



Solar Panel Install and Install Guide & Manual

1. Delivery Content

Module No	PG-GSP150W	PG-GSP360W	PG-GSP450W
Solar Panel	1pc	1pc	1pc
Cable	NA	NA	2M 4mm ² DC cable with MC4 Connect
Manual	1set	1set	1set

2. Explanation of symbols


 The lightning symbol inside a triangle is used when there is a potential risk of personal injury, such as electric shock.

 An exclamation mark in a triangle indicates important instructions in this operating manual that absolutely have to be observed.

3. How to use

- 1) Plan the installation position, place the solar panel on the installation area, and fix the solar panel with screws so that it will not shake.
- 2) Connect the solar in series or parallel according to power demand.

4. Safety instructions

 **Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.**



- The device is not a toy. Keep it out of the reach of children and pets.
 - Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
 - Protect the product from extreme temperatures, strong jolts, flammable gases, vapours and solvents.
 - Do not place the product under any mechanical stress.
 - If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.
 - Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.
 - Also observe the safety and operating instructions of any other devices which are connected to the product.
 - The solar module performance can vary depending on weather conditions. Keep this in mind when operating a device with this product.
 - Do not touch the terminal points during operation.
 - Use suitable extension cables and adaptor plugs approved for outside operation. Do not use bare wires or other uninsulated objects to connect the product.
 - Always ensure correct polarity when connecting a device.
 - Avoid direct contact with the surface. The surface is sensitive and can be easily scratched or destroyed through contamination.
- solar module may only be used in a temperate climate. The solar module is a device which is not secured against explosions. Thus, it may not be installed in the vicinity of highly inflammable gases and vapours.
- If this solar module is used in a system consisting of multiply solar modules, all modules used must have the same amperage. Only solar modules with identical amperage may be used when connected in series. Only solar modules with identical voltage may be used when connected in parallel.
 - Consult an expert when in doubt about operation, safety or connection of the device.
 - Maintenance, modifications and repairs are to be performed exclusively by an expert.

5. Attention and cleaning



Regularly clean the solar module, as its performance would otherwise decrease and the surface could be irreversibly damaged.

- Please read the user guide before using this product.
- The solar panel will generate voltage when it was exposed in the sun, so please avoid installing the solar system in the sun. If it must be installed in the sun, insulation protection is required.
- Before assembling, pay attention to the positive and negative signs, the positive and negative poles cannot be reversed.
- Do not step on, or disassemble the solar panel.
- Do not place the solar panel in shading places such as trees and buildings.
- Do not soak the solar panel in water or any other liquid.
- Do not use or store solar panels near open flames or flammable materials.
- Do not scratch the solar panel with sharp objects.
- Do not put corrosive substances on the solar panel.
- When using the solar panel the circuit must be correctly connected to the equipment and check the connection status of each component each wire and plug.
- Due to the material characteristics of the product it is strictly forbidden to drop it, otherwise it will cause the internal damage of the solar panel and make the product unusable.
- Use a soft brush or damp cloth to clean the dust on the surface of the product. If there is bird droppings or other sticky objects on the surface of the product it should be cleaned up immediately.
- What should I do if there is no output from the solar panel?

Please put the solar panel in a sunny environment and check the connection status of each component, each wire and plug. You can try to replace the data cable or charge device to check whether the solar panel is working. .

B. Specification

Model	PG-GSP150W	PG-GSP360W	PG-GSP450W
Maximum power	150W	360W	450W
Maximum Power Voltage	19.8V	34.2V	34.67V
Maximum Power current	7.57A	10.52 A	12.98 A
Open Circuit Voltage	23.76V	41.04V	41.6 V
Short Circuit current	8.33A	11.57 A	14.27 A
IP level	IP 67	IP 67	IP 67
Module efficiency	21 %	21 %	21 %
Max degradation in year 1	2 %	2 %	2 %
Max annual degradation in years 2-30	0.5 % to 0.6 %	0.5 % to 0.6 %	0.5 % to 0.6 %
Estimated lifetime	25 years	25 years	25 years
Size	1140*700*25mm	1540*1135*30mm	1909*1134*30mm
Operating temperature	-20-85 ℃	-20-85 ℃	-20-85 ℃
Weight	9.98kg	16.5kg	22.5kg

Disposal



This symbol must appear on any electrical and electronic equipment placed on the EU market. This symbol indicates that this device should not be disposed of as

unsorted municipal waste at the end of its service life.

Owners of WEEE (Waste from Electrical and Electronic Equipment) shall dispose of it separately from unsorted municipal waste. Spent batteries and accumulators,

which are not enclosed by the WEEE, as well as lamps that can be removed from the WEEE in a non-destructive manner, must be removed by end users from the

WEEE in a non-destructive manner before it is handed over to a collection point.

Distributors of electrical and electronic equipment are legally obliged to provide free take-back of waste. Conrad provides the following return options free of charge (more

details on our website):

- in our Conrad offices
- at the Conrad collection points
- at the collection points of public waste management authorities or the collection points set up by manufacturers or distributors within the meaning of the ElektroG

End users are responsible for deleting personal data from the WEEE to be disposed of.

It should be noted that different obligations about the return or recycling of WEEE may apply in countries outside of Germany.

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