



New Generation Li-ion Battery



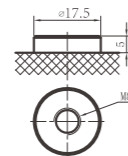
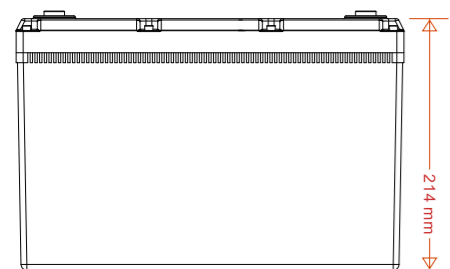
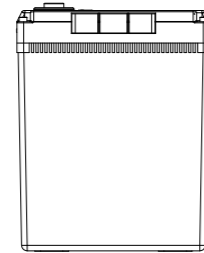
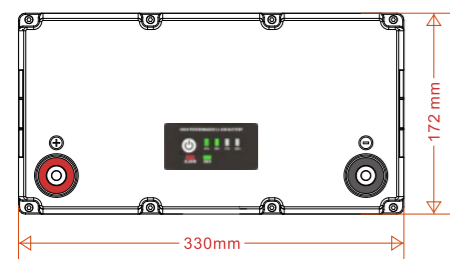


12.8V100Ah (G31)

LiFePO4 BATTERY



Dimension:



Unit: mm

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 ⁽¹⁾ | 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 ⁽²⁾ | >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 ⁽³⁾ | 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

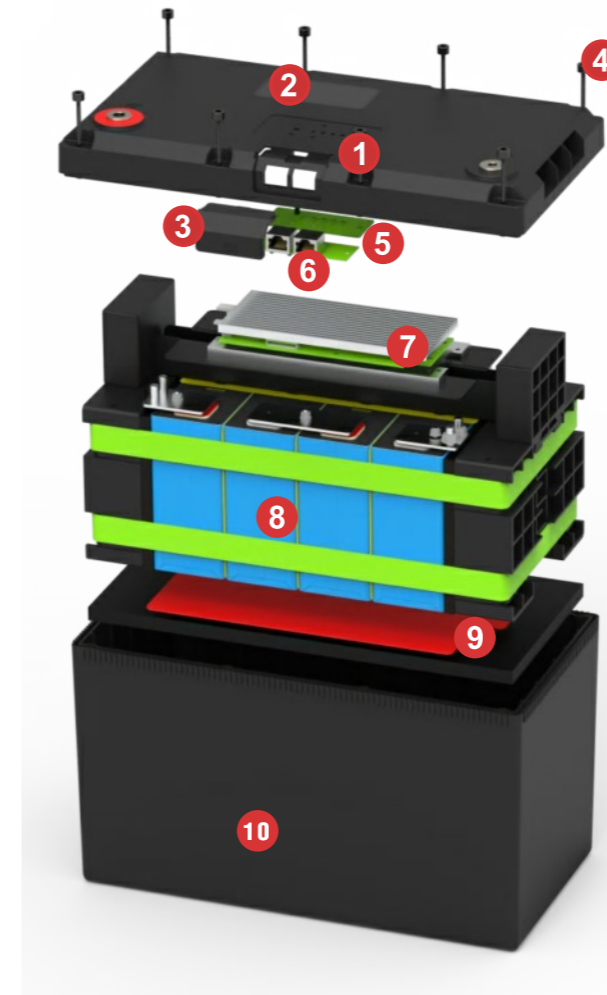
| Over-Charge Alarm & Protection | |
|---|---|
| Over-Charge Alarm | 3.55V (For cell) 14.2V (For pack) |
| Over-Charge Protection | 3.7V (For cell) 14.8V (For pack) |
| Over-Charge Protection Delay | 1000 ms |
| Over-Charge Release | 3.45V (For cell) 13.8V (For pack) |
| Over-Discharge Alarm & Protection | |
| 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 temperature ≤ 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

