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Manufactured and packaged for SRGS PTY LTD
ABN 23 113 230 050
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MADE IN CHINA



10A MPPT SOLAR CHARGE CONTROLLER

24
MONTH
WARRANTY



1. Safety Information

- Read all of the instructions in the manual before installation.
- DO NOT disassemble or attempt to repair the controller.
- Do disconnect the solar module before installing or moving the controller.
- Power connections must remain tight to avoid excessive heating from a loose connection.
- Only charge batteries that comply with the parameters of controller.
- Battery connection may be wired to one battery or a bank of batteries.
- Risk of electric shock due to the high voltages produced, from the photovoltaic (PV) and load when controller is in use.

2. Overview

The Ridge Ryder 10A MPPT Solar Charge Controller adapts to the Maximum Power Point Tracking (MPPT) charging method. This enables the systems charging and discharging management to obtain the most radical optimisation, increases system flexibility and reduces overall system running cost. This controller supports a variety of battery types, including sealed, gel & flooded batteries. It can also be used around the home in many applications, such as home solar systems, solar lighting & garden lamps.

Features:

- Advanced Maximum Power Point Tracking (MPPT) technology
- Long lifespan design, made from high quality components within an aluminium housing
- Ultra-fast tracking speed & efficiency
- Accurately recognises & tracks multiple power points
- Photovoltaic (PV) power limitation function
- IP68 dustproof and waterproof

3. Product Specifications



①	Charging Status LED indicator	④	Battery Positive and Negative Wires
②	Battery Status LED indicator	⑤	Load Positive and Negative Wires
③	PV Positive and Negative Wires	⑥	waterproof cap

NOTE: The waterproof cap must be fitted to prevent water & dust entering the unit.

4. Wiring

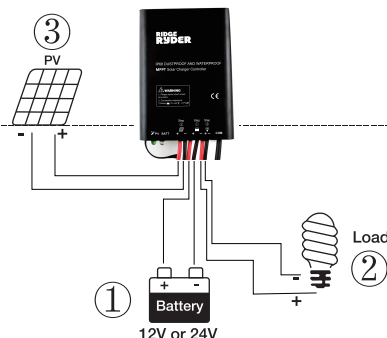
IMPORTANT!

*If load wires are not used it is recommended that these wires are covered.

- (1) Connection of components to the controller **MUST** be completed in the sequence outlined in the following Wiring diagram, paying particular attention to the "+" and "-" wiring. When disconnecting components, the order is reversed.
- (2) After turning the controller on, check that the LED indicator is green (if not green, please refer to section 8. Troubleshooting).

• Load self-test function

Load self-test function - the load will show as on when the controller is switched on.



Wiring Diagram

5. LED Indicators

Indicator	Color	Status	Instruction
PV	Green	On Solid	PV connection normal but low voltage (irradiance) from PV, no charging
	Green	Off	No PV voltage(night time) or PV connection problem
	Green	Slowly Flashing(1Hz)	Charging
	Green	Fast Flashing(4Hz)	PV Over voltage
BATT	Green	On Solid	Normal
	Green	Slowly Flashing(1Hz)	Full
	Green	Fast Flashing(4Hz)	Over voltage
	Orange	On Solid	Under voltage
	Red	On Solid	Over discharged Low temperature
	Red	Fast Flashing(4Hz)	Battery Overheating
Charging (green) and battery indicator (orange) flashing simultaneously			System voltage error

6. Load Working Mode

Note:The controller's 'ON' status indicator, is defaulted to show Load.

7. Inbuilt Controller Protections

PV Protections:

- PV Over Current

Where PV over current occurs, battery charging will be limited to the maximum battery current rating. Oversized solar arrays will therefore not operate at peak power.

- PV Short Circuit

Where PV short circuit occurs, or PV input short circuits on low power, charging will cease. Clear error to resume charging.

WARNING: Damage to the controller may occur where PV input short circuits on high power.

- PV Reverse Polarity

Where reverse polarity occurs, check the wire connections and resume normal operation.

WARNING: Damage to controller will occur where PV array straight polarity and operation power of the PV array is 1.5 times greater than the rated charge power.

Battery Protections:

- Reverse Polarity

Where battery reverse polarity occurs, check wire connections and resume normal operation.

- Over Voltage

Where over voltage is detected, the controller will stop charging the battery, to prevent damage to the battery.

- Over Discharge

Where over discharge (low voltage) is detected, the controller will stop charging the battery, to prevent damage to the battery.

- Overheating

The controller monitors environmental temperature via a sensor. Where environmental temperatures exceed 65°C, the controller will cease charging until the temperature reaches 55°C, after which charging will resume.

- Temperature Sensor Error

If temperature sensor faults, the controller will continue to charge/discharge battery at the default temperature of 25°C, to prevent damage to the battery from overcharging & low voltage.

- Load Overload

The controller will disconnect the load where the load current exceeds the maximum load current rating of 1.05 . Where overload does occur, reduce load demand and restart controller.

- Load Short Circuit

The controller will disconnect the load if short circuit (≥4 times rated current) occurs, and will attempt reconnection 5 times, after which user must clear short circuit by restarting controller. If restart fails, please refer to 8. Troubleshooting.

8. Troubleshooting

Faults	Possible reasons	Action
LED charging indicator turns off in daylight, despite PV modules under direct sun.	PV array disconnection	Check PV & battery wire connections are correct and tight.
No LED indicator	Battery voltage may be less than 8.5V	Measure battery voltage with a multi-meter. A minimum of 8.5V are required to power the controller.
Battery LED indicator - fast flashing - green	Battery over voltage	Check if battery voltage is higher than the over voltage disconnect and disconnect the PV
Battery LED indicator red	Battery over discharged	When the battery voltage is restored to or above LVR point (low voltage reconnect voltage), the load will recover
Battery LED indicator red flashing	Battery Overheating	The controller will automatically turn off until temperature falls below 50 °C, then resume normal operation.
Load output has stopped	Load Overload^	① Reduce output load demand ② Restart controller.
	Load Short Circuit^	① Check load connections, clear controller fault. ② Restart controller.

^ Where overload or short circuit occurs and the controller ceases charging, it will then attempt auto-recovery 5 times, in the following timing intervals: 5s, 10s, 15s, 20s and 25s.

9. Technical Specifications

Item \ Model		Tracer2606BP
Nominal system voltage		12/24VDC Auto
Rated charge/discharge current		10A
Rated charge power		130W/12V; 260W/24V
Lead acid	Over Voltage Disconnect Voltage	Sealed :16V/Gel: 16V / Flooded:16V
	Low Voltage Reconnect Voltage	Sealed/Gel/Flooded:12.6V
	Low Voltage Disconnect Voltage	Sealed/Gel/Flooded:11.1V
Enclosure		IP68
Mounting hole size		Φ3.5mm

10. Disclaimer

Under the following conditions, product warranty does not cover/apply:

- Damage caused through misuse, including use within unsuitable environments.
- Damage caused as a result of PV, load current, voltage or power exceeding the rated value of the controller.
- Damage caused from use in excessively hot environments.
- If the controller has been disassembled, opened or altered by the user
- Damage caused from natural elements, for example lightning.
- Damage caused during transportation by the user.

WARRANTY

Our product is guaranteed to be free from quality and manufacturing defects for a period of 24 months.

If your product becomes defective during this period, SRGS PTY LTD will offer you either a replacement, credit or refund where a product is faulty; wrongly described; different from the sample shown to you or do not do what they are supposed to do.

This warranty will not cover substantially modified product; misuse or abuse of the product contrary to user instructions or packaging label; change of mind and normal wear and tear.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

To claim the warranty, take the product to the front Service Desk of your nearest store of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim. Should you not be able to provide proof of purchase with a receipt or bank statement, identification showing name, address and signature may be required to process your claim.

Any expenses relating to the return of your product to the store will normally have to be paid by you. For online store purchases, SRGS PTY LTD will pay for the return freight for any product assessed as having a major failure.

The benefits to the customer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods or services to which this warranty relates.

This warranty is provided by SRGS PTY LTD, 6 Coulthards Avenue, Strathpine QLD 4500, Australia. Phone: 1300 175 010.