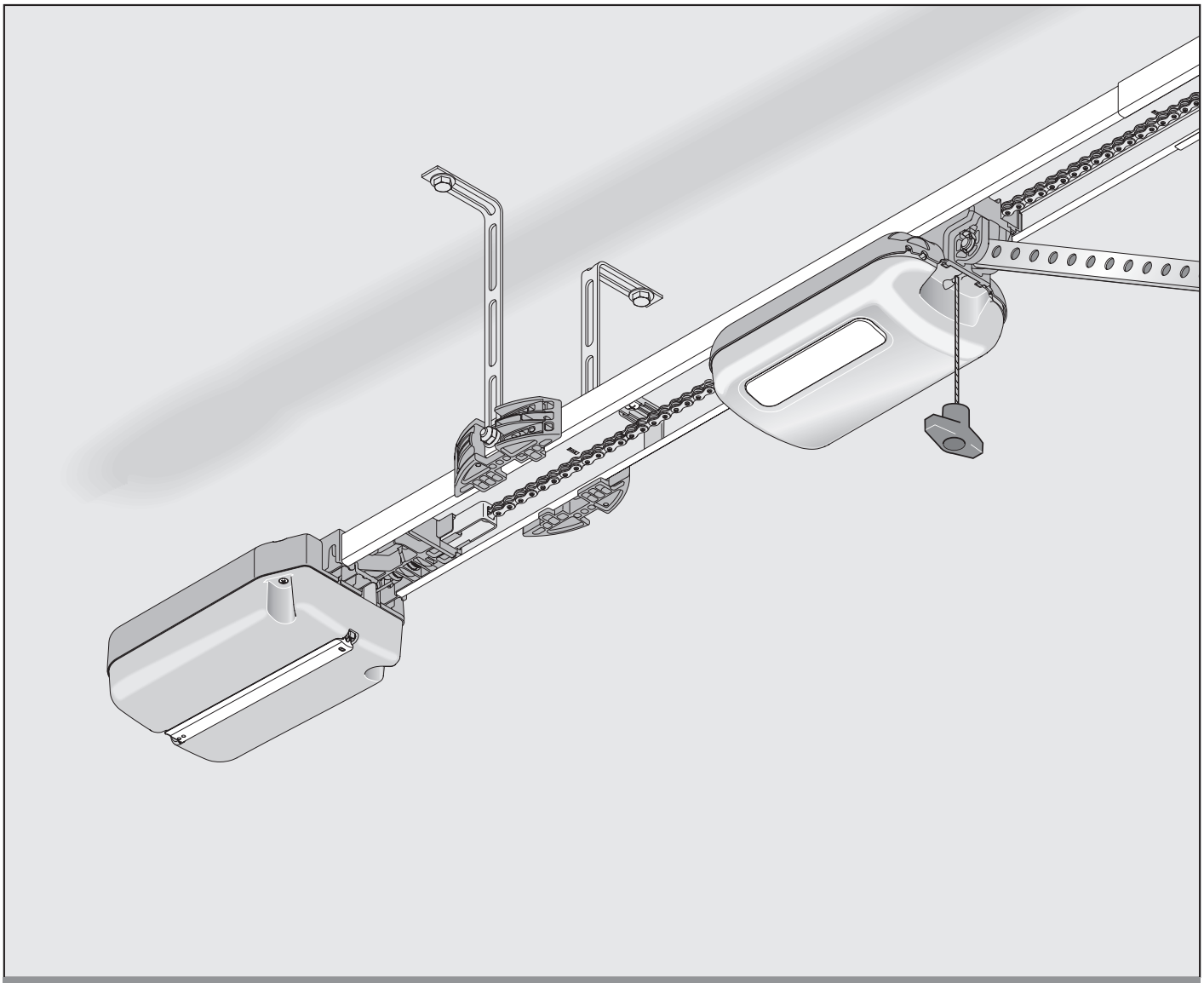
TECKENTRUP
DOOR SOLUTIONS



EN TRANSLATION OF THE ORIGINAL INSTALLATION AND OPERATING MANUAL

Garage door operator

CarTeck DRIVE 500 pro
CarTeck DRIVE 600 pro

Platz für
Garantieaufkleber

pro-plus_S10931-00202_512017_0-DRE_Rev-D_EN

Table of contents

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 to all users at all times at the place of use. A replacement for the installation and operating manual can be downloaded from **SOMMER** at:
www.sommer.eu
During the transfer or resale of the operator to third parties, the following documents must be passed on to the new owner:

- EC Declaration of Conformity
- handover protocol and inspection book
- this installation and operating manual
- proof of regular maintenance, testing and care
- documents recording retrofitting and repairs

1.2 Important for translations

The 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:

https://www.teckentrup.biz/downloadcenter/

1.3 Description of the product type

The operator has been constructed according to state-of-the-art technology and recognised technical regulations and is subject to the Machinery Directive (2006/42/EC). The operator is fitted with a radio receiver. Optionally available accessories are also described. The version can vary depending on the type. This means the use of accessories can vary.

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
- Initial operation
- Setting
- Usage
- Maintenance, testing and care
- Troubleshooting and repairs
- Disassembly and disposal

1.5 Explanation of warning symbols and notes

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 level:

DANGER

WARNING

CAUTION

This leads to three different hazard classifications

1. About this Installation and Operating Manual

⚠ 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.

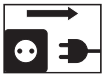
INFORMATION
Describes additional information and useful tips.
Functions for optimum usage of the operator are described.

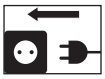
INFORMATION
This symbol indicates that all operator components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must 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 containers provided by 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 WiFi-enabled device, such as a smartphone.

1.6 Special warnings, hazard symbols and mandatory signs

To specify the nature 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.

⚠ 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 must be carried out by a **trained electrician**.

1. About this Installation and Operating Manual

⚠ 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 for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.
► If there is no second entrance to the garage, you must have a release lock or a Bowden wire for unlocking from the outside installed. This can be used to free persons who cannot free themselves

⚠ WARNING

Danger due to projecting parts!
Parts must not project into roads or public footpaths. This also applies while the door is moving.
Persons and animals may be seriously injured.
► Keep public roads and footpaths clear of projecting parts

⚠ 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 you open or close it.

⚠ WARNING

Danger of entrapment!
Persons and 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 and there are 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 near moving parts when the door is moving.

⚠ WARNING

Danger of tripping and falling!
Unsafely positioned parts such as packaging, operator parts or tools may cause trips or falls.
► Keep the installation area free of unnecessary items

⚠ 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.
► Never look directly into an LED.

⚠ WARNING

Danger due to hot parts!
After frequent operation, parts of the motor 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 down before removing the cover.

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 Item number in the figure refers to a number in the text.

Important text items, for example in directions for actions, are emphasised in **bold** type.
References to other chapters or sections are in **bold** type 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 the intended use. The user bears the sole responsibility for any risks 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 domestic standards, directives and regulations. These include EN 12604, EN 12605 and EN 13241-1.
The operator may only be used:

- if the EC Declaration of Conformity has been issued for the door system
- if the CE mark and the type plate for the door system have been attached to the door
- if the handover protocol and the inspection book have been completed and are available
- the installation and operating manuals for the operator and the door are present

1. About this Installation and Operating Manual

- as specified in this Installation and Operating Manual
- in good technical condition
- with attention to safety and hazards by trained users

1.9 Improper use of the operator

Any other use or additional use that has not been described in chapter **"1.8 Intended use of the operator"** constitutes improper use. The user bears the sole responsibility for any risks 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 protection system, an escape route 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 and apply the CE mark and a type plate to the door system. This also applies if the operator is retrofitted to a manually operated door. In addition, a handover protocol and an inspection book must be completed.
The following are available:

- handover protocol for the operator
- EC Declaration of Conformity

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 must be performed by a **trained electrician** in accordance with EN 50110-1.
Installation, initial operation 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 commissioned by the installer. The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the manual emergency release
- on regular maintenance, testing and care which the user can carry out

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

- installation of accessories
- settings
- regular maintenance, testing and care
- troubleshooting and repairs

The following documents for the door system must be handed over to the user:

- EC Declaration of Conformity
- handover protocol and inspection book
- the installation and operating manuals for the operator and the door

1. About this Installation and Operating Manual

1.11 For the user

The user must ensure that the CE mark and the type plate have been attached to the door system.
The following documents for the door system must be handed over to the user:

- the installation and operating manuals for the operator and the door
- inspection book
- EC Declaration of Conformity
- handover protocol

The user must always keep this Installation and Operating Manual at the place of use, ready for consultation and accessible to all users
The user is responsible for:

- the intended use of the operator
- its good condition
- instructing all users how to use the door system and in the associated hazards
- operation
- maintenance, inspection and care by a qualified specialists
- troubleshooting and repair by a qualified specialist

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. Handheld transmitters or other command devices must never be given to children. Handheld transmitters must be safely stored and protected against unintended and unauthorised use.
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 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. Handheld transmitters or other command devices must never be given to children. Handheld transmitters must be safely stored and protected against unintended and unauthorised use.

⚠ DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death may result.
- ► All safety instructions 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 must be carried out by a **trained electrician**.
- ► Disconnect the mains plug before working on the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

⚠ DANGER

Danger due to use of the operator with incorrect settings 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 condition.
- ► You must have faults repaired professionally without delay.

⚠ DANGER

Danger of hazardous substances!
Improper storage, use or disposal of accumulators, batteries and operator components 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 accumulators and batteries away from chemical, mechanical and thermal influences.
- ► Old accumulators and batteries must not be recharged.
- ► 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.
- ► Test the operation of the emergency release regularly from inside and if necessary, also from outside.
- ► You must have faults repaired professionally without delay.

2. General safety instructions

⚠ WARNING

Danger due to projecting parts!

Door leaves or other parts must not project into roads or public footpaths. This also applies while the door is moving.

This may cause serious injury or death to persons or animals.

► Keep public roads and footpaths clear of projecting parts

⚠ 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 and 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 movement area of the door.

⚠ WARNING

Danger of crushing and shearing!

If the door moves and there are 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 when you have a direct view of the door.

► All danger zones must be visible during the entire door operation.

► Always keep the moving door in sight.

► Keep persons and animals clear of the range of movement of the door.

► Never put your hand near the door or near moving parts when the door is moving. In particular, do not reach into the moving push arm.

► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.

► Do not drive through the door until it has opened completely.

► Store the handheld transmitters so that unauthorised or accidental operation, e.g., by children or animals, is impossible.

► Never stand under the opened door.

⚠ 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.

► Never look directly into an LED.

NOTE

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

2. General safety instructions

NOTE

The motor 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 motor 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!
The door can be actuated by radio. If the door moves and there are persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ► In particular when operating control elements such as the radio remote control, all danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door or near moving parts when the door is moving.
- ► Do not drive through the door until it has opened completely.
- ► Store the handheld transmitters so that unauthorised or accidental operation, e.g., by children or animals, is impossible.
- ► Never stay and under the opened door.

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 may only be used if you have a clear view of the door.

The user of the radio system is not protected against interference 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.
You can find the EC Declaration of Conformity for the radio here:

http://som4.me/konform-funk

3. Description of function and product

3.1 The operator and its mode of operation

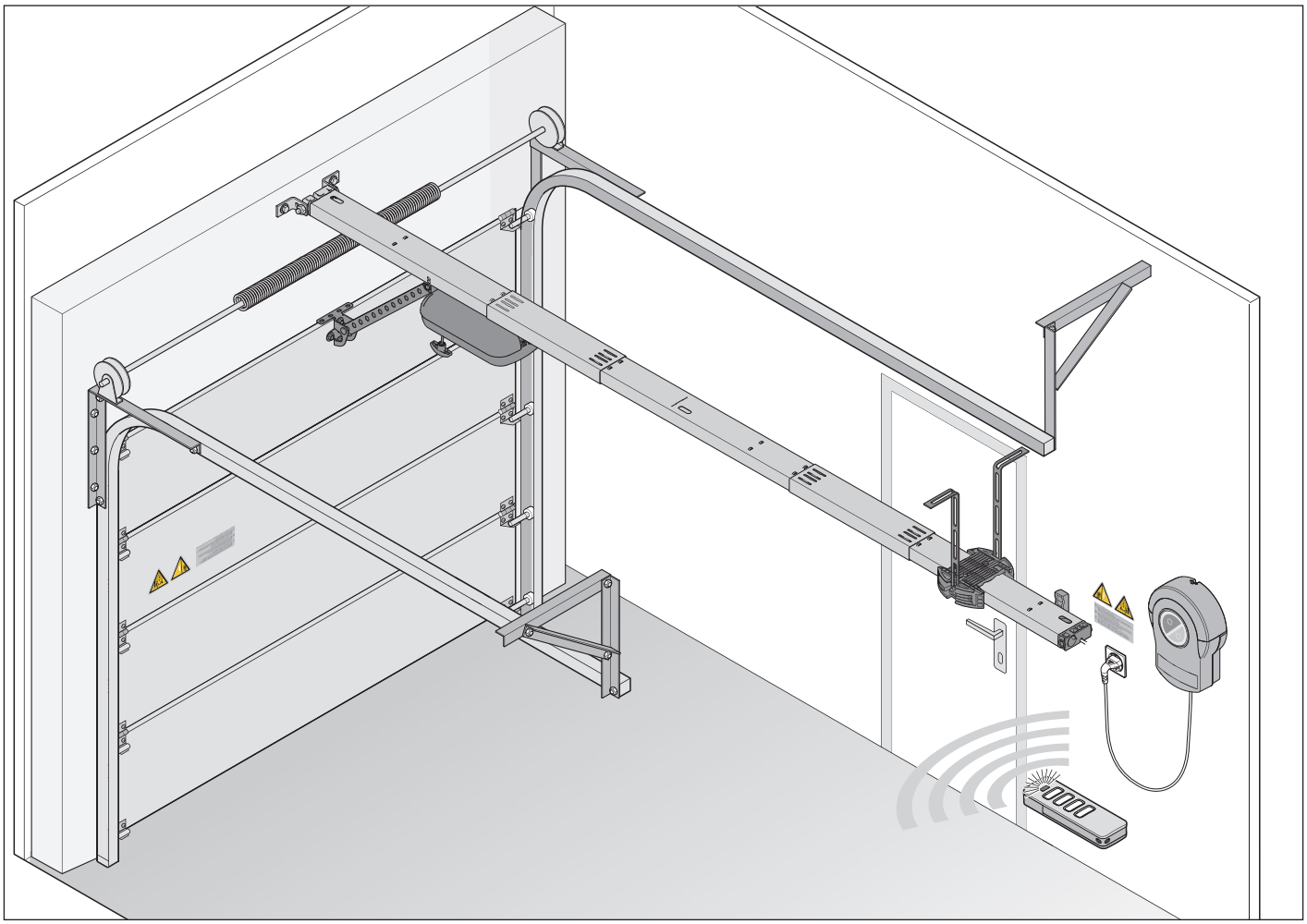


Fig. Door structure with operator

Sectional doors and other door types can be opened and closed with the electrically powered operator and its available accessories The operator can be controlled, for example, with a handheld transmitter. The door can be opened and closed with the membrane keypad of the wall control unit.

The track is mounted on the ceiling and the lintel above the garage door. The motor carriage is attached to the door by a push arm. The motor carriage moves along the track on a spring-mounted chain and opens or closes the door. The handheld transmitter can be stored in a holder in the garage or in the vehicle.

A plug-in light for the wall control unit is available as an accessory. It is automatically activated during operation.

The use of accessories can vary depending on the type. For more information on using the operator with different door types or accessories, contact your specialist dealer.

3.2 Safety equipment

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.

In the event of a power failure, the door can be opened from the inside via an emergency release handle 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 Product designation

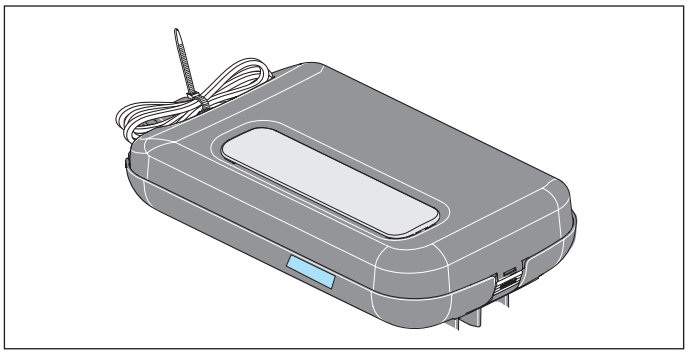


Fig. Motor carriage with type plate and device specifications

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.

3.4 Explanation of tool symbols

Tool symbols

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


Phillips screwdriver

Metal drill 5 mm

Masonry drill 6/10 mm

Fork wrench 10/13/17 mm

Ratchet wrench 10/13/17 mm

Other symbols

Drilling depth

Audible engaging or clicking noise

3. Description of function and product

3.5 Scope of delivery

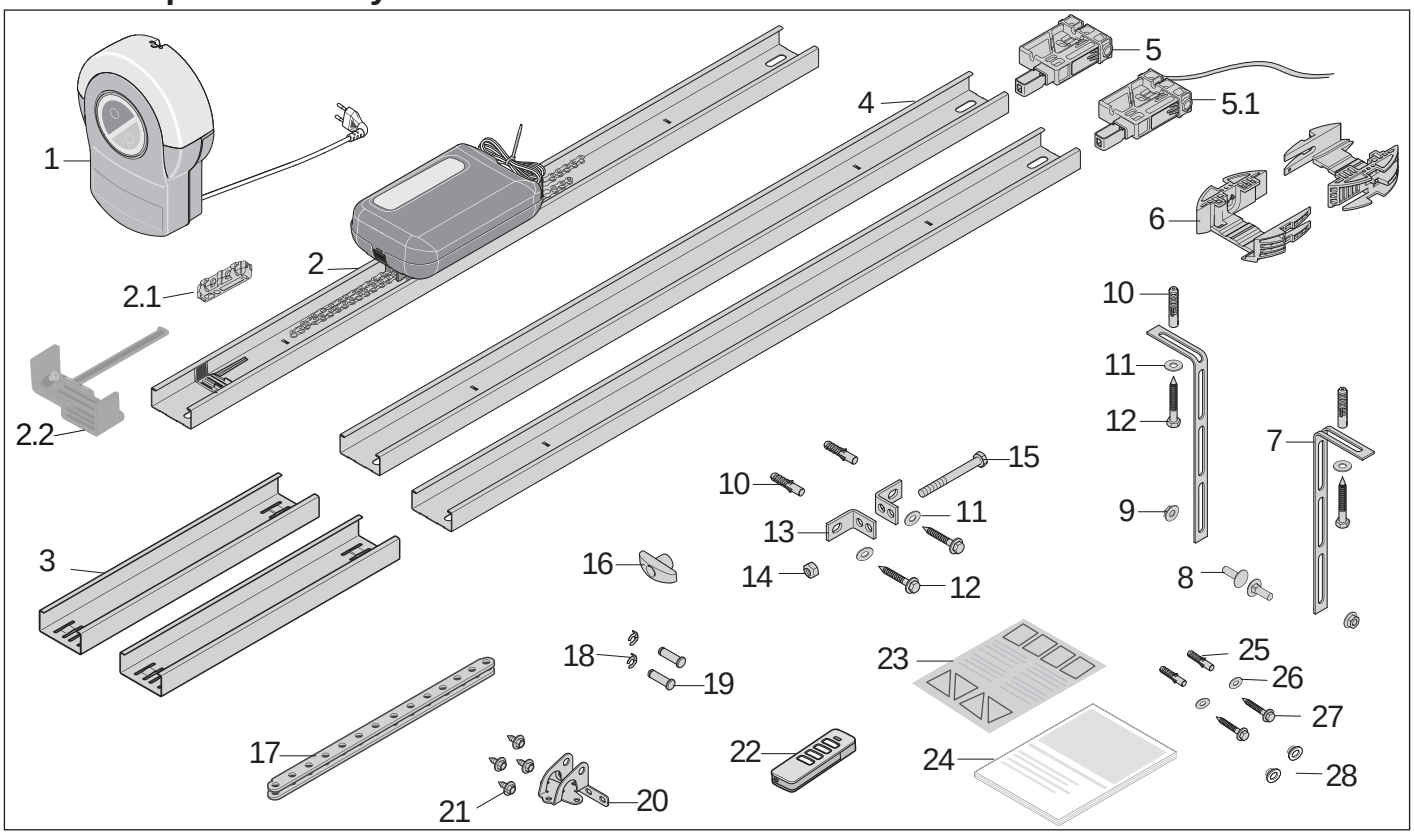


Fig. Scope of delivery

1) Wall control unit
2) Track, pre-assembled with **1 x limit stop**, chain and motor carriage
2.1) Isolator, **pre-assembled on the chain**
2.2) Limit stop, **included with the track**
3) Connecting sleeves, 2 x
4) Track, 2 x
5) Plug-in unit, **pre-assembled**
5.1) Plug-in unit, **pre-assembled**, with control cable, 2-wire, approx. 5 m
6) Ceiling holder, 2-part
7) Perforated strip, angled, 2 x
8) Screw M8 x 20 mm, 2 x
9) Hexagonal nut self-locking M8, 2 x
10) S10 wall plugs, 4 x
11) Washer, 4 x
12) Screw 8 x 60 mm, 4 x
13) Lintel bracket, 2 x
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, 2 x
19) Bolt 10 x 34.5 mm, 2 x
20) Door bracket
21) Combination self-tapping screw, 4 x
22) Handheld transmitter, **preprogrammed**, channel 1 pulse sequence, with CR 2032 3 lithium battery
23) Information sticker for garage interior
24) Installation and Operating Manual

Mounting for the wall control unit:

25) S6 wall plugs, 2 x
26) Washer, 2 x
27) Screw ∅ 4 x 50 mm, 2 x
28) End caps, 2 x

When unpacking, make sure that all items 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

3.6 Dimensions

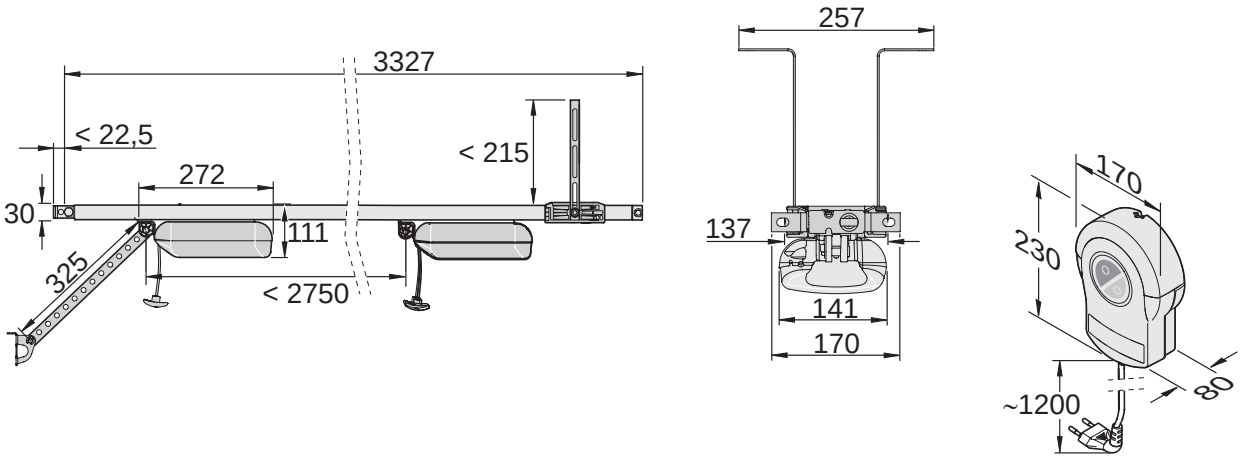


Fig. Dimensions (all dimensions are in mm)

3.7 Technical data

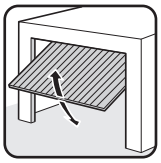
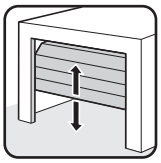
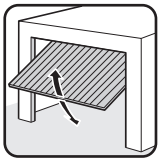
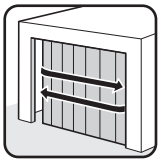
		S 9050 pro/pro+	S 9060 pro/pro+		
Rated voltage		220 V - 240 V AC			
Rated frequency		50/60Hz			
Memory locations in radio receiver		40			
Duty cycle		S3 = 40%			
Operating temperature		–25 ºC to +65 ºC			
Emission value according to operating environment		< 59 dBA – operator only			
IP protection class		IP21			
IP-code		II			
Travel length max.		2750 mm			
Travel length including extension max.		3,800 mm (2 x 1,096 mm)	4,900 mm (2 x 1,096 mm)		
Max. speed		180 mm/s	240 mm/s		
Max. pull and pushing force		500 N	600N		
Rated pull force		150 N	180 N		
Rated power consumption**		95 W			
Power consumption (max. load)		350 W			
Rated current consumption**		0.5 A			
Power consumption in power-saving mode		< 3 W / < 1 W			
Door weight max.		approx 80 kg	approx 120 kg		
Max. door width / door height*	**Sectional doors**	H 1.875 - 2.500 mm B 2.000 - 5.500 mm	H 1.875 - 2.500 mm B 2.000 - 5.500 mm		
	One piece doors	H 1.875 - 2.750 mm B 2.000 - 3.000 mm	H 1.875 - 2.750 mm B 2.000 - 3.000 mm		
Max. recommended no. of spaces		2	30		

* Depending on door and the operating conditions

** Values apply without lighting

3. Description of function and product

3.8 Door types and accessories

Door type		Accessories
	One piece door	No accessories required
	Sectional door with single track	Sectional door fitting with curved push arm*
	Sectional door with double track	Sectional door fitting without curved push arm**
	Sectional overhead door	No accessories required
	Up-and-over door	Curved arm*
	Hinged double door	Hinged double door fitting*
	Side-opening door, side-opening sectional door	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. Customs fittings are not included in the scope of delivery.

A number of accessories are available for the operator.

Here are a few examples:

Accessories	Function
Sensor	Pluggable humidity sensor If humidity is high, the garage door automatically opens a little, providing ventilation
Memo (red housing)	Pluggable EEPROM 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 acoustic signal generator Option of alarm tone when a break-in attempt occurs or a warning tone, for example in the case of a wicket door contact
Laser	Pluggable parking position laser The parking end position is displayed by a laser point on the dashboard
Battery pack	Accumulator Operator is supplied with power during a power failure

For more information on accessories such as track extensions, additional locking mechanisms, customs 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

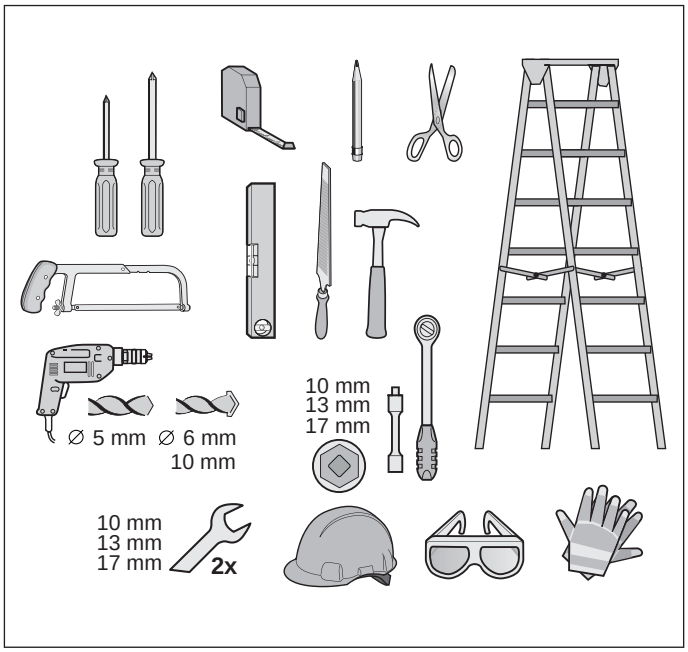


Fig. Recommended tools and personal protective equipment for installation

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

SOMMER Antriebs- und Funktechnik GmbH

Hans Böckler-Straße 21-27
73230 Kirchheim
Germany

hereby declares that the control units
CarTeck DRIVE 500 pro, CarTeck DRIVE 600 pro

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 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

Kirchheim, 01-12-2017

CE

i.V.

Jochen Lude
Responsible for documents

6. Installation

6.1 Important information on installation

Please observe and comply with all instructions to ensure a safe installation.
Persons 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 instructions 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.
- ► Test the operation of the emergency release regularly from inside and if necessary, also from outside.
- ► If there is no second entrance to the garage, you must have a release lock or a Bowden wire for unlocking from the outside installed. This can be used to free persons who cannot free themselves

⚠ WARNING

Danger due to projecting parts!
Door leaves or other parts must not project into roads or public footpaths. This also applies while the door is moving.
This may cause serious injury or death to persons or animals.
- ► Keep public roads and footpaths clear of projecting parts

⚠ WARNING

Danger due to falling parts of doors!
If a door is incorrectly weight-balanced, springs may break suddenly. Falling door parts may cause serious injury or death.
Check:
- ► the stability of the door.
- ► that the door does not bend, rotate or twist when you open or close it.
- ► that the door runs smoothly in the 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 mounting materials are used. Persons or animals may be struck by falling parts of the wall, ceiling or operator. Severe injuries or death may result.
- ► You must test the stability of the ceiling and the walls
- ► Use only permissible mounting materials appropriate for the supporting surface.

6. Installation

⚠ 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.
- ► Always wear tight-fitting clothing.
- ► Wear a hairnet if you have long hair.

⚠ WARNING

Danger of crushing and shearing!
If the door moves and there are 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 when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door or near moving parts when the door is moving. In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling spring unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never stand under the opened door.

⚠ WARNING

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

- ► Keep the installation area free of unnecessary items
- ► Place all parts where no-one is likely to trip or fall over them.
- ► The 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 gloves when deburring or performing similar work.

NOTE

If the ceiling and walls are not stable, parts of the ceiling, walls 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 mounting materials such as wall plugs or screws.
The mounting material must be suitable for 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. Installation

6.2 Preparation for installation

Before installation, you must check whether the operator is suitable for the door, see also Chapter **"3.7 Technical data"**.

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:

- manual locking on door
- 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 or damage to 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 the mechanism and weight balance

⚠ 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 carried out by a **qualified specialist**.

► You must proceed with extreme caution if you check and if necessary adjust the force setting.

NOTE

If the weight compensation of the 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

6. Installation

1. Check the mechanisms of the door, cables, springs and other fittings

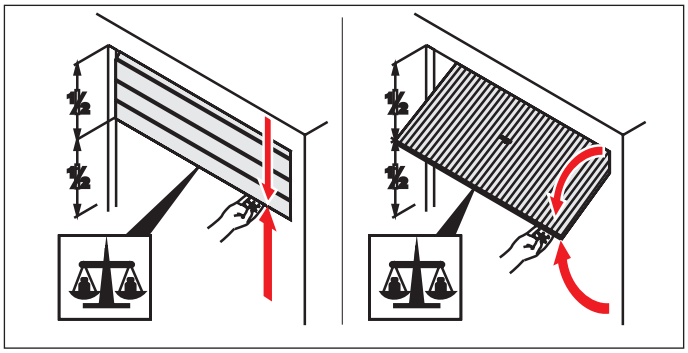


Fig. 2

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 balance of the door must be adjusted.

Emergency release

In a garage without a separate entrance (e.g. wicket door), 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 wire or a release lock. Ask your specialist dealer.

Adjusting the top roll of a sectional door

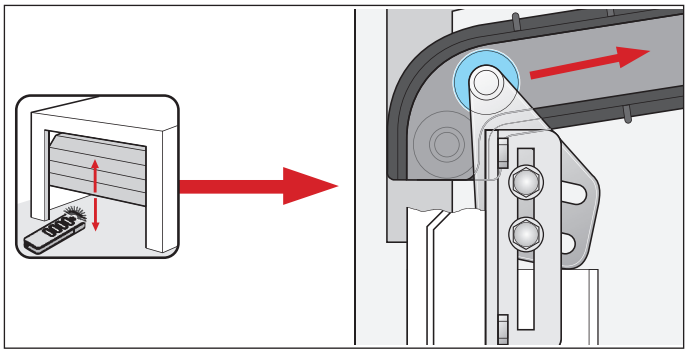


Fig. Top roll on sectional door

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.

6.3 Installing the operator system

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

Selecting the installation variant

The scope of delivery offers the option of implementing the following installation variants. Check your specific situation and select the optimum installation variant for you.

Installation situation A, B and C

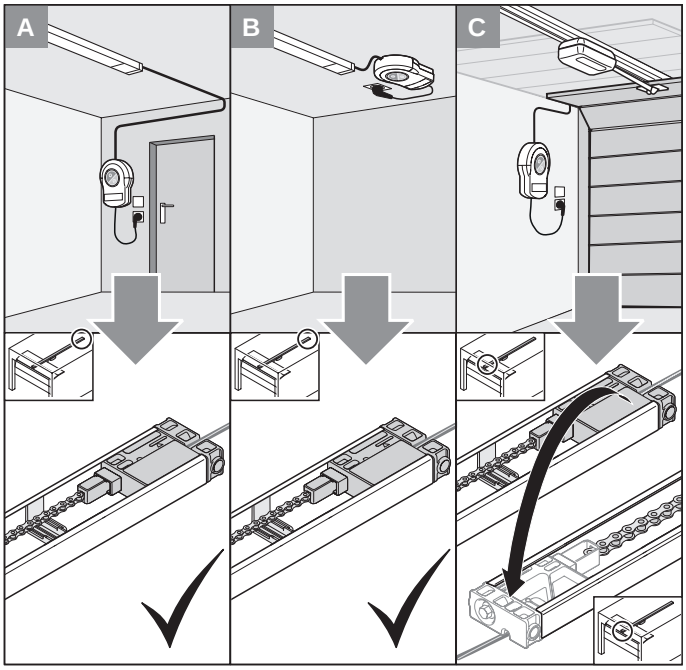


Fig. Installation situation and installation variants A, B and C

6. Installation

Installation variant A

This variant is selected if there is a separate entrance to the garage. The wall control unit is installed near a power outlet. The integrated membrane keypad of the wall control unit can be used to open the door when entering the garage or to close the door when leaving the garage. The control cable is led out at the rear end of the track, see Chapter **"6.5 Installing the operator system for installation variants A and B."**

Installation variant B

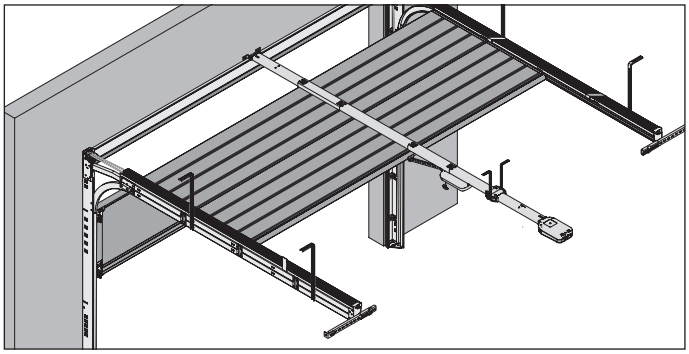
This variant is selected when an existing device is being replaced by a new one and there is already a power outlet or other control lines such as buttons or photocells in this area. Here, the wall control unit is mounted on the ceiling in the rear area of the track. The control cable of the plug-in unit is also led out at the rear end of the track, see chapter **"6.5 Installing the operator system for installation variants A and B."**

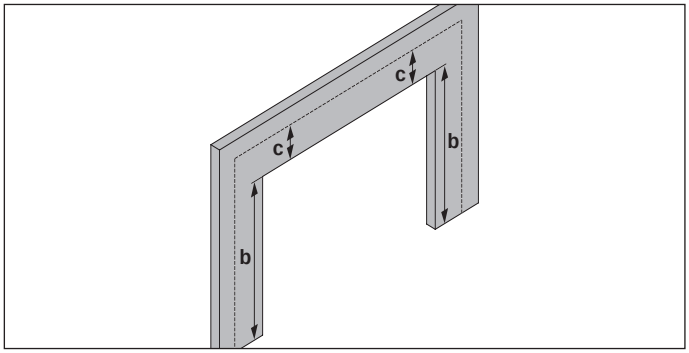
Installation variant C

This version is selected when there is a power outlet which can be used for the wall control unit located near the door opening. Here, the control cable is led out at the front end of the track, see chapter **"6.6 Installing the operator system for installation variant C."**

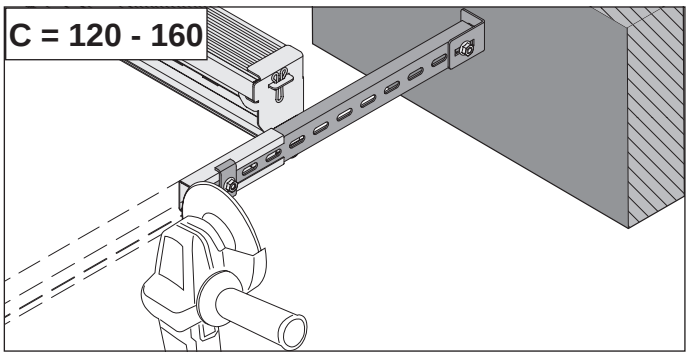
6.4 Installation on the door

INFORMATION
Because the track of the operator and the rear distance track are on the same level, the distance track must be severed and displaced.



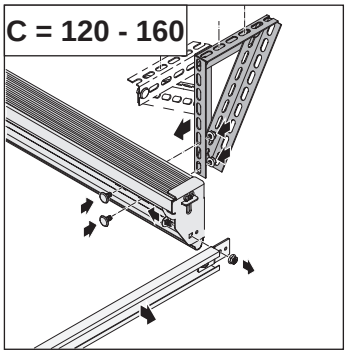


Version 1

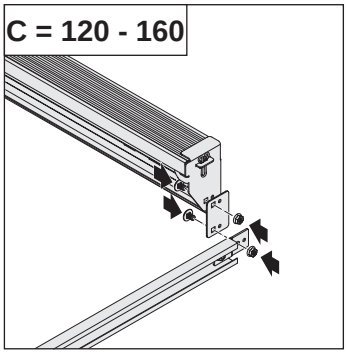


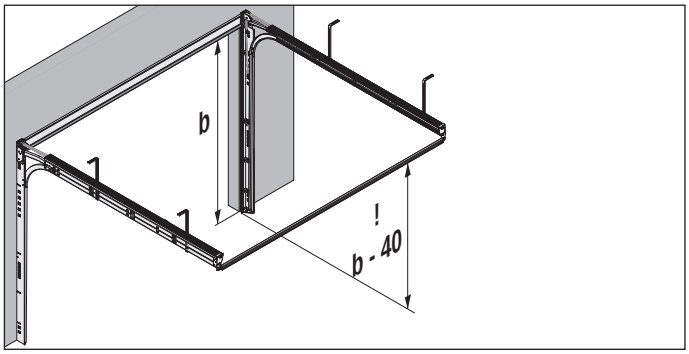
6. Installation

Version 2



Version 3





6.5 Installing the operator system for installation variants A and B

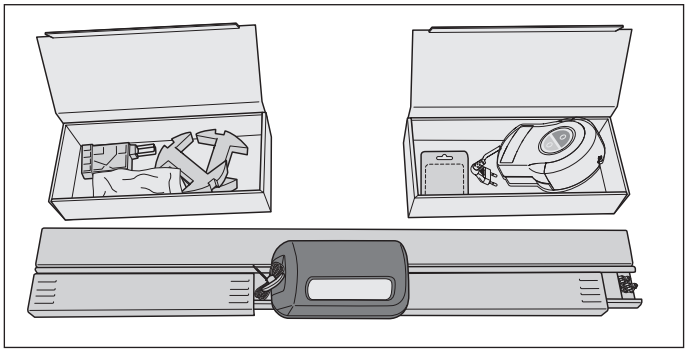


Fig. 1

⚠ CAUTION

Risk of injury to hands!

Rough metal parts may cause abrasions and cuts when picked up or touched.

► You must wear safety gloves when working with rough metal parts.

1. Open the package.
   Place the two cartons in the package beside the tracks and open them.
   Check the entire contents against the scope of delivery, see chapter **"3.5 Scope of delivery."**

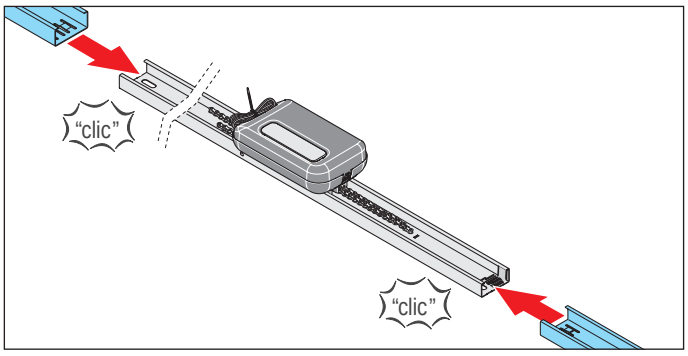


Fig. 2

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

6. Installation

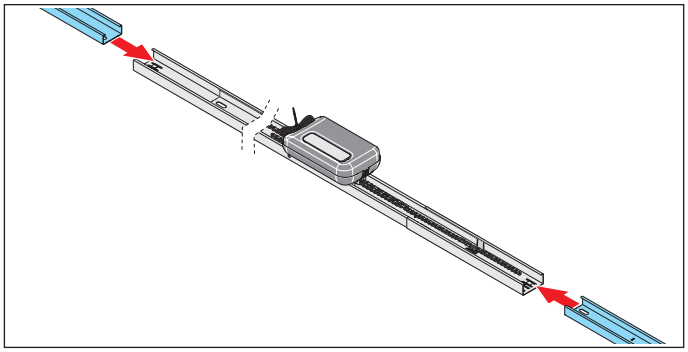


Fig. 3

3. Attach a track to each of the connecting sleeves

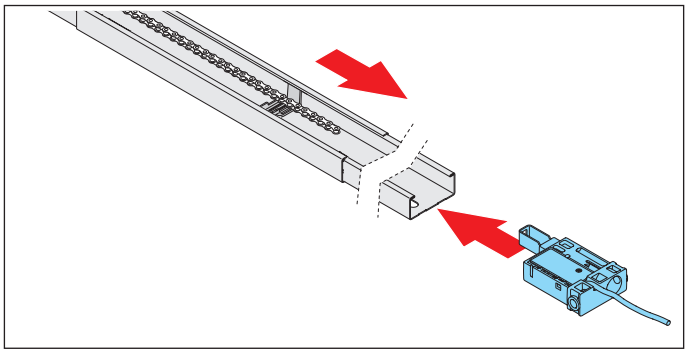


Fig. 4

4. Plug the **plug-in unit with control cable** into the track behind the limit stop.
   Lay the chain over the limit stop.

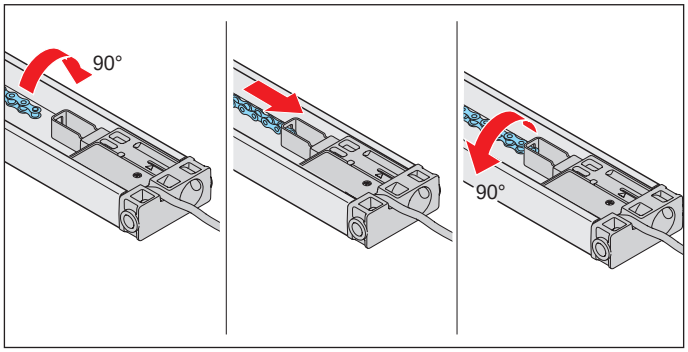


Fig. 5

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°.

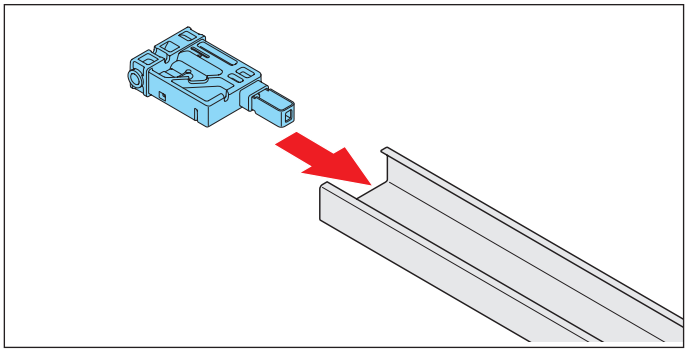


Fig. 6

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

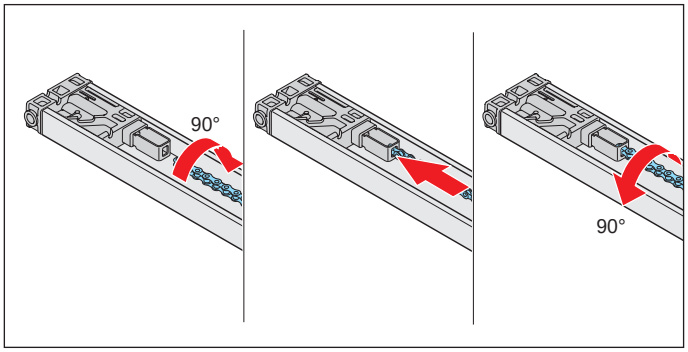


Fig. 7

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.

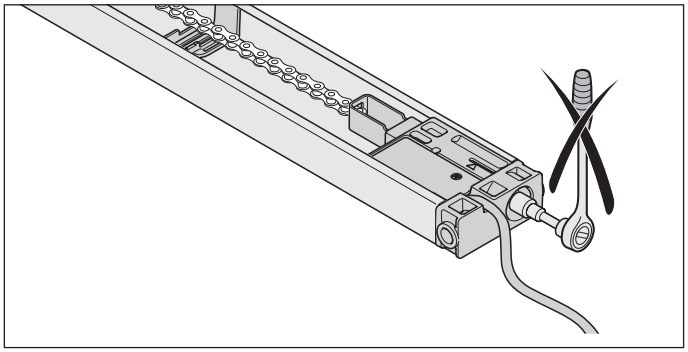


Fig. Plug-in unit with control cable

NOTE

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

6. Installation

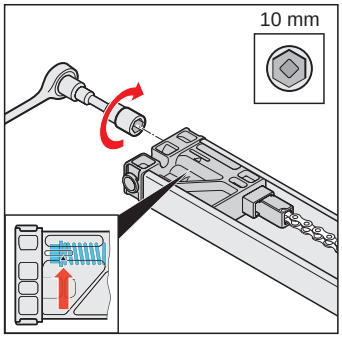


Fig. 8

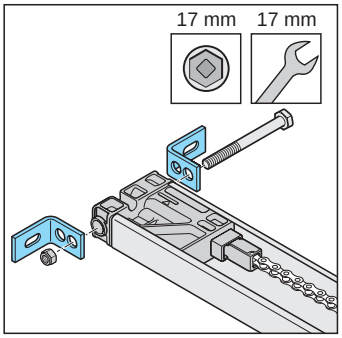


Fig. 9

8. Tens on the b ain to the mark on the **plug-in unit without control cable**, s e **arrow** in the detailed iv ew.

9. Fas en the two header brak e ts to the **plug-in unit without control cable** with s ew and nut.

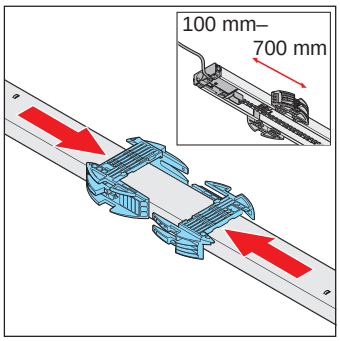


Fig. 10

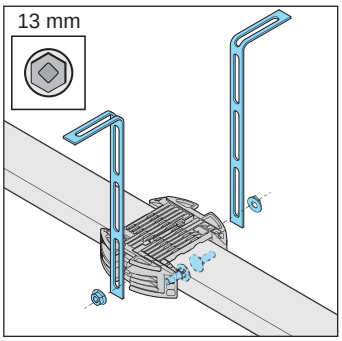


Fig. 11

10. Turn the trak to ins all the e iling brak e t.
The dis ane between the rear **plug-in unit with control cable** and the e iling holder s ould be 100 - 700 mm.
Plae the e iling holder on the trak and s ide into one another.

11. Fas en the perforated s rips to the e iling holder on the left and right. Als obs re the dis ane s for ins allation to the e iling or lintel.
⇒ The trak is prepared for the remainder of the ins allation.

For further ins allation, s e Chapter **"6.7 Installation on the door."**

6.6 Installing the operator system for installation variant C

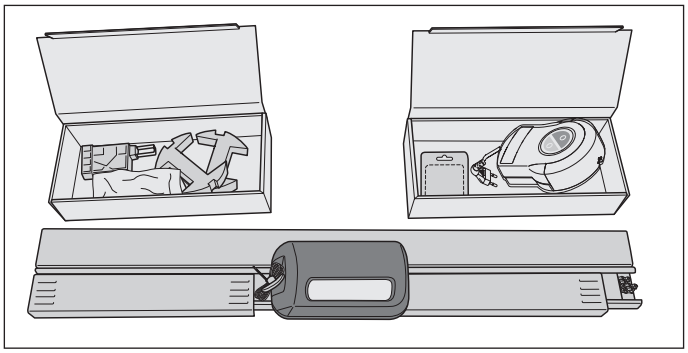


Fig. 1

⚠ CAUTION

Risk of injury to hands!

Rough metal parts may cause abrasions and cuts when picked up or touched.

► You mus wear a fety glov s when working with rough metal parts.

1. Open the pak a ge.
Plae the two a rtons in the pak a ge bes de the traks and open them.
Chek the entire o ntents agains the s pe of deliv ry lis ed in this Ins allation and Operating Manual, s e b apter **"3.5 Scope of delivery."**

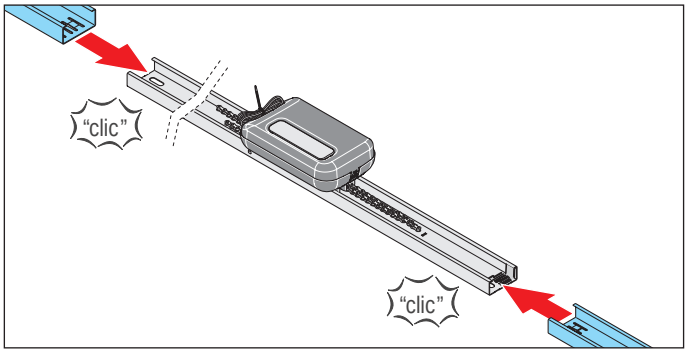


Fig. 2

2. Remov the two o nnec ing s eev s bes de the motor a rriage and attab to the trak on the left and right.

6. Installation

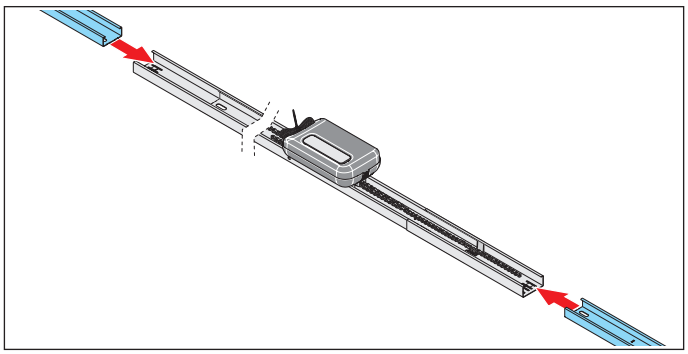


Fig. 3

3. Attach a track to each of the connecting sleeves

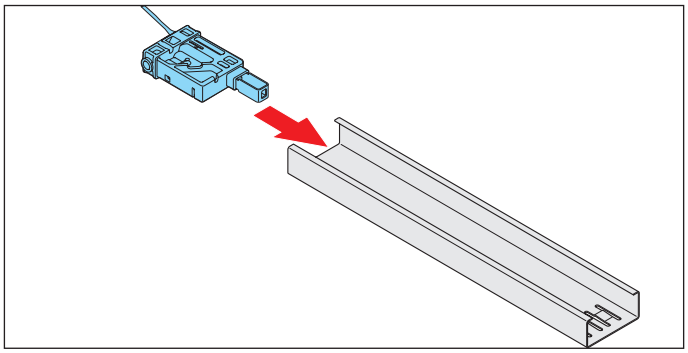


Fig. 4

4. Plug the **plug-in unit with control cable** into the track behind the limit stop.

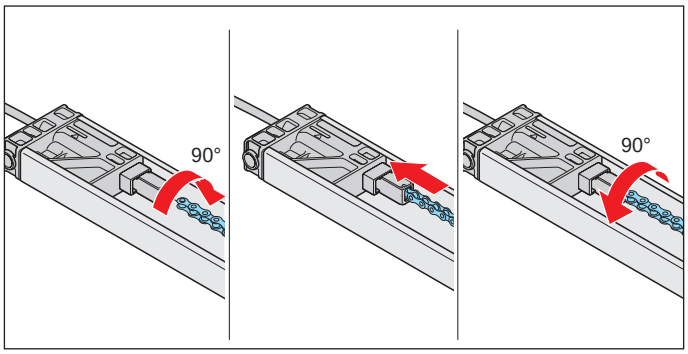


Fig. 5

NOTE

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

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°.

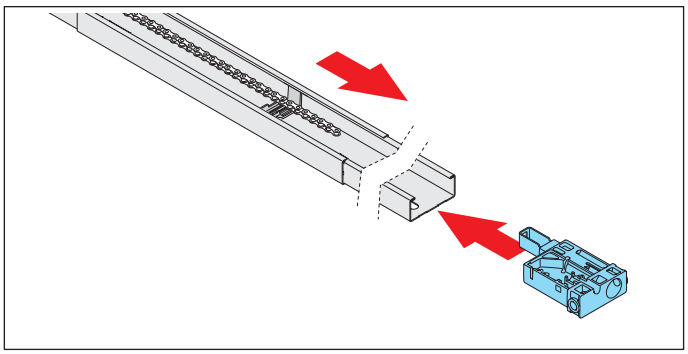


Fig. 6

6. Plug the **plug-in unit without control cable** in on the opposite side of the track.
   Lay the end of the chain over the limit stop.

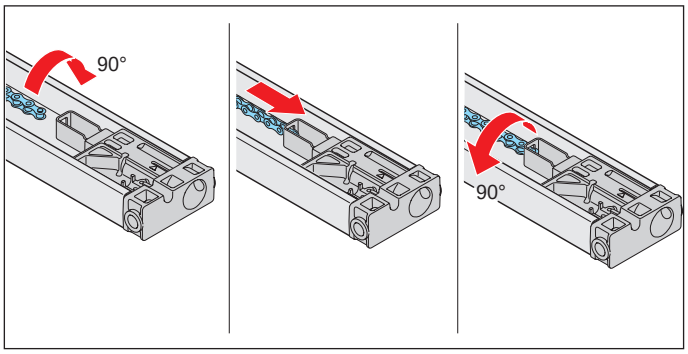


Fig. 7

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.

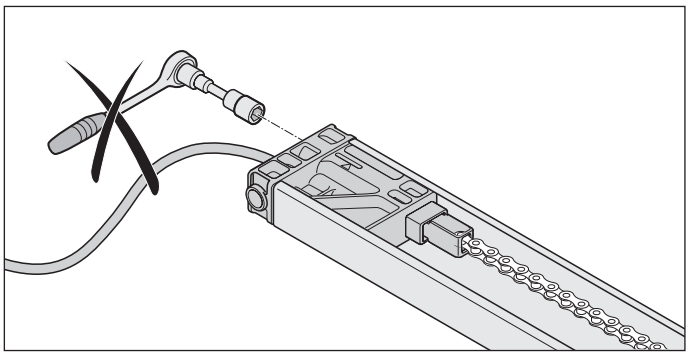


Fig. Plug-in unit with control cable

NOTE

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

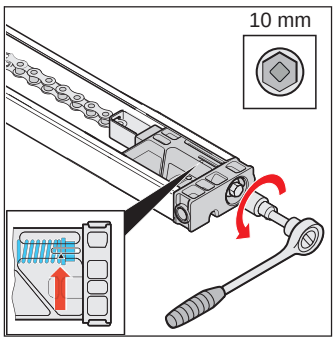


Fig. 8

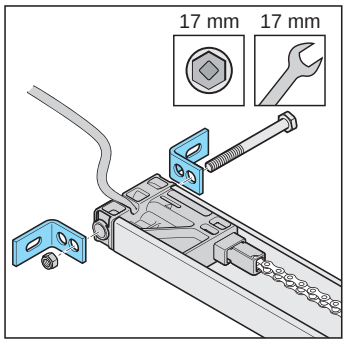


Fig. 9

8. Tens on the b ain to the mark on the **plug-in unit without control cable**, s e **arrow** in the detailed iv ew.

9. Fas en the two header brak e ts to the **plug-in unit with control cable** with s ew and nut.

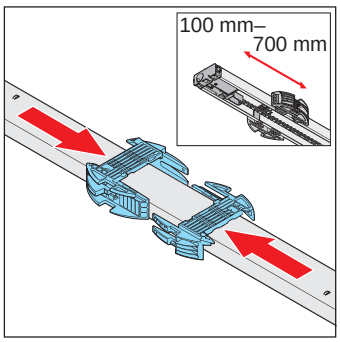


Fig. 10

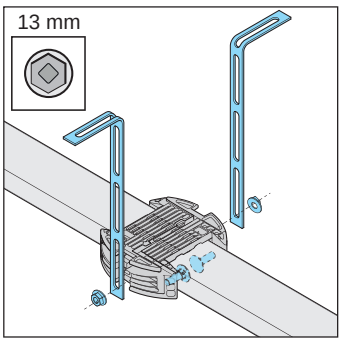


Fig. 11

10. Turn the trak to ins all the e iling brak e t.
The dis ane between the rear **plug-in unit without control cable** and the e iling holder s ould be 100 - 700 mm.
Plae the e iling holder on the trak and s ide into one another.

11. Fas en the perforated s rips to the e iling holder on the left and right. Als obs r e the dis ane s for ins allation to the e iling or lintel.
⇒ The trak is prepared for the remainder of the ins allation.

For further ins allation, s e b apter **"6.7 Installation on the door."**

6. Installation

6.7 Installation on the door

As installation on the door is similar for variants A, B and C, installation on the door is only described for variants A and B.

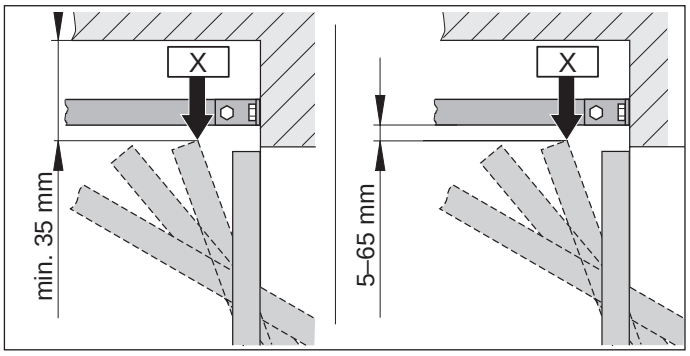


Fig. 1.1 Highest running point for one piece and up-and-over doors

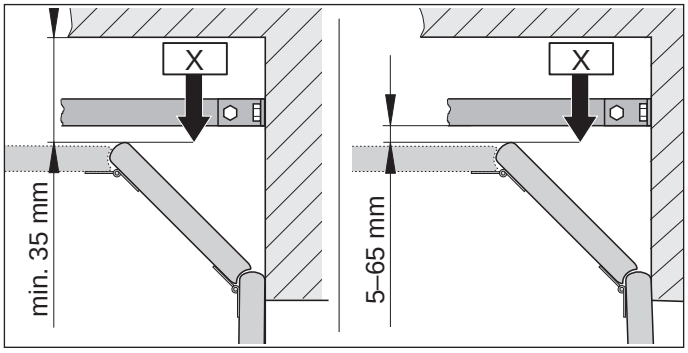


Fig. 1.2 Highest running point for a sectional door

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

1. Measure the highest running point of the door "X" depending on the door type:
   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.

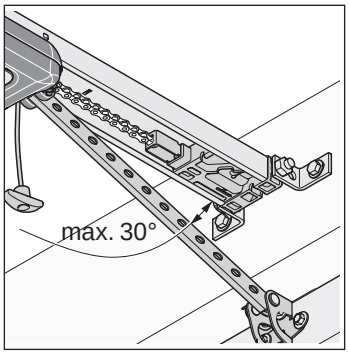


Fig. 2

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

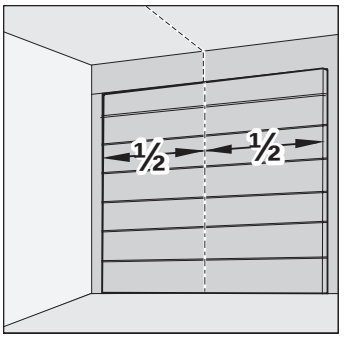


Fig. 3

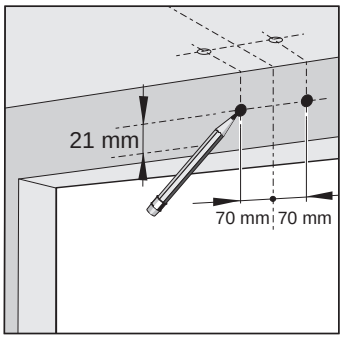


Fig. 4

3. Close the door.
   Select the lintel or ceiling for installation.
   Measure the centre of the door at the front and mark the position on 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.

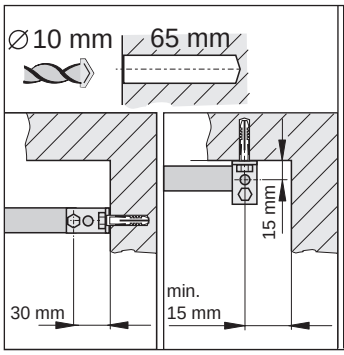


Fig. 5

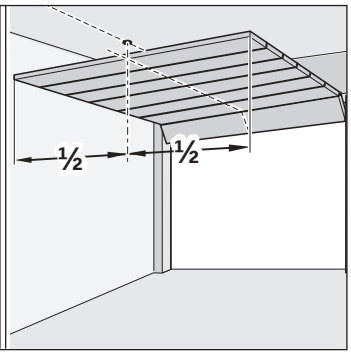


Fig. 6

6. Installation

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.

INFORMATION

The drilling depth must be considered with respect to the ceiling and wall thickness, particularly with prefabricated garages.
It may be necessary to reduce the hole depth.
Only use permissible mounting materials appropriate for the supporting surface.

5. Drill two holes (Ø 10 x 65 mm deep) in the ceiling or lintel.

6. Open the door.
   Transfer the mark from the centre of the door to the ceiling at the rear.

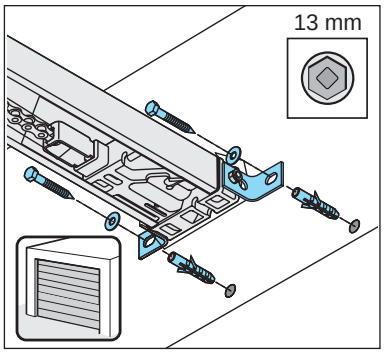


Fig. 7

7. Close the door.
   Insert the wall plug into the lintel or 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.

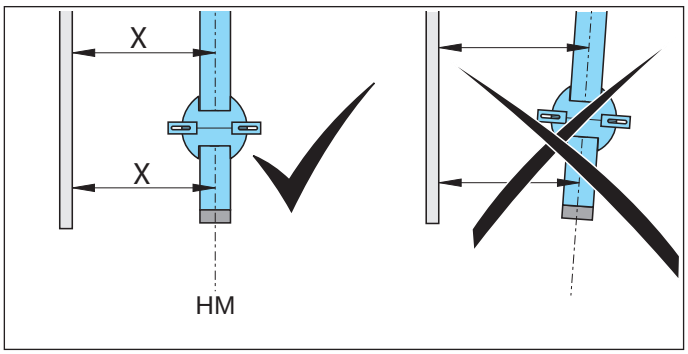


Fig. 8

NOTE

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

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

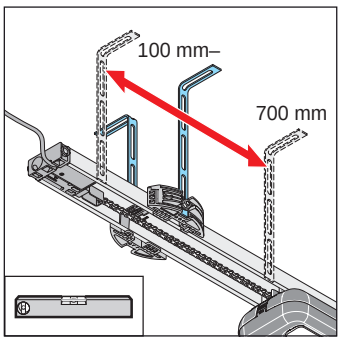


Fig. 9

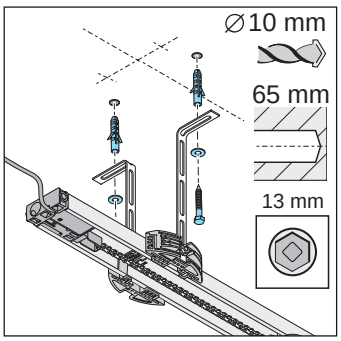


Fig. 10

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 approx. 100 - 700 mm.
   The ceiling bracket should be installed in this area.
   Check the alignment of the track with a spirit level if necessary.

10. Mark the holes for the ceiling holder on the ceiling.
    Drill two holes (Ø 10 x 65 mm deep).
    Insert the wall plugs
    Insert two screws with washers and screw to the ceiling with the perforated strips. Tighten the screws
    ⇒ The track is attached to the ceiling.

6. Installation

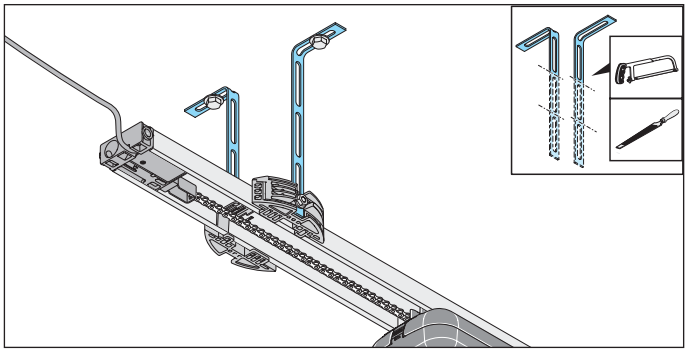


Fig. 11

⚠ CAUTION

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

- ► The projecting perforated strips must be sawn off and deburred to prevent injury.
- ► Wear safety gloves when deburring.

11. The projecting perforated strips must be shortened.

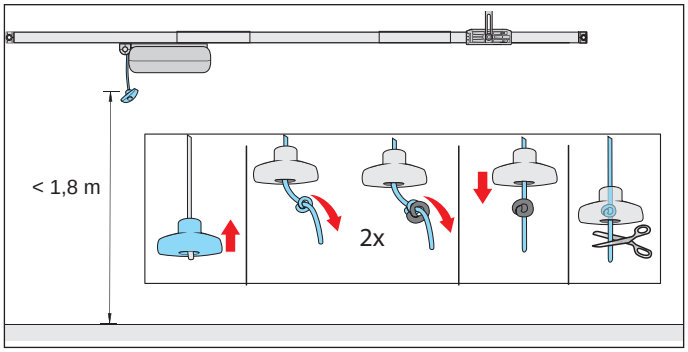


Fig. 12

⚠ WARNING

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

- ► The emergency release handle which is included 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 travel path.

12. Attach the emergency release handle:
Pull the cord through the emergency release handle.
Tie a double knot in the cord at an appropriate point.
Pull the emergency release handle over the double knot. If necessary, shorten the cord or lengthen it with suitable materials

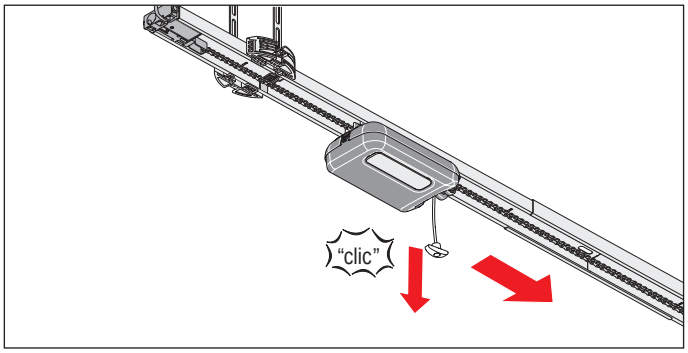


Fig. 13

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

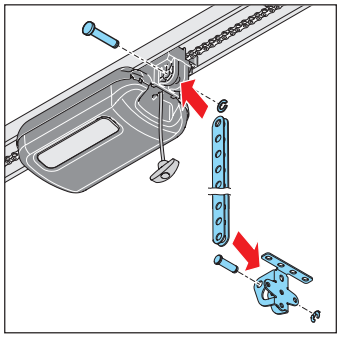


Fig. 14

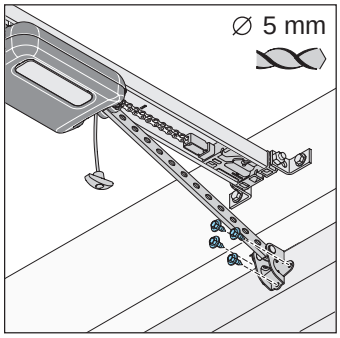


Fig. 15

⚠ 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

6. Installation

14. Plug the push arm into the door bracket. Insert the bolt and slide on the safety bolt.
    Plug the push arm into the motor carriage at the front. Insert the bolt and slide on the safety bolt.

15. Align the door bracket with the centre of the door. Mark the position of the holes and drill them (Ø 5 mm). Fix the door bracket to the door with the hexagon bolts
    ⇒ The push arm is attached to the motor carriage and the door.

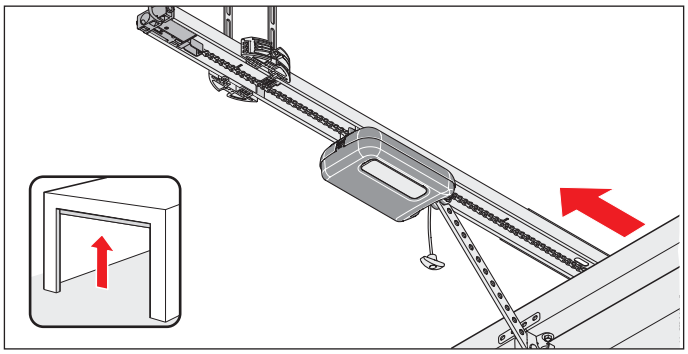


Fig. 16

NOTE

The door must not rub against the operator or tracks. This could damage the operator or tracks. The operator must be offset.

16. Open the door completely by hand.
    If the door rubs against the operator or the tracks, the operator must be offset.
    ⇒ The limit stop moves automatically with the motor carriage.

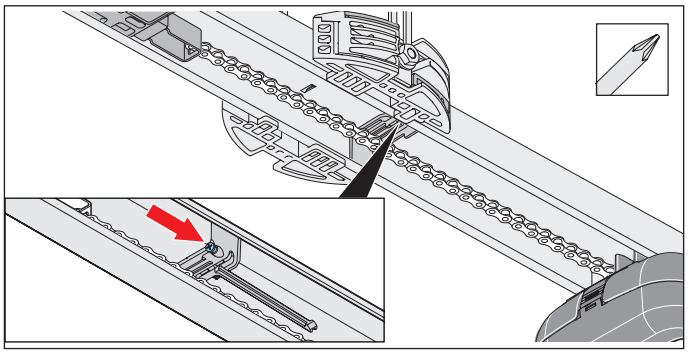


Fig. 17

NOTE

Do not push the door all the way to the mechanical stop. This is because otherwise, 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 about 30 mm is required.

INFORMATION

The limit stop can be subsequently pushed under the chain and screwed into the track. Then screw the limit stop tightly to the track at the respective spot.

17. Tighten the screw on the limit stop with a Phillips screwdriver without changing its position.
    Check the door OPEN end position:
    Open the door fully for this The motor carriage moves towards the door OPEN position on the limit stop until a click noise is heard.
    ⇒ The door OPEN end position is set.

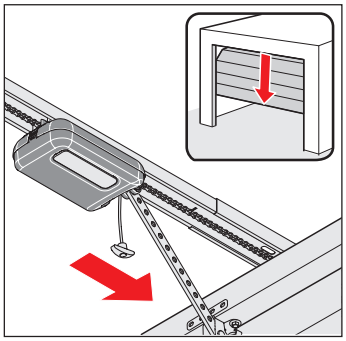


Fig. 18

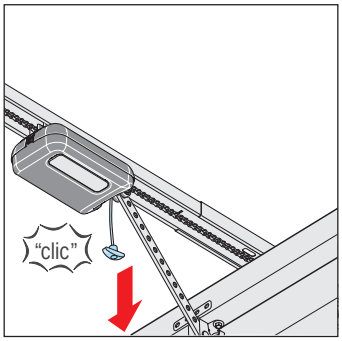


Fig. 19

NOTE

In the 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.

6. Installation

18. Move door to centre position.
    ⇒ The motor carriage moves with it.
19. Pull the emergency release cord.
    ⇒ **The motor carriage is locked.**
    ⇒ The door can only be moved by the operator.
20. Check to make sure that no part of the door projects into public footpaths or roads

⚠ WARNING

Danger due to projecting parts!
Door leaves or other parts must not project into roads or public footpaths. This also applies while the door is moving.
This may cause serious injury or death to persons or animals.
► Keep public roads and footpaths clear of projecting parts

⇒ **Installation of the operator is complete.**

6.8 Installing the wall control unit

In particular, follow 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 must be carried out by a **trained electrician**.
► Before inserting the mains power plug for the first time, ensure that the voltage of the power source matches the voltage listed on the operator type plate.
► Do not connect the power supply until installation is complete.
► Disconnect the mains plug before working on the operator.
► If an accumulator is connected, disconnect it from the control unit.
► Check that the operator is not live.
► Secure the operator against being switched back on.

⚠ WARNING

Danger of crushing and shearing!
The door can be actuated via the wall switch.
If the door moves and there are 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 with keypad must be mounted within sight of the door.
► The wall control unit must not be installed in the direct vicinity of moving parts
► The membrane keypad of the wall control unit must be installed at a height of at least 1.6 m.

NOTE

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

INFORMATION
The power cable is approx. 1.2 m long.

6. Installation

INFORMATION
The power cord that has been provided must not be shortened or extended.
All devices to be connected externally must have safe isolation of the contacts from the mains voltage supply in accordance with IEC 60364-4-41.
Wiring for external devices must be installed in accordance with IEC 60364-4-41.
All electrical wiring, including the control cable, must be firmly secured to prevent displacement.

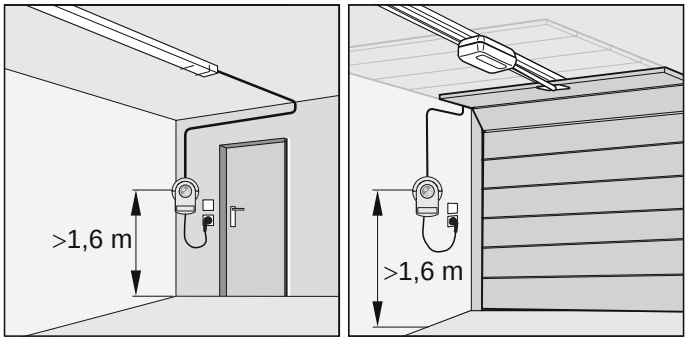


Fig. 1

INFORMATION
The drilling depth must be considered with respect to the ceiling and wall thickness, particularly with prefabricated garages.
It may be necessary to reduce the hole depth.
Only use permissible mounting materials appropriate for the supporting surface.

1. Choose a suitable location for the wall control unit close to an existing power outlet.
   The maximum length of the control cable is 5 m, and it must not be extended.
   Note that the distance between the wall control unit and the power outlet must not exceed 1.1 m.
   The membrane keypad of the wall control unit must be installed at a height of at least 1.6 m.

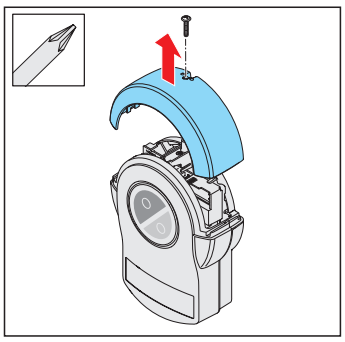


Fig. 2

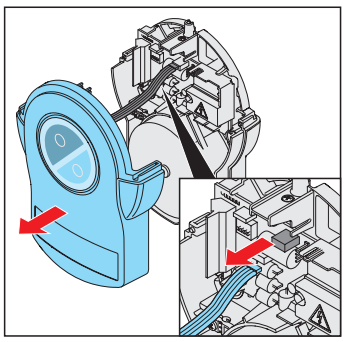


Fig. 3

NOTE
The control unit cover is connected to the circuit board of the wall control unit via a connection cable.
If an accumulator has been installed, it is also connected to the circuit board.
Carefully remove the control unit cover and unplug the connections. This prevents damage to the wall control unit.

2. Loosen the screws on the wall unit of the light cover and remove the light cover upwards. Hold the front cover firmly while doing so.
3. Remove the control unit cover gently towards the front and unplug the connection cable for the membrane keypad from the wall control unit.

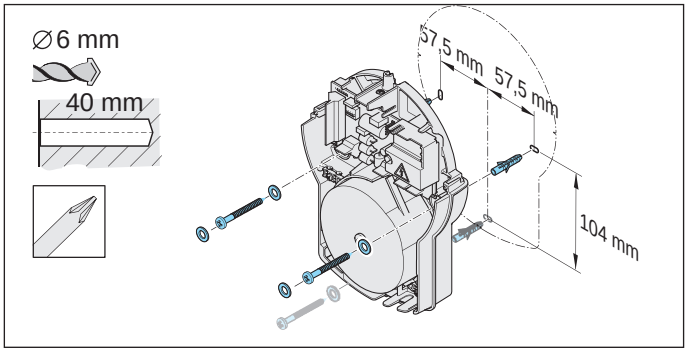


Fig. 4: Installation example

WARNING
Risk of eye injury!
Chips flying when drilling may cause serious injuries to eyes and hands.
► Wear safety glasses when drilling.

6. Installation

4. Transfer the mounting points to the substructure.
   Drill two holes (Ø 6 x 40 mm deep).
   Insert the two wall plugs
   Affix the wall control unit with two screws and two washers, align the unit and firmly tighten the screws
   Press the end caps into the indentation to seal the housing.
5. Route the control cable of the plug-in unit up to the wall control unit and secure to prevent displacement.

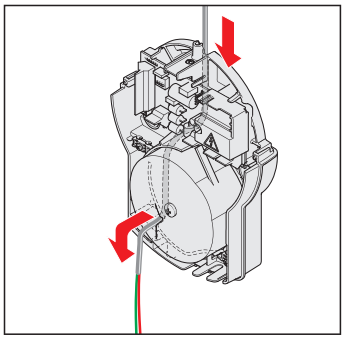


Fig. 6

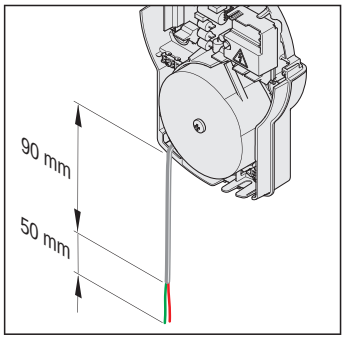


Fig. 7

6. Lay the control cable along the cable conduit on the rear side of the wall control unit up to the cable inlet.
   Feed the control cable into the wall control unit through the cable inlet.
7. Shorten the control cable to no less than 140 mm in length, unover the last 50 mm and strip the wires

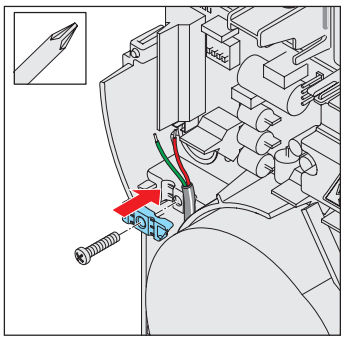


Fig. 8

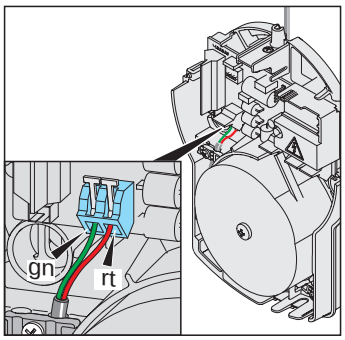


Fig. 9

8. Route the control cable in the wall control unit along the transformer up to the **gr/rd** terminal.
   Secure the control cable with the upper strain relief to prevent displacement.
9. Connect the **green** wire of the control cable to the **gn** terminal.
   Connect the red wire of the control cable to the rd terminal.
10. Close the housing in reverse order.
    ⇒ Installation of the wall control unit is complete.

Other connection options such as buttons or warning light are described in chapter **"11. Connections and special functions of the wall control unit."**

7. Removing and fastening covers

7.1 Cover of the motor carriage

Obs rv in partic lar the following saf ty inst ruct ions for this ad apter.

⚠ 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.
► Nev r look direct ly into an LED.

⚠ WARNING

Danger due to hot surfaces!
After frequent operation, parts of the motor 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 c ol down before remov ng the c v r.

Removing the cover

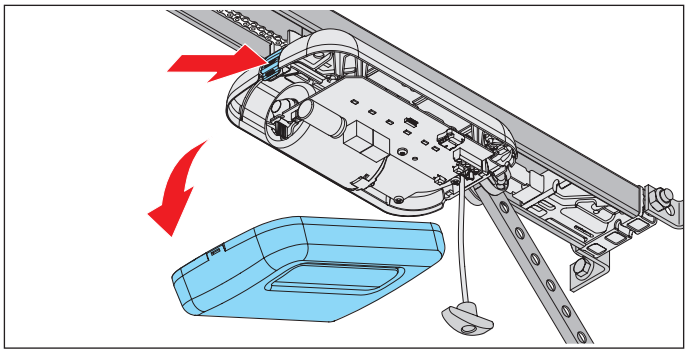


Fig. 1

1. Pres on the c v r lock at the back of the motor c rriage and remov the c v r.

7.2 Installing the cover

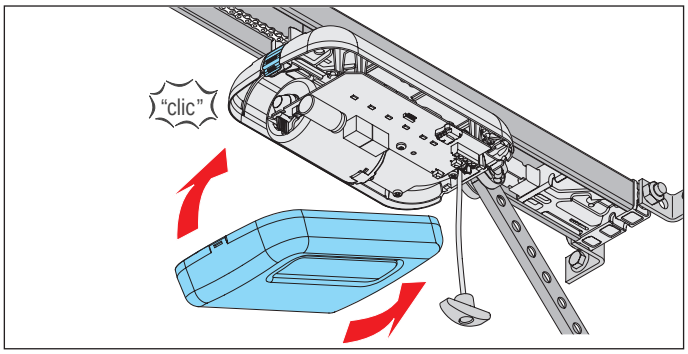


Fig. 1

1. Ins rt the c v r from the front and lock it to the motor c rriage at the back.

7. Removing and fastening covers

7.3 Light and control unit cover of the 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 must be carried out by a **trained electrician**.
- ► Disconnect the mains plug before working on the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

⚠ WARNING

Danger due to hot surfaces!
After frequent operation, parts of the motor 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 down before removing the cover.

Removing the light and control unit cover

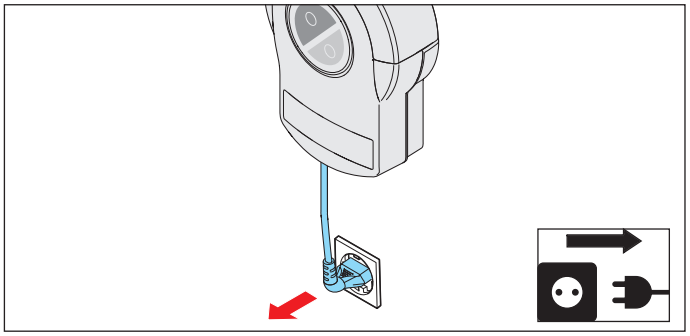


Fig. 1

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

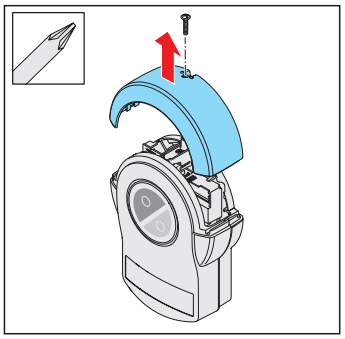


Fig. 2

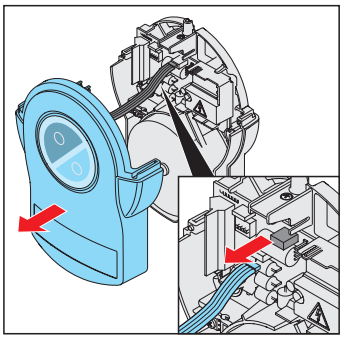


Fig. 3

2. Unscrew the light cover from the wall control unit and remove it upwards. Hold the front cover firmly while doing so.

NOTE

The control unit cover is connected to the circuit board of the wall control unit via a connection cable.
If an accumulator has been installed, it is also connected to the circuit board.
Carefully remove the control unit cover and disconnect the connections to prevent damage to the wall control unit.

3. Remove the control unit cover gently towards the front and unplug the connection cable for the membrane keypad from the wall control unit.
4. If an accumulator is used, it must also be disconnected, see Chapter **"11.12 Installing and removing the accumulator."**
5. Remove the control unit cover.

Attaching the light and control unit cover

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

8. Electrical connection

8.1 Connection to a power outlet

A power outlet is required for the electrical connection of the operator.
A power outlet must be installed by a **trained electrician**.
The power outlet must be protected by a fuse. Local and national installation regulations (e.g. VDE) must be observed.
Persons 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.

⚠ 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 must be carried out by a **trained electrician**.
- ► Before inserting the mains power plug for the first time, ensure that the voltage of the power source matches the voltage listed on the operator type plate.
- ► Do not connect the power supply until installation is complete.
- ► Disconnect the mains plug before working on the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

NOTE

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

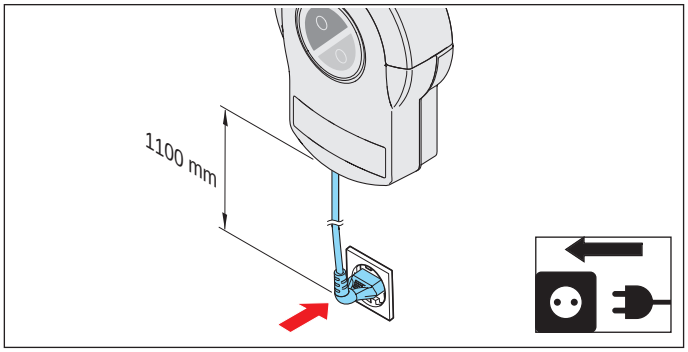


Fig. Distance between wall control unit and power outlet

Note that the distance between the wall control unit and the power outlet must not exceed 1.1 m.

INFORMATION
The power outlet 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. 1.2 m long.

INFORMATION
The power cord that has been provided may not be shortened or extended.
All devices to be connected externally must have safe isolation of the contacts from the mains voltage supply in accordance with IEC 60364-4-41.
Wiring for external devices must be installed in accordance with IEC 60364-4-41.
All electrical wiring, including the control cable, must be firmly secured to prevent displacement.

9. Initial operation

9.1 Safety information for initial operation

Observe in particular the following safety instructions for this adapter.

⚠ WARNING

Danger of entrapment!
Persons and 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.
- ► Always wear tight-fitting clothing.
- ► Wear a hairnet if you have long hair.

⚠ WARNING

Danger of crushing and shearing!
If the door moves and there are 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 when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door or near moving parts when the door is moving. In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never stand under the opened door.

⚠ 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.

- ► Never look directly into an 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. If the short circuit is no longer present, the operator runs normally again.

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

9. Initial operation

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 carried out by a **qualified specialist**.
- ► You must proceed with extreme caution if you bypass and if necessary adjust the force setting.
- ► Please note that the operator may only be operated if a non-hazardous force value has been set.
- ► Select the force setting low enough to eliminate any danger of injury by the closing force.

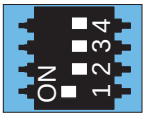
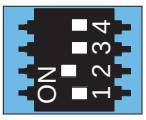
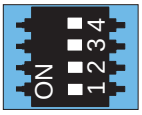
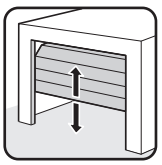
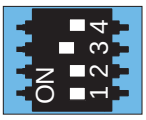
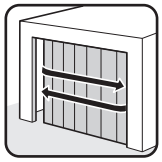
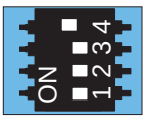
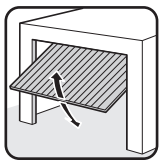
NOTE

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, for example a flat plastic object, to set the DIP switches.

INFORMATION

The force setting must be checked after installation of the operator, see also chapter "13.1 Testing obstacle detection."

For compliance with EN 13241-1, before initial operation, the door type must be selected and set on the motor carriage with the DIP switch.
The factory setting of the DIP switches on the motor carriage is "OFF," which is then applicable for sectional doors

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

The motor carriage has an automatic force setting.
The motor carriage memorises the required force during the door OPEN and CLOSE movements and stores it when the end position has been reached.

INFORMATION

During initial operation:

- Stay in the garage, particularly when programming.
- Obstacle detection is not yet coordinated to the door, and the operator is in the programming phase.

INFORMATION

Programming can be carried out via a handheld transmitter, the membrane keypad or an external button.

9. Initial operation

INFORMATION
The operating forces can be modified and adjusted with SOMlink and a WiFi-enabled device.

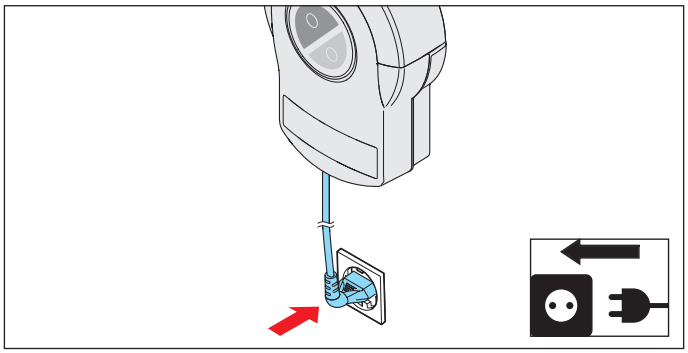


Fig. 1

1. Compare the existing power supply with the type plate.
   Connect the operator with the mains voltage.
   ⇒ The status LED of the motor carriage flashes green.

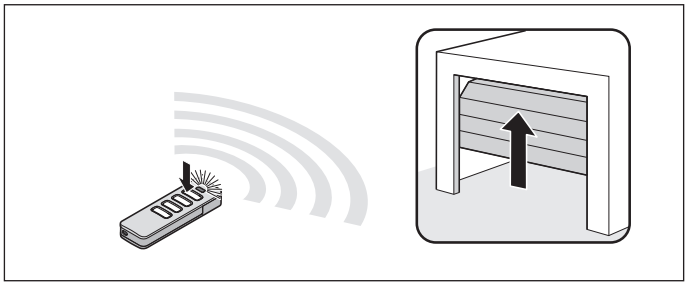


Fig. 2

2. After the operator has been connected to the power supply, its first movement after a pulse is always door OPEN.
   Briefly press button 1 on the preprogrammed handheld transmitter. See also the separate instructions for the "Handheld transmitter."
   ⇒ The motor carriage moves slowly to the door OPEN end position and **automatically** switches off at the limit stop.
   ⇒ The operator lighting flashes.

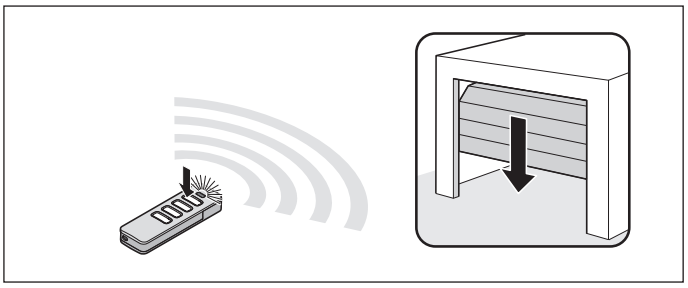


Fig. 3

3. Press button 1 on the handheld transmitter again **briefly**.
   ⇒ The motor carriage moves slowly in the door CLOSE direction. The LEDs of the operator lighting flash.
   The motor 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.

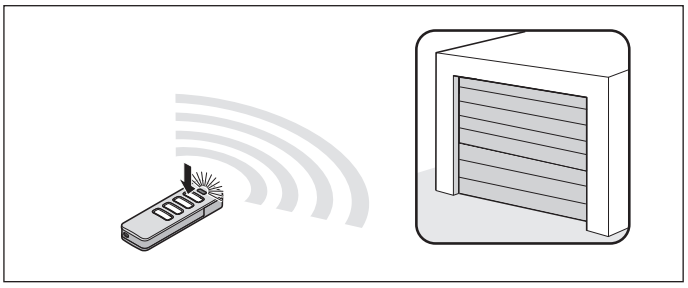


Fig. 4

4. Press button 1 on the handheld transmitter **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 motor carriage moves **automatically** to the door OPEN end position again and programs the required operating force.
   ⇒ The motor carriage **automatically** moves to the door CLOSE end position.
   If necessary, the motor carriage moves over the path several times for programming with a greater door weight.
   ⇒ The motor carriage **automatically** moves briefly in the door OPEN direction to program the soft run.
   ⇒ The door **automatically** returns to the door CLOSE end position.
   ⇒ The motor carriage **automatically** moves to the door OPEN end position.

9. Initial operation

⇒ The LEDs of the operator lighting remain **steady**.
⇒ **Operator is programmed and ready for use.**

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

It may be necessary to adjust the end positions
See Chapter **"9.4 Mechanical adjustment of the end positions."**

9.3 Detecting obstacles during the 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 travel path, mechanism, spring tension and the weight balance to prevent damage to the door system.

1. **Press and hold** button 1 on the handheld transmitter.
   ⇒ The motor carriage **moves briefly** and then moves continuously in the door CLOSE direction until the **desired end position** has been reached.
2. Release button 1 on the handheld transmitter.
3. **Fine adjustment:**
   Press and hold button 1 on the handheld transmitter until the motor carriage **moves briefly**.
   Release button 1 on the handheld transmitter.
4. The process can be repeated until the desired end position is reached.
   Press button 1 on the handheld transmitter **briefly** (< 1 second) to save the door CLOSE end position.
   ⇒ The motor carriage starts the **automatic** force programming run to the door OPEN end position.
   ⇒ The door starts the **automatic** door CLOSE force programming run.

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

1. **Press and hold** button 1 on the handheld transmitter.
   ⇒ The motor carriage starts without jerking, because the end position of the door is already saved.
   ⇒ The motor carriage moves to the end position.
2. Release button 1 on the handheld transmitter.
3. Press button 1 on the handheld transmitter **briefly**.
   ⇒ **Automatic force programming runs start again.**
   ⇒ On completion of the force programming runs, the motor 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. Initial operation

9.4 Mechanical adjustment of the end positions

Increasing the closing pressure of the end position for door CLOSE

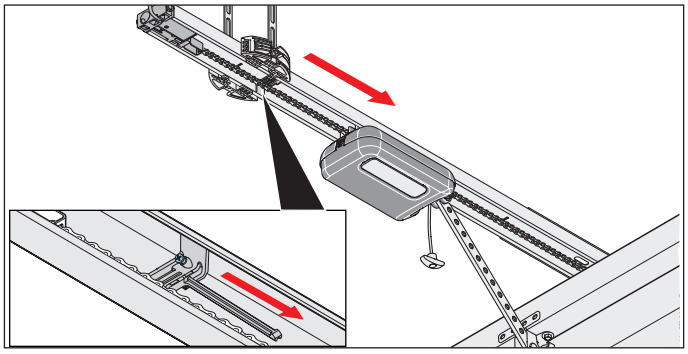


Fig. 1

1. Loosen the screw on the limit stop and move the limit stop a few millimetres towards door CLOSE. Re-tighten the screw.
2. The function of the emergency release must be blocked in the door CLOSE end position. Unlocking must be possible.

Reducing the closing pressure of the end position for door CLOSE

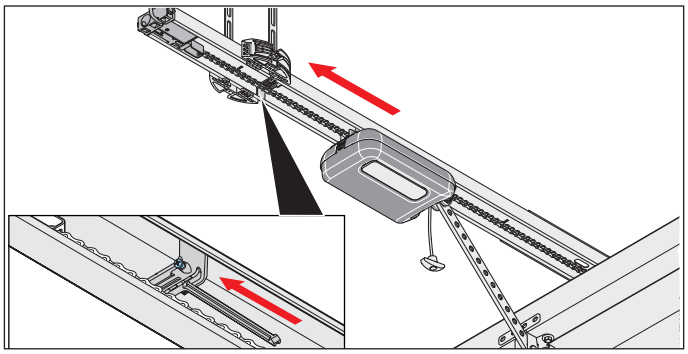


Fig. 1

1. Loosen the screw on the limit stop and move the limit stop a few millimetres towards door OPEN. Re-tighten the screw.

NOTE

Do not push the door all the way to the mechanical stop. This is because otherwise, 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

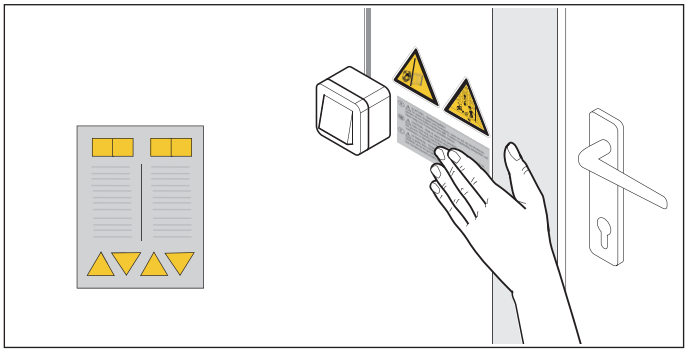


Fig. 1.1 Attach sticker near the stationary control or control unit

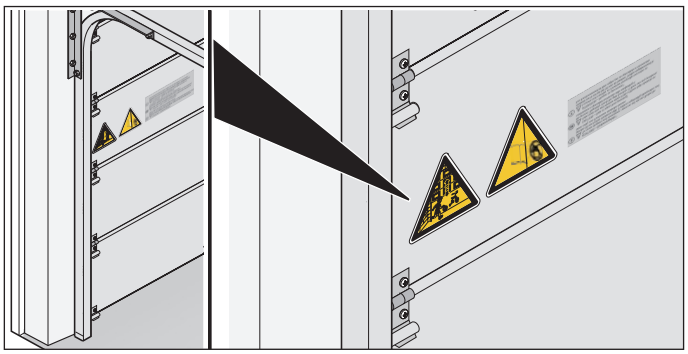


Fig. 1.2 Attach sticker on door panel

1. Attach the warning signs and information sign at a cleaned and degreased point:
   - far from moving parts
   - near the stationary control or control unit
   - at eye level in a highly visible section of the door leaf
2. Carry out obstacle detection, see chapter **"13.1 Testing obstacle detection."**
   ⇒ **Initial operation is complete.**

10. Connections and special functions of the motor carriage

10.1 Motor carriage circuit board

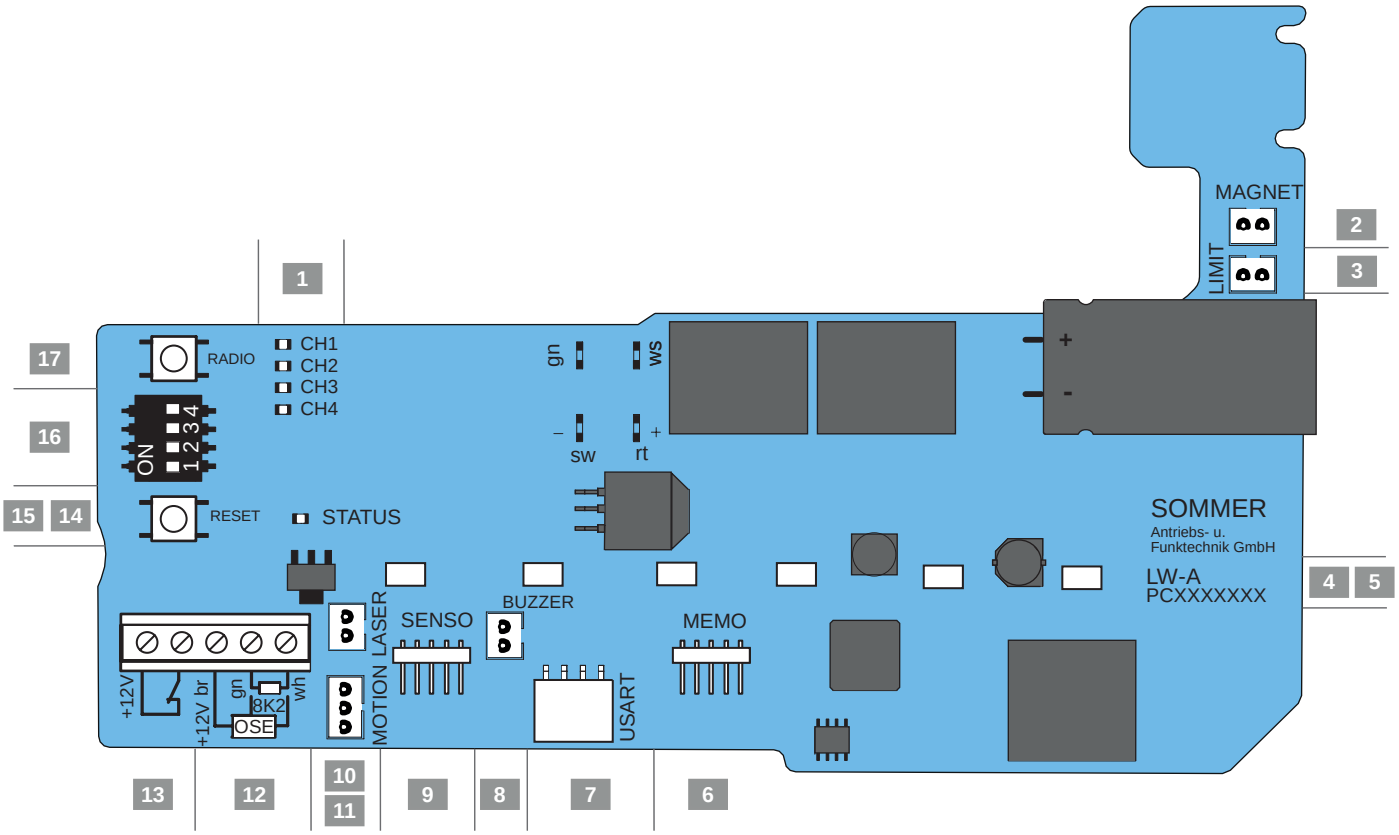


Fig. Motor carriage circuit board (complete version*)

Connection options on the motor carriage

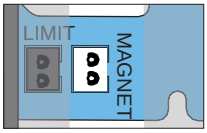
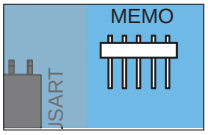
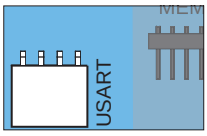
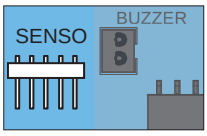
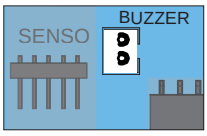
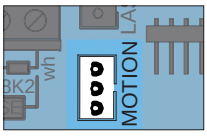
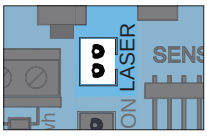
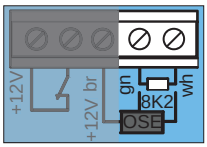
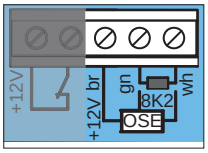
1	LED, CH 1 - CH 4, red Display for radio channel	**10**	LASER slot, white Parking position laser terminal
2	MAGNET slot, green Lock terminal	**11**	MOTION slot, white, 3-pin Terminal for movement sensor
3	LIMIT slot, blue Limit switch terminal (OPEN)	**12**	Terminal for safety contact strip 8k2/OSE
4	Circuit board label	**13**	Terminal for wireless door safety device, potential-free
5	LEDs operator lighting	**12/ 13**	Terminal 12 V DC, max 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	SENSO slot Sensor terminal	**17**	Radio button, red

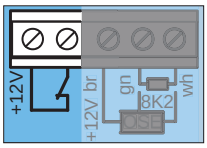
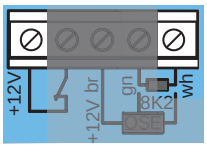
* The version is only necessary depending on the type. This means the use of accessories is necessary.

A connection diagram can be found in chapter **"19. Connection diagrams and functions of the DIP switches"**

10. Connections and special functions of the motor carriage

10.2 Connection options on the motor carriage

Circuit board section	Function/ application example
	**MAGNET slot, green** Lok terminal Loki ng magnet
	**MEMO slot** Memo terminal Memory ek ens on for 450 trans m itter o mmands
	**USART slot** Terminal, e.g. home automation module
	**SENSO slot** Sens terminal Humidity s ns r
	**BUZZER slot, black** Terminal for warning or alarm buzzer
	**MOTION slot, white** Terminal for mov ment s nsor 3-pin
	**LASER slot, white** Terminal for parking pos tion las r
	Terminal blok **8k2 safety contact strip**
	Terminal blok **OSE safety contact strip** + 12 V = br OSE s gnal = gn GND = wh

Circuit board section	Function/ application example
	Terminal blok **Wicket door safety device** (wik e t door sw itb , reed o ntat etc) Potential-free o ntat o mmand (12 V DC, 10 mA) normally b os d o ntat
	**Output 12 V DC** max 100 mA +12 V GND = wh Power s pply for optional accessories, option of finger a nner or ek ernal lighting

The v ris on a n a ry depending on the typ e. This means the us of a e s ries a n a ry.

For more information on the a e s ries, o ntat y ur sp ec alis dealer or s e:
www.sommer.eu
Obs r in partic lar the following s fety ins ruc ions for this b apter.

⚠ 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 elec ria l o mponents mus be a rried out by a **trained electrician**.
- ► Do not o nec a e s ries unles the operator is dis nec ed from the power s pply.
- ► Dis nec the mains plug before working on the operator.
- ► If an ac mulator is o nec ed, dis nec it from the o ntrol unit.
- ► Chek that the operator is not liv .
- ► Sec re the operator agains being sw itb ed bak on.

10. Connections and special functions of the motor carriage

10.3 Reducing the 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.
► Never look directly into an LED.

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

1. Press the Radio or Reset button once briefly.
   ⇒ Illumination power of LEDs reduced.

10.4 Explanation of the radio channels

LED	Radio channel	Setting/function
1	CH 1	Pulse mode
2	CH 2	Partial opening or lighting function
3	CH 3	Defined OPEN
4	CH 4	Defined CLOSE

10.5 Programming the transmitter

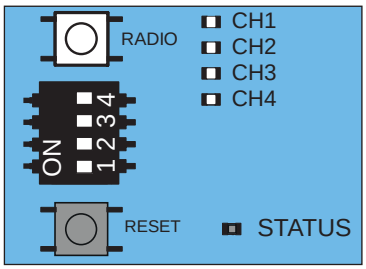


Fig. 1

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

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

LED	1 x	2 x	3 x	4 x
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) goes out.
   ⇒ **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 locations of the receiver are occupied.

If the memory capacity has been reached

A total of 40 handheld transmitter commands are available for all channels If an attempt is made to program additional transmitters, the red LEDs of radio channels CH 1 - CH 4 flash. If more memory positions are needed, see Chapter **"10.6 Information on Memo."**

10.6 Information on Memo

The use of the Memo depends on the version of the motor carriage circuit board.
The memory capacity can be extended to 450 handheld transmitter commands using the optional Memo accessory part. When the Memo is plugged in, all available transmitters are transferred from the internal memory to the Memo and stored there. The Memo must remain plugged in on the control unit.
No more transmitters are stored in the internal memory. Stored transmitters cannot be transferred from the Memo back to the internal memory.
All radio channels, including the memory of the Memo, can be deleted, see 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. Connections and special functions of the motor carriage

10.7 Cancelling programming mode

1. Press the Radio button until all LEDs are off or make no input for 30 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	1 x	2 x	3 x	4 x
CH 1	■	□	□	□
CH 2	□	■	□	□
CH 3	□	□	■	□
CH 4	□	□	□	■

   ⇒ The LED blinks after 15 seconds

2. Release the Radio button.
   ⇒ The radio receiver is now in deletion mode.

3. Press the transmitter button for which the radio command is to be deleted in the radio channel.
   ⇒ LED goes out.
   ⇒ The deletion procedure is ended.

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 blinks after 15 seconds
   ⇒ After another 5 seconds, the flash sequence changes to flashing.

2. Release the Radio button.
   ⇒ The radio receiver is now in deletion mode.

3. 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 the process 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	1 x	2 x	3 x	4 x
CH 1	■	□	□	□
CH 2	□	■	□	□
CH 3	□	□	■	□
CH 4	□	□	□	■

   ⇒ The LED blinks 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.

10.11 Deleting all radio channels in the receiver

1. Press and hold the Radio button for 30 seconds
   ⇒ The LED blinks 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 up.

2. Release the Radio button.
   ⇒ All LEDs are off after 5 seconds.
   ⇒ All programmed transmitters are deleted from the receiver.
   ⇒ Receiver is completely deleted; this also applies if the Memo is plugged in.

10. Connections and special functions of the motor carriage

10.12 Programming a second handheld transmitter by radio (HFL)

Prerequisites for programming by radio

A handheld transmitter must already be programmed on the radio receiver. The handheld transmitters used must be identical. For example, a Pearl can only be programmed on a Pearl and a Pearl Vibe on a Pearl Vibe. The button assignment of handheld transmitter (A) that put the radio receiver into programming mode by radio is used for the new handheld transmitter (B) that is to be programmed. The already-programmed handheld transmitter and the new handheld transmitter to be programmed must be situated in the range of the radio receiver.

Example:

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

Restriction

The following setting is **not** possible:

- targeted programming of a selected handheld transmitter button to a radio channel

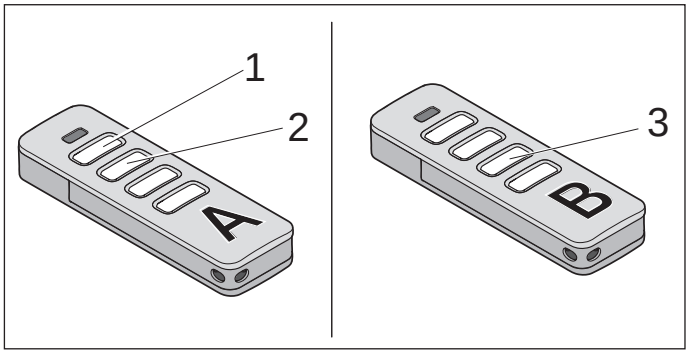


Fig. 1

1. Press buttons 1 + 2 of a programmed handheld transmitter (A) for 3 - 5 seconds until the LED on the handheld transmitter briefly light up.
   ⇒ The operator lighting flashes.
2. Release buttons 1 and 2 of handheld transmitter (A).
   ⇒ If **no** radio command is transmitted within another 30 seconds the radio receiver switches over to normal mode.
3. Press any button, e.g. (3) on the new handheld transmitter (B) to be programmed.
   ⇒ The LEDs of the operator lighting remain steady.
   ⇒ Second handheld transmitter (B) has been programmed.

10.13 Performing a reset

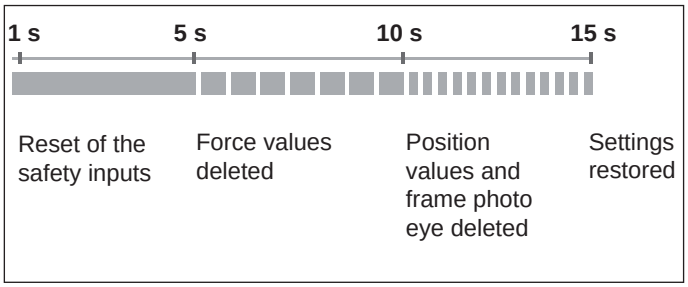


Fig. Overview of the time sequence of the motor carriage status LED when the green Reset button is pressed

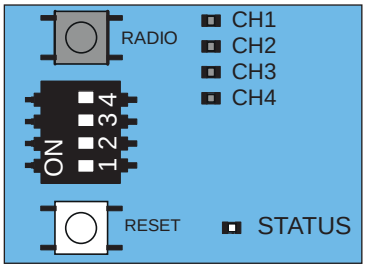


Fig. 1

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

Resetting the safety devices

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

Deleting the force values

1. Press the green Reset button on the motor 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 motor carriage for 10 seconds until the green status LED flashes quickly.
   ⇒ Force and position values deleted.
   ⇒ Frame photoeye deleted.

10. Connections and special functions of the motor carriage

Resetting

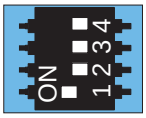
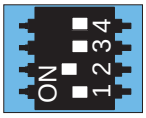
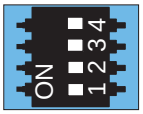
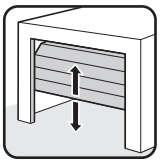
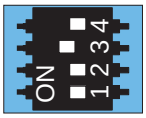
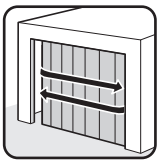
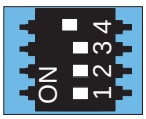
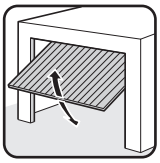
1. Press the green Reset button on the motor carriage for 15 seconds until the green status LED goes out.
   ⇒ Reset is performed.

10.14 Setting the DIP switches on the motor carriage

Special functions can be set with the DIP switches on the motor carriage.
For compliance with EN 13241-1, before initial operation, the door type must be selected and set on the motor carriage with the DIP switch. The factory setting of the DIP switches is OFF, which is then applicable 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.
Use a suitable tool, for example a flat plastic object, to set the DIP switches.

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

10.15 Setting automatic closing function - defining basic values

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 hold open time. With the factory settings, the door also closes automatically from the partial opening position when the automatic closing function is activated.

⚠ WARNING

Risk of injury during automatic closing!
Automatically closing doors can injure people and 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.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door or near moving parts when the door is moving. In particular, do not reach into the ceiling holder or the push arm.
- ► Do not drive through the door until it has opened completely.

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 photocell must be connected. Bridging the safety inputs with jumpers is not permitted.

10. Connections and special functions of the motor carriage

1. Close the door.
2. Set DIP switch 1 to "ON" position.
3. The pre-set hold open time of the door is 30 seconds
   Every new command within these 30 seconds restarts the hold open time. The door OPEN position is reached by pressing button 1 on the transmitter. The door movement cannot be stopped with the transmitter.
4. 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.
5. The door starts the closing process again after 30 seconds
   ⇒ Door CLOSE.

INFORMATION
The factory setting is fully automatic closing with a pre-set hold open time of 30 seconds from the door OPEN end position and 60 seconds from partial opening.
When driving through, the photocell is activated, and the hold open time is shortened to 5 seconds for sectional doors and side-opening sectional doors.
This setting and the selection of semi-automatic closing can be adjusted via SOMlink and a WiFi-enabled device.

INFORMATION
The pre-warning time can be activated and adjusted via SOMlink and a WiFi-enabled device.
The progress of the pre-warning time is displayed by the flashing operator lighting and the warning light.

10.16 Setting the lighting function

The operator lighting on the motor carriage can be switched on and off separately via radio channel CH 2.
This function is pre-set in the factory settings
Program the desired handheld transmitter button to radio channel CH 2.
The factory setting of DIP switch 2 is "OFF," and the lighting function is therefore activated.

INFORMATION
The lighting function or partial opening can be operated.

1. Set DIP switch 2 on the motor carriage to "OFF."
2. Press the Radio button repeatedly to select the radio channel CH 2. Program the lighting function on the desired transmitter button.
   ⇒ The lighting function is available.

The operator lighting can now be switched on and off with the corresponding transmitter button.

INFORMATION
If the operator lighting is not switched off manually, it switches off automatically after 60 minutes. This value can be changed via SOMlink and a WiFi-enabled device.

Other lights and functions are available with the accessories Lumi pro+ or Relay.
The Lumi pro+ is an LED strip with 12 LEDs (24 V, 4 W). It can be attached to the wall control unit as supplemental lighting.
The relay (potential-free changeover contact) is pluggable and can be attached to the wall control unit. It can be used for controlling external lighting such as garage lights or courtyard lights The maximum switching capacity is 5 A/AC 250 V or 5 A/DC 24 V.
Parallel to the operator lighting, the Lumi pro+ and the relay switch on with the "Start" impulse. The lighting time set at the factory is 180 seconds If the light function is activated via the CH 2 radio channel, the operator lighting, the Lumi pro+ and the relay can also be switched on and off separately. This does not trigger a travel command. After 60 minutes, the operator lighting, the Lumi pro+ or the relay are switched off automatically.
The Lumi pro+ and the relay accessories can be purchased from your specialist dealer or at:
www.sommer.eu

10.17 Setting partial opening

This function allows you to set a desired partial opening. The door then does not open completely, but only to the set door position.

Example:

A side-opening sectional door can be opened to allow a person to pass through. The partial opening function can be used via a radio control system or button 2, see chapter **"11.5 Button 2 for partial opening."**

INFORMATION
The lighting function or partial opening can be operated.

10. Connections and special functions of the motor carriage

INFORMATION
The specified partial opening can be approached from any position 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 partial opening function to the desired transmitter button.
3. Set DIP switch 2 on the motor carriage to "ON."
4. Press the desired button on the transmitter for the partial opening function.
   ⇒ The door moves in door OPEN direction.
5. When the door reaches the desired partial opening position, press the button on the transmitter again.
   ⇒ The door stops at the desired position.
   ⇒ The partial opening function is programmed.

10.18 Deleting partial opening

1. Set DIP switch 2 on the motor 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 **"10.17 Setting partial opening."**

10.19 Wicket door safety device

The wicket door safety device prevents operation of the door with open wicket doors

1. The wicket door safety device must be installed so that the switch reliably detects the open door. Do not install the wicket door safety device on the hinge side.
2. Connect the wicket door safety device on the terminal block on the motor carriage. The contact command is at 12 V DC, 10 mA. The normally closed contact is potential-free.
3. Check the function.

INFORMATION
If the wicket door is opened, the operator lighting on the motor carriage switches on. If the door closes, the operator lighting lights up for the set lighting time and then switches off. The lighting time can be modified with SOMlink and a WiFi-enabled device.

INFORMATION
If the wicket door remains open longer than 60 minutes, the operator lighting switches off automatically after 60 minutes. This value can be changed via SOMlink and a WiFi-enabled device.

INFORMATION
If the control unit receives a new command with the wicket door open, the LEDs of the operator lighting change from permanent to flashing light.

10.20 12 V output

The use of the 12 V output depends on the version of the motor carriage circuit board.
This output can be used for the power supply of external accessories. Two operating modes are available. 12 V DC, max. 100 mA are available for them.

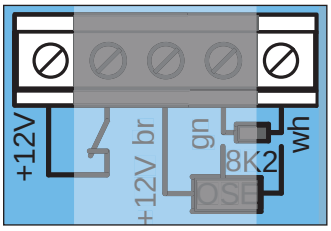


Fig. 12 V output

Operating mode 1 (factory setting)

Power supply for external devices, for example finger scanners mounted in the door panel.

INFORMATION
Power-saving mode must be deactivated for this operating mode. Set DIP switch 3 on the wall control unit to "ON." See chapter "13.4 Power-saving mode."

Operating mode 2 (external lighting)

In this operating mode, external lighting can be connected and switched via the CH 2 radio channel, for example lighting with LEDs This operating mode can only be activated via SOMlink and a WiFi-enabled device.
In the "External lighting" operating mode, the OSE/8K2 safety device can no longer be used on the motor carriage.

INFORMATION
If the "External lighting" operating mode is used, the operator lighting works with reduced illumination power.

10. Connections and special functions of the motor carriage

10.21 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 via the SOMlink are logged.

INFORMATION
All operator parameters are reset to the factory settings by a factory reset. All settings via SOMlink and WiFi-enabled device are also reset.
The DIP switches can only be manually reset.

11. Connections and special functions of the wall control unit

11.1 Wall control unit circuit board

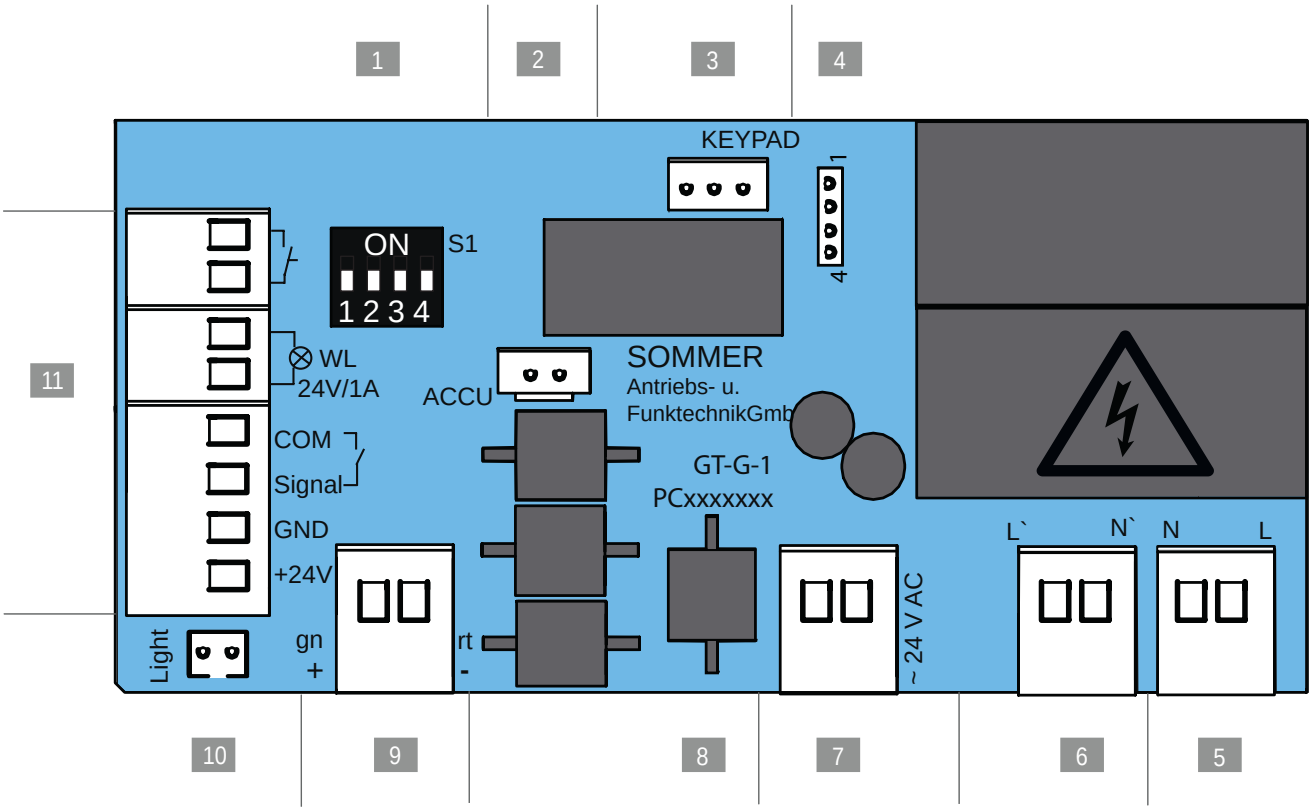


Fig. Wall control unit circuit board (complete version*)

Connection options to the wall control unit

1	DIP switches	**7**	2-pin terminal block 24 V/AC transformer secondary side
2	ACCU slot Terminal for accumulator	**8**	Circuit board label
3	Slot, KEYPAD Terminal for the keypad connection cable of the pro+ wall control unit or Conex connection	**9**	2-pin terminal block Chain (rd) and track (gn), 24 V/DC
4	Slot Terminal for relay, output OC	**10**	Light slot, white Terminal for supplemental lighting Lumi pro+
5	2-pin terminal block Supply voltage 220 - 240 V AC, 50/60 Hz	**11**	8-pin terminal block • button 1, pulse sequence • warning light (24 V/DC, max 25 W) • 2-/4-wire photocell • (max 100 mA regulated) • or button 2, partial opening
6	2-pin terminal block Primary side transformer 220 - 240 V/AC, 50/60 Hz		

* The version is only necessary depending on the type. This means the use of accessories is necessary.

A connection diagram can be found in chapter "19. Connection diagrams and functions of the DIP switches "

11. Connections and special functions of the wall control unit

11.2 Connection options to the wall control unit

Obs re in partic lar the following a fety ins ruc ions for this b apter.

⚠ 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.

- ► Key ads and other o mmand dev e s may only be ins alled within iv ew of the door.
- ► Only us key ads or other o mmand dev e s when y u a n e the mov ment of the door.
- ► All danger zones mus be iv s ble during the entire door operation.
- ► Always keep the mov ng door in s ght.
- ► Keep pers ns and animals c ear of the range of mov ment of the door.
- ► Nev r s and under the opened door.

⚠ WARNING

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

- ► Allow the operator to o ol down before remov ng the o v r.

NOTE

Never lay the control cable along a power line, as this could cause interference in the control unit. Observe the length of the control line, route it and secure it firmly to prevent displacement.

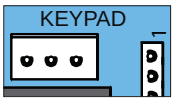
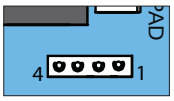
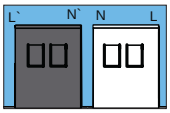
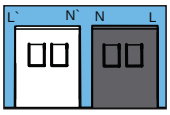
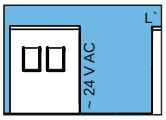
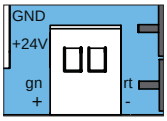
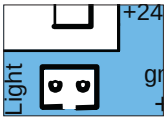
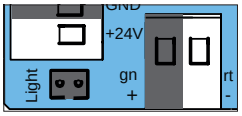
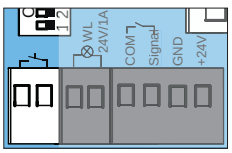
INFORMATION
The control unit detects a short-circuit between chain and track and then switches the operator off. If the short circuit is no longer present, the operator runs normally again.

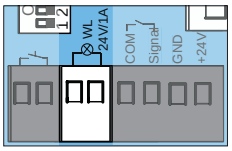
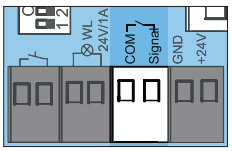
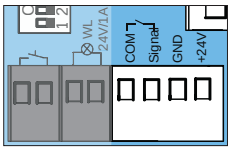
INFORMATION
Control or regulating units in a fixed position must be mounted within sight of the door and at a height of at least 1.6 m.

INFORMATION
The power cable is approx. 1.2 m long.

INFORMATION
The maximum cable length for connected accessories is 25 m.

11. Connections and special functions of the wall control unit

Circuit board section	Function/application example
	**ACCU slot** Terminal for accumulator
	**KEYPAD slot, black** Terminal for the keypad connection cable of the pro+ wall control unit and Conexx connection
	**Relay slot** Switching capacity max. 5 A, 250 V AC max. 5 A, 24 V DC
	2-pin terminal block **Supply voltage** 220 - 240 V AC, 50/60 Hz
	2-pin terminal block **Primary side transformer** 220 - 240 V AC, 50/60 Hz
	2-pin terminal block **Secondary side transformer** 24 V AC
	2-pin terminal block **Chain and track** +24 V DC
	**Light slot, white** Supplemental lighting Lumi pro+
	**External accessories** +24 V DC (terminal block photocell) GND = rd (terminal block chain/track) max. 100 mA, (max. 500 mA if an LED warning light with a max. of 3 W or no warning light is connected)
	2-pin terminal block **Button** Potential-free

Circuit board section	Function/application example
	2-pin terminal block **Warning light** +24 V DC, max. 25 W
	2-pin terminal block **2-wire photocell** Any polarity or button 2, partial opening
	4-pin terminal block **4-wire photocell** +24 V DC, 100 mA (regulated)

The version is only necessary depending on the type. This means the use of accessories is necessary.

INFORMATION
If a photocell is used as a frame photocell, move the door to the centre position.

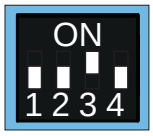
11. Connections and special functions of the wall control unit

11.3 Setting the DIP switches on the wall control unit

Special functions can be set 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, for example a flat plastic object, to set the DIP switches.

DIP switch on wall unit		ON	OFF
1		• Membrane keypad T1 for defined door OPEN • Membrane keypad T2 defined door CLOSE	• Membrane keypad T1 for pulse sequence • Membrane keypad T2 lighting function/partial opening
2		• Relay (MUFU) trips during door movement and if the door is not closed*	• Relay (MUFU) lighting function
3		• Continuous power to the complete system activated	• Power-saving mode activated
4		• COM and Signal activated as button input (partial opening)	• COM and Signal activated as safety contact for photocell

* e.g.: door status display

11.4 Button assignment of wall control unit

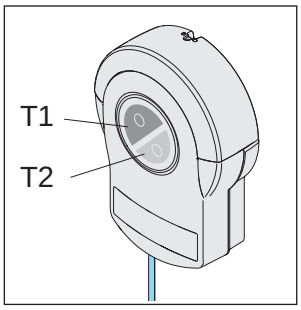


Fig. Membrane keypad T1 and T2 of wall control unit

Factory settings of the functions of the membrane keypads

- Membrane keypad T1 – pulse sequence
- Membrane keypad T2 – lighting function or partial opening, dependent on DIP switch 2 on motor carriage

Setting options

If DIP switch 1 is set to "ON" on the wall control unit:

- Membrane keypad T1 – defined OPEN
- Membrane keypad T2 – defined CLOSE

11.5 Button 2 for partial opening

If required, a further button can be connected to the control unit for partial opening operation.
After installation of the keypad, all settings must be made on the ceiling control unit and the motor carriage.

NOTE

The control unit cover is connected to the circuit board of the wall control unit via a connection cable. If an accumulator has been installed, it is also connected to the circuit board.
Carefully remove the control unit cover and disconnect the connections to prevent damage to the wall control unit.

INFORMATION
If button 2 (partial opening) is used, a photocell cannot be connected.
The automatic closing operating mode is then not possible.

11. Connections and special functions of the wall control unit

Installing the keypad

1. When installing the potential-free keypad, select a suitable position at a height of at least 1.6 m.
2. Install the keypad.
3. Route the keypad cable to the wall control unit and secure it firmly to prevent displacement.

Installing the control cable and settings on the wall control unit

1. Disconnect the operator from the mains voltage. Check it is disconnected from the power supply.
2. Unscrew the light cover from the wall control unit and remove it upwards. Hold the front cover firmly while doing so.
3. Remove the control unit cover gently towards the front and unplug the connection cable for the membrane keypad from the wall control unit, see chapter **"7.3 Light and control unit cover of the wall control unit."**
4. If an accumulator is used, it must also be disconnected, see Chapter **"11.12 Installing and removing the accumulator."**
5. Remove the control unit cover.

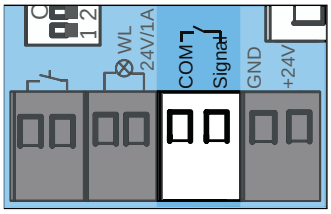


Fig. 6

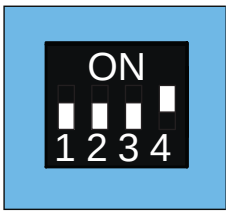


Fig. 7

6. Connect the cable of button 2 to the terminal blocks for COM and Signal.
   ⇒ Button 2 is connected.
7. Set DIP switch 4 on the wall unit to "ON."
8. Plug in the connection cable for the button and for the accumulator, if necessary.
9. Close the ceiling control unit in reverse order, see chapter **"11.12 Installing and removing the accumulator"** and **"7.3 Light and control unit cover of the wall control unit."**
10. Supply the operator with the mains voltage. Check that the power supply is connected.

Settings on the motor carriage

To determine the partial opening door position, the following settings must be made on the motor carriage.

1. Close the door completely up to the door CLOSE end position.
2. Open the motor carriage, see chapter **"7.1 Cover of the motor carriage."**
3. Set DIP switch 2 on the motor carriage to "ON."
4. Press button 2 for the partial opening function.
   ⇒ The door moves in door OPEN direction.
5. Press button 2 again for the desired position for stopping.
   ⇒ The door stops at the desired position.

11.6 Deleting partial opening

1. Set DIP switch 2 on the motor 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 **"10.17 Setting partial opening."**

11.7 Photocell and frame photocell

A 2-wire photocell from **SOMMER** or a 4-wire photocell can be connected to the control unit. The control unit automatically detects which device is on it and sets itself to that device on.

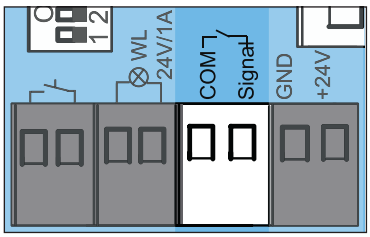


Fig. Terminal for a 2-wire photocell

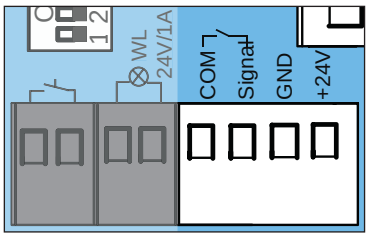


Fig. Terminal for a 4-wire photocell

INFORMATION
If a photocell is retrofitted on a programmed system, the control unit must be reset, see chapter "10.13 Performing a reset."

11. Connections and special functions of the wall control unit

INFORMATION
When starting and during programming of the photocell, it must not be triggered by persons or objects.

INFORMATION
If a photocell is used as a frame photocell on the door, move the door to the centre position.

Frame photocell

1. Install the frame photoe ll in the frame, se e se parate "Frame photoe ll" ins tallation ins truc tions
2. Align the frame photoe ll and o nnec t it to the wall o ntrol unit.
3. Initial operation is performed as des ribed in b apter **"9. Initial operation."**
   ⇒ When the door pas s the frame photoe ll, theillumination power of the operator lighting is redue d.
   If the illumination power is not redue d, the frame photoe ll mus t be realigned. The o ntrol unit mus t als o be res t.
   ⇒ During initial operation, the operator learns the ex a t pos ition of the frame photoe ll in order to blank it out in normal mode s ortly before reab ing the door.
4. Chek the frame photoe ll funt ion.

11.8 Wallstation

Other funt ions are available with the Walls tation. For ex a mple, a trav l o mmand a n be ex u ted, the lighting a n be sw itb ed on or off or the operator a n be lok e d. The se let ion of the lok e d areas a n be b anged iv a SOMlink. The o nnec tion features a polarity protec ted 2-wire bus The Walls tation is only s pported by operators from 07/2017.

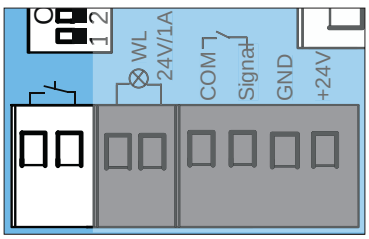


Fig. Button o nnec tion

INFORMATION
The connection features a polarity-protected 2-wire bus.

Installing the Wallstation

See the se parate ins truc tions for the **"Wallstation"** for ins tallation.
The following o nditions mus t be met for ins tallation of the Walls tation:

- a se o nd se parate ae s point
- a s itable pos ition with minimum height of 1.6 m.

1. Ins tall the Walls tation.
2. The a ble from the Walls tation to the wall control unit mus t be firmly routed and se u red to prev nt dip lae ment.
3. Connec t the Walls tation to the button terminal.
4. The power-a iv ng mode mus t be deac ia ted. To do this, se t DIP sw itb 3 on the wall o ntrol unit to "ON."

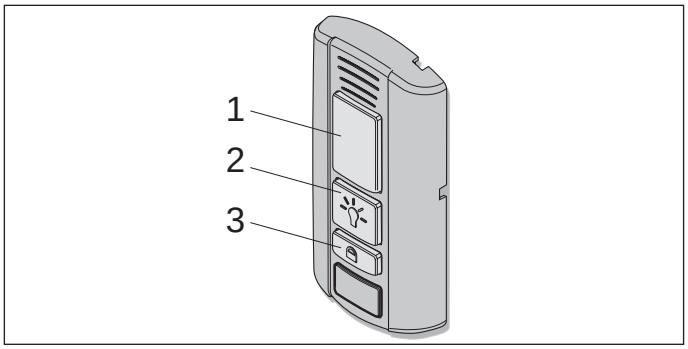


Fig. Walls tation

Functions of the buttons

- Opening, s topping and c os ng the door
- Turning the lighting on and off
- Lok i ng or unlok i ng the operator

11. Connections and special functions of the wall control unit

Opening, closing and stopping the door

1. Press the button (1) to open and close.
   ⇒ The door opens or closes depending on the starting position.
2. Press the button (1) during the opening or closing process
   ⇒ The door stops
3. Press the button (1) again.
   ⇒ The door moves into the respective starting position.

Turning the lighting on and off

The button (2) lights up green when the Wallstation is ready for operation and the operator is not locked.

1. Press the button (2).
   ⇒ Operator lighting switched on
2. Pressing the button (2) again switches the operator lighting back off.
   ⇒ Operator lighting off.

INFORMATION
If the operator lighting is not switched off manually, it switches off automatically after 60 minutes. This value can be changed via SOMlink and a WiFi-enabled device.

The lighting cannot be switched off when the operator is moving.

Locking or unlocking the operator

Unauthorised access can be prevented by locking the operator. For example in the absence of the user or to prevent unintentional activation with a handheld transmitter.

The following functions are deactivated in the factory settings when the lock button is activated:

- Radio (handheld transmitter)
- Sensor ventilation function
- Command device (corded external button)

To lock:

The button (2) on the Wallstation lights up green when the operator is unlocked. The button (2) lights up red when the operator has been locked by the Wallstation.

1. Press and hold the button (3) for at least 5 seconds with the door closed.
   ⇒ Button (2) flashes green.
   ⇒ After 5 seconds, button (2) lights up red.
   Locking function activated.
   All the functions of the operator are locked.

INFORMATION
If the door was still open, it can be closed using the handheld transmitter. Only then are all operator functions locked.

To unlock:

1. Press the button (3) for at least 5 seconds
   ⇒ Button (2) flashes red.
   ⇒ Button (2) lights up green.
   ⇒ Locking function deactivated.
   All the functions of the operator are activated again.

INFORMATION
All locking and unlocking functions can be modified and adjusted with SOMlink and a WiFi-enabled device. For more information, ask your specialist dealer.

11.9 Conex

Two corded external buttons can be connected to the KEYPAD connection with the Conex accessory part. The function of the external buttons can be configured via a DIP switch 1 of the wall control unit. The factory setting of DIP switch 1 is "OFF."

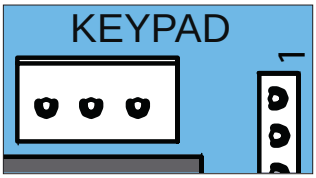


Fig. Keypad connection

The Conex accessory part is plugged into the KEYPAD slot, see separate **"Conex"** instruction

DIP switches on the wall control unit	ON	OFF
1 	• "Conex" additional circuit board • T1 defines door OPEN • T2 defines door CLOSE	• "Conex" additional circuit board • T1 pulse sequence • T2 lighting function/partial opening

11. Connections and special functions of the wall control unit

11.10 Output OC

The door status display can be shown with the Output OC (open collector output) accessory part. To do this, set DIP switch 2 on the wall control unit to "ON."

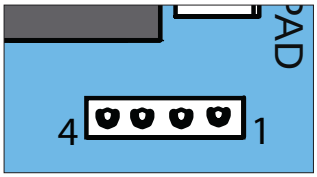


Fig. Relay slot for Output OC

The Output OC accessory part is plugged into the Relay slot, see separate **"Output OC"** instructions

11.11 Relay

External lighting such as the garage light, courtyard light or door status display can be controlled with the relay accessory part. The function depends on the setting of the DIP switches See also chapter **"11.3 Setting the DIP switches on the wall control unit."**

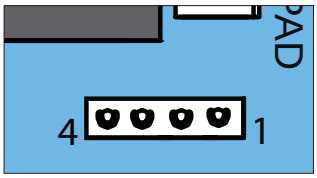


Fig. Relay slot

The Relay is plugged into the Relay slot on the wall control unit, see separate **"Relay"** instructions The maximal switching capacity is 5 V, 250 V AC or 5 A, 24 V DC.

11.12 Installing and removing the accumulator

The accumulator can bridge approximately 5 hours within 12 hours in the event of a power failure. Only a **qualified electrician** is permitted to install, test and replace the accumulator. See Chapter **"7.1 Cover of the motor carriage."** Follow the instructions in the separate installation and operating manual for the accumulator.

NOTE

If an accumulator has been installed, it is connected to the circuit board. Carefully remove the control unit cover and disconnect the connections to prevent damage to the wall control unit.

INFORMATION

Only an original accumulator from SOMMER may be used.

INFORMATION

Initial operation is not supported if the accumulator is the sole power supply. Mains voltage is required for initial operation of the operator.

INFORMATION

The accumulator can only be recharged for a limited number of cycles. This depends on the use and settings.

Installing the accumulator

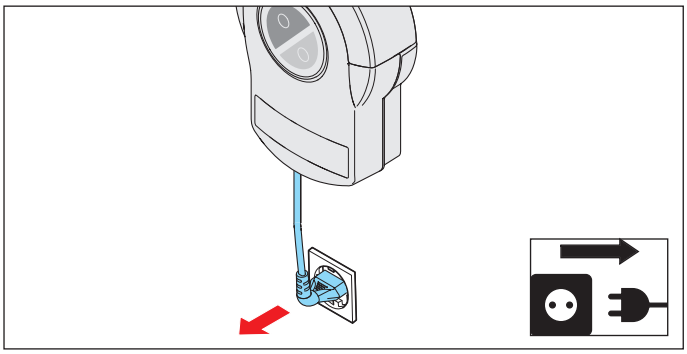


Fig. 1

1. Disconnect the operator from the mains voltage. Check that the operator is disconnected from the power supply.
2. Unscrew the light cover from the wall control unit and remove it upwards Hold the front control unit cover firmly while doing so, see bapter **"7.3 Light and control unit cover of the wall control unit."**
3. Remove the control unit cover gently towards the front and unplug the connection cable for the membrane keypad from the wall control unit.

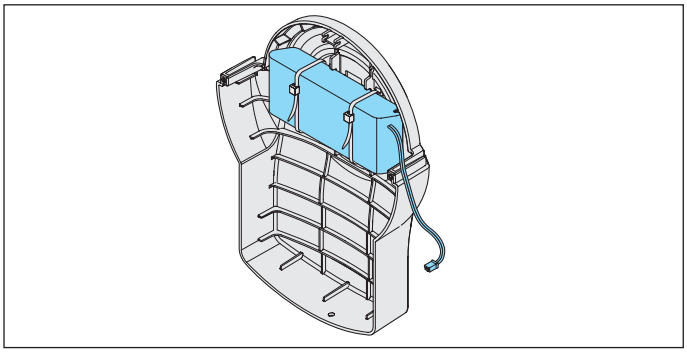


Fig. 4

4. Place the accumulator in the control unit cover and fasten with two cable binders

11. Connections and special functions of the wall control unit

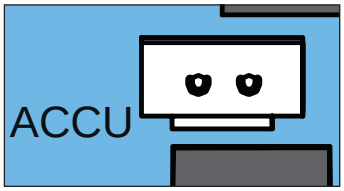


Fig. 5

5. Plae the o ntrol unit o ve r on the bottom of the wall o ntrol unit and plug the o nnec tion a ble for the acu mulator into the ACCU s ot.
6. Set DIP sw itch 3 on the wall o ntrol unit to "ON."
7. Plug the o nnec tion a ble for the membrane key oard into the ci rcu it board, se e ch apter **"7.3 Light and control unit cover of the wall control unit."**
8. Plae the o ntrol unit o ve r on the wall unit and s ew on the light o ve r.
9. Pres the button on the handheld trans m itter to ch ek the operator func tion.
   ⇒ The operator is powered by the acu mulator.
   ⇒ Operator opens or cl oses the door at redue d sp eed.
10. Supply the operator with the mains vo ltage. Chek that the power s pply is o nnec ted.

Removing the accumulator

The acu mulator is remove d in the reve rse order, se e ch apter **"11.12 Installing and removing the accumulator."**

⚠ DANGER

Danger of hazardous substances!

Improper storage, use or disposal of accumulators, batteries and operator components are dangerous for the health of humans and animals. Serious injury or death may result.

- ► Acu mulators and batteries mus t be s ored out of the reab of ch ildren and animals
- ► Keep acu mulators and batteries away from ch emia l, meh ania l and thermal influences.
- ► Do not reh arge old acu mulators and batteries
- ► Components of the operator as well as old acu mulators and batteries mus t not be dispose d of with hous hold was e. They mus t be dip ose d of properly.

NOTE

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

INFORMATION

All operator 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 accumulators and batteries 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 containers provided by dealers. National guidelines must be observed.

INFORMATION

If a photocell is retrofitted on a programmed system, the control unit must be reset, see Chapter "10.13 Performing a reset."

12. twin operation

12.1 twin operation

Two operators can be controlled with one control unit, for example in a double garage with two garage doors Both operators are connected to one control unit for this purpose.

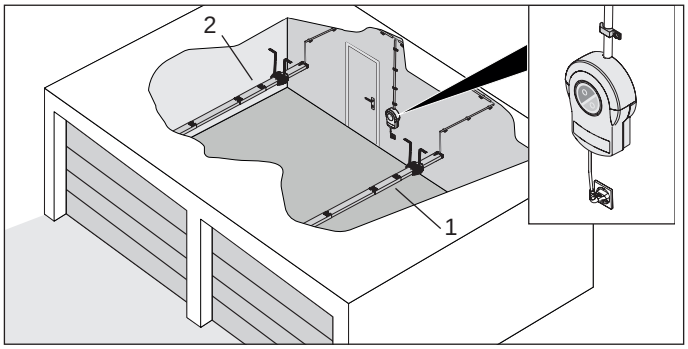


Fig. Installation example for twin operation, slave (1) and master (2)

Mode of operation

If one of the operators receives a command and starts to move, the other operator is locked for this time. The other operator can only be started after the movement has stopped.

INFORMATION
Both operators cannot be operated at the same time.

12.2 Installing the operators

The installation of the operators is described here using an example.

1. Install the operators on the two doors as described in the Chapter **"6. Installation."**

12.3 Selecting and configuring master and slave

Requirements

Both operators are configured as a master in the factory settings The main communication with the control unit is effected via the master.

INFORMATION
No automatic closing function and no energy-saving mode are possible in twin operation.

1. Set DIP switches 1 and 3 on the wall control unit to "ON." This sets membrane keypad T1 for the master and membrane keypad T2 for the slave.

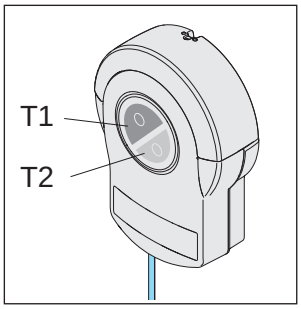


Fig. Membrane keypad T1 and T2 of wall control unit

- T1 for master
- T2 for slave

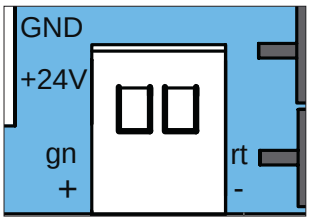


Fig. Connection of brain and track for both operators to the control unit

Terminal block	Function
gn +	Track
rd -	Chain

2. Connect the operator (1) to the terminal blocks for brain (rd) and track (gn) of the wall control unit. The connection cable must be firmly secured to prevent displacement.
3. Connect the wall control unit to the mains voltage. Check that the power supply is connected.
4. Configure the operator (1) as the slave. To do this, establish a connection to the motor carriage via a SOMlink and a WiFi-enabled device.
5. In the menu, under the **"twin operation"** settings, configure **"Operator is slave"** for the selected operator and save the entry. Check the entry.
6. Disconnect the wall control unit from the mains voltage.
7. Connect operator (2), the master, to the wall control unit in parallel to the terminal block for brain and track. The connection cable must be firmly secured to prevent displacement.
8. Reconnect the control unit to the mains voltage.

12. twin operation

9. Put both operators into operation sequentially, see chapter **"9. Initial operation," "10. Connections and special functions of the motor carriage"** and **"11. Connections and special functions of the wall control unit."**

10. Programme the handheld transmitters for the respective operators, see chapter **"10.4 Explanation of the radio channels"** and **"10.5 Programming the transmitter."**

INFORMATION
Only one handheld transmitter button can be assigned per function. Undesired malfunctions could otherwise occur.

12.4 Partial opening

One partial opening can be programmed for each of the two operators (master and slave). Programming or deletion is performed as for the standard equipment, see chapter **"10.17 Setting partial opening"** and **"11.6 Deleting partial opening."**

Example:

Master on radio channel CH 2 (partial opening) on handheld transmitter button 3. For the slave, on radio channel CH 2 (partial opening) on handheld transmitter button 4.

Corded

The input COM and signal on the wall control unit can be used for this purpose. DIP switch 4 on the wall control unit must be set to "ON."
The input is then no longer available for connection of a photocell.

Mode of operation

If button 2 (partial opening) is activated, the master receives the partial opening command. See also chapter **"10.17 Setting partial opening."**

12.5 Defined opening and closing

The functions defined opening and closing of the operators (master and slave) can only be configured via the CH 3 and CH 4 radio channels These settings are not available when corded or via the Conex accessory part.

12.6 Door status display

During door movement and if the door is not closed, the relay (MUFU) trips DIP switch 2 must be "ON." The relay remains activated until both operators (master and slave) are again at the door CLOSE end position.

12.7 Lighting for twin operation

The lighting can be switched on and off for the selected operator via the respective handheld transmitter.
This also applies for the connected supplemental lighting, see also Chapter **"10.16 Setting the lighting function."**

12.8 Photocell

Optionally, a photocell can be connected. The photocell must be configured in such a way that it can be aligned to cover two doors If the photocell is interrupted, the operator of the moving door reverses See also chapter **"11.7 Photocell and frame photocell."**

INFORMATION
If a photocell is retrofitted on a programmed system, the control unit must be reset, see Chapter "10.13 Performing a reset."

12.9 External button

With the Conex additional circuit board, both operators (master and slave) can be operated in pulse sequence mode. Fit the Conex as described in the separate instructions Set DIP switch 1 on the wall control unit to "ON."

Mode of operation

Button 1 - master
Button 2 - slave

12.10 Reset

The slave becomes the master again when a factory reset is carried out. The operator must be configured as the slave again via a SOMlink and a WiFi-enabled device, see chapter **"12.3 Selecting and configuring master and slave."**

13. Function test and final test

13.1 Testing obstacle detection

Observe in particular the following safety instructions for this chapter.
After initial operation of the operator, the force measurement of the operator must be checked with a force measurement device and an obstacle detection test must be performed.

⚠ WARNING

Danger due to projecting parts!
Door leaves or other parts must not project into roads or public footpaths. This also applies while the door is moving.
This may cause serious injury or death to persons or animals.

- ► Keep public roads and footpaths clear of projecting parts

⚠ 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 carried out by a **qualified specialist**.
- ► You must proceed with extreme caution if you check and if necessary adjust the force setting.

⚠ WARNING

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

- ► Note that obstacle detection does not operate below 50 mm.
- ► The obstacle detection must be tested one a month.
- ► Only use the operator when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door when it is moving or near moving parts In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never rest and under the opened door.

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.

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 for the operator must be handed over to the user. This also applies if the operator is retrofitted to a manually operated door.

13. Function test and final test

INFORMATION
Reversing: The operator stops on contact with an obstacle and then moves a short distance 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 WiFi-enabled device. For more information, ask your specialist dealer.

After successful testing of the force settings, the obstacle detection and the functions, the qualified specialist must issue the EC Declaration of Conformity and attach the CE mark and type plate to the door system.
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 on the ground.

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

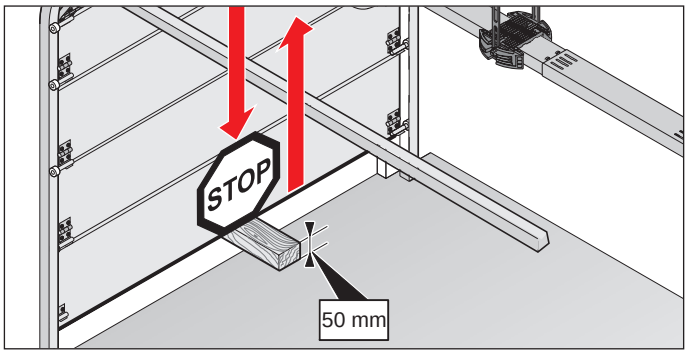


Fig. Example: Obstacle detection on sectional door

3. Close the door with the operator.
   ⇒ If the door hits an obstacle, the operator must reverse.
   ⇒ The operator opens the door completely at a pulse from the transmitter.

   If the operator does not reverse, a position reset is required, see chapter **"10.13 Performing a reset."** The positions and the forces must be reprogrammed.

13.2 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 manual emergency release
- on the regular maintenance, testing and care measures which the user can carry out, see chapter **"15. Maintenance and care"**
- on the troubleshooting measures which the user can carry out, see chapter **"16. Troubleshooting."**

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

- installation of accessories
- settings
- regular maintenance, testing and care, with the exception of that described in chapter **"15. Maintenance and care"**
- troubleshooting, except that described in chapter **"16. Troubleshooting."**
- repairs

The following documents for the door system must be handed over to the user:

- the installation and operating manuals for the operator and the door
- inspection book
- EC Declaration of Conformity
- handover protocol for the operator

http://som4.me/konform

14. Operation

14.1 Safety information on operation

In particular, observe the following safety instructions and the safety instructions in chapters **"15. Maintenance and care"** and **"16. 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. Handheld transmitters or other command devices must never be given to children. Handheld transmitters must be safely stored and protected against unintended and unauthorised use.

⚠ DANGER

Danger if not observed!
If safety instructions are not observed, serious injury or death will result.
- ► All safety instructions must be complied with.

⚠ DANGER

Danger due to use of the operator with incorrect settings 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 condition.
- ► You must have faults repaired professionally 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
- ► Pay attention to the movement of the door when the emergency release is actuated.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Keep clear of the movement area of the door.

⚠ WARNING

Danger of entrapment!
Persons and 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.

14. Operation

⚠ WARNING

Danger of crushing and shearing!
If the door moves and there are 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 when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door when it is moving or near moving parts In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never rest and under the opened door.

⚠ 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.

- ► Never look directly into an LED.

NOTE

If the weight compensation of the 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.

14.2 Handover to the user

The user must ensure that the CE mark and the type plate have been attached to the door system.
The following documents for the door system must be handed over to the user:

- the installation and operating manuals for the operator and the door
- inspection book
- EC Declaration of Conformity
- handover protocol

The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the manual emergency release
- on regular maintenance, testing and care which the user can carry out

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

- installation of accessories
- settings
- regular maintenance, testing and care which can be carried out by the user, except that described in chapter **"15. Maintenance and care"**
- troubleshooting which can be carried out by the user, except that described in chapter **"16. Troubleshooting"**

The user is responsible for:

- the intended use of the operator
- its good condition
- operation
- instructing all users how to use the door system and in the associated hazards
- on the handling of the manual emergency release
- maintenance, testing and care
- 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 at all times

14. Operation

14.3 Operating modes of door movement

⚠ WARNING

Danger of crushing and shearing!
The door can be actuated by a keypad or another command 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 or other command devices may be used only if the movement of the door can be viewed directly.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never rest and under the opened door.

INFORMATION
All functions can be programmed for all buttons.

Button 1 (CH 1)

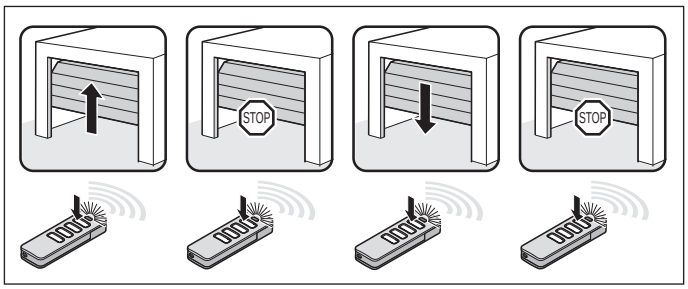


Fig. Pulse sequence door OPEN, door stop, door CLOSE, door stop

Button 2 (CH 2)

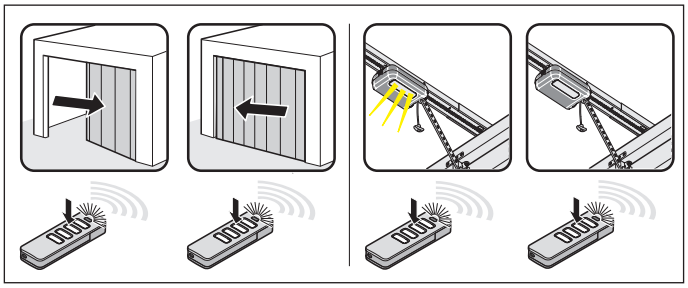


Fig. Pulse sequence for
partial opening: DIP switch 2 "ON"
Lighting function: DIP switch 2 "OFF"

Button 3 (CH 3)

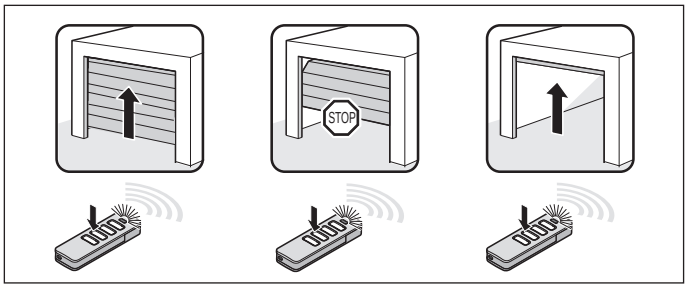


Fig. Pulse sequence for defined door OPEN

Button 4 (CH 4)

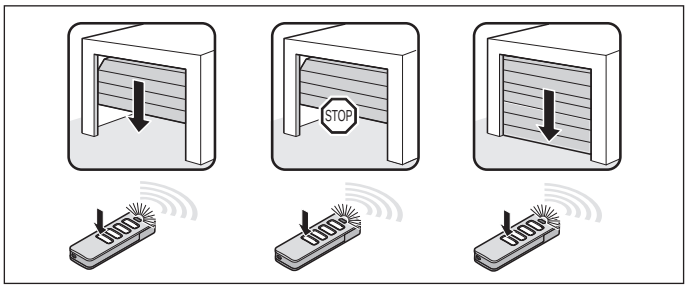


Fig. Pulse sequence for defined door CLOSE

14. Operation

14.4 Testing 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 reversion is pre-set at the factory.
Full reversion can be set via a SOMlink and a WiFi-enabled device.

INFORMATION
Reversing: The operator stops when it hits an obstacle. Then the operator moves slightly in the opposite direction to release the obstacle.
In the automatic closing function, the door opens completely.

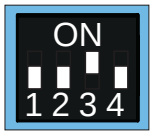
The following safety devices are installed to detect obstacles

- photocell (object protection)
- safety contact strips (personal protection)
- obstacle detection of the operator (personal protection)

Here, also note chapter **"15. Maintenance and care."**

14.5 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: photocell, 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 deactivated.

DIP switch on wall unit		ON	OFF
3		• 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 is 20 seconds. This value cannot be changed.

14.6 In the event of a 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 the emergency release in chapter **"11.8 Installing and removing the accumulator"** and **"14.7 Function of the emergency release."**

14.7 Function of the emergency release

In the event of a power failure, the door can be opened from the inside using a mechanical emergency release.
Observe in particular the following safety instructions for this chapter.

⚠ WARNING
Danger for trapped persons!
Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.
- ► Test the operation of the emergency release regularly from inside and if necessary, also from outside.
- ► You must have faults repaired professionally 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 be used only with the door closed.
- ► Use the emergency release with great caution if the door is open.
- ► Keep persons and animals clear of the range of movement of the door.

14. 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

During emergency release, the door could open by itself 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 to the door OPEN end position. Otherwise the limit stop will be 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.

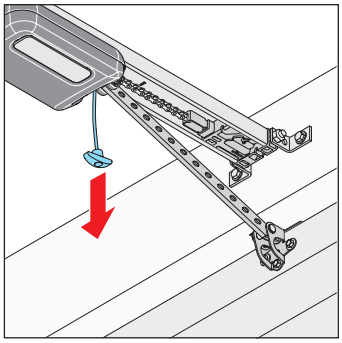


Fig. 2

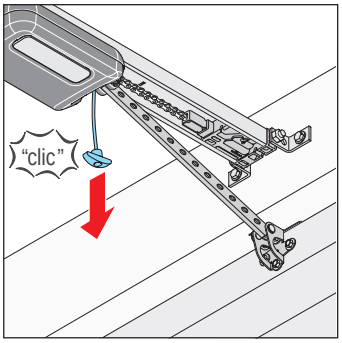


Fig. 3

2. Pull once on the emergency release handle.
   ⇒ **The motor carriage is released.**
   ⇒ Door can be moved by hand.
3. Pull the emergency release handle once more.
   ⇒ **The motor carriage is locked.**
   ⇒ The door can only be moved by the operator.
4. Re-connect the operator to the voltage supply.
   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.

15. Maintenance and care

15.1 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 instructions 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 must be carried out by a **trained electrician**.
- ► Disconnect the mains plug before working on the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

⚠ 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.

- ► Test the operation of the emergency release regularly from inside and if necessary, also from outside.
- ► You must have faults repaired professionally 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.

15. Maintenance and care

⚠ WARNING

Danger of crushing and shearing!

If the door moves and there are 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 when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door when it is moving or near moving parts In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never rest and under the opened door.

⚠ WARNING

Danger due to hot surfaces!

After frequent operation, parts of the motor 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 down before removing the cover.

NOTE

The motor 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 motor 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.

15.2 Maintenance schedule

How often?	What?	How?
One a month	• Tests the emergency release	• See chapter **"14.7 Function of the emergency release"**
	• Tests obstacle detection	• See chapter **"14.4 Testing obstacle detection"**
	• Tests photocell	• Interrupt the active photocell 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 photocell, see chapter **"15.3 Care"**
One a year	• Tests the door and all moving parts	• As directed by the door manufacturer
	• Checks 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 **"15.3 Care"**
	• Clean the housing of the wall control unit and motor carriage	• See chapter **"15.3 Care"**

15. Maintenance and care

15.3 Care

Clean track, motor carriage and wall control unit

1. Pull the power plug out of the power outlet.
   If an accumulator has been installed, remove the wall control unit cover and disconnect the accumulator from the wall control unit, see also chapter **"11.12 Installing and removing the accumulator."**
   Then check that the power is disconnected.
2. Remove loose dirt with a moist, lint-free cloth:
   - from the motor carriage and the wall control unit
   - from the track and the inside of the track
3. If required, install the accumulator in reverse order of removal.
   Re-connect the operator to the mains voltage.
   Check the power supply.
   ⇒ The operator is supplied with voltage.

Cleaning the photocell

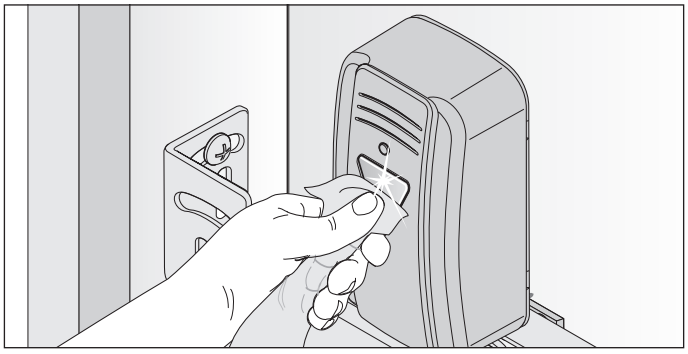


Fig. 1

NOTE

Do not change the position of the photocell when cleaning it.

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

16. Troubleshooting

16.1 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 instructions 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 may result.

- ► All work on electrical components must be carried out by a **trained electrician**.
- ► Disconnect the mains plug before working on the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

⚠ 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.

- ► Test the operation of the emergency release regularly from inside and if necessary, also from outside.
- ► You must have faults repaired professionally 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 opened completely.

⚠ WARNING

Danger of entrapment!

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

- ► Keep clear of the moving door.
- ► Always wear tight-fitting clothing.
- ► Wear a hairnet if you have long hair.

16. Troubleshooting

⚠ WARNING

Danger of crushing and shearing!

If the door moves and there are 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 when you have a direct view of the door.
- ► All danger zones must be visible during the entire door operation.
- ► Always keep the moving door in sight.
- ► Keep persons and animals clear of the range of movement of the door.
- ► Never put your hand near the door when it is moving or near moving parts In particular, do not reach into the moving push arm.
- ► Do not reach into the ceiling suspension unit when the motor carriage is running along the track.
- ► Do not drive through the door until it has opened completely.
- ► Never rise and under the opened door.

⚠ 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.

- ► Never look directly into an LED.

⚠ WARNING

Danger due to hot surfaces!

After frequent operation, parts of the motor 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 down 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. If the short circuit is no longer present, the operator runs normally again.

16.2 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 must be performed by a **trained electrician**.

1. Pull the power plug out of the power outlet.
   If an accumulator has been installed, remove the ceiling control unit cover and disconnect the accumulator from the control unit, see Chapter **"7.3 Light and control unit cover of the wall control unit"** and chapter **"11.12 Installing and removing the accumulator."**
   Then check that the power is disconnected.
2. After working on the operator, if applicable replace the accumulator in reverse order.
3. Connect the operator to the mains voltage.
   Check that the power supply is connected.
   ⇒ The operator is supplied with mains voltage.

16. Troubleshooting

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

The flash sequence shows information on malfunctions for technicians, end customers and telephone support.

In normal mode

Flash sequences	Possible cause	Corrective action
Operator lighting flashes as warning light	• Programming mode activated • Pre-warning time activated • Reversing movement, soft reversing and stopped after a soft and reversing movement • Function for HFL activated	• none, for information

In the event of faults

Flash sequences	Possible cause	Corrective action
Requirement Operator expects a command	• Waiting for a confirmation during the position programming movement of door CLOSE end position	• Confirmation of position programming movement
Alarm A process has triggered a fault	• Photocell/safety device not OK before movement	• Check photocell and realign if necessary • If necessary, have components replaced by a qualified specialist
	• Interruption of a safety device during the movement	• Remove obstacle
	• Dead man movement, safety device not OK	• Have it checked by a qualified specialist
	• Motor return from outside (e.g. due to attempted break-in)	• For information
Service A process has triggered a fault	• Service (service days, service hours have been reached)	• Have the service performed by a qualified specialist
	• It may be that after 180 days the basic force curve data for the door operation vary from the actual data	• Check weight-balancing and door mechanism • If necessary, carry out force reset, see Chapter **"10.13 Performing a reset,"** section "Deleting the force values"
	• Motor temperature is too high (overheating)	• Allow motor to cool
	• Programming of 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).	• For information
Fault Operator or parts of the operator faulty	• Self-tests of electronics • Blockage detection (gear breakage, Hall sensor fault)	• Have it checked and, if necessary, components replaced by a qualified specialist
	• Limit switch does not operate (e.g. wire break, limit switch fault)	• Have cable connections checked by a qualified specialist and, if necessary, have components replaced
	• Counting pulses sent in the wrong direction (motor cable was incorrectly connected)	• Check wiring, correct if necessary
	• Run time exceeded	• Travel path too long, travel path is restricted to max. 7,500 mm
	• Error during plausibility test of Memo	• Have it checked and, if necessary, components replaced by a qualified specialist

16. Troubleshooting

16.4 Troubleshooting table

Problem	Possible cause	Test/check	Remedy
The operator opens the door when the transmitter or command device is actuated but does not close it.	• Photocell and safety device interrupted	• Check photocell and safety device	• Remove obstacle • The photocell must be aligned • If necessary, have it blocked 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 command device.	• No power	• Check power supply	• Check the power outlet with a different device, for example by plugging in a lamp
	• Limit switch on motor carriage defective	• Unlock operator and push motor carriage to the centre of the track • Lock operator • Actuate transmitter • If the operator still closes thedoor but does not open it, the limit switch is defective	• Have the limit switch replaced by aqualified specialist
	• The operator was unlocked by the emergency release mechanism	• Check that the door can be moved manually	• Pull the emergency release handle to lock the operator
	• Control device incorrectly connected to the operator	• Check function of operator with a transmitter	• Check wiring and correct if necessary
	• Membrane keypad of the wall unit is not working	• Check cable	• Plug in cable • If necessary, replace wall control unit cover
	• 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 command device	• Have operator repaired or replaced by a qualified specialist
	• Electrical supply voltage outside the approved range	• Have the mains voltage checked by a trained electrician	• Have the cause corrected by a trained electrician
When a button on the transmitter is pressed, the operator does not open or close the door.	• Transmitter not programmed	• Radio LED does not light up when the transmitter is operated	• Programme transmitter
	• Battery in the transmitter is flat		• Replace the battery of the transmitter
	• Transmitter defective	• LED on transmitter does not light up	• Replace transmitter
Radio command cannot be programmed	• Memory full	• All four LEDs for radio flash briefly for about 3 seconds	• Memory full, see Chapter **"10.6 Information on Memo"** and **"10.8 Deleting a transmitter button from the radio channel"**
MEMO Identifier error	• Incorrect MEMO	• All four LEDs for radio flash briefly for a short time and then go out for a long time. The operator lighting of the motor carriage flashes 4 times short and 4 times long.	• Disconnect operator from the power supply, unplug Memo, re-supply operator with power

16. Troubleshooting

Problem	Possible cause	Test/check	Remedy
MEMO device type error	• System error	• All four LEDs blink briefly for a long time and then go out for a short time. If voltage is present, the operator lighting of the motor carriage flashes an additional four times	• Memory can be deleted via the Radio button, see chapter **"10.11 Deleting all radio channels in the receiver"**
Operator stops the door during closing and opens it partially or completely.	• Door has detected an obstacle	• Check whether there are any objects in the movement range of the door	• Remove the object • If necessary, have door mechanism checked and set by a qualified specialist
	• Photocell was interrupted	• Check LEDs on photocell	• Remove obstacle
	• Photocell defective or misaligned		• Align photocell • Check wiring • If necessary, have defective photocell replaced
Operator stops while the door is opening	• Door has detected an obstacle	• Check whether there are any objects in the movement range of the door • Check the weight balance of the door - it must run smoothly	• Remove obstacle • If necessary, have door mechanism checked and repaired by a qualified specialist
Operator lighting or the Lumi pro+ supplemental lighting does not function	• Operator lighting defective • Lumi pro+ supplemental lighting defective		• Have motor carriage replaced with a new one by a qualified specialist • If necessary, replace Lumi pro+ supplemental lighting
Speed varies while opening and closing the door	• Track dirty		• Clean with a moist lint-free cloth, see chapter **"15.3 Care"**
	• Chain tightened incorrectly		• Tighten the chain, see chapter **"6.5 Installing the operator system for installation variants A and B"** or **"6.6 Installing the operator system for installation variant C"**

16.5 Replacing the motor carriage

The instructions for **"Disassembling the motor carriage"** can be downloaded from **SOMMER** at: **www.sommer.eu**
If applicable, save the existing settings on the existing motor carriage via a SOMlink and a WiFi-enabled device. The settings can be transferred to the new motor carriage later. The new motor carriage is in delivery condition from the factory. After replacing the motor carriage, make sure that used accessories have been transferred to the new motor carriage.
Initial operation must be repeated, and the special functions of the motor carriage must be reset, see chapter **"9. Initial operation"** and **"10. Connections and special functions of the motor carriage."**
Handheld transmitters which are used must also be reprogrammed, see Chapter **"10.5 Programming the transmitter."** On the other hand, handheld transmitters do not have to be programmed if the Memory part has already been used.
After successful initial operation, run a function test and a final test, see chapter **"13. Function test and final test."**

INFORMATION
Save the existing settings of the motor carriage with the help of SOMlink and a WiFi-enabled device. After the new motor carriage has been inserted, reinstall the data.

17. Taking out of operation, storage and disposal

17.1 Taking the operator out of operation and disassembly

Follow the basic safety instructions listed below.
Persons under the influence of drugs, alcohol, or medications that can influence their ability to react may **not** work on the operator.
The disassembly and disposal of the operator must be performed by a **qualified specialist**. This Installation and Operating Manual must be read, understood and complied with by a 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 instructions 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 disassembly work on electrical components must be carried out by a **trained electrician**.
- ► Disconnect the power plug before disassembling the operator.
- ► If an accumulator is connected, disconnect it from the control unit.
- ► Check that the operator is not live.
- ► Secure the operator against being switched back on.

⚠ 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 the de-installation area free of unnecessary items
- ► Place all parts where no-one is likely to trip or fall over them.
- ► The 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.
- ► Never look directly into an LED.

⚠ WARNING

Danger due to hot surfaces!
After frequent operation, parts of the motor 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 down 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.
- ► You must wear a safety helmet when disassembling suspended parts

17. Taking 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 an accumulator in the control unit, it must be removed by a trained electrician. See chapter "11.8 Installing and removing the accumulator."

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

1. Pull the power plug out of the power outlet.
   If an accumulator has been installed, remove the control unit cover and disconnect the accumulator from the control unit, see also chapter **"11.8 Installing and removing the accumulator."**
   Then check that the power is disconnected.
2. Disassembly is in reverse order of installation.

17.2 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 °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.

17.3 Disposal of waste

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

⚠ DANGER

Danger of hazardous substances!

Improper storage, use or disposal of accumulators, batteries and operator components 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 accumulators and batteries 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.

17. Taking out of operation, storage and disposal

NOTE

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

INFORMATION

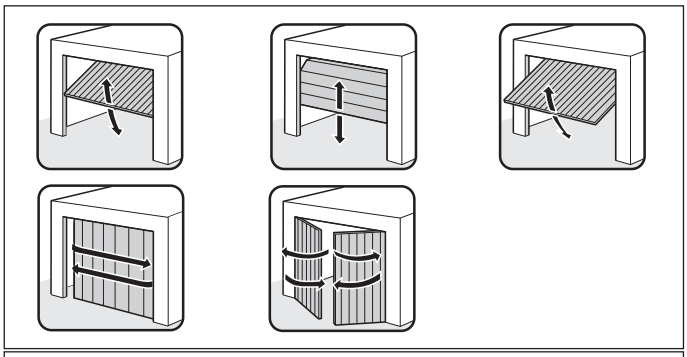
All operator components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must be observed.

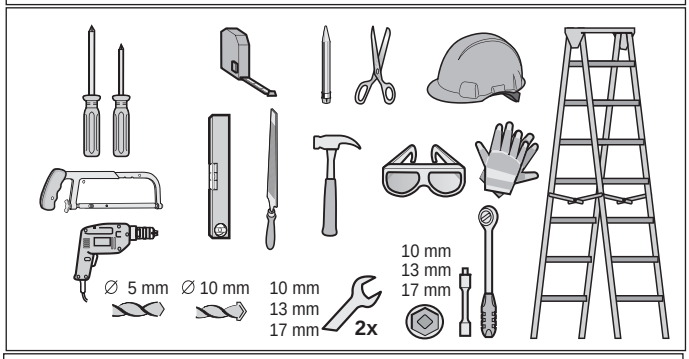
INFORMATION

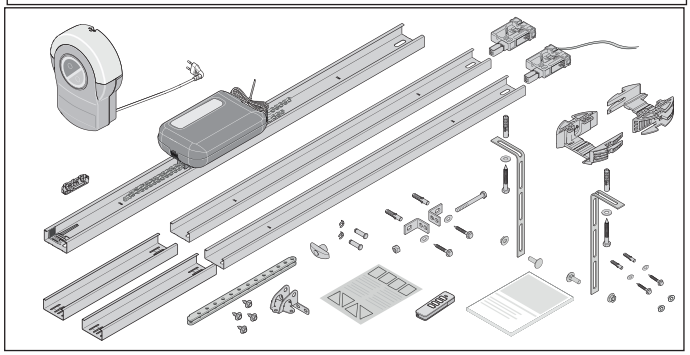
Old accumulators and batteries must not be disposed of with household waste as they contain hazardous substances. These must be disposed of properly at municipal collection points or in the containers provided by dealers. National guidelines must be observed.

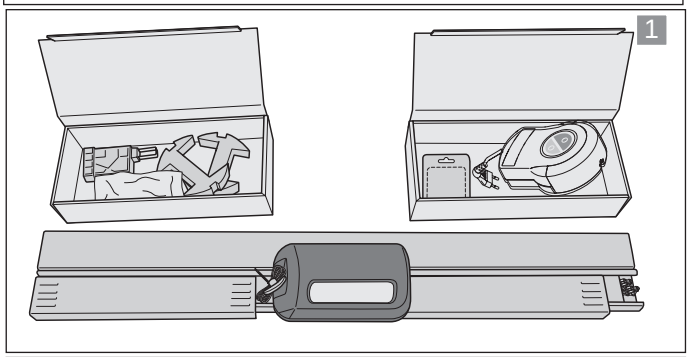
18. Short instructions for installation

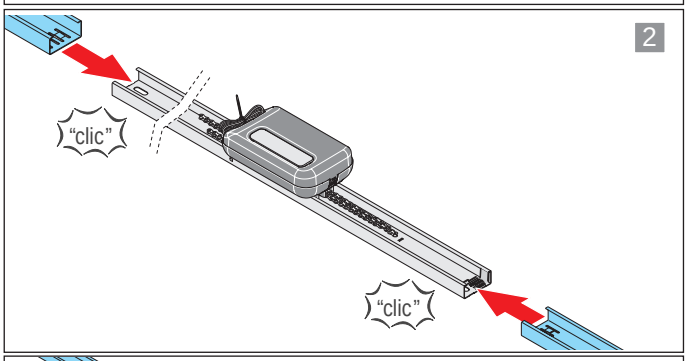
The short instructions describe the installation of **variants A/B**.
The short instructions do not replace the installation and operating manual. Read this Installation and Operating Manual carefully and, most importantly, follow all warnings and safety instructions. This will ensure that you can install the product safely and optimally.

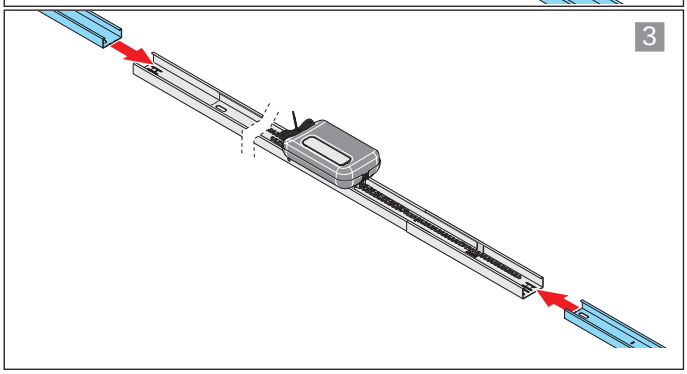


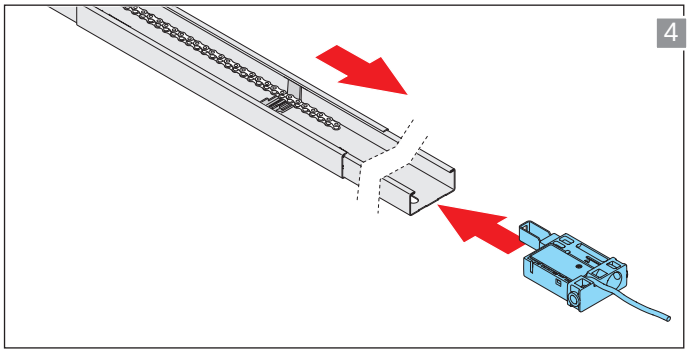








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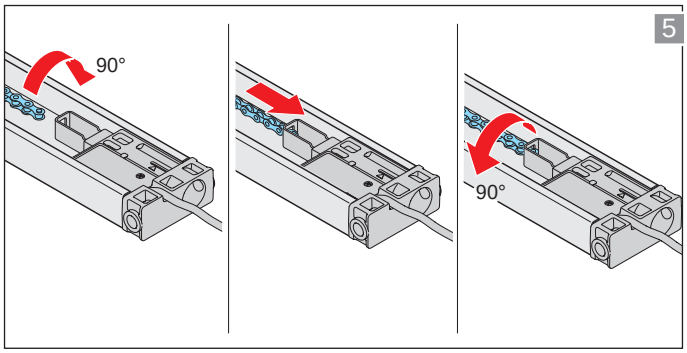
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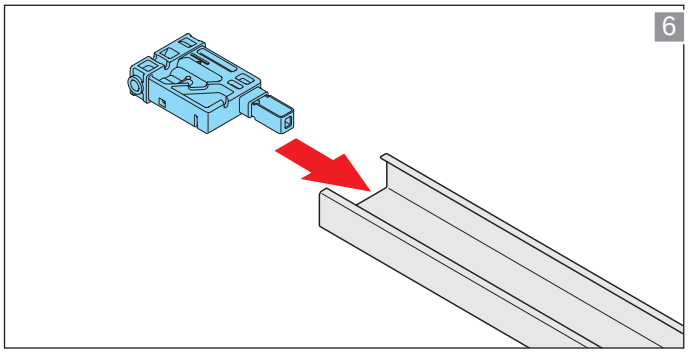
90°
90°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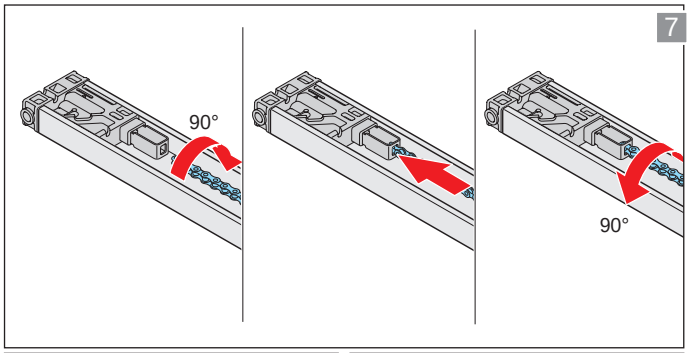
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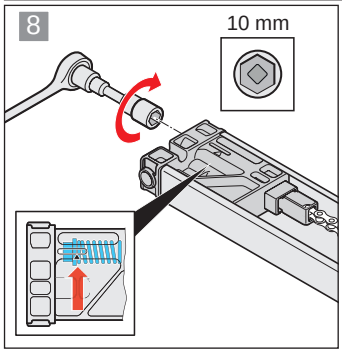
90°
90°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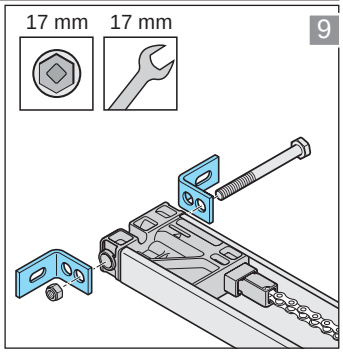
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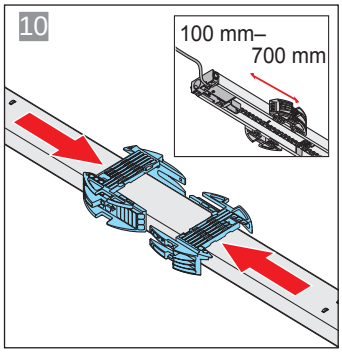
17 mm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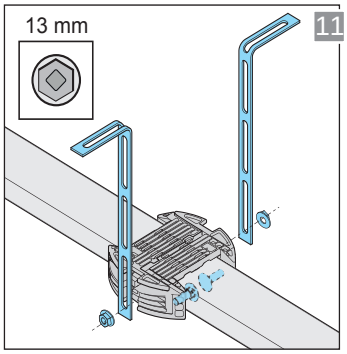
100 mm–
700 mm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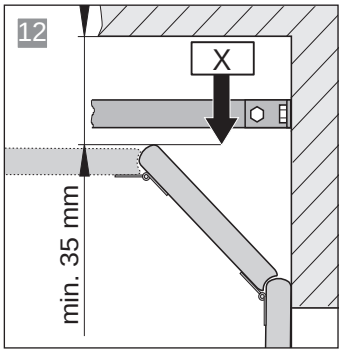
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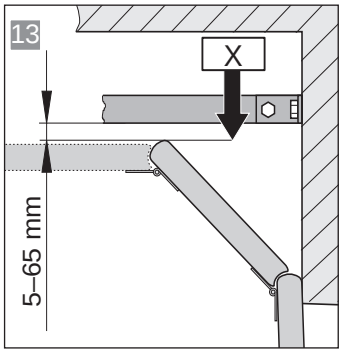
X
min. 35 mm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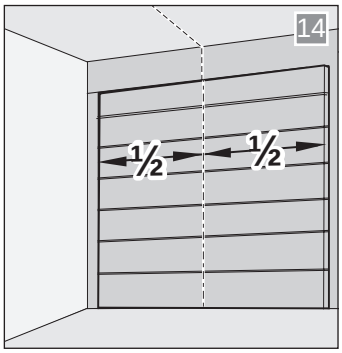
X
5–65 mm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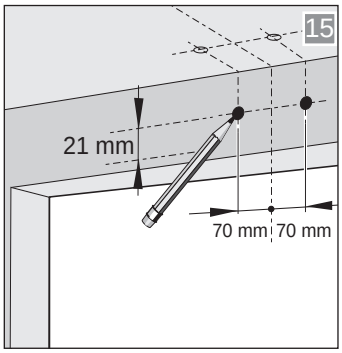
½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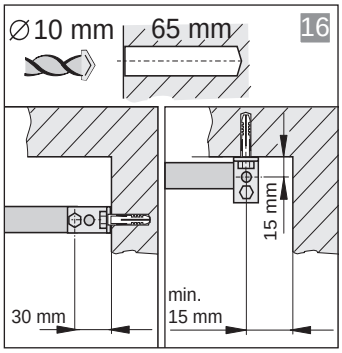
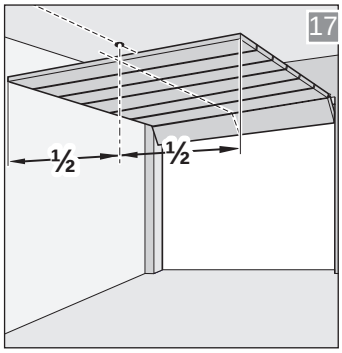
21 mm
70 mm
70 mm


16
∅10 mm
65 mm
15 mm
30 mm
min.
15 mm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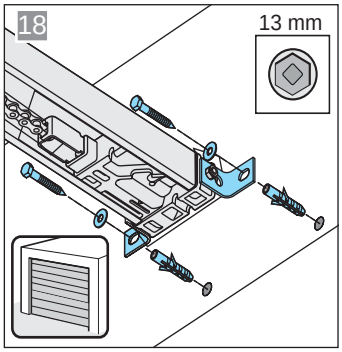
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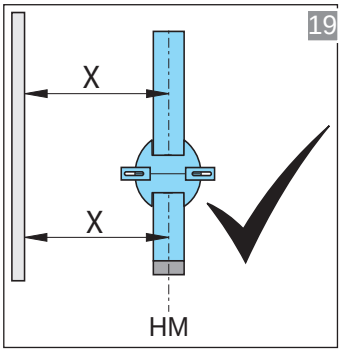
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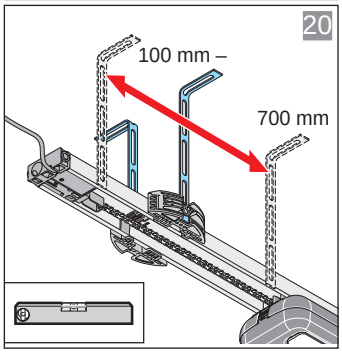
X
HM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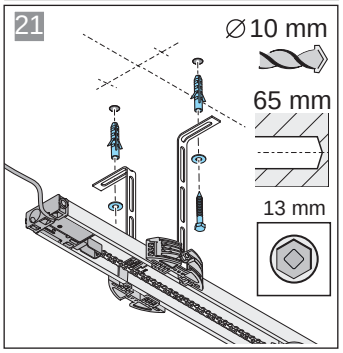
100 mm –
700 mm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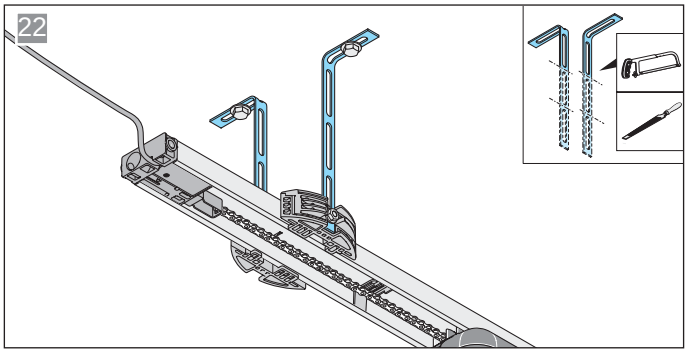
∅10 mm
65 mm
13 mm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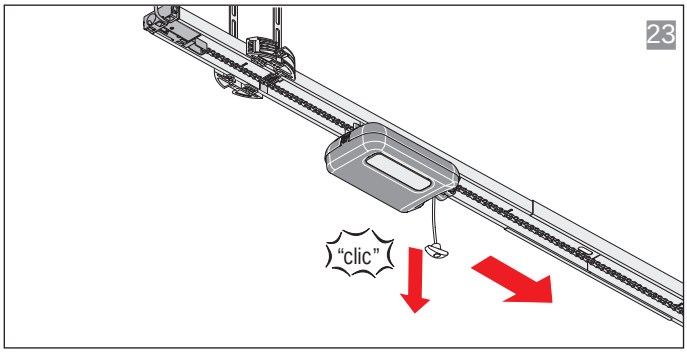
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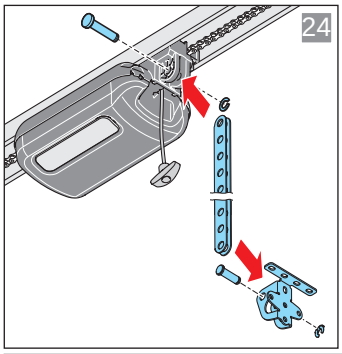
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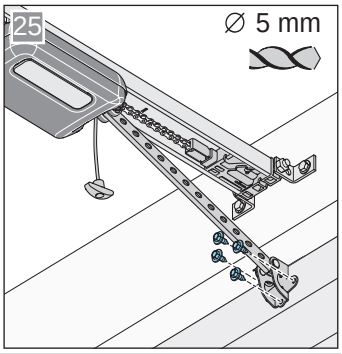
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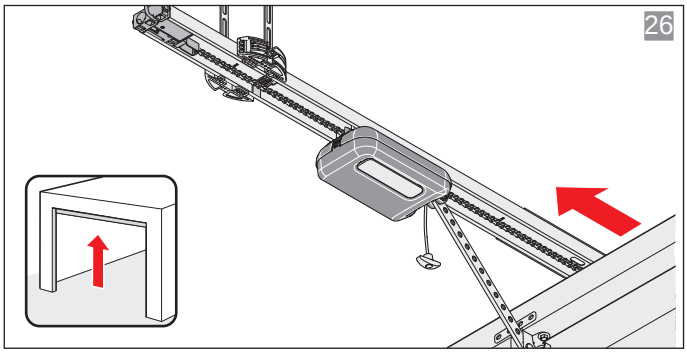
∅ 5 mm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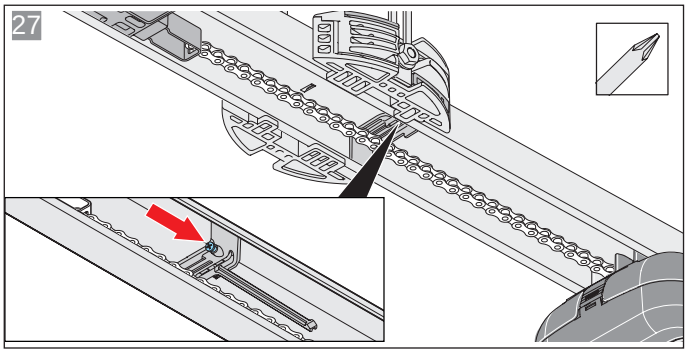
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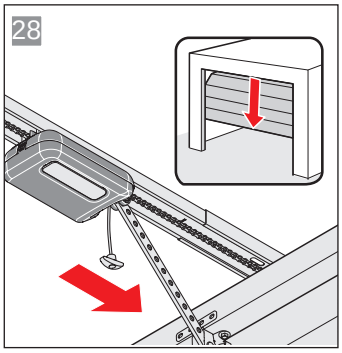
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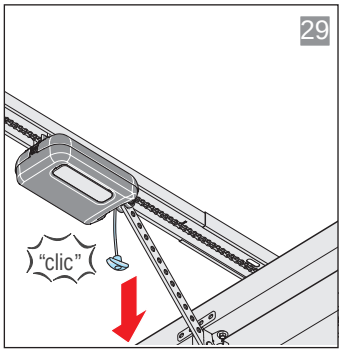
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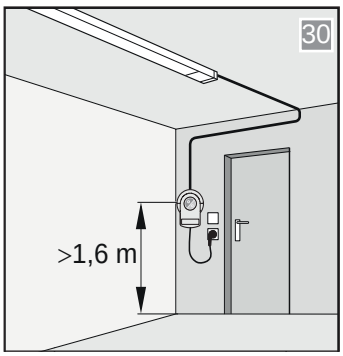
"clic"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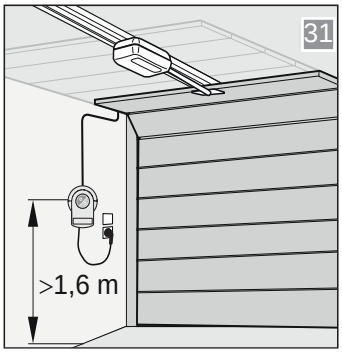
>1,6 m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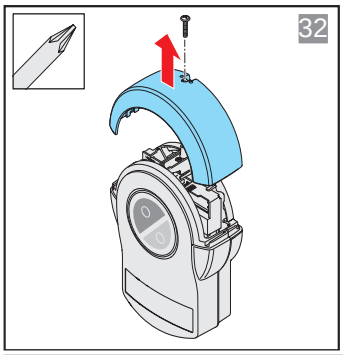
>1,6 m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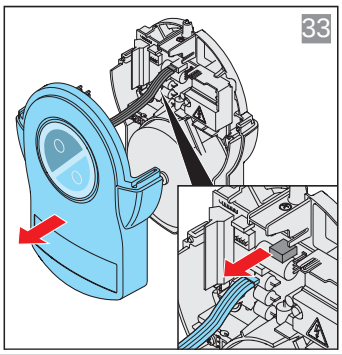
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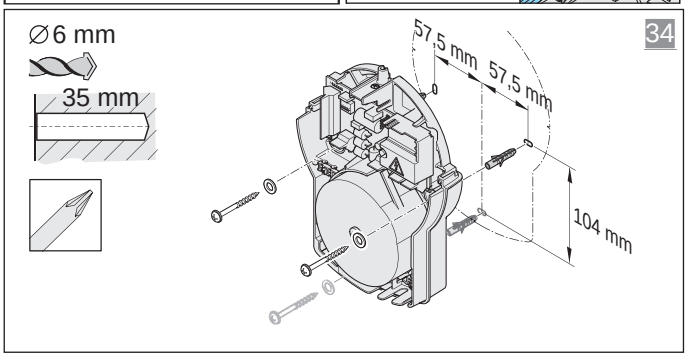
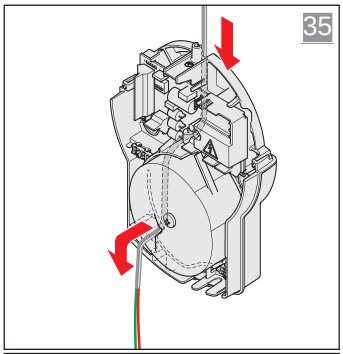
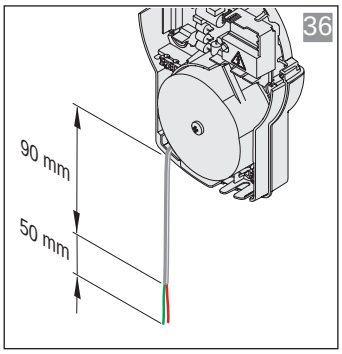
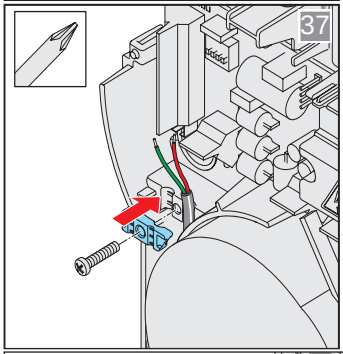
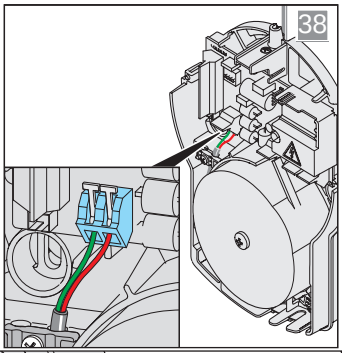
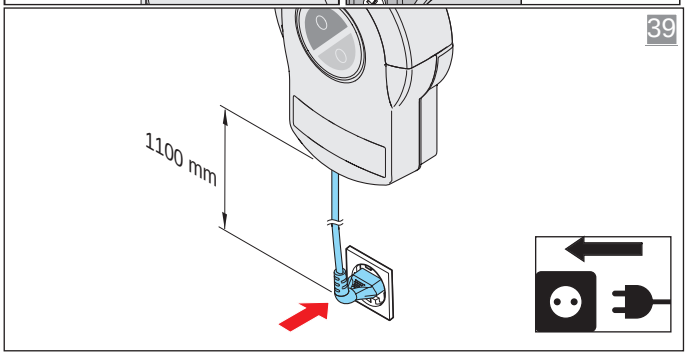

34
∅6 mm
35 mm
57,5 mm
57,5 mm
104 mm


35


36
90 mm
50 mm

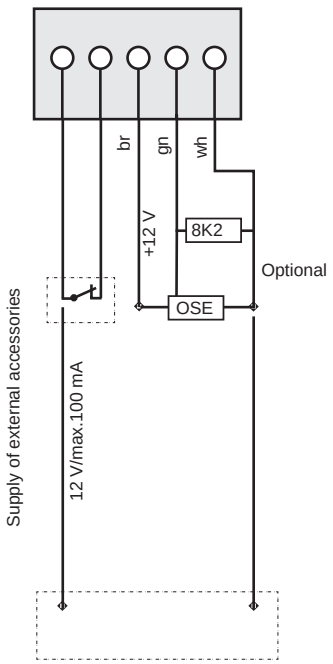

37


38


39
1100 mm

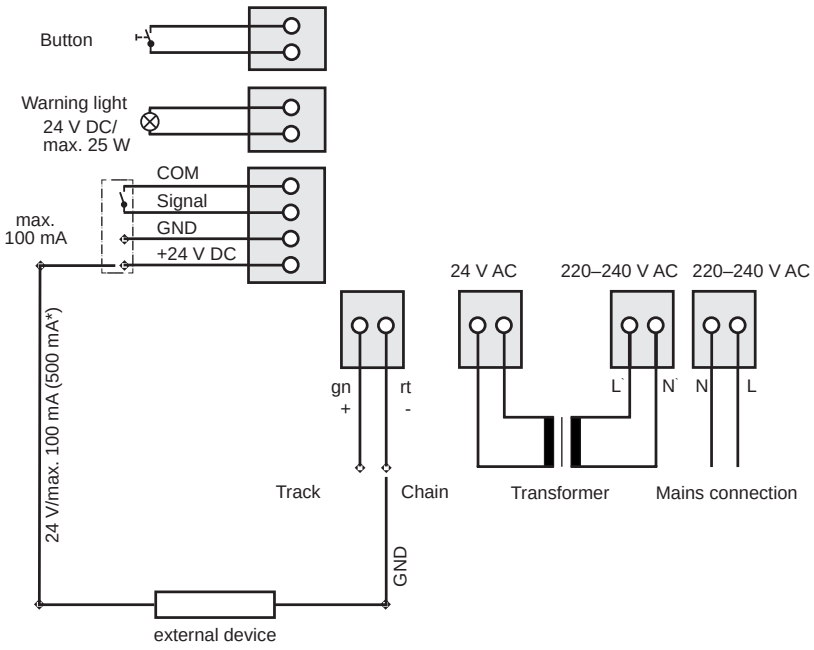
19. Connection diagrams and functions of the DIP switches

Fig. Connection diagram,
motor carriage*



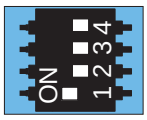
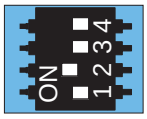
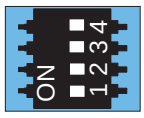
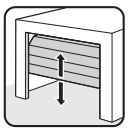
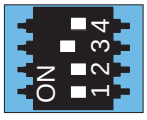
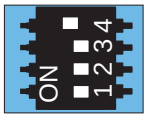
* The version can vary depending on the type. This means the use of accessories can vary.

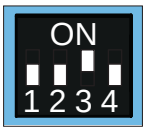
Fig. Connection diagram
of wall control



* 500 mA are only available if an LED warning light (max. 3 W) or no warning light is connected

When connecting external devices, power-saving mode must be deactivated to ensure the power supply.

DIP switches on the motor carriage	ON	OFF
	• Automatic closing function activated	• Automatic closing function deactivated
	• Partial opening activated/ lighting function deactivated	• Partial opening deactivated/ lighting function activated
		
		
		

DIP switches on the wall control unit	ON	OFF
	• Membrane keypad/ Conex additional circuit board • Membrane keypad T1 defines door OPEN • Membrane keypad T2 defines door CLOSE	• Membrane keypad/ Conex additional circuit board • Membrane keypad T1, pulse sequence • Membrane keypad T2 lighting function/ partial opening
	• Relay (MUFU) trips during door movement and if the door is not closed*	• Lighting function
	• Continuous power to the complete system activated	• Power-saving mode activated
	• COM and Signal activated as button input (partial opening)	• COM and Signal activated as safety contact for photocell

* e.g.: door status display