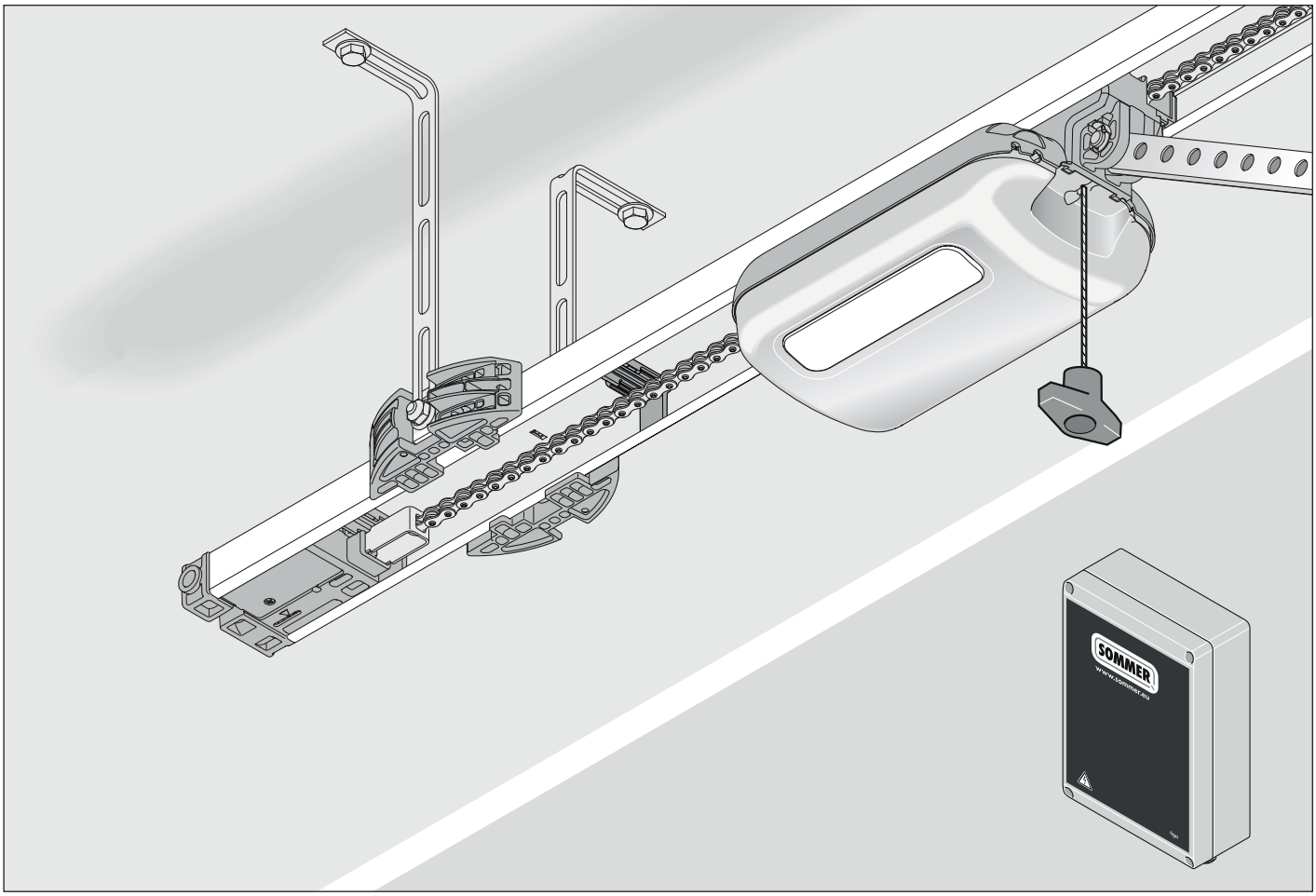

EN TRANSLATION OF THE ORIGINAL INSTALLATION AND OPERATING MANUAL

Garage door operator

S 9060 tiga S3
S 9080 tiga S3
S 9110 tiga S3

Download the current manual:

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This product has been developed and manufactured under high standards of quality and with reference to ISO 9001. Read this installation and operating manual carefully and follow all instructions.

Warranty

The warranty complies with statutory requirements. The contact person for warranties is the qualified dealer. The warranty is only valid in the country in which the operator was purchased. There is no warranty for consumables such as batteries, accumulators and fuses as well as light bulbs. This also applies for wear parts.
The operator is only designed for a limited frequency of use. More frequent use leads to increased wear.

Contact data

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

Service

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

+49 (0) 7021 8001 333

www.sommer.eu/de/kundendienst.html

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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. Observe all warnings and safety instructions.

Keep this Installation and Operating Manual accessible to all users at all times at the place of use. A replacement installation and operating manual can be downloaded from **SOMMER** at:

www.sommer.eu

In the event of 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://som4.me/orig-tiga-s3-rev-a

For other language versions, see:

www.sommer.eu

1.3 Description of the product type

The operator has been constructed according to state-of-the-art technology and recognised technical regulations and is subject to the Machinery Directive 2006/42/EC.

The operator is fitted with a radio receiver. Optionally available accessories are also described.
The version can vary depending on the type. This means the use of accessories can vary.

1.4 Target groups of the Installation and Operating Manual

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

- unloading and in-house transport
- unpacking and installation
- Initial operation
- setting
- usage
- maintenance, testing and care
- troubleshooting and repairs
- disassembly and disposal

1.5 Explanation of symbols and notes

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

⚠ Signal word

Hazard symbol

Type and source of hazard.
Consequences of the hazard.

▸ Preventing/avoiding the hazard.

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

DANGER

WARNING

CAUTION

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 that may lead to fatal or serious injury.
Describes the possible consequences of the danger to you or other persons.

▸ Follow the instructions for avoiding or preventing the danger.

1. About this Installation and Operating Manual

⚠ CAUTION

Describes a potential danger of a hazardous situation.

Describes the possible 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 in the operator or door may occur.

INFORMATION

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

The following symbols are used in the figures and text.


Continue reading the Installation and Operating Manual for more information.


Trained electrician (required for installation)


Trained mechanic (required for installation)


Disconnect the operator from the voltage supply


Connect the operator to the voltage supply


Factory setting, as-delivered state depending on version


Connection via SOMlink to a WiFi-enabled device

Symbol refers to a period of time, e.g. 60 seconds.


Setting options via DIP switches


Operator components must be disposed of properly



Phillips screwdriver


Metal drill


Masonry drill


Open-end wrench


Ratchet wrench


Drilling depth

Audible engaging or clicking noise

1. About this Installation and Operating Manual

1.6 Information regarding the depiction of text

1. Stands for directions for an action
   ⇒ Stands for the results of the action
   ⇒ **Stands for successful completion of an action**

Lists are shown as a list of actions:

- List 1
- List 2

1, A Item number in the figure refers to a number in the text.

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

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

1.7 Intended use of the operator

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

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

For more information on accessories, see:

https://downloads.sommer.eu/

Doors automated with this operator must comply with all valid international and domestic standards, directives and regulations in their currently valid version. These include EN 12604 and EN 13241.

The operator may only be used:

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

https://som4.me/cgdo

- if a declaration of performance in accordance with the Building Products Directive is present for the door
- if the CE mark/UKCA mark and the type plate for the door system have been attached
- if the handover protocol and the inspection book have been completed and are available
- if 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.

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/UKCA mark and a type plate to the door system. This also applies if the operator is retrofitted to a manually operated door. In addition, a handover protocol and an inspection book **must** be completed.

The following are available:

https://som4.me/konform

- EC Declaration of Conformity
- handover protocol for the operator

1.8 Improper use of the operator

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

The manufacturer's warranty will be voided by:

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

The gate must not be part of a fire protection system, an escape route or an emergency exit that automatically closes the gate in the event of fire.
Installation of the operator will prevent automatic closing.

Observe the local building regulations.

The operator may not be used in:

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

1. About this Installation and Operating Manual

1.9 Qualifications of personnel

Qualified specialist for the installation, commissioning and disassembly of doors

This Installation and Operating Manual must be read and complied with by a **qualified specialist** who installs or performs maintenance on the operator.

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

The installation, initial operation and disassembly of the operator may only be performed by a qualified specialist. A **qualified specialist** is a person commissioned by the installer.

The qualified specialist must be familiar with the following standards:

EN 13241	Doors and gates – Product standard
EN 12604	Doors and gates – Mechanical aspects – Requirements and test methods
EN 12453 2022 (Plc)	Safety in use of power-operated doors

When all work has been completed, the **qualified specialist** must:

- issue an EC Declaration of Conformity
- attach the CE mark/UKCA mark and the type plate to the door system

1.10 Instructing the user and handover of documents

The **qualified specialist** must instruct the user:

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

The **qualified specialist** must inform the user about which work may only be carried out by a **qualified specialist**:

- installation of accessories
- settings
- regular maintenance, testing and care
- Troubleshooting

1.11 Information for the user

The user **must** ensure that the CE mark/UKCA 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:

- correct Declaration of Conformity
- declaration of performance for the door
- handover protocol and inspection book
- the installation and operating manuals for the operator and the gate

The user is responsible for:

- keeping this Installation and Operating Manual accessible at all times at the place of use
- the intended use of the operator
- ensuring that the operator is in good condition
- instructing all users how to use the operator, the hazards involved and in the operation of the emergency release
- operation
- regular maintenance, testing and care
- Troubleshooting

The operator may be used by children from the age of 8, persons with restricted physical, sensory or mental capabilities or persons lacking in experience and knowledge if these persons have been instructed in the safe operation of the device and understand the associated hazards. Children must not be allowed to clean or service the operator, even under adult supervision. Handheld transmitters or other command devices must never be given to children. Handheld transmitters must be safely stored and protected against unintended and unauthorised use.
The user must observe the accident prevention regulations and the applicable standards. The guideline "Technical regulations for workplaces ASR A1.7" of the German committee for workplaces (ASTA) is applicable for commercial use. The guidelines described must be observed and complied with. In other countries, the user must comply with the applicable national regulations.

2. General safety instructions

2.1 Basic safety instructions for operation

Observe the basic safety instructions listed below, in as far as they are relevant for the specific door system.

The door system must not be used by persons with restricted physical, sensory or mental capacity or who lack experience and knowledge. All users must be specially instructed and have read and understood the installation and operating instructions. Persons under the influence of drugs, alcohol, or medications that can influence their ability to react may not work on the control unit. Children must never play with or use the control unit, even under supervision. Children must be kept clear of the control unit. Handheld transmitters or other command devices must never be given to children. Handheld transmitters and other command devices must be stored in such a way that unauthorised or accidental operation is prevented.

Danger if not observed!

Serious injury or death may result if safety instructions are not observed.

- It is imperative to comply with all safety instructions!

Danger due to electric current!

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

- Installation, testing and replacement of electrical components must be carried out by **trained electricians**.
- Disconnect the mains plug before working on the system.
- If an accumulator is connected, it must also be disconnected from the control unit.
- Check that the system is disconnected from the voltage supply.
- Secure the system against being switched back on.

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

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

- The system may only be used with the required settings and in the proper condition.
- Inspect the system frequently for indications of wear, damage or defective weight balancing.
- Following installation and thereafter at monthly intervals, check that the operator reverses upon contacting a 40 mm high object on the floor (obstacle recognition).
- Faults, worn components or defects in the weight balance must be repaired professionally without delay.

Danger caused by hazardous substances!

Improper storage, use or disposal of accumulators, batteries and components of the system are dangerous for the health of humans and animals.

- Store accumulators and batteries out of the reach of children and animals.
- Keep batteries and accumulators away from chemical and thermal influences.
- Do not recharge batteries and defective accumulators.
- All components of the operator, including old accumulators and batteries, must be disposed of correctly and not with household waste.

Danger for trapped persons!

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

- Check the function of the emergency release at monthly intervals, **particularly** from inside in the door CLOSE end position and if necessary, also from the outside.
- Ensure that the emergency release is installed at a height of no more than 1.8 m.
- Attach an information sign in a prominent, clearly visible position near the emergency release lever.
- Have faults repaired professionally without delay.

Danger from components projecting into a publicly accessible area!

No parts should project into public footpaths or roads. This also applies during the complete operating cycle. Persons and animals may be seriously injured.

- Keep public roads or footpaths free of obstacles.

Danger due to falling system parts!

Actuating the emergency release can lead to uncontrolled garage door movement if:

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

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

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

Danger of entrapment!

Persons or animals in the movement area of the door system may be trapped and pulled along with the door. Severe or fatal injuries may result.

2. General safety instructions

- Keep clear of the range of movement.
- Before installation, remove all ropes or chains which are not required and disable all devices not needed for operation, for example blocks.

Danger of crushing and shearing!

If people or animals are in the range of movement of the system, crushing and shearing injuries may be caused by the mechanism and safety edges.

- Before mounting the operator on the garage door / outside door, make sure that the garage door / outside door is in good mechanical condition, is optimally weight-balanced and opens and closes correctly.
- Only use the system when you have a direct view of the danger zone.
- The danger zone must be visible during the entire operating cycle.
- Always keep the moving system in sight.
- Keep persons and animals away from the movement area of the door.
- Never put your hand near the system when it is moving or near moving parts. In particular, do not reach into the moving push arm.
- Do not touch the ceiling suspension unit when the motor carriage is running past the ceiling suspension unit.
- Do not drive through the system until it has opened completely.
- Never stand under the opened system.
- Attach warning signs in a prominent, clearly visible position near the fixed operating device.

Danger caused by the garage door falling!

The garage door can drop in an uncontrolled manner if a support fails. Severe or fatal injuries may result.

- A suitable device (external safety catch, locking mechanism etc.) must be installed on-site.

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.

Danger of tripping and falling!

Unsafely positioned parts such as packaging, operator parts or tools may cause persons to trip or fall.

- Keep the installation area free of unneeded items.
- Place all parts where no-one is likely to trip or fall over them.
- Observe the general workplace guidelines.

Danger due to optical radiation!

Looking into the beam of a bright LED for prolonged periods can cause temporary irritation of the eyes. Serious or fatal accidents can occur as a result.

- Never look directly into an LED.

Risk of eye injury!

Chips flying when drilling may cause serious injuries to eyes and hands.

- Always wear safety glasses when drilling.

Risk of hand injury!

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

- Wear safety gloves when performing tasks such as deburring.

Risk of injury in the head region!

Impact with suspended objects may cause serious abrasions and cuts.

- Wear a safety helmet when installing suspended parts.

Additional safety information for the radio remote control

Danger of crushing and shearing!

If the system 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 such as the radio remote control, all danger zones must be visible during the entire operating cycle.
- Before operating the handheld transmitter, check that the springs of the garage door are not weakened or broken.
- Always keep the moving system in sight.
- Keep persons and animals clear of the range of movement of the system.
- Never put your hand near the system when it is moving or near moving parts.
- Do not drive through the system until it has opened completely.
- Store handheld transmitters so that unauthorised or accidental operation, e.g. by children or animals, is impossible.
- Operating devices in a fixed position (e.g. ext. buttons, key switches etc.) must be attached at a height of no more than 1.5 m and at a distance from moving parts.

- Never stand under the opened system.

Notes and information on operation and remote control

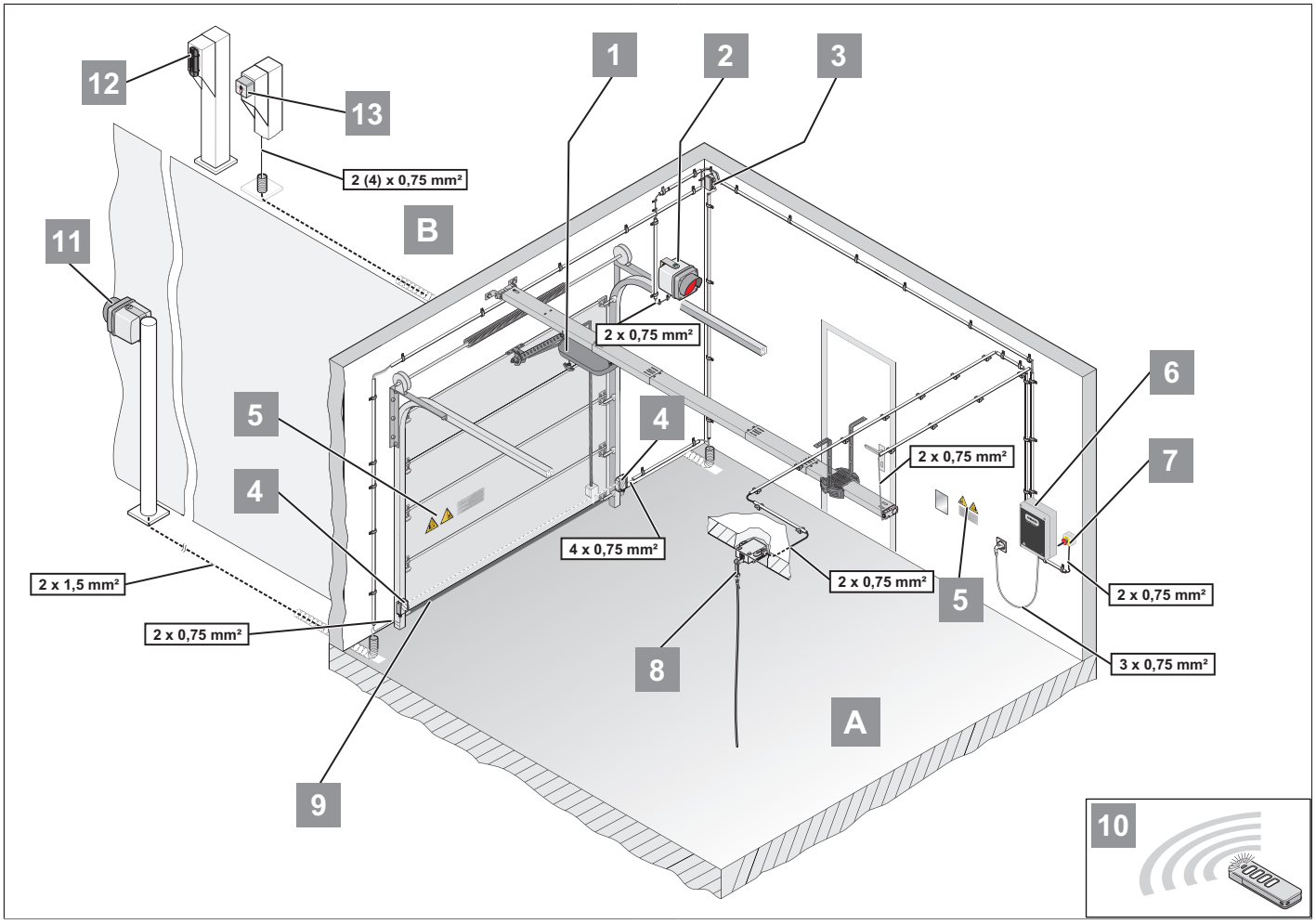
The user of the radio system is not protected against interference due to other telecommunications equipment or devices. This includes radio-controlled systems that are licensed to operate in the same frequency range. If significant interference occurs, please contact your appropriate telecommunications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

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.
- Only use the operator if you have a direct view of the door.

3. Description of function and product

3.1 The operator and its mode of operation



A Interior side

1. Motor carriage
2. Red traffic light (interior)
3. Junction box
4. Photocell
5. Warning sticker
6. Control unit
7. EMERGENCY STOP
8. Pull button
9. Safety contact strip
10. Transmitter

B Exterior side

11. Red traffic light (exterior)
12. Key switch
13. Telecody

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

The rail is mounted on the ceiling and the lintel above the garage door. The motor carriage is attached to the door by a push arm. The motor carriage moves along the rail on a spring-mounted chain and opens or closes the door.

Access authorisation for the interior and exterior is displayed by the traffic lights.

The handheld transmitter can be stored in a holder in the garage or in the vehicle.

NOTE

- Other pulse transmitters are: Handheld transmitters, Telecodys, wireless wall buttons and key switches.
- For transmitters, Telecody or interior radio push-buttons, there is no need to install a connecting line to the operator.

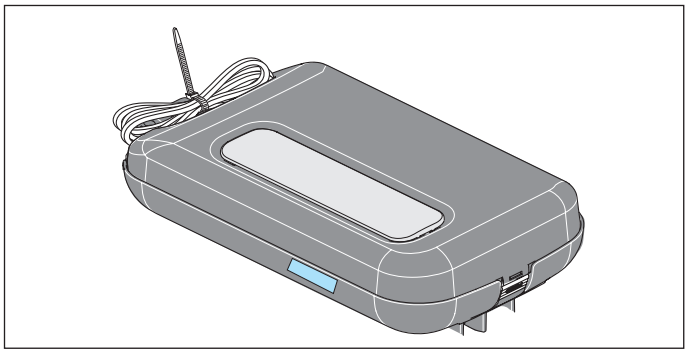
3. Description of function and product

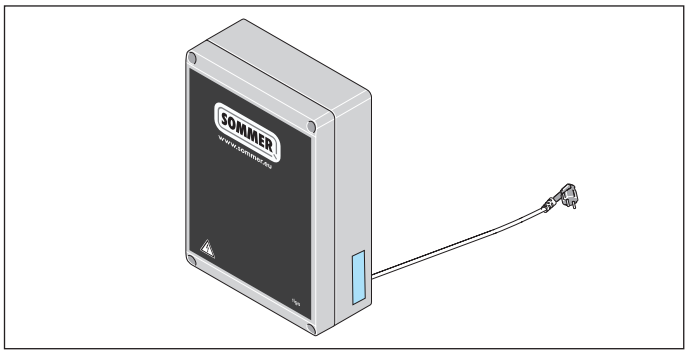
3.2 Safety equipment

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

In the event of a power failure, the door can be opened from the inside via an emergency release handle or from the outside with a Bowden wire or emergency release lock.

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 Definitions

Programming

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

Door OPEN

The door opens or is open.

Door CLOSE

The door closes or is closed.

Interior (IN)

This side is inside the garage.

Exterior (OUT)

This side is outside the garage.

Light signal of the traffic lights

Access authorisation for the interior and exterior is displayed by the traffic lights.

Request side, interior or exterior

A command was given from this side.

Opposite side

This side is opposite the request side.

Command from the interior

Button or radio signal give a command to open the door from the interior. After the pre-warning time and, if applicable, the clearing time, the red traffic light for the interior switches off. This gives the authorisation for drive-through from the interior. The red phase is displayed on the opposite side.

Command from the exterior

Button or radio signal give a command to open the door from the exterior. If the door is closed or is in the door OPEN end position, the red traffic light for the exterior switches off. This gives the authorisation for drive-through from the exterior. The red phase is displayed on the opposite side.

Pre-warning time

This phase affects the time before opening or closing. The traffic light blinks red on both sides. The warning light and the operator lighting of the motor carriage also blink. This announces the operator movement. The door area must be cleared.

Hold open time

The door remains open in this phase. The traffic light of the request side is off. The traffic light lights up red on the opposite side. The door can only be opened but not closed by a command from a button or handheld transmitter. While the door is being opened, it cannot be stopped by a command.

Example:

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

Clearing time

This phase affects the time after the hold open time has run out. The traffic light lights up red on both sides.
The operator lighting of the motor carriage also blinks. This announces movement of the operator or traffic light switch-over for changing the drive-through direction. The door area must be cleared.

Multi-function relay – MUFU

The multi-function relay is a relay with a floating changeo-ver contact. The multi-function relay can be configured for several settings using the SOMlink, a WiFi-enabled device and the Memo tiga, with a Memo tiga attached to the SOM-link.

3.5 Operator response with factory settings

Response after power connection

The door is closed and the operator is programmed.
All traffic lights are off. The first direction is always door OPEN. If the door is already open, the operator detects this. After a command to the operator, the command side is granted access authorisation.

The operator closes the door after the hold open time and clearing time run out.

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

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

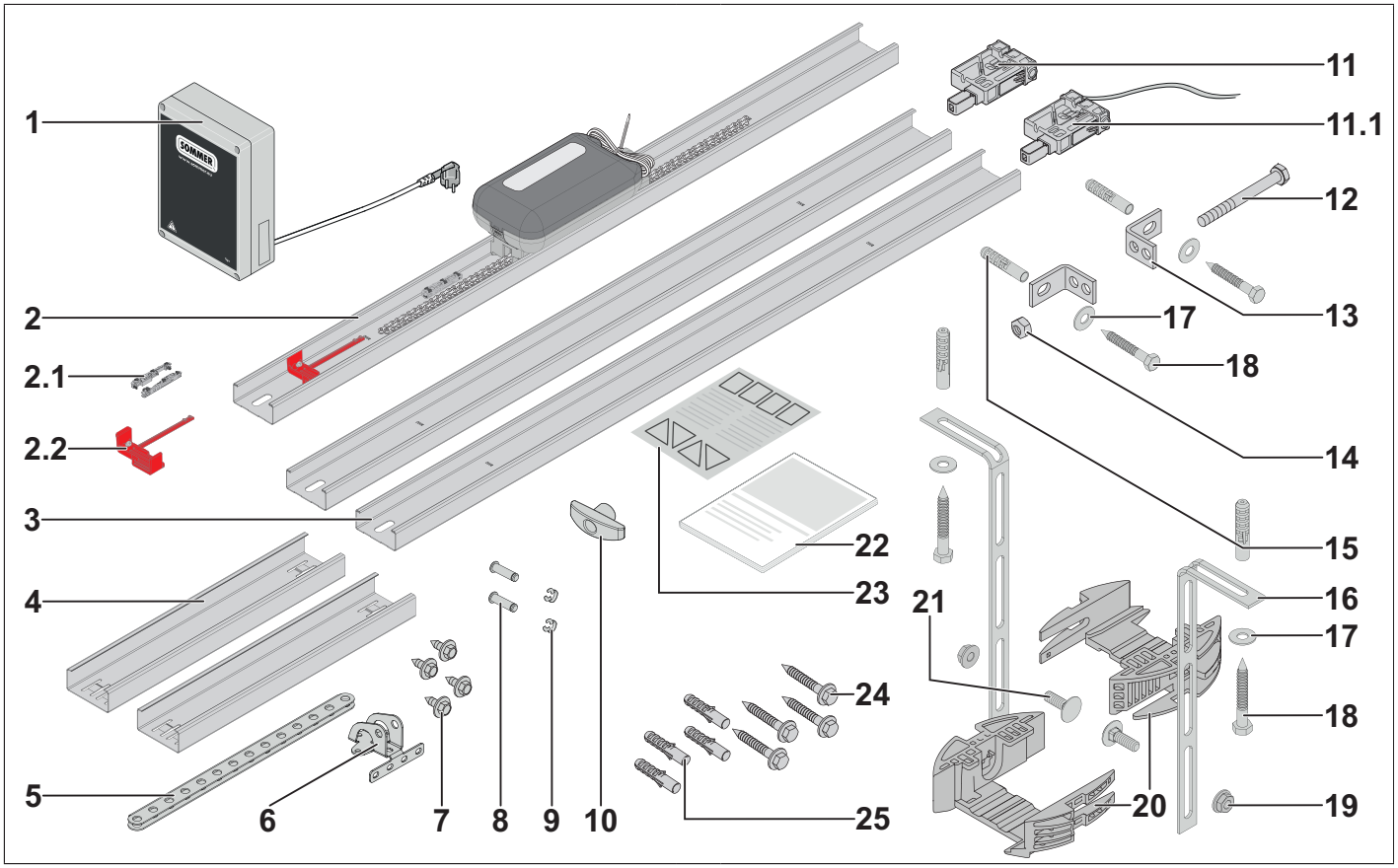
1. Command from interior or exterior.
   - ⇒ Door opens.
     Both sides: Red phase - no authorisation for drive-through.
   - ⇒ Door is open.
   - ⇒ Hold open time starts.
     Request side: Green phase - authorisation for drive-through.
     Opposite side: Red phase - no authorisation for drive-through.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

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

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

3. Description of function and product

3.6 Scope of delivery



1) Wall control unit with Memo tiga, attached at the factory, and power cord
2) Rail, **pre-assembled** with 1x limit stop, chain and motor carriage
2.1) Isolator, **1x**, **pre-assembled on the chain (centre)**
2.2) Limit stop, **(red)**, **pre-assembled on the rail**
3) Rail, **2x**
4) Connecting sleeve, **2x**
5) Push arm, **straight**
6) Door bracket
7) Combination self-tapping screw, **4x**
8) Bolt 10 x 34.5 mm, **2x**
9) Security pin 10 mm, **2x**
10) Emergency release handle
11) Plug-in unit, **pre-assembled**
11.1) Plug-in unit, **pre-assembled**, with control cable, 2-wire, approx. 5 m
12) Hexagonal head screw M10 x 100 mm
13) Lintel bracket, **2x**
14) Hexagonal nut, self-locking M10
15) S10 wall plug, **4x**
16) Perforated strip, angled, **2x**
17) Washer, **4x**
18) Screw 8 x 60 mm, **4x**
19) Hexagonal nut, self-locking M8, **2x**
20) Ceiling holder, **2-part**
21) Screw M8 x 20 mm, **2x**
22) Information sticker for garage interior
23) Translation of the Installation and Operating Manual

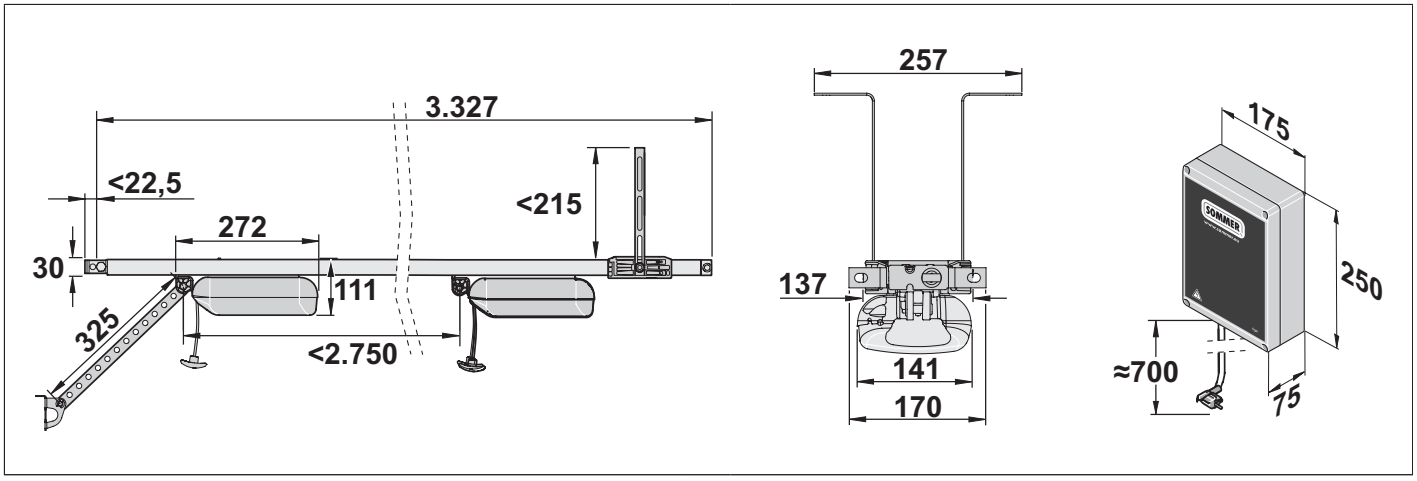
Mounting for the wall control unit

24) Screw Ø 4 x 50 mm, **4x**
25) S6 wall plug, **4x**

When unpacking, make sure that all parts are included in the packages. The actual scope of delivery may vary depending on the specific version.

3. Description of function and product

3.7 Dimensions



(all dimensions in mm)

3.8 Technical data

		S 9060 tiga S3	S 9080 tiga S3	S 9110 tiga S3
Rated voltage		AC 100-240 V		
Rated frequency		50–60 Hz		
Rating		3 cycles or 4 minutes		
Memory positions in radio receiver		40		
Operating time* **		S3 = 40%		
Operating temperature		–25 °C to +65 °C		
Emission value according to operating environment		<59 dB(A) – operator only		
IP protection class		Rail and carriage: IP21; wall control IP65		
Protection class		I		
Max. travel length		2,750 mm		
Max. travel length incl. extension		4,900 mm (2x 1,096 mm)	6,000 mm (3x 1,096 mm)	7,100 mm (4x 1,096 mm)
Max. speed*		180 mm/s	180 mm/s	180 mm/s
Max. pull and pushing force		600 N	800 N	1,100 N
Rated pull force		10 N	240 N	330 N
Max. current consumption		0.8 A	0.9 A	0.9 A
Rated current consumption		0.8 A	0.8 A	0.8 A
Max. power consumption		205 W	185 W	175 W
Rated power consumption		150 W	170 W	165 W
Power consumption in standby		0.5 W		
Max. door weight*		120 kg	160 kg	200 kg
Maximum door width/ highest running point of the door* **	**Sectional doors**	4,500 mm/2,500 mm	6,000 mm/2,500 mm	8,000 mm/2,500 mm
	One piece doors	4,500 mm/2,750 mm	6,000 mm/2,750 mm	8,000 mm/2,750 mm
	Up-and-over doors	4,500 mm/2,050 mm	6,000 mm/2,050 mm	8,000 mm/2,050 mm
	Side-opening sectional doors/ Side-opening doors	2,500 mm (4,500 mm)/ 2,500 mm	2,500 mm (5,750 mm)/ 2,750 mm	2,500 mm (6,850 mm)/ 3,000 mm
Max. no. of spaces		30	75	50

* Values apply without lighting

** Depending on door and the operating conditions

*** Reference value, depending on the door construction

3. Description of function and product

3.9 Connection options

Only **SOMMER** accessories may be used. Observe the corresponding instructions.

Accessories may only be installed and adjusted by **qualified specialists**. The use of accessories can vary depending on the type.

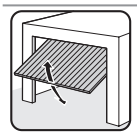
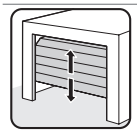
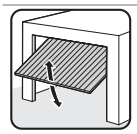
Motor carriage	
LED	**6**
Lock	●
Memo (red housing)	●
USART	●
Senso	●
Buzzer	●
Laser	●
Motion	●
for OSE/8k2	●
wicket door contact	●
Output 12 V, 100 mA	●
DIP switch	**4**

Wall control unit	
Rechargeable battery	●
Memo (black housing)	●
Traffic light (interior Red)	●
Traffic light (exterior Red)	●
Warning light 24 V, 6 W	●
Photocell door CLOSE (2-/4-wire)	●
Button – Interior request side	●
Button – Exterior request side	●
MUFU 1	●
MUFU 2 (optional for Relay or Output OC)	●
STOP (EMERGENCY STOP)	●
DIP switch	**4**

A SOMlink is also available as an accessory. For more information on accessories, see:

https://downloads.sommer.eu/

Door types and accessories

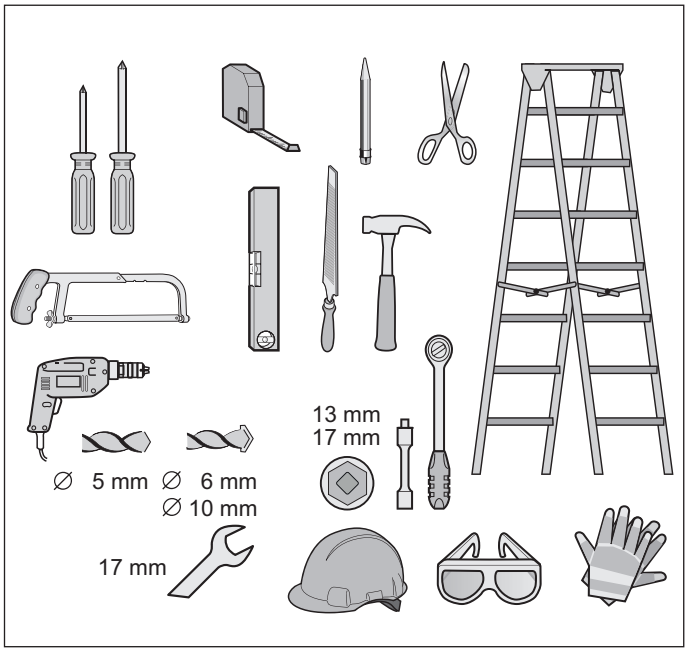
Door type		Accessories
	One piece door	No accessories required
	Sectional door with single rail	Sectional door fitting with curved push arm*
	Sectional door with double rail	Sectional door fitting without curved push arm**
	Sectional overhead door	No accessories required
	Up-and-over door	Curved arm*
	Side-opening door, side-opening sectional door	Side-opening/side-sectional door fitting**

* Accessories not included in the scope of delivery

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

4. Installation

4.1 Required tools and personal protective equipment



Tools	Size
Phillips screwdriver	PH2
Flat head screwdriver	3.5 mm
Fork or ring wrench	17 mm
Ratchet	
Ratchet insert	13/17 mm

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.

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

4.2 Important notes and information

In particular, please observe and comply with the following warnings, notes and information to ensure safe installation.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 9**.

⚠ WARNING

Danger due to falling ceiling and wall parts!

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

- You must test the stability of the ceiling and the walls.
- Use only permissible mounting materials appropriate for the supporting surface.

Danger due to falling parts of doors or complete door panels!

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

Check:

- the stability of the door.
- that the door does not bend, rotate or twist when you open or close it.
- that the door runs smoothly in the rails.

Wires, spring sets and other fittings can be damaged and break. The complete door panel can fall.

Persons or animals may be struck by falling parts. Severe injuries or death may result.

Before installation, a **qualified specialist** must check and, if necessary, adjust the following:

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

4. Installation

⚠ CAUTION

Risk of eye injury!

Chips flying when drilling may cause serious injuries to eyes and hands.

▸ Wear safety glasses when drilling.

Risk of injury in the head region!

Impact with suspended objects may cause serious abrasions and cuts.

▸ You must wear your personal safety helmet when installing/disassembling suspended parts.

Risk of injury to hands!

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

▸ You must wear your personal safety gloves when working with rough metal parts.

NOTE

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

  Ceiling and walls must be stable.
- To prevent damage to the door or operator, use only approved mounting materials such as wall plugs or screws.

  The mounting material must be suitable for the material of the ceiling and walls. This applies particularly for prefabricated garages.

4.3 Preparing for installation

Before installation, you **must** check whether the operator is suitable for the door, see also Chapter **“3.8 Technical data” on page 16**.

Removal of actuation parts

Before installation, remove:

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

Disabling mechanical locks

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

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.

Checking the mechanism and weight balance

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 the rails.

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

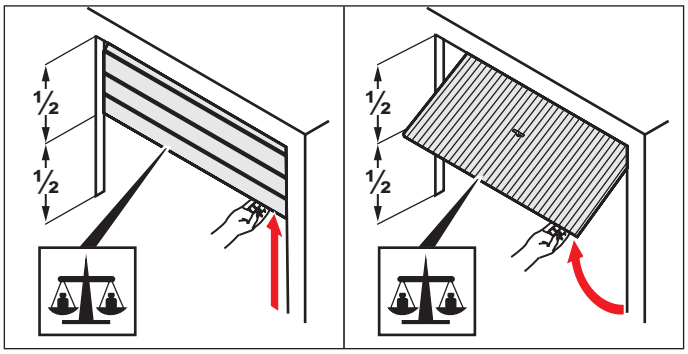


Fig. 2

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

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

Emergency release

In a garage without a separate entrance (e.g. wicket door), the operator's emergency release **must** be operable from outside. The emergency release **must** then also be routed to be accessible from the outside. This can be done with a Bowden wire or a release lock.

INFORMATION

- The emergency release **must** be easy to operate in all necessary positions.
- In particular, unlocking **must** be possible in door CLOSE.

4. Installation

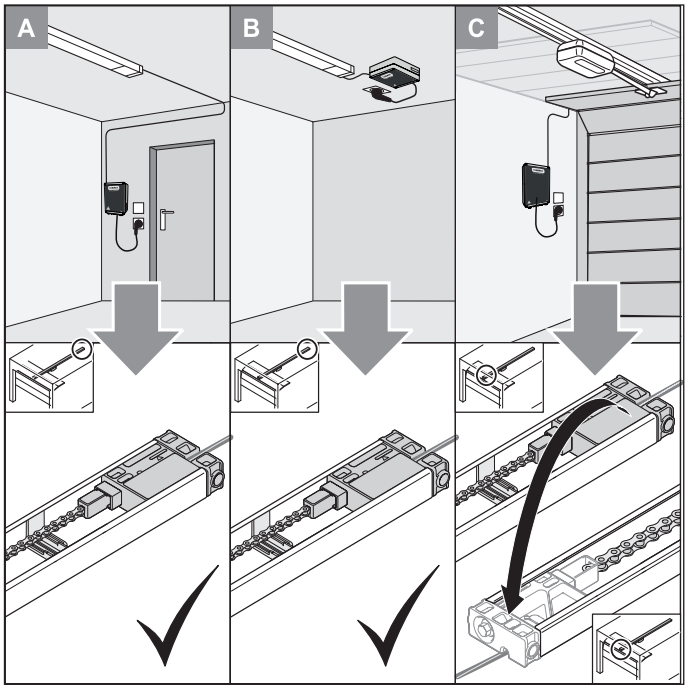
4.4 Installing the drive system

Selecting the installation variant

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

Check your specific situation and select the optimum installation variant for you.

Installation situation A, B and C



Variant A

This variant is selected if there is a separate entrance to the garage. The wall control unit is installed near a power outlet.

The control cable is led out at the rear end of the rail; see Chapter **“4.5 Installing installation variant A or B of the operator system” from page 21**.

Variant B

This variant is selected when an existing device is being replaced by a new one and there is already a power outlet or other control lines to buttons or photocells in this area. Here, the wall control unit is mounted on the ceiling in the rear area of the track.

The control cable of the plug-in unit is also led out at the rear end of the rail; see Chapter **“4.5 Installing installation variant A or B of the operator system” from page 21**.

Variant C

This variant is selected when there is a power outlet which can be used for the wall control unit located near the door opening.

Here, the control cable is led out at the front end of the rail; see Chapter **“4.6 Installing installation variant C of the operator system” from page 23**.

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

4. Installation

4.5 Installing installation variant A or B 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 be maintained and inspected as specified by the door manufacturer.

INFORMATION

- Before installation, check whether the garage is suitable for the operating temperature indicated on the motor carriage.

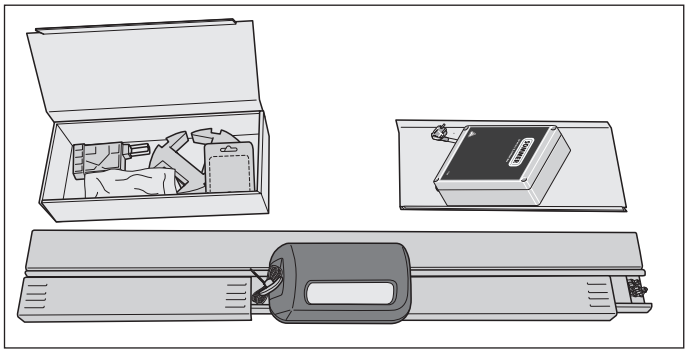


Fig. 1

1. Open the package.

   Check the entire contents against the scope of delivery, see Chapter **“3.6 Scope of delivery” on page 15**".

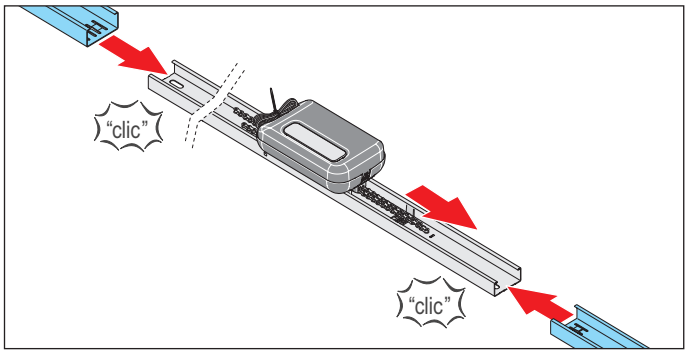


Fig. 2

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

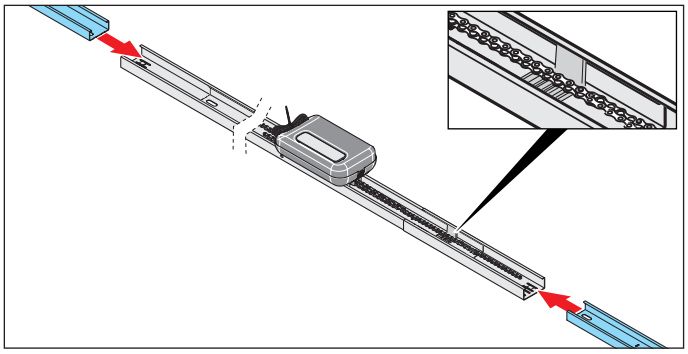


Fig. 3

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

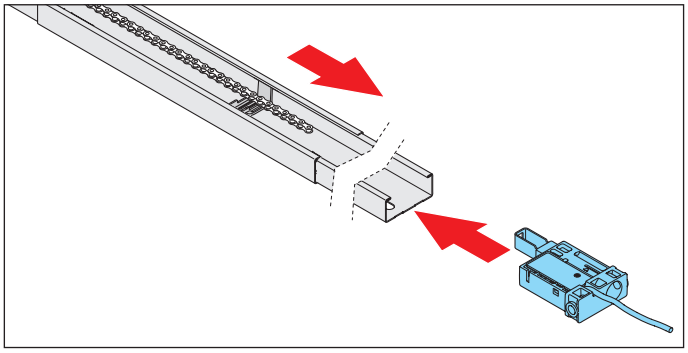


Fig. 4

4. Plug in the **plug-in unit with control cable** on the side of the rail **with** limit stop.

   Lay the chain over the limit stop.

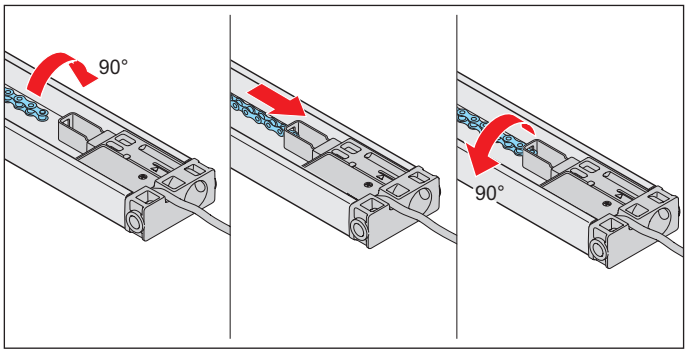


Fig. 5

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

   Rotate the chain back 90°.

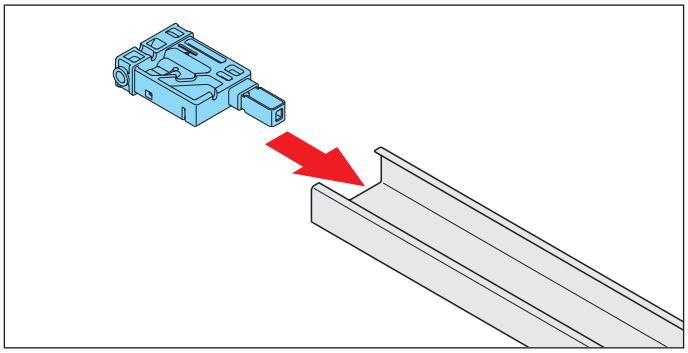


Fig. 6

4. Installation

6. Plug in the **plug-in unit without control cable** on the side of the rail **without** limit stop.

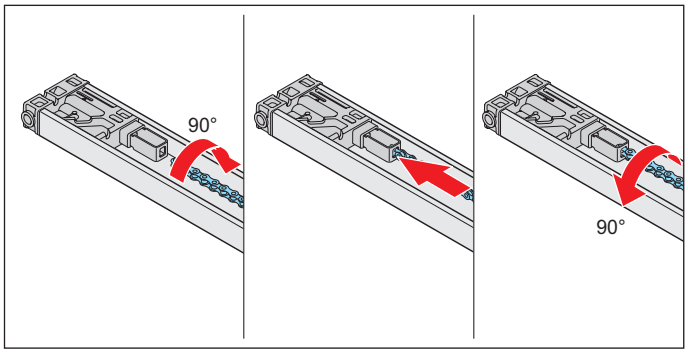


Fig. 7

NOTE

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

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

   Rotate the chain back 90°.

   ⇒ **The entire chain is attached.**

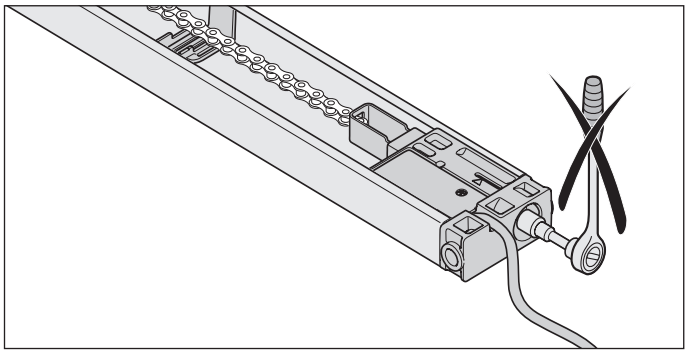


Fig. Plug-in unit with control cable

NOTE

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

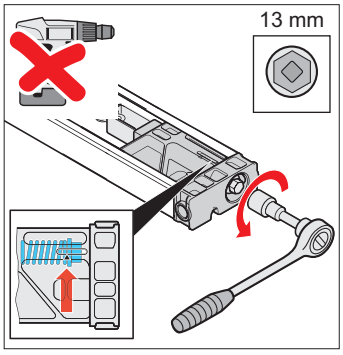


Fig. 8

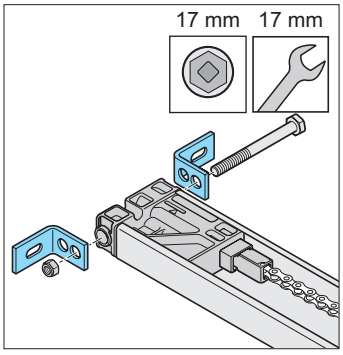


Fig. 9

8. Tension the chain to the mark on the **plug-in unit without control cable**; see arrow in the detailed view.
9. Fasten the two header brackets to the **plug-in unit without control cable** with screw and nut.

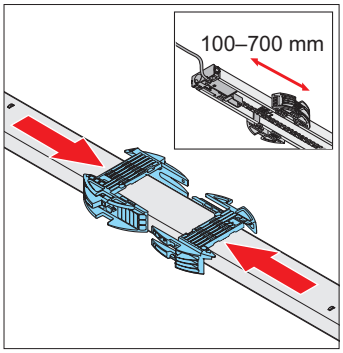


Fig. 10

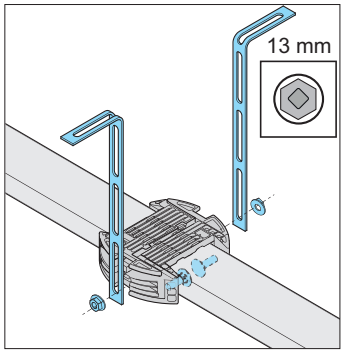


Fig. 11

10. Turn the rail to install the ceiling bracket.

    The distance between the rear **plug-in unit with control cable** and the ceiling holder should be approx. 100–700 mm.

    Place the ceiling holder on the rail and slide into one another.

NOTE

- Depending on the door construction, the installation situation and the installation type, it should be checked whether a **second ceiling bracket** is necessary.

11. Fasten the perforated strips to the ceiling holder on the right and left. Also observe the distances for installation to the ceiling or lintel.

    ⇒ **The rail is prepared for the remainder of the installation.**

For further installation, see Chapter **“4.7 Installation on the door” from page 25**.

4. Installation

4.6 Installing installation variant C 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 be maintained and inspected as specified by the door manufacturer.

INFORMATION

- Before installation, check whether the garage is suitable for the operating temperature indicated on the motor carriage.

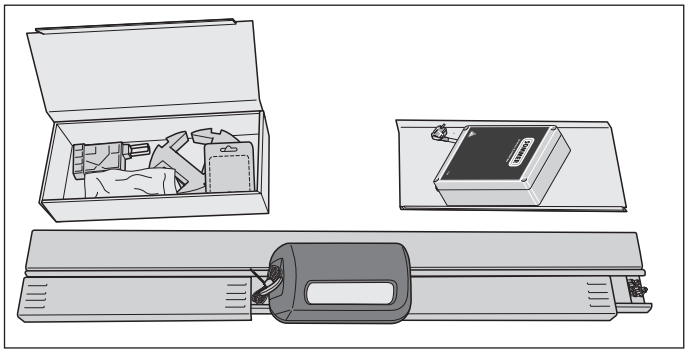


Fig. 1

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.

   Check the entire contents against the scope of delivery, see Chapter **“3.6 Scope of delivery” on page 15**".

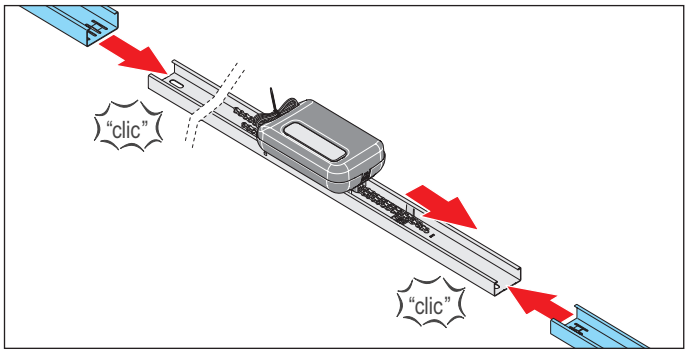


Fig. 2

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

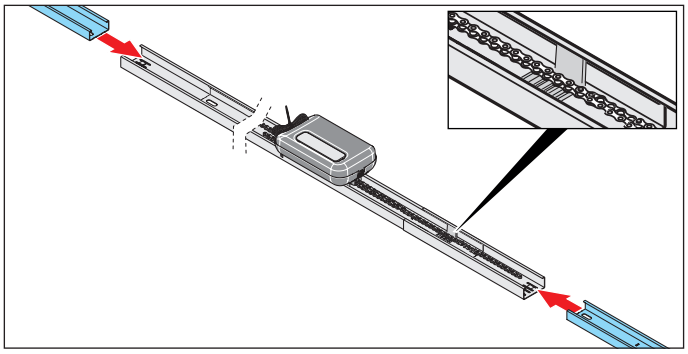


Fig. 3

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

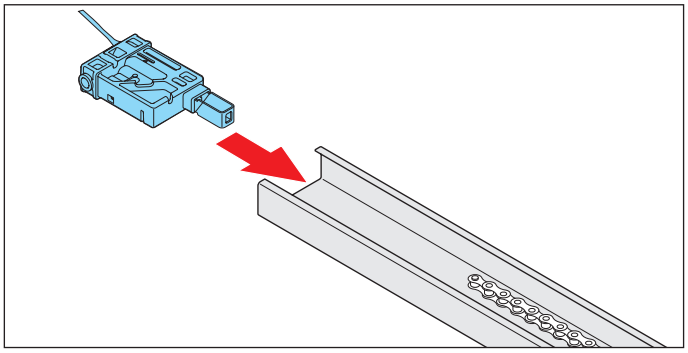


Fig. 4

4. Plug in the **plug-in unit with control cable** on the side of the rail with limit stop.

   Lay the chain over the limit stop.

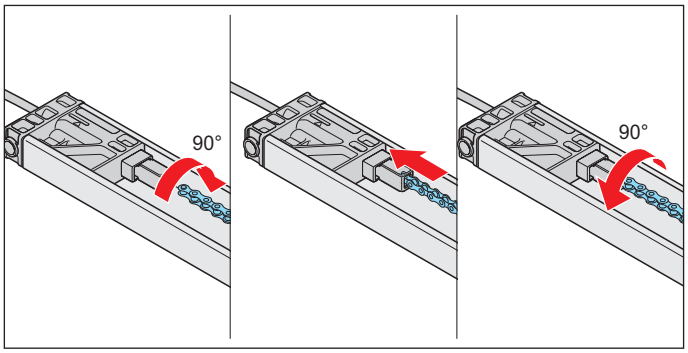


Fig. 5

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

   Rotate the chain back 90°.

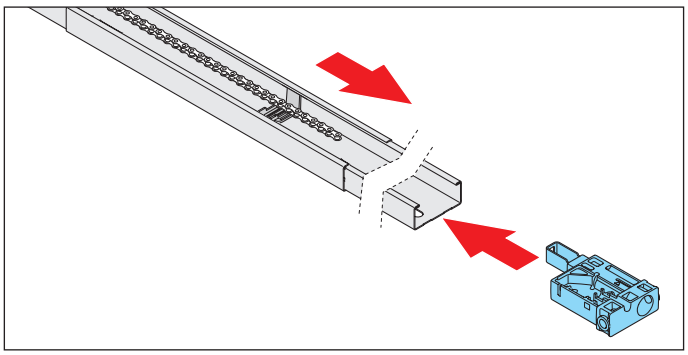


Fig. 6

4. Installation

6. Plug in the **plug-in unit without control cable** on the side of the rail **with** limit stop.

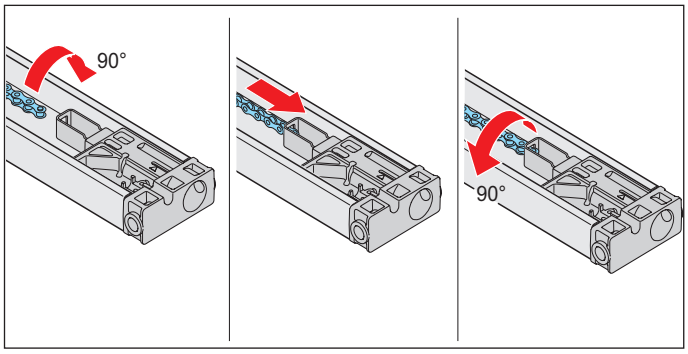


Fig. 7

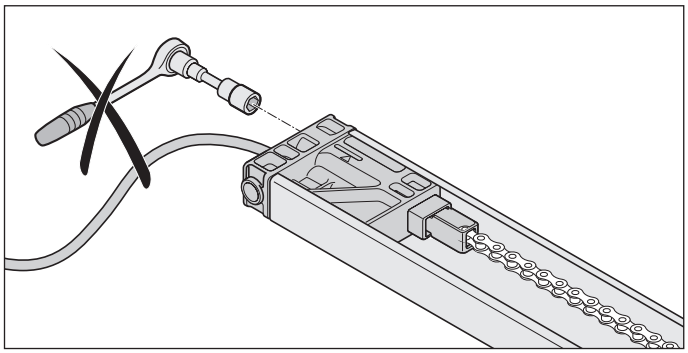
NOTE

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

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

   Rotate the chain back 90°.

   ⇒ **The entire chain is attached.**



NOTE

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

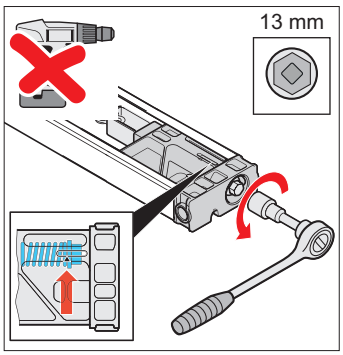


Fig. 8

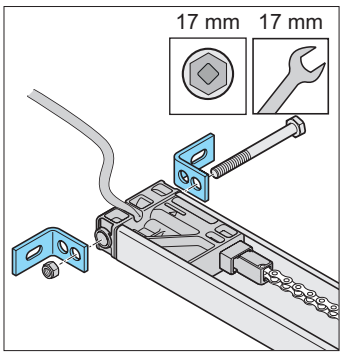


Fig. 9

8. Tension the chain to the mark on the **plug-in unit without control cable**; see arrow in the detailed view.
9. Fasten the two header brackets to the **plug-in unit with control cable** with screw and nut.

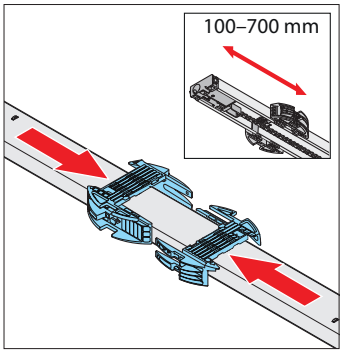


Fig. 10

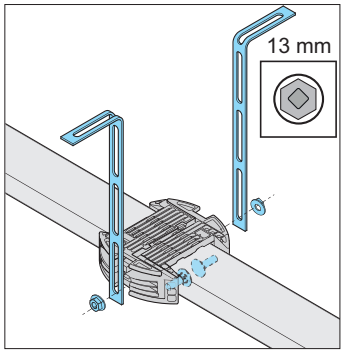


Fig. 11

10. Turn the rail to install the ceiling bracket.

    The distance between the rear **plug-in unit without control cable** and the ceiling holder should be approx 100–700 mm.

    Place the ceiling holder on the rail and slide into one another.

NOTE

- Depending on the door construction, the installation situation and the installation type, it should be checked whether a **second ceiling bracket** is necessary.

11. Fasten the perforated strips to the ceiling holder on the right and left. Also observe the distances for installation to the ceiling or lintel.

    ⇒ **The rail is prepared for the remainder of the installation.**

For further installation, see Chapter **“4.7 Installation on the door” from page 25**.

4. Installation

4.7 Installation on the door

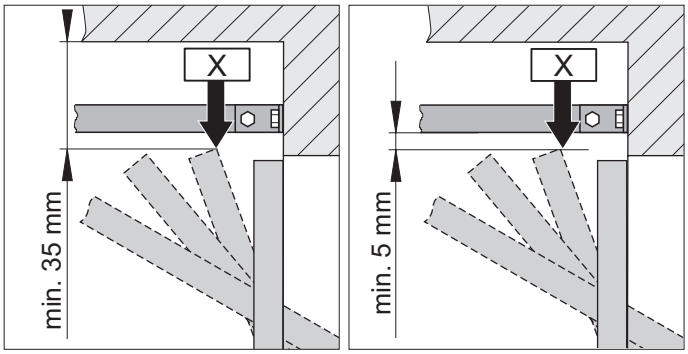


Fig. 1.1 Highest running point for one piece and up-and-over doors

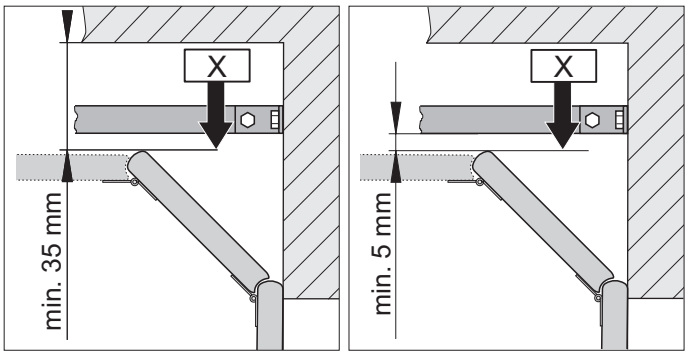


Fig. 1.2 Highest running point for a sectional door

INFORMATION

- 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.

NOTE

- The door must not rub against the operator or rails. This could damage the operator or rails.

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

   Open the door and measure the closest distance (min. 35 mm) between the top edge of the door and the ceiling.

   The distance between "X" and the bottom edge of the rail **must** be at least 5 mm. If the distance between the ceiling and the bottom edge of the rail is greater than 245 mm, extend the ceiling holder with additional perforated strips.

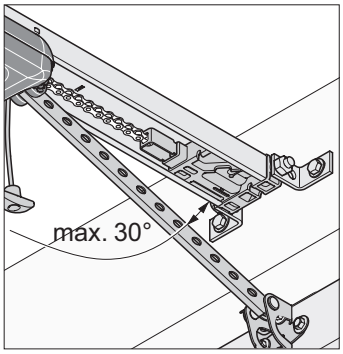


Fig. 2

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

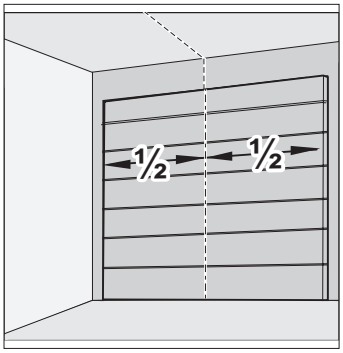


Fig. 3

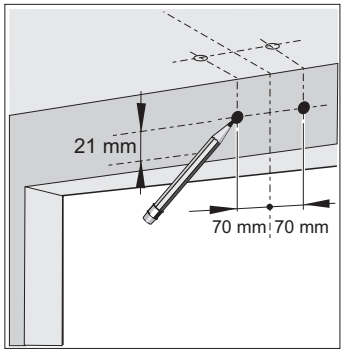


Fig. 4

3. Close the door.

   Select the lintel or ceiling for installation. The space required for ceiling installation is more than 35 mm.

   Measure the centre of the door at the front and mark the position on the door and the lintel or ceiling.

4. Mark points 70 mm to the right and left of the centre of the door at the same height on the lintel or ceiling.

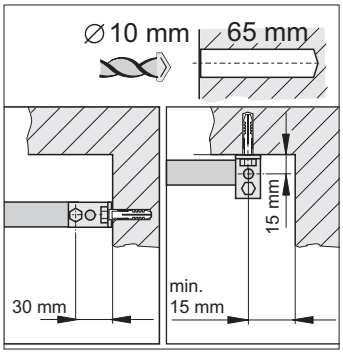


Fig. 5

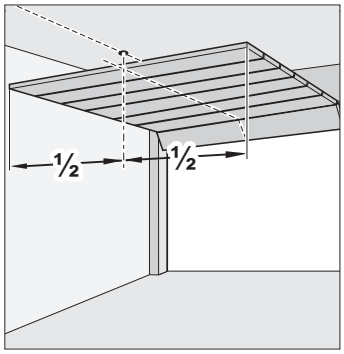


Fig. 6

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

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

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

4. Installation

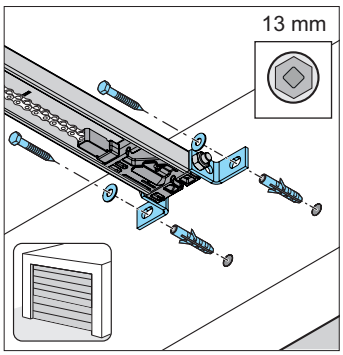


Fig. 7

7. Close the door.

   Insert the wall plug into the lintel or ceiling.
   Lift the rail 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 rail is attached to the lintel or ceiling.**

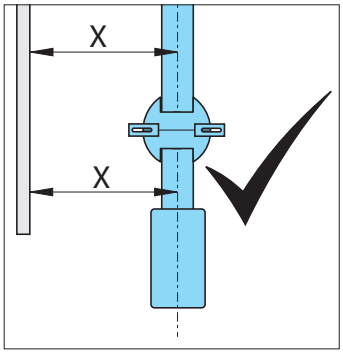


Fig. 8

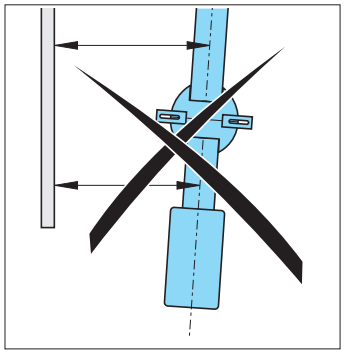


Fig. 9

NOTE

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

8. Align the operator parallel to the rails of the door **(correct)**.
9. Here, the operator is not aligned parallel to the rails of the door **(incorrect)**.

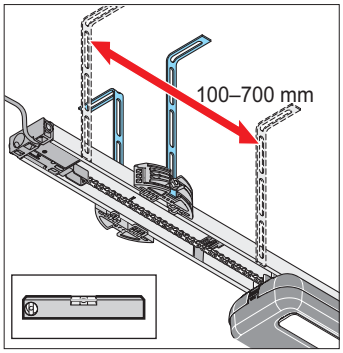


Fig. 10

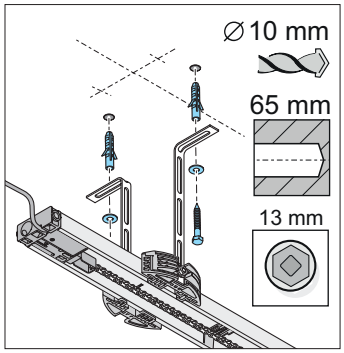


Fig. 11

10. Align the rails parallel to the centre of the door at the rear.

    Align the ceiling bracket.

    The distance between the ceiling control unit and the ceiling holder should be approx. 100–700 mm.
    The ceiling bracket should be installed in this area.

    Check the alignment of the rail with a spirit level.

11. Mark the holes for the ceiling holder on the ceiling.

    Drill two holes (Ø 10 x 65 mm deep).

    Insert the wall plugs.

    Insert two screws with washers and screw the perforated strip to the ceiling.

    Tighten the screws.

    ⇒ **The rail is attached to the ceiling.**

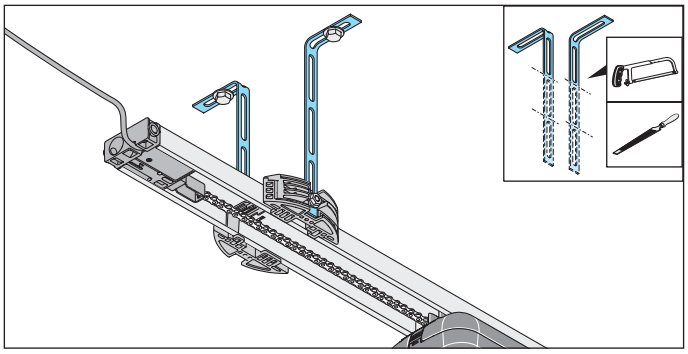


Fig. 12

12. The projecting perforated strips must be shortened.

⚠ 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.

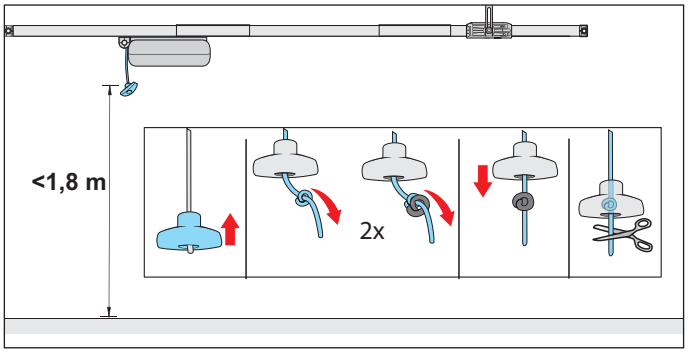


Fig. 13

⚠ WARNING! Danger of entrapment!

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

- The emergency release handle which is included must be used.

4. Installation

NOTE

- The emergency release handle may cause damage, e.g. scratches on the vehicle.

  The distance between the garage floor and the emergency release cord **must** be less than 1.8 m.

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

13. Attach the emergency release handle:

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

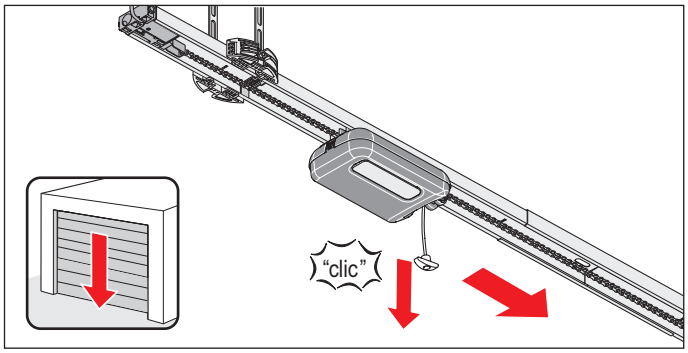


Fig. 14

14. Pull the emergency release cord once to unlock the motor carriage.

    Slide the motor carriage forward to the door.

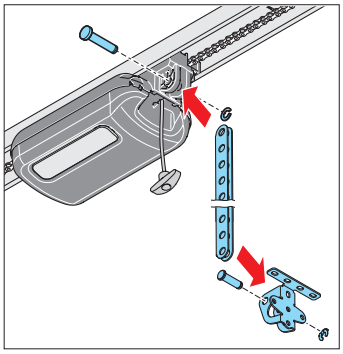


Fig. 15

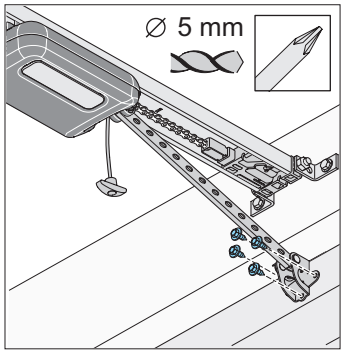


Fig. 16

⚠ WARNING! Risk of injury in the head region!

Impact with suspended objects may cause serious abrasions and cuts.

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

15. Plug the push arm into the door bracket. Insert the bolt and slide on the security pin.

    Plug the push arm into the motor carriage at the front. Also insert the bolt here and slide on the security pin.

16. Align the door bracket with the centre of the door.

    Mark the position of the holes and drill them (Ø 5 mm).

    Fix the door bracket to the door with the hexagon bolts.

    ⇒ **The push arm is attached to the motor carriage and the door.**

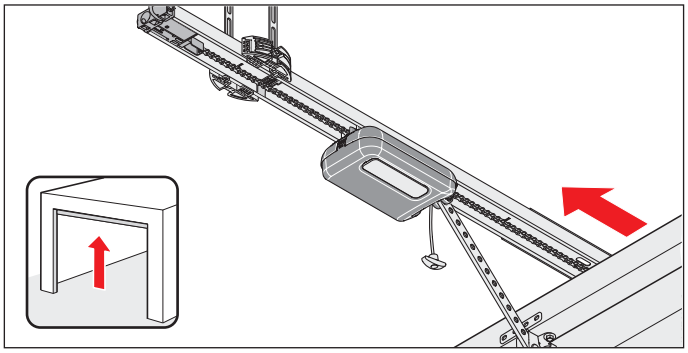


Fig. 17

NOTE

- The door must not rub against the operator or rails. This could damage the operator or rails.

  The operator **must** then be offset.

17. Open the door completely by hand.

    If the door rubs against the operator or the rails, the operator **must** be offset.

    ⇒ **The limit stop moves automatically with the motor carriage.**

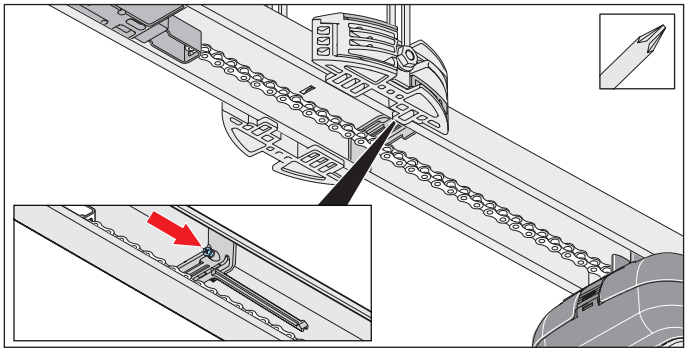


Fig. 18

NOTE

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

  A clearance of 30 mm **must** be observed.

INFORMATION

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

4. Installation

18. Tighten the screw on the limit stop with a Phillips screwdriver without changing its position.

    Check the door OPEN end position:

    Open the door fully for this. The motor carriage moves towards the door OPEN position on the limit stop until a click noise is heard.

    ⇒ **The door OPEN end position is set.**

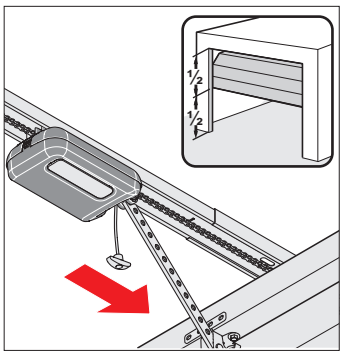


Fig. 19

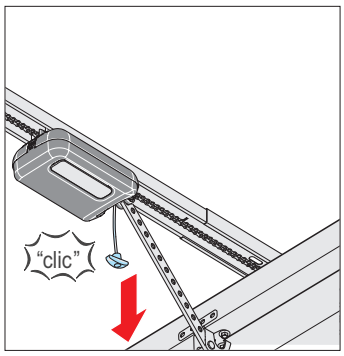


Fig. 20

19. Move door to centre position.

    ⇒ The motor carriage moves with it.

20. Pull the emergency release cord.

    ⇒ **The motor carriage is locked.**

    ⇒ The door can only be moved by the operator.

    ⇒ **Installation of the motor carriage and rail is complete.**

4.8 Installing the wall control unit

In particular, observe the warnings below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 9**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- If an accumulator is connected, disconnect it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

⚠ WARNING

Danger of crushing and shearing!

The door can be actuated via the wall switch.

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

- The wall control unit with keypad must be mounted within sight of the door.
- The wall control unit must not be installed in the direct vicinity of moving parts.
- The keypad of the wall control unit **must** be installed at a height of at least 1.5 m.

NOTE

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

INFORMATION

- The power cord that has been provided may not be shortened or extended.

  All devices to be connected externally **must** have safe isolation of the contacts from the mains voltage supply in accordance with IEC 60364-4-41.

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

  All electrical wiring must be firmly secured to prevent displacement.

The following **must** be observed when installing the wall control unit:

- The power cord is approx. 0.7 m long.
- Note that the distance between the wall control unit and the power outlet must not exceed 0.6 m.
- The maximum length of the control cable is 5 m, and it must not be extended.
- The keypad of the wall control unit must be installed at a height of at least 1.5 m.

The direct connection of the wall control unit to an all-pole mains circuit breaker, e.g. a main switch or a power outlet, **must** be fuse-protected; see Chapter **"6.1 Mains connection" on page 32**.

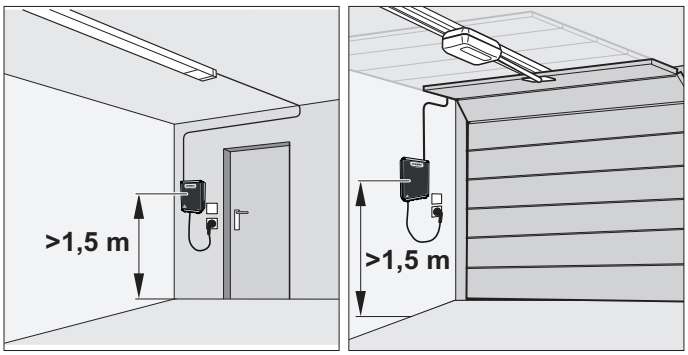


Fig. 1

4. Installation

INFORMATION

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

  Only use permissible mounting materials appropriate for the supporting surface.

1. Choose a suitable location for the wall control unit close to an existing power outlet.

   The maximum length of the control cable is 5 m, and it must not be extended.

   Note that the distance between the wall control unit and the power outlet must not exceed 0.6 m.

   The wall control unit **must** be installed at a height of at least 1.5 m.

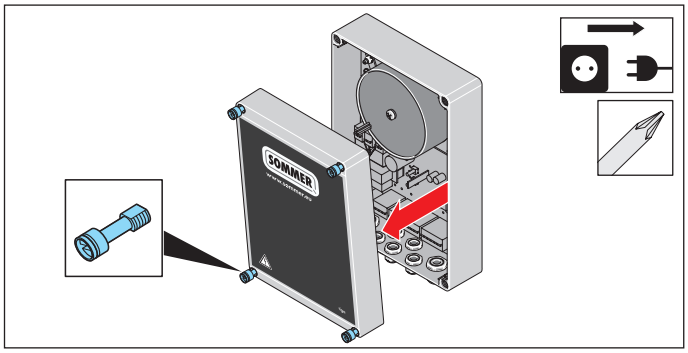


Fig. 2

2. Loosen the four screws of the control unit housing and remove the cover.

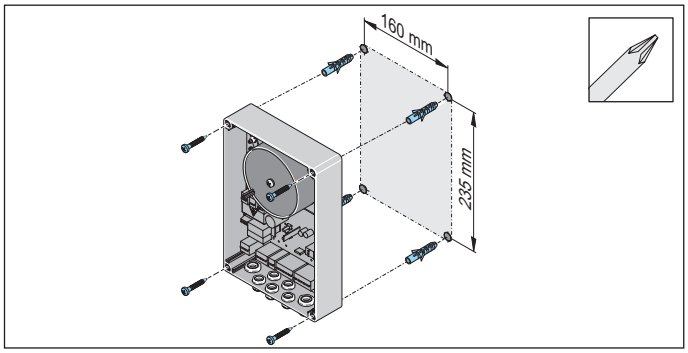


Fig. 3 Installation example

WARNING! Risk of eye injury!

Chips flying when drilling may cause serious injuries to eyes and hands.

▸ Wear safety glasses when drilling.

3. Transfer the mounting points to the substructure.

   Drill holes (Ø 6 x 50 mm deep).

   Insert the wall plugs. Fix the wall control unit in position with screws, align the unit and firmly tighten the screws.

4. Route the control cable of the plug-in unit up to the wall control unit and secure to prevent displacement.

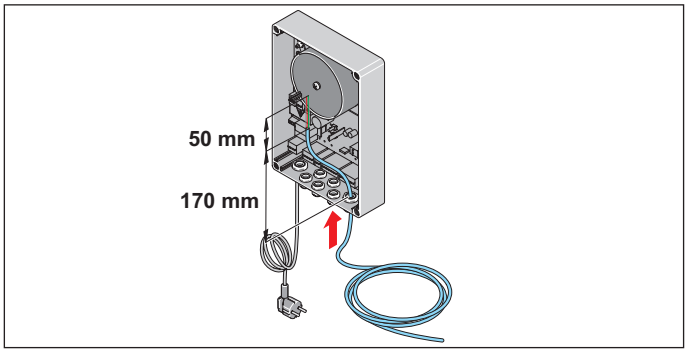


Fig. 5

5. Feed the control cable into the wall control unit through the cable inlet.

   Shorten the control cable to no more than 220 mm in length.

   Uncover the last 50 mm and strip the wires.

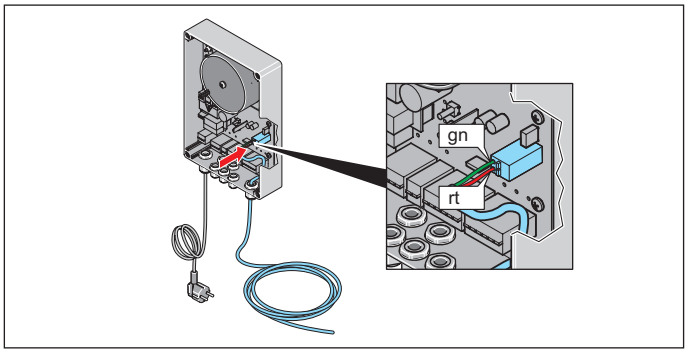


Fig. 5

6. Route the control cable up to the **gn/rd** terminal. Connect the green wire of the control cable to the **gn** terminal.

   Connect the red wire of the control cable to the **rd** terminal.

7. Close the housing in reverse order.

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

Further connection options are described in Chapter **“9. Connections and special functions of the wall control unit” from page 47**.

5. Removing and fastening covers

5.1 Cover of the motor carriage and the wall control unit

In particular, observe the warnings below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **“2. General safety instructions” from page 9**.

⚠ 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.

Danger due to hot surfaces!

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

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

Removing the cover of the motor carriage

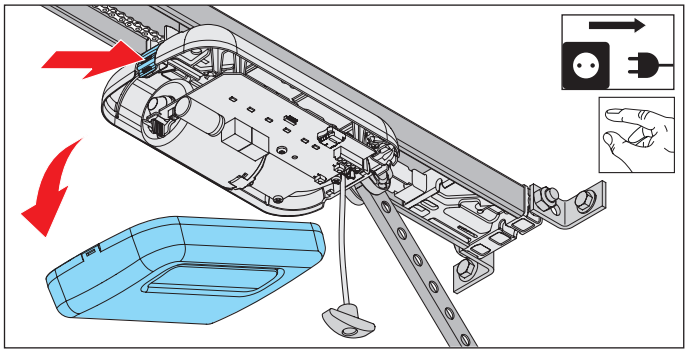


Fig. 1

1. Disconnect the operator from the mains voltage.
   Then check that the power is disconnected.
   ⇒ **Press** on the cover lock at the **back** of the motor carriage and remove the cover.

Fitting the cover of the motor carriage

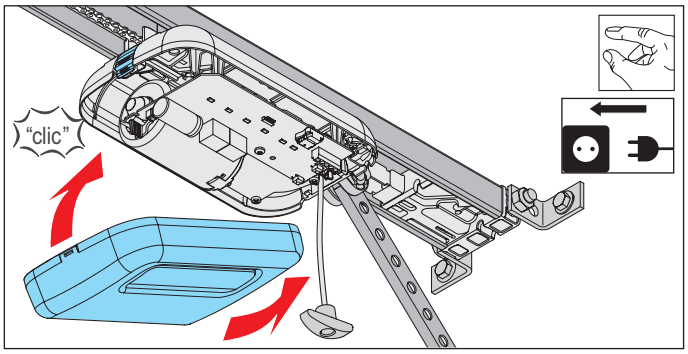


Fig. 1

1. After working on the motor carriage, replace the cover in reverse order.
   Connect the operator to the mains voltage.
   Check that the voltage supply is connected.
   ⇒ **The operator is supplied with mains voltage.**

Remove the cover of the wall control unit

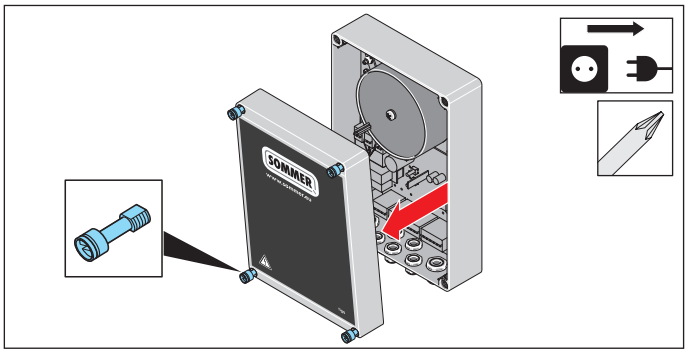


Fig. 1

1. Disconnect the operator from the mains voltage.
   Then check that the power is disconnected.
2. Loosen the screws on the control unit housing and remove the cover.
3. If an accumulator is used, it must also be disconnected, see Chapter **“9.11 Connecting an accumulator” from page 56**.

5. Removing and fastening covers

Fit the cover of the wall control unit

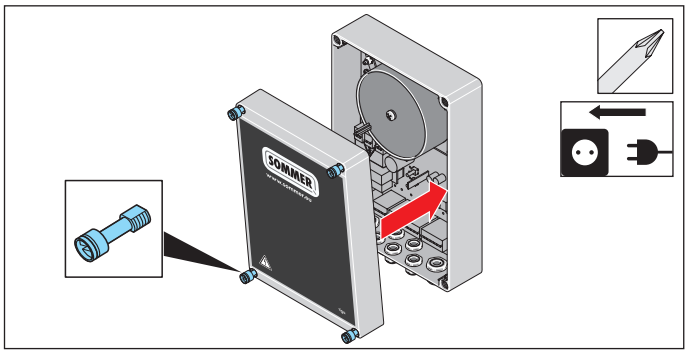


Fig. 1

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

   ⇒ **The operator is supplied with mains voltage.**

6. Electrical connection

6.1 Mains connection

The direct connection of the wall control unit to an all-pole mains circuit breaker, e.g. a main switch, or to a power outlet, **must** be fuse-protected.

Electrical connection must be performed by a **trained electrician**. Local and national installation regulations (e.g. VDE) must be observed.

In particular, observe the warnings below.

⚠ DANGER

Danger due to electric current!

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

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

NOTE

- Control or regulating units in a fixed position must be mounted within sight of the door and at a height of at least 1.5 m.
- The maximum cable length for connected accessories is 30 m.

NOTE

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

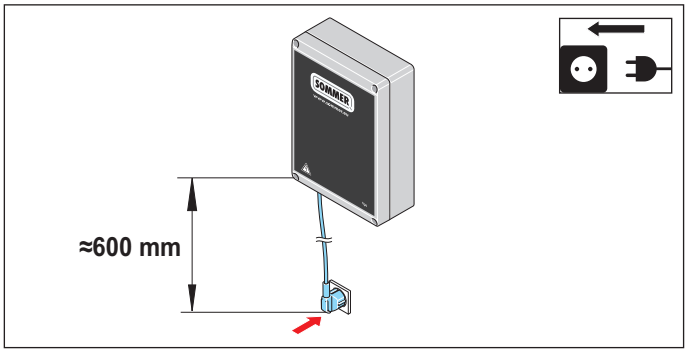
INFORMATION

- All devices to be connected externally **must** have safe isolation of the contacts from the mains voltage supply in accordance with IEC 60364-4-41.

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

  All electrical wiring must be firmly secured to prevent displacement.

Connection to the mains voltage must not be established until installation has been completed.
The connection to the battery pack is established last.



In order to connect to a power outlet or to an all-pole mains circuit breaker, e.g. a main switch, the wall control unit **must** be installed as follows:

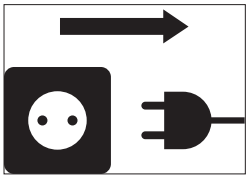
- the network cable is about 0.7 m long and must not be shortened or extended.
- the distance between the wall control unit and the power outlet must not exceed 0.6 m.
- easily visible and accessible.

The power outlet must be installed as follows:

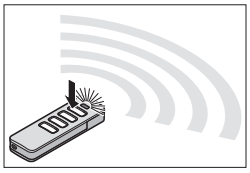
- within easy reach of the wall control unit power cord.
- easily visible and clear of obstacles.

Disconnect the operator from the mains voltage / power reset

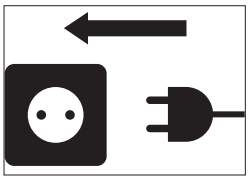
After the operator has been disconnected from the mains voltage, the various parts continue to carry a certain amount of residual voltage. The following steps can be taken to quickly and safely eliminate this voltage:



1. Disconnect the operator from the mains voltage.



2. Execute a travel command (handheld transmitter or pulse button)
3. Wait 20 seconds.



4. Reconnect the mains plug to the mains voltage.

   ⇒ **Residual voltage is eliminated / power reset completed.**

7. Initial operation

7.1 Important notes and information

In particular, observe the warnings below.

⚠ WARNING

Danger of entrapment!

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

- The force setting is relevant to safety and must be carried out by a **qualified specialist**.
- You must proceed with extreme caution if you check and if necessary adjust the force setting.
- 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 caused by the closing force.

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 rail.
- Do not drive through the door until it has opened completely.
- Never stand under the opened door.

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.

7.2 Carrying out automatic initial operation

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

INFORMATION

- During initial operation:
  - Stay in the garage, particularly when programming.
  - Obstacle recognition is not yet coordinated to the door and is in the programming phase.
- If a photocell/light curtain is connected for door CLOSE and detected by the control unit, the closing function is automatically activated. Only when the DIP switch on the motor carriage is set to **“ON”**, see also Chapter **“8. Connections and special functions of the motor carriage” from page 37** or Chapter **“16. Connection diagrams and functions of the DIP switches” from page 78**.
- Programming can be carried out via a handheld transmitter or an external button.
- The limit stop can also be retrofitted.

For compliance with EN 13241, before initial operation, the door type **must** be selected and set on the motor carriage with DIP switch 3 or 4. The motor carriage has an automatic force setting. The motor carriage memorises the required force during the door OPEN and CLOSE movements and stores it when the end position has been reached.

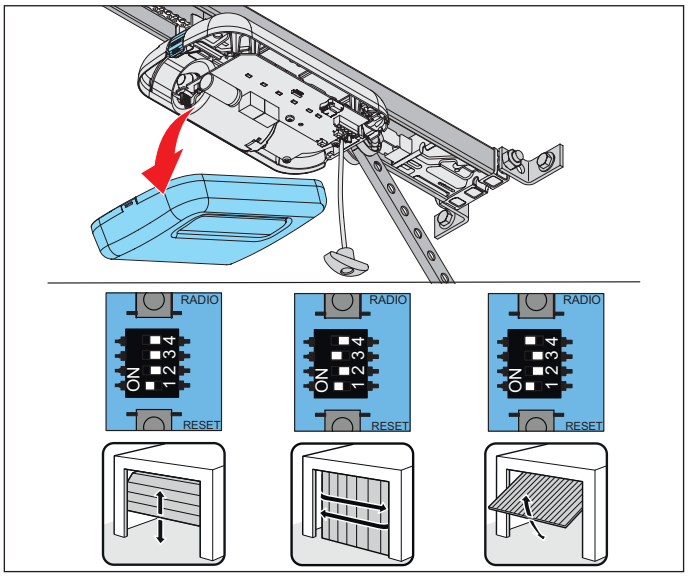


Fig. 1

1. Open the cover of the motor carriage. Set the DIP switches, depending on the door.

7. Initial operation

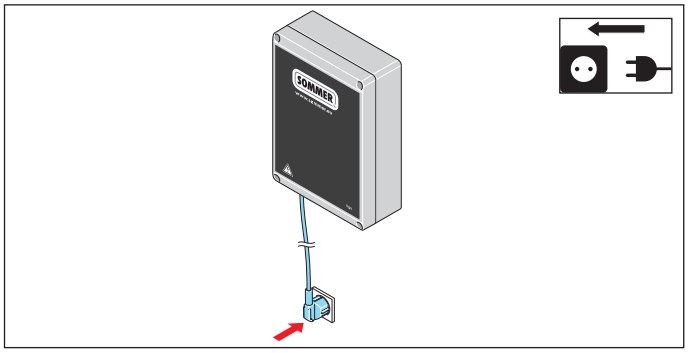


Fig. 2

2. Compare the existing mains voltage with the type plate.
   Connect the operator with the mains voltage.

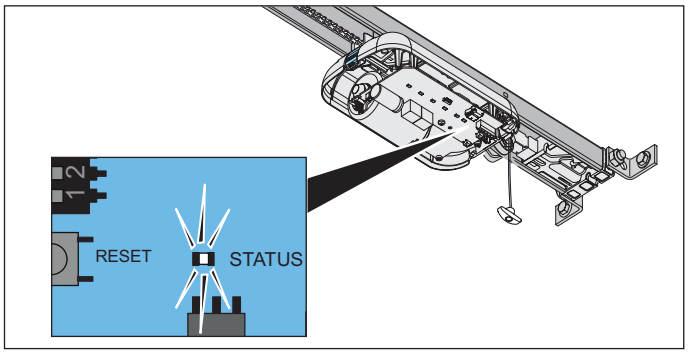


Fig. 2.1

⇒ The status LED of the motor carriage blinks green.

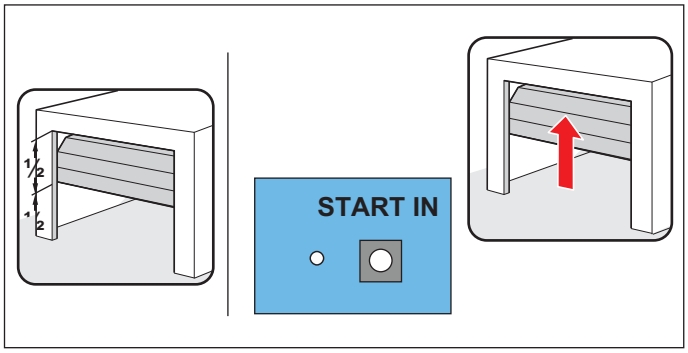


Fig. 3

3. After the operator has been connected to the mains voltage, its first movement **after a pulse** is always door OPEN.
   Press the START IN button on the control unit.

⇒ The motor carriage moves slowly to the door OPEN end position and **automatically** switches off at the limit stop.

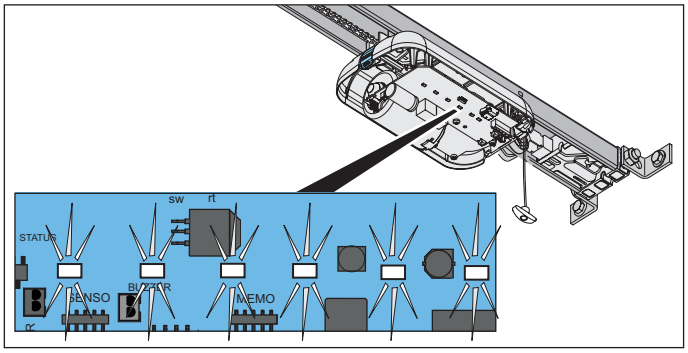


Fig. 3.1

⇒ The operator lighting LEDs blink.

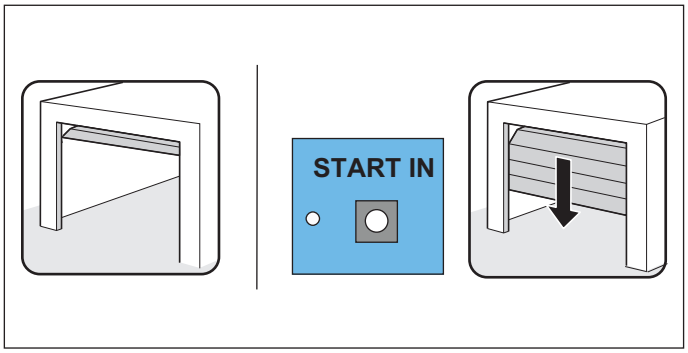


Fig. 4

4. Press the START IN button on the control unit **briefly** (< 1 second) to save the end position.

⇒ The motor carriage moves slowly in the door CLOSE direction.

⇒ The operator lighting LEDs blink.

⇒ The motor carriage switches off **automatically** when it reaches the factory-set closing force at the door CLOSE end position.

⇒ The operator lighting blinks in a different sequence.

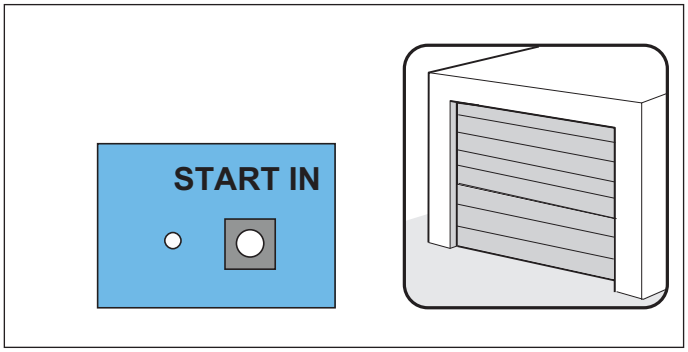


Fig. 5

5. Press the START IN button on the control unit **briefly** (< 1 second) to save the end position.

⇒ The operator lighting LEDs blink briefly in a fast sequence.

The operator automatically starts its programming process

7. Initial operation

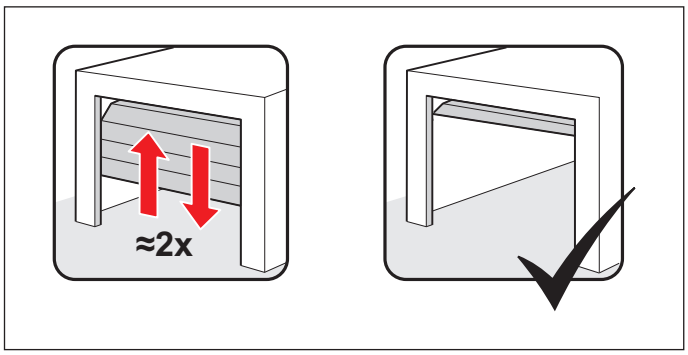


Fig. 5.1

⇒ The motor carriage moves **automatically** to the door OPEN end position again and programs the required operating force.

⇒ The motor carriage **automatically** moves to the door CLOSE end position.

⇒ If necessary, the motor carriage moves over the path several times for programming with a greater door weight.

⇒ The motor carriage **automatically** moves briefly in the door OPEN direction to program the soft run.

⇒ The door automatically returns to the door CLOSE end position.

⇒ The motor carriage **automatically** moves to the door OPEN end position.

⇒ The LEDs of the operator lighting remain **steady**.

6. The function of the emergency release **must** be checked in the door CLOSE end position. Unlocking **must** be possible.

⇒ If a photocell/light curtain is connected, PHOTO 1 for door CLOSE, the door automatically closes after the hold open time and clearing time run out.

⇒ **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 **"7.4 Detecting obstacles during the force programming run" from page 35**.
- It may be necessary to adjust the end positions; see Chapter **"7.5 Mechanical adjustment of the end positions" on page 36**.
- The force setting **must** be checked after installation of the operator; see Chapter **"10.1 Testing obstacle detection" on page 57**.

7.3 Carrying out manual initial operation

In the case of doors without lintel or without lintel panel, programming of the door CLOSE end position should be carried out manually. To do this, carry out steps 1.–3 in Chapter **"7.2 Carrying out automatic initial operation" from page 33** and then the steps below:

1. **Briefly** press the START IN button on the control unit.

⇒ The door begins to move towards the door CLOSE end position.

2. Before the door reaches the door CLOSE end position, press the START IN button again briefly.

⇒ The door stops.

3. To approach the desired end position for door CLOSE, **press and hold** the START IN button until the motor carriage **moves briefly**.
4. Release the START IN button.
5. The process can be repeated until the desired end position is reached.
6. Press the START IN button **briefly** (<1 second) to save the door CLOSE end position.
7. The door then starts the programming process; see Section **"The operator automatically starts its programming process" on page 34**.

7.4 Detecting obstacles during the force programming run

If the door detects an obstacle during its first door CLOSE movement and the force programming runs cannot be completed, the door stops.

NOTE

- Check the movement range, mechanism, spring tension and the weight balance to prevent damage to the door system

1. **Press and hold** the START IN button on the control unit.

⇒ The motor carriage **moves briefly** and then moves to the desired end position for door CLOSE.

2. Release the START IN button.
3. **Fine adjustment:**

Press and hold the START IN button on the control unit until the motor carriage **moves briefly**.
Release the START IN button.

3.1 The process can be repeated until the desired end position is reached.

⇒ Press the START IN button on the control unit **briefly** (1 second) to save the door CLOSE end position.

⇒ The motor carriage starts the **automatic** force programming runs for the door OPEN end position.

⇒ The motor carriage starts the **automatic** force programming runs for the door CLOSE end position.

⇒ If an obstacle is detected again, the motor carriage stops and reverses a short distance. The motor carriage starts the **automatic** force programming run to the door OPEN end position.

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

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

1. **Press and hold** the START IN button on the control unit.

⇒ The motor carriage starts without jerking, because the end position of the door is already saved.

⇒ The motor carriage moves to the end position.

2. Release the START IN button on the control unit.

7. Initial operation

3. **Briefly press** the START IN button on the control unit.
   ⇒ **Automatic force programming runs start again.**
   ⇒ On completion of the force programming runs, the motor carriage automatically moves to the door OPEN end position.
   ⇒ The LEDs of the operator lighting remain **steady**.
4. The function of the emergency release **must** be checked in the door CLOSE end position. Unlocking **must** be possible.
   ⇒ **Operator is programmed and ready for use.**

7.5 Mechanical adjustment of the end positions

Increasing the closing pressure of the end position for door CLOSE

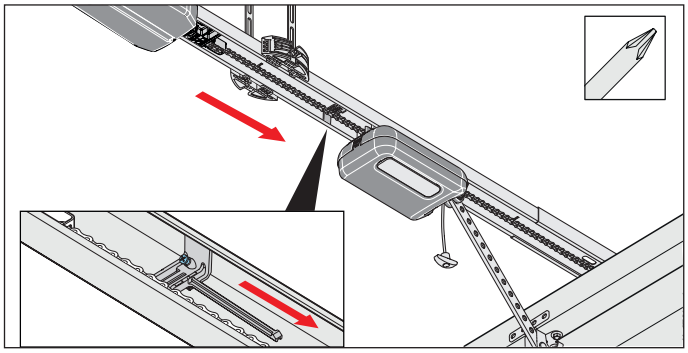


Fig. 1

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

Reducing the closing pressure of the end position for door CLOSE

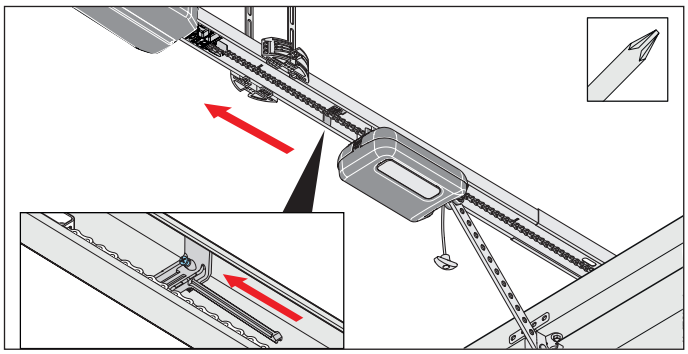


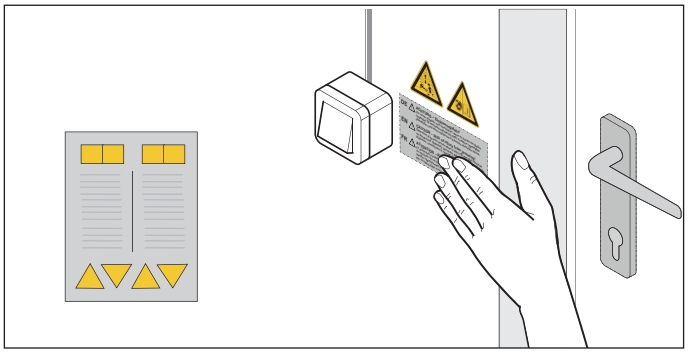
Fig. 1

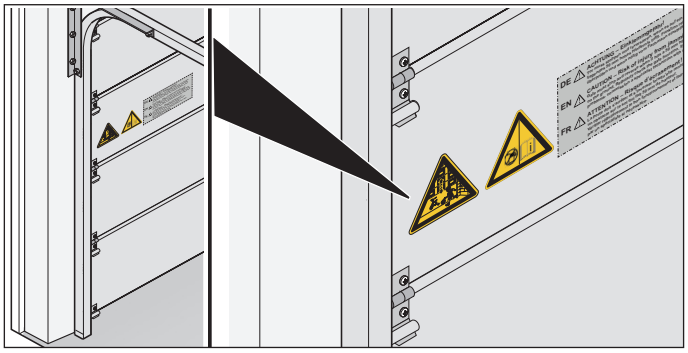
1. Loosen the screw on the limit stop and move the limit stop **a few millimetres** in the door OPEN direction. Re-tighten the screw.

NOTE

- Do not push the door all the way to the mechanical stop. Otherwise, the operator will pull the door against the mechanical stop. This will apply tension to the door and it may be damaged.
  A clearance of approx. 30 mm **must** be observed.

7.6 Attaching information sign and warning signs



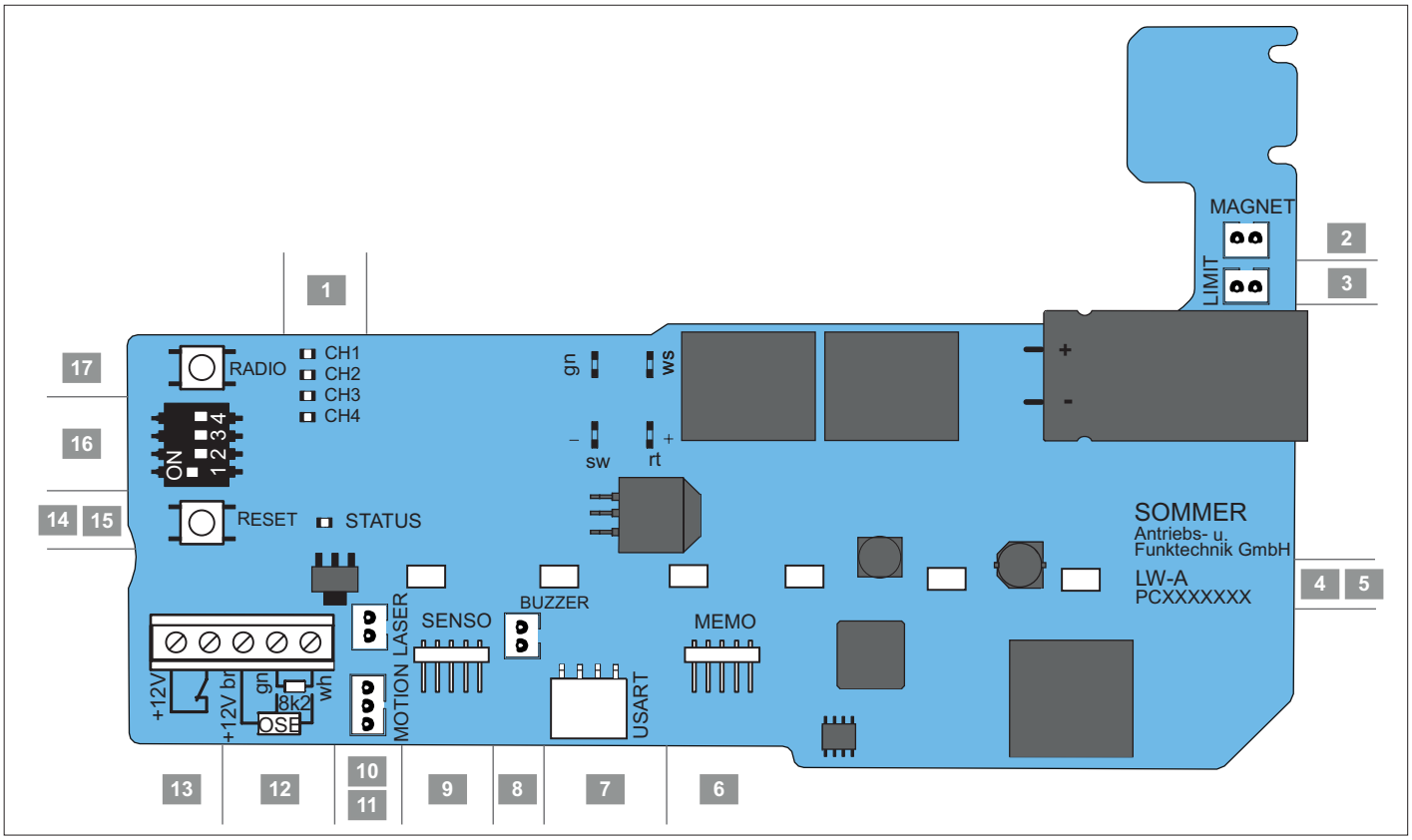


- far from moving parts
- near the stationary control or control unit
- at eye level in a highly visible section of the door leaf

2. Carry out obstacle detection; see Chapter **“10.1 Testing obstacle detection” on page 57.**
   ⇒ **Initial operation is complete.**

8. Connections and special functions of the motor carriage

8.1 Motor carriage circuit board



1	LED, CH 1–4, red **Display for radio channel**
2	MAGNET slot*, green, 2-pin **Lock terminal**
3	LIMIT slot, blue, 2-pin **Limit stop terminal (OPEN)**
4	Circuit board label
5	LEDs, operator lighting
6	MEMO slot* **Memo terminal (red housing)**
7	USART slot **Interface for additional modules**
8	BUZZER slot*, black, 2-pin **Warning or alarm buzzer terminal**
9	SENSO slot* **Senso terminal**
10	LASER slot*, white, 2-pin **Parking position laser terminal**
11	MOTION slot*, white, 3-pin **Terminal for movement sensor**
12.1	Terminal for safety contact strip 8k2*
12.2	Terminal for OSE safety contact strip*
13	Terminal for wicket door safety device Potential-free
12/13	Terminal DC 12 V, max. 100 mA
14	Status LED, green
15	Reset button, green
16	DIP switch
17	Radio button, red

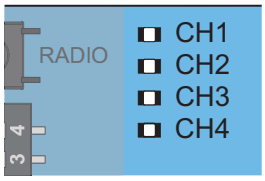
* The version can vary depending on the type. This means the use of accessories can vary. See Chapter **“3.9 Connection options” on page 17**.

A connection diagram can be found in Chapter **“16. Connection diagrams and functions of the DIP switches” from page 78**

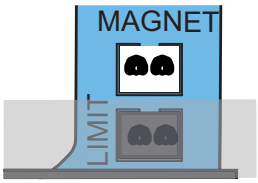
8. Connections and special functions of the motor carriage

8.2 Connection options on the motor carriage

Circuit board section	Function/application example
1	**Radio channels, CH 1–4, red**



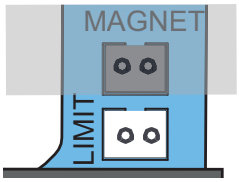
2	**MAGNET slot*, green,** 2-pin



Lock terminal

Locking magnet

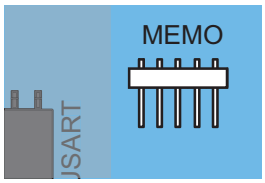
3	**LIMIT slot, blue,** 2-pin



Limit stop terminal (OPEN)

4	**Circuit board label**
5	**Operator lighting, 6 LEDs**

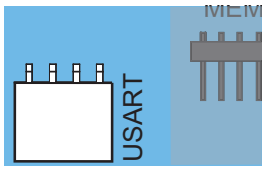
6	**MEMO slot***



Memo terminal

Memory extension for 450 transmitter commands

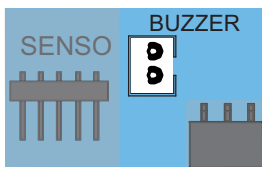
7	**USART slot**



Connection

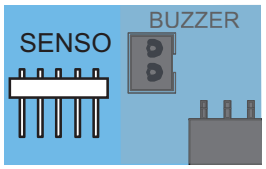
Interface for additional modules

8	**BUZZER slot*, black,** 2-pin



Warning or alarm buzzer terminal

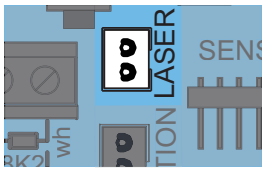
Circuit board section	Function/application example
9	**SENSO slot***



Senso terminal

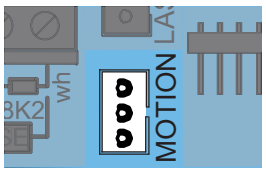
Humidity sensor

10	**LASER slot*, white,** 2-pin



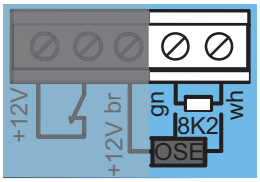
Parking position laser terminal

11	**MOTION slot*, white,** 3-pin

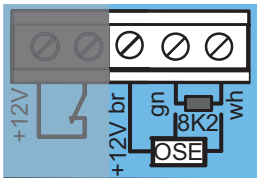


Terminal for movement sensor

12.1	**8k2* terminal**



12.2	**OSE* connection**

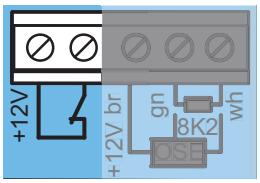


+12 V = br

OSE = gn

GND = wh

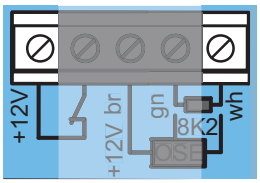
13	**Wicket door safety device terminal***



(Wicket door safety device, reed contact, etc.) potential-free Contact command

(DC 12 V, 10 mA) normally closed contact

12/13	**Output DC 12 V terminal***



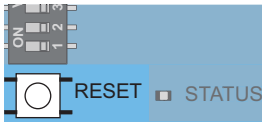
max. 100 mA +12 V

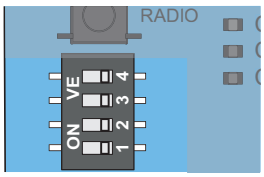
GND = wh

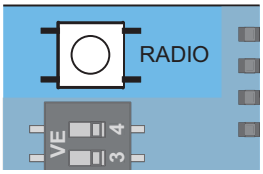
Power supply for optional accessories, option of finger scanner or external lighting

8. Connections and special functions of the motor carriage

Circuit board section	Function/application example
14	Status LED, green
15	Reset button, green
16	DIP switch
17	Radio button, red







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

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 11**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- If an accumulator is connected, disconnect it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

NOTE

- 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.

NOTE

- Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the circuit board.
  The DIP switches **must** be set using a suitable tool, for example a flat, thin plastic object.

INFORMATION

- Control or regulating units in a fixed position must be mounted within sight of the door and at a height of at least 1.5 m.
- The power cord is approx. 1.2 m long.
- The maximum cable length for connected accessories is 30 m.

8.3 Reducing the illumination power of LEDs

⚠ WARNING

Danger due to optical radiation!

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

- Never look directly into an LED.

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

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

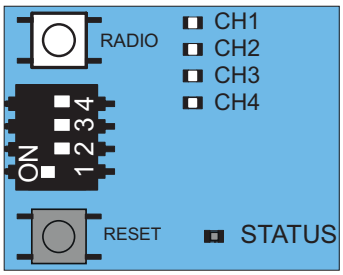
8.4 Explanation of the radio channels

LED	Radio channel	Setting/function
1	CH 1	Multi-function relay, lighting
2	CH 2	Partial opening
3	CH 3	**Exterior** request side
4	CH 4	**Interior** request side

* Depending on the DIP switch/SOMlink setting

8. Connections and special functions of the motor carriage

8.5 Programming the transmitter



INFORMATION

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

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

LED	1x	2x	3x	4x
CH 1	☐	☐	■	☐
CH 2	☐	☐	☐	■
CH 3	■	☐	☐	☐
CH 4	☐	■	☐	☐

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

If the memory capacity has been reached

A total of 40 handheld transmitter commands are available for all channels. If an attempt is made to program additional transmitters, the red LEDs of radio channels CH 1–4 blink. If more memory positions are needed, see Chapter **“8.6 Information on Memo” on page 40**.

8.6 Information on Memo

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

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

All radio channels, including the memory of the Memo, can be deleted; see Chapter **“8.11 Deleting all radio channels in the receiver” on page 41**.

INFORMATION

- Only delete a Memo on which data has been stored on a new operator.
  Otherwise, all stored transmitters of an operator are deleted and must be reprogrammed.

8.7 Cancelling programming mode

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

8.8 Deleting a transmitter button from the radio channel

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

LED	1x	2x	3x	4x
CH 1	☐	☐	■	☐
CH 2	☐	☐	☐	■
CH 3	■	☐	☐	☐
CH 4	☐	■	☐	☐

   ⇒ The LED flashes after 15 seconds.
2. Release the Radio button.
   ⇒ The radio receiver is now in deletion mode.
3. Press the transmitter button for which the radio command is to be deleted in the radio channel.
   ⇒ LED goes out.
   ⇒ **The deletion procedure is ended.**

Repeat the process for additional buttons as required.

8. Connections and special functions of the motor carriage

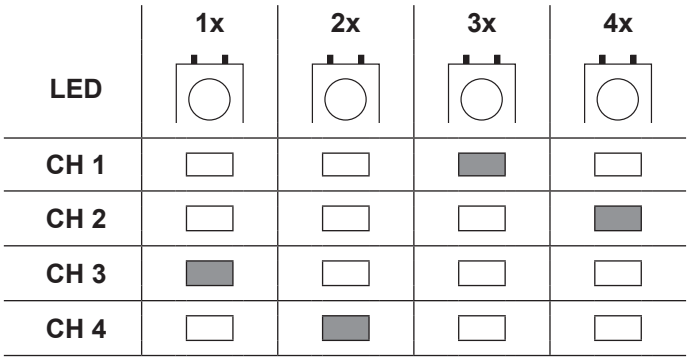
8.9 Deleting a transmitter completely from the receiver

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

Repeat the process for additional transmitters as required.

8.10 Deleting a radio channel in the receiver

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



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

8.11 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 blinking.
   ⇒ After another 5 seconds, the LED of the selected radio channel remains steady.
   ⇒ After another 5 seconds, all LEDs light up.
2. Release the Radio button.
   ⇒ All LEDs are off after 5 seconds.
   ⇒ **All programmed transmitters are deleted from the receiver.**
   ⇒ **Receiver is completely deleted; this also applies if the Memo is plugged in.**

8.12 Programming a second handheld transmitter by radio (HFL)

Prerequisites for programming by radio

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

The key assignment of the handheld transmitter **(A)** that put the radio receiver into programming mode by radio is used for the new handheld transmitter **(B)** which is to be programmed. The already-programmed transmitter and the new transmitter to be programmed must be situated within the range of the radio receiver.

Example:

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

Restrictions

- This function is not possible with the (Pearl Twin) handheld transmitter.
- The targeted programming of a selected handheld transmitter button to a radio channel is not possible.

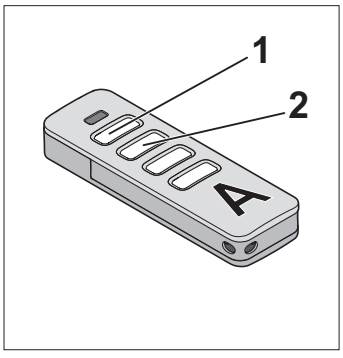


Fig. Handheld transmitter A

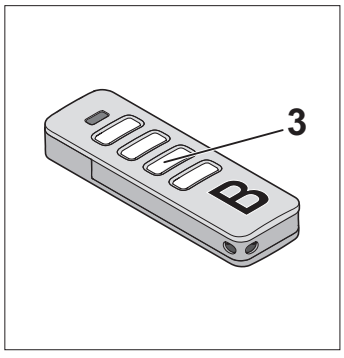


Fig. Handheld transmitter B

8. Connections and special functions of the motor carriage

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

8.13 Carrying out a reset

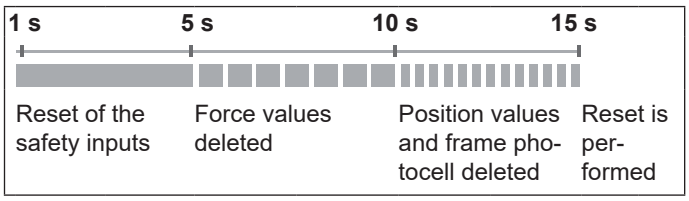
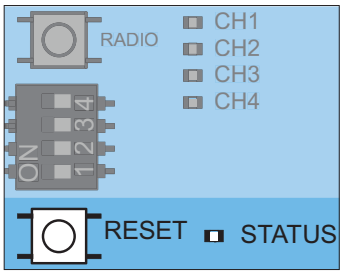


Fig. Overview of the time sequence of the ceiling control unit status LED when pressing the green Reset button



INFORMATION

- A SOMlink and a WiFi-enabled device are required to reset all parameters to the factory setting.
- The DIP switches can only be manually reset.

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 operator for 5 seconds until the green status LED blinks slowly.
   ⇒ Force values are deleted.

Deleting force and position values

1. Press the green Reset button on the operator for 10 seconds until the green status LED blinks quickly.
   ⇒ Force and position values deleted.
   ⇒ Frame photocell deleted.

Resetting

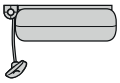
1. Press the green Reset button on the operator for 15 seconds until the green status LED goes out.
   ⇒ Reset is performed.

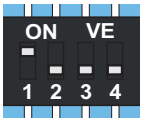
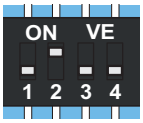
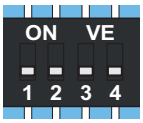
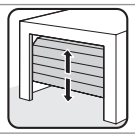
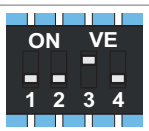
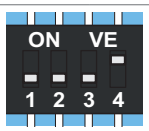
8.14 Setting the DIP switches on the motor carriage

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

For compliance with EN 13241, before initial operation, the door type **must** be selected and set on the motor carriage with DIP switches 3 or 4; see table below.

DIP switch on motor carriage



		ON	OFF
1		Automatic closing function activated*	Automatic closing function deactivated
2		Partial opening activated	Partial opening deactivated*
3+4		no function	 *
3			
4			

* Factory setting

8. Connections and special functions of the motor carriage

8.15 Setting the automatic closing function

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

⚠ WARNING

Risk of injury during automatic closing!

Automatically closing doors can injure people or 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 or near moving parts when the door is moving. In particular, do not reach into the ceiling holder or the push arm.
- Do not drive through the door until it has opened completely.

NOTE

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

  Objects must not be in the range of movement of the door.

INFORMATION

- The door opens completely if it hits an obstacle.
- Operation with automatic closing **must** comply with EN 12453.

  This is a legal requirement. National regulations must be observed in non-European countries.
- A photocell **must** be connected. Bridging the safety inputs with jumpers is not permitted.

8.16 Hold open time

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

During the hold open time, the request side, which gave the open command, receives no light signal. The hold open time is restarted after every additional command.

Example:

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

Different hold open times

- In the factory setting, the hold open time is 60 seconds from the end position and from partial opening.
- When driving through the photocell/light curtain, the hold open time is shortened to 5 seconds.

1. The door OPEN end position is reached by pressing button 1 on the transmitter. Every additional command issued during the hold open time restarts the hold open time.

   The door movement cannot be stopped with the transmitter.
2. After 60 seconds, the door closes automatically.

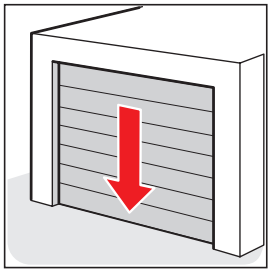
   The closing movement can be stopped by a command with the transmitter.

   ⇒ Door opens completely - after reversal of direction.
3. The door starts the closing process again after 60 seconds.

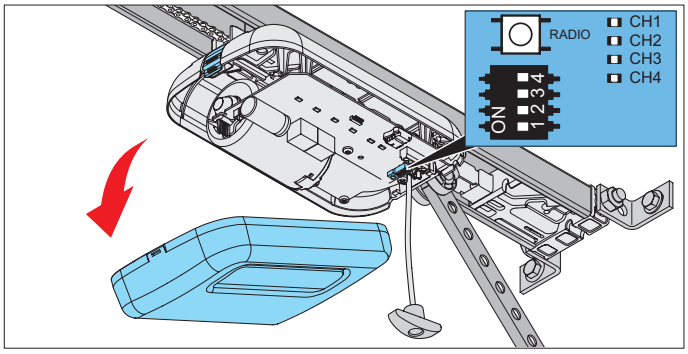
   ⇒ The door moves to the door CLOSE end position.

8. Connections and special functions of the motor carriage

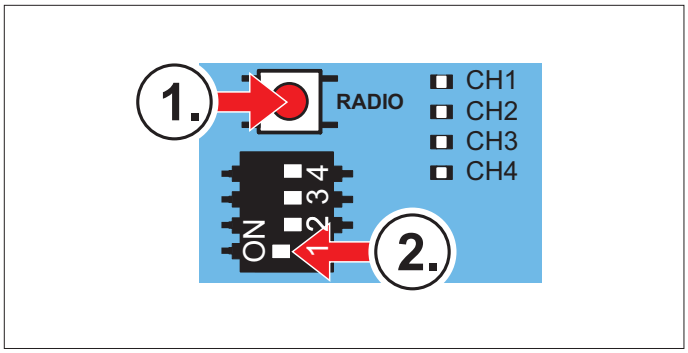
8.17 Setting the hold open time manually



1. Close the door.

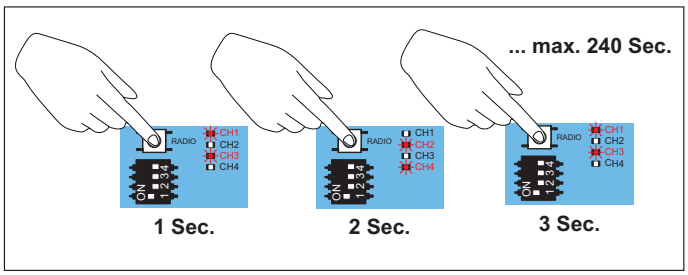


2. Remove the cover of the motor carriage.



3. First, **press and hold** the Radio button.
   With the button pressed, set DIP switch 1 to **"ON"** position.

   ⇒ LEDs CH 1 + CH 3 and CH 2 + CH 4 light up alternately in pairs for one second in each case. With each alternation, the hold open time has been extended by one second.



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

For repeated change of the hold open time (manually)

Steps 1 to 4 must be repeated!

8.18 Pre-warning time

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

8.19 Priority switching

Priority switching is used when entry from the exterior request side has a higher priority than that from the interior request side – for the exit. For example, when there is a very short entry and the car protrudes into the street. No priority switching is activated in the factory settings.

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

After the clearing time (factory setting: 10 seconds), the exterior request side receives drive authorisation. The traffic light in the interior lights up red.

8.20 Shortened hold open time for driving through the photocell

This is preset at the factory for sectional doors and side-opening sectional doors. 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.

If DIP switch 4 is set to ON (one piece doors) on the motor carriage, the shortened hold open time after driving through the photocell is not available in the factory setting.

⇒ Door is in the door OPEN end position.

⇒ A vehicle drives through the photocell.

⇒ Shortening of the hold open time is now activated. Door closes 5 seconds after the photocell is driven through.

8.21 Clearing time

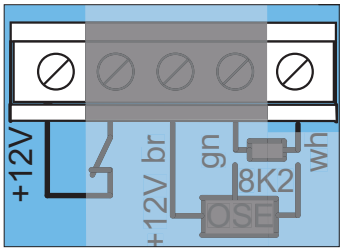
The 10-second clearing time (factory-set) starts after the hold open time runs out. During clearing time, the traffic lights light up red and the operator lighting on the motor carriage also blinks.

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

8. Connections and special functions of the motor carriage

8.22 12 V output

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



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

External devices can be connected in this operating mode, for example a finger scanner on the door panel. In this operating mode, power-saving mode is not available and **must** be deactivated; see Chapter **"11.4 Power-saving mode" on page 63**.

INFORMATION

- Power-saving mode **must** be deactivated for this operating mode. To do this, set DIP switch 3 on the wall control unit to **"ON"**.

8.23 Setting partial opening

A desired door opening can be selected with this function, e.g. for access for persons.

The door will then not open completely, but only to the set door OPEN end position. The specified partial opening can be approached from any position of the door.

INFORMATION

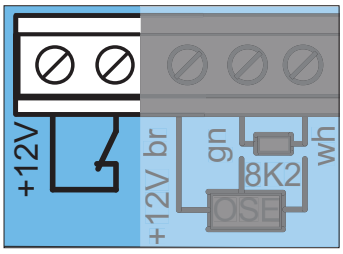
- When the door has reached the partial opening position, the traffic lights light up red on both sides of the door.

1. Close the door completely up to the door CLOSE end position.
2. Press the Radio button repeatedly to select radio channel CH 2 and to program the partial opening function to the desired transmitter button.
3. Set DIP switch 2 on the motor carriage to **"ON"**.
4. Press the desired button on the transmitter for the partial opening function.
   ⇒ The door moves in door OPEN direction.
5. When the door reaches the desired partial opening position, press the button on the transmitter again.
   ⇒ The door stops at the desired position.
   ⇒ **The partial opening position is programmed.**

8.24 Deleting partial opening

1. Set DIP switch 2 on the motor carriage to **"OFF"**.
2. Open the gate completely up to the gate OPEN end position.
   ⇒ Partial opening is deleted.
1. To program a new position, see Chapter **"8.23 Setting partial opening" on page 45**.

8.25 Wicket door safety device



The wicket door safety device prevents operation of the door with an open wicket door. The wicket door safety device from **SOMMER** meets the requirements of EN 12453.

Only the **SOMMER** wicket door switch may be installed (Item No.: S11474-0001).

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

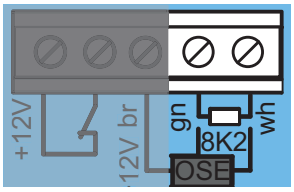
INFORMATION

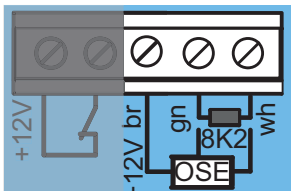
- If the control unit receives a new command with the wicket door open, the LEDs of the operator lighting change from permanent to blinking light.

8. Connections and special functions of the motor carriage

8.26 Connecting safety contact strip

Either an OSE (opto-electronic safety contact strip) or an 8k2 (electric safety contact strip) can be connected. During commissioning, the control unit automatically detects which version it is and sets itself to that version. If a safety contact strip is retrofitted on a programmed system, the control unit **must** be reset; see Chapter **"8.13 Carrying out a reset" on page 42**. As set at the factory, the safety contact strip is only effective in the Close direction. The direction of action can be changed with the SOMlink.

Terminal block	8k2
	gn wh

Terminal block	OSE
	+12 V = br OSE = gn GND = wh

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

⇒ Operator stops and opens the door slightly.

⇒ The obstacle is released.

INFORMATION

- In automatic closing operating mode, the operator stops and opens the door completely.
  The door closes automatically after the hold open time. If the door encounters the obstacle again, the operator stops and reverses completely to the door OPEN end position.
  The door stops there and the automatic closing function is interrupted. The hold open time does not start again until a command is received. The door is then **automatically** closed.

8.27 Information on SOMlink

SOMlink is a combination of an additional device and a web-based application. Since safety-relevant values can also be changed, SOMlink is **only sold to qualified specialists**.

Qualified specialists only can use the SOMlink to change functions and settings on the gate operator.

These include force and speed values as well as operating parameters and other convenient functions.
All changes to settings via the SOMlink are logged.

You can access a **demo version** of the **WEB APP** under:

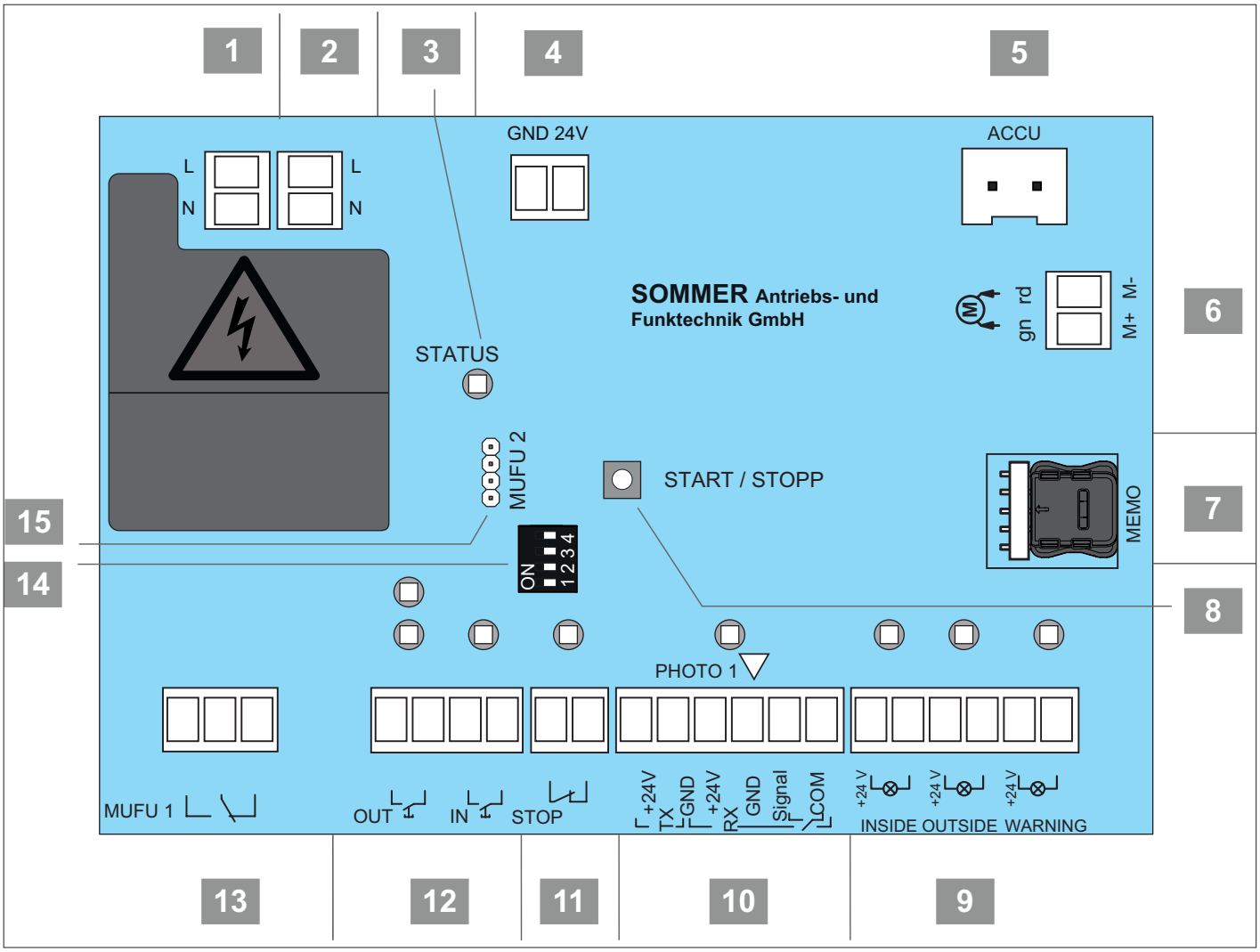
https://www.sommer-projects.de/gta_app/#home

INFORMATION

- A SOMlink and a WiFi-enabled device are required to reset all parameters to the factory setting.
- The DIP switches can only be manually reset.

9. Connections and special functions of the wall control unit

9.1 Wall control unit circuit board



1	2-pin terminal block **Supply voltage** AC 100–240 V, 50–60 Hz
2	2-pin terminal block **Primary side power supply** AC 100–240 V, 50–60 Hz
3	**Status LED** with status LED, green
4	2-pin terminal block **Power supply secondary side** DC +24 V
5	**ACCU slot** Terminal for accumulator

6	2-pin terminal block **Chain and rail** DC +24 V
7	**MEMO slot** Memo tiga (black housing) mounted at the factory
8	**Start / STOP** Start/STOP button for interior
9	**Terminal block,** 6-pin **Traffic light for red,** interior, with status LED, DC 24 V, max. 250 mA / max. 6 W **Traffic light for red,** exterior, with status LED, DC 24 V, max. 250 mA / max. 6 W **Warning light,** with status LED, orange, DC 24 V, max. 250 mA / max. 6 W

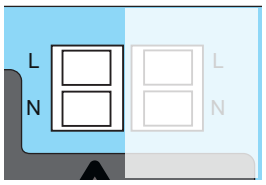
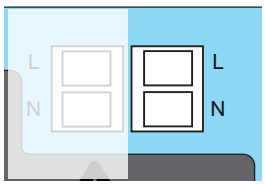
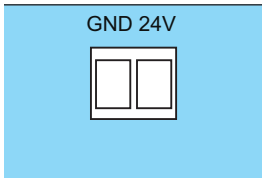
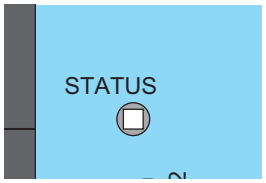
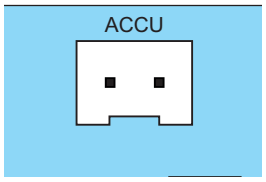
9. Connections and special functions of the wall control unit

10	**PHOTO 1 terminal block,** 6-pin 2- or 4-wire photocell (door CLOSE direction) DC 24 V, total max. 200 mA, with status LED, orange
	or
	Light curtain with OSE output (door CLOSE direction) DC +24 V = br GND = wh Signal = gr
11	**STOP terminal block,** 2-pin potential-free, e.g. for EMERGENCY STOP with status LED, green
12	**IN/OUT button terminal block**, 4-pin Potential-free interior request side exterior request side with status LED, orange
13	MUFU 1 terminal block **Multi-function relay 1** Potential-free changeover contact max. AC 250 V / 5 A or DC 24 V / 5 A with status LED, green
14	**DIP switch**
15	**MUFU 2 slot** for Relay or Output OC accessory **Relay:** max. AC 250 V / 5 A **or** DC 24 V / max. 5 A **Output OC:** DC 24 V / max. 250 mA with status LED, green

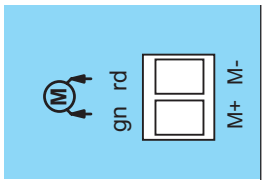
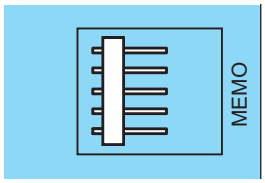
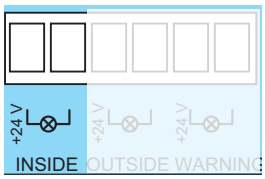
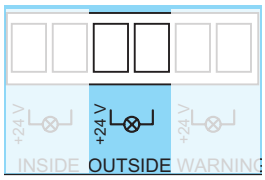
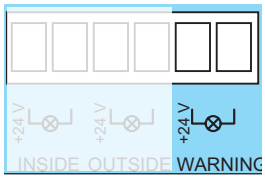
* The version can vary depending on the type. This means the use of accessories can vary. See Chapter **"3.9 Connection options" on page 17**.

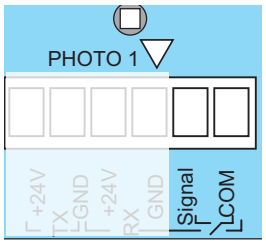
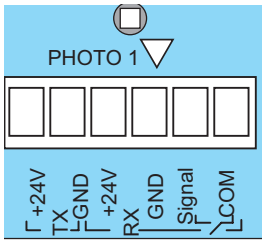
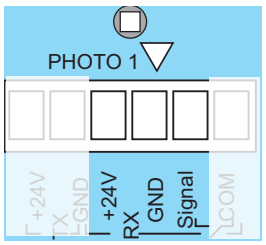
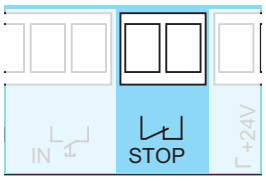
A connection diagram can be found in Chapter **"16. Connection diagrams and functions of the DIP switches" from page 78**

9.2 Connection options to the wall control unit

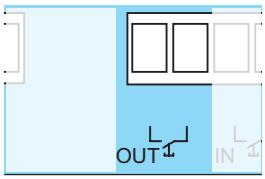
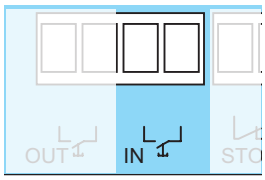
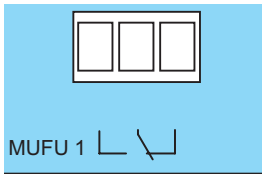
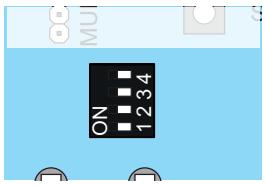
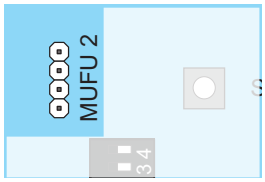
Circuit board section	Function/application example
1	**Terminal block, supply voltage,** 2-pin
	AC 100–240 V, 50–60 Hz
2	**Terminal block, primary side power supply,** 2-pin
	AC 100–240 V, 50–60 Hz
3	**Terminal block, secondary side power supply,** 2-pin
	DC +24 V
4	**Status LED, green**
	
5	**Accu slot**
	Connection Accu (700 mAh) **or** Connection Accu 2,2 (2,200 mAh)

9. Connections and special functions of the wall control unit

Circuit board section	Function/application example
6	**Terminal block, chain and rail,** 2-pin
	DC +24 V gn + = rail rd – = chain
7	**MEMO slot**
	**Memo tiga (black housing)** mounted at the factory EEPROM for configuration data from multi-function relay 1 (MUFU 1 and optional relay)
8	**Start/STOP button for interior**
	with status LED, green
9	**Terminal block traffic light and warning light,** 6-pin
	**Traffic light for red (interior)** DC 24 V / max. 250 mA / 6 W with status LED, red
	**Traffic light for red (exterior)** DC 24 V / max. 250 mA / 6 W with status LED, red
	**Warning light,** 2-pin DC 24 V / max. 250 mA / 6 W with status LED, orange

Circuit board section	Function/application example
10	**Terminal block for PHOTO 1,** 6-pin
	**2-wire photocell (SOMMER for door CLOSE),** 2-pin Any polarity Signal COM with status LED, orange
	**4-wire photocell for door CLOSE** 6-pin **TX (transceiver)** DC +24 V / max. 100 mA GND **RX (receiver)** DC +24 V / max. 100 mA GND Signal COM Potential-free with status LED, orange
	**Light curtain with OSE output for door CLOSE** 3-pin DC +24 V / max. 100 mA GND Signal
11	**STOP terminal block,** 2-pin
	Potential-free **Example:** for EMERGENCY STOP with status LED, green

9. Connections and special functions of the wall control unit

Circuit board section	Function/application example
12	**Terminal for interior and exterior button,** 4-pin
	**Button OUT for exterior** 2-pin Potential-free with status LED, orange
	**Button IN for interior,** 2-pin Potential-free with status LED, orange
13	**MUFU 1 terminal block,** 3-pin
	Potential-free changeover contact max. DC 250 V / 5 A **or** max. AC 24 V / 5 A with status LED, green
14	**DIP switch**
	
15	**MUFU 2 slot**
	**Switching capacity** max. AC 250 V / 5 A **or** max. DC 24 V / 5 A

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

In particular, observe the warnings below.

⚠ DANGER

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- 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.

9. Connections and special functions of the wall control unit

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.
- 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.

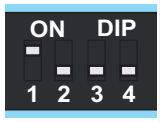
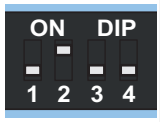
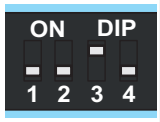
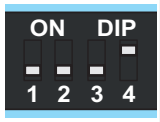
INFORMATION

- The control unit detects a short-circuit between chain and rail and then switches the operator off. If the short circuit is no longer present, the operator runs normally again.
- Control or regulating units in a fixed position must be mounted within sight of the door and at a height of at least 1.5 m
- The power cord is approx. 0.7 m long
- The maximum cable length for connected accessories is 25 m.

9.3 Setting DIP switches on the wall control unit

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

DIP switches on the wall control unit

		ON	OFF
1		Both red traffic lights are **on** when the door is closed	Both red traffic lights are **off** when the door is closed
2		no function	no function
3		Continuous power to the complete system activated	Power-saving mode activated
4		no function	no function

* For example: Door status display

9.4 Information on Memo tiga

At the factory, the Memo tiga (black housing) is attached to the wall control unit in the Memo slot.

It creates the configuration memory for the multi-function relay settings. Separate settings can be made in this way.

1. Disconnect the operator from the mains voltage.
   Check it is disconnected from the power supply.
2. Open the wall control unit; see Chapter **"Remove the cover of the wall control unit" on page 30**.

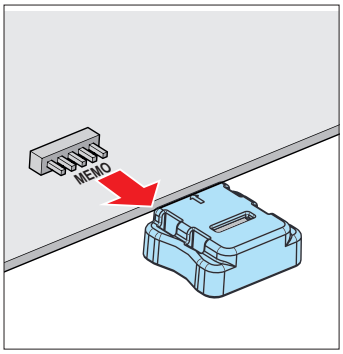


Fig. 3

3. Remove the Memo tiga from the wall control unit circuit board; see Chapter **"9.1 Wall control unit circuit board" from page 47**.

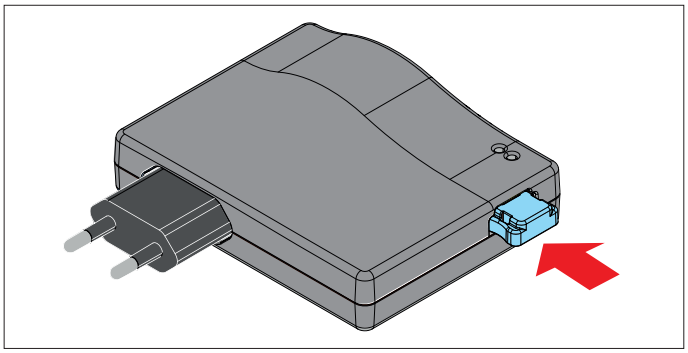


Fig. 4

4. Plug the Memo tiga into the slot provided on the SOMlink.
5. Connect the SOMlink to the mains voltage.
6. Establish a connection to SOMlink with a WiFi-enabled device; see separate SOMlink instructions.
7. Select and confirm the Memo tiga icon via the WiFi-enabled device.
8. Select the corresponding multi-function relay.
   Select and confirm the desired functions.
9. Disconnect the SOMlink from the mains voltage.

9. Connections and special functions of the wall control unit

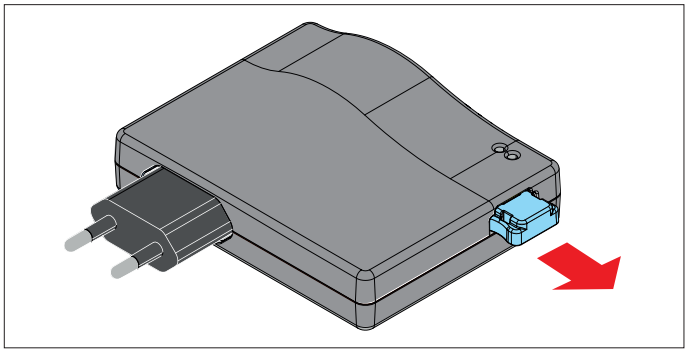


Fig. 10

10. Unplug the Memo tiga from the SOMlink.

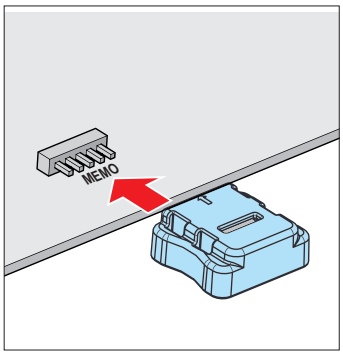


Fig. 11

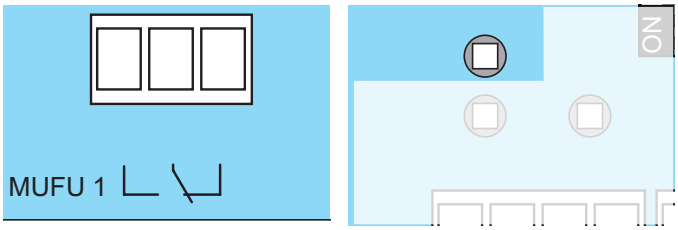
11. Attach the Memo tiga to the wall control unit circuit board. The Memo tiga must remain plugged in to carry out the selected functions.
12. Close the wall control unit; see Chapter **“Fit the cover of the wall control unit” on page 31**.
13. Connect the operator to the mains voltage.
    Check that the voltage supply is connected.
14. Check the settings made and adjust them if necessary.

9.5 Multi-function relay 1 – MUFU 1

The MUFU 1 multi-function relay 1 can be used for various functions, such as additional exterior lighting or a door status display.

In the factory setting, the multi-function relay is energised.

- door closed/not closed.



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

NOTE

- The multi-function relay 1 contact is a potential-free changeover contact and may only be loaded with max. AC 250 V, 5 A or max. DC 24 V, 5 A.

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

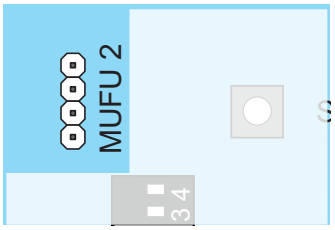
⇒ During door movement and if the door is open, multi-function relay 1 trips.

⇒ When the door CLOSE end position is reached, multi-function relay 1 is deactivated.

9.6 MUFU 2

An additional multi-function relay can be attached at the Relay slot. Additional functions can be activated, e.g. exterior lighting or the door status display (door closed/door not closed).

The relay is an optional accessory.



The **“Pulse for 1 second at function change”** function is set at the factory.

⇒ When the operator is started, the relay is energised for 1 second.

9. Connections and special functions of the wall control unit

9.7 Photocell and frame photocell

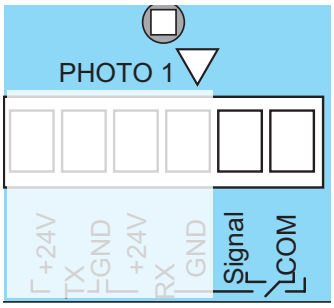
A 2-wire or 4-wire photocell from **SOMMER** can be connected to the control unit. The control unit automatically detects which version it is and sets itself to that version.

We recommend installing the photocell at a height of up to max. 300 mm.

INFORMATION

- If a photocell is retrofitted on a programmed system, the control unit must be reset; see Chapter **"8.13 Carrying out a reset" on page 42**.
- During initial operation of the photocell or the frame photocell, it must not be triggered by persons or objects.
- If a photocell is used as a frame photocell on the door, the door must be moved to the centre position.

2-wire photocell for door CLOSE (PHOTO 1)



Connect the 2-wire photocell to the terminal block (PHOTO 1). The polarity is optional.

The status LED (PHOTO 1) for door CLOSE lights up orange when the safety device has been detected by the control unit.

Terminal block	Function
Signal	2-wire photocell, any polarity
COM	

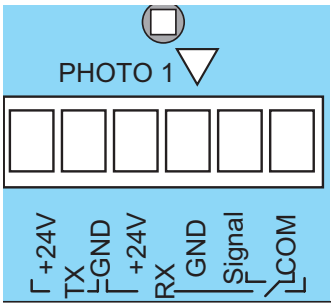
The 2-wire photocell (PHOTO 1) is interrupted in the door CLOSE direction:

⇒ Status LED flashes orange during the interruption.

⇒ The operator stops gently and opens the door completely.

⇒ The door closes again automatically after the hold open and clearing time.

4-wire photocell for door CLOSE (PHOTO 1)



Connect the 4-wire photocell to the terminal block for door CLOSE (PHOTO 1). The supply for RX (Receiver) should be on the side facing away from the sun.

The status LED for door CLOSE (PHOTO 1) lights up orange when the safety device has been detected by the control unit.

	Terminal block	Function
TX (transceiver)	DC +24 V	Voltage supply
	GND	
RX (receiver)	DC +24 V	
	GND	
	Signal	Floating relay contact
	COM	

The photocell (PHOTO 1) is interrupted in the door CLOSE direction:

⇒ Status LED flashes orange during the interruption.

⇒ The operator stops gently and opens the door completely.

⇒ The door closes again automatically after the hold open and clearing time.

Use as frame photocell

1. Install the frame photocell in the frame; see separate instructions for **"Frame photocell."**
2. Align the frame photocell and connect it to the wall control unit.
3. Initial operation is performed as described in Chapter **"7. Initial operation" from page 33**.

   ⇒ When the door passes the frame photocell, the illumination power of the operator lighting is reduced.

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

   ⇒ During initial operation, the operator learns the exact position of the frame photocell in order to blank it out in normal mode **shortly** before reaching the door.
4. Check the frame photocell function.Repeat the process if necessary.

9. Connections and special functions of the wall control unit

9.8 Connecting the light curtain

A **SOMMER** 2-wire photocell or a light curtain **(with OSE output)** can be connected to the wall control unit connection for (door CLOSE – PHOTO 1), see also Chapter **“9.7 Photocell and frame photocell” on page 53** or **“7. Initial operation” from page 33**.

NOTE

- Installation of a light curtain **(with OSE output)** on the wall control unit must be carried out by a **trained electrician**.
- The manufacturer’s **installation and operating manual** must be strictly observed when installing the light curtain.
- There may be various connection options (depending on the specific light curtain/manufacturer).
- **Before purchasing** a light curtain, get expert advice **from a specialist retailer** on possible use and installation.

In particular, observe the warnings below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **“2. General safety instructions” from page 9**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- If an accumulator is connected, disconnect it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

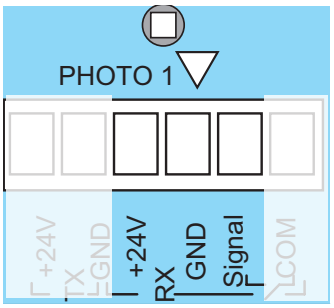
NOTE

- To prevent damage to the operator, do not connect the wall control unit to the mains voltage until installation is complete.

INFORMATION

- All devices to be connected externally **must** have safe isolation of the contacts from the mains voltage supply in accordance with IEC 60364-4-41.
  Wiring for external devices must be installed in accordance with IEC 60364-4-41.
  All electrical wiring, including the control cable, must be firmly secured to prevent displacement.

Light curtain for door CLOSE (PHOTO 1)



Connect the light curtain for door CLOSE to the terminal block (PHOTO 1).

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

Terminal block	Function
br = DC +12 V	Voltage supply
wh = GND	
gn = signal	Signal input

The light curtain in direction door CLOSE (PHOTO 1):

⇒ Status LED blinks orange during the interruption.

⇒ The operator stops gently and opens the door completely.

⇒ The door closes again automatically after the hold open and clearing time.

Use of the light curtain

1. Install the light curtain; see separate **“Light curtain”** instruction manual from the respective manufacturer.
2. Align the light curtain and connect it to the wall control unit.
3. The manufacturer’s installation and operating manual must be strictly observed when installing the light curtain and during initial operation.
4. Check the function of the light curtain.
5. Connection to the mains voltage must not be established until installation has been completed. The connection to the accumulator is established last.

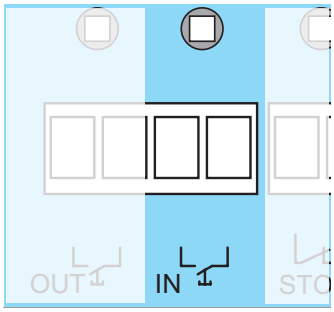
9. Connections and special functions of the wall control unit

9.9 Connection options for command devices

IN button and OUT button

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

IN button



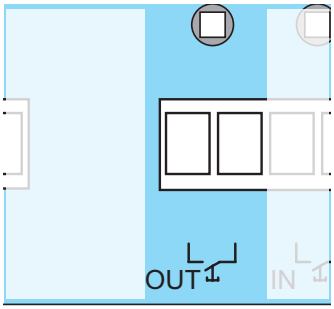
If the IN contact is activated, the command of the interior request side is executed:

⇒ Status LED lights up orange during activation.

⇒ Operator opens the door to the door OPEN end position.
Interior: Traffic light off.
Exterior: Red phase.

⇒ The door closes **automatically** after the hold open and clearing time.

OUT button



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

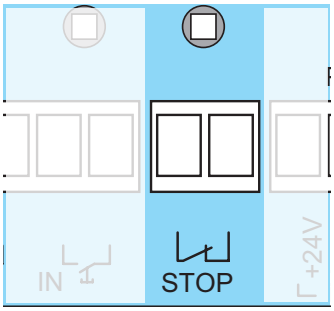
⇒ Status LED lights up orange during activation.

⇒ Operator opens the door to the door OPEN end position.
Interior: Traffic light off.
Exterior: Red phase.

⇒ The door closes after the hold open and clearing time have run out.

9.10 STOP connection

A potential-free normally closed contact can be connected to this terminal, for example an EMERGENCY STOP.



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

If the STOP safety input is open, the operator stops during the door movement. No more commands are executed.

⇒ Status LED on the control unit flashes.

Resetting the STOP safety input

1. Reset safety input (close contact).
2. Execute a command using the button.

⇒ Door opens up to door OPEN end position.

⇒ The door closes automatically after the hold open and clearing time.

9. Connections and special functions of the wall control unit

9.11 Connecting an accumulator

An accumulator can supply power during a mains power failure. The accumulator can only be recharged for a limited number of cycles. This depends on the use and settings. Mains voltage is required
for initial operation of the operator.

Only a **qualified electrician** is permitted to connect, install, test and replace the accumulator.
Observe the information in the separate **"Accessories, description"** for the respective accumulator.

Accumulators from **SOMMER Antriebs- und Funktechnik GmbH** are intended exclusively for use in combination with SOMMER products.

NOTE

Battery pack installation, see respective separate instructions for the battery pack used.

⚠ WARNING

Danger of fire, explosion or burns!

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

- Do not take apart, do not heat to above 60 °C or burn.
- During replacement, observe the installation position and polarity of the accumulators.
- Components that have been taken out of service, old accumulators and batteries must not be disposed of with household waste. Components which are no longer in use, old accumulators and batteries must be disposed of properly. The local and national regulations must be observed.

After a power failure, the accumulator is automatically recharged via the control unit as soon as the mains voltage supply is restored.

Depending on the specific requirements, the following accumulator variants are available.

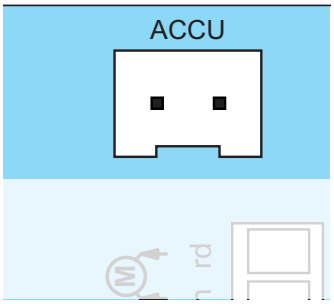
Accumulator type	Capacity	Running time	Maximum
Accu	700 mAh	12 h	5 door cycles
Accu 2.2	2,200 mAh	20 h	5 door cycles

NOTE

- All technical data are based on an ambient temperature of +20 °C/+68 °F.
- The performance data of an accumulator/battery pack are influenced by its specific external operational conditions.
- For example, the ambient temperature, current consumption, state of charge, number of charging cycles as well as the age of the accumulator/battery pack
can significantly change the performance data.

Installing and removing the accumulator

1. Disconnect the operator from the mains voltage.
   Then check that the power is disconnected.
2. Loosen the screws on the control unit housing and remove the cover.



3. Connect the battery pack to the ACCU slot.
4. Close the control unit housing again.
5. Connect the operator to the mains voltage.
   Check that the voltage supply is connected.

10. Function test and final test

10.1 Testing obstacle detection

After initial operation of the operator, the force setting of the operator **must** be checked with a force measurement device and an obstacle detection test must be performed. In particular, observe the warnings below.

After initial operation of the operator, the force setting of the operator must be checked with a force measurement device and an obstacle detection test must be performed. In particular, observe the warnings below.

⚠ WARNING

Danger of entrapment!

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

- The force setting is relevant to safety and must be carried out by a **qualified specialist**.
- You must proceed with extreme caution if you check and if necessary adjust the force setting.
- Check the force setting at monthly intervals.

Danger of crushing and shearing!

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

- Note that obstacle recognition does not operate below 40 mm.
- The obstacle detection must be tested once a month using an object with a height of 40 mm.
- 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 rail.
- Do not drive through the door until it has opened completely.
- Never stand under the opened door.

NOTE

- Observe the national standards, guidelines and regulations for cut-off of the operating forces.
- The obstacle detection **must** be tested once a month to prevent damage to the operator.

INFORMATION

- After installing the operator, the person responsible for the installation **must** complete a Declaration of Conformity for the entire door system in accordance with the directives applicable in the respective location and attach the corresponding marking.

In member states of the European Union

Machinery Directive 2006/42/EC + CE mark.

In Great Britain

Supply of Machinery/Safety Regulations 2008 + UKCA mark.

This documentation and this installation and operating manual must be handed over to the user.

This also applies if the operator is retrofitted to a manually operated door.

- Reversing: The operator stops on contact with an obstacle and then moves a short distance in the opposite direction to release the obstacle.

  In the automatic closing function, the door opens completely if an obstacle is detected.

10. Function test and final test

INFORMATION

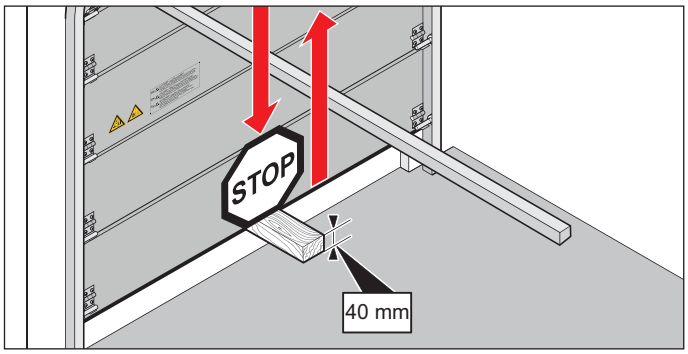
- **In accordance with EN ISO 13849-1, all safety-relevant equipment affecting the safety of the gate system must meet the requirements of at least PL "C" Cat. 2!**

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

If it is possible for a person to be carried along with the (horizontally or vertically moving) door, it **must** be checked whether the operator is capable of lifting the weight of a person. The operator **must** reverse in the door OPEN direction when it is loaded with a weight of 20 kg. The weight is fastened in the centre of the bottom edge of the door for this purpose. This applies to doors with a door opening of over 50 mm.

The door **must** reverse during the door CLOSE movement if it hits an obstacle with a height of 40 mm on the ground.

1. Open the door with the operator.
2. Place a 40-mm-high object in the centre of the door.



3. Close the door with the operator.
   - ⇒ The operator **must** reverse immediately if the door hits an obstacle.
   - ⇒ The operator opens the door completely at a pulse from the transmitter.
   - ⇒ If the operator does not reverse, a position reset **must** be carried out; see Chapter **"8.13 Carrying out a reset" on page 42**.
     The positions and the forces must be reprogrammed.
4. The function of the emergency release **must in particular** be checked in the door CLOSE end position and if necessary, also from outside.
   Unlocking **must** be possible; see Chapter **"11.6 Function of the emergency release" on page 63**.

10.2 Handover of the door system

The qualified specialist must instruct the user:

- on the operation of the operator and its dangers
- on the handling of the manual emergency release
- on the regular maintenance, testing and care measures which the user can carry out; see Chapter **"12. Maintenance and care" on page 65**.
- on the troubleshooting measures which the user can carry out, see Chapter **"13. Troubleshooting" from page 67**.

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

- installation of accessories
- settings
- regular maintenance, testing and care, except that described in Chapter **"12. Maintenance and care" on page 65**
- troubleshooting, except that described in Chapter **"13. Troubleshooting" from page 67**
- repairs

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

- the installation and operating manuals for the entire door system
- Inspection book
- EC Declaration of Conformity
- handover protocol for the control unit/operator

https://som4.me/konform

INFORMATION

- Keep this Installation and Operating Manual accessible at all times at the place of use.

11. Operation

11.1 Important notes and information

In particular, observe the following warnings and Chapters **“1. About this Installation and Operating Manual” on page 5** and **“4.2 Important notes and information” on page 18**.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **“2. General safety instructions” from page 9**.

⚠ WARNING

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

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

- The operator may only be used with the required settings and in the proper condition.
- You must have faults repaired professionally without delay.

Danger of crushing and shearing!

If the gate 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 gate.

- 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 rail.
- Do not drive through the door until it has opened completely.
- Never stand under the opened door.

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 the rails.

  Defects must be repaired without delay by a **qualified specialist**.
- 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.

11.2 Operating modes of door movement

Opening the door system from the interior and exterior

The sequence for a command from the exterior is described. Access authorisation for the interior and exterior is displayed by the traffic lights.

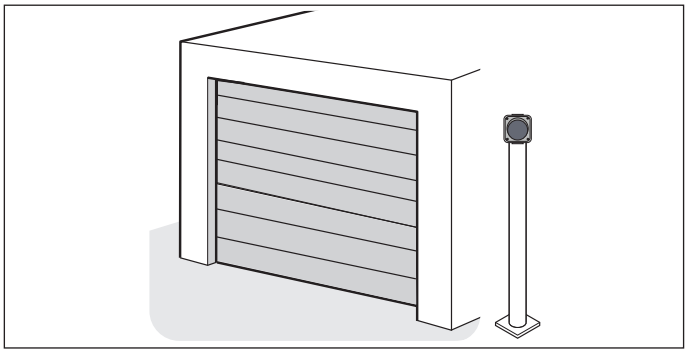


Fig. 1

1. The door is in the door CLOSE end position.
   Both sides: Traffic lights off.

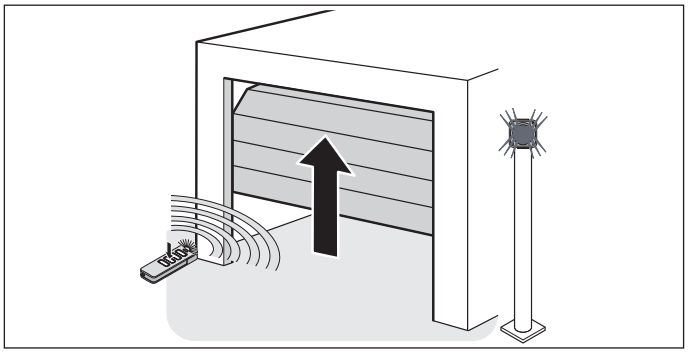


Fig. 2

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

11. Operation

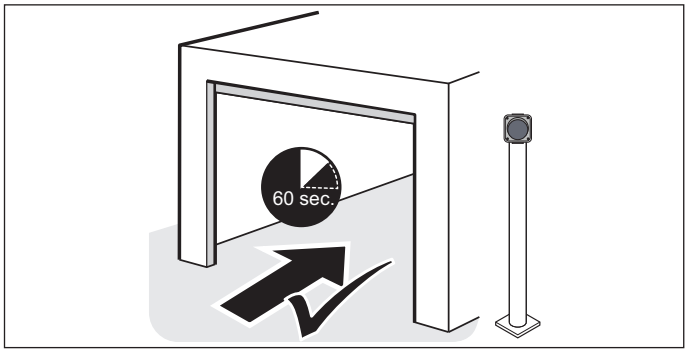


Fig. 3

3. The door is open. The set **hold open time** (factory setting 60 seconds) starts.
   ⇒ **Request side:** Traffic light off.
   Door may be driven or passed through.
   ⇒ **Opposite side:** Red phase.
   Door may **not** be driven or passed through.

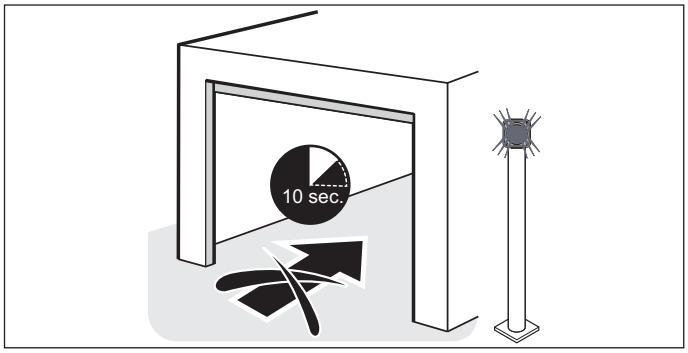


Fig. 4

4. The **clearing time** (factory setting 10 seconds) is automatically initiated after the set hold open time runs out.
   ⇒ **Both sides:** Red phase.
   Door may **not** be driven or passed through.
   ⇒ The door range **must** be cleared of persons and vehicles.

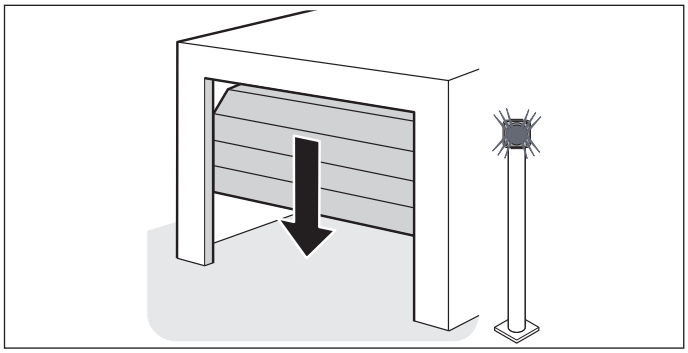


Fig. 5

5. The door closes automatically after the set **clearing time**.
   ⇒ **Both sides:** Red phase.
   Door may **not** be driven or passed through.
   ⇒ The door range **must** be cleared of persons and vehicles.

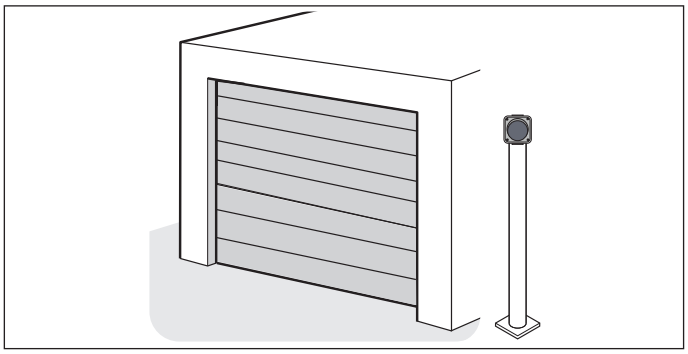


Fig. 6

6. After the door CLOSE end position has been reached, the traffic lights on both sides are switched off.
   Both sides: Traffic lights off.

INFORMATION

- If a command is given during the closing process, the operator stops.
  The direction changes automatically and the operator opens the door completely.
  The door closes **automatically** after the hold open and clearing time.

11. Operation

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

Access authorisation for the interior and exterior is displayed by the traffic lights.

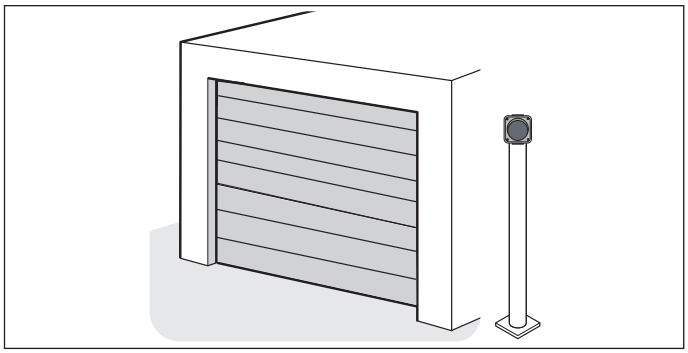


Fig. 1

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

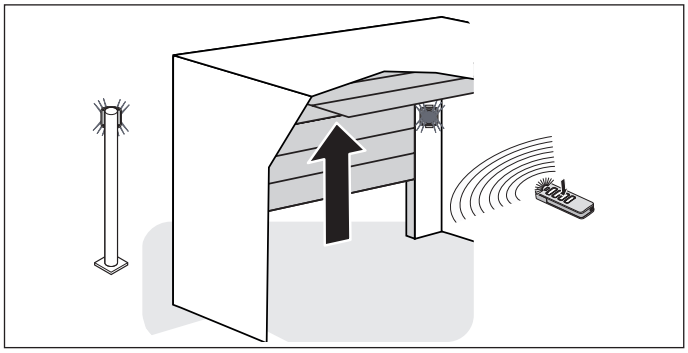


Fig. 2

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

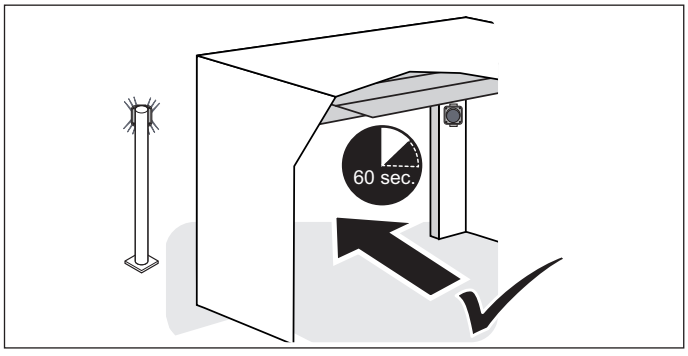


Fig. 3

3. The door is open. The set hold open time (factory setting 60 seconds) starts.
   ⇒ **Request side, interior:** Traffic light off.
   Door may be driven or passed through.
   ⇒ **Opposite side, exterior:** Red phase.
   Door may **not** be driven or passed through.

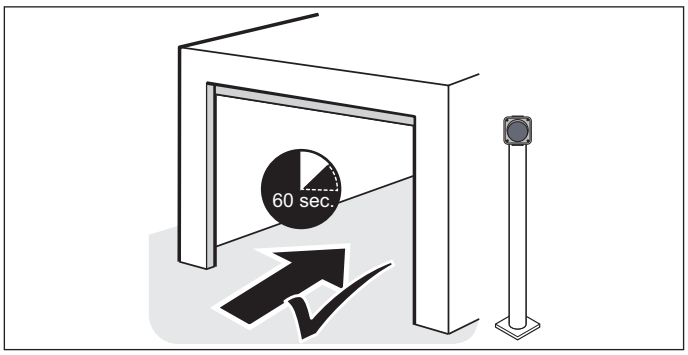


Fig. 4

4. After the set hold open time (factory setting 60 seconds) and clearing time (factory setting 10 seconds) for the interior, the traffic lights are **automatically** switched. The request side and the opposite side are then exchanged.
   ⇒ **Opposite side, interior:** Red phase.
   Door may **not** be driven or passed through.
   ⇒ **Request side, exterior:** Traffic light off.
   Door can be driven or passed through from the **exterior** request side.

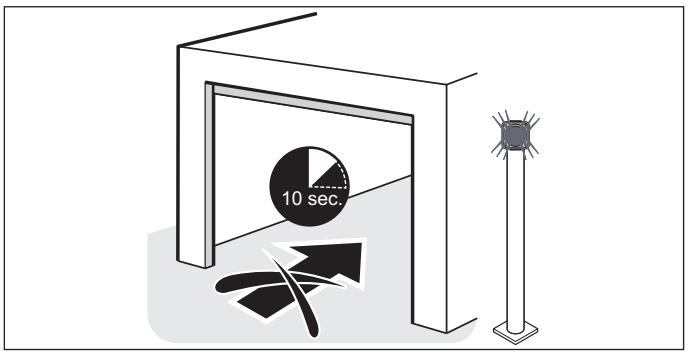


Fig. 5

5. The **clearing time** (factory setting 10 seconds) is automatically initiated after the set hold open time runs out.
   ⇒ **Both sides:** Red phase
   ⇒ The entrance **must** be cleared of persons and vehicles.

11. Operation

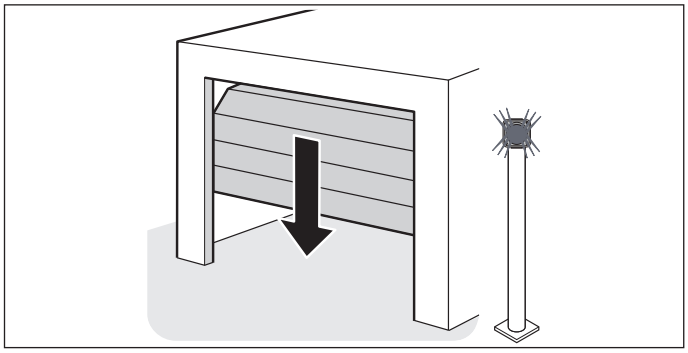


Fig. 6

6. The door closes automatically after the set clearing time.
   ⇒ **Both sides:** Red phase.
   Door may **not** be driven or passed through.
   ⇒ The entrance **must** be cleared of persons and vehicles.

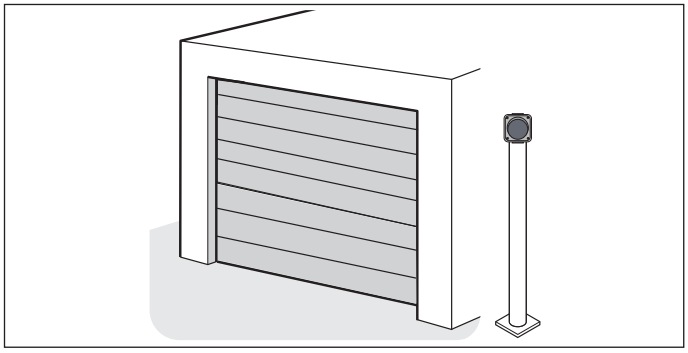


Fig. 7

7. After the door CLOSE end position has been reached, the traffic lights on both sides are switched off.
   ⇒ **Both sides:** Traffic lights off.

11.3 Obstacle detection

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

The partial reversion is pre-set at the factory.

INFORMATION

- In the automatic closing function, the gate opens completely.
  If the photocell is interrupted, the door runs on for a longer distance.

The following safety devices are installed to detect obstacles:

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

See also Chapter **“12. Maintenance and care” from page 65**.

Obstacle recognition in door OPEN direction

If the door meets an obstacle, the door stops, reverses a short distance in door OPEN direction and stops.

⇒ Operator expects a new command and does not start **automatically**.

⇒ After receiving a command, the operator moves in the door CLOSE direction.

Obstacle recognition in door CLOSE direction with automatic closing function

⇒ If the door meets an obstacle, the door stops and reverses a short distance until it reaches the door OPEN end position.

⇒ The door closes **automatically** after the hold open time.

INFORMATION

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

STOP output

If the STOP safety input is open, the operator stops the door movement. No more commands are executed. The potential-free NC contact, for example, is suitable for connecting an EMERGENCY STOP.

⇒ Status LED on the control unit flashes.

Resetting the STOP safety input

1. Reset safety input (close contact).
2. Execute a command using the button.

⇒ Door opens up to door OPEN end position.

⇒ Hold open time and clearing time run out.

⇒ Door closes automatically.

11.4 Power-saving mode

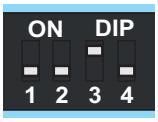
To save energy, the operator control unit switches to power-saving mode after the factory-specified period. The factory-set period before the control unit switches to power-saving mode after expiration of the set lighting time is 20 seconds. This value cannot be changed. Connected accessories are deactivated and then reactivated at the next command from a button or radio.

Connected accessories may include: photocell, safety contact strip and external radio receiver.

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

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

DIP switches on the wall control unit

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

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

11.5 In the event of a power failure

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

Also observe the instructions for emergency release in Chapter **“11.6 Function of the emergency release” on page 63**.

11.6 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.

In particular, observe the warnings below.

⚠ WARNING

Danger for trapped persons!

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

- Check the function of the emergency release at monthly intervals, **particularly** from inside in the door CLOSE end position and if necessary, also from outside.
- You must have faults repaired professionally without delay.

⚠ WARNING

Danger due to falling parts of doors!

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

- The emergency release should be used only with the door closed.
- Use the emergency release with great caution if the door is open.
- Keep persons and animals clear of the range of movement of the gate.

NOTE

- The cord of the emergency release may only be used for unlocking or locking. The red cord must never be pulled in order to move the unlocked door.
- 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.
- During 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.
- After the operator is locked back in, move the door into the door OPEN end position.

11. Operation

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 function of the emergency release **must in particular** be checked in the door CLOSE end position and if necessary, also from outside. Unlocking **must** be possible.

  It can be locked and released in any door position.

  The emergency release **must** be easy to operate in all necessary positions.

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

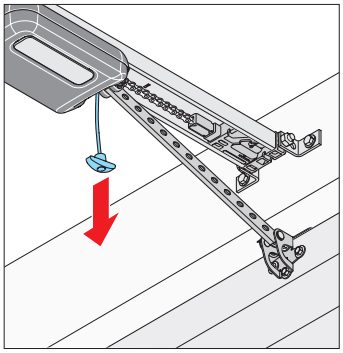


Fig. 2

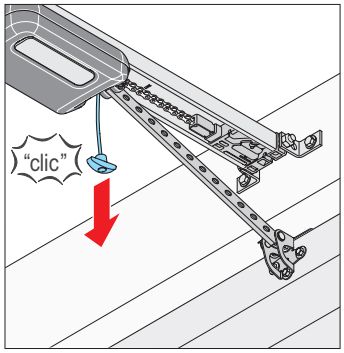


Fig. 3

2. Pull once on the emergency release cord.
   - ⇒ **The motor carriage is unlocked.**
   - ⇒ Door can be moved by hand.
3. Pull the emergency release cord once more.
   - ⇒ **The motor carriage is locked.**
   - ⇒ The door can only be moved by the operator.
4. Connect the operator to the mains voltage.
   Check that the voltage 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.

12. Maintenance and care

12.1 Important notes and information

Service the operator regularly as directed below. This ensures safe operation of your operator and a long service life.

In particular, observe the warnings below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 9**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- If an accumulator is connected, disconnect it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

NOTE

- The motor carriage is supplied with safety low voltage via the chain and the rail. The use of **non-conductive lubricants** reduces the conductivity of the chain, rail and motor carriage.
  This may result in faults and inadequate electrical contact.
  If necessary, lubricate the chain or rail with a **"conductive"** lubricant. **Do not use grease!**
- The use of unsuitable cleaning agents may damage the surface of the operator.
  Clean the operator with a damp, lint-free cloth only.

INFORMATION

- **Specified lubricants:**
  Ballistol, WD40 contact spray

12.2 Maintenance schedule

How often?	What?	How?
Once a month	Test the emergency release.	See Chapter **"9.7 Photocell and frame photocell" on page 53**.
	Test obstacle detection.	See Chapter **"10.1 Testing obstacle detection" on page 57**.
	Checking the photocell or light curtain	Interrupt the active photocell while the door is closing. The door **must** stop and open slightly. If automatic closing is activated, the door opens completely.
		If necessary, clean the photocell, see Chapter **"12.3 Care" on page 66**
	Check the obstacle recognition.	See Chapter **"10.1 Testing obstacle detection" on page 57**.
Once a year	Test the door and all moving parts.	As directed by the door manufacturer.
	Check screws on door, ceiling or lintel.	Check that screws are tight and tighten if necessary.
As needed	Chain and rail	maintenance-free
	Rail	See Chapter **"12.3 Care" on page 66**.
	Clean the housing of the ceiling control unit and motor carriage.	

12. Maintenance and care

12.3 Care

Clean rail, motor carriage and ceiling control unit

1. Disconnect the operator from the mains voltage.
   If an accumulator has been connected/installed, remove the wall control unit cover and disconnect the accumulator from the wall control unit.
   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 rail and the inside of the rail
3. If required, follow the steps in reverse order to connect/ install the accumulator.
   Connect the operator to the mains voltage.
   Check that the voltage supply is connected.

   ⇒ **The operator is supplied with voltage.**

Cleaning the photocell

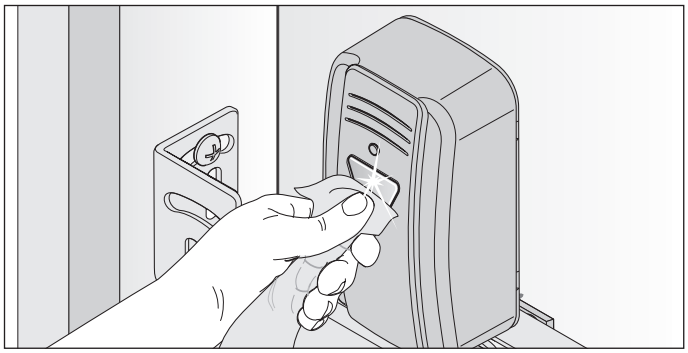


Fig. 1

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.

13. Troubleshooting

13.1 Important notes and information

Observe the basic warnings listed below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 9**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- If an accumulator is connected, disconnect it from the control unit.
- Check that the operator is not live.
- Secure the operator against being switched back on.

NOTE

- 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 rail and then switches the operator off.

13.2 Preparing for troubleshooting

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

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

1. Disconnect the operator from the mains voltage.
   If an accumulator has been connected/installed, remove the control unit cover and disconnect the accumulator from the control unit.
   Then check that the power is disconnected.
2. After working on the operator, if applicable, connect/fit the accumulator in reverse order.
3. Connect the operator to the mains voltage. Check that the voltage supply is connected.

   ⇒ **The operator is supplied with mains voltage.**

13. Troubleshooting

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

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

In normal mode

Flash sequences	Possible cause	Corrective action
Normal mode  Operator lighting blinks as warning light	Programming mode activated Pre-warning time activated Function activated via HFL	none, for information
	Interruption of a safety device during the movement	Remove obstacle

In the event of faults

Flash sequences	Possible cause	Corrective action
Requirement  Operator expects a command	Waiting for a conformation during the position programming movement of door CLOSE end position	Confirmation of position programming run **or** Sluggish point during programming; see Chapter **"The operator automatically starts its programming process" on page 34**
Alarm  A process has triggered a fault	Photocell/light curtain/safety device not OK before movement	Check photocell/light curtain, realign if necessary If necessary, have components replaced by a **qualified specialist**
	Dead man movement, safety device not OK	Have it checked by a **qualified specialist**
	Motor return from outside (e.g. due to attempted break-in)	For information
Service  A process has triggered a fault	Service required (service days, service cycles have been reached)	Have the service performed by a **qualified specialist**
	Motor temperature is too high (overheating)	Allow motor to cool
	Programming of difficult positions in case of reversing with no visible cause. The complete distance is traversed from end position to end position (dead man by radio, under direct view only)	For information
Fault  Operator or parts of the operator faulty	Self-test of electronics Blockage detection (gear breakage, Hall sensor fault)	Have it checked and, if necessary, components replaced by a **qualified specialist**
	Limit stop does not operate (e.g. wire break, limit stop fault)	Have cable connections checked by a **qualified specialist** and, if necessary, have components replaced
	Counting pulses sent in the wrong direction (motor cable was incorrectly connected)	Check wiring, correct if necessary
	Run time exceeded	Movement range too long, movement range is restricted to max. 7,000 mm
	Error during plausibility test of Memo	Have it checked and, if necessary, components replaced by a qualified specialist
	Intrinsically safe wicket door contact defective	Carry out power reset of 20 seconds If necessary, have component replaced

13.4 Troubleshooting table

13. Troubleshooting

Problem	Possible cause	Test/check	Remedy
The operator opens the door when the transmitter or command device is actuated but does not close it.	Photocell/light curtain and safety device interrupted	Check photocell/light curtain and safety devices	Remove obstacle The photocell/light curtain must be aligned If necessary, have it checked and replaced by a **qualified specialist**
	Automatic closing function activated	Wait to see whether the operator starts automatically after 30 seconds	Automatic closing function deactivated Have the cause corrected by a **trained electrician**
Operator cannot be operated with the command device.	No power	Check power supply	Check the power outlet with a different device, for example by plugging in a lamp
	Limit stop on motor carriage defective	Unlock operator and push motor carriage to the centre of the rail Lock the operator Actuate transmitter If the operator still closes the door but does not open it, the limit stop is defective	Have the limit stop replaced by a **qualified specialist**
	The operator was unlocked by the emergency release mechanism	Check that the door can be moved manually	Pull the emergency release handle to lock the operator, see Chapter **"11.6 Function of the emergency release" on page 63**.
	Command device incorrectly connected to the operator	Check function of operator with a transmitter	Check wiring and correct if necessary
	Transmitter defective	Operator cannot be started with the transmitter	Check transmitter voltage supply If necessary, replace the battery of the transmitter If necessary, replace the transmitter with a new one
	Operator defective	Operator cannot be started with the transmitter or the connected command device	Have operator repaired or replaced by a **qualified specialist**
	Electrical supply voltage outside the approved range	Have the mains voltage checked by a **trained electrician**	Have the cause corrected by a **trained electrician**
	STOP safety input, e.g. EMERGENCY STOP, triggered	Status LED is off, the status LED blinks	Reset STOP safety input, see Chapter **"9.10 STOP connection" on page 55**
	Overload protection has tripped, e.g. due to short-circuit between chain and rail or due to operator overload	Visual inspection to check whether chain and rails touch Check the weight balance of the door - it must run smoothly	Disconnect the operator from the mains voltage for approx. 15 minutes If necessary, have door mechanism checked and set by a **qualified specialist**
When a button on the transmitter is pressed, the operator does not open or close the door.	Transmitter not programmed	Radio LED does not light up when the transmitter is operated	Programme transmitter
	Battery in the transmitter is flat	LED on transmitter does not light up	Replace the battery of the transmitter
	Transmitter defective	LED on transmitter does not light up	Replace transmitter
Radio command cannot be programmed.	Memory full	All four LEDs for radio blink cyclically for about 3 seconds	Memory full; see Chapter **"10.1 Testing obstacle detection"** and **"8.8 Deleting a transmitter button from the radio channel"**
MEMO Identifier error.	Incorrect MEMO	All four LEDs for radio blink briefly cyclically. The operator lighting of the motor carriage blinks 4 times short and 4 times long	Disconnect operator from the voltage supply, unplug Memo, re-supply operator with power

13. Troubleshooting

Problem	Possible cause	Test/check	Remedy
MEMO device type error.	System error	All four LEDs blink cyclically for a long time and then go out for a short time. If voltage is present, the operator lighting of the motor carriage blinks an additional four times.	MEMO can be deleted via the Radio button; see Chapter **"8.11 Deleting all radio channels in the receiver" on page 41**
Operator stops the door during closing and opens it partially or completely.	Door has detected an obstacle	Check whether there are any obstacles in the movement range of the door Check the weight balance of the door - it must run smoothly	Remove obstacle If necessary, have door mechanism checked and set by a **qualified specialist**
	Photocell/light curtain was interrupted	Check LEDs on photocell/light curtain	Remove obstacle
	Photocell/light curtain defective or misaligned		Align photocell/light curtain Check wiring If necessary, have defective photocell replaced
Operator stops the door during the opening process and moves a short distance in door CLOSE direction.	Door has detected an obstacle, photocell or safety device has been interrupted	Check whether there are any obstacles in the movement range of the door Check the weight balance of the door - it must run smoothly Check photocell and safety devices	Remove obstacle If necessary, have door mechanism checked and repaired by a **qualified specialist** The photocell must be aligned; if necessary, have it checked and replaced by a **qualified specialist**
Operator lighting does not work.	Operator lighting defective		Have motor carriage replaced with a new one by a **qualified specialist**
Speed varies while opening and closing the door.	Rail dirty		Clean with a moist, lint-free cloth; see Chapter **"12.3 Care" on page 66**
	Chain tightened incorrectly		Tighten the chain; see Chapter **"4.5 Installing installation variant A or B of the operator system" from page 21** or **"4.6 Installing installation variant C of the operator system" from page 23**
	Weight balance of the door has changed	Move the operator to the door CLOSE position and check the weight balance of the door	If necessary, have it checked, adjusted or have components replaced by a **qualified specialist**
Motor carriage is pulled away from limit stop.	Spring tension too high	Check door operation and spring tension Check door OPEN end position	Adjust door operation and spring tension Adjust door OPEN end position Fit Lock accessory

13. Troubleshooting

13.5 Replacing the motor carriage

The instructions for **“Disassembling the motor carriage”** can be downloaded from **SOMMER** at:

www.sommer.eu

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

The new motor carriage is in delivery condition from the factory. After replacing the motor carriage, make sure that used accessories have been transferred to the new motor carriage.

Initial operation must be repeated and the special functions of the motor carriage reset, see Chapter **“7. Initial operation” from page 33** and **“8. Connections and special functions of the motor carriage” from page 37**.

Handheld transmitters which are used must also be reprogrammed, see Chapter **“8.5 Programming the transmitter” on page 40**. On the other hand, handheld transmitters do not have to be programmed if the Memo tiga accessory part has already been used.

After successful initial operation, run a function test and a final test; see Chapter **“10. Function test and final test” on page 57**.

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.

14. Taking out of operation, disassembly, storage and disposal

14.1 Important notes and information

Disassembly of the operator may only be performed by a **qualified specialist**. In particular, observe the warnings below.

⚠ DANGER

Danger if not observed!

Serious injury or death may result if warnings are not observed.

- In particular, observe the warnings below.
- In addition, observe the safety instructions in Chapter **"2. General safety instructions" from page 9**.

Danger due to electric current!

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

- All work on electrical components must be carried out by a **trained electrician**.
- Before performing work on the operator, including the connection of accessories, it must be disconnected from the power supply.
- 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.

⚠ CAUTION

Risk of injury in the head region!

Impact with suspended objects may cause serious abrasions and cuts.

- You must wear your personal safety helmet when installing/disassembling suspended parts.

Risk of injury to hands!

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

- You must wear your personal safety gloves when working with rough metal parts.

14.2 Taking out of operation and disassembly

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

1. Pull the mains plug out of the power outlet.
   If an accumulator has been connected/installed, remove the control unit cover and disconnect the accumulator from the control unit, see Chapter **"9.11 Connecting an accumulator" from page 56**.
   Then check that the power is disconnected.
2. Disassembly is carried out in reverse order of installation.

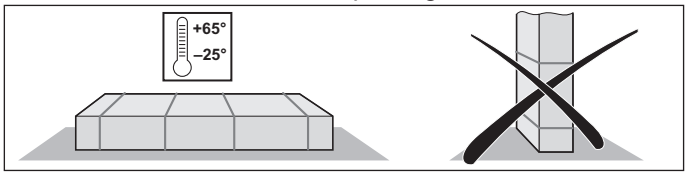
14.3 Storage

NOTE

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

Store the packaging units as follows:

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



14. Taking out of operation, disassembly, storage and disposal

14.4 Disposal

⚠ WARNING

Danger caused by hazardous substances!

Improper storage, use or disposal of accumulators, batteries and operator components pose a risk to 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.
- Batteries may contain hazardous chemical substance which damage the environment and pose a risk to the health of humans and animals. Caution must be exercised, in particular when handling batteries containing lithium, as these can easily ignite and cause fires if not handled correctly.
- Batteries and accumulators in electrical appliances and which can be removed non-destructively must be disposed of separate from the appliance.

NOTE

- Dispose of all components in accordance with local and national regulations to avoid environmental damage.
- Wherever possible, avoid the production of waste. Please check before disposing of components whether it is possible to recycle them.

INFORMATION

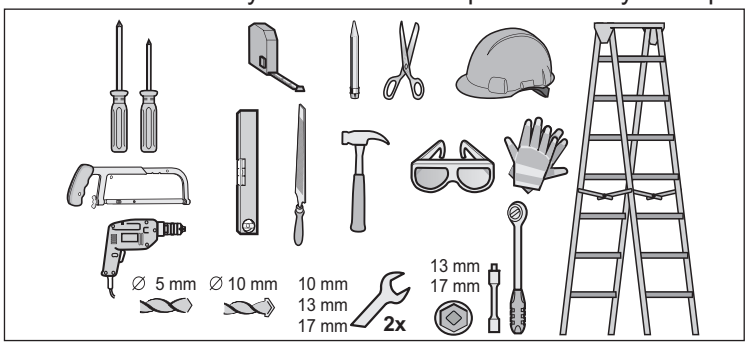
This device is labelled in accordance with European Directive 2012/19/EU on used electrical and electronic devices (WEEE – waste electrical and electronic equipment).

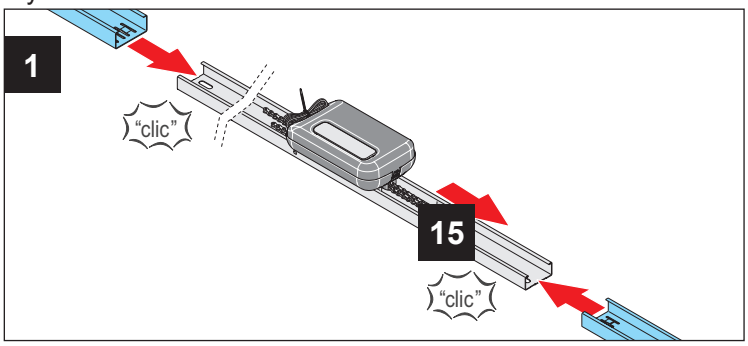
This Directive provides the framework for the EU-wide return and recycling of used equipment.

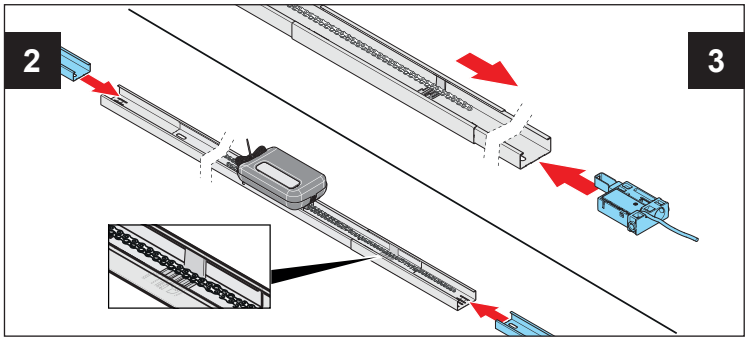
Operator components that have been taken out of service as well as old accumulators and batteries must not be disposed of with household waste. Components which are no longer in use, old accumulators and batteries must be disposed of properly. You must observe the local and national regulations here. Contact your specialist retailer to find out more about current disposal channels.

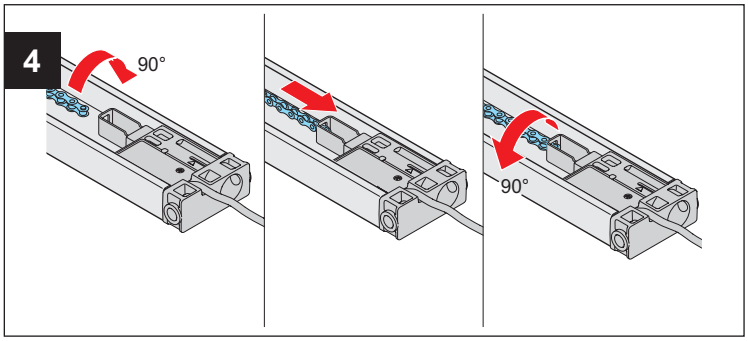
15. Brief instructions for installation

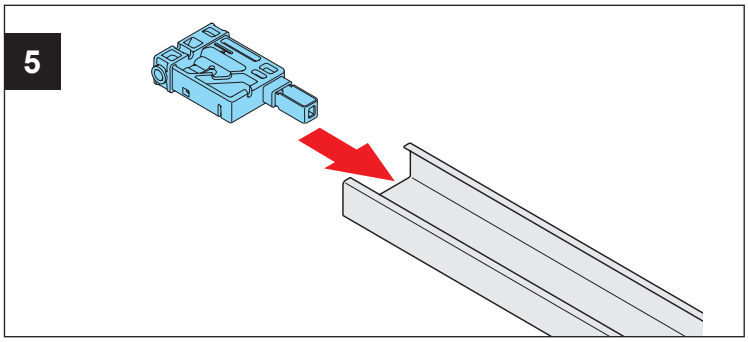
The brief instructions do not replace the installation and operating manual.
Read this Installation and Operating Manual carefully and, most importantly, observe all safety instructions and warnings.
This will ensure that you can install the product safely and optimally.

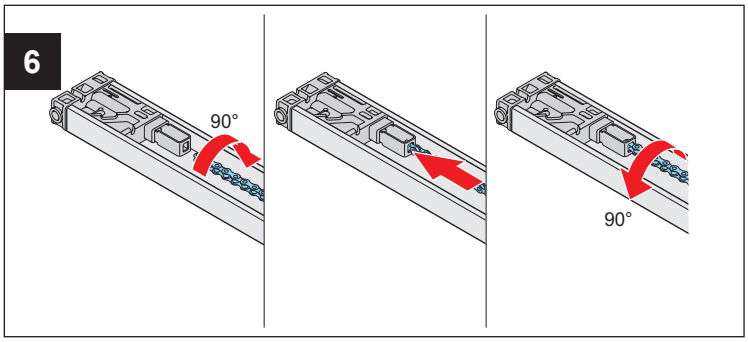


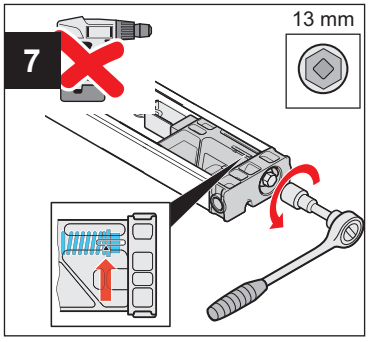


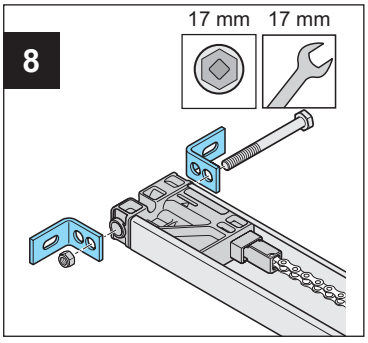


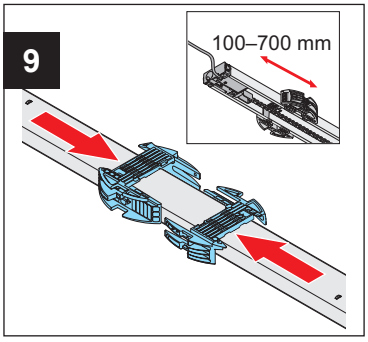


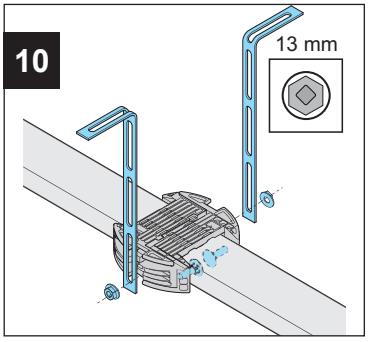


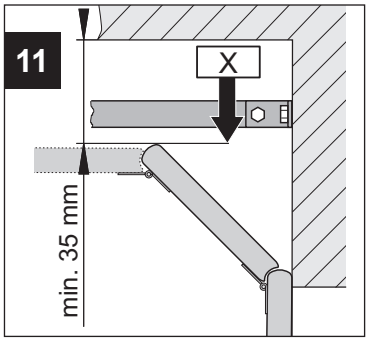


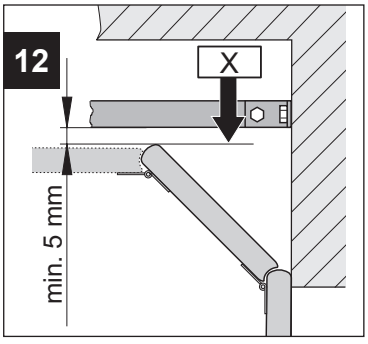


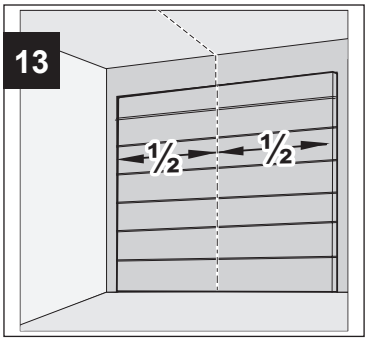


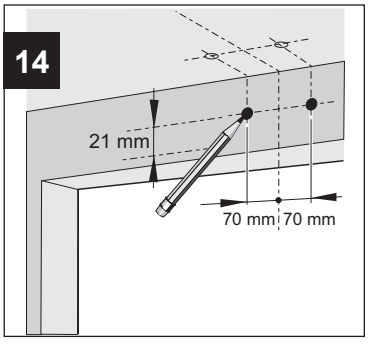




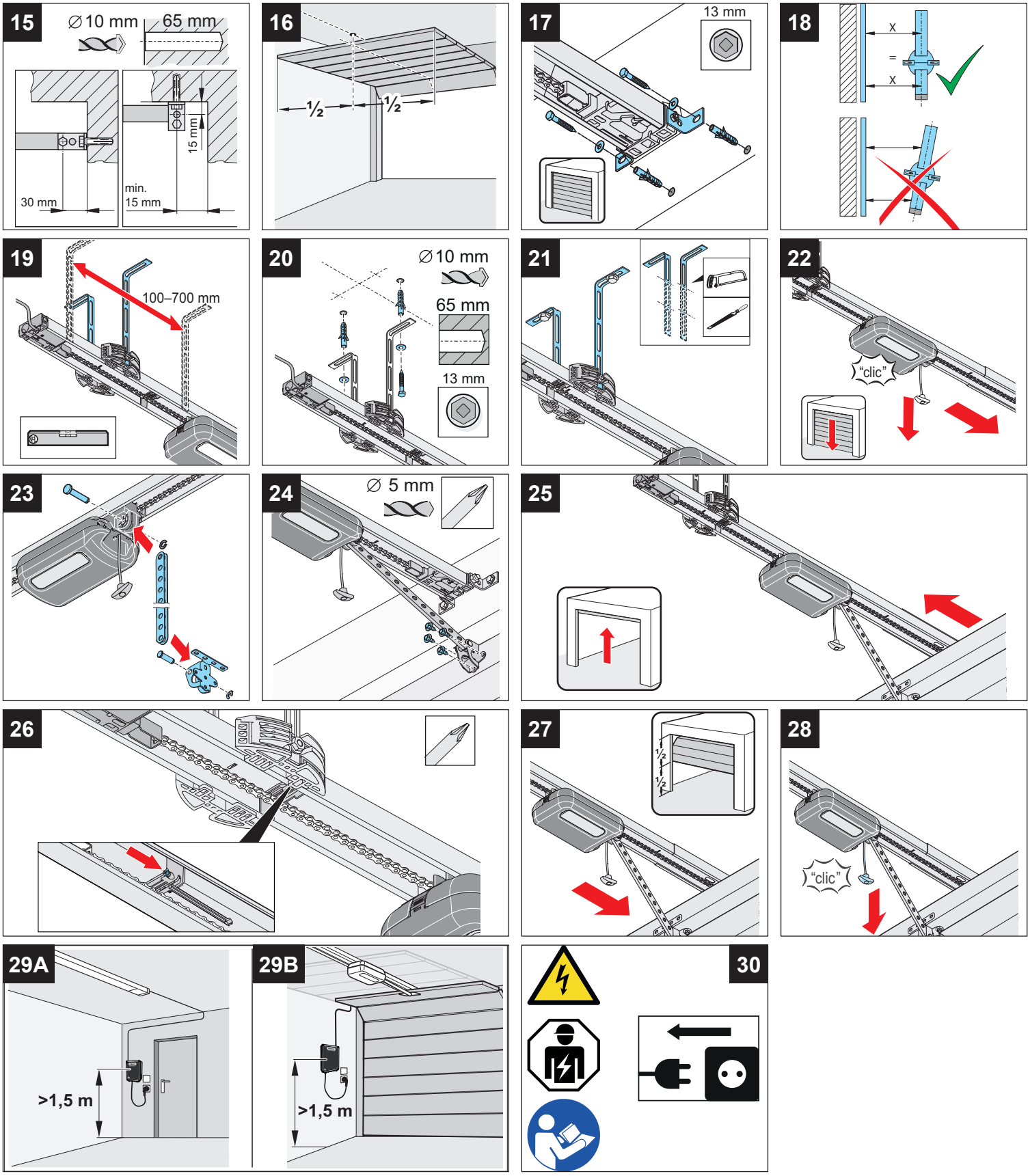




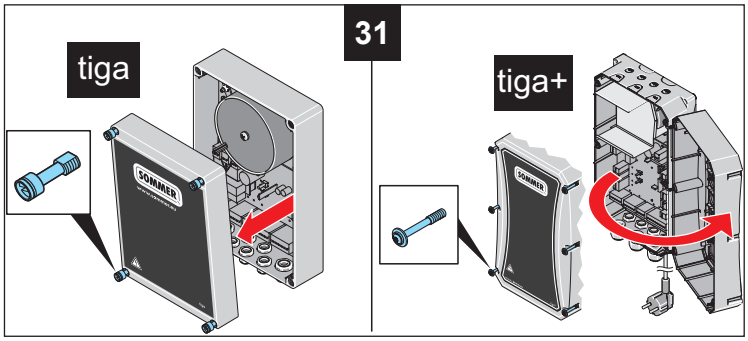


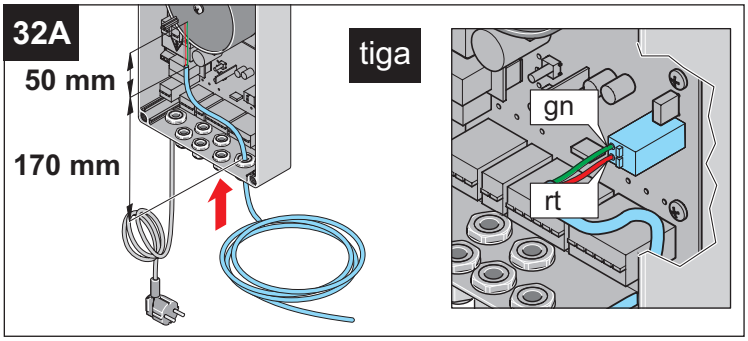


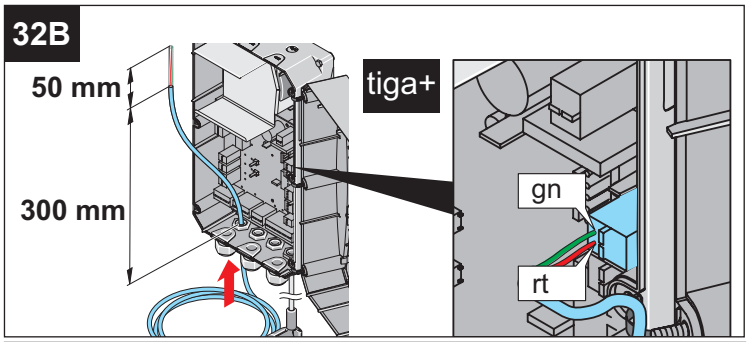
15. Brief instructions for installation

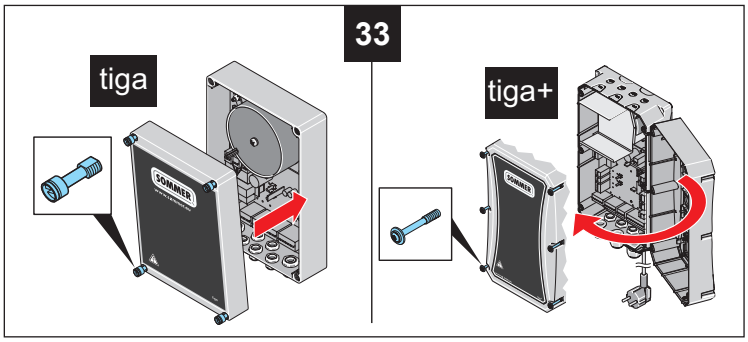


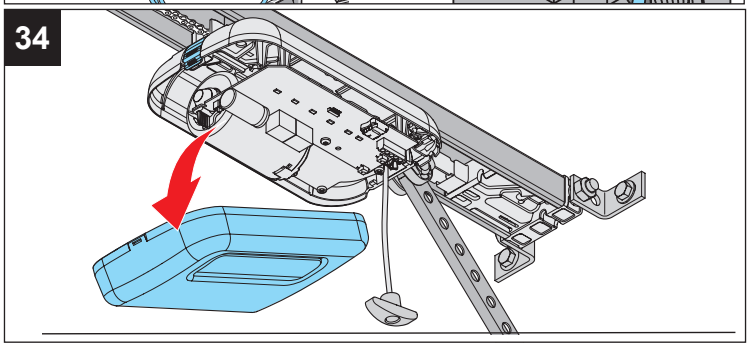
15. Brief instructions for installation

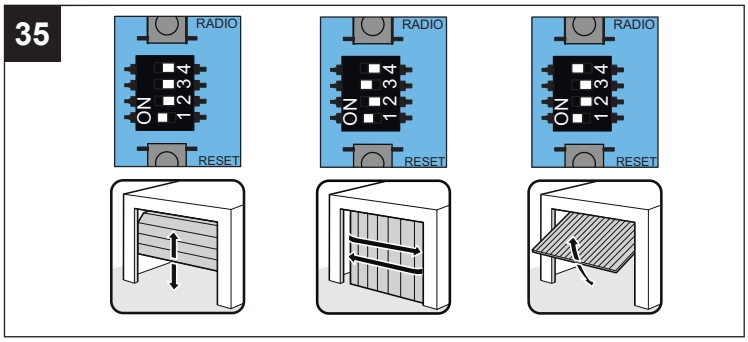


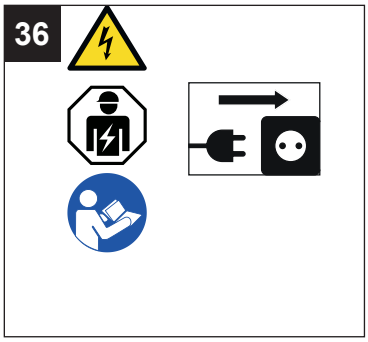


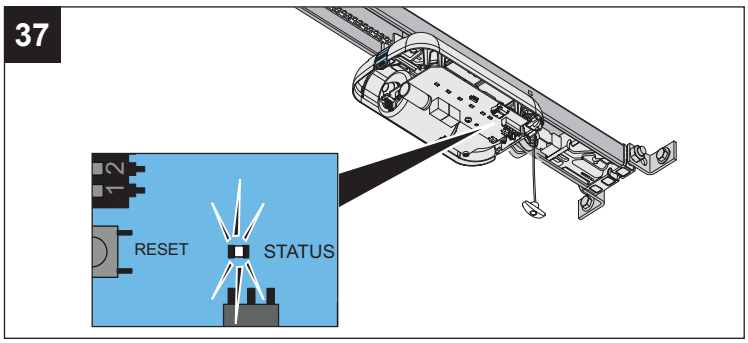


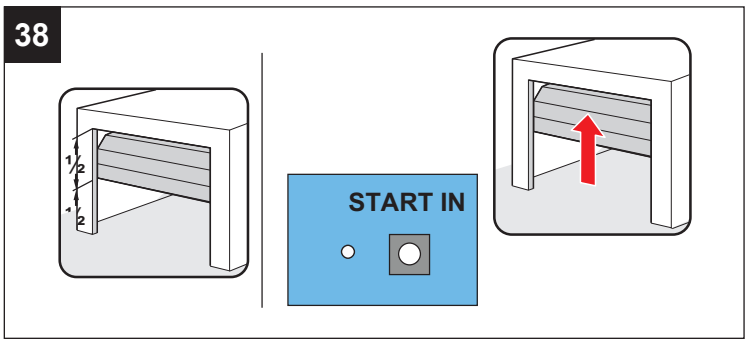




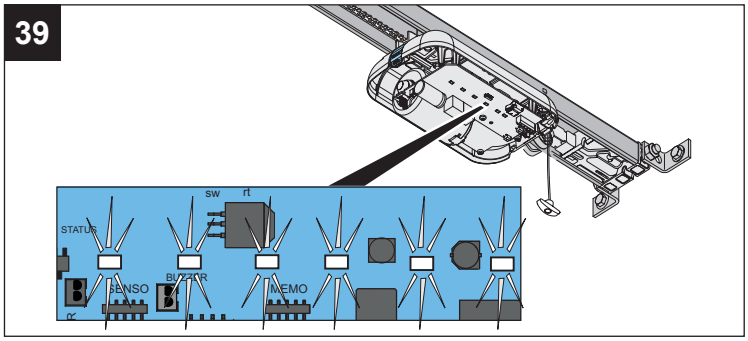


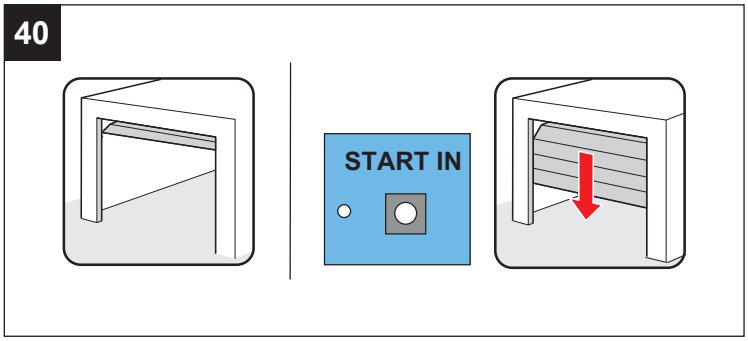


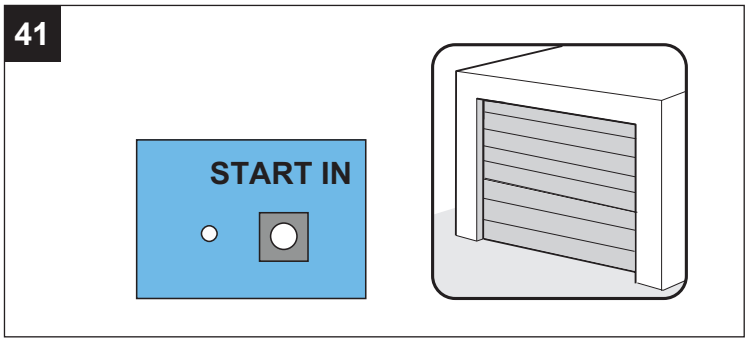


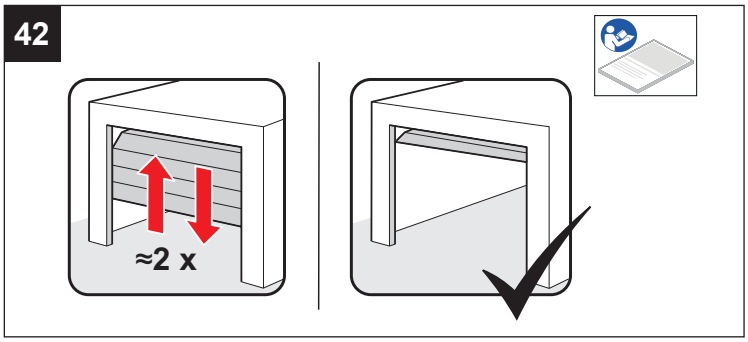


15. Brief instructions for installation

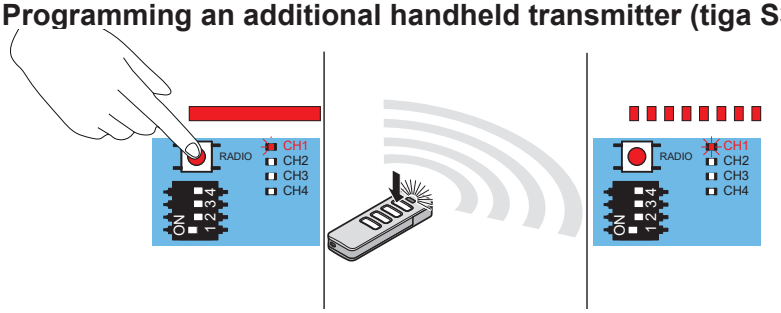




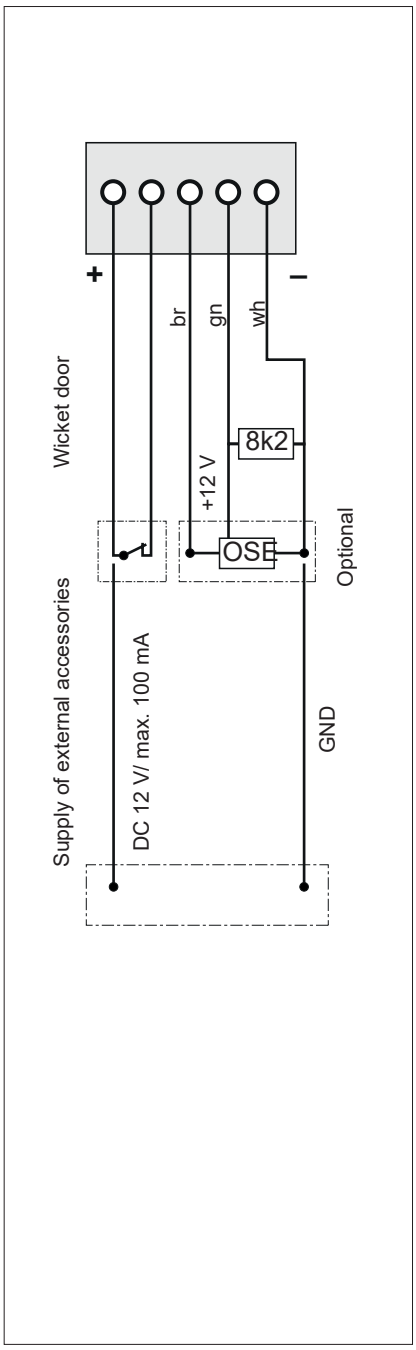


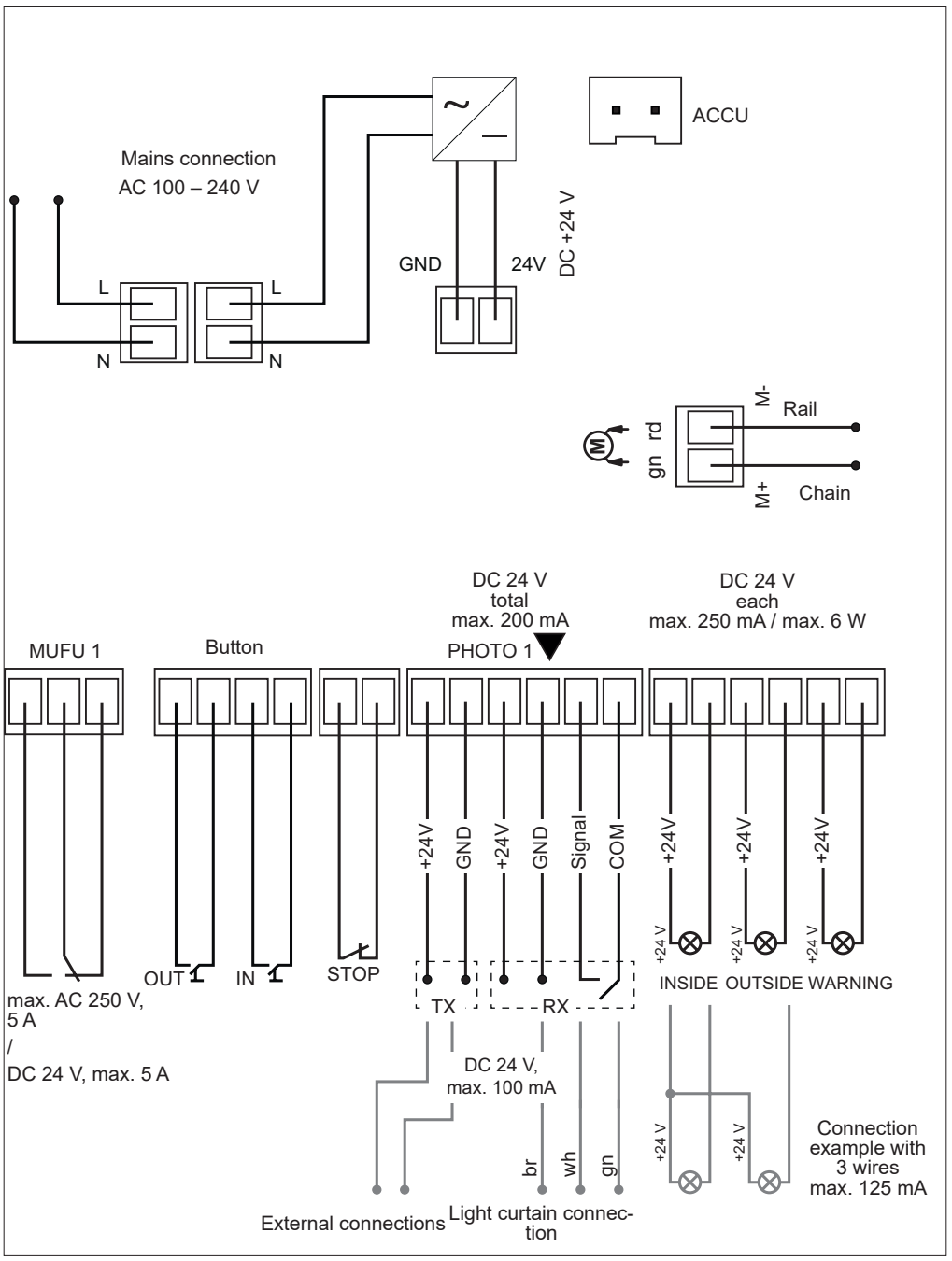


Programming an additional handheld transmitter (tiga S3/tiga+)



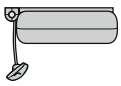
16. Connection diagrams and functions of the DIP switches

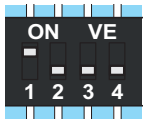
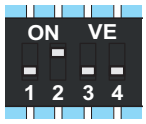
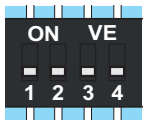
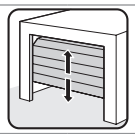
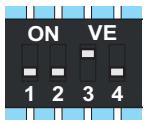
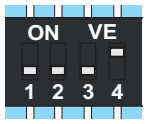
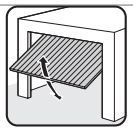




16. Connection diagrams and functions of the DIP switches

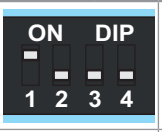
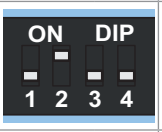
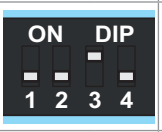
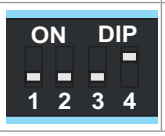
DIP switch on motor carriage



		ON	OFF
1		Automatic closing function activated*	Automatic closing function deactivated
2		Partial opening activated	Partial opening deactivated*
3+4		no function	 *
3			
4			

* SOMlink settings, e.g. timer mode, are necessary in order to use the multi-function relay.

DIP switches on the wall control unit

		ON	OFF
1		Both red traffic lights are **on** when the door is closed	Both red traffic lights are **off** when the door is closed
2		no function	no function
3		Continuous power to the complete system activated	Power-saving mode activated
4		no function	no function

* For example: Door status display

17. Declarations of Conformity

17.1 EC Declaration of Incorporation

Declaration of incorporation

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

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

hereby declares that the garage door operator

S 9060 tiga S3, S 9080 tiga S3, S 9110 tiga S3

has 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
- DIRECTIVE (EU) 2024/1781 (ESPR)

.

The following standards were applied:

EN ISO 13849-1, PL "C" Cat. 2	Safety of machines - Safety-related parts of controls.
	– Part 1: General design guidelines.
EN 60335-1, where applicable	Safety of electrical appliances / operators for doors.
EN 61000-6-2	Electromagnetic compatibility (EMC) - interference resistance.
EN 61000-6-3	Electromagnetic compatibility (EMC) - interference.
EN 60335-2-95	General safety requirements for household and similar electrical appliances.
	– Part 2: Particular requirements for operators for vertically moving garage doors for residential use.
EN 60335-2-103	General safety requirements for household and similar electrical appliances.
	– Part 2: Special requirements for operators for gates, doors and windows.

The following requirements of Annex 1 of the Machinery Directive 2006/42/EC are met: 1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.6, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6, 1.5.14, 1.6.1, 1.6.2, 1.6.3, 1.7.1, 1.7.3, 1.7.4

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

- in combination with door types in the reference list, which can be found under Certifications:

www.sommer.eu

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

The undersigned is responsible for compilation of the technical documents.

Kirchheim/Teck,
01.04.2025

CE

i.V.

Jochen Lude
Responsible for documents

17.2 Simplified EU Declaration of Conformity for radio systems

SOMMER Antriebs- und Funktechnik GmbH hereby declares that the radio system (tiga S3) complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity
for the radio system can be found at:

CE

https://som4.me/mrl

17. Declarations of Conformity

17.3 UKCA declaration of incorporation

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

hereby declares that the products designated below, have been developed, designed and manufactured in conformity with the:

- Supply of Machinery (Safety) Regulations 2008
- Electrical Equipment (Safety) Regulations 2016
- Electromagnetic Compatibility Regulations 2016
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
- REGULATION (EU) 2024/1781 (ESPR)

The machine component must not be put into service until it has been established that the machine into which the machine component is to be incorporated complies with the provisions of the Supply of Machinery (Safety) Regulations 2008.

The following standards were applied:

BS EN ISO 13849-1, PL "C" Cat. 2	Safety of machinery. Safety-related parts of control systems. General principles for design.
	– Part 1: General principles for design.
BS EN 60335-1+A15 where applicable	Household and similar electrical appliances. Safety. General requirements.
BS EN IEC 61000-6-2	Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.
BS EN IEC 61000-6-3	Electromagnetic compatibility (EMC). Generic standards. Emission standard.
BS EN 60335-2-95 + A2	Household and similar electrical appliances. Safety.
	– Part 2: Particular requirements for drives for vertically moving garage doors for residential use.
BS EN 60335-2-103	Household and similar electrical appliances. Safety.
	– Part 2: Particular requirements for drives for gates, doors and windows.

Product type	Products
Garage gate operator	**S 9060 tiga S3, S 9080 tiga S3, S 9110 tiga S3**

The following requirements of Annex 1 of the Supply of Machinery (Safety) Regulations 2008 are met:
1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.2.6, 1.3.1, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6, 1.5.14, 1.6.1, 1.6.2, 1.6.3, 1.7.1, 1.7.3, 1.7.4

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

The product may only be used in combination with door types in the reference list, which can be found under Certifications at **www.sommer.eu**

The products are imported into the United Kingdom by:
SOMMER Doco
Unit B3 Elvington Industrial Estate
Elvington
York
YO41 4AR

Kirchheim/Teck,
01.04.2025

i.V.
Jochen Lude
Responsible for documents

17.4 UKCA declaration of conformity for radio systems

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

hereby declares that the products designated below, when used as intended, comply with the essential requirements of the Radio Equipment Regulations 2017 and that, in addition, the standards listed below have been applied.

DIN VDE 0620-1 (where applicable)	2016-01
EN 62368-1:2016-05 + AC:2015	2016-05
EN 62479:2011	2011-09
ETSI EN 300 220-2 V3.1.1	
ETSI EN 300 328 V2.2.2	
ETSI EN 301 489-1 V2.2.2	2019-11
ETSI EN 301 489-3 V2.1.1	2019-03

Product type	Products
Garage gate operator	**S 9060 tiga S3, S 9080 tiga S3, S 9110 tiga S3**

The products are imported into the United Kingdom by:
SOMMER Doco
Unit B3 Elvington Industrial Estate
Elvington
York
YO41 4AR

Kirchheim/Teck,
01.04.2025

i.V.
Jochen Lude
Responsible for documents

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

+49 (0) 7021 8001-0

+49 (0) 7021 8001-100

info@sommer.eu
www.sommer.eu