



**浙江兴海能源科技有限公司**  
Zhejiang Xinghai Energy Technology Co.,LTD

# Headway®

Zhejiang Xinghai Energy Technology Co.,LTD

 [www.headway-lib.com](http://www.headway-lib.com)

 +86 13629903526

 [sales@headway-lib.com](mailto:sales@headway-lib.com)

 No. 1346, Eco & Tec Development Zone, Changxing ,Zhejiang 313100

[www.headway-lib.com](http://www.headway-lib.com)

# Catalogue

## 01 Introductions

- Group Profile ..... 002
- About Us ..... 003
- Company History ..... 003
- Honor/Certificate ..... 004
- Production Line ..... 005
- Core Technology ..... 006

## 02 Products

- Cell ..... 007
- Forklift Battery ..... 009
- Lead Acid Replacement Battery ..... 011
- Telecom Battery ..... 013
- Low Voltage Home Energy Storage Battery ..... 015
- High Voltage Home Energy Storage Battery ..... 017
- Hybrid Inverter ..... 018
- Solar Street Light Battery ..... 019
- Tricycle Battery ..... 020
- High Power Lithium Battery for High Voltage UPS ..... 021
- Portable power supply ..... 022

# Group Profile

Founded in 1985 and started from a small private enterprise, Headway Group gradually developed into a large-scale private enterprise group with significant advantages in technology, brand and production capacity. Focusing on three major sectors (lithium battery, optical cable and data cable), Headway products are widely used in the field of intelligent transportation, energy and power, telecommunication, security and intelligent building, big data, national defense and military industry, etc. at home and abroad. With more than 100 patents for various products, Headway Group integrates R&D, production, sales & service, and has been awarded honorary titles such as "Key Backbone Enterprise in Huzhou City", "Top 50 Industrial Enterprises in Changxing County", "AAA Contract Honoring and Trustworthy Enterprise in Zhejiang Province", "High-Tech Demonstration Enterprise in Zhejiang Province", "Top 10 Satisfactory Brands in China's Security Industry", "Famous Products in Zhejiang Province", "Famous Trademark in Zhejiang Province" and so on.

### Zhejiang Xinghai Energy Technology Co.,Ltd

— Li-ion batteries —



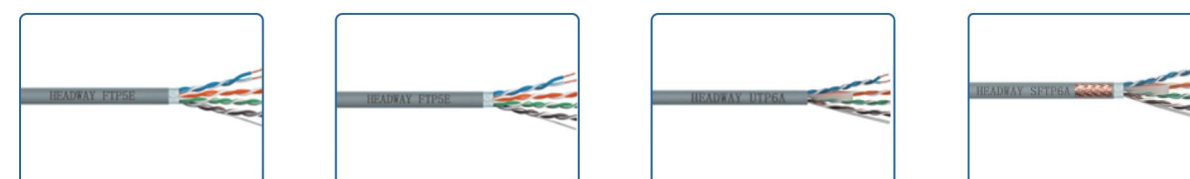
### Zhejiang Headway Communication Equipment Co.,Ltd

— Fiber optic cables —



### Zhejiang Langman Communication Technology Co.,Ltd

— Data cables —





# Production Line



**Slurry Mixing**

650L large jar  
Fully enclosed preparation and transportation of slurry



**Coating**

Double-sided high-precision spraying process,  $\beta$ -ray online coating amount detection



**Roll Pressing**

800mm cold pressing device  
On-line rolling thickness detection



**Slitting**

Quick cutting device  
Online deburring



**Winding**

Alignment online detection  
Online Dust Removal



**Assembly**

Fully automatic assembly line  
Independent Intellectual Property



**Electrolyte Injection**

Automatic liquid injection machine  
Independent Intellectual Property



**Formation**

Cell testing, energy recovery from discharge  
feed-in grid



**Packing**

Double speed chain production line  
efficient and safe

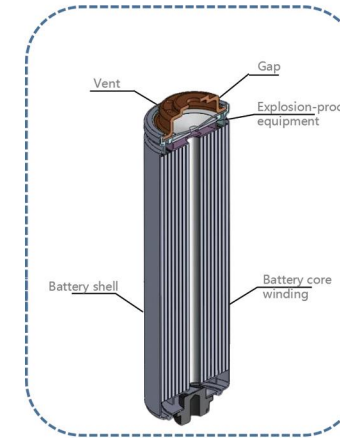


**Testing**

Battery testing, energy recovery from discharge  
feed-in grid

# Core Technology

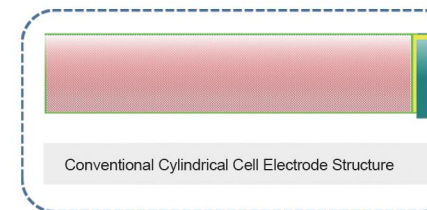
## Technical Advantages - Explosion-Proof Valve



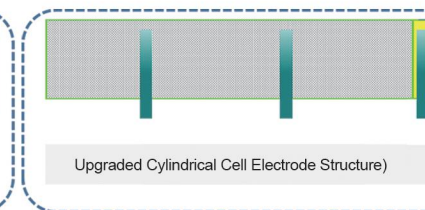
Double protection of positive and extreme explosion-proof valves: CID disconnection, tearing of aluminium cover.

The explosion-proof valve plays an important role and the thermal runaway is prevented in time. After cells are packed, the thermal runaway caused by a single cell will not spread to other cells to ensure the safety of the pack.

## Technology Advantage – All Tab Technology



Conventional Cylindrical Cell Electrode Structure

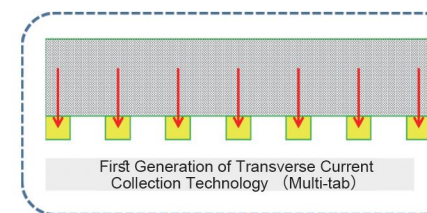


Upgraded Cylindrical Cell Electrode Structure

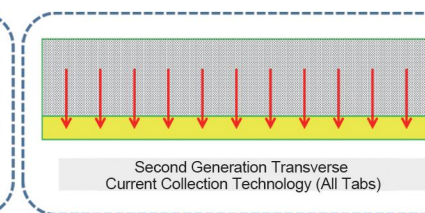
Longitudinal collection of current, uneven distribution of current, serious fever

Upgraded electrode can partly solve the above problem

Conventional cylindrical cell tab structure

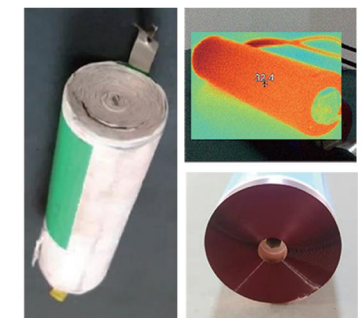


First Generation of Transverse Current Collection Technology (Multi-tab)



Second Generation Transverse Current Collection Technology (All Tabs)

Xinghai all tab electrode structure



Collecting current transversely makes the travel route to get closest, the current distribution to be more even and the heat generation to be reduced significantly.

Development of second-generation technology enables full automation of battery assembly process.

# Cell


**38120HP**  
 Ultra-high-rate cell

**40152S**  
 High-rate cell

Items	38120HP	40152S
<b>Nominal Capacity</b>	8Ah @ 0.5C	17Ah @ 0.5C
<b>Nominal Voltage</b>	3.2V	3.2V
<b>Max Charging Voltage</b>	3.65 ± 0.05 V	3.65 ± 0.05 V
<b>Discharge Cut-Off Voltage</b>	2.5 ± 0.05 V	2.5 ± 0.05 V
<b>Charge Current</b>	Standard charge: 3C Max charge: 10C (when T≥10°C) Max charge: 3C (when 10°C≥T≥0°C) Max charge: 0.1C (when 0°C≥T≥-10°C)	Standard charge: 0.5C Max charge: 2C (when T≥10°C) Max charge: 1C (when 10°C≥T≥0°C) Max charge: 0.05C (when 0°C≥T≥-10°C)
<b>Discharge Current</b>	Standard discharge: 5C Max discharge: 15C Max instant discharge: 30C	Standard discharge: 3C Max discharge: 7C Max instant discharge: 15C
<b>Recommended charge &amp; Discharge Cell Surface Temperature</b>	Charge: 0 ~ 45°C Discharge: -20 ~ 60°C	Charge: 0 ~ 45°C Discharge: -20 ~ 60°C
<b>Max. Cell Surface Temperature</b>	60°C While Charging 75°C While Discharging	60°C While Charging 75°C While Discharging
<b>Cycle Life</b>	≥3000th Cycles	≥3000th Cycles
<b>Internal Resistance</b>	≤2.5mOhm (AC Impedance, 1000HZ)	≤2.5mOhm (AC Impedance, 1000HZ)
<b>Cell Dimension</b>	Height: 136 mm Max Diameter: 38.5mm Max	Height: 165 mm Max Diameter: 41mm Max
<b>Weight</b>	~330 g	~460 g
<b>Connection Method</b>	Screw	Screw

# Cell

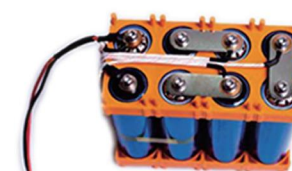
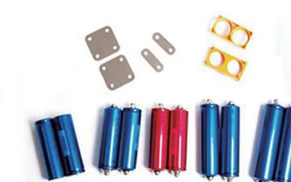

**40146L**  
 Capacity type cell

**40175L**  
 Capacity type cell

Items	40146L	40175L
<b>Nominal Capacity</b>	20Ah @ 0.5C	25Ah @ 0.5C
<b>Nominal Voltage</b>	3.2V	3.2V
<b>Max Charging Voltage</b>	3.65 ± 0.05 V	3.65 ± 0.05 V
<b>Discharge Cut-Off Voltage</b>	2.5 ± 0.05 V	2.5 ± 0.05 V
<b>Charge Current</b>	Standard charge: 0.5C Max charge: 2C when T≥10°C Max charge: 1C when 10°C≥T≥0°C Max charge: 0.1C when 0°C≥T≥-10°C	Standard charge: 0.5C Max charge: 2C (when T≥10°C) Max charge: 1C (when 10°C≥T≥0°C) Max charge: 0.1C (when 0°C≥T≥-10°C)
<b>Discharge Current</b>	Standard discharge: 1C Max discharge: 3C Max instant discharge: 6C	Standard discharge: 1C Max discharge: 3C Max instant discharge: 6C
<b>Recommended charge &amp; Discharge Cell Surface Temperature</b>	Charge: 0 ~ 45°C Discharge: -20 ~ 60°C	Charge: 0 ~ 45°C Discharge: -20 ~ 60°C
<b>Max. Cell Surface Temperature</b>	60°C While Charging 75°C While Discharging	60°C While Charging 75°C While Discharging
<b>Cycle Life</b>	≥3000th Cycles	≥3000th Cycles
<b>Internal Resistance</b>	≤2.5mOhm (AC Impedance, 1000HZ)	≤2.5mOhm (AC Impedance, 1000HZ)
<b>Cell Dimension</b>	Height: 146 mm Max Diameter: 41mm Max	Height: 175 mm Max Diameter: 41mm Max
<b>Weight</b>	~445 g	~520 g
<b>Connection Method</b>	Weld	Weld

The screw structure makes it easier and faster to install and connect the battery.


**Battery cell 38120HP**

**Battery cell 40152S**

**Lithium Battery Packs**

**Cells and accessories**

# Forklift Battery

## HELI-CBD15-190Li; CBD20-190Li

Item	73.6V8Ah	73.6V16Ah
Nominal Capacity	8Ah@0.2C	16Ah@0.2C
Nominal Voltage	73.6V	
Cycle Life	≥2000 cycles	
Internal Resistance	≤36mΩ	
Standard Charge Current	4A	8A
Standard Discharge Current	8A	16A
Maximum Discharge Current	16A	32A
Maximum Instantaneous Discharge Current	75A	140A
Protection Level	IP54	
Operating Temperature Range	Charging: -12°C~55°C Discharging: -20~65°C	
Size W*H*THK	208*300*90mm	243*360*155mm
Net Weight	5.3±0.5kg	11.15±0.5kg
Power Interface	SAS75X 600V V0	

## NOBLELIFT Electric Pallet Truck

Item	25.6V20Ah	25.6V40Ah	25.6V60Ah	48V20Ah
Nominal Capacity	20Ah	40Ah	60Ah	20Ah
Nominal Voltage	25.6V			48V
Cycle Life	≥2000 cycles			
Internal Resistance	≤36mΩ			
Standard Charge Current	10A	20A	20A	10A
Standard Discharge Current	20A			
Maximum Discharge Current	20A	40A	60A	20A
Maximum Instantaneous Discharge Current	180A			
Protection Level	IP54			
Operating Temperature Range	Charging: -12°C to 55°C Discharging: -20°C to 65°C			
Size W*H*THK	410*370*81mm			
Net Weight	5.9±0.5kg	9.8±0.5kg	13.9±0.5kg	9.8±0.5kg
Power Interface	Anderson 50A			

## HELI-CBD15 J-LI-S; CBD20 J-LI-S

Item	25.6V20Ah	25.6V30Ah	25.6V40Ah	25.6V60Ah	51.2V20Ah	51.2V30Ah
Nominal Capacity	20Ah	30Ah	40Ah	60Ah	20Ah	30Ah
Nominal Voltage	25.6V					51.2V
Cycle Life	≥2000 cycles					
Internal Resistance	≤36mΩ					
Standard Charge Current	10A	15A	20A	20A	10A	
Standard Discharge Current	20A					
Maximum Discharge Current	20A	30A	40A	60A	20A	
Maximum Instantaneous Discharge Current	180A					
Protection Level	IP54					
Operating Temperature Range	Charging: -12°C to 55°C Discharging: -20°C to 65°C					
Size W*H*THK	364*350*100mm					
Net Weight	5.7±0.5kg	8.3±0.5kg	9.5±0.5kg	13.5±0.5kg	9.7±0.5kg	12±0.5kg
Power Interface	SAS75X 600V V0					
Weak Electricity Switch Interface	Self-locking, diameter 19mm		Self-locking type, diameter 19mm		Self-locking, diameter 19mm	

## HELI-CBD15J-LI3; CBD20J-LI3

Item	25.6V20Ah-CAN	25.6V30Ah-CAN	25.6V40Ah-CAN	51.2V15Ah-CAN	51.2V20Ah-CAN
Nominal Capacity	20Ah	30Ah	40Ah	15Ah	20Ah
Nominal Voltage	25.6V				51.2V
Cycle Life	≥2000 cycles				
Internal Resistance	≤36mΩ				
Standard Charge Current	10A	15A	20A	10A	
Standard Discharge Current	20A				
Maximum Discharge Current	20A	30A	40A	20A	
Maximum Instantaneous Discharge Current	180A				
Protection Level	IP54				
Operating Temperature Range	Charging: -12°C to 55°C Discharging: -20°C to 65°C				
Size W*H*THK	375*255*90mm				
Net Weight	5.3±0.5kg	8.3±0.5kg	7.7±0.5kg	7.4±0.5kg	7.7±0.5kg
Power Interface	15L5 connector				
Weak Electricity Switch Interface	15L5 connector				
CAN Communication	15L5 connector				

# Application

## Pictures



## Scenario application



The above battery models are widely used in pallet forklift, stacker forklift and counterbalance forklift, and Headway is the supplier of many famous forklift factories in China.

## Use energy type battery cells



Battery Cell 40146L



Battery Cell 40175L

# Lead Acid Replacement Battery

Items	HW1240	HW1260	HW12100	HW12140	HW12160	HW12200	HW12250	HW12300
Specification	12.8V40Ah	12.8V60Ah	12.8V100Ah	12.8V140Ah	12.8V160Ah	12.8V200Ah	12.8V250Ah	12.8V300Ah
Size	223x120x175 mm	198*166*170 mm	260*168*209 mm	330*172*215 mm	406*173*236 mm	483*170*240 mm	532*207*215 mm	522*240*218 mm
Box Material	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Rated Capacity	40Ah	60Ah	100Ah	140Ah	160Ah	200Ah	250Ah	300Ah
Working Current	40A	60A	100A	100A	100A	100A	100A	100A
Voltage Range	10-14.6V	10-14.6V	10-14.6V	10-14.6V	10-14.6V	10-14.6V	10-14.6V	10-14.6V
Cycle Life	≥3000	≥3000	≥3000	≥3000	≥3000	≥3000	≥3000	≥3000
Charge Temperature Range	0-60°C	0-60°C	0-60°C	0-60°C	0-60°C	0-60°C	0-60°C	0-60°C
Discharge Temperature Range	-10-60°C	-10-60°C	-10-60°C	-10-60°C	-10-60°C	-10-60°C	-10-60°C	-10-60°C
Storage temperature range	-10-45°C	-10-45°C	-10-45°C	-10-45°C	-10-45°C	-10-45°C	-10-45°C	-10-45°C
IP level	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Weight	~5kg	~7kg	~11kg	~15kg	~17kg	~21kg	~26kg	~31kg
Parallel function	4pcs Maximum	4pcs Maximum	4pcs Maximum	4pcs Maximum	4pcs Maximum	4pcs Maximum	4pcs Maximum	4pcs Maximum

\*Hot sale: HW12100,HW12140,HW12200

\*The battery box is non-flame-retardant by default and supports flame-retardant customization

\*Support series/Bluetooth function customization, support 4pcs batteries maximum in series use

\*Support customization of working current, can maximum support HW12200 plus model products upgrade to 200A working current

# Application

## Pictures



HW1240



HW12100



HW12140



HW12300

## Scenario application



Water monitoring



Meteorological monitoring



Tachymeter

## Product features

Using lead-acid battery shell, IP65 protection grade, with higher energy density and service life than lead-acid batteries under the same volume, it can perfectly replace lead-acid batteries.

## Use energy type battery cells



Battery Cell 40146L



Battery Cell 40175L

# Telecom Battery

Items	Model	T48100-3.5U (3U)	T48200-5U	T48100-3US Intelligent Power
Electrical Characteristics	Nominal Voltage	48V		
	Nominal Capacity	100Ah	200Ah	100Ah
	Cycle Life	≥5000 cycles @70%DOD		
	Design Life	≥10 years @25°C		
Charge	Charge Mode	0.2C to 54.0V, then 54.0V charge current to 0.02C(CC/cv)		
	Max.Charge Current	100A		
Discharge	Max.Continuous Discharge Current	100A		
	Discharge Cut-Off Voltage	42.5±0.5V		
Environmental	Charge Temperature Range	0°C~60°C		
	Discharge Temperature Range	-10°C~60°C		
	Optimum Operation Temperature	10°C~35°C		
	Storage Temperature	-20°C~55°C ≤85%Relative Humidity		
Mechanical	Water Dust Resistance	IP20		
	Dimensions (Excluding Hanger and Handle Bar)	442*450*157mm (442*430*133mm)	442*540*222mm	442*430*130mm
	Max.Weight	43kg	88kg	43kg
Other	Protocol	Modbus		
	Communication Port	RS485 (2pcs)/RS232		RS485 (2pcs)/CAN
	SOC Light	4*LED		
	Parallel in Maximum	15pcs		32pcs
Optional Functions	LCD Screen	Displays the total voltage pack, cell voltage, temperature, BMS status, etc <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Anti-theft function: Keep battery tilt more than 15° to turn on anti-theft
	Gyroscope anti-theft	Keep battery tilt more than 15° to turn on anti-theft <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Dry contact function: PIN1 to PIN2: Normally closed, open during battery protection; PIN3 to PIN4: Normally closed, open during low SOC
	SNMP	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		★Can be used in combination with lead-acid and second-use lithium batteries. Compatible with the existing DC power system to reduce the cost of base station construction and maintenance;
	Dry Contact	PIN1 to PIN2: Normally open, closed during low power PIN3 to PIN4: Normally open, closed during fault protection <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		★The auxiliary switching power supply achieves load shifting to save the expansion costs for base station; ★Boost power supply: the stable discharge voltage level can be adjusted within the range of 48V to 57V, compensating for the voltage drop and reducing the line loss and investment in booster; ★Achieving intelligent self-management through CAN automatically assign addresses and stable continuous output.

# Application

## Pictures



T48100-3.5U



T48150-3.5U



T48200-5U

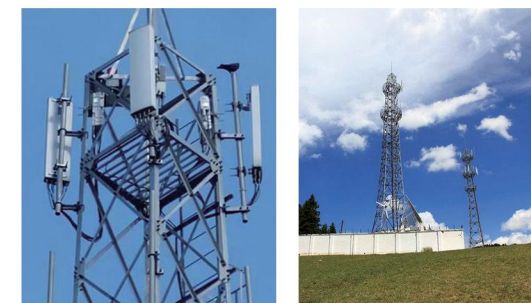


T48100-3US intelligent power supply

Adopting intelligent BMS, it can be mixed with lead-acid batteries and old lithium batteries.

\*The voltage platform needs to be similar

## Backup power for telecom site



China Mobile and China Tower

## Backup power for data centers



Network Computer Room

## Use energy type battery cells



Battery Cell 40146L



Battery Cell 40175L

# Low Voltage Home Energy Storage Battery

Items	Model	H51100RC	H51200WM	H51100ST
Electrical Characteristics	Nominal Voltage	51.2V		
	Nominal Capacity	100Ah	200Ah	100Ah
	Cycle Life	≥5000 cycles @70%DOD		
	Design Life	≥10 years @25°C		
Charge	Charge Mode	0.2C to 57.6V, then 57.6V charge current to 0.02C (CC/cv)		
	Max.Charge Current	100A		
Discharge	Max.Continuous Discharge Current	100A		
	Discharge Cut-Off Voltage	45±0.5V		
Environmental	Charge Temperature Range	0°C~60°C		
	Discharge Temperature Range	-10°C~60°C		
	Optimum Operation Temperature	10°C~35°C		
	Storage Temperature	-20°C~55°C ≤85%Relative Humidity		
	Water Dust Resistance	IP20		
Mechanical	Case	Iron(Insulation Painting)		
	Dimensions (Excluding Hanger and Handle Bar)	442*450*157mm	780*510*185mm	460*460*165mm
	Max.Weight	45kg	102kg	45kg
Other	Communication Port	RS485(3pcs)/RS232/CAN		
	SOC Light	6*LED		
	LCD Screen	Optional,default is no		Not available
	Parallel in Maximum	15pcs,depends on the installation condition		4pcs
	Installation	Should be installed in the RACK or cabinet	Should be mounted on the wall	Can be stacked one upon another, with four wheels below
	Inverter Integrated	Support Growatt,Deye,Goodwe,Sungrow,Sofar,etc		

## Application

### Pictures



H51100RC Rack Mount



H51200WM Wall Mount



H51100ST Stack Type



H51100ST Supports 4 pieces in parallel use

### Description



#### Product Description:

Used for home power backup; power supply at peak time, charging at valley time to save electricity; storage of solar photovoltaic electricity, "free electricity"; Backup power supply in case of unexpected power outage, use electricity calmly.

### Use energy type battery cell



Battery Cell 40146L



Battery Cell 40175L

# High Voltage Home Energy Storage Battery

Items	HXX060ST-HV							
Battery Module	H51060ST(3.072kWh,51.2V,30kg)							
Number or Modules	3	4	5	6	7	8	9	10
Energy (kWh)	9.21	12.28	15.36	18.43	21.5	24.57	27.64	30.72
Usable Energy (kWh)	8.29	11.05	13.82	16.58	19.35	22.11	24.87	27.64
Nominal Voltage (V)	153.6	204.8	256	307.2	358.4	409.6	460.8	512
Operating Voltage Range (V)	141.6-170.4	188.8-227.2	236-284	283.2-340.8	330.4-397.6	377.6-454.4	424.8-511.2	472-566
Dimension (W*D*H) mm	600*220*807	600*220*997	600*220*1187	600*220*1377	600*220*1567	600*220*1757	600*220*1947	600*220*2137
Weigeh (kg)	94	124	154	184	214	244	274	304
Standard Charge/Discharge Current	15A/30A							
Max. Charge/Discharge Current	30A/60A							
Cycle Life	≥5000次@70%DOD							
Charge Mode	0.2C to N*56.8V, then N*56.8V charge current to 0.02C(CC/CV)							
Discharge Cut-off Voltage	≤N*47.2V							
Water Dust Resistance	IP54							
LCD	Displays the total voltage, cell voltage, temperature, BMS status, etc							
Communication	RS485/CAN/Wifi							

## Pictures



HXX060ST-HV Module



Supports 10 modules in series

# Hybrid Inverter

Items	15212/24/48	20212/24/48	30224/48	40224/48	50248	60248	80248	10348	12348
Rated Power	1500W	2000W	3000W	4000W	5000W	6000W	8000W	10KW	12KW
Phase Type	Single phase L-N: Split phase can be customized L1-L2, L1-N, L2-N								
Standard Battery Voltage	12/24/48VDC		24/48VDC		48VDC				
Battery Type	Lead-acid/Gel Battery/Lithium Batteries /Custom battery								
Rated Input Voltage	110VAC/120VAC/220VAC /230VAC/240VAC								
AC Input Voltage Range	85VAC~138VAC(110VAC)/95VAC~148VAC(120VAC)/170VAC~275VAC(220VAC)/180VAC~285VAC (230VAC)/190VAC~295VAC(240VAC)								
AC Input Frequency Range	45Hz~55Hz(50Hz), 55Hz~65Hz(60Hz)								
Output Wave/Conversion Efficiency	Pure Sine Wave/>85%								
AC Output Voltage /Frequency Range(INV mode)	110VAC±2%/120VAC±2%/220VAC±2%/230VAC±2%/240VAC±2%, 50/60Hz±1%								
Rated Current	30A~60A			60A~100A			100A		
PV Array Max Power	12V(420W)/24V(840W)/48V(1680W)			12V(840W)/24V(1680W)/48V(3360W)			5600W		
Max PV input Voltage (Voc)(At The Lowest Temperature)	12V/24V system: 120VDC; 48V system: 180VDC								
MPPT Tracking Voltage Range	12V System(15V-80V)/24V System(30V-100V)/48V System(60V-140V)								
Protection	Battery undervoltage protection/Battery overvoltage protection/Overload power protection/Inverter output short circuit protection/Temperature protection								
Display	LCD								
Communication Interfaces	RS485/RS232,APP(WIFI monitoring or GPRS monitoring)Optional								
Product Size (L*W*Hmm)	470*300*148			530*335*158			684*430*250		
Packing Size (L*W*Hmm)	545*385*223			605*420*233			705*485*315		
N.W.(kg)	13.5	18	20	22	26	24	45	55	58
G.W.(kg)	15	19.5	21.5	24	28	26	52	62	65

## Pictures and Features



LF Series Inverter

- ★ Pure sine wave output, toroidal low-loss transformer, high-efficiency inverter conversion, customizable dual output voltage;
- ★ Intelligent LCD integrated display, convenient for users to view the status of the equipment and parameters;
- ★ Adjustable utility charging current range of 0-30A, while providing optional operating modes;
- ★ Starting more than 3 times the peak power, and fully automatic and complete protection features to ensure the safe and stable operation of equipment;
- ★ New fault code query function, convenient for users to monitor the real-time operating status of the equipment;
- ★ Support diesel (gas) oil generator, suitable for a variety of harsh power environment;
- ★ With dual-use industrial and civilian functions, wall-mounted design, easy to install and use.

# Solar Street Light Battery



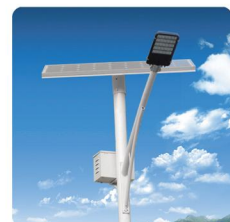
HW-12.8V60Ah



HW-25.6V120Ah

Items	Model	HW-12.8V60Ah	HW-25.6V120Ah
Specification	Nominal Voltage	12.8V	25.6V
	Nominal Capacity (0.2C,25°C)	60Ah	120Ah
	Weight (Approximate)	< 9Kg	< 38kg
	Size (Approximate)L*W*H (Does not include interfaces and other protrusions)	179mm *171mm *270mm	L*W*H=505*405*132mm (Does not include interfaces and other protrusions)
Standard Discharge	Recommended Discharge Current	15A	20A
	Max. Continuous Current	30A	30A
	Cut-off Voltage	9-11V	18-22V
	Discharge temperature range	-10~60°C ≤0.1C discharge if temperature is less than -10°C	-10~60°C ≤0.1C discharge if temperature is less than -10°C
Standard Charge	Standard Charge Voltage	14.6V	29.2V
	Recommended Charge Current	15A	20A
Others	0.1C/0.1C cycle life	≥5000 Times@70%DOD	≥5000 Times@70%DOD
	Package	AL(Blue)+AL(Blue)	Q235 iron or Aluminium (Grey)
	Connector	Lead red&black wire	Waterproof Socket
	IP Level	IP65	IP65
Optional Functions	GPS	<input type="checkbox"/> Yes For GPS function	<input checked="" type="checkbox"/> Yes For GPS function
		<input checked="" type="checkbox"/> No	<input type="checkbox"/> No
	LORA	<input type="checkbox"/> Yes For connecting to remote server to complete the reading of parameters and status of solar energy controller	<input checked="" type="checkbox"/> Yes Connect to the remote server to read parameters and status of solar energy controller
		<input checked="" type="checkbox"/> No	<input type="checkbox"/> No
	Bluetooth	<input type="checkbox"/> Yes Bluetooth is used for cell phone APP to connect with the control device	<input checked="" type="checkbox"/> Yes Bluetooth is used for cell phone APP to connect with the control device
		<input checked="" type="checkbox"/> No	<input type="checkbox"/> No

## Application scenario



Ordinary solar street light



Intelligent Street Light

# Tricycle Battery

Items	Model	51.2V60Ah	64V145Ah
Electrical Characteristics	Nominal Voltage	51.2V	64V
	Nominal Capacity	60Ah	145Ah
	Cycle Life	≥3000 cycles @80%DOD	≥3000 cycles @80%DOD
	Design Life	≥10 years @25°C	≥10 years @25°C
Charge	Charge Mode	0.2C to 57.6V, then 57.6V charge current to 0.02C (CC/cv)	0.2C to 72V, then 72V charge current to 0.02C (CC/cv)
	Max.Charge Current	30A	40A
Discharge	Max.Continuous Discharge Current	50A	50A
	Discharge Cut-Off Voltage	40V	50V
Environmental	Charge Temperature Range	0 ~ 60°C	0 ~ 60°C
	Discharge Temperature Range	-10°C~60°C	-10°C~60°C
	Optimum Operation Temperature	10°C~35°C	10°C~35°C
	Storage Temperature	-10°C~45°C ≤85%Relative Humidity	-10°C~45°C ≤85%Relative Humidity
Mechanical	Water Dust Resistance	IP54	IP54
	Case	Iron (Insulation Painting)	Iron (Insulation Painting)
	Dimensions (Excluding Hanger and Handle Bar)	525mm*190mm*213mm	673mm*383mm*258mm
	Max.Weight	≤32kg	≤82.3kg
Connector	Anderson 50A	Anderson 50A	

## Pictures & Application Scenarios



51.2V60Ah



Electric tricycle battery

## Use energy type battery cells



Battery Cell 40146L



Battery Cell 40175L

# High-Power Lithium Battery for High-Voltage UPS

Items	480V8Ah	480V17Ah
System Specifications	480V8Ah	480V17Ah
System Composition	96V8Ah*5 + controlling system*1	96V17Ah*5 + controlling system*1
Working Voltage	405V-540V	405V-540V
Capacity	3.84kWh	8.16kWh
Maximum Allowable Charging Current	8A	17A
Maximum Allowable Discharging Current	100A	100A
Charging Temperature	0-60°C	0-60°C
Discharge Temperature	-10-60°C	-10-60°C
Storage Temperature	-10-45°C	-10-45°C
Dimension (mm)	442 (W) *230 (D) *1100 (H)	442 (W) *250 (D) *1100 (H)
Weight	110kg	125kg
Protection	OVP、UVP、OTP、UTP、OCP、SCP、etc	OVP、UVP、OTP、UTP、OCP、SCP、etc
Communication	CAN & RS485	CAN & RS485
LCD	7 inches, displays voltage,current,temperature SOC, SOH, system status, etc	7 inches, displays voltage, current, temperature SOC, SOH, system status, etc.

## Pictures

Higher capacity UPS power supply for large server rooms, scientific research, data centers and more.



Module



Battery

## Use high rate battery cells



Battery cell 38120HP



Battery cell 40152S

# Portable power supply



Items	Model	HW T11-1200W
General parameters	Internal battery	LiFePo4 rate battery
	Nominal Energy	1008Wh
	Charger specifications	38V 6A(Support 12V~50V charger)
	Solar Charging Specifications	Anderson socket 12V~50V/8AMax MPPT 350W
	Charging time	Charger charging: 5 hours Charger + Type-c: 4 hours
	DC output	2xDC output:12V/7ACigarette lighter output: 12V/7A 8xUSB output: 5V/2A 2xUSB3.0 5~9V/2A 1xTYPE-C 5~9V/2A 1xTYPE-C 5~20V/3A Two-Way PD 60W
	AC output	4x AC pure sine wave outputs
	AC continuous output power	1200W
	AC output voltage	110V60HZ/230V 50HZ
	Operating TemperatureRange	-10°C-40°C
	Cycle Life	>2500
	Product Protection	a. Short circuit protection d. Undervoltage protection b. Overcurrent protection e.Overload protection c.Overvoltage protection f.Overtemperature protection
	Packing list	1 x Portable emergency power supply 1 x Charger
	Output	38V 6A
	DC port	GX16
Shape	Desktop	
Input charging function	Support power charger charging	Yes
	Support solar panel charging	Yes
Battery	Energy	22.4V 45Ah
	Cycle life (charge&discharge)	>2000
Structure	Size	394*213*287mm
	Net weight	Approximately 13.2KG
	Material	Alloy+ABS plastic, UL94-V0;
	Color	Black+Orange
Packaging	Packaging	Carton+Foam
	Carton size	498*325*380mm
	Quantity/CTN	1PCS/CTN
	Gross weight	Approximately 16KG