

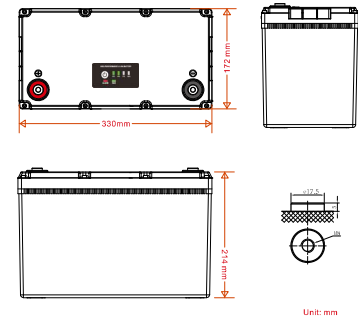
New Generation Li-ion Battery

12.8V100Ah (G31)

LiFePO4 BATTERY



Dimension:



SAFETY

- + Long life type prismatic LiFePO4 cells.
- + Cell certification: UN38.3, ROHS, IEC62619, UL1973.
- + Battery certification: UN38.3, MSDS.
- + The cycle life over 3500 times.

DESIGN

- + Detachable case, better than traditional case.
- + Case material ABS+PC, better and stronger than ABS case.
- + IP65 Class, water-proof design.
- + Maintenance free.

BATTERY MANAGEMENT SYSTEM

- + Integrated BMS inside.
- + Independent protection for charge and discharge.
- + OVP, LVP, OCP, OTP, LTP, OTP, Short circuit protection.
- + Support LEDs indicators, Heater parts, Blue-tooth module.

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SPECIFICATION

Model	LFP12.8V100AH G1	LFP12.8V100AH G2	LFP12.8V100AH G3
Nominal Voltage [V]	12.8		
Nominal Capacity [Ah]	100		
Total Energy [Wh]	1280		
Max. Charging Current [A]	100		
Recommended Charging Current [A]	50		
Charging Voltage [V]	14.2~14.6		
Max. Discharging Current [A]	100		
End of Discharge Voltage [V]	11.2		
Operating Temperature Range <sup>(1)</sup>	Charge: 0 ~ +50°C; Discharge: -20 ~ +55°C With optional heater parts: Charge/Discharge -20 ~ +55°C		
Protection	Over charge Over discharge, Over temperature, Low Temperature, Over Current, Short circuit		
Cycle Life <sup>(2)</sup>	>3500 cycles		
Designed Calendar Life	10 Years		
Dimension (W*D*H, mm)	330*172*214 (BCI Group 31)		
Weight [Kg]	10.5		
Operation Humidity	0~95% RH (No condensing)		
Communication Port	/	/	RS485; CAN
LED Indicator and Button	/	SOC, ALM, RUN, ON/OFF	SOC, ALM, RUN, ON/OFF
IP Class	IP65	IP65	IP30
Parallel Support <sup>(3)</sup>	Yes, Max, 4Sets	Yes, Max, 4Sets	Yes, Max, 4Sets
Series Support	Yes, Max, 4 Sets	Yes, Max, 4 Sets	Yes, Max, 4 Sets
Certification-Cell	UN38.3; ROHS; IEC62619; UL1973;		
Certification-Battery	UN38.3; MSDS; CE		
Optional Parts	Internal Bluetooth Module Heater Parts(100W)	Internal Bluetooth Module Heater Parts(100W)	Internal Bluetooth Module Heater Parts(100W) RS485-USB Device

Note:  
(1) Normally the Li-ion battery operation temperature range is : discharge -20~+55°C, charge 0~+55°C, If the optional heater is stalled, it will automatic start to work once the cell temperature is below 5°C and the heater can help to increase cell temperature 4~8°C/hour. With Optional Heater: Charge / Discharge: -20 ~ +55°C, the charger power should be above than heater parts power consumption.

(2) 25°C, 0.5C/0.5C, 100%DOD and 80% EOL

(3) For parallel and series power cable connection, refer to user manual.

The datasheet is subject to change without prior notification

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BMS Detail Information

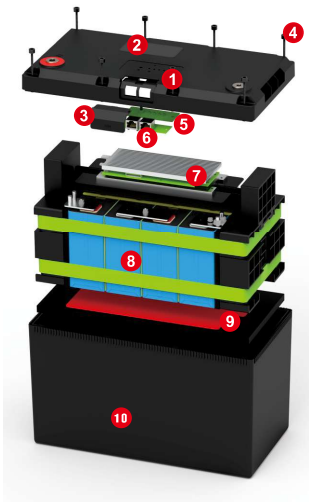
Over-Charge Alarm & Protection	
Over-Charge Alarm	3.55V (For cell) 14.2V (For pack)
Over-Charge Protection	3.7V (For cell) 14.8V (For pack)
Over-Charge Protection Delay	1000 ms
Over-Charge Release	3.45V (For cell) 13.8V (For pack)
Over-Discharge Alarm & Protection	
Over-Discharge Alarm	2.8V (For cell) 11.2V (For pack)
Over-Discharge Protection	2.5V (For cell) 10V (For pack)
Over-Discharge Protection Delay	1000 ms
Over-Discharge Release	2.8V (For cell) 11.2V (For pack)
Over Current Alarm & Protection	
Charge Over Current Alarm	60A
Charge Over Current Protection	105A
Charge Over-Current Protection Delay	15S
Charge Over Current Protection Release	Automatic release after 1min and up to 3 times or Discharge
Discharge Over Current Alarm	105A
Discharge Over Current Protection~1	110A
Discharge Over Current Protection~1 Delay	15S
Discharge Over Current Protection~2	300A
Discharge Over Current Protection~2 Delay	200ms
Discharge Over Current Protection Release	Automatic release after 1min and up to 3 times or Charge
Over Temperature Alarm & Protection	
Charge Low Temperature Alarm	7°C
Charge Low Temperature Protection	0°C
Charge Low Temperature Protection Release	5°C
Charge High Temperature Alarm	50°C
Charge High Temperature Protection	55°C
Charge High Temperature Protection Release	45°C
Discharge Low Temperature Alarm	-10°C
Discharge Low Temperature Protection	-20°C
Discharge Low Temperature Protection Release	-17°C
Discharge High Temperature Alarm	55°C
Discharge High Temperature Protection	60°C
Discharge High Temperature Protection Release	50°C
Short Circuit Protection	
Short Current Protection Delay Time	1500 uS
Short Current Release Method	Release load
Heater Control (for optional heater parts)	
Heater ON	Cell temperatures 0°C and charger is connected
Heater OFF	Cell temperature >10°C

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INTERNAL STRUCTURE DIAGRAM



- ① Detachable cover-ABS+PC
- ② PC Film
- ③ Communication port cover (Only for G3)
- ④ Hexagon socket screws
- ⑤ ON/OFF button and LEDs (Only for G2,G3)  
Optional Bluetooth Module
- ⑥ Communication board (Only for G3)
- ⑦ BMS (RD-RJ4S100A)
- ⑧ Cells, 1P4S
- ⑨ Heater Parts (100W, Optional)
- ⑩ Case : ABS+PC

Optional Parts: Bluetooth module & APP

