MEGNA SERIES

SCAN

User Manual

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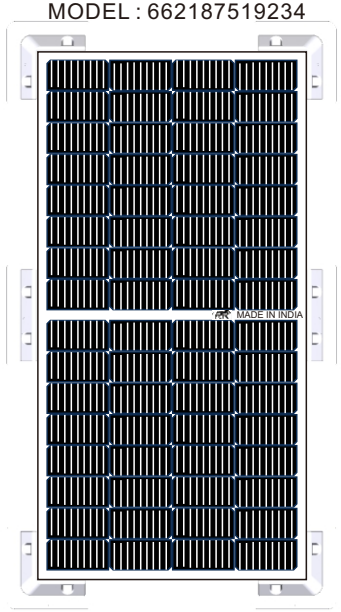

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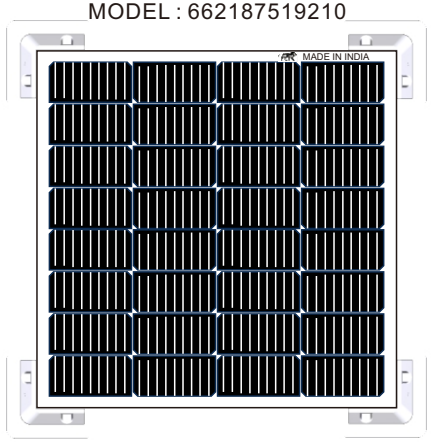
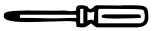


*We may modify these specifications without prior notice.

1. Warnings and Tools Icon Chart

Icons	Name	Description
	High Voltage	High voltage device. Installation should be performed by an electrician.
	High Temperature	This device will produce heat. Mount device away from other items.
	Environmental Hazard	Electronic Equipment. Do not put in landfill.
	Wire Cutter	A wire cutter is needed for cutting and stripping prior wires to connect.
	Anti-static Glove	Anti-static gloves are recommended to prevent controller damage caused by static electricity.
	Electrical Tape	Electrical tape is recommended to safely insulate spliced or bare wires.
	Screwdriver	A common size screwdriver is needed to attach wires to the controller.

2. Safety Tips

- You must understand and follow all applicable local, state, and federal regulations and standards for building construction, electrical design, fire, and safety, and must check with local authorities to determine applicable permitting requirements before attempting to install or maintain PV modules.
- Rooftop PV systems should only be installed on dwellings that have been formally analyzed for structural integrity, and confirmed to be capable of handling the additional weighted load of PV system components, including PV modules, by a certified building specialist or engineer.
- For your safety, do not attempt to work on a rooftop until safety precautions have been identified and taken, including without limitation fall protection measures, ladders or stairways ,and personal protective equipment (PPE).
- For your safety, do not install or handle PV modules under adverse conditions, including without limitation strong or gusty winds, and wet or frosted roof surfaces.
- The flat-plate PV module construction consists of a laminated assembly of solar cells encapsulated within an insulating material with a rigid glass surface and an insulated substrate. The laminated assembly is supported by an aluminum frame that is also used for mounting the module illustration of the PV module components
- PV modules can produce current and voltage when exposed to light of any intensity. Electrical current increases with higher light intensity. DC voltage of 30 Volts or higher is potentially lethal. Contacting the live circuitry of a PV system operating under light can result in lethal electric shock. De-energize PV modules by removing them entirely from light or by Covering their front surface with an opaque material. Regard the safety regulations for live electrical equipment when working with modules that are exposed to any light.
- Use insulated tools and do not wear metallic jewelry while working with PV modules.
- In order to avoid arcing and electrical shock, do not disconnect electrical connections under load. Faulty connections can also result in arcing and electrical shock. Keep connectors dry and clean,

3. Product Features

1.High in power, High performance in the low-light environment

2.Compact in size, High-quality aluminium frame, resisting load up to 5400 Pa and wind pressure up to 2400 Pa

3.Monocrystalline Solar Panel is the perfect option for any off-grid application.

4.It comes with pre-drilled mounting holes &Mounting Brackets, solar connector leads, and a junction box. Allowing you to install, connect it to a controller.

5.This is most economical long-term investment

6. The panels are made of premium Grade A+ monocrystalline solar cells that are more efficient than conventional polycrystalline solar cells.

7.Solar Panel will made of high quality mono crystalline solar cell.

8.RluxRv solar Panel still work during cloudy weather condition but please note that the Power conversion is not as high as on sunny days.

9. Solar panels can be connected in series or in parallel to meet your electrical circuit size and power demands.

In series: The operating voltage output adds up, while the system current output is the same as that of one panel.

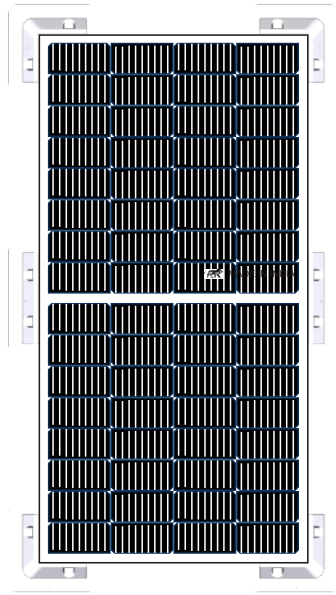
In parallel: The operating current output will add up, while the system voltage output will be the same as the output of one solar panel.

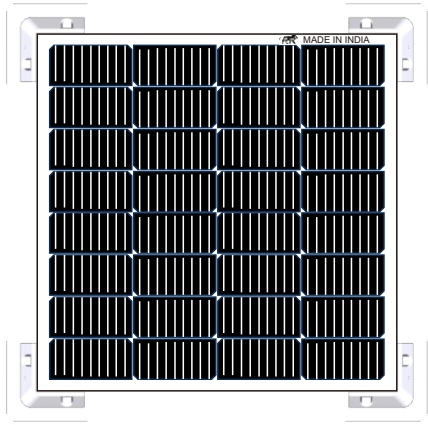
To achieve optimum power output and system rating for your power system, you can use both parallel and series connections.

10. Double EL test before and after lamination.

11. IP67 junction box for long term weather endurance.

4. Product Views





5. Accessories

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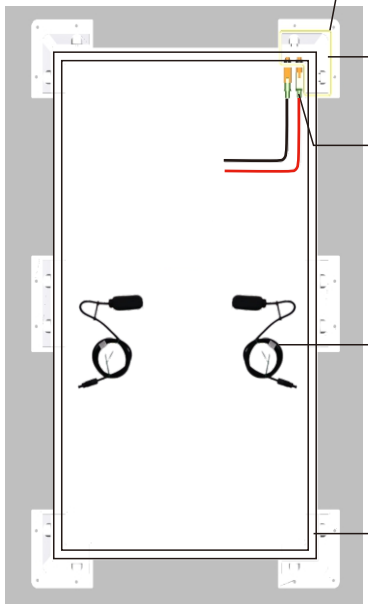

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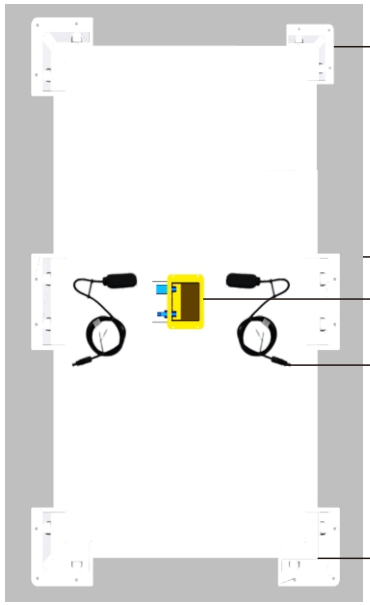

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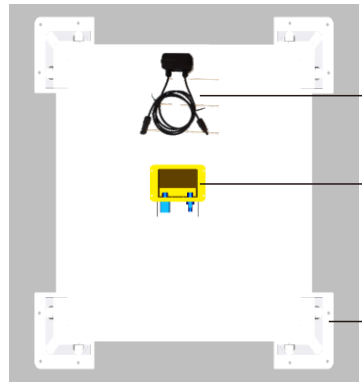

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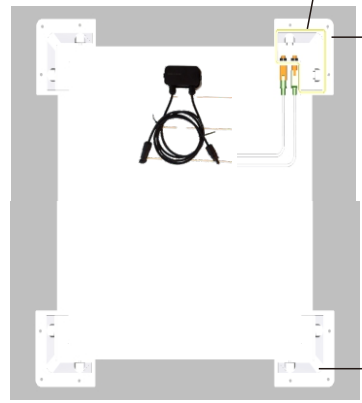
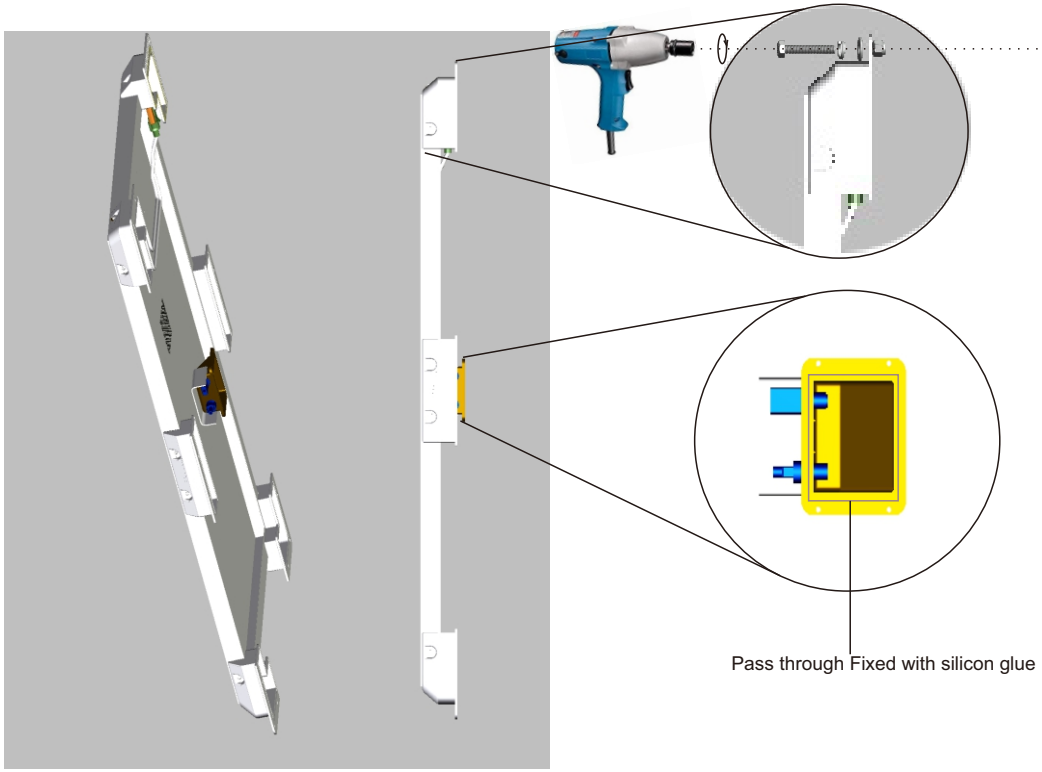
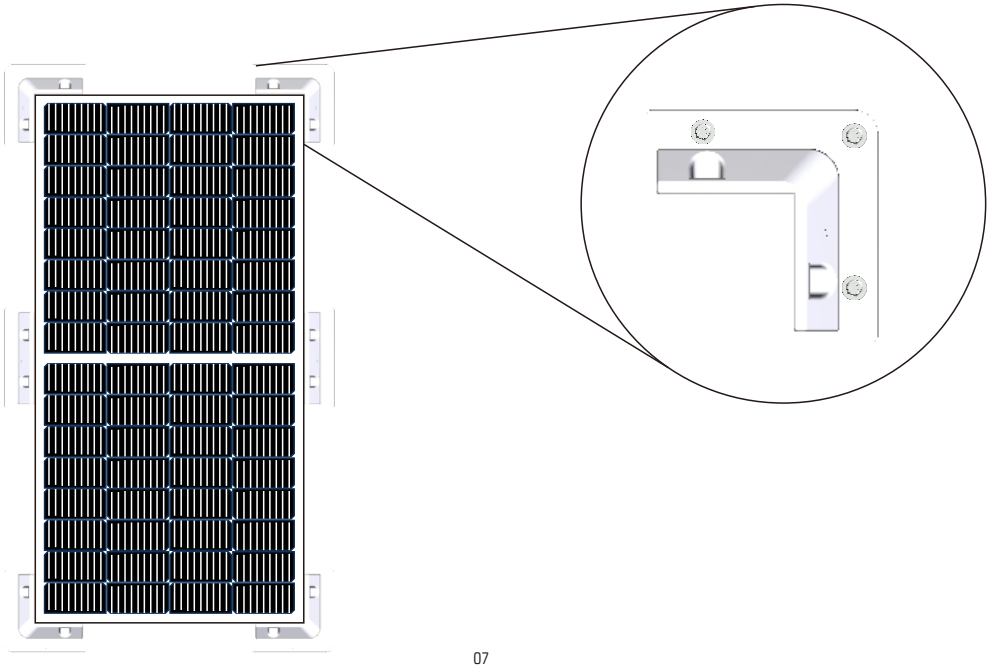


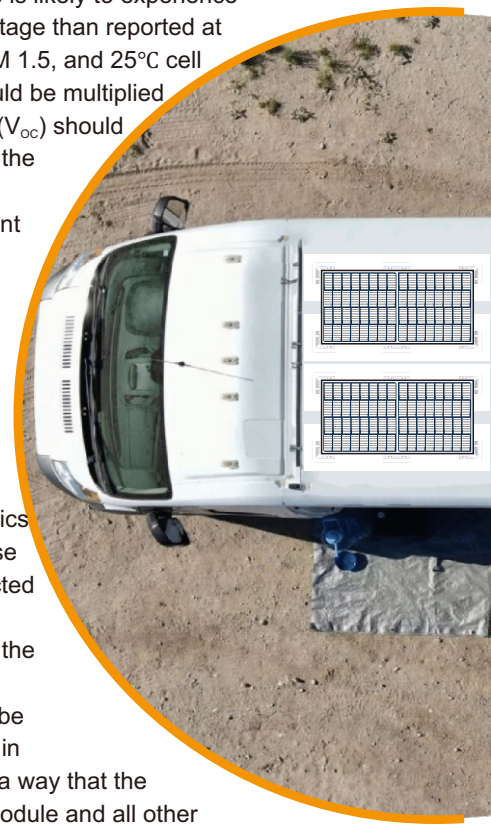




6.Electrical installation

Electrical Configuration

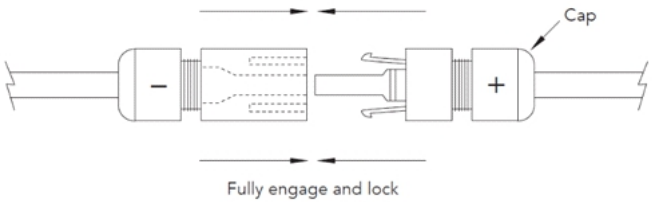
Under normal conditions, a photovoltaic module is likely to experience conditions that produce more current and/or voltage than reported at Standard Test Conditions (STC: 1000 W/m2, AM 1.5, and 25℃ cell temperature). The short-circuit current (I_{SC}) should be multiplied by a factor of 1.25 and the open-circuit voltage (V_{OC}) should be multiplied by a factor of up to 1.25 based on the lowest ambient temperature recorded for the installation location when determining component voltage ratings, conductor current ratings, fuse sizes, and size of controls connected to the PV output.



Voltages are additive when PV modules are connected directly in series, and module currents are additive when PV modules are connected directly in parallel, as illustrated PV modules with different electrical characteristics must not be connected directly in series. The use of suitable third-party electronic devices connected to PV modules may enable different electrical connections and must be installed according to the manufacturer's specified instructions.
The maximum number of PV modules that can be connected in a series string must be calculated in accordance with applicable regulations in such a way that the specified maximum system voltage of the PV module and all other electrical DC components will not be exceeded in open-circuit operation at the lowest temperature expected at the PV system location.
An appropriately rated over current protection device must be used when the reverse current could exceed the value of the maximum fuse rating of the module. An over current protection device is required for each series string if more than two series strings are connected in parallel.

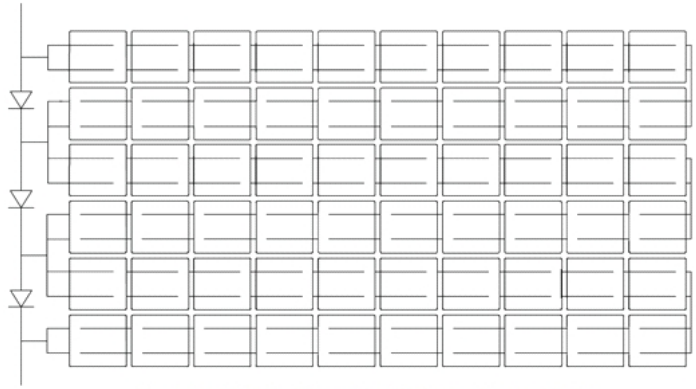
7.Cables and Wiring

RluxRv modules are provided with two (2) stranded, sunlight resistant output cables that are terminated with PV connectors ready for most installations. The positive (+) terminal has a female connector while the negative (-) terminal has a male connector. The module wiring is intended for series connections [i.e. female (+) to male (-) interconnections], but can also be used to connect suitable third-party electrical devices that may have alternative wiring configurations so long as the manufacturer's instructions are followed.
Use field wiring with suitable cross-sectional areas that are approved for use at the maximum short-circuit current of the PV module. RluxRv recommends installers use only sunlight resistant cables qualified for direct current (DC) wiring in PV systems. The minimum wire size should be 4mm2.Required minimum field wiring Testing standard Wire Size Temperature Rating
Cables should be fixed to the mounting structure in such a way that mechanical damage of the cable and/or the module is avoided. Do not apply stress to the cables. For fixing, use appropriate means, such as sunlight resistant cable ties and/or wire management clips specifically designed to attach to the PV module frame. While the cables are sunlight resistant and waterproof, where possible, avoid direct sunlight exposure and water immersion of the cables.



8. Bypass Diodes

The junction boxes used with RluxRv modules contain bypass diodes wired in parallel with the PV cell strings. In the case of partial shading, the diodes bypass the current generated by the non-shaded cells, there by limiting module heating & performance losses. Bypass diodes are not over current protection devices. Bypass diodes divert current from the cell strings in the event of partial shading .In the event of a known or suspected diode failure, installers or maintenance providers should contact the company the PV modules were purchased from. Never attempt to open the junction box of a PV module yourself.



Example of Electrical Circuitry of Cells and Bypass Diodes

8. Mounting

solar panels will be mounted to the roof of your van and secured to your vehicle's roof rack. These solar panels will generate electricity harvested from the power of the sun, and the energy that these two panels create will be passed through a series of adapter cables to your solar charge controller. From the charge controller, the energy will pass through another series of cables to your deep cycle battery, which is where your solar energy will be stored until it is ready to be used. Then, from your deep cycle storage battery, a final series of cables will run to a small power inverter, which is where you will be able to plug in any of the devices you wish to charge or power.

Once you have everything connected properly, remove the blanket from the solar panels on the top of your car, truck or van and you should begin to see some action on your charge controller’s display. Depending on the angle and intensity of the sun, you will be able to generate as much as 5-10 or more amps at any one time using this unique and easy to install solar power system.

FEATURES

- High conversion efficiency: Greatly reduces light and electricity loss.
- Leading in component power industry
- Strong stability: effectively enhance the reliability and stability
- Significantly reduce the effect of hot spot
- 1-year warranty on material and workmanship, on linear power output
- Reduce system cost: high component efficiency can effectively reduce the floor space, BOS, transportation, and operation costs by 5-10%

APPLICATIONS

- The solar panel is able to charge the batteries of the vehicles such as boat, motorhome, caravan, camper, narrowboat, and yacht, etc, or any other system with a 12V battery or battery bank.

PRODUCT DETAILS-100W	
ELECTRICAL	
Max Power (Pmax)	100W
Short-Circuit Current (Isc)	5.88A
Open Circuit Voltage (Voc)	21.80V
Current at Pmax (Imp)	5.48A
Voltage at Pmax (Vmp)	18.24V
Panel efficiency (%)	19.5%
Power Tolerance	±3%
Power Temp Coefficient	-0.45% / °C
Voltage Temp Coefficient	-0.35% / °C
Current Temp Coefficient	0.04% / °C
Operating Temperature	-40°C~85°C
Weight	16.9 lbs
Module	
Solar Cell Brand	MONO Crystalline Silicon
Solar Cell Qty.	32pcs half cut (83X166mm)
Module Dimension	(33.85X32.28X1.7) inch
Connector	MC 4
Waterproof Junction Box	IP65/IP67

DIMENSIONS(WITH FOOT REST)	(Inches)	(mm)
Length	33.85	860
Width	32.28	820
Height	2.56	65

PRODUCT DETAILS-200W	
ELECTRICAL	
Max Power (Pmax)	200W
Short-Circuit Current (Isc)	11.62A
Open Circuit Voltage (Voc)	21.80V
Current at Pmax (Imp)	10.96A
Voltage at Pmax (Vmp)	18.24V
Operating Temperature Panel efficiency (%)	20.50%
Power Tolerance	±3%
Power Temp Coefficient	-0.45% / °C
Voltage Temp Coefficient	-0.35% / °C
Current Temp Coefficient	0.04% / °C
	-40°C~85°C
Weight	28.3 lbs
Module	
Solar Cell Brand	MONO Crystalline Silicon
Solar Cell Qty.	64pcs half cut (83X166mm)
Module Dimension	(60.23X32.28X1.7) inch
Connector	MC 4
Waterproof Junction Box	IP65/IP67

DIMENSIONS(WITH FOOT REST)	(Inches)	(mm)
Length	60.23	1530
Width	32.28	820
Height	2.56	65

Dimension