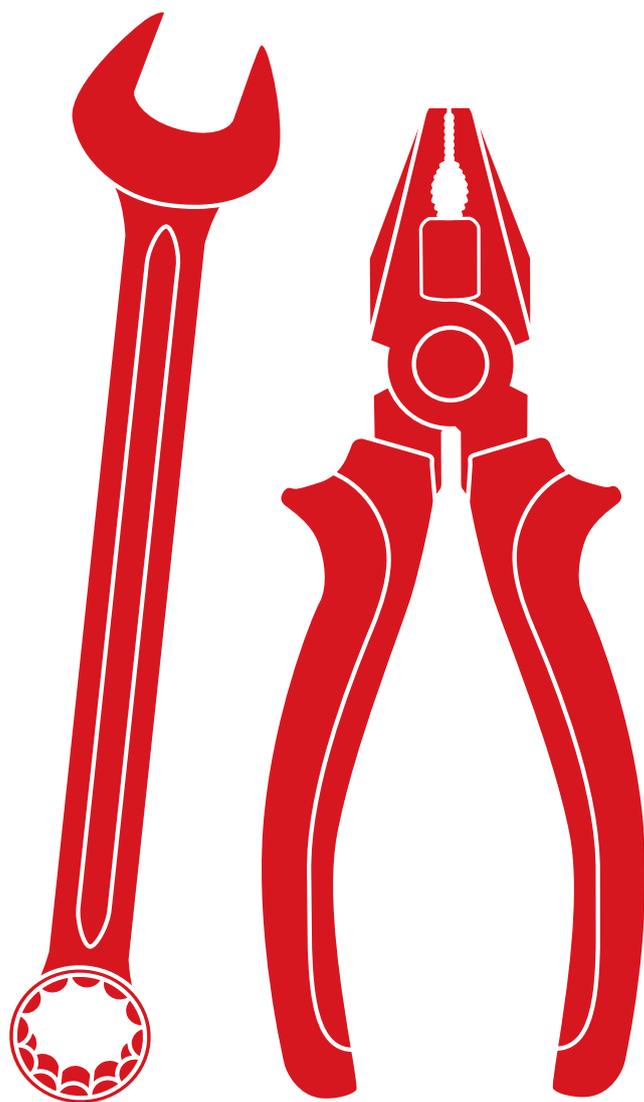


INSTALLATION AND OPERATION MANUAL

Solibro Solar Modules SL1, SL1-F and SL2
Generation G1.4

Valid for Europe



1	INTRODUCTION	3
2	PRODUCT DESCRIPTION	4
3	SAFETY INSTRUCTIONS	5
3.1	Transport and storage	5
4	AREA OF USAGE AND INSTALLATION LOCATION	6
5	LAYOUT, MOUNTING AND INSTALLATION	7
5.1	Mounting layouts	8
5.2	Mechanical mounting - unframed modules	10
5.3	Mechanical mounting - framed modules	11
5.4	Electrical layout	12
5.5	Grounding	14
5.6	Electrical installation	15
6	TROUBLESHOOTING	15
7	CLEANING AND MAINTENANCE	16
8	DECOMMISSIONING	16
9	CONTACT	17

DOCUMENT REVISION 3

This document applies for Europe for the following product series as of March 2013:
SL1, SL1-F and SL2 of revision G1.4 or higher.

Technical parameters and design are subject to change. The data sheets and customer information valid at the point in time when the relevant module was manufactured apply for the carrying out of installation, mounting or maintenance work on the solar modules.

1 INTRODUCTION

The CIGS solar modules SL1, SL1-F and SL2 from Solibro allow you to directly transform the unlimited energy provided by the sun into environmentally friendly electrical energy.

In order to be able to completely exploit the full performance capacity of the Solibro solar modules, please read the following instructions carefully. Failure to observe them may result in bodily injury and property damage.

This manual only applies for installations in Europe. It provides information on safety precautions to be used during the handling and installation of Solibro solar modules along with technical instructions to be followed during installation, mounting, wiring and operation. This manual applies for the installation of the following modules:

- SL1
- SL1-F
- SL2

of generation G1.4 or higher.

Installation, operation and maintenance works on a photovoltaic system must be carried out by qualified persons able to carry out the technical procedures described in this manual, i.e. system, installer and maintenance personnel. If you do not possess these qualifications, you may not carry out the work described except for cleaning (Chapter 7).

INFORMATION FOR INSTALLERS

Ensure that the solar system is set up, expanded, modified and maintained in accordance with the requisite local and federal laws and regulations, as well as with the generally recognized electrical and building codes of the country in which it will be operated.

Hand over the installation and operation manual to the respective operator of the solar system after installation. Inform the operator that these instructions are part of the product and should be kept for the entire useful life of the solar installation.

APPLICABLE DOCUMENTS

Application Note PV*Sol Simulation
Clamp list for unframed Solibro Modules
Inverter List for Usage with Solibro Modules
Packaging+Transport Information

Please ask our Technical Customer Service for the above mentioned documents.

INFORMATION FOR OPERATORS

That way we can secure a fast solution to any questions regarding your PV system. Ask our Technical Customer Service for your personal registration documents.

Keep these instructions safe for the entire life of the module. Particularly observe chapters 3 (Safety instructions), 6 (Troubleshooting) and 7 (cleaning and maintenance).

Please contact your plant supplier for information concerning the formal requirements for solar systems. Please be sure to learn about directives and permit requirements from the responsible local authorities and energy providers prior to installation of the solar plant. You can only ensure economic success when these requirements have been taken into account. In your own interest, make sure to acquire the necessary permits from the authorities and contracts with the energy providers. We recommend that you insure your solar system against natural hazards (e.g. lightning strike).

DISCLAIMER

These instructions are only valid for products of the Solibro GmbH company (thereafter, Solibro). Solibro assumes no liability for damage resulting from failure to observe these instructions. Please note that the wiring and dimensioning of the plant, as well as the observance of all necessary safety regulations when laying out and installing the system are the responsibility of the installer of the plant. These instructions do not provide a basis for liability of Solibro. Solibro is only liable in the context of contractual agreements. It assumes no responsibility extending beyond the functional capability and safety of the modules.

Please also observe the instructions for the other components of the solar system. It may be necessary to generate and evaluate the statics for the entire project.

If your questions are not adequately addressed in these instructions, please first contact your system supplier.

3 SAFETY INSTRUCTIONS

SAFETY INSTRUCTIONS



DANGER! Danger due to electric shock!

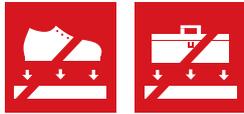
A solar module generates electricity and voltage even at a low intensity of illumination. Arcing can occur when contacts in a live electrical circuit are physically disconnected. This can result in grave or mortal injury. The severity increases when several modules are connected.

- Never disconnect plugs when under load. Ensure that the modules are first disconnected from the inverter prior to opening any contacts in the solar installation.
- Cover the solar modules with opaque material for the entire duration of assembly. Only then the module is reliably de-energised.
- The regulations and safety instructions for the installation of electrical devices and systems must be observed (see Chapter 3.3).
- In the case of module or phase voltages of more than 120 V ripple-free DC, the extra-low voltage-range is exceeded. Undertake the necessary protection and cautionary measures.
- Do not insert electrically conductive parts into the plugs and junction box. Do not touch the contacts or exposed terminals.
- Keep children and unauthorised people away from the modules.
- In case of damaged modules or operational errors of the solar array, always contact your installer or our Technical Customer Service (see Chapter 6).

WARNING! Danger of injury due to broken glass! Risk of injury due to falling modules!

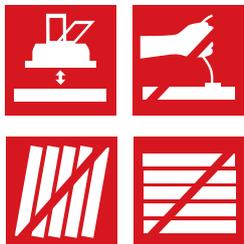
- The modules are primarily made of glass and must therefore be handled with appropriate caution.
- In order to ensure safe mounting, orient yourself to the national regulations for work safety and accident prevention.
- Wear suitable protective clothing (e.g. safety shoes, protective gloves) in order to prevent injuries.

PRODUCT PROTECTION



- Protect the modules against scratches and other damage, especially from impact at the edges or improper storage.
- Do not subject the module surfaces to mechanical stress. Do not stand on the modules. Do not drop or place objects on the modules.
- Don't modify the module in any way!
- Do not open the junction box under any circumstances.
- Do not use light concentrators (e.g. mirrors or lenses) in attempting to increase the capacity of the module. The module may be damaged.
- Don't operate the modules in short circuit. Don't operate the modules with open terminal voltage for more than 90 days in a row. This can result in later yield loss. Inform Solibro in written form, if the cases happens.

3.1 TRANSPORT AND STORAGE



To prevent damage of the modules:

- Store the modules securely in cool and dry rooms. The packaging is not weather-resistant!
- Transport the module in its original packaging until installation.
- Do not stack the modules.
- Use a glass suction cup to remove and transport a module or hold the module at the edges.
- Carry the module vertically over longer distances.
- Do not lift or move the module using the cables or at the junction box.
- Do not rest the module unprotected on its edges.
- Blue tape is for transportation only and must be removed directly before mounting.

4 AREA OF USAGE AND INSTALLATION LOCATION

INSTALLATION LOCATION

- The modules are certified according to the standards IEC 61646 and IEC 61730 for safe operation in moderate climates.
- The permitted module temperatures lie between -40 °C and $+85\text{ °C}$. Please ensure that adequate ventilation exists below the module so that elevated module temperatures can be avoided.
- Observe the requirements for a functional grounding depending on the installation location (see Chapter 5.5 „Grounding“).
- Do not expose the modules to chemicals.
- Do not place the modules in standing water. The junction box is splash-proof only.
- Do not install the modules near highly flammable gases and vapors (e.g. gas containers) or near open flame and flammable materials. Solar modules are not explosion-proof operating equipment.
- The modules are not suitable for mobile usage or for indoor installations.

AVOIDANCE OF SHADING



Optimal solar irradiation results in a maximum energy yield. For this reason, set up the modules so that they are facing the sun.

Avoid shading of the modules, as this has a negative impact on the energy yield. A module is considered shade-free when it is entirely unshaded throughout the year (e.g. by buildings, chimneys, trees). Even partial shading of the modules (e.g. by overhead lines, dirt, snow) should be avoided (see also Chapter 7 “Cleaning and maintenance”).

Also, refer to the specifications for module orientation and tilt angle (see Chapter 5.1).

5 LAYOUT, ASSEMBLY AND INSTALLATION

SAFETY INSTRUCTIONS



WARNING! Damaged module components may cause risk of fire hazard!

- Only install undamaged solar modules.
- Ensure that the junction box, cable and connectors are undamaged prior to installation.
- Do not open the junction box under any circumstances.

- Always store the solar modules securely in a dry place. The packaging is not weather-resistant!
- The voltage of a module is higher at lower temperatures and / or higher irradiation than the Standard Test Conditions (25 °C, 1000 W/m²). This must be considered so that the overall-voltage of the module strings does not exceed 1000 VDC (according to IEC 61646 / IEC 61730 standard) or 600 VDC (according to UL 1703 standard).
- Observe the requirement of functional grounding depending on the installation location (see Chapter 5.5 “Grounding”).
- Ensure lightning protection according to IEC EN 62305-3 Protection against lightning - Part 3: Physical damage to structures and life hazard.
- Ensure that the operating voltage ranges of all connected system components include the Maximum Power Point (MPP) and that the components can always follow the MPP of the generator.
- Ensure that all electrical system components are licensed for the maximum operating voltage of the PV generator.
- Do not install or perform maintenance the modules in strong wind or rain. We recommend that mounting and installation only be performed in dry weather.
- During mounting on buildings, there is a danger that tools, mounting materials or solar modules can fall and injure people. Block off the danger area on the ground before beginning the assembly work.
- Warn people near the danger area or in the building. Keep children away from the installation site.
- Carry out wiring work in such a way that people are not endangered and that no damage can occur.
- Protect all parts of the module during transport and installation from mechanical stresses (e.g. from pressure, tension, torsional stress). Ensure that the bend radius of the connection cables is kept greater than 60 mm at all times.
- The solar modules, especially the connectors and tools, must be dry during installation.

WORK SAFETY REGULATIONS

In order to ensure safe mounting, familiarise yourself with the national regulations for work safety and accident prevention.

The regulations and safety instructions applicable for the installation of electrical devices and systems must be observed.

FIRE PROTECTION

Also observe valid regulations and safety instructions concerning the fire protection classification for rooftop installations. The module belongs to fire protection class C.

YIELD SIMULATIONS

Please take the power increase of Solibro modules into account. Due to the positive sorting and the light soaking effect, the actual power of a SL1, SL1-F or SL2 module can differ from the nominal values stated on the data sheets.

Please refer to the Application Notes for PV*Sol.

5.1 MOUNTING VARIANTS

MOUNTING VARIANTS AND CLAMPS

Please refer to the Clamp list for unframed Solibro Modules regarding:

- approved mounting variants,
- approved clamps.

Only apply approved mounting variants and approved clamps for the installation.

Please ask our Technical Service for the Clamp list for unframed Solibro Modules.

SPECIFICATIONS FOR POINT SUPPORT

With the point support, the module must not have contact with the subconstruction. The module shall be supported by the clamp only. Please take into account that a module can bend up to 15 mm under a snow load of 2400 Pa. The module glass must not have contact to underconstruction or metal at any time.

SPECIFICATIONS FOR LINEAR SUPPORT

With linear support, the modules lie along the lateral sides on the substructure. When using this mounting variant, place a silicone-free rubber support plate between the substructure and the clamps. Please refer to figure 3 for the required clamp overlap of glass edge.

MODULE ORIENTATION AND TILT ANGLE



CAUTION! Incorrect orientation of the module may cause risk of fire hazard!

- The modules may be installed in landscape or portrait format.
- Install the module in such a way that the junction box is positioned in the upper area of the module and the wires hang downwards.
- Ensure that the drainage openings of the frame are left open following installation to allow water-runoff. This prevents frost damage.



- Install the modules with a minimum tilt angle of 3° and a maximum tilt angle of 75°. Facade installations are not allowed.
- For installations with a tilt angle < 20°, regularly check for dirt built up (soiling, bird droppings, etc.). Rain should help to remove soiled areas, though regular cleaning is recommended for all installations (see Chapter 7 “Cleaning and maintenance”).
- Install the module in such a way that rainwater and snowmelt can run off freely to avoid standing water or puddling.
- The optimal tilt angle of the module depends on the respective latitude. We recommend a photovoltaics simulation tool to ensure the optimal orientation.

WIND / SNOW LOAD

The framed SL1-F modules are designed for wind loads up to 2400 Pa and snow loads up to 5400 Pa. The unframed SL1 and SL2 modules are designed for wind and snow loads up to 2400 Pa.

MOUNTING STRUCTURE

Install the module to a mounting structure:

- that corresponds to the necessary statics and the local snow and wind loads.
- that is correctly fastened in the ground or on the roof.
- that can transfer forces on the module to the assembly substructure.
- that ensures that no mechanical stresses (e.g. caused by vibrations, twisting or expansion) are generated on the module. Take into account the different thermal expansion properties of the applied materials.
- that at least 100 mm of air space are between module back side and the outer surface of the roof to allow for sufficient ventilation.
- that ensures long term stability.
- that will not give rise to galvanic corrosion in case of direct metal contact (i.e. grounding lead, screws, washers, etc.)
- that allows for strain-free expansion and contraction of the module due to natural ambient temperature variations.

Clamps and rail system must be constructed as a coordinated unit.

MODULE FASTENING

To ensure a long-term stability of the solar modules:

- Install the module according to the mounting variants and the defined clamp areas. Please refer to the SL1 / SL2 clamp list. Noncompliance with the clamp list regarding defined mounting variants, clamp positions and approved clamps can lead to module breakage and loss of safety class II.
- Ensure that the module cannot bend or twist more than 3 mm/m (without additional load such as wind, snow, etc.). That means that the height-difference between any two mounting points of the module must not exceed 3 mm per meter distance of those points. Observe the technical rules for point or linear supported glazing.
- Position the module planar.
- Install the modules with a minimum distance of 10 mm to each other. In order to prevent module damage due to thermal expansion, do not use any kind of spacer for that purpose.
- During installation, the use of spacers for module arrangement is permitted.
- Use all fastening points and avoid direct contact between the glass and metal (e.g. mounting rails).
- Ensure, that the rubber support of the mounting structure rest solidly and do not shift.
- Depending upon the local wind and snow load and the angle of inclination, it is necessary attaching non-slip safeguards to the modules when installing the module in portrait format.
- Please note that the installation requirements given for the clamps in section 5.2 are also valid for the installation of any non-slip safeguards.

5.2 MECHANICAL ASSEMBLY - UNFRAMED MODULES

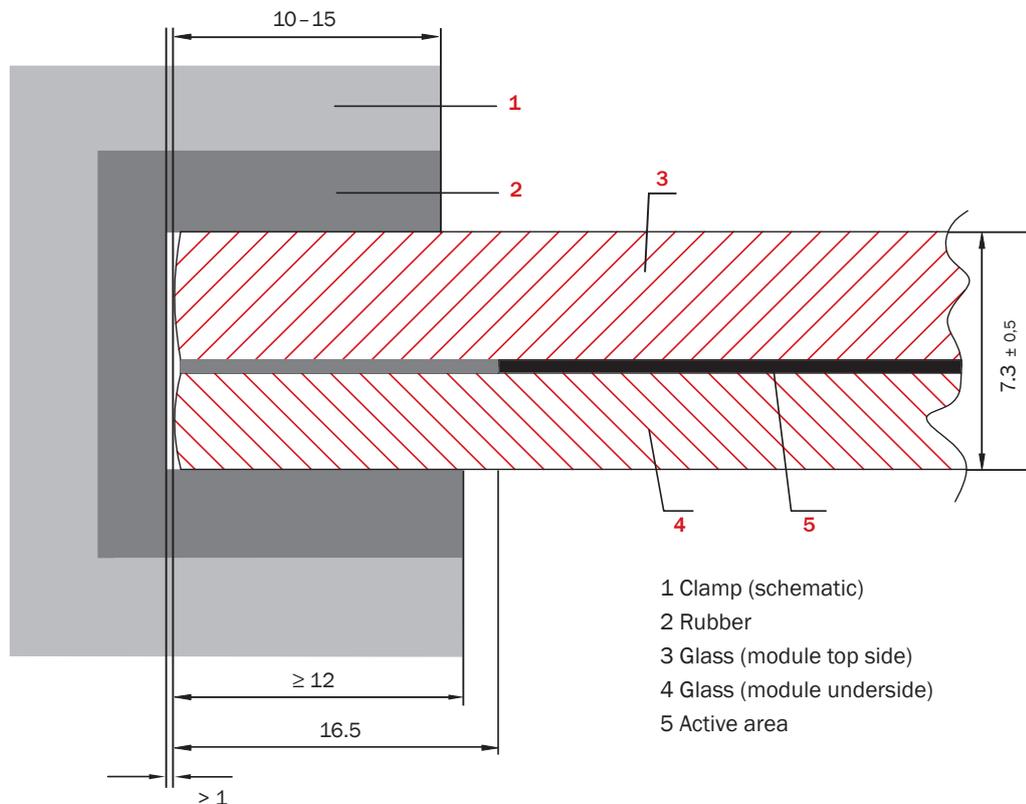
CLAMP SYSTEMS

Only install clamp systems approved by Solibro. Upon request, Solibro can test clamp systems for approved use.

GENERAL REQUIREMENTS FOR FASTENING THE CLAMP SYSTEM:

- Ensure that the threaded connections do not generate extra stress on the module. The modules must be positioned “floating”.
- Don't attach the metal clamps directly to the glass. Use a suitable, silicone-free rubber support between the module and the substructure or clamps.
- Adjust the clamp height to the module thickness.
- Ensure that the clamps have a width of ≥ 100 mm for SL2 and ≥ 70 mm for SL1 modules.
- Ensure that the clamps do not throw shadows onto the active cells. The distance from the glass edge to the first active cell is 18.5 mm (Figure 3).
- Ensure that clamps overlap the glass edge (Figure 3):
 - 10 mm to 15 mm on the top side of the module
 - 12 - 16 mm on the module back side
- These specifications also apply for the support of support longitudinal.
- Ensure a minimum gap of > 1 mm between the glass edge and inner side of the clamp at 25 °C (Figure 3) to allow for thermal expansion of the module.
- Lock the clamp into position by fastening the screw to the material-defined limit-point.

FIGURE 3: Clamp overlap of glass edge on the module top side (10-15 mm) and module back side (12 - 16 mm), distance between glass edge and inner side of clamps (> 1 mm)



5.3 MECHANICAL MOUNTING - FRAMED MODULES

KLEMMSYSTEME

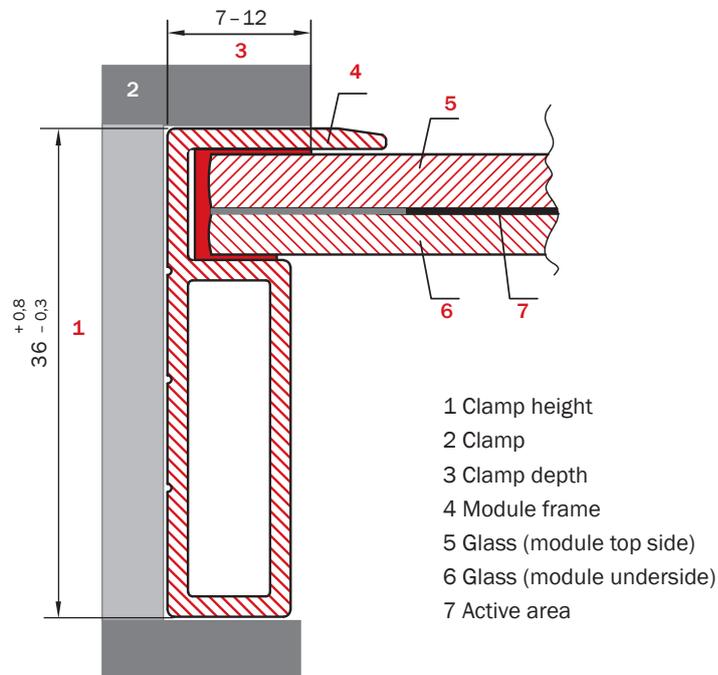
Fasten the module with 4 clamps each and a recommended torque of 18 Nm to the rails. If the information of the clamp manufacturer differs from this recommendation, the values of the clamp manufacturer are to be used.

The framed module SL1-F can be installed with commonly available clamp systems that satisfy the following conditions.

GENERAL REQUIREMENTS OF THE CLAMP SYSTEM:

- Clamp width: ≥ 60 mm
- Clamp height corresponding to 36 mm frame height (Figure 4)
- Clamp depth: 7 -12 mm (Figure 4)
- Clamp area (clamp depth x clamp width): ≥ 600 mm²
- Clamps that comply to the local statics requirements
- Clamps that ensure longevity and secure, long-term fastening of the modules

FIGURE 4: Frame profile with clamp height and depth in mm.



5.4 ELECTRICAL LAYOUT

MODULE SELECTION

YOU CAN FIND THE DETAILED ELECTRICAL PARAMETERS IN THE PRODUCT DATA SHEET.

Only connect modules of the same type and the same power class. This is the only way to achieve optimal yields.

SAFETY FACTOR

It may occur during normal operation that the module provides a greater current and / or a higher voltage than that determined under standardized test conditions.

Apply a safety factor of 1.25 for ISC and 1.20 for VOC for::

- the identification of the rated voltage value of the used system components,
- the identification of the rated power value of the cables,
- the size of the fuses as well as the design of the controls.

Alternatively, the respectively valid national regulations for the installation of electrical systems are to be used.

SERIES CONNECTION

- Only connect modules of the same power class.
- For system conception, please take into account the typical relative VOC and VMPP power increase of +2.5 % after 215 kWh/m² of light soaking. This power boost is not included in the nominal values given in the data sheet.
- A series connection of modules is only permitted up to the maximum system voltage specified in the respective data sheet revision.
- Carry out the layout taking into account all working conditions and relevant technical regulations and standards. In this way you ensure that the maximum system voltage, including the necessary safety supplements are not exceeded.
- Also take the voltage limitation of the inverter into account when laying out the string length.

REVERSE CURRENT

Only connect modules of the same type and power class.

Do not exceed the maximum permissible reverse current as given in the respective data sheet. In the event of reverse currents (caused by module defects, ground leakage or shading), modules can be placed under strain.

In order to safely account for reverse currents, we recommend the following fuse variants:

1) LAYOUT WITH LIMITATION OF THE NUMBER OF PARALLEL CONNECTED STRINGS: Without further measures for current limitation, only a maximum of 2 strings of modules may be operated parallel on an inverter or on a MPP tracker.

2) LAYOUT WITH STRING DIODES: When more than 2 strings are connected parallel, a maximum of 2 strings respectively must be protected against reverse currents from the remaining system with a shared string diode.

3) LAYOUT WITH STRING FUSES : In this case, each string of modules must be protected with 4 A on the plus and minus sides.

BEWARE! When installing modules from different product revisions, comply to the minimum permissible limitation of the product revisions used.

INVERTER

Only use inverters approved by Solibro!

In order to find and approve the inverter best suited for your application, please contact our Technical Customer Service. As a first guideline, refer to the Inverter List for Usage with Solibro Modules which includes several inverters already approved by Solibro.

Irrespective of the released inverters, please follow the instructions for the use of inverters with transformers as provided in the following section „Functional grounding.“ Also, refer to the specification and instructions as provided by the inverter manufacturer.

YIELD MONITORING

In order to secure high energy yields of your system, we recommend to use a monitoring system with irradiation sensor.

5.5 GROUNDING

FUNCTIONAL GROUNDING

Ensure that the following requirements for a functional grounding are met:

- The negative pole of the solar module array is to be connected to ground.
- By using a framed SL1-F module a hard grounding is only permitted when this is in accordance with local regulations and abides by the requirements of the respective inverter manufacturer.
- A maximum of 150 module strings in the module array can be connected to the inverter.
- Only inverters are used for which the manufacturer provides a ground kit complying with the above provisions.
- It must be ensured that the PV modules have no negative potential with respect to the ground potential.
- Do not connect the modules to system with positive grounding or central point grounding.

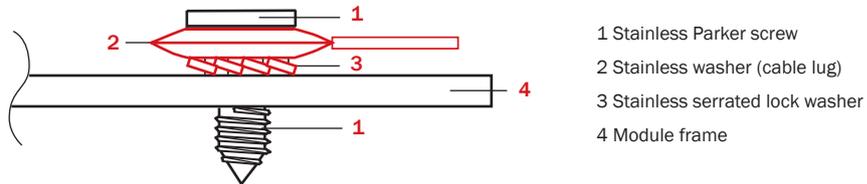
If it is essential to functionally ground a PV generator as a result of our specifications or local regulations, the grounded conductor should be monitored by a safety device and the disconnection in case of the following fault-conditions has to be ensured:

- a) ground fault currents > 30 mA are prevented (e.g. by installing a > 35 k Ω resistor for a 1000 VDC maximum-voltage system) or
- b) ground fault currents > 50 mA don't exceed a length of time of 0.4 s are detectable and preventable with certainty.

SAFETY BONDING

Ground each of the framed SL1-F modules with Parker screws (according to DIN 7981, material: A2, size: 4.2 mm x 16 mm) to the grounding points indicated in Figure 1. Attach the screw as shown in Figure 5.

FIGURE 5: Attachment of the grounding



5.6 ELECTRICAL INSTALLATION

SAFETY INSTRUCTIONS



DANGER! Life danger due to electric shock and fire!

- When disconnecting a DC circuit, electric arcs can occur that can result in dangerous injuries.
- Carry out work on the inverter and the electrical cables with extreme caution.
- Never disconnect the plug when under load.
- Ensure that the modules are disconnected at the inverter prior to disconnection from one another.
- Be absolutely certain to observe the time intervals specified by the manufacturer after switching off the inverter and prior to starting subsequent work such that the energised components can be discharged.
- Cover the module for the duration of the assembly with opaque material. Only then is the module reliably de-energised.
- Never touch live contacts with your bare hands. Use only insulated, dry tools for the installation.
- Pay attention to the correct polarity when connecting. The connectors are labelled with plus for the positive terminal and minus for the negative terminal.
- Ensure that the open circuit voltage of the modules don't exceed the maximum permitted system voltage of 1000 VDC.
- Do not open the junction box under any circumstances. The bypass diode must not be removed.

ELECTRICAL CABLES AND CONNECTORS

Observe the following when selecting and using electrical cables and connectors:

- Only use solar cables and insulated, compatible connectors. SL1, SL1-F and SL2 modules use MC4 connectors.
- Only use additional components which are compatible with the modules and its electrical specifications.
- Ensure that all electrical components are in a undamaged, dry and safe condition. In this way you avoid that electrical short-circuits or dangerous contact voltages occur due to defective or damaged cables.
- Always avoid the mechanical stressing of the electrical cables.
- Ensure a tight connection between the individual connectors (especially to the inverter). Make sure they click together properly.

AFTER COMPLETION OF INSTALLATION

Upon completion of the installation, ensure that:

- the wiring is protected from dirt and moisture.
- the plug connections do not lie on a water-channeling surface and are properly connected.
- all necessary safety and functional tests have been carried out according to the current state of technology.

6 TROUBLESHOOTING



DANGER! Life danger due to electric shock! Damaged module components may cause risk of fire hazard!

- Please do not attempt to correct problems on your own!
- In case of problems or damaged modules (e.g. glass breakage, damaged cables) please contact your installer immediately. The installer must ensure that the module is removed
- from the system as soon as possible.

7 CLEANING AND MAINTENANCE

Solibro modules are built to last and require minimal maintenance. Light dirt is typically washed away by rain. However, rain may not adequately clear more stubborn grime (i.e. pollen, vegetation, bird droppings, etc.). Such soiling which shades the active area of the module can lead to a reduction in the system's performance.

SAFETY INSTRUCTIONS



WARNING! Danger of injury from heated and live modules!

Only clean the modules when the module temperature lies between 10 °C and 30 °C, e.g. in the early morning or late evening. Do not wear electrically conductive parts. Don't clean damaged modules. This can cause an electric shock.

WARNING! Risk of falling during maintenance of roof installations and building-integrated installations!

Never enter the installation area alone and unsecured. We recommend commissioning a specialist company to perform this work. Consult your installer on location.

CLEANING



As the operator, you should regularly remove dirt built up from the modules. In addition to the safety instructions and chapter 3, observe the following points:

- Never step on the modules. Do not subject the modules to mechanical stress.
- Avoid cleaning with water when there is a danger of frost and strong temperature differences between the module, water and air.
- Hard water used as a cleaning agent should be decalcified beforehand in order to avoid water staining. Remove any standing water from the module.

Do not use abrasive detergents or surface-active agents (e.g. soap). Do not scratch dirt off. This can damage the surface of the module.

Modules must not be covered by snow or ice for a longer period.

Only remove snow and ice without exerting force (e.g. with a broom).

Proceed as follows to remove dirt from the top of the module:

1. Rinse coarse dirt (dust, leaves, etc.) from the module with lukewarm water.
2. Moisten stubborn stains and remove them carefully.

Use lukewarm water and a soft cloth or sponge. Don't put the modules under water. If necessary, it is possible to use isopropanol (IPA) selectively. Follow the safety instructions on the IPA packaging. Ensure that the IPA does not run off between the module and the frame or into the module edges.

Free the substructure of dirt (leaves, bird nests, etc.). In the case of ground-mounted installations, we recommend regularly trimming of the vegetation order to avoid partial shading. Be sure to pay attention to the cables and stones.

MAINTENANCE

The solar system should be inspected annually by a specialist installer for:

- secure fastening and corrosion-free system components
- secure connection, cleanliness and integrity of all electrical components the contact resistances of the grounding.

8 DECOMMISSIONING



Do not decommission the module on your own. Commission a specialist company for this purpose. Dispose old modules only in accordance with your regional waste regulation. Ask your local waste authority for options of disposal. In many countries, the disposal services of PV CYCLE can be used free of charge.

SOLIBRO GMBH

OT Thalheim, Sonnenallee 32-36
06766 Bitterfeld-Wolfen, Germany

PHONE +49 (0)3494 3840 - 93222
FAX +49 (0)3494 3840 - 93400

EMAIL service@solibro-solar.com
WEB www.solibro-solar.com

