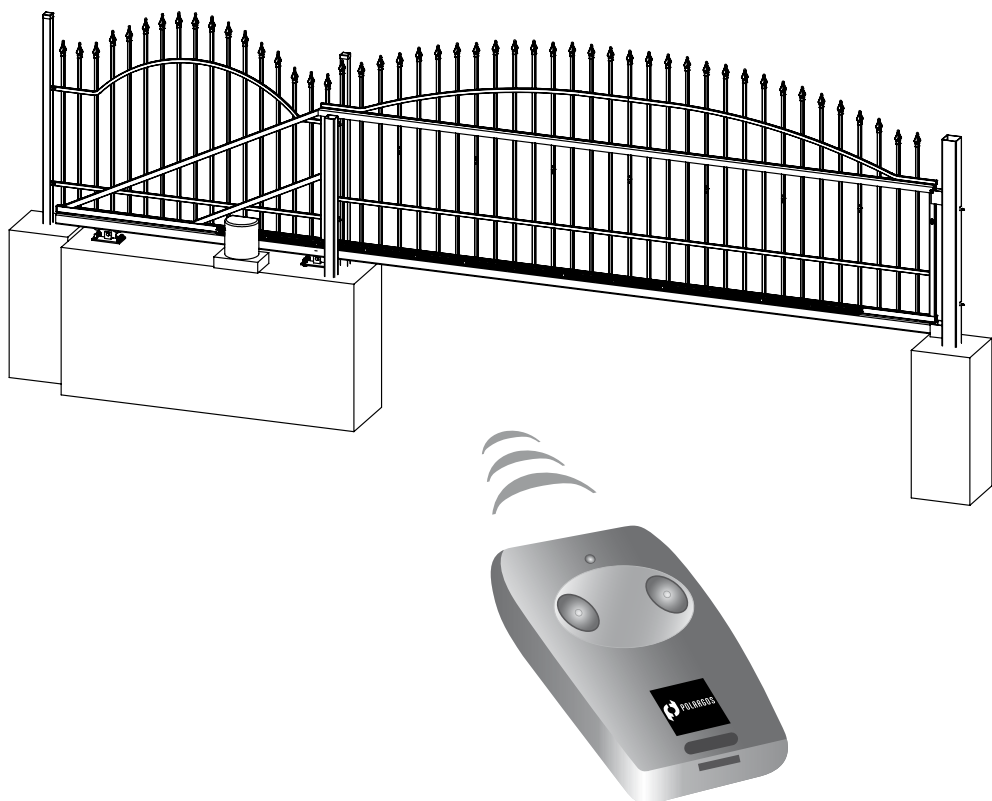


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## ***CANTILEVER GATE DRIVE UNIT***

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# INTRODUCTION

POLARGOS is a Polish manufacturer of housing and industrial fence systems as well as other steel products that has been operating on the market since 1994.

Due to their many years of experience as well as production and marketing facilities, POLARGOS manufactures products for numerous domestic and foreign customers.

Our aim is the delivery of products that both meet the highest workmanship standards and answer customers' expectations as regards to the aesthetics and ruling trends in the fencing market.

Thank you for your confidence in choosing Simple Move 101.

Please read this instruction book thoroughly before installation.

Simple Move 101 is manufactured by Somfy for POLARGOS.

## SAFETY PRINCIPLES

Please read this instruction book thoroughly before installation of the drive unit. It is important to follow the instructions precisely and retain this document for the whole working life of the product.

In Failure to comply with the recommendations concerning installation could lead to severe physical injuries or material damage. POLARGOS shall not bear responsibility in such cases.

This device is not designed to be used by people (including children) with limited physical, sensory or mental abilities, or by people without any experience or knowledge unless under the supervision of the person responsible for their safety or using instructions provided as regards the operation of this device.

Children are not allowed to play with fixed control devices.

Remote control transmitters must be kept out of the reach of children.

When using a switch without an interlock\*\*\*, check if another people are at a suitable distance from the gate.

Check the installation frequently to detect any abnormalities connected with the gate balance or specify signs of wear. Do not use any drive units that need to be repaired or adjusted.

Disconnect the power supply from the drive unit before performing cleaning or any other maintenance work.

Before installation of the drive unit, check if the drive unit moving parts are in good technical condition, balanced properly and if the gate opens and closes in a correct manner.

Do not stand between the moving part and near fixed elements in view of the dangers connected with displacement of the moving parts during opening (crushing, cropping, blocking).

Watch the gate while it is in motion.

All switches without interlock\*\*\* must be in the area from where the moving part will be directly visible but at a suitable distance from moving elements. The switches must be installed at a height of at least 1.5 m; they cannot be generally accessible except for the switches requiring the use of a key. When using these switches, check to see if any person is in the vicinity.

When the gate is completely open, keep a distance of 500 mm from its end.

After installation is finished, check the correct adjustment of the mechanism and proper operation of the safety system and any devices used to switch off the system manually.



Do not throw away unwanted devices or expired batteries together with household waste. Consumers are obliged to transport all unwanted electronic and electric equipment to a special waste collection area for their disposal and recycling.

## PRODUCT DESCRIPTION

The drive unit is designed for cantilever gates used in residential properties.

### Components of the set

| Item                                                | Name                                                      | Quantity |
|-----------------------------------------------------|-----------------------------------------------------------|----------|
| 1                                                   | Shield                                                    | 1        |
| 2                                                   | Antenna                                                   | 1        |
| 3                                                   | Electronic module                                         | 1        |
| 4                                                   | Drive                                                     | 1        |
| 5                                                   | Shield screw                                              | 1        |
| 6                                                   | Round gasket 9x2                                          | 1        |
| 7                                                   | Toothed bar 33 cm                                         | 13       |
| 8                                                   | Cable bush                                                | 1        |
| 9                                                   | Thread forming screw TCB M4x10, galvanized                | 3        |
| 10                                                  | Fan-shaped washer AZ4                                     | 1        |
| 11                                                  | Wire holder                                               | 1        |
| 12                                                  | Flat medium washer M4x10                                  | 1        |
| 13                                                  | Round insulated terminal D4                               | 1        |
| 14                                                  | Assembly template (printed on cardboard)<br>to be cut out | 1        |
| 15                                                  | Adhesive label for the electronic module                  | 1        |
| 16                                                  | Remote control transmitter                                | 1        |
| <b>Additional items to be provided by the user:</b> |                                                           |          |
| 17                                                  | Nuts M10, galvanized                                      | 8        |
| 18                                                  | Flat washers 10.5x22x2, galvanized                        | 8        |
| 19                                                  | Double-thread screw 10x15 mm                              | 4        |
| 20                                                  | Pin 10x60 S12                                             | 4        |

POLARGOS hereby declares that this product conforms to the basic requirements and other relevant regulations of the Directive 1999/5/CE. The Declaration of Conformity is available at [www.polargos.eu](http://www.polargos.eu)

This product is accepted for use in European Union and Switzerland..

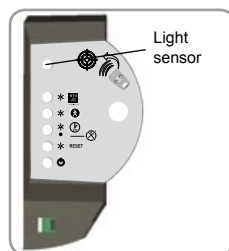
\*\*\* example: intercom, key switch, code panel, etc.





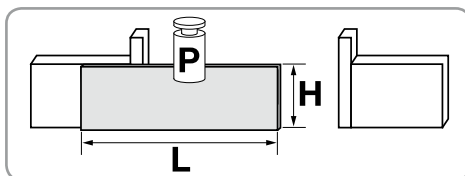
## Light sensor

The electronic module of the drive is equipped with a light sensor that detects the presence or absence of the shield. Thanks to this function, the setting mode is available only with the shield removed. If the shield is installed, the drive is switched to standby mode.

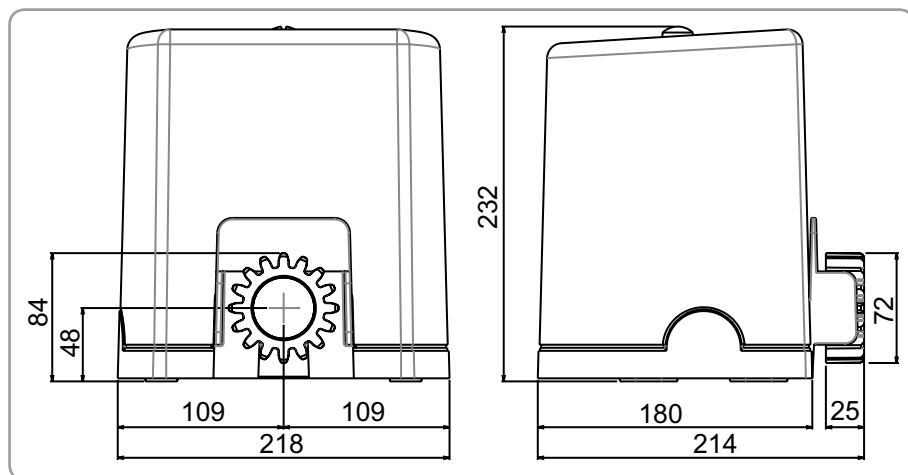


## Gate dimensions and maximum weight

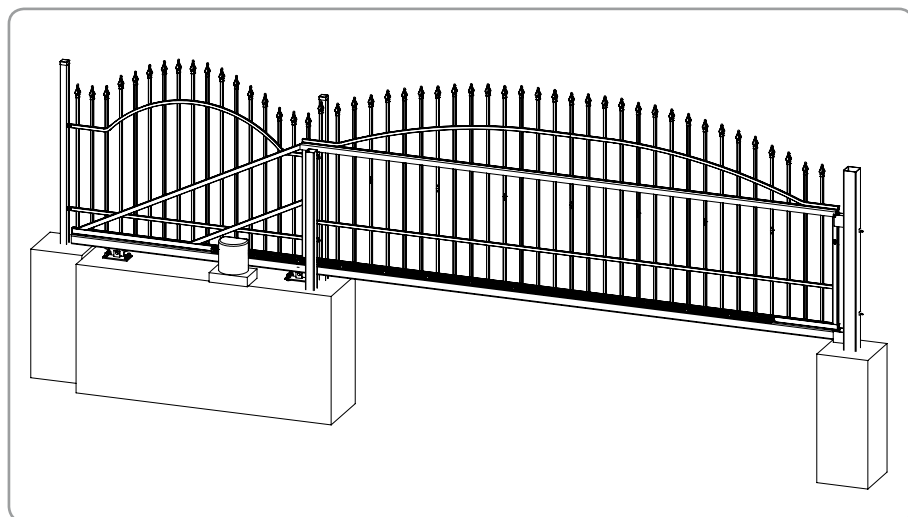
|                              |                                           |
|------------------------------|-------------------------------------------|
| Maximum weight (P)           | 300 kg                                    |
| Maximum height (H)           | 2 m                                       |
| Maximum width (L)<br>Gate 4M | Overall length with<br>counterbalance 6 m |



## Drive dimensions (in mm)



# Pictorial view of installation



## Technical data

|                                                      |                                                  |
|------------------------------------------------------|--------------------------------------------------|
| Supply voltage                                       | 230 V AC / Solar energy                          |
| Drive type                                           | 24 V DC                                          |
| Drive power                                          | 150 W                                            |
| Maximum energy consumption (including zone lighting) | 600 W                                            |
| Energy consumption in stand by mode                  | 4,5 W                                            |
| Average number of working cycles daily               | 20 cycles daily                                  |
| Opening speed*                                       | 3 m / 16 s, beyond the deceleration area (20 cm) |
| Automatic obstacle detection                         | According to EN 12 453                           |
| Working temperature                                  | Between -20°C and +60°C                          |
| Thermal shield                                       | Yes                                              |
| Protection level                                     | IP 44                                            |
| Built-in radio wave receiver                         | Yes                                              |
| Remote controls:                                     |                                                  |
| Radio frequency                                      | 433,42 MHz                                       |
| Range of operational use                             | ~50 m                                            |
| Number of memory settings                            | 16                                               |
| Possible connections:                                |                                                  |
| Orange light output                                  | Flashing, 24 V, 10 W                             |
| Zone lighting output, supplied terminals             | Maximum 500 W (at 230 V AC)                      |
| Accessory supply output                              | 24 V – 15 W as maximum, only at 230 V            |
| Emergency battery input                              | Yes                                              |
| Photocell input                                      | Yes (BUS)                                        |
| Control input, supplied terminals                    | Yes, only at 230 V                               |

\* Opening time may differ depending on gate parameters.

# PRELIMINARY OPERATIONS

## Checks before installation

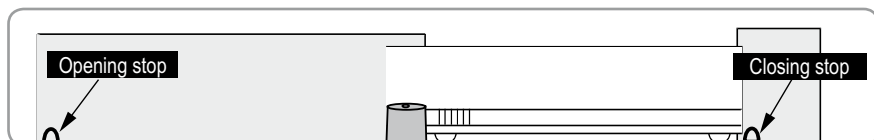
### ► Gate inspection

The gate must be in good technical condition: check if its construction allows automation.

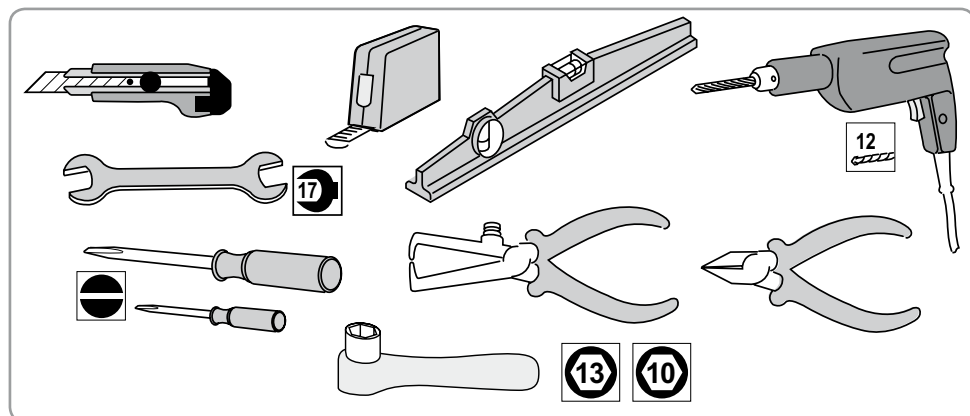
The gate must be in a horizontal position during the whole displacement cycle; it must open and close without the necessity of using excessive power. Check if the guide is absolutely perpendicular to the ground and if there are no obstructions that could prevent proper gate displacement.

### ► The presence of gate stops

Gate movement must be controlled by stops firmly fixed to the ground. The stops limit the extreme position of the **gate during opening while the post performs this function during closing.**



## Necessary tools



## Preliminary wiring system

Provide the shield Orange ICT Ø 25 mm for cables located underground.  
If cables cannot be laid underground, use a cable bush that can withstand being run over by vehicles.

### ► Mains supply (only with voltage 230 V)

Lead power supply of 230 V as close to the drive unit as possible.

The electronic module of the drive must be powered with voltage 230 V – 50 Hz using a flexible conductor of 1,5 mm<sup>2</sup>.

The electrical supply line must be:

- Designed for the drive only.
- Protected:
  - by means of a fuse or a circuit breaker 10 A,
  - by means of a differential gear (30 mA).
- Installed in accordance with the safety standards concerning wiring systems and effective in the country of use.

Multipolar disconnection of power supply is to be provided:

- using a supply conductor with a plug,
- or by means of a switch where the distance between contacts is at least 3 mm for each pole (according to EN 60335-1).

It is recommended to install a lightning rod (maximum residual voltage 2 kV).

### ► Photocells (an option in Simple Move 101 set)

Photocells are necessary for operation in automatic mode and to open a gate.

- Photocell conductors (see page 23).

Provide a connection for the photocell conductors in the shield between the two gate posts. Drill holes for shields in both ends of the gate construction. The photocells must be connected with the electronic system of the gate using a cable 2x0.75 mm<sup>2</sup>. Supply conductors must be led under the photocells.

- Location of the photocells (see page 23).

### ► Orange light (option)

Installation of orange light is recommended for operation in automatic mode when opening the gate.

- Orange light conductors (see page 27).

Provide space for the conductor of the orange light. The orange light must be connected to the electronic system of the drive using a conductor 2x0.75 mm<sup>2</sup>.

- Location of the orange light (see page 26).

## Safety rules

Observe the following safety rules during installation:

- Remove any jewellery before commencing installation (bracelets, chains or any other items).
- Wear special safety goggles and proper protection during drilling or welding.
- Use the appropriate tools as specified on page 6.
- Exercise caution during operation of the drive system to avoid the risk of injury..
- Do not connect the system to the mains or emergency battery (accessory equipment) before installation is completed.
- Do not use high pressure water to clean the system.

# 1. PREPARATION OF FOUNDATION

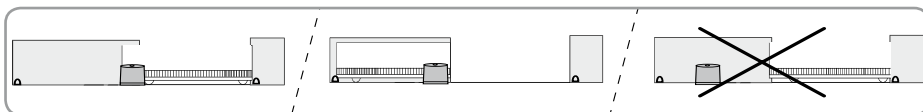
## Successive stages

- Drive Unit location
- Installation of stops
- Foundations

### ► Drive unit location

#### Horizontal setting

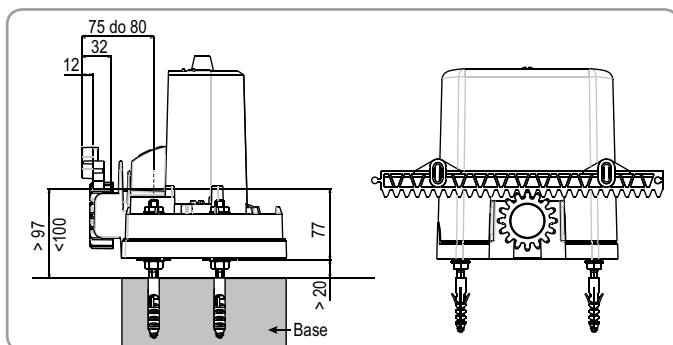
Pay attention to the fact that the drive unit must be always within the area of the gate operation, during both opening and closing.



#### Vertical setting

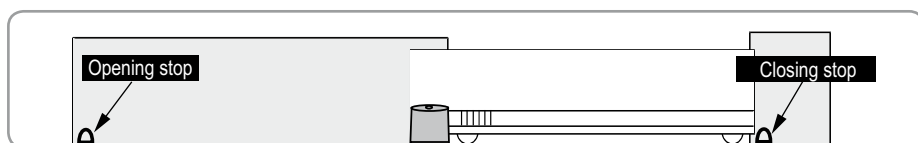
The drive unit should be located a little off the ground (more than 20 mm).

Choose a suitable position for the toothed bar. If necessary, create a concrete base. It is necessary to take into account the gate position on trolleys.



### ► Installation of stops

The gate movement must be controlled by stops fixed to the ground firmly to limit the extreme position of the gate.

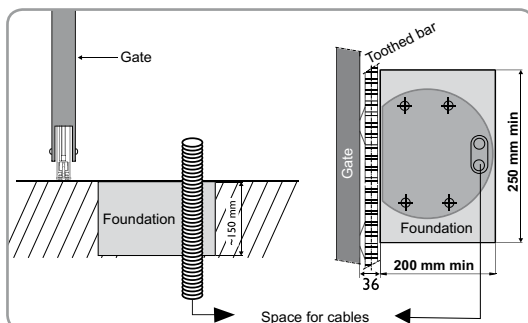


### ► Foundations

Screws to fasten the drive unit must be firmly attached to the ground.

The foundation type and dimensions depend on the type of ground.

The supply conductor must be laid according to the standards concerning wiring systems and effective in the country of use.



## 2. FASTENING

### Successive stages

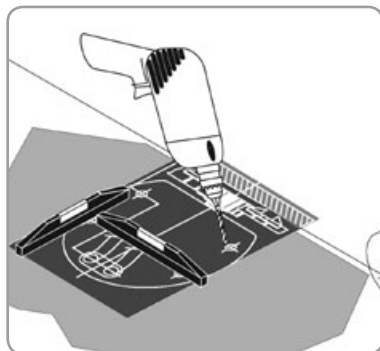
- Screw assembly
- Drive fastening
- Toothed bar assembly
- Mechanical adjustment

#### ► Screw assembly

- [1]. Place the assembly template on the ground (the template is printed on cardboard) and drill holes using a drill ( $\varnothing$  12 mm) suitable for the ground type. (20)
- [2]. Insert the pins (12x60 S12). Tighten the double-thread screws (M10x15). (19)

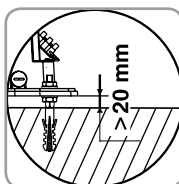


**Put a small amount of grease on the screws before screwing them into the pins.**



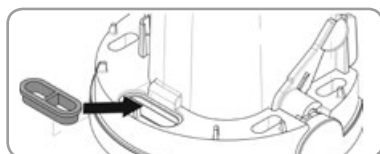
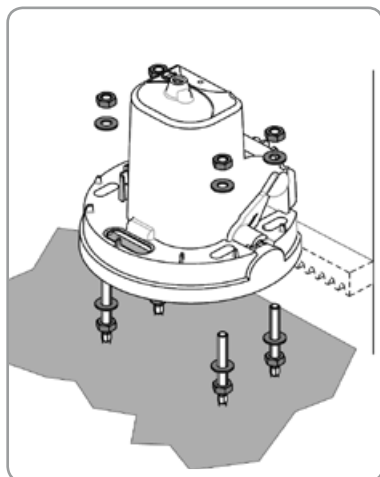
#### ► Drive fastening

- [1]. Screw in 4 nuts (M10, galvanized (17)) and put 4 washers (flat,  $\varnothing$ 10 5x22x2, galvanized). (18)
- [2]. Remove the shield (1) from the drive (4).
- [3]. Place the drive on screws: the flange (drive basis) must be at a maximum height of 25 mm above the ground as. The recommended distance is between 20 and 25 mm.

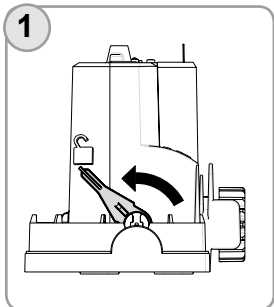
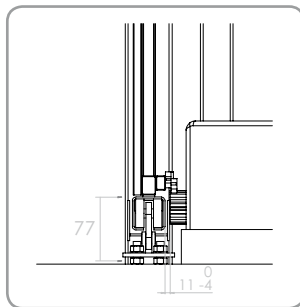



**Use a level to check if the drive is positioned correctly.**

- [4]. After the drive is set at a suitable height from the ground, attach it using washers (flat,  $\varnothing$ 10 5x22x2, galvanized) (18) and 4 nuts (M10, galvanized). (17)
- [5]. Insert the cable bush (8) that has been drilled through previously in the hole provided for the supply conductor.

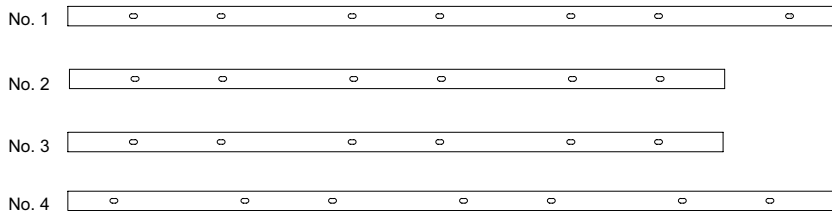


## ► Tooth bar assembly



**[1].** Check if the drive is really unlocked when the lever is in position  .

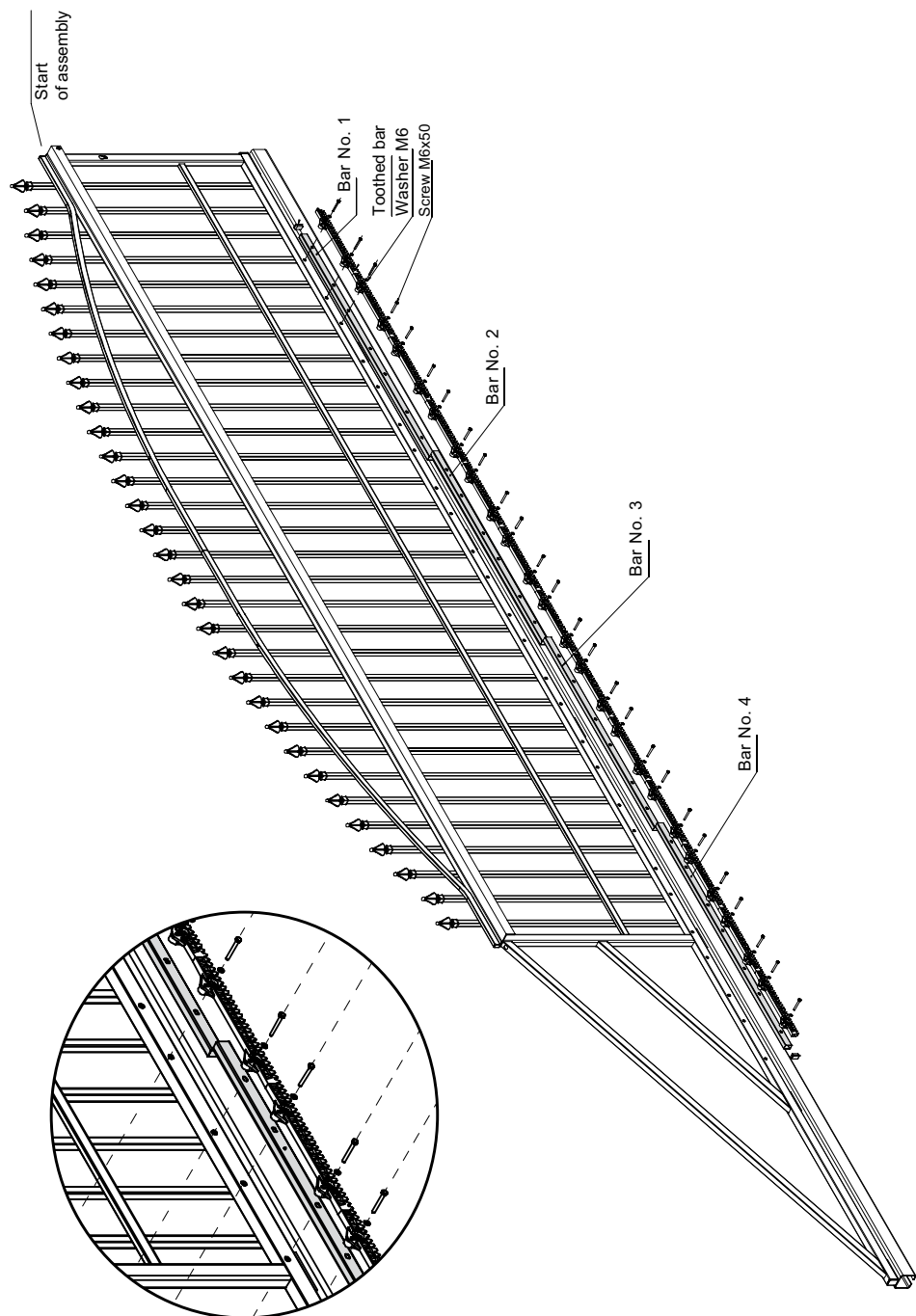
**[2].** Preparation of bars.



**[3].** Assembly of the bars should start from the lock side.

**[4].** Insert bar No. 1 at a suitable distance from the lock side.

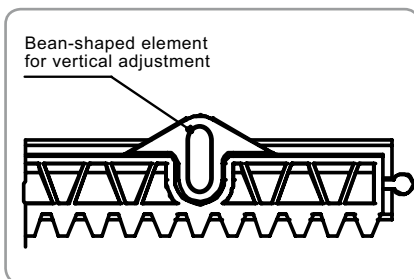
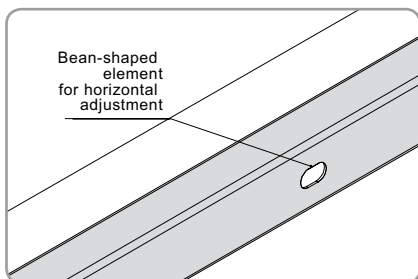
**[5].** Fix the toothed bar (7) to bar No. 1 and fasten using screws M6x50.





Fasten the first bar in such a way as to feel slight resistance.

**[6].** Level the bar. The bars No. 1 – 4 have bean-shaped elements for horizontal adjustment; The toothed bars can be adjusted vertically.



**[7].** Fasten the next toothed bars to the bar No. 1. The last toothed bar on the bar No. 1 will connect the bars No. 2 and No. 1.

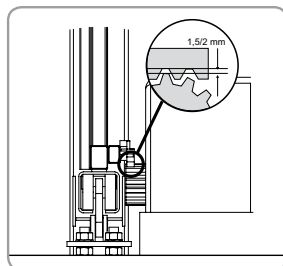
**[8].** Fasten the next bars and toothed bars as above.

**[9].** Once the bars are fastened, check whether everything is level or not; if not, correct this.

## ► Mechanical adjustment

Check if:

- the drive unit is located at a suitable height,
- the gate moves properly: the gate should move without difficulty along its track,
- the gear wheel is driven all the time when the gate moves along its track,
- the set consisting of the toothed bar and the gear wheel does not change its position substantially along the gate path.



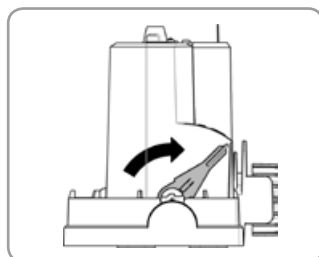
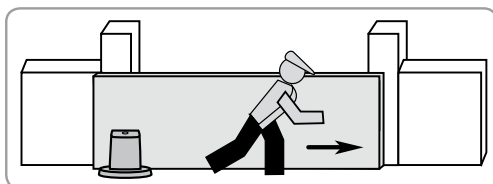
If these conditions are not met:

**[1].** Adjust the height and set the drive at a suitable level using the 4 nuts (17) located under the drive.

**[2].** If necessary, adjust the position of the toothed bar and tighten up the nuts of the drive.

**[3].** Close the gate.

**[4.]** Lock the drive.



**Never lock the drive when the gate is running.**

# 3. ELECTRICAL CONNECTIONS

## Successive stages

- Connection of the drive unit
- Connection to power supply
- Connection to a solar energy source
- Connection of safety accessories

### ► Connection of the drive



***Always connect the drive unit and the electronic module before the electronic module is connected to the mains.***

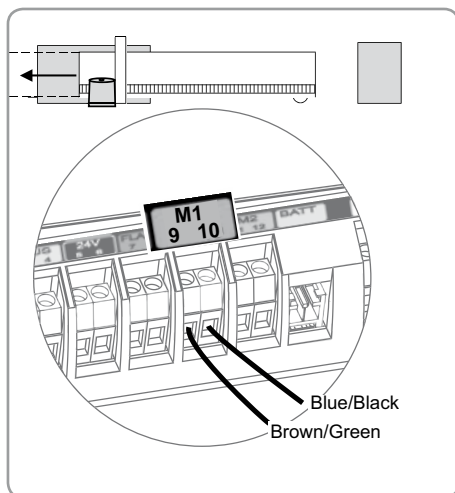


***Always connect the drive unit to the terminals 9 and 10 (green label M1 of the electronic module of the drive).***

The drive unit (4) and the electronic module (3) are initially equipped with conductors designed for the drive unit mounted on the left hand side. To change direction of the drive unit operation, interchange the conductors connected to terminals 9 and 10.

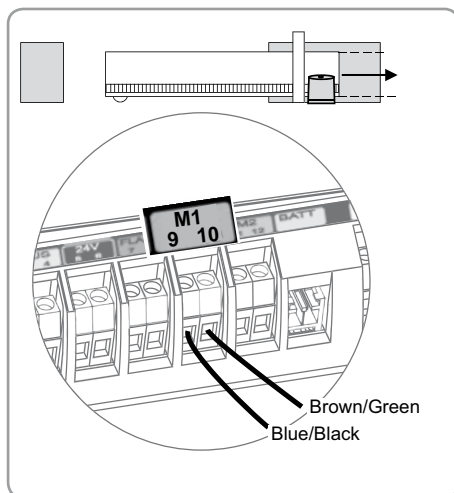
#### The drive on the left-hand side

View from inside




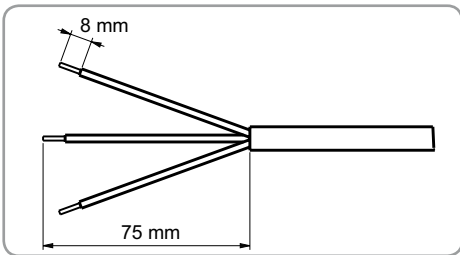
#### The drive on the right-hand side

View from inside

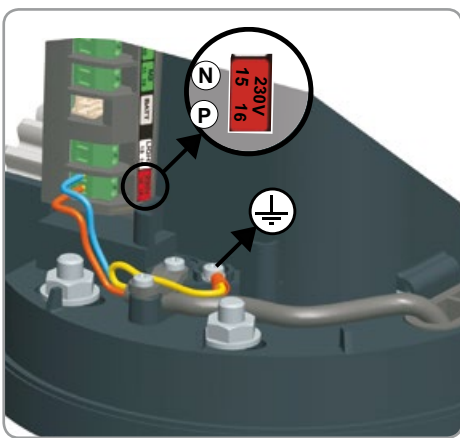


# ► Connection to power supply


 **For safety reasons, only carry out these activities with the power supply disconnected.**



**[1].** Skin the wires of the supply conductor (the same length for 3 wires).



- [2].** Connect the earth conductor.  
The earth conductor (green-yellow) and the insulated terminal provided (13) will be needed in case of some accessories (lighting 230 V, Class I).
- [3].** Connect the phase conductor P and the neutral conductor to terminals 15 and 16 of the electronic module (red label 230 V).  
Check whether the conductors are blocked correctly by pulling them slightly.

| Terminal                  |   |                                                                                    |
|---------------------------|---|------------------------------------------------------------------------------------|
| Blue conductor            | N | <b>15</b>                                                                          |
| Red/brown/black conductor | P | <b>16</b>                                                                          |
| Green-yellow conductor    |   |  |

 **It is obligatory to observe the recommendations concerning the colours of conductors.**

# ► Connection to a solar energy source (See page 30)

# ► Connection of protecting accessories

**Photocells (to be sold separately as an option in the set Simple Move 101)**  
(See pages 23 and 24)

The photocells must be fixed and connected before the start-up of the drive unit.

**The orange light (to be sold separately as an option in the set Simple Move 101)**  
(See pages 26 and 27)

## 4. QUICK START-UP

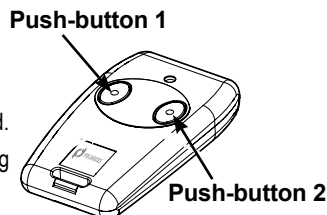
### Successive stages

- Introduction to the remote control
- Placing the label on the electronic module
- Power up the system
- Gate track teaching

#### ► Introduction to the remote controls

The remote controls delivered in the set have been already programmed.

Push-button 1 of the remote control allows the complete opening of the gate.




#### ► Placing the label on the electronic module

Stick the label (14) on the electronic module (3) of the drive unit.

#### ► Power up the system

Power up the system.

The STATUS indicator  on the electronic module flashes (2 pulses) to inform that the power supply of the drives is ON and they are waiting for adjustment.

If the STATUS indicator  remains unlit, see page 31.

#### ► Gate track teaching

The electronic system of the drive stores automatically the following:

- The necessary drive torque to control the gate in the usual mode. The saving of this information allows detection of any abnormalities in the drive unit operation.
- The gate tracks during the opening and closing of the gate completely as well as the positions of the stops.

During setting the parameters, stand at the usual distance from the gate and carry out the following operations:

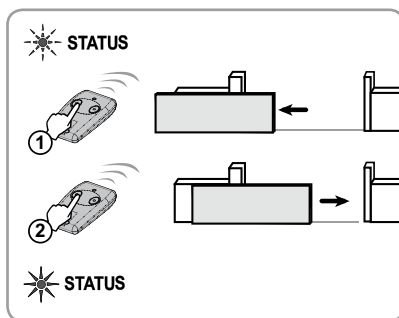
**Press push-button 1 of the remote control to open / close the gate COMPLETELY.**

The STATUS indicator  of the electronic module should **EMIT LIGHT CONTINUOUSLY**.

If the STATUS indicator  flashes, see troubleshooting on page 31.

Do not interrupt the gate movement (complete opening / closing).

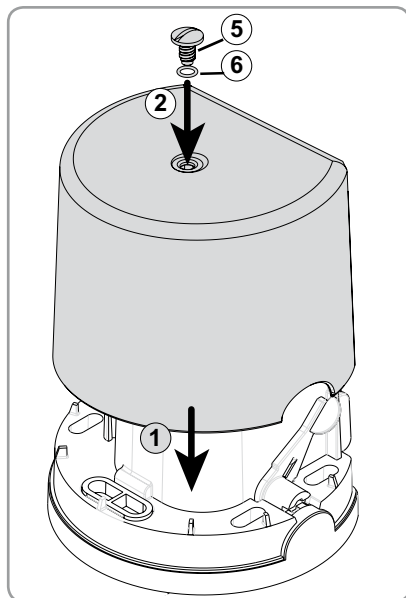
If the gate movement is interrupted, teaching will be resumed automatically at the next opening.



## 5. SHIELD ASSEMBLY

Check if the drive unit is locked.

- [1].** Place the shield on the flange (base) of the drive.
- [2].** Mount the gasket (6) to ensure the tight fitting of the drive unit and then the shield screw (5).



**THE DRIVE UNIT IS READY FOR ACTION.**

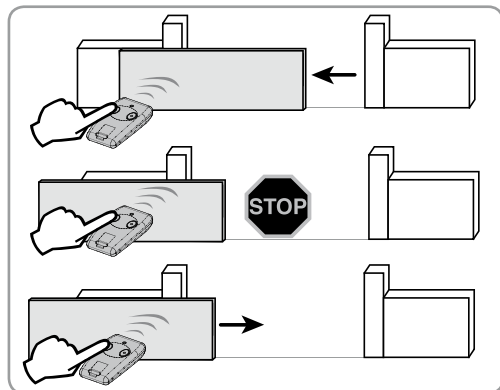
According to the default settings, the drive unit operates in sequential mode and in complete opening mode only.

# OPERATIONAL USE

## Operation in sequential mode

Successive pressing of the same push-button on the remote control results in the following drive unit operation: **Opening, Stop, Closing, Stop, Opening, etc.**

### ► Complete opening



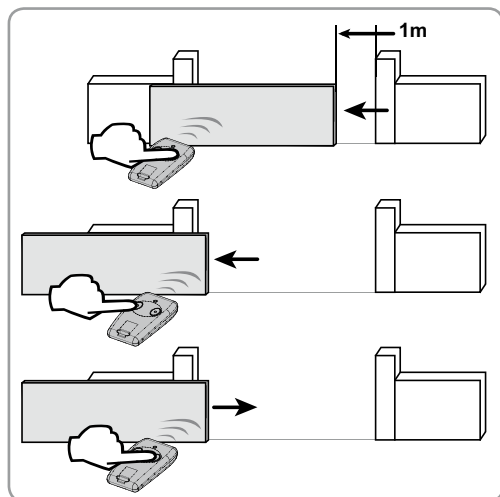
**Complete opening** of the gate by pressing push-button 1.

**Stop** the gate movement by renewed pressing of push-button 1.

**Close** the gate by renewed pressing of push-button 1.

### ► Opening to allow pedestrian entry

Opening to allow pedestrian entry is carried out by pressing the previously activated push-button on the remote control (see page 21).



**Partial opening** of the gate (about 1 m) by pressing of the active push-button.

**Complete opening of the gate** by pressing push-button 1.

**Closing** of the gate by renewed pressing of the active push-button.

## Operation in automatic mode

In automatic mode, the gate closes automatically after 30 seconds.

### ► Precautions

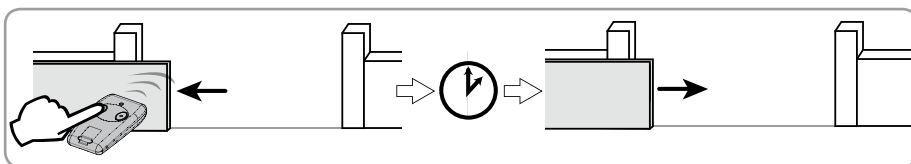
For automatic operation, installation of the photocell set is necessary according to EN 12 453 (see description and information on conductors on pages 22 and 23).

Polargos recommends installation of the orange light (see description and information on conductors on pages 26 and 27) and the zone lighting (see information on conductors on page 27).

### ► Operation in automatic mode (to switch on this mode, read the information on page 20)

In automatic mode, the gate closes automatically after 30 seconds.

In case an obstacle is detected during closing, the gate stops and then opens completely. To close the gate, press push-button 1.

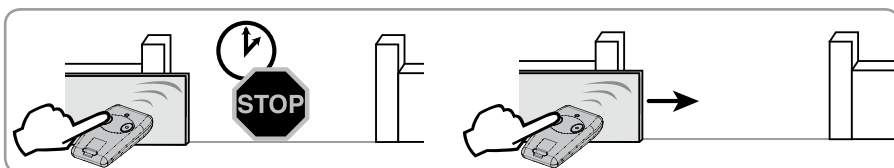


Gate **opening** by pressing push-button 1.

**Automatic gate closing after 30 seconds.**



**Crossing in front of the photocells will result in automatic gate closing after 5 seconds.**



**Keeping of the gate in the open position** by pressing push-button 1.

**Automatic gate closing** by renewed pressing of push-button 1.

## Operation of the obstacle detection function

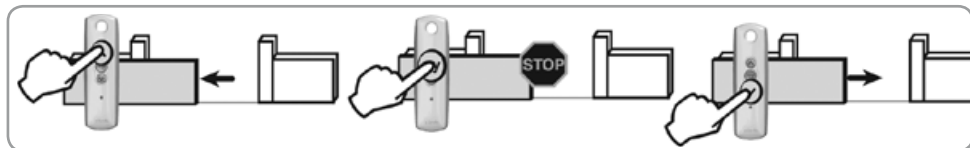
In case an obstacle is detected:

- during opening: the gate stops and carries out a short movement backwards,
- during closing: the gate stops and then it opens fully.

## Operation of zone lighting

The zone lighting lights up every time when the drive is started. It goes out automatically after 1 minute and 30 seconds.

## Operation of remote controls or transmitters with 3 push-buttons



**Opening** by pressing the „Up” push-button

**Stopping** by pressing the central push-button

**Closing** by pressing the „Down” push-button

**Note:** The remote controls or transmitters with 3 push-buttons do not allow opening the gate in pedestrian entry mode.


## Drive unit unlocking / locking

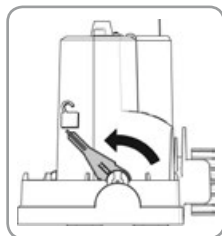


*- For safety reasons, carry out these operations after the power supply has been disconnected because even in the case of power failure, the power supply could be restored at any moment.*

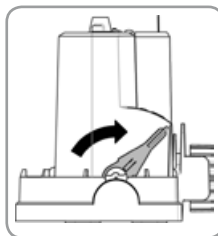
*- Always lock the drive before connecting the power supply. The lever must be in the locked position.*

*- Never unlock or lock the drive unit when the gate is running (displacement in electric or manual mode).*

When the drive is set in the unlocked position , the gate can be controlled manually in case of power failure. Then the gate can be moved completely freely. Exercise caution when carrying out this operation.



Unlock the drive unit by pulling the lever towards yourself.



Lock the drive unit by pushing the lever in the direction of the gate.



# ADVANCED PARAMETER SETTING

**Note:** You cannot set parameters when the gate is running.

Any introduced parameter changes will be taken into account after the first opening of the gate.

## Available push-buttons in remote controls with 2 or 4 push-buttons

Each remote control push-button can be programmed for control of complete gate opening.

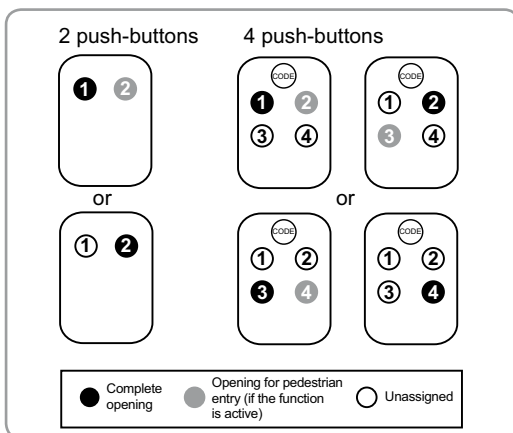
The next push-button allows activation of the function of opening for pedestrian entry (the function of opening for pedestrian entry, see page 20).




**Push-button 1 cannot be programmed for the function of opening for pedestrian entry.**

Unassigned push-buttons or an inactive push-button for opening for pedestrian entry can be used to control another automatic mechanism (garage door, shutter, etc.).

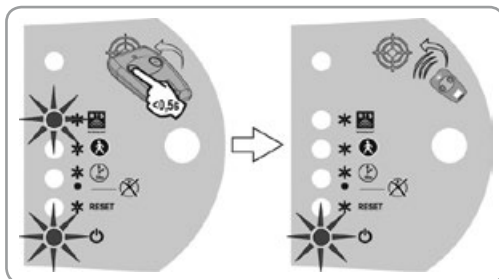
**Available combinations of push-buttons for complete opening / opening for pedestrian entry:**




## Programming of a remote control with 2 or 4 push-buttons

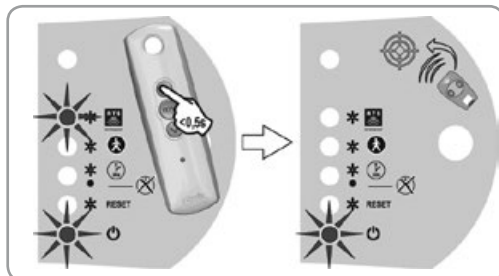
- [1]. Place the remote control on the picture showing a target.
- [2]. Press quickly the remote control push-button designed for the control of COMPLETE gate opening.
  - > RADIO indicator  lights up and then goes out when the push-button is released.

The push-button has been programmed.



## Programming of a remote control with 3 push-buttons



- [1]. Place the remote control on the picture showing a target.
  - [2]. Press quickly the remote control push-button Up or Down.
    - > RADIO indicator  lights up and then goes out.
- The remote control has been programmed.

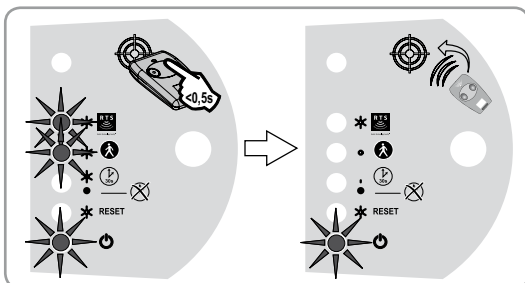



**If 16 remote controls have been programmed, then while programming the 17<sup>th</sup> remote control, the first remote control will be deleted, etc.**

## Activation of the function of opening for pedestrian entry

The function of opening for pedestrian entry can be activated using the push-button of the programmed remote control with 2 or 4 push-buttons (see 'Available push-buttons in remote controls', page 19).

- [1]. Place the programmed remote control on the picture showing a target.
- [2]. Press quickly the remote control push-button to be activated.  
 > The RADIO indicator  and the PEDESTRIAN indicator  light up and then go out. The function of opening for pedestrian entry has been activated in this push-button.




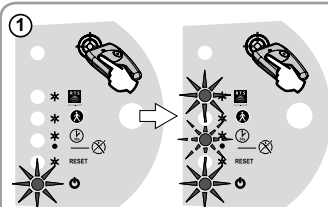
**To switch off the function for opening for pedestrian entry on this push-button**, carry out this function activation procedure (as described below) once again for this push-button. PEDESTRIAN indicator  goes out.

## Activation of the AUTOMATIC CLOSING mode (recommended in the case of a solar energy supply)



**Note:** The automatic mode can be activated only when a photocell set has been installed (see description of conductors on page 23).

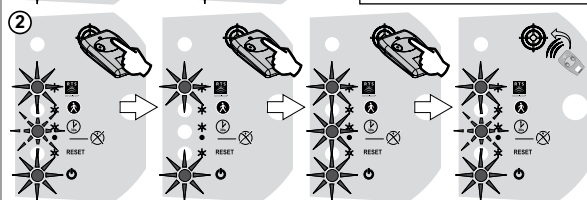
Put the remote control on the electronic module to access the settings. In case of a remote control with 3 push-buttons, the settings are not accessible.


- [1]. Put the programmed remote control with 2 or 4 push-buttons on the picture showing a target. Press push-button 1 until AUTOMATIC CLOSING indicator  starts flashing.

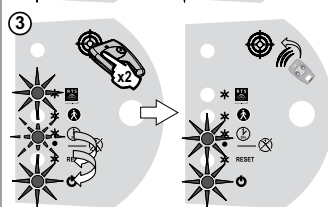



**Note:** After stage 1 is finished, successive stages can be carried out in remote mode (without placing the remote control on the picture showing a target).

- [2]. Press push-button 2 until AUTOMATIC CLOSING indicator  goes out and then lights up and emits light continuously. Release the push-button.  
 > AUTOMATIC CLOSING indicator  starts flashing.



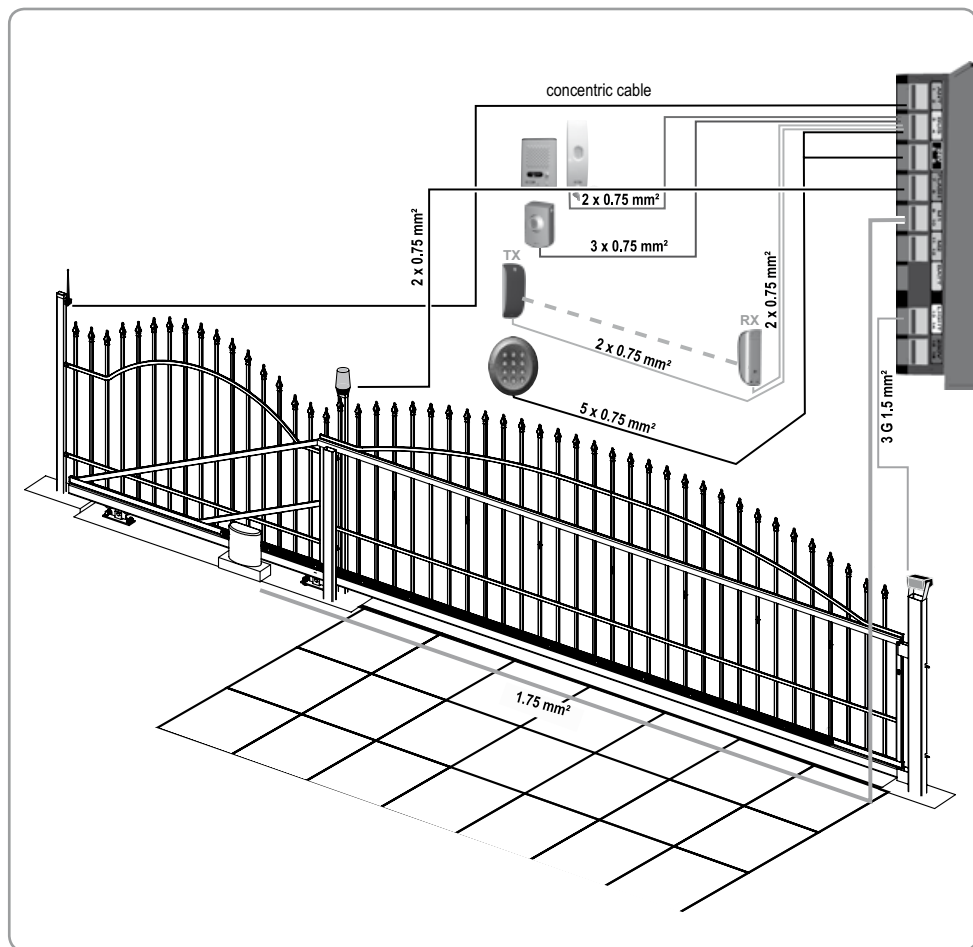
- [3]. Press remote control push-button 1 twice.  
 > AUTOMATIC CLOSING indicator  remains lit to signify automatic mode activation.



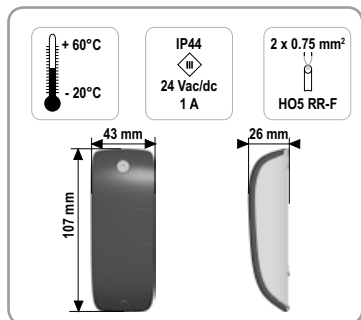
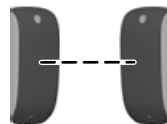
To switch off automatic closing mode and return to sequential mode, **repeat stage 1 described above and then press quickly remote control push-button 2**; pilota, AUTOMATIC CLOSING indicator  will go out and then start flashing. Press remote control push-button 1 twice.

# ACCESSORIES

## A cross-section of conductors for individual types of devices



# Photocells



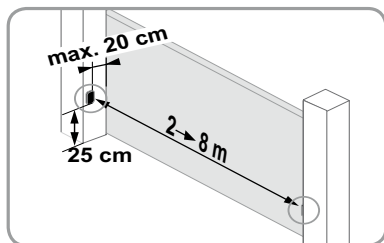
Photocells cause the gate to stop and reverse direction during closing in the case of obstacle detection (photocells obstructed).

**Note:** If the gate is closed and the photocells are obstructed, the gate will not open.

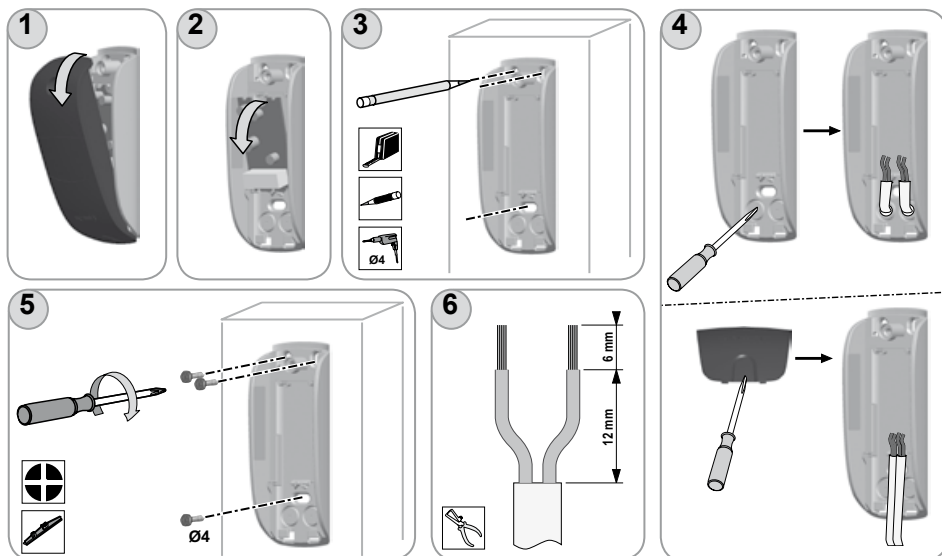
A set of photocells consists of:

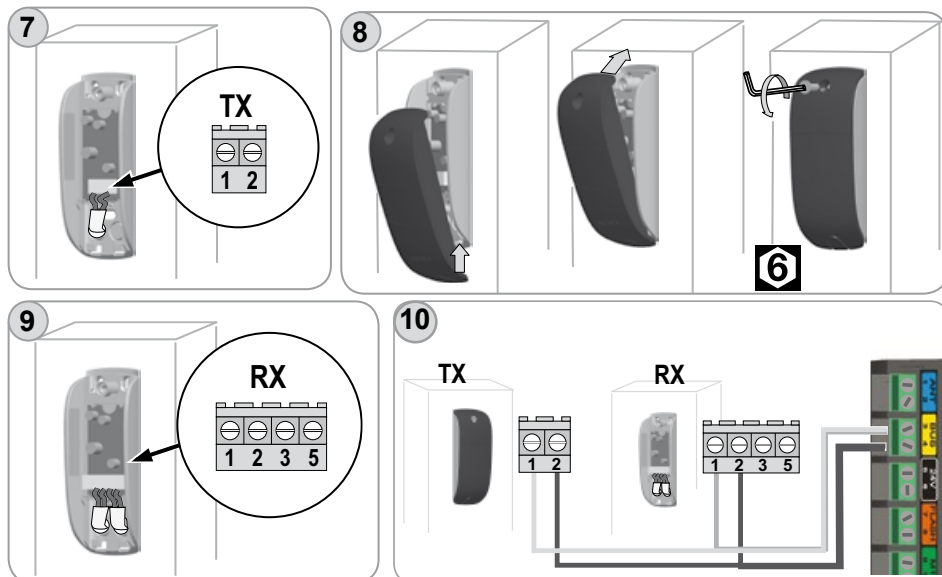
- transmitting photocells (TX),
- receiving photocells (RX).

## ► Location of photocells



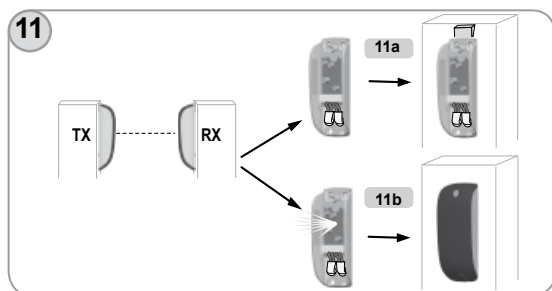
## ► Photocell installation and conductors





|                    | TX |   | RX |   |   |   |
|--------------------|----|---|----|---|---|---|
|                    | 1  | 2 | 1  | 2 | 3 | 5 |
| Yellow label (BUS) | 3  | 4 | 3  | 4 | X | X |


**!** *To check that the photocells are set properly, mount the shield of the transmitting photocell but do not install the shield of the receiving photocell.*




Check proper setting of the photocells:

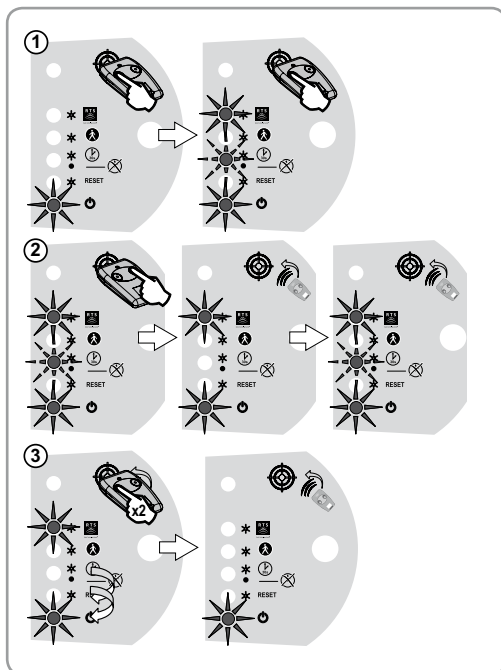
- If the receiving photocell indicator does not light up, adjust the position of the photocell (RX) using a pad. Check once again.
- If the receiving photocell indicator emits light continuously (proper setting), close the shield of the receiving photocell (RX).

## ► Recognition of photocells by the electronic system of the drive unit when in sequential mode

- [1].** Put the programmed remote control with 2 or 4 push-buttons on the picture showing a target. Press remote control push-button 1 until the AUTOMATIC CLOSING indicator  goes out and then starts flashing.

**Note:** After stage 1 is finished, successive stages can be carried out in remote mode (without placing the remote control on the picture showing a target).

- [2].** Press remote control push-button 2 until the AUTOMATIC CLOSING indicator  goes out, and then starts flashing.
- [3].** Press remote control push-button 1 twice.



**Note:** In automatic closing mode, the photocells are recognized by the electronic system of the drive unit on activation of the automatic closing mode (see page 21).

## ► Removal of photocells

In case of isolation of the photocells:

- in sequential mode: repeat the procedure of recognition of the photocells by the electronic system of the drive unit in sequential mode,
- in automatic closing mode: repeat the procedure of activation of the automatic closing mode as described on page 21.

## ► Obstructed photocells

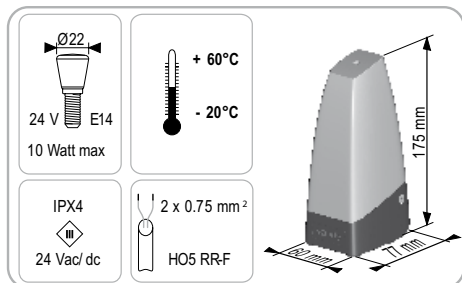
If the photocells are obstructed during gate closing, the gate will stop and start moving in the reverse direction.

If the gate is closed and the photocells are obstructed, the gate will not open.

## ► Safety rules

The photocell operation must be checked every 6 months. To do this, shield the photocell with one hand during gate closing. **The gate should stop and open again.**

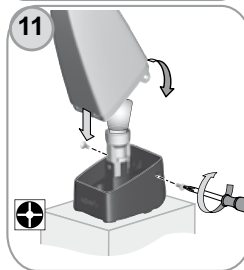
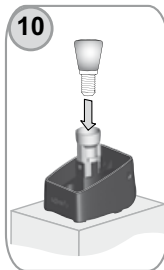
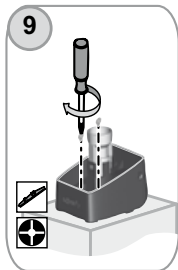
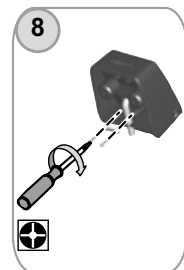
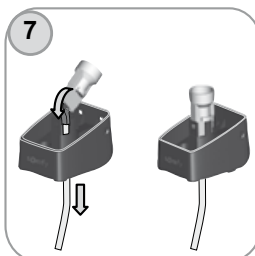
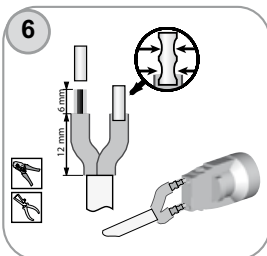
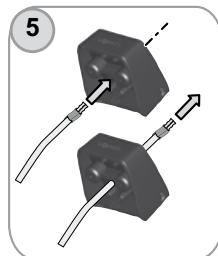
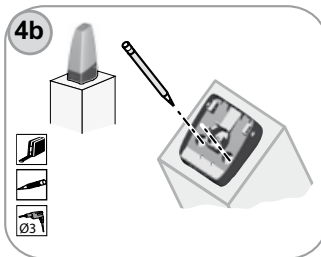
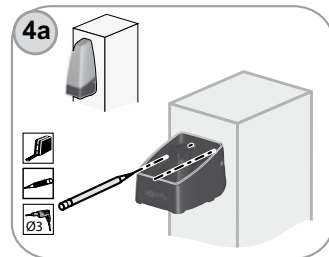
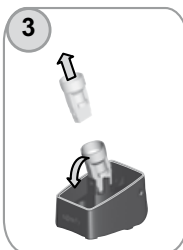
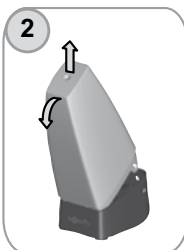
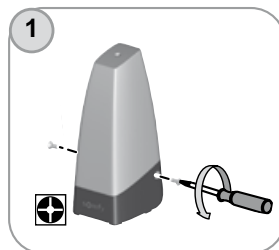
# Orange light-----



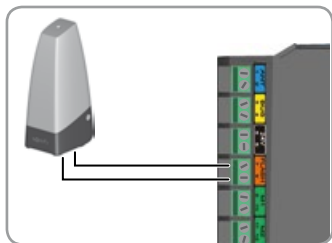
The orange light indicates that the drive unit is running. It starts flashing 2 seconds before the gate starts moving.

## ► Installation of orange light

There are two methods available of installing the orange light (see Fig. 4a and 4b).

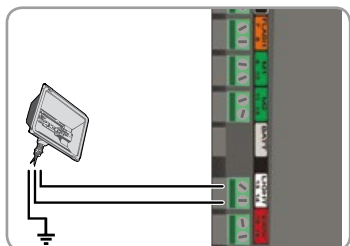


## ► Conductors of orange light



Connect the orange light to the terminals 7 and 8 (orange label „FLASH“) of the electronic module.

## Zone lighting



***This element is not compatible with a solar energy supply.***

Connect the zone lighting to terminals 13 and 14 (white label „LIGHT“) of the electronic module.


## Emergency battery



***This element is not compatible with a solar energy supply.***

The emergency battery ensures the continuity of gate operation at low speed in case of electrical supply failure. The battery is built in to the electronic module of the drive and connected with it directly.

To lengthen the amount of time of the battery operation, the wire control systems are disconnected; the gate is controlled with remote controls and radio transmitters only.

Note: STATUS indicator  flashes (1 pulse) when the drive is supplied by the battery.

## ► Technical data of the battery

- Operating time: 10 cycles in continuous mode or 24 hours if the gate is in good technical condition.
- Optimum charging time for the battery before use: 48 hours.
- Battery life: 3 years.

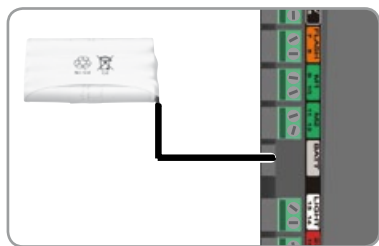
To ensure optimum battery life, disconnect the power supply from the gate three times a year and run several cycles with battery operated drive.



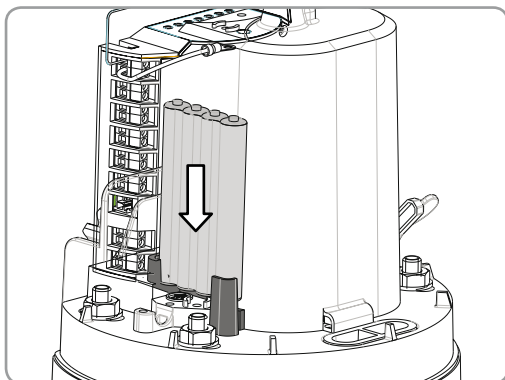
It is necessary to separate batteries and rechargeable batteries from other types of waste and to transport them to a local waste collection area to be recycled.



## ► Battery conductors and installation



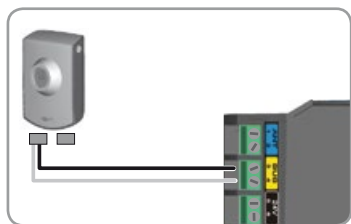
Connect the battery to the electronic module terminal provided for this purpose (grey label „BATT“).



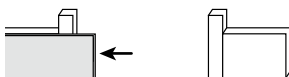
## Key switch-----



*This element is not compatible with a solar energy supply.*



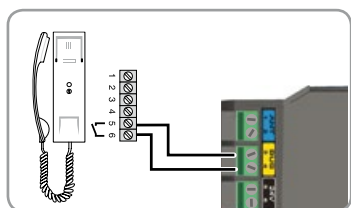
Connect the key switch to the electronic module terminals 3 and 4 (yellow label „BUS“).



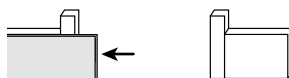
## Interphone-----



*This element is not compatible with a solar energy supply.*



Connect the interphone to the electronic module terminals 3 and 4 (yellow label „BUS“).

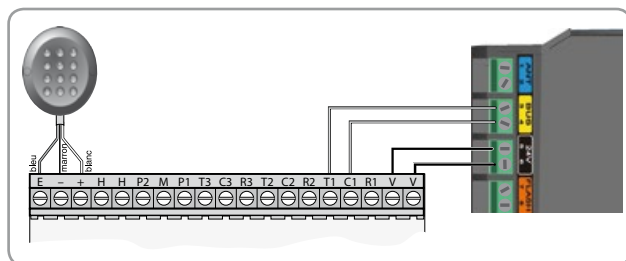


**Note:** In the case of the connection of an interphone of a different type to the one presented above, check to see if it is equipped with an output contact without power supply.

## Panel with digital code-----



*This element is not compatible with a solar energy supply.*



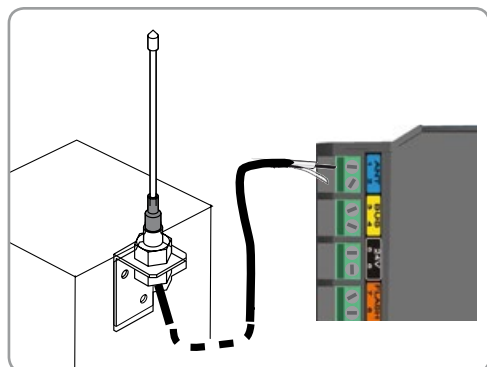
Connect:

- T1 and C1 of the panel with a digital code to the electronic module terminals 3 and 4 (yellow label „BUS”).
- V and V of the panel with a digital code to the electronic module terminals 5 and 6 (black label „24 V”).

## Radio panel with code -----



## Independent antenna-----



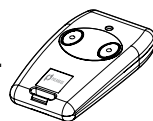
An independent antenna with a longer range can replace the wire antenna.

Place it on the post top and check to see if it is exposed.

Connect the antenna to the electronic module terminals 1 and 2 (blue label „ANT”):

- conductor core to terminal 1
- stranded aerial wire to terminal 2

## Remote control with 2 push-buttons-----



# SOLAR ENERGY SUPPLY



**Never connect the drive unit to a power supply of 230 V when it is already connected to a solar energy source because this can lead to damage to the electronic module of the drive.**

When the drive unit operates using a solar energy supply:

- the gate can be controlled by means of remote controls and radio transmitters only (wire control is inactive),
- protecting wire accessories (photocells, the orange light) are still active.

## ► Connection to a solar energy source

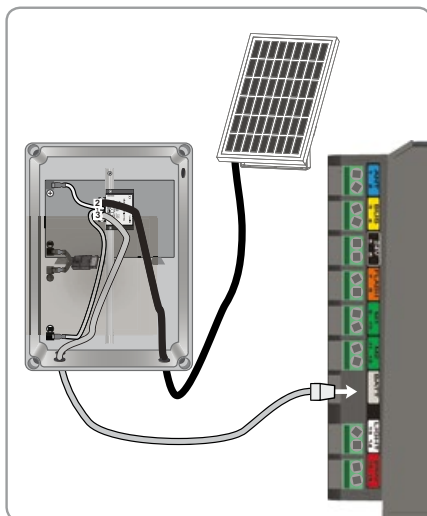
Connect the lead-in wire from a solar battery to the grey terminal „BATT“ of the electronic module of the drive.

**Note:** When the drive is supplied with a solar energy source, the wire control systems are disconnected; the gate is controlled by means of remote controls and radio transmitters only.

## ► Advice concerning use

To reduce energy consumption by the gate drive unit, we recommend the following:

- the gate should stay closed to ensure a longer period for battery recharging,
- the gate should not remain open for longer than 2 days,
- switch on automatic closing mode of the system (see page 21).





# TROUBLESHOOTING



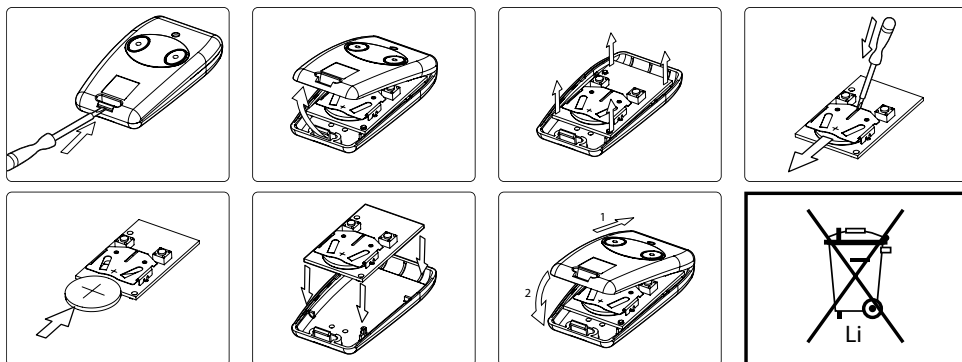
**Switch off the power supply of the system during cleaning or any other maintenance activities.**

| DIAGNOSTICS                                                                       |                                                                           | FAULT CLEARING                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The drive does not respond to commands from the remote control</b>             | Limited operating range of the remote control.                            | <ul style="list-style-type: none"> <li>- Check the battery of the remote control (see „Replacement of the remote control battery” on the next page).</li> <li>- Check the electronic module antenna (conductors, position – see the next page).</li> <li>- Check possible source of radio frequency interferences (overhead line pole, reinforced brickwork, etc.). If this is the case, fit an external antenna.</li> </ul> |
|                                                                                   | Unprogrammed remote control.                                              | Program the remote control (see page 20).                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                   | Unlocked drive.                                                           | Lock the drive.                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>STATUS indicator (STATUS) of the electronic module does not emit any light</b> | No power supply for the drive unit.                                       | <ul style="list-style-type: none"> <li>- Check the mains supply.</li> <li>- Check the supply conductor.</li> </ul>                                                                                                                                                                                                                                                                                                           |
|                                                                                   | Very low light intensity outdoor = the drive unit is in standby mode.     | To carry out settings, increase illumination outside the electronic module (eg. using a torch).                                                                                                                                                                                                                                                                                                                              |
| <b>STATUS indicator of the electronic module is flashing:</b>                     |                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>1 pulse</b>                                                                    | Working mode with the emergency battery supply.                           | Check the mains supply.                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>2 pulse</b>                                                                    | The drive unit is awaiting the gate path teaching.                        | Restart the gate path teaching (see page 15).                                                                                                                                                                                                                                                                                                                                                                                |
| <b>3 pulse</b>                                                                    | Photocell failure:                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                   | - Obstructed photocells.                                                  | Remove any obstacles that are obstructing the photocells.                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                   | - Photocells set improperly.                                              | Correct the photocell setting (see page 24).                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                   | - Photocell conductors connected improperly.                              | Connect photocell conductors in accordance with the instructions given on page 24.                                                                                                                                                                                                                                                                                                                                           |
|                                                                                   | - No photocells /disconnected photocells.                                 | <ul style="list-style-type: none"> <li>- Check if the photocells are connected properly.</li> <li>- If photocells are disconnected intentionally and the gate is working in automatic closing mode, switch off automatic closing mode (see page 21).</li> </ul>                                                                                                                                                              |
| <b>4 pulse</b>                                                                    | Short circuit at the output BUS (terminals 3-4) of the electronic module. | Check accessories connected to the output BUS of the electronic module.                                                                                                                                                                                                                                                                                                                                                      |

| DIAGNOSTICS                                                                                                                                                                         |                                                                                 | FAULT CLEARING                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5 pulses</b>                                                                                                                                                                     | Thermal protection of the drive is switched on.                                 | Wait for the drive to cool down until the STATUS indicator  starts emitting light continuously. |
| <b>6 pulses</b>                                                                                                                                                                     | Short circuit at the output 24 V (terminals 5-6) of the electronic module.      | Check the device connected to the output 24 V of the electronic module.                                                                                                          |
|                                                                                                                                                                                     | Short circuit within the orange light (terminals 7-8) of the electronic module. | Check conductors of the orange light (see page 27).                                                                                                                              |
|                                                                                                                                                                                     | Short circuit within the drive unit.                                            | Check the conductors of the drive unit (see page 13).                                                                                                                            |
| <b>The automatic closing mode does not start (the AUTOMATIC CLOSING indicator remains unlit).</b>  | Photocells have not been installed.                                             | Install photocells (see pages 23 and 24).                                                                                                                                        |

## ► Replacement of the remote control battery

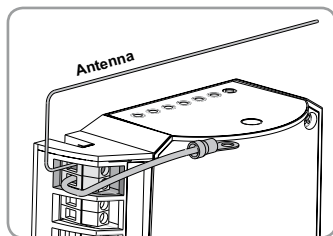
The battery life is usually 2 years.



**WARNING:** Observe the polarity (+/-) of the batteries; they must not be recharged or thrown into fire or water. They must not be exposed to high temperatures. Used batteries must not be opened or mixed with batteries of another type or used batteries (this can result in an explosion, electrolyte leakages and damage of different types). Keep out of the reach of children.

## ► Antenna conductors and position

The antenna must be connected to terminal 1 of the electronic system of the drive unit and positioned as shown in the picture on the right.



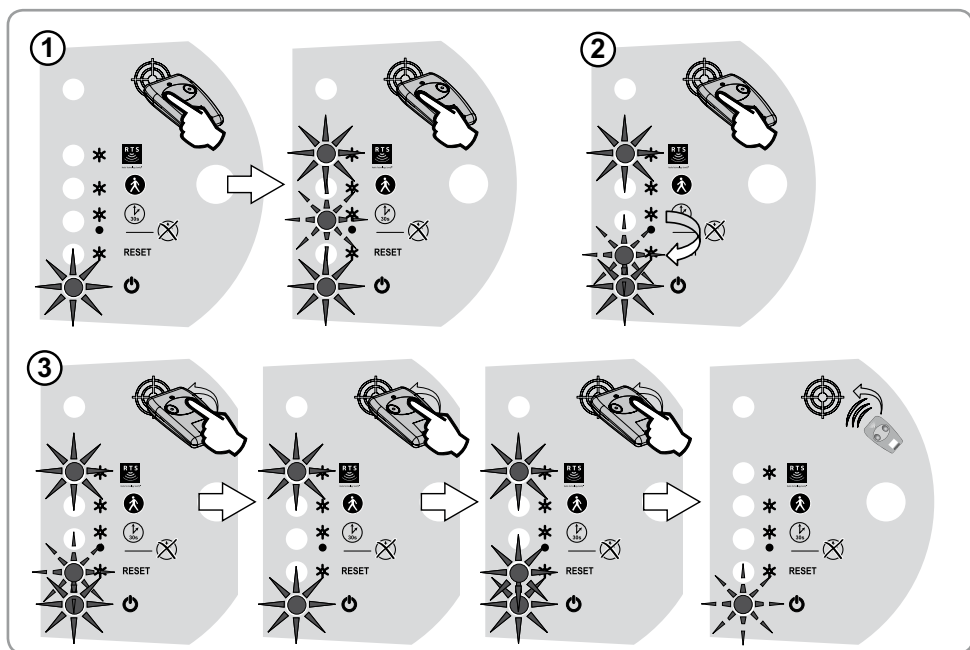
## ► Removal of settings

The following settings can be removed: the gate path and activation of the automatic gate closing mode.

### When are the settings to be removed?

After the gate path teaching, in the case of modification of the drive conductors.

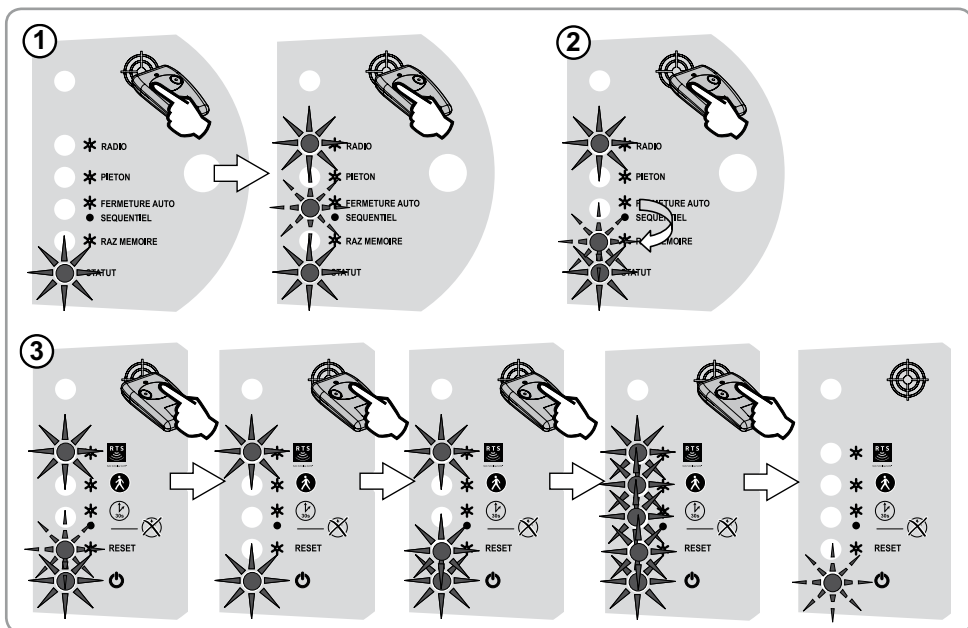
In the case of detection of an unexpected obstacle as a consequence of normal wear of the gate.





- [1].** Put the programmed remote control with 2 or 4 push-buttons on the picture showing a target.  
Press the remote control push-button 1 until the AUTOMATIC CLOSING indicator starts flashing.
- [2].** Press remote control push-button 1 once.  
> MEMORY RESET indicator (RESET) is flashing.
- [3].** Press remote control push-button 2 and hold it until the MEMORY RESET indicator (RESET) lights up.  
Release push-button 2.  
> STATUS indicator is flashing.

## ► Removal of programmed settings and remote controls

The following settings can be removed: the gate path, activation of the automatic gate closing mode and all programmed remote controls or radio transmitters.



- [1].** Put the programmed remote control with 2 or 4 push-buttons on the picture showing a target.  
Press remote control push-button 1 until the AUTOMATIC CLOSING indicator  starts flashing.
- [2].** Press remote control push-button 1 once.  
> MEMORY RESET indicator (RESET) is flashing.
- [3].** Press remote control push-button 2 until all indicators light up. Release push-button 2.  
> STATUS indicator  is flashing.



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