

SPOWER SOLAR HYBRID GENERATOR



What is a Solar Generator?

Solar generators are an environmentally friendly and sustainable energy solution that converts solar energy into electrical energy. These generators store the energy they collect through solar panels, providing users with a reliable energy source when the grid power is cut off or in places where access to the grid is not possible. Solar generators, which usually contain a LiFePO4 (Lithium Iron Phosphate) battery system, can store energy from solar panels or grid electricity and provide this energy for use when needed.

Solar generators are widely preferred, especially because they provide portability, energy efficiency and long-lasting use. The solar generators we produce are customized according to the energy needs of users with different power options (such as 1000 watts, 3000 watts, 5000 watts, 11000 watts). All generators are equipped with 220-volt socket outlets and USB charging ports, and can also be controlled remotely with a mobile application. Thus, the device offers a practical energy source during power outages or nature trips.

Solar generators are notable for being environmentally friendly, fuel-free, quiet, and low-maintenance devices. They offer ideal solutions for users who adopt an off-grid lifestyle, especially in areas where electricity is limited or completely inaccessible. They also provide energy savings in both homes and workplaces, opening the door to a sustainable life.

How Does It Work?

Preparation of Connections: Our solar generators come with solar connection sockets and cables. This makes connecting the solar panels to the generator very simple and fast. The solar connection sockets are provided pre-assembled, which means that users do not need to do any additional assembly.

Selection of Energy Source: The device can be charged from both mains electricity and solar panels. When energy reaches the generator via mains electricity or solar panels, the device automatically starts to store energy. The user only needs to connect the device to the solar panels or mains socket.

Ready to Use: Once all connections are made, the device immediately starts producing and storing energy. Devices that need electricity can be connected directly thanks to the 220V sockets and USB charging outlets on the generator. The status of the generator and battery level can be easily monitored thanks to the advanced BMS (Battery Management System) and Bluetooth-enabled mobile application control.

Safe and Trouble-Free Operation: Once the device starts working, there is no need for any manual adjustments. It provides reliable and trouble-free energy thanks to quality materials such as Schneider brand sockets. The plug-and-play feature makes the installation and use of the generator very easy, so the generator is ready to work in a minute.

As a result, thanks to its plug-and-play feature, our solar generators can be easily installed and used by anyone. It offers a fast and reliable solution, especially for power outages, and the control of the device is quite practical with the mobile application.

Solar generators take energy from sources like solar panels and grid electricity and store it in LiFePO4 (Lithium Iron Phosphate) batteries. These batteries provide long-lasting and reliable energy storage solutions. Here is a step-by-step explanation of how they store energy:

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How to Collect Energy, i.e. Charge and Store?

Solar Panels: Solar generators collect sunlight through solar panels. The panels convert sunlight directly into electrical energy.

Mains Electricity: When solar energy is not sufficient or at night, the device can also charge its batteries by receiving energy from the mains electricity.

Conversion of Energy to DC Current: The energy produced by solar panels is direct current (DC) electrical energy. This energy is directed to LiFePO4 batteries for storage. The grid electricity is controlled by the advanced BMS (Battery Management System) within the device and transferred to the batteries.

Storage in LiFePO4 Battery: LiFePO4 batteries inside the solar generator have the capacity to store energy safely for long periods of time. LiFePO4 batteries are more durable and have high energy density compared to other lithium batteries.

Advanced BMS: Battery Management System prevents the battery from overcharging, overdischarging or overheating. This system ensures that energy is stored efficiently and safely.

Use of Stored Energy

The stored energy can be used when needed via 220V sockets or USB outputs on the generator. The device converts the energy directly into AC (alternating current) electrical energy and operates your devices.

Control with Mobile Application You can monitor the stored energy and the charging status of the device via the generator's mobile application. It is possible to control the energy level and stored power remotely thanks to the Bluetooth connection.

As a result, solar generators take sunlight or grid electricity and store it in reliable LiFePO4 batteries, providing uninterrupted power whenever you need it.

How long is the battery and panel warranty period?

Battery and Panel Life are important factors for the performance and long-term use of solar generators. Here is information about the life of these components:

What is LiFePO4 Battery Life?

LiFePO4 (Lithium Iron Phosphate) batteries have a much longer life and durability than traditional lithium-ion batteries.

The life of batteries depends on the charge cycle. One charge cycle means that the battery is fully charged and discharged.

LiFePO4 batteries typically last up to 3000-5000 charge cycles. This gives an average life of 10-15 years with daily use.

LiFePO4 batteries continue to perform at 80% capacity for extended periods of time, meaning they provide high efficiency throughout most of their lifespan.

What is the lifespan and duration of a solar panel?

Solar panels typically have a lifespan of 25-30 years. This is the time period before the panel starts to lose its performance.

Most panels continue to operate at 80% efficiency until the end of their life.

Solar panels experience a slow loss of efficiency over time. They may lose about 0.5% to 1% of their performance each year, but this decline is very slow and unnoticeable.

As a result, LiFePO4 batteries used in solar generators are long-lasting and can last at least 10 years. Solar panels, on the other hand, work efficiently for 25-30 years, which means that the device can meet your energy needs for many years.

Solar Generator Safety Features:

Solar Panel Protection: Panels are resistant to overload or voltage changes. High-quality connection systems and circuit components ensure safe transfer of energy.

Schneider Brand Sockets: Schneider brand sockets used on the device are made of high quality and safe materials. These sockets are activated in case of overload and minimize risks such as fire or electric shock.

USB Output Protection: The USB outputs on the back of the device are also equipped with overcurrent and short circuit protection, so you can charge your devices safely.

Monitoring with Mobile Application: The status of the generator and battery levels can be checked remotely thanks to the mobile application that can be connected via Bluetooth. It provides the opportunity for rapid intervention in case of a possible malfunction or danger.

Physical Protection

Metal Case: Solar generators and LiFePO4 batteries are protected in durable metal cases. This case protects the device from impacts, environmental effects and external damage. It also provides a closed system to prevent the battery from being affected by moisture and dust.

As a result, our solar generators are equipped with advanced BMS, overload and temperature protection, high-quality materials and monitoring features via mobile app. These safety measures ensure the longevity of the generator and provide users with a safe energy solution.



WHY SOLAR GENERATOR?

✓ 99% performance and power with MPPT charge control

✓ Forget about power outages or problems.

✓ You are now free with the energy you will receive from solar panels.

✓ Portable, easy to install and durable.

✓ Long-Life LiFePo4 lithium battery performance

FLEXIBLE USE AND CUSTOM PRODUCTION

✓ LiFePo4 Battery Goes beyond standards.

✓ Adding Battery Expansion
lowest **100 Ah**

✓ Solar panels can be added.
December **110 - 750 watt**

✓ External Battery Cabinet
optional **100 Ah to 15.000 Ah**

WHICH PRODUCT IS SUITABLE FOR YOU?

TV + Lighting + Refrigerator + USB Charging Unlimited **1000 watt**

TV + Lighting + Refrigerator + USB Charger + Kitchen Appliances + Power tools (Drill, Saw, Spiral) **3000 watt**

TV + Lighting + Refrigerator + USB Charger + Kitchen Appliances + Power Tools (Drill, Saw, Spiral) + Washing Machine or Dishwasher + Small Air Conditioner (Not at the same time) **5000 watt**

TV + Lighting + Refrigerator + USB Charger + Kitchen Appliances + Power Tools (Drill, Saw, Spiral) + Washing Machine or Dishwasher + Air Conditioner at the Same Time **8000 watt 11.000 watt**



Contact us for detailed information:



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Spower energy is a company of Msk Global Elektronik San. Tic. Ltd. Şti.

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Specification

**1000
watt**

**3000
watt**

**5000
watt**

**8.000
watt**

**11.000
watt**

Nominal Power [VA/W]	1000V/1000W	3000V/3000W	5000Va/5000W	8000Va/8000W	11000Va/11000W
INPUT AC	-	-	-	-	-
Voltage [V AC]	230	230	230	230	230
Nominal Frequency [Hz]	50 / 60 (Auto Sensing)	50 / 60 (Auto Sensing)	50 / 60 (Auto Sensing)	50 / 60 (Auto Sensing)	50 / 60 (Auto Sensing)
OUTPUT	-	-	-	-	-
Alternating Current	-	-	-	-	-
Voltage Ripple Power [VA]	230 ± 5%	230 ± 5%	230 ± 5%	230 ± 5%	230 ± 5%
Peak Watt 15 second	2000 Pure Sine Wave	5000 Pure Sine Wave	10000 Pure Sine Wave	16000 Pure Sine Wave	21000 Pure Sine Wave
BATTERY					
Battery Voltage [V]	12v	24v	48v	48v	48v
Battery Type and Ampere	12 Life Po4 100 Ah	24 Life Po4 100 Ah	48 Life Po4 100 Ah	48 Life Po4 100 Ah	48 Life Po4 100 Ah
Battery Life	4000 cycle	4000 cycle	4000 cycle	4000 cycle	4000 cycle
PV CHARGE INPUT	30-80V	30-450V	120-455V	120-455 Dual	120-400V Dual
PV ideal Circuit Voltage [V]	60V	260V	350V	300V	300V
Max PV Power [W]	1000W	3000W	5000W	8000W	11000W
Max Solar Charge Current [A]	40	80	120	120	160
Max AC Charge Current [A]	20	60	60	80	80
Max Charge Current PV+AC [A]	60	120	180	200	240
PHYSICAL SPECIFICATIONS					
Size, D x W x H [mm]	23 x 30x 35 cm	28 x 38x 41 cm	43 x 46 x 55 cm	43 x 46 x 55 cm	43 x 46 x 55 cm
Net weight / kilogram]	18 kg	28 kg	46 Kg	56 Kg	65 Kg
ENVIRONMENT					
Humidity [%]	5 to 90	5 to 90	5 to 90	5 to 90	5 to 90
Operating Temperature [°C]	-10 ~ 50	-10 ~ 50	-10 ~ 50	-10 ~ 50	-10 ~ 50
Parallel connection	No	No	No	Yes	Yes
External Battery Support	Yes	Yes	Yes	6 pcs Yes	6 Pcs Yes

Areas of Use:

Home and villa energy support

- Emergency energy needs
- Rural and off-grid areas
- Camping and nature activities
- Industrial field applications
- Lighting systems
- Housing systems
- Small home appliances

- Boat, caravan systems
- Camera systems
- Camping and tent systems
- Industrial devices and applications
- Solar generator systems
- Solar energy systems
- Wind energy systems

For More Options and Special Use, Please Contact Us.

Support Areas:

Europe, Africa, South Asia, Middle East

Supported Languages:

Turkish, English, Arabic, French, Russian



FOR DETAILED INFORMATION:
CONTACT US:



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