

10A Solar Charge Controller



User's Manual

10A Solar Charge Controller by Wagan Tech

Thank you for purchasing the 10A Solar Charge Controller by Wagan Tech. With normal care and proper treatment it will provide years of reliable service. Please read all operating instructions carefully before use.

The solar charge controller is designed to protect your 12 volt GEL or Flooded battery from being overcharged by solar panels. It also provides protection from reverse battery connection. This controller will display charging current or battery voltage from the LCD meter.

Important Safety Instructions

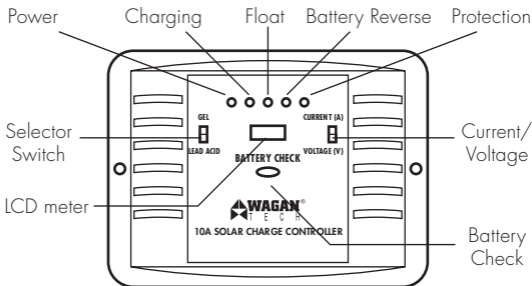
- **Working in the vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal operation.**
- Wear complete eye and clothing protection when working with lead-acid batteries.
- Make sure that someone is within range of your voice to come to your aid if needed while you work with or are near a lead-acid battery.
- Have plenty of fresh water and soap nearby for use in case battery acid contacts your eyes, skin or clothing. If this happens, wash immediately with soap and water. Then get medical attention.
- Avoid touching your eyes while working with a battery. Acid particles (corrosion) may get into your eyes. If this occurs, flush eyes immediately with running cold water for at least 10 minutes. Then immediately get medical attention.

User's Manual—Read before using this equipment

- Never charge a frozen battery.
- Remove all personal metal items from your body such as rings, bracelets, necklaces and watches while working with lead-acid batteries. A battery can produce a short circuit current high enough to weld a ring (or the like) to metal, causing a severe burn.
- Take care not to drop any metal tool or metal object onto the battery. This may result in a spark or short circuit across the battery or another electrical device that may cause an explosion.
- Always operate the charge controller in an open, well-ventilated area.
- Never smoke or allow sparks or flames in the vicinity of the battery. Batteries generate explosive gases.
- Neutralize any acid spills thoroughly with baking soda before attempting to clean up.

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Front Panel Indicators

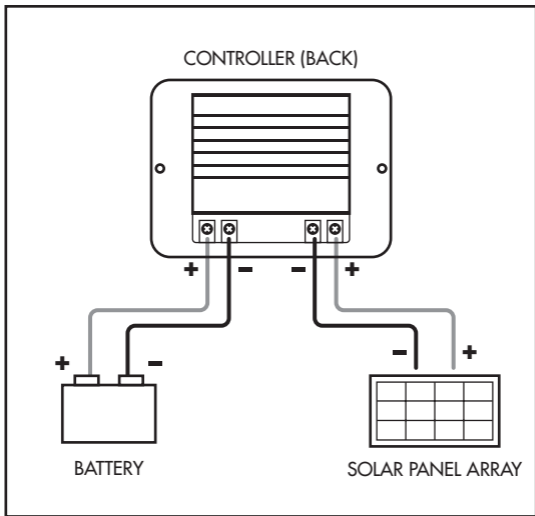


- Power:** Solar power has sufficient voltage.
- Charging:** Indicates solar power is charging the battery
- Float:** When a full charge is reached, the controller enters float mode.
- Battery Reverse:** Warns when battery is connected in reverse
- Protection:** Temperature of heat sink is up to $\sim 60^{\circ}\text{C}$. Turns off when temperature drops down to about 55°C .
- Selector Switch:** Selects Gel or Flooded battery type
- Current/Voltage:** Switches between showing the charging current or battery voltage in charging process on the LCD meter.

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Battery Check: Connect the battery and press this button to display the battery voltage on the LCD. In this case it is not suggested to connect the solar panel array. The damaged battery is not applicable to this mode.

Connection Diagram



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Connection Procedure

1. Mount the solar controller panel in a suitable location.
2. Select Gel or Flooded battery mode.
3. Connect the solar panel positive side to the solar controller ARRAY POSITIVE + with a suitable wire.
4. Connect the solar panel negative side to the solar controller ARRAY NEGATIVE – with a suitable wire.
5. Connect the battery positive side to the solar controller BATTERY POSITIVE + with a suitable wire.
6. Connect the battery negative side to the solar controller BATTERY NEGATIVE – with a suitable wire.

Caution:

- Do not exceed the solar array power and the controller's current and voltage ratings.
- Do not reverse the battery and solar array connections to the controller.
- When battery voltage reaches to about 14.6V (14.2 for Gel) the controller stops charging. When the battery voltage drops to about 13.5V the controller begins to charge again.

Specifications

Max Solar Panel Array Power	150W
Input Voltage	16.5V~22V
Max Input Voltage	25V
Charging current	10A
Constant Voltage for Gel Battery	14.2V
Constant Voltage for Flooded Battery	14.6V
Float Voltage	13.5V
Temperature Protection	Yes (by electronic circuit)
Battery Reverse Protection	Yes (by electronic circuit)
Output Short Protection	Yes (by electronic circuit)
Operating Temperature	0°~40° C
Storage Temperature	-10°~70° C
Dimensions (mm)	140.5 × 104 × 31
Weight	205g

WAGAN Corp. Limited Warranty

All WAGAN Corporation products are warranted to the original purchaser of this product.

Warranty Duration: This product is warranted to the original purchaser for a period of one (1) Year from the original purchase date, to be free of defects in material and workmanship. WAGAN Corporation disclaims any liability for consequential damages. In no event will WAGAN Corporation be responsible for any amount of damages beyond the amount paid for the product at retail. In the event of a defective item, please contact WAGAN Corporation at (800) 231-5806 to obtain a Returned Merchandise Authorization number (RMA#), and return instructions. Each item returned will require a separate RMA#. After you have received the RMA# and the return instructions from WAGAN Corporation, please follow the instructions and send the item with PREPAID SHIPPING, along with all of the required documentation, a complete explanation of the problem, your name, address and daytime phone number. WAGAN Corporation will, at its option, replace or repair the defective part.

A Returned Merchandise Authorization number (RMA#) is REQUIRED when sending in any defective item. WAGAN Corporation is not responsible for any item(s) returned without an official Returned Merchandise Authorization number. The item(s) must be returned with prepaid shipping. WAGAN Corporation is not responsible for any shipping charges incurred in returning the item(s) back to the company for repair or replacement. This warranty is void if the product has been damaged by accident, in shipment, unreasonable use, misuse, neglect, improper service, commercial use, repairs by unauthorized personnel or other causes not arising out of defects in materials or workmanship. This warranty is effective only if the product is purchased and operated in the USA and does not extend to any units which have been used in violation of written instructions furnished.

Warranty Disclaimers: This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume any other liability in connection with the sale of our products. There shall be no claims for defects or failure of performance or product failure under any theory of tort, contract or commercial law including, but not limited to negligence, gross negligence, strict liability, breach of warranty and breach of contract.

Warranty Performance: During the above one (1) Year warranty period, a product with a defect will be replaced with a comparable model when the product is returned to WAGAN Corporation with an original store receipt. The replacement product will be in warranty for the balance of the one (1) Year warranty period.

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Detach and return warranty form to the address indicated.



Please activate my limited warranty for WAGAN Corp.

Name	
Mailing Address	
City	
State, Zip code	
E-mail Address	
Item Purchased	Item No.
Store Name	
Date of Purchase	
Signature	Date





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