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LESSO Group (2128) is listed in the Stock Exchange of Hong Kong.

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LESSO GROUP
STOCK CODE: 2128.HK

LESSO

Intelligent Storage for Smart Living

LESSO Smart Energy Solutions

LESSO,
Building a solar-powered world.

CONTENT

A Bright and Exciting Journey

LESSO Group is a Hong Kong-listed (2128.HK) manufacturer of building materials with an annual revenue of over USD4.57 billion from its global operations.

LESSO Solar, a flagship division of LESSO Group, specialises in manufacturing solar panels, inverters, and energy storage systems, and providing solar-energy solutions.

Our 5 production bases, introduce advanced equipment, and create intelligent and automated production lines for intelligent building photovoltaic integrated BIPV, solar photovoltaic modules, and solar cells. The sales network of LESSO solar has covered Asia, North America, South America, Europe, South Africa, and the Middle East.

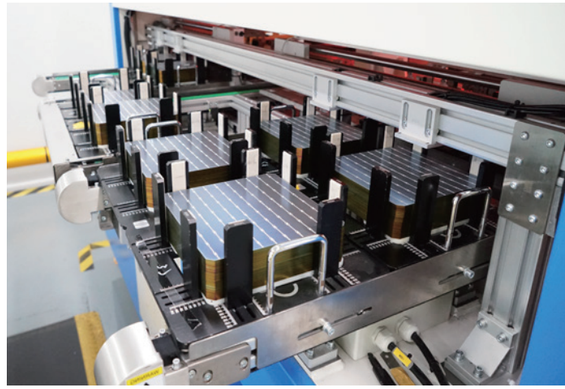
Founded in 2021, LESSO Solar has been growing with spectacular pace, with global production capacity of over 15GW for solar panels and 6GW for solar cells by the end of 2023.

USD4.57 bil
2022 Group Revenue

37
Years of Experiences

5 Major
Manufacturing Bases

15.3GW
Solar Modules Manufacturing Capacity



Leading the Future with Intelligent Manufacturing

Poised to grow into a large-scale global manufacturer of solar solutions, we are rapidly expanding our production capabilities by utilizing the latest manufacturing technologies and building more factories around the world.

Using only the best raw materials and leveraging on our in-house logistics capabilities, we ensure each step of the process is well controlled to deliver the best experience for our customers.

Our Certificates

IEC61215, IEC61730,
ISO 9001:2015 Quality management system,
ISO 14001:2015 Environment management system,
ISO 45001:2018 Occupational health and safety management system

LESSO Solar GLOBAL FOOTPRINT

LESSO Solar has been expediting the adoption of smart manufacturing by proactively building smart factories across the world. Drawing upon the extensive resources of LESSO, we integrate intelligent green energy as the cornerstone of our operations. Our commitment is to provide a wide range of new energy solutions and services to customers worldwide. With a focus on expanding our global production, logistics, sales, and service network, we aim to meet the diverse needs of customers all over the world.

WUSHA FACTORY

6.4GW in Solar Modules

HESHAN FACTORY

6GW in Solar Modules 6GW in Solar Cells

CHONGKOU FACTORY

500MW in Solar Modules

JIULONG FACTORY

5GW in Solar Modules 10GW in Solar Cells

1GW+ Inverters

3GWh+ Energy Storages

100,000 pcs EV Chargers

2.4GW in Solar Modules

EFFICIENT, RELIABLE RENEWABLE

Intelligent Storage for Smart Living

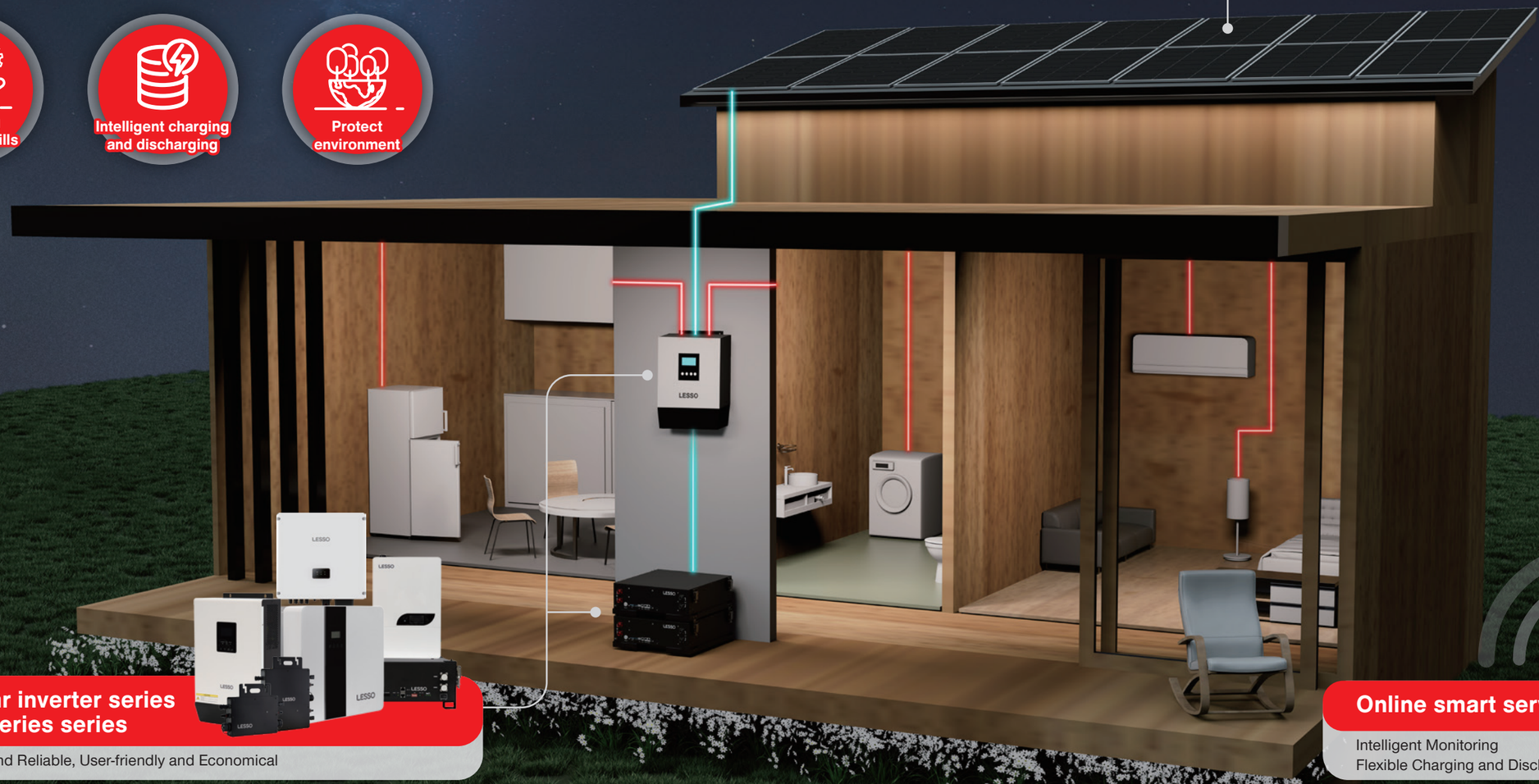
Reducing electricity bills

Intelligent charging and discharging

Protect environment

Solar PV modules

Hardcore Energy
Reliable Technology



Solar inverter series
Batteries series

Safe and Reliable, User-friendly and Economical

Online smart services

Intelligent Monitoring
Flexible Charging and Discharging

OFF-GRID SOLAR ENERGY SOLUTIONS

LESSO Solar off-grid solar energy solutions can be operated far from the area without grid electricity supply by generating, storing the energy by its own. Solar panels are used to keep the loads working and battery charging for night backup. Your off-grid solar system has to be sized properly to meet your daily power needs and make use of the stored energy pulled from the battery.

Main Advantage

Solve the problem of no power cuts

It can be self-generated and self-consumed without relying on the public grid, and the excess power during the daytime can be stored for use at night to form an independent energy supply micro-grid, which can satisfy remote areas without a stable power supply, and realize a 24-hour uninterrupted supply of energy.

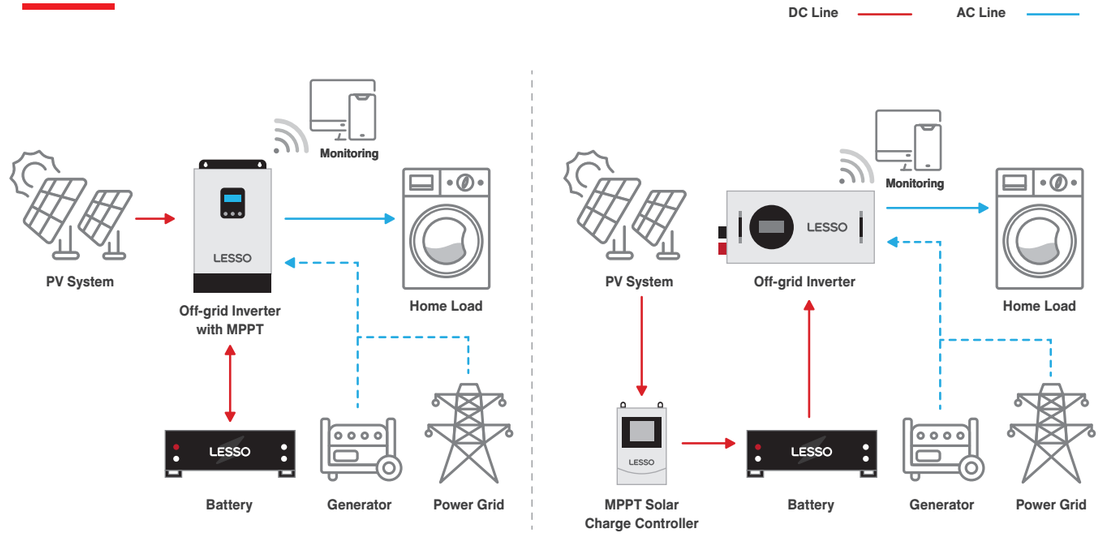
Effective utilization of generated power

By utilizing renewable energy sources such as solar or wind, our systems ensure a continuous and sustainable power supply, reducing dependence on fossil fuels and minimizing the environmental impact.

High ROI

Off-grid energy storage solutions offer a high profits on investment. By reducing reliance on expensive diesel generators or costly grid extensions, significant cost savings can be realized in the long run. The scalability and flexibility of the solution also allows for customized configurations to meet specific energy needs, ensuring that customers can optimize their investment and achieve maximum cost-effectiveness.

Schematic Diagram



OFF-GRID SOLAR ENERGY SOLUTIONS

	1kW + 3kWh		3kW + 5kWh	5kW + 10kWh
AC Output Type	Single phase L-N: 220/230/240Vac		Single phase L-N: 220/230/240Vac	Single phase L-N: 220/230/240Vac
PV Capacity	410Wp x 2pcs		410Wp x 6pcs	410Wp x 8pcs
Daily Average Energy Production	3.28kWh		9.84kWh	13.12kWh
PV Installation Footprint	> 4m²		> 12m²	> 16m²
Energy Storage Capacity	3.07kWh		5.12kWh	10.24kWh
Inverter / Converter	1kW Inverter with MPPT	1kW Inverter +40A/24VDC MPPT controller	3kW Inverter with MPPT	5kW Inverter with MPPT
BOS (optional)	PV cable, Battery cable, Bracket (Roof pitch/ground), Distribution box, Tool bag			

1-10kW

Off-grid inverter with MPPT

Rated power: 1-10kW
DC input voltage: 24/48V
Output voltage: 220V / 230V / 240V
Output type: Single phase
Battery type: Lead acid battery / LiFePO4 battery
Warranty: 2 years

1-6kW

Off-grid inverter

Rated power: 1-6kW
DC input voltage: 12/24/48V
Output voltage: 220V / 230V / 240V
Output type: Single phase
Battery type: Lead acid battery / LiFePO4 battery
Warranty: 2 years

5kWh

LiFePO4 battery

Nominal voltage: 51.2V
Nominal capacity: 100Ah
Nominal energy: 5.12kWh
Operating voltage range: 44.8-56V
Max discharge current: 100A
Warranty: 5 years

40-100A

MPPT Solar charge controller

Voltage: 12/24/36/48V
MAX PV Input: 12-150V
Battery type: Lead acid battery / LiFePO4 battery
Warranty: 2 years

3.07kWh

LiFePO4 battery

Nominal voltage: 25.6V
Nominal capacity: 120Ah
Nominal energy: 3.07kWh
Warranty: 3 years

Remark: Specifications are subject to change without notice.

HYBRID SOLAR ENERGY SOLUTIONS

LESSO hybrid solar energy solutions are available as on-grid solar with battery storage system (ESS) and integrate the innovation of both off-grid and on-grid technologies. In addition to being directly used, power can also be saved for use at night. It's also possible to sell excess energy back to the utility provider, which is ideal for homeowners. Still the most affordable option, a standard hybrid solar system is ideal for most daytime-operating enterprises.

Main Advantage

Effective utilization of generated power

During the day, the power generated by the system is supplied to the local load or sell to the power grid through inverters. At night, the energy stored in the energy storage equipment can supply to the electricity demand. The highest spontaneous self use rate of electricity can reach 95%.

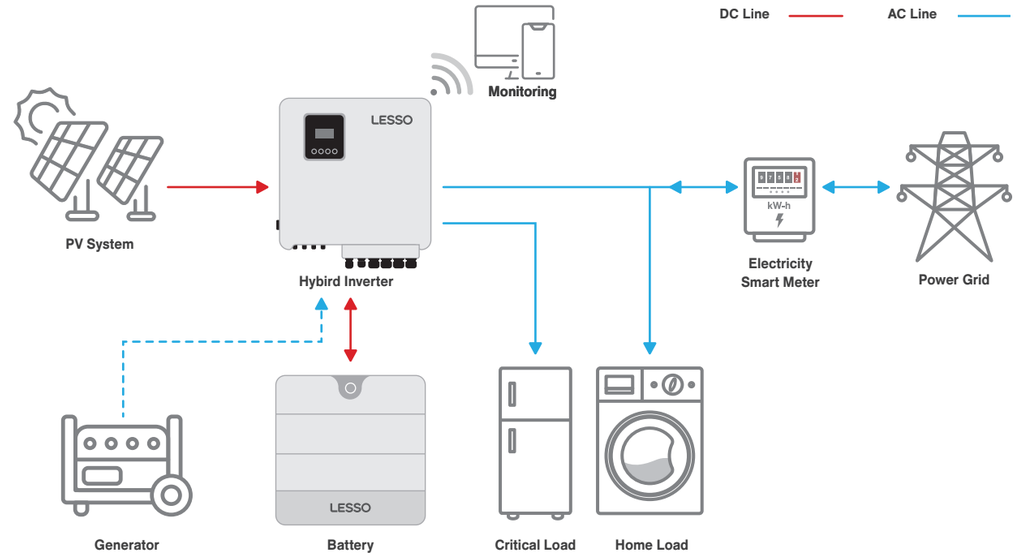
Reducing electricity bills

Set the charging and discharging time for the battery according to the peak and valley electricity prices, charge the battery when the electricity price is low, and discharge the battery for load use when the electricity price is high, reducing the economic expenses of households on electricity consumption.

Intelligent security Easy installation

Island isolation protection, over-charged/discharged protection, under-voltage protection, over-current protection. All-in-one system, easy to installation and maintenance.

Schematic Diagram



HYBRID SOLAR ENERGY SOLUTION

	5kW + 10kWh	10kW + 20kWh
AC Output Type	Single phase L-N: 230Vac	Three phase L-N: 220/230Vac L-L: 380/400Vac
PV Capacity	550Wp x 9pcs	550Wp x 18pcs
Daily Average Energy Production	19.8kWh	39.6kWh
PV Installation Footprint	> 24m^2	> 48m^2
Energy Storage Capacity	10kWh	20kWh
Inverter / Converter	5kW Hybrid Inverter	10kW Hybrid Inverter
BOS (optional)	PV cable, Battery cable, Bracket (Roof pitch/ground), Distribution box, Tool bag	

5kWh

LiFePO4 battery

Nominal voltage: 51.2V
Nominal capacity: 100Ah
Nominal energy: 5.12kWh
Operating voltage range: 44.8-56V
Max discharge current: 100A
Warranty: 5 years

3-6kW

Hybrid Inverter

Rated power: 3-6kW
Battery DC input voltage: 40-58V
Output voltage: 230Vac
Output type: Single phase
Battery type: Lead acid battery / LiFePO4 battery
Warranty: 5 years

5kWh

LiFePO4 battery

Nominal voltage: 51.2V
Nominal capacity: 100Ah
Nominal energy: 5.12kWh
Operating voltage range: 44.8-56V
Max discharge current: 100A
Warranty: 5 years

6-15kW

Hybrid Inverter

Rated power: 6-15kW
Battery DC input voltage: 150-550V
Output voltage: 380/400Vac
Output type: Three phase
Battery type: Lead acid battery / LiFePO4 battery
Warranty: 5 years

10-20kWh

LiFePO4 battery

Nominal voltage: 204.8-409.6V
Nominal capacity: 50Ah
Nominal energy: 10.24-20.48kWh
Max discharge current: 50A
Warranty: 5 years

Remark: Specifications are subject to change without notice.

ON-GRID SOLAR ENERGY SOLUTIONS

LESSO on-grid solar energy solutions feature a sleek and modern design that is not only functional but also beautiful, adding value to your property while having a positive impact on the environment. The system is equipped with high-quality solar panels that can withstand all weather conditions, ensuring long-term performance and durability.

Installation and maintenance of our on-grid solar systems is simple, with the professional guidance and on going support of our experienced team. Once installed, you can start enjoying the benefits of reduced energy bills and a cleaner, greener lifestyle.

Main Advantage

Reducing electricity bills

With our Photovoltaic On-grid System, you can take advantage of the abundant solar energy to significantly reduce your electricity bills during the day.

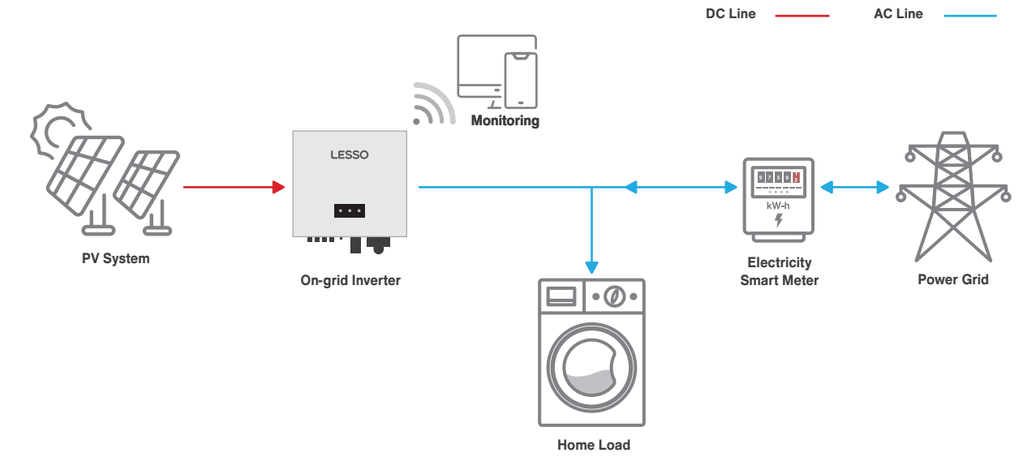
Stable power supply Environmental friendly

Designed for seamless integration with existing electrical infrastructure, our photovoltaic on-grid system is a hassle-free and environmentally friendly way to power your home or business.

Self-consumption Surplus power to grid

Our on-grid system allows excess energy to be sent to the grid and energy to be drawn from the grid when needed, ensuring flexible power supply and reducing energy costs. This system enables self-sufficiency and surplus energy integration. With reliable performance and long-term durability, the on-grid power system provides a low-maintenance, efficient solution for users.

Schematic Diagram



ON-GRID SOLAR ENERGY SOLUTIONS

	Micro Solutions		String Solutions	
	800W	1600W	10kW	20kW
AC Output Type	Single phase L-N: 220/230Vac		Three phase L-N: 220/230Vac L-L: 380/400Vac	
PV Capacity	410Wp x 2pcs	410Wp x 4pcs	550Wp x 18pcs	550Wp x 36pcs
Daily Average Energy Production	3.28kWh	6.56kWh	39.6kWh	79.2kWh
PV Installation Footprint	> $4m^2$	> $8m^2$	> $48m^2$	> $96m^2$
Inverter / Converter	800W Micro Inverter	1600W Micro Inverter	10kW String Inverter	20kW String Inverter
BOS (optional)	PV cable, Bracket (Roof pitch/ground), Distribution box, Tool bag			

2.5/3-6kW

Single phase PV inverter

Max. PV input voltage: 550V/600V
MPPT voltage range: 50-450V/90-520V
Nominal output voltage: 220/230Vac
Warranty: 5 years

800W

Micro inverter

Rated output power: 800W
Operation voltage range: 20-50V
Nominal output current: @220Vac: 3.7A / @230Vac: 3.5A
Warranty: 5 years

6-50kW

Three phase PV inverter

Max. PV input voltage: 1100V
MPPT voltage range: 200-1000V
Nominal output voltage: 380/400Vac
AC voltage range: 310-480Vac
Warranty: 5 years

1600W

Micro inverter

Rated output power: 1600W
Operation voltage range: 18-60V
Nominal output current: @220Vac: 7.4A / @230Vac: 7A
Warranty: 5 years

50-110kW

Three phase PV inverter

Max. PV input voltage: 1100V
MPPT voltage range: 180-1000V
Nominal output voltage: 380/400Vac
Warranty: 5 years

Remark: Specifications are subject to change without notice.

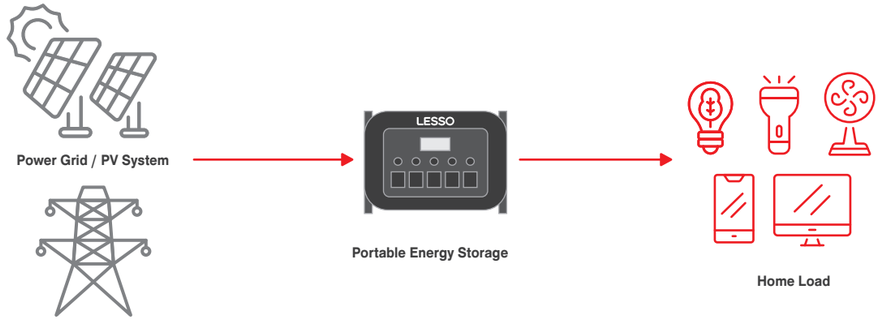
PORTABLE ENERGY STORAGE SOLUTIONS

LESSO portable energy storage may be charged by connecting it to solar panels, the grid, or a generator. It can also be utilized to create an outdoor power supply system, appropriate for outdoor charging scenarios which is quite adaptable. The portable energy storage features a versatile power outlet, is lightweight and compact, and is real two-way, rapid charging, and simple to operate.

Main Advantage

- **Portable, aesthetic design, user-friendly, easy to carry.**
- **Power grid or photovoltaic charging are both applicable.**
- **Build-in lithium iron phosphate battery, multiple software protection settings, safe and reliable.**

Schematic Diagram



300W/192Wh

LiFePO4 battery

USB output: 5V 3A x 4
DC output: 12V x 4
AC output: 220/230Vac x 1
PV input: 18V/10-80W
DC light: 3W x 2 (3m length)
Other function: TF card, USB, Bluetooth, radio, audio

300-3000W

Portable LiFePO4 battery

Rated output capacity range: 300-3000W
Energy storage capacity range: 378-3072Wh
Rated output AC voltage: 220/230Vac
Charge power: PV/AC grid

Remark: Specifications are subject to change without notice.