

**Title:**

How To Install Marine Solar Panels

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**Summary:**

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Learning how to install marine solar panels will be vital for the sailor who wants their advantages, but first he or she must learn which solar panels are best. Three types of solar cells are commonly used in solar panels, each with its own advantages. The sailor need...

**Keywords:**

marine solar panels,types of solar panels,placement of solar panels,install marine solar panels

**Article Body:**

Solar panels can be a great help to sailors, keeping vital lights and appliances functioning, even when batteries run low or a generator malfunctions. They are also a much quieter way of recharging batteries!

Learning how to install marine solar panels will be vital for the sailor who wants their advantages, but first he or she must learn which solar panels are best. Three types of solar cells are commonly used in solar panels, each with its own advantages. The sailor needs to learn these advantages and select the solar panels that are best for the need.

**Types of Solar Panels**

Solar panels must be kept from shading, as shaded cells draw energy for themselves from other cells.

1. Solar panels using monocrystalline cells have high conversion efficiency, and take up less space, but lack shade protection.
2. Solar panels using polycrystalline cells have even higher conversion efficiency, take up even less space, but still lack shade protection.

3. Solar panels using amorphous silicon cells have lower conversion efficiency, and take up more space, but do have shade protection. This can be especially important on a sailboat.

Marine solar panels are available in both hard and flexible types. Hard solar panels can be attached to the deck, while flexible solar panels might be attached to deck or canvas.

### Size and Number of Solar Panels

Learning how to install marine solar panels will include calculations to determine what size and how many solar panels you will need. This information is readily available on the Internet by searching the question: "What size solar panel do I need" on your favorite search engine. The rule of thumb is to allow for 20% more solar panel power than you estimate you will need.

### Placement of Solar Panels

Once you have determined the size and number of solar panels needed, you will be better able to determine where they will be placed. The best places depend on the boat's configuration and size of the panels. Take your time and think it through. Read the instructions that came with your solar panels. You will want to avoid all violations of warranty terms.

The simple answer to how to install marine solar panels is: in the sun. Select locations that will get maximum sunlight without shaded spots.

In placing marine solar panels, consider the use of extra bars/braces to secure the panels. You obviously want them to remain stable.

### How to Install Marine Solar Panels

Your marine solar panels should have clear instructions for installation. In addition to those, consider the following.

Most marine solar panel systems have three main components:

1. Solar panels to collect sunlight and produce a charge for you.
2. Charge controller to regulate the charge entering your battery and avoid overcharging it.
3. Batteries to store the energy your solar panels created.

Once marine solar panels have charged your batteries, you can use that energy to run most 12 volt DC appliances. These might include your safety lights, regular lighting, pumps, and fans, as well as small appliances. If you add an inverter, you can also run 120 volt AC appliances such as a microwave, radio, satellite dish, or radio. An inverter is a separate unit, not mentioned above, that transforms the current coming out of the battery into that required by most appliances.

First off, check to see that the system has a voltmeter. If it does not, purchase and install one. This will allow you to check the charge you are getting.

Affix your solar panels securely in place, and connect them per the instructions included in your kit. Use only tinned marine grade wire running from the panels to the batteries. If you are unsure of the wire you are considering, ask questions. Regular automotive wire may look similar, but in marine conditions, it will lose its ability to conduct electrical power.

#### Helpful Tip

Pre-packaged marine solar panel kits take the guesswork out of installation.