



TECHNICAL  
SUPPORT



WARRANTY



## Styrka 310 TELESCOPIC MOTOR DRIVE KIT FOR 2-PANEL SWING GATES

Ref.114170

EN



24V



OPENING  
PANEL



2.50M  
PER PANEL



2.20M  
MAXIMUM



150KG  
PER PANEL



COMPATIBLE WITH  
WITH ALL TYPES  
OF OPENWORK GATES



SOLAR  
OPTION



SMARTPHONE  
COMPATIBLE  
OPTION



PHOTOCELL  
OPTION

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## A - SAFETY INSTRUCTIONS

In our efforts to continually improve our products, we reserve the right to make any changes to the technical, functional, or aesthetic characteristics related to their development.

This automatic gate opening mechanism, and its manual, were designed to enable a gate to be motorised in compliance with current European standards.

### WARNING

Important safety instructions. A automatic gate opening mechanism is a product that can cause injury to people and animals and damage to property. It is important for people's safety to follow these instructions.

Keep these instructions.

### 1 - OPERATING PRECAUTIONS

- This apparatus may be used by children over the age of 8 and by persons with reduced physical, sensory or mental abilities or lack of experience or familiarity, if they are correctly supervised or if the instructions relating to the safe use of the apparatus have been given to them and the possible hazards are understood. Children must not play with the device. Cleaning and user maintenance must not be conducted by children without supervision.
- This apparatus should only be used for its intended purpose, that is, to motorise a one- or two-panel gate for vehicle access. Any other use will be considered dangerous.
- The opening or closing manoeuvre control must be used with perfect visibility of the gate. Should the gate be outside the user's field of vision, the installation must be protected by a photocell type safety device, and its operation must be checked every six months.
- All potential users must be instructed in the use of the motorised gate by reading this manual. It must be ensured that no persons who have not been instructed in the use of the device may set the gate into motion.
- Before setting the gate into motion, ensure that there is no person in the area in which the gate moves.
- Do not let children play with the gate control devices. Keep the remote controls out of the reach of children.
- Avoid any natural obstacles (branch, stone, high

grass, etc.) impeding the gate's movement.

- Do not manually activate the gate when the motor drive is not disengaged from the gate.

Avidsen cannot be held liable for any use that does not comply with the instructions in this manual and causes damage.

### 2 - INSTALLATION PRECAUTIONS

- Read this entire manual before starting the installation.
- The electrical installation of the motorised gate must meet current standards (NF C 15-100) and should be undertaken by a qualified person.
- The 230VAC mains supply must be protected with a suitable circuit breaker which meets current standards.
- All electrical connections must be performed with the power switched off (safety switch in the OFF position) and battery disconnected.
- Ensure that crushing and shearing between the mobile parts of the motorised gate and the surrounding fixed parts due to the gate's opening/closing movement are avoided or signalled on the installation.
- The motorised part must be installed on a gate according to the specifications provided in this manual.
- The motorised gate must not be installed in an explosive atmosphere (presence of gas, flammable smoke, etc.).
- The installer must check that the temperature range shown on the motor drive is suitable for the location.
- The wire that acts as an antenna must remain inside the electronic panel.
- It is strictly forbidden to modify any of the components provided in this kit, or to use an additional component not provided for in this manual.
- During installation, but above all during adjustment of the motorised gate, you must ensure that no person, including the installer, is in the area in which the gate moves at the start and throughout the duration of adjustment.
- The flashing light is an essential safety component.
- If installation does not correspond to one of the cases shown in this manual, you must contact us so that we can provide all the components

## A - SAFETY INSTRUCTIONS

necessary for smooth installation with no risk of damage.

- After installation, ensure that the mechanism is correctly adjusted and that the protection systems work correctly.
- Do not let children play with the fixed control devices. Keep the remote controls out of the reach of children.

The Avidsen company shall not be responsible in case of damage if installation is not conducted as indicated in these instructions.

### 3 - MAINTENANCE AND CLEANING

- Read all the instructions given in this manual before carrying out maintenance on the motorised gate.
- Disconnect the power supply during cleaning or other maintenance operations if the device is automatically controlled.
- Any technical, electronic or mechanical change to the motorised gate must be made with our technical department's approval; otherwise, the guarantee will be immediately cancelled.
- In the event of breakdown, the damaged part should be replaced by an original part and nothing else.
- Check the installation frequently to reveal any fault on the gate or the motor drive (see the chapter on maintenance).
- Never use abrasive or corrosive substances to clean the products.
- Use a soft, slightly damp cloth.
- Never use an aerosol to spray the product as this may damage the internal workings.
- Do not clean with a pressure washer.

### 4 - RECYCLING



Disposing of used batteries in household waste is strictly forbidden. Batteries/accumulators containing harmful substances are marked with symbols (shown opposite) which indicate that it is

forbidden to discard them in the household waste. The corresponding heavy metals are referred to as follows: Cd= cadmium, Hg= mercury, Pb= lead.

You can dispose of these batteries/accumulators at local waste treatment centres (centres for sorting recyclable materials) who are under an obligation to recover them. Keep batteries/button cells/

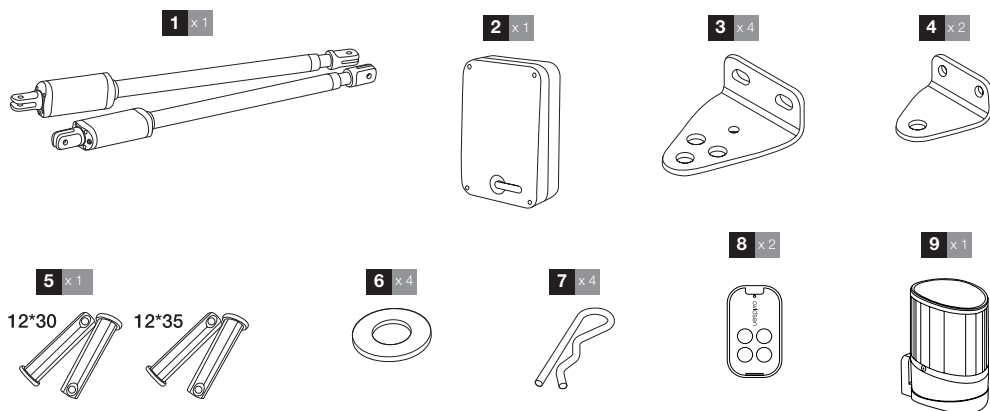
accumulators out of reach of children and store them in a safe place not accessible to them. They could be swallowed by children or pets. Risk of death! If they should be swallowed in spite of all the precautions, consult a doctor or go to A&E immediately. Never short-circuit the batteries, and do not burn or recharge them as they may explode!



This logo denotes that devices no longer in use should not be disposed of as household waste. They are likely to contain hazardous substances which are dangerous to both health and the environment. Return the equipment to your local distributor or use the recycling collection service provided by your local council.

## B - PRODUCT DESCRIPTION

### 1 - CONTENTS OF THE KIT

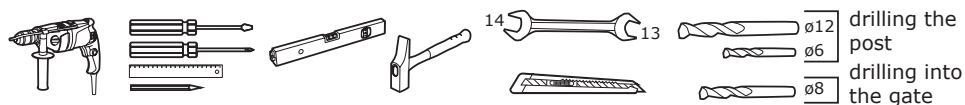


|          |                       |
|----------|-----------------------|
| <b>1</b> | Telescopic motors 24V |
| <b>2</b> | Switchgear            |
| <b>3</b> | Post mounting bracket |
| <b>4</b> | Gate mounting bracket |
| <b>5</b> | Clevis pins           |

|          |                |
|----------|----------------|
| <b>6</b> | Spacer         |
| <b>7</b> | Elastic pin    |
| <b>8</b> | Remote control |
| <b>9</b> | Flashing light |

### 2 - EQUIPMENT REQUIRED (NOT INCLUDED)

The tools and screws required for the installation must be in good condition and compliant with applicable safety standards.



|   |   |  |   |  |
|---|---|--|---|--|
| <p>flashing light</p> <p>3m cable<br/>2 x 0.5mm<sup>2</sup></p> | <p>motor</p> <p>10m cable<br/>2 x 1.5mm<sup>2</sup></p> | <p>attachment to the post:</p> <ul style="list-style-type: none"> <li>- electronic panel</li> <li>- flashing light</li> </ul> <p>ø6<br/>ø4<br/>x4<br/>x4</p> | <p>attachment of the brackets onto the posts:</p> <p>ø12<br/>ø8x150<br/>ø12x150<br/>x6<br/>x6</p> | <p>fixation des pattes sur le portail :</p> <p>Choisir un système vis/ écrous adapté à l'épaisseur du portail.<br/>Il y a 4 points de fixation</p> |
|---|---|--|---|--|

## 1 - HAZARD ANALYSIS

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### 1.1 - Regulations

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Installation of a motorised gate or a motor drive on an existing gate within the framework of "Residential" type use must be compliant with Regulation (EU) 305/2011 concerning building products.

The reference standard used to check this compliance is EN 13241-1 which refers to a framework of several standards including EN 12445 and EN 12453 which specify the motorised gate safety methods and components to reduce or completely eliminate hazards to people.

The installer must train the end user on the correct operation of the motorised gate, and the trained user must train the other people likely to use the motorised gate, using this guide.

It is specified in standard EN 12453 that the minimum protection of the gate's primary edge depends on the type of use and the type of control used to set the gate in motion. The gate motor drive is a press control system, i.e. simply pressing one of the control parts (remote control, key selector, etc.) sets the gate in motion.

This gate motor drive is equipped with a force limiter which complies with appendix A of EN 12453 standard, within the framework of use with a gate that is compliant with the specifications given in this chapter. The specifications of EN12453 standard therefore enable the 3 following use cases, as well as the minimum levels of protection:

- **Press activation with non-visible gate**

Minimum level of protection: Force limiter only.

- **Press activation with non-visible gate**

Minimum level of protection: Force limiter and 2 pairs of photocells to protect the gate's opening and closing.

- **Automatic control (automatic closure)**

Minimum level of protection: Force limiter and 1 pair of photocells to protect the gate's automatic closing.

The flashing light is an essential safety component. The proper operation of the safety devices must be checked every six months.

### 1.2 - Specifications of the gate to motorise

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This motor drive can automate swing gates up to

**2.50m** wide and **2.20m** high and weighing **150kg**.

These maximum dimensions and weights are for an openwork-type gate and for use in an area that is not very windy. For use in an area with significant wind speed, it is necessary to reduce the maximum values indicated above for the gate to be motorised.

### 1.3 - Safety checks on the gate

---

The motorised gate is strictly for residential use. The gate must not be installed in an explosive or corrosive atmosphere (presence of gas, flammable smoke, vapour or dust).

The gate must not have locking systems (latch, lock, bolt, etc.).

The hinges of the gate must be on the same axis and the axis must be vertical. The posts supporting the gate must be strong and stable enough so that they do not bend (or break) under the weight of the gate. Without the motor drive, the gate must be in good mechanical conditions, correctly balanced and open and close without friction or resistance. Greasing the hinges is recommended. Check that the fastening points of the different components are in locations that are sheltered from shock and that the surfaces are solid enough. Check that the gate does not have any part protruding from its structure. The central stop and side stops must be appropriately fastened so as not to give way under the force exerted by the motorised gate.

If installation does not correspond to one of the cases shown in the guide, contact us so that we can provide all the components necessary for proper installation with no risk of damage.

The motor drive cannot be used with a driven part that has a door.

### 1.4 - Safety rules

The actual opening of a gate may create dangerous situations for people, goods and vehicles in the vicinity that by nature, cannot always be avoided by design.

The possible hazards depend on the state of the gate, the manner in which it is used and the installation site. After having checked that the gate to be motorised complies with the requirements given in this chapter and before beginning the installation, a hazard analysis of the installation must be conducted in order to eliminate all dangerous situations or to indicate them if they cannot be eliminated.

### 2 - ELIMINATING HAZARDS

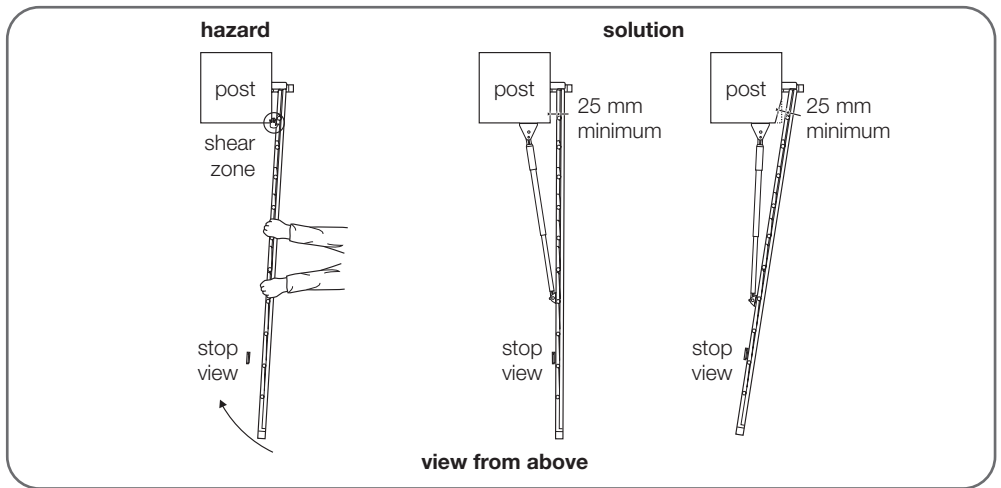
The hazards posed by a two-panel motorised gate, as well as the adapted solutions to eliminate those hazards, are as follows:

#### Subpanels

Following installation, there may be a shear zone between the panel and the corner of the post.

In this case, it is recommended to remove this zone leaving a minimum working distance of 25 mm either by positioning the side stops accordingly or by notching the corner of the posts without weakening them, or both if necessary.

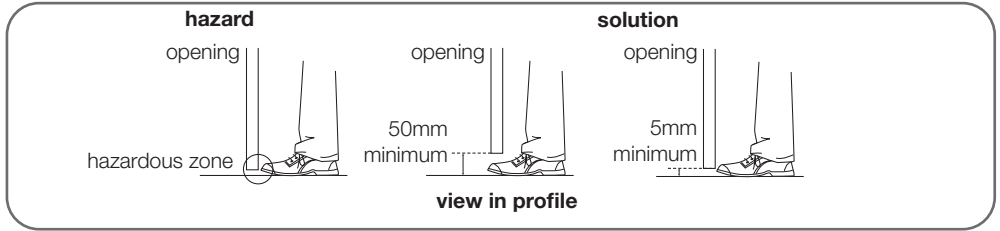
**If this is not possible, the hazard must be clearly reported.**



#### Bottom edges

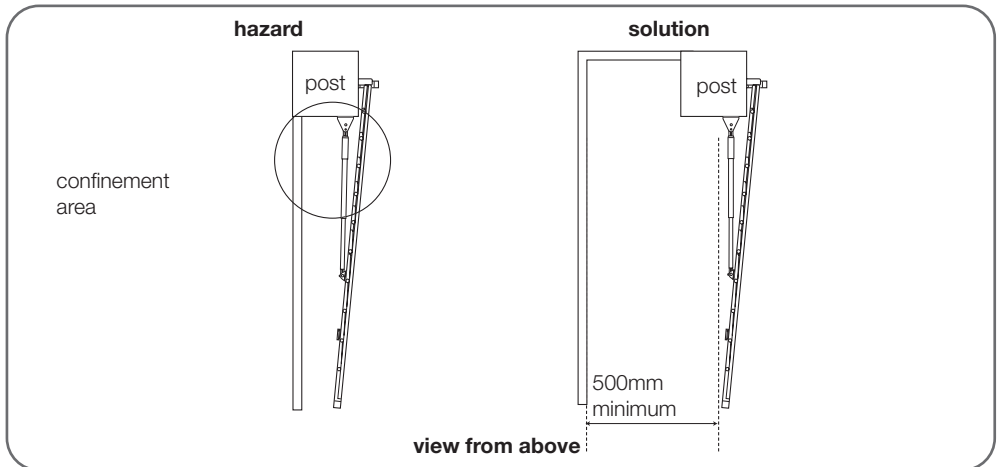
Following installation, there may be a dangerous zone for toes between the bottom edge of the gate and the ground, as indicated in the following figure.

In this case, this area must be removed leaving a working distance of minimum 50mm or maximum 5mm.



### Between the panels and the fixed parts close to each other

Depending on the configuration of the site where the motorised gate is installed, there may be confinement areas between the panels in open position and the fixed parts close to them. To remove these areas, it is mandatory to leave a safe distance of 500mm between the fixed part and the moving parts of the motorised gate.



### PREVENTING OTHER HAZARDS

The body of a switch with no lock must be located in direct view of the driven part but away from moving parts. Unless it operates with a key, it must be installed at a minimum height of 1.5 m and must not be accessible to the public.

After installation, ensure that the components of the gate do not hang above a footpath or public access road.

### 3 - INSTALLING THE MOTORS

The motor drive must be installed by qualified personnel, in compliance with all the indications provided in the "General warnings."

Before starting installation, ensure that:

- Hazards can be minimised by following the recommendations under the Chapter "Hazard analysis."
- The desired use has been correctly defined.
- The gate complies with the specifications provided in the Chapter "Specifications of the gate to motorise."

*The different stages of installation must be followed in order and in compliance with the indications given.*

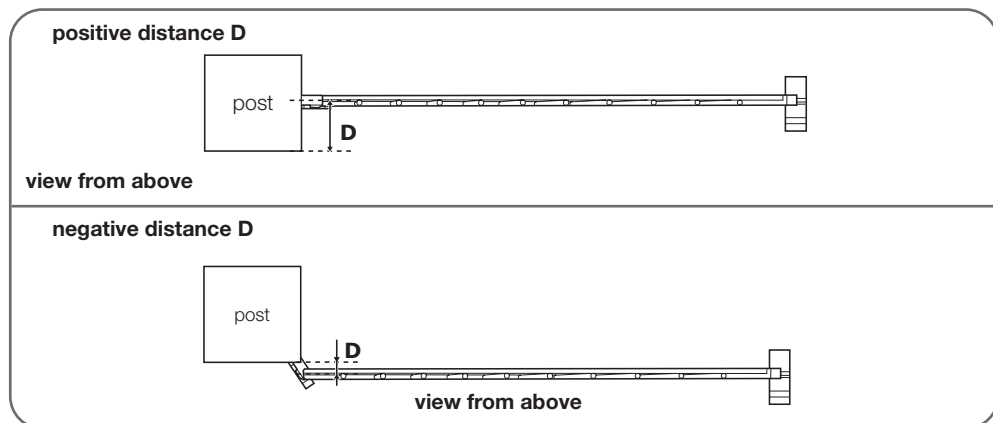
## C - INSTALLATION

### • The use of stops is mandatory (not provided)

This gate motor drive is a self-locking motorisation system. Your 2-panel gate must be equipped with a central stop and side stops (not included).

The (central and side) stops must stop the gate without locking it. In other words, any mechanical lock (or latch) and any tilting shoe base or stopper must be removed.

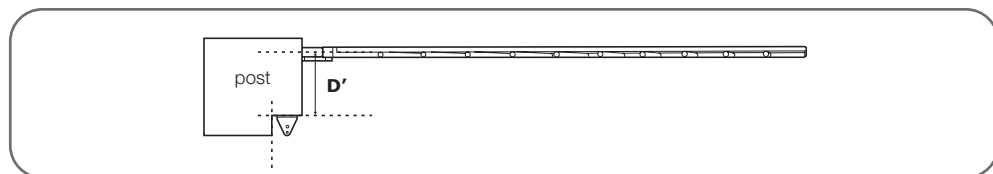
The installation of the side stops depends on the desired opening angle which depends on distance  $D$  (the distance between the axis of the hinge and the inner side of the post).



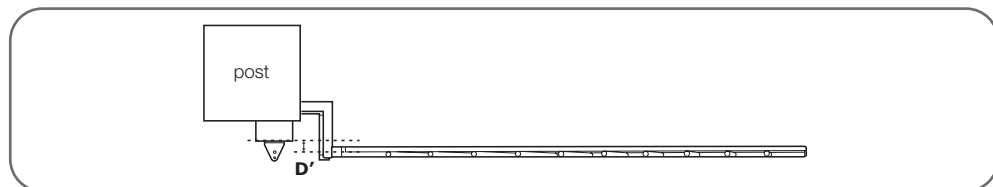
If the positive distance  $D$  is greater than 190 mm or if distance  $D$  is negative, the configuration of the posts must be adjusted.

### Special cases

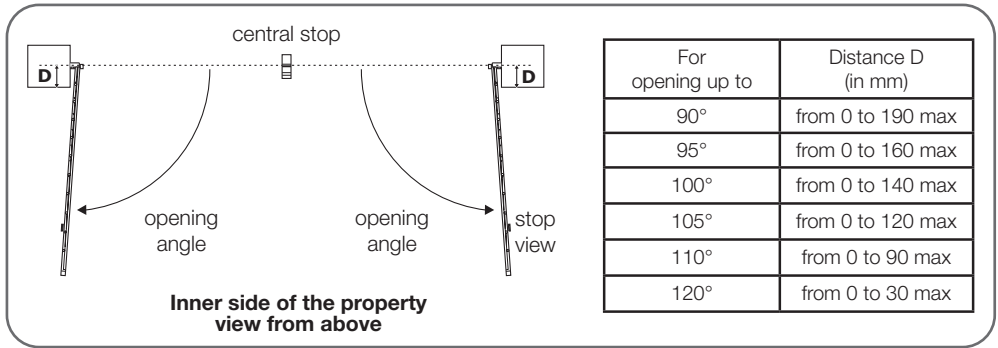
- If  $D > 190\text{mm}$  and if the structure of the posts allows, the posts must be cut so that  $D'$  is equal to 190mm.



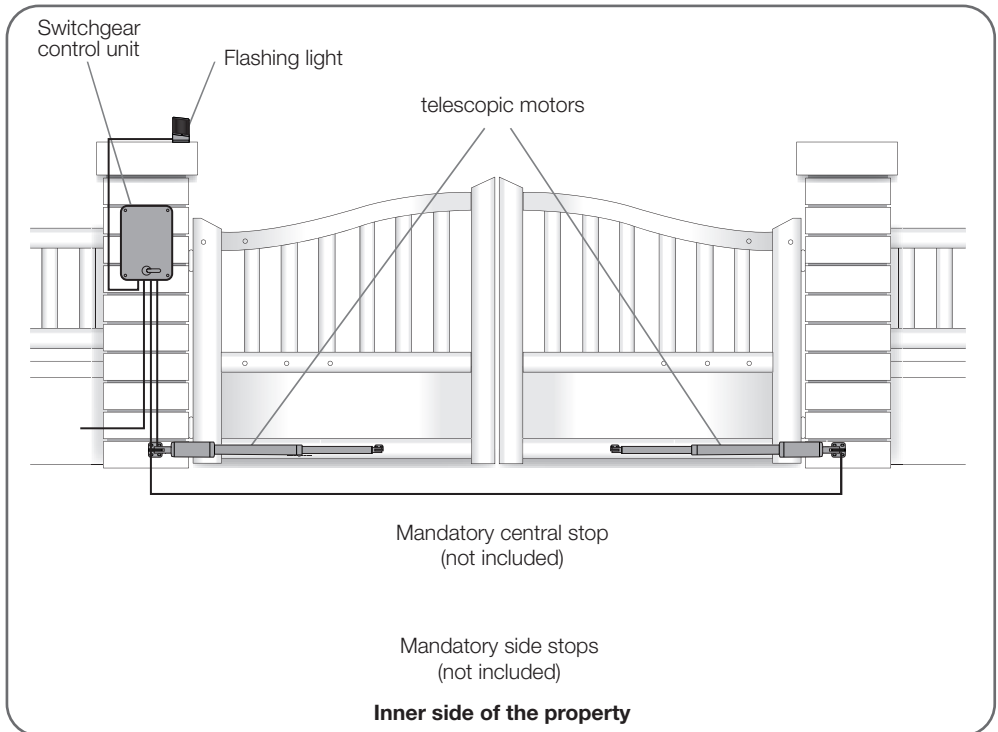
- If  $D < 0\text{mm}$ , place a shim thick enough so that  $D'$  is equal to 0mm.



Determine the opening angle of each panel based on the data in the following table. The opening angle may be different for each panel but must never be less than 40°.



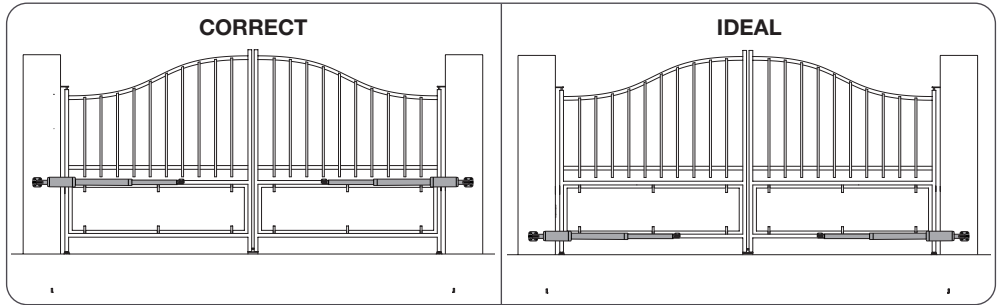
### Overview



## C - INSTALLATION

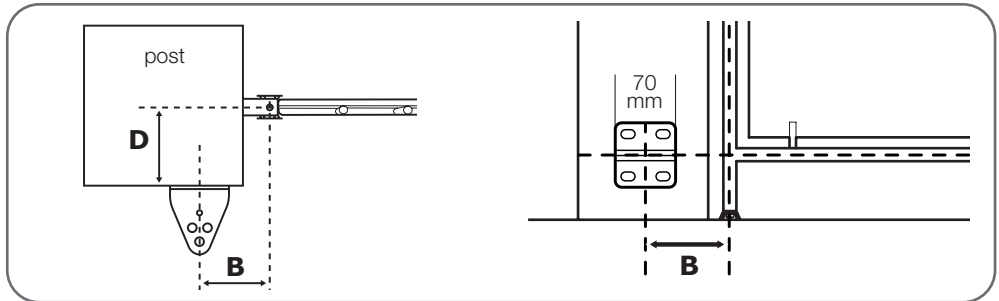
### Attaching the post mounting bracket

Mount the motors to a rigid and reinforced part of the gate (e.g. the frame or the crossbar). Mount them as low as possible for aesthetic and technical reasons.

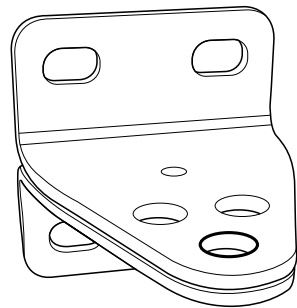


The instructions below describe installation of the left motor; to install the right motor, repeat the process while respecting the symmetry.

- Measure distance D, then refer to the table for distance B, which allows you to determine the post mounting bracket position. The table also indicates the hole in which the motor will be mounted.
- The height of the centre of the mounting bracket must be the same as the centre of the gate frame on which the motor is mounted.

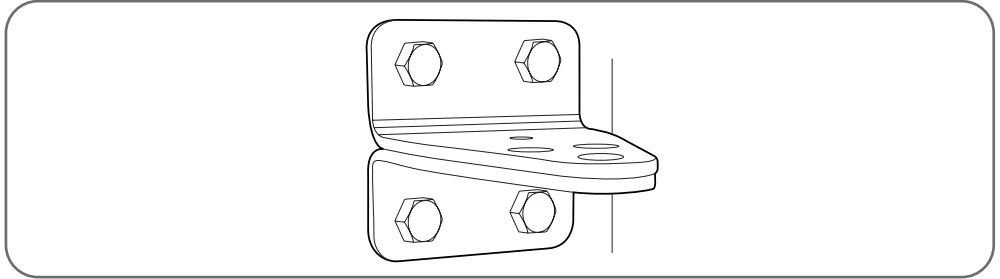


| D (mm) | B (mm) | max angle (°) |
|--------|--------|---------------|
| 0      | 220    | 120°          |
| 30     | 220    | 120°          |
| 60     | 210    | 110°          |
| 90     | 190    | 110°          |
| 120    | 190    | 105°          |
| 140    | 180    | 100°          |
| 160    | 170    | 95°           |
| 180    | 160    | 90°           |
| 190    | 160    | 90°           |

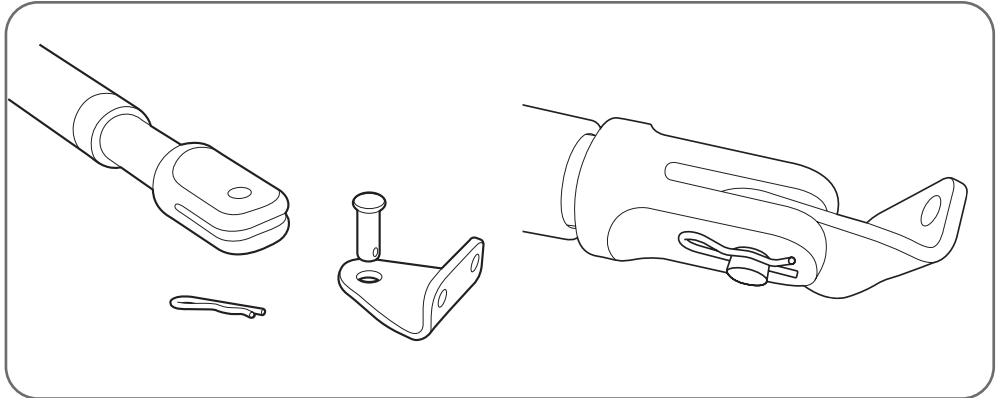


Mark the location of the holes in the post, ensuring that the post mounting bracket is mounted horizontally at the end. Use 10-inch lag screws or any other fastening system suitable for the post material.

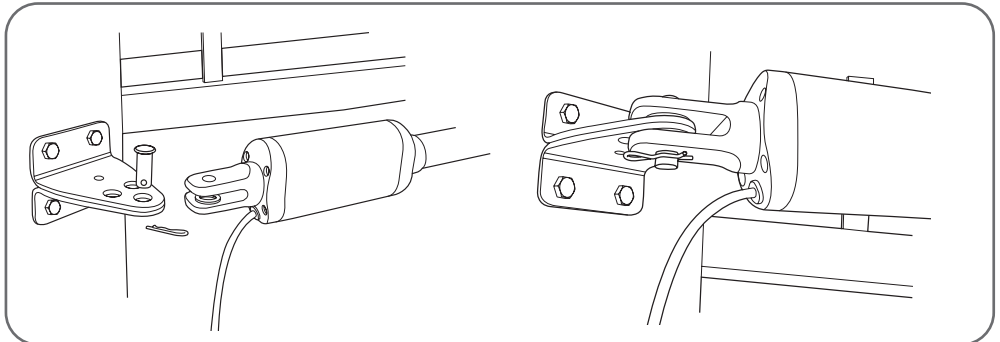
**Please note:** there will be significant force on the mounting bracket when the motor drive is running. We recommend sealing threaded rods at least 15 cm in length. If the post is made of metal, we recommend welding or passing the threaded rods through to secure them with self-locking nuts. Consult a professional if in doubt.



### Attaching the gate bracket to the motor



### Assembling the motor to the post bracket



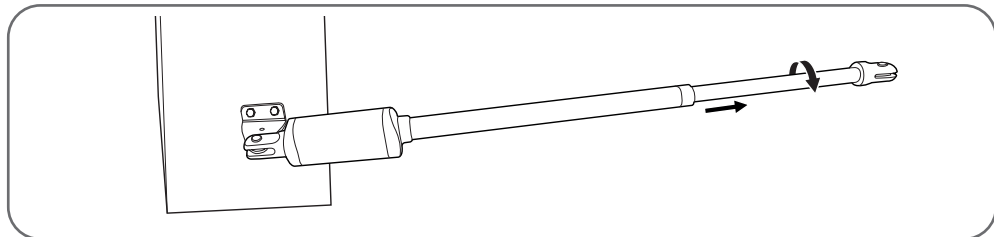
Please note: the motor must be turned so that the wire is at the bottom  
Remember to add the spacers on both sides of each mounting bracket.

## C - INSTALLATION

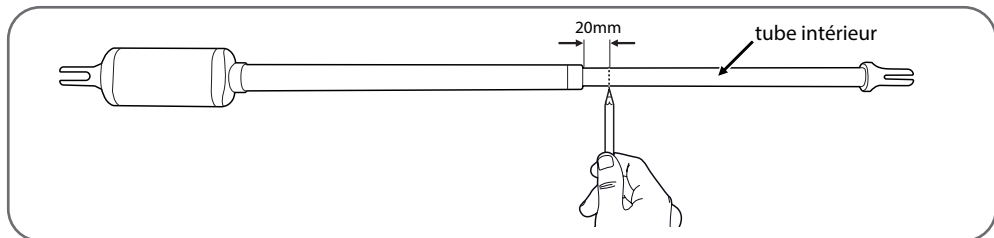
### Positioning of the bracket on the gate

To position the motor on the gate, the motor rod must be retracted 20mm from its fully extended position. **If this distance is not strictly observed, the motors may experience operating problems that are not covered by the product warranty.**

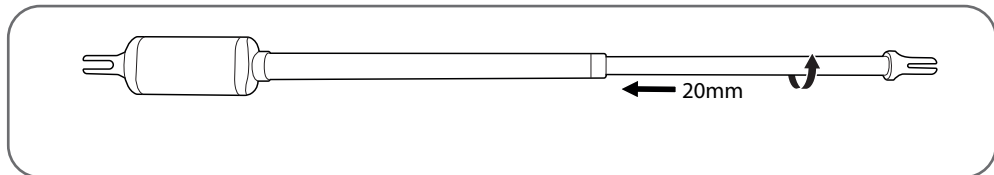
- Unscrew the motor rod by hand to get it all the way out.



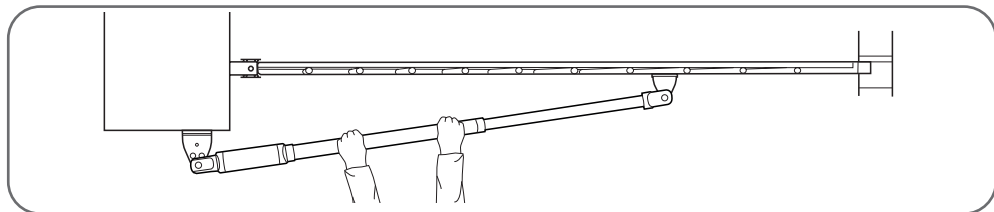
- Make a mark on the inner tube 20 mm from the outer tube as shown in the drawing below:



- Screw the 20 mm inner tube back on using the previously made mark; push the tube in until the mark disappears, but no further.



- Close the gate and place the mounting bracket on the crossbar of the gate, making sure that the motor is **horizontal**, then mark the location of the two holes to be drilled in the gate.



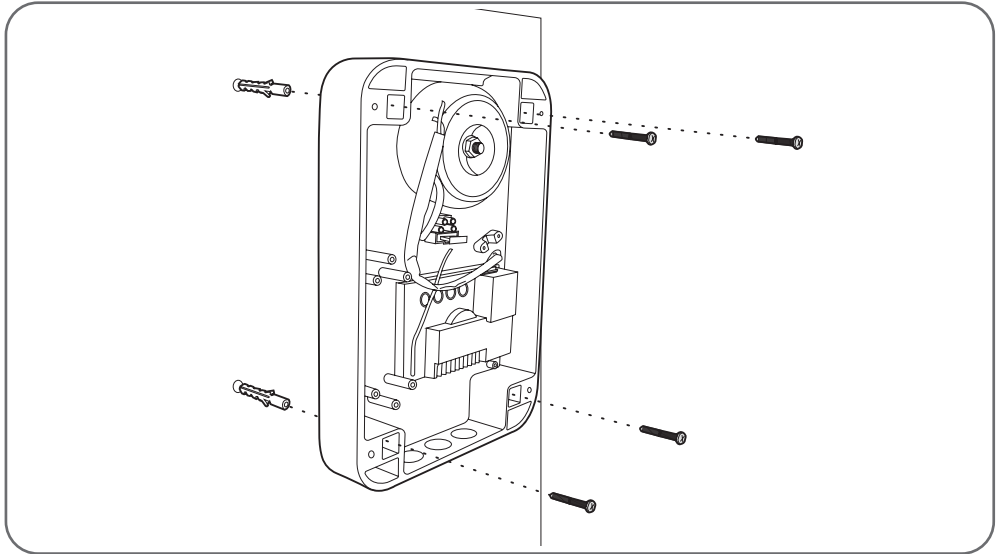
Once the holes are drilled, remove the gate mounting bracket from the motor by removing the pin. Attach the bracket to the gate, preferably using through-bolts.

- Reassemble the motor and the gate mounting bracket.

#### 4 - INSTALLING THE SWITCHGEAR

The switchgear must be mounted to the post where the 230Vac power comes from.

- To ensure proper operation of the motorisation, the length of the motor cables must not exceed 8 m per motor. The cables must have sections of at least 1.5mm. Therefore, the switchgear must be mounted less than 6m from each motor.
- Use four screws and dowels to install and mount the switchgear in the defined location.

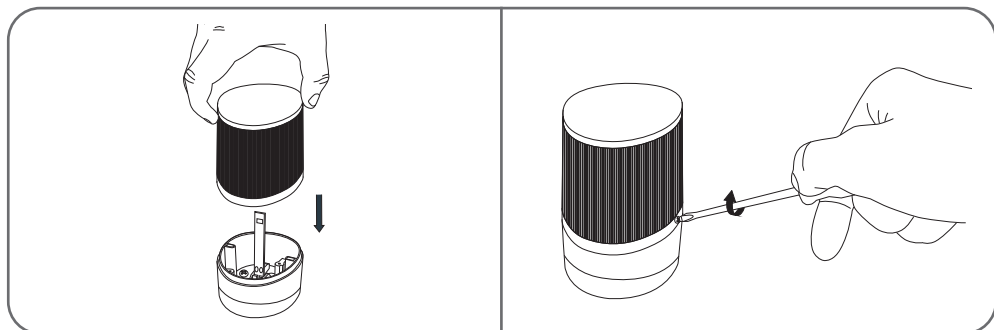
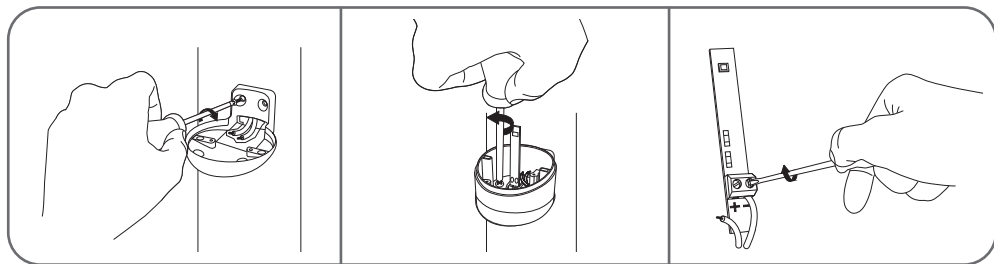


#### 5 - INSTALLING THE FLASHING LIGHT

The flashing light must be fastened at the top of the post on which the switchgear is attached and must be visible both inside and outside. Only use the light provided in the kit (24 V - 2 W).

The flashing light may be fastened on the wall with or without support.

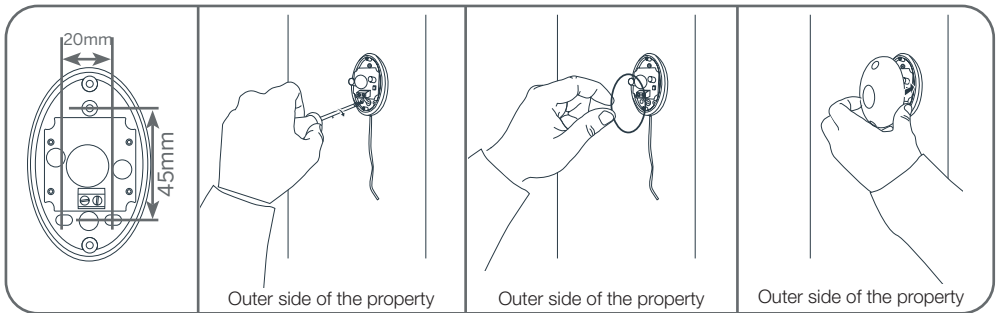
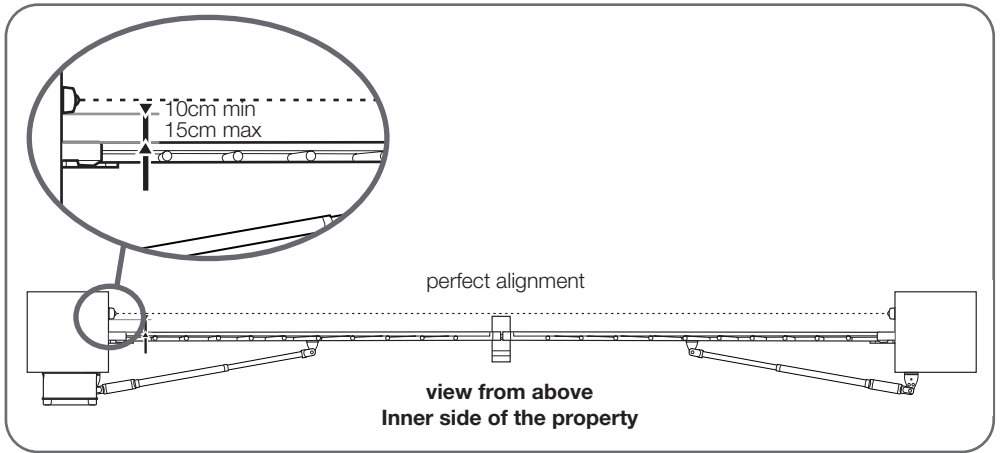
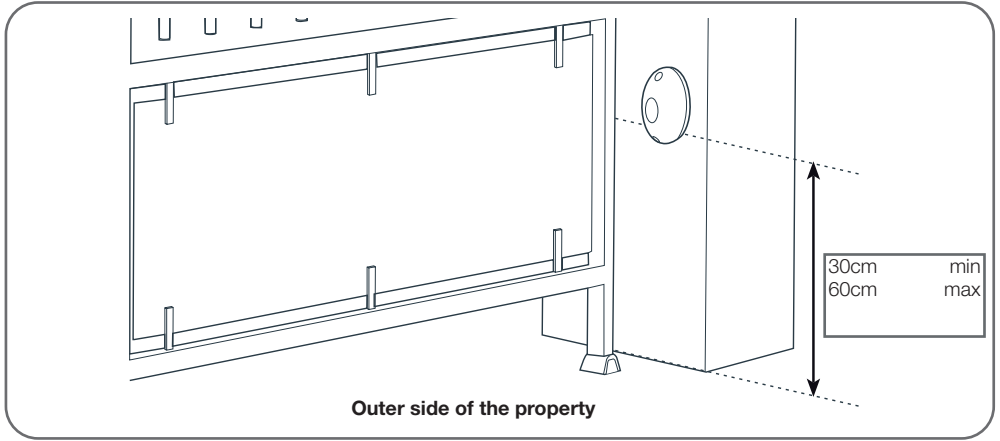
- With a screwdriver, remove the transparent part of the flashing light by unscrewing the 2 screws that hold the upper part of the flashing light.
- Still with a screwdriver, remove the flashing light bracket by unscrewing the 2 screws inside the light.
- Fasten the flashing light bracket to the wall (ignore this step if you are fastening the light directly to the wall).
- Run the wires into the flashing light and connect them to the LED lightbulb (maintaining the “+” and “-” polarity).
- Screw the flashing light to its bracket and screw in the transparent part



### 6 - INSTALLING THE SET OF PHOTOCELLS (OPTIONAL)

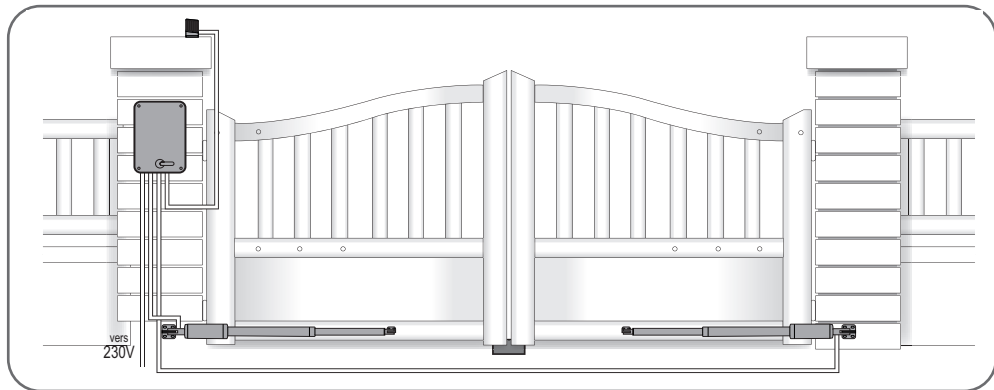
#### 1 set of photocells

- Install the reception photocell (RX indicated at the back) of the same side of the gate as the switchgear. The surface of the posts must be perfectly flat in order to properly align the infrared beam of the photocells.
- Place the photocells at exactly the same height from the ground; they must be perfectly aligned and parallel to each other.  
The distance between the outer side of the gate and the photocells must be between 10 cm and 15 cm.
- Mount the photocells on the posts.



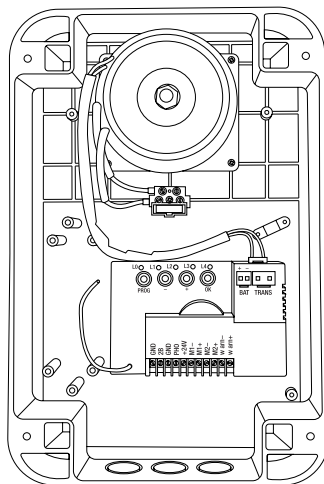
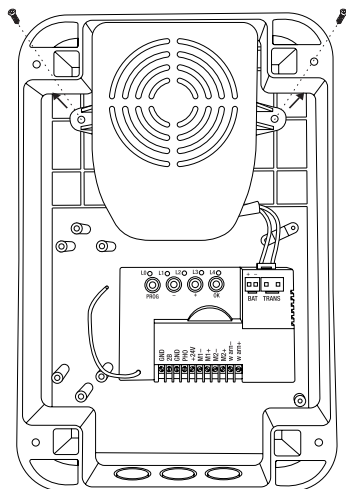
### 7 - CONNECTIONS

- The cable run between must comply with applicable standards (NFC 15-100).
- Either the cable is 80 cm deep with red warning mesh, or the cable is run through a sheath.



#### Safety instructions

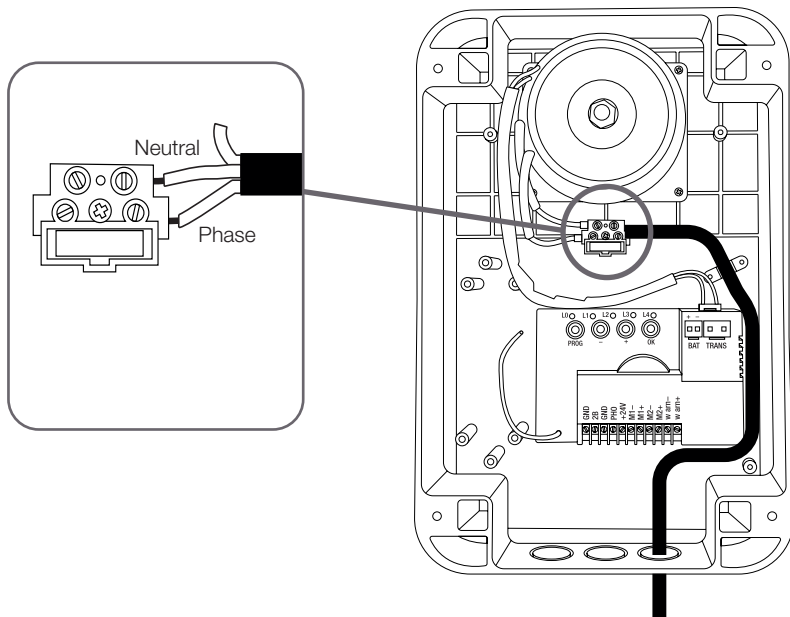
- All electrical connections must be performed with the power switched off (safety switch in OFF position).
- These connections must be made by a qualified electrician.
- Remove the protective cover from the transformer.



## 7.1 - THE MAINS ELECTRICITY

### Important notes:

- The electrical line may only be used to power the gate motor drive. It must be protected by a fuse or circuit breaker (6A min., 16A max.) and a differential device (30mA). It must be compliant with the applicable electrical safety standards.
- The 230V power cable must be HO5RN-F type.
- Connect the wires from the power supply and make sure they are properly secured in the terminal block. Once the 230V cable has been run through the cable duct, replace the protective cover.

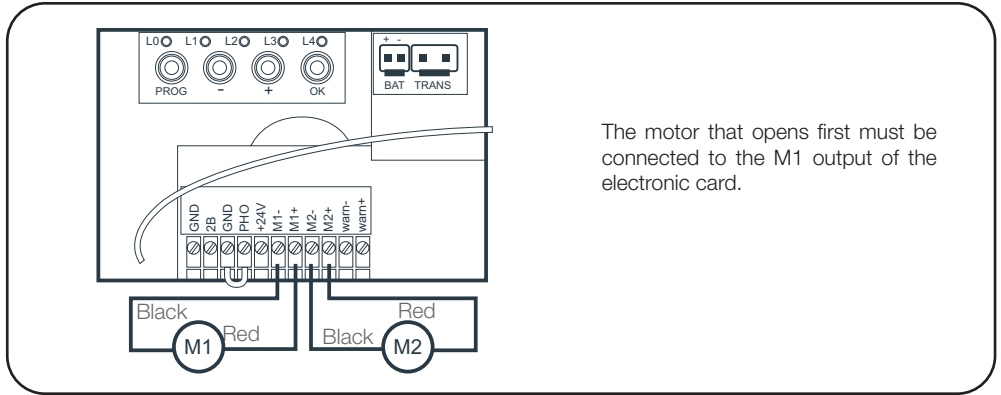


## C - INSTALLATION

### 7.2 - TELESCOPIC MOTORS

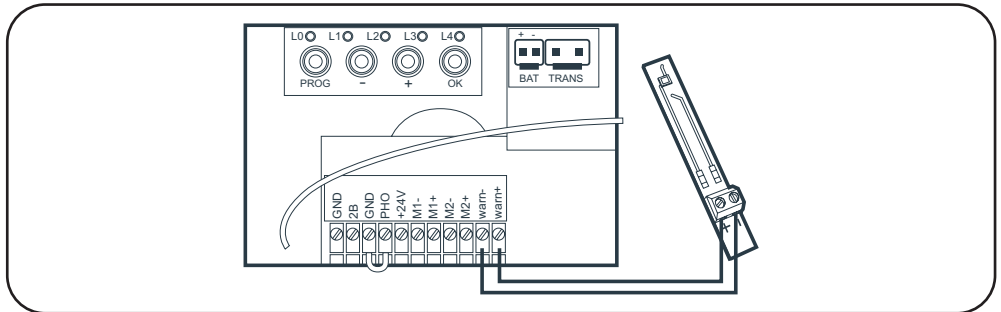
For motor wiring on the electronic card, use a 2x1.5mm<sup>2</sup> cable. Run the cable through the cable clamp and tighten

- For opening towards the inside



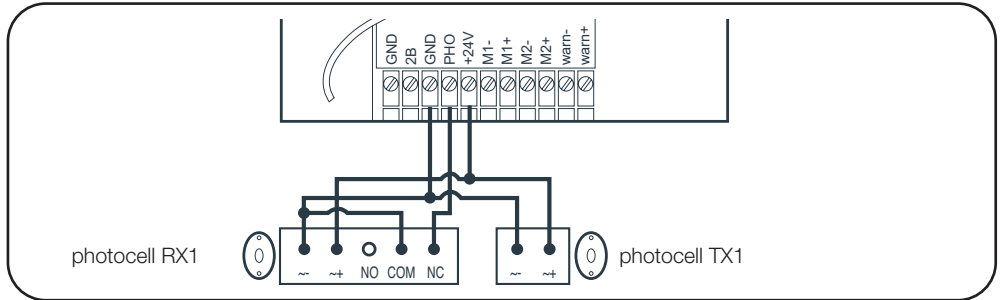
### 7.3 - FLASHING LIGHT

- Connect the flashing light wires to the terminal block as shown in the diagram below.
- Use a 2x0.5mm<sup>2</sup> section cable, at least.
- Maintain the connection polarity

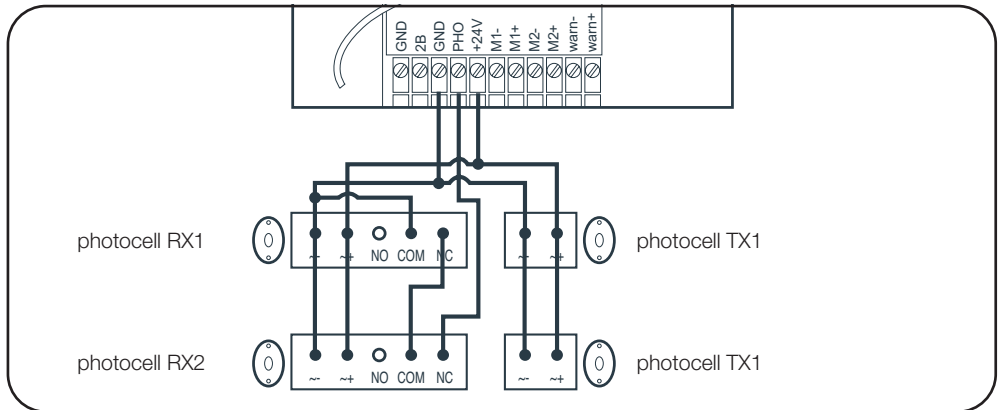


## 7.4 - PHOTOCELLS (OPTIONAL)

- If there are no photocells, leave the connector between GND and PHO.
- With one set of photocells, remove the connector between GND and PHO.



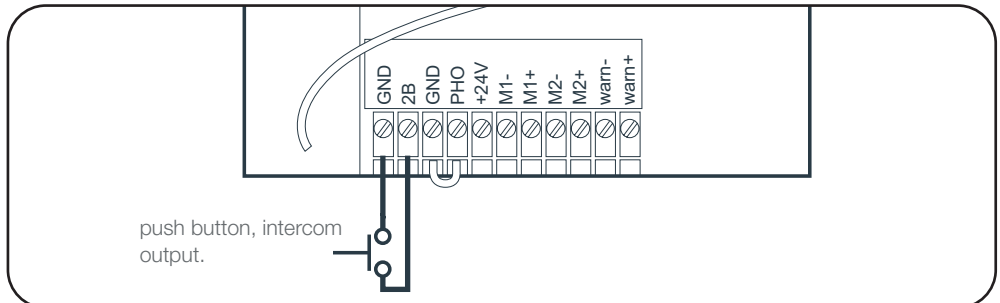
- With 2 sets of photocells, remove the connector between GND and PHO



## 7.5 - CONTROL PARTS (OPTIONAL)

**Note:**

This command activates the complete opening of the gate from a dry contact.



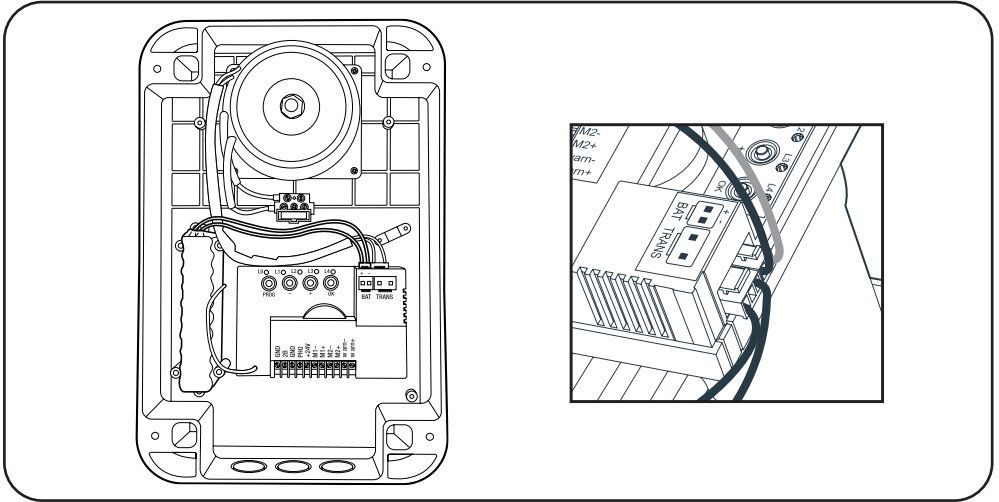
## C - INSTALLATION

### 7.6 - BACKUP BATTERY (OPTIONAL)

---

It is possible to connect a backup battery to perform some manoeuvres in the event of power failure.

- Type of battery: NiMH
  - Battery voltage: 24V
  - Configuration: 20xAAA / 800mAh
- After connecting the battery, it will charge for up to 48H.



### 7.7 - SOLAR POWER KIT (OPTIONAL)

---

**Warning: do not connect a solar power supply at the same time as the mains power supply.**

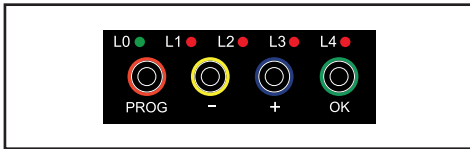
The 24V solar power kit is plugged into the same connector as the backup battery. The solar power kit (which already has a battery) and a backup battery cannot be connected at the same time.

For installation, refer to the solar power kit instructions.

When a solar power kit is connected, if you press the "OK" button on the electronic card, the number of red LEDs that light up indicates the battery charge level.

### 1 - SETTINGS INTERFACE

#### Indicators



- **L0** = Green LED (switched off when the card is on standby)
- **L1 to L4** = Red LEDs to display information concerning settings, events (or errors) or battery status.

#### Buttons

**PROG** = Enter or exit settings menus.

“-” / “+” = Select a menu item, set a value, navigate the event log.

**OK** = Enter sub-menus, confirm a setting, view the battery voltage or history of events, enter manual control mode.

#### Important notes:

- Buttons can be pressed and released or pressed and held (for 3 seconds). When the instructions below indicate “**press the PROG button**”, the button must be pressed and released. When the instructions indicate “**press the PROG button for 3s**” or “**PROG 3s**”, the button must be pressed and held.
- In the instructions below, the operations to be performed with the buttons will be described from **MENU 0**. It's the display menu that appears just after the power has been switched on for example, just after the gate has moved (before standby) or even when the card is on standby (in this case, the green LED L0 is switched off).
- To make sure you are at **MENU 0** of the display, press PROG 2 or 3 times and only the green LED should be switched on.

**When the user performs no action on a button for 15 seconds, the system automatically goes back to MENU 0.**

### 2 - BASIC SETTINGS (MENU 1)

#### 2.1 - MENU STRUCTURE

**After it is switched on, all LEDs will be turned off except the green LED**

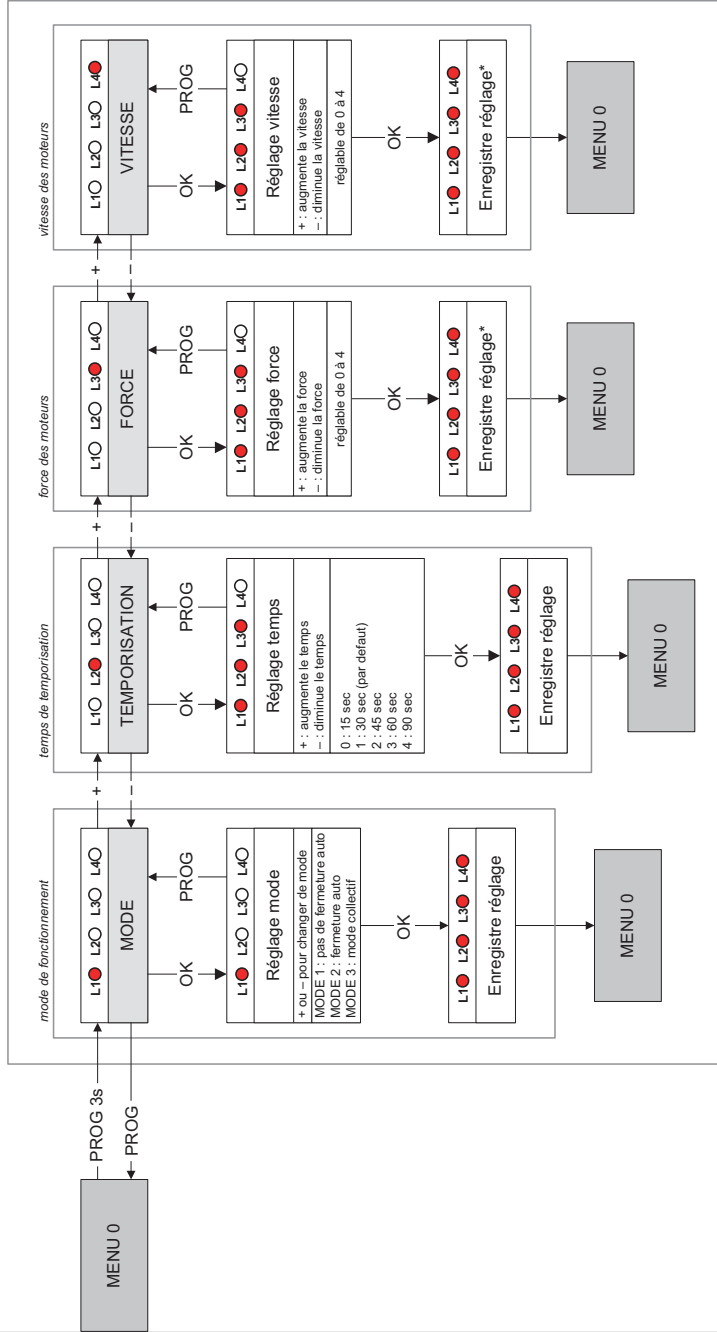
- If the green LED is off, the card is on standby mode. Press **PROG** once (press and release) to activate the card. If no lights turn on, check that the power connections are correct.
- Lit up red LEDs are an error code. Check the error code table for the meaning. (If the card has already worked before, the last error code appears. This does not mean that there is a problem with the card).
- To clear the display of an error code, press and release **PROG** once.

**Now to enter settings menu 1 (MENU 1), press PROG for 3 seconds and LED L1 will turn on.**

- Menu item number 1 is selected. Press + or – to select another menu item and the red LED for that item will turn on accordingly.
- When a menu item is selected, press OK to view and change the related setting. See the chart below. The + and – buttons must then be used to change the setting value, and the **OK** button must be pressed to confirm it. If you do not wish to change a setting, you can exit by pressing **PROG** repeatedly (until only the green LED is lit).

The complete structure of the Level 1 menu is represented by the diagram below. The arrows indicated by the diagram represent a press on the button (short or long if it indicates 3s).

### 2.1.1 - BASIC SETTINGS MENU (MENU 1)



\* cette modification nécessite de faire un auto-apprentissage

### 2.2 - PHOTOCCELL ALIGNMENT PROCEDURE (OPTIONAL)

---

The electronic card of this motorised gate is on standby after 1 minute with no action.

On standby, the photocells no longer have power.

- To prolong the “activation” time, press and release one of the buttons.

When the photocells have power, a green indicator is lit inside each one.

When the photocells are not aligned, a second red indicator light turns on in the RX photocells.

When the photocells are aligned, an orange indicator light turns on inside the RX photocell.

- Move your hand in front of it to hide the infrared beam. The green indicator light turns on and the orange indicator turns off. A relay click can be heard when the status changes.

### 2.3 - OPERATING MODE

---

This automatic gate opening mechanism has 3 operating modes.

#### **Semi-automatic mode (mode 1) (default)**

- Closed gate -> to open the gate, press and release the gate command.
- Open gate -> to close the gate, press and release the gate command.

While the gate is in motion, you can stop it by pressing the (gate or pedestrian) command.

By pressing on the gate command again, the gate swings in the opposite direction.

#### **Automatic closing mode (mode 2)**

- Closed gate: pressing and releasing the gate command once opens the gate, which remains open for a certain time (adjustable time, see “Time delay”), then closes automatically.
  - During the time delay, you can cancel the automatic closure by pressing the (gate or pedestrian) command. The gate stays open and you must press the gate command to close the gate.

While the gate is in motion, you can stop it by pressing the (gate or pedestrian) command.

#### **Collective mode (mode 3)**

This mode is used for a collective access gate.

- Closed gate: pressing and releasing the gate command once opens the gate, which remains open for a certain time (adjustable time, see “Time delay”), then closes automatically.

#### **Unlike the automatic closure mode:**

- If you press a command during opening, it will not be acknowledged.
- If you press a command during the time delay, instead of cancelling the automatic closure, the time delay starts again at 0.
- If you press a command during closure, the gate shuts, opens again and starts the automatic closure time delay.
- **You can only control the complete gate. The pedestrian command does not work.**

#### **To choose the operating mode, set a value from 1 to 3. Follow the procedure below**

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press **OK** and the number of red LEDs that turn on will indicate the operating mode that has already been set (mode 1 by default).
- To change the operating mode, use the “-” and “+” buttons, then confirm with the **OK** button. All the LEDs turn on and off to confirm the operation.

**N.B.:** applicable regulations require the installation of photocells for security during automatic closing.

### 2.4 - TIME DELAY

---

The time delay is the time during which the gate remains open before closing automatically (if automatic closing is activated).

#### **To adjust this value, follow the procedure below**

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “+” once. L2 will turn on instead of L1.
- Press **OK**, and the number of red LEDs that turn on will indicate the set value.
- Use the “+” and “-” buttons to change this value (see table below).
- Press **OK** to confirm this value. All the LEDs will turn on and off to confirm the operation.

This time is adjustable from 15 seconds to 90

## D - BEGINNING OPERATION

seconds and is 30 seconds by default.

|                 |      |
|-----------------|------|
| L1○ L2○ L3○ L4○ | 15 s |
| L1● L2○ L3○ L4○ | 30 s |
| L1● L2● L3○ L4○ | 45 s |
| L1● L2● L3● L4○ | 60 s |
| L1● L2● L3● L4● | 90 s |

### 2.5 - MOTOR FORCE

This system controls the force of the motors by detecting the maximum current they can absorb. As a result, if an obstacle pushes with enough force against a gate panel, the motor current exceeds the detected value and the gate stops. In most cases, it is not necessary to change this setting.

The force is adjustable from 0 to 4 and is set to 3 by default.

However, if the force is insufficient, a gust of wind may cause one or more panels to stop.

- In this case, it is necessary to increase the level of force to 4.
- On the other hand, if the gate has a rather weak structure and a low wind load, it is recommended that the force be reduced.

#### Note

To meet the requirements of Standard 12453, it may be necessary to change the force of the motors.

#### To adjust the force, follow the procedure below

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “+” twice and L3 will turn on instead of L1.
- Press OK, and the number of LEDs that turn on will indicate the set force value.
- Use the “+” and “-” buttons to change the force and confirm with the OK button. All the LEDs will switch on and off to confirm the operation.

**NOTE:** if the force setting is changed, self-learning must be repeated.

### 2.6 - SPEED

You can adjust the speed by a value of 0 to 4. The default speed is 3.

If the gate is too fast, it may be necessary to reduce the speed.

#### To adjust the speed, follow the procedure below

- Press PROG for 3 seconds. L0 will flash once and L1 will turn on.
- Press “+” 3 times. L4 will turn on instead of L1.
- Press OK and the number of LEDs that turn on will indicate the set value.
- Use the “-” and “+” buttons to change this value.
- Press OK to confirm this value. All the LEDs will turn on and off to confirm the operation.

**NOTE:** if the speed setting is changed, self-learning must be repeated.

### 2.7 - SELF-LEARNING

#### The role of self-learning:

In order for the card to learn which motors are connected and the path of the door, self-learning must be launched.

In addition, if certain settings are changed (force, speed), self-learning must be repeated.

#### IMPORTANT

- **The panels must have fixed stops at the end of the closing motion (central stop) and at the end of the opening motion (side stops), during self-learning, and they must not be moved or removed afterwards. If the stops are not firmly attached to the ground, this can lead to self-learning failure.**
- The panels can be in any position (open, closed, ajar) before starting the self-learning procedure.
- Prioritise placing the panels in a semi-open position to control the motor’s first movement (closing)
- Before launching self-learning, it is vital to check for the correct polarity on the motor connections. To do this, launch the manual control mode by pressing the OK button for 3 seconds. Press

PROG and then + (not at the same time). The panels should open. If a panel closes, reverse the + and - on the card.

To exit manual control mode, do a short press on PROG and - at the same time.

### SAFETY

Make sure that there is no one in the gate movement area during the entire commissioning period and the entire test period.

### Starting self-learning

- Check that you are not in a prog menu by pressing on prog 3 consecutive times.
- Press and hold the “+” button for 3 seconds. The self-learning procedure may be interrupted at any time by pressing OK.

### Self-learning procedure

- The flashing light flashes.
- **Phase 0:** repositioning in central stop  
Panel M2 closes up to the central stop.  
Panel M1 closes up to the central stop.
- **Phase 1:** detection of side stops  
Panel M1 opens up to the side stop.  
Panel M2 opens up to the side stop.
- **Phase 2:** path detection  
Panel M2 closes again up to the central stop  
Panel M1 closes again up to the central stop.
- **Phase 3:** learning opening and closing  
Panel M1 starts to open, gradually accelerating.  
Panel M2 starts to open, gradually accelerating, 2.5 seconds (or more depending on the setting, see MENU 3) after M1.  
The panels reach their opening stops.  
Panel M2 starts to close, gradually accelerating.  
Panel M1 starts to close, gradually accelerating.  
The panels reach the central stop (with a difference of 2.5 seconds or more depending on the setting, see MENU 3)

### Error during self-learning

If self-learning does not work as described above and stops earlier than expected (the motors and the flashing light stop), some of the red LEDs will be on or flashing, and others will be off. The configuration of the red LEDs that are on provides an error code allowing the installer to determine the source of the incident that has occurred.

Below is a table indicating the self-learning error codes:

- : LED off
- : LED on
- : Flashing LED light

**Make sure not to confuse the self-learning error codes with error codes of events that may occur during normal operation and which are indicated in the same way by a combination of red LEDs that are on / off / flashing.**  
**(See page 47)**

| L1                                  | L2                                  | L3                                  | L4                                  | Description  |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | In phase 0, panel M1 did not arrive at a stop after closing for 60s, cable section too weak? |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | In phase 0, panel M2 did not arrive at a stop after closing for 60s, cable section too weak? |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | In phase 0, motor M1 was not detected (not / incorrectly connected?).                        |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | In phase 0, motor M2 was not detected (not / incorrectly connected?).                        |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | In phase 1, motor M1 reached the stop after opening for less than 3s: reduce the speed.      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | In phase 1, motor M2 reached the stop after opening for less than 3s: reduce the speed.      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | In phase 1, panel M1 did not reach a stop after opening for 60s or cable section too weak?   |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  | In phase 1, panel M2 did not reach a stop after opening for 60s or cable section too weak?                     |
|  |  |  |  | In phase 1, motor M1 was not detected (contact failure, electronic card problem?)<br>Review motor connections. |
|  |  |  |  | In phase 1, motor M2 was not detected (contact failure, electronic card problem?)<br>Review motor connections. |
|  |  |  |  | Self-learning was interrupted by the user.   |

### 2.8 - PROGRAMMING REMOTE CONTROLS

It is possible to open both panels (gate) or a single panel (pedestrian) by remote control.

On a remote control, it is possible to decide which button will be used as the gate command and which button will be used as the pedestrian command.

#### 2.8.1 - PROGRAMMING WITH THE CARD

##### Note:

It is possible to programme a remote control once, then use the “copy” function that allows you to programme additional remote controls without using the electronic card, via a remote control that has already been programmed. (This is useful when additional remote controls are available for programming without having to open the electronic control box).

##### Programming a button for the GATE OPENING command:

- Press “-” for 3 seconds and L1 will switch on.
- Press **OK** and L1 and L4 will turn on alternately.
- Within the next 10 seconds, press the remote control button for memorisation.
  - If the red LEDs all turn on for 1 second, this

means that memorisation is successful.

- If the red LEDs all flash 3 times, this means that the system has waited for more than 10 seconds without receiving valid information. Restart the programming.

##### Programming a button for the Pedestrian OPENING command:

- Press “-” for 3 seconds and L1 will switch on.
- Press “+” and L1 will switch off and L2 will switch on.
- Press **OK** and L1 and L4 will turn on alternately.
- Within the next 10 seconds, press the remote control button for memorisation.
  - If the red LEDs all turn on for 1 second, this means that memorisation is successful.
  - If the red LEDs all flash 3 times, this means that the system has waited for more than 10 seconds without receiving valid information. Restart the programming.

#### 2.8.2 - COPY PROGRAMMING

From a remote control that has already been memorised, you can memorise other remote controls (“copy” function).

##### For each new remote control to be memorised, follow the procedure below

- **Stand near the motor.**
- Press simultaneously on both buttons at the bottom of the remote control already in the memory until the flashing light switches on (around 6 seconds).
- Press any button on the new remote control. The flashing light will flash 3 times and then turn off. The new remote control is now memorised (the buttons will have the same function as the original remote control).

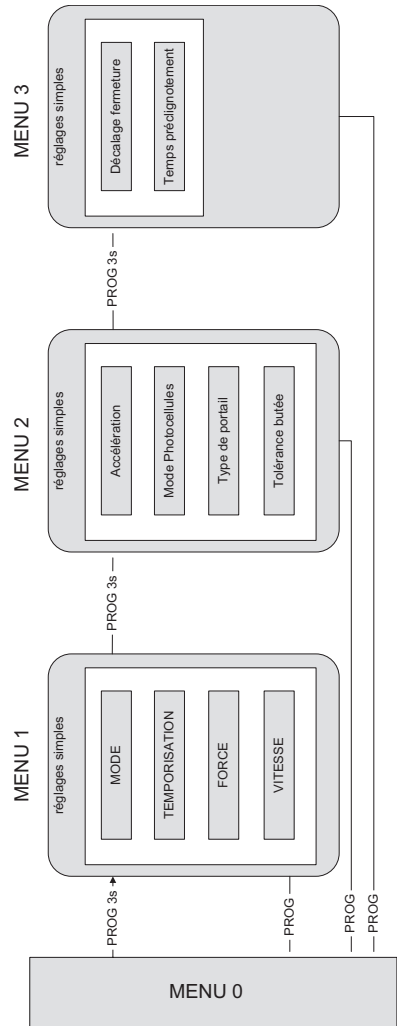
**2.8.3 - DELETING ALL REMOTE CONTROLS**

**To deprogram all the remote control buttons learnt, follow the procedure below**

- Press “-” for 3 seconds and L1 will switch on.
- Press “+” twice and L1 will turn off and L3 will turn on.
- Press **OK** and the 4 red LEDs will switch on.
- Press **OK** for 3 seconds and all the LEDs will switch off and switch on to confirm the operation.

**3 - ADVANCED SETTINGS**

Certain adjustments may be necessary in the event of a problem or for specific use of the electronic card. There are two additional menus with basic settings.



**3.1 - ACCESS TO ADVANCED SETTINGS**

(MENUS 2 AND 3)

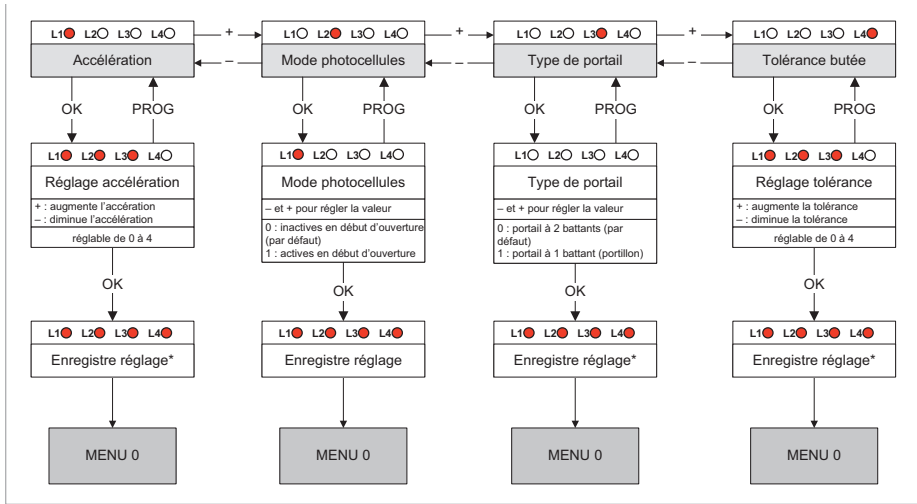
**To access menus 2 and 3, follow the procedure below**

- Press **PROG** for 3 seconds. L0 will flash once, L1 will turn on and you will be in **menu 1 (basic settings)**.

## D - BEGINNING OPERATION

- Press **PROG** again for 3 seconds. L0 will flash twice, L1 will turn on and you will be in **menu 2 (advanced settings)**.
- Press **PROG** again for 3 seconds. L0 will flash three times, L1 will turn on and you will be in **menu 3 (advanced settings)**.

### 3.2 - ADVANCED SETTINGS MENU (MENU 2)



This change requires a new self-learning procedure.

#### 3.2.1 - ACCELERATION

The acceleration at the start of the panel opening process can be adjusted from a level of 0 to 4. The higher this value, the more time the gate will take to reach its nominal speed. The default level is 3, at which the gate takes about 4 seconds to open. It may be useful to reduce the acceleration for a softer start.

#### To adjust the acceleration, follow the procedure below

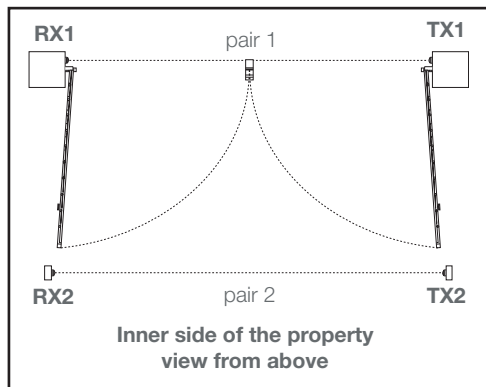
- Press **PROG** for 3 seconds. L0 will flash once and L1 will turn on.
- Press **PROG** for 3 seconds. L0 will flash twice.
- Press **OK** and the number of LEDs that turn on will indicate the set value.
- Use the “+” and “-” buttons to change this value.
- Press **OK** to confirm this value. All the LEDs will turn on and off to confirm the operation.

**NOTE:** If the acceleration setting is changed, self-learning must be repeated.

#### 3.2.2 - PHOTOCCELL MODE

The photocells are active when the panels close because they are placed between the posts (pair 1) to secure the passage between panels. The installation of a second set of photocells is useful to completely protect the gate movement area during closing and opening:

## D - BEGINNING OPERATION



In that case, the system must verify that its infrared beam is not obstructed before starting to open the panels. But by default, photocells are only tested during closure.

### To activate or deactivate photocells at the beginning of the opening process, follow the procedure below

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “**PROG**” for 3 seconds. L0 will flash twice.
- Press “**+**” once. L2 will turn on instead of L1.
- Press **OK**.
- If L1 is off, the photocells are inactive at the beginning of the opening process. Press “**+**” to activate them, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.
- If L1 is on, the photocells are active at the beginning of the opening process. Press “**-**” to deactivate them, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.

### 3.2.3 - TYPE OF GATE

To operate the electronic card on a single-panel gate, this setting must be changed. By default, this value is set to 0 (two-panel gate mode). In addition, the motor output that remains active in side gate mode is M1 (not to be confused with the pedestrian passage function).

### To activate or deactivate this function, follow the procedure below

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “**PROG**” for 3 seconds. L0 will flash twice.
- Press “**+**” twice and L3 will turn on instead of L1.
- Press **OK**.
- If L1 is off, gate mode is activated. Press “**+**” to

activate side gate mode, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.

- If L1 is on, side gate mode is activated. Press “**-**” to activate gate mode, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.

**Self-learning is required if this setting is changed.**

### 3.2.4 - STOP TOLERANCE

During self-learning, the system learns the path of each panel to determine when a panel stops if it has reached a stop or an obstacle. In fact, during a movement, if more than a certain percentage of the path remains to be completed by the panel but it comes under strain, the system considers it to be pushing against an obstacle. If the panel comes under strain when less than such percentage remains to be completed, the system considers that the panel has reached its stop. By default, this percentage is 3%.

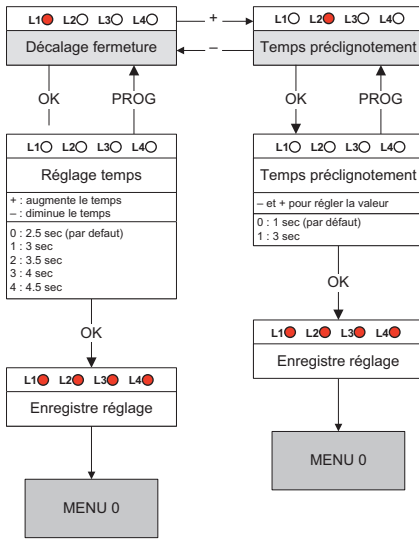
However, the accuracy of the system depends on many parameters, such as temperature, motor quality, the type of motor cables and the flexibility and weight of the gate. Depending on these parameters, the path measuring system may not be accurate enough to operate with this default tolerance. In this case, the system can trigger obstacle detection when the panels reach their normal stop. If this occurs (and after confirming that the opening and closing stops are stable), the obstacle detection tolerance must be increased.

### To adjust this tolerance level, follow the procedure below

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “**PROG**” for 3 seconds. L0 will flash twice.
- Press “**+**” 3 times. L4 will turn on instead of L1.
- Press “**OK**”, and the number of LEDs lit will then show the value set.
- Use the “**-**” and “**+**” buttons to change this value. The higher the value, the higher the tolerance level (“lower risk of obstacle detection at the stop”).
- Press **OK** to confirm this value. All the LEDs will turn on and off to confirm the operation.

**Self-learning is required if this setting is changed.**

### 3.3 - ADVANCED SETTINGS MENU (MENU 3)



- Use the “+” and “-” buttons to change this value (see table below).
- Press **OK** to confirm this value. All the LEDs will turn on and off to confirm the operation.

|                 |                    |
|-----------------|--------------------|
| L1○ L2○ L3○ L4○ | 2.5 s (par défaut) |
| L1● L2○ L3○ L4○ | 3 s                |
| L1● L2● L3○ L4○ | 3.5 s              |
| L1● L2● L3● L4○ | 4 s                |
| L1● L2● L3● L4● | 4.5 s              |

**Note:** During opening, there is also a time interval between the panel movements, but this time interval is fixed and is equal to 2.5 seconds.

#### 3.3.1 - PANEL MOVEMENT TIME INTERVAL

In general, on closing, one gate panel closes over the other. This panel is controlled by the motor connected to output M1 of the electronic card. To ensure that the panels close in the correct order, the system arranges for the panel of motor M2 to come to a stop 2.5 seconds before the panel of motor M1. If the gate is solid and exposed to the wind, panel M2 may be stopped by the wind and panel M1 may be helped by the wind on closing. In this case, panel M1 may catch up to panel M2 and the panels may close in the wrong order. If this occurs, the time interval between the panel movements during closure may be increased.

**To adjust this time interval, follow the procedure below**

- Press “**PROG**” for 3 seconds. L0 will flash once and L1 will switch on.
- Press “**PROG**” for 3 seconds. L0 will flash twice.
- Press **PROG** for 3 seconds. L0 will flash 3 times.
- Press “**OK**”, and the number of LEDs lit will then show the value set.

### 3.3.2 - PRE-FLASHING TIME

---

**The flashing light is an important safety component.** It starts when a command to set the gate in motion is received by the electronic card. The gate is set in motion around one second after a command is received.

In certain use cases, it is better that the time between receiving a motion command and the start of the manoeuvre is longer. It is possible to increase this time to 3 seconds.

**To set the pre-flashing time, follow the procedure below**

- Press **"PROG"** for 3 seconds. L0 will flash once and L1 will switch on.
- Press **"PROG"** for 3 seconds. L0 will flash twice.
- Press **PROG** for 3 seconds. L0 will flash 3 times.
- Press **"+"** once. L2 will turn on instead of L1.
- Press **OK**.
- If L1 is off, the time is 1 second. Press **"+"** to increase it to 3 seconds, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.
- If L1 is on, the time is 3 seconds. Press **"-"** to reduce it to 1 second, then **OK** to confirm. All LEDs will turn on and off to confirm the operation.

### 1 - WARNINGS

---

A automatic gate opening mechanism is a product that can cause injury to people and animals and damage to property. Our motorised gate as well as its installation and user guides were designed to remove all hazardous situations.

Avidsen cannot be held liable for any installation or use that does not comply with the instructions and causes damage. It is essential to read the instructions carefully before using your motorised gate and to keep these instructions for any later use.

#### General Safety Obligations

- This device may be used by children 8 years of age or older and by persons with reduced physical, sensory or mental abilities or a lack of experience or knowledge, if they are properly supervised or if instructions on the safe use of the device have been provided to them and the possible hazards have been understood. Children must not play with the device. Cleaning and maintenance by the user should not be performed by unattended children.
- All potential users must be instructed in the use of the motorised gate by reading this user guide.
- No untrained person (child) must set the gate in motion using the fixed (key selector) or portable (remote control) devices.
- Prevent children from playing near or with the motorised gate.
- Do not deliberately stop the moving gate, except of course with a control device or for an emergency stop.
- Prevent any natural obstacles (branches, stones, high grass, etc.) from hindering the gate's movement.
- Do not manually operate the gate when the motors are not disassembled.
- Before setting the gate into motion, ensure that there is no person in the area in which the gate moves (children, vehicles, etc.).
- In the event of a malfunction, disassemble the motors to allow passage and contact your installer.

Do not attempt to fix the product yourself.

- Do not alter or add components to the system without discussing it with the installer.

### 2 - OPENING/CLOSING

---

The gate can be controlled from a programmed remote control, a programmed wireless code keypad or a wired control device.

### 3 - TYPE OF COMMAND

---

There are two types of command to manoeuvre the gate:

#### • Gate control



#### • Pedestrian control



- The gate control controls the opening, stopping and closing of both panels.
- The pedestrian control is used to control the opening, stopping and closing of the panel driven by motor M1.
- The pedestrian control can also be used to stop the two panels.
- The pedestrian control cannot be used to close M1 if M2 is not fully closed.

### 4 - OPERATING MODES

---

The operating mode is set by following the instructions in the "OPERATING MODE" section.

### 4.1 - "SEMI-AUTOMATIC CLOSING" MODE

---

Description of operation from the closed gate position:

#### To open the gate:

- Activate the complete (or partial) opening command.
- The flashing light will flash (1 flash per second).
- 1 second later, panel M1 starts opening.
- 2.5 seconds later, panel M2 starts opening.
- Both panels open up to their opening stop.
- When both panels have reached their opening stop, the flashing light will stop flashing and the manoeuvre will be complete.

#### To close the gate:

- Activate the complete or partial opening command.
- The flashing light will flash (1 flash per second).
- 1 second later, panel M2 starts closing.
- A few seconds later, panel M1 starts closing.
- Panel M2 reaches its closing stop.
- Some time later (2.5 seconds by default, but this time can be adjusted), panel M1 reaches its closing stop.
- The flashing light will stop flashing and the manoeuvre will be complete.

At any time, you can stop the gate's movement by activating a command (total or partial). If you activate the gate control again, the gate will start in the opposite direction.

### 4.2 - "AUTOMATIC CLOSING" MODE

---

Description of operation from the closed gate position; the photocells must be operational:

- Activate the complete opening command.
- The flashing light will flash (1 flash per second).
- 1 second later, panel M1 starts opening.
- 2.5 seconds later, panel M2 starts opening.
- Both panels open up to their opening stop.
- 1 second later, panel M2 starts closing.
- A few seconds later, panel M1 starts closing.
- Panel M2 reaches its closing stop.
- Some time later (2.5 seconds by default, but this time can be adjusted), panel M1 reaches its closing stop.
- The flashing light will stop flashing and the manoeuvre will be complete.

At any time, you can stop the gate's movement by activating a command (total or partial). If you activate the gate control again, the gate will start in the opposite direction. If you activate a command during the time delay, it will be stopped and automatic closure will be cancelled.

### 4.3 - "COLLECTIVE" MODE

---

Operation is identical to "automatic closure" mode, except:

The photocells must be operational.

- You cannot stop the gate from opening, either with the complete or partial opening command.
- If you activate the complete opening command during the time delay, it is reloaded with the initial time to extend the time before automatic closure.
- If you activate the complete opening command during closure, the gate will stop and open again and the time delay before automatic closure will start.
- The partial opening command is inoperative.

### 5 - PHOTOCELLS

---

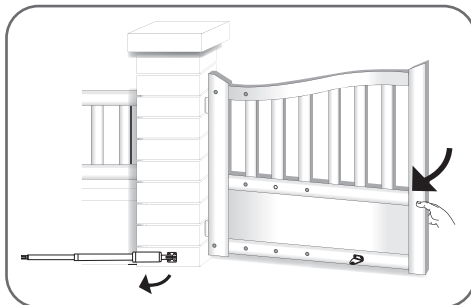
- During closure, if an object or a person obstructs the infrared beam between the two photocells, the gate will stop and start opening again. If automatic closure is activated, the time delay will start. If at the end of the time delay, the photocell beam is cut, the gate will wait for the beam to be released before closing again. If after 3 minutes, the beam has still not been released, automatic closure will be cancelled, the system will go on standby.
- Photocells can also be active at the beginning of the opening process (this is useful if a second set of photocells is installed - see "Advanced Settings (Menu 2)").
- If this is not the case and the beam is obstructed when the gate should start to open, the flashing light will emit double flashes for 30 seconds unless a command is activated. For the gate to be able to open, the beam must be unobstructed and a command must be activated.

### 5.1 - OBSTACLE DETECTION

---

During their movement, the panels may encounter an obstacle.

- For safety purposes, if the motors are under too much strain (the force is adjustable; see “Motor Force” in the settings), the gate stops and releases the pressure and the flashing light emits double flashes for 30 seconds unless a command is activated.
- On activating a command (the same one that was used to start the movement), the gate starts to move in the opposite direction.
- If the gate has a large area of wind resistance, this can trigger obstacle detection in windy weather. In this case, increasing the motor force is recommended.



### 6 - MANUAL MOVEMENT

---

In order to manually manoeuvre the gate, just remove the pin from the gate mounting bracket and remove the pin to disengage the operator arm. The gate can then be opened manually.

**Warning: When the motors are disengaged, the gate may be set in motion by the wind or an external push. It is therefore important to be careful or block the gate to avoid any risk of injury.**

Just remove the pin and raise the operator arm. The gate can therefore be opened manually during a power failure.

7 - OPTIONAL ACCESSORIES

(photo not contractually binding)



## F - MAINTENANCE AND UPKEEP

### 1 - MAINTENANCE WORK

Maintenance work must be carried out by the installer or a qualified individual to guarantee the installation's operation and safety.

The number of maintenance and upkeep operations must be proportional to the frequency the motorised gate is used.

**For use of about 10 cycles per day, it is necessary to provide:**

- maintenance of the mechanical parts every 12 months: tightening screws, lubrication, checking the hinges, stops and gate balance, etc.
- maintenance of the electronic parts every 6 months: engine operation, photocells, control devices, etc.

**Warning:** The warranty may be voided if the motor drive and gate are not checked regularly.

**Important: All the installation or maintenance operations must be performed with the motor drive disconnected from electrical power supply.**

If the disconnection device is not visible where the motor drive is located, before starting work, you must attach a sign to the disconnection device. The first check must be carried out 1 month after installation, to check that all the instructions have been followed.

#### Points to check:

- The water inputs (the product is intended for outdoor use, however, incorrect positioning of the lid, the holes made to run the cable, or an incorrectly positioned grommet... can damage the product). Any trace of infiltration must be eliminated (if silicone is used, do not use an acetic acid-based silicone (smells like vinegar)).
- Traces of external items (Insects can sometimes find refuge in the fixed parts. Their presence must be eliminated and the possible entrances closed off).
- The 1st month of use already gives a good idea of the motorised gate's operation.

The following checks must be performed each time the season changes:

|   | SPRING   | SUMMER                         | AUTUMN                                 | WINTER                                |
|---|--|--------------------------------|--|---------------------------------------|
| Lubricate the hinges*...  | ... that have been washed away by rain         | ... that are clogged with dust | ... that have been washed away by rain | ... that are subject to frost or snow |
| Lubricate all moving parts on the motor drive                               | x  | x                              | x                                      | x                                     |
| Remove all obstacles that could block the movement of the gate              | Grass, stones, etc.                            | Grass, stones, etc.            | Dead leaves, grass, stones etc.        | Stones, snow, etc.                    |
| Check the safety features   | Amperage detection, emergency stop, Photocells |                                |  |                                       |
| Check that dangerous areas (shearing, crushing, etc.) are always protected  | x  | x                              | x                                      | x                                     |
| Check the alarms (flashing signal)  | x  | x                              | x                                      | x                                     |
| Check the settings** (force, reaction time, sensitivity)                    | x  | x                              | x                                      | x                                     |
| Check the condition of the electronic card (removal of dust, insects, etc.) | x  | x                              | x                                      | x                                     |
| Check the controls (intercoms, keypad, push button)                         | x  | x                              | x                                      | x                                     |

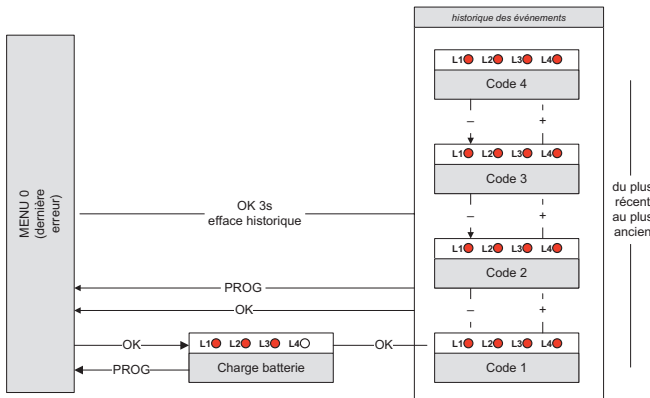
|   |   |   |   |   |
|---|---|---|---|---|
| Check the batteries of the remote controls                    | x | x | x | x |
| Check the motor support (deformation, etc.) and the fasteners | x | x | x | x |

\* do not use grease, as it tends to attract dust or dirt

\*\* please note that adjustments made in summer may need to be changed according to the season (more wind in autumn, frost in winter, etc.)

### 2 - OPERATING INDICATORS

This system has two operating indicators: the battery charge level (optional) and the history of events.



#### 2.1 - HISTORY OF EVENTS AND ERROR CODES

- During operation, events may occur that may be malfunctions of the motor drive or consequences of user actions.
- Each event has a different code.
- This code is displayed by a combination of red LEDs that are on, off or flashing on the MENU 0 display.
- When OK or PROG are pressed, this code is deleted. However, the last 4 codes generated are memorised, and can be viewed in a history.
- To access them, press OK twice, then use the “+” and “-” buttons to scroll through the memorised codes.

To diagnose any problems, here is the list of codes and their meaning:

: LED off

: LED on

: Flashing LED light

## F - MAINTENANCE AND UPKEEP

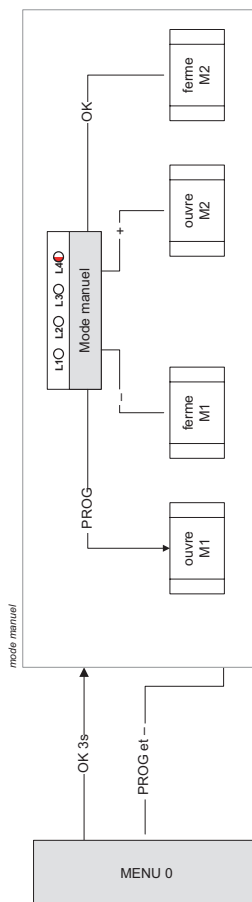
**There are two types of code:** Error (E) or Information (I). N.B. an error requires action from the installer to correct the motor drive problem.

| L1                                  | L2                                  | L3                                  | L4                                  | MEANING  | TYPE |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | An obstacle has been detected in M1 when closing.  | I    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | An obstacle has been detected in M2 when closing.  | I    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | The photocell beam has been obstructed.  | I    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | An obstacle has been detected in M1 when opening.  | I    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | An obstacle has been detected in M2 when opening.  | I    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Motor M1 is not connected or incorrectly connected (contact failure). Check connections.   | E    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Motor M2 is not connected or incorrectly connected (contact failure). Check connections.   | E    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | The maximum operating time has been reached (a motor is idle and the stop has not been reached?). Check that the motor is engaged.   | E    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Panel M1 closed before panel M2. Increase the time interval between the movement of both panels.   | E    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Three obstacles detected in a row during opening. Check the gate movement area.  | E    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | Three obstacles detected in a row during closing. Check the gate movement area.  | E    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | The main power supply has been cut during a movement phase OR the battery is too weak for proper operation.  | E    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Self-learning is not valid (it was never performed or a setting that requires repetition of self-learning has been changed). Start self-learning.  | E    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Automatic closure has been cancelled. Generated if the gate re-opens 3 times (10 in collective mode) after a photocell has been obstructed during automatic closure OR if the beam was obstructed for more than 3 minutes. | E    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | The gate control input (2B) is permanently earthed. Check the connections.   | E    |

### 2.2 - MANUAL CONTROL

The panels can be manoeuvred without any prior programming, for example during motor installation.

- To enter manual mode, press OK for 3 seconds. LED L4 will flash.
- Press and hold the button for the desired movement.



- PROG and “+” can be pressed simultaneously, for example, to open both panels at the same time.
- To exit, press PROG and “-” simultaneously (press and release).

- Otherwise, after a minute with no action on a button, the system will automatically exit manual control.

In addition, in this mode, LEDs L1 and L2 are used to test the status of the photocell inputs (PHO) and wired control (2B):

If photocells are connected, LED L1 will be on if the infrared beam is unobstructed.

If a wired control device is connected to input 2B, LED L2 turns on when the contactor of the component is activated.

### 2.3 - TOTAL RESET

You can reset to factory settings.

- To do so, press “-” and “+” and OK at the same time for 8 seconds until an LED display appears. All the settings now have their default value and you must redo the self-learning.

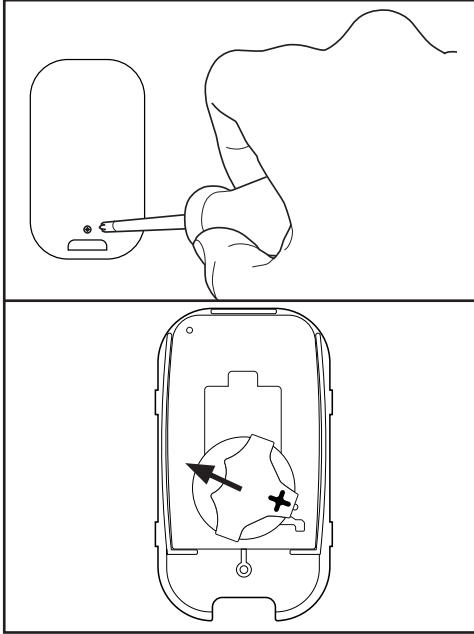
However, this procedure does not delete the remote controls from the memory.

### 2.4 - REPLACING THE REMOTE CONTROL BATTERY

When the remote control range is very reduced and the red indicator is weak, this means that the remote control battery will soon run out.

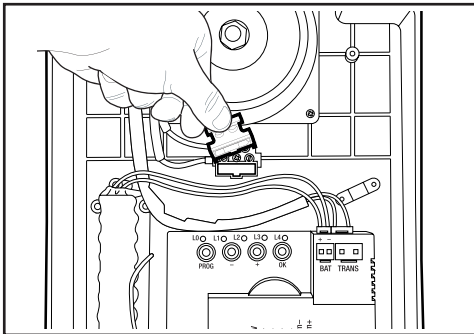
The remote control takes CR2032 batteries. Replace the battery with a battery of the same type as originally used.

- With a Philips screwdriver, remove the 3 screws behind the remote control.
- Open the remote control and remove the batteries.
- Insert the new batteries, respecting the polarity.
- Close the remote control and screw in the fastening screws.



### 2.5 - REPLACING THE POWER FUSE

- Switch the motor drive off.
- Use a 250V 5A time-delay fuse



## G - TECHNICAL AND LEGAL INFORMATION

### 1 - TECHNICAL CHARACTERISTICS

The technical characteristics are provided as an indication only and for a temperature of +20°C. The company Avidsen reserves the right to modify these characteristics at any time, while under all circumstances guaranteeing these products' smooth operation and the type of use intended, in an aim to improve these products.

| MOTORS                        |   |
|-------------------------------|---|
| Type                          | 24 VDC motors, reduction gear, type: telescopic |
| Power supply                  | 24 VDC  |
| Nominal force                 | 2200N   |
| Speed at rated torque         | 2cm/sec   |
| Consumption at rated strength | 3A  |
| Cable                         | 50cm. 2 x 0.75 mm <sup>2</sup> section cables   |
| Assigned operating duration   | 10 minutes                                      |
| Maximum number of cycles/day  | 50  |
| Operating temperature         | -20°C/ +60°C                                    |
| Protection rating             | IP44  |

| ELECTRONIC CONTROL BOX                         |   |
|--|---|
| Type   | Electronic control box for 2 x 24 VDC motors  |
| Contents                                       | 1 AVLO electronic card, 1 x 230 / 24 VAC transformer  |
| Power supply                                   | 230 VAC / 50 Hz or 24 VDC   |
| Maximum assigned power                         | 120W  |
| Motor output (- M1 + / - M2 +)                 | 2 outputs for 24 VDC motor<br>- Maximum output current at start for 3s = 10A.<br>- Maximum output current after start = 10A |
| Flashing light output (- Warn +)               | Flashing controlled by the electronic card.<br>For flashing light with LED, 24V/10W maximum                                 |
| +24 VDC power output (+24 V/GND)               | To power the photocells. 3.3W maximum   |
| Photocell input (GND/PHO)                      | Input for dry contact that is normally closed   |
| Input for control device (2B / GND) "2 panels" | Input for dry contact that is normally open (closing the contact triggers a command to set the gate in motion or stop it)   |

## G - TECHNICAL AND LEGAL INFORMATION

|  |   |
|--|---|
| Antenna input (ANT/GND)                                | 50 Ohm  |
| Remote control option for:                             | - The gate<br>- Pedestrian access                             |
| Number of remote control buttons that can be memorised | 15 with 1 gate command button and 1 pedestrian command button |
| Operating temperature                                  | -20°C/+60°C   |
| Protection rating                                      | IP44  |

### FLASHING LIGHT

|                       |   |
|-----------------------|---|
| Type                  | LED lighting 2W max<br>Flashing controlled by the electronic card |
| Power supply          | Max supply voltage: 24 VDC  |
| Operating temperature | -20°C/ +60°C  |
| Protection rating     | IP44  |

### REMOTE CONTROL

|                       |  |
|-----------------------|--|
| Type                  | Type: OOK AM modulation. 16-bit Rolling code encoder (i.e. 65,536 possible combinations) |
| Frequency             | 433.92MHz  |
| Power supply          | 3V, CR2032 battery   |
| Keys                  | 4 keys   |
| Radiated power        | < 10mW   |
| Battery life          | 2 years at a rate of 10 x 2s uses per day  |
| Operating temperature | -20°C/+60°C  |

### 2 - WARRANTY

- This product is guaranteed for parts and labour for 3 years from the date of purchase. Proof of purchase must be retained for the duration of the warranty period.
- The warranty does not cover damage caused by negligence, knocks or accidents.
- The parts of this product must not be opened or repaired by any persons not employed by Avidsen.
- The warranty will be void if the device is tampered with.
- Your motor drive benefits from a 10-year warranty against corrosion. This warranty covers perforation caused by corrosion (excluding fasteners, motor brackets and electronic components). This warranty covers motor drive failure caused by corrosion.

### 3 - HELP AND SUGGESTIONS

- If, despite the care we have taken in designing our products and drafting these instructions, you do encounter difficulties when installing your product or you have any questions, we recommend you contact one of our specialists who will be glad to help.
- If you encounter operating problems during the installation or a few days afterwards, it is essential that you are in front of your installation when contacting us, so that one of our technicians can diagnose the source of the problem, as it will probably be the result of a setting that is incorrect or an installation that is not to specification.

Contact our after sales service team technicians:

**0 892 701 369**

**Monday to Friday, 9pm to 12pm, and 2pm to 6pm.**

### 4 - PRODUCT RETURNS - AFTER SALES SERVICE

If, despite the care we have taken in designing and manufacturing your product, it needs to be returned to our customer service centre.

Avidsen undertakes to keep a stock of spare parts for this product throughout the contractual warranty period.

### 5 - EU DECLARATION OF CONFORMITY

Avidsen declares, under its sole responsibility, that the equipment with reference number 114170 complies with the applicable Union harmonisation legislation. Its conformity has been assessed pursuant to the applicable standards in force:

- Directive RED 2014/53/EU

EN 300220-1 V3.1.1

EN 300220-2 V3.2.1

- Directive LVD 2014/35/EU

EN 60335-1:2012 + A11:2014 + A13:2017 +

A1:2019 + A14:2019 + A2:2019

EN 60335-2-103:2015

EN 62233:2008

EN 62479:2010

- Directive EMC 2014/30/EU

EN 301489-1 V2.2.3

EN 301489-3 V2.1.1

Avidsen declares, under its sole responsibility, that the remote control included in the 114170 kit complies with the applicable Union harmonisation legislation. Its conformity has been assessed pursuant to the applicable standards in force:

- Directive RED 2014/53/EU

EN 300220-1 V3.1.1

EN 300220-2 V3.2.1

- Directive LVD 2014/35/EU

EN 62479:2010

EN 62368-1:2014 + A11:2017

- Directive EMC 2014/30/EU

EN 301489-1 V2.2.3

EN 301489-3 V2.1.1

The above-mentioned products comply with the RoHS 2011/65/EU Directive and delegated directive 2015/867/EU.

Signed by Alexandre Chaverot, CEO, on behalf of Avidsen

19 avenue Marcel Dassault, 37200 Tours, France  
Tours, 21/02/2022




avidsen

Avidsen  
19 avenue Marcel Dassault - ZAC des Deux Lions  
37200 Tours - France