ELB™

ELB-ES48100

LITHIUM ION PHOSPHATE BATTERY

ELB lithium battery LiFePO4 series batteries offer BMS controlled safety, long life,fast-charging performance. The BMS embeds smart balancing algorithms that control all cell voltages in the battery, making sure they are constantly at the same voltage level, optimizing battery capacity.

ELECTRICAL SPECIFICATION	
Nominal Voltage	51.2V
Nominal Capacity	100AH
Stored Energy	5120Wh
Resistance	70 mΩ
Self Discharge Rate	<3% per Month
Maximum Continous Charge Current	50A
Maximum Continous Discharge Current	100A
Charge Cut-off Voltage	58.4 V
Discharge Cut-off Voltage	40V

ISO9001 ISO14001 ISO18001 IEC62133

CE UL1642(CELL) UN38.3 MSDS

MECHANICAL SPECIFICATIONS	
Dimensions (mm)	L483×W459×H175
Weight	49kg
Terminal Type	Screwed Terminal
Case Material	SS

TEMPERATURE SPECIFICATIONS	
Discharge Temperature	-20 to 60 °C
Charge Temperature	0 to 55 ºC
Storage Temperature	-20 to 55 °C

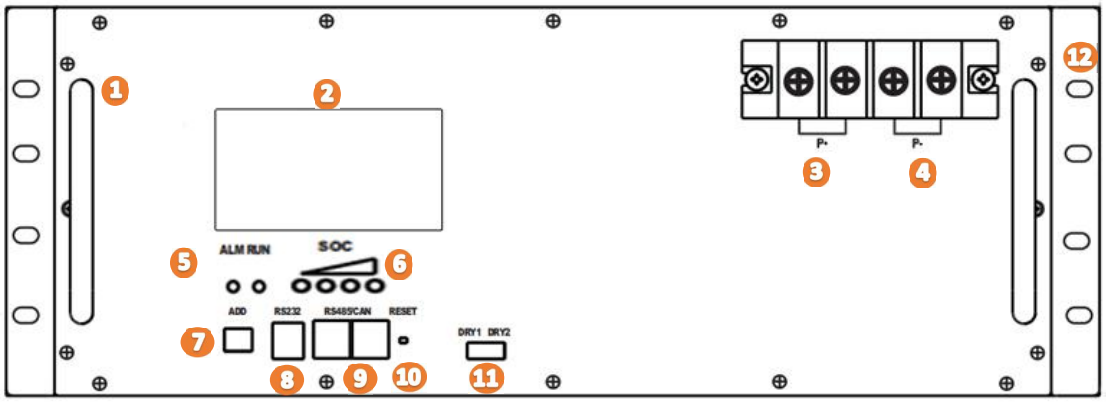
OTHERS SPECIFICATIONS	
Short Circuit Protection	Automatically recover after removal of short
Life Expectancy (years)	10 years at one cycle per day

COMPLIED STANDARD

- ✓ ISO9001(Factory)
- ✓ ISO14001(Factory)
- ✓ ISO18001(Factory)
- ✓ UN38.3
- ✓ MSDS
- ✓ UN39.3(Shipping)
- ✓ IEC 62133(Cells)
- ✓ UL 1642(Cells)
- ✓ CE

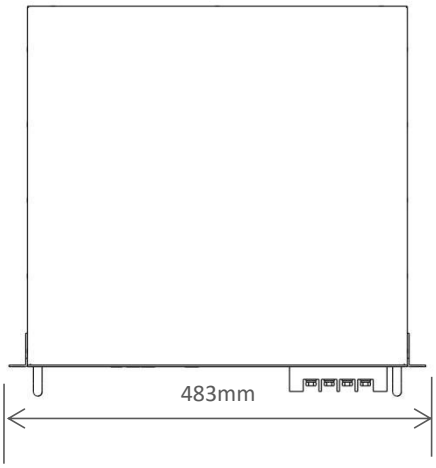
INTELLIGENT BMS FUNCTION

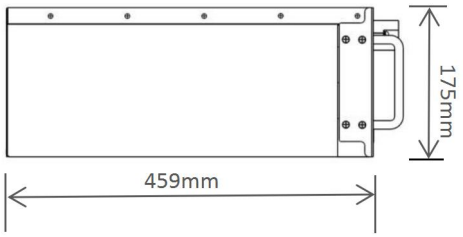
- ➢ Overcharge detection function
- ➢ Over discharge detection function
- ➢ Over current detection function
- ➢ Short detection function
- ➢ Temperature detection function
- ➢ Balance function



1. Handel
2. LCD Display
3. Positive Terminal
4. Negative Terminal
5. Battery Status Indicator Light
6. SOC
7. ADD
8. RS232
9. RS485
10. RESET
11. DRY
12. Installation Hole

BATTERY DIMENSIONS





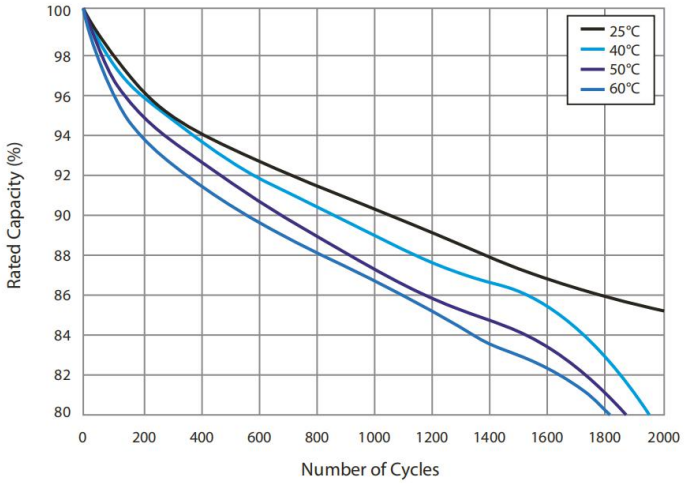
COMMUNICATION PROTOCAL

RS485 port can realize monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells.

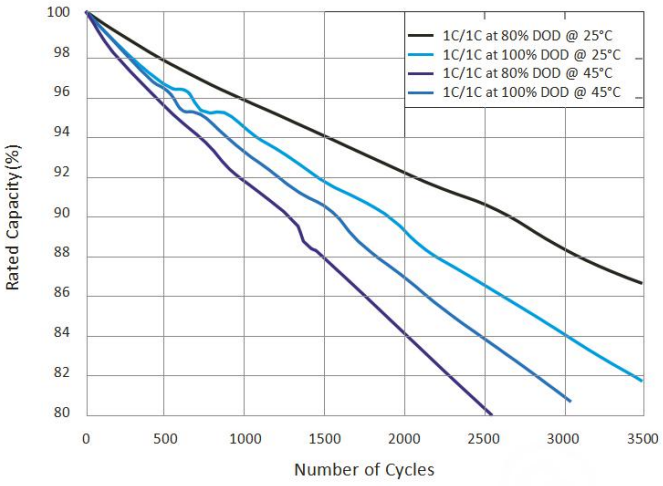
BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging or short circuit situation.
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging.
- BMS enhanced design balances the battery cells, optimizing battery performance.
- Delivers twice the power of lead acid batteries, even at high discharge rates, while maintaining high energy capacity.
- Faster charging and lower self-discharge.
- Up to 10 times more cycles than lead acid batteries.
- Compact and only 40% of the weight of comparable lead acid batteries.

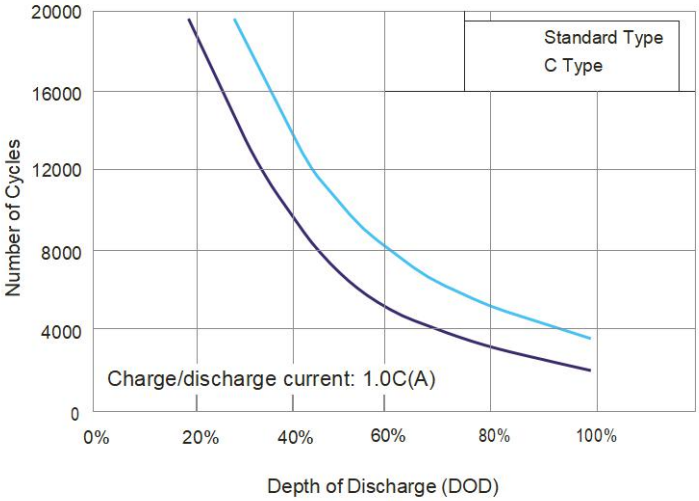
PERFORMANCE CHARACTERISTICS



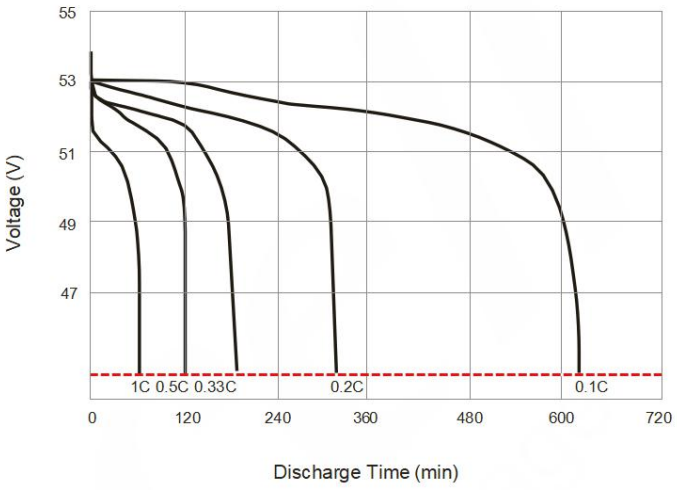
100% DOD Cycle Curves at Different Temperatures



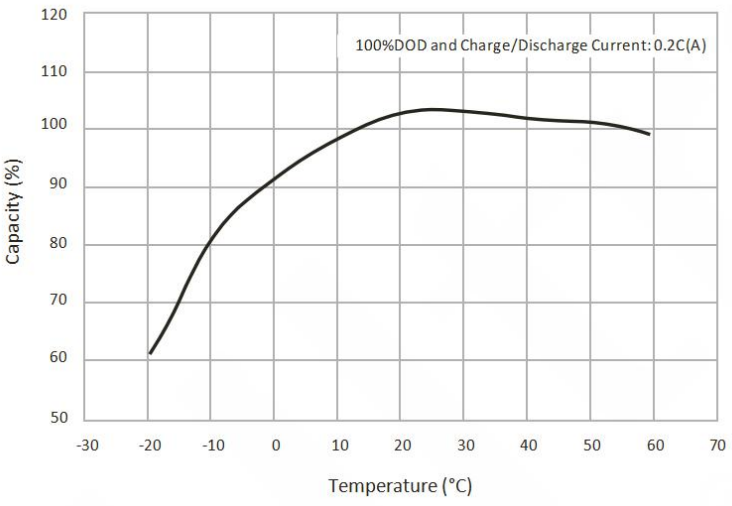
1C Cycle Curves at Different DOD&Temperatures



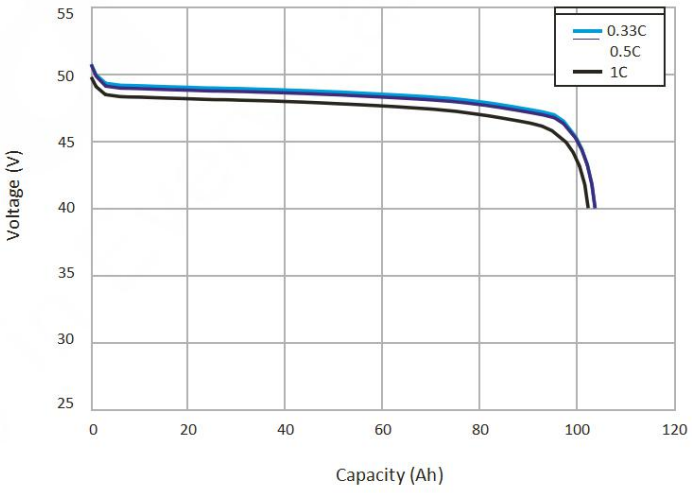
DOD in Relation to Cycle Life (25°C)



Discharge Time in Relation to Discharge Rate (25°C)



Temperature Effect in Relation to Battery Capacity



Discharge Capacity in Relation to Discharge Rate

ELB

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