



VOLETRONIC io

Motorisation for window shutters



Installation and operating instructions

INSTALLATION
SPECIALIST PERSONNEL
Valid from 03.2021

E 641.4

Notes

The present Installation and operating instructions describe the commissioning of the EHRET VOLETRONIC io window shutter drive with wireless remote control.

Carefully read through these operating instructions prior to commissioning. Observe the specified process steps and take into account the notes and recommendations given. Knowledge of and technically impeccable implementation of the given safety notes and warnings are prerequisite for the safe and proper operation of the VOLETRONIC io window shutter drive. Insufficient knowledge at the time of commissioning and utilisation leads to the loss of any liability claims against EHRET GmbH. Any installation or operation in deviation from our installation and operating instructions – either in full or in part – will result in the warranty becoming void.

Installation of the shutters in accordance with the EHRET window shutter installation instructions is a prerequisite for the commissioning of the EHRET VOLETRONIC io window shutter drive.

► *Remove the labels stuck to the shutters after installation!*

These Installation and operating instructions are addressed to qualified specialist personnel. Qualified specialist personnel are persons who are familiar with the transport, setup, installation, commissioning and operation of the product and who have appropriate qualifications for their work. Specialist personnel must know and observe the relevant standards and/or guidelines.

These Installation and operating instructions are a component part of the product and are therefore always to be retained until the product is disposed of.

These Installation and operating instructions are to be passed along in the event of the sale of this product. This product is in accordance with general rules of technology. Safety-conscious behaviour is necessary for undertaking safe commissioning. For this reason, observe the following notes.


Should you not understand something in these Installation and operating instructions unambiguously, do not fail to contact the specialist personnel at EHRET GmbH, 77972 Mahlberg (Germany).

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Explanation of signs and symbols


Warning notes

 **DANGER**

▶ Designates an immediately pending danger that could lead to death or severe injuries if the respective precautionary measures are not implemented.

 **WARNING**

▶ Means that death, severe bodily injury or major property damage could occur if the respective precautionary measures are not implemented.


 **CAUTION**

▶ Means a possibly pending danger that could lead to minor injuries or property damage if it is not avoided.

- ▶ Directives for action


Safety notes

- ▶ Only qualified specialist personnel may carry out installation and commissioning!

 **WARNING**

Incorrect installation could lead to severe injuries and/or damage to property.

- ▶ Follow all installation instructions.

 **WARNING**

- ▶ Take into account the following notes and warnings in order to avoid dangers and to protect the product.

- ▶ Observe the accident prevention regulations of the Accident Prevention & Insurance Association.
- ▶ Observe the rules of the road during transport.
- ▶ Make sure that the load is well-secured on the means of transport.
- ▶ Take care to ensure that the drives are stored under dry conditions prior to final installation and commissioning.
- ▶ Cordon off a generously large area around the installation site.
- ▶ Observe without limitation the regulations of the manufacturers of dowel and attachment materials.
- ▶ The mounting bases of the installation site are to be checked for load-bearing capacity prior to installation.
- ▶ In the event of uncertainties about the mounting bases, contact your responsible building experts.
- ▶ Electrical work may be carried out only by authorised electricians.

- ▶ The specified connection diagrams are to be observed, as otherwise damage to the motor could occur. EHRET GmbH assumes no liability for damage resulting from incorrect installation.
- ▶ Check the product for damage prior to installation. Products requiring repair may not be used.
- ▶ Do not touch any internal parts of the product that become exposed as the result of damage (e.g. electrical cables/lines).
- ▶ Discontinue operation of your electrical drive at once in the event of smoke or fumes.
- ▶ Do not allow children to play with the operating apparatus of the drives.
- ▶ Electrical/electronic devices are not secure against failure. Make sure that no hazardous situations for personnel or product could arise in the event of a power failure.
- ▶ Devices with electrical controls could go into motion at any time and without warning. Prevent situations hazardous to personnel and product that arise from this fact.
- ▶ No personnel or obstacles are permitted to be within the range of pivoting and/or travelling shutters while they are moving. Keep personnel and objects away until the shutters have reached their final position.
- ▶ Do not reach into moving parts or closing areas while shutters are opening or closing.
- ▶ Make sure that no articles of clothing or body parts are able to be caught by moving parts in the system.
- ▶ Disconnect the drives from the power supply during maintenance work.
- ▶ Ice could form on the product in the event of snowfall, sleet or icy rain. Do not operate equipment until the ice formation is no longer present, and switch automatic controls to manual.
- ▶ Make sure that the shutters are locked before any wind load occurs.
- ▶ The shutters may not be operated at wind speeds from 62 km/h (stormy wind).
- ▶ No additional loads such as persons or objects are permitted to have an effect on the shutters.
- ▶ Shutters are not intended to protect individuals from falls.

 **WARNING**

Danger of injury from the weight of the product!

- ▶ Due to the weight of the products, perform transport and installation by at least two individuals.

- ▶ Transport the product carefully in order to avoid damage.
- ▶ Take care to ensure that the product is not damaged when the packaging material is removed.

 **WARNING**

Danger of suffocation from packaging foil.

- ▶ The packaging foil must be kept out of reach of children.
- ▶ Store the foil carefully until you turn it in for recycling.

- ▶ Turn the packaging materials in for recycling.

CE EC Declaration of Conformity

The manufacturer: EHRET GmbH
Aluminium Shutters
Bahnhofstrasse 14 - 18
D-77972 Mahlberg

declares that the product: **EHRET window shutter drive
VOLETRONIC io**

to which this guideline refers, is in conformance with the stipulations of

2006/42/EC	Machinery Directive
2014/53/EC	Radio Equipment / R&TTE
2011/65/EU + 2015/863 + 2017/2102	RoHS Directive

as well as with the following standards:

EN 60335-1:2012 + A1:2019 + A11:2014 + A13:2017 + A14:2019 + A2:2019
EN 60335-2-97: 2006 + A11:2008 +A12:2015 + A2:2010
EN 62233: 2008 ; EN 62479:2010
EN 301489-1 V2.2.3:2019 ; EN 301489-3 V2.1.1: 2019; EN 55014-1:2017 ; EN 55014-2:2015;
EN 61000-3-3:2013 + A1:2019 ; EN IEC 61000-3-2:2019
EN 300220-1 V3.1.1: 2017 ; EN 300220-2 V3.1.1: 2017 ; EN 300220-2 V3.2.1: 2018
EN IEC 63000:2018

—

Name and address of the individual who is authorised to assemble the technical documentation:

Ralf Gielen	Location: D-77972 Mahlberg
Head of Technology	Date: 01/03/2015



EHRET GmbH
Eberhard Schopferer
Management

Installation FAQs

Which parts have been delivered?

- VOLETRONIC io window shutter drive
- Depending on the diagram, 1× or 2× guide rail and carriage arm
- 1× adhesive buffer, 1× stop buffer, 2× support for stop buffer per sash
- Coupling set with coupled window shutters
- Optional support for end piece of window shutter drive, pair

Which means of attachment are being used?

- The means of attachment are not included in the scope of delivery!
- The selection of the attachment materials is oriented towards the mounting bases on hand, the load-bearing capacities of which are to be checked before the installation. Observe without limitation the regulations of the manufacturers of dowel and attachment materials.

WARNING

Danger of injury/property damage caused by unsuitable fastening materials

- ▶ The means of attachment are to be selected in accordance with the load-bearing capacity of the mounting bases.

How is the VOLETRONIC io window shutter drive mounted?

- First, the installation profile is aligned and mounted and the drive modules are hooked into place and attached.
- Then the carriage arms, guide rails and the stop buffer are mounted, during which the drive is connected and put into operation and the priority of the sashes is checked at the same time that the carriage arms are installed.
- Afterwards, the coupling rod is cut to size and mounted in the case of multiple-section sashes, and, if express hinges are used, then these are secured.

Electrical installation


WARNING


Electrical shock (230 V)

NOTES

- The connection (Phase L) must be equipped with a line safety switch with a maximum nominal current of 6 A.
- The line safety switch must have a switch-off capacity of at least 6 A.
- The prescribed tripping characteristic is B.
- The line switch should be equipped with a thermal tripping device for overload protection, furthermore it should have an electromagnetic trigger as a protection against short circuits.
- Other requirements may apply to the installation of the line safety switch, depending on the location. For example, it could be necessary to use a line safety switch with additional separation of Phase N in order to switch off all poles. It might possibly also be necessary to have a residual current circuit breaker in the system. The standards and the laws of the respective country with respect to permanent electrical installations are to be complied with (e.g. VDE 0100).
- It is recommended that no more than five drives are secured simultaneously by a single line safety switch.
- Pursuant to VDE 0100 and/or the statutory regulations and standards of the respective country, the permanent electrical installation must be carried out by a certified electrician.
- According to VDE 0022, the operator and the installer are responsible for compliance with the VDE regulations and/or regulations of the energy supplier.

Disposal

 IMPORTANT
<p>Disposal</p> <ul style="list-style-type: none"> • The following information must be strictly adhered to in order to prevent any environmental damage. Even if the machine is disposed of by certified experts, the operator must ensure proper execution!

 IMPORTANT
<p>Disposal</p> <ul style="list-style-type: none"> ▶ Dispose of all machine parts in accordance with the applicable legal conditions in order to prevent the possibility of any harm to human health or the environment.

Some materials of the machine are reusable. By recycling some parts or raw materials from used products, you make an important contribution to protecting the environment.

- ▶ Please contact your local authorities if you require information about collection points near you.

Hazardous waste

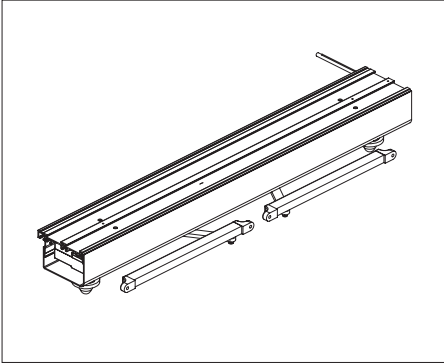
Reusable material	Components
Electronic waste	<ul style="list-style-type: none"> • Electrical supplies • Control units • Circuit boards with electronic components

Recyclable materials of the machine

Reusable material	Components
Aluminium	<ul style="list-style-type: none"> • Shutters • Drive housing • Coupling • Guide rail • Fittings
Copper	<ul style="list-style-type: none"> • Cables • Motor
Plastic, rubber, PVC	<ul style="list-style-type: none"> • Guides • Accessories • Sealing sleeves • Cables
Steel	<ul style="list-style-type: none"> • Motor and components • Coupling • Carriage arm • Fittings • Accessories

1 Product description

Product properties

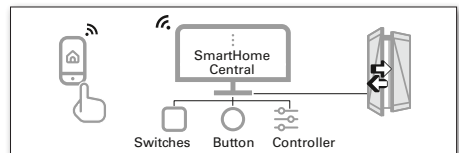


- VOLETRONIC io is a drive system for a max. of 2 sashes per side for the electronic actuation of window shutters.
- The drive is equipped with tri-band bidirectional (io-homecontrol®) and is suitable for all types of window shutters.
- Operation takes place via the supplied wall transmitter Smoove 1 O/C RTS, radio frequency 868-870 MHz or optionally via 1-channel or 5-channel hand-held transmitter (Situo io Pure II) or Handheld transmitter Nina io (bi-directional touch display control).
- The VOLETRONIC io folding shutter drives are checked and delivered fully charged.
- The drives are pre-programmed for mounting type, stop scheme, side of the cable exit, direction of rotation and priority of the sashes, closing force as well as time delay for special construction situations (e.g. 90° opening, overlapping of the sashes).

Technical data

<i>Power supply</i>	230 V – 50 Hz
<i>Emergency rechargeable battery (optional)</i>	9.6 V/1600 mAh; in the event of a power failure
<i>Drive housing (1L/1R, 2)</i>	according to diagram: 92 × 66 mm (w × h)
<i>(2L/2R, 3L/3R, 4)</i>	106 × 66 mm (w × h)
<i>Connection cable</i>	3 m, 2-wire, 0,75 mm ² cable exit on the right or left window side
<i>Nominal torque</i>	4 Nm per motor, peak torque 50 Nm
<i>Speed</i>	1,5 rpm.
<i>Power consumption</i>	max. 50 W
<i>Peak current</i>	1.5 A (electronically limited)
<i>Noise emission</i>	approx. 48 dB (A)
<i>Disconnection</i>	Load switch-off
<i>Protection class</i>	II
<i>Degree of protection</i>	IP 24
<i>Operating temperature</i>	–20° C to +60° C

SmartHome connection



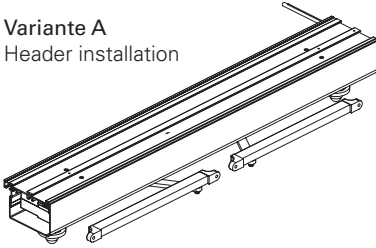
- The VOLETRONIC io drives are suitable for SmartHome connection.
- Because not all systems and products are compatible with each other, all areas of application should be considered and an enquiry made to EHRET GmbH before purchase.

Scope of delivery

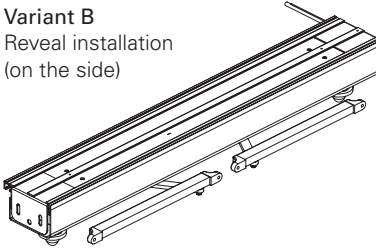
VOLETRONIC io

Motorisation for window shutters

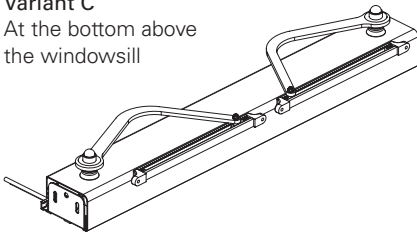
Variante A Header installation



Variante B Reveal installation (on the side)



Variante C At the bottom above the windowsill

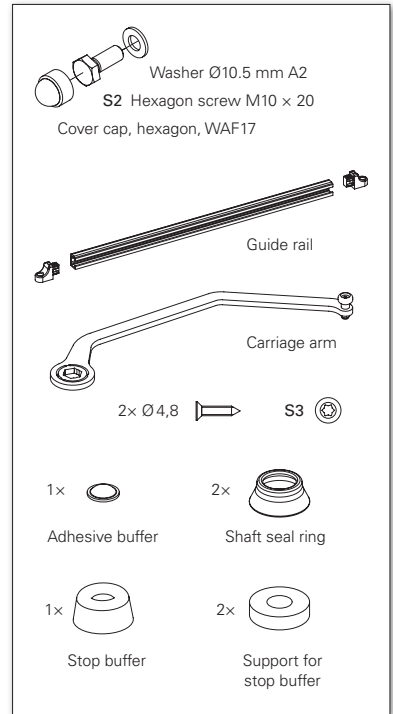


INFO Fastening material at the installation site
(for all variants)

Accessories per sash

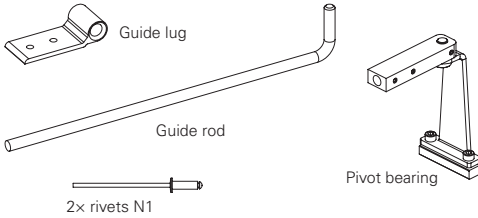
1× (1L/1R, 2L/2R); 2× (2, 3L/3R, 4)

M3 × 6 mm   S1

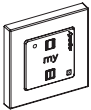


Coupling with multiple-section sashes

2L/2R, 3L/3R, 4



Operation



6440 wall transmitter Smoove 1 O/C io Pure Shine, wireless

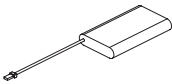


Situ io Pure II hand-held transmitter (optional)
6441 1-channel
6642 5-channel



6643 Nina io hand-held transmitter (bidirectional touch display control)

Optionen



6406 Emergency battery, 9.6V / 1600 mAh, (optional)



6631 Extension cable 3m

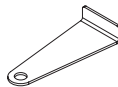


6220 Support for end piece of window shutter drive, pair

To be used with window shutter models with protruding slats

1x (1L/1R, 2L/2R); 2x (2, 3L/3R, 4);

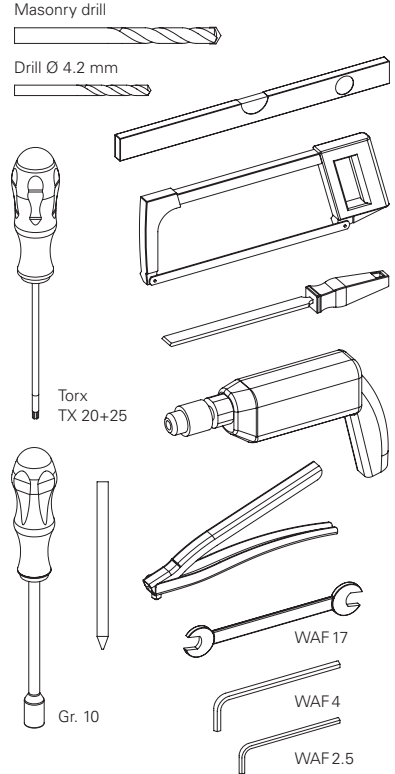
2x Ø 4,8 x 32 mm S4



6360 Cover remover for simplified subsequent dismantling of the cover

Tools required*

*not included in the scope of delivery



2 Installation instructions

Preparation

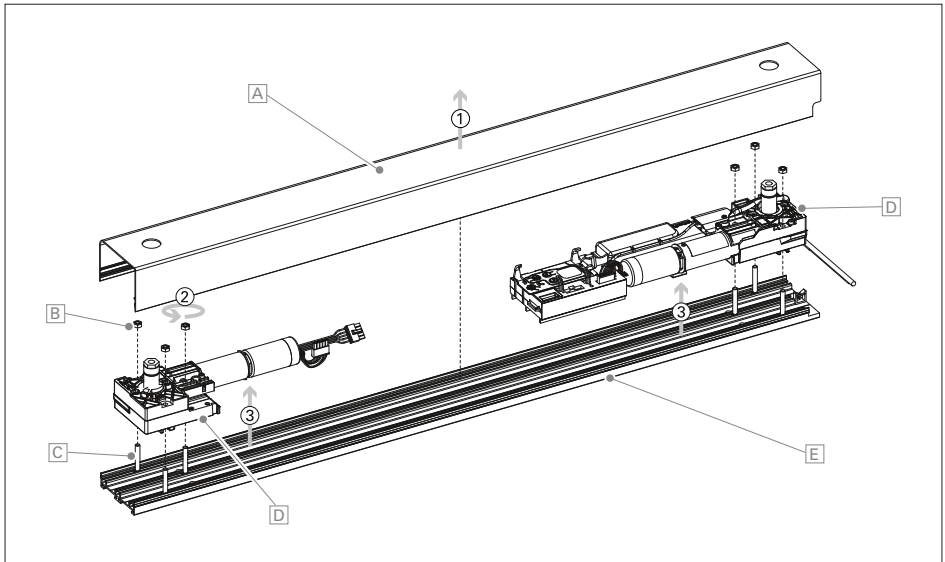
NOTES

Before mounting the drive, make sure that each sash of the folding shutter can be moved freely over the entire swivel range. The folding shutter must not jam or rub against its immediate surroundings (frame, masonry, etc.). The resistance of the folding shutter must not exceed a torque of 4 Nm during movement.

- ▶ Remove any pre-existing locking elements (e.g. shutter bolt, espagnolette, etc.).

Dismantle cover and drive modules

- ▶ ① Remove **A** the cover
- ▶ ② Loosen the 6 drive nuts **B**, leave the 6 drive screws **C** in the installation profile
- ▶ ③ Remove the 2 drive modules **D** from the **E** installation profile



Mounting the installation profile and fastening the drive modules

WARNING

Danger of injury/property damage caused by unsuitable fastening materials

- ▶ Select the fastening material in accordance with the load capacity of the installation substrates!

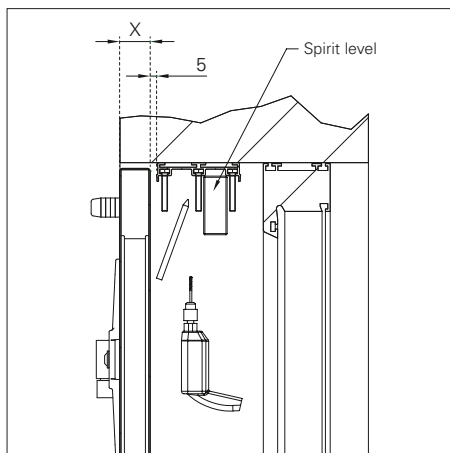
NOTES

- The selection of the fastening method is dependent on the substrate and is therefore exclusively your own responsibility.
- Note that the lintel must be horizontal in both width and depth.
- The dowels used must be able to withstand a force of at least 40 kg. The brackets must be fastened at at least two points.
- EHRET recommends the use of screws with a diameter of at least 6 mm.

Variant A

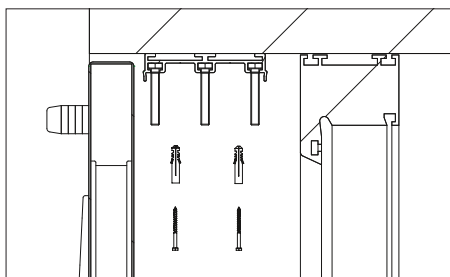
Header installation

- ▶ Position the installation profile with shutters closed (dimension $X + 5$ mm) and align it horizontally.



X = sash thickness in the reveal

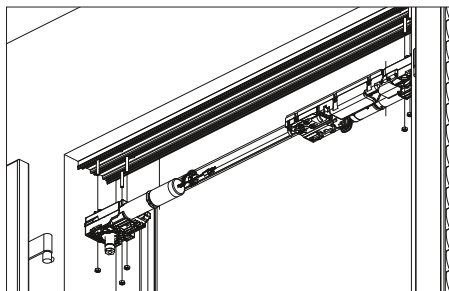
- ▶ Mark and drill the fastening holes.
- ▶ Fasten installation profile at at least four points.



- ▶ Insert the electromechanical module into the frame on the side where the power supply enters.
- ▶ Insert the drive modules into the installation profile, move them as far as they will go (limit screw S1) and fasten them with the drive nuts.

NOTE

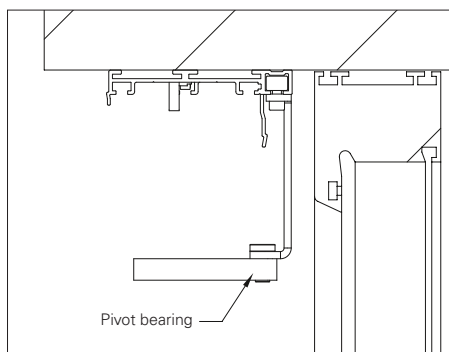
Do not screw the drive nuts too tightly!



For multiple-section sashes

Diagram 2L/2R, 3L/3R, 4

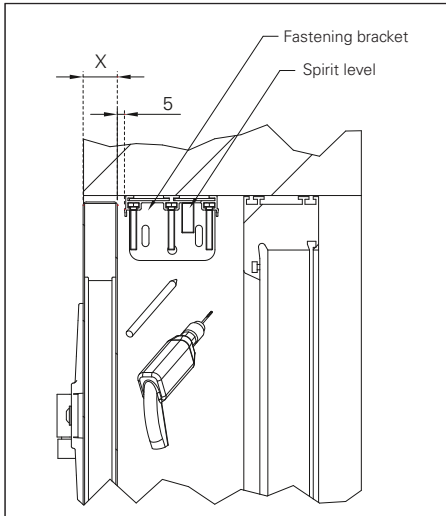
- ▶ Insert pivot bearings into the installation profile when coupling multi-section sashes!



Variant B

Reveal installation

- ▶ Position the installation profile with lateral fastening brackets (dimension $X + 5$ mm) and align it vertically and horizontally with a spirit level; drill and attach.

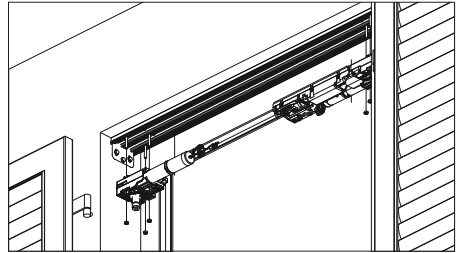


X = sash thickness in the reveal

- ▶ Insert the electromechanical module into the frame on the side where the power supply enters.
- ▶ Insert the drive modules into the installation profile, move them as far as they will go (limit screw S1) and fasten them with the drive screws.

NOTE

Do not screw the drive nuts too tightly!



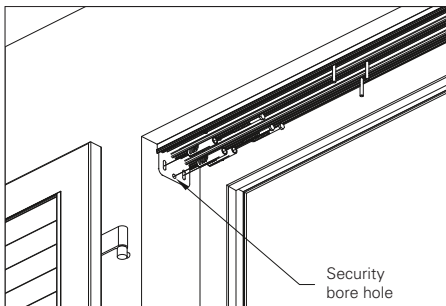
For multiple-section sashes

Diagram 2L/2R, 3L/3R, 4

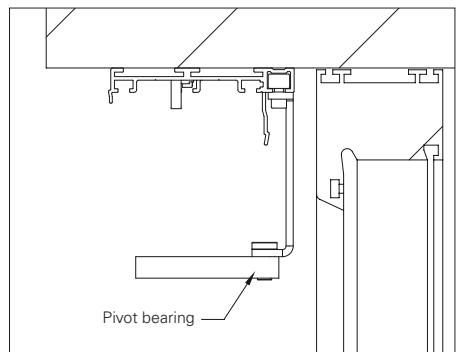
⚠ CAUTION

Property damage caused by sliding of the drive due to insufficient fastening

- ▶ Use security bore hole!



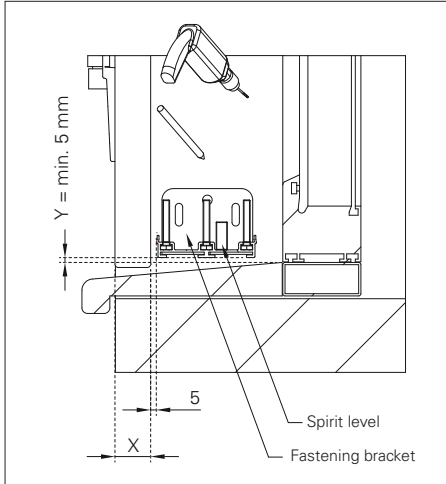
- ▶ Insert pivot bearings into the installation profile when coupling multi-section sashes!



Variant C

At the bottom above the windowsill

- ▶ Position the installation profile with lateral fastening brackets at the bottom above the windowsill (dimension X + 5 mm) and align it vertically and horizontally with a spirit level; drill and attach.



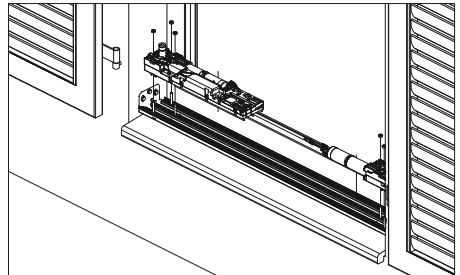
X = sash thickness in the reveal

Y = air (upper edge of windowsill to lower edge of installation profile), min. 5 mm

- ▶ Insert the electromechanical module into the frame on the side where the power supply enters.
- ▶ Insert the drive modules into the installation profile, move them as far as they will go (limit screw S1) and fasten them with the drive screws.

NOTE

Do not screw the drive nuts too tightly!



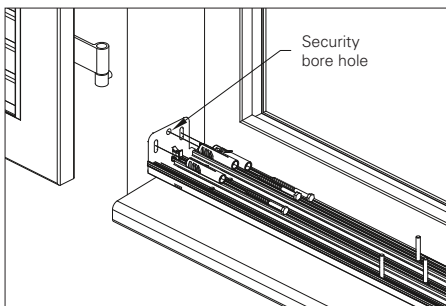
For multiple-section sashes

Diagram 2L/2R, 3L/3R, 4

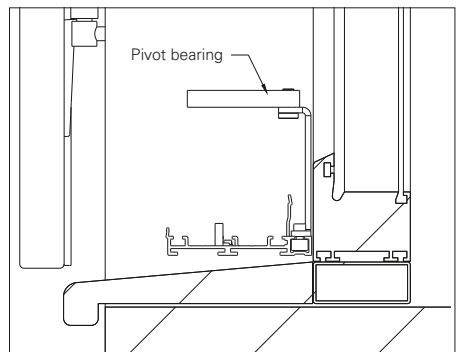
⚠ CAUTION

Property damage caused by sliding of the drive due to insufficient fastening

- ▶ Use security bore hole!



- ▶ Insert pivot bearings into the installation profile when coupling multi-section sashes!



Cable routing

⚠ WARNING

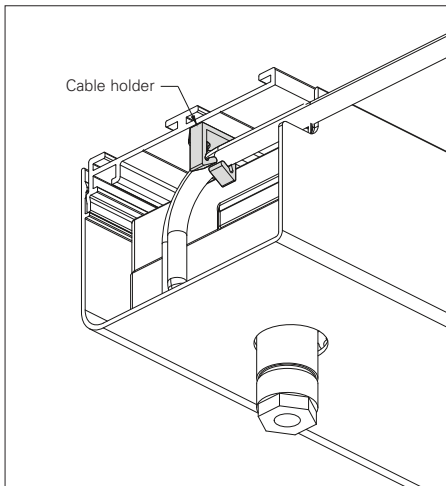
Electrical shock (230 V) resulting from damage to cable

- ▶ Pass the cable through the cable holder to guarantee electrical safety and the integrity of the cable.

⚠ CAUTION

Danger of crushing/property damage from incorrect cable placement

- ▶ Install the electromechanical module next to the voltage supply inlet. Note while doing so that the mains cable proceeds outward from the product on the window side!
- ▶ Do not disconnect the mains cable in the area between the drive and the red cable marking!



Wiring

⚠ WARNING

Electrical shock (230 V) resulting from damage to cable

- ▶ Protect mains cable against contact with the activated window shutter!

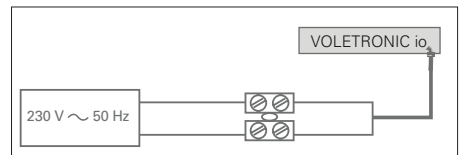
⚠ CAUTION

Impairment of the antenna and the radio range

- ▶ Do not alter the placement of the cables in the interior of the product!
- ▶ Do not cut off the cable in the interior of the product!
- ▶ Always switch off the power supply via the mains cable before each operation.



- ▶ Connect the drive as follows:



- ▶ Switch on the voltage supply.



The VOLETRONIC io folding shutter drive confirms by means of *an audible signal*. If this is not the case, check the electrical connection again.

- ▶ Switch off the power supply again after checking the electrical connection.



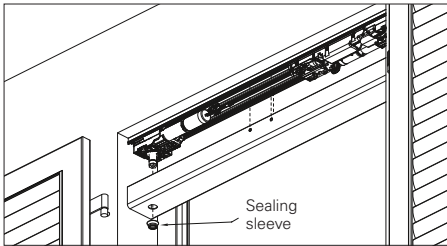
Attaching the cover

⚠ WARNING

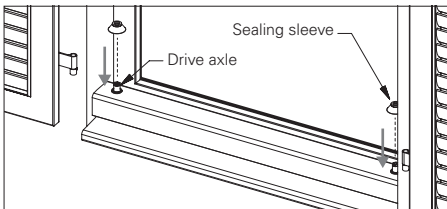
Electrical shock (230 V) resulting from damage to cable

- ▶ Position the recess of the cover on the side with the mains cable!
- ▶ Protect the mains cable against crushing by the cover of the drive housing!

- ▶ Hold the cover parallel and clip it firmly in place.
- ▶ Attach adhesive buffers.



- ▶ Place the left and right sealing sleeves on the drive axle and press them onto the trim cover.



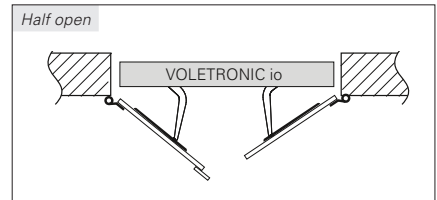
Sample drawing – variant C

Attaching sash arms with guide rails on the drive

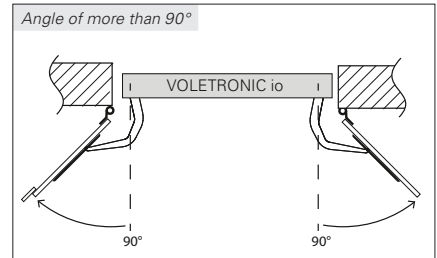
NOTES

- The swivel arms must be fitted in accordance with one of these two recommendations:

a) **half open**, outside the end positions, observing the sequence of the covered sash and the sash with cover strip



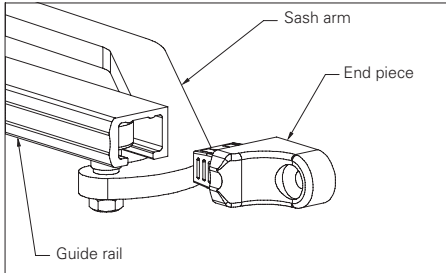
b) **at an angle of more than 90°** outside the open end position.



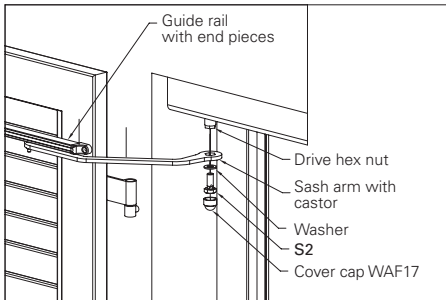
- Note whether a left-hand or right-hand sash arm is required.
- The castor of the sash arm must be positioned at the middle of the guide rail at the time of installation.
- The joints of the guide rails must face downwards at the time of installation.
- Remove all objects that could obstruct the movement of the folding shutter.
- Do not use a hammer during assembly.

Attaching guide rails to the sash

- ▶ Thread the sash arm into the guide rail and plug the end pieces into the guide rail



- ▶ Set the sash arm on the drive hex nut and fasten with the self-locking S2 screws provided
- ▶ Use the washers provided.
- ▶ Set covers on S2 screw.



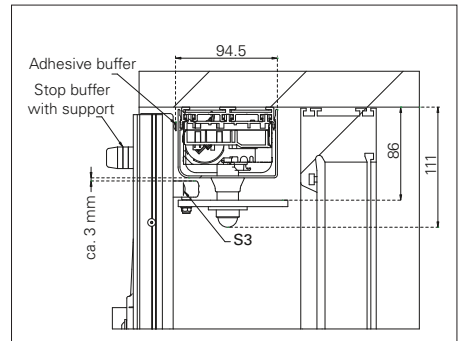
NOTES

Observe the edge clearance of the guide rails with rabbet or surface-mounted installation.

For models with protruding slats, use the **6220 supports for end pieces of window shutter drive** with the corresponding S4 screws.

When selecting screws for window shutters made of wood (a decision that is the exclusive responsibility of the installer), care must be taken to ensure that the sliding guides cannot be torn off.

- ▶ Centre the guide rail in the sash width and use a spirit level to align it horizontally.
- ▶ Mark fastening holes, drill them with a $\text{Ø}4.2$ mm drill bit and fasten them with the S3 screws supplied.



- ▶ Anschlagpuffer als Flügelanschlag montieren.

INFO

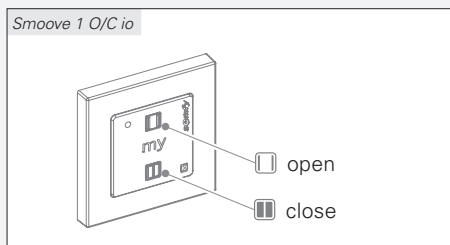
The stop buffers can be installed as stops either on the exterior side of the sash at the top-outer corner or on the façade.

COMMISSIONING

NOTE

In order to carry out commissioning successfully, the following commissioning work steps must be carried out consecutively and coherently.

Wireless Radio wall transmitter



⇒ **ACTIVATE RADIO WALL TRANSMITTER**
(P. 20)

⇒ **CHECK DIRECTION OF ROTATION AND PRIORITY OF THE SASHES** (P. 21)

⇒ **SELF-LEARNING PROCESS** (P. 21)

⇒ **CONNECTING THE RADIO WALL TRANSMITTER TO THE DRIVE** (P. 23)

⇒ **VERIFICATION OF PROPER FUNCTIONING** (P. 23)

⇒ **ACTIVATE RADIO WALL TRANSMITTER**

⚠ CAUTION

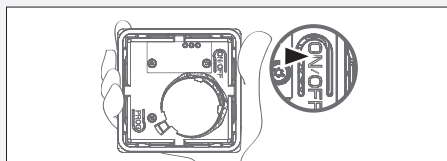
Do not press against the sensitive side of the wireless wall transmitter with the flat of the hand because otherwise unintended commands could be triggered.



▶ Switch on the voltage supply.



The drive emits a beep.





▶ Check that the radio wall transmitter is switched on (ON/OFF).



▶ Press and hold the buttons  and  **only until** the product confirms the activation with a short up/down movement and a signal tone.

▶ Release the buttons  and  immediately!

ATTENTION!

If the and buttons  and  continue to be held down after the drive has confirmed activation, the drive blocks.




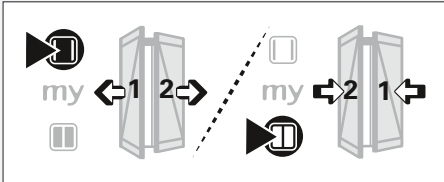
⇒ CHECK DIRECTION OF ROTATION AND PRIORITY OF THE SASHES

NOTES

The leading sash is the sash with the cover strip.

Direction of rotation

- ▶ Press button  of the wireless wall transmitter until the two axes rotate:



- The direction of rotation is **correct** if the turning movement of the axes corresponds to the *opening direction*.
- The direction of rotation is **not correct** and must be changed if the turning movement of the axes corresponds to the *closing direction*.

Priority of the sashes

- If the sash with cover strip opens before the sash without cover strip and closes after it, the priority of the sashes is **correct**.
- If the sash with cover strip opens after or closes before the sash without cover strip, the priority of the sashes is **not correct** and must be changed.



⇒ SELF-LEARNING PROCESS

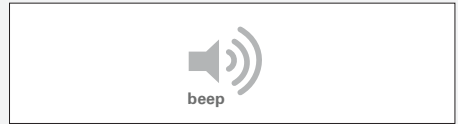
NOTES

The teach-in phase allows the configuration of the drive according to its installation environment.

In this phase, each sash performs unsynchronised opening and closing movements in the set priority in order to find the optimal configuration for the installation.

Start self-learning process

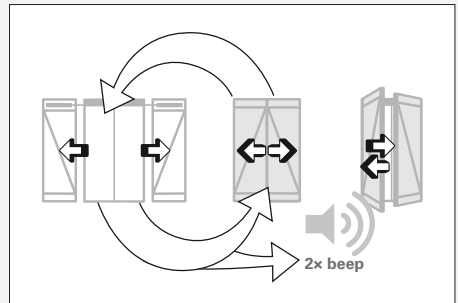
- ▶ To start the self-learning process, press  and  hold the and buttons for a few seconds until you hear a beep.



A) Positive feedback from the drive


At the end of the teach-in cycle, the drive has determined a sensible setting of the folding shutter.

Two signal tones sound and the sash with cover strip performs a short open/close movement.

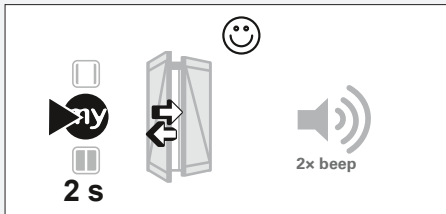


A1) User confirmation ☑

If the steps of the self-learning process have run **without errors** (no obstacles or unexpected stops):

- ▶ Confirm the self-learning process by pressing the button  for 2 sec.

Two signal tones sound and the drive performs a short up/down movement.

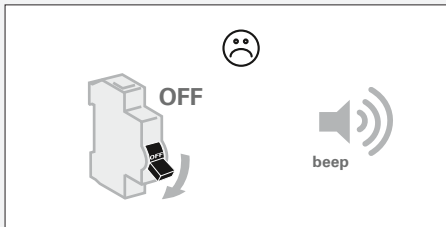


The self-learning process is successfully completed.

A2) User cancellation ☒

If the steps of the self-learning process did **not** run without errors, e.g. if there was an unexpected stop:

- ▶ Switch off the power supply to exit the drive's self-learning mode.

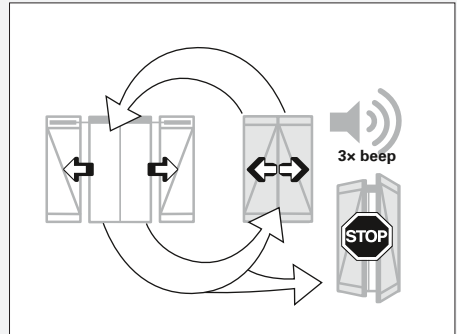


The settings are not saved. The self-learning process must be repeated.

B) Negative feedback from the drive ☒


The drive has detected an inappropriate setting during the self-learning process.

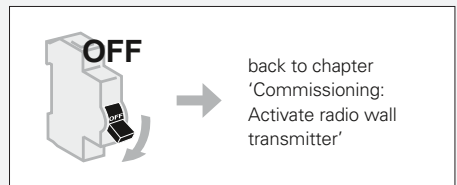
Three beeps sound and the drive locks.




The self-learning process has failed.

B1) Repeat commissioning

- ▶ Switch off the power supply
- ▶ Repeat the **entire commissioning procedure** from  chapter "commissioning", page 20.



If the torque of the drive during the self-learning process is unsuitable for the given installation:

- ▶ Adjust the Maximum Closing Force via the operator interface of the drive (see  chapter "List of Adjustment Parameter", page 36.

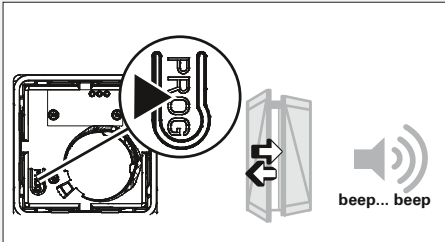
⇒ CONNECTING THE RADIO WALL TRANSMITTER TO THE DRIVE

⚠ CAUTION

Do not press against the sensitive side of the wireless wall transmitter with the flat of the hand because otherwise unintended commands could be triggered.

- ▶ Briefly press the PROG button on the radio transmitter.

The drive emits 2 signal tones and the folding shutter performs an open/close movement.

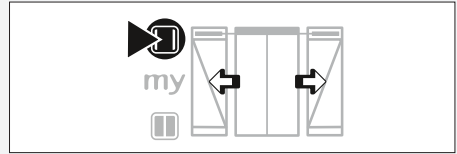


The radio wall transmitter is now linked to the drive.

⇒ VERIFICATION OF PROPER FUNCTIONING

Opening procedure

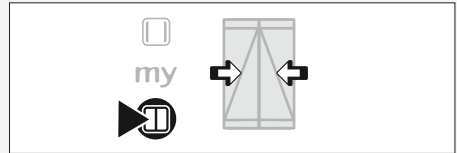
- ▶ Briefly press the open button (□) on the io-radio transmitter.
- ▶ Allow the folding shutter to open fully until it stops automatically when the stops are reached.



Closing procedure

- ▶ Briefly press the close button (▣) of the io-radio transmitter.

The folding shutter is closed completely.



Commissioning is now complete!

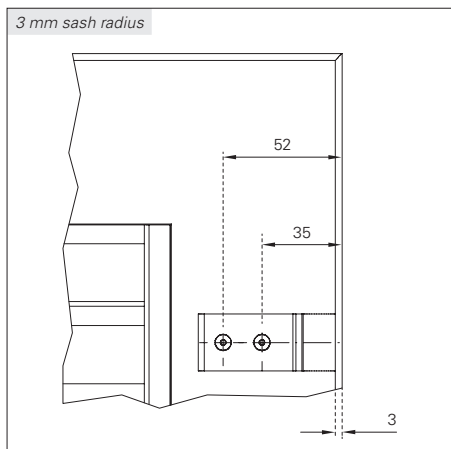
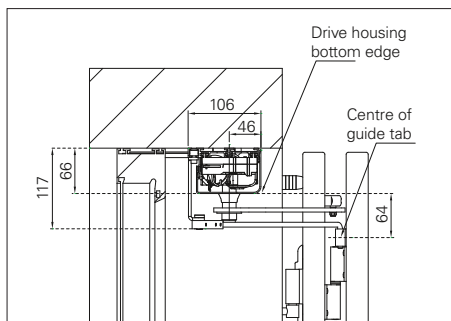
Cutting the coupling rod to size and mounting it

For multiple-section sashes (2L/2R, 3L/3R, 4)

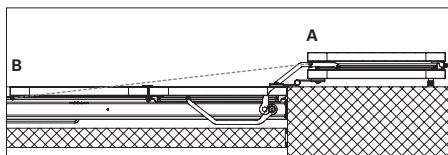
NOTES

Observe the edge clearance of the guide lug with rabbet or surface-mounted installation!

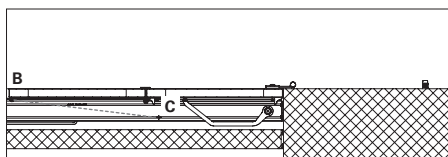
- ▶ Mount the guide lug with N1 rivets.



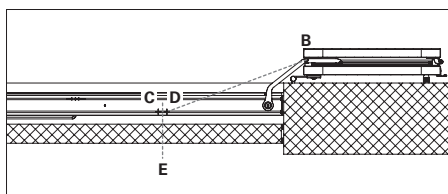
- ▶ Close the double shutter and mark the centre of rotation of guide lug **B**. Afterwards, open the double shutter and measure the distance from **A** to **B**.



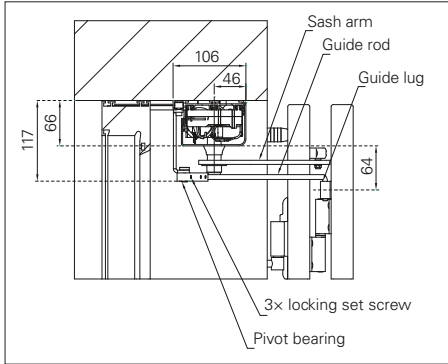
- ▶ Close the double shutter and divide the distance determined (from **A** to **B**) in half. Inscribe the half path on motor housing **C** as shown in the drawing.



- ▶ Open the double shutter once again and, as shown in the drawing, the half path (from **A** to **B**) is marked once again on motor housing **D**. The centre of rotation **E** of the coupling rod lies between the two points **C** and **D**.



- ▶ Cut the coupling rod to size.
- ▶ Hook the guide rod in the guide lug, slide the pivot bearing on and lock in place with the 3 locking set screws in the pivot bearing.



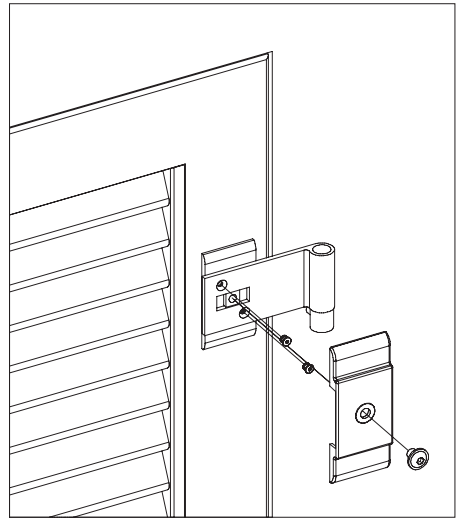
Crimped metal ribbon

only when express hinges are used

NOTES


The express hinges used must be secured against shifting in place as follows after the installation of the VOLETRONIC io window shutter drive!

- ▶ Close and align the shutters and stabilise them with wooden wedges in the reveal.
- ▶ Remove hinge holders.
- ▶ Mark, drill and countersink rivet holes.
- ▶ Attach rivets so they are flush and reinstall hinge holders.




3 Operation

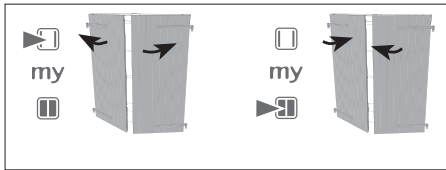
Opening and closing

- ▶ Press the  button.


The sash opens and stops automatically, once it reaches the stops.

- ▶ Press the  button.

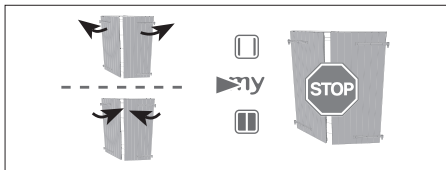
The window shutter closes completely.



Stop function

- ▶ Press the  button while the window shutter is in motion.

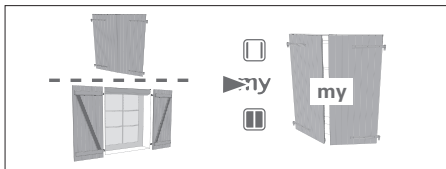
The window shutter stops automatically.



Preferred position

- ▶ Press the  button.

The window shutter moves into the preferred position.




Storing preferred position “my” in the memory

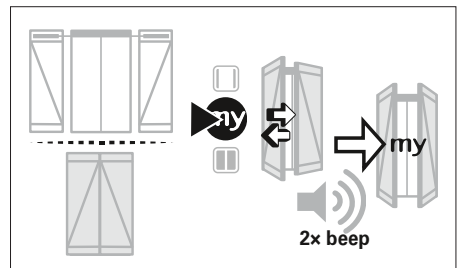
NOTES

An intermediate position called the *preferred position* can be stored in the memory of the VOLETRONIC io shutter drive. That position must not correspond to either the *open* or the *closed position*.

EHRET recommends selecting a position with as small an area exposed to wind as possible, e.g. a position in which the shutters are open just a crack.

The “my” preferred position is not available for shutters with an overlap.

- ▶ Move the leading sash into the desired position.
- ▶ Press and hold the  button for 5 seconds until two audible signals are heard and the folding shutter performs an open/close movement.

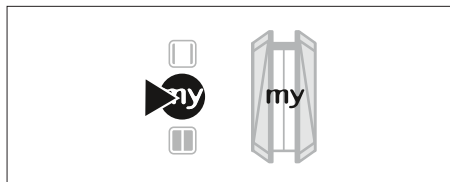


The “my” preferred position has now been programmed.

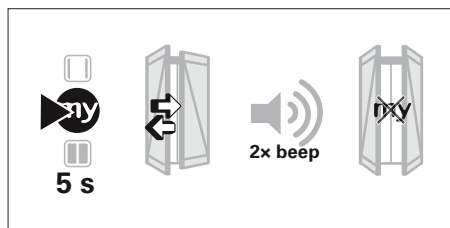
Deleting the preferred position

- ▶ Press the **my** button.

The folding shutter moves into the preferred position.



- ▶ Press and hold the **my** button for 5 seconds until two audible signals are heard and the folding shutter performs an open/close movement.



The "my" preferred position has now been deleted.

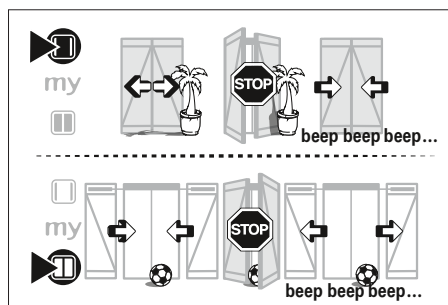
Detecting obstacles

NOTES

The automatic obstacle recognition protects the VOLETRONIC io against damage and prevents accidents.

If a sash encounters an obstacle when opening or closing, the folding shutter is automatically stopped and moves in the opposite direction until it is fully opened or closed.

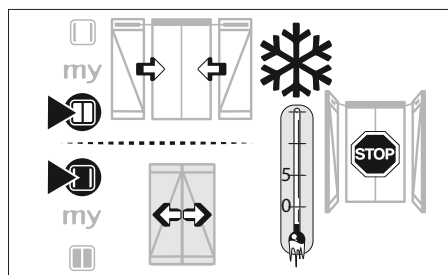
The drive emits audible signals during the entire release manoeuvre.



Freeze protection

NOTES

The protection against freezing in place functions just like the recognition of obstacles: The drive is stopped automatically as soon as it detects resistance.



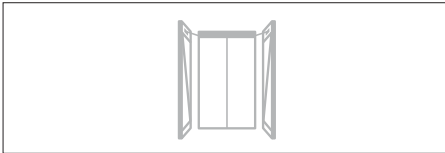
Activate the new setting mode

NOTES

Using an io radio transmitter, some parameters, such as sash priority, direction of rotation, closing force, buzzer function, can be adjusted subsequently in the Reset mode.

- The drive returns to its initial state if no setting has been made within two minutes since the last action or if the power supply is interrupted. The settings will still be saved.
- For all new settings described in this chapter, a new self-learning process must be carried out after the adjustment has been made.

- ▶ Open the sashes halfway.



- ▶ Press and hold the Open and Close buttons simultaneously for five seconds until the product performs an open/close movement and emits a beep.



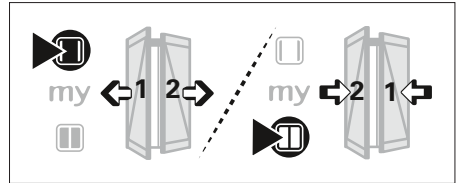
The new setting mode is now activated.

Reverse sash priority




NOTES

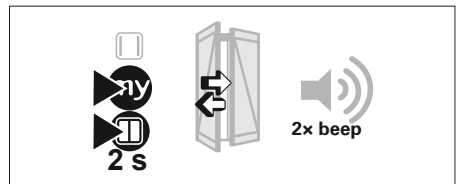
This step is required if the arrangement of the sashes is reversed.

The leading sash is the sash with the cover strip.



If the correct sash is not set as the sash with cover strip:

- ▶ Activate the new setting mode (see  page 28).
- ▶ Press and hold the  and  keys for 2 sec. until two beeps sound and the sash with top rail performs an up/down movement.

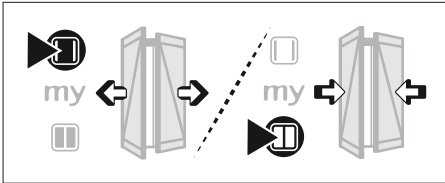


The priority of the sashes is now reversed.

Reverse direction of rotation

NOTES

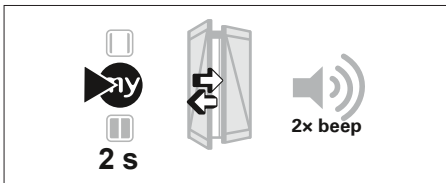
This step is necessary if the direction of rotation of the drive does not correspond with the pressed buttons on the io radio transmitter.



If the direction of rotation is not correct:

- ▶ Activate the new setting mode (see □ page 28).
- ▶ Press and hold the button **my** for 2 seconds.

The folding shutter confirms with a short open/close movement and two signal tones.



The direction of rotation is now reversed.

Setting the closing force

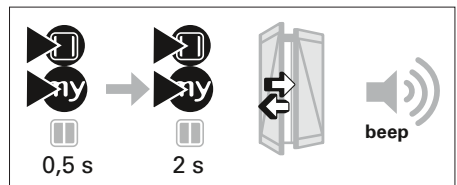
NOTES

The VOLETRONIC io drive is set ex works to closing force level 2.

If needed (e.g. increased weight due to multi-section large sashes), the closing force can be increased to a higher level as follows:

- ▶ Activate the new setting mode (see □ page 28).
- ▶ Open the sashes half-way.
- ▶ Press the buttons □ and **my** of the wireless wall transmitter simultaneously, first once briefly and then a second time without delay and continuously until the leading sash confirms with a single short open/close movement.

The VOLETRONIC io emits a *signal tone* and enters the *Programming mode* for the next 30 seconds.



- ▶ Adjust the closing force level. Button □ raises, button ▣ lowers the closing force level.

Level	Tones	Tone sequence
1 (min.)	1 × 2	▣ ▣ [] etc.
2	2 × 2	▣ ▣ ▣ ▣ [] etc..
3	3 × 2	▣ ▣ ▣ ▣ ▣ ▣ [] etc..
4 (max.)	4 × 2	▣ ▣ ▣ ▣ ▣ ▣ ▣ ▣ [] etc..

- ▶ Press button **my** until the leading sash confirms with a brief open/close movement.




The new closing force level is saved, the VOLETRONIC io emits *two signal tones*.

Signalling the movement

Buzzer function

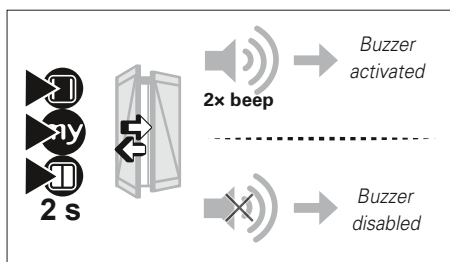
NOTES

EHRET recommends activating the buzzer function in order to signal shutter movements (e.g. for a shutter on the ground floor) and to prevent accidents.

▶ Hold the buttons ,  and  pressed down until the leading shutter confirms with a brief open/close movement:

A If the VOLETRONIC emits *one signal tone*, then the buzzer is **activated**.

B If the VOLETRONIC emits no signal tone, then the buzzer is **disabled**.



Reset to factory settings

NOTES

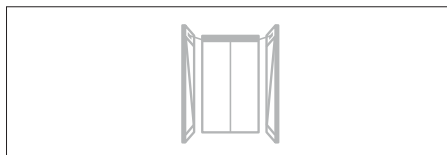
Returning to the pre-configured mode deletes the changes to the leaf priority, the direction of rotation, the closing force setting, all radio transmitters and sensors, the favourite position and deactivates the buzzer. The end positions are deleted.

All these parameters are reset to the values set by Somfy when the drive was produced.

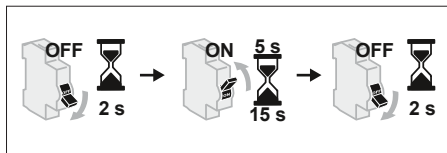
ATTENTION!

- Only apply the double voltage interruption to the driven product that you want to reset!
- The drive emits a series of beeps when the voltage is interrupted and if no change is made within 10 minutes of the first action.

▶ Open the sashes halfway.

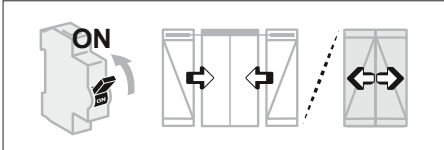


- ▶ Switch off the power supply for 2 sec.
- ▶ Switch on the power supply again for 5-15 seconds.
- ▶ Switch off the power supply again for 2 sec.



- ▶ Switch on the power supply again.

The sash with cover strip performs an open/close movement.

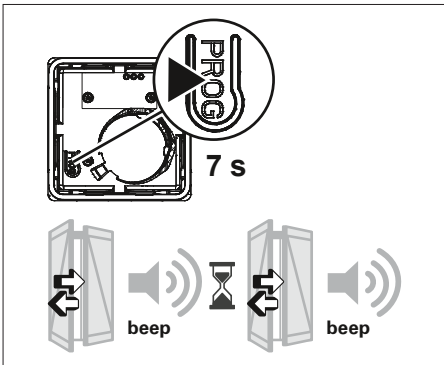


- ▶ Press and hold the PROG button on the radio transmitter for 7 sec.

The drive is reset to the factory settings recommended by Somfy (pre-configured mode).

The sash with cover strip performs an open/close movement after one second and a signal tone sounds.

After seven seconds, a second up/down movement follows and another signal tone sounds.



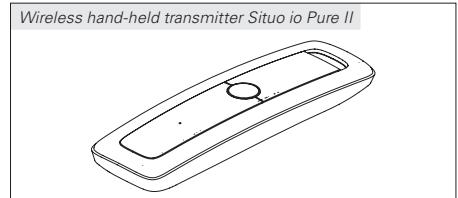
After the second up/down movement, the pre-configured mode is active again.

Radio transmitter "io Pure"

Option

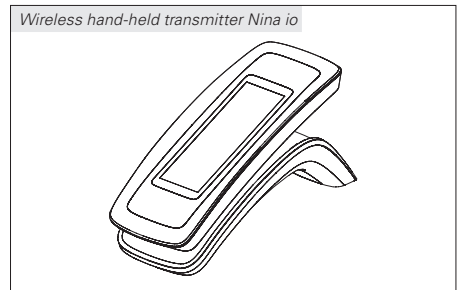
NOTES

As an option, the VOLETRONIC io folding shutter drive can also be controlled by means of a io Pure wireless hand-held transmitter.



6441 Situo io Pure II (1-channel)

6442 Situo 5 io Pure II (5-channel)



6443 Nina io (bidirectional touch display control)

The operating instructions of the respective hand-held transmitter are enclosed with the respective product.

The directions for use for the respective wireless hand-held transmitter are enclosed with the respective product.

- ▶ Read the [Directions for use of the wireless portable transmitter](#).

4 Maintenance

Installing the emergency battery

⚠ CAUTION

Danger of explosion when using incorrect battery types

In the event of using a battery not recommended by EHRET, the liability and warranty obligations of EHRET do not apply.

- ▶ Only use the battery recommended by EHRET, part no. **6406** *Emergency battery (optional), 9.6 V / 1600 mAh.*

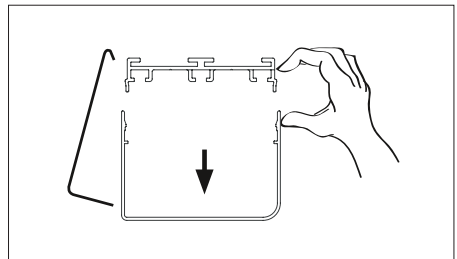
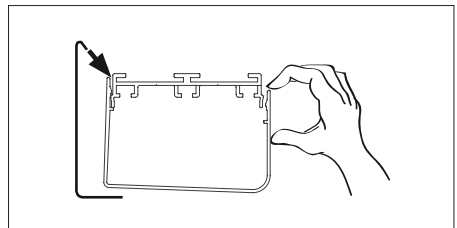
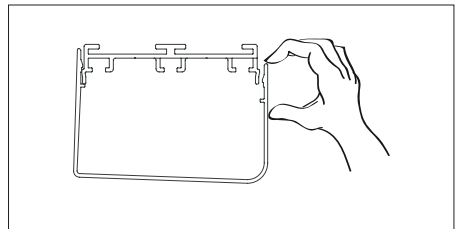
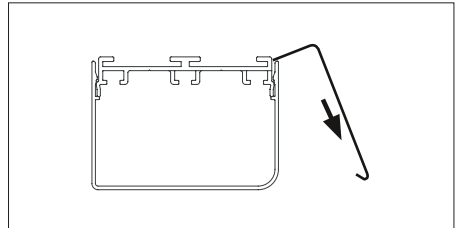
NOTES

The emergency battery must be recognised by the drive to be functional. It can only be recognised when mains voltage is present. If the battery is connected without mains voltage applied, it will not function.

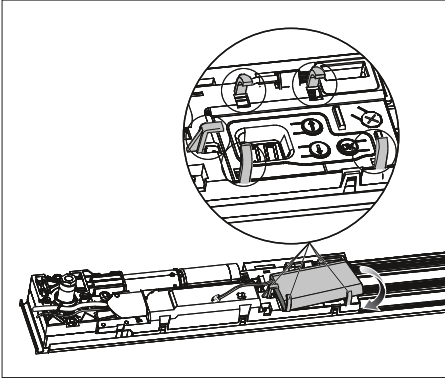
The battery becomes functional when the mains voltage has been re-applied at least once.

The battery may discharge during installation. It must then be recharged via the drive connected to the mains voltage. This can take up to 24 hours.

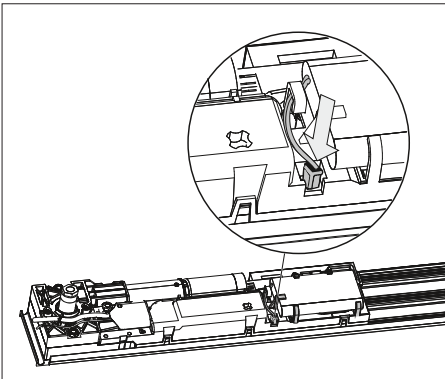
- ▶ Dismantle the cover using the **6360** cover remover



- ▶ Insert the battery by placing it in the 5 fastening hooks provided on the circuit board housing.
- ▶ Make sure that the battery is firmly fitted in place.



- ▶ Connect the battery to the circuit board.

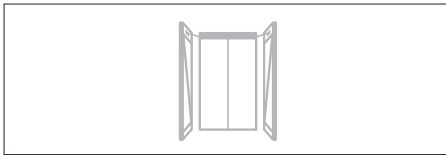


Restore factory settings

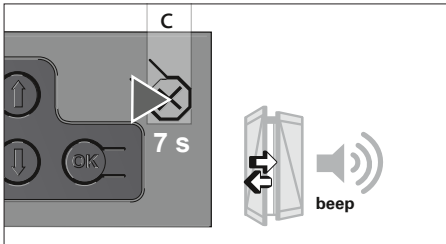
NOTES

- Returning to the pre-configured mode deletes the changes to the leaf priority, the direction of rotation, the closing force setting, all radio transmitters and sensors, the favourite position and deactivates the buzzer.
- The end positions are deleted.
- All these parameters of the drive are reset to the values set by ehret in the delivery state.

- ▶ Open the sashes halfway.



- ▶ Press and hold the -key on the keypad for 7 sec. until the sash with cover strip performs an up/down movement and a signal tone sounds.



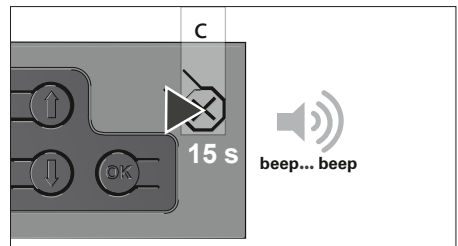
After the up/down movement, the pre-configured mode is active again.

Restore the initial configuration

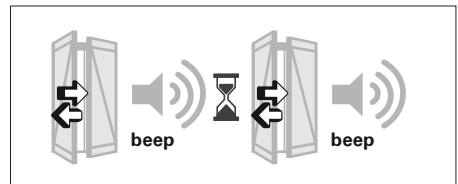
NOTES

- Restoring the output configuration deletes all parameters of the drive. These are the parameters mentioned in chapter "List of setting parameters", p. 36.
- Restoring the output configuration cannot be done via a radio transmitter. To return to the output configuration, the keypad of the drive must be used.

- ▶ To restore the initial configuration, press and hold the -key on the keypad of the drive for 15 sec. until a series of beeps sounds for the second time.



- ▶ The sash with cover strip performs an up/down movement after seven seconds and a signal tone sounds, followed by a second up/down movement and another signal tone after 15 seconds.



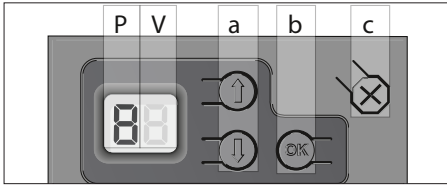
After the second up/down movement, the output configuration is active again.

Operator interface of the drive



NOTES

Keypad and display

- The keypad on the drive module allows you to set a number of adjustment parameters for the drive.
- The display shows two digits: the **P** tens digit indicates the selected parameter and the **V** ones digit indicates a possible parameter value.

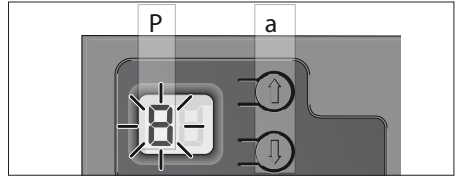


Description of the keys

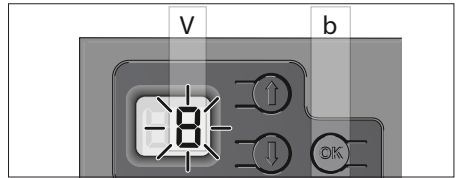
- The display can be activated by pressing any key.
- For a list of the parameters and the corresponding values as a selection aid, see  chapter "List of setting parameters", p. 36.
- At any step, you can cancel the current changes by pressing the -key **c**.
- In case of inactivity, the display goes into sleep mode after a few second.



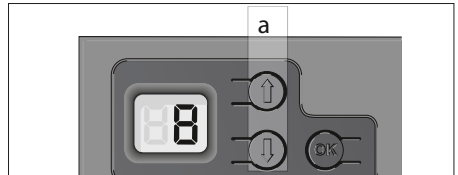
- ▶ When the parameter code **P** flashes on the keypad display, press the \uparrow or \downarrow keys **a** to select the parameter.



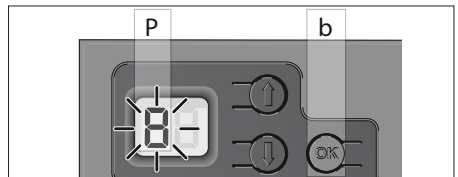
- ▶ Press OK **b**, to confirm the selection of the parameters. The value **V** then flashes.



- ▶ Press the \uparrow or \downarrow keys **a**, to select the code of the corresponding value.



- ▶ Press OK **b** to confirm the selection of the value. The parameter code **P** then flashes again.



List of setting parameters

Parameter	Display	Description Parameter	Display	Values
Changing the direction of rotation of the drive.	P 0	Allows the direction of rotation of the drive to be changed. When changing this parameter, a self-learning process of the end positions must be started.	V 0 1	Standard direction Opposite direction
Sash with cover strip	1	Enables the sash with cover strip to be re-selected (right/left). When changing this parameter, a self-learning of the end positions must be started.	0 1	<i>Electromechanical side.</i> The sash with cover strip is on the side of the drive equipped with the board. <i>Mechanical side.</i> The sash with cover strip is on the side of the drive without the PCB.
Selection of the number of drives to be activated.	2	Allows to force the setting of the number of motors to 1 or 2 or to let the operator set the number itself during the self-learning procedure. When changing this parameter, a self-learning process of the end positions must be started.	0 1 2	Automatic. 1 drive. 2 drives.
Type of overlap	Identification number of the overlap.	These parameters are used to control folding shutters with overlapping. If these parameters have not been set at the factory, they can only be changed after a "reset" of the drive to the pre-configured mode. Changing these parameters makes it necessary to repeat the entire setting and teach-in procedure.	0 1 to F	No overlap. Identification no. of the overlap.
	Opening delay of the sash with cover strip.		0 to U	From zero to nineteen seconds (in one-second increments)
	Opening delay of the covered sash.		0 to U	From zero to nineteen seconds (in one-second increments)
	Closing delay of the sash with cover strip.		0 to U	From zero to nineteen seconds (in one-second increments)
	Closing delay of the covered sash.		0 to U	From zero to nineteen seconds (in one-second increments)
Maximum clamping force	8	Allows the actuator torque to be increased or decreased. Changing this parameter requires re-adjustment in the open end position after commissioning the drive.	1 to 4	
Free	9	Not assigned		Not assigned
Activation/deactivation of hand squeeze protection	A	A change of this parameter requires an adjustment in the open end position after commissioning of the drive.	0 1	Deactivated. Enabled.
Activation/deactivation of buzzer With / without battery	b	A change of this parameter requires an adjustment in the open end position after commissioning of the drive.	0 1	Deactivated. Enabled.

Parameter	Display P	Description Parameter	Display V	Values
With / Without battery	[0 1	There is no back-up battery on the product. The backup battery has been detected.
Emergency battery charge level	d		0 1 2 3	Battery not present or damaged or charge level insufficient for drive operation. Battery charge low. Battery functional. Battery fully charged.
Reserve ERROR code	E		0 to 1	Product status error code. If an error occurred during the last operation, an error code appears.

- Depending on the state of the drive (user mode or setting mode), changing some parameters is not possible in the current state.
- If the parameter flashes on the display, it can be changed. If the parameter is permanently shown on the display, it cannot be changed in the current mode.

Troubleshooting

Problem	Possible causes	Solutions
The drive emits audible signals when moving.	If the emergency battery is installed, the audible signals indicate an interruption in the power supply.	▶ Make sure that the product is connected to the power supply.
	The buzzer was activated for all movements.	▶ Deactivate the buzzer.
	The drive has detected excessive torque due to an obstacle in the path of the sash and performs a manoeuvre to clear the obstacle. This is indicated by audible signals.	▶ Once this release manoeuvre is complete, the drive returns to normal operation.
The wireless transmitter is not working.	The battery of the wireless transmitter is dead.	▶ Change the battery of the wireless transmitter. <i>Please be sure to recycle used batteries.</i>
	The drive is not equipped with an emergency battery and there is no 230 V power supply.	▶ Switch the power supply back on and insert an emergency battery (optional). Consider inserting an emergency battery if this occurs too often.
	The wireless transmitter has not been programmed.	▶ See chapter "Commissioning; Programming the io wall transmitter", page 20.
	The power supply to the drive via the power supply is interrupted and the emergency battery is empty, not connected to the drive or damaged.	▶ Check the presence of the mains voltage, the connection of the battery and its state of charge. <i>The emergency battery must be recognised by the drive to be functional. It can only be recognised when mains voltage is present. If the battery is connected without mains voltage applied, it will not function. The battery becomes functional when the mains voltage has been re-applied at least once.</i>
	The wireless transmitter is deactivated (OFF).	▶ Activate the wireless transmitter (ON).
The folding shutter hits hard when it reaches the wall.	There are no shock absorbers behind the shutter.	▶ Attach the stops provided for this purpose.
The shutter is deformed by the force of the rotating arm.	The closing force is too strong.	▶ Set the closing force.
	The divisible stop is incorrectly positioned.	▶ Correct the position of the divisible stop.
Shutter opening is activated and stops again immediately	The sash priority is incorrectly configured.	▶ Reset the priority of the sashes.
	Opening is blocked by the bolt.	▶ Open the bolt.
	The cranked belt of the sash is too flexible.	▶ Install a brace to prevent unwanted movement between the shutter and the belt.
The sash with cover strip is covered by the second sash.	The sash priority is incorrectly configured.	▶ Reset the priority of the sashes.
	The direction of rotation is incorrectly configured.	▶ Reverse the direction of rotation.
The folding shutter closes on the 'Open' command and vice versa.	The settings are incorrect.	▶ Perform a reset.
The sashes overlap.	The settings are incorrect.	▶ Perform a reset.
The folding shutter squeaks.	The rollers no longer move correctly in the sliding guides.	▶ Lightly lubricate the inside of the sliding guides.

Problem	Possible causes	Solutions
The drive emits an audible signal and stops in a middle position.	The free movement of the folding shutter is obstructed (obstacle, jammed, movement of the roller in the sliding guide, bad alignment of the drive, the rotating arms or the sliding guides, etc.).	▶ Make sure that the folding shutter can move freely.
One sash is closed, the other open.	Force effects have been detected on the different sashes and the drive has assumed a position that is safe for the drive and the folding shutter.	▶ Give the command to open. No other command will be accepted until the folding shutter has been returned to a fully open position.

Error codes on the user interface of the drive

Designation	Display	Cause	Solutions
Error 00: no error	E 0	No error	–
Error 01: Current measurement	E 1	Error in internal current measurement. As a result of this defect, the motor is blocked.	▶ To reset the unit to its normal state, the power supply must be interrupted for >10 sec. ▶ Then restore the power supply and start a self-learning process.
Error 02: Motor	E 2	Drive current of the multiphase motor Error (motor, motor control, position sensor,...).	
Error 03: Synchronisation of the sashes	E 3	An overstress slows down one sash (e.g. due to wind) and reduces the offset between both sashes.	
Error 04: Rotation speed	E 4	Rotation speed is over/ or underrun. Internal error, there is a risk of excessive speed.	
Error 05: Self-learning process	E 5	Due to an error, the position monitoring of the sashes is no longer defined.	▶ Performing a self-learning process is necessary to determine the end positions again.
Error 06: Closing movement prohibited	E 6	After using the user interface or after several obstacle detections, the motor can cause a complete opening.	▶ Perform a complete opening until the end positions are reached.
Error 07: Simultaneous overload	E 7	There was a simultaneous overload of both motors. In order to protect your system, the motor automatically performs a relief run.	▶ Please allow the motor to perform its unloading travel completely.

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