

All In One ESS Energy Storage System

Tiny Home Solar Solutions
SESS Small Energy Storage System
1.28kWh LiFePO4 Battery + 1kW Smart Inverter



SESS Series Brief Introduce

SESS 1.28+1 integrates a 1.28kWh LiFePO4 battery and a 1kW inverter in one moveable system with wheels. Designed for home energy storage and backup power, the system supports PV charging and AC charging. The battery operates at a nominal 12.8V with a rated capacity of 100Ah. Its compact cabinet allows convenient positioning for residential applications. The 1kW AC output supplies compatible household appliances at 230Vac. Refer to the technical specifications for the operating limits and select the configuration to suit the application. OEM and customization options are available on request.

Safety

Long Life

Simple



Application Block Diagram



All In One ESS

Energy Storage System

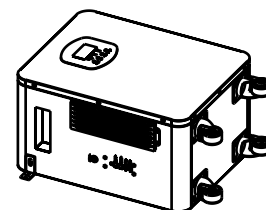
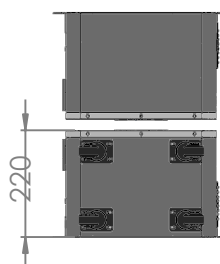
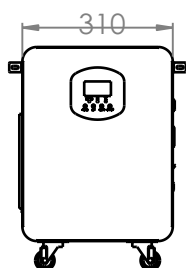
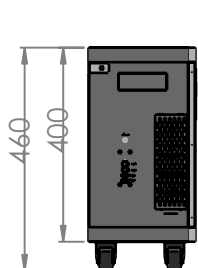
Tiny Home Solar Solutions
SESS Small Energy Storage System
1.28kWh LiFePO4 Battery + 1kW Smart Inverter



Technical Specifications

Model		SESS 1.28+1
Parametric Description		1.28kWh+1kW
Battery	Battery Type	LiFePO4 Battery
	Battery Energy	1.28KWh
	Nominal Voltage	12.8V
	Rated Capacity	100Ah
	Voltage Range	11.0~14.0V
	Cycle Life	Prismatic Cell, > 6000cycles @ 80%DOD
	Monthly Self Discharge	<3%
	Communication Protocol	CAN/RS485
	Charge Temperature	0 °C to 45 °C (32F to 113F) @60±25% Relative Humidity
	Discharge Temperature	-20 °C to 60 °C (-4F to 140F) @60±25% Relative Humidity
	Storage Temperature	0 °C to 40 °C (32F to 104F) @60±25% Relative Humidity
PV	Max. Power	600W
	Max. PV Voltage	150VdC
	MPPT Voltage Range	20~50Vdc
	Max.PV charge Current	40A
AC Output	Rated Power	1.0KW
	AC Voltage	230Vac±5%
	AC Frequency	50Hz/60Hz
	Efficiency	≤93%
	Transfer time	10ms (for PC) 20ms (for Appliance)
	Waveform	Pure sine wave
AC Input	Rated AC Voltage	230Vac
	AC Voltage Range	170~280Vac(for PC) 90~180Vac(for Applies)
	Frequency Range	50Hz/60Hz(Auto sensing)
General Parameters	Altitude	≤2000m
	Humidity	5%~95%
	Work Temperature	-10°C ~50°C
	Size(mm)	310×220×460 mm / 12.20×8.66×18.11 in
	Weight(kg)	25kgs/55.11lbs

Size & Weight



Length: 310±1mm

Width: 220±1mm

Height: 460±1mm

Weight: 25.0±0.1kgs

Note: All above information shall be changed without prior notice, we reserve the right to explain and update the latest information. Welcome inquiry us !

Power Your Home Choose CSSUN

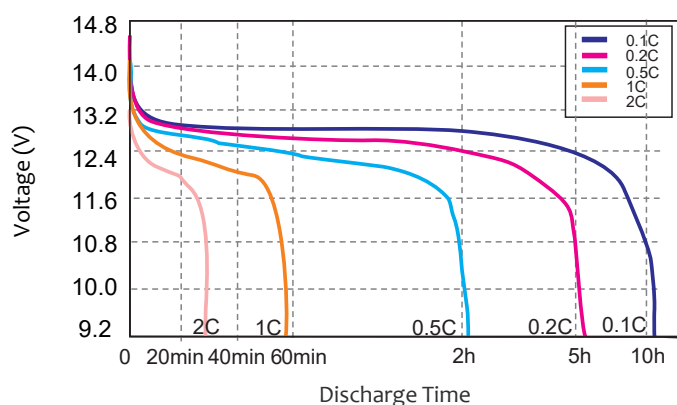
Copyright© 2026 CSSUN Energy Co., LTD

Battery BMS Specifications

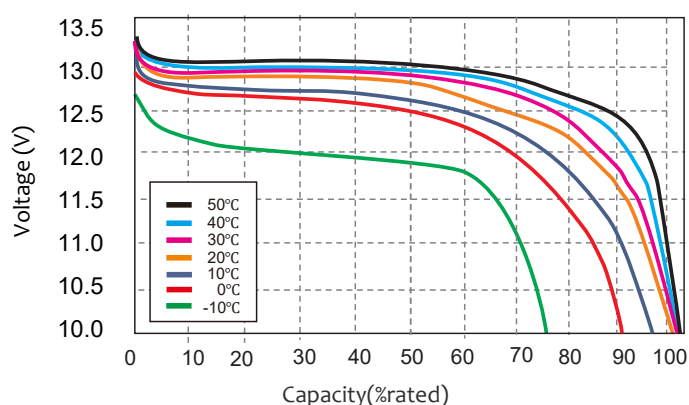
- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Temperature protection
- Cell Voltage balance function
- Short detection function

Battery Performance Characteristics (4S reference curves, 12.8V nominal)

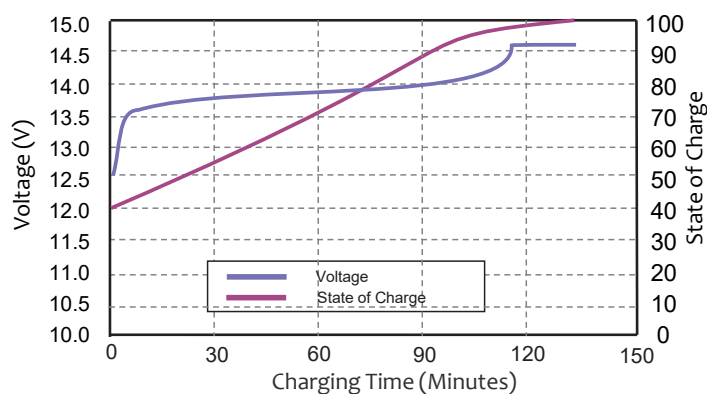
Different Rate Discharge Curve (25°C)



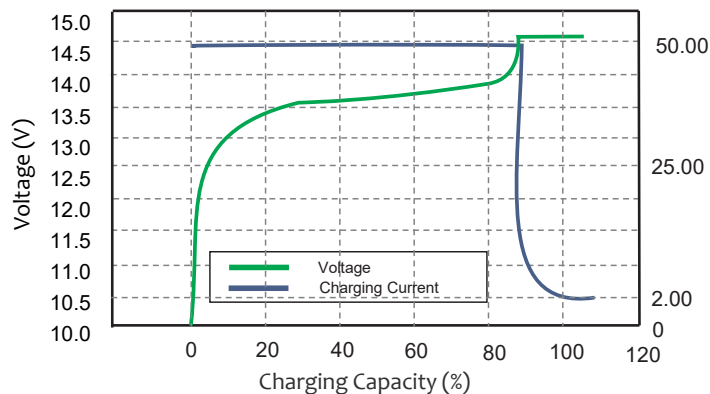
Different Temperature Discharge Curve At 0.5C



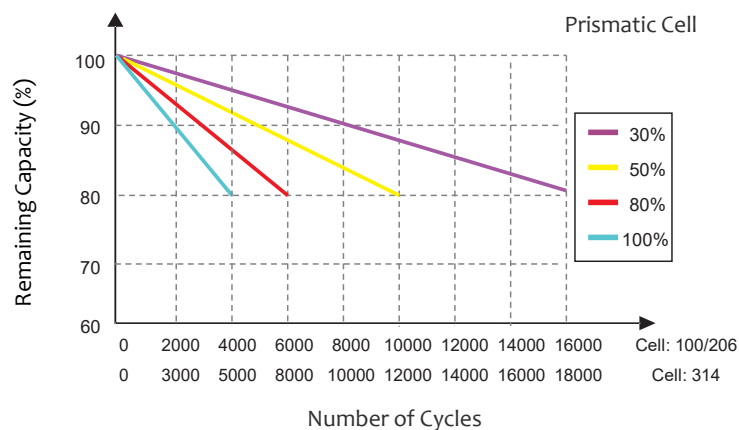
State Of Charge Curve At 0.5C (25°C)



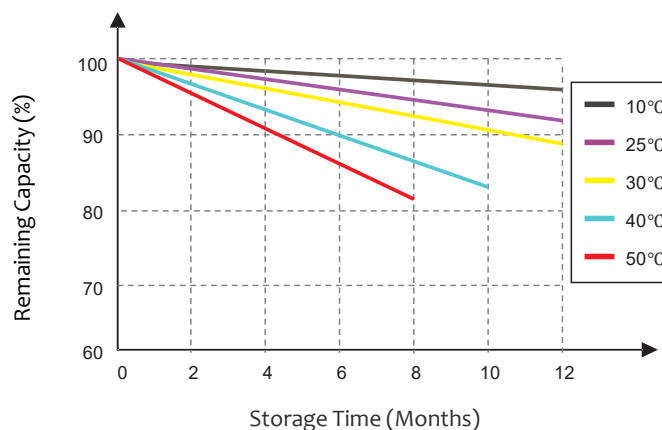
Charging Characteristics At 0.5C (25°C)



Cycle Life Curve At 0.2C According DoD



Self Discharge Characteristics Curve



Note: All above information shall be changed without prior notice, CSSUN reserves the right to explain and update the latest information. Welcome inquiry us !
SAFETY WARNING : Use only within the allowed parameters. Do not short circuit or over-load the battery. Charge only using an approved charger designed specifically to charge this battery. Do not heat above maximum temperatures indicated. Never crush, mutilate, puncture or abuse the battery. Do not dismantle the pack or disable any of the protective devices or circuits. Do not use the battery if you suspect it may be faulty or damaged.

Add: Evolution Building, Xingdong Industry Park, Bao'an District, Shenzhen, Guangdong, China
 Tel: +86-755-29123661 | email: sales@cssun.net | support@cssun.net | website: www.cssun.net