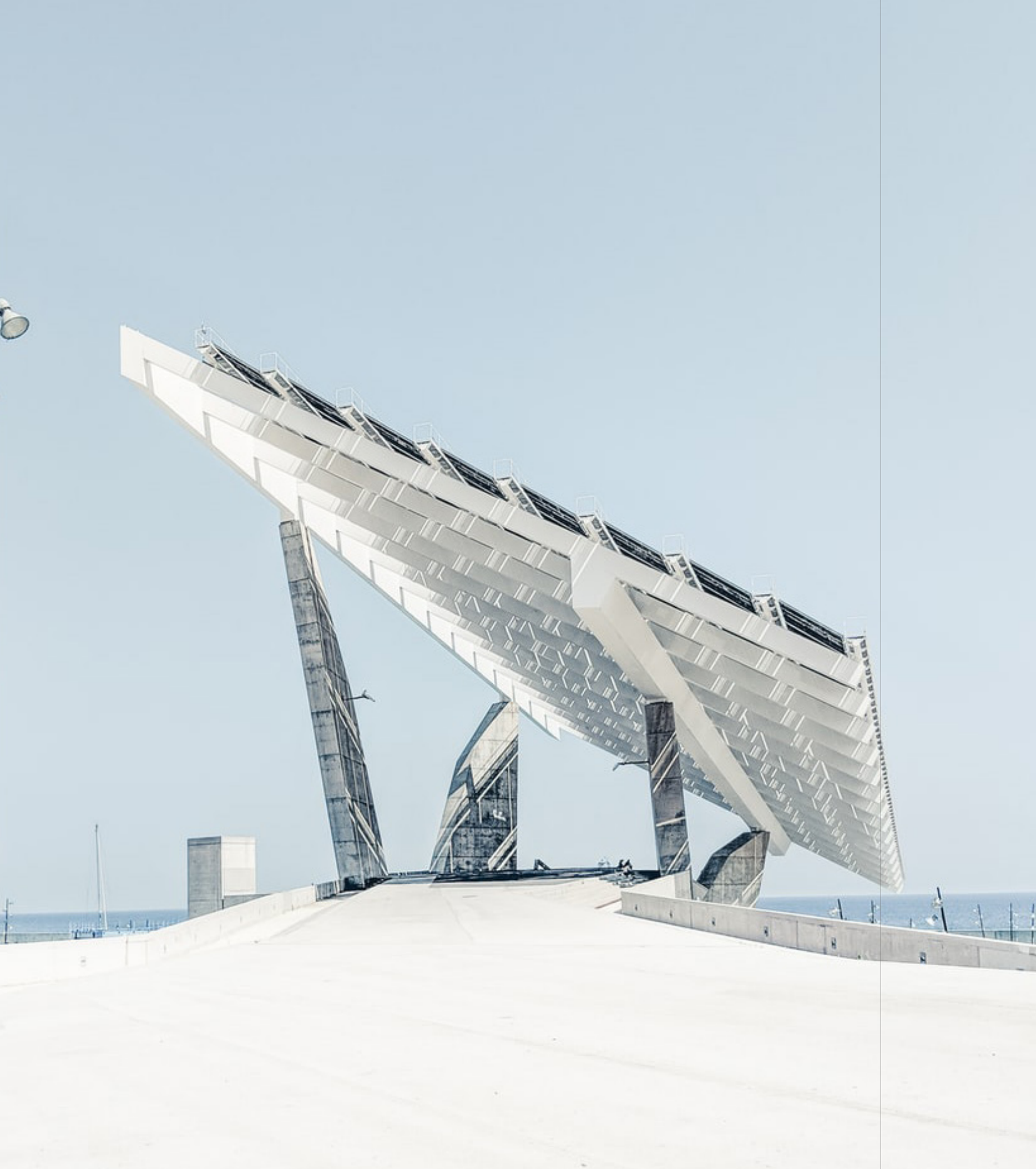




Off-Grid Solar Solutions

2020





What is Solar Power?

Solar power is the use of the sun's energy by employing photovoltaic cells in solar panels and transparent photovoltaic glass to generate electricity. A photovoltaic cell (PV cell) is a specialised semiconductor diode that converts visible light into direct current (DC). These cells are an integral part of solar-electric energy systems and in order to increase the gathering of energy, large sets of PV cells can be connected together to form solar modules, arrays, or panels.

One of the major advantages of photovoltaics is the fact that it is non-polluting, requiring only real-estate (and a reasonably sunny climate) in order to function. Another advantage is the fact that solar energy is unlimited. Once a photovoltaic system has been installed, it can provide energy at essentially no cost for years, and with minimal maintenance. Following the gathering of power from the solar panels, there are three other key pieces of equipment that the gathered power must pass through before it exits the system and is used by a utility. A basic solar-power system has some key components.

These are;

- The Solar Panel - to collect power from the sun.
- The battery or storage device.
- The Inverter- this converts the DC power to AC power. (AC power is used in most appliances)

Up until recently, the industry or producing solar power has been unable to store sufficient power to benefit general day-to-day tasks. This has all changed since the arrival of Lithium-Ion and Lithium-Phosphate batteries and advanced electronic systems to economically manage the storage of power safely.



Mission Statement

Our mission is to provide high quality green technology that will benefit both our customers and the environment. We will achieve this by innovative design, high standards in production and better value for money within the world market fo renewable energy.

About Us

Established over 20 years ago, Sunsynk® is part of the Global Tech China Group and is based out of Hong Kong with manufacturing and design bases in Ningbo, China. We are closely partnered with the Science Department of Ningbo University with which technology is shared and developed. The company has approximately 80 staff working on our projects at any one time.

Our key products fall into the following categories and full details can be found within this catalogue or in our website; www.sunsynk.com .

The Global Tech China Group was founded in 2004 and is a Hong Kong registered company made up of British & Chinese engineers. The company has over 30 patents and some of these inventions have directly influenced the world's electronic appliance development since 2004. Currently, Sunsynk exports to over 20 countries including South Africa, Philippines, Thailand, Australia New Zealand and United Kingdom where are solar lighting and power storage products have proven to be very popular.



Solar TV SAT Converter

SVC 011

Combining both solar and LED technology
2 x 3 AMP constant 12.5V for powering TV or sat box (driven from a 72W micro- inverter)

A PORTABLE POWER PACK

Charged by three 15W solar panels to provide a massive 162Wh of

power to a normal DC satellite box and TV.

It is rugged, scratch and UV resistant with two built-in USB sockets that can be used to charge mobile phones or mini-power banks. In good sunshine it will take 5 hours to be fully charged and ready run the average satellite TV system for up to 6 hours.

Solar TV Sat Converter	
System Voltage	12V
Battery Size	13.25 A
Lamp Wattage	3Wh
Lumen	<300 Lumen
Cable Length	3 Metre
Solar Panel	3 x 15 Watt Solar Panels
Type	Conventional
Battery Type	Lithium Ion
CRI	>85%
Size	343cm x 343cm



Power Bank 300

Do it yourself solar kit with our plug and play off-grid system

Have FREE electricity when you need it without the need of an electrician.

The Power Bank 300 is charged by the sun and stores enough power to run a TV for 28 hours off a single charge!

The kit includes 200W's of solar panels 1kW internal battery storage, all mounting and connection equipment to get you powered up. Power Bank 300 is a self contained solar power system with storage and is 'everything you need in one box!' The plug-and-play system is really easy to set-up and any customer can install it without the need of an electrician or solar installer.

This is a great entry entry-level product for people who want to get into solar but are not quite sure on what equipment they need. It's a simple to use system and once its installed you can draw power (AC or DC)

Power Bank Includes:

- Lithium battery pack 1kWh
- Built-in inverter 230V or 110V and 12V output
- Lithium battery digital charge controller
- x 2 100W solar panels
- Solar panel fixing kit & Cables & connectors

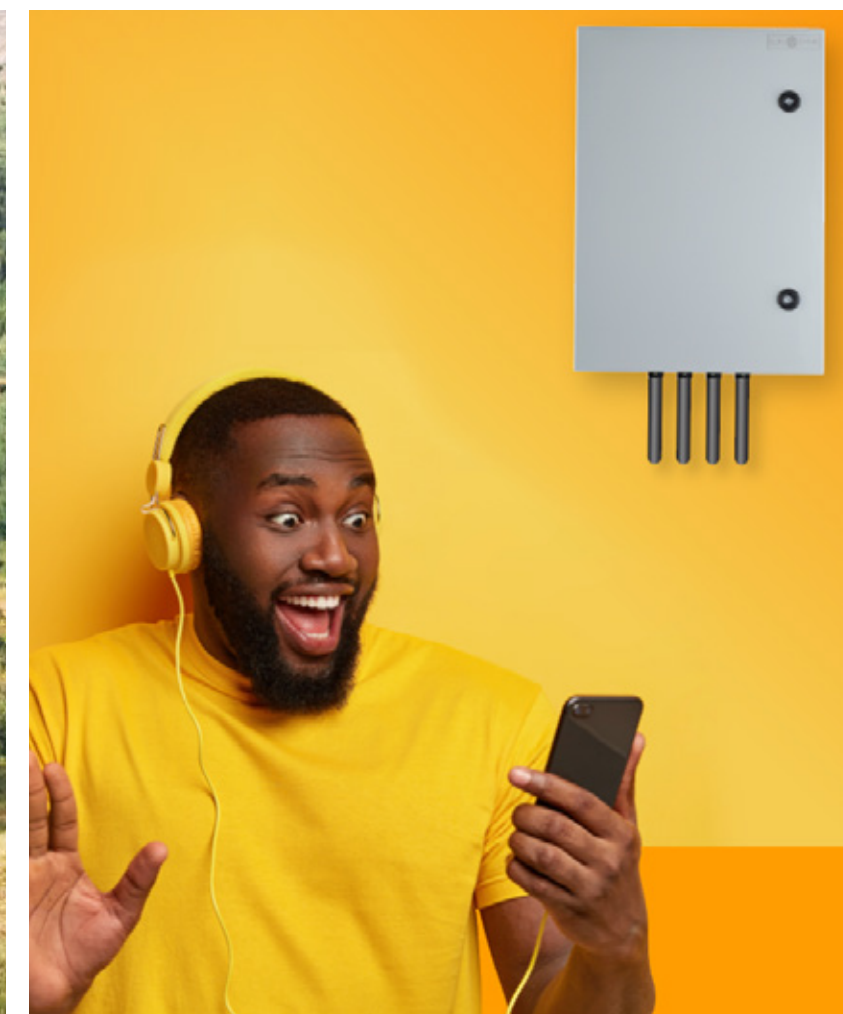
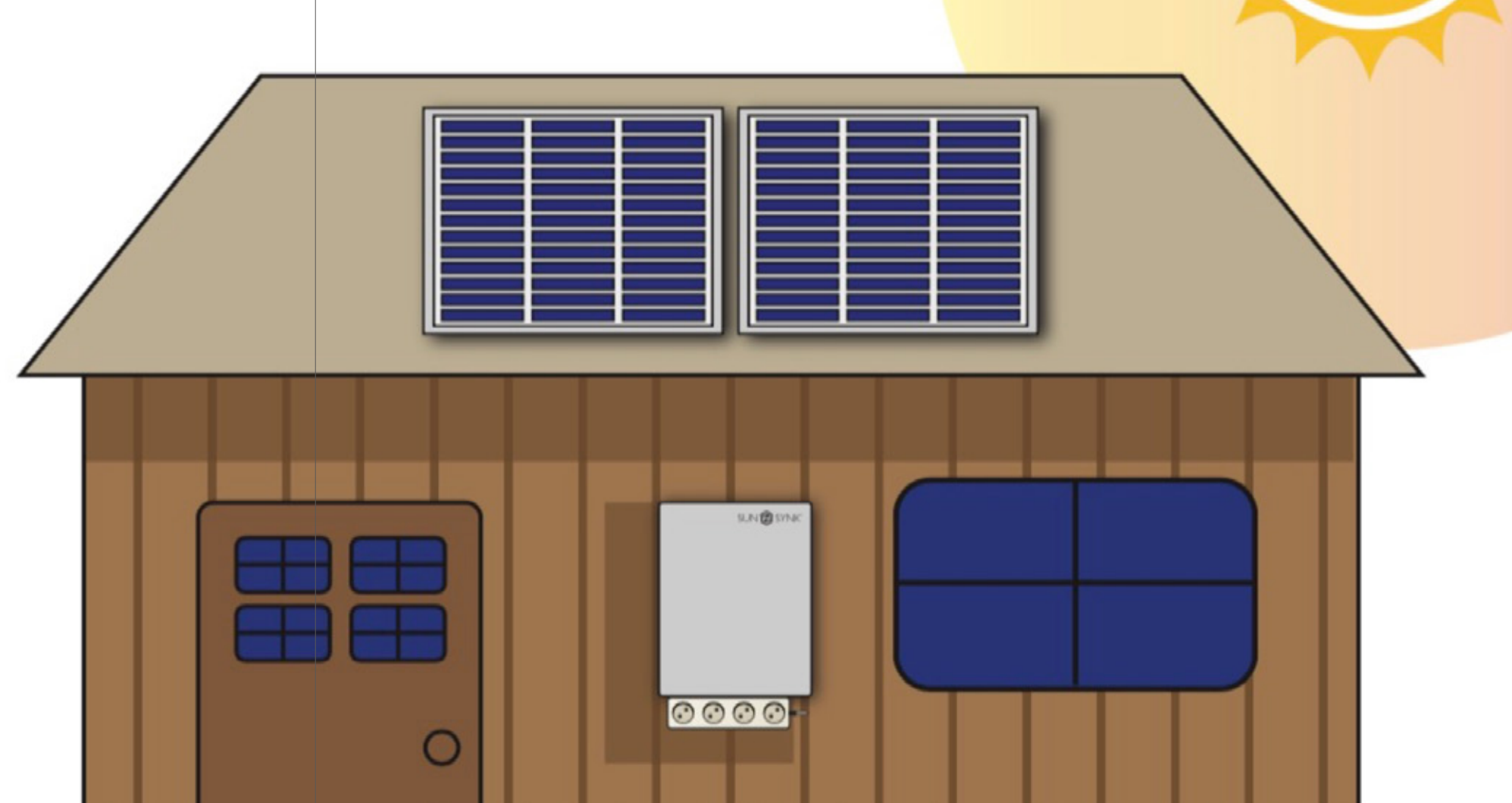
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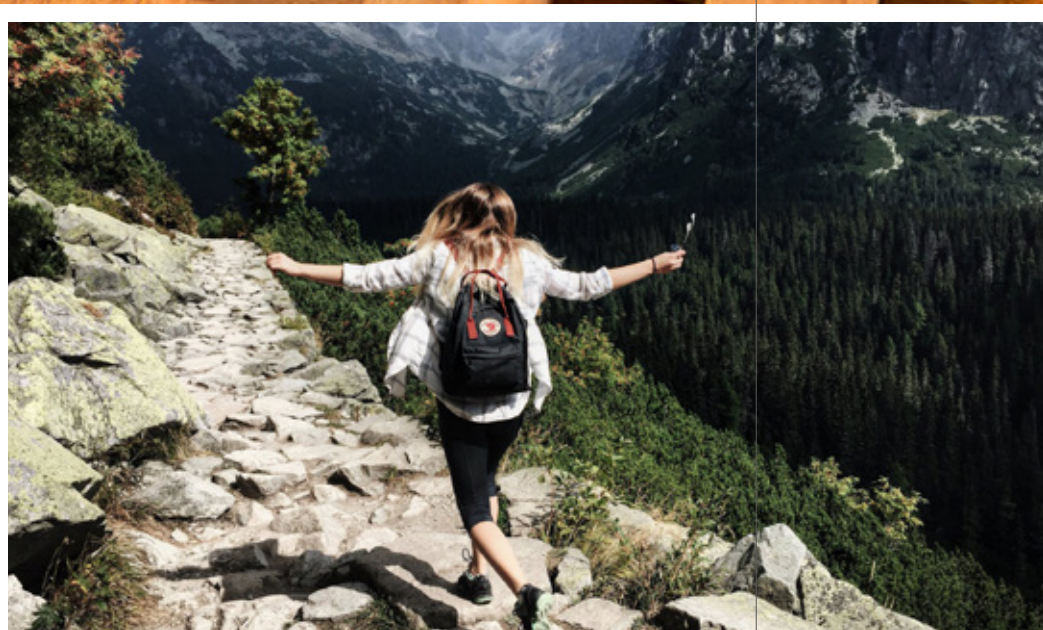
to run TVs, computers, lights, fans and any other utility within its operating limits.

The unit can power a mixed load of up to 300W and a battery storage of 1000W.

The unit is equipped with temperature control and overload protection while each battery card is protected by a PCM card. The Power Bank 300 can operate at any time of the day and be set to 'automatic' mode where it operates only in night or when power is required It can either operate 24hrs or be set in the UPS mode where it operates only in night or where power cuts out.

The Power Bank 300 can be bundled with our 32" AC TV and / or a 16" oscillating stand fan which the system can run either individually for 20 hours, or together for up to 10 hours





Solar Phone Chargers

Portable energy, anywhere anytime.

Lightweight and portable solar panel made from polycrystalline silicon they are waterproof, scratch resistant and UV resistant and has a built-in USB socket and can be used to charge mobile phones or mini power banks.

The panels are durable and can be stood on or dropped and still work fine.

In direct sunlight it will take 5 hours to charge the average smartphone.

Features

- Portable
- Includes USB charger output
- LED charge indicator
- IP65



Flex Solar Charger Includes:

2W laminated polycrystalline silicon

15.2 x 11.9 x 0.2cm

USB port

LED indicator light

Order Code: F2WPC



Solar Charger Includes:

2W glass polycrystalline silicon

16.8 x 14 x 1.7cm

Frame with stand

Hook hole to hang up

3 metre cable

Order Code: 2WPC



Solar Charger Includes:

5W glass polycrystalline silicon

15.2 x 11.9 x 0.2cm

USB Port

Hook hole to hang up

LED Indicator Light

Order Code: 3WPC



Solar Charger Includes:

10W glass polycrystalline silicon

16.8 x 14 x 1.7cm

Frame with stand

Hook hole to hang up

3 metre cable

Order Code: 10WPC



Pocket Power Station

Power To Go

The Pocket Power Station is very different to other portable storage device in its class. Underneath its shockproof shell is a unique device that is able to supply 230V or 110V mains power. The Pocket power station can be charged by solar, USB, wind turbine or the included rapid charge adapter.

DONT CUT YOUR ADVENTURE SHORT BECAUSE OF A FLAT BATTERY.

The Pocket Power Station has interchangeable batteries, which means when your pocket power station runs out of charge you can simply swap the battery and carry on. The battery sizes range from the or standard 150Wh battery pack up to our larger capacity 230Wh battery packs. We have 2 products in the Pocket Power Station range, Pocket Power Station 1 also known as PPS1 and Pocket Power Station 2 also known PPS2. The PPS1 carries 1 interchangeable battery and up to 100Watts mains output. The PPS2 carries 2 interchangeable batteries and up to 200 Watts mains output. The Pocket Power Station is capable of running devices in those environments where mains power is non-existent or being fitted to those power systems that might be vulnerable to power outages as a back-up or uninterrupted power supply.



PPS1 Kit:	PPS2 Kit:
100 Watt 230V/110V light	200 Watt 230V/110V light
100Wh rechargeable li-ion battery	200Wh rechargeable li-ion battery
Mains charger & USB charging cable	Mains charger
Carry case	PPS2 is a 300W Inverter.
Includes standard 150Wh battery pack x 1 (x 2 for PPS2) Larger size battery packs are optional.	Carry case
PPS1 Includes rapid charge mains adapter, 2 x USB charging cable (optional solar panel for charging).	Includes standard 150Wh battery pack x 1 (x 2 for PPS2) Larger size battery packs are optional
	PPS2 Includes rapid charge mains adapter, (optional solar panel for charging).

Order code: PPS1 Order code: PPS2



Portable Foldable Solar Panel

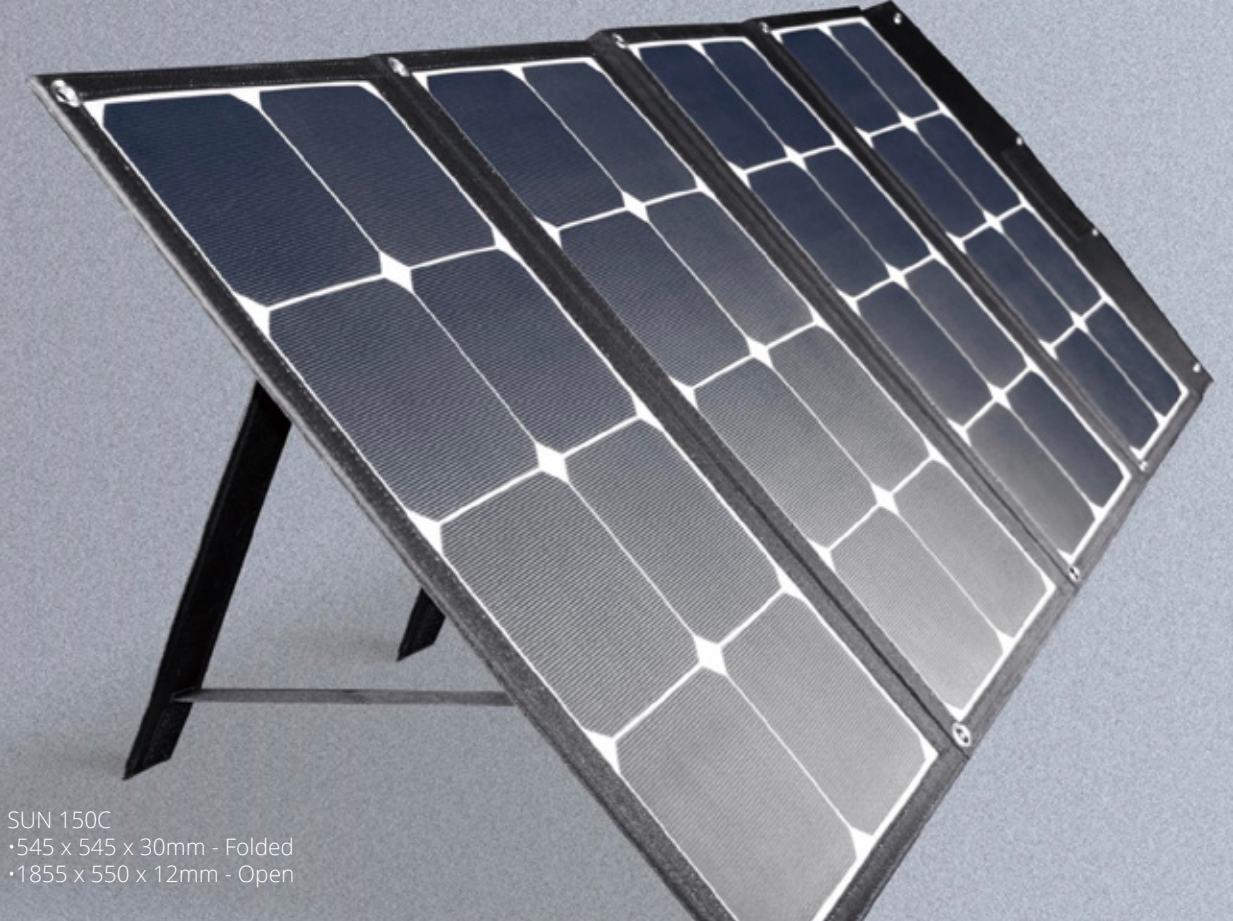


Sunsynk are now offering an exclusive range of folding solar panels. These range from 100W to 150W and they can be folded in three patterns B- two fold / C- three fold and D- four fold. This gives more choice to the user with the size of the collapsed models. Ideal for camping, expedition, para-military and relief work with the convenience of being neatly stowed away during transit.

Our light-weight and foldable solar panels are also a perfect addition to our Pocket Power Station range. Made with polycrystalline cells in a black codura fabric wallet.

PORTABLE POWER SOURCE

Foldable Solar Panel	SUN 100B	SUN 100D	SUN 120C	SUN 120D	SUN 150C
Wattage	100W	100W	120W	120W	150W
Open Circuit Voltage	21.1V	21.1V	23.7	23.7	29.7V
IP Rating	IP66	IP66	IP66	IP66	IP66
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Max Power Voltage	17.6V	17.6V	19.8V	24.7V	24.7V
Charger Connection Type	DC Jack	DC Jack	DC Jack	DC Jack	DC Jack
Cable Length	2 Metres	2 Metres	2 Metres	2 Metres	2 Metres



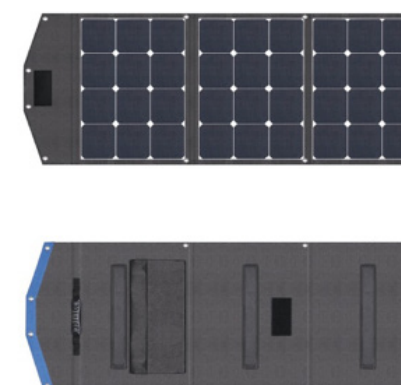
SUN 150C
 • 545 x 545 x 30mm - Folded
 • 1855 x 550 x 12mm - Open



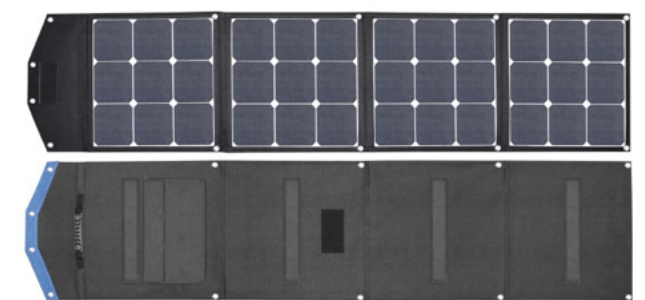
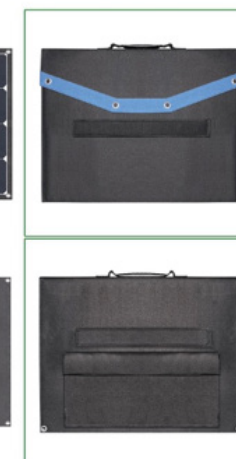
SUN 100B
 • 545 x 540 x 25mm - Folded
 • 1300 x 545 x 12mm - Open
 • 3.1kg



SUN 100D
 • 550 x 300 x 35mm - Folded
 • 1385 x 550 x 12mm - Open
 • 3.5kg



SUN 120C
 • 550 x 430 x 30mm - Folded
 • 1480 x 550 x 12mm - Open
 • 3.6kg



SUN 120D
 • 425 x 430 x 35mm - Folded
 • 1935 x 425 x 12mm - Open
 • 3.75kg



Rechargeable Handy Light

Anywhere any-time

This compact, lightweight and bright camp light comes with a rechargeable lithium-ion battery that can be charged with its adapter or an optional solar panel to use on the go where ever and when ever you need it.

Reliability and cutting edge technology

Our Lithium-Ion batteries technology enables the light to be used in a wide range of environments including hard to reach places and where power is not accessible.

The durable M-stand makes the light directional to give you light wherever you need it.

IP65 and drop tested at over 2 meters. The polycarbonate and aluminium body makes the light robust enough for any environment.

10W Light Includes:

10 Watt rechargeable light
2Ah Lithium-ion battery
USB charger

Order code: 40346025/2Ah

16W Light Includes:

16 Watt rechargeable light
4Ah Lithium-ion battery
USB charger

Order code: 40346025/4Ah



DC Light Kits

Have light anywhere and anytime with our solar powered Light Kits. They come with their very own power banks.

No mains power is required. Easy to set-up, plug-and-play. No electrical knowledge required.

Lightweight, with a built-in li-ion battery. The power banks are charged by solar panels. Each kit comes equipped with either 2 or 4 lights attached to 3 metre cables with in-line switches.

Consistent current, good stability with illumination maintained above 300 lumens per lamp. East-to-see battery status plus extra USB outlets for charging mobile phones.

DC 2 Light Kit: Includes

60,000 mWh li-ion battery pack
x2 300 lumen LED light bulbs
5 metres of cable
5W silicon solar panel
Lamp fixing kit

Order code: DC 2 LIGHT KIT

DC 4 Light Kit: Includes

90,000 mWh li-ion battery pack
x4 300 lumen LED light bulbs
5 metres of cable
x2 5W silicon solar panel
Lamp fixing kit

Order code: DC 4 LIGHT KIT

USB Light Bulb

3 Watt light fitting with 3-metre cable with built-in, in-line switch and DC Jack. It is portable & light-weight includes 3 meter cable.



3W LED Light Bulb

Lumens	300
Colour	White
CRI	85%
Colour Temp	5400K



Hybrid Systems

Hybrid Solar Power Systems are becoming more popular in the domestic market around the world. What are they and what are the advantages?
The term 'Hybrid' means a combination of solar and energy storage which is also connected to the grid.

Hybrid systems generate power in the same way as a common grid tie solar system but use special hybrid inverters and batteries to store energy for later use. This ability to store energy enables most hybrid systems to also operate as a back-up power supply in the same way as a UPS system. Advantages of Hybrid Solar Systems.

Hybrid

allows you to store excess power when grid power is off- peak. You can use stored solar power during evening times. This is called 'load shifting'.

The system provides back-up power when required. It can reduce power consumption from the grid. It provides advanced energy management known as 'peak shaving'. It is less expensive than an Off-Grid system.

The system can be programmed to accept solar power when grid power is at peak expense.

Sunsynk provide a range of Hybrid Inverters that are useful for both the domestic and marine environments. In addition to providing inverters whole systems can be purchased and our staff can advise on the best set up for your own personal needs.

The Sunsynk Parity Inverter

Sunsynk have foreseen the development of renewable energy and the need for people's property to incorporate a managed battery storage system into their household. The Sunsynk Parity Inverter with Storage is just that, and an important addition to any modern premises.

It combines several functions within one shell such as charge controller, inverter, battery charger, programmable power management and uninterrupted power supply. Its convenient LCD display offers the user a configurable and accessible button operation and once the Wifi dongle has been attached the user can monitor and adjust remotely the inverter's functions to make the most of installed power generation and storage.

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There are several advantages of the Parity Inverter and these can be summarised as; It can be programmed to store mains power when the mains grid is at its cheapest. It will manage the mount of DC power stored into the batteries. The batteries will not be allowed to run below their DoD.

You can remotely switch power for your household appliances to come from either the batteries or the mains. It will manage power generated by solar panels.

The inverter can be programmed to act as an Uninterrupted Power Supply. Once it is storing electricity while the grid is cheapest, the user will be able to save up to 65% on power bills.

The inverter can also be mounted with engine systems to channel power from the alternator to battery storage to be used by the driver when the machine is not required to be driven / operated.



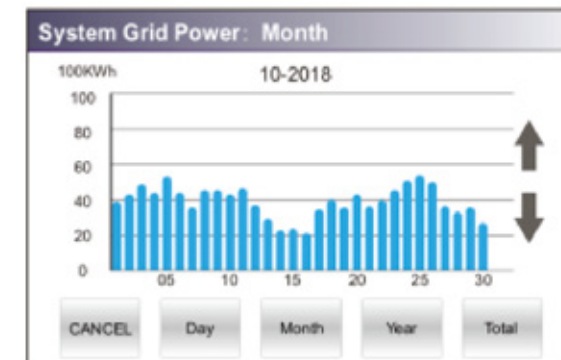
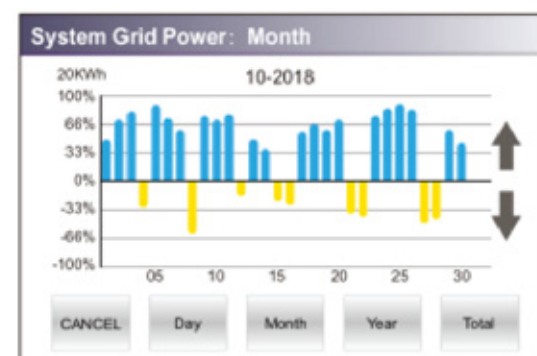
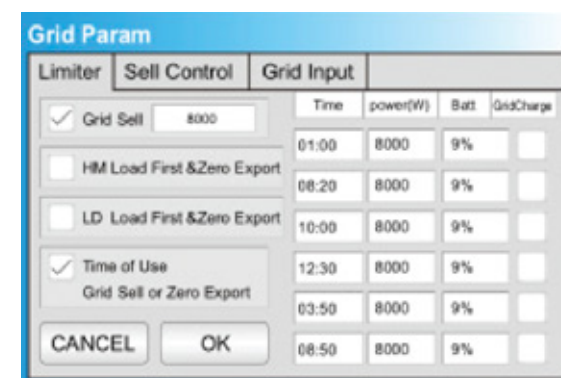
Getting to know our inverters

Getting to know our inverters.
Easy-to-use interface.

Fully programmable via an LCD display that can alter the amount of power exported, fed into the grid or stored in the batteries.



Excellent data analytics that can be accessed remotely via Wi-Fi or GSM.





Inverter Monitoring System

WI-FI: SSWIFIPK - GSM:GPRS_IPK

take care of your PV system, it makes sure that the system is working to its full capacity and in excellent working condition. It monitors your inverter throughout its entire life-cycle.

You will receive detailed information on your inverter including the energy used that day. You will also receive monthly, yearly energy and total energy updates through its wireless communication with your router to the internet by an smart Wi-Fi plug.

PLUG AND PLAY DATA LOGGER

You can easily access the monitoring page via PC or phone APP.

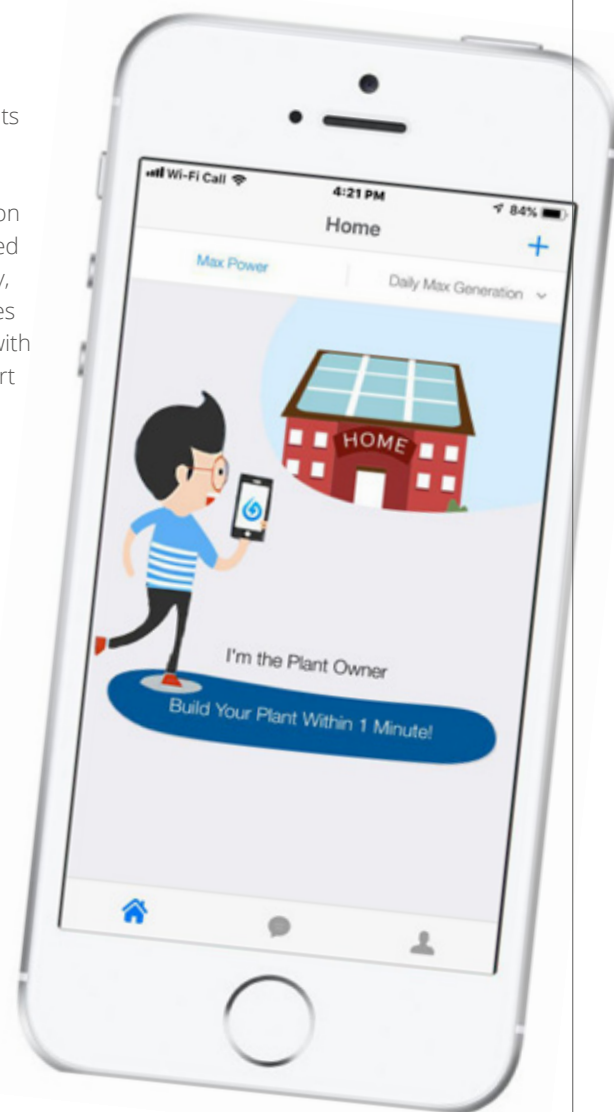
USE YOUR ENERGY TO THE MAX!

The ability to collect information from the inverters remotely has made the monitoring of PV systems more efficient than ever before. The Wi-Fi or GSM module ensures stable and efficient monitoring of a user's Solar power system

It measures by collecting information from inverters such as status and performance, data collecting devices make the long-term monitoring of PV systems feasible and efficient.

The Wi-Fi or GSM module can ensure the stable and efficient performance of PV systems, while minimising the monitoring costs as well, therefore enabling users to achieve great increase in ROI with only a little investment.

Our residential monitoring system helps



3.6kW On-Grid Parity Inverter with Storage

Sunsynk-3.6-K-SG01LP1 IP65

Sunsynk's 3.6kW Parity Inverter is a small scale inverter which is ideal for both marine vessels and small houses with limited roof spaces.

The size of array ranges between 1.2W to 7kW and the inverter

possess software features that are common with the larger models. It carries a weatherproofing rating of IP65 and is fitted with 2 x MPPT ports

HELP LIGHT THE WAY FOR OUR FUTURE

Main Features

- Maximum efficiency of 97.5% with wide input range
- Double MPPT design with precise MPPT algorithm
- Natural cooling- IP65 protection
- Compact and light design for easy installation
- Transformer-less GT technology
- RS485 Wi-Fi interface
- Built-in protection features
- Built-in anti-overflow function
- 25 years lifespan

Hybrid Grid Tied Inverter with Storage

Max PV Power	7,000W
Rated DC Power	7kW
Max DC Voltage	500V
MPPT Voltage Range	125~480V
Starting Voltage	125V
Input Lines	1+1
Battery Type	Lead-Acid or Li-ion Battery
Battery Rated Voltage	48V
Rated AC/DC & Reserve Power	3600W
Max AC Power	3960W
Peak Power (off-grid)	1.5 Times Rated Power, 10s
AC Output Range	230Vac
Off-grid Output	45~55Hz/55~65Hz 180~270Vac 230Vac±2%



5.5kW On-Grid Parity Inverter with Storage

Sunsynk-5.5-K-SG01LP1 IP65

Here is a mid-range on-grid Parity Inverter that carries the same features as the larger inverters. The size is aimed at larger marine vessels and domestic premises with sufficient roof space for solar or wind power. Ideal for solar arrays

ranging from 2.5kW to 4.8kW. It carries a weatherproofing rating of IP65 and is fitted with 2 x MPPT ports.

IDEAL INVERTER FOR SOLAR PANELS

Main Features

- Maximum efficiency of 97.5% with wide input range
- Double MPPT design with precise MPPT algorithm
- Natural cooling- IP65 protection
- Compact and light design for easy installation
- Transformer-less GT technology
- RS485 Wi-Fi interface
- Built-in protection features
- Built-in anti-overflow function
- 25 years lifespan

Hybrid Grid Tied Inverter with Storage

Max PV Power	5500W
Rated DC Power	5000W
Max DC Voltage	500V
MPPT Voltage Range	125~480V
Starting Voltage	125V
Input Lines	1+1
Battery Type	Lead-Acid or Li-ion Battery
Battery Rated Voltage	48V
Rated AC/DC & Reserve Power	5500W
Max AC Power	5500W
Peak Power (Off-Grid)	1.5 Times Rated Power,10s
AC Output Range	230Vac
Off-Grid Output	45~55H/55~65Hz 180~270Vac 230Vac±2%



8.8kW On-Grid Parity Inverter with Storage

SUNSYNK-8.8K-48-STIP Weatherproof

The 8.8KW Parity Inverter is a world leader in its class.

OUR INVERTERS ARE LIKE NO OTHER!

Not only is it responsible for DC to AC inversion, it also has MPPT and voltage management for each type of power input. That means it can be fed DC power from solar, wind turbine and AC from mains-grid at the same time then calculate the

correct amount of power to be stored in the batteries, used by appliances or fed back into the grid. The inverter has excellent efficiency and performs above 97%. It is easy to install and has a clear touch screen where you can programme and read the system status. Added to the inverter is a Wi-Fi port to allow the user to monitor the inverter via the internet. This model is designed for outdoor use.

Main Features

- 120V/240V split phase, 230V single phase
- Self consumption and feed-in to the grid options
- Auto re-start while AC is recovering
- Programmable
- On-grid, off-grid or uninterrupted power supply (UPS)
- Compatible to mains voltage or generator power
- Overload / temperature / short circuit protection
- Supports Wi-Fi monitoring
- 3-Stage MPPT charging for optimal battery performance
- Timing adjustable for convenient and efficient operation

Hybrid Grid Tied Inverter with Storage

Max PV Power	8800W
Rated DC Power	8000W
Max DC Voltage	500V
MPPT Voltage Range	125~480V
Starting Voltage	125V
Max DC Current	17A/17A
Input Lines	2+2
Battery Type	Lead-Acid or Li-ion Battery
Battery Rated Voltage	48V
Rated AC/DC & Reserve Power	8000W
Max AC Power	8000W
Peak Power (off-grid)	1.5 Times Rated Power,10s
AC Output Range	50/60Hz;120Vac & 230Vac
Off-grid Output	45~55H/55~65Hz 180~270Vac 230Vac±2%



Solar Panels

Our solar panels

Our 320 Watt Solar Panels are made of polycrystalline and once integrated with our inverters will turn sunlight into electricity that can be used in your house or fed back into the grid. They can be mounted on individual fixing kits or onto large frames and once functioning, they will continue to provide power for over 25 years.

Features:

- Polycrystalline Solar Panel
- Weatherproof
- 18% Cell Efficiency

100 Watt Solar Panel

Polycrystalline Solar Panel
Size: 678 x 1008 x 35mm
Weight: 8.2kg

Order Code: SUN100PAN

270 Watt Solar Panel

Polycrystalline Solar Panel
Size: 1640 x 992 x 35mm
Weight: 18.6kg

Order Code: SUN270PAN

320 Watt Solar Panel

Polycrystalline Solar Panel
Size: 1956 x 992 x 40mm
Weight: 23kg

Order Code: SUN320PAN





Solar Fixing Systems

In order to install a working PV system, Sunsynk supply fixing kits, which are matched to the 320W solar panel however, should smaller panels be purchased, we can supply the appropriate kits as well.

SOLAR FIXING KITS

Matched with the panels are the solar cables and isolators which are essential to any system.

- Fixing kits (bracket, end clamp & roof hook) for 100W / 250W & 320W panels.
- Mains circuit breakers (MCB) - 20A & 63A
- Cabling 4-10mm solar cable / 14mm / 35mm & 50mm battery hook up cables.
- Connectors MC4 male / female & 'O' connectors



100W Fixing Kit
SUN100FIX1

Including rails, screws & fixtures



270W Fixing Kit
SUN270FIX1

Including rails, screws & fixtures



320W Fixing Kit
SUN320FIX1

Including rails, screws & fixtures





Battery Material

Combining both solar and LED technology

Different materials have different impacts on the discharge rate and the lifespan of the product. For example, lithium-ion batteries can discharge 70%-90% of the total amount of storage while lead-acid can only discharge around 50%. And lithium-ion batteries have at least double the lifespan of lead-acid batteries. Higher discharge rate and longer lifespan will typically results in higher prices.

Capacity

Storage capacity refers to the total amount of energy your solar battery can store, and usable capacity means the amount one can use, which is usually calculated by depth of discharge (DoD). The amount of storage capacity and usable capacity, measured in kilowatt hours (kWh), directly influences how much your solar battery storage system will cost. Larger capacity means it can store more energy and support a larger area, thus, it will result in a higher price.

Lifespan

The life cycle is an important indicator of a solar battery storage system's lifespan. The more cycles a solar battery can provide, the longer time it can perform normally. Considering the lifespan of solar panels is around 25 years, replacing a new solar battery may add up to the future costs.

Installation

Installation cost of solar battery storage systems varies slightly based on the size. It may be covered by the solar battery storage system costs of some brands. Generally speaking, it is more economical to set up your solar battery system while installing solar panels.

What Is the Lifespan of a Solar Battery?

The average lifespan of a solar battery storage system is around 5 to 7.5 years for lead-acid and 11-15 years for lithium-ion batteries. However, all batteries are vulnerable if they are over-discharged or exposed to extreme weather.

Depth of Discharge (DoD)

DoD means how much you can use the battery before recharging it. Just as it may be harmful for your phone's battery to have only 2% remaining, the same goes for a solar battery storage system.

If you use up 100% of its charge or exceed its DoD limit before recharging it, the lifespan will be shortened significantly. For example, if you buy a solar battery storage system that has a capacity of 5kW energy storage and 80% DoD, remember to charge it before using up the entire 4kW in order to extend the life of the battery.



Lithium Phosphate Batteries

Lithium-Ion Batteries

Cell	100Ah, LFP	Max. discharging current peak	200A, (2C, 30s, 25°C ± 2°C
Module	1P16S		SOC ≥ 40%
Rated energy	5.12Vdc	Communication	CAN/RS485
Rated voltage	51.2Vdc	Rated energy	5.12Vdc
Working voltage range	44.8~58.4 Vdc	Diamension (LDH)	440* 530* 132mm
Rated charging/discharging current	0.5C	Weight	~50kg
Max. Dis-charging current	1C (100A)	IP Level	IP20

Order Code: Sunsynk-100 AH-345789



200AH AGM Batteries

SUN-200AH

With our solar systems we recommend the use of the gel batteries due to their stable properties. A modern gel battery is a Valve Regulated Lead Acid (VRLA) battery with a gelled electrolyte. The sulphuric acid is mixed with fumed silica which makes the resulting mass gel-like and immobile. Unlike a flooded wet-cell lead acid battery, these batteries do not need to be kept up-

right. Gel batteries are maintenance free since it is a sealed battery and no emission of gasses occurs so the volume of electrolyte released is minor. This means that a gel battery lasts 2-3 times longer than a normal flooded battery.

**LAST LONGER THAN
NORMAL LEAD ACID**

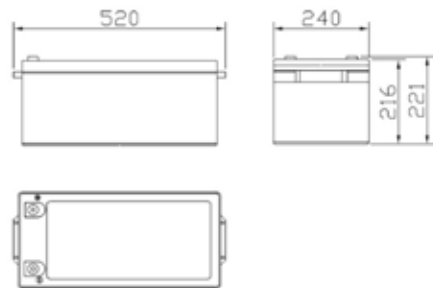
In addition, another advantage is that gel batteries are more acid-starved than other batteries which protects the batteries' plates. This makes gel batteries the best suited for deep discharge applications.

The ideal gel battery supplied by Sunsynk® is the 12V 200Ah gel battery.

General characteristics

- (1) High Reliability and Quality
- (3) Good deep discharge cycle capability

Outer Dimensions



Dimensions and Weight

Length (mm / inch)	522 / 20.55
Width (mm / inch)	240 / 9.45
Height (mm / inch)	216 / 8.50
Total Height (mm / inch)	242 / 9.53
Approx.Weight(Kg / lbs)	59/ 129.8

- (2) Excellent Recovery from Deep Discharge
- (4) Longer Service Life

Performance Characteristics

Nominal Voltage	12V
Design Life	10-12 years
Nominal Capacity 77°F(25°C)	
10 hour rate(20A,10.8V)	200Ah
3 hour rate (53.0A,10.2V)	159Ah
1 hour rate(130A,9.6V)	130Ah
Self-Discharge	3% of capacity declined per month at 20°C(average)
Internal Resistance	
Fully Charged battery 77°F(25°C)	3mΩ
Operation Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max.Discharge Current 77°F(25°C)	1800A(5s)
Short Circuit Current	4433A

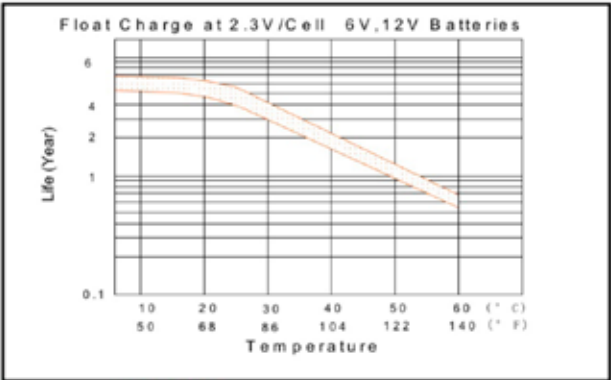
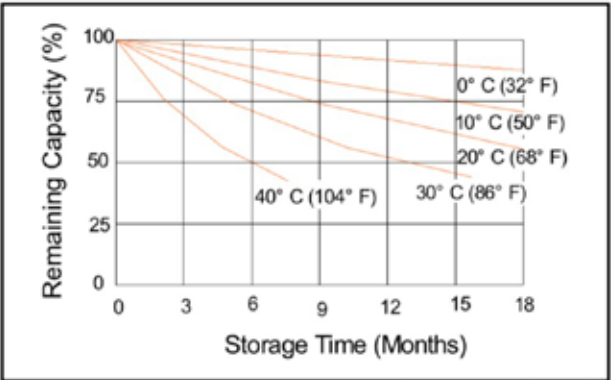
Battery Construction

COMPONENT	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
RAW MATERIAL	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

Charging Methods

Application	Charging method	Charging Voltage at 25°C	Temperature compensation coefficient of charging voltage	Max.charging current	Charging time 25°C(h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage & Constant Current	13.4-13.8V	-18 mV/°C	60A	24	20	0~40 (32~104°F)
For cycle service	Charging (with current restriction)	14.5-15.0V	-30 mV/°C	60A	16	10	

*Temperature compensation of charging voltage is not needed when using the batteries within 15°C to 35°C range.

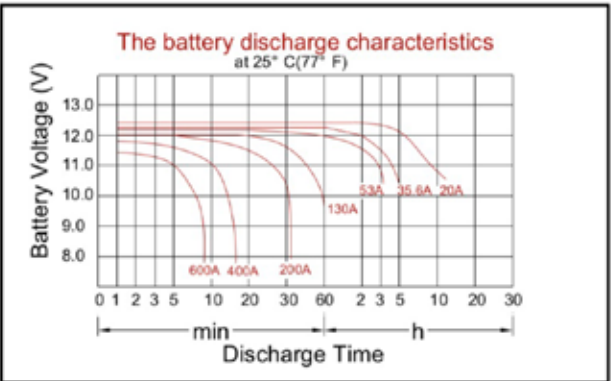
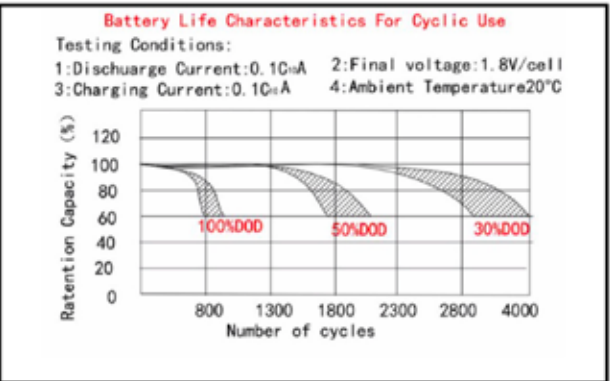
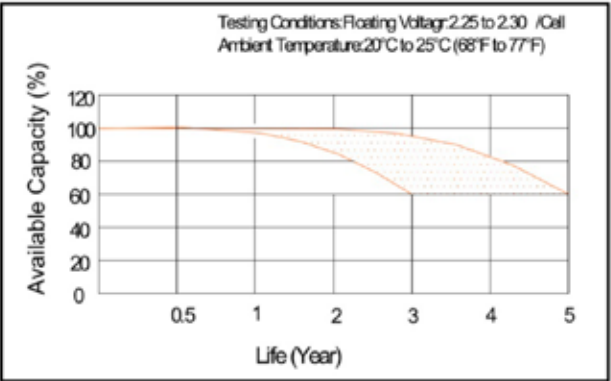
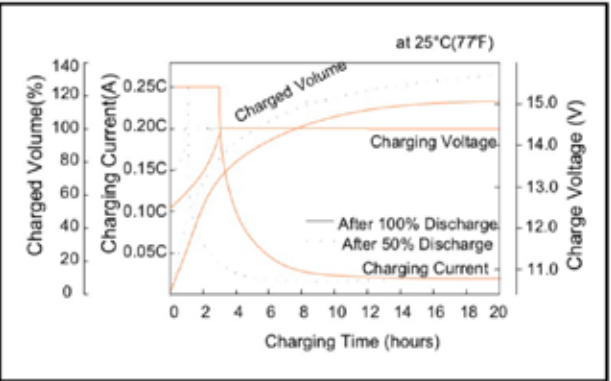


Discharge Constant Current (Amperes at 77°F25°C)

End Volatage	1h	2h	3h	4h	5h	6h	8h	9h	10h
9.6	132	75.1	56	45.1	38.1	32.7	26	23.3	21.5
9.9	125	73.1	55.7	43.7	36.7	31.3	25.2	23.1	21.2
10.2	123	71.3	54.5	43.1	36	31.1	24.8	22.7	21.2
10.5	121	70.8	53.9	41.9	35.1	30.4	24	22.1	20.7
10.8	115	66.8	50.8	40.4	34.5	29.7	23.7	21.5	20

Discharge Constant Power (Watts/cell at 77°F25°C)

End Volatage	1h	2h	3h	4h	5h	6h	8h	9h	10h
9.6	1491	851	633	508	431	371	291	264	244
9.9	1415	815	615	495	421	364	287	261	241
10.2	1367	804	612	492	419	360	287	260	240
10.5	1332	775	588	477	412	351	280	253	237
10.8	1251	751	581	471	407	348	273	251	231





Pro Off-Grid Systems

- 220V single phase, pure sine wave inverter
- Self consumption & feed-in to the grid
- Auto re-start while AC is recovering and programmable supply priority for battery or grid
- Programmable multiple operation modes; on-grid/ off-grid & UPS
- Configurable battery charging - current/ voltage based on applications by LCD setting
- Configurable AC/solar/ generator charger priority by LCD setting
- Compatible with mains voltage or generator power
- Overload/ over-temperature/ short-circuit protection
- Smart battery charger designer optimised battery protection
- Limit-function installed to prevent excess power overflow to grid
- Supporting Wi-Fi monitoring and built-in 2 strings of MPP trackers
- Smart settable 3-stage MPPT charging for optimised battery performance
- Time of use function
- Smart load function

	2KW	4KW	6KW	8KW	10KW
Kit Model Number	SSOGPro2KW	SSOGPro4KW	SSOGPro6KW	SSOGPro8KW	SSOGPro10KW
Inverter	3.5 KW Sunsynk	5KW Sunsynk	5KW Sunsynk	8.8KW Sunsynk	8.8KW Sunsynk
MPPT Charger	11A + 11 A	11A + 11 A	11A + 11 A	18A + 18A	18A + 18A
Battery Bank	5,000 Wh	10,000 Wh	20,000 Wh	30,000 Wh	40,000 Wh
Battery Inter Connect	35mm Cable	50mm Cable	50mm Cable	50mm Cable	50mm Cable
Battery Isolator	SS-BAT-ISO x 1	SS-BAT-ISO x 1	SS-BAT-ISO x 1	SS-BAT-ISO x 1	SS-BAT-ISO x 1
Battery Cabinets	SS Battery Cabinet x 1	SS Battery Cabinet x 1	SS Battery Cabinet x 2	SS Battery Cabinet x 3	SS Battery Cabinet x 4
Solar Panel Array	6 x 320 Watt Solar Panels	12 x 320 Watt Solar Panels	18 x 320 Watt Solar Panels	24 x 320 Watt Solar Panels	30 x 320watt Solar panels
Solar Combiner Box	SS-Surge-SP1 x 1	SS-Surge-SP1 x 1	SS-Surge-SP1 x 2	SS-Surge-SP1x 2	SS-Surge-SP1 x 2
Solar Hook ups Cables	Included	Included	Included	Included	Included
AC Isolator	SS-SURGE-AC1 x 1	SS-SURGE-AC1 x 1	SS-SURGE-AC1 x 1	SS-SURGE-AC1 x 1	SS-SURGE-AC1 x 1
AC Cables	Not Included	Not Included	Not Included	Not Included	Not Included
Solar Panel Fixing Kit	Included	Included	Included	Included	Included



Solar Floodlight compact

Tough little fittings

The Compact solar Floodlight is tough, bright and resilient. The light is designed for simple plug and play installation and can operate in almost all weather conditions which makes the light useful in places where there is no mains available.

The compact solar floodlight uses its solar panel that charges the battery during the day. Once the sun goes down the light automatically activates itself into standby mode ready for motion detection.

The lights motion sensor can detect move-

ment up to 8 meters away which gives security in the most remote areas.

Features:

- Dimensions -11 x 16 x 12.5cm
- PIR with a 120° range
- Beam range 8-10 metres
- Silicon solar panel included
- Compact (all-in-one)
- Micro-processor based
- Galvanised steel brackets (rust-proof)
- Marine grade construction
- Long shelf-life
- Easy to install

10 Watt Solar Flood Compact

Includes:

Built-in Polycrystalline Solar Panel
600 lumen compact floodlight
10 Watt
Built-in PIR
LED indicator light

Order Code: 40342255

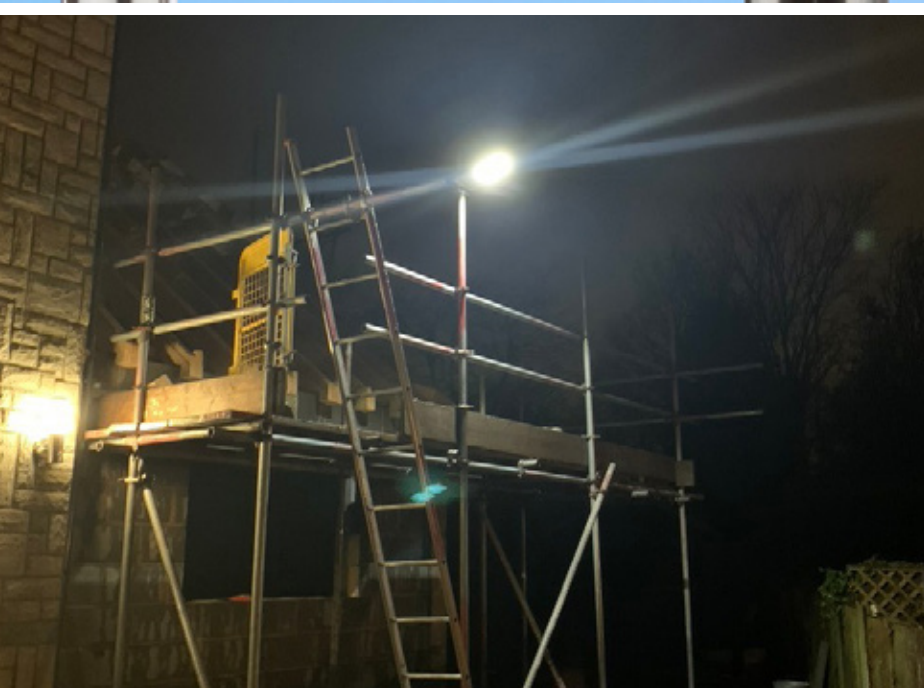
20 Watt Solar Flood Compact

Includes:

Built-in Polycrystalline Solar Panel
1200 lumen compact floodlight
20 Watt
Built-in PIR
LED indicator light

Order Code: 40342225





Eclipse Solar Streetlight

Combining both solar and LED technology

Sunsynk's Eclipse combines both solar and LED technology to produce a unique high quality product that can provide effective illumination in those areas that have no electricity. During the day, the built in solar panel collects sunlight and charges the batteries ready for night-time use. A photo-sensor installed within the light illuminates the LEDs once darkness falls and automatically cuts them off when the sun rises in the morning. During darkness, The Eclipse operates at a lower brightness throughout the night. A built-in infrared motion sensor can detect movement so that when people pass nearby, the light increases its power to nearly 100% giving a much brighter illumination for up to 30 seconds. This value-engineered lighting system allows any potential customer to save money or purchase several of these lights together to provide complete illumination of

chosen areas. Includes over-voltage, under-voltage and under current protection with a PIR range up to 4 metres.

Features:

- Uses renewable and energy saving solar power.
- Operating temperature -20 to +60°C.
- Illumination of up-to 10 hours depending on the amount of triggers.
- Integrated design and convenient installation.
- Using specified lithium-ion battery for power storage allows long service life, compact size and environmental protection.
- The infra red sensor improves the reliability of the system.
- The efficient LED lights provide high luminosity, efficient operation, long lifespan and colour uniformity.
- The aluminium alloy shell structure is light weight, corrosion resistant and weatherproof.

12 Watt Eclipse Includes:

5.5W solar panel
1110 lumen LED's
PIR sensor
15Wh battery
40x21x11.5cm

Order Code: AIO-12

36 Watt Eclipse Includes:

10W solar panel
3200 lumen LED's
PIR sensor
22Wh battery
53x21x11.5cm

Order Code: AIO-36

24 Watt Eclipse Includes:

6.5W solar panel
1800 lumen LED's
PIR sensor
15Wh battery
42.5x21x11.5cm

Order Code: AIO-24

48 Watt Eclipse Includes:

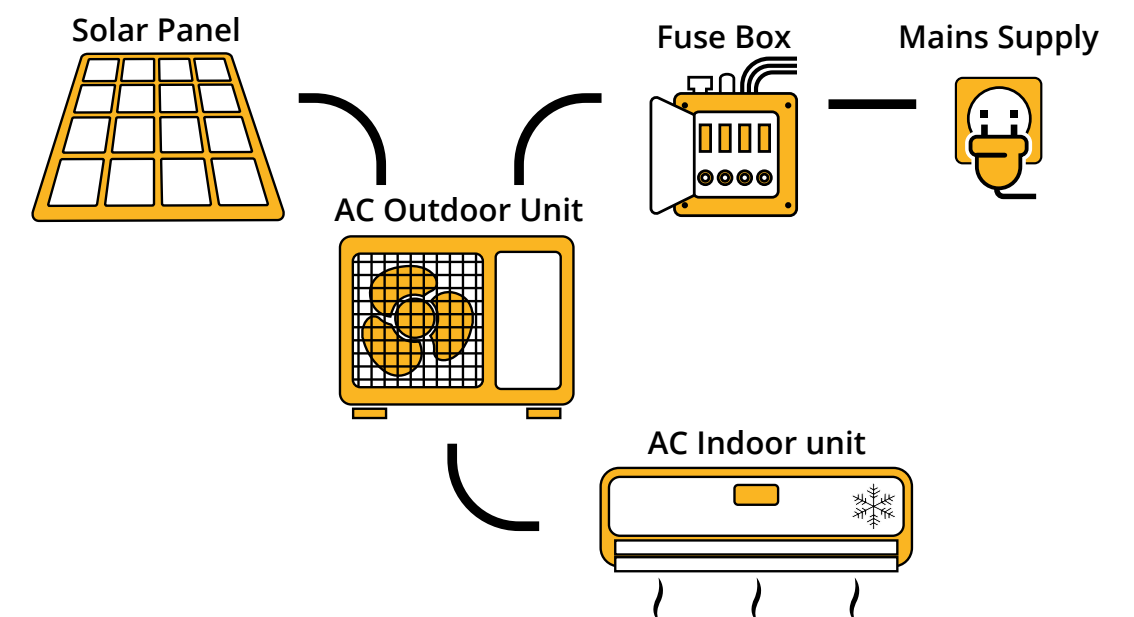
10.5W solar panel
3500 lumen LED's
PIR sensor
22Wh battery
63x21x11.5cm

Order Code: AIO-48



Solar Powered Hybrid Air Conditioning Units

Sunsynk Hybrid Air Conditioning System



ACDC Solar Inverter Air Conditioner

You are probably thinking what's the point and expect to see big batteries and inverters but none of this they are simply hybrid AC units. During the day the solar array powers the inverter AC you have free heating or cooling, at

night the unit simply switches to mains power. Installation same as any AC A 12,000 BTU this only needs 3 panels to run of a daytime and st night is also super efficiency thanks to the digital inverter tech.



Global Tech China Ltd

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Want to become a distributor? Or want to know more?

Email us: sales@globaltech-china.com Our website: www.sunsynk.com

GT website: www.globaltechchina.com

