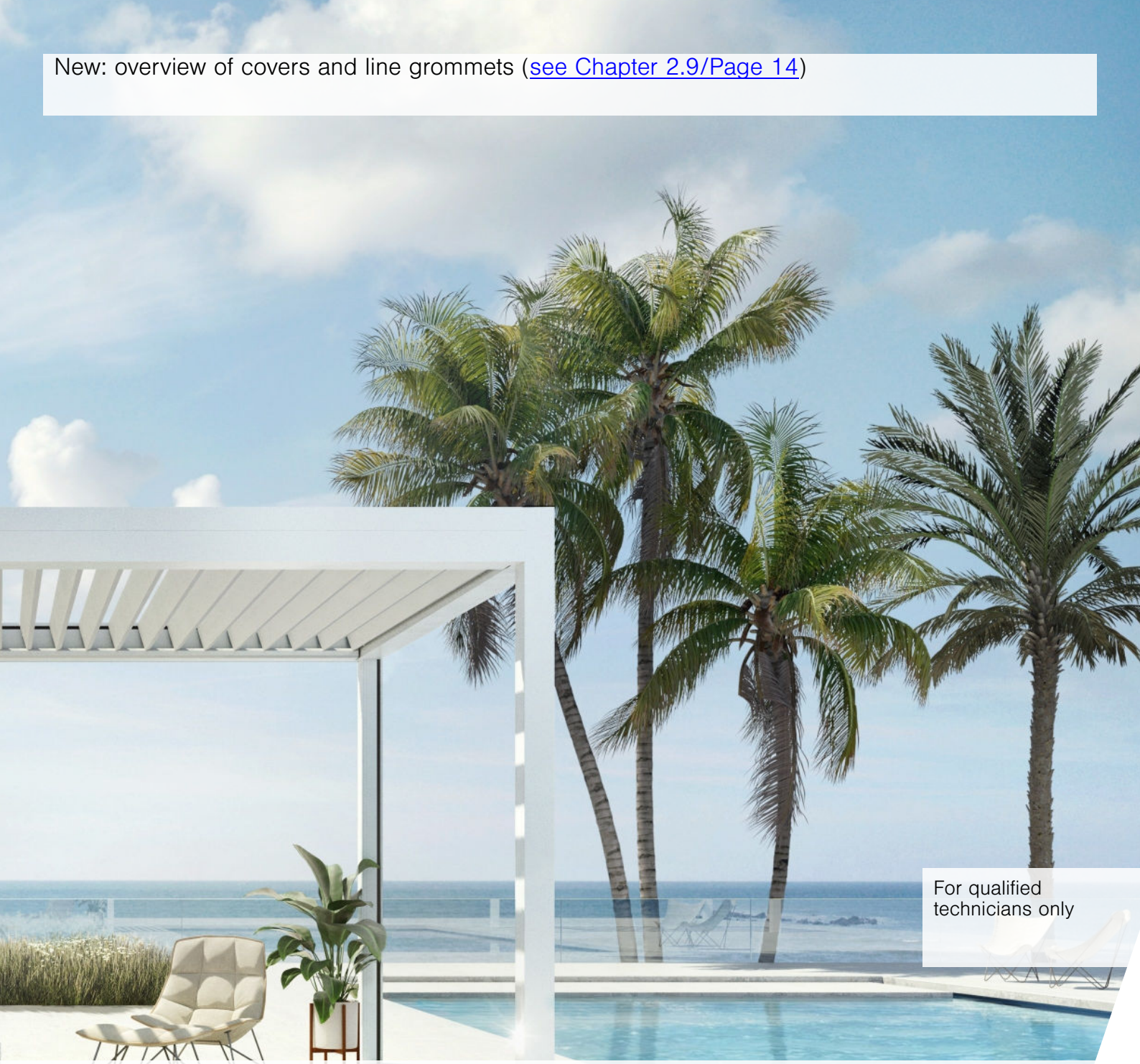
New: overview of covers and line grommets (see Chapter 2.9/Page 14)



For qualified technicians only

WAREMA slat roof Lamaxa L50

Installation Instructions

Document number 2054143 [Rev. 7 - en]

Table of contents

1 Safety and product information

Warnings are marked in the instructions with this symbol.

- Read through the product instructions before use.
- Observe all safety and setting instructions.

The basic safety instructions can be viewed under (**www.warema.de/Sicherheitshinweise**).

Target group

These instructions are intended for use by qualified specialists.

Activities that pertain to the slat roof structure are only permitted to be performed by qualified fitters.

Activities that pertain to the electrical connection of the components within the slat roof are only permitted to be performed by certified electricians.

Activities that pertain to the electrical house installation are only permitted to be performed by an installation company registered in the installers directory of the network operator.

Permissible activities

Performing tasks on the product that are not described in these instructions is not permissible. No other alterations are to be carried out on the product other than as described in these instructions without the written approval of WAREMA.

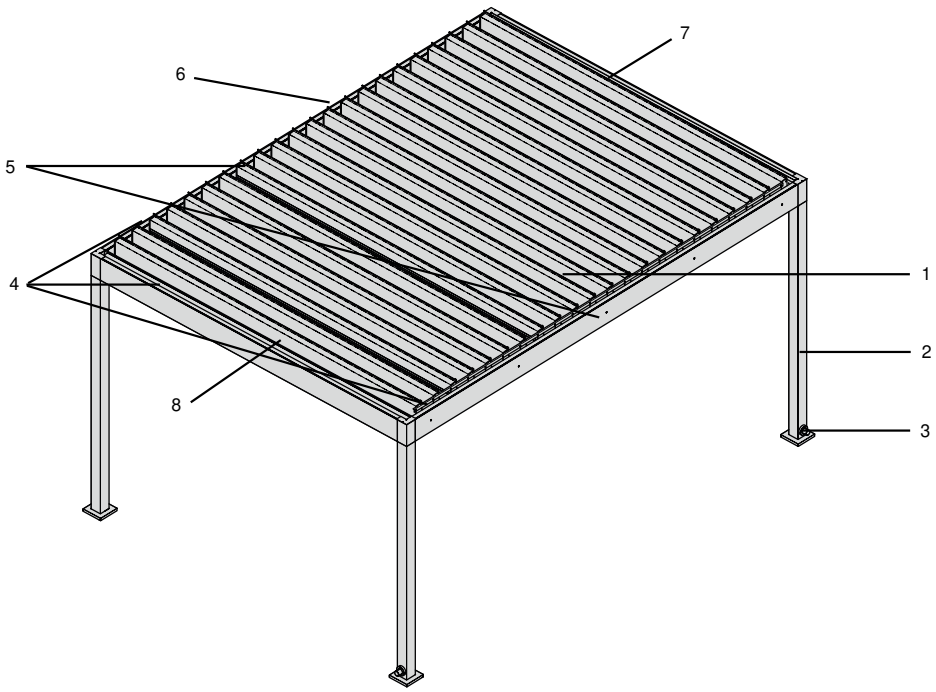
If any questions arise before or during installation, please send an e-mail to **service@warema.de** or call +49 9391 20-1900.

Intended use

The following details apply to the following product: slat roof Lamaxa L50

The product is a weather-proof, large-area external sun shading system that may be used for protection against heat and weather and for glare control.

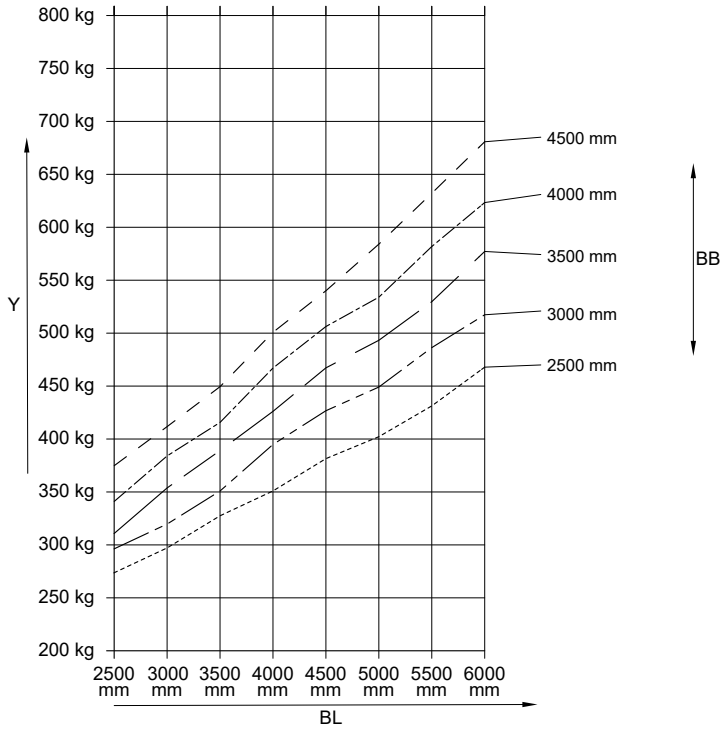
Parts description



1	Slats	5	Beams with slat seat
2	Pole	6	Push rod (push rod not visible)
3	Base plate (e.g., external)	7	Partition compensation plate
4	Rain hood	8	Connection box (optionally)

Fig. 1: Parts description

Weights



BB	Order width [mm]	Y	Weight
BL	Order length		

Fig. 2: Weights

Wind resistance

The resistance to wind loads are determined in accordance with EN 13561.

The product has the following wind resistance rating: class 3

The slats can remain in a vertical position up to a maximum wind speed of 48 km/h.

The installed product will meet the requirements of the specified class if the following instructions are followed during installation:

– The fixing material used must be suitable for the mounting substructure (the fitter is responsible for the right selection).
– The installation specifications from the fixing material manufacturer must be adhered to (the fitter is responsible for adherence).

Resistance against slat roof water collection

The product fulfils performance class 2 in accordance with DIN EN 13561.

The product offers protection against the weather when the slats are closed.

Electric drive data Slat roof

INFO
Observe the separate instructions for the motor.

Technical data LED strip (optionally)

Parameter	Value
Output voltage	24 V
Degree of protection	IP 67
max. power	400 lm/m, 4.8 W/m
Colour temperature	3000 Kelvin

Tab. 1: Technical data of LED strip (round)

Parameter	WMS Dimmer smart
Operating voltage [V AC]	200-240
Frequency [Hz]	50-60
Load current [A] at 230 V AC	6.0
Output voltage [V DC]	24
Switching capacity [W] at 24 V DC with WMS Dimmer smart 60 L (art. no. 2023455)	55
Switching capacity [W] at 24 V DC with WMS Dimmer smart 100 L (art. no. 2023456)	95
Switching capacity [W] at 24 V DC with WMS Dimmer smart 200 L (art. no. 2023457)	150
Degree of protection	IP 54
Safety class	I
Operating and storage temperature [°C]	-20 to +55

Tab. 2: Data for WMS Dimmer smart

Technical data RGB strip (optionally)

Parameter	Value
Output voltage	24 V
Degree of protection	IP 54
max. power	12 W/m

Parameter	ZigBee RGB Dimmer smart 150 W
Operating voltage [V AC]	200-240
Frequency [Hz]	50-60
Output voltage [V DC]	24
Switching capacity [W] at 24 V DC with ZigBee RGB Dimmer smart 150 W (art. no. 2031738)	145
Degree of protection	IP 54
Safety class	I
Operating and storage temperature [°C]	-20 to +55

Tab. 3: Data for ZigBee RGB Dimmer smart 150 W

Technical data Design radiant heater (optionally)

INFO
For the radiant heater, an in-line circuit breaker with type C16 is**mandatory**.

Parameter	Value
Mains voltage	230–240 V AC/50 Hz
Power consumption [W]	2200
Degree of protection	IP 65
Safety class	I
Dimensions LxWxH [mm]	900x170x80

Tab. 4: Technical data of the Design radiant heater

2 Installation

INFO
The fixation and the fixing material must be suitable for the existing mounting substructure and must be designed according to the applicable regulations.

INFO

- Perform the installation with at least two persons!
  To **ensure** proper installation, the **mounting aid** must be used.

DANGER
Electric shock!

When working in the immediate vicinity of potentially live parts, such as on-site connecting lines, contact may result in an electric shock.

- Check that the on-site connecting line is de-energised.
- Before installation, de-energise the on-site connecting line and secure it against being switched on again.

INFO

2.1 Tools

Tool/aid	Use
Lifting aid	Beams
Bellows	Cleaning the fixing holes after drilling
Dismantling tool (art. no. 2024013)	Dismantling guide rail (GranTex with easyZIP guidance)
Protective equipment (protective goggles/gloves)	For primer
Brushes/rags/cloths	For applying primer
Cartridge press/caulking gun	For sealing adhesive
Cleaner (**recommendation**: Rhobasol 35DSF or Würth IPA cleaner – **not** included)	For cleaning surfaces on which primer and sealing adhesive are to be applied
Primer (**specification**: Würth Primer for Plastic/Wood/Stone – included)	Pretreatment of surfaces on which the sealing adhesive are to be applied
Sealing adhesive (**specification**: Würth SMP sealant black – included)	Sealing
Sealant smoothing agent (**recommendation**: from Würth – **not** included)	Smoothing of sealant

Tab. 5: In additional, specifically required special tools and aids

2.2 Unpacking the product

WARNING
Risk of suffocation from carelessness!

Plastic film, polystyrene, small parts, etc., can be very dangerous for children to play with.

- Keep children away from small parts.
- Do not leave the packaging material lying around in disorderly fashion.

INFO
Dispose of the packaging material properly after the unit is unpacked.

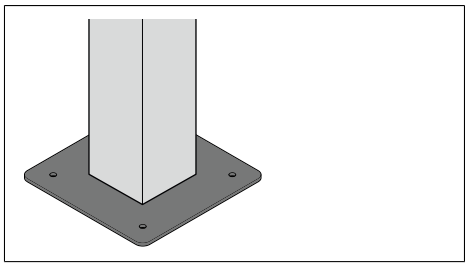
- Use care when unpacking the product and components.

2.3 Scope of delivery

INFO

- Check the scope of delivery against the delivery note.
- Check all parts to make sure they are not damaged.
- Compare the situation on-site with the order data.
- If any items are damaged or do not match the order data, discontinue installation and contact WAREMA.

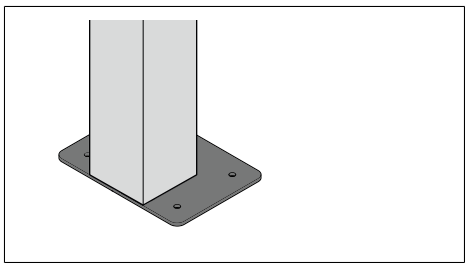
Ground connections with field of application



Installation of glass permissible.

Downward drainage possible.

Fig. 3: External base plate (standard – protruding on all sides)

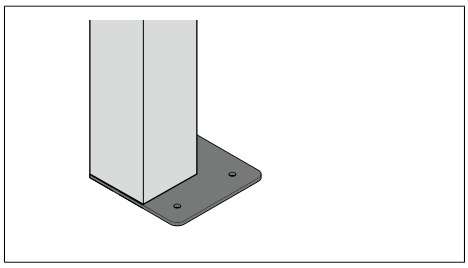


For recess installation only.

Installation of glass permissible.

Downward drainage possible.

Fig. 4: Base plate for recess installation (flush on one side)



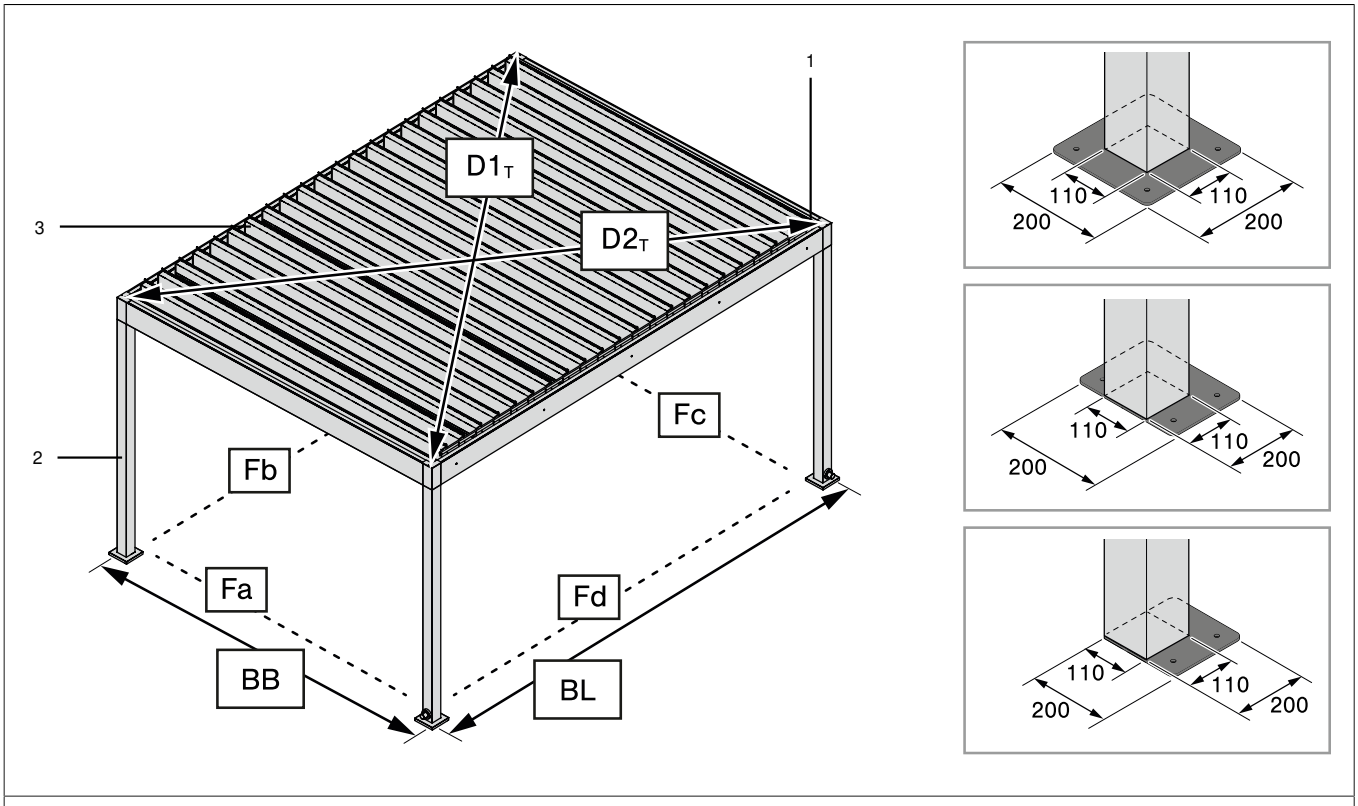
For corner installation only.

Installation of glass permissible.

Downward drainage possible.

Fig. 5: Base plate for corner installation (flush on two sides)

2.4 Product position



1	Electric distribution on the beam
2	Pole
3	Beam with slat seat
BB	Order width
BL	Order length
D1	Diagonal 1 poles (inside corner to inside corner) – dimension specified on order confirmation as aid
D2	Diagonal 2 poles (inside corner to inside corner) – dimension specified on order confirmation as aid

Fig. 6: Product dimensions

INFO
The distance of the outside panels of the pole or outside surfaces of the beam to a wall must be 10 mm at every possible contact point.

Pole fixing methods

INFO
Note the special features of the fixing methods of the components listed and have any necessary preparations made.

▶ Pole with base plate

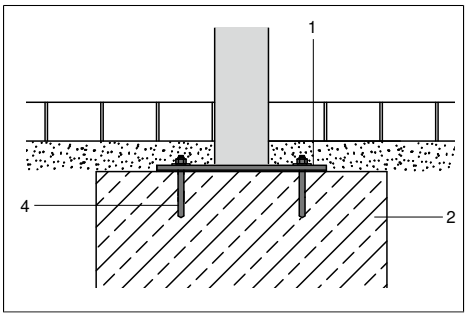


Fig. 7: Ground installation directly on the foundation [2]

- Attach the base plate [1] directly to the foundation [2] using suitable fixing material [4].

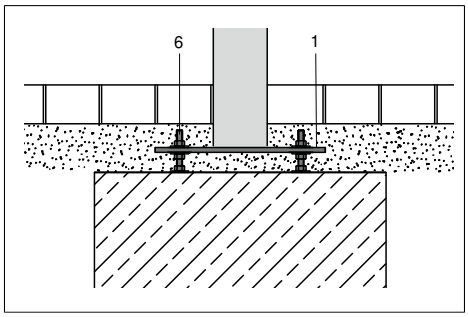
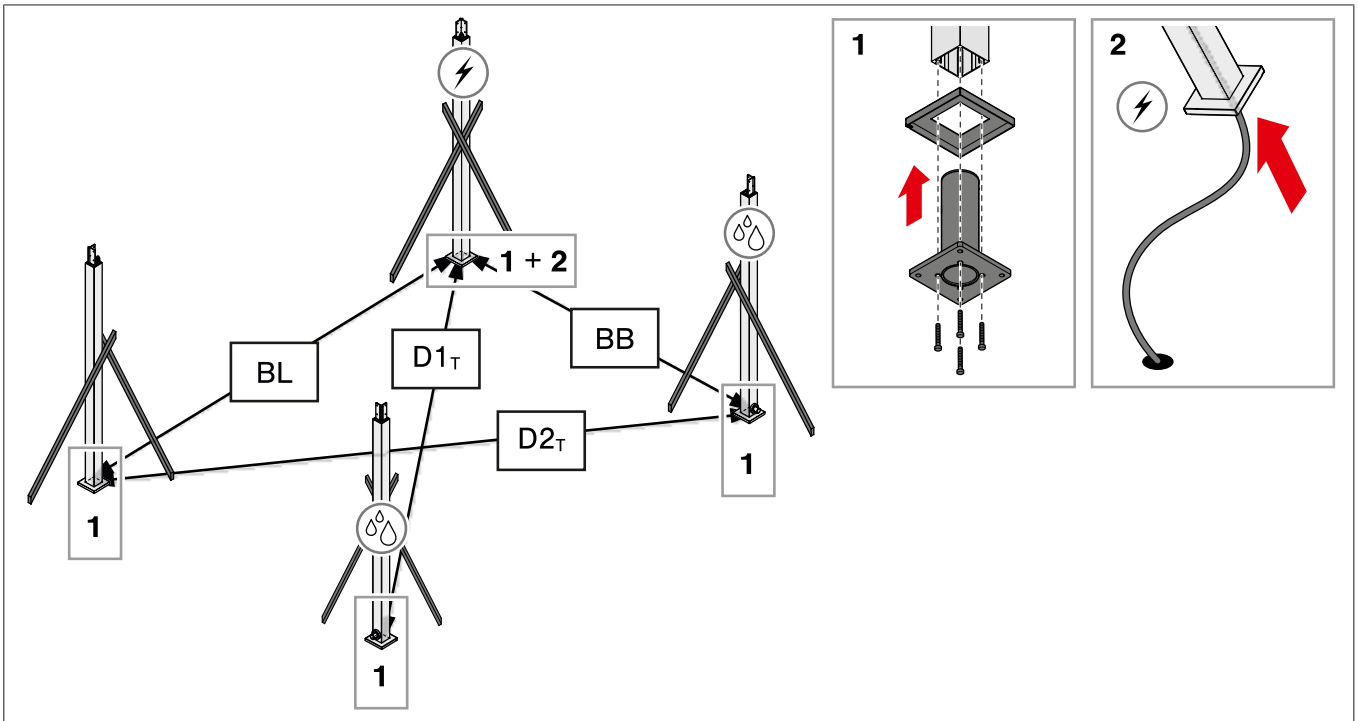


Fig. 8: Ground installation with threaded rod [6]

- Attach the base plate [1] to the threaded rod [6] without an intermediate layer.

2.5 Erecting the poles



BB	Order width
BL	Order length
$D1_T$	Diagonal 1 poles (inside corner to inside corner) – dimension specified on order confirmation as aid
$D2_T$	Diagonal 2 poles (inside corner to inside corner) – dimension specified on order confirmation as aid

Fig. 9: Erecting and aligning the pole

- [1] Attach the covers of all base plates, if present.
- [1] Attach 1 base plate to each pole with 4 screws DIN 7500 M8x30 each.
- [2] Pass the on-site supply line through the opening in the base plate of the pole for the supply line.

INFO
Secure the poles against falling over. As soon as two beams are connected to a pole, the fixture for securing the pole can be removed.

- Erect 2 poles. Centre the position and align roughly
- Secure the poles against falling over.

2.6 Erecting the poles, star-mounted and series-mounted units

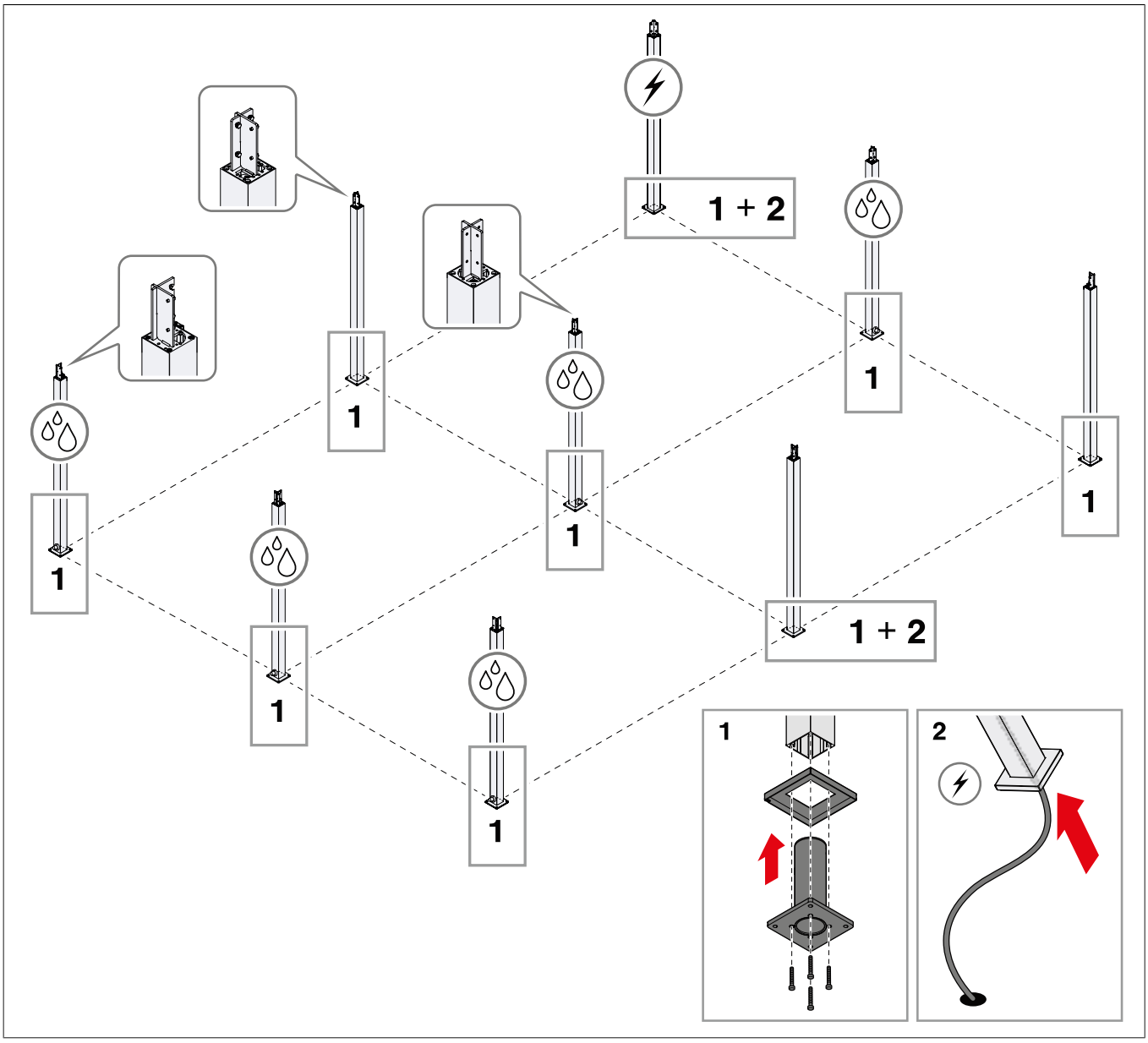


Fig. 10: Erecting and aligning the poles, star-mounted and series-mounted units

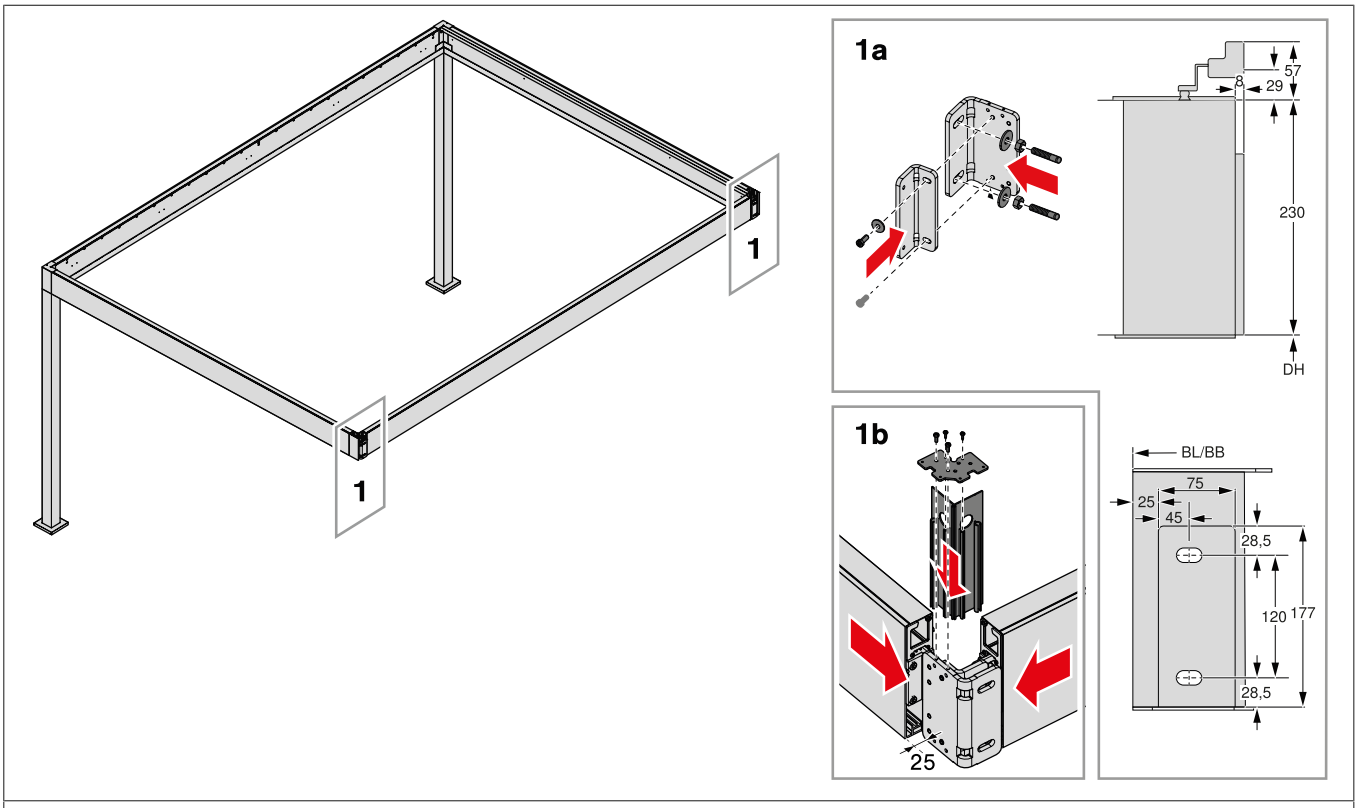
- [1] Attach the covers of all base plates, if present.
- [1] Attach 1 base plate to each pole with 4 screws DIN 7500 M8x30 each.
- [2] Pass the on-site supply line through the opening in the base plate of the pole for the supply line.

INFO
Secure the poles against falling over. As soon as two beams are connected to a pole, the fixture for securing the pole can be removed.

INFO
Note the different pole versions and their positions. The exact positions of the various beams can be seen in the accompanying sketch.

- Erect the poles. Centre the position and align roughly.
- Secure the poles against falling over.

2.7 Installing the wall console (optionally)



BB	Order width	DH	Headroom (order data)

Fig. 11: Installing the wall console (dimensions in mm)

INFO
Pencil in the fixing positions centrally to allow corrections later on.

Watch the edge distances.

INFO

- Check the mounting substructure for unevenness.
- Correct any unevenness.

- [1a] Transfer the stop position DH and the console offset of 25 mm onto the mounting substructure.

  NOTICE
  Make sure the markings are at the same height.

- Hold the wall console against the marking, properly aligned both vertically and horizontally.
- Transfer the fixing template.
- Drill the fixing holes.
-
- [1a] Attach the basic body of the wall console beam to the mounting substructure.
- [1a] Screw the angle bracket onto the basic body using 2 screws DIN 6912 M8x20 and 2 washers DIN 9021 8.4.
- [1b] Screw 2 beams, each with 2 wedge-locking washers 8.7x16.6 and 2 screws DIN 7984 M8x16, onto the console.
- [1b] Attach the retaining plate for the cover to the cover (inside) using 2 screws DIN 7981 3.5x13.
- [1b] Push in the cover (inside, for assignment see Chapter 2.9/Page 14) from the top downward and fasten it to the wall console using 2 screws DIN 7985 M4x12.

2.8 Installing the fixing profile of the wall connection system on the wall via the beam (optionally)

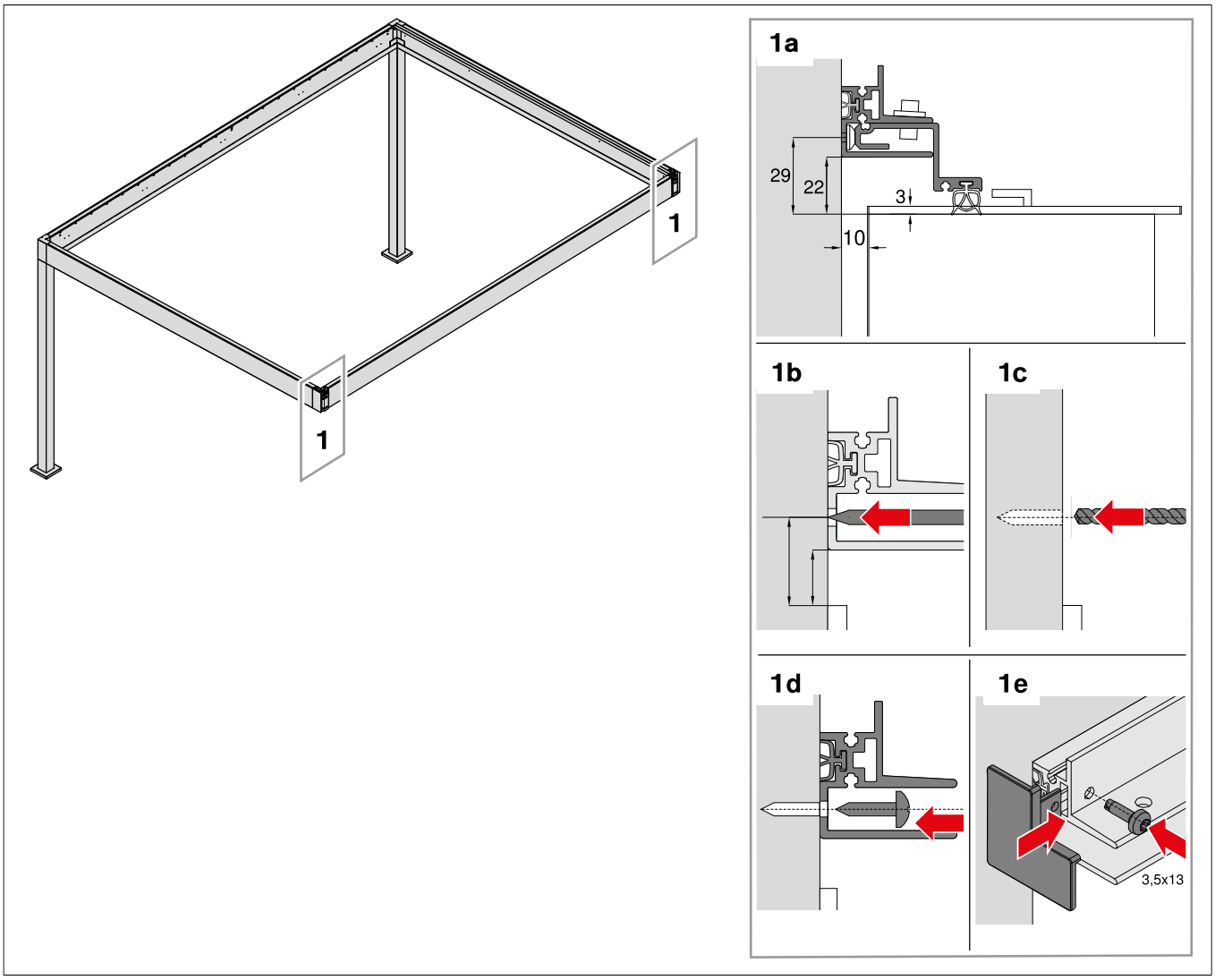
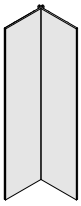
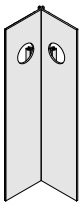
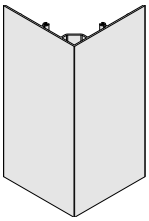


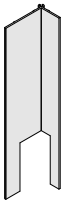
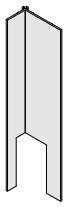
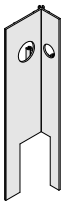
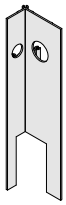
Fig. 12: Installing the wall connection profile (dimensions in mm)

- [1a] Transfer the height to the mounting substructure.
- [1a] Hold the fixing profile against the marking and align it vertically and horizontally.
- [1a] Centre the fixing profile lengthwise on the beam. The overhang over the beam is 115 mm.
- [1b] Transfer the fixing template.
- [1c] Drill the fixing holes.
- [1d] Attach the fixing profile on the mounting substructure.
- [1e] Push the side cover into the fixing profile on both sides and attach.

2.9 Overview of the use of covers and line grommets on the pole

Cover and its use		Line grommets and their use
	Cover for inside of pole at installation point Mab/Mda (side without connection box)	
	Cover for inside of pole with cable conduit at installation point Mbc/Mcd (side with connection box)	 Use (sealing area 8 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line  Use (sealing area 5–21 mm) ■ On-site connecting line
	Cover for outside of pole at installation point Mab/Mbc/Mcd/Mda	

Tab. 6: Cover of corner pole

Cover and its use		Line grommets and their use
	Cover for series-mounted unit, inside of right pole (side without connection box)	
	Cover for series-mounted unit, inside of left pole (side without connection box)	
	Cover for series-mounted unit, inside of right pole with cable conduit (side with connection box)	 Use (sealing area 8 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line  Use (sealing area 5–21 mm) ■ On-site connecting line  Use (sealing area 6–10 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line
	Cover for series-mounted unit, inside of left pole with cable conduit (side with connection box)	 Use (sealing area 8 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line  Use (sealing area 5–21 mm) ■ On-site connecting line  Use (sealing area 6–10 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line
	Cover for series-mounted unit, outside of pole	

Tab. 7: Cover for series pole (butt joint)

Cover and its use	Line grommets and their use
 Cover for star-mounted unit, inside of pole (side without connection box)	
 Cover for star-mounted unit, inside of pole with cable conduit (side with connection box)	 Use (sealing area 5–21 mm) ■ On-site connecting line  Use (sealing area 6–10 mm) ■ Window awning with ZIP guidance ■ LED ■ Motor line

Tab. 8: Cover for poles, star-mounted unit (butt joint)

2.10 Installing the beams

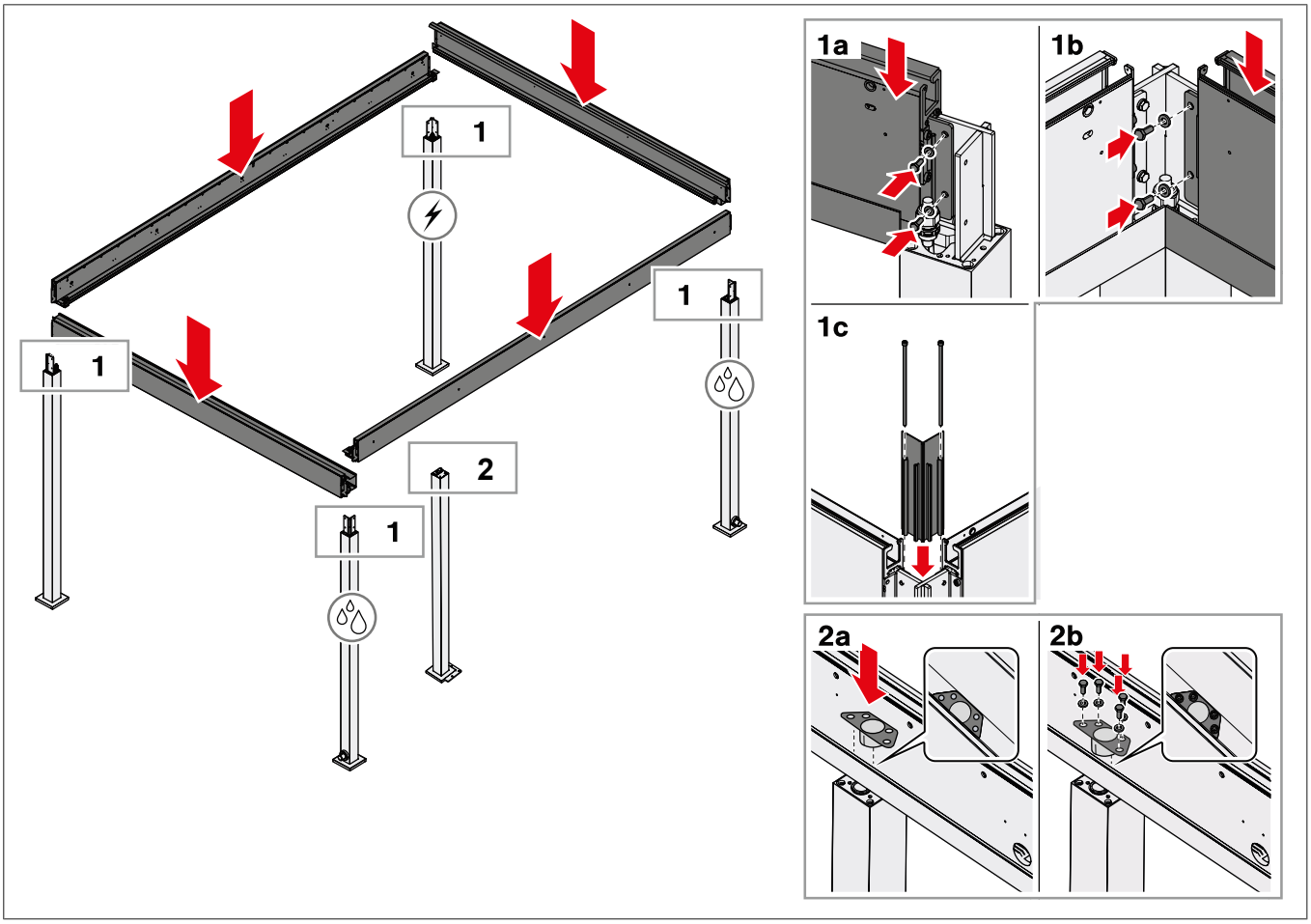


Fig. 13: Installing the beams

- [1a] Place 1 beam from above onto the 2 erected poles and fasten the beam using 2 wedge-locked washers 8.7x16.6 and 2 screws DIN 7984 M8x16.
- [1b] Erect 1 more pole and install the 2nd beam in an L-shape.
- [1a + 1b] Erect the 4th pole and, if necessary, the 5th pole (optionally) and also install the 2 remaining beams.
- [1c] Push in the covers (inside, for assignment see Chapter 2.9/Page 14) at all 4 poles from the top downward and screw on from the top to the bottom using the screws ISO 4762 M6x190.

INFO

- Use the cover (inside, for assignment see Chapter 2.9/Page 14) with the cable conduit for the electrical lines on the pole with the on-site supply line.

- If an additional pole is being used (optionally), perform the following steps:
  - [2a] Place the EPDM film for sealing onto the corresponding beam from the top over the drilled hole.
  - [2b] Insert the fixing adapter for screwing the beam onto the 5th pole, insert the leaf screen (only for drainage in pole) and screw from the top downward using 4 washers DIN 125 8.4 and 4 screws DIN 912 M8x25.

2.11 Installing the beams with offset pole (optionally)

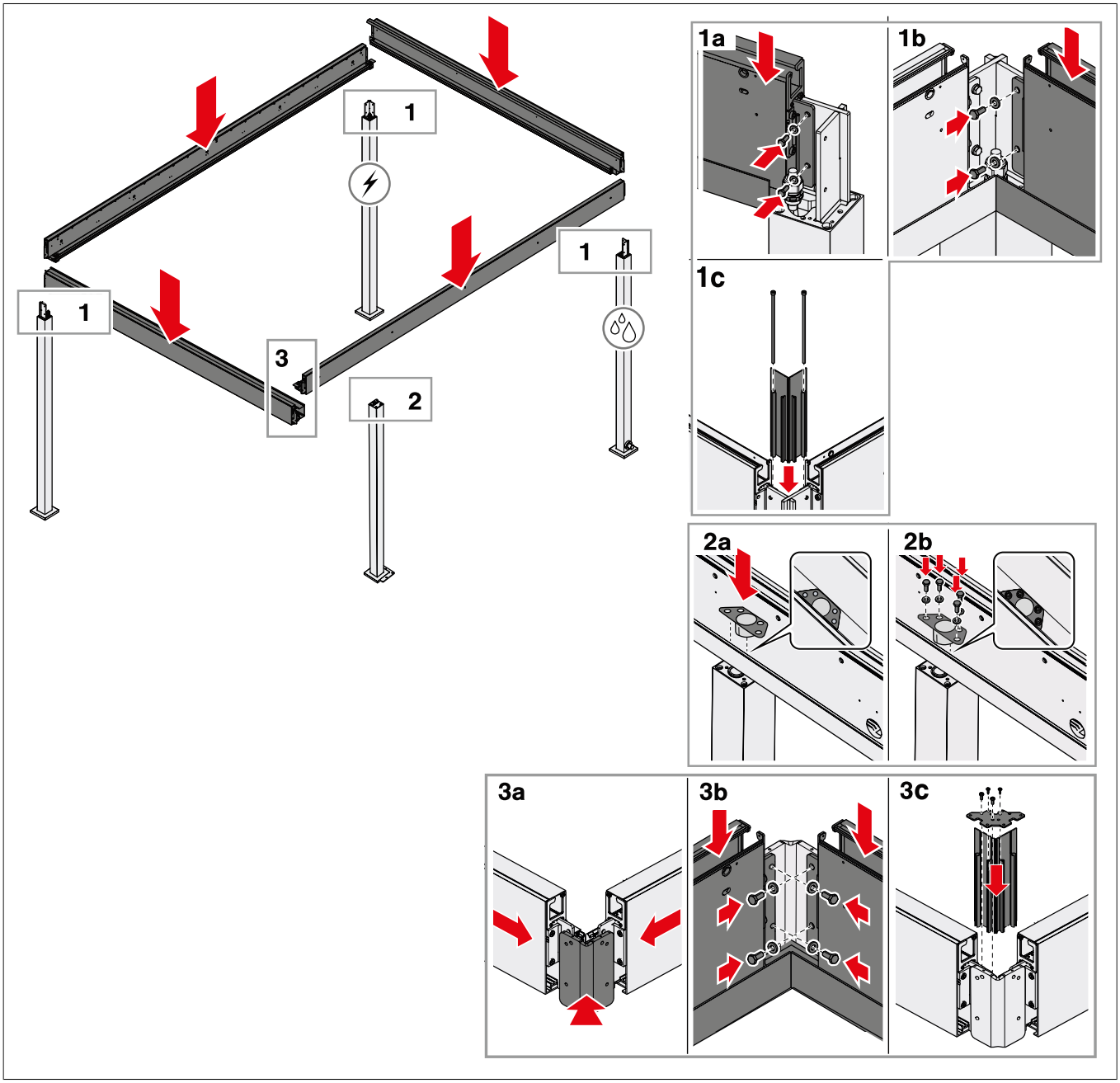


Fig. 14: Installing the beams

- [1a] Place 1 beam from above onto the 2 erected poles and fasten the beam using 2 wedge-locked washers 8.7x16.6 and 2 screws DIN 7984 M8x16.
- [1b] Erect 1 more pole and install the 2nd beam in an L-shape.
- [1c] Push in the covers (inside, for assignment see Chapter 2.9/Page 14) at 2 poles from the top downward and screw from the top downward using the screws ISO 4762 M6x190.

  INFO

  - Use the cover (inside, for assignment see Chapter 2.9/Page 14) with the cable conduit for the electrical lines on the pole with the on-site supply line.

- Erect the offset pole and install the 3rd beam:
  - [2a] Place the EPDM film for sealing onto the corresponding beam from the top over the drilled hole.
  - [2b] Insert the fixing adapter for screwing the beam onto the 5th pole, insert the leaf screen (only for drainage in pole) and screw from the top downward using 4 washers DIN 125 8.4 and 4 screws DIN 912 M8x25.
- Set down the 4th beam, attach to the pole at the corner as in [1a] and install the cover (inside, for assignment see Chapter 2.9/Page 14) as in [1c].
- Install the cover (inside, for assignment see Chapter 2.9/Page 14) at the corner without a pole and connect the beams using an angle bracket:
  - Screw 2 beams, each with 2 wedge-locking washers 8.7x16.6 and 2 screws DIN 7984 M8x16, onto the angle bracket.
  - Attach the retaining plate for the cover to the cover (inside) using 2 screws DIN 7981 3.5x13.
  - Push in the cover (inside, for assignment see Chapter 2.9/Page 14) from the top downward and fasten it to the wall console using 2 screws DIN 7985 M4x12.

2.12 Installing the beams, star-mounted and series-mounted units

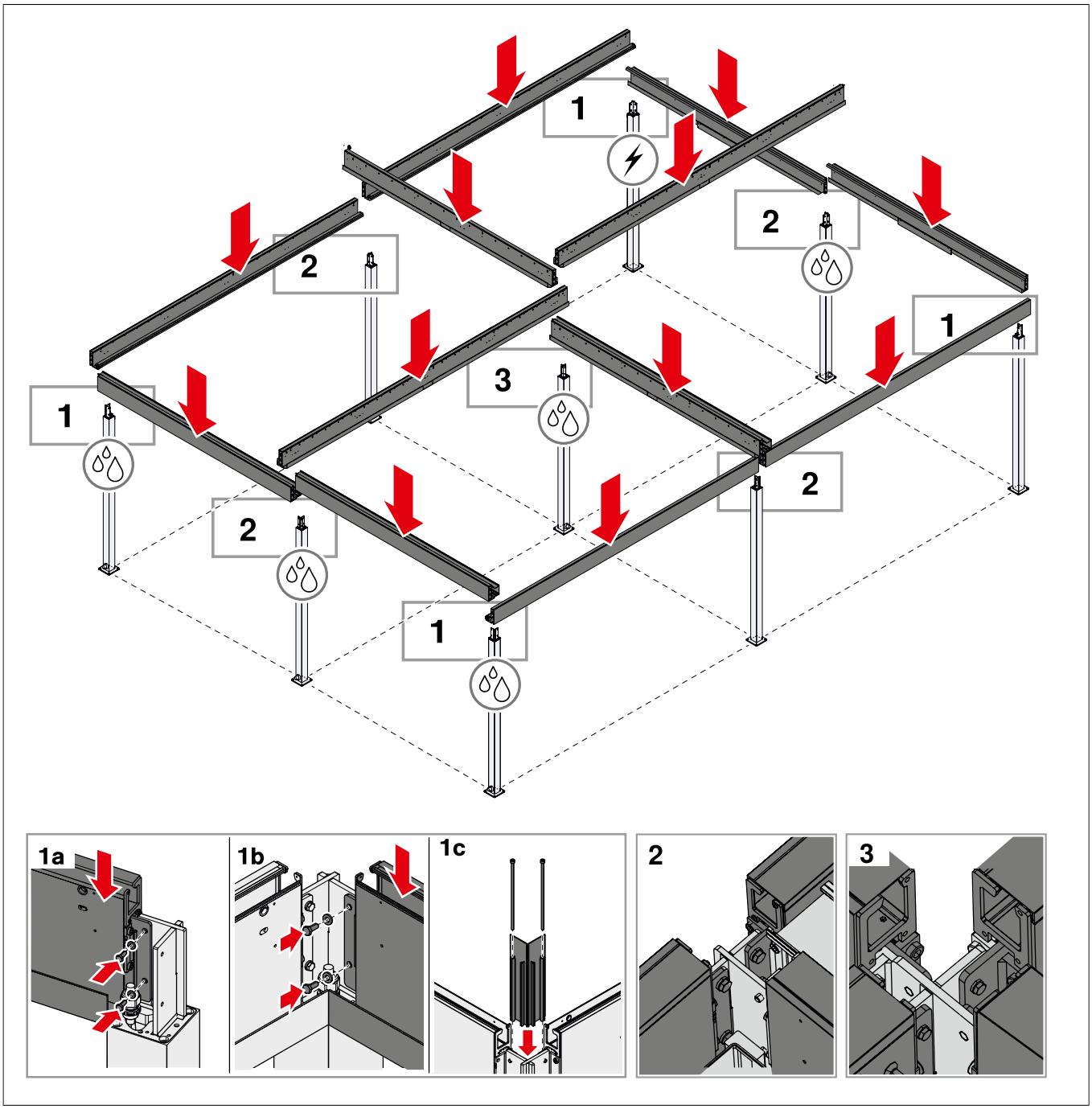


Fig. 15: Installing the beams, star-mounted and series-mounted units

INFO
Note the different beam versions and their positions. The exact positions of the various beams can be seen in the accompanying sketch.

- [1a + 1b] Place the beams from above onto the corner poles and fasten each one using 2 wedge-locked washers 8.7x16.6 and 2 screws DIN 7984 M8x16.
- [1c] Push in the covers (inside, for assignment see Chapter 2.9/Page 14) at all corner poles from the top downward and screw from the top downward using the screws ISO 4762 M6x190.

INFO

- Use the cover (inside, for assignment see Chapter 2.9/Page 14) with the cable conduit for the electrical lines on the pole with the on-site supply line.

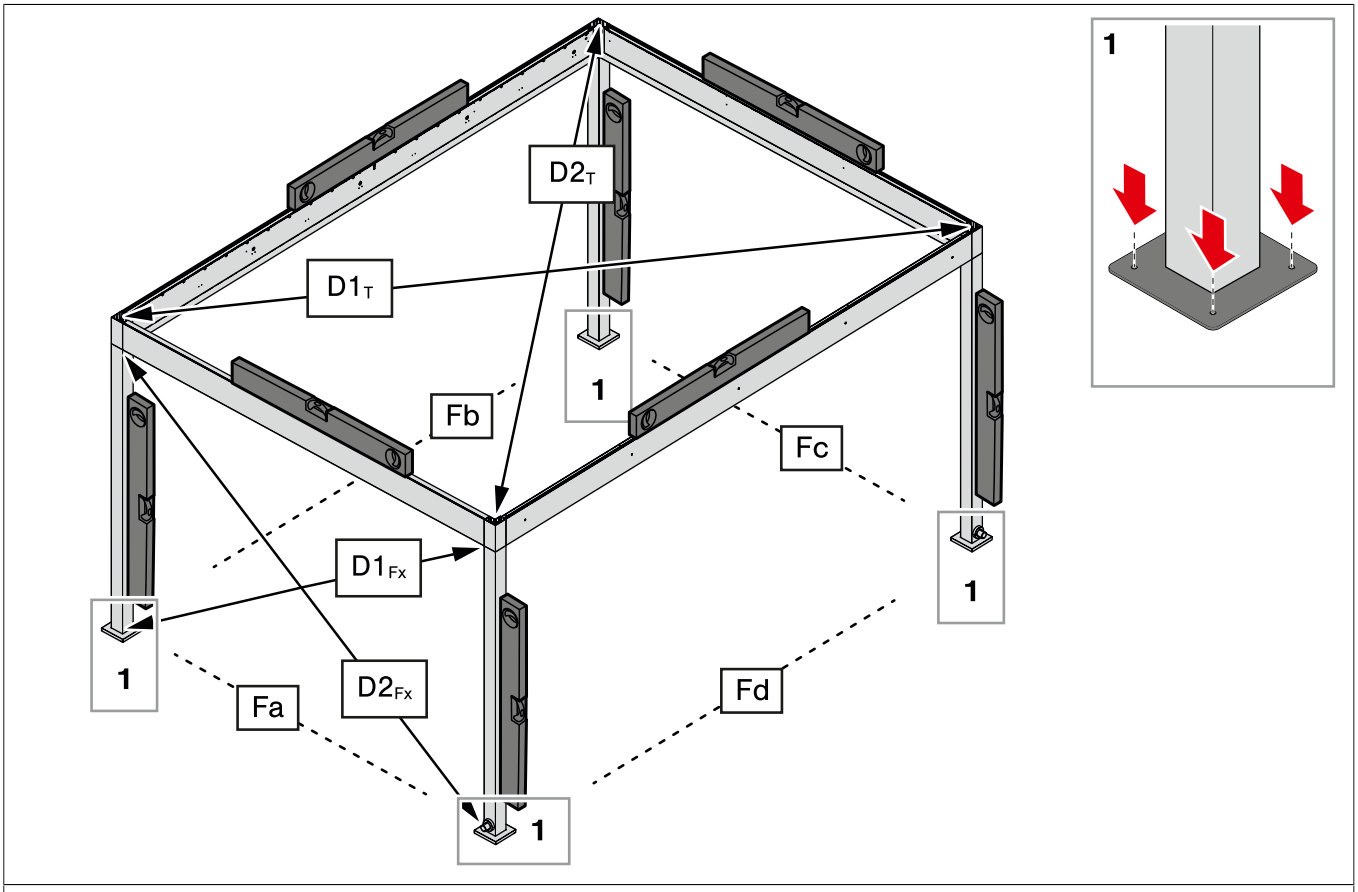
- [2] Place the beams from above onto the series poles and fasten each one using 2 wedge-locked washers 8.7x16.6 and 2 screws DIN 7984 M8x16.
- [3] Place the beams from above onto the star poles and fasten each one using 2 wedge-locked washers 8.7x16.6 and 2 screws DIN 7984 M8x16.

INFO

- For installation of additional poles, see chapter "Installing the beams".
- For installation of offset poles, see chapter "Installing the beams with offset pole (optionally)".

2.13 Aligning the slat roof

INFO
Check the diagonals and horizontal alignment.



$D1_{Fx}$	Diagonal 1 of field x
$D2_{Fx}$	Diagonal 2 of field x
$D1_T$	Diagonal 1 beams (inside corner to inside corner) or pole (inside edge to inside edge) – dimension specified on order confirmation as aid
$D2_T$	Diagonal 2 beams (inside corner to inside corner) or pole (inside edge to inside edge) – dimension specified on order confirmation as aid
F_a	Field a
F_b	Field b
F_c	Field c
F_d	Field d

Fig. 16: Aligning the beams and poles

- Measure the diagonals $D1_T$ and $D2_T$ between the inside corners of the beams. The dimension is specified on the order confirmation as an aid. If $D1_T = D2_T$, the beams are parallel.
- Measure diagonals $D1_{Fx}$ and $D2_{Fx}$ between the poles (all fields F_a–F_d). If $D1_{Fx} = D2_{Fx}$, the poles are parallel.
- Check the alignment of the poles with a spirit level.
- Check the alignment of the beams with a spirit level. Adjust the height of the affected poles if necessary. Pad under the base plate, if necessary, in order to reach the alignment of the beam.
- [1] Attach the poles to the mounting substructure.

  INFO
  Align the pole perpendicular to the mounting substructure.

  - Drill the fixing holes.
  - Attach the poles.

2.14 Installing the corner joint

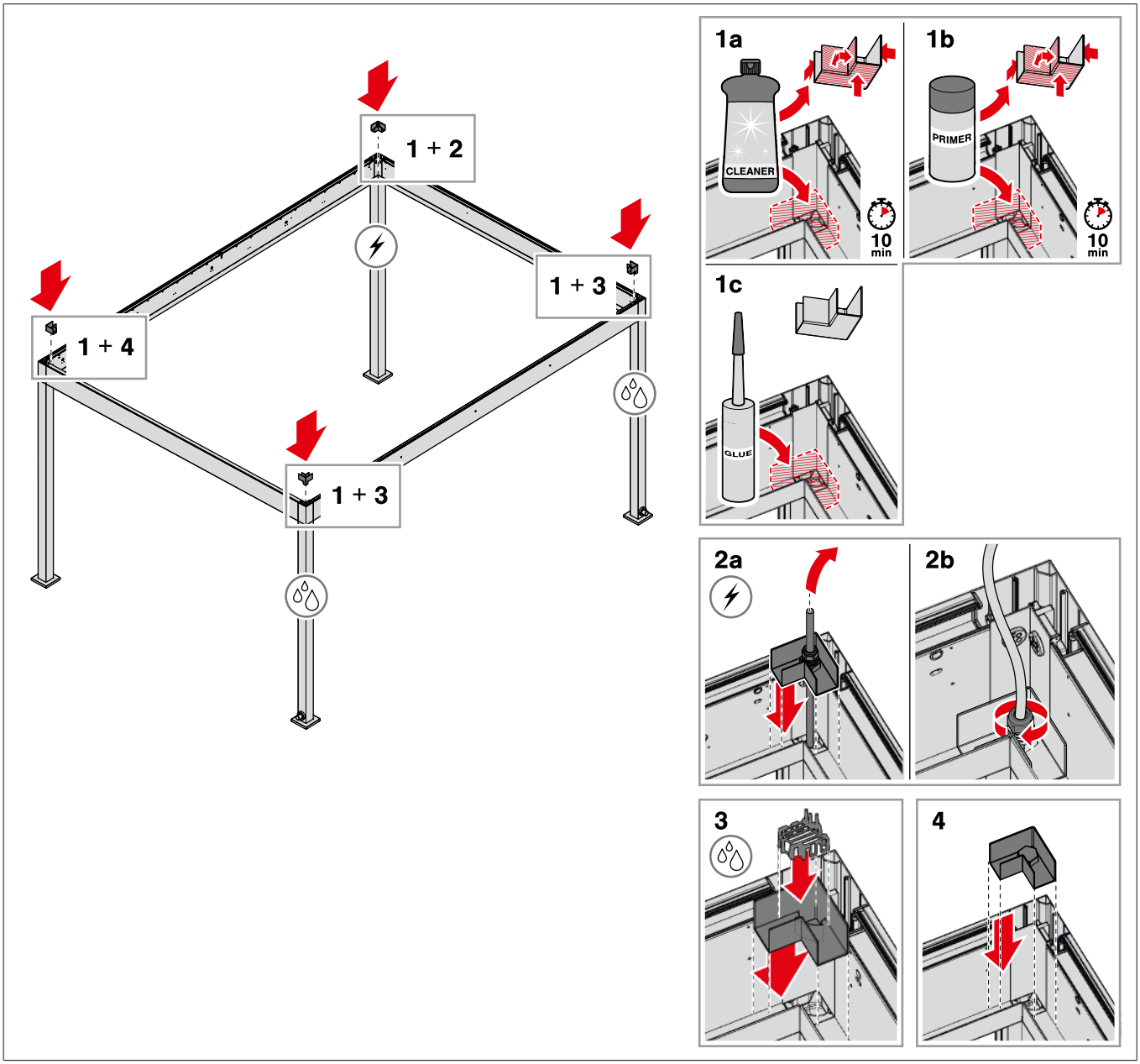


Fig. 17: Installing the corner joint

INFO

- Install the corner joint using the hole on the pole with drainage.

NOTICE
Insufficient tightness at the corners!

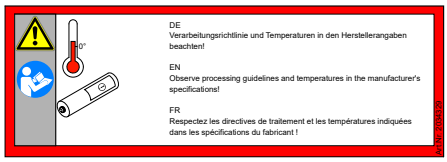
The tightness depends on the care with which the sealing adhesive is distributed and smoothed after the corner joint is inserted.

Water droplets form in the area of the corners if the work is not performed carefully.

- Distribute sealing adhesive liberally on all labelled areas.

INFO
The surface on which the sealing adhesive is applied must be dry, dirt-free and grease-free.

Note the processing guidelines and the temperatures in the manufacturer's data.



- Clean the surface on which the sealing adhesive is to be applied (**Recommendation**: Rhobasol 35DSF or Würth IPA cleaner – **NOT** included in the scope of delivery). → Then insert a 10 min wait time.
- Treat the cleaned surface with primer (**specification**: Würth Haftplus Primer for Plastic/Wood/Stone – included; use the **REQUIRED** protection equipment). → Then insert a 10 min wait time.
- [1c] Apply the adhesive sealant to the beams.
- [2a] Insert the corner joint with the installed cable gland in the pole with the onsite supply line and pass the cable through the cable grommet.
- [2b] Pull out the line by approx. 5 metres and fasten the cable gland.
- [3] Insert the corner joints with the integrated outlet in the pole with drainage.
- [4] Insert the corner joint for the addition pole.
- Push the corner joint firmly into place.
- Smooth sealing adhesive that has squeezed out using a sealant smoothing agent.

2.15 Installing the corner joint, star-mounted and series-mounted units

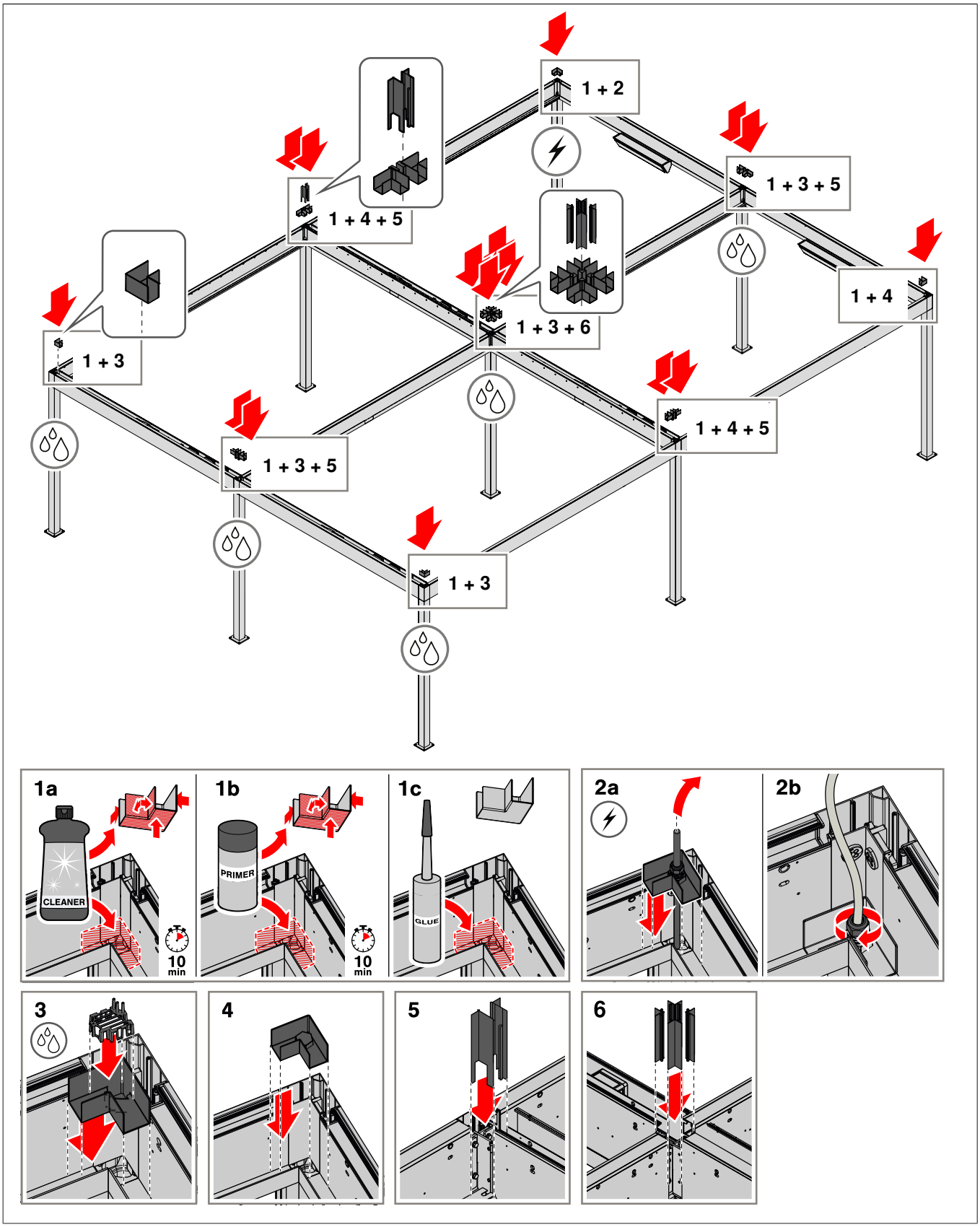


Fig. 18: Installing the corner joint, star-mounted and series-mounted units

INFO

- Install the corner joint using the hole on the pole with drainage.

NOTICE
Insufficient tightness at the corners!

The tightness depends on the care with which the sealing adhesive is distributed and smoothed after the corner joint is inserted.

Water droplets form in the area of the corners if the work is not performed carefully.

- Distribute sealing adhesive liberally on all labelled areas.

INFO
The surface on which the sealing adhesive is applied must be dry, dirt-free and grease-free.

Note the processing guidelines and the temperatures in the manufacturer's data.

- Clean the surface on which the sealing adhesive is to be applied (**Recommendation**: Rhobasol 35DSF or Würth IPA cleaner – **NOT** included in the scope of delivery). → Then insert a 10 min wait time.
- Treat the cleaned surface with primer (**specification**: Würth Haftplus Primer for Plastic/Wood/Stone – included; use the **REQUIRED** protection equipment). → Then insert a 10 min wait time.
- [1c] Apply the adhesive sealant to the beams.
- [2a] Insert the corner joint with the installed cable gland in the pole with the onsite supply line and pass the cable through the cable grommet.
- [2b] Pull out the line by approx. 5 metres and fasten the cable gland.
- [3] Insert the corner joints with the integrated outlet in the pole with drainage.
- [4] Insert the corner joint for the addition pole.
- Push the corner joint firmly into place.
- Smooth sealing adhesive that has squeezed out using a sealant smoothing agent.

- [5] Push in the covers (inside, for assignment see Chapter 2.9/Page 14) at the series-mounted poles from the top downward and screw from the top downward using the screws ISO 4762 M6x190.
- [6] Push in the covers (inside, for assignment see Chapter 2.9/Page 14) on the star-mounted pole from the top downward.

INFO

- Use the cover (inside, for assignment see Chapter 2.9/Page 14) with the cable conduit for the electrical lines on the pole with the on-site supply line.

2.16 Installing the light rail directly/indirectly (optionally)

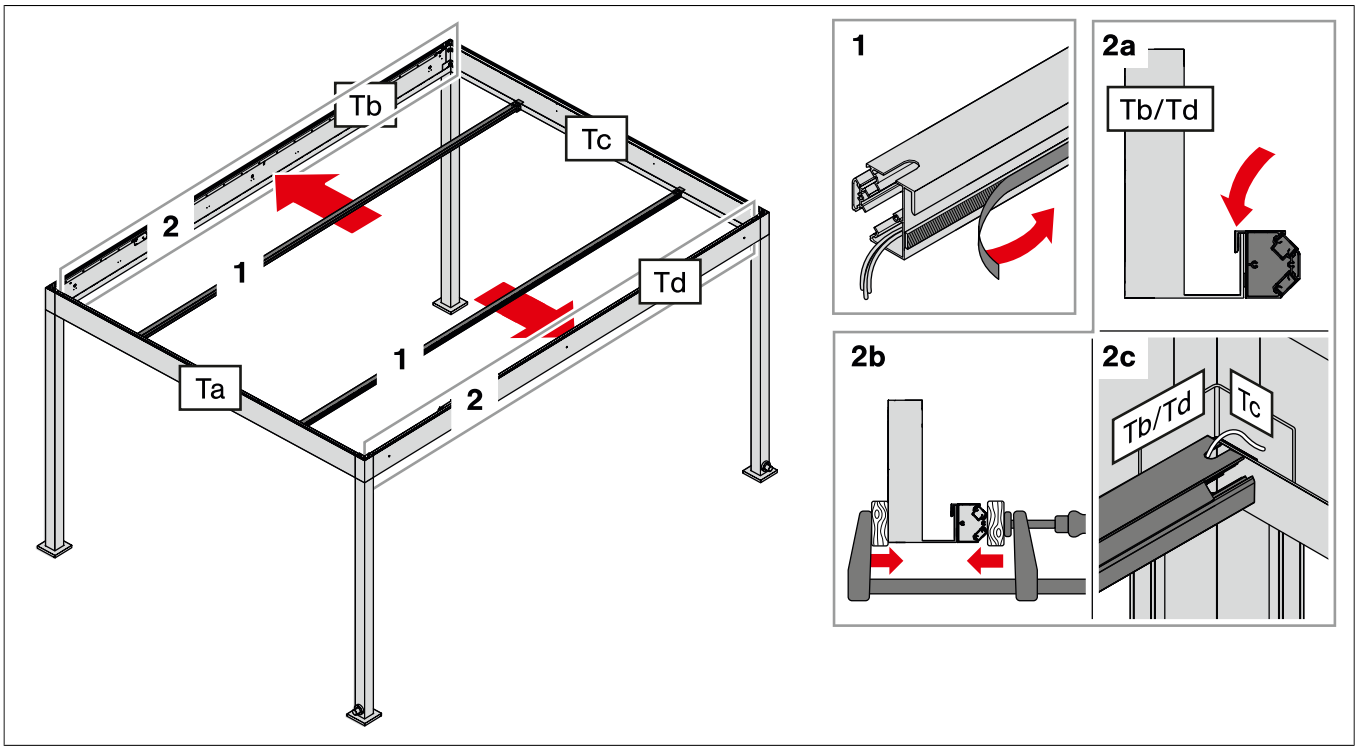


Fig. 19: Light rail installation with 2 light rails

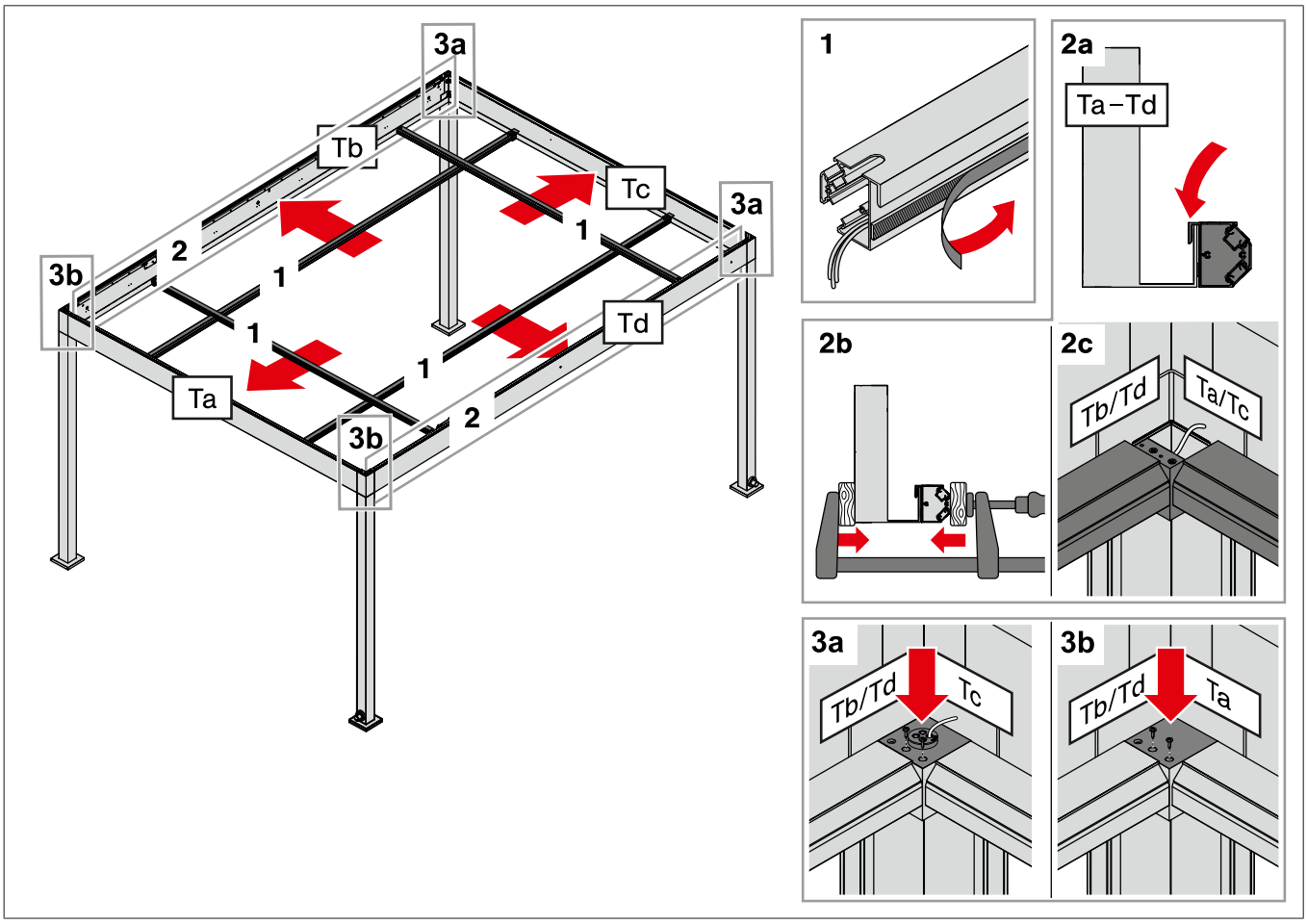


Fig. 20: Light rail installation with 4 light rails

INFO

- [2c] Note the installation direction relative to the connection box: The line ends of the light rail must face the connection box.

- [1] Remove the protective strip from the adhesive tape on the light rail.
- [2a] Attach the hooks of the light rail to the corresponding beam.
- [2b] Press the light rail firmly against the rain gutter of the beam using screw clamps.

NOTICE
Insert wood blocks between the screw clamp and the coated surfaces.

- [2c] Pull the line up at the corners with the connection box.
- [3a] Attach 2 covers with a sealed opening for a line at the corners with a line.
- [3a] Attach 2 covers without a sealed opening for a line at the corners without a line.

2.17 Installing the light rail on the pole (optionally)

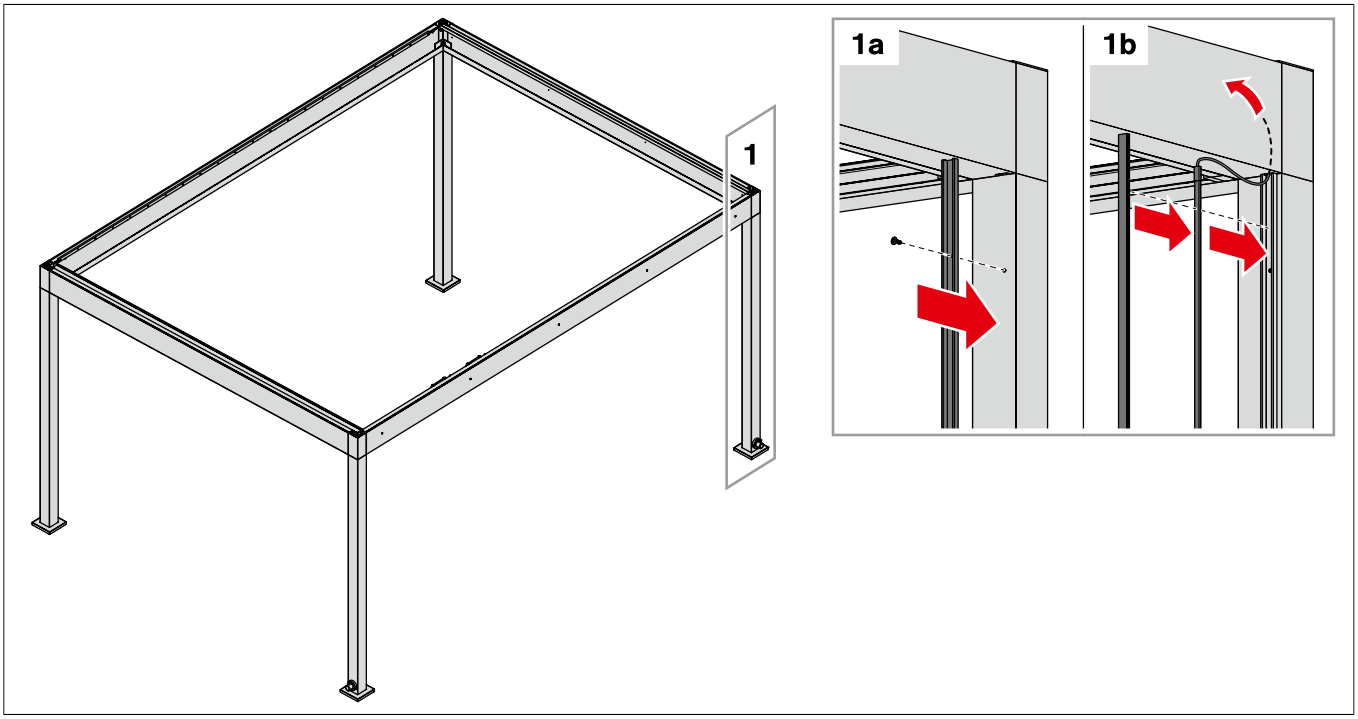
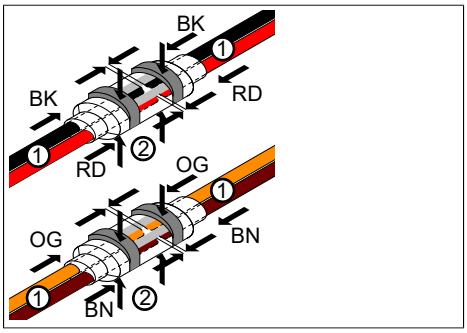


Fig. 21: Installing the light rail on the pole

- [1a] Attach the profile of the light rail to the pole using the drilling screws DIN 7504 3.5 x 9.5.

NOTICE
Distance between profile and outer edge of pole: 12 mm

- [1b] Remove the protective film from the adhesive tape on the LED strip.
- [1b] Stick the LED strip into the profile and pass the line out through the notch.
- [1b] Press the cover of the light rail into the groove.
- Connect the LED line to the extension using CoolSplice and pass the line into the connection box:



- Insert the wires all the way into the connector. Note the colours.
- Using an aid such as tongue-and-groove pliers, push in the two activation levers of the connector so they are flush.

2.18 Installing the Basic power distributor (optionally)

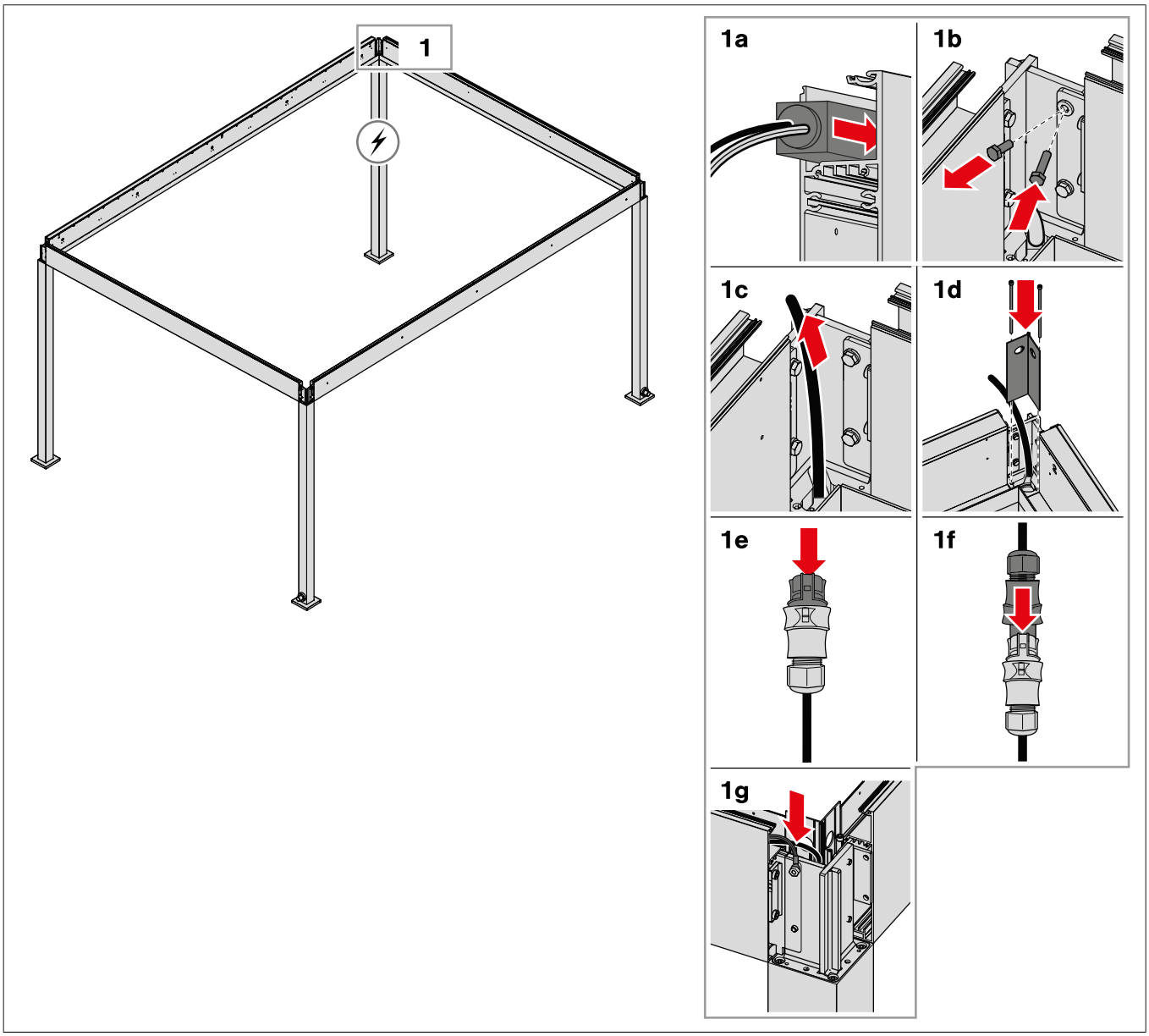


Fig. 22: Installing the power distributor

- [1a] Push the distributor into the beam.

NOTICE
Route the lines with a sufficient radius and do not kink.

- [1b] Replace the screw ISO 4017 M8x25 on the pole with the earth screw.
- [1c] Pull the supply line back out of the pole.

- [1d] Install the cover on the inside of the pole.
- [1e] Install the plug connector on the supply line:
  - Strip approx. 7 mm off the ends of the single conductors.
  - Pass the earth cable through the metric screw connection.
  - Disassemble the on-site earth cable connector (contained in the accessories).
- [1f] Connect the supply line to the distributor.
- [1g] Attach the earth to the corner joint using a nut DIN 934 M8 and a washer DIN 6798 8.4.

2.19 Installing the connection box (optionally) and the partition compensation plate

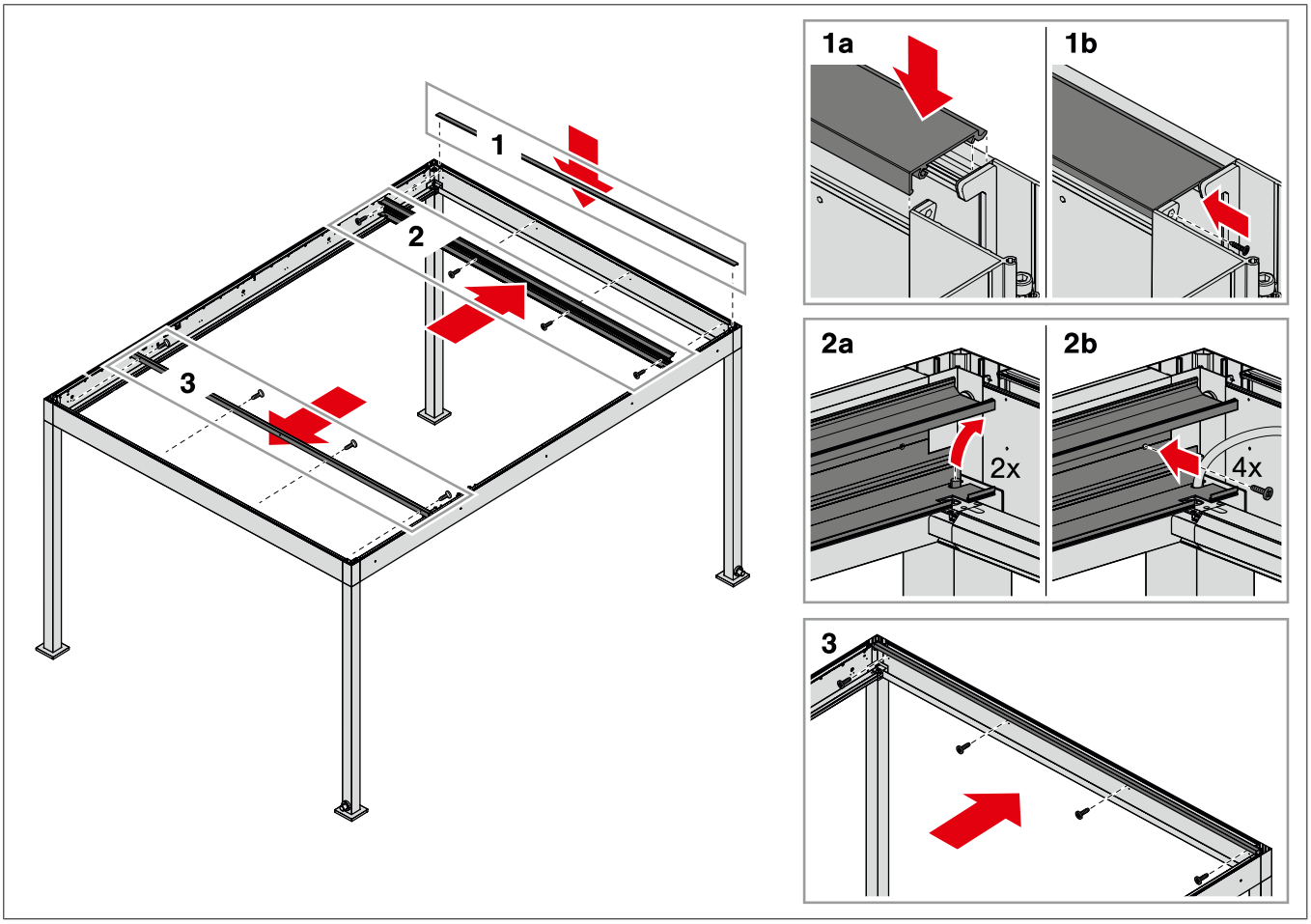


Fig. 23: Installing the connection box

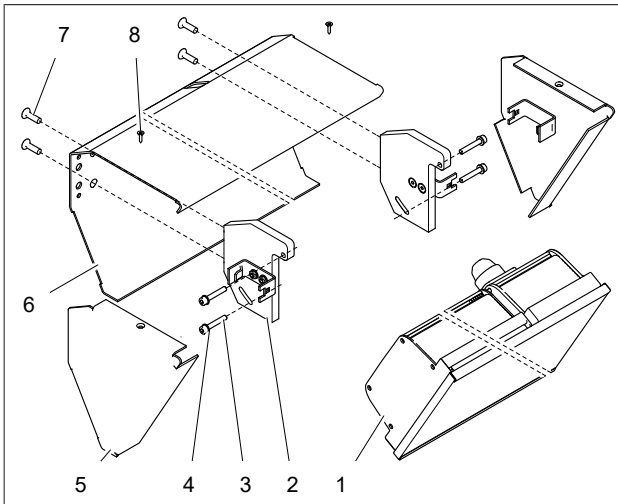
- [1a] Attach the rain hoods for beams A and C to the hinge and lower them.

NOTICE
The mounting plate must rest on the retaining plate on both sides.

- [1b] Attach the rain hoods to the predrilled holes in the retaining plate, if not yet present, each with 1 screw DIN 7981 3.5x25.
- [2a] Pass the LED lines, if present, into the connection box through the notches provided for this purpose and position the connection box on the LEDs.
- [2b] Fasten the connection box, if present, to the predrilled holes using 4 screws DIN 7981 4.2x13 and 4 serrated lock washers DIN 6798 5.3.
- [3] Fasten the partition compensation plate at the predrilled holes using screws DIN 7981 3.5x9.5. If there is no connection box, install the partition compensation plate on both sides.

2.20 Installing the Design radiant heater (optionally)

Parts description



1	Design radiant heater	5	Cover cap e. g. left
2	Console g. g. left	6	Housing for the Design radiant heater
3	Screw DIN 912 M5x30	7	Screw 6x20
4	Washer DIN 125 5.3	8	Screw DIN 7982 3.5x13

Fig. 24: Parts overview of the Design radiant heater

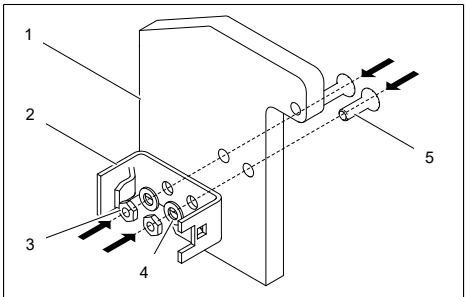
Technical data

INFO
Maximum number per slat roof is 2 pieces

For the radiant heater, an in-line circuit breaker with type C16 is**mandatory**.

The technical data for the Design radiant heater are contained in the corresponding table (see Tab. 4/Page 7).

Attaching the consoles in the housing for the Design radiant heater



1	Console (e. g. right)	4	Washer DIN 125 A5.3
2	Snaplock connector	5	Screw DIN 7991 M5x16
3	Nut DIN 439 B M5		

Fig. 25: Installing the snaplock connector

- Attach the snaplock connector [2] to the consoles [1] using the screws [5], washers [4] and nuts [3].

INFO
The radiant heater must be mounted at a height [A] of at least 2100 mm above the floor or another surface with steady traffic. The minimum distances of 1000 mm to the front toward flammable materials [C] must be maintained.

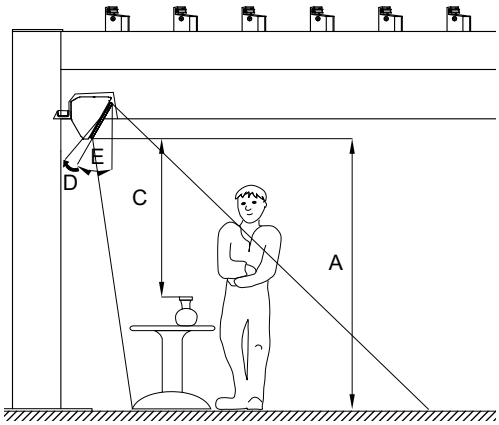


Fig. 26: Minimum distances for Design radiant heater

The minimum inclination angle [E] is 30°, the maximum adjustment range [D] is 10° to maximum of 40° to the horizontal.

The radiant heater can be installed on the rain gutter in field 1 or field 3.

Installing the housing

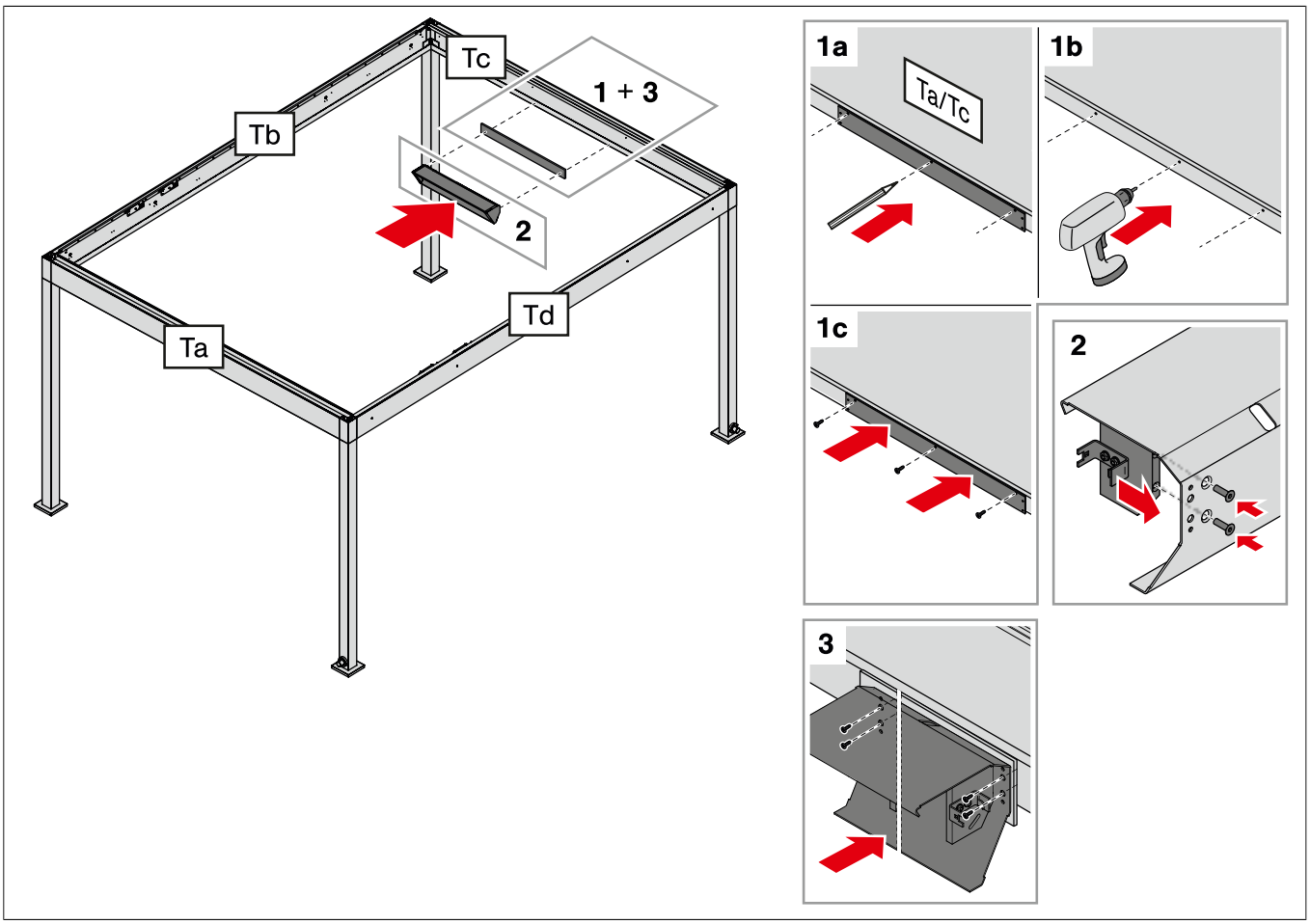


Fig. 27: Installing the housing of the radiant heater

- [1a] Hold the bracket for the radiant heater against the vertical wall of the rain gutter while adhering to the specified minimum distances (see Fig. 26).
- [1a] Align the bracket horizontally so that the top edge of the retainer is aligned with the top edge of the rain gutter and transfer the fixing template.
- [1b] Drill the fixing holes ∅3.5 mm at the markings.

- [1c] Attach the intermediate plate to the rain gutter using the drilling screws Zebra Pias 3.9 x25 (in accessories).
- [2] Attach the console in the housing for the Design radiant heater using the 2 screws M6x20. Ensure you are using the correct side.
- [3] Attach the housing to the intermediate plate using the screws DIN 912 A2 M5x8 (in accessories).

Connecting the plug-in connector

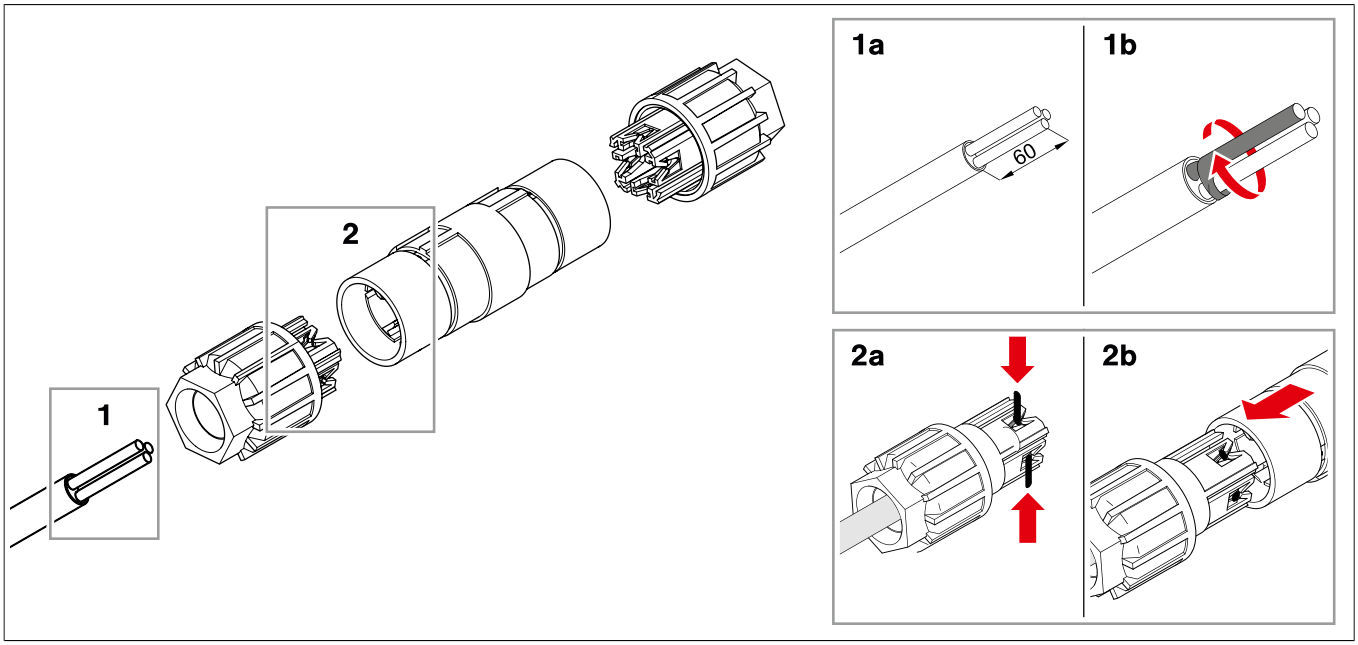


Fig. 28: Connecting the plug-in connector

INFO
An extension line 3x1.5 mm² must be connected to the line of the radiant heater. The line connector connects the two lines.

- [1a] Strip approx. 60 mm off the line.
- [1b] Loop the PE conductor around the live conductor. By pulling forcefully on the line, the PE conductor is pulled out of the terminal as the last step.
- [2a] Insert the line in the nut and inside part.
- Secure the wires in the line holder of the inside part. Note the label.
- Cut the wires off flush with the line holder.
- [2b] Slide the centre part onto the nut in the correct position.
- [2b] Screw the nut (size 15) onto the centre part (tightening torque of 1.5 Nm).

Installing the radiant heater on the housing

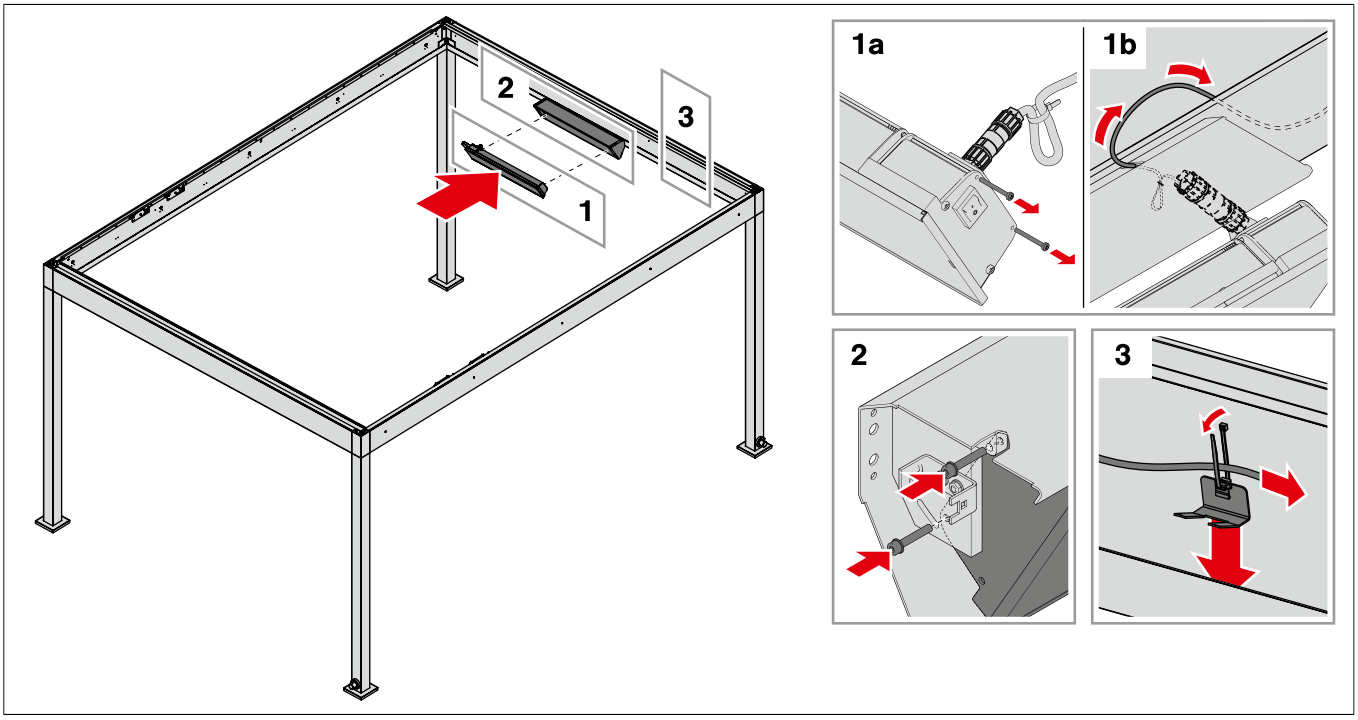


Fig. 29: Installing the radiant heater on the housing

- [1a] Unscrew the screws from the radiant heater.

  INFO
  The screws are needed to attach the radiant heater to the console later on.

- [1b] Position the radiant heater in front of the housing and pass the radiant heater line through the opening in the housing to the outside.

  NOTICE
  Place the plug-in connector within the housing, not in the rain gutter.

- [2] Position the radiant heater between the consoles and fasten it to the console using 2 screws DIN 912 M5x30 and 2 washers DIN 125 5.3.
- [3] Route the radiant heater line in the rain gutter toward the connection box.

  INFO
  Insert one bracket per meter.

  - Place the bracket into the rain gutter.
  - Attach the radiant heater line to the bracket using cable ties.

Adjusting the inclination angle

INFO
The standard inclination is 30°. The inclination angle can be continuously adjusted to a maximum angle of 40°.

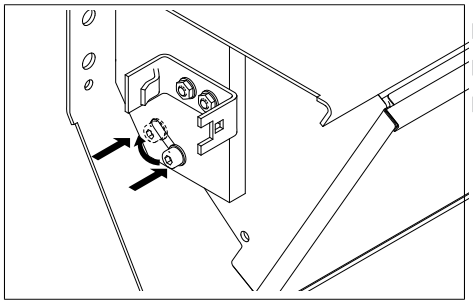


Fig. 30: Adjust the inclination angle

- Release the lower screws on both sides.
- Adjust the radiant heater in the oblong hole to the desired angle.
- Tighten the lower screws on both sides.

Connecting the radiant heater

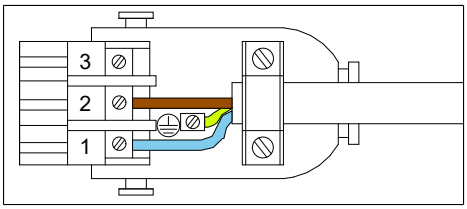


Fig. 31: Coupling STAS 3

- Connect the STAS 3 coupling to the extension.

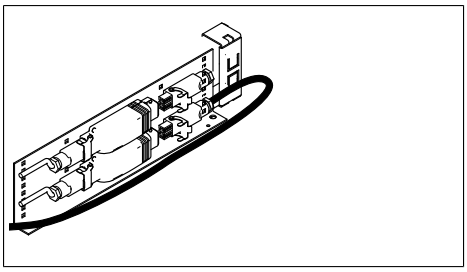


Fig. 32: Connecting the radiant heater

- Route the extension in a wide arc around the installed plug-in connector.
- Connect the plug-in connector.
- Attach the extension to the panel above and below using the preinstalled cable ties.

Performing a functional check

CAUTION
Risk of burns on hot surfaces!

The surfaces of the product are a burn hazard while the product is in use and after it has been switched off.

- Wait for the radiant heater to cool down before touching it.

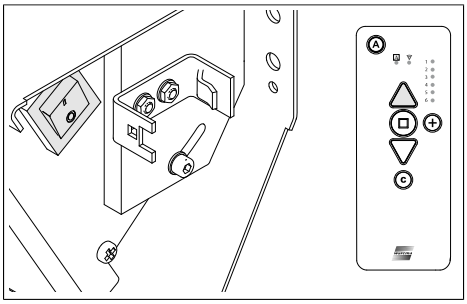


Fig. 33: Radiant heater function check

- Switch the radiant heater on at the rocker switch.
- Switch the radiant heater on with the learned WMS hand-held transmitter. The ceramic glass disk lights up red after a short time and radiates heat.
- Switch off the radiant heater again using the WMS hand-held transmitter and let it cool down.

Setting the rocker switch to ON

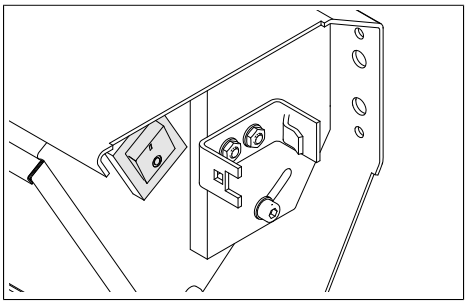


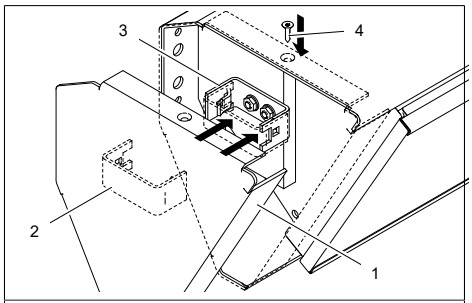
Fig. 34: Checking the position of the rocker switch

INFO
The radiant heater must be switched off on the hand-held transmitter before the rocket switch is actuated.

The rocker switch on the radiant heater is not used for switching the unit on and off because it is not accessible.

- Check whether the rocker switch is set to ON.

Installing the cover caps



1	Cover cap	3	Snaplock on the console (permanently installed)
2	Snaplock in the cover cap (permanently installed)	4	Screw DIN 7982 3.5x13

Fig. 35: Installing the cover cap

- Slide the cover cap [1] sideways onto the housing until the two snaplock parts [2 and 3] are engaged.
- Secure the cover cap [1] using the screw [4].

2.21 Installing the slats

INFO
The position of the slat with the motor is fixed.

A notch is found in the beam.

The slats with LED (optionally) can be installed in any position.

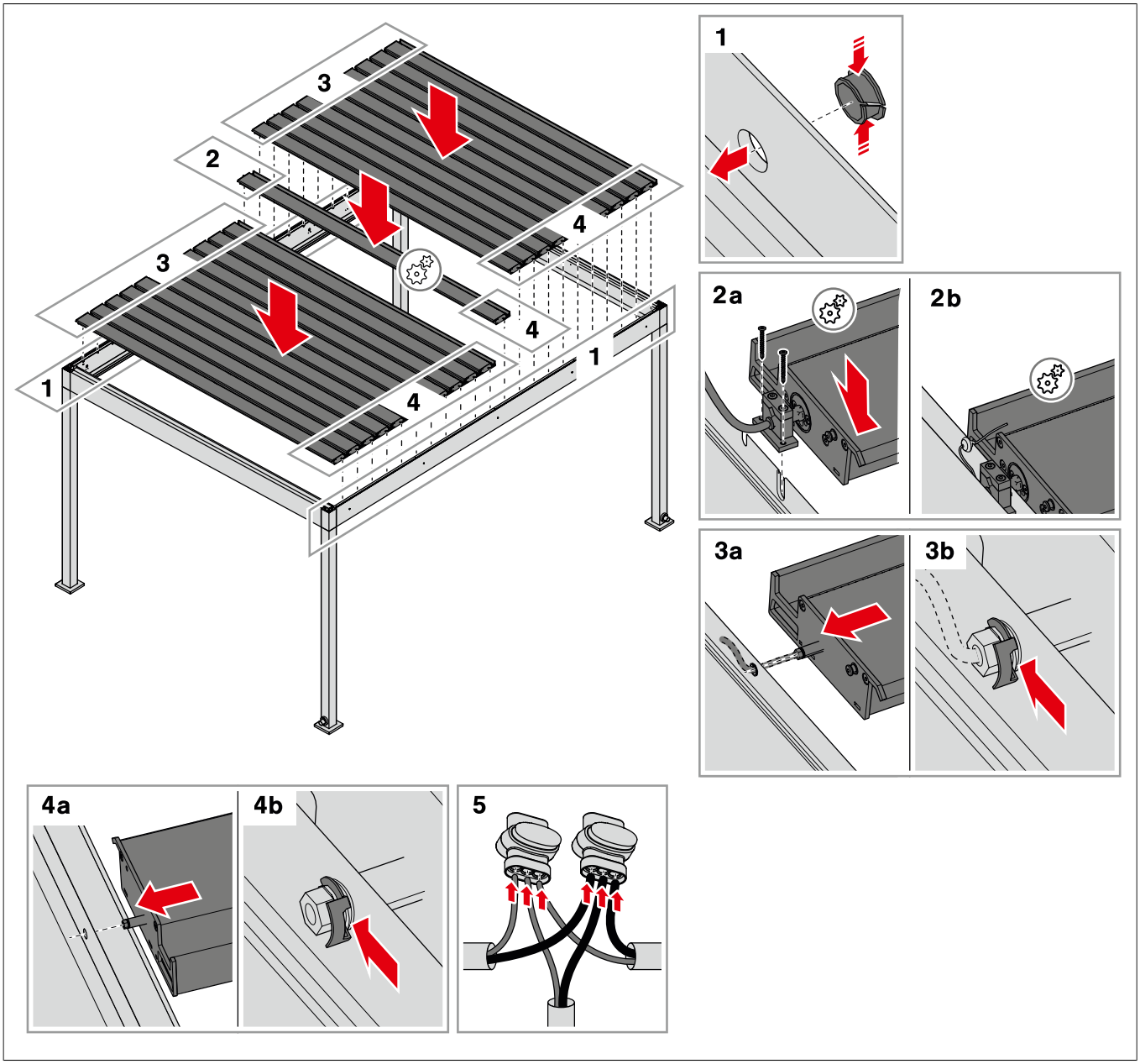


Fig. 36: Installing the slats

- [1] Press all bushings into the provided openings in the beam.
- [2] Install and fasten the slat with the motor.
  - [2a] Insert the slat in the mount.
  - [2a] Attach the motor holder of the slat with the motor to the beam using 2 screws Zebra Pias A2 4.8x25.
  - [2a] Route the line to the connection box, if present.
  - [2b] Pass the antenna through the provided grommet and pull it out by approx. 50 mm.
  - [2b] Insert the grommet into the notch provided in the beam for this purpose.
- Install and secure at least 1 further (LED) slat.
  - [3] Slide the bolt on one side through the feedthrough and fasten it.
  - [4] Slide the bolt on the other side through the feedthrough and fasten it.
- [5] Connect the LED lines, if present, with the quick connectors and route to the connection box.
  - Disconnect the ring line in the beam in the area of the LED line.
  - In each case, connect 3 wires of the same colour in 1 quick connector.
  - Squeeze the quick connector using water pump pliers.

- Install the push rod (see Fig. 37).
- Install and secure all further slats and attach them to the push rod.

Installing the push rod

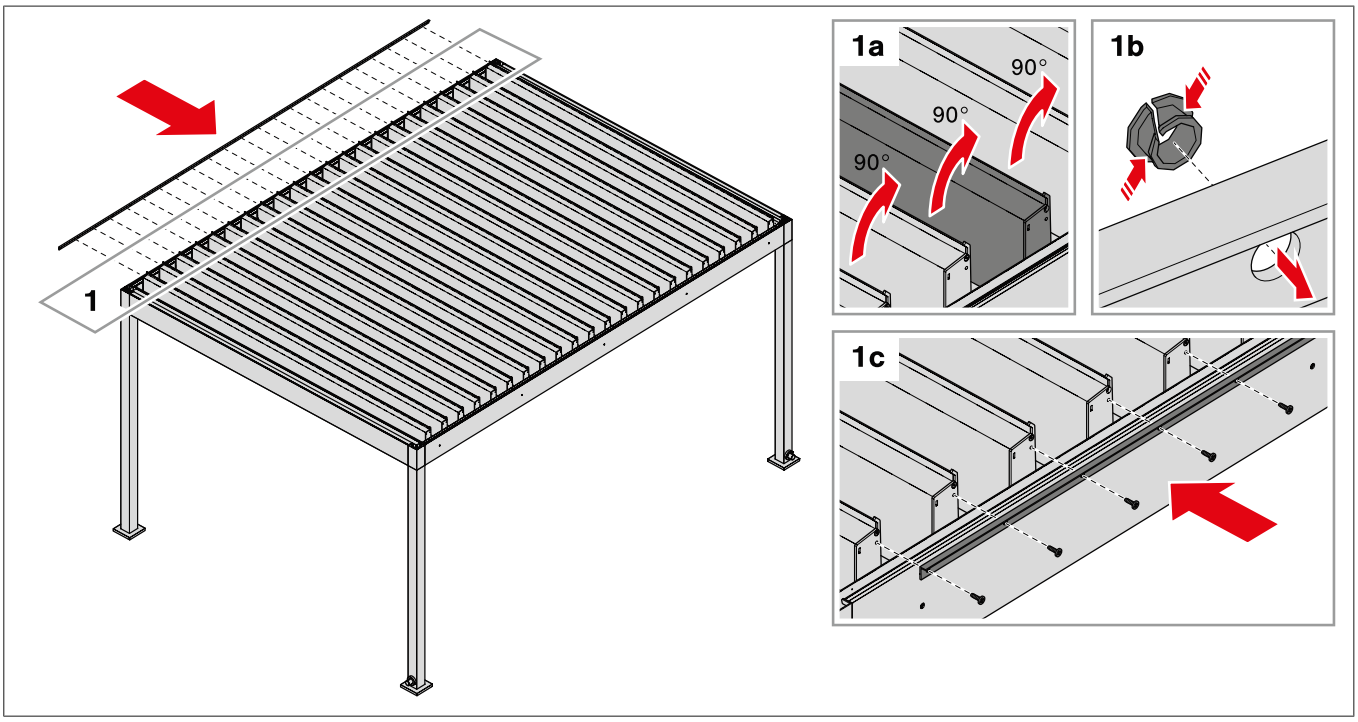


Fig. 37: Installing the push rod on the motor side

- [1a] Twist on the slats manually by 90°.
- [1b] Press the bushing into the opening.
- [1c] Stop the push rod on the motor side and fasten using the collar screw M8.

NOTICE
Do not tighten the screws too tightly. The slat must still be capable of pivoting after tightening.

Fasten the push rod to the upper slat mount on the motor side. Do not fasten the push rod in the direction of the drainage.

- Attach the already installed slats to the push rod.

2.22 Setting the motor limit positions

INFO
Teach the motor limit position of the slat roof using the WAREMA Smart programming cable.

INFO

- Note the "Setting instructions and wiring diagram" included with the drive.

2.23 Installing the awning with easyZIP guidance (optionally)

INFO
To install the awning with easyZIP guidance, follow the accompanying instructions.

Line routing for the awning with easyZIP guidance

- Route the line from the awning through the pole and high up into the beam.
- Route the line from the beam into the connection box.

2.24 Line routing within the product

WARNING
Risk of electric shock from insufficient care!

The line can be damaged by moving parts!

- Keep the line away from all moving parts.

INFO
Inspect the lines. If the line is damaged, the product is **not** permitted to be connected.

The 230 V line must be routed separately from the 24 V line.

INFO
All lines included in the scope of delivery must be routed in the product.

- Line for drive Lamaxa (230 V) – max. 1 pieces
- Line for awning (230 V) - max. 4 pieces
- Line for radiant heater (230 V) – max. 2 pieces
- Line for LED strips (24 V) – max. 8 pairs
- Line for RGB strips (24 V) – max. 4 pair

The only lines that may be connected in the electrical distribution are those that have a power consumer.

2.25 Connection box connections

Electric distribution connection

Note the target group for this task (see Page 3).

INFO
Note the labels on the lines (see Tab. 10) and distributors (see Tab. 11).

Colour	IEC 60757 code
Black	BK
Brown	BN
Red	RD
Orange	OG
Yellow	YE
Green	GN
Blue	BU
Violet	VT
Grey	GY
White	WH
Pink	PK
Turquoise	TQ

Tab. 9: Overview of colour abbreviations

Line label	Meaning	Note
LED Mab	LED strip at installation point Mab	The LED is installed and the line is stored at installation point Mab.
LED Mbc	LED strip at installation point Mbc	The LED is installed and the line is stored at installation point Mbc.
LED Mcd	LED strip at installation point Mcd	The LED is installed and the line is stored at installation point Mcd.
LED Mda	LED strip at installation point Mda	The LED is installed and the line is stored at installation point Mda.

Tab. 10: Labels on the lines

Line label	Meaning	Note
LED Ta	LED strip in light rail at beam Ta	LED installed and line routed in light rail to connection box
LED Tb	LED strip in light rail at beam Tb	LED installed and line routed in light rail to connection box
LED Tc	LED strip in light rail at beam Tc	LED installed and line routed in light rail to connection box
LED Td	LED strip in light rail at beam Tc	LED installed and line routed in light rail to connection box
REG Ta	RGB strip in light rail at beam Ta	RGB installed and line routed in light rail to connection box
RGB Tb	RGB strip in light rail at beam Tb	RGB installed and line routed in light rail to connection box
REG Tc	RGB strip in light rail at beam Tc	RGB installed and line routed in light rail to connection box
RGB Td	RGB strip in light rail at beam Td	RGB installed and line routed in light rail to connection box
Motor ⟃	Tilting motor	The motor is installed and the line is stored in the beam
H Ta	Radiant heater on beam a	Line in accessories
H Tc	Radiant heater on beam c	Line in accessories
LED slat (up to 4 pieces maximum)	LED strip in slat	LED installed and line routed via Tb to connection box

Tab. 10: Labels on the lines

Symbol	Meaning
	**Distributor LED** LED strip in pole
	**Distributor LED** LED strip directly in beam
	**Distributor LED** LED strip indirectly in beam **Distributor 230 V** RGB strip in beam, indirect
	**Distributor 230 V** Tilting motor
ZIP	**Distributor 230 V** Window awning with ZIP guidance

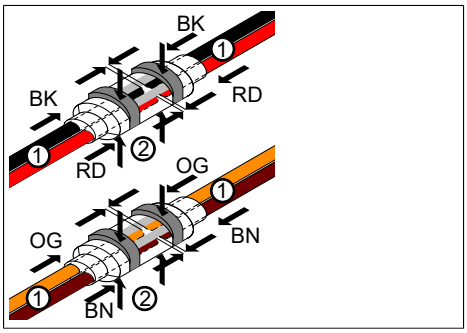
Tab. 11: Overview of the symbols of distributor LED and distributor 230 V

INFO

For RGB strips, two connectors are used.

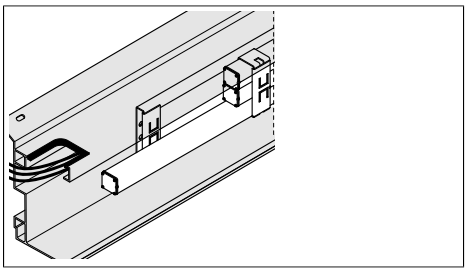
Strip	Extension line	Dimmer
Black	Black	Black
Red	Red	Red
Green	Orange	Orange
Blue	Brown	Brown

Tab. 12: RGB colour assignment

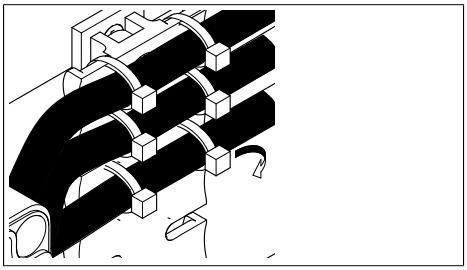


Special feature of RGB strip: direct connection with dimmer

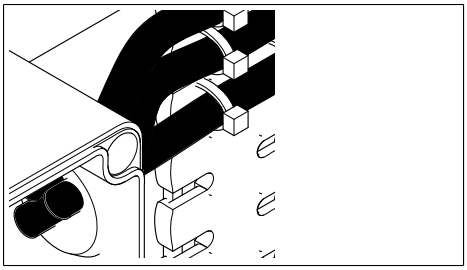
- Insert the wires all the way into the connector. Note the colours.
- Using an aid such as tongue-and-groove pliers, push in the two activation levers of the connector so they are flush.



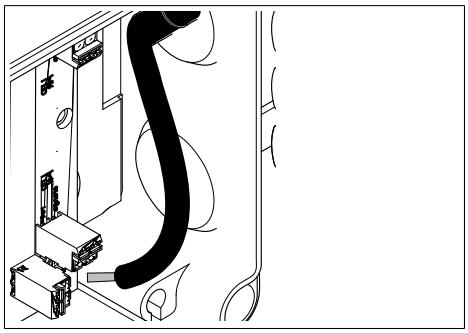
- Slide the lines into the cable channel toward the distributor.



- Route the lines to the distributor via a strain relief.
- Attach the lines to the strain relief with cable ties.



- Insert the lines into the appropriate distributor.



- Strip the lines.
- Equip the lines with ferrules.
- Insert the line (see label) into the corresponding slot on the printed circuit board.

2.26 Performing a functional check (slat roof)

CAUTION
Risk of crushing from failure to exercise care during operation.

Persons who are located within the projection area may be injured.

- Keep the path of the product clear of people.
- Keep children away from the operating elements.

Functional check procedure

INFO
To be able to perform a functional check, a **PRCD-S personal protection line** must be connected to the electric distribution.

The component is operated using the **WMS Hand-held transmitter**. The procedure is described in the "Trial run" section of. the accompanying instructions for the motor.

- Connect the personal protection line PRCD-S with the supply line of the electric distribution.
- Connect the personal protection line PRCD-S with the power supply.

INFO
of the motors used are not intended for continuous operation.

The integrated thermal protection switches the motor off after approx. 4 minutes. The product will be ready again for use after 10 to 15 minutes.

- When using the product, avoid operating the motor continuously over a lengthy period.

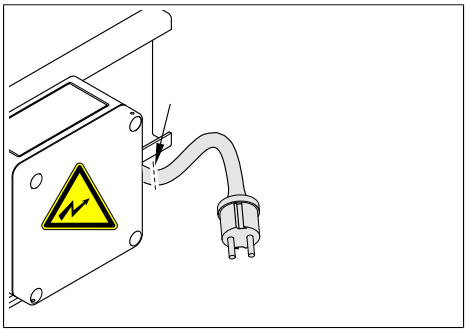
Cutting of the supply line at the distributor

GEFAHR DURCH STROM
Electric shock!

The supply line on the distributor is connected to the power supply via the personal protection line.

- Before cutting off the supply line at the distributor, the PRCD-S personal protection line must be unplugged again.

INFO
With RGB strips: only cut off the supply line after the RGB hand-held transmitter has been taught and the power socket has been tested.



- Die Zuleitung am Verteiler bündig abzwicken.

2.27 On-site connection

Note the target group for this task (see Page 3).

GEFAHR DURCH STROM
Electric shock!

Electrical work on electrical systems that expand to the electrical house installation are only permitted to be performed by an installation company registered in the installers directory of the network operator.

- Contract a registered installation company to perform the on-site connections in adherence with the applicable standards.

2.28 Installing the protection profile (optionally)

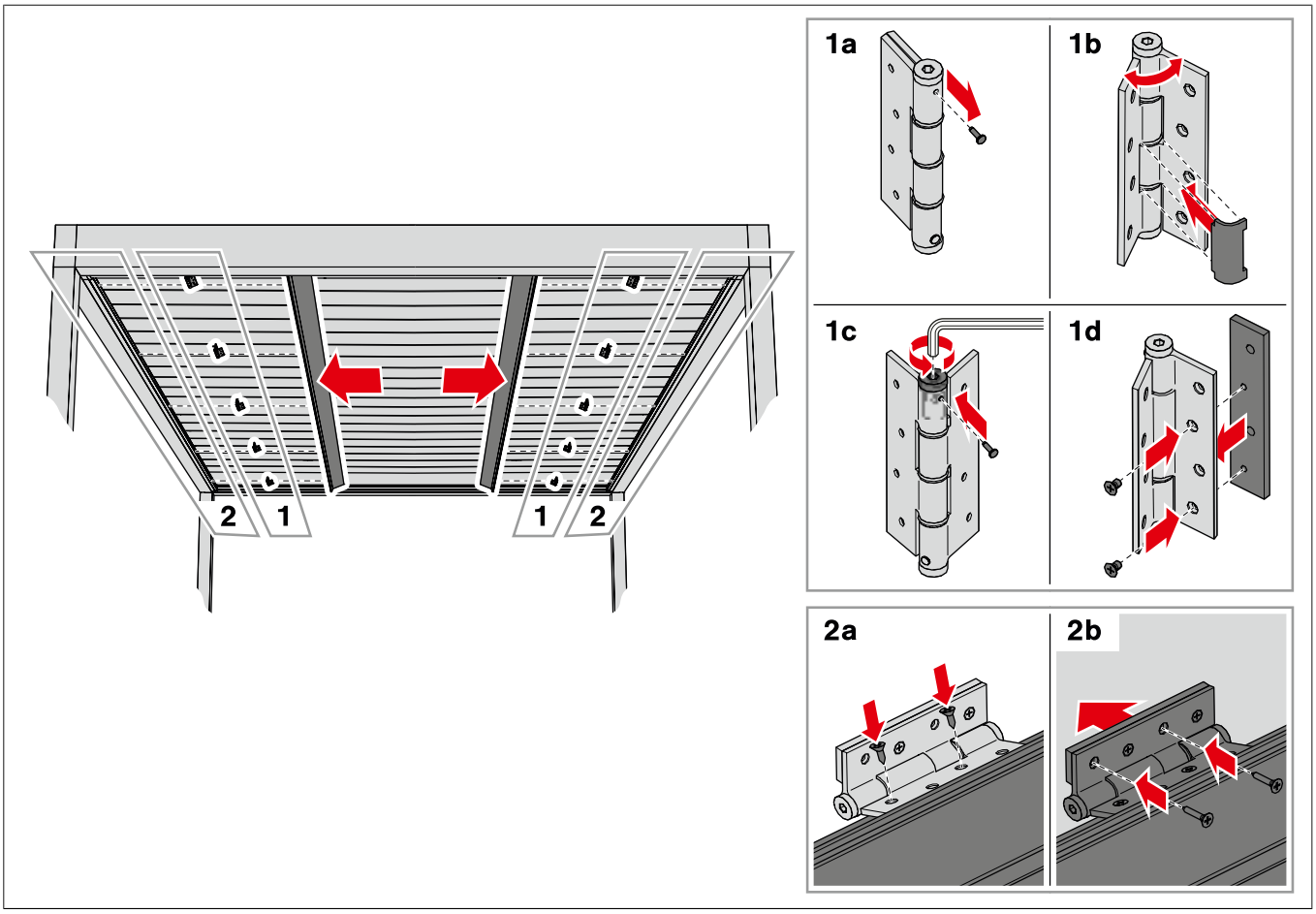


Fig. 38: Installing the protection profile

- [1a] Take the hinge out of the packaging and release the black pin with a size 5 hex key.

  NOTICE

  The hinge arms are under tension when delivered.
  - Remove the pin from the hinge by moving the tool back and forth.

- [1b] Fold open the hinge arm and position the mounting aid into the opening in the hinge provided for this purpose.

  ▶ The mounting aid is used to ensure that the hinge arms do not fold together, and the integrated spring can be put under tension.

- [1c] Turn the hinge flange anti-clockwise using a hex key.
- [1c] Insert the pin into the fourth stacked hole and remove the hex key.
- [1d] Fasten the spacer to the hinge arm using 2 screws DIN 965 A2 M5x8.
- [2a] Hook the protection profile into the hinge arms.

  INFO

  Because it is hooked in place, the protection profile can be aligned manually. The drilled holes in the hinge and protection profile must lie one on top of the other.

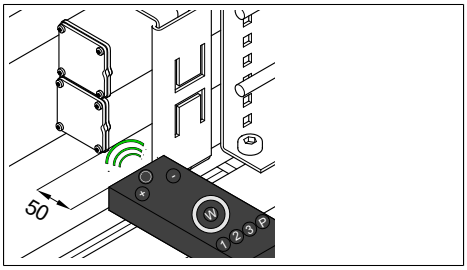
- [2a] Fasten the hinge arms on the protection profile using 2 sheet tapping screws DIN 7982 A2 C 4.8x13.
- [2b] Fasten the hinge modules on the beam at the existing drilled holes with 2 sheet tapping screws DIN 7982 A2 C 4.8x22 each.
- Remove the mounting aid from the hinge after installing the slats and fold up the protection profile manually.

2.29 Finishing the installation

Programming the RGB strip for the hand-held transmitter

INFO
Teach the hand-held transmitter for the product (see the accompanying installation and operating instructions for the hand-held transmitter).

The hand-held transmitter must be no farther than 50 mm away from the dimmer.



- To teach the RGB strips, hold the hand-held transmitter a maximum distance of 50 mm away from the dimmer.

Installing the covers

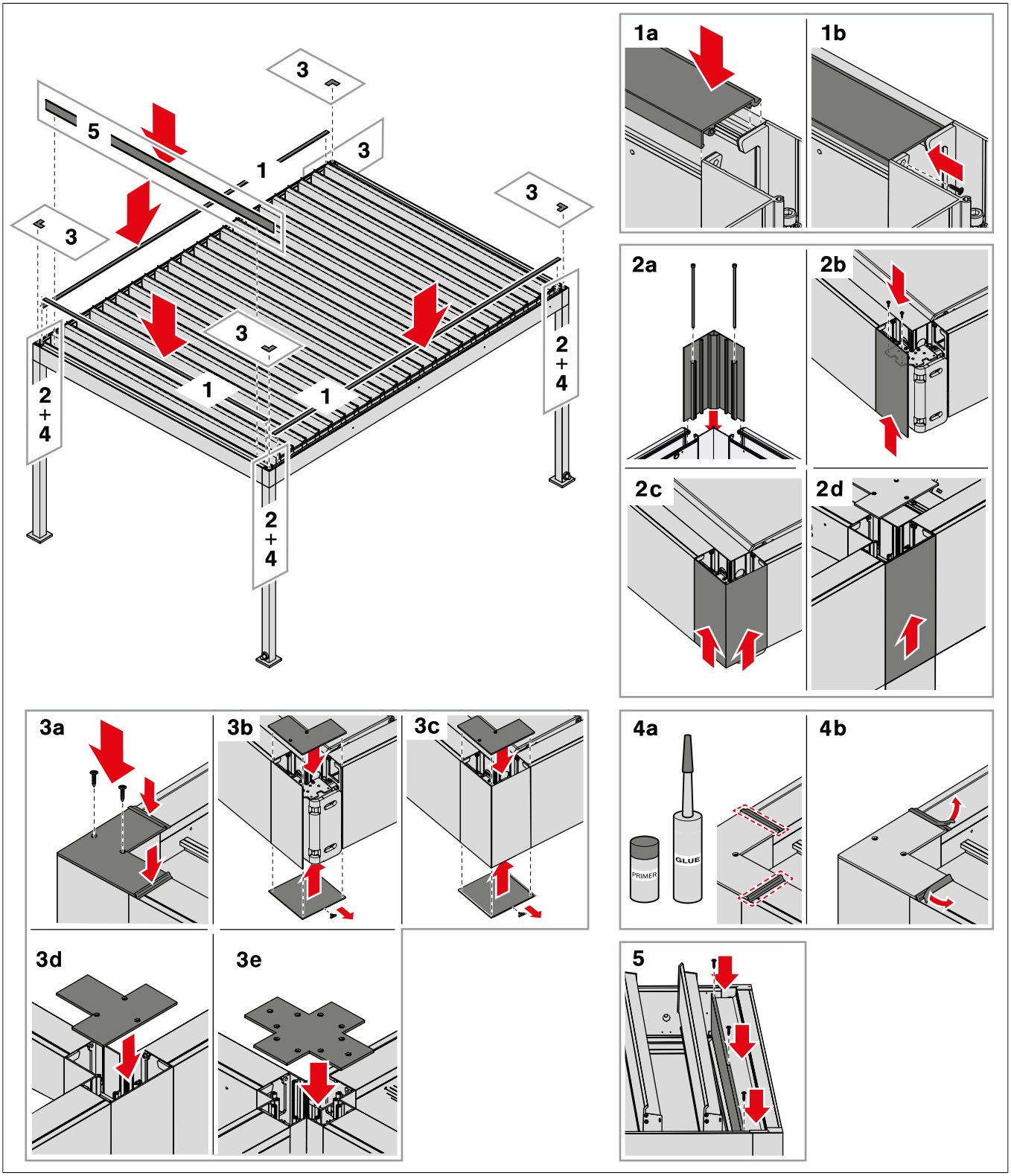


Fig. 39: Finishing the installation

- [1a] Attach the rain hoods for beams B and C to the hinge and lower.
- [1b] Attach the rain hoods to the predrilled holes, each with 1 screw DIN 7981 A2 C 3.5x25.
- [2a] Screw the cover (outside) on all poles from the top downward using the screws ISO 4762 M6x190.
- [2b] If a wall console is present, push in the cover (outside) from the bottom to the top and fasten it to the retaining plate using 2 sheet tapping screws DIN 7981 3.5x13.

- [2c] If an offset pole is present, push in the cover (outside) from the bottom to the top and fasten it to the retaining plate using 2 sheet tapping screws DIN 7981 3.5x13.
- [2b] For a star-mounted or series-mounted unit, push in the cover (outside) at the series pole from the bottom to the top and fasten it to the retaining plate using 2 sheet tapping screws DIN 7981 3.5x13.
- [3a] Place the upper covers on the corners and screw in place using 2 screws DIN 7982 A2 C 3.5x19 each.
- [3b/3c] If a wall console [3b] or an offset pole [3c] is present, install the lower cover on the corners with wall console:
  - Remove the tab from the lower cover of the wall console.
  - Glue the lower cover of the wall console in place.
- [3d] For a series-mounted or star-mounted unit, place the upper covers on the series poles and screw in place using 3 screws DIN 7982 A2 C 3.5x19 each.
- [3e] For a star-mounted unit, place the upper cover on the star pole, screw on using 8 screws DIN 7982 A2 C 3.5x19 and fasten to the rain hood of the beams using 2 screws Zebra Pias A2 3.5x16.
- [4] Seal the upper covers:
  - Apply adhesive tape a distance of 10 mm between the cover edge on the rain hood and on the cover.

    INFO
    Do not place brushes, cloths or rags that came into contact with the primer on the coated surfaces of the slat roof. The primer causes matt areas on the coating.

  - Clean the surface on which the sealing adhesive is to be applied.

    INFO
    Recommendation: Rhobasol 35DSF or Würth IPA cleaner. Not included in the scope of delivery.

  - Wait 10 minutes.
  - Treat the cleaned surface with primer.

    INFO
    Specification: Würth Primer for Plastic/Wood/Stone. Included in the scope of delivery. Use the necessary protective equipment.

  - Wait 10 minutes.
  - Pull off the adhesive tape.
- [5] Tilt open the slats and fasten the inspection cover of the connection box, if present, using drilling screws Zebra Pias 3.5x13 lens head.

General information

- Hand the documentation over to the operator.
- Instruct the operator on how to use this product.
- Complete and issue the handover report.

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