



## Please read carefully!

Congratulations on your new solar module. You are going to have a lot of fun with this product and the natural and free energy from the sun. Please read the following instructions carefully, because only then you will receive a long lasting success with your new solar module.

### Electric shocks

The crystalline silicon cells in this PV module generate an electrical current when their front side is exposed to sunlight. Although the voltage and current from a single module are low, touching the terminals or wiring can still cause shocks or burns. That hazard increases when several modules are installed together and produce higher voltage and current. To avoid any accident, turn the front of the module away from the sun or any intense source of light when wiring. If this is not possible, place an opaque material (cardboard, cloth etc.) on the front of the module for the entire time needed for the work, including wiring all the other components in the system.

### Recommendations for handling and installation

Although this product has been designed to be sturdy, it is preferable to handle it with care:

- Significant irreparable damage can be caused by impacts on the front or back surface.
- Always keep the module flat (do not bend, twist etc.).
- Never disassemble the module.
- Do not weld the frame.
- Do not use a light concentrator. Such a device could destroy the module.
- Use insulated tools.

### Mounting and fastenings

Install the module horizontally, or vertically with the junction box at the top. Vertical mounting with the box at the bottom, where water might accumulate in or around it, should be precluded.

- Use stainless steel screws and fastenings only. The cable glands or conduit fasteners should preferably be placed on the side facing downwards. If this is not possible arrange the wiring to avoid drops of water accumulating.

- Leave enough space behind the module (at least 20 cm if possible) to allow for proper ventilation by free flow of air.

### Position and tilt

For maximum output, face the module towards the equator (southwards in the northern hemisphere and northwards in the southern hemisphere). Tilt angle depends on the application:

▪ For regular power supply throughout the year, the tilt angle from the horizontal should be equal to latitude + 15 to 20° in temperate regions. In tropical areas, the tilt angle should be equal to the latitude but should never be less than 10° so that water and dust will be carried away naturally.

- For any other type of application, consult a specialist to determine the best position for requirements.

In all cases, make sure that no shadow from anything near the module (grass, trees, buildings etc.) will cover any part of the module when the sunshine is brightest (mainly in midday) in any season.

### Preparation and wiring of the junction box

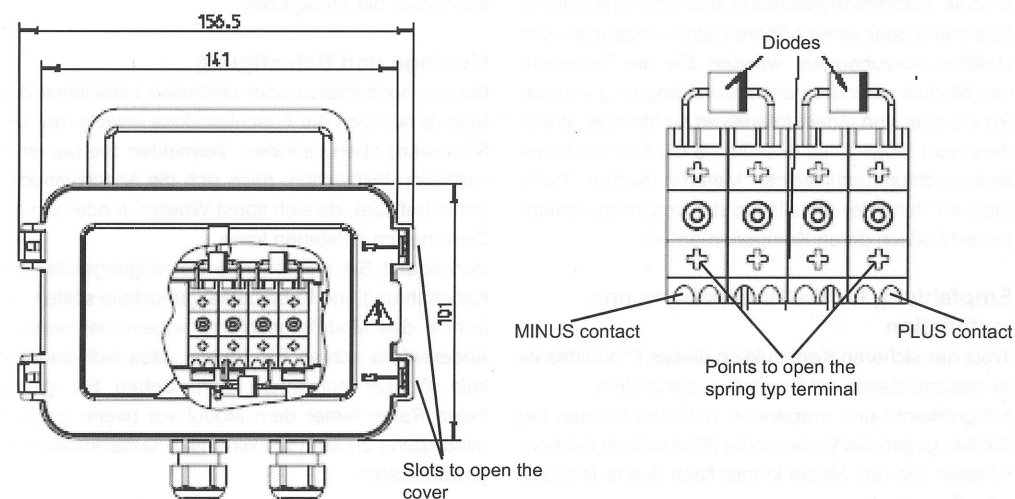
To open the cover lever up the two "snap-in locks" on the right side of the box with a screwdriver. The cover opens to the left side.

Insert the cable through the pre-mounted glands and connected them on the positive terminal (marked with "+") and on the negative terminal (marked with "-"). The connections in the junction box are spring-type terminals and big enough for 4 mm<sup>2</sup> cables. Use only optimal cable.

## Installation Manual SOLARA S-Series

### Connection of the cable in the junction box

The terminals are big enough for cable with 4 mm<sup>2</sup>. In all boxes the + contact is on the right side and the - contact is on left side. There are clearly marked. To open the spring-type terminals press down the point to open the terminal (see below drawing) above the terminal you will connect. After plugging in the bared cable, release the point and the cable is fixed. All modules are equipped with two diodes. After connecting plus and minus close the box and pull the glands tight. Close the junction box by snapping in the cover. For closing the junction box no screws are required. Be careful during wiring and do not scratch the backside of the module.



### Mechanical data

	S50M36 Ultra	S100M36 Ultra	S220M36 Ultra	S240P36 Ultra	S365P36 Ultra	S520M36 Ultra
Weight	1.3 kg	3.4 kg	6.3 kg	5.7 kg	8.6 kg	12.1 kg
Dimensions (mm)	471x257x40	504x448x40	1330x350x40	775x680x40	1070x680x40	1500x680x40

As of 05/2012. Errors and omissions excepted. Subject to change.