



sentinel MBA0103 Articulated Arms Automation Kit For Swing Gate Instruction Manual

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MBA0103 Articulated Arms Automation Kit For Swing Gate



**OpenGate 2
MBAO103**

pour portail battant
Articulated arms automation kit for swing gate



Installation
Utilisation
faciles

24 V



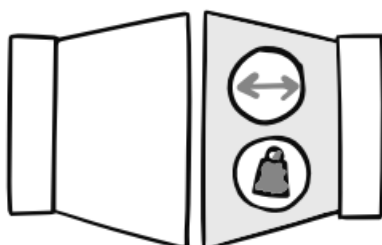
Fiabilité



Moteurs
silencieux



Carte
électronique
P100 PCB2
V SCS



2 x 2,5 m max
2 x 250 kg max

SAFETY INSTRUCTIONS



WARNING: Important safety instructions. It is essential to follow these instructions for reasons of personal safety. Keep these instructions in a safe place.



WARNING: Important safety instructions. Follow all instructions carefully as improper installation may result in serious injury.

This product is only designed for the automation of a swing gate for «residential» use.

The power supply installation must comply with current standards in the country where the product is installed (NF C 15-100 for France) and be carried out by qualified staff. A means of disconnecting all the poles of the supply network must be provided. This device must be connected directly to the supply terminals and have a contact separation distance on all poles to ensure complete disconnection in accordance with the installation rules.

The mains supply must be protected against overload by a suitable trip switch and an earth leakage circuit breaker.



CAUTION: The motorised system must be disconnected from its power source during installation, cleaning, maintenance and parts replacement.

Installation requires qualified staff with mechanical and electrical skills.

- Make sure that the temperature range indicated on the motorised device is suitable for the installation's location.
- Only original parts should be used to replace or repair the motorised system.
- Before installing the motorised device, check that the driven part is in good mechanical condition, properly balanced and opens and closes correctly.
- The motorised device cannot be used with a driven part incorporating a side gate.
- Ensure that crushing caused by the opening movement of the driven part is avoided between the driven part and the surrounding fixed parts.
- After installation, ensure that the mechanism is properly adjusted and that the protection system and any manual disconnection devices function properly.
- Activation of the manual disconnection device may cause uncontrolled movement of the driven part due to mechanical failure or loss of balance.
- Frequently examine the installation for imbalance where applicable and signs of wear or damage to cables, springs and mounting. Do not use if repair or adjustment is necessary.
- This appliance may be used by children at least 8 years old and by people with reduced physical, sensory or mental capabilities or without experience or knowledge, if they are properly supervised or instructed in the safe use of the appliance, and if the risks involved have been understood. Children should not play with the appliance. The user's cleaning and maintenance must not be carried out by unsupervised children.
- Do not allow children to play with the unit or its controls, including remote controls.
- Permanently attach the label for the manual disconnection device to the operating element of this device.

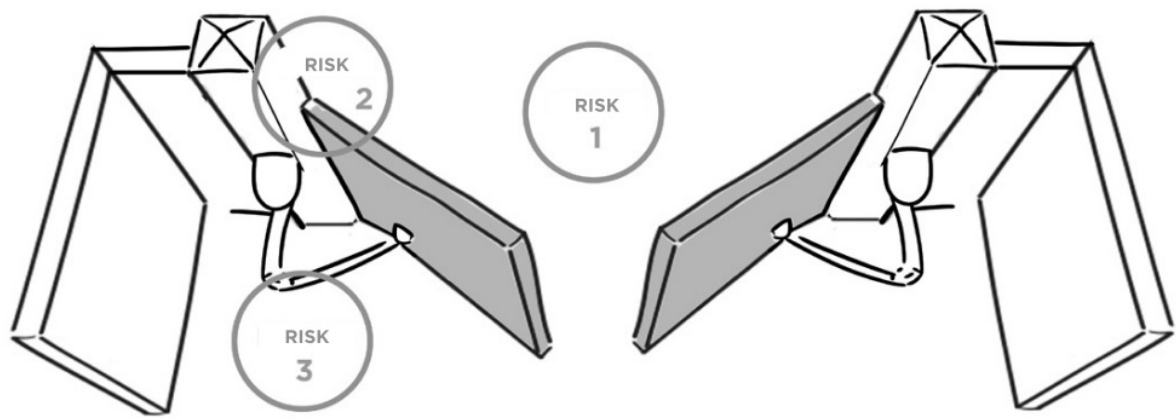
Only use the remote control when you have a complete view of the gate.

If in any doubt, do not operate the system, as it could be damaged.

SCS SENTINEL certifies that its swing gate operators for residential use comply with the European standards and safety regulations for swing gate operators (EN 60335-2-103). The use of this product outside the specified conditions or the use of components or accessories not recommended by SCS SENTINEL may compromise the safety of property and persons, and is therefore prohibited. SCS SENTINEL accepts no liability for any damage resulting from failure to comply with the instructions provided in this manual.

Potential risks

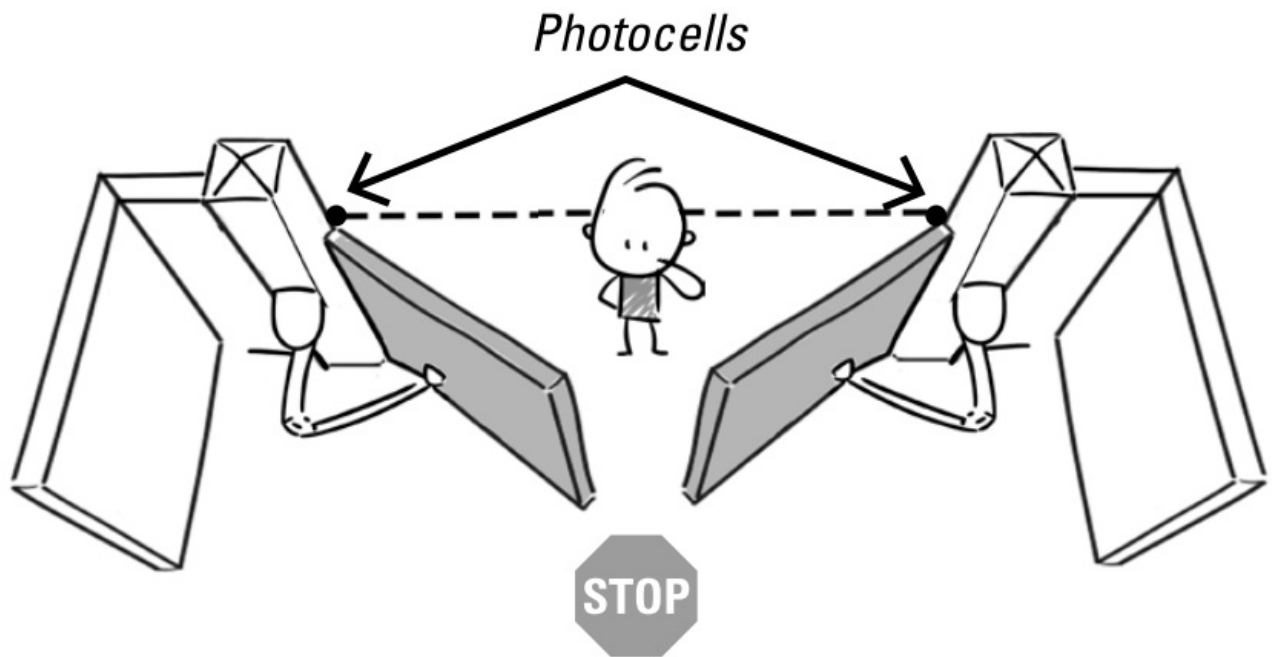
There are 4 potential risks 3 zones identified opposite:



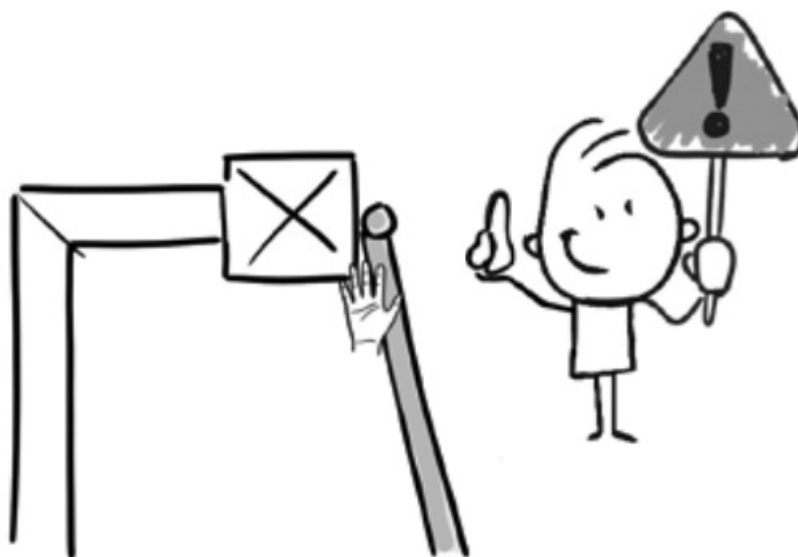
Risk 1: Shock and crushing

Prevention :

- Obstacle detection by motor.
- Use of photocells.

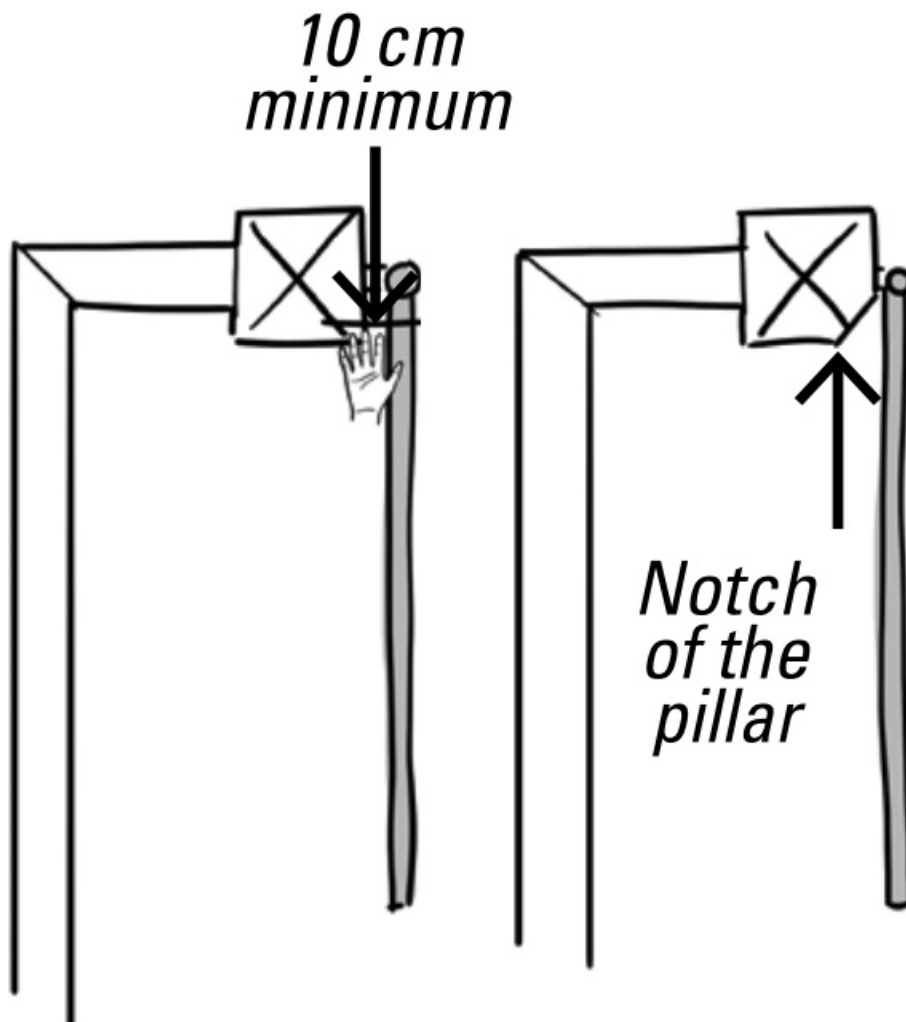


Risk 2 : Hand crushing



Prevention : migem

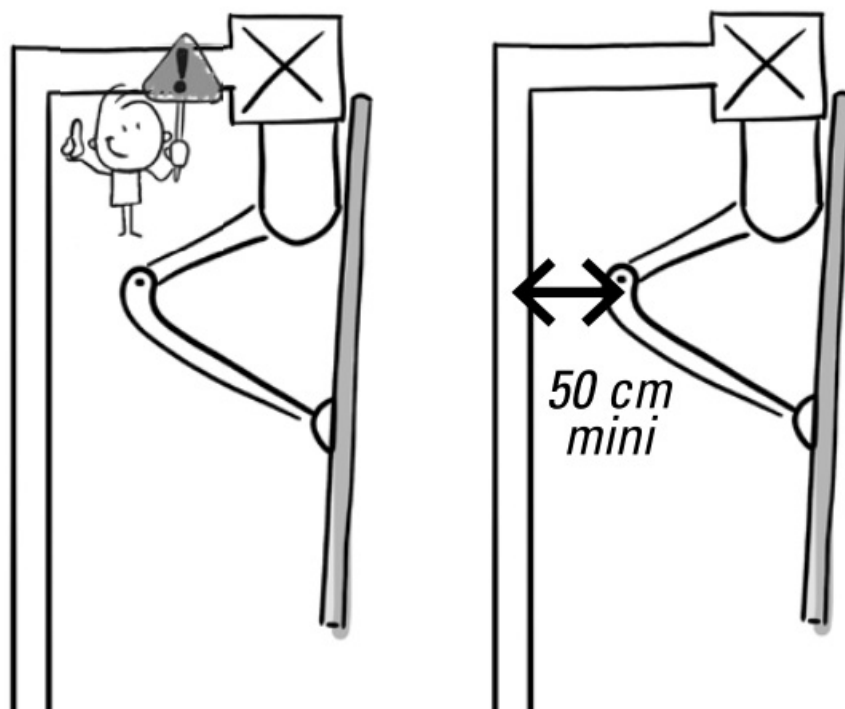
- Leave a minimum distance of 10 cm between the leaf and the pillar/wall.
- Notch the corner of the pillar without pillar weakening it.



Risk 3 : Imprisonment and crushing

Prevention :

- Obstacle detection by the motor.
- Leave a minimum distance of 50 cm between the motor arm and the wall (or other fixed part).



Risk 4 : Crushing of the feet



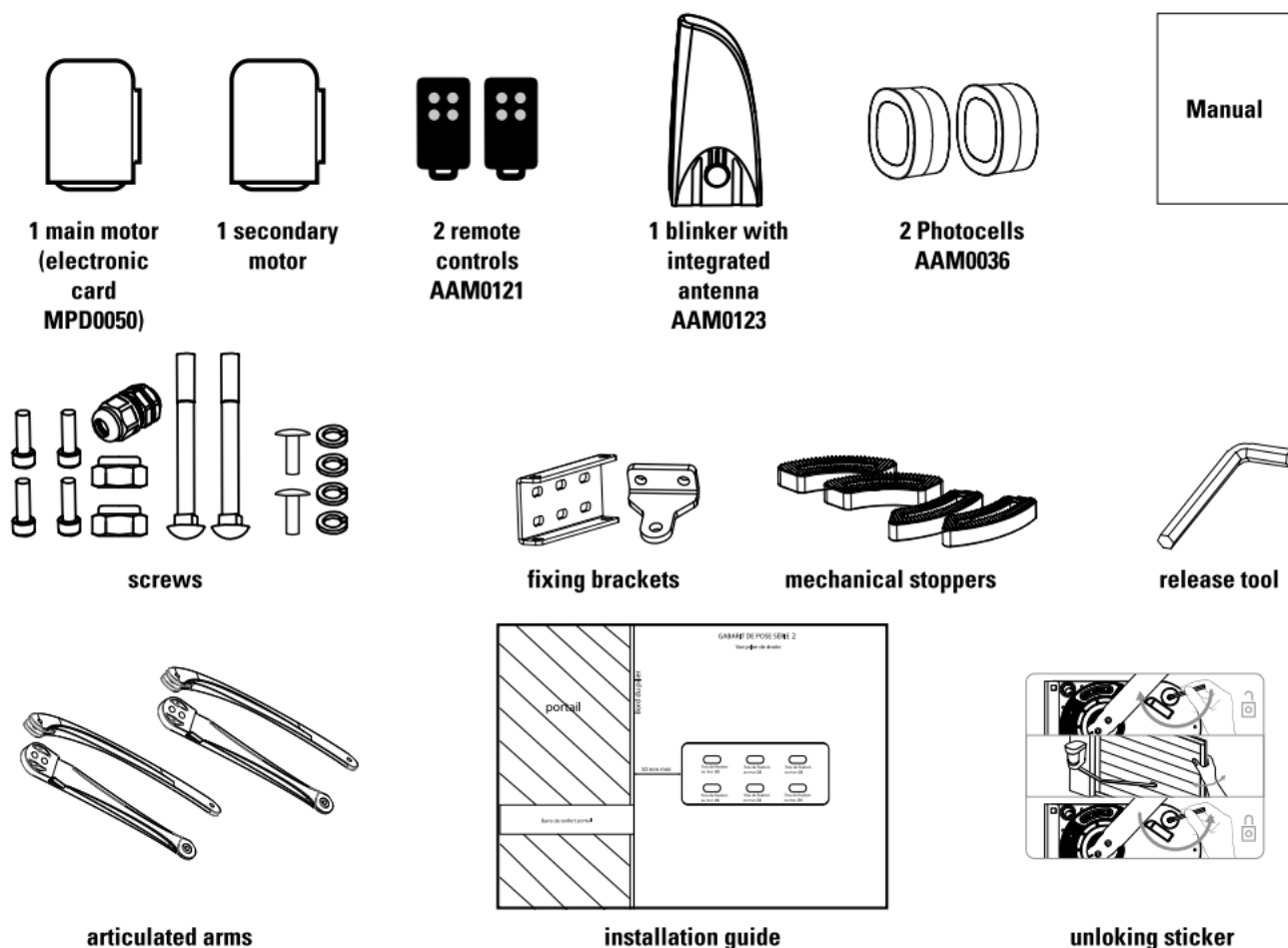
Prevention :

– To avoid a danger zone for feet, leave a minimum distance of 12 cm or a maximum of 5 mm between the bottom of the leaves and the floor.

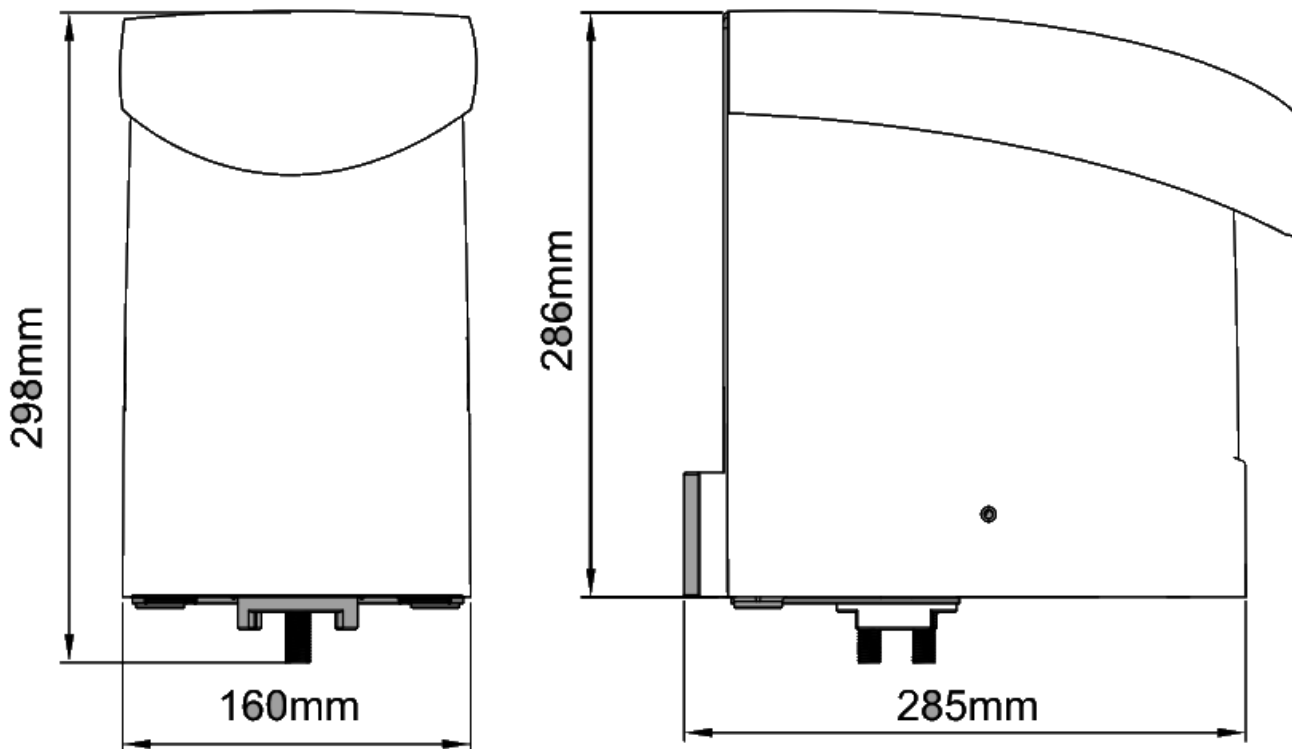


DESCRIPTION

B1- Contents

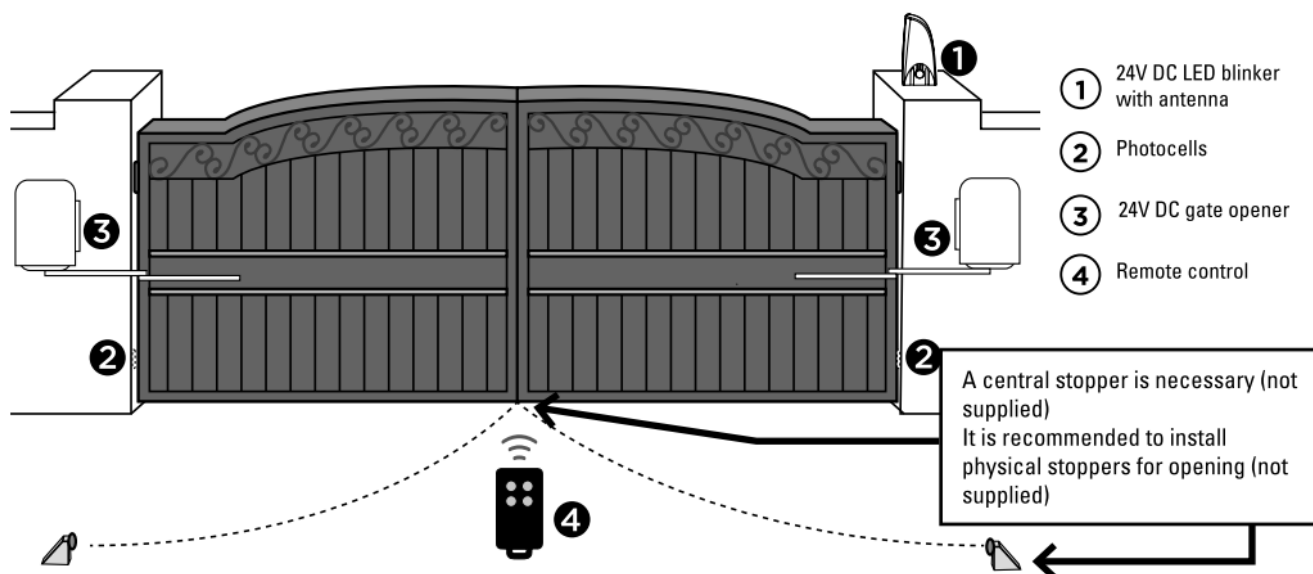


B2- Dimensions



WIRING / INSTALLING

C1- Standard installation



C2- Dimension chart

Comply with the measures shown on the chart for proper installation. Adjust the gate structure to fit it for best automation, if necessary.

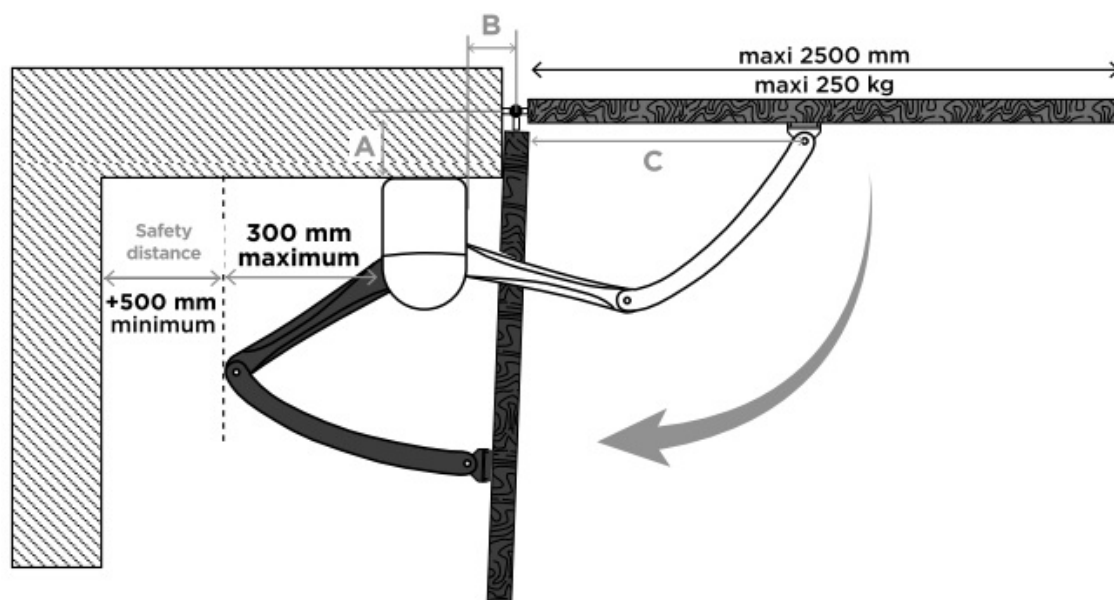
Before starting the installation, please make sure that the gate moves freely and that :

1. Hinges are properly positioned and greased.
2. No any obstacle in the moving area.
3. No frictions between two gate leafs or and on the ground while moving.
4. Enough space is left when the gate is opening.
 - a. Distance perpendicularly from gate bolt to the front of fixing bracket.
 - b. Distance from the bolt perpendicular to the surface of articulated arm opener.
 - c. Distance between the position of arm fixation and the bolt.

d. Installation angle from full closed and full opened position.

Inside opening Dimension chart

A (mm)	B (mm)	C(mm)	D
50	50	600	90°- 95°
50	100	550	90°- 105°
50	150	500	95°- 110°
100	50	630	90°-95°
100	100	580	90°- 100°
100	150	530	95°- 110°
150	50	600	90°-95°
150	100	550	90°- 100°
150	150	500	95°-110°
200	50	600	900-950
200	100	550	90°-100°
200	150	500	95°-105°



COTEA:

minimum 50 mm
maximum 200 mm

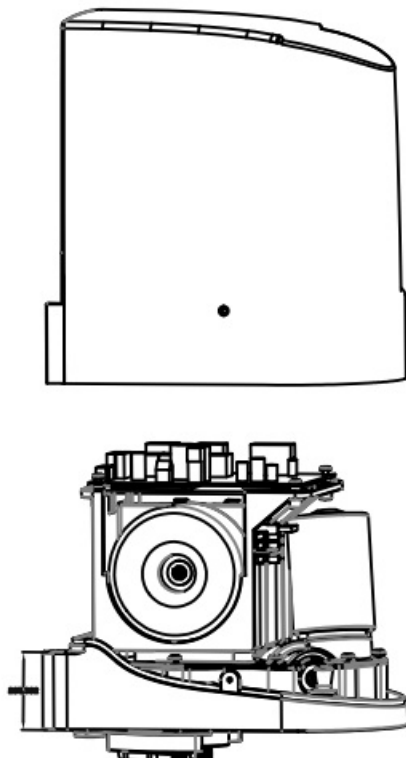
COTEB:

minimum 50 mm
maximum 150 mm

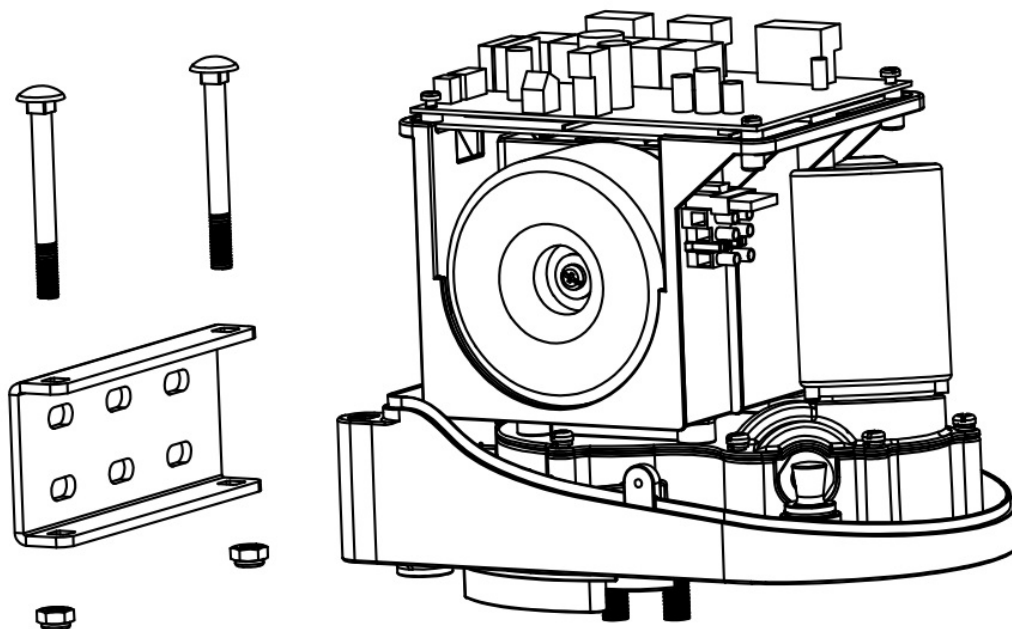
C3- Motor fixing

1. Refer to the Dimension Chart to choose the correct dimensions of the motors and position.
2. Check if the mounting surface of the brackets to be installed is smooth, vertical and rigid.
3. Arrange the cables for power supply cable of the motors.
4. Motor installation and setting for mechanical stopper in opened and closed position.

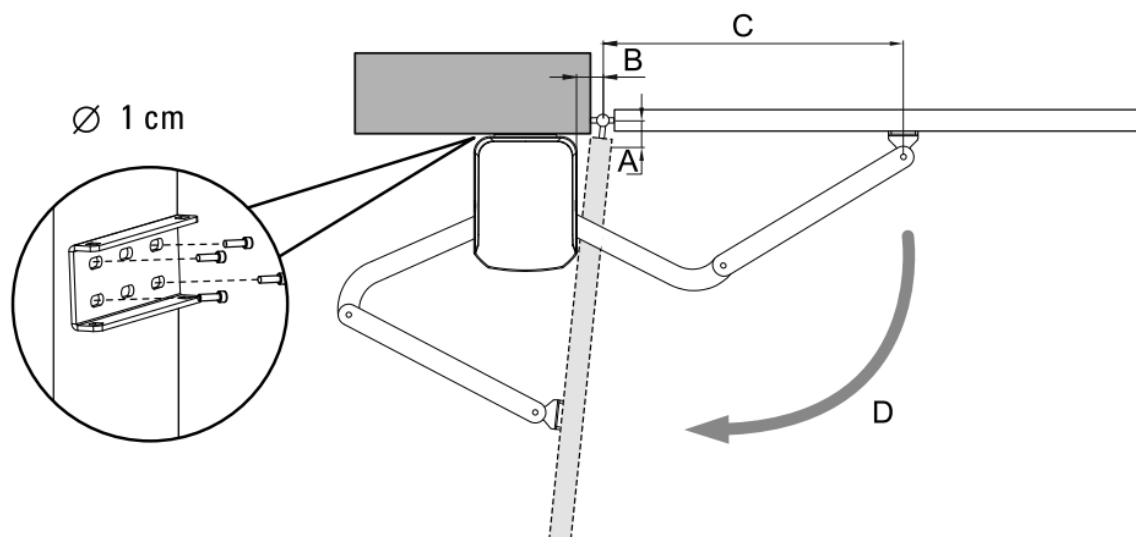
Remove the upper cover and mechanical stoppers on the bottom of motor.



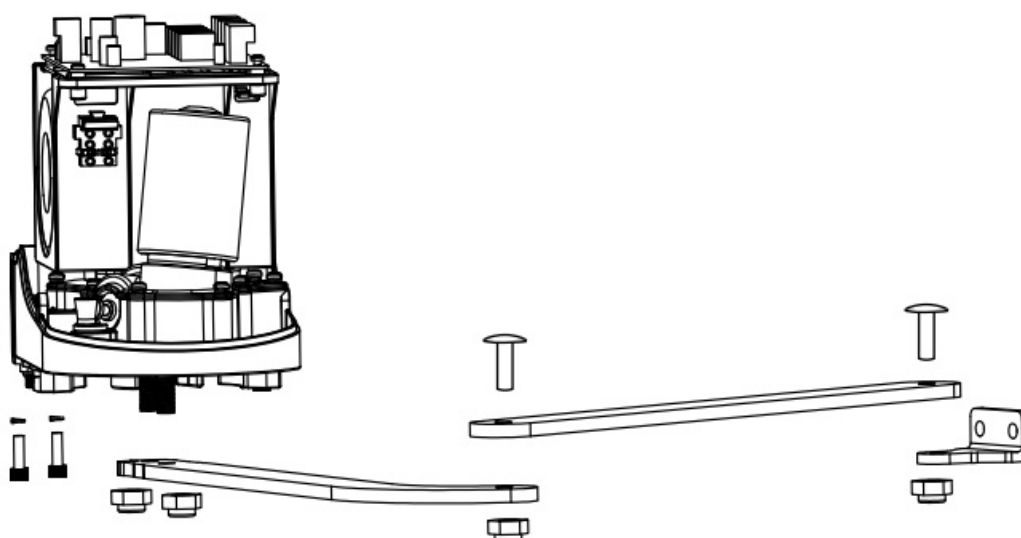
Install the motor on the U-shape with screws (n°8) and corresponding nuts.



Place the gate in the full closed position and fix the U-shaped fixing plate on the wall

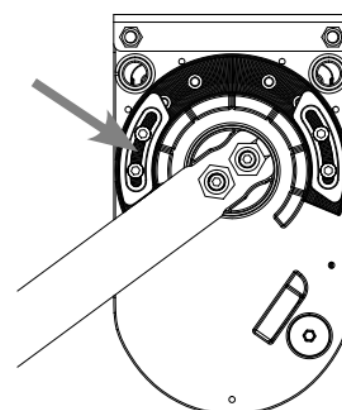
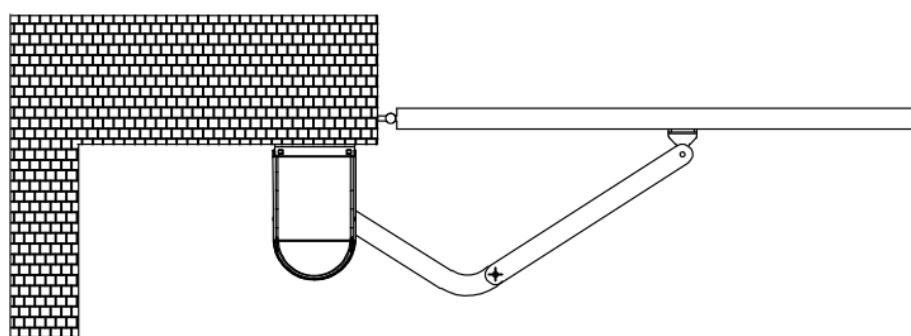


After positioning the front of curved arm on the bottom of motor, position the minor arm on the end of curved arm and mounting bracket with corresponding screws and nuts.

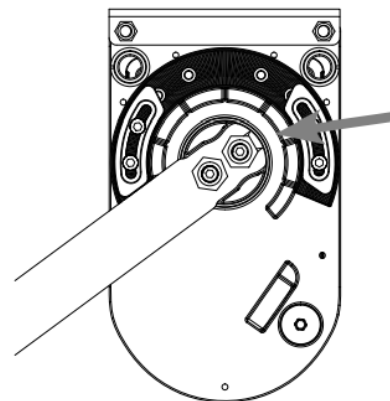
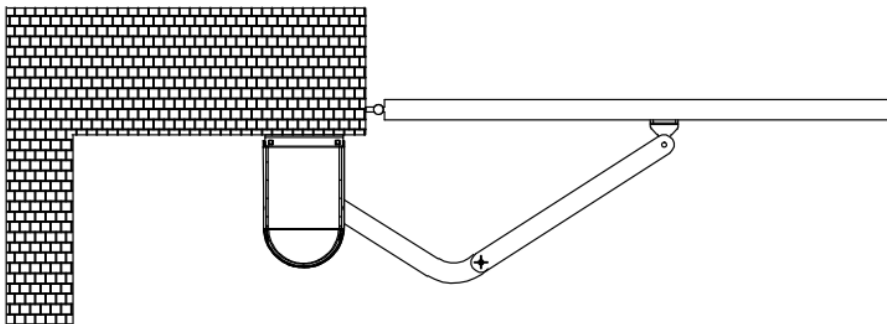


To unlock the arms refer to paragraph C4

Closed position adjustment : Once the full closed position is decided, fix the corresponding mechanical stopper in this position.



Opened position adjustment : Adjust the gate to full opened position and once the position is decided, fix with corresponding mechanical stopper.

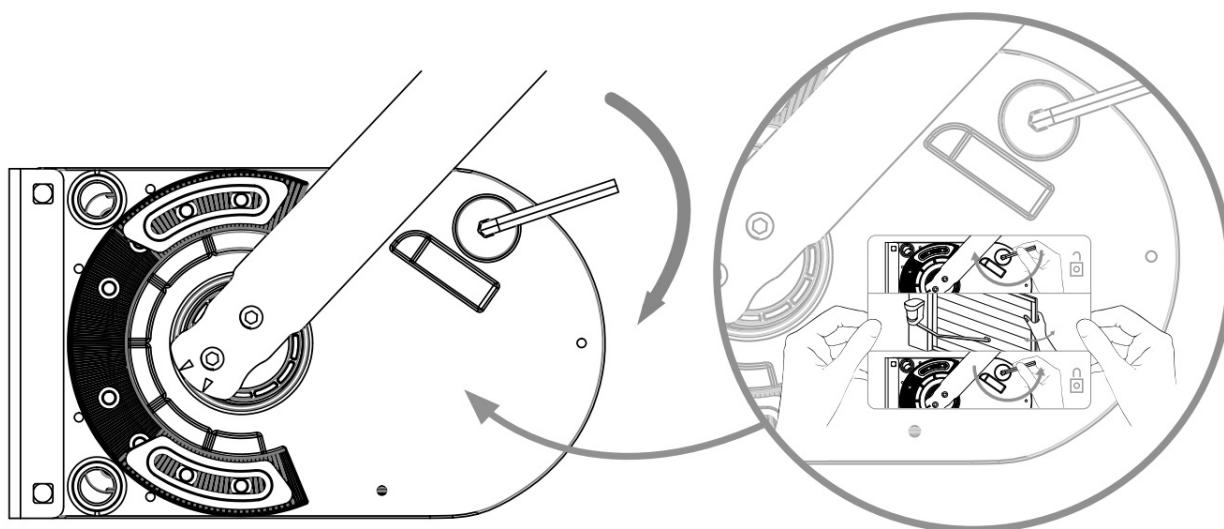


This operation must be carried out a second time to install the second arm

C4- Emergency release

1. Insert the release key to the release slot
2. Turn the release key clockwise
3. Release and move the gate

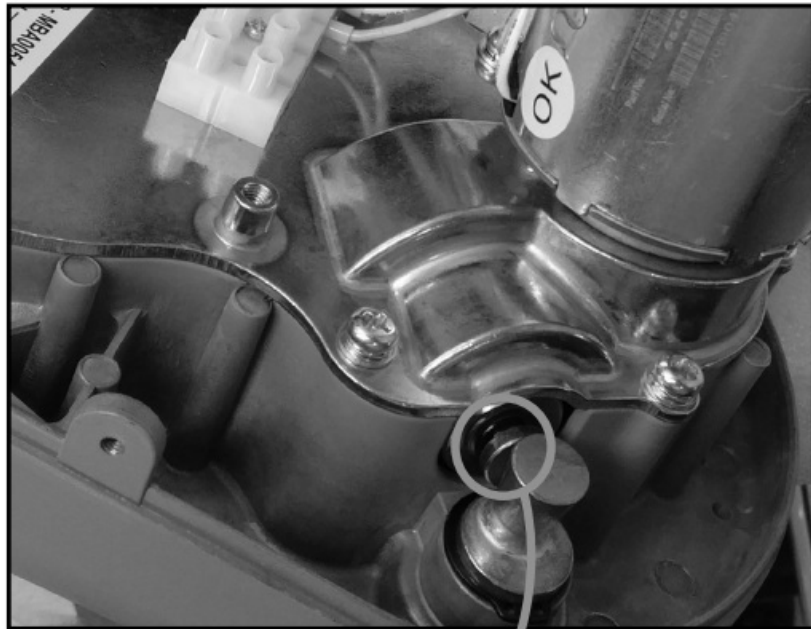
⚠ At the beginning you may notice that the motors are difficult to release.
Do not worry, it will disappear with time.



Permanently attach the label for the manual disconnection device to the operating element of this device.



Position of locked motor : the pintle should be exited

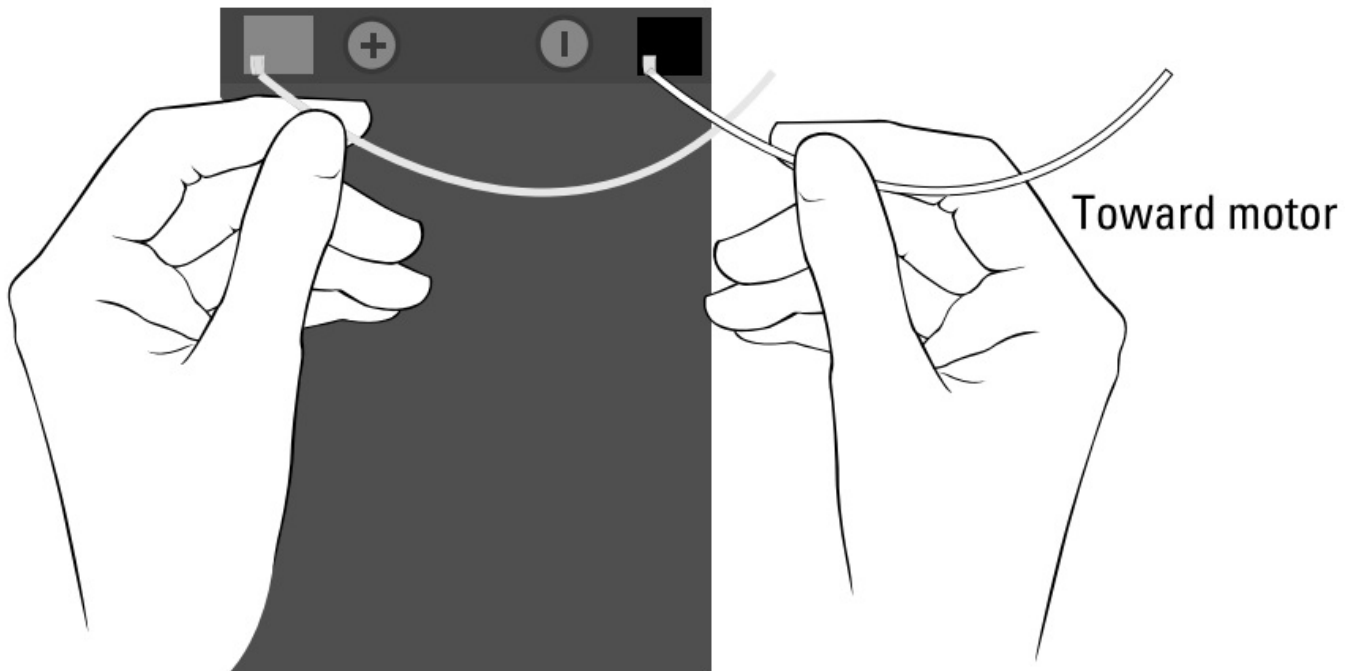


Position of unlocked motor : the pintle should be pressed



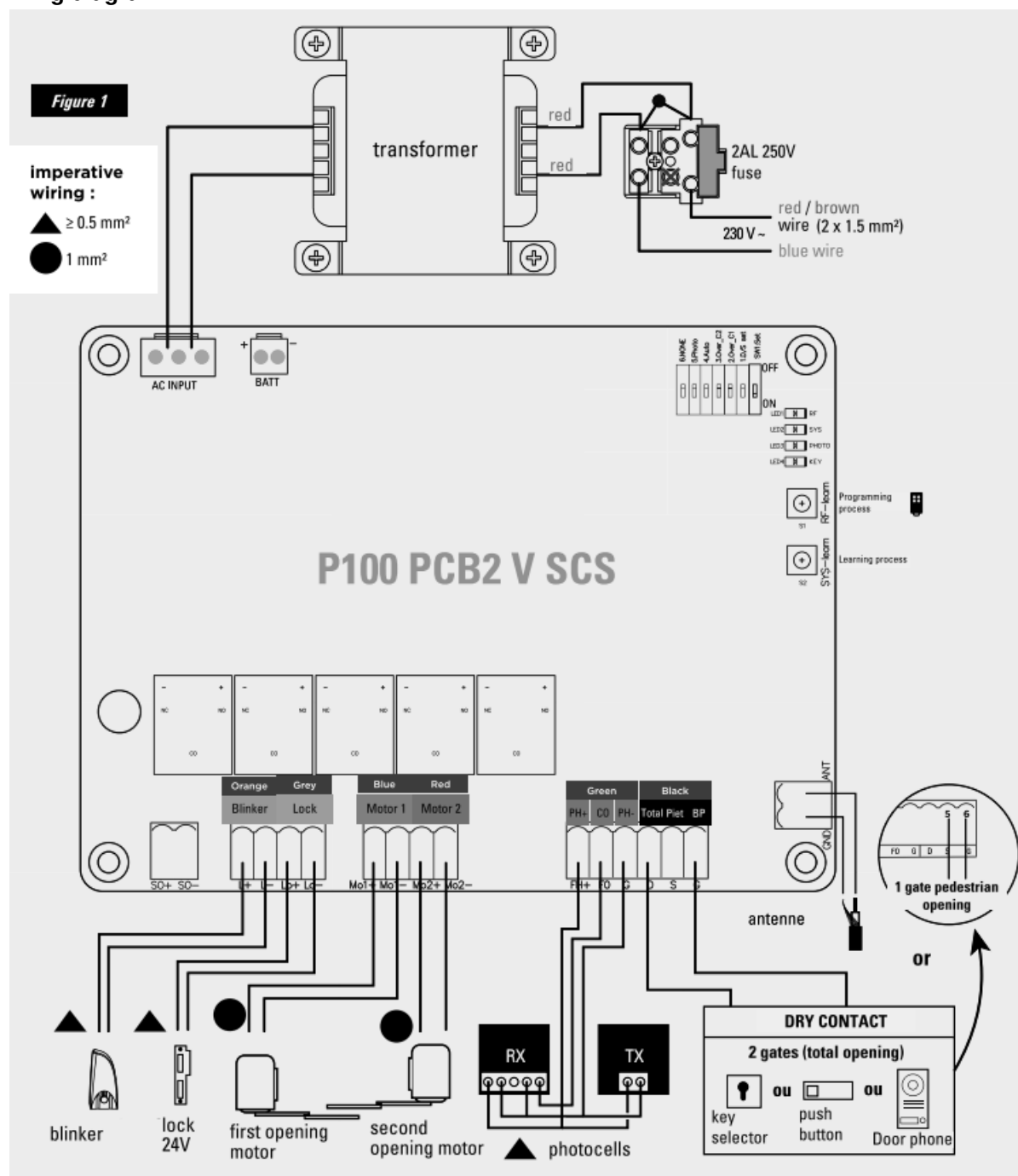
TiP

Instead of unlocking a motor with arms strength, you can use a battery connecting the white and yellow motor cables one way or the other following the polarity to operate the motors.



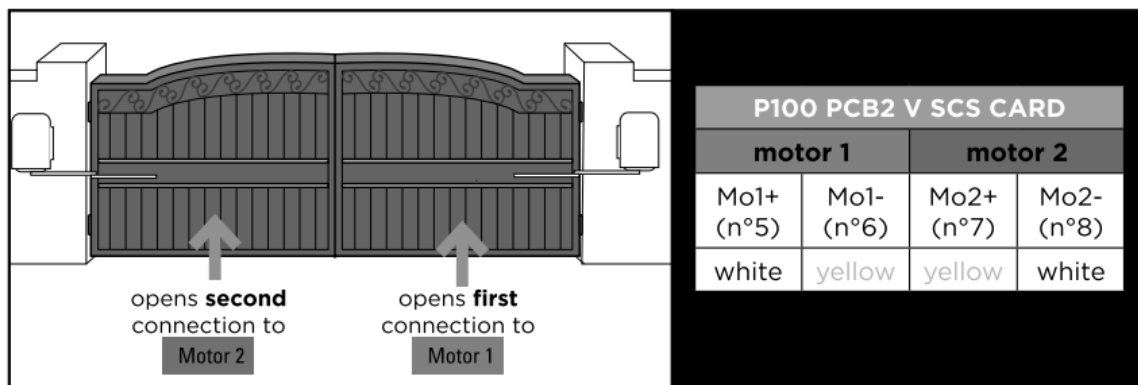
⚠ The white and yellow cables must be disconnected from the electronic card.

C5 – Wiring diagram

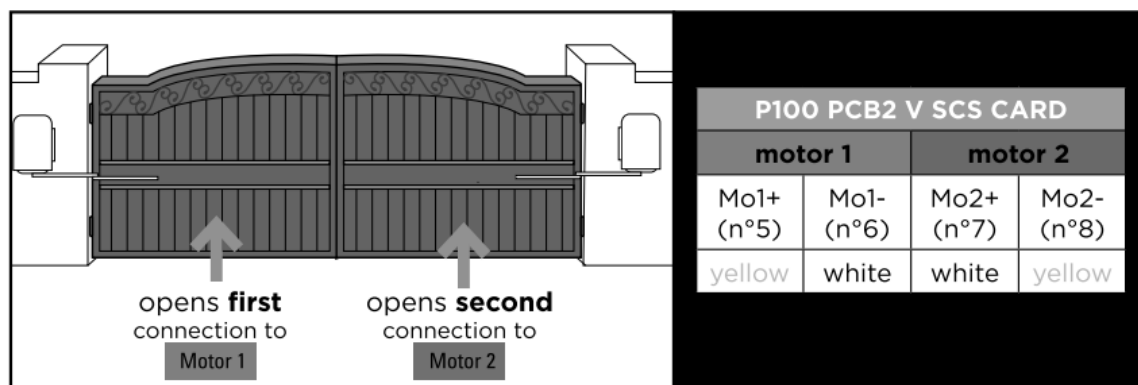


Inside opening

Cas n°1



Cas n°2



The main and secondary motors can be installed on the right or on the left pillar.

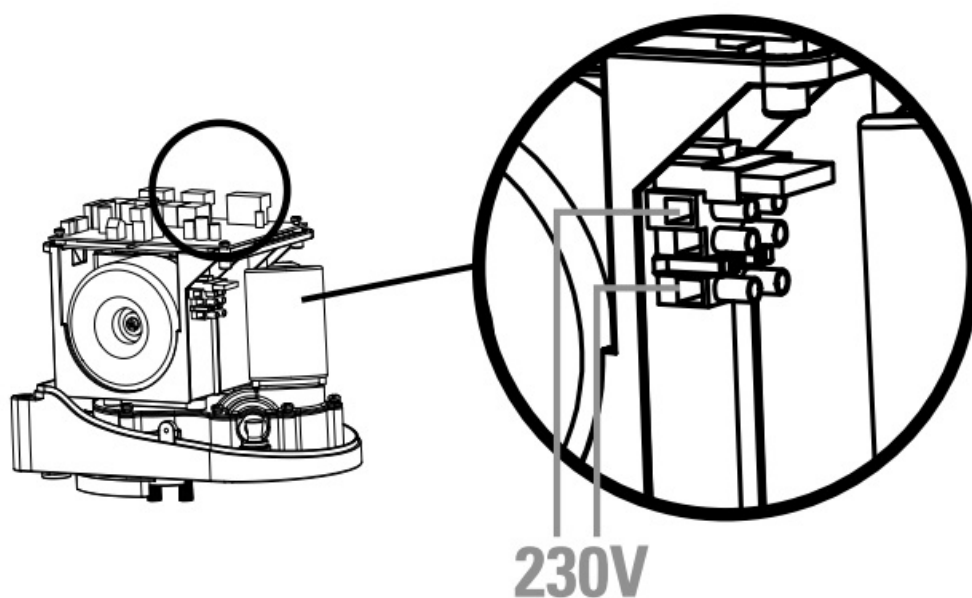
C6- Installing

Power supply connections

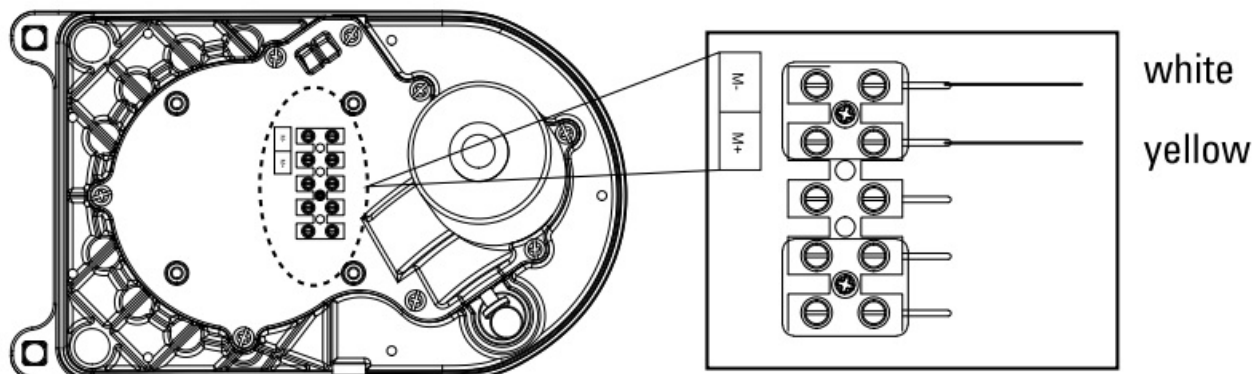
Please kindly notice that the operation of power connection should be carried out by a qualified electrician with following steps.

Make sure that all your connections (motors, blinker, antenna, photocells, lock, etc.) are perfectly made before connecting the 230V power supply to the grey domino.

See diagram (Figure 1- page 24)

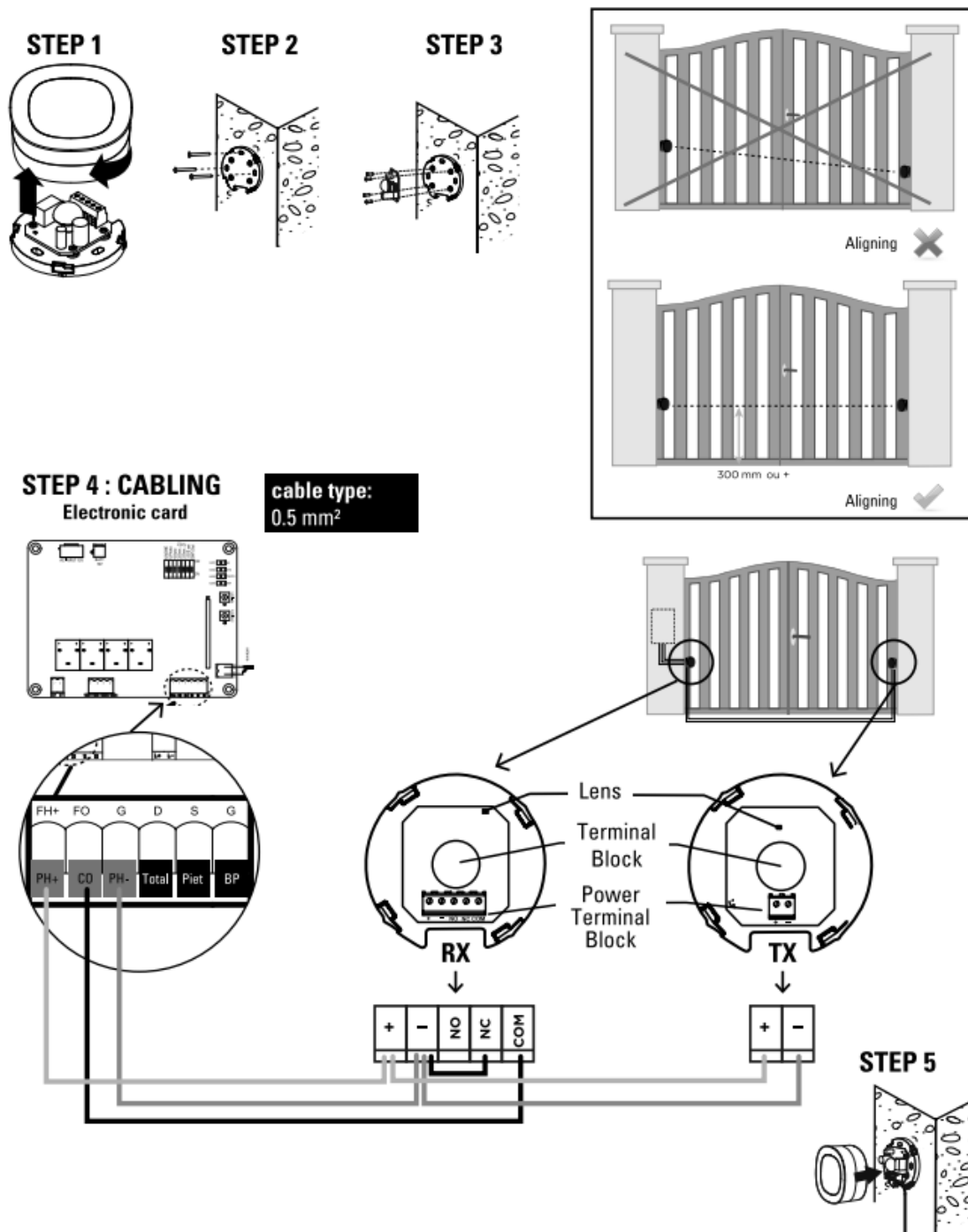


Wire connection secondary motor



Photocells

The photocells are safety devices for control automatic gates. Consist of one transmitter and one receiver based in waterproof covers; it is triggered while breaking the path of the beams. If an obstacle is detected, the gate stops and opens again slightly allowing the obstacle to be released safely.

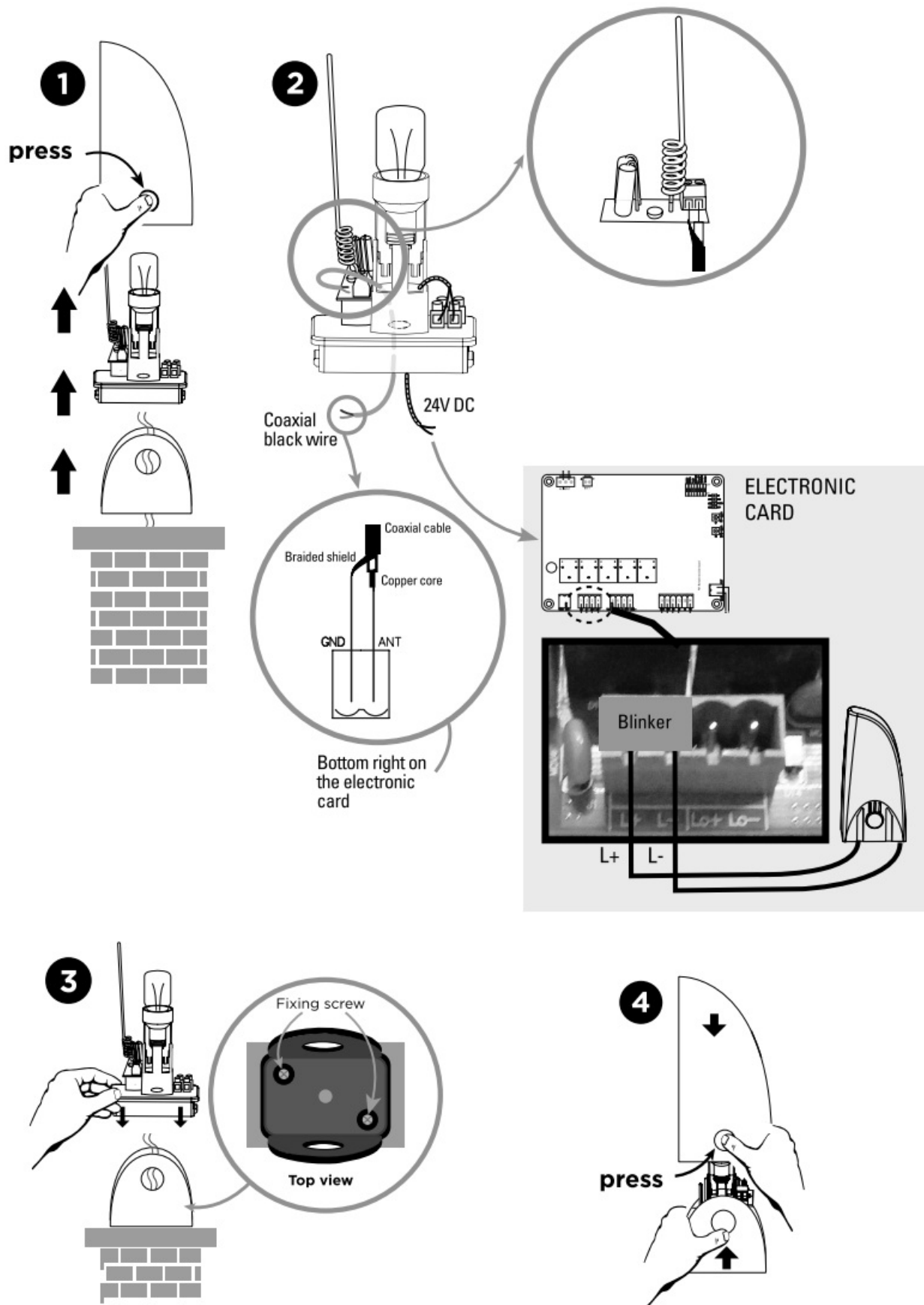


Blinker

Remove any packaging before connecting.

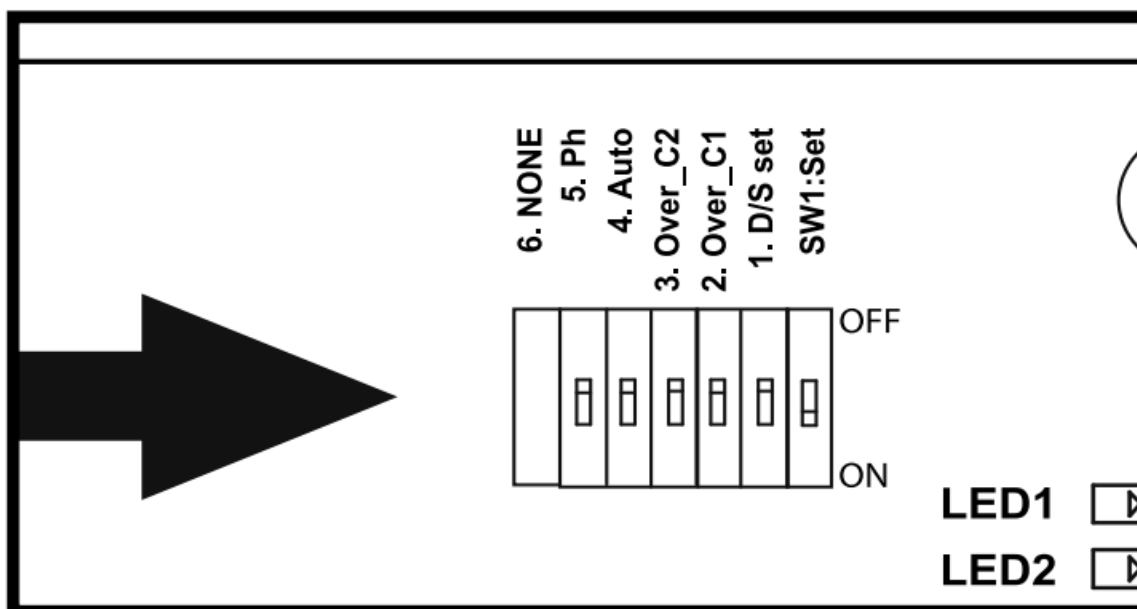
If you want to improve the operating range of your remote, you can connect the blinker antenna with a RG58

coaxial cable (not supplied). In this case you must disconnect the original antenna and then connect the coaxial copper core to the terminal ANT and the coaxial braided shield to the terminal GND on both antenna and electronic card.



SETTING / USING

D1- Switch settings (dip switch 1)



Switch settings: «on» down position, «off» up position.

DIP SWITCH1:

ON = double gate operation

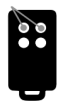
OFF = single gate operation (connection on and 6)

D2- Power setting (dip switch 2 et 3)

DIP SWITCH (OVER C1)	DIP SWITCH (OVER C2)	CURRENT (AMP)
DIP switch 2 OFF	Dip switch 3 OFF	5A
DIP switch 2 OFF	Dip switch 3 ON	4A
DIP switch 2 ON	Dip switch 3 OFF	3A
DIP switch 2 ON	Dip switch 3 ON	2A

D3- Gate auto-close adjustment (dip switch 4)

DIP SWITCH 4

«ON »: Active automatic closing in 30 seconds. Simultaneously pressing the two remotes top keys'  (opened or closed gate) will turn OFF the automatic mode (the blinker will flash 3 times as confirmation). Repeat the operation to turn ON the automatic mode (the blinker will flash 3 times as confirmation).

Note :in case of automatic closing, photocells are required

«OFF » : Automatic closing OFF (caution it will still be possible to turn ON with the remote)

D4- Photocell adjustment (dip switch 5)

DIP SWITCH5:

ON : Photocells ON. When the photocells detect an obstacle while the gate is closing, the gate stops and opens during 2 seconds.

If the gate auto-close is adjusted, and the photocells detect an obstacle when the gate is totally opened, then the closing time will be reseted.

OFF : No detection by the photocells, the photocells will not control the opening of the gate.

D5- Dephasing of the leaves (dip switch 6)

DIP SWITCHG6 :

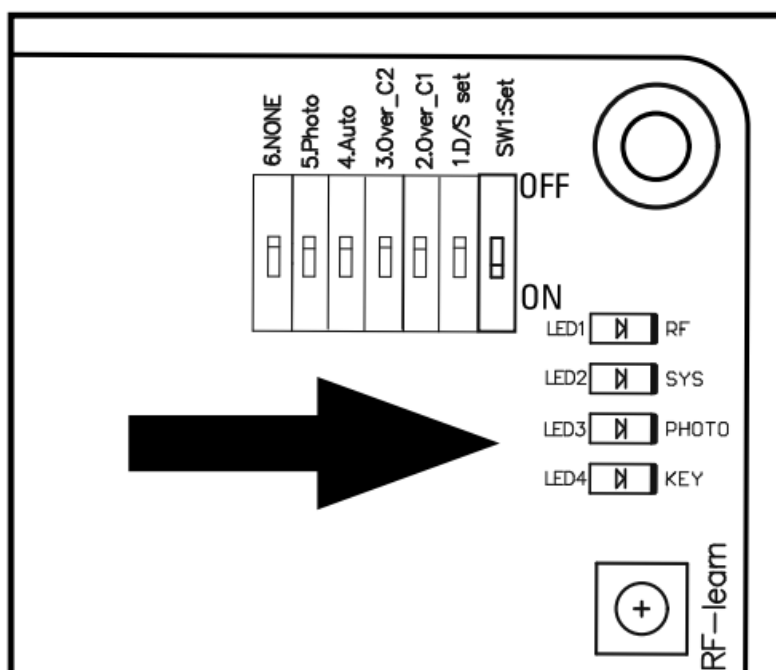
ON : Dephasing in closing / opening of 8 seconds.

OFF : Dephasing in closing / opening of 3 seconds.

D6- Deceleration speed

The speed is 70% output of the full speed (no adjustment possible).

D7- LED indication



LED 1 RF indicator : radio frequency:

LED1 blinks when remote controls are activated.

LED 2 System learning:

LED 2 blinks twice per seconde during normal operation and once per seconde during learning. Static LED2 means incorrect programming.

LED 3 Photocells:

LED 3 will be on when photocells are not aligned or when an obstacle is between the photocells.


LED 4 Start:

LED 4 will be on if the switch of the transmitter, key selector, or the push button s activated.

D8- Remote controls learning process

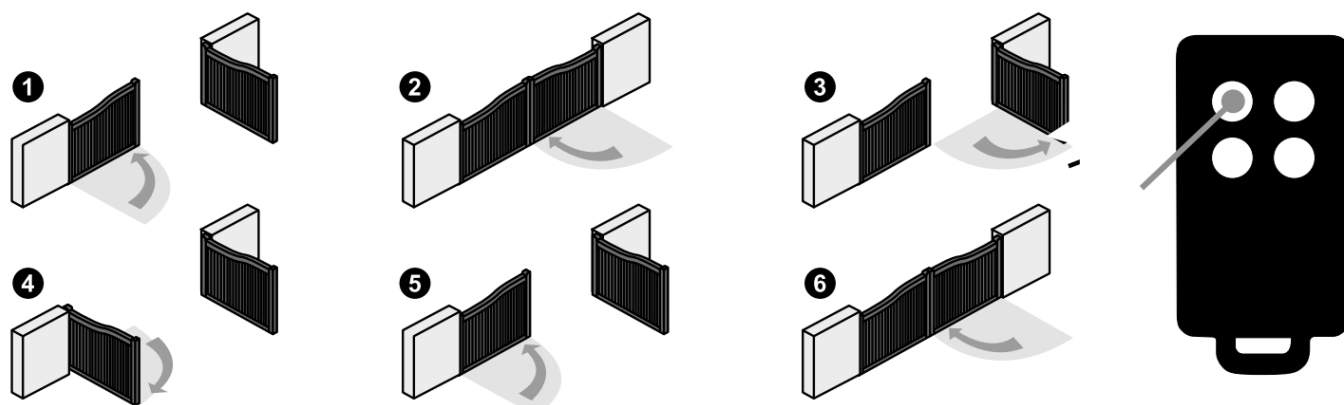
Press “RF-learn” button for 2 seconds, and the LED1 will be on; then press the transmitter top left button. The LED1 will blink twice and stay on for 10 seconds then be off. And the remote memorize has completed.

D9- System learning process double gate

 The remote control memory storing operation must be over before starting the final system learning process. Let your gate totally opened then lock them (part C4)

Press «SYS-learn» (until the LED2 light begins to flash once every second, instead of twice every second as it normally would), then press the upper-left key for a double gate.

The system learning process will be as follows, step by step:



After step 6, the system learning process is complete. You can use it with the remote control:



double gate full opening



pedestrian opening (single gate)

The LED2 light will remain ON until the system learning process is not over. Check the wiring connection and repeat the step

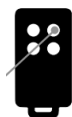
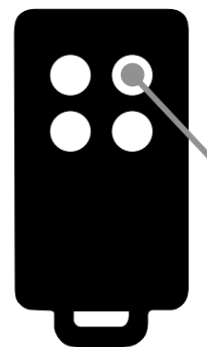
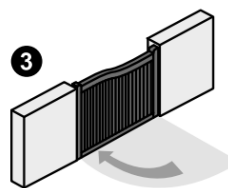
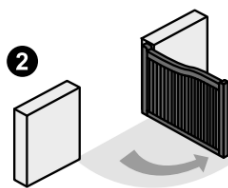
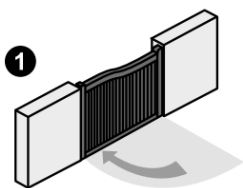
D10- System learning process simple gate

Switch 1 OFF.

Totally open the leaf gate.

Press «SYS-learn» (until the LED2 light begins to flash once every second, instead of twice every second as it normally would), then press the upper-right key for a single gate.

The system learning process will be as follows, step by step:



single gate opening

TECHNICAL FEATURES

Motor

Motor	24V DC motor with manual unlocking
Gear type	electromechanical articulated arm
Supply voltage	24VDC
Maximum Gate Weight / Maximum Gate Length	250 kg /2.5 m per leaf
Operating Temperature	-20°C~+50°C
Dimensions	285 mm x 160 mm x 298 mm

The A-weighted emitted sound pressure level of the motor is equal or less than 70 dB (A).

Blinker

Antenna included	YES (coaxial cable not supplied)
Bulb	LED E14 24V 1W (included)
Power cable	2x 1 mm ² (not included)
Bulb connection	unpolarized at the electronic card connection.
Screws	included
Do not supply 230V	
Operating temperature	-20°C~+50°C
Dimensions	74 x 167 x 59 mm

Photocells

Detection Method	infrared Beam
Sensing Range	MAX~10 m
Input Voltage	12~24V AC/DC
Response Time	< 100ms
Operation Indicator	RX: Red LED On (beam broken) / Off (beam aligned) TX : Red LED On
Dimensions	63 x 63 x 30 mm
Output Method	relay Output

Remote controls

Channels	4
Frequency – Maximum transmitted power	433.92 MHz – power < 10 mW
Power supply	1 battery lithium CR2032 included
Security	rolling code technology

MAINTENANCE

F1- Motor

Conduct the following operations at least every 6 months. If in high intensity of use, shorten the period in between.

Disconnect the power supply:

1. Clean and lubricate the screws, the pins, and the hinge with grease.
2. Check the fastening points are properly tightened.
3. Make the wire connection are in good condition.

Connect the power supply:

1. Check the power adjustments.
2. Check the function of the manual release.
3. Check the function of photocells or other safety device.

F2- Remote control



F3- Maintenance advice

Ensure the correct operation of safety devices (photocells, flashing light, etc.)	1x per season	Clean inside and out with a microfiber
Ensure that the manual clutch works properly		Perform a disengagement, open and close your gate completely manually (during the disengagement a hard point can come before manoeuvring manually it remains a normal phenomenon)
Check the electronic safe for oxidation, insects or other damage	1x per season	Clean inside and out with a microfiber
Sealing of the electronic box		Check silicone seals + gland
Check the gate	Txyear	lubrication of hinges

TECHNICAL ASSISTANCE

G1- Troubleshooting

Problem	Solutions
Overheated back-up batteries	Check the wiring connection of the batteries.
The gate doesn't move when pressing the button of the transmitter	<ol style="list-style-type: none"> 1. Check if LED1 is "ON" once pressing the transmitter. 2. Check if the voltage of the batteries is above 25V. 3. Check if LED2 is "ON" and blinks accordingly. 4. Make sure all the wiring connections are firmly connected to the terminals on the PCB. 5. Make sure the fuse is workable. on the panel and power socket.
The transmitting distance is too short	<p>Make sure the connecting terminals of the antenna is firm.</p> <p>Check the battery on the transmitter.</p>
The Flashing light does not work	<p>Unscrew and screw in the bulb</p> <p>Check if the wiring connection of the flashing light is correct.</p>
<p>The leaves suddenly stop during moving</p> <p>The leaves does not move or only move toward one direction</p>	<ol style="list-style-type: none"> 1. Check if the gate can be moved freely and no obstacle is between. 2. Make sure the wiring connection of the gear motors is firm. 3. Make sure the safety beam are operating properly if installed. 4. Cut off the power of the engine. Release the motor and make sure the gate can move freely.
The master gate closes to the end first and the slave gate stops, which the opening or closing sequence is not being operated properly	<ol style="list-style-type: none"> 1. Check if the gate can be moved freely and no obstacle is between. 2. Make sure the wiring connection of the gear motors is firm. 3. Make sure the fuse is workable. 4. Make sure the safety beam are operating properly if installed. 5. Cut off the power of the engine. Release the motor and make sure the gate can move freely.
The gear motors does not run and the relay is noisy when operating the gate opening and closing	Check the condition fuse.
No remote control connection	<ol style="list-style-type: none"> 1. Check LED1 is blinking when pressing the remote control key. 2. Check RF1 receiver is ok. 3. To check that the remote control is associated when the remote control is pressed, LED 1 and LED 4 must light up. 4. If the LED flashes for 1 second when the remote control is pressed, the battery must be changed. 5. Remove and replace the plug-in receiver
4 steps instead of 6 when learning process	Reverse polarity on all motors

G2- Tutos



G3- Free online



Any question?

For an individual answer, use our online chat on our website www.scs-sentinel.com

WARRANTY

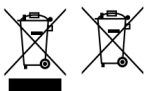


SCS Sentinel grants to this product a longer warranty period, beyond the legal one, as a sign of quality and reliability. The invoice will be required as proof of purchase date. Please keep it during the warranty period. Carefully keep the barcode and the proof of purchase, that will be necessary to claim warranty.

Are never covered by our warranty:

- Damage resulting from the consequences of a bad installation (bad wiring, reverse polarity ...)
- Damage resulting from improper use of the device (use in contradiction with the manual) or its modification.
- Damage resulting from the consequences of the use of components not from SCS SENTINEL.
- Damage due to lack of maintenance, physical shock.
- Damage due to weather: hail, lightning, strong wind etc..
- Returns made without a copy of the invoice or receipt.

WARNINGS



Don't throw batteries or out of order products with the household waste (garbage). The dangerous substances that they are likely to include may harm health or the environment. Make your retailer take — back these products or use the selective collection of garbage proposed by your city.



Do not ingest battery, Chemical Burn Hazard. This product contains a button cell battery. If the button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death. Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention. Do not clean the remote control with abrasive or corrosive substances. Use a simple cloth. Do not allow children to play with the product or packaging.

When replacing the battery, use a battery with the same characteristics as the one supplied with the product. Remove the batteries from the equipment if it is not to be used for a prolonged period, except in emergency situations.

Batteries must not be exposed to excessive heat or thrown into a fire.



DECLARATION OF CONFORMITY

SCS Sentinel hereby declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU and Directive 2006/42/EC.

The Declaration of Conformity can be found at: www.scs-sentinel.com/downloads

Toutes les infos sur : www.scs-sentinel.com



<https://www.youtube.com/c/Scs-laboutique>



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Documents / Resources



[sentinel MBA0103 Articulated Arms Automation Kit For Swing Gate](#) [pdf] Instruction Manua

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ation Kit For Swing Gate, Arms Automation Kit For Swing Gate, Automation Kit For Swing Gate,
Kit For Swing Gate, Swing Gate

References

- [User Manual](#)

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