

EFB-48100

LiFePO₄ Batteries





EFB - 48100

4800Wh

With a robust and efficient design, this 48V 4800Wh rack-mountable Lithium Battery is specially designed for hybrid systems requiring high performance and reliability. Equipped with LiFePO₄ technology, it enables full charge and discharge cycles in just one hour, offering a fast and safe solution for critical applications.

With over 5000 discharge cycles at 80% depth of discharge (DoD), it ensures a long estimated lifespan even under demanding usage conditions. Its intelligent Battery Management System (BMS) includes advanced protection features: overcharge, overdischarge, overcurrent, and temperature detection, as well as cell balancing, ensuring stable and long-lasting performance.

Ideal for a wide range of applications: energy storage for telecommunications, uninterruptible power supply (UPS) systems, solar and wind energy systems, and lighting systems. A reliable, safe, and versatile solution for today's energy challenges.



Technology
LiFePO₄



Extendable
system



HMI
supported



Anti-theft
compatible



Warranty
2 years

Applications



FLV



Telecommunications



Solar Energy System

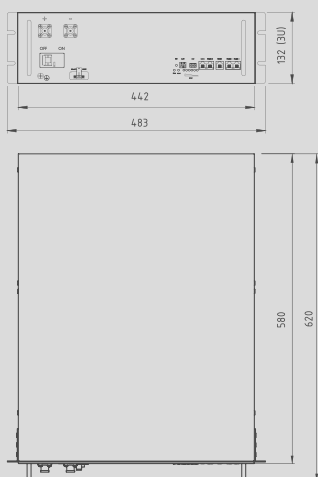


UPS

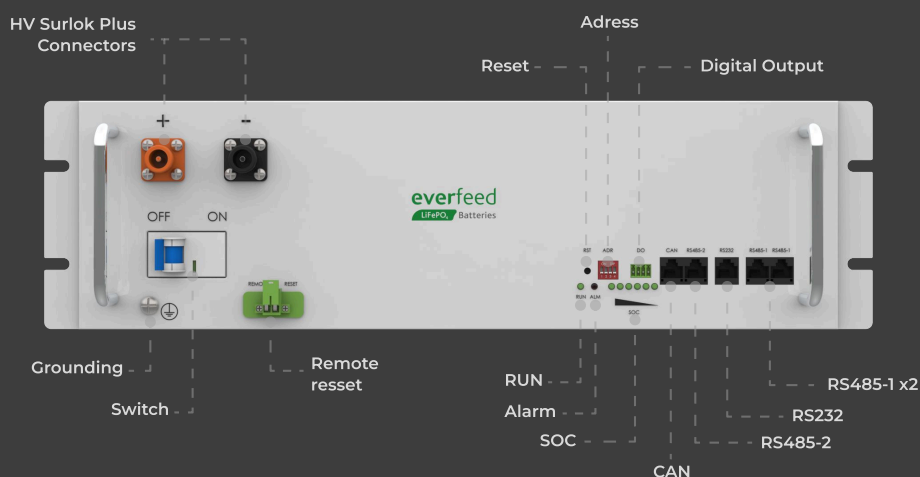


Smart Home

Dimensions



Specifications



Electrical characteristics	Nominal Voltage	48V
	Nominal Capacity	100Ah
	Energy	4800Wh
	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
Standard Charge	Charge Voltage	53,5 ± 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	54,5V
Standard Discharge	Continuous Current	100A
	Max. Discharge Cut-off Voltage	100A Constant, Peak 150A for 10secs
	Discharge Cut-Off Voltage	41V
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-15S1P
	Pack Case	Prismatic
	Terminal type	HV Surlock Plus
	Dimensions (mm)	442*580*132(3U)
	Weight (kg)	41Kg
	Gravimetric Specific Energy	117Wh/Kg
Safety standard	UN38,3	
	IEC 60950 / IEC 62619	
	RoHS Directive (2011/65/CE)	
	Standard UL 1642	
Warranty	2 years	
Digital Output	Factory programmable auxiliary contact configuration	
Protection	Thermomagnetic	

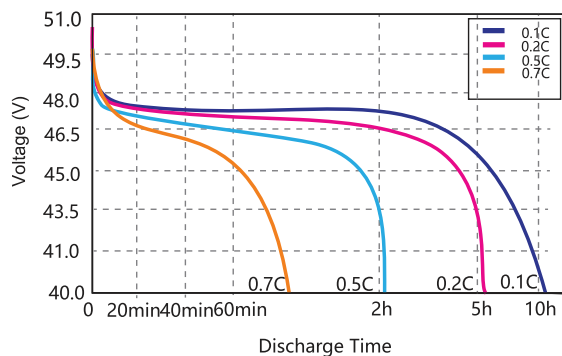
*The data in this document may be modified without prior notice.

- **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.

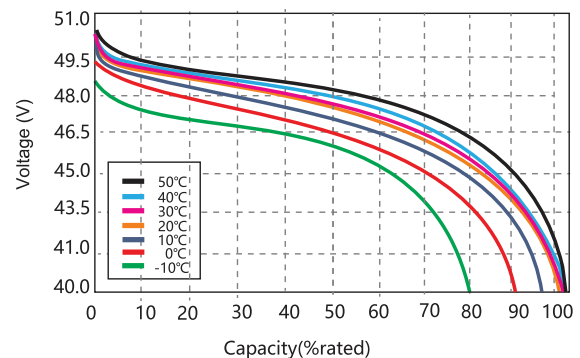
Different Rate Discharge Curve

Different Rate Discharge Curve @25°C



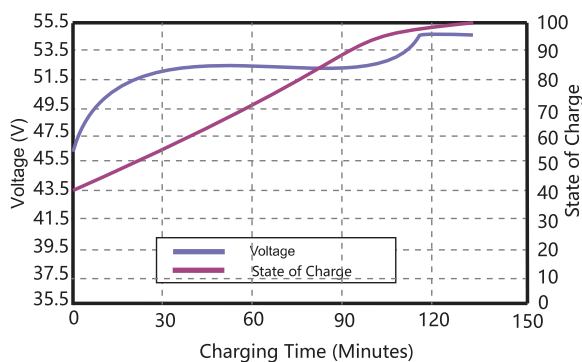
Different Temperature Discharge Curve

Different Temperature Discharge Curve @0.5C



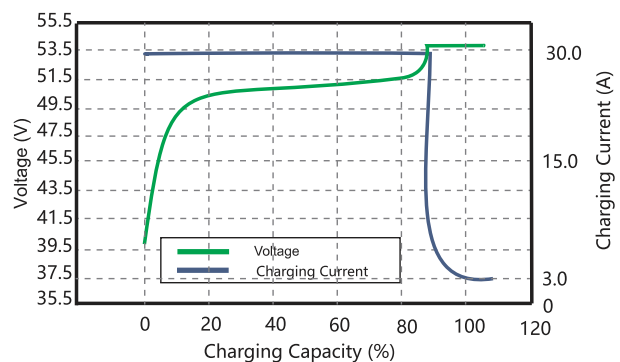
State of Charge Curve

State of Charge Curve @0.5C 25°C



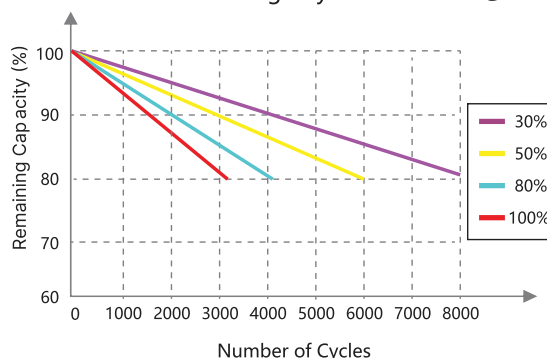
Charging Characteristics Curve

Charging Characteristics @0.2C 25°C



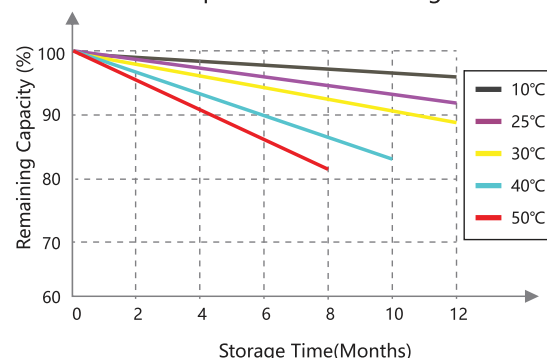
Cycle Life Curve

Different DOD Discharge Cycle Life Curve @0.5C



Self Discharge Characteristics Curve

Different Temperature Self Discharge Curve



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