

LifePO₄ Battery System for Telecom Application



It is the 48V system for Telecommunication standby type LiFePO₄ (lithium iron phosphate) battery products, the system uses the advanced LiFePO₄ battery technology with the benefit of long cycle life, small size, light weight, safety and environmental protection, and has a strong environmental adaptability, it is idea for harsh outdoor environments.

The system also integrates a smart battery management and monitoring module, support for remote centralized monitoring and remote battery management and maintenance, to meet the requirements of unattended. Therefore, the system can fully meet the backup power supply requirements of the access network equipment, mobile communications equipment, transmission equipment, micro base stations and microwave communication equipment.



Features and Benefits

- With the latest development technology trends of international Telecommunication battery, adopt advanced Fe lithium battery system.
- Advanced intelligent lithium battery management technology to ensure the intelligent automatic management.
- With "Energy transfer" balanced patented technology, provide high efficiency balanced and prolong system operate life.
- Excellent electromagnetic compatibility. The outdoor power system with this product comply with the main equipment when they working together, no interfere with each other.
- Complete intelligent design, centralized monitoring unit have function of "three remote" (remote measure, remote communication, remote control), The system managed by computer, communicate with the remote monitoring center, unattended, in line with the requirements of the development of modern communications technology.
- Combine the power control technology and computer technology, real-time monitoring and control the rectifier, AC and DC power distribution.
- Configuration flexibility, support parallel connection expansion.

General Specifications

Item	Type	Nominal Voltage (V)	Nominal Capacity (Ah)	Charge Voltage (V)	Max. Charge Current (A)	Optional Charging Current limit(A)	Output Voltage (V)	Max. Output Current (A)	Dimensions (WxDxH in mm)	Weight (kg)
1	EVL48-10FT01	48	10	54.0 +/- 0.5	5	2	37.5 to 54.7	10	442x260x44	6.5
2	EVL48-20FT01	48	20	54.0 +/- 0.5	10	2	37.5 to 54.7	10	442x400x88	12
3	EVL48-40FT01	48	40	54.0 +/- 0.5	20	10	37.5 to 54.7	40	442x400x132	22
4	EVL48-50FT01	48	50	54.0 +/- 0.5	20	10	37.5 to 54.7	50	442x400x132	30
5	EVL48-70FT01	48	70	54.0 +/- 0.5	50	15	37.5 to 54.7	50	442x400x220	40
6	EVL48-75FT01	48	75	54.0 +/- 0.5	50	15	37.5 to 54.7	50	442x400x220	45
7	EVL48-100FT01	48	100	54.0 +/- 0.5	50	15	37.5 to 54.7	50	442x400x264	60

Note: ① Nominal voltage---cell nominal voltage 3.2V, 48V battery consist of 15 cells.

② Nominal capacity---discharge with constant current (0.2CA) to end voltage (37.5V) at 25°C.

③ The batteries can be customized.

LifePO₄ Battery System for Telecom Application



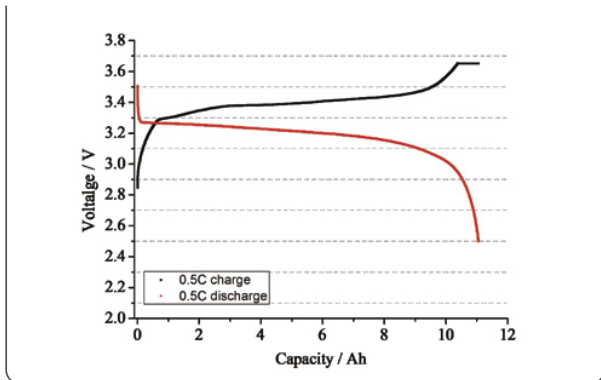
Battery system panel



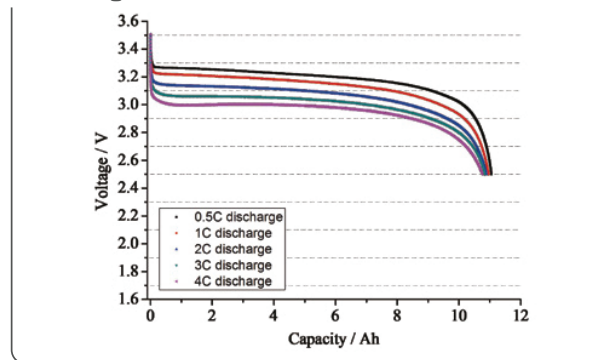
- 1 Input and output (DC)
- 2 Cascading communication (RS-485)
- 3 Up-link communication (RS-232)
- 4 Address dial number (ADD)
- 5 Alarm (red) and run (green) LED light
- 6 Indicator light for capacity (SOC)

Performance Curve

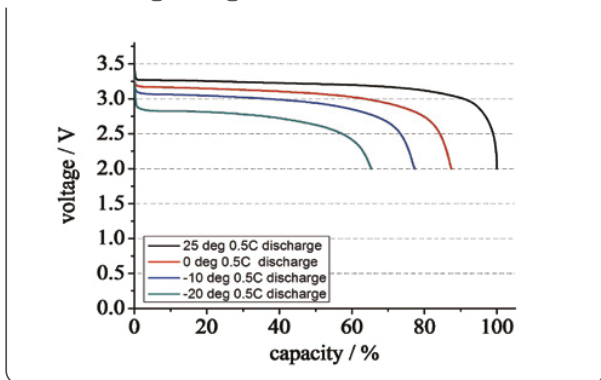
Charge and discharge performance of single cell



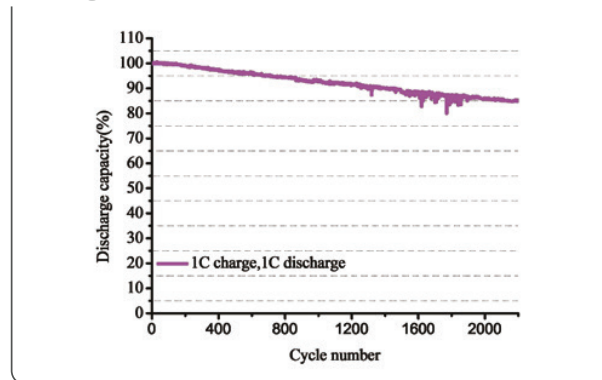
Discharge performance at different discharge rate of single cell



Constant Voltage Charge Characteristics



Discharge Characteristics



Operation Environment

- Working temperature: -10°C ~ +55°C.
- Storage temperature: -20°C ~ +45°C.
- Relative humidity : 25% ~ 85%, no condensation.
- Altitude : 0~2000m, if altitude above 2000m, the max working temperature decrease 1°C every 200m. Max. altitude is 4000m.

For trade enquiries please contact:
M/s Newstar Investments Limited

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LifePO₄ Battery System for Energy Storage



Typical Applications

- Distributed PV power station
- Off grid energy storage system
- Solar street lamp
- Wind and PV energy storage
- Roof solar energy storage
- Microgrid energy storage system

Features

- High energy density, small Size, light weight. Ultra long cycle performance.
- Reliability: high safe and reliable system hardware configuration. Soft packed LiFePO₄ battery cell and modular design.
- Safety: Perfect protect system: overvoltage protection, short circuit protection, overheat protection, overload protection, etc.. Comply with EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-2, EN61000-3-3, EN60164-1-1, EN55022, EN50178, etc..
- High usability: easy to be installed and have CAN, RS485 port.
- Expansibility: RS485 port is reserved, easy to connect computer and read monitor data.



Item	Model	Nominal Voltage (V)	Rated Capacity C ₂₀ (Ah)	Approx Dimension			Approx Weight (KG)
				L mm	W mm	TH mm	
1	EVLE220-120	220	20	800	600	2200	360
2	EVLE600-40	600	40	800	600	2200	360
3	EVLE600-80	600	80	800	1000	2200	720
4	EVLE336-40	336	40	800	600	2200	185
5	EVLE12-10	12	10	170	100	65	1.5
6	EVLE12-20	12	20	170	100	120	3
7	EVLE12-40	12	40	170	200	120	6
8	EVLE24-10	24	10	170	100	120	3
9	EVLE24-20	24	20	170	200	120	6
10	EVLE24-40	24	40	240	200	170	12

Note: The batteries can be customized.

LifePO₄ Battery System for Energy Storage



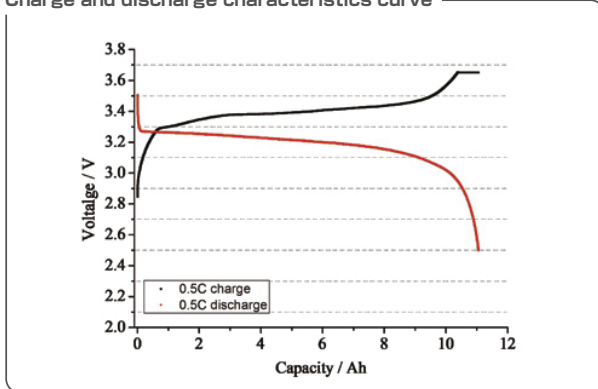
System Operation Panel



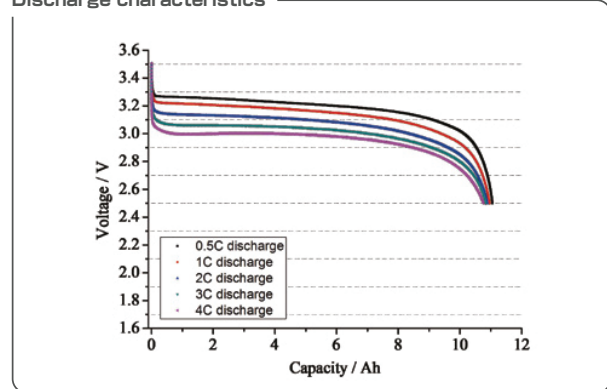
- 1 Input and Output (DC)
- 2 RS-485 cascade communication
- 3 RS232 mainframe monitor communication
- 4 Address code (ADD)
- 5 LED light of alarm (red) and running (green)
- 6 Indicator light of SOC

Performance Characteristics

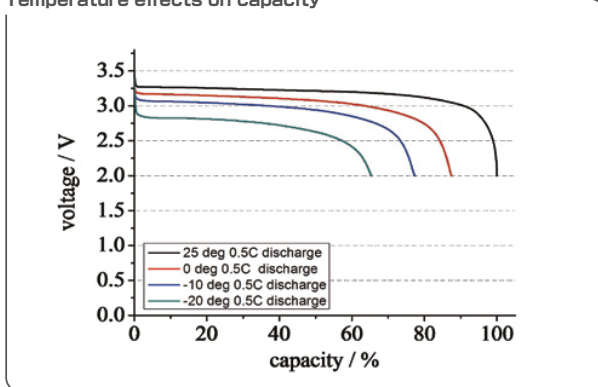
Charge and discharge characteristics curve



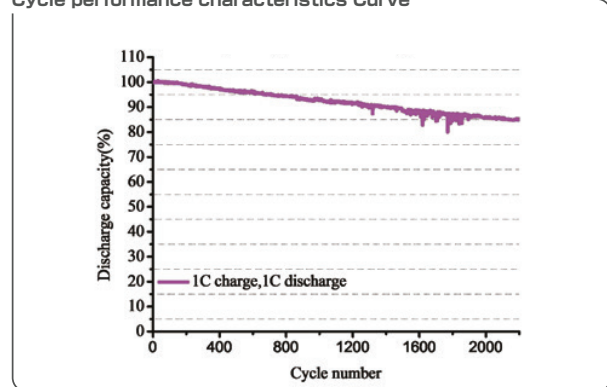
Discharge characteristics



Temperature effects on capacity



Cycle performance characteristics Curve



Work Environment

- Operation Temperature : -10°C ~ +55°C.
- Storage Temperature : -20°C ~ +45°C.
- Relative Humidity : 25% ~ 85%.
- Altitude : 0~2000m, If it is high than 2000 meters, the maximum operating temperature will be reduced by 1 degree Celsius every 200 meters. The allowed maximum altitude is 4000 meters.

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LifePO₄ Battery System for Power Application



Typical Applications

- Electric motorcycle, low speed electric vehicles
- Golf cart, patrol car
- Tourism boat and Patrol car
- Intelligent warehouse motive system

Features

- High energy density, small size, light weight, excellent safety and reliable performance. Ultra long cycle performance, environment friendly energy.
- 3 CAN communication modes, keeping the real-time communication with the vehicle control unit, car charger and LCD.
- Battery balance technology. Solving the battery consistency problem through active and passive balance technology, and this technology can be customized.
- Increase the capacity by parallel connection
- SOC self learning technology.
Calculating battery capacity through real time data collection and automatically adjust the SOC data.
- Heating film management(Optional)
In low temperature, heating film will be started and heat the surface of the battery, to ensure the performance of battery capacity.
- Alarm function
Beside the basic protection alarm function, BMS can also send the information of power off, low voltage etc. to the monitoring system.
- LCD display function
LCD (Optional) can display the voltage, temperature, SOC of the battery and alarm, protection information, etc.
- Other functions
Sending alarm, precharge, data storage, indication of battery capacity and running status
- Total solution system is available.



Item	Model	Rated Voltage (V)	Rated Capacity (Ah)	Dimension			Weight (KG)
				L	W	TH	
1	EVLP48-10-AL	48	10	390	150	68	5.5
2	EVLP36-10-AL	36	10	110	75	385	4.5
3	EVLP24-10	24	10	87	87	380	2.5
4	EVLP24-8	24	8	87	87	380	2
5	EVLP48-10	48	10	130	180	238	6
6	EVLP48-20	48	20	130	180	373	11
7	EVLP24-60	24	60	330	310	120	18
8	EVLP48-40	48	40	420	178	195	19.5
9	EVLP48-120FMO1	48	120	500	500	230	55

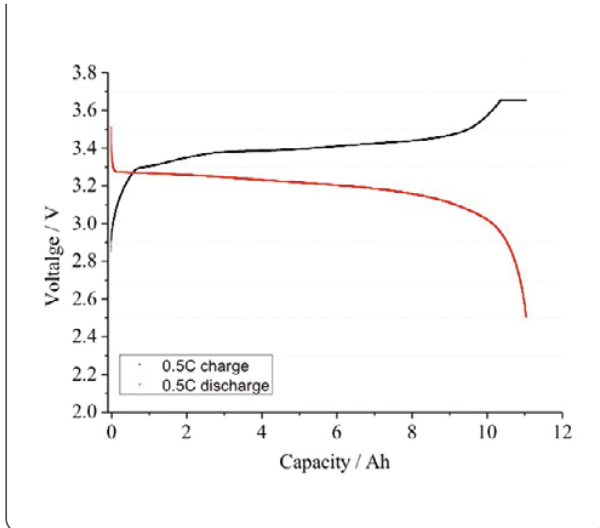
Note: The batteries can be customized.

LifePO₄ Battery System for Power Application

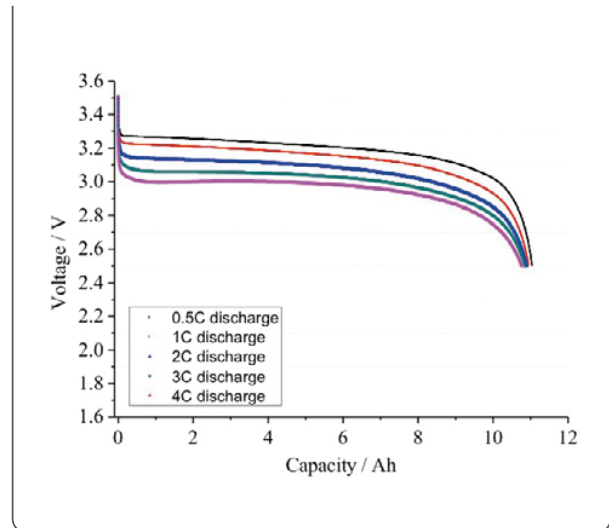


Performance Characteristics

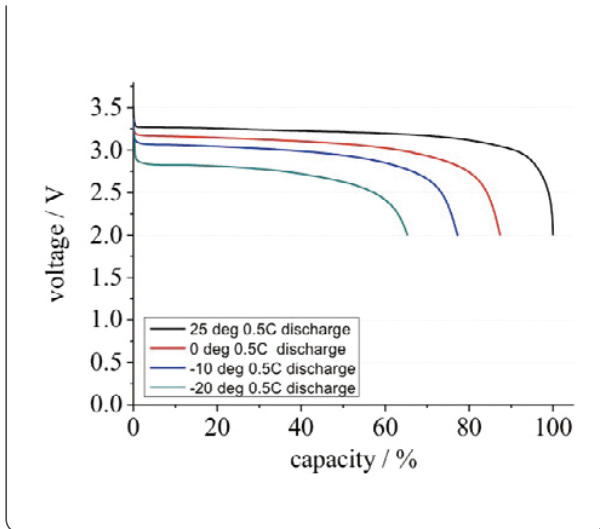
Charge and discharge performance characteristics curve



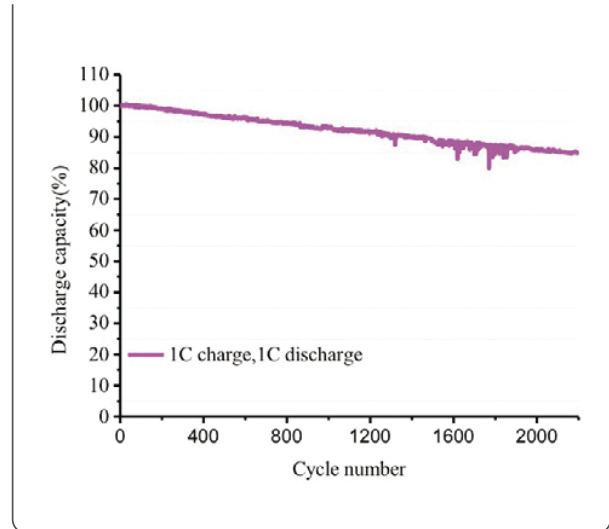
Discharge characteristics curve



Temperature effects on capacity curve



Cycle performance characteristics curve



Work Environment

- Charge : 0°C ~ 45°C
- Discharge : -10°C ~ 55°C
- 30 Days Storage : -20°C ~ 45°C
- 90 Days Storage : -20°C ~ 35°C

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