

CHR-1236 / 2472

BATTERY CHARGER



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Warning: This manual contains important instructions that should be followed during installation and operation of the battery charger. Also read the instructions and information on tags, decals, and labels that may be affixed to the battery charger. Replace any decal or label that is no longer legible.

Monicon Instrument Co., Ltd., hereafter referred to as the “**manufacturer**”, cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all-inclusive. If using a procedure, work method or operating technique the manufacturer did not specifically recommend, ensure that it is safe for others. Also make sure the procedure, operating method does not render the battery charger unsafe. Throughout this publication, and on tags and decals affixed to the battery charger, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

Three commonly used safety symbols accompany the DANGER, WARNING and CAUTION blocks. The type of information each indicates follows:



Danger

After this heading, read instructions that if not strictly complied with will result in personal injury including without limitation, death or property damage.



Warning

After this heading, read instructions that if no strictly complied with, may result in personal injury or property damage.

Caution

After this heading, read instructions that if not strictly complied with, could result in damage to equipment and/or property.

NOTE:

After this heading, read explanatory statements that require special emphasis. These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the service are essential to preventing accidents.

GENERAL HAZARDS

- ◆ Improper or unauthorized installation, operation, service or repair of the equipment is



extremely dangerous and may result in death, serious personal injury, or damage to equipment and/or personal property.

- ◆ Extremely high and dangerous power voltages are present inside the battery charger. Any contact with high voltage terminals, contacts or wires will result in extremely hazardous and possible LETHAL. DO NOT WORK ON THE BATTERY CHARGER UNTIL ALL POWER SUPPLIES HAVE BEEN TURNED OFF.

IMPORTANT SAFETY INSTRUCTIONS

- ◆ Competent, qualified personnel should install, operate and service this equipment.
- ◆ Never handle any kind of electrical device while standing in water, barefoot, or hands/feet are wet. DANGEROUS ELECTRICAL SHOCK MAY RESULT.
- ◆ Jewelry conducts electricity and may cause electrical shock. Remove all jewelry (such as rings, watches, bracelets, etc.) before working on this equipment.
- ◆ If work must be done on this equipment while standing on metal or concrete, place insulated mats over a dry wood platform. Work on this equipment only while standing on such insulated mats.
- ◆ Never work on this equipment while physically or mentally fatigued.
- ◆ Keep the battery charger enclosure closed and bolted at all times. Only qualified personnel should be permitted access to the charger interior.
- ◆ In case of an accident caused by electric shock, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor but AVOID DIRECT CONTACT WITH THE VICTIM. Use a non-conducting implement, such as a dry rope or board to free the victim from the live conductor. If the victim is unconscious, apply first aid and get immediate medical help.
- ◆ When a battery charger is installed for a standby generator set, the generator engine may crank and start at any time without warning. To avoid possible injury that might be caused by such sudden start-ups, the system's automatic start circuit must be disabled before working on battery charger. For that purpose, a SAFETY DISCONNECT is provided inside the controller panel. Always set that control panel to OFF position before working on the equipment. Then place a "DO NOT OPERATE" tag on the on the generator. Remove the Negative (Neg) or (-) battery cable.



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1. Descriptions

CHR-1236/2472 intelligent module constantly keeps lead acid battery fully charged all the time. Short-circuit, over load, and over voltage protection prevent any damage to the battery. Wide AC input voltage and adjustable DC output voltage gives the high flexibility of usage. CHR-1236/2472 also in accordance with the principle of high Efficiency, at Full Load >85% of efficiency is archived. Easy operation reduces the time and cost for client training.

2. Features

- Short circuit protection, Overload protection, force charge input
- Float charging system, constant voltage output, current limited
- Rugged design for industrial environments, wide range of input voltage

3. Specifications

AC Input Voltage:

Voltage 90~300VAC (110/220/240 VAC)
Frequency 50/60HZ

Adjustable DC output voltage:

CHR-1236 Voltage 12.4-13.8VDC
CHR-2472 Voltage 24.4-27VDC

Charging algorithm:

Constant voltage

Protection:

Over voltage, Over current, DC short circuit

Efficiency:

at Full Loaded >85%

Working Temperature:

-40~70°C

Storage Temperature:

-40~85°C

Relative humidity:

Max. 90 %

Dimension:

147mmL*82mmW*43mmH

Weight:

482.2g

Specifications subject to change without notice

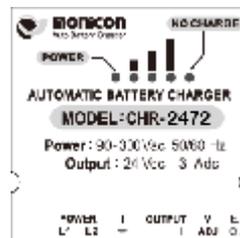
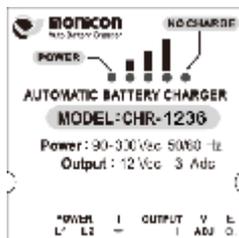
4. Installation and Operation

- 4.1. Turn off the AC power before connecting to L1 and L2 terminals.
- 4.2. Connect + and – terminals on the charger to + and – terminals of the battery then turn ON the AC power.
- 4.3. The design of automatic charging circuit limits the output, when the battery is fully charged.
- 4.4. Build-in short circuit and reverse polarity protections.

5. Notes:

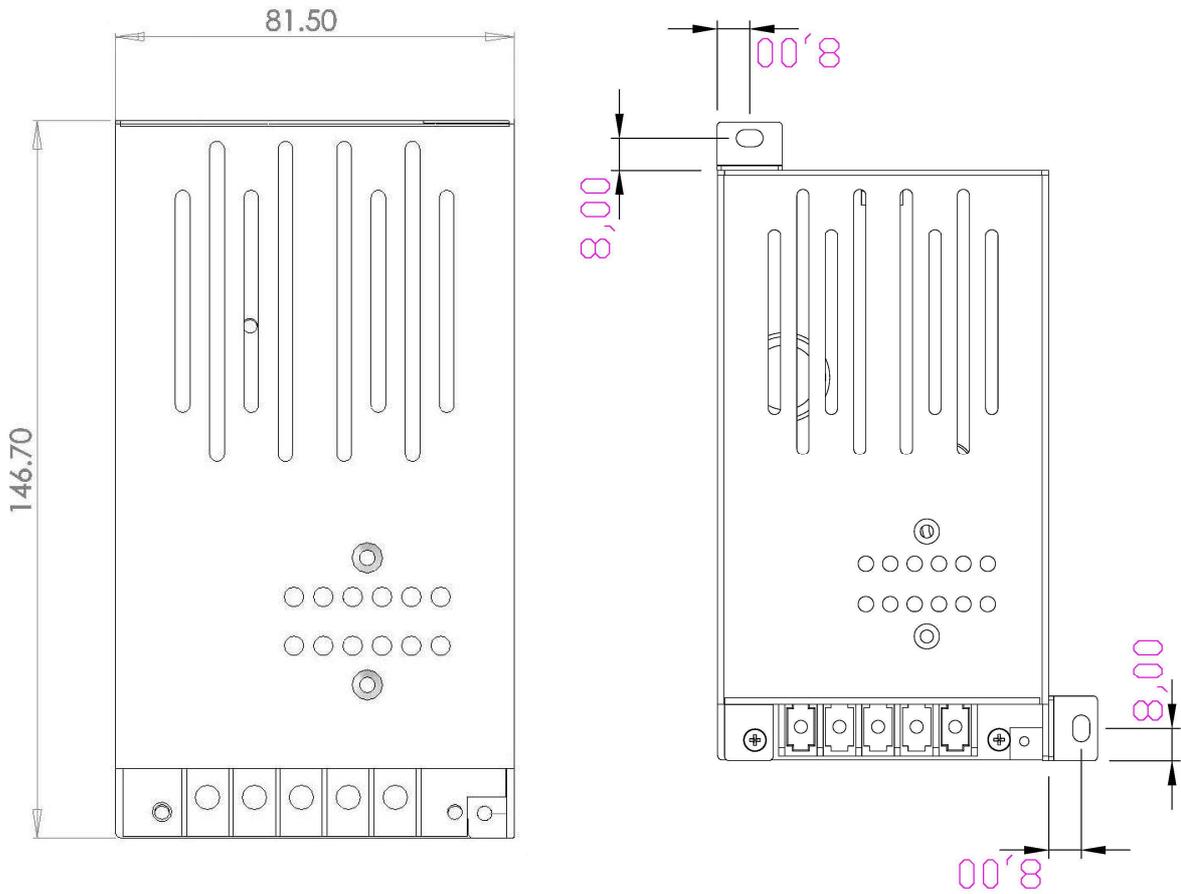
- 5.1. All the adjustments are preset at factory.
- 5.2. In charging state, because lead-acid batteries will gas, please located it on well- ventilated storage.
- 5.3. Avoiding the place of raining, exposing, non-neutralization or existing corrosive gas.
- 5.4. Battery detected voltage must over 10V(or 22V) otherwise the charger stop charging automatically.
- 5.5. Charger only for battery charging

6. Label Specification



1. **Low output current**, when the battery is close to fully charged , only this light remains on.
2. **Moderate flow of current**, the current output flows according to the battery capacity and the charger operates above 50%.
3. **Charging at full load**, when this light is on, it's indicating that the battery is flat. (Charging duration depended on the battery size)
4. **When the red light is on**, please check the following status,
 - I. Has the battery voltage dropped below minimum charging value (happens in old battery, died out battery, battery hasn't been serviced etc.)
 - II. Input & output has been connected incorrectly.

7. Dimension



8. Safety Precautions

When operating your battery charger, basic safety precautions should always be followed to reduce the potential risk of fire, electric shock and/or injury to person, including the following:

- 8.1 Read this owner's manual thoroughly before operating your battery charger.**
- 8.2 Do not allow any objects or liquid into the openings of your battery charger.**
- 8.3 Do not place any flammable materials such as gasoline near your battery charger.**
- 8.4 Do not cover or obstruct ventilating opening of your battery charger. Overheating may result.**
- 8.5 To reduce the risk of fire or electric shock, do not remove any service covers. No user's serviceable parts are inside. Repair should be done by your dealer's authorized personnel only.**
- 8.6 If you have any questions or comments about this product, please contact your local dealer for assistance.**

Caution

- To prevent fire, do not cover or obstruct ventilation openings. Do not mount in zero-clearance compartment.
- The protection of overload or any fault condition in each output circuit is operated by current fuse. These fuses of output circuit are located in the above printed wiring board.
- Disconnect supply before changing fuse.

Monicon Instrument Co. Ltd. reserves the right to change specification without prior notice.