



TEHA 410

MOTOR DRIVE KIT

With actuators – For two-panel swing gates

Ref. 114173

EN



24V



SWING
GATE



1.75M
PER PANEL



150KG
PER PANEL



COMPATIBLE WITH
WITH ALL TYPES
OF OPENWORK
GATES



SOLAR
OPTION



BACKUP BATTERY
OPTION



BACKUP BATTERY
SMARTPHONE
COMPATIBLE

CONTENTS

A - SAFETY INSTRUCTIONS

1 - OPERATING PRECAUTIONS	04
2 - INSTALLATION PRECAUTIONS	04
3 - MAINTENANCE AND CLEANING	05
4 - RECYCLING	05

B - PRODUCT DESCRIPTION

1 - KIT CONTENTS	06
2 - EQUIPMENT REQUIRED (NOT INCLUDED)	06

C - INSTALLATION

HAZARD ANALYSIS	07
1 - ELIMINATING RISKS	08
2 - INSTALLING ACTUATORS	09
2.1 - maximum opening angle	10
3 - INSTALLING THE SWITCHGEAR	14
4 - INSTALLING THE FLASHING LIGHT	15
5 - INSTALLING THE SET OF PHOTOCELLS	16
6 - CONNECTIONS	18
6.1 - The mains electricity	19
6.2 - Actuators	20
6.3 - Flashing light	20
6.4 - Photocells	20
6.5 - Control parts (optional)	21
6.6 - Backup battery (optional ref. 114257V)	21
6.7 - solar power kit (optional ref. 114375)	21

D - BEGINNING OPERATION

1 - SETTINGS INTERFACE	22
2 - QUICK SETTINGS	22
2.1 - Self-learning	22
2.2 - Adding remote controls	23
2.2.1 - Programming with the card	24
2.2.2 - Copy programming	24
2.3 - DELETING ALL REMOTE CONTROLS	24
3 - ADVANCED SETTINGS	25
3.1 - Menu 1	26
3.1.1 - Operating mode (automatic or semi-automatic closing)	27
3.1.2 - Time delay (for automatic mode)	27
3.1.3 - Motor force	28
3.1.4 - Motor speed	28
3.2 - Menu 2	28
3.2.1 - Acceleration/deceleration at end of travel	29
3.2.2 - Photocell mode	29
3.2.3 - Type of gate	29
3.2.4 - Stop tolerance	30
3.3 - Menu 3	30
3.3.1 - Closing time interval	30
3.3.2 - Pre-flashing time for the flashing light	31



E - USE

1 - WARNINGS	32
2 - OPENING/CLOSING	32
2.1 - Type of command	32
2.2 - Operating modes	32
2.2.1 - "Semi-automatic closing" mode	32
2.2.2 - "Automatic closing" mode	33
2.2.3 - "Collective" mode	33
2.3 - Photocells (if installed)	33
2.4 - Obstacle detection	33
2.5 - Manual movement	34
3 - OPTIONAL ACCESSORIES	34

F - MAINTENANCE AND UPKEEP

1 - MAINTENAINCE WORK	35
2 - OPERATING INDICATORS	35
2.1 - HISTORY OF EVENTS AND ERRORS CODES	36
2.2 - Manual control	37
2.3 - Total reset	37
3 - DEMOLITION AND DISPOSAL	37
3.1 - REPLACING THE BATTERY IN THE REMOTE CONTROL	38

G - TECHNICAL AND LEGAL INFORMATION

1 - TECHNICAL CHARACTERISTICS	39
2 - WARRANTY	42
3 - HELP AND ADVICE	42
4 - PRODUCT RETURNS/AFTER-SALES SERVICE	42
5 - DECLARATION OF CONFORMITY	42

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 against surges 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 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.

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.

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 used batteries/accumulators at local waste treatment centres (centres for sorting recyclable materials), which are required to accept 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! In the event that a battery is swallowed, 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!

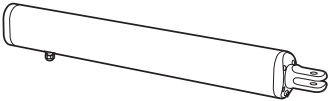
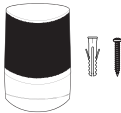
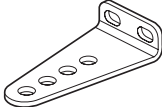


This logo denotes that devices no longer in use should not be disposed of as household waste. as they are likely to contain hazardous substances which are dangerous to both health and the environment. Return the equipment to your local distributor or use the recycling collection service provided by your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



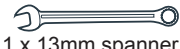
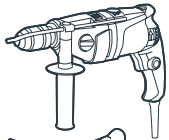
B - PRODUCT DESCRIPTION

1 - CONTENTS OF THE KIT

1 x2	2 x1	3 x1	4 x2
			
5 x1	6 x2	7 x4	
			
1 Actuator	4 Remote control		
2 Switchgear	5 Photocells		
3 Flashing light	6 Gate mounting bracket		
	7 Post mounting bracket		

2 - EQUIPMENT REQUIRED (NOT INCLUDED)

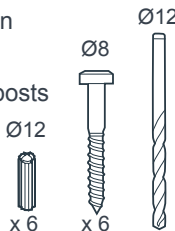
The tools and screws required for the installation must be in good condition and compliant with applicable safety standards.



Allen key 2



Installation
of the
brackets
onto the posts



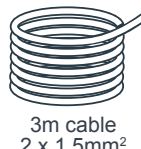
Installation
of the switchgear
onto the post



Installation
of the actuators
onto the gate



Installation
of the flashing
light



3m cable
2 x 1.5mm²



10m cable
2 x 0.5mm²

HAZARD ANALYSIS

REGULATION

Installation of a motorised gate or a motor drive on an existing gate within the framework of "Residential" type use must be compliant with directive 89/106/EEC concerning building products.

The reference standard used to check this compliance is EN 13241-1 which refers to EN 12453, which specifies 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 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 photocell type safety devices and their correct operation must be checked every six months.

SPECIFICATIONS OF THE GATE TO MOTORISE

This motor drive can automate openwork swing gates up to **1.75 m** wide and **2.20 m** high and weighing up to **150 kg**.

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.

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.

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.

1 - ELIMINATING HAZARDS

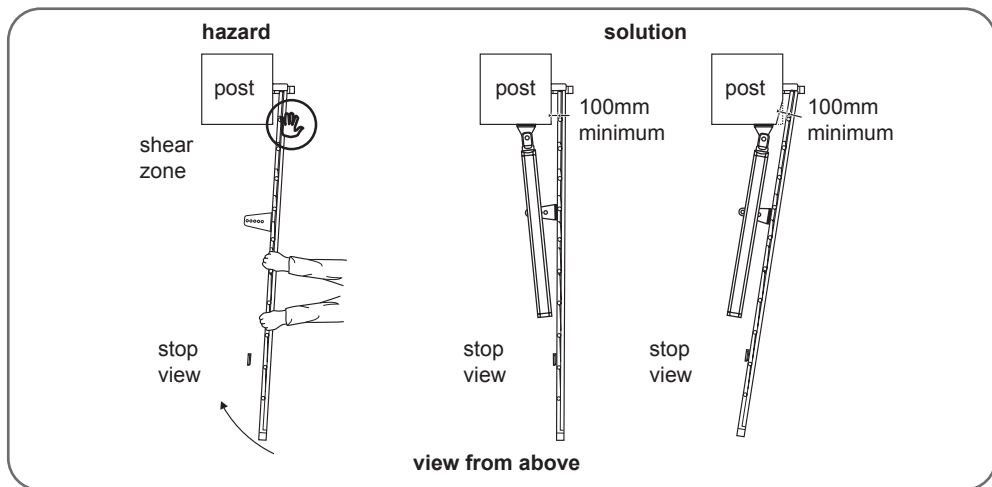
The hazards posed by a two-panel motorised gate, as well as the adapted solutions to eliminate those hazards, are as follows:

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 100mm either by positioning the side stops accordingly or by notching the corner of the posts without weakening them, or both if necessary.

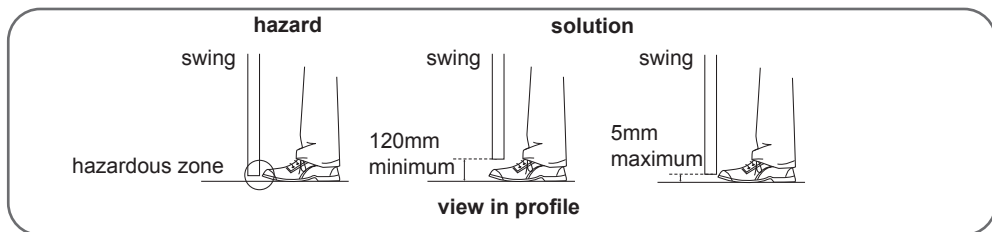
If this is not possible, the hazard must be clearly reported.



Bottom edges

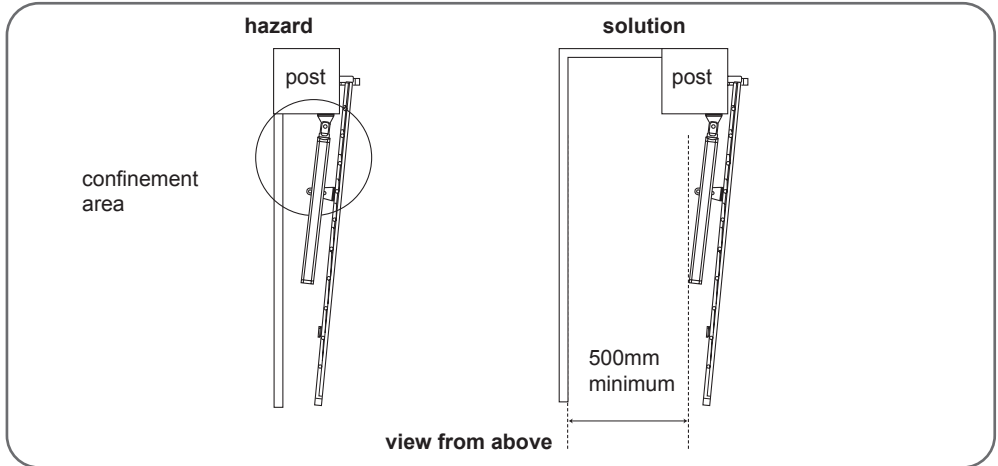
Following installation, there may be a dangerous zone for toes between the bottom edge of the gate and the ground, as indicated in the following figure.

In this case, this area must be removed leaving a working distance of minimum 120mm 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 1.5m 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.

2 - INSTALLING ACTUATORS

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.

• Stops (not supplied)

This gate motor drive is a self-locking motorisation system. Your two-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.

C - INSTALLATION

2.1 - MAXIMUM OPENING ANGLE

The installation of the actuators 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).

Normal case

- If $D < 170\text{mm}$

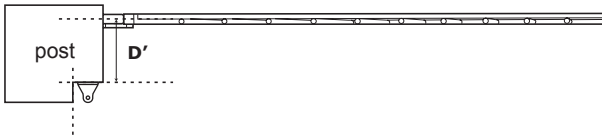
distance D



view from above

Special cases

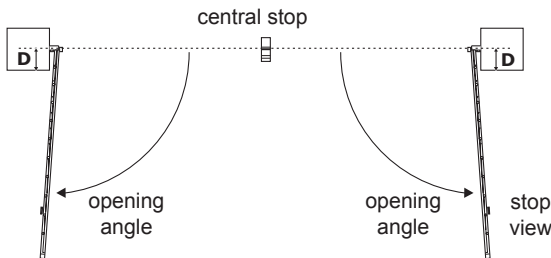
- If $D > 150\text{mm}$ and if the structure of the posts allows, the posts must be cut so that D' is equal to 150mm.



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

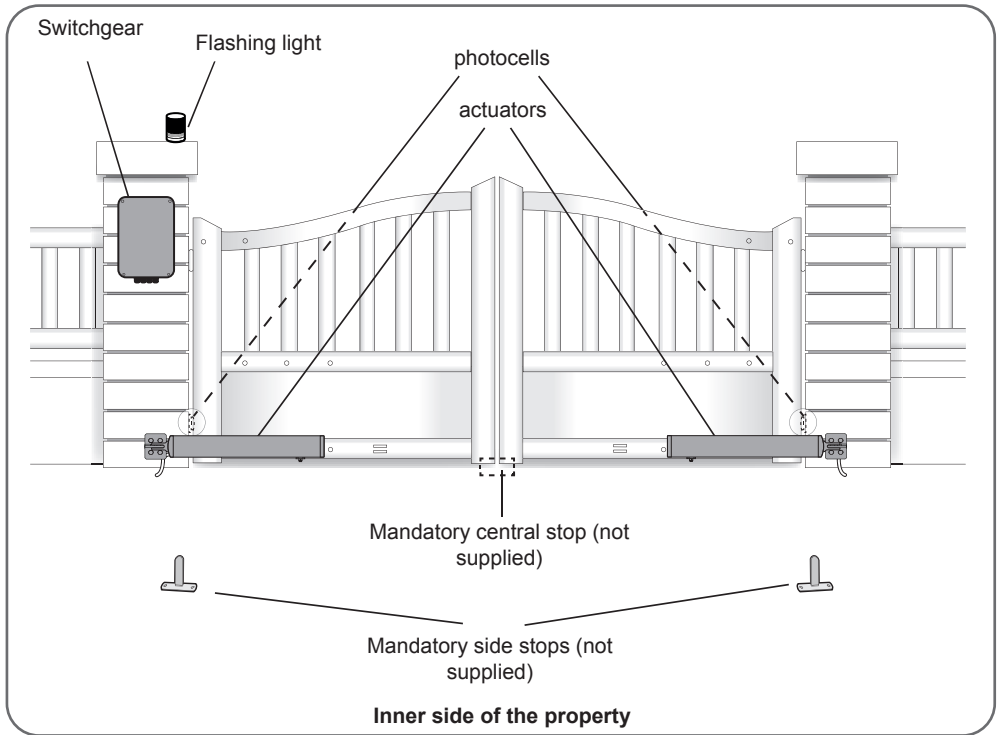


Determine the opening angle of each panel based on the data in the following table.
The opening angle may be different for each panel but must never be less than 40° .



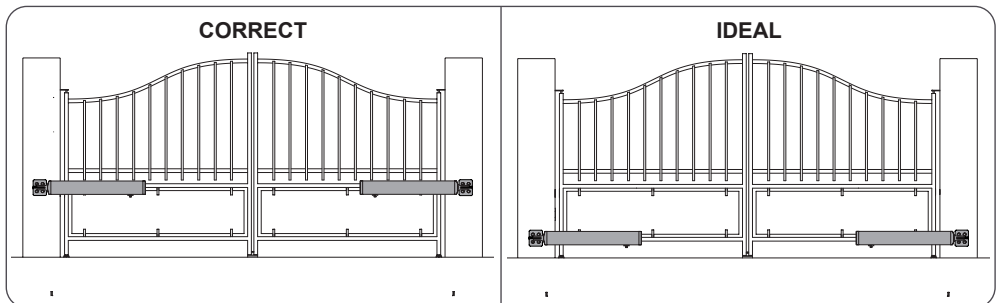
For opening up to	Distance D (in mm)
90°	from 0 to 150 max
100°	from 0 to 60 max
110°	from 0 to 30 max
120°	from 0 to 10 max

Overview



Attaching the post mounting bracket

Mount the actuators 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.

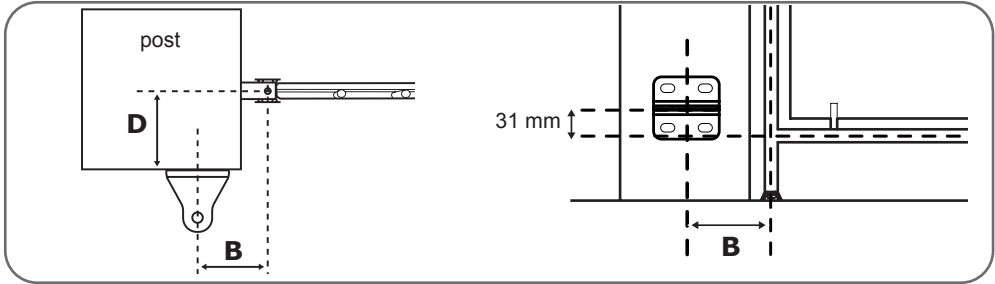


The instructions below describe installation of the left actuator; to install the right actuator, repeat the process while respecting the symmetry.

- 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 actuator will be mounted on the mounting bracket on the gate.

C - INSTALLATION

- The height of the centre of the mounting bracket must be the same as the centre of the gate frame on which the actuator is mounted.



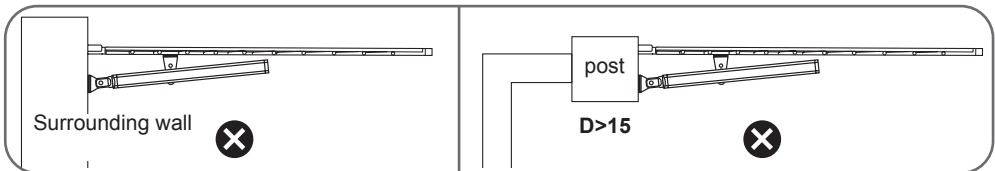
A motorised gate system must be installed within clearly defined installation distances, to ensure that it operates optimally and safely.

If the motors are not installed in accordance with the table below, problems with your actuator may arise:

- failure to drive the panels correctly (small opening angle, obstacles detected by the card, erratic operation, etc.)
- failure to keep the panels closed properly
- destruction of one or more motor components
- failure to comply with the values defined in standard NF-EN 12453 leading to significant material or physical damage

Any incorrect installation resulting in malfunction, destruction or premature wear of the device will not be covered by the warranty.

Avidsen will not provide any technical assistance until the motorisation installation has been brought into compliance.



D (mm)	B (mm)	max angle (°)
0	180	120°
10	180	120°
20	170	110°
30	170	110°
40	160	100°
50	160	100°
60	160	100°
70	155	95°

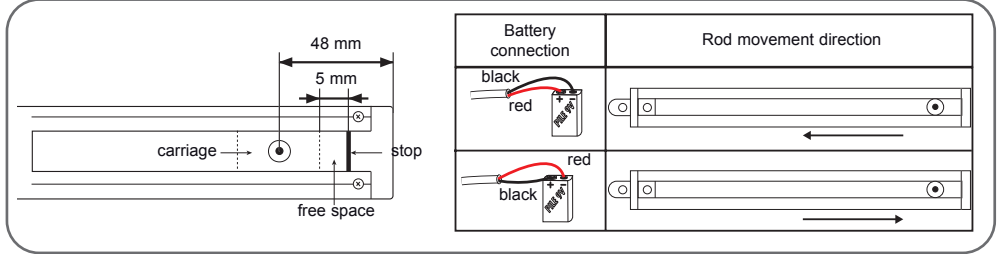
D (mm)	B (mm)	max angle (°)
80	155	95°
90	155	95°
100	150	95°
110	145	95°
120	140	90°
130	130	90°
140	130	90°
150	125	90°

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.

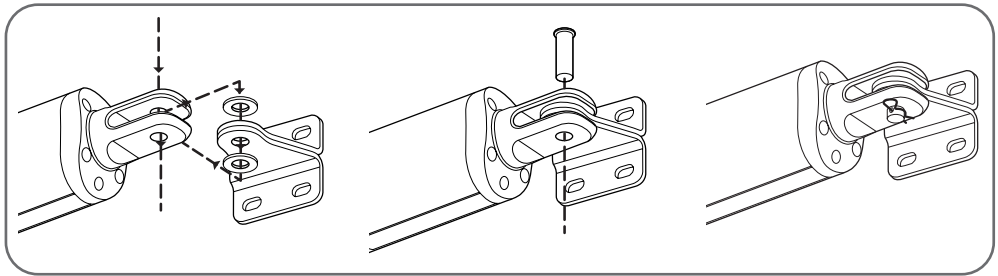
Please note: there will be significant force on the mounting bracket when the motor drive is running. We recommend sealing threaded rods at least 15 cm in length. If the post is made of metal, we recommend welding or passing the threaded rods through to secure them with self-locking nuts. Consult a professional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

Turn the actuator over and make sure the carriage rod is about 5mm from the opposite end of the motor. Otherwise, move the carriage using a 9V LR61 battery. The motors can also be connected to the electronic card (see connection section) and manual mode can be started in order to power the motors while adjusting the position of the carriage.

Please note: It is very important to follow this step otherwise the gate may not fully open or close properly!



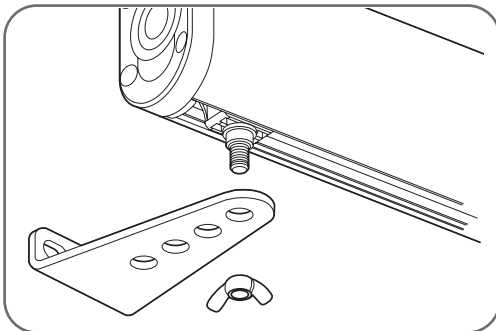
Assemble the actuator rotation axis with the post mounting bracket



Using a butterfly screw, assemble the gate mounting bracket with the actuator.

STEP 1:

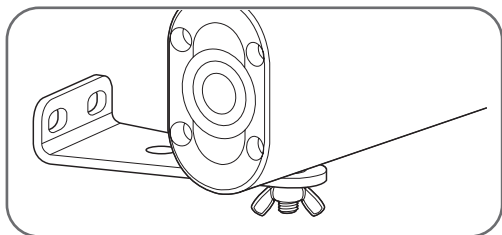
Use the 9 V battery to move the "carriage" to the end of the actuator, then back 0.5 to 1 cm inwards



STEP 2:

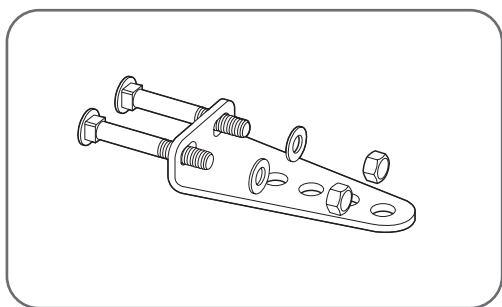
Close the gate by pressing it securely against its central stop, then rotate the actuator in order to install the base of the gate mounting bracket onto the gate. Use the butterfly screw to fit the gate mount under the actuator.

Important: The two marks should be at the middle of the rigid part of the gate so that the actuator is completely horizontal.



STEP 3:

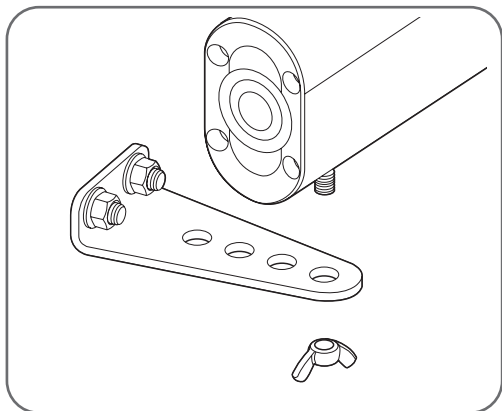
Set the mount flush against the gate and mark the position of the mounting holes



STEP 4:

Keep only the mount and fix it to the gate using the appropriate fasteners

Considerable force is applied to the gate bracket during operation. To prevent the gate bracket from being pulled off, use suitable fasteners (rivets/threaded inserts or through bolts)



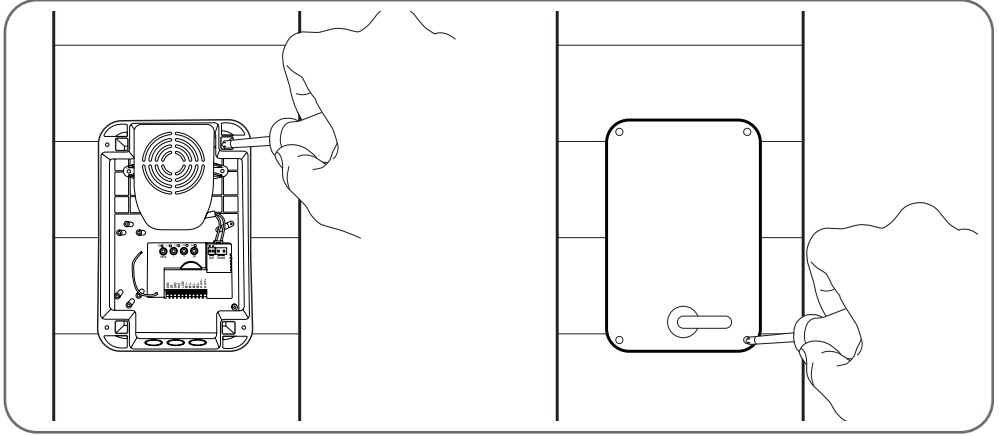
STEP 5:

Use the butterfly screw to reattach the actuator on the mount

3 - 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 actuator cables must not exceed 8 m per actuator. Therefore, the switchgear must be mounted less than 6 m from each actuator.
- Use two screws to install and mount the switchgear in the defined location.

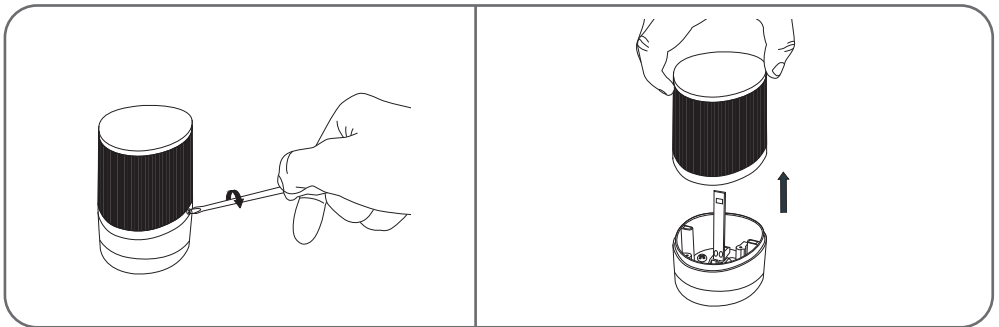


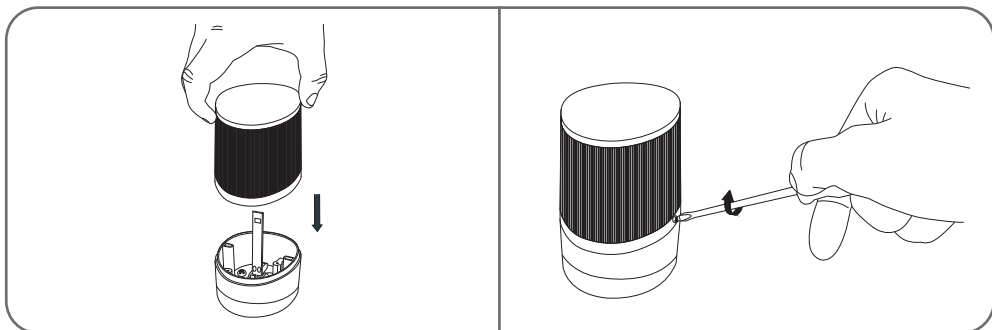
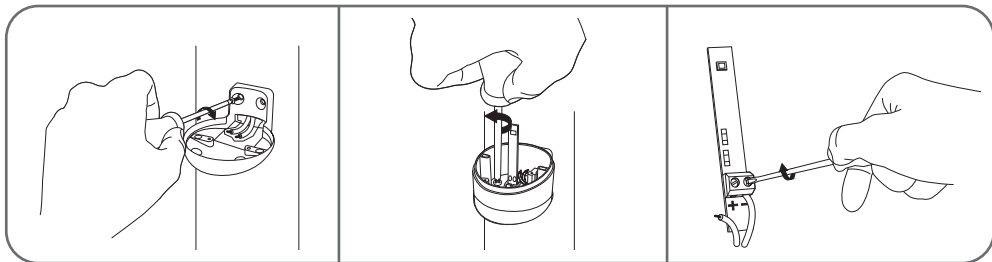
4 - INSTALLING THE FLASHING LIGHT

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

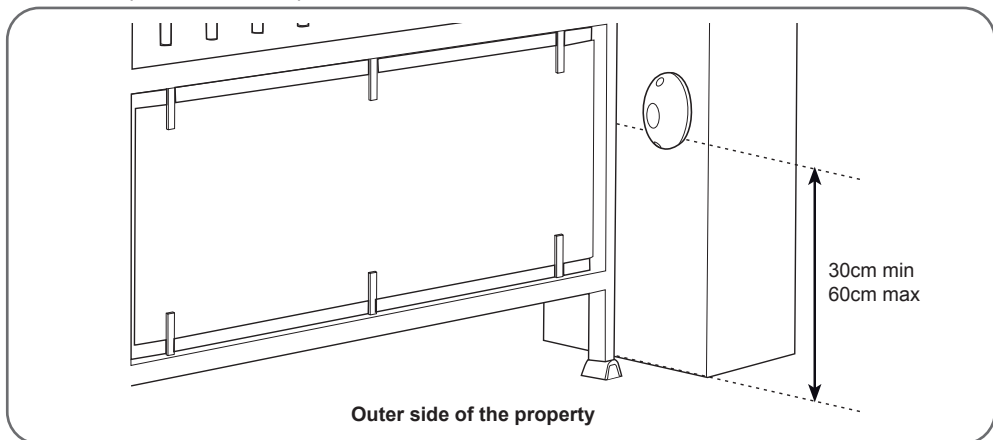


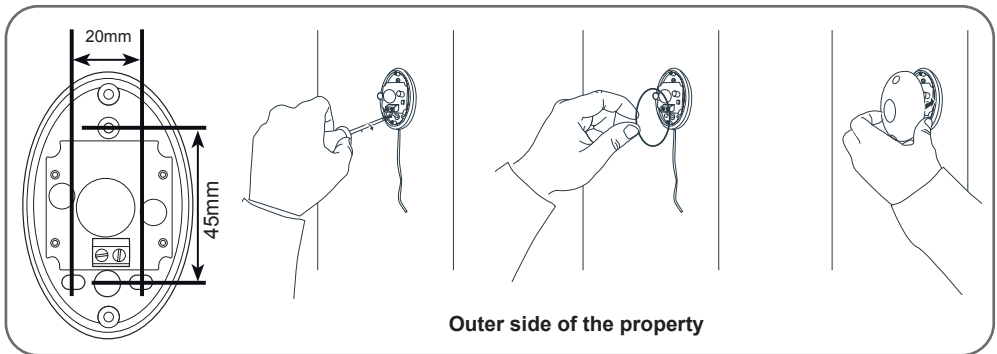
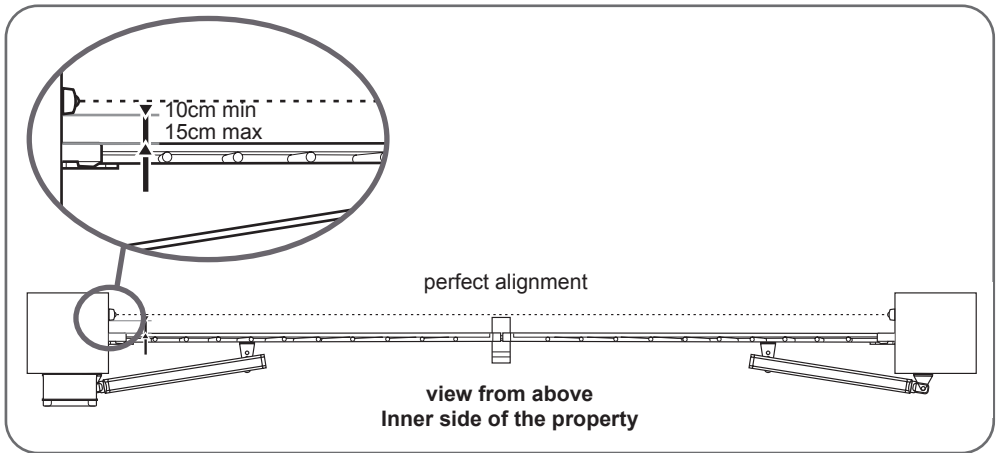


5 - ATTACHING THE SET OF PHOTOCELLS

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 10cm and 15cm.
- Mount the photocells on the posts.

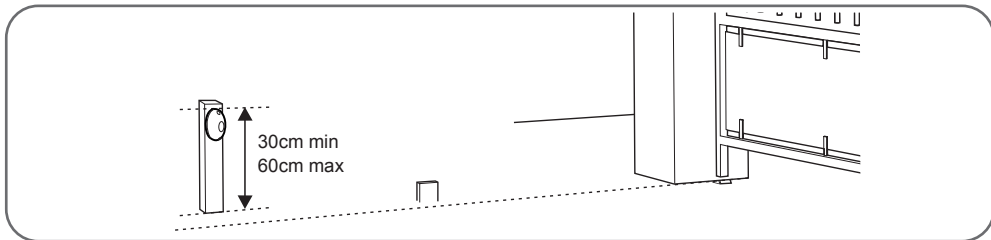
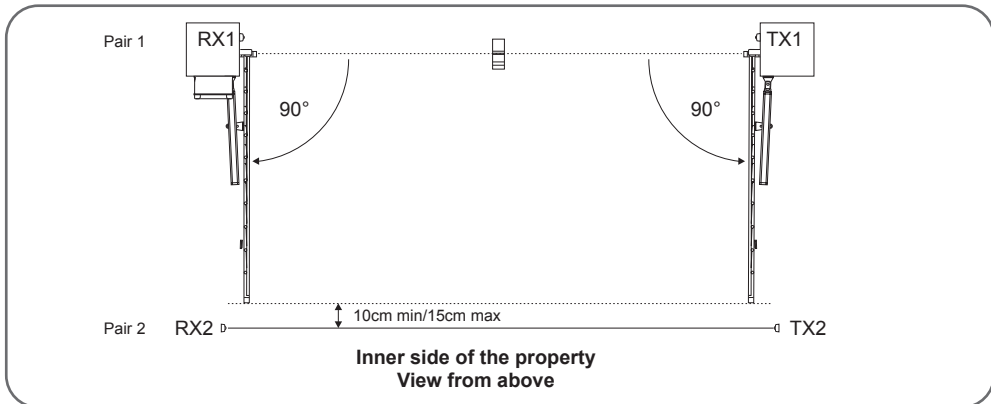




2 set of photocells

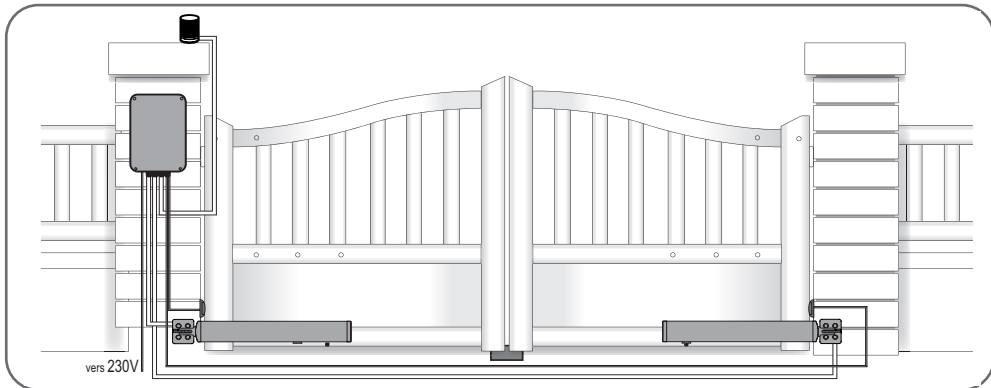
For use when the gate is not visible. You must install a second set of photocells to prevent the gate from opening when an item (car, person, etc.) is behind the gate.

- The photocells must be perfectly aligned and parallel to each other.
- The reception photocells (RX indicated at the back) must be installed on the same side of the gate as the electronic control box.
- The photocells must be installed on the inner side of the property. The distance between the main edges of the gate in an open position at 90° and the photocells must be between 10 cm and 15 cm maximum.
- The mounts used to secure the photocells must be correctly secured to the ground and precisely aligned.
- The photocells must be placed exactly at the same height from the ground, and the height must be between 30 cm and 60 cm.



6 - 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.
- It is imperative and mandatory to use the cable gland provided to pass and attach the 230V power cable in the switchgear. Once the cable has passed through the cable gland, tighten the outer nut to secure the cable to prevent it from being torn off.

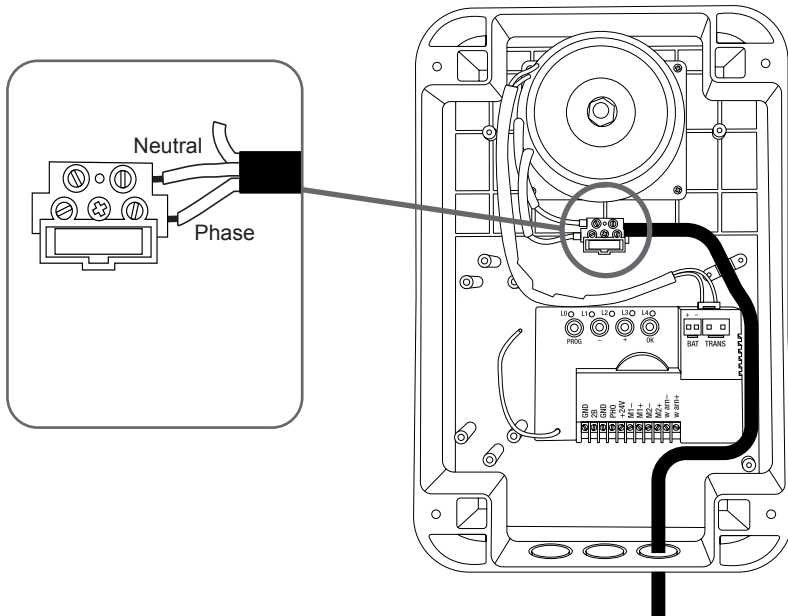
Never drill into the electronic box (whether to pass the cable or attach it to the post). This would compromise the seal and void the warranty.

- Remove the protective cover from the transformer.

6.1 - THE MAINS ELECTRICITY

Important notes:

- The electrical line must solely be used to power the gate motor drive and be protected by a fuse or circuit breaker (6 A min, 16 A max) and a differential device (30 mA). It must be compliant with the applicable electrical safety standards.
- The 230 V 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.

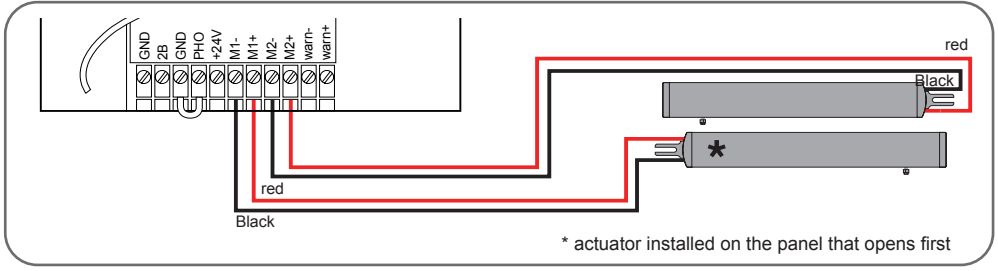


C - INSTALLATION

6.2 - ACTUATORS

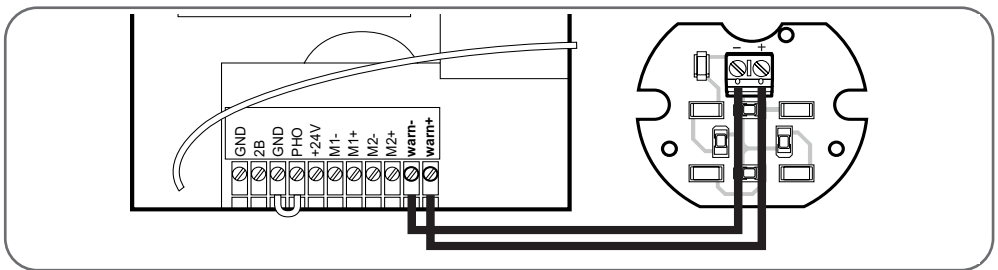
For actuator wiring, use a 2x1.5mm² section cable and waterproof junction boxes. For each motor, the cable length must not exceed 8 m.

- Opening inwards:



6.3 - FLASHING LIGHT

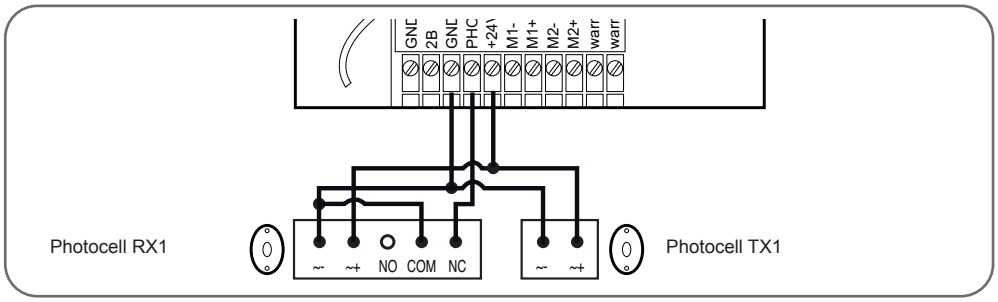
- Connect the flashing light wires to the terminal block as shown in the diagram below and reconnect the terminal block.
- Use a 2 x 0.5 mm² section cable, minimum.
- Maintain the polarity.



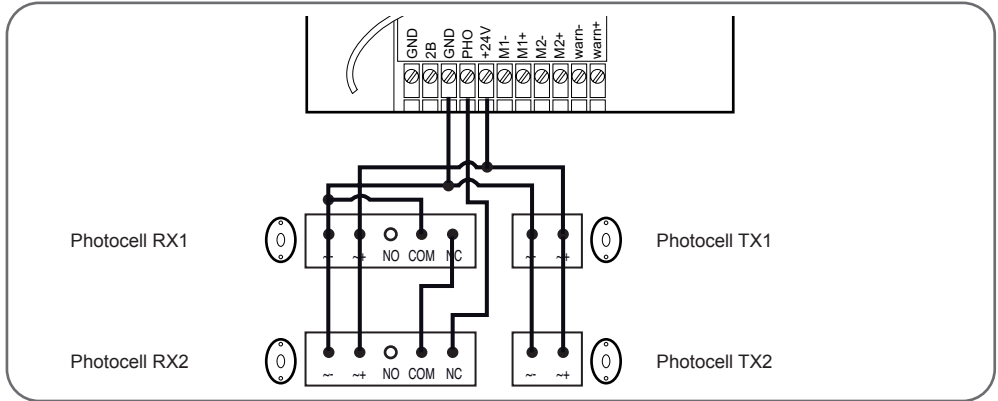
6.4 - PHOTOCELLS

- Disconnect the removable terminal block, connect the photocell wires to the terminal block as shown in the diagram below and then reconnect the terminal block.

1 set of photocells



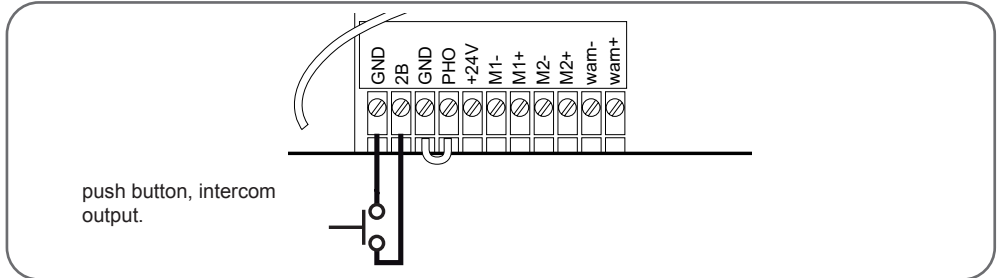
2 sets of photocells



6.5 - CONTROL PARTS (OPTIONAL)

Note:

These control parts must be normally open dry contacts.



6.6 - BACKUP BATTERY (OPTIONAL)

The backup battery is useful in case the power is cut and it enables you to operate the motor drive for several days.

- Cut off the 230V power supply (safety switch to the OFF position) and connect the battery to the **BAT** terminal.
- Put the 230V power supply back on (safety switch to the ON position).
- The battery will load in 24 hours approximately. Beyond this time, test the gate's operation (1 opening + 1 closing) after having switched the motor drive off (safety switch in the OFF position).
- After this test, reconnect the power supply (safety switch to the ON position). The battery will take over if the power is cut.

6.7 - SOLAR POWER KIT (OPTIONAL)

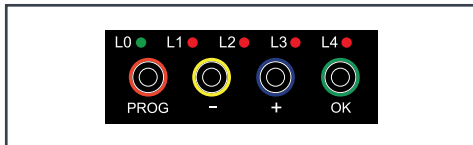
Refer to the solar kit instructions.

D - BEGINNING OPERATION

Warning: Operation must be begun and adjustments made by a person qualified to work on this equipment because the active parts are accessible.

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:

- You can do a short press on a button (hold the button down for less than 1 second) or long press (hold the button down for 3 seconds). In the following, when we write:
 - **"Press the button"**, this means a short press (one press) on this button.
 - When we write **"long press"**, you must press the button for 3 seconds.
- 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 be sure of being on **MENU 0** of the display, press on **PROG** 2 or 3 times and the green LED should be switched on (only the green LED).

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

2. QUICK SETTINGS

2.1. SELF-LEARNING

Self-learning enables the card to learn how far the gate moves. Before starting this step, the gate must have fixed stops at the end of closing and end of opening to stop its movement.

Self-learning starts with a closing cycle. If this is not the case, stop the learning cycle by pressing the **"OK"** button and reverse the motor's connections.

Self-learning procedure:

- The flashing light starts (1 flash per second).
- **Phase 0:** Detection of the closing stop; the gate closes up to the closing stop.
- **Phase 1:** Measurement of opening length, the gate opens up to the opening stop.
- **Phase 2:** Measurement of the closing length; the gate closes up to the closing stop.

Starting self-learning:

- Press 2 or 3 times on **PROG** and the green LED should be switched on (only the green LED)
- Long press on the **"+"** button and self-learning will start.

Once self-learning has finished, you can use your gate motor drive.

If self-learning has stopped, see the table below. Resolve the problem with the table and restart self-learning.

If you would like to change the settings on your motor drive, visit the **"ADVANCED SETTINGS"** paragraph

D - BEGINNING OPERATION

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

○ : LED off

● : LED on

● : Flashing LED

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.

LED				Description
L1 ○	L2 ○	L3 ○	L4 ●	In phase 0, panel M1 did not arrive at a stop after closing for 60s, disengagement or cable section too weak?
L1 ○	L2 ●	L3 ○	L4 ○	In phase 0, panel M2 did not arrive at a stop after closing for 60s, disengagement or cable section too weak?
L1 ○	L2 ●	L3 ●	L4 ●	In phase 0, motor M1 was not detected (not / incorrectly connected?).
L1 ●	L2 ○	L3 ○	L4 ○	In phase 0, motor M2 was not detected (not / incorrectly connected?).
L1 ●	L2 ○	L3 ○	L4 ●	In phase 1, motor M1 reached the stop after opening for less than 3s: reduce the speed.
L1 ●	L2 ○	L3 ●	L4 ○	In phase 1, motor M2 reached the stop after opening for less than 3s: reduce the speed.
L1 ●	L2 ○	L3 ●	L4 ●	In phase 1, panel M1 did not reach a stop after opening for 60s or cable section too weak?
L1 ●	L2 ●	L3 ○	L4 ○	In phase 1, panel M2 did not reach a stop after opening for 60s or cable section too weak?

L1 ●	L2 ●	L3 ○	L4 ●	In phase 1, motor M1 was not detected (contact failure, electronic card problem?) Review motor connections.
L1 ●	L2 ●	L3 ●	L4 ○	In phase 1, motor M2 was not detected (contact failure, electronic card problem?) Review motor connections.
L1 ○	L2 ●	L3 ●	L4 ●	In phase 1 (opening), M1 is not recognised. Note 1.
L1 ●	L2 ○	L3 ○	L4 ○	In phase 1 (opening), M2 is not recognised. Note 1.
L1 ●	L2 ○	L3 ○	L4 ●	In phase 2 (closing), M1 is not recognised. Note 2.
L1 ●	L2 ○	L3 ●	L4 ○	In phase 2 (closing), M2 is not recognised. Note 2.
L1 ●	L2 ○	L3 ●	L4 ●	Self-learning was interrupted by the user.

2.2. ADDING REMOTE CONTROLS

You can control the complete or partial (pedestrian) opening of the gate. 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.

D - BEGINNING OPERATION

2.2.1. PROGRAMMING WITH THE CARD

Programming a button for the **COMPLETE OPENING** command:

- Press on PROG 2 or 3 times and the green LED should be switched on (only the green LED)
- Press “–” for 3 seconds and L1 will switch on.
- Press OK and L1 and L4 will turn on alternately.
- While the indicators are flashing, press the remote control button to be memorised.
- The red LEDs will all switch on for 1 second (memorisation is successful).

If the red LEDs switch off without having flashed, this means that the system has exceeded the 10 second wait without anything being confirmed. Restart programming.

Programming a button for the **PARTIAL OPENING** command:

- Press 2 or 3 times on PROG and the green LED should be switched on (only the green LED)
- 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.
- While the indicators are flashing, press the remote control button to be memorised.
- The red LEDs will all switch on for 1 second (memorisation is successful).

If the red LEDs switch off without having flashed, this means that the system has exceeded the 10 second wait without anything being confirmed. Restart programming.

2.2.2. 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 the button of the new remote control to be memorised, the flashing light will flash 3 times to confirm the new remote control.

The new remote control is now memorised (the buttons will have the same function as the original remote control).

2.3. DELETING ALL REMOTE CONTROLS

To unprogramme all the remote control buttons learnt, follow the procedure below

- Press on **PROG** 2 or 3 times and the green LED should be switched on (only the green LED)
- Press “–” for 3 seconds and L1 will switch on.
- Press “+” twice and L1 will turn off and L3 will turn on.
- Press **OK**. The 4 red LEDs will turn on.
- Press **OK** for 3 seconds. All the LEDs will turn off and turn on to confirm the operation.

All the remote controls will be deleted from the memory.

3. ADVANCED SETTINGS

In this part we are going to see how to perform the remote settings. Below is the list of possible settings:

• MENU 1

- Operating mode (automatic closing or semi-automatic closing)
- Time delay (for automatic mode)
- Motor force
- Motor speed

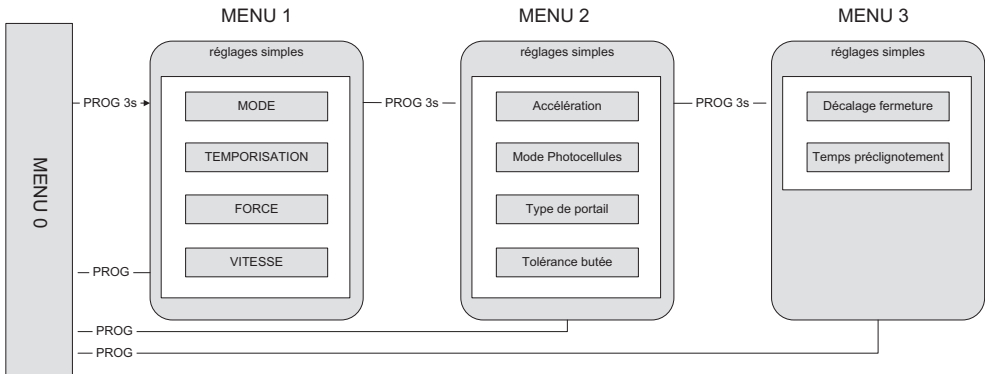
• MENU 2

- Acceleration/deceleration at end of travel
- Photocell mode
- Type of gate
- Stop tolerance

• MENU 3

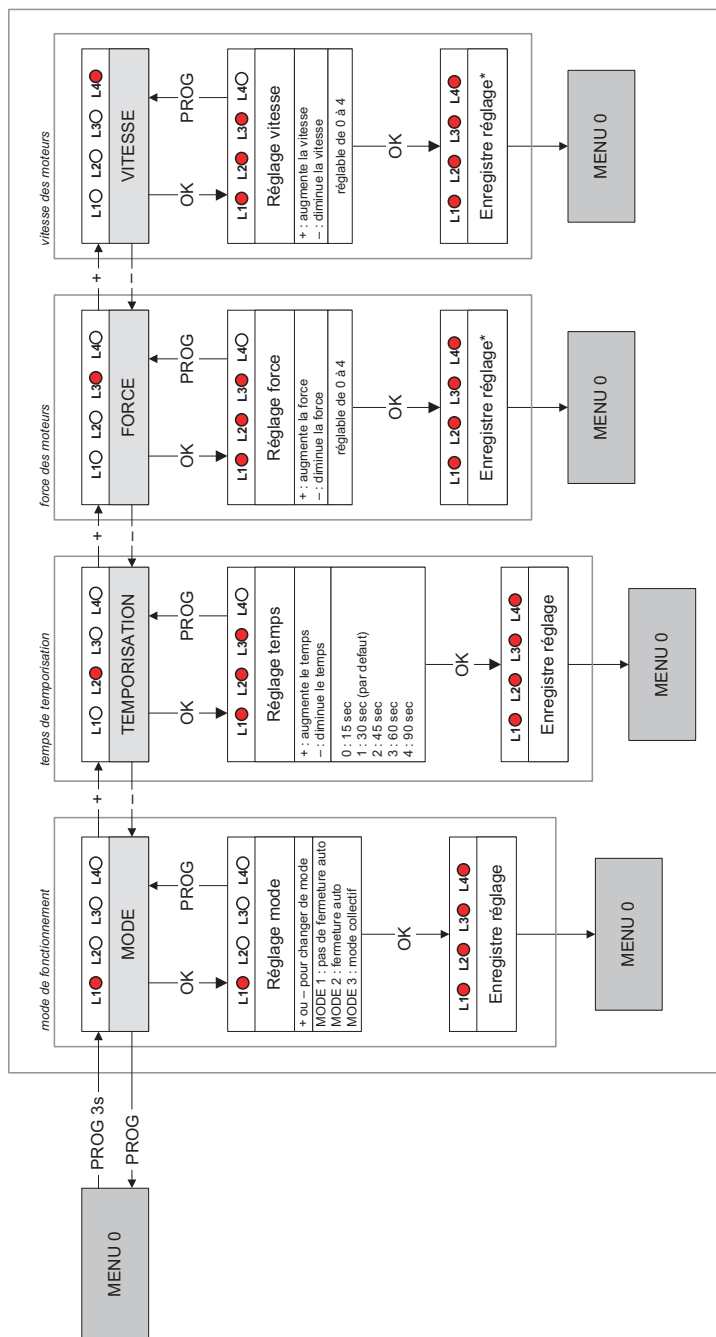
- Closing time interval
- Flashing light pre-flashing time

After each new force, speed and acceleration adjustment, it is necessary to start a new self-learning procedure



3.1. MENU 1

To access menu 1, press the “PROG” button for 3 seconds. L0 will flash once and L1 will switch on.



* cette modification nécessite de refaire un auto-apprentissage

D - BEGINNING OPERATION

3.1.1. OPERATING MODE (AUTOMATIC CLOSING OR SEMI-AUTOMATIC CLOSING)

This automatic gate opening mechanism has 3 operating modes.

Semi-automatic mode (mode 1, LED 1 on) (default)

- Closed gate -> one press on the gate command (complete or partial) opens the gate.
- Open gate -> one press on the gate command (complete or partial) closes the gate.

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, LED 1 and 2 on)

In this operating mode, you must connect the photocells and they must be functional.

- Closed gate -> one press on the gate command (complete or partial opening) 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 a command (complete or partial). The gate stays open and you must press the command to close the gate.
- While the gate is in motion, you can stop it by pressing a command (complete or partial).
- By pressing on a command again, the gate starts in the opposite direction.

Collective mode (mode 3, LED 1, 2 and 3 on)

This mode is used for a gate with collective access. In this operating mode, you must connect the photocells and they must be functional.

- Closed gate -> one press on the gate command 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 stops, opens back up and starts the automatic closure time delay.

Note: you can only control complete opening; the partial opening command does not work.

To choose the operating mode, follow this procedure:

- Press on **PROG** 2 or 3 times and the green LED should be switched on (only the green LED)
- Press "**PROG**" for 3 seconds. L0 will flash once and L1 will turn on.
- Press **OK** and the number of LEDs switched on will then indicate the previously set operating mode (mode 1 by default).
- To change the operating mode, use the "+" and "-" buttons, then confirm with the **OK** button.

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

3.1.2. TIME DELAY (FOR AUTOMATIC MODE)

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 this procedure:

- Press on **PROG** 2 or 3 times and the green LED should be switched on (only the green LED)
- Press "**PROG**" for 3 seconds. L0 will flash once and L1 will turn on.
- Press "+" once. L2 will turn on instead of L1.
- Press **OK**. The number of 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 seconds by 15 second interval as defined in the table below (set to 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

D - BEGINNING OPERATION

3.1.3. 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 gate is solid and 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 turn on.
- Press **"+"** twice and L3 will switch 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.

3.1.4. MOTOR 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.

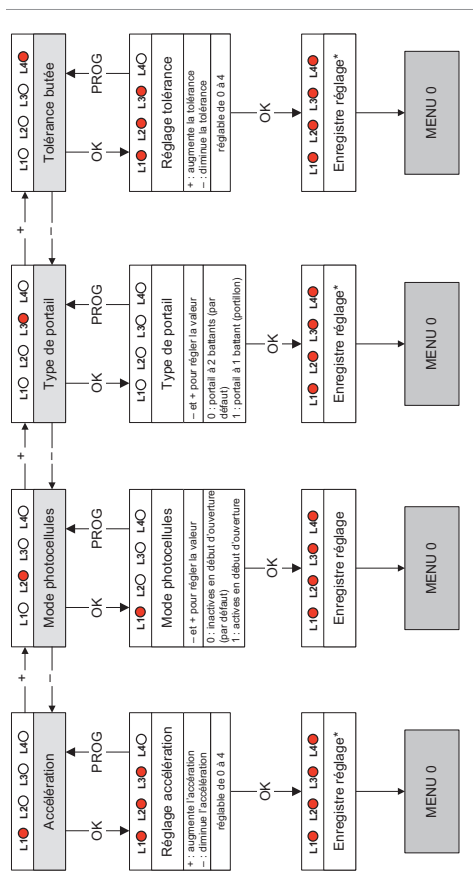
- Press **"+"** 3 times. L4 will turn on instead of L1.
- Press **OK** and the number of LEDs that turn on will indicate the set value.
- Use the **"–"** and **"+"** buttons to change this value.
- Press **OK** to confirm this value. All the LEDs will turn on and off to confirm the operation.

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

3.2. MENU 2

To access menu 2

- Press the **"PROG"** button for 3 seconds. L0 will flash once and L1 will switch on.
- Press the **"PROG"** button for 3 seconds again. L0 will flash twice and L1 will remain on.



3.2.1. ACCELERATION/DECELERATION AT END OF TRAVEL

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

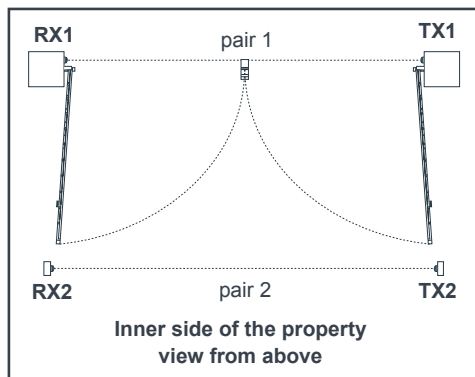
- Press PROG for 3 seconds. L0 will flash once and L1 will turn on.
- Press PROG for 3 seconds. L0 will flash twice.
- Press OK and the number of LEDs that turn on will indicate the set value.
- Use the “-” and “+” buttons to change this value.
- Press OK to confirm this value. All the LEDs will turn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

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

3.2.2. PHOTOCELL 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 before opening:



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 turn 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 turn on.
- Press **PROG** for 3 seconds. L0 will flash twice.
- Press “+” twice and L3 will switch 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%.

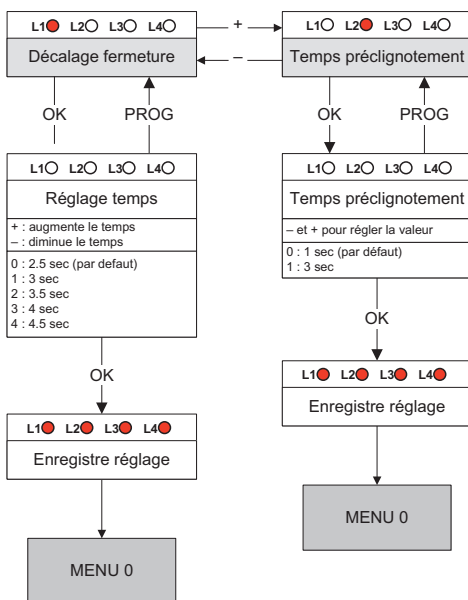
However, the accuracy of the system depends on many parameters, such as temperature, motor quality, the type of motor cables and the flexibility and weight of the gate. Depending on these parameters, the path measuring system may not be accurate enough to operate with this default tolerance. In this 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 turn on.
- Press **PROG** for 3 seconds. L0 will flash twice.
- Press **"+"** 3 times and L4 will switch on instead of L1.
- Press **"OK"**. The number of LEDs that turn on will indicate the set value.
- 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. - MENU 3



3.3.1. CLOSING 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 turn on.
- Press **PROG** for 3 seconds. L0 will flash twice.
- Press **PROG** for 3 seconds. L0 will flash 3 times.
- Press **"OK"**. The number of 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.

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.

3.3.2 - FLASHING LIGHT 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 on **PROG** 2 or 3 times and the green LED should be switched on (only the green LED)
- Press **"PROG"** for 3 seconds. L0 will flash once and L1 will turn on.
- Press **"PROG"** for 3 seconds. L0 will flash twice.
- Press **"PROG"** for 3 seconds.
- Press **"+"** once. L2 will turn on instead of L1.
- Press **OK**.
- If L1 is switched off, the time is 1 second. Press **"+"** to increase it to 3 seconds, then **OK** to confirm.
- If L1 is switched on, the time is 3 seconds. Press **"–"** to reduce it to 1 second, then **OK** to confirm.

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 is not intended for use by children or persons with reduced physical, sensory or mental abilities or lack of experience or familiarity, unless they are supervised by someone responsible for their safety or have been provided prior instructions concerning the use of the device. Children should be supervised to make sure that they do not play with the device.
- 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, remove the actuators from the gate mounting brackets 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.

2.1 - TYPE OF COMMAND

There are two types of command to manoeuvre the gate:

Gate control



Pedestrian control (by radio only)



- 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.
- Automatic closure and photocells are not active for pedestrian control.
- The pedestrian control does not work in collective mode.

2.2 - OPERATING MODES

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

2.2.1 - "SEMI-AUTOMATIC CLOSING" MODE

Description of operation from the closed gate position:

To open the gate

- Activate the gate control.
- 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 gate control.
- 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 (gate or pedestrian). If you activate the gate control again, the gate will start in the opposite direction.

2.2.2 - "AUTOMATIC CLOSING" MODE

Description of operation from the closed gate position:

- Activate the gate control.
- 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 the two panels have reached their opening stop, the flashing light begins to flash differently (1 short flash every 1.25 seconds), and the time delay before closing starts.
- When the time delay is over, the flashing light will resume its normal pace (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 (gate or pedestrian). 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.

2.2.3 - "COLLECTIVE" MODE

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

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

2.3 - PHOTOCELLS (IF INSTALLED)

- 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 "3.2.2. PHOTOCCELL MODE MENU 2").
- If this is not the case and the beam is cut when the gate should start to open, the flashing light will double flash for 30 seconds. The flashing can be stopped by pressing a command. For the gate to be able to open, the beam must be unobstructed and a command must be activated.

2.4 - OBSTACLE DETECTION

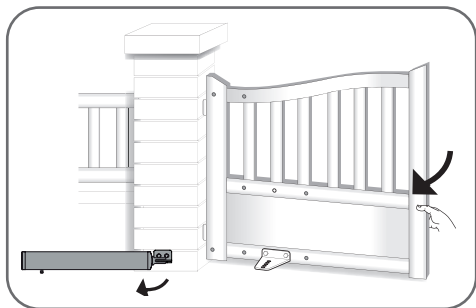
During their movement, the panels may encounter an obstacle.

- 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 double flashes for 30 seconds. The flashing can be stopped by pressing a command.
- On activating a command (the same one that was used to start the movement), the gate starts to move in the opposite direction.
- If an obstacle is detected during closure and the operating mode is "automatic closure" or "collective", the gate will open again and the time delay will start over.
- If the gate has a large area of wind resistance (solid gate), this can trigger obstacle detection in windy weather. In this case, increasing the motor force is recommended.

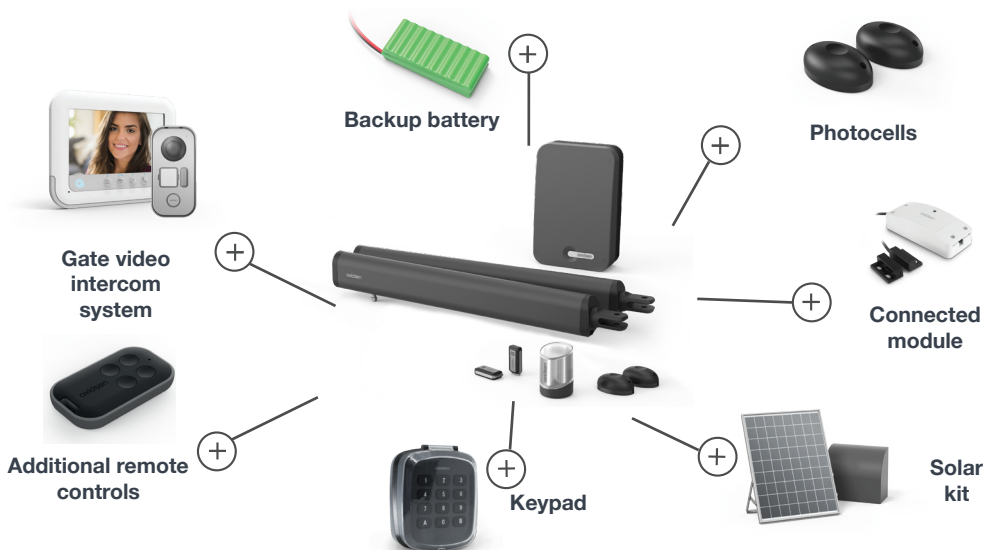
2.5 - MANUAL MOVEMENT

Warning: When the actuators are disengaged from the gate, 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.



3 - OPTIONAL ACCESSORIES



1 - MAINTENANCE WORK

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

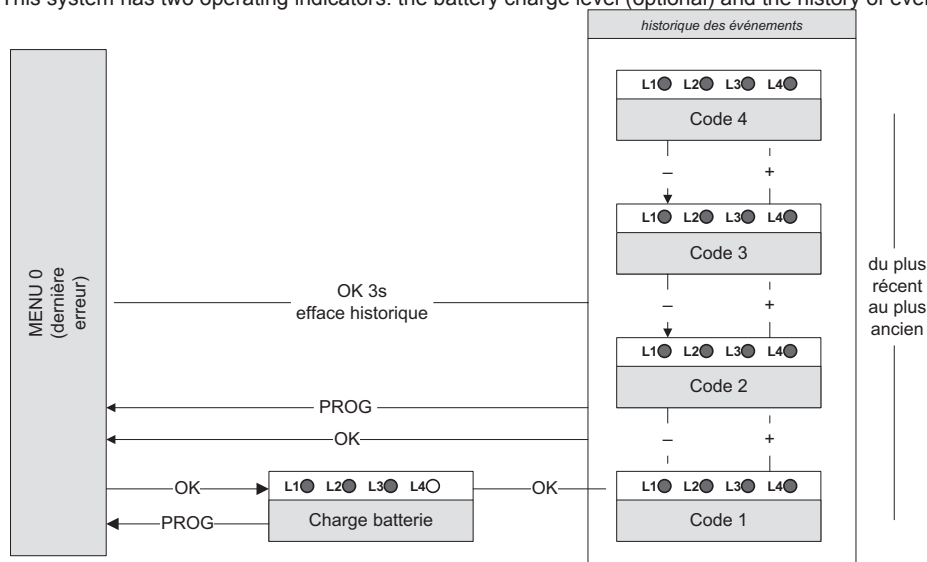
The number of maintenance and upkeep operations must be proportional to the frequency the motorised gate is used.

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: motor operation, photocells, control devices, 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.

F - MAINTENANCE AND UPKEEP

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

○ : LED **off**

● : LED **on**

◐ : **Flashing** LED

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.

LED				Description	Type
L1 ○	L2 ○	L3 ○	L4 ●	An obstacle has been detected in M1 when closing.	I
L1 ○	L2 ○	L3 ●	L4 ○	An obstacle has been detected in M2 when closing.	I
L1 ○	L2 ●	L3 ●	L4 ●	The photocell beam has been obstructed.	I
L1 ●	L2 ●	L3 ●	L4 ○	An obstacle has been detected in M1 when opening.	I
L1 ●	L2 ●	L3 ●	L4 ●	An obstacle has been detected in M2 when opening.	I
L1 ○	L2 ○	L3 ○	L4 ◐	Motor M1 is not connected or incorrectly connected (contact failure). Check connections.	E
L1 ○	L2 ○	L3 ◐	L4 ○	Motor M2 is not connected or incorrectly connected (contact failure). Check connections.	E
L1 ○	L2 ○	L3 ◐	L4 ◐	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
L1 ○	L2 ◐	L3 ◐	L4 ○	Panel M1 closed before panel M2. Increase the time interval between the movement of both panels.	E
L1 ○	L2 ◐	L3 ◐	L4 ◐	Three obstacles detected in a row during opening. Check the gate movement area.	E

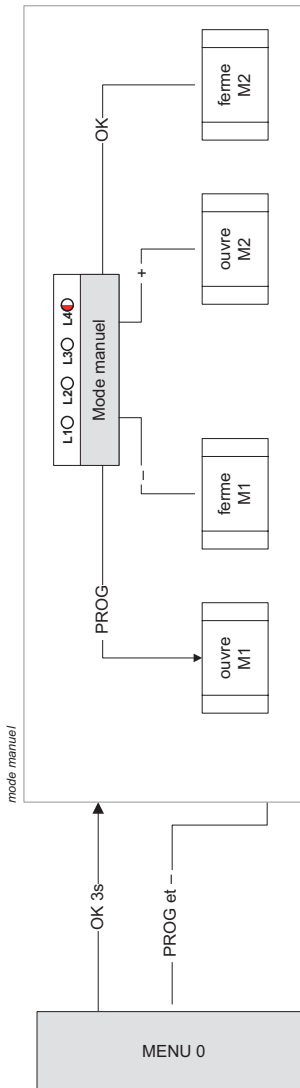
L1 ◐	L2 ○	L3 ○	L4 ○	Three obstacles detected in a row during closing. Check the gate movement area.	E
L1 ◐	L2 ○	L3 ◐	L4 ○	The main power supply has been cut during a movement phase OR the battery is too weak for proper operation.	E
L1 ◐	L2 ◐	L3 ○	L4 ○	Self-learning is not valid (it was never performed or a setting that requires repetition of self-learning has been changed). Start self-learning.	E
L1 ◐	L2 ◐	L3 ○	L4 ◐	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
L1 ◐	L2 ◐	L3 ◐	L4 ◐	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.

F - MAINTENANCE AND UPKEEP



- **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 and hold 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.

3 - DEMOLITION AND DISPOSAL

This automatic gate opening mechanism and its

F - MAINTENANCE AND UPKEEP

packaging are made of different types of materials, some of which must be recycled and others which must be discarded.

None of the items should be left outdoors or thrown into a household bin.

To separate the different materials, the kit elements must be disassembled by a qualified person.

Sort items by type:

- Batteries / - Electronic card / - Plastics / - Scrap / - Cardboard and paper / - Other

Once the items have been sorted, send them to the appropriate recycling organisation and drop off the other materials at a waste treatment centre.

Information on environmental protection



The consumer is required by law to recycle all used batteries and accumulators. Disposing of them 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 metal designations are as follows: Cd = cadmium, Hg = mercury, Pb = lead. These used batteries/accumulators can be disposed of at local waste treatment centres (centres for sorting recyclable materials), which are required to accept them.

Keep batteries, button cells and accumulators out of reach of children. Store them in a safe place that is not accessible to children. They could be swallowed by children or pets. Risk of death! In the event that a battery is swallowed, immediately contact a doctor or go to A&E!

Never short-circuit the batteries, and do not burn or recharge them as they may explode!



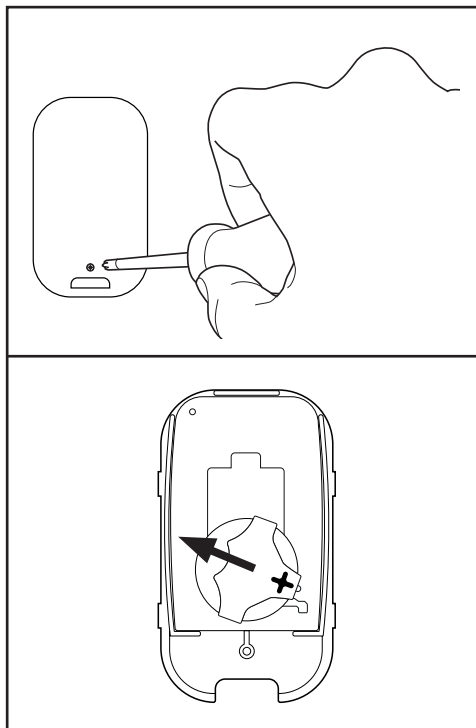
This logo denotes that devices no longer in use should not be disposed of as household waste. as they are likely to contain hazardous substances which are dangerous to both health and the environment. Return the equipment to

your local distributor or use the recycling collection service provided by your local council.

3.1. 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, and they are connected to one another. 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 battery.
- Insert the new battery, respecting the polarity.
- Close the remote control and screw in the fastening screws.



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.

ACTUATORS	
Type	24 VDC motors, reduction gear, type: worm gear
Power supply	24 VDC
Nominal force	2200N
Speed at rated torque	2cm/sec
Consumption at rated strength	60W
Cable	50cm. 2 x 0.75 mm ² 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 actuators
Contents	1 AVLO electronic card, 1 x 230 / 20 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 - Maximum output current at start for 3s = 3A. - Maximum output current after start = 2.5A
Flashing light output (- Warn +)	Flashing controlled by the electronic card. For 24V flashing light with LED only.
+12Vdc power output (+12V / 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

Number of remote control buttons that can be memorised	15 with 1 gate command button and 1 pedestrian command button
Protection fuses	Time-delay fuse in transformer 1A terminal block
Operating temperature	-20°C/+60°C
Protection rating	IP44

FLASHING LIGHT

Type	LED lighting 2W max 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 via CR2032 battery
Touch-sensitive	4 keys
Radiated power	< 10mW
Battery life	1 years at a rate of 10 x 2s uses per day
Operating temperature	-20°C/+60°C

PHOTOCELLS

Type	Modular infrared beam presence detector. D type safety system according to EN 12453
Contents	1 TX transmitter and 1 RX receiver
Power supply	12 VDC, 12 VAC, 24 VDC, 24 VAC
Maximum assigned power	0.7W for the pair
Output	- 1 output with normally closed dry contact (COM/NC) - 1 output with normally open dry contact (COM/NO)

G - TECHNICAL AND LEGAL INFORMATION

Transmission angle/Reception angle	10° approx. / 10° approx.
Range	15m maximum (range may be reduced due to weather disruption)
Number of connectable photocells	It is possible to connect up to 5 RX receivers in a series
Operating temperature	-20°C/+60°C
Protection rating	IP44

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, impacts 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.

Warning: Do not use any carboxylic acid, alcohol, or similar chemicals on the product. In addition to damaging your device, the fumes are also hazardous to your health and are explosive. Do not use any tool that can conduct voltage (wire brush, sharp tool, etc.) for cleaning.

The receipt or invoice is proof of purchase date.

3 - HELP AND SUGGESTIONS

- If, despite the care we have taken in designing our products and drafting these instructions, you encounter difficulties when installing your product or you have any questions, we strongly recommend that you contact one of our specialists who will be glad to help.
- If you encounter operating problems during installation or a few days afterwards, it is essential for you to be where your system is installed when you contact 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, 9am 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, you can check the progress of the work on our website at the following address: <http://sav.avidsen.com/nos-services>

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

5 - EU DECLARATION OF CONFORMITY

NAME AND POSITION OF SIGNATORY:
Alexandre Chaverot, CEO

Declares with full responsibility that:

The product complies with the RED 2014/53/EU directive. Its compliance has been assessed pursuant to the applicable standards in force:

EN 300220-1 V3.1.1

EN 300220-2 V3.2.1

EN 62479:2010

EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019

EN 60335-2-103:2015

EN 62233:2008

EN 301 489-1 V2.2.3

EN 301 489-3 V2.1.1

The remote control complies with the RED 2014/53/EU directive. Its conformity has been assessed pursuant to the applicable standards in force:

EN 300220-1 V3.1.1

EN 300220-2 V3.1.1

EN 62479:2010

EN 62368-1:2014 + A11:2017

EN 301 489-1 V2.2.0

EN 301 489-3 V2.1.1

EN 50663:2017

The abovementioned product complies with the RoHS 2011/65/EU directive.

Tours, 29/11/2023

Alexandre Chaverot, CEO






avidsen

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