

1. GENERAL INFORMATION

Hereby, Somfy declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 98/37/CEE. A declaration of conformity is available on the website at www.somfy.com/ce (Levixo 50 RTS), usable in EU, CH and NO.

This compact electromechanical barrier is designed to delimit private areas, car parks, areas where access is reserved for vehicles and is available in widths of 3 or 5 metres.

The barrier is supplied factory-fitted to be mounted on the left (viewed from inside). If necessary, it is possible to reverse the opening direction.

The base plate (optional) is used to install the barrier.

It is advisable to install a support bracket (optional) in order to optimise the service life of the barrier.

2. SAFETY

2.1. General information

Always read this installation guide and the attached safety instructions before installing this Somfy product. This product must be installed by a professional motorisation and home automation installer, for whom this guide is intended.

This device is not designed to be used by persons (including children) whose physical, sensory or mental capacity is impaired, or persons with little experience or knowledge, unless they are under supervision or have received instructions on using the device by a person responsible for their safety.

The use of any safety components not approved by Somfy remains the sole responsibility of the installer.

Moreover, the installer must comply with current standards and legislation in the country in which the product is being installed, and inform his customers of the conditions for use and maintenance for the product.

Any use outside the sphere of application specified by Somfy is forbidden. This invalidates the warranty and discharges Somfy of all liability, as does any failure to comply with the instructions given herein.

This guide describes how to install, commission and operate this product.

2.2. Safety instructions



- ***Somfy refuses to accept any responsibility as regards the safety and correct operation of the lifting barrier if non-Somfy components are used.***
- ***No modifications may be made to the components of the motorisation system unless expressly authorised by Somfy.***
- ***Inform the user about the operation of the control systems and how to manually open the barrier in the event of an emergency.***
- ***Installations which do not comply with the specifications in this manual or improper use of the product may cause injury or damage the equipment.***

• Standards in force:

- The constituent components of the machine must comply with the following European Directives: EMC 2004/108/EC, LVD 2006/95/EC, 2006/42/EC and successive modifications. For all countries outside the common market, besides the national standards in force, it is recommended that the standards listed above are respected in order to guarantee the correct safety level.
- The installation must comply with the provisions of the following European Directives: EMC 2004/108/EC, LVD 2006/95/EC, 2006/42/EC and successive modifications.

• Installation area:

- Before installation, ensure that the installation location complies with the provisions of the current standards. In particular, the position in which the motorisation mechanism will be fitted must allow for safe and easy manual release of the barrier.
- Ensure that there are no danger zones (risk of crushing, cutting, trapping) between the barrier and the surrounding fixed elements caused by the opening movement of the barrier.
- Do not install the product in an explosive environment.

• Installation

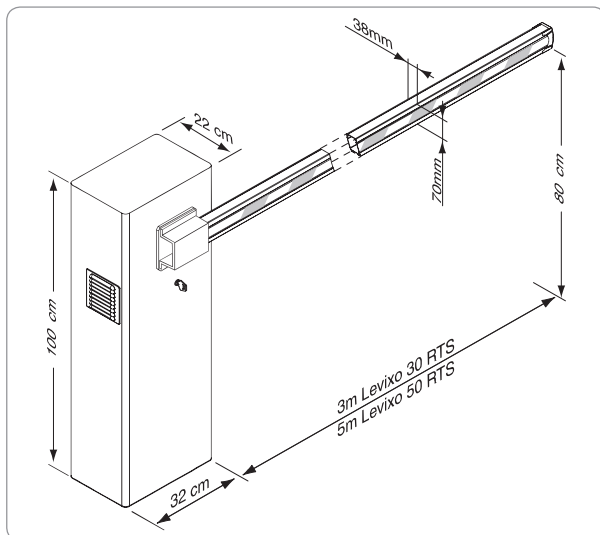


Before opening the door of the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.




- **The barrier must only be used to allow vehicles to pass through. Pedestrians must not pass through the area in which the automatic system is operating. It is necessary to provide a separate pedestrian route.**
 - Watch the barrier while it is moving.
 - Place the fixed control devices and remote controls out of the reach of children.
 - Any switch without a locking device must be installed in direct view of the barrier and away from any mobile parts. The minimum height at which it must be installed is 1.5 m. It must not be accessible to the public.
 - Dispose of packaging material (plastic, cardboard, polystyrene, etc.) according to the provisions of the current standards. Do not leave nylon and polystyrene packaging within the reach of children.
 - Ensure the installation instructions are kept where they can be consulted at any time.
- **During installation of the barrier:**
- Remove any jewellery (bracelets, chains, etc.).
 - For drilling and welding operations, wear special glasses and sufficient protection.
 - Use the appropriate tools.
 - Do not connect to the mains supply until installation is complete.
 - Be careful when handling the housing and boom to prevent any risk of injury.
- **Power supply:**
- **In order to operate, the motor must be supplied with 230 V 50 Hz. The electric line should:**
 - solely be used for the motor,
 - have a minimum cross section of 1.5 mm²,
 - be fitted with an approved all-pole switch with contact openings of at least 3.5 mm, fitted with a protection device (fuse or circuit breaker with a 16 A rating) and a differential device (30 mA),
 - be installed in accordance with the current electrical safety standards,
 - be fitted with a lightning conductor (in compliance with standard NF C 61740, maximum residual voltage 2 kV),
 - Check whether the earthing system is performed correctly: connect all the metal parts of the assembly and all the components of the installation equipped with earth terminals.
- **Safety devices:**
- The selected safety accessories for the installation must comply with the current standards and regulations in force in the country in which the product is being installed.
 - Install all the safety devices (photoelectric cells, safety edges, etc.) required to protect the zone from the danger of crushing, movement force and cutting according to the applicable directives and technical standards.
 - Install at least one light signalling device (flashing light) in a visible position,
 - Attach a sign to the structure which informs pedestrians that they are prohibited from passing through.
- **Maintenance:**
- Check the condition of the housing and boom assembly regularly. Any component found to be in poor condition must be repaired, reinforced or replaced. Check that the bolts and fittings of the various assembly components are correctly tightened.
 - Before carrying out work on the installation, switch off the power supply.
 - Use only original parts for any maintenance or repair work.

3. PRODUCT DESCRIPTION

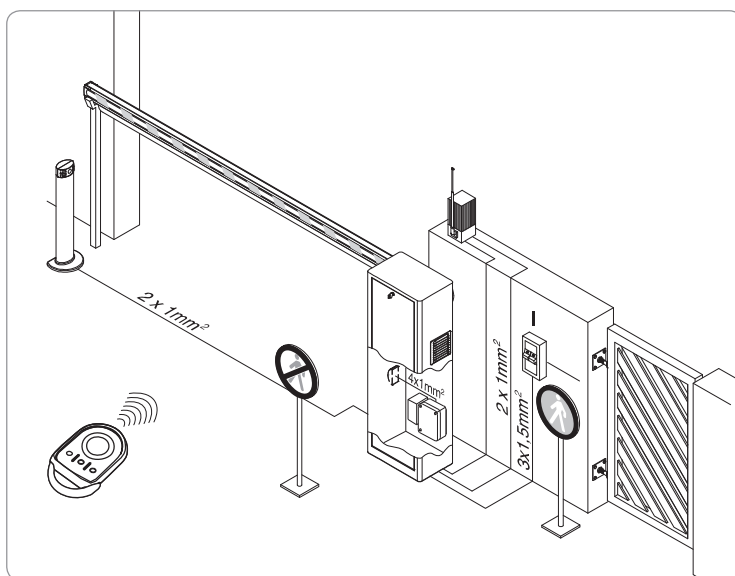
3.1. Space requirements



Useful boom length

Boom accessories			No rubber block	1 rubber block	2 rubber blocks
Levixo 50		MIN L		5 m	4.7 m
		MAX L		5 m	5 m
		MIN L	4.4 m	3.9 m	3.7 m
		MAX L	5 m	5 m	5 m
Levixo 30		MIN L	2.9 m	2.9 m	2.8 m
		MAX L	3 m	3 m	3 m

3.2. Typical installation



4. INSTALLATION

4.1. Mounting the housing with a base plate (optional) and concrete base

If the housing is mounted without a base plate, go straight to section 4.2.

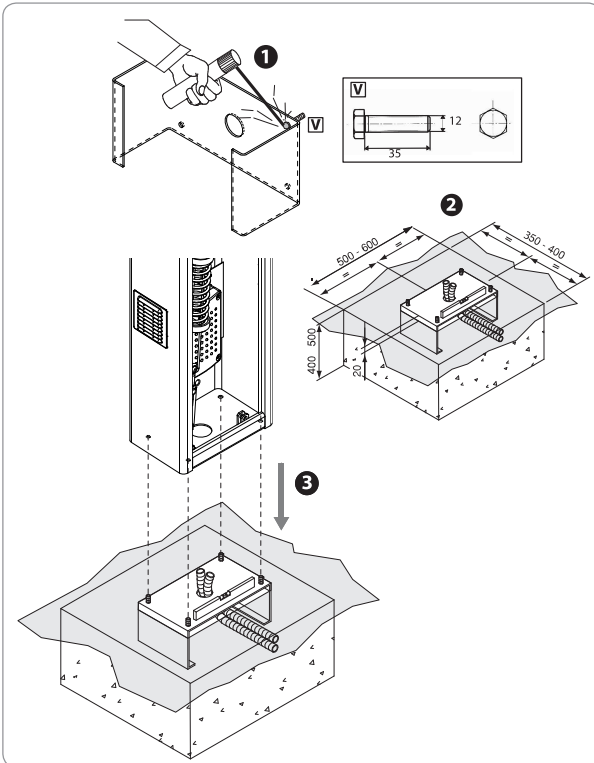


Before opening the door of the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.



The door of the housing must be facing inside the property.

- Make a hole in the base suitable for the type of terrain.
- Use several ducts to route the electrical cables.
- Place 4 bolts supplied with the base plate in the final position with the thread of the bolt facing upwards and weld the heads of the 4 bolts to the base (1). Protect the welds with an anti-rust product. Position the base so that it protrudes the ground by approximately 20 mm (2).
- Fill the base with concrete, using a spirit level to check the position of the base in both directions (3) and leave the cement to harden.



4.2. Mounting the housing without a base plate



Before opening the door of the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.

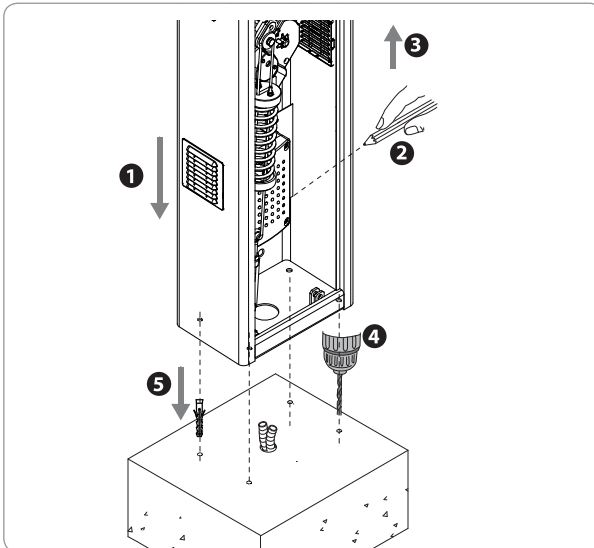


The door of the housing must be facing inside the property.

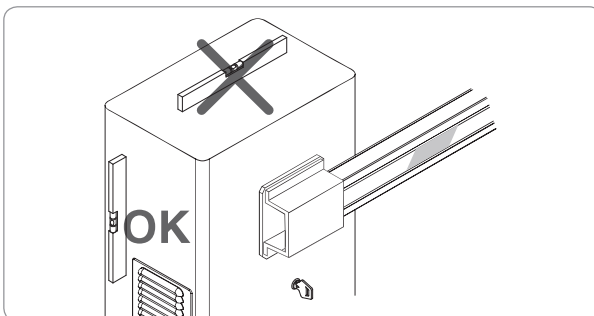
Follow the instructions in the figure opposite.

Note: The plugs are not supplied.

Secure the housing by tightening the M12 nuts.



The top surface of the actuator is angled slightly to prevent rain water from collecting. Use a side surface instead to check that the housing is correctly level.



4.3. Identifying the barrier's mounting direction

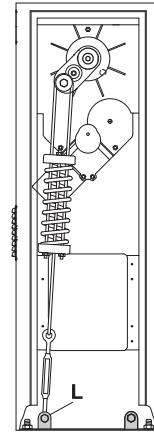
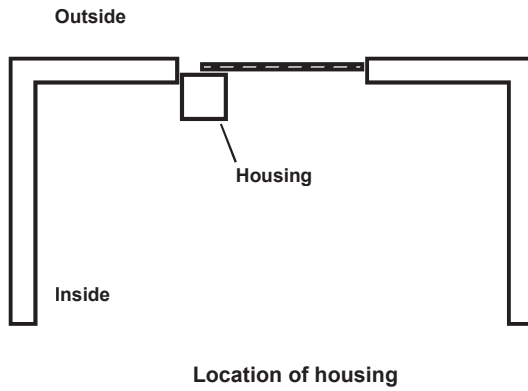
Standing in the middle of the gap and facing the outside:

- if the housing is on the left, refer directly to section 4.5 to mount the boom.
- if the housing is on the right, refer to the following section to carry out a right-hand mounting procedure.

Note: The lifting barrier is supplied factory-fitted for mounting on the left.

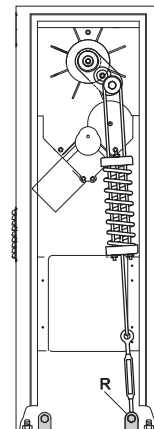
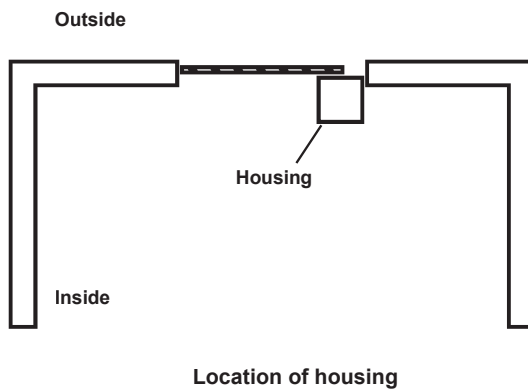
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Barrier mounted on the left



Position of spring inside the housing

Barrier mounted on the right



Position of spring inside the housing

4.4. Mounting on the right (opposite of factory mounting)

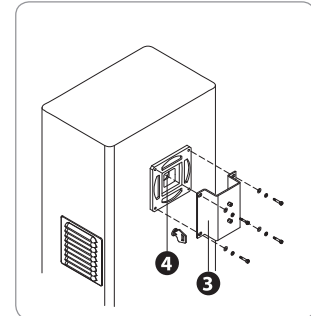
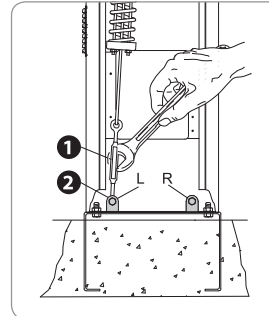
The operation involves moving certain internal components as follows, in order to mount the barrier on the right:



Before performing any operations inside the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.

Lock the boom by placing the key in the padlock closed position

- Slacken the spring tensioner **1** completely using a Ø19 spanner until the bolt and nut **2** securing the base of the housing can be removed.
- Remove the bracket **3** and loosen the bolt **4** using a Ø19 spanner (with a tightening offset of at least 40 mm) until the lever **5** begins to rotate.

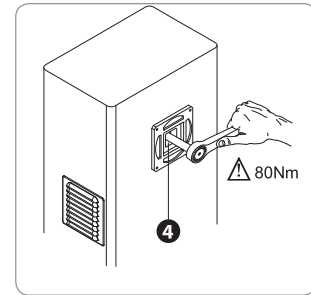
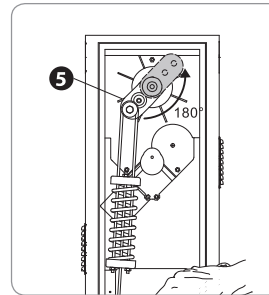


- Pull and turn the lever **5** 180°.
- Note:** Only one position is possible at 180°, and is indicated by a notch.

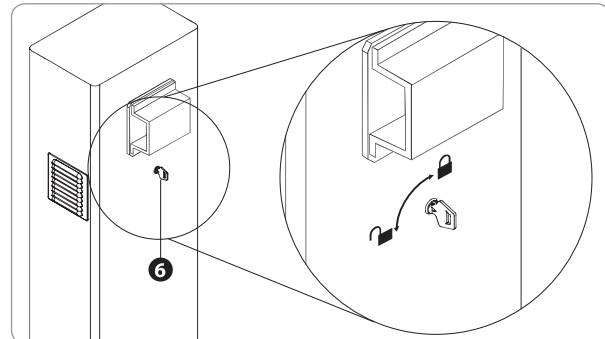


Be sure not to damage the end limit contacts.

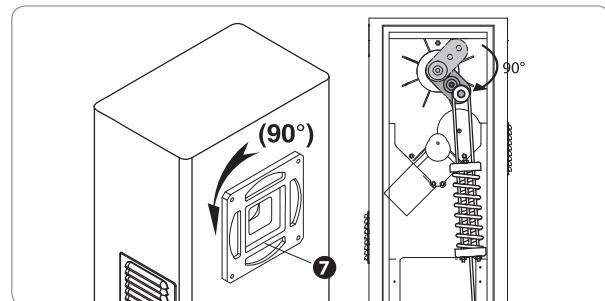
- Tighten the bolt **4** which immobilises the lever using a torque wrench set to a torque of approximately 80 Nm.



- Place the unlocking key **6** in the manual operation position (padlock open)



- Turn the boom support plate **7** 90° anticlockwise by hand.
- Lock the boom by placing the unlocking key **6** in the padlocked closed position .

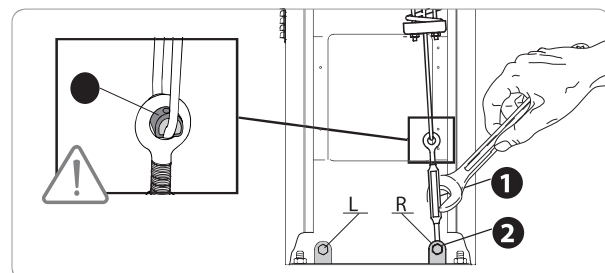


- Lock the spring tensioner **1** in the position (mark R) using the self-locking bolt and nut **2**.



Be sure to reposition the part **8 located between the spring tensioner and the spring.**

- Adjust the spring tensioner **1** to lightly tighten the spring.
- In the control unit, reverse the black and brown wires of the motor operating connections (terminals 3 and 5).



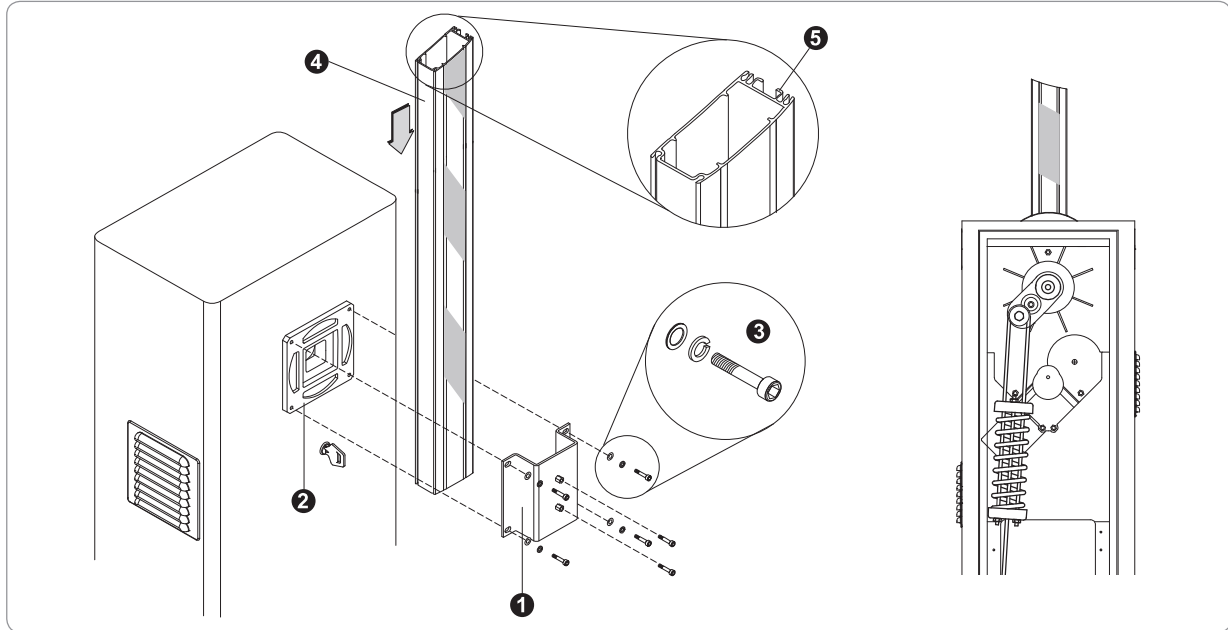
4.5. Mounting the boom

- Mount the boom in the open position (vertically).
- Secure the boom ④, using the bracket ① with the bolts and washers provided ③, on the boom support ②.



*The boom should be positioned so that the double profile ⑤ is facing downwards.
The bracket ① must be properly aligned with the boom support ②.*

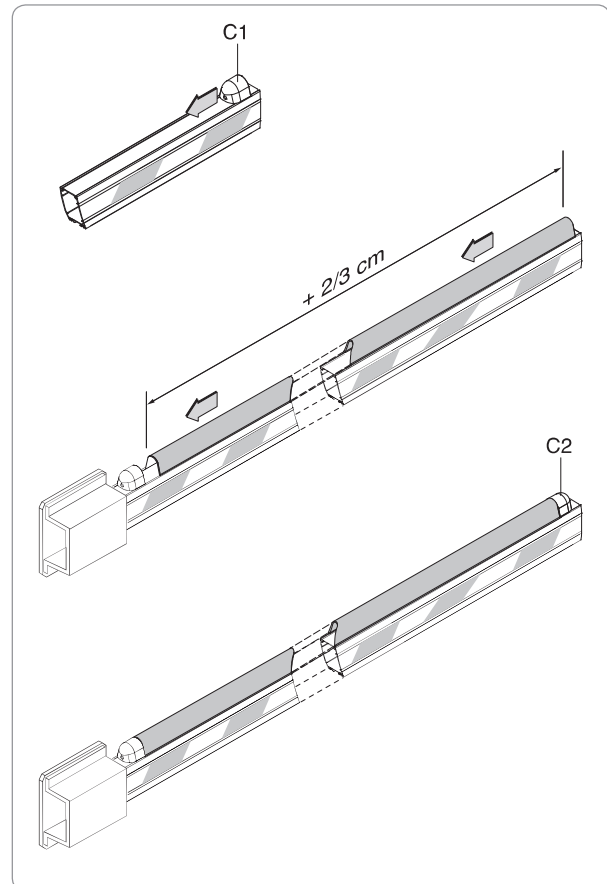
- The balance is set for a nominal boom length (3 m for Levixo 30 / 5 m for Levixo 50). If the boom is cut, balance the boom as indicated in paragraph 4.7.



4.6. Fitting the rubber edge (option)

- Position cover C1 by sliding it along the boom.
- Cut the rubber edge with an extra 2/3 cm over the length of the boom to be protected.
- Slide the rubber edge into the groove provided.
- Position cover C2.



Note: We recommend securing the rubber edge to covers C1 and C2 using silicone adhesive to join the assembly together and allow it to slide freely in the boom profile.

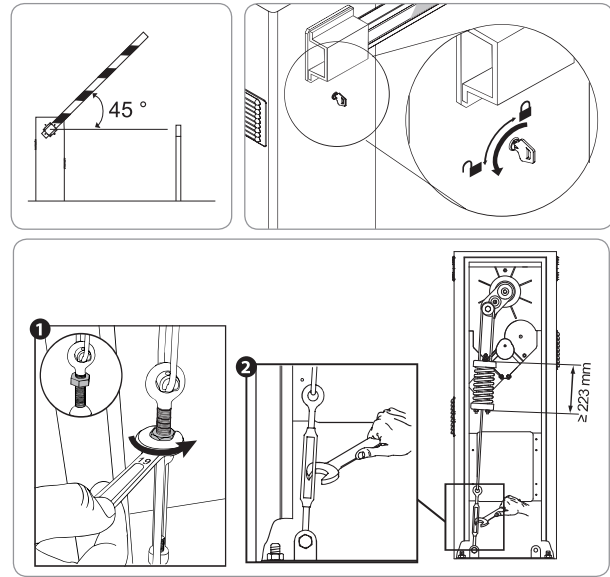


4.7. Balancing the boom



Before performing any operations inside the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.

- Unlock the boom (release key in padlock open position )
- Guide the boom until it is balanced.
- Loosen the locknut **1**.
- Tension or slacken the spring **2** until the boom remains balanced at approximately 45°:
 - . if the boom seems to open, slacken the spring by moving the tie-rod.
 - . if the boom seems to close, tension the spring by moving the tie-rod.
- Tighten the locknut **1**.
- Lock the boom (release key in padlock closed position )



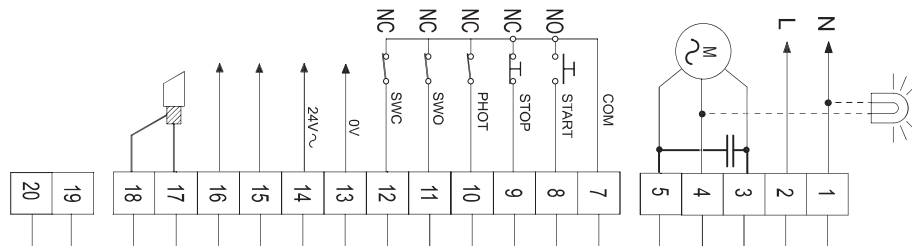
When closing the boom, the setting spring must never be completely compressed. The minimum length that the compressed spring can achieve with the boom in the horizontal position is 223 mm (see diagram opposite).

4.8. Wiring

4.8.1. General wiring diagram



- Ensure that the safety low voltage (230V) wires and safety extra low voltage wires are routed separately using suitable cable glands and collars.
- The low voltage (230V) wires must be stripped, grouped and attached near the connectors so as to avoid contact with terminals 7 to 20 in case of disconnection.
- Use double-insulated wires for the 230V supply.
- Install all the safety devices (photoelectric cells, safety edges, etc.) required to protect the zone from the danger of crushing, movement force and cutting according to the applicable directives and technical standards. If no directive or standard applies, inputs 9 and 10 must be bridged to terminal 7 if they are not used to connect a safety device.



Terminals	Description	Function
1	N	Neutral single-phase 230 V~, 50Hz power supply
2	L	Neutral single-phase 230 V~, 50Hz power supply
3-4-5		Motor connection (4 = shared, 3 and 5 = motor and capacitor)
1-4		230 V output, flashing orange light
7	COM	Shared by control inputs (8-9-10-11-12)
8	START	Control point input, sequential operation
9	STOP	Control point input (closing only)
10	PHOT	Photoelectric cell input
11	SWO	Opening end limit contact
12	SWC	Closing end limit contact
13-14	0V-24V~	Alternating 24 V output for power supply to the additional devices
15-16		Unused outputs
17	ANT	Aerial core
18	ANT	Aerial braid
19	COM	Shared
20	PED	Not used

4.8.2. Aerial wiring

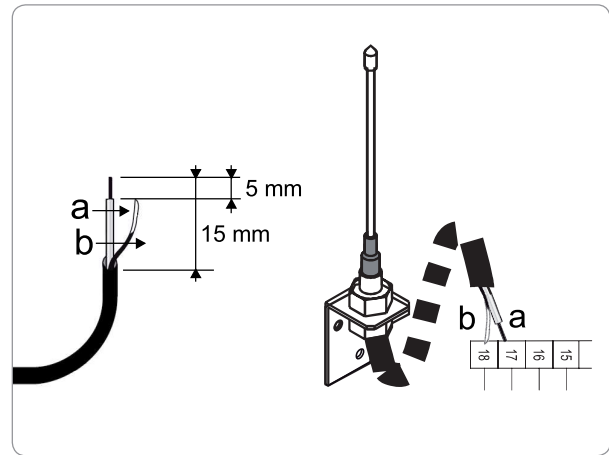
For optimum reception, the aerial must not be cut and must be as far away as possible from the power supply terminal blocks and wires. The aerial must always be installed at a height and must be visible from a distance.



Secure the aerial to the housing by inserting the insulating shim between the housing and the base of the aerial.

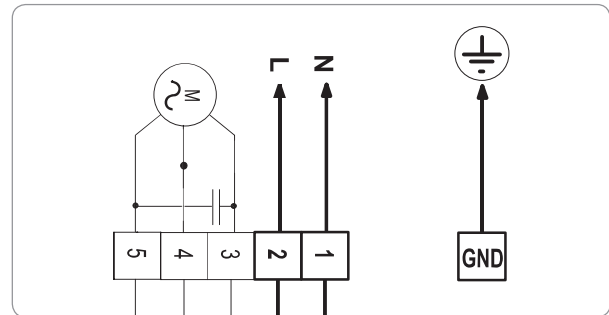
Cut the coaxial cable if it is too long. Shortening the cable will improve the signal (a coaxial cable which is too long, extended or connected with an insulating screw joint will distort the signal).

The mounting plate is an active component of the aerial. It must not be removed or modified.



4.8.3. Connection to the power supply

To connect the motor to the power supply, use a standard, multicore cable with a minimum cross section of $.3 \times 1.5 \text{ mm}^2$.



5. COMMISSIONING



Ensure that the boom is correctly balanced before commissioning (see paragraph 4.7. "Balancing the boom")

5.1. Programming the remote controls

To program a remote control:

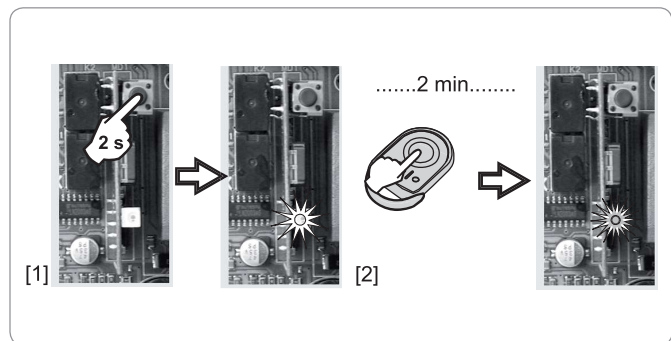
- [1]. Press the PROG button on the control unit for 2 seconds. The red indicator will come on permanently.
- [2]. Press the radio control channel to be assigned to the motor within 2 min. The red indicator will flash, the remote control is memorised.

If this procedure is carried out using a channel which has already been memorised, this channel will be cleared.

To add other remote controls:
repeat the above procedure.

To exit programming mode without programming a remote control:

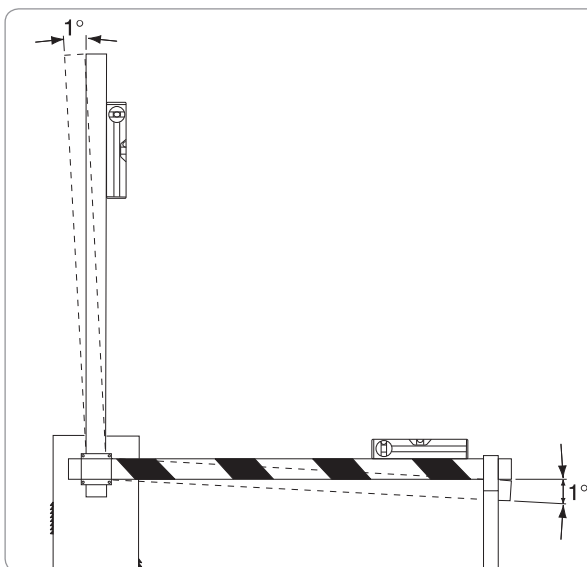
Press the PROG button of the control unit briefly.



5.2. Setting the end limits

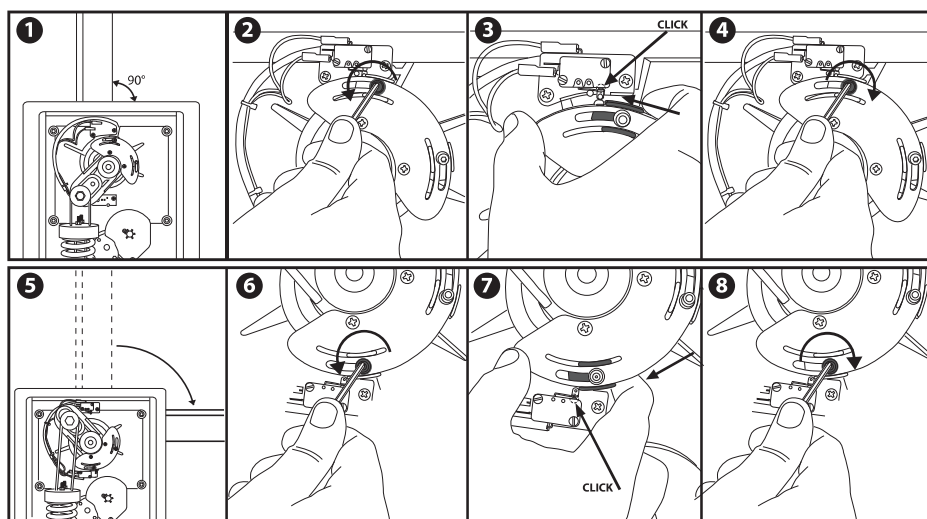
The barrier is fitted with adjustable electrical end limit contacts and a mechanical stop.

A rotation margin of approximately 1° must be left between the electrical end limit contact and the mechanical stop, both for opening and closing, in order to prevent damage to the end limit contacts.

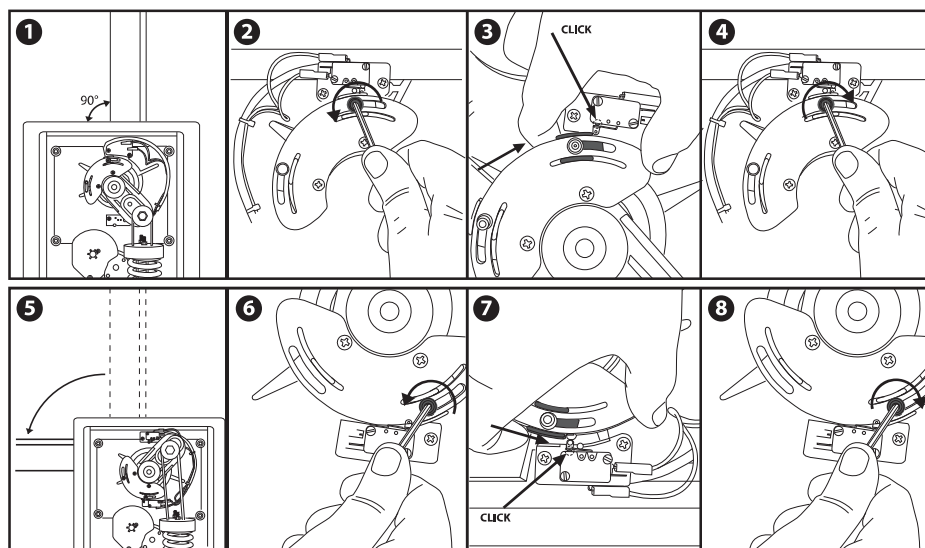


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5.2.1. Setting the end limits for left-hand mounting



5.2.2. Setting the end limits for right-hand mounting

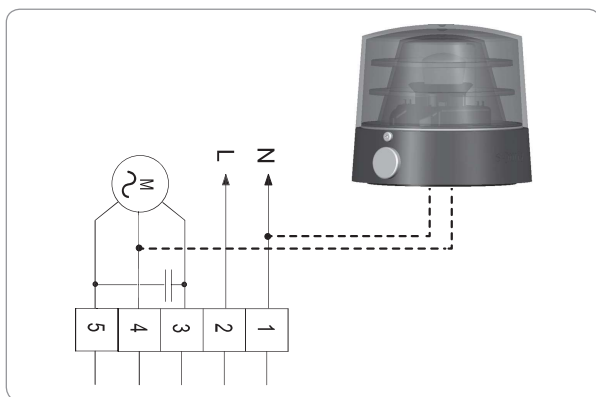


6. LIFTING BARRIER OPERATION

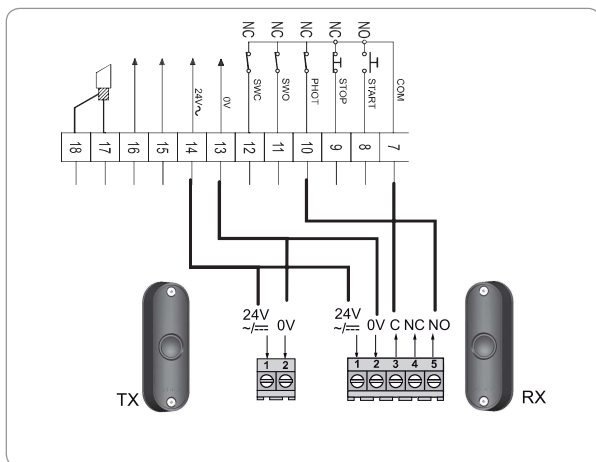
See the user manual.

7. CONNECTING ADDITIONAL DEVICES

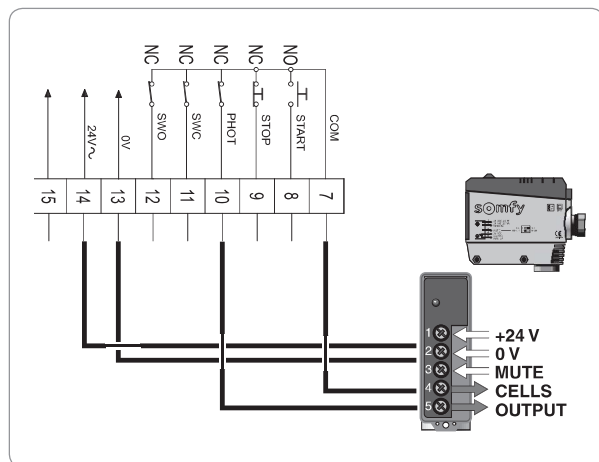
230 V flashing orange light
(ref. 9 015 034)



Photoelectric cells

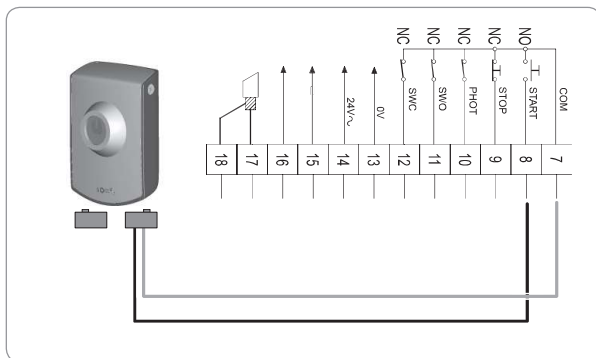


Electric eye

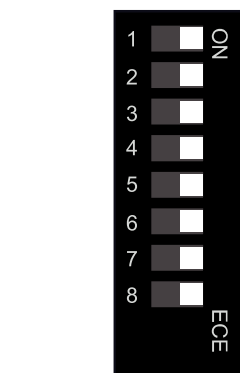


On the cell, set the DIP switch1 and the DIP switch2 to ON.

Wired key lock



8. PARAMETER SETTING



Potentiometers: to modify the automatic closing time and the motor run time.

TCA: Automatic closing time	Between 0 and 90 seconds	Setting the time delay for automatic closing (if DIP1 is ON).
TW: Motor run time	Between 0 and 120 seconds	The motor run time should be slightly longer than the actual closing time of the barrier.

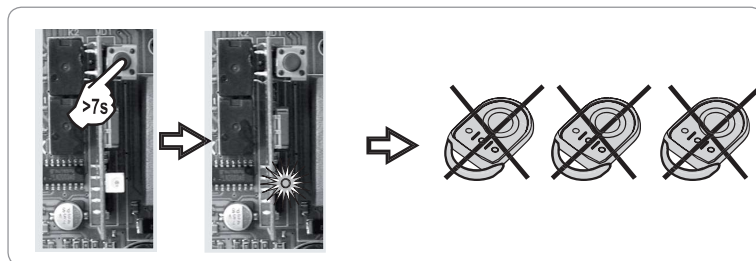
DIP switch: to select the operating mode for the motor and its additional devices.

1: Automatic closing	ON: Activates automatic closing OFF: Deactivates automatic closing	The barrier closes automatically after the programmed time delay (TCA).
2: Operation of the photoelectric cells	ON: In closing mode only.	In closing mode, the barrier stops then reverses its movement. In opening mode, the cells are inactive.
	OFF: In opening and closing mode.	In closing mode, the barrier stops and reverses its movement once the cells are no longer obstructed. In opening mode, the barrier stops then continues its movement once the cells are no longer obstructed.
3: Blocking impulses	ON: In opening mode only OFF: None	Impulses during opening have no effect.
4: 3 Step/4 Step	ON: Activates the 3 step logic. OFF: Activates the 4 step logic.	3 STEP = operation in semi-automatic mode (see "User's manual" p. 1). 4 STEP = operation in sequential mode (see "User's manual" p. 1).
5 6	DIP 5 and 6 are not used and have no effect.	
7	OFF: Compulsory position	
8	OFF: Compulsory position	

9. CLEARING ALL REMOTE CONTROLS

Press the PROG button of the control unit (for more than 7 seconds) until the indicator flashes.

All the remote controls and radio control points are erased.



10. MAINTENANCE



Before performing any operations inside the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.


Lock the boom by placing the key in the padlock closed position.

Before carrying out work on the installation, switch off the power supply.

Clean the photoelectric cell optical units regularly.

11. DIAGNOSTICS



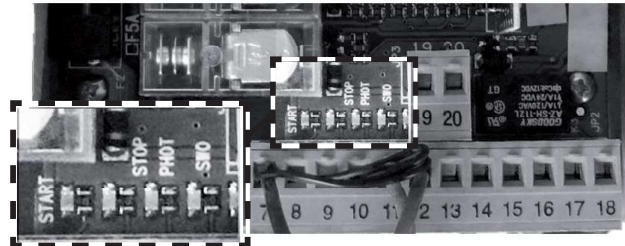
*Before performing any operations inside the housing, it is essential to ensure that the spring is released by moving the boom to the vertical position.
Lock the boom by placing the key in the padlock closed position .*



If the boom is jammed and prevents unlocking for manual manoeuvring, turn the motor blades manually to reduce the pressure on the boom.

The auto-diagnostic LEDs, located on the control unit terminal, control the operation of the motor and its additional devices.

START	lights up on the START command
STOP	goes out on the STOP command
PHOT	goes out if the photoelectric cells are not aligned or if they are obstructed
SWO	goes out on the opening end limit command
SWC	goes out on the closing end limit command



The boom is not raised. The motor is not running.

- Ensure that the photoelectric cells are not dirty, obstructed or misaligned.
- If the motor is overheating, the thermal protection may have been triggered. Wait for the auto-reset.
- Check that the control unit is powered on. Check the fuses.
- Check the operation of the end limit switches. Lubricate the mechanism if the movement is not smooth.

The boom is not raised. The motor is running but there is no movement.

- The system is still in the unlocked position.
- Check that the reduction unit is not damaged.

12. TECHNICAL DATA

	LEVIXO 30 RTS	LEVIXO 50 RTS
Power supply	230 V ~ 50 Hz	
Power consumption	300 W	
Capacitor	8 μ F 450 V	
Absorbed current (with accessories)	1.4 A	
Insulation category	H	
Circuit breaker activation temperature	150°C (winding)	
Lubrication of the reduction unit	Permanent grease	
Max. torque	85 Nm	250 Nm
Opening time	4 s	8 s
Boom length (aluminium)	3 max.	5 max.
Response to impact with safety accessories	Stop or stop and reverse	
End limits	Integrated and adjustable electrical	
Manual manoeuvre	Quick release using key	
Number of actuations per day	1200	600
Operating temperature	-10°C +55°C	
Protection rating	IP24	
Weight of actuator (without boom)	35.6 kg	

ELECTRONICS	
Accessories power supply	24 V (180 mA max. absorbed)
Automatic closing time	between 0 and 90 seconds
Operating time	between 0 and 120 seconds
Reversal pause	1 second approximately
Flashing orange light connection	230 V max. 15 W
Fuses	250 V T 0.62 A and T 1 A
Built in radio receiver	RTS
Number of storable remote controls	36
RTS remote control frequency	433.42 Mhz
Aerial resistance	50 Ω

EN

1. GENERAL INFORMATION

The Levixo 30-50 RTS assembly has been designed to motorise a lifting barrier for residential or industrial use.

Assistance

For further information on how to choose, purchase or install Somfy systems, please ask your Somfy installer for advice or contact a Somfy advisor directly for help and assistance.

Conformity

Hereby, Somfy declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 98/37/CEE. A declaration of conformity is available at the web address www.somfy.com/ce, usable in EU, CH and NO.

2. SAFETY

If installed and used correctly, the motorisation system conforms to the required safety standards. It is recommended that these rules of conduct be respected to prevent the risk of danger or accidents.

Before using the motorisation system, read the user guide carefully and keep it for future reference.

Keep children, people and objects out of the motorisation operating range, particularly during operation. Children should be supervised to ensure they do not play with the device.

Do not leave radio controls or other control devices within easy reach of children, to prevent unintentional operation of the motorisation.

Do not deliberately prevent the automatic control from moving.

Do not attempt to open the barrier manually if the boom has not been unlocked with the special unlocking key.

Do not modify the motorisation components.

In the event of incorrect operation, switch off the power supply, unlock the boom in order to enable access and request assistance from a qualified technician (installer).

Only qualified personnel (installer) may open the housing.

For all external cleaning operations, switch off the power supply.

Never clean the motorisation system with high pressure water cleaning equipment.

Clean the photoelectric cell optical units and light signalling devices. Ensure that no branches or shrubs obstruct the safety equipment (photoelectric cells).

For all direct operations on the motorisation, please contact a qualified technician (installer).

Have the motorisation checked every year by a qualified technician.

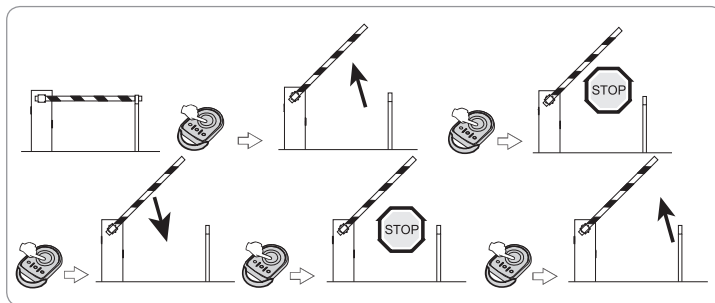
The barrier must only be used to allow vehicles to pass through. Pedestrians must not pass through the area in which the automatic system is operating. It is necessary to provide a separate pedestrian route.

Watch the barrier while it is moving.

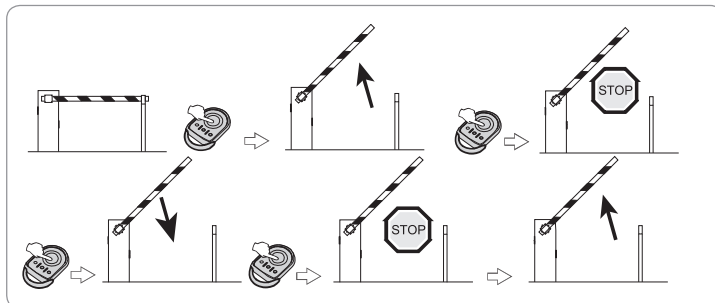
Somfy refuses to accept any responsibility resulting from improper use or use which differs from that which the product has been designed for and which is indicated in this documentation.

3. OPERATION

Operation in sequential mode



Operation in semi-automatic mode



Operation with photoelectric cells

The photoelectric cell operation mode can be programmed during installation, as follows:


- Photoelectric cell mode activated for closing only: if an obstacle is detected when closing, the barrier stops then reopens.
- Photoelectric cell mode activated for opening and closing:
 - when opening: if an obstacle is detected, the barrier will stop and then continue to open when the obstacle no longer obstructs the cells.
 - when closing: if an obstacle is detected, the barrier will stop and then reopen when the obstacle no longer obstructs the cells.

Operation with orange flashing light

The orange light is activated during any movement of the barrier.

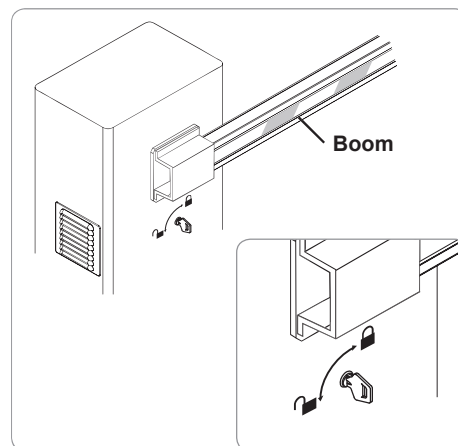
4. UNLOCKING THE BOOM IF THERE IS NO ELECTRICITY SUPPLY

Emergency unlocking makes it possible to operate the boom manually if there is no electricity supply.

To unlock the boom, insert the key into the lock on the housing and turn it so that it is in the padlock open position .



If the boom is missing (broken, damaged), do not use the emergency unlocking system. Contact a qualified installer. Manually unlocking the boom may cause it to move uncontrollably.



RECYCLING



Do not throw away your scrapped equipment or used batteries with household waste. It is your responsibility to dispose of your electronic equipment in the relevant recycling points.

DIAGNOSTICS

The motor does not start

- Check the motor power supply.
- The remote control indicator light remains off; the battery is flat, replace it.
- Check that the boom has not been unlocked; re-lock it.
- Check that the photoelectric cells are neither obstructed nor dirty.
- This type of motor is unsuitable for intensive use. The thermal protection may have activated.

If the problem cannot be fixed, please contact the motorisation installer.

Change the remote control batteries (3V CR 2430 battery)

