EN  TRANSLATION OF THE ORIGINAL INSTALLATION AND OPERATING MANUAL

Garage door operator

CarTeck DRIVE 500
CarTeck DRIVE 600
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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 notes. 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 recognized technical regulations and is subject to the EC Machinery Directive (2006/42/EC). The operator is fitted with a radio receiver. Optionally available accessories are also described. The version depends on the type. This means the accessory name.

1.4 Target groups of the installation and operating manual

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

• Unloading and in-house transport
• Unpacking and installation
• Commissioning
• 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 used as follows:

⚠️ Signal word

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

DANGER
WARNING
CAUTION
1. About this installation and operating manual

There are three different classifications of hazards:

### DANGER

- **Describes an immediate danger that leads to serious injury or death.**
- **Describes the consequences of the danger to you or other persons.**
  - Follow the instructions for avoiding or preventing the danger.

### WARNING

- **Describes a potential danger of serious injury or death.**
- **Describes the potential consequences of the danger to you or other persons.**
  - Follow the instructions for avoiding or preventing the danger.

### CAUTION

- **Describes a potential danger of a hazardous situation.**
- **Describes the potential consequences of the danger to you or other persons.**
  - Follow the instructions for avoiding or preventing the danger.

The following symbols are used for notes and information:

- **NOTE**
  - Describes additional information and useful notes for correct use of the operator without endangering persons.
  - If it is not observed, property damage or faults to the operator or door may occur.

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

**INFORMATION**

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

The following symbols are used in the figures and text:

- **Continue reading the installation and operating manual for more information.**
- **Disconnect the operator from the mains voltage.**
- **Connect the operator to the mains voltage.**
- **Symbol refers to factory settings.**
- **Symbol refers to a Wi-Fi-enabled device, such as a smartphone.**

**1.6 Special warnings, hazard symbols and mandatory signs**

To specify the source of danger more precisely, the following symbols are used together with the above-mentioned hazard symbols and signals. Follow the instructions for preventing a potential hazard.
1. About this installation and operating manual

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

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

⚠️ **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 allied. This may be used to free persons who cannot free themselves.

⚠️ **WARNING**
Danger due to projecting parts!
Parts must not project into public roads or 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 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 when it is moving or near moving parts.

⚠️ **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 direct ions for an at ion
⇒ Stands for the rea lts of the at ion

Lists are own as a lists of at ions
- List 1
- List 2

1, A A Item number in the figure refers to a number in the tek.
Important tek items for ample ions for at ions are emphasised in bold.
References to other apters or ions are in bold and 
t in "quotation marks".

1.8 Intended use of the operator

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

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

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

The operator may only be used:
- in combination with door types in the reference lists
- if the EC Declaration of Conformity has been issued for the door
- if the CE mark and the type plate for the door have been attached to the door
- if the handover protocol and the installation and operating manuals for the operator and the door are present
- as specified in this installation and operating manual
- in good technical condition
- with attention to safety and hazards by trained users
1. About this installation and operating manual

1.9 Improper use of the operator

Any other use or additional use that has not been described in Chapter 1.8 is considered improper use. The user bears the sole responsibility for any related damage.

The manufacturer's warranty will be voided by:
- Damage caused by other use and improper use
- Use with defective parts
- Unauthorized 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 evacuation path, or an emergency exit that automatically closes the door in the event of fire. Installation of the operator will prevent automatic closing.

Observe 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 affect 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 with a mark of conformity and a plate to the door system. This applies if the operator is retrofitted to a manually operated door. In addition, a handover protocol and an instruction book must be completed.

The following is available:
- EC Declaration of Conformity
- Handover protocol for the operator
- EC Declaration of Conformity
- Handover protocol and instruction book
- The installation and operating manuals for the operator and the door

Trained qualified specialist for installation, commissioning and disassembly

This installation and operating manual must be read, understood and applied with by a qualified person who is all or performs maintenance on the operator. Work on the electrical system and parts may be performed only by a trained electrician in accordance with EN 50110-1.

The installation, commissioning and dismantling of the operator may only be performed by a qualified person. The qualified person must be familiar with the following standards:
- EN 13241-1 Doors and gates
- EN 12604 Doors and gates - Requirements
- EN 12605 Doors and gates - Testing methods
- EN 12445 and EN 12453 - Safety in use of power-operated doors

A qualified person is a person ordered by the installer. The qualified person 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 use must only be performed by a qualified person:
- In all, all of the series
- All things
- Regular maintenance, testing and repairs

The following documents for the door system must be handed over to the user:
- EC Declaration of Conformity
- Handover protocol and instruction book
- The installation and operating manuals for the operator and the door

http://som4.me/konform
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.

The following documents for the door 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 and in the associated hazards
- operation
- maintenance, inspection and care by a qualified person
- troubleshooting and repair by a qualified specialist

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

Children must not play with or use the operator under any circumstances. Children must be kept away from the operator. Handheld transmitters or other control devices must 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 applicable standards in Germany. In other countries the user must comply with the applicable national regulations.

The guideline "Technische Regeln für Arbeitsstätten ASR A1.7" of the German committee for workplaces (ASTA) is applicable for commercial use. The guidelines described must be observed and applied. This applies for the user 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 ability 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 control devices must not 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.
- In the event of a power failure, replacement of electrical components must be carried out by a trained electrician.
- Do not connect the mains plug before working on the operator.
- If an accumulator or battery is not connected, do not work on the operator.
- Check that the operator is not live.
- Secure the operator against being live and unsafe.

⚠️ 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.

⚠️ WARNING
Danger of 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 from outside.
- You must have faults repaired professionally without delay.
2. General safety instructions

**WARNING**

Danger due to projecting parts!
Gate leaves or other parts must not project into public roads or 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 b e a r ear 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 b ear ear 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 b ear ear 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 pulley 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 transmitter so that unauthorised and 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 components 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!
If the door is not visible and the radio control is operated, crushing and shearing injuries to persons or animals may be caused by the mechanism and safety edges of the door.

► In particular, when operating control elements like the radio, all danger zones must be visible during the entire door operation.
► Always keep the moving door in sight.
► Keep persons and animals away from the range of movement of the door.
► Never put your hand near the door when it is moving or near moving parts.
► Do not drive through the door until it has opened completely.
► Store the handheld transmitter at unauthorized dental operation, e.g., by children or animals.
► Never stand 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. Objects must not be in the range of movement of the door.

The user of the radio system is not protected from faults due to other telecommunications equipment or devices. This includes radio-controlled systems that are needed 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

![Door Structure with Operator](image)

Fig. Door structure with operator

Setional doors and other doors can be opened and closed with the electrically powered operator and its accessories. The operator control unit can be controlled with a handheld transmitter.

The track is mounted on the ceiling and the lintel above the garage door. The carriage is attached to the door by a push arm. The carriage moves along the track on a spring-mounted rail 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 ceiling control unit is available as an accessory. It is automatically activated during operation.

For more information on using the operator with different doors 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 or from the outside with a Bowden wire or emergency release lock.

For more information, contact your specialist dealer.

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3. Description of function and product

3.3 Product designation

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 10 mm
- Fork spanner 10/13/17 mm
- Ratchet driver 10/13/17 mm

**Other symbols**
- Drilling depth
- Audible engaging or clicking noise
3. Description of function and product

3.5 Scope of delivery

1) Ceiling control unit
2) Track, pre-assembled with 1 x guide idler, chain and motor carriage

2.1 Isolator, pre-assembled on the chain
3) Connecting sleeve, 2 x
4) Track, 2 x
5) Plug-in unit, pre-assembled
6) Ceiling holder, 2-part
7) Perforated rip, angled, 2 x
8) Screw M8 x 20 mm, 2 x
9) Hexagonal nut Ng M8, 2 x
10) S10 wall plugs, 4 x
11) Washer, 4 x
12) Screw 8 x 60 mm, 4 x
13) Lintel brake, t, 2 x
14) Hexagonal nut, If-locating 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 brake, t
21) Combination self-tapping screw, 4 x
22) Handheld transmitter, preprogrammed, channel 1 pulse sequence, with CR 2032, 3 V lithium battery
23) Information sticker for garage interior
24) Installation and Operating Manual

When unpacking make sure that all articles are included in the package. 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

<table>
<thead>
<tr>
<th></th>
<th>CarTeck DRIVE 500</th>
<th>CarTeck DRIVE 600</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated voltage</strong></td>
<td>220 V – 240 V AC</td>
<td></td>
</tr>
<tr>
<td><strong>Rated frequency</strong></td>
<td>50/60Hz</td>
<td></td>
</tr>
<tr>
<td><strong>Memory locations in radio receiver</strong></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td><strong>Operating time</strong></td>
<td>S3 = 40 %</td>
<td></td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>–25 °C to +65 °C</td>
<td></td>
</tr>
<tr>
<td><strong>Emission value according to operating environment</strong></td>
<td>&lt; 59 dBA – operator only</td>
<td></td>
</tr>
<tr>
<td><strong>IP protection class</strong></td>
<td>IP21</td>
<td></td>
</tr>
<tr>
<td><strong>IP-code</strong></td>
<td>I1</td>
<td></td>
</tr>
<tr>
<td><strong>Travel length max.</strong></td>
<td>2,750 mm</td>
<td></td>
</tr>
<tr>
<td><strong>Travel length including extension max.</strong></td>
<td>3,800 mm (2x 1,096 mm)</td>
<td>4,900 mm (2x 1,096 mm)</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>180 mm/s</td>
<td>240 mm/s</td>
</tr>
<tr>
<td><strong>Max. pull and pushing force</strong></td>
<td>500 N</td>
<td>600 N</td>
</tr>
<tr>
<td><strong>Rated pull force</strong></td>
<td>150 N</td>
<td>180 N</td>
</tr>
<tr>
<td><strong>Rated power consumption</strong></td>
<td>95 W</td>
<td>95 W</td>
</tr>
<tr>
<td><strong>Power consumption (max. load)</strong></td>
<td>350 W</td>
<td>350 W</td>
</tr>
<tr>
<td><strong>Rated current consumption</strong></td>
<td>0.5 A</td>
<td>0.5 A</td>
</tr>
<tr>
<td><strong>Power consumption in power-saving mode</strong></td>
<td>CarTeck DRIVE 500 &lt;3 W</td>
<td>CarTeck DRIVE 600 &lt;1 W</td>
</tr>
<tr>
<td><strong>Max. door width/ door height</strong></td>
<td>Sectional doors: H 1,875 – 2,500 mm W 2,000 – 5,500 mm</td>
<td>One piece doors: H 1,875 – 2,750 mm W 2,000 – 3,000 mm</td>
</tr>
</tbody>
</table>

* Depending on door and the operating conditions

** Values apply without lighting
3. Description of function and product

3.8 Door types and accessories

<table>
<thead>
<tr>
<th>Door type</th>
<th>Accessories</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>One piece door</td>
<td>No accessories required</td>
<td><strong>One piece door not included in the scope of delivery</strong></td>
</tr>
<tr>
<td>Sectional door with single track</td>
<td>Sectional door fitting with curved push arm*</td>
<td><strong>The standard fitting can also be used depending on the installation type. Custom fittings are not included in the scope of delivery.</strong></td>
</tr>
<tr>
<td>Sectional door with double track</td>
<td>Sectional door fitting without curved push arm**</td>
<td><strong>For more information on accessories such as tracks, additional locking mechanism, custom fittings or different transmitters, contact your specialist dealer or see:</strong></td>
</tr>
<tr>
<td>Up-and-over door</td>
<td>Curved arm*</td>
<td><strong><a href="http://www.sommer.eu">www.sommer.eu</a></strong></td>
</tr>
<tr>
<td>Side-opening door, sectional door</td>
<td>Side-opening/Sectional door fitting**</td>
<td><strong>For more information on accessories and products, see:</strong></td>
</tr>
</tbody>
</table>

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

A number of accessories are available for the operator. Here are a few examples:

Accessories | Function |
---|---|
SenS | Pluggable humidity sensor<br>If humidity is high, the garage door automatically opens a bit, providing ventilation |
Memo (red housing) | Pluggable EEPROM<br>Memory for expanding the capacity of transmitter commands from 40 internal to 450 external |
Lock | Pluggable locking magnet<br>For mechanical locking of the motor and therefore improvement of break-in protection |
Alarm/warning buzzer | Pluggable acoustic signal generator<br>Option of alarm tone when a break-in attempt occurs or a warning tone in the case of a wicket door or a power failure |
Laser | Pluggable parking position laser<br>The parking end position is displayed by a laser point on the dashboard |
Battery pack | Monitor<br>Operator is applied with power during a power failure |

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4. Tools and protective equipment

4.1 Required tools and personal protective equipment

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

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 or ended 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.
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 1B

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

hereby declare that the control units CarTeck DRIVE 500, CarTeck DRIVE 600 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 control systems - 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 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 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 only to form a complete machine as defined by the Machinery Directive 2006/42/EC. The door may only be put into operation after it has been established that the complete machine complies with the regulations of the above EC Directive.

The undersigned is responsible for compilation of the technical documents.

Kirchheim, 01-12-2017

i.V.
Jochen Lude
Responsible for documents

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6. Installation

6.1 Important information on installation

In particular, please observe and comply with the following safety instructions to ensure safe installation. People under the influence of drugs, alcohol, or medications that 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 indirect entrance to the garage, you must have a release lock or a Bowden wire for unlocking from the outside installed. This must be used to free persons who cannot free themselves.

**WARNING**

Danger due to projecting parts!
Gate leaves or other parts must not project into public roads or 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 balanced, springs may break suddenly. Falling door parts may cause serious injury or death.
Check:
► the ability 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 ability of the ceiling and the walls.
► Use only permissible mounting materials appropriate for the supporting surface.

**WARNING**

Danger of entrapment!
Loose clothing or long hair may be trapped by moving parts of the door. Severe injuries or death may result.
► Keep clear of the moving door.
► Always wear tight-fitting clothing.
► Wear a hairnet if you have long hair.
6. Installation

**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 stand and 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 match 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 mechanism and weight balance

**WARNING**
Danger due to falling parts of doors or complete door panels!
Wires, spring sets and other fittings can be damaged and break. The door panel may 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 ensure the following and adapt if necessary:
► wires, spring sets and other fittings of the door.
► the weight balance 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 trained 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.

1. Check the mechanism of the door, as wire cables, spring sets and other fittings...
6. Installation

6.3 Installation of 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.

---

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 doors), the operator's emergency release must be operable from outside. The emergency release must also be routed to be accessible from the outside. This can be done with a Bowden wire or a release lock. Ask your specialist dealer.

Adjusting the top roll of a sectional door

---

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 pe of delivery, after "3.5 Scope of delivery".

---

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 adjusted if necessary.
The top roll must be routed over the roller.
6. Installation

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

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

Fig. 4
4. Plug in the ceiling control unit to the track behind the guide idler.
   Lay the chain over the guide idler.

Fig. 5
5. Rotate the chain 90° and insert it into the chain holder of the ceiling control unit.
   Rotate the chain back 90°.

Fig. 6
6. Plug the plug-in unit onto 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.
   Rotate the chain back 90°.
   ⇒ The entire chain is attached.

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6. Installation

8. Tens on the b ain to the mark on the plug-in unit, e e arrow in the detailed v ew.

9. Screw the two header bracke ts to the plug-in unit with bolt and nut.

10. Turn the track to inst all the e iling bracke t. The distance between the e iling o ntrol unit and the e iling holder sould be 100 - 700 mm. Place the e iling holder on the track and slide into one another.

11. Fasten the perforated strips to the e iling holder on the right and left. Alse obse re the distance s for inst allation to the e iling or lintel.

⇒ The track is prepared for the remainder of the inst allation.

For further inst allation, e e Chapter "6.4 Installation on the door".

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

C = 120 - 160
6. Installation

Version 2

![Diagram of Version 2]

Version 3

![Diagram of Version 3]

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

Fig. 1.2 Highest point for a sectional door

INFORMATION

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

1. Measure the highest point of the door "X" depending on the type of door:
   - Open the door and measure the 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

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6. Installation

**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.

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.

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.

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.

8. Align the operator parallel to the tracks of the door to prevent damage to the operator and the tracks.

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

**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.

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

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6. Installation

9. Align the track parallel to the center of the door at the rear.
   Align the ceiling bracket.
   The distance between the ceiling control unit and the ceiling holder should be 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 on the ceiling for the ceiling holder.
    Drill two holes (Ø 10 x 65 mm deep).
    Insert the wall plugs.
    Insert two screws with washers and screw the perforated strip to the ceiling.
    Tighten the screws.
    ⇒ The track is attached to the ceiling.

11. The perforated strips must be shortened.

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.
6. Installation

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

14. Plug the push arm into the door bracket. Insert the bolt and slide on the safety bolt.

15. Align the door bracket with the center 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.

16. Open the door completely by hand. If the door rubs against the operator or the tracks, the operator must be offset.

**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 the ended parts

**NOTE**

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

16. Open the door completely by hand. If the door rubs against the operator or the tracks, the operator must be offset.

⇒ The guide idler moves automatically with the motor carriage.

**NOTE**

Do not push the door all the way to the mechanical stop. This is because the operator will then 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 guide idler can be subsequently pushed under the chain and screwed into the track. Then screw the guide idler tightly to the track at the respective spot.
6. Installation

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

![Fig. 18](image1)
![Fig. 19](image2)

⇒ Installation of the operator is complete.

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.

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 no part of the door projects into public footpaths or roads

WARNING
Danger due to projecting parts!
Gate leaves or other parts must not project into public roads or 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
7. Removing and fastening covers

7.1 Cover of the motor carriage

Observe in particular the following safety instructions for this chapter.

⚠️ **WARNING**

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

► 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.

Removing cover

![Fig. 1](image1)

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

Installing cover

![Fig. 1](image2)

1. Insert the cover from the front and lock it to the motor carriage at the back.
7. Removing and fastening covers

7.2 Cover of the ceiling control unit

Observe in particular the following safety instructions for this chapter.

⚠️ **DANGER**

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

- ► All work on electrical components may only be carried out by a trained electrician.
- ► 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.
- ► Ensure the operator against being accidentally switched 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.

Unscrewing cover

Fig. 1

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

Fig. 2

2. Unscrew and remove the cover from the ceiling control unit.

Fig. 3

3. If an accumulator is used, unscrew the cover carefully. The accumulator is loose in the cover.
   Disconnect the accumulator plug from the circuit board.

Installing the cover

Fig. 4

1. After working on the ceiling control unit replace the operator in reverse order.

2. Connect the operator to the mains voltage.
   Check that the power supply is disconnected.
   ⇒ The operator is supplied with mains voltage.
8. Electrical connection

8.1 Connection to a power socket
A power socket is required for the electrical connection of the operator.
A power socket must be installed by trained electricians only. The power socket must be protected by a fuse. Local and national regulations must be observed (e.g. VDE).
People under the influence of drugs, alcohol, or medications that 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 may only be carried out by a trained electrician.
► Before inserting the mains power plug for the first time, ensure that the voltage of the power supply matches the voltage listed on the operator type plate.
► Do not connect the mains 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.

INFORMATION
The power socket must be installed as follows:
• within easy reach of the ceiling control unit power cable
• easily visible and clear of obstacles

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

NOTE
Do not connect the ceiling control unit to the power supply until the installation is complete to prevent damage to the operator.
9. **Commissioning**

9.1 **Safety information for commissioning**

Observe in particular the following safety instructions for this chapter.

----

**WARNING**

**Danger of entrapment!**

Persons 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 when it is moving or near moving parts in the path, 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.

---

**NOTE**

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

**INFORMATION**

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

**INFORMATION**

If a 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.

---

**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.

---

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9. Commissioning

9.2 Initial operation

Before initial operation, read this chapter with special care to ensure that you 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 setting is relevant to safety and must be carried out by a trained specialist.
- You must proceed with extreme caution if you check 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 to set the DIP switches, such as a flat, thin plastic object.

**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 must be let out and on the motor carriage with the DIP switch.

The factory setting of the DIP switch on the motor carriage is "OFF", which is then applicable for sectional doors.

<table>
<thead>
<tr>
<th>DIP switch on motor carriage</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Automatic closing function activated</td>
<td>• Automatic closing function deactivated</td>
</tr>
<tr>
<td>2</td>
<td>• Partial opening deactivated / lighting function activated</td>
<td>• Partial opening deactivated / lighting function deactivated</td>
</tr>
<tr>
<td>3+4</td>
<td>• Auto closing function activated</td>
<td>• Auto closing function deactivated</td>
</tr>
<tr>
<td>3</td>
<td>• Partial opening deactivated / lighting function deactivated</td>
<td>• Partial opening deactivated / lighting function activated</td>
</tr>
<tr>
<td>4</td>
<td>• Partial opening deactivated / lighting function activated</td>
<td>• Partial opening deactivated / lighting function deactivated</td>
</tr>
</tbody>
</table>

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

**INFORMATION**

During initial operation:

- Stay in the garage, particularly when programming.
- Obstacle detection has not been coordinated with the door, and the operator is in the programming phase.

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

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.
   Press button 1 briefly 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 guide idler.
   ⇒ The operator lighting flashes.

Fig. 3

3. Press button 1 on the handheld transmitter again briefly.
   ⇒ The motor carriage moves only in the door CLOSE direction.
   ⇒ The operator lighting flashes.
   The motor carriage switches off automatically when it reaches the factory setting 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 sec) to the end position.
   ⇒ The operator lighting flashes briefly in a fast queue.
   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 operator 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 end run.
   ⇒ The door automatically returns to the door CLOSE end position.
   ⇒ 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.

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 readjust the end positions, see Chapter "9.4 Mechanical adjustment of the end positions".
9. Commissioning

9.3 Detecting obstacles during the force programming run

If the door detects an obstacle during its first door CLOSE movement and the force programming runs are not 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 runs briefly and moves 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 transmitter until the motor runs briefly.
   Release button 1 on the handheld transmitter.
3.1 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 runs automatically for the door OPEN end position.
   ⇒ The motor runs automatically for the door CLOSE end position.

If an obstacle is detected again, the motor runs and re-starts.

1. **Press and hold** button 1 on the handheld transmitter.
   ⇒ The motor runs without jerking, because the end position of the door is already reached.
   ⇒ The motor moves to the end position.
2. Release button 1 on the handheld transmitter.
3. Press button 1 on the handheld transmitter briefly.
   ⇒ **Restart automatic force programming runs.**
   ⇒ On completion of the force programming runs the motor runs automatically to the door OPEN end position.
   ⇒ The LEDs of the operator lighting remain steady.
   ⇒ Operator is programmed and ready for use.

9.4 Mechanical adjustment of the end positions

**Increasing the closing pressure of the end position for door CLOSE**

![Fig. 1](image1)

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

**Reducing the closing pressure of the end position for door CLOSE**

![Fig. 1](image2)

1. Loosen the screws on the guide idler and move the guide idler a few millimetres towards door OPEN. Re-tighten the screws.

**NOTE**
Do not push the door all the way to the mechanical stop. This is because the operator will then 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.
9. Commissioning

9.5 Attaching information sign and warning signs

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 at a highly visible section of the gate leaf

2. Run 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

2. MAGNET slot*, green
   Lock terminal

3. LIMIT slot, blue
   Limit terminal (OPEN)

4. Circuit board label

5. LEDs, operator lighting

6. MEMO slot*
   Memo terminal

7. USART slot*
   Interface

8. BUZZER slot*, black
   Warning or alarm buzzer terminal

9. SNSO slot*
   Sensor terminal

10. LASER slot*, white
    Parking position laser terminal

11. MOTION slot*, white, 3-pin
    Terminal for movement sensor

12. Terminal for safety contact strip*
    8k2/OSE

13. Terminal for wired door safety device
    Potential-free

14. Status LED, green

15. Reset button, green

16. DIP switches

17. Radio button, red (radio)

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

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

<table>
<thead>
<tr>
<th>Circuit board section</th>
<th>Function/ application example</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAGNET slot*, green</td>
<td>Limit terminal, Loκ ϊ ng magnet</td>
</tr>
<tr>
<td>MEMO slot*</td>
<td>Memo terminal, Memory anς on for 450 tranς iter ω mands</td>
</tr>
<tr>
<td>USART slot*</td>
<td>Terminal, e.g. for home automation module</td>
</tr>
<tr>
<td>SENSO slot*</td>
<td>Senς terminal, Humidity e nς r</td>
</tr>
<tr>
<td>BUZZER slot*, black</td>
<td>Warning or alarm buzzer terminal</td>
</tr>
<tr>
<td>LASER slot*, white</td>
<td>Parking poς i on laς r terminal</td>
</tr>
<tr>
<td>MOTION slot*, white</td>
<td>Terminal for moς e nt η nsor 3-pin</td>
</tr>
<tr>
<td>Terminal for safety contact strip 8k2*</td>
<td></td>
</tr>
<tr>
<td>Terminal for OSE safety contact strip*</td>
<td>+ 12 V = br OSE = gn GND = wh</td>
</tr>
<tr>
<td>Terminal for wicket door safety device</td>
<td>(Wicke t door w itb , Reed o ntat etc.) potential-free o ntat o mmand (12 V DC, 10 mA) NC o ntat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Circuit board section</th>
<th>Function/ application example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal for output +12 V DC*</td>
<td>max 100 mA +12 V GND = wh Power a pply for optional accessories, option of finger e r ner or e xternal lighting</td>
</tr>
</tbody>
</table>

*The e r on a n a ry depending on the τ e. This means the use of e ries a n a ry.

For more information on the e ries o ntat o ur e c al dealer or e e: www.sommer.eu
Obse re in particu lar the following a fety inς r 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 elek tric k o mponents may only be a rried out by a trained electrician.
► Do not o ntat a ries unles the operator is dis e nt ed from the power a pply.
► Die nent h the mains plug before working on the operator.
► If an ak lulator is o ntat ed, die nent it from the o ntr ol unit.
► Cheκ that the operator is not li e.
► Seς e the operator again being w itb ed baς on.
10. Connections and special functions of the motor carriage

10.3 Reducing illumination power of LEDs

![WARNING]

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

▶ Never look directly into an LED.

The illumination power of the LEDs can be reduced during adjustment work by pressing the reset button or radio button once briefly.

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

10.4 Explanation of the radio channels

<table>
<thead>
<tr>
<th>LED</th>
<th>Radio channel</th>
<th>Setting/function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CH 1</td>
<td>Pulsed mode</td>
</tr>
<tr>
<td>2</td>
<td>CH 2</td>
<td>Partial opening or lighting function</td>
</tr>
<tr>
<td>3</td>
<td>CH 3</td>
<td>Defined OPEN</td>
</tr>
<tr>
<td>4</td>
<td>CH 4</td>
<td>Defined CLOSE</td>
</tr>
</tbody>
</table>

2. Press the desired button on the transmitter until the previous LED (CH 1, CH 2, CH 3, CH 4) is off.
⇒ LED goes out - programming is complete.
⇒ The transmitter has transferred the radio code to the receiver.

3. Repeat the above steps to program additional transmitters.

**INFORMATION**

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

If the memory capacity has been reached
A total of 40 handheld transmitters 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".

10.5 Programming the transmitter

**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 radio channel.

**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 out 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.

<table>
<thead>
<tr>
<th>LED</th>
<th>1 x</th>
<th>2 x</th>
<th>3 x</th>
<th>4 x</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 1</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 2</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 3</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 4</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
</tbody>
</table>

⇒ The LED flashes after 15 seconds.
2. Release the radio button.
⇒ The radio receiver is in deletion mode.
3. Press any button on the transmitter that is being deleted.
⇒ LED goes out.
⇒ The deletion procedure is cancelled.
⇒ The transmitter is deleted from the radio receiver.
Repeat the procedure 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.

<table>
<thead>
<tr>
<th>LED</th>
<th>1 x</th>
<th>2 x</th>
<th>3 x</th>
<th>4 x</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 1</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 2</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 3</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
<tr>
<td>CH 4</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
<td>ो</td>
</tr>
</tbody>
</table>

⇒ The LED flashes after 15 seconds.
⇒ After another 5 seconds the LED 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 flashes after 15 seconds.
⇒ After another 5 seconds the flash sequence changes to flashing.
⇒ 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 transmitter by radio (HFL)

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

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

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

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

Restriction
The following setting is not possible:
• The targeted teach-in of a selected handheld transmitter button on a radio channel.

2. Press buttons 1 + 2 of a programmed handheld transmitter (A) for 3 - 5 seconds until the LED briefly lights up on the handheld transmitter.
   ⇒ The operator lighting flashes.

2. Release buttons 1 + 2 of the handheld transmitter (A).
   ⇒ If a radio command is not transmitted within another 30 seconds the radio receiver is switched to normal mode.

3. Press any key, e.g. (3) on the new handheld transmitter (B) to be programmed.
   ⇒ The LEDs of the operator lighting remain steady.

10.13 Resetting the control unit

<table>
<thead>
<tr>
<th>1 s</th>
<th>5 s</th>
<th>10 s</th>
<th>15 s</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="RADIO" alt="LED" /></td>
<td><img src="RESET" alt="LED" /></td>
<td><img src="STATUS" alt="LED" /></td>
<td></td>
</tr>
</tbody>
</table>

Reset of the safety inputs
Force values deleted
Position values and frame photo eye deleted
Settings restored

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 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 LED flashes quickly.
   ⇒ Force and position tion deleted.
   ⇒ Frame photoe ey deleted.

Reset
1. Press the green reset button on the motor carriage for 15 seconds until the green LED goes out.
   ⇒ The reset is performed.
10. Connections and special functions of the motor carriage

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 switches.

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 to set the DIP switches, such as a flat, thin plastic object.

<table>
<thead>
<tr>
<th>DIP switch on motor carriage</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1" alt="DIP Switch" /></td>
<td><img src="image2" alt="DIP Switch" /></td>
</tr>
<tr>
<td>2</td>
<td><img src="image3" alt="DIP Switch" /></td>
<td><img src="image4" alt="DIP Switch" /></td>
</tr>
<tr>
<td>3</td>
<td><img src="image5" alt="DIP Switch" /></td>
<td><img src="image6" alt="DIP Switch" /></td>
</tr>
<tr>
<td>4</td>
<td><img src="image7" alt="DIP Switch" /></td>
<td><img src="image8" alt="DIP Switch" /></td>
</tr>
</tbody>
</table>

- **Automatic closing function activated**
- **Automatic closing function deactivated**
- **Partial opening activated / lighting function deactivated**
- **Partial opening deactivated / lighting function activated**

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 OPEN end position.

The door automatically closes after the hold open time.

With the factory settings, the door automatically closes 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. This may cause serious or fatal injury.

► 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 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 wire bridges is not permitted.

1. Close the door.
2. Set DIP switch 1 to ON.
3. The hold open time of the door is 30 seconds.
10. Connections and special functions of the motor carriage

Every new command within 30 seconds restarts the hold open time. If button 1 on the transmitter is pressed, the door moves to door OPEN end position. 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 preset 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 set 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 preset in the factory setting. Program the desired red handheld transmitter button on 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 on the motor carriage can be switched on and off with the 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 Lumi+ and the relay accessory. The Lumi+ is an LED strip with 12 LEDs (24V, 7W). It can be attached to the ceiling control unit as supplementary lighting.

Parallel to the operator lighting, the Lumi+ and relay are switched on with the "Start" impulse. The light burning time is 180 seconds. If the light function is activated via CH 2 radio channel, the operator lighting, the Lumi+ and the relay can be switched on and off separately. This does not trigger a travel command.

After 60 minutes, the operator lighting, the Lumi+ or the relay are switched off automatically. The Lumi+ and the relay accessory are purchasable from your specialist dealer or at:

www.sommer.eu

10.17 Setting partial opening

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

Example:

A side-opening door can be opened to allow a person to pass through. The partial opening is only be used via a radio control or button 2. See Chapter "11.4 Button 2 for partial opening".

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10. Connections and special functions of the motor carriage

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

**INFORMATION**
A partial opening function can only be programmed with automatic closing deactivated.

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 carriage to ON.
4. Press the desired button on the transmitter for the partial opening function.
   ⇒ The door moves in the 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.

10.18 Deleting partial opening

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

To program a new position, see Chapter "10.17 Setting partial opening".

10.19 Wicket door safety device

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

1. The wicket door must be installed so that the switch reliably detects the open door. Do not install the wicket door a few millimeters 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 burning time and then switches off. The burning 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 blinking light.

10.20 12 V output

The use of the 12 V output depends on the version of the motor carriage board.

This output can be used for the power supply of external accessories. The 12 V output offers 2 operating modes:

- **Operating mode 1 (factory setting)**
  - Power supply for e.g., finger scanners mounted in the door panel.
  - Power-saving mode must be deactivated for this operating mode. Set DIP switch 3 on the ceiling control unit to ON.
  - See Chapter "14.5 Power-saving mode."

- **Operating mode 2 (external lighting)**
  - In this operating mode, e.g., external lighting only be powered by the CH2 radio channel, for e.g., LED lighting with LEDs. This operating mode can only be activated via SOMlink and a WiFi-enabled device.

Fig. Output 12 V
10. Connections and special functions of the motor carriage

In the "External lighting" operating mode, the OSE/8K2 safety device cannot be used on the motor carriage.

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

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 by 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 ceiling control unit

11.1 Ceiling control unit circuit board

Connection options to the ceiling control unit

1. DIP switches
2. ACCU slot
3. Slot, KEYPAD, black
4. Slot
5. 2-pin terminal block
6. 2-pin terminal block
7. 2-pin terminal block
8. Circuit board label
9. 2-pin terminal block
10. Light slot, white
11. 8-pin terminal block

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

A connection diagram can be found in Chapter “19. Connection diagrams and functions of the DIP switches”.

*The use of accessories can vary depending on the type. This means the use of accessories can vary.
11. Connections and special functions of the ceiling control unit

11.2 Connection options of the ceiling control unit

Observe the following safety instructions for this chapter.

⚠️ WARNING
Danger of crushing and shearing!
The door can be actuated by a button. Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.
► Keypads and other control devices may only be installed within view of the door only.
► Only use keypads or other control devices when you can see the movement 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 stand 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 cool down before removing the cover.

NOTE
Never lay the control cable along a power line as this could cause interference in the control unit. Note the length of the control cable and install it correctly.
### 11. Connections and special functions of the ceiling control unit

<table>
<thead>
<tr>
<th>Circuit board section</th>
<th>Function/application example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCU slot</td>
<td>ACCU mulator terminal</td>
</tr>
<tr>
<td>Slot, KEYPAD, black</td>
<td>Conex connection</td>
</tr>
<tr>
<td>Relay slot</td>
<td>Switching capacity</td>
</tr>
<tr>
<td></td>
<td>max 240 V AC, 5 A</td>
</tr>
<tr>
<td></td>
<td>max 24 V DC, 5 A</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Supply voltage</td>
</tr>
<tr>
<td></td>
<td>220 - 240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Primary side transformer</td>
</tr>
<tr>
<td></td>
<td>220 - 240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Secondary side transformer</td>
</tr>
<tr>
<td></td>
<td>24 V AC</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Chain and track</td>
</tr>
<tr>
<td></td>
<td>24 V DC</td>
</tr>
<tr>
<td>Light slot, white</td>
<td>Supplemental lighting</td>
</tr>
<tr>
<td></td>
<td>Lumi+</td>
</tr>
<tr>
<td>External accessories</td>
<td>+24 V DC (terminal block photocell)</td>
</tr>
<tr>
<td></td>
<td>GND = rt (terminal block chain/track)</td>
</tr>
<tr>
<td></td>
<td>max 100 mA</td>
</tr>
<tr>
<td></td>
<td>(max 500 mA if an LED warning light with a max of 3 W or no warning light is on)</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Button</td>
</tr>
<tr>
<td></td>
<td>Potential-free</td>
</tr>
<tr>
<td>2-pin terminal block</td>
<td>Warning light</td>
</tr>
<tr>
<td></td>
<td>+24 V DC, max 25 W</td>
</tr>
</tbody>
</table>

**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.

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

For more information on the accessories contact your specialist dealer or see: [www.sommer.eu](http://www.sommer.eu)

---

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

---
11. Connections and special functions of the ceiling control unit

11.3 Setting the DIP switches on the ceiling control unit

Special functions can be set with the DIP switches on the ceiling control unit. All DIP switches are set to OFF by default.

**NOTE**

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

<table>
<thead>
<tr>
<th>DIP switches on the ceiling control unit</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
<tr>
<td>2</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
</tr>
<tr>
<td>3</td>
<td><img src="image5.png" alt="Diagram" /></td>
<td><img src="image6.png" alt="Diagram" /></td>
</tr>
<tr>
<td>4</td>
<td><img src="image7.png" alt="Diagram" /></td>
<td><img src="image8.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

* e.g.: door status dip switch

---

11.4 Button 2 for partial opening

If required, another button can be networked 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 ceiling 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 ceiling control unit.

**INFORMATION**

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

---

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. The keypad on the ceiling control unit must be firmly red to prevent displacement.

Installation of the control cable and settings on the ceiling control unit

1. Disconnect the operator from the mainsgallery. Check that the operator is disconnected from the power supply.
2. Unplug the operator from the ceiling control unit.
3. If an accumulator is used, it must also be disconnected, see Chapter "11.11 Installing and removing the accumulator".
4. Remove the control unit cover.

---

Fig. 5  Fig. 6
11. Connections and special functions of the ceiling control unit

5. Connect the cable of button 2 to the terminal block for COM and Signal.
⇒ Button 2 is connected.

6. Set DIP switch 4 on the wall device to ON.

7. Plug in the cable for the button and for the accumulator, if necessary.

8. Close the ceiling control unit in reverse order, see Chapter "11.11 Installing and removing the accumulator" and "7.2 Cover of the ceiling control unit".

9. Supply the operator with the mains voltage.

Settings on the motor carriage
To determine the partial opening 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.

11.5 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".

11.6 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 version it is and sets itself to that version.

Fig. Terminal for a 2-wire photocell

<table>
<thead>
<tr>
<th>WL</th>
<th>24V/1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM</td>
<td>Signal</td>
</tr>
<tr>
<td>GND</td>
<td>+24V</td>
</tr>
</tbody>
</table>

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 Resetting the control unit."

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

INFORMATION
During commissioning, the frame photocell must not be interrupted by persons or objects.

Frame photocell

1. Install all the frame photocells in the frame, separate installation instructions.

2. Align the frame photocells and connect to the ceiling control unit.
11. Connections and special functions of the ceiling control unit

3. Commissioning is performed as described in Chapter "9. Commissioning".

⇒ If the door passes the frame photo cell, the illumination power of the operator lighting is reduced.

If the illumination power is not reduced, the frame photo cell must be realigned and the control unit must be reset.

⇒ During commissioning, the operator learns the exact position of the frame photo cell in order to blank it out in normal mode shortly before reaching the door.

4. Check the frame photo cell function.

11.7 Wall station

Other functions are available with the wall station. For example, a travel command can be executed, the lighting can be switched on or off or the operator can be locked. The selection of the locked areas can be changed via SOMlink. The connection features a polarity-protected 2-wire bus.

The wall station is only supported by operators from 07/2017.

![Fig. Wall station](image)

Functions of the buttons

- Opening, stopping and closing the door
- Turning the lighting on and off
- Locking or unlocking the operator

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 wall station is ready for operation and the operator is not locked.

1. Press the button (2).

⇒ Operator lighting is on

2. Pressing the button (2) again switches the operator lighting 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 turned off when the operator is moving.

Locking or unlocking the operator

Unauthorized access can be prevented by locking the operator. For example, in the absence of the user.
11. Connections and special functions of the ceiling control unit

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)
- Sense ventilation function
- Control device (corded external button)

To lock:
The button (2) on the wall station lights up green when the operator is unlocked. The button (2) lights up red when the operator has been locked by the wall station.

1. Press and hold the button (3) for at least 5 seconds with the door closed.
   ⇒ Button (2) flashes green.
   ⇒ After 5 seconds the 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 deactived.
   ⇒ 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.

11.8 Conex

Two corded external buttons are connected to the KEYPAD and the Conex accessory part.
The function of the external buttons is configured via a DIP switch 1 of the ceiling control unit. The factory setting of DIP switch 1 is OFF.

![KEYPAD diagram]

INFORMATION
The Conex accessory part is plugged into the KEYPAD slot, see separate "Conex" instructions.

<table>
<thead>
<tr>
<th>DIP switches of the ceiling control unit</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&quot;Conex&quot; additional circuit board</td>
<td>&quot;Conex&quot; additional circuit board</td>
</tr>
<tr>
<td></td>
<td>T1 defines door OPEN</td>
<td>T1 pulse queue</td>
</tr>
<tr>
<td></td>
<td>T2 defines door CLOSE</td>
<td>T2 lighting function/partial opening</td>
</tr>
</tbody>
</table>

11.9 Output OC

The door status display can be shown with the Output OC (open collector output) accessory part. Set DIP switch 2 on the ceiling control unit to ON.

![Relay slot for Output OC]

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. Connections and special functions of the ceiling control unit

11.10 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 switch. See also chapter "11.3 Setting the DIP switches on the ceiling control unit".

Fig. Relay slot

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

11.11 Installing and removing the accumulator

In the event of a power failure, the accumulator can bridge approx. 5 cycles within 12 hours. 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 ceiling control unit.

**INFORMATION**
Only an original accumulator from SOMMER may be used.

**INFORMATION**
Commissioning is not supported if the accumulator is the sole power supply. Mains voltage is required for commissioning 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**

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

2. Unscrew and remove the cover from the ceiling control unit.

3. Place the accumulator loosely in its position in the operator and plug the accumulator plug into the control board in the ACCU slot.

4. Screw on cover.

---

Fig. 1

Fig. 2

Fig. 3

Fig. 4
11. Connections and special functions of the ceiling control unit

5. Attach the sticker "ACCU INSIDE" to the outside of the housing in a highly visible place.

6. Run a function test.
   ⇒ Pull the power plug out of the power outlet.
   ⇒ The operator is powered by the accumulator.

7. Press the button on the handheld transmitter.
   ⇒ Operator opens or closes the door at reduced speed.

8. Connect the operator to the mains voltage.
   Check that the power supply is connected.

Removing the accumulator
The accumulator is removed in the reverse order, see Chapter "11.11 Installing and removing the accumulator", section "Installing 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.

---

NOTE

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

INFORMATION

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

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.
12. twin operation

12.1 twin operation

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

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.

INFORMATION
Master and slave are assigned regardless of the installation.

1. Install the operators on the two doors as described in the Chapter "6. Installation".
   - Insert the control unit into one track.
   - Insert the plug-in unit with the connection cable into the other track.

2. Connect the operator without the ceiling control unit, the master (2), to the control unit parallel to the terminal block for the main voltage (rt) and tracks (gn). The n-net ion is fixed to prevent displacement.

3. Reconnect the control unit to the mains voltage.

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

1. Set DIP switches 1 and 3 on the ceiling control unit to ON.
2. Connect the ceiling control unit to the mains voltage. Check that the power supply is ON.
3. Configure the operator with the control unit (1) as the master. A n-net ion to the motor is possible via SOMlink and a WiFi-enabled device for this purpose.
4. In the menu, under the "twin operation" settings, configure "Operator is master" for the selected operator and save the entry. Check the entry.
5. Disconnect the ceiling control unit from the mains supply for 15 seconds.

6. Connect the operator without the ceiling control unit, the master (2), to the control unit parallel to the terminal block for the main voltage (rt) and tracks (gn). The n-net ion is fixed to prevent displacement.

7. Put both operators into operation as described in Chapter "9. Commissioning", "10. Connections and special functions of the motor carriage" and "11. Connections and special functions of the ceiling control unit".
12. twin operation

9. 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 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 "10.18 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.

Wired
The COM input and signal on the control unit can be used for this purpose. DIP switch 4 on the control unit must be ON.
The input is then no longer available for an connected photo cell.

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 radio channels CH 3 and CH 4. The settings are not available when ordered via the Conex accessory part.

12.6 Door status display
If DIP switch 2 on the control unit is set to ON, the relay is activated during door movement and when the door is open. It 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 turned on and off for the respective operator via the handheld transmitter. This also applies for the supplemental lighting, see Chapter "10.16 Setting the lighting function".

12.8 Photocell
Optionally, a photo cell can be connected. The photocell must be configured so that it can be aligned to two doors. If the photocell is interrupted, the operator of the moving door reverses. See also Chapter "11.6 Photocell and frame photocell".

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

12.9 External button
With the Conex additional circuit board, both operators (master and slave) can be operated in pulse mode. Fit the Conex as described in the separate instructions. Set DIP switch 1 on the 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 SOMlink and a WiFi-enabled device, see Chapter "12.3 Selecting and configuring master and slave".

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13. Function test and final test

13.1 Testing obstacle detection

Observe in particular the following safety instructions for thisapter.

After commissioning 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!
Gate leaves or other parts must not project into public roads or 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 trained specialist.
▸ You must proceed with extreme caution if necessary and if necessary adjust the force setting.

![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.
13. Function test/Final test

INFORMATION
After installation of the operator, the person responsible for the installation of the operator must complete an EC Declaration of Conformity for the door system in accordance with Machinery Directive 2006/42/EC and apply the CE mark and a type plate. This documentation and this 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.

INFORMATION
Reversing: The operator stops when it meets an obstruction and then moves in the opposite direction for a short distance to free the obstruction. 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.

⇒ If the door hits an obstacle, the operator must immediately reverse.
⇒ The door opens completely at a pulse from the transmitter.
⇒ If the operator does not reverse, a position is required, see Chapter "10.13 Resetting the control unit". 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 the use of emergency on the ground, see Chapter "15. Maintenance and care"
• on the troubleshooting
• intallation of accessories
• settings
• regular maintenance, testing, and repair, with the exception of what is described in Chapter "15. Maintenance and care"
• repairs

The following documents for the door must be handed over to the user:
• the installation and operating manuals for the operator and the door
• intation book
• EC Declaration of Conformity
• handover protocol for the operator

After successful testing of the forces, the obstacle detection and the functions, the qualified specialist must issue the EC Declaration of Conformity and attach the CE mark and a type plate to the door. 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 center 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 obstacle in the center 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 immediately reverse.
⇒ The door opens completely at a pulse from the transmitter.
⇒ If the operator does not reverse, a position is required, see Chapter "10.13 Resetting the control unit". The positions and the forces must be reprogrammed.

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 especially instructed and have read and understood the installation and operating instructions.

Children must not play with or use the operator, even under supervision. Children must be kept clear of the operator. Handheld transmitters or other control devices must be felly secured 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 use of the operator with incorrect setting or when it is in need of repair!
If the operator is used despite incorrect settings or if it is in need of repair, severe injury or death may result.
► The operator may only be used with the required settings and in the proper 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 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 near the door when it is moving or near moving parts. In particular, do not reach into the moving parts.
- Do not reach into the evening parts. When the motor carriage is running along the track.
- Do not drive through the door until it has opened completely.
- Keep people and animals clear of the range of movement of the door.

**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 to all users 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
- the inspection book
- EC Declaration of Conformity
- handover protocol

The qualified specialist must inform 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 can be carried out by the user, except as described in Chapter "15. Maintenance and care"
- troubleshooting measures which can be carried out by the user, except as described in Chapter "16. Troubleshooting"

The user is responsible for:

- the intended use of the operator
- its good condition
- operation
- repairing all faults how to use the door and in the stated hazards
- 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
14. Operation

The user must keep this installation and operating manual ready for notification in the vicinity of the door at all times.

14.3 Operating modes of door movement

⚠️ **WARNING**

**Danger of crushing and shearing!**

The door can be actuated by a keypad or another control device. Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.

- Keep ads or other control 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 stand 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 Obstacle detection
The operator stops and reverses slightly if it encounters an obstacle.
This prevents injury and damage to property. The door will be partially or completely opened depending on the setting.
The partial reversal is pre-set at the factory. Full reversal can be set via 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:
• photo cell (object protection)
• safety contact strip (personal protection)
• obstacle detection of operator (personal protection)
See also Chapter "15. Maintenance and care".

14.5 Power-saving mode
To energy, the operator control unit must be operated in power-saving mode after the factory specified period.
Connect the emergency release at the safety contact strip from a button or radio.
Connect the emergency release may include: photo cell, a safety contact strip and an internal radio receiver.
Because the emergency release may be used in power-saving mode, they are not reset and they remain with the remote control and the door.
Set DIP switch 3 to ON to power the entire system.
Power-saving mode is deactivated.

DIP switches on the ceiling control unit

<table>
<thead>
<tr>
<th>3</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Continuous power to the complete system
• 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 Operation during power failure
The programmed forces and end positions of the operator remain after a power failure.
After the power supply has been restored, the first movement of the operator after a pulse is always OPEN. The door moves the entire way into the door OPEN end position.
Always follow the instructions for emergency release in Chapter "11.11 Installing and removing the accumulator" or "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 and closed manually from the inside using a mechanical emergency release.
Observe 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 could be used only with the door closed.
• Use the emergency release with great caution if the door is open.
• Keep persons and animals away from the range of movement of the door.

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.
14. Operation

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

**NOTE**
After the operator is locked back in, move the door into the door OPEN end position. Otherwise the guide idler 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. 1](image1)
   ![Fig. 2](image2)

2. Pull once on the emergency release cord.
   ⇒ The motor carriage is released.
   ⇒ Door can be moved by hand.

3. Pull the emergency release cord one more.
   ⇒ The motor carriage is locked.
   ⇒ The door only be moved by the operator.

4. Connect the operator to the mains voltage.
   Check that the power supply is connected.

5. Give the operator a command.
   ⇒ After a power failure, the first pulse of the operator is always in the door OPEN direction.
   ⇒ The operator must drive completely to the door OPEN end position.

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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 may result.
► All work on electrical components may only be carried out by a trained electrician.
► Disconnect the mains plug before working on the operator.
► If 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 firmly 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.

⚠️ 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 parts arm.
► Do not drive through the door until it has opened completely.
► Never sit and under the opened door.
### 15. Maintenance and care

#### 15.2 Maintenance schedule

<table>
<thead>
<tr>
<th>How often?</th>
<th>What?</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once a month</td>
<td>🔄 Test the emergency release</td>
<td>• See Chapter &quot;14.7 Function of the emergency release&quot;</td>
</tr>
<tr>
<td>One a year</td>
<td>🔄 Test obstacle detection</td>
<td>• Interrupt the obstacle photoelectrically while the door is opening. The door must be open slightly. If automatic closing is activated, the door opens completely. • If necessary, clean the photoelectric II, see Chapter &quot;15.3 Care&quot;</td>
</tr>
<tr>
<td>As needed</td>
<td>🔄 Clean the hoisting of the control unit and motor carriage</td>
<td>• Chain and track • Maintenance-free</td>
</tr>
</tbody>
</table>

---

#### 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. Maintenance and care

15.3  Care

Clean track, motor carriage and ceiling control unit

1. Pull the power plug out of the power socket.
   If an accumulator has been installed, remove the control unit cover and disconnect the accumulator from the control unit. See also Chapter "11.11 - 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 ceiling control unit
   • from the track and the inside of the track
   • If required, install the accumulator in reverse order of removal.

3. Reconnect 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. Electrical shock, burns, or death may result.
▷ All work on electrical components may only be carried out by a trained electrician.
▷ Disconnect the mains plug before working on the operator.
▷ If an accumulator is connected, it must be disconnected from the control unit.
▷ Check that the operator is not live.
▷ Secure the operator against being switched on.

⚠️ **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 your ear 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 put your hand near 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 operator.

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.

16.2 Troubleshooting
The following guide to troubleshooting lists potential problems and their causes and information on repairing them. In some cases, other chapters and sections with a more detailed description are referred to. You will be prompted to call a qualified electrician if this is required. Work on the electrical system and live parts may be performed only by a trained electrician.

1. Pull the power plug out of the power socket.
   If an accumulator has been installed, remove the ceiling control unit cover and disconnect the accumulator from the control unit, see Chapter "7.2 Cover of the ceiling control unit" and chapter "11.11 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. Re-connect the operator to the mains voltage.
   Check the power supply.
   ⇒ The operator is supplied with mains voltage.

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### 16. Troubleshooting

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

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

**In normal mode**

<table>
<thead>
<tr>
<th>Flash sequences</th>
<th>Possible cause</th>
<th>Corrective action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator lighting blinks as warning light</td>
<td>• Programming mode activated</td>
<td>• None, for information</td>
</tr>
<tr>
<td></td>
<td>• Pre-warning time activated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Detector rings moving, stops after a few seconds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Function for HFL activated</td>
<td></td>
</tr>
</tbody>
</table>

**In the event of errors**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Flash sequences</th>
<th>Possible cause</th>
<th>Corrective action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alarm</strong></td>
<td>• Photocell or safety device not OK before movement</td>
<td>• Check photocell II, realign if necessary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interruption of a safety device during the movement</td>
<td>• Remove obstacles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Dead man movement, safety device not OK</td>
<td>• Have it checked by a qualified specialist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Motor return from out of order (e.g. due to attempted break-in)</td>
<td>• For information</td>
<td></td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td>• Servicing required (service days, service cycles have been reached)</td>
<td>• Have the service performed by a qualified specialist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• It may be that after 180 days the basic data for the door operation vary from the actual data</td>
<td>• Check weight-balancing and door mechanism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Motor temperature is too high (e.g. overheating)</td>
<td>• Allow motor to cool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Programming of difficult positions in a few seconds with no visible cause. The complete data is transferred from end position to end position (dead man by radio, under direct view only)</td>
<td>• For information</td>
<td></td>
</tr>
</tbody>
</table>

**Fault**

<table>
<thead>
<tr>
<th>Operator or parts of the operator faulty</th>
<th>Possible cause</th>
<th>Corrective action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Self-test of electronics</td>
<td>• Check wiring, if necessary replace faulty components</td>
<td></td>
</tr>
<tr>
<td>• Blockage detected (gear breakage, Hall sensor fault)</td>
<td>• Have the blockage cleaned, replace faulty components</td>
<td></td>
</tr>
<tr>
<td>• Limit switch does not operate (e.g. wire break, limit switch fault)</td>
<td>• Have the switches cleaned or replaced</td>
<td></td>
</tr>
<tr>
<td>• Counting pulse sent in the wrong direction (motor gear was incorrectly connected)</td>
<td>• Check wiring, if necessary replace faulty components</td>
<td></td>
</tr>
<tr>
<td>• Run time exceeded</td>
<td>• Path too long, path reduced to max. 7,500 mm</td>
<td></td>
</tr>
<tr>
<td>• Error during plausibility test of Memo</td>
<td>• Have it checked by a qualified specialist, if necessary replace faulty components</td>
<td></td>
</tr>
</tbody>
</table>
## 16. Troubleshooting

### 16.4 Troubleshooting table

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Test/check</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The operator opens the door when the transmitter or control device is actuated but does not close it.</td>
<td>• Photoelectric and safety device interrupted</td>
<td>• Check photoelectric and safety device</td>
<td>• Remove obstr. ab. e and replace it by a qualified specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Automatic door opening function activated</td>
<td>• Automatic door opening function activated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Automatic door opening function activated</td>
<td>• Automatic door opening function activated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the operator is ill, the door does not open, the limit switch is defective</td>
<td>• Have the limit switch replaced by a qualified specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The operator was unlocked by the emergency release mechanism</td>
<td>• Pull the emergency release handle to lock the operator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Control device incorrectly connected to the operator</td>
<td>• Check wiring, replace if necessary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transmitter defective</td>
<td>• Operator not armed with the transmitter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Operator defective</td>
<td>• Operator not armed with the transmitter or the control device</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electric supply voltage outside the approved range</td>
<td>• Have the mains voltage checked by a trained electrician</td>
</tr>
<tr>
<td>When a button on the transmitter is pressed, the door does not open or close.</td>
<td>• Transmitter not programmed</td>
<td>• Radio LED does not light up when the transmitter is operated</td>
<td>• Programme transmitter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Battery in the transmitter is flat</td>
<td>• Replace the battery of the transmitter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transmitter defective</td>
<td>• LED on transmitter does not light up</td>
</tr>
<tr>
<td>Radio command cannot be programmed.</td>
<td>• Memory full</td>
<td>• All four LEDs for radio blink</td>
<td>• Memory full, see Chapter &quot;10.6 Information on Memo&quot; and &quot;10.8 Deleting a transmitter button from the radio channel&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Battery not inserted</td>
<td>• Replace the operator from the power supply, unplug Memo, replace power supply with power</td>
</tr>
<tr>
<td>MEMO Identifier error</td>
<td>• Incorrect MEMO</td>
<td>• All four LEDs blink</td>
<td>• Die NET operator from the power supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Battery not inserted</td>
<td>• Replace NET operator from the power supply with power</td>
</tr>
<tr>
<td>MEMO device type error</td>
<td>• System error</td>
<td>• All four LEDs blink</td>
<td>• Memory can be deleted via the Radio button</td>
</tr>
</tbody>
</table>

---

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## 16. Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Test/check</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator stops the door during closing and opens it partially or completely.</td>
<td>• Door has detected an obstacle</td>
<td>• Check whether there are any objects in the movement range of the door.</td>
<td>• Remove the obstacle. If necessary, have door mechanism checked and set by a qualified specialist.</td>
</tr>
<tr>
<td></td>
<td>• Photoelectric II was interrupted</td>
<td>• Check LEDs on photoelectric II.</td>
<td>• Remove obstacle.</td>
</tr>
<tr>
<td></td>
<td>• Photoelectric II defective or misaligned</td>
<td></td>
<td>• Align photoelectric II. Check wiring. If necessary, have defective photoelectric II replaced.</td>
</tr>
<tr>
<td>Operator stops while the door is opening.</td>
<td>• Door has detected an obstacle</td>
<td>• Check whether there are any objects in the movement range of the door. • Check the weight balance of the door - it must run smoothly.</td>
<td>• Remove obstacle. If necessary, have door mechanism checked and repaired by a qualified specialist.</td>
</tr>
<tr>
<td>Lighting on the operator or the Lumi+ supplemental lighting does not work</td>
<td>• Operator lighting defective</td>
<td>• Have motor carriage replaced with a new one by a qualified specialist. • If necessary, retrofit Lumi+ supplementary lighting.</td>
<td></td>
</tr>
<tr>
<td>Speed varies while opening and closing the door</td>
<td>• Track dirty</td>
<td>• Clean with a moist lint-free cloth. See Chapter &quot;15.3 Care&quot;.</td>
<td>• Tighten the chain. See Chapter &quot;6.3 Installation of the operator system&quot;.</td>
</tr>
<tr>
<td></td>
<td>• Chain tightened incorrectly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 16.5 Replacing the motor carriage

The instructions for "Disassembling the motor carriage" can be downloaded from SOMMER at: [www.sommer.eu](http://www.sommer.eu)

If applicable, the existing settings on the available motor carriage via SOMLink and a WiFi-enabled device. The settings can then be transferred to the new motor carriage later.

The new motor carriage is delivered from the factory. After replacing the motor carriage, make sure that used parts have been transferred to the new motor carriage.

Commissioning must be repeated and the special functions of the motor carriage activated. Handheld transmitters which are used must also be reprogrammed, e.g. Chapter "10.5 Programming the transmitter". On the other hand, the transmitter does not have to be programmed if the Memo accessory part has already been used.

After successful commissioning, carry out a final test and a function test, e.g. 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. People under the influence of drugs, alcohol, or medications that influence their ability to react may not work on the operator. The installation and operating manual must be read, understood, and complied with by the qualified specialist who assembles 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 assembly work on electrical components may only be carried out by a trained electrician.
- Disconnect the power plug before dismantling the operator.
- If an accumulator is removed, it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

**WARNING**

Danger of tripping and 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! Unsafe or defective ladders may tip and cause serious or fatal accidents.
- Keep the installation area free of unserviceable 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 injury in the head region! Impact with suspended objects may cause serious abrasions and cuts.
- You must wear a safety helmet when dismantling a hand held end.
17. Taking out of operation, storage and disposal

### 17.1 Taking out of operation

- **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 "11.11 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 socket.
   - If an accumulator has been installed, remove the control unit cover and disconnect the accumulator from the control unit. See also chapter "11.11 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
- so that they are stored in a 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

- **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.

- **NOTE**
  - Dispose of all components in accordance with national regulations to avoid environmental damage.

- **INFORMATION**
  - All components that have been taken out of service must not be disposed of with normal waste. Unwanted components with pollutants must be disposed of correctly at an authorised recycling centre. The local regulations must be observed.

- **INFORMATION**
  - Old batteries and battery packs must not be disposed of with household waste as they contain hazardous substances. These must be disposed of properly at municipal collection points or in the provided containers of the dealers. The local and national regulations must be observed.
18. Short instructions for installation

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 install the product safely and optimally.
19. Connection diagrams and functions of the DIP switches

<table>
<thead>
<tr>
<th>DIP switches on the motor carriage</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automatic opening/deactivated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Partial opening/deactivated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• COM and Signal actived as button input (partial opening)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIP switches on the ceiling control unit</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>• &quot;Conek additional it board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• T1 defines door OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• T2 defines door CLOSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Door status relay is actived during door movement and if the door is not closed*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Power-saving mode actived</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

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

* e.g.: door status relay

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