



Ditec DAB105

Swing doors
(Original instructions)

IP2159 EN
Technical Manual

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Key



This symbol indicates instructions or notes regarding safety, to which special attention must be paid.





This symbol indicates useful information for the correct functioning of the product.



This symbol advises you to contact the support service.

1. General safety precautions

 This installation manual is intended for qualified personnel only. Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with the present standards. Read the instructions carefully before beginning to install the product.

 Bad installation could be dangerous. The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of danger. Before installing the product, make sure it is in perfect condition.

Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.


Before installing the motorisation device, make all the necessary structural modifications in order to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas.

Make sure the existing structure is up to standard in terms of strength and stability. The motorisation device manufacturer is not responsible for failure to observe Good Working Methods when building the frames to be motorised or for any deformation during use.


The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door.

The safety devices must protect the crushing, cutting, trapping and general hazardous areas of the motorised door.

Display the signs required by law to identify hazardous areas.

 Each installation must bear a visible indication of the data identifying the motorised door. When requested, connect the motorised door to an effective earthing system that complies with current safety standards. During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.

The automation protection casing must be removed by qualified personnel only.

 The electronic parts must be handled using earthed antistatic conductive arms. The manufacturer of the motorisation declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation.

Use original spare parts only for repairs or replacements of products.

The installer must supply all information on automatic, manual and emergency operation of the motorised door and must provide the user with the operating instructions.

2. Users general safety precautions

These precautions are an integral and essential part of the product and must be supplied to the user.

Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed.

Any other use is to be considered improper and therefore dangerous. The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

This product must not be used by people (including children) with reduced physical, sensorial or mental abilities, or lack of experience or knowledge, unless they are given proper surveillance and instructions for operating the device by a person responsible for their safety.

Avoid operating in the proximity of the hinges or moving mechanical parts.

Do not enter within the operating range of the motorised door while it is moving.

Do not block the movement of the motorised door since this may be dangerous.

Do not allow children to play or stay within the operating range of the motorised door.

Keep remote controls and/or any other control devices out of the reach of children in order to avoid possible involuntary activation of the motorised door.

In the event of a fault or a malfunction of the product, turn off the power supply switch, do not attempt to repair or intervene directly and contact only qualified personnel.

Failure to comply with the above may cause a dangerous situation.

All cleaning, maintenance or repair work must be carried out by qualified personnel.

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and only qualified personnel must see to the routine maintenance of the motorised door.


In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

All installation, maintenance and repair work must be documented and made available to the user.



To dispose of electrical and electronic equipment correctly, users must take the product to special "recycling centres" provided by the municipal authorities.

3. Technical specifications

	Ditec DAB105
Power supply	100-240 V~ +10/-15% 50/60 Hz
Power consumption	max 75 W
Accessories power supply	24 V  400 mA max
Opening time	min 3 s / 0°-80° max 6 s / 0°-80°
Closing time	min 3 s / 90°-10° max 6 s / 90°-10°
Service class	5 - VERY INTENSE
Operation type	Motor opening Spring + motor closing
Range	45-90 kg
Maximum width	1200 mm
Temperature	min -20° C max +45° C
Degree of protection	IP20 (FOR INTERNAL USE ONLY)

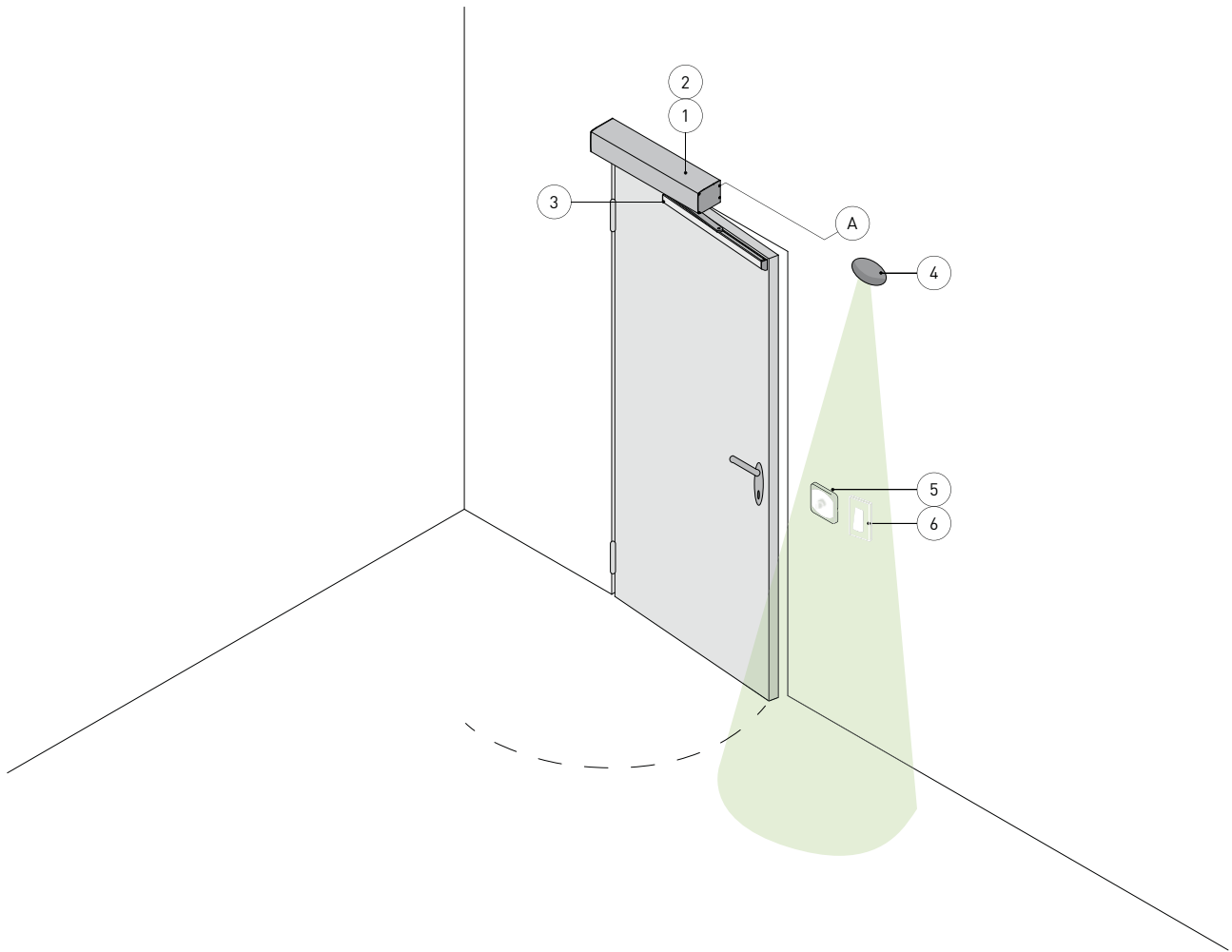
3.1 Operating instructions

Service class: 5 (minimum 5 years of working life with 600 cycles per day)

Applications: VERY INTENSE (for shared entrances with very intense pedestrian use).

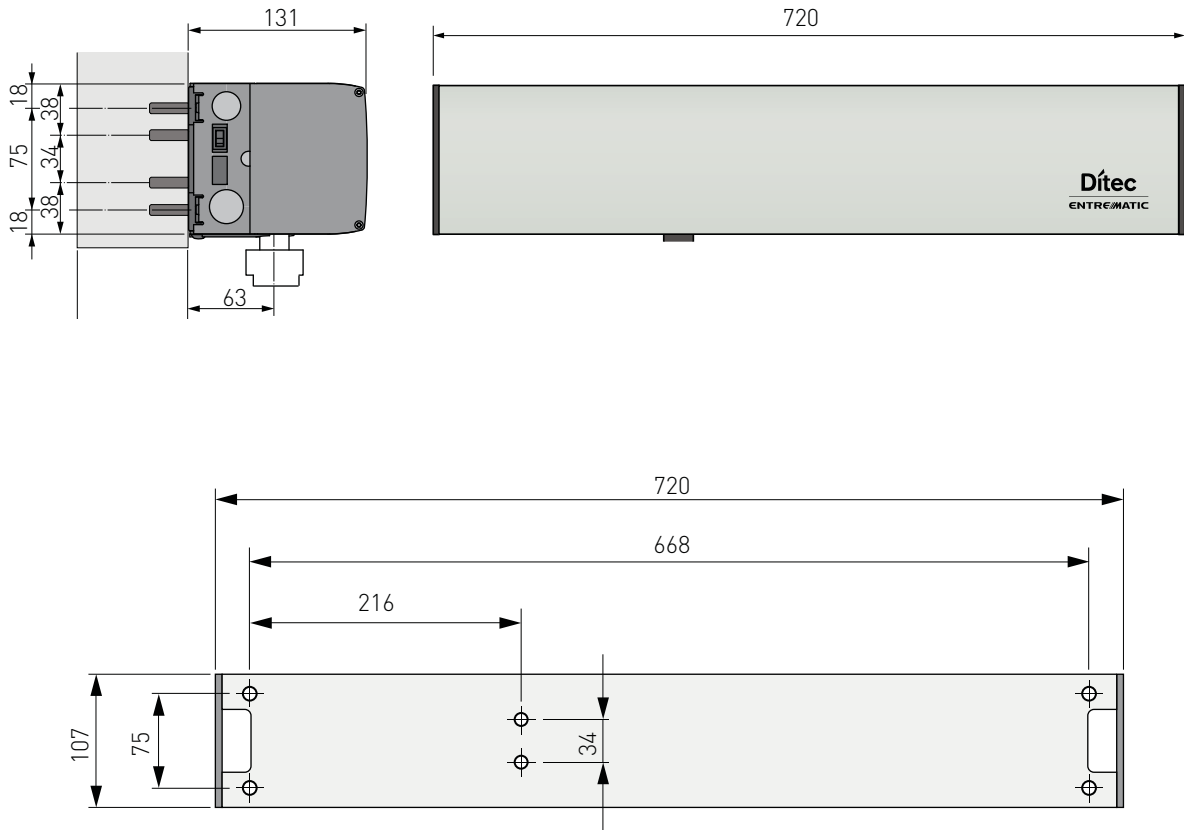
- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). When used with the maximum permissible weight a reduction in the above mentioned performance can be expected.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative, having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use.
- Each automatic entrance has variable elements such as: friction, balancing and environmental factors, all of which may substantially alter the performance characteristics of the automatic entrance or curtail its working life or parts thereof (including the automatic devices themselves). The installer should adopt suitable safety conditions for each particular installation.

4. Standard installation

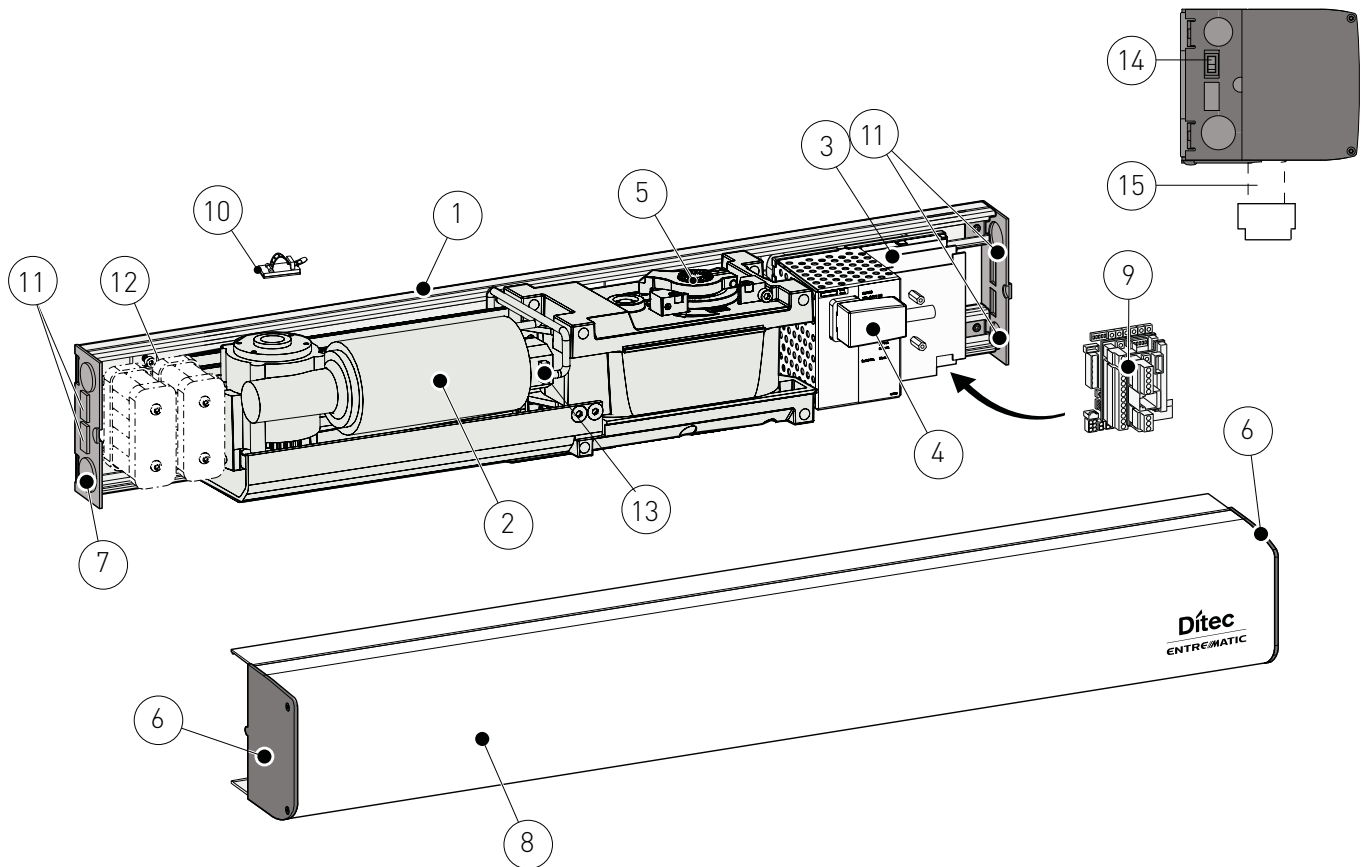


Ref.	Code	Description
1	DAB105	Electromechanical actuator
2		Control panel
3	DAB805PSA-PSAF DAB805PLA DAB805PLAT DAB805PLAB	Articulated arm Sliding arm Three-lever arm Break-out/anti-panic sliding arm
4		Opening sensor
5	COM400MHB COM400MKB	Function selector switch
6		Control switch
A		Connect the power supply to a type-approved omnipolar switch, with a contact opening distance of at least 3 mm (not supplied). Connection to the mains must be via independent channels and separate from the connections to the control and safety devices.

5. Dimensions



6. Main components



Ref.	Code	Description
1		Base plate
2		Gearmotor
3		Control panel
4		Power supply
5		End stop
6		Upper endplate
7		Lower endplate
8		Casing
9	DAB905ESE DAB905ESA	Security and pulse expansion card (optional) Safety function expansion card (optional)
10		Cable clamp
11		Cable slits
12	DAB905BAT	Battery kit
13		Encoder
14		ON/OFF/HOLD OPEN switch
15		Arm extension kit
		20 mm 50 mm 70 mm 50 mm
	DAB805SE2 DAB805SE5 DAB805SE7 DAB805SE5F	
		DAB805SE2 DAB805SE5 DAB808SE7 DAB805SE5F

7. Installation

Operating and performance features can only be guaranteed with the use of DITEC Entrematic accessories and safety devices. Unless otherwise specified, all measurements are expressed in mm.

7.1 Preliminary checks

Check the stability and weight of the wing and that movement is smooth and free of friction (strengthen the frame if necessary). Any "door closes" must be removed or completely cancelled.

7.2 General information

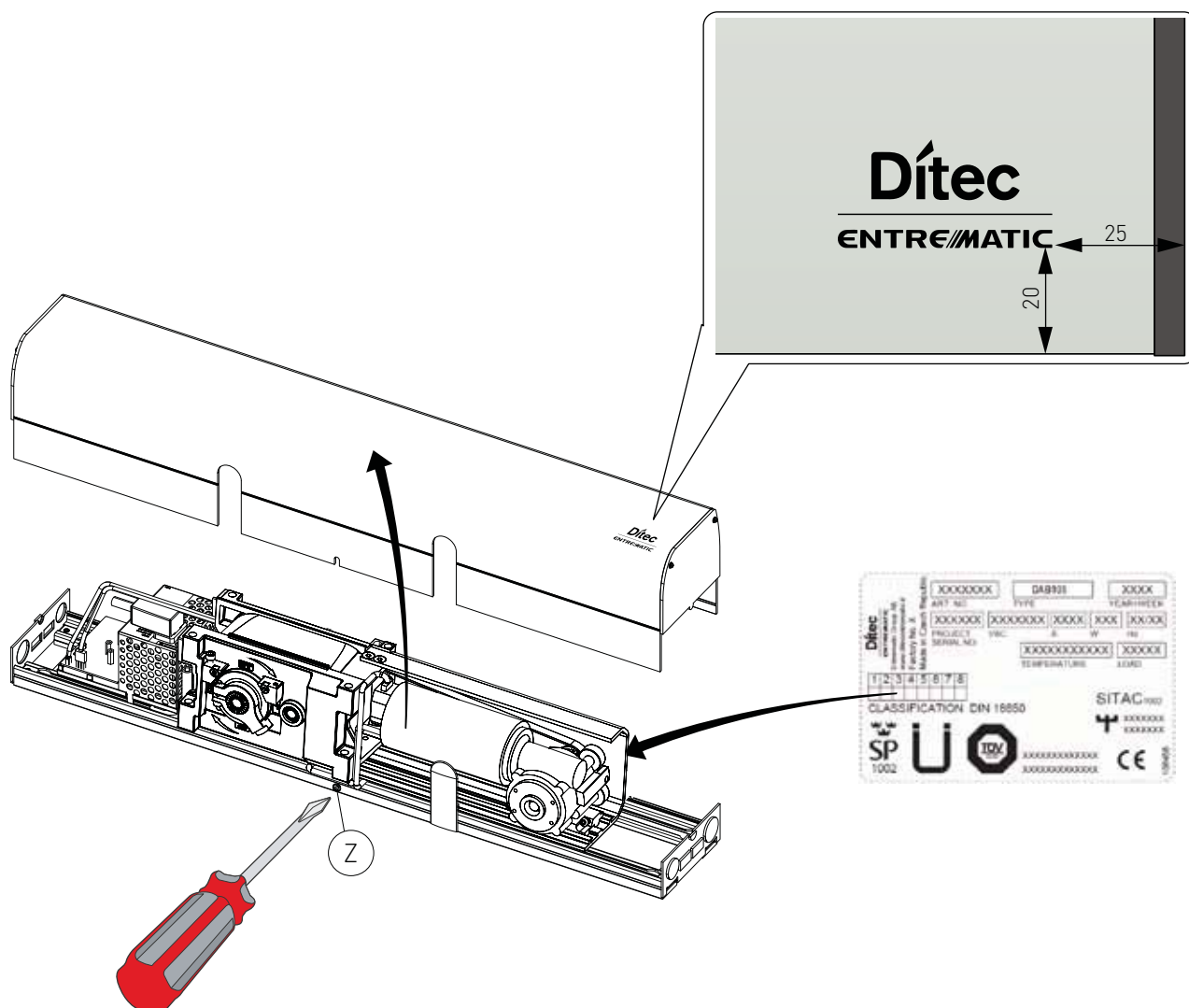
The DAB105 swinging door automation can use articulated arms or sliding arms to open the doors. A spring system combined with the force of the motor close the door. The spring is pretensioned to 210°.

i Do not change the spring pretensioning unless strictly necessary.

7.3 Removing the casing

Remove the casing [8] by loosening the screw [Z].

Apply the logo label and the product label to the casing, in the position shown in the figure.

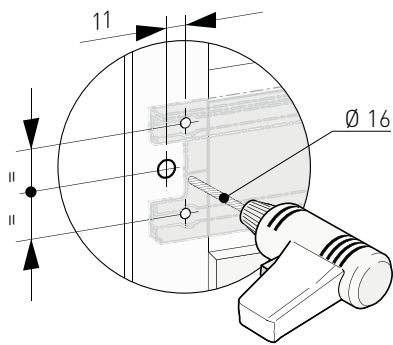


8. Automation with articulated arm DAB805PSA

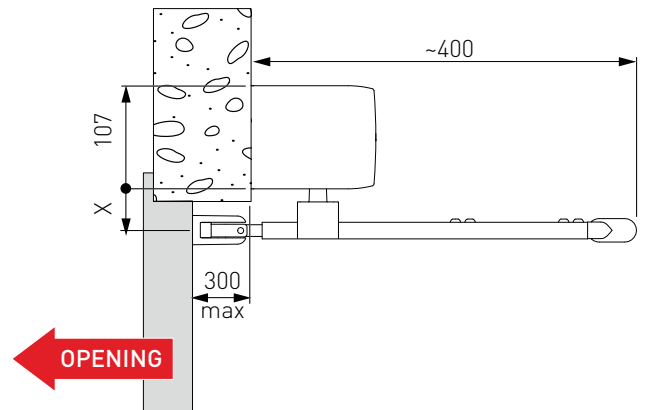
Use the articulated arm for outswing doors (seen from automation side).



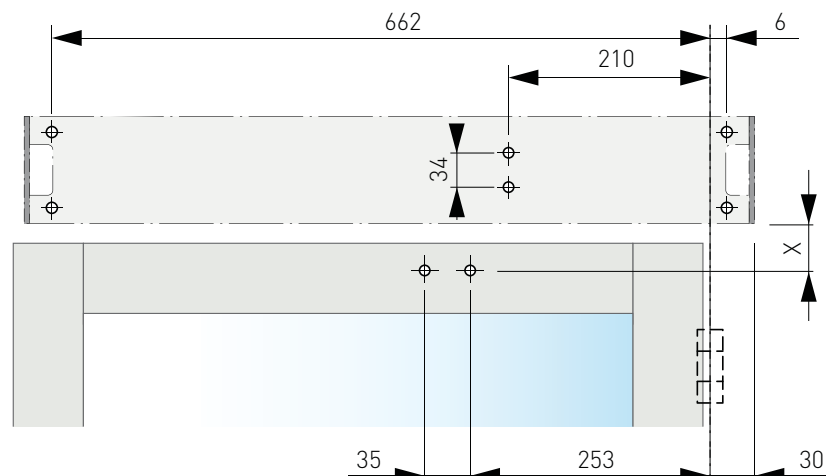
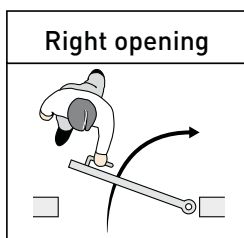
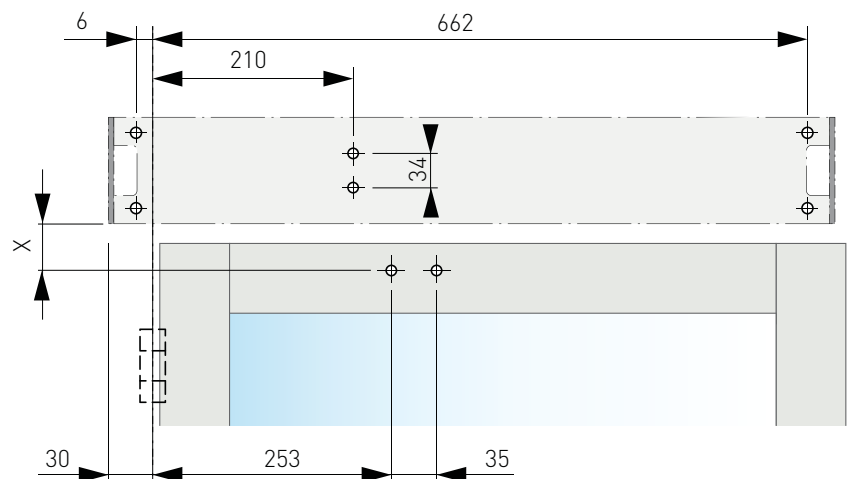
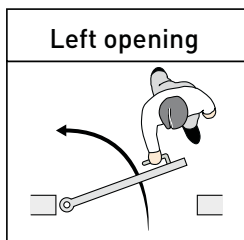
Before fastening the base plate [1] drill the cable entry holes.



	X
DAB805PSA	30
DAB805PSA DAB805SE2	50
DAB805PSA DAB805SE5	80
DAB805PSA DAB805SE7	100

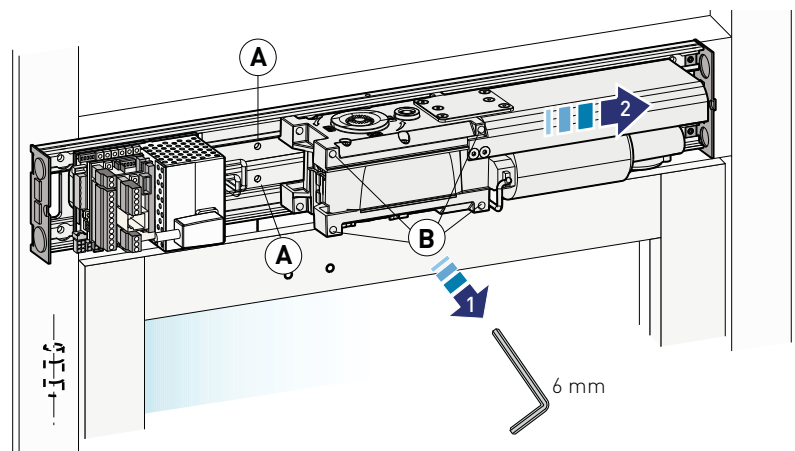
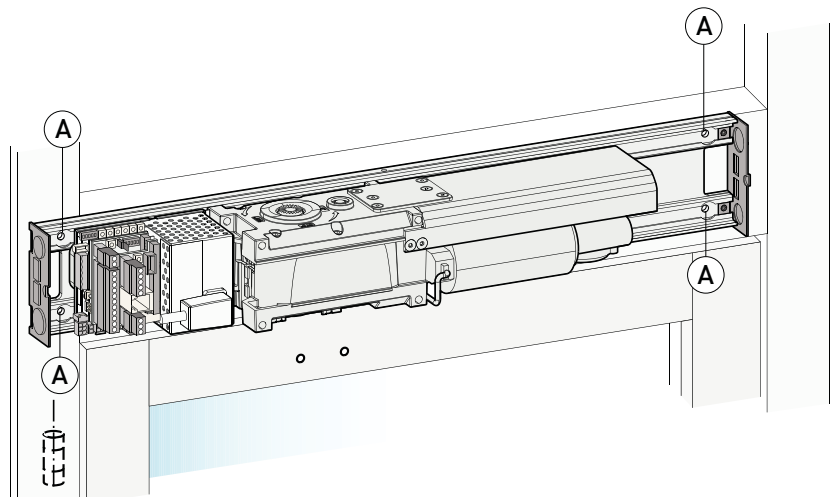
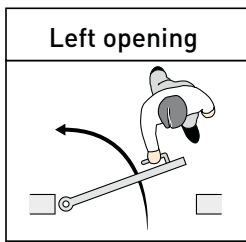


8.1 Pre-installation

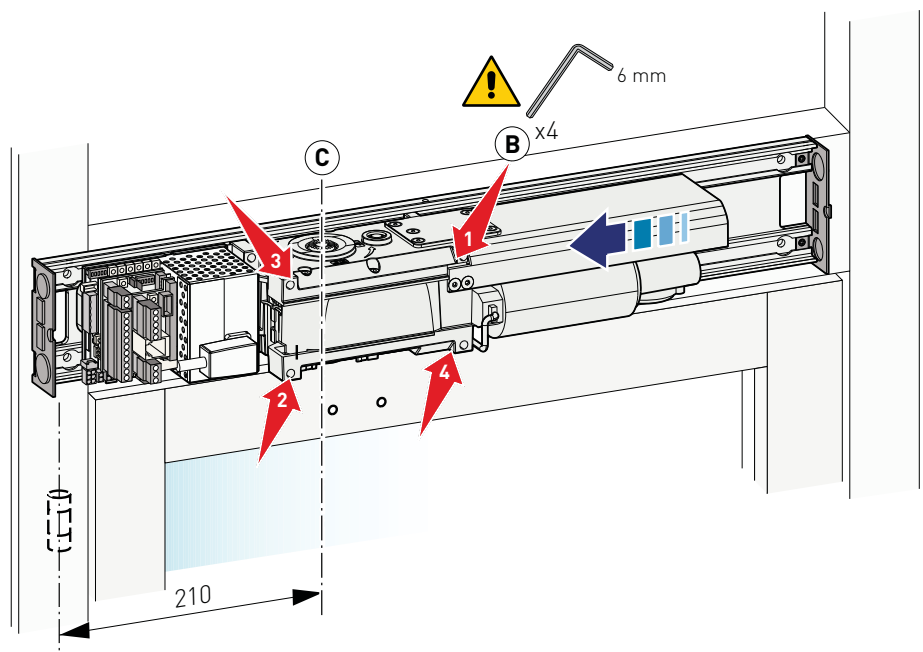


- Prepare to fasten the automation to the wall in accordance with the measurements shown in the diagram by referring to the hinge axis.
- Drill holes in the wing in line with where the articulated arm is fastened.
- If necessary, use the DAB805SE2/SE5/SE7 extensions to increase measurement X between the automation and the arm fixing points.

8.2 Fastening the automation

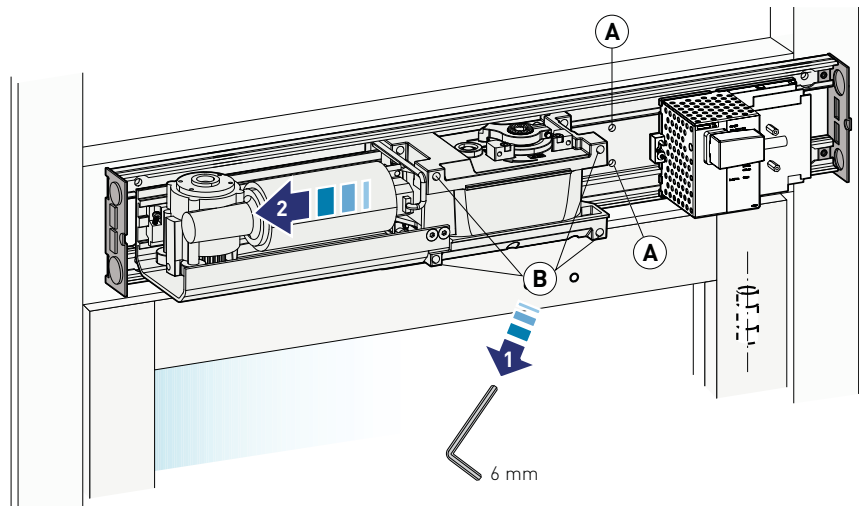
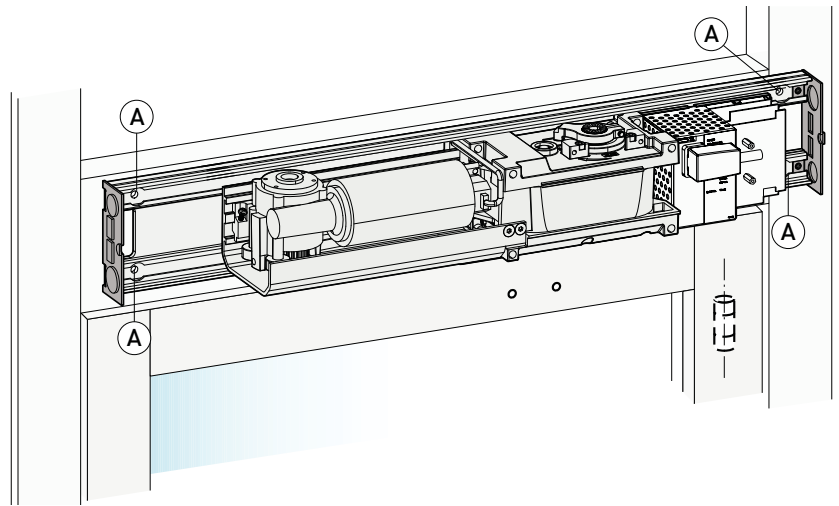
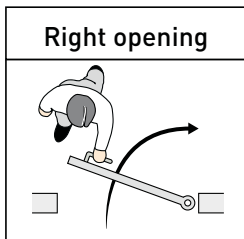


- Fasten the automation using suitable screws [A] securely and make sure it is level.
- Move the gearmotor sideways and unscrew the four screws [B] to fasten the base plate.
- Fasten the base plate with screws [A].

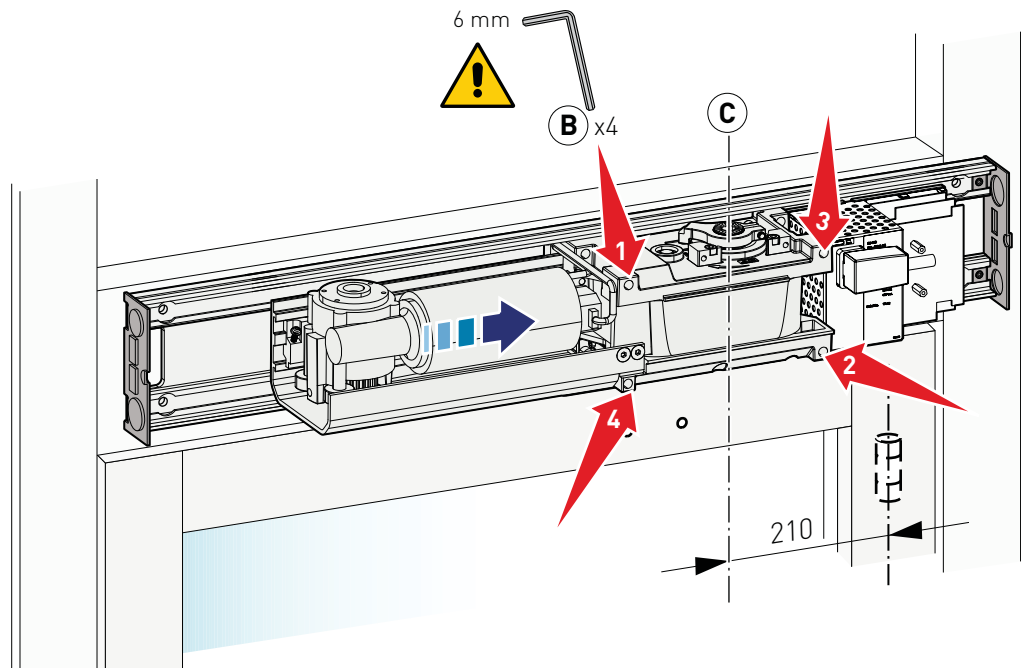


- Move the motor back to its original position.
- Fasten the motor by retightening the 4 supplied screws [B] in the order shown in the diagram.

i Respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.



- Fasten the automation using suitable screws [A].
- Move the gearmotor sideways and unscrew the four screws [B] to fasten.
- Fasten with screws [A].

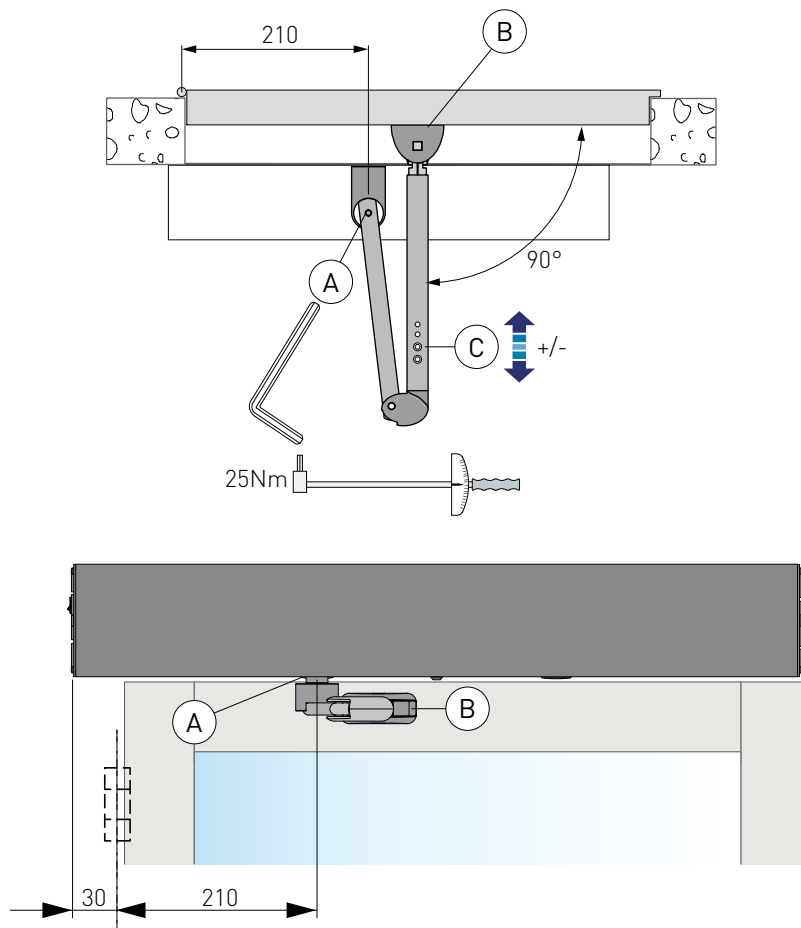


- Move the motor back to its original position.
- Fasten the motor by retightening the 4 supplied screws [B] in the order shown in the diagram.



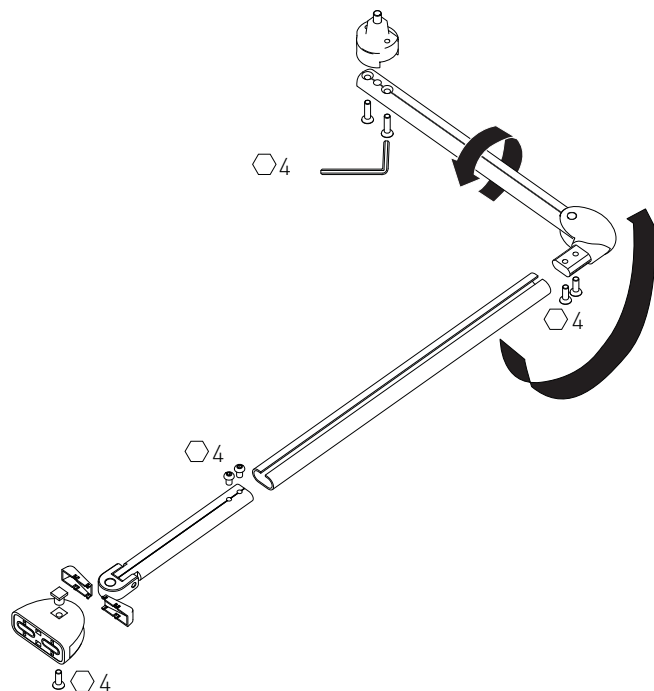
Respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.

8.3 Fastening the arm



- With the door closed, fasten the arm to the automation in the arm support housing [A].
- Fasten the bracket [B] to the wing to form an angle of 90°. Extend or shorten the arm [C] if necessary.
- Manually move the door and check that it opens and closes correctly without friction.

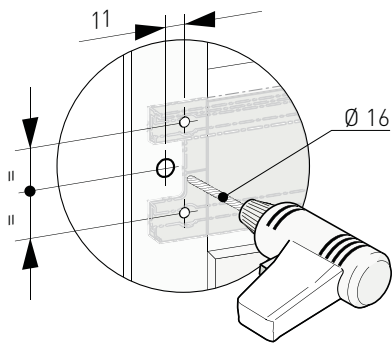
8.4 Assembling the right articulated arm



- For automations with right-hand opening, assembly of the articulated arm must be inverted as shown in the figure.

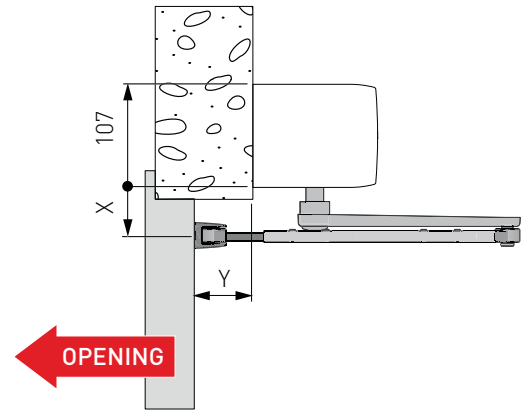
9. Automation with articulated arm DAB805PSAF

i Before fastening the base plate [1] drill the cable entry holes.

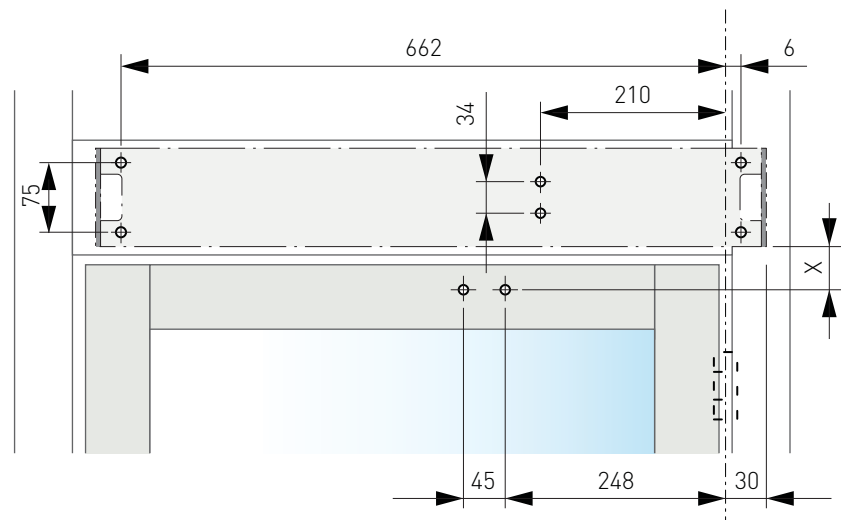
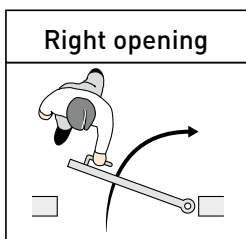
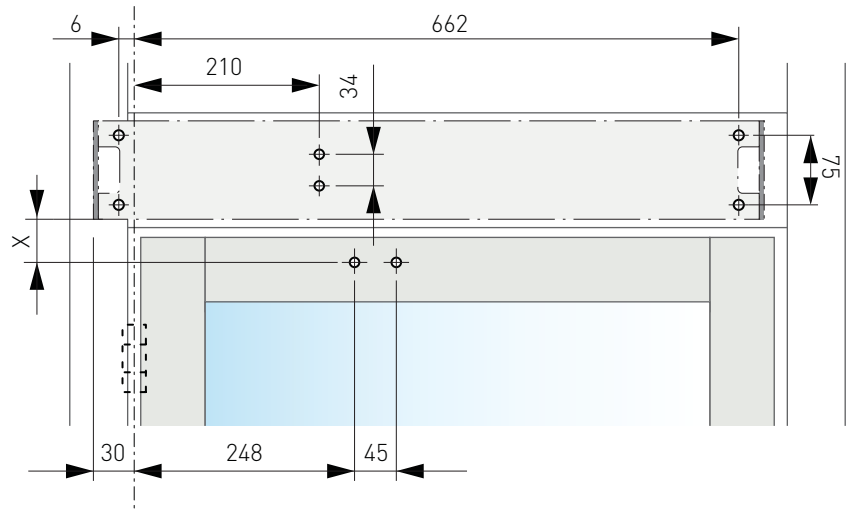
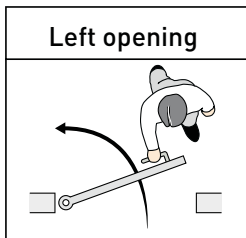


	X
DAB805PSAF	48
DAB805PSAF DAB805SE5F	98

Y	Extension
0-100	/
100-210	DAB805TFL
210-300	DAB805TFS DAB805TKJ

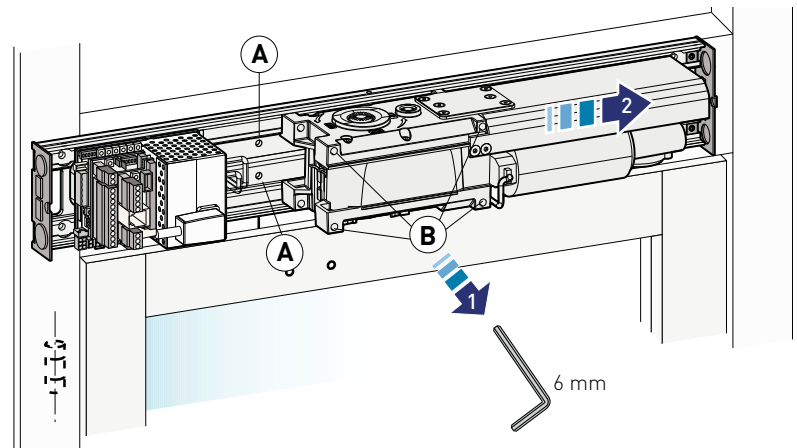
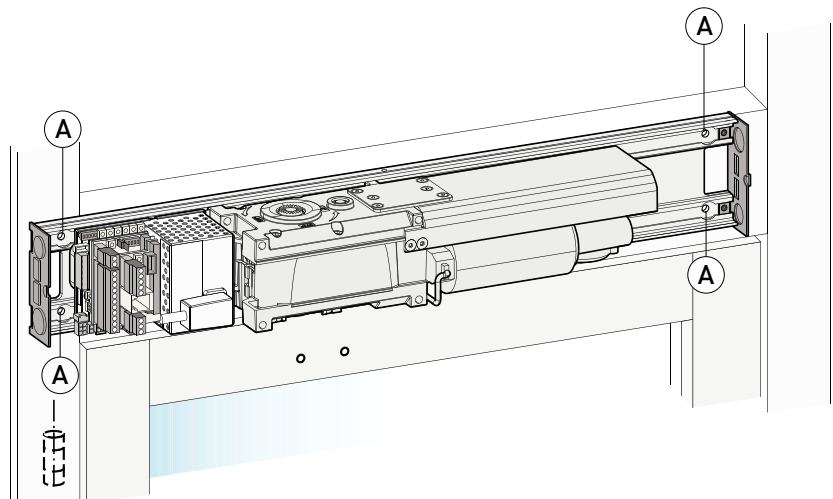
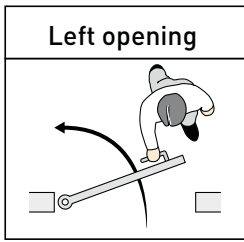


9.1 Pre-installation

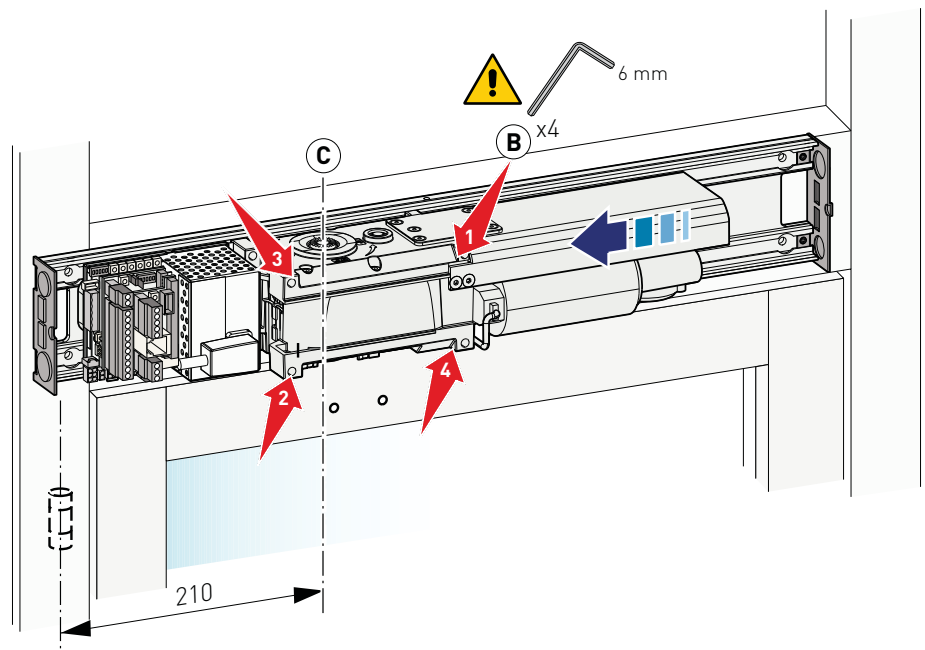


- Prepare to fasten the automation to the wall in accordance with the measurements shown in the diagram by referring to the hinge axis.
- Drill holes in the wing in line with where the articulated arm is fastened.
- If necessary, use the DAB805SE5F extension to increase measurement X between the automation and the arm fixing points.

9.2 Fastening the automation



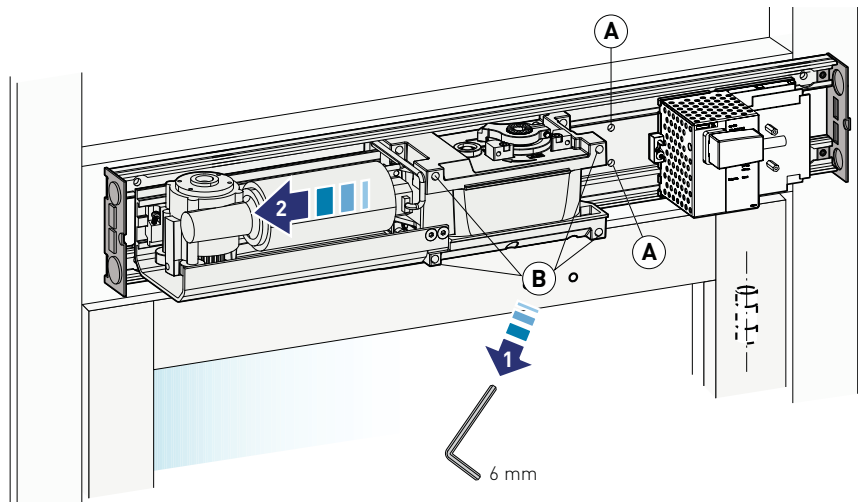
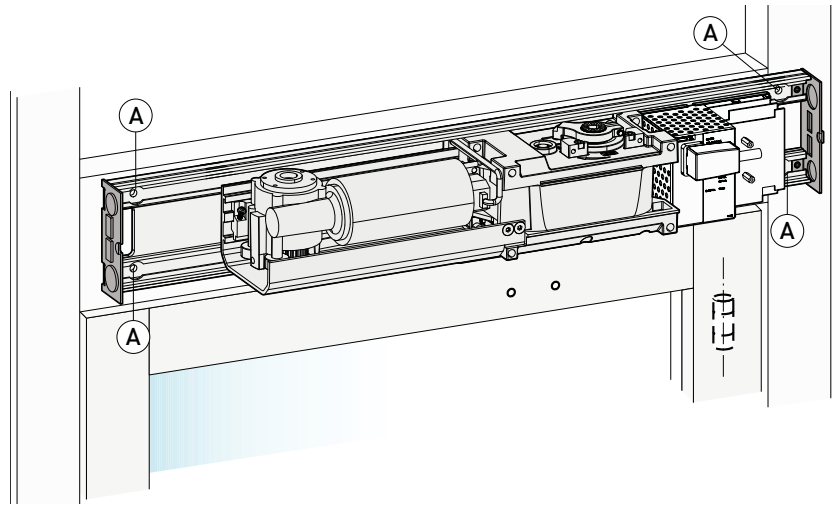
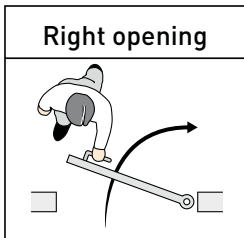
- Fasten the automation using suitable screws [A] securely and make sure it is level.
- Move the gearmotor sideways and unscrew the four screws [B] to fasten.
- Fasten with screws [A].



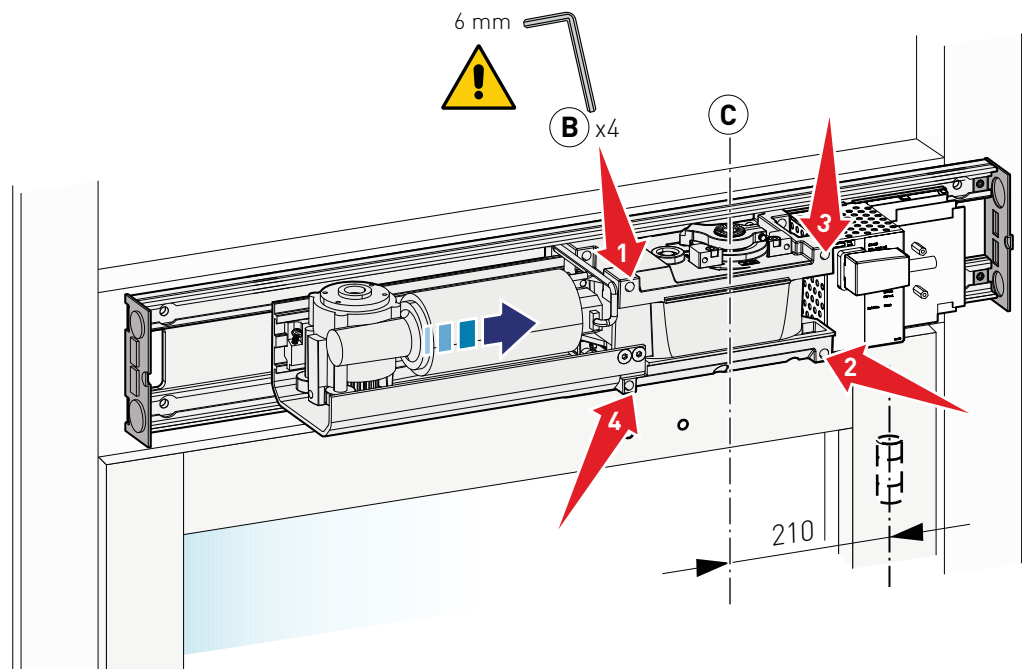
- Move the motor back to its original position.
- Fasten the motor by retightening the 4 supplied screws [B] in the order shown in the diagram.



NOTE: respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.



- Fasten the automation using suitable screws [A].
- Move the gearmotor sideways and unscrew the four screws [B] to fasten.
- Fasten with screws [A].

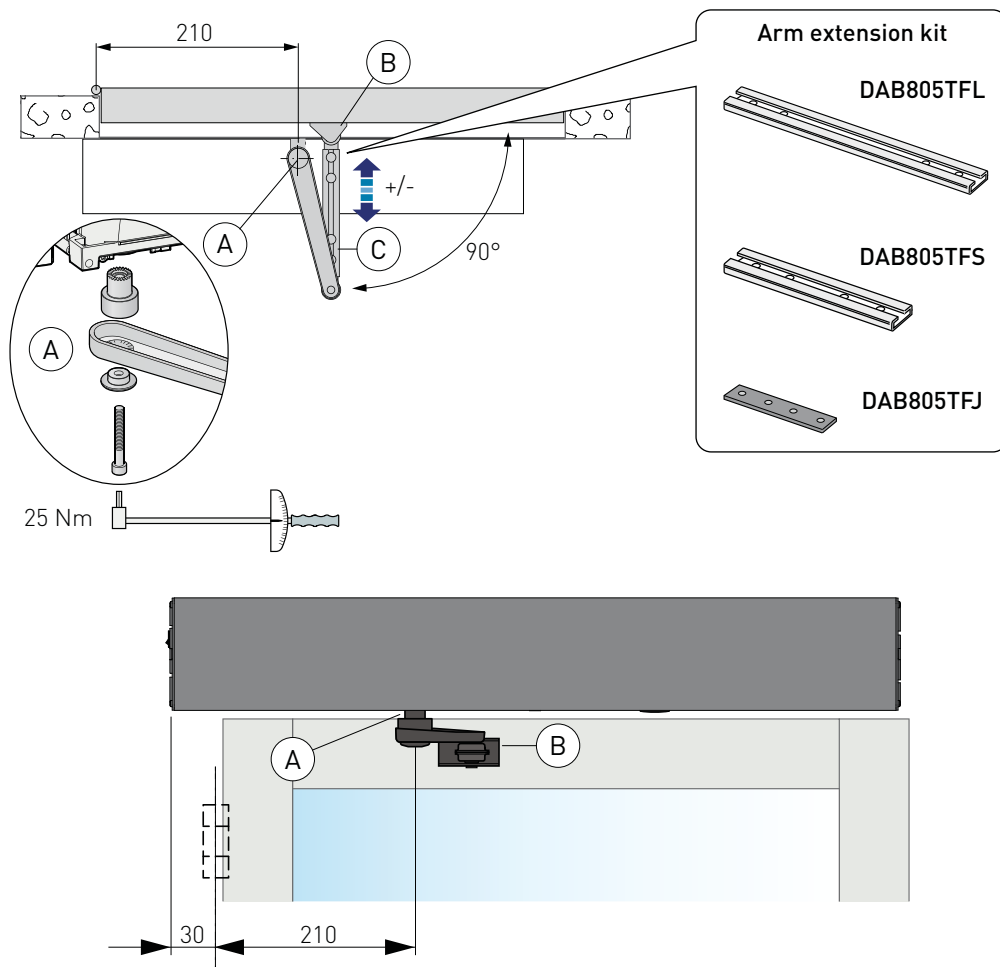


- Move the motor back to its original position.
- Fasten the motor by retightening the 4 supplied screws [B] in the order shown in the diagram.



NOTE: respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.

9.3 Fastening the arm

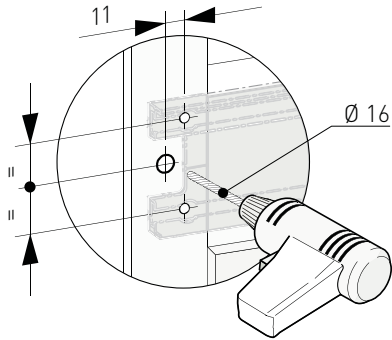


- With the door closed, fasten the arm to the automation in the arm support housing [A].
- Fasten the bracket [B] to the wing to form an angle of 90°. Extend or shorten the arm [C] if necessary.
- Manually move the door and check that it opens and closes correctly without friction.

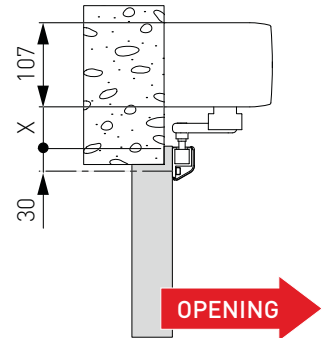
10. Automation with sliding arm DAB805PLA

Use the sliding arm for inswing doors (seen from automation side).

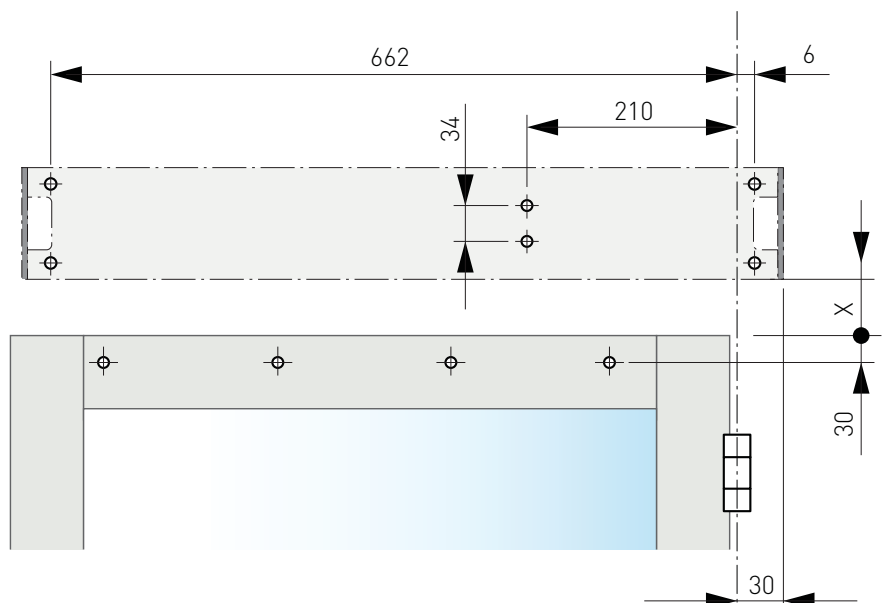
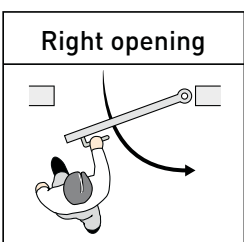
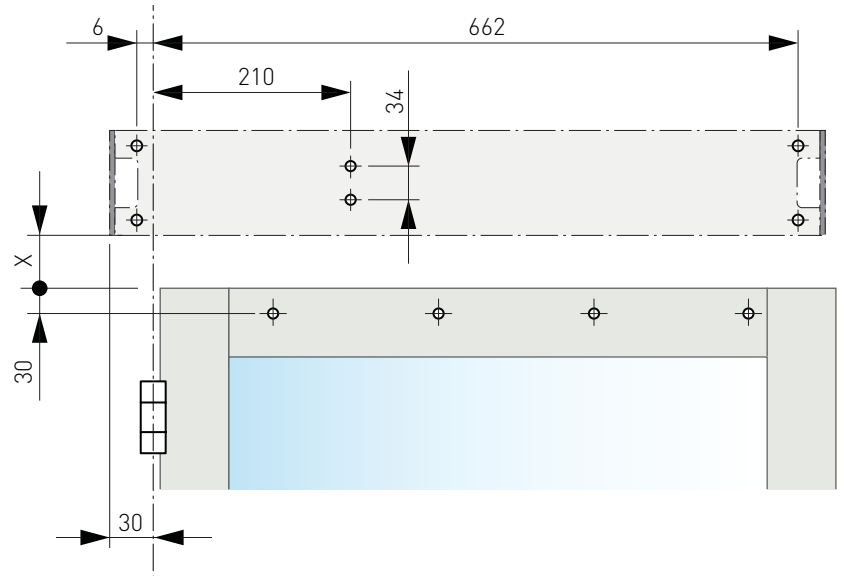
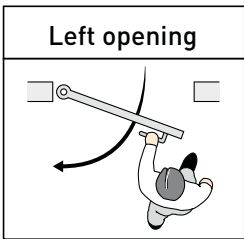
i Before fastening the base plate [1] drill the cable entry holes.



	X
DAB805PLA	50
DAB805PLA DAB805SE2	70
DAB805PLA DAB805SE5	100
DAB805PLA DAB805SE7	120

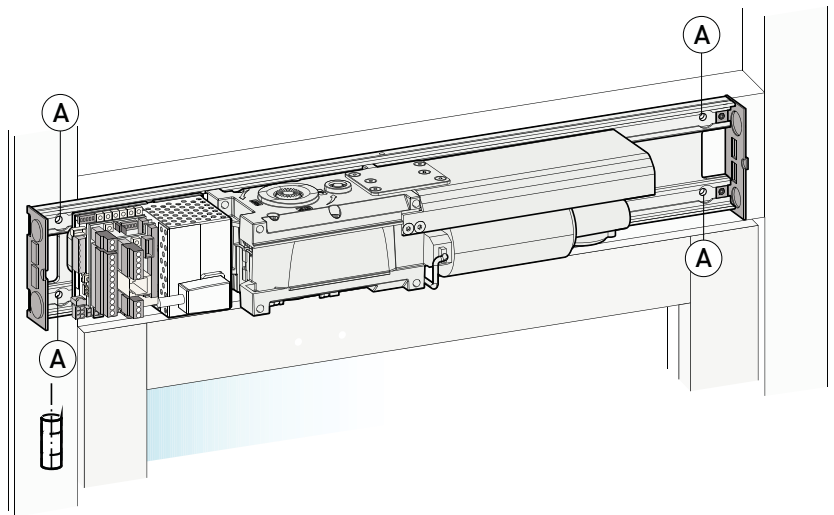
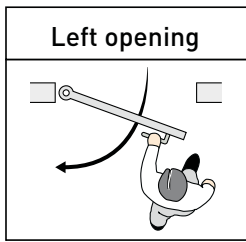


10.1 Pre-installation

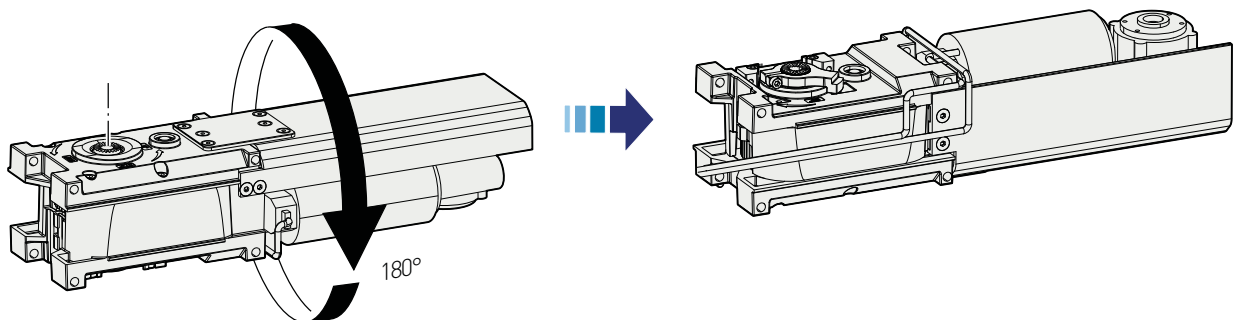
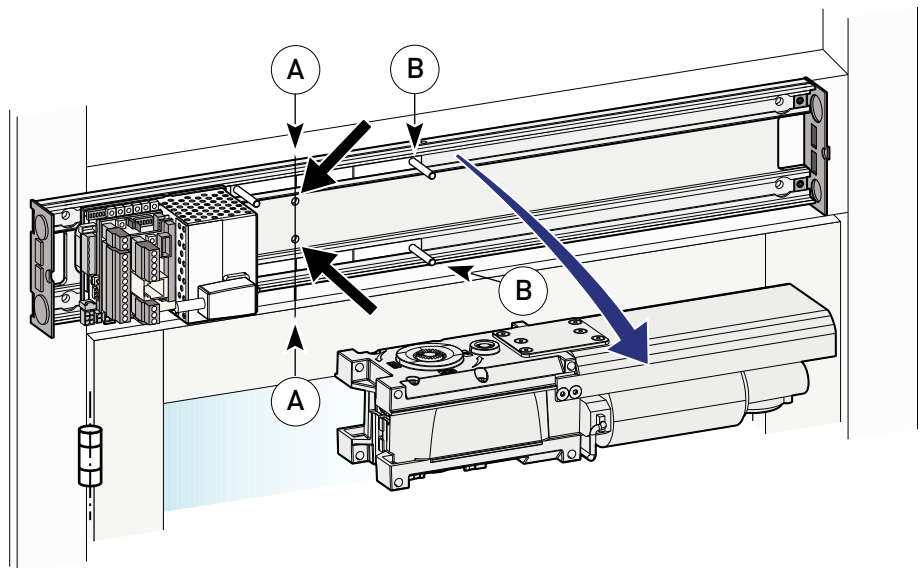


- Prepare to fasten the automation to the wall in accordance with the measurements shown in the diagram by referring to the hinge axis.
- Drill holes in the wing in line with where the sliding arm is fastened.
- If necessary, use the DAB805SE2/SE5/SE7 extensions to increase measurement X between the automation and the arm fixing points.

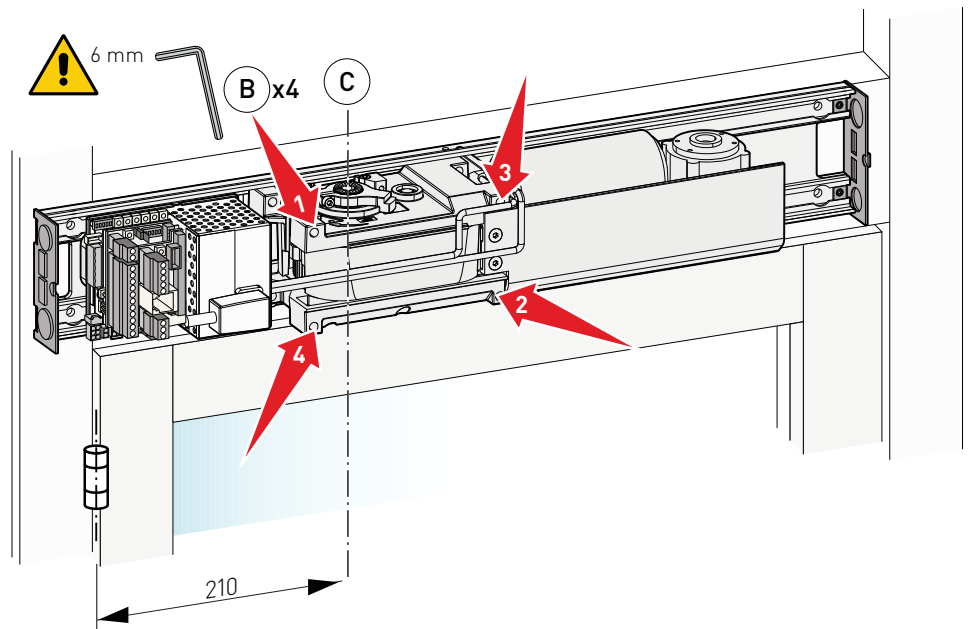
10.2 Fastening the automation



- Fasten the automation using suitable screws [A].



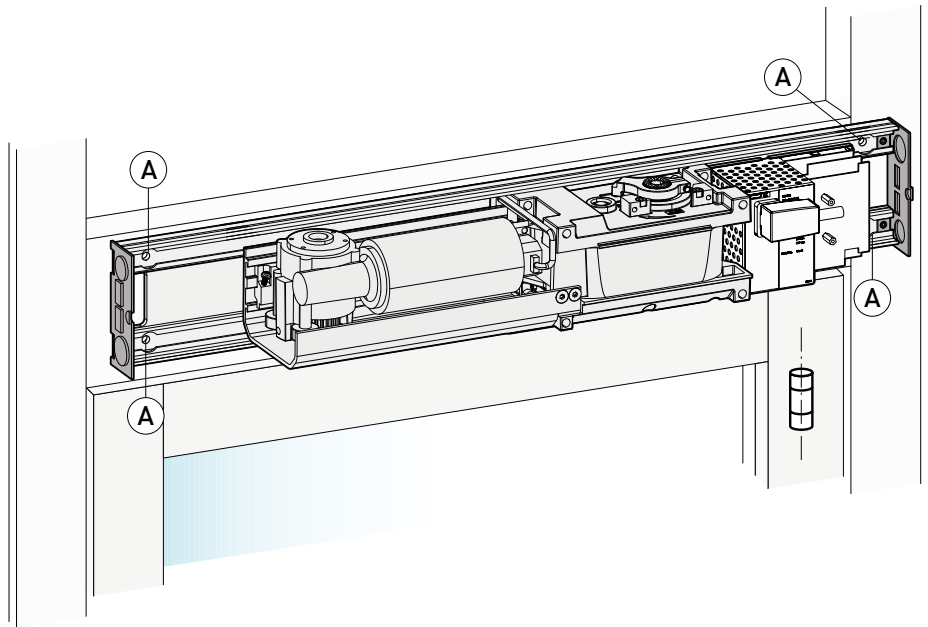
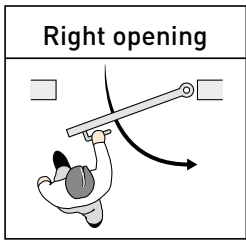
- Remove the screws [B] that secure the motor. Remove the motor. Fasten the base plate with the two screws [A].
- Turn the motor 180° as shown in the figure.



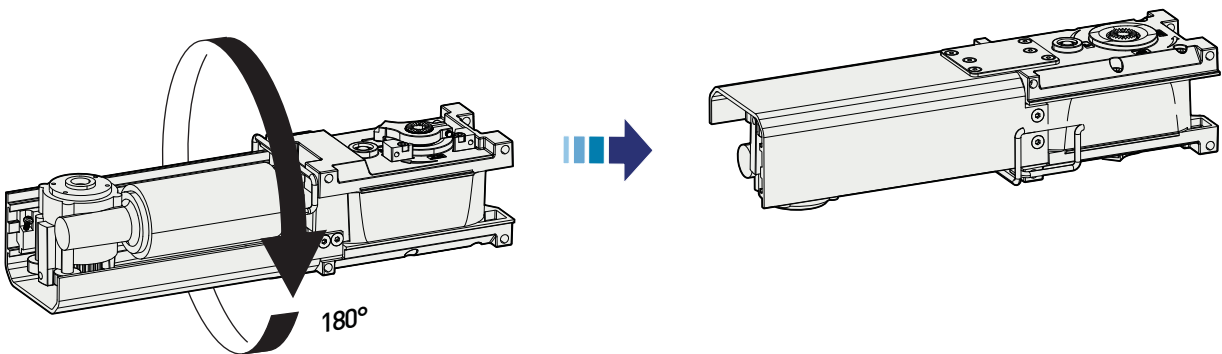
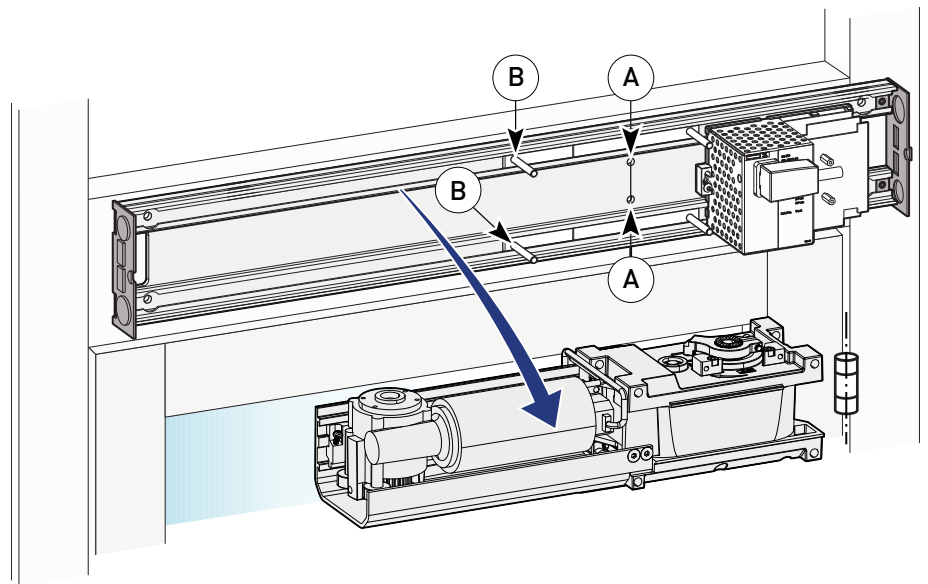
- Fasten the motor by retightening the supplied screws [B] in the order shown in the diagram.



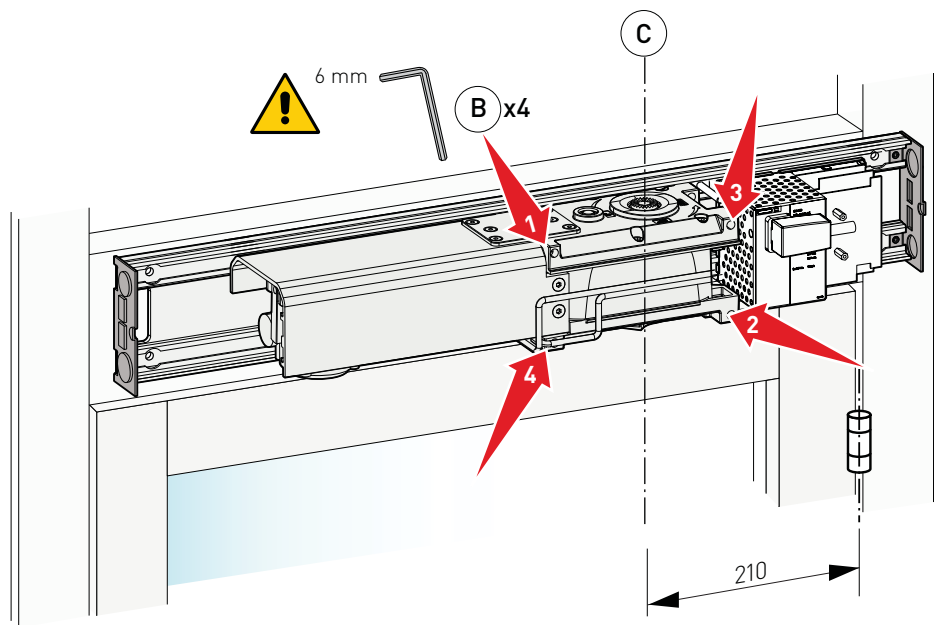
NOTE: respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.



- Fasten the automation using suitable screws [A].



- Remove the screws [B] that secure the motor. Remove the motor. Fasten the base plate with the two screws [A].
- Turn the motor 180° as shown in the figure.

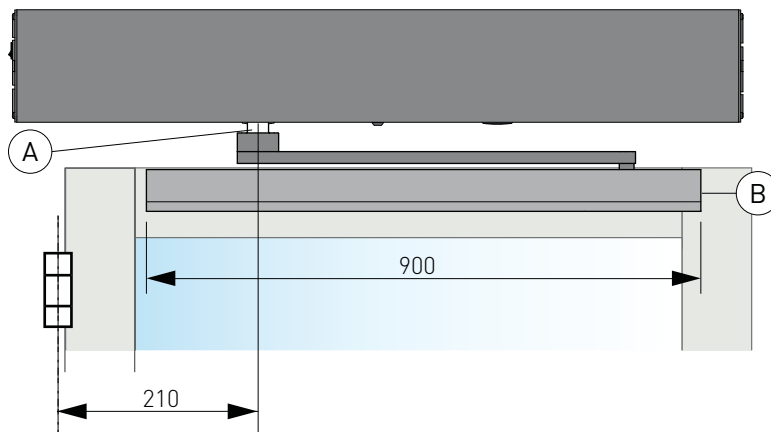
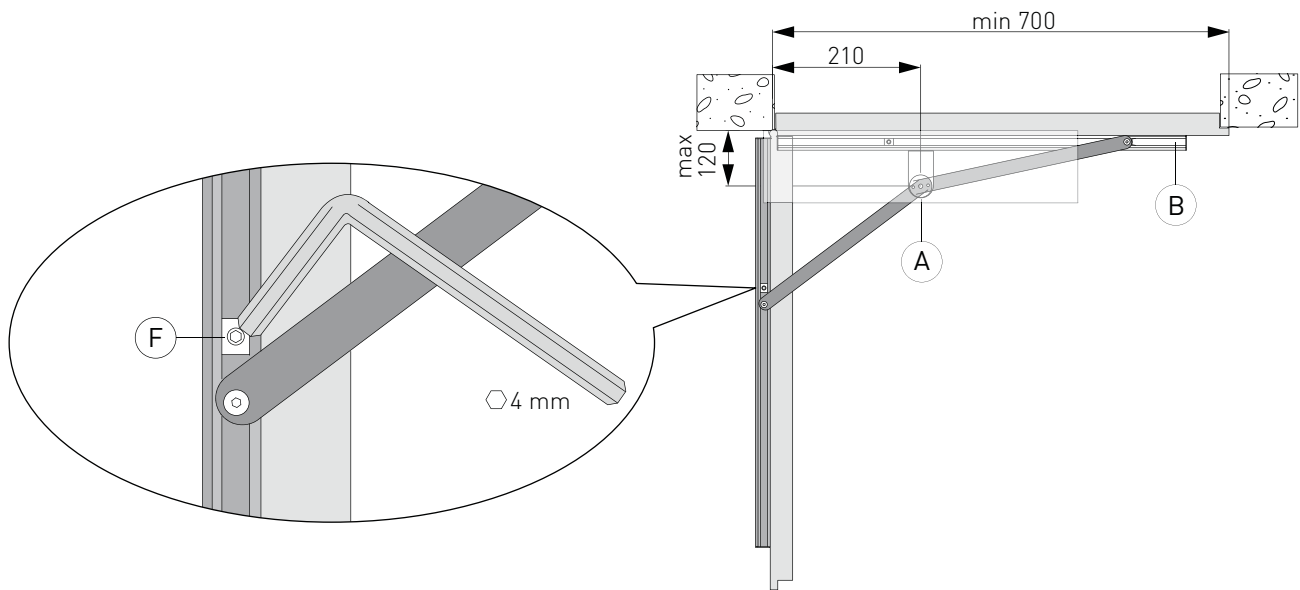


- Fasten the motor by retightening the supplied screws [B] in the order shown in the diagram.



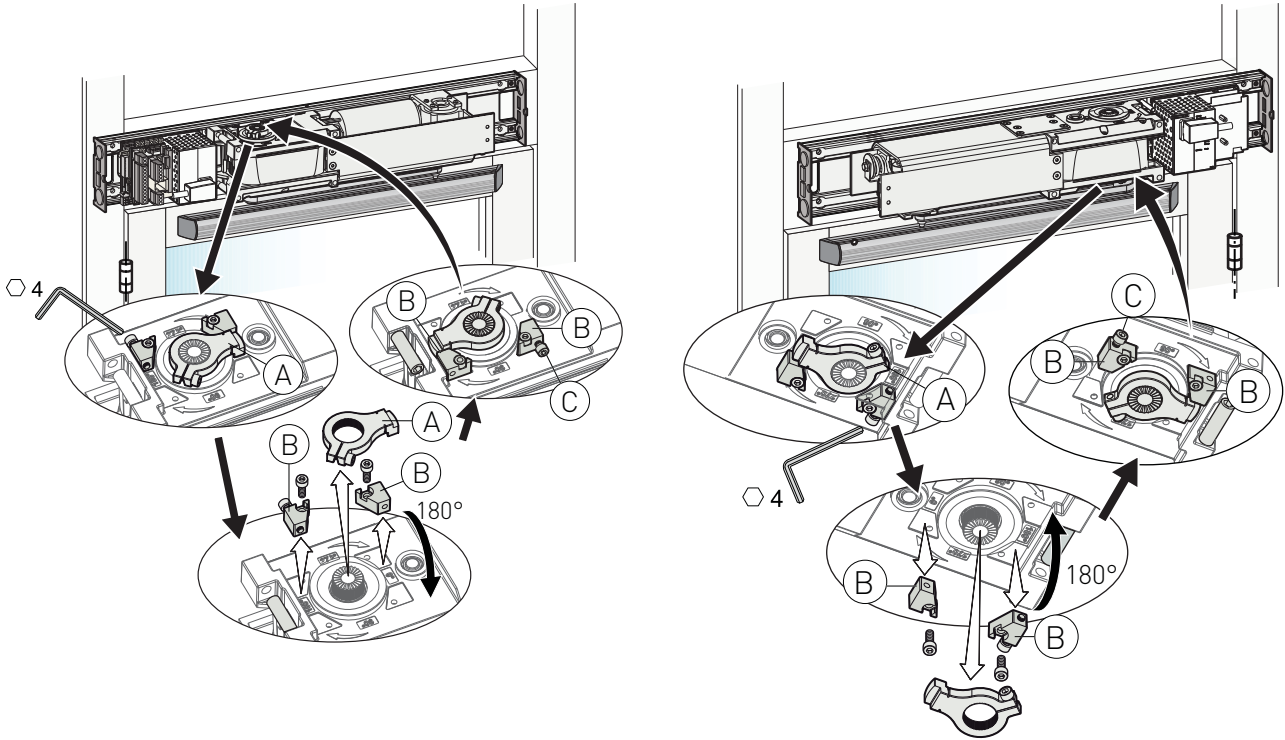
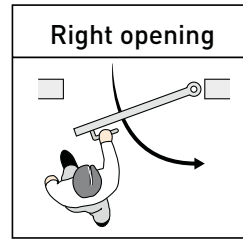
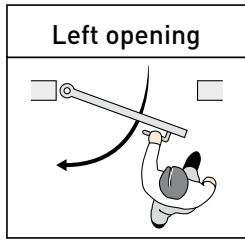
NOTE: respect the measurement between the hinge and the gearmotor shaft output [C], as shown in the figure.

10.3 Fastening the sliding arm



- With the door closed, fasten the arm to the automation in the arm support housing [A].
- Fasten the guide [B] to the door wing and cut off the surplus part of the guide if necessary.

10.4 Fastening the door stop



NOTE: the following operations must be performed with the arm installed and the door closed.

For installations with a sliding arm, do the following:

- Remove the limit switches [B]. Loosen the door stop [A] and move it to the unknurled part of the actuator arm.
- Turn the limit switches 180°. Reposition them on the gearmotor as shown in the figure.
- Reposition the door stop [A] as shown in the figure.



The door stop [A] must be installed as close as possible to the closing limit switch [B].

- Manually move the door and check that it opens and closes correctly without friction.
- Adjust the internal door open stop [F] as described in paragraph 10.3.

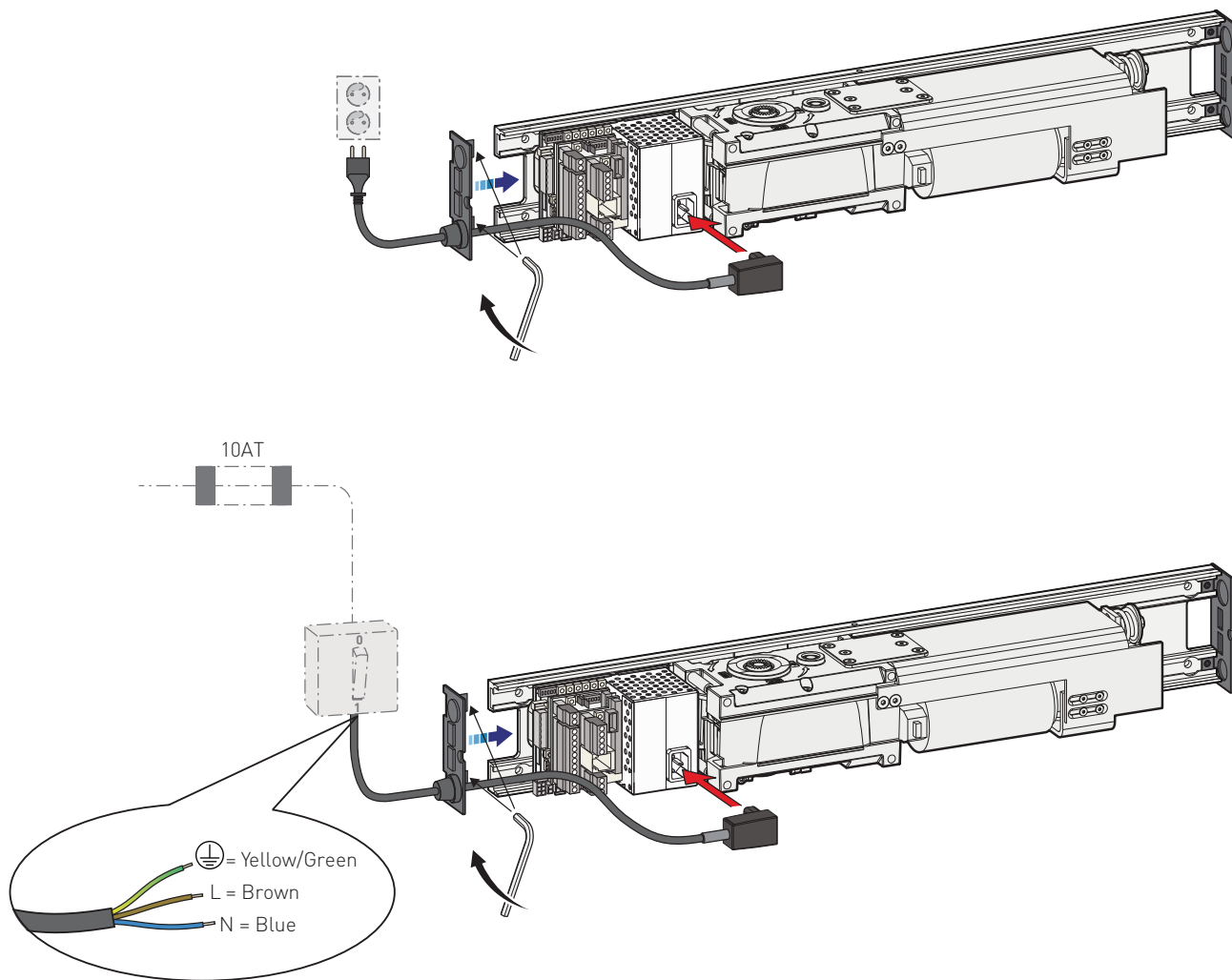
11. Connections to power supply.

Before connecting the power supply, make sure the plate data correspond to that of the mains power supply. An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply. Check that upstream of the electrical installation there is an adequate residual current circuit breaker and a suitable overcurrent cutout.

Use a H05RN-F 3G1.5 or H05RR-F 3G1.5 type electric cable.

Connection to the mains power supply, in the section outside the automation, is made with independent channels and separated from the connections to the control and safety devices.

Make sure there are no sharp edges that may damage the power supply cable.

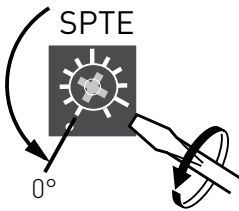


12. Door start-up

Place the door in a closed position.

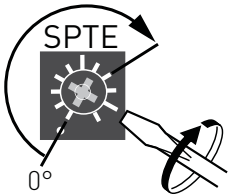


Turn the SPTE trimmer on the control panel to 0° (if it is not already).



Turn on the power.

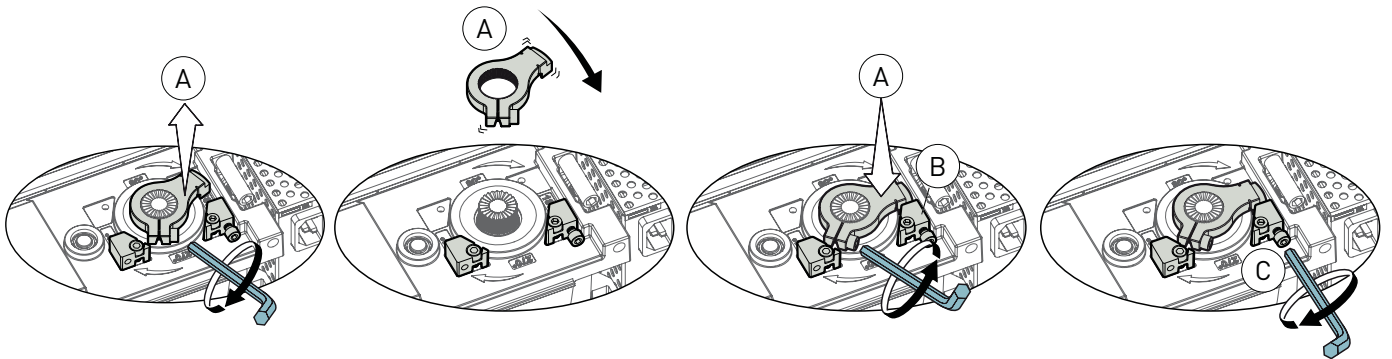
By gradually turning the SPTE trimmer clockwise, the door opens electrically and gradually moves into the desired open position, plus approximately 15 mm.



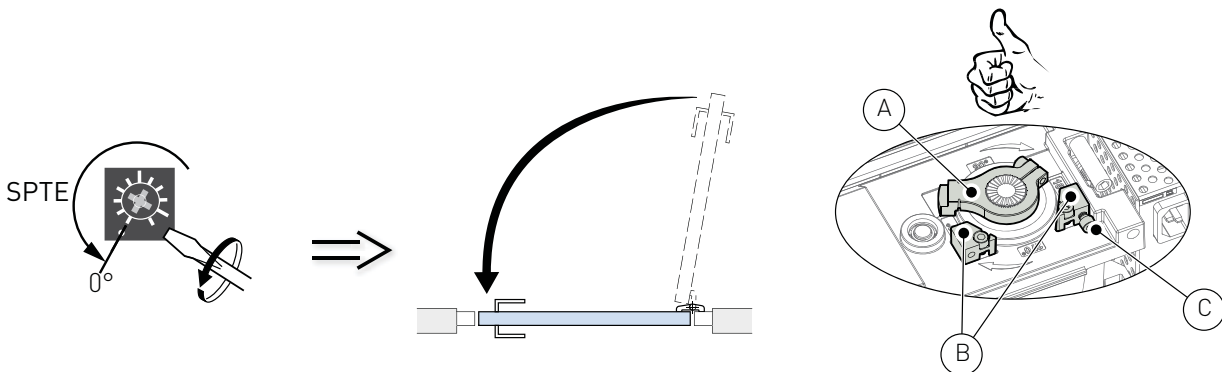
Loosen the door stop [A]. Move it to the unknurled part of the arm.

Install the door stop [A] on the grooves as close as possible to the opening limit switch [B].

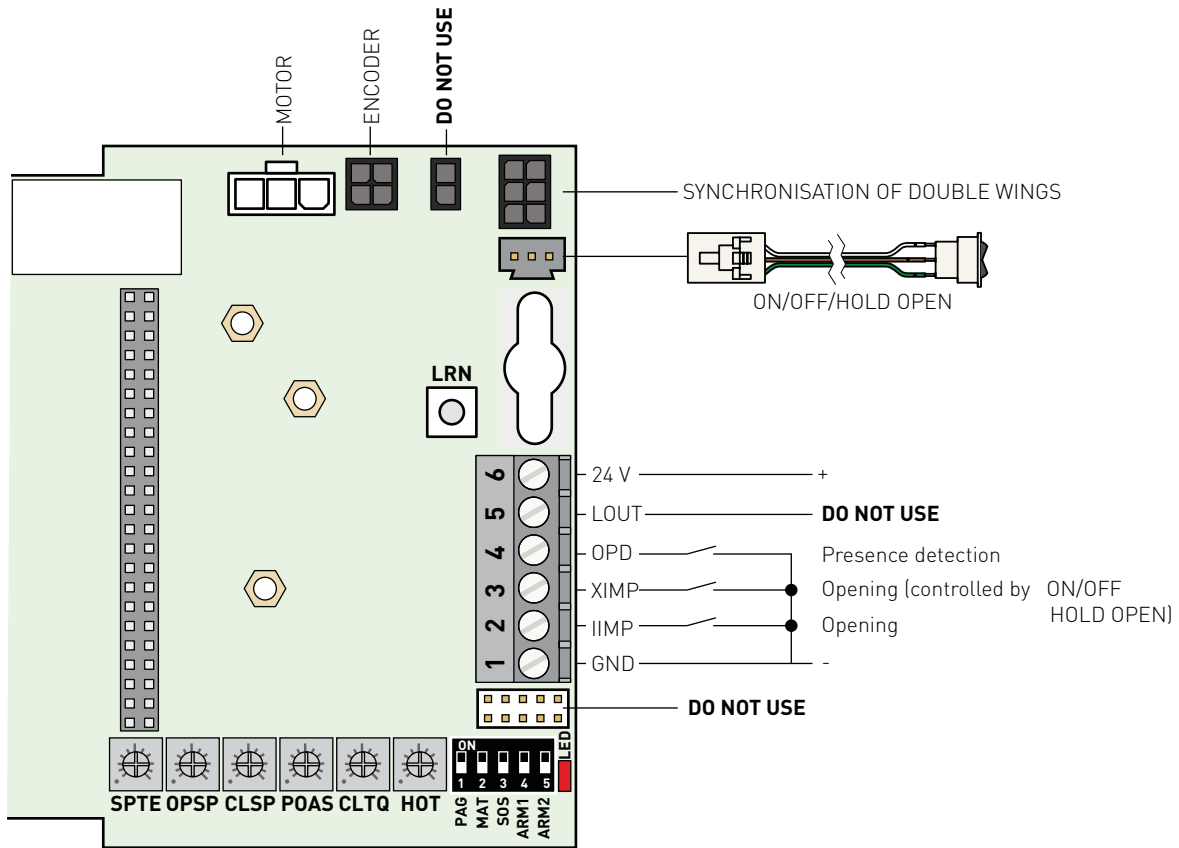
If necessary, fine tune using the opening limit switch screw [C].



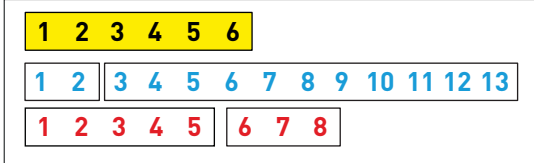
Close the door by turning the SPTE trimmer to 0°.




13. Electrical connections



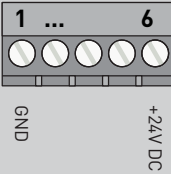






i Attach the label to the terminal board making sure you place it in the right direction (see figure above).



13.1 Commands

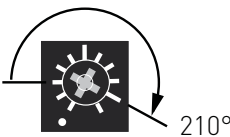

Contact	Function / Accessory	Description
1-2 GND-IIMP	N.O.	OPENING FROM INNER SIDE Closing of the contact activates the opening operation.
1-3 GND-XIMP	N.O.	OPENING FROM OUTER SIDE CONTROLLED BY ON-OFF-HOLD SWITCH Closing of the contact activates the opening operation. Contact controlled by ON-OFF-HOLD OPEN switch.
1-4 GND-OPD	N.O.	OPENING SAFETY DEVICE Closing of the contact prevents the door from opening if closed or closing if open.
1-5 GND-LOUT		DO NOT USE
LRN 	Self-learning. When the door starts up and each time the stroke and mechanical stops are adjusted and the CLTQ trimmer and DIP3 are changed on the DAB905ESE card, self-learning is required.	
	<p>i Make sure that the door is fully closed. Move away from the door as soon as you pressed the LRN button. The door does not have safety settings during self-learning. The door may close suddenly or violently.</p>	
	<p>When the LRN button is pressed, the door starts an opening and closing operation for self-learning of the positions and opening and closing stops.</p> <p>i DO NOT intervene during self-learning.</p>	
When closing, the spring pushes the door to learn the weight of the door wing.		
When the LRN button is pressed once, the door opens after 2 s. When the LRN button is pressed twice in a row, the door opens immediately.		

13.2 Outputs and accessories



Output	Description	
	Power supply output for accessories 24 V $\overline{\text{DC}}$ 400 mA max. NOTE: the maximum absorption of 400 mA corresponds to the total number of installed accessories.	
	Motor connection	
	Encoder connection	
	DO NOT USE	
	Cable connection for synchronising two swing doors. For operation, refer to the "SYNCHRONISED DOORS" section.	
	ON/OFF/HOLD switch connection	
	ON	The IIMP and XIMP opening contacts are activated.
	OFF	The XIMP opening contacts is excluded.
	HOLD OPEN	Door open.
	DO NOT USE	

13.3. Adjustments

Trimmer





Trimmer	Description
	Door start-up. The SPTE trimmer is used to make adjustments for acquisition of the opening and closing stops during door start-up.
	Adjusting spring tension The spring pretensioning factory setting is 210° <div style="background-color: #00a0e3; color: white; padding: 5px; margin-top: 10px;">  The maximum spring pretensioning is 210°. Higher tension may damage the spring or overheat the motor. </div> To reduce/increase pretensioning: <ul style="list-style-type: none"> • Loosen the door stop and remove it (see section 10). • Turn the trimmer clockwise until the door opens to 45°. • Loosen the actuator arm fastening screw. • When the door is moved to the open position, the spring tension is reduced. • When the door is moved to the closed position, the spring tension increases. • Tighten the actuator arm fastening screw. • Turn the trimmer to minimum. • Open the door until it reaches the desired open position plus approximately 15 mm by turning the trimmer clockwise. • Fasten the door stop. For fine tuning, see section 10. • Turn the trimmer to minimum. • Press the LRN button and the door will perform the learning cycle.
OPSP	Adjustment of opening speed (from 3 to 6 s). When the trimmer is turned clockwise, the opening speed increases.
CLSP	Adjustment of closing speed (from 3 to 6 s). When the trimmer is turned anti-clockwise, the opening speed decreases.
POAS	Adjustment of servo-assisted movement during manual opening of the door. When the trimmer is set to minimum, the door is not servo-assisted. When the trimmer is turned clockwise, the motor will increase servo-assistance when the door is opened manually.
CLTQ	Adjustment of closing force. When the trimmer is set to minimum, the door is closed by the force of the spring. When the trimmer is turned clockwise, the motor increases the closing force. Increase the closing force for doors installed in areas with different pressures or where there are strong gusts of wind.
HOT	Adjustment of automatic closing time (from 1.5 to 30 s). Adjust the time that passes between the end of the opening operation and the start of the closing operation. Timing starts when the door is fully open.

Dip-switch




DIP	Description	OFF 	ON 
DIP1 - PAG	Push & Go. Manual pushing of the door activates automatic opening. When the door is closed, a thrust is maintained by the motor or the spring during closing.	Disabled	Enabled
DIP2 - MAT	DO NOT USE		
DIP3 - SOS	Obstacle detected during opening	Stall. If an obstacle is detected during an opening operation, the door attempts to reopen.	Stop. If an obstacle is detected during an opening operation, it stops movement and the door is closed after the time set with the HOT trimmer elapses.
DIP4 - ARM1 DIP5 - ARM2	Selection of arm type. See table below.		













The factory setting is used for the articulated arm.
To modify DIP4 and DIP5, disconnect the mains power supply.
Select arm type.
Reconnect the power supply.

Articulated arm DAB805PSA-PSAF (FACTORY SETTING)	DIP4 OFF 	DIP5 OFF 
Sliding arm DAB805PLA-PLAB Three-lever arm DAB805PLAT	DIP4 ON 	DIP5 OFF 

Signals

LED	ON 	OFF 	FLASHING 
	Normal working	No mains power supply	Alarm (see alarm table)

Alarms

LED 	CAUSE	SOLUTION
(1) 	Short circuit. Incorrect sensor detection.	Check to see if there is a short circuit or damaged sensor
(2) 	Faulty battery	Replace battery
(3) 	Faulty control panel	Replace control panel
(4) 	Encoder error	Check encoder cable. Open and close the door manually and check the automatic function. If the problem is not resolved, replace the control panel.
(5) 	Faulty locking device	Check to see if there is a short circuit on the locking device. Replace locking device.
	Faulty DAB905ESE unit	Replace DAB905ESE unit
(6) 	Sync cable not connected or faulty (parallel doors only)	Connect the cable.
		Replace the cable.
(7) 	Faulty slave control panel (parallel doors only)	Check flashing frequency on the slave LED and take necessary measures as indicated in this table.
(8) 	Motor overheated	Wait for the motor to cool down.
(9) 	Door locked or repetitive command.	Activate or deactivate command.

14. Preset parameters

The DAB105 automation has 10 groups of preset parameters loaded into the system.

The factory set parameter group corresponds to number 1.

To modify the parameter group:

1. Disconnect the batteries, if present.
2. Disconnect the mains power supply.
3. Press and hold down the LRN self-learning button.
4. Reconnect the power supply, the LED will come on **3s** **5s**, and release the LRN self-learning button, the LED will go out.
5. The LED flashes the same number of times as the number of the parameter group (see table).
6. Press the LRN button to go to the parameter group following the set parameter group. Once the maximum parameter limit has been reached, it restarts from number 1.
7. Press the LRN button until the desired parameter group has been set.
8. Disconnect the mains power supply.
9. The next time the power supply is connected, the automation will use the new parameter group.

Group Parameter	1	2	3	4	5	6	7	8	9	10
Time door is open contact 3-5 ESE card (a)	15 min	no limit	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min
Use of battery	Energy saving	Energy saving	Continuous mode	Energy saving	Energy saving	Energy saving	Energy saving	Energy saving	Energy saving	Continuous mode
Emergency closing (KILL)	Blocked	Blocked	Blocked	Block controlled by selector	Blocked	Blocked	Blocked	Blocked	Block controlled by selector	Blocked
Obstacle detected during closing (b)	Closing	Closing	Closing	Closing	Reversal	Closing	Closing	Closing	Closing	Reversal
Way presence sensor is installed on synchronised doors. (c)	Separate detection	Separate detection	Separate detection	Separate detection	Separate detection	Shared detection	Separate detection	Separate detection	Separate detection	Separate detection
Lock attempt during closing (d)	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Disabled	Enabled	Enabled	Enabled
O/C open/close command (e)	TWO-WAY mode	TWO-WAY mode	TWO-WAY mode	TWO-WAY mode	TWO-WAY mode	TWO-WAY mode	TWO-WAY mode	TWO-WAY / DOOR CLOSED / ONE-WAY mode	TWO-WAY mode	TWO-WAY mode
Configuration of emergency closing contact (KILL)	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.	N.C.	N.O.

NOTES:

- (a) If the door remains open after an O/C open command, the control panel starts a close command after 15 min of inactivity.
- (b) If set to "CLOSING" mode, the automation will stop if an obstacle is present.
If set to "REVERSAL" mode, the automation reopens. It reattempts closing until the obstacle is removed.
- (c) For synchronised doors, the presence sensor can intervene independently on each door or simultaneously.
- (d) If there is a problem with the block hook-up while closing, the door recloses and reattempts the hook-up.
- (e) With the ON/OFF/HOLD switch the O/C command is always enabled except in the HOLD position - Door open.
With the program selector, the O/C command operates normally in TWO-WAY mode.
With parameter 8 selected, the O/C command operates in TWO-WAY / ONE-WAY/ DOOR CLOSED mode.

15. Door requirements for use by people with disabilities

If the DAB105 automation is used on doors accessed by people with disabilities, adjust the OPSP and CLSP trimmers so that the opening and closing times are the same as or longer than those indicated in the table in accordance with DIN 18650-2 (ANSI 156.19).

		Weight of door wing [kg]				
		50	60	70	80	90
Length of door wing [mm]	750	3,0 s (3,0 s)	3,1 s (3,0 s)	3,2 s (3,0 s)	3,3 s (3,0 s)	3,5 s (3,5 s)
	850	3,1 s (3,0 s)	3,1 s (3,0 s)	3,2 s (3,5 s)	3,4 s (3,5 s)	3,6 s (4,0 s)
	1000	3,2 s (3,5 s)	3,4 s (3,5 s)	3,7 s (4,0 s)	4,0 s (4,0 s)	4,2 s (4,5 s)
	1200	3,8 s (4,0 s)	4,2 s (4,5 s)	4,5 s (4,5 s)	4,8 s (5,0 s)	5,1 s (5,5 s)

(the values in parenthesis refer to EN16005:2012 Directive).

Or change the opening and closing speed as indicated below.

1. Disconnect the batteries, if present.
2. Disconnect the mains power supply.
3. Press and hold down the LRN self-learning button and reconnect the power supply.
4. The LED will come on **3s 5s 5s**.
5. Release the LRN self-learning button and the LED will go out.
6. The LED flashes the same number of times as the number of the parameter (see table).
7. Press the LRN button to go to the parameter following the set parameter. Once the maximum parameter limit has been reached, it restarts from number 1.
8. Press the LRN button until the desired parameter has been set.
9. Disconnect the mains power supply.
10. The next time the power supply is connected, the automation will use the new setting.

	1 - Preset	2
Opening speed	3-6 s	Automatic limitation
Closing speed	3-6 s	Automatic limitation

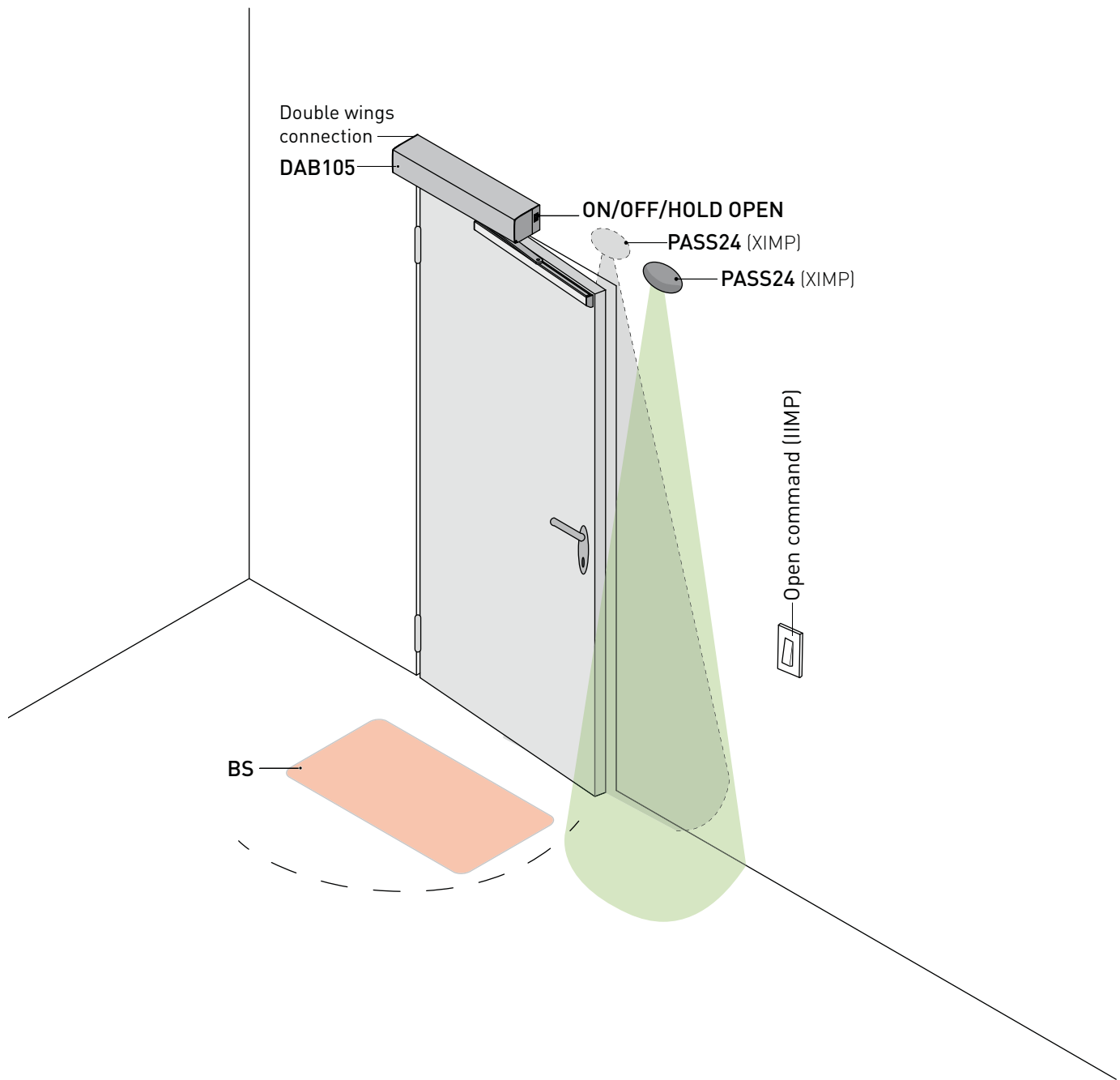


Start automatic self-learning procedure (LRN button) each time parameter settings are changed.

16. Resetting default settings

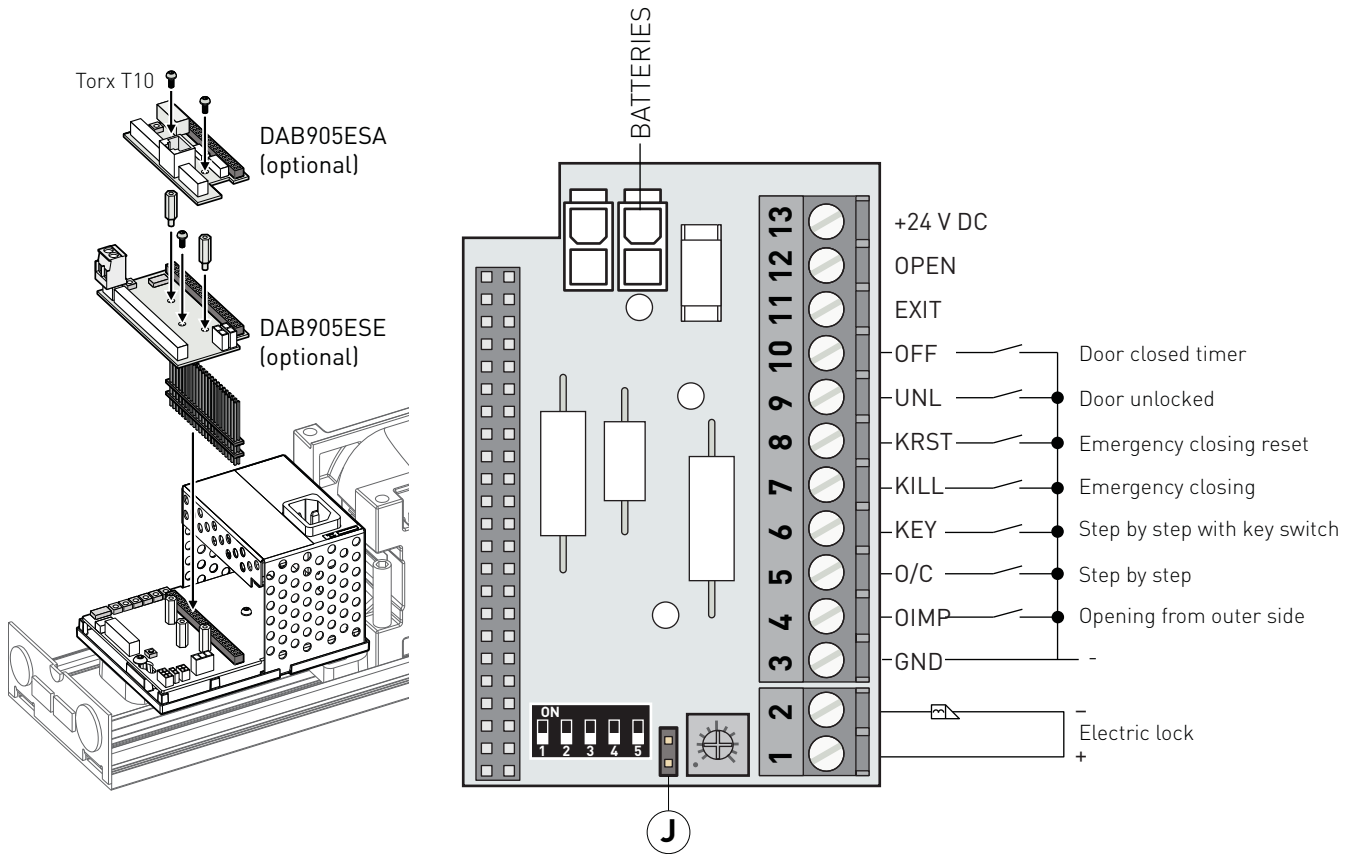
1. Disconnect the batteries, if present.
2. Disconnect the mains power supply.
3. Press and hold down the LRN self-learning button.
4. Reconnect the power supply and the LED will come on **3s**.
5. After 3 s, release the LRN self-learning button and the LED will go out.
6. Disconnect the mains power supply.
7. The next time the power supply is connected, the automation will use the preset values.

17. Example of application with basic control panel

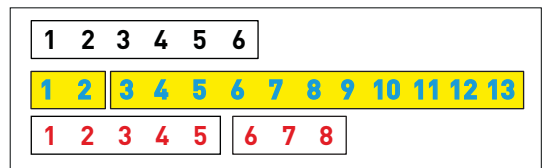


18. DAB905ESE extension unit (optional)

A control expansion card is available for control of the electromechanical lock, function selector switch, batteries, key selector switch and night closing.



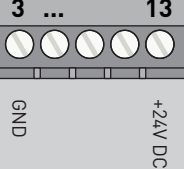
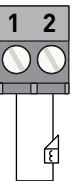
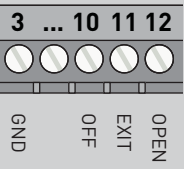

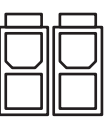
Attach the label to the terminal board making sure you place it in the right direction (see figure above).



18.1 Commands


Contact		Function - Accessory	Description
3 — 4 GND-OIMP	N.O.	OPENING FROM OUTER SIDE	Contact for connection of external detection radar connection. Closing of the contact activates the opening operation. NOTE: Command only active with COM400MKB-MHB function selector switch.
3 — 5 GND-O/C	N.O.	STEP-BY-STEP	Closing of the contact activates the opening and closing operation in the order open-stop-close-open. If the door remains open, it is reclosed after 15 min of inactivity.
3 — 6 GND-KEY	N.O.	STEP-BY-STEP	Closing of the contact activates the opening and closing operation in the order open-stop-close-open. Output for connection of key selector switch.
3 — 7 GND-KILL	N.O.	EMERGENCY CLOSING (FIRE DOORS)	Closing of the contact activates the emergency closing operation. This command is activated in all situations and overrides all other commands. When the contact re-opens, the door goes back to operating as set by the selector switch. N.B.: This command can be combined with an emergency button.
3 — 8 GND-JRST	N.O.	EMERGENCY CLOSING RESET	If JUMPER=ON the control panel performs an automatic reset after emergency closing.
3 — 9 GND-UNL	N.O.	DOOR UNLOCKED SIGNAL	Contact for door unlocked signal. Closing of the contact activates the opening operation when the electric lock is completely unlocked. Set trimmer OPD=MAX.
3 — 10 GND-OFF	N.O.	DOOR CLOSED	Contact for connection of door closed timer.

18.2 Outputs and accessories



Output	Description
	<p>Power supply output for accessories 24 V $\overline{\text{DC}}$ 400 mA max. NOTE: the maximum absorption of 400 mA corresponds to the total number of installed accessories.</p>
	<p>Output for connection of electromechanical lock. Select the lock type using DIP1. NOTE: do not use electric locks with reset.</p>
	<p>Output for connection of function selector switch. If the function selector switch is set to OFF the Push and Go function is disabled. If a function selector switch is installed, connect the ON/OFF/HOLD switch if present.</p> <p> For more information, refer to the COM400MKB-MHB selector switch manual.</p>
	<p>Battery kit in continuous mode. With the mains power supply off, the battery kit will guarantee operating in continuous mode. WARNING: to allow charging, the battery kit must be connected to the control panel at all times. Periodically check that the battery kit is working properly by setting DIP5=ON. If the battery is not connected, the LED on the control panel flashes continuously. An acoustic/light alarm signal can be connected to terminals 6-7-8 on the DAB905ESA card. The battery kit is factory set to ENERGY SAVING mode. In the event of a power failure, the door only operates with the key-operated switch. If you change the preset parameter group, you can set the battery kit to CONTINUOUS mode. In the event of a power failure, the door operates normally until the batteries fully discharge.</p>

18.3 Adjustments




Trimmer

Trimmer	Description
	<p>Adjustment of opening delay time. From 0 to 3 s. With the automation closed, there is a thrust during closing at the same time as the trigger impulse before the door is opened. With DIP3=ON the door release is activated for the duration of the opening delay.</p>

Dip-switch

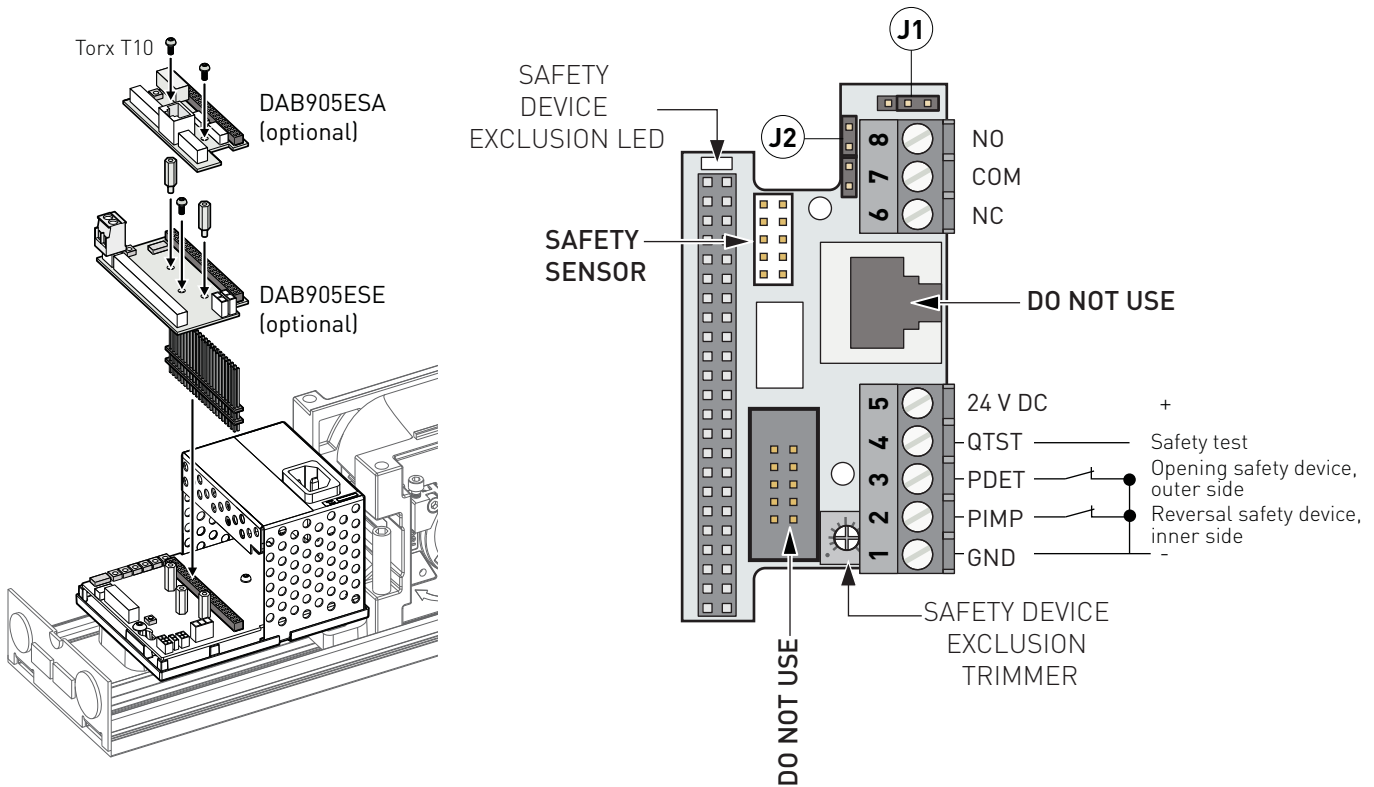
DIP	Description	OFF 	ON 
DIP1	Electric lock power supply	12 V $\overline{\text{DC}}$	24 V $\overline{\text{DC}}$
DIP2	Electric lock type. DO NOT USE ELECTRIC LOCKS WITH RESET.	Standard. The electric lock or electric block is normally powered off. When powered, it allows door opening	Anti-panic. The electric lock or electric block is normally powered. When unpowered, it allows door opening.
DIP3	Release	Disabled	Enabled during time set by OPD trimmer
DIP4	Electric lock hook-up	Disabled	Enabled. Near the closing stop, the door increases force/speed to ensure it closes correctly if an electric lock or electric block is present.
DIP5	Battery test	Disabled	Enabled.

Jumper

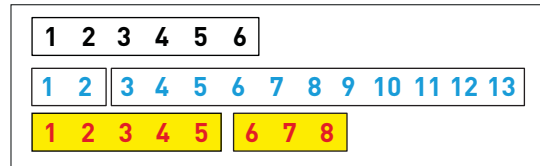
	Description	OFF 	ON 
	Emergency closing reset	Manual.	Automatic

19. DAB905ESA extension unit (optional)

A control expansion card is available for control of the presence sensors and alarm and door status signals.



i Attach the label to the terminal board making sure you place it in the right direction (see figure above).

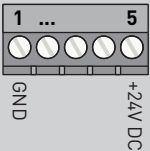
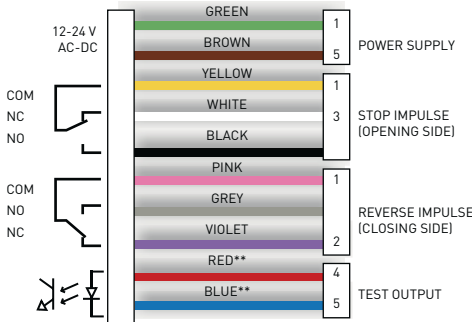
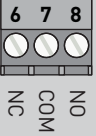


i Remove the jumpers if a safety sensor is connected to terminals 1-2 and 1-3.

19.1 Commands


Contact	Function - Accessory	Description
1 — 2 GND-PIMP	N.C. REVERSAL SAFETY CONTACT INTERNAL SENSOR	Opening of the contact during the closing operation causes the movement to invert (re-opening).
1 — 3 GND-PDET	N.C. OPENING SAFETY DEVICE EXTERNAL SENSOR	Opening of the contact stops movement during the opening operation. When the contact is reclosed, the automation continues the interrupted opening operation. If the automation is closed, opening of the contact stops the opening operation.
5-4 24V-QTST	SAFETY TEST	Connect the QTST terminal of the control panel to the corresponding test terminal on the safety device. A safety device test is activated before each operation.

19.2 Outputs and accessories







Output	Description
	<p>Power supply output for accessories 24 V $\overline{\text{DC}}$ 400 mA max. NOTE: the maximum absorption of 400 mA corresponds to the total number of installed accessories.</p>
<p>SAFETY SENSOR</p> 	<p>Connection of autocontrolled safety sensor on door wing. Connect the internal sensor to terminals 1-2 (GND-PIMP). Connect the external sensor to terminals 1-3 (GND-PDET).</p> <p>i Remove jumpers 1-2 and 1-3.</p> <p>i For more information, refer to the REM sensor manual</p>
	<p>Connection of external error indication or door open device. Relay contact 24 V $\overline{\text{DC}}$ 1A.</p> <p>☎ In the event of an alarm, contact the support service.</p>

19.3 Adjustments

Trimmer

Trimmer	Description
	<p>Adjustment of exclusion of safety device during opening. From 45° to 90°. When the door is opening, it excludes operating of the safety device installed on the wing so that the wall is not detected. When the safety device is excluded, the LED comes on.</p>

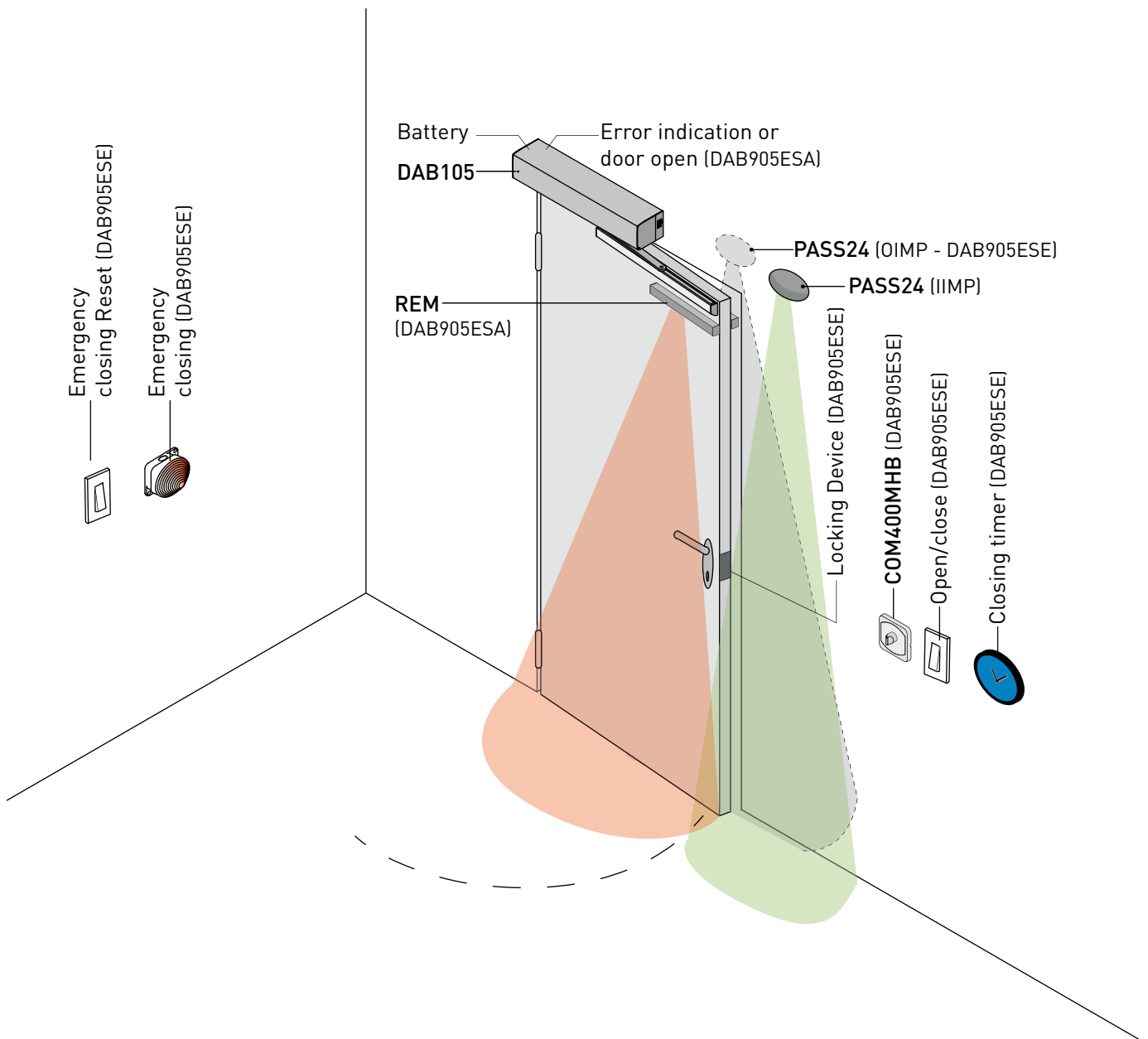
Jumper

J1		Indication of external error
		Indication of door open
J2		External sensor test
		Internal sensor test
		No test
		Internal and external sensor test

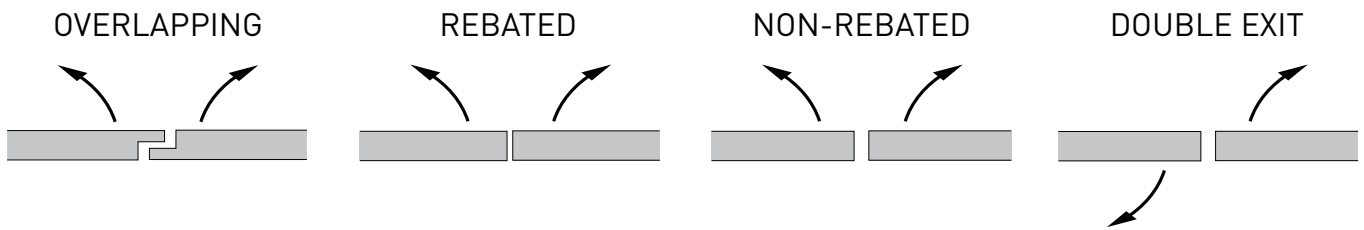
Signals

	ON 	OFF 
LED	Opening safety device disabled.	Opening safety device enabled.

20. Example of application



21. Synchronised doors



Connect the two automations using the sync cable to the plug on the control panel.

Depending on the type of installation, cut the jumpers on the MASTER or the SLAVE cable, as indicated in the table:



The MASTER automation is the automation that opens first.



Function		Type of application		Jumper to cut	
Opening	Closing	Overlapping	Rebated	MASTER	SLAVE
Synchronous	Synchronous	NO	NO	/	/
Synchronous	Asynchronous	YES	NO	BLACK	/
Asynchronous	Asynchronous	YES	YES	/	RED
Double output		/	/	BLACK	RED

21.1 Settings

Function	Settings	
	MASTER	SLAVE
Program selection	X	
Opening time	X	
Closing time	X	
Adjustment of closing time	X	
Closing / Attempt to open when door is obstructed	X	
PAG On / Off	X	
Servo-assistance level	X	X
Closing force	X	X
Presence or mat sensor impulse	X	
Selection of operating mode during battery operation	X	
Lock / unlock signal voltage	X	X
Lock powered / unpowered	X	X
Lock release enable / disable	X	X
Door open delay time	X	X
Snap lock enable / disable	X	X



- The electric locks must be connected to the MASTER and SLAVE control panels.
- The opening devices must be connected to the MASTER or SLAVE control panels or both.
- The presence sensor must be connected to the MASTER control panel except for double exit doors.
- The safety sensors must be connected to the corresponding control panel.

22. Electrical start-up



NOTE: Before performing any type of operation, make sure that the automation is turned off and the batteries are disconnected.
The trimmer can only be adjusted with the automation idle.

1. Turn on the power.
2. Press the LRN button for self-learning.
3. For parallel installations, learning must first be performed on the MASTER door and then on the SLAVE door.
Learning can be performed on the two doors separately before connecting the sync cable.
For parallel doors with overlapping, the MASTER door must remain open until the SLAVE has completed learning.
4. Set the automatic closing time using the HOT trimmer.
5. Adjust the opening speed using the OPSP trimmer.
6. Adjust the closing speed using the CLSP trimmer.
7. Connect the accessories and check they are operating.

23. Routine maintenance plan

Perform the following operations and checks every 6 months according to intensity of use of the automation.

Disconnect the 230 V~ power supply and batteries (if present) and switch the ON/OFF switch to OFF:

- Clean and lubricate the moving parts.
- Check that the fixing screws hold.
- Check all electrical connections.
- Check the batteries are working properly.

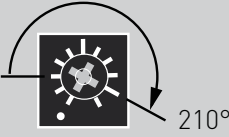
Reconnect the 230 V~ power supply and batteries (if present) and switch the ON/OFF switch to ON:

- Check the stability of the door and that the movement is smooth and free of friction.
- Check the state of the hinges.
- Check that all the control and safety devices are working properly.

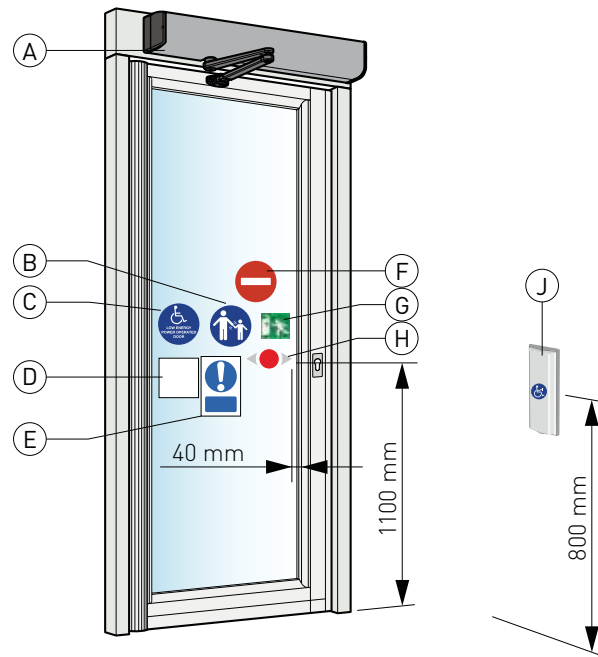


NOTE: For spare parts, see the spares price list.

24. Troubleshooting

Problem	Possible cause	Remedy / Explanation
The door does not open		
a) The motor does not start	The switch is set to OFF	Change switch setting
	There is no mains power supply	Check the mains power supply
	The control panel does not work	Check the contacts on the control panel
	Presence detection is activated	Remove any objects from the detection area
	Emergency closing activated	Deactivate emergency closing
	SPT trimmer not set to 0°	Turn the SPT trimmer to 0°
b) The motor starts	Mechanical lock is locked	Unlock the lock
	Obstacle	Remove any obstacles
	Door lock jammed	Select lock release
	The arm system is too loose	Turn the SPT trimmer until the end stop reaches the limit switch. Place the door in an open position. Tighten the arm system. Turn the SPT trimmer to 0°
The door does not close		
	The switch is set to HOLD	Change switch setting
	The presence detection contact is activated	Remove any objects from the detection area
	Obstacle	Remove any obstacles
The automation has incorrect spring pretensioning	The limit switches have been removed without the installed arm.	<ol style="list-style-type: none"> Turn the SPT trimmer until the end stop becomes loose. Remove the end stop and the arm system. Disconnect the mains power supply. Disconnect the motor cable Install the arm system and find the non-pretensioning point by moving the door wing backwards and forwards. Loosen the arm. Connect the motor cable. Connect the mains power supply. Set the SPT trimmer to 210°.  <ol style="list-style-type: none"> Fasten the end stop to the closing limit switch. Set the SPT trimmer to 0°. <p>THE AUTOMATION HAS RETURNED TO THE FACTORY SETTING</p>

25. Signage



Check that all required signage is applied and intact.

Mandatory indicates that the signage is required by European directives and equivalent national legislation outside the European Union.

Ref.		Description
A		Product label. Mandatory.
B		Supervision of child. Mandatory, if applicable. Apply to both side of the door. To be placed on entrances where risk analysis shows use by children, elderly and disabled.
C		Operator designed for disabled people. Raccomended, if applicable (applied to both sides of the door)
D		Automatic door. Only mandatory in GB.
E		Keep clear. Only mandatory in GB.
F		No entry. Identifying one-way traffic. Mandatory in GB and US. If applicable.
G		Emergency break-out. Mandatory, if approved for escape route.
H		Door sticker. Mandatory, if applicable to highlight the presence of the glass (applied to all glass sections that are moving).
J		Activation by disabled people. Recommended, if applicable.

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