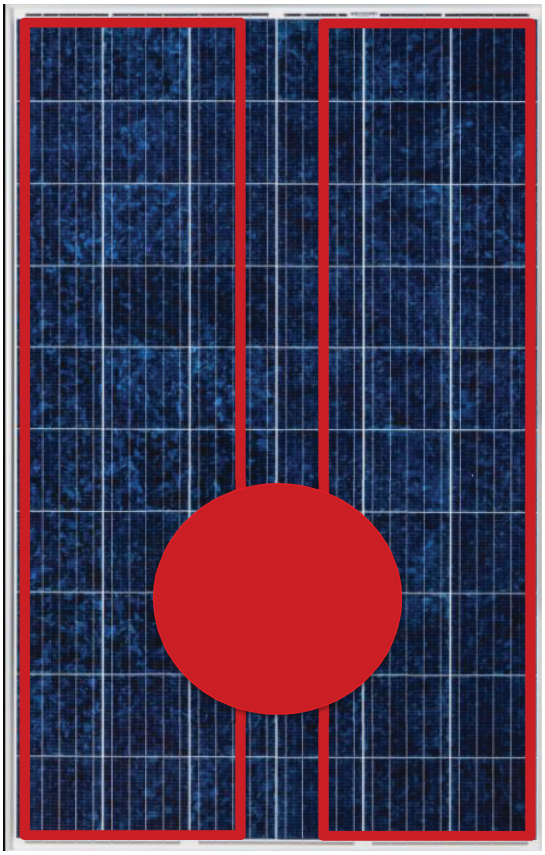

INSTALLATION MANUAL

HAI-TEC 2018

Photovoltaic Panels

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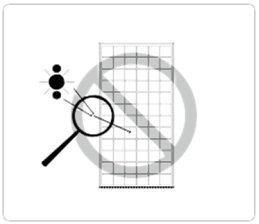
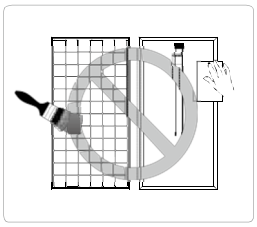
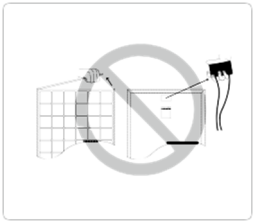
Be Attention to the following instructions



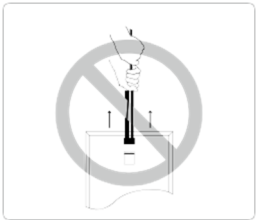
DON'T use mirrors or magnifiers to concentrate sunlight onto the module.



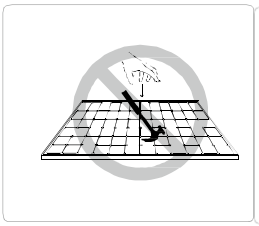
DON'T paint the module or attach anything on to the back of the module.



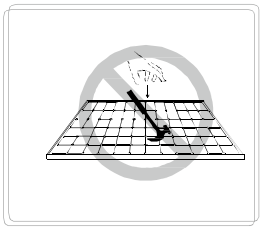
Do not attempt to disassemble the modules, and do not remove any attached nameplates or components from the module.



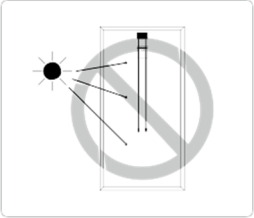
Do not lift or remove the module by holding the junction box or cable.



Do not place anything on the module or press on the module surface.

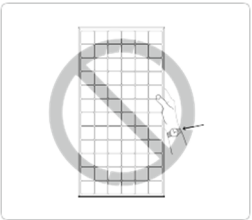


Do not drop the module or allow objects to fall on the module.

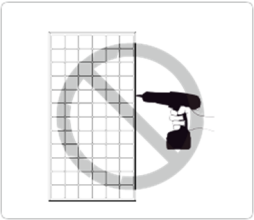


Do not expose the back of the module to direct sunlight.

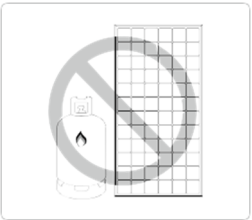
Do not install or handle module in wet or strong windy conditions.



Do not wear metal ornaments while handling the module during the installation.



Do not drill holes in the frame.



Do not use module near equipment or in place where flammable gases may be generated or collected.

Insulated gloves must be worn while handling the module and during installation.

1. SAFETY PRECAUTION

This manual contains information regarding product identification and the safe installation and maintenance of photovoltaic modules (hereafter referred to as “module”) supplied by HAI-TEC GmbH, Germany. (hereafter referred to as “HAITEC”). The term “module” can be interpreted as a single module or multiple modules depending on the context.

Installers must already be familiar with the mechanical and electrical requirements for a photovoltaic system. Installers must also read this manual carefully prior to installation. We recommend that you keep this manual in a safe place for future reference and in case of future sale or disposal of the module.

1.1 General Safety

1.1.1 The installation of a photovoltaic system requires specialized skills and knowledge and must only be carried out by licensed/qualified persons.

1.1.2 Installers should assume all risks of injury and do everything to avoid potential damages and risks that might occur during installation, including but not limited to, the risks of electric shock.

1.1.3 HAITEC modules do not need special cables for connection. All of the modules have permanent junction boxes, cables and connectors.

1.1.4 Always use the same type of module within a particular photovoltaic system.

1.1.5 Do not use mirrors or magnifiers to concentrate sunlight onto the modules.

1.1.6 The modules generate DC electrical energy from sunlight. They are designed for outdoor use and can be mounted onto frames on rooftops or in the ground etc.

1.1.7 Do not paint the module or attach anything on to the back of the module.

1.1.8 Do not attempt to disassemble the modules, and do not remove any attached nameplates or components from the modules.

1.2 Handling safety

1.2.1 When handling the module insulated gloves must be worn.

1.2.2 Inappropriate transportation and installation may break the module.

1.2.3 Do not lift or move the module by holding the junction box or cable.

1.2.4 Do not place anything on the module or press on the module surface.

1.2.5 Do not drop the module or allow objects to fall on the module.

1.2.6 Do not expose the back of the module to direct sunlight.

1.2.7 Do not wear metal ornaments while handling the module.

1.2.8 Do not install or handle modules in wet or strong windy conditions.

1.2.9 Keep children away from the system during transporting and installing mechanical and electrical components.

1.3 Installation safety

1.3.1 Local, regional and state laws and regulations must be adhered to while installing a photovoltaic system. For example, any necessary licenses

must be obtained prior to the installation commencing. Regulations around vehicles and ships must also be observed during the installation.

1.3.2 Observe all safety rules for the other system components, including the cables, connectors, charging controllers, inverter and storage battery etc.

1.3.3 Do not place the modules near a location where flammable gases are either generated or collected.

1.3.4 Insulated gloves must be worn during the installation.

1.3.5 Do not wear metal ornaments during the installation.

1.3.6 Do not drill holes in the frame.

1.3.7 Under normal conditions, a module is likely to produce more current and/or voltage than reported under Standard Test Conditions (STC). Accordingly, the values of ISC and VOC marked on the module nameplate should be multiplied by a factor when determining the component voltage ratings, conductor current ratings, fuse sizes, and the size of controllers connected to the photovoltaic system. The exact factor value should be suggested by a licensed/qualified person.

1.3.8 The live connector may cause fire. spark or lethal shocks even when the modules are not connected.

1.3.9 Electricity can be generated when the modules are exposed to sunlight, even if they are not connected. It is dangerous to touch 30V DC or higher, so never open the electrical connectors or unplug the electrical connectors while the circuit is under load, and do not touch the live connectors during the installation when the modules are exposed to sunlight.

1.3.10 Children should be kept away from the photovoltaic system.

1.3.11 In order to prevent current and voltage generation during installation an opaque board can be used to cover the modules.

1.3.12 Only use licensed/qualified insulated tools.

1.3.13 The frame of the modules may be grounded according to local, regional and state safety and electrical standards.

1.3.14 Only Balance of System (BOS) components that conform with local, regional and state safety electricity standards should be used to avoid affecting module performance and/or module damage.

1.4 Fire Safety

1.4.1 Consult your local authority for guidelines and requirements for building or structural fire safety.

1.4.2 Roof constructions and installations may affect the fire safety of a building; an improper installation may create a hazard in the event of a fire.

1.4.3 Use components such as ground fault circuit breakers and fuses as required by the local authorities.

1.4.4 Do not use the modules near a location where flammable gases are either generated or collected.

1.4.5 The modules have been rated Fire Class C, and are suitable for mounting onto a Class A roof.

2. PRODUCT IDENTIFICATION

On the back of each module there are 2 labels that provide the following information:

Nameplate: Describes the product type, rated power, rated current, rated voltage, open circuit voltage, short circuit current, all as measured under STC; weight, dimensions etc.; the maximum system voltage of 1000V DC.

Warning: The value of Voc multiplied by the number of modules in series should not be higher than the maximum system voltage marked in the nameplate.

Barcode: This is used to identify each module. Each module has a unique and traceable serial number in the form of barcode. The barcode of each HAI-TEC module has 15 letter/digits.

Warning: Do not remove the nameplate or barcode. HAI-TEC product warranty will be void if either the module nameplate or barcode is removed.

3. MECHANICAL INSTALLATION

(Note: All instructions hereafter are for reference only. A licensed/qualified person or installer must be responsible for the design, installation, mechanical load calculation and security of the photovoltaic system.)

3.1 Select suitable locations for installation

3.1.1 Select a suitable location for installing the modules.
3.1.2 HAI-TEC recommends that to achieve the best performance the modules should face south in northern latitudes and north in southern latitudes.

The exact tilt angle and orientation of mounted modules should be recommended by a licensed/ qualified installer.

3.1.3 The modules should be completely free of shade at all times.

3.1.4 Do not place the modules near a location where flammable gases are either generated or collected.

Note[1]: Saline environments can accelerate the processes of electrical insulation losses and galvanic corrosion, especially when different metals with high electrochemical potential come into contact each other.

In saline environments, based on the distance to seashore, HAITEC generally classifies coastal PV installation into three different levels:

-From 0 up to 50 meters, HAITEC Solar does not recommend any installation due to concerns for salt-mist corrosion.
-From 50 to 500 meters, HAITEC regards this as “Near-Coast” installation requiring adherence to salt-mist corrosion prevention.

-From 500 meters and onwards, HAI-TEC estimates the risk of salt mist corrosion is minor and only requires annual preventive maintenance.

In “Near-Coast” installation, HAI-TEC PV modules must be installed under the following conditions:

-During the installation, do not scratch or break the corrosion-resistant coating (e.g. electroplated layer, oxidized coating, etc.) on the modules and mounting systems.

-The modules shall be mounted with a minimum tilt angle of 10°in respect to the horizon.

-Use corrosion-resistant materials (e.g. stainless steel SUS 316) for components (nut, bolt, gasket, etc.) to fixing the modules and mounting systems.

-To avoid possible galvanic corrosion between the aluminum frame and the support structure, mica lamination, or other silicone, or fluoride made gasket shall be interposed between the two metals

-When grounding the module frames, stainless steel hardware must also be used. To prevent salt corrosion to grounding block, fluorocarbon varnish could be sprayed on the grounding block thoroughly to form an anti-corrosion coating (at least 40um thick) or a pad of butyl plaster covering could be placed on the grounding block completely.

To ensure optimum module performance for near- coast installation, a system maintenance service of every three months is generally recommended and additionally the following maintenance measures shall be taken:

-Check the frame, mounting system, grounding block and other junction areas for potential signs of corrosion.

-Clean the frame, mounting system, grounding block and other junction areas from salt and dust accumulation.

-To repair the rusty areas, apply butyl plaster or fluorocarbon varnish spray to cover the area thoroughly after clean the salt and other dust accumulations around the rusty areas.

Note2: In environments where ammonia is present, HAI-TEC PV modules must be installed under the following conditions:

Mounting Method is to be selected from an experienced Engineer

-When fixing the modules using the 8 mounting slots, all the hardware (washers, screws and nuts) shall be made of stainless steel;

-To avoid possible galvanic corrosion between the aluminum frame and the support structure, PVC washers or neoprene tape shall be interposed between the two metals;

-When grounding the module frames, stainless steel hardware must also be used.

3.2 Select suitable mounting rails

3.2.1 Please observe the safety regulations and installation instructions included with the mounting rail. If necessary please contact the supplier directly for further information.

3.2.2 The modules must be safely set onto the mounting rail. The whole rail supporting the photovoltaic system must be strong enough to resist

potential mechanical pressures caused either by wind or snow, in accordance with local, regional and state safety (and other associated) standards.

3.2.3 Make sure that the mounting rail will not deform or affect the modules when it expands as a result of thermal expansion.

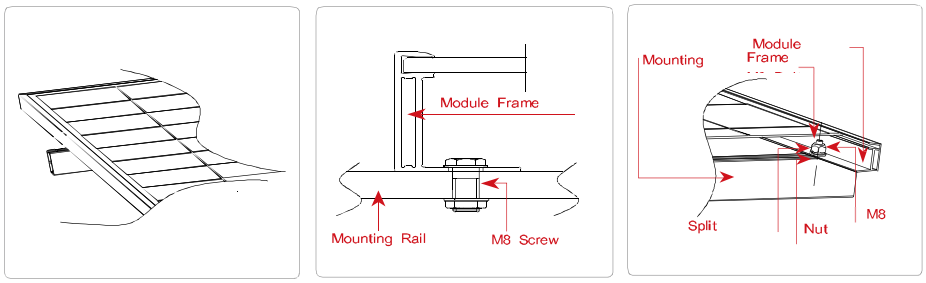
3.2.4 The mounting rail must be made of durable, anti-corrosive and UV-resistant materials.

3.3 Select suitable mounting methods

HAI-TEC modules can be mounted using two methods:

Screw Fitting: Use corrosion-proof screws in the existing installing holes in the module frame. Each module has 8 mounting holes for securing the module on the mounting rail. The module frame must be attached to a mounting rail using M8 corrosion-proof screws together with spring washers and flat washers in symmetrical locations on the module. The applied torque should be 8Nm.

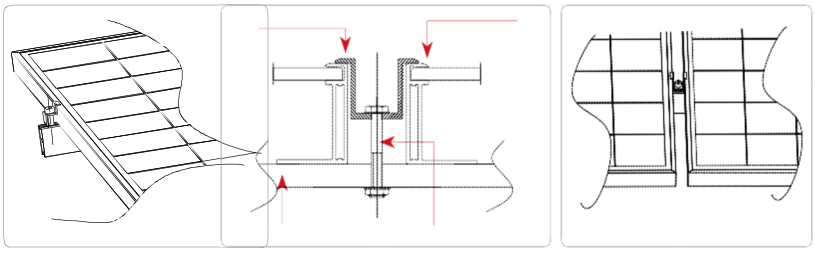
Please find detailed mounting information in the below illustration:



Clamp fitting: Using suitable module clamps on the LONG side of the module frame to mount the modules is “portrait orientation” mode, while on the SHORT side of the module frame is “landscape orientation” mode.

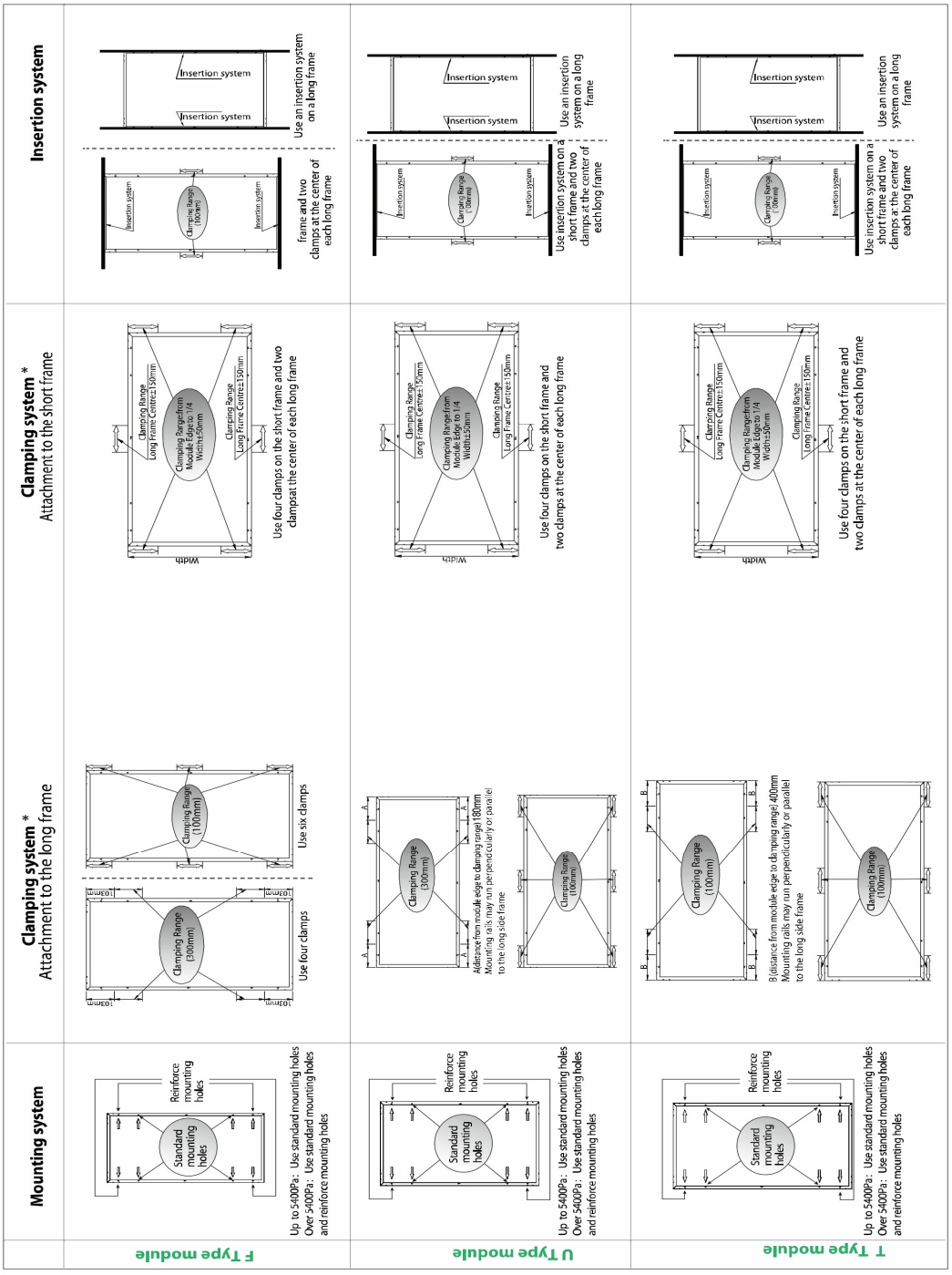
The module clamps should not come into contact with the front glass and must not deform the module frame. Avoid any shadowing effects from the module clamps. The module frame can not be modified under any circumstances. Regardless of the orientation chosen, at least 4 clamps must be used on each module. For portrait orientation, 2 clamps should be attached to the long sides of the module and for landscape orientation 2 clamps should be attached to the short sides of the module. Depending on the local wind and snow loads, additional clamps may be required.

The applied torque should be about 8Nm. Please find detailed mounting information in the below illustration:



Select the appropriate installation method depending on the load (see below for more detailed information).

F Type	1580mm × 808mm × 35mm
U Type	1640mm × 992mm × 35/40/45mm
T Type	1956mm x 992mm x 45/50mm


Insertion system
Clamping system * Attachment to the short frame
Clamping system * Attachment to the long frame
Mounting system
T Type module
U Type module
F Type module
Use an insertion system on a long frame
Use insertion system on a short frame and two clamps at the center of each long frame
Use four clamps on the short frame and two clamps at the center of each long frame
Use six clamps
Use four clamps
Clamping Range (100mm)
Clamping Range (300mm)
Clamping Range (180mm)
Clamping Range from Module Edge to 1/4 Width±50mm
Clamping Range Long Frame Centre±150mm
Width
Reinforce mounting holes
Standard mounting holes
Up to 5400Pa : Use standard mounting holes
Over 5400Pa : Use standard mounting holes and reinforce mounting holes

Warning: Do not attempt to drill holes in the module frame or in the glass surface of the module. Any such modifications will void the HAI-TEC product warranty.

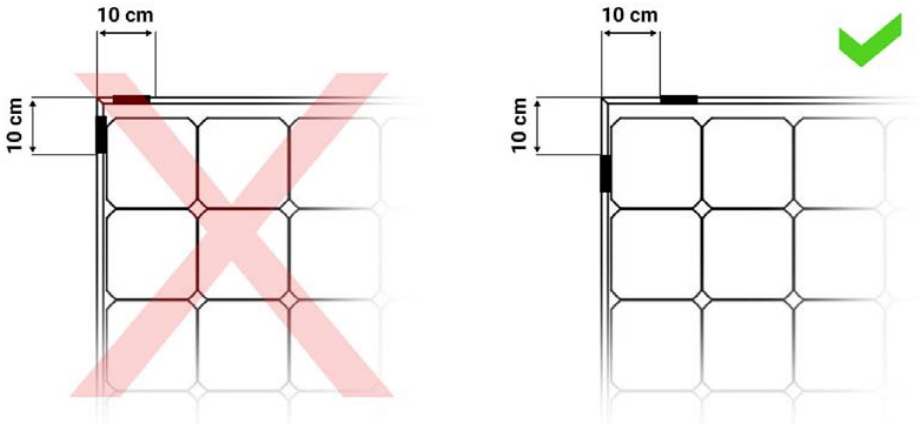
3.3.1 When installing a module on a pole ensure that the pole and mounting rail can withstand anticipated local winds. The pole must be installed on a secure base.

3.3.2 Ensure that the installation height is such that the lowest modules will not be covered by accumulated snow or shaded by the surroundings.

3.3.3 Ensure that there is adequate ventilation under the modules, conforming to local, regional and state standards and regulations.

3.3.4 Observe the linear thermal expansion of the module frames. A minimum distance of 1cm between two modules is generally recommended.

3.3.5 A minimum distance of 10cm, between the roof plane and the frame of the module is generally recommended.



3.4 Ground mount

Select enough height of the mounting system to prevent the lowest edge of the module from being touch or covered by snow or rain water in winter. Ensure as well

that the module is so placed that is not shaded by plants or trees or building or that not damaged by sand and stone driven by wind.

3.5 Roof mount

By rooftop mounting ensure that the module is securely fastened and can`t fall as a result of wind or snow loads. Allow adequate ventilation under the module for cooling, 100 mm is recommended as minimum are space between the module and the roof surface.

By selecting a rooftop installation, ensure that the roof construction is suitable. Any roof penetration required to mount the module must be properly sealed to prevent leaks.

4. ELECTRICAL INSTALLATION

(Note: All instructions hereafter are for reference only. A licensed/qualified person or installer must be responsible for the design, installation, mechanical load calculation and security of the photovoltaic system.)

4.1 Any hardware used must be compatible with the mounting material to avoid galvanic corrosion.

4.2 Only use connectors that are designed for photovoltaic systems and that match HAI-TEC modules.

4.3 When working with the connectors only use tools as recommended by the connector manufacturer.

4.4 HAI-TEC recommends that the same type of modules are connected together in order to avoid any system power loss.

4.5 The maximum number of series connected modules depends on system design, the type of inverter used and environmental conditions.

Select insulated cables that are able to resist to ultraviolet radiation and extreme weather conditions.

4.6 The rated voltage of the cable chosen must be appropriate to the overall maximum voltage of the system.

4.7 The module frame may be grounded according to local, regional and state safety and electrical standards. Ensure that a recommended connector or equivalent is used for the grounding cable. The grounding cable must be properly fastened to the module frame.

4.8 In order to reduce the risk of potential induced degradation (PID),HAI-TEC strongly recommends to use anti-PID solar modules in wet regions (i.e. shores, wetlands), or to use the system negative grounding where the negative polarity of the PV modules array (i.e. negative grounding at the DC bus bar level) is connected to the ground. Failure to comply with this recommendation may reduce the module performance and will invalidate the limited power warranty of the module.

5. Wiring and connection

5.1 Before this procedure, please read the operation instructions of the PV system carefully. Make wiring by Multi-connection cables between the PV modules in series or Parallel connection, which is determined by user`s configuration requirement for system power, current and voltage.

5.2 PV module connected is series should have similar current> modules must not be connected together to create a voltage higher than the permitted system voltage (1000Vdc). As reference the max. number of Modules in series N can be easily calculated by dividing the max. system voltage of the modules by the respective Voc of the modules. Please always take into consideration that the variation of the voltage under different temperatures, the Vo cog the modules will be rise when temperature drops.

5.3 PV module connect in Parallel should have similar voltage. As reference the max. number of modules in Parallel M can be easily calculated by dividing

the max. rated current indicated in the electrical specification by Isc value of the module, and then plus 1. Please always take into consideration the variation of the current under different temperatures, the Isc of the modules will be rise when the temperature goes up.

5.4 connect the cabled from PV arrays to the connection box in accordance with the installation indications of PV control systems. The cross-sectional area and cable connector capacity must satisfy the maximum short-circuit of PV system, otherwise cables and connectors will become overheating for large current.

Please pay attention: the temperature limit of cables is 85 °C and the temperature limit of the connector is 105 °C.

5.5 All module frames and mounting racks must be properly grounded in accordance with local and national electrical codes. Attach the equipment grounding conductor to the module frame using the hole and hardware provided. Not that a stainless steel star washer is used between the ground wire and module frame. This washer is used to avoid corrosion due to dissimilar metals. Tighten the screw securely.

5.6 Follow the requirements of applicable local and national electrical codes.

5.7 These modules contain factory installed bypass diode. If these modules are incorrectly connected to each other, the bypass diode, cable or junction box may damage.

5.8 The cable of the junction box is 1000 mm. please take the cable length into consideration before designing the wiring layout.

6. MAINTENANCE

In order to ensure optimum module performance, HAI-TEC recommends the following:

5.1 If necessary, the glass front of the module can be cleaned with water and a soft sponge or cloth. A mild, non-abrasive detergent can be used to remove more stub born stains.

5.2 Check the electrical and mechanical connections periodically and make sure they are clean, safe, complete and secure.

5.3 In the event of a problem, consult with a licensed/qualified person.

7. DISCLAMER OF LIABILITY

Since it is impossible for HAI-TEC to control installation, operation, application and maintenance of the photovoltaic system according to this instruction, HAI-TEC does not accept responsibility and expressly disclaims liability for any loss, damage, or expense arising out of or in any way connected with such installation, operation, use or maintenance.

HAI-TEC will not take any responsibilities for any possible violation of patent rights and third party rights that are related to application of the solar energy system. No permission of patents is given through implication.

The information of this instruction is from knowledge and experience of HAITEC, and so it is reliable. However, the instructions and suggestions of this instruction do not make an external or internal of guarantee.

HAITEC reserves the right to revise this instruction, products and all the information about products without prior notification to customers.

8. DISPOSAL OF PRODUCT LIFE END

HAITEC modules belongs to a member of PV CYCLE, a European non-profit association managing a collection and recycling scheme for end-of-life solar modules throughout Europe. Please visit the website: http://www.pvcycle.org/ for further information.

9. LIMITED WARRANTY FOR PV-MODULES

(Version EN-W-SM-2015-V1)

HAITEC Standard PV Modules with the Model Names covered under this warranty are: PSXXXM-24/F (XXX = 180, 185, 190, 195,200,205,210)

PSXXXM-20/U (XXX = 230,235,240,245,250,255,260,265,270) PSXXXP-20/U (XXX = 230,235,240,245,250,255,260,265) PSXXXM-24/T (XXX = 280,290,300,310,320,330)

PSXXXP-24/T (XXX = 280,290,300,310,320,330)

The product (hereinafter the "Product") in this Warranty means the Standard PV Module(s) OF HAI-TEC GMBH (hereinafter the "HAITEC"). The HAITEC warrants its Product(s) in compliance with the terms and conditions as stipulated below.

The Customer in this Warranty means the individual person or company who Purchases HAITEC Product.

This "Limited Warranty for PV-Modules" is valid for all Standard Modules delivered from HAITEC since January 1st, 2015

10. Limited product warranty-Repair or Replacement

Ten (10) years

HAITEC warrants that the Product including factory-assembled DC connectors and cables, if any, will be free from defects in material and workmanship under normal application, installation, operation, use and service conditions.

If Product fails to conform to this warranty, within a period of ten (10) years from the date of delivery by HAITEC to its first buyer, HAITEC will, at its sole discretion, either

repair the defective Product(s) at no charge; or replace the defective Product(s) or part thereof by a new or remanufactured equivalent at no charge, within the above specified period. This repair or replacement remedy shall be the sole and exclusive remedy provided under the “Limited Product Warranty” and shall not extend beyond the ten Years period set forth herein.

This “Limited Product Warranty” does not warrant a specific power output, which shall be exclusively covered under clause 2 hereinafter (“Limited Peak Power Warranty”).

11.Limited Peak Power Warranty-Limited Remedy

Twelve 12 years

If, within a period of Twelve (12) years from the date of delivery by HAITEC to the first buyer any Product exhibits a power output less than 90% of the minimum “Peak Power at STC”1 as specified as of the HAITEC´s product label, provided that such loss in power is determined by HAITEC (at its sole and absolute discretion) to be due to defects in material or workmanship, HAITEC will, at its sole option, either

1.replace such loss in power by either (a) providing additional Product(s) to the Customer to make up for such loss in power or (b) replacing the defective Products(s) at the option of HAITEC or

2. refund the percentage of the cost of the Product(s) (as measured by the then prevailing market price for similar Product(s) to the Customer representing the percentage of the power output less than 90% the minimum “Peak Power at STC”1 as specified as of the HAITEC’s product label.

The remedies set forth in this clause 2 shall be the sole and exclusive remedies provided under the “Limited Peak Power Warranty”

Twenty Five (25) years

If, within a period of Twenty Five (25) years from the date of delivery by HAITEC to the first buyer any Product exhibits a power output less than 80% of the minimum “Peak Power at STC”1 as specified as of the HAITEC´s product label, provided that such loss in power is determined by HAITEC (at its sole and absolute discretion) to be due to defects in material or workmanship,

HAITEC will, at its sole option, either

1. replace such loss in power by either (a) providing additional Product(s) to the Customer to make up for such loss in power or (b) replacing the defective Products(s) at the option of HAITEC or

2.refund the percentage of the cost of the Product(s)(as measured by the then prevailing market price for similar Product(s) to the Customer representing the percentage of the power output less than 80% the minimum “Peak Power at STC”1 as specified as of the HAITEC’s product label.

The remedies set forth in this clause 2 shall be the sole and exclusive remedies provided under the “Limited Peak Power Warranty”.

12.Exclusion and Limitations

In any event, all warranty claims must be received within the applicable warranty period for this warranty to be effective. The “Limited Product

Warranties" and the "Limited Peak Power Warranties" do not apply to any Product(s) which have been subjected to: Misuse, abuse, neglect or accident;

Non-observance of HAITEC's installation manual;

Impairments caused by external effects, such as e.g., dirt stains, smoke, damages caused by salt, by chemicals not explicitly authorized for use, e.g. for cleaning. Repair or modifications by someone other than an approved service technician of HAITEC;

Power failure surges, lightning, flood, fire, accidental breakage or other events out of HAITEC' s control;

Caused by external events including but not limited to defective equipment parts, appliances, system components like, connecting cables, invertors, or the like, which have been coupled with the Module by anyone other than Seller, or caused by defective system design, configuration, or installation planning;

Removal of Modules and reinstallation at a new site;

Installation on mobile platforms or in a marine environment; direct contact with corrosive agents or salt water; pest damage; or malfunctioning system components; Alteration, removal or obliteration of the original Module label;

Both the "Limited Product Warranties" and "Limited Peak Power Warranties" do not cover any costs associated with installation, removal or re-installation of the PV-modules and (except as explicitly set forth in the final paragraph of Section 5) customs clearance or any other costs for return of the Product(s); .

Both the "Limited Product Warranties" and "Limited Peak Power Warranties" do not cover cosmetic blemishes associated with installation, or the normal wear and tear of HAITEC Modules

13.Limitation of Warranty Scope

These warranties as set forth herein are expressly in lieu of and exclude all other warranties of any kind whatsoever, whether express or implied, including but not limited to warranties of merchantability, of fitness for particular purpose, use, or application, of non-infringement and all other obligations or liabilities on the part of HAITEC, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by HAITEC to the broadest extent permitted by law.

HAITEC shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or related to the Product(s), including, without limitation, any defects in the Product(s), or from use or installation. Under no circumstances shall HAITEC be liable for any special punitive, incidental, or consequential damages, howsoever caused, including but not limited to loss of use, loss of profits, loss of production, or loss of revenues, arising, directly or indirectly from the sale or use of any Product(s), whether such claim is based on warranty, contract, negligence, strict liability or otherwise, HAITEC´s aggregate liability, if any, in damages or otherwise, shall not exceed the invoice value as paid by the Customer, for the single unit of Product(s) involved. The rights and limitations herein shall leave unaffected any legal rights existing under mandatory applicable laws

14.Obtaining Warranty performance

If the Customer has a justified claim covered by this “Limited Warranties for PV Modules”, an immediate notification directly to HAITEC shall be filed by mailing a registered letter in writing to the address of HAITEC listed hereunder, or by, sending an email letter to the email account of HAITEC Service Center listed hereunder as soon

as becoming aware of the circumstances which constitute a warranty case. Together with the notification, the Customer should enclose the following information:

1.The necessary contact information of the Customer, including its name, address, telephone, email, etc.,

2.The corresponding serial number of the Product(s)

3.The date on which the Product(s) have been delivered and installed

4.The pictures of the defective Module which show the defect and/or the pictures which show the shadowing situation at the installation location

The timely receipt of the notification by HAITEC shall be decisive. The return of any PV-modules will not be accepted unless prior written authorization for the return and evaluation of the claimed defect has been given by HAITEC. To the extent necessary for processing the return request HAITEC or its authorized person shall be given commercially reasonable access to the Product(s) for inspection and analysis of the claimed defect. In connection with both the “Limited Product Warranties” and “Limited Peak Power Warranties”, HAITEC shall reimburse Customer for reasonable, customary and documented transportation charges by sea freight for both the return of the Product(s) and reshipment of any repaired or replaced Product(s), only if this cost is authorized by HAITEC customer service department.

15.Severability

If a part, provision or clause of this “Limited Warranty for PV-Modules”, or the application thereof to any person or circumstance, is held invalid, void or

unenforceable, such holding shall not affect and shall leave all other parts, provisions, clauses or applications of this “Limited Warranty for

PV-Modules", and to this extent such other parts, provisions, clauses or applications of this "Limited Warranty for PV- Modules" shall be treated as severable.

16.Disputes

In case of any discrepancy in a warranty-claim, a first-class international test-institute such as Fraunhofer ISE in Freiburg/ Germany, TÜV Rheinland in Cologne/ Germany or ASU Arizona State University shall be involved to judge the claim finally. All fees and expenses shall be born by the losing party, unless otherwise awarded. The final explanation right shall be borne by HAITEC.

17.Various

The repair or replacement of the Product(s) or the supply of additional Product(s), does not cause the beginning of new warranty terms, nor shall the original terms of this "Limited Warranty for PV-Modules" be extended. Any replaced Product(s) shall become the property of HAITEC made for their disposal. HAITEC has the right to deliver another type (different in size, color, shape and/or power) in case HAITEC discontinued producing the replaced Product(s) at the time of the claim.

18.Warranty transfer

This warranty is transferable from the original Customer to any assignee and remains in effect for the time period remaining under the limited warranties, provided the Product remains installed in its original location at the warranty registration.

19.Force Majeure

HAITEC shall not be responsible or liable in any way to the customer or any third-party arising from any non-performance or delay in performance of any terms and conditions of sale, including this

"Limited Warranty for PV-Modules ", due to acts God, war, riots, strikes, warlike conditions, plague or other epidemics, fire, flood, or any other similar cause or circumstance beyond the reasonable control of such HAITEC. In such cases, performance by HAITEC Solar of this Limited Warranty shall be suspended without liability for the period of delay reasonably attributable to such causes.

1 “Peak Power at STC” is the power in Watt peak that a PV- Module generates in its Maximum Power Point.

“STC” are as follows:

Light spectrum of AM 1.5, (b) an irradiation of 1000 W per m2 and (c) a cell temperature of 25 degree centigrade at right angle irradiation.

The measurements are carried out in accordance with IEC 61215 as tested at the connectors or junction box terminals – as applicable – per calibration and testing standards of HAITEC valid at the date of manufacture of the PV-modules. The power output shall be measured by a laboratory approved by HAITEC.

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Company Information

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