

## Instructions for the Use of SMB SOLAR MULTIBOARDS on Photovoltaic Arrays with Framed Modules

### 1. General introduction

Solar panel manufacturers stipulate that you must not walk or place concentrated loads on photovoltaic modules as incorrectly distributed weight may result in the formation of micro cracks in the solar cells. The damage ranges from a small loss of performance to the complete failure of individual modules.

However, there is an increasing amount of work on photovoltaic arrays, such as servicing, repairs or cleaning, that requires you to walk or place weight on the modules.

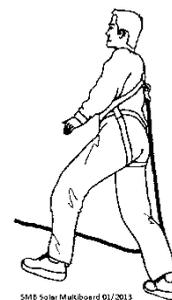
The SMB SOLAR MULTIBOARD is a lightweight, mobile, non-slip working platform that enables you to work on framed photovoltaic modules without damaging them.

SMB SOLAR MULTIBOARDS may be installed on the solar panels only for the duration of the works and must be removed after the job has been completed.

### 2. Safety regulations

When using the SMB SOLAR MULTIBOARDS you must comply with the general safety regulations for working on PV arrays and for working on scaffolding. The use of SMB SOLAR MULTIBOARDS does not exempt you from observing the following safety regulations:

- BGI 515 Personal protective equipment
- BGI 656 Safety when working on roofs
- BGI 659 Safety when cleaning buildings
- BGI 663 Handling of work and protective scaffolding
- Accident prevention regulations for winches, lifting and towing equipment
- Accident prevention regulations for first aid



### 3. Das SMB SOLAR-MULTIBOARD

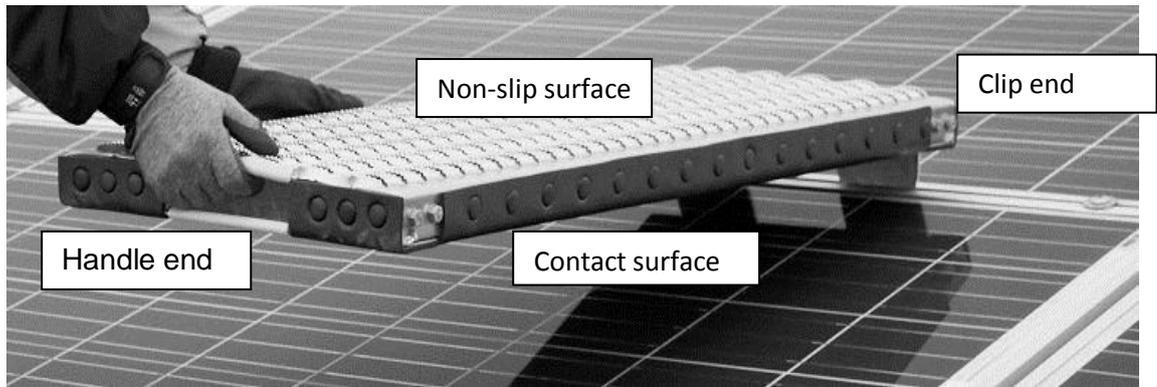


Figure 1: General view of the SMB SOLAR MULTIBOARD

The non-slip surface must be kept clean at all times to maintain its non-slip properties. The contact surface must also be kept clean at all times to prevent dirt particles from damaging the glass surface of the PV modules when a service technician steps onto the board. The entire contact surface must rest flat on the glass surface and the frame of the PV module.

The handle end must always be positioned facing downwards in the direction of slope, i.e. towards the lower edge of the solar panel. The board has an integrated handle for ease of use. The clip end must always face upwards against the direction of slope, i.e. towards the upper edge of the solar panel, and be pushed into position (figure 1 & 2). Make sure that the two clips on the clip end are carefully inserted in the existing gap between the framed PV modules (figure 2)



Figure 2: Detailed view of clips

The SMB SOLAR MULTIBOARD may only be placed on the glass surface and frame of the PV modules as described above. Damaged or dirty SMB SOLAR MULTIBOARDS must not be used.

#### 4. Use of SMB SOLAR MULTIBOARDS on framed PV modules

The entire surface of the SMB SOLAR MULTIBOARD must rest flat on the glass surface and the upper and lower frame of the PV modules to ensure that weight is distributed evenly and supported by the module frame and the substructure. The boards must be laid in an offset pattern in the line of slope (see figure 3).

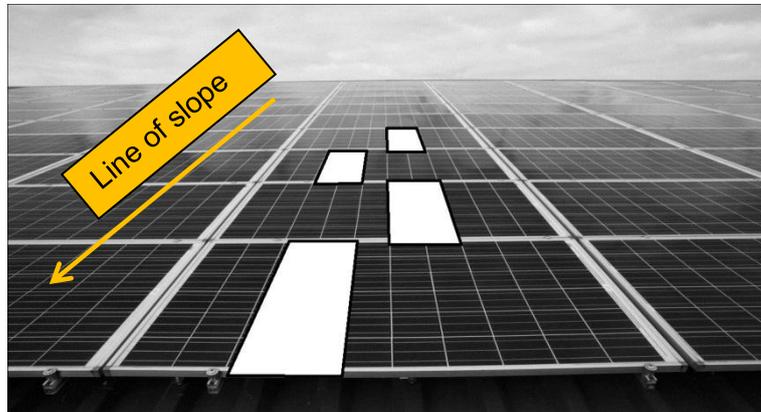


Figure 3: Correct alignment of SMB SOLAR MULTIBOARDS

The SMB SOLAR MULTIBOARDS must not be laid across the mounting brackets of the modules. Please also ensure that the boards are not placed near the edge of the framed PV modules (see figure below).



Figure 4: Incorrect alignment of SMB SOLAR MULTIBOARDS

The size of the SMB SOLAR MULTIBOARD must match the size of the PV module.

| Size of PV module | PV modules laid vertically | PV modules laid horizontally | Correct SMB SOLAR MULTIBOARD |
|-------------------|----------------------------|------------------------------|------------------------------|
| 1,660 mm x 990 mm | 1660 mm                    |                              | 1720 mm                      |
| 1,660 mm x 990 mm |                            | 990 mm                       | 1020 mm                      |
| 1,580 mm x 808 mm | 1580 mm                    |                              | 1620 mm                      |
| 1,580 mm x 808 mm |                            | 808 mm                       | 900 mm                       |

SMB SOLAR MULTIBOARDS must not be subjected to sudden impacts (no jumping or skipping). Tools, cleaning equipment, etc. on the glass surface of the modules or on the boards must not cause an obstruction to the service technician and must be secured against falling. You are advised to wear knee pads to prevent injury to your knees.

When walking on the SMB SOLAR MULTIBOARDS you must stay within the area between the upper and lower frame of each PV module (figure 5). If an SMB SOLAR MULTIBOARD extends onto the next module below you must not place weight on this section (figure 6).



Figure 5: Correct position on SMB SOLAR MULTIBOARD



Do not walk on this section!

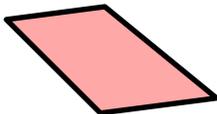


Figure 6: Incorrect position on SMB SOLAR MULTIBOARD

In order to work across a wider area of the PV array we recommend the use of five SMB SOLAR MULTIBOARDS. The first SMB SOLAR MULTIBOARD should be placed on the lowest row of modules as described in point 3. Step on the SMB SOLAR MULTIBOARD and fit the second SMB SOLAR MULTIBOARD offset to One side.



Figure 7: Installation of SMB SOLAR MULTIBOARD

Step onto the second SMB SOLAR MULTIBOARD and position the next SMB SOLAR MULTIBOARDS as described above.



Figure 8: Inserting the SMB SOLAR MULTIBOARD

## **5. Limitation of liability**

We will accept no responsibility for damage to PV modules of any kind.

Before using SMB SOLAR MULTIBOARDS users must make sure that the PV modules have been installed correctly. In particular, users must ensure that the mounting brackets connecting the PV modules to the substructure have been securely fastened so that modules cannot slip out of position. The maximum load of the PV modules must not be exceeded.

## **6. General information**

SMB SOLAR MULTIBOARDS must be kept clean at all times. Each board must be inspected to ensure that it is in proper working order before being used on framed PV modules. This includes an inspection of the clip retainers and the backing layer and a general check for distortion of the board.

When cleaning PV arrays do not direct the jet of the high-pressure washer at the backing layer on the contact surface as this may damage it. When storing the SMB SOLAR MULTIBOARDS please ensure that the backing layers or the non-slip surfaces of two SMB SOLAR MULTIBOARDS are always stacked on top of each other to prevent damage to the SMB SOLAR MULTIBOARDS.

Service and repairs may only be carried out by the manufacturer:

SMB SOLAR MULTIBOARD

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