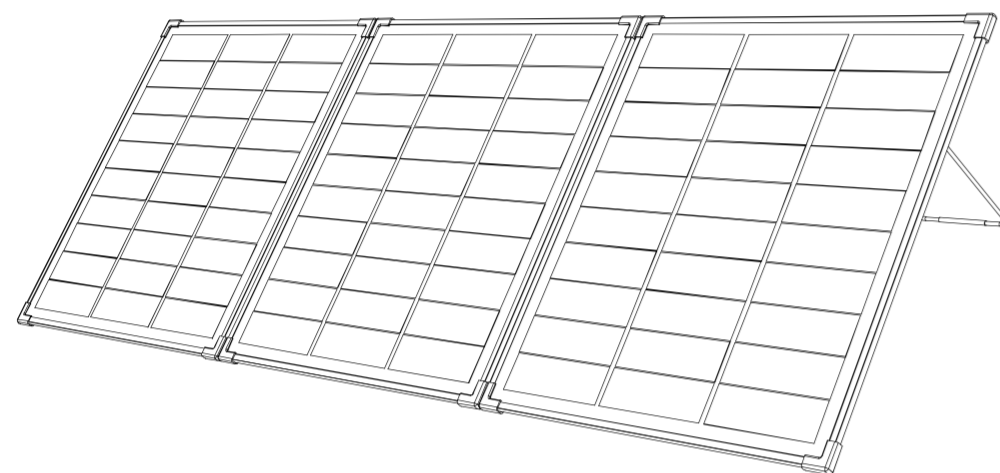




ZM9190

300W Folding Solar Panel



INSTRUCTION MANUAL

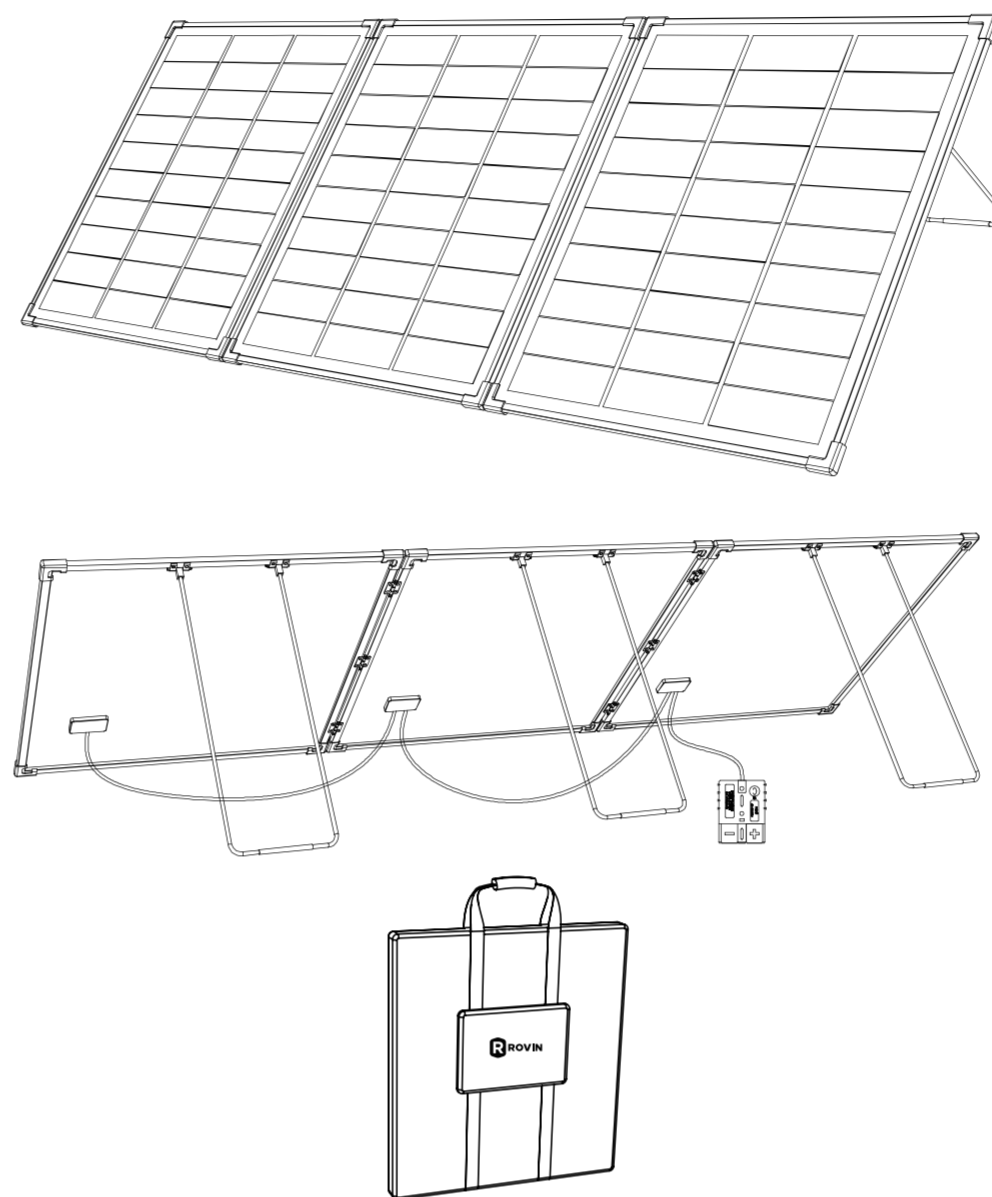
PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE USING THIS PRODUCT.

WARNINGS & SAFETY INFO



- Keep the solar panel away from liquids at all times.
- Keep the solar panel clean and always check connectors for debris before connecting.
- This product is not intended to be used by children. In addition to this, adults with reduced physical or mental capabilities, or those who are under the influence of drugs or alcohol should not use the product.
- Only use the solar panel to charge 12V, rechargeable batteries.
- Lead acid batteries produce harmful explosive gasses. The battery should be mounted in a well ventilated area, away from possible ignition sources.
- Take care when maneuvering & setting-up the Solar Panel as to not damage the unit.
- Never connect the Solar Panel directly (without a regulator) to a battery or other load.
- Tampering with or modifying the solar panel or wiring will void warranty.
- When transporting the solar panel, firmly secure the panel so that it will not move around or collide with other objects.
- Do not use the solar panel or wiring if it is damaged or compromised in any way.
- This is an unregulated solar panel - ensure you connect a suitable regulator (available separately) to prevent damage to the battery

PRODUCT CONTENTS



SPECIFICATIONS

Model	ZM9190
Rated Maximum Power (Pmax)	300W
Power Tolerance	+5%
Current at Pmax (IMP)	17.10A
Voltage at Pmax (VMP)	17.53V
Short Circuit Current (ISC)	17.57A
Open Circuit Voltage (VOC)	20.43V
Series Fuse Rating	20A
Dimensions Open	2215x800x20mm
Dimensions Closed	735x800x60mm
Weight	13.6KG

CHOOSING A SUITABLE REGULATOR

Warning: This is an unregulated solar panel - ensure you connect a suitable regulator (available separately) to prevent damage to the battery

- These panels are compatible with PWM and MPPT regulators and can be used on the solar input of DC-DC Chargers.
- Ensure the regulator or DC-DC Charger has an input voltage limit higher than the Open Circuit Voltage (VOC) of the panel
- Ensure the regulator or DC-DC Charger has an input current limit higher than the Short Circuit Current (ISC) of the panel
- Ensure the regulator or DC-DC Charger has an input power limit higher than the power rating of the panel
- Ensure the regulator or DC-DC Charger is suitable for the battery type you are charging (AGM, GEL, LiFePO4 etc)

INSTRUCTIONS

Solar panel performs at their peak power when facing towards the sun directly.

SETTING UP THE PANEL

- Remove elastic strap from the panels and unfold the panels
- Lift all legs to the open position. When open, the legs will lock into place
- Angle the solar panel so its directed toward the sun

CONNECTING SOLAR PANEL

- Ensure you're using a suitable solar regulator (available separately) and connecting lead (available separately) to charge your battery. Do not connect this solar panel directly to a battery
- First connect the regulator as close as possible to the battery, then connect the regulator to the solar panel using the quick connect plugs- if more length is required between the solar panel and solar regulator, use a Solar Extension Lead (available separately)

DISCONNECTING & STORING THE SOLAR PANEL

- Disconnect the solar panel from the regulator, before disconnecting the regulator from the battery
- Place the optional accessories separately in the front pocket of the carry bag
- Note: Never store your solar panel with any extra wire connected to the quick connect plug

TROUBLESHOOTING

Problem	Cause	Solution
Solar not Charging	Inadequate sunlight	Position panel in full sun
	Plug terminals incorrect polarity	Inspect the quick connect plug terminals, ensuring the polarity (+ and -) are correct. Change if incorrect.
	Plug terminals are not correctly seated	Ensure the terminals in the quick connect plug are firmly connected. To seat the terminals push them from the back of the plug until you hear a 'click'
	Plug terminals have corroded	Clean corrosion from plug terminals
No open Circuit Voltage recorded on panel	Panel has been incorrectly connected to 12V system	Ensure the panel has been connected to the correct terminals on the solar regulator Ensure regulator is suitable for solar and battery type.
	No open Circuit Voltage recorded on panel	Use a multimeter or voltmeter to measure the voltage of the panel at the quick connect plug. The meter should display 18~25V in full sun. If there is no voltage present, there may be an internal short circuit or broken circuit. Contact customer service for further assistance.

WARRANTY INFORMATION

Our product is guaranteed to be free from manufacturing defects for a period of 12 Months. If your product becomes defective during this period, Electus Distribution will repair, replace, or refund where a product is faulty; or not fit for intended purpose. This warranty will not cover 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 warranty, please contact the place of purchase. You will need to show receipt or other proof of purchase. Additional information 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. 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:
Electus Distribution
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Ph. 1300 738 555