pulse discharge current	150A 1Sec.	200A 1Sec.	300A 1Sec.
Max.continue charge current	50A	100A	150A
Scalable	1~15 in parallel		
Communication	CAN,RS485		
Cycle life	>6000 Cycles@(+25°C,0.2C,80%DOD,60%EOL)		
Terminal	double M6		
Storage temperature	0°C~ 30°C		
Storage duration	6 months at 25°C		
Safety standard	UN38.3, MSDS		
IP degree	IP20		
PROTECTION			
Protection	Over charge protection, Over discharge protection, Over current protection, Shortcircuit protection, Over temperature protection		
AMBIENT			
Working Temperature	-10°C~ +50°C		
Humidity	0~95% (no condensation)		
DIMENSION			
L×W×H (products size) mm	565*440*176mm	743*440*176mm	775*490*230mm
L×W×H (package size) mm	665*530*276mm(UN carton)	813*640*325mm (UN wooden cases)	845*535*430mm (UN wooden cases)
Weight(NW Kg)	46.0Kg	83.4Kg	111.5Kg
Weight(GW Kg)	51.0Kg	98.6Kg	126.7Kg

Smart BMS supports communication with different brand of hybrid inverter

Li-Smart High Voltage Modular & Stacked Lithium Battery 52kWh 105kWh 160kWh 192kWh 261kWh

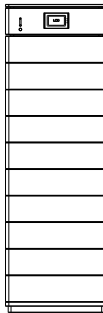
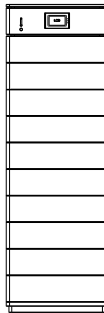
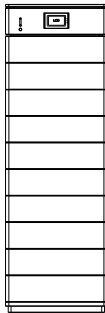
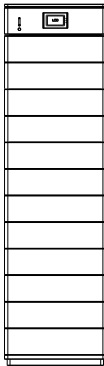
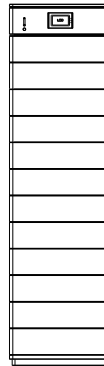
52kWh(512V102Ah), 105kWh(512V206Ah), 160kWh(512V314Ah), 192kWh(614V314Ah), 261kWh(768V314Ah)



Main Features

- Top brand new LiFePO4 cells, super safety.
- 5 Years warranty, 6000+ cycles, 10+ years life design.
- Modular&stacked design for easy extension.
- Smart BMS for each modular, matches well with solar system.
- All around protection and unattended operation.
- High voltage stack with central BMS, compatible with SUNIN Series inverter

Lithium Battery Pack

MODEL SPECIFICATION	SK-52kWh	SK-105kWh	SK-160kWh	SK-192kWh	SK-261kWh
System Demo					
Battery cell type	LiFePO4				
Battery Module	51.2V/102Ah	51.2V/206Ah	51.2V/314Ah	51.2V/314Ah	51.2V/314Ah
No. of Module	10	10	10	12	12
Normal Capacity (25°C, 0.2C)	52.2kWh	105.4kWh	160.7kWh	192.9kWh	241.1kWh
Normal Voltage (dc)	512V	512V	512V	614.4V	768V
Voltage window (dc)	448~584V	448~584V	448~584V	537.6~700.8V	672~876V
Dimension(WxDxH MM)	590*597*1420*2	590*680*1750*2	590*880*1950*2	590*880*1950*2	590*880*1950*2
Weight(NW Kg)	710Kg	1250Kg	1510Kg	1880Kg	2300Kg
Normal discharge current	50A	100A	160A	160A	160A
Max. discharge current	50A	100A	160A	160A	160A
Cycle life (+25°C 0.2C 90%DOD)	6000 Cycles				
Terminal	double M8				
Storage temperature	0°C~ 30°C				
Storage duration	6months at 25°C				
Safety standard	UN38.3,MSDS,IEC62619,EN62619,EN61000				
IP degree	IP20				
Communication function	RS485,CAN				
PROTECTION					
Protection	Over charge protection, Over discharge protection, Over current protection, Shortcircuit protection, Over temperature protection				
AMBIENT					
Working Temperature	-10°C~ +50°C				
Humidity	0~95% (no condensation)				

Smart BMS supports communication with different brand of hybrid inverter

Li-Max 12.8V/25.6V Lithium Battery to Replace Lead Acid Battery

12.8V100Ah, 12.8V200Ah, 12.8V300Ah, 25.6V100A



Main Features

- Optional for Bluetooth monitor.
- With hardware BMS & plastic case.
- Supports in parallel expansion.
- Ideal choice for lead acid battery replacement.
- 3 Years warranty, 6000+ cycles, 5+ years life design.

Lithium Battery Pack



MODEL	Li-MAX 12.8V100AH	Li-MAX 12.8V200AH	Li-MAX 12.8V300AH	Li-MAX 25.6V100AH
SPECIFICATION				
Battery Type	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Normal Battery Model	12.8V100AH	12.8V200AH	12.8V300AH	25.6V100AH
Normal Capacity(25°C, 0.2C)	1280WH	2560WH	3840WH	2560WH
Voltage window (Vdc)	11.2 ~ 14.6V	11.2 ~ 14.6V	11.2~14.6 V	22.4 ~ 29.2V
Float Charge Voltage(Vdc)	14.0V	14.0V	14.0V	28.0V
Max.continue discharge current	100A	150A	200A	100A
Max.pulse discharge current	150A 1Sec.	225A 1Sec.	300A 1Sec.	150A 1Sec.
Max.continue charge current	50A	100A	150A	50A
Cycle life(+25°C 0.2C 90% DoD)	6000 Cycles			
Terminal	M8			
Storage temperature	0°C~ 30°C			
Storage duration	6 months at 25°C			
Safety standard	UN38.3,MSDS,CE			
IP degree	IP54			
PROTECTION				
Protection	Over charge protection, Over discharge protection, Over current protection, Shortcircuit protection, Over temperature protection			
AMBIENT				
Working Temperature	-10°C~ +50°C			
Humidity	0~95% (no condensation)			
Sea Level(m)	≤1500			
DIMENSION				
L×W×H (products size) mm	339*185*218	522*218*238	522*218*238	522*218*238
L×W×H (package size) mm	350*195*265	532*252*268	532*252*268	532*252*268
Weight(NW Kg)	12.0kg	25.0Kg	27.0Kg	22.0Kg
Weight(GW Kg)	13.0kg	26.0Kg	28.0Kg	23.0Kg



Li-Max Pro All-In-One-DC-ESS 4 In 1
Wall/Stand-Mounted DC Home Solar System

12V320Wh, 12V700Wh



Li-Max Pro 12V320Wh

Li-Max Pro 12V700Wh

- 

Premium Grade
LiFePO4 Cells
- 

Advanced BMS for
Full Protection
- 

6000 Cycles,
10+ Years Lifespan
- 

All-in-One
Integrated Design
- 

All-Metal Sturdy &
Safe Housing
- 

Built-in High-Power
MPPT Solar Charge
- 

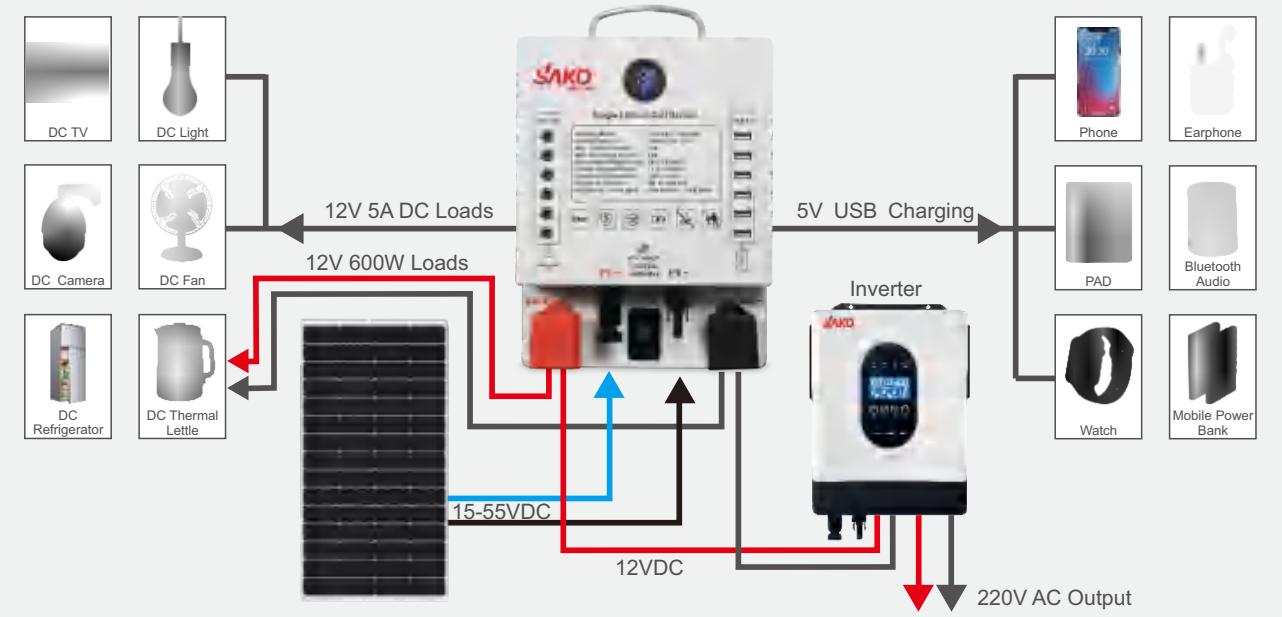
Multi-Output:
DC/USB/High-Current
- 

Unlimited Parallel
Expandable
- 

Wall-Mounted &
Horizontal Installation
- 

OEM/ODM Available,
Small MOQ

LONG-LASTING DC POWER SOLUTION



Energy Storage System



TECHNICAL PARAMETER

SPECIFICATION	MODEL	Li-Max Pro 12V320Wh	Li-Max Pro 12V700Wh
Lithium Iron Battery			
Usable Capacity		320Wh	700Wh
Max.Charge Current		30A	50A
Max.Discharge Current		30A	50A
Discharge Voltage Range		10.0Vdc~14.6Vdc	10.0Vdc~14.6Vdc
Charge Voltage Range		13.8Vdc~14.6Vdc	13.8Vdc~14.6Vdc
Solar Input			
Nominal PV Voltage		30Vdc	30Vdc
PV Array MPPT Voltage Range		15Vdc~55Vdc	15Vdc~55Vdc
Max. PV Array Open Circuit Voltage		60Vdc	60Vdc
Solar Charging Power		300W Max.	600W Max.
DC Output			
USB Output Power		5V2A *4pcs	5V2A *6pcs
TYPE-C Output Power		5V2A *2pcs	/
DC Output Power		12V2A *4pcs	12V2A *6pcs
DC Output Socket		DC5.5*2.1mm	DC5.5*2.1mm
Discharge of Depth		DOD 90%	DOD 90%
Display Function			
LED Indicator		Voltage display meter	Voltage display meter
Protection			
Protection		Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection	
Ambient			
Noise(dB)		< 60dB (1 meter)	< 60dB (1 meter)
Working Temperature		-10℃~-+50℃	-10℃~-+50℃
Humidity		20~95% (no condensation)	20~95% (no condensation)
Sea Level(m)		≤3000	≤3000
Dimension			
L×W×H (products size)		180*94*228mm	260*197*168mm
L×W×H (package size)		237*150*285mm	315*252*224mm
Weight(NW Kg)		4.3Kg	8.8Kg
Weight(GW Kg)		4.8Kg	9.4Kg



SKD Lithium Supplying & Solutions

From Cells to Complete Kits – We Handle Everything

Why Choose Our SKD Lithium Battery Solutions Cost-Effective

- Cost-Effective**
Reduce local production costs by SKD Solutions, optimize tariffs and logistics expenses, and improve overall profit margins.
- Flexible & Customizable**
Support full customization of voltage, capacity, appearance, interface and communication protocol to meet different market demands.
- Fast Delivery**
Shorten production cycles with SKD shipping mode. Stable mass production ensures on-time delivery for bulk orders.
- Full Technical Support**
Provide complete assembly instructions, BMS debugging guidance, on-site training and after-sales support for local assembly lines.
- Reliable Quality**
Adopt Grade A lithium cells, strict incoming inspection, aging test and full certification to ensure safety and stability.



Our SKD Product Range

- Lithium Cell SKD**

LiFePO4
3.2V cells
For energy storage, UPS, EV, industrial power
- Battery Module SKD**

12.8V / 25.6V / 51.2V standard modules
Pre-assembled brackets, busbars, wiring harnesses
Ready for local pack assembly
- Complete Battery Pack SKD Kit**

Cells + BMS + Mechanical parts + Harness + Accessories
Full set of testing and assembly documents
Plug-and-play for local assembly lines
- Customized SKD Solutions**

Tailor-made for solar energy storage, telecom base stations, electric motorcycles, and more

Professional SKD Supply

One-Stop SKD supply for Lithium Battery

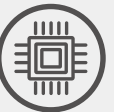
Professional SKD Solutions • Stable Supply Chain • Full Technical Support

	Lithium Cells	100Ah
		206Ah
		280Ah
		314Ah
	BMS + LCD	100A
		150A
		200A
		300A
	Case + Package	2.5K
		5K
		7.5K
		10K
		15K
		30K
	Connections	C2.5
		C5
		C7.5
		C10
		C15
		C30
	Tools + Equipments	Assembly, Testing, Production Line etc.
	Technical Support	Training and Engineering Solutions

Li-Motor Lithium Battery for Electric motorcycle



Main Features

 A Grade New Cell: DFD, Gotion, Cornex, Geely	 Max 2C Discharge	 10-year Life, 2-year warranty	 Smart JBD BMS, bluetooth monitor
 Optional for MPPT charger	 Compatible motor power: 800W-6000W	 IP65 waterproof	 Applications: electric two-wheeler, tricycles & four-wheeler

Lithium Battery Pack for Electric Motorcycle



TECHNICAL PARAMETER

Li-Motor Lithium Battery for Electric scooter

Model #	Rated Capacity (Ah)	Rated Voltage (V)	Rated Power (Wh)	IP Leve	Products Dimension (mm)	N.W. (KG)	Compatible Moto Power	Max Continuous Discharge (A)	Max Charge Current (A)	Connection way
Li-Motor 6021	21	64	1344	IP65	328*180*155	9.5	800W	40A	10.5A Max	20S1P
Li-Motor 6030	30	64	1920	IP65	310*180*170	14.5	1500W	50A	15A	20S1P
Li-Motor 6050	50	64	3200	IP65	400*235*169	23.5	2000W	80A	25A	20S1P
Li-Motor 7221	21	76.8	1612	IP65	328*180*155	11	800W	40A	10.5A	24S1P
Li-Motor 7230	30	76.8	2304	IP65	340*180*174	17	1800W	50A	15A	24S1P
Li-Motor 7250	50	76.8	3840	IP65	460*235*169	27.5	2500W	80A	25A	24S1P

Li-Motor Lithium Battery for electric tricycle & four-wheeler

Model #	Rated Capacity (Ah)	Rated Voltage (V)	Rated Power (Wh)	IP Leve	Products Dimension (mm)	N.W. (KG)	Compatible Moto Power	Max Continuous Discharge (A)	Max Charge Current (A)	Connection way
Li-Motor 6075	75	64	4800	IP65	440*300*220	40	2000W	100A	37.5A	20S1P
Li-Motor 6096	96	64	6144	IP65	535*330*200	49.8	3500W	120A	48A	20S1P
Li-Motor 60125	125	64	8000	IP65	560*302*230	57.9	5000W	150A	62.5A	20S1P
Li-Motor 60150	150	64	9600	IP65	650*302*230	68.3	6000W	200A	75A	20S1P
Li-Motor 7275	75	76.8	5760	IP65	510*300*220	48	2500W	100A	37.5A	24S1P
Li-Motor 7296	96	76.8	7372	IP65	545*285*230	62	4000W	120A	48A	24S1P
Li-Motor 72125	125	76.8	9600	IP65	610*310*240	69.2	5000W	150A	62.5A	24S1P
Li-Motor 72150	150	76.8	11520	IP65	650*330*250	80.5	6000W	200A	75A	24S1P

Compatible With Top Brands Motorcycle

Yadea—Aima—Niu—Ninebot
Luyuan—Xinri—Jianshe—Shenyuan & More

Accessories of Electric motorcycle battery for option:

AC Charger: 220Vac-5Ah/8Ah/15Ah
MPPT Solar Charger: 60V/72V-10A (for 1 piece 600W panel)



Alpha ESS 500W/1000W All In One

10 YEARS
LIFE TIME



Affordable



Alpha-I-ESS



Alpha-W-ESS



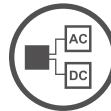
Alpha ESS -PayGo



Budget-friendly and accessible



All-in-one, built inside with inverter, mppt charger, ac charger and lithium battery



Can power both AC load and DC load(12V DC+5V USB)



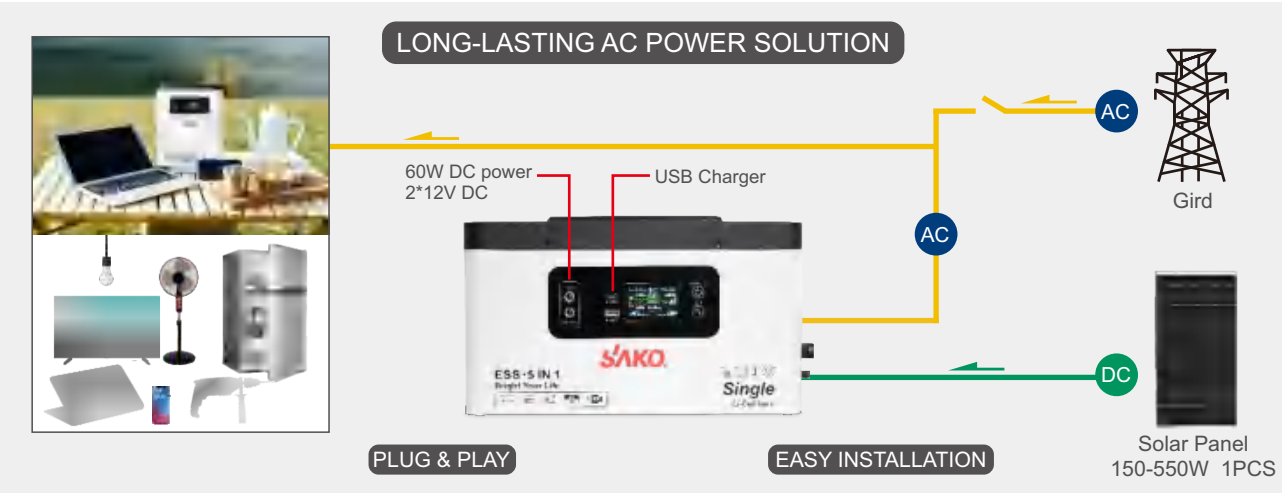
10 years life design, plug and play



With 80A AC charger and 80A MPPT Solar charger



Optional for PAYGO function. Affordable access, payment-secure



Energy Storage System



TECHNICAL PARAMETER

SPECIFICATION	MODEL	Alpha 500W/1kWh	Alpha 1000W/2kWh
Inverter / Charger			
Rated AC Output Power		500W	1000W
Output Voltage Waveform		Pure Sine Wave	Pure Sine Wave
Output Voltage		185~230Vac 50Hz	185~230Vac 50Hz
Low DC Warning Point		≤19%	≤19%
Low DC Cut-off Voltage		3.0Vdc	5.8Vdc
Low DC Warning Return Voltage		>20%	>20%
Charging Power(Utility and solar together)		500W Max.	1000W Max.
Bulk Charging Voltage		3.6Vdc	7.2Vdc
Float Charging Voltage		3.5Vdc	7.0Vdc
AC Input			
Nominal Input Voltage		230Vac	230Vac
Low Loss Voltage		90Vac ± 7	90Vac ± 7
Low Loss Return Voltage		100Vac ± 7	100Vac ± 7
High Loss Voltage		280Vac ± 7	280Vac ± 7
High Loss Return Voltage		270Vac ± 7	270Vac ± 7
Max. AC Input Voltage		300Vac	300Vac
Nominal Input Frequency		45~65Hz	45~65Hz
AC Charging Power		500W Max.	1000W Max.
Solar Input			
Nominal PV Voltage		30Vdc	38Vdc
PV Array MPPT Voltage Range		10Vdc~55Vdc	15Vdc~70Vdc
Max. PV Array Open Circuit Voltage		56Vdc	80Vdc
Solar Charging Power		400W Max.	550W Max.
Lithium Iron Battery			
Capacity		1004.8Wh	2009.6Wh
Nominal Battery Voltage		3.2Vdc	6.4Vdc
Typical Capacity		314Ah	314Ah
Max.Charge Current		220A	220A
Max.Discharge Current		220A	220A
Operation Voltage Range		3.0Vdc~3.6Vdc	5.8Vdc~7.2Vdc
Operation Temperature		-10℃~+50℃	
DC Output			
DC Output Power		DC12V 60W Max.	
DC Output Socket		1 pcs 5V1A USB charger 1 pcs, 5V1A Type-c charger 1pcs, 12V2.5A DC Power JACK 5.5*2.1mm 2pcs	
Display Function			
Display mode		LCD touch screen	
Pay In Installments			
Number of installments		1~12 installments	
Unlock Method		Enter recharge password via touch screen	
Valid days per recharge		30 days	
Operation Mode Selection			
UO mode		Automatically enable output when PV or Utility is available	
AO mode		Output will not turn on automatically when PV or utility power is available. You need to press the key manually to enable output.	
APP mode		Wide Input Voltage Range: 90~280Vac	
UPS mode		Narrow Input Voltage Range: 185~280Vac	
SUB mode		Solar→Utility→Battery	
SBU mode		Solar→Battery→Utility	
Protection			
Protection		Overcharge protection、Overdischarge protection、Overcurrent protection、 Shortcircuit protection、 Overtemperature protection	
Ambient			
Noise(dB)		<60dB (1 meter)	
Working Temperature		-10℃~+50℃	
Humidity		5~95% (no condensation)	
Sea Level(m)		≤2000	
Dimension			
L×W×H (products size)		325x210x184mm	278x243x330mm
L×W×H (package size)		432x277x255mm	345x310x430mm
Weight(NW Kg)		10.8Kg	19.5Kg
Weight(GW Kg)		12.0Kg	21Kg



Alpha-ESS All-In-One-ESS Off Grid Home Solar System

ALPHA Series

- Portable Power Station, high capacity in compact size.
- Pure sinewave AC output with Lithium-ion battery bank.
- Power 99% of your home appliances.
- Scalable output power from 2K to 3K
- 60A-100A built-in AC and Solar charger.
- Super-fast recharge, 0-90% in one hour.
- 3 AC outlets, 4 DC outputs, terminal block for 2K/3K.
- Dual inputs, grid and solar.
- Built-in battery management system (BMS).
- With local WIFI built inside.

System Diagram

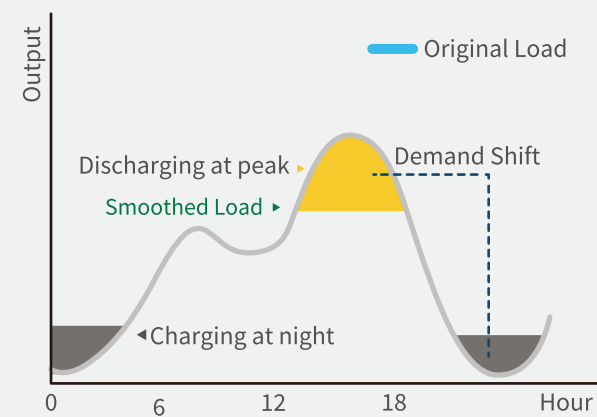
Highly mobility and Plug & Use

If you need to relocate the energy bank, simply unplug it and move it anywhere.

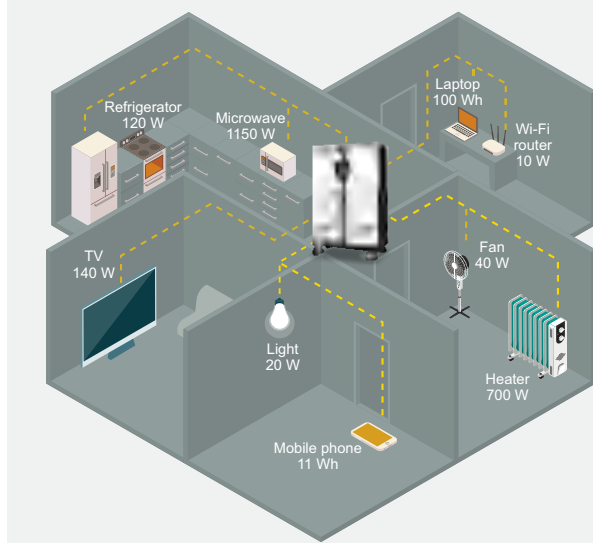


Peak cut

Store the power at night when the utility is generally cheaper and more available and discharge power when needed.



Power 9 devices at the same time for one hour and more



Energy Storage System

TECHNICAL PARAMETER

	MODEL	Alpha ESS-2K 3kWh	Alpha ESS-3K 2.56kWh	Alpha ESS-3K 5.12kWh	Alpha ESS-3K 8kWh
SPECIFICATION					
Inverter / Charger					
Inverter Type		2K/12V	3K/24V	3K/24V	3K/24V
Rated Output Power		2.5KW(PV+BAT); 1.6KW(W/O PV);	3000W	3000W	3000W
Output Voltage Waveform		Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Output Voltage		230VAC 50Hz/60Hz	230VAC 50Hz/60Hz	230VAC 50Hz/60Hz	230VAC 50Hz/60Hz
Low DC Warning Voltage		11.9Vdc	23.8Vdc	23.8Vdc	23.8Vdc
Low DC Cut-off Voltage		11.7Vdc	23.4Vdc	23.4Vdc	23.4Vdc
Low DC Warning Return Voltage		12.0Vdc	24Vdc	24Vdc	24Vdc
Charging Current(Utility and solar together)		100A Max.	80A Max.	80A Max.	80A Max.
Bulk Charging Voltage		14.4Vdc	28.8Vdc	28.8Vdc	28.8Vdc
Float Charging Voltage		14.0Vdc	28Vdc	28Vdc	28Vdc
AC Input					
Nominal Input Voltage		230Vac			
Low Loss Voltage		170Vac ± 7(UPS),90Vac ± 7(Appliances)			
Low Loss Return Voltage		180Vac ± 7(UPS),100Vac ± 7(Appliances)			
High Loss Voltage		280Vac ± 7			
High Loss Return Voltage		270Vac ± 7			
Max. AC Input Voltage		300Vac			
Nominal Input Frequency		50Hz/ 60Hz(Auto detection)			
AC Charging Current		100A Max.	60A Max.	60A Max.	60A Max.
Solar Input					
Max. PV Array Power		3000W	3000W	3000W	3000W
Nominal PV Voltage		300Vdc	300Vdc	300Vdc	300Vdc
PV Array MPPT Voltage Range		40Vdc~400Vdc	50Vdc~430Vdc	50Vdc~430Vdc	50Vdc~430Vdc
Max. PV Array Open Circuit Voltage		450Vdc	450Vdc	450Vdc	450Vdc
I max. PV		18A	18A	18A	18A
Lithium Iron Battery					
Capacity		3.072kWh	2.56kWh	5.12kWh	8kWh
Nominal Battery Voltage		12.8Vdc	25.6Vdc	25.6Vdc	25.6Vdc
Typical Capacity		240Ah	100Ah	200Ah	320Ah
Max.Charge Current		100A	100A	100A	150A
Max.Discharge Current		150A	100A	150A	150A
Operation Voltage Range		11.2Vdc~ 14.3Vdc	23.4Vdc~28.6Vdc	23.4Vdc~28.6Vdc	23.4Vdc~28.6Vdc
Operation Temperature		-10℃~+50℃	-10℃~+50℃	-10℃~+50℃	-10℃~+50℃
Protection					
Protection		Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection Overtemperature protection			
Ambient					
Noise(dB)		<55dB (1 meter)			
Working Temperature		-10℃~+50℃			
Humidity		0~95% (no condensation)			
Sea Level(m)		≤2000			
Dimension					
L×W×H (products size)		405*290*325mm	470*250*708mm	480*278*940mm	560*280*940mm
L×W×H (package size)		492*376*409mm	553*375*800mm	580*380*1130mm	660*380*1080mm
Weight(NW Kg)		37Kg	43.3Kg	63.0Kg	79.4Kg
Weight(GW Kg)		40Kg	47.3Kg	82.0Kg	99.2Kg



Alpha ESS Energy Solar System

Alpha ESS 5K/6.5K/12K/25K Energy Storage System

 Smart WIFI monitor, user friendly.	 Integrated with inverter, MPPT charger, AC charger, LiFePO4 battery inside.	 8000 Cycles LiFePO4 cells, 10+ years life design.
 Smart BMS for communication and all around protection.	 Easy installation, Plug & play	 Configurable of work mode and charge current.

We Can Provide All Kinds Of Solar Solutions According To Your Demands.

Energy Storage System



TECHNICAL PARAMETER

	MODEL	Alpha ESS-5KW 8kWh	Alpha ESS-6.5KW 16kWh	Alpha ESS-12KW 16kWh	Alpha ESS-25KW 64kWh
SPECIFICATION					
Inverter / Charger					
Inverter Type		5K/24V	6.5K/48V	12K/48V	25K/48V
Rated Output Power		5.5KW(PV+BAT); 4.5KW(W/O PV);	6.5KW(PV+BAT); 6.5KW(W/O PV);	12KW(PV+BAT); 10.5KW(W/O PV);	25000W
Output Voltage Waveform		Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Output Voltage		230VAC 50Hz/60Hz	230VAC 50Hz/60Hz	230VAC 50Hz/60Hz	380VAC 50Hz/60Hz
Low DC Warning Voltage		23.8Vdc	47.6Vdc	47.6Vdc	47.6Vdc
Low DC Cut-off Voltage		23.4Vdc	46.8Vdc	46.8Vdc	46.8Vdc
Low DC Warning Return Voltage		24Vdc	48.0Vdc	48.0Vdc	48.0Vdc
Charging Current(Utility and solar together)		160A Max.	120A Max.	160A Max.	415A Max.
Bulk Charging Voltage		28.8Vdc	57.6Vdc	57.6Vdc	57.6Vdc
Float Charging Voltage		28Vdc	56.0Vdc	56.0Vdc	56.0Vdc
AC Input					
Nominal Input Voltage		230Vac			380Vac
Low Loss Voltage		170Vac ± 7(UPS),90Vac ± 7(Appliances)			180Vac ± 5
Low Loss Return Voltage		180Vac ± 7(UPS),100Vac ± 7(Appliances)			190Vac ± 5
High Loss Voltage		280Vac ± 7			260Vac ± 5
High Loss Return Voltage		270Vac ± 7			250Vac ± 5
Max. AC Input Voltage		300Vac			300Vac
Nominal Input Frequency		50HZ / 60HZ(Auto detection)			
AC Charging Current		160A Max.	120A Max.	160A Max.	415A Max.
Solar Input					
Max. PV Array Power		9000W	9000W	15000W	50000W
Nominal PV Voltage		330Vdc	330Vdc	330Vdc	700Vdc
PV Array MPPT Voltage Range		60Vdc~450Vdc	60Vdc~450Vdc	80Vdc~450Vdc	150Vdc~950Vdc
Max. PV Array Open Circuit Voltage		500Vdc	500Vdc	500Vdc	1000Vdc
I max. PV		27A	27A	22A+22A	20A+20A+20A+20A
Lithium Iron Battery					
Capacity		8kWh	16kWh	16kWh	64kWh
Nominal Battery Voltage		25.6Vdc	51.2Vdc	51.2Vdc	51.2Vdc
Typical Capacity		320Ah	320Ah	320Ah	1256Ah
Max.Charge Current		157A	150A	200A	300A
Max.Discharge Current		200A	150A	200A	500A
Operation Voltage Range		23.4Vdc~28.6Vdc	46.8Vdc~57.6Vdc	46.8Vdc~57.6Vdc	46.8Vdc~57.6Vdc
Operation Temperature		-10℃~+50℃	-10℃~+50℃	-10℃~+50℃	-10℃~+50℃
Protection					
Protection		Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection			
Ambient					
Noise(dB)		<55dB (1 meter)			
Working Temperature		-10℃~+50℃			
Humidity		0~95% (no condensation)			
Sea Level(m)		≤2000			
Dimension					
L×W×H (products size)		460*250*815mm	455*315*895mm	700*270*1040mm	990*470*1400mm
L×W×H (package size)		550*350*980mm	550*410*1070mm	1230*804*463mm	1090*570*1590mm
Weight(NW Kg)		76.8Kg	127.4Kg	148.0Kg	425.0Kg
Weight(GW Kg)		94.8Kg	147.4Kg	168.0Kg	450.0Kg

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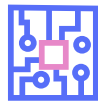


INDUSTRIAL AND COMMERCIAL ENERGY STORAGE IP21/IP54 SERIES

60kWh, 225kWh, 261kWh



Rated power operation the maximum temperature of the battery is less than 40°C



BMS integrated technology, power supply redundancy design, support black start function, Off grid Operation, etc



Suitable for high rate cyclic charging and discharging scenarios



Lithium Iron Phosphate (LFP) Battery, The battery pack and system adopt an aerosol fire extinguishing solution



Combustible gas, smoke and temperature detection, system active exhaust, and fire alarm



Supports battery expansion, with a maximum capacity of 960kWh

Energy Storage System



TECHNICAL PARAMETER

MODEL	SKH-48100U1 -60kWh	SKH-48100E1 -60kWh	SKH-48314U1 -225kWh	SKH-48314E1 -225kWh	SKH-48314E2 -261kWh	SK-LFP 261kWh
SPECIFICATION						
BATTERY						
System Energy	61.44kWh	61.44kWh	225kWh	225kWh	261kWh	261kWh
System Operating Voltage	576~691.2V	576~691.2V	672~806.4V	672~806.4V	768~921.6V	780~936V
System Capacity	100Ah	100Ah	314Ah	314Ah	314Ah	314Ah
Battery Pack	16S1P*12set	16S1P*12set	16S1P*14set	16S1P*14set	16S1P*16set	52S1P*5set
Charge/Discharge Rate Current	50A/100A	50A/100A	157A/157A	157A/157A	157A/157A	157A/157A
Cooling Method	Self Cooling	Air Cooling	Self Cooling	Air Cooling	Air Cooling	Liquid Cooling
Battery Life Cycle	6000 CYC@25°C, 90% DOD, ≥70%EOL	6000 CYC@25°C, 90% DOD, ≥70%EOL	8000 CYC@25°C, 90% DOD, ≥70%EOL	8000 CYC@25°C, 90% DOD, ≥70%EOL	8000 CYC@25°C, 90% DOD, ≥70%EOL	8000 CYC@25°C, 90% DOD, ≥70%EOL
IP Rating of Enclosure	IP21	IP54	IP21	IP54	IP54	IP54
Protection						
Protection	Overcharge protection、Overdischarge protection、Overcurrent protection、 Shortcircuit protection、Overtemperature protection					
Ambient						
Noise	<65dB (1 meter)					
Charging Temperature	0℃~+55℃ , >45℃ Derating					
Discharge Temperature	-10℃~+60℃ , >45℃ Derating					
Humidity	0~100%					
Sea Level	≤2000					
Dimension						
L×W×H (products size)mm	/	/	/	/	/	/
L×W×H (package size)mm	730*750*2080	740*1120*2135	890*1795*1700	/	/	1649*1586*2207
Weight(NW Kg)	632Kg	/	/	/	/	2500Kg
Weight(GW Kg)	680Kg	/	/	/	/	2600Kg

