




ESAUL

LITHIUM BATTERY

BROCHURE

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COMPANY INTRODUCTION



Based on a profound understanding of the energy utilization, ESAUL-energy is committed to providing solutions for high quality, efficient, environmentally friendly and safe portable power source to our daily modern lives! Our batteries are used in UPS, wind energy storage system, solar energy storage system, telecommunications, electrical tools, golf carts, forklifts, sweepers, marine, camping, caravans, motor homes, and backup power system.



WALL-MOUNTED LIFEPO4 BATTERY



Main features

- Top brand cell, grade A quality
- High density, small size and weight
- Cells cycle times 6000 cycles
- Long lifespan: 5 years warranty, 10+ years life design
- Big discharge current, Suitable for solar system.
- Smart BMS system to optimize the performance
- Communication: RS485/CAN, compatible with different brand of solar inverter
- All around protection
- Power wall and 4U Rack-mounted case design for optional

TECHNICAL PARAMETER		
MODEL	51.2V100AH Li-Wall Series	51.2V200AH Li-Wall Series
SPECIFICATION		
Battery Type	LiFePO4 (BYD/EVE Cell)	LiFePO4 (BYD/EVE Cell)
Normal Battery Model	51.2V100AH	51.2V200AH
Normal Capacity(25°C, 0.2C) (WH)	5120Wh	10240 Wh
Voltage window (Vdc)	44.8~58.4V	44.8~58.4V
Float Charge Voltage(Vdc)	56.0V	56.0V
Max.continue discharge current (A)	50	100
Max.pulse discharge current (A)	150A 1Sec.	150A 1Sec.
Max.continue charge current (A)	50	100
Cycle life(+25°C 0.2C 100%DOD)	>6000 Cycles	>6000 Cycles
Cell Equalizer Current(A)	1~5A Max.	1~5A Max.
Terminal	M8	
Storage temperature	0°C~30°C	
Storage duration	6 months at 25°C	
Safety standard	UN38.3,MSDS,CE	
IP degree	IP20	
Communication function	RS485/CAN(Communication protocol supported inverter brand: Deye, Growatt, Voltroni, GOODWE VICTRON, PYLONTEC, SMA, SOFAR)	
PROTECTION		
Protection	Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection	
AMBIENT		
Noise(dB)	< 40dB (1 meter)	
Working Temperature	-10°C~+50°C	
Humidity	0~95% (no condensation)	
DIMENSION		
L×W×H (products size) mm	L625*W455*H181mm	L837*W455*H181mm
L×W×H (package size) mm	L660*W490*H216mm	L872*W490*H216mm
Weight(NW Kg)	57.0Kg	101.0Kg
Weight(GW Kg)	60.0Kg	104.0Kg

SERVER RACK LIFEPO4 BATTERY



Main features

- Top brand cell, grade A quality
- High density, small size and weight
- Cells cycle times 6000 cycles
- Long lifespan: 5 years warranty, 10+ years life design
- Big discharge current, Suitable for solar system.
- Smart BMS system to optimize the performance
- Communication: RS485/CAN, compatible with different brand of solar inverter
- All around protection
- Power wall and 4U Rack mounted case design for optional

TECHNICAL PARAMETER

SPECIFICATION	MODEL	51.2V100AH	51.2V200AH	51.2V300AH	51.2V400AH
Battery Module		51.2V100AH			
No. of Module		1	20	30	40
Normal Capacity(25°C, 0.2C) (WH)		5120Wh	1024 Wh	1536 Wh	2048 Wh
Battery Type		LiFePO4 (BYD Cell)	LiFePO4 (BYD Cell)	LiFePO4 (BYD Cell)	LiFePO4 (BYD Cell)
Voltage window (Vdc)		44.8~58.4V	44.8~58.4V	44.8~58.4V	44.8~58.4V
Float Charge Voltage(Vdc)		56.0V	56.0V	56.0V	56.0V
Max.continue discharge current (A)		50	100	150	200
Max.pulse discharge current (A)		150A 1Sec.	300A 1Sec.	450A 1Sec.	600A 1Sec.
Max.continue charge current (A)		50	100	150	200
Cycle life(+25°C 0.2C 100%DOD)		>6000 Cycles	>6000 Cycles	>6000 Cycles	>6000 Cycles
Cell Equalizer Current(A)		1~5A Max.	1~5A Max.	1~5A Max.	1~5A Max.
Terminal		Double M8	Double M8	Double M8	Double M8
Storage temperature		0°C~30°C			
Storage duration		6 months at 25°C			
Safety standard		UN38.3,MSDS,CE			
IP degree		IP20			
Communication function		RS485/CAN(Communication protocol supported inverter brand: Deye, Growatt, Voltroni, GOODWE, VICTRON, PYLONTEC, SMA, SOFAR)			
PROTECTION					
Protection		Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection			
AMBIENT					
Noise(dB)		< 40dB (1 meter)			
working Temperature		-10°C~+50°C			
Humidity		0~95% (no condensation)			
DIMENSION					
L×W×H (products size) mm		L655*W452*H191mm	L655*W452*H428mm	L655*W422*H595mm	L655*W422*H761mm
Weight(NW Kg)		55.0Kg	118.0Kg	175.0Kg	228.0Kg

LITHIUM DEEP CYCLE BATTERY



Main features

- 12V/24V/48V LiFePO4 pack, superior safety and reliability.
- Top brand cell such as CATL, BYD.
- Cells cycles times: ≥ 3000 .
- Long lifespan: 3 years warranty, 5+ years life design.
- With intelligent BMS system to optimize the performance.
- Built in 1.2A cell equalizer, can balance all cells in short time.
- Max discharge current 6A-200A depends on different model, compatible with Solar system with big storage power.
- Excellent standby self-consumption as low as 4mA.
- High density, small size and weight.
- With ABS case to replace lead acid battery.
- All around protection and unattended operation.
- Optional for LCD display or communication (CAN/RS485/RS232).

TECHNICAL PARAMETER

MODEL	12V100AH	12V200AH	12V300AH	12V400AH	24V100AH	24V150AH	24V200AH	48V100AH
SPECIFICATION								
Battery Type	LiFePO4							
Normal Battery Voltage(Vdc)	12.8V	12.8V	12.8V	12.8V	25.6V	25.6V	25.6V	51.2V
Normal Capacity(25°C, 0.2C) (WH)	1280WH	2560WH	3840WH	5120WH	2560WH	3840WH	5120WH	5120WH
Voltage window (Vdc)	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	22.4~29.2V	22.4~29.2V	22.4~29.2V	44.8~58.4V
Folat Charge Voltage(Vdc)	13.8V	13.8V	13.8V	13.8V	27.6V	27.6V	27.6V	55.2V
Max.continue discharge current (A)	100	200	200	200	100	150	200	100
Max.pulse discharge current (A)	200A 1Sec.	400A 1Sec.	400A 1Sec.	400A 1Sec.	200A 1Sec.	300A 1Sec.	400A 1Sec.	200A 1Sec.
Max.continue charge current (A)	50	100	150	200	50	75	100	50
Cycle life(+25°C 0.2C 80%DOD)	> 3000 Cycles							
Cell Equalizer Current(A)	1~5A Max.							
Terminal	M8							
Storage temperature	0°C~30°C							
Storage duration	6 months at 25°C							
Safety standard	UN38.3,IEC62619,MSDS,CE							
IP degree	IP20							
PROTECTION								
Protection	Overcharge protection、Overdischarge protection、Overcurrent protection、Shortcircuit protection、Overtemperature protection							
AMBIENT								
Noise(dB)	< 40dB (1 meter)							
working Temperature	-10°C~+50°C							
Humidity	0~95% (no condensation)							
DIMENSION								
L×W×H (products size) mm	256x165x210	532x207x215	521x238x218	520x267x220	532x207x215	521x238x218	520x267x220	520x267x220
L×W×H (package size) mm	276x185x230	552x227x235	541x258x238	540x287x240	552x227x235	541x258x238	540x287x240	540x287x240
Weight(NW Kg)	12.5Kg	30.0Kg	34.0Kg	42.0Kg	30.0Kg	34.0Kg	42.0Kg	42.0Kg
Weight(GW Kg)	13.0Kg	31.0Kg	35.0Kg	43.0Kg	31.0Kg	35.0Kg	43.0Kg	43.0Kg



TECHNICAL PARAMETER

MODEL	12V35AH	12V40AH	12V45AH	12V50AH	12V55AH	12V60AH	12V70AH	12V80AH
SPECIFICATION								
Battery Type	LiFePO4							
Normal Battery Voltage(Vdc)	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V
Normal Capacity(25°C, 0.2C) (WH)	448WH	512WH	576WH	640WH	704WH	768WH	896WH	1024WH
Voltage window (Vdc)	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V
Float Charge Voltage(Vdc)	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V
Max.continue discharge current (A)	35	40	45	50	55	60	70	80
Max.pulse discharge current (A)	70A 1Sec.	80A 1Sec.	90A 1Sec.	100A 1Sec.	110A 1Sec.	120A 1Sec.	140A 1Sec.	160A 1Sec.
Max.continue charge current (A)	17.5	20	22.5	25	27.5	30	35	40
Cycle life(+25°C 0.2C 80%DOD)	>3000 Cycles							
Cell Equalizer Current(A)	1~5A Max.							
Terminal	M6			M8				
Storage temperature	0°C~30°C							
Storage duration	6 months at 25°C							
Safety standard	UN38.3,IEC62619,MSDS,CE							
IP degree	IP20							
PROTECTION								
Protection	Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection							
AMBIENT								
Noise(dB)	< 40dB (1 meter)							
working Temperature	-10°C~+50°C							
Humidity	0~95% (no condensation)							
DIMENSION								
L×W×H (products size) mm	195x133x171	195x133x171	197x165x170	197x165x170	197x165x170	197x165x170	256x165x210	256x165x210
L×W×H (package size) mm	215x153x191	215x153x191	217x185x190	217x185x190	217x185x190	217x185x190	276x185x230	276x185x230
Weight(NW Kg)	8.0Kg	8.0Kg	10.0Kg	10.0Kg	10.0Kg	10.0Kg	12.0Kg	12.0Kg
Weight(GW Kg)	8.5Kg	8.5Kg	10.5Kg	10.5Kg	10.5Kg	10.5Kg	12.5Kg	12.5Kg

TECHNICAL PARAMETER

MODEL	12V6AH	12V7AH	12V12AH	12V18AH	12V20AH	12V25AH	12V30AH
SPECIFICATION							
Battery Type	LiFePO4						
Normal Battery Voltage(Vdc)	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V
Normal Capacity(25°C, 0.2C) (WH)	76.8WH	89.6WH	153.6WH	230.4WH	256WH	320WH	384WH
Voltage window (Vdc)	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V	11.2~14.6V
Folat Charge Voltage(Vdc)	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V
Max.continue discharge current (A)	6	7	12	18	20	25	30
Max.pulse discharge current (A)	12A 1Sec.	14A 1Sec.	24A 1Sec.	36A 1Sec.	40A 1Sec.	50A 1Sec.	60A 1Sec.
Max.continue charge current (A)	3	3.5	6	9	10	12.5	15
Cycle life(+25°C 0.2C 80%DOD)	>3000 Cycles						
Cell Equalizer Current(A)	100mA Max.						
Terminal	250TCT			M6			
Storage temperature	0°C~30°C						
Storage duration	6 months at 25°C						
Safety standard	UN38.3,IEC62619,MSDS,CE						
IP degree	IP20						
PROTECTION							
Protection	Overcharge protection, Overdischarge protection, Overcurrent protection, Shortcircuit protection, Overtemperature protection						
AMBIENT							
Noise(dB)	< 40dB (1 meter)						
working Temperature	-10°C~+50°C						
Humidity	0~95% (no condensation)						
DIMENSION							
L×W×H (products size) mm	L90xW70xH101	L90xW70xH101	L151xW65xH94	L150xW100xH95	L165xW125xH175	L165xW125xH175	L165xW125xH175
L×W×H (package size) mm	L100xW80xH12	L100xW80xH12	L161xW75xH11	L160xW110xH115	L185xW145xH195	L185xW145xH195	L185xW145xH195
Weight(NW Kg)	1.5Kg	1.5Kg	2.3Kg	3.2Kg	7.0Kg	7.0Kg	7.0Kg
Weight(GW Kg)	1.7Kg	1.7Kg	2.5Kg	3.4Kg	7.2Kg	7.2Kg	7.2Kg

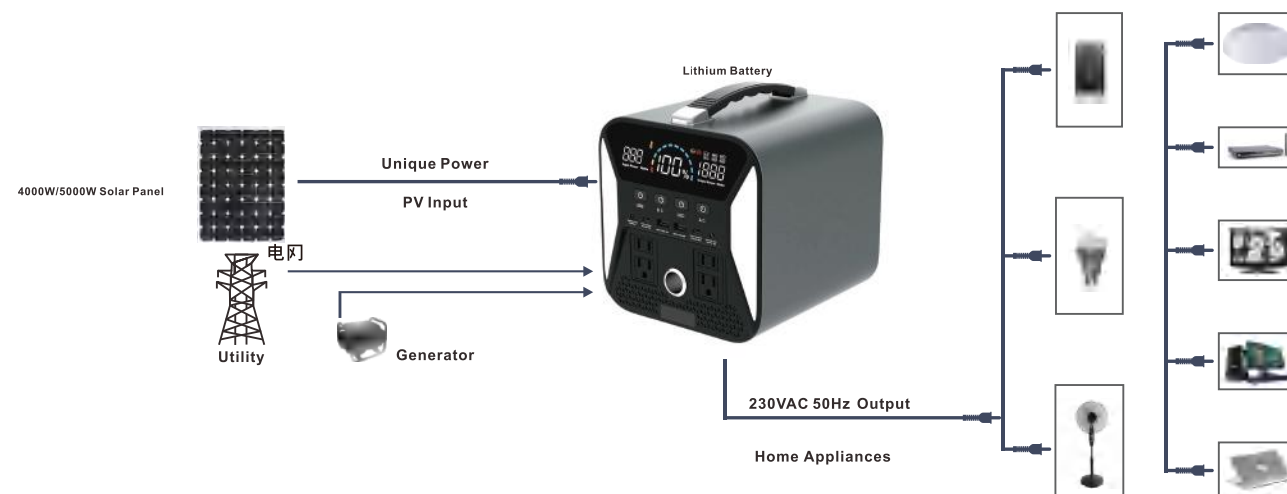
PORTABLE POWER STATION



Main features

- Top brand cell, grade A quality
- Pure Sine wave output, stable and not damaged
- Intelligent BMS management system, safe and reliable
- Cycle life more than 800 times
- Multi-port output simultaneous fast charge, support PD60w full fast charge solution, QC3.0, HUAWEI 22.5W super fast charge
- A variety of charging methods, outdoor travel car charger/solar panel
- Adopt fanless metal heat conduction and heat dissipation

Application



Items	Specification parameter		
Cell type	Ternary lithium battery		
Single cell capacity	2600mAh		
Battery pack mode	4S8P	4S13P	4S27P
Rated rated of battery	83200mAh	135200mAh	280800mAh
Battery rated power	307.84Wh	500.24Wh	1038.96Wh
Battery rated voltage	14.8V		
Discharge cut-off voltage	12V		
Battery internal resistance	<20mR		
Battery operating temperature	-10 ~ 60°C		
Normal temperature cycle life	500cycles>80%		
Charging current	20A		
Discharging current	50A	100A	150A
Monomer overvoltage	4.25V		
Response time	2S		
Overvoltage recovery	4.15V		
Monomer under-voltage	3V		
Response time	2.9S		
Undervoltage recovery	3.1V		
Short circuit protection	When the positive and negative impedance is less than 50mΩ, it is considered as short circu		
Recover	Software delete		
Overcurrent protection	60A	120A	180A
Response time	5S		
Recover	Software delete		
Charging overtemperature protection	48°C		
Recovery temperature	40°C		
Discharging overtemperature protection	65°C		
Recovery temperature	60°C		
Battery equalization	80mA		
Static consumption current	<30mA		
Sleep current	<0.1mA		
Weight	NA		
Operating ambient temperature	-40~85°C		
Voltage accuracy	1%		
Current accuracy	1%		
Temperature accuracy	±3		
SOC accuracy	8%		
Safety standard	FCC , UN38.3 , PSE , MSDS , CE		
Environmental protection	ROHS		
Main facility weight	4.6KG	6.8KG	11.5KG
Main facility size	192*192*218 (L)mm	192*192*218 (L)mm	192*192*303 (L)mm
Set weight	6.5KG	8.8KG	13.5KG
Packing size	310*287*317mm	310*287*317mm	310*287*317mm