



All Travel Energies.  
NEW YORK

# All In One ESS

## Energy Storage System for Home Solar Power



### AIO Series

The series refers to AIO LiFePO<sub>4</sub> batteries+ inverter with wheels integrates cutting-edge technology for efficient energy storage and management. Designed for seamless installation and space-saving efficiency, it offers a compact solution ideal for residential and small commercial applications. With a robust 1-10 kW inverter and 1-10 kWh lithium battery capacity, it ensures reliable power supply and energy optimization. Advanced features include smart monitoring, remote control capabilities, and built-in safety protocols for enhanced reliability. All In One system delivers versatility, performance, and ease of use, making it a dependable choice for modern energy requirement. Customize All In One system to power your facility with or without solar and lower your energy bills.



Longer service



Quick Recharge



Better storage



High Safty



### Power System Diagram





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### Technical Specifications

Model Parametric Description		AIO200-24	AIO200-48	AIO300-48
Battery	Battery Type	LiFePO4 Battery		
	Battery Energy	5.12KWh	10.24KWh	15.36KWh
	Nominal Voltage	25.6V	51.2V	51.2V
	Rated Capacity	200Ah	200Ah	300Ah
	Voltage Range	22.0~28.0V	42.0~57.0V	42.0~57.0V
	Cycle Life	Prismatic Cell, > 6000cycles @ 80%DOD		
	Months Self Discharge	<2%		
	Communicate Protocol	CAN/RS485		
	Charge Temperature	0°C to 45°C (32°F to 113°F)@60±25%Relative Humidity		
	Discharge Temperature	-20°C to 60°C (-4°F to 140°F)@60±25%Relative Humidity		
	Storage Temperature	0°C to 40°C (32°F to 104°F)@60±		
PV	Max. Power	3000W	3500W	
	Max. PV Voltage	450Vdc	500Vdc	
	MPPT Voltage Range	30~400Vdc	120~430Vdc	
	Max.PV charge Current	80A	80A	
AC Output	Rated Power	3.0KW	5.0KW	
	AC Voltage		230Vac±5%	
	AC Frequency		50Hz/60Hz	
	Efficiency	≤94%	≤94%	
	Transfer time		10ms (for PC) 20ms (for	
	Waveform		Pure sine wave	
AC Input	Rated AC Voltage		230Vac	
	AC Voltage Range		170~280Vac(for PC) 90~180	
	Frequency Range		50Hz/60Hz(Auto Sensing)	
General Parameters	Altitude		≤2000m	
	Humidity		5%~95%	
	Work Temperature		-10°C~50°C	
	Size(mm)	540*182*768mm 21.25*7.16*30.23Ins	560*242*786mm 22.04*9.52*30.94Ins	680*242*786mm 26.77*9.52*30.94Ins
	Weight(kg)	56.6kgs/122.57lbs	99.15kgs/128.58lbs	127.1kgs/280.2lbs



**WARNINGS**

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.

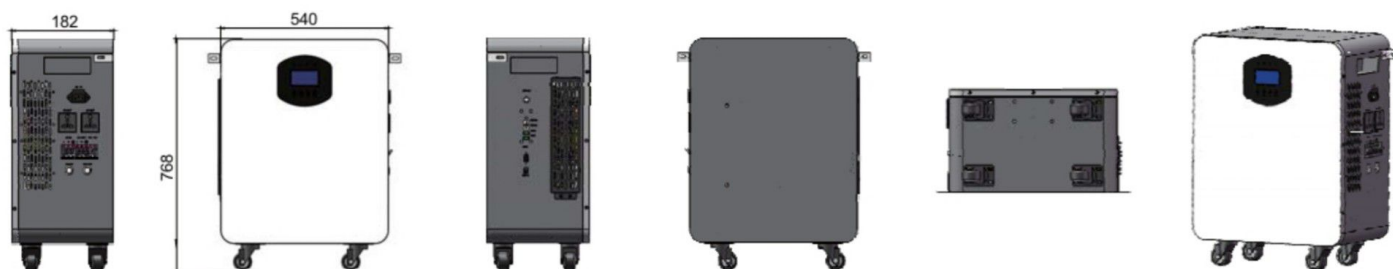


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### AIO200-24 Size&Weight



Length: 540±1mm

Width: 182±1mm

Height: 768±1mm

Weight: 56.6±0.1kgs

### AIO200-48 Size&Weight

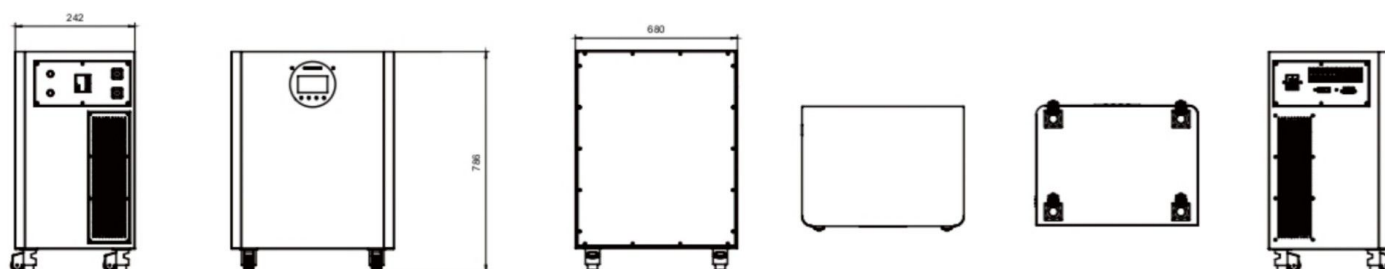


Length: 560±1mm

Width: 242±1mm

Height: 786±1mm

### AIO300-48 Size&Weight



Length: 680±1mm

Width: 242±1mm

Height: 786±1mm

Weight: 127.1±0.1kgs





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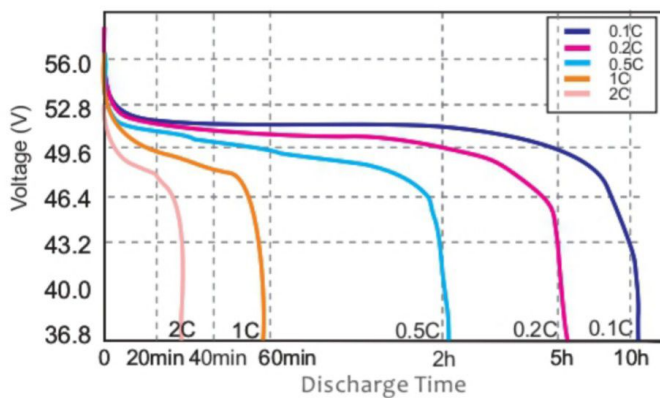
## Energy Storage System for Home Solar Power

### Battery BMS Specifications

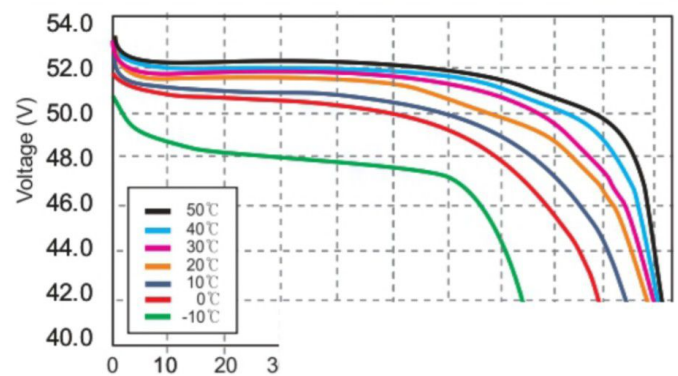
- > Overcharge detection function
- > Over discharge detection function
- > Over current detection function
- > Temperature protection
- > Cell Voltage balance function
- > Short detection function

### Battery Performance Characteristics (Data test from 16 Series Cell)

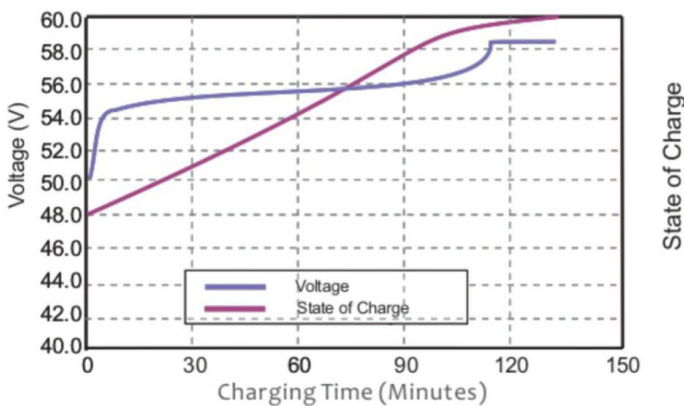
#### Different Rate Discharge Curve (25°C)



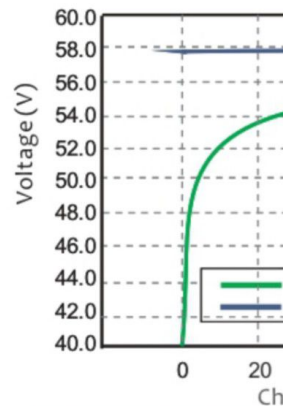
#### Different Temperature Discharge Curve At 0.5c



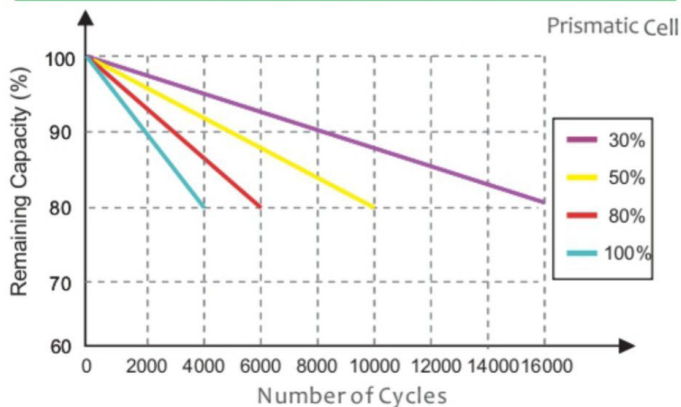
#### State Of Charge Curve At 0.5c (25°C)



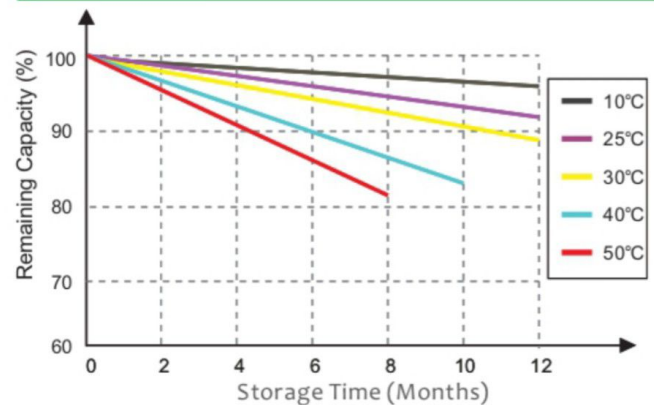
#### Charging Characteristic



#### Cycle Life Curve At 1c According DoD



#### Self Discharge Characteristics Curve



**NOTE:** All above information can be changed without prior notice, KOYOSONIC reserves the right to explain and update the latest information. In addition, we can design exactly based on your power needs. Welcome to tell us of your inquiries.