SUN SYNK

# Solar Systems 2021

POWERED BY SUN SYNK

v7 (04/26/21)

# INDEX

## 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 great value for money within the world of 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, where our technology is jointly developed. The company has approximately 80 staff working on our projects at any one time.

Our key products fall within the categories described in this catalogue with further information appearing on our website; www.sunsynk.com.

The Global Tech China Group was founded in 2004 and is a company registered in Hong Kong, made up of British & Chinese engineers. The company has over 30 registered patents covering a wide spectrum of products, some of which have directly influenced the development of electrical appliances within the world since 2004.

Currently, Sunsynk exports to over 20 countries, including South Africa, the Philippines, Thailand, Australia, New Zealand, and the United Kingdom, where are solar lighting and power storage products have proven to be very popular.

## Homes of the Future

It is sensible that new-build houses both in the UK and abroad will simply adopt solar power and battery storage as part of the initial building design. As the mains electricity price rises, it will be a severe disadvantage to selling a house without having an installed means to power generation and power storage. As electric vehicles (EVs) become the norm, the amount of power consumed by a household will double and families will be paying careful attention to the number of kWhs on their monthly bills. It will become essential that power management systems are installed to allow consumers to make informed decisions on the amount of power their appliances consume and what can be turned off. Smart-Metering is the beginning of this change and later, once houses have their own battery storage and power management systems, customers will be able to economically manage their own consumption.

The range of Sunsynk products covers all aspects of power generation, storage and management and brings the future of green, environmentally friendly energy to households and industry.

**Sunsynk Parity Inverter with Storage & Programmable Export Facility**

The inverter can power all kinds of appliances in the home or office environment, including motor type appliances such as tube lights, fans, refrigerators, and air conditioners. It works rather like a water tank when storing electricity in that you fill the tank up from a generator or solar array and silently use the power until the tank is empty or close to empty. Subsequently, it can be topped back up again by the generating facilities.

When excess power is diverted to the grid, it is possible in countries such as the UK or Hong Kong to receive payback from the mains supplier. This will allow the customer to earn money and cover the cost of the inverter within a short period of time.

The Sunsynk® range of solar products is the culmination of years of research and development. This inverter is one of our newest products. This device combines the functions of inverter, solar charger, and battery charger to offer uninterrupted power support in a convenient size. Its comprehensive LCD display offers users configurable and accessible button operation to adjust functions such as battery charging current, AC/Solar charger priority, and acceptable input voltage in order to match different applications.

In addition to producing power via solar panels the Sunsynk Inverters can be connected to an engine generator system thereby assisting in the reduction of diesel. Power is generated and stored and used by the appliance / load in preference to the engine’s direct power.

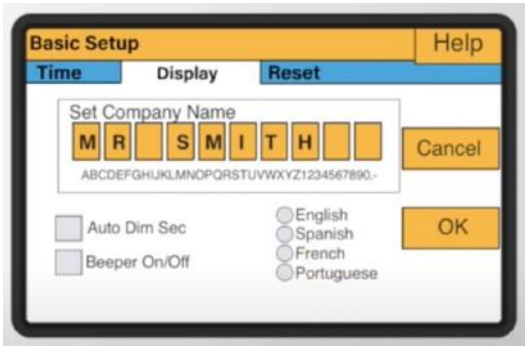
# GETTING TO KNOW OUR INVERTERS

The Sunsynk Operating System is one of the best in its class. It provides real-time information as well as the daily cumulative readings for power consumption and generation. The screen is an interactive touch-screen and users can adjust it by their finger-tips. Special attention should be paid to the Bar Chart and the Cog icons.

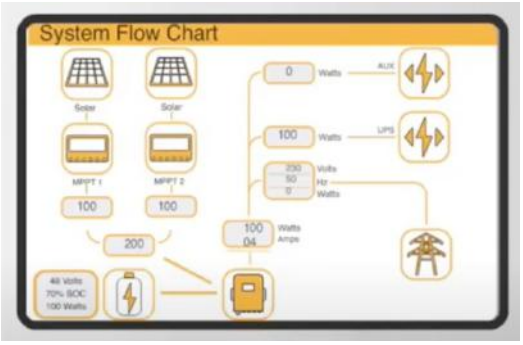
By clicking the various icons on the Home page, the user can access lots more information, like this simple spread sheet providing real-time data.

Let's start with the Basic Setup features which include setting Date & Time as well as the installer's name or telephone number.

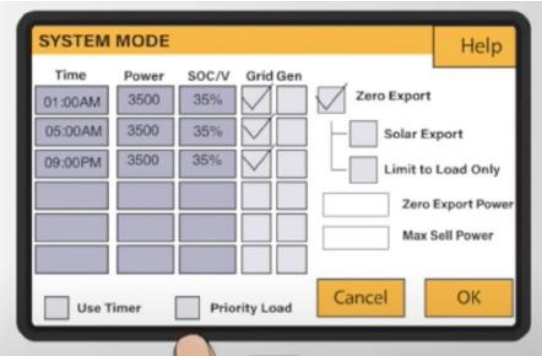
From the Basic Setup page, you could also have a choice of pre-installed languages. These are Spanish, French, Portuguese and English.


If you click on the Bar Chart icon you can access this System Flow Chart, showing exactly what the inverter is doing at any particular time and how the power is flowing through the device.

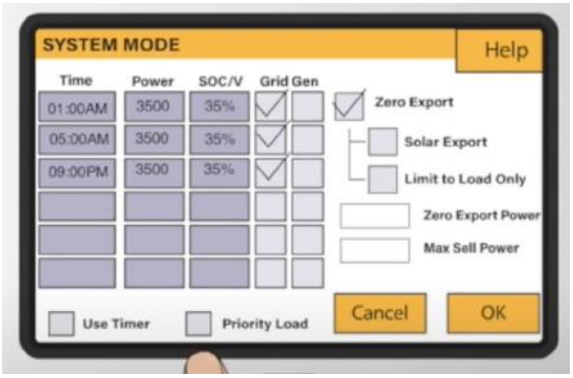

If you click the Cog icon in the top right-hand corner you can now access the Settings navigation page which will take you to the various programming pages.


The Battery Setup allows the user to choose between AGM-Battery, Lithium Battery or No Battery.

On the Battery Charge page, besides solar charging, the user can select to charge the battery packs from either the Grid or by Generator. If a signal is required to trigger a generator to start, this function can be selected from this page. In addition, we have the option of using the relay as an automatic response when the inverter is in Island-Mode

Also, the Battery Setup page lets you select the shutdown voltages when the inverter's power is OFF or if the battery is LOW.

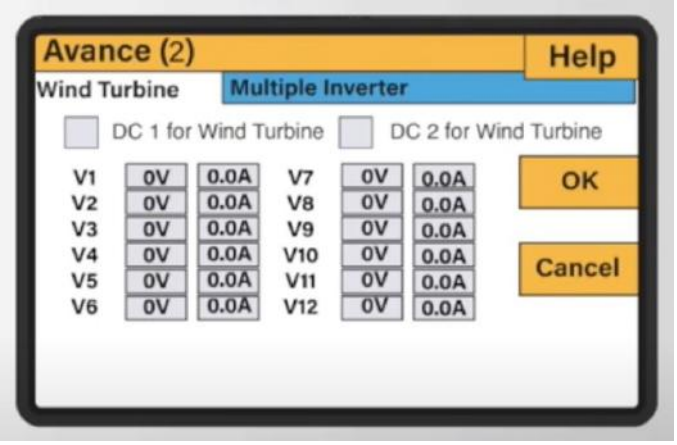

If you are using lithium batteries and connect a communication cable between the lithium batteries, BMS and inverter, you need to make sure the circuit is correct and communicating. By clicking the icon on the bottom right hand side of the SETTINGS page the user can confirm the status of this function.

Grid Setup is fairly simple and provides the parameters of the Grid Voltage and Frequency Upper and Lower settings. In most cases the default settings will be fine unless you have a particular problem with your mains power.

System Mode is the heart of the inverter and enables the user to set timings for the inverter to do various tasks. From here you can also select your solar to export power to the load or to the battery. In addition, you can control the maximum power of the inverter and the import power from the Grid to help prevent zero export.

Advanced settings allow you to parallel inverters into a multi-inverter system operating in either single-phase or three-phase rotation.

If you are using a Wind Turbine you can set up the profile of the wind turbine from this page.




Auxiliary Load can be used for many things like using a generator on a single inverter system peak power shaving or if using micro inverters off-grid. This page lets the user set the environment.

As well as the Setup pages they Sunsynk Operating System provides lots of information which is generally common to most inverters such as historic solar and grid power.

We also provide a comprehensive list of fault codes. This should be treated as a diagnostic tool to check that your whole system is operating correctly and that there are no earth-faults on your solar panels and there are no over or under-voltages and over- currents

There are many other pages on the Sunsynk operating system and this is just a simple glimpse of what it can do. We believe we have the best operating system out of any hybrid inverter the easiest to use and program. Each page also has a simple Help Menu to assist the user. No power, no problem with Sunsynk.

# STORAGE INVERTERS

## 3.6kW On-Grid Parity Inverter with Storage

### SUNSYNK-3.6K-SG01LP1 IP65

The Sunsynk 3.6kW Parity Inverter is ideal for small-scale AC applications. The 3.6kW hybrid is our flagship inverter for use in places where you are limited to the inverter size, such as United Kingdom and Australia.

It has multiple operating modes: Grid-Tied, Off-Grid, UPS, and Hybrid. The array size ranges between 1.2 to 4.6kW, and the inverter possesses software features common with our larger models. It carries a weatherproofing rating of IP65 and is fitted with one MPPT port.


**Features:**

- Maximum efficiency of 97.6% with a wide input range.
- Natural cooling - IP65 protected.
- 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.

| Model | SUNSYNK-3.6K-SG01LP1 |
|---|---|
| **Battery Input Data** | |
| Battery Type | Lead-acid or Lithium-ion |
| Battery Voltage Range | 40~60V |
| Max. Charging Current | 90A |
| Max. Discharging Current | 90A |
| Charging Curve | 3 Stages/Equalisation |
| External Temperature Sensor | Optional |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS |
| **PV String Input Data** | |
| Max. DC Input Power | 4680W |
| PV Input Voltage | 370V (100V~500V) |
| MPPT Range | 125~425V |
| Full Load DC Voltage Range | 240~425V |
| Start-up Voltage | 150V |
| PV Input Current | 11A |
| No. of MPPT Trackers | 1 |
| No. of Strings Per MPPT Tracker | 1 |
| **AC Output Data** | |
| Rated AC Output and UPS Power | 3600W |
| Max. AC Power | 3960W |
| Peak Power (off-grid) | 2 times of rated power, 10 S |
| AC Output Rated Current | 15.7A |
| Max AC Output Current | 18A |
| Max Continuous AC Passthrough | 35A |
| Power Factor | 0.8 leading to 0.8 lagging |
| Output Frequency and Voltage | 50/60Hz; 220/230/240Vac (single phase) |
| Grid Type | Single Phase |
| Current Harmonic Distortion | THD<3% (Linear load<1.5%) |
| **Efficiency** | |
| Max. Efficiency | 97.60% |
| MPPT Efficiency | 96.50% |
| Euro Efficiency | 99.90% |
| **Protection** | |
| PV Input Lightning Protection | Integrated |
| Anti-islanding Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| Insulation Resistor Detection | Integrated |
| Residual Current Monitoring Unit | Integrated |
| Output Over Current Protection | Integrated |
| Output Shorted Protection | Integrated |
| Output Over Voltage Protection | Integrated |
| **Certifications and Standards** | |
| Grid Regulation | VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727, RD1699:2011, XP C15-712-3:2019-05 |
| Safety Regulation | IEC62109-1, IEC62109-2 |
| EMC | EN61000-6-1, EN61000-6-3 |
| **General Data** | |
| Operating Temperature Range | -25~60°C, >45°C Derating |
| Cooling | Natural Cooling |
| Noise | <30dB |
| Communication with BMS | RS485; CAN |
| Weight | 20.5kg |
| Size (Length x Width x Height) | 580 x 330 x 208 mm |
| Protection Degree | IP65 |
| Warranty | 5 years |

# STORAGE INVERTERS

## 3.6kW On-Grid Parity Inverter with Storage + 7kW MPPT Input

## SUNSYNK-3.6K-SG02LP1 IP65

The Sunsynk hybrid inverter has many operating modes and it 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 with the 7kW MPPT is perfect for the UK market. Now you can have enough solar power to charge your batteries and provide the load the whole day.

For this model, the array size ranges between 1.2 to 4.6kW and it has several software features common with our larger models. It carries a weatherproofing rating of IP65 and is fitted with two MPPT ports.


**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.

| Model | SUNSYNK-3.6K-SG02LP1 |
|---|---|
| **Battery Input Data** | |
| Battery Type | Lead-acid or Lithium-ion |
| Battery Voltage Range (V) | 40~60V |
| Max. Charging Current (A) | 90A |
| Max. Discharging Current (A) | 90A |
| Charging Curve | 3 Stages/Equalisation |
| External Temperature Sensor | Optional |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS |
| **PV String Input Data** | |
| Max. DC Input Power (W) | 7000W |
| Voc Max. (V) | 500V |
| MPPT Range (V) | 125~425V |
| Full Load DC Voltage Range (V) | 240~425V |
| Start-up Voltage (V) | 150V |
| PV Input Current (A) | 11A+11A |
| No. of MPPT Trackers | 2 |
| No. of Strings Per MPPT Tracker | 1+1 |
| **AC Output Data** | |
| Rated AC Output and UPS Power (W) | 3600W |
| Max. AC Power (W) | 3960W |
| Peak Power (off-grid) | 2 times of rated power, 10 S |
| AC Output Rated Current (A) | 15.7A |
| Max AC Output Current (A) | 18A |
| Max Continuous AC Passthrough (A) | 35A |
| Power Factor | 0.8 leading to 0.8 lagging |
| Output Frequency and Voltage | 50/60Hz; 220/230/240Vac (single phase) |
| Grid Type | Single Phase |
| Current Harmonic Distortion | THD<3% (Linear load<1.5%) |
| **Efficiency** | |
| Max. Efficiency | 97.60% |
| MPPT Efficiency | 96.50% |
| Euro Efficiency | 99.90% |
| **Protection** | |
| PV Input Lightning Protection | Integrated |
| Anti-islanding Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| Insulation Resistor Detection | Integrated |
| Residual Current Monitoring Unit | Integrated |
| Output Over Current Protection | Integrated |
| Output Shorted Protection | Integrated |
| Output Over Voltage Protection | Integrated |
| **Certifications and Standards** | |
| Grid Regulation | VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727, RD1699:2011, XP C15-712-3:2019-05 |
| Safety Regulation | IEC62109-1, IEC62109-2 |
| EMC | EN61000-6-1, EN61000-6-3 |
| **General Data** | |
| Operating Temperature Range (℃) | -25~60°C, >45°C Derating |
| Cooling | Natural Cooling |
| Noise (dB) | <30 |
| Communication with BMS | RS485; CAN |
| Weight (kg) | 20.5 |
| Size (Length x Width x Height) | 580 x 330 x 208 mm |
| Protection Degree | IP65 |
| Installation Style | Wall-mounted |

# STORAGE INVERTERS

## 5.5kW On-Grid Parity Inverter with Storage

## SUNSYNK-5.5K-SG01LP1 IP65

Here is 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. It carries a weatherproofing rating of IP65 and is fitted with 2 x MPPT ports.


**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.

| Model | Sunsynk-5.5K-SG01LP1 |
|---|---|
| **Battery Input Data** | |
| Battery Type | Lead-acid or Lithium-ion |
| Battery Voltage Range | 40~60V |
| Max. Charging Current | 120A |
| Max. Discharging Current | 120A |
| Charging Curve | 3 Stages/Equalisation |
| External Temperature Sensor | Optional |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS |
| **PV String Input Data** | |
| Max. DC Input Power | 6500W |
| PV Input Voltage | 370V (100V~500V) |
| MPPT Range | 125~425V |
| Full Load DC Voltage Range | 240~425V |
| Start-up Voltage | 150V |
| PV Input Current | 11A+11A |
| No. of MPPT Trackers | 2 |
| No. of Strings Per MPPT Tracker | 1+1 |
| **AC Output Data** | |
| Rated AC Output and UPS Power | 5000W |
| Max. AC Power | 5500W |
| Peak Power (off-grid) | 2 times of rated power, 10 S |
| AC Output Rated Current | 21.7A |
| Max AC Output Current | 25A |
| Max Continuous AC Passthrough | 35A |
| Power Factor | 0.8 leading to 0.8 lagging |
| Output Frequency and Voltage | 50/60Hz; 220/230/240Vac (single phase) |
| Grid Type | Single Phase |
| Current Harmonic Distortion | THD<3% (Linear load<1.5%) |
| **Efficiency** | |
| Max. Efficiency | 97.60% |
| MPPT Efficiency | 96.50% |
| Euro Efficiency | 99.90% |
| **Protection** | |
| PV Input Lightning Protection | Integrated |
| Anti-islanding Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| Insulation Resistor Detection | Integrated |
| Residual Current Monitoring Unit | Integrated |
| Output Over Current Protection | Integrated |
| Output Shorted Protection | Integrated |
| Output Over Voltage Protection | Integrated |
| **Certifications and Standards** | |
| Grid Regulation | VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727, RD1699:2011, XP C15-712-3:2019-05 |
| Safety Regulation | IEC62109-1, IEC62109-2 |
| EMC | EN61000-6-1, EN61000-6-3 |
| **General Data** | |
| Operating Temperature Range | -25~60°C, >45°C Derating |
| Cooling | Fan |
| Noise | <30dB |
| Communication with BMS | RS485; CAN |
| Weight | 20.5kg |
| Size (Length x Width x Height) | 580 x 330 x 208 mm |
| Protection Degree | IP65 |
| Warranty | 5 years |

# STORAGE INVERTERS

## 8.8kW On-Grid Parity Inverter with Storage

## SUNSYNK-8.8K-SG02LP1 IP65

The Sunsynk 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


**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.

| Model | SUNSYNK-8.8K-SG01LP1 |
|---|---|
| **Battery Input Data** | |
| Battery Type | Lead-acid or Lithium-ion |
| Battery Voltage Range | 40~60V |
| Max. Charging Current | 190A |
| Max. Discharging Current | 190A |
| Charging Curve | 3 Stages/Equalisation |
| External Temperature Sensor | Optional |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS |
| **PV String Input Data** | |
| Max. DC Input Power | 10400W |
| PV Input Voltage | 370V (100V~500V) |
| MPPT Range | 125~425V |
| Full Load DC Voltage Range | 240~425V |
| Start-up Voltage | 150V |
| PV Input Current | 22A+22A |
| No. of MPPT Trackers | 2 |
| No. of Strings Per MPPT Tracker | 2+2 |
| **AC Output Data** | |
| Rated AC Output and UPS Power | 8000W |
| Max. AC Power | 8800W |
| Peak Power (off-grid) | 2 times of rated power, 10 S |
| AC Output Rated Current | 33.4A/35A |
| Max AC Output Current | 38A/40A |
| Max Continuous AC Passthrough | 90A |
| Output Frequency and Voltage | 50/60Hz; 120/240Vac (split phase), 208Vac (2/3), 230Vac (single phase) |
| Grid Type | Split phase, 2/3 phase, single phase |
| Current Harmonic Distortion | THD<3% (Linear load<1.5%) |
| **Efficiency** | |
| Max. Efficiency | 97.60% |
| MPPT Efficiency | 96.50% |
| Euro Efficiency | 99.90% |
| **Protection** | |
| PV Arc Fault Detection | Integrated (Except European Type) |
| PV Input Lightning Protection | Integrated |
| Anti-islanding Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| Insulation Resistor Detection | Integrated |
| Residual Current Monitoring Unit | Integrated |
| Output Over-Current Protection | Integrated |
| Output Shorted Protection | Integrated |
| Output Over Voltage Protection | Integrated |
| **Certifications and Standards** | |
| Grid Regulation | UL1741, IEEE1547, RULE21, VDE0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727 |
| Safety Regulation | IEC62109-1, IEC62109-2 |
| EMC | EN61000-6-1, EN61000-6-3, FCC 15 Class B |
| **General Data** | |
| Operating Temperature Range | -25~60°C, >45°C Derating |
| Cooling | Fan |
| Noise | <30db |
| Communication with BMS | RS485; CAN |
| Weight | 32kg |
| Size (Length x Width x Height) | 670 x 420 x 233 mm |
| Protection Degree | IP65 |
| Installation Style | Wall-mounted |

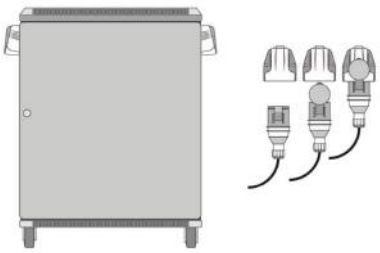
# STORAGE INVERTERS

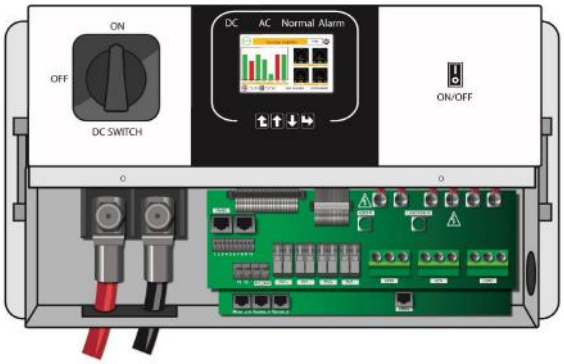
## 5.5kW / 7.6kW On-Grid Parity Inverters with Storage

## SUNSYNK-6K-SG02LP1
## SUNSYNK-7.6K-SG02LP1

The rack mounted inverter, 5.5kW and 7.6kW, are perfect for use where space is of a premium. It can be stacked up with batteries for several applications, for example, telecommunications systems and office UPS. In addition, similarly to our other hybrids, it can be connected to several input types, such as PV, AC grid, batteries, generator, microinverter, and wind turbines.







| Model | SUNSYNK-6K- SG02LP1 | SUNSYNK-7.6K-SG02LP1 |
|---|---|---|
| **Battery Input Data** | | |
| Battery Type | Lead-acid or Lithium-ion | |
| Battery Voltage Range | 40~60V | |
| Max. Charging Current | 135A | 190A |
| Max. Discharging Current | 135A | 190A |
| Charging Curve | 3 Stages/Equalisation | |
| External Temperature Sensor | Optional | |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS | |
| **PV String Input Data** | | |
| Max. DC Input Power | 7800W | 9880W |
| PV Input Voltage | 370V (100V~500V) | |
| MPPT Range | 125~425V | |
| Start-up Voltage | 150V | |
| PV Input Current | 18A+9A | 22A+22A |
| No. of MPPT Trackers | 2 | |
| No. of Strings Per MPPT Tracker | 2+1 | 2+2 |
| **AC Output Data** | | |
| Rated AC Output and UPS Power | 6000W | 7600W |
| Max. AC Power | 6600W | 8360W |
| Peak Power (off-grid) | 2 times of rated power, 10 S | |
| AC Output Rated Current | 25A | 31.7A/33A |
| Max AC Output Current | 27.5A | 34.9A/36.3A |
| Max Continuous AC Passthrough | 40A | 50A |
| Output Frequency and Voltage | 50/60Hz; 120/240Vac(split phase), 208Vac(2/3), 230Vac(single phase) | |
| Grid Type | Split phase, 2/3 phase, Single phase | |
| Current Harmonic Distortion | THD<3%(Linear load<1.5%) | |
| **Efficiency** | | |
| Max. Efficiency | 97.60% | |
| MPPT Efficiency | 97.00% | |
| Euro Efficiency | 99.90% | |
| **Protection** | | |
| PV Arc Fault Detection | Integrated (Except European Type) | |
| PV Input Lightning Protection | Integrated | |
| Anti-islanding Protection | Integrated | |
| PV String Input Reverse Polarity Protection | Integrated | |
| Insulation Resistor Detection | Integrated | |
| Residual Current Monitoring Unit | Integrated | |
| Output Over Current Protection | Integrated | |
| Output Shorted Protection | Integrated | |
| Output Over Voltage Protection | Integrated | |
| **Certifications and Standards** | | |
| Grid Regulation | UL1741, IEEE1547, RULE21, VDE0126, AS4777, NRS2017, G98,G99, IEC61683, IEC62116, IEC61727 | |
| Safety Regulation | IEC62109-1, IEC62109-2 | |
| EMC | EN61000-6-1, EN61000-6-3, FCC 15 Class B | |
| **General Data** | | |
| Operating Temperature Range | -25~60°C, >45°C Derating | |
| Cooling | Fan | |
| Noise | <30 | |
| Communication with BMS | RS485; CAN | |
| Warranty | 5 years | |

# 3-PHASE STORAGE INVERTERS

## 8kW / 10kW / 12kW On-Grid Parity Inverters with Storage

## SUNSYNK-8K-3P-SG02LP1
## SUNSYNK-10K-3P-SG02LP1
## SUNSYNK-12K-3P-SG02LP1

The Sunsynk Three-Phase On-Grid Parity Inverters are highly efficient power management tools for three-phase grid applications. These inverters allow the user to control power flow from multiple sources such as solar, main electrical grids, and generator, and effectively storing and delivering electric power to the grid.

These amazing three-phase inverters have a unique feature. They can operate and balance the load, which means you can have 20% connected to one phase, 20% to another, and 60% to the third phase, and it still gives perfect phase rotation. No other inverter in their class can offer this amazing feature.

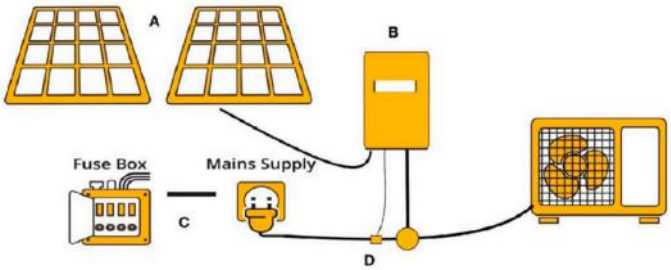

**Features:**

- 48V low-voltage battery.
- Isolation transformer design.
- 6 time periods for battery charging/discharging.
- Maximum charging/discharging current of 250A.
- Frequency droop control.
- Up to 16 inverters in parallel.
- DC and AC couple to retrofit existing solar system.
- Support storing energy from diesel generator.
- Interactive Display.

| Model | SUN-8K-SG01LP3 | SUN-10K-SG01LP3 | SUN-12K-SG01LP3 |
|---|---|---|---|
| **Battery Input Data** | | | |
| Battery Type | Lead-acid or Lithium-ion | | |
| Battery Voltage Range | 40~60V | | |
| Max. Charging Current | 190A | 210A | 240A |
| Max. Discharging Current | 190A | 210A | 240A |
| Charging Curve | 3 Stages/Equalization | | |
| External Temperature Sensor | Optional | | |
| Charging Strategy for Li-Ion Battery | Self-adaption to BMS | | |
| **PV String Input Data** | | | |
| Max. DC Input Power | 9880W | 13000W | 15000W |
| PV Input Voltage | 450V (140V~1000V) | | |
| MPPT Range | 140V~800V | | |
| Start-up Voltage | 160V | | |
| PV Input Current | 12.5A+12.5A | 25A+12.5A | 25A+12.5A |
| No. of MPPT Trackers | 2 | | |
| No. of Strings Per MPPT Tracker | 1+1 | 2+1 | 2+1 |
| **AC Output Data** | | | |
| Rated AC Output and UPS Power | 8000W | 10000W | 12000W |
| Max. AC Power | 8800W | 11000W | 13200W |
| Peak Power (off-grid) | 2 times of rated power, 10 S | | |
| AC Output Rated Current | 11.6A | 14.5A | 17.4A |
| Max AC Output Current | 12.8A | 16A | 19.1A |
| Max Continuous AC Passthrough | 60A | 60A | 60A |
| Output Frequency and Voltage | 50-60Hz; 230/400Vac (Three Phase) | | |
| Grid Type | Three Phase | | |
| Current Harmonic Distortion | THD<3% (Linear load<1.5%) | | |
| **Efficiency** | | | |
| Max. Efficiency | 97.6% | | |
| MPPT Efficiency | 97.0% | | |
| Euro Efficiency | 99.9% | | |
| **Protection** | | | |
| PV Arc Fault Detection | Integrated (Except European Type) | | |
| PV Input Lightning Protection | Integrated | | |
| Anti-islanding Protection | Integrated | | |
| PV String Input Reverse Polarity Protection | Integrated | | |
| Insulation Resistor Detection | Integrated | | |
| Residual Current Monitoring Unit | Integrated | | |
| Output Over Current Protection | Integrated | | |
| Output Shorted Protection | Integrated | | |
| Output Over Voltage Protection | Integrated | | |
| Surge Protection | DC Type II / AC Type II | | |
| **Certifications and Standards** | | | |
| Grid Regulation | UL1741, IEEE1547, RULE21, VDE0126, AS4777, NRS2017, G98,G99, IEC61683, IEC62116, IEC61727 | | |
| Safety Regulation | IEC2109-1, IEC62109-2 | | |
| EMC | EN61000-6-1, EN61000-6-3, FCC 15 Class B | | |
| **General Data** | | | |
| Operating Temperature Range | -25~60°C, >45°C Derating | | |
| Cooling | Fan | | |
| Noise | <30dB | | |
| Communication with BMS | RS485; CAN | | |
| Weight | 45kg | | |
| Size (Length x Width x Height) | 673 x 462 x 265mm | | |
| Warranty | 5 years | | |

# SINGLE-PHASE INVERTERS

## SUN-1.5 / 2 / 3 / 3.6 / 5 / 6 / 7.5 / 8 / 10K-G




Sunsynk® have produced inverters specifically designed to handle solar systems that power heaters and water pumps fitted to swimming pools, greenhouses and other power-hungry applications. But, they can also be utilized to provide power for homes and businesses.

Some of these models are perfect for heating your hot water on sunny days and, if there is low sunshine, it will automatically pull power from the mains grid. The CT coil built into these inverters will control when power is drawn from the grid or from the solar array. A Wi-Fi connection allows the user to remotely monitor and control this inverter and power connections are IP65 rated.

| Model | SUN-1.5K-G | SUN-2K-G | SUN-3K-G |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 1.95kW | 2.6kW | 3.6kW |
| Max. DC Input Voltage | 550V | | |
| Start-up DC Input Voltage | 80V | | |
| MPPT Operating Range | 70~550V | | |
| Max. DC Input Current | 12.5A | | |
| Number of MPPT / Strings per MPPT | 1 / 1 | | |
| **Output** | | | |
| Rated Output Power | 1.5kW | 2kW | 3kW |
| Max. Active Power | 1.65kW | 2.2kW | 3.3kW |
| Rated AC Grid Voltage | 230V | | |
| AC Grid Voltage Range | 160~300V | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | |
| Operating Phase | Single-Phase | | |
| Rated AC Grid Output Current | 6.5 | 8.7A | 13.1A |
| Max. AC Output Current | 7.2 | 9.6A | 14A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | |
| **Efficiency** | | | |
| Max. Efficiency | 97.3% | 97.3% | 97.5% |
| Euro Efficiency | 97.1% | 97.1% | 97.3% |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 330 x 310 x 115mm | | |
| Weight | 6kg | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <25dB | | |
| Cooling Concept | Natural Cooling | | |
| Max. Operating Altitude Without Derating | 2000m | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |

| Model | SUN-3.6K-G | SUN-5K-G | SUN-6K-G |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 4.68kW | 6.5kW | 6.6kW |
| Max. DC Input Voltage | 550V | | |
| Start-up DC Input Voltage | 80V | | |
| MPPT Operating Range | 70~550V | | |
| Max. DC Input Current | 12.5A + 12.5A | | |
| Number of MPPT / Strings per MPPT | 2 / 1 | | |
| **Output** | | | |
| Rated Output Power | 3.6kW | 5kW | 6kW |
| Max. Active Power | 4kW | 5.5kW | 6.6kW |
| Rated AC Grid Voltage | 230V | | |
| AC Grid Voltage Range | 180~300V | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | |
| Operating Phase | Single-Phase | | |
| Rated AC Grid Output Current | 15.7 | 21.7A | 26A |
| Max. AC Output Current | 17.4 | 23.9A | 28.7A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | |
| **Efficiency** | | | |
| Max. Efficiency | 97.3% | 97.3% | 97.5% |
| Euro Efficiency | 97.1% | 97.1% | 97.3% |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 330 x 310 x 172mm | | |
| Weight | 11kg | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <25dB | | |
| Cooling Concept | Natural Cooling | | |
| Max. Operating Altitude Without Derating | 2000m | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |

| Model | SUN-7.5K-G | SUN-8K-G | SUN-10K-G |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 9.75kW | 10.4kW | 13kW |
| Max. DC Input Voltage | 550V | | |
| Start-up DC Input Voltage | 120V | | |
| MPPT Operating Range | 100~550V | | |
| Max. DC Input Current | 12.5A + 25A | 12.5A + 25A | 25A + 25A |
| Number of MPPT / Strings per MPPT | 2 / 1 | 2 / 1 + 2 | 2 / 2 + 2 |
| **Output** | | | |
| Rated Output Power | 7.5kW | 8kW | 10kW |
| Max. Active Power | 8.25kW | 8.8kW | 11kW |
| Rated AC Grid Voltage | 230V | | |
| AC Grid Voltage Range | 180~300V | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | |
| Operating Phase | Single-Phase | | |
| Rated AC Grid Output Current | 32.6 | 34.8A | 43.5A |
| Max. AC Output Current | 35.9 | 38.3A | 47.8A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | |
| **Efficiency** | | | |
| Max. Efficiency | 97.7% | | |
| Euro Efficiency | 97.5% | | |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 330 x 310 x 198.5mm | | |
| Weight | 11kg | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <25dB | | |
| Cooling Concept | Natural Cooling | | |
| Max. Operating Altitude Without Derating | 2000m | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |

# 3-PHASE STRING INVERTERS

The Sunsynk three-phase inverters are the perfect solution for grid-tied applications, ranging from medium to high power. These rugged machines have excellent harmonics, high efficiency, wide output voltage range, and are approved for use in many countries.

## SUN-4 / 5 / 6 / 7 / 8 / 10 K-G03

These lower power models are ideal for most small commercial and domestic applications. They have high efficiency, great harmonics, wide output voltage range, and all this with a user-friendly display.


- 2 MPP trackers, Max. efficiency up to 98.3%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)

| Model | SUN-4K-G03 | SUN-5K-G03 | SUN-6K-G03 | SUN-7K-G03 | SUN-8K-G03 | SUN-10K-G03 |
|---|---|---|---|---|---|---|
| **Input** | | | | | | |
| Max. DC Input Power | 5.2kW | 6.5kW | 7.8kW | 9.1kW | 10.4kW | 13kW |
| Max. DC Input Voltage | 1000V | | | | | |
| Start-up DC Input Voltage | 140V | | | | | |
| MPPT Operating Range | 120~850V | | | | | |
| Max. DC Input Current | 12.5A + 12.5A | | | | | |
| Number of MPPT / Strings per MPPT | 2 / 1 | | | | | |
| **Output** | | | | | | |
| Rated Output Power | 4kW | 5kW | 6kW | 7kW | 8kW | 10kW |
| Max. Active Power | 4.4kW | 5.5kW | 6.6kW | 7.7kW | 8.8kW | 11kW |
| Rated AC Grid Voltage | 380/400V | | | | | |
| AC Grid Voltage Range | 277~460V | | | | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | | | | |
| Operating Phase | Three-Phase | | | | | |
| Rated AC Grid Output Current | 5.8A | 7.2A | 8.7A | 10.1A | 11.6A | 14.5A |
| Max. AC Output Current | 6.3A | 8A | 9.6A | 11.1A | 12.7A | 16A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | | | | |
| Grid Current THD | <2% | | | | | |
| DC Injection | <0.5% | | | | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | | | | |
| **Efficiency** | | | | | | |
| Max. Efficiency | 98.3% | | | | | |
| Euro Efficiency | 97.5% | | | | | |
| MPPT Efficiency | >99% | | | | | |
| **Protection** | | | | | | |
| DC Reverse-Polarity Protection | Yes | | | | | |
| AC Short Circuit Protection | Yes | | | | | |
| AC Output Overcurrent Protection | Yes | | | | | |
| Output Overvoltage Protection | Yes | | | | | |
| Insulation Resistance Protection | Yes | | | | | |
| Ground Fault Monitoring | Yes | | | | | |
| Islanding Protection | Yes | | | | | |
| Temperature Protection | Yes | | | | | |
| Integrated DC Switch | Yes | | | | | |
| Remote software upload | Yes | | | | | |
| Remote change of operating parameters | Yes | | | | | |
| Surge protection | DC Type II / AC Type II | | | | | |
| **General Data** | | | | | | |
| Size (W x H x D) | 330 × 430 × 177 mm | | | | | |
| Weight | 15kg | | | | | |
| Topology | Transformerless | | | | | |
| Internal Consumption | <1W (Night) | | | | | |
| Running Temperature | -25°C~65°C | | | | | |
| Ingress Protection | IP65 | | | | | |
| Noise Emission (Typical) | <25dB | | | | | |
| Cooling Concept | Natural Cooling | | | | | |
| Max. Operating Altitude Without Derating | 2000m | | | | | |
| Designed Lifetime | > 20 years | | | | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | | | | |
| Operating Surroundings Humidity | 0-100% | | | | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | | | | |
| **Features** | | | | | | |
| DC Connection | MC-4 mateable | | | | | |
| AC Connection | IP65 rated plug | | | | | |
| Display | LCD1602 | | | | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | | | | |

# 3-PHASE STRING INVERTERS

## SUN-12 / 15 K-G03

The 12 / 15kW 3-Phase String Inverters are the big brothers of the smaller units, and they are perfect for most small commercial and large domestic applications.

These machines are safe and reliable and can reach 98.5% efficiency with a high power factor.
They also have a user-friendly LCD display plus the ability via Wi-Fi to be monitored and managed remotely by smartphone or PC.


- 2 MPP trackers, Max. efficiency up to 98.5%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)

| Model | SUN-12K-G | SUN-15K-G |
|---|---|---|
| **Input** | | |
| Max. DC Input Power | 15.6kW | 18kW |
| Max. DC Input Voltage | 1000V | |
| Start-up DC Input Voltage | 250V | |
| MPPT Operating Range | 200~800V | |
| Max. DC Input Current | 11A + 22A | |
| Number of MPPT / Strings per MPPT | 2 / 1 + 2 | |
| **Output** | | |
| Rated Output Power | 12kW | 15kW |
| Max. Active Power | 13.2kW | 16.5kW |
| Rated AC Grid Voltage | 380/400V | |
| AC Grid Voltage Range | 277~460V | |
| Rated Grid Frequency | 50/60Hz (Optional) | |
| Operating Phase | Three-Phase | |
| Rated AC Grid Output Current | 17.4A | 21.8A |
| Max. AC Output Current | 19.14A | 23.9A |
| Output Power Factor | 0.8 leading to 0.8 lagging | |
| Grid Current THD | <2% | |
| DC Injection | <0.5% | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | |
| **Efficiency** | | |
| Max. Efficiency | 98.5% | |
| Euro Efficiency | 97.5% | |
| MPPT Efficiency | >99% | |
| **Protection** | | |
| DC Reverse-Polarity Protection | Yes | |
| AC Short Circuit Protection | Yes | |
| AC Output Overcurrent Protection | Yes | |
| Output Overvoltage Protection | Yes | |
| Insulation Resistance Protection | Yes | |
| Ground Fault Monitoring | Yes | |
| Islanding Protection | Yes | |
| Temperature Protection | Yes | |
| Integrated DC Switch | Yes | |
| Remote software upload | Yes | |
| Remote change of operating parameters | Yes | |
| Surge protection | DC Type II / AC Type II | |
| **General Data** | | |
| Size (W x H x D) | 330 × 430 × 193.5 mm | |
| Weight | 17kg | |
| Topology | Transformerless | |
| Internal Consumption | <1W (Night) | |
| Running Temperature | -25°C~65°C | |
| Ingress Protection | IP65 | |
| Noise Emission (Typical) | <45dB | |
| Cooling Concept | Smart Cooling | |
| Max. Operating Altitude Without Derating | 2000m | |
| Designed Lifetime | > 20 years | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | |
| Operating Surroundings Humidity | 0-100% | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | |
| **Features** | | |
| DC Connection | MC-4 mateable | |
| AC Connection | IP65 rated plug | |
| Display | LCD1602 | |
| Interface | RS485/RS232/Wi-Fi/LAN | |

# 3-PHASE STRING INVERTERS

## SUN-18 / 20 / 25 K-G02

The 18 / 20 / 25kW models are very useful for larger commercial applications that require a compact design.

These models feature intelligent cooling, high efficiency, remote monitoring, and also support VSG function, which is helpful to poor grid areas.


- 2 MPP trackers, Max. efficiency up to 98.6%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)

| Model | SUN-18K-G02 | SUN-20K-G02 | SUN-25K-G02 |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 21.6kW | 26kW | 32.5kW |
| Max. DC Input Voltage | 1000V | | |
| Start-up DC Input Voltage | 250V | | |
| MPPT Operating Range | 200~800V | | |
| Max. DC Input Current | 22A + 22A | 25A + 25A | 30A + 30A |
| Number of MPPT / Strings per MPPT | 2 / 2 + 2 | 2 / 2 | 2 / 3 |
| **Output** | | | |
| Rated Output Power | 18W | 20kW | 25kW |
| Max. Active Power | 19.8kW | 22kW | 27.5kW |
| Rated AC Grid Voltage | 380/400V | | |
| AC Grid Voltage Range | 277~460V | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | |
| Operating Phase | Three-Phase | | |
| Rated AC Grid Output Current | 26.1A | 29A | 36.2A |
| Max. AC Output Current | 28.71A | 31.9A | 39.9A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | |
| **Efficiency** | | | |
| Max. Efficiency | 98.60% | | |
| Euro Efficiency | 97.80% | | |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 400 × 520 × 240.5 mm | | |
| Weight | 28kg | | |
| Topology | Transformerless | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <45dB | | |
| Cooling Concept | Smart Cooling | | |
| Max. Operating Altitude Without Derating | 2000m | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |
| AC Connection | IP65 rated plug | | |
| Display | LCD 240 x 160 | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | |

# 3-PHASE STRING INVERTERS

## SUN-30 / 33 / 35 / 40 / 45 / 50 K-G03

These are the largest inverters in their class (30kW - 50kW Three Phase) yet remain stylish with high efficiency plus many features such as smart cooling, multiple MPPT inputs, remote  monitoring and control.


- 4 MPP trackers, Max. efficiency up  to 98.7%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)
- Type II DC/AC SPD

| Model | SUN-30K-G03 | SUN-33K-G03 | SUN-35K-G03 | SUN-40K-G03 | SUN-45K-G03 | SUN-50K-G03 |
|---|---|---|---|---|---|---|
| **Input** | | | | | | |
| Max. DC Input Power | 39kW | 42.9kW | 45.5kW | 52kW | 55kW | 65kW |
| Max. DC Input Voltage | 1000V | | | | | |
| Start-up DC Input Voltage | 250V | | | | | |
| MPPT Operating Range | 200~850V | | | | | |
| Max. DC Input Current | 40A + 40A | 40A + 40A + 40A | 40A + 40A + 40A | 40A + 40A + 40A | 40A + 40A + 40A | 40A + 40A + 40A + 40A |
| Number of MPPT / Strings per MPPT | 2 / 3 | 3 / 3 | 3 / 3 | 3 / 3 | 3 / 3 | 4 / 3 |
| **Output** | | | | | | |
| Rated Output Power | 30kW | 33kW | 35kW | 40kW | 45kW | 50kW |
| Max. Active Power | 33kW | 36kW | 38.5kW | 44kW | 49.5kW | 55kW |
| Rated AC Grid Voltage | 380/400V | | | | | |
| AC Grid Voltage Range | 277~460V | | | | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | | | | |
| Operating Phase | Three-Phase | | | | | |
| Rated AC Grid Output Current | 43.5A | 48A | 50.7A | 58A | 65.2A | 72.4A |
| Max. AC Output Current | 47.85A | 52.8A | 55.8A | 63.8A | 71.7A | 79.64A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | | | | |
| Grid Current THD | <2% | | | | | |
| DC Injection | <0.5% | | | | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | | | | |
| **Efficiency** | | | | | | |
| Max. Efficiency | 98.70% | | | | | |
| Euro Efficiency | 98.00% | | | | | |
| MPPT Efficiency | >99% | | | | | |
| **Protection** | | | | | | |
| DC Reverse-Polarity Protection | Yes | | | | | |
| AC Short Circuit Protection | Yes | | | | | |
| AC Output Overcurrent Protection | Yes | | | | | |
| Output Overvoltage Protection | Yes | | | | | |
| Insulation Resistance Protection | Yes | | | | | |
| Ground Fault Monitoring | Yes | | | | | |
| Islanding Protection | Yes | | | | | |
| Temperature Protection | Yes | | | | | |
| Integrated DC Switch | Yes | | | | | |
| Remote software upload | Yes | | | | | |
| Remote change of operating parameters | Yes | | | | | |
| Surge protection | DC Type II / AC Type II | | | | | |
| **General Data** | | | | | | |
| Size (W x H x D) | 647.5 × 537 × 303.5 mm | | | | | |
| Weight | 44.5kg | | | | | |
| Topology | Transformerless | | | | | |
| Internal Consumption | <1W (Night) | | | | | |
| Running Temperature | -25°C~65°C | | | | | |
| Ingress Protection | IP65 | | | | | |
| Noise Emission (Typical) | <45dB | | | | | |
| Cooling Concept | Smart Cooling | | | | | |
| Designed Lifetime | > 20 years | | | | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | | | | |
| Operating Surroundings Humidity | 0-100% | | | | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | | | | |
| **Features** | | | | | | |
| DC Connection | MC-4 mateable | | | | | |
| AC Connection | IP65 rated plug | | | | | |
| Display | LCD 240 x 160 | | | | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | | | | |

# 3-PHASE STRING INVERTERS

## High Power String Inverters

### SUN-60 / 70 / 75 / 80 K-G02

These are large style commercial string inverters to be used with solar farms and large solar arrays.
Reaching 98.7% of efficiency, these rugged machines are the perfect solution for three-phase grid-tied applications.

Some features of these models are: user-friendly display, AC/DC surge protection, remote monitoring (via Wi-Fi), VSG function, intelligent cooling, and wide output voltage range.


- 4 MPP trackers, Max. efficiency up to 98.7%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)
- Type II DC/AC SPD

| Model | SUN-60K-G02 | SUN-70K-G02 | SUN-75K-G02 | SUN-80K-G02 |
|---|---|---|---|---|
| **Input** | | | | |
| Max. DC Input Power | 78kW | 91kW | 97.5kW | 104kW |
| Max. DC Input Voltage | 1000V | | | |
| Start-up DC Input Voltage | 250V | | | |
| MPPT Operating Range | 200~850V | | | |
| Max. DC Input Current | 40A + 40A + 40A + 40A | | | |
| Number of MPPT / Strings per MPPT | 4 / 3 | 4 / 4 | 4 / 4 | 4 / 4 |
| **Output** | | | | |
| Rated Output Power | 60kW | 70kW | 75kW | 80kW |
| Max. Active Power | 66kW | 77kW | 82.5kW | 88kW |
| Rated AC Grid Voltage | 380/400V | | | |
| AC Grid Voltage Range | 277~460V | | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | | |
| Operating Phase | Three-Phase | | | |
| Rated AC Grid Output Current | 87.8A | 101.5A | 108.7A | 115.9A |
| Max. AC Output Current | 95.7A | 111.6A | 119.6A | 127.5A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | | |
| Grid Current THD | <2% | | | |
| DC Injection | <0.5% | | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | | |
| **Efficiency** | | | | |
| Max. Efficiency | 98.70% | | | |
| Euro Efficiency | 98.30% | | | |
| MPPT Efficiency | >99% | | | |
| **Protection** | | | | |
| DC Reverse-Polarity Protection | Yes | | | |
| AC Short Circuit Protection | Yes | | | |
| AC Output Overcurrent Protection | Yes | | | |
| Output Overvoltage Protection | Yes | | | |
| Insulation Resistance Protection | Yes | | | |
| Ground Fault Monitoring | Yes | | | |
| Islanding Protection | Yes | | | |
| Temperature Protection | Yes | | | |
| Integrated DC Switch | Yes | | | |
| Remote software upload | Yes | | | |
| Remote change of operating parameters | Yes | | | |
| Surge protection | DC Type II / AC Type II | | | |
| **General Data** | | | | |
| Size (W x H x D) | 700 × 575 × 297 mm | | | |
| Weight | 60kg | | | |
| Topology | Transformerless | | | |
| Internal Consumption | <1W (Night) | | | |
| Running Temperature | -25°C~65°C | | | |
| Ingress Protection | IP65 | | | |
| Noise Emission (Typical) | <45dB | | | |
| Cooling Concept | Smart Cooling | | | |
| Max. Operating Altitude Without Derating | 2000m | | | |
| Designed Lifetime | > 20 years | | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | | |
| Operating Surroundings Humidity | 0-100% | | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | | |
| **Features** | | | | |
| DC Connection | MC-4 mateable | | | |
| AC Connection | IP65 rated plug | | | |
| Display | LCD 240 x 160 | | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | | |

# 3-PHASE STRING INVERTERS

## High-Power String Inverters

### SUN-70 / 75 / 80 / 100 K-G03

These are the largest inverters that we currently produce, reaching 100 kW. Only 10 of these inverters are needed for a Megawatt solar farm. All this with an ultra-compact design, cool operation. It is an amazing investment for your system.


- 6 MPP trackers, Max. efficiency up to 98.7%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)
- Type II DC/AC SPD

| Model | SUN-70K-G03 | SUN-75K-G03 | SUN-80K-G03 | SUN-100K-G03 |
|---|---|---|---|---|
| **Input** | | | | |
| Max. DC Input Power | 105kW | 112.5kW | 120kW | 150kW |
| Max. DC Input Voltage | 1000V | | | |
| Start-up DC Input Voltage | 250V | | | |
| MPPT Operating Range | 200~85 0V | | | |
| Max. DC Input Current | 40A + 40A + 40A + 40A | 40A + 40A + 40A + 40A | 40A + 40A + 40A + 40A | 40A + 40A + 40A + 40A+ 40A + 40A |
| Number of MPPT / Strings per MPPT | 4 / 4 | 4 / 4 | 4 / 4 | 6 / 4 |
| **Output** | | | | |
| Rated Output Power | 70kW | 75kW | 80kW | 100kW |
| Max. Active Power | 77kW | 82.5kW | 88kW | 110kW |
| Rated AC Grid Voltage | 380/400V | | | |
| AC Grid Voltage Range | 277~460V | | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | | |
| Operating Phase | Three-Phase | | | |
| Rated AC Grid Output Current | 101.5A | 108.7A | 115.9A | 144.9A |
| Max. AC Output Current | 111.6A | 119.6A | 127.5A | 497.4A |
| Output Power Factor | >0.99 | | | |
| Grid Current THD | <2% | | | |
| DC Injection | <0.5% | | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | | |
| **Efficiency** | | | | |
| Max. Efficiency | 98.70% | | | |
| Euro Efficiency | 98.30% | | | |
| MPPT Efficiency | >99% | | | |
| **Protection** | | | | |
| DC Reverse-Polarity Protection | Yes | | | |
| AC Short Circuit Protection | Yes | | | |
| AC Output Overcurrent Protection | Yes | | | |
| Output Overvoltage Protection | Yes | | | |
| Insulation Resistance Protection | Yes | | | |
| Ground Fault Monitoring | Yes | | | |
| Islanding Protection | Yes | | | |
| Temperature Protection | Yes | | | |
| Integrated DC Switch | Yes | | | |
| Remote software upload | Yes | | | |
| Remote change of operating parameters | Yes | | | |
| Surge protection | DC Type II / AC Type II | | | |
| **General Data** | | | | |
| Size (W x H x D) | 838 × 577 × 323 mm | | | |
| Weight | 73.7kg | | | |
| Topology | Transformerless | | | |
| Internal Consumption | <1W (Night) | | | |
| Running Temperature | -25°C~65°C | | | |
| Ingress Protection | IP65 | | | |
| Noise Emission (Typical) | <55dB | | | |
| Cooling Concept | Smart Cooling | | | |
| Max. Operating Altitude Without Derating | 2000m | | | |
| Designed Lifetime | > 20 years | | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | | |
| Operating Surroundings Humidity | 0-100% | | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | | |
| **Features** | | | | |
| DC Connection | MC-4 mateable | | | |
| AC Connection | IP65 rated plug | | | |
| Display | LCD 240 x 160 | | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | | |

# 3-PHASE STRING INVERTERS (LV)

The Sunsynk low-voltage three-phase inverters are the perfect solution for grid-tied applications involving split phase, ranging from medium to high power. These rugged machines have excellent harmonics, high efficiency, wide output voltage range, and are approved for use in many countries.

## SUN-6 / 8 K-G03-LV

These lower power models are ideal for most small commercial and domestic applications. They have high efficiency, great harmonics, wide output voltage range, and all this with a user-friendly display.


- 2 MPP trackers, Max. efficiency up to 98.5%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)

| Model | SUN-6K-G03-LV | SUN-8K-G03-LV |
|---|---|---|
| **Input** | | |
| Max. DC Input Power | 7.8kW | 10.4kW |
| Max. DC Input Voltage | 800V | |
| Start-up DC Input Voltage | 250V | |
| MPPT Operating Range | 200~700V | |
| Max. DC Input Current | 11A + 22A | |
| Number of MPPT / Strings per MPPT | 2 / 1 + 2 | |
| **Output** | | |
| Rated Output Power | 6W | 8kW |
| Max. Active Power | 6.6kW | 8.8kW |
| Rated AC Grid Voltage | 127/220V | |
| AC Grid Voltage Range | 176~242V | |
| Rated Grid Frequency | 50/60Hz (Optional) | |
| Operating Phase | Three-Phase | |
| Rated AC Grid Output Current | 15.7A | 21A |
| Max. AC Output Current | 17.3A | 23.1A |
| Output Power Factor | 0.8 leading to 0.8 lagging | |
| Grid Current THD | <2% | |
| DC Injection | <0.5% | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | |
| **Efficiency** | | |
| Max. Efficiency | 98.50% | |
| Euro Efficiency | 97.50% | |
| MPPT Efficiency | >99% | |
| **Protection** | | |
| DC Reverse-Polarity Protection | Yes | |
| AC Short Circuit Protection | Yes | |
| AC Output Overcurrent Protection | Yes | |
| Output Overvoltage Protection | Yes | |
| Insulation Resistance Protection | Yes | |
| Ground Fault Monitoring | Yes | |
| Islanding Protection | Yes | |
| Temperature Protection | Yes | |
| Integrated DC Switch | Yes | |
| Remote software upload | Yes | |
| Remote change of operating parameters | Yes | |
| Surge protection | DC Type II / AC Type II | |
| **General Data** | | |
| Size (W x H x D) | 330 × 430 × 193.5 mm | |
| Weight | 17kg | |
| Topology | Transformerless | |
| Internal Consumption | <1W (Night) | |
| Running Temperature | -25°C~65°C | |
| Ingress Protection | IP65 | |
| Noise Emission (Typical) | <45dB | |
| Cooling Concept | Smart Cooling | |
| Max. Operating Altitude Without Derating | 2000m | |
| Designed Lifetime | > 20 years | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | |
| Operating Surroundings Humidity | 0-100% | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | |
| **Features** | | |
| DC Connection | MC-4 mateable | |
| AC Connection | IP65 rated plug | |
| Display | LCD1602 | |
| Interface | RS485/RS232/Wi-Fi/LAN | |

# 3-PHASE STRING INVERTERS (LV)

## SUN-10 / 12 / 15 K-G03-LV

The 10 / 12 / 15kW are the big brothers of the smaller units, and they are perfect for most small commercial and large domestic applications.

These safe and reliable machines reach 98.6% of efficiency with a high power factor. They also have a user-friendly LCD display and can be monitored and managed remotely by smartphone of PC.


- 2 MPP trackers, Max. efficiency up to 98.6%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)

| Model | SUN-10K-G03-LV | SUN-12K-G03-LV | SUN-15K-G03-LV |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 13kW | 15.6kW | 19.5kW |
| Max. DC Input Voltage | 800V | | |
| Start-up DC Input Voltage | 250V | | |
| MPPT Operating Range | 200~700V | | |
| Max. DC Input Current | 25A + 25A | 25A + 25A | 30A + 30A |
| Number of MPPT / Strings per MPPT | 2 / 2 + 2 | 2 / 2 | 2 / 3 |
| **Output** | | | |
| Rated Output Power | 10kW | 12kW | 15kW |
| Max. Active Power | 11kW | 13.2kW | 16.5W |
| Rated AC Grid Voltage | 127/220V | | |
| AC Grid Voltage Range | 176~242V | | |
| Rated Grid Frequency | 50/60Hz (Optional) | | |
| Operating Phase | Three-Phase | | |
| Rated AC Grid Output Current | 26.25A | 31.5A | 39.4A |
| Max. AC Output Current | 28.87A | 34.64A | 43.31A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 47~52 or 57~62 (optional) | | |
| **Efficiency** | | | |
| Max. Efficiency | 98.60% | | |
| Euro Efficiency | 97.80% | | |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 400 × 520 × 240.5 mm | | |
| Weight | 28kg | | |
| Topology | Transformerless | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <45dB | | |
| Cooling Concept | Smart Cooling | | |
| Max. Operating Altitude Without Derating | 2000m | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |
| AC Connection | IP65 rated plug | | |
| Display | LCD 240 x 160 | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | |

# 3-PHASE STRING INVERTERS (LV)

## SUN-20 / 25 / 30 / 35 K-G02-LV

The 20 / 25 / 35kW models are designed for larger commercial applications that would benefit from an inverter with a compact design.

These models feature intelligent cooling, high efficiency, remote monitoring, and support VSG function, which is useful in those areas that have an unreliable grid power supply.


- 4 MPP trackers, Max. efficiency up to 98.7%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)
- Type II DC/AC SPD

| Model | SUN-20K-G02-LV | SUN-25K-G02-LV | SUN-30K-G02-LV | SUN-35K-G02-LV |
|---|---|---|---|---|
| **Input** | | | | |
| Max. DC Input Power | 26kW | 32.5kW | 39kW | 45.5kW |
| Max. DC Input Voltage | 800V | | | |
| Start-up DC Input Voltage | 250V | | | |
| MPPT Operating Range | 200~700V | | | |
| Max. DC Input Current | 40A + 40A | 40A + 40A + 40A | 40A + 40A + 40A + 40A | 40A + 40A + 40A + 40A |
| Number of MPPT / Strings per MPPT | 2 / 3 | 3 / 3 | 4 / 3 | 4 / 3 |
| **Output** | | | | |
| Rated Output Power | 20kW | 25kW | 30kW | 35kW |
| Max. Active Power | 22kW | 27.5kW | 33kW | 38.5kW |
| Rated AC Grid Voltage | 127/220V | | | |
| AC Grid Voltage Range | 176~242V | | | |
| Rated Grid Frequency | 60Hz | | | |
| Operating Phase | Three-Phase | | | |
| Rated AC Grid Output Current | 52.5A | 65.6A | 78.7A | 91.9A |
| Max. AC Output Current | 57.8A | 72.2A | 86.6A | 101.1A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | | |
| Grid Current THD | <2% | | | |
| DC Injection | <0.5% | | | |
| Grid Frequency Range | 57~62 | | | |
| **Efficiency** | | | | |
| Max. Efficiency | 98.70% | | | |
| Euro Efficiency | 98.00% | | | |
| MPPT Efficiency | >99% | | | |
| **Protection** | | | | |
| DC Reverse-Polarity Protection | Yes | | | |
| AC Short Circuit Protection | Yes | | | |
| AC Output Overcurrent Protection | Yes | | | |
| Output Overvoltage Protection | Yes | | | |
| Insulation Resistance Protection | Yes | | | |
| Ground Fault Monitoring | Yes | | | |
| Islanding Protection | Yes | | | |
| Temperature Protection | Yes | | | |
| Integrated DC Switch | Yes | | | |
| Remote software upload | Yes | | | |
| Remote change of operating parameters | Yes | | | |
| Surge protection | DC Type II / AC Type II | | | |
| **General Data** | | | | |
| Size (W x H x D) | 647.5 × 537 × 303 mm | | | |
| Weight | 44.5kg | | | |
| Topology | Transformerless | | | |
| Internal Consumption | <1W (Night) | | | |
| Running Temperature | -25°C~65°C | | | |
| Ingress Protection | IP65 | | | |
| Noise Emission (Typical) | <45dB | | | |
| Cooling Concept | Smart Cooling | | | |
| Max. Operating Altitude Without Derating | 2000m | | | |
| Designed Lifetime | > 20 years | | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | | |
| Operating Surroundings Humidity | 0-100% | | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | | |
| **Features** | | | | |
| DC Connection | MC-4 mateable | | | |
| AC Connection | IP65 rated plug | | | |
| Display | LCD 240 x 160 | | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | | |

# 3-PHASE STRING INVERTERS (LV)

## SUN-40 / 45 / 50 K-G-LV

These are large style commercial string inverters to be used with solar farms and large solar arrays.
Reaching 98.7% of efficiency, these rugged machines are the perfect solution for three-phase grid-tied applications.

Some features of these models are: user-friendly display, AC/DC surge protection, remote monitoring, VSG function, intelligent cooling, and wide output voltage range.


- 4 MPP trackers, Max. efficiency up to 98.7%
- Wide output voltage range
- Zero export application, VSG application
- Ani-PID function (Optional)
- String intelligent montoring (optional)
- Type II DC/AC SPD

| Model | SUN-40K-G-LV | SUN-45K-G-LV | SUN-50K-G-LV |
|---|---|---|---|
| **Input** | | | |
| Max. DC Input Power | 52kW | 58.5kW | 65kW |
| Max. DC Input Voltage | 800V | | |
| Start-up DC Input Voltage | 250V | | |
| MPPT Operating Range | 200~700V | | |
| Max. DC Input Current | 40A + 40A + 40A + 40A | | |
| Number of MPPT / Strings per MPPT | 4 / 4 | | |
| **Output** | | | |
| Rated Output Power | 40kW | 45kW | 50kW |
| Max. Active Power | 44kW | 49.5kW | 55W |
| Rated AC Grid Voltage | 127/220V | | |
| AC Grid Voltage Range | 176~242V | | |
| Rated Grid Frequency | 60Hz | | |
| Operating Phase | Three-Phase | | |
| Rated AC Grid Output Current | 104.9A | 118.1A | 131.2A |
| Max. AC Output Current | 115.5A | 129.9A | 144.4A |
| Output Power Factor | 0.8 leading to 0.8 lagging | | |
| Grid Current THD | <2% | | |
| DC Injection | <0.5% | | |
| Grid Frequency Range | 57~62 | | |
| **Efficiency** | | | |
| Max. Efficiency | 98.70% | | |
| Euro Efficiency | 98.30% | | |
| MPPT Efficiency | >99% | | |
| **Protection** | | | |
| DC Reverse-Polarity Protection | Yes | | |
| AC Short Circuit Protection | Yes | | |
| AC Output Overcurrent Protection | Yes | | |
| Output Overvoltage Protection | Yes | | |
| Insulation Resistance Protection | Yes | | |
| Ground Fault Monitoring | Yes | | |
| Islanding Protection | Yes | | |
| Temperature Protection | Yes | | |
| Integrated DC Switch | Yes | | |
| Remote software upload | Yes | | |
| Remote change of operating parameters | Yes | | |
| Surge protection | DC Type II / AC Type II | | |
| **General Data** | | | |
| Size (W x H x D) | 700 × 575 × 297 mm | | |
| Weight | 60kg | | |
| Topology | Transformerless | | |
| Internal Consumption | <1W (Night) | | |
| Running Temperature | -25°C~65°C | | |
| Ingress Protection | IP65 | | |
| Noise Emission (Typical) | <55dB | | |
| Cooling Concept | Smart Cooling | | |
| Designed Lifetime | > 20 years | | |
| Grid Connection Standard | EN50549, IEC61727, VDE 0126-1-1, IEC62109-1-2 | | |
| Operating Surroundings Humidity | 0-100% | | |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-3 | | |
| **Features** | | | |
| DC Connection | MC-4 mateable | | |
| AC Connection | IP65 rated plug | | |
| Display | LCD 240 x 160 | | |
| Interface | RS485/RS232/Wi-Fi/LAN | | |

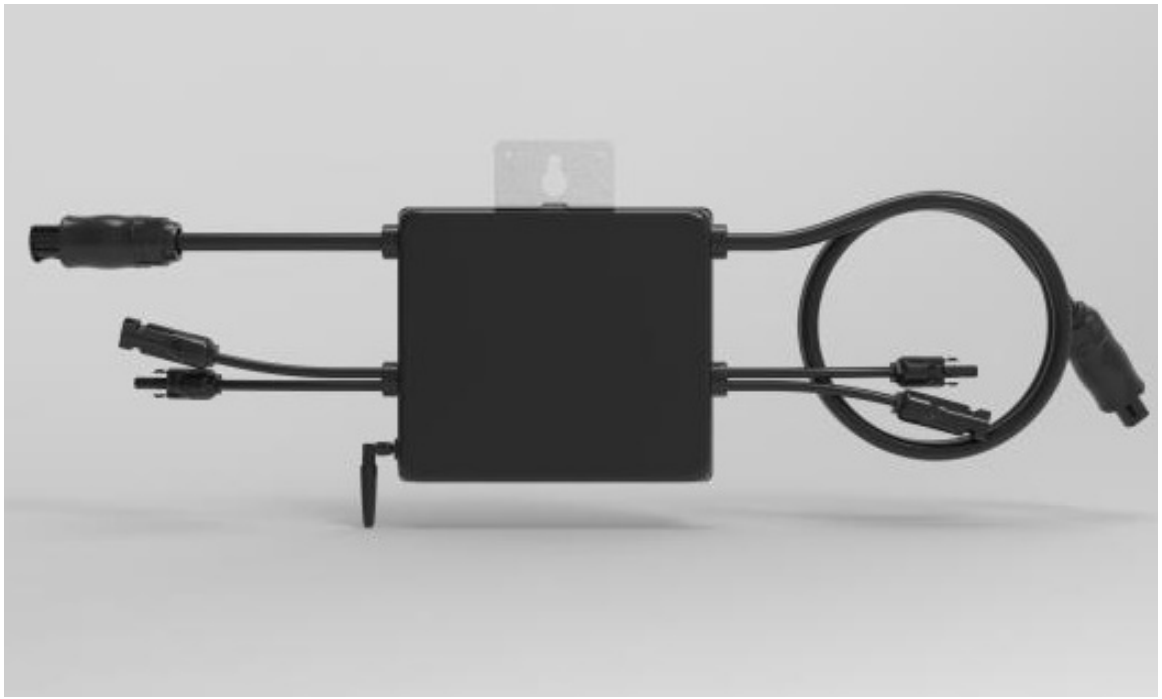
# MICRO INVERTERS

These amazing solar micro inverters are ‘mini machines’ fit behind individual solar panels where they function the same as string inverters, converting DC to AC power. Sunsynk® micro inverters are built-in with Wi-Fi, PLC, and Zigbee communication for remote monitoring and control.

Simply assemble and mount your panel with its own micro-inverter and connect it to the mains grid. In addition, microinverters can be used in conjunction with the Sunsynk Storage Inverter.

## SUN500G-230-EU / SUN600G2-US-208/240
## SUN600G2-US-220 / SUN600G2-US-127

These models are ideal for low power applications. They have 2 MPPT trackers, monitoring, rapid shutdown function, and low power consumption at night.



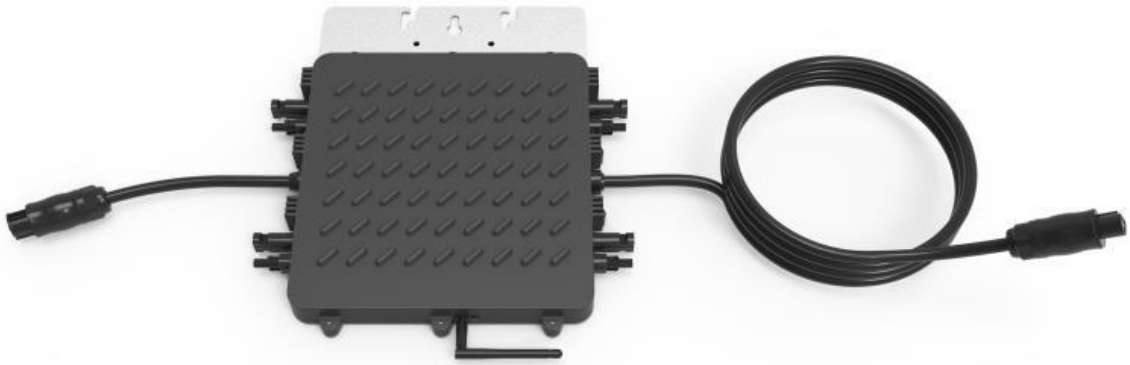
- Rapid shutdown function
- PLC, Zigbee or Wi-fi Communication
- IP67 protection degree, 10 years warranty
- 2 MPP trackers, module level monitoring

| Model | SUN500G-230-EU | SUN600G2-US-208/240 | SUN600G2-US-220 | SUN600G2-US-127 |
|---|---|---|---|---|
| **Input Data (DC)** | | | | |
| Recommended Input Power (STC) | 210 ~ 400W (2 pieces) | 210 ~ 400W (2 pieces) | 210 ~ 400W (2 pieces) | 210 ~ 350W |
| Maximum Input DC Voltage | 60V | | | |
| MPPT Voltage Range | 25 ~ 55V | | | |
| Operating DC Voltage Range | 20 ~ 60V | | | |
| Max. DC Short-Circuit Current | 13A | | | |
| Max. Input Current | 10.4A x 2 | | | |
| **Output Data (AC)** | | | | |
| Output Power Peak | 600W | 600W | 600W | 500W |
| Max. Output Power | 600W | 600W | 600W | 500W |
| Max. Output Current | 2.17A | 2.884A/2.5A | 2.7A | 4A |
| Nominal Voltage / Range | 184 ~ 265V | 208V / 183 ~ 229V<br>240 / 211 ~ 264V | 176 ~ 242V | a.c.95 ~ 155V @127Vac |
| Nominal Frequency / Range | 50 / 47.5 ~ 51.5Hz | 60 / 59.3 ~ 60.5Hz | 60 / 59.3 ~ 60.5Hz | 60 / 59.3 ~ 60.5Hz |
| Extended Frequency / Range | 50 / 45 ~ 55Hz | 60 / 55 ~ 65Hz | 60 / 55 ~ 65Hz | 60 / 55 ~ 65Hz |
| Power Factor | > 0.99 | | | |
| Max. Units per Branch | 11 | 8 / 10 | 9 | 6 |
| **Efficiency** | | | | |
| CEC Weighted Efficiency | 95% | | | |
| Inverter Efficiency Peak | 96.5% | | | |
| Static MPPT Efficiency | 99% | | | |
| Night Time Power Consumption | 50mW | | | |
| **Mechanical Data** | | | | |
| Ambient Temperature Range | -40°C ~ 65°C | | | |
| Size (W/H/D) | 185 x 161 x 29mm (without mounting bracket and cable) | | | |
| Weight | 2.4kg | | | |
| Cooling | Natural Cooling | | | |
| Enclosure Environmental Rating | IP67 | | | |
| **Features** | | | | |
| Compatibility | Compatible with 60~72 cell PV modules | | | |
| Communication | Power line / Wi-Fi / Zigbee | | | |
| Compliance | EN50549 / VDE0126 / VDE4105 / IEC62109 / CE / INMETRO | | | |
| Warranty | 10 years | | | |

# MICRO INVERTERS

## SUN1200G-230-EU / SUN1300G2-US-208/240 / SUN1300G

These higher power microinverters are ideal for applications with more panels. Besides rapid shutdown, high efficiency, and low power consumption at night, they also have 4 MPPT inputs, which allows the connection of more modules. Also, they come with PLC, Zigbee, and Wi-Fi communication, requiring no external communication device.



- Rapid shutdown function
- PLC, Zigbee or Wi-fi Communication
- IP67 protection degree, 10 years warranty
- 4 MPP trackers, module level monitoring

| Model | SUN1200G-230-EU | SUN1300G2-US-208/240 | SUN1300G |
|---|---|---|---|
| **Input Data (DC)** | | | |
| Recommended Input Power (STC) | 210 ~ 400W (4 pieces) | | |
| Maximum Input DC Voltage | 60V | | |
| MPPT Voltage Range | 25 ~ 55V | | |
| Operating DC Voltage Range | 20 ~ 60V | | |
| Max. DC Short-Circuit Current | 13A | 13A | 14A |
| Max. Input Current | 10.4A x 4 | | |
| **Output Data (AC)** | | | |
| Output Power Peak | 1300W | | |
| Max. Output Power | 1300W | | |
| Max. Output Current | 4.34A | 6.25A / 5.416A | 5.91A |
| Nominal Voltage / Range | 184 ~ 265V | 208V / 183 ~ 229V<br>240 / 211 ~ 264V | 176 ~ 242V |
| Nominal Frequency / Range | 50 / 47.5 ~ 51.5Hz | 60 / 59.3 ~ 60.5Hz | 60 / 59.3 ~ 60.5Hz |
| Extended Frequency / Range | 50 / 45 ~ 55Hz | 60 / 55 ~ 65Hz | 60 / 55 ~ 65Hz |
| Power Factor | > 0.99 | | |
| Max. Units per Branch | 5 | 4 | 4 |
| **Efficiency** | | | |
| CEC Weighted Efficiency | 95% | | |
| Inverter Efficiency Peak | 96.5% | | |
| Static MPPT Efficiency | 99% | | |
| Night Time Power Consumption | 50mW | | |
| **Mechanical Data** | | | |
| Ambient Temperature Range | -40°C ~ 65°C | | |
| Size (W/H/D) | 298 x 287 x 36mm (without mounting bracket and cable) | | |
| Weight | 6.3kg | | |
| Cooling | Natural Cooling | | |
| Enclosure Environmental Rating | IP67 | | |
| **Features** | | | |
| Compatibility | Compatible with 60~72 cell PV modules | | |
| Communication | Power line / Wi-Fi / Zigbee | | |
| Compliance | EN50549 / VDE0126 / VDE4105 / IEC62109 / CE / INMETRO | | |
| Warranty | 10 years | | |

# MICRO INVERTERS

## SUN300G3-EU-230 / SUN500G3-EU-230

These models are ideal for very low power applications, featuring only 1 MPPT tracker. This high-efficiency device has rapid shutdown function, monitoring, and low power consumption at night. In addition, it comes with PLC, Zigbee, and Wi-Fi communication.

- Rapid shutdown function
- PLC, Zigbee or Wi-fi Communication
- IP67 protection degree, 10 years warranty
- 1 MPP tracker, module level monitoring

| Model | SUN300G3-EU-230 | SUN500G3-EU-230 |
|---|---|---|
| **Input Data (DC)** | | |
| Recommended Input Power (STC) | 210 ~ 400W (1 pieces) | 210 ~ 600W (1 pieces) |
| Maximum Input DC Voltage | 60V | |
| MPPT Voltage Range | 25 ~ 55V | |
| Operating DC Voltage Range | 20 ~ 60V | |
| Max. DC Short-Circuit Current | 16A | |
| Max. Input Current | 10.5A x 1 | 12.5A x 1 |
| **Output Data (AC)** | | |
| Output Power Peak | 300W | 500W |
| Max. Output Power | 330W | 550W |
| Max. Output Current | 1.4A | 2.4A |
| Nominal Voltage / Range | 230V / 184 ~ 265V | |
| Nominal Frequency / Range | 50/60Hz | |
| Extended Frequency / Range | 45 ~ 55Hz / 55 ~ 65Hz | |
| Power Factor | > 0.99 | |
| Max. Units per Branch | 17 | 10 |
| **Efficiency** | | |
| CEC Weighted Efficiency | 95% | |
| Inverter Efficiency Peak | 96.5% | |
| Static MPPT Efficiency | 99% | |
| Night Time Power Consumption | 50mW | |
| **Mechanical Data** | | |
| Ambient Temperature Range | -40°C ~ 65°C | |
| Size (W/H/D) | 212 x 229 x 40mm (without mounting bracket and cable) | |
| Weight | 3.5kg | |
| Cooling | Natural Cooling | |
| Enclosure Environmental Rating | IP67 | |
| **Features** | | |
| Compatibility | Compatible with 60~72 cell PV modules | |
| Communication | Power line / Wi-Fi / Zigbee | |
| Compliance | EN50549 / VDE0126 / VDE4105 / IEC62109 / CE / INMETRO | |
| Warranty | 10 years | |

# MICRO INVERTERS

## SUN600G3-EU-230 / SUN800G3-EU-230 / SUN1000G3-EU-230

Here we have some models ranging from 600W to 1000W, providing a lot of flexibility for your application. Besides rapid shutdown, high efficiency, and low power consumption at night, they also have 2 MPPT inputs. They come with PLC, Zigbee, and Wi-Fi communication, requiring no external communication device.

- Rapid shutdown function
- PLC, Zigbee or Wi-fi Communication
- IP67 protection degree, 10 years warranty
- 2 MPP trackers, module level monitoring

| Model | SUN600G3- EU-230 | SUN800G3- EU-230 | SUN1000G3- EU-230 |
|---|---|---|---|
| **Input Data (DC)** | | | |
| Recommended Input Power (STC) | 210 ~ 400W (2 pieces) | 210 ~ 600W (2 pieces) | 210 ~ 600W (2 pieces) |
| Maximum Input DC Voltage | 60V | | |
| MPPT Voltage Range | 25 ~ 55V | | |
| Operating DC Voltage Range | 20 ~ 60V | | |
| Max. DC Short-Circuit Current | 16A | | |
| Max. Input Current | 10.5A x 2 | 12.5A x 2 | 12.5A x 2 |
| **Output Data (AC)** | | | |
| Output Power Peak | 600W | 800W | 1000W |
| Max. Output Power | 660W | 880W | 1100W |
| Max. Output Current | 2.9A | 3.8A | 4.8A |
| Nominal Voltage / Range | 230V / 184 ~ 265V | | |
| Nominal Frequency / Range | 50/60Hz | | |
| Extended Frequency / Range | 45 ~ 55Hz / 55 ~ 65Hz | | |
| Power Factor | > 0.99 | | |
| Max. Units per Branch | 8 | 6 | 5 |
| **Efficiency** | | | |
| CEC Weighted Efficiency | 95% | | |
| Inverter Efficiency Peak | 96.50% | | |
| Static MPPT Efficiency | 99% | | |
| Night Time Power Consumption | 50mW | | |
| **Mechanical Data** | | | |
| Ambient Temperature Range | -40°C ~ 65°C | | |
| Size (W/H/D) | 212 x 229 x 40mm (without mounting bracket and cable) | | |
| Weight | 3.5kg | | |
| Cooling | Natural Cooling | | |
| Enclosure Environmental Rating | IP67 | | |
| **Features** | | | |
| Compatibility | Compatible with 60~72 cell PV modules | | |
| Communication | Power line / Wi-Fi / Zigbee | | |
| Compliance | EN50549 / VDE0126 / VDE4105 / IEC62109 / CE / INMETRO | | |
| Warranty | 10 years | | |

# MICRO INVERTERS

## SUN1300G3-EU-230 / SUN1600G3-EU-230 / SUN1800G3-EU-230 / SUN2000G3-EU-230

Here we have others higher power microinverters, perfect for applications with more panels. They feature rapid shutdown, high efficiency, great power factor, and low power consumption at night. In addition, they have 4 MPPT trackers, which allows the connection of more modules. All this without any external communication device.

- Rapid shutdown function
- PLC, Zigbee or Wi-fi Communication
- IP67 protection degree, 10 years warranty
- 4 MPP trackers, module level monitoring
- Max. DC input current of 12.5A, adapt to 600W PV module

| Model | SUN1300G3-EU-230 | SUN1600G3-EU-230 | SUN1800G3-EU-230 | SUN2000G3-EU-230 |
|---|---|---|---|---|
| **Input Data (DC)** | | | | |
| Recommended Input Power (STC) | 210 ~ 400W (4 pieces) | 210 ~ 600W (4 pieces) | 210 ~ 600W (4 pieces) | 210 ~ 600W (4 pieces) |
| Maximum Input DC Voltage | 60V | | | |
| MPPT Voltage Range | 25 ~ 55V | | | |
| Operating DC Voltage Range | 20 ~ 60V | | | |
| Max. DC Short-Circuit Current | 16A | | | |
| Max. Input Current | 10.5A x 4 | 12.5A x 4 | 12.5A x 4 | 12.5A x 4 |
| **Output Data (AC)** | | | | |
| Output Power Peak | 1300W | 1600W | 1800W | 2000W |
| Max. Output Power | 1430W | 1760W | 1980W | 2200W |
| Max. Output Current | 6.2A | 7.7A | 8.6A | 9.6A |
| Nominal Voltage / Range | 230V / 180 ~ 265V | | | |
| Nominal Frequency / Range | 50 / 60Hz | | | |
| Extended Frequency / Range | 45 ~55Hz / 55~65Hz | | | |
| Power Factor | > 0.99 | | | |
| Max. Units per Branch | 4 | 4 | 3 | 3 |
| **Efficiency** | | | | |
| CEC Weighted Efficiency | 95% | | | |
| Inverter Efficiency Peak | 96.5% | | | |
| Static MPPT Efficiency | 99% | | | |
| Night Time Power Consumption | 50mW | | | |
| **Mechanical Data** | | | | |
| Ambient Temperature Range | -40°C ~ 65°C | | | |
| Size (W/H/D) | 267 x 300 x 42.5mm (without mounting bracket and cable) | | | |
| Weight | 5.2kg | | | |
| Cooling | Natural Cooling | | | |
| Enclosure Environmental Rating | IP67 | | | |
| **Features** | | | | |
| Compatibility | Compatible with 60~72 cell PV modules | | | |
| Communication | Power line / Wi-Fi / Zigbee | | | |
| Compliance | EN50549 / VDE0126 / VDE4105 / IEC62109 / CE / INMETRO | | | |
| Warranty | 10 years | | | |

# COMPONENTS

## MECD

The MECD communications gateway collects and delivers modular performance data in real time to allow the user to get comprehensive updates and manage the solar system effectively. With a built-in shutdown application, the MECD can immediately control a micro-inverter shutdown when the dry contact is activated.

- Built-in Zigbee, PLC, and Wi-Fi module.
- Suitable for single-phase and three-phase applications.
- Enables remote monitoring and management.

- OLED display and buttons, allowing easy operation.
- Compact design and lightweight.

- Supports quick shutdown remotely.
- Robust design with 3-year warranty.

| Model | MECD |
|---|---|
| **Communication Interface** | |
| Communication Method | Zigbee, PLC |
| Max. Number of Inverters Connected | 32 |
| Communication to Router | Wi-Fi |
| Wi-Fi Wireless Security | WEP, WPA2-PSK |
| RS485 | Reserved |
| Max. Distance (Free Space) | PLC 300m; Zigbee 100m (max. straight-line distance) |
| **Power Supply** | |
| AC power Supply | 100 to 240V AC, 50/60Hz |
| Power Consumption | 5W typical, 10W maximum |
| **Mechanical Data** | |
| Dimensions (L/H/W) | 133.6 x 132 x 35.5mm |
| Weight | 0.3kg |
| Operation Temperature Range | -20ºC ~ +50°C |
| Mounting Method | Wall-mounted |
| Display | OLED and LED indicators |
| **Features** | |
| Grid Type | Single-phase / Three-phase |
| Digital Input | Control device connection |
| **Other** | |
| Compliance | IEC60950, IEC610000-6-2, FCC Part 15 Class B / Class C |
| Warranty | 3 years |

# COMPONENTS

## SOLARMAN Stick Logger

### Log in at
### GSM: GPRS_IPK
### Wi-Fi: SSWWIFIPK

The Stick Logger supports GPRS, WiFi, 4G, Ethernet and other communication models. Its bluetooth functions enable its debugging configuration to collect data from the inverters covering power generation and operating status. It is matched with the SOLARMAN professional platform to enable remote PV system monitoring and to allow the user to optimise power management which will result in lower cost and higher efficiency.


**Features:**

- External light indicator.
- Logging status at a glance.
- Plug-and-play.
- Select power source within the inverter.
- No external power needed.
- Easy to install.
- Independent from inverter thereby providing increased protection to operating system, IP65 waterproofing, resistant to bad weather, stable operation.

| | LSG-3 | LSG-4 | LSW-3 | LS4G-3 | LSE-3 |
|---|---|---|---|---|---|
| Remote Communication Interference | GPRS | GPRS | Wi-Fi | 4G | LAN |
| Working Frequency | GSM850 / EGSM900 / DCS1800 / PCS1900MHz | GSM850 / EGSM900 / DCS1800 / PCS1900MHz | 2.142GHz ~ 2.484GHz | 704MHz-960MHz 1710MHz-2690MHz | Adaptative Network; 10M / 100M |
| Positioning | / | GPS / Beidou < 15m | / | / | / |
| Antenna | External GPRS Stick Antenna | External GPRS Stick Antenna | External Wi-Fi Stick Antenna | External 4G Stick Antenna | / |
| Data Interface | RS485 / RS232 / TTL | | | | |
| Working Voltage | 4.7VDC ~ 15VDC | | | | |
| Working Power | 3W | 3W | 1.5W | 5W | 1W |
| SIM Card | Chip Card / MicroSIM | Chipcard / MicroSIM | / | MicroSIM | / |
| Memory | 2M Flash (2M-16M Optional) | | | | |
| Working Temperature | -40ºC ~ +85ºC | | | | |
| Working Humidity | <90% (No Condensing) | | | | |
| No. of Connections | One | | | | |
| Serial Communication Rate | bps (1200-115200bps Configurable) | | | | |
| Data Acquisition Interval | Default 5min (1-15min Configurable) | | | | |
| User Configuration | Bluetooth | App / Web | AT + Instruction Set Remote Server | Local Serial Port | Web |
| Firmware Upgrade | Remote Upgrade | | | | |
| Others | Real-Time Control, Data Resuming | | | | |

# COMPONENTS

## SUNSYNK Stick Logger

The Sunsynk® 4G+WiFi Stick Logger is a new generation industrial grade dual mode gateway that realises data collection and uploads data to cloud servers. This stick adopts a plug-in design, which is quick to install and easy to use. The Wi-Fi supports both 802.11 standards and WPA/ WPA2/WPA2 encryption mode. The 4G grading is universally supported in systems operating in China, Europe, Australia, North America and many other countries in the world. In addition, the the device supports remote firmware upgrade allowing developers to upgrade the product continuously after purchase.

The gateway adopts a double-data buffer design which improves the reliability of data transmission and receiving. In addition, the Stick Logger has ultra-violet protection (F1 level), flame retardant grade reaching UL94 V-0 and IP65 waterproofing.


**Features:**

- RS-232 transmission.
- Wi-Fi supports AP+STA dual mode.
- 4G compatible.
- Automatic switching between Wi-Fi and 4G.
- Online time synchronization.
- Supports Over-the-Air (OTA) programming via Gateway.
- Supports remote OTA for inverter.
- Supports smartphone APP setting.
- Supports remote parameters setting for inverter.
- Support data breakpoint resume.
- Operating temperature range: -2°C ~ +60°C.
- Flame retardant grade: UL94 V-0.

| | |
|---|---|
| **Electrical Parameters** | |
| Power supply | DC 5V – 12V |
| Current consumption | Max. 1.8A; Avg. 220mA |
| **Wi-Fi Parameters** | |
| WLAN Standard | 802.11 b/g/n |
| Security | WPA/WPA2/WPA2 /WPS |
| Work mode | Station/AP/Station + AP |
| Others | 802.11n (2.4 GHz), up to 150Mbps |
| **4G Parameters** | |
| Frequency Band | Europe:<br>LTE FDD: B1/B3/B7/B8/B20/B28<br>WCDMA: B1/B8 GSM: B3/B8<br>Australia:<br>LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66<br>WCDMA: B1/B2/B5/B8 GSM:<br>B2/B3/B5/B8<br>North America:<br>LTE FDD: B2/B4/B5/B12/B13/B25/B26<br>WCDMA: B2/B4/B5<br>China Mainland:<br>LTE FDD: B1/B3/B5/B8<br>LTE TDD: B34/B38/B39/B40/B41<br>GSM: B3/B8 |
| **Internet Data** | |
| Internet Data | Contains at least one year of internet data (Only version with internet data) |
| Recharging | Recharging via APP or Website |
| **Communication with Inverter** | |
| Interface | RS-232 |
| Parameters | 9600bps 8/N/1 (default) |
| **Antenna** | |
| Antenna | Built-in |
| **LED Indication** | |
| DEV | Communication with inverter indication |
| NET | Communication with cloud platform indication |
| **Mechanical Parameters** | |
| Size | 118.0 x 75.0 x 29.0 mm (without package) |
| Weight | About 63g |
| Installation | Plug and Play |
| **Environment** | |
| Operating temperature range | -20°C ~ +6°C |
| Relative humidity (no condensation) | 0% ~ 100% |
| **Others** | |
| SIM Card | Micro SIM Card |
| Degree of protection | IPX7 (After installed) |
| Flame retardant grade | UL94 V-0 |
| UV protection rating | F1 |

Note: The Frequency band of 4G may not the same when in different area.

# COMPONENTS

## Smart PV Management Platform

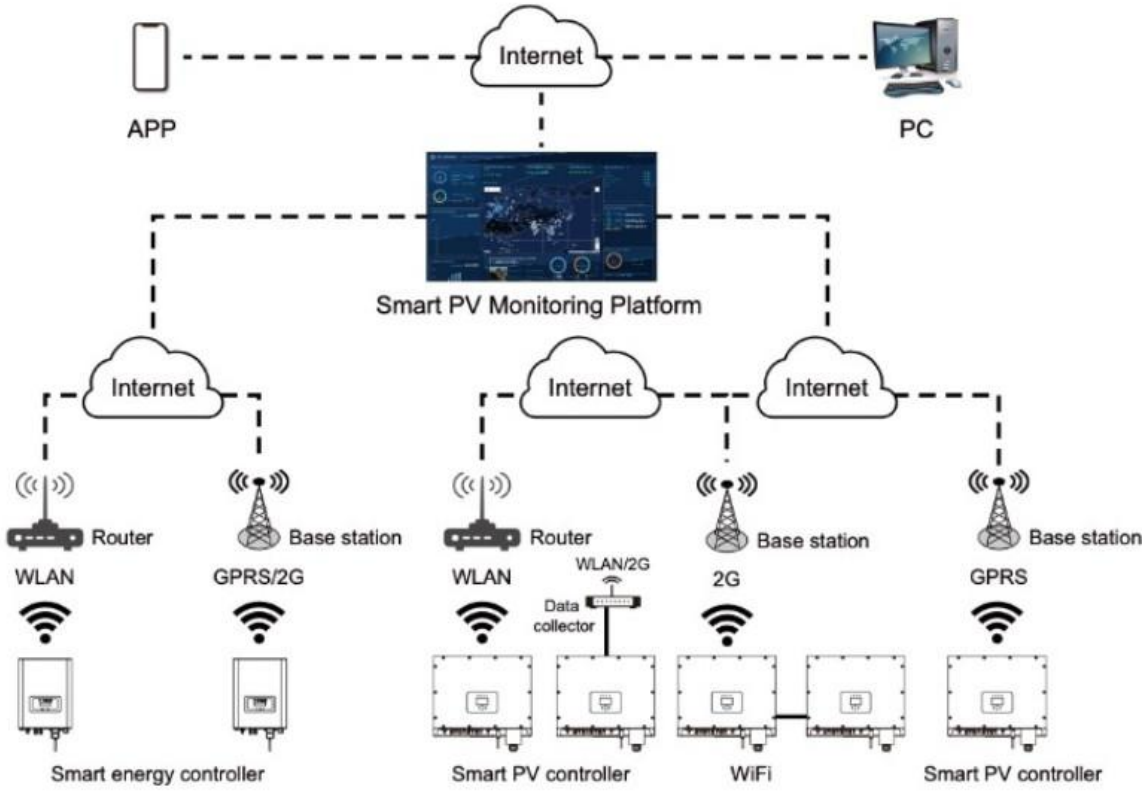
Sunsynk residential monitoring solution takes great care to ensure that your PV system is in excellent operation throughout its entire life-cycle. This monitoring solution offers you detailed information about your power generating plant, including daily, monthly, yearly, and total energy through wireless communication with your router to the internet by a smart Wi-Fi plug. Users can easily access the monitoring page via the web or phone app.

## Efficient

- Open station supports one-click installation and registration;
- Capable of handling remote monitoring and of settings.

## Safe

- Safe operation, traceable logs, etc;
- Supports full life-cycle data storage, ensuring data security and reliability.

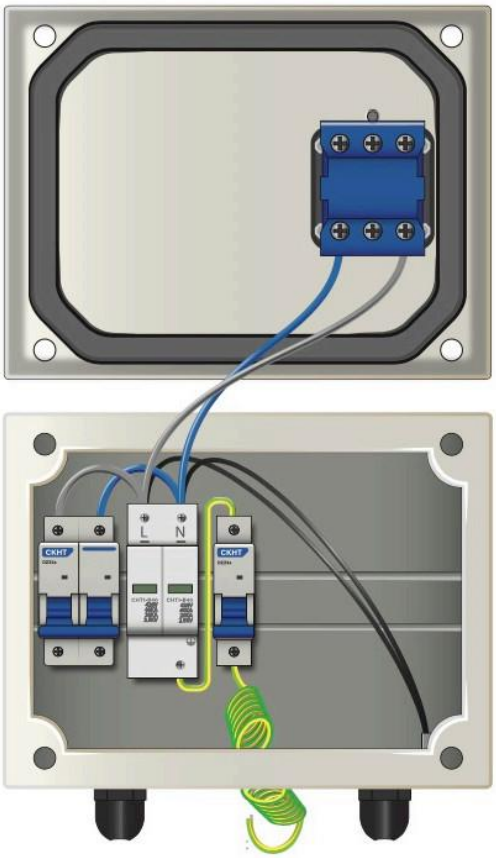


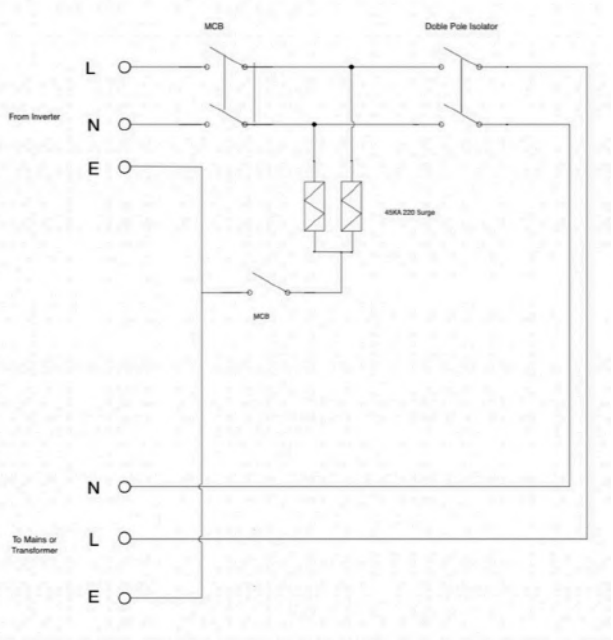
# PROTECTION DEVICES

## Mains Surge Protector

## SS-SURGE-AC1

The SS-Surge-AC1 is an AC Isolator that provides protection against lightning and other unexpected power surges. It is a fully integrated component which includes circuit breakers, rotary isolator and earth bond. An essential piece of protection for your solar system that comes in a metal box rated at IP65




## Components:

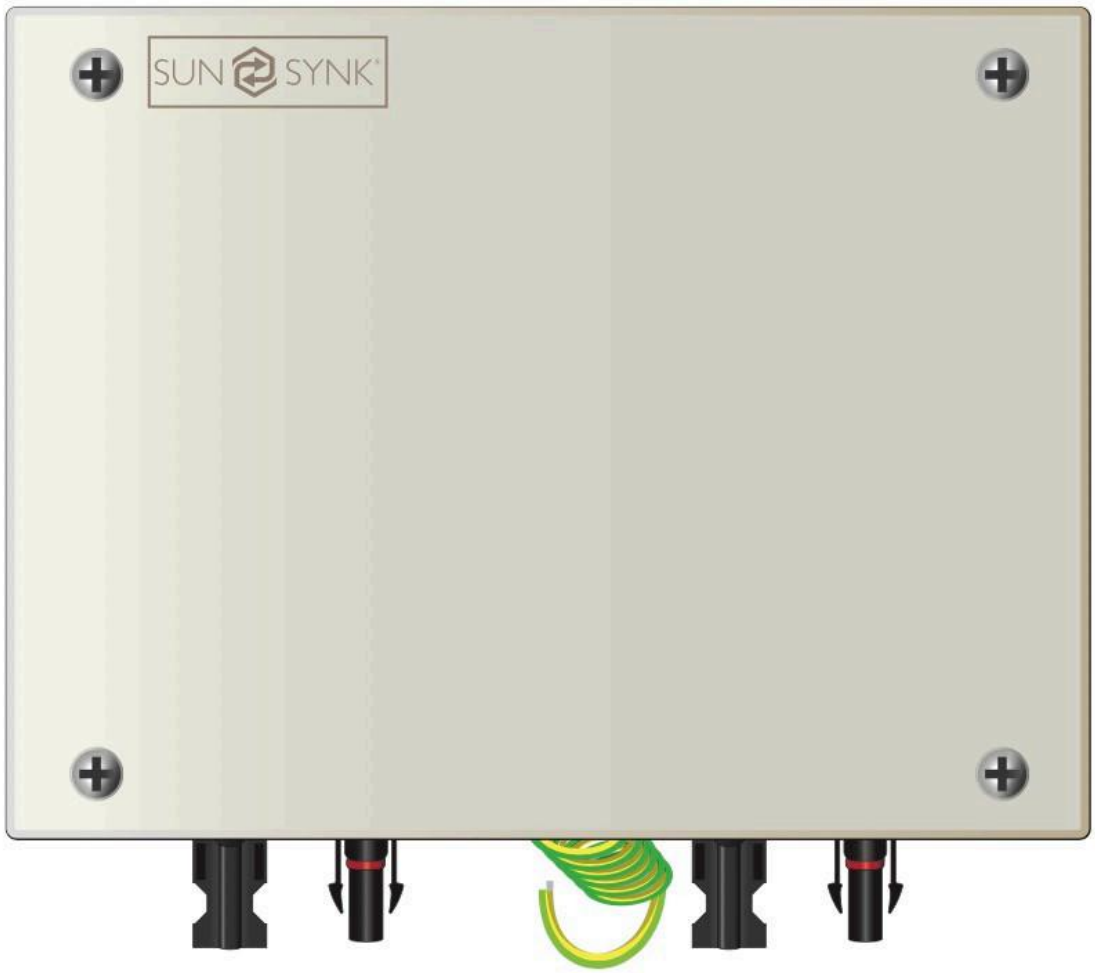
2 x NXB-63 Miniature circuit breaker Modular DIN Rail — Miniature Circuit Breaker
1 x CHINT MCB 1P / PHASE 10 AMPERE / 10A / 10 A 6KA SNI NXB-63 C10
1 x LW30 40 Amp Series Rotary Isolator
1 x Earth Bond
1 x IP65 Metal Box

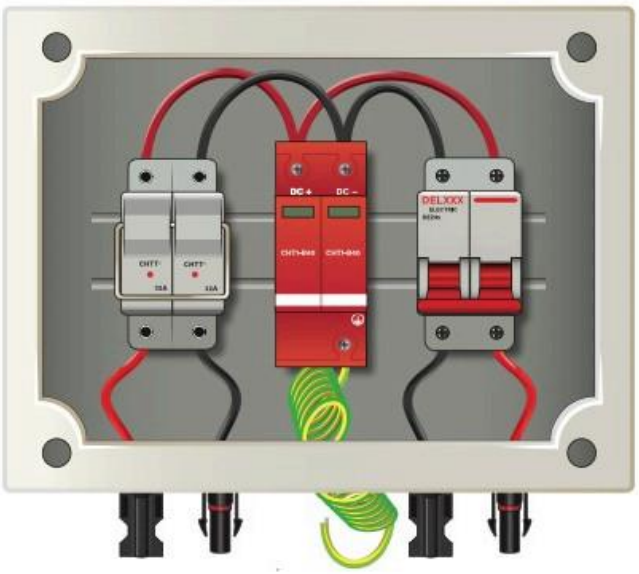
# PROTECTION DEVICES

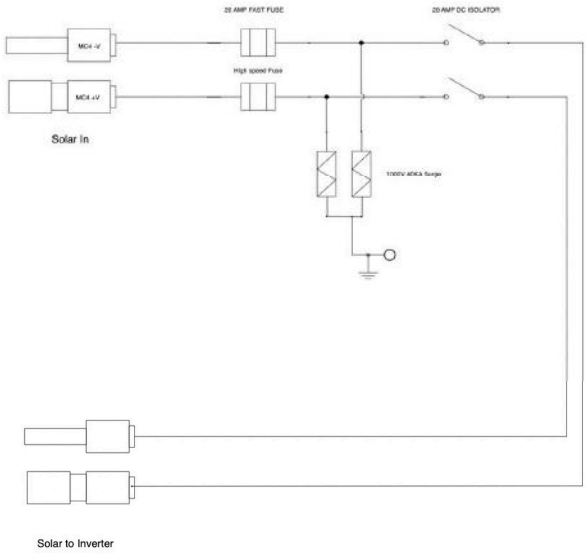
## One-Way Combiner Box with Lightening and Surge Protector

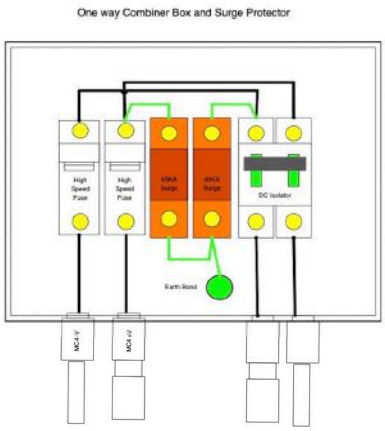
## SS-SURGE-DC-Comb1

The SS-Surge-DC-Comb1 is a DC Isolator that provides protection against lightning and other unexpected power surges. It is a fully integrated component which includes circuit breakers, isolator, fuses, MC4 connectors and earth bond. An essential piece of protection for your solar system that comes in a metal box rated at IP65.






## Components:

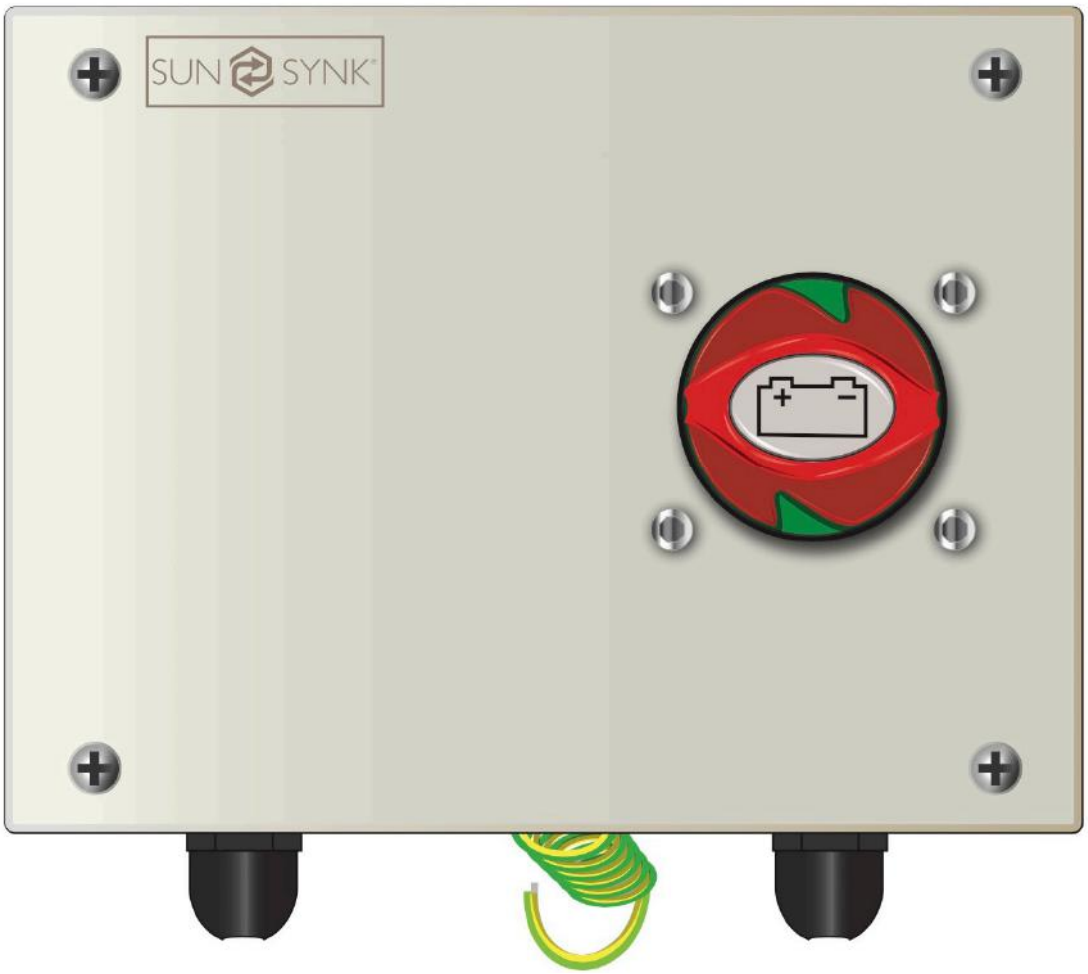
2 x CHT1-B40 kA 1000v Max 2kV Surge Protective Device(SPD)
2 x RT28N-32X Solar panel fuse
2 x 6. DZ47sZ 20Amp Isolator Switch with MCB
1 x Earth Bond
1 x IP65 Metal Box
4 x MC4 Connectors

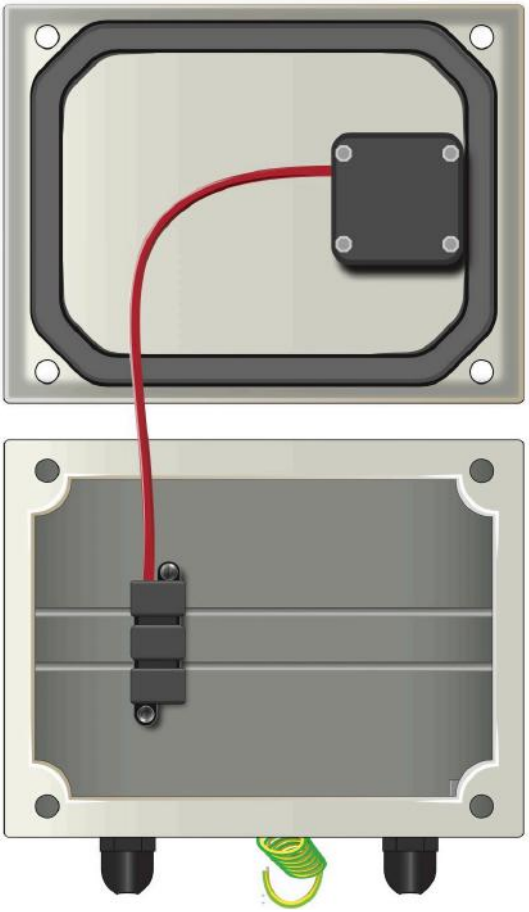
# PROTECTION DEVICES

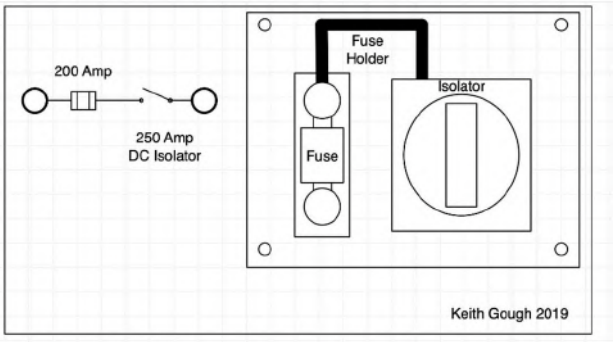
## Battery Isolator

## SS-BAT-ISO

Here we have a battery isolator with high current DC isolator and fuse. Everything you need to protect your batteries from surges. All fully wired inside an IP65 metal box!








**Components:**

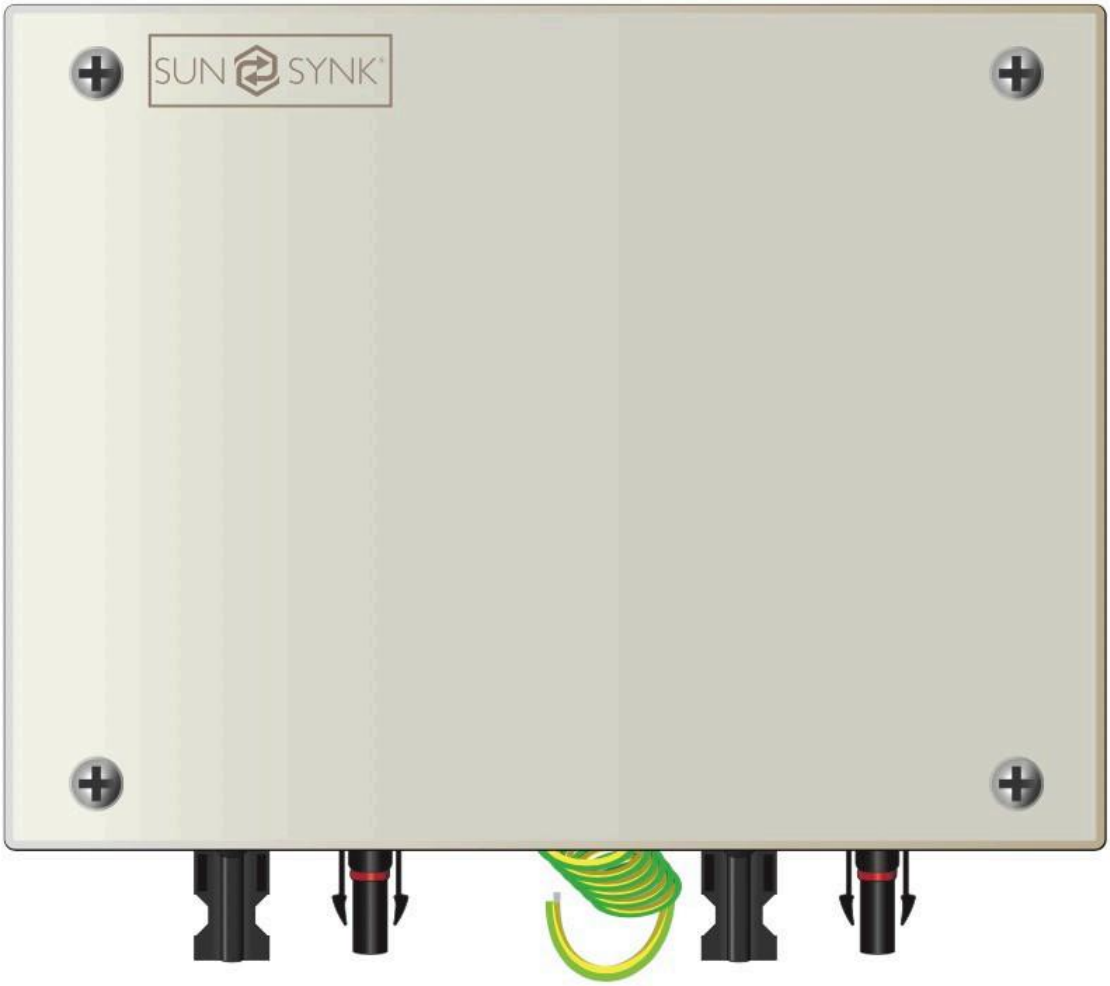
1 x 300A 60VDC battery isolate switch
1 x 200 Amp Marine Grade DC Fuse and Holder
1 x IP65 Metal Box

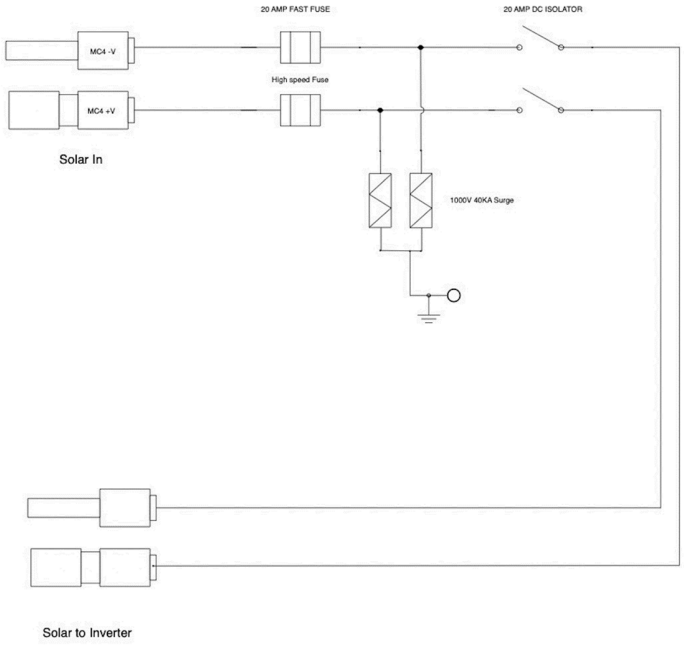
# PROTECTION DEVICES

## Two-Way Combiner Box with Lightening and Surge Protector

## SS-SURGE-DC-Comb2

Here there is a two-way IP65 metal box that includes everything you need to protect your system. Fuses, circuit breakers, MC4 connectors, isolator, earth bond. All wired!




## Components:

4 x CHT1-B40 kA 1000v Max 2kV Surge Protective Device (SPD)
4 x RT28N-32X Solar panel fuse
4 x 6. DZ47sZ 20Amp Isolator Switch with MCB
1 x Earth Bond
1 x IP 65 Metal Box
6 x MC4 Connectors

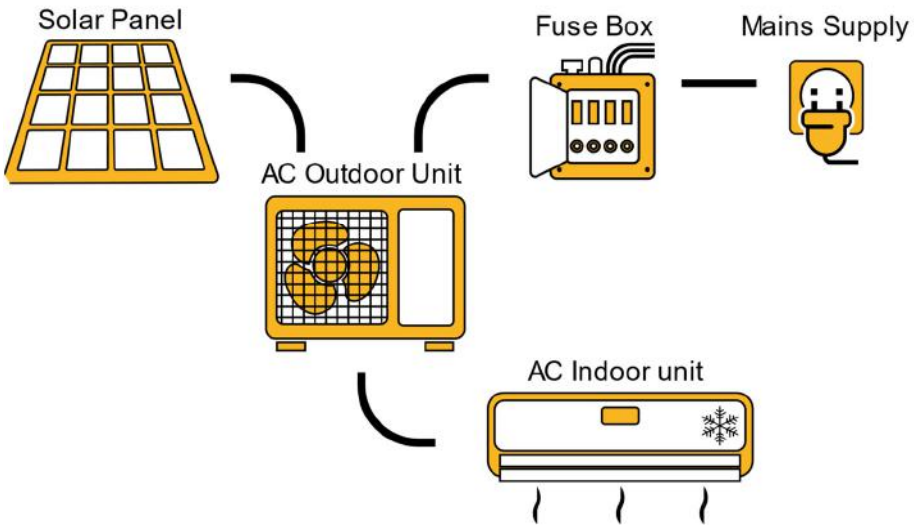
# SOLAR AIR CONDITIONING

## Solar Powered Hybrid Air Conditioning Units

## SSACNB-09K
## SSACNB-12K
## SSACNB-18K
## SSACNB-24K

Sunsynk's new hybrid air conditioning units are complete units that do not require battery storage or inverters. All parts of a solar PV system are contained within the unit apart from the panels which have to be mounted separately. During the day, the solar array sends power to the air conditioner's built-in inverter to allow the air conditioner to provide free heating or cooling. At night, the unit automatically switches to the mains grid when electricity is at its cheapest!

The installation is the same as any normal air conditioner. It will only require three panels to run efficiently and at night the units programme will adjust the power consumption to mains grid.




| | 9000 BTU | 12000 BTU | 18000 BTU | 24000 BTU |
|---|---|---|---|---|
| Model Number | SSACNB-09K | SSACNB-12K | SSACNB-18K | SSACNB-24K |
| Indoor Fan type | BLDC | BLDC | BLDC | BLDC |
| Indoor Fan Consumption | 18W | 18W | 40W | 40W |
| Indoor Fan Speed (Turbo/High/Mid/Low) | 1200/1100/1000/850 | 1300/1200/1100/950 | 1050/950/900/800 | 1350/1250/1150/1000 |
| Indoor Fan Air Flow m3/h | 485/434/382/305 | 536/485/434/357 | 971/864/808/700 | 1250/1120/1000/850 |
| Indoor Noise Level dB(A) | 41.7/38.8/33.0/31.6 | 44.6/42.6/36.3/35.0 | 44.3/41.5/38.8/36.8 | 51/50/47/42 |
| Indoor Evaporator Row | 2 | 2 | 2 | 2 |
| Indoor Pipe Diameter | Φ7 | Φ7 | Φ7 | Φ7 |
| Outdoor Fan type | BLDC | BLDC | BLDC | BLDC |
| Outdoor Fan Consumption | 40W | 40W | 55W | 75W |
| Outdoor Fan Speed r/min | 850 | 880 | 880 | 850 |
| Outdoor Condenser Row | 1 | 1 | 1.5 | 2 |
| Outdoor Pipe Diameter | Φ7 | Φ7 | Φ7 | Φ7 |
| Outdoor Fan Air Flow m3/h | 1800 | 2000 | 2200 | 3320 |
| Outdoor Noise level dB(A) | ≤52 | ≤52 | ≤55 | ≤58 |
| Pressure Mpa (Gas/Liquid) | 4.3/1.1 | 4.3/1.1 | 4.3/1.1 | 4.3/1.1 |
| Connecting Pipe size (Gas/Liquid) (Inch) | 3/8 1/4 | 3/8 1/4 | 1/2 1/4 | 1/2 1/4 |
| Connecting Pipe Max Length (m) | 15 | 15 | 20 | 25 |
| Connecting Pipe Max Height (m) | 8 | 8 | 10 | 10 |

# LITHIUM BATTERIES

## CATL Battery L051100-A

### 5.12kWh / 51.2V / 100Ah (Connection cable included)

### **L051100-A**

Sunsynk have 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 a room temperature (25°C).

**• Stable**

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.

| Power Lite Lithium Battery System L051100-A | |
|---|---|
| Cell Type | Lithium Ferro Phosphate (LifePO4 or LFP) |
| Nominal Operating Voltage | 51.2V |
| Nominal Capacity | 100Ah / 5.12kWh |
| Depth of Discharge (DoD) | 100% |
| Usable Capacity | 5.12kWh |
| Packing | 1P16S |
| IP Rating | IP40 |
| Minimum Operating Voltage | 44.8V |
| Maximum Operating Voltage | 57.6V |
| Standard Charging Current | 50A |
| Max. Continuous Charging Current | 50A |
| Standard Discharging Current | 50A |
| Max. Continuous Discharging Current | 100A (1C, 25°C ± 2°C) |
| Max. Pulse Discharging Current | 200A（2C, 30S, 25°C ± 2°C SOC≥40%） |
| Standard Charging Method | 0.5C CC to 57.6V, CV at 57.6V till current is 0.05C |
| Min. Operating Temperature (no derating) | Charging: 0°C / Discharging: -20°C |
| Max. Operating Temperature (no derating) | Charging: 50°C / Discharging: 55°C |
| Operating ROH | 20% ~ 80% |
| Storage Temperature | -20 ~ 50°C |
| Self-discharging rate | ≤5% (25°C,  50% SoC) |
| SoC @ end of product line | 40% |
| Insulation Resistance | >100MΩ |
| Voltage Difference in each module | ≤20mV |
| Inner Resistance of single Cell | 0.34 ± 0.05mΩ (fresh cell 30 ~ 40% SoC) |
| Altitude | Below 2000m |
| Weight | 48kg |
| Dimensions | 440 x 530 x 132mm<br>(not include connector, MSD and other parts) |
| Expected Life @ 25°C | Greater than 10 years if used as per warranty terms |

# LITHIUM BATTERIES

## Power-Maker Battery

## SSCLK3.1
## SSCLK5.6

The Sunsynk Power-Maker Battery has a revolutionary design that allows it to be both wall or rack mounted. It does not require additional components as it comes complete with all accessories.

Featured on the front of the Power-Maker Battery is a blue strip which glows indicating that the component is working correctly. Included within the unit are cells produced by China’s top cell manufacturers, ANC.

| Parameter | | SSCLK3.1 | SSCLK5.63 | Remark |
|---|---|---|---|---|
| Rated Capacity | Typical | 62Ah | 115Ah | Standard discharge (0.2$C_5$A) after the standard voltage |
| | Minimum | 60Ah | 110Ah | |
| Cell Voltage | Nominal Voltage | 3.2V | 3.2V | Mean Operation Voltage |
| Internal Impedance | | ≤0.65mΩ | ≤0.65mΩ | Internal resistance measured at AC 1kHz after the battery has 50% charge. (This measurement requires new batteries and is conducted within one week of shipment with less than 5 cycles) |
| Dimension | Depth | 24.5mm | 24.5mm | Initial dimension. |
| | Width | 140.5mm | 140.5mm | |
| | Height | 160.5mm | 160.5mm | |
| Rapid charge based on cell voltages | Constant Current | 110A | 110A | Charge time: Approx. 1.5h@≥10°C |
| | Constant Voltage | 3.65V | 3.65V | |
| | Cut Off | 0.01$C_5$A | 0.01$C_5$A | |
| Standard discharge per cell | Constant Current | 12A | | 0.2C |
| | Cut Off Voltage | 5V | | |
| Volumetric Specific Energy | | 295Wh/L | | Approximately |
| Gravimetric Specific Energy | | 139Wh/kg | | Approximately |
| Combination Method | | 110Ah | 110Ah | |
| Factory Voltage per Battery Pack | | 51V (40%-60%) | | Mean Operation Voltage |
| Cut Off Voltage per Battery Pack | | 42V | | |
| Charging Voltage per Battery Pack | | 54.75V | | |
| Internal Impedance per Battery Pack | | ≤40mΩ | | Internal resistance measured at AC 1kHz after 50% charge. The measure must use the new batteries within one week after shipment and cycles less than 5 times. |
| Standard Charge | Constant Current | 20A | 20A | Charge Time: Approx. 6h |
| | Constant Voltage | See Above | | |
| | Cut Off | 0.02CA | | |
| Maximum Continuous Charge Current | | 60A | 110A | When 0°C>T ≥-10°C |
| Maximum Continuous Discharge Current | | 60A | 110A | |
| Operation Temperature Range | Charge | 0~45°C | | 60±25%R.H. Bare Cell |
| | Discharge | -20~55°C | | |
| Storage Temperature Range | | Less than 12 months: -10~45ºC | | 60±25%R.H. at the shipment state |
| | | Less than 3 months: -10~45ºC | | |
| | | Less than 7 days: -10~45ºC | | |
| Dimensions | | 442 x 520 x 132mm | | Case Included |
| Weight | | 28.5kg | | |

# LITHIUM BATTERIES

## Wall-Mount Component

## L051100-AFix

These are wall brackets for L051100-A batteries. Now you can install your batteries on the wall if you prefer.

# POWER BANKS

## PB 300 XL
## PB 1000

Everything you need in a single box. This is a unique storage device that is completely off-grid and contains all the constituent parts of a solar power system within a waterproof housing. The design is such that anyone using it would quickly understand its design and be capable of setting up a simple power system to provide AC power to utilities that fall within the parameters of 300W to 1000W.

The PB 300 XL and the PB 1000 can operate at any time of the day or be set to ‘automatic mode’ where it operates only at night or when power is required (UPS Mode).

## Power Bank 300 XL

- 2 x 100W Solar panels (prewired);
- Power Bank 300 Main Unit;
- 300W Inverter with 230V output;
- 300W MPPT charge controller;
- Power Bank fixing kit;
- Solar panel fixing kit;
- 2 x 500Wh Lithium Battery packs;
- Cables / MC4 Connectors
- Digital voltage meter;
- User-reset overload fuse;

## Power Bank 1000

- 4 x 125W Sunsynk® XH Solar Panels;
- Power bank 1000 Main Unit;
- 1KW Inverter with 230V output;
- 500W MPPT charge controller;
- Digital voltmeter;
- Auto reset and thermal fuse;
- Super quiet variable speed fan;
- 2000W Lithium Phosphate battery;
- 25metres of solar cables / MC4 Connectors;
- Solar panel fixing kit;
- Power bank fixing kit
- AC Charger (optional)

| Model | PB 300 XL | PB 1000 |
|---|---|---|
| Max PV Power | 300W | 500W |
| Inverter Size | 300W | 500W |
| Charger Type | MPPT | MPPT / AC |
| Max Surge power | 400W | 650W |
| Battery Size | 1000Wh | 2000Wh |
| Battery Type | Life Po4 | Life PO4 |
| BMS | Yes | Yes |
| Max PV Input | 60V | 75V |
| Power bank Size | 46 x 33 x 13 cm | 46 x 33 x 13 cm |
| IP Rating | 45 | 45 |
| Complete kit weight | 37kg | 48kg |

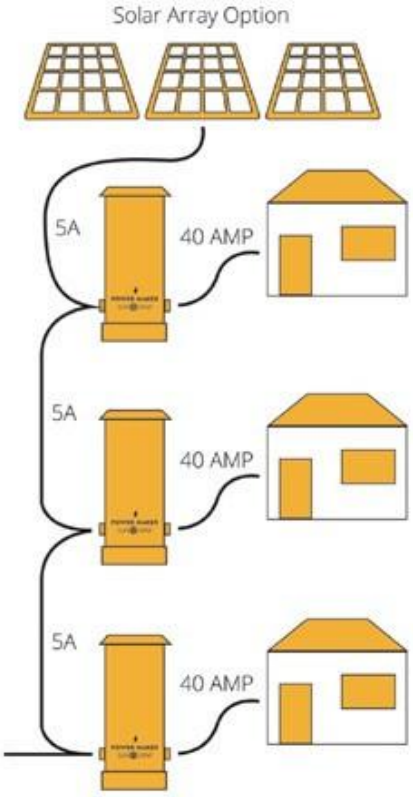
# POWER MAKER CABINETS

## Power Maker Cabinets


**6 Station IP Rated Outdoor Unit**
**24 Station Outdoor Enclosure**
**6 Station Rack for Inverter and Battery**

The Sunsynk Power cabinets can be used to transport professional stand-alone power systems in a modular format to help reduce weight.

Traditional central systems suffer huge power losses, so by using the Sunsynk power maker cabinets, you will massively reduce power losses and save a lot of money. They can used as big offices UPS, supply power to food parks, caravan parks, and several other applications.



# SOLAR PUMP

## Water Pump Driver with MPPT

## SUN-PD-24
## SUN-PD-48
## SUN-PD-72
## SUN-PD-96

The Sunsynk® Water Pump Driver (with MPPT) is designed for swimming pools, wells and other water supplies requiring the movement of water.

**Features:**

• The LED displays shows power, voltage, current, speed and working condition.

• Automatic stop/start function.

• Soft start - no impulse current to protect the pump motor.

• Frequency conversion function - the driver automatically runs with frequency conversion
according to solar power, and users can also change the pump's speed manually.


| PCB Model | Adaptable Pump | Maximum Input Power (KW) | Maximum Input Current (A) | Maximum Input Voltage (V) | MPPT Voltage Range (V) | Working Temperature (°C) |
|---|---|---|---|---|---|---|
| SUN-PD-24 | Rated 24V Pump | 0.48 | 20 | 48 | 18-36 | -15-60 |
| SUN-PD-48 | Rated 48V Pump | 0.75 | 15 | 96 | 24-72 | -15-60 |
| SUN-PD-72 | Rated 72V Pump | 1.1 | 15 | 150 | 50-108 | -15-60 |
| SUN-PD-96 | Rated 96V Pump | 1.3 | 15 | 180 | 60-144 | -15-60 |

# EV CHARGING

## 22kW Three-Phase EV Station

Sunsynk® focuses on the field of charging EVs and is committed to providing customers with high quality charging equipment and solutions.

## SUN-22KW-EV

This is a high-powered 3-Phase EV station for commercial applications. It is a compact solution with remote control, advanced communications and excellent charging performance.

**Features:**

- Metal casing (IP65).
- 4.3-inch LCD colour display.
- OCPPv1.6 Interoperable communication protocol.
- Remote firmware update with reboot capable via the internet.
- Auto cable-lock release in the event of power outage.
- Multiple languages available.
- Mobile App payment support.
- Pedestal mounting optional.

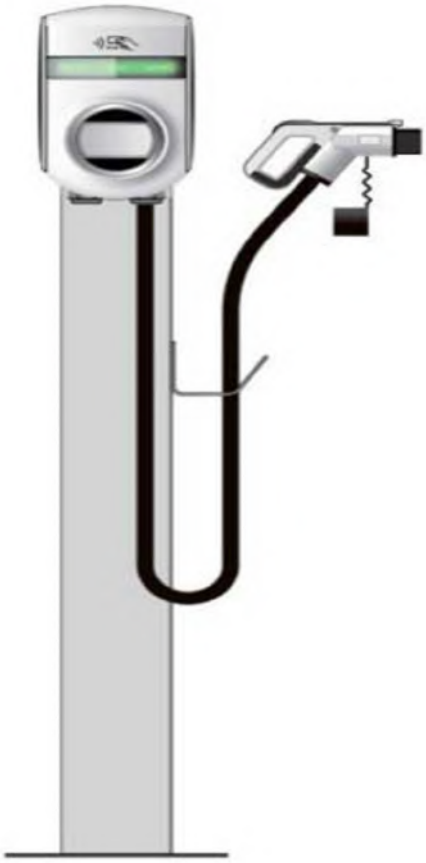
| Model | SUN-22KW-EV |
|---|---|
| Housing material | 1.5mm metal Shell |
| Dimension | 370 x 232 x 145mm (H x W x D) |
| Installation method | Wall mounting, Pedestal mounting (optional) |
| Cable routing | Bottom/Rear inlet wiring, |
| Weight | N.W.: 8kg, Pedestal: 10kg |
| Charging standard | IEC 61851-1 and IEC 61851-22 |
| Charging outlet | Type2 plug with 5M cable |
| Outlet number | 1 |
| **Input** | |
| Input voltage | 380Vac +/-10%, 3-phase |
| Input frequency | 50Hz/60Hz |
| **Output** | |
| Max output power | 22kW @ 32A max |
| Measuring accuracy | Level 0.5 |
| Output voltage range | 380Vac +/-10%, 3-phase |
| Output current range | 0 – 32A |
| RCCB | Type-A, sensitivity: 30mA |
| **General** | |
| Charging type | Mode 3 |
| User Interface | RFID, 4.3” LCD display screen |
| AC output type | AC Type-2 |
| Communication | WI-FI, Bluetooth, PWM, Ethernet, 4G (optional), OCPP 1.6 |
| Remote control | Remote firmware update and system reboot via internet |
| Application place | Indoor/Outdoor |
| Working temperature | -30 ° C ~ +50 ° C |
| Working humidity | 5% ~ 95% non-condensation |
| Altitude | <2000m |
| Protection grade | IP54 |
| Cooling | Natural cooling |
| Safety standard | Compliant with CE, EN 61851-1-2001; EN 61851-21-2001; EN 61851-22-2001 |
| Security design | Over/under voltage protection, overload protection, current leakage protection, grounding protection, over temp protection, lightening surge protection |

# EV CHARGING

## 7kW Single-Phase Home Used EV Station

## SUN-7KW-EV1

The Electric Vehicle Charging Station developed by our company has advanced functions, stable performance, wide application range, robust design and easy-to-understand instructions. It is perfect for home-based applications.



| | Item | Technology Index | Remarks |
|---|---|---|---|
| Electrical Parameters | Rated input voltage | AC230V ± 20% | Single phase |
| | Max. power | 7KW | |
| | Rated working current | 32A | 6/10mm$^2$ wires |
| | Input frequency | 50Hz ± 1Hz | |
| | Rated output voltage | AC230V ± 20% | Single phase |
| | Rated output current | 32A | 6/10mm$^2$ wires |
| | Standby power | <6W | |
| Environment Index | Application senses | Indoor/Outdoor | |
| | Working temperature | -30°C ~ +55°C | |
| | Working humidity | 5% ~ 95% No condensation | |
| | Working elevation | <2000m | |
| | Protection grade | IP54 | |
| | Cooling method | Natural cooling | |
| | MTBF | 100,000 hours | |
| Shell Structure | Material | Plastic | |
| | Dimensions | 211 x 345 x 122mm (L x W x D) | |
| | Installation methods | Wall-mounting / Standing pole | |
| | Net. weight | <4kg | |
| Optional | Activate method | 1: Plug in and play<br>2: ON/OFF by swiping card (3pcs)<br>3: Offline payment via swiping card | Optional |
| | Output port | 1: Type 2 socket<br>2: Type 2 gun with 5m cable<br>3: Type 1 gun with 5m cable | Optional |
| Security Design | Over/under voltage protection, Overload protection, Short-circuit protection, Current leakage protection, Grounding protection, Over/Under temperature protection, Lighting surge protection. | | |
| Option Parts | Swapping card control, Ethernet, 3G, 4G communication<br>OCCP1.6 (JSON) | | Optional |

# EV CHARGING KITS

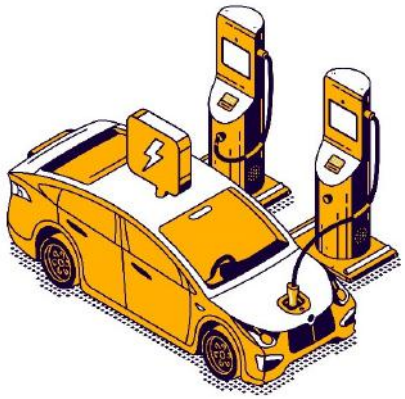
## 7kW Single-Phase Commercial EV Station

## SUN-7KW-EV2

This product is A 7KW single-phase AC EV charger, mainly used for electric vehicle AC charging. It is composed of a charging body, wall hanging rear plate, floor standing pole (optional accessories), etc.
It features charging protection, card charging, scan code charging, mobile payment, network monitoring, and other functions. This product adopts industrial design, easy to install, and quick to deploy.

| | | | |
|---|---|---|---|
| Appearance and structure | Product Name | Commercial 7KW EV Charging Station | |
| | Model No. | SUN-7KW-EV2 | |
| | Shell Material | Plastic | |
| | Product Size | 400 x 200 x 117 mm (L x W x H) | |
| | Installation Methods | Wall-Mounted | Floor Type |
| | Installation Accessories | Rear Plate | Floor Stand |
| | Wiring Method | From bottom / Back side | |
| | Gross Weight | 5Kg | |
| | Cable Length | Default: 5m (refer to real product) | |
| | Display | 4.3” LCD display screen | |
| Electrical Index | Input Voltage | 230V | |
| | Input Frequency | 50Hz | |
| | Max. Power | 7KW | |
| | Output Voltage | 230V | |
| | Output Current | 32A | |
| Environment Index | Application | Indoor/Outdoor | |
| | Work Temperature | -30°C ~ 55°C | |
| | Work Humidity | 5% ~95% No condensation | |
| | Work Altitude | <2000m | |
| | IP Rate | IP54 | |
| | MTBF | 100,000 hours | |
| | Special Protection | Anti-UV | |
| Protection Functions | Over/Under voltage protection, over current protection, short-circuit protection, ground protection, lightning protection, emergency stop protection, leakage protection. | | |
| Functions | Ethernet/GPRS/4G/Wifi/Bluetooth communication, Remote control, Mobile payment, Mobile APP/Wechat scan code for payment, Swipe card for charging, LED indicate, LCD display (optional based on requirements) | | |

# EV CHARGING KITS





## 8.8kW Single-Phase 40A / 10kWh EV Charger

### SUN-7KW-EV2-KIT1 – Plug-in Hybrids or smaller EVs

This is a small-scale EV charging kit with cabinet, batteries, an 8.8kW inverter, and a 7kW car charger unit. It is a perfect solution for small EVs.

## 8.8kW Single-Phase 40A / 20kWh EV Charger

### SUN-7KW-EV2-KIT2 – Home Charging

Similar to the kit above, this is also a small-scale EV charging kit with cabinet, an 8.8kW inverter, a 7kW car charger unit, and more batteries. This is a perfect solution for home used applications.

# EV CHARGING KITS

## 8.8kW Single-Phase 40A / 40kWh EV Charger

**SUN-7KW-EV2-KIT3 – Charging Big EVs**

This is an awesome solution to charge big vehicles. With 40kWh capacity, this kit also includes, an 8.8kW inverter, a 7kW car charger unit, and several batteries

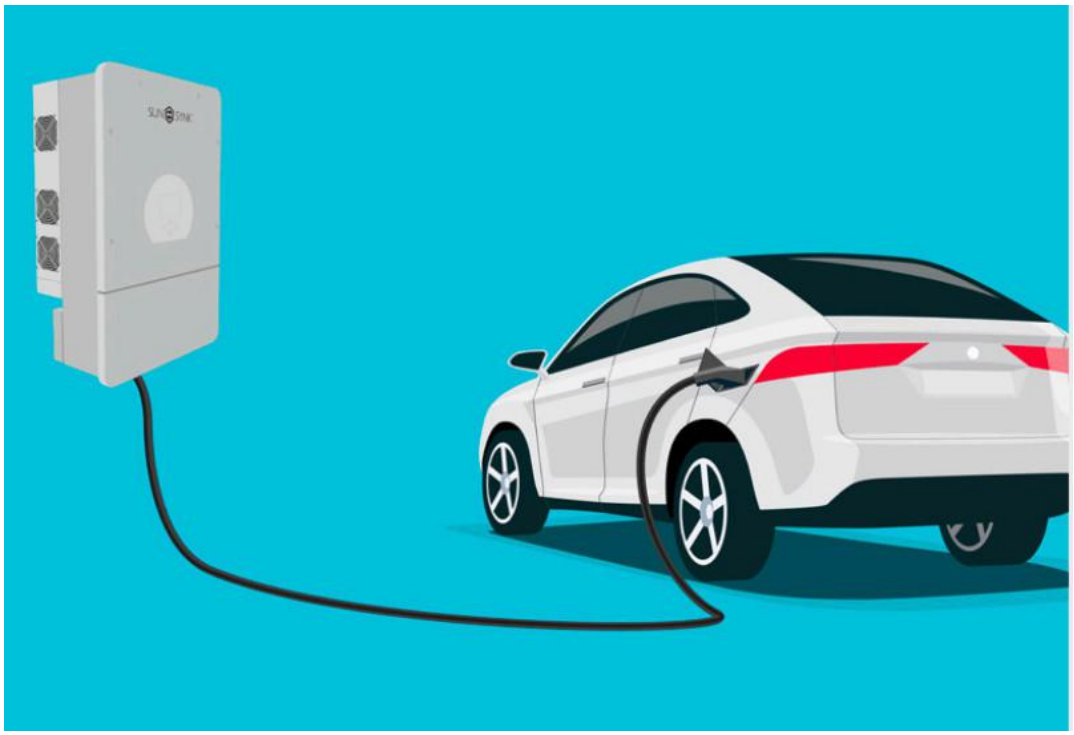
## 26kW Three-Phase 40A per phase / 40kWh EV Charger

**SUN-22KW-EV-KIT1 – High-Speed Charging**

## 26kW Three-Phase 40A per phase / 80kWh EV Charger

**SUN-22KW-EV-KIT2 – High-Speed Charging**

These 26kW kits are a perfect solution for high speed charging of EVs with a choice of either 40kWh or 80kWh capacity. A highly practical solution to charging EVs quickly and effectively.



# SOLAR POOL / WATER PUMP / WATER HEATER AC HYBRID CONVERTER KITS

## 3kW Solar Power Converter + 1kW Solar Array

**3kW SUN-3K-G-KIT 1 – Run your pool pump for free**

This kit is a complete solution for you to run your pool pump for free by using solar energy. It includes a 1kW solar array, fixings, cables, protection devices, CT coil, and inverter.

## 3kW Solar Power Converter + 2kW Solar Array

**3kW SUN-3K-G-KIT 2 – Heat water for free**

With this kit you can heat water for free. It is a complete solution that includes a 2kW solar array, fixings, cables, protection devices, CT coil, and inverter.

## 3kW Solar Power Converter + 3kW Solar Array

**3kW SUN-3K-G-KIT 3 – Run your AC for free in the daytime**

No more high energy bills to run your AC during hot seasons. With this kit you can use your AC for free, by using solar power. It is a complete solution that includes a 3kW solar array, fixings, cables, protection devices, CT coil, and inverter.

# STORAGE INVERTER KITS

## 3.6kW Inverter + 3.1kWh Lithium Power-Maker Battery

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 1**

## 3.6kW Inverter + 5.6kWh Lithium Power-Maker Battery

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 2**

## 3.6kW Inverter + 11.2kWh Lithium Power-Maker Battery

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 3**

These kits are a perfect solution for residential application, offering storage capacity ranging from 3.1kWh to 11.2kWh, depending on your needs. The kits include a 3.6kW inverter, protection devices, CT coil, and batteries. All you need for your system.

## 5.5kW Inverter + 5.6kWh Lithium Power-Maker Battery

**SUNSYNK-5.5K-SG01LP1 IP65 KIT 4**

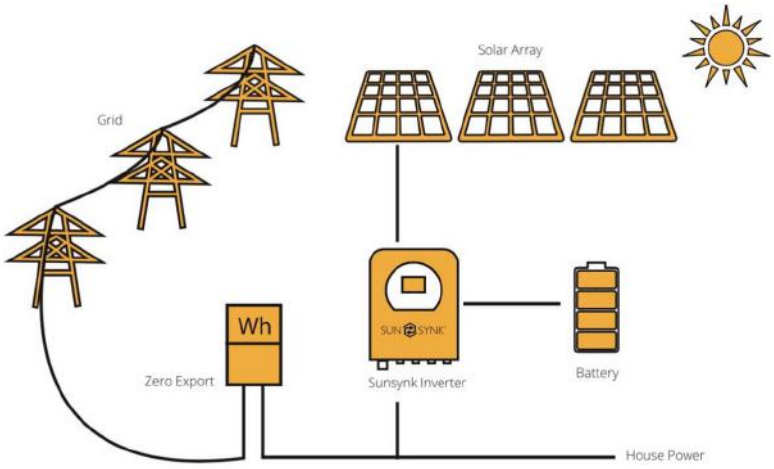
The 5.5kW storage kit includes protection devices, CT coil, batteries, and a 5.5kW hybrid inverter. This kit is the best solution for domestic and small commercial applications.

# STORAGE INVERTER KITS

## 8.8kW Inverter + 11.2kWh Lithium Power-Maker Battery

**SUNSYNK-8.8K-SG01LP1 IP65 KIT 5**

Here we have a powerful solution for commercial applications and big houses. This kit includes a 11kWh storage system, an 8.8kW hybrid inverter, CT coil, and protection devices.

# PROFESSIONAL COMPLETE KITS

## 3.6kW Inverter + 3.1kWh Lithium Power-Maker Battery + 2kW Solar Array

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 1s**

A small scale professional kit that can be the perfect solution for small houses. It includes a 3.6kW hybrid inverter, a 3.1kWh lithium battery, a 2kW solar array, protection devices plus CT coil. A convenient and complete solution.

## 3.6kW Inverter + 5.6kWh Lithium Power-Maker Battery + 4kW Solar Array

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 2s**

This is also a small-scale professional kit with protection devices, CT coil, a 3.6kW hybrid inverter, but with higher generation and storage capacity than the model above, including a 5.6kWh battery and a 4kW solar array.

## 3.6kW Inverter + 11.2kWh Lithium Power-Maker Battery + 7kW Solar Array

**SUNSYNK-3.6K-SG01LP1 IP65 KIT 3s**

This kit is similar to the professional kits above, but it can be a better solution for applications that require more storage capacity.

# PROFESSIONAL COMPLETE KITS

## 5.5kW Inverter + 5.6kWh Lithium Power-Maker Battery + 5kW Solar Array

**SUNSYNK-5.5K-SG01LP1 IP65 KIT 4s**

The Sunsynk 5.5kW All-in-One is a completer solution for domestic and small commercial applications. The 5.5kW hybrid inverter is our best selling inverter and this kit includes a 5.6kWh lithium Power-Maker battery, a 5kW solar array, protection devices and a CT Coil.

## 8.8kW Inverter + 11.2kWh Lithium Power-Maker Battery + 8kW Solar Array

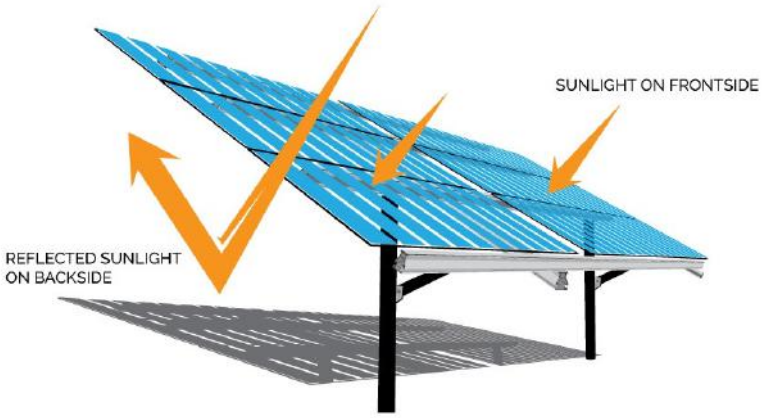
**SUNSYNK-8.8K-SG01LP1 IP65 KIT 5s**

For the customer requiring a lot more power, we present a complete All-in-One kit for the 8.8kW inverter that is the perfect solution for large homes and commercial premises. The kit also comes with a 8kW solar array, CT coil, protection devices and a 11.2kWh battery pack that will deliver sufficient power for larger premises.

# SOLAR PANELS

## 240W Bifacial Solar Panels

### Increase your power generation with Sunsynk Bifacial Solar Panels

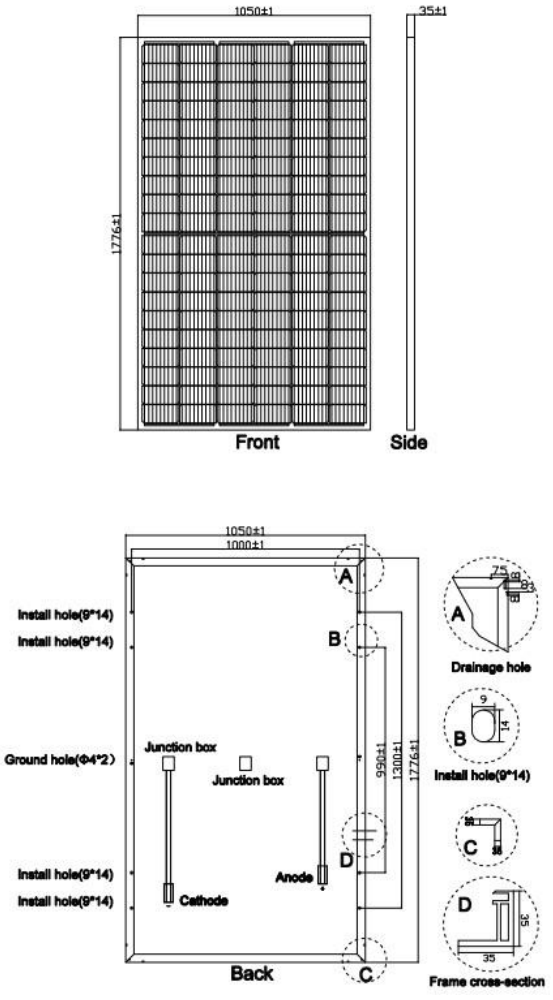



Source: https://sinovoltaics.com

# SOLAR PANELS

## SUN-120HCLM

Here we present Sunsynk® Monocrystaline solar panels ranging from 350W to 390W with cells that feature a 23.7% efficiency. The frame is robust and the junction box has an IP65 rating. It is the perfect solution for a domestic or commercial solar system.



## ELECTRICAL DATA (STC)

| Model Type | SUN350 MH-30 | SUN360 MH-30 | SUN370 MH-30 | SUN380 MH-30 | SUN390 MH-30 |
|---|---|---|---|---|---|
| Peak Power (Pmax) | 350.00 | 360.00 | 370.00 | 380.00 | 390.00 |
| Maximum Power Voltage (Vmp) | 33.30 | 33.70 | 34.10 | 34.50 | 34.90 |
| Maximum Power Current (Imp) | 10.52 | 10.69 | 10.86 | 11.02 | 11.18 |
| Open Circuit Voltage (Voc) | 40.50 | 40.90 | 41.30 | 41.85 | 42.33 |
| Short Circuit Current (Isc) | 11.02 | 11.20 | 11.37 | 11.64 | 11.81 |
| Cell Efficiency (%) | 21.28 | 21.89 | 22.50 | 23.11 | 23.71 |
| Module Efficiency (%) | 18.76 | 19.30 | 19.84 | 20.37 | 20.91 |

* STC: irradiance 1000 W/ m $^2$, AM 1.5, and cell temperature of 25° C

## ELECTRICAL DATA (NOTC)

| Model Type | SUN350 MH-30 | SUN360 MH-30 | SUN370 MH-30 | SUN380 MH-30 | SUN390 MH-30 |
|---|---|---|---|---|---|
| Peak Power (Pmax) | 259.30 | 266.70 | 274.10 | 282.00 | 290.00 |
| Maximum Power Voltage (Vmp) | 30.80 | 31.10 | 31.50 | 31.87 | 32.23 |
| Maximum Power Current(Imp) | 8.44 | 8.57 | 8.71 | 8.85 | 9.00 |
| Open Circuit Voltage (Voc) | 37.80 | 38.20 | 38.50 | 39.01 | 39.45 |
| Short Circuit Current (Isc) | 8.89 | 9.03 | 9.17 | 9.39 | 9.55 |

* NOCT: irradiance 800 W/m $^2$, AM 1.5, ambient temperature 20° C, wind speed 1 m/s

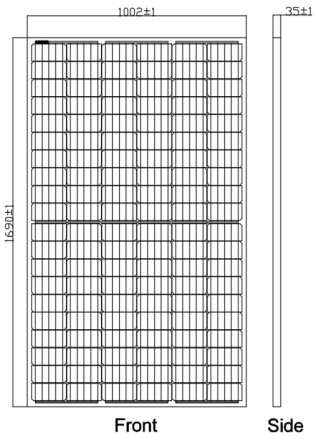
## MECHANICAL CHARACTERISTICS

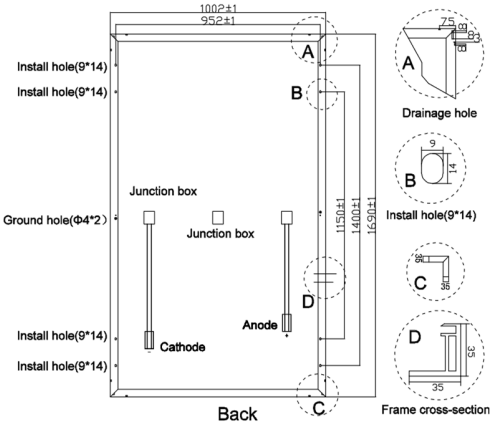
| | |
|---|---|
| Cell Type | 166 x 83 Monocrystalline |
| No. of Cells | 120 (12x10) |
| Dimensions | 1776*1050*35 mm |
| Weight | 20.0kg |
| Front Glass | 3.2mm high transmission, low iron, tempered glass |
| Frame | Anodized Aluminium Alloy |
| Junction box | IP68 3 diodes |
| Output cables | 4mm² cable 90cm+mc4 |
| Max Wind Load/Snow Load | 2400Pa/5400Pa |

# SOLAR PANELS

## SUN-120HCLB

Here we present Sunsynk® Monocrystaline solar panels ranging from 350W to 390W with cells that feature a 23.15% efficiency. The frame is robust and the junction box has an IP65 rating. It is the perfect solution for a domestic or commercial solar system.



## ELECTRICAL DATA (STC)

| Model Type | SUN330 MH-30 | SUN335 MH-30 | SUN340 MH-30 | SUN345 MH-30 | SUN350 MH-30 |
|---|---|---|---|---|---|
| Peak Power (Pmax) | 330 | 335 | 340 | 345 | 350 |
| Maximum Power Voltage (Vmp) | 33.35 | 33.45 | 33.55 | 33.65 | 33.75 |
| Maximum Power Current (Imp) | 9.9 | 10.02 | 9.9 | 10.26 | 10.38 |
| Open Circuit Voltage (Voc) | 40.85 | 40.98 | 41.1 | 41.22 | 41.34 |
| Short Circuit Current (Isc) | 10.42 | 10.55 | 10.42 | 10.9 | 10.93 |
| Cells Efficiency (%) | 21.83 | 22.16 | 22.49 | 22.82 | 23.15 |
| Module Efficiency (%) | 19.48 | 19.78 | 20.07 | 20.37 | 20.65 |

* STC: irradiance 1000 W/ m $^2$, AM 1.5, and cell temperature of 25° C

## ELECTRICAL DATA (NOTC)

| Model Type | SUN330 MH-30 | SUN335 MH-30 | SUN340 MH-30 | SUN345 MH-30 | SUN350 MH-30 |
|---|---|---|---|---|---|
| Peak Power (Pmax) | 245 | 249 | 252 | 256 | 260 |
| Maximum Power Voltage (Vmp) | 31.18 | 31.28 | 31.37 | 31.46 | 31.56 |
| Maximum Power Current (Imp) | 7.86 | 7.97 | 8.04 | 8.14 | 8.24 |
| Open Circuit Voltage (Voc) | 38.41 | 38.54 | 38.65 | 38.76 | 38.88 |
| Short Circuit Current (Isc) | 8.33 | 8.45 | 8.52 | 8.63 | 8.73 |

* NOCT: irradiance 800 W/m $^2$, AM 1.5, ambient temperature 20° C, wind speed 1 m/s

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| Cell Type | 158.75 x 79.38 Monocrystalline |
| No. of Cells | 120 (12x10) |
| Dimensions | 1690*1002*35 mm |
| Weight | 18.8kg |
| Front Glass | 3.2mm high transmission, low iron, tempered glass |
| Frame | Anodized Aluminium Alloy |
| Junction box | IP68 3 diodes |
| Output cables | 4mm² cable 90cm+mc4 |
| Max Wind Load/Snow Load | 2400Pa/5400Pa |

# BASIC TERMINOLOGY

| | |
|---|---|
| **Alternating Current (AC)** | The flow of electricity that constantly changes direction between positive and negative sides. Almost all power produced by electric utilities in the United States moves in a current that shifts direction at the rate of 60 times a second. |
| **Ampere (Amp)** | The unit of measure that indicates how much electricity flows through a conductor. It is like using cubic feet per second to measure the flow of water. Example: a 1200w, 120v hair dryer pulls 10 amperes of electric current. (Amps = watts / volts) |
| **Array** | A collection of electricity connected photovoltaic (PV) modules. |
| **Battery** | Batteries are often sold with a PV system. The primary purpose is to store electricity not immediately used and can be used at some later time. With net metering, the value of batteries is less because the utility grid basically acts as a storage facility. For a reliable generation system that can function independently of the utility grid, the batteries may be an important component of a complete system. Back-up generators may be included in a system to provide power when the PV system is not operating, and are generally included when systems are not grid connected. Neither batteries or generators are eligible for rebate money. |
| **Battery Capacity** | The total number of ampere-hours that can be drawn from a fully charged battery. |
| **Circuit** | One or more conductors through which electricity flows. |
| **Current** | The flow of electricity in a conductor between two points having a difference in potential (voltage). |
| **Customer Load** | The amount of power your site uses. ‘Load’ may be expressed in kilowatts (capacity) or kilowatt-hours (energy). A site’s peak kilowatts generally refers to when electric demand requirements are highest. |
| **Cycle** | The discharge and subsequent charge of a battery. |
| **Deep Cycle** | A type of battery that can be discharged to a large fraction of capacity many times without damaging the battery. |
| **Demand** | The level at which electricity is delivered to end-users at a given point in time. Electric demand is measured in kilowatts. |
| **Direct current (DC)** | The flow of electricity that travels continuously in one direction. |
| **Efficiency** | The ratio of output power (or energy) to input power (or energy) expressed in %. |
| **Electrical Current** | A flow of electrons; Electricity. |
| **Electrical Grid** | An integrated system of electricity distribution that usually covers a large area. |
| **Gel Type Battery** | Lead-acid battery in which electrolyte is composed of a silica-gel matrix. |
| **Grid** | The electrical grid that is an interconnected network for delivering electricity from producers to consumers. |

| | |
|---|---|
| **Grid-Connected PV System** | A PV system in which the PV Array acts like a central generating plant supplying power to the grid. |
| **Inverter** | Converts DC power from the PV array/battery to AC power compatible with the utility grid and local AC loads. |
| **Irradiance** | The solar power incident on a surface. Usually expressed in kilowatts per square metre. Irradiance x Time = Insolation. |
| **Kilowatt (kW)** | One thousand watts. A unit of measure of the amount of electricity needed to operate given equipment. Example - One kW is enough power to illuminate 10 light bulbs at 100 watts each (volts x amps = watts) |
| **Kilowatt-hour (kWh)** | The amount of kW produced over a period of time, or one kilowatt of electricity supplied for one hour. A unit of energy. Power multiplied by time equals energy. For example, a one kW PV system, if operating at full capacity for 5 hours will produce 5kWh of electricity during that time. |
| **Load** | The amount of electric power used by any electrical unit or appliance at any given time. |
| **Meter** | A device that measures levels and volumes of customer's electricity and gas use. |
| **MPPT** | Maximum Power Point Tracker - means of power conditioning unit that automatically operates the PV Generator at its maximum power point (MPP) under all conditions. |
| **Peak Load** | The highest electrical demand within a particular period of time. |
| **Peak Sun Hours** | The equivalent number of hours per day when solar irradiance averages 1,000 w/m2. Example: Six peak sun hours would mean that the energy received during total daylight hours equals the energy that would have been received had the irradiance for six hours been 1000 W/m2. |
| **Photovoltaic Array** | A group of photovoltaic modules. |
| **Photovoltaic Module** | An integral, encapsulated unit containing a number of PV cells. A group of photovoltaic cells combined in series or parallel and encapsulated in an environmentally protective laminate. The smallest replaceable unit of a PV Array is a module and this is the building block of an array. |
| **Photovoltaic System** | An installation of PV modules and other components designed to produce power from sunlight and meet the power demand for a designated load. |
| **Solar Hot Water** | A process that heats water directly using the sun's radiant energy. |
| **Storage** | Storage refers to saving surplus electricity produced by a PV system. Generally, batteries are used as storage devices. |
| **String** | A number of modules or panels interconnected electrically in series to produce the operating voltage required by the load. |
| **Uninterruptible Power Supply (UPS)** | The designation of a power supply providing continuous uninterruptible service. A UPS contains batteries. |
| **Volt** | The amount of force required to drive a steady current of one ampere through a resistance of one ohm. Electrical systems of most homes and offices use 240 volts. (Volts= watts/amps) |
| **Watt** | (W) Electrical measurement of power at one point in time, as capacity or demand. For example, light bulbs are classified by wattage. (1000 watts = 1KW) |

## Manufacturer's Warranty Terms and Conditions

1. Global Tech China Limited and Sunsynk Limited (hereinafter "the Company") hereby warranty against manufacturing faults of the products for the period specified in Schedule-A under the following terms and conditions:

   a) The product must be purchased and installed within one of the following countries: The United Kingdom, the Isle of Man, the Channel Islands, South Africa, Zimbabwe, Botswana, Hong Kong and Australia. Products purchased and/or installed outside of these countries will not be covered by this Warranty under any circumstances.

   b) The product must be installed and commissioned in full compliance with the installation instructions provided with the product packages. The product must also meet the requirement of the Benchmark initiative (if applicable).

   c) The warranty period will commence from date of installation. However, if the installation is made after more than six months from the date on which the product was dispatched by the Company, the warranty period will commence immediately after six months from the date of manufacture.

   d) The product must be confined to domestic or light commercial use only. For the purpose of this Warranty, "light commercial use" is referred to as a semi domestic- commercial environment including but not limited to hair salons, small shops, pubs). Should a confusion arise regarding the determination of "light commercial use", the decision on the determination of the Company will be final.

   e) The product must be well-maintained in accordance with the User Manual guidelines. Failure to maintain the product, poor servicing or no servicing of the products might result in invalidation of this Warranty. Proof of servicing by competent servicing centres might be required to obtain warranty facilities.

   f) The product must not be moved from the original place of installation without prior consent of the Company.

   g) During the Warranty period, the product must not be serviced, repaired or altered in any way by any third party. Any change, alteration, modification or servicing whatsoever from anyone other than the Company will invalidate the warranty with full effect.

   h) Following the servicing, repairment or replacement, any parts or products removed from your product will be taken as owner by the Company. You will not have any claim for such parts or products.

2. Warranty Limitations

**This Warranty does not include:**

a) Any condition resulting from other than ordinary residential wear or any use for which the product was not intended, such as use in rental or contract trade or commercial use;

b) Any condition resulting from incorrect or inadequate maintenance or car;

c) Damage resulting from misuse, abuse, negligence, accidents, theft, tempering, flood, explosion, lightning, storms, frost, shipping damage, adverse weather or any other similar event;

d) Dissatisfaction due to buyer's remorse;

e) Normal wear and tear;

f) Damages incurred during transportation;

g) Damages incurred during assembly or maintenance (unless assembly or maintenance has been carried out by the Company);

h) Any unauthorised adjustments made to the product by a third party;

i) Any upgrading/improvement work required as a result of enactment of new law, (Health & Safety or otherwise).

j) The Company makes no express warranty or condition whether written or oral and the company expressly disclaims all warranties and conditions not stated in this limited warranty. the Company disclaims all implied warranties or conditions, including any implied warranties of merchantability and fitness for a particular purpose.

k) All warranty claims must be filed by the consumer to the retailer of this product, who in turn is to contact the manufacturer regarding any warranty return or replacement. The Company will not handle claims from the consumer directly. Please retain invoices for obtaining warranty facilities.

l) The warranty period specified in Schedule A cannot be extended under any circumstances.

m) All claims pursuant to this Warranty Statement must be made within the warranty period.

n) The decision of the Company regarding any issue relating to this warranty statement is final.

**Schedule A**

The warranty period of the products will depend on its type and the accreditation of the installer. Below is a demonstration:

- Inverters 5 year warrantee
- Solar Panels 15 year warrantee
- Alarms 3 year warrantee
- Batteries 1 year warrantee
- Control gear 10 year warrantee
- Power banks 2 year warrantee
- Light fittings 2 year warrantee
- Air conditioners 5 year warrantee

The Warranty does not apply to the following products:

- Product installed on boats that fall outside the remit of section ‘o’;
- Consumables as specified by the Company, including but not limited to: fixings, glues, cables, ducting, replaceable batteries, light bulbs and other consumables;

**Sunsynk Limited & Global Tech China Ltd,**
**3 Floor, Wai Yip Industrial Building.**
**171 Wai Yip Street, Kwun Tong,**
**Kowloon, Hong Kong.**
**Tel. HK +852 2884 4318 Fax: +852 2884 4816**
**Tel. UK +44 151 528 9945**
**Tel. SA +27 1108 39837**
**sales@globaltech-china.com**

**Audio Training manuals on Apple Pod Cast and Spotify**
**Full training support, manuals and videos on www.sunsynk.com**

SUN SYNK®

**Global Tech China Ltd**
3rd Floor, Wai Yip Street Kwun Tong, Kowloon, Hong Kong
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