



ML100-12.8 A

Lithium LiFePO₄ Battery

Lead Acid Replacement Series



LITHIUM IRON PHOSPHATE Battery

ELECTRICAL PERFORMANCE

Rated voltage	12.8V, 4 string
Battery voltage range	10-14.6V, According to the single cell is 2.5V-3.65V
Rated capacity	102Ah
Total energy	1.3KWH
Cycles	6000 times (0.2C cycle, 25°C, 80%Dod, capacity retention rate≥80%)
Charge-discharge capacity efficiency	≥96%
Cells	EVE A Grade , LiFePO4 Cell 102Ah
Standard charging current (A)	50A, 0.5C
Standard discharge current (A)	50A, 0.5C
Maximum continuous charging and discharging current (A)	100

MECHANICAL PERFORMANCE

Gross weight	12KG
Shell material	ABS rubber shell
Product size (mm)	333*175.5*223.7mm (L*W*H)
Input-output mode	M8
Enclosure Protection	IP 65
Composition mode of battery pack	4 series and 1 parallel, a total of 1 battery pack.

TEMPERATURE PERFORMANCE

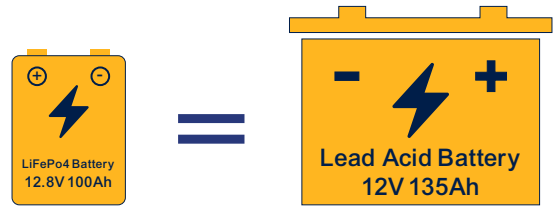
Battery system charging and discharging ambient temperature	Charge at 0°C~ 65°C and Discharge at -20°C~ 65 °C
---	---

BMS PERFORMANCE

Charging protection	Recommended Charge Voltage	14.4 V
	Overcharge protection voltage	3.65 V ±30
	Overcharge protection delay	2000 ±1000 (ms)
	Overcharge protection recovery voltage	3.5 V ±50 (mv)
	Charging overcurrent delay	10 ±3 (s)
Balanced	Balanced turn-on voltage	3.30 V ±50 (mv)
	Balanced Current	200 ±50 (mA)

Discharge protection	Overdischarge protection voltage	2.50 V ±50 (mv)
	Overdischarge protection delay	2000 ±1000 (ms)
	Overdischarge protection recovery voltage	3 V ±100 (mv)
	Delay of discharge overcurrent protection	320 ±180 (ms)
	Short circuit protection delay	560-900 (us)
Max Batteries Connection	Maximum Batteries in Series	4
	Maximum Batteries in Parallel	4

	Voltage (V)	Capacity (AH)	Energy (KWH)	DOD (depth of discharge)	Usable Energy (KWH)	Equivalent
ML100-12.8 A	12.8	100	1.3	90%	1.2	"(12.8V 100Ah) Lithium Battery Equivalent to (12V 135Ah) Lead Acid Battery "
135Ah LA battery	12	135	1.6	75%	1.2	



INSTRUCTIONS

1. Use a lithium charger (25A recommended, 80A max) to preserve capacity and warranty.
2. It is not recommended to use a lead acid battery charger as it will reduce the warranty to 18 months.
3. You can only connect 4 batteries max in series and 4 in parallel. Series connection reduces warranty to 18 months.
4. The product is non-disassembling, with no unauthorized dismantling and maintenance only by Marvel Technical team.
5. Using a Lithium battery provides 30~40% more effective capacity than its Lead-Acid Equivalent.