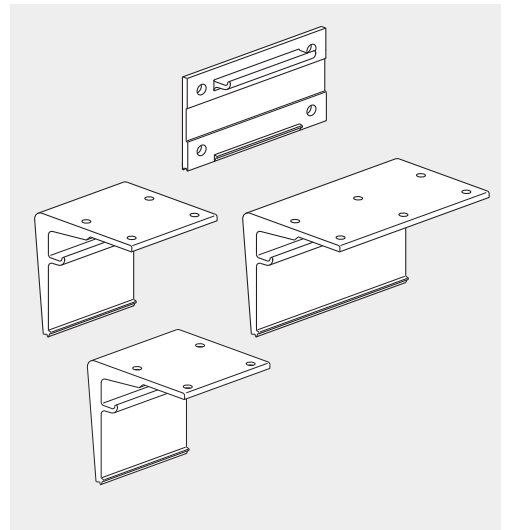
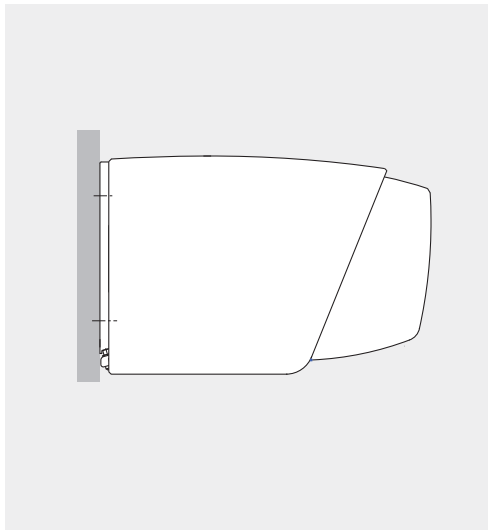
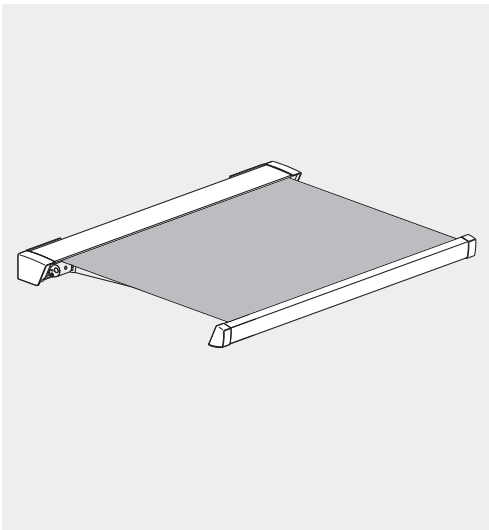


Installation instructions

Edition 06.2019


Cassette awning art_02



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Important safety instructions for the installation


1. Reading the installation and operating instructions

 The operating instructions must be read prior to installation. Any failure to do so absolves the manufacturer of any duty of liability

1.1. Safety notes and warnings relating to installation instructions

Safety notes can be found throughout the text. They are marked with a symbol and a note:


 **Important safety information:**
Notes that are important for the functioning of the product and can result in serious injury or death in the event of improper use are marked with this warning triangle.


 **Important safety information:**
This warning triangle indicates notes that are important for the functioning of the product and that if not followed represent a risk of electrocution that can result in serious injury or death.

1.2. Qualification


These installation instructions are aimed exclusively at qualified fitters with sound knowledge in the following areas:

- Health and safety at work and accident prevention regulations
- Handling of ladders and scaffolding
- Handling and transport of long, heavy components
- Working with tools and machines
- Attaching fasteners Assessing the fabric of buildings Commissioning and operating the product

 In the absence of any of these qualifications, a specialist fitting company must be employed to install the product.

 Due to its construction, at least two qualified fitters are required to install the awning. The same applies for taking it down


Electrical work:

 The permanent electrical installation must be carried out by a qualified electrician in accordance with the national regulations. Installation instructions are enclosed with the electrical appliances supplied with the awning. These must be followed.

1.3. Goods acceptance

The delivery must be inspected immediately upon receipt for any damage sustained in transit. In addition, the contents of the shipment must be checked against the delivery note.


1.4. Transport

 The permitted axle load and permitted total weight of the transport vehicle may not be exceeded. Loading can effect the vehicle's handling.

The goods being transported are to be tied down and properly secured. The shade system packaging is to be protected against moisture. Any soaked packaging may disintegrate and result in accidents. Packaging opened for the purpose of goods receipt inspection must be properly taped up for further transportation.

After the awning is unloaded, it is to be transported to the installation site the right way up and in the proper installation position so that it does not have to be manoeuvred through tight spaces.
The note on the position and side information on the awning box is to be adhered to.

1.5. Pulling up with ropes

 If the awning system needs to be pulled up to a higher position with the help of ropes, the awning is to be

- taken out of the packaging,
- fastened to the hoisting ropes in such a way that they cannot slip off, and
- pulled up smoothly in a vertical position.

The same applies to taking down the awning.

1.6. Mounting brackets

 Before starting installation, check

- that the type and number of fitting brackets supplied match the order,
- that the details given with the order about the substructure to which the awning is to be fixed match the actual substructure found at the installation site.

If any variances that impair safety are identified, the installation may not be carried out.


Cassette awning art_02 installation instructions

Important safety instructions for the installation

NB:


Supplied without installation materials (available as accessories). Installation materials need to be matched by the fitter to the given installation substructure. Where fastening materials ordered with the system are used we do not simultaneously assume liability for proficient installation. The installer is exclusively liable for determining if the fastening materials for the respective masonry are suitable and for the installation being performed properly. The wall plug manufacturers' respective fitting guides must be followed!

1.7. Fasteners

 The awning fulfils the requirements of the wind resistance category specified in the CE conformity mark (see operating instructions). In installed condition, this requirement is only met if:


- the awning is installed using the type and number of brackets recommended by the manufacturer (see point 1.18 on page 6+7)
- the awning is installed taking account of the wall plug extraction forces specified by the manufacturer (see point 1.18 on page 6+7)
- that during installation attention has been paid to the guidance of the manufacturer of the wall plugs used.

Example of a CE Conformity Mark in the accompanying document:


①	
②	MHZ Hachtel GmbH & Co. KG Sindelfinger Straße 21 D-70771 Leinfelden-Echterdingen Germany
③	2018
④	EN 13561:2015 art_02 Use on the outside of buildings and other structures Resistance to wind loads: Class 1 * Total energy transmittance g_{tot} : NPD <small>* For awnings mounted on wooden substructures and/or to rafters, and for awnings in special sizes or finishes, it is not possible to state wind resistance classes (class 0).</small>

- ① CE conformity mark, consisting of the CE mark defined in Directive 93/68/EEC.
- ② Name or identification code and the registered address of the manufacturer.
- ③ The year that the CE mark was issued.
Declaration of performance reference number
- ④ Number of the European standard applied, as given in the EU's Official Journal.
Product type's unique identifying code.
Product's intended purpose, as specified in the European norm.
Level and class of the stated power output.


1.8. Climbing aids

 Climbing aids may not be attached to or leant against the awning. They must be steady and provide adequate grip. Only use ladders that are certified for the proper load bearing weight


1.9. Fall protection equipment

 There is a risk of falling when working at any significant height. The appropriate fall protection equipment is to be used to guard against falls


1.10. Electrical connection

 The awning may only be connected if the electric motor's specifications match the electricity source (see operating instructions). The electrical component installation notes supplied with the unit must be followed.

 The unit is to be protected with an upstream FI circuit breaker in accordance with VDE regulations.


 Only cables and connectors with a protection class of a minimum of IP 54 may be used to supply power.

1.11. Partially assembled awnings

 Where awnings are partially assembled at the factory, e.g. linked systems with no fabric, the spring-loaded parts (see marking on the product) are secured against inadvertent opening. The securing device must not be removed until the blind has been completely installed.

These marked, spring-loaded blind components present a high risk of injury!


1.12. Intended use

 Awnings may be used only for the purpose defined for them in the operating instructions. Changes, such as attachments and modifications not intended by the manufacturer may only be carried out with the manufacturer's written consent.

Additional loading of the awnings by attaching objects or by cable tensioning or the like can result in damage to the awning or to it falling down; this is not permitted

Important safety instructions for the installation


1.13. Unsupervised operation

 When working in the extension area of the awning, the automatic controller must be turned off. There is a risk of crushing or falling.

In addition, ensure that the system cannot be unintentionally manually operated. For this purpose, the power is to be cut, e.g. take out the fuse or disconnect the plug. Furthermore, in the case of manual operating systems the operating crank must be removed and securely stored.

If the awning is used by several users, a priority locking system (controlled external electricity turn-off switch) must be used, which makes the retraction and extension of the awning impossible during cleaning and maintenance work.


1.14. Trial run

 The first time the system is extended, no one is permitted in the extension area of or under the awning. A visual check must be made of the fasteners and brackets after the first trial run.

During trial runs the automatic control or switch may not be used if the awning is out of the operator's sight (there is a risk of unintended extension/retraction). The use of a test cable to turn on the motor is recommended.

The installation and adjustment instructions included with the awning from the manufacturers of the motor, switch and controller must be followed.


1.15. Crush and shear zones


 There are crush and shear zones between drop bar and tube/cassette and/or covers near the joint arm and moving sections. Clothing i.e. body parts can be pulled into the system!



If the awning is being installed at a height of less than 2.5 metres above accessible thoroughfares, it may be turned on only by a push button switch from which there is a view of the moving parts. Electrical controllers, radio drives with latching function, latching switches, etc. are not permissible in this case.


The push-button switch must be fitted within sight of the drop bar but away from the moving parts. Ideally it should be fitted at a height of 1.3 metres (national regulations relating to the disabled must be observed).


1.16. Installation and removal

 While the awning is being installed or taken down the area underneath it is a danger area and only people involved with the work are allowed in that area.


 When dropping the awning into the brackets make sure that you don't pinch or damage the connection cable.

  If any damage occurs or is identified, it must be professionally repaired. Awnings in need of repair must be retracted and may not be used. Only manufacturer approved replacement parts may be used.

 To avoid injuries, the end positions must be adapted, where applicable, to the site circumstances.

 In the publicly accessible areas the prevailing statutory regulations must be observed.

1.17. Handover

 All operating instructions as well as the installation and adjustment instructions issued by the motor, switch and controller manufacturers are to be handed over to the user with an induction session. The user is to be instructed comprehensively on safety and on use of the awning. Failure to follow the instructions or any incorrect operation can cause accidents and damage to the awning.

All instructions are to be kept by the customer for future reference and must be passed on to the new owner if the awning is sold.

Based on knowledge of the particular circumstances at the site and the finished installation, the installation firm will tell the user whether the wind resistance class specified by the manufacturer has been achieved in the installed condition. If not, the installation company must document the wind resistance class actually attained.

Recommendation:

If you are the fitter, have the awning's correct installation and set-up, the time of installation and details of the acceptance meeting, including that you explained the safety information, confirmed in writing.

Important safety instructions for the installation

1.18. Bracket arrangement and extraction forces



Be sure to take note of all key installation information!

All brackets supplied with the product must be used and they must be fitted using all fixing points.

Pay attention to the extraction forces (see p. 7).

K set	Description	Bracket arrangement	Fixing points	Illustration
ME	Standard wall bracket set consisting of 2-off WK26		8	 WK26
MD	Wall bracket set consisting of 2-off WK27 (1 each of WK26 and steel plate *1) for fixing to critical substructures		12	 WK27
MF	Ceiling bracket set Ceiling bracket set consisting of 2-off DK13 (for projection of up to 350 cm)		8	 DK13
MH	Ceiling bracket set Ceiling bracket set consisting of 2-off DK15 (for projection of 400 cm)		12	 DK15
MG	Roof rafter bracket set * 2 consisting of 2-off DK14		8	 DK14

K set = bracket set; WK = wall bracket; DK = ceiling bracket Brackets are to be fitted to the arm bracket (pay attention to centre-to-centre distances)

*1 Galvanised, powder-coated in frame colour

*2 Bracket set in combination with roof rafter bracket

Important safety instructions for the installation

EXTRACTION FORCES AND BRACKET SETS for wind resistance class 1

Extraction forces in Newton (N) per fastening screw

⚠ So that the wind resistance class specified by us is valid, the fasteners must be matched to the existing substructure by the fitter. Where orders are received without specification of the installation substructure, you will receive mounting brackets for mounting on concrete C 20/25. Please note that these brackets may not be suitable for installation on other substructures. In order to satisfy DIN EN 13561, it is necessary to fit the type and number of brackets recommended for each product. It is essential to observe the defined wall plug extraction forces as well as the mounting and installation instructions given by the manufacturer of the fasteners (including the edge and hole distances). Precise extraction forces in relation to the thickness of the insulating plaster and the desired bracket set as well as to installation on other substructures on request. Coupled systems are counted as two individual systems (system width = 1/2 total width). The bracket set (K set) is required twice.

WALL installation on concrete (C20/25)

Width in cm	Projection in cm									
	150		200		250		300		350	
	N	K-set	N	K-set	N	K-set	N	K-set	N	K-set
264	565	ME	877	ME						
314	649	ME	1.005	ME	1.427	ME				
364	733	ME	1.134	ME	1.608	ME	2.166	ME		
414	816	ME	1.262	ME	1.790	ME	2.408	ME	3.182	ME
464	900	ME	1.391	ME	1.971	ME	2.651	ME	3.906	ME
500	961	ME	1.483	ME	2.102	ME	2.826	ME	4.164	ME
550	1.045	ME	1.612	ME	2.283	ME	3.429	ME	4.522	ME
600	1.129	ME	1.741	ME	2.465	ME	3.705	ME	4.880	ME
650	1.213	ME	1.869	ME	2.943	ME	3.982	ME	5.238	ME
700	1.297	ME	1.998	ME	3.148	ME	4.258	ME	5.597	ME

CEILING installation on concrete (C20/25)

Width in cm	Projection in cm									
	150		200		250		300		350	
	N	K-set	N	K-set	N	K-set	N	K-set	N	K-set
264	514	MF	762	MF						
314	593	MF	876	MF	1.210	MF				
364	672	MF	990	MF	1.367	MF	2.166	ME		
414	751	MF	1.105	MF	1.523	MF	2.013	MF	2.627	MF
464	830	MF	1.219	MF	1.679	MF	2.218	MF	3.213	MF
500	887	MF	1.301	MF	1.792	MF	2.366	MF	3.426	MF
550	966	MF	1.416	MF	1.948	MF	2.856	MF	3.723	MF
600	1.045	MF	1.530	MF	2.104	MF	3.088	MF	4.019	MF
650	1.124	MF	1.645	MF	2.496	MF	3.319	MF	4.315	MF
700	1.203	MF	1.759	MF	2.671	MF	3.551	MF	4.612	MF

WALL installation on brick ≥ MZ 12

Width in cm	Projection in cm									
	150		200		250		300		350	
	N	K-set	N	K-set	N	K-set	N	K-set	N	K-set
264	565	ME	877	ME						
314	649	ME	1.005	ME	357	MD				
364	733	ME	284	MD	402	MD	541	MD		
414	816	ME	316	MD	447	MD	602	MD	794	MD
464	900	ME	348	MD	493	MD	662	MD	975	MD
500	961	MD	371	MD	526	MD	706	MD	1.039	MD
550	262	MD	404	MD	571	MD	856	MD	1.129	MD
600	283	MD	436	MD	616	MD	926	MD	1.218	MD
650	304	MD	468	MD	736	MD	995	MD	1.307	X
700	325	MD	500	MD	787	MD	1.064	MD	1.397	X

WAND - Montage auf Hochlochziegel ≥ HLZ 12

Width in cm	Projection in cm									
	150		200		250		300		350	
	N	K-set	N	K-set	N	K-set	N	K-set	N	K-set
264	565	ME	877	ME						
314	649	ME	1.005	ME	357	ME				
364	733	ME	284	MD	402	MD	541	MD		
414	816	ME	316	MD	447	MD	602	MD	794	MD
464	900	ME	348	MD	493	MD	662	MD	975	MD
500	961	ME	371	MD	526	MD	706	MD	1.039	MD
550	262	MD	404	MD	571	MD	856	MD	1.129	MD
600	283	MD	436	MD	616	MD	926	MD	1.218	X
650	304	MD	468	MD	736	MD	995	MD	1.307	X
700	325	MD	500	MD	787	MD	1.064	MD	1.397	X

WAND - Montage auf Porenbeton ≥ PB2

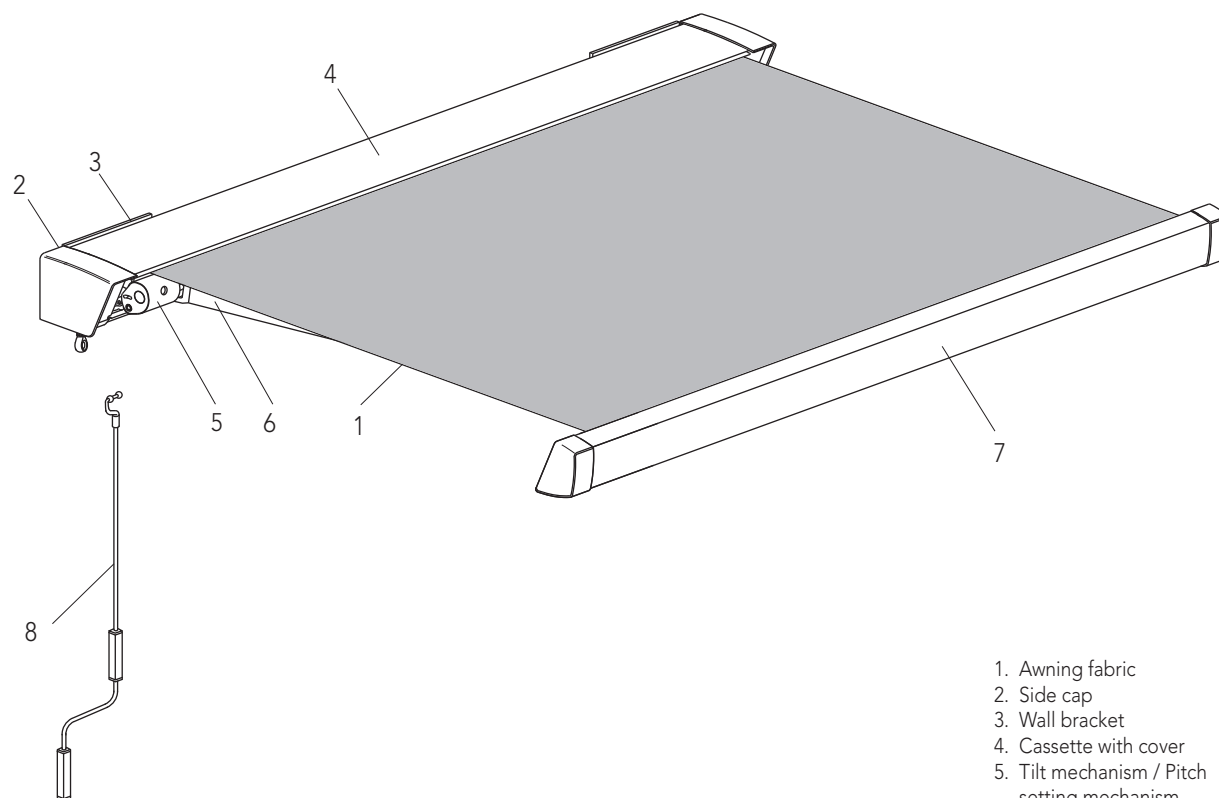
Width in cm	Projection in cm									
	150		200		250		300		350	
	N	K-set	N	K-set	N	K-set	N	K-set	N	K-set
264	565	ME	877	ME						
314	649	ME	1.005	ME	357	MD				
364	733	ME	284	MD	402	MD	541	MD		
414	816	ME	316	MD	447	MD	602	MD	794	MD
464	900	ME	348	MD	493	MD	662	MD	975	MD
500	241	MD	371	MD	526	MD	706	MD	1.039	MD
550	262	MD	404	MD	571	MD	856	MD	1.129	MD
600	283	MD	436	MD	616	MD	926	MD	1.218	X
650	304	MD	468	MD	736	MD	995	MD	1.307	X
700	325	MD	500	MD	787	MD	1.064	X	1.397	X

N = extraction force in Newtons (N) per fastening screw; K set = specified bracket set (see overview on page 6)
X = on request

INSTALLATION INSTRUCTIONS



Cassette awning art_02



Check delivery at once for any damage caused in transit. The contents of the shipment must be checked against the delivery note.

Caution: Supplied without fastening materials.

The fasteners must be matched by the fitter to the given installation substructure.

! Important:

The extraction forces for the fastening screws must be defined on the basis of 70N/m² related to the awning fabric surface area.

Operating note:

An awning is a sunshade, not a shield from all forms of weather. In the event of wind, storms, snow or rain, it must be retracted. If the awning is equipped with an automatic controller (e.g. wind and sun sensor), this must be switched off over the winter (danger of icing up).

Give the user of the awning the accompanying operating instructions and explain to them in detail all the guidance on awning use and safety.

MHZ awnings require in the main no maintenance. If any faults do arise, notify your specialist retailer.

Required tools:

- Allen wrench SW 3, 4, 5, 6+10
- Box spanner SW 10 (for coupling)
- Spirit level

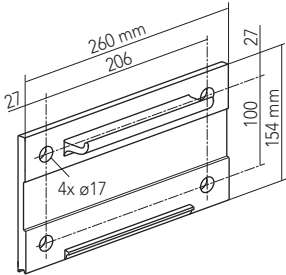
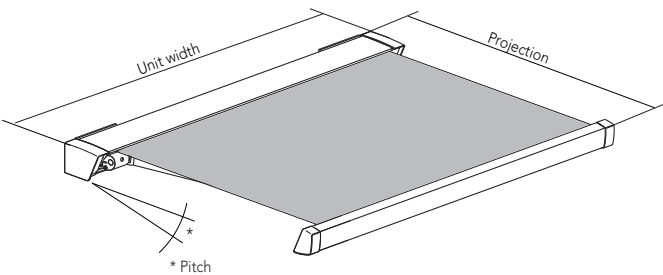
If electrically operated:

1 adjustment cable for SunTop drives (prod. no. 99-1669) or
1 adjustment cable for RTS or io wireless drives (prod. no. 99-4196) Adjustment cables can be used only for the installation!

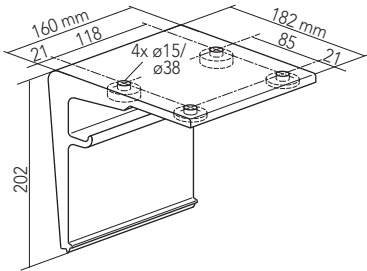
Caution: For motor settings please follow the setting instructions for electric drives, p. 23, 24, 25 + 27.

Technical data

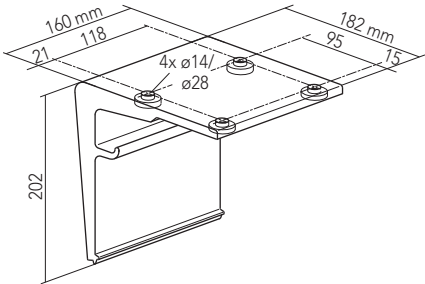
- Unit width: from 214 cm to 700 cm
coupled from 701 cm to 1400 cm
- Projection: 150 / 200 / 250 / 300 / 350 / 400 cm
- Arm bracket: pitch adjustable from 5° to 35°
- Type of installation: wall / ceiling / rafters



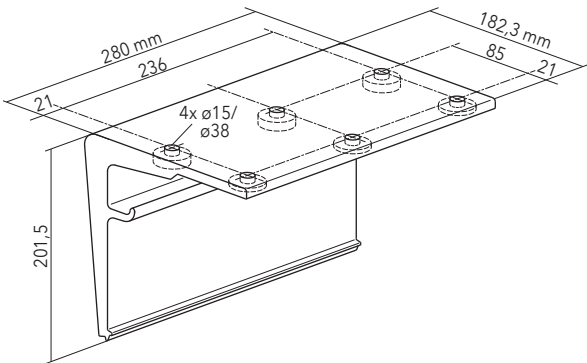
Wall bracket



Ceiling bracket
for projection 150 - 350 cm

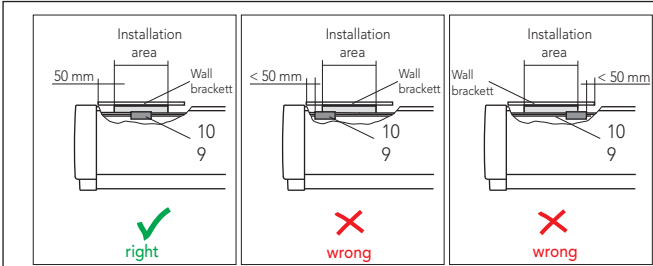


Roof rafter bracket

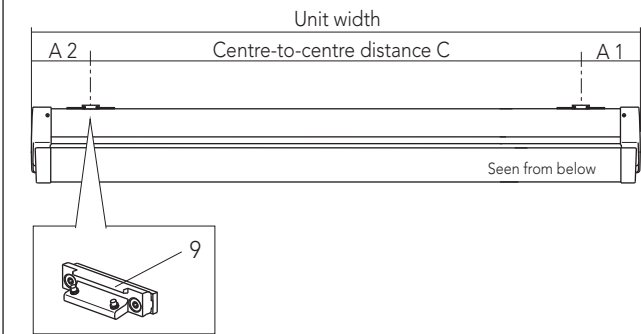


Ceiling bracket
central for extension 400 cm

1.1. Wall installation



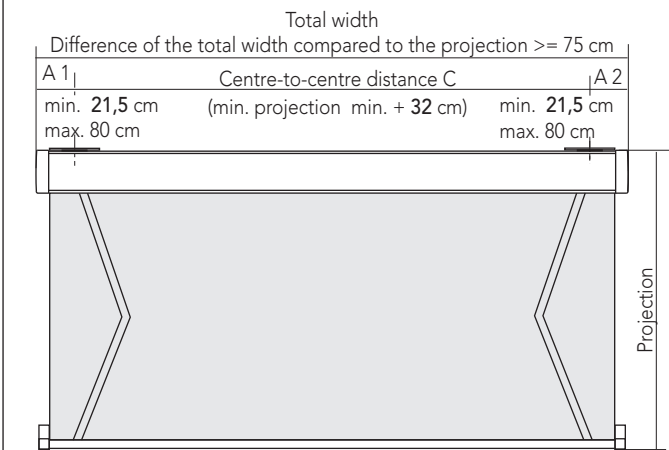
In order to ensure correct installation of the awning (within bracket installation area), the centre-to-centre distance must be checked before fitting the brackets.



Re-measure centre-to-centre distance at the clamp (9) (awning bottom).

! Clamp (9) must not be pushed out of position. The arm mount (10) determines the position of the clamp (9). Arm mount and clamp must be positioned relative to each other.

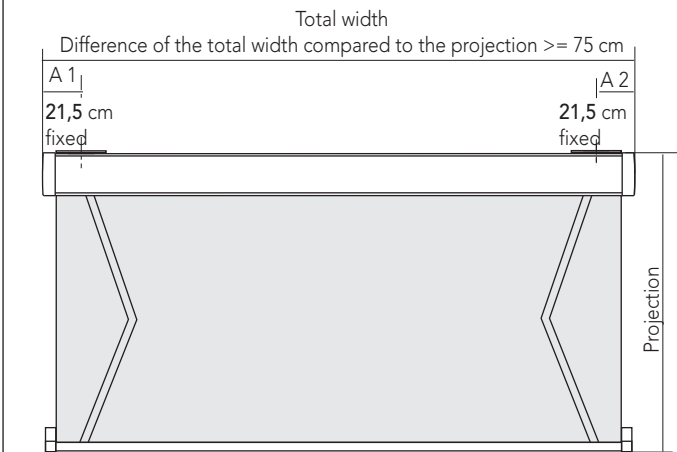
Centre-to-centre distance:



If the difference of the total width compared to the projection ≥ 75 cm, the centre-to-centre distance ** can vary between 21.5 cm and 80 cm, depending on the projection.

** In the case of a centre-to-centre distance of $A1/A2 \geq 21,5$ cm the bracket can be fitted offset by + 5 cm (related to the awning centre) and in the case of a centre-to-centre distance of $A1/A2 \geq 26,5$ cm by +/- 5 cm to the distance ordered (installation tolerance).

Centre-to-centre distances at minimum widths:

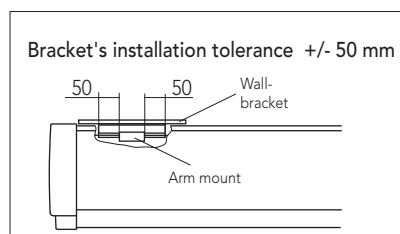
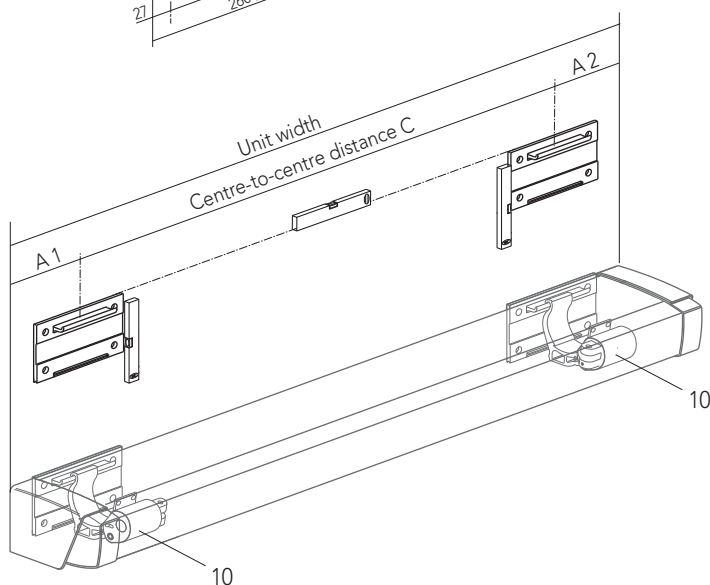
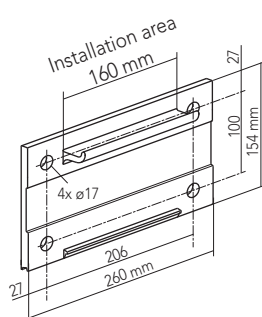
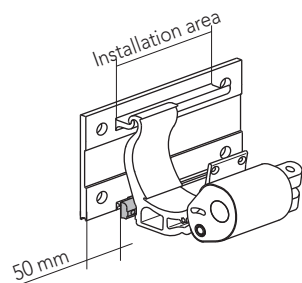


If the difference of the total width compared to the projection < 75 cm, the centre-to-centre distance* is strictly 21,5 cm (see table).

* The bracket cannot be fitted offset related to the centre-to-centre distance.

Unit width (cm)	150 cm Proj.	200 cm Proj.	250 cm Proj.	300 cm Proj.	350 cm Proj.	400 cm Proj.
214 - 263	21,5					
264 - 313		21,5				
314 - 363			21,5			
364 - 413				21,5		
414 - 463					21,5	
464 - 500						21,5

1.1. Wall installation



⚠ In the case of units with minimum widths it is possible to fit the arm mount not centrally, but flush with the outer edges of the wall bracket (see sketch).

Mark the brackets fixing points and the unit's width on the installation substructure (wall).

Before the drill holes are made, check again that the centre-to-centre distance is correct.

Align brackets against the wall and screw into place.

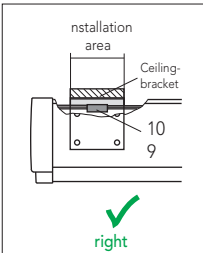
NB: The brackets must always be in line vertically and horizontally.

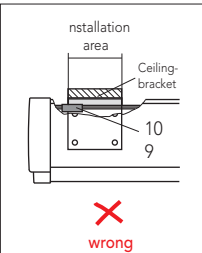
⚠ It is imperative that the fasteners are matched to the installation substructure!

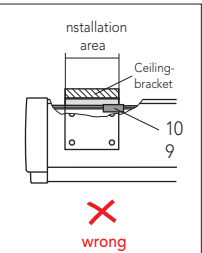
It is imperative that the arm mount (10) / clamp (9) is positioned within installation area of the wall bracket. It may not protrude beyond it (see p. 11).

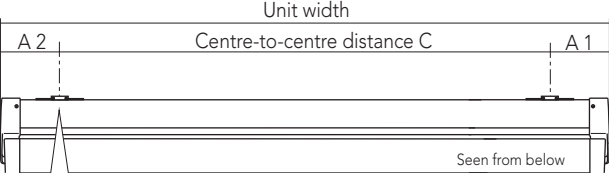
⚠ If installed incorrectly, the awning may be damaged! Risk of injury!

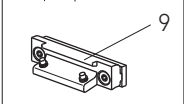
1.2. Ceiling installation



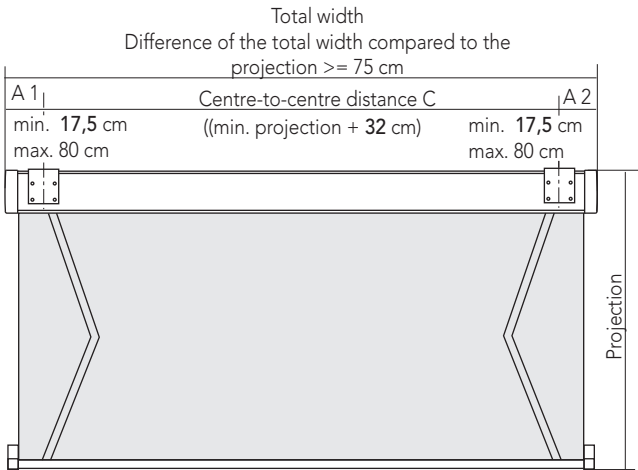




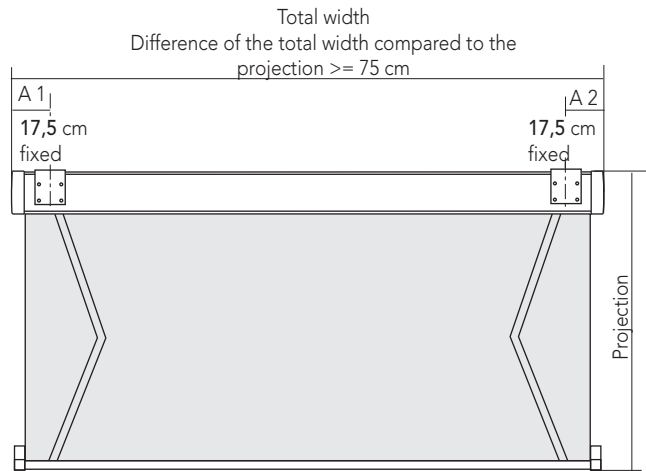




Centre-to-centre distance:




Centre-to-centre distances at minimum widths:



In order to ensure correct installation of the awning (within bracket installation area), the centre-to-centre distance must be checked before fitting the brackets.

Re-measure centre-to-centre distance at the clamp (9) (awning bottom).

 Clamp (9) must not be pushed out of position. The arm mount (10) determines the position of the clamp (9). Arm mount and clamp must be positioned relative to each other.

If the difference of the total width compared to the projection ≥ 75 cm, the centre-to-centre distance** can vary between 17.5 cm and 80 cm, depending on the projection.

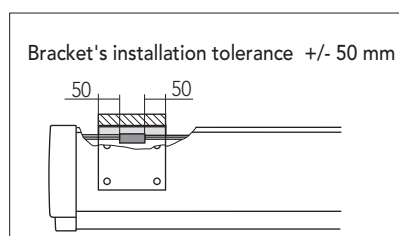
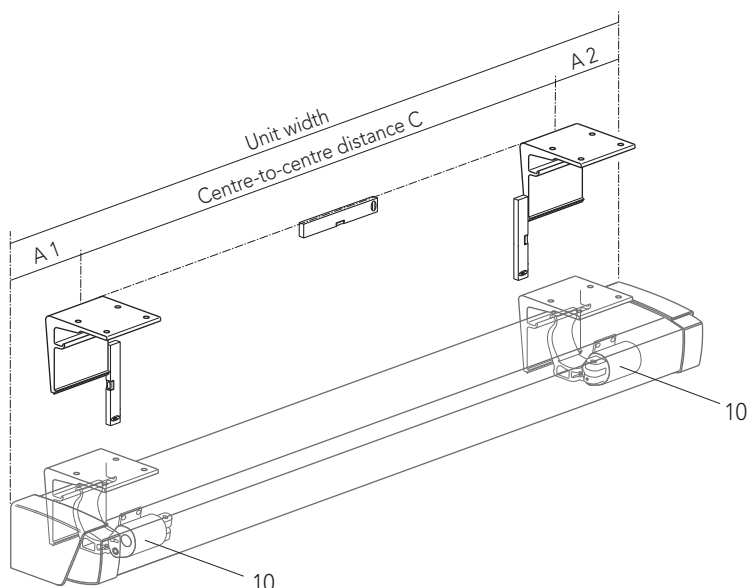
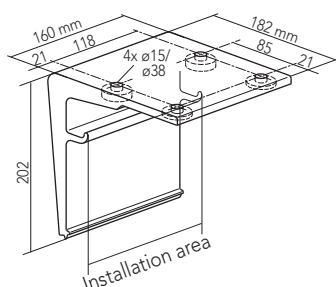
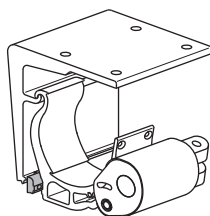
** In the case of a centre-to-centre distance of $A1/A2 \geq 17.5$ cm the bracket can be fitted offset by + 5 cm (related to the awning centre) and in the case of a centre-to-centre distance of $A1/A2 \geq 22.5$ cm by +/- 5 cm to the distance ordered (installation tolerance).

If the difference of the total width compared to the projection < 75 cm, the centre-to-centre distance* is strictly 17.5 cm (see table).

* The bracket cannot be fitted offset related to the centre-to-centre distance

Unit width (cm)	150 cm Proj.	200 cm Proj.	250 cm Proj.	300 cm Proj.	350 cm Proj.	400 cm Proj.
206 - 255	17,5					
256 - 305		17,5				
306 - 355			17,5			
356 - 405				17,5		
406 - 455					17,5	
456 - 500						17,5

1.2. Ceiling installation



⚠ In the case of units with minimum widths it is possible to fit the arm mount not centrally, but flush with the outer edges of the ceiling bracket (see sketch).

Mark the brackets fixing points and the unit's width on the installation substructure (ceiling).

Before the drill holes are made, check again that the centre-to-centre distance is correct.

Align brackets against the ceiling and screw into place.

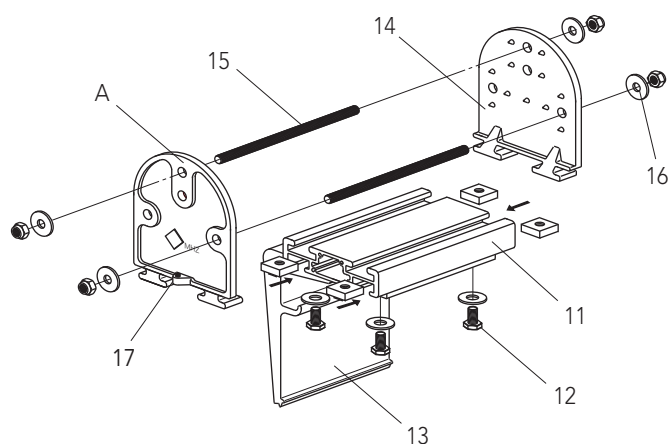
NB: The brackets must always be in line vertically and horizontally.

⚠ It is imperative that the fasteners are matched to the installation substructure!

It is imperative that the arm mount (10) / clamp (9) is positioned within the installation area of the ceiling bracket. It may not protrude beyond it (see p. 11).

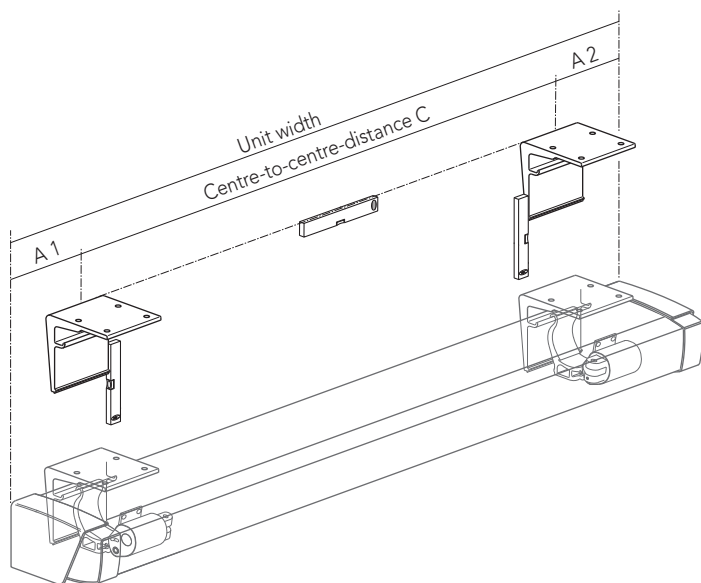
⚠ If installed incorrectly, the awning may be damaged! Risk of injury!


1.3. Roof rafter installation (accessory)

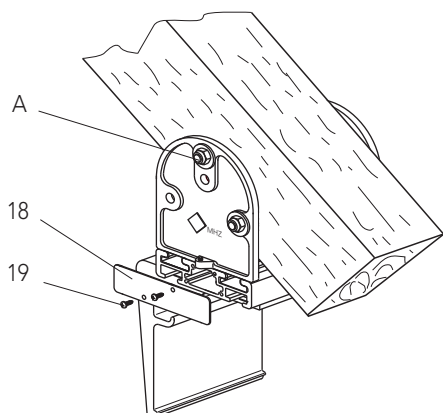


Using sliding block, hexagon head screw M10x25, U-washer (12) and box spanner SW17, fix support rail (11) to roof rafter bracket (13).

Push both plates (14) into the upper grooves of the support rail (11). Mark top drill hole (A) on the rafter and drill through using a $\varnothing 12$ mm drill bit. Push through threaded rod (15) and screw in place at both ends with washers and M10 nuts (16).



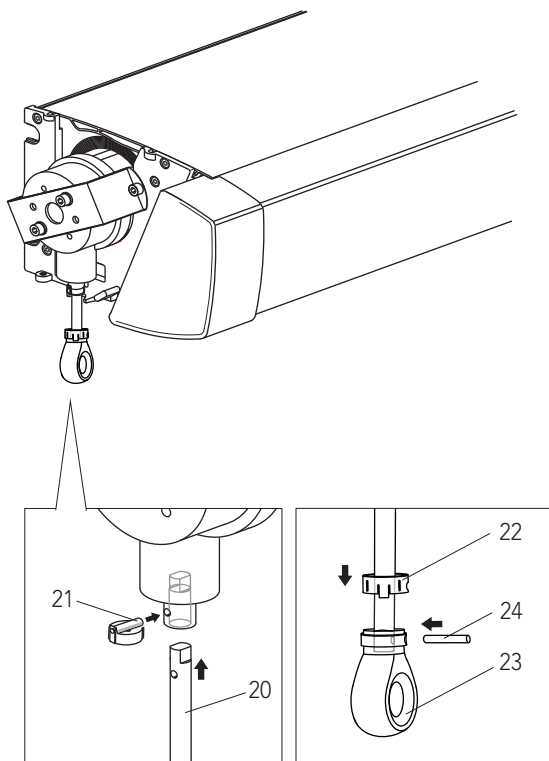
 As shown at 1.2. Ceiling installation, align rafter brackets with each other.



Drill second hole appropriate to the two plates and screw in place. Then tighten threaded pin (17).

Then fix side panels (18) of the support rail in place using 2, 4.2x16 slotted pan head screws (19) for each.

2. Fitting gear unit grommet and extension

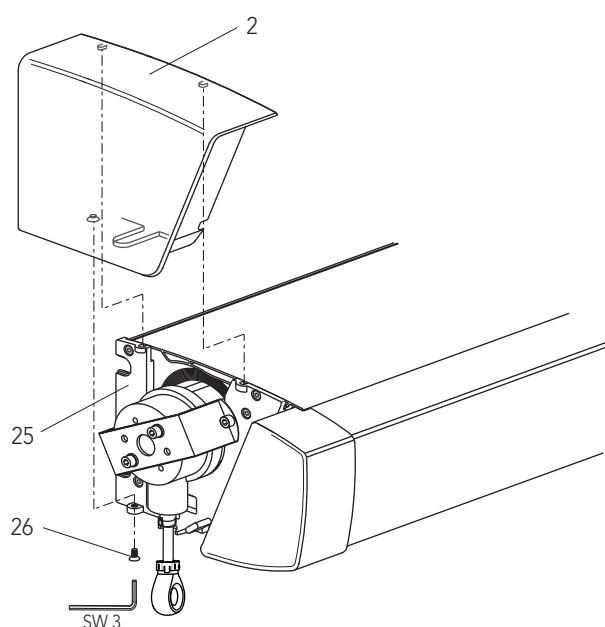


Before the awning is dropped into the brackets, the gear unit grommet with extension has to be fitted.

Insert extension (20) into the bevel gear's mount and secure using the bolt lock (21).

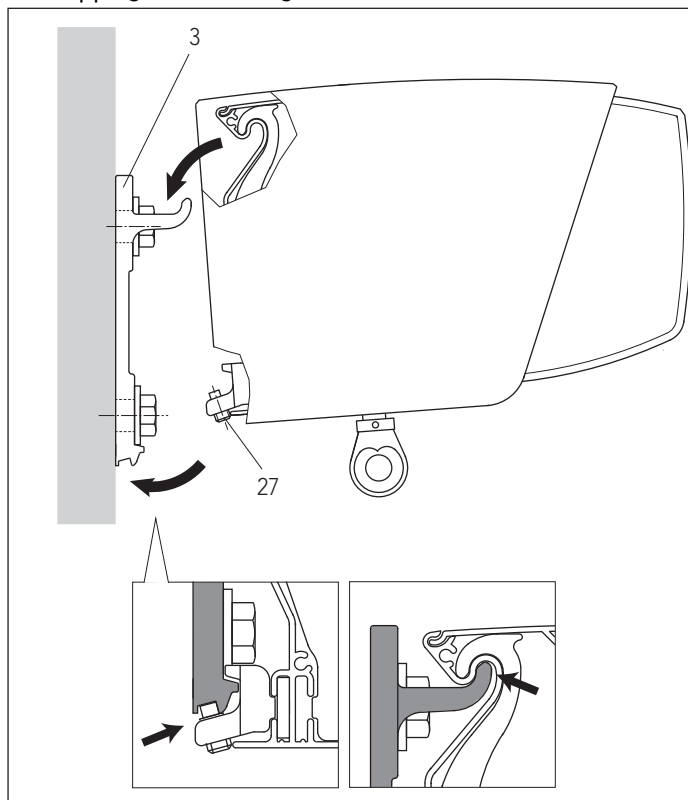
Then first push retaining ring (22) and plastic eyelet (23) onto extension. Turn plastic eyelet into position until the cylinder pin (24) for fixing the eyelet in place can be introduced onto the extension. Push retaining ring (22) up to plastic

3. Side cap installation



Insert side cap (2) from above into side bearing (25), fold down and fasten using countersunk head screw M5x10 (26) (Allen key SW 3).

4. Dropping in the awning



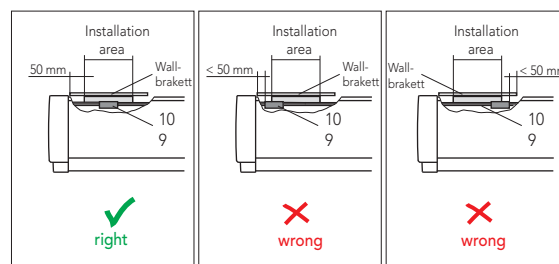
Lower awning into bracket (3) and fix to the brackets using the two M8x16 threaded pins (27) (Allen key SW 4).

Note:

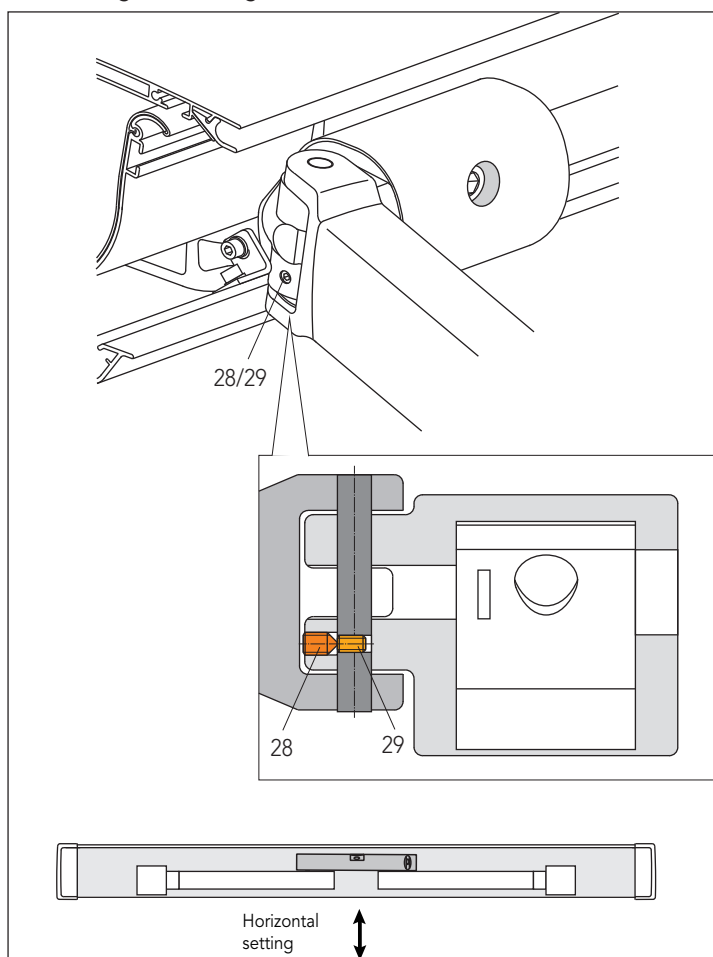
Always tighten the two outer threaded pins to the brackets first, then the inner ones.

⚠ This step of the work needs to be done by at least two fitters!

⚠ Be sure to pay attention to centre-to-centre distance!



5a. Setting the awning arms to be horizontal



If with the awning retracted the arms are not horizontal, proceed as follows:

Extend awning to c. 2/3 of the awning projection. Using an SW 4 Allen key, remove the pitch adjusting mechanism's threaded pin (28). Through this threaded hole use an SW 3 Allen key to tighten or loosen the second threaded pin in the rear pivot bolt until the arms are horizontal.

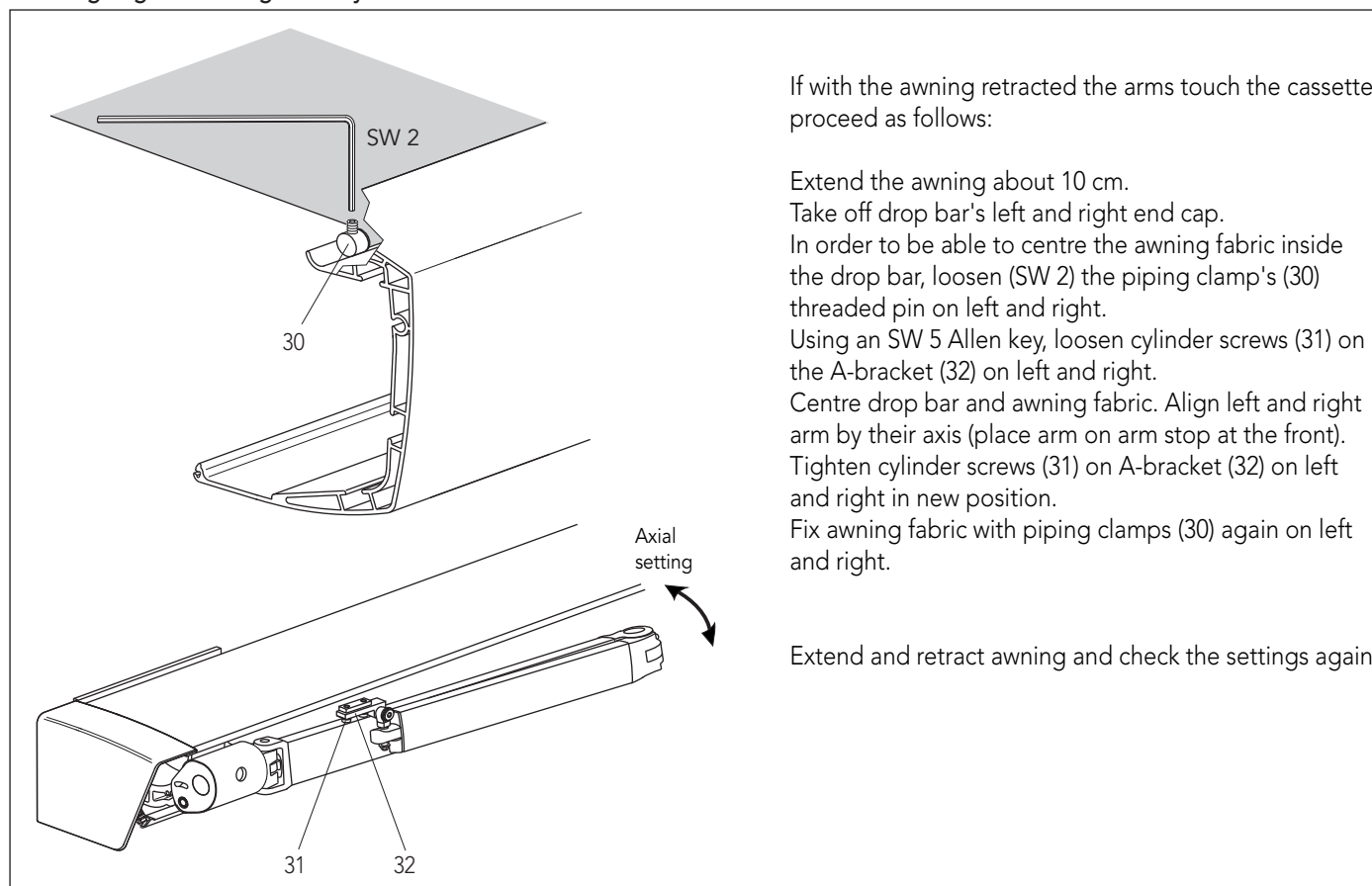
Note:

- Tightening the threaded pin (29):
Arm moves up
- Loosening the threaded pin (29):
Arm moves down

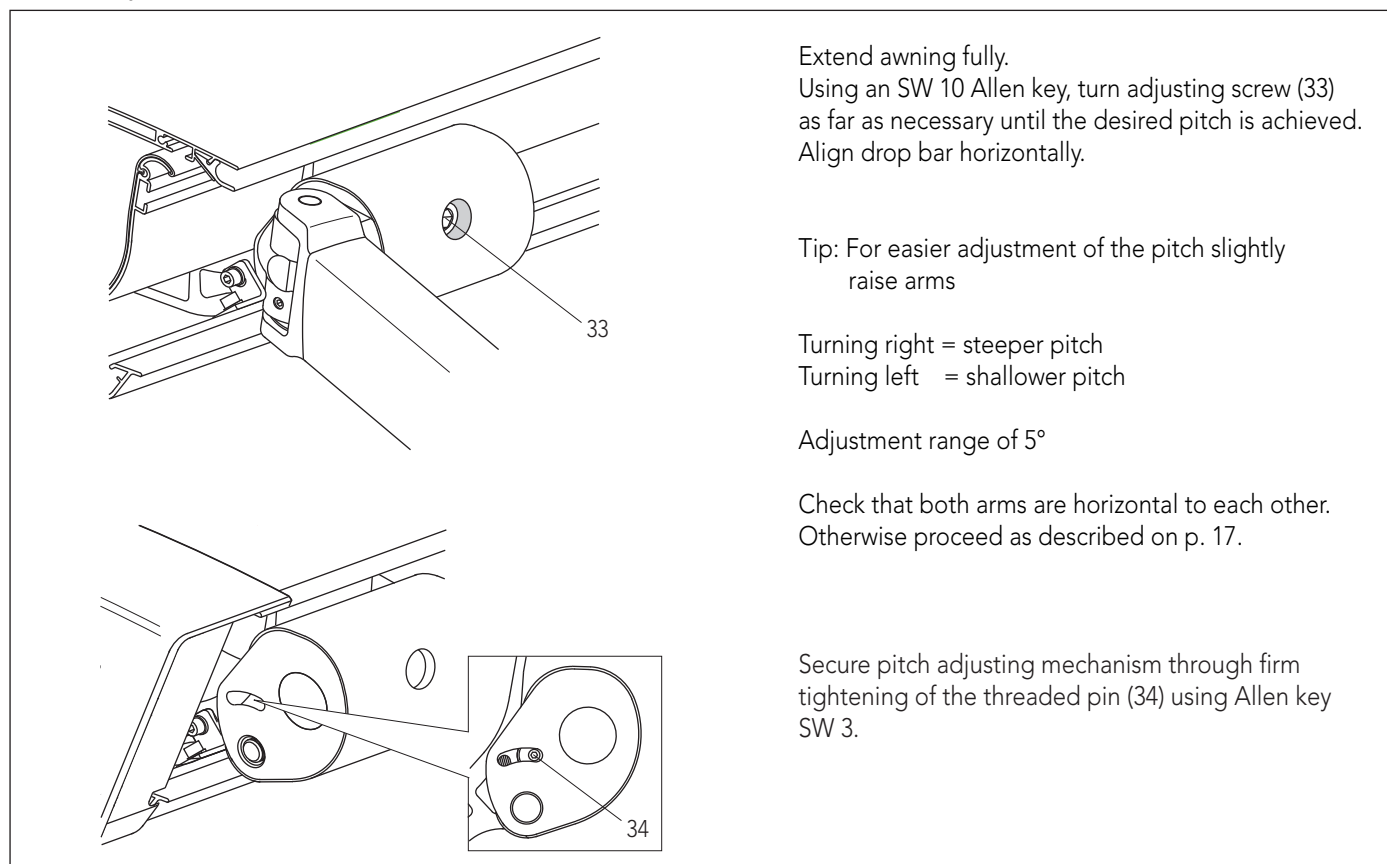
After setting the arms, screw the threaded pin (28) back in and fix the setting in place by firmly tightening (10 Nm).

Extend and retract awning and check setting again.

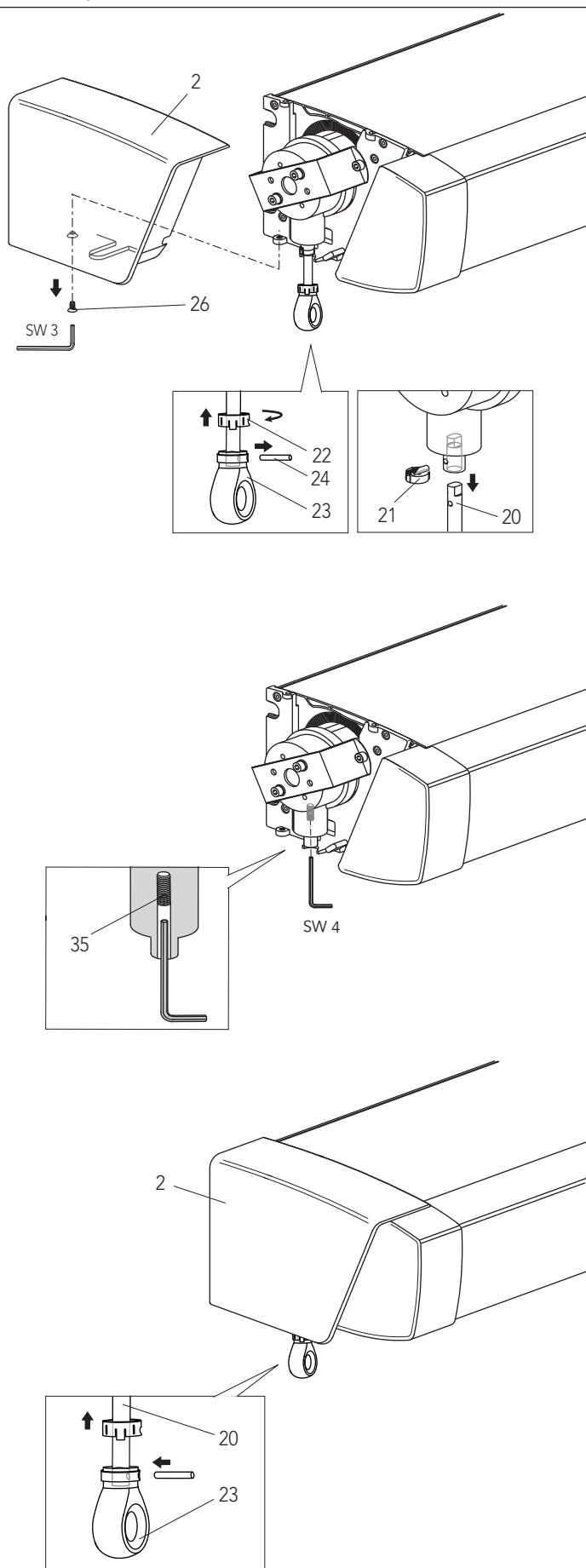
5b. Aligning the awning arms by their axis



6. Pitch adjustment



7. Gear adjustment



The gear's end setting is set at the factory. If you do, nevertheless, want to change the end setting, proceed as follows:

Extend awning until the free-wheel clutch activates (clear 'click' sound). Then retract awning c. 1 to 2 cm.

Remove countersunk head screw M5x10 (26) for fixing the side cap (2) in place and take off side cap. Rotate the retaining ring (22) of the plastic eyelet (23) until the cylinder pin (24) for removing the plastic eyelet becomes visible. Remove cylinder pin.

To set the gearing, take off extension (20). Remove bolt lock (21) and pull extension (20) out of the bevel gear's mount.

Gear adjustment:

Using an SW 4 Allen key, loosen the internal securing screw (35) by three rotations. Fit extension (20) and plastic eyelet (23) again.

When adjusting the end stop outwards (projection becomes greater):

Using the crank handle, slightly wind the awning in (c. 1 cm) in order to take pressure off the end stop. Then wind out to the desired end position.



This short movement prevents any damage to the adjustment cogging.

When adjusting the end stop inwards (projection becomes smaller):

Using the crank handle, wind the awning in to the desired end position.

Take off eyelet and extension and tighten securing screw (35) again.

Then fit extension (20), plastic eyelet (23) and side cap (2) again.

Check setting by retracting by c. 50 cm and then extending until the free-wheel clutch activates (clear 'click' sound).

Note:

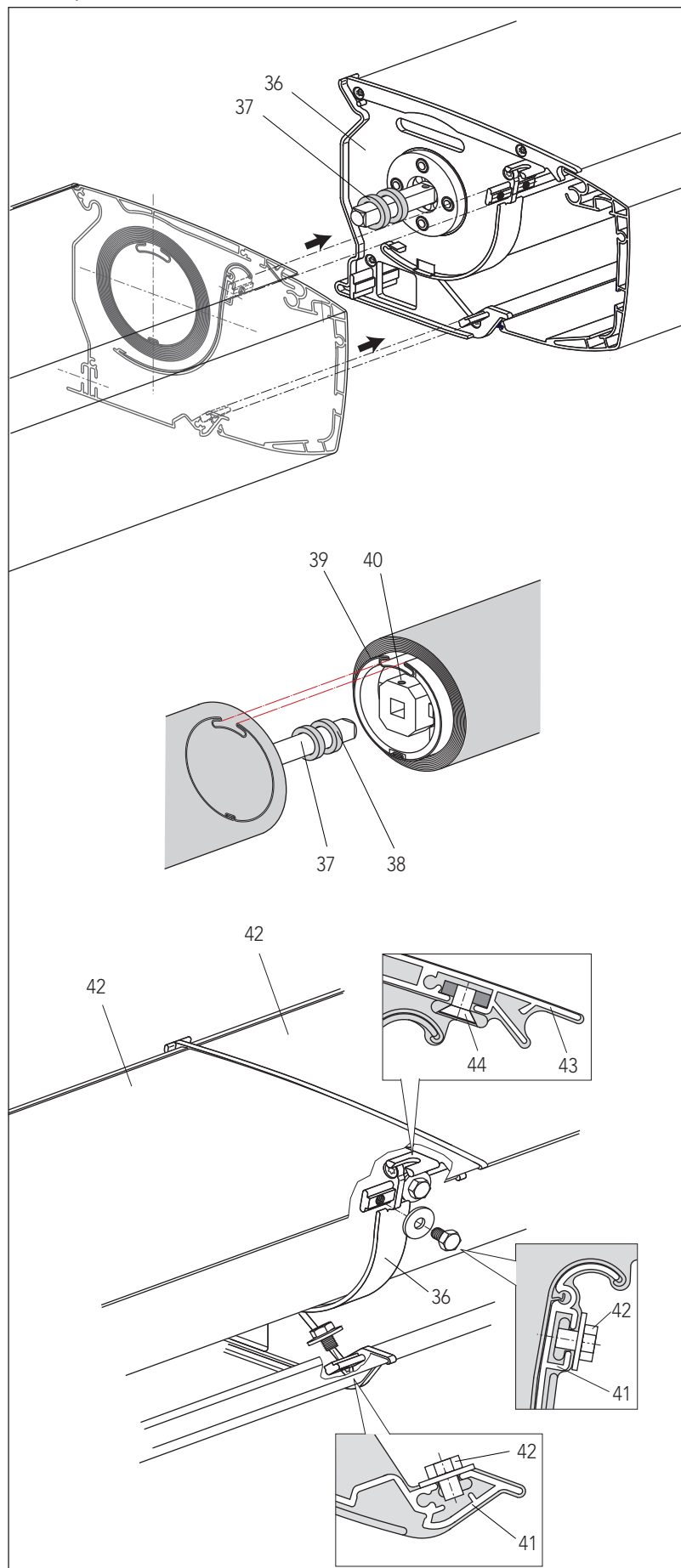
Wind in UP direction (wall direction)

= projection gets smaller

Wind in DOWN direction (projection direction)

= projection gets bigger

8. Coupling



⚠ Caution:

Only remove the arms' securing tapes after the fabric tube's coupling.
here is a lot of tension on the joint arms -
Risk of injury!

Fit the awning part with the drive unit as you would a single awning.
Push the section to be coupled onto coupling mount (36).

1. Coupling the fabric tube

⚠ The sections to be coupled must have the same number of wound fabric layers and the fabric tubes' piping channels (preferably upwards) must be in line.

When pushing on the section to be coupled, the square coupling shaft (37) including spacer (38) has to be pushed into the fabric tube insert (39) of the section to be coupled and secured with threaded pin (40) (SW 3).

3. Remove the joint arms' securing tapes.

4. Extend awning completely.

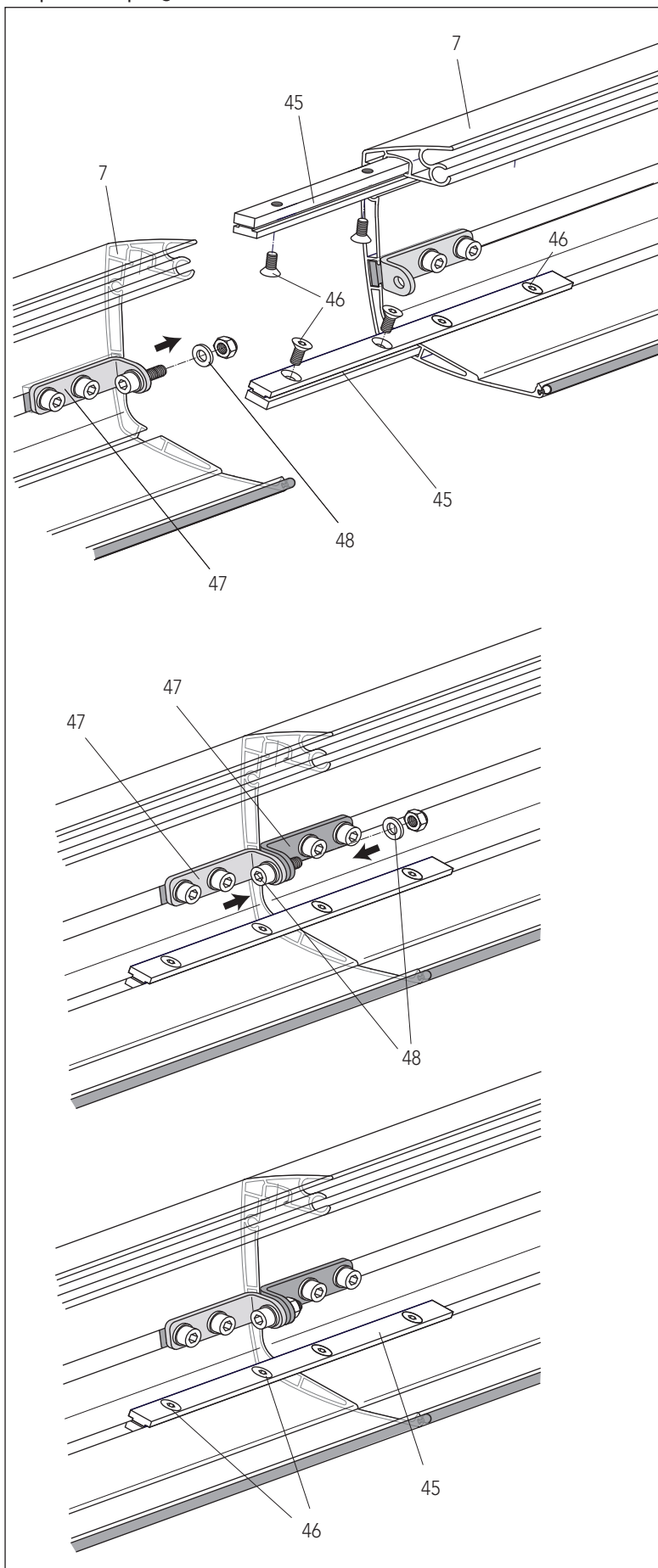
5. Coupling cassette section (41)
Using hexagon head screw M6x8 and U-washer (42), secure to coupling mount (36) at front and underneath box spanner SW 10).

6. Coupling the roof sections (43)
Secure using sliding block, screw and washer (44) (Allen key SW 4).

7. Check that the drop bars (7) of the two sections are horizontally at the same level. If they are not horizontal, proceed as per p. 18 'Pitch adjustment'.

Important for an installation free of tension!

Drop bar coupling



8. Coupling the drop bar

Push in each case half of the complete coupling shaft (45), motor side first, into the grooves of the drop bar (7) (see picture for positions). Using in each case 2 countersunk screws M6x12 (46), fix in the drop bar (Allen key SW 4).

On the pre-fitted angle bracket (47) take off the hexagon head nuts, the U-washers and the hexagon socket head cap screw (48).

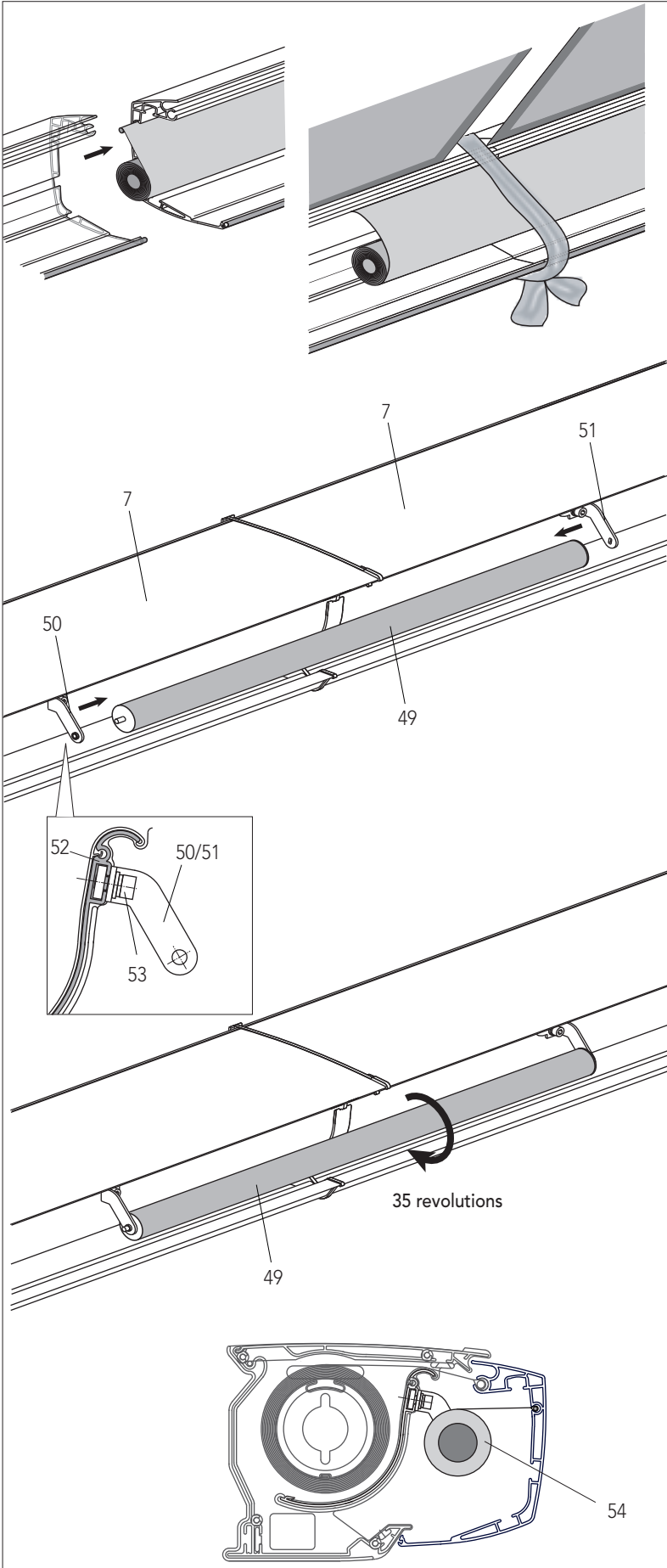
Then push complete coupling shaft (45) in the coupling field into the grooves of the drop bar and loosely screw together using the other countersunk screws M6x12 (46).

Using the hexagon socket head cap screw, hexagon head nut and U-washers (48), pull the two angle brackets together until they abut.

Firmly tighten countersunk screws M6x12 (46) of the complete coupling shaft (45) in the coupling field.

Caution: After coupling the awning, the motor setting must be checked and possibly adjusted.

9. Fabric gap cover installation



1. Before coupling the drop bars (7), the fabric gap cover's fabric must be pushed using the piping into the groove of one drop bar.

Then for the spring rod (49) push the counter-bearing bracket (50) on the left and the drive bracket (51) on the right into the groove of the redirection profile (52).

2. Couple drop bars as described on p. 21. Push fabric gap cover's fabric centrally over the coupling and secure against rolling up.

3. Place fabric gap cover's spring rod (49) into the pre-fitted brackets (50, 51).

Position spring rod centrally with the coupling and then firmly tighten the bracket's (53) fixing screws.

4. With 35 revolutions of the spring rod (49), build up spring tension towards the front.

5. Hold spring tension. Stick fabric (54) too onto the tube's adhesive tape.

Adjustment instructions for Elero SunTop drives

A. Note for the electrical installer

This awning must not be connected with the power live. Take fuse out beforehand!

There is a risk of the electronic end position setting being deleted. Resetting this is possible only with the special Elero setting cable (prod. no. 99-1669).

The system is to be protected with an upstream FI circuit breaker in accordance with VDE regulations. Only cables and connectors with a protection class of a minimum of IP 54 may be used to supply power.

B. Important Notice

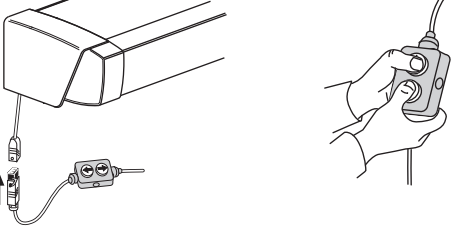
- This unit is fitted with an electronic SunTop motor. The special Elero setting cable has to be used to set the end positions. A conventional test cable can be used to operate the unit, but not to set it!
- The electronics within the drive unit function only when built into the fabric tube!
- Work on the mains power may be carried out only by authorised specialists!
- After setting the drive's end positions, secure these installation instructions to the cable for the electrician!
- When using your own control systems not included with the product (e.g. wind/sun sensors or similar), you must ensure that a switch-over pause from retract to extend command of at least 0.5 seconds is set in the controller.
Where operation is via switches, only push-button switches with a 'dead-man' circuit are permissible and they must mutually disable each other.
In accordance with VDE regulations, the motor may not be supplied with continuous current. Otherwise the SunTop drive cannot be guaranteed to function reliably!

Note: It is possible to connect multiple SunTop drives in parallel (max. 430 W per drive). If doing so, pay attention to the switching point's maximum switching capacity.

D. End position setting


The end position setting of the SunTop drive is set at the factory and does not normally need any correction. If you do, nevertheless, want to set the drive's end positions differently, please note the following points:

1.)




Connect the Elero setting cable to the drive's Hirschmann coupling and run the unit out 30 cm. At the same time, press **both** buttons on the setting cable. After c. 5 seconds, the drive goes briefly up and down. The end positions have now been deleted and can be reset

2.)




Press the **UP** button again. Move up to the top end stop. When the stop is reached, the drive automatically switches off.

3.)




Press the **DOWN** button until the drive automatically stops. The top end position has now been set.

4.)



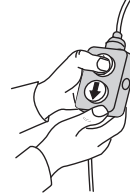
Press the **DOWN** button again. Run out the awning to just before the desired bottom end position. The drive starts with a short STOP.

5.)



Move to the desired bottom end position. Corrections can be made via the buttons.

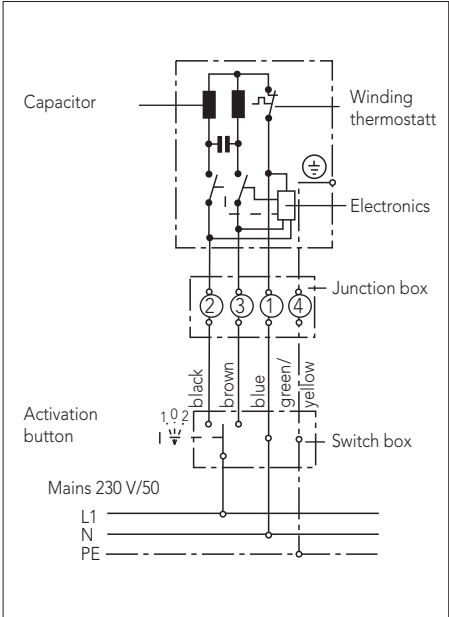
6.)



Press the **UP** button until the drive automatically stops. The bottom end position has now been set and the programming finished.

The end positions are now set as wished and the drive moves into the respective end position. Connect the Hirschmann coupling to the control line again. With this new drive there is no need to simultaneously press the UP and DOWN buttons after resetting the end positions. Pressing both buttons simultaneously would put the drive back into programming mode (see point 1).

C. Connection example



Adjustment instructions for all OREA WT drive units from Somfy

A. Note for the electrical installer

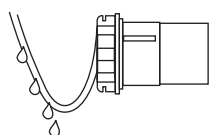
This awning must not be connected while the power is live.

Take fuse out beforehand!

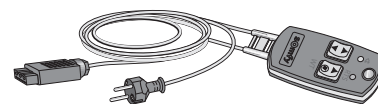
There is a risk of the electronic end position setting being deleted.

Resetting this is possible only with the special Somfy Universal setting cable (prod. no. 99 - 4196).

The unit is to be protected with an upstream FI circuit breaker in accordance with VDE regulations. Only cables and connectors with a protection class of a minimum of IP 54 are to be used for the electrical connection.



In order to prevent water running along it into the motor, the connection cable should always be laid with a downward loop.



Art.Nr. 99 - 4196

B. Important information

- This unit is fitted with an electronic Orea WT drive unit. To set the end positions you must use the Somfy Universal setting cable.

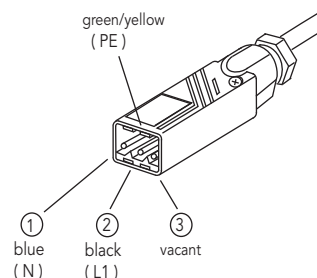
- The electronics within the drive unit function only when built into the fabric tube!

Work on the mains power may be carried out only by authorised specialists!

- After setting the drive unit's end positions, secure these installation instructions to the cable for the electrician!

- When using your own control systems not included with the product (e.g. wind/sun sensors or similar), you must ensure that a switch-over pause from retract to extend command of at least 0.5 seconds is set in the controller.
Where operation is via switches, only push-button switches with a 'dead-man' circuit are permissible and must mutually disable each other.
In accordance with VDE regulations, the motor may not be supplied with continuous current. Otherwise the Orea WT drive unit cannot be guaranteed to function reliably!

C. Electrical connection



The OREA WT must be connected according to the terminal assignments.

When making connections ensure that there is no supply of power (take out fuse).

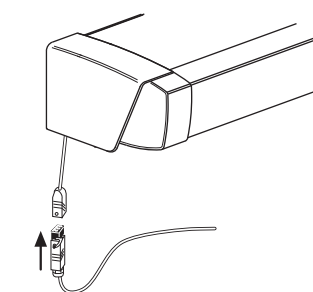
Note: An electrician must perform the on-site connection of drive system and controller.

D. End position setting

The awning's bottom end position is set at the factory. The top end position does not get set, as it gets moved to via torque.

No alteration is necessary unless you want to reset the bottom end position.

If necessary, the bottom end position can be changed. Please heed the following points:



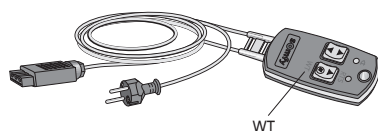
Connect the Somfy Universal setting cable to the drive unit's Hirschmann coupling.

Note: The switch on the setting cable must be set to WT.

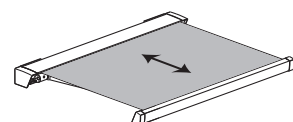
1. Via the 'DOWN' button, move the awning into the bottom end position.
Drive automatically switches off.
2. Press the control unit's 'DOWN' button for c. 5 seconds.
3. Wait 2 seconds.
4. Press the 'DOWN' button until the awning confirms with a short up/down movement.
5. Repeat steps 3 and 4 four times.
The final up/down movement is slightly delayed.
6. Move the awning into the desired bottom end position.
7. Briefly press the 'UP' button.
If the awning reacts, repeat step 6.
8. Wait 2 seconds.
9. Press the 'UP' button until the awning confirms with a short up/down movement.

The new bottom end position has now been programmed in.

Trial run

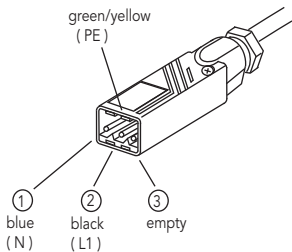
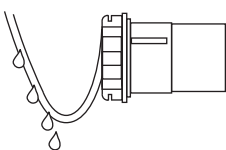
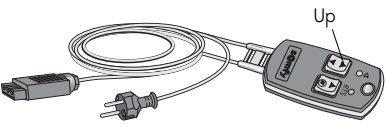
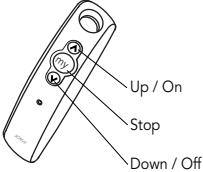
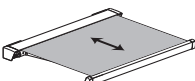
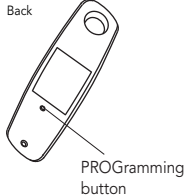
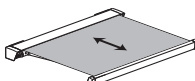


WT



Adjustment instructions for OREA RTS drives from Somfy

NB: The awning's end positions are set at the factory. No alteration is necessary unless you want to reset the bottom end position.

<div>Electrical connection</div> <div><div></div><div><p>The OREA RTS must be connected according to the terminal assignments.</p><p>When making connections ensure that there is no supply of power. (Remove the fuse!)</p><p>Note: An electrician must perform the on-site connection of drive system and controller.</p></div><div><p>The system is to be protected with an upstream FI circuit breaker in accordance with VDE regulations. Only cables and connectors with a protection class of a minimum of IP 54 may be used to supply power.</p><div></div><p>In order to prevent water running along it into the motor, the connection cable should always be laid with a downward loop.</p></div></div>	
<div>Special features of radio control systems</div>	<p>Radio control systems' range is limited by the statutory regulations for wireless equipment and the structural circumstances.</p> <p>The control system should not be installed in the immediate vicinity of any metallic surfaces. Strong local transmitter units (e.g. wireless headphones) that have a transmission frequency identical to the control system can have an influence on its function. The transmission range is up to 300 metres in the open and c. 20 metres inside buildings. The operating instructions of the Somfy radio transmitters being used must be followed.</p>
<div>Features of the radio transmitters</div>	<p>All suitable Somfy radio transmitters can be paired with and operate the OREA RTS drive, e.g.: Telis 1 RTS, Telis 4 RTS, Telis Soliris RTS, Centralis RTS.</p> <p>A maximum of 12 transmitters (including a maximum of 3 Sensor RTS transmitters) can be paired with each OREA RTS drive.</p>
<div>Installation</div> <div><div></div><div><p>In order to be able to operate the awning during installation, the drive must be connected to the Somfy test cable. For power to be supplied to the drive, the test cable's 'Up' button has to be pressed.</p><p>The drive can then be operated via the hand-held radio remote control unit supplied with it.</p><p>The remote control unit has been paired with the drive. The top and bottom default end positions have also been set at the factory and do not need any further programming. In the top end position the drive automatically switches off when it reaches a set level of rated torque.</p></div></div> <div>Product no. 99 - 4196</div>	
<div>Changing the lower end position</div> <div>(Only necessary if the factory setting is to be altered)</div> <p>The top and bottom end positions are set at the factory and do not normally need any further programming. If necessary, the bottom end position can be changed (the top end position always stays the same).</p> <div><div></div><div><ol style="list-style-type: none">1. Via the 'DOWN' button, extend the awning completely (drive switches off automatically).2. Press the 'UP' and 'DOWN' buttons simultaneously for c. 5 seconds until the unit briefly moves back and forth.3. Via the 'UP' or 'DOWN' buttons set the awning's new, desired end position.4. Press the middle 'Stop' button until the unit again briefly moves back and forth.5. The bottom end position has now been reprogrammed.6. Trial run</div><div></div></div>	<div>Pair further transmitters</div> <div>(Or delete paired transmitters)</div> <p>A maximum of 12 transmitters (including a maximum of 3 Sensor RTS transmitters) can be paired with the OREA RTS radio-controlled drive. In order to pair further transmitters (or to delete them), you always need a transmitter that has already been paired. If no such transmitter is available to you, contact your specialist retailer to get further information.</p> <div><div></div><div><ol style="list-style-type: none">1. On the back of the transmitter already paired with the radio-controlled drive press the PROGramaing button for c. 2 seconds. The unit briefly moves and is thus 'Ready for Pairing'2. Briefly press the PROGramaing button of the transmitter to be newly paired (or deleted). The unit again moves briefly back and forth.3. The new transmitter has now been paired (or deleted).4. Trial run</div><div></div></div>

Adjustment instructions for TELIS 4 MODULIS RTS Pure hand-held remote control

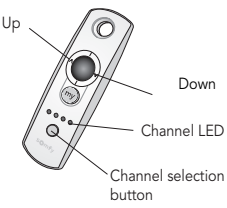
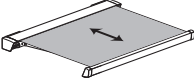
NB: Hand-held remote control can be used only in combination with OREA RTS radio-controlled drive

Changing the bottom end position

(Only necessary if the factory setting is to be altered)

The top and bottom end positions are set at the factory and do not normally need any further programming.

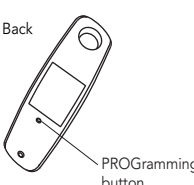
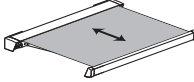
If necessary, the bottom end position can be changed (the top end position always stays the same).

- 
1. Via the 'DOWN' button, extend the awning completely (drive switches off automatically).
 2. Press the 'UP' and 'DOWN' buttons simultaneously for c. 5 seconds until the unit briefly moves back and forth.
 3. Via the 'UP' or 'DOWN' buttons set the awning's new, desired end position.
 4. Press the middle 'Stop' button until the unit again briefly moves back and forth.
 5. The bottom end position has now been reprogrammed.
 6. Trial run
- 

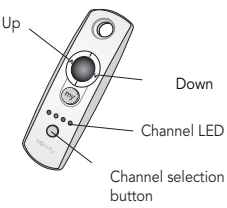
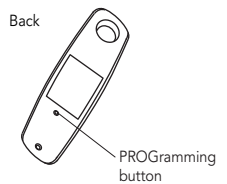
Pair further transmitters

(Or delete paired transmitters)

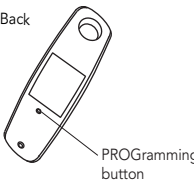
A maximum of 12 transmitters (including a maximum of 3 Sensor RTS transmitters) can be paired with the OREA RTS radio-controlled drive. In order to pair further transmitters (or to delete them), you always need a transmitter that has already been paired. If no such transmitter is available to you, contact your specialist retailer to get further information.

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1. On the back of the transmitter already paired with the radio-controlled drive press the PROGramming button for c. 2 seconds. The unit briefly moves and is thus 'Ready for Pairing'. PROGramming button.
 2. Briefly press the PROGramming button of the transmitter to be newly paired (or deleted). The unit again moves briefly back and forth.
 3. The new transmitter has now been paired (or deleted).
 4. Trial run
- 

Pairing LED lighting with the hand-held

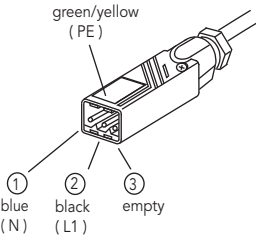
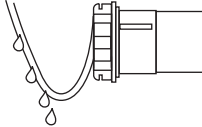
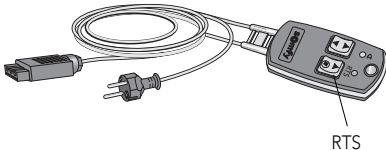
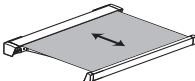
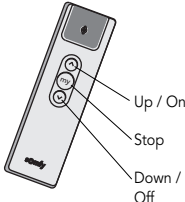
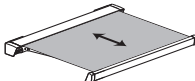
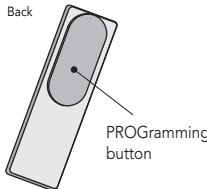
- 
- LED transformer must have been disconnected from the mains for at least 15 seconds.
1. Plug device in and wait for c. 6 seconds. LED lighting comes on for c. 2 seconds, then goes off again.
 2. Through short presses of the channel selection button, select the desired channel. Channel LED flashes.
 3. Press UP and DOWN buttons simultaneously. LED lighting comes on for c. 2 seconds, then goes off again.
- 
- The hand-held remote control has been paired.

Restore factory settings (delete hand-held remote control)

- LED transformer must be connected to the mains for at least 15 seconds.
1. Unplug device for 5 seconds (at least 3)
 2. Plug in device for 8 seconds (5 -15)
 3. Unplug device for 5 seconds (at least 3)
 4. Plug in device
LED lighting comes on for c. 2 seconds, PROGramming then goes off again.
 5. Keep PROGramming button pressed for c. 7 seconds. During that time LED lighting goes on and off twice.
- 
- The factory settings have now been restored.

Adjustment instructions for all Sunea io radio-controlled drives from Somfy

NB: The awning's bottom end position is set at the factory. The top end position does not get set, as it gets moved to via torque. No alteration is necessary unless you want to reset the bottom end position

<div>Elektrischer Anschluss</div> <div><div></div><div><p>⚠ The connecting cable must have a length of at least 30 cm left over. If the length left over is shorter, the integrated antenna can get damaged and there may be reception problems.</p><p>The Sunea io must be connected according to the clamp assignments.</p><p>When making connections ensure that there is no supply of power. (Remove the fuse!)</p><p>The system is to be protected with an upstream FI circuit breaker in accordance with VDE regulations.</p><p>Only cables and connectors with a protection class of a minimum of IP 54 may be used to supply power.</p></div><div><p>Note: On-site connection of drive and control system must be done by a specialist electrical firm.</p><div><p>Lay the drive's connection cable in a downward loop so that no water can get into the drive.</p><ul style="list-style-type: none">- Damage to the internal electronics in the drive system.</div></div></div>	
<div>Special features of radio control systems</div> <div>io radio frequency: 868,25 MHz</div>	<p>The control system should not be installed in the immediate vicinity of any metallic surfaces. Strong local transmitter units (e.g. wireless headphones) that have a transmission frequency identical to the control system can have an influence on its function.</p>
<div>Features of the radio transmitters</div> <div>1 W: unidirectional (one way, can transmit only)</div> <div>2 W: bidirektional (two Way, können senden u. empfangen)</div>	<p>For unidirectional transmitters (1W) the transmission range is 15 metres with no concrete walls. For bidirectional transmitters (2W) it is up to 20 metres with two concrete walls.</p> <p>The following transmitters are unidirectional (1W): Situo Mobile io, Smooove 1 io, Smooove Origin io and Smooove A/M io.</p> <p>A maximum of 9 unidirectional transmitters (1W) can be paired with each Sunea io drive. Of these up to 3 can be wind sensors, e.g. Eolis 3D WireFree io, Eolis WireFree io. Any number of bidirectional transmitters (2W) can be paired with the Sunea io drive.</p> <p>Sunea io drives cannot be operated using an RTS radio transmitter (433,42 MHz). RTS drives can also not be operated using an io radio transmitter (868,25 MHz).</p>
<div>Installation</div> <div><div></div><div><p>In order to be able to operate the awning during installation, the drive system must be connected to the Somfy universal adjustment cable. For power to be supplied to the drive, the test cable's 'RTS' button has to be pressed (supplies the Sunea io drive with continuous current). The drive can then be operated via the hand-held radio remote control unit supplied with it.</p><p>The remote control unit has been paired with the drive. The top and bottom default end positions have also been set at the factory and do not need any further programming. In the top end position the drive automatically switches off when it reaches a set level of rated torque.</p></div></div> <div>Product no. 99 - 4196</div>	
<div>Changing the bottom end position</div> <div>(Only necessary if the factory setting is to be altered)</div> <div><p>The awning's bottom end position is set at the factory. The top end position does not get set, as it gets moved to via torque. No alteration is necessary unless you want to reset the bottom end position.</p><p>If necessary, the bottom end position can be changed. To do this, use a control unit with no data feedback (1W), e.g. Situo Mobile io.</p></div> <div><div></div><div><ol style="list-style-type: none">1. Via the 'DOWN' button, move the awning into the bottom end position. Drive automatically switches off.2. Press the 'UP' and 'DOWN' buttons simultaneously for c. 5 seconds until the unit briefly moves back and forth.3. Via the 'UP' or 'DOWN' buttons set the awning's new, desired end position.4. Press the middle 'Stop' button until the unit again briefly moves back and forth.5. The bottom end position has now been reprogrammed.6. Trial run</div></div>	<div><div>Pair further control units without data feedback (1W) (or delete paired control units without data feedback (1W))</div><div><p>A maximum of 9 control units without data feedback (1W) can be paired with each Sunea io drive. Up to 3 of them can be wind sensors, e.g. Eolis 3D WireFree io, Eolis WireFree io.</p><p>In order to pair further transmitters (or to delete them), you always need a transmitter that has already been paired.</p><p>If no such transmitter is available to you, contact your specialist retailer to get further information.</p></div><div><div></div><div><ol style="list-style-type: none">1. On the back of the transmitter already paired with the radio-controlled drive press the PROGramming button for c. 2 seconds. The unit briefly moves and is thus 'Ready for Pairing'2. Briefly press the PROGramming button of the transmitter to be newly paired (or deleted). The unit again moves briefly back and forth.3. The new transmitter has now been paired (or deleted).4. Trial run</div></div></div>

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