

DRIVE

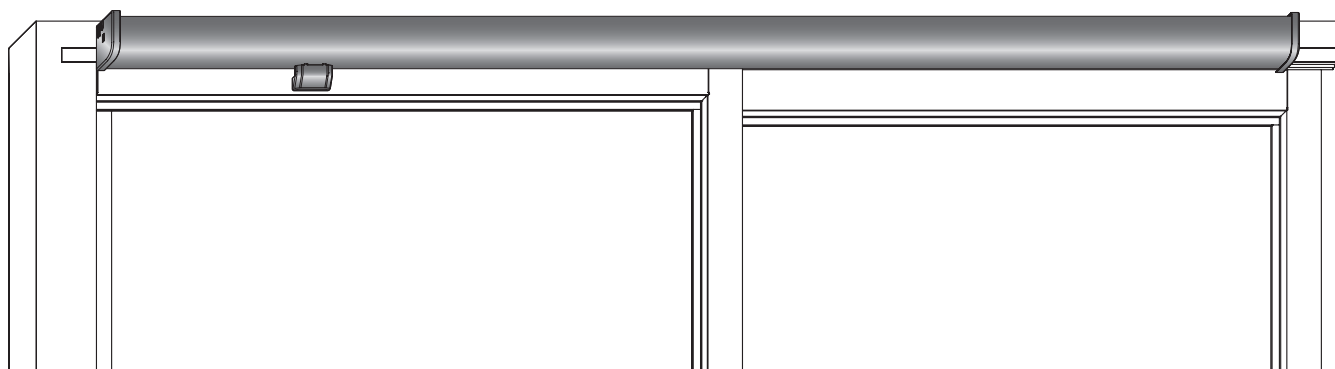
DRIVE axxent HSA smart

Part-concealed HS drive.

Window systems

Door systems

Comfort systems



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1. General information

Please read these installation and operating instructions carefully and in full before commissioning the HS system DRIVE axxent HSA smart.

1.1 Target group of this documentation

- This documentation is intended for use by specialists and end users.
- All instructions concerning installation, commissioning, repairs and maintenance described in this document are to be performed exclusively by electricians with training and practice in the installation, commissioning and maintenance of mechanical drives.
- All instructions on operation and maintenance described here are intended for end users.
- Following installation, the installation company must hand over the installation and operating instructions to the end user and brief the user/owner of the building accordingly.

1.2 Intended use

- The DRIVE axxent HSA smart system uses an electric motor to open and close windows and French doors with lift-slide hardware (e.g. PORTAL HS).
- The standard DRIVE axxent HSA smart system is not suitable for use in swimming pools and/or damp rooms. Special designs are possible and permitted only upon request and after having been tested by SIEGENIA.
- The DRIVE axxent HSA smart must only be operated with hardware components and genuine accessories from SIEGENIA.
- It must be possible to access and disassemble the slide drive SA at all times should maintenance and service work be required (curtain rods, lamps, ceiling covers, roller shutter housings, etc. must not hinder removal).
- The instructions contained in ASR A 1.6, VFF data sheet KB.01 as well as EN 12453 for power-operated windows, doors and gates must be observed!
- If you are using the system for commercial purposes, you must also observe the safety instructions of your accident insurance provider.
- Following installation of the DRIVE axxent HSA smart, you must carry out a reference run as well as a calibration and teach-in run when the unit is commissioned for the first time.

1.3 Incorrect use

- Lift and slide elements that are equipped with the DRIVE axxent HSA smart HS system must not be used as escape doors/ emergency exits in the event of a fire!
- Any use of this product that is not in accordance with its correct use, or any adaptation of or modification to the product and its associated components for which the express consent of SIEGENIA has not been obtained, is strictly prohibited. SIEGENIA accepts no liability whatsoever for any material losses or injury to people caused by failure to comply with this stipulation.

1.4 Dimensions

- All the dimensions in this documentation are specified in mm.

2. Safety notes

Risk of injury or fatal injury. Hands, arms, legs and feet can get trapped and/or crushed in systems driven by an electric motor.

- Make sure that no parts of the body or objects are within the shearing and locking area of the system.
- Particularly when lowering lift and slide elements, make sure that no parts of the body or objects are under the lift & slide sash.
- Do not leave children unattended near a lift and slide element.

Risk of injury or death due to electrical shock or fire. Systems driven by an electric motor can overheat and cause fire.

- Insert the Euro mains plug of the standard connecting cable only into a suitable 230 V AC mains power supply socket.
- Only a qualified electrician may perform any work on the 230 V AC mains power supply.
- Current local regulations (such as VDE 0100 of the VDE in Germany) must be observed.
- Relevant country-specific regulations must be strictly followed for all work on the voltage supply system or building wiring system.
- All-pole safety isolation is required when the mains cable is laid on-site because the power supply does not have a separate line disconnecter.
- Connect in-wall supply lines to the DRIVE axxent HSA smart HS system in branch boxes. These branch boxes must be kept accessible for maintenance.
- When cleaning the lift & slide sash and the drives, make sure that no liquid gets inside the DRIVE axxent HSA smart HS system as this could damage the electronics.
- The unit must be checked by a specialist in the event of a fault.

Injuries caused by falling objects.

- Please do not put or place objects on top of the DRIVE axxent HSA smart.

Hazard due to third party attacks on SIEGENIA WLAN devices! Please observe the following notes to protect your system against attacks by third parties:

- Every SIEGENIA WLAN device is protected by two passwords (user and administrator). It is essential that you change these passwords after the initial setup. Do not leave in the default setting.
- If the SIEGENIA WLAN devices are integrated in your home WLAN, this must be encrypted for operation.
- Please choose secure passwords consisting of lower case and capital letters, numbers and special symbols.

3. Device functions

3.1 General product description

- The DRIVE axxent HSA smart is a motorised HS system for the automatic locking, release and movement of lift & slide sashes (lift and slide elements, scheme A and C).
- The DRIVE axxent HSA smart can be controlled by a tablet or smartphone and offers additional device functions via the SI Comfort app. Please follow the enclosed quick start instructions (H47.MOTS005EN).
- The slide drive SA features an electronic cut-off function (see “3.3 Information on safety cut-off and jam protection” on page 6).
- To further increase safety during travel, the slide drive SA with terminal board allows for the integration of a light curtain. If an object is moved into the path of the lift & slide sash, the lift & slide sash is stopped immediately.
- In the event of a power failure, the DRIVE axxent HSA smart can be operated manually using the emergency operating key.
- The lift & slide sash can be moved into a freely programmed intermediate position (intermediate stop).
- The lift & slide sash can be moved into a secured night vent position (only the PORTAL HS).

3.2 Control

The DRIVE axxent HSA smart system offers the following control options:

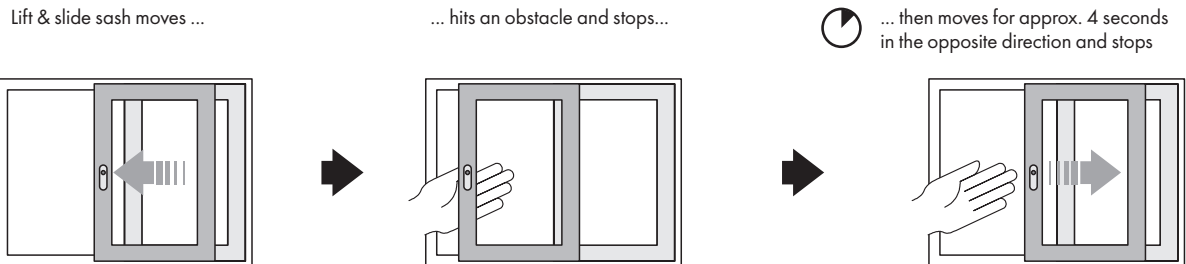
Function	Lift & slide sash end position	Button on the lift drive	SI Comfort app	Infrared remote control (optional accessory)	On-site button
Reference run	Closed and locked	✓	—	—	—
Calibration and teach-in run	Closed and locked	✓	—	—	—
Open	Unlocked and open	✓	✓	✓	✓
Close	Closed	—	✓	✓	✓
Lock	Closed and locked	✓	✓	✓	✓
Intermediate stop	User-defined, limited opening width	✓	✓	✓	—
Night vent	Night vent position (locked in locking bolt/locking part)	—	✓	✓	—
10-min. night vent		✓	✓	✓	—
Night vent timer (0–60 min.)		—	✓	—	—
Open up to the end position	Unlocked and fully open (up to stop)	✓	—	—	✓

3.3 Information on safety cut-off and jam protection

General information on safety cut-off

As soon as the path of a lift & slide sash becomes blocked (e.g. due to an obstacle or because it is stuck), it stops, moves for approx. 4 seconds in the opposite direction and then comes to a final stop (see figure below).

For increased safety in the area around the bottom shear points between the lift & slide sash and the HS frame, in normal motor-powered operation, the lift & slide sash only moves as far as a defined opening position.



Safety shutdown in systems with light curtain

If additional safety requirements apply, the optional terminal board must be ordered. Also available prepared to be equipped with a light curtain. To prevent injuries and damage, the safety cut-off function is activated, which causes the lift & slide sash to stop immediately. If equipped with a light curtain, the lift & slide sash is opened fully to its stop.



3.4 LED indicator

The LED is attached to the lower edge of the slide drive SA. Please note the light indicators in the LED. The indicators and their meanings are listed in the table below:

Function and meaning	LED
System test	Flashes yellow or red/green alternately
Teach in	Flashes red
Move in direction of "Open" position	Continuously green
Move in direction of "Close/Lock" position	Continuously red
10-min. night vent (timer running)	Flashes green
Night vent (without timer)	Off
Intermediate stop (limited opening width)	Off
Locked	Off
After a power failure	Flashes red

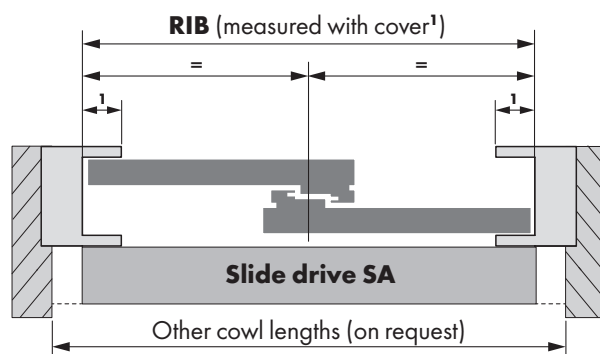
4. Size range

	Scheme A	Scheme C
Inside frame width (RIB) size 1	2144 mm – 2794 mm	4284 mm – 5584 mm ¹
Inside frame width (RIB) size 2	2795 mm – 4099 mm	5585 mm – 8194 mm ¹
Inside frame width (RIB) size 3	4100 mm – 6666 mm	8195 mm – 13328 mm ¹
Sash height ² (standard for PORTAL HS)	1175 mm – 2675 mm	1175 mm – 2675 mm
Sash weight PORTAL HS 200	max. 200 kg	max. 200 kg
Sash weight PORTAL HS 300	max. 300 kg	max. 300 kg
Sash weight PORTAL HS 400	max. 400 kg	max. 400 kg
Max. permissible sash weight for DRIVE axxent HSA smart	max. 400 kg	max. 400 kg
Backset (gear) PORTAL HS 200	27.5 mm	27.5 mm
Backset (gear) PORTAL HS 300	37.5 mm	37.5 mm

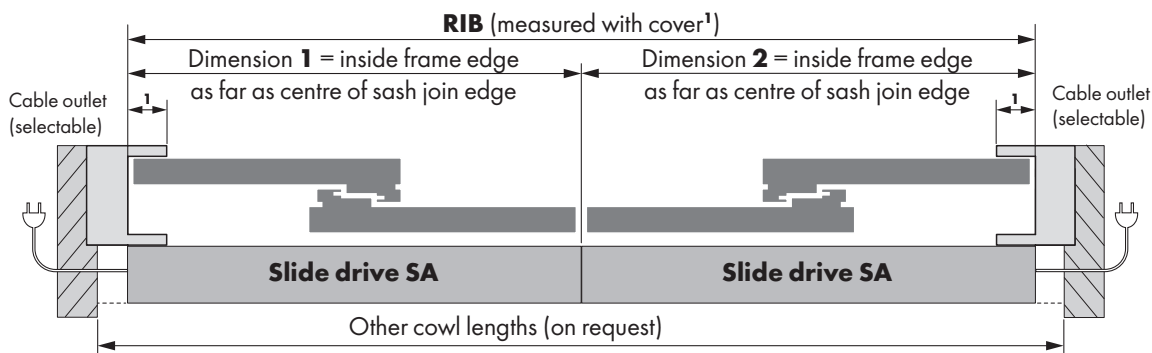
¹⁾ per slide drive = RIB/2

²⁾ for other sash heights (on request), note the special cable length!

Dimension drawing – Scheme A



Dimension drawing – scheme C



5. Scope of delivery

Number of pieces	Size by slide drive DRIVE axxent HSA smart	Size range in mm	Colour
1	Scheme A, size 1 (one slide drive each on left or right)	2144 – 2794	White RAL 9003 Silver RAL 9006
1	Scheme A, size 2 (one slide drive each on left or right)	2795 – 4099	
1	Scheme A, size 3 (one slide drive each on left or right)	4100 – 6666	
1	Scheme C, size 1 (one slide drive each on left and right)	4284 – 5584	
1	Scheme C, size 2 (one slide drive each on left and right)	5585 – 8194	
1	Scheme C, size 3 (one slide drive each on left and right)	8195 – 13328	

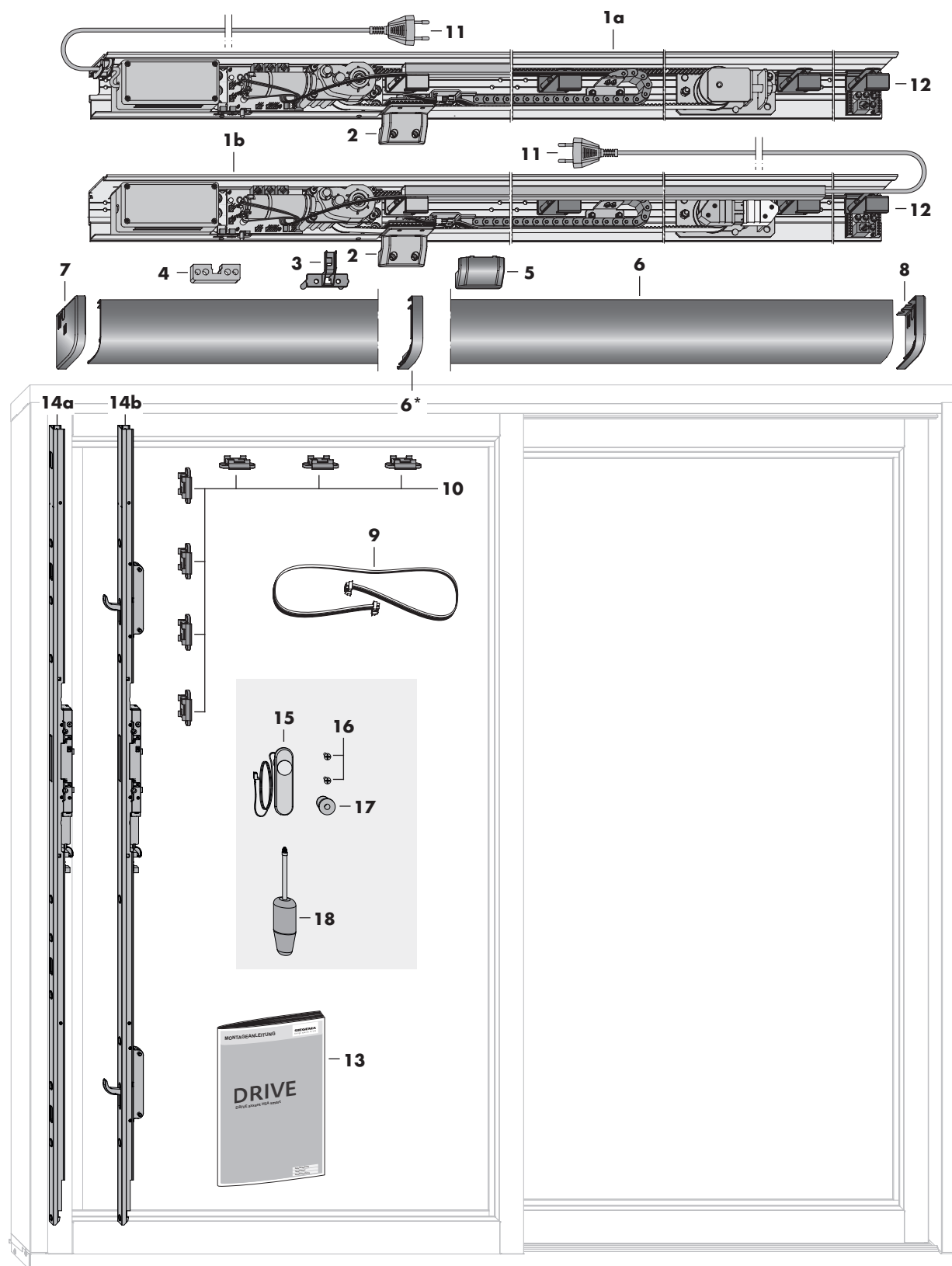
Item	Number of pieces		Contents of slide drive SA carton	Version
	A	C		
1a	1	–	Scheme A - Slide drive SA	Including 24 V power supply
1b	–	2	Scheme C - Slide drive SA	
2	1	2	Catch	For slide drive SA
3	1	2	Catch base	For lift & slide sash top
4	1	2	Packer (2.5 / 5 / 8/ 10 mm thick depending on profile system)	For catch on lift & slide sash top
5	1	2	Cover cap M	For catch
6	1	1	Cover profile SA (up to total length of 7000 mm)	For slide drive SA
	–	2	Cover profile SA with profile connector (from a total length of 7000 mm)	
7	1	1	Cover cap SA left	For cover profile SA
8	1	1	Cover cap SA right	For cover profile SA
9	1	2	Sash cable (flat ribbon cable, 6-wire)	For slide drive SA
10	12	24	Cable holder	Clip-on or screw-on
11	1	1	Network connection cable with Euro plug	On slide drive SA, 5 m cable length
12	1	1	Terminal board (optional)	For connecting light curtain
13	1	1	Installation and operating instructions	

*e.g. if the result of the risk analysis requires a light curtain

Item	Pieces		Contents of motor control gear carton	Version
14a	1	2	Motor control gear axxent RGB	Size 220, sash height 1786–2285
				Size 260, sash height 2286–2685
14b	1	2	Motor control gear axxent SHG	Size 220, sash height 1786–2285
				Size 260, sash height 2286–2685

Item	Pieces		Contents of lift drive HA carton	Version
15	1	2	Single button operation axxent HSA	
16	2	4	Magnetic screw	For lift drive HA
17	1	2	Stop HS-H	For lift drive HA
18	1	1	Emergency operating key	

5.2 Component and accessories overview



6. On-site risk and hazard analysis

In order to assess the potential hazards of a power-operated window and to take the appropriate protective measures, you must assess risks in the planning phase. A risk analysis provides you with all the information needed to assess risks and make decisions concerning the safety of the window elements. The lift and slide element of the DRIVE axxent HSA smart can cause crushing and shearing. You must carry out a risk and hazard analysis during the planning phase in accordance with VFF data sheet KB.01 and the current Machinery Directive relating to the safety equipment and installation location as appropriate for the individual property and conditions of use (e.g. in case of persons requiring special protection or commercial properties).

6.1 Risk and hazard analysis

- Takes into account the protective measures necessary in the planning phase
- Must be carried out before commissioning
- Provides information based on the individual installation location and instructs users on how to install the window system in order to prevent or minimise possible hazards
- Draws attention to possible residual risks

The following aspects must be checked:

- Public or non-public area (private or industrial property)
- Installation location
- Users (authorised users, persons in need of protection or trained personnel)
- Special structural conditions
- Type of access control
- Requirements for added safety can be met with a light curtain

6.2 Instructions for assembly and installation

- Use flexible supply lines (route conduit tubes if necessary)
- When routing cables, avoid damaging the cables by crushing, bending or stretching them
- The concealed mains supply lines running to the DRIVE axxent HSA smart must be connected in branch boxes (these branch boxes must be easily accessible for maintenance)
- Protect the DRIVE axxent HSA smart system against contamination by site material and humidity
- The hardware components must be securely fixed in place
- Connect to the mains supply only after you have tested for proper mechanical function
- Observe the applicable fabrication guidelines from the profile manufacturer
- To avoid personal injury, it is important to observe the safety precautions provided in these instructions and make sure that these instructions are accessible at all times

6.3 Cooperation between trades and interfaces

In the context of project management, the work of the various trades must be carefully coordinated. If SIEGENIA components are being connected to third-party installations or SIEGENIA products are being combined with parts by other manufacturers (e.g. drives and controls), technical compatibility must be verified in advance by authorised personnel. For data collation purposes, the technical data sheets and the latest versions of the installation and operating instructions must be handed over to the trades involved when work commences.

7. Installation

7.1 Installation requirements

General information about installation

- The following description of the assembly process is a recommendation from SIEGENIA and describes the major steps involved. The specific details of the assembly process are determined, amongst other factors, by the HS element used, by the production process and by the window manufacturer's equipment and facilities.
- You will find specific steps for installation of the DRIVE axxent HSA smart on our download portal:
downloads.siegenia.com/de/00007/index.html

Tools required (not included in scope of delivery)

- Drill
- Ø 3 mm, Ø 7 mm, Ø 10 mm, Ø 15 mm plus Ø 20 mm timber or metal drill
- Phillips screwdriver (size 2)
- 1 screwdriver bit 90 mm long
- 2 screw clamps
- Folding rule
- Router (for timber elements)
- Between 2 and 4 assembly racks
- Recommendation:** For straightforward and accurate positioning or fixing of the catch on the lift & slide sash, SIEGENIA recommends using the catch jig (see accessories, page 48).

Materials required (not included in scope of delivery)

Screws		Number of units (depending on RIB) * Scheme		For component
For timber and PVC elements	For aluminium elements	A	C	
Screw PC 4.1 x 38 mm	Flow-drill screw M4 x 18 mm	10-25	20-50	Slide drive SA*
		2	4	Catch
		6	12	Cable holder

Note: All screwing points must be pre-drilled to Ø 3 mm. The length of the fixing screws for PVC elements must be sufficient to penetrate deep enough into the reinforcing material to ensure a sufficient hold. Materials for lining the slide drive SA (PVC plates, for example) must be provided by the customer for certain lift & slide profile systems.

⚠ WARNING Risk of mechanical defects if the DRIVE axxent HSA smart system is put into operation unassembled.

- › You must assemble the DRIVE axxent HSA smart first before putting it into operation!
-

Requirements to be met by the HS element

- The HS element must not be warped.
- The HS element must be installed vertically plumb in the reveal.
- The threshold must be properly and sufficiently supported – especially for wide or heavy HS elements (e.g. 400 kg).
- The displacement force must not be > 60 N.
- To avoid the risk of the connection cable getting crushed in the sash groove, the locking bolt or the locking part for the night vent must always be installed at the bottom on the locking side (see the latest assembly instructions for more information).
- The lift & slide sash must lock into the locking bolts or locking parts evenly.
- The cable routing of the cable in the lift & slide sash must be checked prior to assembly. The lift & slide sash must be prepared for an optimum cable channel in the eurogroove.
- For scheme A, the concealed mains cable guide must always be located on the horizontal top section of the HS frame near the locking side.
- For scheme C, the concealed mains cable guide can be located on the outside of the HS frame on either the left-hand side or the right-hand side.
- For scheme C, the secondary sash must be fitted with “locking part G”.

Requirements to be met by the hardware

- You can find detailed specifications for size ranges and sash weights in the relevant assembly instructions (e.g. assembly instructions for PORTAL HS 200, PORTAL HS 300 or PORTAL HS 400).
- The hardware must be able to run smoothly (be in unrestricted working order). The max. torque on the handle must not exceed 25 Nm.

Requirements to be met by the drive

⚠ WARNING Risk of mechanical defects if the DRIVE axxent HSA smart system is put into operation with lift and slide elements that are not able to move freely.

- › Only put DRIVE axxent HSA smart into operation if the smooth running of the lift and slide element can be ensured!
-

- The DRIVE axxent HSA smart system has not been tested as a locking unit in accordance with ENV 1627-1630.

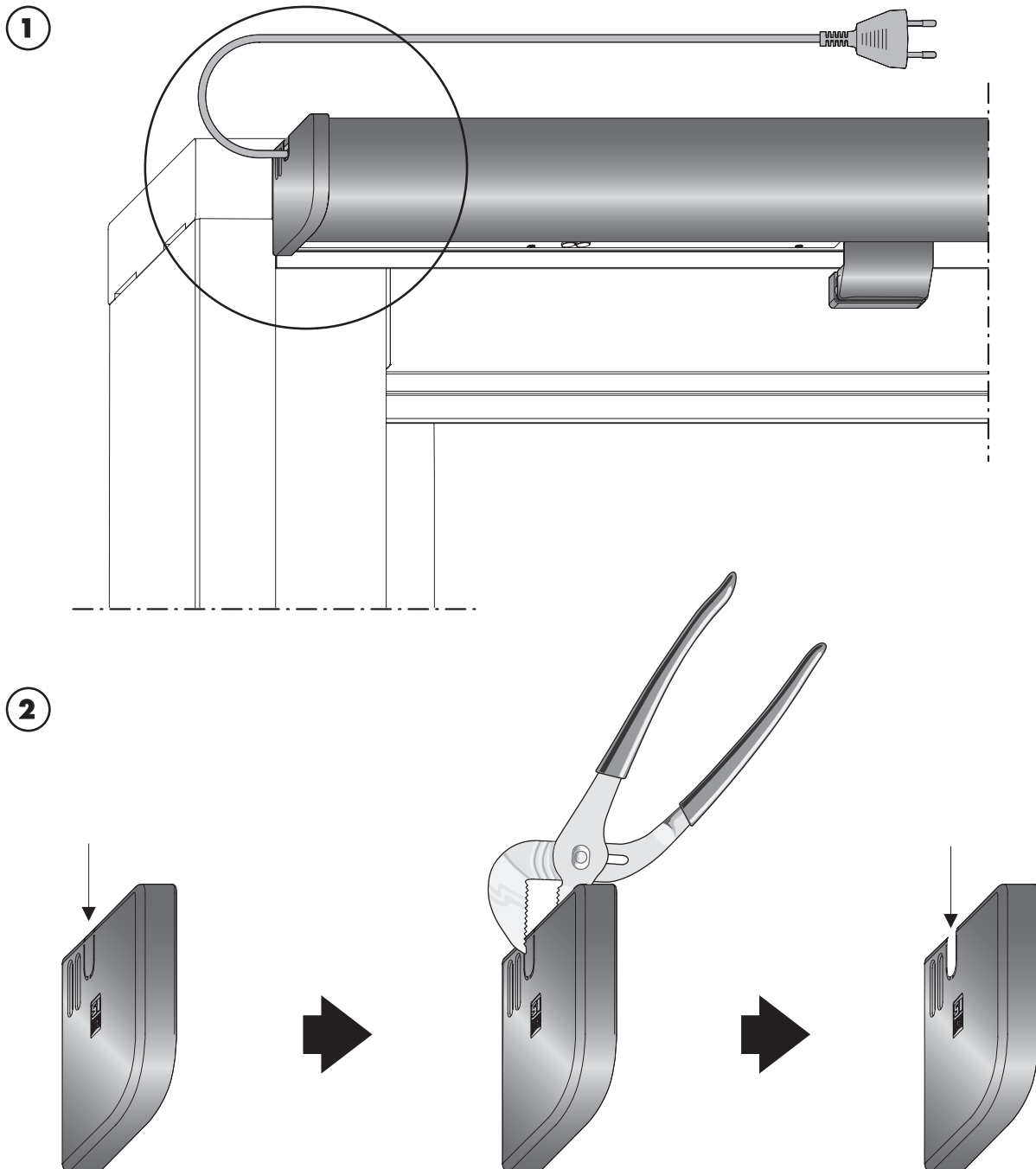
7.2 Information about mains cable running

Important information for safety and assembly

The fitting of the mains cable is determined by the prevailing conditions on site. There are two assembly options:

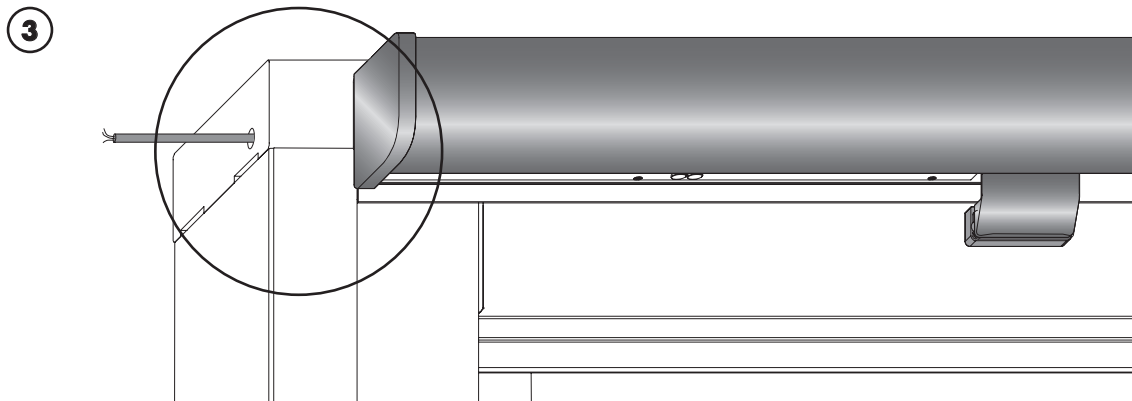
Assembly option 1 – surface-mounted mains cable running

The DRIVE axxent HSA smart system is delivered as standard with a mains cable. The cable outlet for scheme A is always at the top of the slide drive SA on the locking side (Fig. 1); for scheme C, it can be located on the outside of the slide drive SA on either the left-hand side or the right-hand side. A notch for the cable outlet must be made on the cover cap SA of the cover profile SA (see Fig. 2). A suitable mains socket must be located near the cable outlet. It is recommended to route the mains cable through an appropriate installation duct.

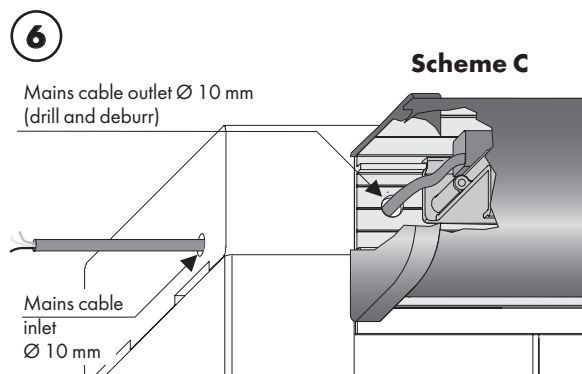
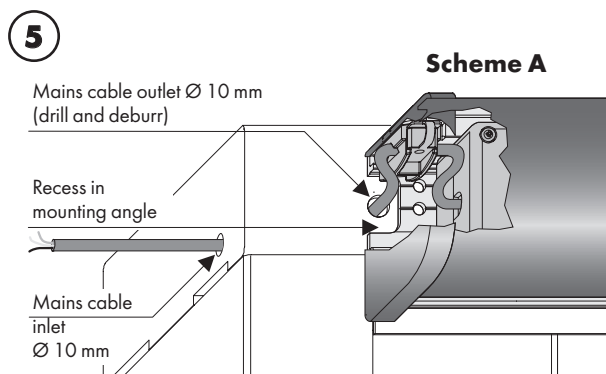
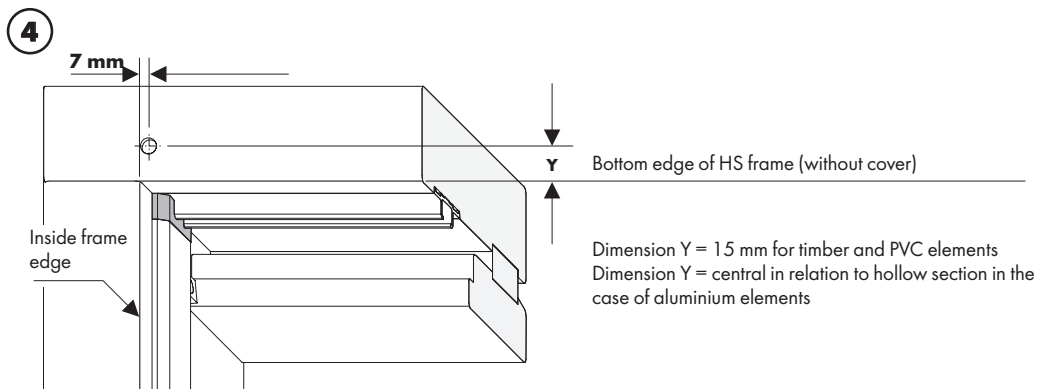


Assembly option 2 – concealed mains cable running

If the customer is responsible for the concealed routing of the mains cable for the slide drive SA and the connection of the slide drive SA (for scheme A in the power supply, for scheme C in the 5-pin socket), this work must be carried out by a qualified electrician. When running mains cables for HS elements which have not yet been installed (e.g. new build and renovation projects), a flexible cable (5 x 1.5 mm² incl. connection) for buttons (not included in scope of delivery) must be provided by the customer and fed concealed through the top section of the HS frame (Fig. 3).



Holes for the cable inlet and outlet (each approx. Ø 10 mm) must be made for this purpose, with the centre of each hole being positioned approx. 7 mm away from the inside frame edge (Fig. 4). All-pole safety isolation is required if the customer is routing the mains cable. The isolated end of the mains cable must be located inside the power supply housing (scheme A) or 5-pin socket (scheme C). The connection to the slide drive is made in accordance with the wiring diagrams. In the mounting angle for the slide drive SA, there is a sufficiently dimensioned recess for the cable outlet on the HS frame profile for scheme A (Fig. 5). The mounting angle for scheme C does not have a recess for the cable outlet (Fig. 6). Concealed mains cable running to the slide drive SA is through the top edge of the frame on the locking side

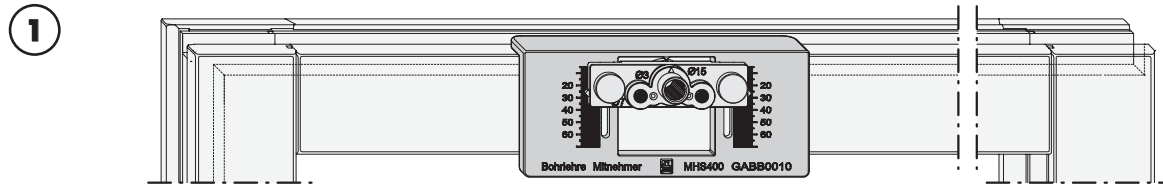


7.3 Holes and milling on the lift & slide sash

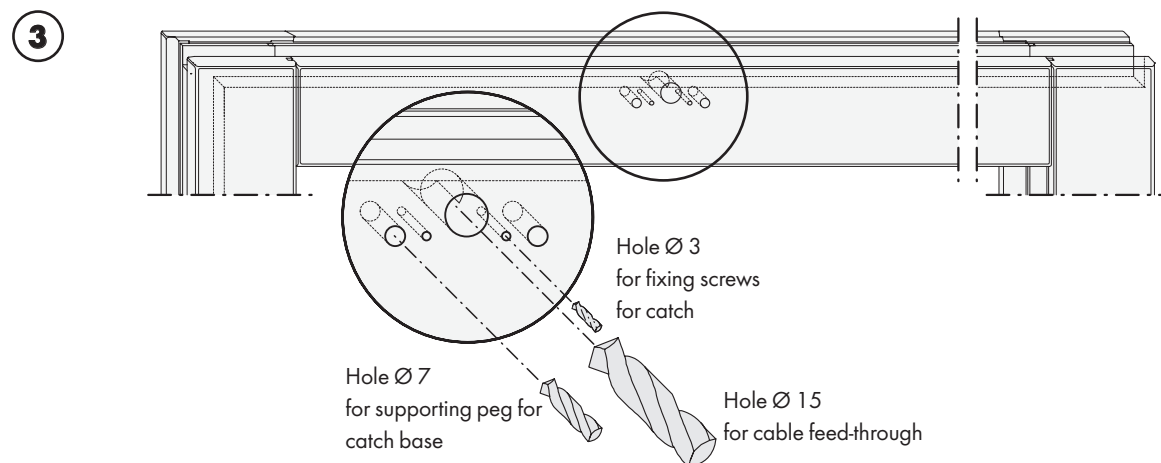
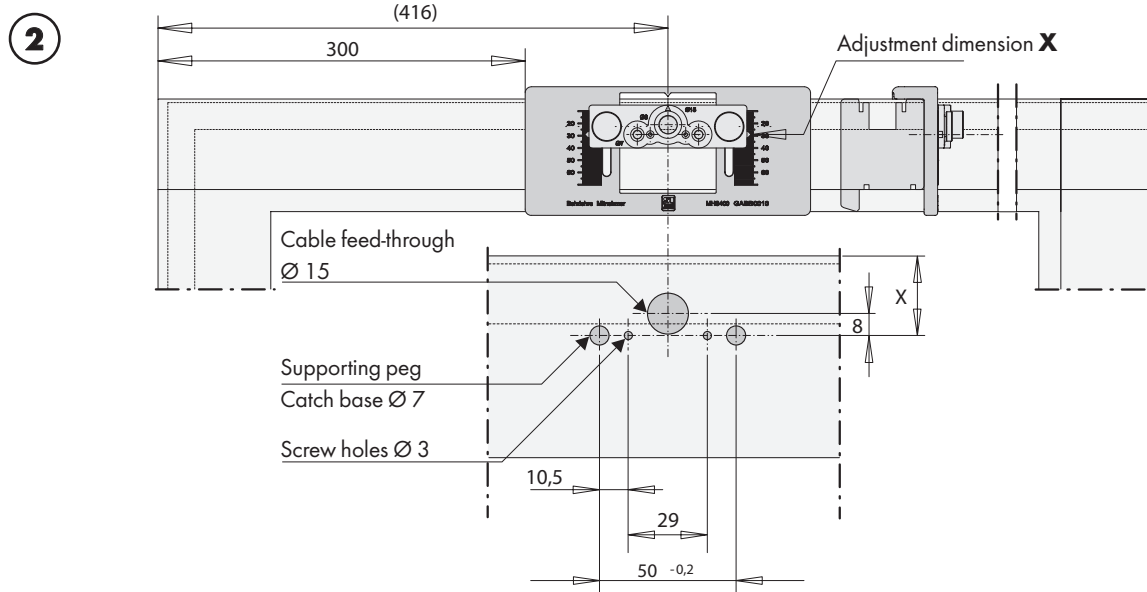
7.3.1 Positioning and setting the catch jig (accessories)

Place the jig horizontally at the top of the lift & slide sash (Fig. 1), removing existing sash sealings first. Position and set the jig in accordance with the dimensioning (Fig. 2).

Make the holes for the catch horizontally at the top, noting the drilling diameter (Fig. 3).



Positioning and drilling diameters for the holes of the catch on the lift & slide sash (Fig. for timber profile DIN left – DIN right is a mirror image)



Attention: In order for the catch to be positioned correctly on the lift & slide sash, the correct set dimension X (Fig. 2) must be used. The correct set dimension **X** for each HS profile system is listed in the installation steps for DRIVE axxent HSA smart on our download portal:

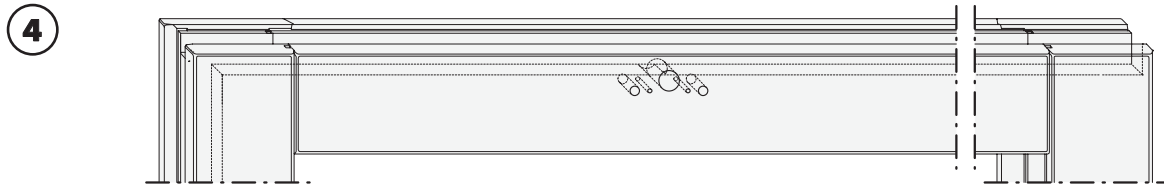
downloads.siegenia.com/de/00007/index.html

7.3.2 Through hole for cable channel in lift & slide sash

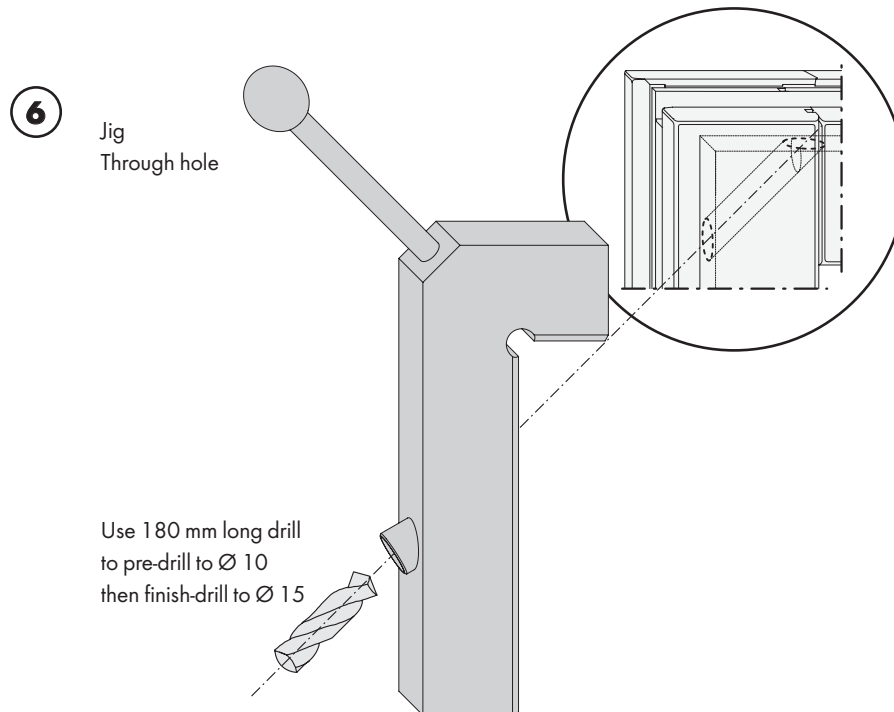
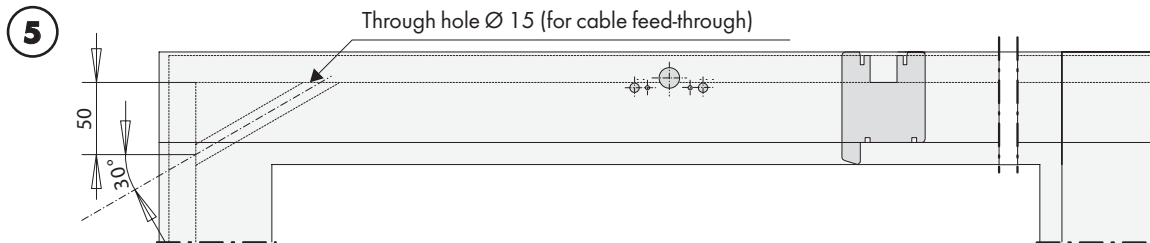
Timber elements require a through hole (Ø 15 mm) for the cable channel in the sash groove in the top corner of the lift & slide sash on the locking side. This hole is created by pre-drilling to Ø 10 mm with a drill 180 mm long and then finish-drilling to Ø 15 mm (Fig. 5 and 6).

The through hole can be drilled with the through hole jig (see Fig. 6) (see accessories, page 48).

Through holes do not have to be drilled for HS PVC and aluminium profiles. If necessary, the slider support can be machined to accommodate the cable channel

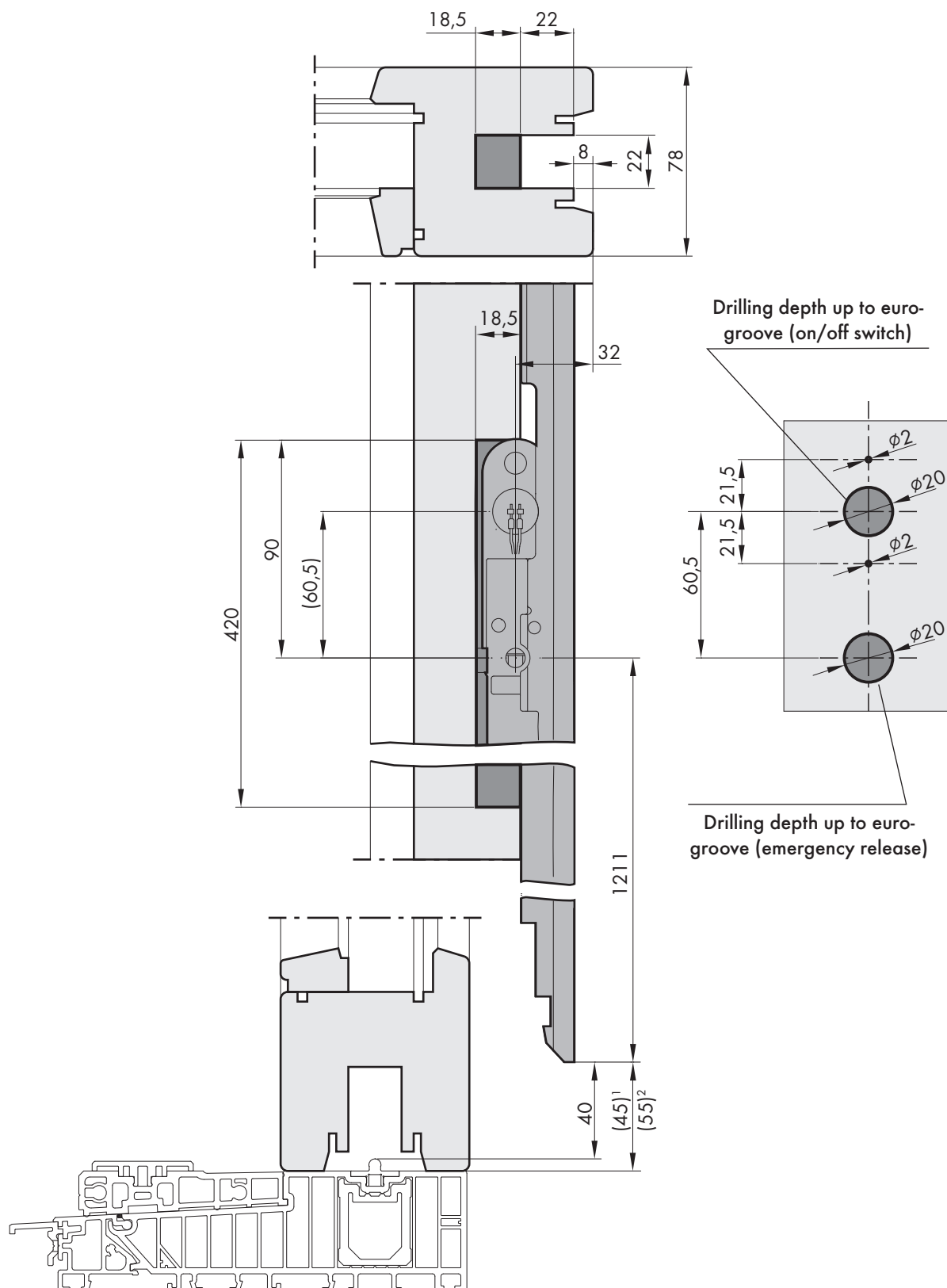


Positioning and drilling dimensions on the lift-slide sash
(Fig. for timber profile DIN left - DIN right is a mirror image)



7.3.3 Holes and milling for lift drive HA and cable feed-through

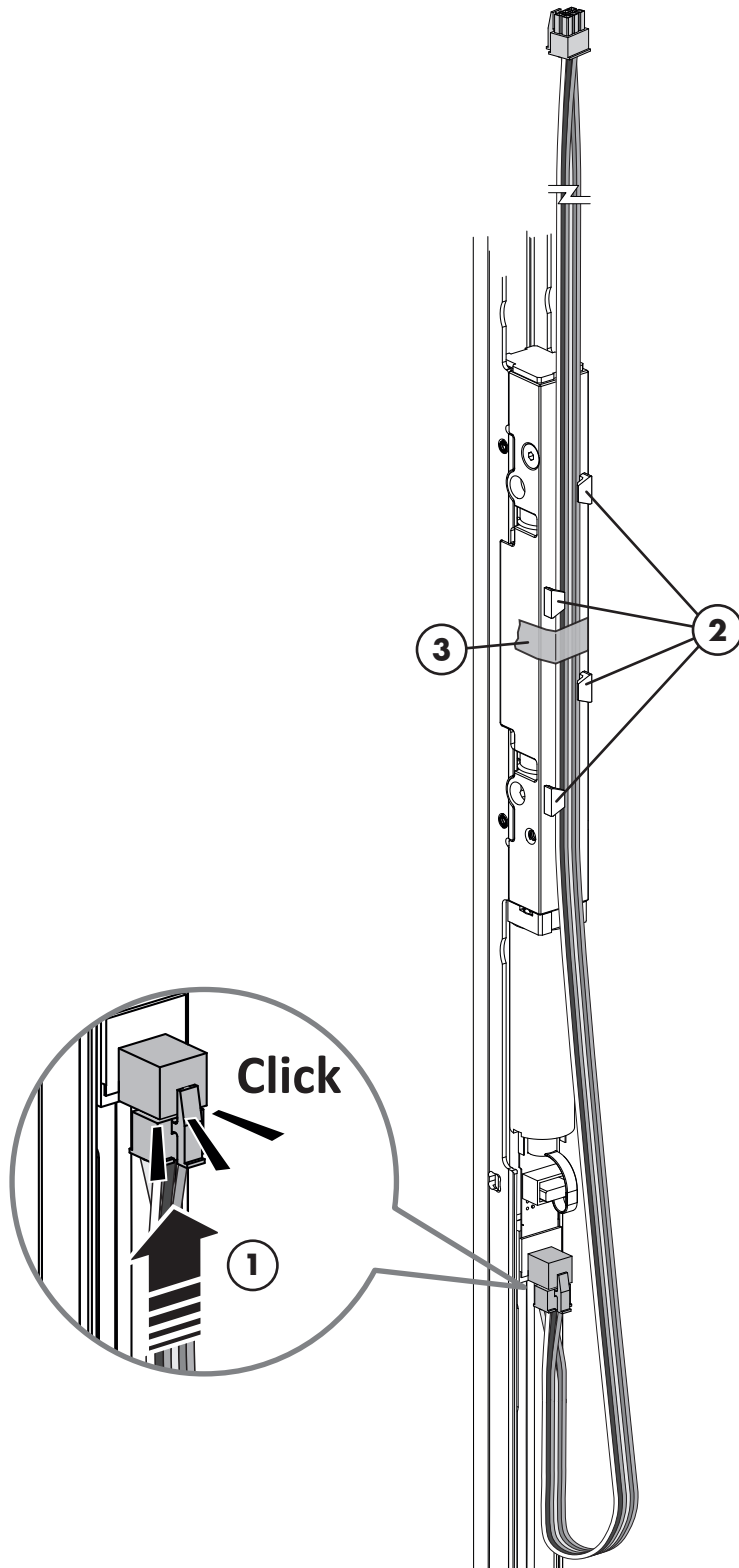
The holes can be drilled with the lift drive jig (see accessories, page 48).



7.4 Cable routing

7.4.1 Fixing the cable for lift drive HA

1. Connect the cable to the lift drive HA.
2. Thread the cable into the cable channel on the gear.
3. The cable can also be fixed with adhesive tape if necessary.

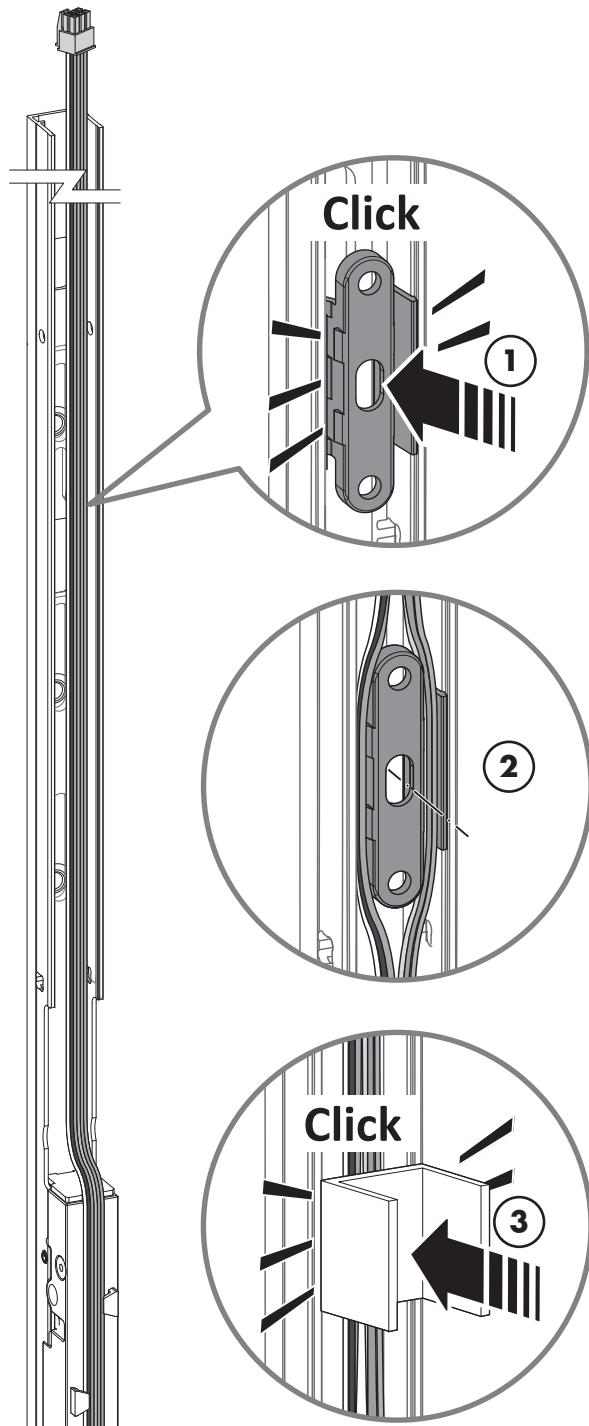


7.4.2 Threading the cable through the gear profile and fixing it with cable holders

To avoid damaging the cable, the following information must be heeded:

- Cable must be free from moving parts and must not be clamped
- Sharp edges, in particular on aluminium elements, must be deburred.

1. Clip cable holders into gear profile
2. Split the 6-wire flat ribbon cable into sections of 3 wires and push into the cable holders
Attention! The cable holders must be aligned with the screw holes and the locking bolt
3. Clip in distance pieces above and below the cable holders (only for PVC and aluminium elements).



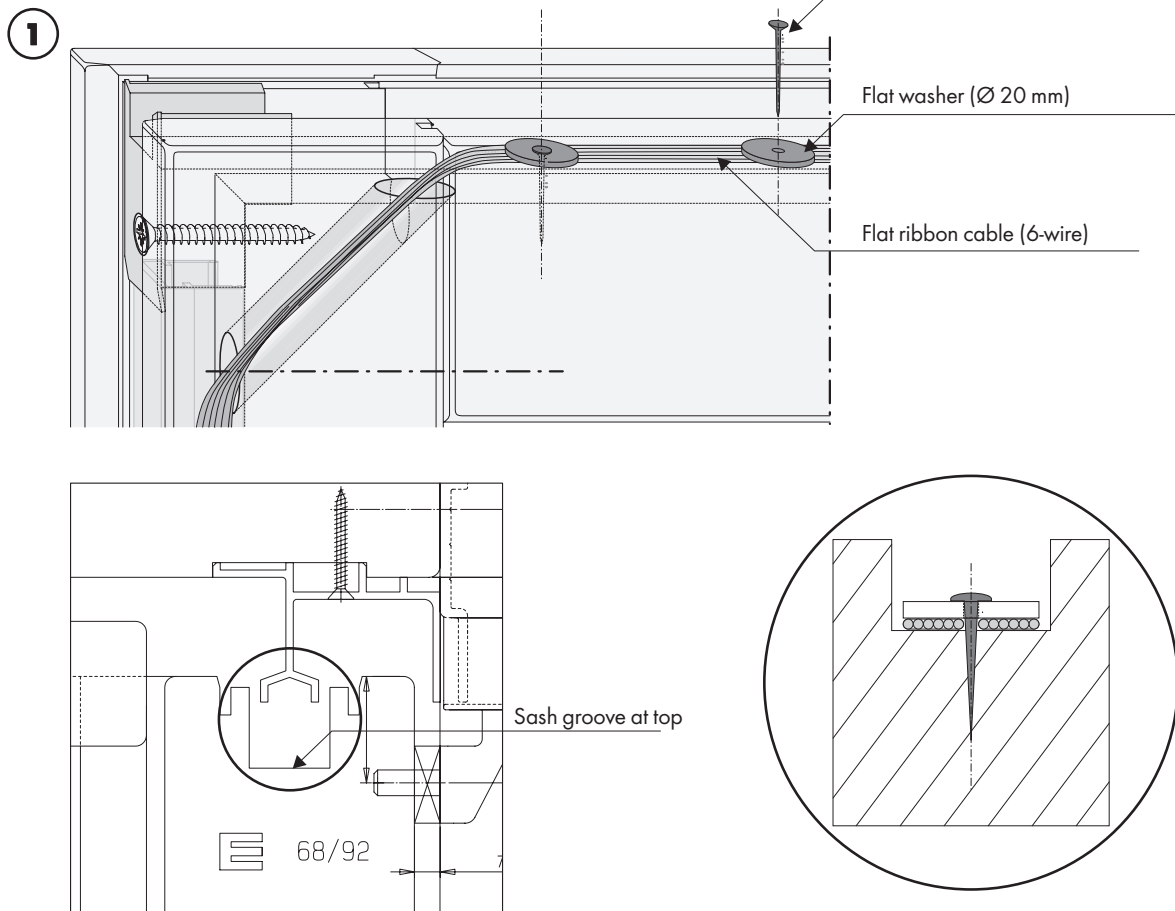
7.4.3 Preparing for cable routing in the sash groove at the top

Important note: With some profiles with guiding rail at the top, the cable holders can rub against the guiding rail when the lift & slide sash is lifted. Actions for avoiding this are described below:

Timber elements

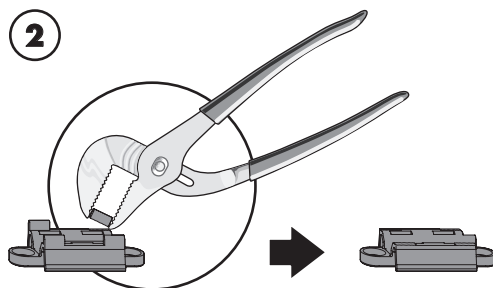
- For timber profiles with guiding rail HH 0130-01/-02, the cable can be routed through the glazing rebate.
- Alternatively, the sash groove can be milled 5 mm deeper on the horizontal sash timber at the top. The bearing surface of the guides must not be altered!
- In the case of retrofitting, flat washers (Ø 20 mm) and nails (max. 30 mm long) must be used to secure the cable in the sash groove at the top (see Fig. 1). Care must be taken to avoid damaging the wires of the cable with the nails.

Timber element with guiding rail HH 0130-01/-02



PVC elements

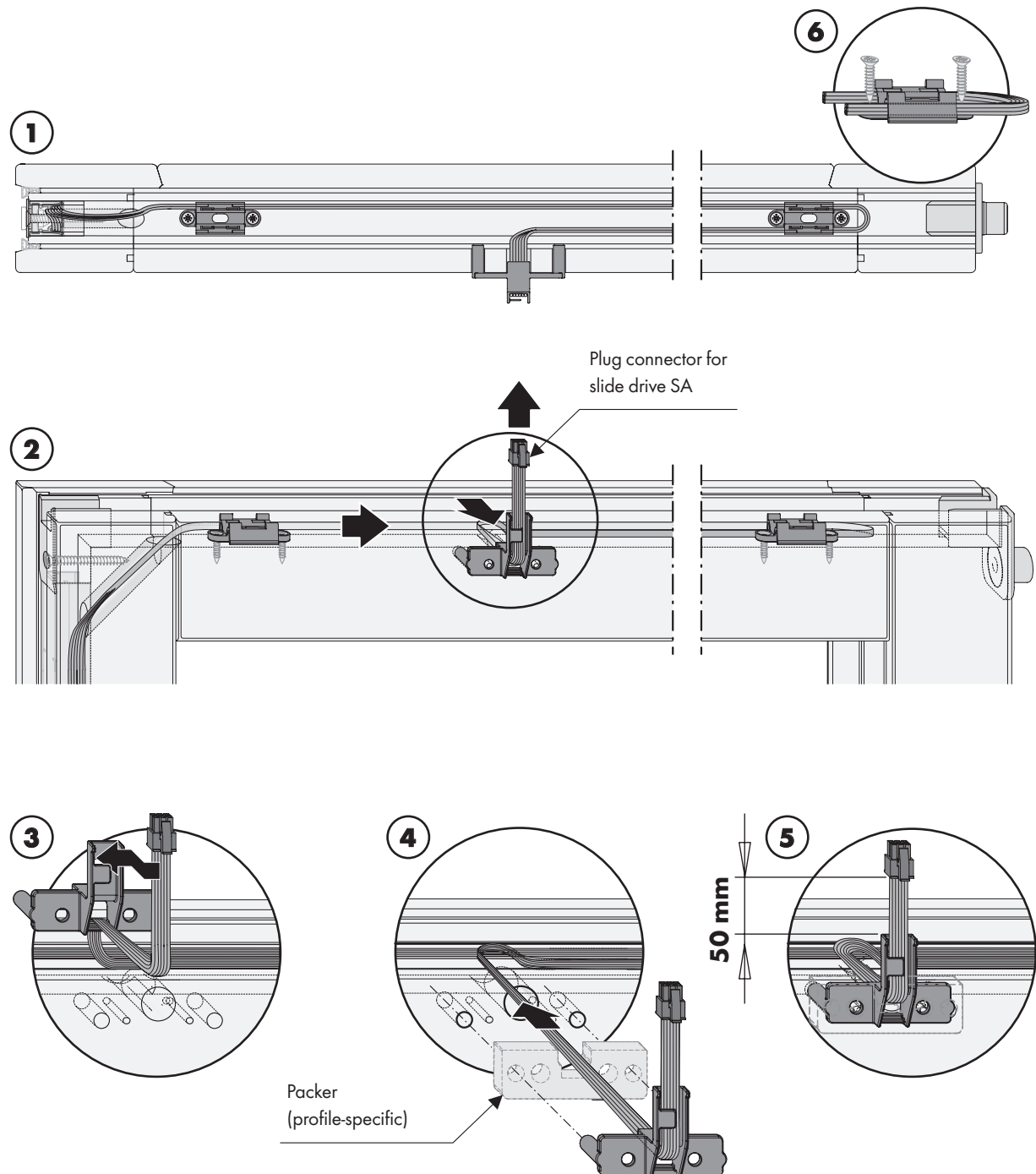
With certain PVC profiles (see Chapter 4), the webs of the cable holders must be removed (e.g. with pliers or similar, see Fig. 2)



7.4.4 Cable routing in the sash groove at the top

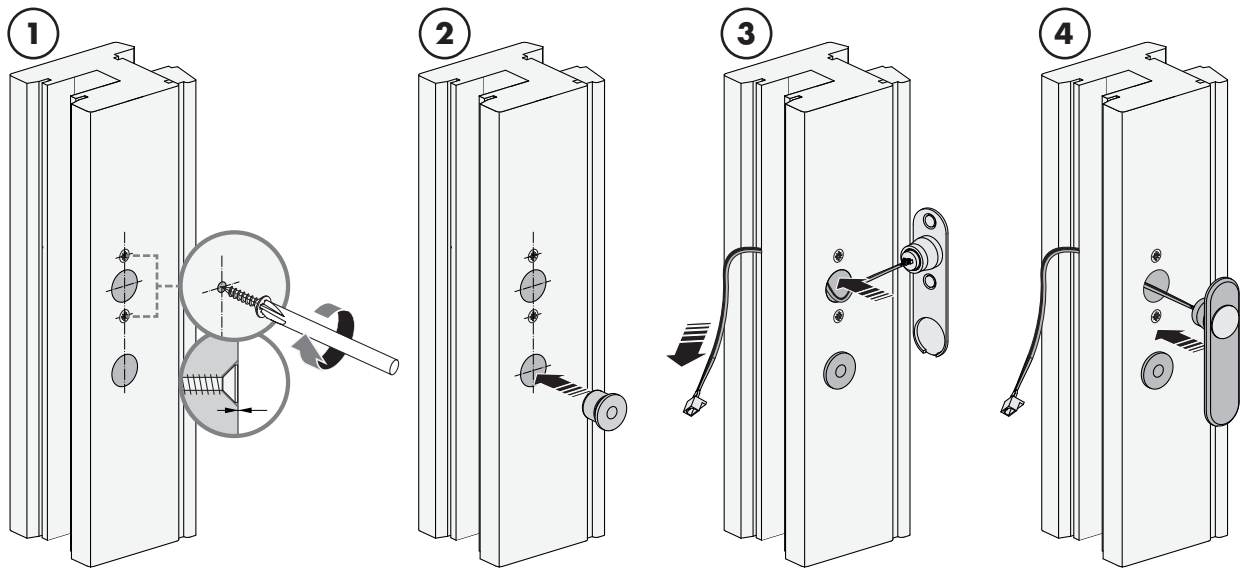
Proceed as follows when routing the cable in the lift & slide sash:

- Run the cable in the sash groove at the top as far as the cable outlet hole (Fig. 1 and 2).
- Insert the cable into the cable feed-through on the catch base (Fig. 3) and pull back as far as a length of 50 mm (Fig. 5).
- Place the catch base and if applicable the packer (depending on profile, included in scope of delivery) on the sash (Fig. 4).
- Use cable holders to secure, loop and fix the cable in the sash groove at the top (Fig. 6).
- If a central lock is being used in the HS hardware, provision may need to be made for a sufficiently dimensioned side recess for the cable channel in the sash groove at the top

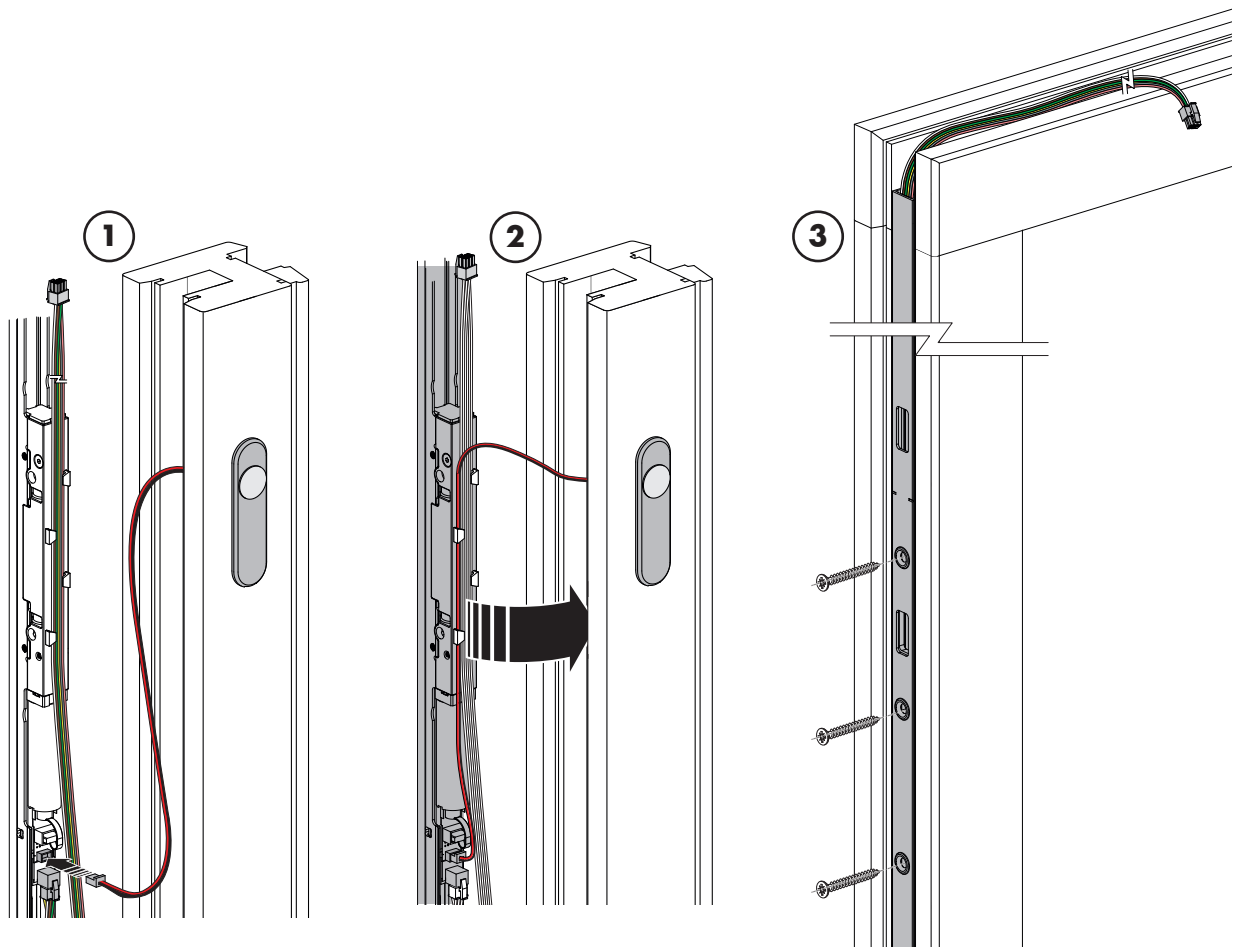


7.5 Installation of the lift drive HA

7.5.1 Installation of the button



7.5.2 Setting the gear



7.6 Installation of the slide drive SA – scheme A

7.6.1 Horizontal positioning of the slide drive SA – scheme A

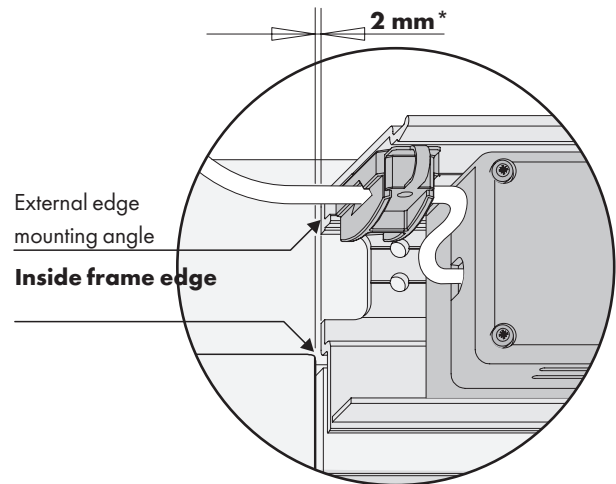
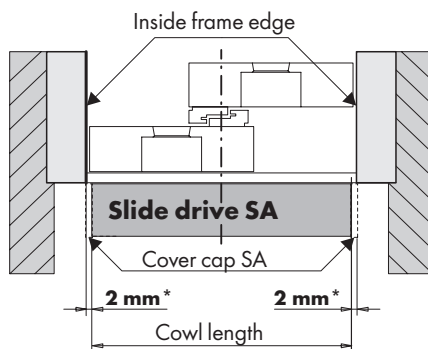
When measuring the RIB (inside frame width), take into account whether the HS frame profile is being used with or without a cover. With a cover, the inside frame edge is offset inwards and must be taken into account when measuring the RIB. The offset specified here of 2 mm* corresponds to the material thickness of the side cover cap SA.

Option A – HS frame profile without cover

Position slide drive SA offset from inside frame edge by 2 mm* (see Fig. A)

A

Fig. for positioning DIN left (DIN right is a mirror image)

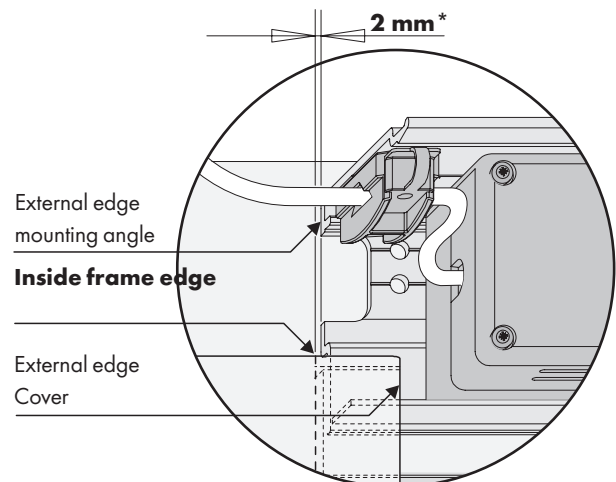
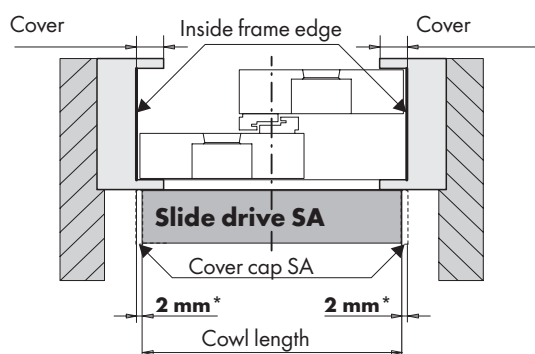


Option B – HS frame profile with cover

On a HS frame profile with cover, the inside frame edge is not visible through the cover. The slide drive SA must be positioned offset from the inside frame edge by 2 mm* (see Fig. B). To achieve this, the distance from the inside frame edge to the external edge of the cover must be measured out before positioning the slide drive SA.

B

Fig. for positioning DIN left (DIN right is a mirror image)

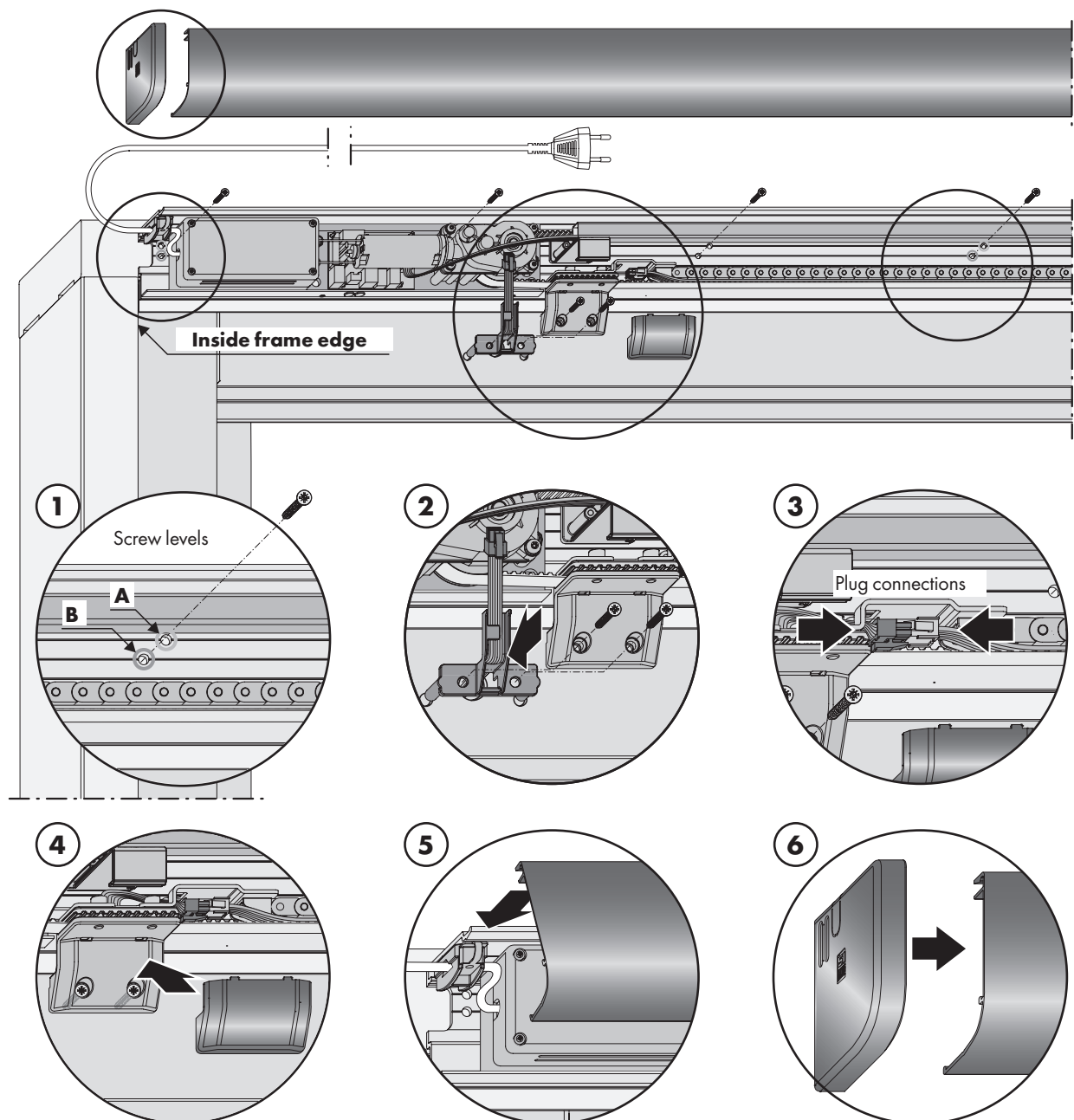


7.6.2 Vertical positioning and fixing of the slide drive SA – scheme A

Two screw levels (A or B) are provided to fix the slide drive SA to the top of the HS frame profile. You will find specific steps for installation of the DRIVE axxent HSA smart on our download portal:

downloads.siegenia.com/de/00007/index.html

1. Fixing the slide drive SA to the mounting angle at screw level A or B.
2. Set the catch down on the catch base and screw on with suitable screws
3. Connect the sash cable (flat ribbon cable, 6-wire) and cable energy supply chain with the plug socket. Do not crush the cable.
4. Attach the cover cap for the catch.
5. Attach the cover profile SA to the mounting angle.
6. Push the right-hand and left-hand cover caps SA onto the cover profile SA



7.7 Concealed mains cable running and connection – scheme A

Concealed routing and connection in the power supply for slide drive SA – scheme A

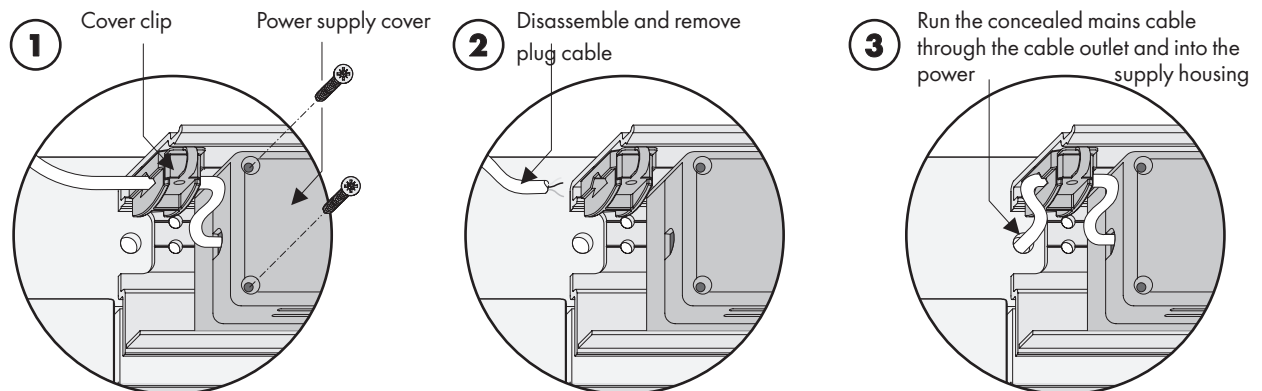
Important note: If the customer is responsible for routing the flexible mains cable (5 x 1.5 mm²) for the slide drive SA and the connection in the power supply of the slide drive SA, this work must be carried out by a qualified electrician.

⚠ WARNING Risk of overheating! Risk of electrical shock!

- Prior to installation, you must disconnect the mains cable from the AC mains power supply or disconnect the mains fuses.

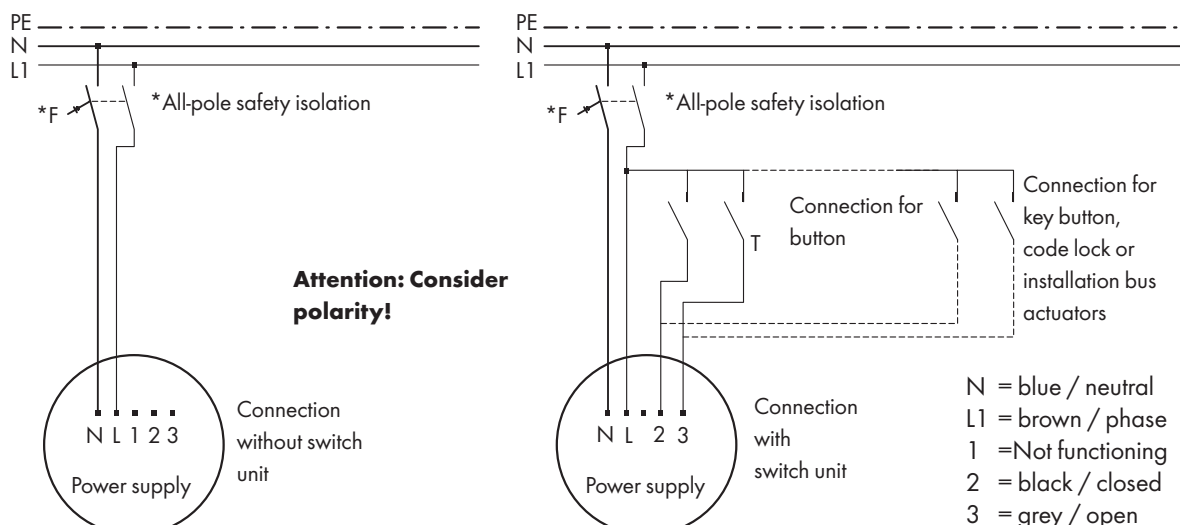
With concealed mains cable running and for control using a wall or key switch (not included in scope of delivery), the cable must be connected in the power supply of the slide drive SA.

1. Unscrew the fixing screws on the power supply cover and remove the power supply cover.
2. Disassemble and remove the plug cable that comes standard in the power supply.
3. Run the concealed mains cable through the cable outlet in the mounting angle and into the power supply housing; the jacket on the mains cable must extend into the power supply housing. The mains cable must be isolated inside the power supply housing:



Wiring diagram – scheme A

- All-pole safety isolation is essential.
- Connect the cable inside the power supply according to the wiring diagram.
- Reattach the power supply cover using the fixing screws

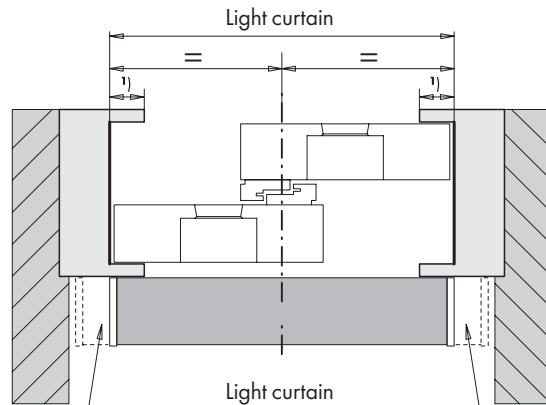


7.8 Installation of the light curtain – scheme A

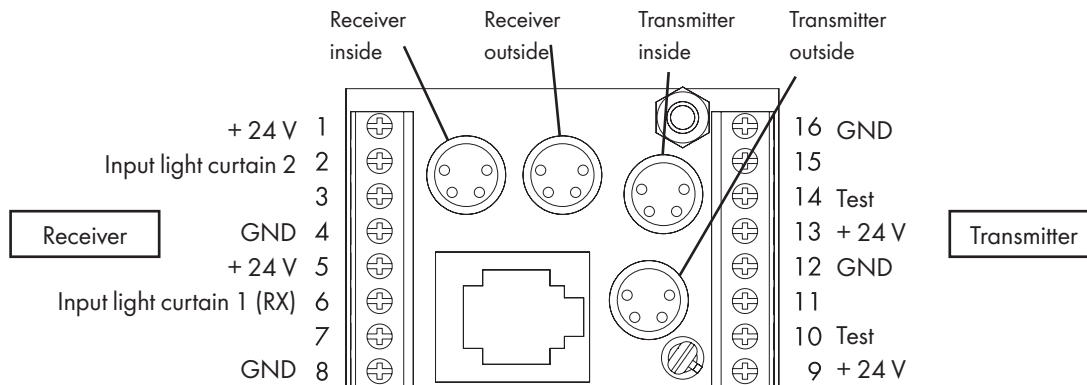
Alterations must be made to the DRIVE axxent HSA smart in order to operate it with a light curtain

The suitable light curtain can be ordered from:

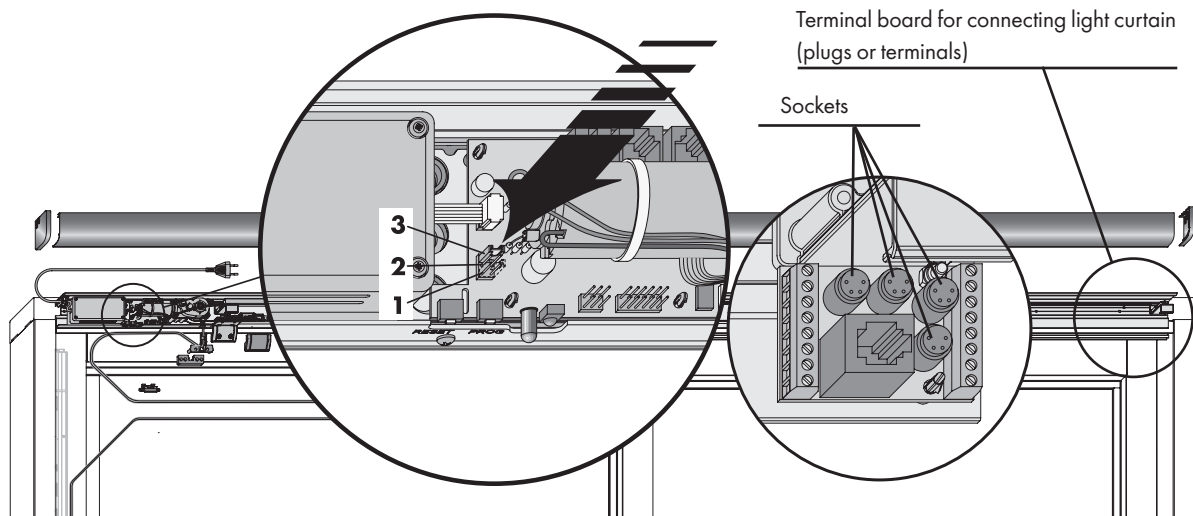
CEDES GmbH
Elektronische Systeme
Elzmatten 6
D-79365 Reinhausen



Terminal board for connecting light curtain (plugs or terminals)



On the slide drive SA, a jumper must be switched for operation with a light curtain.



Jumper position 3 = operation with light curtain

Jumper position 2 = operation in normal mode without light curtain

Jumper position 1 = operation with reduced traverse speed

7.9 Installation of the slide drive SA – scheme C

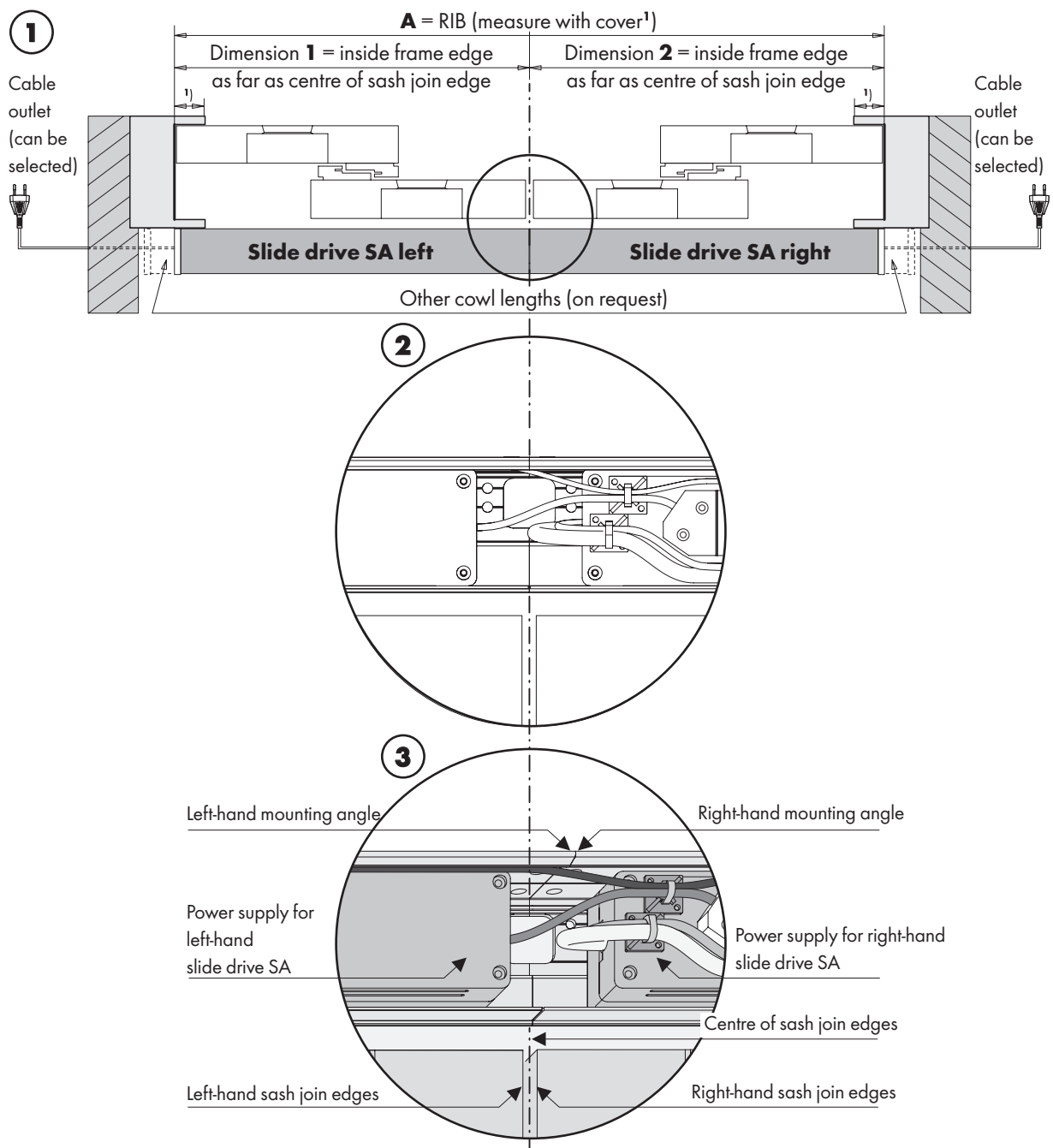
7.9.1 Horizontal positioning of the slide drive SA – scheme C

Both slide drives must be assembled dead centre between the two sash join edges. The two mounting angles must be positioned next to each other (Fig. 2 and 3). The two power supplies are then located inside, one opposite the other.

Checking the inside frame width (RIB) – scheme C

When measuring the RIB (inside frame width), take into account whether a HS frame profile is being used with or without a cover. With a cover, the inside frame edge is offset inwards and must be taken into account when measuring the RIB. Each RIB must be calculated individually, for the left-hand slide drive SA (dimension **1**) and the right-hand slide drive SA (dimension **2**).

To check that the measurement has been taken correctly, measure the total RIB (dimension **A**). The dimension **A** must match the total resulting from adding RIB dimension **1** to RIB dimension **2** (Fig. 1).

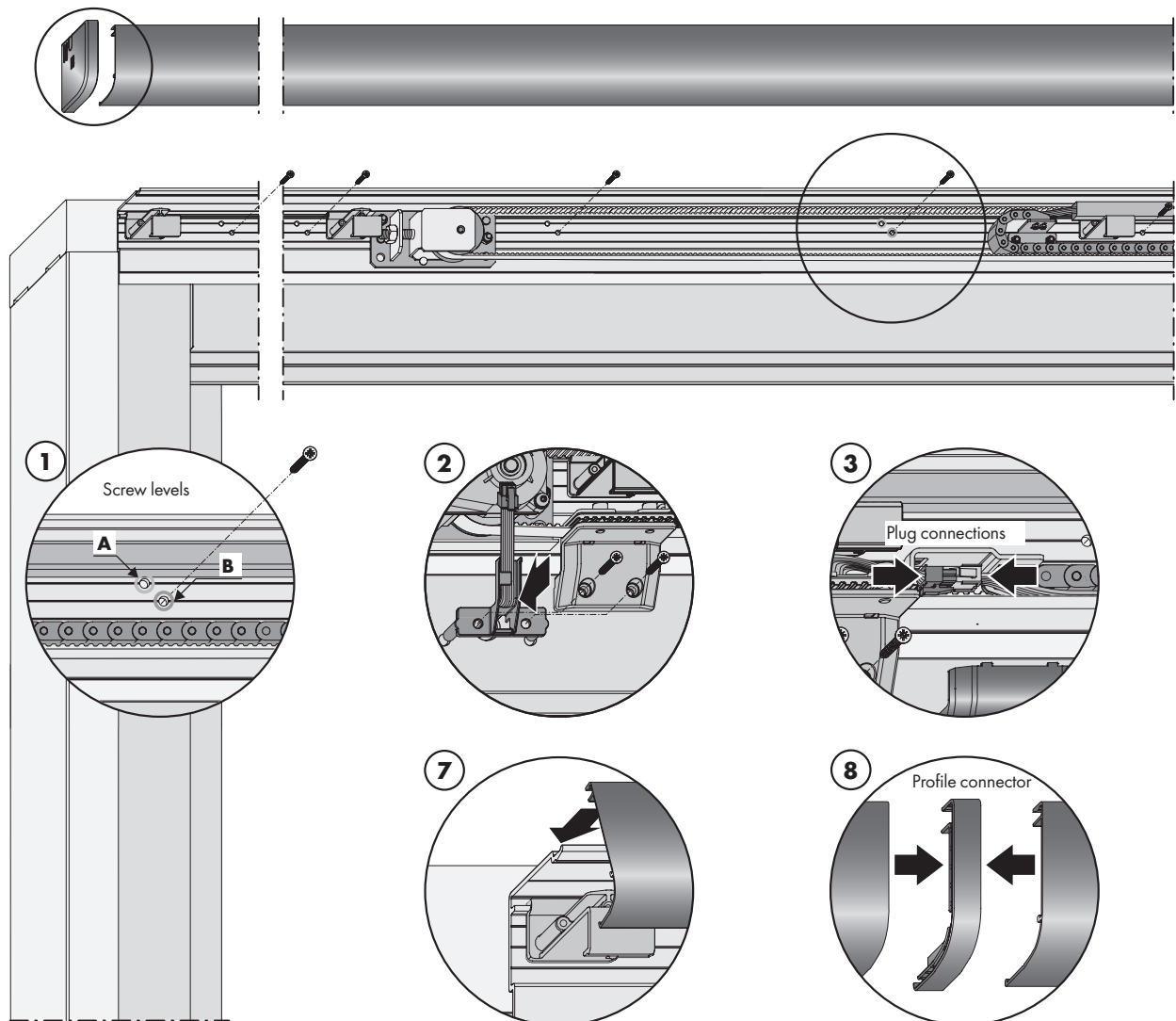


7.9.2 Vertical positioning and fixing of the slide drive SA – scheme C

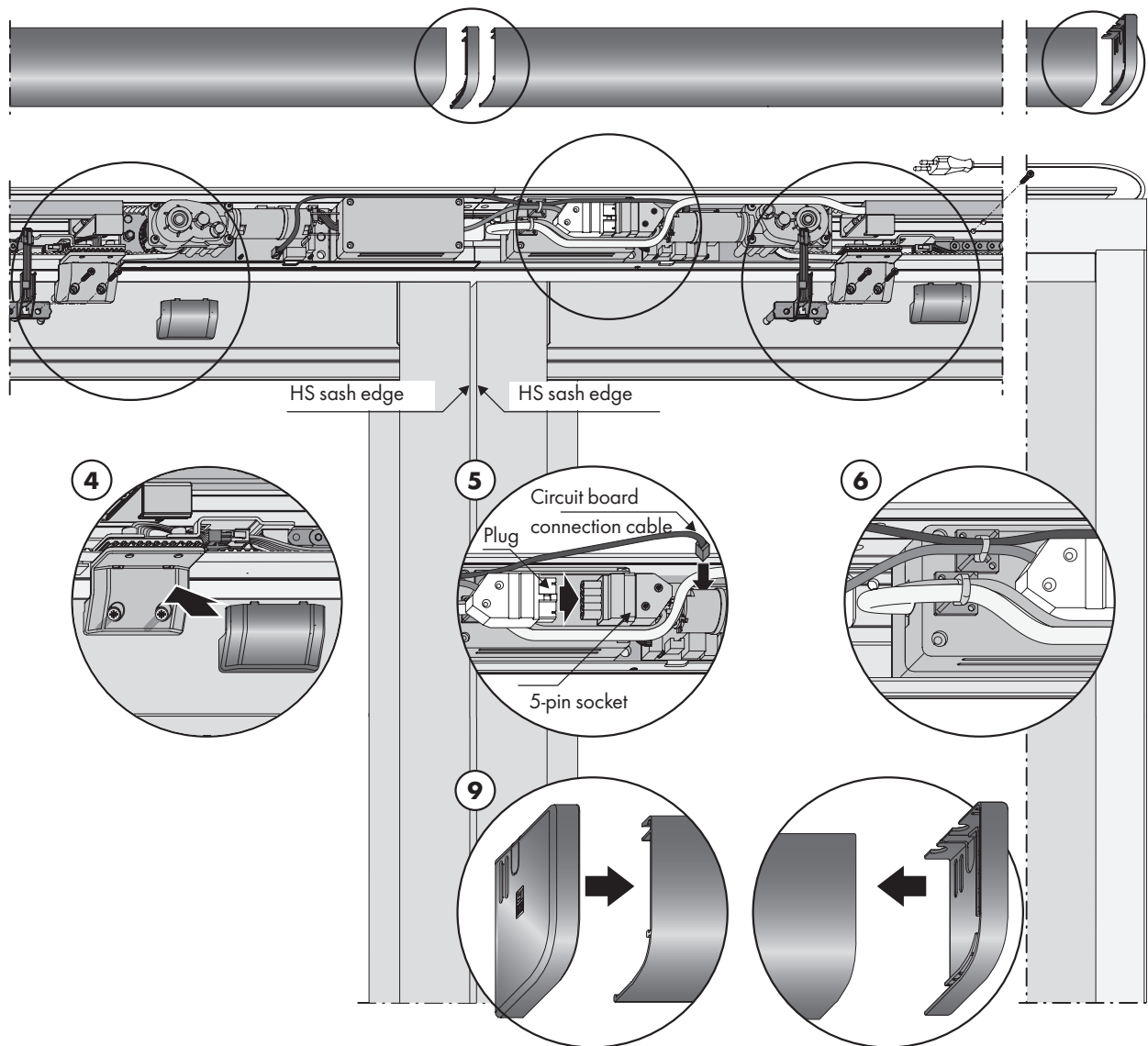
Drilling holes on two screw levels (A or B) are provided to fix the slide drive SA to the top of the HS frame profile. The slide drive is positioned and screwed on as appropriate for the installation location of the HS profile system concerned. You will find specific steps for installation of the DRIVE axxent HSA smart on our download portal:

downloads.siegenia.com/de/00007/index.html

1. Fixing the slide drives SA to the mounting angle at screw level A or B.
2. Set the catch down on the catch base and screw on with suitable screws.
3. Connect the sash cable (flat ribbon cable, 6-wire) and cable energy supply chain with the plug socket. Do not crush the cable



4. Attach the cover cap for the catch.
5. Connect the plug to the 5-pin socket and plug the connection cable (4-pin) into the circuit board.
6. Use cable binders to fix the cable to the power supply housing
7. Attach the cover profile SA to the mounting angle.
8. Use profile connectors to connect the cover profiles on the left and right at and above total length of 7000 mm.
Press down on the cover profiles so that they snap in on the mounting angle.
9. Push the right-hand and left-hand cover caps SA onto the cover profile SA



7.10 Concealed mains cable running and connection – scheme C

Concealed routing and connection in the power supply for slide drive SA – scheme C

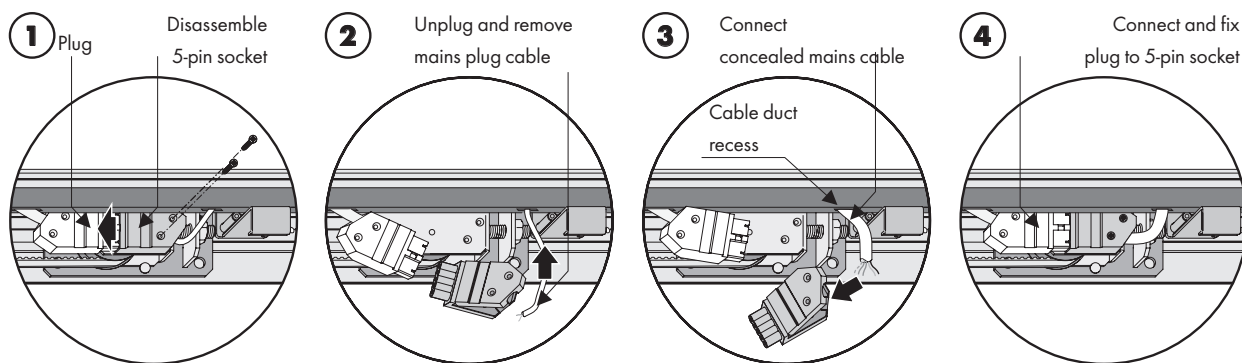
Important note: If the customer is responsible for routing the flexible mains cable ($5 \times 1.5 \text{ mm}^2$) for the slide drive SA and the connection in the power supply of the slide drive SA, this work must be carried out by a qualified electrician.

⚠ WARNING Risk of overheating! Risk of electrical shock!

- › Prior to installation, you must disconnect the mains cable from the AC mains power supply or disconnect the mains fuses.

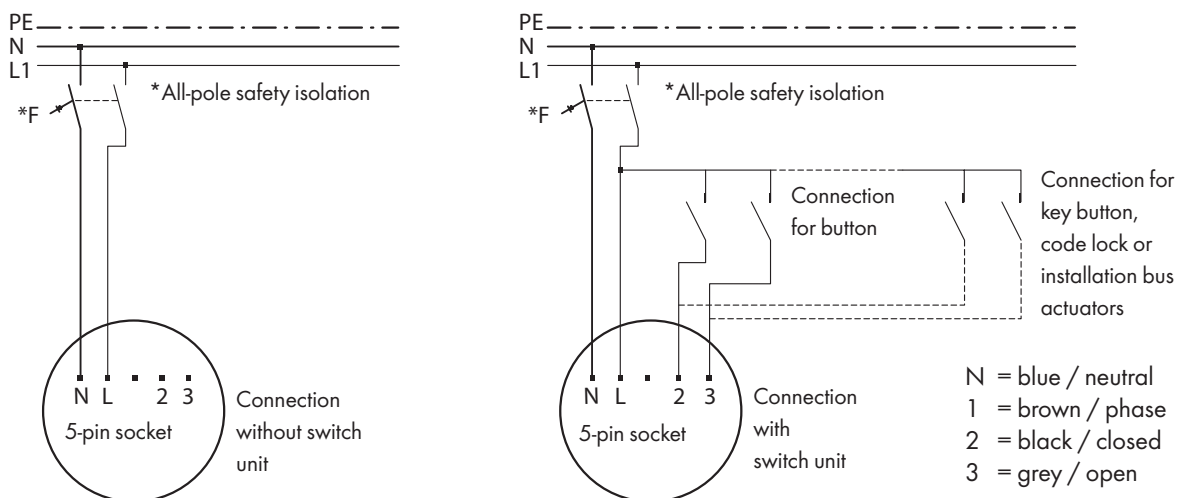
With concealed mains cable running and for control using a wall or key switch (not included in scope of delivery), the cable must be connected in the 5-pin socket of the slide drive SA.

1. Unscrew the fixing screws on the 5-pin socket and pull out the plug.
2. Unplug and remove the 2-wire mains plug cable that comes as standard in the power supply.
3. Route the concealed mains cable through the open cable duct (clips open and shut) and cable duct recess into the 5-pin socket. The isolated part of the mains cable must be located inside the 5-pin socket:



Wiring diagram – scheme C

- All-pole safety isolation is essential.
- Connect the cable inside the 5-pin socket according to the wiring diagram.
- Connect the plug to the 5-pin socket and reattach using the fixing screws (Fig. 4)

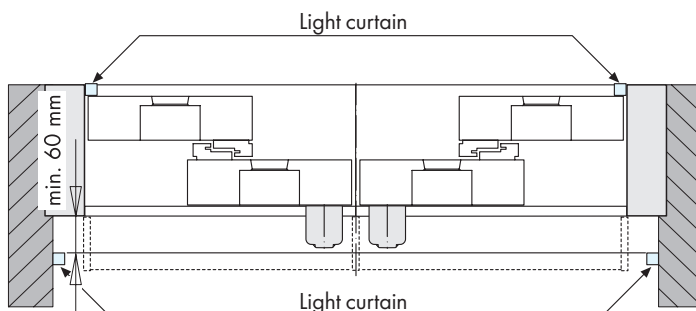


7.11 Installation of the light curtain – scheme C

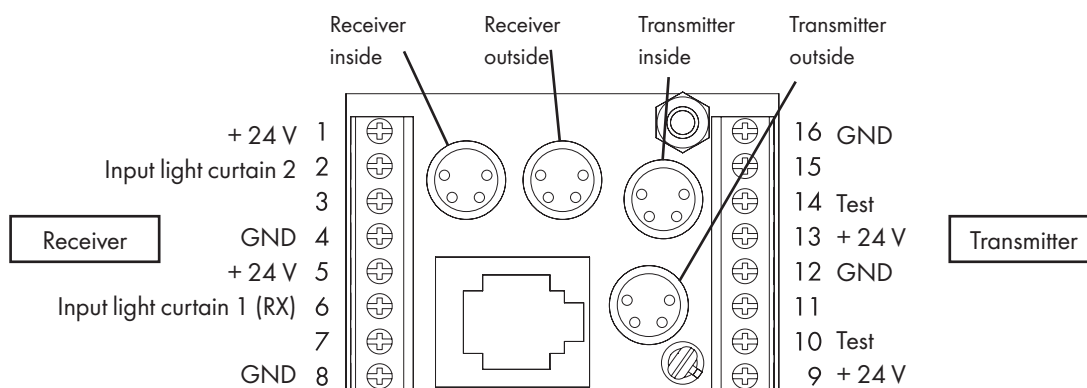
Alterations must be made to the DRIVE axxent HSA smart in order to operate it with a light curtain

The suitable light curtain can be ordered from:

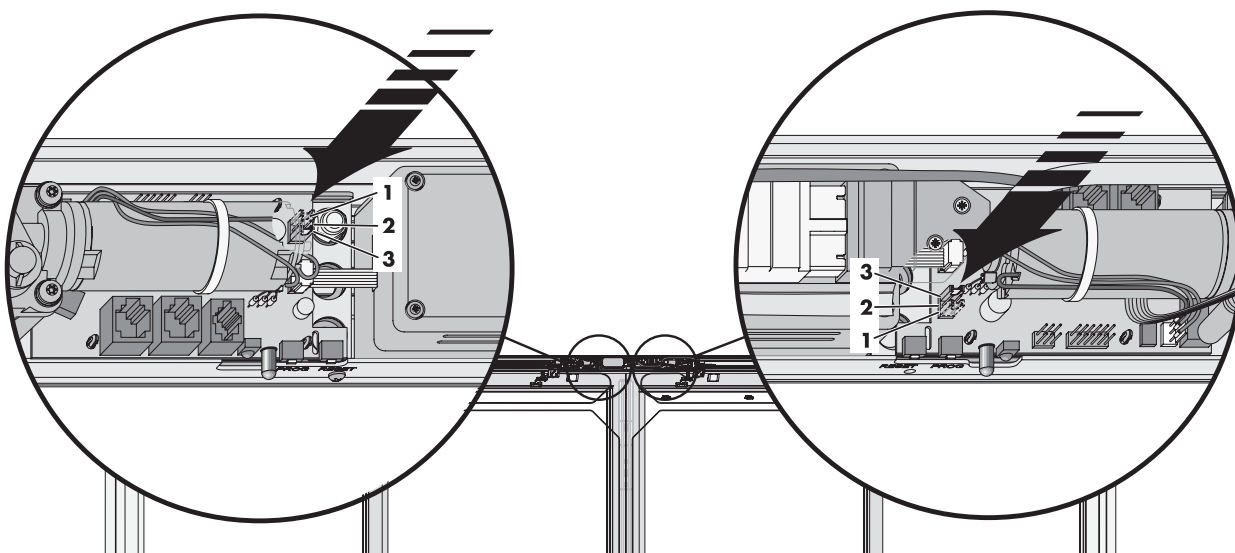
CEDES GmbH
Elektronische Systeme
Elzmatten 6
D-79365 Reinhausen



Terminal board for connecting light curtain (plugs or terminals)



On the slide drive SA, a jumper must be switched for operation with a light curtain.



Jumper position 3 = operation with light curtain

Jumper position 2 = operation in normal mode without light curtain

Jumper position 1 = operation with reduced traverse speed

7.12 Completing the installation

Checking the functionality of the HS element manually with the DRIVE axxent HSA smart system installed

So that friction and resistance can be identified during manual operation of the lift & slide sash, the slide drive should be decoupled from the sash. To do this, simply release the catch on the slide drive SA from the catch base on the lift & slide sash and pull out the plug of the connection cable for the lift drive HA in the slide drive SA.

Possible causes of malfunctions affecting the DRIVE axxent HSA smart

- Changes to the HS element following assembly of the DRIVE axxent HSA smart (e.g. changes to stoppers, end pieces, etc.)
- Seals on HS element too stiff or not fitted correctly
- Seal lip is rubbing against the guiding rail
- During travel, the cable holders in the sash groove at the top are rubbing against the guiding rail
- The front and rear guides at the top are not positioned correctly in the sash groove (e.g. installed too high up)
- The HS element has been installed warped and/or at an angle or not vertically plumb in the reveal
- Threshold not aligned precisely horizontally
- Heavy soiling on or significant damage to the running rail
- Thermal characteristics of the material not taken into account (e.g. continuous exposure to direct sunlight, dark shade of the HS element components)
- HS element not glazed or wedged properly

The causes should be remedied by qualified professionals taking the appropriate actions.

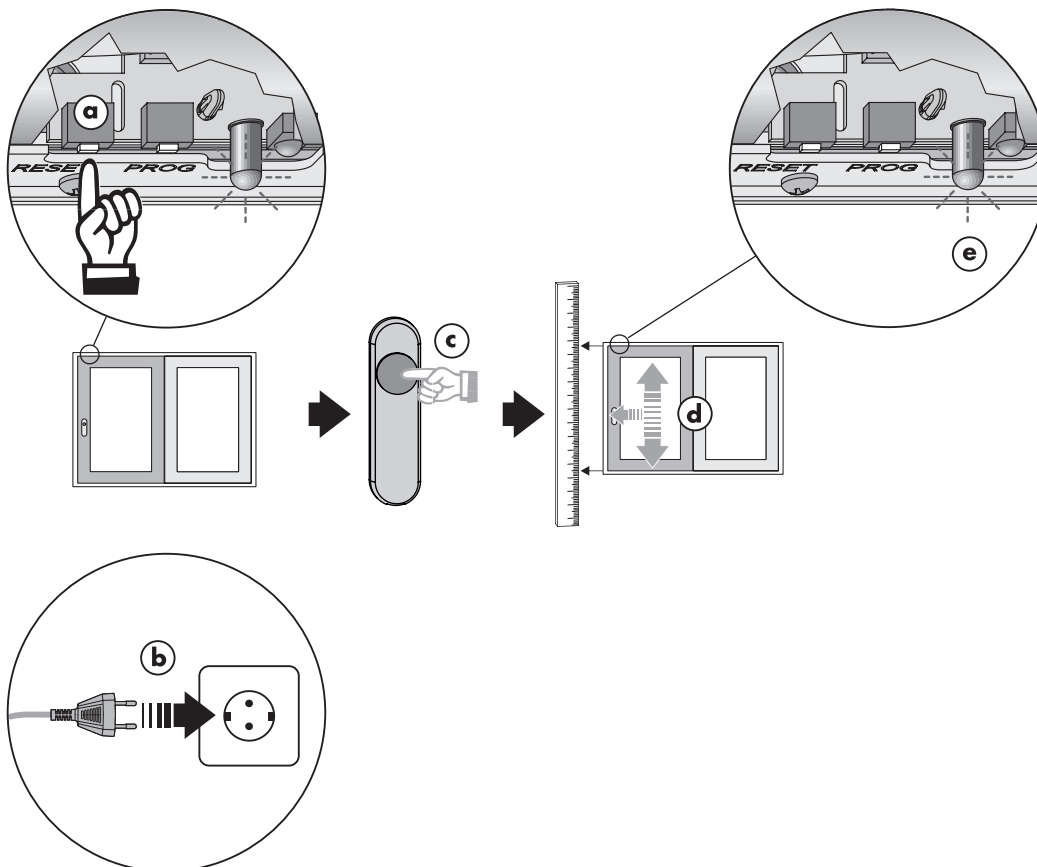
8. Commissioning – scheme A

8.1 General information for commissioning

- Following installation of the DRIVE axxent HSA smart (initial commissioning), you must carry out a reference run as well as a calibration and teach-in run.
- The reference run, as well as the calibration and teach-in run help to determine the size of the lift and slide element and the displacement force.
- The reference run must be performed again in the event of a power failure. The calibration and teach-in run only has to be performed when commissioning the equipment.
- Any tasks relating to commissioning may only be completed by qualified professionals.

8.2 Reference run

1. Press reset button **(a)** or break the electric circuit and then reconnect the power supply **(b)**
2. Move lift & slide sash into “Close” position (manually if necessary)
3. Press button on the lift drive **(c)**
4. The lift & slide sash is automatically lowered, lifted and lowered/locked during the reference run **(d)**.
Note: The LED flashes red during the reference run **(e)**.
5. The LED goes out after the reference run has been completed and the “Lock” position has been reached.



8.3 Calibration and teach-in run

⚠ WARNING

**Risk of injury! Hands, arms, legs and feet can get trapped and/or crushed!
There is no safety cut-off function!**

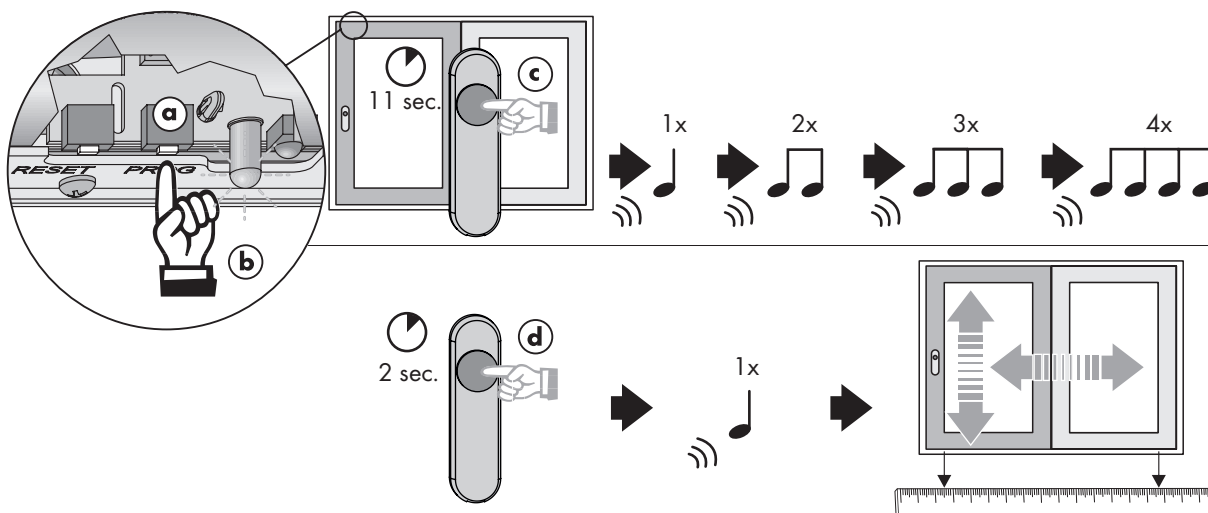
- › During the calibration and teach-in run, maintain a safe distance from the moving elements.

⚠ WARNING

Risk due to incorrect measured values!

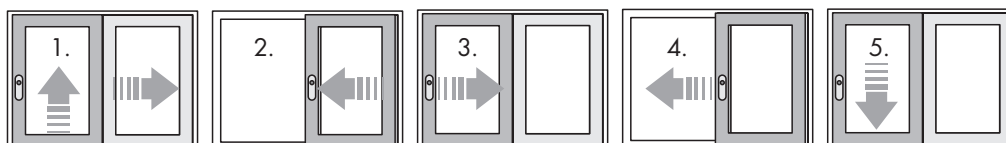
- › To prevent incorrect measured values, never interrupt or interfere with the calibration and teach-in run of the DRIVE axxent HSA smart system!

1. Move lift & slide sash into "Close" position (manually if necessary)
2. Press the "PROG" button (a)
Note: The LED flashes green (b).
3. Press the button on the lift drive for 11 seconds (c)
Note: While the button is pressed, the following tones sound in succession:
1 short alarm signal, 2 short alarm signals, 3 short alarm signals, 4 short alarm signals. Then release the button.
4. Press the button on the lift drive for 2 seconds (d)
Note: While the button is pressed, 1 short alarm signal is sounded. Then release the button.

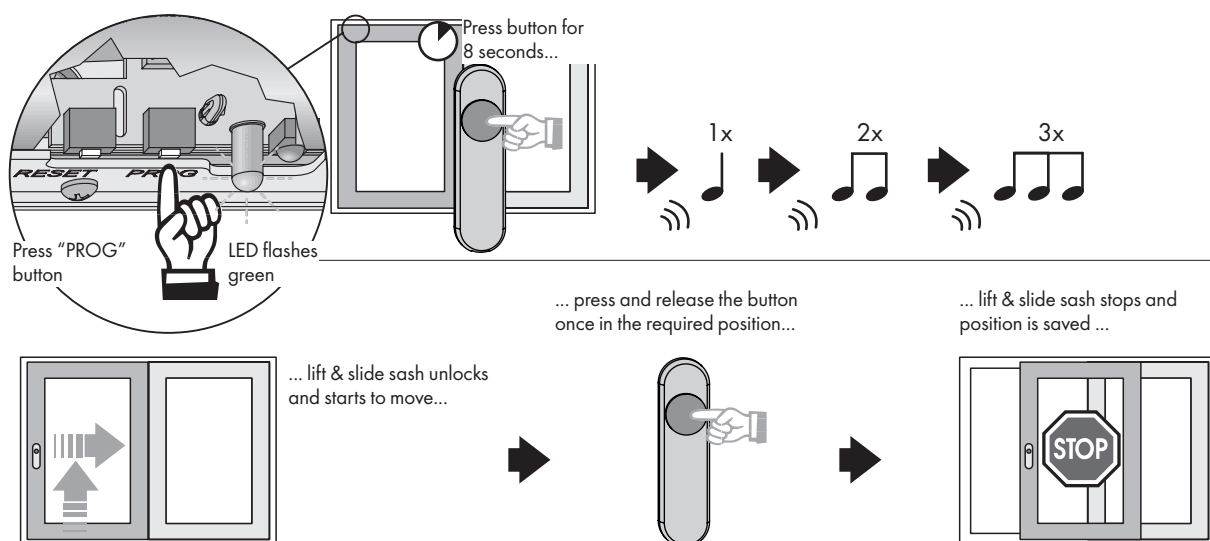
**Positions of the calibration and teach-in run**

1. The lift & slide sash unlocks and moves as far as the end position stop.
2. The lift & slide sash moves back to the "Close" position
3. The lift & slide sash moves as far as the end position stop again
4. The lift & slide sash moves back to the "Close" position again
5. The lift & slide sash locks

Note: The LED flashes red during the calibration and teach-in run.



9. Teaching in the intermediate stop – Scheme A

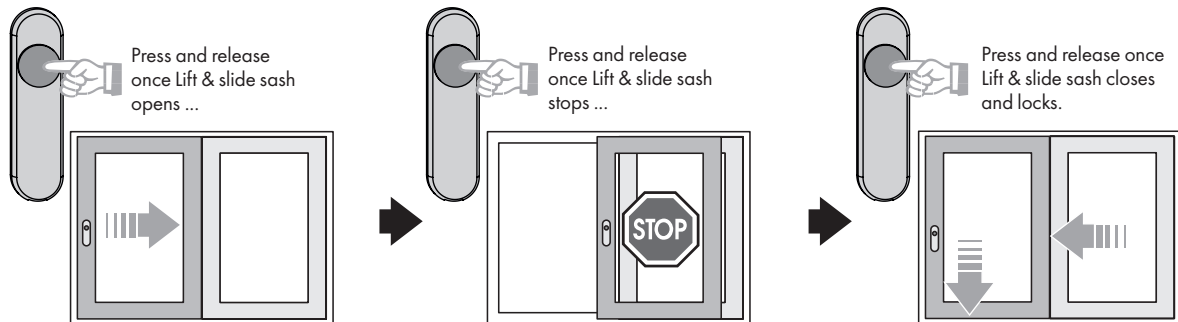


10. Operation – scheme A

10.1 “Open” - “Stop” - “Lock” operation

Every time the button is pressed, the function switches between “Open” - “Stop” - “Lock”.

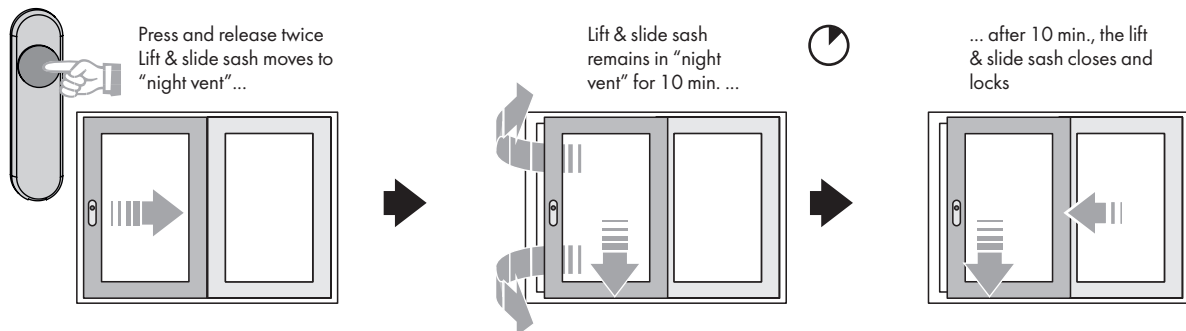
Note: The LED lights up green when opening. The LED lights up red when closing and locking.



10.2 10-min. night vent position

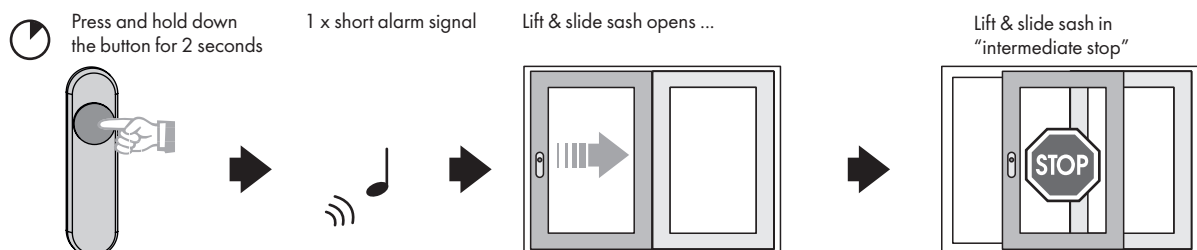
The lift & slide sash moves to the night vent position and lowers. After 10 minutes, the lift & slide sash automatically closes again and locks.

Note: The LED flashes green during night ventilation.



10.3 Intermediate stop (limited opening width)

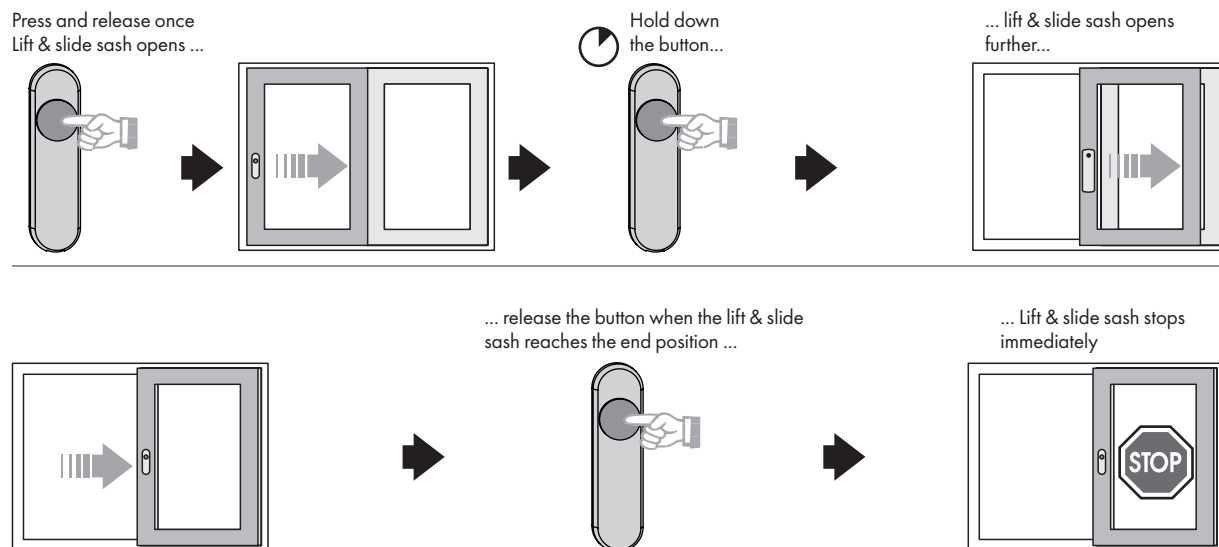
The lift & slide sash moves to a taught-in intermediate stop (see page 35).



10.4 Special function "Opening as far as the end position" (stop)

For safety reasons, the lift & slide sash does not open fully in normal motor-powered operation.

To move the lift & slide sash to its absolute end position (as far as the stop), it can be pushed open manually or moved to the end position by pressing the button on the lift drive. The lift & slide sash must be in the "Open" position.



Note: Not required for version with optional terminal board for light curtain. On the version with light curtain, the lift & slide sash is always opened as far as the end position.


11. Commissioning – scheme C

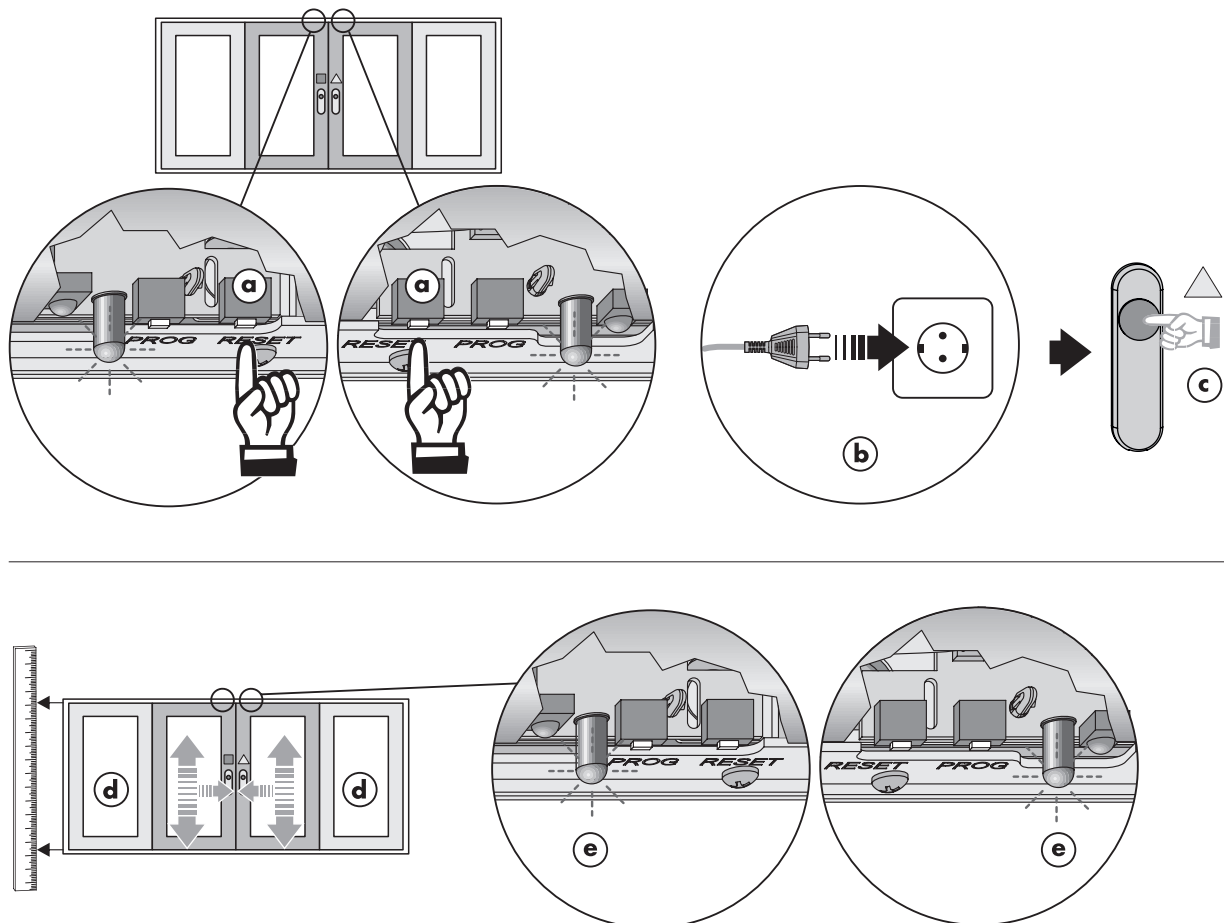
11.1 General information for commissioning

- Following installation of the DRIVE axxent HSA smart (initial commissioning), you must carry out a reference run as well as a calibration and teach-in run.
- The reference run, as well as the calibration and teach-in run help to determine the size of the lift and slide element and the displacement force.
- The reference run must be performed again in the event of a power failure. The calibration and teach-in run only has to be performed when commissioning the equipment.
- Any tasks relating to commissioning may only be completed by qualified professionals.

11.2 Reference run

With scheme C, a distinction is made between the primary sash  (initial opening sash) and the secondary sash  (locking bolt or hook bolt on locking side).

1. Press both reset buttons **(a)** or break the electric circuit and then reconnect the power supply **(b)**
2. Move both lift & slide sashes into "Close" position (manually if necessary)
3. Press button on the lift drive of the secondary sash  **(c)**
4. The lift & slide sashes are automatically lowered, lifted and lowered/locked during the reference run **(d)**.
Note: Both LEDs flash red during the reference run **(e)**.
5. Both LEDs go out after the reference run has been completed and the "Lock" position has been reached.





11.3 Calibration and teach-in run

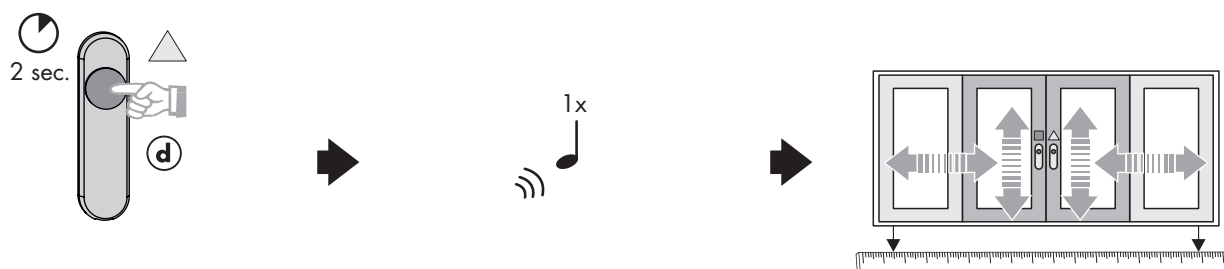
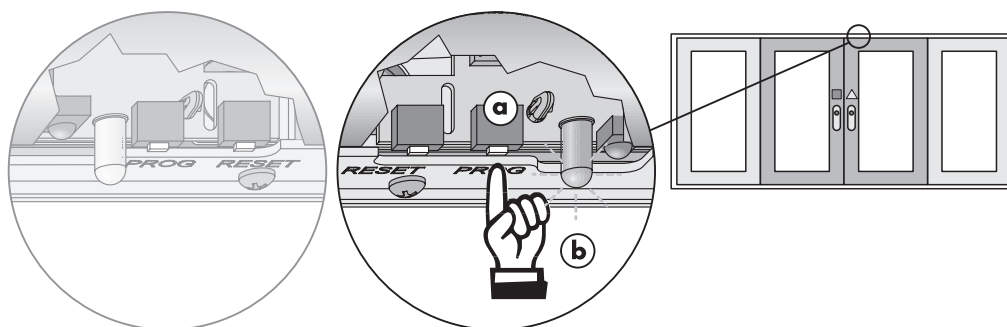
⚠ WARNING Risk of injury! Hands, arms, legs and feet can get trapped and/or crushed!
There is no safety cut-off function!

- › During the calibration and teach-in run, maintain a safe distance from the moving elements.

⚠ WARNING Risk due to incorrect measured values!









- › To prevent incorrect measured values, never interrupt or interfere with the calibration and teach-in run of the DRIVE axxent HSA smart system!

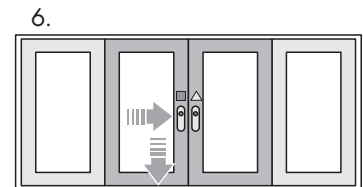
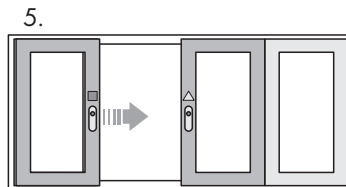
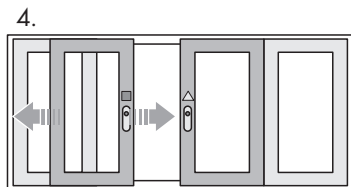
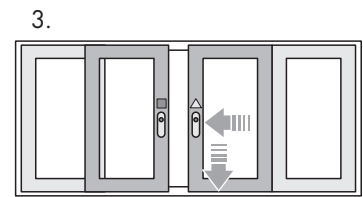
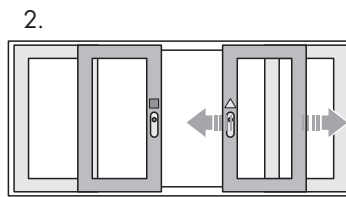
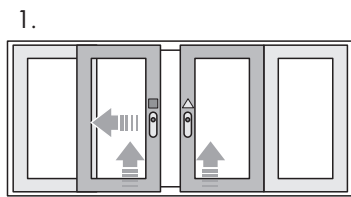
1. Move lift & slide sash into "Close" position (manually if necessary)
2. Press the "PROG" button (a)
Note: The LED flashes green (b).
3. Press the button on the lift drive of the secondary sash  for 11 seconds (c)
Note: While the button is pressed, the following tones sound in succession:
1 short alarm signal, 2 short alarm signals, 3 short alarm signals, 4 short alarm signals. Then release the button.
4. Press the button on the lift drive of the secondary sash  for 2 seconds (d)
Note: While the button is pressed, 1 short alarm signal is sounded. Then release the button.





Positions of the calibration and teach-in run

The descriptions of the operating sequences on the following pages are based on the example of a primary sash. The following positions are approached after starting:

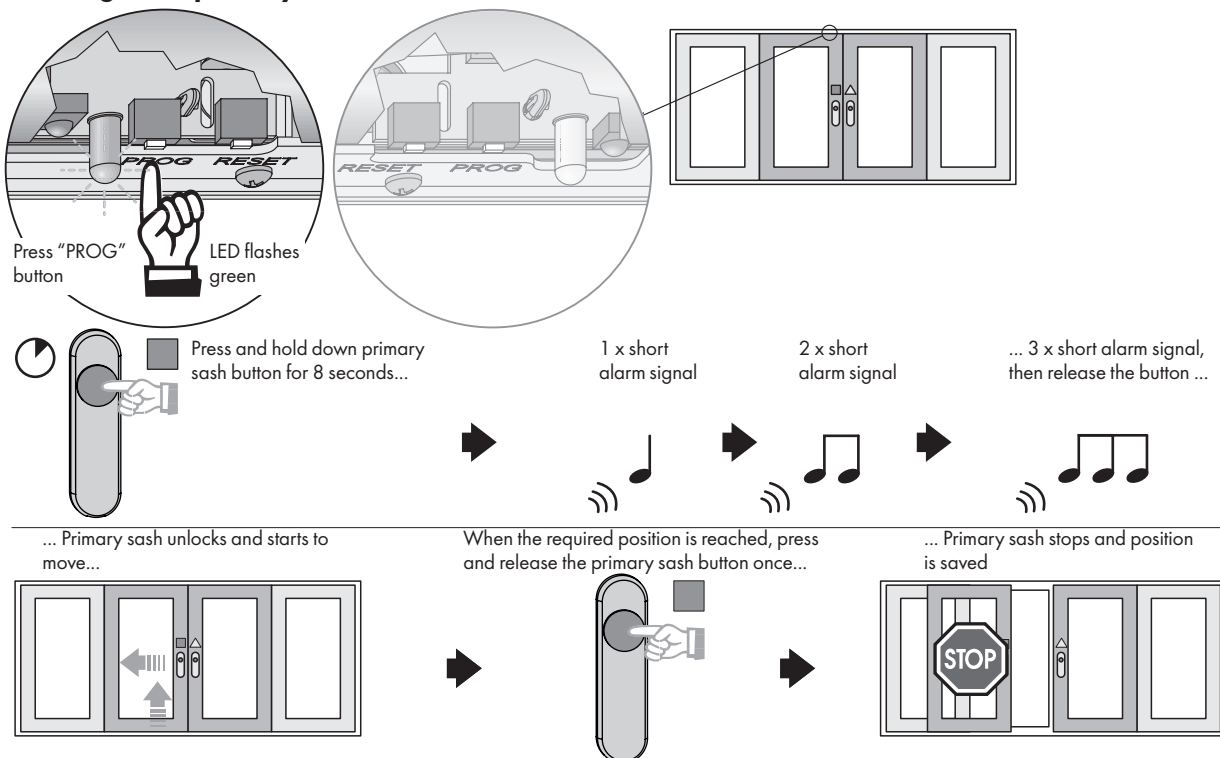
1. Both lift & slide sashes   release and the primary sash  opens slightly (moves to the waiting position).
2. The secondary sash  opens as far as the end position stop then moves back to the "Close" position.
3. The secondary sash  opens again as far as the end position stop, moves back to the "Close" position and locks.
4. The primary sash  opens as far as the end position stop again, moves back to the waiting position, stops briefly and then moves on as far as the "Close" position.
5. The primary sash  opens as far as the end position stop again, moves back to the waiting position, stops briefly and then moves on as far as the "Close" position.
6. Primary sash  locked



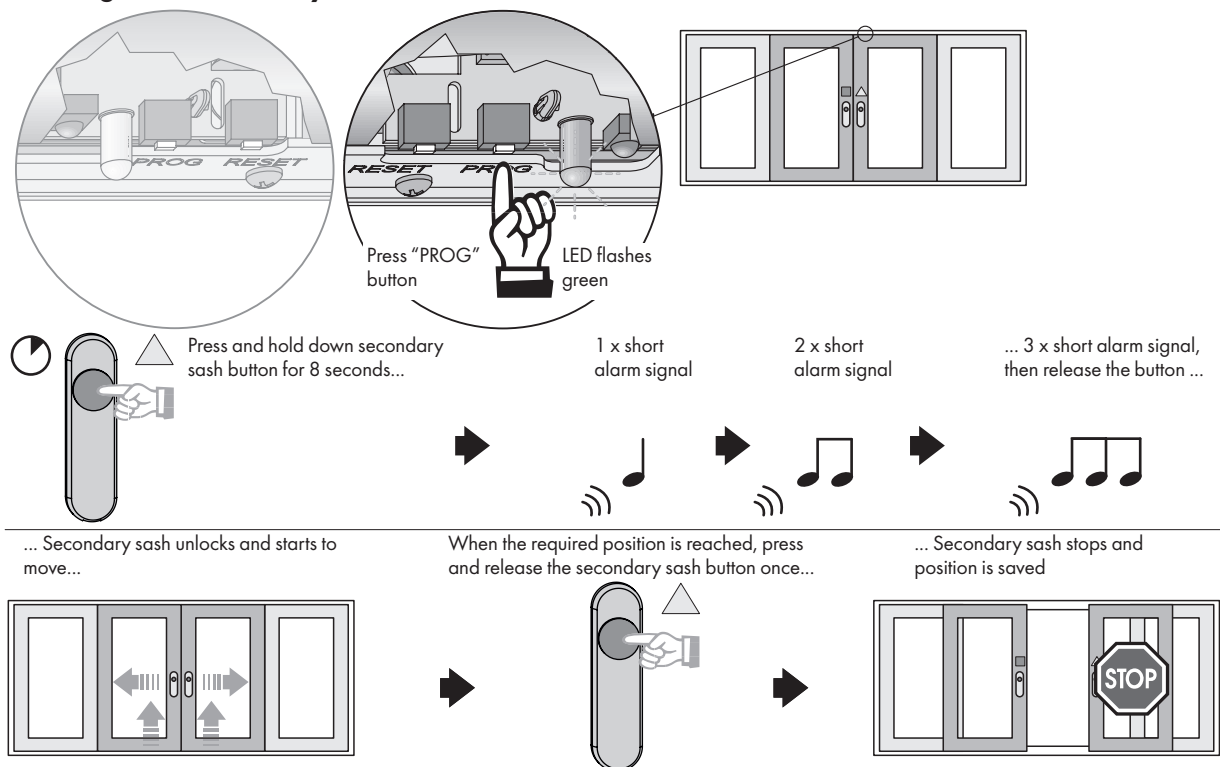
12. Teaching in the intermediate stop – scheme C

- Primary sash  and secondary sash  must be taught in individually for the required intermediate stop.
- Usually, it is sufficient to teach in the intermediate stop for the primary sash only.

Teaching in the primary sash



Teaching in the secondary sash



13. Operation – scheme C

Scheme C lift and slide elements have two controllable lift & slide sashes (primary sash ■ and secondary sash ▲). The primary sash is the initial opening sash and the secondary sash opens next. The primary sash and secondary sash positions (right or left lift & slide sash) must be specified when placing your order. In the examples in these instructions, the left-hand lift & slide sash is the primary sash and the right-hand lift & slide sash is the secondary sash.

Note: The button for the primary sash controls the corresponding lift & slide sash individually. The button for the secondary sash controls both lift & slide sashes at the same time.

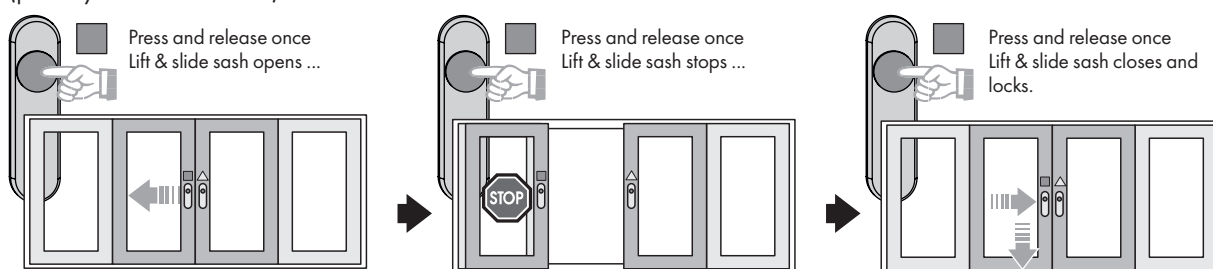
13.1 “Open” - “Stop” - “Lock” operation

Every time the button is pressed, the function switches between “Open” - “Stop” - “Lock”.

Note: The LED lights up green when opening. The LED lights up red when closing and locking.

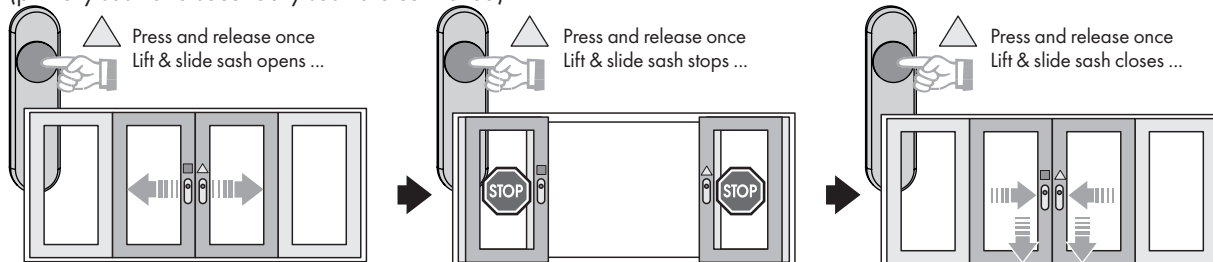
Primary sash button ■

(primary sash is controlled)



Secondary sash button ▲

(primary sash and secondary sash are controlled)

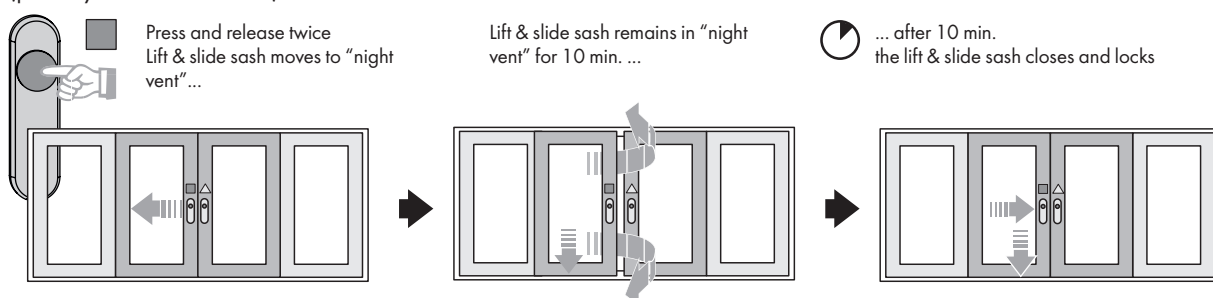


13.2 10-min. night vent position

For scheme C, only the primary sash moves to the 10-min. night vent position, where it lowers. During the 10-minute ventilation phase, the LED flashes green. It then goes out and the primary sash moves back to the “CLOSED” position. This is where it locks.

Primary sash button ■

(primary sash is controlled)

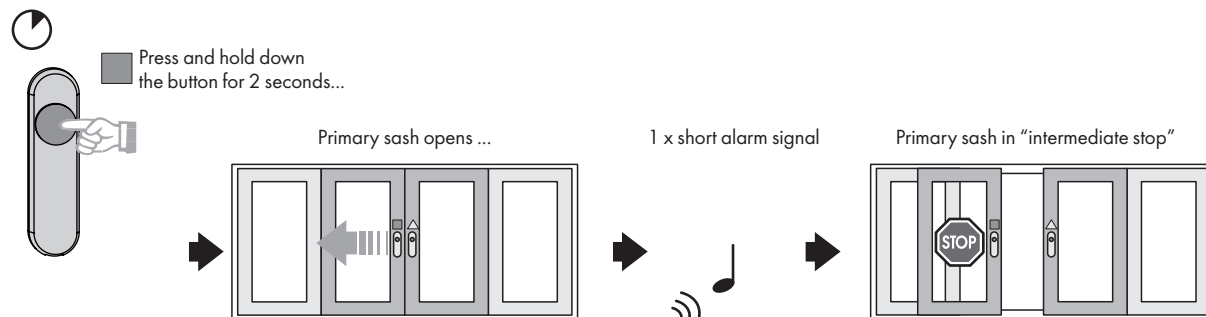


13.3 Intermediate stop (limited opening width)

The primary and secondary sashes are controlled individually and then move to the taught in intermediate stop.

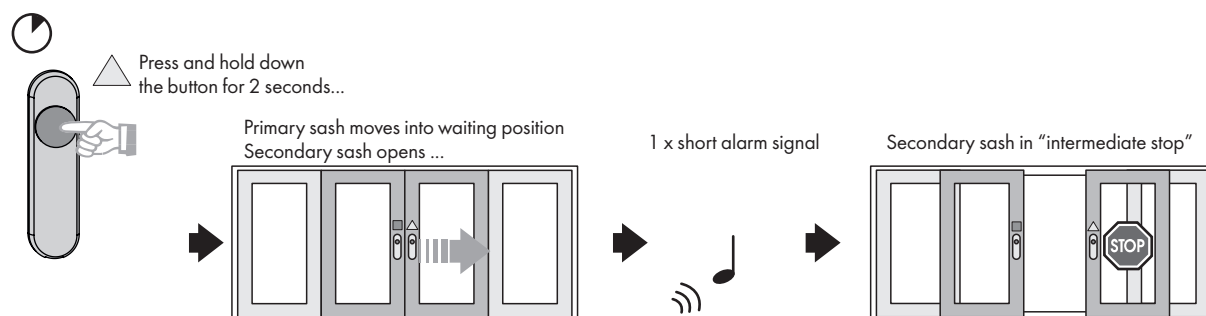
Primary sash button ■

(primary sash is controlled)



Secondary sash button ▲

(primary sash and secondary sash are controlled)



13.4 Special function "Opening as far as the end position" (stop)

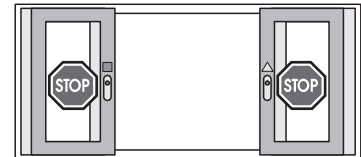
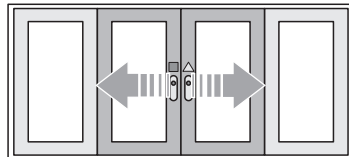
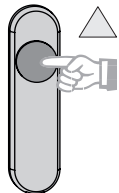
For safety reasons, both lift & slide sashes do not open fully in normal motor-powered operation. To open the lift & slide sashes fully (i.e. to move them to their absolute end position (as far as the stop)), they can be manually pushed open individually or moved to the end position by pressing the button on the corresponding lift drive HA. The lift & slide sashes must be in the "OPEN" position before they can be moved to their absolute end position.

Secondary sash button

(primary sash and secondary sash are controlled)

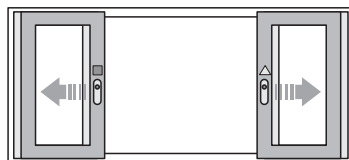
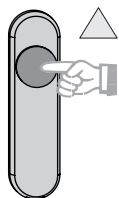
Press and release once

... both lift & slide sashes open ...



Press and hold down the button...

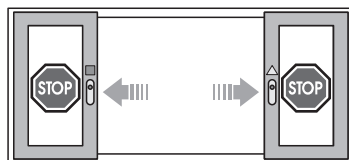
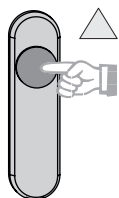
... Lift & slide sash opens further...



Operate primary  and secondary sashes  individually

... release the button when the lift & slide sash reaches the end position ...

... Lift & slide sash stops immediately



Note: This special function can only be executed for the primary and secondary sashes separately.

Note: Not required for version with optional terminal board for light curtain. On the version with light curtain, the lift & slide sash is always opened as far as the end position.

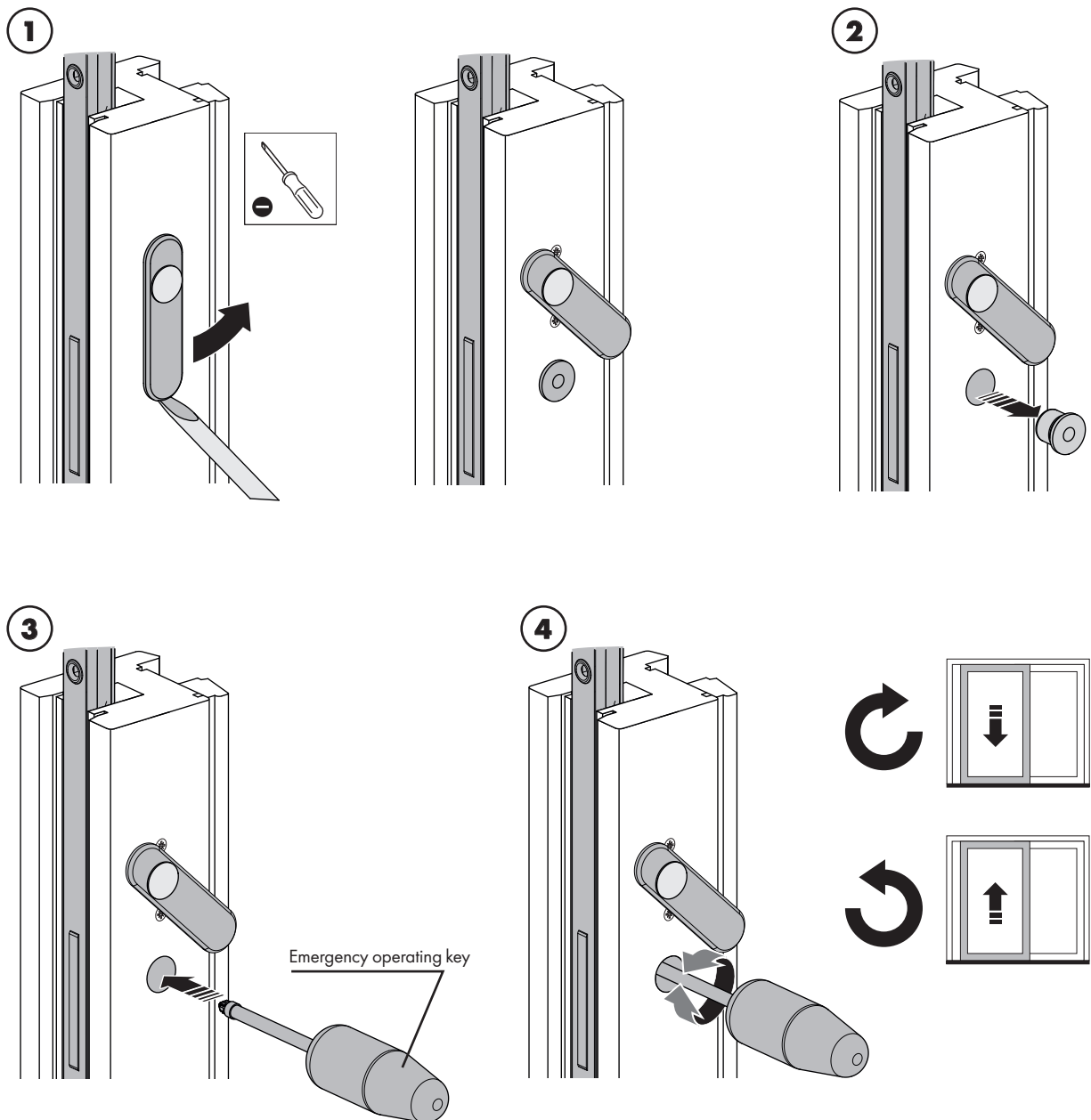
14. Manual emergency operation

If the lift drive HA fails, the lift & slide sash can be lifted/lowered manually with the emergency operating key that is included in the scope of delivery. Once it has been lifted/lowered, the lift & slide sash can be moved manually.

Note: The emergency operating key is designed solely for manual operation in the event of a malfunction. It should therefore be kept in the vicinity of the lift and slide element.

⚠ WARNING Injury hazard due to emergency operating key snapping back!

- During manual operation with the emergency operating key, hold it sufficiently firmly. When the unit is unlocked, the emergency operating key takes the weight of the lift & slide sash.



15. Care and maintenance

⚠ WARNING

Electrically operated unit.

Risk of fatal injury from electric shock or fire.

To prevent personal injury or damage to property, always comply with the following instructions:

- › Pull the mains plug out of the socket prior to every cleaning process or maintenance work. Never pull at the cable to disconnect the device from the electricity grid.
 - › For all devices with a fixed connection to the 230 V AC mains power supply, switch off all poles of the feeder. The fuses may need to be removed.
-

15.1 Cleaning

Important: When cleaning the DRIVE axxent HSA smart, do not allow liquids to get inside the unit.

- Never use cleaning agents that are aggressive or contain solvents, or sharp-edged objects, as these may damage the surfaces of the casing.
- Never clean the unit with a high-pressure cleaner or steam-jet cleaner.
- Clean the DRIVE axxent HSA smart with a cloth moistened with a mild soap solution or cleaning agent.
- Observe the safety regulations for operating electrical equipment and, if necessary, for ladders, steps and work overhead or at certain heights.

16. Rectification of malfunctions

In case of a malfunction, do not open the device or try to repair it under any circumstances.

If the problem is not listed in the table below, please contact your window specialist or SIEGENIA directly:

Tel. +49 271 3931-0

16.1 DRIVE axxent HSA smart

Description of problem	LED	Possible cause	Proposed solution
DRIVE axxent HSA smart not functioning	Off	No power supply	Check power supply
	Off	Infrared remote control not taught in	See operating instructions – infrared remote control
	Flashes red	DRIVE axxent HSA smart not initialised	Perform reference run (see page 33 and 38)
	Flashes 2x green 3x red	Overheating	Wait until drive cools and LED stops flashing
	Flashes red/green	System test failed	Disconnect the voltage for at least 10 seconds, then start reference and calibration run (see pages 33 and 38) (if the problem reoccurs, contact Service)
DRIVE axxent HSA smart aborts closing/opening and moves in opposite direction for 4 seconds	Off	Obstacle is blocking the sliding path of the lift & slide sash	Remove obstacle and operate DRIVE axxent HSA smart again
DRIVE axxent HSA smart does not respond to smartphones/tablets	-	No WLAN connection to the router of the home network	Restart WLAN router of the home network
	-	No WLAN connection to the Smartphone/Tablet	Restart Smartphone/Tablet
	-	No WLAN connection to the DRIVE axxent HSA smart	Reset DRIVE axxent HSA smart: 1. Press and release "PROG" button 3 times in succession. 2. Hold "PROG" button once (for approx. 4 seconds) directly on the connection 3. Lift & slide sash closes The module will then return to the default setting.

16.2 SI Comfort app

You will find detailed operating information as well as information on how to rectify disturbances on the SIEGENIA Smarthome Internet page.

<https://smarthome.siegenia.com>



17. Technical specifications

Specification for a DRIVE axxent HSA smart	
Supply voltage	120–230 V~, 22 W
Device operating voltage (power supply integrated in the slide drive)	24 V
Max. displacement force during slide operation	Approx. 50 N (depending on sash weight and friction)
Max. torque of the emergency operating key	Approx. 2 Nm
Traverse speed	Approx. 150 mm/sec.
Operating time of lift drive HA	Approx. 7 sec.
Temperature range	–5 °C to +50 °C
Jam protection	Electronic overload cut-off device (current limiter in accordance with standard)
Protection class	IP20 for dry locations
Connection to AC mains power supply (at factory)	Europlug, cable length 5 m
Connection to AC mains power supply (at installation site) (concealed cable channel)	5 x 1.5 mm ² cable (all-pole safety isolation required)
Connecting clamps	For a max. supply-line cross-section of 2.5 mm ²

18. Accessories

Material description	Material no.
Jig catch	GABB0010-0E5010
Jig through hole	GABB0020-0E5010
Jig lift drive HA	PAFB0020-000010
Infrared remote control	GZFB0020-025010
Light curtain (inside/outside)	Available from CEDES GmbH Elzmatten 6, D-79365 Reinhausen

19. Information concerning product liability

19.1 Intended use

Any use of this product that is not in accordance with its correct use, or any adaptation of or modification to the product and its associated components for which the express consent of SIEGENIA has not been obtained, is strictly prohibited. SIEGENIA accepts no liability whatsoever for any material losses or injury to people caused by failure to comply with this stipulation.

19.2 Product liability

Our products are guaranteed – subject to correct installation and proper use – for a period of one year from the date of receipt by a company (according to our general terms and conditions) or as otherwise agreed, and for a period of two years for end consumers, in accordance with statutory provisions. As part of our ongoing improvements, we reserve the right to replace individual components or entire products. Consequential losses resulting from defects are excluded from the warranty within the limits of the law. The warranty shall become void if modifications that are not authorised by us or have not been described in this documentation are performed on the product and/or individual components, or if the product and/or individual components is/are dismantled or (partly) dismantled, and the defect is due to the changes made.

19.3 Disclaimer of liability

The product and its components are subject to stringent quality controls. As a result, they function reliably and safely when used correctly.

Our liability for consequential losses and/or claims for damages is excluded, except in the case of wilful misconduct or gross negligence, or where we are responsible for injury to life, physical injury or damage to health. Strict liability under the German Product Liability Act (Produkthaftungsgesetz) remains unaffected. Liability for the culpable violation of significant contractual obligations also remains unaffected; liability in this case is limited to losses that are specific to the contract and that could have been foreseen. The above regulations do not imply a change in the burden of proof to the detriment of the consumer.

19.4 Environmental protection

Although our products do not fall within the scope of the German Electrical and Electronic Equipment Act, SIEGENIA will continue to meet the requirements of this Act and will endeavour to completely eliminate the use of substances that are hazardous to the environment as soon as this becomes technically feasible.

Electrical products should not be disposed of as household waste.

20. Feedback on documentation

We welcome your comments and suggestions on how to improve our documentation. Please email your comments to documentation@siegenia.com.

21. EC declaration of incorporation

Manufacturer SIEGENIA-AUBI KG
Hardware and ventilation technology
Duisburger Straße 8
57234 Wilnsdorf

declares that the product: **HS drive**

Device type

DRIVE axxent HSA smart

Type designation

meets the following fundamental requirements:

EC Machinery Directive	2006/42/EC
EMC Directive	2014/30/EU
	EN 301 489-1
	EN 301 489-17
Low voltage directive	2014/35/EU
	EN 60335-1:2012
	EN 60335-2-103:2010
RoHS Directive	2011/65/EU

This declaration is based on test reports from:

EMC TestHaus Dr. Schreiber GmbH - Test protocol 14/457

The machine may only be put into operation when incomplete if it has been ascertained, if applicable, that the machine into which it is to be installed conforms to the specifications of the Machinery Directive.

The specific technical documentation has been drafted in accordance with Annex VII Part B of the EC Machinery Directive 2006/42/EC.

We undertake to provide such documentation to market surveillance authorities in electronic format within a reasonable time upon reasoned request. The aforementioned technical documentation can be obtained from the manufacturer.

Siegen, 24.08.2016



G Wanders
(Business Area Manager)

This declaration certifies conformity with the directives cited but does not warrant properties in the legal sense.

The safety instructions in the product documentation supplied must be followed.

SIEGENIA®

brings spaces to life

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Contact your dealer: