

# SR SERIES

## Microprocessor Controlled Automatic Battery Charger

## User Guide



BOX C

BOX B

- [1] Power Switch
- [2] DC Current Meter
- [3] Charging Complete Indicator
- [4] Charging Indicator
- [5] Error Indicator
- [6] Power Indicator
- [7] Carrying Handle
- [8] DC Output Cable and Clamps
- [9] Fan
- [10] AC Power Cable
- [11] AC Fuse
- [12] AC Power 110V/220V Switch

### 6. Install and Operation :

1. Please make sure working area is well-ventilated and prevent the charger expose to the sun or get wet.
2. Please make sure the voltage of AC power socket is corresponded to the input voltage.
3. Please make sure the battery voltage is corresponded to the output voltage and battery liquid is fully filled.
4. Connect [ 8 ] with battery terminals, do not reverse polarity. (When battery and cables connect wrongly, the charger will not start charging)
5. Connect [ 10 ] with AC power socket and turn on power switch.
6. When charging is completed, [ 3 ] will light on and charger will stop charging and turn to Float Charging to keep battery in full charging for a long time.
7. If you would like to disconnect your battery during charging or after charging is completed, please disconnect [ 10 ] or turn off [ 1 ] first.

### 7. Applicable

Emergency Generators, UPS, Self-powered Equipment.



BOX C

SIZE : 277mm x 215mm x 172mm

BOX B

SIZE : 238mm x 180mm x 142mm

**MASHIN** 麻新電子股份有限公司  
MASHIN ELECTRIC CORP.

**WARNING : Electric Shock Hazard**

Do not disassemble the CHARGER. The CHARGER does not contain any internal user-serviceable parts and attempting to service the unit yourself could result in electrical in electrical shock or burn.

# SR SERIES USER MANUAL

## 1. Description

**Constant Voltage Charging:** Effectively control the charging voltage to prevent the damage of battery cell plate when over-charging.

**Constant Current Charging:** Control charging current at certain steady point to prevent battery absorbs too much current and cause the temperature increases rapidly to affect the battery service life and efficiency.

**Equalizing Charging:** Charge battery cell by 2.45~2.5V to ensure each battery cell can achieve saturated without over-charging and keeps charging saturation in 100%.

**Float Charging:** Charge battery cell by 2.25V to ensure battery last longer without loss of water.

**Microcomputer Controlled:** Automatically check if the charging cables connect correctly, the charger will begin charging after it is well-connected.

**Generator Protection:** When turn on your generator during charging, the charger will not burn or damage due to generator large starting current.

**Automatic Charging:** When power goes out and back on, the charger will start charging automatically. After full charging, the charger will turn to Float charging mode and keeps the battery in 100% saturation with no loss of water.

**Low Voltage Charging:** When battery in the low battery due to self-consumption or other reason, the charger will start charging automatically.

**Cycle Charging:** When charger turns to Float charging, it will re-charge in every 15 days.

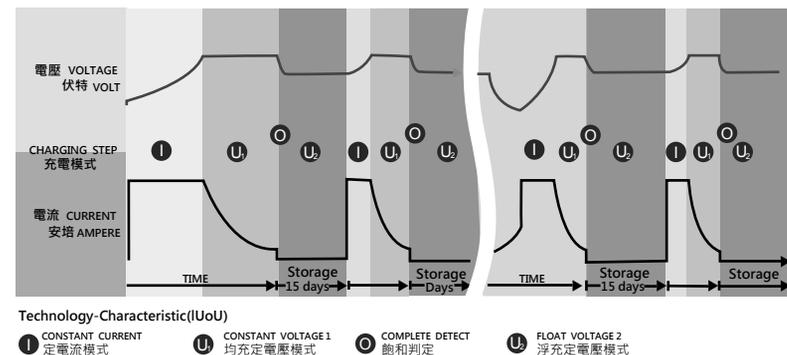
## 2. Specification

- Input Power :** Single-phase 220/110V±10% 50/60Hz (Or customized)
- Output Voltage :** 12V(max. DC15V)/ 24V(max. DC30V) (Or customized)
- Output Current :**  
SR-1208=6A / SR-2408 = 6A / SR-1215 = 15A / SR-1220 = 20A  
SR-2415 = 15A / SR-2420 = 20A / SR-2425 = 25A / SR-2430 = 30A
- Float Voltage :** DC 13.0V / DC 26V( DC 2.2V/cell ) (Or customized)
- Float Current :** DC 100 mA~DC 500 mA
- Efficiency :** Full load 82%
- Charging Mode :** Constant Current, Constant Voltage, Equalizing and Float Charging.
- Operating Temperature :** 50℃, Humidity 90%
- Fuse :** 30mm Fuse Tube **※Do not modify the fuse without qualified personnel※**  
(For AC110V) SR-1208=3A / SR-2408 = 5A / SR-1215 = 5A / SR-1220 = 8A  
SR-2415 = 10A / SR-2420 = 15A / SR-2425 = 15A / SR-2430 = 15A
- Protection :**
  - Reverse Polarity : When clamps and battery connect wrongly, the charger will not start charging.
  - AC input Protection : When input power is over-current, the fuse will cut off.
  - Microcomputer Controlled to prevent over-temperature and over-charging.
  - DC Output reverse polarity protection.

E. Spark Proof : When power is on and clamps connect together or connect with battery terminals, there will be no spark generated.

11. This charger is for lead-acid battery or industrial lead-acid battery ONLY.

## 3. Charging Curve



## 4. Caution

- Please store the charger in well-ventilated area and do not use the charger in the area over 50℃.
- Do not let the charger exposes to the sun or get wet. Do not put the charger onto the battery when charging.
- Keep charger away from strong acid and alkali when storing. As well as away from flammable liquid or stuff during charging.
- Please make sure the AC power is corresponded to the charger you are using.
- If you would like to disconnect the battery during charging or charging is completed, please disconnect AC power or turn off the power first.
- Please do not modify or disassemble the charger without qualified professional to prevent danger.
- When connecting the charger with battery, please make sure red clamp is connected with battery positive terminal (+) and black clamp with negative terminal (-).
- Please use the charger corresponds to its specification.
- This charger is for charging battery only, do not use in other purposes.

## 5. Troubleshooting

- Ans 1 : Please make sure if the AC power is well-connected.
- Ans 2 : Please make sure if the AC power indicator lights on.
- Ans 3 : Please check if the fuse is burned.
- Ans 4 : Please check if the power switch turns on.
- Ans 5 : Please check if charging battery is short-circuit or revere polarity.
- Ans 6 : Please make sure if battery is over-discharged or in low power.
- Ans 7 : Please make sure if the charging cables are well-connected or connected wrongly.
- Ans 8 : If the charging indicator is flashing, please check if the clamps are connected correctly.