

## 8、Protection Features:

- 1) Over Temperature Protection: When the charger internal temperature reaches protection point, the charger will stop charging automatically and the LED flash red.
- 2) Output Short-circuit Protection: When the charger appears short-circuit, it will cut off the output current and the LED will flash red.
- 3) Reverse Polarity Protection: When the battery polarity is reversely connected, the charger will cut off and the LED will flash red.
- 4) Output Over-Voltage protection: When the charger output detects over-voltage, it will cut off the output current and the LED will flash red.

## 9、LED Indicator:

LED Status	Charger Status
LED flashes green	not connected
LED permanently Green	Fully charged
LED permanently blue	Battery is being charged.
LED flashes red	Charger under protection (over temperature protection, output short-circuit protection, reverse polarity protection, output over-voltage protection).

## 10、Troubleshooting:

If failure continues, please contact your local distributor.

Failure Mode	Troubleshooting Methods
LED not ON	a. Input connectors must be connected firmly. b. Open power switch.
Charger is not charging, and the LED is flashes green	a. Output connectors must be connected firmly. b. Battery failure or damage: replace the battery.
Charger is not charging, and the LED flashes red	a. Make sure the output polarity is correct. b. Battery voltage is too high and cannot match the battery charger.
battery is not fully charging	a. Output connectors are loose must be connected firmly. b. Replacement output wire cannot is too long. c. Battery failure or damage replace the battery.

# ULTRAMAX<sup>®</sup>

## 14. 6V/80A Lithium Battery

# Charger Instruction Manual

This manual is subject to change without further notice. We are not responsible for the accidental damage caused by user's improper use.

### 1、Summary:

Microcomputer (MCU) controlled 3 stages intelligent battery charging technology, which can accurately track the charging process, and fully charge your battery in an optimal condition, in order to prolong the service life of your battery.

### 2、Application Scopes:

Used for charging Lithium phosphate LiFePo4 batteries, used in electric bicycle, electric tricycle, electric forklift, electric vehicles, electric motorcycles, electric sweepers, electric boats, electric sightseeing cars, electric golf cart, electric tractor, electric lift trucks, electric medical equipment, electric transportation trucks.

### 3、Maintenance and precautions:

- a、 Before use, carefully check whether the specifications and performance of the charger match the input voltage of your battery。 Your battery Voltage must match your battery charger.
- b、 The battery and the charger must be correctly connected with correct polarity, positive (Red) and negative (Black). Do not connect wrongly.
- c、 Charging cables must be firmly connected to the battery terminal. Loose connections can damage the battery and the chargers due to generation of excessive heat.
- d、 Do not short circuit charger cables.
- e、 While charging, if your charger or battery is damaged, disconnect the input mains power cable and the output connection cable of the charger immediately.
- f、 If external mains power cables are used other than the supplied mains cable, ensure that the power cables gauge can withstand the current requirement of the charger and that the voltage of the charger input port is within the working range of the charger.

- 1) Do not open the charger.
- 2) Never use during a lightning storm.
- 3) Use indoors only.
- 4) Do not use near a heat source such as exposed fire or in direct sunlight.
- 5) Do not use in or near flammable gases.
- 6) Use it in a ventilated and dustless free environment.
- 7) Don't insert sharp metal objects into the charger.
- 8) Leave the air vent always free with at least 10cm gap from any obstruction.
- 9) Do not shake or drop.

#### 4、 Operation:

- 1) Switch off the power switch.
- 2) Connect the batteries to the output, positive to positive, negative to negative.
- 3) Plug the mains cable.
- 4) Now you can Switch on the power switch, blue LED means battery is being charged.
- 5) Green LED means battery is fully charged, switch off the charger.
- 6) Disconnect the input cable.
- 7) Disconnect the output wires.

#### 5、 Product Features:

- 1) MCU controlled High efficiency, small size and light weight
- 2) Switching power supply, with a pre-charge mode to activate and prolonging the life of your batteries.
- 3) High reliability
- 4) The charger comes with over temperature protection, output short-circuit protection, reverse polarity protection, output over-voltage protection.

#### 6、 Technical Specifications:

Input Voltage Range: AC100V~240V 45Hz~65Hz

Maximum Input current: 16A

Operation Temperature Range: -10°C~45°C

Storage Temperature: -40°C~+75°C

Relative Humidity: 5%~95%

Atmospheric pressure: 70KPa~106KPa

Dimensions (mm): 243(L) × 138(W) × 90(H)

Net Weight: 3.2Kg

#### 7、 Charging Mode Cycles:

- 1) **Precharge stage (T1):** When the battery voltage is lower than normal, the battery cannot withstand large current charging. The charger will supply lower current for charging, which will activate the battery and prolong battery life. Charger will automatically switch to high current when voltage is recovered or some time is passed.
- 2) **Fast charge stage (T2):** Constant current charge stage to peak voltage.
- 3) **Float charge stage (T3):** Constant voltage charge.

