

## 4. Connection to the regulator and the battery

Read furthermore the instruction of the charge controller.

1. Install the regulator close to the battery.
2. Connect the charge controller with the battery. The regulator should be connected with a wire size of min. 2 x 4mm<sup>2</sup> (or larger, depending on the system size) on a direct way to the battery.
3. Put a fuse between regulator and battery. The fuse should have the double rating of the module(s) maximum current (Ampere).
4. Now connect the cable from the cell protector or solar panel with the regulator.
5. Never mix up plus and minus!
6. If you have two panels in a 12 Volt-System in parallel, then connect them like in figure 2.
7. In a 24 Volt-System connect the two panels like shown in figure 3.
8. In case the system should be disconnected, take off the solar array from the charge controller first and then disconnect the controller from the battery.

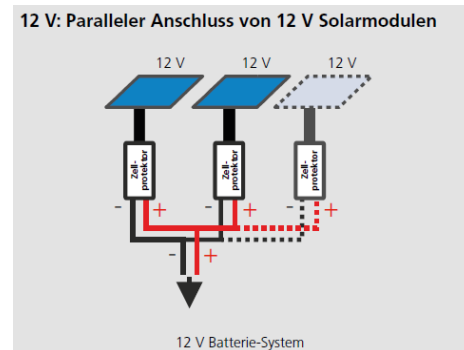


figure 2

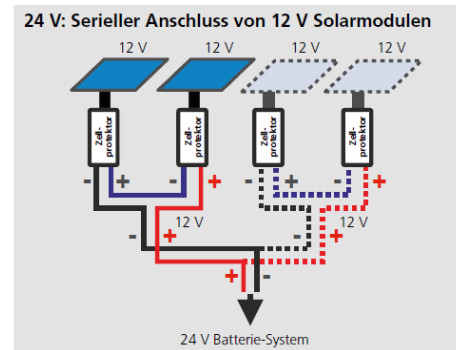


figure 3

### Tip:

The solar module needs no further maintenance; it only has to be cleaned with water. It can be cleaned with soap, but only soap without sanding, corrosive fluid or wax. (Do not use car-cleaning soap!)

SOLARA takes no responsibility for damages on the module caused by wrong installation and by not following this installation manual. For any further questions, please do not hesitate to contact us.

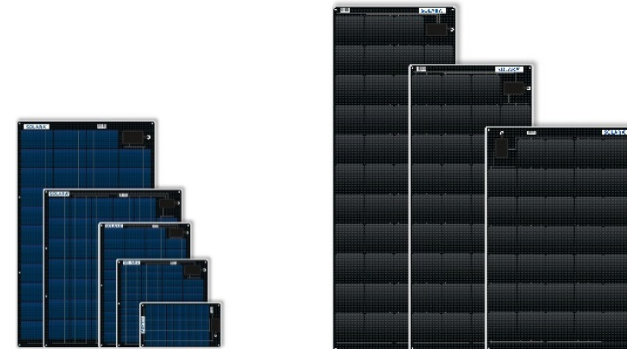
Subject to technical change. No responsibility will be taken for printing mistakes. Date: 06.02.2018

# Installation Manual

## SOLARA M-Series

## SOLARA Power M-Series

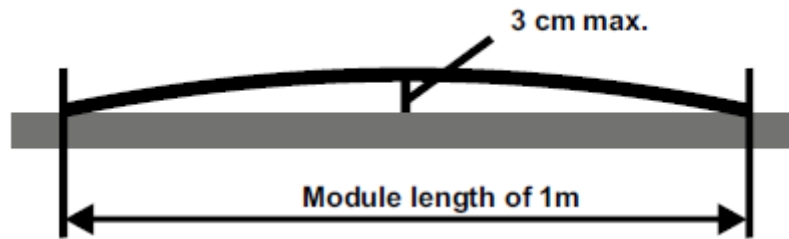
**Important notice! Please read!**



**Please read this manual carefully.**  
Incorrect installation can damage the module  
and can result in loss of warranty!

## 1. Flexibility

Solara M- and Power M-Series modules are semi flexible. The modules can be slightly bent for mounting - a maximum of 3 cm per 1 m module length.



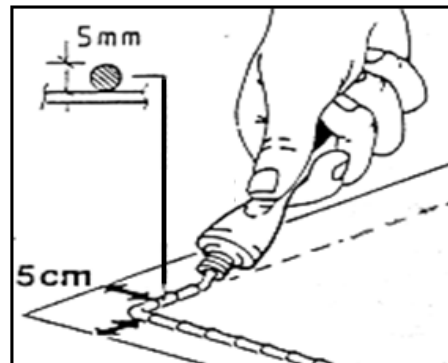
In particular, please make sure that the module cannot swing! Swinging and overbending can damage or destroy the module! Always use all the fixing points of the module!

## 2. Installation

The module can be both glued and screwed

### Version A: module gluing

1. Apply a 5-8 mm thick, closed adhesive bead, for example Sikaflex 252i or Dekalin MS5, to the back of the module. (fig. 1). Depending on the size of the module, put a second bead in the middle of the module
2. Then attach the module and press until the adhesive bead is compressed to a minimum thickness of 3mm.



### Attention:

The adhesive bead must not be interrupted, since the adhesive also serves as a seal.

### Note:

To cleanly seal the edges of the solar module after bonding, we recommend a clean, black V-seam with Sikaflex 252i or Dekalin MS5 to pull the module.

**After installation, do not put any load on the modules for 24 hours!**

### Version B: screw a module

Solara modules can also be screwed. For that the aluminium sandwich plate is prebored holes in all four corners. Simply drill (max. 4,5mm drill) through the surface and backside coating at these points of the module and screw the module with stainless steel screws which are a little bit smaller than the drilling holes.

### Attention:

The modules surface in the area of the cells should not be damaged. **Do not drill additional holes in the module.** Use only the given fixing points to screw a module.

## 2. Connection of the cell protector

Before you can connect your solar module to the charge controller, the supplied cell protector must be installed first. This does not apply to the module types with 2-wire connection cable, such as the S 50M36 and S 110P42. They can be connected directly to the charge controller without a cell protector.

### Connection cell protector

1. Screw the three wires from the module cable into the terminal strip "Solar" according to the color coding (red / red, green / green and blue / blue). Make sure that the cores are securely seated in the screw terminals.
2. At the terminal block "Output" has to be installed a standard cable to + and - of the charge controller. The wire size depends on the distance to the charge controller. 2x1,5mm<sup>2</sup> or 2x2,5mm<sup>2</sup> cable diameter fits in most of the cases..
3. In exceptional cases, when the module should be blocked against reverse current, then please use + \_D and -.
4. Use the enclosed two cable clamps to fix the cables to the housing.
5. Screw the cover onto the base plate - ready.

### Attention:

The cell protector is not suitable for outdoor use, use it only inside the vehicle / boat.

The operation of the solar module is only allowed together with the supplied cell protector, otherwise the guarantee expires.

