

CAUTION

1. **SAVE THIS INSTRUCTIONS-** This manual contains important safety and operating instructions for the Powercell battery charger.
Please read the caution of batteries or devices you want to charge firstly!
2. When charging, batteries can emit explosive gases, therefore it is essential to prevent flames and sparks. The charger is designed for charging lead-acid batteries from 7 to 80 Ah. Do not use for any other purpose.
3. Always provide good ventilation when charging.
4. Use of an attachment not recommended or sold by Powercell may result in a risk of fire, electric shock or serious injury to persons.
5. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure that: a) Pins on plug of extension cord are the same number, size and shape as those of plug on charger; b) Extension cord is properly wired and in good electrical condition; and c) Wire size is large enough for ac ampere rating as specified in "technical data".
6. Do not operate charger with a damaged cord or plug-return the charger to the place where purchased.
7. Never operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way; take it to a qualified serviceman.
8. Do not disassemble the charger; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electrical shock or fire.
9. To reduce risk of electric shock, unplug charger from AC outlet before attempting any maintenance or cleaning. Turning off controls will not reduce the risk.

Powercell Lead-Acid Battery Charger

User's Manual



Brief Introduction

These chargers represents today's new technology for lead-acid type battery charging. The charger programmed four auto stages (Ud-Im-Uo-Up) charging process, It is designed for all kinds of 12V 7~80Ah lead-acid battery, such as SLA, AGM and Gel battery. Stage "Ud" desulfurating the battery through 18V pulse. When the battery recovered, stage "Im" will give bulk current charging(3.3A or 2.0A). Then, "Uo" stage is followed, the output voltage is limited on 14.7V; When the battery is nearly full, stage"Up" will turn on duty. At this stage, the battery is charged completely and the charger give some pulse to maintenance the battery.

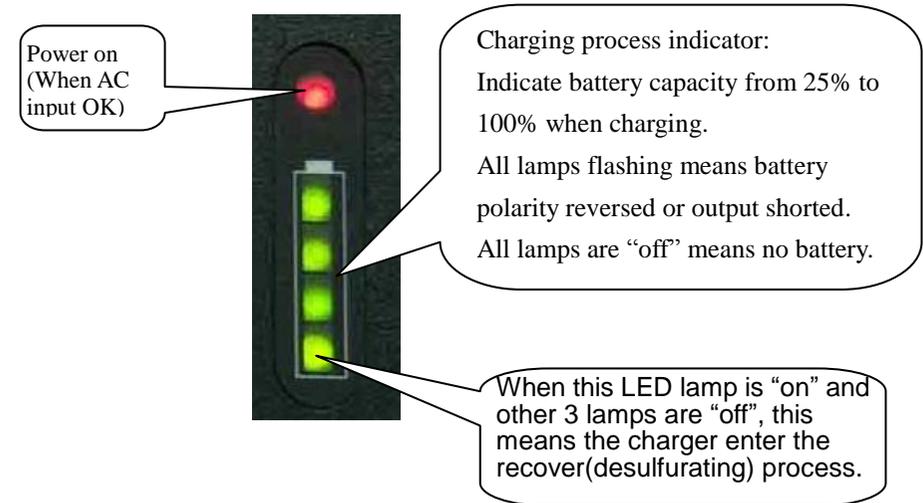
Further, the charger can display the charging process, indicate the battery capacity from 25% to 100% timely. This is helpful for user.

For more safety, this charger will inter protection mode when the battery polarity reversed or the output connectors shorted.

Specification

Input Voltage	100-240VAC, 50-60Hz
Input Current	1.1A
Back current drain	1.3mA
Charge voltage	Rating 12V, Bulk limited voltage : 14.7V
Ripple current	Current-ripple: \leq 0.13A rms
Bulk charge current	3.0A for PB12030, 2.0A for PB12020
Operate Temperature	-20°C~50°C
Cooling	Natural convection. Do not cover the charger.
Charge principle	Auto 4 stages: Ud-I-Uo-Up
Battery type	All types of 12V lead-acid batteries.(SLA, Gel, AGM....)
Battery capacity	7-80Ah for PB12030, 4~40Ah for PB12020
Size	120X67X41mm
Enclosure	IP54 (Dust protected, Water splashing resistance)
Weight	270g

Display Panel



How to use:

1. Connect the AC cord to the socket, The "power" lamp will light on RED.
2. Connect positive charger clip (red) to positive battery terminal, the black clip to negative. (You can use other dc plugs to connect battery), the "25%~100%" lamps will light on flowing. If the battery polarity reversed or output shorted, all lamps will flashing, please check the setup.
3. Depend on the charged capacity, 25%~100% lamps will lights up solid sequence, until the battery is fully charged. Then you can power off the charger and disconnect the battery or you can charge a new battery if you need.

The table shows the duration of the Bulk stepup to about 80% state of charge.

Battery type (Ah)	PB12030 (hours)	PB12020 (hours)
12	3	5
22	7	10
45	14	20
75	22	Not recommend