



# Rack Type HV Battery System

**GHR-314**

## ESS

*Energy storage systems have been proven to be "extremely lucrative" for commercial and industrial (C&I) field.*

### Safe and Reliable

- LiFePO4 Batteries with safety performance and long cycle life
- Intelligent BMS
- Support aerosol fire extinguishing
- Support up to 140A current output

### High-Efficiency Use

- Low self-discharge up to 6 months, no memory effect

### Support Wifi&Upgrade

- Wi-Fi module, real-time data monitoring
- Support USB upgrade, remote upgrade

### Intelligent BMS

- Multi protection functions including over-discharge, over-charge, over-current and over-high or low temperature
- Automatically manage charge and discharge state and balance current and voltage of each cell

### Flexible Expansion

- Support 3 ~ 15 packs in series

### Economical&Convenient

- Rack Type, less footprint, lower cost, higher spaceutilization
- Embedded designed module for quick installation and easy maintenance

## Technical Data

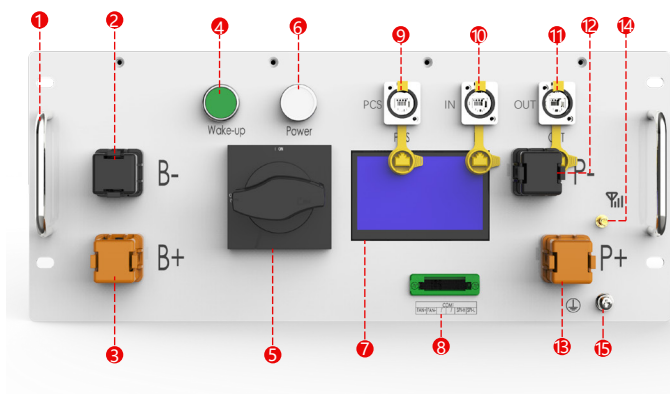
Battery Module Model		GHR-314					
<b>Main Parameter</b>							
Cell Chemistry		LiFePO4					
Module Energy (kWh)		16.076					
Module Nominal Voltage (V)		51.2					
Module Capacity (Ah)		314					
ITEM		GHR-314-E64	GHR-314-E80	GHR-314-E96	GHR-314-E112	GHR-314-E128	GHR-314-E144
Battery Module Qty In Series ( Optional )		4	5	6	7	8	9
System Nominal Voltage (V)		204.8	256.0	307.2	358.4	409.6	460.8
System Operating Voltage (V)		179V~227V	224V~284V	269V~341V	314V~398V	358V~454V	403V~511V
System Energy (kWh)		64.31	80.39	96.46	112.53	128.61	144.69
System Usable Energy (kWh) 90%		57.88	72.35	86.81	101.28	115.75	130.22
Charge/Discharge Current(A)	Nominal						157A
	Peak Discharge						157A
<b>Other Parameter</b>							
Thermal Management		Smart fan cooling					
LCD Display		SOC/ Voltage/Tem/Time/Fault Code					
Working Temperature (°C)		Charge:0~55/Discharge :-20-55					
Status Indicator		Wake Up/Power light					
Communication Port		CAN/RS485					
Humidity		5%~85%RH					
Altitude		≤2000m					
IP Rating of Enclosure		IP20					
Dimension (W*D*H, mm)		582*838*1480	582*838*1736	582*838*1992	582*838*2248	1184*838*1480	1184*838*1480
Weight Approximate (kg)		534kg	655kg	779kg	903kg	1037kg	1151kg
Installation Location		Rack Mounting					
Storage Temperature (°C)		0~35°C					
Recommend Depth of Discharge		90%					
Cycle Life		25±2°C, 0.5C/0.5C, DOD80%≥6000					
Warranty		10 years					
Certification		CE/UN38.3/MSDS					

## Technical Data

Battery Module Model		GHR-314					
<b>Main Parameter</b>							
Cell Chemistry		LiFePO4					
Module Energy (kWh)		16.076					
Module Nominal Voltage (V)		51.2					
Module Capacity (Ah)		314					
ITEM		GHR-314-E160	GHR-314-E176	GHR-314-E192	GHR-314-209	GHR-314-E225	GHR-314-E241
Battery Module Qty In Series ( Optional )		10	11	12	13	14	15
System Nominal Voltage (V)		512.0	563.2	614.4	665.6	716.8	768.0
System Operating Voltage (V)		448V~568V	493V~625V	538V~682V	582V~738V	627V~795V	672V~852V
System Energy (kWh)		160.76	176.84	192.92	209.00	225.08	241.15
System Usable Energy (kWh) 90%		144.69	159.16	173.63	188.10	202.57	217.03
Charge/Discharge Current(A)	Nominal						157A
	Peak Discharge						157A
<b>Other Parameter</b>							
Thermal Management		Smart fan cooling					
LCD Display		SOC/ Voltage/Tem/Time/Fault Code					
Working Temperature (°C)		Charge:0~55/Discharge :-20-55					
Status Indicator		Wake Up/Power light					
Communication Port		CAN/RS485					
Humidity		5%~85%RH					
Altitude		≤2000m					
IP Rating of Enclosure		IP20					
Dimension (W*D*H, mm)		1184*838*1480	1184*838*1736	1184*838*1992	1184*838*1992	1184*838*2248	1184*838*2248
Weight Approximate (kg)		1285kg	1400kg	1533kg	1647kg	1781kg	1895kg
Installation Location		Rack Mounting					
Storage Temperature (°C)		0~35°C					
Recommend Depth of Discharge		90%					
Cycle Life		25±2°C, 0.5C/0.5C, DOD80%≥6000					
Warranty		10 years					
Certification		CE/UN38.3/MSDS					

# System Components

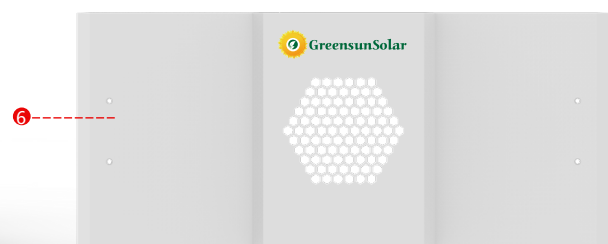
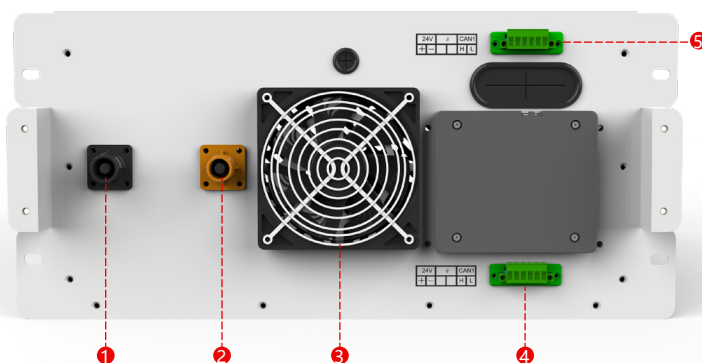
Model	HVB-R-314
Name	High Voltage Control Box
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	157A
Operating Temperature	-20~60°C
Ingress Protection	IP20
AC Input Rating	220±10%VAC/2A
Details	502×210×460mm(W×H×D),25kg



- ① Handle
- ② B-: Battery common negative connection position (Black)
- ③ B+: Battery common positive connection position (Orange)

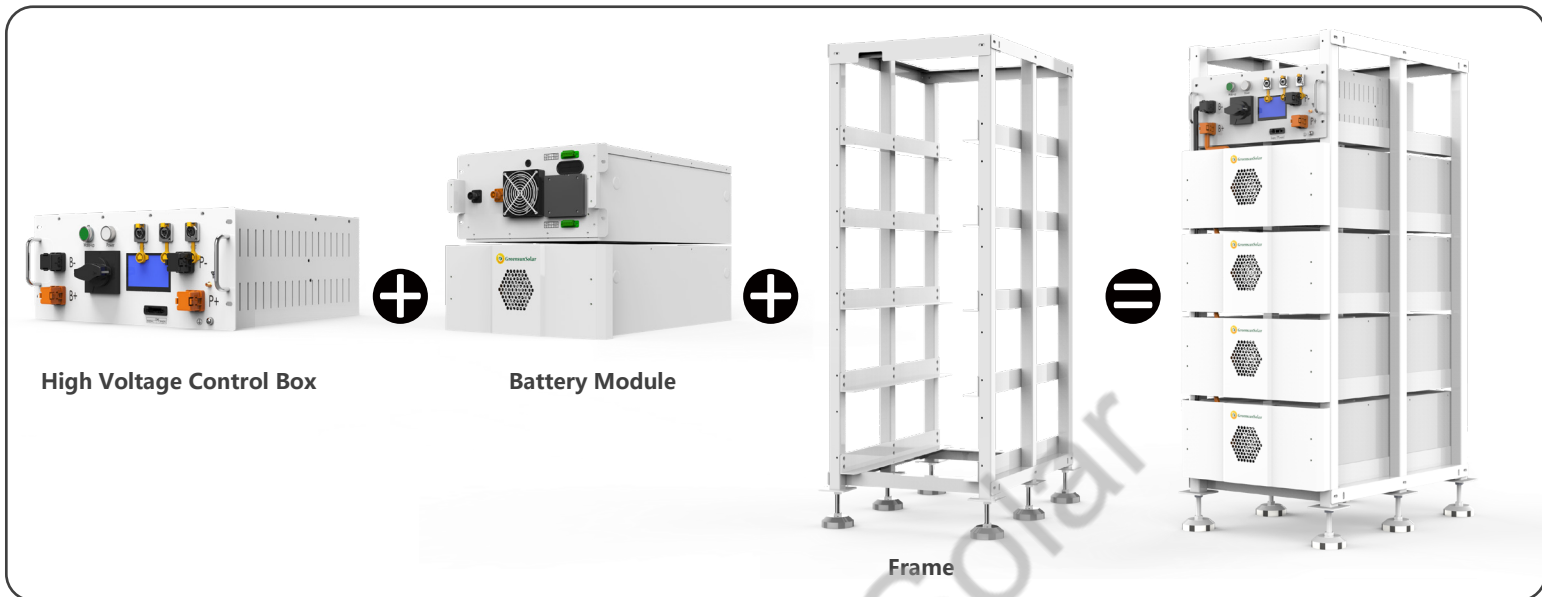
- ④ Wake-up Switch
- ⑤ On/Off Switch
- ⑥ Power Indicator
- ⑦ Battery Screen: Display battery SOC, Voltage, Current and Temperature, Time, Fault code
- ⑧ Providing 24VDC power for the cooling fan and Communicative connection with the first battery module
- ⑨ PCS Communication Port: Connect with PCS/Inverter
- ⑩ IN Port for parallel
- ⑪ Out Port for parallel
- ⑫ Connection Position Of PCS Negative Pole (Black)
- ⑬ Connection Position Of PCS Positive Pole (Orange)
- ⑭ Wireless Antenna
- ⑮ Connection to the battery rack and the ground point

Model	GHR-314
Name	Battery Module
Nominal Capacity	314Ah
Nominal Energy	16.078kWh
Nominal Voltage	51.2Vdc
Nominal Charge/Discharge Current	157A
Ingress Protection	IP20
Operating Temperature(Charge)	0~55°C
Operating Temperature(Discharge)	-20~55°C
Storage Temperature	0~35°C
Details	532×233×801mm(W×H×D),114kg



- ① B-: Battery module negative pole (black)
- ② B+: Battery module positive pole (orange)
- ③ Fan: Ventilation and heat dissipation
- ④⑤ Connection position of battery module communication and power supply output
- ⑥ Dust guard/dust guard

## System Components



## All-in-one Energy & Device Management Platform

**REAL-TIME EQUIPMENT MONITORING**



The platform provides comprehensive real-time monitoring and management. Key features include:

- Device Overview:** A dashboard showing a list of devices, including a demo account with email `ABC123@aaf.mil`. Options include "My Devices", "Add device", "Configure Wi-Fi", "Software Update", "After Sales Service", and "Feedback".
- Device Details:** A detailed view for a specific device (UDAN-057A) showing:
  - Current battery energy: 20.3% (Charging...)
  - Current power: 1.6 kW, Expected full: 10:33
  - Charging time: 0h, Discharge: 22h
  - Health monitor: Normal, Battery temp: 21°C
- Performance Analysis:** Three detailed charts for "Device details":
  - Electricity:** Shows cumulative charge (1449 kWh) and discharge (1395.9 kWh) over time, with filters for Day, Month, and Year.
  - Power:** Displays peak charge power (2.16 kW) and peak discharge power (0.05 kW) with a corresponding line graph.
  - Duration:** Shows cumulative charge time (1439.5%) and discharge time (2261.8%) with filters for Day, Month, and Year.

Display the data details of the current device, and view the battery, charging and discharging power, and charging and discharging time data separately, and support time filtering.