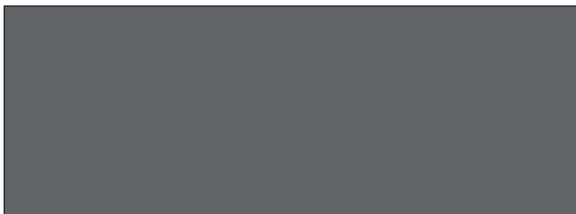


EN TRANSLATION OF THE ORIGINAL INSTALLATION AND OPERATING MANUAL

Garage door operator

- S 9060 tiga+
- S 9080 tiga+
- S 9110 tiga+



Dear customer,

Congratulations on your purchase of a product of
SOMMER Antriebs- und Funktechnik GmbH.

This product has been developed and manufactured under high standards of quality and with reference to ISO 9001. Our passion for the product is just as important to us as the needs and requirements of our customers. We place particular emphasis on the safety and reliability of our products.

Read this installation and operating manual carefully and follow all instructions. This will ensure that you can install the product safely and optimally and operate it properly.

If you have any questions, please contact your specialist retailer, installer or contact.

Information on the operator:

Serial No.: Specified on the title page of the installation and operating manual and on the carriage (warranty label).

Year of manufacture: From 12/2016

Information on the installation and operating manual

Version of the installation and operating manual:
S10557-00001_452016_0-DRE_Rev-A_EN

Warranty

The warranty complies with statutory requirements. The contact person for warranties is the qualified dealer. The warranty is only valid in the country in which the operator was purchased. There is no warranty for consumables such as batteries, accumulators and safety products as well as bulbs. This also applies for wear parts.

Contact data

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

SOMMER Antriebs- und Funktechnik GmbH

Hans-Böckler-Str. 21-27
D-73230 Kirchheim/Teck

www.sommer.eu
info@sommer.eu

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:



+49 (0) 7021 8001 - 403



doku@sommer.eu

Service

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Table of contents

1. About this installation and operating manual	5	8. Electrical connection and special functions	41
1.1 Storage and circulation of the installation and operating manual	5	8.1 Connection to a power socket	41
1.2 Important for translations	5	9. Commissioning	42
1.3 Description of the product type	5	9.1 Safety information for commissioning	42
1.4 Target groups of the installation and operating manual	5	9.2 Initial operation	43
1.5 Explanation of warning symbols and notes used	5	9.3 Detecting obstacles during force programming run	45
1.6 Special warnings, hazard signs and mandatory signs	6	9.4 Mechanical adjustment of the end positions	46
1.7 Information regarding the depiction of text	8	9.5 Attaching information sign and warning signs	46
1.8 Intended use of the operator	8	10. Connections and special functions of the carriage	47
1.9 Improper use of the operator	9	10.1 Carriage circuit board	47
1.10 Qualifications of personnel	9	10.2 Connection options on the carriage	48
1.11 For the user	10	10.3 Reducing illumination power of LEDs	49
2. General safety instructions	11	10.4 Explanation of radio channels	49
2.1 Basic safety instructions for operation	11	10.5 Programming the transmitter	49
2.2 Additional safety information for the radio remote control	13	10.6 Information on Memo	49
3. Description of function and product	14	10.7 Cancelling programming mode	50
3.1 The operator and its mode of operation	14	10.8 Deleting a transmitter button from the radio channel	50
3.2 Safety equipment	15	10.9 Deleting transmitter completely from the receiver	50
3.3 Definitions	16	10.10 Deleting radio channel in the receiver	50
3.4 Operator response with factory settings	17	10.11 Deleting all radio channels in the receiver	51
3.5 Product designation	18	10.12 Programming a second transmitter by radio (HFL)	51
3.6 Explanation of tools used	18	10.13 Resetting the control unit	51
3.7 Scope of delivery	19	10.14 Setting the DIP switches on the carriage	52
3.8 Dimensions	20	10.15 Setting the automatic closing function	52
3.9 Technical data	20	10.16 Open holding time	53
3.10 Door types and accessories	21	10.17 Pre-warning time	54
4. Tools and protective equipment	22	10.18 Priority switching	54
4.1 Required tools and personal protective equipment	22	10.19 Shortened open holding time for driving through the photo eye	54
5. Declaration of installation	23	10.20 Clearing time	54
6. Installation	24	10.21 12 V output	55
6.1 Important information on installation	24	10.22 Setting partial opening	55
6.2 Preparation for installation	25	10.23 Deleting partial opening	55
6.3 Installation of the operator system	28	10.24 Slip door safety device	56
6.4 Installation of the operator system for installation versions A and B	29	10.25 SOMlink	56
6.5 Installation of the operator system for installation version C	31	11. Connections and special functions of the wall control unit	57
6.6 Installation on the door	33	11.1 Wall control unit circuit board	57
6.7 Installing wall control unit	37	11.2 Connection options to the wall control unit	59
7. Removing and fastening covers	39	11.3 Setting the DIP switches on the wall control unit	62
7.1 Cover of carriage	39	11.4 Information on Memo tiga	63
7.2 Cover hood of wall control unit	40	11.5 Multi-function relay, MUFU 1 and MUFU 2	64
		11.6 Photo eye and frame photo eye	64
		11.7 Connecting safety contact strip	66
		11.8 Connection options for control device	68
		11.9 ALARM and SAFETY connection	69
		11.10 Installing and removing battery pack	70

12. Function test/Final test	72
12.1 Testing obstacle detection	72
12.2 Handover of door system	73
13. Operation	74
13.1 Safety information on operation	74
13.2 Handover to the user	75
13.3 Operating modes of door movement	76
13.4 Obstacle detection	79
13.5 Power-saving mode	80
13.6 Operation during power failure	80
13.7 Function of the emergency release	80
14. Maintenance and care	82
14.1 Safety instructions for maintenance and care	82
14.2 Maintenance schedule	84
14.3 Care	84
15. Troubleshooting	85
15.1 Safety instructions for troubleshooting	85
15.2 Troubleshooting	86
15.3 Time sequences of operator lighting in normal mode and in case of faults	87
15.4 Troubleshooting table	88
15.5 Replacing the carriage	90
16. Placing out of operation, storage and disposal	91
16.1 Placing the operator out of operation and disassembly	91
16.2 Storage	92
16.3 Disposal of waste	92
17. Short instructions for installation	94
18. Connection diagrams and functions of the DIP switch	97

1. About this installation and operating manual

1.1 Storage and circulation of the installation and operating manual

Read this installation and operating manual carefully and completely before installation, commissioning and operation and also before removal. Follow all warnings and safety instructions.

Keep this installation and operating manual accessible at all times at the place of use.

A replacement for the installation and operating manual can be downloaded from **SOMMER Antriebs- und Funktechnik GmbH** at: www.sommer.eu

In the event of transfer or resale of the door operator to third parties, the following documents must be passed on to the new owner:

- This installation and operating manual
- Documents recording retrofitting and repairs
- Proof of regular care, maintenance and testing
- Declaration of Conformity and Handover Report

1.2 Important for translations

This original installation and operating manual was written in German. The other available languages are translations of the German version. You can get the original installation and operating manual by scanning the QR code:



<http://som4.me/orig-tiga-plus-reva>

1.3 Description of the product type

The operator has been constructed according to state-of-the-art technology and recognized technical regulations and is subject to the EC Machinery Directive (2006/42/EC). The operator is fitted with a radio receiver. Optionally available accessories are also described. The actual scope of delivery deviates from this.

1.4 Target groups of the installation and operating manual

The installation and operating manual must be read and observed by everyone assigned with one of the following tasks:

- Unloading and in-house transport
- Unpacking and installation
- Commissioning
- Setting
- Usage
- Care and maintenance
- Testing
- Troubleshooting
- Disassembly and disposal

1.5 Explanation of warning symbols and notes used

The warnings in this installation and operating manual are structured as follows.



Hazard symbol



Signal word

Type and source of hazard
Consequences of the hazard

- ▶ Preventing/avoiding the hazard

The hazard symbol indicates the hazard. The signal word is linked to a hazard symbol. The hazard is classified into three classes depending on its danger:

DANGER

WARNING

CAUTION

1. About this installation and operating manual

There are three different classifications of hazards.



DANGER

Describes an immediate danger that leads to serious injury or death

Describes the consequences of the danger to you or other persons.

- ▶ Follow the instructions for avoiding or preventing the danger.



WARNING

Describes a potential danger of serious injury or death.

Describes the potential consequences of the danger to you or other persons.

- ▶ Follow the instructions for avoiding or preventing the danger.



CAUTION

Describes a potential danger of a hazardous situation

Describes the potential consequences of the danger to you or other persons.

- ▶ Follow the instructions for avoiding or preventing the danger.

The following symbols are used for notes and information:



NOTE

Describes additional information and useful notes for correct use of the operator without endangering persons.

If it is not observed, property damage or faults to the operator or door may occur.



INFORMATION

Describes additional information and useful tips.

Functions for optimum usage of the operator are described.



INFORMATION

This symbols indicates that all components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must be observed.



INFORMATION

This symbols indicates that all old accumulators and batteries must not be disposed of with household waste. Old accumulators and batteries contain hazardous substances. These must be disposed of properly at municipal collection points or in the provided containers of the dealers. The local and national regulations must be observed.



The following symbols are used in the figures and text.



Continue reading the installation and operating manual for more information.



Disconnect the operator from the mains voltage.



Connect the operator to the mains voltage.



Symbol refers to factory settings.



Symbol refers to a smartphone.



Symbol refers to a period of time, e.g. 30 seconds.

1.6 Special warnings, hazard signs and mandatory signs

To specify the source of danger more precisely, the following symbols are used together with the above-mentioned hazard symbols and signal words. Follow the instructions to prevent a potential hazard.

1. About this installation and operating manual



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death may result.

- ▶ Installation, testing and replacement of electrical components may only be carried out by a **trained electrician**.



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Never put your hand near the door or moving parts when it is moving.



WARNING

Danger of falling!
Unsafe or defective ladders may tip and cause serious or fatal accidents.

- ▶ Use only a non-slip, stable ladder.



WARNING

Danger of tripping and falling!
Unsafely positioned parts such as packaging, operator parts or tools may cause trips or falls.

- ▶ Keep unnecessary items away from the installation area.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ A second entrance, a release lock or a Bowden cable for unlocking from the outside must be installed. This can be used to free persons who cannot free themselves.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare. This will temporarily reduce vision. This may cause serious or fatal injury.

- ▶ Do not look directly into a LED.



WARNING

Danger due to falling parts!
Parts of the door may become detached and fall. If persons or animals are hit, this may cause serious injury or death.

- ▶ The door must not bend, rotate or twist when opening and closing.



WARNING

Danger due to hot parts!
After frequent operation, the motor and control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.



WARNING

Danger of entrapment!
Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.

1. About this installation and operating manual

The following mandatory signs inform the user that actions are required. The requirements described must be complied with.

 	WARNING Risk of eye injury! Chips flying when drilling may cause serious injuries to eyes and hands. ▶ Wear safety glasses.
 	WARNING Risk of injury in the head region! Impact with suspended objects may cause serious abrasions and cuts. ▶ Wear a safety helmet.
 	CAUTION Risk of injury to hands! Rough metal parts may cause abrasions and cuts when picked up or touched. ▶ Wear safety gloves.

1.7 Information regarding the depiction of text

1. Stands for directions for an action.
⇒ Stands for the results of the action.

Lists are shown as a list of actions:

- List 1
- List 2

1, A **1** **A** Number or letter in the figure refers to a number in the text.

Important text items, for example in directions for actions, are emphasised in **bold**.

References to other chapters or sections are in **bold** and set in "quotation marks".

1.8 Intended use of the operator

The operator is intended exclusively to open and close doors. Any other use does not constitute intended use. The manufacturer accepts no liability for damage resulting from use other than intended use. The user bears the sole responsibility for any risk involved. It also voids the warranty.

Any changes to the operator must be made with original **SOMMER** accessories only and only to the extent described.

Doors automated with this operator must comply with all valid international and national standards, directives and regulations. Examples include EN 12604, EN 12605 and EN 13241-1.

The operator may only be used:

- in combination with door types in the reference list which can be found at:



<http://som4.me/cgdo>

- as specified in this installation and operating manual
- in good technical condition
- with attention to safety and hazards by trained users
- when an EC declaration of conformity, CE mark and a type plate exist for the door system.

1. About this installation and operating manual

1.9 Improper use of the operator

Any other use or additional use that has not been described in Chapter 1.8 constitutes improper use. The user bears the sole responsibility for any risk involved.

The manufacturer's warranty will be voided by:

- damage caused by other use and improper use
- use with defective parts
- unauthorised modifications to the operator
- modifications and non-approved programming of the operator and its components

The door must not be part of a fire and smoke protection system, an evacuation path or an emergency exit that automatically closes the door in the event of fire.

Installation of the operator will prevent automatic closing.

Observe the local building regulations.

The operator may not be used in:

- areas with explosion hazard
- very salty air
- aggressive atmosphere, including chlorine

1.10 Qualifications of personnel

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

After installation of the operator, the person responsible for the installation of the operator must complete an EC declaration of conformity for the door system in accordance with Machinery Directive 2006/42/EC. The CE mark and the type plate must be attached to the door system. Including if the operator is retrofitted to a manually operated door. This documentation and the installation and operating manual must be retained by the user.

The following is available for this purpose:

- handover protocol for the operator
- Declaration of Conformity

At:



<http://som4.me/konform>

Qualified specialist for installation, commissioning and disassembly

This installation and operating manual must be read, understood and complied with by a qualified specialist who installs or performs maintenance on the operator.

Work on the electrical system and live parts may be performed only by a **trained electrician** in accordance with EN 50110-1.

The installation, commissioning and disassembly of the operator may only be performed by a qualified specialist. The qualified specialist must be familiar with the following standards:

- EN 13241-1 Doors and gates - Product standard
- EN 12604
Doors and gates - Mechanical aspects - Requirements
- EN 12605
Doors and gates - Mechanical aspects - Test methods
- EN 12445 and EN 12453 -
Safety in use of power operated doors

A qualified specialist is a person ordered by the installer. The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the emergency release
- on regular maintenance which the user can execute

The user must be informed that other users must be instructed on the operation of the operator, its dangers as well as the emergency release.

1. About this installation and operating manual

The user must be informed about which work must only be performed by a qualified specialist:

- installation
- settings
- regular maintenance
- repairs

This installation and operating manual as well as the Declaration of Conformity created for the door system must be given to the user.

1.11 For the user

The user must note that the installation and operating manual as well as the Declaration of Conformity created for the door system must be given to him/her. The CE mark and the type plate must be attached to the door system.

The user is responsible for:

- the intended use of the operator
- its good condition
- operation
- instructing all user how to use the door system and in the associated hazards
- care and maintenance
- tests by a qualified specialist
- troubleshooting in case of faults by a qualified specialist

The user must keep this installation and operating manual ready for consultation in the vicinity of the door system.

The operator must not be used by persons with restricted physical, sensory or mental capacity or who lack experience and knowledge. All users must be specially instructed and have read and understood the installation and operating manual.

Children must never play with or use the operator, even under supervision. Children must be kept clear of the operator. Transmitters or other control devices must never be given to children.

The user will observe the accident prevention regulations and the applicable standards in Germany. In other countries, the user must comply with the applicable national regulations.

The guideline "Technical regulations for workplaces ASR A1.7" of the German committee for workplaces (ASTA) is applicable for commercial use. The guidelines described must be observed and complied with. This applies for the use in Germany. In other countries the user must comply with the applicable national regulations.

2. General safety instructions

2.1 Basic safety instructions for operation

Follow the basic safety instructions listed below.

The operator must not be used by persons with restricted physical, sensory or mental capacity or who lack experience and knowledge. All users must be specially instructed and have read and understood the installation and operating instructions.

Children must never play with or use the operator, even under supervision. Children must be kept clear of the operator. Transmitters or other control devices must never be given to children.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ Installation, testing and replacement of electrical components may only be carried out by a **trained electrician**.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



DANGER

Danger due to use of the operator with incorrect setting or when it is in need of repair!

If the operator is used despite incorrect settings or if it is in need of repair, severe injury or death may result.

- ▶ The operator may only be used with the required settings and in the proper state.



DANGER

Danger of hazardous substances!
Improper storage, use or disposal of accumulators or batteries are dangerous for the health of humans and animals.

Serious injury or death may result.

- ▶ Accumulators and batteries must be stored out of the reach of children and animals.
- ▶ Keep batteries and accumulators away from chemical, mechanical and thermal influences.
- ▶ Do not recharge old accumulators and batteries.
- ▶ Components of the operator as well as old accumulators and batteries must not be disposed of with household waste. They must be disposed of properly.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ Faults must be repaired without delay.

2. General safety instructions



WARNING

Danger due to falling parts of doors!

Actuating the emergency release can lead to uncontrolled door movement if

- springs are weakened or broken.
- the door has not been optimally weight-balanced.

Falling parts may cause a hazard.

Severe injuries or death may result.

- ▶ Check the weight balance of the door at regular intervals.
- ▶ Pay attention to the movement of the door when the emergency release is actuated.
- ▶ Keep clear of the movement area of the door.



WARNING

Danger of entrapment!
Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.
- ▶ Store the transmitter so that accidental operation, e.g., by children or animals, is impossible.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare.

**This may temporarily reduce vision.
This may cause serious or fatal accidents.**

- ▶ Do not look directly into a LED.



NOTE

Dispose of all components in accordance with local or national regulations to avoid environmental damage.

2. General safety instructions



NOTE

The carriage is supplied with safety low voltage via the chain and the track. The use of oil or grease will greatly reduce the conductivity of the chain, track and carriage. This may result in faults due to inadequate electrical contact. The chain and track are maintenance-free and must not be oiled or greased.



NOTE

Objects in the movement area of the door may be jammed and damaged. Objects must not be in the range of movement of the door.

2.2 Additional safety information for the radio remote control

Follow the basic safety instructions listed below.



WARNING

Danger of crushing and shearing!
If the door is not visible and the radio control is operated, crushing and shearing injuries to persons or animals may be caused by the mechanism and safety edges of the door.

- ▶ When control elements like the radio control in particular are operated, all danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.
- ▶ Store the transmitter so that accidental operation, e.g., by children or animals, is impossible.



NOTE

If the door is not in view and the radio remote control is actuated, objects in the movement area of the door may be jammed and damaged.

The radio remote control can only be used only if you have a clear view of the door.

The user of the radio system is not protected from faults due to other telecommunications equipment or devices. This includes radio-controlled systems that are licensed to operate in the same frequency range. If significant interference occurs, please contact your appropriate telecommunications office which has radio interference measuring equipment or radio location equipment.

For the Declaration of Conformity for the radio see:



<http://som4.me/konform-funk>

3. Description of function and product

3.1 The operator and its mode of operation

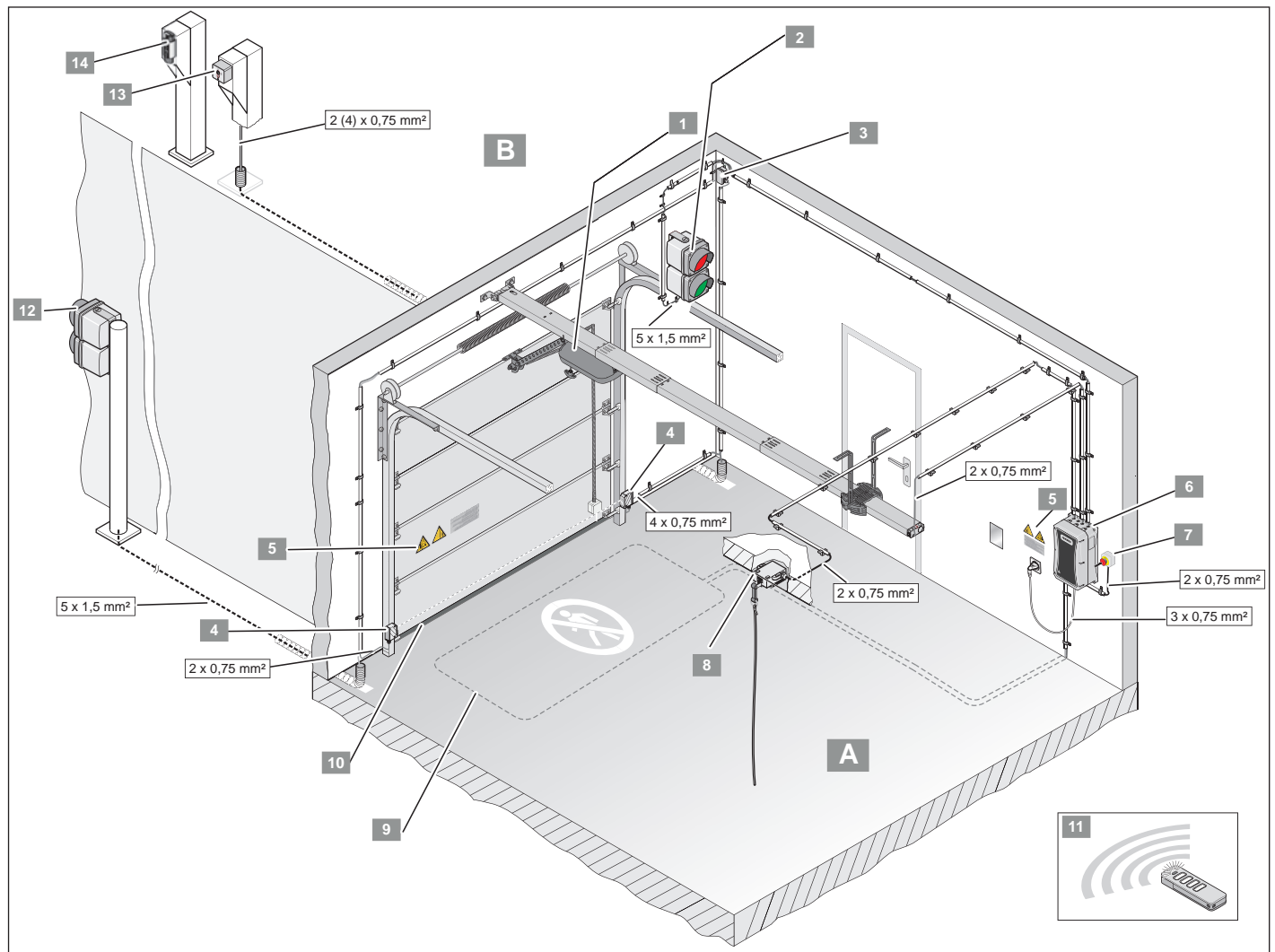


Fig. Door structure with operator

A Interior side

- 1) Carriage
- 2) Red-green traffic light, interior
- 3) Junction box
- 4) Photo eye
- 5) Warning sticker
- 6) Control unit
- 7) Emergency stop
- 8) Pull button
- 9) Induction loop
- 10) Safety contact strip
- 11) Handheld transmitter

B Exterior side

- 12) Red-green traffic light, exterior
- 13) Key switch
- 14) Telecode

Sectional doors and other types of doors can be opened and closed with the electrically powered operator and its available accessories. The operator can be controlled with a transmitter.

The track is mounted on the ceiling and the lintel above the garage door. The carriage is attached to the door by a push arm. The carriage moves along the track on a spring-mounted chain and opens or closes the door. Access authorisation is indicated by the traffic light signal red and green phases. The transmitter can be stored in a holder in the vehicle.

3. Description of function and product

Additional information on using the operator with different types of doors or accessories can be obtained from your specialist dealer.

3.2 Safety equipment

The operator stops and reverses slightly if it encounters an obstacle. This prevent injury and damage to property. The door will be partially or completely opened depending on the setting.

If the power fails, the door can be opened from the inside by an emergency release or from the outside with a Bowden wire or emergency release lock. For more information, contact your specialist dealer.

3. Description of function and product

3.3 Definitions

Programming

The operator programs the path and force required to open and close the door.
The operator saves these values. The values are saved even if the power supply fails.

Door OPEN

The door opens or is open.

Door CLOSE

The door closes or is closed.

Interior (IN)

The side in the interior of the garage or car park.

Exterior (OUT)

The side in the exterior of the garage or car park.

Light signals of the traffic light

Access authorisation is indicated by the traffic light signal red and green phases.

Red traffic light for interior	RED INSIDE
Green traffic light for interior	GREEN INSIDE
Red traffic light for exterior	RED OUTSIDE
Green traffic light for exterior	GREEN OUTSIDE

Request side, interior or exterior

A command is given from this side.

Opposite side, interior or exterior

This side is opposite the request side.

Command from the interior

Button or radio signal give a command to open the door from the interior. If the door is closed or is in the door OPEN end position, the green phase is executed, thereby granting authorisation for drive-through from the interior. The opposite side gets the red phase.

Command from the exterior

Button or radio signal give a command to open the door from the exterior. If the door is closed or is in the door OPEN end position, the green phase is executed, thereby granting authorisation for drive-through from the exterior. The opposite side gets the red phase.

Pre-warning time

This phase affects the time before opening or closing. The red traffic light flashes on both sides. The warning light and the operator lighting of the carriage also flash. The operator movement is thereby announced. The door area must be cleared.

Open holding time

The door remains open in this phase. The request side gets the green phase. The opposite side gets the red phase. The door can only be opened but not closed by a command from a button or hand-held remote control. While the door is being opened, it cannot be stopped by a command.

Example: If a command is sent while the operator is closing automatically, it opens completely and the open holding time is reset.

Clearing time

This phase affects the time after the open holding time has run out. The red traffic light lights up on both sides. The operator lighting of the carriage also flashes. The operator movement is thereby announced. The door area must be cleared.

SOMlink

SOMlink makes it possible for qualified specialists to change many functions and settings on the door operator. 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.

Multi-function relay (MUFU)

The multi-function relay is a potential-neutral changeover contact. The multi-function relay can be configured for other settings using the SOMlink, a smartphone or a Memo tige attached to the wall control unit at the factory.

3. Description of function and product

3.4 Operator response with factory settings

Response after power connection

The door is closed and the operator is programmed. All traffic lights are off. The first movement of motion is always door OPEN. If the door is already open, the operator detects this. After a command to the operator, the request side is granted access authorisation. The operator closes the door after the open holding time and clearing time run out.

Expiration after a command from the interior or exterior, door CLOSE

The traffic lights give the respective light signals for access authorisation.

1. Command from interior or exterior.
 - ⇒ Door opens.
Both sides: Red phase - no authorisation for drive-through.
 - ⇒ Door is open.
 - ⇒ Open holding time starts.
Request side: Green phase - authorisation for drive-through.
Opposite side: Red phase - no authorisation for drive-through.
 - ⇒ Open holding time set at factory runs out.
 - ⇒ Clearing time for door CLOSE starts.
The operator lighting LED flashes.
Both sides: Red phase - no authorisation for drive-through.
 - ⇒ Door closes.
Both sides: Red phase - no authorisation for drive-through.
 - ⇒ Door is closed.
Both sides: Traffic lights off.

Response after a request from the interior and an additional request from the exterior

1. Command from the interior and subsequent command from the exterior.
 - ⇒ Door opens.
Both sides: Red phase - no authorisation for drive-through.
 - ⇒ Door is open.
 - ⇒ Open holding time starts.
Request side, interior: Green phase - authorisation for drive-through.
Opposite side, exterior: Red phase - no authorisation for drive-through.
 - ⇒ Open holding time set at the factory for the command from the interior runs out.
 - ⇒ Clearing time starts.
Operator lighting LED flashes.
Both sides: Red phase – no authorisation for drive-through.
2. Command from the exterior is initiated.
The request and opposite sides are exchanged here.
 - ⇒ Open holding time starts.
Request side, exterior: Green phase – authorisation for drive-through.
Opposite side, interior: Red phase – no authorisation for drive-through.
 - ⇒ Open holding time set at factory runs out.
 - ⇒ Clearing time for door CLOSE starts.
The operator lighting LED flashes:
Both sides: Red phase – no authorisation for drive-through.
 - ⇒ Door closes.
Both sides: Red phase - no authorisation for drive-through.
 - ⇒ Door is closed.
Both sides: Traffic lights off.

3. Description of function and product

3.5 Product designation

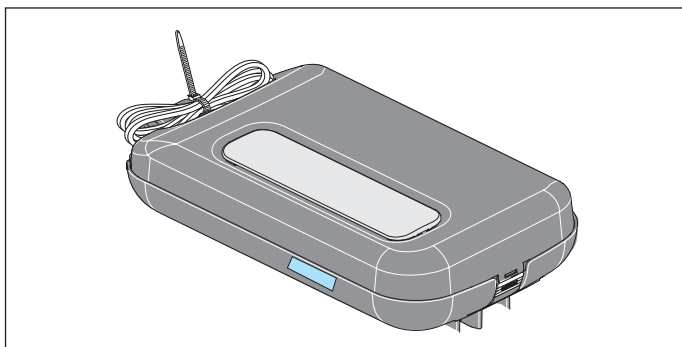


Fig. Carriage with type plate and device specifications

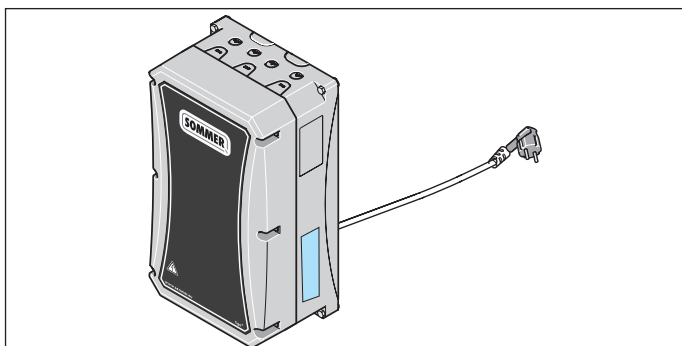


Fig. Control unit with type plate and device specifications

The type plate includes:

- type designation
- Item number
- date of manufacture with month and year
- serial number

In case of questions or service please supply the type designation, the date of manufacture and the serial number.

3.6 Explanation of tools used

Tool symbols

These symbols refer to the use of tools required for installation.



Philips screwdriver



Metal drill 5 mm



Masonry drill 6/10 mm



Fork spanner 10/13/17 mm



Ratchet driver 10/13/17 mm

Other symbols



Drilling depth



Audible engaging or clicking noise

3. Description of function and product

3.7 Scope of delivery

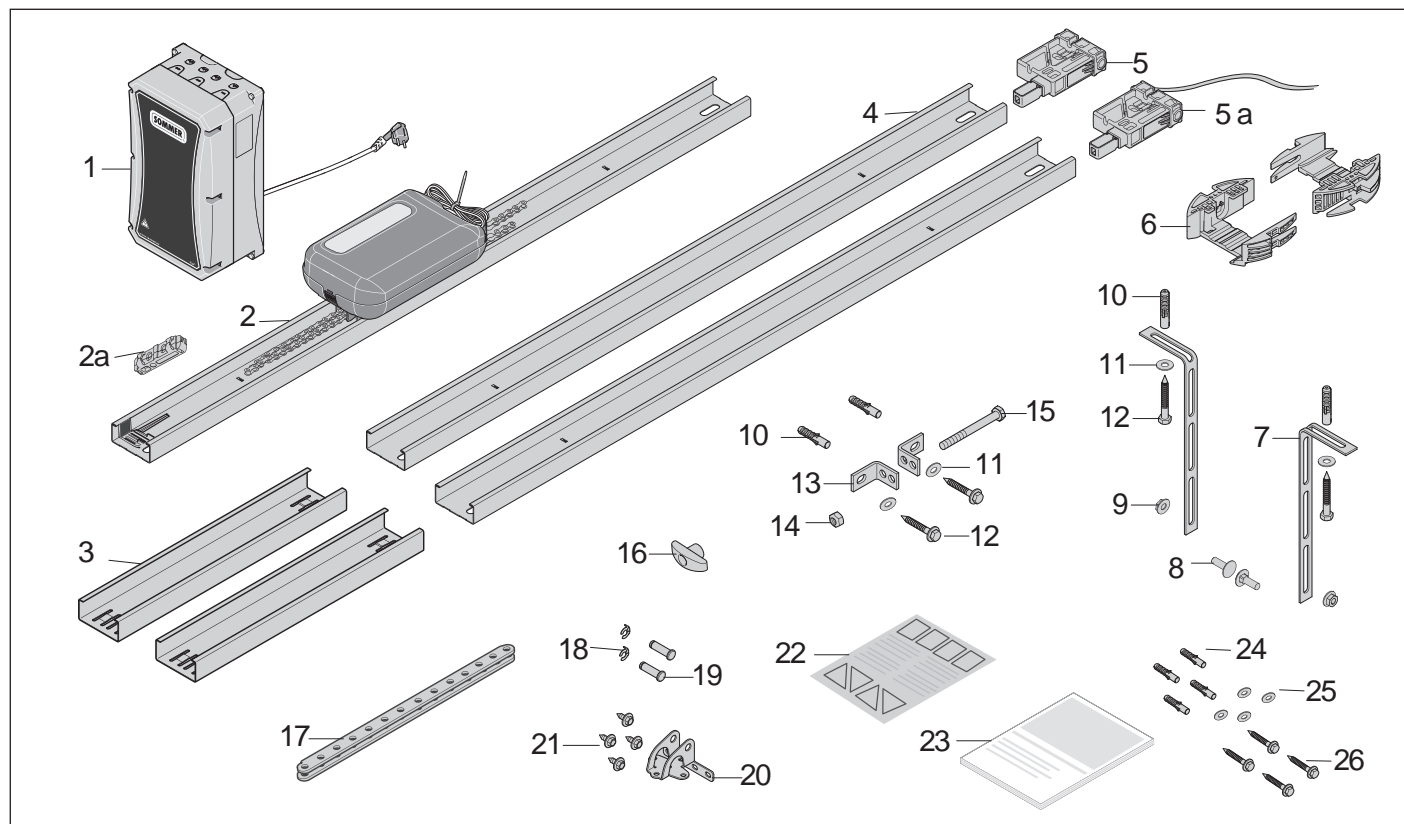


Fig. Scope of delivery

- 1) Wall control unit with Memo tige, attached at the factory, and network cable
- 2) Track, pre-assembled with **1 x guide idler**, chain and carriage
- 2a) Isolator, **pre-assembled on the chain**
- 3) Connecting sleeves, 2x
- 4) Track, 2x
- 5) Plug-in unit, **pre-assembled**
- 5a) Plug-in unit, **pre-assembled**, with control cable, 2-wire, approx. 5 m
- 6) Ceiling holder, 2-part
- 7) Perforated strip, angled, 2x
- 8) Screw M8 x 20 mm, 2x
- 9) Hexagonal nut self-locking M8, 2x
- 10) S10 plugs, 4x
- 11) Washer, 4x
- 12) Screw 8 x 60 mm, 4x
- 13) Lintel bracket, 2x

- 14) Hexagonal nut, self-locking M10
- 15) Hexagonal head screw M10 x 100 mm
- 16) Emergency release handle
- 17) Push arm, straight
- 18) Safety bolt 10 mm, 2x
- 19) Bolt 10 x 34.5 mm, 2x
- 20) Door bracket
- 21) Combination self-tapping screw, 4x
- 22) Information sticker for garage interior
- 23) Installation and operating manual

Fixing point for wall control unit:

- 24) S6 plugs, 4x
- 25) Washers, 4x
- 26) Screw \varnothing 4 x 50 mm, 4 x

When unpacking make sure that all articles are included in the packages. If anything is missing, contact your specialist dealer. The actual scope of delivery may vary depending on the type or customer specifications.

3. Description of function and product

3.8 Dimensions

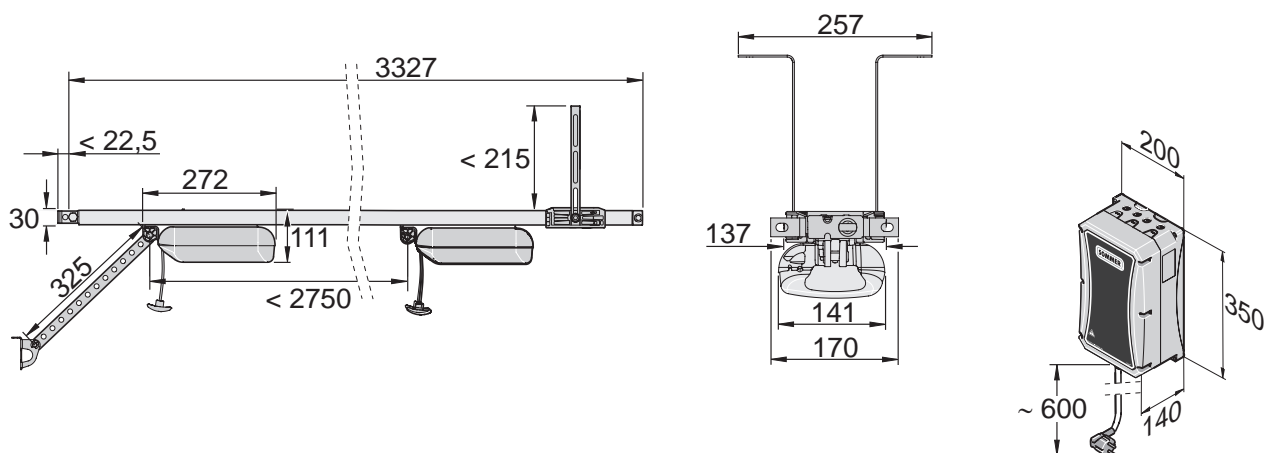


Fig. Dimensions (all dimensions are in mm)

3.9 Technical data


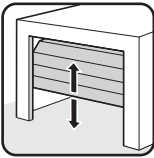
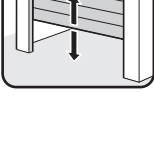
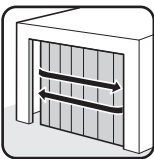
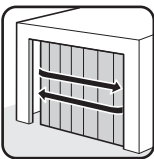
	S 9060 tiga+	S 9080 tiga+	S 9110 tiga+	
Nominal voltage	220 V–240 V AC			
Rated frequency	50/60 Hz			
Storage locations in radio receiver	40			
Operating time	S3 = 40 %			
Operating temperature	-25 °C to +65 °C			
Emission value according to operating environment	< 59 dBA – operator only			
IP protection class	IP 21			
IP-code	I			
Travel length max.	2750 mm			
Travel length incl. extension max.	4,942 mm (2 x 1,096 mm)	6,038 mm (3 x 1,096 mm)	7,134 mm (4 x 1,096 mm)	
Speed max.**	240 mm/s	210 mm/s	180 mm/s	
Max. traction and pressure force	600 N	800 N	1100 N	
Rated traction force	180 N	240 N	330 N	
Max. rated current consumption	1.6 A	1.6 A	2.0 A	
Rated current consumption*	0.5 A	0.65 A	0.8 A	
Max. rated power consumption	350 A	360 A	450 A	
Rated power consumption*	95 W	130 W	150 W	
Power consumption on power-saving mode	< 1 W			
Max. door weight**	120 kg	160 kg	200 kg	
Max. door width/ door height	Sectional doors	4,500 mm / 2,500 mm	6,000 mm / 2,500 mm	8,000 mm / 2,500 mm
	Swinging doors	4,500 mm / 2,750 mm	6,000 mm / 2,750 mm	8,000 mm / 2,750 mm
	Up-and-over doors	4,500 mm / 2,050 mm	6,000 mm / 2,050 mm	8,000 mm / 2,050 mm
	Side-sectional doors/ Side-opening doors	2,500 mm / (4,500 mm) / 2,500 mm	2,500 mm (5,750 mm) / 2,750 mm	2,500 mm (6,850 mm) / 3,000 mm

* Values apply without lighting

** Depending on door and the operating conditions

3. Description of function and product

3.10 Door types and accessories

Door type	Accessories
	No accessories required
	Sectional door fitting with curved push arm*
	Sectional door fitting without curved push arm**
	No accessories required
	Side-opening/ side-opening sectional door fitting **

* Accessories not included in the scope of delivery

** The standard fitting can also be used depending on the installation type. Custom fittings are not included in the scope of delivery.

The operator may only be used:

- in combination with door types in the reference list which can be found under certifications.



<http://som4.me/cgdo>

A number of accessories are available for the operator.

Here are a few examples:

Accessories	Function
Memo	Attachable memory expansion Memory for expanding the capacity of transmitter commands from 40 internal to 450 external
Lock	Pluggable locking magnet For mechanical locking of the motor and therefore improvement of break-in protection
Alarm/ warning buzzer	Pluggable buzzer When a break-in attempt is detected or, alternatively, when the door moves towards the door CLOSE position, an acoustic signal (alarm) is output

For more information on accessories such as track extensions, additional locking mechanism, custom fittings or different transmitters contact your specialist dealer or see:

www.sommer.eu

4. Tools and protective equipment

4.1 Required tools and personal protective equipment

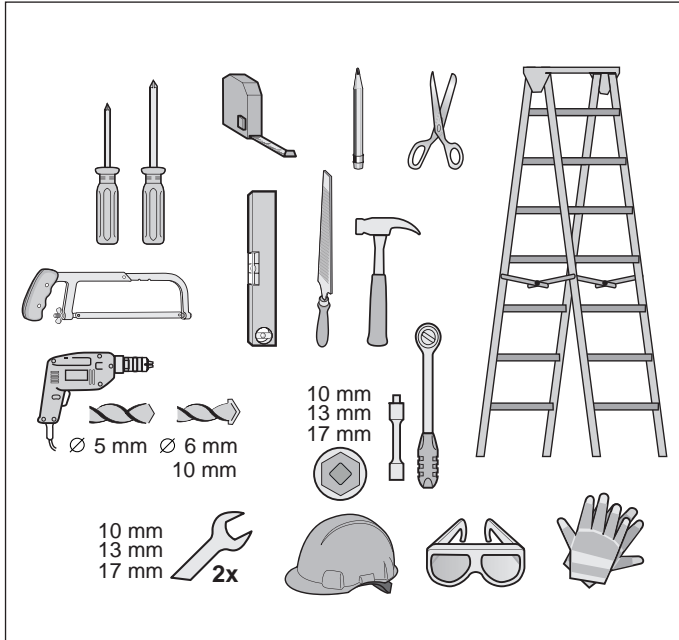


Fig. Recommended tools and personal protective equipment for installation

You will require the tools shown above to assemble and install the operator. Lay out the required tools beforehand to ensure fast and safe installation.



WARNING

Risk of eye injury!
Chips flying when drilling may cause serious injuries to eyes and hands.

- ▶ Wear safety glasses when drilling.



WARNING

Risk of injury in the head region!
Impact with suspended objects may cause serious abrasions and cuts.

- ▶ You must wear a safety helmet when installing suspended parts.



CAUTION

Risk of injury to hands!
Rough metal parts may cause abrasions and cuts when picked up or touched.

- ▶ Wear safety gloves when deburring or performing similar work.



Wear your personal protective equipment. This includes safety glasses, safety gloves and a safety helmet.

5. Declaration of installation

Declaration of installation

for installation of an incomplete machine in accordance with the Machinery Directive 2006/42/EC, Annex II, Part 1 B

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

hereby declares that the control units

S 9060 tiga, S 9080 tiga, S9110 tiga, S 9060 tiga+, S 9080 tiga+, S 9110 tiga+

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 doors
- EN 61000-6-3 Electromagnetic compatibility (EMC) - interference
- EN 61000-6-2 Electromagnetic compatibility (EMC) - interference resistance
- EN 60335-2-95 General safety requirements for household and similar electrical appliances - Part 2: Particular requirements for operators for vertically moving garage doors for residential use
- EN 60335-2-103 General safety requirements for household and similar electrical appliances - Part 2: Special requirements for operators for gates, doors and windows

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, 1.2.5, 1.2.6, 1.3.1, 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 documents have been prepared in accordance with Annex VII Part B and are submitted electronically to the regulators on request.

The operator may only be used:

- in combination with door types in the reference list which can be found at: www.sommer.eu

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

The undersigned is responsible for compilation of the technical documents.



i.V.

Jochen Lude
Responsible for documents

Kirchheim, 20-04-2016

6. Installation

6.1 Important information on installation

Please observe and comply with all instructions to ensure a safe installation.

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

The installation of the operator may only be performed by a qualified specialist.

This installation and operating manual must be read, understood and complied with by a qualified specialist who installs the operator.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



WARNING

Danger of falling!
Unsafe or defective ladders may tip and cause serious or fatal accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ A second entrance, a release lock or a Bowden cable for unlocking from the outside must be installed.



WARNING

Danger due to falling parts of doors!

If a door is incorrectly balanced, springs may break suddenly. Falling door parts may cause serious injury or death.

- ▶ The door must be stable.
- ▶ The door must not bend, rotate or twist when opening and closing.
- ▶ The door must move easily in its tracks.



WARNING

Danger due to falling ceiling and wall parts!

The operator cannot be installed correctly if ceiling and walls are unstable or if unsuitable fastening materials are used. Persons or animals may be struck by falling parts of the wall, ceiling or operator. Severe injuries or death may result.

- ▶ Ceiling and walls must be stable.
- ▶ Only use permissible fastening materials appropriate for the supporting surface.



WARNING

Danger of entrapment!
Loose clothing or long hair may be trapped by moving parts of the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.
- ▶ Wear tight-fitting clothing.
- ▶ Wear a hairnet over long hair.

6. Installation



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



WARNING

Danger of tripping and falling!
Unsafely positioned parts such as packaging, operator parts or tools may cause trips or falls.

- ▶ Keep unnecessary items away from the installation area.
- ▶ Place all parts where no persons are likely to trip or fall over them.
- ▶ General workplace guidelines must be observed.



WARNING

Risk of eye injury!
Chips flying when drilling may cause serious injuries to eyes and hands.

- ▶ Wear safety glasses when drilling.



CAUTION

Risk of injury to hands!
Rough metal parts may cause abrasions and cuts when picked up or touched.

- ▶ Wear safety glasses when deburring.



NOTE

If the ceiling and walls are not stable, parts of the ceiling and wall or the operator may fall. Objects may be damaged. Ceiling and walls must be stable.



NOTE

To prevent damage to the door or operator, use only approved fastening materials such as wall plugs or screws. The fasteners must be suitable to the material of the ceiling and walls. This applies particularly for prefabricated garages.



INFORMATION

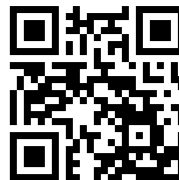
Ask your specialist dealer if you require additional installation accessories for different installation or attachment situations.

6.2 Preparation for installation

Before installation, you must check whether the operator is suitable for the door, see also Chapter "3.9 Technical data".

The operator may only be used:

- in combination with door types in the reference list which can be found at:



<http://som4.me/cgdo>

6. Installation

Removal of actuation parts



WARNING

Danger of entrapment!
Persons or animals may be trapped by straps or cords and pulled into the movement zone of the door. Severe injuries or death may result.

- ▶ Remove straps and cords used for mechanical actuation of the door.

Before installation remove:

- all cords or straps necessary to operate the door by hand.

Disabling mechanical locks



NOTE

If locks or other locking systems are installed on a mechanical door, they may block the operator. This may cause faults to or damage the operator.

Before the installation of the operator, all mechanical locking systems must be disabled.

The mechanical lock on a door with an operator must be removed or disabled if it is not compatible with the operator.

Checking mechanical and weight compensation



WARNING

Danger due to falling parts of doors or complete door panels!
Wires, spring sets and other fittings can suddenly break. The complete door panel can fall.

Persons or animals may be struck by falling parts of the door or the complete door panel. Severe injuries or death may result.

Before installation, qualified personnel must check the following and adapt if necessary:

- ▶ wires, spring sets and other fittings of the door.
- ▶ the weight compensation of the door.



WARNING

Danger of entrapment!
If the force setting is too high, persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ The force setting is relevant to safety and must be carefully checked and if necessary adjusted by qualified specialists.



NOTE

If the weight compensation of door is incorrectly adjusted, the operator may be damaged.

- The door must be stable.
- It must not bend, rotate or twist when opening and closing.
- The door must move easily in its tracks.

1. Check the mechanisms of the door, such as wire cables, spring sets and other fittings.

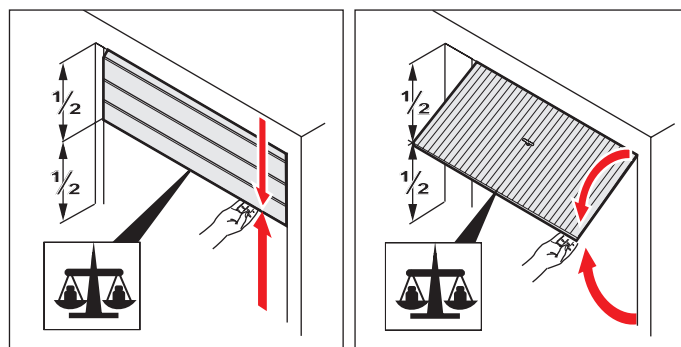


Fig. 2

2. Open the door halfway.
 - ⇒ The door must remain in this position.
 - ⇒ The door must be moved easily by hand and must be balanced.

If the door moves upwards or downwards by itself, the weight compensation of the door must be adjusted.

6. Installation

Emergency release

In a garage without a separate entrance (e.g. slip doors), the operator's emergency release must be operable from outside. The emergency release must also be routed to be accessible from the outside. This can be done with a Bowden cable or an emergency release lock. Ask your specialist dealer.

Adjusting the top roll of a sectional door

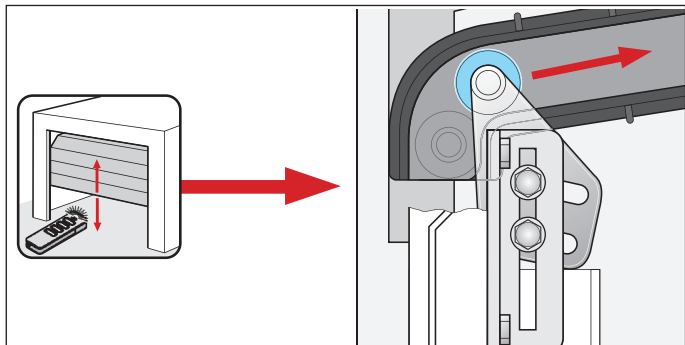


Fig. Top roll on sectional door

If a manually operated sectional door is retrofitted with an operator, the position of the top roll must be checked and adjusted if necessary.

The top roll must be routed up over the curve.

6. Installation

6.3 Installation of the operator system

The operator may only be installed if the installation requirements and dimensions are correct.



NOTE

Specify the position for mounting the operator on the door. Manually open and close the door several times. The door must be moved easily.

A manual movement force of 150 N is applicable for private garage doors and 260 N for commercial doors.

The value is applicable for the entire life of the door. The door must also be maintained and inspected as specified by the door manufacturer.

Selection of the installation version

The scope of delivery offers the option of implementing the following installation versions.

Check your situation and conditions and select the optimal installation version for you.

Installation situation A, B and C

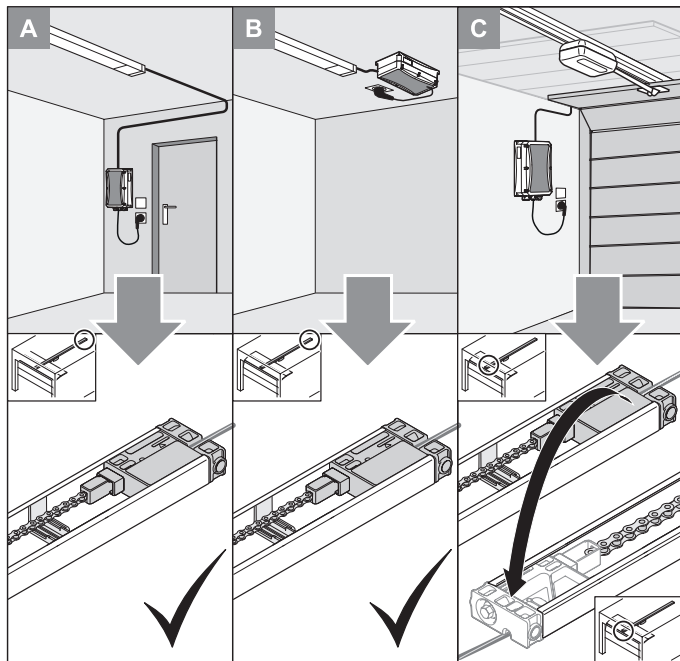


Fig. Installation versions A, B and C

Variant A

This version is selected if there is a separate entrance to the garage. The wall control unit is assembled near a power socket. The control cable is led at the rear end of the track, see Chapter "6.4 Installation of the operator system for installation versions A and B".

Version B

This version is selected when an existing device is being replaced by a new one and there is already a power socket or other control lines such as buttons or photo eyes in this area. The wall control unit on the ceiling is assembled in the rear area of the track. The control cable of the plug-in unit is also led at the rear end of the track, see Chapter "6.4 Installation of the operator system for installation versions A and B".

Version C

This version is selected when a power socket is located near the door opening and can be used for the wall control unit.

The control cable is led at the front end of the track, see Chapter "6.5 Installation of the operator system for installation version C".

6. Installation

6.4 Installation of the operator system for installation versions A and B

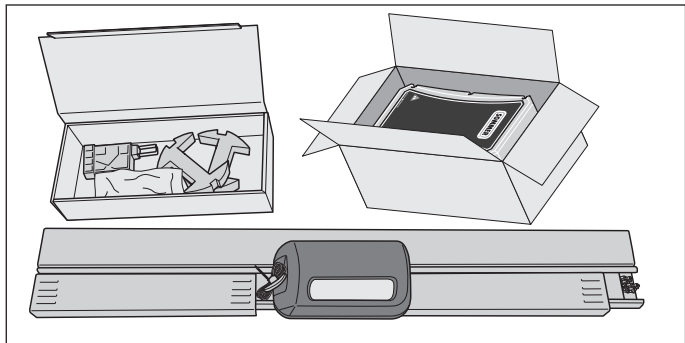


Fig. 1



CAUTION

Risk of injury to hands!
Rough metal parts may cause abrasions and cuts when picked up or touched.

► Wear safety gloves when working with unfinished metal parts.



1. Open the packages.
Check the contents against the scope of delivery listed in this installation and operating manual, see Chapter "3.7 Scope of delivery".

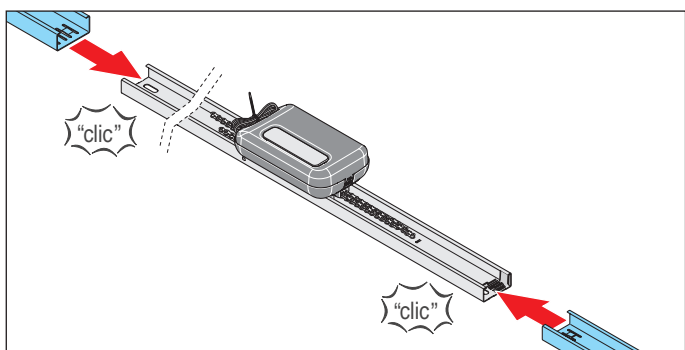


Fig. 2

2. Remove the two connecting sleeves beside the carriage and attach to the track on the left and right.

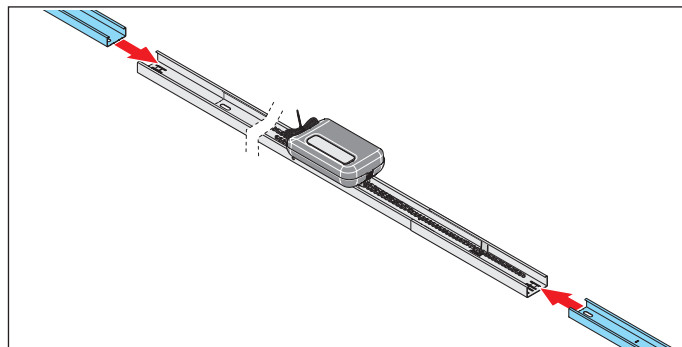


Fig. 3

3. Attach a track to each of the connecting sleeves.

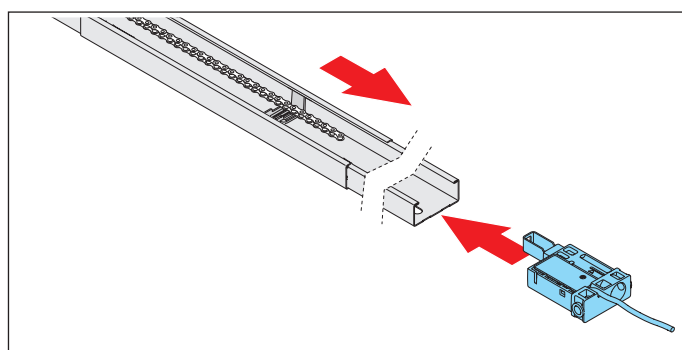


Fig. 4

4. Plug in the **plug-in unit with control cable** to the track behind the guide idler.
Lay the chain over the guide idler.

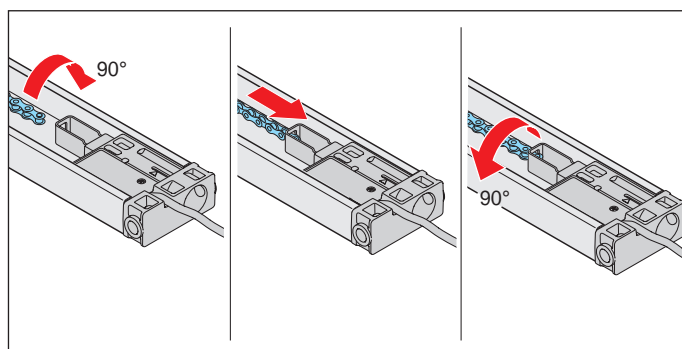


Fig. 5

5. Rotate the chain 90° and insert it into the chain holder of the **plug-in unit with control cable**.
Rotate the chain back 90°.

6. Installation

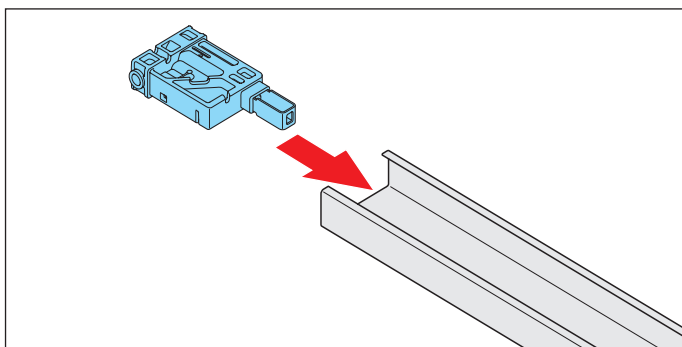


Fig. 6

6. Plug in the **plug-in unit without control cable** on the opposite side of the track.

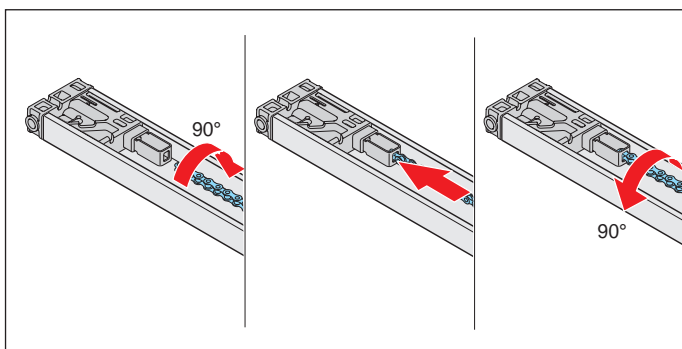


Fig. 7

NOTE

The chain must be parallel to the track to prevent damage to the operator.

7. Rotate the chain 90° and insert it into the chain holder of the **plug-in unit without control cable**. Rotate the chain back 90°.
⇒ The entire chain is attached.

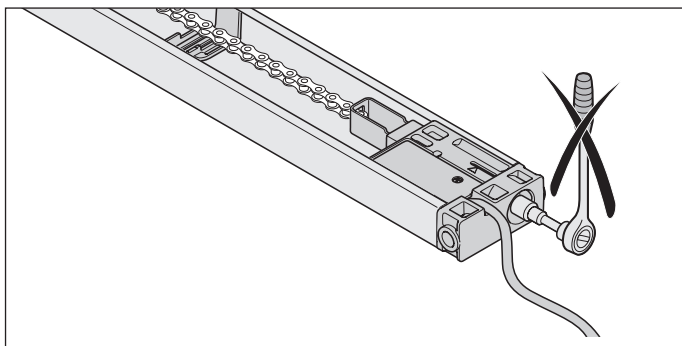


Fig. Plug-in unit with control cable

NOTE

The plug-in unit with control cable must not be tensioned.

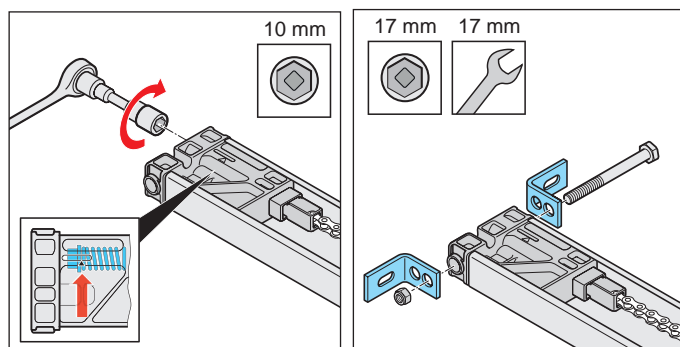


Fig. 8

Fig. 9

8. Tension the chain to the mark on the **plug-in unit without control cable**, see **arrow** in the detailed view.

9. Fasten the two header brackets to the **plug-in unit without control cable** with screw and nut.

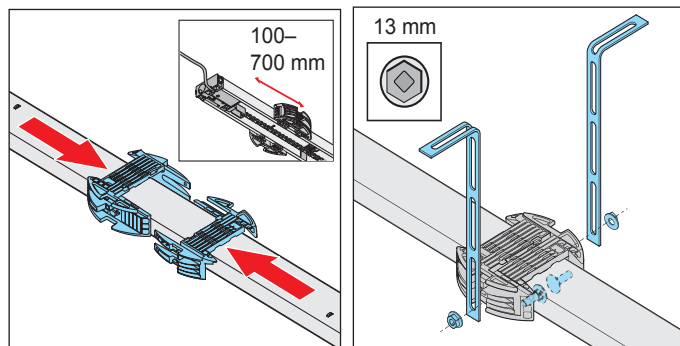


Fig. 10

Fig. 11

10. Turn the track to install the ceiling bracket. The distance between the rear **plug-in unit with control cable** and the ceiling holder should be 100 - 700 mm.

Place the ceiling holder on the track slide into one another.

11. Screw on the perforated strips. Also observe the distances for installation to the ceiling or lintel.

⇒ The track is prepared for the remainder of the installation.

For further assembly, see Chapter "6.6 Installation on the door".

6. Installation

6.5 Installation of the operator system for installation version C

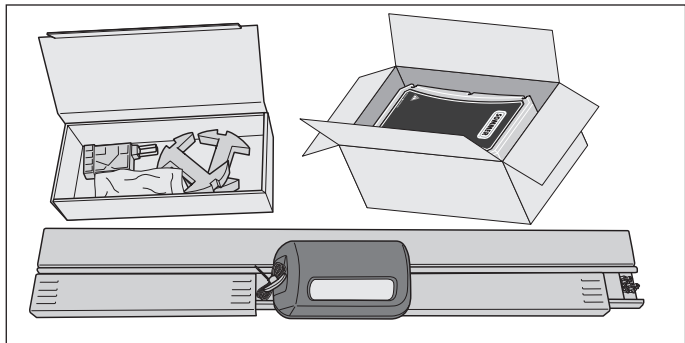


Fig. 1



CAUTION

Risk of injury to hands!
Rough metal parts may cause abrasions and cuts when picked up or touched.

► Wear safety gloves when working with unfinished metal parts.

1. Open the packages.
Check the contents against the scope of delivery listed in this installation and operating manual, see Chapter "3.7 Scope of delivery".

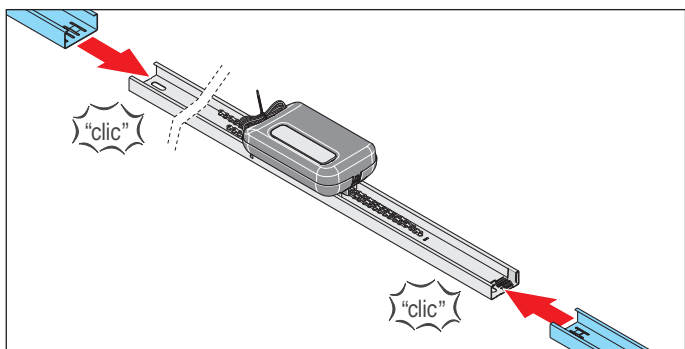


Fig. 2

2. Remove the two connecting sleeves beside the carriage and attach to the track on the left and right.

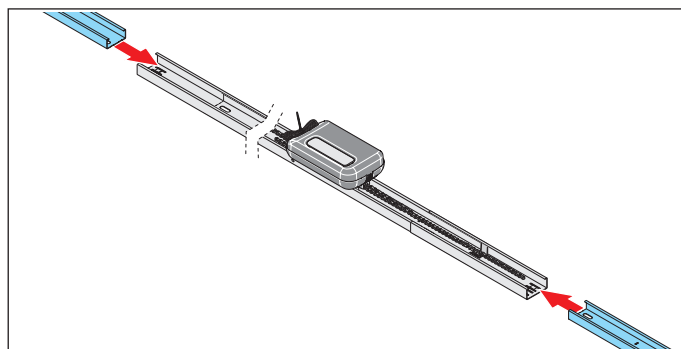


Fig. 3

3. Attach a track to each of the connecting sleeves.

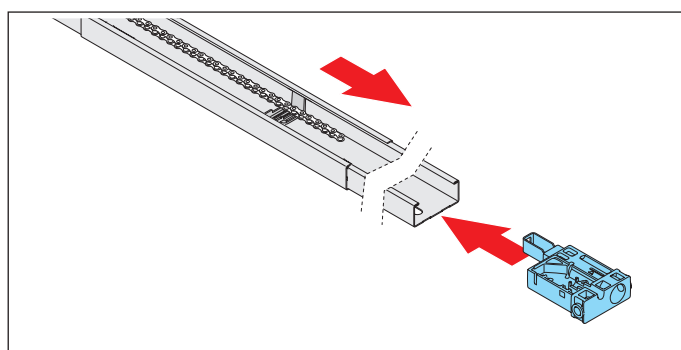


Fig. 4

4. Plug in the **plug-in unit without control cable** to the track behind the guide idler.
Lay the end of the chain over the guide idler.

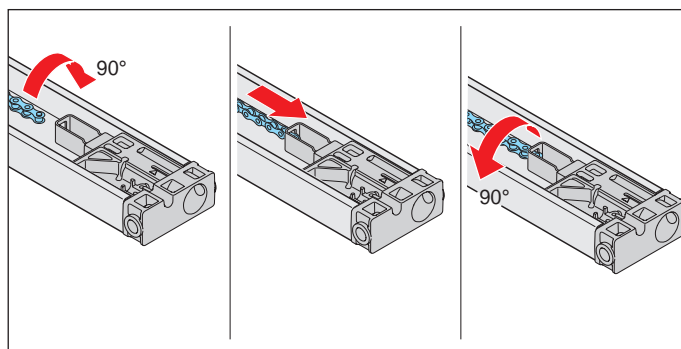


Fig. 5

5. Rotate the chain 90° and insert it into the chain holder of the **plug-in unit without control cable**.
Rotate the chain back 90°.

6. Installation

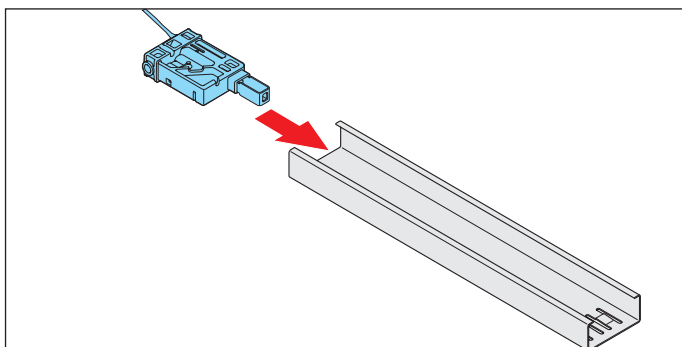


Fig. 6

6. Plug in the **plug-in unit with control cable** on the opposite side of the track.

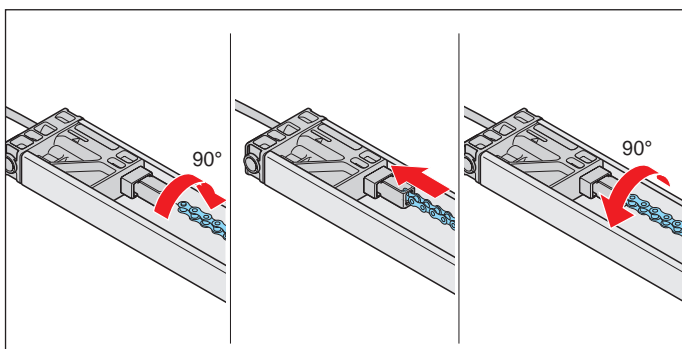


Fig. 7



NOTE

The chain must be parallel to the rail to prevent damage to the operator.

7. Rotate the chain 90° and insert it into the chain holder of the **plug-in unit with control cable**. Rotate the chain back 90°.

⇒ The entire chain is attached.

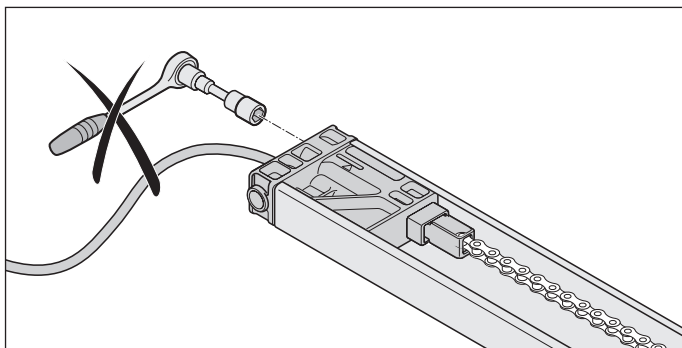


Fig. Plug-in unit with control cable



NOTE

The **plug-in unit with control cable** must not be tensioned.

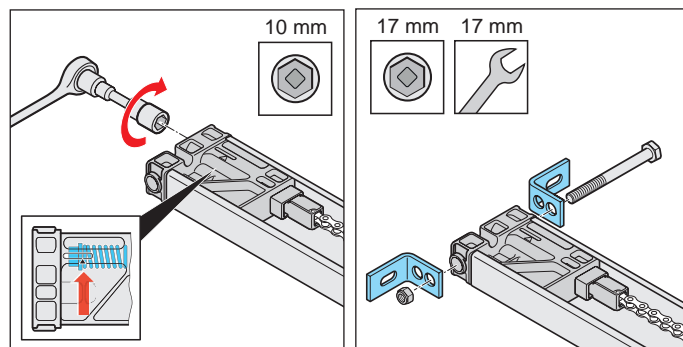


Fig. 8

Fig. 9

8. Tension the chain to the mark on the **plug-in unit without control cable**, see **arrow** in the detailed view.

9. Fasten the two header brackets to the **plug-in unit with control cable** with screw and nut.

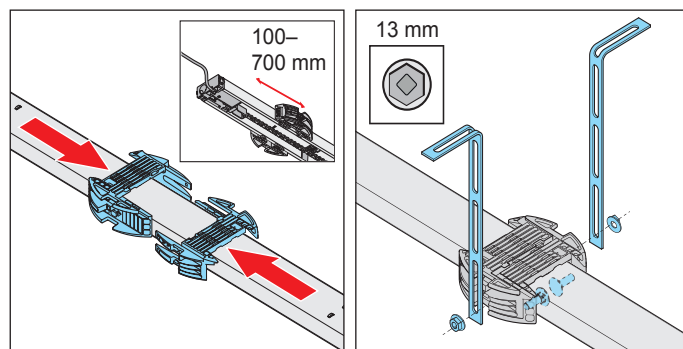


Fig. 10

Fig. 11

10. Turn the track to install the ceiling bracket. The distance between the rear **plug-in unit without control cable** and the ceiling holder should be 100 - 700 mm.

Place the ceiling holder on the track slide into one another.

11. Screw on the perforated strips. Also observe the distances for installation to the ceiling or lintel.

⇒ The track is prepared for the remainder of the installation.

For further assembly, see Chapter "**6.6 Installation on the door**".

6. Installation

6.6 Installation on the door

Since installation on the door is similar for all versions, installation on the door is only described for versions A and B.

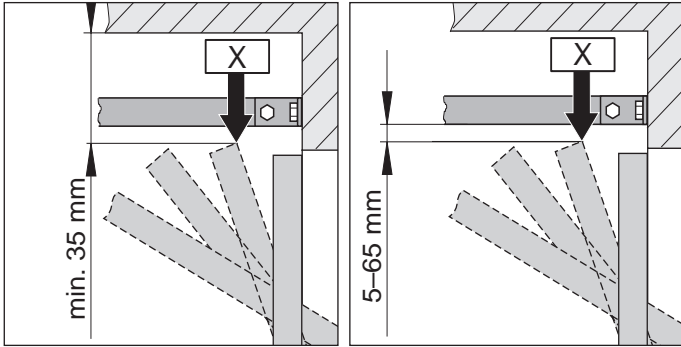


Fig. 1.1 Highest point for swing and up-and-over doors

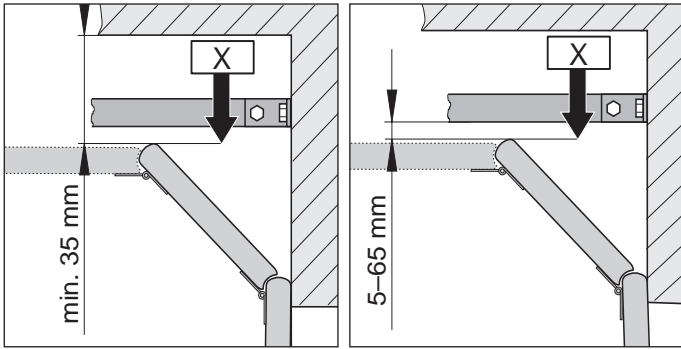


Fig. 1.2 Highest point for a sectional door



INFORMATION

If the distance between the ceiling and the bottom edge of the track is greater than 245 mm, extend the ceiling holder with additional perforated strips.

1. Measure the highest point of the door X depending on the type of door:
Open the door and measure the closest distance (min. 35 mm) between the top edge of the door and the ceiling.
The distance between X and the bottom edge of the track must be at least 5 mm and no more than 65 mm.

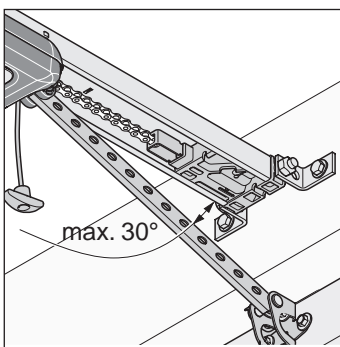


Fig. 2



INFORMATION

The distance may be reduced if a door handle is attached to the middle of the door. The door must be able to run freely.

2. The arm must be at a max. angle of 30° with the door closed.

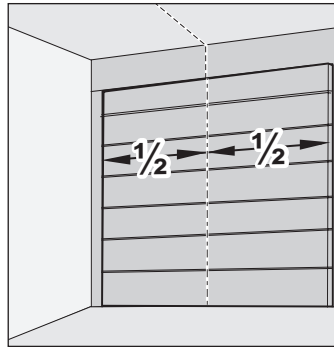


Fig. 3

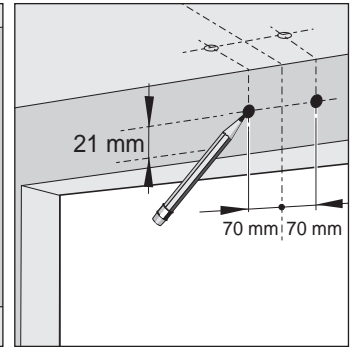


Fig. 4

3. Close the door.
Select the lintel or ceiling for installation. The space required for ceiling installation is more than 35 mm. Measure the front of the centre of the door and mark the door and the lintel or ceiling.
4. Mark points 70 mm to the right and left of the centre of the door at the same height on the lintel or ceiling.

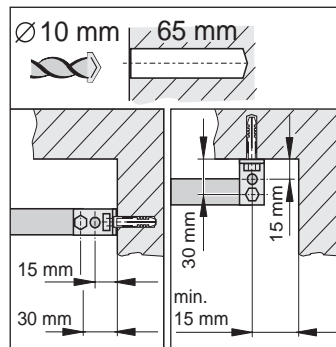


Fig. 5

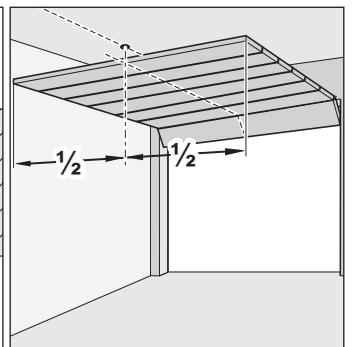


Fig. 6



NOTE

Cover the operator during drilling to prevent dirt from entering the operator unit and damaging it.



INFORMATION

If installing on the ceiling, space the drill holes 15 mm apart if possible. This reduces the tilting angle of the mounting bracket.

6. Installation



INFORMATION

The drilling depth must be considered concerning the ceiling and wall thickness, particularly with prefabricated garages. It may be necessary to reduce the hole depth.

Only use permissible fastening materials appropriate for the supporting surface.

5. Drill two holes ($\varnothing 10 \times 65$ mm deep) in the ceiling or lintel.
6. Open the door.
Transfer the mark from the centre of the door to the ceiling.

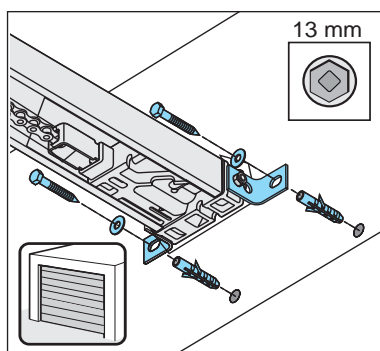


Fig. 7

7. Close the door.
The operator can be mounted on the lintel or the ceiling.
Lift the track at the front.
Screw the lintel fitting at the front to the lintel or ceiling with two screws and the washers. Tighten the screws.
⇒ The track is attached to the lintel or ceiling.

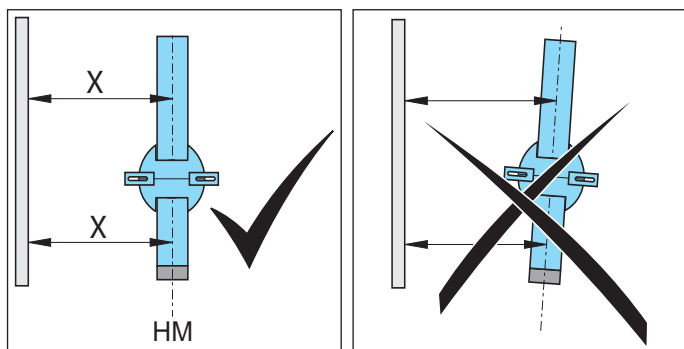


Fig. 8

NOTE

The operator must always be installed parallel to the tracks or the door to prevent damage to the operator and the rails.

8. Align the operator parallel to the running tracks of the door.

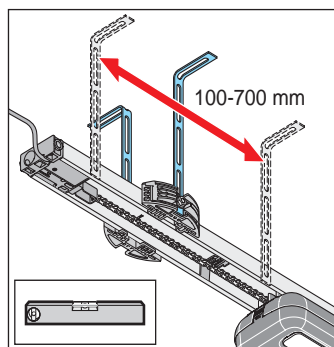


Fig. 9

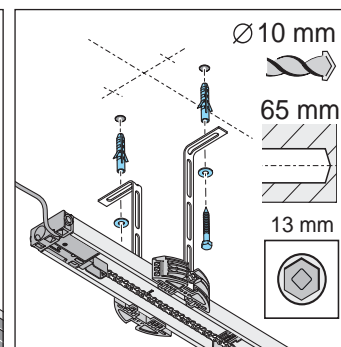


Fig. 10

9. Align the track parallel to centre of the door at the rear.
Align the ceiling bracket.
The distance between the rear plug-in unit and the ceiling holder should be 100 - 700 mm. The ceiling bracket should be installed between them.
Check the alignment of the track with a spirit level if necessary.
10. Mark the holes on the ceiling for the ceiling holder.
Drill two holes ($\varnothing 10 \times 65$ mm deep).
Insert the anchor fittings.
Insert two screws with washers and screw the perforated strips to the ceiling. Tighten the screws.
⇒ The track is attached to the ceiling.

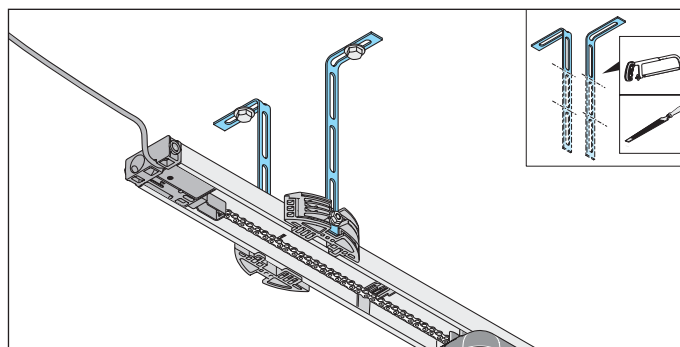


Fig. 11



CAUTION

Risk of injury to hands!
Rough, projecting metal parts may cause abrasions and cuts when picked up or touched.



- ▶ Projecting perforated strips must be sawn off and smoothed to prevent injury.
- ▶ Wear safety gloves when deburring.

11. The projecting perforated strips must be shortened.

6. Installation

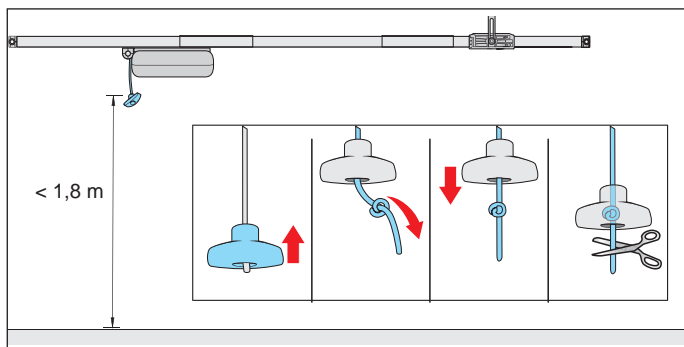


Fig. 12



WARNING

Danger of entrapment!
Persons or animals in the movement area of the door may be trapped in a loop of the emergency release cable and the door may be accidentally unlocked. Severe injuries or death may result.

- ▶ The included emergency release handle must be used.



NOTE

The emergency release handle may cause damage, e.g. scratches on the vehicle. The distance between the garage floor and the emergency release cord must be less than 1.8 m.

The emergency release handle must be at least 50 mm from moving and fixed parts throughout its complete path.

12. Attach the emergency release handle to the emergency release cord. If necessary, shorten the cable or lengthen it with suitable materials if necessary.

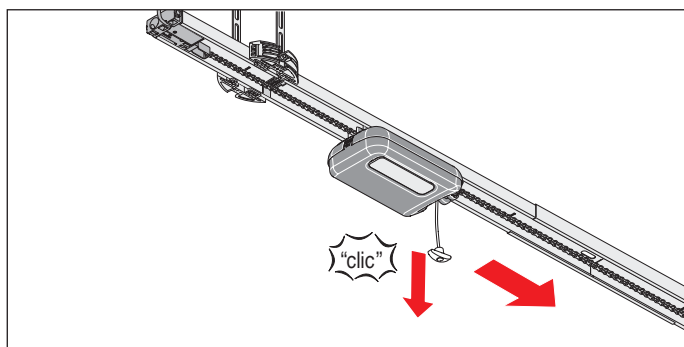


Fig. 13

13. Pull the emergency release cord once to unlock the carriage.
Slide the carriage forward to the door.

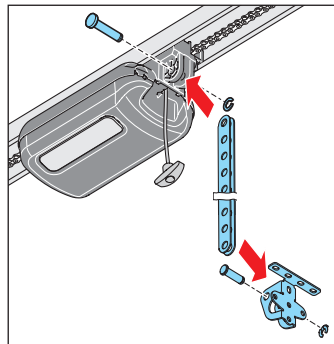


Fig. 14

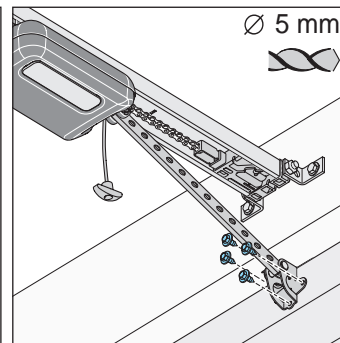


Fig. 15



WARNING

Risk of injury in the head region!
Impact with suspended objects may cause serious abrasions and cuts.



- ▶ You must wear a safety helmet when installing suspended parts.

14. Plug the push arm into the door bracket. Insert the bolt and slide on the safety bolt.
Plug the push arm into the carriage at the front. Also insert the bolt and slide on the safety bolt.
 15. Align the door bracket to the centre of the door. Mark the holes and drill them (\varnothing 5 mm).
Fix the door bracket to the door with the hexagon bolts.
- ⇒ The push arm is attached to the carriage and the door.

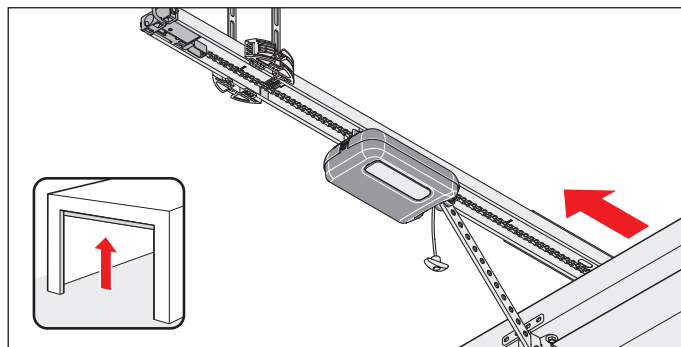


Fig. 16

6. Installation



NOTE

The door must not rub on the operator or tracks. This could damage the operator or tracks.

The operator must then be offset.

16. Open the door completely by hand.

If the door rubs on the operator or the tracks, the operator must be offset.

⇒ The guide idler automatically moves with the carriage.

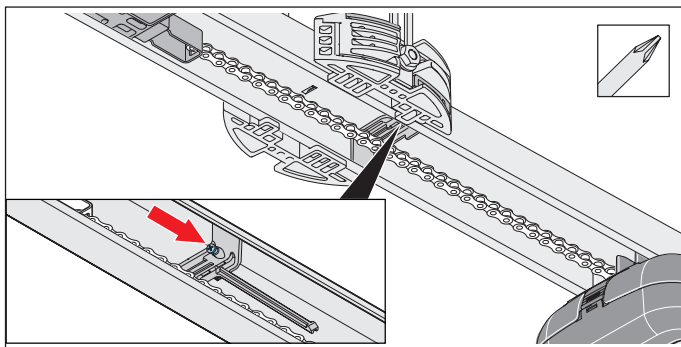


Fig. 17



NOTE

Do not push the door to the mechanical stop. This is because the operator will pull the door against the mechanical stop. This will apply tension to the door and it may be damaged.

A clearance of 30 mm is required.



INFORMATION

The guide idler can be subsequently pushed under the chain and screwed into the tracks.

Then screw the guide idler tightly to the track at the respective spot.

17. Tighten the screw on the guide idler with a Phillips screwdriver without changing its position.

Check the door OPEN end position:

Open the door fully for this. The carriage moves to the door OPEN position on the guide idler until a click noise is heard.

⇒ The door OPEN end position is set.

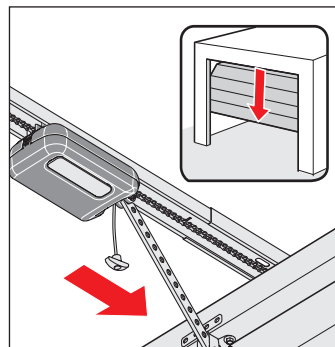


Fig. 18

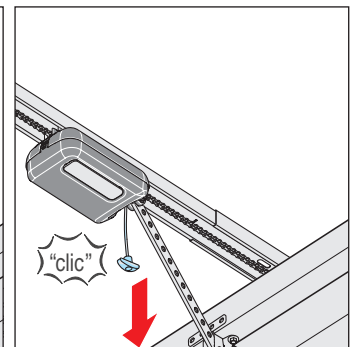


Fig. 19



NOTE

In case of an emergency release, the door could independently open or close itself due to a broken spring or incorrect setting of the weight balancing. The operator could be damaged or destroyed.

Check the emergency release regularly.



INFORMATION

It can be locked and released in any door position.

18. Move door to centre position.

⇒ The carriage moves with it.

19. Pull the emergency release cord.

⇒ **The carriage is locked.**

⇒ The door can only be moved by the operator.

6. Installation

6.7 Installing wall control unit

Follow in particular the basic safety instructions listed below.



DANGER

Danger due to electric current! Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ Before connecting in the mains power plug, ensure that the voltage of the power source corresponds with the voltage listed on the operator type plate. Do not plug in the mains plug until the operator is completely installed.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



WARNING

Danger of crushing and shearing! The door can be actuated by control device.

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ The wall control unit must be installed within sight of the door.
- ▶ The wall control unit must not be installed near moving parts.
- ▶ The wall control unit must be installed at a height of at least 1.6 m.



NOTE

Do not connect the wall control unit to the power supply until the installation is complete to prevent damage to the operator.



INFORMATION

The power cable is approx. 0.6 m long.



INFORMATION

The mains supply line that has been provided may not be shortened or extended.

All devices to be connected externally must have a safe isolation of the contacts from the mains power supply according to EC 60364-4-41.

Wiring for external devices must be installed in accordance with IEC 60364-4-41.

All electrical wiring, particularly the control cable, must be firmly secured to prevent displacement.

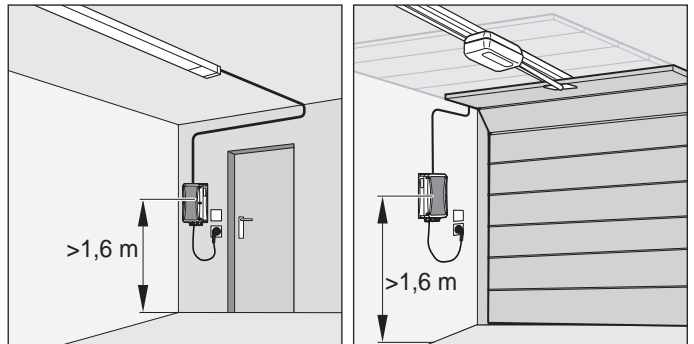


Fig. 1



INFORMATION

The drilling depth must be considered concerning the ceiling and wall thickness, particularly with prefabricated garages. It may be necessary to reduce the hole depth.

Only use permissible fastening materials appropriate for the supporting surface.

1. Choose a suitable location for the wall control unit close to an existing power socket. The maximum length of the control cable is 5 m and it must not be extended. Observe the maximum distance between the wall control unit and power socket of 0.5 m. The wall control unit must be installed at a height of at least 1.6 m.

6. Installation

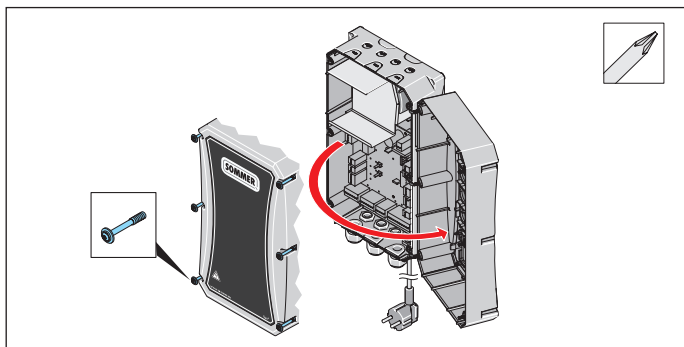


Fig. 2

- Loosen the six screws of the control unit housing and fold the cover to the side.

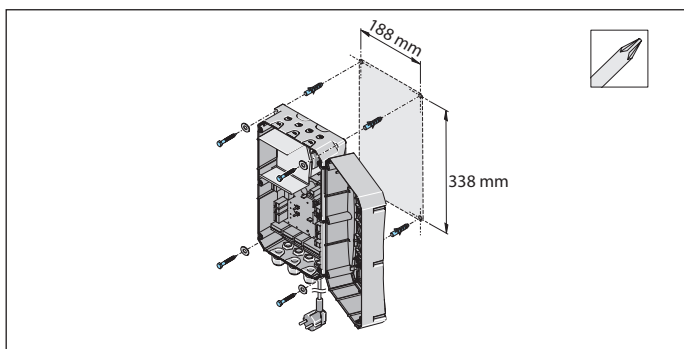


Fig. 3: Installation example



WARNING

Risk of eye injury!
Chips flying when drilling may cause serious injuries to eyes and hands.

► Wear safety glasses.



- Transfer the fixing points to the substructure. Drill four holes ($\varnothing 6 \times 40$ mm deep). Insert the four anchor fittings. Affix the wall control unit with four screws and four washers, align the unit and firmly tighten the screws.
- Securely lay the control cable of the plug-in unit up to the wall control unit and secure to prevent displacement.

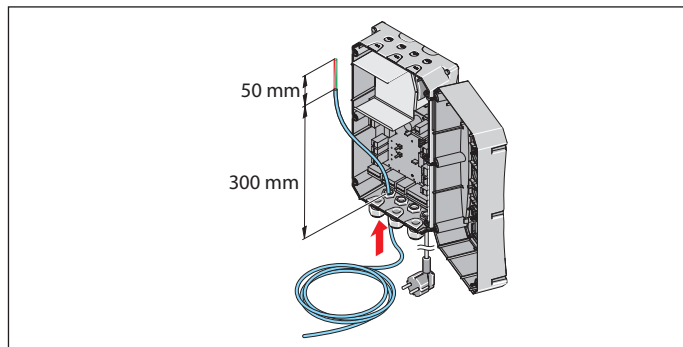


Fig. 5

- Lead the control cable into the wall control unit through the cable inlet. Shorten the control cable to no more than 350 mm in length. Uncover the last 50 mm and strip the wires.

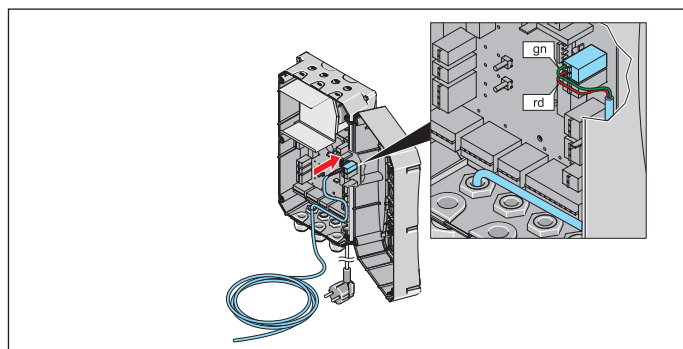


Fig. 6

- Lay the control cable up to the **gn/rd** terminal. Connect the **green** wire of the control cable to the **gn** terminal. Connect the **red** wire of the control cable to the **rd** terminal.
- Close the housing in reverse order.

You can find other connection options such as buttons or warning light in Chapter "11. Connections and special functions of the wall control unit".

7. Removing and fastening covers

7.1 Cover of carriage

Observe in particular the following safety instructions for this chapter.



WARNING

Danger due to optical radiation! Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

- ▶ Do not look directly into a LED.



WARNING

Danger due to hot surfaces! After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.

Removing cover

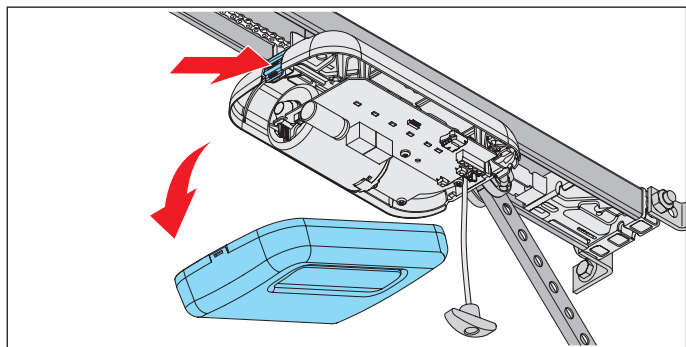


Fig. 1

1. Press on the cover lock at the back of the carriage and remove the cover.

Installing cover

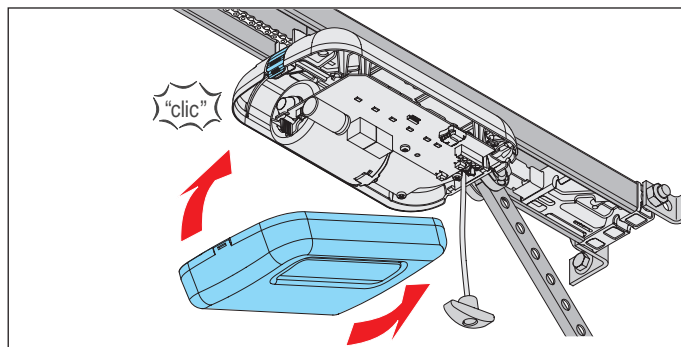


Fig. 1

1. Insert the cover from the front and lock it to the carriage at the back.

7. Removing and fastening covers

7.2 Cover hood of wall control unit



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



WARNING

Danger due to hot surfaces!
After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.

Removing the cover hood

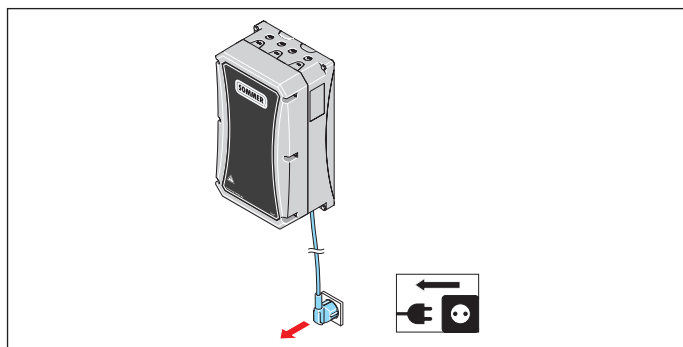


Fig. 1

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.

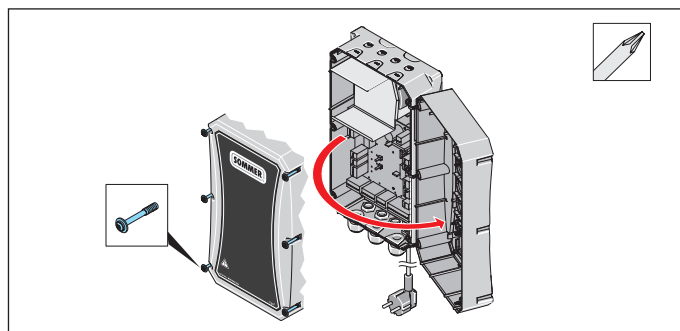


Fig. 2

2. Loosen all screws of the control unit housing and fold the cover to the side.
3. If a battery pack is used, it must also be disconnected, see Chapter "**11.10 Installing and removing battery pack**":

Installing the cover

1. After working on the wall control unit, replace the cover hood in reverse order.
2. Connect the operator to the mains voltage. Check that the power supply is connected.
⇒ The operator is supplied with voltage.

8. Electrical connection and special functions

8.1 Connection to a power socket

A power socket is required for the electrical connection of the operator.

A power socket must be installed by **trained electricians** only.

The power socket must be protected by a fuse. Local and national regulations (e.g. VDE) must be observed.

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

Observe in particular the following safety instructions for this chapter.

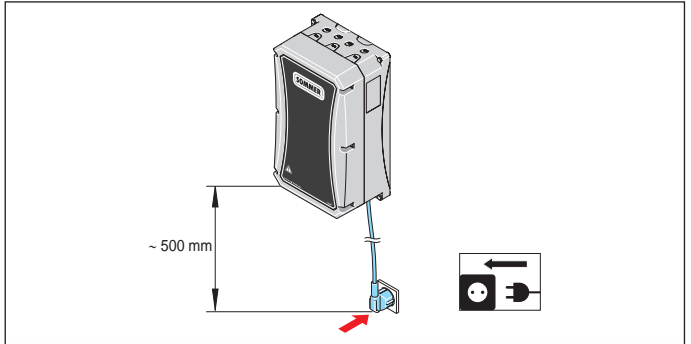


Fig. Distance of wall control unit to power socket

Note that the distance between the wall control unit and the power socket must not exceed 0.5 m.



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ Before connecting in the mains power plug, ensure that the voltage of the power source corresponds with the voltage listed on the operator type plate.
- ▶ Do not plug in the mains plug until the operator is completely installed.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



INFORMATION

The power socket must be installed as follows:

- within easy reach of the wall control unit power cable
- easily visible and clear of obstacles



INFORMATION

The power cable is approx. 0.6 m long.



INFORMATION

The mains supply line that has been provided may not be shortened or extended.

All devices to be connected externally must have a safe isolation of the contacts from the mains power supply according to EC 60364-4-41.

Wiring for external devices must be installed in accordance with IEC 60364-4-41.

All electrical wiring, even the control cable, must be firmly secured to prevent displacement.



NOTE

Do not connect the wall control unit to the power supply until the installation is complete to prevent damage to the operator.

9. Commissioning

9.1 Safety information for commissioning

Observe in particular the following safety instructions for this chapter.



WARNING

Danger of entrapment!
Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.
- ▶ Wear tight-fitting clothing.
- ▶ Wear a hairnet over long hair.



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare.
This may temporarily reduce vision.
This may cause serious or fatal accidents.

- ▶ Do not look directly into a LED.



NOTE

Objects in the movement area of the door may be jammed and damaged.
Objects must not be in the range of movement of the door.



INFORMATION

The control unit detects a short-circuit between chain and track and then switches the operator off.



INFORMATION

If a photo eye is used, it must not be actuated when starting the programming.
If a photo eye is used as a frame photo eye, move the door to the centre position.

9. Commissioning

9.2 Initial operation

Before initial operation read this chapter with special care to ensure that you can make the adjustments to the operator safely and optimally.



WARNING

Danger of entrapment!

If the force setting is too high, persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ The force setting is relevant to safety and must be carefully checked and if necessary adjusted by qualified specialists.
- ▶ The operator may only be operated if a non-hazardous force value has been set.
- ▶ The force setting must be low enough to ensure that the closing force poses no risk of injury.



NOTE

Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the circuit board. Use a suitable tool to set the DIP switches, such as a flat plastic object.



INFORMATION

The force setting must be checked after installation of the operator, see also Chapter "12.1 Testing obstacle detection".

The operator may only be used:

- in combination with door types in the reference list which can be found at:



<http://som4.me/cgdo>


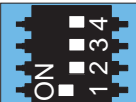
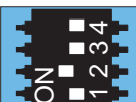
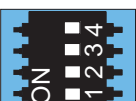
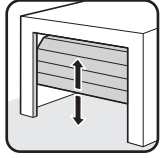
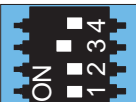
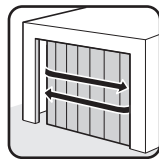
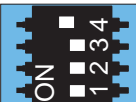
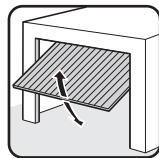
For compliance with EN 13241-0 before initial operation, the door type must be selected and set on the carriage with the DIP switch.

The factory setting of the DIP switches is OFF, which is applicable for sectional doors.



INFORMATION

Only the following settings of the DIP switches are allowed.

DIP switch on carriage	ON	OFF 
1 	Automatic closing function activated	Automatic closing function deactivated
2 	Partial opening activated	Partial opening deactivated
3+4 		
3 		
4 		

The carriage has an automatic force setting. The carriage automatically memorizes the required force during the door OPEN and CLOSE operator movements and stores it when the end positions have been reached.



INFORMATION

If a photo eye is connected for door CLOSE and detected by the control unit, the close function is automatically activated. The position of DIP switch 1 on the carriage is independent of this.

9. Commissioning



INFORMATION

During initial operation:

- Stay in the garage, particularly when programming.
- Power deactivation is not yet coordinated to the door and the operator is in the programming phase.
- The red traffic lights light up in the interior and the exterior.



INFORMATION

The operating forces can be modified and adjusted with SOMlink and a smartphone.

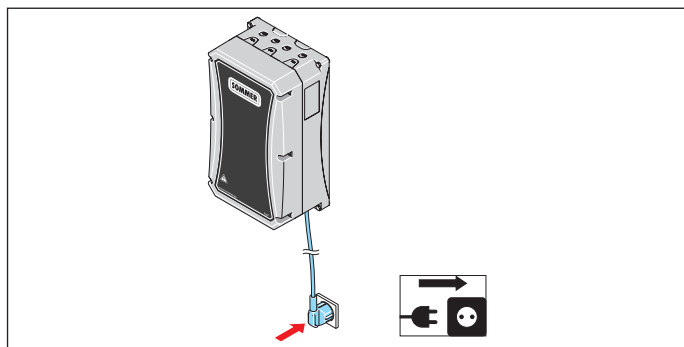


Fig. 1

1. Match the existing power supply with the type plate. Connect the operator to the mains voltage. Check that the power supply is connected.
 - ⇒ The status LED of the carriage flashes green.
 - ⇒ Operator ready for commissioning.



INFORMATION

Depending on which accessories are connected, additional LEDs light up for the respective states on the circuit board of the control unit.

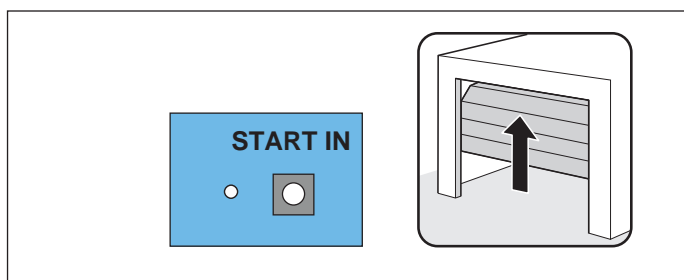


Fig. 2

2. After the operator has been connected to the power supply, its first movement after a pulse is always door OPEN. Press the START IN button on the tiga+ control unit.
 - ⇒ The carriage moves slowly to the door OPEN end position and automatically switches off at the guide idler.
 - ⇒ The operator lighting flashes.

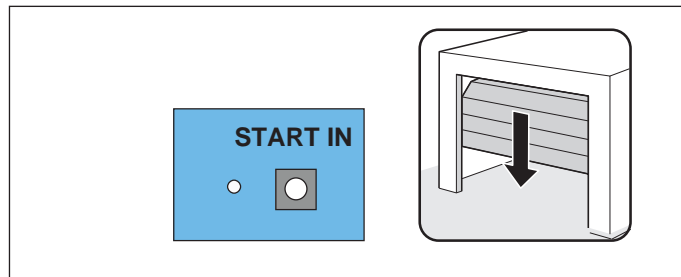


Fig. 3

3. Press the START IN button on the tiga+ control unit again.
 - ⇒ The carriage moves slowly in the door CLOSE direction.
 - ⇒ The operator lighting flashes. The carriage switches off **automatically** when it reaches the factory-set closing force at the door CLOSE end position.
 - ⇒ The operator lighting flashes in a different sequence.

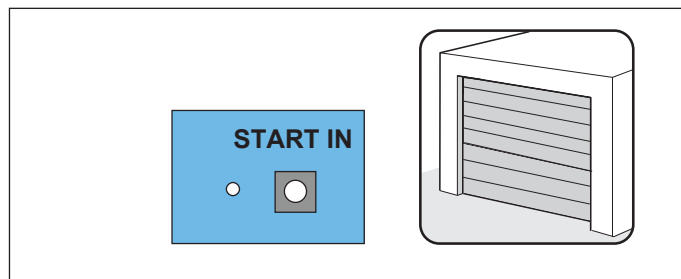


Fig. 4

4. Press the START 1 button on the tiga+ control unit **briefly** (< 1 second) to save the end position.
 - ⇒ The operator lighting flashes briefly in a fast sequence.
 - The operator automatically starts its programming process:**
 - ⇒ The carriage moves **automatically** to the door OPEN end position and programs the required operating force.

9. Commissioning

- ⇒ The carriage **automatically** moves to the door CLOSE end position.
If necessary, the carriage moves over the path several times for programming with a greater door weight.
- ⇒ The carriage **automatically** moves briefly in the door OPEN direction to program the soft running.
- ⇒ The door **automatically** returns to the door CLOSE end position.
- ⇒ The carriage **automatically** moves to the door OPEN end position.
- ⇒ The LEDs of the operator lighting remain **steady**.
- ⇒ The LED lights up when the door OPEN end position has been reached.
Interior: Green.
Exterior: Red.
- ⇒ **Operator is programmed and ready for use.**
- ⇒ If a photo eye is connected, PHOTO 1 for door CLOSE, the door automatically closes after the open holding and clearing time run out.



INFORMATION

The carriage stops if the door is difficult to move. The door mechanism must be checked, see Chapter "9.3 Detecting obstacles during force programming run".

It may be necessary to readjust the end positions, see Chapter "9.4 Mechanical adjustment of the end positions".

9.3 Detecting obstacles during force programming run

If the door detects an obstacle during the OPEN and CLOSE door movements and the force programming run cannot be completed, the door stops.



NOTE

Check the movement path, mechanism, spring tension and the weight compensation to prevent damage to the door system.

1. **Press** the START IN button on the control unit and **keep it pressed**.
 - ⇒ The carriage **jerks briefly** and moves in the door CLOSE direction until the **desired end position** has been reached.
2. Release the Start IN button.

3. Fine adjustment:

Press the START IN button on the control unit and keep it pressed until the carriage jerks briefly. Release the Start IN button.

- 3.1 The process can be repeated until the desired end position is reached.
Press the START IN button on the control unit **briefly** (< 1 second) to save the door CLOSE end position.

- ⇒ The carriage starts the **automatic** force programming run to the door OPEN end position.
- ⇒ The carriage starts the **automatic** door CLOSE force programming run.

If an obstacle is detected again, the carriage stops and reverses a short distance.

1. **Press** the START IN button on the control unit and **keep it pressed**.
 - ⇒ The carriage starts without jerking, because the end position of door is already saved.
 - ⇒ The carriage moves to the end position.
2. Release the START IN button on the control unit.
3. Briefly press the START IN button on the control unit.
 - ⇒ **Restart automatic force programming runs.**
 - ⇒ On completion of the force programming runs the carriage **automatically** moves to the door OPEN end position.
 - ⇒ The LEDs of the operator lighting remain **steady**.
 - ⇒ **Operator is programmed and ready for use.**

9. Commissioning

9.4 Mechanical adjustment of the end positions

Increasing the closing pressure of the end position for door CLOSE

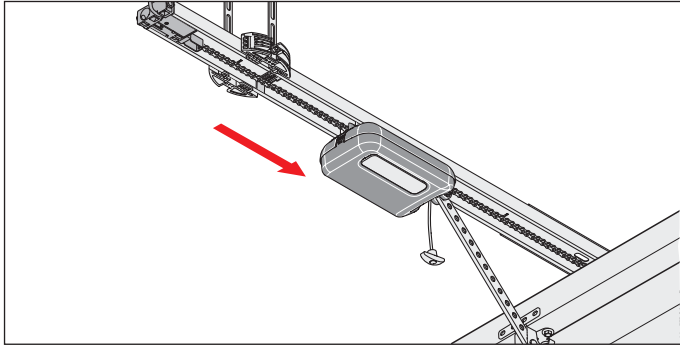


Fig. 1

1. Loosen the screw on the guide idler and move the guide idler a few millimetres towards door CLOSE. Tighten the screw again.
2. The function of the emergency release must be checked in the door CLOSE end position. Unlocking must be possible.

Reducing the closing pressure of the end position for door CLOSE

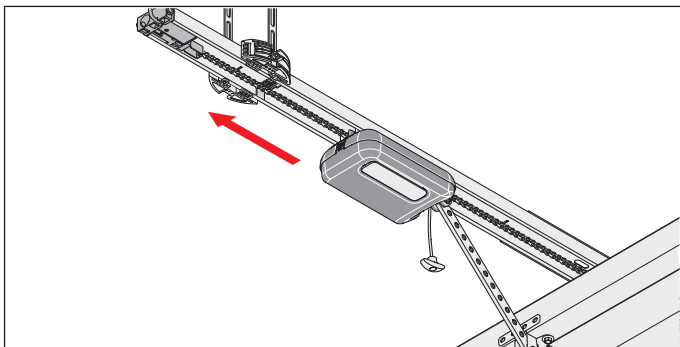


Fig. 1

1. Loosen the screw on the guide idler and move the guide idler a few millimetres towards door OPEN. Tighten the screw again.



NOTE

Do not push the door to the mechanical stop. This is because the operator will pull the door against the mechanical stop. This will apply tension to the door and it may be damaged. A clearance of 30 mm is required.

9.5 Attaching information sign and warning signs

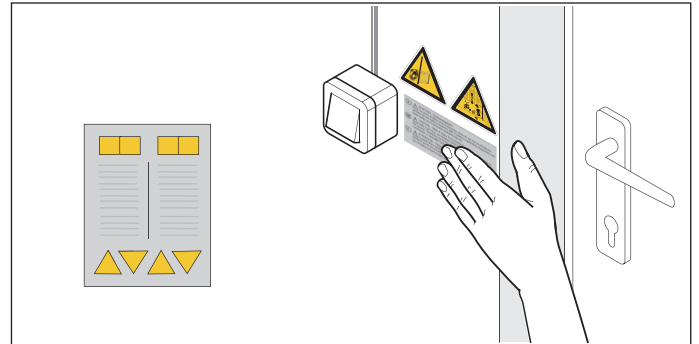


Fig. 1.1 Sticker near the stationary control or control unit

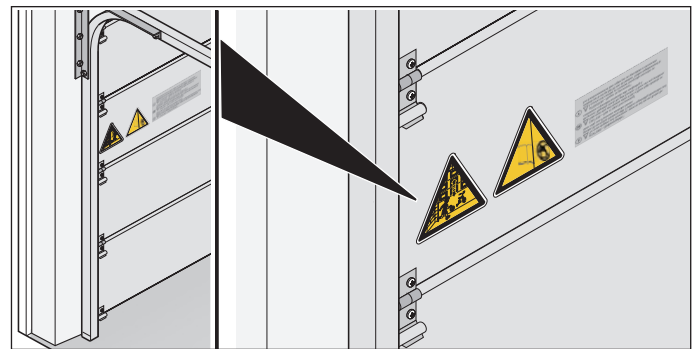


Fig. 1.2 Sticker on door panel

1. Attach the warning signs and information sign:
 - near the stationary control or control unit
 - at eye level at a highly visible section of the door wing
 - far from moving parts
2. Run obstacle detection, see Chapter "12.1. Testing obstacle detection".
⇒ Initial operation is complete.

10. Connections and special functions of the carriage

10.1 Carriage circuit board

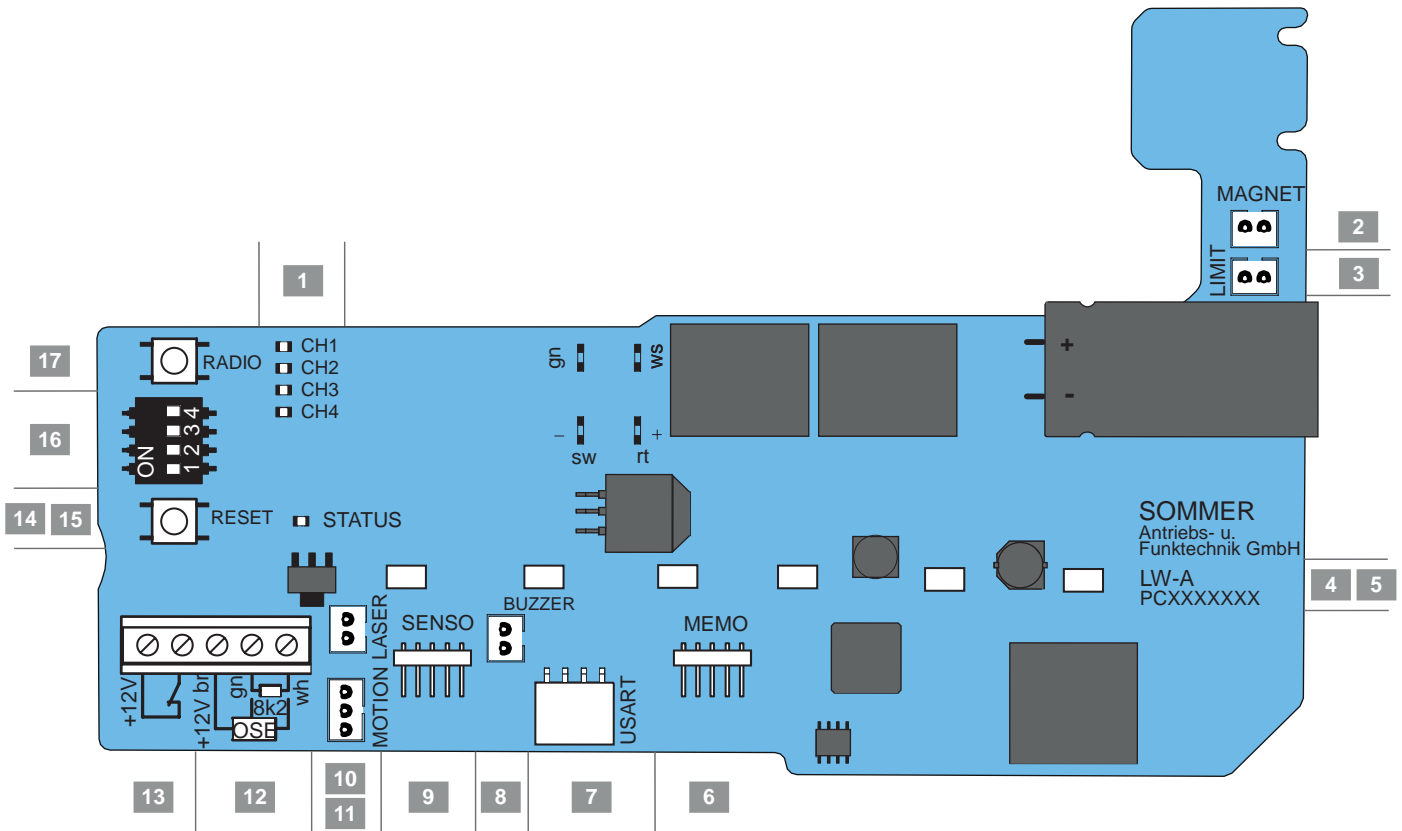


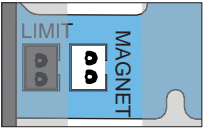
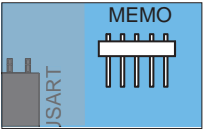
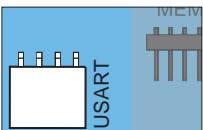
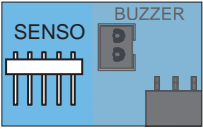
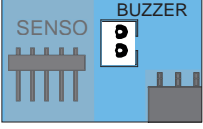
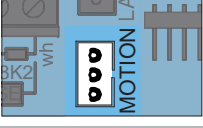
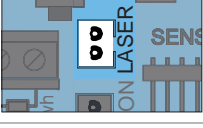
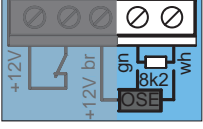
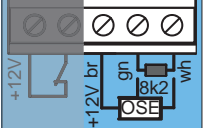
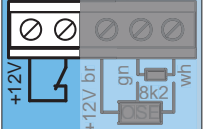
Fig. Carriage circuit board

Overview of connection options

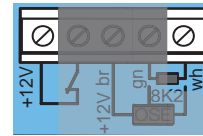
1.	LED, CH 1 - CH 4, red Display for radio channel	10.	LASER slot, white Parking position laser terminal
2.	MAGNET slot, green Lock terminal	11.	MOTION slot, white, 3-pin Terminal for movement sensor
3.	LIMIT slot, blue End switch terminal (OPEN)	12.	Terminal for safety contact strip 8k2, OSE
4.	Circuit board label	13.	Terminal for safety contact for the slip door, potential-neutral
5.	LEDs, operator lighting	12./13.	Terminal 12 V DC, 100 mA
6.	MEMO slot Memo terminal	14.	Status LED, green
7.	USART slot Interface	15.	Reset button, green
8.	BUZZER slot, black Warning or alarm buzzer terminal	16.	DIP switches
9.	SENSIO slot Senso terminal	17.	Radio button, red

10. Connections and special functions of the carriage

10.2 Connection options on the carriage

Circuit board section	Function/application example
	MAGNET slot , green Lock terminal locking magnet
	MEMO slot Memo terminal, (red housing) memory expansion for 450 transmitter commands
	USART slot Terminal, e.g. home automation module
	SENSO slot Terminal for Senso humidity sensor
	BUZZER slot , black Terminal for warning or alarm buzzer
	MOTION slot , white Terminal for movement sensor
	LASER slot , white Terminal for parking position sensor
	Safety contact strip 8k2 terminal
	OSE safety contact strip terminal +12 V = br, Signal = gn, GND = wh
	Slip door safety device terminal (Slip door switch, Reed contact etc.) potential-neutral contact command (12 V, 10 mA) NC contact

Circuit board section



Function/application example

Output 12 V DC, max. 100 mA
+ 12 V DC, GND = wh
Power supply for optional accessories,
e.g. finger scanner

For more information on the accessories contact your specialist dealer or see:

www.sommer.eu

Observe in particular the following safety instructions for this chapter.



! DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ The accessories must only be connected if the operator is disconnected from the power!
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.

10. Connections and special functions of the carriage

10.3 Reducing illumination power of LEDs



WARNING

Danger due to optical radiation! Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

▶ Do not look directly into a LED.

The illumination power of the LEDs of the operator lighting can be reduced during adjustment work on the carriage.

1. Press the radio or reset button briefly one time.
⇒ Illumination power of LEDs reduced.

10.4 Explanation of radio channels

LED	Radio channel	Setting/function
1	CH 1	Multi-function relay, lighting
2	CH 2	Partial opening
3	CH 3	Request side, exterior
4	CH 4	Request side, interior



INFORMATION

If you want the lighting function via one of the two multi-function relays, this function must be configured via SOMlink, a smartphone and the Memo tiga.



10.5 Programming the transmitter

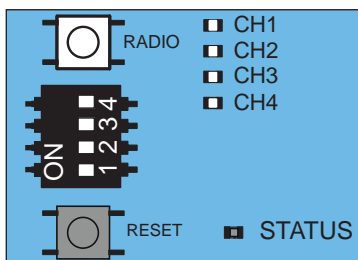


Fig. 1



INFORMATION

If no transmission command is received within 10 seconds of pressing the radio button, the radio receiver switches to normal operation.

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

LED	CH 1	CH 2	CH 3	CH 4
CH 1	■	□	□	□
CH 2	□	■	□	□
CH 3	□	□	■	□
CH 4	□	□	□	■

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



INFORMATION

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

If the memory capacity has been reached

All 40 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 flash. If more memory spaces is needed, see Chapter "10.6 Information on Memo".

10.6 Information on Memo

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

No more transmitters are stored in the internal memory.

10. Connections and special functions of the carriage

Stored transmitters cannot be transmitted from the Memo back to the internal memory.

All radio channels, including the memory of the Memo, can be deleted, see Chapter "10.11 Deleting all radio channels in the receiver".



INFORMATION

Delete the Memo on a new operator. Otherwise, all stored transmitters of an operator are deleted and must be reprogrammed.

10.7 Cancelling programming mode

1. Press the radio button until all LEDs are out or make no input for 10 seconds.
⇒ Programming mode is cancelled.

10.8 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				
CH 1				
CH 2				
CH 3				
CH 4				

⇒ The LED flashes after 15 seconds.

2. Release the radio button.
⇒ The radio receiver is in deletion mode.
3. Press the transmitter button for which the radio command is to be deleted in the radio receiver.
⇒ LED goes out.
⇒ The deletion procedure is ended.
4. Repeat the process for additional buttons as required.

10.9 Deleting transmitter completely from the receiver

1. Press and hold the radio button for 20 seconds.
⇒ The LED flashes after 15 seconds.
2. After another 5 seconds the flash sequence changes to flashing.
3. Release the radio button.
⇒ The radio receiver is in deletion mode.
4. Press any button on the transmitter that is being deleted.
⇒ LED goes out.
⇒ The deletion procedure is completed.
⇒ The transmitter is deleted from the radio receiver.

Repeat for additional transmitters as required.

10.10 Deleting 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				
CH 1				
CH 2				
CH 3				
CH 4				

⇒ The LED flashes after 15 seconds.

⇒ After another 5 seconds the flash sequence changes to flashing.

⇒ After another 5 seconds, the LED of the selected radio channel remains steady.

2. Release the radio button.
⇒ The deletion procedure is ended.
⇒ All programmed transmitters on the selected radio channel are deleted from the radio receiver.

10. Connections and special functions of the carriage

10.11 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 flashing.
 - ⇒ After another 5 seconds, the LED of the selected radio channel remains steady.
 - ⇒ After another 5 seconds all LEDs light.
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.

10.12 Programming a second transmitter by radio (HFL)

Prerequisites for teach-in by radio

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

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

Example:

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

Restrictions

The targeted teach-in of a selected transmitter button on a radio channel is not possible.

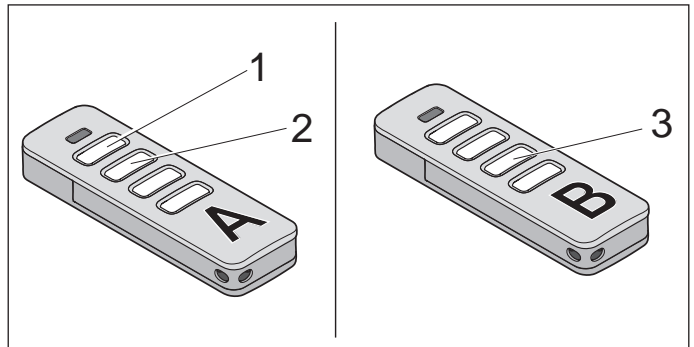


Fig. 1

Fig. for 3.

1. Press buttons 1 + 2 of a programmed transmitter (A) for 3 - 5 seconds until the LED lights up on the transmitter.
 - ⇒ The operator lighting flashes.
 - ⇒ If a radio command is not transmitted within another 30 seconds, the radio receiver switches over to normal mode.
2. Release buttons 1 + 2 of the transmitter (A).
3. Press any key, e.g. (3) on the new transmitter (B) to be programmed.
 - ⇒ The LEDs of the operator lighting remain steady.
 - ⇒ Transmitter (B) has been programmed.

10.13 Resetting the control unit

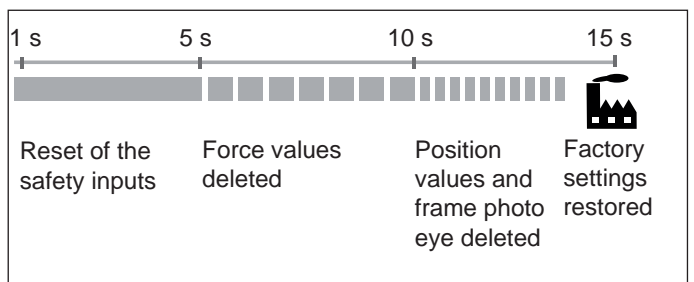


Fig. Overview of the time sequence of the carriage status LED when pressing the green reset button

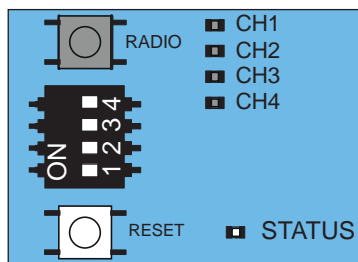


Fig. 1

10. Connections and special functions of the carriage



INFORMATION

All operator parameters are reset to the factory settings by a factory reset. All settings by SOMlink and smartphone are also reset. The DIP switches can only be manually reset.



Reset of the safety device

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

Deleting the force values

1. Press the green reset button on the carriage for 5 seconds until the green status LED flashes slowly.
 - ⇒ Force values are deleted.

Deleting force and position values

1. Press the green reset button on the carriage for 10 seconds until the green status LED flashes quickly.
 - ⇒ Force and position deleted.
 - ⇒ Frame photo eye deleted.

Factory reset

1. Press the green reset button on the carriage for 15 seconds until the green status LED goes out.
 - ⇒ Factory settings are restored.

10.14 Setting the DIP switches on the carriage

Special functions can be set up with the DIP switches on the carriage.

For compliance with EN 13241-0 before initial operation, the door type must be selected and set on the carriage with the DIP switch.

The factory setting of the DIP switches is "OFF", which is applicable only for sectional doors.




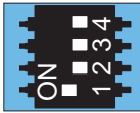
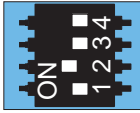
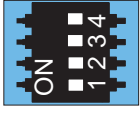
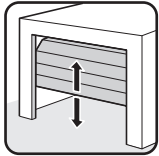
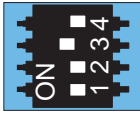
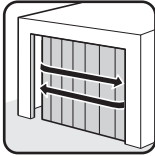
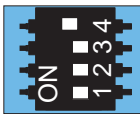
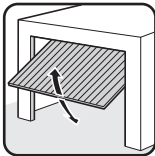
NOTE

Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the circuit board. The DIP switches can be set with a narrow, flat plastic object.



INFORMATION

Only the following settings of the DIP switch are allowed.

DIP switch on carriage	ON	OFF 
1 	Automatic closing function activated	Automatic closing function deactivated
2 	Partial opening activated	Partial opening deactivated
3+4 		
3 		
4 		

10.15 Setting the automatic closing function

When automatic closing is activated, the door is opened by a pulse.

The door moves to the door OPEN end position. The door closes automatically after the open holding time. With the factory settings, the door also closes automatically from the partial opening position when the automatic closing function is activated.

If a photo eye is connected, the "Automatic closing" operating status is activated as a requirement.

10. Connections and special functions of the carriage



WARNING

Risk of injury during automatic closing!

Automatically closing doors can injure people or animals in the movement area of the door when the door is closing. Serious injury or death may result.

- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the ceiling holder or the push arm.
- ▶ Do not drive through the door until it has been fully opened.



NOTE

If the door is not in view and the operator is actuated, objects in the movement area of the door may be jammed and damaged. Objects must not be in the range of movement of the door.



INFORMATION

The door opens completely if it hits an obstacle.



INFORMATION

Operation with automatic closing must comply with EN 12453. This is a legal requirement.

National regulations must be observed in non-European countries.

A photo eye must be connected.

Bridging the safety inputs with wire bridges is not permitted.

10.16 Open holding time

The open holding time is the time during which the door remains open after reaching the door OPEN end position until it automatically closes.

During the open holding time, the request side, which gave the open command, receives the green phase. The open holding time is restarted after every additional command.

Example: If a command is sent while the operator is closing automatically, it opens completely and the open holding time is reset.



INFORMATION

The open holding time set at the factory is 30 seconds from the end position and 60 seconds from partial opening.



These values can be changed and set via SOMlink and a smartphone.

Values in the range of 10-240 seconds can be selected for the open holding time.

The values are 1-255 seconds for partial opening.

1. The open holding time of the door is 30 seconds. Every new command within 30 seconds restarts the open holding time. The door opens by pressing button 1 on the transmitter. The door movement cannot be stopped with the transmitter.
2. The door closes automatically after 30 seconds. The closing movement can be stopped by a command with the transmitter.
⇒ Door opens completely - after reversal of direction.
3. The door starts the closing process again after 30 seconds.
⇒ Door CLOSE.



INFORMATION

The factory setting is fully automatic closing with a set open holding time of 30 seconds. The open holding time starts at the door OPEN end position and from partial opening.



When driving through, the photo eye is activated and the open holding time is shortened to 5 seconds.

This setting and the selection of semi-automatic closing can be adjusted via SOMlink and with a smartphone.

10. Connections and special functions of the carriage

10.17 Pre-warning time

In the pre-warning time, the red traffic light blinks on both sides before opening or closing the door. The warning light and the operator lighting of the carriage also flash. No pre-warning time is activated in the factory settings.



INFORMATION

The pre-warning time can be separately activated and adjusted for door OPEN and door CLOSE with SOMlink and a smartphone.



The setting range is 0-65 seconds.

The progress of the pre-warning time is displayed by the flashing operator lighting and the warning light.

10.18 Priority switching

Priority switching is used when entry from the exterior request side has a higher priority than that of the interior request side - for the exit. For example, when there is a very short entry and the car protrudes into the street.

If the interior request side has the green phase and a command comes from the exterior request side, the interior green phase is terminated.

After the clearing time (factory setting: 10 seconds), the exterior request side receives the green phase.



INFORMATION

Priority switching can be activated and adjusted with SOMlink and a smartphone.



10.19 Shortened open holding time for driving through the photo eye

Shortening of the open holding time after driving through the photo eye is activated in the factory settings and is 5 seconds.

- ⇒ Door is in the door OPEN end position.
- ⇒ The photo eye is crossed.
- ⇒ Shortening of the open holding time is now activated.
Door closes for 5 seconds after passing through photo eye.



INFORMATION

Shortening the open holding time can be deactivated and changed with SOMlink and a smartphone.



The setting range is 5- 65 seconds. When shortening of the open holding time is deactivated, the set open holding time of the automatic closing function is restarted when driving through the photo eye.

10.20 Clearing time

The clearing time starts after the open holding time runs out. During clearing time, the red traffic lights light up and the drive lighting on the carriage also flashes.

Persons or vehicles which had the green phase on the request side (interior/exterior) must clear the entrance during this time.



INFORMATION

The clearing time is 10 seconds (factory setting) and can be changed by SOMlink and a smartphone.



The setting range is 1- 60 seconds.

10. Connections and special functions of the carriage

10.21 12 V output

This output can be used for the power supply of external accessories. 12V DC max. 100 mA are available for them.

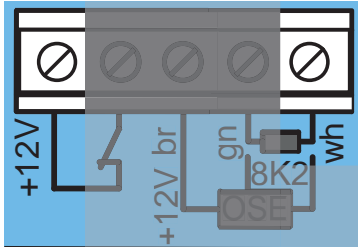


Fig. Output 12 V

Terminal block	Function
br = +12 V DC	Output 12 V DC, max. 100 mA
wh = GND	

External consumers can be connected in this operating mode, for example a finger scanner on the door panel. In this operating mode, power-saving mode is not available and must be deactivated, see Chapter "13.5 Power-saving mode".



INFORMATION

Power-saving mode must be deactivated for this operating mode. Set DIP switch 3 on the wall control unit to ON.

10.22 Setting partial opening

This function partially opens the door.

Example:

A side-opening sectional door can be opened to allow a person to pass through. The partial opening can be used via radio control system or button 2, see Chapter "11.8 Connection options for control device".



INFORMATION

The specified partial opening can be from any position of the door.



INFORMATION

The automatic closing function must be deactivated in order to program the partial opening function.



INFORMATION

When the door has reached the partial opening position, the red traffic lights light up on both sides of the door.

1. Close the door completely up to the door CLOSE end position.
2. Press the radio button repeatedly to select radio channel CH 2 and to program the function to the desired transmitter button.
3. Set DIP switch 2 on the carriage to ON.
4. Press the desired button on the transmitter for the partial opening function.
⇒ The door moves in door OPEN direction.
5. Press the desired button on the transmitter again to stop it.
⇒ The door stops at the desired position.
⇒ The partial opening function is programmed.
6. Press the button on the transmitter again.
7. The door moves to the door CLOSE end position.
⇒ The partial opening function is programmed.

10.23 Deleting partial opening

1. Set DIP switch 2 on the carriage to OFF.
2. Open the door completely up to the door OPEN end position.
⇒ Partial opening is deleted.

To program a new position, see Chapter "10.22 Setting partial opening".

10. Connections and special functions of the carriage

10.24 Slip door safety device

The slip door safety device prevents operation of the door with open slip doors.

1. The slip door safety device must be installed so that the switch reliably detects the open doors. Do not install the slip door safety device on the hinge side. Also see the separate "Slip door" installation instructions.
2. Connect the slip door safety device on the terminal block on the carriage. The contact command is at 12 V/10 mA. The normally closed contact is potential-neutral.
3. Check the slip door safety device function.



INFORMATION

If the slip doors are opened, the operator lighting on the carriage switches on. If the doors close, the operator lighting lights up for the set burning time and then switches off. The burning time can be modified with SOMlink and a smartphone.



INFORMATION

If the slip door remains open longer than 60 minutes, the operator lighting switches off automatically after 60 minutes. This value cannot be changed.



INFORMATION

If the control receives a new command with the slip doors open, the LEDs of the operator lighting change from permanent to blinking light.

10.25 SOMlink

SOMlink makes it possible for qualified specialists to change many functions and settings on the door operator. 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 door operator functions.



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

All changes to settings by the SOMlink are logged.

11. Connections and special functions of the wall control unit

11.1 Wall control unit circuit board

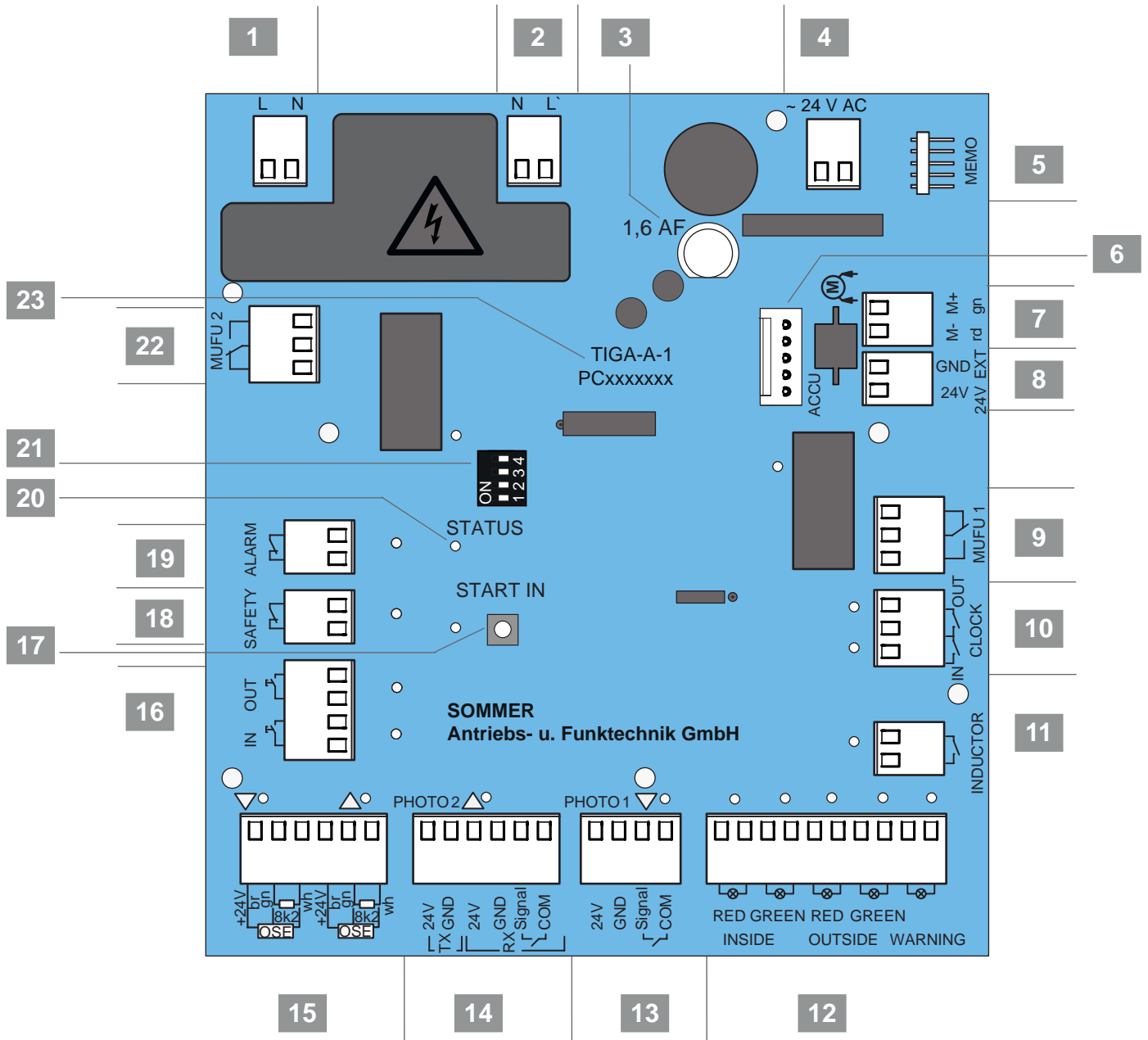


Fig. Wall control unit circuit board

A connection diagram can be found in Chapter "18. Connection diagrams and functions of the DIP switch".

11. Connections and special functions of the wall control unit

Connection options to the wall control unit

<p>1. 2-pin terminal block Supply voltage 220 - 240 V AC 50/60 Hz</p>	<p>12 10-pin terminal block</p> <ul style="list-style-type: none"> • Traffic light for red, interior, with status LED, red 24 V DC, max. 7 W • Traffic light for green, interior, with status LED, green 24 V DC, max. 7 W • Traffic light for red, exterior, with status LED, red 24 V DC, max. 7 W • Traffic light for green, exterior, with status LED, green 24 V DC, max. 7 W • Warning light, 24 V, max. 3 W, with status LED, orange
<p>2 2-pin terminal block Transformer primary side 220 - 240 V AC 50/60 Hz</p>	<p>13 4-pin PHOTO 1 terminal block 2- or 4-wire photo eye 1 (door CLOSE direction) 24 V DC, max. 100 mA, with status LED, orange</p>
<p>3 Glass tube fuse 1.6 AF</p>	<p>14 6-pin PHOTO 2 terminal block 4-wire photo eye 2 (door CLOSE direction) 24 V DC, max. 100 mA, with status LED, orange</p>
<p>4 2-pin terminal block Transformer secondary side 24 V AC</p>	<p>15 6-pin terminal block Safety contact strip (OSE/8k2), 12 V, max. 100 mA with status LED, orange</p>
<p>5 MEMO slot Memo tiga Factory setting</p>	<p>16 4-pin IN/OUT button terminal block Potential-free</p> <ul style="list-style-type: none"> • Request side, interior • Request side, exterior <p>with status LEDs, orange</p>
<p>6 ACCU slot Terminal for battery pack</p>	<p>17 Start IN Start button for interior</p>
<p>7 2-pin terminal block Chain and track 24 V DC</p>	<p>18 2-pin SAFETY terminal block potential-neutral, E.g.: for emergency stop with status LED, green</p>
<p>8 Output, external accessories 24 V, max. 300 mA</p>	<p>19 ALARM terminal block With status LEDs, green</p>
<p>9 MUFU 1 terminal block Multi-function relay 1 potential-neutral changeover contact, max. 60 V DC, 5 A with status LED, green</p>	<p>20 Status LED With status LEDs, green</p>
<p>10 3-pin CLOCK terminal block potential-neutral, timer contact with status LED, orange</p>	<p>21 DIP switches</p>
<p>11 2-pin INDUCTOR terminal block potential-neutral, induction loop contact with status LED, orange</p>	<p>22 MUFU 2 terminal block Multi-function relay 2 potential-neutral changeover contact, max. 250 V AC, 5 A or 24 V DC, 5 A with status LEDs, green</p>
	<p>23 Circuit board label</p>

11. Connections and special functions of the wall control unit

11.2 Connection options to the wall control unit

Observe in particular the following safety instructions for this chapter.



WARNING

Danger of crushing and shearing!
The door can be actuated by a button. Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.

- ▶ Only install the switch in view of the door.
- ▶ Do not press the button unless the door is in view.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.



WARNING

Danger due to hot surfaces!
After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.



NOTE

Never lay the control cable along a power line. This can lead to malfunctions in the control unit.

Note the length of the control cable and install it correctly.



INFORMATION

The control unit detects a short-circuit between chain and track and then switches the operator off. If the short circuit is no longer present, the operator runs normally again.



INFORMATION

Control or regulating units in a fixed position must be mounted within sight of the door at a height of at least 1.6 m.



INFORMATION

The power cable is approx. 0.6 m long.



INFORMATION

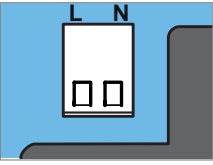
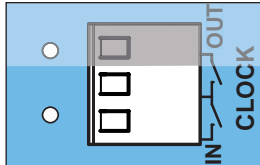
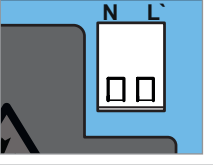
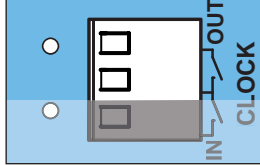
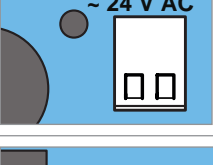
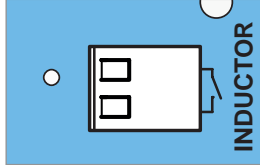

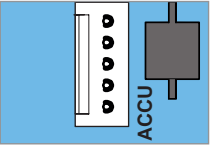
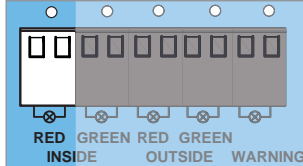
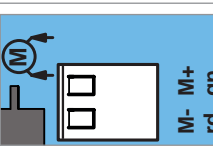
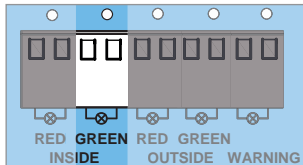
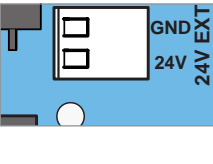
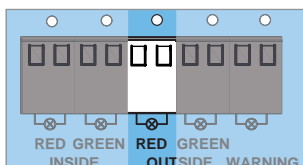
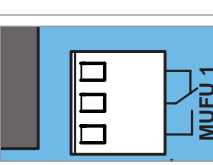
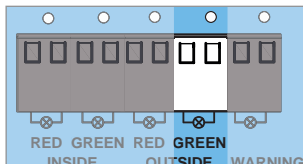
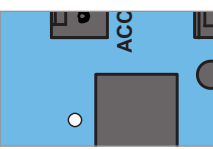
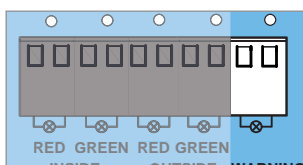
The maximum cable length for connected accessories is 25 m.



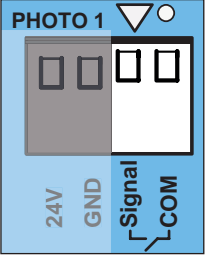
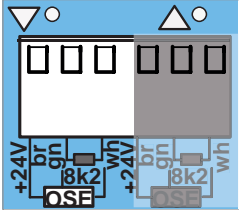
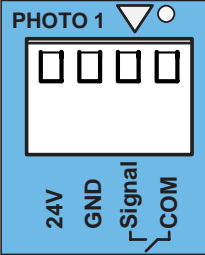
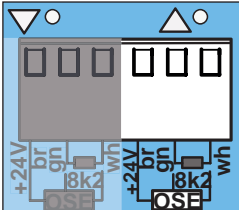
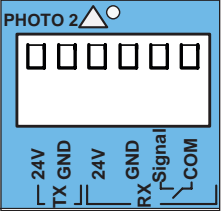
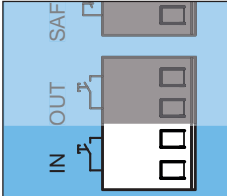
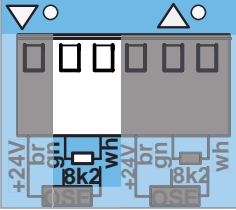
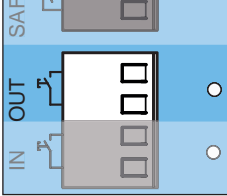
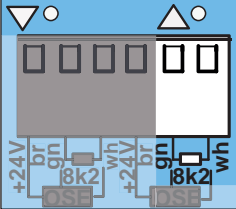
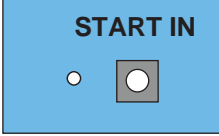
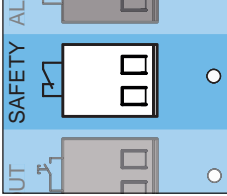
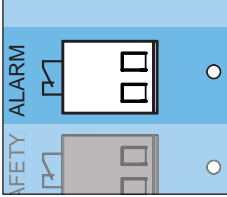
INFORMATION

If a photo eye is used, it must not be actuated when starting the programming. If a photo eye is used as a frame photo eye, move the door to the centre position.

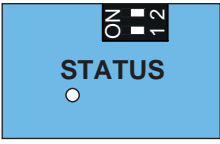
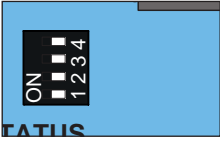
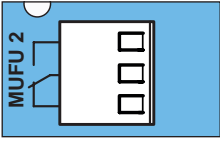
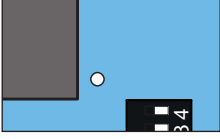
11. Connections and special functions of the wall control unit

Circuit board section	Function/application example	Circuit board section	Function/application example
	2-pin terminal block Supply voltage 220 - 240 V AC 50/60 Hz		3-pin terminal block CLOCK potential-neutral timer contact IN = interior request side OUT = exterior request side With status LED, orange
	2-pin terminal block Transformer primary side 220 - 240 V AC 50/60 Hz		
	2-pin terminal block Transformer secondary side 24 V AC		3-pin terminal block INDUCTOR potential-neutral, induction loop contact interior request side with status LED, orange
	MEMO slot Memo tiga (black housing) installed at the factory EEPROM for configuration data from multi-function relay 1 and 2 (MUFU1 and MUFU2)	10-pin terminal block, traffic light and warning light	
	ACCU slot Terminal for battery pack		Traffic light for red, interior 24 V DC, max. 7 W with status LED, red
	2-pin terminal block Chain and track 24 V DC gn + = track rd - = chain		Traffic light for green, interior 24 V DC, max. 7 W with status LED, green
	2-pin terminal block 24 V output power supply for external accessory output, 24 V DC, max. 300 mA		Traffic light for red, exterior 24 V DC, max. 7 W with status LED, red
	3-pin terminal block MUFU 1 Multi-function relay 1 potential-neutral changeover contact, max. 60 V DC, 5 A with status LED, green		Traffic light for green, exterior 24 V DC, max. 7 W with status LED, green
			Warning light 24 V DC, max. 3 W with status LED, orange

11. Connections and special functions of the wall control unit

Circuit board section	Function/application example	Circuit board section	Function/application example
4-pin PHOTO 1 terminal block 	2-wire photo eye (SOMMER) for door CLOSE Any polarity Signal COM with status LED, orange	6-pin OSE terminal block 	OSE safety contact strip for door CLOSE +24 V DC = br Signal = gn GND = wh +24 V DC, max. 50 mA with status LEDs, orange
	4-wire photo eye for door CLOSE 24 V DC, max. 100 mA +24 V GND Signal COM with status LED, orange		OSE safety contact strip for door OPEN +24 V DC = br Signal = gn GND = wh +24 V DC, max. 50 mA with status LEDs, orange
6-pin PHOTO 2 terminal block 	4-wire photo eye for door OPEN With status LED, orange TX (transceiver) +24 V DC GND RX (receiver) +24 V DC GND Signal COM 24 V DC, max. 100 mA		4-pin terminal block Control device potential-neutral IN = interior request side
6-pin 8k2 terminal block 	8k2 safety contact strip for door CLOSE with status LED, orange		OUT = exterior request side with status LEDs, orange
	8k2 safety contact strip for door OPEN With status LEDs, orange		Start IN Start button for interior with status LED, green
			2-pin terminal block SAFETY potential-neutral, E.g.: for emergency stop with status LED, green
			2-pin terminal block ALARM potential-neutral, E.g.: for fire alarm system contact with status LED, green

11. Connections and special functions of the wall control unit

Circuit board section	Function/application example
	Status LED, green
	DIP switches
	3-pin terminal block MUFU 2 Multi-function relay 2
	potential-neutral changeover contact, max. 250 V AC, 5 A or max. 24 V DC, 5 A with status LED

11.3 Setting the DIP switches on the wall control unit

Special functions can be set up with the DIP switches on the wall control unit. All DIP switches are set to "OFF" in the factory settings.




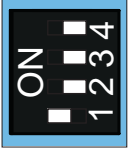
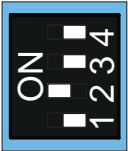
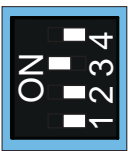
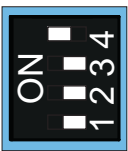
NOTE

Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the circuit board. Use a suitable tool to set the DIP switches, such as a flat plastic object.



INFORMATION

Only the following settings of the DIP switches are allowed.

DIP switches on the wall control unit	ON	OFF 
1 	The red traffic light is on when the door is closed	The red traffic light is off when the door is closed
2 	Door opens immediately with timer command	Door does not open with a timer command until after a pulse
3 	Continuous power to the complete system activated	Power-saving mode activated
4 	Door opens automatically if battery is low	Door does not open automatically if battery is low

11. Connections and special functions of the wall control unit

11.4 Information on Memo tiga

At the factory, the Memo tiga is attached to the wall control unit in the Memo slot. It creates the configuration memory for the multi-function relay settings. Separate settings can be made in this way.

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.
2. Open the wall control unit, see Chapter "7.2 Wall control unit cover".

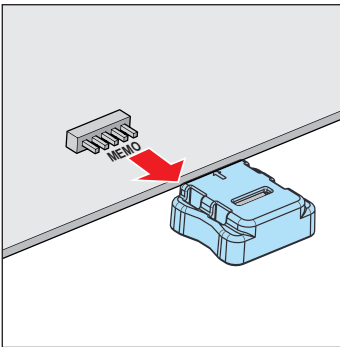


Fig. for 3.

3. Remove the Memo tiga (black housing) from the wall control unit circuit board, see Chapter "11.1 Wall control unit circuit board".

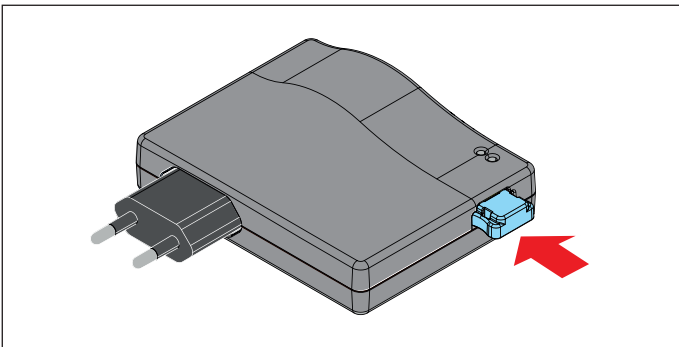


Fig. for 4.

4. Plug the Memo tiga into the provided slot on the SOMlink.
5. Connect the SOMlink to the mains voltage.
6. Establish a connection to SOMlink with a smartphone, see separate SOMlink installation instructions.
7. Select and confirm the Memo tiga icon via the smartphone.
8. Select the respective multi-function relay. Select and confirm the desired functions.

9. Disconnect the SOMlink from the mains voltage.

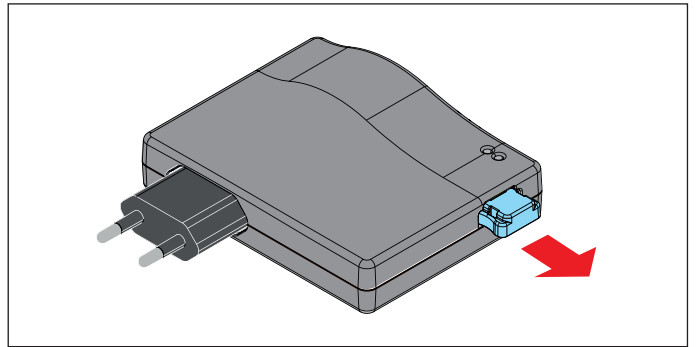


Fig. for 10.

10. Disconnect the Memo tiga from the SOMlink.

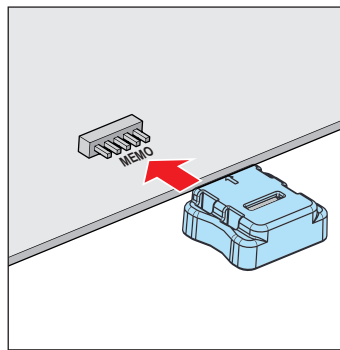


Fig. for 11.

11. Attach the Memo to the circuit board of the wall control unit.
12. Close the wall control unit, see Chapter "7.2 Wall control unit cover".
13. Connect the operator to the mains voltage. Check that the power supply is connected.
14. Check the settings made and adjust them if necessary.

11. Connections and special functions of the wall control unit

11.5 Multi-function relay, MUFU 1 and MUFU 2

The two multi-function relays (MUFU 1 and MUFU 2) can be used for various functions, e.g. operating additional outside lighting or door status display.



INFORMATION

The functions of the two multi-function relays can be changed by SOMlink, a smartphone and a Memo tigo. 10 additional configurations are available per multi-function relay, for example for the lighting function. Time can also be set for timer operation.



Multi-function relay 1 (MUFU 1)

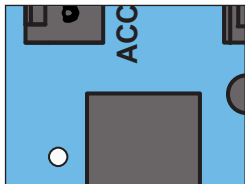


Fig. LED for MUFU 1

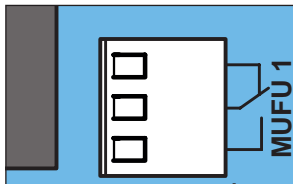


Fig. MUFU 1

The status LED for MUFU 1 lights up green when the relay is energised.



NOTE

Multi-function relay 1 contact is a potential-neutral changeover contact and may only be loaded with 60 V DC, 5 A.

The door status display function is activated in the factory settings:

- ⇒ Relay activates during door movement and if the door is open.
- ⇒ Relay deactivates when the door CLOSE end position has been reached.

Multi-function relay 2 (MUFU 2)

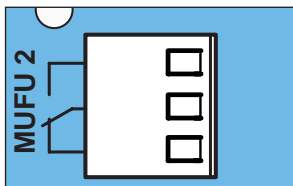


Fig. MUFU 2

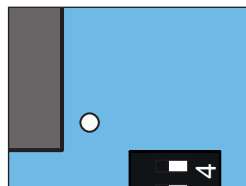


Fig. LED for MUFU 2

The status LED for MUFU 2 lights up green when the relay is energised.



NOTE

Multi-function relay 2 contact is a potential-neutral changeover contact and may only be loaded with max. 250 V AC, 5 A or max. 24 V DC, 5 A .

The "Pulse for 1 second when starting motor" function is set at the factory:

- ⇒ Multi-function relay 2 outputs a pulse of 1 second every time the motor starts.

11.6 Photo eye and frame photo eye

Alternatively a 2-wire photo eye from SOMMER Antriebs- und Funktechnik GmbH or a 4-wire photo eye can be connected to the control system. During commissioning, the control system automatically detects which version it is and sets itself to that version.



INFORMATION

If a photo eye is connected for door CLOSE and detected by the control unit, the close function is automatically activated. The position of DIP switch 1 on the carriage is independent of this.



INFORMATION

If a photo eye is retrofitted on a programmed system, the control system must be reset, see Chapter "10.13 Resetting the control unit".



INFORMATION

During commissioning of the photo eye or the frame photo eye, it must not be triggered by persons or objects.



INFORMATION

If a photo eye is used as a frame photo eye on the door, move the door to the centre position.

11. Connections and special functions of the wall control unit

2-wire photo eye for door CLOSE (PHOTO 1)

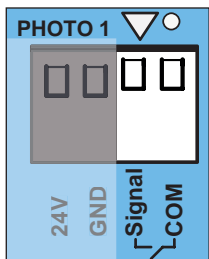


Fig. 2-wire photo eye connection

Connect the 2-wire photo eye for door CLOSE to the terminal block (PHOTO 1). The polarity is optional. The status LED (PHOTO 1) lights up orange when the photo eye has been detected by the control unit.

Terminal block	Function
Signal	2-wire photo eye, any polarity
COM	

The 2-wire photo eye (PHOTO 1) is interrupted in the door CLOSE direction of motion:

- ⇒ Status LED flashes orange during the interruption.
- ⇒ The operator stops gently and opens the door completely.
- ⇒ The door closes automatically after the open holding and clearing time.

4-wire photo eye for door CLOSE (PHOTO 1)

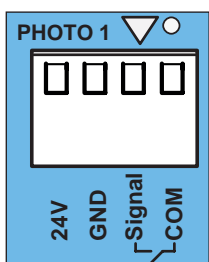


Fig. 4-wire photo eye connection

Connect the 4-wire photo eye to the terminal block for door CLOSE (PHOTO 1). The supply for RX (Receiver) should be on the side facing away from the sun. The status LED (PHOTO 1) for door CLOSE lights up orange when the safety device has been detected by the control unit.

Terminal block	Function
+24 V DC	Voltage supply Power supply
GDN	
SIGNAL	Potential-free relay contact
COM	

The 4-wire photo eye was interrupted in the door CLOSE (PHOTO 1) direction of motion:

- ⇒ Status LED flashes orange during the interruption.
- ⇒ The operator stops gently and opens the door completely.
- ⇒ The door closes automatically after the open holding and clearing time.

Use as frame photo eye

1. Install the frame photo eye in the frame, see separate "Frame photo eye" assembly instructions.
2. Align the frame photo eye and connect to the wall control unit.
3. Commissioning is performed as described in Chapter "9. Commissioning".
 - ⇒ If the door passes the frame photo eye, the illumination power of the operator lighting is reduced. If the illumination power is not reduced, the frame photo eye must be realigned and the control unit must be reset.
 - ⇒ During commissioning, the operator learns the exact position of the frame photo eye in order to blank it out in normal mode shortly before reaching the door.
4. Check the frame photo eye function. Repeat the process if necessary.

4-wire photo eye for door OPEN (PHOTO 2)

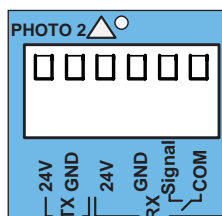


Fig. 4-wire photo eye connection

Connect the 4-wire photo eye to the terminal block (PHOTO 2) for door OPEN. The supply for RX (Receiver) should be on the side facing away from the sun.

11. Connections and special functions of the wall control unit

The status LED for door OPEN (PHOTO 2) lights up orange when the safety device has been detected by the control unit.

	Terminal block	Function
TX (transceiver)	+24 V DC	Voltage supply Power supply
	GND	
RX (receiver)	+24 V DC	Potential-free relay contact
	GND	
	SIGNAL	
	COM	

The 4-wire photo eye was interrupted in the door OPEN (PHOTO 2) direction of motion:

- ⇒ Status LED flashes orange during the interruption.
- ⇒ Operator stops, reverses a bit in door CLOSE direction and stops.
- ⇒ Operator expects a new command and does not start automatically.
- ⇒ After receiving a command, the operator moves in the door OPEN direction.

11.7 Connecting safety contact strip

Safety contact strip for door CLOSE

Either an OSE (opto-electronic safety contact strip) or an 8k2 (electric safety contact strip) can be connected. During commissioning, the control system automatically detects which version it is and sets itself to that version.



INFORMATION

If a safety contact strip is retrofitted on a programmed system, the control system must be reset, see Chapter "10.11 Resetting the control unit".



INFORMATION

If the door encounters an obstacle again in the door CLOSE direction of motion, the operator stops and reverses completely to the door OPEN end position. The door stops there and the automatic closing function is interrupted. The open holding time and clearing time do not start again until a command for door CLOSE. The door is then automatically closed.

Connecting 8k2 safety contact strip

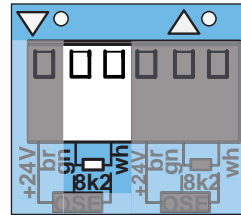


Fig. 8k2 safety contact strip connection for door CLOSE

Connect the safety contact strip for door CLOSE to the 8k2 terminal block. The status LED for 8k2 lights up orange when the safety device has been detected by the control unit.

Terminal block	Function
gn	8k2 safety contact strip
wh	

The safety contact strip in the door CLOSE direction of motion is triggered.

- ⇒ Status LED flashes orange during the activation.
- ⇒ The operator stops and opens the door completely.
- ⇒ The door closes automatically after the open holding and clearing time.

Connecting OSE safety contact strip

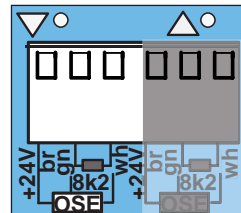


Fig. OSE safety contact strip connection for door CLOSE

Connect the safety contact strip for door CLOSE to the OSE terminal block. The status LED flashes orange when the safety device has been detected by the control unit.

Terminal block	Function
br = +24 V DC	OSE safety contact strip
gn = signal	
wh = GND	

The safety contact strip in the door CLOSE direction of motion is triggered.

- ⇒ Status LED flashes orange during activation.
- ⇒ The operator stops and opens the door completely.
- ⇒ The door closes automatically after the open holding and clearing time.

11. Connections and special functions of the wall control unit

Safety contact strip for door OPEN

Either an OSE (opto-electronic safety contact strip) or an 8k2 (electric safety contact strip) can be connected. During commissioning, the control system automatically detects which version it is and sets itself to that version.

Connecting 8k2 safety contact strip

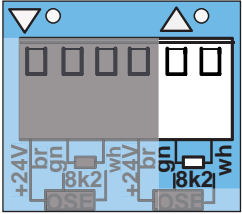


Fig. 8k2 safety contact strip connection for door OPEN

Connect the safety contact strip for door OPEN to the 8k2 terminal block.

The status LED lights up orange when the safety device has been detected by the control unit.

Terminal block	Function
gn	8k2 safety contact strip
wh	

The safety contact strip in the door OPEN direction of motion is triggered.

- ⇒ Status LED flashes orange during the activation.
- ⇒ Operator reverses a bit in the door CLOSE direction and stops.
- ⇒ Operator expects a new command and does not start automatically.
- ⇒ After receiving a command, the operator moves to the door CLOSE end position.

Connecting OSE safety contact strip

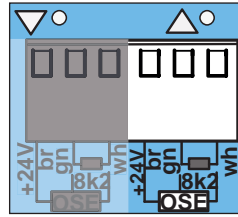


Fig. OSE safety contact strip connection for door OPEN

Connect the safety contact strip for door OPEN to the OSE terminal block.

The status LED lights up orange when the safety device has been detected by the control unit.

Terminal block	Function
br = +24 V DC	OSE safety contact strip
gn = signal	
wh = GND	

The safety contact strip in the door OPEN direction of motion is triggered.

- ⇒ Status LED flashes orange during activation.
- ⇒ Operator reverses a bit in the door CLOSE direction and stops.
- ⇒ Operator expects a new command and does not start automatically.
- ⇒ After receiving a command, the operator moves to the door CLOSE end position.

11. Connections and special functions of the wall control unit

11.8 Connection options for control device

IN button and OUT button

External control devices can be connected to the control unit, for example buttons, pull buttons or key switches. A separate input is available for the interior and exterior request sides. The connection is potential-neutral.

IN button

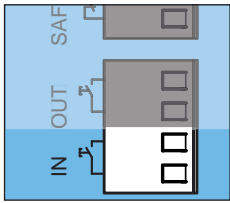


Fig. IN button

If the IN contact is activated, the command of the interior request side is executed:

- ⇒ Status LED lights up orange during the activation.
- ⇒ Operator opens the door to the door OPEN end position.
Interior: Green phase.
Exterior: Red phase.
- ⇒ The door closes automatically after the open holding and clearing time.

OUT button

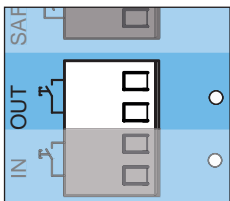


Fig. OUT button

If the OUT contact is activated, the command of the exterior request side is executed:

- ⇒ Status LED lights up orange during the activation.
- ⇒ Operator opens the door to the door OPEN end position.
Interior: Red phase.
Exterior: Green phase.
- ⇒ The door closes after the open holding and clearing time have run out.

CLOCK IN or CLOCK OUT

A potential-neutral NO contact of an external timer can be connected to this terminal. This makes it possible to extend the open holding time by the set time.

If a command comes from the opposite side during the respective open holding time, the request side is changed after the set opening holding and clearing time run out. The opposite side now briefly receives drive authorisation for the set open holding and clearing time. After the open holding and clearing time run out, the request side changes to the original request.



INFORMATION

The "Door does not open with a timer command until after a pulse" function is set at the factory. This function can be changed to the "Door opens immediately with a timer command" function using a DIP switch.

Set DIP switch 2 of the wall control unit to ON, see Chapter "11.3 Setting the DIP switches on the wall control unit".

CLOCK IN for interior request side

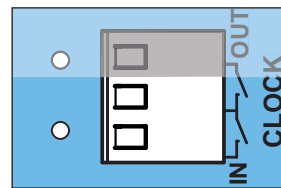


Fig. Timer connection (CLOCK IN)

This connection is selected to keep the door open for a certain amount of time in the morning hours. Vehicles can leave the garage from the interior:

- ⇒ Status LED lights up orange during the activation.
- ⇒ With the first command, the door opens to the door OPEN end position.
- ⇒ Interior request side now receives drive authorisation.
Interior: Green phase.
Exterior: Red phase.
- ⇒ The door remains open until the CLOCK IN contact is activated.
- ⇒ After the desired time, the contact at the CLOCK IN connection drops out.
- ⇒ The open holding and subsequent clearing time restart.
- ⇒ The closing process is automatically initiated after the open holding and clearing time.
- ⇒ Door closes.
- ⇒ Door CLOSE end position.

11. Connections and special functions of the wall control unit

CLOCK OUT for exterior request side

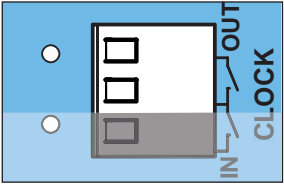


Fig. Timer connection (CLOCK OUT)

This connection is selected to keep the door open for a certain amount of time in the evening hours. Vehicles can enter the garage from the exterior.

- ⇒ Status LED lights up orange during the activation.
- ⇒ With the first command, the door opens to the door OPEN end position.
- ⇒ Exterior request side now receives drive authorisation:
Interior: Exterior red phase: Green phase.
- ⇒ The door remains open until the CLOCK OUT contact is activated.
- ⇒ After the desired time, the contact at the CLOCK OUT connection drops out.
- ⇒ The closing process is automatically initiated after the open holding and clearing time.
- ⇒ Door closes.
- ⇒ Door CLOSE end position.

INDUCTOR

A potential-neutral NO contact from an evaluation unit of an induction loop can be connected to this terminal.

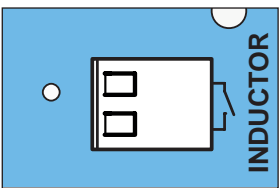


Fig. INDUCTOR connection

The status LED for the INDUCTOR lights up orange when the contact is activated.

If the contact is activated, a command from the interior is triggered. When driving through the induction loop, a command is sent to the control unit:

- ⇒ Operator opens the door to the door OPEN end position.
- ⇒ Interior request side now receives drive authorisation.
Interior: Green phase.
Exterior: Red phase.

- ⇒ The closing process is automatically initiated after the open holding and clearing time.
- ⇒ Door closes.
- ⇒ Door CLOSE end position.



INFORMATION

If several vehicles are driving in the garage, the induction loop and thereby the open holding time are restarted every time it is triggered.

11.9 ALARM and SAFETY connection

ALARM

A potential-neutral NC contact can be connected to this terminal, for example a fire alarm system.

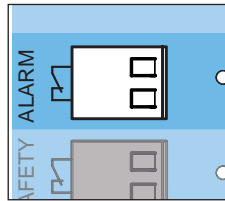


Fig. ALARM access

The status LED for the ALARM lights up green when the contact is closed.

If the ALARM safety input is open, the command for door OPEN is triggered:

- ⇒ Operator starts from door CLOSE end position, drives to door OPEN end position and stays there.
- ⇒ Green traffic light for the interior and red traffic light for the exterior start to flash quickly.
- ⇒ Commands are now ignored.



NOTE

The door system and the operator must be checked before resetting the ALARM safety input. All damages must be repaired without delay.

11. Connections and special functions of the wall control unit

Resetting the ALARM safety input

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.
2. Check door system and operator for damage and repair.
3. Reset fire alarm system (close contact).
4. Connect the operator to the mains voltage. Check that the power supply is connected.
5. Execute a command using the button.

SAFETY

A potential-neutral NC contact can be connected to this terminal, for example an emergency stop.

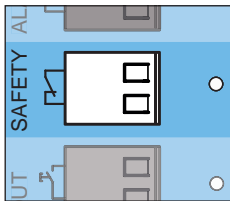


Fig. SAFETY access

The status LED for the SAFETY lights up green when the contact is closed.

Connection for a potential-neutral NC contact, for example an emergency stop.

If the SAFETY safety input is open, the operator stops during the door movement or no commands are executed.

⇒ Status LED on the control unit flashes.

Resetting the SAFETY safety input

1. Reset safety input (close contact).
⇒ Door opens up to door OPEN end position.
⇒ Open holding and clearing time run out.
⇒ Door closes automatically.

11.10 Installing and removing battery pack

The battery pack can bridge approximately 5 cycles within 12 hours in the event of a power failure. If the factory settings are active, the door does not open if the battery is low. If DIP switch 4 on the wall control unit is set to ON, the door opens even if the battery is low.

Only a **qualified electrician** is permitted to install, test and replace the battery pack.

Follow the instructions for the battery pack in the separate installation and operating manual.

See also Chapter "7.2 Wall control unit cover".



NOTE

Only a genuine battery pack from **SOMMER Antriebs- und Funktechnik GmbH** may be used.



INFORMATION

Commissioning is not supported if the battery pack is the sole power supply. Mains voltage is required for commissioning the operator.

Installing and connecting battery pack

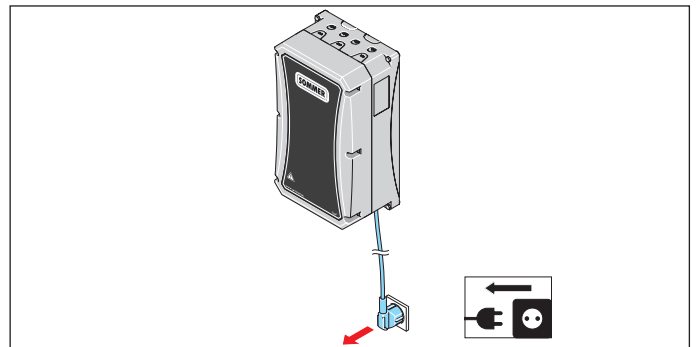


Fig. 1

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.

11. Connections and special functions of the wall control unit

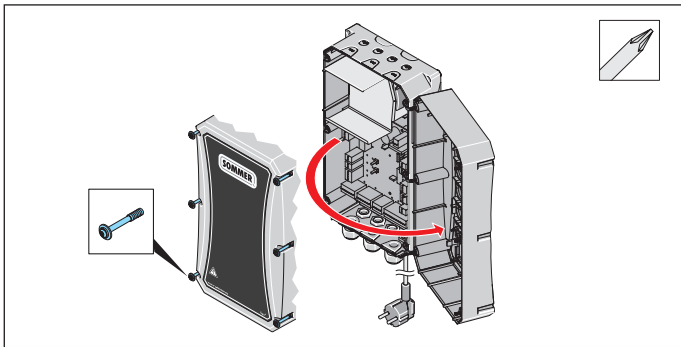


Fig. 2

2. Unscrew the screws on the control unit housing and remove.

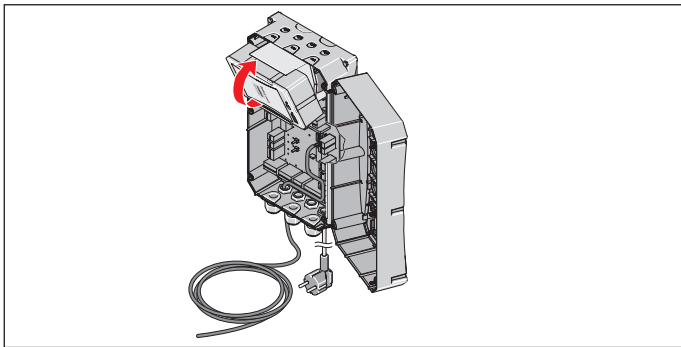


Fig. 3

3. Insert the battery pack into the provided position in the control unit. Slightly tilt the battery pack while doing so.

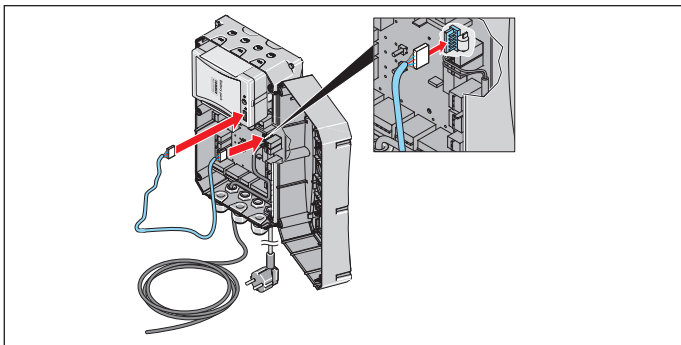


Fig. 4

4. Plug the connection cable into the battery pack and into the battery pack slot in control unit circuit board.
5. Press the transmitter button to check the operator function.
 - ⇒ The operator is powered by the battery pack.
 - ⇒ Operator opens or closes the door at reduced speed.
6. Connect the operator to the mains voltage. Check that the power supply is connected.

Unplugging and removing battery

The battery pack is removed in the reverse order, see Chapter "11.10 Installing and removing battery pack", section "Installing battery pack".



DANGER

Danger of hazardous substances! Improper storage, use or disposal of accumulators or batteries are dangerous for the health of humans and animals.

Serious injury or death may result.

- ▶ Accumulators and batteries must be stored out of the reach of children and animals.
- ▶ Keep batteries and accumulators away from chemical, mechanical and thermal influences.
- ▶ Do not recharge old accumulators and batteries.
- ▶ Components of the operator as well as old accumulators and batteries must not be disposed of with household waste. They must be disposed of properly.



NOTE

Dispose of all parts in accordance with local or national regulations to avoid environmental damage.



INFORMATION

All components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must be observed.



INFORMATION

Old batteries and battery packs must not be disposed of with household waste as they contain hazardous substances. These must be disposed of properly at municipal collection points or in the provided containers of the dealers. National guidelines must be observed.



12. Function test/Final test

12.1 Testing obstacle detection

Observe in particular the following safety instructions for this chapter.

After commissioning the operator, the force measurement of the operator must be checked with a force measurement device and an obstacle recognition test must be performed.



WARNING

Danger of entrapment!

If the force setting is too high, persons or animals in the movement area of the door may be trapped and pulled along with the door.

Severe injuries or death may result.

- ▶ The force setting is relevant to safety and must be carefully checked and if necessary adjusted by qualified specialists.



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ The power cut-off does not operate below 50 mm.
- ▶ The obstacle detection must be tested once a month.
- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



NOTE

Observe the national standards, guidelines and regulations for cut-off of the operating forces.



NOTE

The obstacle detection must be tested once a month to prevent damage to the operator.

12. Function test/Final test



INFORMATION

After installation of the operator, the person responsible for the installation of the operator must complete an EC declaration of conformity for the door system in accordance with Machinery Directive 2006/42/EC and apply the CE mark and a type plate. This documentation and the installation and operating manual are retained by the owner. Including if the operator is retrofitted to a manually operated door.



INFORMATION

Reversing: The operator stops on contact with an obstacle and then moves a bit in the opposite direction to release the obstacle. In the automatic closing function the door opens completely if an obstacle is detected.



INFORMATION

The operating forces can be modified and adjusted with SOMlink and a smartphone. For more information ask your specialist dealer.



The operator must reverse in the door OPEN direction when it is loaded with a weight of 20 kg. The weight is fastened in the centre of the bottom edge of the door for this purpose.

The door must reverse during the door CLOSE movement if it hits a 50-mm-high obstacle.

1. Open the door with the operator.
2. Place a 50-mm-high object in the centre of the door.

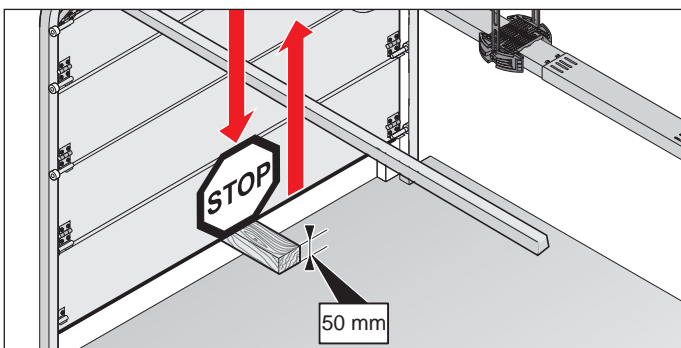


Fig. Example: Obstacle recognition on sectional door

3. Close the door with the operator.
⇒ If the door hits an obstacle, the operator must immediately reverse.

- ⇒ The door opens completely at a pulse from the transmitter.
- ⇒ If the operator does not reverse, a position reset is required, see Chapter "10.13 Resetting the control unit".
The positions and the forces must be reprogrammed.

12.2 Handover of door system

The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the emergency release
- on regular maintenance which the user can execute
- on troubleshooting, see Chapter "15. Troubleshooting"

The user must be informed about which work must only be performed by a qualified specialist:

- installation of accessories
- settings
- regular maintenance except that described in Chapter "14. Care and maintenance" and which can be performed by the user.
- repairs
- troubleshooting, except that described in Chapter "15. Troubleshooting" and which must be performed by a qualified specialist.

This installation and operating manual, the Declaration of Conformity created for the door system and the handover protocol must be given to the user.

The following is available

- handover protocol for the operator
- Declaration of Conformity

At:



<http://som4.me/konform>

13. Operation

13.1 Safety information on operation

In particular, observe the following safety instructions and the safety instructions in Chapter "14. Maintenance and care" and "15. Troubleshooting".

The operator must not be used by persons with restricted physical, sensory or mental capacity or who lack experience and knowledge. All users must be specially instructed and have read and understood the installation and operating instructions.

Children must never play with or use the operator, even under supervision. Children must be kept clear of the operator. Transmitters or other control devices must never be given to children.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



DANGER

Danger due to use of the operator with incorrect setting or when it is in need of repair!
If the operator is used despite incorrect settings or if it is in need of repair, severe injury or death may result.

- ▶ The operator may only be used with the required settings and in the proper state.
- ▶ Faults must be repaired without delay.



WARNING

Danger due to falling parts of doors!
Actuating the emergency release can lead to uncontrolled door movement if

- springs are weakened or broken.
- the door has not been optimally weight-balanced.

Falling parts may cause a hazard. Severe injuries or death may result.

- ▶ Check the weight balance of the door at regular intervals.
- ▶ Keep clear of the movement area of the door.
- ▶ Pay attention to the movement of the door when the emergency release is actuated.



WARNING

Danger of entrapment!
Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.

13. Operation



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare.
This may temporarily reduce vision. This may cause serious or fatal accidents.

- ▶ Do not look directly into a LED.



NOTE

If the weight compensation of door is incorrectly adjusted, the operator may be damaged.

- The door must be stable.
- It must not bend, rotate or twist when opening and closing.
- The door must move easily in its tracks.

Defects must be repaired without delay by a qualified specialist.



NOTE

Objects in the movement area of the door may be jammed and damaged. Objects must not be in the range of movement of the door.



INFORMATION

Keep this installation and operating manual accessible at all times at the place of use.

13.2 Handover to the user

The user checks whether the CE mark and the type plate for the door system have been attached to the door by the qualified specialist.

The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the emergency release
- on regular maintenance which the user can execute

The user must be informed about which work must only be performed by a qualified specialist:

- installation of accessories
- settings
- regular maintenance except that described in Chapter "14. Care and maintenance" and which can be performed by the user.
- repairs
- troubleshooting

13. Operation

This installation and operating manual, the Declaration of Conformity created for the door system and the handover protocol must be given to the user.

The user is responsible for:

- the intended use of the operator
- its good condition
- operation
- instructing all user how to use the door system and in the associated hazards
- care and maintenance
- tests by a qualified specialist
- troubleshooting in case of faults by a qualified specialist

The user must always keep this installation and operating manual ready for consultation in the vicinity of the door system.

13.3 Operating modes of door movement



WARNING

Danger of crushing and shearing!

The door can be actuated by a button or another control device.

Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.

- ▶ Keypads and other control devices must be installed and actuated within view of the door only.
- ▶ Keypads or other control devices may be used only if the movement of the door can be viewed directly.
- ▶ Persons or animals must not be in the range of movement of the door.

Opening the door system from the interior and exterior:

The sequence for a command from the exterior is described. Access authorisation is indicated by the traffic light signal red and green phases.

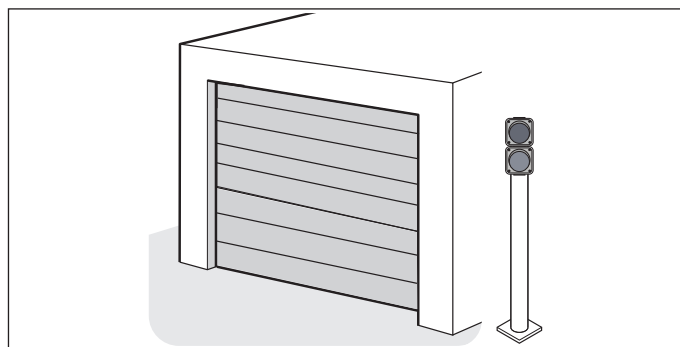


Fig. 1

1. The door stays at the door CLOSE end position.
⇒ **Both sides:** Traffic lights off.

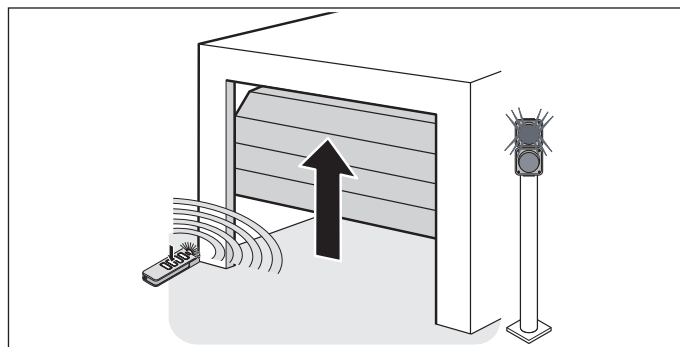


Fig. 2

2. A command from the interior or exterior (button, pull button or handheld transmitter) is given.
⇒ **Both sides:** Red phase.
Door may **not** be driven or passed through.
⇒ Operator moves to door OPEN direction.

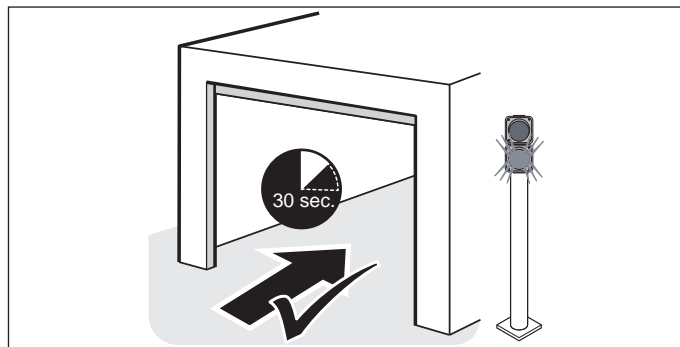


Fig. 3

3. Door is open. The set **open holding time** (factory settings: 30 seconds) starts.
⇒ **Request side:** Green phase.
Door may be driven or passed through.

13. Operation

- ⇒ **Opposite side:** Red phase.
Door may **not** be driven or passed through.

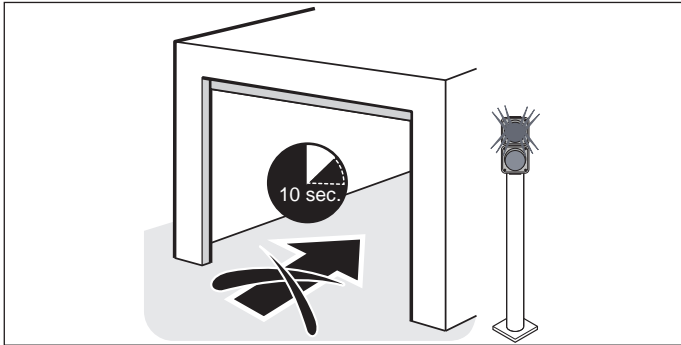


Fig. 4

- The **clearing time** (factory settings: 10 seconds) is automatically initiated after the set open holding time runs out.

- ⇒ **Both sides:** Red phase.
Door may **not** be driven or passed through.
- ⇒ The door range must be cleared of persons and vehicles.

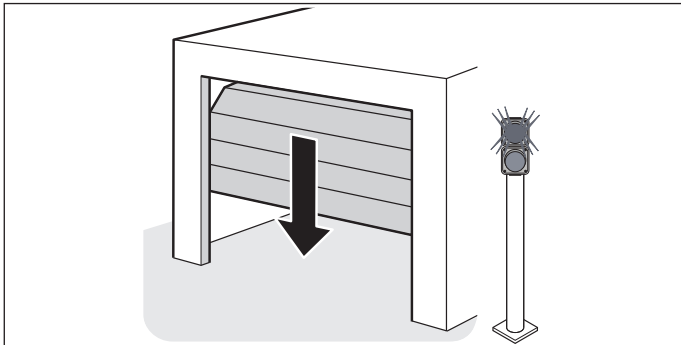


Fig. 5

- The door closes automatically after the set **clearing time**.

- ⇒ **Both sides:** Red phase.
Door may **not** be driven or passed through.
- ⇒ The door range must be cleared of persons and vehicles.

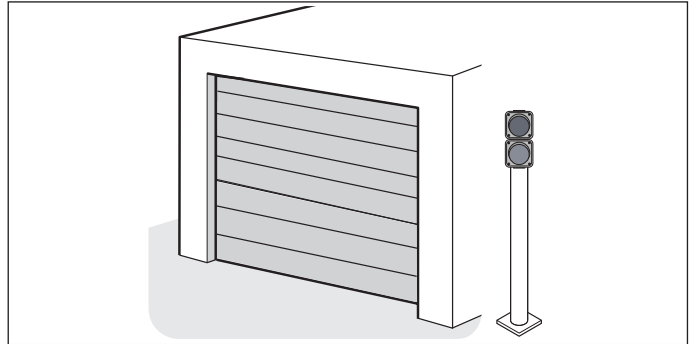


Fig. 6

- After the door CLOSE end position has been reached, all traffic lights on both sides are switched off.

- ⇒ **Both sides:** Traffic lights off.



INFORMATION

If a command is given during the closing process, the operator stops.

The direction changes automatically and the operator opens the door completely.

The door closes automatically after the open holding and clearing time.

Opening the door from the interior and subsequent command from the exterior

The traffic lights show the light signals for drive authorisation.

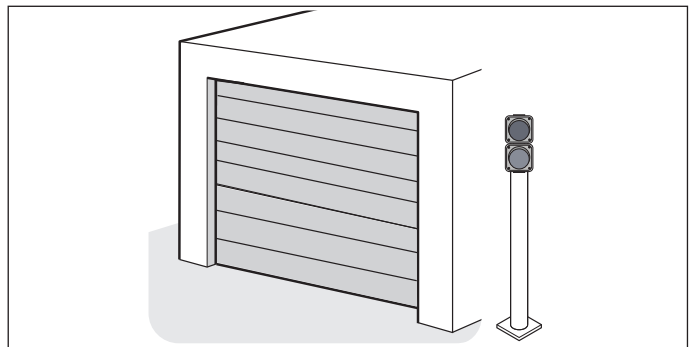


Fig. 1

- The door stays at the door CLOSE end position.

13. Operation

⇒ **Both sides:** Traffic lights off.

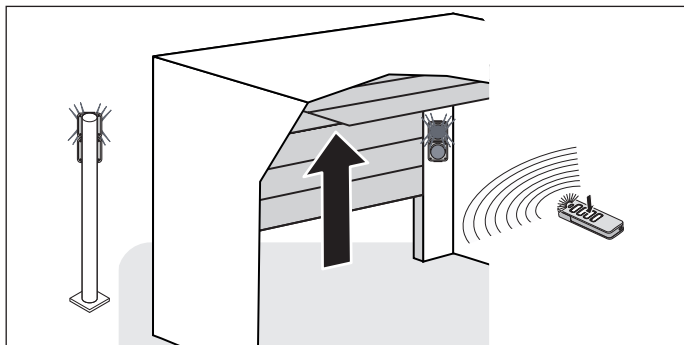


Fig. 2

2. A command (button, pull button or handheld transmitter) is given **from the interior**. While the door opens, an additional command is given from the exterior.

- ⇒ **Both sides:** Red phase.
Door may **not** be driven or passed through.
- ⇒ Operator moves to door OPEN direction.

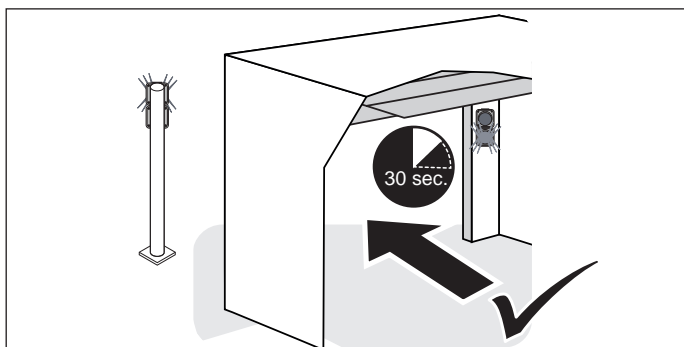


Fig. 3

3. Door is open. The set **open holding time** (factory settings: 30 seconds) starts.

- ⇒ **Request side, interior:** Green phase.
Door may be driven or passed through.
- ⇒ **Opposite side, exterior:** Red phase.
Door may **not** be driven or passed through.

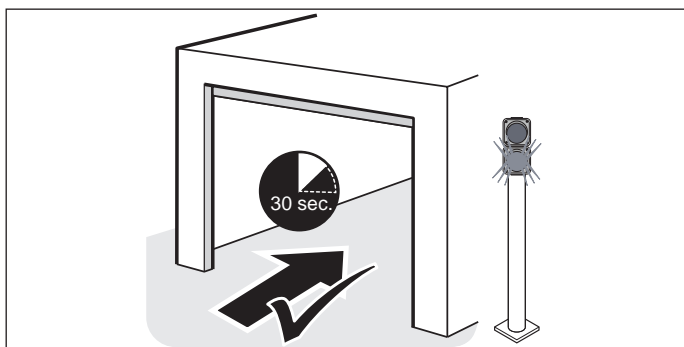


Fig. 4

4. The traffic lights are **automatically** switched after the open holding time (factory setting: 30 seconds) and the clearing time (factory setting: 10 seconds) run out. The request side and the opposite side are then exchanged.

- ⇒ **Opposite side, interior:** Red phase.
Door may **not** be driven or passed through.
- ⇒ **Request side, exterior:** Green phase.
Door can be driven or passed through from the **exterior** request side.

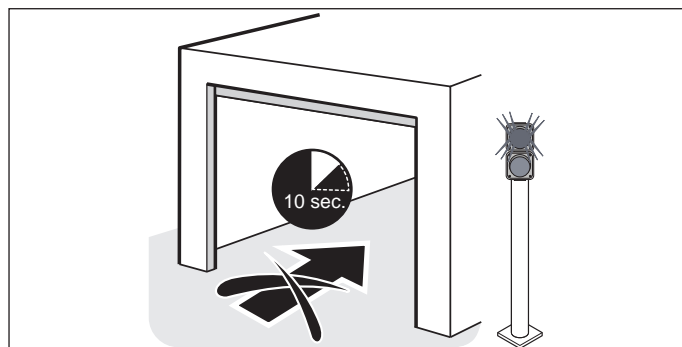


Fig. 5

5. The **clearing time** is automatically initiated after the set open holding time runs out.

- ⇒ **Both sides:** Red phase.
The entrance range must be cleared of persons and vehicles.

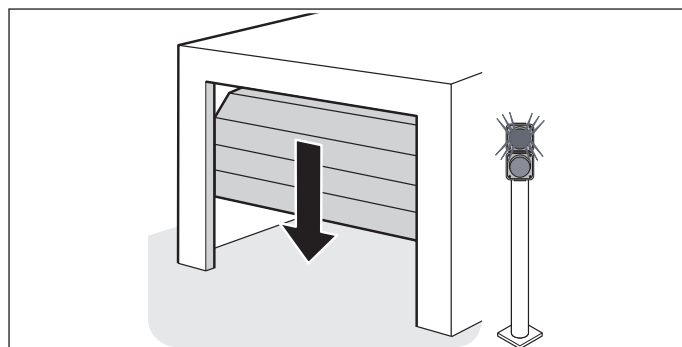


Fig. 6

6. The door closes automatically after the set clearing time.

- ⇒ **Both sides:** Red phase.
Door may **not** be driven or passed through.
- ⇒ The entrance range must be cleared of persons and vehicles.

13. Operation

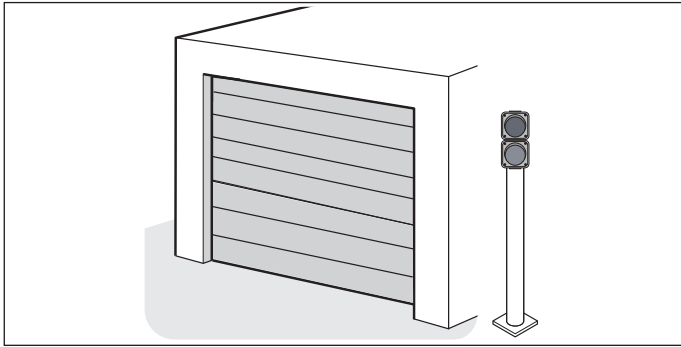


Fig. 7

7. After the door CLOSE end position has been reached, all traffic lights on both sides are switched off.

⇒ **Both sides:** Traffic lights off.

13.4 Obstacle detection

The operator stops and reverses slightly if it encounters an obstacle. This prevents injury and damage to property. The door will be partially or completely opened depending on the setting. The partial reversal is pre-set at the factory. A full reversal can be set with SOMlink and a smartphone.



INFORMATION

In the automatic closing function the door opens completely.



INFORMATION

If the photo eye is interrupted, the door runs on for a long distance.

The following safety devices are installed to detect obstacles:

- Photo eye (object protection)
- Safety contact strips (personal protection)
- Force cut-off of operator (personal protection)

For more, also note Chapter "14. Maintenance and care".

Force cut-off in door OPEN direction of motion

- ⇒ Operator stops, reverses a bit in door OPEN direction and stops.
- ⇒ Operator expects a new command and does not start automatically.
- ⇒ After receiving a command, the operator moves in the door OPEN direction.

Force cut-off in door CLOSE direction of motion with automatic closing function

- ⇒ Operator stops and reverses to the door OPEN end position after encountering an obstacle.
- ⇒ The door closes automatically after the open holding time.



INFORMATION

If the door encounters an obstacle again in the door CLOSE direction, the operator stops and reverses completely to the door OPEN end position. The door stays there. The automatic closing function is interrupted. The open holding time and clearing time do not start again until a command for door CLOSE. The door is then automatically closed.

Alarm

If the ALARM safety input is open, a command for opening the door system is triggered:

The potential-neutral NC contact, for example, is suitable for a fire alarm system.

- ⇒ Operator starts from door CLOSE end position, drives to door OPEN end position and stays there.
- ⇒ Green traffic light for the interior and red traffic light for the exterior start to flash quickly.
- ⇒ Incoming commands are not executed.



NOTE

The door system and the operator must be checked before resetting the ALARM safety input. All damages must be repaired without delay.

Resetting the ALARM safety input

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.
2. Check door system and operator for damage and repair.
3. Reset fire alarm system (close contact).
4. Connect the operator to the mains voltage. Check that the power supply is connected.
5. Execute a command using the button.

13. Operation

Safety

If the SAFETY safety input is open, the operator stops the door movement. No more commands are executed. The potential-neutral NC contact, for example, is suitable for connecting an emergency stop.

⇒ Status LED on the control unit flashes.

Resetting the SAFETY safety input:

1. Reset safety input (close contact).
2. Execute a command using the button.
 - ⇒ Door opens up to door OPEN end position.
 - ⇒ Open holding and clearing time run out.
 - ⇒ Door closes automatically.

13.5 Power-saving mode

To save energy, the operator control unit switches to power-saving mode after the factory-specified period. Connected accessories are deactivated and then reactivated at the next command from a button or radio. Connected accessories may include: photo eye, safety contact strip and external radio receiver.

Because external radio receivers are deactivated in power-saving mode, they cannot receive commands from the remote control and send them to the operator.

Set DIP switch 3 to ON to power the entire system continuously. Power-saving mode is then deactivated.

ON	OFF
Continuous power to the complete system activated	Power-saving mode activated



INFORMATION

The factory-set period before the control unit switches to power-saving mode after expiration of the set burning time is 20 seconds. This value cannot be changed.

If the operator is in power-saving mode, the green status LED flashes briefly in 3-second cycles.

13.6 Operation during power failure

The programmed force values and end positions of the operator remain saved in the event of a power failure. After the power supply has been restored, the first movement of the operator after a pulse is always door OPEN.

Also see the information on emergency release in Chapter "11.10 Installing and removing battery pack" and "Function of the emergency release".

13.7 Function of the emergency release

Observe in particular the following safety instructions for this chapter.

In the event of a power failure, the door can be opened manually from the inside using a mechanical emergency release.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ Faults must be repaired without delay.



WARNING

Danger due to falling parts of doors!

If the emergency release is actuated, weak or broken springs may cause the door to close suddenly and unexpectedly.

This may cause serious or fatal injury.

- ▶ The emergency release should only be used with the door closed.
- ▶ Use the emergency release with great caution if the door is open.
- ▶ Persons or animals must not be within the door's range of movement.

13. Operation



NOTE

The emergency release is only suitable for opening or closing the door in an emergency. The emergency release is not suitable for regular opening or closing. This could cause damage to the operator and door.

The emergency release must only be used in emergencies such as a power failure.



NOTE

In an emergency release, the door could independently open or close surprisingly quickly due to a broken spring or incorrect setting of the weight balancing. Damage to the door system could occur.



NOTE

After the operator is locked back in, move the door into the door OPEN end position. Otherwise the guide idler is hit with too much force.



NOTE

Objects in the movement area of the door may be jammed and damaged. Objects must not be in the range of movement of the door.



INFORMATION

It can be locked and released in any door position.

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.

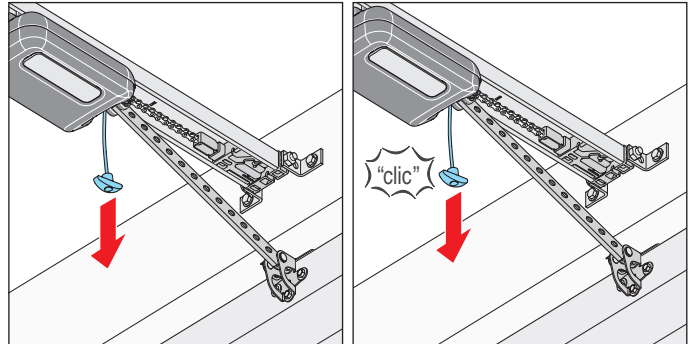


Fig. 2

Fig. 3

2. Pull once on the emergency release cord.
⇒ **The carriage is released.**
⇒ Door can be moved by hand.
3. Pull the emergency release cord once more.
⇒ **The carriage is locked.**
⇒ The door can only be moved by the operator.
4. Connect the operator to the mains voltage. Check that the power supply is connected.
5. Give the operator a command.
⇒ After a power failure, the first pulse of the operator is always in the door OPEN direction.
⇒ The operator must drive completely to the door OPEN end position.

14. Maintenance and care

14.1 Safety instructions for maintenance and care

Follow the basic safety instructions listed below. Service the operator regularly as directed below. This ensures safe operation and a long service life of your operator.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



WARNING

Danger of falling!
Unsafe or defective ladders may tip and cause fatal or serious accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ Faults must be repaired without delay.



WARNING

Danger due to falling parts of doors!
Parts of the door may become detached and fall. If persons or animals are hit, this may cause serious injury or death.

- ▶ Always keep the moving door in sight.
- ▶ Keep all persons and animals away from the door until it is completely opened or closed.

14. Maintenance and care



WARNING

Danger of crushing and shearing!

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ All danger zones must be visible during the entire door operation.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



NOTE

The carriage is supplied with safety low voltage via the chain and the track. The use of oil or grease will greatly reduce the conductivity of the chain, track and carriage.

This may result in faults due to inadequate electrical contact.

The chain and track are maintenance-free and must not be oiled or greased.



NOTE

The use of unsuitable cleaning agents may damage the surface of the operator.

Clean the operator with a dry lint-free cloth only.



WARNING

Danger due to hot surfaces!

After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.

14. Maintenance and care

14.2 Maintenance schedule

How often?	What?	How?
Once a month	Test the emergency release	See Chapter "13.7 Function of the emergency release"
	Testing obstacle detection	See Chapter "12.1 Testing obstacle detection"
	Test the photo eye	Interrupt the active photo eye while the door is closing. The door must stop and open slightly. If automatic closing is activated, the door opens completely. If necessary clean the photo eye, see Chapter "14.3 Care"
Once a year	Check screws on door, ceiling or lintel	Check that screws are tight and tighten if necessary
As needed	Chain and track	maintenance-free
	Track	See Chapter "14.3 Care"
	Cleaning wall control unit housing	See Chapter "14.3 Care"

14.3 Care

Clean track, carriage and wall control unit

1. Pull the power plug out of the power socket.

If a battery pack has been installed, remove the wall control unit cover and disconnect the battery pack from the wall control unit. See also Chapter "11.10 Installing and removing battery pack".

Then check that the power is disconnected.

2. Remove loose dirt with a moist, lint-free cloth:
 - from the carriage and the wall control unit
 - from the track and the inside of the track
3. If applicable, install the battery pack in reverse order of removal. Connect the operator to the mains voltage. Check that the power supply is connected.

Cleaning the photo eye

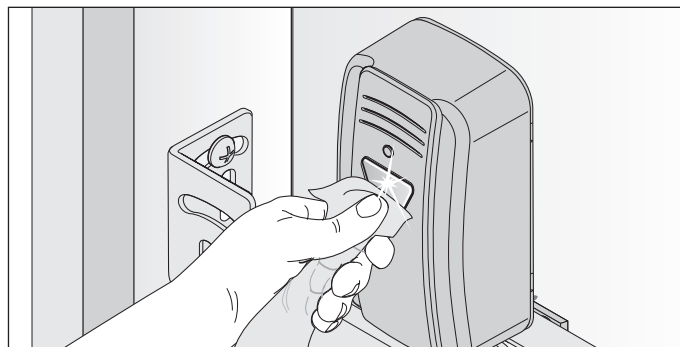


Fig. 1



NOTE

Do not change the position of the photo eye when cleaning it.

1. Clean the housing reflectors with a damp, lint-free cloth.

15. Troubleshooting

15.1 Safety instructions for troubleshooting

Follow the basic safety instructions listed below.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body.
Electrical shock, burns, or death may result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ Disconnect the mains plug before working on the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



WARNING

Danger of falling!
Unsafe or defective ladders may tip and cause serious or fatal accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



WARNING

Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ Faults must be repaired without delay.



WARNING

Danger due to falling parts!
Parts of the door may become detached and fall. Persons may be hit. Severe injuries or death may result.

- ▶ Always keep the moving door in sight.
- ▶ Keep all persons and animals away from the door until it is completely opened or closed.
- ▶ Do not drive through the door until it has been fully opened.



WARNING

Danger of entrapment!
Loose clothing or long hair may be trapped by moving parts of the door.

- ▶ Keep clear of the moving door.
- ▶ Wear tight-fitting clothing.
- ▶ Wear a hairnet over long hair.

15. Troubleshooting



WARNING

Danger of crushing and shearing!
If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the operator in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the track.
- ▶ Only pass through the door only once it is completely open and the traffic light is green.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare.
This may temporarily reduce vision.
This may cause serious or fatal accidents.

- ▶ Do not look directly into a LED.



WARNING

Danger due to hot surfaces!
After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.



NOTE

If the door is not in view and the radio remote control is actuated, objects in the movement area of the door may be jammed and damaged.
Objects must not be in the range of movement of the door.



INFORMATION

The control unit detects a short-circuit between chain and track and then switches the operator off.

15.2 Troubleshooting

The following guide to troubleshooting lists potential problems and their causes and information on correcting them. In some cases, other chapters and sections with a more detailed description are referenced.
You will be prompted to call a qualified specialist if this is required.

Work on the electrical system and live parts may be performed only by a **trained electrician**.

1. Pull the power plug out of the power socket.

If a battery pack has been installed, remove the control unit cover and disconnect the battery pack from the control unit, see also Chapter "7.2 Wall control unit cover" and Chapter "11.10 Installing and removing battery pack".

Then check that the power is disconnected.


2. After working on the operator, if applicable replace the battery pack in reverse order.
Plug the power plug into the power socket.

15. Troubleshooting





15.3 Time sequences of operator lighting in normal mode and in case of faults

The LED flash sequences show information on malfunctions for technicians, end customers and telephone support.

In normal mode

Flash sequences	Possible causes	Corrective action
Normal mode  Operating lighting blinks as warning light	<ul style="list-style-type: none"> • Learning mode activated • Pre-warning time activated • Reversing movement, soft reversing and stopped after a soft and reversing movement 	<ul style="list-style-type: none"> • For information

In the event of errors

Flash sequences	Possible causes	Corrective action
Requirement  Operator expects a command	<ul style="list-style-type: none"> • Waiting for a conformation during the position programming movement of door CLOSE position 	<ul style="list-style-type: none"> • Confirmation of position programming movement
Alarm  A process has triggered a fault	<ul style="list-style-type: none"> • Photo eye or safety device not OK before movement 	<ul style="list-style-type: none"> • Check photo eye, realign if necessary • If necessary, have parts replaced by a qualified specialist
	<ul style="list-style-type: none"> • Interruption of a safety device during the movement 	<ul style="list-style-type: none"> • Remove obstacle
	<ul style="list-style-type: none"> • Dead man movement, safety device not OK 	<ul style="list-style-type: none"> • Have it checked by a qualified specialist
Service  A process has triggered a fault	<ul style="list-style-type: none"> • Service (service days, service cycles have been reached) 	<ul style="list-style-type: none"> • Have the service performed by a qualified specialist
	<ul style="list-style-type: none"> • Motor temperature is too high (overheating) 	<ul style="list-style-type: none"> • Allow motor to cool
	<ul style="list-style-type: none"> • Program difficult positions in case of reversing with no visible cause. The complete distance is traversed from end position to end position (dead man by radio, under direct view only) 	<ul style="list-style-type: none"> • For information
Fault  Operator or parts of the operator faulty	<ul style="list-style-type: none"> • Self-test of electronics • Blockage detection (gear breakage, Hall sensor fault) 	<ul style="list-style-type: none"> • Have it checked and, if necessary, parts replaced by a qualified specialist
	<ul style="list-style-type: none"> • End switch does not operate (e.g. wire break, end switch fault) 	<ul style="list-style-type: none"> • Have cable connections checked and, if necessary, parts replaced by a qualified specialist
	<ul style="list-style-type: none"> • Counting pulses sent in the wrong direction (motor cable was incorrectly connected) 	<ul style="list-style-type: none"> • Check wiring, correct if necessary
	<ul style="list-style-type: none"> • Run time exceeded 	<ul style="list-style-type: none"> • Path too long, path restricted to max. 7500 mm
	<ul style="list-style-type: none"> • Error during plausibility test of memo 	<ul style="list-style-type: none"> • Have it checked and, if necessary, parts replaced by a qualified specialist

15. Troubleshooting

15.4 Troubleshooting table

Problem	Possible causes	Test/check	Remedy
The operator opens the door when the transmitter or control device is actuated but does not close it	• Photo eye and safety device have been destroyed	• Check photo eye and safety devices	• Remove obstacle • The photo eye must be aligned • If necessary, have it checked and replaced by a qualified specialist
	• Automatic closing function activated	• Wait to see whether the operator starts automatically after 30 seconds	• Automatic closing function deactivated • Have the cause corrected by a trained electrician
Operator cannot be operated with the control device	• No power	• Check power supply	• Check the power socket with a different device, for example with a lamp
	• End switch in carriage defective	• Unlock operator and push carriage to the centre of the track • Lock operator • Actuate transmitter • If the operator now still does not close and open, the end switch is defective.	• Have the end switch replaced by a qualified specialist.
	• The operator was deactivated by the emergency release mechanism	• Check that the door can be moved manually	• Pull the emergency release to activate the operator
	• Control device incorrectly connected to the operator	• Check function of operator with a transmitter	• Check wiring, correct if necessary
	• Transmitter defective	• Operator cannot be started with the transmitter.	• Check transmitter power supply • If necessary, replace the battery of the transmitter • If necessary, replace the transmitter with a new one
	• Operator defective	• Operator cannot be started with the transmitter or the connected control device.	• Have operator repaired or replaced by a qualified specialist
	• Electrical supply voltage outside the approved range	• Have the mains power supply checked by a trained electrician	• Have the cause corrected by a trained electrician
	• ALARM safety input triggered	• Red traffic light for exterior and green traffic light for interior flash quickly • Status LED is off	• Reset ALARM safety input, see Chapter "11.9 ALARM and SAFETY connection", section "ALARM".
	• SAFETY safety input, e.g. emergency stop, triggered	• Status LED is off, the status LED flashes.	• Reset SAFETY safety input, see Chapter "11.9 ALARM and SAFETY connection", section "SAFETY".
When a button on the transmitter is pressed, the door does not open or close	• Transmitter not programmed	• Radio LED does not light when the transmitter is operated	• Program transmitter
	• Battery in the transmitter is flat		• Replace the battery of the transmitter
	• Transmitter defective	• LED on transmitter does not light	• Replace transmitter
Radio command cannot be programmed	• Memory full	• All four LEDs blink cyclically for about 3 seconds and then go out.	• Memory full, see Chapter "10.5 Programming the transmitter"
MEMO Identifier error	• Incorrect MEMO	• All four LEDs blink cyclically for a short time and then go out for a long time. The operator lighting of the carriage blinks 4 times short and 4 times long.	• Disconnect operator from the power supply, unplug Memo, re-supply operator with power

15. Troubleshooting

Problem	Possible causes	Test/check	Remedy
MEMO device type error	<ul style="list-style-type: none"> System error 	<ul style="list-style-type: none"> All four LEDs blink cyclically for a long time and then go out for a short time. If voltage is present, the operator lighting of the carriage blinks an additional four times. 	<ul style="list-style-type: none"> The Memo can be deleted via the radio button, if necessary all stored transmitters of the Memo are deleted, see Chapter "10.11 Deleting all radio channels in the receiver"
Operator stops the door during closing and opens it partially or completely	<ul style="list-style-type: none"> Door detected an obstacle 	<ul style="list-style-type: none"> Check whether there are any objects in the movement range of the door 	<ul style="list-style-type: none"> Remove the object If necessary, have door mechanism checked and set by a qualified specialist
	<ul style="list-style-type: none"> Photo eye was interrupted 	<ul style="list-style-type: none"> Check LEDs on photo eye 	<ul style="list-style-type: none"> Remove obstacle
	<ul style="list-style-type: none"> Photo eye defective or misaligned 		<ul style="list-style-type: none"> Align photo eye Check wiring If necessary, replace photo eye
Operator stops the door during the opening process and moves a briefly in the door CLOSE direction of the door	<ul style="list-style-type: none"> Door has detected an obstacle, photo eye and safety device have been disturbed 	<ul style="list-style-type: none"> Check whether there are any objects in the movement range of the door Check the weight balance of the door - it must run smoothly Check photo eye and safety devices 	<ul style="list-style-type: none"> Remove obstacle If necessary, have door mechanism checked and repaired by a qualified specialist The photo eye must be aligned; if necessary, have it checked and replaced by a qualified specialist
Operator lighting does not work	<ul style="list-style-type: none"> Operator lighting defective 		<ul style="list-style-type: none"> Have carriage replaced by a new one by a qualified specialist
Speed varies while opening and closing the door	<ul style="list-style-type: none"> Track dirty 		<ul style="list-style-type: none"> Clean with a moist lint-free cloth, see Chapter "14.3 Care"
	<ul style="list-style-type: none"> Chain tightened incorrectly 		<ul style="list-style-type: none"> Tighten the chain, see Chapter "6.4 Installation of the operator system for installation versions A and B" or "6.5 Installation of the operator system for installation version C"
	<ul style="list-style-type: none"> Weight balance of the door has changed 	<ul style="list-style-type: none"> Move the operator into the door CLOSE position and check the weight balance of the door 	<ul style="list-style-type: none"> If necessary, have it checked, adjusted or have components replaced by a qualified specialist

15. Troubleshooting

15.5 Replacing the carriage

The instructions for replacing the carriage can be downloaded from **SOMMER Antriebs- und Funktechnik GmbH** at:
www.sommer.eu

If applicable, save the existing settings on the available carriage via SOMlink and a smartphone. The settings can be transmitted to the new carriage later.

The new carriage is in delivery condition from the factory. Before replacing the carriage, make sure that used accessories have been transferred to the new carriage. Commissioning must be repeated and the special functions of the carriage must be reset, see Chapter "9. Commissioning" and "10. Connections and special functions of the carriage".

Used transmitters must also be reprogrammed, see Chapter "10.5 Programming the transmitter".

On the other hand, the transmitter does not have to be programmed if the Memo accessory part has already been used.

After successful commissioning, run a final test and a function test, see Chapter "12. Final test/function test".



INFORMATION

Save the existing settings of the carriage with the help of SOMlink and a smartphone. After the new carriage has been inserted, reinstall the data.

16. Placing out of operation, storage and disposal

16.1 Placing the operator out of operation and disassembly

Follow the basic safety instructions listed below.

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

The disassembly of the operator may only be performed by a qualified specialist.

This installation and operating manual must be read, understood and complied with by the qualified specialist who disassembles the operator.



DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.

- ▶ All safety information must be complied with.



DANGER

Danger due to electric current!
Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ Electrical components must be disassembled by a **trained electrician** only.
- ▶ Disconnect the power plug before disassembling the operator. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the operator is disconnected from the power supply and secure it from switching on again.



WARNING

Danger of falling!
Unsafe or defective ladders may tip and cause serious or fatal accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



WARNING

Danger of tripping and falling!
Unsafely positioned parts such as packaging, operator parts or tools may cause trips or falls.

- ▶ Keep unnecessary items away from the disassembly area.
- ▶ Place all parts where no persons are likely to trip or fall over them.
- ▶ General workplace guidelines must be observed.



WARNING

Danger due to optical radiation!
Looking into an LED at short range for an extended period may cause optical glare.
This may temporarily reduce vision.
This may cause serious or fatal accidents.

- ▶ Do not look directly into a LED.



WARNING

Danger due to hot surfaces!
After frequent operation parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the operator to cool before removing the cover.



WARNING

Risk of eye injury!
Eyes and hands may be seriously injured by chips when removing screws.

- ▶ Wear safety glasses.



WARNING

Risk of injury in the head region!
Impact with suspended objects may cause serious abrasions and cuts.

- ▶ Wear a safety helmet when disassembling suspended parts.



16. Placing out of operation, storage and disposal



CAUTION

Risk of injury to hands!
Rough, projecting metal parts may cause abrasions and cuts when touched.

- ▶ Wear safety gloves.



NOTE

If there is a battery pack in the control unit, it must be removed by a trained electrician. See Chapter "11.10 Installing and removing battery pack".

The operator and its accessories must be disconnected from electrical power when putting them out of operation or during disassembly.

1. Pull the power plug out of the power socket.

If a battery pack has been installed, remove the control unit cover and disconnect the battery pack from the control unit, see also Chapter "11.10 Installing and removing battery pack".

Then check that the power is disconnected.

2. Disassembly is in reverse order of installation.

16.2 Storage

Store the packaging units as follows:

- in enclosed, dry rooms so that they are protected from moisture
- at a storage temperature from -25 °C to $+65\text{ °C}$
- secure to prevent falling
- leave room for unhindered passage

NOTE

Improper storage may damage the operator.
The operator must be stored in closed and dry rooms.

16.3 Disposal of waste

Observe the instructions for disposal of packaging, components and batteries and, if applicable, the battery pack.



DANGER

Danger of hazardous substances!
Improper storage, use or disposal of accumulators or batteries are dangerous for the health of humans and animals.

Serious injury or death may result.

- ▶ Accumulators and batteries must be stored out of the reach of children and animals.
- ▶ Keep batteries and accumulators away from chemical, mechanical and thermal influences.
- ▶ Do not recharge old accumulators and batteries.
- ▶ Components of the operator as well as old accumulators and batteries must not be disposed of with household waste. They must be disposed of properly.

16. Placing out of operation, storage and disposal



NOTE

Dispose of all parts in accordance with local or national regulations to avoid environmental damage.



INFORMATION

All components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must be observed.



INFORMATION

Old batteries and battery packs must not be disposed of with household waste as they contain hazardous substances. These must be disposed of properly at municipal collection points or in the provided containers of the dealers. National guidelines must be observed.



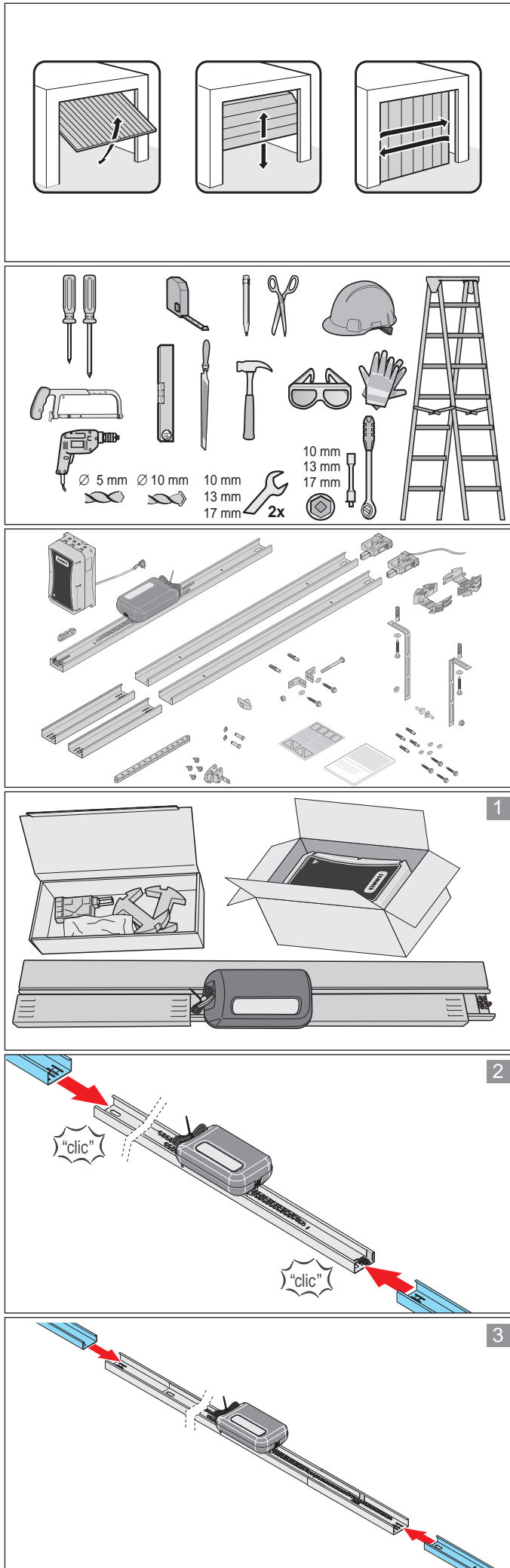
17. Short instructions for installation

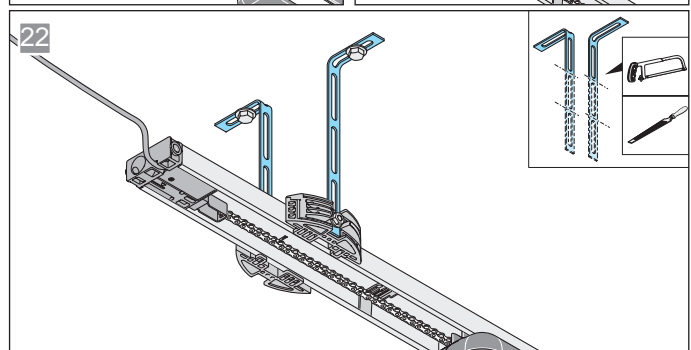
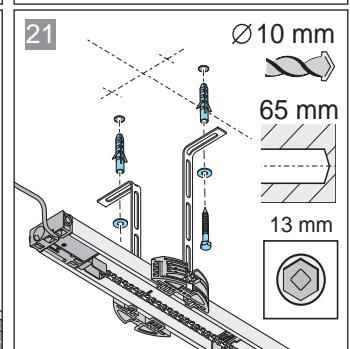
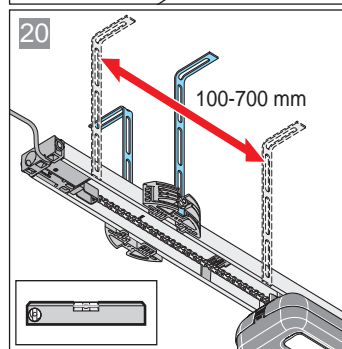
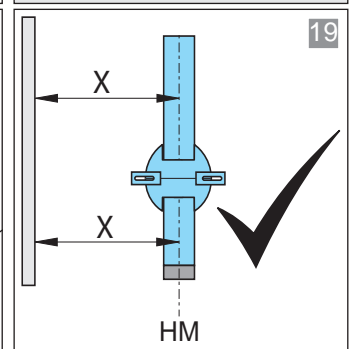
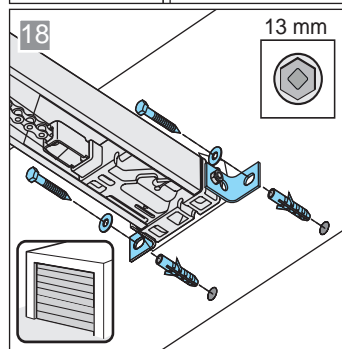
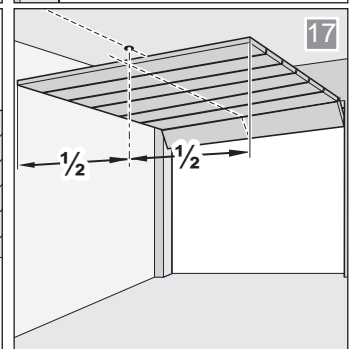
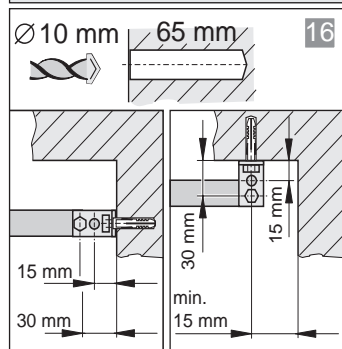
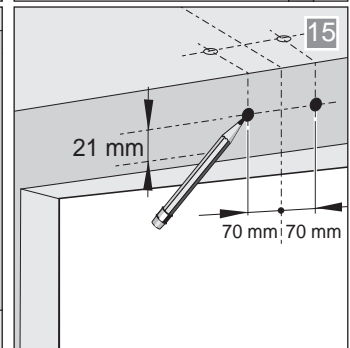
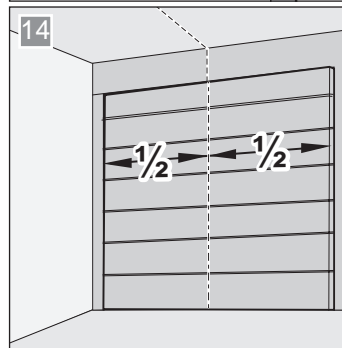
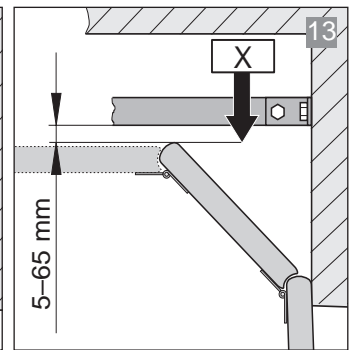
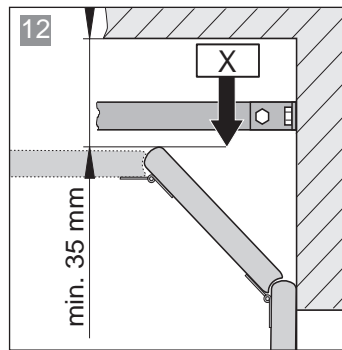
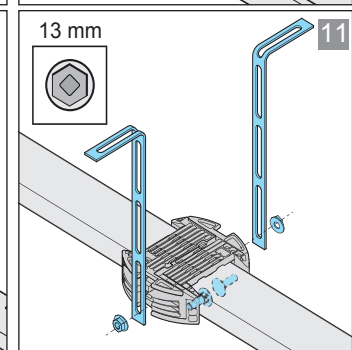
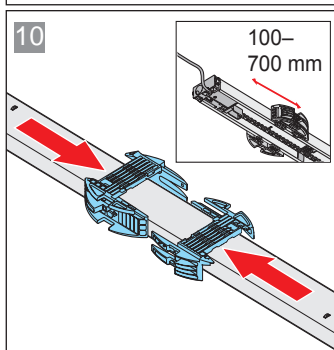
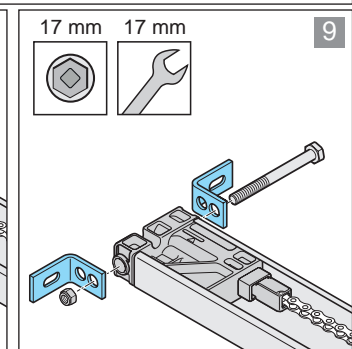
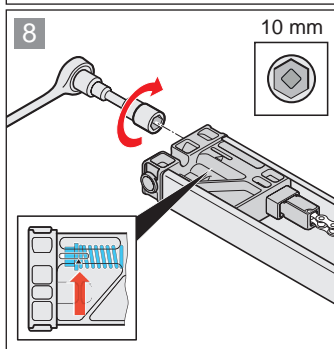
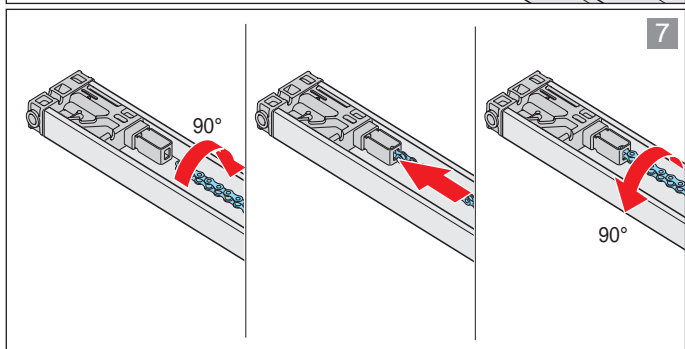
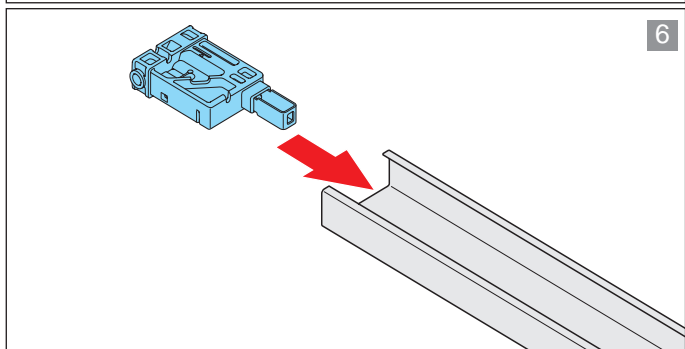
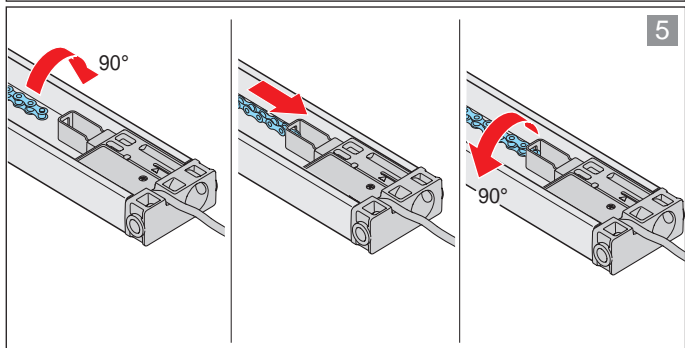
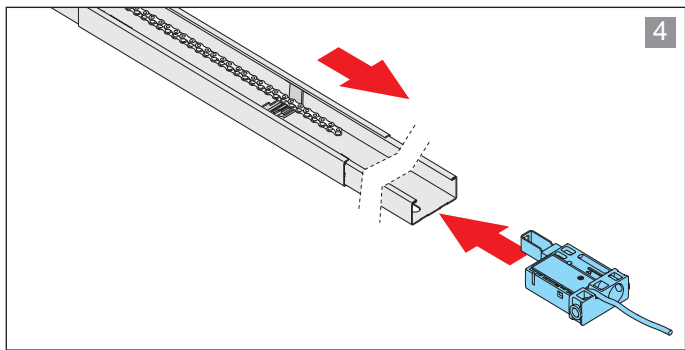
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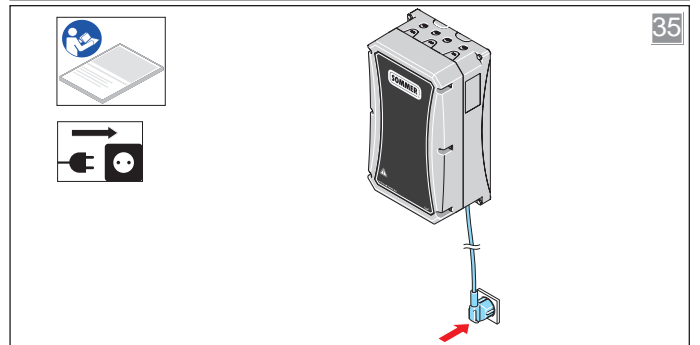
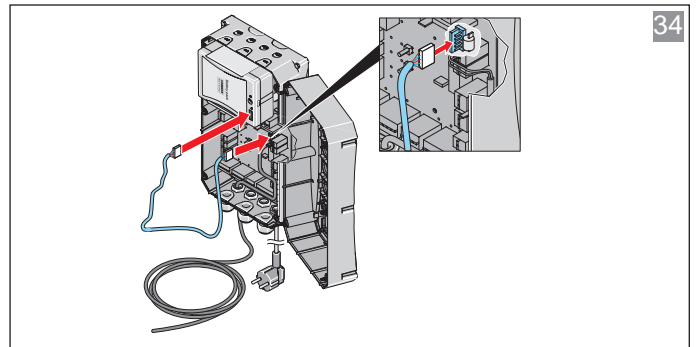
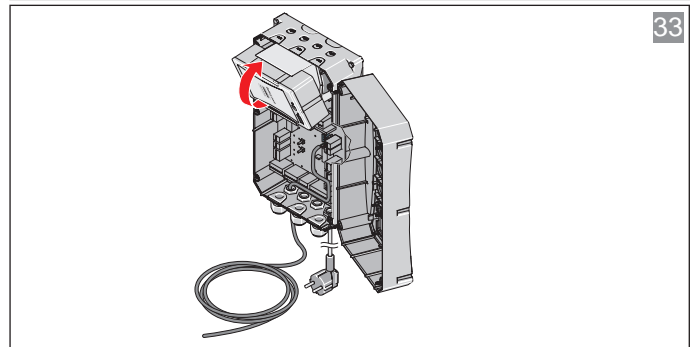
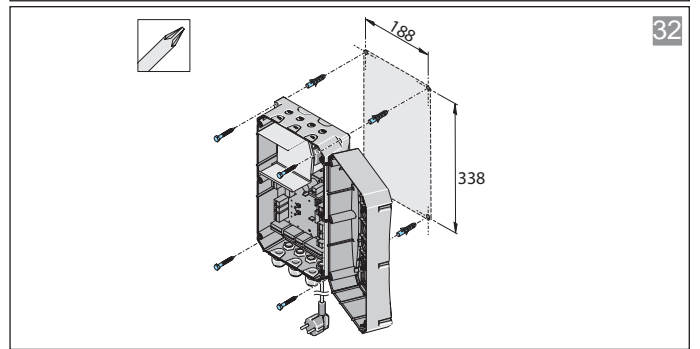
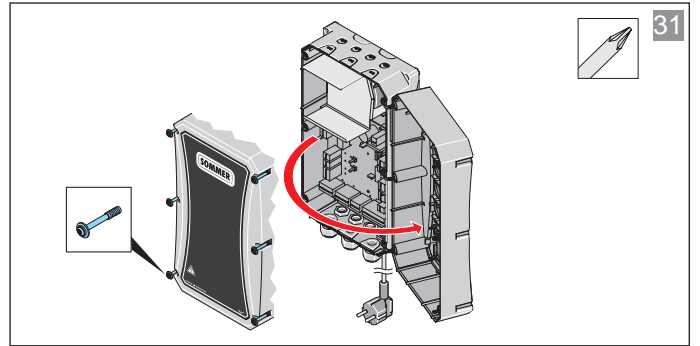
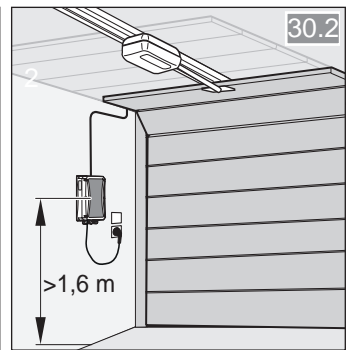
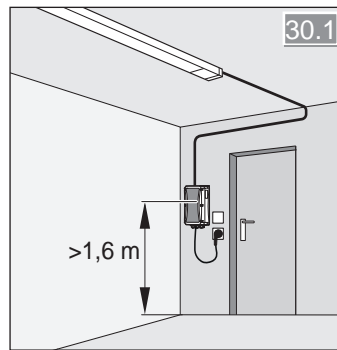
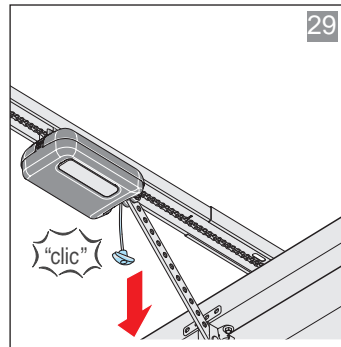
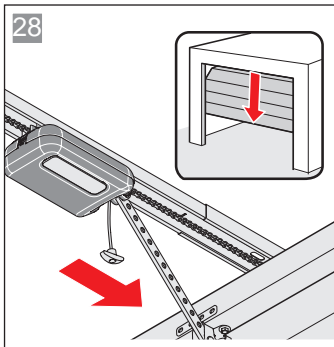
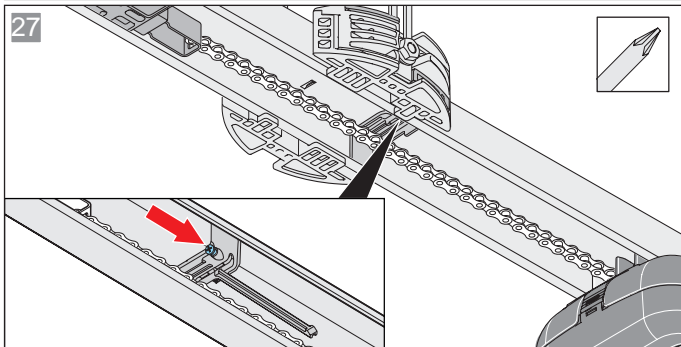
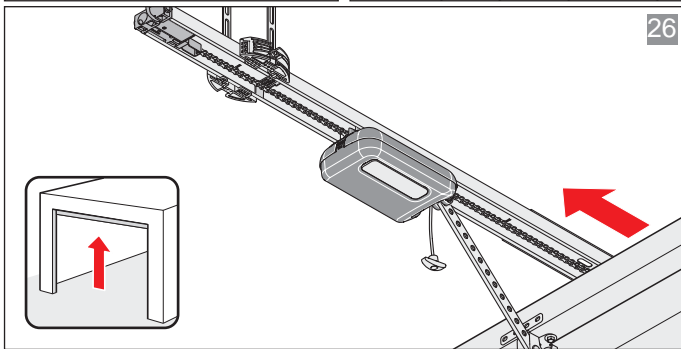
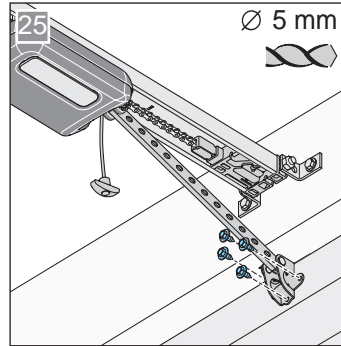
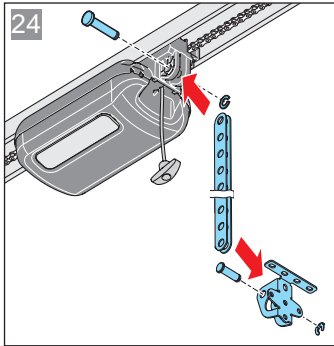
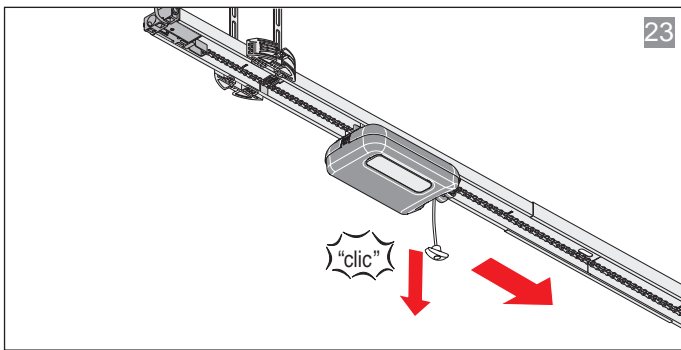
The short instructions does not replace the installation and operating manual.

Read this installation and operating manual carefully and, most importantly, follow all warnings and safety instructions.

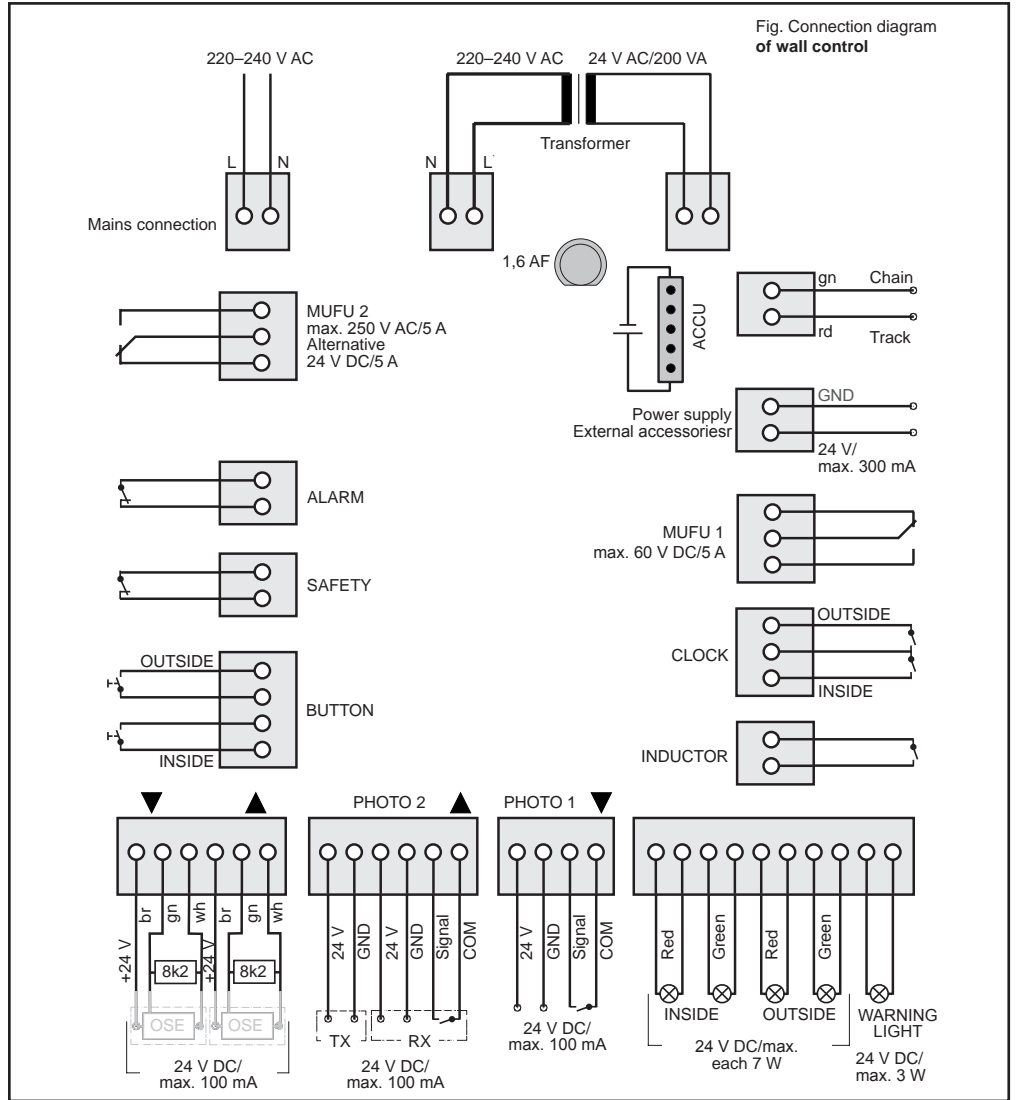
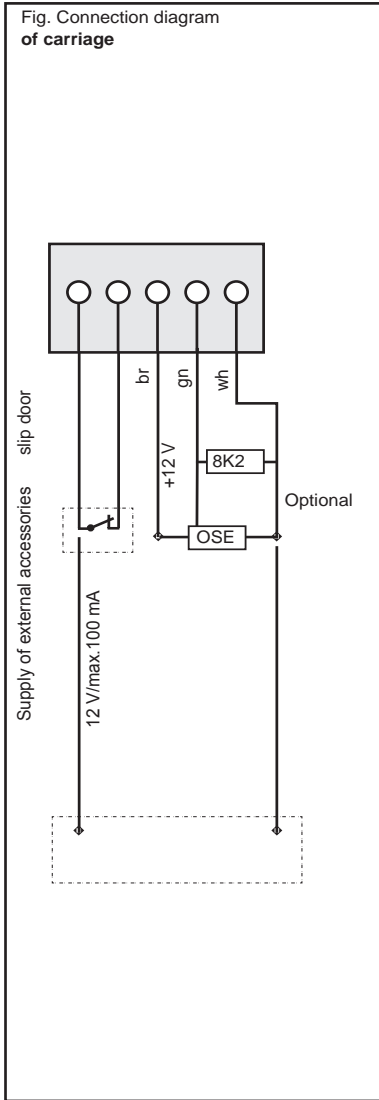
This will ensure that you can install the product safely and optimally.


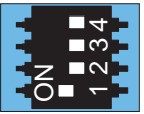
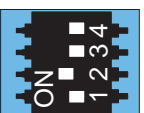
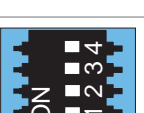
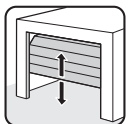


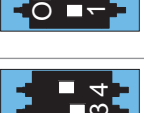
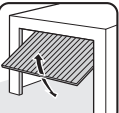



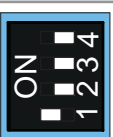

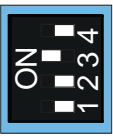
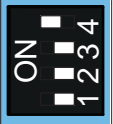




18. Connection diagrams and functions of the DIP switch



DIP switches of the carriage	ON	OFF 
	Automatic closing function activated	Automatic closing function deactivated
	Partial opening activated	Partial opening deactivated
		
		
		

DIP switches on the wall control unit	ON	OFF 
	The red traffic light is on when the door is closed	The red traffic light is off when the door is closed
	Door opens immediately with timer command	Door does not open with a timer command until after a pulse
	Continuous power to the complete system activated	Power-saving mode activated
	Door opens automatically if battery is low	Door does not open automatically if battery is low

SOMMER Antriebs- und Funktechnik GmbH

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

Phone: +49 (0) 7021/8001-0
Fax: +49 (0) 7021/8001-100

info@sommer.eu
www.sommer.eu

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