

**EFB-48/5.12**

**LiFePO<sub>4</sub> Batteries**



## EFB - 48/5.12

### 5120Wh



Technology  
LiFePO<sub>4</sub>



Extendable  
system



Fire  
Extinguisher



Anti-theft  
compatible



Warranty  
2 years

Designed with a robust structure and high performance, this 48V 5120Wh rack-mountable lithium battery is the ideal choice for hybrid systems that demand superior features and reliable operation. Thanks to LiFePO<sub>4</sub> technology, it supports full charge and discharge cycles in just one hour, providing a fast, efficient, and safe solution for critical applications.

With over 5000 cycles at 80% depth of discharge (DoD), it ensures a long service life even under intensive use. Its intelligent Battery Management System (BMS) includes advanced protection features such as overcharge, overdischarge, overcurrent, and temperature control, as well as cell balancing—ensuring stable and long-lasting performance.

Highlighted features include an integrated internal fire extinguisher for enhanced safety and a remote reset button, which simplifies maintenance and enables remote system operation.

Ideal for solar and wind energy installations, telecommunications, UPS systems, and backup power solutions.

## Applications



FLV



Telecommunications



Solar Energy System

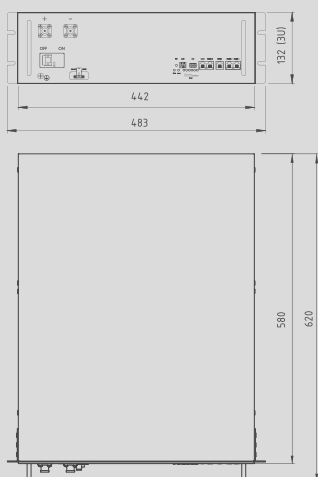


UPS

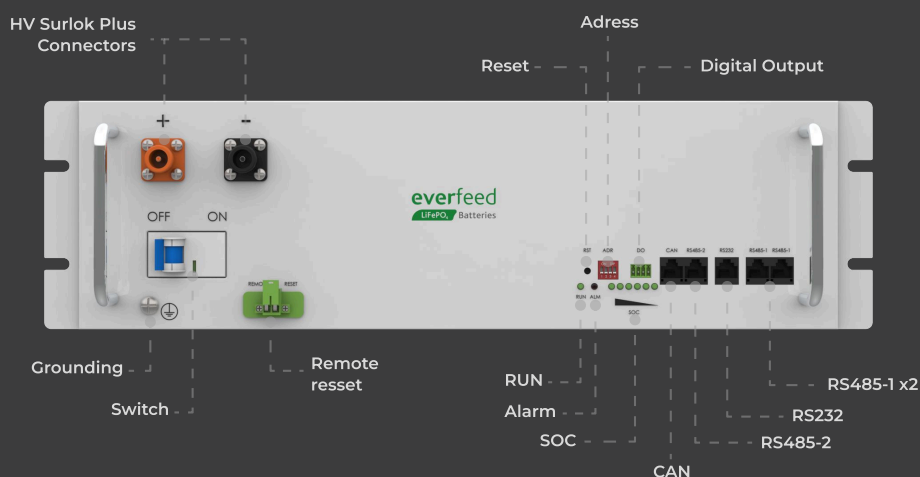


Smart Home

## Dimensions



## Specifications



Electrical characteristics	Nominal Voltage	48V
	Nominal Capacity	100Ah
	Energy	5120Wh
	Internal Resistance	≤60mΩ
	Life cycle	>5000cycles @0,2C 80%DoD
	Calendar Life	>10 years
	Months Self Discharge	<5% in 90-day storage at 25°C
	Efficiency of Charge	97% @0,5C
	Efficiency of Discharge	98% @0,5C
Charge	Charge Voltage	57 ± 0,1V
	Method of Charge	0,2C to 54,0V; then charge current to 0,02C (CC/CV)
	Standard Charge Current	50A @≥10°C ; 10A@<10°C
	Max. Constant current	100A (if over, limited 20A)
	Charge Cut-off	57,6V
Discharge	Continuous Current	100A
	Max. Discharge Cut-off Current	100A Constant, Peak 100A for 1000ms
	Discharge Cut-Off Voltage	45,6V
Environmental	Charge Temperature	0°C to 50°C @60 ± 25%HR
	Discharge Temperature	-20°C to 60°C @60 ± 25%HR
	Storage Temperature	0°C to 45°C @60 ± 25%HR
	Water Dust Resistance	IP21
Communication	Modbus (RS485)	Yes
	RS232	Yes
	CAN	Yes
	SNMP	Optional
Mechanics	Cell / Method	100Ah/16S1P
	Cell Type	Prismatic
	Terminal type	HV Surlock Plus
	Dimensions (mm)	442*580*132(3U)
	Weight (kg)	45Kg
	Gravimetric Specific Energy	114Wh/Kg
Safety standard	UN38,3 IEC 60950 / IEC 62619 RoHS Directive (2011/65/CE) Standard UL 1642 <div>     </div>	
Warranty	2 years	
Digital Output	Alarms	
Protection	Thermomagnetic	

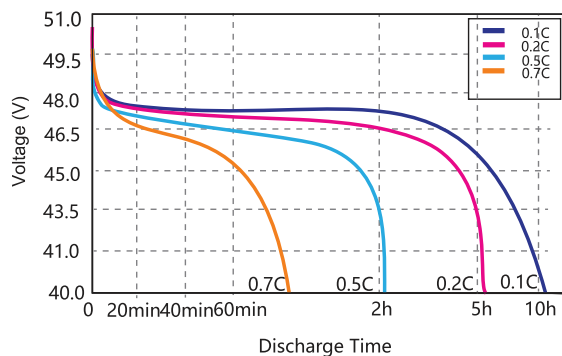
\*The data in this document may be modified without prior notice.

- **Longer Cycle Life.** Offers up to 20 times longer cycle life and 5 times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight.** About 40% of the weight of a comparable lead acid battery. A “driop in” replacement for lead acid batteries.
- **Increased Flexibility.** Modular design enables deployment up to 16 batteries in parallel

- **Superior Safety.** Lithium Iron phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation
- **Higher Power.** Delivers twice power of lead-acid battery, even high discharge rate, while maintaining high energy capacity
- **Wider temperature Range.** Operates reliably within a broad temperature range of -20°C to 60°C.

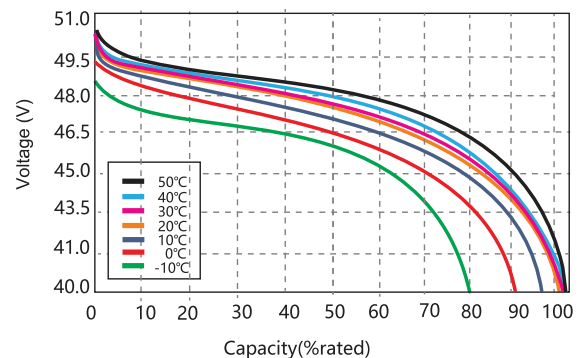
### Different Rate Discharge Curve

Different Rate Discharge Curve @25°C



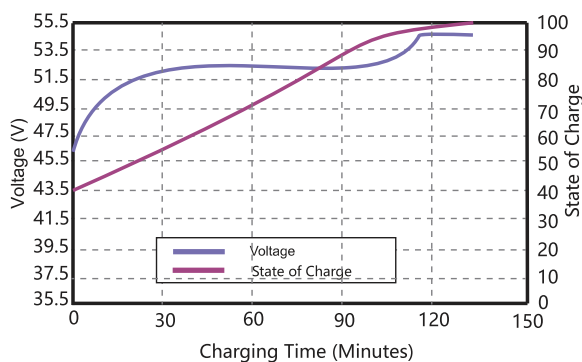
### Different Temperature Discharge Curve

Different Temperature Discharge Curve @0.5C



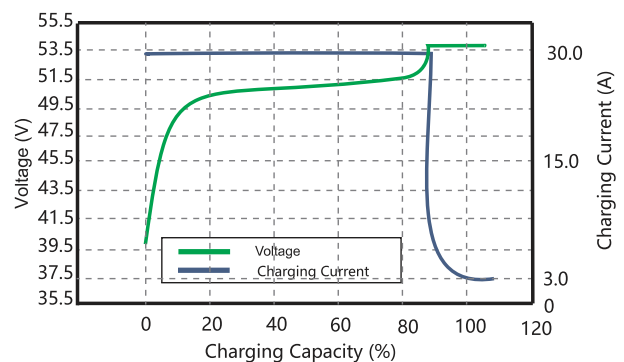
### State of Charge Curve

State of Charge Curve @0.5C 25°C



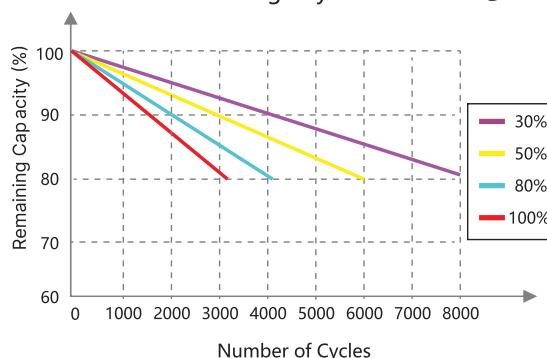
### Charging Characteristics Curve

Charging Characteristics @0.2C 25°C



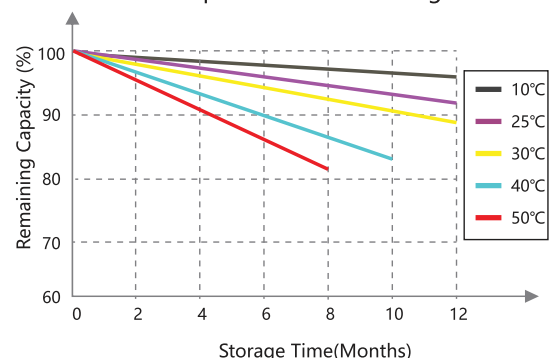
### Cycle Life Curve

Different DOD Discharge Cycle Life Curve @0.5C



### Self Discharge Characteristics Curve

Different Temperature Self Discharge Curve





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