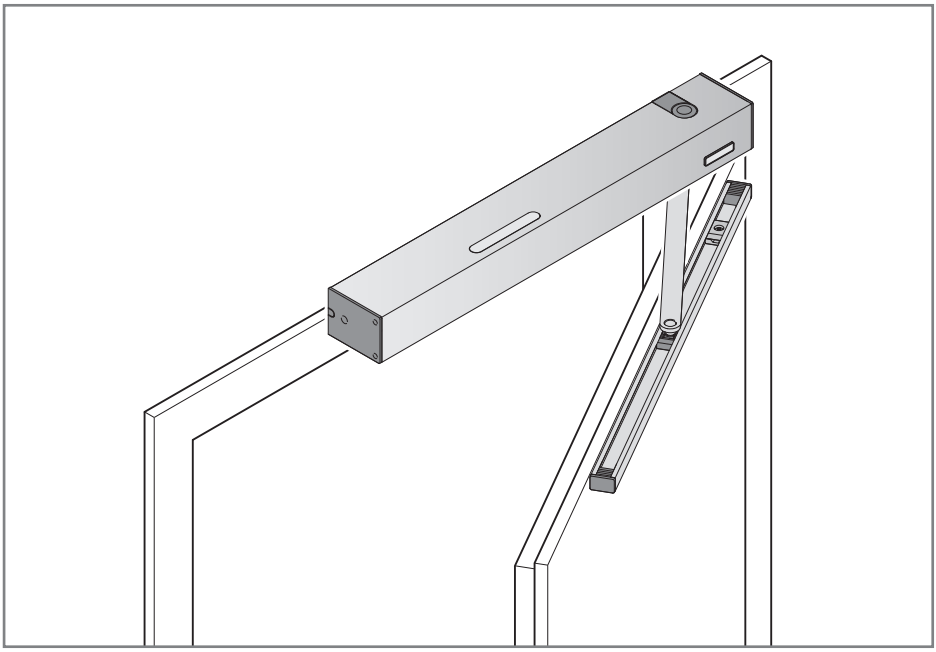

EN

Instructions for Fitting, Operating and Maintenance

Hinged Door Operator PortaMatic

636501 B4 / 50-2021 / DX

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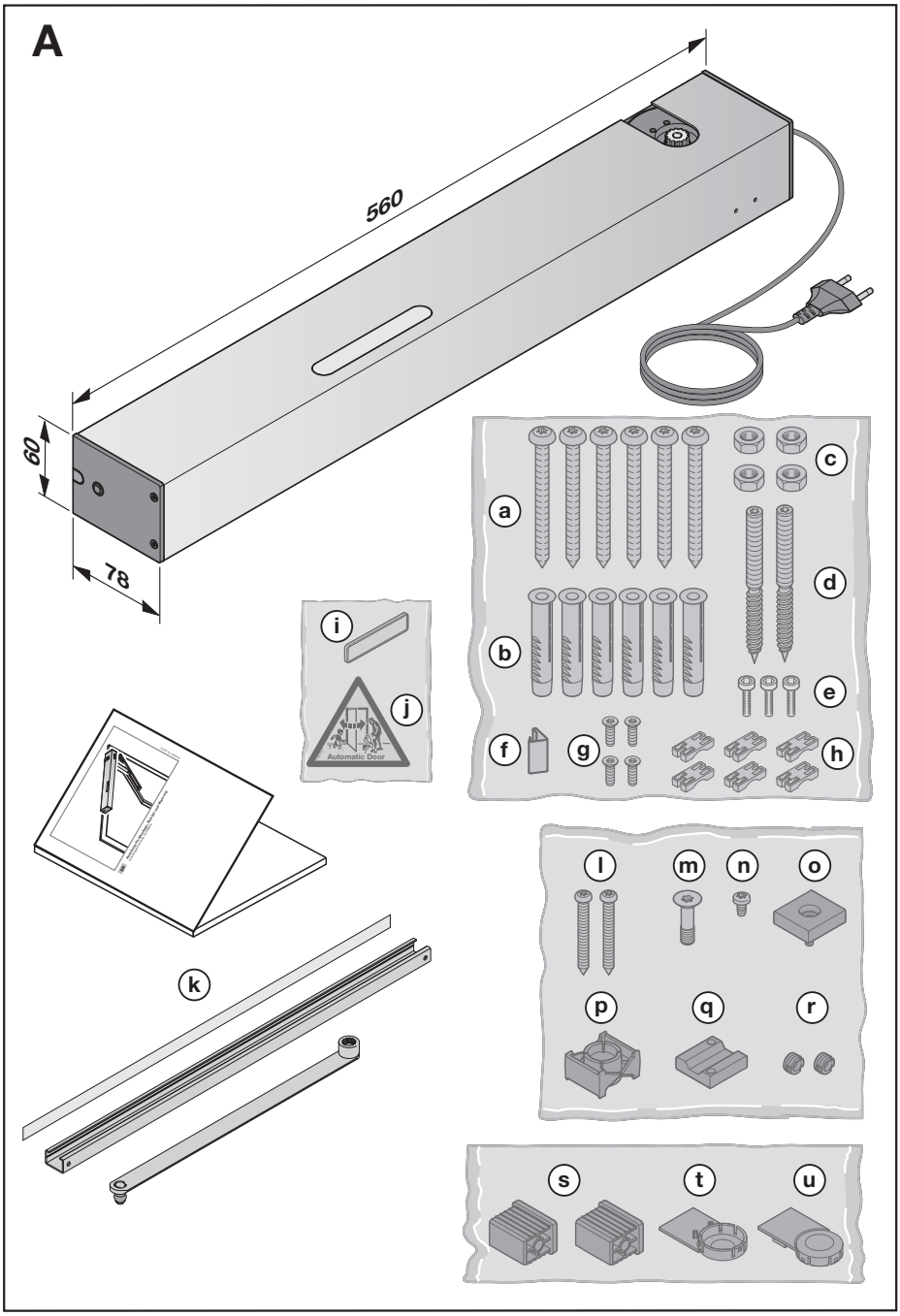
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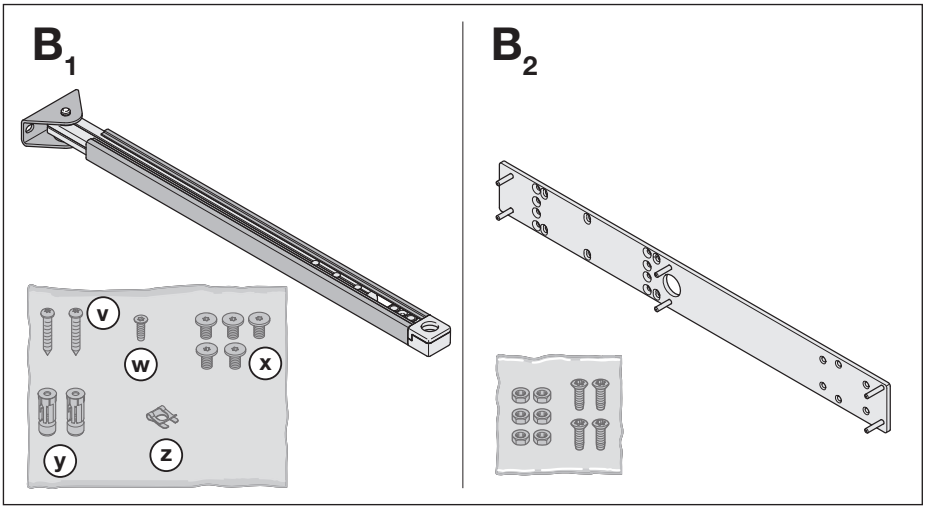
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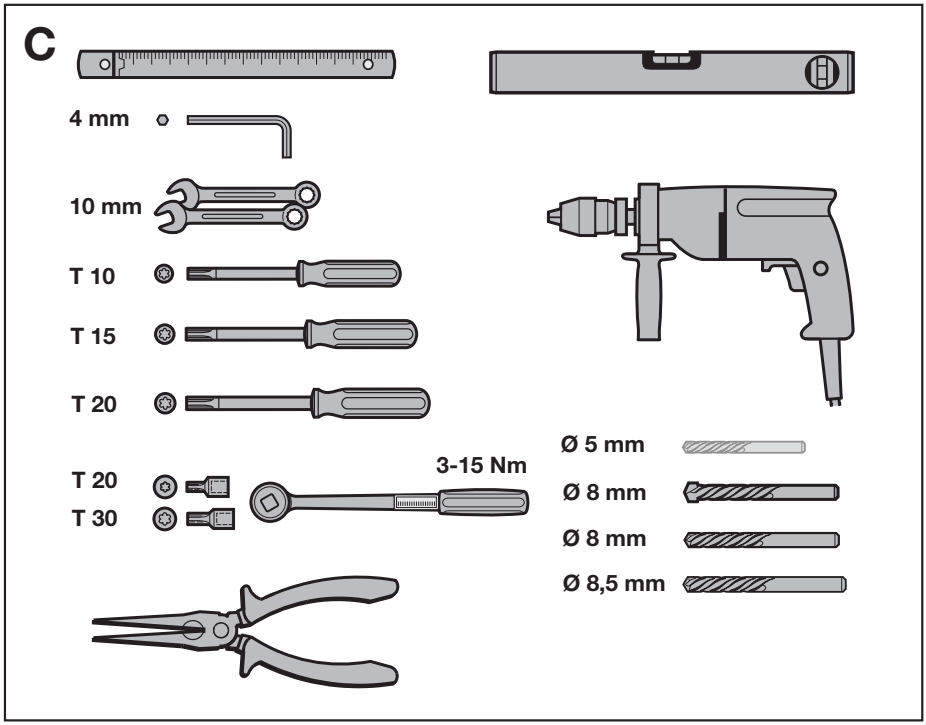
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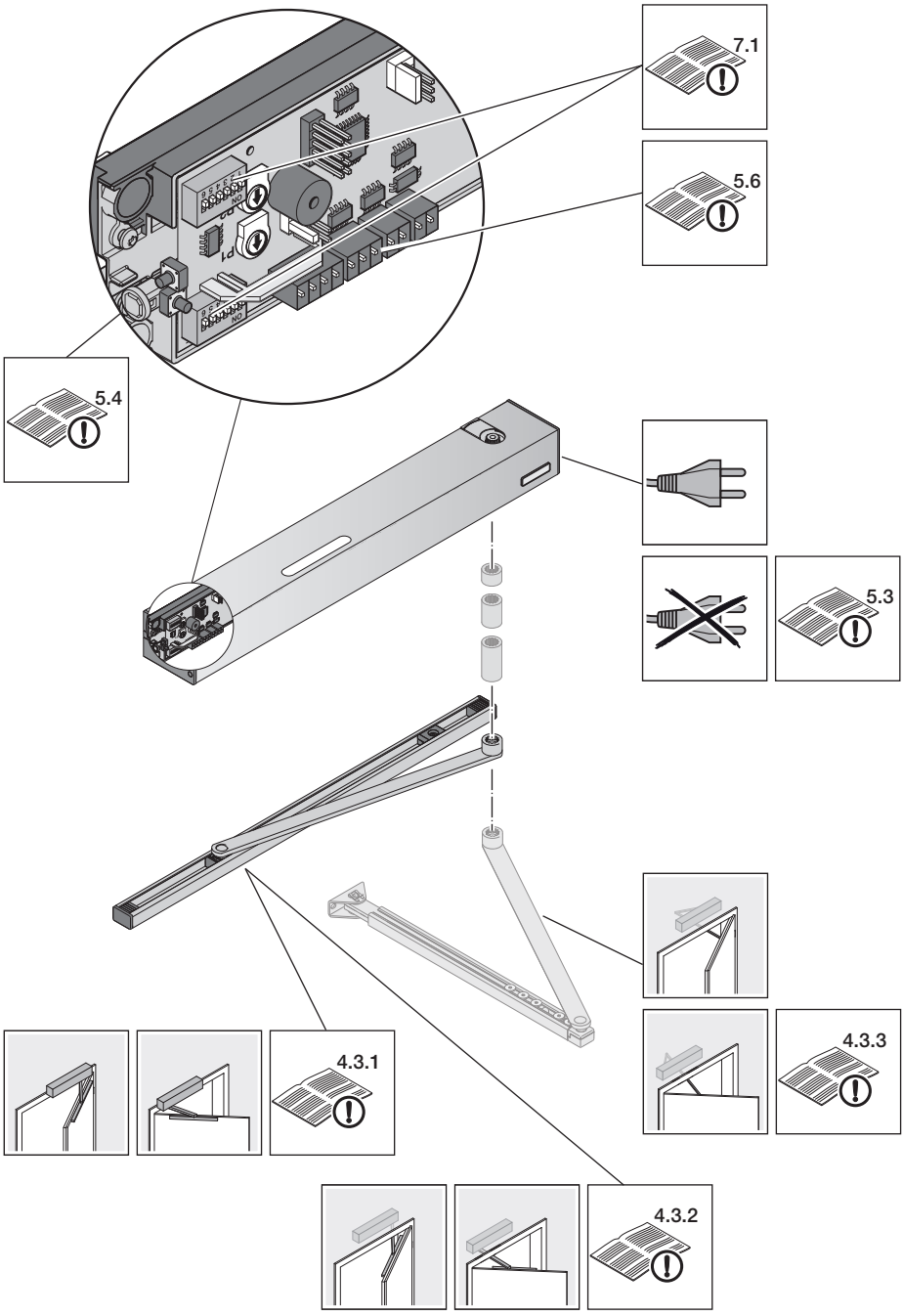
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Dear Customer,
We are delighted that you have chosen a quality product from our company.

1 About these instructions

These instructions are **original operating instructions** as outlined in the EC Directive 2006/42/EC. Read through all of the instructions carefully, as they contain important information about the product. Note the information and please pay particular attention to all safety instructions and warnings.

Please keep these instructions in a safe place and make sure that they are available to all users at all times.

1.1 Further applicable documents

For safe handling and maintenance of the door assembly, the following documents must be placed at the disposal of the end user:

- These instructions
- The enclosed log book
- The enclosed documentation for risk analysis

1.2 Warnings used

The general warning symbol indicates a danger that can lead to **injury** or **death**. In the text, the general warning symbol will be used in connection with the caution levels described below. In the illustrated section, an additional instruction refers back to the explanation in the text.

⚠ DANGER

Indicates a danger that can immediately lead to death or serious injuries.

⚠ WARNING

Indicates a danger that can lead to death or serious injuries.

⚠ CAUTION

Indicates a danger that can lead to minor or moderate injuries.

ATTENTION

Indicates a danger that can lead to **damage** or **destruction of the product**.

1.3 Definitions used

Automatic operation

The taught-in *Automatic* radio code or an external button triggers automatic operation:

After an impulse, the door opens. The door then automatically closes again.

Automatic timer

Once the set hold-open phase and pre-warning phase have elapsed, the door closes automatically.

Hinge side / opening side

On the hinge side of a door, the hinges are visible. If the operator is fitted on the hinge side, it pulls the door open.

Opposite hinge side / closing side

The opposite hinge side of a door is the side opposite the hinge side. If the operator is fitted on the opposite hinge side, it pushes the door open.

Semi-automatic

If semi-automatic mode is set, the door automatically travels in the direction in which is was moved after a manual door movement.

Impulse sequence control

The taught-in *Impulse* radio code or a button triggers impulse sequence control:

1st impulse	The door runs towards an end-of-travel position.
2nd impulse	The door stops.
3rd impulse	The door runs in the opposite direction.
4th impulse	The door stops.
5th impulse	The door runs in the direction of the end-of-travel position selected in the 1st impulse.

etc.

Power limit

Forces that are caused by the door leaf hitting an obstacle are limited to permissible values (EN 16005).

Learning runs

Door runs during which the operator learns the following:

- Travel distances
- Forces that are required to move the door

Low-energy

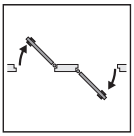
The hinged door operator PortaMatic is a so-called low-energy operator as outlined in the European standard EN 16005. The outgoing kinetic energy from the power-driven operator is limited in such a way that the dynamic forces exerted by an impact normally do not pose any danger to persons and no further safeguards are necessary.

Normal operation

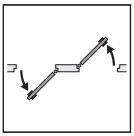
Normal operation is door travel with taught-in travel distances and forces.

Left-hand door / right-hand door

Depending on the positioning of the hinges, doors are designated either *left-hand doors* or right-hand doors. This is based on a view from the hinge side.



Left-hand door: hinges on the left side



Right-hand door: hinges on the right side

Door closer function

Once the set hold-open phase and pre-warning phase have elapsed, the door automatically closes from any open position.

Travel

The path that the door takes traveling from the *Open* end-of-travel position to the *Closed* end-of-travel position.

Pressure in the Close direction

Before travel in the Open direction, the operator presses the door into the Closed end-of-travel position to relieve the electric strike's release mechanism (DIL switch H2).

Pre-warning time

Time between the travel command (impulse) and start of door travel.

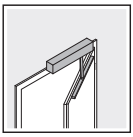
1.4 Symbols used

This operator fitting is shown in the illustrated section:

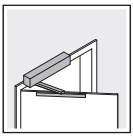
- To the lintel
- With slide rail, pulling on the hinge side
- On a right-hand door

Fitting deviations for other fitting variants are also shown. In this case, the following pictograms provide better orientation:

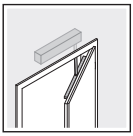
Operator fitting



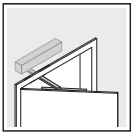
- To the lintel
- With slide rail, pulling on the hinge side
- On a right-hand door



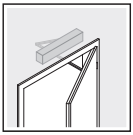
- To the lintel
- With slide rail, pulling on the hinge side
- On a left-hand door



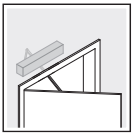
- To the lintel
- With slide rail, pushing on the opposite hinge side
- On a right-hand door



- To the lintel
- With slide rail, pushing on the opposite hinge side
- On a left-hand door



- To the lintel
- With scissors linkage, pushing on the opposite hinge side
- On a right-hand door



- To the lintel
- With scissors linkage, pushing on the opposite hinge side
- On a left-hand door

All dimensions in the illustrated section are in millimetres [mm].

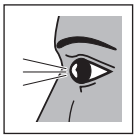
Symbols:

See text section
In the example, 7 means: See text section, section 7

Important note for avoiding material damage and personal injury

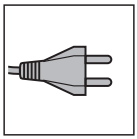
Check for smooth running

High exertion of force



Inspect

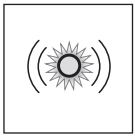
Audible engagement



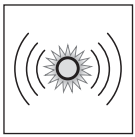
Mains lead with plug

Permanent connection

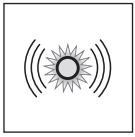
Factory setting



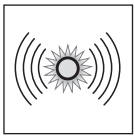
Slow flashing



Normal flashing



Fast flashing



Very fast flashing

1.5 Abbreviations used

Colour code for cables, single conductors and components The abbreviations of the colours for identifying the cables, conductors and components comply with the international colour code according to IEC 60757:	
BN	Brown
BU	Blue
GN	Green
GY	Grey
WH	White
YE	Yellow

2 ⚠ Safety instructions

ATTENTION:

IMPORTANT SAFETY INSTRUCTIONS.

FOR THE SAFETY OF PERSONS, IT IS IMPORTANT TO COMPLY WITH THE FOLLOWING INSTRUCTIONS. THESE INSTRUCTIONS MUST BE KEPT.

2.1 Intended use

The hinged door operator is intended to automate internal doors weighing up to 80 kg and measuring max. 1100 mm in width.

Contact with the automated door must be acceptable for the expected group of users.

- Private area, only instructed persons
- Commercial area/workplace, instructed persons and accompanied visitors
- Public area, all groups of persons have access

NOTE:

In every area, the group of users (e.g. persons that are older or require assistance, small children or persons with disabilities) must be taken into consideration when deciding whether the risks are acceptable.

2.2 Non-intended use

The operator must not be used

- on fire-rated doors or smoke-tight doors
- in public areas (if the contact between the automated door and the user is considered unacceptable).

2.3 Fitter qualification

Only correct fitting and maintenance in compliance with the instructions by a competent/specialist company or a competent/qualified person ensures safe and flawless operation of the system. A qualified person is a person with suitable training, specialist knowledge and practical experience sufficient to correctly and safely fit, test, and carry out maintenance on a door system.

2.4 Safety instructions for fitting, maintenance, repair and disassembly of the door system

⚠ DANGER

Concealed supply lines

Contact with the mains voltage presents the danger of a deadly electric shock.

In the event of an uncontrolled gas leak, there is a risk of explosion.

In the event of an uncontrolled water leak, there is a risk of water damage.

▶ Before drilling in ceilings and walls, check the drill site. With a metal detector, you can find concealed supply lines, for example for
  - Electricity
  - Gas
  - Water

⚠ WARNING

Risk of injury due to unexpected door travel

▶ See warning in section 11

2.5 Safety instructions for fitting

The specialist must observe the following during fitting:

- The applicable job safety rules and regulations
- The rules and regulations for operating electrical devices

In the process, the relevant national guidelines must be observed. Potential hazards as outlined in DIN EN 16005 are avoided by construction and fitting according to our guidelines.

The base construction at the fitting site must ensure secure operator fitting.

⚠ WARNING

Risk of injury due to falling components

▶ See warning in section 4

Unsuitable fixing material

▶ See warning in section 4.2

Risk of injury due to unintentional door movement

▶ See warning in section 4.2

2.6 Safety instructions for initial start-up and for operation

⚠ DANGER

Mains voltage

Contact with the mains voltage presents the danger of a deadly electric shock.

Please note the following:

- ▶ Only specialised electricians may perform electrical connections.
- ▶ The on-site electrical installation must conform to the applicable protective regulations (100–240 V AC, 50 / 60 Hz).
- ▶ For permanent operator connection (optional), an all-pole mains isolator switch with corresponding pre-fuse must be installed.
- ▶ Before all electrical work, switch the system off and wait 30 seconds until the operator is de-energised. Safeguard the system against being switched on again without authorisation.
- ▶ If the mains connection cable is damaged, a specialised electrician must replace this cable. In this way you avoid danger.

⚠ WARNING

Risk of injury during door travel

▶ See warning in section 10

Risk of crushing at the main closing edge and the secondary closing edges

▶ See warning in section 10

Risk of crushing in the slide rail or scissors linkage

▶ See warning in section 10

ATTENTION

External voltage at the connecting terminals

External voltage on the connecting terminals of the control will destroy the electronics.

▶ Do not apply any mains voltage (100 – 240 V AC) to the connecting terminals of the control.

3 Fitting preparations

NOTE:

The fitter of a door assembly is obligated to perform and document a risk analysis according to EN 16005 before the initial start-up. This must be coordinated with the operator. The secure functions are explained to the operator during handover and documented in the log book and the risk analysis. The documents are included in the scope of delivery of the operator and must be kept.

Check the dimensions for your operator's fitting situation to the lintel with

- Slide rail pulling on the hinge side, see section 4.3.1
- Slide rail pushing on the opposite hinge side, see section 4.3.2
- Scissors linkage pushing on the opposite hinge side, see section 4.3.3

If you do not want to drill into the frame to fit the operator, you have to use a shaft extension. The dimension required for the shaft extension depends on the height at which the operator is fitted on the lintel.

▶ Refer to Section 4.3.1, 4.3.2 or 4.3.3.

There are two options for fitting the slide rail:

- Bonding the slide rail, see section 4.6.1
- Bolting the slide rail, see section 4.6.2

There are two ways to connect the mains voltage:

- Mains lead with plug
- Permanent connection, see section 5.3

4 Fitting

ATTENTION:

IMPORTANT INSTRUCTIONS FOR SAFE INSTALLATION.

FOLLOW ALL INSTRUCTIONS; INCORRECT FITTING CAN LEAD TO SERIOUS INJURIES.

⚠ CAUTION

Risk of injury due to falling components

Unsecured components can fall.

▶ The base construction at the fitting site must be designed in such a way as to ensure secure operator fitting.

4.1 Checking the door assembly

The operator is not designed for operation:

- On sluggish or dragging doors
- On doors that can no longer be opened or closed or are difficult to open or close manually
- On doors with lifting hinges
- On doors with door closers

The door must be free of mechanical defects. In addition, the door must be easy to open and close manually.

▶ Check whether the door is easy to open and close.

4.2 Fitting the hinged door operator

⚠ WARNING

Unsuitable fixing material

Use of unsuitable fixing material may mean that the operator is insecurely attached and could come loose.

- ▶ The fitter must check whether the supplied fixing materials (plugs) are suitable for the intended fitting site and, if necessary, use different materials. The supplied fixing materials are suitable for
  - Concrete ≥ C20/25
  - Solid brick ≥ Mz 12
  - Sand-lime solid brick ≥ KS 12
  - Gas concrete ≥ PB2, PP2 (G2)
  - Gas concrete ≥ PB4, PP4 (G4)
  - Vertically perforated brick ≥ Hlz 12 ($\rho \geq 0.9$ kg/dm³)
  - Sand-lime perforated brick ≥ KSL 12 ($\rho \geq 1.6$ kg/dm³)
  - Gypsum boards ($\rho \geq 0.9$ kg/dm³)
  - Gypsum fibre boards 12.5 mm
  - Gypsum plasterboard 12.5 mm
  - Gypsum plasterboard 2 × 12.5 mm

⚠ WARNING

Risk of injury due to unintentional door movement

Incorrect assembly or handling of the operator may trigger unwanted door travel.

- ▶ Follow all the instructions provided in this manual.

Incorrectly fitted control devices (e.g. buttons) may trigger unwanted door travel.

- ▶ Install control devices,
  - depending on user group, at a height between 0.8 m and 1.2 m.
  - at a height of at least 1.5 m (out of the reach of children).
- ▶ Fit permanently installed control devices (such as buttons, etc.) within sight of the door, but away from moving parts.

ATTENTION

Damage caused by dirt

Drilling dust and chippings can lead to malfunctions.

- ▶ Cover the operator during drilling work.

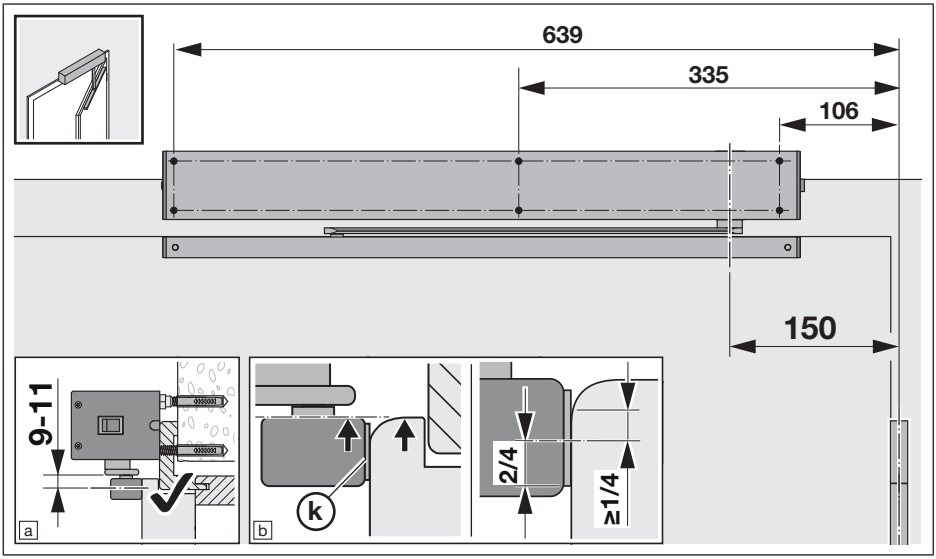
NOTE:

Fit the operator with the mains switch facing towards the hinges.

4.3 Fitting dimensions

For door widths ≤ 645 mm, the operator can be moved towards the hinges.

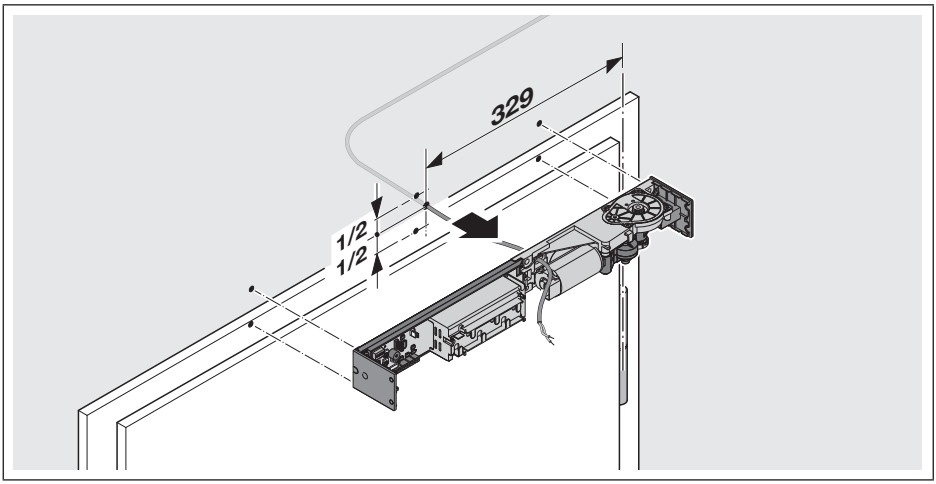
4.3.1 Operator fitting to the lintel with slide rail, pulling on the hinge side, on a right-hand door



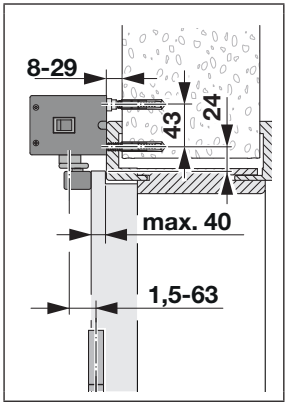
NOTE:

For operator fitting on a left-hand door, the hole pattern is mirrored.

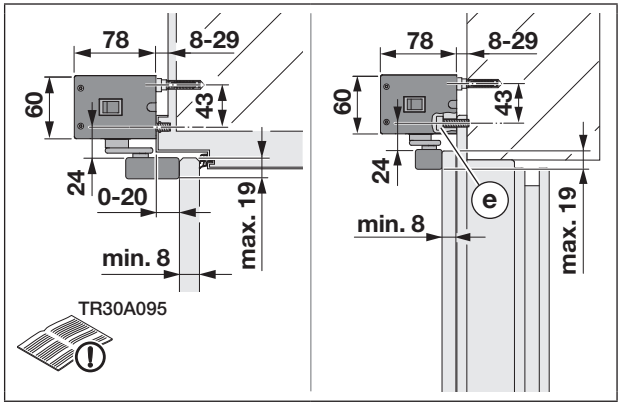
Cable outlet, hard wiring



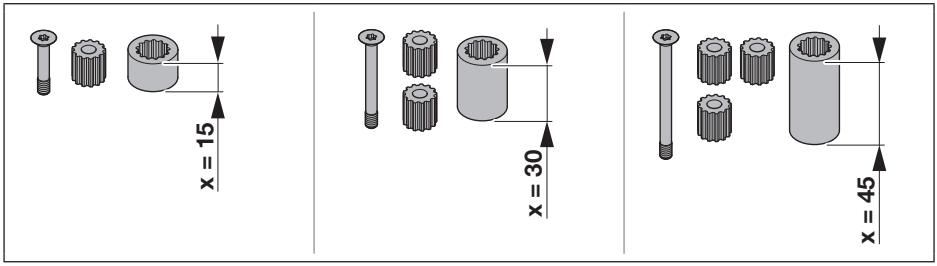
Side view



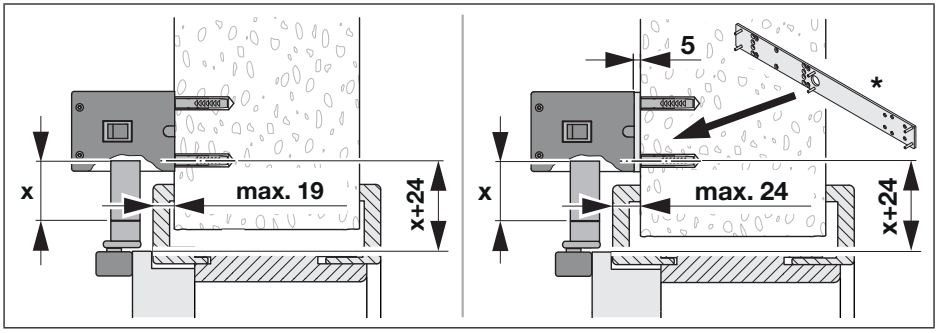
Glass door



Shaft extension*

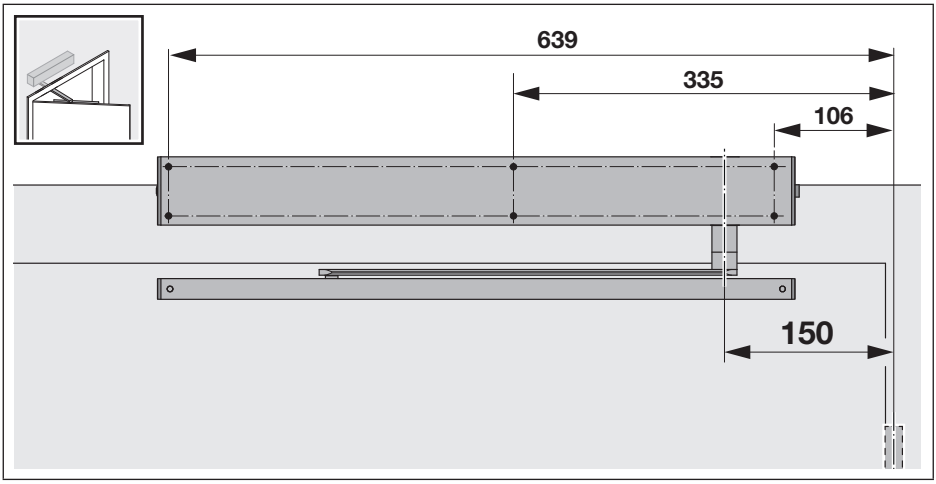


Operator fitting with shaft extension



* Accessory, not included in the standard equipment.

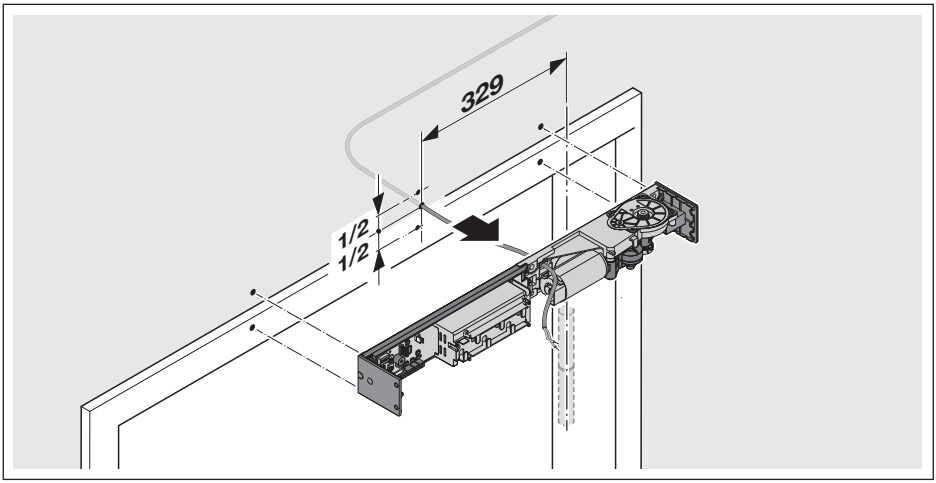
4.3.2 Operator fitting to the lintel with slide rail, pushing on the opposite hinge side, on a left-hand door



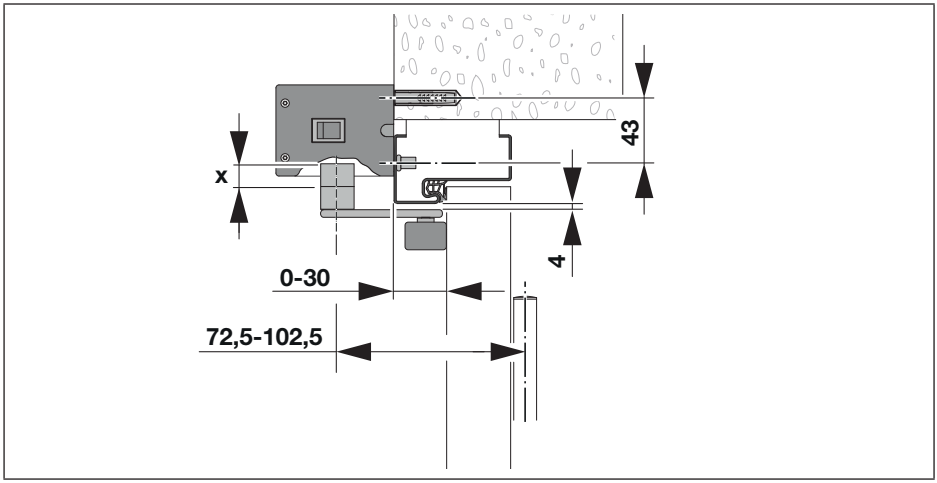
NOTE:

For operator fitting on a right-hand door, the hole pattern is mirrored.

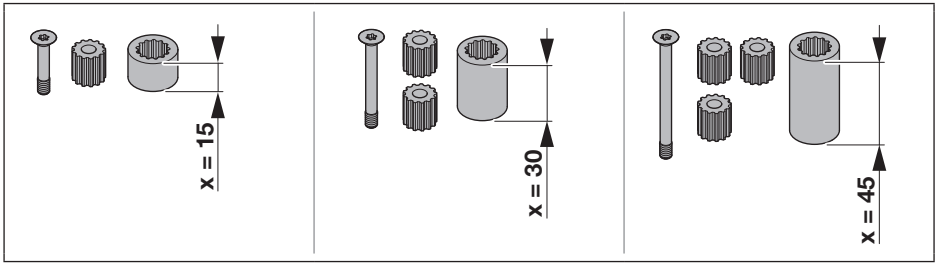
Cable outlet, hard wiring



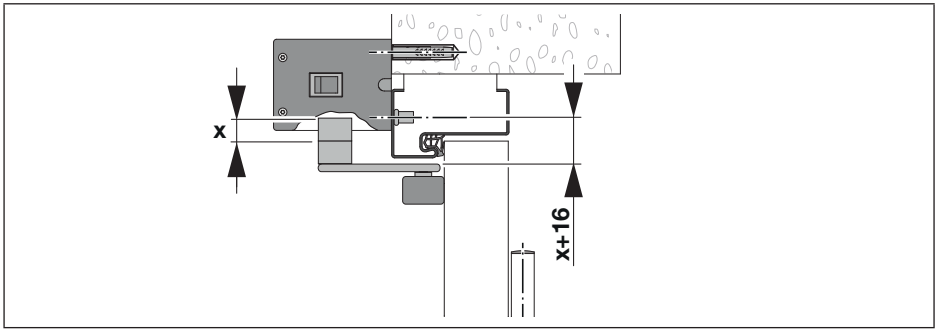
Side view



Shaft extension*

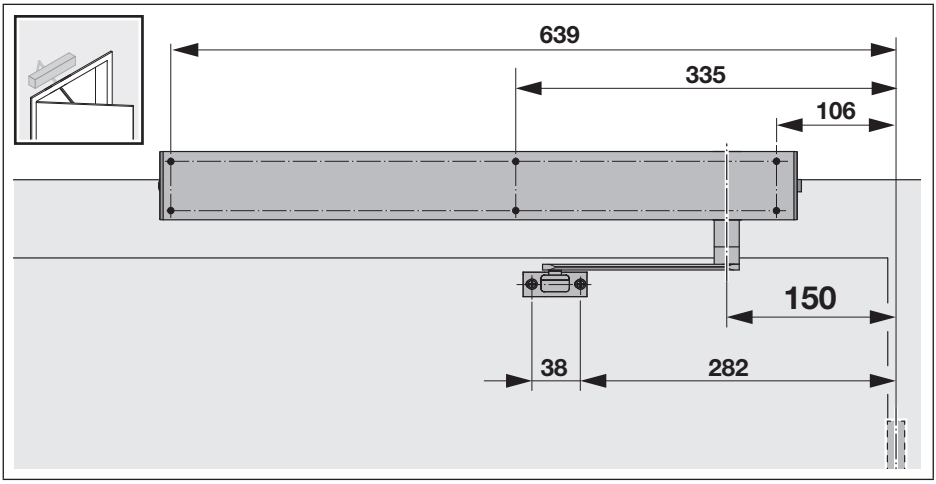


Operator fitting with shaft extension



* Accessory, not included in the standard equipment.

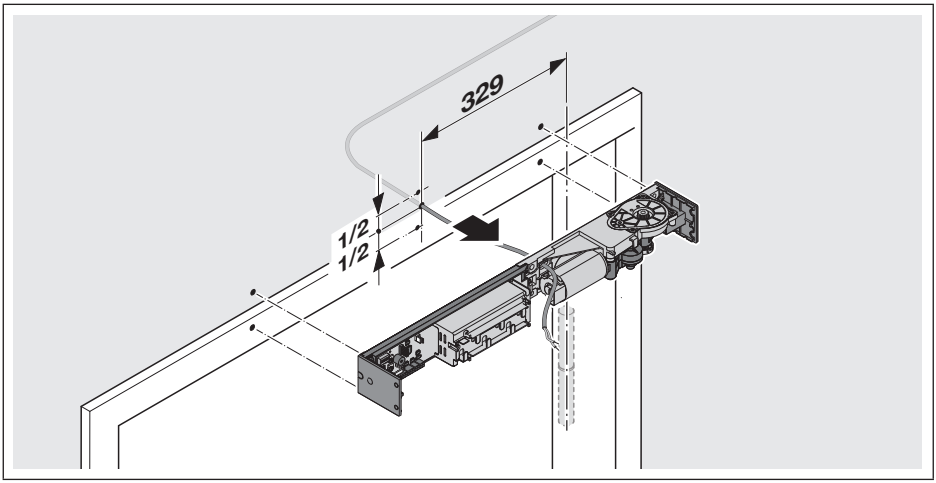
4.3.3 Operator fitting to the lintel with scissors linkage* pushing on the opposite hinge side of a left-hand door



NOTE:

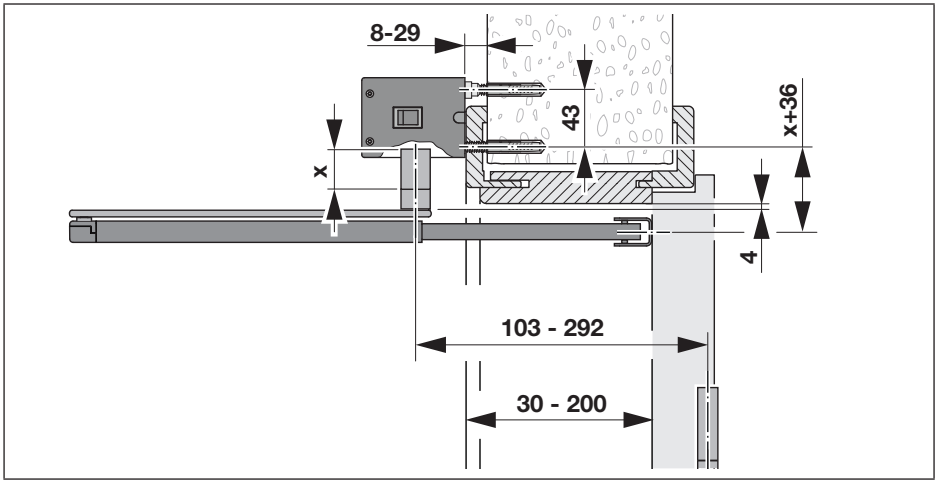
For operator fitting on a right-hand door, the hole pattern is mirrored.

Cable outlet, hard wiring

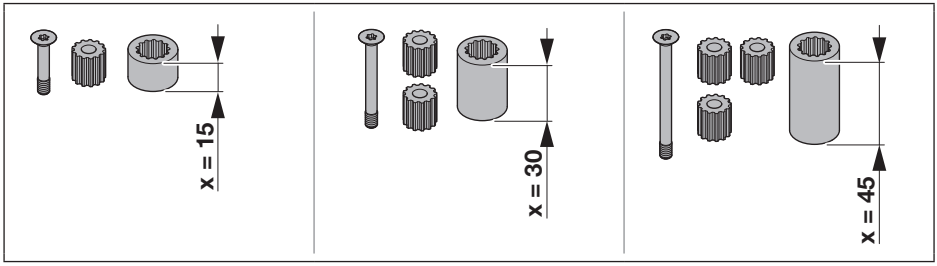


* Accessory, not included in the standard equipment.

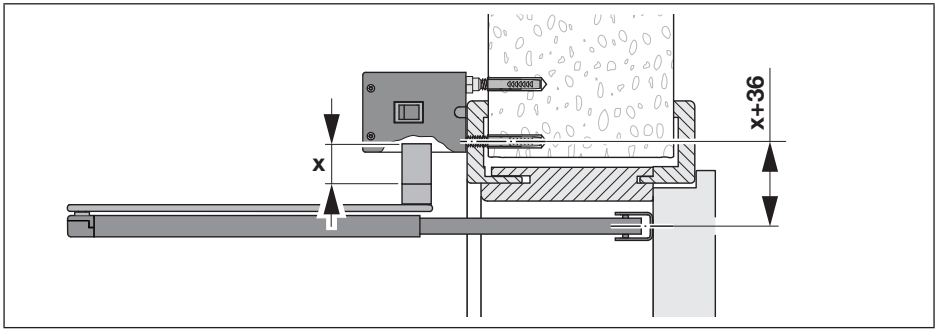
Side view



Shaft extension*

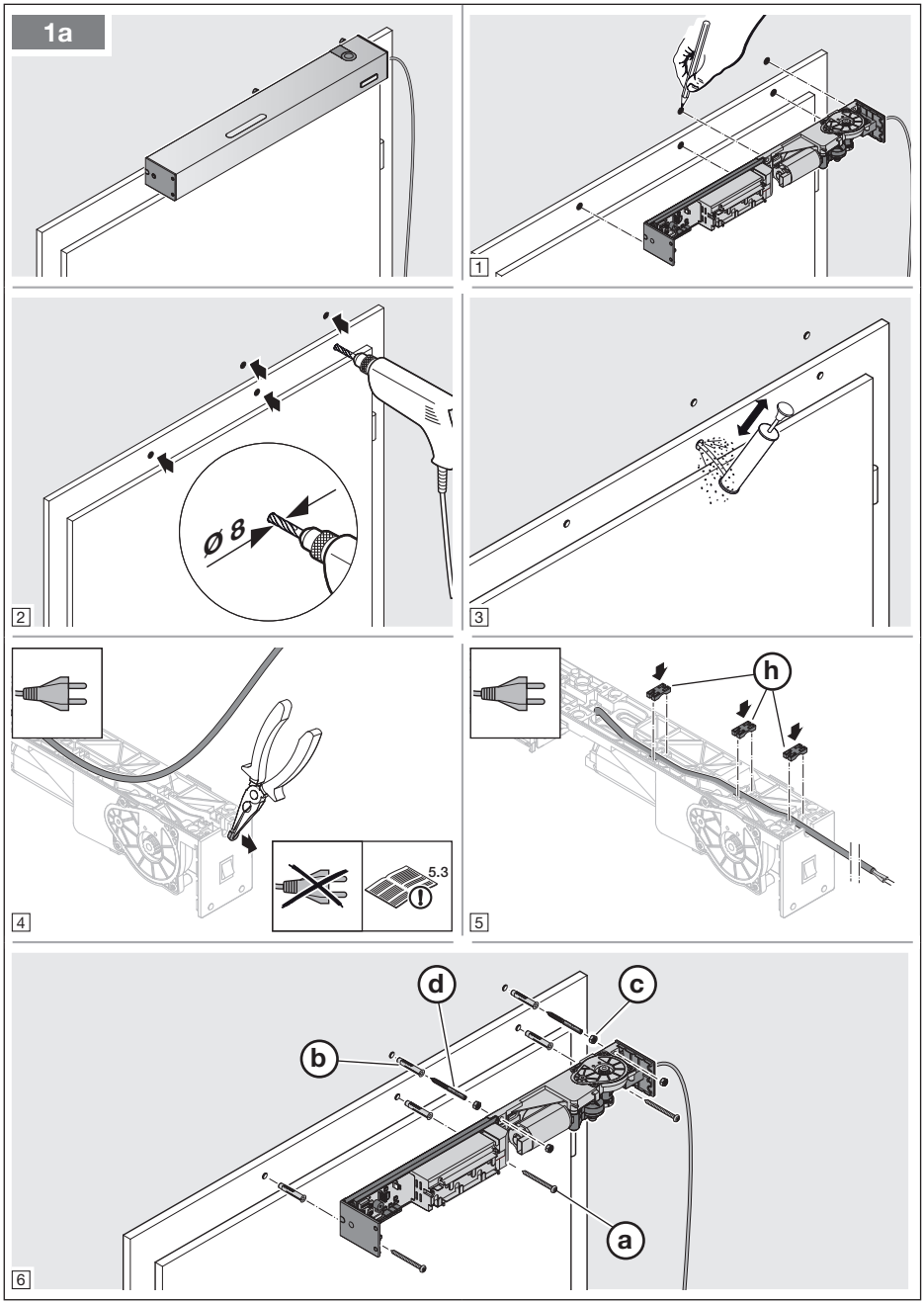


Operator fitting with shaft extension

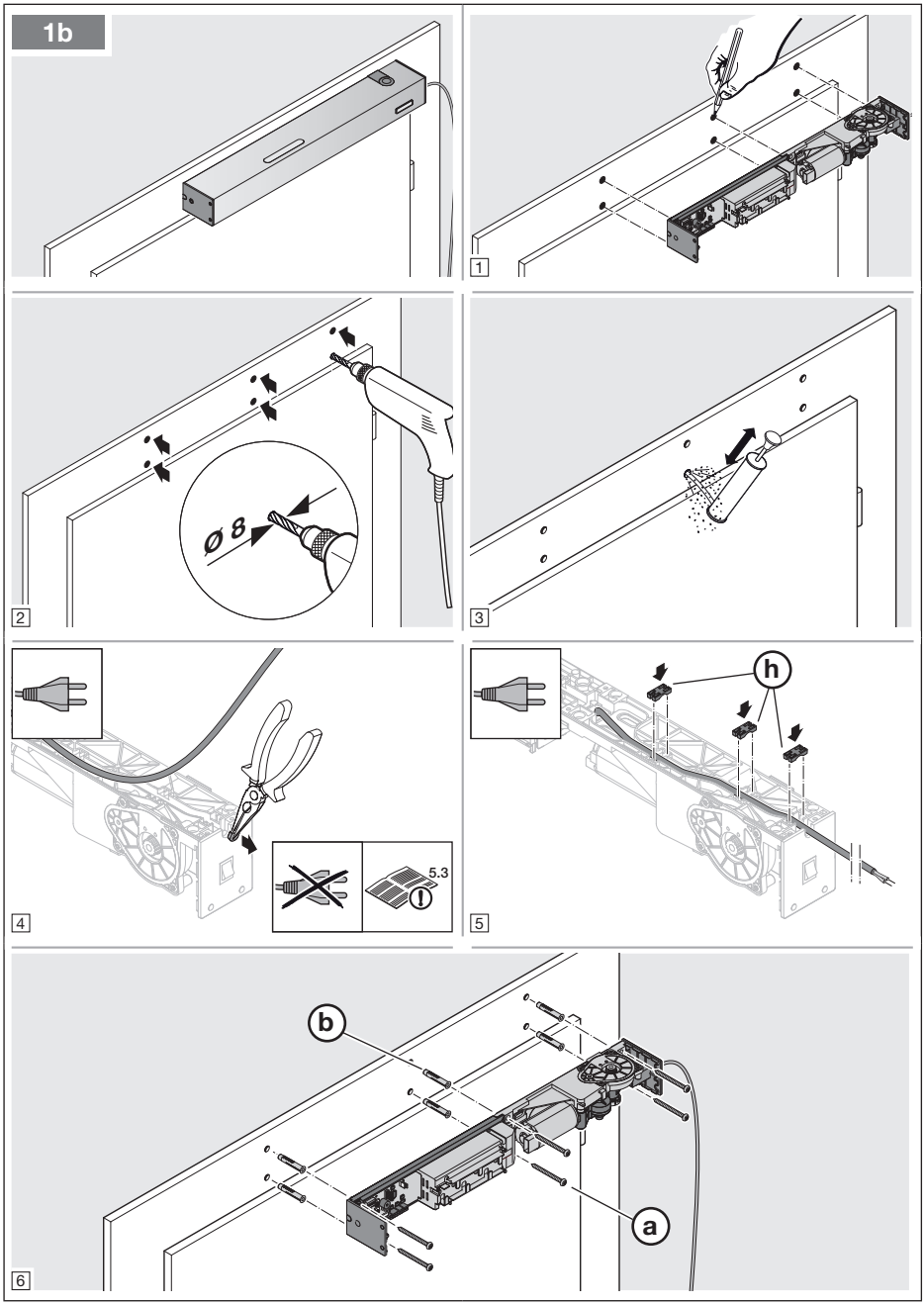


* Accessory, not included in the standard equipment.

4.4 Operator fitting to frame and lintel



4.5 Operator fitting to frame



4.6 Slide rail

There are two options for fitting the slide rail:

Slide rail bonding

- see section 4.6.1

Slide rail bolting

- see section 4.6.2

4.6.1 Slide rail bonding

Cleaning the surfaces 1

- Use clean, lint-free and non-perfumed cleaning cloths.
- Use suitable cleaning agents. Do not use lipid-restoring household cleaners.

NOTE:

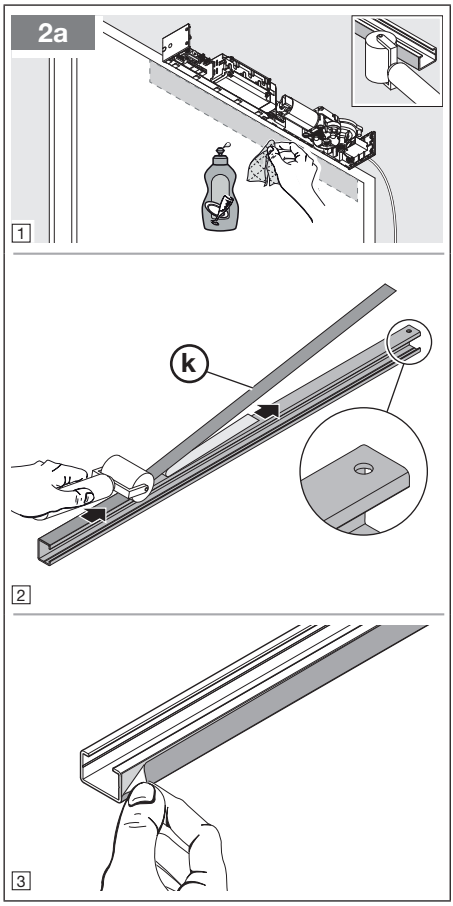
Always use suitable cleaning agents and care products. It is your responsibility to maintain an intact surface.

Applying adhesive tape 2

- Remove the protective film.
- Place the adhesive tape on the slide rail surface to be bonded.
- Tauten the adhesive tape but do not stretch it out.
- Avoid air pockets.
- Press the adhesive tape on e.g. with a roller.

Removing protective film 3

- To ensure the adhesive tape stays perfectly even, remove the protective film all at once.
- Do not touch the gluing surface.
- To prevent dirt from reaching the gluing surface, quickly bond the slide rail to the door.

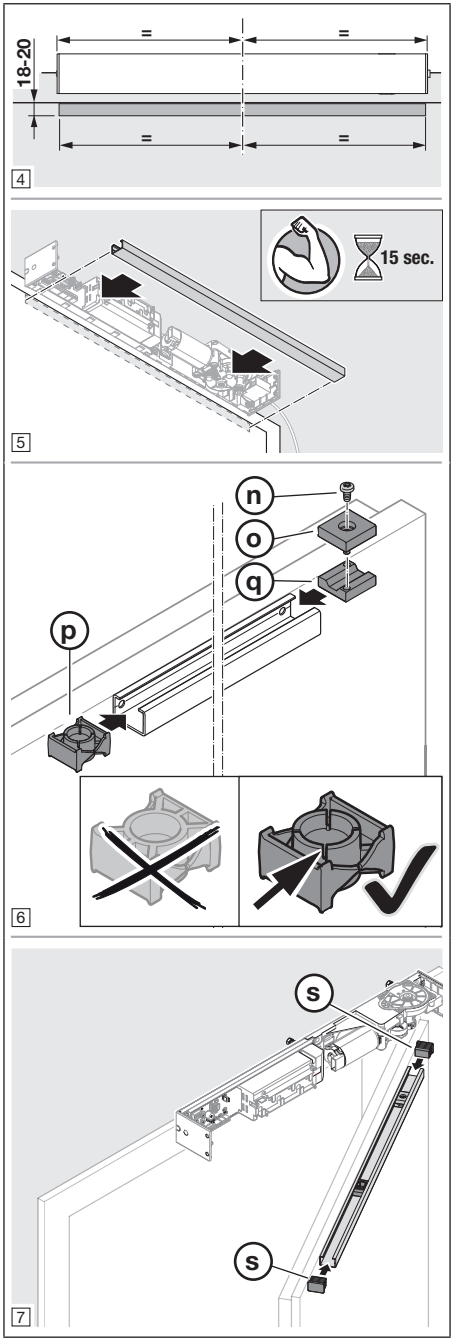


Pressing on the slide rail 4 5

NOTE:

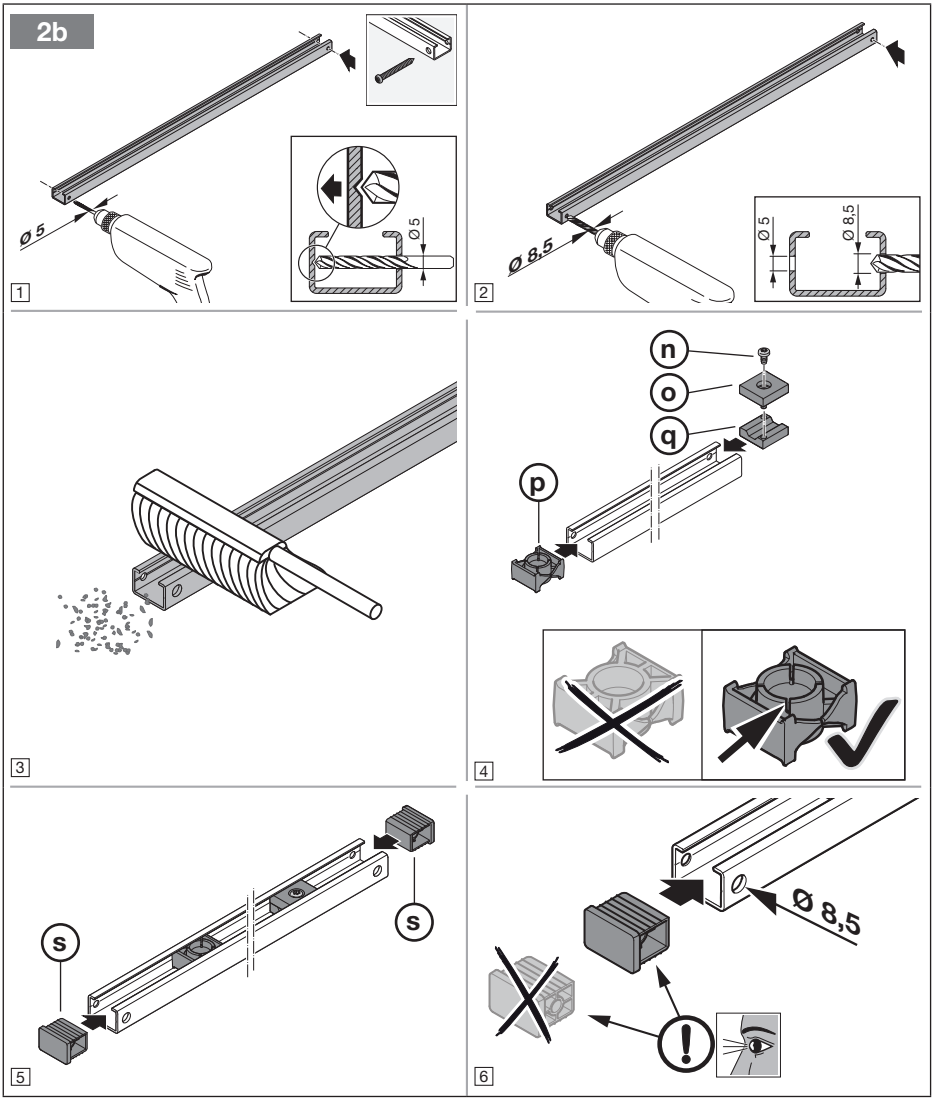
Check the position before bonding the slide rail.

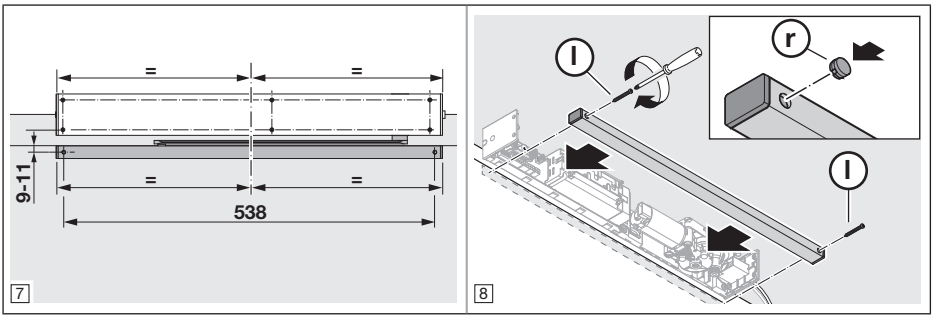
- Press on the slide rail with the adhesive tape.
- Avoid air pockets.



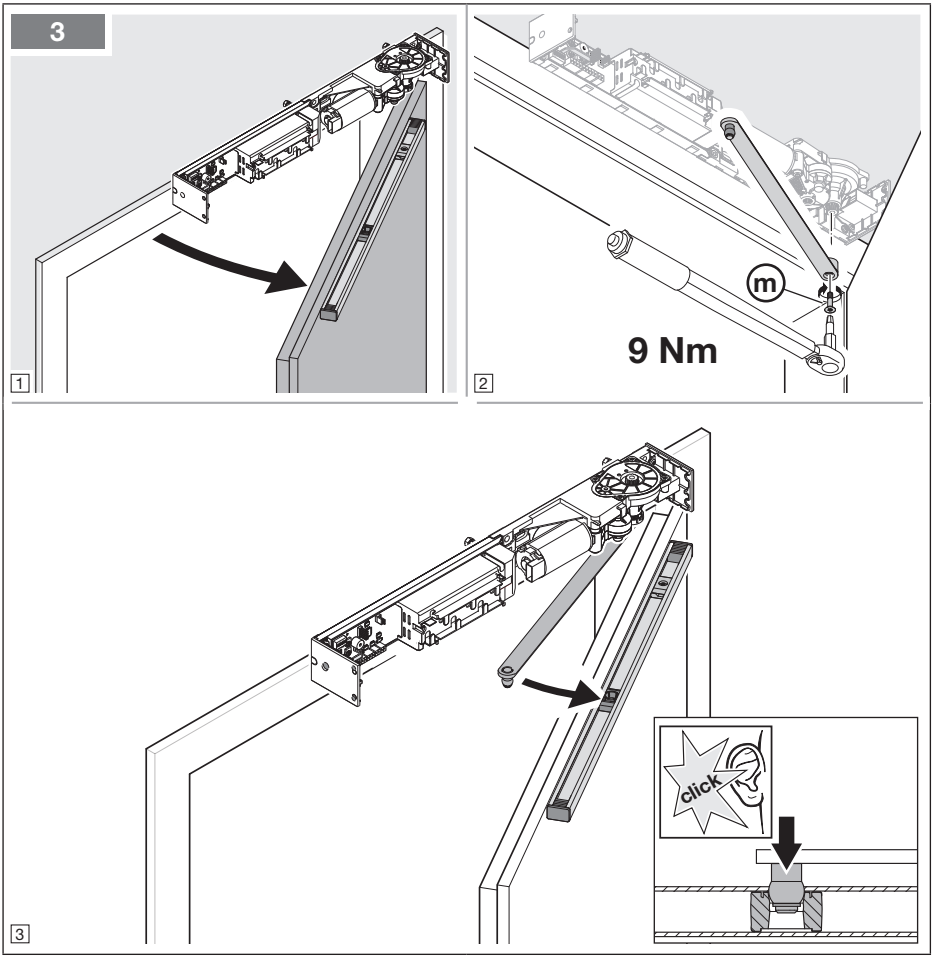
4.6.2 Slide rail bolting

- Before fitting, check for the required screw-in depth for the supplied screws (k).
- Drill two Ø 5 mm holes. Use the existing holes to guide the drill. The interior wall features a groove to centre the drill bit.





4.7 Leaf communicator fitting

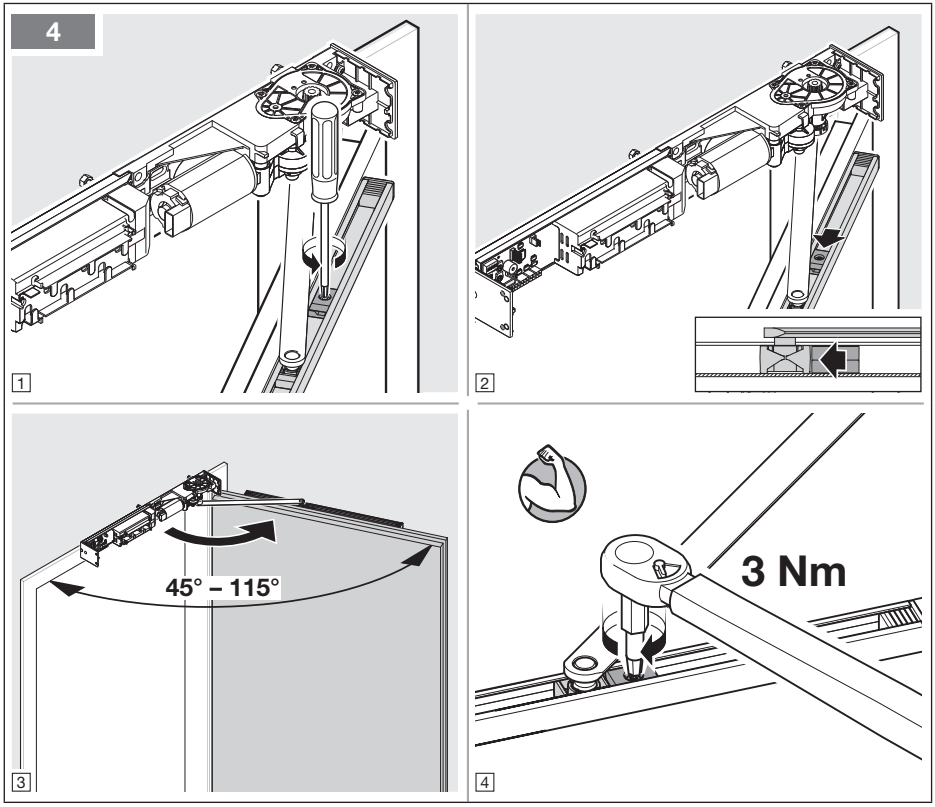


4.8 Fitting the *Open* end stop

- ▶ Loosen the end stop 1.
- ▶ Press the end stop against the slide shoe 2.
- ▶ Manually push the door into the desired *Open* end-of-travel position 3.
- ▶ Fix the end stop 4.

NOTE:

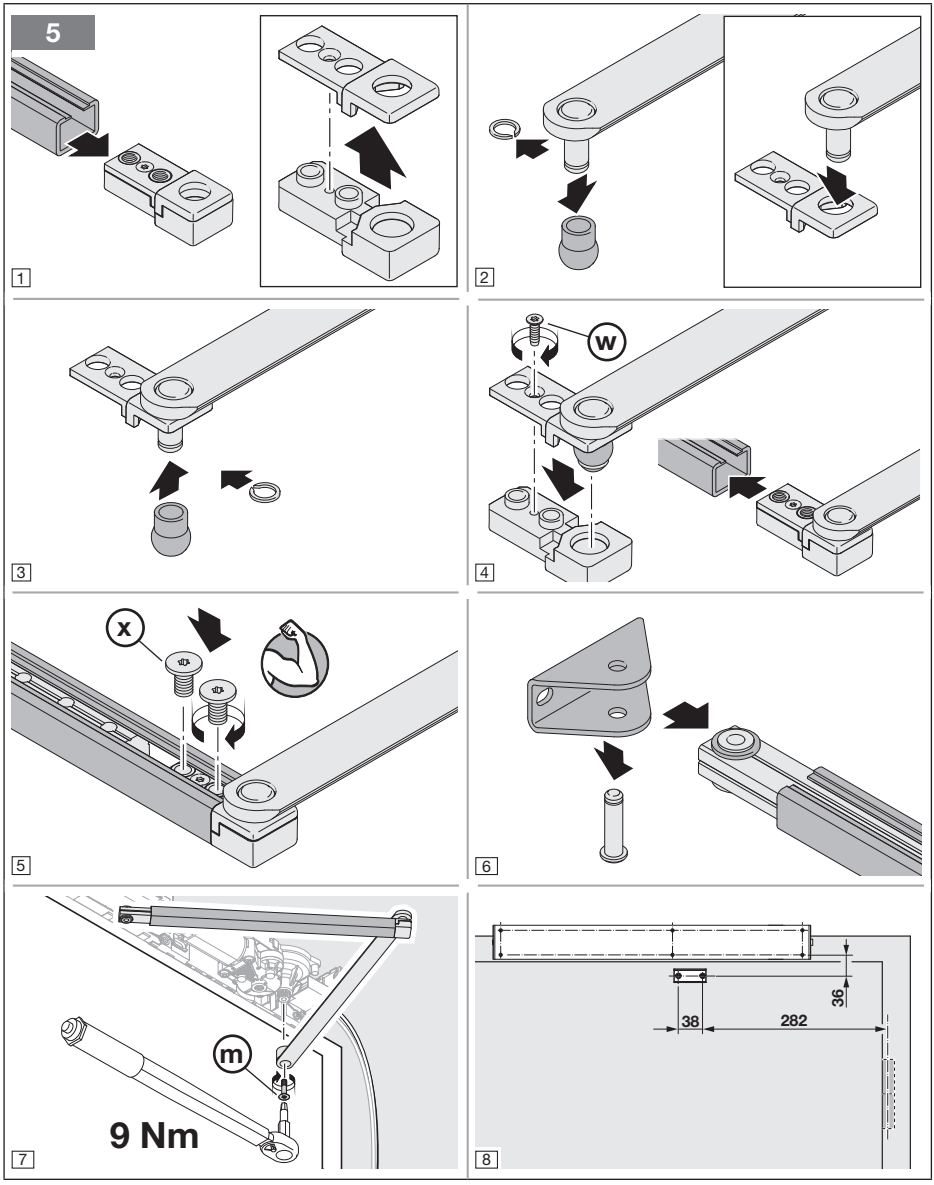
For wide and heavy doors, we recommend setting an additional door stop.



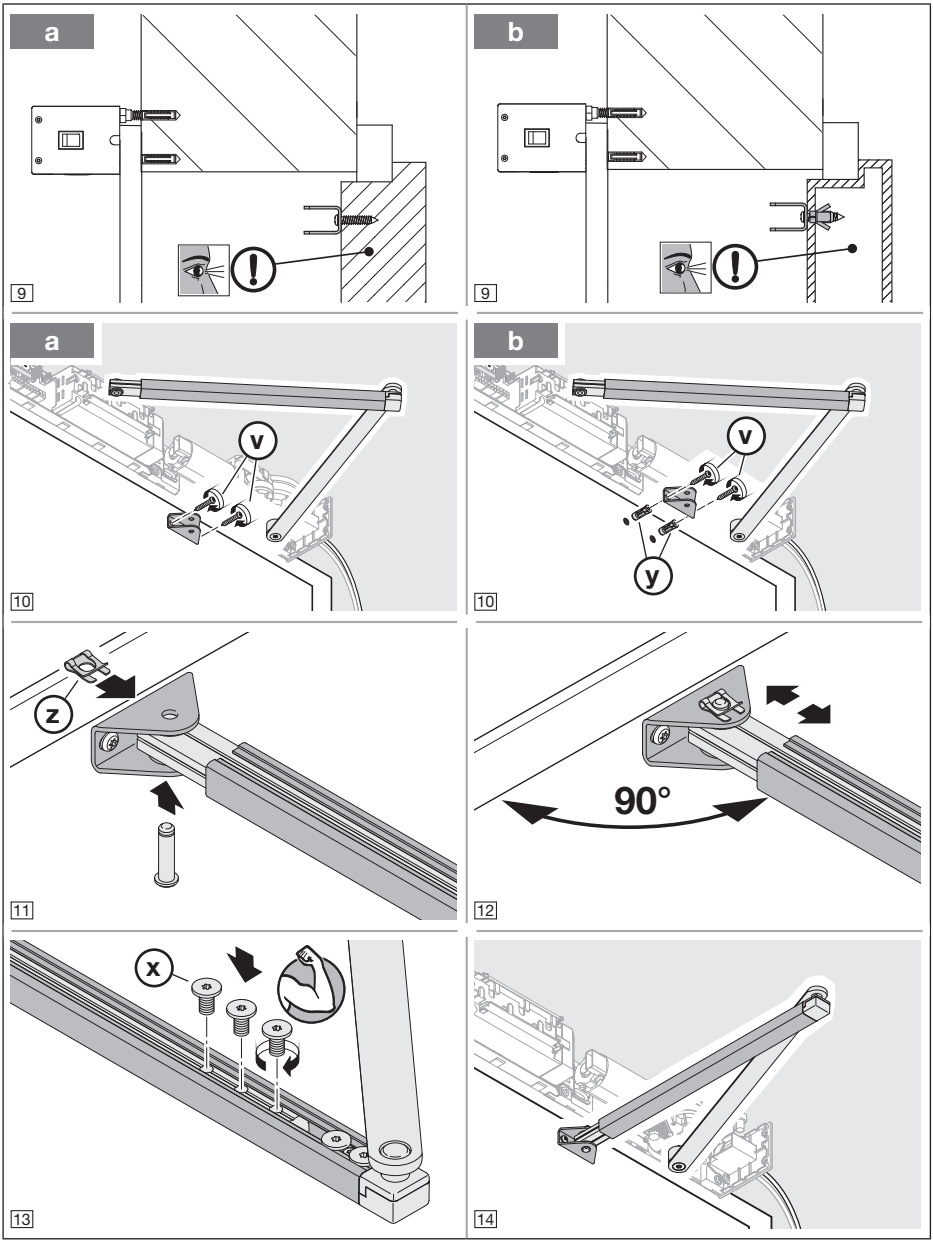
4.9 Scissors linkage*

NOTE:

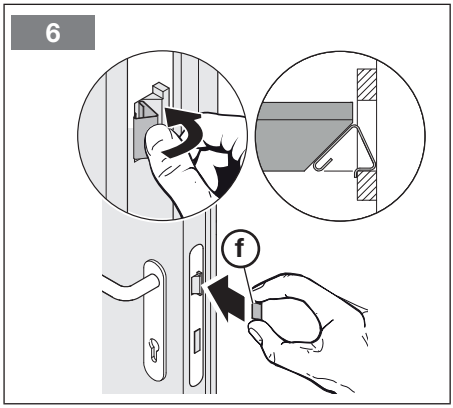
For doors with scissors linkage, we recommend setting an additional door stop.



* Scissors linkage optional

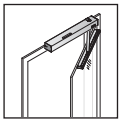

a
9
b
9
a
v
10
b
v
y
10
z
11
90°
12
x
13
14

4.10 Securing the lock latch



If no electric strike/motor lock is in operation on the door assembly, use the latch clip to take the lock out of operation.

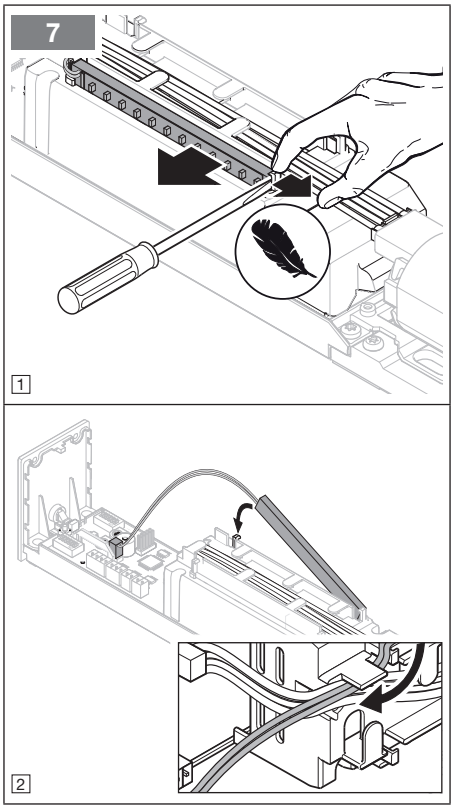
If you cannot use the included latch clip with your door, then secure the lock latch on-site.



On glass doors, the lock latch can be disassembled completely.

4.11 Setting the direction of illumination for the operator light

The operator light can illuminate the door threshold or the ceiling. Depending on the operator fitting situation and the desired direction of illumination, you may have to reposition the operator light.



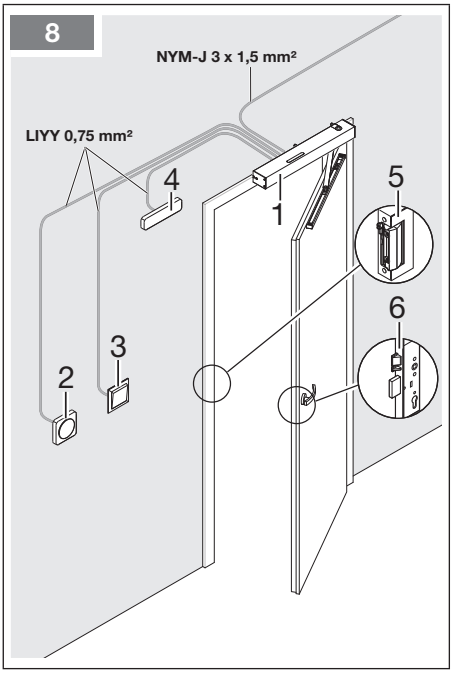
5 Installation

▶ Note the safety instructions in section 2.6.

To prevent malfunctions:

▶ Duct the operator's connection cables (24 V DC) in an installation system that is separate from other supply lines (230 V AC).

5.1 Wiring plan



Position	Explanation
1	Hinged door operator
2	Radar button
3	Button
4	Radar
5	Electric strikes
6	Motor lock

5.2 Mains voltage

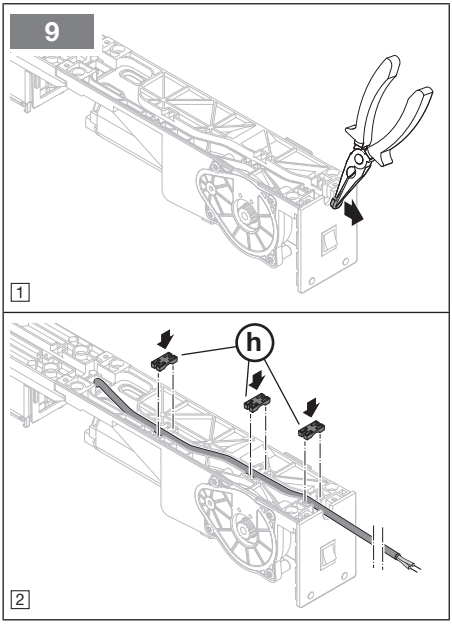
There are two options to connect the mains voltage:

Mains lead with plug

The socket required for electrical connection must be located near the door.
The operator's 3 m long mains connection cable must reach the socket.

Permanent connection

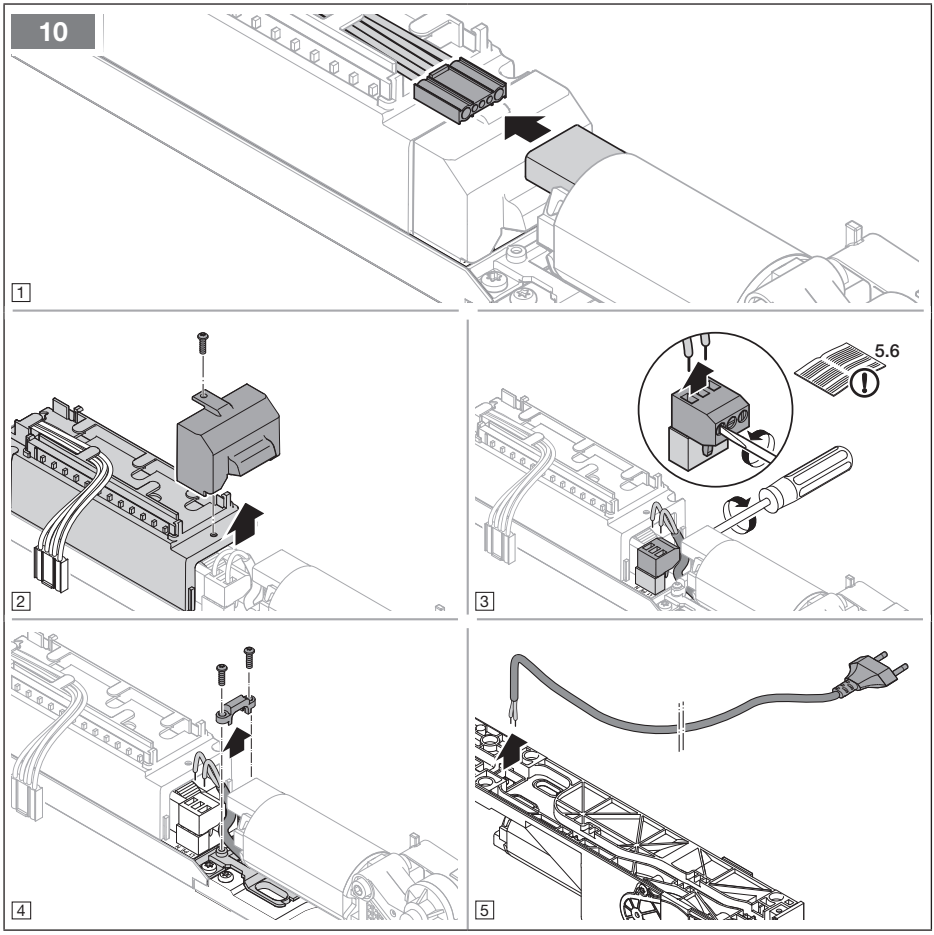
▶ see section 5.3

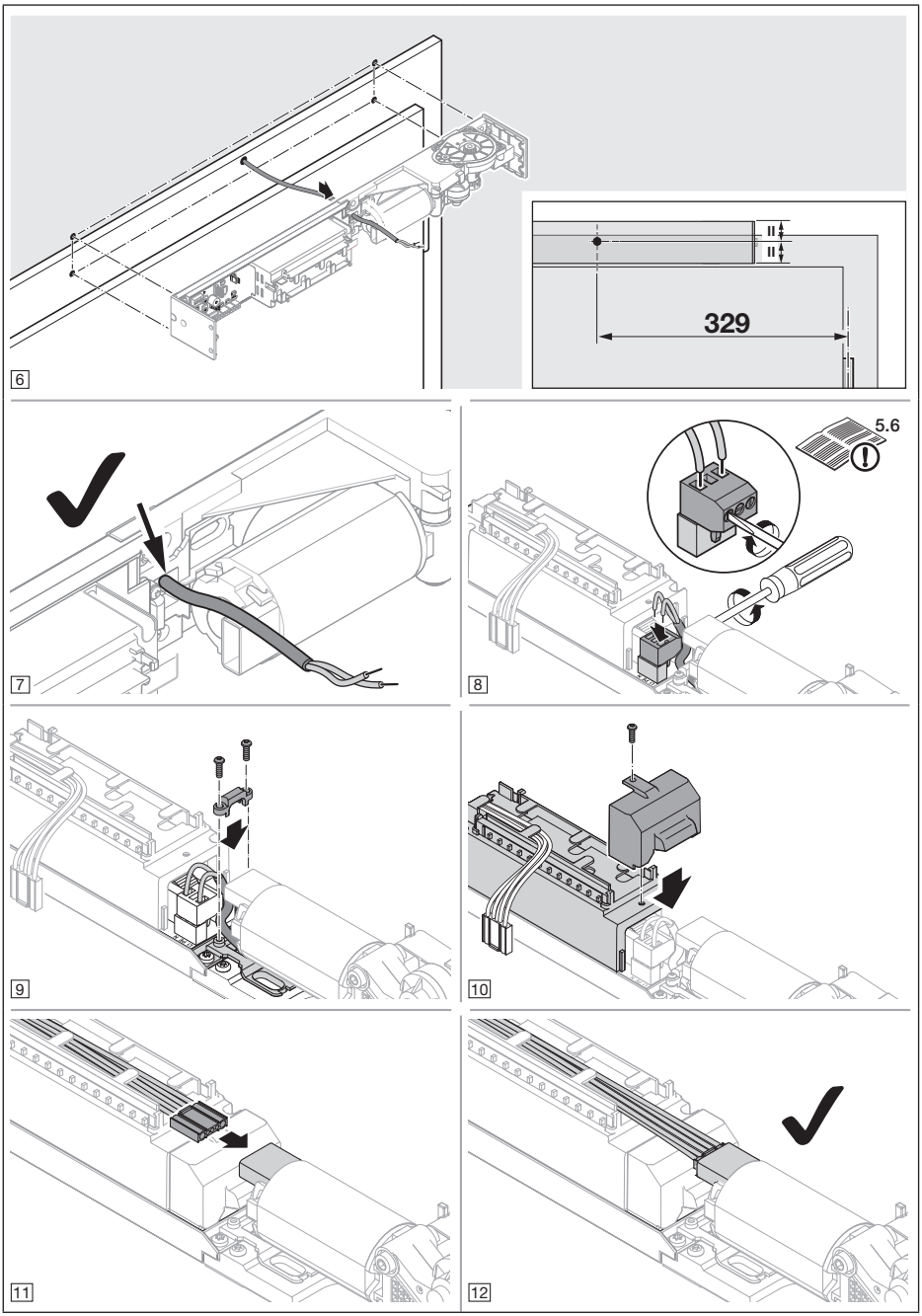


Wiring below the operator is possible to the right and left.

5.3 Permanent connection (optional)

A permanent connection with NYM 3 × 1.5 mm² (maximum 30 m) is possible, rendering the 3 m long mains connection cable with plug unnecessary.

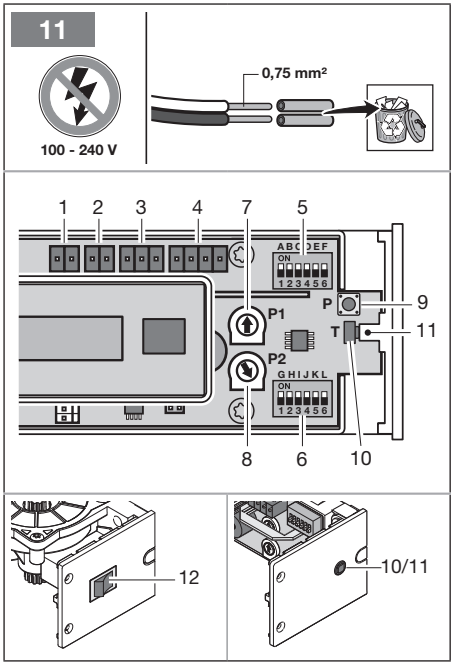



329
5.6

5.4 Connecting terminals

All connecting terminals can have multiple assignments:

- Cable cross-section: 0.75 mm²



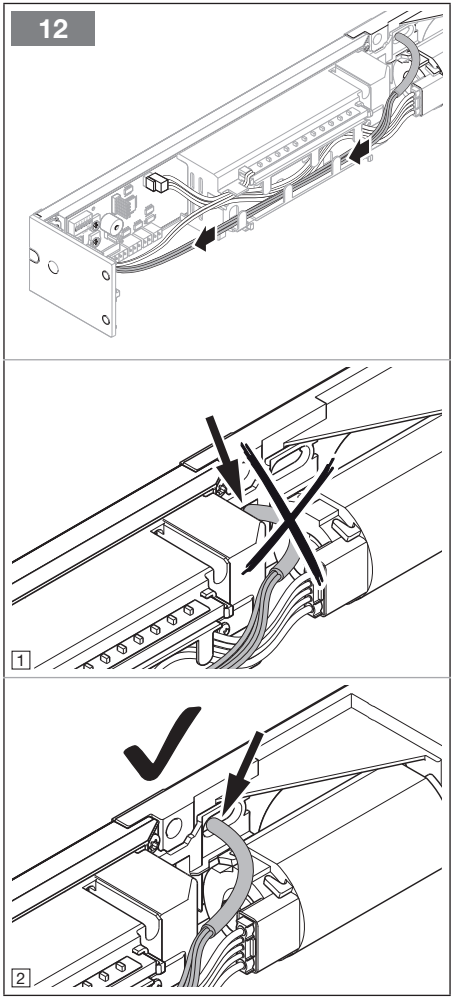
Position	Function
1	Electric lock/motor lock 24 V DC, max. load 450 mA
2	Relay board PR 1*
3	Stop / bolt reporting
4	Impulse inputs
5	DIL switches A1-F6
6	DIL switches G1-L6
7	Potentiometer P1 Hold-open phase in automatic operation
8	Potentiometer P2 Speed
9	**P** button
10	**T** button
11	LED
12	Mains switch

* Accessory, not included in the standard equipment.

5.5 Cable routing from accessory

To prevent malfunctions:

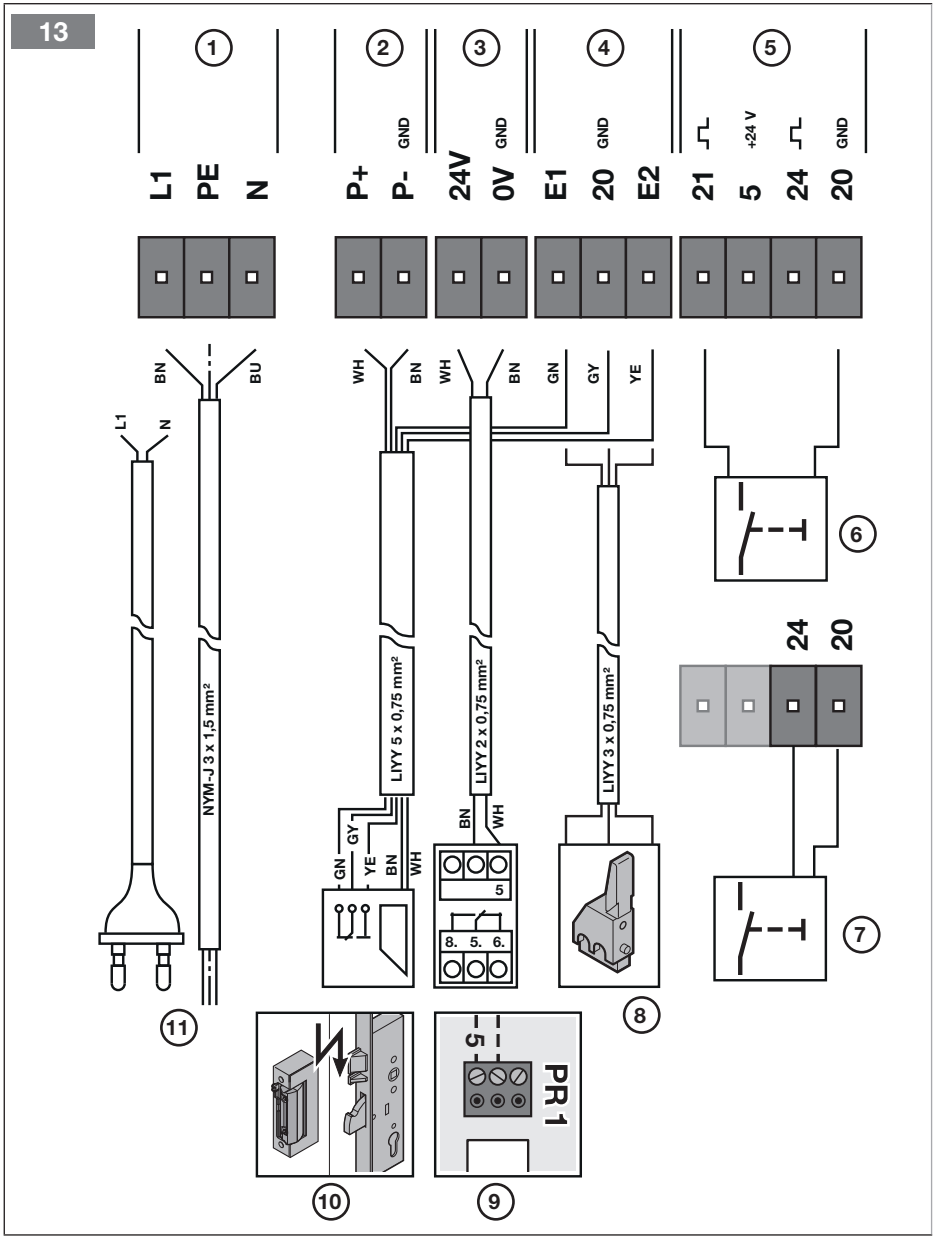
▶ Guide the operator connection cables (24 V DC) into the operator separated from other supply cables (230 V AC).



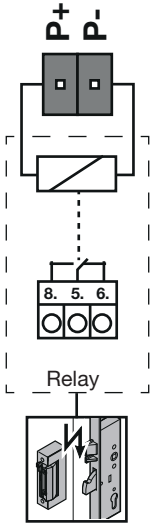
5.6 Connecting accessories / connection examples

NOTE:

Loading of the operator by all accessories: **max. 600 mA**.



Position	Function
1	Mains voltage 100 – 240 V, 50 / 60 Hz
2	Electric lock 24 V DC, 450 mA
3	Option relay
4	Entrance
5	Impulse input 24 V DC, 150 mA
6	**External button* for impulse sequence control** One or more buttons with normally open contacts (volt-free) can be connected in parallel.
7	**External button* for automatic operation** One or more buttons with normally open contacts (volt-free) can be connected in parallel. To set the hold-open phase ▶ see section 7.16
8	**Bolt reporting / stop*** To set the function ▶ see section 7.14
9	**Relay board PR1*** Relay board PR 1 is required to switch externally supplied lamps or warning lights, such as for Close limit switch reporting. To set the function ▶ see section 7.15

Position	Function
10	**Electric strike / motor lock*** 24 V DC, max. load 450 mA If operating a motor lock – With an operating voltage other than 24 V DC or – With a power consumption higher than 450 mA You have to use an additional relay that switches the external power supply. To set the function ▶ see section 7.11 
11	Mains lead 100 – 240 V, 50 / 60 Hz

* Accessory, not included in the standard equipment.

6 Initial start-up

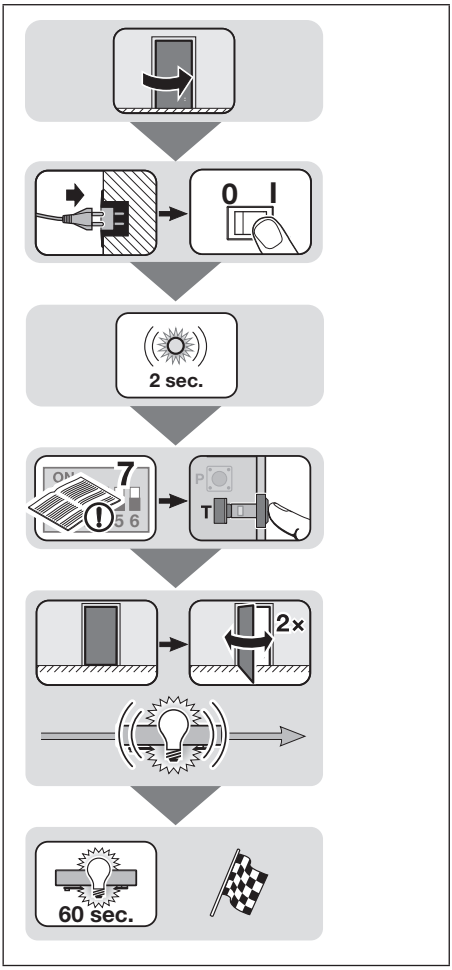
▶ Before initial start-up, read and follow the safety instructions in section 2.6.

NOTE:

- The DIL switch DIL A1 (moment arm / fitting type) must be set before initial start-up.
- For doors with electric locking, DIL switches DIL H2 to DIL K5 must also be set before initial start-up.
- For doors with scissors linkage, we recommend setting an additional door stop while teaching in the operator.

6.1 Teaching in the operator

The operator is adapted to the door during teach-in. The length of travel, the required force for opening and closing is automatically taught in.



1. Close the door.
2. Connect the operator with the power supply.
3. Switch on the operating switch. The display flashes quickly for 2 seconds.

NOTE:

If the operator has not yet been taught in, the operator light flashes 2× as soon as you plug the mains plug into the socket.

4. Check the DIL switch settings.
5. Press the **T** button.
   – The door moves to the *Closed* end-of-travel position.

NOTE:

Depending on the type of fitting, the operator may travel in the Open direction first. The operator automatically detects its fitting position and corrects its travel direction to Close.

   – The door automatically completes 2 cycles (Open and Close). During these cycles, the operator learns the travel path and the required forces.

   The operator light flashes during the learning runs.

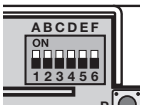
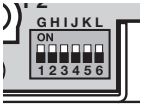
The operator has been taught in and is ready for operation.

6.2 Abort learning run

▶ Press the **T** button or an external control element with impulse function.

7 Functions

7.1 Overview

DIL switches		Functions	Category	Section
	A1	Moment arm / fitting type	Main functions	7.4
	B2	Semi-automatic ON or OFF		7.5
	C3	Hold-open phase / door closer function		7.6
	D4	Door travel signal	Signal settings	7.7
	E5	Advance warning / advance warning type		7.8
	F6	Direction of the advance warning		7.9
	G1	Maintenance display	Advanced adjustment	7.10
	H2	Electric strike / motor lock		7.11
	I3	Start delay / release time		7.12
	J4	End stop during closing		7.13
	K5	Stop / bolt reporting		7.14
	L6	Programming of relay board PR 1*		7.15

7.2 Setting the functions

Combination options

Functions	Explanation	Hold-open phase	Manual	Door closing	Semi-automatic	Automatic Terminal	Automatic Radio	Impulse sequence Terminal	Impulse sequence Radio
Off	De-energised	–	●	–	–	–	–	–	–
Manual	Manual operation	–	●	○	–	○	○	○	○
Semi-automatic	In Open/Close directions	Time 1	–	○	●	○	○	○	○
Automatic operation	Via terminal	Time 2	○	○	○	●	○	○	○
Automatic operation	Via radio	Time 2	○	○	○	○	●	○	○
Impulse sequence control	Via terminal	–	○	○	○	○	○	●	○
Impulse sequence control	Via radio	–	○	○	○	○	○	○	●
Permanently open / Partially open / Ventilate	Manual / impulse sequence	–	○	–	–	–	–	○	○

● Standard
○ Possible
– Not available

Time 1 = hold-open phase 2 – 60 sec.
Time 2 = hold-open phase 2 – 180 sec.

* Accessory, not included in the standard equipment.

Combination options

Functions	Explanation	Hold-open phase	Manual	Door closing	Semi-automatic	Automatic Terminal	Automatic Radio	Impulse sequence Terminal	Impulse sequence Radio
Signalling	Acoustic (sound) / visual (light)								
Advance warning (before door travel)			–	○	–	○	○	○	○
Warning (during door travel)			–	○	○	○	○	○	○

● Standard
○ Possible
– Not available

Time 1 = hold-open phase 2 – 60 sec.
Time 2 = hold-open phase 2 – 180 sec.

The operator functions can be set via DIL switches. Before initial start-up, all DIL switches are set to OFF (factory setting).

Changes to the DIL switch settings are only permissible under the following conditions:

- The operator is at rest.
- No pre-warning phase or hold-open phase activated.

Set the DIL switches and the respective parameters in accordance with site requirements and individual adaptations.

7.3 Changing function and parameters

Some functions have parameters that enable additional settings.

▶ Set the desired DIL switch to ON.
The LED flashes red 1x. The function is activated.

▶ Press the **T** button 1×.
The LED flashes red 2×. A different parameter has been selected.

▶ Press the **T** button 2×.
The LED flashes red 3×. A different parameter has been selected.
…

To save the selected parameter

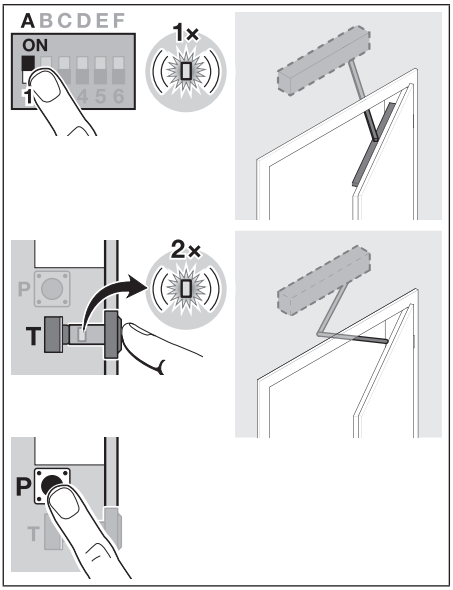
▶ Press the P button.
As a confirmation, the LED flashes green once corresponding to the parameter.

Timeout

If you do not press the P button within 60 seconds, the default parameter 1 (flashing 1×) is maintained.

If you reach the last parameter of a function, the next time you press the **T** button, you return to the original default setting for this function. The LED flashes 1×.

7.4 DIL switch A1: moment arm / fitting type



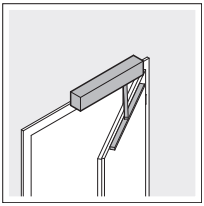
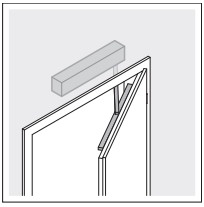
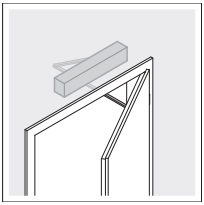
NOTE:

Before the learning run, the following settings must be applied via DIL switch A1:

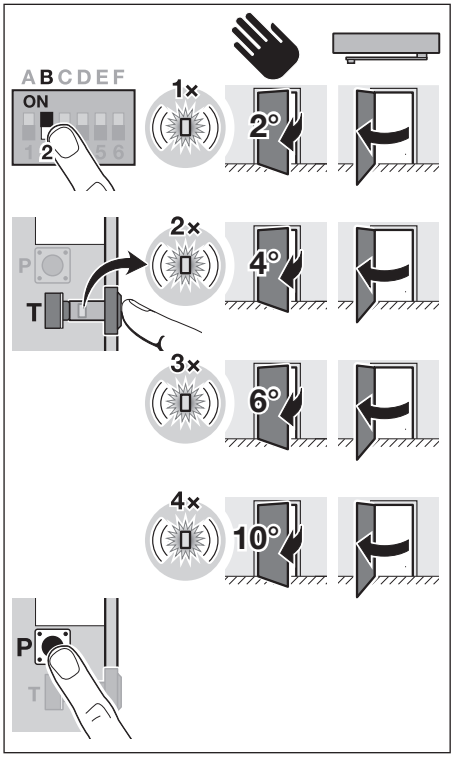
- The type of your moment arm
  and
- the type of fitting

Setting / changing the moment arm / fitting type:

▶ see section 7.3

A1 FFL	*Slide rail* on the door, operator fitting to the lintel on the *hinge side* 	
A1 ON	Additional fitting types ON	
	Flashing 1 ×	*Slide rail* on the door, operator fitting to the lintel on the *opposite hinge side* 
	Flashing 2 ×	*Scissors linkage* on the door, operator fitting to the lintel on the *opposite hinge side* 

7.5 DIL switch B2: semi-automatic



If DIL switch B2 is set to **OFF** (factory setting), semi-automatic mode is deactivated. The door can be moved manually at all times without triggering a travel command (impulse).

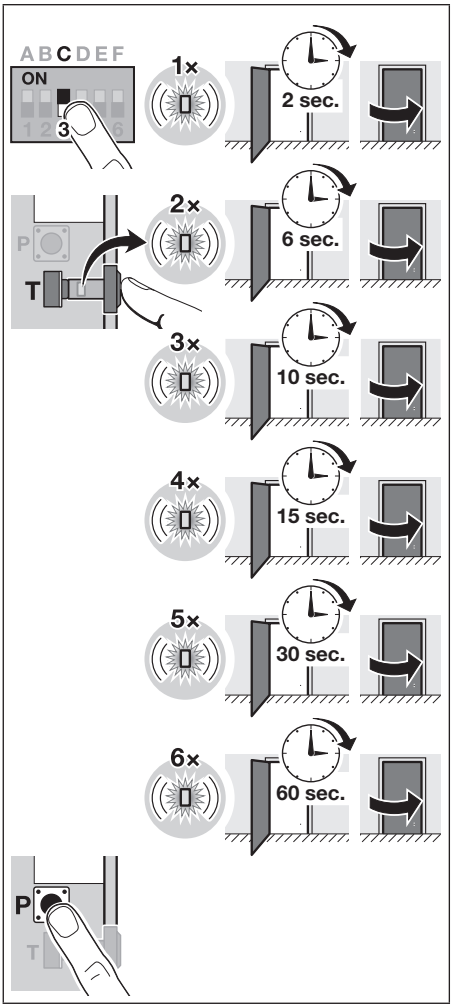
If DIL switch B2 is set to **ON**, semi-automatic mode is activated. The door opens or closes automatically after a manual door movement. You can set the degree value that triggers automatic door travel via the parameters.

Activating / setting the degree value:

▶ see section 7.3

B2 FFL	Semi-automatic OFF	
B2 ON	Semi-automatic ON	
	Flashing 1 ×	Approx. 2° manual door movement
	Flashing 2 ×	Approx. 4° manual door movement
	Flashing 3 ×	Approx. 6° manual door movement
	Flashing 4 ×	Approx. 10° manual door movement

7.6 DIL switch C3: hold-open phase / door closer function



If DIL switch C3 is set to **OFF** (factory setting), the hold-open phase is deactivated and the door remains in open position after opening. The door only closes via a manual door movement or a travel command (impulse).

If DIL switch C3 is set to **ON**, the hold-open phase is activated and the open door automatically closes once the set time elapses (max. 60 seconds). The hold-open phase restarts for every additional opening run. The hold-open phase can be changed via the parameters.

NOTE:

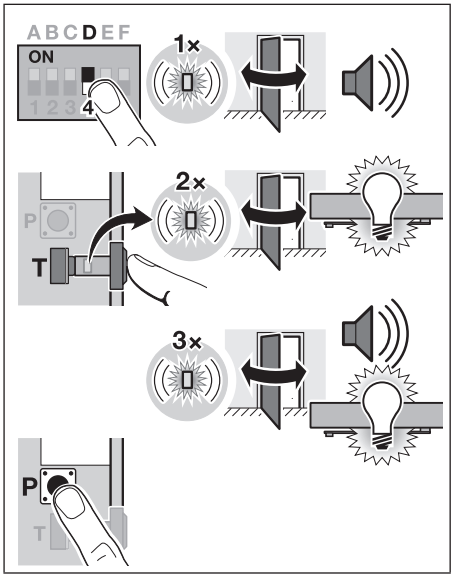
If the hold-open phase is activated, the door closes from the Open end-of-travel position and any manually opened position.

Activating / setting the hold-open phase:

▶ see section 7.3

C3 FFL	Hold-open phase OFF	
C3 ON	Hold-open phase ON	
	Flashing 1 ×	2 second hold-open phase
	Flashing 2 ×	6 second hold-open phase
	Flashing 3 ×	10 second hold-open phase
	Flashing 4 ×	15 second hold-open phase
	Flashing 5 ×	30 second hold-open phase
	Flashing 6 ×	60 second hold-open phase

7.7 DIL switch D4: signalling door runs



If DIL switch D4 is set to **OFF** (factory setting), door run signalling is deactivated.

If DIL switch D4 is set to **ON**, door run signalling is activated. During a door run, an acoustic signal is output and / or the operator light is illuminated
The operator light* remains on for one minute after the end-of-travel position or an intermediate travel limit has been reached (illumination period).

NOTE:

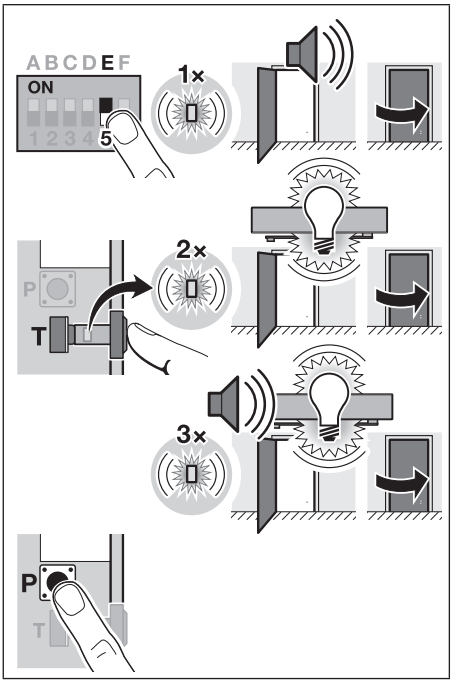
If you activate the operator light via radio, it does not go out after one minute. The operator light remains on permanently. Light commands via radio (channel 2) during the door run do not have an effect.
After a maximum period of 12 hours, the operator light* automatically goes out.

Activating / setting door run signalling:

▶ see section 7.3

D4 FFL	Signalling OFF	
D4 ON	Signalling ON	
	Flashing 1 ×	Acoustic signal
	Flashing 2 ×	Operator light
	Flashing 3 ×	Acoustic signal and operator light

7.8 DIL switch E5: advance warning / advance warning type



If DIL switch E5 is set to **OFF** (factory setting), advance warning is deactivated. The door run starts as soon as a travel command (impulse) triggers it.

If DIL switch E5 is set to **ON**, advance warning is activated. **Before** a door run in the Close direction, an acoustic signal is output and / or a light flashes for a period of 3 seconds.

NOTE:

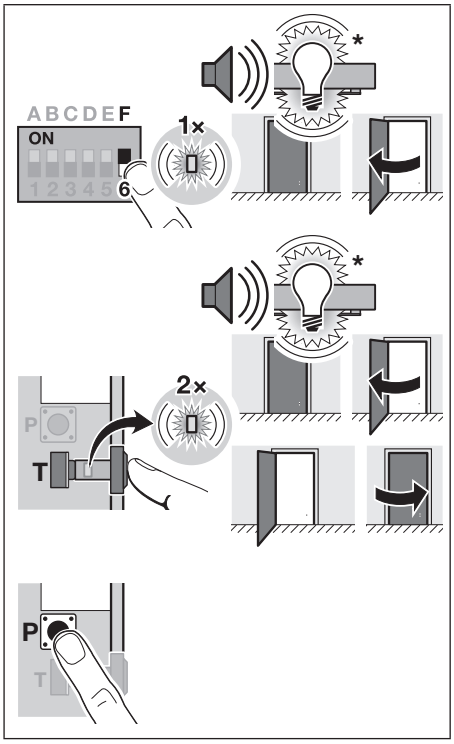
If the travel command is output via semi-automatic mode, advance warning is not active.

Activating advance warning and setting the advance warning type:

▶ see section 7.3

E5 FFL	Advance warning OFF	
E5 ON	Advance warning ON	
	Flashing 1 ×	Acoustic signal
	Flashing 2 ×	Operator light flashes
	Flashing 3 ×	Acoustic signal and flashing of operator light

7.9 DIL switch F6: advance warning direction



NOTE:

This function is only active if the advance warning (DIL switch E5) function is activated.

If DIL switch F6 is set to **OFF** (factory setting), an advance warning is output **only** before runs in the Close direction.

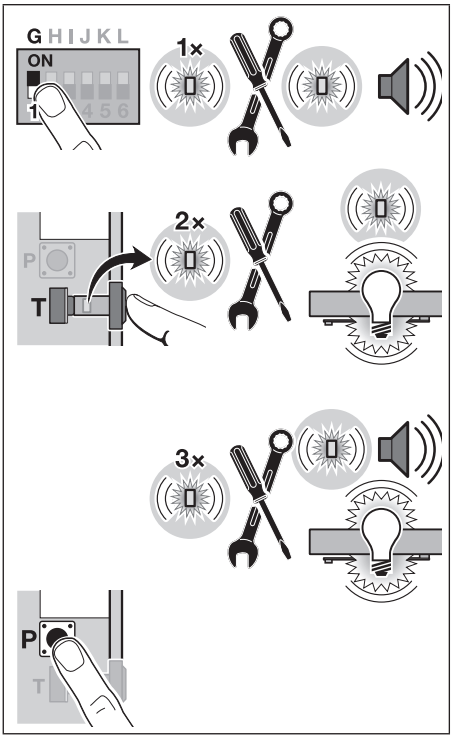
If DIL switch F6 is set to **ON**, an advance warning is output before runs in the Open **or** Open and Close direction.

To set the advance warning in Open and Close direction:

▶ see section 7.3

F6 FFL	Advance warning before runs in Close direction	
F6 ON	Advance warning before runs in direction	
	Flashing 1 ×	Open
	Flashing 2 ×	Open **and** Close

7.10 DIL switch G1: maintenance display



If DIL switch G1 is set to **OFF** (factory setting), the maintenance display is deactivated. No message is output.

If DIL switch G1 is set to **ON**, the maintenance display is activated. At the latest, a message is output after

– 1 year of operation

or

– 20000 door cycles

The message appears once each time the Closed end-of-travel position is reached. You can set whether a visual and / or acoustic signal is output.

NOTE:

The message after the Closed end-of-travel position has been reached can only be deleted:

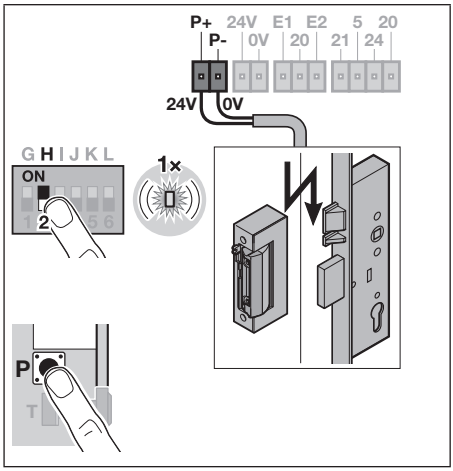
– Via a factory reset
– By deleting the force data and travel data

Activating / setting the maintenance display:

▶ see section 7.3

G1 FFL	Maintenance display OFF	
G1 ON	Maintenance display ON	
	Flashing 1 ×	Acoustic warning (LED and acoustic signal)
	Flashing 2 ×	Visual warning (LED and flashing of operator light)
	Flashing 3 ×	Acoustic and visual maintenance display (LED and acoustic signal and flashing of operator light)

7.11 DIL switch H2: electric strike / motor lock



If DIL switch H2 is set to **OFF** (factory setting), the function for electric strike / motor lock is deactivated.

If DIL switch H2 is set to **ON**, the functions for electric strike / motor lock can be set based on the operating current principle and the static current principle.

- If the *operating current* principle is set, the electric strike / motor lock opens via an active impulse.
  If you do not trigger an impulse, the electric strike / motor lock remains permanently locked by the mechanism.
- If the *static current* principle is set (e.g. for escape routes), the electric strike / motor lock opens when the contact is broken.
  If static current is applied permanently, the electric strike / motor lock is locked permanently.

Activating / setting the electric strike:

▶ see section 7.3

H2 FFL	Electric strike / motor lock OFF	
H2 ON	Electric strike/motor lock ON	
	Flashing 1 ×	Electric strike operating current principle
	Flashing 2 ×	Electric strike static current principle
	Flashing 3 ×	Motor lock
	Flashing 4 ×	Electric strike operating current principle with pressure in close direction
	Flashing 5 ×	Electric strike static current principle with pressure in close direction
	Flashing 6 ×	Motor lock with pressure in close direction

NOTE:

If operating a motor lock

- With an operating voltage other than 24 V DC

or

- With a power consumption higher than 450 mA

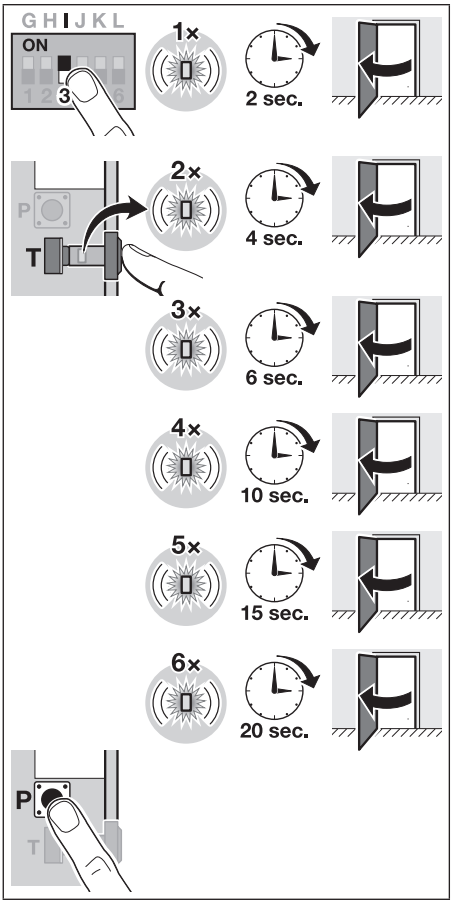
you must use relay board PR 1*.

TIP:

If the **electric strike** function is activated, the door will accelerate significantly from the Closed end-of-travel position. You can use this characteristic when employing a roller latch, for example.

* Accessory, not included in the standard equipment.

7.12 DIL switch I3: start delay and release time



If DIL switch I3 is set to **OFF** (factory setting), the start delay and release time are deactivated. If a travel command (impulse) is given, the door run starts immediately from the Closed end-of-travel position.

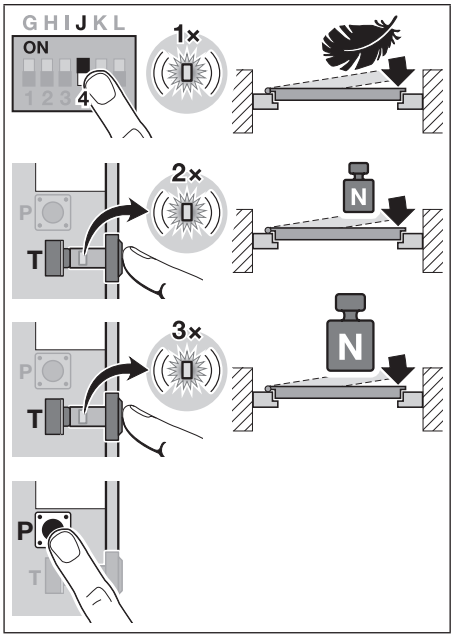
If DIL switch I3 is set to **ON**, the start delay and release time are activated. The door run begins with delay from the Closed end-of-travel position, so that e.g. a motor lock can retract the bolts before the door opens. The time is adjustable.

Activating / adjusting the time:

▶ see section 7.3

I3 FFL	Start delay/release time OFF	
I3 ON	Start delay/release time ON	
	Flashing 1 ×	2 seconds
	Flashing 2 ×	4 seconds
	Flashing 3 ×	6 seconds
	Flashing 4 ×	10 seconds
	Flashing 5 ×	15 seconds
	Flashing 6 ×	20 seconds

7.13 DIL switch J4: end stop during closing



If DIL switch J4 is set to **OFF** (factory setting), the door closes without end stop. Before closing, the door does not accelerate for the last 50 mm before the Closed end-of-travel position.

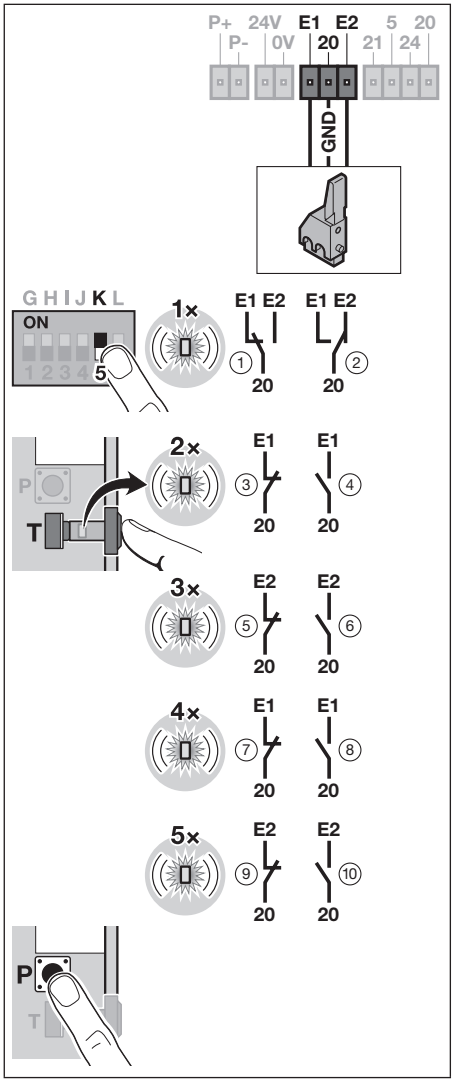
If DIL switch J4 is set to **ON**, the door closes and accelerates immediately before the end-of-travel position in which the power limit is not active. This acceleration is required for secure closing at higher counter-pressures (seal). The end stop settings can be adjusted.

Activating / setting the end stop:

▶ see section 7.3

J4 FFL	End stop during closing OFF	
J4 ON	End stop during closing ON	
	Flashing 1 ×	End stop soft
	Flashing 2 ×	End stop normal
	Flashing 3 ×	End stop hard

7.14 DIL switch K5: bolt reporting / stop



If DIL switch K5 is set to **OFF** (factory setting), bolt reporting / stop is deactivated.

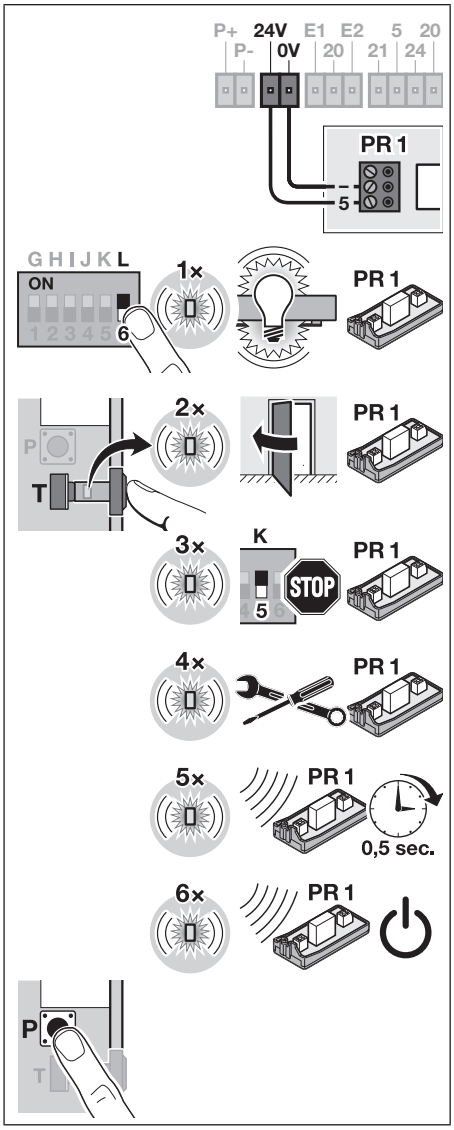
If DIL switch K5 is set to **ON**, bolt reporting / stop is activated. You can query door locking with the parameters or block / stop travel commands.

Activating / setting bolt reporting / stop:

▶ see section 7.3

K5 FFL	Stop / bolt reporting OFF		
K5 ON	Stop / bolt reporting ON		
	Flashing 1 ×	Bolt reporting / change-over contact	
		1	Locked
		2	Unlocked, movement possible
	Flashing 2 ×	Bolt reporting / normally open contact (E2 is not evaluated)	
		3	Locked
		4	Unlocked, movement possible
	Flashing 3 ×	Bolt reporting / normally closed contact (E1 is not evaluated)	
		5	Unlocked, movement possible
		6	Locked, no movement possible
	Flashing 4 ×	Stop / normally open contact (E2 is not evaluated)	
		7	Stop active, no movement possible
		8	Stop inactive, movement possible
	Flashing 5 ×	Stop / normally closed contact, e.g. for emergency stop	
		9	Stop inactive, movement possible
		10	Stop active, no movement possible

7.15 DIL switch L6: programming of relay board PR 1



If, after connecting relay board PR 1***,** DIL switch L6 is set to **OFF** (factory setting), board programming is deactivated. The relay energises in the Closed end-of-travel position.

* Accessory, not included in the standard equipment.

If, after connecting relay board PR 1, DIL switch L6 is set to **ON**, board programming is activated. You can set additional functions with the parameters.

NOTE:

For the bolt reporting set (DIL switch K5), the relay only energises when

- The Closed end-of-travel position has been reached

  and
- The feedback **locked** has been given

Activating / setting relay board programming:

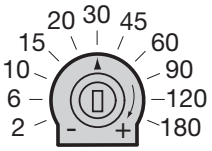
▶ see section 7.3

L6 FFL	The relay energises with the Closed end-of-travel position.	
L6 ON	Additional relay functions	
	Flashing 1 ×	The relay energises with the operator light. The relay de-energises as soon as the operator light goes out.
	Flashing 2 ×	The relay energises for 0.5 seconds (momentary impulse) while the door moves in the Open direction, manually or automatically.
	Flashing 3 ×	The relay energises during a programmed stop (DIL switch K5) with the message **Stop active**. The relay once again de-energises with the message **Stop inactive**.
	Flashing 4 ×	The relay energises with the first incoming maintenance message. The relay does not de-energise again until the counter has been reset.
	Flashing 5 ×	The relay energises for 0.5 seconds (momentary impulse) when it receives a channel 6 radio code (relay press-and-hold).

	Flashing 6×	The relay energises when it receives a channel 6 radio code. The next time a channel 6 radio code is received, the relay once again de-energises (relay switching ON/OFF).

7.16 Potentiometer P1: hold-open phase in automatic operation (time 2)

For a travel command initiated by an impulse (terminal 20 / 24 or channel 1 radio code), the door does not close until after the set hold-open phase has elapsed. Use this potentiometer to set the hold-open phase. The phase can be set from 2 seconds to 180 seconds.



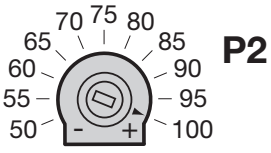
Setting **–**	2 second hold-open phase	
Mid-setting	30 second hold-open phase	
Setting **+**	180 second hold-open phase	

7.17 Potentiometer P2: speed

Use this potentiometer to reduce the speed in 5% increments between 100 % and 50 %.

Reduce the speed if:

- The operator is in low-energy mode but the speed is still too high, e.g. for small children or older persons.
- You were unable to observe the fitting dimensions (A dimension and B dimension) and the operator speed is too high as a result.



Minimum	50 %	
Maximum	100 %	

If you re-adjust this potentiometer, the next run is a force learning run.

7.18 Special programming

In addition to the various functions and the respective parameters, there are two types of special programming that you can perform.

– Speed adjustment

– Increasing force

Contact your specialized dealer for the programming.

NOTE:

Changing the factory settings to special settings (door weight/ speed and power limit) may only be done by professionals. Please contact your specialized dealer and observe our instructions for special programming as well as the included warnings.

8 Integrated radio module

A maximum of 100 radio codes can be transferred and distributed across the existing channels. If more than 100 radio codes are transferred, then the first transferred radio code is deleted.

Channel	Function
1	Automatic operation You can trigger automatic operation via the taught-in *Automatic* radio code or an external button: Following an impulse, the door opens and then closes automatically.
2	Integrated operator light ON / OFF You can switch on the operator light via the taught-in *Light* radio code as well as switch it off early.
3	Impulse sequence control Trigger the impulse sequence control over – the taught-in radio code (channel 3), – an external button (terminals 20 – 21), or – - the **T** button. 1st impulse: The door runs towards an end-of-travel position. 2nd impulse: The door stops. 3rd impulse: The door runs in the opposite direction. 4th impulse: The door stops. 5th impulse: The door runs in the direction of the end-of-travel position selected in the 1st impulse.
6	Momentary impulse or switching of relay (relay board PR 1*). You can switch the relay (relay board PR 1) via the taught-in radio code, see section 7.15

NOTE:

If the radio code of the hand transmitter button is inherited from another hand transmitter, press the hand transmitter button twice when operating it the first time.

To teach in transmitter buttons, the following condition must be met:

- The operator is at rest.

* Accessory, not included in the standard equipment.

8.1 Teaching in channel 1 – *automatic operation*

1. Briefly press the **P** button once.
   The red LED flashes 1 ×.
2. Press and hold the transmitter button from which you would like to send the radio code.
   If the radio module detects a valid radio code, the red LED in the transparent button on the operator cover flashes quickly.
3. Release the transmitter button.
   The transmitter button has been taught in and is ready for operation.
   The red LED in the transparent button flashes slowly. You can teach in additional transmitter buttons.
4. Repeat steps 2 + 3 to teach in additional transmitter buttons.

If you teach in the same transmitter button on two different channels, the button is deleted on the channel taught in first.

If you do not want to teach in any additional transmitter buttons or want to abort the process:

▶ Press the **T** button 1 ×, the **P** button 4 × or wait for the timeout.

Timeout

If the operator does not detect a valid radio code within 25 seconds, it automatically switches to normal operation.

8.2 Teaching in channel 2 – *operator light ON / OFF*

1. Briefly press the **P** button twice.
   The red LED flashes 2 ×.
2. Press and hold the transmitter button from which you would like to send the radio code.
   If the radio module detects a valid radio code, the red LED in the transparent button on the operator cover flashes quickly.
3. Release the transmitter button.
   The transmitter button has been taught in and is ready for operation.
   The red LED in the transparent button flashes slowly. You can teach in additional transmitter buttons.
4. Repeat steps 2 + 3 to teach in additional transmitter buttons.

If you teach in the same transmitter button on two different channels, the button is deleted on the channel taught in first.

If you do not want to teach in any additional transmitter buttons or want to abort the process:

▶ Press the **T** button 1 ×, the **P** button 3 × or wait for the timeout.

Timeout

If the operator does not detect a valid radio code within 25 seconds, it automatically switches to normal operation.

8.3 Teaching in channel 3 – *impulse sequence control*

1. Briefly press the **P** button three times.
   The LED flashes red 3×.
2. Press and hold the transmitter button from which you would like to send the radio code.
   If the radio module detects a valid radio code, the red LED in the transparent button on the operator cover flashes quickly.
3. Release the transmitter button.
   The transmitter button has been taught in and is ready for operation.
   The red LED in the transparent button flashes slowly. You can teach in additional transmitter buttons.
4. Repeat steps 2 + 3 to teach in additional transmitter buttons.

If you teach in the same transmitter button on two different channels, the button is deleted on the channel taught in first.

If you do not want to teach in any additional transmitter buttons or want to abort the process:

▶ Press the **T** button 1×, the **P** button 2 × or wait for the timeout.

Timeout

If the operator does not detect a valid radio code within 25 seconds, it automatically switches to normal operation.

8.4 Channel 4 and channel 5

These channels are not assigned for this operator.

8.5 Teaching in channel 6 – *momentary impulse or switching the relay**

1. Briefly press the **P** button four times.
   The red LED flashes 6 ×.
2. Press and hold the transmitter button from which you would like to send the radio code.
   If the radio module detects a valid radio code, the red LED in the transparent button on the operator cover flashes quickly.
3. Release the transmitter button.
   The transmitter button has been taught in and is ready for operation.
   The red LED in the transparent button flashes slowly. You can teach in additional transmitter buttons.
4. Repeat steps 2 + 3 to teach in additional transmitter buttons.

If you teach in the same transmitter button on two different channels, the button is deleted on the channel taught in first.

If you do not want to teach in any additional transmitter buttons or want to abort the process:

▶ Press the **T** button 1 ×, the **P** button 1 × or wait for the timeout.

Timeout

If the operator does not detect a valid radio code within 25 seconds, it automatically switches to normal operation.

8.6 Deleting all radio codes

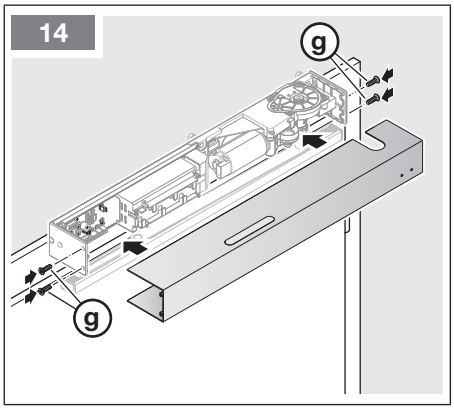
You cannot delete the radio codes for individual transmitter buttons or individual functions.

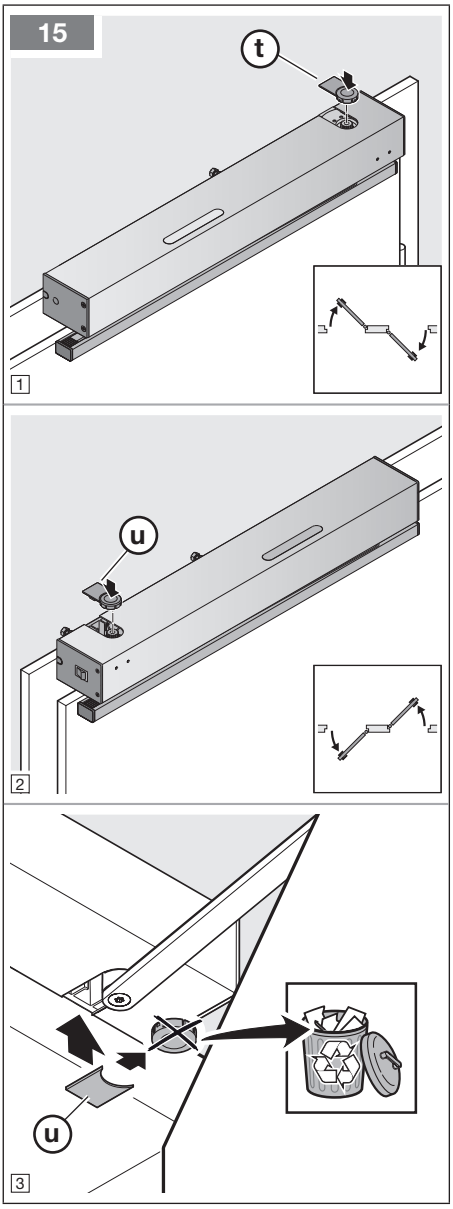
▶ Press and hold the **P** button.
- The LED slowly flashes in red for 5 seconds.
- The LED flashes rapidly in red for 2 seconds.
- The LED goes out.

All radio codes have been deleted.

* Relay board PR 1

9 Final work



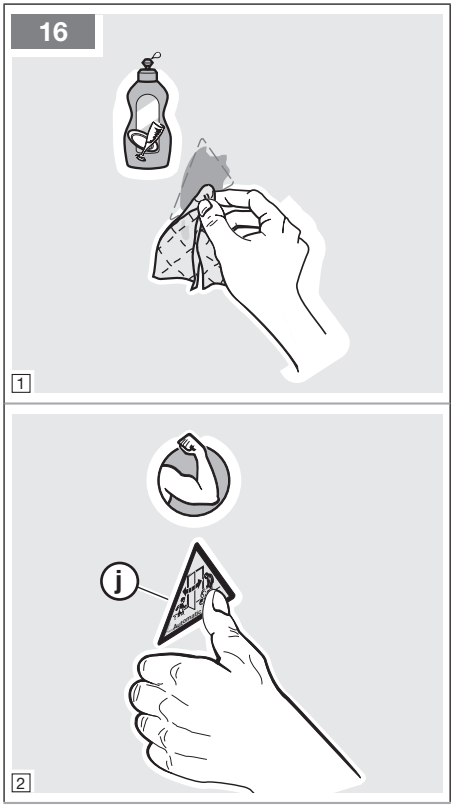


9.1 Fixing the warning sign

- Permanently fix the warning sign for the automated door in a prominent place, for example near the permanently installed button for moving the operator.

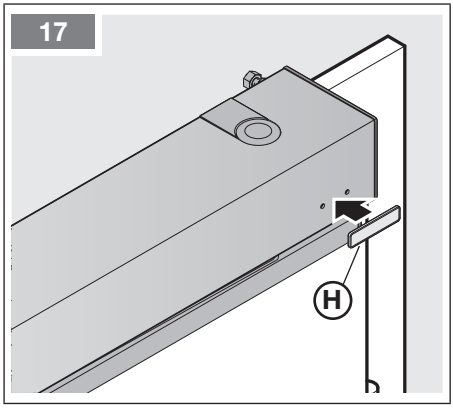
NOTE

Always use suitable cleaning agents and care products. It is your responsibility to maintain an intact surface.



9.2 Clipping in the label holder

To conclude operator fitting, attach the label holder to the cover.



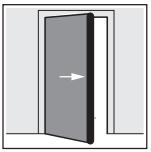
10 Operation

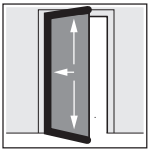
⚠ WARNING

Risk of injury during door travel

If the door moves, injuries or damage may result near the door.

- ▶ Children must not play on the door assembly.
- ▶ Make sure that no persons or objects are in the door's travel range.
- ▶ Only operate the hinged door operator if you are within the sight of the door's area of travel.
- ▶ Monitor the door travel until the door has reached the end-of-travel position.





⚠ WARNING

Risk of crushing at the main closing edge and the secondary closing edges

During the door run, fingers may be crushed between the door and main closing edge or the secondary closing edge.

- ▶ Do not reach toward the main closing edge during a door run.
- ▶ Do not reach toward the secondary closing edges during a door run.

⚠ WARNING

Risk of crushing in the slide rail or scissors linkage

Reaching into the slide rail or scissors linkage during a door run can lead to crushing.

- ▶ During the door run, do not reach into the slide rail or the scissors linkage.

10.1 Instructing users

The operator may be used by

- children over 8 years of age
- persons with limited physical, sensory or mental capabilities
- persons with a lack of experience or knowledge

The condition for use of the operator is that the above-mentioned children / persons

- are supervised
- instructed on safe use
- understand the resulting dangers

Children must not play with the operator.

- ▶ All persons using the door assembly must be shown how to operate the hinged door operator properly and safely.

10.2 Function test

- ▶ Perform various operator runs to test the set functions (DIL switches) and parameters.

10.3 Functions of various radio codes

Each transmitter button is assigned to a radio code. If you want to operate the operator with a hand transmitter, for example, you must register the respective hand transmitter buttons for the desired function on the operator. You must transmit the corresponding radio code to the integrated radio receiver.

NOTE:

If the radio code of the hand transmitter button is inherited from another hand transmitter, press the hand transmitter button twice when operating it the **first** time.

Channel	Function
1	Automatic operation
2	Integrated operator light ON / OFF
3	Impulse sequence control
6	Momentary impulse or switching of relay (relay board PR 1*).

* Accessory, not included in the standard equipment.

10.4 Behaviour during a power failure

The operator is equipped with an easy-to-move gearbox allowing you to open or close the door manually at all times.

10.5 Behaviour after the power returns

If power is lost, the operator performs a reference run with the next impulse command.

10.6 Reference run

A reference run is performed

- After a power failure

or

- If the power limit is activated 3 × in a row during a run in the *Open or Close* direction.

During a reference run, the operator light flashes and an acoustic signal is output.

11 Inspection and maintenance

⚠ WARNING

Risk of injury due to unexpected door travel

Unexpected door travel may occur during inspection and maintenance work if the door assembly is inadvertently actuated by other persons.

- ▶ For all work on the door assembly, disconnect the mains plug or switch off the line protection switch.
- ▶ Safeguard the door assembly against being switched on again without authorisation.

The hinged door operator is maintenance-free.

However, for your own safety, we recommend an inspection after:

- 1 year of operation

or

- 20000 door cycles

NOTE:

If you use the operator at a workplace, you must comply with the **mandatory annual inspection**.

Only specialists may perform inspections or repairs. Contact your supplier for this purpose.

The operator can perform a visual inspection.

- ▶ Inspect your door assembly **every six months**.
- ▶ You must eliminate any errors or defects **immediately**.

Do not allow children to clean or maintain this operator without supervision.

12 Reset

⚠ WARNING

Danger of injury by incorrectly set forces

Special settings with regard to door weight/speed and power limit must not be changed by the operator.

- ▶ Contact your specialized dealer for inspection and set up of special programming.

There are three options for resetting settings and data on the operator:

a. Performing a factory reset
b. Deleting force data
c. Deleting force data and travel data

Taught-in radio codes are maintained for all three variants.

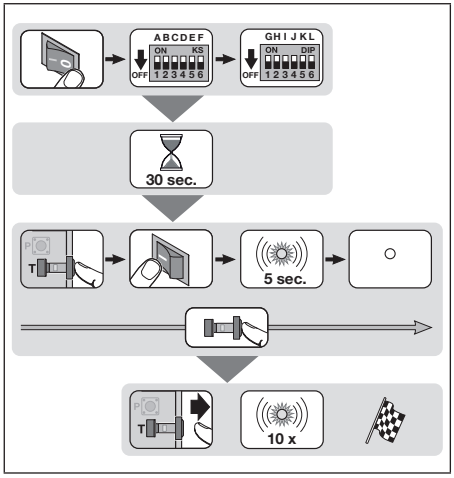
NOTE:

A repeated force error display can be caused by excessive drafts or by the floor covering (e.g. carpet).

12.1 Factory reset

The following settings and data are completely reset to the factory setting:

- Travel data
- Force data
- DIL switches



1. Switch off the operator at the mains.
   ▶ Switch off the operator via the mains switch.
2. Wait 30 seconds until the operator is de-energised.
3. Set all DIL switches to **OFF**.
4. Press and hold the **T** button.
5. Connect the operator with the power supply.
   ▶ Switch on the operator via the mains switch.
   The LED flashes normally for 5 seconds.
6. When the LED goes out, release the **T** button.
   The LED flashes slowly 10 ×.

All the above-mentioned settings and data are reset to the factory setting.

NOTE:

The operator switches to normal operation if:

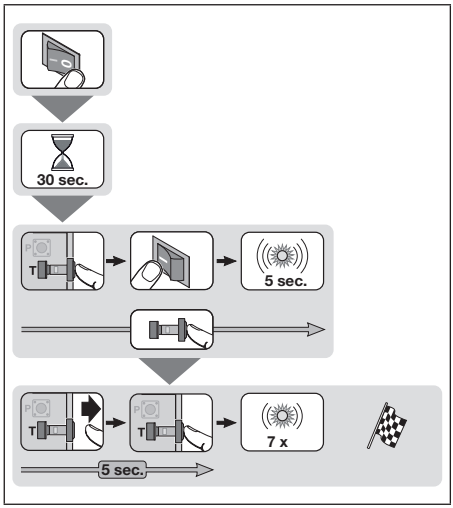
- The LED goes out and you release the **T** button within 10 seconds
- The factory reset was unsuccessful.

12.2 Deleting force data

If the travel behaviour of the door changes, e.g. a new carpet is located under the door or in the summer / winter, the force data can be deleted separately.

The following data will be maintained:

- the travel data
- the DIL switch settings
- the radio codes



1. Switch off the operator at the mains.
   ▶ Switch off the operator via the mains switch.
2. Wait 30 seconds until the operator is de-energised.
3. Press and hold the **T** button.
4. Connect the operator with the power supply.
   ▶ Switch on the operator via the mains switch.
   The LED flashes normally for 5 seconds.
5. Release the **T** button while the LED is flashing.
6. Press the **T** button again within 5 seconds.
   The LED flashes slowly 7 ×.

The force data has been deleted.

▶ A new learning run is required.

NOTE:

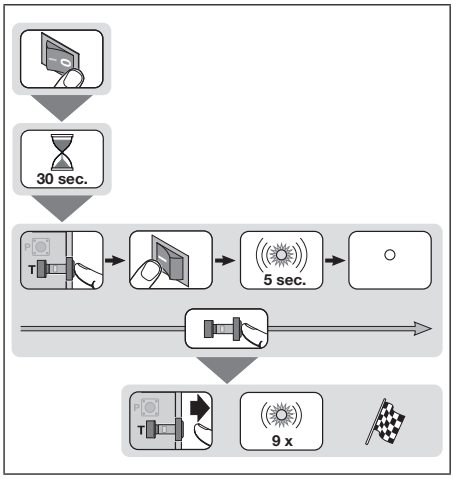
If you do not press the **T** button within 5 seconds, the operator switches to normal operation.

The LED flashes slowly 8 ×.

The next run is a reference run.

12.3 Deleting force data and travel data

If the door's opening angle changes, e.g. due to new furniture, the force data and the travel data can be deleted. The settings for the DIL switches are maintained.



1. Close the door.
2. Switch off the operator at the mains.
   - ▶ Switch off the operator via the mains switch.
3. Wait 30 seconds until the operator is de-energised.
4. Press and hold the **T** button.
5. Connect the operator with the power supply.
   - ▶ Switch on the operator via the mains switch.

   The LED flashes normally for 5 seconds.
6. When the LED goes out, release the **T** button.
   The LED flashes slowly 9 ×.

The force data and travel data are deleted.

- ▶ A new learning run is required, see section 6.1.

NOTE:

If you release the **T** button within 10 seconds, the operator switches to normal operation.

The LED flashes slowly 8 ×.

The next run is a reference run.

13 Dismantling and Disposal

NOTE:
When dismantling the system, observe the applicable job safety rules and regulations.

Dismantle the hinged door operator in the reverse order of these instructions. Dispose of the operator properly.

14 Warranty conditions

Warranty Period

In addition to the statutory warranty provided by the dealer in the sales contract, we grant the following warranty for parts from the date of purchase:

- 2 years on operator technology, motor and motor control
- 2 years on radio equipment, accessories and special systems

Claims made under the warranty do not extend the warranty period. For replacement parts and repairs the warranty period is six months or at least the remainder of the warranty period.

Prerequisites

The warranty claim only applies in the country where the equipment was purchased. The product must have been purchased through our authorised distribution channels. A claim under this warranty exists only for damage to the object of the contract itself.

The receipt of purchase substantiates your right to claim under the warranty.

Services

For the duration of the warranty we shall eliminate any product defects that are proven to be attributable to a material or manufacturing fault. We pledge to replace free of charge and at our discretion the defective goods with non-defective goods, to carry out repairs, or to grant a price reduction. Replaced parts become our property.

Reimbursement of expenditure for dismantling and fitting, testing of parts as well as demands for lost profits and compensation for damages are excluded from the warranty.

Damage caused by the following is also excluded:

- improper fitting and connection
- improper initial start-up and operation
- External factors such as fire, water, abnormal environmental conditions
- mechanical damage caused by accidents, falls, impacts
- negligent or intentional destruction
- normal wear or deficient maintenance
- repairs conducted by unqualified persons
- Use of non-original parts
- Removal or defacing of the data label

15 Excerpt from the Declaration of Incorporation

(as defined in EC Machinery Directive 2006/42/EC for incorporation of partly completed machinery according to annex II, part 1 B).

The product described on the reverse side has been developed, constructed and produced in accordance with the following directives:

- EC Machinery Directive 2006/42/EC
- EU Regulation 305/2011 (Construction Products Regulation)
- EU Directive 2011/65/EU (RoHs)
- EC Low-Voltage Directive 2014/35/EC
- EC Electromagnetic Compatibility Directive 2014/30/EU

Applied and consulted standards and specifications:

- EN ISO 13849-1, PL “c”, Cat. 2 Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design
- EN 16005
  Power operated pedestrian door sets - Safety in use - Requirements and test methods
- EN 60335-1/2, when applicable
  Safety of electrical appliances / operators for doors
- EN 61000-6-3
  Electromagnetic compatibility – Emission standard
- EN 61000-6-2
  Electromagnetic compatibility – Immunity standard

Partly completed machinery as defined in the EC Directive 2006/42/EC is only intended to be incorporated into or assembled with other machinery or other partly completed machinery or equipment, thereby forming machinery to which this directive applies.

This is why this product must only be put into operation after it has been determined that the entire machine / system in which it has been installed corresponds with the guidelines of the EC directive mentioned above.

Any modification made to this product without our express permission and approval shall render this declaration null and void.

16 Technical data

Operator dimensions	560 × 60 × 78 mm (W × H × D)
Transmission of forces	Slide rail
	Scissors linkage*
Fitting to the lintel with	Slide rail, pulling on the hinge side
	Slide rail, pushing on the opposite hinge side
	Scissors linkage, pushing on the opposite hinge side
Door leaf dimensions	Min. width 610 mm
	Max. width 1100 mm
	Max. height 2250 mm
Door opening angle	45° – 115°
Door weight, maximum	For door width
Up to 80 kg	610 – 1100 mm
Up to 100 kg	610 – 985 mm
Up to 125 kg	610 – 860 mm
Connection options	
Button (automatic)	
Button (impulse sequence)	
Electric strikes	
Stop / latch switching contact	
Motor lock	
Programmable relay (relay board PR 1)	
Functions	
On / off (mains switch)	
Automatic operation	
Impulse sequence control	
Permanently open	
Partially open	
Operator light	
End stop	
Pressure in close direction before runs from the Closed end-of-travel position	
Semi-automatic	
Visual / acoustic signalling of door travel	
Stop / latch switching contact	
Semi-automatic	

* Accessory, not included in the standard equipment.

Door closer function (automatic closing after manual door opening)	
Low-energy operation	
Start delay / release time	
Pre-warning phase, visual / acoustic	
Soft start / soft stop	
Zero-current / manual use	
Radio (integrated)	
Miscellaneous	
Connecting voltage	100 – 240 V
Supply frequency	50 / 60 Hz
Max. power input	0.15 kW
Control voltage	24 V
Ambient temperature	–15 °C to +50 °C
Tested service life	200000 cycles
Protection category	IP 20
Service displays	
Error display (LED)	
Programmable maintenance display	
Warranty	2 years
Security	
CE mark	
GS mark	
DIN EN 16005	
Additional details	
Opening angle for the semi-automatic	Adjustable 2°, 4°, 6° or 10°
Power consumption in stand-by	Approx. 1 W
Max. closing speed	Low-energy
Hold-open phase	2 to 180 seconds
Torque	Max. 30 Nm

17 Error / warning messages and operating conditions

17.1 Error messages

LED display red (RD)

State	Function
Flashes 3 ×	Error: power limit in Close direction
Flashes 4 ×	Stop, bolt reporting active
Flashes 5 ×	Error: power limit in Open direction
Flashes 6 ×	System error, travel time limit
Flashes 8 ×	No reference point (next run is a reference run)

17.2 Operating condition display

LED display: red (RD)

State	Function
Continuously illuminated	Runs in Open, Close direction and in all open positions
Flashes	Learning run or reference run is being performed
Flashes 3 × once	Maintenance interval has been reached at the latest after: – 1 year or – 20000 cycles
Flashes 7 ×	Force data has been deleted. Operator is ready for new force learning runs.
Flashes 9 ×	Force data and travel data have been deleted. Operator is ready for new force and travel learning runs.
Flashes 10 ×	Operator is not yet taught in (delivery state)

Flashes quickly	During the pre-warning phase
Off	No mains voltage

LED display: green (GN)

State	Function
Continuously illuminated	In the Close end-of-travel position
Flashes quickly 1 × – 6 ×	One-time confirmation according to the selected setting
Off	No mains voltage

Operator light messages

State	Function
Flashes	Learning run or reference run is being performed
Flashes 2 ×	Operator is not yet taught in (delivery state)
Flashes 3 × once	During the pre-warning phase
	Maintenance interval has been reached at the latest after: – 1 year or – 20000 cycles

PortaMatic

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