

No Power
No Problem

SUN  SYNK®

2 Short - Form
Catalogue

REVOLUTIONISING THE WAY WE USE, STORE, GENERATE & CONTROL ENERGY



www.sunsynk.com

The Products - Power Bank Kit 1000

The Sunsynk brand has created a wide variety of products and in particular inverters, power management, battery storage and portable power solutions. All our products have their own IP registration and legal protection. Sunsynk products are set apart because of the many propriety technologies under patent that are included in our devices. The following section of the report covers products falling under the power management, storage and portable power categories.



Power Bank Kit 1000 - 1000Wh Battery Storage

The Power Bank Kit PB 1000 is a complete off-grid solution that contains all the constituent parts of a solar system within one package. With a 1000Wh capacity, the design is simple, enabling the user to quickly set up a working solar system and provide AC devices with power up to 300W. In addition the system can provide 24V that can power up DC equipment. Within the waterproof casing of the power bank itself is a built-in charge controller, lithium-ion batteries, a DC-to-AC inverter, and logic programme that manages the whole system. All that is visible is the cabling that takes DC power from the solar panels to the inverter and the AC power outlet.



The Products - Power Bank Kit 2000



Power Bank Kit 2000 - 2000Wh Battery Storage

The PB 2000 system is a higher capacity piece of kit compared to the PB 1000. It is also a complete off-grid system that contains all the constituent parts of a solar system within one package. The design is simple, enabling the user to quickly set up a working solar system and provide AC devices with power up to 1000W. In addition the system can provide 24V that can power up DC equipment. Within the waterproof casing of the power bank itself is a built-in charge controller, lithium ion batteries, a DC-to-AC inverter, and logic programme that manages the whole system. All that is visible is the cabling that takes DC power from the solar panels to the inverter and the AC power outlet.



The Products - Sunsynk 3.6kW Hybrid Parity Inverter

**Features:**

- Maximum efficiency of 97.6% with a wide input range.
- Double MPPT design with precise MPPT algorithm.
- Natural cooling & IP65 protection.
- Compact and light design for easy installation.
- Transformerless GT technology.
- RS485 Wi-Fi interface.
- Built-in protection features.
- Built-in anti-overflow function.
- 25 years lifespan.

Sunsynk 3.6kW Hybrid Inverter

Sunsynk-3.6K-SG02LP1-IP65

The Sunsynk Hybrid inverter has many operating modes and can be connected to several input types, such as PV, AC grid, batteries, generator, microinverter, and wind turbines. It is a complete solution.

The 3.6kW Inverter has been fitted with 7kW MPPT Input and is perfect for the UK market. Now you can have enough solar power to charge your batteries and supply the load for a whole day. This range of models covers a solar arrays spanning 1.2 to 4.6kW in size and they have several software features common to our larger models. It carries a weatherproof rating of IP65 and is fitted with two MPPT ports.

The Products - Sunsynk 5.5kW Hybrid Parity Inverter

**Features:**

- Maximum efficiency of 97.6% with a wide input range.
- Double MPPT design with precise MPPT algorithm.
- Fan 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.

Sunsynk 5.5kW Hybrid Inverter

Sunsynk-5.5K-SG01LP1-IP65

Here we present a mid-range on-grid parity inverter that carries the same features as the larger inverters. The 5.5 kW inverter is our best-selling hybrid inverter with 2 MPPT ports.

It is perfect for most applications. The size is aimed at domestic premises with sufficient roof space for solar or wind power. Ideal for solar arrays ranging from 2.5kW to 4.8kW. The 5.5kW Inverter also carries a weatherproofing rating of IP65.

“ We have the luxury of free choice as we do not have ties with any specific brand on the market. We have chosen Sunsynk as our inverter of choice, which demonstrates the value they offer.”

The Products - Sunsynk 8.8kW Hybrid Parity Inverter

**Features:**

- Overload / temperature / short circuit protection.
- Supports Wi-Fi monitoring.
- 3-Stage MPPT charging for optimal battery performance.
- Timing adjustable for convenient and efficient operation.
- On-grid, off-grid or uninterrupted power supply (UPS).
- Fan Cooling & IP65 protection.
- 5-year warranty.

Sunsynk 8.8kW Hybrid Inverter

Sunsynk-8.8K-SG02LP1-IP65

The Sunsynk 8.8kW Hybrid Parity Inverter is a highly efficient power management tool that allows the user to hit those 'parity' targets by managing power flow from multiple sources such as solar, wind turbines, main electrical grids, and generator, and then effectively storing and releasing electric power as the utilities require. It also carries a weatherproofing rating of IP65 and is fitted with two MPPT ports. Its convenient LCD display offers the user a configurable and accessible button operation, and once the Wi-Fi dongle has been attached, the user can monitor and adjust the inverter's functions remotely to make the most of installed power generation and storage.

The 8.8kW inverter is ideal when we need a bit more power, especially for systems that have totally off-grid or where you need a powerful UPS. It has a 50% surge power and the main advantage of these super inverters is that it can reverse and charge the batteries with very high power when required. In addition, since Sunsynk Hybrid Inverters use IGBT, they are much more reliable against surges and back EMF.

The Products - Lithium Batteries



Lithium CATL Battery L051100-A 5.12kWh/51.2V/100Ah

L051100-A

Sunsynk has produced a perfect storage solution. The module consists of Lithium-ion rechargeable batteries with 5.12kWh capacity rated at 51.2V 100Ah with built-in battery management system.



• Long Life Span

The battery can be expected to remain serviceable for more than 10 years and this takes into consideration that it is charged and discharged once at room temperature (25°C).

• Stability

Olivine Lithium-ion phosphate batteries provide excellent thermal stability and storage. The module also incorporates a self-monitoring function for the detection of any abnormalities in power storage.

• Compact Design

The height is nicely designed as per standard industrial rack size (3U).

• High Scalability

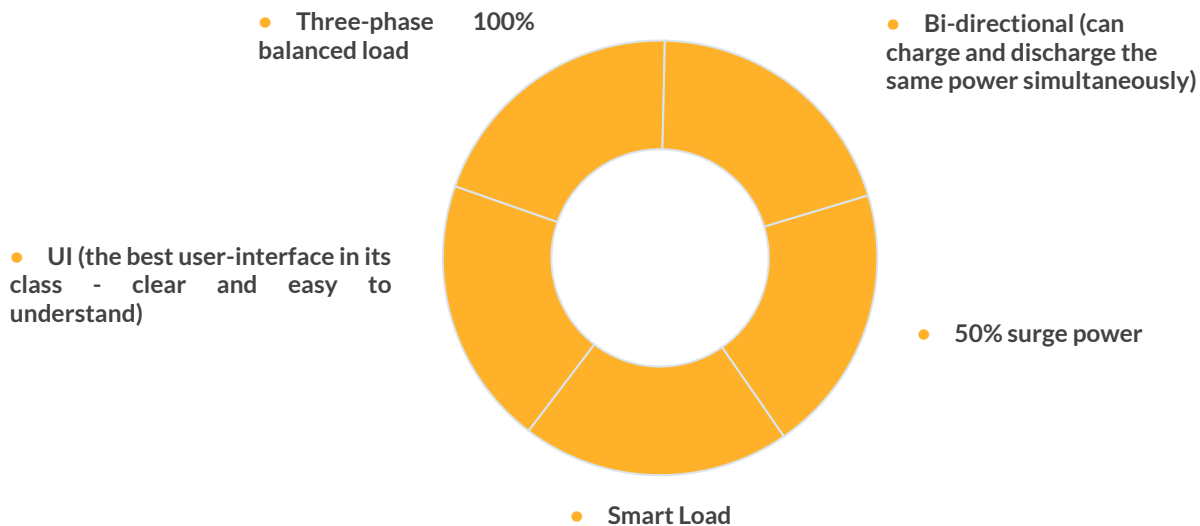
Multiple energy storage modules can be connected in parallel and the capacity customised according to the intended usage.

The Technology

Why is the Sunsynk Inverter better than the competition? – Our technology!

Our team of engineers has created a product that is not only technologically better and more efficient than our competitors, but it is also even better value too. We have many new features and benefits that are superior to the competition making our inverter the premier choice in the market.

Five key technological features of our inverters that make them special:



How does Sunsynk stay at the forefront of research and development?

Sunsynk continually researches and develops new methods to improve our products. This means that our products have been through an extensive process of development and will continue to be improved through the spirit of innovation and the pursuit of better design and functionality. This spirit will keep Sunsynk products at the forefront of technological advancement for the years to come.

Given that some of our R&D team are based in international bodies, educational facilities and included in governmental discussions concerning our field, our overall team is second to none.

Sunsynk's technology puts our products in a class of their own. It's what you don't see that makes the difference.

The Technology continued...

The Batteries

Sunsynk uses the best battery cell in the world, namely CATL Cells. CATL stands for Contemporary Amperes Technology Co. Ltd. and it is the leading manufacturer of lithium batteries in the world. Based in Ningde, Fujian, China, CATL is the largest lithium battery manufacturer in China. CATL battery cells are a quality product and are a popular choice with leading manufacturers such as BMW who employ them in their electric vehicles. TESLA has also sought out and engaged CATL as a battery supplier for their own products.

Why does CATL battery technology set Sunsynk products apart?

1. A high energy density. The energy density of a battery is the amount of energy released per unit volume or mass of the battery. The higher the energy density, the more energy is stored per unit volume. The energy density of Lithium-Phosphate (LiFePO₄) batteries is around 150Wh/Kg and the energy density of CATL NCM batteries is around 200Wh/Kg.
2. A good cycling performance. The cycle life of a ternary lithium battery is about 3000 times.
3. A long battery life. Based on the calculation of ; 1000 x ternary battery circulation, the complete charge and discharge of a battery in a 3-day period achieves a service life of 8.3 years. Even with the loss process. the battery lifespan can reach more than 7 years.
4. A good low-temperature performance. The low-temperature limit of NCM lithium batteries is -30°C and the low-temperature discharge performance is good. Under the same low temperature as that of a lithium-phosphate battery, the range of attenuation in winter is less than 15%.



Sunsynk's innovation and technical skill has been setting our business apart for decades.

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