IDEAL POWER

IDEAL POWER SOLUTIONS

Battery Charger

8~50A Lead Acid Charger User Manual

Part Number(s)

31AC0848 / 31AC1024

31AC1212 / 31AC1424

31AC2512 / 31AC3512

31AC2524 / 31AC5012

Read these installation and operating instructions through

before connecting and using the battery charger.

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- **Information for using the installation instructions**

  Warning! Failure to observe this warning may result in damage to equipment.

  Caution ! Failure to observe this warning may result in damage to equipment & improper functioning of the battery charger.

- **General safety and installation information**

  Warning ! The following fundamental safety measures must be observed when using electrical equipment to avoid the danger of : ・Electric Shocks ・Fire ・Injury

- **About the unit itself**

  - The battery charger must only be used for the purpose specified by the manufacturer.
  - Do not operate the battery charger if the housing or cable is damaged!
  - The battery charger must be positioned and secured in such a way that can't fall over or down! The connector cable from the battery charger must be plugged into earth outlet only. - Ensure good ventilation.
  - The battery charger must be kept in safe place out of the reach of children!
  - The battery charger must not be operated in a damp or wet environment!
  - A qualified person who is familiar with the risks involved & the relevant regulations must only carry out servicing & repair

- **Caution, Installation on boats !**

  - Wrong installation of electrical units on a boat can lead to corrosion of the boat. Therefore, please let an electrician carry out the installation of the charger.

- **About the cables**

  - If cables have to be inserted through metal walls or other sharp edged Materials, use a cable duct or cable bush
  - Secure cables properly ! - Do not pull the cables !
  - Do not lay cables loose or with sharp bends on electrically conductive materials (metal) !
  - Lay cable in such a way that no one can trip over them !
  - Do not lay AC INPUT mains cable and DC OUTPUT cable together in the same cable duct
  - The specified minimum cable cross-section must be complied with !
  - Lay cables in such a way that they are not exposed to the risk of damage !

- **Intended Use**

  The use of a high efficiency primary switching controller makes the installation friendly and very small, light and powerful. Together with the mechanical strength, the pole errors & short circuit protection ensure high operation safety. Because of these features , the unit is ideal for mobile uses in motor homes , on motor or sailing y31AChts or in ambulances and emergency rescue vehicles with a battery capacity of 100Ah : 31AC0848 / 31AC1024 or 150Ah : 31AC1212 / 31AC1424 or 300Ah : 31AC2512 / 31AC2524 / 31AC3512 or 600Ah : 31AC 5012

- **Features**

  - Small, light and robust in design and manuf31ACture. - Pole error and short circuit protection.
  - Rectifier function. As mains unit, suitable for parallel operation. - Easy installation by brackets on the housing.
  - LED charge display. - 3-stage charger characteristic for rapid and complete battery charging.

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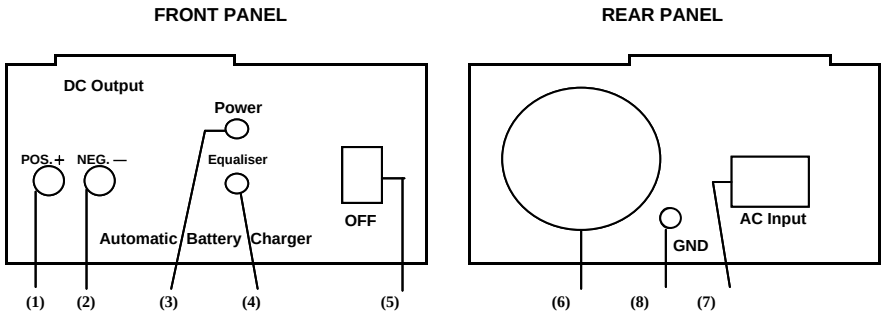
- **Option Function**

  - Optimum charge characteristics through temperature compensation to sense battery. - Two groups of DC output.
  - Input voltage select by manual (switch on base) - Over heat protection by decrease output current.

- **Installation and Operation**

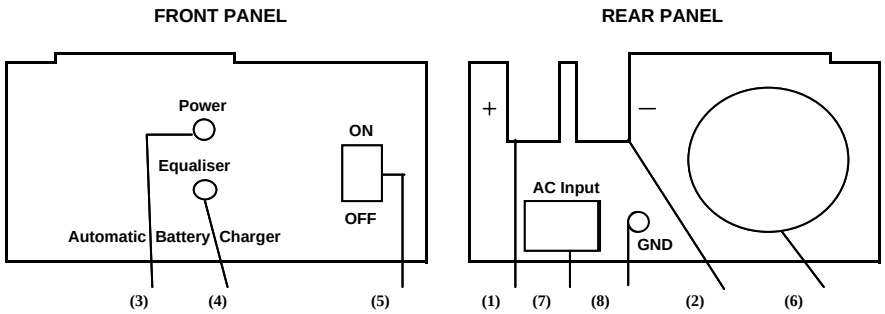
  ◎ The battery charger must be installed in a location which is protected from exposure to damp. Ensure that the location is well ventilated and that the surface on which it is mounted is level and sufficiently strong. The air intake on the base and the air outlet on the rear must always be unobstructed.

  ◎ Before connecting or disconnecting the DC cable, set the mains switch to〝off〞and unplug from the mains always.



31AC0848 / 31AC1024 / 31AC1212 / 31AC1424 / 31AC2512 / 31AC2524 / 31AC3512 Control Panel

1. “＋”（positive） terminal
2. “－”（negative）terminal
3. Power indicator
4. Charging indicator
5. On／Off switch
6. Fan
7. AC power input
8. Earth Terminal



31AC5012 Control Panel

Fuse 31AC 1212 31AC 1024 : Glass fuse 3AT 250V 31AC2512 / 31AC1424: Glass fuse 4AT 250V

Fuse 31AC0848: Glass fuse 6AT 250V 31AC5012 / 31AC2524: Glass fuse 8AT 250V

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- **DC Cable Install**

  - Fit the ends of the cables to be connected to the battery charger with lugs.
  - Crimp the lugs on to the cable end with crimping pliers.
  - Make sure that the lugs are securely fitted.
  - Connect the cable to the unit via the two terminals on the front panel.

  Despite the pole error protection, always make sure that the cables are properly poled.

- **Rectifier function**

  The battery charger can be used to provide the maximum current consumption provided the equipment does not exceed the current rating of the charger. It is always recommended to connect the charger to the battery. The equipment should be connected direct to the battery. This applies in particular to equipment with high peak currents demands.
  (e.g. high start-up current in the case of Compressors)

- **Maximum current consumption of consumers when used as a mains unit**

  31AC0848 → 8 Amp 31AC1024 → 10 Amp 31AC1424 → 14 Amp
  31AC1212 → 12 Amp 31AC2512 / 31AC2524 → 25 Amp 31AC3512 → 35 Amp 31AC5012 → 50 Amp

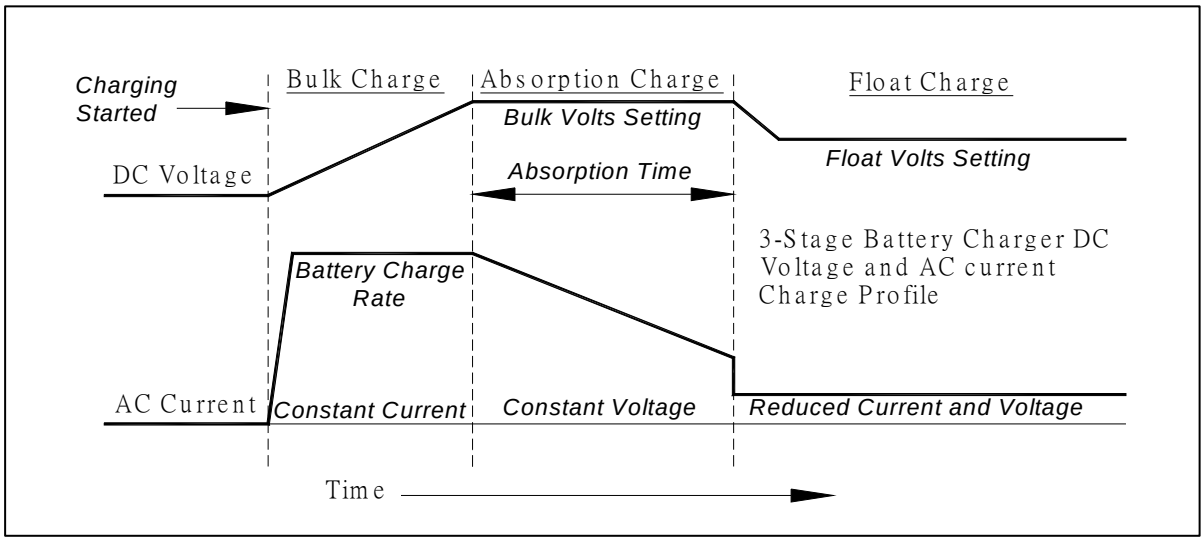
- **LED Indicator**

  - Green : Light → Power On Dark → Power Off
  - Yellow : Light → Bulk charging Dark → Float charging

- **Caution!**

  - Battery with a cell closure must not be charged, as there is otherwise the danger of explosion through the occurrence of electrolytic gas.
  - Nickel-cadmium batteries and non-chargeable batteries must not be charged with the charger. The casing of these types of batteries can burst explosively.

- **Charging Curve**



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