



 Assembly instructions



# K2 Buddy TopBox

## for Dome 6 flat roof systems



Connecting Strength

[k2-systems.com](https://www.k2-systems.com)

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## Tested quality - multiple certifications

K2 Systems stands for secure connections, top quality and maximum precision. Our customers and business partners have known this for a long time. Independent bodies have tested, verified and certified our competencies and components.

You can find our quality and product certificates at [k2-systems.com](https://www.k2-systems.com).

# Tool overview



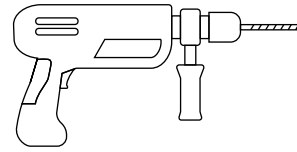
5 + 6 mm



8 mm



30



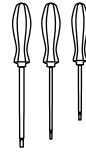
5 mm



6 - 30 Nm  
(4.5 - 22.2 lb-ft)



6 mm



Small electrician's  
screwdrivers (PH 0)



Standard electrician's tools

# General safety information

Please note that our general mounting instructions must be followed at all times and can be viewed online at [k2-systems.com](https://k2-systems.com).

- The equipment may only be installed and operated by qualified and adequately trained installers.
- Prior to installation, ensure that the product complies with on-site static loading requirements. For roof-mounted systems, the roof load-bearing capacity must always be checked.
- National and local building regulations and environmental requirements must be adhered to.
- Compliance with health and safety regulations, accident prevention guidelines and applicable standards is required.
  - Protective equipment such as safety helmet, boots and gloves must be worn.
  - Roofing works must be in accordance with roofing regulations utilising fall protection safeguards when eaves height exceeds 3 m.
  - At least two people must be present for the duration of the installation work in order to provide rapid assistance in the event of an emergency.
- K2 mounting systems are continuously developed and improved and the installation process may thereby change at any time. Prior to installation consult our website at [k2-systems.com](https://k2-systems.com) for up-to-date instructions.  
We can send you the latest version on request.
- The assembly instructions of the module manufacturer must be adhered to.
- Equipotential bonding/grounding/earthing between individual parts is to be performed according to country specific standards, as well as national laws and regulations.
- During the entire installation period, it must be ensured that at least one copy of the assembly instructions is available at the construction site. Furthermore, special product and warning notices apply to the K2 Buddy, which must be observed by both the installer and the end customer. They can be found at: [k2-systems.com/en/digital-services/k2-buddy/product-warning-notice/](https://k2-systems.com/en/digital-services/k2-buddy/product-warning-notice/)
- Failure to adhere to our general safety and assembly instructions and not using all system components, K2 is not liable for any resulting defects or damages. We do not accept liability for any damage resulting in the use of competitor's parts. Warranty is excluded in such cases.
- German law shall apply excluding the UN Convention on CISG. Place of venue is Stuttgart. Our General Terms of Business apply.
- If all safety instructions are adhered to and the system is correctly installed, there is a product warranty entitlement of 12 years! We strongly recommend reviewing our terms of guarantee, which can be viewed at [k2-systems.com](https://k2-systems.com).  
We will also send this information on request.
- Dismantling of the system is performed in reverse order to the assembly.
- K2 stainless steel components are available in different corrosion resistance classes. Each structure or component must be carefully checked for possible corrosion exposure.

# The following generally applies

Under the following conditions, the K2 Buddy can be installed together with the Dome 6 systems (Classic, Classic LS, Xpress). These assembly instructions only apply together with the associated installation and operating instructions for the TopBox and BaseBox at [k2-systems.com/buddy-manual](http://k2-systems.com/buddy-manual).

There you will find important safety instructions that must be followed. Even if the system meets higher requirements due to the inclusion of safety factors, please consult your contact at K2 Systems if the specified values are exceeded.



## Planning with K2 Base

We recommend our free online software K2 Base for the design. In five steps, you plan the right mounting system and receive a construction recommendation, parts list and structural analysis report. Simply log in and get started with your planning: [base.k2-systems.com](http://base.k2-systems.com)



## Roof requirements

- This system can be installed on all standard flat roofs with a pressure-resistant substrate and a roof pitch  $\leq 3^\circ$  without a fixed connection.
- Fixed connection  $> 3^\circ$  to  $\leq 10^\circ$ 
  - Up to  $\leq 5^\circ$  combinations with ballast possible
  - $> 5^\circ$  to  $\leq 10^\circ$  only without ballast
- The roof surface must be clean and dry. Even out or eliminate roof undulations if necessary.
- The coefficient of friction of the roof must be determined on site. See video at [k2-systems.com/en/friction-coefficient](http://k2-systems.com/en/friction-coefficient)



## Structural requirements

- It is essential to check the roof structure has sufficient residual load capacity and the pressure capacity of the heat insulation on site.
- For framed modules with a frame height of
  - 28 - 30 mm
  - $\geq 35$  mm
- Permitted module dimensions:  
Length 1,448 - 2,100 mm, width 950 - 1,170 mm



## Important assembly instructions

### Mounting system

The assembly instructions for the respective Dome 6 mounting system apply.

### General information

- When designing the ballasting, external influences acting on the system are only represented to a limited extent. For example, unevenness, thermal linear expansion, moss, waterlogging and ageing of the membrane can therefore not be taken into account, but these influences can also cause the system to shift under certain circumstances. To ensure that the Buddy functions properly on the roof, the weighing unit should be serviced every year before the winter months; i.e. any dirt that is directly on the unit should be removed and the system should be re-tared using the Buddy app.
- Care must be taken to ensure that the drainage of rainwater is not impeded.



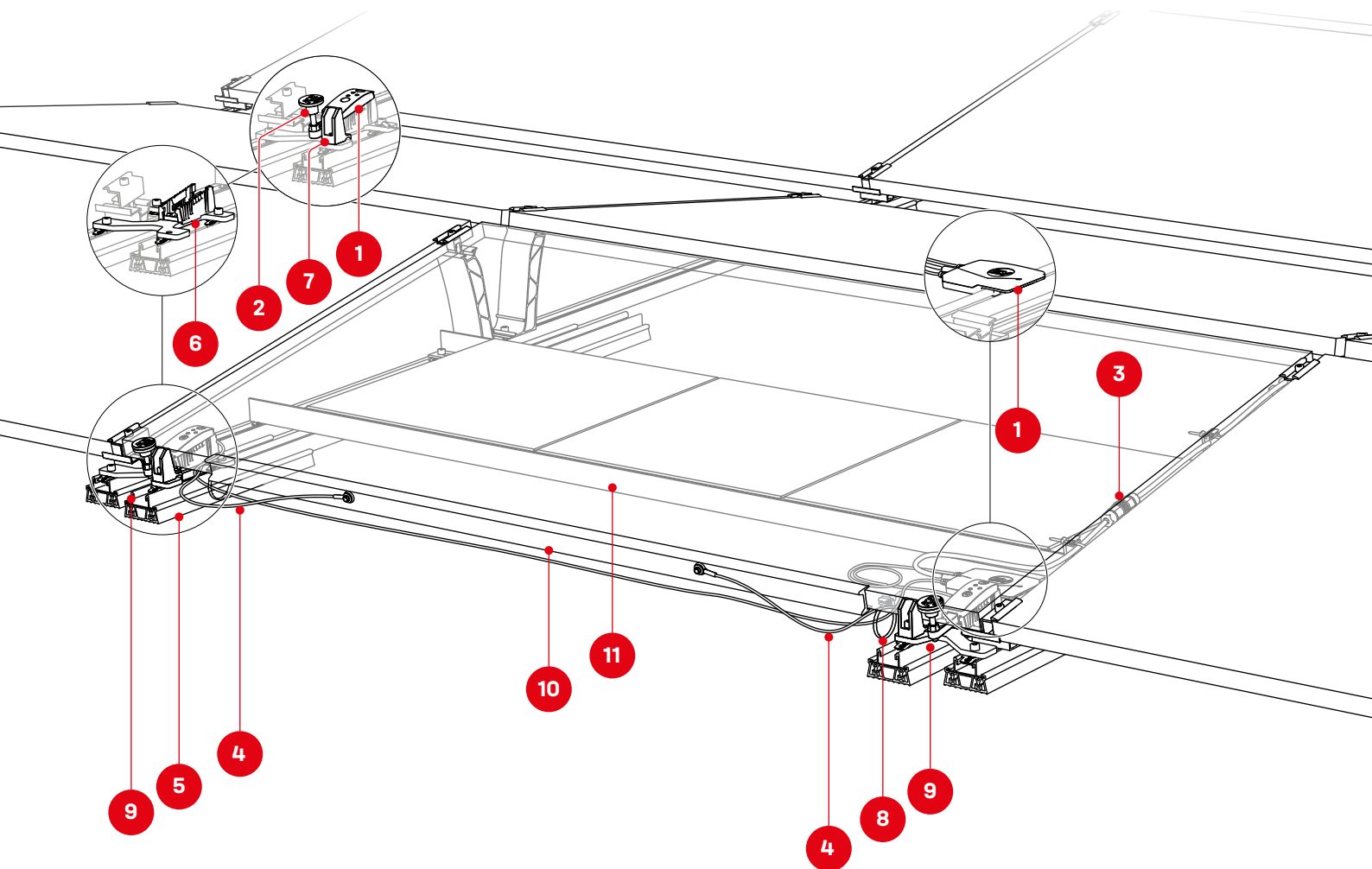
### Buddy app cheat sheet

Fill it in and pass it on for electrical installation!



# Components

## Dome 6 Classic / Xpress

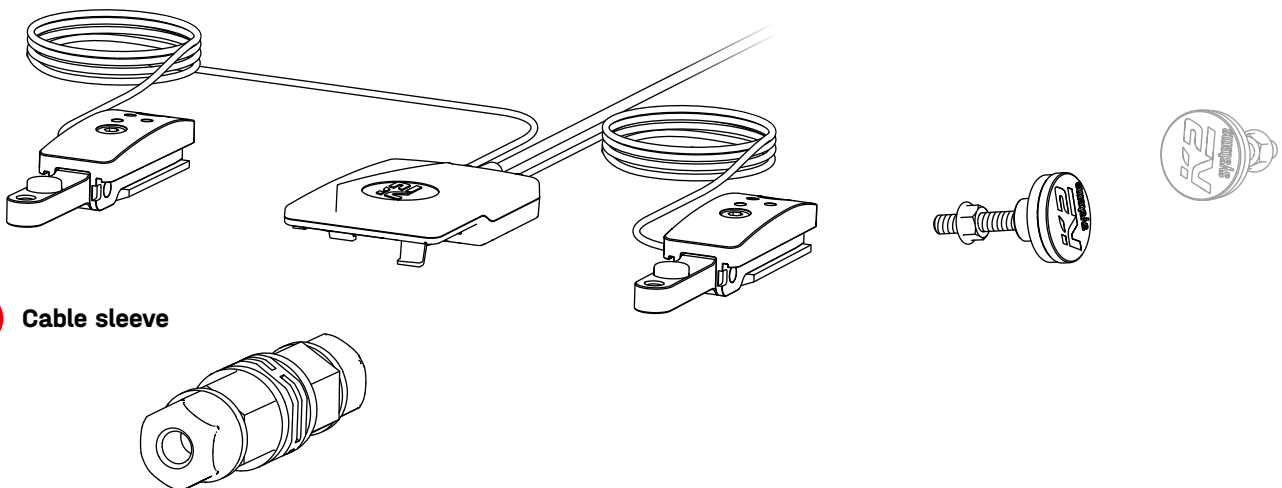


### Top Box Set Snow 1000003

**1** TopBox and snow sensors

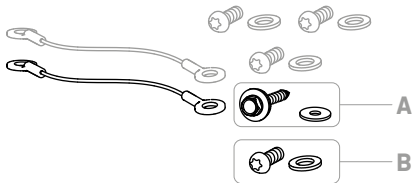
**2** Knurled screw and nut

**3** Cable sleeve

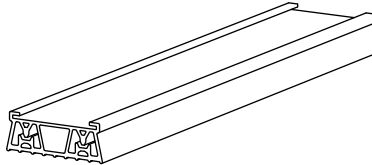


**Dome Accessories Set 2003603**

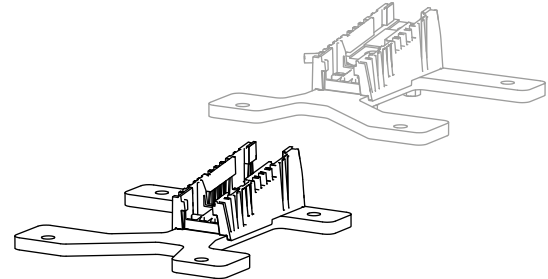
**4 Safety cables and module frame screws**



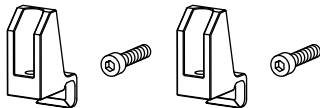
**5 4× 2003126 Mat S**



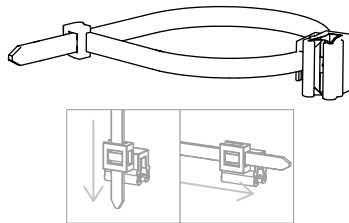
**6 Left/right Dome plate and screw connection 20 mm**



**7 Module stops and screw connection 35 mm**



**8 4× 2002870 Cable-Manager**

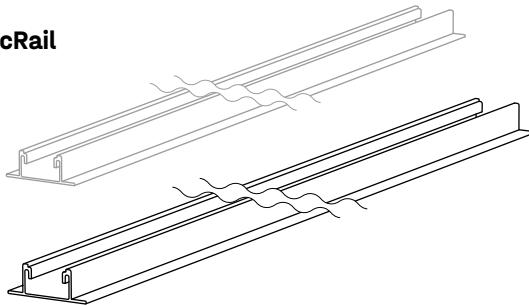


**10×**  
**12×**

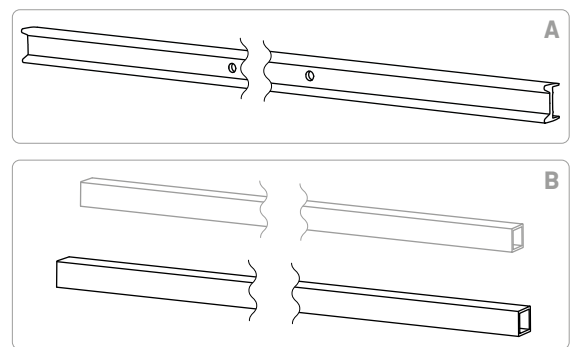


**Dome Profile Set 2004547 (A) / 2003448 (B) A = 28 - 30 mm · B ≥ 35 mm**

**9 BasicRail**



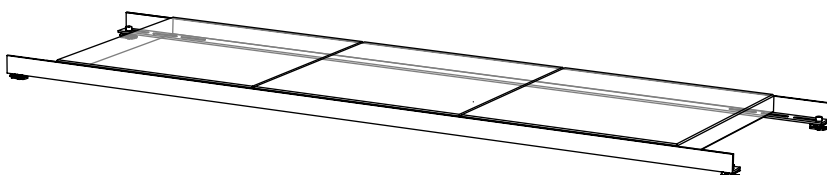
**10 Module bracing**



**Additional accessories**  
(not included in the set)

**11 Ballasting with porters**

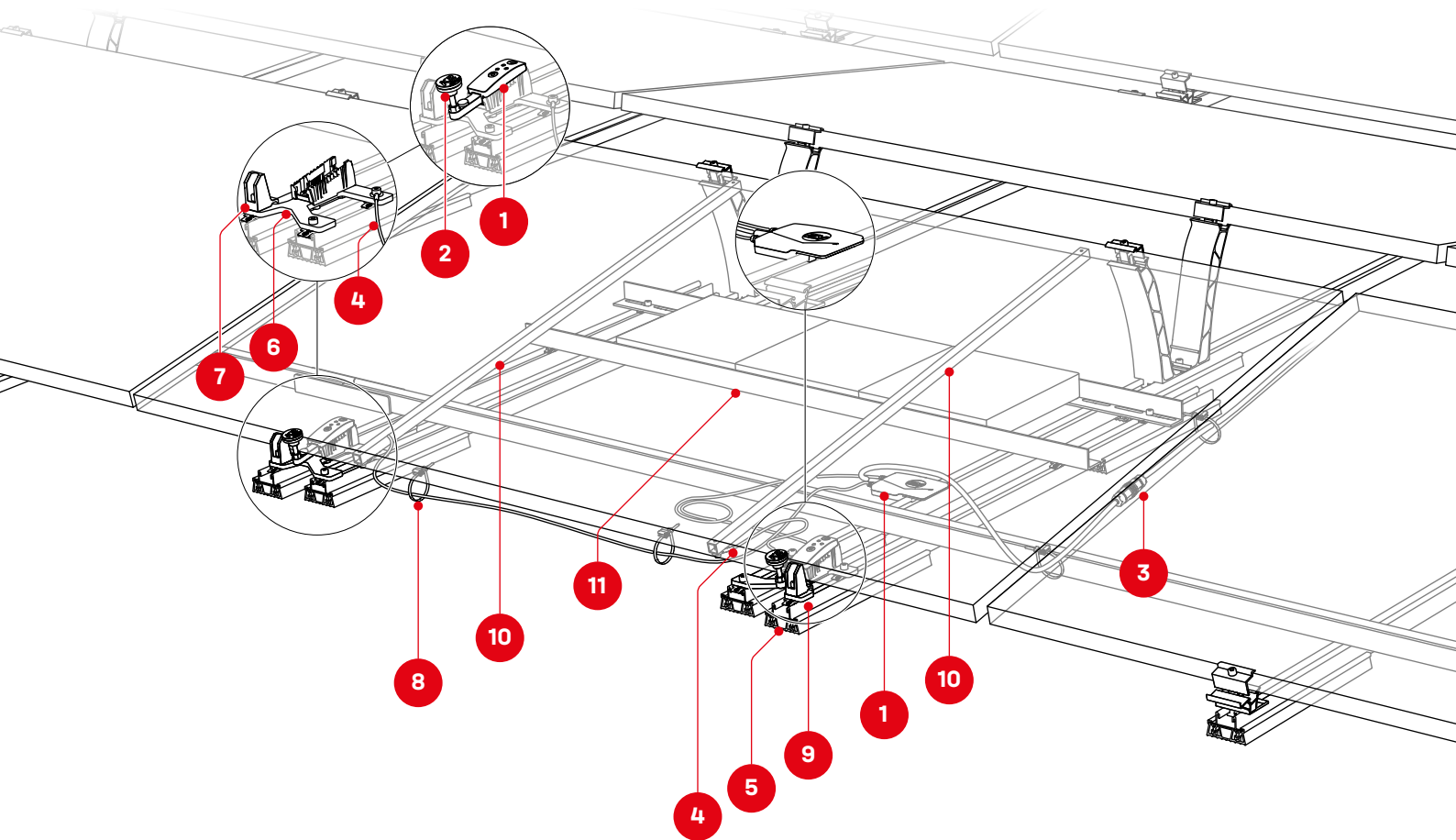
See D-/S-Dome 6 assembly instructions!





# Components

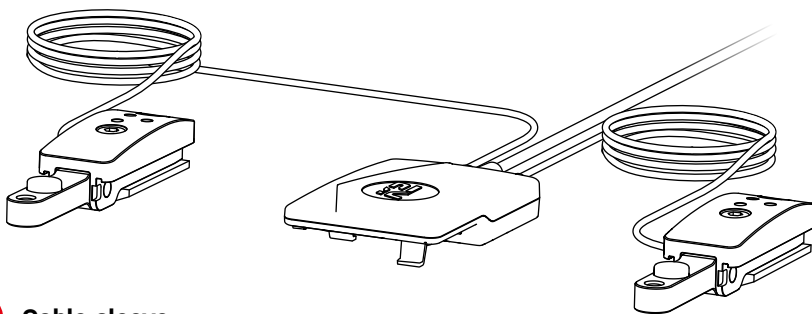
## Dome 6 Classic LS



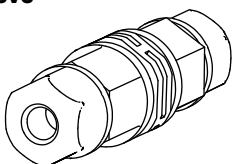
### Top Box Set Snow 1000003

**1** TopBox and snow sensors

**2** Knurled screw and nut



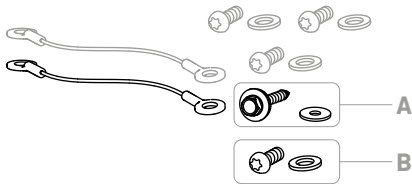
**3** Cable sleeve



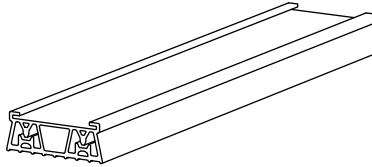


**Dome Accessories Set 2003603**

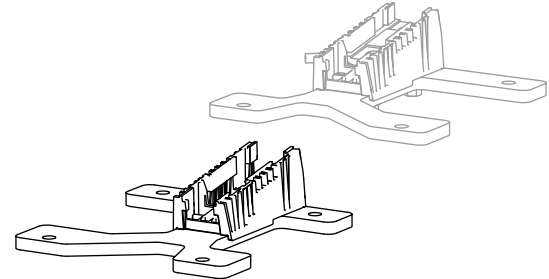
**4 Safety cables and module frame screws**



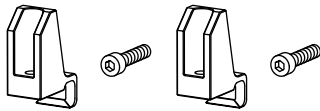
**5 4× 2003126 Mat S**



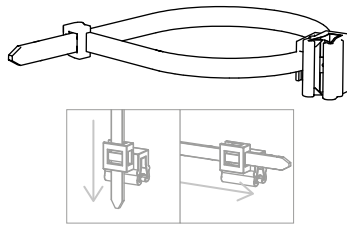
**6 Left/right Dome plate and screw connection 20 mm**



**7 Module stops and screw connection 35 mm**



**8 4× 2002870 Cable-Manager**

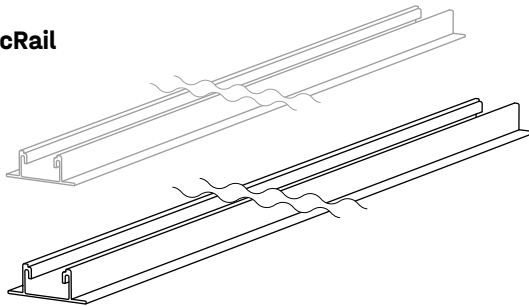


**10×**

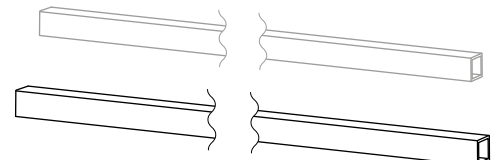
**12×**

**Dome Profile Set 2003448**

**9 BasicRail**



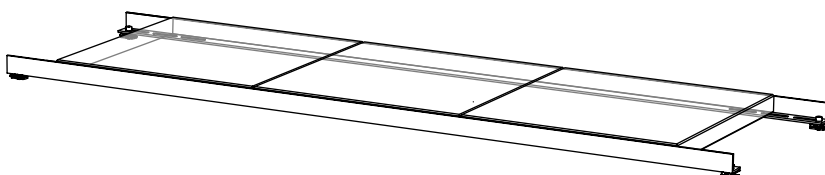
**10 Module bracing**



**Additional accessories**  
(not included in the set)

**11 Ballasting with porters**

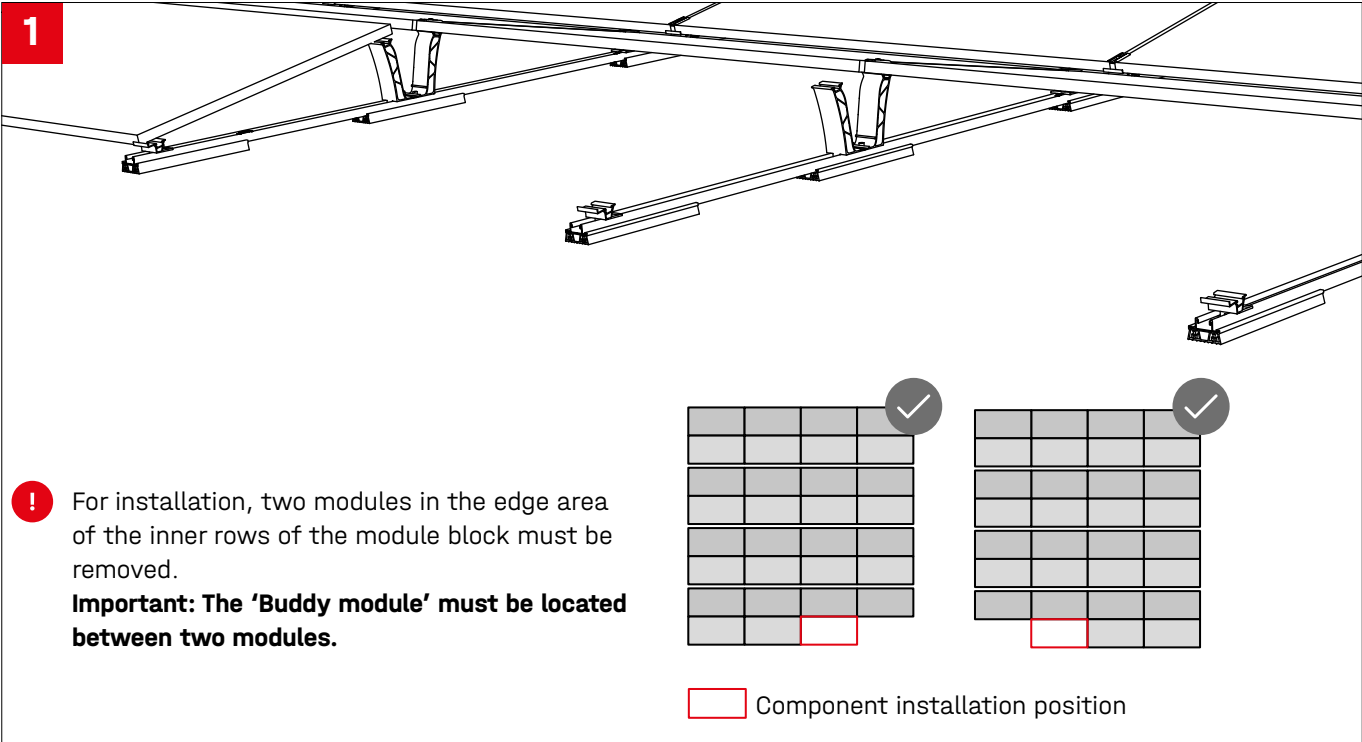
See D-/S-Dome 6 assembly instructions!



# Assembly Dome 6 Classic / Xpress

## Preparation

**1**

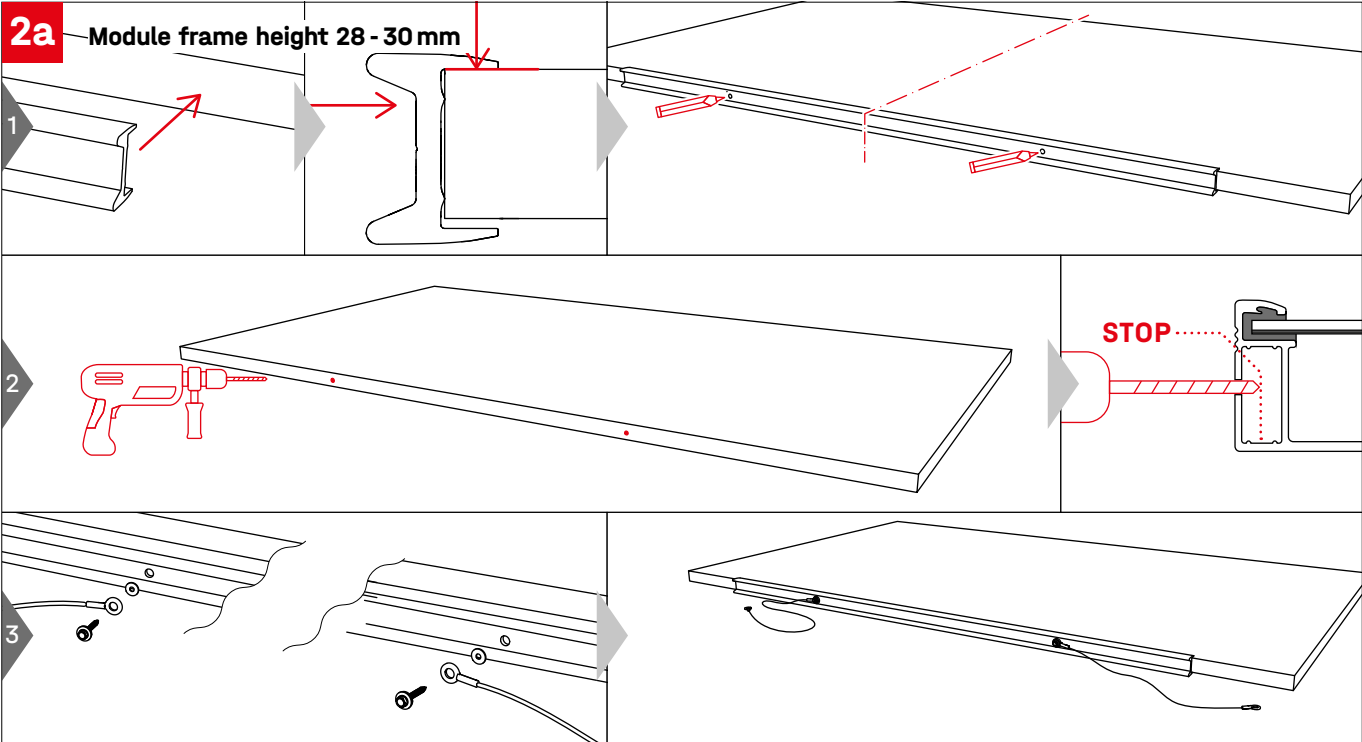


**!** For installation, two modules in the edge area of the inner rows of the module block must be removed.  
**Important: The 'Buddy module' must be located between two modules.**

Component installation position

## Module bracing

**2a** Module frame height 28 - 30 mm



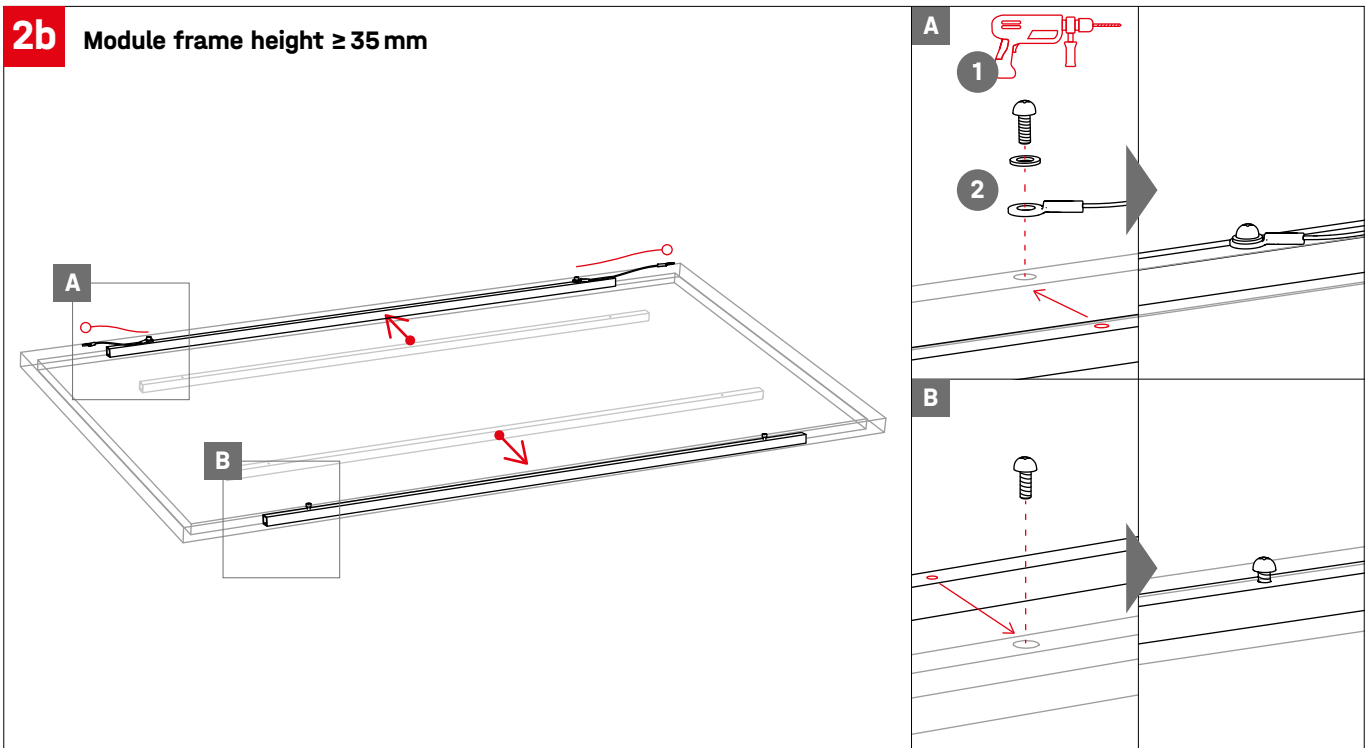
1

2

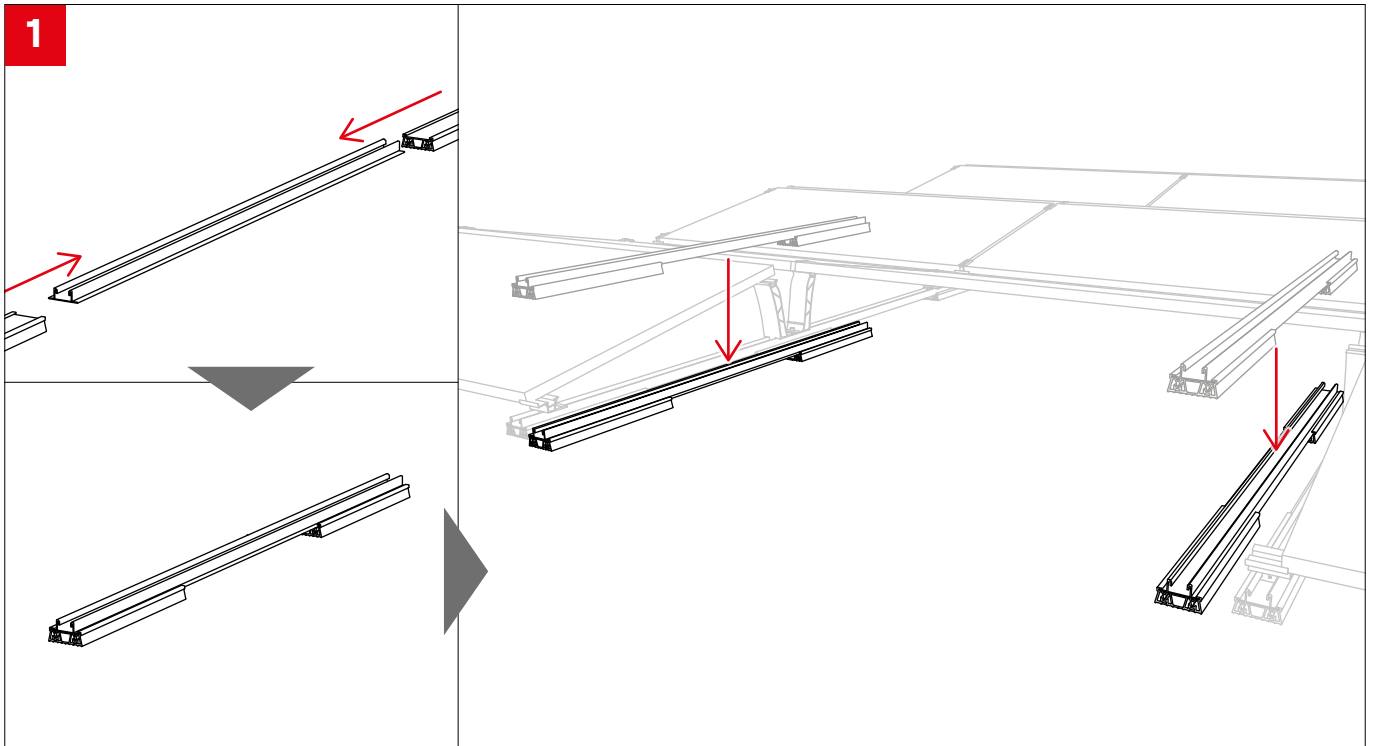
3

STOP

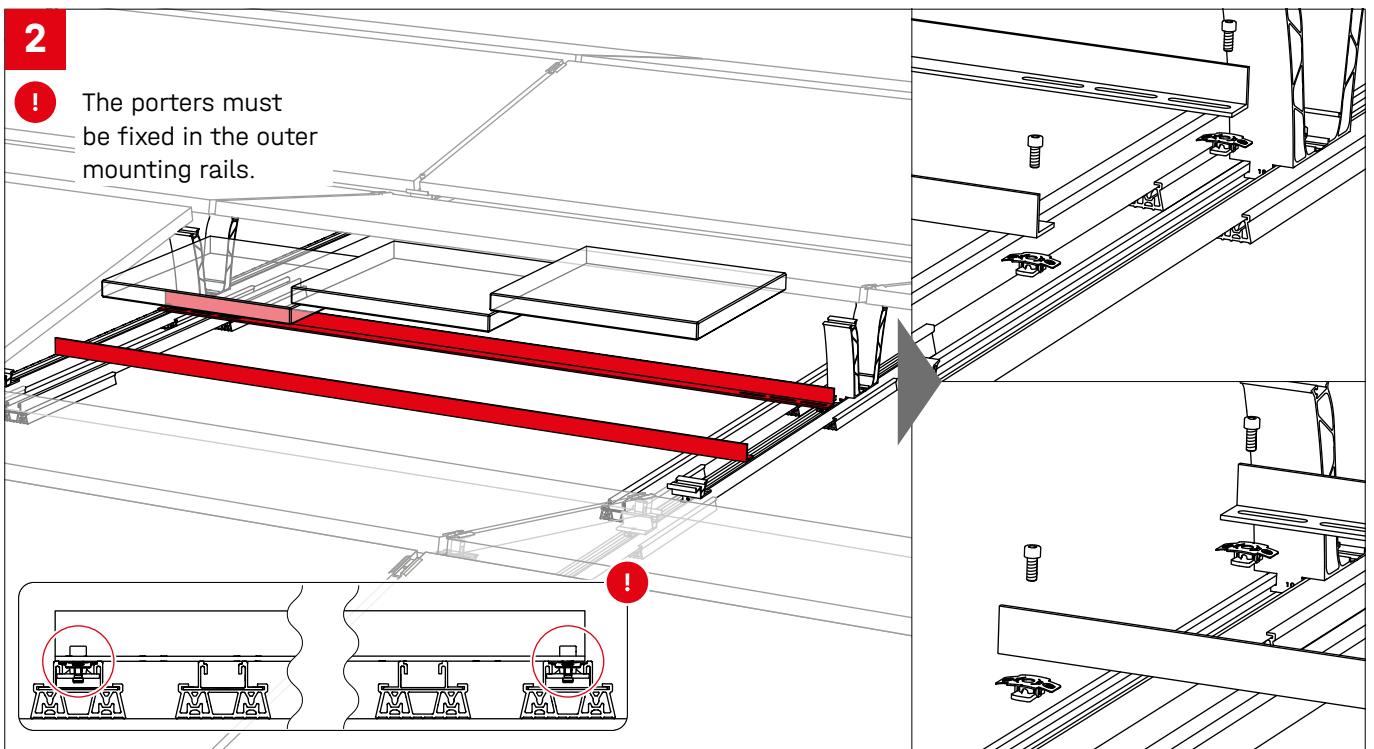
**2b** Module frame height  $\geq 35$  mm



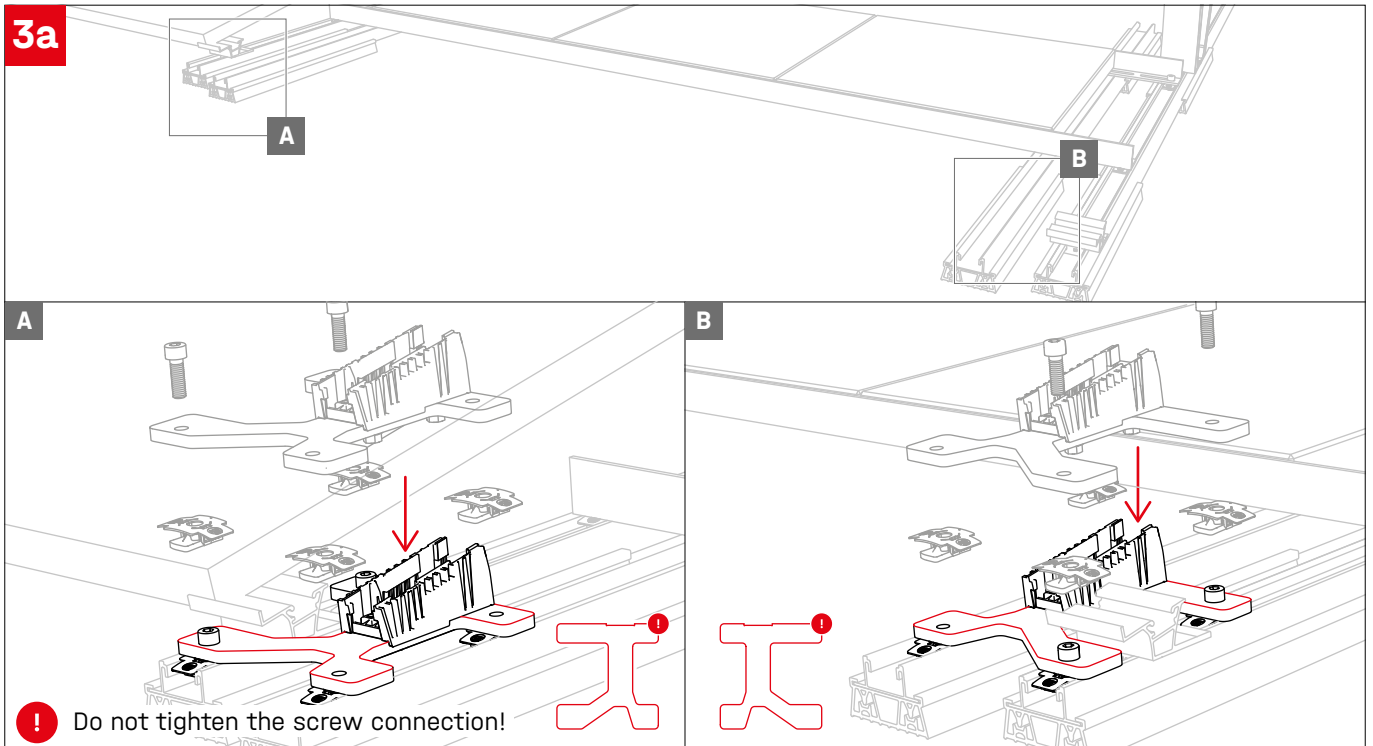
## Additional BasicRails (Dome Profile Set)



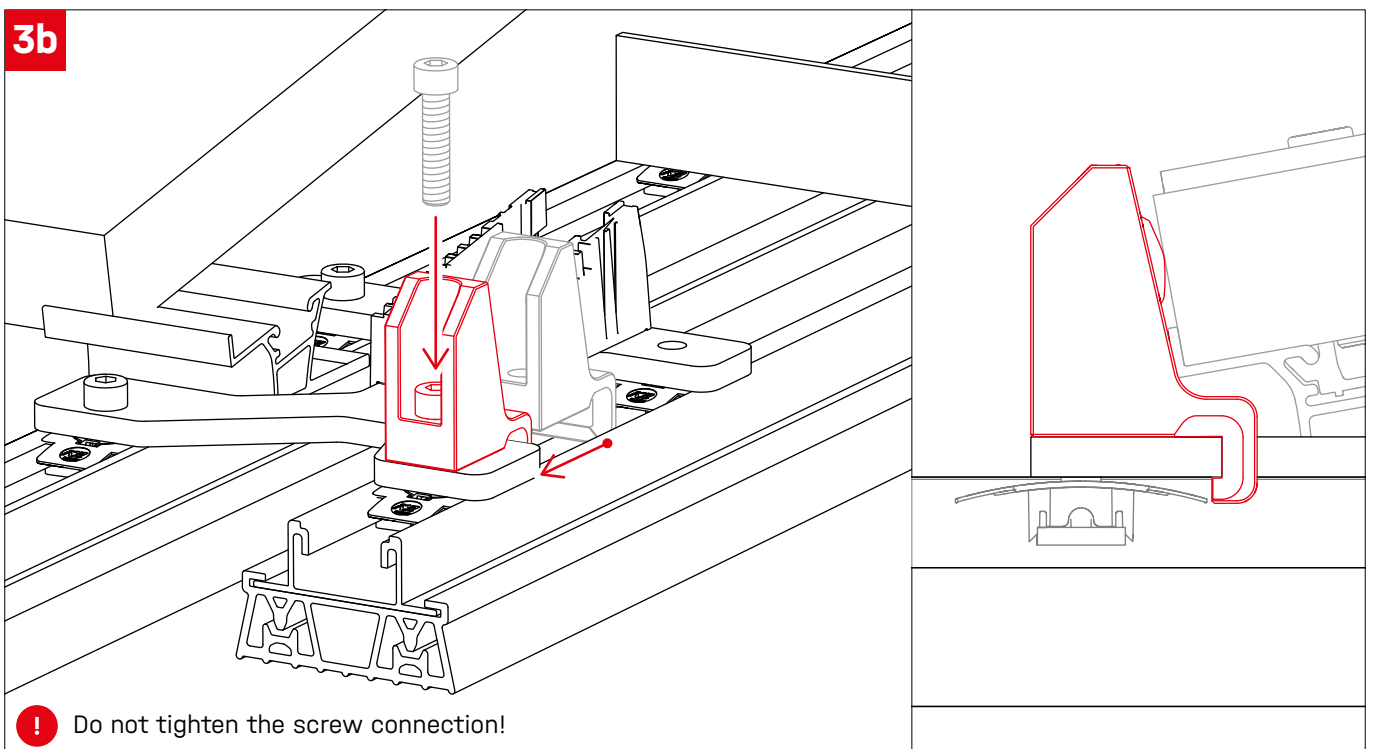
## Porter assembly



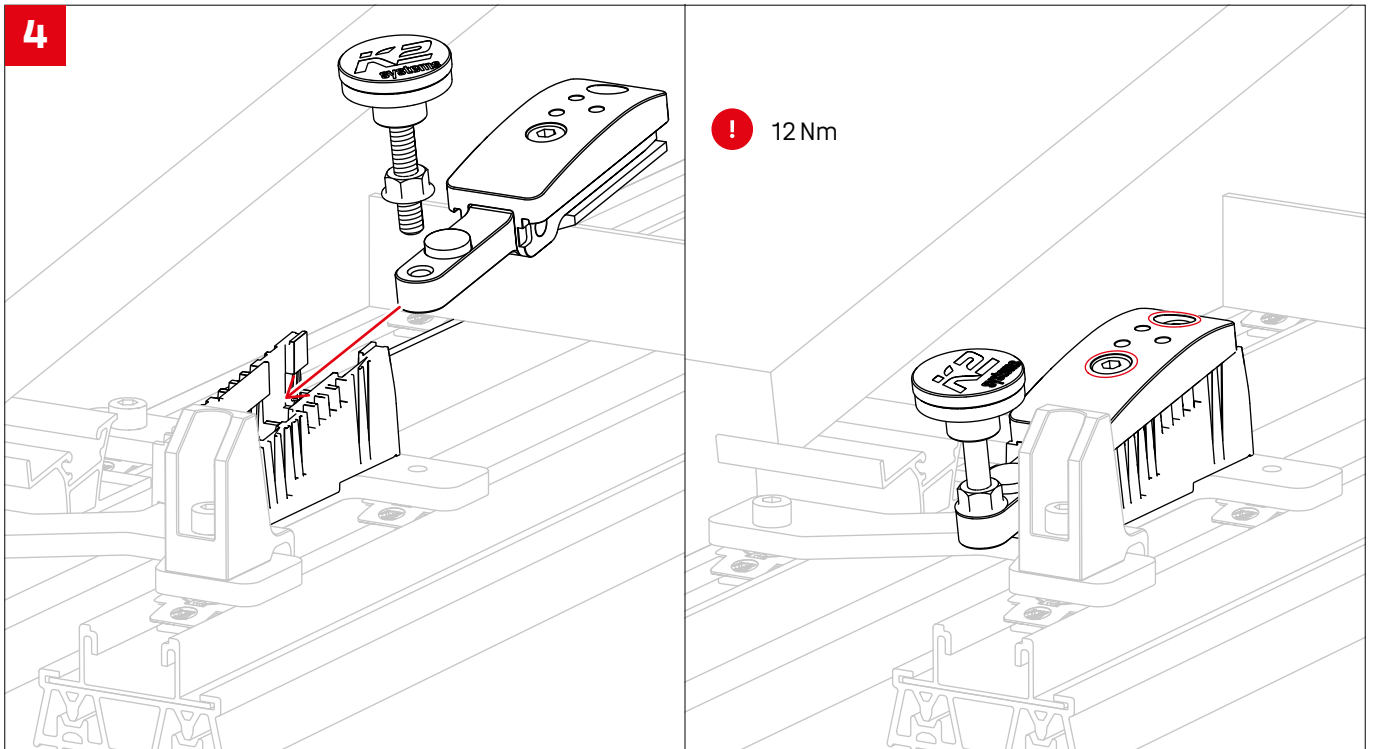
## Install connection (DomePlates)



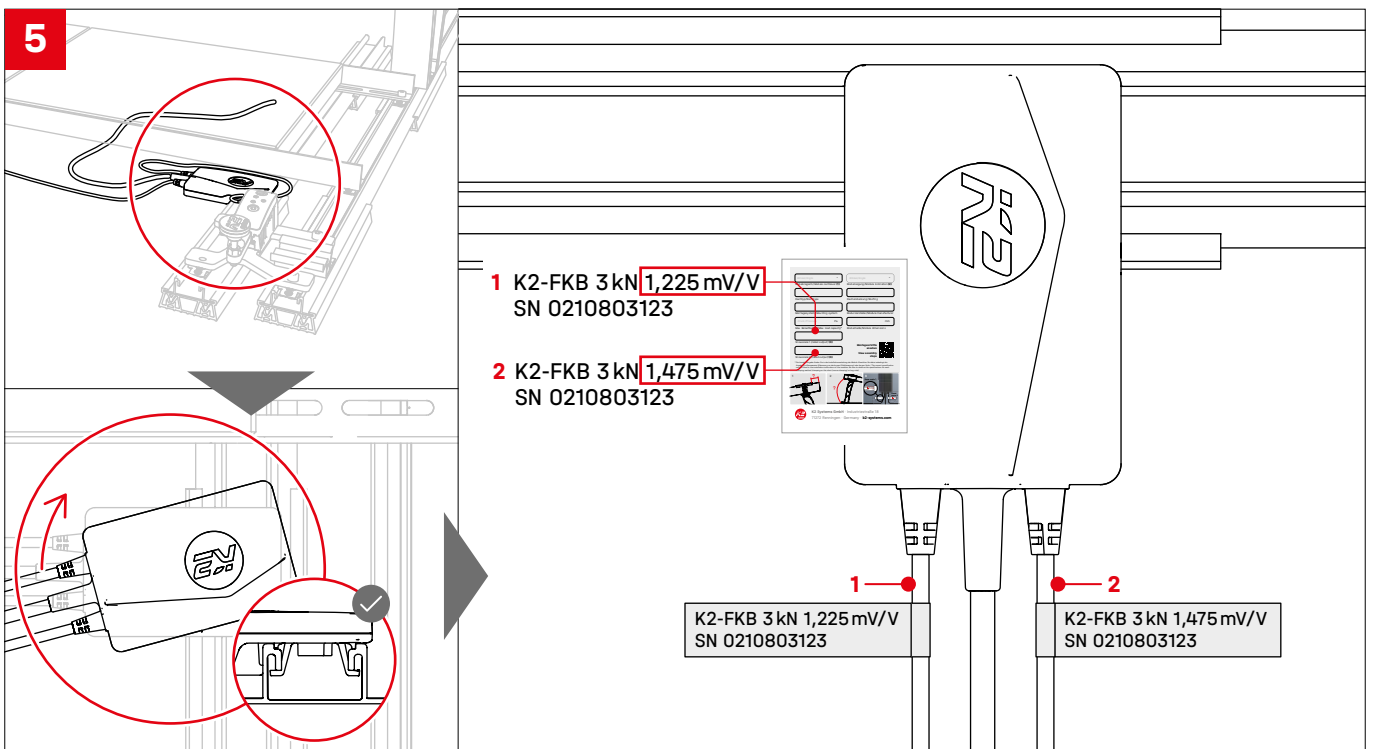
## Assembly module stop



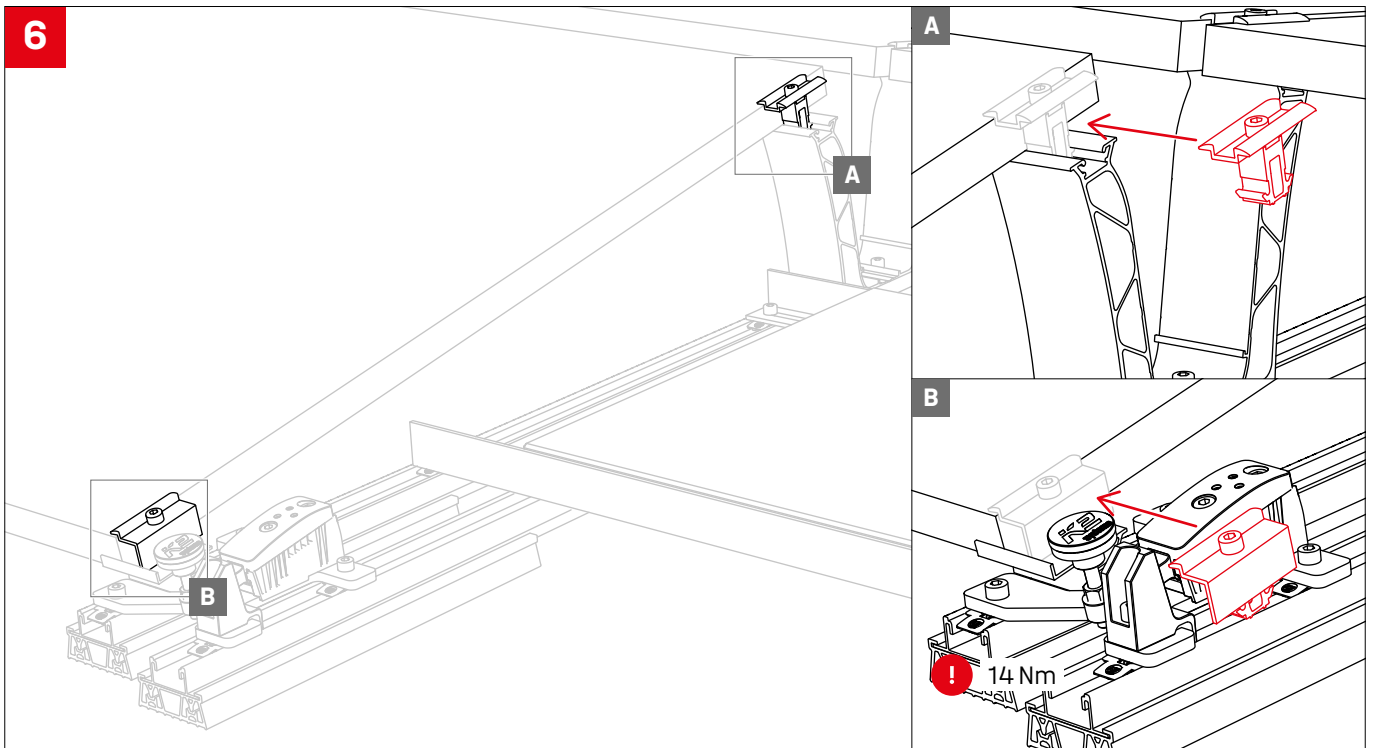
## Insert and attach weighing units



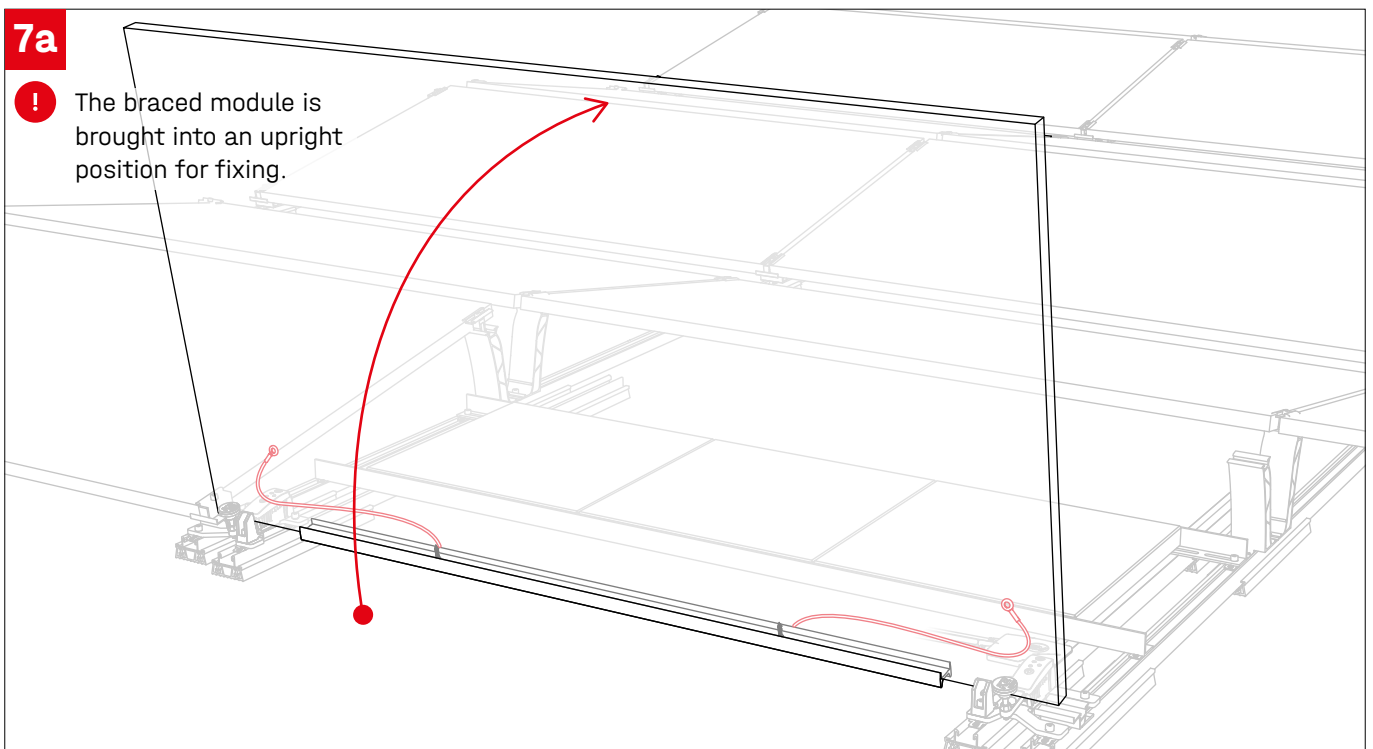
## Insert TopBox and record sensor values



## Install module clamps



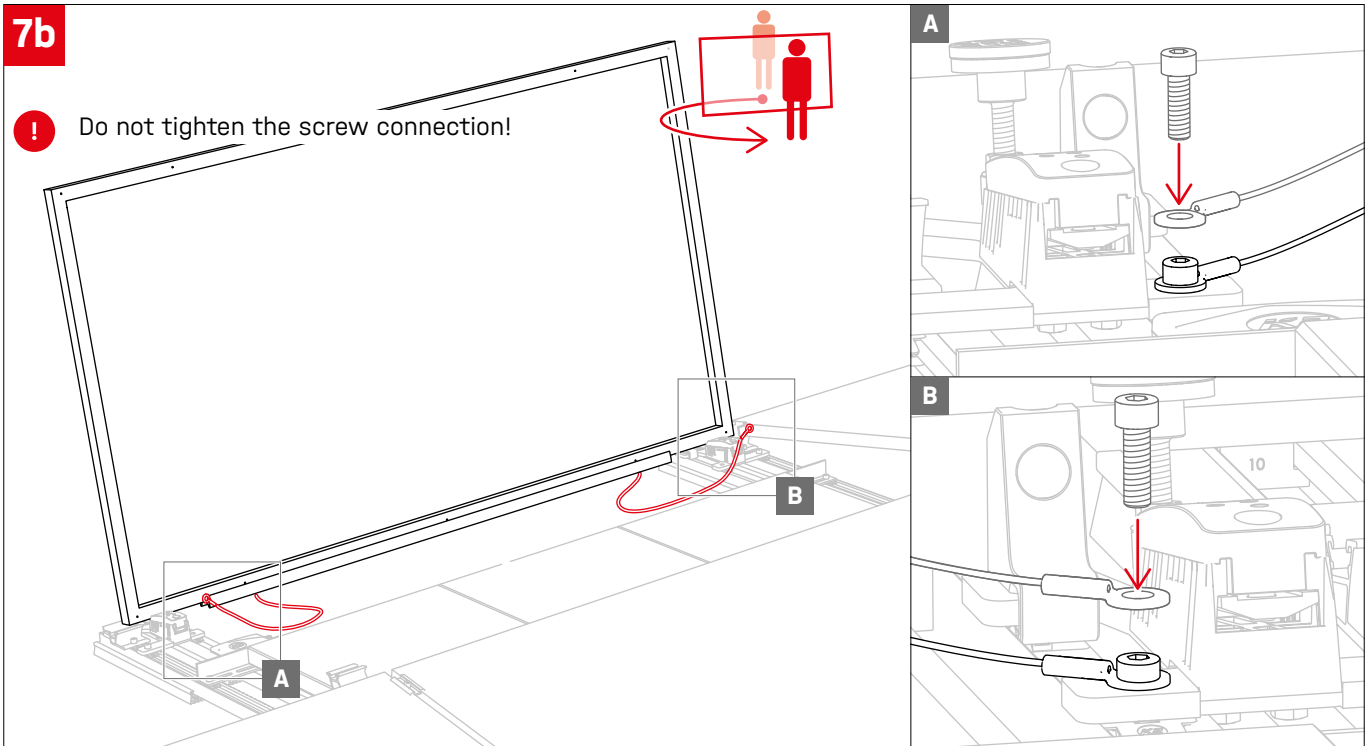
## Placement of measuring module





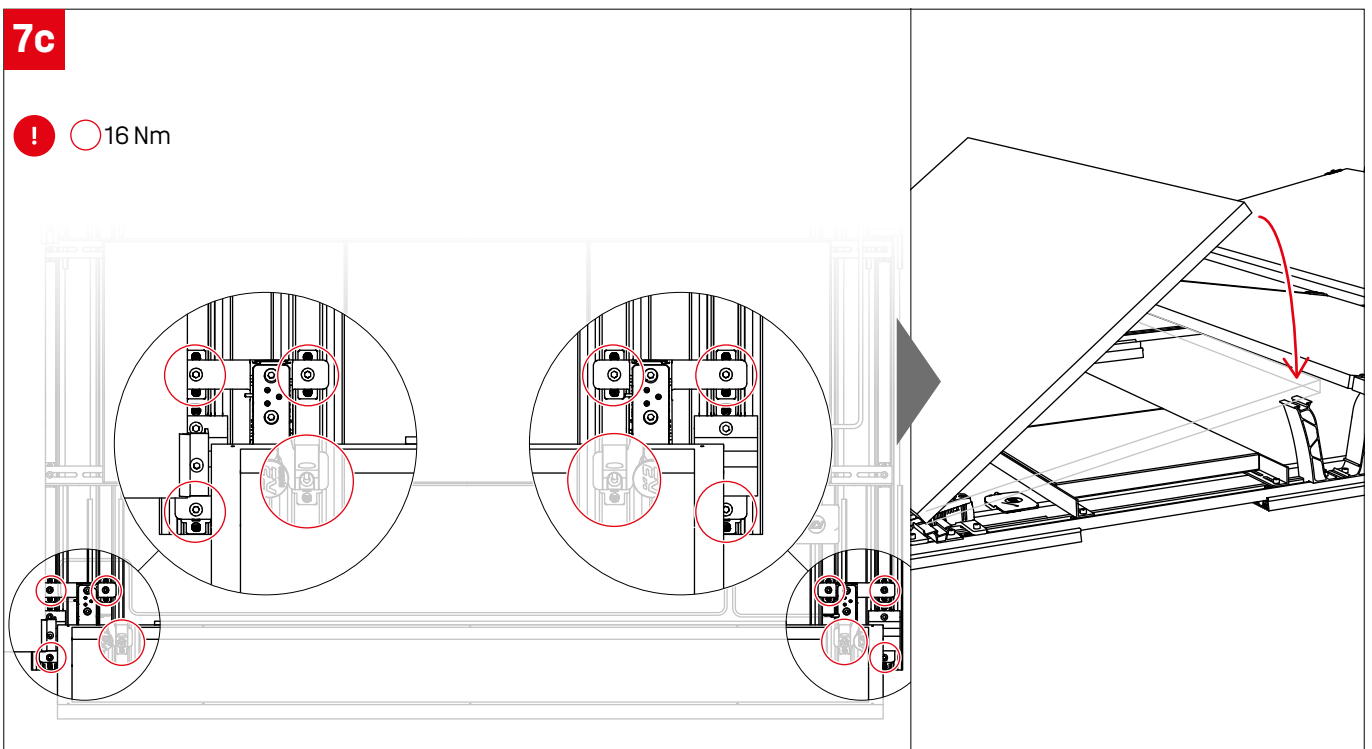
## 7b

! Do not tighten the screw connection!

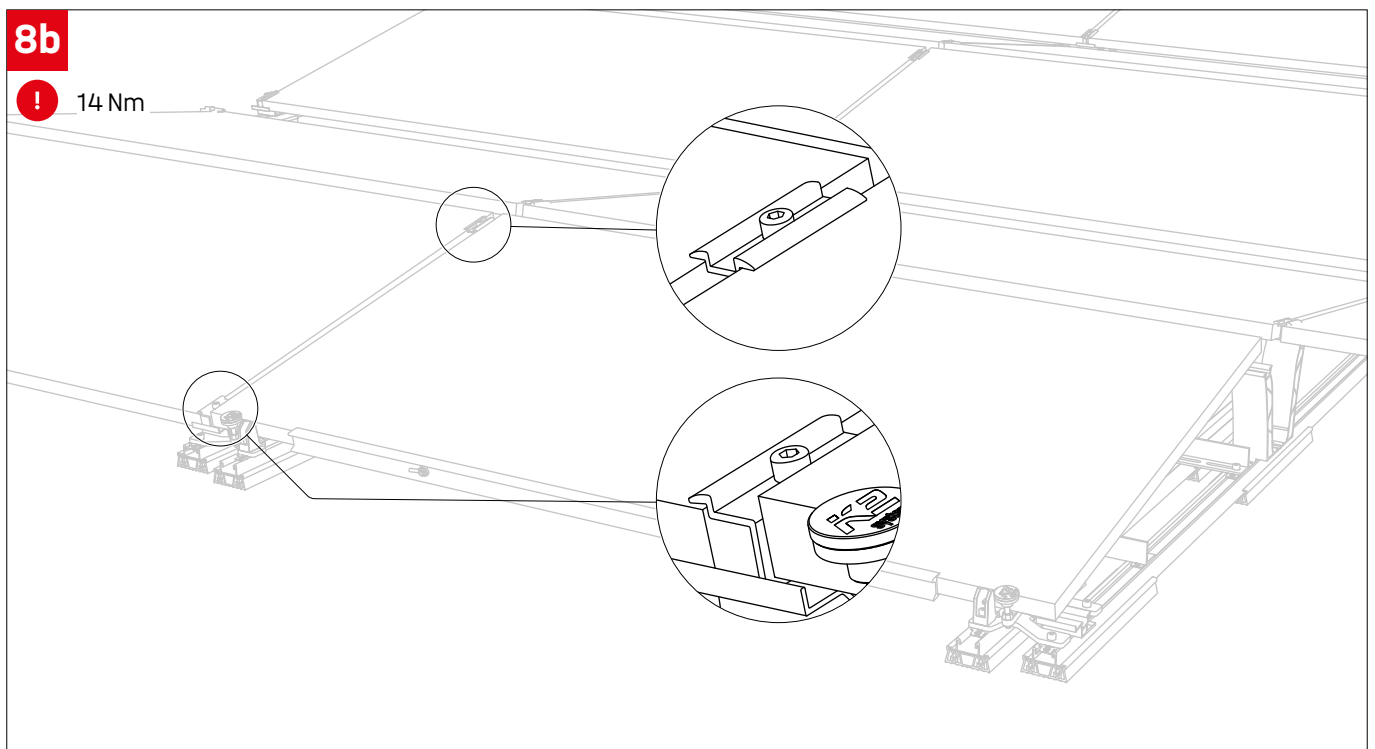
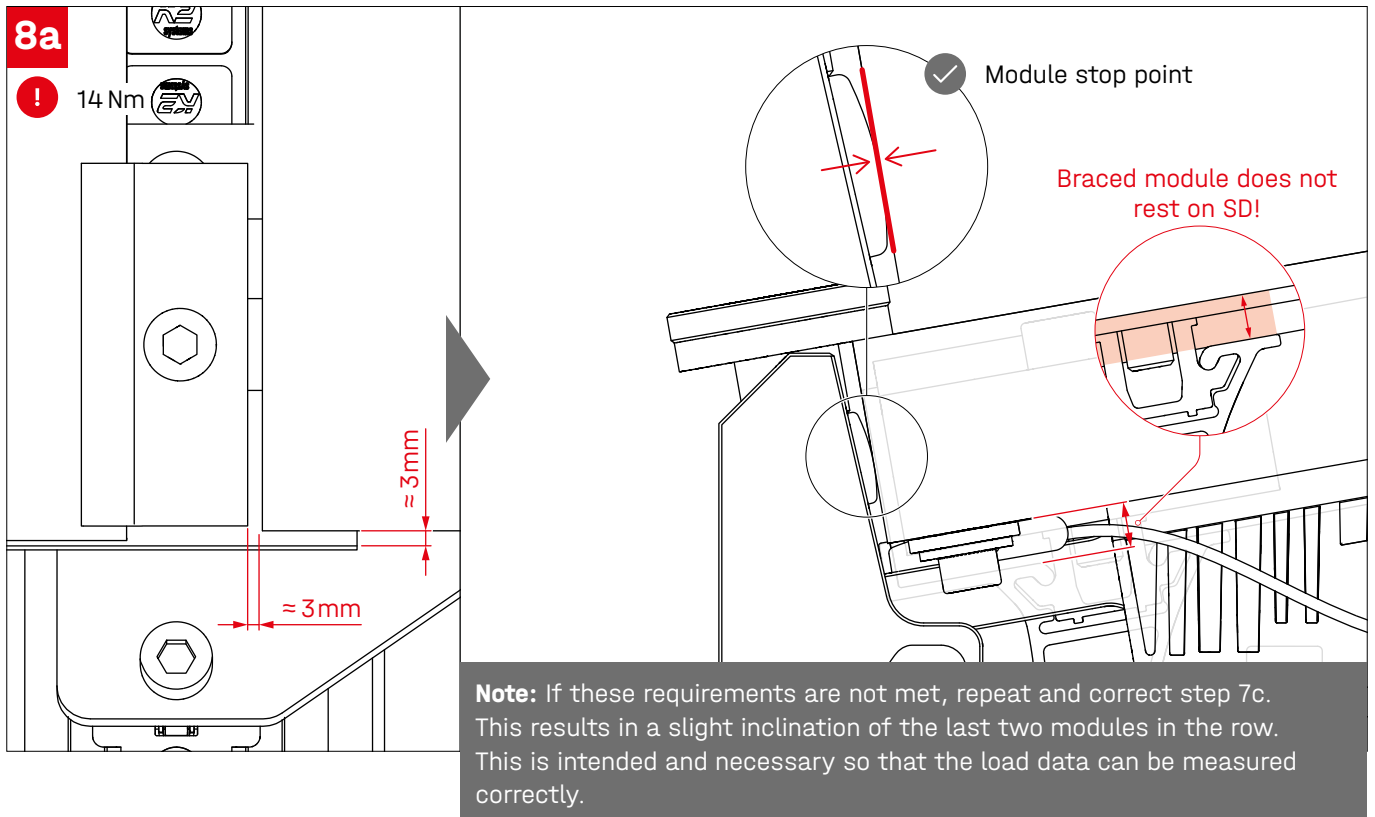


## 7c

! 16 Nm



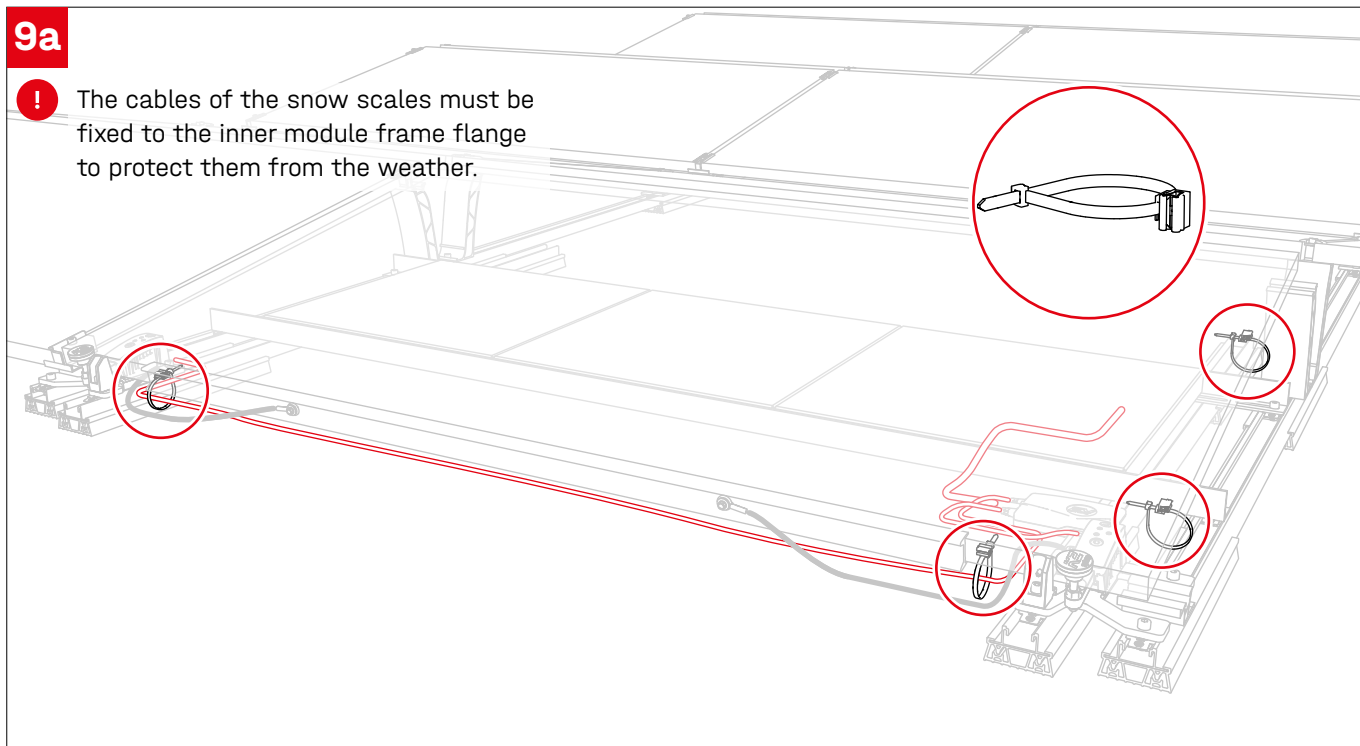
## Spacing between modules and module fixing



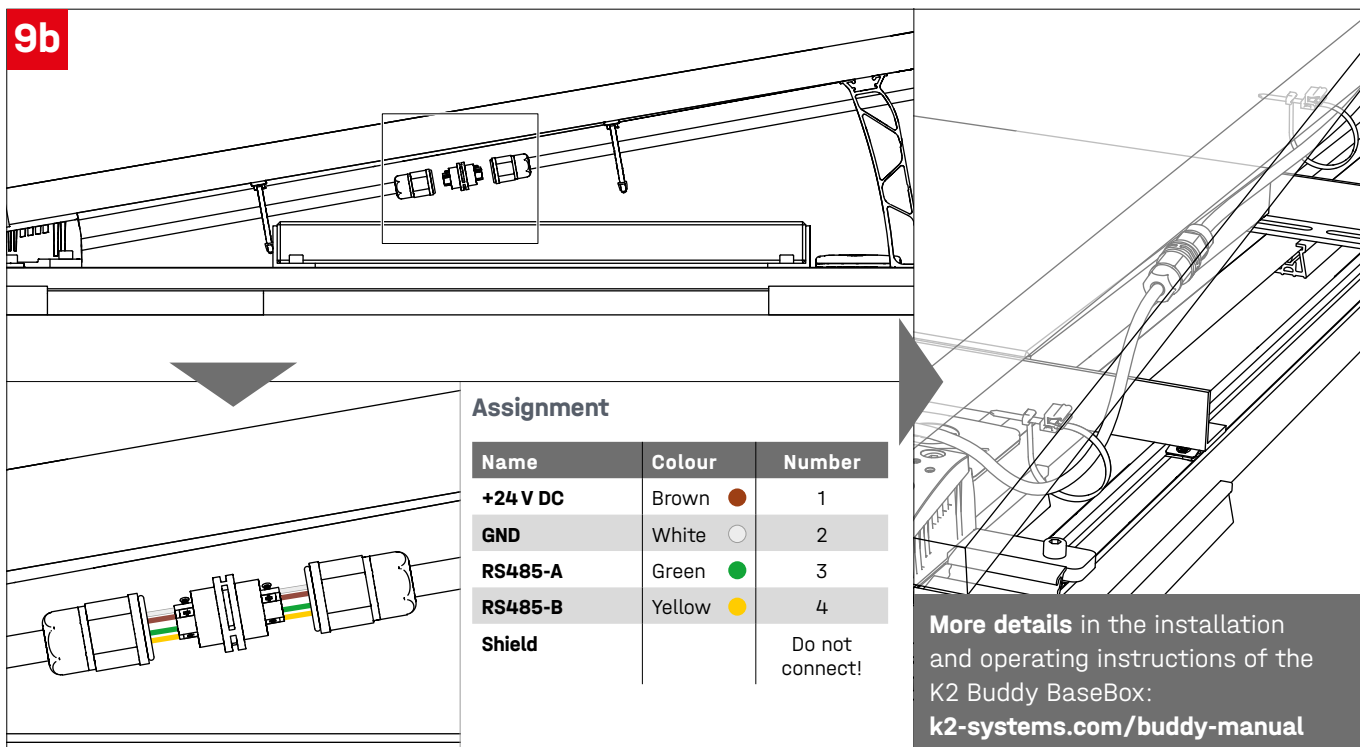
## Cable management

9a

! The cables of the snow scales must be fixed to the inner module frame flange to protect them from the weather.



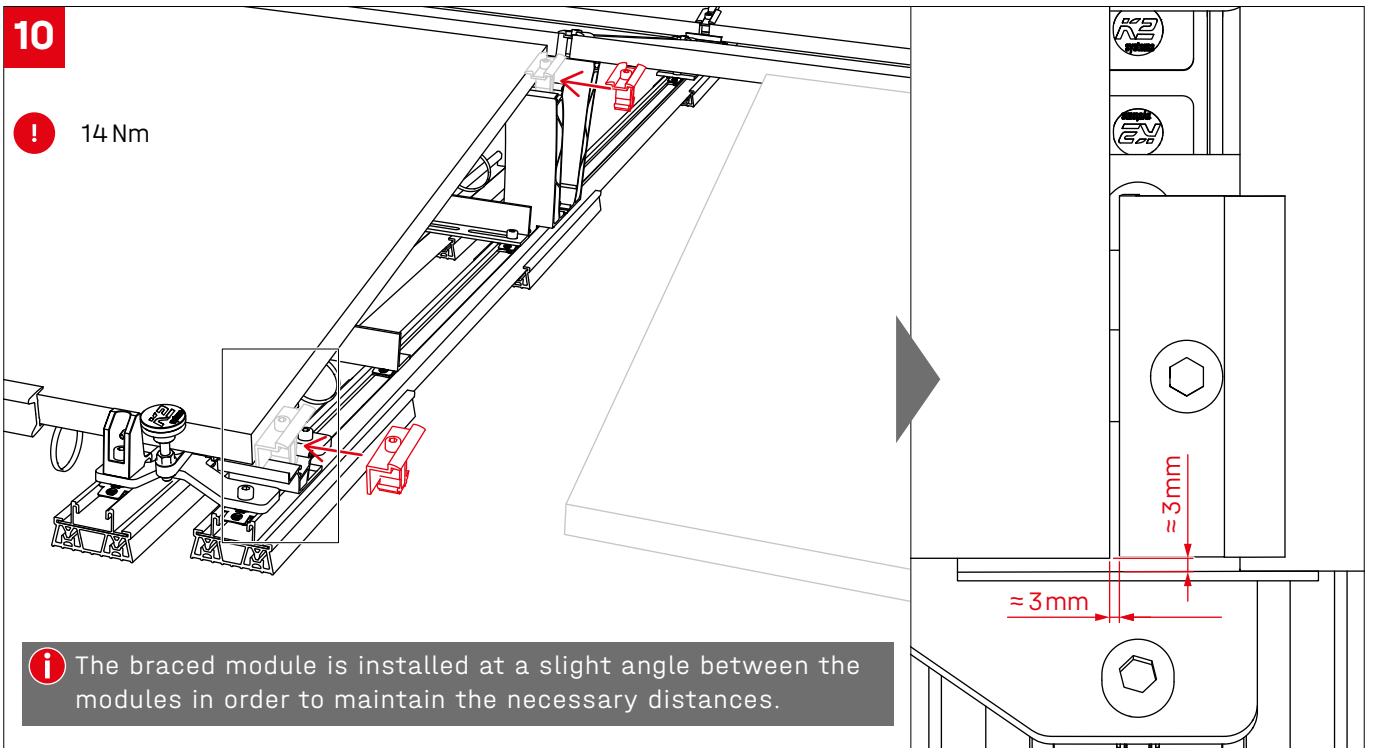
9b



## Positioning and fixing end clamps

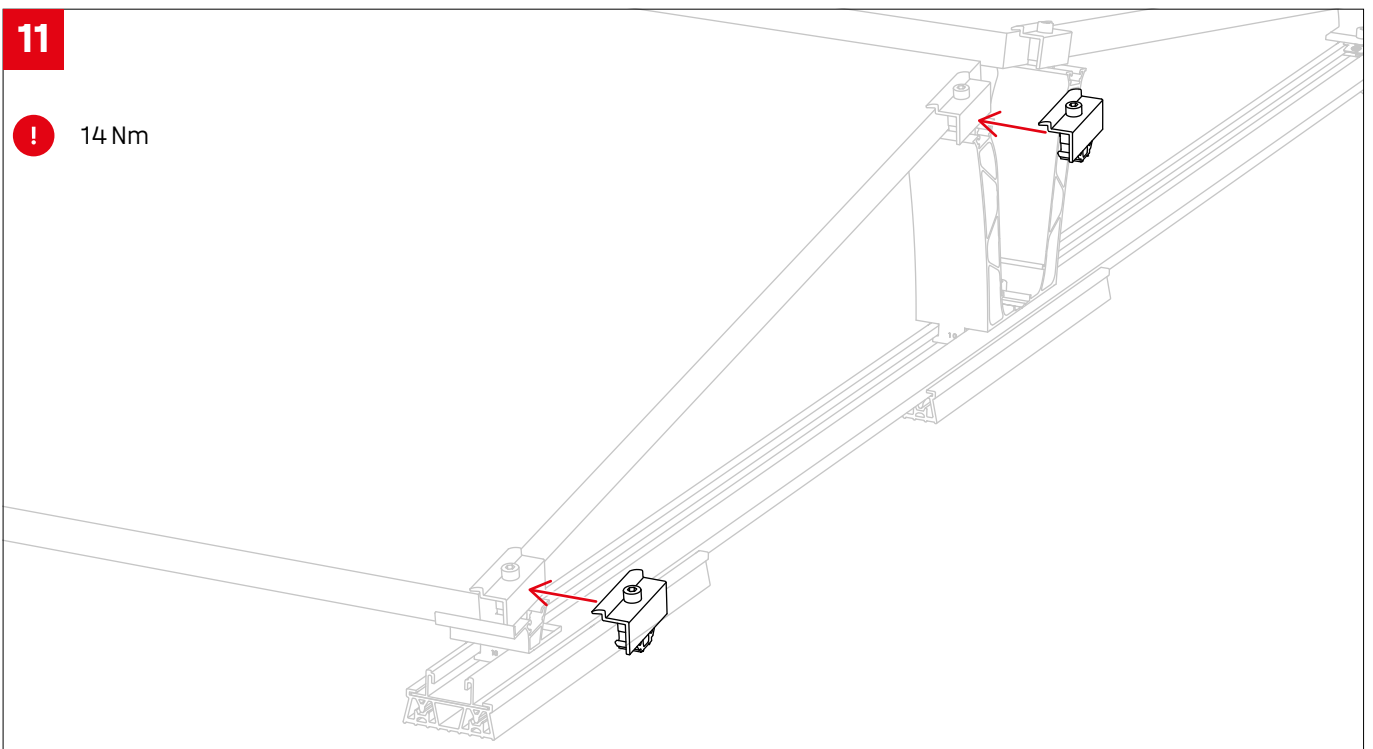
10

! 14 Nm



11

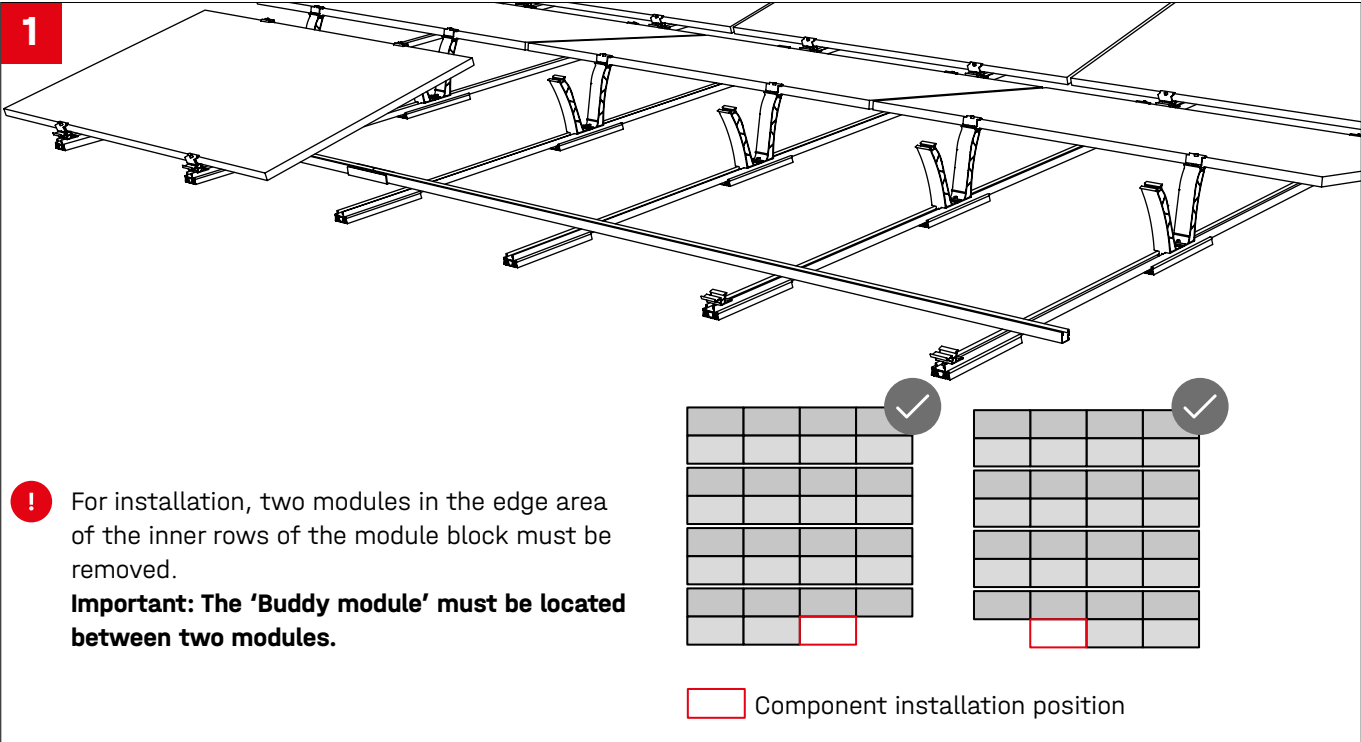
! 14 Nm



# Assembly Dome 6 Classic LS

## Preparation

**1**



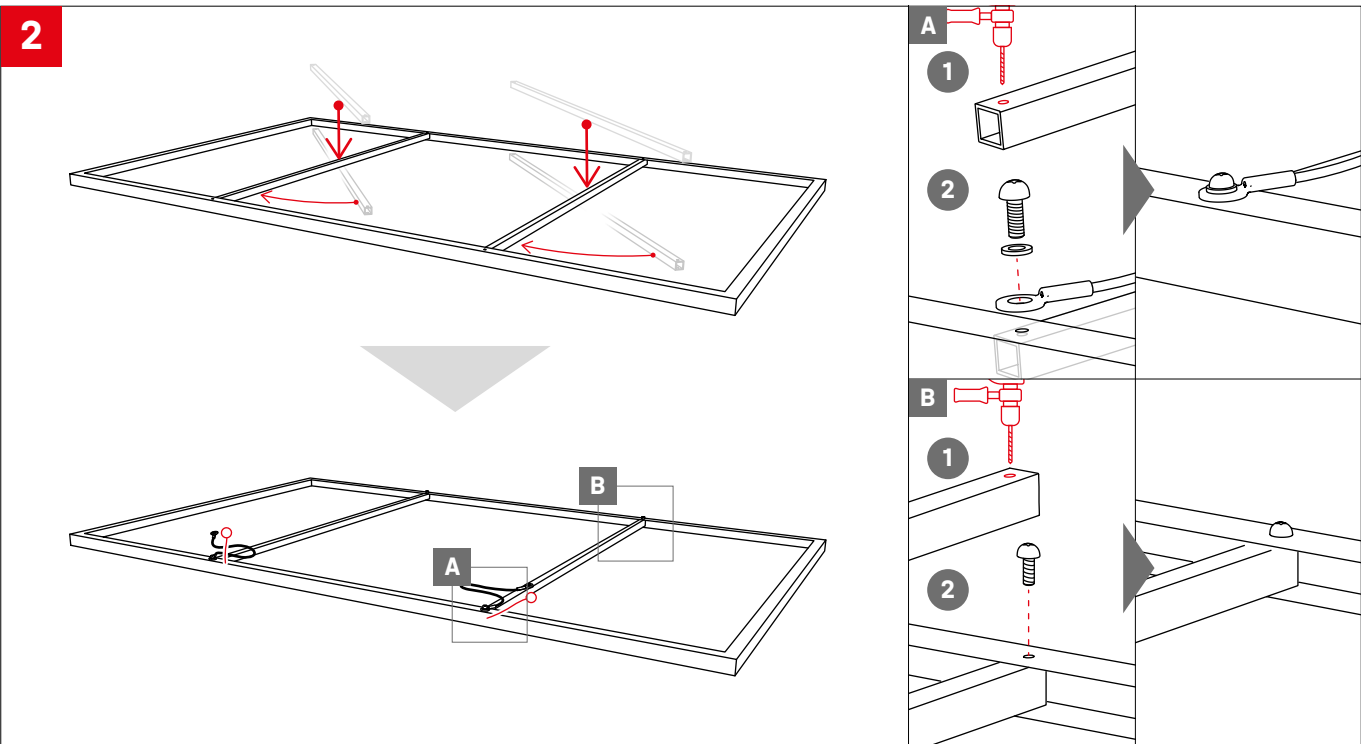
**!** For installation, two modules in the edge area of the inner rows of the module block must be removed.

**Important: The 'Buddy module' must be located between two modules.**

Component installation position

## Module bracing

**2**



**A**

**1**

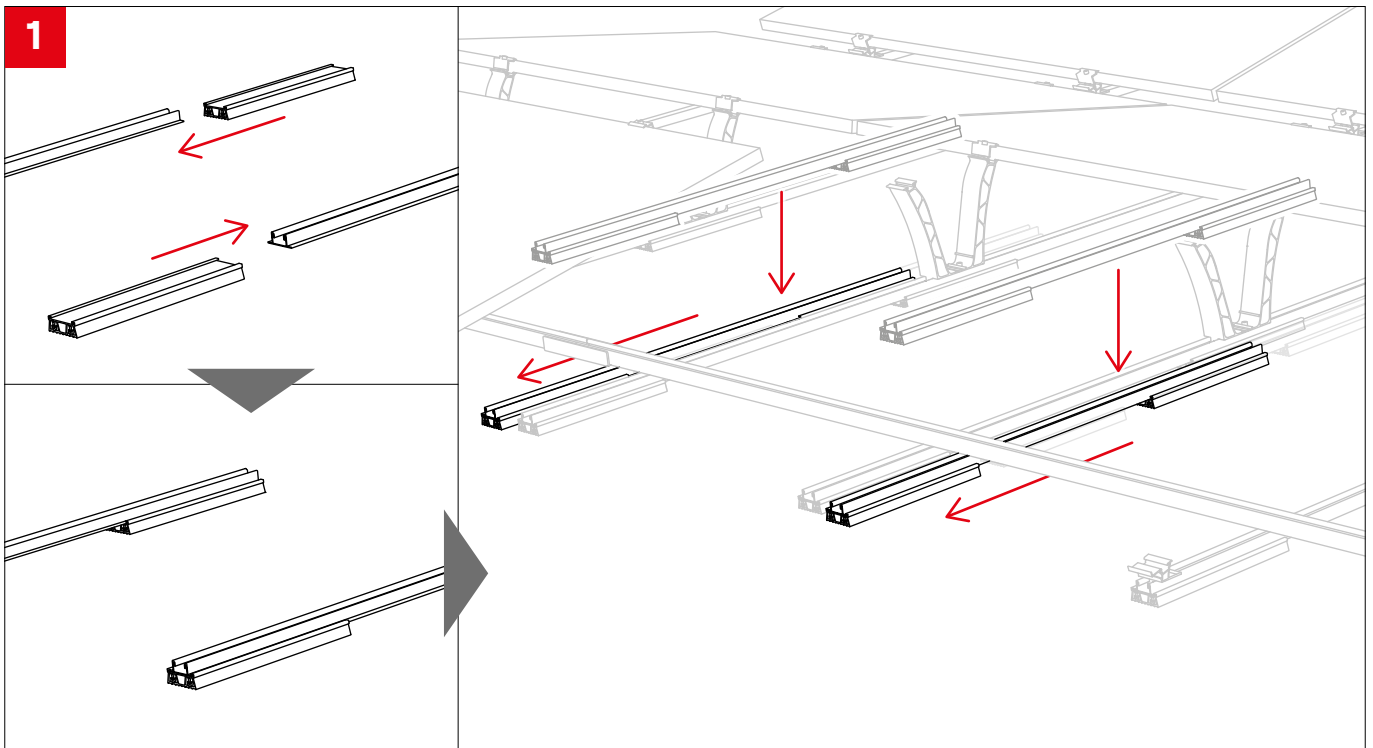
**2**

**B**

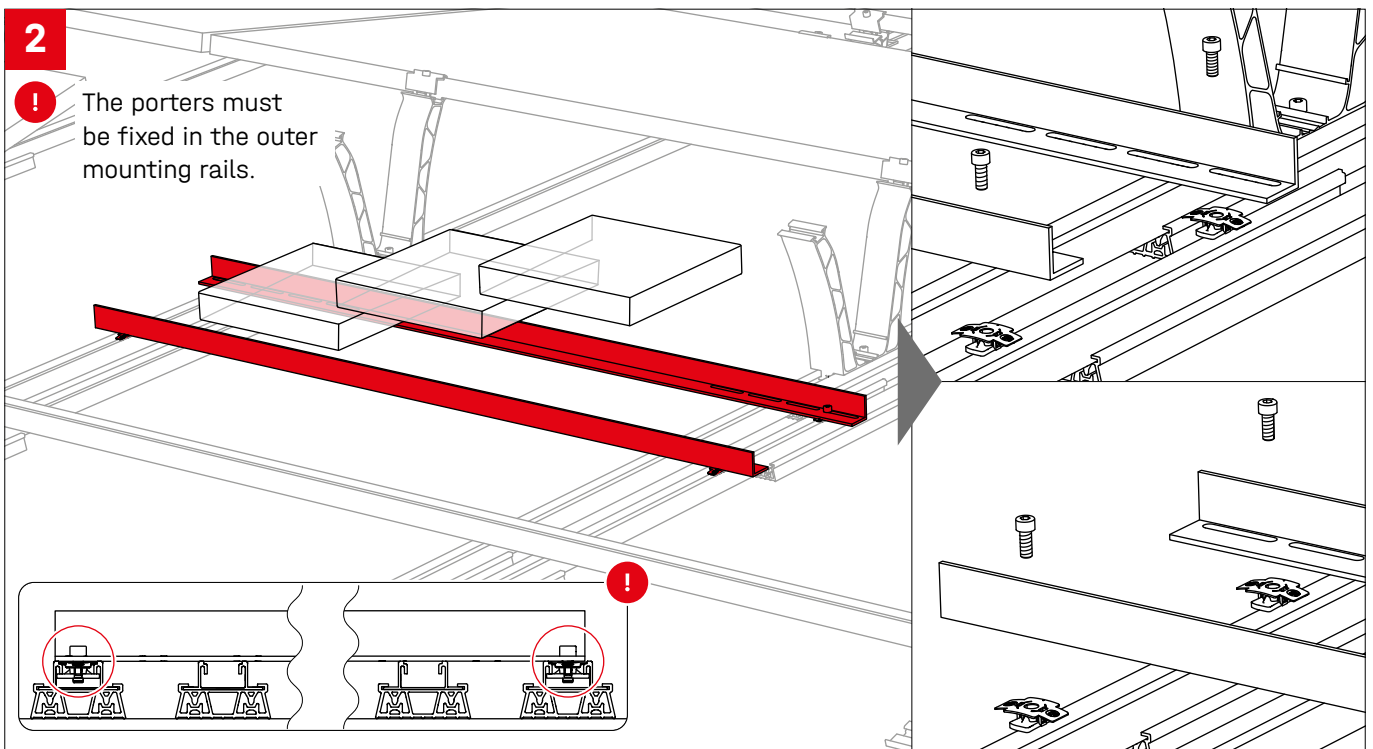
**1**

**2**

## Additional BasicRails (Dome Profile Set)

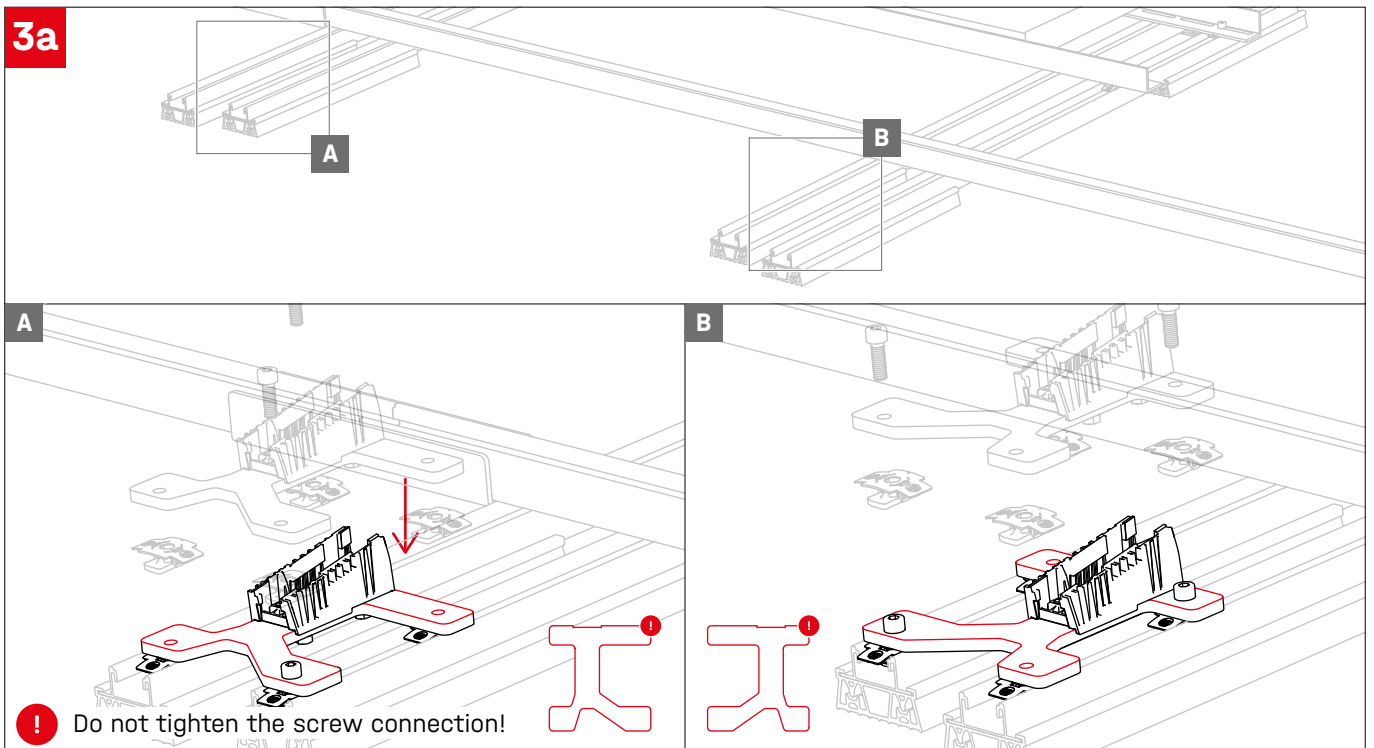


## Porter assembly



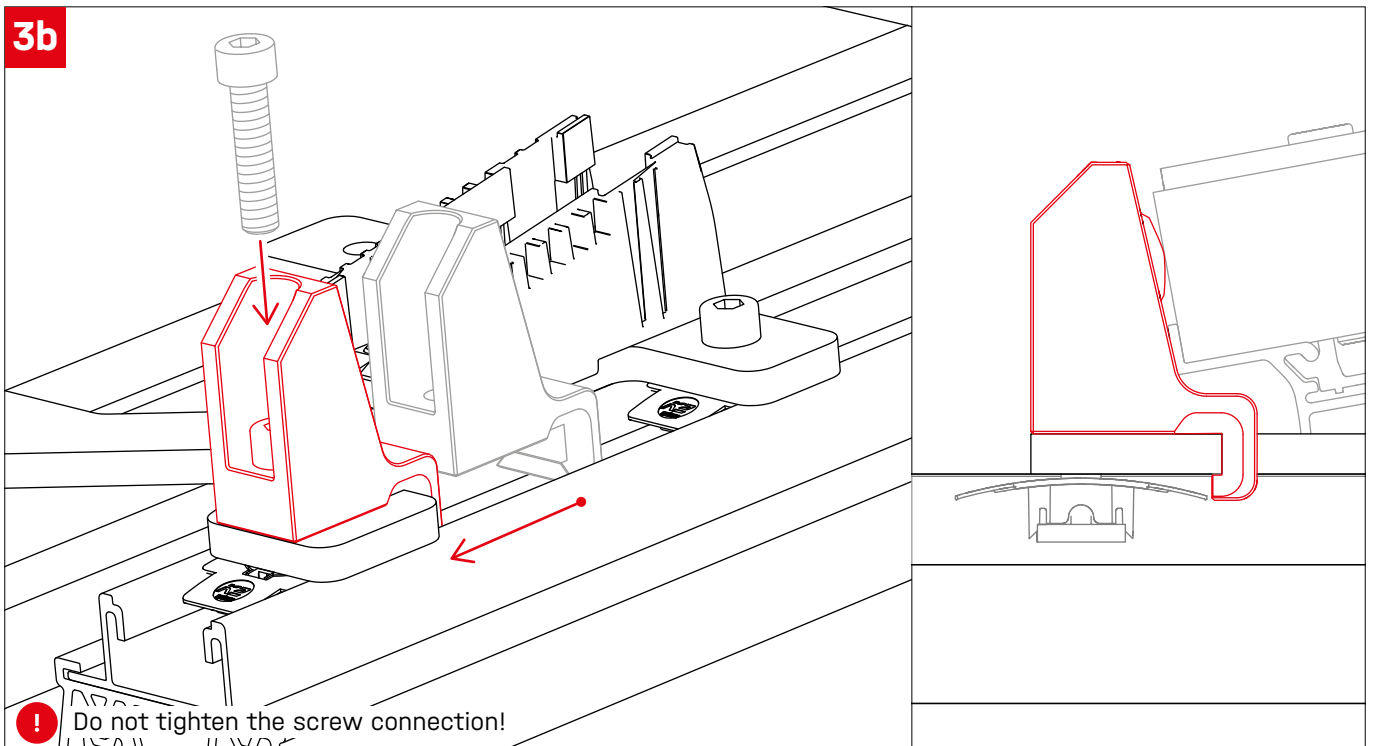
## Install connection (DomePlates)

3a



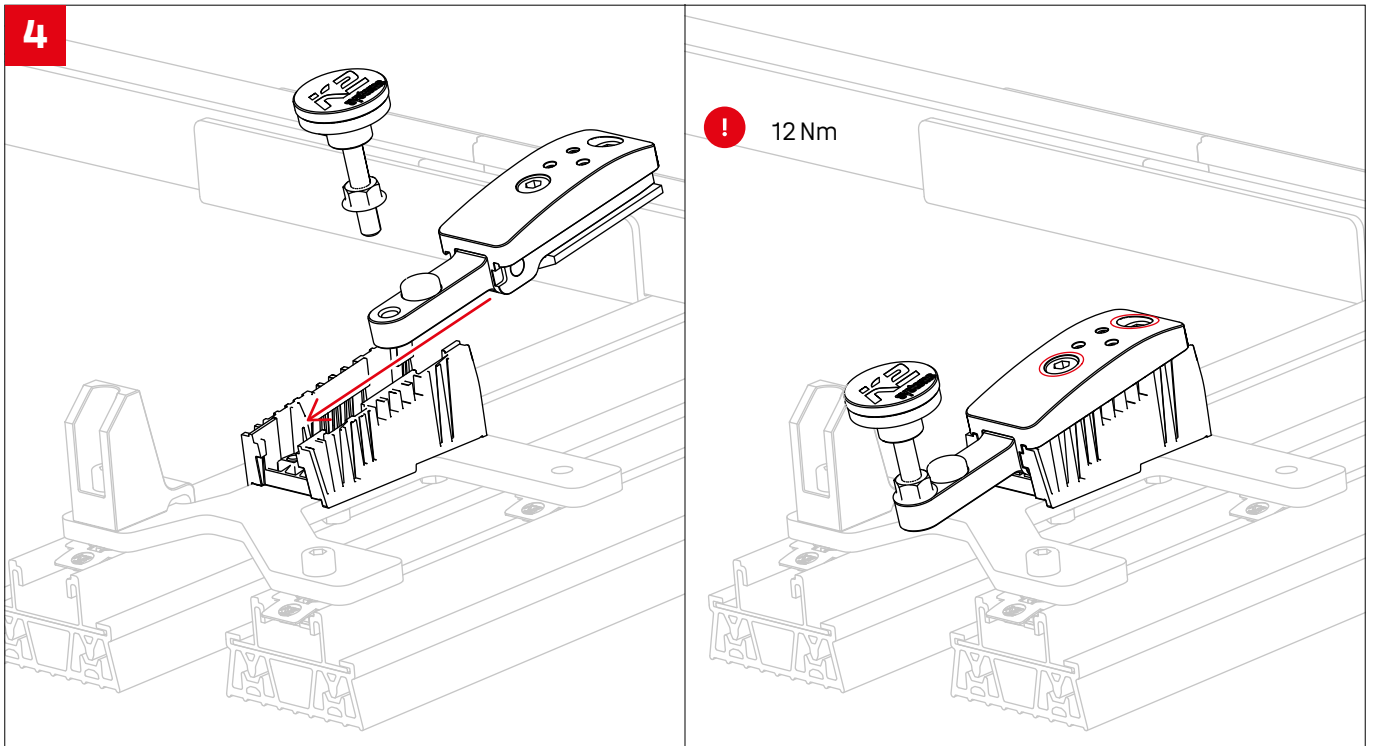
## Assembly module stop

3b

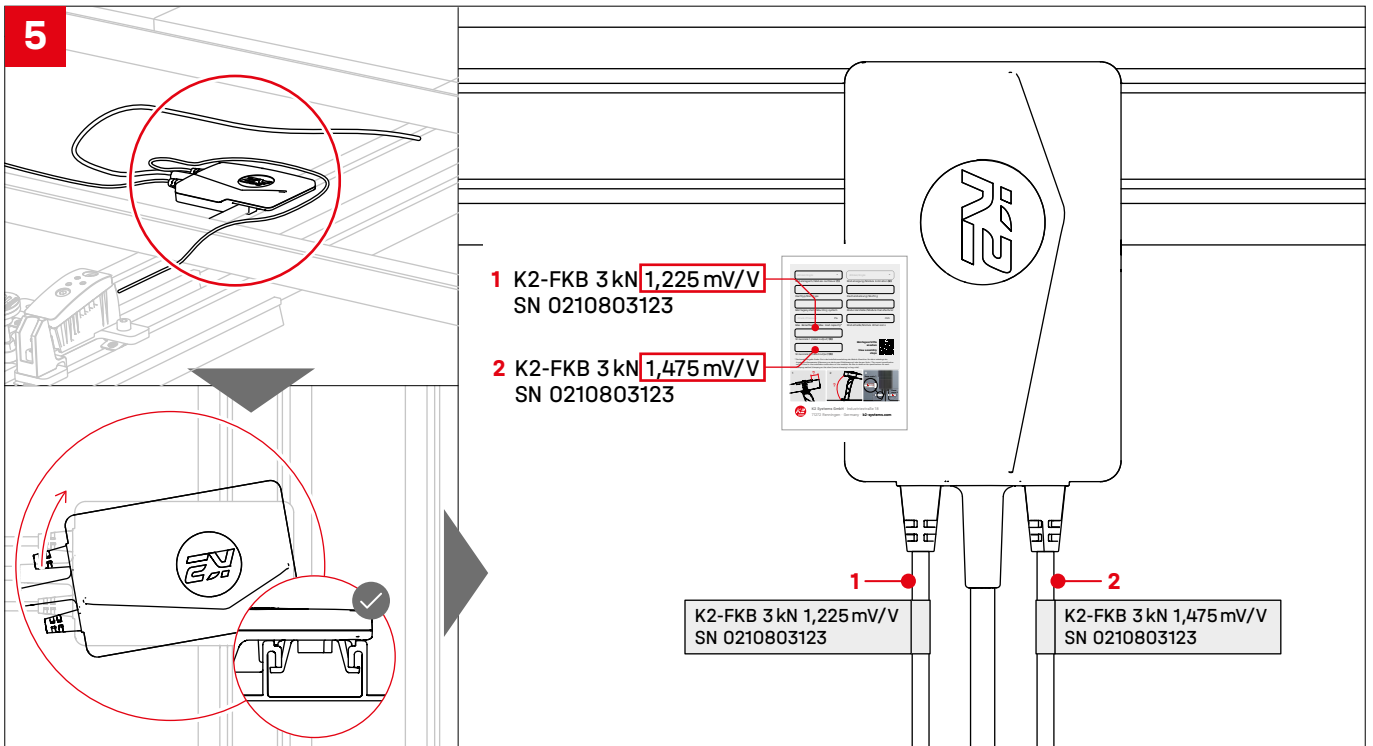




## Insert and attach weighing units



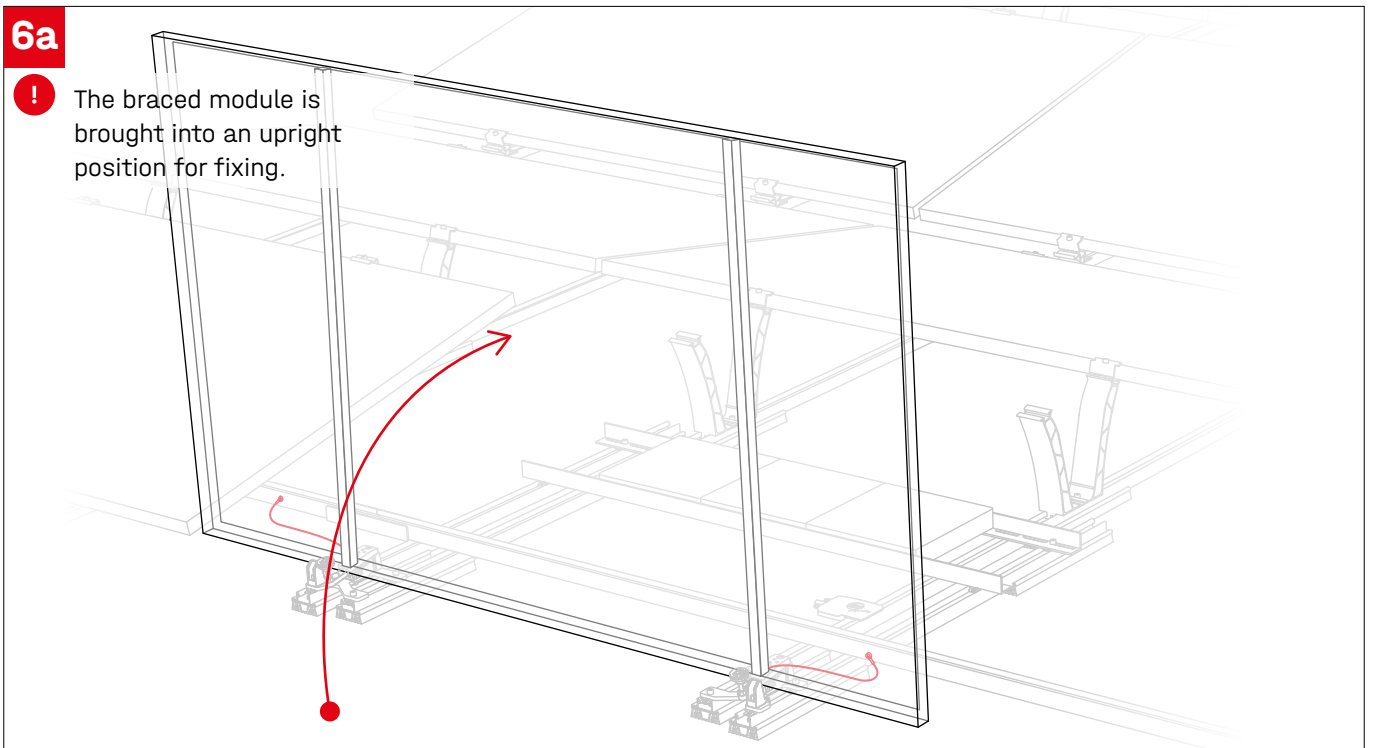
## Insert TopBox and record sensor values



## Placement of measuring module

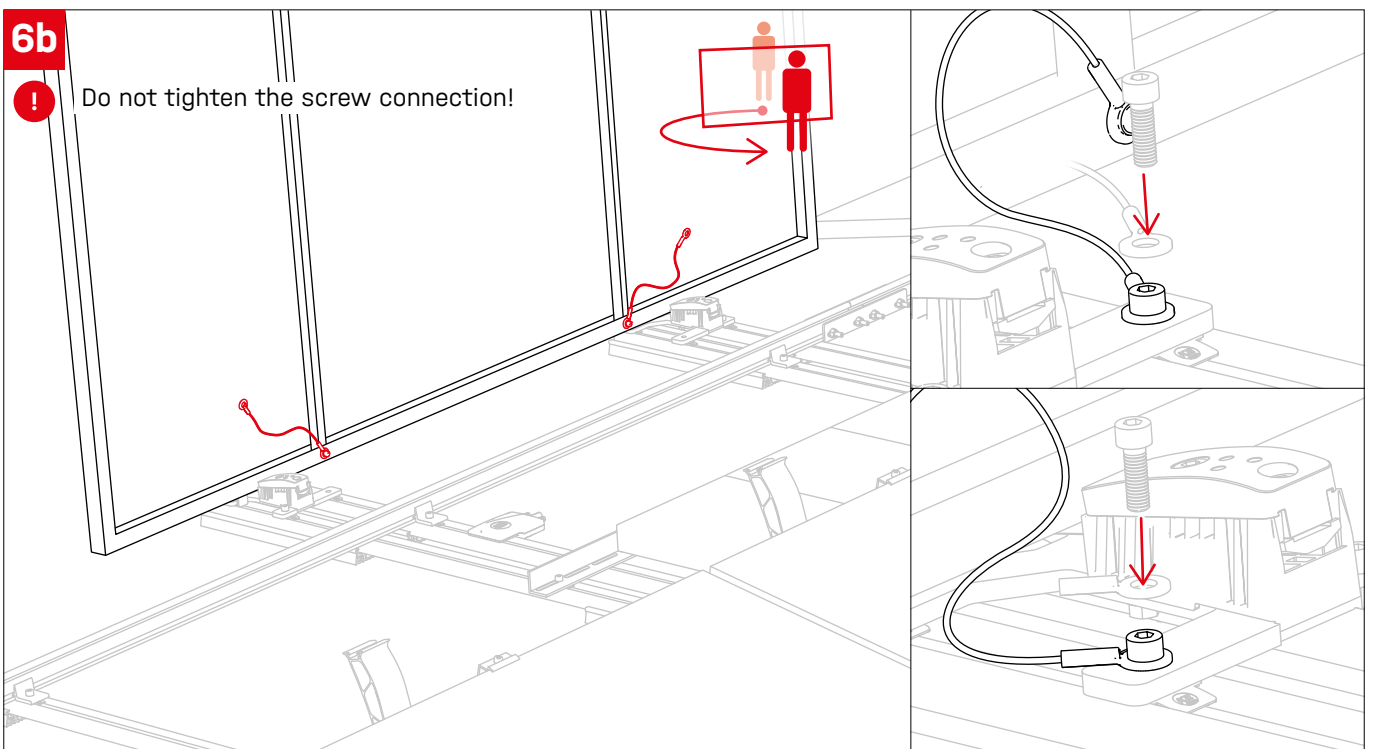
**6a**

! The braced module is brought into an upright position for fixing.



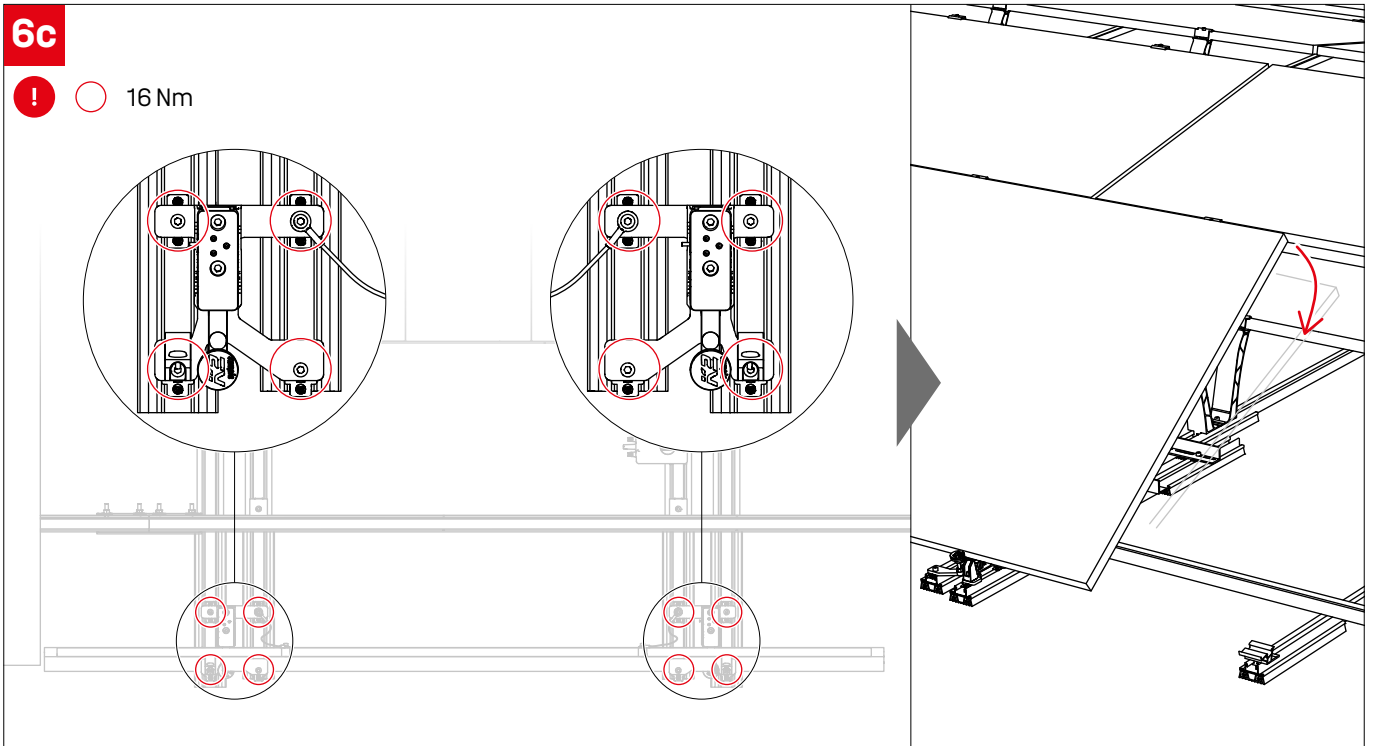
**6b**

! Do not tighten the screw connection!



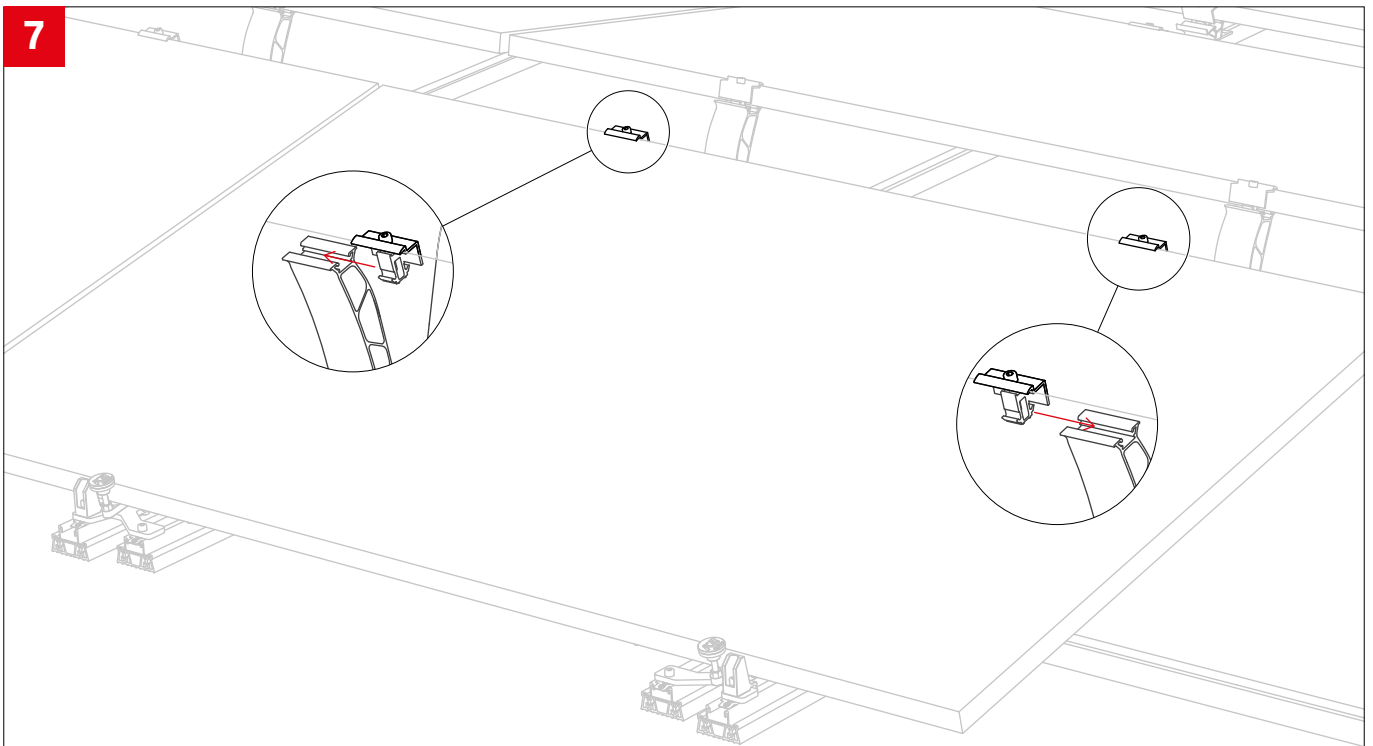
6c

! 16 Nm



## Module fixation

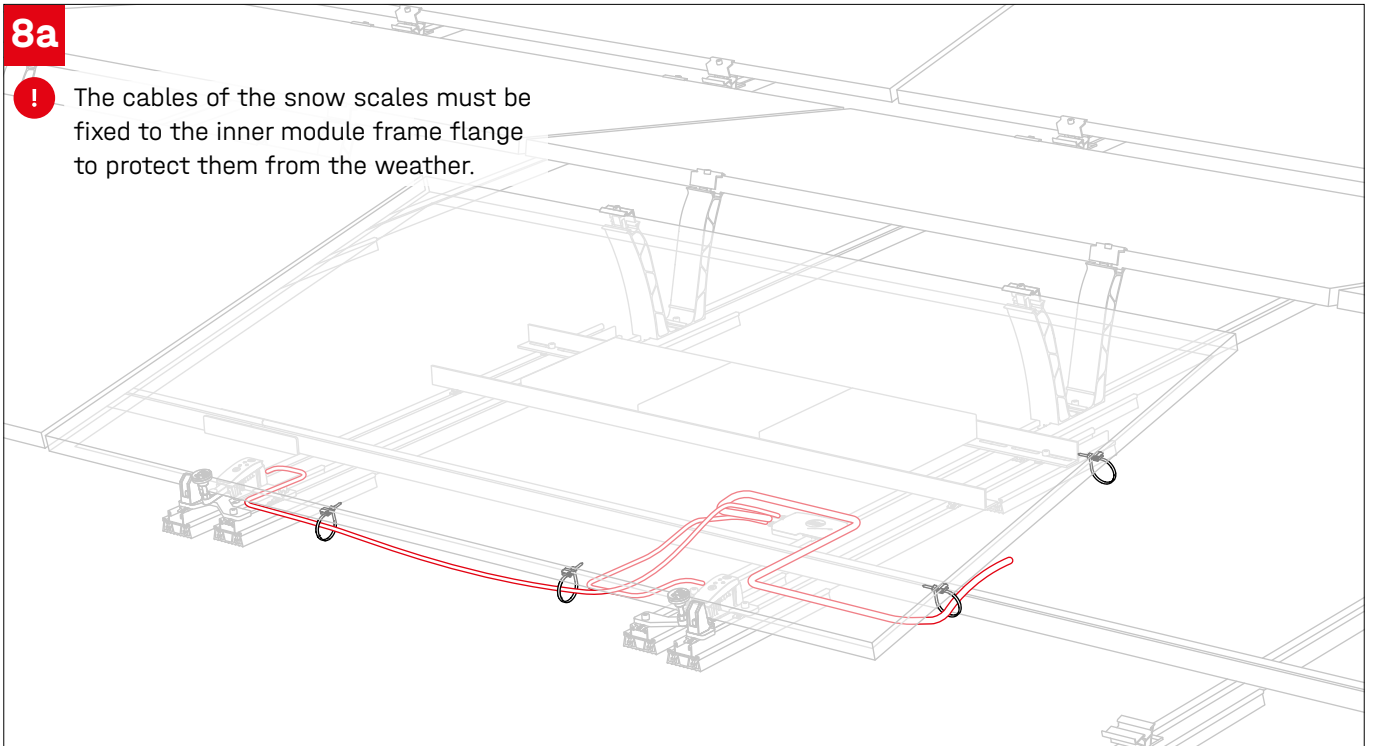
7



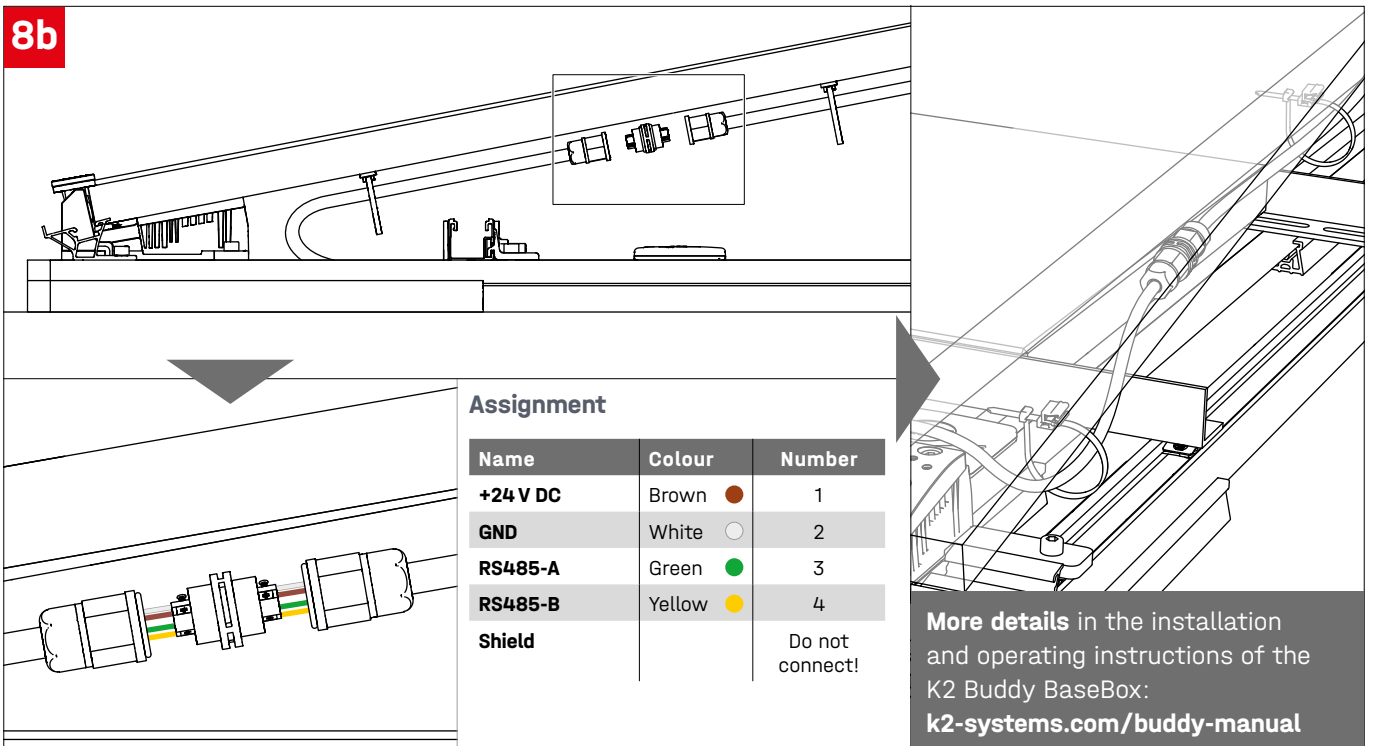
## Cable management

8a

! The cables of the snow scales must be fixed to the inner module frame flange to protect them from the weather.



8b

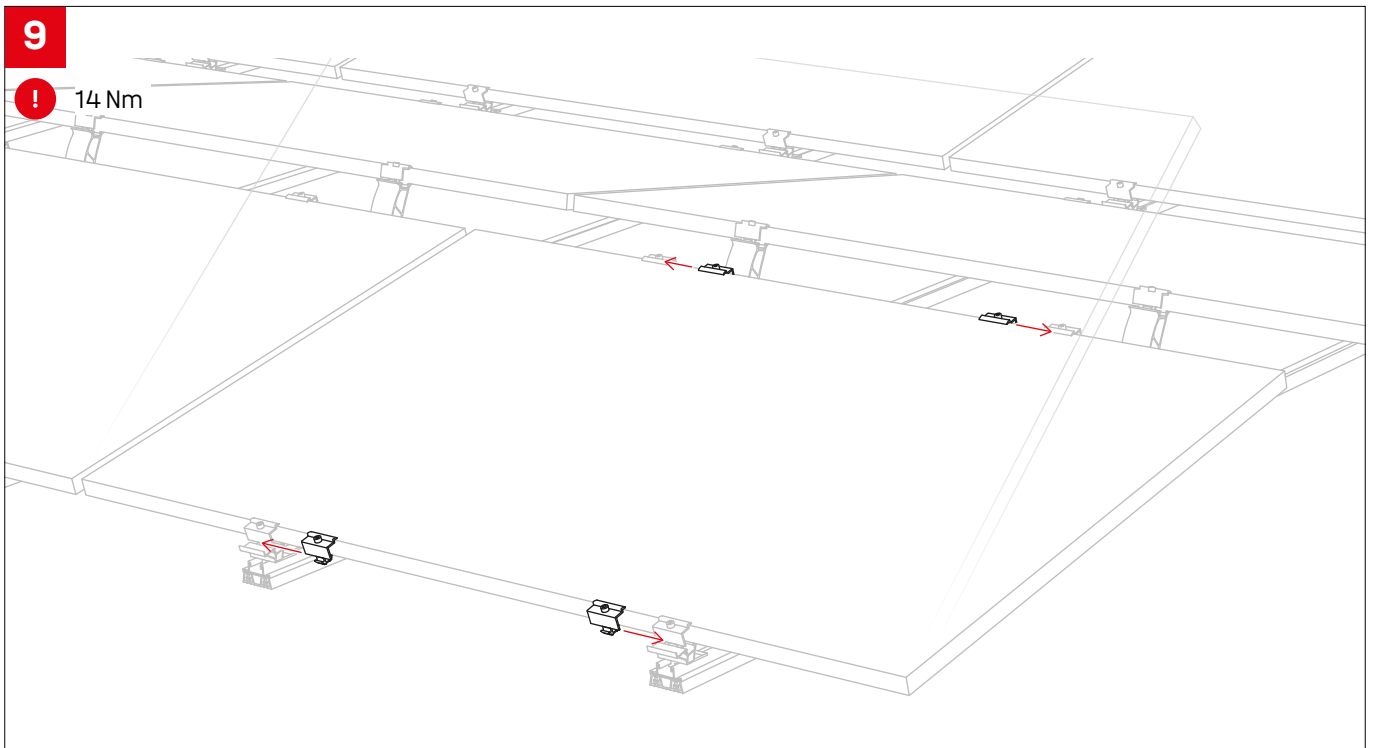


### Assignment

Name	Colour	Number
+24 V DC	Brown ●	1
GND	White ○	2
RS485-A	Green ●	3
RS485-B	Yellow ●	4
Shield		Do not connect!

More details in the installation and operating instructions of the K2 Buddy BaseBox:  
[k2-systems.com/buddy-manual](http://k2-systems.com/buddy-manual)

## Place final module



## Thank you for choosing a K2 mounting system.

Systems from K2 Systems are quick and easy to install. We hope that these instructions have been of help to you. Please do not hesitate to contact us if you have any suggestions, questions or ideas for improvements. All contact details can be found at:

- [k2-systems.com/en/contact/](https://k2-systems.com/en/contact/)
- **Service hotline: +49 (0)7159 420 590**

Our General Terms and Conditions of Delivery apply and can be found at: [k2-systems.com](https://k2-systems.com)

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K2 Buddy TopBox Dome 6 Manual EN V2 | 0824 · Subject to change without notice · Images of the products are exemplary and may differ from the original.



**Connecting Strength**

**[k2-systems.com](https://k2-systems.com)**