IVENDO Solar
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14-200 Iława

Manual for system installation on a pitched roof

KDS-B

These instructions contain information on mounting the mounting structure for 4 vertically arranged modules.

Materials:

- Stainless steel A2
- Aluminum 6060 T66

Bezpieczeństwo
Produkcja
kontrolowana

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It is essential that you familiarize yourself thoroughly with the instructions and use them in accordance with the intended purpose.

Information about the security

Before starting the assembly work, you should familiarize yourself with the following safety instructions, which will reduce the risk of an accident.

Attention! The setup and connection should be performed by qualified personnel with the appropriate authorizations. The general safety rules must also be observed.

Attention! During the work, it is necessary to observe the applicable national and European standards, especially the electrical installations. It is also necessary to follow the instructions of the other components, e.g. the inverter.

Attention! Danger of falling from heights. The rules for working at heights and the necessary safety equipment such as harnesses and safety ropes must be observed.

Attention! Danger of falling objects. Special care must be taken. Before starting work, the assembly area must be appropriately secured to avoid hazards.

Attention! Warning of electric current. Be especially careful when performing electrical work, especially when connecting modules and when setting up and connecting the inverter to the modules.

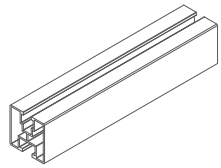
Attention! Warning about highly flammable materials. Photovoltaic modules, inverters and other electrical equipment should not be used near easily flammable materials.

Attention! The assembly work must not be carried out by persons under the influence of alcohol or other intoxicating substances.

Attention! The mounting structure should not be installed simultaneously with the edge of the roof. It is recommended to keep a distance of at least 20 cm from the edge. The construction and modules should not be mounted outside the roof area.

Components overview

A

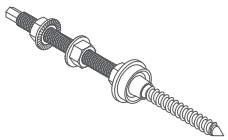


ECO rail 40x40x1,5

4 piece

Material: Aluminum

B

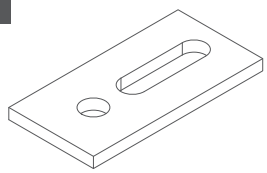


Double spindle M10 screw

12 piece

Material: Stainless steel

C

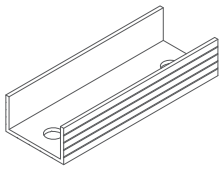


Montageadapter 30x80x4

12 piece

Material: Stainless steel

D

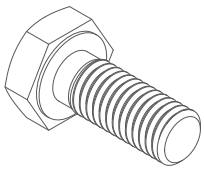


Rail connector

6 piece

Material: Aluminum

E

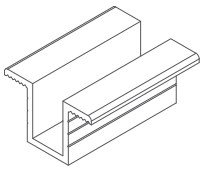


Hexagon head screw M10

24 piece

Material: Stainless steel

F

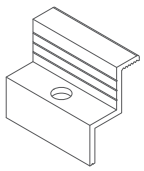


Center clamp

12 piece

Material: Aluminium

G

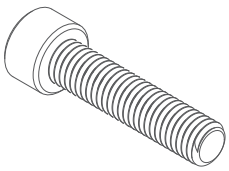


Endklemme

8 piece

Material: Aluminum

H

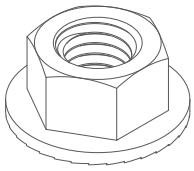


Hexagon socket-screw M8

20 piece

Material: Stainless steel

I

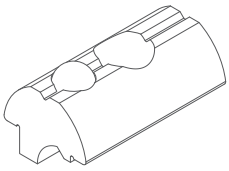


Flange nut M10

24 piece

Material: Stainless steel

J

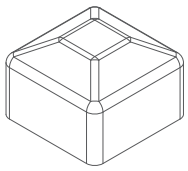


Sliding carriage Slot nut M8

20 piece

Material: Aluminum

K



Ski cover

8 piece

Material: plastic

Assembly instruction

Necessary tools:

- Allen wrench (size 5)
- Ring wrenches (size 13, 15 and 17 mm)
- Cordless screwdriver with
Torque adjustment
- Cross-recess bits / attachments for the
Cordless screwdriver (PZ)

Tightening torques:

- Tighten middle and end clamps with a tightening torque of 8.5 Nm
- Tighten M8 bolts and nuts with a tightening torque of 18 Nm.
- Tighten M10 bolts and nuts with a tightening torque of 36 Nm

Staffing for assembly:

- At least 2 persons

Assembly time:

- About 2 hours

Control and maintenance

During the installation work, it must be ensured that the photovoltaic system is used
is used according to its intended purpose. All changes in the use of
construction elements, including connection with elements that do not come from
IVENDO Solar, the modification of the construction by welding, shortening,
lengthening, drilling, etc., and increasing the load on the systems will result in the
loss of warranty claims and may have a direct impact on the life of the systems and their safe use.
systems and their safe use.

The technical inspection and maintenance of the mounting system should be carried out at least once every
every six months, special attention should be paid to:

- Bolted connections,
- The condition and connections of the electrical cables are checked,
- the visual condition of the PV modules (contamination, mechanical damage) is
is checked.

Assembly of the set

1 Before mounting, it is necessary to determine the distribution plan of the modules on the roof (Fig. 1). This is the basis for the distribution of the mounting rails with all accessories (Fig. 2).

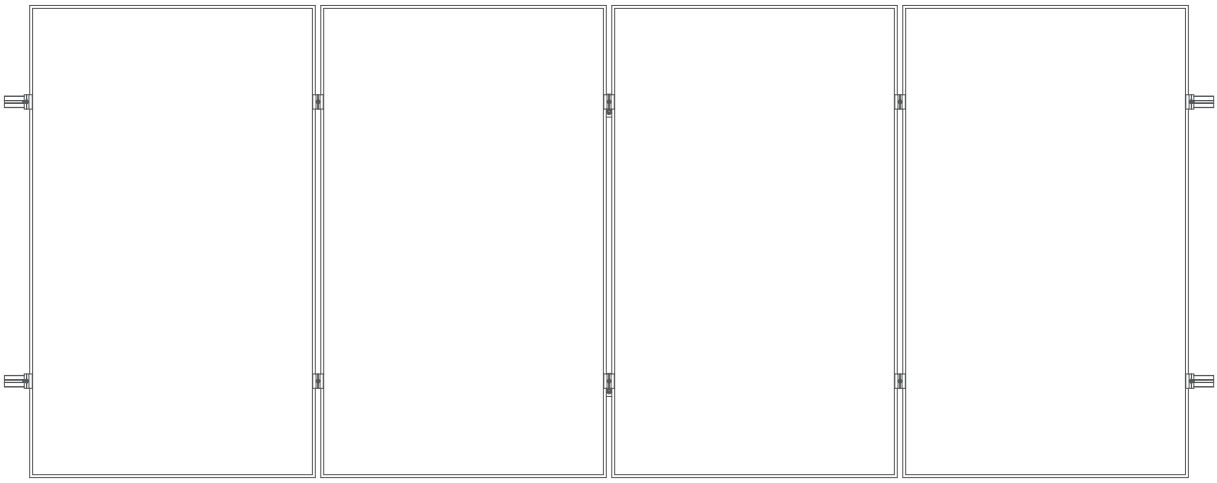


Fig. 1. module placement plan

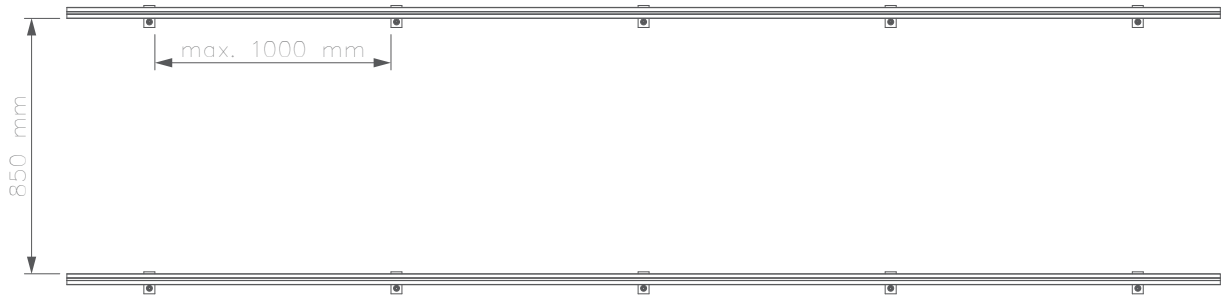


Fig. 2. placement of mounting rails with double threaded screw

2 Before mounting, the place on the roof where the supporting structure of the photovoltaic modules will be fixed should be determined. For M10 screws, 97 mm drilling is required in advance at the mounting location, and for M12 screws, 38 mm drilling is required (Fig. 3).

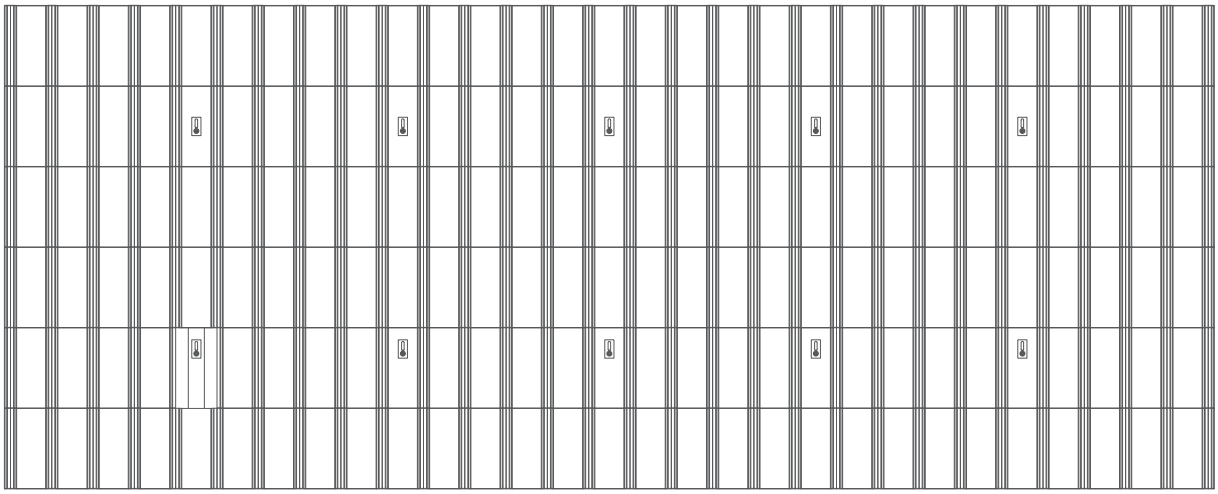


Fig. 3. determination of the location for the assembly of the load-bearing columns.

3 After tightening the screw with double spindle and the mounting adapter, they should be attached to the rafters (Fig. 4).

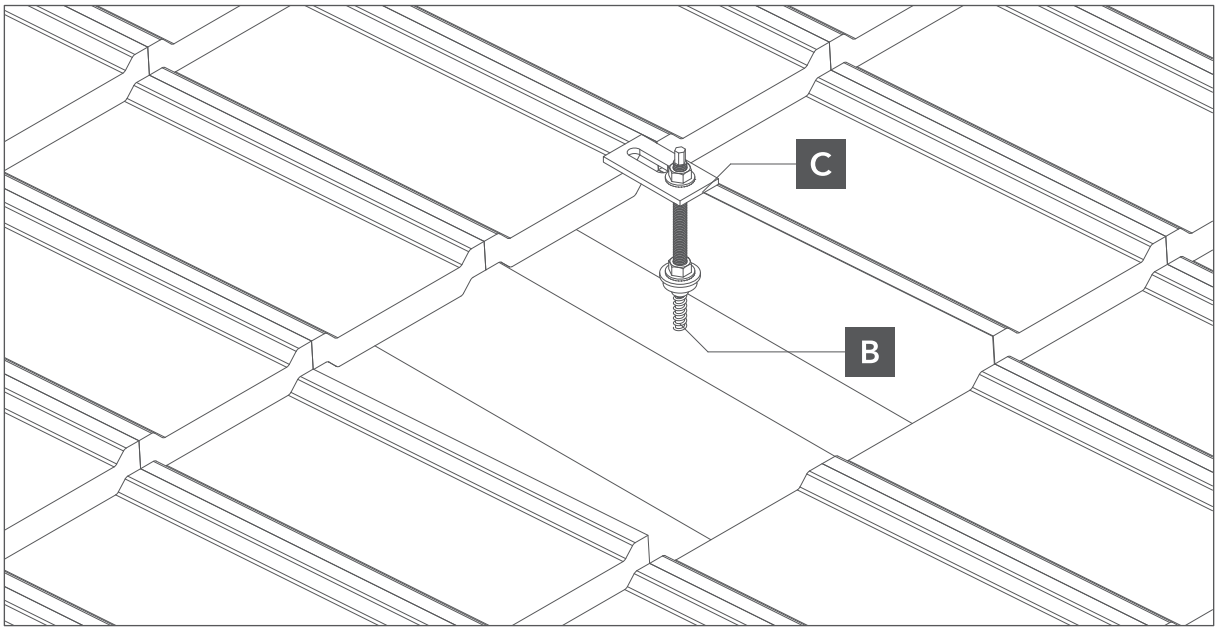


Fig. 4. attachment of the double threaded screw to the roof beams.

4 If a system with a larger number of rows is ordered, the mounting rails may have different lengths. It is necessary to connect them using the rail connector (Fig. 5).

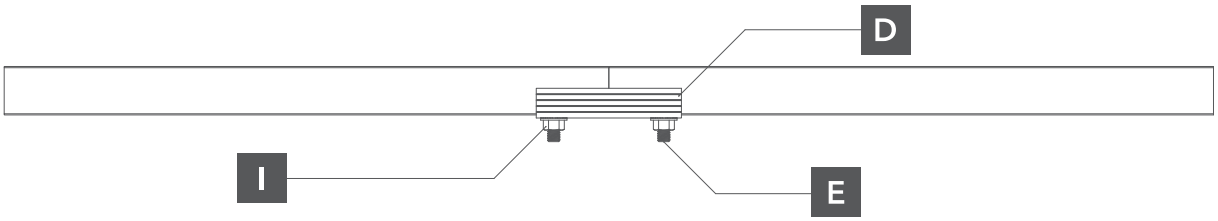


Fig. 5. connection of the mounting rails

5 Then you should insert the M10x25 DIN6923 hexagon bolt through the end of the mounting rail, align it with the mounting adapter and fasten it with the DIN6923 M10 threaded nut (Fig. 6).

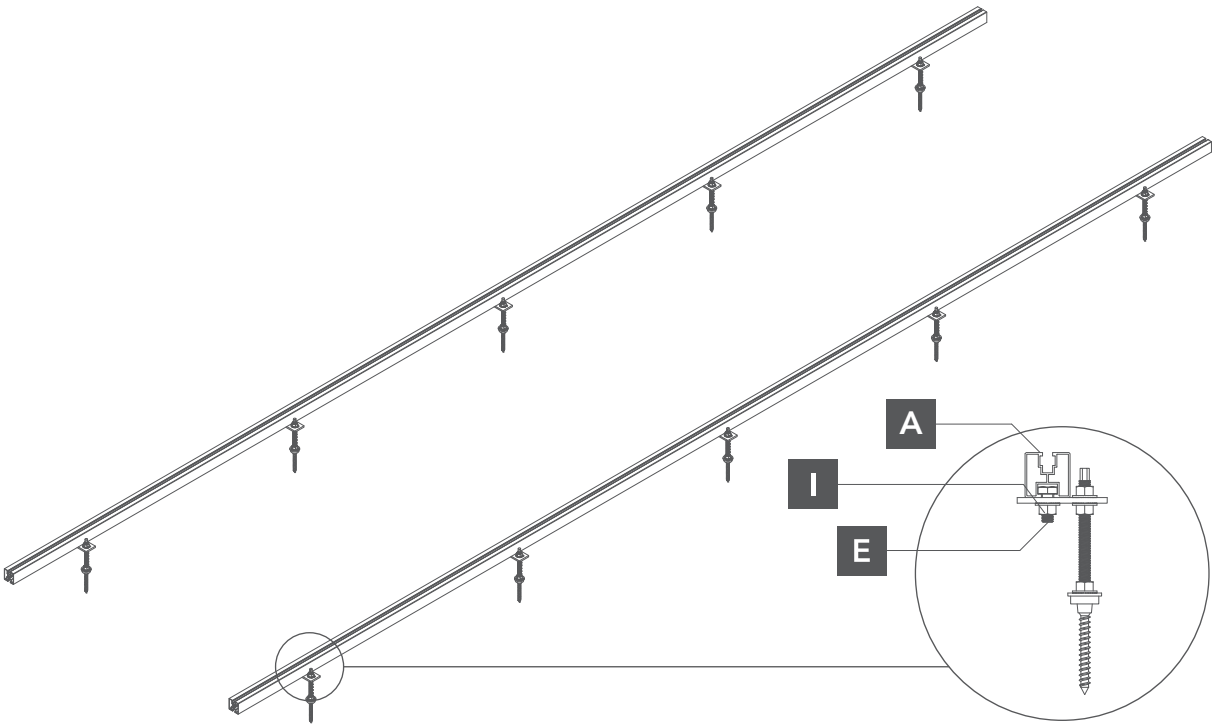


Fig. 6. fastening the mounting rail to the mounting adapter

6 Before mounting the set, you must determine the module layout plan on the roof (Fig. 1). This is the basis for the distribution of the mounting rails with all accessories (Fig. 2).

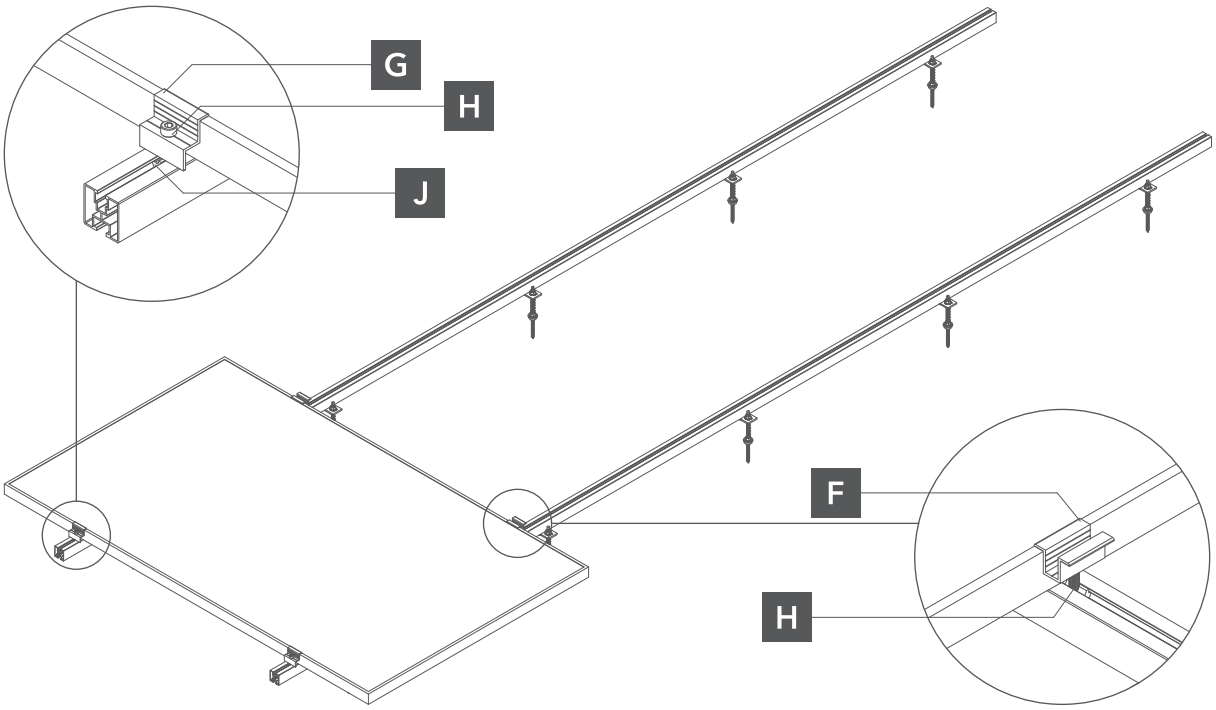


Fig. 7. attachment of the module to the mounting rail