ESS High Voltage Lithium Batteries

HV100-Series

20.4 – 491kWh|100Ah

The HV100 - Series is a high-performance scalable battery storage module.The system design allows for maximum flexibility,making it suitable for a broad range of storage applications.
Additional batteries can be installed in series allowing for a maximum storage capacity of 491kWh.Installation is easy with a plug and play solution that can save valuable time for installers.

CE IEC UN38.3

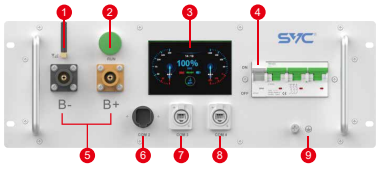


Main Features

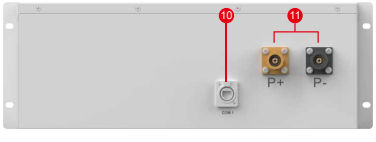
- 5.12 kWh per Module
- >6000 cycles (90%DOD 70%EOL)
- Wide Temperature Tolerance
- High Voltage range
- Single cluster (rack) 61.4kWh, scalable to 491 kWh
- 90% DOD recommended
- CAN/RS485 Communication with inverter and software computer
- $LiFePO_4$ Chemistry-Safest Lithium Technology



Product Overview



HV100 BOX (front view)



HV100 BOX (rear view)



Battery Module HV51100 (front view)

1. WiFi Antenna
2. LED Indicator
3. LCD Display
4. Input Battery Breaker
5. HV Battery Input (B+/B-)
6. SPI COM In Port from Batteries
7. RS485/CAN0/CAN1 Communication Port
8. RS485/CAN0/CAN1 Communication Port
9. Ground Screw
10. RS485/CAN0/CAN1 Communication Port
11. +/- HV Output to Inverter
12. Battery Module Terminals (B+/B-)
13. SPI COM In Port
14. SPI COM Out Port

Technical Data		HV100-204	HV100-307	HV100-409	HV100-512	HV100-614
Battery Type		LiFePO$_4$				
Battery Module		HV100 BOX HV51100*4	HV100 BOX HV51100*6	HV100 BOX HV51100*8	HV100 BOX HV51100*10	HV100 BOX HV51100*12
Nominal Capacity		20480Wh	30720Wh	40960Wh	51200Wh	61440Wh
Max.output power		20kW	30kW	40kW	50kW	60kW
Nominal Voltage		204.8V	307.2V	409.6V	512.0V	614.4V
Operating Voltage		172.8~230.4V	259.2~345.6V	345.6~460.8V	432.0~576.0V	518.4~691.2V
Recommend Discharge Current		50A				
Max.Charge/Discharge Current		100A				
Peak Discharge Current		120A@30S				
Battery Module Capacity		100Ah				
Built-in Circuit Breaker		125A				
Charge Efficiency		99%				
Battery Roundtrip Efficiency		95%				
Cycle Life		>6000 cycles (90%DOD 70%EOL)				
COMMUNICATIONS AND MONITORING						
Compatible Inverters		SVC, Growatt, Goodwe, Solis, Deye, Megarevo.				
Communication ports		CAN2.0,RS485				
WiFi interface		Yes,for remote monitoring				
LCD Display Information		Real-time voltage, current, power SOC, temperature, charge/discharge status, alarms				
PROTECTION						
Main Protection Device		125A DC Breaker & Overcurrent Fuse				
Internal Protections		Over/Under Voltage Protection,Over Current Protection,OverTemperature Protection,Short Circuit Protection, Active Cell Balancing,Temperature Monitoring & Protection				
GENERAL						
Max Parallel Connection		Up to 8 units (491kWh max, may require additional hardware)				
Scalable Design		Modular 4-12 battery modules per rack				
IP Rating of Enclosure		IP20				
Design Life		10* Years				
Installation Location		Indoor Rack Mounting				
Operating Temperature		Charge:0~50°C:Discharge:-20~60°C				
Storage Temperature		-5~35°C				
Recommend Depth of Discharge		90%				
Humidity		5~95%(No Condensing)				
Altitude		Max.3,000m				
GENERAL						
Machine Dimension (W*H*D)(mm)	HV100 BOX	443*163*437				
	HV51100	443*133*480				
System Cabinet Dimension (W*H*D)(mm)		550*1000*500	550*1300*500	550*1600*500	600*1900*500	600*2150*500
N.W(kg)	HV100 BOX	15.5				
	HV100 - Series	206	311	405	506	610
CERTIFICATION &STANDARDS						
Safety		IEC62619,MSDS				
EMC		EN IEC 61000-6-1/2/3/4				
Transportation		UN38.3				

* The technical specifications of this document are subject to change without any notice.