



ENERGY STORAGE



50kW/100kWh

Optical Storage Unit Specification

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Product Introduction

The 50kW/100kWh PV/100kWh storage system adopts the "All-In-One" design concept, which integrates the hybrid inverter, Li-ion battery, fire protection system, temperature control system, loads and power grid to realise intelligent power management and dispatch. The product is designed to be flexible in deployment, easy to install and ship, responsive and highly reliable, and at the same time has the functions of integrating photovoltaic power generation and energy storage, multiple modes of operation, intelligent control and scheduling, highly efficient energy conversion and utilisation, multiple protections and security guarantees, and a wide range of application areas. For the industrial and commercial sectors where peak and valley tariffs exist, not only can the energy storage system be used to realise peak and valley arbitrage, reduce transformer capacity fees, lower transformer maximum demand charges, delay the construction of user distribution capacity and save money as a back-up power source for enterprises and industrial and commercial sectors, but it can also provide a clean and sustainable supply of energy, with the photovoltaic system converting solar energy into electrical energy and storing the excess; when the supply of electricity is insufficient, the energy storage system can provide a clean and sustainable supply of energy. PV systems convert solar energy into electricity and store excess power; when power supply is insufficient, energy storage systems can provide power, reducing reliance on the grid.

Application Scenario

It is suitable not only for industrial and commercial applications requiring high grid continuity, but also for remote areas with insufficient grid coverage or unstable power supply, and can cover communication energy storage, grid frequency modulation energy storage, wind and solar micro-grid energy storage, large-scale industrial and commercial distributed energy storage, data center energy storage, and photovoltaic power generation business in the new energy field.

Product Features



Standard Design

Modular "All-In-One" integrated design, support for multi-stage parallel connection, integrated transport, convenient loading and easy operation and maintenance.



Intelligent Dispatch

Multiple operation modes, mature energy management strategies and equipment control, intelligent operation and maintenance, remote control to achieve maximum product value.



High Safety

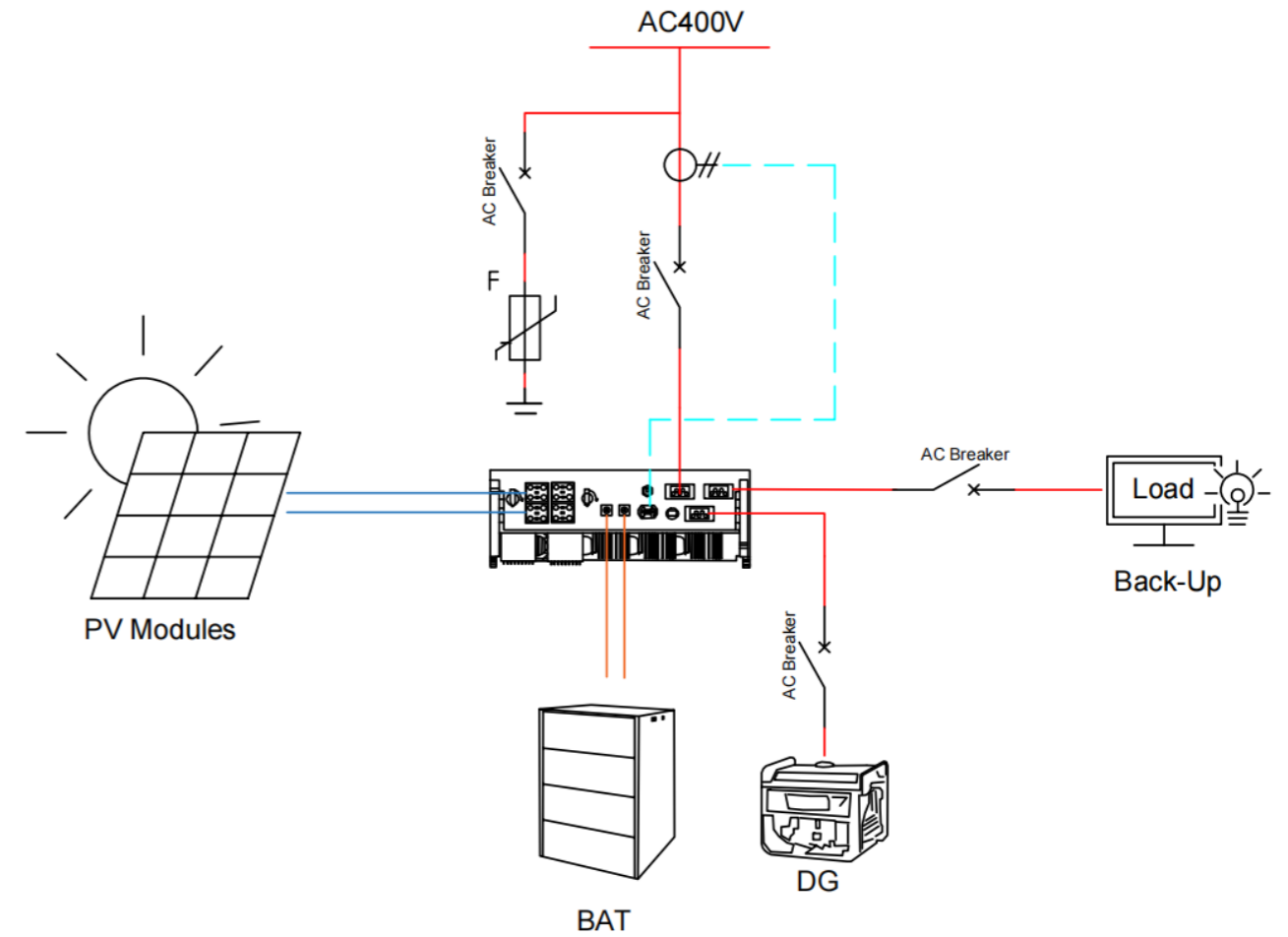
Multiple protection mechanisms, such as over-temperature, overload, over-voltage, over-current, etc., to ensure the safety and stability of system operation.



Multi-mode

Support PV direct access, Chai hair interface, support and off-grid automatic switching, can meet most of the application of optical storage solutions.

Specifications and Model Description





Product Introduction

BYHV-100SAC-H



PV Input

Rated PV input power	50kW
MPPT voltage range	200V ~ 850V
No. of MPP trackers	4
No. of DC inputs per MPPT	8
Max. input current	60*2A
Max. short-circuit current	80*2A

DC(Battery Side)

Battery type	Lithium Battery (with BMS)
Battery communication mode	CAN
Battery voltage range	546V ~ 750V
Maximum charging current	100A
Maximum discharge current	100A

Grid (Grid-Tied)

Rated power	50kW
Max power	55kW
Rated AC voltage	3P+N+PE, 220/380V; 230/400V; 240/415V
Rated AC frequency	50/60HZ
Rated current	75A
Power factor	-0.8~+0.8
Max. total harmonic distortion	<3% Rated output power
DCI	<0.5%In

Grid (Off-Grid)

Rated power	50kW
Max power	55kW
Rated current	75A
UPS switching time	<20ms
Rated output voltage	3P+N+PE, 220/380V; 230/400V; 240/415V
Rated output frequency	50/60HZ
Peak output apparent power	60kW/60S
Voltage harmonic distortion	<3% Linear load



Generator side

Max. input apparent power	60kVA
Max. charging power of batter	50kW
Rated AC voltage	3P+N+PE, 220/380V; 230/400V; 240/415V
Rated AC frequency	50/60HZ
Max. input current	87A

Protection

DC reverse polarity protection	Integrated
Battery input reverse connection protection	Integrated
Insulation resistance protection	Integrated
Surge protection	Integrated
Over-temperature protection	Integrated
Residual current protection	Integrated
Islanding protection	Integrated (Frequency shift)
AC over-voltage protection	Integrated
Overload protection	Integrated
AC short-circuit protection	Integrated

System Parameters

System Energy Efficiency	≥92%
Operating Modes	Grid-Tied / Off-Grid
Communication Method	CAN, 485, TCP/IP
Protection Level	IP55
Anti-Corrosion Level	C3
Noise	≤65dB
Fire Protection	Hot Aerosol
Operating Temperature	-29°C to +50°C
Operating Humidity	0% to 95% (no condensation)
Altitude	3000m (derating above 2000m)
Cooling Method	Intelligent Air Cooling
Overall Dimensions (WHD)	1200mm*1850mm*1150mm
Weight	Approximately 1.4 tons

Installation Requirements

1. The installation environment should be dry, well-ventilated, free from corrosive substances, free from electromagnetic interference, and with a temperature between -29°C and 50°C.
2. The equipment should be placed on a stable surface and should maintain a certain distance from surrounding objects for heat dissipation.
3. The equipment should have reliable grounding and comply with relevant safety standards.
4. Follow the steps in the product manual or installation manual for installation and wiring.

Maintenance And Care

1. Regularly inspect the operating status of the equipment and perform necessary maintenance, including checking the tightness of terminal connections, the condition of cable equipment connections, and insulation performance. The equipment should be placed on a stable surface and should maintain a certain distance from surrounding objects for heat dissipation.
2. The battery components should be replaced regularly to ensure the normal operation of the equipment.
3. Periodically clean and maintain exhaust vents, such as air conditioning, ensuring cleaning fluids do not enter the equipment.

After-sale Service

1. We provide comprehensive after-sales service, including equipment installation, commissioning, and maintenance. The battery components should be replaced regularly to ensure the normal operation of the equipment.
2. During the equipment warranty period, we will provide free repairs or replacements. After the warranty period, we offer paid repair and maintenance services.
3. After equipment installation, we provide free safety inspections and safety training.

Precautions

1. Before installing the equipment, place it in a dry and well-ventilated environment, avoiding prolonged exposure to humid conditions.
2. Do not place flammable or explosive materials on the equipment.
3. Prohibit illegal operations and modifications on the equipment. If parameter changes are required, please contact the manufacturer or dealer.