

# Ironman Inverter Series User manual

**Please read**

Carefully before use

**Manual**

Certification

IS-16169

## Preface

As we move towards a future that is defined by constant innovation and a greater need for sustainability, we are proud to present our latest product - the solar lithium generator. This innovative product is designed to address one of the most critical needs of our time - clean energy, and has the potential to revolutionize the way we consume and use electricity. At its core, the lithium inverter is all about energy efficiency and sustainability. Our product combines intelligent design with cutting-edge technology to provide a comprehensive solution to all your energy needs. With an emphasis on eco-friendliness, the lithium inverter is the perfect solution for those who are looking to reduce their carbon footprint and contribute to a better world.

Our team of experts has gone to great lengths to ensure that this product is not only state of the art but also reliable and easy to use. The innovation behind this product lies in its unparalleled efficiency, which enables it to generate a significant amount of energy from renewable sources. This is the power of the future - efficient, sustainable, and eco-friendly. We are excited to introduce our solar lithium generator, a product that has the potential to redefine the way we use electricity and contribute to a cleaner and more sustainable future. Join us in creating a better world, one step at a time.

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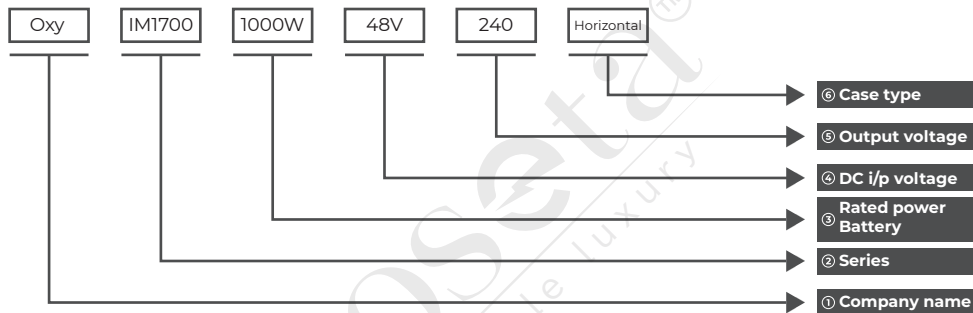
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**Remarks: please choose according to the actual product, the Relevant information is for reference only**

## Model and its meaning

3.



For example: OXYIM17001000W48V240HORIZONTAL  
OXYIM17002000W48V240HORIZONTAL  
OXYIM17003000W48V240HORIZONTAL  
OXYIM34001000W48V240HORIZONTAL  
OXYIM34002000W48V240HORIZONTAL  
OXYIM34003000W48V240HORIZONTAL  
OXYIM50001000W48V240HORIZONTAL  
OXYIM50002000W48V240HORIZONTAL  
OXYIM50003000W48V240HORIZONTAL

1. Begin by selecting a suitable location to mount the wall bracket. The location must be near the power source and provide enough ventilation for the inverter.
  2. Fix the wall bracket firmly to the selected location using suitable hardware. Ensure that the bracket is leveled correctly.
  3. Once the bracket is firmly mounted, snap the inverter onto the bracket and secure it with the screws provided.
  4. Before proceeding with electrical connections, ensure that the inverter and all other electrical items are de-energized. This can be done by disconnecting the ac input and turning off the circuit breaker.
  5. Connect the wires for the ac input to the inverter. Connect the inverter's ac output to the main electrical panel through a transfer switch or directly.
  6. Connect the DC cables from the solar panels and the wind turbine to the inverter's DC input terminals.
  7. Connect the external battery if any, cables to the inverter's external battery terminals, ensuring that the polarity is correct.
  8. Switch on the main circuit breaker (three /two MCB -1st DC for cut off battery, second is for solar input and third is for ac output ) and the ac input. The inverter should start charging the batteries, and the installation is complete.
- Please follow safety instructions Annexure-A while handling this lipon inverter solar connection.
9. DCDB recommended for solar panel connections and inverter for safety purpose.
  10. Lighting arrestor needed in case of open area or roof
    - Wire is in mm→2 mm per kilowatt this lipon inverter → 2 mm per kilowatt add-on.
    - 2kw solar panel : 4mm wire, 3kw panel : 6mm wire.
    - 5kw solar panel : 10mm wire

- Solar panel direction should be in south side with "a" tilt angle . A is decided according to different geographical locations.
  - Wind turbines if it is with set - please read instructions set with wind turbines, Trx and any electricity source machine equipment.
  - Earthing to cover guarantee and warranty on this lithium inverter .
  - AC input and output wire should be with proper insulation. we recommends to use only good quality wire with specific thickness according to load.
- It is vital to follow all safety procedures and guidelines provided with the equipment during installation to avoid any injuries or damages.
- If wind turbine read instructions manual given separately with wind turbine

### Annexure-A

1. Only operate the inverter in a well-ventilated area to prevent overheating.
2. Do not use the inverter near flammable materials, objects, or gases.
3. Always make sure that the inverter is turned off and unplugged before connecting or disconnecting any devices.
4. Avoid touching the inverter with wet or damp hands.
5. Never overload the inverter by connecting devices that require more power than the inverter's capacity.
6. Use only compatible devices with the inverter as mentioned in the manufacturer's instructions.
7. Never modify or tamper with the inverter in any way.
8. Do not use the inverter for medical equipment or life support systems.
9. Always make sure that the inverter is stored in a safe and secure place.
10. Do not expose the inverter to extreme temperatures, humidity, or sunlight.
11. Keep the inverter away from children and pets.
12. Always refer to the manufacturer's instructions for any questions or concerns.
13. Only use inbuilt, external batteries and inverters that are specifically designed to work with the lithium inverter with prior confirmation from company technical person in written.
14. Avoid exposing the lithium inverter to high temperatures, direct sunlight, or moisture.
15. Always make sure that the lithium inverter is turned off and unplugged before installing or

servicing any components.

16. Use caution when working with the lithium inverter's high-voltage DC circuitry.

17. Never touch any exposed metal parts or terminals on the lithium inverter.

18. Do not attempt to disassemble or modify the lithium inverter in any way.

19. Do not use the lithium inverter for any other purpose than what is specified in the manufacturer's instructions..

20. Use care when handling the lithium inverter's battery during charging or discharging and follow all instructions for safe battery handling.

It is extremely important to follow these safety instructions when using a lithium inverter to prevent accidents or damage to the user and the inverter itself.



## Safety guidelines for handling lithium inverters

8.

1. Check with your local recycling center to see if they accept lithium inverters. If they do, they will have specific instructions on how to prepare the device for recycling.
2. Remove any batteries from the device if possible, as they may require separate recycling.
3. Clean the device of any dust or debris before recycling.
4. If the battery is not removable, discharge the battery before recycling, as a full battery can pose a risk during transport and recycling.
5. Place the lithium inverter in a clear plastic bag to prevent any possible short-circuits.
6. Label the bag with "Li-ion battery inside, handle with care" so that the recycling center staff know that they are handling a lithium device.
7. Bring the lithium inverter to the recycling center, where staff will either recycle the battery or remove it for separate recycling.
8. Do not dispose of lithium inverters with general waste, as they can be hazardous to the environment if not properly recycled.
9. By recycling your lithium inverter, you are doing your part to reduce electronic waste and protect the environment

1. Pure sine wave
2. High efficiency
3. LCD indicates the status of the load and other information
4. Fully automatic control of refrigeration fan (load)
5. Microprocessor design
6. Maintain battery life effectively, 3500 cycles @60% DOD
7. Low voltage | overload/ short circuit | over voltage | over temperature alarm

### Product applications

- Power tools series: Electric saw, Drilling machine, grinder, sand blast machine, Punching machine, welding machine, air compressor etc.
- Office equipment series: computers, printers, monitors, copiers, scanners, etc.
- Household appliances series: vacuum cleaners, electric fans, fluorescent lamp, incandescent lamps, electric cutting knives, sewing machines, etc.
- Kitchen appliances series: microwave ovens, refrigerators, freezers, coffee machines, blenders, ice machines, ovens etc.
- Industrial equipment series: metal halide lamp, high-pressure lamp, ship cutting, solar energy, wind power generation, etc. Electronic field series: TV sets, video recorders, game consoles, radios, power
- Amplifiers, music equipment, monitoring equipment, terminal, Equipment server, intelligent platform, satellite communication equipment, etc

## Important instructions for lithium inverters/recycling:

10.

1. Read the user manual carefully before using the device.
2. Lithium inverters should only be used by those who have experience handling electronics. If you are not familiar with electronics, seek assistance from a knowledgeable person.
3. When charging the device, use only the charger provided by the manufacturer. Using third-party chargers can damage the battery and pose a safety hazard.
4. Do not expose the device to extreme temperatures, including heat or cold. High temperatures can cause the battery to degrade or stop working altogether, while freezing temperatures can damage the LCD display.
5. Do not puncture or damage the battery in any way. This can cause it to leak or explode.
6. Lithium inverters should be stored in a cool and dry place, away from direct sunlight.
7. When not in use, disconnect the inverter from the battery to prevent unnecessary drain or accidental electrical discharge.
8. If you notice any signs of malfunction or unusual behavior, stop using the inverter immediately and seek assistance from a qualified professional.
9. Keep the device out of reach of children and pets to prevent accidental damage or injury.
10. Make sure to follow proper recycling procedures when disposing of the device. Never dispose of the lithium inverter in normal household trash.

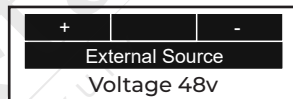
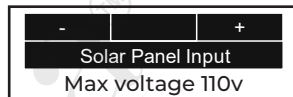
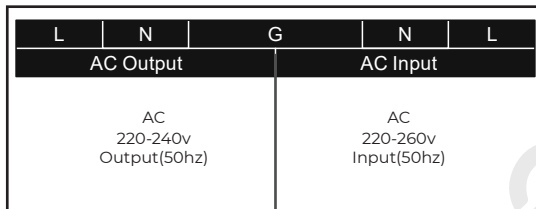
Operation guide: warning! There is high voltage inside the product, pay attention to safety. Non-professionals are strictly forbidden to disassemble or modify without permission, and the company will not be responsible for any violation. Please follow the instructions below.

1. Connect appliances with inverter: ensure that the loading power is within inverter power, the power cannot exceed the maximum power of inverter when started. 42 Low voltage protection: when battery voltage is too low, the indicator will sound an alarm, indicating that the DC supply voltage has been reduced and the battery needs to be recharged.

2. Over voltage protection: when battery voltage is too high, the indicator will sound an alarm, indicating that the input DC voltage is too high, and the battery needs to be discharged as soon as possible. The input voltage reaches  $54\text{V}+0.5\text{V}$  and the warning light will turn red, the ac output device will be turned off at the same time.

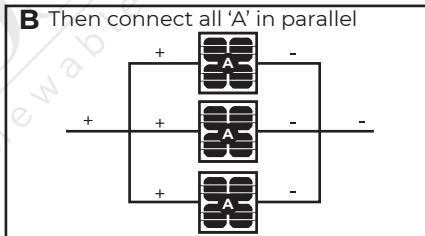
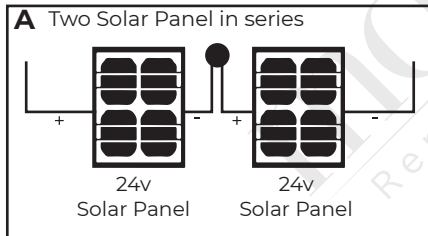
## Inverter icon and connections

12.



A- Two 24volt solar panel in series

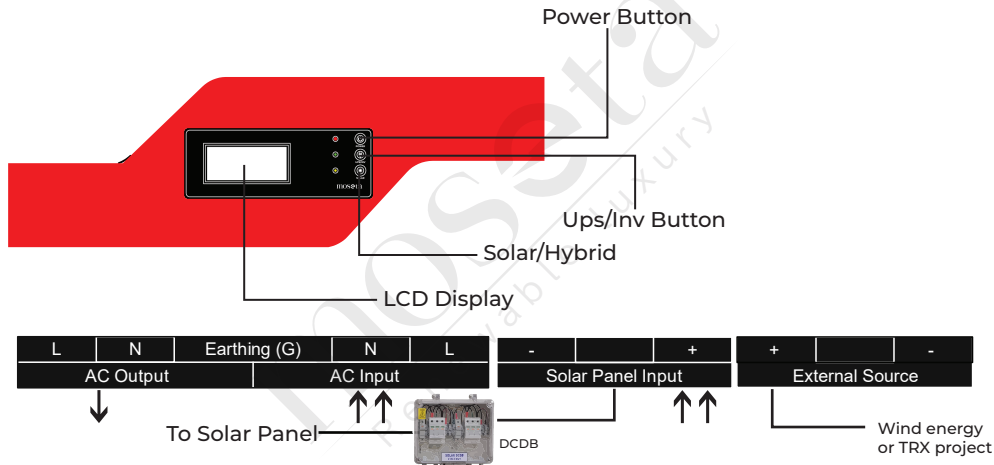
B- Parallel all connections "A"



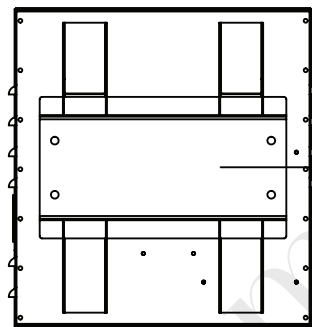
## Inverter icon and connection

13.

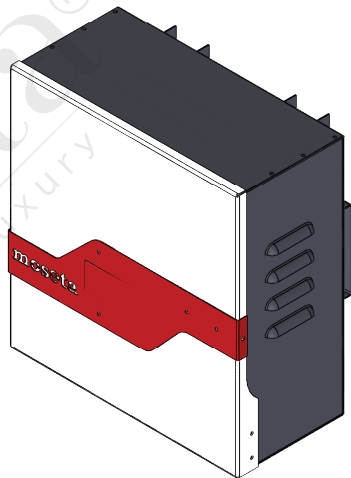
- Pure sine wave/ modified sine wave



Protects your Solar Inverter and Panels from high voltage and short circuits.

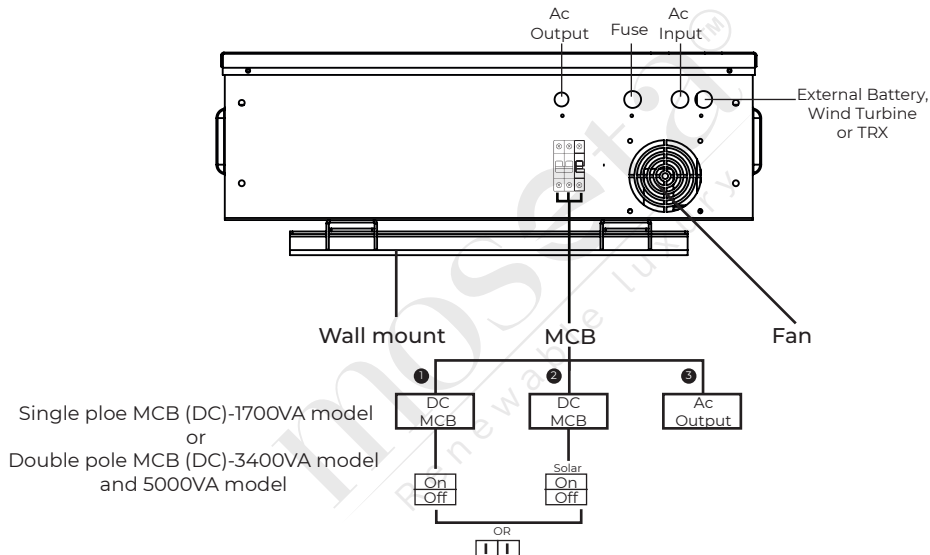


Wall mount stand

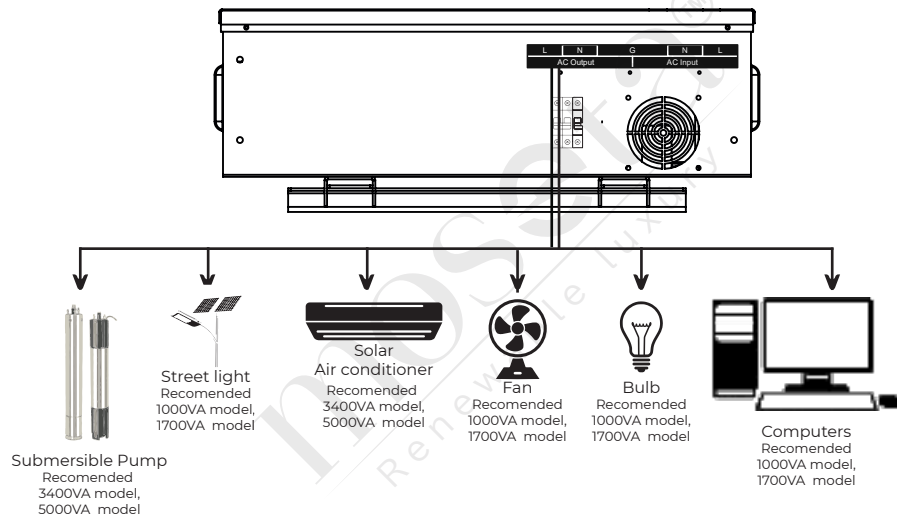


## Inverter icon and connection

15.







## Common faults and eliminating methods

17.

Fault	Possible reason	Recommended solution
The inverter does not work during the initial power up	The wire is not connected properly. The connection on the battery side is loose. The battery voltage is too low.	Check the battery and wire connections. Check the DC fuse. Charge the battery.
The buzzer sounds and the LCD flashes continuously	The voltage on the DC input terminal reached the set point of the low battery alarm: 10.5v±0.5v (m-12v version) 42v±2v (m-48v version) 11v±0.2vdc (p-12v version) 44±0.8vdc (p-48v version)	<ol style="list-style-type: none"> <li>1. Check whether the battery power is sufficient, if it is worse than the previous worksheet. Please charge as soon as possible.</li> <li>2. Check whether the battery wire is thick enough to carry the required current within the required length, if necessary, thicker wires can be used.</li> <li>3. Tighten the connection of the battery input circuit</li> </ol>
<ol style="list-style-type: none"> <li>1. Low backup</li> <li>2. Frequent trip</li> </ol>	<ul style="list-style-type: none"> <li>• Load is high</li> <li>• No solar charging</li> <li>• No grid charging</li> </ul>	<ol style="list-style-type: none"> <li>1. Lower the load</li> <li>2. Check solar input</li> <li>3. Check ac input</li> <li>4. Register complaint online</li> </ol>
<ol style="list-style-type: none"> <li>1. Fuse trip</li> <li>2. No current showing in LCD</li> </ol>	<ul style="list-style-type: none"> <li>• Check fuse</li> <li>• No solar power of ampere is less than 2amp</li> </ul>	<ol style="list-style-type: none"> <li>1. Change fuse</li> <li>2. Wait for good solar radiation or check solar input wire connectivity</li> </ol>

## Common faults and eliminating methods

18.

Fault	Possible reason	Recommended solution
MCB trip -Battery trip -AC output -Solar	- Battery short circuit protection - Output wire having short circuit - Solar wire short circuit	- Don't use inverter. Contact customer care - Don't use inverter. Contact customer care - Don't use inverter. Contact customer care
→ LCD error	→ Check error information in LCD	→ Follow appropriate by decreasing the value
→ Overload → Over voltage → Over voltage → Over current → Reverse solar panel → Short Circuit → No solar power → No Solar Power → Mains Fail	→ Any respective reason may be	→ Follow appropriate by decreasing the value

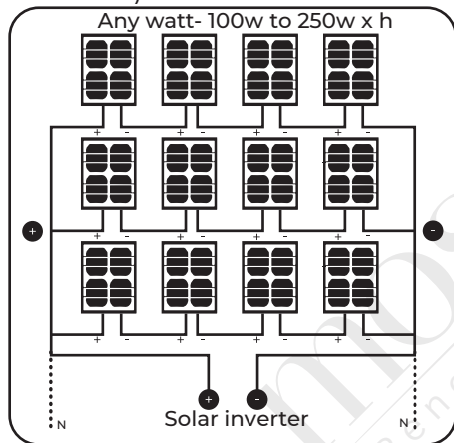
Model	12LIPON1KW	12LIPON2KW	48X1K	48X2K	48X3K	48Y1K
Rated power	1000w	2000w	1000w	2000w	3000w	1000w
Inv. Voltage	12v	12v	48v	48v	48v	48v
O/p voltage	220v-240v					
Max. Solar Panel power	800w	800w	2500w	2500w	2500w	4000w
Inverter Power	1KVA	1KVA	1700VA	1700VA	1700VA	3400VA

Model	48Y2K	48Y3K	48Z1K	48Z2K	48Z3K
Battery	2000w	3000w	1000w	2000w	3000w
Inv. Voltage	48V	48V	48V	48V	48V
O/p voltage	220v-240v				
Max. Solar Panel power*	4000W	4000W	7500W	7500W	7500W
Inverter Power	3400VA	3400VA	5000VA	5000VA	5000VA

\*Depending on type of panel so match max volt. so match : Maximum Solar Voltage :  $\frac{1700VA}{110V}$  -  $\frac{3400VA}{110V}$  -  $\frac{5000VA}{110V}$

Maximum Solar Current : 28A - 48A - 70A

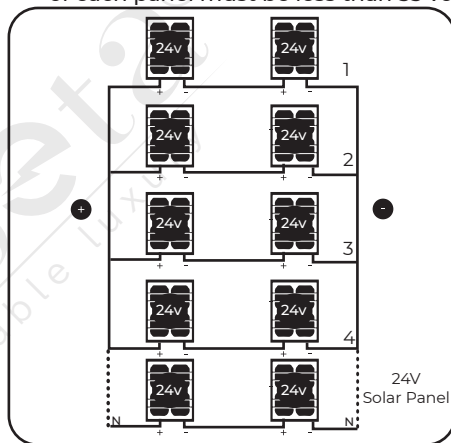
- A** If 12 volt solar panel- one series (12v solar Panelx4)



$V_{oc} (V_{in}) = \text{Inverter Max Input Volt} = 110\text{Volt}$

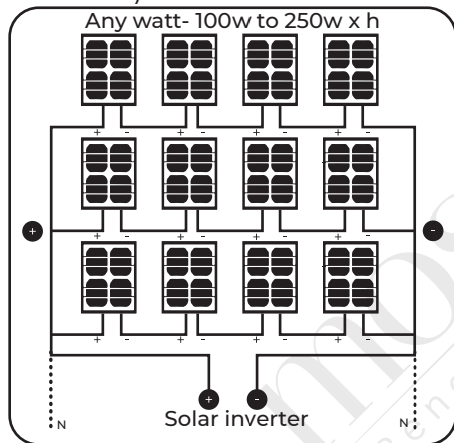
$I_{sc} (I_{in}) = \text{Inverter Max Input Ampere} = 28\text{amp}$

- B** If 24 volt solar panel- 250W to 550W  $V_{OC}$  of each panel must be less than 55 volt



Solar Watt Max=2.5kw

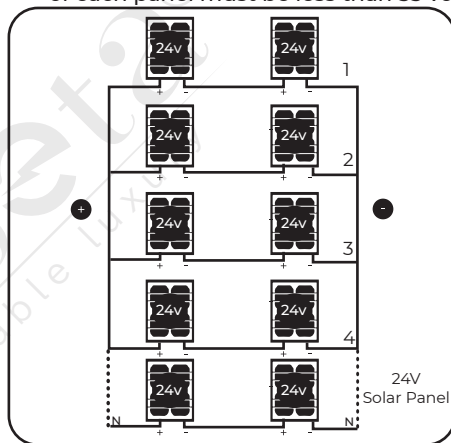
- A** If 12 volt solar panel- one series (12v solar Panelx4)



$V_{oc} (V_{in}) = \text{Inverter Max Input}$   
 Volt=110Volt

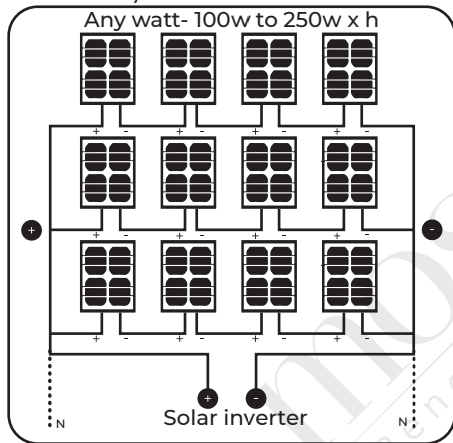
$I_{sc} (I_{in}) = \text{Inverter Max Input}$   
 Ampere=48amp

- B** If 24 volt solar panel- 250W to 550W  $V_{OC}$  of each panel must be less than 55 volt



Solar Watt Max=4kw

**A** If 12 volt solar panel- one series (12v solar Panelx4)

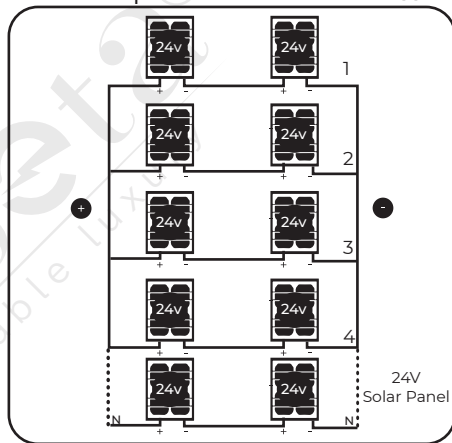


Voc ( $V_{in}$ )=Inverter Max Input  
Volt=110Volt

$I_{sc} (I_{in}) = \text{Inverter Max Input Ampere} = 70 \text{ amp}$

Solar Watt Max=7.5kw

**B** If 24 volt solar panel- 250W to 550W VOC of each panel must be less than 55 volt





## Warranty registration form

24.

Customer details

Name:.....

Address1: .....

Address2: .....

City: .....state: .....

Pin: ..... Mobile: .....

Occupation: .....

How did you first hear about our product?.....

Birthday (optional): dd/mm/yyyy

Warranty on Inverter : 5 years offsite against any mfg, defects, onsite charges applicable on different geographical locations.

Warranty on Battery : 15 Year or 3500 Cycles @60% DOD of battery which ever earlier.

AMC/CMC applicable for extended warranty.

\*Warranty is applicable on successful warranty registration online.

## Warranty registration form

25.

Please rate how you felt? (Please circle appropriate option)

During the sales presentation



At the time of installation



The product has been installed to my satisfaction. (Please refer to the installation procedure and safety measures outlined in accompanying guide for users):

Yes.....

No.....

Customer signature & date

\*Self acknowledged after 24hours if no reply received

## Service request form

26.

Customer name: \_\_\_\_\_  
Contact number: \_\_\_\_\_  
Product details: \_\_\_\_\_  
Product name: \_\_\_\_\_  
Product model number: \_\_\_\_\_  
Date of purchase: \_\_\_\_\_  
Place of purchase: \_\_\_\_\_  
Issue faced with the product: \_\_\_\_\_

### **Terms and conditions**

1. The service request form is only meant for products that are currently covered under Warranty.
2. For products like ACs and Inverters, on-site servicing might require additional charges depending on the location and product. Extra charges can be confirmed during the time of scheduling the service request.

3. The service request form is not meant for any general queries or requests. Please contact customer support for the same.
  4. Customer support will schedule the service request within 48 hours of receiving the request form.
  5. Any additional or non-warranty-related services provided by the service technician will be charged separately.
  6. The service request form must be filled accurately, with the correct details of the product to ensure prompt service requests.
- By filling this form, you agree to the above terms and conditions.  
Please note that submitting this form does not guarantee a service request, and the service request is subjected to availability and location limitations. Our team will respond to your request as soon as possible.  
Thank you for your understanding.

For service request please visit website and fill service request form  
<https://moseta.in/customer-care/>



[illegible]

[illegible]

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**Disclaimer:** There is certain difference between the size of the picture of this product and the actual product. Please refer to the actual product. The company's product are constantly being updated. If you need to know more, please contact the company.



Do not disassemble the inverter without permission