

EN Translation of the Original Installation and Operating Manual From Page 2

EN Translation of the handover protocol From Page 47

EN Translation of the test report Page 53

EN Translation of the brief instructions From Page 57

EN Translation of the connection diagram Page 58

Barrier

ASB Alu
ASB Stahl

Information on the product

Serial No.:

See the title page of the installation and operating manual (if applicable warranty label).

Year of manufacture: from 5.2020

Information on the Installation and Operating Manual

Warranty

The warranty complies with statutory requirements. The contact person for warranties is the specialist retailer.

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.

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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 it or if you think more information is needed, please send your suggestions to us:



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

(0.14 euros/minute from a German landline, mobile prices may vary)

<https://www.sommer.eu/de/servicepartner.html>

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Violations of the above stipulations will lead to damage claims.

All brands mentioned in this manual 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 "Other applicable documents" on page 4

Description of the product type

The ASB Alu and ASB Stahl barriers have been constructed to the technical state-of-the-art and in accordance with recognised technical regulations and are 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 Alu and ASB Stahl barriers are 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
- taking out of operation
- 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 may lead to death or extremely severe injuries.



WARNING

Designates a possible danger that may lead to death or extremely severe injuries.

NOTE

Designates a possible danger that may lead to damage to the system or the environment.



INFORMATION:

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.

Information regarding illustrations

The graphics provided in this Installation and Operating Manual are intended to serve as examples. Depending on the specific model, details in the graphics may differ from those of your product.

User information

Intended use

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

The ASB Stahl and ASB Alu barriers are suited 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 2.5 metres to 6 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 400, 580, 500 LED 2.5 m - 3 m for max. wind strength 9 Bft
boom 400, 580, 500 LED >3 m - 6 m for max. wind strength 5 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" 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 "[Creating the barrier foundation with supply connections](#)" on page 14,
- 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.

User information

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 Stahl and ASB Alu barriers 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.



INFORMATION:

See also Chapter "Installation preparations" on page 14. 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.

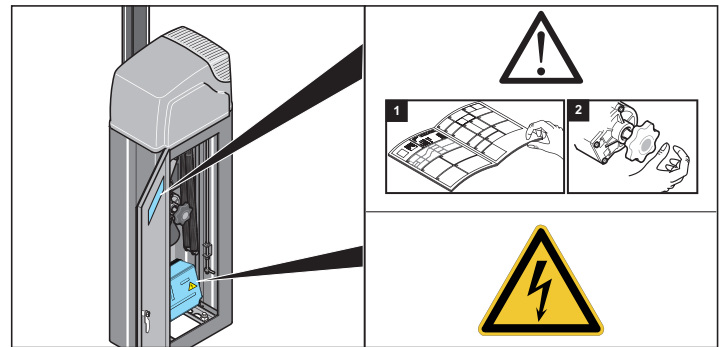
Before the operation of the barrier, the operator and personnel must be familiarised with the position and meaning of the warning sign on the barrier.

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

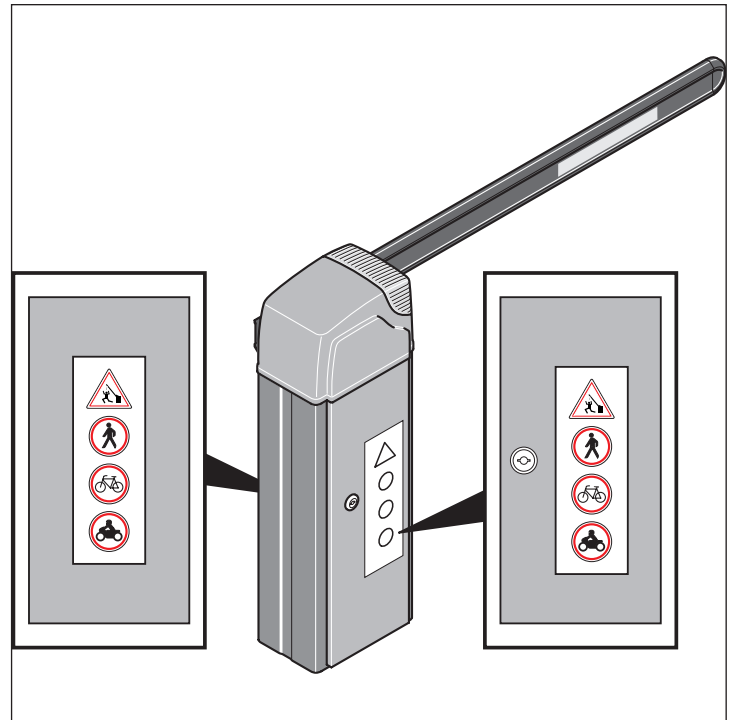
Damaged or missing warning signs and reflectors must be replaced by the operator immediately.

Warning signs on the barrier

The following warning sign is attached to the barrier:








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



User information

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!
The use of 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



INFORMATION:

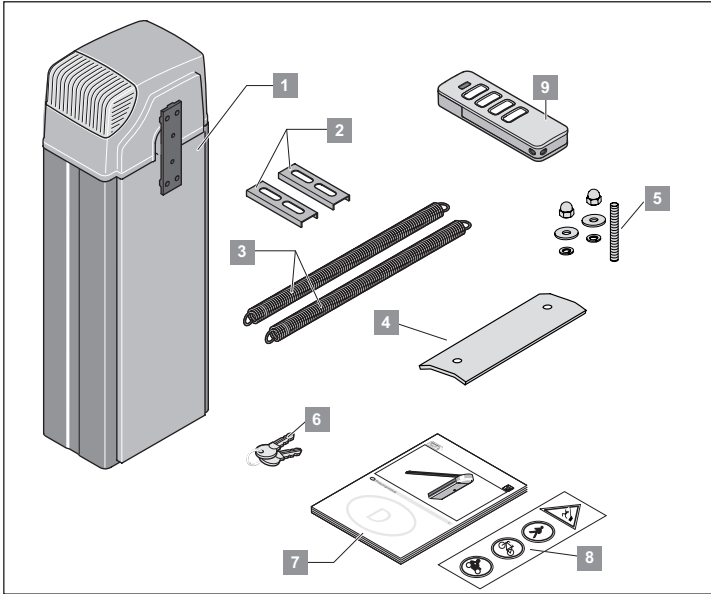
Mounting material such as heavy-duty anchors is not included. The installer must select mounting material suitable for the respective subsurface.

p. “Creating the barrier foundation with supply connections” on page 14

Optionally available: Oval boom in various models, see “Boom” on page 10

ASB Alu

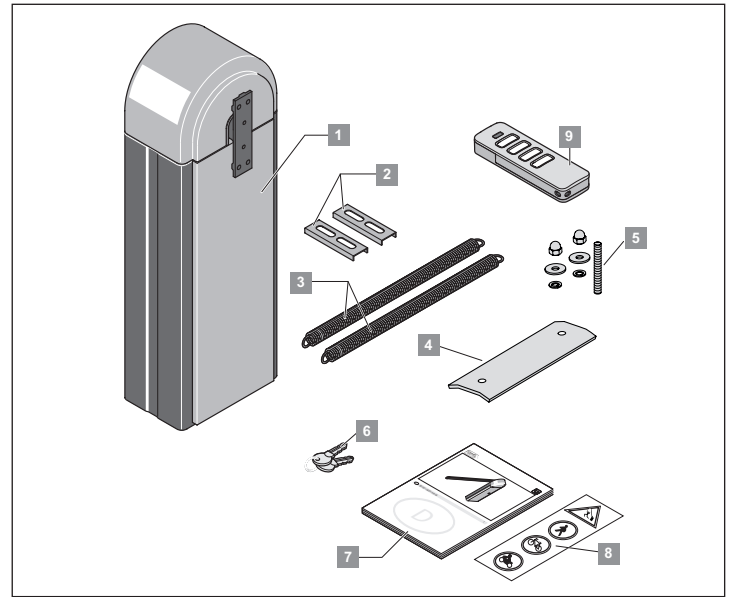
The actual scope of delivery may vary depending on the design of the barrier. The standard scope of delivery contains the following items:



Item	Quantity	Designation
1	1	Barrier housing - left-closing or right-closing design
2	2	U-profiles
3	2	Springs factory-installed
4	1	Shim plate
5	1	Screw set
6	2	Keys for the barrier housing
7	1	Installation and Operating Manual
8	2	Warning signs
9	1	Pearl Vibe handheld transmitter

ASB Stahl

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	2	Springs factory-installed
4	1	Shim plate
5	1	Screw set
6	2	Keys for the barrier housing
7	1	Installation and Operating Manual
8	2	Warning signs
9	1	Pearl Vibe handheld transmitter



INFORMATION:

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

Product description

Boom



INFORMATION:

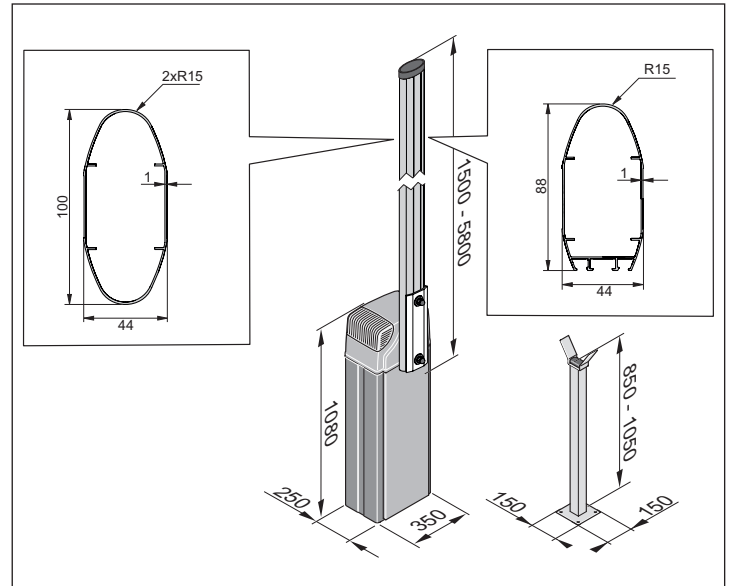
A boom is not included in the scope of delivery, but can be ordered separately. The following models are available:

	Length	Profile	ASB Alu	ASB Stahl
400	4 m		✓	✓
580	5.8 m		✓	✓
LED 500	5 m		✓	

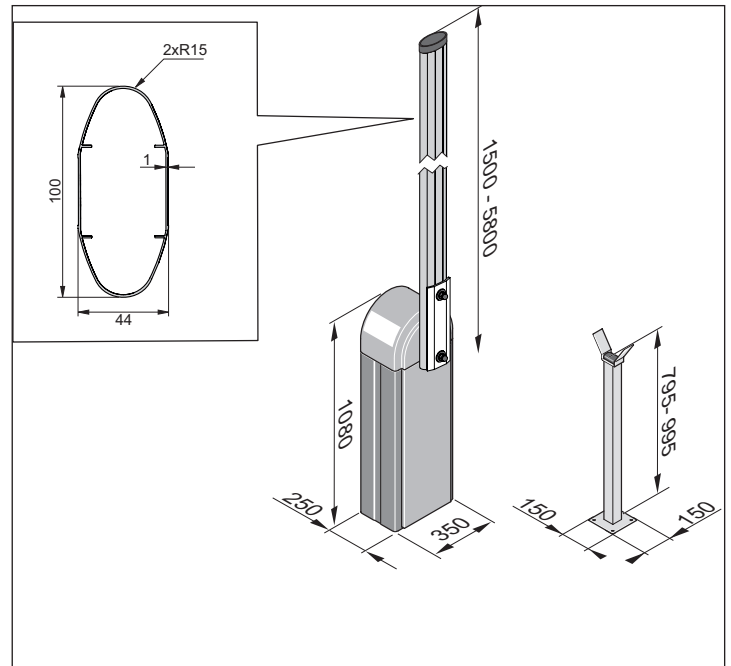
Dimensions

All dimensions in mm

ASB Alu

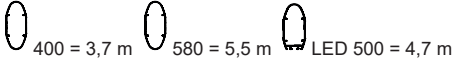
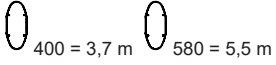


ASB Stahl



Product description

Technical data

	ASB Alu	ASB Stahl
Weight without boom	50 kg	60 kg
Weight of boom	5.5 kg	5.5 kg
Maximum opening width	 400 = 3,7 m 580 = 5,5 m LED 500 = 4,7 m	 400 = 3,7 m 580 = 5,5 m
Opening time	7 sec.*	7 sec.*
Closing time	7 sec.*	7 sec.*
Voltage supply	220 - 240 V; 50 - 60 Hz	220 - 240 V; 50 - 60 Hz
Motor	24 V, DC	24 V, DC
Power consumption in normal operation	60 W	60 W
Power consumption (power-saving mode)	max. 1.3 W	max. 1.3 W
Dimensions without boom	H 1080 mm x W 350 mm x D 250 mm	H 1080 mm x W 350 mm x D 250 mm
IP code	IP44	IP44
Workplace-based emission value	< 75 dBA	< 75 dBA
Temperature range	-25 °C to + 65 °C	-25 °C to + 65 °C
Maximum wind strength according to Beaufort scale	Boom 2.5 - 3 m: max. wind strength 9 Boom 3 - 6m: max. wind strength 5	
Permitted cycles	Max. 350 cycles/day	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

NOTE!

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

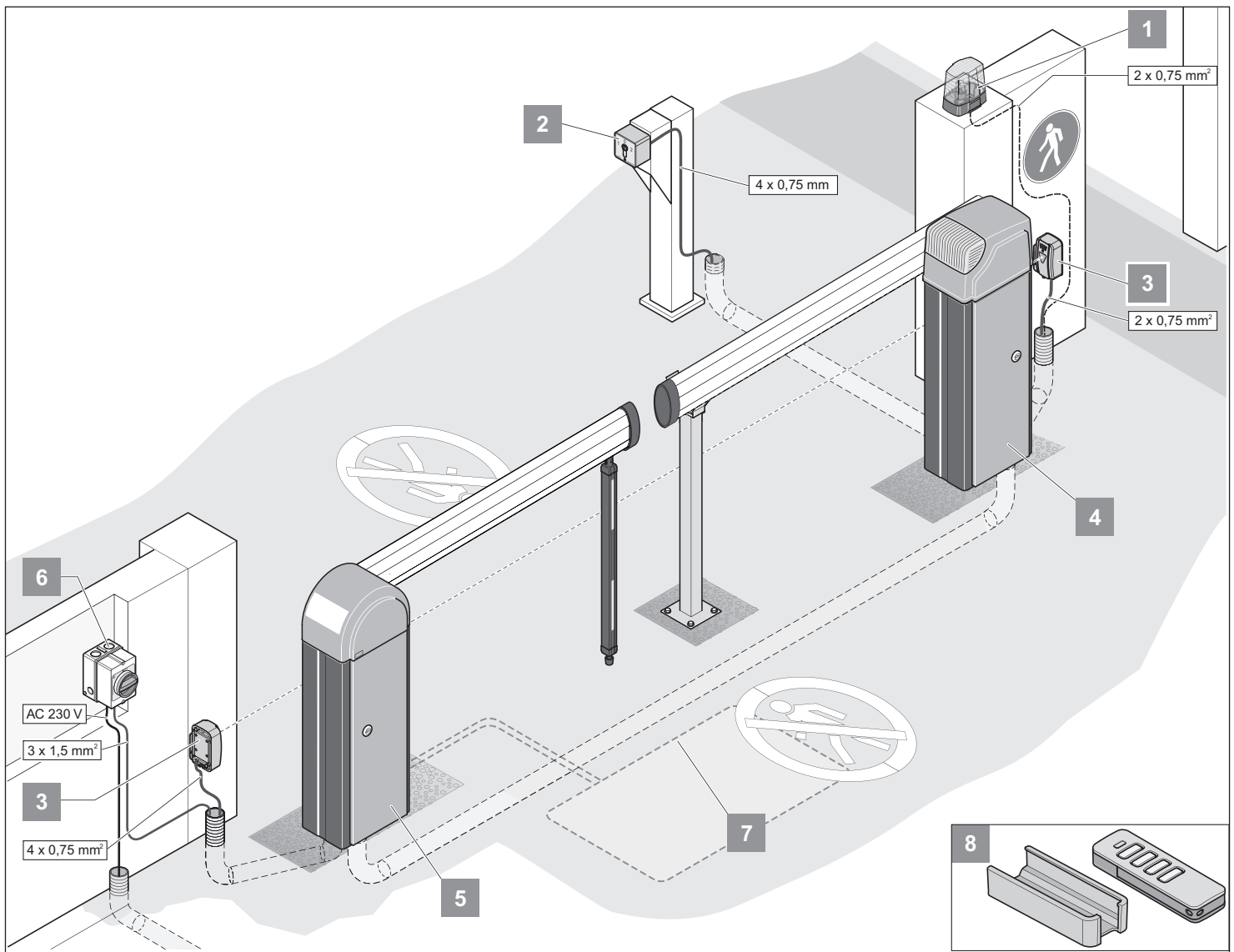
Irreparable damage to the barrier may be the result.

- 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°C to $+60^{\circ}\text{C}$.
- 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.

Work with the user to decide on the position of the accessories before installation.



INFORMATION!

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	Induction loop
8	Handheld transmitter with car/wall holder

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

Installation preparations

Information on preparing for installation



RISK OF CRUSH INJURIES TO HANDS!

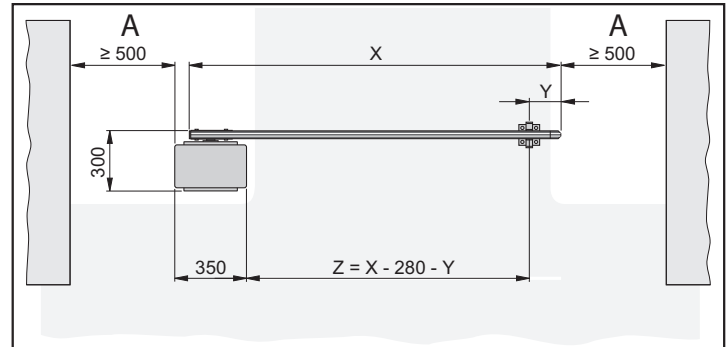
Risk of crushing at the lever system of the barrier when the hood is open.

- 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.
- For a boom length of more than 4 metres, a floating support or support post is required. There must be a safety distance of at least 500 mm (A) 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 (omnipolar 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 (16A, 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 (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

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

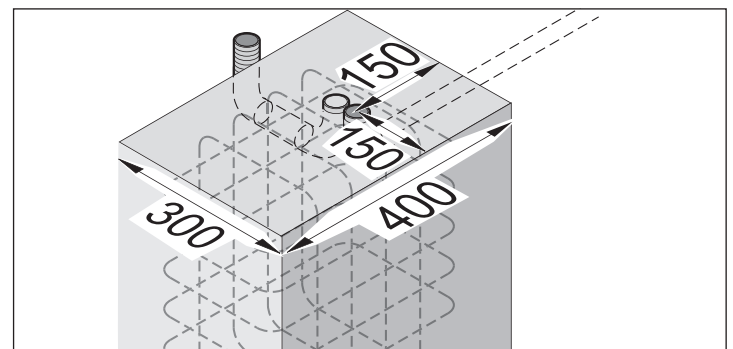
$X = 3500 \text{ mm} + 200 \text{ mm} + 280 \text{ mm}$

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	B	L
Recommended	Frost-proof! 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/mm²)

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.



INFORMATION:

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	B	L
Frost-proof! 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/mm²)

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.



INFORMATION:

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.



INFORMATION:

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 the event of a defect.

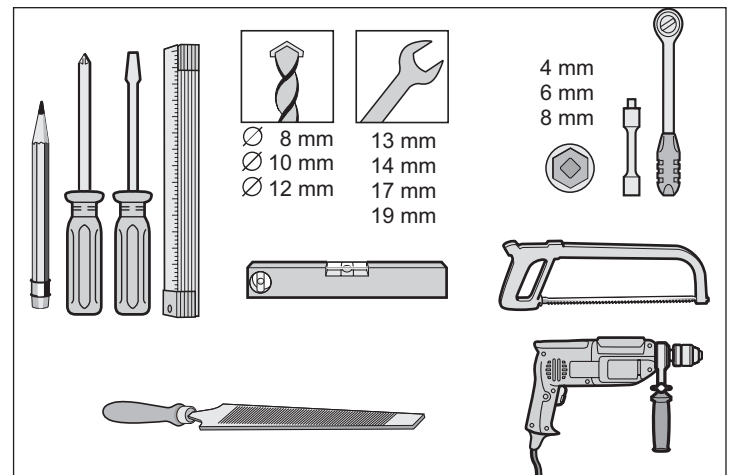
Pedestrian traffic

The ASB Alu and ASB Stahl barriers 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

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!

Danger of crush injuries at the lever system

- 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.

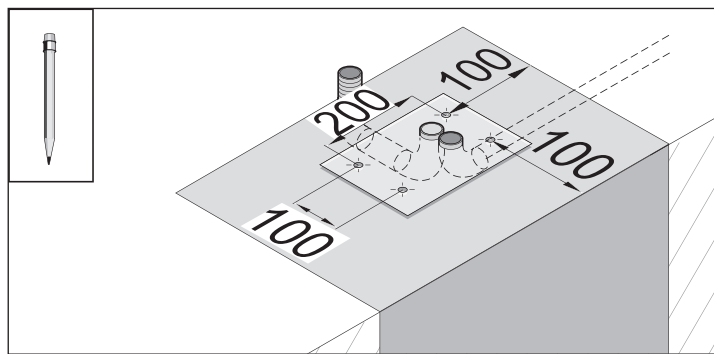
Check the delivery for completeness (see "Scope of delivery" on page 9 and order form).

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

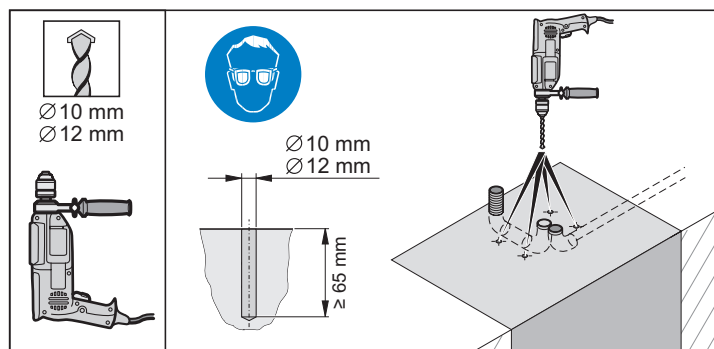
Dispose of the packaging in accordance with national regulations.

Installing the barrier housing

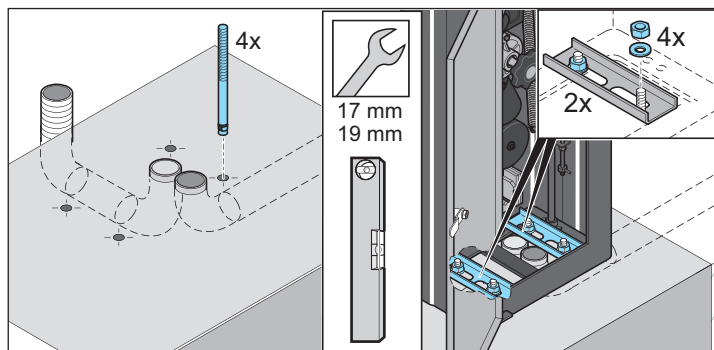
1. Pull the cables into the empty ducts and label them for later use.



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



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



3. Blow out holes with compressed air.

NOTE:

Only use permissible fastening materials. For recommended heavy-duty anchors, see "Creating the barrier foundation with supply connections" on page 14

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



INFORMATION:

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

6. Insert both U-profiles.
7. 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.
8. Close the barrier housing.

Installation

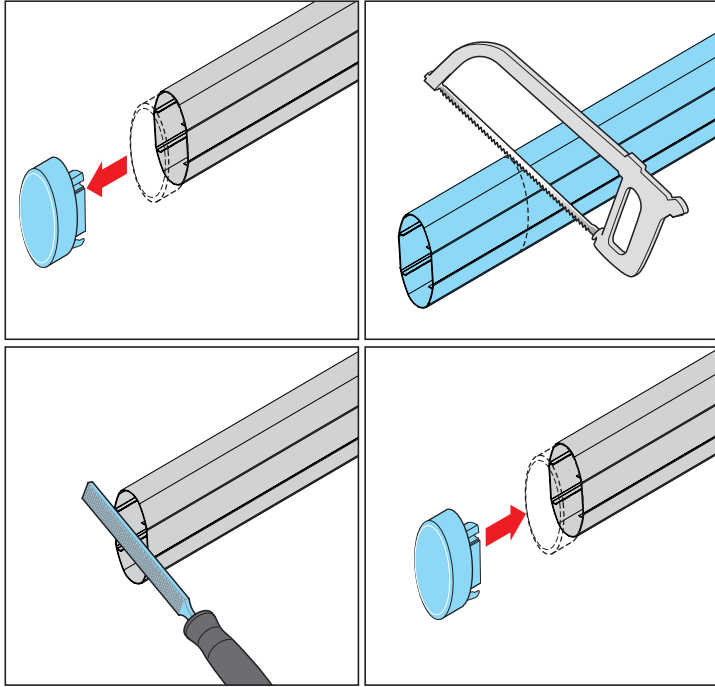
Adapting the length of the boom

Booms 400 and 580



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

To calculate the required length of the boom, see "[Installation drawing](#)" on page 14.



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.

Boom LED 500



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

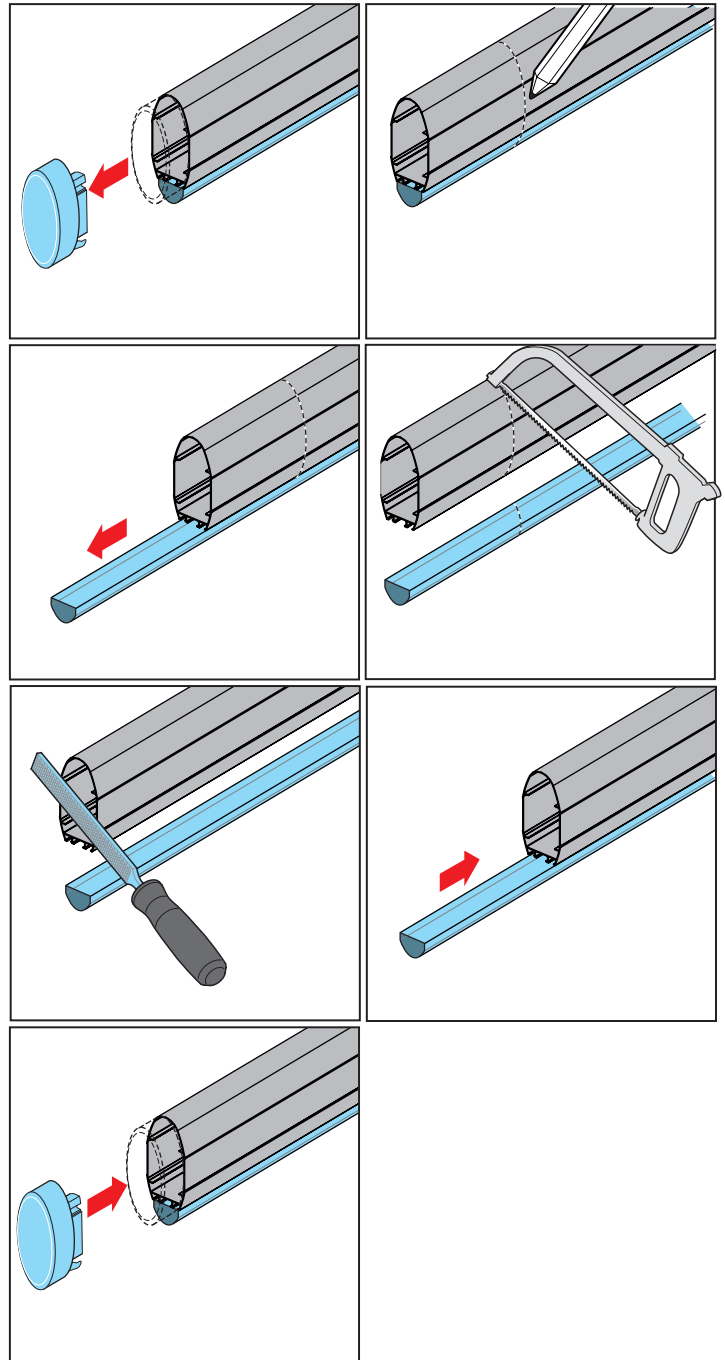


INFORMATION:
The total length of the boom is not equal to the effective opening width!



INFORMATION:
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 "[Installation drawing](#)" on page 14.



1. Remove the cover from the tip of the boom.
2. Mark the desired length.
3. Pull out the cover of the LED bar.
4. Cut the LED bar to the required length.
5. Saw the boom and the cover of the LED bar to the desired length and deburr if necessary.
6. Reassemble in reverse order.

Installation

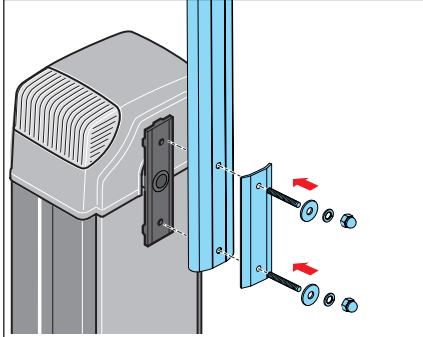
Installation of the boom

Oval boom 400 / 580



INFORMATION:

When using a floating support, install it before installing the boom; see [“Installing the floating support”](#) on page 20



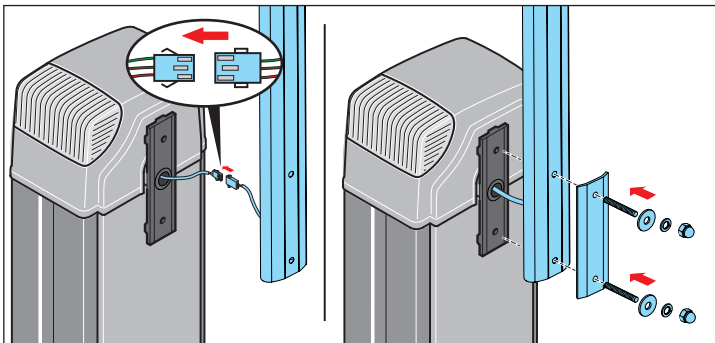
1. The boom is attached in the vertical opening position.
2. Place boom on the adapter plate and fasten it in position using the support plate and the mounting material provided.

Oval boom 500 LED

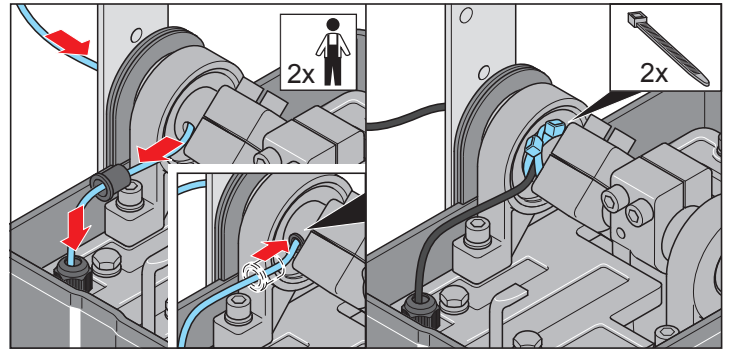


INFORMATION:

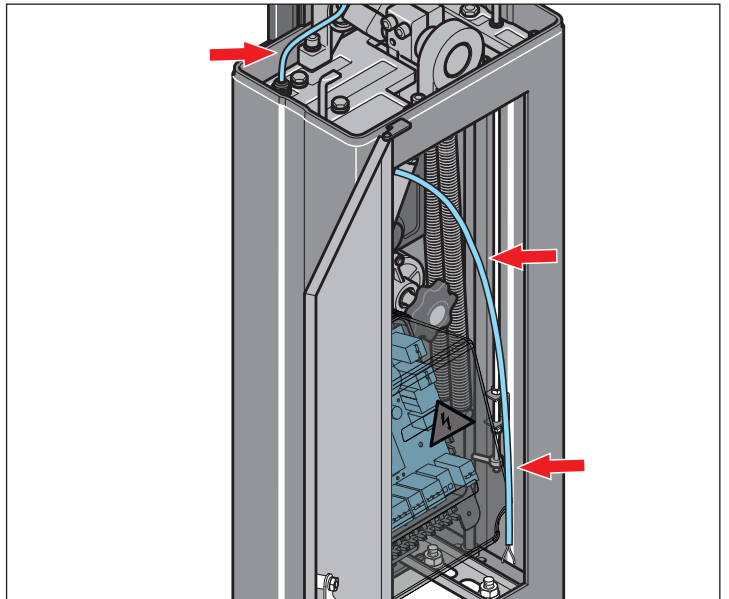
- A relay (Relay) which is available separately is required for the traffic-light function with the boom lighting.
- The boom lighting is switched off when the barrier switches to power-saving mode. Power-saving mode must be deactivated if this is not required; see Page 28.



1. The boom is attached in the vertical opening position.
2. Connect the two plug ends
3. 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.



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



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

24V	●	■
GND	●	■
12V	●	■
24V	●	■

	Green lighting	Red lighting
GND	Green wire (GN)	Red wire (GN)
+12 V	Brown wire (BN)	Brown wire (BN)

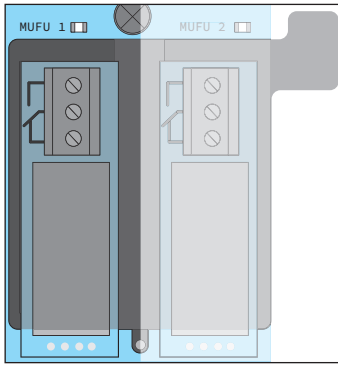
6. Connect the wires to the control unit as specified in the connection diagram; see [Page 58](#).

Installation

Alternative: Connection for traffic-light function



INFORMATION:
Optional relay (Relay) required.



1. Plug the Relay into the Mufu1 slot.
2. Wire as shown in the table.

GND (control unit)	COM (Relay)
Green wire, boom (GN)	NO (Relay)
Red wire, boom (RD)	NC (Relay)
Brown wire, boom (BN)	12V (control unit)

Installing the support post

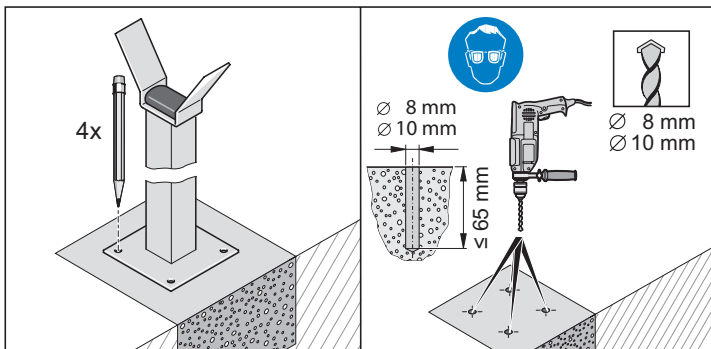


RISK OF CRUSH INJURIES TO HANDS!

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!

1. To calculate the required length of the support post, see "[Installation drawing](#)" on page 14.

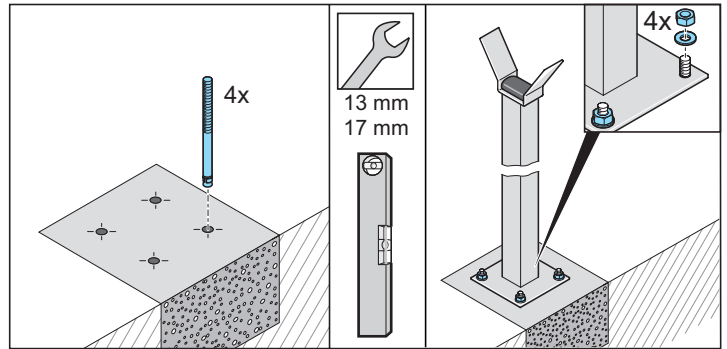


2. Put the support post in place and mark the position for the 4 holes.
3. Drill four holes $\varnothing 8$ or $\varnothing 10$ mm and at least 65 mm deep.
4. Blow out holes with compressed air.



INFORMATION:

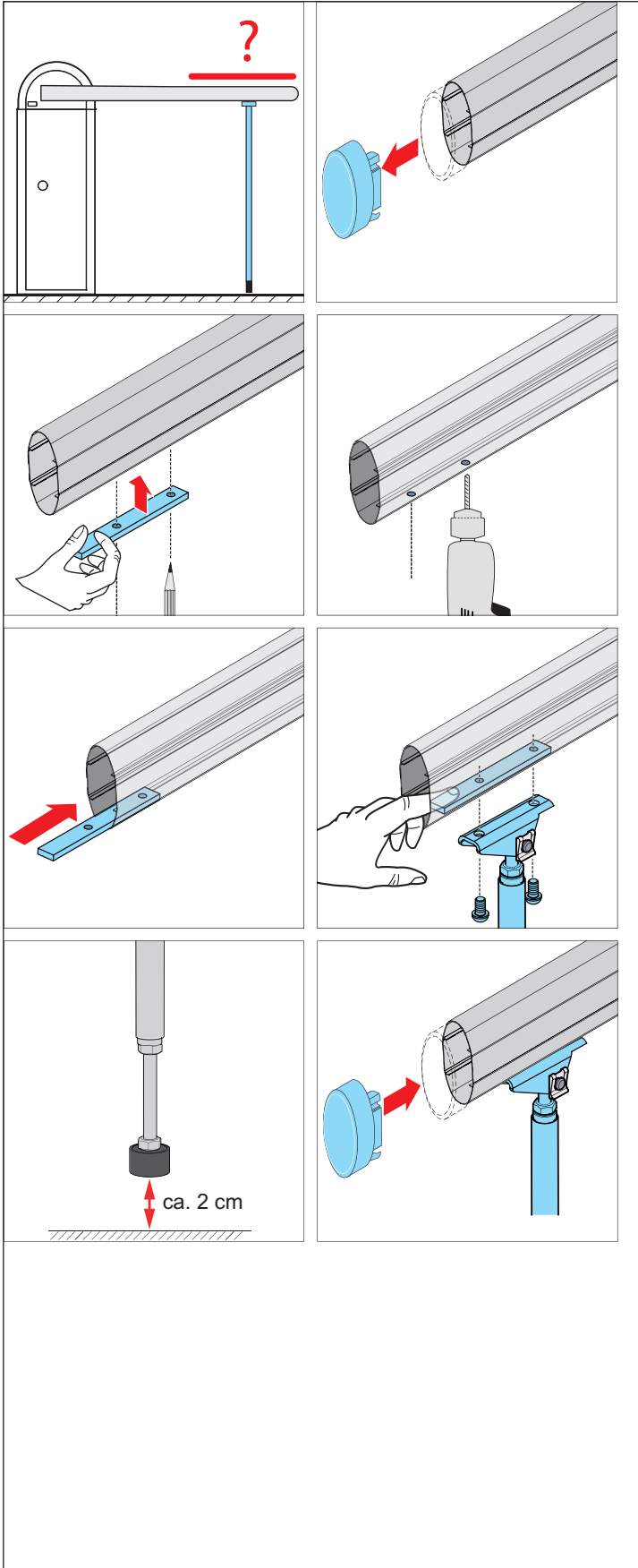
Only use permissible fastening materials. For recommended heavy-duty anchors, see "[Installation drawing](#)" on page 14



5. Insert the heavy-duty anchors into the holes.
6. 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.

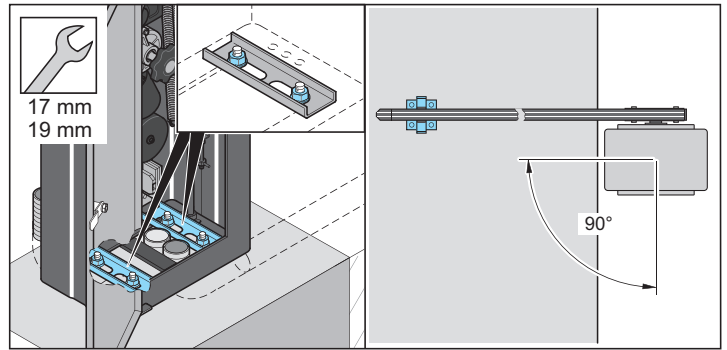
Installation

Installing the floating support

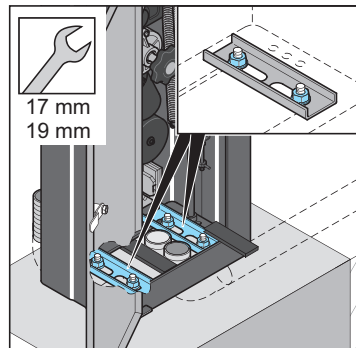


Aligning the position of the barrier

1. Open the emergency release (see [Page 28](#)) and close the barrier.



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



4. Tighten the 4 nuts as specified by the heavy-duty anchor manufacturer.
5. To calculate the position of the floating support, see "[Installation drawing](#)" on [page 14](#).
6. Remove the cap from the boom.
7. Hold the plate for screw connection of the floating support against the boom from below, in the position previously defined
8. Use the plate as a template to mark the position of the bore holes.
9. Drill holes in the marked positions.
10. Push the plate for screw connection of the floating support into the boom until the bore holes in the plate are aligned with the holes drilled in Step 5.
11. Bolt the floating support to the boom.
12. Close the barrier and check the distance of the floating support to the ground. When closed, the distance must be **approx. 2 cm**. If necessary, correct the lower end positions of the barrier; see "[Connection options](#)" on [page 33](#).
13. Replace the cap on the boom.

Installation

Connection to the power mains

- 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 (16A, slow-acting).
- The mains connection must be in accordance with EN 12453 (omnipolar mains circuit breaker). For this purpose, install a lockable main switch (all-pole deactivation).
- As a PE wire is already connected to the PE terminal at the factory, the PE wire from the mains supply line must be connected to the terminal provided on the base plate.



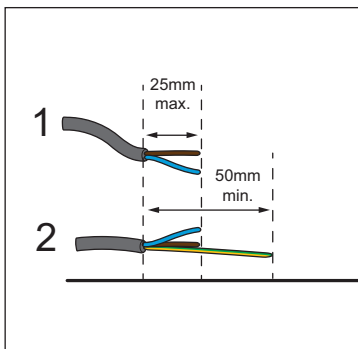
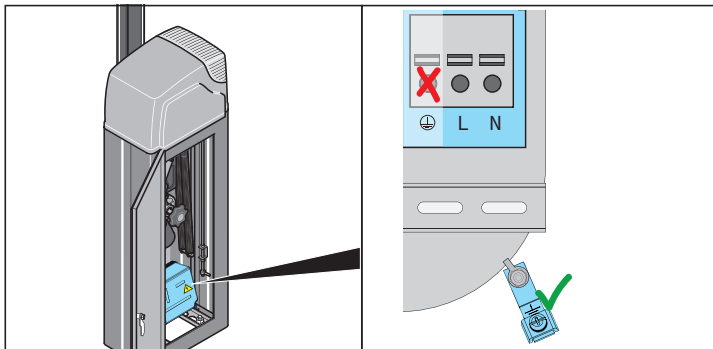
DANGER!

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

Electric 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 "Qualifications of personnel" on page 6.

1. Open the door of the barrier housing.
2. Connect the mains supply line as shown in the connection overview (see [Page 30](#)).
3. Fit strain relief.



Terminal	Wire
L	br
N	bu
PE	gn / ye

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.

Electric 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 **“Qualifications of personnel”** on page 6.



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!

- Risk of crushing at the lever system of the barrier when the hood and door of the barrier housing are open!

- 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.

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!

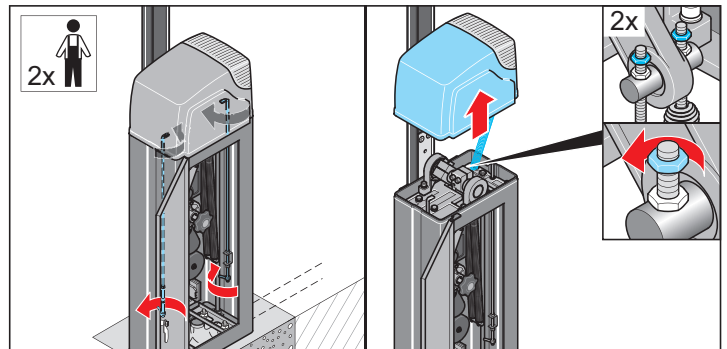
- Emergency release must be performed according to the instructions in this manual and only by two persons.

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

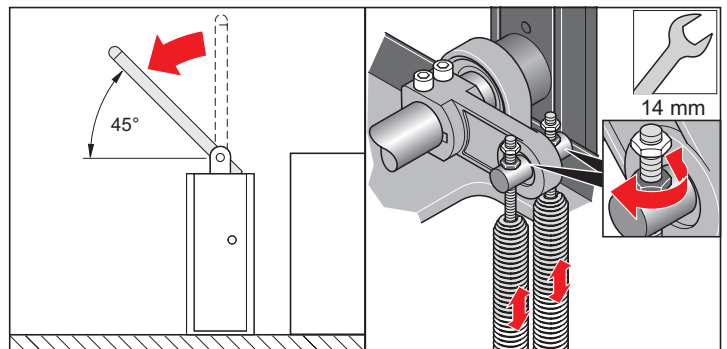
The barriers are delivered without adjustment of the spring unit. The required spring force depends on the specific boom installed and the accessories mounted on it.

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.

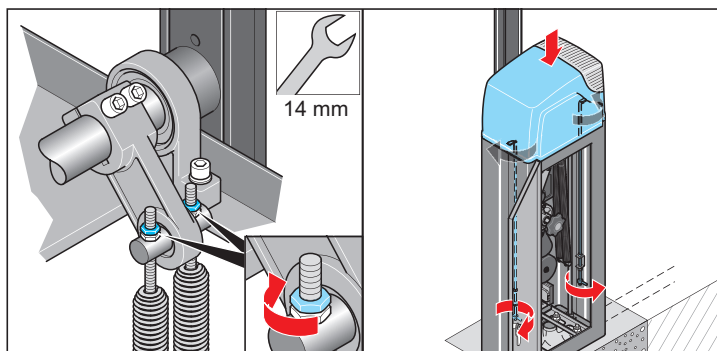


1. Open the door of the barrier housing.
2. Release the locking mechanism of the cover.
3. Remove the top cover of the barrier.
4. Release the lock nuts of both springs.
5. Barrier emergency release, see **“Emergency release”** on page 28



6. Bring the boom into a 45° angle using the emergency release button or by hand and hold it there.
7. Adjust both nuts of the springs so that the boom remains at a 45° angle when released.

Initial operation



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



INFORMATION:

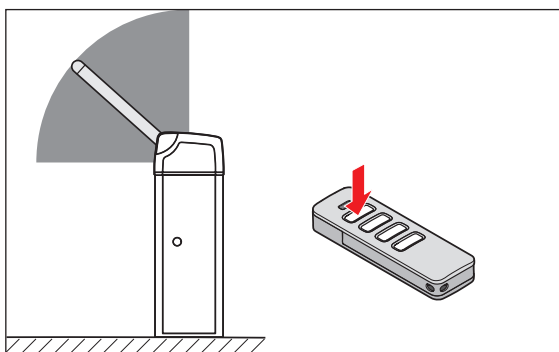
If changes are made to the boom later, the spring force must be readjusted and the force values reprogrammed. This is necessary when shortening the boom, mounting accessories on the boom or exchanging the boom for a longer or shorter boom.

Checking the movement range and end positions



INFORMATION:

- Movement range and end positions can be checked either with the handheld transmitter provided or with a button connected to Start 1 or Start 2.
- In accordance with the regulations, the first movement of the barrier when the operating voltage is connected is always in the OPEN direction. If this is not the case, there is a fault in the electrical connection and the wiring of the limit stops and the motor connection must be checked.



1. Connect the voltage supply of the barrier.
 - ⇒ "Status" LED flickers
10. Press button 1 on the handheld transmitter briefly.
 - ⇒ The barrier opens until the OPEN end position is reached, or it is already open.
 - ⇒ "Limit Open" LED lights up red.
 - ⇒ Warning light double-blinks.
11. Press button 1 on the handheld transmitter again.
 - ⇒ End position is confirmed.
 - ⇒ Barrier closes until the CLOSE end position is reached.
 - ⇒ "Limit Close" LED lights up.
 - ⇒ Warning light double-blinks.
12. Press button 1 on the handheld transmitter again.
13. If necessary, set the end positions of the barrier to the desired positions.

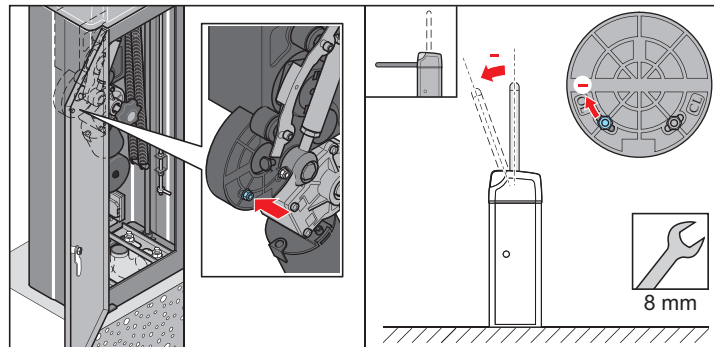
⇒ If the end positions are already correct, continue at chapter "Programming the force values and end positions" on page 24

Setting the end position (optional)

NOTE!

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

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



2. Open the door of the barrier housing.
3. 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 movement range is shortened
 - In the + direction, the movement range is extended

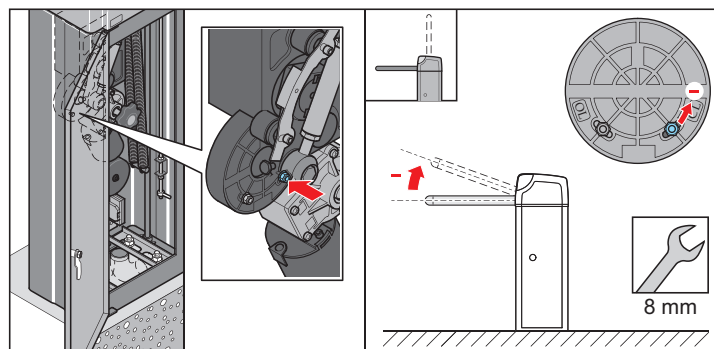


WARNING

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.



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 movement range is shortened
 - In the + direction, the movement range is extended
5. Check the movement range and end positions of the barrier; see "Checking the movement range and end positions" on page 23

Initial operation

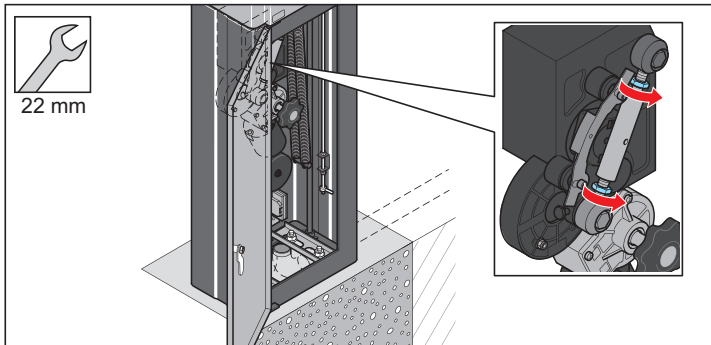
Setting the swivel range (optional)



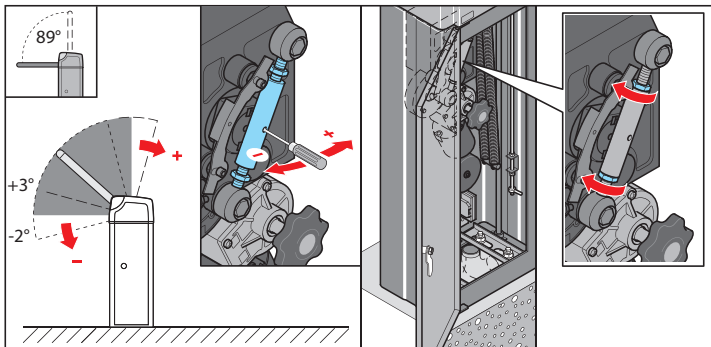
INFORMATION!

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 toward the **lower** end position.
 - In the + direction, the swivel range changes toward the **upper** end position.
5. Tighten both nuts (width across flats 22).
6. Check the movement range and end positions of the barrier; see "Checking the movement range and end positions" on page 23

Programming the force values and end positions



WARNING

In programming mode, the barrier moves with full force. This poses a high risk of injury to persons and animals.

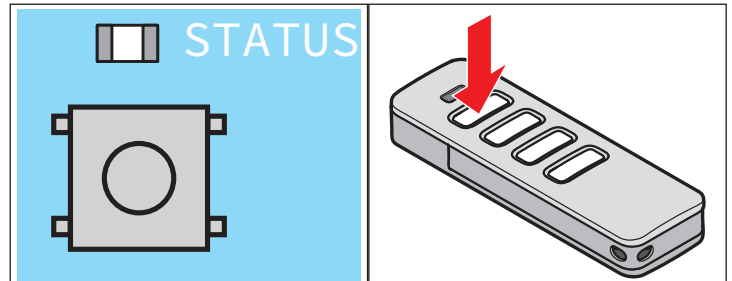
- Programming runs must be carried out under supervision and with a clear view of the movement area of the boom.



INFORMATION!

- The barrier has automatic obstacle recognition. The control unit memorises the required force during the barrier movements in both directions and stores them automatically when the end positions are reached. For this reason, a control unit reset must first be carried out.

- If an obstacle is detected during programming of the end positions and force values, the barrier stops or stops and reverses. If this happens, check the movement range, mechanism, spring tension and weight compensation of the barrier to prevent damage.
- Force values and end positions can be programmed either with the handheld transmitter provided or with a button connected to Start 1 or Start 2.



1. Press and hold the "Reset" button for 10 seconds (control unit reset); see "Resetting the control unit" on page 38
 - ⇒ Safety devices, force values and end positions are deleted.
2. Press button 1 on the handheld transmitter briefly.
 - ⇒ The barrier opens until the OPEN end position is reached, or it is already open.
 - ⇒ "Limit Open" LED lights up
 - ⇒ Warning light double-blinks.
3. Press button 1 again briefly.
 - ⇒ End position is confirmed.
 - ⇒ Barrier closes until the CLOSE end position is reached.
 - ⇒ "Limit Close" LED lights up.
 - ⇒ Warning light double-blinks.
4. Press button 1 again briefly.
 - ⇒ End position is confirmed.
 - ⇒ Barrier automatically starts the programming process for the force values.
 - Barrier opens
 - Barrier closes
 - Barrier opens
 - ⇒ Force values are programmed.
 - ⇒ Barrier is ready for operation.



INFORMATION!

The operating forces can be changed with SOMlink and a WiFi-enabled end device.

Obstacle detection event



INFORMATION!

An obstacle detection event takes place when the boom encounters an obstacle.

Two different obstacle detection events can occur during programming.

Obstacle detection event during programming of end positions

The barrier encounters an obstacle during the programming run for the end positions.

- ⇒ The barrier stops.
 - ⇒ The warning light blinks briefly and repeatedly
1. Press button 1 on the handheld transmitter briefly.
 - ⇒ The barrier opens until the OPEN end position is reached.
 - ⇒ "Limit Open" LED lights up.
 - ⇒ Warning light blinks.
 2. Remove obstacle.
 3. Continue programming of the end positions "[Programming the force values and end positions](#)" on page 24.

Obstacle detection event during programming of force values

The barrier encounters an obstacle during the programming run for the force values.

- ⇒ The barrier stops and reverses a short distance.
 - ⇒ The warning light blinks briefly and repeatedly.
1. Press button 1 on the handheld transmitter briefly.
 - ⇒ The barrier opens until the OPEN end position is reached.
 - ⇒ "Limit Open" LED lights up.
 - ⇒ Warning light blinks
 2. Remove obstacle.
 3. Continue programming of the end positions "[Programming the force values and end positions](#)" on page 24

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.

Electric 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 “Qualifications of personnel” on page 6.



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!



RISK OF CRUSH INJURIES TO HANDS!

- Risk of crushing at the lever system of the barrier when the hood and door of the barrier housing are open!
- 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.
- Children must never play with or use the barrier, even under supervision.
- Keep children away from the barrier.
- 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

Automatic closing function



DANGER!

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

- Operation with automatic closing must comply with EN 12453.
This is a legal requirement.
In countries outside the EU, the relevant safety regulations must be observed.
- The installation of a photocell is mandatory for operation with automatic closing. The automatic closing function does not work without a connected photocell.
- Never reach into moving parts!
- Keep persons and animals away from the movement area of the barrier!
- Keep children away from the barrier!
- Always keep the moving barrier in sight!
- Do not pass through the barrier until it has opened completely!

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.

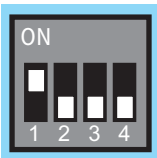
If an opening command is given again during automatic closing of the barrier, the barrier opens completely and the hold open time restarts.



INFORMATION!

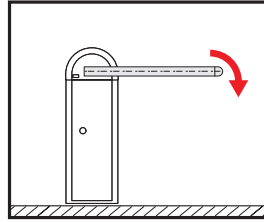
- The hold open time set at the factory is 60 seconds from the end position.
- This value can be changed via SOMlink.
- The setting range for the hold open time is 10 - 120 seconds.
- A shortening of the hold open time to 5 seconds after passing the photocell is set at the factory.

Setting the automatic closing function:

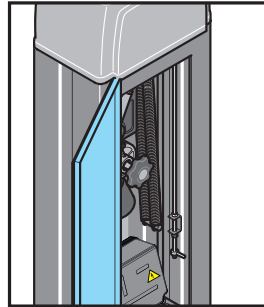


DIP switch	ON	OFF
1	Activated	Disabled 

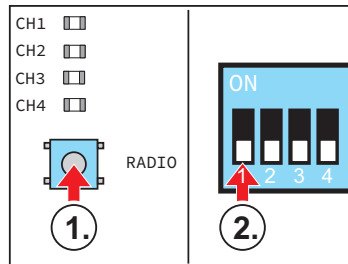
Setting the hold open time manually



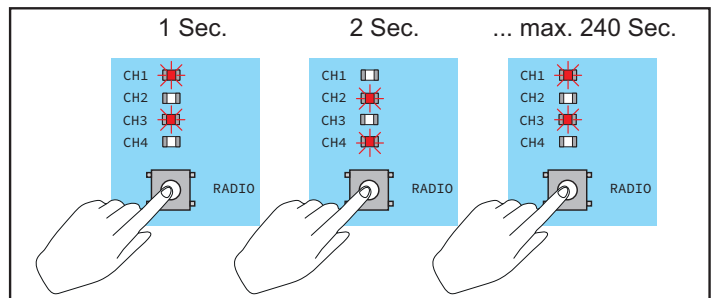
1. Close the barrier.



1. If necessary, open the housing door.
2. Check that DIP switch 1 is in "OFF" position.



3. First, **press and hold** the RADIO button. With the button pressed, set DIP switch 1 to "ON" position.
⇒ LEDs CH1 + CH3 and CH2 + CH4 light up alternately in pairs for one second in each case. With each alternation, the hold open time is extended by one second.



4. Count off the hold open time by counting the alternations of the LEDs. Release the RADIO button when the desired duration has been reached.

Operation and control

Early warning time

The warning light blinks during the pre-warning time to warn users of the opening and closing of the barrier.



INFORMATION!

- The pre-warning time can be set separately via SOMlink for the directions of movement OPEN and CLOSE.
- The setting range for the pre-warning time is 0 - 65 seconds.
- The progress of the pre-warning time is displayed by the blinking warning light.

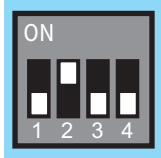
Power-saving mode

To save energy, the control unit switches to power-saving mode after 60 seconds.

Connected accessories, e.g. 8k2 safety contact strips or photocells, are deactivated in power-saving mode.

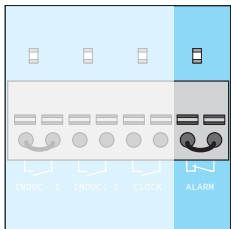
With the next command via the buttons or the radio control system, the barrier and the accessories are reactivated.

Setting power-saving mode:



DIP switch	ON	OFF
2	Disabled	Activated 

Resetting the ALARM safety input



1. Disconnect the barrier from the mains voltage.
2. Check that it is disconnected from the voltage supply.
3. Inspect the barrier for damage and repair any damage found.
4. Reset fire alarm system (close contact)
5. Restore the mains power supply
6. Execute a command using the button.

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.

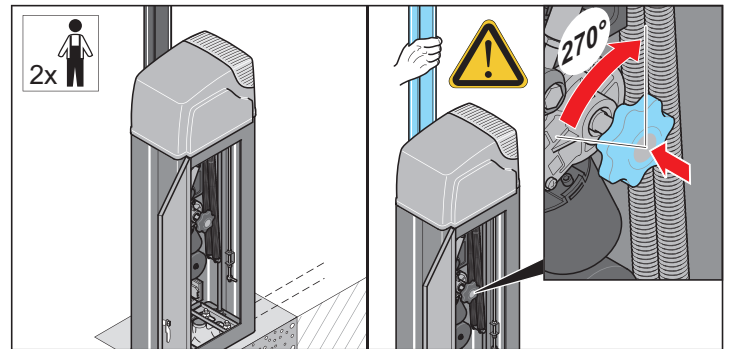


RISK OF CRUSH INJURIES TO HANDS!

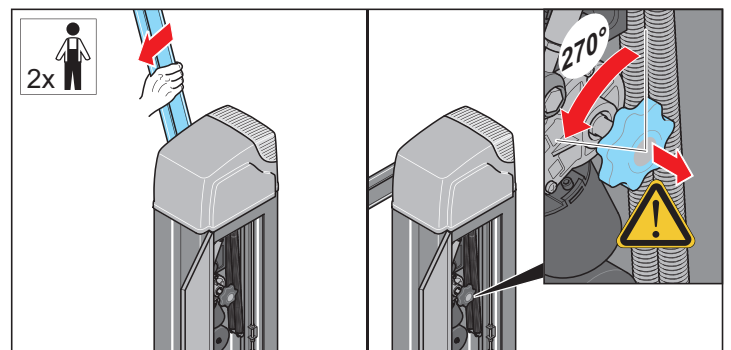
- Risk of crushing at the lever system of the barrier when the hood and door of the barrier housing are open!

- Follow the instructions on personal protective equipment!

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.

Safety information for control unit



DANGER!

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

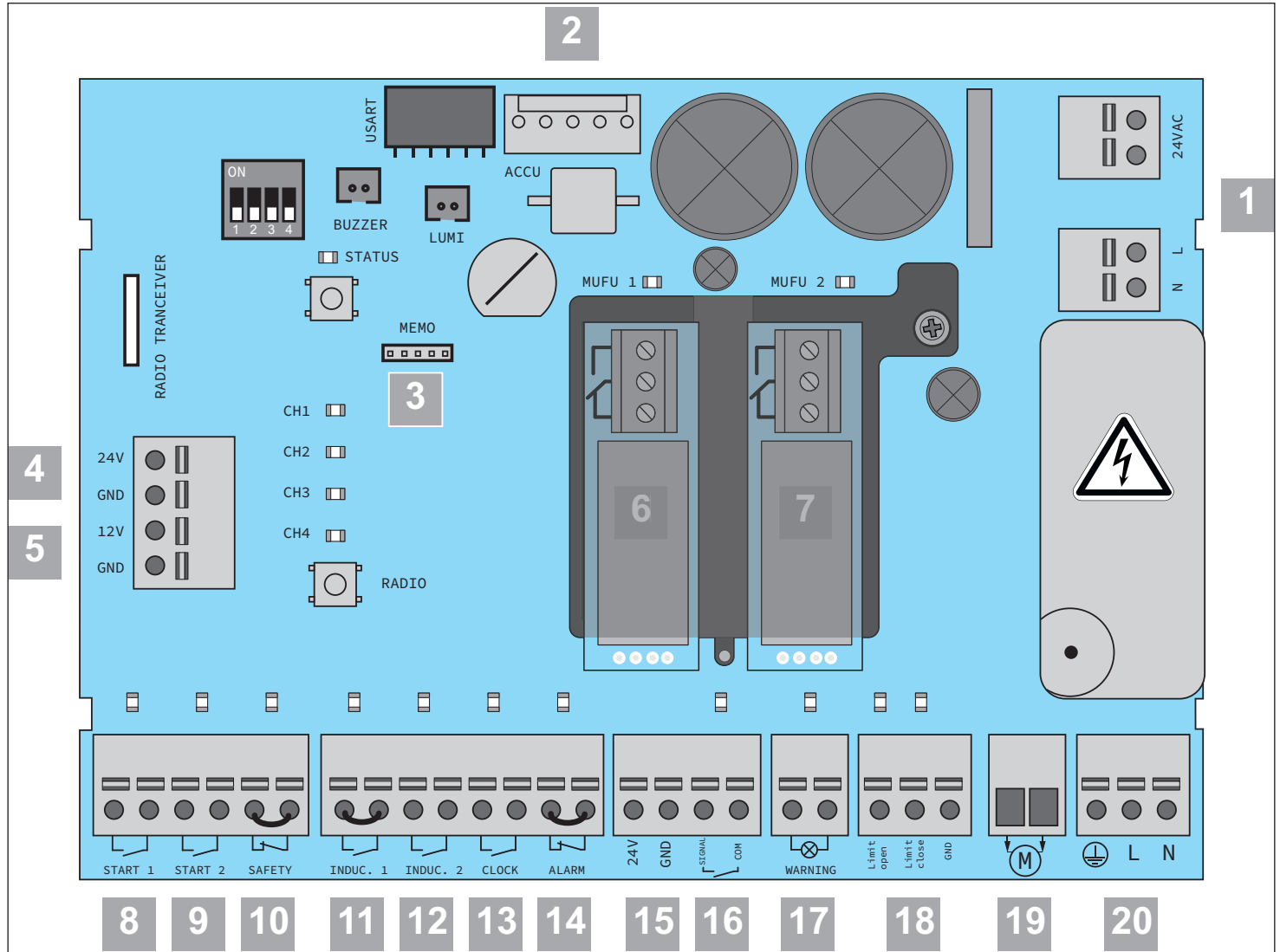
Electric shock, burns, or death may result.

- 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 **“Qualifications of personnel”** on page 6.

-
- Protect the control unit against moisture.
 - Do not apply an external voltage to the connections of the control unit or the control unit will immediately be permanently damaged.
 - Only use the control unit provided by SOMMER Antriebs- und Funktechnik GmbH; all other control units would be damaged or would damage the operator.

Control unit

Connection overview











1)	Transformer
2)	Slot for Accu
3)	Slot for Memo
4)	Output 24 V DC max. 300 mA (600 mA*)
5)	Output 12 V DC max. 150 mA
6)	Multi-function relay slot
7)	Multi-function relay slot
8)	External button 1, potential-free
9)	External button 2, potential-free
10)	Emergency stop / targeted STOP, potential-free
11)	Normally closed contact NC, contact evaluation unit of an induction loop as object protection, potential-free
12)	Normally open contact NO, contact evaluation unit of an induction loop as opener, potential-free
13)	Timer, potential-free
14)	Alarm safety input, potential-free
15)	Voltage supply 4-wire photocell 24 V DC, max. 100 mA
16)	2-wire photocell, switching contact 4-wire photocell, 8k2 safety contact strip
17)	Warning light 24 V max. 3W
18)	Limit stop OPEN /CLOSE (wire colours, see Page 34)
19)	Motor (wire colours, see Page 34)
20)	Mains connection 220-240 V AC 50/60 Hz

*600 mA are only available if no further external 24 V and 12 V device is connected to the control unit.

Control unit

Overview and flash sequences of the LEDs

The flash sequences provide information on malfunctions for the installer, the end customer and telephone support.

LED	Flash sequence	Cause
STATUS (green)	<input type="checkbox"/> Off	• Normal mode
		• Power-saving mode active / EMERGENCY STOP or targeted STOP activated
		• Force programming run in progress
		• End positions not programmed
START 1 START 2 (orange)	<input type="checkbox"/> Off	• External command device is not activated
	<input checked="" type="checkbox"/> On	• External command device is activated
		• Safety device in exterior interrupted/fault
SAFETY (green)	<input type="checkbox"/> Off	• EMERGENCY STOP / targeted STOP activated
	<input checked="" type="checkbox"/> On	• EMERGENCY STOP / targeted STOP not activated
		• Safety device interrupted in interior/fault
INDUC 1 (orange)	<input type="checkbox"/> Off	• Induction loop detector not activated
	<input checked="" type="checkbox"/> On	• Induction loop detector OFF activated
INDUC 2 (orange)	<input type="checkbox"/> Off	• Induction loop detector not activated
	<input checked="" type="checkbox"/> On	• Induction loop detector OFF activated
CLOCK (orange)	<input type="checkbox"/> Off	• External command device not activated
	<input checked="" type="checkbox"/> On	• External command device activated
ALARM (green)	<input type="checkbox"/> Off	• External command device not activated
	<input checked="" type="checkbox"/> On	• External command device activated
Photocell (orange)	<input type="checkbox"/> Off	• No photocell detected
	<input checked="" type="checkbox"/> On	• Photocell detected
		• Photocell interrupted / fault
WARNING (orange)	<input type="checkbox"/> Off	• Barrier not in operation / no mains voltage
	<input checked="" type="checkbox"/> On	• Lights up during movement / pre-warning time activated
		• Normal operation, blinks during movement • Programming mode activated / pre-warning time during reversing movement
		• Waiting for conformation of the end position in programming mode
		• Induction loop detector activated before or during movement / alarm fault e.g. fire alarm system activated
		• Service required

Control unit

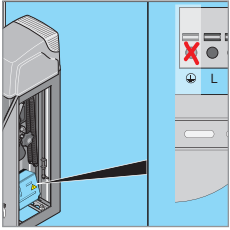
LED	Flash sequence	Cause
LIMIT OPEN (red)	<input type="checkbox"/> Off	• Boom is not in OPEN end position
	<input checked="" type="checkbox"/> ON	• Boom has reached the OPEN end position
LIMIT CLOSE (red)	<input type="checkbox"/> Off	• Boom is not in CLOSE end position
	<input checked="" type="checkbox"/> On	• Boom has reached the CLOSE end position
		• Safety device in exterior interrupted/fault
MUFU 1 / MUFU 2 (green)	<input type="checkbox"/> Off	• Multi-function relay not activated
	<input checked="" type="checkbox"/> On	• Multi-function relay activated

A connection diagram can be found in Chapter "[Connection diagram](#)" on page 58

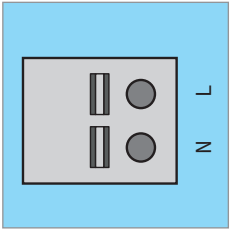
Control unit

Connection options

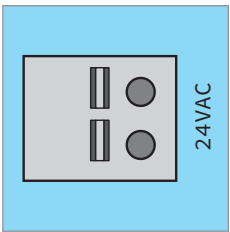
Terminal blocks



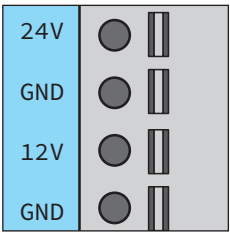
3-pin terminal block
Supply voltage
 220–240 V AC 50/60 Hz
 see “[Connection to the power mains](#)” on page 21



2-pin terminal block
Transformer primary side
 220–240 V AC 50/60 Hz



2-pin terminal block
Transformer secondary side
 24 V AC

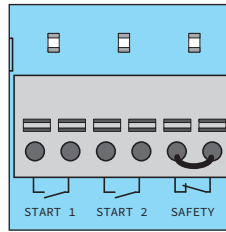


4-pin terminal block
24 V output
 DC max. 300 mA (600 mA*)
 Voltage supply for external accessories
 +24 V DC, GND
12 V output
 DC max. 150 mA
 Voltage supply for external accessories
 +12 V DC, GND



The 12 V and 24 V voltage sources are switched off when the control unit switches to power-saving mode.

*600 mA are only available if no further external 24 V and 12 V device is connected to the control unit.



6-pin terminal block
START 1, START 2 and SAFETY
 potential-free,
 e.g.: for external 3-way button
 OPEN - CLOSE - emergency stop
 with orange status LEDs
 Safety with status LED, green



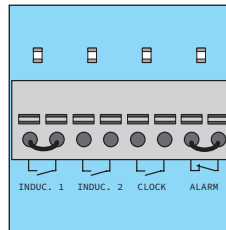
START 1 = Pulse ≤ 2 sec

START 2 = Pulse ≤ 2 sec

SAFETY = emergency stop



Programmable via SOMlink



8-pin terminal block
INDUC.1, INDUC 2, CLOCK and ALARM
 potential-free

INDUC.1: Normally closed contact
 NC, contact evaluation unit of an
 induction loop as object protection,
 potential-free
 with status LED, orange

INDUC.2: Normally open contact
 NO,
 contact evaluation unit of an
 induction loop as opener, potential-
 free
 with status LED, orange

CLOCK: For example, for timer or
 constant signal (barrier remains
 open as long as the signal is
 present)
 with status LED, orange

ALARM: For example, for fire alarm
 system
 with status LED, green



INDUC.1 = Object protection

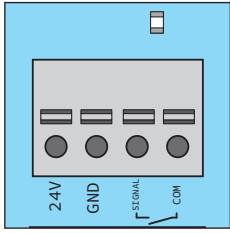
INDUC.2 = Open

CLOCK = Operating mode 1
 (barrier opens with closed contact)



Programmable via SOMlink

Control unit



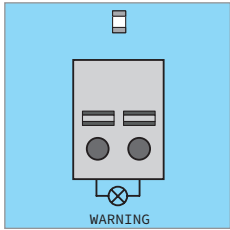
4-pin terminal block Photocell 2-wire, 4-wire or for 8k2 safety contact strip

2-wire:
Any polarity
Signal
COM
with status LED, orange

4-wire:
24 V DC, max. 100 mA
+ 24 V DC
GND
Signal
COM



With status LED, orange

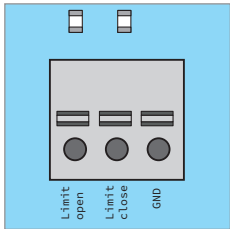
8k2 safety contact strip:
Signal
COM
With status LED, orange



2-pin terminal block WARNING

Warning light
24 V DC, max. 3 W
with status LED, orange

 : Warning light blinks during movement
 : Programmable via SOMLink

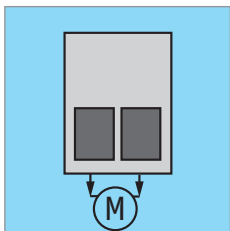


3-pin terminal block LIMIT OPEN, LIMIT CLOSE limit stop

Right-closing barrier:
LIMIT OPEN: red wire
LIMIT CLOSE: blue wire
GND: green - yellow wire

Left-closing barrier:
LIMIT OPEN: blue wire
LIMIT CLOSE: red wire
GND: green - yellow wire

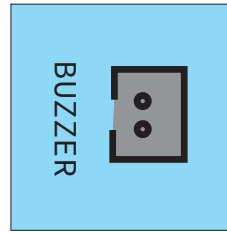
With status LED, red





2-pin terminal block MOTOR

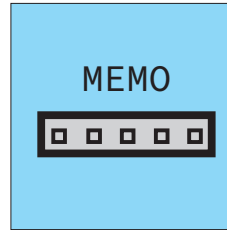
Wire colours:
right black
left red

Slots



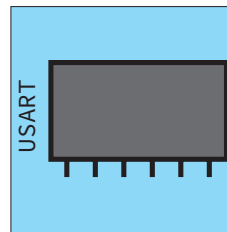
BUZZER slot, Buzzer terminal,

 : Buzzer sounds during movement
 : Programmable via SOMLink



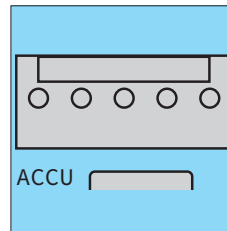
MEMO slot

Memo terminal,
(red housing)
memory expansion for 450 transmitter
commands





USART slot

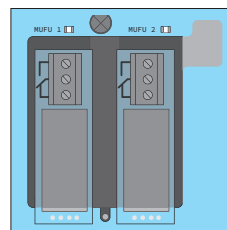
Terminal, e.g. home automation
module



ACCU slot



Terminal for battery pack

 : If the battery is low, the barrier
opens.
 : Programmable via SOMLink



MUFU 1 / MUFU 2 slots

Terminals for relay (potential-free
changeover contact) or Output OC (open
collector output)

 : MUFU 1: Relay activated as long as
the barrier is in OPEN end position.
MUFU 2: Relay activated as long as
the barrier is in CLOSE end
position.
 : Programmable via SOMLink

Control unit

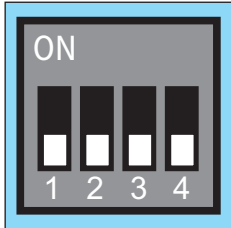
DIP switch





You can select different functions via the DIP switches. The following table summarises the various setting options.



INFORMATION!

- All DIP switches are set to "OFF" in the factory settings
- To prevent damage to the DIP switches or the circuit board, do not use sharp objects to change the position of the DIP switches.



DIP switch	Function	Effect
1	OFF 	Automatic closing
	ON	Deactivated
2	OFF 	Power-saving mode
	ON	Activated
3	OFF 	No function
	ON	Deactivated
4	OFF 	No function
	ON	Activated



Factory setting

Radio

Safety information for the radio remote control



DANGER!

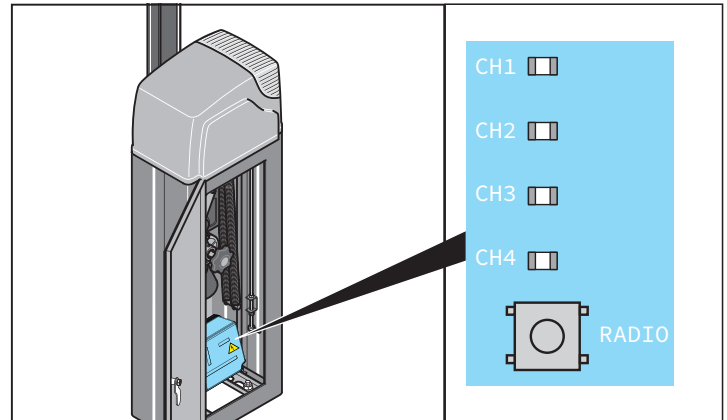
If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electric 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 "Qualifications of personnel" on page 6.

- 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.

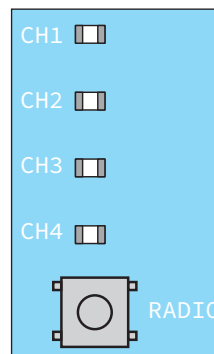
- The radio remote control may only be used if the operator has a direct view of the barrier and when there are no persons or objects within the range of movement.
- Store the handheld transmitter of the radio remote control in such a way that unintended operation e.g., by children or animals, is prevented.
- The user 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 handheld transmitters near locations or installations that are sensitive to radio interference (e.g.: airports, hospitals).



Explanation of the radio channels

LED	Radio channel	Setting/function
1	CH 1	Pulse mode
2	CH 2	 : Defined Stop
		 : Lighting function, multi-function relay
3	CH 3	Defined OPEN
4	CH 4	Defined CLOSE

Programming the transmitter



Control unit



INFORMATION!

If no transmission command is received within 30 seconds of pressing the Radio button, the radio receiver switches to normal operation.

1. Press the Radio button repeatedly to select the required radio channel.

LED	1 x	2 x	3 x	4 x
CH 1				
CH 2				
CH 3				
CH 4				

1. Press the desired button on the transmitter until the previously selected LED (CH 1, CH 2, CH 3, CH 4) goes out.
 - ⇒ LED goes out - programming is complete.
 - ⇒ The transmitter has transferred the radio code to the radio receiver.
2. Repeat the above steps to program additional transmitters.



INFORMATION!

Further transmitters cannot be programmed if all memory positions of the handheld transmitter are occupied.

If the memory capacity has been reached

A total of 40 handheld transmitter commands are available for all channels. If an attempt is made to program additional transmitters, the red LEDs of radio channels CH 1 - CH 4 blink. If more memory positions are required, see "Information on Memo" below.

Information on Memo

The memory capacity can be extended to 450 handheld transmitter commands using the optional Memo accessory part. When plugging in the Memo, all available transmitters are transferred from the internal memory to the Memo and stored there. The Memo must remain plugged in on the control unit.

No more transmitters are then stored in the internal memory. Stored transmitters cannot be transferred from the Memo back to the internal memory.

All radio channels, including the memory of the Memo, can be deleted; see Page 37.



INFORMATION!

Delete the Memo on a new receiver.

Otherwise, all stored transmitters of an operator are deleted and must be reprogrammed.

Cancelling programming mode

- Press the Radio button until all LEDs are off or make no input for 30 seconds.
 - ⇒ Programming mode is cancelled.

Deleting a transmitter button from the radio channel

1. Press the Radio button repeatedly to select the required radio channel. Press and hold the Radio button for 15 seconds.

LED	1 x	2 x	3 x	4 x
CH 1				
CH 2				
CH 3				
CH 4				

⇒ The LED flashes after 15 seconds.

2. Release the Radio button.
 - ⇒ The radio receiver is now in deletion mode.
 3. Press the transmitter button for which the command is to be deleted in the radio channel.
 - ⇒ LED goes out
 - ⇒ The deletion procedure has been completed.
- Repeat the process for additional buttons as required.

Deleting a transmitter completely from the receiver

1. Press and hold the Radio button for 20 seconds.
 - ⇒ The LED flashes after 15 seconds
 - ⇒ After another 5 seconds, the flash sequence changes to blinking.
 2. Release the Radio button.
 - ⇒ The radio receiver is now in deletion mode
 3. Press any button on the transmitter that is to be deleted.
 - ⇒ The radio receiver is now in deletion mode
 - ⇒ LED goes out
 - ⇒ The deletion procedure has been completed.
 - ⇒ The transmitter is deleted from the radio receiver
- Repeat the process for additional transmitters as required.

Control unit

Deleting a radio channel in the receiver

1. Press the Radio button repeatedly to select the required radio channel. Press and hold the Radio button for 25 seconds.

LED	1 x	2 x	3 x	4 x
CH 1				
CH 2				
CH 3				
CH 4				

- ⇒ The LED flashes after 15 seconds
 - ⇒ After another 5 seconds, the flash sequence changes to blinking.
 - ⇒ After another 5 seconds, the LED of the selected radio channel remains steady
2. Release the Radio button.
 - ⇒ The deletion procedure has been completed.
 - ⇒ All programmed transmitters on the selected radio channel are deleted from the radio receiver

Deleting all radio channels in the receiver

1. Press and hold the Radio button for 30 seconds.
 - ⇒ The LED flashes after 15 seconds
 - ⇒ After another 5 seconds, the flash sequence changes to blinking.
 - ⇒ After another 5 seconds, the LED of the selected radio channel remains steady
 - ⇒ After another 5 seconds, all LEDs light up
2. Release the Radio button.
 - ⇒ All LEDs are off after 5 seconds
 - ⇒ All programmed transmitters are deleted from the receiver
 - ⇒ Receiver is completely deleted; this also applies if the Memo is plugged in

Programming a second transmitter by radio (HFL)

Prerequisites for programming by radio

A handheld transmitter must already be programmed on the radio receiver. The handheld transmitters used must be identical. This means, for example, that a Pearl can only be programmed on a Pearl and a Pearl Vibe on a Pearl Vibe.

The key assignment of handheld transmitter (A) that put the radio receiver into teach-in mode by radio is used for the new handheld transmitter (B) that is to be programmed.

The already-programmed transmitter and the new transmitter to be programmed must be situated in the range of the radio receiver.

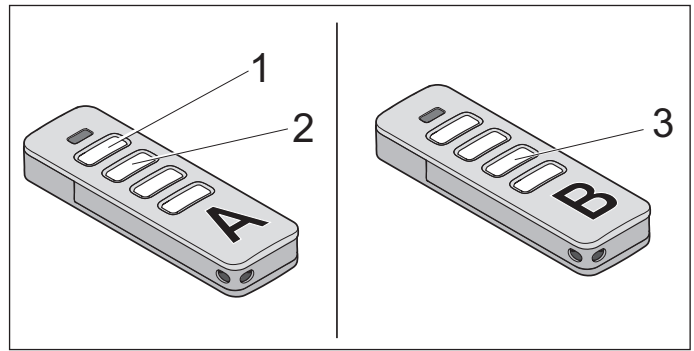
Example:

1. Button 1 on radio channel 1 and button 2 on radio channel 2 have been programmed by handheld transmitter (A).
 - ⇒ The newly programmed handheld transmitter (B) adopts the button assignment of handheld transmitter (A): Button 1 on radio channel 1, button 2 on radio channel 2.

Restriction

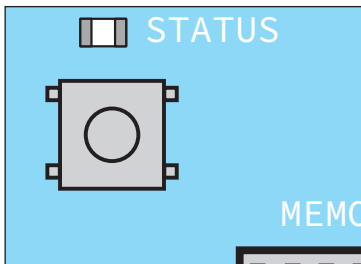
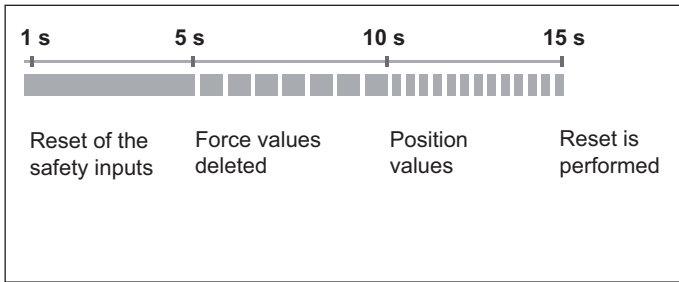
The following setting is **not** possible:

- The targeted teach-in of a selected handheld transmitter button on a radio channel.



1. Press buttons 1 and 2 of a programmed handheld transmitter (A) for 3 - 5 seconds until the LED on the handheld transmitter briefly lights up.
 - ⇒ Warning light and LEDs CH1 and CH2 blink
2. Release buttons 1 + 2 of the handheld transmitter (A).
 - ⇒ If a radio command is **not** transmitted within another 30 seconds, the radio receiver switches over to normal mode
3. Press any key, e.g. (3) on the new handheld transmitter (B) to be programmed.
 - ⇒ LEDs CH1 and CH2 go out

Resetting the control unit



INFORMATION!

A SOMlink and a WiFi-enabled device are required to reset all parameters to the factory settings.

Resetting the safety devices

- Press the green Reset button for 1 second.
 - ⇒ Reset of the connected safety devices.
 - ⇒ Subsequently attached safety devices are detected.

Deleting the force values

- Press the green Reset button for 5 seconds until the green status LED blinks slowly.
 - ⇒ Force values are deleted.

Deleting force and position values

- Press the green Reset button for 10 seconds until the green status LED blinks quickly.
 - ⇒ Force and position values deleted.

Reset

- Press the green Reset button for 15 seconds until the green LED goes out.
 - ⇒ Reset is performed.

SOMlink

SOMlink makes it possible for qualified specialists to change many functions and settings. These include force and speed values as well as operating parameters and other convenient functions.

If you would like to make changes, contact your specialist dealer.



INFORMATION!

SOMlink is a combination of an additional device and a web-based application for changing gate functions.

Since safety-relevant values can also be changed, SOMlink is only sold to qualified specialists.

All changes to settings via the SOMlink are logged.

Regular testing and maintenance



INFORMATION:

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	To be carried out by	Date and tester
Obstacle recognition		
Stop the boom during closing at a closing angle of about 45° with a 2-metre high object.	Specialist	
Emergency release		
Proceed as described in "Emergency release" on page 28.	Specialist	
Visual inspection		
Inspect the boom and attached parts such as support post and floating support as well as the inside and outside of the barrier housing for obvious defects, damage from vehicles, environmental influences or vandalism.	Specialist	
Safety devices		
Test the safety devices and repair as necessary.	Specialist	
Spring tension		
Check the spring tension and correct if necessary; see "Adjusting the spring unit" on page 22.	Specialist	
Mechanical systems		
Check the mechanical system of the barrier for correct functioning and repair as necessary.	Specialist	
Electrical system		
Check the electrical connections and cables for firm seating and damage and repair as necessary.	Trained electrician	

Troubleshooting

Safety information for troubleshooting



DANGER!

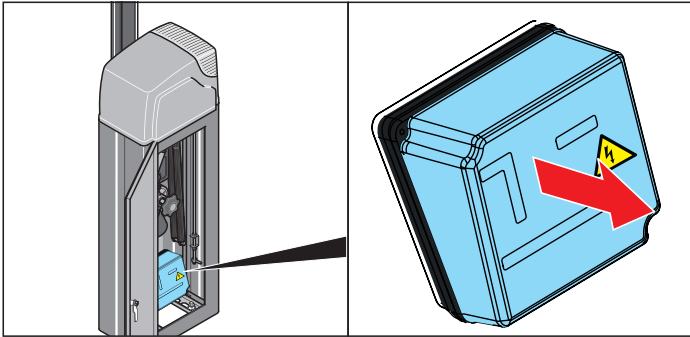
If there is direct or indirect contact with live parts, dangerous current could flow through the body.

Electric shock, burns, or death may result.

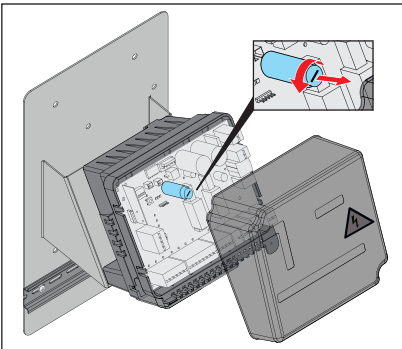
- Before performing wiring work, make sure that the lines are de-energised. During wiring work, make sure that the lines remain de-energised (e.g. prevent reactivation).
- Connection to the mains power must be performed by the personnel described in the chapter “Qualifications of personnel” on page 6.

Changing the fuse

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



1. Open the barrier housing.
2. Open the control unit housing.



3. Change the defective fuse (1 A fast-acting fuse).
4. Close the control unit housing.
5. 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 and door of the barrier housing are open!

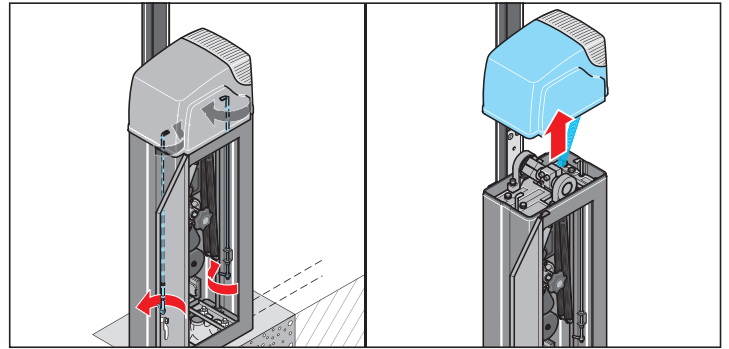
- All work on the barrier must be carried out by qualified personnel!
- Before working on the barrier, always disconnect the system and secure it to prevent reactivation!
- Install the barrier housing without the boom!
- Follow the instructions on personal protective equipment!



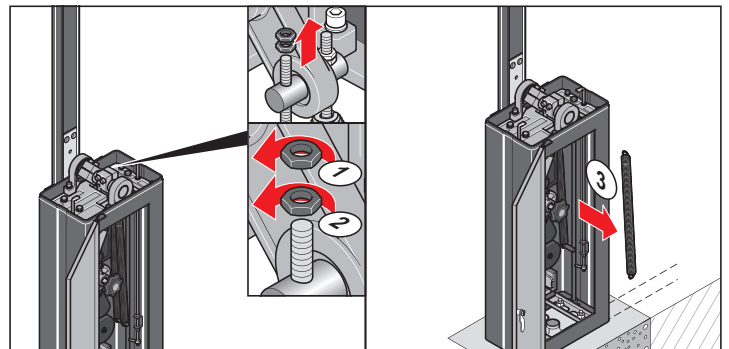
INFORMATION:

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

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

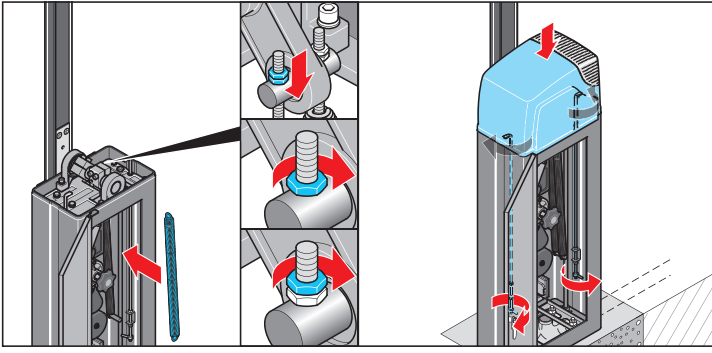


2. Open the door of the barrier housing and release the lock of the cover.
3. Remove the top cover of the barrier.



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 [“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 "[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 carrying out troubleshooting.
- 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"> • Switch on the main switch. • Check the fuse of the supply line. • Check the supply line. • Check transformer.
	No control unit installed.	<ul style="list-style-type: none"> • Install the control unit.
	Automatic closing function activated.	<ul style="list-style-type: none"> • Barrier closes automatically when the set time elapses. For settings, see "Automatic closing function" on page 27.
	Spring torn.	<ul style="list-style-type: none"> • Replace spring; see "Replacing springs" on page 40.
	Safety device prevents closing.	<ul style="list-style-type: none"> • Free the safety device. • Check the safety device. • Clean the photocell.
	The overload protection has stopped the barrier.	<ul style="list-style-type: none"> • Wait 20 seconds until the control unit enables the barrier again.
The barrier does not open or close when a handheld transmitter is actuated.	Handheld transmitter battery is empty. LED on the handheld transmitter does not light up.	<ul style="list-style-type: none"> • Replace the battery of the handheld transmitter.
	Handheld transmitter has not been programmed on the radio receiver.	<ul style="list-style-type: none"> • Program the handheld transmitter, see "Programming the transmitter" on page 35.
	The command is constantly present because the button of the handheld transmitter is jammed. The LED on the radio receiver lights up.	<ul style="list-style-type: none"> • Release the button or replace the handheld transmitter. • Program handheld transmitter on a different radio channel, see Programming a handheld transmitter, p. "Programming the transmitter" on page 35.
The barrier does not open or close when a command device (e.g. key switch) is actuated.	Handheld transmitter is programmed on radio channel 2 (LED CH2 lights up when the handheld transmitter button is pressed).	<ul style="list-style-type: none"> • Program handheld transmitter on a different radio channel, see "Explanation of the radio channels" on page 35.
	The command device is not connected or defective. LED START 1 / START 2 does not light up when the command device is actuated.	<ul style="list-style-type: none"> • Check the supply line of the command device. • Replace the command device.
	A constant signal is present - water in the housing of the command device. LED START 1 / START 2 lights up when the command device is actuated.	<ul style="list-style-type: none"> • Replace the command device and protect against moisture.
The barrier stops during closing, moves about 10 cm in the opposite direction and stops. Warning light and LED WARNING blink for 20 seconds: 	Actuation of the obstacle recognition due to an obstacle.	<ul style="list-style-type: none"> • Remove obstacle.
	Incorrect force values programmed.	<ul style="list-style-type: none"> • Perform a control unit reset and reprogramme the force values. Do not increase the force tolerance unless this measure does not help. See "Programming the force values and end positions" on page 24.
	Barrier incorrectly set or defective.	<ul style="list-style-type: none"> • Have the barrier adjusted or repaired by a specialist; to do this, call your specialist retailer or a service partner.
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"> • Check the spring setting and correct if necessary; see "Adjusting the spring unit" on page 22. • Replace broken springs; see "Replacing springs" on page 40.

troubleshooting

Fault	Possible cause	Corrective action
Connected warning light does not light up.	Light bulb defective. No operating voltage at light bulb.	<ul style="list-style-type: none"> • Replace light bulb. • Check the supply line.
Connected warning light does not light up / blink during opening / closing. LED WARNING lights up / blinks.	Lighting activated during movement / pre-warning time activated.	<ul style="list-style-type: none"> • Set warning light to blinking with SOMlink.
Warning light blinks with the following pattern: 	Induction loop detector activated before or during movement.	<ul style="list-style-type: none"> • Remove all metal objects in the area of the induction loop. • Repair induction loop or induction loop detector.
Speed changes during opening and closing.	No fault.	<ul style="list-style-type: none"> • Completely normal: before the end positions are reached, the barrier reduces speed (soft run).
Warning light blinks with the following pattern: 	Operator or control unit defective.	<ul style="list-style-type: none"> • Have it checked and, if necessary, operator or components replaced by a specialist.
Warning light blinks with the following pattern: 	Service required (e. g. pre-set limit value reached).	<ul style="list-style-type: none"> • Have service performed by a qualified specialist.
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"> • Deactivate dead man mode with SOMlink.
Barrier is open and cannot be closed. Warning light blinks. Warning light blinks with the following pattern:  LED warning light blinks with the following pattern: 	Alarm safety input open, e.g. fire alarm system activated or jumper defective.	<ul style="list-style-type: none"> • Close Alarm safety input, reset fire alarm system and carry out power reset. • Repair jumper and carry out power reset.
LED START 1 / START 2 constantly lit.	Constant signal at button connection 1 or 2. An external signal is interfering with the control unit of the barrier; LED CH1, CH2, CH3 or CH4 lights up on the control unit.	<ul style="list-style-type: none"> • Check connected command devices. • Wait until the external signal drops. • Remove the sources of the interference emitting the external signal.
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"> • Have barrier adjusted or repaired by a specialist.
LED CH1, CH2, CH3 or CH4 lights up continuously.	The radio signal is being received. The button on the handheld transmitter may be faulty or an external signal may be present.	<ul style="list-style-type: none"> • Remove the battery from the handheld transmitter. • Wait until the external signal drops.
LED CH1, CH2, CH3 or CH4 lights up for 30 seconds.	The radio receiver is in programming mode and waiting for a radio code from a handheld transmitter.	<ul style="list-style-type: none"> • Press the desired handheld transmitter button.
Barriers with floating support only 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"> • If necessary, correct the lower end positions of the barrier; see "Setting the end position (optional)" on page 23.

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
- Set all DIP switches to OFF
- Disconnect connected accessories (e.g. photocell) and reconnect the jumper for a safety connection.
- Check all connections

If you encounter other problems, please contact your specialist dealer,

a customer service company: <https://www.sommer.eu/de/servicepartner.html>,

our free service hotline:



+49 (0)900-1800150

(0.14 euros/minute from a German landline, mobile prices may vary)

or visit our website at: <https://www.sommer.eu/de/>

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 "Qualifications of personnel" on page 6.



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 into intermediate storage after disassembly, observe the provisions and regulations for storage listed in "Transport / Unloading / Storage" on page 12.

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.

Electric 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 CRUSH INJURIES TO HANDS!

- Risk of crushing at the lever system of the barrier when the hood and door of the barrier housing are open!
- Follow the instructions on personal protective equipment!

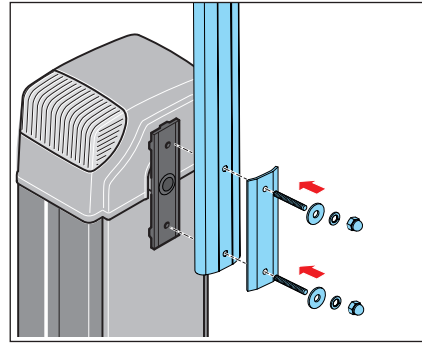


RISK OF BURNS!

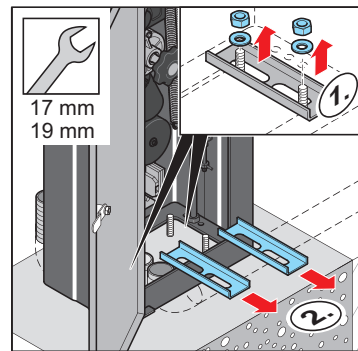
Wait at least five minutes after deactivation so that the motor can cool down and the capacitors lose their voltage.

1. Disconnect the mains supply line and remove it.
2. Remove the control unit.
3. Disassemble the connected accessories and remove the control unit.

Flat boom 400, 580 and LED 500



4. Remove the boom in the vertical opening position.
5. Release the support plate and remove the boom.
6. Release and remove the adapter plate.



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

Disassembly and disposal

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 Conformity

for the installation of a machine
in accordance with the in accordance with the Machinery Directive 2006/42/EC, Annex II, Section 1 A

SOMMER Antriebs- und Funktechnik GmbH
Hans - Böckler - Straße 21 - 27
73230 Kirchheim unter Teck
Germany

hereby declares that the barrier systems

ASB Alu ASB Stahl

have been developed, designed and manufactured in conformity with the

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU
- RoHS Directive 2011/65/EU

The following standards were applied:

- EN ISO 13849-1, PL "C" Cat. 2 Safety of machines - safety-related parts of controls
- Part 1: General design guidelines
- EN 60335-1, where applicable Safety of electrical appliances / operators for gates
- EN 61000-6-3 Electromagnetic compatibility (EMC) - interference
- EN 61000-6-2 Electromagnetic compatibility (EMC) - interference resistance

The following requirements of Annex 1 of the Machinery Directive 2006/42/EC are met:

1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.6, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6, 1.5.14, 1.6.1, 1.6.2, 1.6.3, 1.7.1, 1.7.3, 1.7.4


The special technical documentation was prepared in accordance with Annex VII Part B and will be submitted to regulators electronically on request.

The incomplete machine is intended solely for installation in a door system to form a complete machine as defined by the Machinery Directive 2006/42/EC. The gate system may only be put into operation after it has been established that the complete system complies with the regulations of the above EC Directives.

The undersigned is responsible for compilation of the technical documents.

Kirchheim, 20 March 2021



i.V. 
Jochen Lude
Responsible for documents

Handover protocol



INFORMATION:

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.



INFORMATION:

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.



INFORMATION:

Safety testing is not to be equated with maintenance!



INFORMATION:

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 Alu

ASB Stahl

Right-closing

Left-closing

Closing direction

Serial number

.....

Year of manufacture

.....

Item Number

.....

Boom length

....., m

Handover protocol

7. Installed accessories:

Floating support
(from 4 m boom length)

Yes No

Support post
(from 4 m boom length)

Yes No

External warning light

Yes No

Main switch (all-pole deactivation)

Yes No

External antenna

Yes No

Other

.....

8. Safety devices:

Photocell

Yes Installation height: No

Induction loop

Yes Quantity: No

Other

.....

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

Other

.....

Handover protocol

10. Setting of the barrier:

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

11. Induction loops:

1. Induction loop

Loop circumference 5 m 9 m 13 m

Function Object protection close open

Resistance Ω

Insulation resistance $M\Omega$

Loop position (where applicable, sketch)

2. Induction loop

Loop circumference 5 m 9 m 13 m

Function Object protection close open

Resistance Ω

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

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

Location

Date

Signature

Location

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 systems

	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 stop OPEN (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit stop 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)			
1. Induction loop (function / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 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"/>

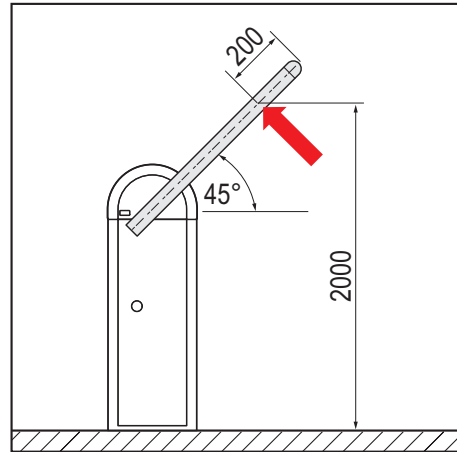
Safety devices

	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)



Maximum operating force complied with (max. 400 N)

Yes No

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

Location

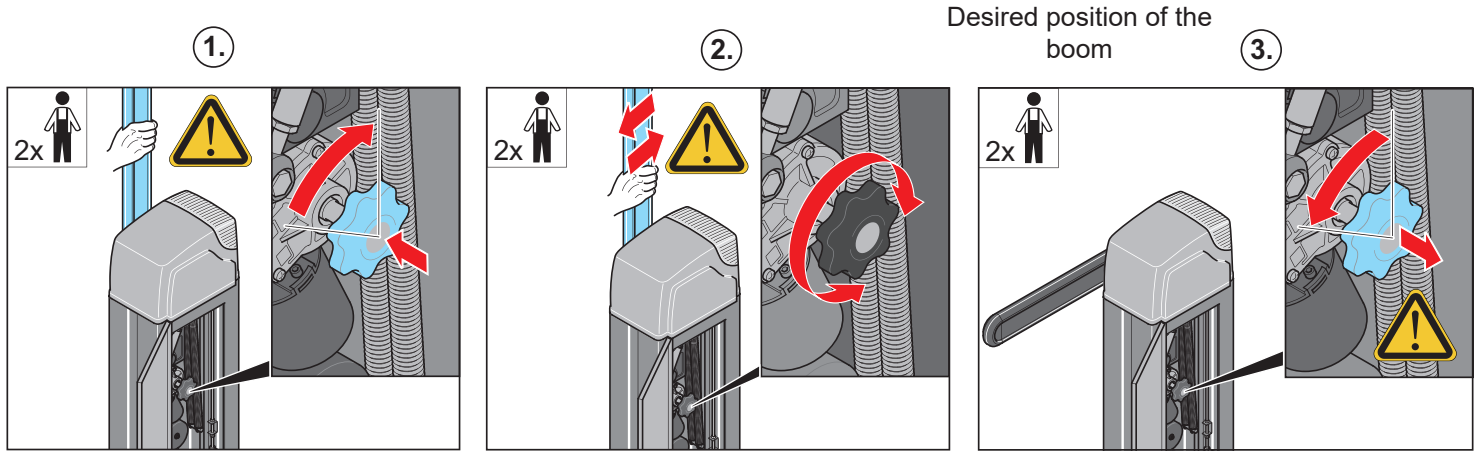
Date

Signature

Brief instructions

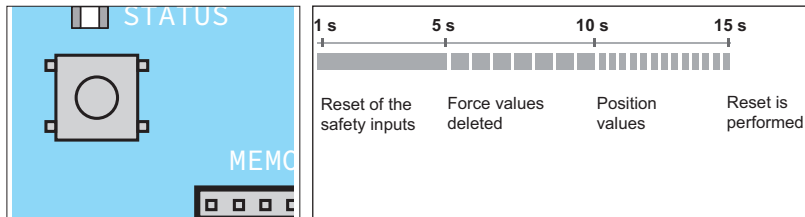
CAUTION
 These brief instructions do not replace the Installation and Operating Manual! The safety instructions and warnings in the Installation and Operating Manual must be complied with!

Emergency release



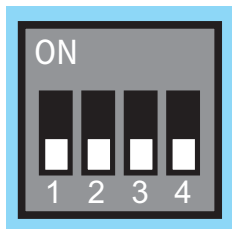
INFORMATION!
 A SOMlink and a WiFi-enabled device are required to reset all parameters to the factory settings.



Resetting the control unit



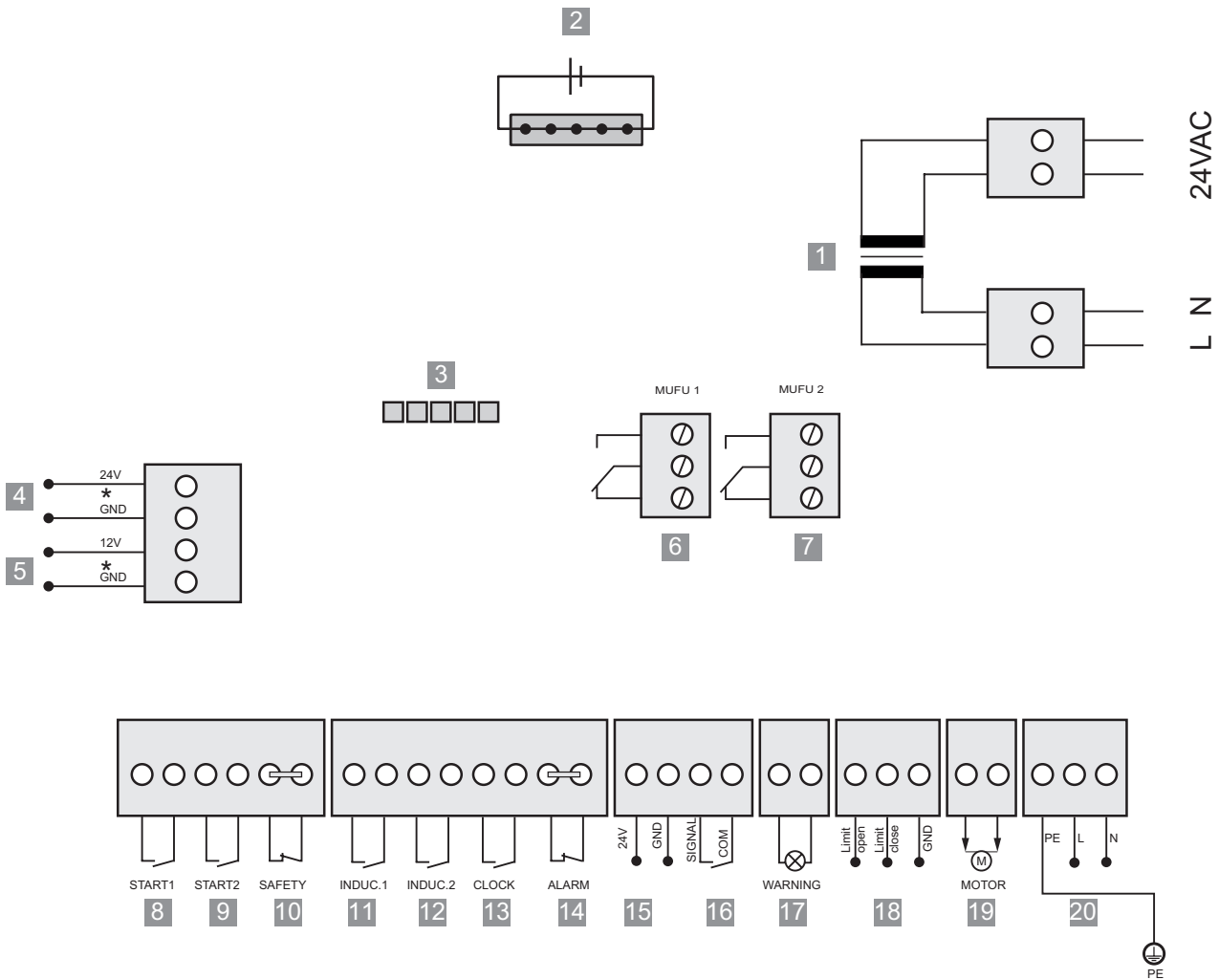
- Press the green Reset button for 15 seconds until the green LED goes out.
 ⇒ Reset is performed.

Overview of the DIP switches



DIP switch	Function	Effect
1	OFF 	Deactivated
	ON	Activated
2	OFF 	Activated
	ON	Deactivated
3	OFF	No function
	ON	No function
4	OFF	No function
	ON	No function

Connection diagram



* The 12 V and 24 V voltage sources are switched off when the barrier switches to power-saving mode.

1)	Transformer
2)	Slot for Accu
3)	Slot for Memo
4)	Output 24 V DC max. 300 mA (600 mA*)
5)	Output 12 V DC max. 150 mA
6)	Multi-function relay slot
7)	Multi-function relay slot
8)	External button 1, potential-free
9)	External button 2, potential-free
10)	Emergency stop / targeted STOP, potential-free
11)	Normally closed contact NC, contact evaluation unit of an induction loop as object protection, potential-free
12)	Normally open contact NO, contact evaluation unit of an induction loop as opener, potential-free
13)	Timer, potential-free
14)	Alarm safety input, potential-free
15)	Voltage supply 4-wire photocell 24 V DC, max. 100 mA
16)	2-wire photocell, switching contact 4-wire photocell, 8k2 safety contact strip
17)	Warning light 24 V max. 3W
18)	Limit stop OPEN / CLOSE (wire colours see Page 34)
19)	Motor (wire colours, see Page 34)
20)	Mains connection 220-240 V AC 50/60 Hz

For colours of the lines on motor and limit stop connection, see [“Connection options” on page 33](#)

*600 mA are only available if no further external 24 V and 12 V device is connected to the control unit.

* The 12 V and 24 V voltage sources are switched off when the barrier switches to power-saving mode.

SOMMER Antriebs- und Funktechnik GmbH
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D-73230 Kirchheim/Teck
Germany

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