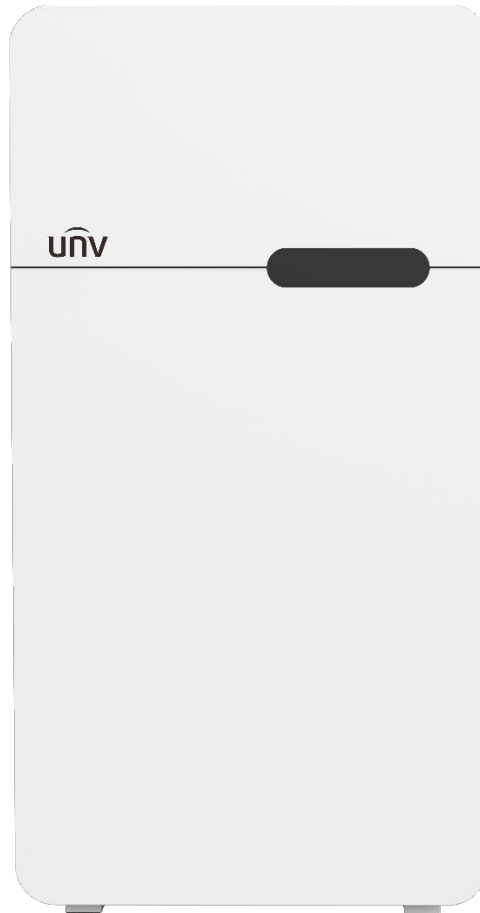


# Residential Energy Storage System

ESS-SAH5B10-A-EU

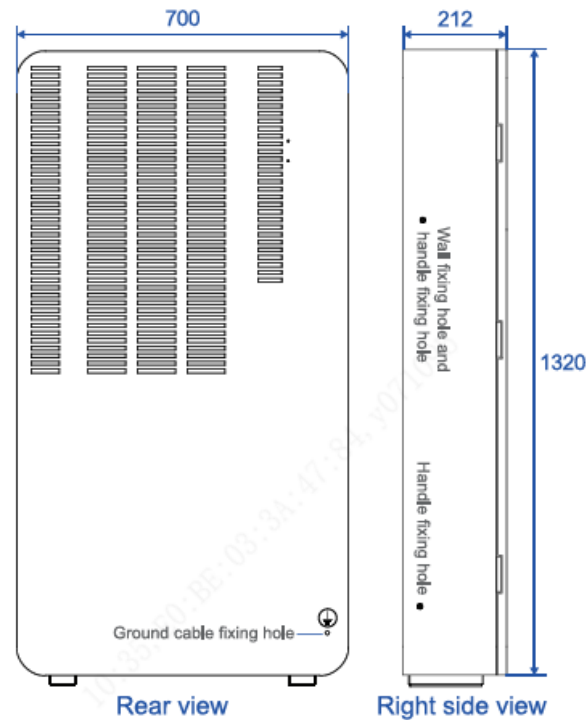


## Overview

ESS-SAH5B10-A-EU is a solar energy storage device that can operate both on and off grid. It is integrated with a 5kW high-power inverter, a 10.24kWh lithium-iron phosphate (LiFePO4) battery, and a Wi-Fi module that allows user to monitor system status at any time through the mobile app. The device can receive power from the mains and two MPPT inputs, and can output a maximum of 5kW AC to power a variety of household appliances or store excess power to battery or feed back to the grid for economic benefits and flexible energy use. It is intended for residential use and provides multiple modes to meet different needs in different scenarios.

## Dimensions

1320mm (H) × 700mm (W) × 212mm (D)



## Features

- Built-in 5kW on&off-grid inverter to power multiple different household appliances at the same time.
- High-performance 10.24kWh lithium-iron phosphate (LiFePO4) battery, safe, reliable, and long lifespan (up to 6,000 cycles).
- Supports off-grid operation, can seamlessly switch between on/off-grid mode in backup mode to supply power without interruption.
- Integrated design, simple and stylish appearance, easy to transport and install.
- Multiple indicators show at-a-glance system status.
- Built-in Wi-Fi module allows remote system monitoring through a mobile app, achieving 24-hour automatic energy management and real-time update.
- Multiple modes available for user to choose for maximum system utilization in different scenarios.
- Ultra-wide photovoltaic input voltage range (125~550V), up to 11A input current, compatible with different photovoltaic arrays. Max 6500W input power, which is 1.3 times of the rated DC output power.
- Two independent MPPT inputs meet different installation scenarios in households.
- Fanless integrated and efficient heat dissipation technology allows a quieter environment and longer lifespan of system components.
- Integral cabinet, reinforced protection plate for battery compartment, IP65 ingress protection.
- BMS intelligent battery management system safeguards battery with integrated protections such as overvoltage protection, over-discharge protection, overcurrent protection, short-circuit protection, high temperature protection, low temperature protection, etc.
- Supports cold startup.
- Inverter's conversion efficiency up to 97.6%.

- Multiple inverter protections: DC insulation resistance monitoring, residual current monitoring, anti-islanding protection, input reverse polarity protection, AC overcurrent protection, AC short-circuit protection, AC overvoltage protection.
- 5-year warranty, CE, UN38.3, UL1973, UL9540, IEC62619 certificates.

## Specifications

Inverter	
PV input parameters	Description
Max input power	6500W
MPPT voltage range	125V to 550V
Rated input current	11A per input
Number of MPP trackers	2
On-grid output parameters	Description
Rated on-grid output apparent power	5000VA
Max on-grid input apparent power	9200VA
Rated output voltage	230V AC, 50Hz
Max on-grid output current	24.5A
Power factor	~1 (0.8, leading/lagging, adjustable)
Total harmonic distortion (THD)	<3%
Off-grid output parameters	Description
Rated off-grid output apparent power	4600VA
Peak off-grid output apparent power	6900 VA, 10 sec
Max output current	20A
Rated output voltage	230 (±2%) VAC
Rated output frequency	50 (±2%) Hz
Total harmonic distortion (THD)	<3%
General	Description

Max efficiency	97.6%
Operating temperature	-25°C to 60°C
Operating humidity	0% to 95% (RH)
Cooling	Natural convection
Display	LED indicator, app
BMS communication	RS485, CAN
Wireless communication	Wi-Fi
Ingress protection	IP65
<b>Battery</b>	
<b>Basic parameters</b>	<b>Description</b>
Rated energy	10.24kWh
Cell	Lithium iron phosphate
Nominal voltage	51.2 VDC (25°C ±2°C)
Battery self-discharge rate	≤3.5%/month (25°C, 40% SOC)
Cycle life	≥6000 (0.5C/0.5C, 70% DOD) ≥3500 (0.5C/0.5C, 80% DOD)
Rated capacity	200Ah
Nominal discharge current	100A
Max continuous discharge current	100A
Nominal charge current	100A
Max continuous charge current	100A
Internal impedance	> 100mΩ
IP level	IP65
Max withstand voltage	1500 VDC
Operating temperature	Charge: 0°C to 55°C Discharge: -20°C to 55°C
Storage temperature	-30°C to 60°C
Storage humidity	5% to 95% (RH)
<b>Physical</b>	
<b>Basic parameters</b>	<b>Description</b>

Dimensions	1320mm (H) * 700mm (W) * 212mm (D)
Weight	149kg
Ingress protection	IP65
Operating environment	Description
Operating temperature	Charge: 0°C to 55°C Discharge: -20°C to 55°C
Operating humidity	5% to 95% (RH)
Altitude	≤2000m

## Ordering Information

Item	Qty	Remarks
ESS-SAH5B10-A-EU	1pcs	Residential energy storage system (single phase on&off-grid, 5kW inverter, 10.24kWh battery, EU)

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