Solar Energy & Storage System

Product Manual 2024

www.alisolarlight.com www.alishine.net www.alisolarenergy.com

Contents

PH 10000W

ALL

ALL 5 / 8 / 10KW

WM

WM 512100

WM 512200

WM 48100

BP

BP 128050

BP 128100

BP 128150

BP 128200

End 20-22

Organized
Details
Service

Alishine Profile

ALISHINE was started in 2004 with a mission to drive clean energy moving forward in the world by providing alternative green energy solutions for city light, commercial applications, and residential. Our goal is to enhance the shift to renewable energy by providing all-in-one Solar solutions to our customers from design to installation.

We pride ourselves on providing high-efficiency solar products that come with safe design and comprehensive warranties. We ensure dedicated customer support at each step of solar power projects to make clean energy accessible for all.

We partner with businesses to customize innovative power and sustainability solutions that are informed by our years of experience as market leaders. And we work diligently to stay ahead of an ever-evolving energy climate with rising demands.

With the superior production processes, professional engineering team, and industry-leading technologies, along with ALISHINE global teamwork, ALISHINE is committed to providing the most comprehensive, efficient, and professional solutions and services to the world.

ALISHINE is one of only a few companies worldwide that fully develops and manufactures the completely solar-powered products ensuring total control over product development, quality, and testing. With more than 18 years of experience and advanced technologies,ALISHINE has gradually developed and held dozens of patents for smart solar lighting and solar system solutions and processes.

ALISHINE'S purpose is to unlock the extraordinary potential of Sunlight for brighter lives and a better carbon-free world. We achieve this through living our values, innovation, passion for sustainability, and desire to transform people's lives.

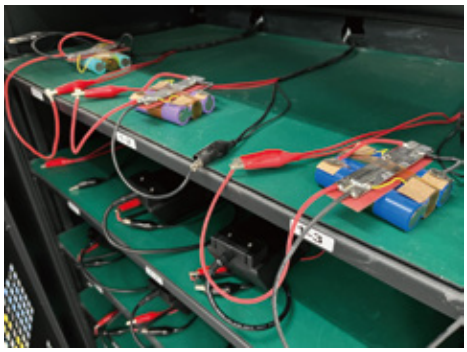
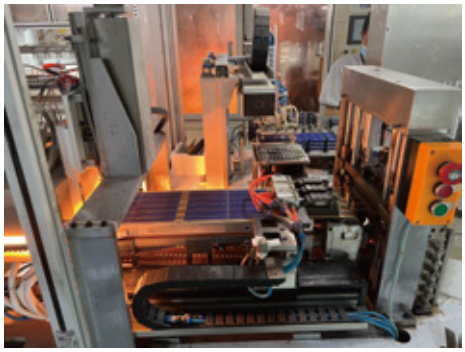
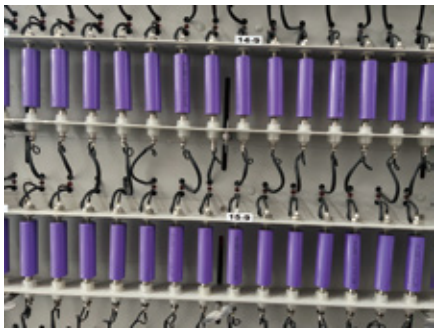
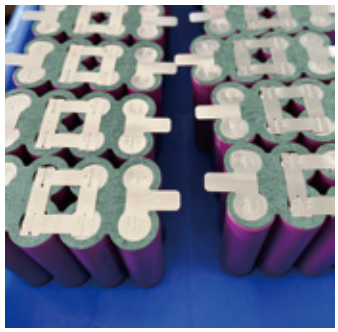
In an informal atmosphere, our ambitious Engineers, project developers, QC team, and technicians are working together on sustainable energy projects. It's our innovative and entrepreneurial approach that makes our projects a success.

Renewable energy is here to stay and the market for solar energy is still developing at high speed. We're proud that we're able to make a major contribution to this, and we're brimming with plans to further strengthen our leading position.

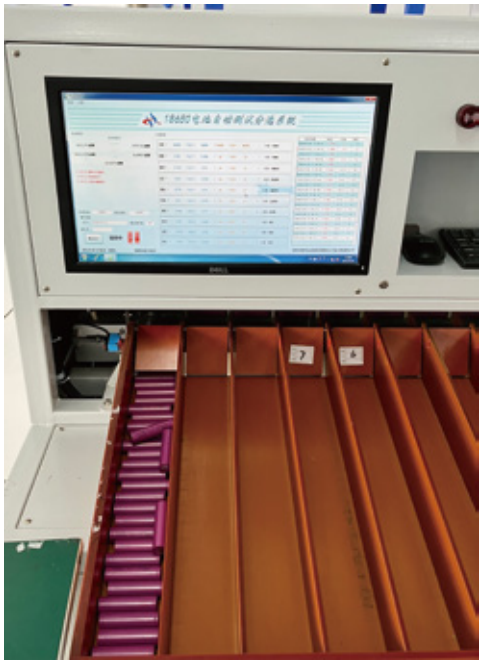
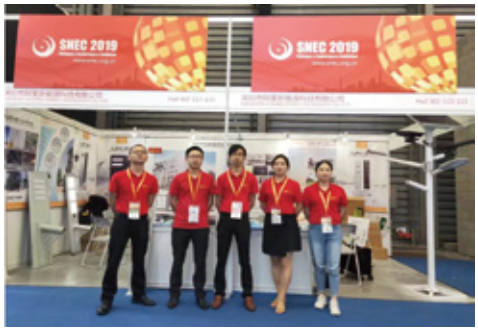
Engineering designs and solutions to every aspect of exterior of our products is our commitment. Conservation of the world's energy by the implementation of "green" concepts throughout is our goal. Combining the use of green energy technology along with solar power products, we accomplish our mission successfully.

We Believe
The power of the sun is undeniable,so is the power of solar products. We bring it into new places, projects, and people so that everyone can world. We bring reliable energy to the place where we live. We keep parking lots and roadways safe at work. We ensure that houses, buildings, funs, and the other applications are safe and accessible. So they can be more resilient and sustainable. And we help reduce the world's reliance on fossil fuels, lowering pollution and environmental impact.

We Are
The right choice for solar energy products.





COMPANY ACHIEVEMENTS

22+
Industry Experience

150+
Employees

4500+
Square meters workshop

10+
Experienced R&D engineer

AliSunpower
Solar Energy System

Solar energy is volatile and does not match the daily peak of electricity consumption, so we need Solar Energy Storage System to regulate the energy distribution and convert solar energy into stable AC energy.

Safe

Plug & Play

Uninterrupted

PV Charging

Efficiency

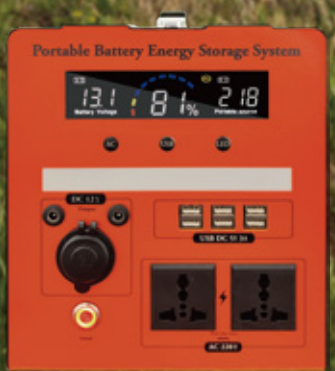
PH Series

Portable Power Station

The cost-effective design makes it affordable for any family. Meet the outdoor use needs and emergency use needs of most daily devices.

PH 300W

PH 500W



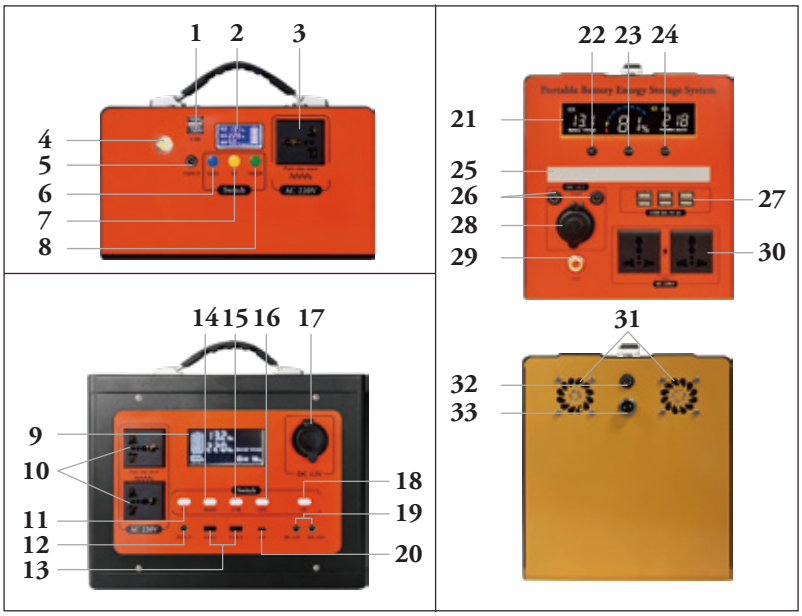
PH 700/1100/1500W

PH Series

300W / 500W / 700W / 1100W / 1500W

- New Designed
- Metal Housing
- Easy to carry
- Touch Panel
- High Cost Performance
- Suitable for common electrical equipment at home

1	USB 5V Output	2	LCD Display
3	AC Output Plug	4	LED Light
5	DC 12V Input	6	LED Light ON/OFF
7	AC ON/OFF	8	Main Switch
9	LCD Display	10	AC Output Plug
11	AC ON/OFF	12	DC 12V Input
13	USB 5V Output	14	Main Switch
15	USB ON/OFF	16	LED Light ON/OFF
17	Car Charging Plug	18	DC ON/OFF
19	DC 12V Output	20	USB Type-C
21	LCD Display	22	AC ON/OFF
23	USB ON/OFF	24	LED Light ON/OFF
25	LED Light	26	DC 12V Output
27	USB 5V Output	28	Car Charging Plug
29	Main Switch	30	AC Output Plug
31	Fan	32	DC Input
33	PV Input		



Model	AL-PH 300	AL-PH 500	AL-PH 700	AL-PH 1100	AL-PH 1500
AC Input (generator / grid)					
Input Voltage Range	210-230V				
Frequency	50Hz				
Mains Charging Efficiency	>95%				
DC Input					
Adaptor	10.4V~14.6V/3A	10.4V~14.6V/6A	10.4V~14.6V/12A		
Solar energy	15.4V~22V/8A		15.4V~22V/12A		
AC Output					
Output Voltage	210-230V				
Output Voltage Waveform	Pure Sine Wave				
Rated Output Voltage	230 (200/208/220/240Vac)				
Rated Output Power	300W	500W	700W	1100W	1500W
Output Frequency Range(Hz)	50Hz				
Maximum Efficiency	>92%				
DC Output					
DC Output	\	12V 5A			
Car Charing Plug	\	12V 8A	12V 10A		
USB Output					
USB A Output	5V 3A				
Type-C Output	\	PD 30W	\	\	\
General					
Housing	Metal housing				
Screen	AC & DC Voltage Display				
LED Light	1W	3W			
Humidity Range	5% to 95% (Conformal Coating Protection)				
Charging Mode	AC / PV Charger	AC / Car / PV Charger			
Working Temperature Range	-15℃~55℃				
Storage Temperature Range	-25℃~60℃				
Dimensions	242*157*140mm	292*205*225mm	300*200*225mm	360*200*225mm	400*200*225mm
Weight	3.6kg	7.35kg	8.1kg	10.6kg	13.5kg

PH Series

Hybrid Moveable Power Station

The large power and moveable design meets indoor and outdoor application scenarios, supports hybrid input, intelligently switches input sources within 10ms, and combines with a variety of output ports to keep the device at all times a stable output to your home devices.

PH Series

2400W / 3600W

- Private mold
- Metal Housing
- Easy to move
- AC / Solar / DC Hybrid Inverter
- AC / PV input automatic switch (10ms)
- Output Type-C PD / USB3.0 Quick Charge avaliable

1	Touch LCD Screen	2	Main Switch	3	Handle	4	10W LED Light
5	5W LED light	6	AC Output (EU/US/AU/SA/CN/UN AC Plug Optional)			7	DC Output
8	Car Charging Plug	9	USB 2.0 Output	10	USB 3.0 Output	11	USB Type-C
12	AC Input	13	Circuit Breaker	14	PV Input	15	Handle
16	Fan						

Model	AL-PH 2400	AL-PH 3600
PV Input		
Maximum PV Open-circuit Voltage	100Vdc	
MPPT Voltage Range	30-85Vdc	
Maximum PV Input Current	25A	
Maximum PV Input Power	750W	
Maximum PV Charging Current	60A	
AC Input (generator / grid)		
Mains Maximum Charging Current	25A	30A
Rated Input Voltage	220-230Vac	
Input Voltage Range	UPS Mains Mode : (170Vac~280Vac)±2%	
Frequency	50Hz/ 60Hz (Automatic Detection)	
Mains Charging Efficiency	>95%	
Switch Time (bypass and inverter)	10ms(Typical Value)	
Maximum Bypass Overload Current	30A	
AC Output		
Output Voltage	220-240V	
Output Voltage Waveform	Pure Sine Wave	
Rated Output Voltage	230 (200/208/220/240Vac)	
Rated Output Power	2400W	3600W
Peak Power	4000VA	6000VA
Output Frequency Range(Hz)	50Hz±0.3Hz/60Hz±0.3Hz	
Maximum Efficiency	>92%	
DC Output		
4* DC Output	12V 5A	
1* Car Charing Plug	12V 10A	
USB Output		
2* USB 2.0 Output	5V 2.4A	
1* USB 3.0 Output	5V 3A	
1* USB-C Output	PD60W	
General		
Housing	Metal housing	
Screen	Touch LCD screen	
LED Light	1* Rectangle 10W & 2* Round 5W	
Humidity Range	5% to 95% (Conformal Coating Protection)	
Charging Mode	AC / Car / PV Charger	
Working Temperature Range	-15℃~55℃	
Storage Temperature Range	-25℃~60℃	
Product Size	500*270*500mm	
Weight	33.9kg	38.8kg

Power Cabinet

All In One Energy Storage System

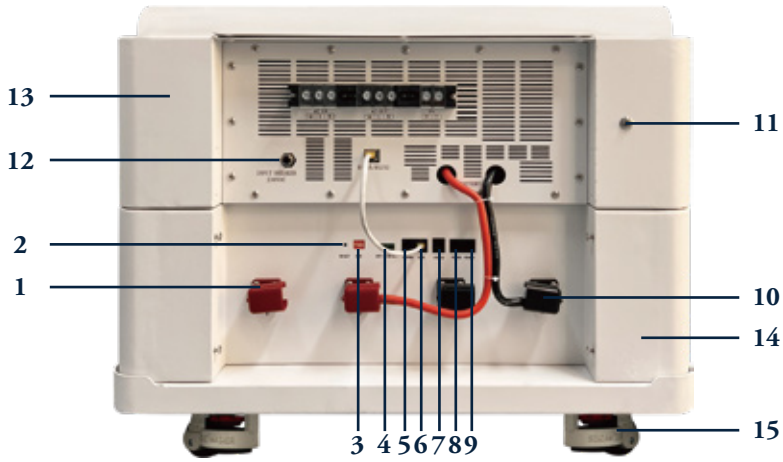
This is an all-in-one stackable modular design using a Brand new grade A LiFePO4 battery pack, and the number of stacks can be freely increased or decreased according to the needs to meet the application needs. Easy to install and ready to use, 5 years Warranty.

PH 5000W PH 8000W PH 10000W

PH Series

5000W / 8000W / 10000W

- Focus On Industrial Design
- Modular Design
- Free Stacking to increase the battery pack
- High Safety
- Long Cycle Life
- Brand new and grade A LiFePo4 cell



1	Positive	2	Reset	3	Address
4	Dry Contact	5	RS485A(To Inverter)	6	CAN
7	RS232	8	RS485B(Parallel Operation)	9	RS485B(Parallel Operation)
10	Negative	11	ON / OFF	12	Input Breaker
13	Inverter	14	Battery	15	Bottom Universal Wheel

Item Number	AL-PH 5000	AL-PH 8000	AL-PH 10000	Remark
Rated power	5K+5kW.h	8K+10kW.h	10K+15kW.h	Inveter + Battery
AC Output	Output Waveform : Pure Sine Wave			Hybrid All in One Inveter with Smart BMS.
	Output frequency : 50 / 60Hz			
	Output Voltage : 210V-230V			
Input	Hybrid (PV & AC)			
Nominal Voltage	48 / 51.2V			Single battery 3.2V
Rated Capacity	Typical : 100Ah			Standard discharge（0.2C) after Standard charge（0.2C)
	Minimun : 95Ah			
Charging Voltage	54.75V 58.4V			/
Charging Mode	C.C / C.V.			Constant Current / Constant Voltage
Voltage at end of Discharge	37.5 / 40V			Discharge Cut-off Voltage
Rated Charge Current	≤60A			Charging Current 60A
Maximum Continuous Charge Current	≤80A			No more than 1 hour
Rated Discharge Current	≤100A			Discharging Current 100A
Maximum Continuous Discharge Current				No more than 1 hour
Overcharge Voltage	3.65±0.05V(Adjustable)			Single series voltage
Over Discharge Cut Off Voltage	2.5±0.01V(Adjustable)			
Over Current	Discharge overcurrent value: ≧105A			/
Short Circuit	Detection condition			Exterior short circuit
	Release condition			Cut short circuit
Operation Temperature Range	Charge : 0~55 ℃			60±25%R.H.Bare Cell
	Discharge : -20~55 ℃			
Storage Temperature Range	Less than 7 day : -20~65 ℃			60±25%R.H.at the shipment state
Internal Impedance	＜100mΩ			/
Weight	About 130kg	About 222kg	About 275kg	The number of stacks can be freely increased or decreased according to the needs to meet the application needs.
Packing Size(mm)	Inverter : 675*675*290 ; Battery : 675*675*255 (Carton box) 685*685*270 (UN wooden boxes) ; Base : 620*620*140			
Communication mode	Working voltage, working current, remaining capacity			/

ALL Series

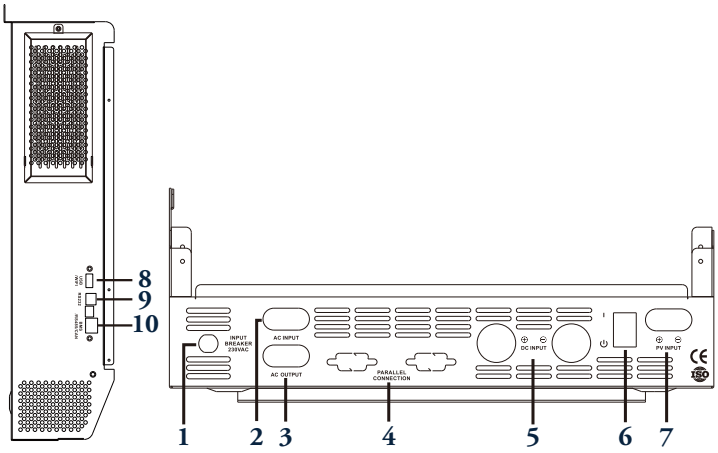
All In One Hybrid Inverter

Hybrid input, MPPT and inverter all in one, more power output option. High power conversion efficiency, easy installation and use, low failure rate. RS485/232/CAN communication, and parallel extensions are optional function.

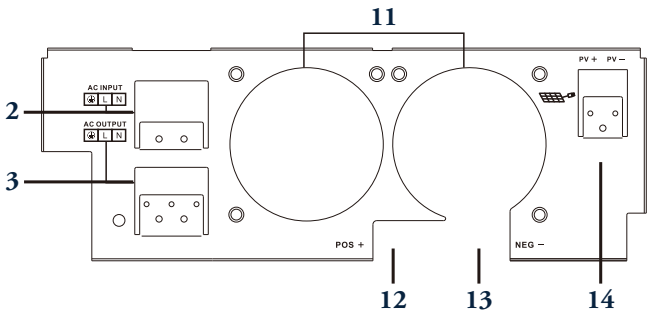
ALL Series

485.5pro / 488pro / 4810pro

- Load friendly
- Efficient heat dissipation
- Dual LFP battery activation method
- Uninterrupted power supply
- High energy efficiency
- Power saving



1	Input Breaker	2	AC Input
3	AC Output	4	Parallel Connection
5	Battery Input	6	Power ON/ OFF Switch
7	PV Input	8	USB/WIFI Communication Port
9	RS232 Communication Port	12	Battery Terminal Positive
10	BMS/RS485/CAN Communication Port	11	Fan
13	Battery Terminal Negative	14	Solar Panel Input



MODEL	AL-All 485.5pro	AL-All 488pro	AL-All 4810pro
Phase		1-phase	
Maximum PV Input Power	5500W	8200W	10200W
Rated Output Power	5500VA/5500W	8200W / 8200VA	10200W / 10200VA
Maximum Solar Charging Current		160A	
GRID-TIE OPERATION			
PV Input(DC)			
Nominal DC Voltage/Maximum DC Voltage		360VDC / 500VDC	
Start-up Voltage/Initial Feeding Voltage		90VDC / 120VDC	
MPPT Voltage Range		90VDC ~ 450VDC	
Number Of MPPT Trachers/Maximum Input Current		1 / 27A	
GRID OUTPUT(AC)			
Nominal Output Voltage		200 / 230 240VAC	
Output Voltage Range		195.5 ~ 253VAC	
Nominal Output Current	23.88A	35.6A	44.3A
Power Factor		>0.99	
Feed-in Grid Frequency Range	50Hz/60Hz（Auto Sensing）	49 ~ 51±1HZ	
EFFICIENCY			
Maximum Conversion Efficiency(DC/AC)		98%	
TWO LOAD OUTPUT POWER(V2.0)			
Full Load	5500W	8200W	10200W
Maximum Main Load	5500W	8200W	10200W
Maximum Second Load(Battery mode)	1833W	2733W	3400W
Main Load Cut Off Voltage		44VDC	
Main Load Return Voltage		52VDC	
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage/Auto Restart Voltage		120-140VAC / 180VAC	
Acceptable Input Voltage Range		90-280VAC or 170-280VAC	
Maximum AC Input Current	30A	40A	50A
Nominal Operating Frequency		50 / 60Hz	
Surge Power	12400W	16400W	20400W
BATTERY MODE OUTPUT(AC)			
Nominal Output Voltage		48VDC	
Output Wavefrom		Pure sine wave	
Efficiency(DC to AC)		94%	
BATTERY & CHARGER			
Nominal DC Voltage		48VDC	
Maximum Solar Charging Current	80A	160A	
Maximum AC Charging Current	70A	140A	
PHYSICAL			
Dimension(D*W*H)		455*352*135mm	
Net Weight(kgs)	10.5	14.2	14.5

WM Series

Wall Mounted Lithium Battery Pack

Brand New and A grade lithium iron phosphate battery, warranty of 5 years, SMART BMS support Bluetooth, RS485/CAN communication, support series and parallel.

WM 48100

WM 512200

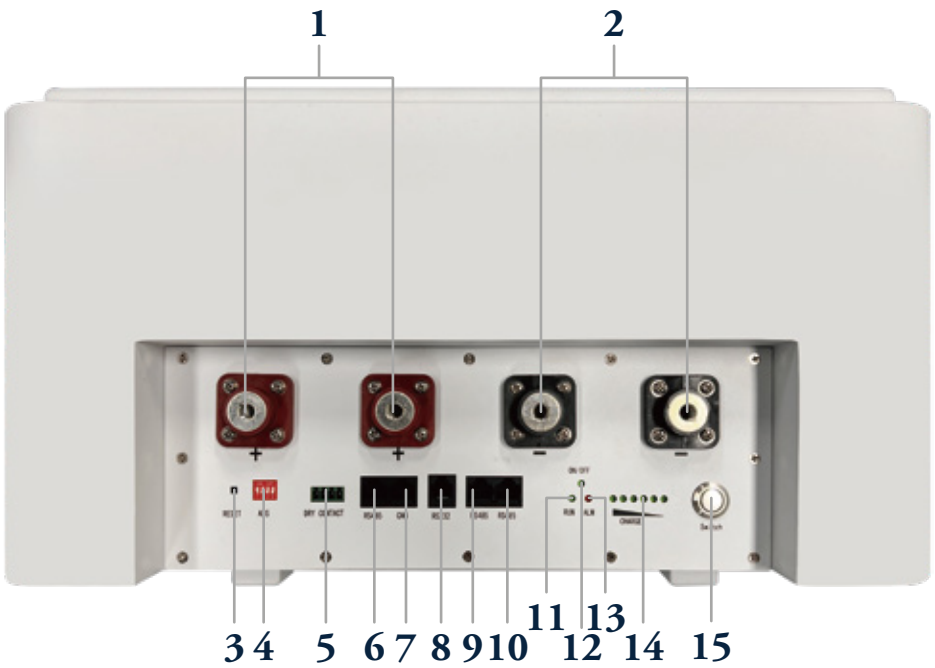
WM 512100

WM Series

48100 / 512100 / 512200

- 6000 Cycles
- Calender Life > 10 years
- Wall-Mounted Installation
- Equipped With Battery Status Monitor
- Support RS485/CAN Communication
- Free-Maintenance

1	Positive
2	Negative
3	Reset
4	Address
5	Dry contact
6	RS485A(to Inverter)
7	CAN
8	RS232
9	RS485B(parallel operation)
10	RS485B(parallel operation)
11	RUN(LED)
12	ON/OFF(LED)
13	Alarm(LED)
14	Charge(LED)
15	Main Switch



MODEL		AL-WM 48100	AL-WM 512100	AL-WM 512200
Nominal Voltage		48V	51.2V	
Rated Capacity	Typical	100Ah		200Ah
	Minimum	95Ah		190Ah
Charging Voltage		58.4V / 54.75V		
Charging Mode		C.C / C.V.		
Voltage at end of Discharge		40V / 37.5V		
Rated Charge Current		≤60A		
Maximum Continuous Charge Current		≤80A		
Internal Impedance		＜100mΩ		
Rated Discharge Current		≤100A		
Maximum Continuous Discharge Current		≤100A		
Overcharge Voltage		3.65±0.05V (Adjustable)		
Over Discharge Cut Off Voltage		2.5±0.01V (Adjustable)		
Discharge Over Current Value		≧105A		
Short Circuit		Detection condition		
		Release condition		
Operation Temperature Range		Charge: 0~55℃		
		Discharge: -20~55℃		
Storage Temperature Range		Less than 7 days : -20~65℃		
Weight		About 47.85kg	About 64.8kg	About 138.5kg
Size(mm)		530*650*270(Carton)	675*515*265(Carton) 685*525*280(UN Wooden)	725*520*310(Carton) 735*530*325(UN Wooden)
Communication mode		RS485		

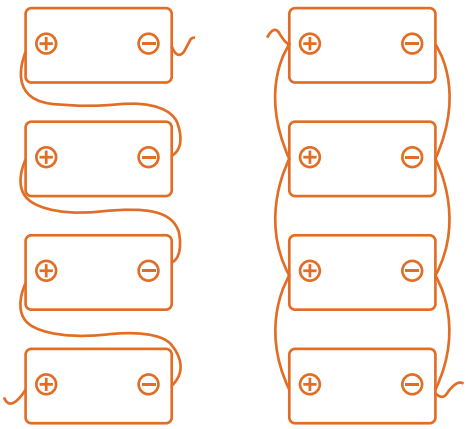
BP Series
Lithium Battery Pack

From 50Ah to 200Ah,1:1 perfect replacement of Lead-acid and Gel batteries. The most cost-effective solution for 12V and 24V home energy storage systems.

BP Series

128050 / 128100 / 128150 / 128200

- UPS
- Solar &Wind Power System
- Golf Cart
- Electric Vehicle, E-bike, E-rickshaw etc
- Lighting



Model	AL-BP 128050	AL-BP 128100	AL-BP 128150	AL-BP 128200
Electrical Characteristics				
Nominal Voltage	12.8V			
Nominal Capacity	50Ah@0.2C	100Ah@0.2C	150Ah@0.2C	200Ah@0.2C
Energy	640Wh	1280Wh	1920Wh	2560Wh
Cycle Life	2500 Cycles @0.2C Charging / Discharging until 80%			
Self Discharge	≤3.5% per month at 25℃			
Standard Charging				
Max. Charging Voltage	14.0~14.6V			
Charging Mode	At 0℃~45℃ temperature,charged to 14.6V at a constant current of 0.2C5A,and then,changed continuously with constant voltage of 14.6V until the current was not more than 0.02C5A.			
Charging Current	10A	20A	30A	40A
Max.Charging Current	25A	50A	75A	100A
Standard Discharging				
Discharging Current	50A	100A	150A	200A
Max. Continuous Current				
Discharging Cut-off Voltage	10.0			
Operating Condition				
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 45°C (32°F to 113°F) @60±25% Relative Humidity			
Water Dust Resistance	IP55			
Structure				
Casing	Iron			
Dimension(L*W*H)	230*145*210mm	340*185*220mm	550*235*255mm	570*295*260mm
Weight	Approx. 5.2kg	Approx. 9.85kg	Approx. 14.35kg	Approx. 19.55kg
Terminal	M8			

Applicable scenario

Case




Portable Battery Energy Storage System






Portable Battery Energy Storage System







Our Factory

Alishine

Always shining the way forward

Shenzhen Alishine Energy Technology CO., Ltd.

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