

Installation Instructions

alfasolar Pyramid Series



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INFORMATION FOR CUSTOMERS

Congratulations!

We congratulate you on the purchase of your alfasolar solar modules, characterised by the following outstanding features:

- Long service life thanks to the use of only high-quality materials
- Environmentally friendly production with electricity from the sun and water
- Very high efficiency for optimum area utilisation
- High energy yield thanks to pyramid glass and optimum low-light behaviour

The solar modules as innovative, high-quality products generate the electrical energy in your photovoltaic system. We would like to give you some important information at this point to help you make optimum, trouble-free use of your solar modules. Please read this information carefully. Keep this document in a safe place, preferably together with the documentation on your photovoltaic system, so you have it close at hand at all times.

WHAT MUST I WATCH FOR DURING DAY-TO-DAY OPERATION?

During day-to-day operation, the solar modules function completely independently. They convert the solar energy silently and unnoticed into electrical energy without you have to do anything. During daylight, direct current flows through the solar modules to the inverter during the energy transformation. That is the normal operating mode.

If work has to be carried out on your roof, for example by roofers, chimney sweep or aerial installers, draw the attention of these persons to the following points before they go up or out onto the roof:



- Do not walk on the solar modules
- Do not touch the solar modules, substructures, PV cables or plug connectors
- Do not drop anything on the solar modules
- Do not mechanically load cables and plug connectors
- On no account disconnect plug connectors
- On no account cut any cables

INSTRUCTIONS FOR THE INSTALLER

TERMS & SYMBOLS

Certain terms and symbols are used repeatedly throughout this manual to warn you of dangers and to give you tips on avoiding these dangers.



This symbol is used where there is a risk of injury if instructions are not followed



This symbol is used where there is a risk of injury due to slipping or falling



This symbol is used where there is a risk of contact with live parts



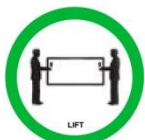
This symbol is used where electric components have to be isolated to avoid contact with live parts



This symbol is used where danger areas have to be cordoned off and unauthorised persons must be prevented from entering



This symbol is used where there is a risk of injury due to falling objects



Handle solar modules only on their short sides



Do not lift solar modules on their long sides



This symbol is used where there is a risk of injury due to falling from heights

SAFETY INSTRUCTIONS



The solar modules must be installed and operated according to the approved rules of engineering. During installation, the applicable national regulations on safety at work and accident prevention must be observed and complied with at all times. This applies in particular to work carried out on the roof.



During the installation and maintenance of the solar modules, the applicable regulations and safety instructions for the installation of electrical equipment and systems and any regulations of the responsible public utility for grid parallel operation of photovoltaic systems must be observed.

The solar modules are electric voltage sources with the corresponding potential hazards. The full open circuit voltage must be expected even under poor light conditions. The electrical commissioning of the solar modules may only be carried out by an approved electrician.

If the solar modules are integrated into a lightning conductor system, the applicable national regulations must be observed and complied with.



There is a risk of falling when working on the roof and when climbing on to and down from the roof. Be sure to observe the accident prevention regulations and to use appropriate fall arrest harnesses.

The planning of the installation, the installation and commissioning of the solar modules may only be carried out by persons who, due to their professional qualification, are familiar with the installation and the proper and safe configuration.



When working on the roof, there is a risk of tools, installation material or solar modules falling from the roof and injuring persons on the ground.



Therefore cordon off the danger area on the ground before starting the installation work.

Warn persons in the vicinity of the danger area or inside the house of the imminent danger.



Keep children well clear of the danger area. Unauthorised persons must not be allowed to climb onto the roof.



Before starting work on the solar modules, they must be isolated from the power supply by means of an isolating switch as arcs can occur when working on lines conducting direct current.

Unqualified installation or commissioning can result in damage to the system and endanger persons.

Connection of the solar modules in series (addition of the module voltages) can result in voltages above the safety extra-low voltage of 120 VDC.

The maximum admissible system voltage of the solar modules must not be exceeded, even at low ambient temperatures (see also Table 1). Background: The open circuit voltage (module rating plate) drifts with the temperature coefficient shown on the data sheet of the module.



Handle solar modules only on their short sides



Do not lift solar modules on their long sides

The solar modules must be handled like glass products. They are not suitable for walking on.

Do not drop anything on the solar modules. Protect the solar modules on the front and particularly on the rear side against scratches and other damage. Do not install damaged solar modules.

The solar modules, in particular the plug connectors and tools, must be dry during the installation.

Do not store the solar modules unprotected.

Protect the module cables from mechanical strain during transport and installation. Before installation, inspect the junction box, cables and plug connectors for damage. For safety reasons, the junction box must not be opened. Protect the plug contacts against soiling. Do not make any plug connections with dirty plug contacts. Lay the cables in such a way that they cause no damage and no persons can be endangered.

INSTALLATION INSTRUCTIONS

In order to ensure sufficient self-cleaning, the angle of inclination should be at least 12 degrees. Take account of local conditions (rainfall, dust development, etc.) when determining the angle.

The solar modules should be set up so that shadowing (even partial) is avoided. The optimum installation position is one where there is no shadowing at any time of the day or any time of the year.

If shadowing nevertheless has to be accepted or is unavoidable, Figure 1 opposite helps to illustrate the effects of this shadowing:

Shadowing type B results in noticeably increased power losses of the module affected!

Pay attention to good ventilation on the rear side of the module.

Bundling of the sunlight on the module surface using mirrors or lenses is not permitted as this can result in an inadmissible increase in the module temperature.

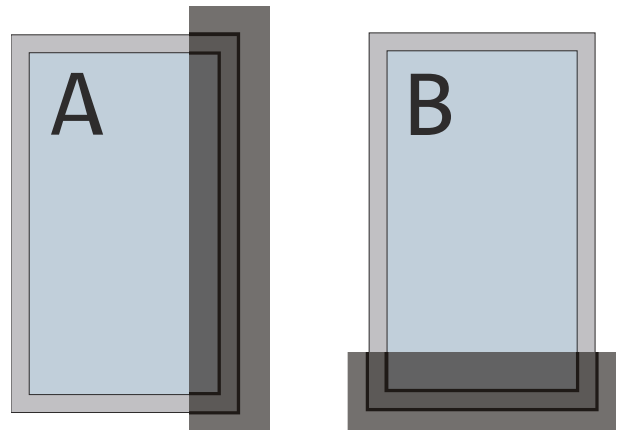


Fig. 1 - Types of shadowing

WIRING INSTRUCTIONS

The solar cables on the module are fitted with the Radox plug connector system from Huber & Suhner that has been specially developed for use in photovoltaics. The plugs are marked with their respective polarity.



Fig. 2 - H&S Radox plug system

Connect only solar modules of the same type and same power class in series!

Module type	Maximum current I_{sc}	Maximum admissible system voltage	Maximum permissible number of modules in series	Maximum admissible number of strings in parallel*
PYR54	9,10 A	1000V	26	3
PYR60	9,10 A	1000V	24	3
PYR80	9,10 A	1000V	18	3

Tab. 1 - Data and limit values of the circuit

*If more than three strings are to be connected in parallel, they must be protected using appropriate PV fuse links. (See below: Fuse protection of strings)

Fuse protection of strings

Depending on the manufacturer, the fuses can be installed in the inverter or in separate housings (together with modular terminal blocks and/or surge voltage protectors).

Our staff will be pleased to advise you on the correct dimensioning of the fuse links.

Fuse links should generally be dimensioned according to the system they are installed to protect; reliable rules of thumb for the commercially available fuse links developed for PV applications are:

Rated voltage:
$$U_N \geq U_{OC-String} \cdot 1,18$$

(at lowest temperature -25°C)

Rated current:
$$I_N \geq I_{SC-Modul} \cdot 1,3$$

(at 60°C in junction box, alternating load factor 0.9 and irradiance 1000 W/m²)

Source: SIBA GmbH & Co. KG



Fig. 3 - Rear side of module

The modules are dimensioned for use in application class A to EN 61730 (general access, hazardous voltage > 120 VDC).

Pay particular attention to the polarity of the solar modules. Reversing the polarity will destroy the bypass diodes.

Note:

Diodes installed are Diotec SB 1240.

Replacements can be obtained from alfasolar.

The junction box with cables connected at the factory does not have to be opened for the electric wiring of the solar modules.

Lay cables with strain relief, mechanically stress-free and with sufficiently large bending radii. If necessary, secure lines using cable ties.

For **additionally required cable** (e.g. string cables), use only cables specified for the application or special solar cables. Observe recognised good engineering practice when dimensioning the cables: Take into consideration the connected power (and the resulting voltages and currents), temperature influences, cable lengths and the laying situation for safety reasons and to prevent unnecessary power losses in the cables.



Caution:

Do not insert or remove the plugs under load.

If other commercially available plug systems are employed on the inverter side and the tools required for crimping are not available, adapter sets can be obtained from us (short pieces of Radox 4 mm² with connectors and shrink sheaths).

Currently available sets:

- H&S Radox
- MC III and MC 4
- Tyco Solarlok

In 2010, SMA is also introducing a new plug system (Sunclix) for the inverter side.

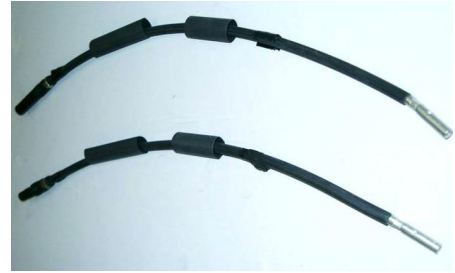


Fig. 4 - H&S adapter set with connectors

Overshooting the power output

Under certain conditions*, a solar module can output higher currents and/or voltages than the electrical characteristics measured under standardised test conditions.



This has to be taken into consideration by means of corresponding factors when determining the current and voltage ratings of components (e.g. controllers) connected to the output of PV modules.

**The highest irradiances occur on sunny days with light cloud. Reflections of the solar radiation on passing clouds can result in brief irradiance peaks.*

INSTALLATION INSTRUCTIONS FOR ALFASOLAR SOLAR MODULES

GENERAL INSTRUCTIONS

The general installation instructions given here are intended to provide assistance in the statically correct fixing of alfasolar solar modules and safe electrical connection. They are the result of the many years of experience of alfasolar's partners and from our own experience. They are intended to help avoid typical installation errors and to ensure a long service life of the system.

The installation instructions are not an installation guide and do not describe the installation of a complete photovoltaic system. They are therefore in no way a substitute for the necessary technical know-how. They also contain no concrete guidelines for the planning and installation of photovoltaic systems. They merely underline the necessity for care during the planning and installation of PV systems.

Conditions at the installation site, such as local climate, lightning conductors, wind loads, snow loads, special static demands on the sub-structure or other site-specific features have to be taken into particular consideration during installation of the modules. These are neither known to the module manufacturer and supplier (alfasolar GmbH), nor are they recognisable in advance.

Local conditions, the installation system used from one of the numerous substructure manufacturers and in particular the building regulations in the different countries and states with specific design and dimensioning standards make it impossible to give generally valid installation instructions.

From the point of view of alfasolar GmbH, installation should only be carried out by specialised companies in cooperation with a specialist planner. This is a fundamental precondition for the warranty on the assured performance. The proper function of a photovoltaic system requires not only the solar modules for the construction of the generator, but also other major components from other manufacturers and the associated services of the consultants, specialist companies and wholesalers on the PV market.

The installation instructions apply only to the standard modules supplied by alfasolar GmbH. Special customised constructions, special features of the substructure or the installation systems and other site-specific features cannot be taken into consideration.

In order to simplify your work, alfasolar GmbH has included additional information in the data sheets on the modules that will help your statics engineer with the necessary calculations.

alfasolar GmbH assumes no liability for these installation instructions and for any consequential damage. This limitation of liability does not apply to damage resulting from injury to life, body or health attributable to a negligent infringement of obligations by alfasolar GmbH or to a wilful or negligent infringement of obligations by a legal representative or aide of alfasolar GmbH, or to other damage attributable to a grossly negligent infringement of obligations by alfasolar GmbH or to a wilful or grossly negligent infringement of obligations by a legal representative or aide of alfasolar GmbH. Please refer also to the General Terms and Conditions and to the publications on the warranty and performance guarantee of alfasolar GmbH.

INSTRUCTIONS FOR INSTALLATION

- The solar modules can be installed vertically or horizontally. Maximum admissible loads on the solar modules must thereby be observed, depending on the installation situation.
- For permanent installation, fasten the solar modules to a suitable substructure. The distance between the supporting profile (see table or the latest data sheets) of the installation system is dictated by the installation bores on the long frame side of the particular solar module type used. This information can be found on the data sheet of the respective solar module. A deviation of +/- 90 mm is admissible.
- Solar modules must lie flush on the substructure on at least 4 supporting points or in line on 2 directly opposite sides.
- The manufacturer assumes no liability for fixing distances deviating from the dimensions and tolerances indicated.

Solar module Type	Length mm	Width mm	Distance between supporting profiles mm	Profile height mm
alfasolar				
Pyramid 54	1465	986	790	35
Pyramid 60	1623	986	811	35
Pyramid 80	1623	1303	811	35
220P6L60	1667	1000	834	40

- Observe the linear thermal expansion of the module frames (recommended linear distance between 2 solar modules 8-10 mm).
Note: When using the alfasolar A2 System, the information on thermal expansion in the installation instructions of the A2 System must also be observed.
- When selecting the material for the installation system, pay attention to the electrochemical displacement series (avoidance of contact corrosion between different metals).

The solar modules can be fixed as described in section "Fixing specifications" either:

- Using corrosion-resistant stainless steel screws (M6) in the installation bores in the module frame
- Using suitable module clamps on the module frame
- Using insert systems

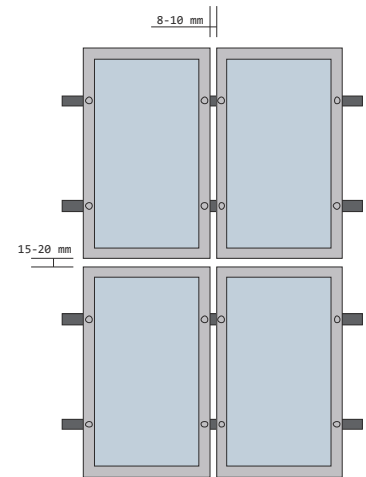


Fig. 5 - Installation spacings

WARNING!

Depending on the installation, resting and fixing of the solar modules on the short frame posts significantly reduces the mechanical load-bearing strength of the solar module!

The solar modules must not be installed right up against one another. A minimum distance of 8-10 mm must be maintained between the solar modules. We also recommend a distance of 20 mm between the rows.

When installing horizontally with middle support (illustrations), fix the lower post of the module frame using a module clamp. This reduces the risk of damage to the module frame caused by slipping snow.

WARNING!

Module clamps used must not touch the front glass or deform the frame. They must not cast shadows on the solar cells of the module.

Modification of the module frame is not permitted. Ventilation openings in the module frame must not be blocked, even by the installation substructure.

Solar modules must be installed in such a way that rainwater or condensation cannot enter the cable glands. The solar modules must not stand in banked-up water.

If this is not observed, the modules may be damaged by frost!

The modules must be installed on non-flammable materials.

Secure the electric cables to the installation substructure in such a way that the plug connectors, in particular, do not lie in a water-bearing plane. Protect the plug contacts against soiling. Do not make any plug connections with dirty plug contacts.

LIGHTNING & SURGE VOLTAGE PROTECTION

The requirements for lightning and surge voltage protection must be determined according to the specific local conditions (building with or without external lightning conductor), to the technology employed (in particular inverter or solar module), and on the local regulations and directives (i.a. VDE V 0185 Parts 1-4 in their respective latest version, corresponding in content to the draft of European standard IEC 623051). The legal regulations must be observed in all respects. It is otherwise assumed that the installation complies with the state-of-the-art (compliance with the VDE regulations and DIN standards).

Equipotential bonding

All metallic parts of the photovoltaic system must be connected electrically and, depending on whether the building has a lightning conductor system, connected to the equipotential bonding conductor. If the building has a lightning conductor system and the minimum distances to this system are not observed, the photovoltaic system must be integrated into the system in a manner appropriate to the building and using the normal methods using an earthing conductor. If the building does not have a lightning conductor system, a single-core copper cable of at least 16 mm² (or an aluminium cable with at least 25 mm²) must be laid outside the building to a separate earthing electrode or to the equipotential bonding strip. Applicable technical boundary conditions (no laying through areas with easily inflammable substances, adequate dimensioning of the earthing electrode, and possible use of interconnected metallic installations in the building) must be observed.

EARTHING OF THE MODULES IN DETAIL

alfasolar Pyramid module with alfasolar A2 rail system

As the module frames are connected as electrical conductors (via the centre clamps) to the rail when using the alfasolar installation system, it is sufficient to connect the individual module rows together and to lay a cable from there to the equipotential bonding conductor. This can be carried out, for example, using cable shoes and M10 nuts/screws in the lateral grooves (see figure). When selecting the connection materials, pay attention to the electrochemical displacement series (contact corrosion). If the normal aluminium materials used in lightning conductor systems are employed, no particular precautions are necessary.

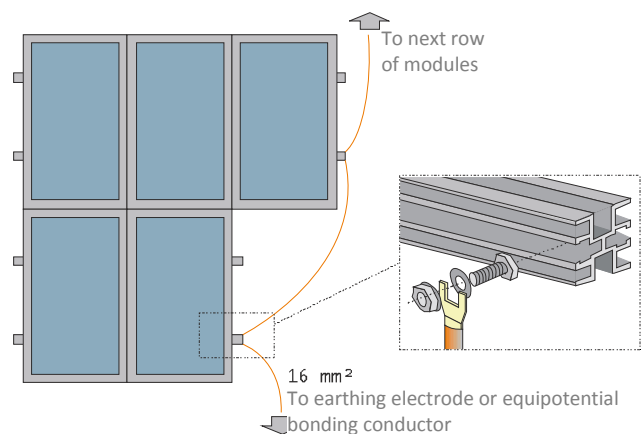
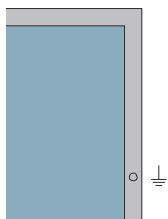


Fig. 6 - Possible earthing of the A2 System



alfasolar Pyramid module without alfasolar A2 rail system

If some other method of installation is employed, the modules can also be integrated into the equipotential binding system via the M4 earthing bores in the middle of the module frames using corresponding cable shoes and screws.



The earthing connection must not be interrupted or destroyed during routine maintenance of a module. Bolts, screws or other earthing connections must not be used for mechanically securing the complete installation to supporting surfaces or frameworks.

EXPLANATORY NOTES

The dimensions to be observed are dictated by the respective module type. Even with new products or special modules, the installation instructions can generally be derived without any specific additional measures. The crucial aspects are the distance between and the position of the supporting profiles that are found in the drawings provided in the data sheets and the manufacturer's specifications for the installation bores in the frame. A special adaptation of the installation instructions is therefore generally not necessary. In such cases please observe the details in the data sheet and consult your contract partner or alfasolar GmbH, should you have any questions.


Special features of the substructure and of the fixing systems can necessitate deviations from the installation instructions that are unforeseeable for alfasolar. In the event of questions or uncertainty, the installation specialists can contact your contract partner or an approved statics engineer directly.



Technical modifications reserved. The installation instructions apply only in conjunction with the data sheets, the installation instructions for alfasolar solar modules, the General Terms and Conditions and the warranty and performance guarantee of alfasolar GmbH in the latest version.

FIXING SPECIFICATIONS

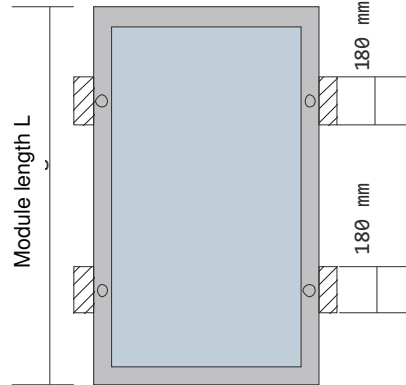
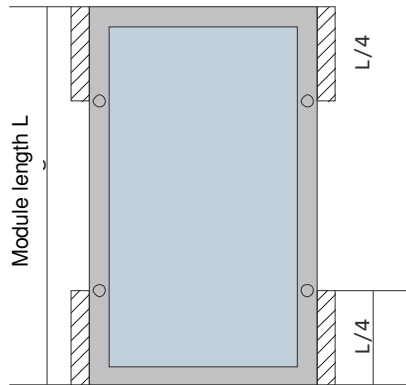
PERMISSIBLE FIXING FOR VERTICAL INSTALLATION

Clamping area 

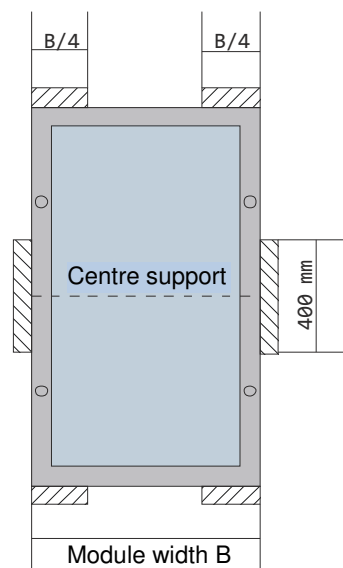
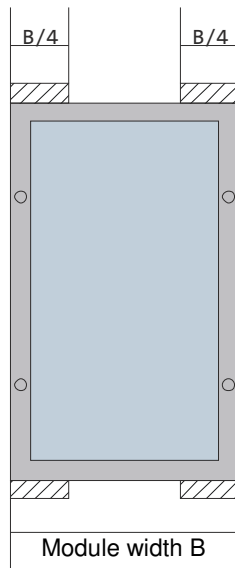
up to 2400 N/m²

up to 5400 N/m²

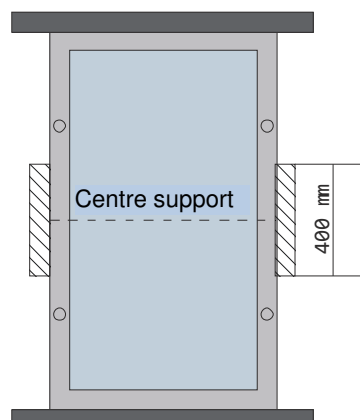
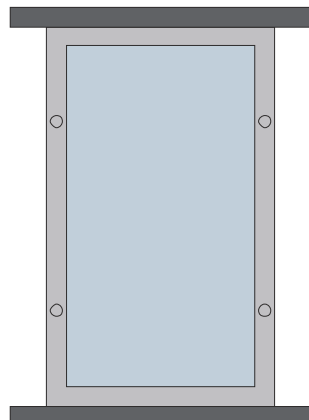
Fixing of long side



Fixing of short side

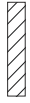


Insert system



PERMISSIBLE FIXING FOR HORIZONTAL INSTALLATION

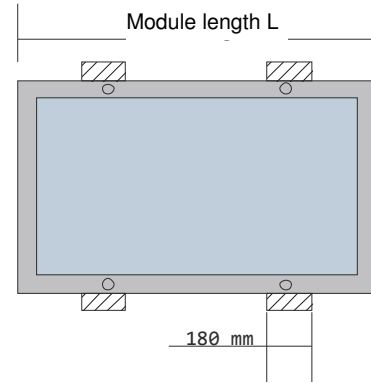
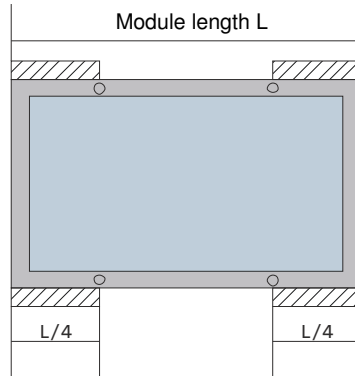
Clamp-
ing area



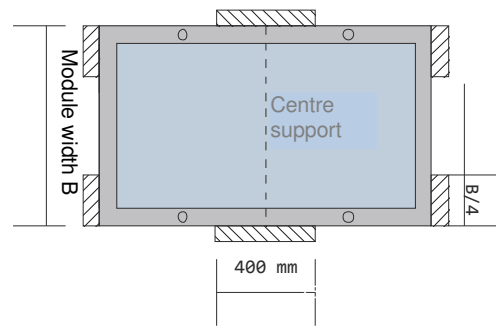
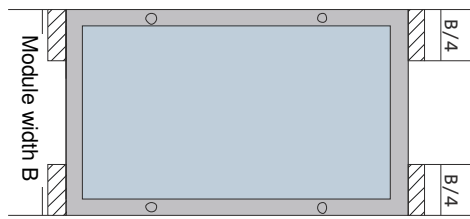
up to 2400 N/m²

up to 5400 N/m²

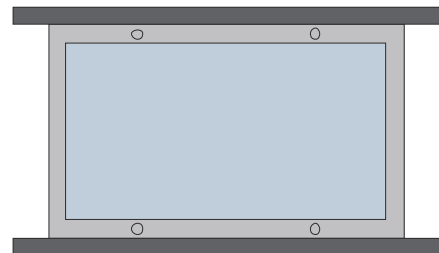
Fixing of long
side



Fixing of short
side



Insert system



Cleaning and maintenance

Soiling of the glass on the front side of the solar modules reduces the light falling on the solar cells, and hence the electric power of the solar modules.

In case of severe soiling, we recommend that you have the front glass surface cleaned occasionally. This applies in particular to heavy soiling (e.g. bird excrement or leaves), as these create the additional risk of localised overheating due to the shadowing effect or of accelerated corrosion of the glass surface due to aggressive constituents.



- On no account should you climb onto the roof to see, for example, whether solar modules are damaged. Danger! You could fall off the roof.
- On no account should you carry out work on the PV system yourself, as this involves considerable risks. You could injure yourself, suffer an electric shock or damage the PV system.

In order not to damage the solar modules during cleaning, they should be cleaned with large amounts of water and a soft sponge or cloth, stubborn soiling can be removed using large-pore, non-abrasive sponges used also for washing cars. Abrasive or matting cleaning agents and hard objects must not be used for cleaning. Do not walk on the solar modules or subject them to any other form of mechanical load.

Cleaning with pressurised water and motorised cleaning apparatus is not permitted.

Have the electric cables inspected occasionally for damage, corrosion and tightness of the cable connectors.

We recommend that you have the system inspected for its electrical function and performance once a year by a specialist company. An open circuit voltage test can help, for example, identify bypass diodes that have become conductive (e.g. due to exposure to surge voltages) and hence prevent the resulting overheating of the junction box and energy losses.

Have cleaning and maintenance work carried out only by qualified and specialist personnel.

WHAT SHOULD I DO IN THE EVENT OF FAULTS?

Should you have the impression that your PV system is not functioning correctly, please contact your installer or other specialist company immediately. Have repairs carried out only by qualified and specialist personnel.

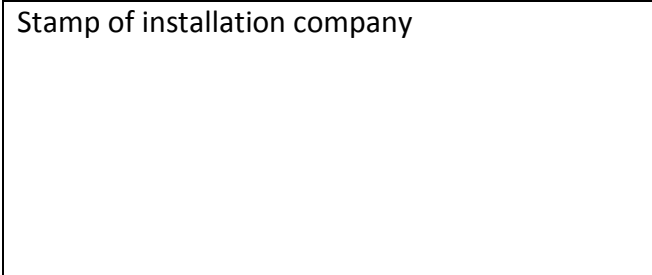


- On no account should you climb onto the roof to see, for example, whether solar modules are damaged. Danger! You could fall off the roof.
- On no account should you carry out work on the PV system yourself, as this involves considerable risks. You could injure yourself, suffer an electric shock or damage the PV system.

WHO SHOULD I CONTACT IN THE EVENT OF FAULTS OR QUESTIONS?

In the event of faults or questions, please contact the specialist company that installed your PV system.

Stamp of installation company



LIABILITY DISCLAIMER

These instructions contain expedient tips on installing the solar module from alfasolar GmbH. In addition to this information, the installing company must observe the applicable regulations and rules of engineering. The tips on dimensioning contained in these instructions are only indications based on our practical experience, but which can only be validated in individual cases by a statics examination. alfasolar assumes no liability for the dimensioning tips contained in commercial quotations, as not all the technical boundary conditions can generally be analysed during the submission of quotations. The installation company is responsible for the mechanical durability of the elements used for connection to the building shell, in particular for their leak-tightness. The components from alfasolar GmbH are designed to withstand the anticipated loads of normal operation and in accordance with the state-of-the-art. alfasolar assumes no liability in the event of improper handling of the installed parts.

PRODUCT GUARANTEE & PERFORMANCE GUARANTEE

Our guarantee card for the alfasolar modules below is included with your delivery. Please have it filled out, signed and handed over by your dealer/installation company. Keep it in a safe place together with the other documents.

Garantiekarte für alfasolar Photovoltaikmodule

Sehr geehrter Kunde,
für die von Ihnen gekaufte Photovoltaikmodule leistet die alfasolar Vertriebsgesellschaft mbH Garantie gemäß dem zum Zeitpunkt des Kaufes gültigen Garantieerklärung. Bitte füllen Sie diese Garantiekarte aus.

Modultyp:
Stückzahl:
Seriennummern der Module*:

* Bitte lassen Sie sich einen Ausdruck der Seriennummern der gelieferten Solar-Module von Ihrem Fachhändler/Installateur bei Inbetriebnahme aushändigen. Sie sind auch auf den Liefererschein der alfasolar.

Kaufdatum:

Käuferadresse:

Die Angaben sind innerhalb von zwei Wochen ab Kaufdatum von Ihrem Fachhändler und Installateur mit Firmenstempel und Unterschrift zu bestätigen. Die Garantiekarte verbleibt beim Käufer. Im Garantiefall ist die vollständig ausgefüllte Garantiekarte zusammen mit Ihrer Original-Rechnung oder Liefererschein bei Ihrem Fachhändler einzureichen und damit die Garantieleistung zu beantragen.

alfasolar Vertriebsgesellschaft mbH
Ahrensburger Straße 4-6 · D-30659 Hannover
Tel. +49 (0) 511 261 447-10 · Fax +49 (0) 511 261 447-50

Fachhändler/Installateur:
(Stempel, Datum, Unterschrift)

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alfasolar®
Innovative Solarsysteme

Garantie alfasolar Module



Garantieerklärung für alfasolar Module

Die alfasolar Vertriebsgesellschaft mbH (im Folgenden alfasolar genannt) übernimmt als Hersteller der Solarmodule („Module“) alfasolar EoLme xP alfasolar xFFly und alfasolar Pyramid (wobei x, die Leistungs- und yy die Zellenanzahl) bezichtigt gegenüber dem ursprünglichen Endkunden (im Folgenden „Endkunden“ genannt) folgende Garantie (1) bzw. Leistungsstufe (2, und 3).

- alfasolar wird eventuelle Herstellungs- oder Materialfehler besitzgen, die sich an den Modulen während der ersten 6 Jahre nach Auslieferung ab Werk unter normalen Anwendungs-, Installations-, Nutzungs- und Wartungsbedingungen zeigen und die Funktionsfähigkeit des Moduls beeinträchtigen. Natürliche Abnutzung stellt keinen Fehler dar.
- alfasolar garantiert, dass sich die Leistung der Solarmodule unter normalen Einsatzbedingungen im Vergleich zu der im Datenblatt angegebenen Nennleistung innerhalb von 10 Jahren – von der Auslieferung ab Werk an – um nicht mehr als 10 % reduziert.
- alfasolar garantiert, dass sich die Leistung der Solarmodule unter normalen Einsatzbedingungen im Vergleich zu der im Datenblatt angegebenen Nennleistung innerhalb von 25 Jahren – von der Auslieferung ab Werk an – um nicht mehr als 20% reduziert.

in der Montageanleitung und den Montagehinweisen bestimmen Zweck zu verwenden;

c) Schäden am Modul, die verursacht worden sind durch:

- unregelmäßigen Gebrauch, insbesondere (a) Gebrauch dieses Moduls für einen anderen als den vorgesehenen Zweck oder der Gebrauch unter Nichtbeachtung der Montageanleitung und Montagehinweise, und (b) die Installation oder der Gebrauch des Moduls in einer Weise, die den in dem Land, in welchem das Modul betrieben wird, geltenden technischen oder Sicherheitstechnischen Vorschriften nicht entspricht;
- Reparaturen, die nicht durch alfasolar oder die vom Kunden selbst durchgeführt wurden;
- Unfälle, Blitzschlag, Überflutung, Feuer, ungenügende Befüllung oder andere, nicht in der Macht von alfasolar liegende Umstände;
- Defekte des Systems, in das dieses Modul eingebaut ist.
- Glasschäden durch Einwirkung von außen.

Die Garantieleistung erfolgt nur, wenn der Fehler unverzüglich nach Entdeckung gerügt wurde. Die Rüge ist an die Verkaufsstelle zu richten. Die Originalrechnung bzw. der Kassenbeleg (unter Angabe von Lieferdatum, Modultyp, Seriennummer, Handlerno. Nr.) ist beizubringen.

Der Fehler muss vom Endkunden genau beschrieben und nachgewiesen werden. Die Garantie gilt nicht, wenn die Typen- oder Seriennummer des Moduls geändert, gelöscht, entfernt oder unleserlich gemacht wurde.

Weltweit geltende und andere Ansprüche gegen die Firma alfasolar aufgrund dieser Garantieerklärung, insbesondere Schadenersatzansprüche wegen entgangenen Gewinns, Nutzungsentzögerung, mittelbarer Schäden sowie Ansprüche auf Ersatz außerhalb des Produkts entstandener Schäden sind ausgeschlossen, soweit eine Haftung nicht zwingend gesetzlich angeordnet ist.

Wir empfehlen hierfür den Abschluss einer Solarversicherung.

Bei der Leistungsausgabe handelt es sich weder um eine „Garantie für die Beschaffenheit“ der Module im Sinne des § 443 BGB noch um die „Übernahme einer Garantie“ im Sinne des § 276 BGB.

Eine etwaige Gewährleistung des Herstellers aufgrund des Kaufvertrages mit dem Endkunden wird durch die vorliegende Garantieerklärung nicht berührt.

Die Garantieerklärung gilt für ausgelieferte Module ab dem 01.05.2009.

Stand 01.05.2009

www.alfasolar.de