

Installation and operating manual

Valid for the following Meyer Burger photovoltaic module:

MEYER BURGER PANEL+ WHITE XL - product type: MB_WG144Cyz


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1. Introduction

Congratulations on the purchase of your high-efficiency photovoltaic module (hereinafter referred to as PV module) from Meyer Burger Industries (hereinafter referred to as MBI). Meyer Burger PV modules offer particularly sustainable and climate-friendly energy production, as no greenhouse gases are produced in the solar cells during power generation. MBI strives for sustainable production of PV modules.

This is why MBI focuses from the very start on high-quality materials, resource-conserving production processes, maximum recyclability in the sense of the circular economy, reliable and transparent supply chains and optimised transport routes. MBI PV modules enable environmentally friendly conversion of solar energy directly into electrical energy indefinitely and for several decades.




To ensure that you can use the full power of the MBI PV modules, please read and observe the following instructions carefully. Failure to observe the instructions can lead to personal injury and material damage. This installation manual describes the safe installation of the MBI PV modules.


All data and specifications in this installation manual are preliminary and subject to change at any time. The latest version is always available at www.meyerburger.com.

1.1 General information

- Before installing the photovoltaic system (PV system), request information from the relevant local authorities and energy suppliers about the applicable guidelines and approval requirements. Taking these requirements into account is the only way to ensure economic success.



Observe all required local, regional and national (safety) regulations and ordinances, as well as all technical, electrical and structural standards when designing and installing the PV system. Occupational safety regulations must be observed and occupational health and safety must be guaranteed at all times.



A photovoltaic module is an electrical product. There is a risk of electric shock in the event of incorrect handling and installation. All work may only be carried out by qualified specialist personnel.

- Keep the installation manual for the entire service life of the PV modules.
- Make sure that this installation manual is accessible to the operator at all times.
- Hand over the installation manual to any subsequent owner or user of the PV modules.
- Please observe the other applicable documents.
- Remove the adhesive tape on the rear for securing the cables and connectors before installation.

1.2 Intended use

This installation manual is valid in North America. The instructions provide information on how to handle MBI's high-performance crystalline PV modules safely, as well as on installation, assembly, cabling, maintenance and recycling.

NOTE

Deviations from the installation manual and modifications to the module will invalidate the warranty and guarantee. Please refer to the warranty conditions for further details.

2. Electrical planning, design and wiring

2.1 Scope of application

The PV modules are suitable for the following applications:

- Operating ambient temperature -40°C to +45°C
- Module operating temperature -40°C to +85°C
- Pressure loads of max. 8,200 Pa and tensile loads of max. 4,000 Pa (including safety factor 1.5)*

The assembly takes place on a substructure for PV modules.

* depending on assembly variants (see 3.7 installation types)



Observe all required local, regional and national (safety) regulations and ordinances, as well as all technical, electrical and structural standards when designing and installing the PV system.

2.2 Certification and technical data of PV modules

The PV modules are tested and approved according to IEC 61215, IEC 61730, UL 61730-1 and UL 61730-2. Please refer to the corresponding data sheets for the further list of current available certificates, as well as all technical and electrical data.

These can be found on our website www.meyerburger.com.

2.3 Electrical design and planning

- Meyer Burger PV modules have three pre-installed bypass diodes (non-replaceable) that ensure protection and improved performance in the shade.
- It is advisable to only connect PV modules of the same module line and performance class.
- When designing the photovoltaic system (PV system) and its components, a safety factor of 1.25 for the electrical variables (VOC, ISC) must be observed, as a module can supply a higher current and/or higher voltage than under standardised test conditions due to special ambient conditions. For the MEYER BURGER GLASS module, use higher safety factors depending on the application due to the bifaciality.

- It is recommended to use UV resistant PV cables. These must have a minimum cross-section of 4 mm² (12 AWG) and be heat-resistant up to at least 90°C (194°F).
- Identical connection plugs (same manufacturer, same plug types) must be used for the extension and connection cables. MBI uses different plug types.
- These are indicated by numbering on the module label. Please refer to the explanation on the data sheet for the corresponding plug type.
- Shading must be avoided in order to achieve optimal solar radiation and maximise yield.
- The individual system components (PV modules, fuses, inverters, etc.) must be coordinated according to their data sheet

2.4 Series connection

- The PV modules can be connected in series to achieve the desired total voltage.
- The current (IMPP) of the PV modules connected in series should be identical, as the maximum current is determined by the module with the lowest current.
- The maximum system voltage must be observed and can be found in the corresponding module data sheet.

2.5 Parallel connection

- The PV modules can be connected in parallel to achieve the desired total current.
- The voltage (VMPP) of the PV modules connected in parallel should be identical.
- The cable cross-section of the extension cable must be adapted to the maximum current capacity of the wiring.
- To prevent reverse current, an over current protection device is also required (e.g. blocking diodes or string fuse).
- Without string fuse, a maximum of two strings may be connected in parallel. Please observe the value specified in the relevant data sheet for the overcurrent protection rating.

2.6 Combined connection

- All components must be coordinated with each other. The individual connection instructions, series and parallel connection, must be observed.
- The same number of PV modules must be connected in series (identical string voltage).
- Additional safety precautions must be implemented to protect the cables and PV modules from reverse current.



2.7 Safety during electrical installation

The following safety instructions must be observed at all times:

- Work may only be carried out by qualified personnel.
- The applicable safety instructions and regulations must be observed.
- Even with low lighting, the open circuit voltage (VOC) is applied.
- Do not touch the PV modules with bare hands.
- Do not wear metallic jewelry when working with the PV modules.
- Use dry and insulated tools and insulating gloves.
- The PV modules must be dry, clean and free of damage during installation.
- Do not modify the PV modules.
- Never connect or disconnect PV modules under load. There is a risk of electric arc.

2.8 Electrical installation

- The cables and plugs must be routed so that they are protected against moisture.
- The cables and plugs must not lie on the substrate, the roof surface or the ground.
- The cables and plugs must be routed so that they are protected against UV radiation.
- The cables and plugs must be protected against animal bites.
- Connections that are not plugged in must be protected from dirt and moisture during transport, storage and during the installation period, as only plugged-in connections meet their respective protection class.
- Observe the polarity of the cables and plugs during connection.
- PV modules, junction boxes, cables and plugs must be checked for damage and contamination. Only undamaged components may be installed.
- The minimum bending radius of the cable and strain relief must be taken into account.
- The cables must not be routed over sharp edges and corners without protection.

- Always connect the cables with a suitable identical plug, do not trap them and protect them from mechanical stress.
- Ensure that the cables are routed so that there are no loops (minimise the risk of induction during thunderstorms).
- It is recommended to place PV modules with the same orientation and inclination in a string to achieve maximum yields.
- Connect the module string to an inverter suitable for the layout.

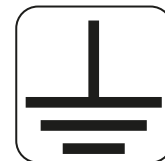
2.9 Equipotential bonding, grounding and lightning protection



Proper equipotential bonding of the system components must be ensured in accordance with the locally applicable guidelines, regulations and standards.

The PV module grounding must be implemented in accordance with national, regional and local guidelines, regulations and standards.

- In order to ensure electrical and fire safety, Meyer Burger solar modules must be grounded in accordance with the national, regional and local regulations.
- Article 250 of the U.S. National Electrical Code (NEC) covers the grounding and bonding of electrical systems within the US. Follow the rules of the NEC accordingly.
- Meyer Burger modules are equipped with pre-drilled grounding holes along the frame as specified in the module data sheets (www.meyerburger.com). Grounding holes are marked with the following symbol:

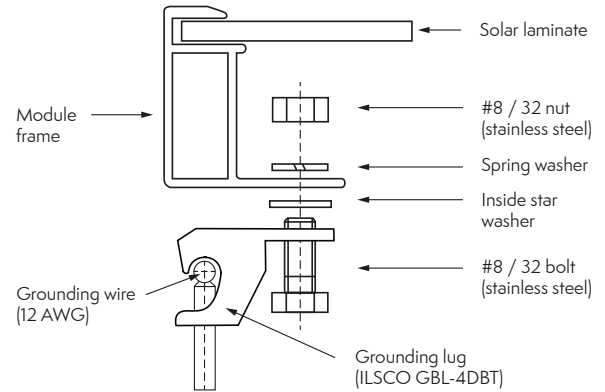


- Do not use different holes for grounding purposes and do not drill any additional holes inside the module frame.
- The frames of Meyer Burger modules are made of aluminum and coated with an anodized layer to protect against corrosion. Penetration of the anodized layer is necessary for proper grounding and/or bonding. Use special technical means (e.g. star washer, toothed washer) to penetrate the anodized layer.

- Meyer Burger only recommends using UL listed and certified methods as shown below:

Method 1: Use a certified grounding mean

- We require the installation of the certified equipment from ILSCO Corp. in the displayed order of installation in the picture.
- Use a stainless steel bolt and nut, a star washer and a spring washer.
- The tightening torque of the grounding lug to the module frame shall be 20 lbs-in (2.3 Nm).
- The tightening torque of the in-field grounding wire (12 AWG) shall be 20 lbs-in (2.3 Nm).



Ground lug GBL-4DBT, ILSCO CORP, UL File-No. E354420

Method 2: Use a mounting system integrated grounding

- Electrically bond Meyer Burger solar modules to UL2703 certified integrated grounding methods of a mounting system.
- To ensure system safety, the entire mounting system must be grounded according to the manufacturer's installation instructions.
- Meyer Burger modules must be listed on the system certificate.
- Strictly follow the installation instructions of the system manufacturer.
- Examples of this grounding method are the use of pin clamps or special washers within a certified system for proper bonding of the solar module.



The existing lightning protection concept of the building must be observed. The potential integration of the PV system into the lightning protection concept must be agreed with the corresponding lightning protection expert. National, regional and local guidelines, regulations and standards must be complied with at all times.

3. Technical planning and installation of PV modules

3.1 Handling and transport

- Module pallets should only be loaded and moved using suitable forklifts.
- The forklift truck must have a minimum fork length of 1.20 m, a fork length of 1.75 m is recommended. The forks must be selected and placed so that they do not come into contact with the PV modules under any circumstances.
- Ride over uneven surfaces slowly.
- It is recommended to move the pallets one at a time and not in a double deck.
- Pallets may be stored on a double deck (maximum 2 pallets on top of each other). Only the original Meyer Burger pallets are permitted for stacking. It is essential to ensure that the pallets are positioned exactly on top of each other.
- No third-party products may be placed or stacked on the pallets and PV modules.
- Further transport recommendations can be requested from Meyer Burger.
- The PV modules may only be touched on the module frame with clean gloves.
- When unpacking the PV modules, the front side must be protected against scratches, etc.
- The cables of the PV modules must not be short-circuited (connected) under any circumstances.
- It is prohibited to handle and carry the module by the cables and junction boxes.
- Climbing on the PV modules and other point loads (e.g. carrying the PV modules by their head or back) is prohibited, as this can lead to irreversible damage to the PV modules.
- Do not place tools or other objects on top of or drop them onto the PV modules.
- The PV modules must be stored dry and protected from the weather until installation. The transport pallets do not provide sufficient protection for outdoor storage of the PV modules.
- When unpacking the PV modules from the pallet, the stability of the PV modules and pallet must be ensured. The pallet and PV modules must be secured against falling over.
- The packaging must be disposed of properly.

3.2 Installation location

The following information on the installation location must be observed:

The PV modules must **not** be installed:

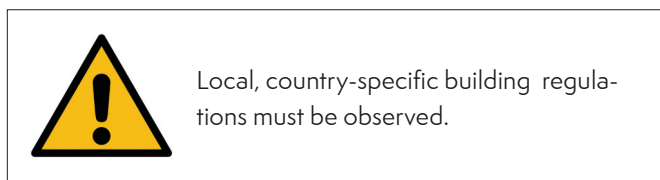
- In enclosed spaces
- Over 2,000 m above sea level*
- On water surfaces**
- In places where water can accumulate (e.g. flooding)
- Near highly flammable gases or vapors (e.g. gas tanks or filling stations)
- In places where contact of chemical substances (e.g. oil or solvents) with parts of the PV module is possible
- Near open flames or flammable/explosive materials
- In the immediate vicinity of air conditioning and ventilation systems
- The PV modules must not be used as a replacement for roof coverings or facades.
- For installations closer than 500 m to the sea, special precautions must be taken with regard to grounding, maintenance and cleaning.
- The PV modules must not be in direct contact with salt water.
- There is an increased risk of corrosion when installing PV modules in salty or ammonia/sulphurous environments.
- Use of PV modules on mobile units such as vehicles and ships will void any liability and warranty claims.
- The use of PV modules for BIPV applications (building-integrated photovoltaics) is not permitted**.
- The use of PV modules in concentrated light applications is prohibited.

* Installation up to 5,000 m above sea level is allowed only for products with following connector types 1: MC4 and 2: MC4-Evo2(A); Connector types are indicated with the according numbers on the frame label alongside the connector symbol

**On water surfaces or in BIPV applications requires consultation with and explicit approval from the manufacturer.

3.3 Module positioning

- The PV modules can be installed in landscape or portrait format.
- Ensure that there is no water build-up. Rain and melt water must be able to drain freely.
- The drainage openings in the module frame must not be covered or sealed.
- The PV modules must be installed with a minimum inclination angle of 5°.
- The maximum permitted inclination angle must be determined in accordance with the locally applicable regulations.
- An inclination angle greater than 20° has a positive effect on the self-cleaning of the PV modules.
- There must be no objects (air outlets, antennas, etc.) on the back of the module that could lead to point loads when the PV modules bend.



3.4 Freedom from shade

Optimal solar radiation results in maximum energy yield:

- Install the front of the PV modules facing the solar radiation. The electrical connection box is located on the rear of the PV module.
- Shading and partial shading (e.g. trees, chimneys, buildings, dirt, snow, overhead lines etc.) should be avoided.
- In the case of bifacial PV modules, it must be ensured that shading caused by the substructure on the rear of the module is avoided or minimised.
- In the case of strong or inhomogeneous shading, the use of optimizers in the system may be advantageous.

3.5 Substructure

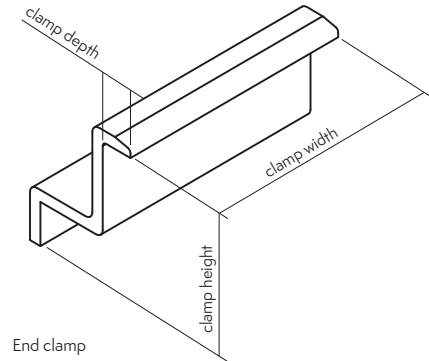
- Meyer Burger solar modules can be mounted in combination with UL 2730 certified mounting systems if listed.
- The structure or subsurface on which the PV system is installed must be able to absorb the resulting static loads.

- The substructure must be able to absorb the forces acting on the module.
- The statics of the substructure must be designed according to the local snow and wind loads.
- In addition to the wind and snow loads, no forces may act on the module via the substructure.
- The substructure must be properly fixed to the roof or the floor.
- Uneven snow loads (e.g. snow overhangs, snowdrifts) that lead to local increases in loads must be eliminated or prevented by technical measures.
- The substructure must ensure adequate cooling through rear ventilation of the PV modules.
- The fixing must be stress-free to allow for temperature-related changes in length.
- A minimum distance of 5 mm between the PV modules is recommended.
- The PV modules can be fastened using clamps or insert rails or via a screw connection (point connection) using the pre-drilled mounting holes inside the frame of the module (see table in Section 3.7). Do not change the module frame e.g. by drilling additional holes.
- There must be no components between the profiles of the substructure and the PV modules.
- Sharp edges and point loads of the substructure under the PV modules must be avoided.
- Additional stresses and torques at the mounting positions are not permitted. It must be ensured that the clamps or insertion rails do not touch the glass, even under load.
- A distance of at least 50 mm from the substructure and other hard structures under the junction box (except for mounting variant CP2) must be ensured.
- Make sure that the cables cannot be pinched between laminate and carrier rail under high compression load. Routing the cable along the module frame is recommended.
- Contact between different metallic materials must be avoided (contact corrosion, observe electrochemical series), e.g. it must be ensured that the fastening screws and washers have the same material properties.
- Corrosion-resistant screws and washers must be used for installation.

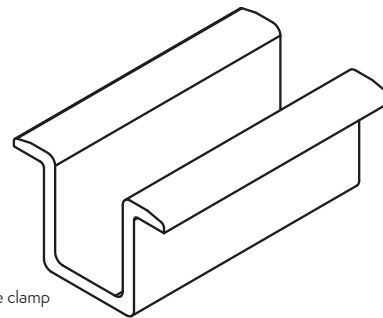
3.6 Clamping system

Clamps that meet the following requirements must be used:

- Minimum clamping width 40 mm
- Clamping height for 35 mm frame height
- Clamping depth 7–11 mm
- The clamps must meet the necessary structural requirements at the installation site.
- The clamps must be fastened firmly in the assembly system.
- Long-term stable clamps
- The clamps must not touch the front glass.
- The clamps must not cast shade on any cells.
- The clamps must not damage or deform the frame of the module.
- Use clamps which guarantee long-term stability and secure attachment of the modules to the racking.
- The clamps must be installed in accordance with the manufacturer’s instructions, including any specific hardware and torque requirements. A tightening torque of 15 Nm (133 lbs-in) need to be used.
- Use M8 screws, stainless steel
- The module frame must not be removed or modified. Drilling additional holes on the module frame is not permitted. Changes of any kind will void the warranty.



End clamp



Middle clamp

Example of end and middle clamp

Manufacturer	Mounting Systems (Clamp option 1)	K2 Systems (Clamp option 2)
Type end clamp	MEC FH 35 mm steel	Universal OneEnd
Type mid clamp	No mid clamp was used	Universal OneMid
Tightening torque	15 Nm / 133 inch Pounds	15 Nm / 133 inch Pounds
Width of clamp	40 mm	65 mm
Depth of clamp	9 mm (over module frame)	7 mm (over module frame)
Height of clamp	37.8 mm (designed for 35 mm module frames)	30-42 mm
Clamp min. thickness	2.5 mm	

3.7 Installation types

The overview load tables show all permissible installation types including the associated design and test loads according to IEC 61215 and UL 61215 for several modules. The following tables show in detail the different assembly variants (see also sketches), the permissible associated fixing areas and the corresponding maximum pressure and suction loads.

Legend for installation type naming:

Prefix	Description
CP	Clamp point
CL	Clamp line
IP	Installation profile / Insertion profile
MP	Mounting point on frame (mounting holes)
TCP	Tracker mounting at clamp point
TMP	Tracker mounting at mounting point (mounting holes)

Suffix	Description
1	Installation on long module side
a	different variation of same type

Module with 144 half-cells	Installation type		Design load		Test load (1.5x safety)	
	Name	L [mm]	Pressure [Pa]	Suction [Pa]	Druck [Pa]	Sog [Pa]
MEYER BURGER PANEL+ WHITE XL MB_WG144Cyz	CP1	500 - 600	3600	2400	5400	3600
		400 - 650	2400	2400	3600	3600
		150 - 700	1600	1600	2400	2400
	CP1a	500 - 600	2400	2400	3600	3600
		150 - 700	1600	1600	2400	2400
	CL1	500 - 600	2133	2133	3200	3200
		150 - 700	1600	1600	2400	2400
	IP1		2133	1600	3200	2400
	MP1	487.5	3600	2400	5400	3600
	MP1a	487.5	2133	2400	3200	3600
	TCP1	200 - 700	1333*	1333*	2000*	2000*
	TMP1	200	1600	1600	2400	2400
		395	1600	1866	2400	2800
		700	1866	1866	2800	2800
	TMP1a	200	1600	1600	2400	2400
		395	1600	1866	2400	2800

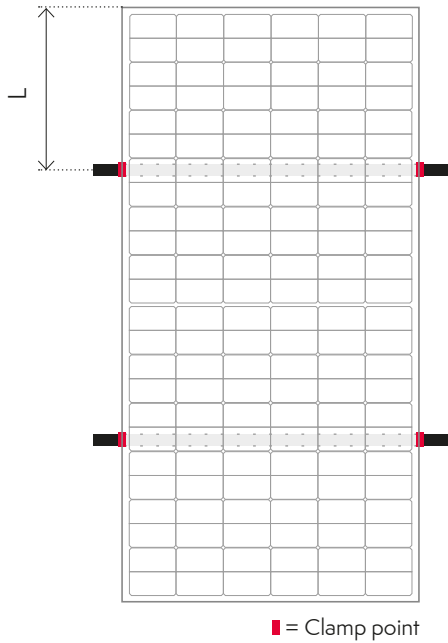
* these load ratings have been tested in accordance with the standard test procedure of IEC 61215-2 / UL 61215-2 but are not certified according to the minimum test load requirements of the standards

Meyer Burger Panel+ White XL was additionally tested on mainstream tracker mounting systems listed below. The following load ratings have been achieved in accordance with the standard test procedure of IEC 61215-2 / UL 61215-2 but are not part of the certification.

For compatibility letters and other special mounting options not listed in the table please contact Meyer Burger customer service.

Tracker compatibility overview for 144 half-cell modules:

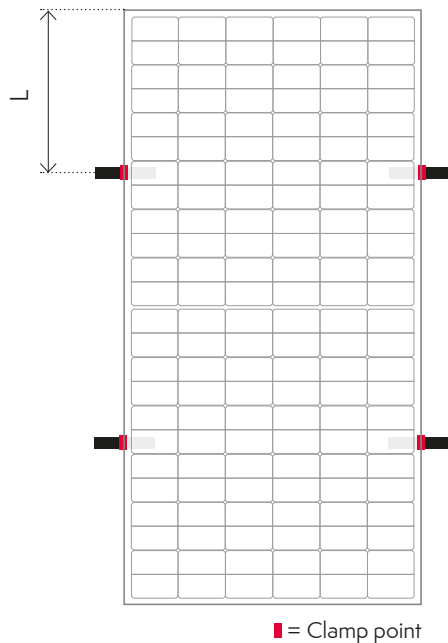
Module with 144 half-cells	Tracker Installation type	Design load		Test load (1.5x safety)	
		Pressure [Pa]	Suction [Pa]	Druck [Pa]	Sog [Pa]
MEYER BURGER PANEL+ WHITE XL MB_WG144Cyz	Name				
	Nevados ATT clamp SL	1600	1600	2400	2400
	Nevados ATT clamp HL	2133	2133	3200	3200
	Nextracker NXH & NX100 & NXH-XTR – 400 mm rail	1866	1866	2800	2800
	Nextracker NXH & NX100 & NXH-XTR – 790 mm rail	2133	2133	3200	3200
	Nextracker NXH & NX100 & NXH-XTR – 1400 mm supplemental rail	2133	2133	3200	3200
	ATI DuraTrack clamp 20916 – 1400 mm	2133	2133	3200	3200
	ATI DuraTrack bolting 21011 – 400 mm	1333	1333	2000	2000
	ATI DuraTrack bolting 20834 – 400 mm	1200	1200	1800	1800
	ATI DuraTrack bolting 20822 – 300 mm	1200	1200	1800	1800


INSTALLATION TYPE CP1

Fastening with 4 module clamps on the long module side, point mounting with continuous substructure rails

PERMISSIBLE LOADS (PRESSURE, SUCTION)

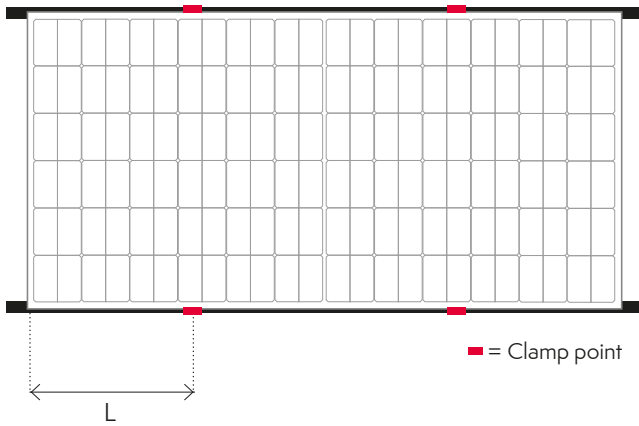
CP1		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	500 - 600	3600	2400	5400	3600
	400 - 650	2400	2400	3600	3600
	150 - 700	1600	1600	2400	2400


INSTALLATION TYPE CP1a

Fastening with 4 module clamps on the long module side, point mounting without continuous substructure rails

PERMISSIBLE LOADS (PRESSURE, SUCTION)

CP1a		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	500 - 600	2400	2400	3600	3600
	150 - 700	1600	1600	2400	2400

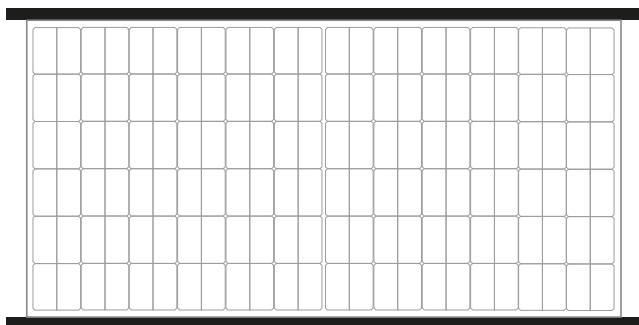


INSTALLATION TYPE CL1

Fastening with 4 module clamps on the long module side, line mounting along the long module side

PERMISSIBLE LOADS (PRESSURE, SUCTION)

CL1		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	500 - 600	2133	2133	3200	3200
	150 - 700	1600	1600	2400	2400

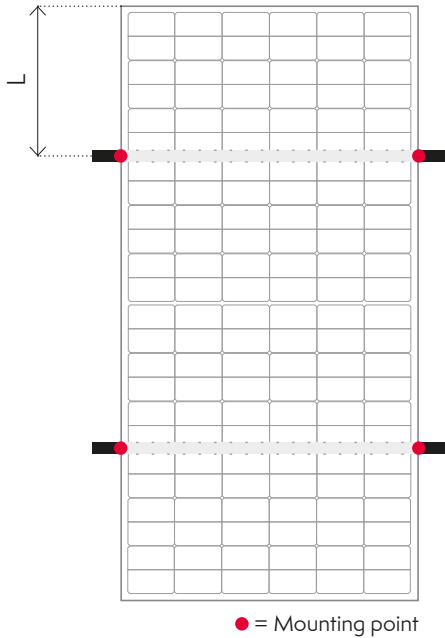


INSTALLATION TYPE IP1

Fastening via line mounting with insert profile rails on the long module side

PERMISSIBLE LOADS (PRESSURE, SUCTION)

IP1		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	2133	1600	3200	2400	2400

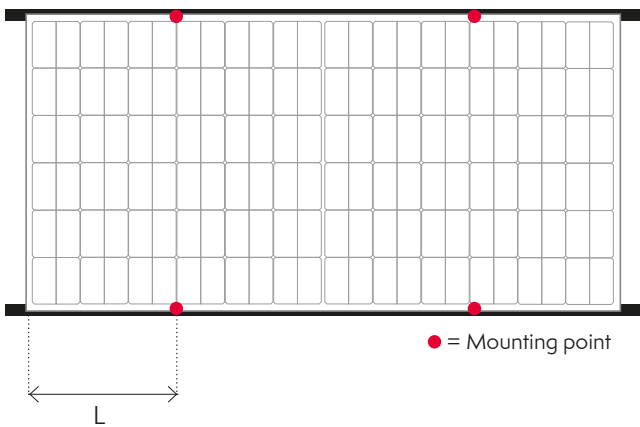


INSTALLATION TYPE MP1

Fastening to the mounting points on the long module side, point mounting with continuous substructure rails

PERMISSIBLE LOADS (PRESSURE, SUCTION)

MP1		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	487.5	3600	2400	5400	3600



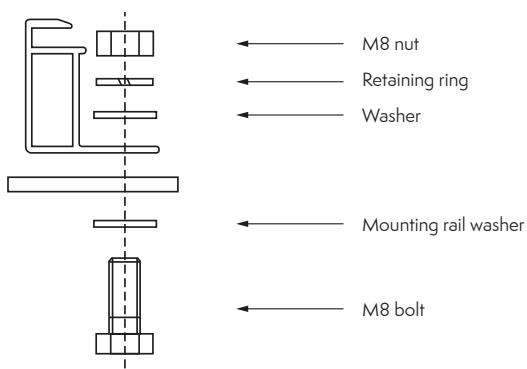
INSTALLATION TYPE MP1a

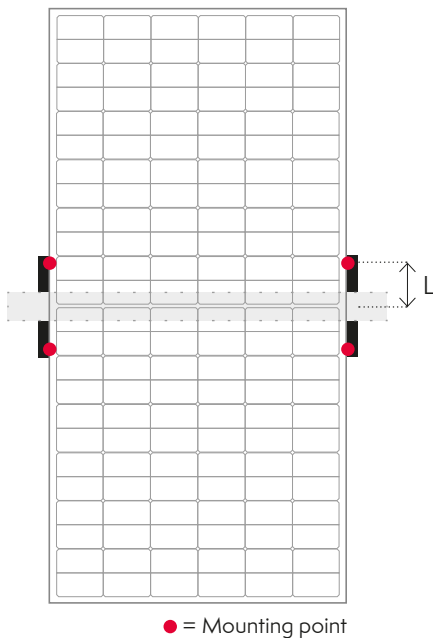
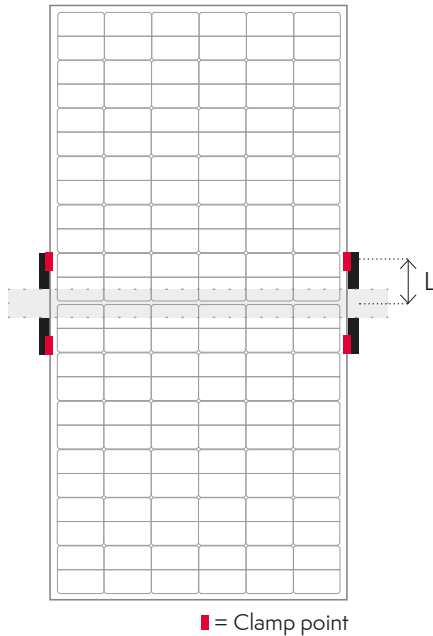
Fastening at the mounting points on the long module side, line mounting along the long module side

PERMISSIBLE LOADS (PRESSURE, SUCTION)

MP1a		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	487.5	2133	2400	3200	3600

Recommended mounting method at the mounting points of the MP1, MP1a installation variants:





INSTALLATION TYPE TCP1

Fastening with 4 module clamps on the long module side, fixed 1P tracker mounting rail

PERMISSIBLE LOADS (PRESSURE, SUCTION)

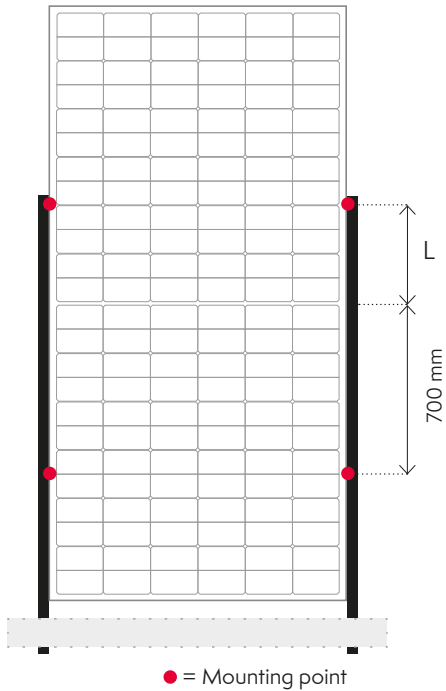
TCP1		Design load		Test load (1.5x safty)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	200 - 700	1333	1333	2000	2000

INSTALLATION TYPE TMP1

Fastening at the mounting points on the long module side, fixed 1P tracker mounting rail
 200 mm & 395 mm holes = 7x10 mm
 700 mm holes = 9x14 mm

PERMISSIBLE LOADS (PRESSURE, SUCTION)

TMP1		Design load		Test load (1.5x safty)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	200	1600	1600	2400	2400
	395	1600	1866	2400	2800
	700	1866	1866	2800	2800



INSTALLATION TYPE TMP1a


Fastening at the mounting points on the long module side, fixed
 2P tracker mounting rail
 L holes = 7x10 mm
 700 mm holes = 9x14 mm

PERMISSIBLE LOADS (PRESSURE, SUCTION)

TMP1a		Design load		Test load (1.5x safety)	
Module	L [mm]	Pressure [Pa]	Suction [Pa]	Pressure [Pa]	Suction [Pa]
PANEL+ WHITE XL	200	1600	1600	2400	2400
	395	1600	1866	2400	2800

3.8 Fire protection

- When installing on the roof, the PV modules may only be installed over a fire-resistant roof cover ("hard roof"). This excludes the in-roof installation of the PV modules.



Improper installation can lead to fires/ fire hazards. Observe all necessary local, regional and national building and fire protection regulations, ordinances as well as all technical, electrical and structural standards when designing and installing the PV system.

- Do not use deionized water for cleaning.
- The use of abrasive cleaning agents such as sanding powder, steel wool, scrapers and steel cleaning equipment is not permitted.
- Care should be taken when cleaning if sand or heavy soiling is present to avoid scratches.
- To remove heavy soiling, use generous amounts of water before wiping the glass surface. Stubborn dirt should be soaked if necessary.
- Carefully remove leaves, snow, ice or other loose dirt with a soft broom.
- Damage to the anti-reflective coating (ARC) due to improper cleaning will void the performance warranty.

4. Maintenance & cleaning


4.1 Maintenance

- It is recommended to have the system checked regularly (annually) by an installer. The inspection interval may vary depending on local circumstances/conditions/regulations.
- Check glass surface, frame and connections for damage.
- Check the electrical components for corrosion and good-connection contact.
- If a module needs to be replaced, observe the instructions for disassembly and assembly (see Sections 3 and 6).
- The replacement module should have the same electrical-properties.
- After an unusual weather event (storm, hail, a lot of snow, etc.), the modules must be checked for damage.
- The vegetation under the PV modules must be cut back regularly to avoid shading on the PV modules.


4.2 Cleaning

- Use sufficient water and a soft cloth to clean the PV modules.
- The PV modules must only be cleaned manually.
- Do not use high-pressure cleaners for cleaning.
- Allow the PV modules to cool down before cleaning.
- Never touch glass with bare hands as this may leave fingerprints.
- The use of aggressive cleaners, ethanol and isopropanol, diluted alcohol, acetone and any chemical cleaning agents is not permitted, as this may damage the anti-reflective coating (ARC) of the module.
- The use of acids, alkalis, bleach powders and strong bases is not permitted.
- The ingredients of cleaning products should be checked before use.

5. Troubleshooting



The installer or the technical customer service of MBI must be contacted in the event of a malfunction of the PV system.




Never try to remedy the fault yourself, especially in the event of glass breakage. There is a risk of electric shock.

Contact details can be found at www.meyerburger.com.

6. Dismantling and recycling

- When disassembling the system, the (dis)assembly/ installation manual for the other installed system components must be observed.



The work may only be carried out by qualified personnel.

- The five safety rules of electrical engineering must be observed.
- The inverter must be switched off and its switch-off time interval observed.
- The PV modules must be disconnected from the inverter.
- It is essential to ensure and check that the inverter is de-energised.
- The plugs must only be disconnected with suitable specialist tools.
- Check the components for damage.
- PV modules and substructure must be disassembled with suitable specialist tools.
- PV modules and other components must be packaged for safe transport.
- The modules must be disposed of in accordance with local regulations.

Meyer Burger (Industries) GmbH

Carl-Schiffner-Str. 17
09599 Freiberg
Germany

www.meyerburger.com

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