



**Installation
and
maintenance**

**SoLink
Hybrid Panels**

Grade "A".
HYBRID comply with **CEI EN/ IEC 61215, CEI EN 61730 and SOLAR KEYMARK.**

This installation manual provides general and specific information relating to photovoltaic modules series HYBRID .

The series is available in the power scale of 245-300W electrical and 850W thermal.

PLEASE READ CAREFULLY BEFORE INSTALLING THIS MANUAL FORMS AND FOLLOW CAREFULLY TO ITS CONTENT, THE FAILURE TO FOLLOW THE INSTRUCTIONS BELOW MAY VOID THE WARRANTY OF FORMS!

This manual should not be used for the installation of modules from other manufacturers, no liability is assumed as a result of any failure in this manual.

Our solar modules are the result of intensive market research components suitable for the construction of high quality modules and

They should only be used for the transformation of solar radiation into electrical energy spread, and heat recovery of thermal energy systems.

Do not use concentration of sunlight of any kind!

ELECTRICAL COMPONENT

HYBRID modules must only be installed by highly skilled personnel in possession of the technical / professional and following the installation of suitable projects and authorization of local authorities.

HYBRID modules are highly reliable and virtually no maintenance for the electrical part except for normal cleaning of the surface exposed to irradiation with suitable neutral detergent ecological highly biodegradable for maximum environmental

protection.
Absolutely avoid the use of cleaning sponges, acids or chemicals which may dull the surface of transparent glass!

Avoid the use of any metal body while cleaning the surfaces! While the heat is recommended to check the closed-loop glycol circulation periodically (every 6 months) by trained personnel.

Avoid walking above the glass surface of the modules during mounting and cleaning, such a failure may cause breakage of the module and serious damages to the person. (Risk of cuts and shock)!

Avoid careless operations that may cause an electric shock hazard, the modules produce direct current (DC)! Use only appropriate support structures certified for snow load and wind resistance!

Avoid using structures and fixing screws which can create corrosion of the aluminum frame of the modules to effect electrolysis! Use the individual safety

devices, (ISD) according to current legislation, during the assembly operations and periodic cleaning of the modules!

Avoid damage during installation of the modules with impact against a hard surface and not install modules with glass surface or the back surface damage! Install the modules in environmental conditions without wind, rain or snow to avoid accidents to persons, property or modules!

Be very careful during all phases of handling modules! Make sure that the installation area is free from atmospheric corrosive agents such as salt chemicals etc..!

Avoid installing the modules in contact with flammable materials and always adhere to the regulations of fire prevention!

Always choose the best sun exposure and inclination of the modules to prevent loss of power!

Do not install modules near shade of trees, buildings and obstacles of any kind!

The modules are equipped with bypass diodes to minimize any loss of power. To optimize the yield of the modules connect in series, only modules with the same orientation and angle to avoid power losses.

The modules connection can be performed either in series or in parallel.

In case of parallel connection the bypass diodes are already inserted in the junction boxes in the manufacturing phase.

All modules are ground connected in accordance with the rules in force for electrical installation.

HEAT COMPONENT:

The hydraulic circuit must be filled with water / glycol in appropriate percentage to prevent the danger of freezing during the winter season, to define the percentage of glycol refer to the minimum winter conditions of the place

of installation, calculate the percentage of glycol and increase it by 50 %. To fill the hydraulic circuit using a pump equipped with filter impurities, make sure that the circuit is completely free of air before turning on the system!

No air vent is required at the top of the system!

BEFORE YOU FILL THE CIRCUIT WITH GLYCOL WASH THOROUGHLY WITH CLEAN WATER AND SO THE EXCHANGER COIL OF BOILERS. DOWNLOAD ALL WATER SO IT DOESN'T CIRCLES INSIDE THE PANELS OR BETWEEN THE CONNECTIONS MODULES AND HEAT EXCHANGERS.

DO NOT USE CARBON METAL PIPES FOR THE CONNECTION BETWEEN MODULES, AND STORAGE EXCHANGER!

IF YOU CAN, EXPECT A FILTER FOR HOT WATER WITH STAINLESS STEEL SOCK SET ON THE RETURN PIPE BEFORE THE PUMP.

AN EXPERT SHOULD CHECK THE CLOSED GLYCOL CIRCULATION FROM TIME TO TIME (AT LEAST EVERY 6 MONTHS).

THE COLD PRESSURE CIRCUIT MUST BE BETWEEN 2 and 2,5 BAR!

THE MAX WORKING PRESSURE IS 6 BAR.

The circulation of the glycol must always be ensured, in order to avoid that in case of electrical blackout also the temporary circulation system remains still. Provide an electrical switch with automatic reset safety according standards Country Regulations.

Connect the hydraulic circuit of the modules in parallel, the series connection does not guarantee a uniform cooling of the modules.

The drain of the safety valve of the pump unit must be discharged to an empty can with transparent rubber tube (not supplied) of suitable diameter to avoid that the

solution of water / glycol, in case of unloading, ends up in sewers or pollute the soil.

MODULES MOUNTING:

The modules must be mounted as following method:

1) Using corrosion--resistant screws (M8) on the existing holes in the module frame

2) Use of appropriate terminals on the module frame

The structure of each module is equipped with 4 holes (diameter 9mm) to secure the modules to the supporting structure.

The module frame can also be fixed to the support structure using special stainless steel clamps with spring.

Be careful that clamps not come into contact with the front glass and tighten properly so as not to deform the frame.

You may not modify the

module frame in any case, do not drill holes on the frame!

The recommended minimum distance between the solar modules is 5mm in this way the thermal expansion of the individual modules will be guaranteed.

IMPORTANT SAFETY NOTES : ELECTRICAL COMPONENT

The modules exposed to light will generate electricity, be careful when connections to avoid the danger of electrical shock, always cover the modules with opaque sheets when working on electrical parts!

Use insulated tools suitable for electrical connections and use insulating gloves and shoes to minimize the risk of electric shock!

The modules produce direct current (DC)!

Never open the junction box (JUNCTION--BOX) do not cut the cables to the modules and never replace connectors, and junction

box and connectors are sealed tampering will drop the warranty!

The modules can be installed both vertically and horizontally, but never with junction box (JUNCTION-BOX) side down!

The connection of the connectors must be complied with (+) positive (-) negative pole must not be short-circuited, never disconnect the connectors under load! For the boundary conditions of operation of the modules follow the data sheet!

HEAT COMPONENT

During the steps of assembly of the system check with air under pressure (max. 2bar) sealing the joints for hydraulic single string to avoid, in case of loss, of having to dismantle the whole plant or part thereof to perform the repair!

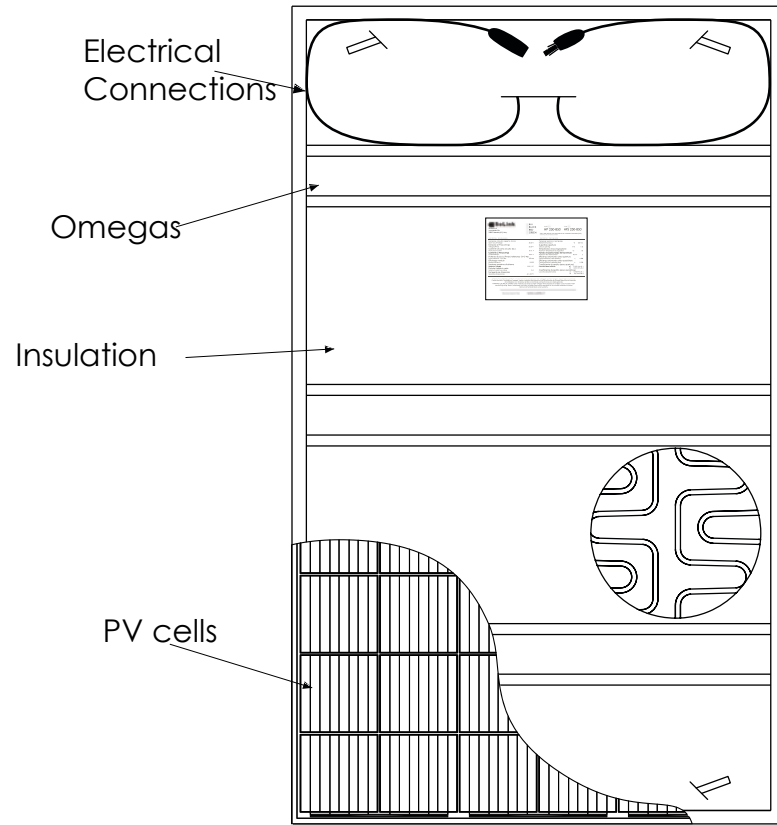
Being the modules heavier than the standard modules ensure that the structure no which will be mounted is suitable to the load that will be subjected!

Always activate the command of cooling of the modules in the solar control unit!

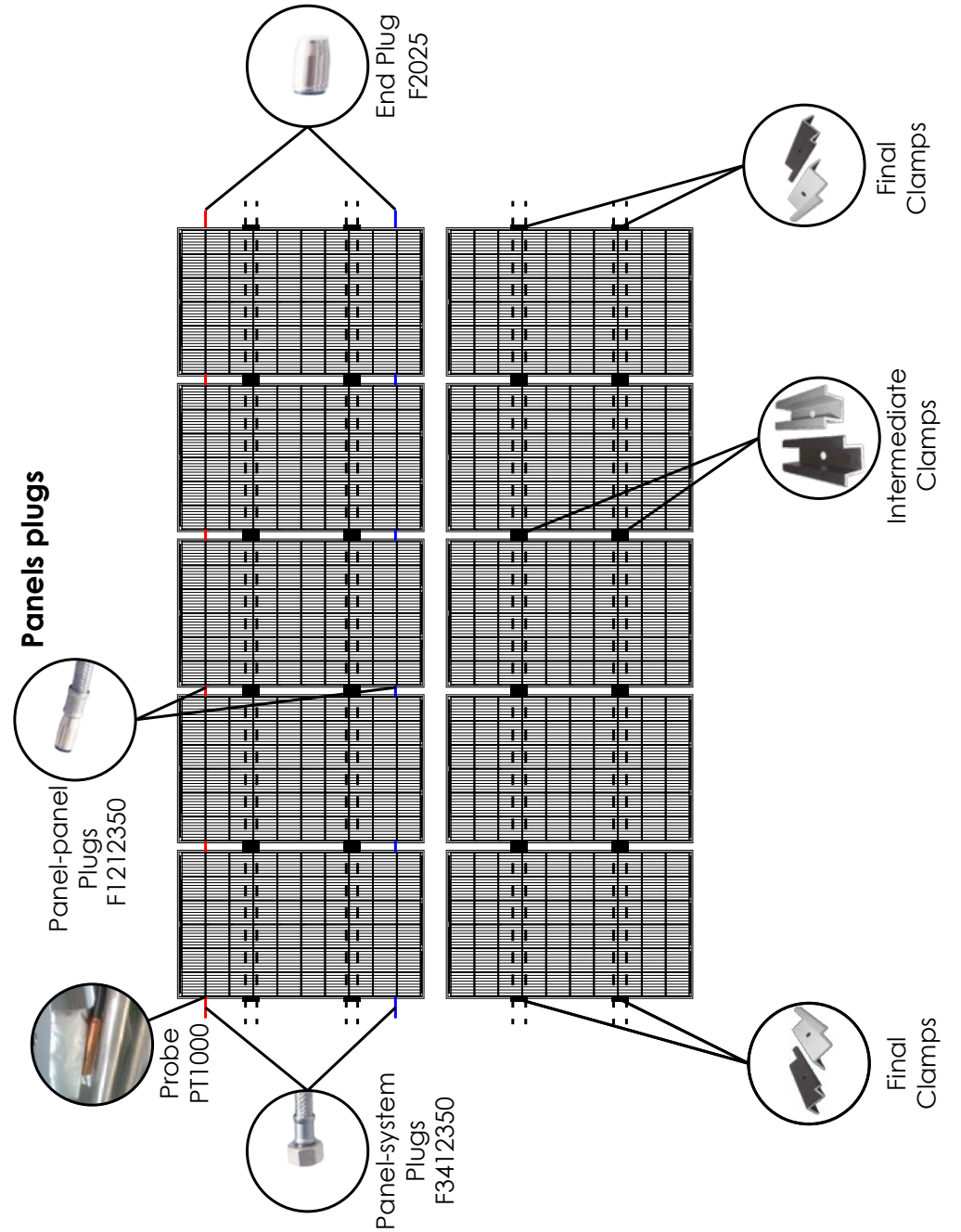
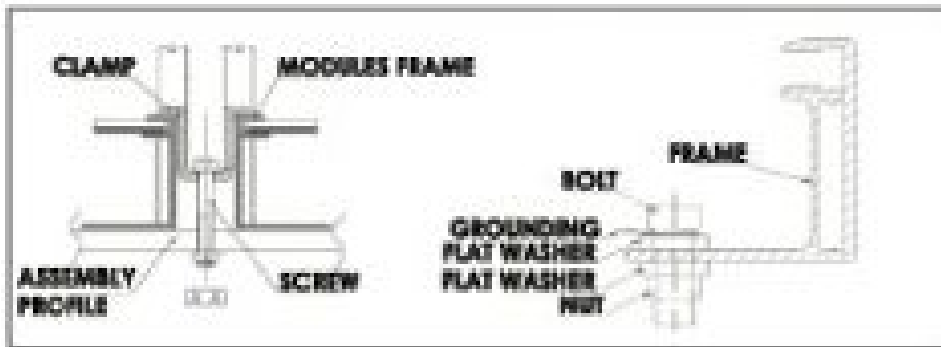
It is recommended to cover the modules with cloth obscuring if after the installation are not put to work immediately!

ALWAYS FOLLOW THE STANDARD ELECTRICAL AND HEATING SAFETY REGULATIONS IN THE COUNTRY OF INSTALLATION

SoLink Hybrid Panel



Clamp installation



Periodical checks

<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>

<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>
<p>Date..... Kind of check..... Glycol protection grade: <input type="checkbox"/> -10°C <input type="checkbox"/> -15°C <input type="checkbox"/> -20°C <input type="checkbox"/> -25°C <input type="checkbox"/> -30°C</p>	<p>Technician signature:</p>

www.solink.it