

SOFARSOLAR putting power into the hands of consumers

Energy storage | As rooftop solar proliferates, energy storage is perfectly placed to put more control into the hands of consumers. SOFARSOLAR has launched its modular energy storage solution, the SOFAR PowerAll, to achieve just that.

SOFARSOLAR has been dedicated to the development of power electronics products for many years, focusing on key areas of technology research and product development in the field of energy storage.

These R&D efforts have focused on expanding the capabilities of energy storage inverters and battery products while independently developing and producing battery management systems, intelligent lithium batteries and hybrid energy storage systems to provide customers with reliable, safe and efficient 'one-stop-shop' household energy storage system solutions.

In response to the problems experienced by the current residential energy storage industry, SOFARSOLAR has integrated energy storage batteries with power electronics technology and launched an intelligent household energy storage system solution.

The SOFAR PowerAll adopts key technologies such as independent balance management, modularization and integrated design among battery packs to enhance the balance capability between energy storage battery packs, increase the available capacity of the system and improve the battery cycle life, reliability and flexibility.

The PowerAll comprises a smart lithium battery unit which is comprised of a low-voltage battery pack, battery management unit (BMU) and a power control unit (PCU). Through the PCU, the battery can independently adjust the output voltage and current, which serves to automatically balance the capacities between battery packs according to the battery's state of charge.

This improvement to the battery capacity mismatch effectively increases the battery's available capacity, supports the use of both old and new battery units which can be expanded in stages, allows for easy maintenance and results in extremely low self-consumption of power by the battery. Furthermore, the system can be updated remotely and monitored through the use of a mobile application.

Its all-in-one design allows for a highly integrated lithium battery and energy storage inverter, whilst also possessing the advantages of a smaller footprint and design, allowing the PowerAll to be suitable for numerous installation scenarios.

The PowerAll comes with standardized accessories and quick-plug connectors, removing the need for on-site wiring. Only simple wiring and fixing operations are required and two people can complete an installation of the entire system – which includes three battery modules and one inverter module – within 30 minutes. Furthermore the battery module also has electrical and physical isolation, posing major safety benefits to the equipment and personnel installing it, while the battery is also has a zero-voltage mode, making it safer to transport and operate.

Platform specifics

- Inverter module size: 708 x 170 x 410mm
- Battery module size: 708 x 170 x 420mm
- Each battery storage module adds 5kWh of energy storage capacity, with a nominal power output of 2,500W
- One battery and one inverter module weighs 74.5kg, with each additional battery storage module weighing 50kg

Key characteristics

Intelligent management and efficient operation and maintenance;

- Built-in PCU, which automatically adjusts output voltage and current, self-balances management between battery packs and

improves capacity mismatch;

- Remote system upgrade and real-time monitoring, including a mobile application that directly manage the system;
- Supports the mixed use of old and new batteries. When the battery is abnormal, the new battery can be replaced directly, plug and play;
- It can be expanded in stages, reducing the initial investment cost and high return on investment.

Modular design, applicable to all scenarios

- Fully modular design, convenient transportation and handling, stacking installation, flexible configuration
- Standardized accessories, quick-plug connectors, easy to install.
- EPS output, seamless switching, applicable to all scenarios

Safe and reliable, stable protection

- Lithium-iron phosphate battery for safe energy storage
- Electrical and physical double isolation to ensure the battery is safer
- In the process of transportation, installation and maintenance, the battery pack is in a dormant state and the port has zero voltage output for safer installation

