

scs sentinel

**MBA0103
Articulated
Arms
Automation
Kit For
Swing
Gate**



scs sentinel MBA0103 Articulated Arms Automation Kit For Swing Gate Installation Guide

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scs sentinel MBA0103 Articulated Arms Automation Kit For Swing Gate



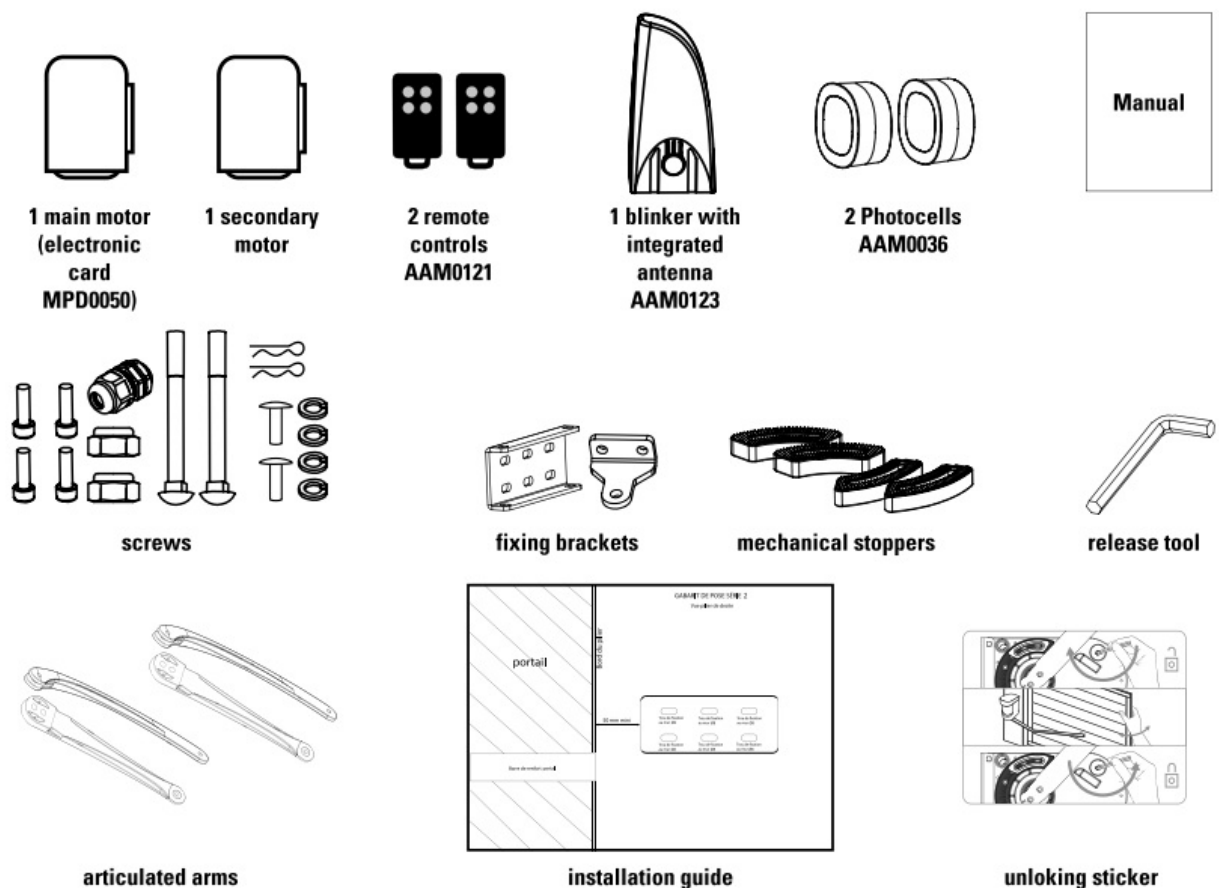
SAFETY INSTRUCTIONS

-  **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 sliding 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
- The main supply must be protected against overload by a suitable trip switch and an earth leakage circuit breaker.
-  **CAUTION:** The motorized system must be disconnected from its power source during cleaning, maintenance, and parts replacement.
- Installation requires qualified staff with mechanical and electrical skills.
- Make sure that the temperature range indicated on the motorized device is suitable for the installation's location.
- Only original parts should be used to replace or repair the motorized system.
- 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.

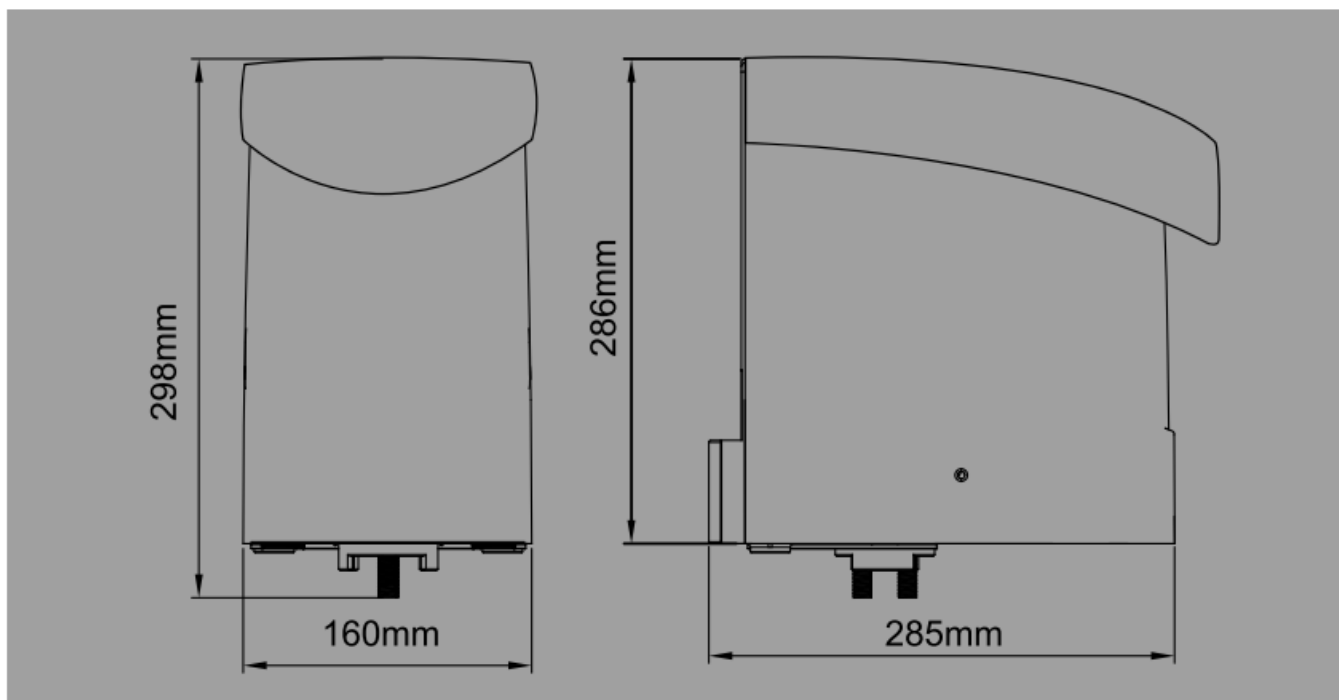
- Do not allow children to play with the unit or its controls, including remote controls.
- Activation of the manual disconnection device may cause uncontrolled movement of the driven part due to mechanical failure or loss of balance. Before installing the motorized device, check that the driven part is in good mechanical condition, properly balanced, and opens and closes correctly.
- The motorized 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.
- 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.

DESCRIPTION

Contents

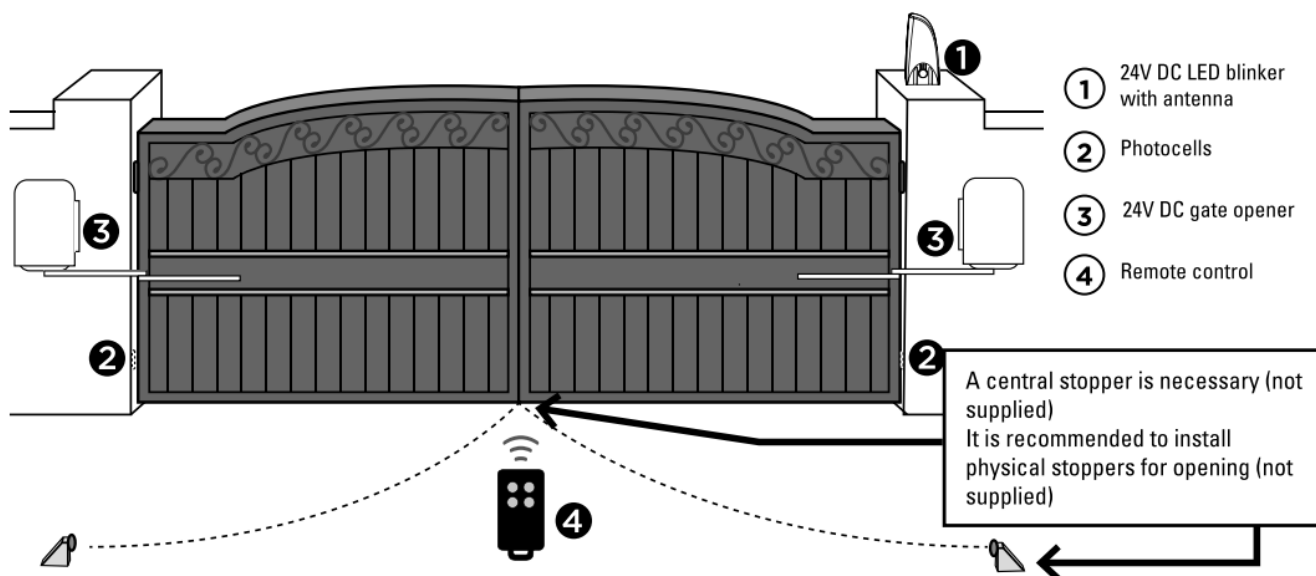


Dimensions



WIRING INSTALLING

Standard installation



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.

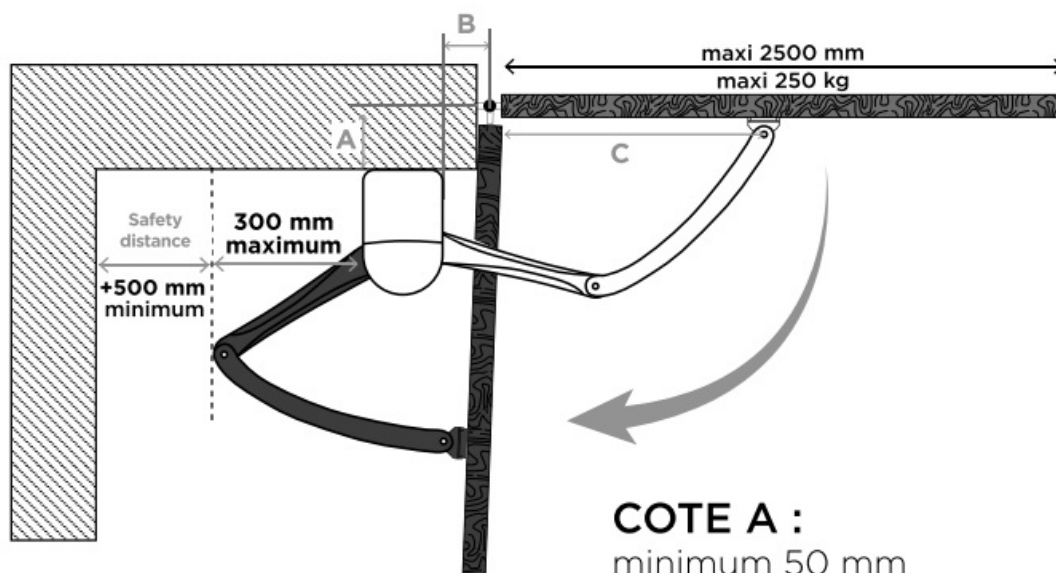
Before starting the installation, please make sure that the gate moves freely and that:

1. Hinges are properly positioned and greased.
2. No obstacles in the moving area.
3. No friction between two gate leaves or on the ground while moving.
4. Enough space is left when the gate is opening.

- **a.** Distance perpendicularly from the gate bolt to the front of the fixing bracket.
- **b.** Distance from the bolt perpendicular to the surface of the 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	90°-95°
200	100	550	90°-100°
200	150	500	95°-105°



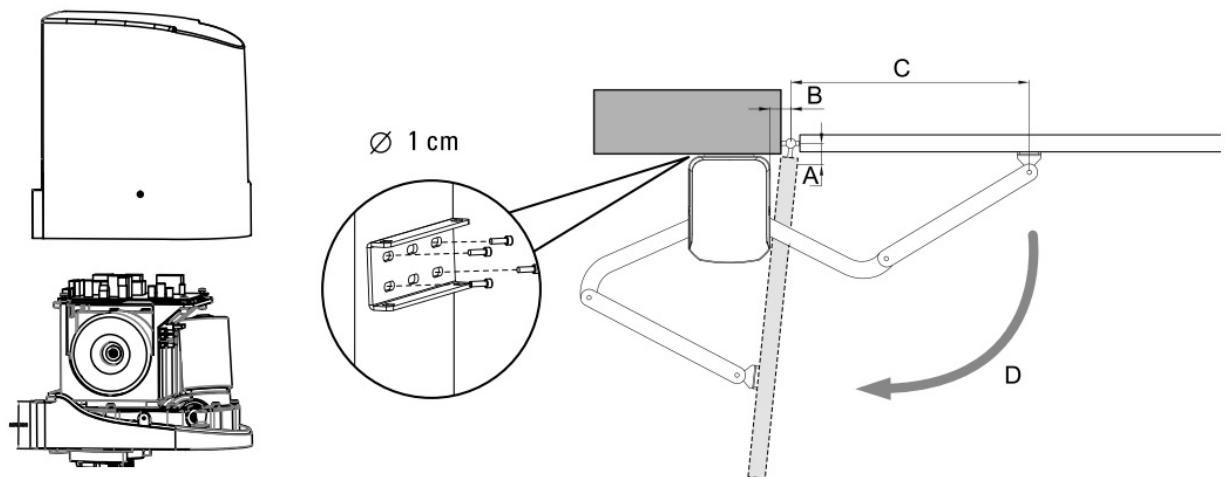
COTE A :
minimum 50 mm
maximum 200 mm

COTE B :
minimum 50 mm
maximum 150 mm

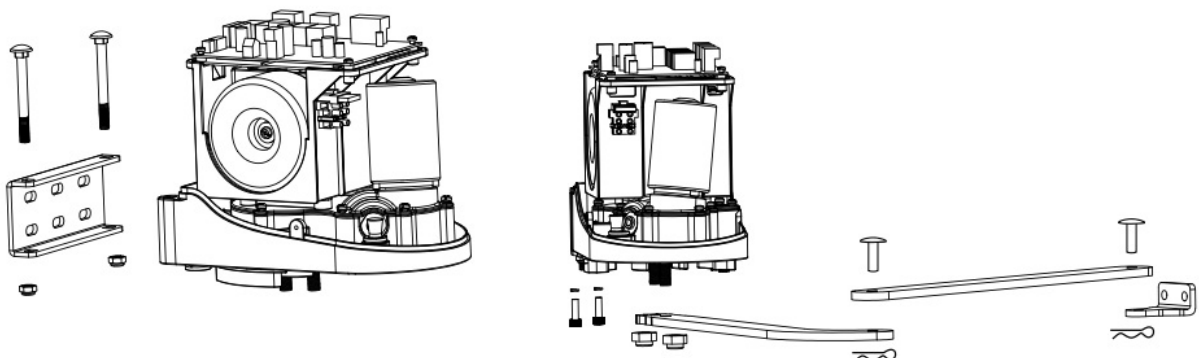
Motor fixing

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 a mechanical stopper in opened and closed position.
 - Remove the upper cover and mechanical stoppers on the bottom of the motor.
 - Place the gate in the fully closed position and fix the U-shaped fixing plate on the wall.

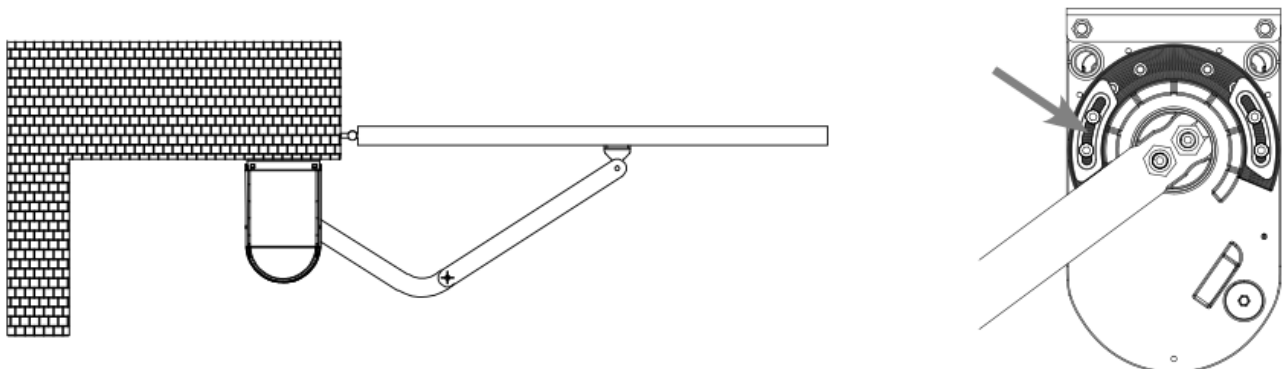


- Install the motor on the U-shape with screws (n°8) and corresponding nuts.
- After positioning the front of the curved arm on the bottom of the motor, position the minor arm on the end of the curved arm and mounting bracket with corresponding screws and nuts.

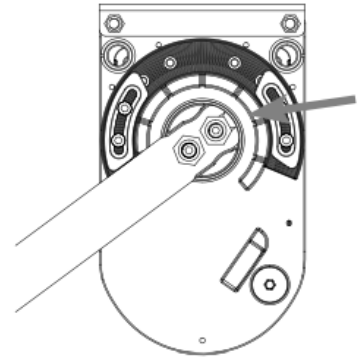
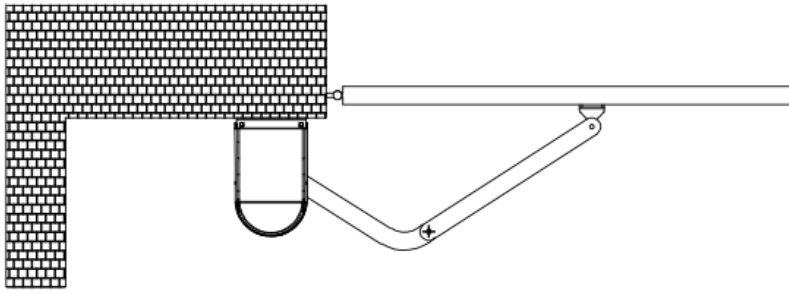


To unlock the arms refer to paragraph C4

- **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 a fully opened position and once the position is decided, fix it with the corresponding mechanical stopper.

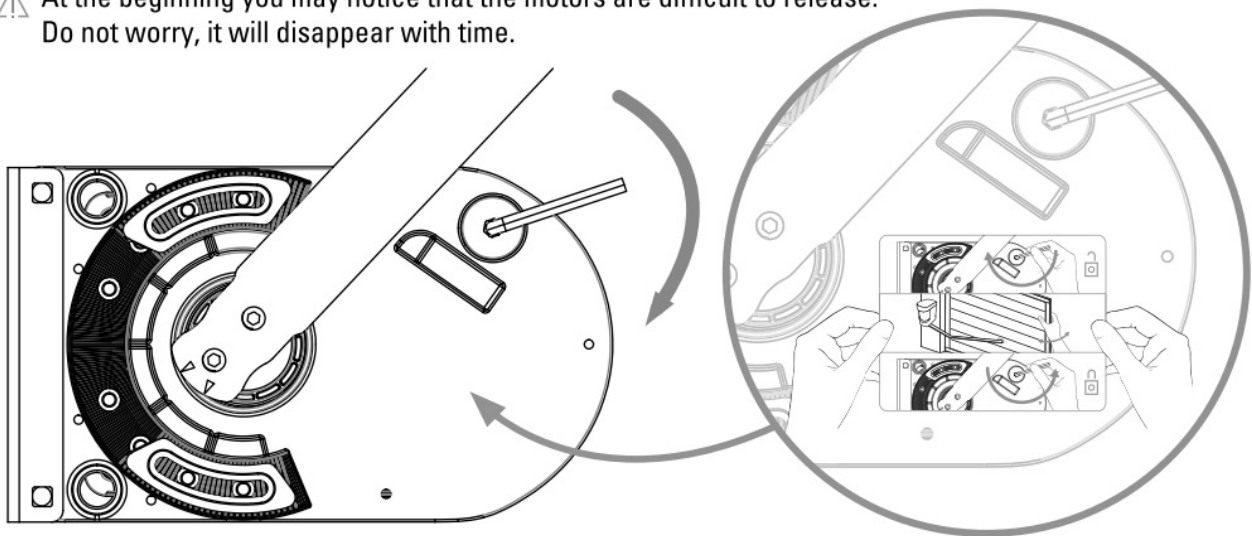


- This operation must be carried out a second time to install the second arm

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.

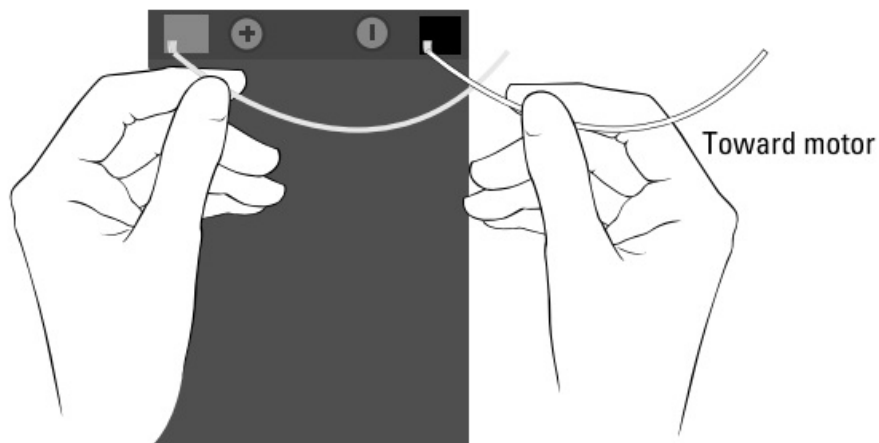


Position of locked motor :
the pintle should be exited

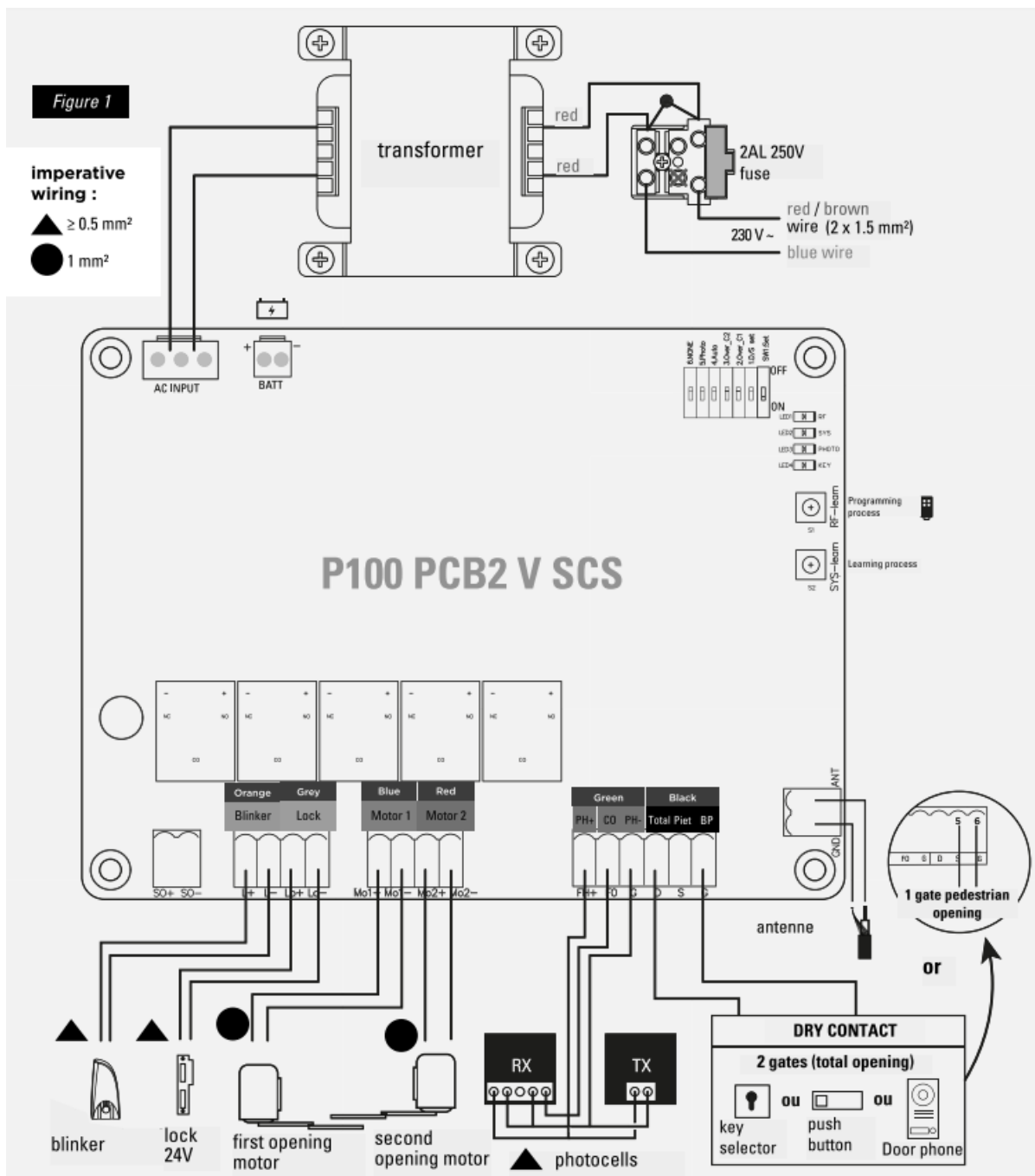


Position of unlocked motor :
the pintle should be pressed

- **TIP** Instead of unlocking a motor with arm 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.

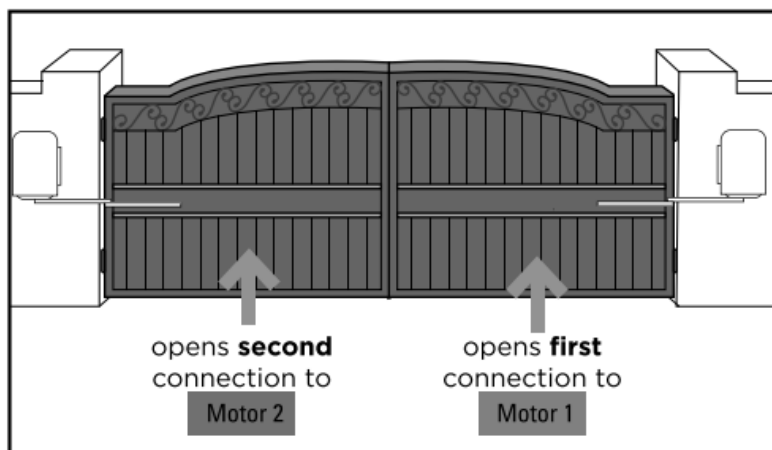


Wiring diagram



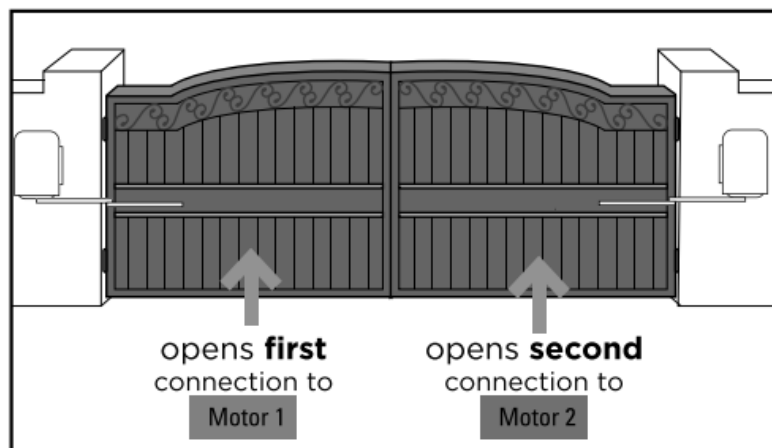
Inside opening

Cas n°1



P100 PCB2 V SCS CARD			
motor 1		motor 2	
Mo1+ (n°5)	Mo1- (n°6)	Mo2+ (n°7)	Mo2- (n°8)
white	yellow	yellow	white

Cas n°2

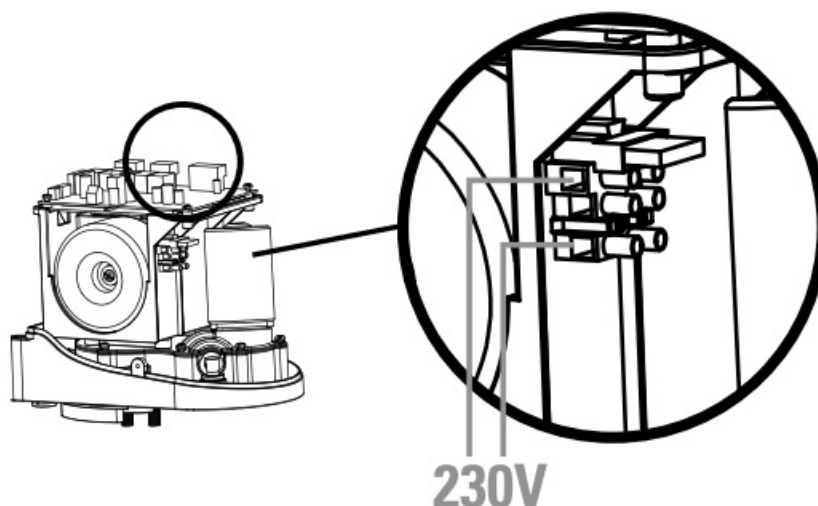


P100 PCB2 V SCS CARD			
motor 1		motor 2	
Mo1+ (n°5)	Mo1- (n°6)	Mo2+ (n°7)	Mo2- (n°8)
yellow	white	white	yellow

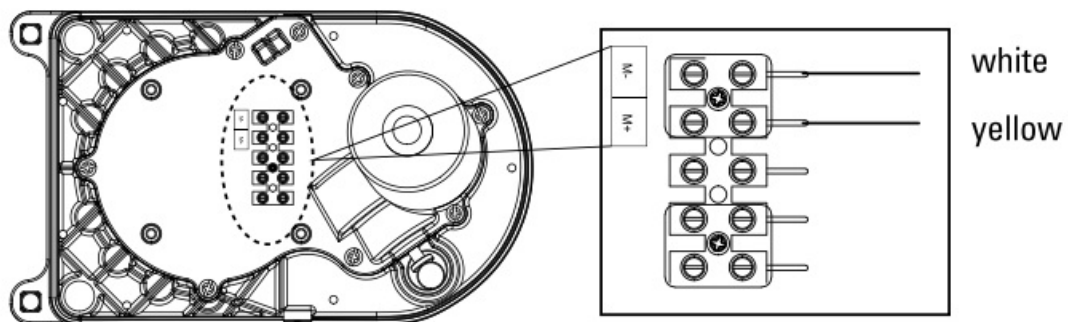
The main and secondary motors can be installed on the right or on the left pillar.

Installing Power supply connections

- Please kindly note that the operation of the power connection should be carried out by a qualified electrician with the 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)



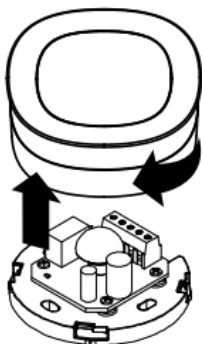
Wire connection secondary motor



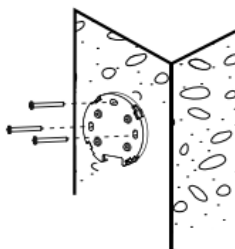
Photocells

The photocells are safety devices for controlling automatic gates. Consists of one transmitter and one receiver based on 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.

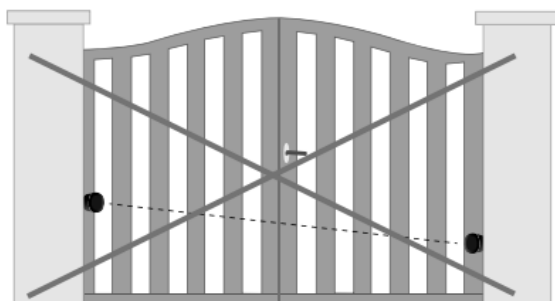
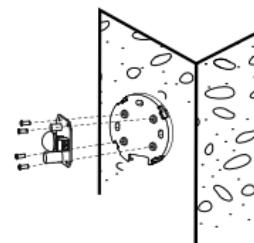
STEP 1



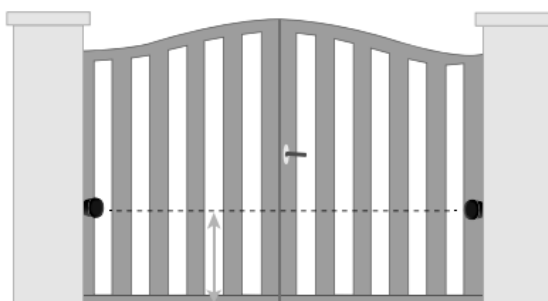
STEP 2



STEP 3



Aligning



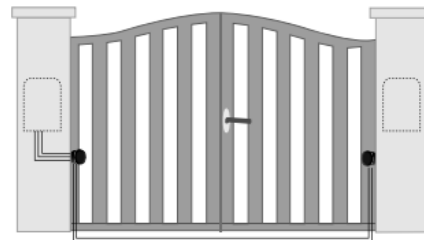
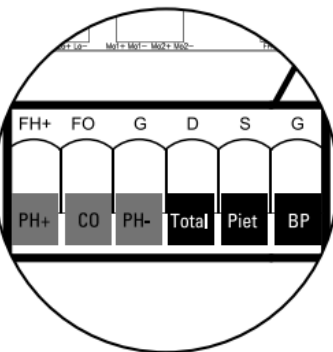
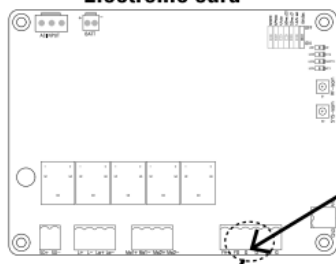
300 mm ou +

Aligning

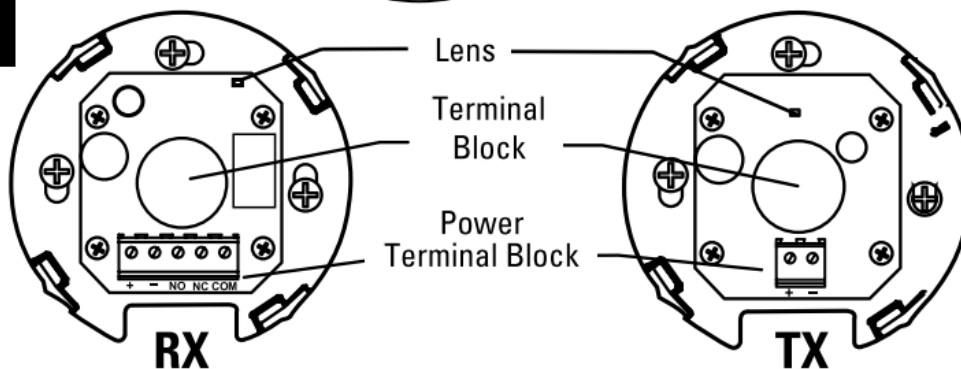


STEP 4 : CABLING

Electronic card

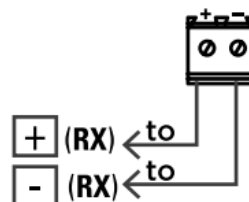
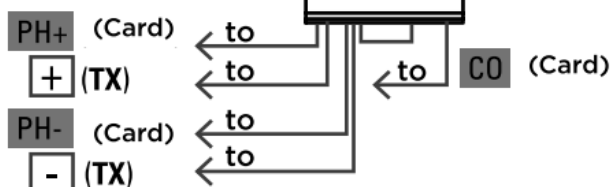


cable type:
0.5 mm²

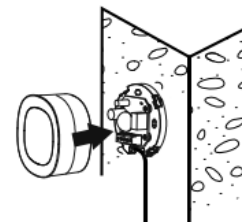


RX

TX

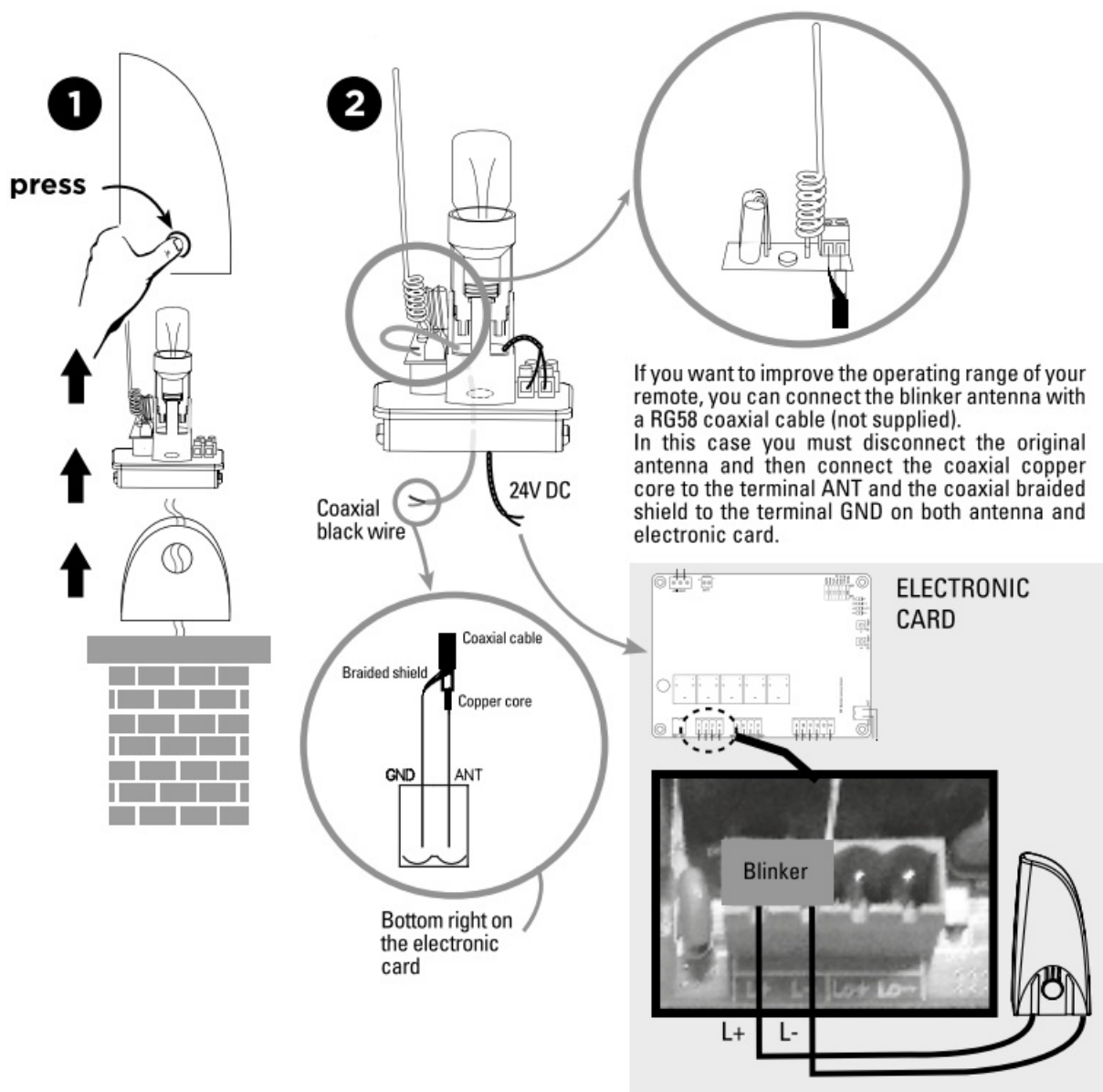


STEP 5



Blinker

Remove any packaging before connecting.



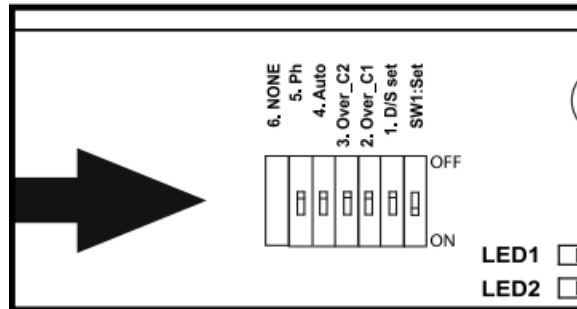
SETTING USING

Switch settings (dip switch 1)

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

• DIP SWITCH 1:

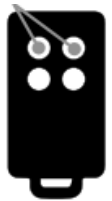
- **ON** = double gate operation
- **OFF** = single gate operation (connection on 5 and 6)



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

Gate auto-close adjustment (dip switch 4) DIP SWITCH 4



- « **ON** »: Active automatic closing in 30 seconds. Simultaneously pressing the two remotes' top keys (closed the 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)

Photocell adjustment (dip switch 5)

DIP SWITCH 5:

- **ON**: Photocells ON. When the photocells detect an obstacle while the gate is closing, the gate stops and opens for 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 reset.
- **OFF**: No detection by the photocells, the photocells will not control the opening of the gate.

Dephasing of the leaves (dip switch 6)

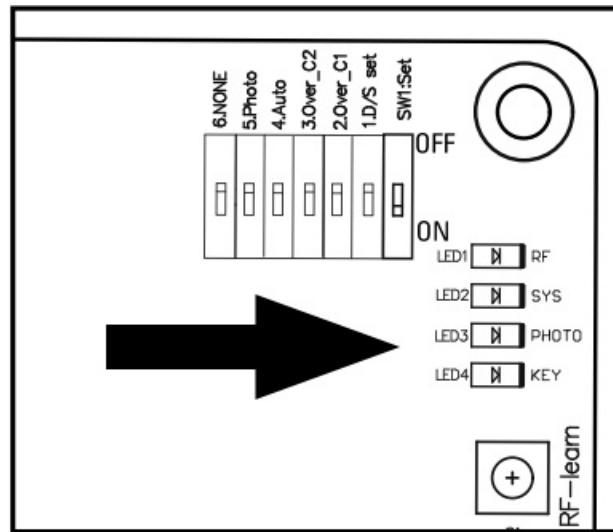
DIP SWITCH 6 :

- **ON**: Dephasing in closing/opening of 8 seconds.
- **OFF**: Dephasing in closing/opening of 3 seconds.

Declaration speed

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

LED indication



LED 1 RF indicator: radio frequency:

- LED1 blinks when remote controls are activated.

LED 2 System learning:

- LED 2 blinks twice per second during normal operation and once per second during learning. Static LED 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:

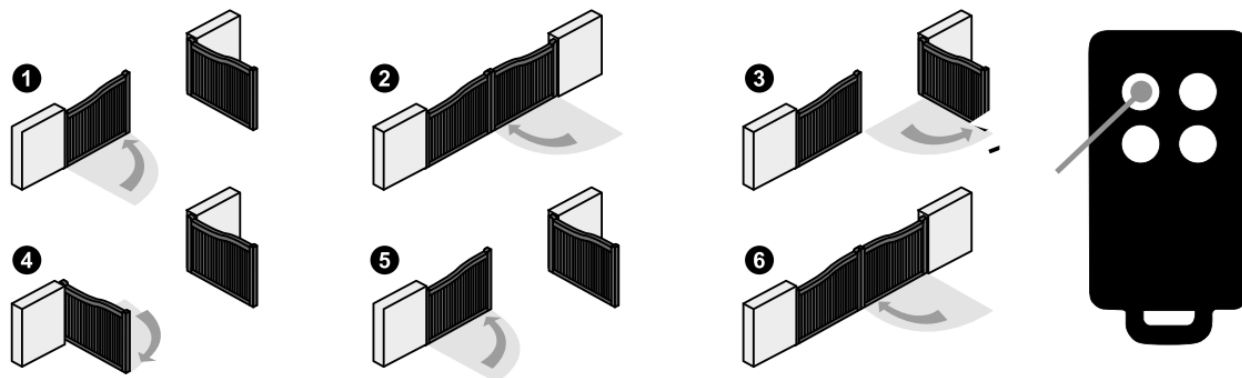
- LED 4 will be on if the switch of the transmitter, key selector, or push button is activated.

Remote controls learning process

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

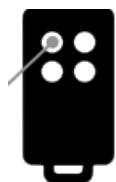
System learning process double gate

- The remote control memory storing operation must be over before starting the final system learning process.
- The system learning process will be as follows, step by step:

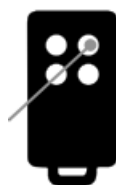


- After step 6, the system learning process is complete.

- **You can use it with the remote control:**



- double gate full opening



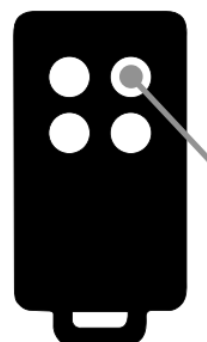
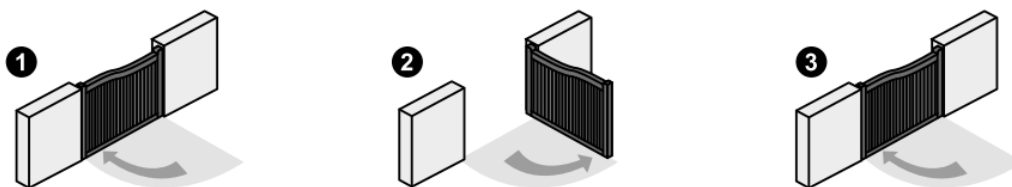
- pedestrian opening (single gate)

- The LED2 light will remain ON until the system learning process is over. Check the wiring connection and repeat the step.

System learning process simple gate

- Switch 1 OFF.
- Open the leaf gate.
- Pit wal the press the upper-is to store a single second, instead of twice every second

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



single gate opening



- single gate opening

TECHNICAL FEATURES

Motor

Motor	24V DC motor with manual unlocking
Gear type	electromechanical articulated arm
Supply voltage	24V DC
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

Blinker

Antenna included	YES (coaxial cable not supplied)
Bulb	LED E14 24V 1W (included)
Power cable	2 x 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

Motor

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

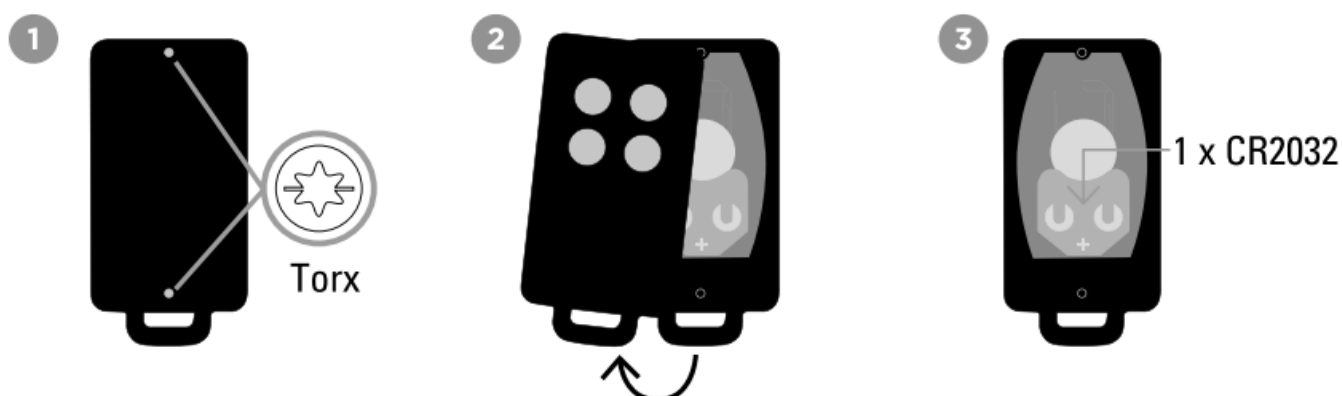
Disconnect the power supply:

1. Clean and lubricate the screws, the pins, and the hinge with grease.
2. Check the fastening points are properly tightened.
3. Make sure the wire connections 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.

Remote control



Maintenance advice

Ensure the correct operation of safety devices (photocells, flashing light, etc.)	1 x 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	1 x per season	Clean inside and out with a microfiber
Sealing of the electronic box		Check silicone seals + gland
Check the gate	1 x year	lubrication of hinges

TECHNICAL ASSISTANCE

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	Make sure the connecting terminals of the antenna is firm. Check the battery on the transmitter.
The Flashing light does not work	Unscrew and screw in the bulb Check if the wiring connection of the flashing light is correct.
The leaves suddenly stop during moving	1. Check if the gate can be moved freely and no obstacle is between.
The leaves does not move or only move toward one direction	<ol style="list-style-type: none"> 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

MORE INFO

Tutos



Free online

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

WARRANTY




- SCS Sentinel grants this product a longer warranty period, beyond the legal time, 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, which will be necessary to claim a 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, and physical shock.
- Damage due to weather: hail, lightning, strong wind, etc...
- Returns are 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.

DECLARATION OF CONFORMITY

- Hereby, SCS Sentinel declares that this product complies with the essential requirements and other relevant

provisions of Directive 2014/53/UE. The UE declaration of conformity may be consulted on the website:


www.scs-sentinel.com/downloads.

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



- 110, rue Pierre-Gilles de Gennes
- 49300 Cholet – France

Documents / Resources

	<p>scs sentinel MBA0103 Articulated Arms Automation Kit For Swing Gate [pdf] Installation Guide</p> <p>MBA0103 Articulated Arms Automation Kit For Swing Gate, MBA0103, Articulated Arms Automation Kit For Swing Gate, Arms Automation Kit For Swing Gate, Automation Kit For Swing Gate, Swing Gate</p>
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References

- [User Manual](#)

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