

**EN Translation of the Original Installation and Operating Manual** From on page 2

**EN Translation of the handover protocol** From on page 46

**EN Translation of the test report** From on page 52

**EN Translation of the brief instructions** From on page 57

**Barrier**

**ASB-5014A**

Attach warranty sticker here!

# Information on the product

## Serial No.:

See the title page of this Installation and Operating Manual (if applicable, warranty sticker).

**Year of manufacture: from 10/2015**

## Information on the Installation and Operating Manual

### Warranty

The warranty complies with statutory requirements. The contact person for warranties is the qualified dealer.

The warranty is only valid in the country in which the operator was purchased.

Batteries, fuses and light bulbs are excluded from the warranty.

### Contact data

To ensure quick and efficient processing of your inquiry, please make a note of the serial number and the type code given on the type plate before phoning .

If you require after-sales service, spare parts or accessories, please contact your specialist retailer, installer or contact

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### Feedback on this Installation and Operating Manual

We have tried to make the Installation and Operating Manual as easy as possible to follow. If you have any suggestions as to how we could improve the Installation and Operating Manual or if you think more information is needed, please send your suggestions to us:



+49 (0) 7021 / 8001 - 403



[doku@sommer.eu](mailto:doku@sommer.eu)

### Service

If you require service, please contact us on our service hotline (fee required) or see our web site:



+49 (0)900-1800150

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Violations of the above stipulations will lead to damage claims.

All brands mentioned in these instructions are the property of their respective manufacturer and hereby recognised as such.

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# User information

## Storage and circulation of the manual

This manual must always be available at the site of installation and use of the barrier.

The operator must inform the personnel about the storage location of this manual and its supplementary manuals.

If the manual has become unreadable due to constant use, the operator must obtain a replacement from the manufacturer. To reorder the manual, contact the Customer Service department.

During the transfer or resale of the barrier to third parties, the following documents must be passed on to the new owner:

- this manual,
- documentation of retrofitting and repair work,
- proof of regular testing,
- other applicable documents; see the chapter "*User Information - Other Applicable Documents*".

## Description of the product type

The ASB-5014A barrier has been constructed according to state-of-the-art technology and recognised technical regulations and is subject to the EC Machinery Directive (2006/42/EC).

This manual describes an industrially, commercially, and privately usable, power-activated barrier for vehicle traffic. The barrier is used to block and open entrances and exits of car parks and other driveways.

The ASB-5014A barrier is available in both right-closing and left-closing designs. A conversion is **not** possible.

Optionally available accessories are also described. The actual scope of delivery may deviate from that described here.

## Target group of the manual

This manual must be read and observed by all persons assigned with one of the following tasks:

- in-house transport,
- unpacking and installation,
- initial operation,
- setting,
- troubleshooting,
- testing,
- decommissioning,
- disassembly,
- storage,
- disposal.

## Other applicable documents

In addition to this manual, observe the following (technical) documents / regulations:

- national regulations regarding accident prevention,
- national regulations regarding environmental protection,
- information regarding supervisory and reporting responsibilities, as well as company organisation,
- recognised technical regulations for safe working.

## Explanation of symbols

The following symbols and signal words are used in this manual:



### DANGER

Designates an immediate danger that leads to death or extremely severe injuries.



### WARNING

Designates a possibly dangerous situation which may lead to death, extremely severe injuries or damage to the barrier and the environment.



### NOTE:

Designates additional information and useful tips.



Refers to a part or machine component in a picture.

## Warning symbols

If the source of danger can be specified more precisely, the following symbols are used together with the signal words listed above:



### DANGER DUE TO ELECTRIC CURRENT!

If live parts are touched, current can flow through the body, possibly leading to electric shock, burns, or death.



### DANGER OF TIPPING!

This symbol is used to indicate a danger of tipping during the transport and installation of the barrier.



### DANGER DUE TO CLOSING BARRIER!

Failure to observe these instructions can lead to dangerous situations resulting in serious injuries.



### RISK OF BURNS!

Failure to observe these instructions can lead to dangerous situations resulting in serious burns.



### RISK OF CRUSH INJURIES TO HANDS!

Failure to observe these instructions can lead to dangerous situations resulting in serious crush injuries to the hands.



### RISK OF CRUSH INJURIES TO THE BODY!

Failure to observe these instructions can lead to dangerous situations resulting in serious crush injuries to the body.

## Information regarding the depiction of text

- Stands for general safety instructions which must be observed!
- Stands for directions for an action with one or two instructions.
- 1. Stands for directions for an action with three or more instructions.
  - Stands for lists within the action.
  - ⇒ Stands for the results of the action.

Lists without a mandatory order are shown as a list with bullet points (Level 1) and en-dashes (Level 2):

- List 1,
  - point A,
  - point B.
- List 2.

References to chapters and other documents are shown in bold print, italicised and placed in "*quotation marks*".

# Safety instructions

## Intended use

Operate the barrier only if it is in perfect, traffic-safe condition and in a safety- and risk-conscious manner.

The ASB-5014A barrier is suitable for industrial, commercial and private use in the following applications:

- to block and open the entrances and exits of car parks and other driveways to which vehicles of all types have access
- for use with a boom length from 1.5 metres to 5 metres
- maximum of 350 operating cycles per day
- use with the required safety clearances to the surroundings
- use with appropriate safety devices and command devices oriented to the expected vehicle traffic
- use in wind:

boom H14 1.5 m - 3 m for maximum wind strength 9 Bft  
boom H14 >3 m - 5 m for maximum wind strength 6 Bft

## Improper use



### WARNING

#### Danger caused by improper use!

- **Use the barrier only as intended and follow all warnings and safety instructions in the manual to the letter!**

Any use not listed in the chapter "**Intended Use**" chapter is deemed to be improper. The operator of the barrier bears sole liability for any damage resulting from improper use. This also applies to unauthorised changes, modifications, and programming of the barrier and its parts.

In particular, the following are not permitted:

- use by pedestrians and cyclists,
- use at toll booths,
- use in parking garages,
- use with defective parts,
- use in enclosed spaces,
- use in explosive atmospheres or in environments with hazardous, flammable gases,
- installation of the barrier without a foundation or with a foundation that does not meet the requirements listed in the chapter "**Installation preparations - creation of barrier foundation with supply connections**,"
- use on foundations with an upward or downward slope,
- use of spare parts and accessories that have **not** been tested and approved by SOMMER Antriebs- und Funktechnik GmbH,
- modification of the barrier or individual parts without the permission of SOMMER Antriebs- und Funktechnik GmbH,
- misuse of the barrier or individual parts of the barrier for a similar area of application.

## Qualifications of personnel

Persons under the influence of drugs, alcohol, or medications that can influence their ability to react may not work on the barrier.



### WARNING

#### Risk of injury due to insufficiently qualified personnel!

- **Incorrect handling of the barrier can cause significant injury and damage to property.**
- **All work on the barrier must be carried out by suitably qualified personnel.**

## Operator

The operator owns the barrier or has rented it.

In addition to the contractually regulated transfer of responsibilities to the operator, the operator is also responsible for ensuring use of the barrier as intended.

The operator is responsible for making sure that all personnel meet all necessary physical and mental requirements for the tasks assigned to them.

## Qualified transport personnel

The barrier is transported to the operator's premises by a specialist dealer or by a haulage company commissioned by the specialist dealer.

Transport may not be performed by the operating personnel or by the operator. This does not apply to in-house transport.

## Qualified personnel for the foundation

The foundation of the barrier must be laid by a trained expert. This trained expert must provide the required proof of static stability in accordance with the local building regulations.

If necessary, consult a structural engineer.

## Qualified personnel for installation, initial operation and disassembly

The installation, initial operation and disassembly of the barrier must be performed by a trained expert.

Personnel must be familiar with the local accident prevention regulations.

Minors or trainees may only perform this work under the supervision of an experienced specialist and with the express permission of the operator.

## Electricians

All work on the electrical system and live parts must be performed by a trained electrician.

Work on the electrical system or live parts must not be performed by the qualified personnel for installation, initial operation and disassembly or by the operator.

## Qualified operating personnel

The qualified operating personnel are assigned the following responsibilities and tasks:

- setting the operating mode,
- emergency release of the barrier,
- eliminating malfunctions or initiating measures to eliminate malfunctions,
- testing the barrier at the intervals specified in the testing schedule.

These persons must be named by the operator and have taken part in training on the operation of the barrier provided by the operator.

Minors or trainees may only perform this work under the supervision of an experienced specialist and with the express permission of the operator.

# Safety instructions

## Users

The barrier may be used by all persons who have reached the age of 18.

Minors may only use the barrier when accompanied by an adult.

Users are assigned the following responsibilities and tasks:

- opening and closing the barrier using the command devices,
- use of the barrier by vehicles guided (control) by the users.

## Responsibilities of the operator

The operator of the barrier remains responsible for its use at all times unless otherwise agreed. This also applies when the barrier is used by third parties.

We would like to point out expressly that the ASB-5014-A barrier may only be used for vehicle traffic. Persons must not use the barrier. The operator must use suitable measures to guarantee a strict separation of vehicle and pedestrian traffic. Structural separations such as pedestrian paths next to the traffic lane must be supplemented with warnings and corresponding signs.

The opening and closing movements must be observed and monitored using suitable measures. Operation of the barrier system without safety devices, visual supervision or monitoring is not permitted.

In addition, the operator of the barrier must:

- assign the various tasks at the barrier to qualified, suitable, authorised personnel,
- train the operating personnel in the proper operation of the barrier and the effect of all safety devices and document the training. The training or instruction of the personnel must be confirmed in writing!
- have damage repaired and faulty parts replaced immediately by suitable qualified personnel,
- commission experts to test the barrier system at regular intervals and keep a record of these tests,
- document retrofitting work,
- ensure that the barrier is operated only in technically perfect condition,
- equip personnel with suitable protective work clothing,
- installation signal boards notices, or structures (railings) so that pedestrians are sufficiently warned and do not walk through the barrier system,
- design the entrance widths for vehicles in such a way that wider, longer, and high vehicles can enter comfortably without damaging the installation.



### NOTE:

See also the chapter "Installation preparations". The necessary preparations and responsibilities are listed there.

## Safety labelling on the barrier

The danger zone of the barrier is labelled with a warning sign. In addition, reflectors can be attached to the boom.

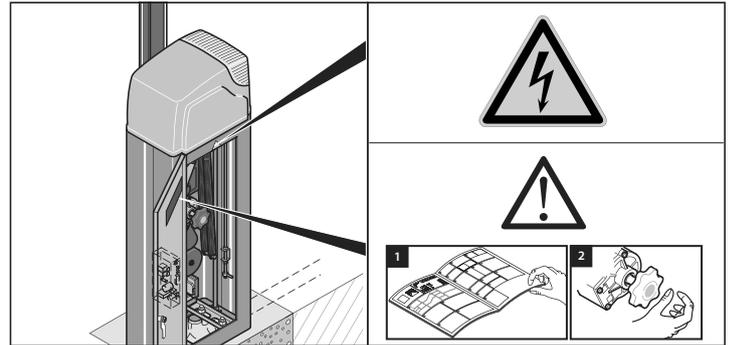
Before the operation of the barrier, the operator and personnel must be familiarised with the position and meaning of the warning sign on the barrier.

All warning signs and reflectors attached in and to the barrier must always be easily visible and undamaged.

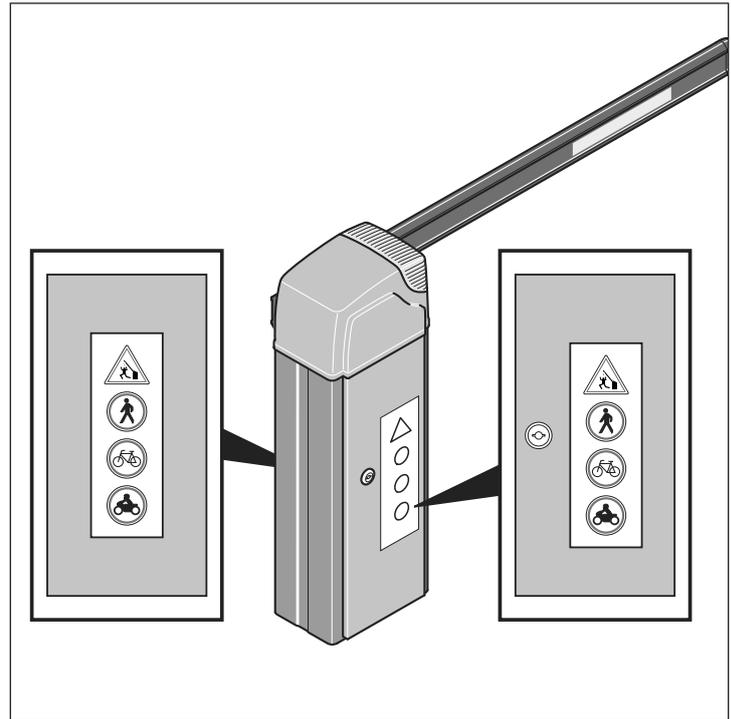
Damaged or missing warning signs and reflectors must be replaced by the operator immediately.

## Warning sign on the barrier

The following warning sign is attached to the barrier:



The following warning signs must be attached by the installer / operator:



# Safety instructions

## Personal protective equipment

The table below shows which protective equipment must be worn for the special work requirements and which safety measures must be taken.

					
Transport	X	X	X		X
Installation		X	X	X	X
Initial operation					X
Troubleshooting			X		X
Disassembly		X	X	X	X
Disposal	X	X	X		X

## Spare parts and accessories



### WARNING

**Risk of injury caused by use of incorrect spare parts**  
Incorrect or faulty spare parts can lead to damage, malfunctions or failure of the system and may impair safety.

- **Only use original spare parts!**

If safety-relevant parts are replaced, their function must be checked afterwards.

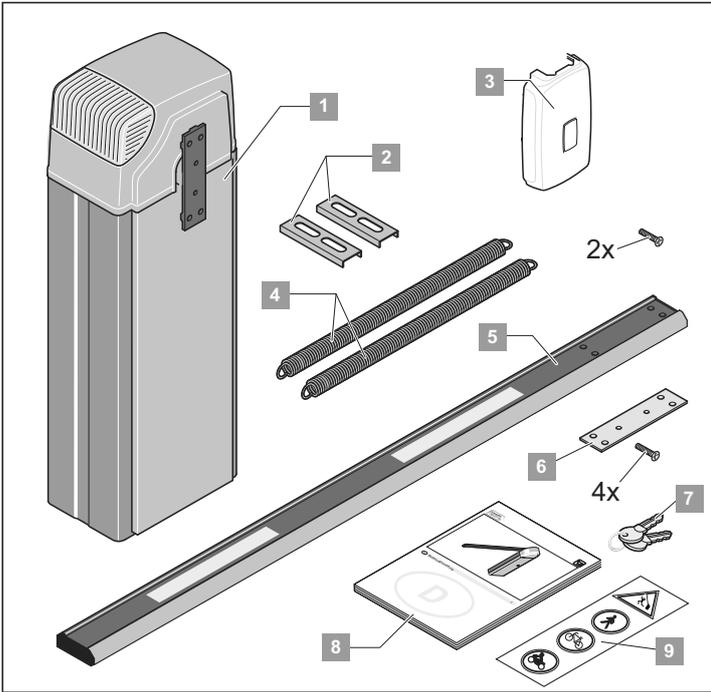
Use only accessories approved by SOMMER Antriebs- und Funktechnik GmbH. The use of accessories can change the way the barrier works. In addition, observe the instructions for work and safety when using accessories.

# Product description

## Scope of delivery

### Standard scope of delivery with flat boom H14

The actual scope of delivery may vary depending on the design of the barrier. The standard scope of delivery contains the following items:



Item	Quantity	Designation
1	1	Barrier housing - left-closing or right-closing design
2	2	U-profiles
3	1	Boom cover with 2 screws
4	2	Springs - 2 factory-installed
5	1	Boom
6	1	Shim plate with 4 screws
7	2	Keys for the barrier housing
8	1	Installation and Operating Manual
9	2	Warning signs

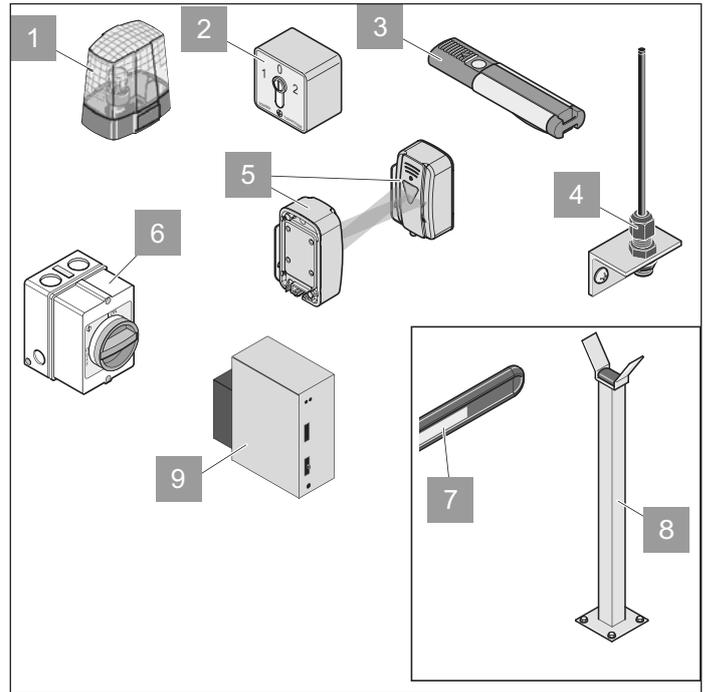


**NOTE:**

The detailed list of the scope of delivery can be found on the order form.

## Available accessories

A number of accessories are available for the barrier. The accessories can be reordered at any time from SOMMER Antriebs- und Funktechnik GmbH.



### 1 Warning light

The warning light warns users of the barrier of an opening or closing barrier.

### 2 Key switch

The barrier opens or closes when the key switch is activated.

### 3 Handheld transmitter

The handheld transmitter is used to open or close the barrier via a radio signal.

### 4 External antenna

The external antenna extends the reception range for radio signals.

### 5 Photocell

The photocell detects objects and sends a signal to the control unit when an object is detected. For example, this prevents the closing of the barrier if the photocell is monitoring the closing area.

### 6 Main switch

The lockable main switch (all-pole mains circuit breaker in accordance with EN 12453) de-energises the barrier at all poles.

### 7 Reflectors

Reflectors attached to the boom increase the visibility of the boom in the dark.

# Product description

## 8 Support post

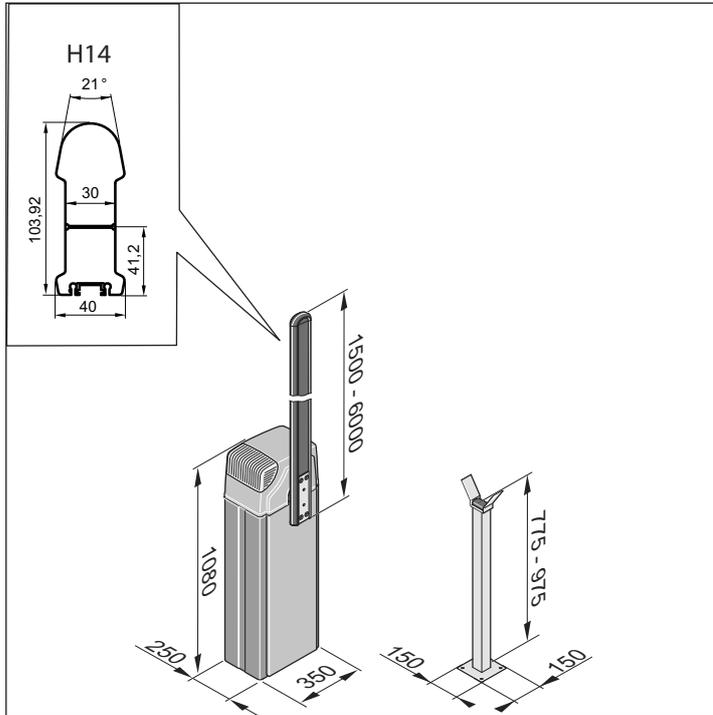
A support post must be installed for booms with a length of 3 to 5 metres. The total weight of the boom including accessories must not exceed 6 kg under any circumstances.

## 9 Induction loop and evaluation

If induction loops are present on-site for the opening or closing of the barrier, their signals can be processed using loop evaluation.

## Dimensions

All dimensions in mm



## Technical data

### ASB-5014A

Weight without boom	60 kg
Weight of 5 m boom	6 kg
Max. opening width of LED boom	4.55 m
Opening time	7 sec.*
Closing time	7 sec.*
Power supply	230 V; 50 Hz
Motor	24 V, DC
Power consumption in normal operation	80 W
Power consumption in standby	max. 2 W
Dimensions without boom	H 1080 mm x W 350 mm x D 250 mm
Dimensions of boom	5 m, can be shortened to 1.5 m
Maximum weight of boom	6 kg
Protection class	IP44
Workplace-based emission value	< 75 dBA
Temperature range	-20 °C to + 60 °C
Maximum wind strength according to Beaufort scale	Boom H10 >3 m - 6 m: max. wind strength 5 Boom H10 >1.5 m - 3 m: max. wind strength 9
Permitted cycles	Max. 350 cycles/day

\* Opening and closing times may vary depending on the boom design and length of the boom

## Type plate

The type plate is attached to the inside of the housing.

The type plate bears the following data:

- company name and full address of the manufacturer,
- designation of the machine,
- CE mark,
- type designation and serial number,
- date of manufacture (week number/year) of the barrier,
- Information on correct disposal:



# Transport / Unloading / Storage

## Transport

The barrier is transported to the operator's premises by a specialist dealer or by a haulage company commissioned by the specialist dealer.

After the contractually regulated handover of all responsibility to the operator, the operator must make sure that the barrier is safely and properly transported.

It is compulsory to observe the following information regarding transport:

- Do not stack the packaging units on top of each other.
- Transport the packaging units in the position specified on the packaging.
- Even during transport, observe the ambient conditions (temperature, humidity, etc.) specified by the manufacturer.
- Always make sure that the barrier is transported without impact and jolts.
- Always secure the loads to be transported against falling, tipping over, and damage.

## Unloading and in-house transport



### WARNING

During this work, dangers may arise, for example, due to uneven surfaces, sharp edges or the use of operating and auxiliary materials.

Body parts may be injured.

- Wear suitable, close-fitting protective work clothing (as a minimum, safety helmet, safety shoes, and safety gloves). Do not wear long hair loose.



### DANGER

Falling load!

During unloading, the load may fall and cause severe or fatal injuries.

- Use lifting equipment designed for the weight of the load.
- Never step under suspended loads.

Check packaging units for externally visible transport damage or other damage. If damage is found, have it confirmed by the haulage company and inform SOMMER Antriebs- und Funktechnik GmbH in writing immediately after delivery.

After unloading, store the barrier until setup. For this purpose, the operator of the barrier may have to transport the barrier from the place of unloading to the storage location.

If this is the case, observe the following information regarding unloading and intermediate transport:

- For unloading and in-house transport, **at least two persons** are required.
- Use only suitable, tested, and standardised lifting equipment (fork lift truck, mobile crane, overhead crane) and attachments (slings, lifting belts, sling ropes, chains).
- When selecting the lifting equipment and attachments, always take the maximum load-bearing capacities into consideration.
- Always make sure that the barrier is unloaded and transported without impact and jolts.
- Do not stack the packaging units on top of each other.
- After unloading, do **not** remove the packaging materials or transport locks.

## Storage



### WARNING

The operator and other assemblies of the barrier may be damaged by incorrect storage.

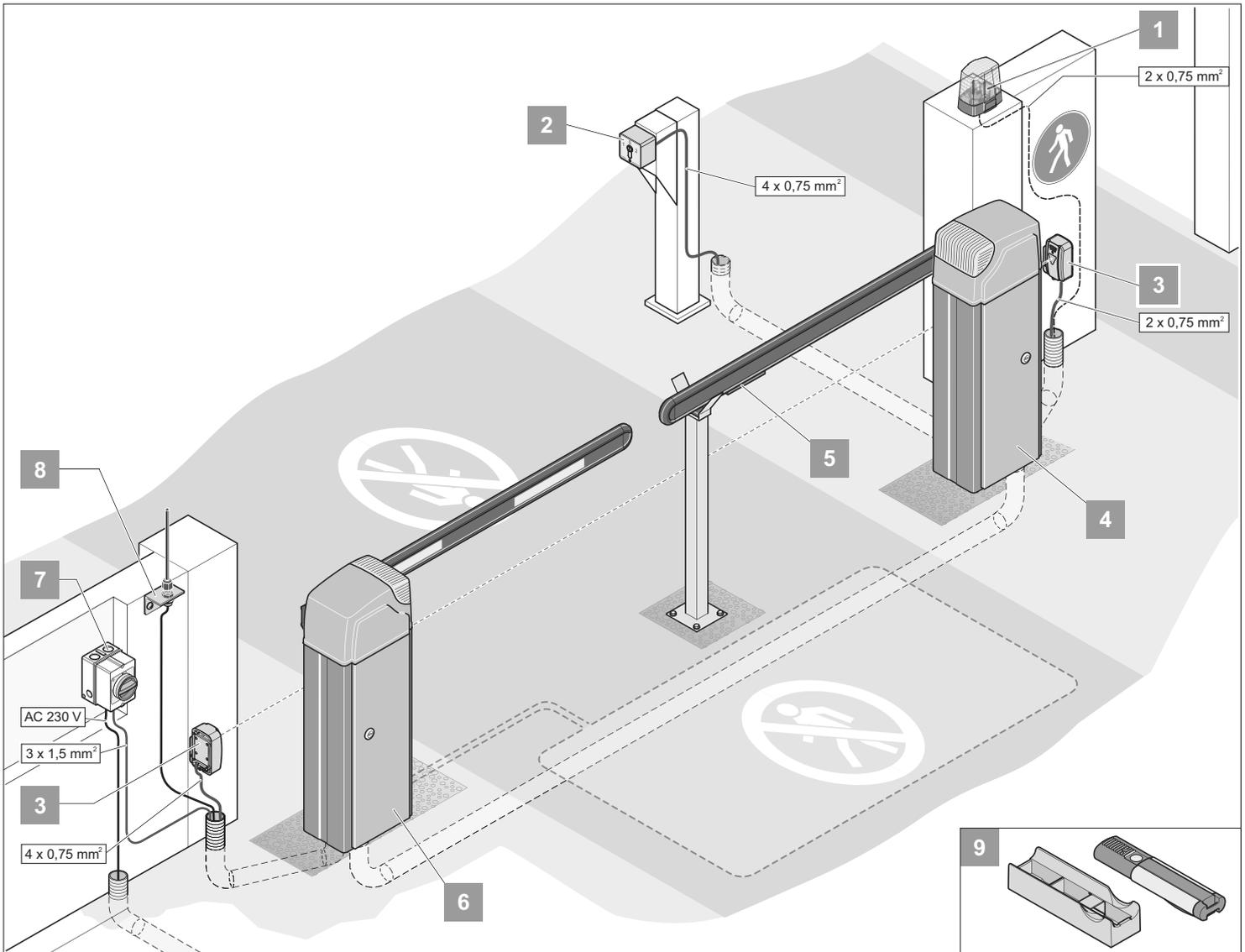
Irreparable damage to the barrier may be the result.

- Observe the following storage conditions on first delivery and during intermediate storage!

For transport, the packaging units are packed in a plastic film which protects them against environmental influences.

- Do not remove or damage this plastic film. If necessary, additionally cover the assemblies.
- Store the packaging units in enclosed, dry rooms in which they are protected against moisture and UV radiation.
- Store the packaging units at a storage temperature from  $-20\text{ °C}$  to  $+60\text{ °C}$ .
- Store the packaging units in the position specified on the packaging.
- Do not stack the packaging units on top of each other.
- Leave room for unhindered passage.

# Installation preparations



A possible installation scenario is shown here as an example.

Together with the operator, determine the position of the accessories before installation.



## NOTE!

Further possible command devices are Telecody and interior radio push-buttons. In the case of Telecody or interior radio push-buttons, there is no need to install a connecting line to the operator. Ask your specialist dealer.

1	Warning light DC 24 V
2	Key switch
3	Photocell
4	Left-closing barrier
5	Right-closing barrier
6	Main switch (lockable)
7	External antenna (incl. 10 m cable)
8	Induction loop
9	Handheld transmitter with car / wall holder

Before the installation of the barrier, organisational and on-site preparations must be made.

# Installation preparations

Observe the following information for the preparation of installation:



## RISK OF CRUSH INJURIES TO HANDS!

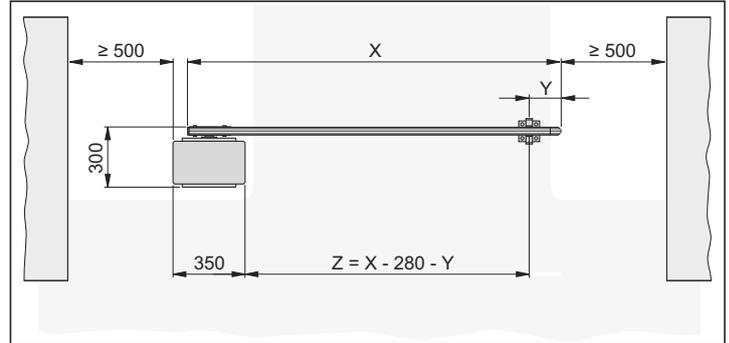
Risk of crushing at the lever system of the barrier when the hood is open.

- All work on the barrier must be carried out by qualified personnel!
- Before working on the barrier, always disconnect the system and secure it to prevent reactivation!
- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!

- The total length of the boom is not equal to the effective opening width.
- A support post is required for a boom length of **more than 3 metres**.
- There must be a safety distance of **at least 500 mm** in each case between the barrier housing / the tip of the boom and the next stationary obstacle (building, wall, fence, etc.).
- The mains connection must be in accordance with EN 12453 (all-pole mains circuit breaker). For this purpose, install a lockable main switch (all-pole deactivation).
- Operate barriers only with a permanently laid line protected by a fuse (16 A, slow-acting). The power cord connected in the as-delivered state is not approved for constant or outdoor operation.
- A **minimum distance of 5 metres** must be observed between the range of movement of the barrier and overhead power lines / trees.
- Provide empty ducts in the foundation of the barrier and throughout the installation site for the cables of the mains supply line and the accessories (photocell, warning light, key switch, etc.).

## Installation drawing

The position of the foundation, the length of the boom, and, where applicable, the position of the support post can be calculated using the overview illustration.



X = Boom length (from 1500 mm to 6000 mm)

Y = Distance from the tip of the boom to the centre of the support post or floating support. Minimum 150 mm, maximum 300 mm

Z = Opening width of the barrier - drive-through width

### Example calculation:

Calculation of the boom length (X) with:

Opening width of the barrier (Z) = 3500 mm

Distance between the tip of the boom and the centre of the support post (Y) = 200 mm

$X = Z + Y + 280 \text{ mm}$

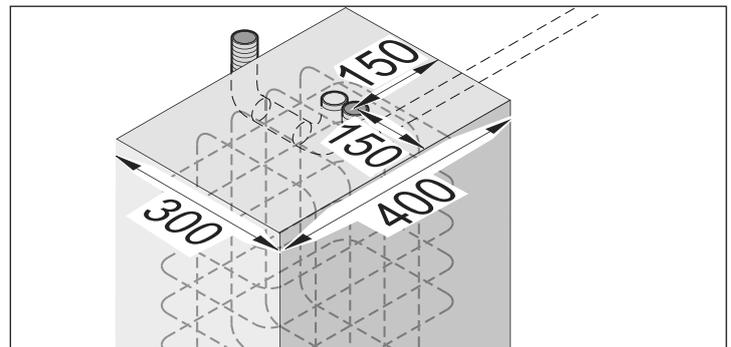
$X = 3500 \text{ mm} + 200 \text{ mm} + 280 \text{ mm}$

**X = 3980 mm**

## Creating the barrier foundation with supply connections

For the proper operation of the barrier, the barrier housing must stand securely.

The following table shows the foundation size recommended by SOMMER Antriebs- und Funktechnik GmbH. Depending on the danger of frost, the depth of the foundation (D) must be adapted in a frost-proof manner so that the ground cannot lift.



	D	W	L
Recommended	<b>Frost-proof!</b> 800 mm in Germany	300 mm	400 mm

# Installation preparations

When selecting the empty ducts, take all the lines to be laid into consideration. These may be:

- power supply line,
- connecting line for photocell / induction loop,
- connecting line for the stationary command devices,
- connecting line for accessories such as warning light, external antenna, etc.



## WARNING

**Never lay the power supply line in the same duct as the connecting lines.**

**Interference in the control unit may result.**

- **Use different empty ducts for the power supply line and the connecting lines.**

Use only lines / cables suitable for outdoor use (resistance to cold, UV-resistance).

The surface of the foundation must be even and absolutely horizontal to the traffic lane (smoothed) so that the barrier housing can be set up evenly.

Use concrete with the following strength class:

- EN 206 C25/30 XC4, XF1, XA1 (25-30 N/mm<sup>2</sup>)

The foundation must be massive and steel-reinforced.

The barrier housing is attached using heavy-duty anchors (not included in the scope of delivery).

Minimum size of the heavy-duty anchor M10x120 or M12x125.



## NOTE:

**For further information on heavy-duty anchors, contact your specialist dealer.**

## Creating the foundation for the support post

A stable foundation is required for the installation of the support post.

The minimum size for the foundation is specified in the following table. Depending on the danger of frost, the depth of the foundation (D) must be adapted in a frost-proof manner so that the ground cannot lift.

D	W	L
<b>Frost-proof!</b> 800 mm in Germany	200 mm	200 mm

The surface of the foundation must be even and absolutely horizontal to the traffic lane (smoothed) so that the support post can be set up straight.

Use concrete with the following strength class:

- EN 206 C25/30 XC4, XF1, XA1 (25-30 N/mm<sup>2</sup>)

The barrier housing is attached using heavy-duty anchors (not included in the scope of delivery).

Minimum size of the heavy-duty anchor M8x75 or M10x85.



## NOTE:

**For further information on heavy-duty anchors, contact your specialist dealer.**

## Stationary command devices

Stationary command devices (key switch, pushbutton, etc.) must be positioned in such a way that

- they can be reached easily from any vehicle,
- the user is not in the range of movement of the barrier,
- the user has a direct view of the barrier during actuation.

## Safety measures

For the safe operation of the barrier, the operator **must** install the necessary safety devices. The opening and closing movements must be monitored using suitable measures.

Examples of such measures are:

- photocells,
- induction loops.



## NOTE:

**Up to two safety devices can be connected to the control unit! A safety device must always be connected as a normally closed contact so that safety is always guaranteed in case of a defect.**

For example, various safety device scenarios are shown in the chapter "**Appendix - Entrance and exit scenarios**".

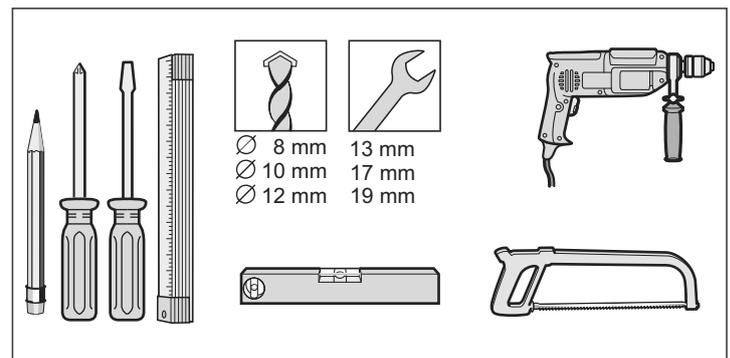
## Pedestrian traffic

The ASB-5014A barrier may only be used for vehicle traffic. Persons must not use the barrier.

The operator must use suitable measures to guarantee a strict separation of vehicle and pedestrian traffic. Structural separations such as pedestrian paths next to the traffic lane must be supplemented with warnings and corresponding signs.

## Tools required

The following tools must be available in order to perform proper installation:



# Installation preparations

## Permissible weights and dimensions of the boom

### Boom H14

Length (m)	Weight (kg)	Permissible max. weight (kg)
up to 2	3.0	3.3
up to 3	4.0	4.2
up to 4	5.0	5.1
up to 5	6.0	6.0

# Installation

## Safety information for installation



### WARNING

Risk of injury caused by the closing boom!

- Keep out of the range of movement of the boom!



### WARNING

Risk of injury through incorrect attachment of parts!

- Before initial operation, check that the heavy-duty anchors and all screws are tightly and securely seated!



### RISK OF CRUSH INJURIES TO THE BODY!

Danger of crush injuries

Observe a minimum distance of 0.5 m between the boom and surrounding objects!



### RISK OF CRUSH INJURIES TO HANDS!

- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!



### DANGER OF TIPPING!

The barrier may tip during installation and in-house transport.

This can cause injuries and damage to the barrier.

- Transport and installation must be performed by two persons and using suitable transport equipment.

- All work on the barrier must be carried out by qualified personnel!
- Before working on the barrier, always disconnect the system and secure it to prevent reactivation!
- Perform installation only up to a maximum wind strength of 3 on the Beaufort scale (light wind).
- **At least two persons** are required for the entire installation.
- For installation work performed above body height, use suitable, tested, and stable climbing aids. Never use the barrier or parts of the barrier as climbing aids.

## Checking the scope of delivery

Remove the barrier and all accessories from the packaging at the installation site. No sharp objects may be used to open the packaging since otherwise, parts could be damaged.

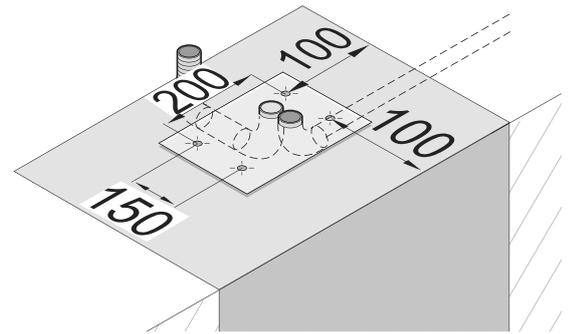
Check the delivery for completeness (see the chapter "**Product description - Scope of Delivery**" and order form).

In the case of an incomplete delivery, contact your specialist dealer or SOMMER Antriebs- und Funktechnik GmbH.

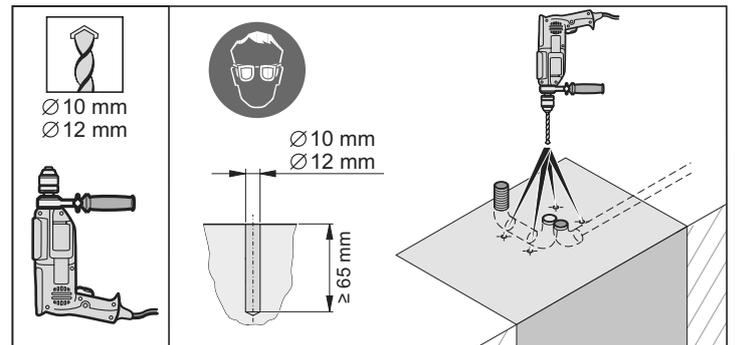
Dispose of the packaging according to locally applicable regulations.

## Installing the barrier housing

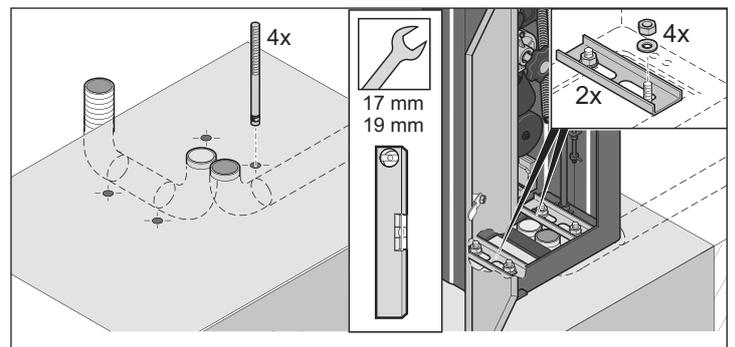
1. Pull the cables into the empty ducts and label them for later allocation.



2. Measure and mark the drill holes for the foundation.



3. Drill four holes Ø 10 or Ø 12 mm and at least 65 mm deep.



4. Blow out holes with compressed air.



### NOTE:

**Only use permissible fastening materials. For the recommended heavy-duty anchors, see the chapter "**Installation preparations - Creating the barrier foundation with supply connections**".**

5. Insert 4 heavy-duty anchors into the holes.
6. Put the barrier housing in place and open the door.



### NOTE:

**Remove the control unit and place it to one side. Do not reinstall the control unit until after connection to the mains power.**

7. Insert both U-profiles.
8. Align the barrier housing or U-profiles. Put 4 washers in place and tighten 4 nuts. With the spirit level, check the horizontal alignment of the barrier and correct it if necessary.
9. Close the barrier housing.

# Installation

## Adapting the length of the boom



### WARNING

Risk of electric shock!  
The LED boom must be de-energised before shortening it!



### NOTE:

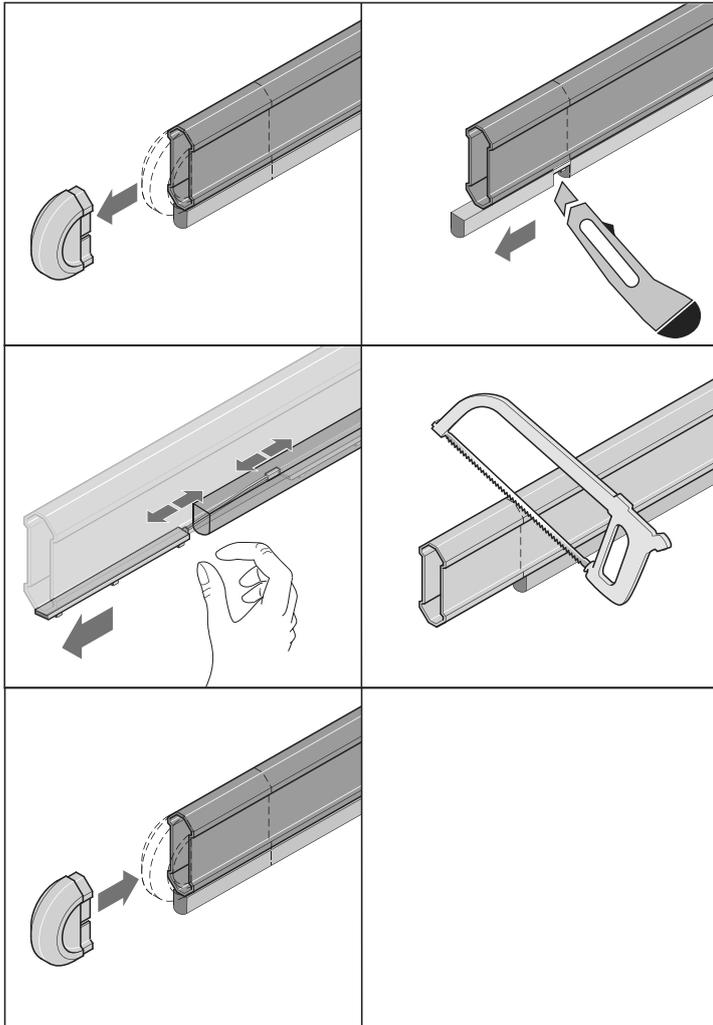
The total length of the boom is not equal to the effective opening width!



### NOTE:

When using an LED boom, be careful not to damage cables and LED bars when sawing.

To calculate the required length of the boom, see the chapter "*Installation preparations - Installation drawing / Example calculation*".



1. Remove the cover from the tip of the boom.
2. Cut the boom to the desired length and deburr it if necessary.
3. Place the cover onto the tip of the boom.

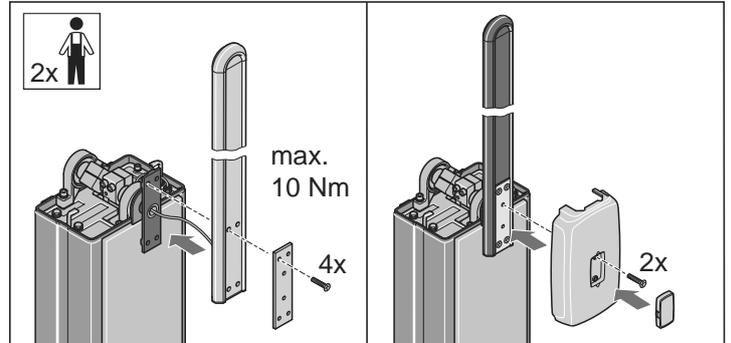
## Installation of the LED boom



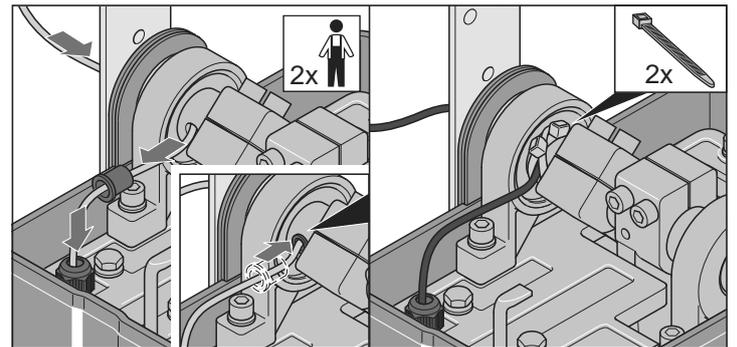
### NOTE:

A floating support cannot be used with an LED boom!  
A support post must be used for a boom length between 3 and 5 m.

1. The boom is attached in the vertical opening position.

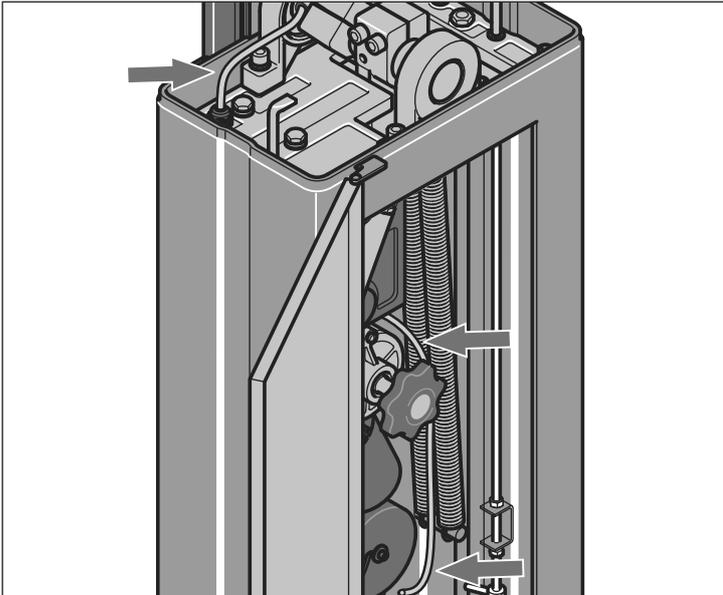


2. Install the boom.
  - ⇒ One person positions the boom and holds it in place
  - ⇒ The second person runs the cable through the opening and screws on the boom and the shim plate as shown in the drawing
3. Fit the plastic cover.



4. Install the cable as shown in the drawing and fasten to the shaft with 2 crosswise positioned cable binders.
  - ⇒ This prevents the cable from being damaged over time by the movements of the boom

# Installation



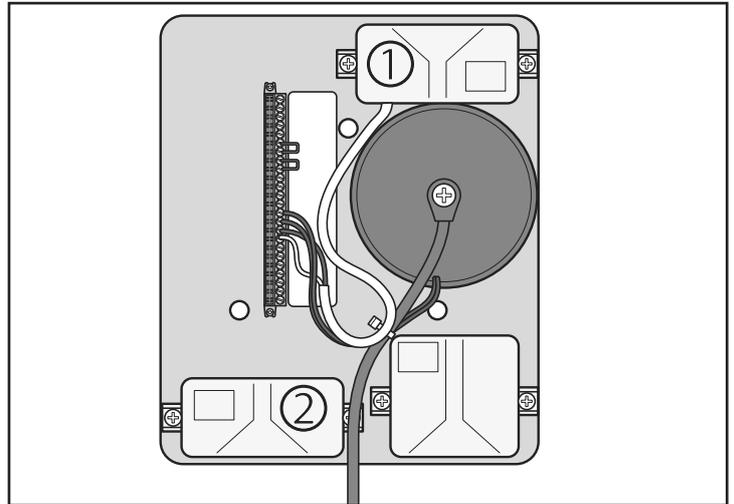
5. Route cables into the boom housing through the base plate cable gland.

## Connecting the LED boom

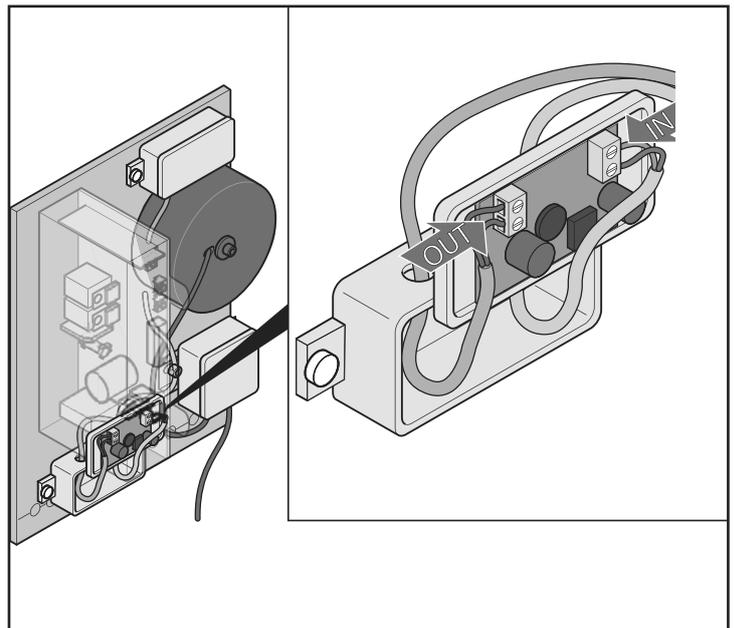


**DANGER**

The electrical work must be performed exclusively by persons with the corresponding qualifications.



## Wiring terminal box (2)



The terminals on the circuit board are labelled "IN" and "OUT".

## "IN" terminal



**NOTE:**

This wire is included loose with the delivery.

Cable colour	Terminal
brown	+ (bottom terminal)
white	- (top terminal)

# Installation

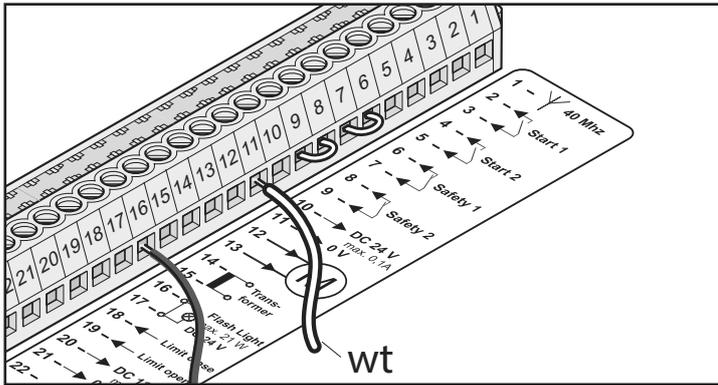
## "OUT" terminal



**NOTE:**  
This wire is already installed on the LED boom. The leads are black and are numbered 1 and 2.

Cable number	Terminal
1	+ (bottom terminal)
2	- (top terminal)

## Connection to the terminal strip



Cable colour	Terminal
brown	No. 16
white	No. 11

## Installing the support post

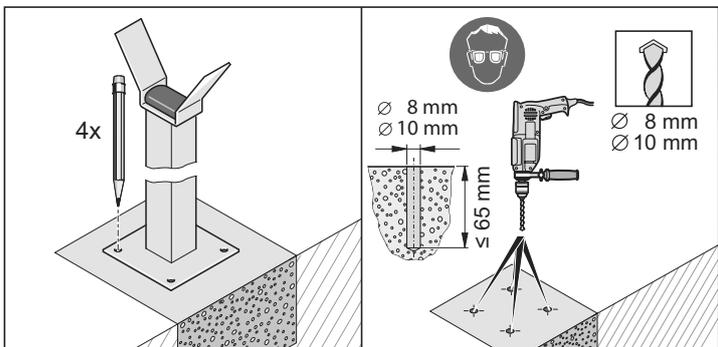


**RISK OF CRUSH INJURIES TO HANDS!**

Danger of crushing between the fork of the support post and the boom!

- Keep out of the range of movement of the boom!
- Never place your hand on the fork of the support post!

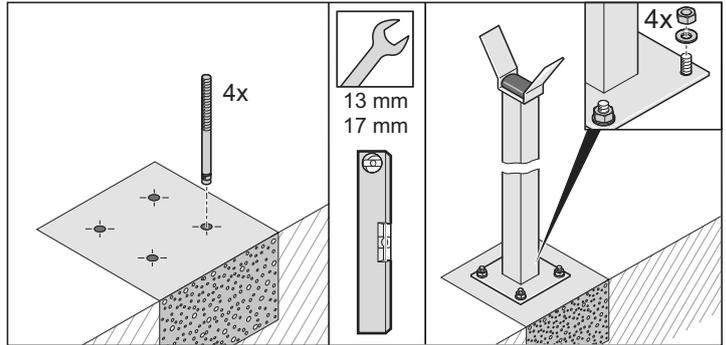
- To calculate the position of the support post, see the chapter "*Installation preparations - Installation drawing / Example calculation*".



- Put the support post in place and mark the position for the 4 holes.
- Drill four holes  $\varnothing 8$  or  $\varnothing 10$  mm and at least 65 mm deep.
- Blow out holes with compressed air.



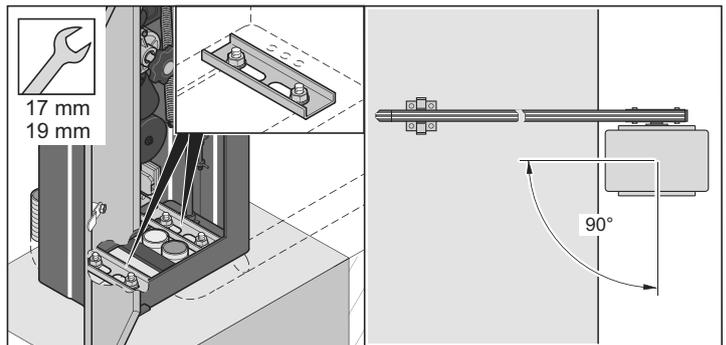
**NOTE:**  
Only use permissible fastening materials. For the recommended heavy-duty anchors, see the chapter "*Installation preparations - Creating the foundation for the support post*".



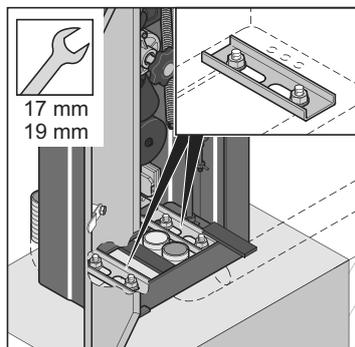
- Insert the heavy-duty anchors into the holes.
- Put the support post in place. Put 4 washers in place and tighten 4 nuts. With the spirit level, check the horizontal alignment of the support post and correct it if necessary.

## Aligning the position of the barrier

- Open the emergency release (see the chapter "*Operation and control - Emergency release*") and close the barrier.



- Open the barrier housing and loosen the 4 nuts so that the barrier can be aligned.
- Align the barrier so that it is parallel to the traffic lane and the boom is lying on the support post.



- Tighten the 4 nuts as specified by the heavy-duty anchor manufacturer.

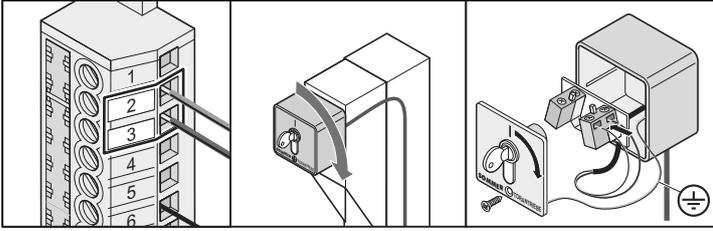
## Installing accessories

- All devices to be connected externally must have a safe isolation of the contacts from the mains voltage supply in accordance with EC 364-4-41.
- To install the accessories, the barrier and all lines must be de-energised and secured against reactivation.

For connection to the direct connector and the adjustment of the DIP switches, see the chapter "*Control unit*".

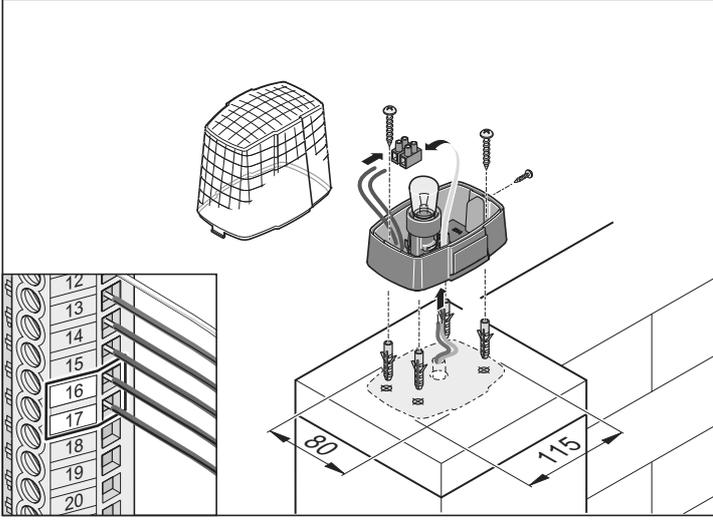
# Installation

## Installing the key switch



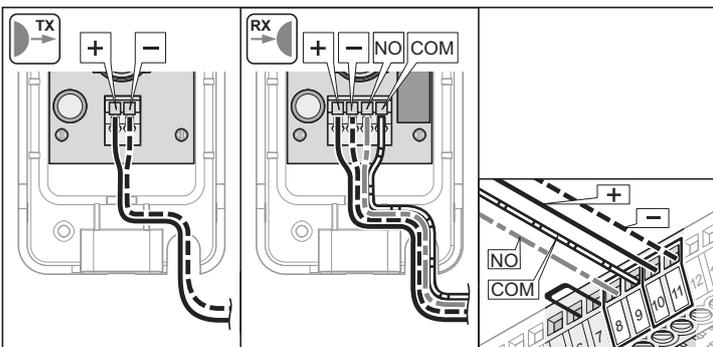
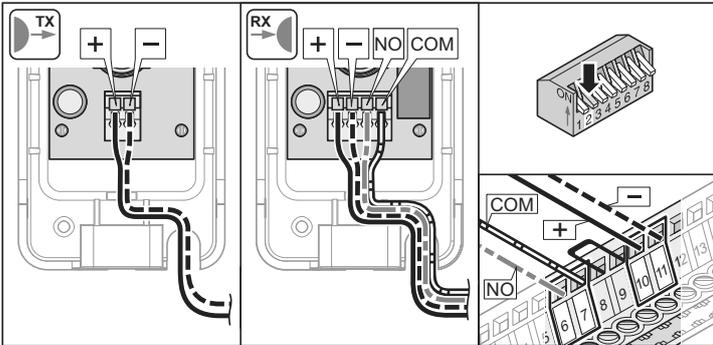
- Install the key switch and connect it to the direct connector.
- Never route the cable of the key switch along a power line, as this could cause interference in the control unit.

## Installing the warning light



- Install the warning light and connect it to the direct connector.

## Installing the photocell



- Install the photocell and connect it to the direct connector.

## Installing the main switch



### NOTE:

The lockable main switch (all-pole mains circuit breaker in accordance with EN 12453) de-energises the barrier at all poles.



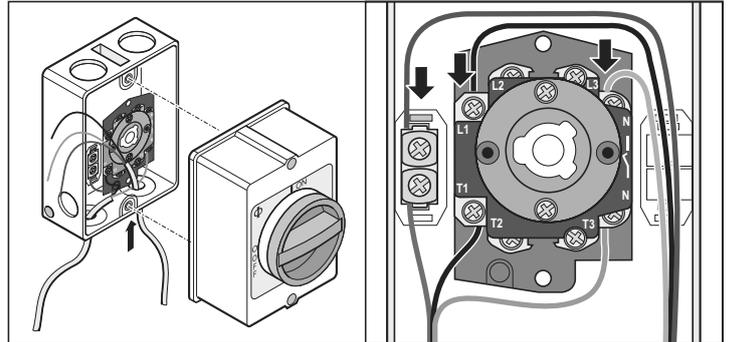
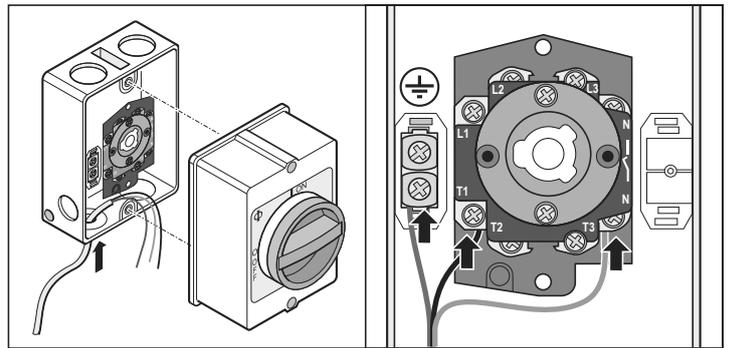
### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

➤ Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).

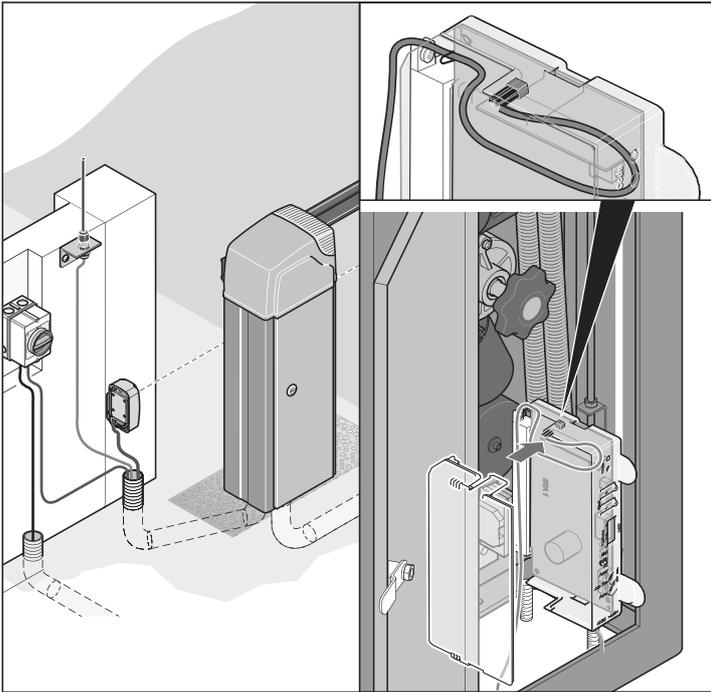
➤ Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".



- Connect the mains supply line of the barrier to the main switch.
- Connect the external mains supply line to the main switch.

# Installation

## Installing the external antenna



- Install the external antenna and connect it to the control unit.

## Connection to the mains power

- The voltage of the power source must match the voltage listed on the type plate.
- Check the mains supply line at the installation site and on the customer's side in accordance with the valid regulations. Before connecting the barrier, perform an electrical test in accordance with the valid regulations.
- If there is a danger that the mains voltage will have significant fluctuations, even for a brief period of time, the barrier must be supplied via a voltage stabiliser.
- Operate barriers only with a permanently laid line protected by a fuse (16 A, slow-acting).
- The mains connection must be in accordance with EN 12453 (all-pole mains circuit breaker). For this purpose, install a lockable main switch (all-pole deactivation).

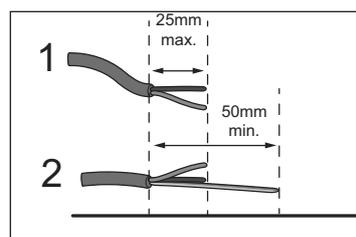
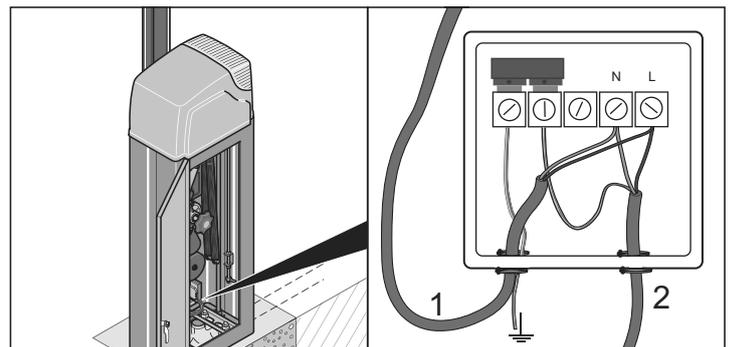


### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".



1. Open the door of the barrier housing.
2. Connect the mains supply line.
3. Fit strain relief.
4. Plug in the control unit. Check for the correct polarity (protection against incorrect insertion: yellow plug between terminals 11 + 12)!

# Initial operation

## Safety information for initial operation



### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".



### WARNING

Risk of injury caused by the closing boom!

- Keep out of the range of movement of the boom!



### WARNING

Risk of injury through incorrect attachment of parts!

- Before initial operation, check that the heavy-duty anchors and all screws are tightly and securely seated!



### RISK OF CRUSH INJURIES TO HANDS!

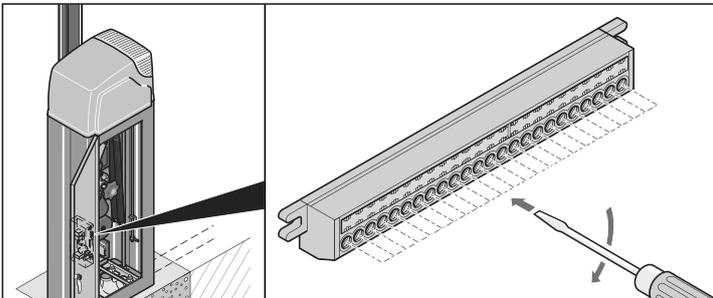
- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!

- All work on the barrier must be carried out by qualified personnel!
- Before working on the barrier, always disconnect the system and secure it to prevent reactivation!
- Perform installation only up to a maximum wind strength of 3 on the Beaufort scale (light wind).

Initial operation of the barrier may not be carried out until:

- all required monitoring devices (for example, photocells) are correctly connected.
- all accident prevention measures have been taken.
- all safety provisions are observed.

## Checking the cable of the direct connector



1. De-energise the barrier and secure it against reactivation.
2. Open the door of the barrier housing.
3. Check all the cables on the direct connector (1) for firm seating and tighten the terminals if necessary.

## Adjusting the spring unit



### WARNING

The adjustment of the spring unit is safety-relevant and must be performed by qualified personnel and with the utmost care.

If the setting of the spring unit is impermissibly high, persons could be injured and objects damaged.

- Adjust the spring unit as described below to allow quick and reliable detection of obstacles.



### WARNING!

If emergency release is performed by only one person, the emergency release button transfers considerable forces to the hand of the operating personnel.

Severe injuries may result!

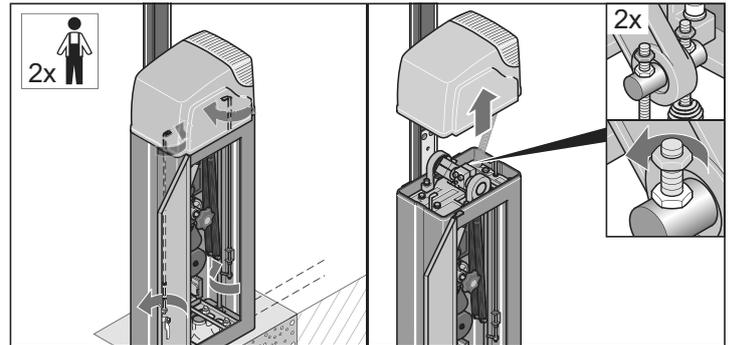
- Emergency release must be performed according to the instructions in this manual and only by two persons.

- At least two persons are required for the adjustment of the spring unit.

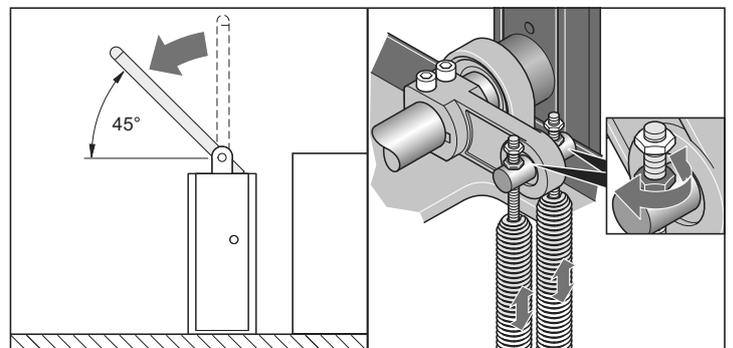
The barriers are delivered without adjustment of the spring unit. The required spring force depends on the specific boom installed and the accessories mounted on it.

The barrier will only work correctly if the weight of the boom is compensated for by the tensile force of the springs; for this purpose:

1. De-energise the barrier and secure it against reactivation.



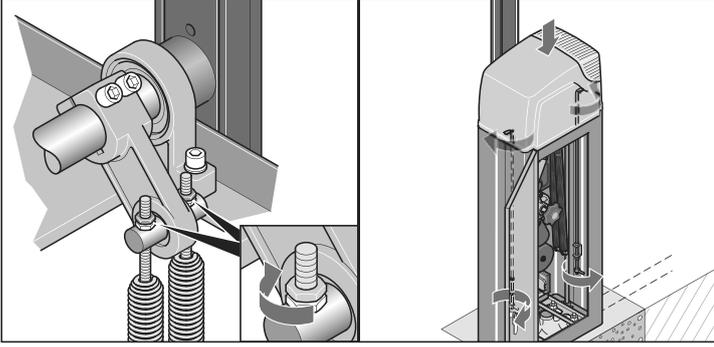
2. Open the door of the barrier housing.
3. Release the locking mechanism of the cover.
4. Remove the top cover of the barrier.
5. Release the lock nuts of both springs.
6. Open the emergency release of the barrier; see the chapter "Operation and control - Emergency release".



7. Bring the boom into a 45° angle using the emergency release button or by hand and hold it there.

# Initial operation

- Adjust both nuts of the springs so that the boom remains at a 45° angle when released.



- Tighten the lock nuts of both springs.
- Fit the top cover of the barrier and lock it.

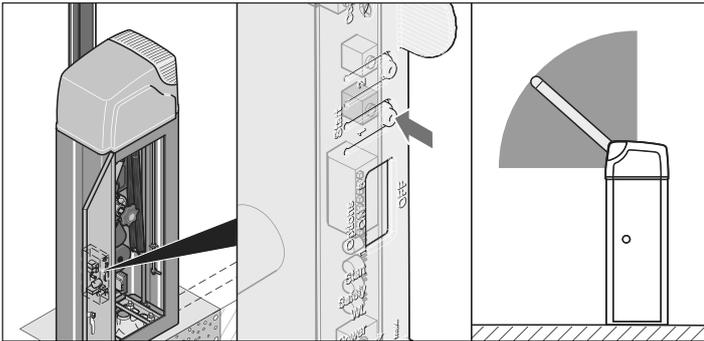


## NOTE:

If changes are made to the boom later, the spring force must be readjusted. This is necessary when shortening the boom, mounting accessories on the boom or exchanging the boom for a longer or shorter boom.

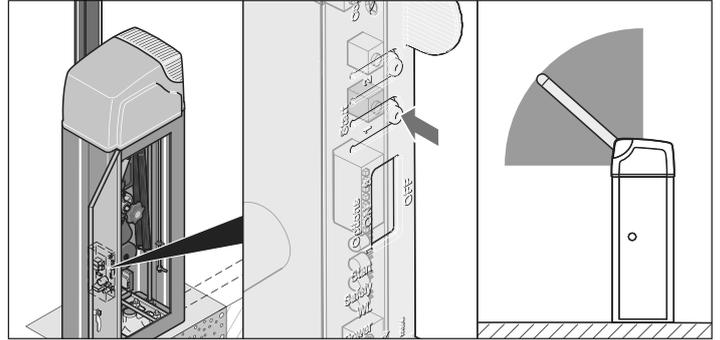
## Checking the direction of running

- Connect the power supply of the barrier.



- Press the button (1).  
⇒ The barrier opens until BARRIER OPEN end position is reached or it is opened.
- Press the button (1).  
⇒ The barrier closes until the BARRIER CLOSE end position is reached.

## Checking the travel path of the barrier



- Press the button (1).  
⇒ The barrier opens until BARRIER OPEN end position is reached or it is opened.
- Press the button (1).  
⇒ The barrier closes until the BARRIER CLOSE end position is reached.
- Check whether the barrier reaches the end positions.  
⇒ If necessary, adjust the travel path of the barrier.

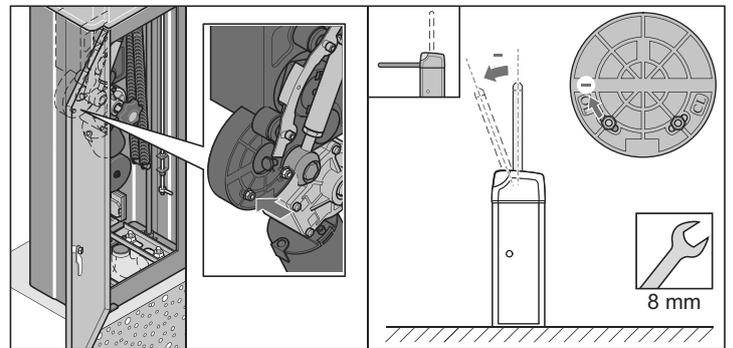
## Adjusting the travel path of the barrier via the end positions



## NOTE!

The motor may be damaged if the end positions are not set correctly!

- De-energise the barrier and secure it against reactivation.



- Open the door of the barrier housing.
- To adjust the **upper end position (OL)**, loosen the nuts (width across flats 8) and move them in the oblong holes.
  - In the - direction, the travel path is shortened by a maximum of XX°.
  - In the + direction, the travel path is extended by a maximum of XX°.



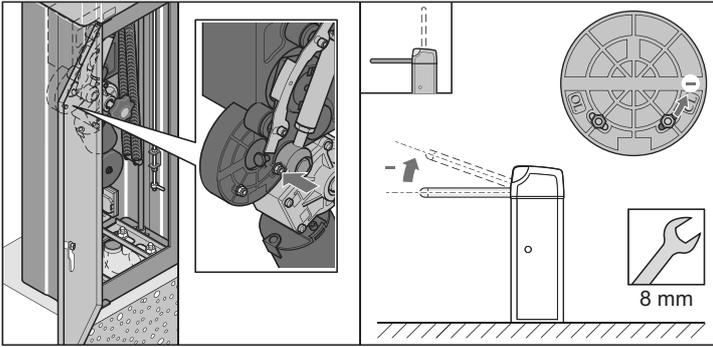
## WARNING

There are reed sensors for the barrier control system located under the nuts.

If the nuts are tightened too strongly, the reed sensors will be destroyed and irreparable damage to the barrier may result.

- Tighten the nuts (width across flats 8) only slightly.

# Initial operation



4. To adjust the **lower end position (CL)**, loosen the nuts (width across flats 8) and move them in the oblong holes.
- In the – direction, the travel path is shortened by a maximum of XX°.
  - In the + direction, the travel path is extended by a maximum of XX°.



## WARNING

There are reed sensors for the barrier control system located under the nuts.

If the nuts are tightened too strongly, the reed sensors will be destroyed and irreparable damage to the barrier may result.

➤ Tighten the nuts (width across flats 8) only slightly.

5. Check the travel path of the barrier, see the chapter "*Initial operation - Checking the travel path of the barrier*".

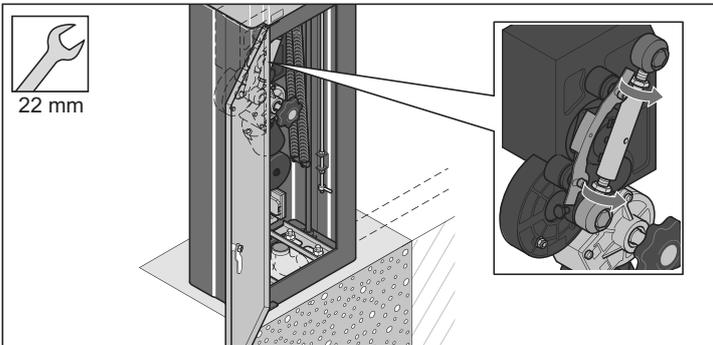
## Adjusting the travel path of the barrier using the swivel range



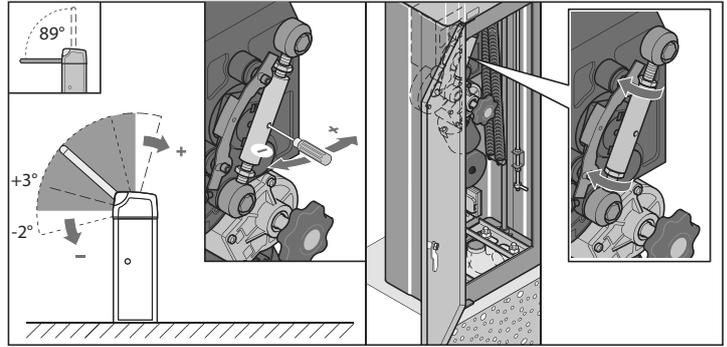
## NOTE!

During adjustment of the swivel range, the angle between the two end positions changes only minimally. Both end positions are pushed evenly in one direction.

1. De-energise the barrier and secure it against reactivation.



2. Open the door of the barrier housing.  
3. Loosen both nuts (width across flats 22).



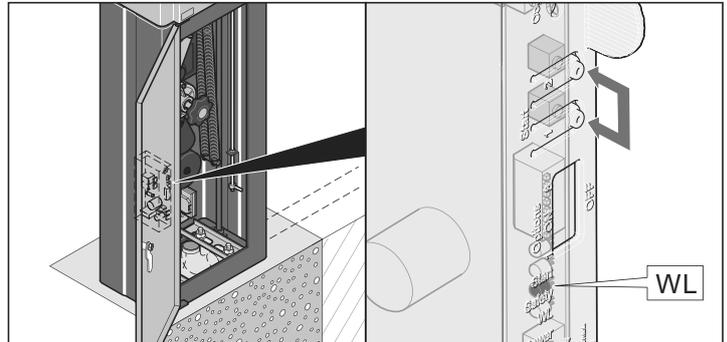
4. Insert a screwdriver into the bore hole of the clamping element. Turn the clamping element.
- In the – direction, the swivel range changes by a maximum of XX° towards the **lower** end position.
  - In the + direction, the swivel range changes by a maximum of XX° towards the **upper** end position.
5. Tighten both nuts (width across flats 22).
6. Check the travel path of the barrier, see the chapter "*Initial operation - Checking the travel path of the barrier*".

## Performing a control unit reset and programming the force values

The control unit has an automatic force setting. The control unit memorises the required force during the "OPEN" and "CLOSE" barrier movements and stores it when the end position has been reached.

Read in the correct force values. To do so, reset the control unit:

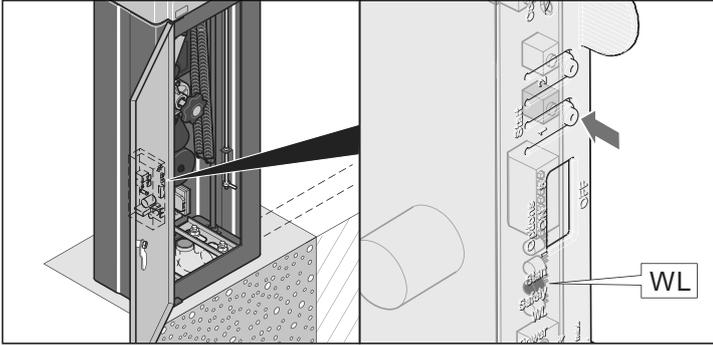
### Resetting the control unit:



1. Press the buttons (1 + 2) until the "WL" LED goes out.  
⇒ "WL" LED off - force values deleted.
2. Release the buttons (1 + 2).
3. Press the button (1).  
⇒ Barrier opens.

# Initial operation

## Programming the force values:



1. Press the button (1).
  - ⇒ The barrier opens until the BARRIER OPEN end position is reached.
  - ⇒ The "WL" LED flashes.
2. Press the button (1).
  - ⇒ The barrier closes until the BARRIER CLOSE end position is reached.
  - ⇒ The "WL" LED flashes.
3. Repeat Steps 1 and 2 three times.
  - ⇒ The "WL" LED lights up and goes out - the force values have been programmed.
4. Check the travel path of the barrier, see the chapter "*Initial operation - Checking the travel path of the barrier*".

## Adjusting the force tolerance

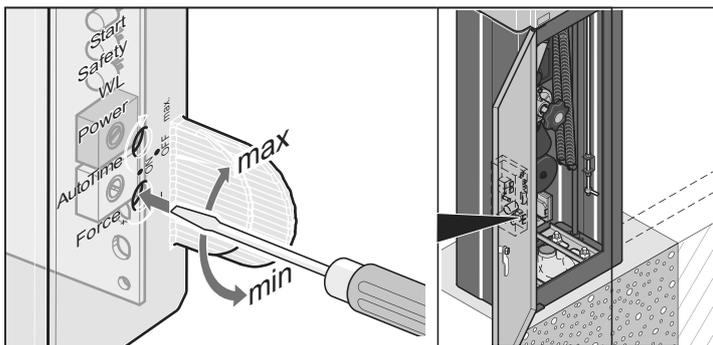


### WARNING!

If the force tolerance is set too high, the barrier closes even if a considerable resistance is present.

Severe injuries or property damage may result!

- The setting of the force tolerance is safety-relevant and must be performed by qualified personnel and with the utmost care.
- Select a force tolerance that is as low as possible so that obstacles are detected quickly and safely.



- Set the force tolerance using the "Force" potentiometer of the control unit.



### NOTE!

The set force tolerance is read in again each time the barrier is opened.

# Optional handheld transmitter

## Safety information for the radio remote control



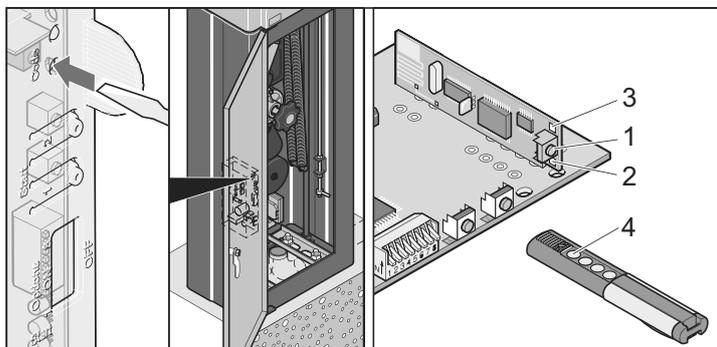
### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".

- The radio remote control may only be used for equipment and / or systems where interference in the transmitter or receiver does not pose a risk to humans, animals or objects, or where the risk is covered by other safety devices.
- The radio remote control may only be used if the operator has a direct view of the barrier and when there are no persons or objects within the range of movement.
- Store the handheld transmitter of the radio remote control in such a way that unintended operation e.g., by children or animals, is prevented.
- The operator of the radio system is not protected against interference due to other telecommunications equipment or devices (e.g.: radio-controlled systems that are licensed to operate in the same frequency range). If substantial interference occurs, please contact your appropriate telecommunications office which has radio interference measuring (radio location) equipment!
- Do not operate the handheld transmitter in areas with sensitive radio technology or systems (e.g. airports, hospitals).



## Deleting the radio receiver memory

1. Press and hold the Teach-in button (1).
  - ⇒ After 5 seconds, the LED (2 or 3) flashes.
  - ⇒ After another 10 seconds, the LED (2 or 3) lights up steadily.
  - ⇒ After a total of 25 seconds, all LEDs (2 + 3) light up.
2. Release the Teach-in button (1) - the deletion procedure is ended.

## Programming a handheld transmitter



### NOTE!

Before the first programming of the handheld transmitter, delete the memory of the radio receiver.

1. Press the Teach-in button (1).
  - 1x for channel 1; the LED (2) lights up.
  - 2x for channel 2; the LED (3) lights up.
  - ⇒ If no code is sent within 10 seconds, the radio receiver switches to Normal mode.
2. Press the desired handheld transmitter button (4) until the LED (2 / 3) goes out, depending on which channel has been selected.
  - ⇒ LED goes out - programming has been completed.
  - ⇒ The handheld transmitter has transferred the radio code to the radio receiver.
3. Repeat the above steps to program additional handheld transmitters. A maximum of 112 memory positions for each radio receiver are available.

### Cancelling programming mode:

Press the Teach-in button (1) repeatedly until no more LEDs are lit.

## Deleting the handheld transmitter from the radio receiver

If a handheld transmitter is to be deleted from the radio receiver, **every** button and **every** button short cut of the handheld transmitter must be deleted for security reasons!

1. Press Teach-in button (1) and keep it pressed for 5 seconds.
  - ⇒ An LED flashes (2 or 3).
2. Release the Teach-in button (1).
  - ⇒ The radio receiver is in deletion mode.
3. Press the transmitter button whose code is to be deleted in the radio receiver.
  - ⇒ LED goes out. The deletion procedure has been completed.
4. Repeat the procedure for **all** buttons and button short cuts.

## Deleting a channel from the radio receiver

1. Press and hold the Teach-in button (1).
  - 1x for channel 1; the LED (2) lights up.
  - 2x for channel 2; the LED (3) lights up.
  - ⇒ After 5 seconds, the LED (2 or 3) flashes.
  - ⇒ After another 10 seconds, the LED (2 or 3) lights up steadily.
2. Release the Teach-in button (1).
  - ⇒ The deletion procedure has been completed.

## Loss of a handheld transmitter

If a handheld transmitter is lost, the entire memory of the radio receiver must be deleted for security reasons; see the chapter "*Optional handheld transmitters - Deleting the memory of the radio receiver*".

After that, reprogramme all handheld transmitters.

# Operation and control

## Safety information on operation



### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".



### WARNING

Risk of injury caused by the closing boom!

- Keep out of the range of movement of the boom!



### WARNING

Risk of injury through incorrect attachment of parts!

- Before initial operation, check that the heavy-duty anchors and all screws are tightly and securely seated!



### WARNING

Risk of injury caused by a torn-off boom!

- If wind strengths are higher than specified in the technical data:
  - Close the barrier and de-energise it.
  - Remove the boom.



### WARNING

Risk of injury and damage following a lightning strike:

- Following a lightning strike, have the barrier tested by an electrician and if necessary, have it repaired.



### RISK OF CRUSH INJURIES TO THE BODY!

Danger of crush injuries

Observe a minimum distance of 0.5 m between the boom and surrounding objects!



### RISK OF BURNS!

The surface of the motor heats up during operation!

- Allow the surface of the motor to cool before touching it!



### RISK OF CRUSH INJURIES TO HANDS!

- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!

- During normal operation:
  - the upper cover of the barrier must be in place and locked, and
  - the door of the barrier housing must be closed and locked.
- An open barrier housing poses the following hazards:
  - tension springs under tension,
  - crushing and shearing points in the vicinity of the actuating connecting rod and the linkage.
- When the barrier housing is open, protect the control unit and mains supply line against moisture.
- Operate the barrier only when all safety devices are present and fully functional. As soon as a safety device is not functional, the barrier must be taken out of operation until the malfunction has been properly eliminated.
- Do not allow several vehicles to pass through the barrier at once.
- Do not drive through the barrier until it has opened completely.

- During operation, never hold the boom or reach into moving parts.
- During the opening and closing procedures, no people or objects may be in the vicinity of the boom.
- The opening and closing procedures must be observed by the user.
- Do not place objects on the barrier housing or boom.
- Do not climb onto the barrier.
- The surface temperature of the motor may rise to 80 °C, resulting in a risk of burns.

# Operation and control

## Operation with automatic closing function

- During operation with automatic closing, observe the applicable standards. Secure the closing level of the barrier with safety devices.



### DANGER

Without safety devices, the automatic closing function will also close the barrier if people or objects are underneath it.

Severe injuries and property damage may result.

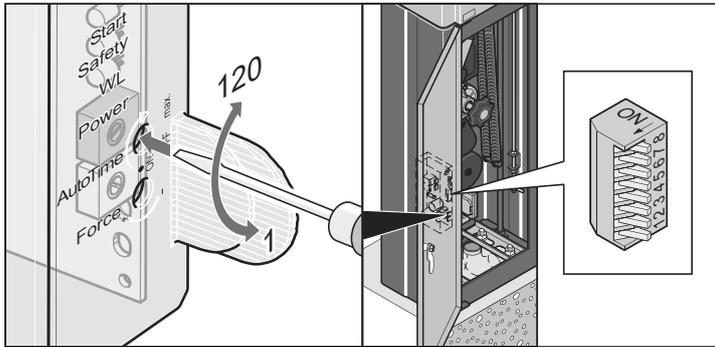
- Install the required safety devices (photocells, induction loops) in accordance with EN 12453.

In the case of the automatic closing function, the barrier closes automatically after a set hold open time. The hold open time is counted down starting when the BARRIER OPEN end position is reached. If another opening command is issued during the hold open time, the hold open time restarts.

The barrier can be opened, but not closed with a command device. While it is opening, the barrier cannot be stopped using a command device.

If an opening command is given again during automatic closing of the barrier, the barrier opens completely and the hold open time restarts.

### Setting the automatic closing function:



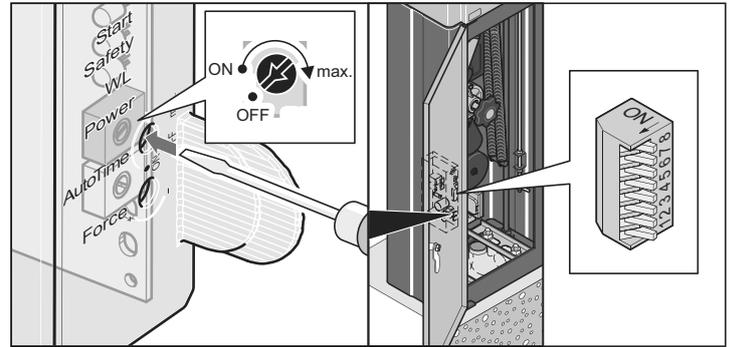
- Set the hold open time using the "AUTO TIME" potentiometer of the control unit. The hold open time can be set between 1 and 120 seconds.
- Set DIP switch 7 to "OFF".

Set other DIP switches as desired; see the chapter "**Control unit - DIP switches**".

## Single-channel operation

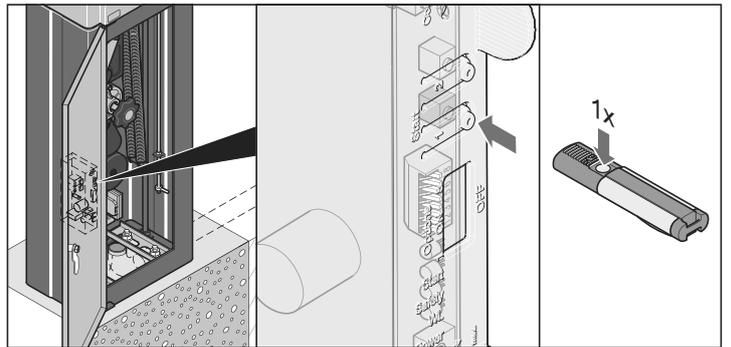
In single-channel operation, **one** command device is used to open and close the barrier.

### Setting single-channel operation



- Deactivate the automatic closing function via the "AUTO TIME" potentiometer of the control unit. Deactivation via the left stop of the potentiometer.
- Set DIP switch 7 to "OFF".

Set other DIP switches as desired; see the chapter "**Control unit - DIP switches**".



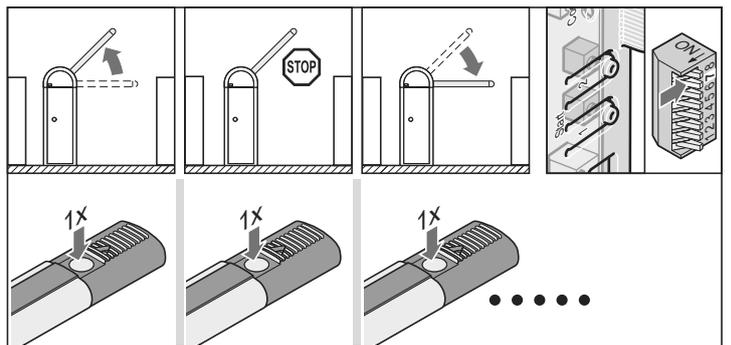
### Opening the barrier in single-channel operation

1. Press the button (1) or open the barrier using the command device.
2. If another command is sent during the opening procedure, the barrier stops in its current position.
3. A further command closes the barrier.

### Closing the barrier in single-channel operation

1. Press the button (1) or close the barrier using the command device.
2. If another command is sent during the closing procedure, the barrier stops in its current position.
3. A further command opens the barrier.

### Pulse sequence of the barrier movement



Command device 1: OPEN - STOP - CLOSE - STOP - OPEN - STOP - ...

## Emergency release



### WARNING!

Uncontrolled upward movement of the boom!

The emergency release must never be opened on the barrier if the boom has been damaged (e.g. by a vehicle driving into it).

- The defective boom must be replaced before the emergency release is opened on the barrier!



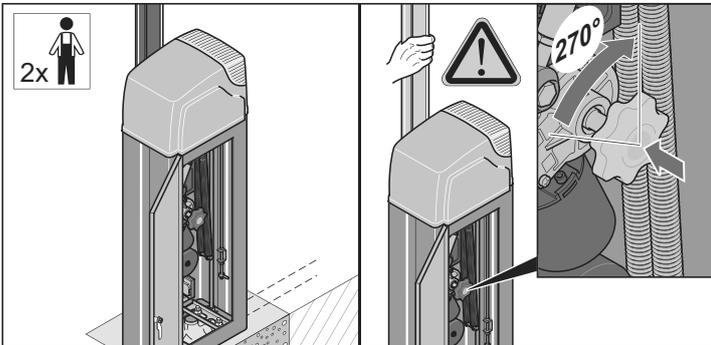
### WARNING!

If emergency release is performed by only one person, the emergency release button transfers considerable forces to the hand of the operating personnel.

Severe injuries may result!

- Emergency release must be performed according to the instructions in this manual and only by two persons.

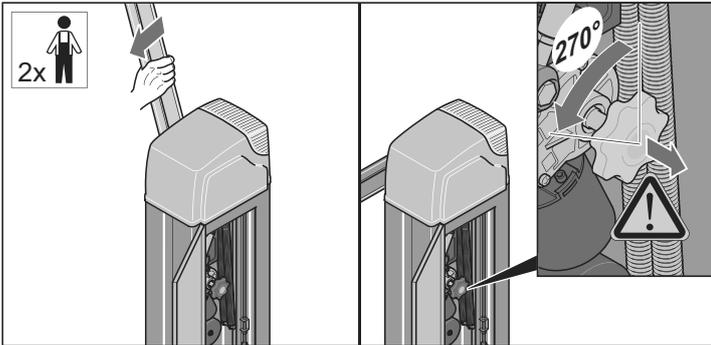
1. De-energise the barrier and secure it against reactivation.



2. Open the door of the barrier housing.

3. Have a second person hold the boom. At the same time, press the emergency release button and turn it about 60° to the right or left.

⇒ The barrier has been released.



4. Open or close the barrier with the emergency release button. The second person must assist by moving the boom.

5. When the desired boom position is reached, turn the emergency release button about 60° towards the right or left, to the centre position.

⇒ The emergency release button snaps back.

⇒ The barrier has been locked.

# Control unit

## Safety information for the control unit



### DANGER!

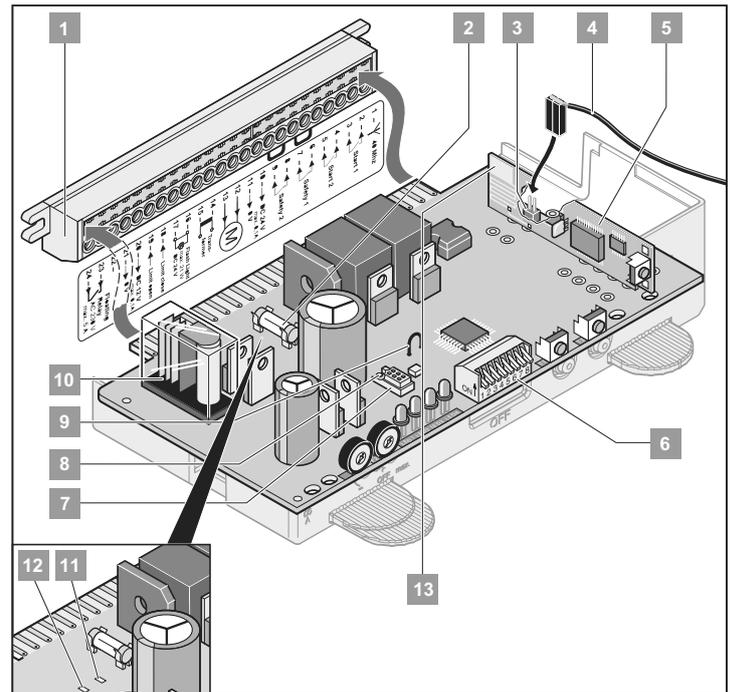
If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electrical shock, burns, or death may result.

- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".

- Protect the control unit against moisture.
- Do not apply external voltage to the connections of the control unit; otherwise, the control unit is immediately destroyed.
- The reverse polarity protection (yellow plug) of the control unit must always be installed between terminals 11 + 12.
- Only use the control unit provided by SOMMER Antriebs- und Funktechnik GmbH; all other control units would be damaged or would damage the operator.

## Overview of the control unit



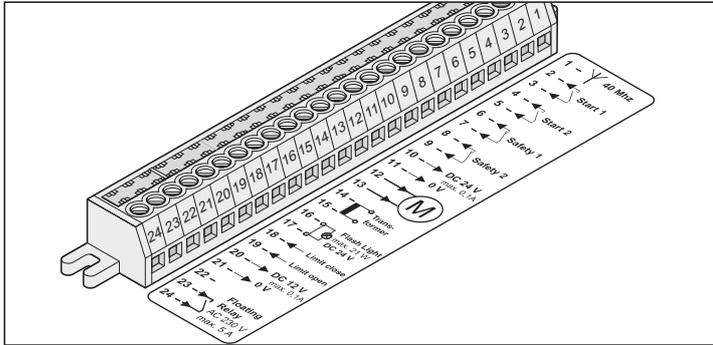
1	Direct connector, 24-pole
2	Fuse for connection of the warning light (1 A fast-acting)
3	Connection of the external antenna
4	External antenna
5	Radio receiver
6	DIP switches
7	TorMinal connection
8	Protection against incorrect insertion for the TorMinal connection
9	Wire jumper, disconnecting switches off the soft run
10	Relay contact, terminals 23 + 24
11	LED: Barrier, left-closing: Barrier CLOSE end position Barrier, right-closing: Barrier OPEN end position
12	LED: Barrier, left-closing: Barrier OPEN end position Barrier, right-closing: Barrier CLOSE end position
13	Internal antenna

# Control unit

## Direct connector, 24-pole

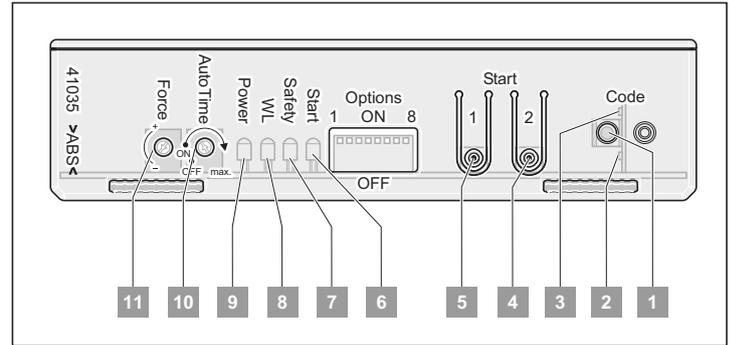
Permissible cable cross-sections: 1.5 mm<sup>2</sup> max.

Terminal	Max. permissible cable length
10, 11, 16, 17, 20, 21	10 m
2, 3, 4, 5, 6, 7, 8, 9	30 m



Terminal	Pin assignment / cable colour	Connection / name
1	Unassigned	Antenna connection 40 MHz
2 + 3	Unassigned	Button 1
4 + 5	Unassigned	Button 2
6 + 7	Jumper	Tested connection for floating contacts, safety input 1
8 + 9	Jumper	Tested connection for floating contacts, safety input 2
10	Unassigned	Regulated DC 24 V, max. 0.1 A
11	Unassigned	Earth
12	Black	Motor
13	Red	Motor
14 + 15	Red	Secondary transformer
16 + 17	Unassigned	Warning light, unregulated DC 24 V (max. 34 V) 25 watts, max. 1 A
18	Right-closing barrier: blue	Barrier CLOSE sensor
	Left-closing barrier: red	
19	Right-closing barrier: red	Barrier OPEN sensor
	Left-closing barrier: blue	
20	Unassigned	Regulated DC 12 V, max. 0.1 A
21	Green	Barrier CLOSE sensor
	Yellow	Barrier OPEN sensor
	-	Earth for terminal 20
22	-	-
23 + 24	Unassigned	Floating relay output, AC 230 V, max. 5 A

## Explanation of display and buttons



1	Teach-in button
2	LED radio channel 1
3	LED radio channel 2
4	Button 2
5	Button 1
6	Start LED Lights up when a radio command is sent or a button is pressed.
7	Safety LED Lights up when a safety input is actuated.
8	"WL" LED Flashes when the operator opens or closes the barrier.
9	Power LED Lights up when mains voltage is present.
10	Potentiometer for adjusting the hold open time of the automatic closing function.
11	Potentiometer for adjusting the force tolerance.

# Control unit

## Functions of the control unit

### Break-in protection due to automatic lock

If someone tries to open the barrier by hand, the operator tries to hold the barrier closed or to close it.

### Overload protection

If the operator of the barrier is overloaded during opening or closing, the control unit detects this and stops the operator.

After about 20 seconds or a control unit reset, the control unit releases the overload protection again. The barrier can now resume operation.

### Automatic obstacle detection

Through the automatic obstacle detection, the barrier reverses if it hits an obstacle during opening or closing.

For the automatic obstacle detection to work correctly:

- read in the force values and
- adjust the force tolerance.

See the chapters "*Initial operation - Performing a control unit reset and programming the force values*" and "*Initial operation - Adjusting the force tolerance*".

### Operation after a power failure

The programmed force values are stored in the event of a power failure. The first movement of the operator after a power failure is always Barrier OPEN.

### HomeLink-compatible

If a vehicle is equipped with a HomeLink system (Version 7), the radio receiver of the barrier is compatible with it at 868.6 MHz. Another radio frequency (40.685 or 434.42 MHz) must be used with older HomeLink systems.

For more information, see: "<http://www.eurohomelink.com>"

### Pulse for the light control system

With every start of the operator, a pulse is present at the relay output and can be used, for example, to switch lighting on. For the connection and data, see the chapter "*Control unit - Direct connector, 24-pole*".

## DIP switches

The settings of the barrier are changed using the DIP switches.



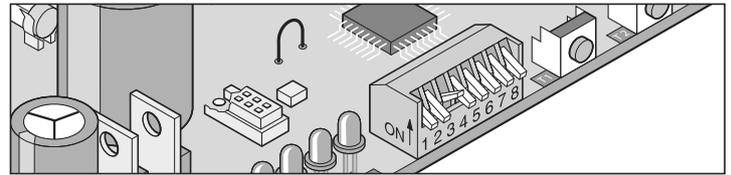
#### NOTE

**Before adjusting the DIP switches, disconnect the power supply for the barrier / control unit.**



#### NOTE

**To prevent damage to the DIP switches, do not use metal objects to set them. We recommend that you use a flat plastic object.**



To switch the individual DIP switches, use a small screwdriver.

DIP switches	Position	Function / reaction
Obstacle detection during the opening of the barrier at safety input 1		
1	OFF	No reaction of the operator
	ON	Barrier stops and reverses
Selection of the safety device at safety input 1		
2	OFF	Selection of the normally closed contact (e.g. photocell or loop evaluation)
	ON	--
3	OFF	-- No function
	ON	-- No function
Closing command via safety inputs 1:2 after 5 seconds		
4	OFF	Disabled
	ON	Activated
Pre-warning time of the connected warning light		
5	OFF	Pre-warning time 0 sec.
	ON	Pre-warning time 3 sec. - warning light flashes
6	OFF	-- No function
	ON	-- No function
7	OFF	-- No function
	ON	-- No function
8	OFF	-- No function
	ON	-- No function

## **DIP 1 - obstacle detection during the opening of the barrier**

If a signal is present at safety input 1 when the barrier is opening (e.g. a vehicle drives through the photocell), the barrier reacts according to the setting of DIP switch 1.

In the case of a signal at safety input 2, the barrier does **not** react.

## **DIP 2 - selection of the safety device at safety input 1**

Using DIP switch 2, select the safety device connected at safety input 1.

## **DIP 4 - closing command through safety inputs**

The barrier can be closed automatically in any operating mode through a safety input that has become free.

As soon as safety inputs 1 and 2 become free when the barrier is open, the barrier closes after a fixed hold open time of 5 seconds. To do this, the "Auto Time" potentiometer must be in "ON" position.

## **DIP 5 - pre-warning time of the connected warning light**

To warn users, a connected warning light flashes for 3 seconds before the opening and closing of the barrier.

# Regular testing and maintenance



**NOTE:**

Using this testing schedule, test the barrier at the required intervals and document and archive the test result!

- Test interval using this testing schedule: annual.
- The entire barrier is maintenance-free.

Testing	Behaviour	Yes / No	Possible cause	Remedy	Date and tester
<b>Obstacle detection</b>					
Stop the boom during closing at a closing angle of about 45° with a 2-metre high object.	The operator reverses when it hits the object.	Yes	Obstacle detection works without limitations.	Leave all settings as they are.	
		No	Force tolerance too high. Adjust it using the "Force" potentiometer or TorMinal.	Reduce the force tolerance until the test is successful. Before that, open and close the barrier completely twice under supervision. See the chapter " <b>Initial operation - Adjusting the force tolerance</b> " or " <b>TorMinal manual</b> ".	
<b>Emergency release</b>					
Proceed as described in the chapter " <b>Operation and control - Emergency release</b> ".	It must be possible to open / close the barrier easily by hand.	Yes	Everything is OK.		
		No	Emergency release defective.	Have the emergency release repaired; to do this, call the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.	
<b>Visual inspection</b>					
Check the boom and the barrier housing for obvious defects, damage from vehicles, environmental influences or vandalism.	The barrier is damaged.	No	Everything is OK.		
		Yes	Boom or barrier housing damaged.	Take the barrier out of operation and secure it against reactivation. Have the barrier or damaged parts repaired or exchanged; to do this, call the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.	
			Warning signs or reflectors on the barrier damaged.	Replace the warning signs or reflectors.	
<b>Photocell, if installed</b>					
Open / close the barrier, interrupting the photocell in the process.	Adjust the behaviour of the barrier as set at DIP switch 1 or 2. Safety LED lights up.	Yes	Everything is OK.		
		No	Cable breakage, terminal loose.	Check the wiring; re-tighten the terminals.	
			DIP switch misaligned.	Set the DIP switch.	
			Photocell dirty.	Clean the photocell.	
			Photocell misaligned (holder bent).	Adjust the photocell.	
Photocell defective.	Take the barrier out of operation and secure against reactivation; contact the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.				
<b>Induction loop, if present</b>					
Open / close the barrier, actuating the induction loop in the process.	Adjust the behaviour of the barrier as set at DIP switch 1 or 2. Safety LED lights up.	Yes	Everything is OK.		
		No	Cable breakage, terminal loose.	Check the wiring; re-tighten the terminals.	
			DIP switch misaligned.	Set the DIP switch.	
			Induction loop defective.	Take the barrier out of operation and secure it against reactivation. Repair or replace the induction loop or damaged parts.	
<b>Spring tension</b>					
Bring the boom into a 45° angle using the emergency release button or by hand and hold it there.	The boom remains at an angle of 45° when released.	Yes	Everything is OK.		
		No	Incorrect spring setting	Check and correct the spring setting; see the chapter " <b>Initial operation - Adjusting the spring unit</b> ".	

# Troubleshooting

## Safety information for troubleshooting



### DANGER!

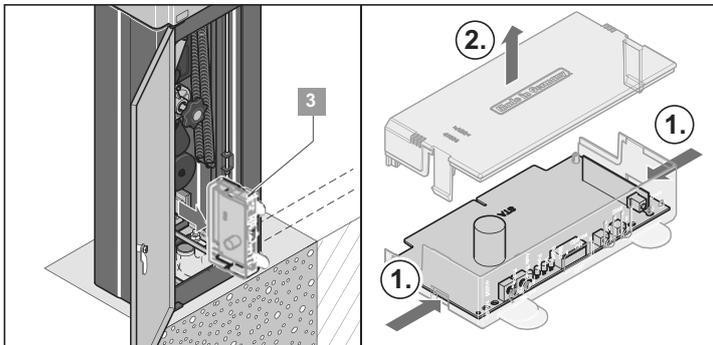
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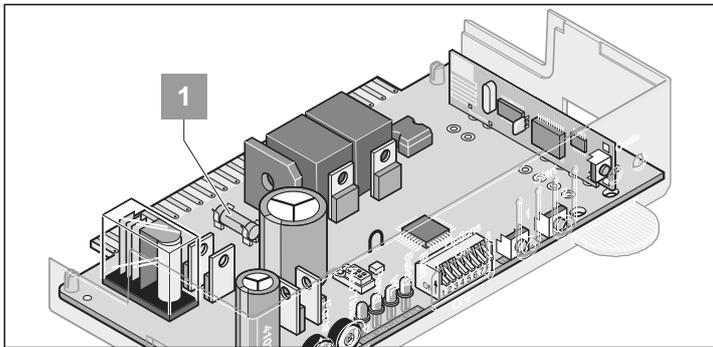
- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter "Safety information - Qualifications of personnel".

## Changing the fuse

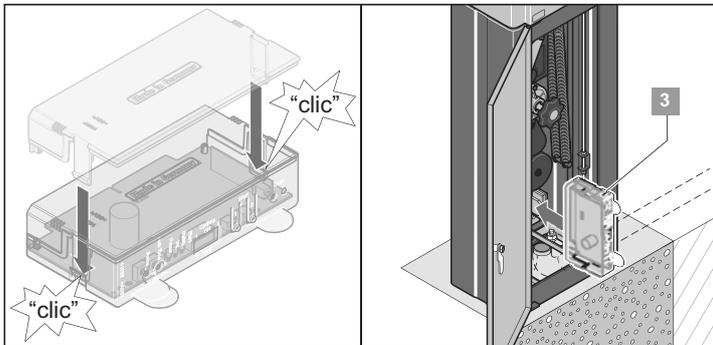
1. De-energise the barrier and secure it against reactivation.



2. Open the barrier housing.
3. Remove the control unit (3) and open the control unit housing.



4. Change the defective fuse (1) (1 A fast-acting).



5. Close the control unit housing and install the control unit (3).
6. Close the barrier housing.

## Replacing springs



### RISK OF CRUSH INJURIES TO HANDS!

Risk of crushing at the lever system of the barrier when the hood is open.

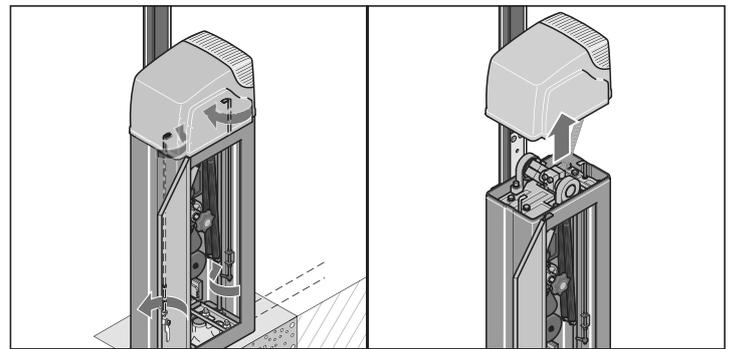
- All work on the barrier must be carried out by qualified personnel!
- Before working on the barrier, always disconnect the system and secure it to prevent reactivation!
- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!



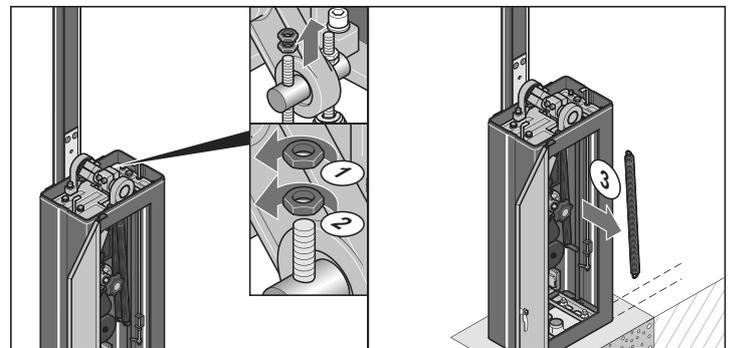
### NOTE:

To ensure problem-free operation, we recommend that you replace both springs!

1. De-energise the barrier and secure it against reactivation.

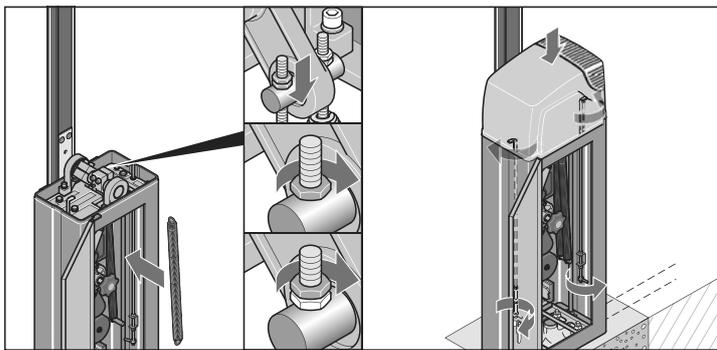


2. Open the door of the barrier housing and release the lock of the cover.
3. Remove the top cover of the barrier.



4. Loosen both nuts of the broken springs.
5. Remove the broken springs.

# Troubleshooting



6. Insert new springs and fasten with nuts.
7. Adjust the spring unit, see the chapter "***Initial operation - Adjusting the spring unit***".
8. Close the barrier housing.

# Troubleshooting

## Fault - cause - elimination

- All work within the scope of troubleshooting may only be performed by trained personnel; see the chapter "**Safety information - Qualifications of personnel**". Personnel must be familiar with the special risks which arise when protective devices are disabled and must know which special safety measures must be taken while eliminating malfunctions.
- Shut down all command devices so that the barrier does not move in an uncontrolled manner.
- Safety devices may only be bypassed, switched off or removed if it has been guaranteed by suitable measures that the barrier does not give rise to any risk despite this.
- Secure the working area during troubleshooting. Use boundary tape and warning signs. Never leave the working area unattended.
- Make sure that no tools or other aids are left in or on the barrier after completing troubleshooting.
- For work performed above body height, use suitable, tested, and stable climbing aids.
- Before starting operation again, mount and check all safety devices.

Fault	Possible cause	Corrective action
The barrier does not open or close.	No mains voltage present; Power LED does not light up.	<ul style="list-style-type: none"> <li>• Switch on main switch.</li> <li>• Check the fuse of the supply line.</li> <li>• Check the supply line.</li> </ul>
	No control unit installed.	<ul style="list-style-type: none"> <li>• Install the control unit.</li> </ul>
	Control unit not properly plugged in.	<ul style="list-style-type: none"> <li>• Plug the control unit into the connector correctly.</li> </ul>
	Automatic closing function activated.	<ul style="list-style-type: none"> <li>• Barrier closes automatically when the set time elapses. For the settings, see the chapter "<b>Operation and control - Operation with automatic closing function</b>".</li> </ul>
	Spring torn.	<ul style="list-style-type: none"> <li>• Replace spring; see the chapter "<b>Troubleshooting - Replacing springs</b>".</li> </ul>
	Safety device prevents closing; Safety LED lights up.	<ul style="list-style-type: none"> <li>• Free the safety device.</li> <li>• Check the safety device.</li> <li>• Clean the photocell.</li> </ul>
	The overload protection has stopped the barrier.	<ul style="list-style-type: none"> <li>• Wait 20 seconds until the control unit enables the barrier again.</li> </ul>
The barrier does not open or close when a handheld transmitter is actuated.	Battery of the handheld transmitter is empty; LED on the handheld transmitter does not light up.	<ul style="list-style-type: none"> <li>• Replace the battery of the handheld transmitter.</li> </ul>
	Handheld transmitter has not been programmed on the radio receiver.	<ul style="list-style-type: none"> <li>• Program the handheld transmitter; see the chapter "<b>Optional handheld transmitters - Programming a handheld transmitter</b>".</li> </ul>
	The command is constantly present because the button of the handheld transmitter is jammed. The Start LED and the LED on the radio receiver light up.	<ul style="list-style-type: none"> <li>• Release the button or replace the handheld transmitter.</li> </ul>
The barrier does not open or close when a command device (e.g. key switch) is actuated.	The command device is not connected or defective. The Start LED does not light up when the command device is actuated.	<ul style="list-style-type: none"> <li>• Check the supply line of the command device.</li> <li>• Replace the command device.</li> </ul>
	A constant signal is present - water in the housing of the command device; the Start LED lights up.	<ul style="list-style-type: none"> <li>• Replace the command device and protect against moisture.</li> </ul>
The barrier stops during closing, moves about 10 cm in the opposite direction and stops.	Actuation of the obstacle detection due to an obstacle.	<ul style="list-style-type: none"> <li>• Remove obstacle.</li> </ul>
	Incorrect force values programmed.	<ul style="list-style-type: none"> <li>• Perform a control unit reset and reprogramme the force values. Do not increase the force tolerance unless this measure does not help. See the chapter "<b>Initial operation - Adjusting the force tolerance</b>" or "<b>TorMinal manual</b>".</li> </ul>
	Barrier incorrectly set or defective.	<ul style="list-style-type: none"> <li>• Have the barrier adjusted or repaired by a specialist; to do this, call the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.</li> </ul>

# Troubleshooting

Fault	Possible cause	Corrective action
The barrier stops during opening, moves about 10 cm in the opposite direction and stops.	Actuation of the obstacle detection due to an obstacle.	<ul style="list-style-type: none"> <li>Remove obstacle.</li> </ul>
	Incorrect force values programmed.	<ul style="list-style-type: none"> <li>Perform a control unit reset and reprogramme the force values. Do not increase the force tolerance unless this measure does not help. See the chapter "<b>Initial operation - Adjusting the force tolerance</b>" or "<b>TorMinal manual</b>".</li> </ul>
	Barrier incorrectly set or defective.	<ul style="list-style-type: none"> <li>Have the barrier adjusted or repaired by a specialist; to do this, call the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.</li> </ul>
The barrier stops during opening.	Safety device activated and DIP switch 1 ON.	<ul style="list-style-type: none"> <li>Free the safety device or set DIP switch 1 to OFF.</li> </ul>
The boom is not balanced (45°) when in de-energised state with the emergency release opened and lowers by itself.	Incorrect spring setting or spring breakage.	<ul style="list-style-type: none"> <li>Check and correct the spring setting; see the chapter "<b>Initial operation - Adjusting the spring unit</b>".</li> <li>Replace the broken spring; see the chapter "<b>Troubleshooting - Replacing springs</b>".</li> </ul>
Connected warning light does not light up.	Fuse or bulb defective.	<ul style="list-style-type: none"> <li>Change the fuse; see the chapter "<b>Troubleshooting - Changing the fuse</b>".</li> <li>Replace bulb.</li> </ul>
Speed changes during opening and closing.		<ul style="list-style-type: none"> <li>Completely normal: before the end positions are reached, the barrier reduces speed (soft run).</li> </ul>
The barrier can only be operated as long as the button of a command device is pressed.	Dead man operation activated.	<ul style="list-style-type: none"> <li>Deactivate dead man operation; see "<b>TorMinal manual</b>".</li> </ul>
The Start LED is constantly lit.	Constant signal at button connection 1 or 2.	<ul style="list-style-type: none"> <li>Check connected command devices.</li> </ul>
	An external signal is interfering with the control unit of the barrier; LED 3.1 or 3.2 on the radio receiver lights up.	<ul style="list-style-type: none"> <li>Wait until the external signal falls off.</li> <li>Remove the sources of the interference emitting the external signal.</li> </ul>
Boom is hanging down.	The boom was bent with force or pressed up or down when in the closed position.	<ul style="list-style-type: none"> <li>Have the barrier adjusted or repaired by a specialist; to do this, call the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH.</li> </ul>
<b>Radio receiver only</b> All LEDs flashing.	All memory locations occupied, max. 112.	<ul style="list-style-type: none"> <li>Delete any handheld transmitters that are no longer needed.</li> <li>Install additional radio receiver.</li> </ul>
LED 2 or 3 lights up constantly.	Radio signal is being received; the button of a handheld transmitter may be defective or an external signal is present.	<ul style="list-style-type: none"> <li>Remove the battery from the handheld transmitter.</li> <li>Wait until the external signal falls off.</li> </ul>
LED 2 or 3 lights up.	The radio receiver is in programming mode and waiting for a radio code from a handheld transmitter.	<ul style="list-style-type: none"> <li>Press the desired handheld transmitter button.</li> </ul>
<b>Barriers with floating support only</b> The floating support of the barrier hits the ground hard in the lower end position.	The lower end position of the barrier has been incorrectly set, which means that the distance between the floating support and the ground is too small. In closed state, the distance between the floating support and the ground must be about 2 cm.	<ul style="list-style-type: none"> <li>Correct the lower end positions of the barrier; see the chapter "<b>Initial operation - Adjusting the travel path of the barrier via the end positions</b>".</li> </ul>

If you cannot find the malfunction in the table and eliminate it, carry out the following measures.

- Perform a control unit reset and then reprogramme the force values.
- Disconnect the connected accessories (e.g. photocell) and reconnect the jumper for a safety connection.
- Set DIP switches 1,2,4,5,6,7,8,9 to OFF and DIP switch 3 to ON.
- If settings have been changed using TorMinal, perform a control unit reset with TorMinal.
- Check all connections on the direct connectors and terminal strip and re-tighten if necessary.

In case of other problems, contact the Customer Service department of SOMMER Antriebs- und Funktechnik GmbH. You can find the contact data of the headquarters in Germany on the back of the title page.

# Disassembly and disposal

## Safety information for disassembly

During disassembly, additional dangers that do not occur during operation must be expected since the safety devices are to some extent disabled.

- Perform disassembly only up to a maximum wind strength of 3 on the Beaufort scale (light wind).
- **At least two people** are required for the entire disassembly.
- Physically disconnect the power supply lines and discharge energy buffers.
- For disassembly work performed above body height, use suitable, tested, and stable climbing aids. Never use the barrier or parts of the barrier as climbing aids.
- The disassembly of the barrier and all work on the electrical system may only be performed by the personnel described in the chapter "**Safety information - Qualifications of personnel**".



### DANGER OF TIPPING!

The barrier may tip during disassembly.

This can cause injuries and damage to the barrier.

- Transport and disassembly must be performed by two persons and using suitable transport equipment.

## Storage after disassembly

If the barrier is to be put in intermediate storage after disassembly, observe the provisions and regulations for storage listed in the chapter "**Transport / Unloading / Storage - Storage**".

If possible, store the control unit of the barrier separately.

## Description of the disassembly work



### DANGER!

If there is direct or indirect contact with live parts, dangerous current could flow through the body.

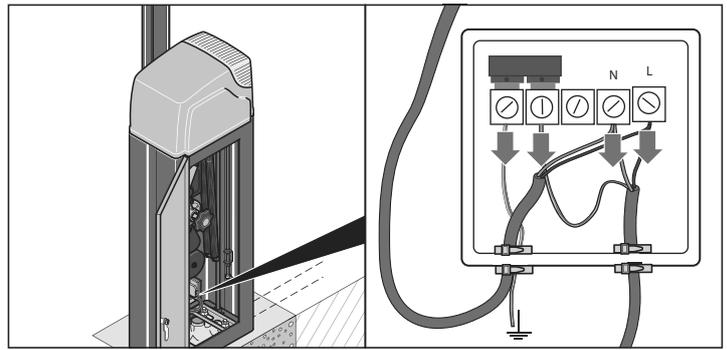
Electrical shock, burns, or death may result.

- Before starting disassembly, set the main switch to "0," secure it with a padlock, and attach a warning sign.



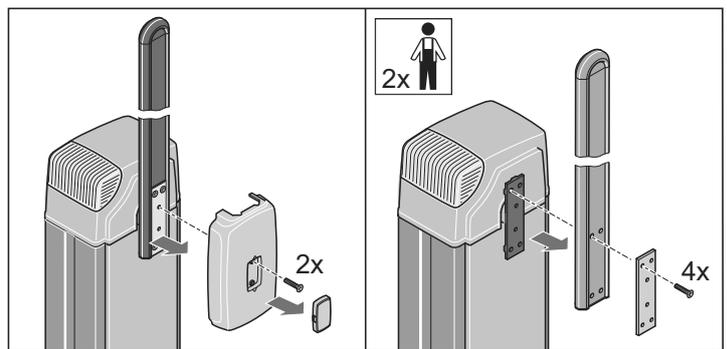
### RISK OF BURNS!

Wait at least five minutes after deactivation so that the motor can cool down and the capacitors lose their voltage.



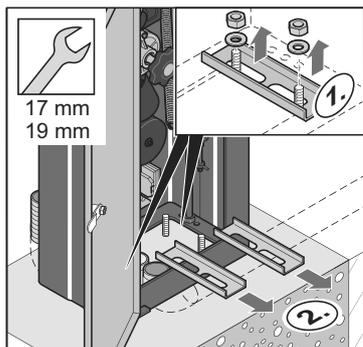
1. Remove the control unit.
2. Disconnect the mains supply line and remove it.
3. Disassemble the connected accessories and disconnect the cables from the direct connector.

### Flat boom H10



4. Remove the boom in the vertical opening position.
5. Remove the faceplate and disassemble the cover with 2 screws.
6. Release 4 screws from the boom and remove the boom and the shim plate.

# Disassembly and disposal



7. Open the barrier housing and loosen 4 nuts.
8. Remove the nuts, washers, and U-profiles.
9. Remove the barrier housing.

## Disposal

Procedure for the disposal of the barrier, parts, operating material and auxiliary materials is to some extent prescribed by law. Precise information can be obtained from the responsible public administration authorities (e.g. water boards and environmental protection offices on a federal and state or provincial level).

Only deliver goods to be disposed of to authorised disposal facilities.



### WARNING

**Environmental damage in the case of incorrect disposal!**

- **Electrical waste, electronic components, lubricants and other auxiliary materials must be treated as hazardous materials and may only be disposed of by approved specialist companies.**

# Declaration of performance

## Declaration of performance

**SOMMER Antriebs- und Funktechnik GmbH**

Hans-Böckler-Straße 21 - 27  
73230 Kirchheim/Teck  
Germany

Hereby declares the following performance in accordance with Construction Products Regulation No. 305/2011

for the products

**ASB-6010**  
**ASB-5014A**  
**ASB-6010A**  
**ASB-5507A.**

1. Product design	Barrier control system
2. ID No./-	See cover sheet
3. Purpose	Barrier control system for access control in commercial / private applications
4. Manufacturer	SOMMER Antriebs- und Funktechnik GmbH
5. Authorised representative	Jochen Lude
6. System for performance evaluation	3
7. Harmonised standard	EN 13241:2003+A2:2016
8. Notified body	SP Technical Research Institute of Sweden
9. Essential features:	
• Resistance to the ingress of water	npd
• Release of hazardous substances	npd
• Resistance to wind load	See technical data
• Thermal resistance	npd
• Air permeability	npd
• Sustainability of the mechanical and performance characteristics	350 cycles/day
• Operating forces (with power-activated gates)	Compliant

Kirchheim, 6 July 2016



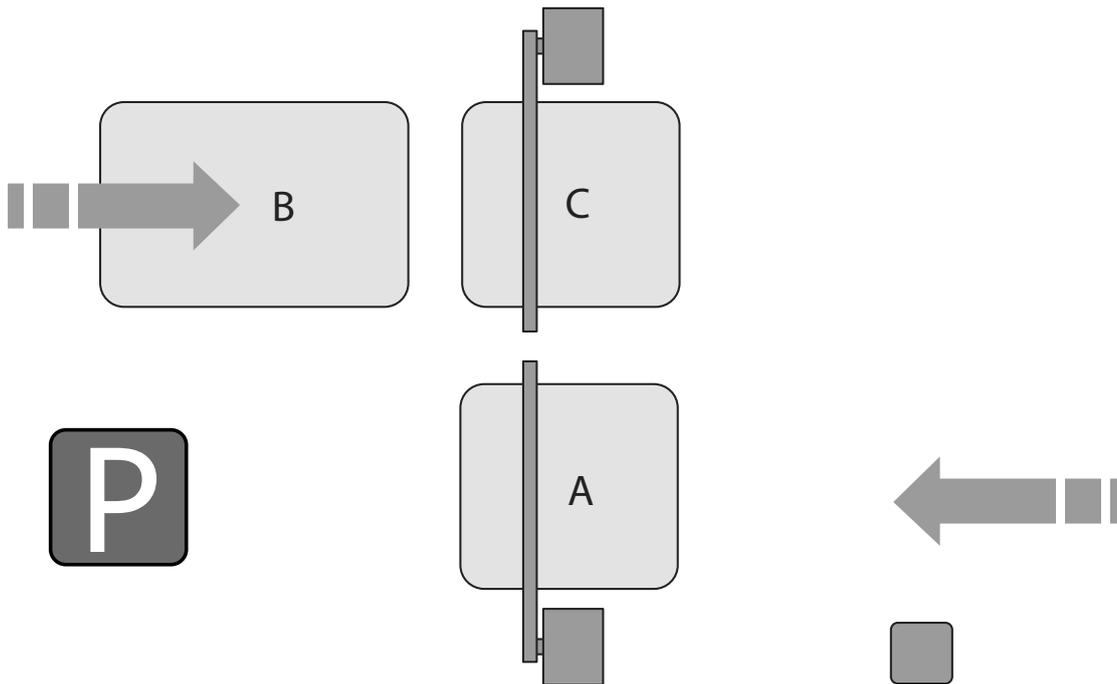
i.V.

A handwritten signature in black ink, appearing to read 'Jochen Lude'.

Jochen Lude  
Responsible for documents

# Entrance and exit scenarios

## Example 1 - Car park with monitored entry and free exit



### Barrier for entrance:

The barrier is manually opened using a command device or by handheld transmitter and closed after 60 seconds using the automatic closing function. Induction loop A monitors the closing level as per EN 12453. The hold open time of the automatic closing function does not start until the vehicle leaves the induction loop. A connected warning light flashes for 3 seconds before the opening and closing of the barrier.

The barrier is set as follows:

DIP	Position	Function / connection	Setting / terminal
1	OFF	Auto Time potentiometer	
2	OFF	Command device as Button 1	Terminals 2 + 3
3	OFF	Programmed handheld transmitters	-
4	OFF	Induction loop A as safety input 1	Terminals 6 + 7
5	ON	Warning light	Terminals 16 + 17
6	OFF		
7	OFF		
8	OFF		

### Barrier for the exit:

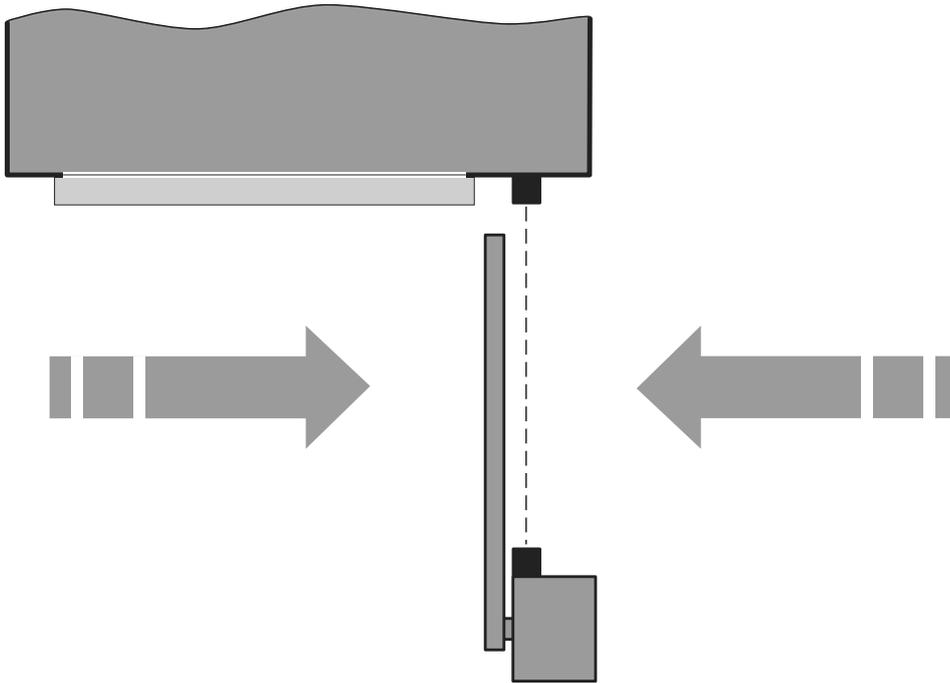
The barrier is automatically opened via induction loop B and closed after 30 seconds using the automatic closing function. Induction loop C monitors the closing level as per EN 12453. The hold open time of the automatic closing function does not start until the vehicle leaves induction loop C.

The barrier is set as follows:

DIP	Position	Function / connection	Setting / terminal
1	OFF	Auto Time potentiometer	
2	OFF	Induction loop B as Button 1	Terminals 2 + 3
3	OFF	Induction loop C as safety input 1	Terminals 6 + 7
4	OFF		
5	OFF		
6	OFF		
7	OFF		
8	OFF		

# Entrance and exit scenarios

## Example 2 - Company entrance with gatehouse



### Barrier for entrance and exit:

The barrier is opened manually using a command device in single-channel operation and closed with the "Closing command through safety input" setting. The photocell monitors the closing level. When the vehicle leaves the photocell, the barrier closes after 5 seconds.

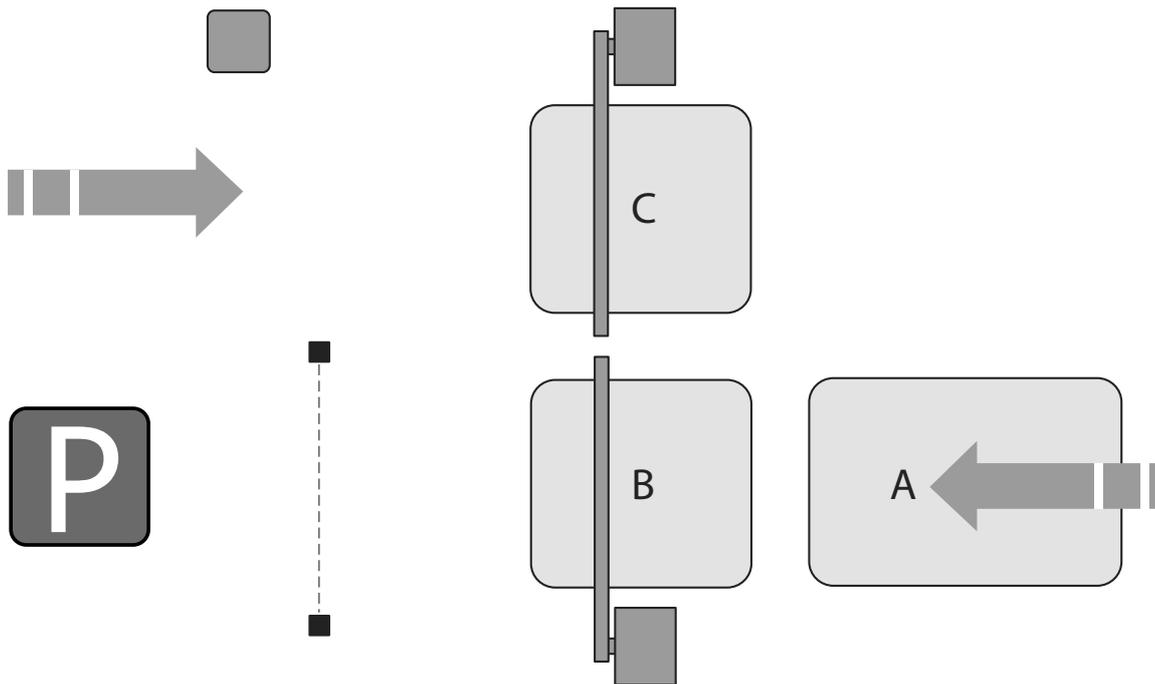
The barrier is set as follows:

DIP	Position
1	OFF
2	OFF
3	OFF
4	ON
5	OFF
6	OFF
7	OFF
8	OFF

Function / connection	Setting / terminal
Auto Time potentiometer	
Command device as Button 1	Terminals 2 + 3
Photocell as safety input 2	Terminals 8 + 9

# Entrance and exit scenarios

## Example 3 - Car park with free entry and monitored exit



### Barrier for entrance:

The barrier is automatically opened via induction loop A and closed using the "Closing command through safety input" setting. Induction loop B monitors the closing level as per EN 12453. The photocell also monitors the entrance. When the vehicle leaves the photocell, the barrier closes after 5 seconds.

The barrier is set as follows:

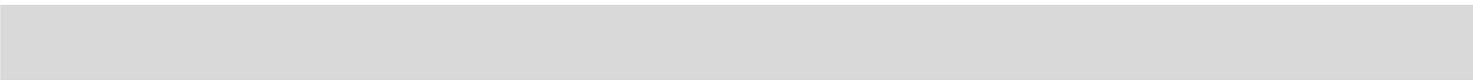
DIP	Position	Function / connection	Setting / terminal
1	OFF	Auto Time potentiometer	
2	OFF		
3	OFF		
4	ON		
5	OFF		
6	OFF	Induction loop as Button 1	Terminals 2 + 3
7	OFF	Induction loop B as safety input 1	Terminals 6 + 7
8	OFF	Photocell as safety input 2	Terminals 8 + 9

### Barrier for the exit:

The barrier is manually opened using a command device or by handheld transmitter and closed after 120 seconds using the automatic closing function. Induction loop C monitors the closing level as per EN 12453. The hold open time of the automatic closing function does not start until the vehicle leaves induction loop C.

The barrier is set as follows:

DIP	Position	Function / connection	Setting / terminal
1	OFF	Auto Time potentiometer	
2	OFF		
3	OFF		
4	OFF		
5	OFF		
6	OFF	Command device as Button 1	Terminals 2 + 3
7	OFF	Programmed handheld transmitters	-
8	OFF	Induction loop C as safety input 1	Terminals 6 + 7



# Handover protocol



**NOTE:**

**Technical Regulation for Workplaces ASR A1.7 stipulates that all power-activated gate and barrier systems must undergo safety testing once per year, irrespective of when the system was put on the market.**

The test specifications listed in ASR A1.7 must be applied in a manner appropriate for a barrier system.

The requirements must be met from initial operation onwards, and compliance with the requirements must be tested at least once per year by a safety test of the entire system including all safety-relevant additional components and carried out by a qualified specialist.

A separate safety test is mandatory in the event of significant changes, e.g. changes in operating mode, use of non-identical components etc.



**NOTE:**

**A qualified specialist is a person who, due to his / her training and experience, has sufficient knowledge in the field of power-activated gates and barriers and who is familiar with the governmental health and safety regulations, UV regulations, directives and generally accepted engineering practice (e.g. standards) to the degree that he / she can assess the operational safety of power-activated gates and barriers.**



**NOTE:**

**Safety testing is not to be equated with maintenance!**



**NOTE:**

**Safety testing is carried out using the checklist below, the results of the test must be documented in the checklist, kept at the operation location of the barrier system and made available for inspection.**

Subject to technical changes.

# Handover protocol

## 1. Installer of the system:

Company

.....

Address

.....

Phone

.....

E-mail

.....

Contact

.....

## 2. Operator of the system:

Company

.....

Address

.....

Phone

.....

E-mail

.....

Contact

.....

## 3. Location of the system:

Company

.....

Address

.....

# Handover protocol

## 4. Installation / initial operation:

Installed on

.....

Installer / qualified specialist (name)

.....

Initial operation on

.....

Initial operation by (name)

.....

Acceptance of the system by  
the operator:

Date ..... Name .....

## 5. Area of application:

Commercial

Private

Exit

Entrance

Exit / entrance

Number of cycles/day

.....

## 6. Technical data:

Model

ASB-6010

ASB-6010A

ASB-5014A

ASB-5507A

Closing direction

Right-closing

Left-closing

Serial number

.....

Year of manufacture

.....

Item number

.....

Boom length

....., ..... m

# Handover protocol

## 7. Installed accessories:

Floating support  
(from 3 m boom length)

Yes  No

Support post  
(from 3 m boom length)

Yes  No

External warning light

Yes  No

Main switch (all-pole deactivation)

Yes  No

External antenna

Yes  No

Miscellaneous

.....

## 8. Safety devices:

Photocell

Yes  Installation height: ..... No

Induction loop

Yes  Quantity: ..... No

Miscellaneous

.....

## 9. Control unit:

Buttons without self-locking (dead man's switch)

Pulse control with view of the system

Pulse control without view of the system (remote control)

Automatic mode

Miscellaneous

.....

# Handover protocol

## 10. Setting of the barrier:

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6
ON	<input type="checkbox"/>					
OFF	<input type="checkbox"/>					

Auto Time ON \_\_\_\_\_ seconds

## 11. Induction loops:

### 1st Induction loop

Loop circumference      5 m       9 m       13 m

Function      Object protection       close       open

Resistance      \_\_\_\_\_  $\Omega$

Insulation resistance      \_\_\_\_\_  $M\Omega$

Loop position  
(where applicable, sketch)

### 2nd Induction loop

Loop circumference      5 m       9 m       13 m

Function      Object protection       close       open

Resistance      \_\_\_\_\_  $\Omega$

Insulation resistance      \_\_\_\_\_  $M\Omega$

Loop position  
(where applicable, sketch)

# Handover protocol

## 12. Signatures:



The barrier system and its accessories were properly installed and the settings specified by the customer were made. The signing operator has been trained in the correct operation and maintenance of the barrier system and its accessories and in particular, has been made aware of the safety instructions. The barrier system may only be operated with a view of the barrier. All users of the system must be informed of this.

## The following documents have been created and handed over:

- Installation and Operating Manual for the barrier system
- Installation and Operating Manuals for the installed accessories
- Test report of initial operation

## Signatures

Installer / qualified specialist

Operator

--	--	--	--	--	--

Town

Date

Signature

Town

Date

Signature

# Test report

## Test report for power-activated barriers

(Testing in accordance with ASR A1.7)

Company carrying  
out test

Date

### Information on the system:

#### Operator of the system:

Company

Address

Phone

E-mail

Contact

#### Location of the system:

Company

Address

Model:

Year of manufacture:

Serial number:

# Test report

n.o. = no objections

o. = objection

n.p. – not present

## Mechanical system

	n.o.	o.	n.p.
Barrier housing (damage / attachment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boom (damage / attachment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compensating springs (damage / attachment / weight compensation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency release (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seals (condition / wear)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Operator

	n.o.	o.	n.p.
Motor (attachment / electrical connection / function / noise)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boom (damage / attachment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Control unit / electrical system

	n.o.	o.	n.p.
Mains connection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Control buttons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit switch OPEN (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit switch CLOSE (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All-pole mains circuit breaker (in accordance with EN 12453)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaluation of induction loops (function: close, open, presence)			
1st Induction loop (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd Induction loop (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Photocell (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

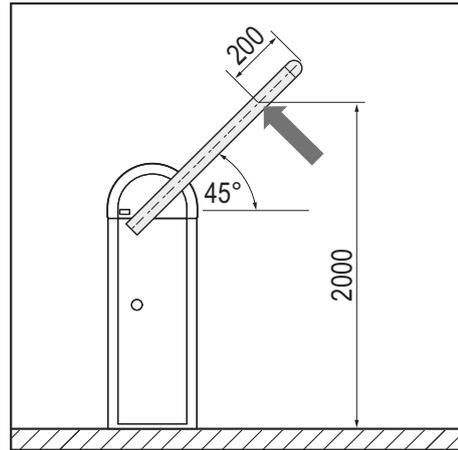
## Safety devices

	n.o.	o.	n.p.
Safety distances between moving and fixed parts in the surroundings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Test report

## Compliance with operating forces

Main closing edge		
200 mm before end of boom , but no more than 2 m above the ground	Boom at 45°	
	F (N)	T (ms)
	Fd (N)	Td (ms)



Yes No

Maximum operating force complied with (max. 400 N)

Dynamic time complied with (max. 750 ms)

Static time complied with (max. 5 s)

### System is labelled

Yes No

Completeness / legibility

### Documentation for the system is available

Yes No

Installation and Operating Manual

Handover protocol

Inspection book

# Test report

## Result of the test

Defects found:

Remedied defects:

--	--



The system has safety-relevant defects which pose a risk to human beings and property and must be remedied without delay. We recommend that the system be taken out of operation until all safety-relevant defects have been fully remedied.

## Miscellaneous:

--

## Signatures

Installer / qualified specialist

Operator

--	--

Date

Signature

Town

Date

Signature

# Test report

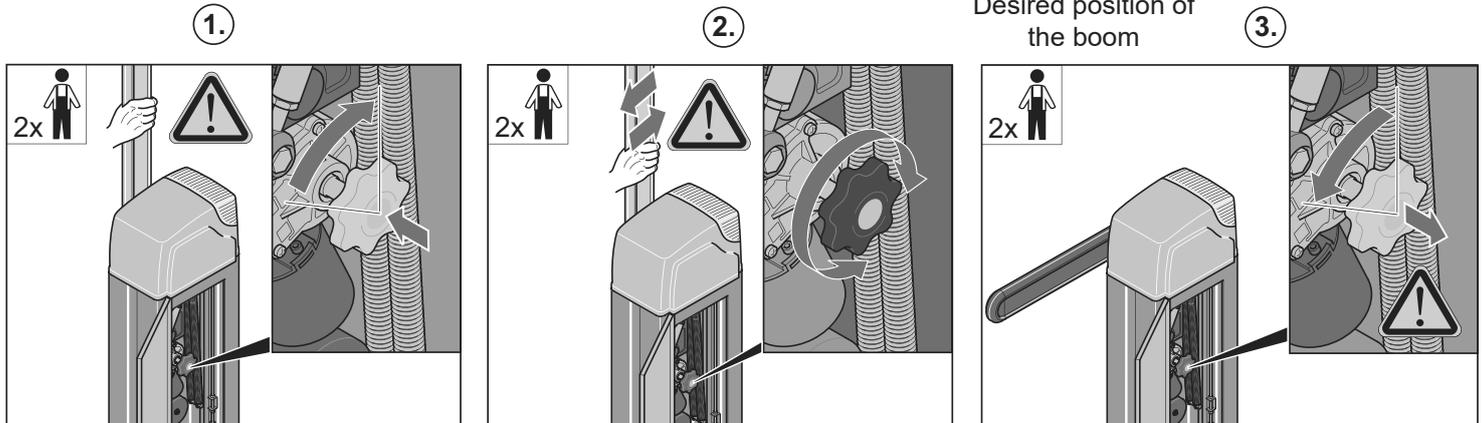
# Brief instructions



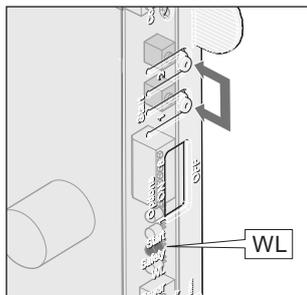
## CAUTION

These brief instructions do not replace the Installation and Operating Manual! The safety instructions and warnings in the Installation and Operating Manual must be complied with!

## Emergency release

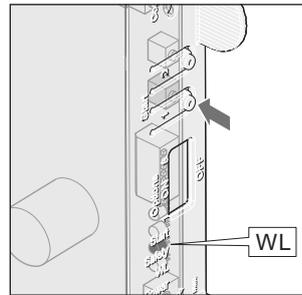


## Resetting the control unit



1. Press the buttons (1 + 2) until the "WL" LED goes out.  
⇒ "WL" LED off - force values deleted.
2. Release the buttons (1 + 2).
3. Press the button (1).  
⇒ Barrier opens.

## Programming the force values



1. Press the button (1).  
⇒ The barrier opens until the BARRIER OPEN end position is reached.  
⇒ The "WL" LED flashes.
2. Press the button (1).  
⇒ The barrier closes until the BARRIER CLOSE end position is reached.  
⇒ The "WL" LED flashes.
3. Repeat Steps 1 and 2 three times.  
⇒ The "WL" LED lights up and goes out - the force values have been programmed.

## Overview of the DIP switches

DIP switch	Position	Function / reaction
Obstacle detection during the opening of the barrier at safety input 1		
1	OFF	No reaction of the operator
	ON	Barrier stops and reverses
Selection of the safety device at safety input 1		
2	OFF	Selection of the normally closed contact (e.g. photocell or loop evaluation)
	ON	--
3	OFF	-- No function
	ON	-- No function
Closing command via safety inputs 1:2 after 5 seconds		
4	OFF	Disabled
	ON	Activated
Pre-warning time of the connected warning light		
5	OFF	Pre-warning time 0 sec.
	ON	Pre-warning time 3 sec. - warning light flashes

6	OFF	-- No function
	ON	-- No function
7	OFF	-- No function
	ON	-- No function
8	OFF	-- No function
	ON	-- No function

