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# ATRIS

**I**

**ATTUATORE ELETTROMECCANICO  
PER PORTE SEZIONALI E  
BASCULANTI**

**GB**

**ELECTROMECHANICAL ACTUATOR  
FOR SPRING AND COUNTERWEIGHT  
BALANCED DOORS**

**F**

**OPERATEUR ELECTROMECHANIQUE  
POUR PORTES SECTIONNELLES ET  
BASCULANTES**

**E**

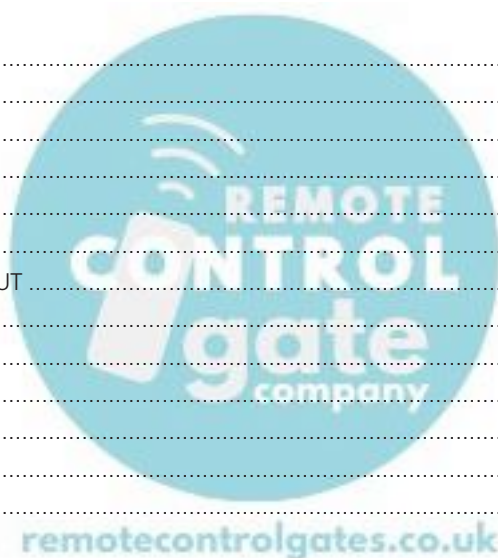
**MOTOR DE TECHO  
ELECTROMECÁNICO PARA PUERTAS  
SECCIONALES Y BASCULANTES**




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1 - IMPORTANT REMARKS .....	26
1.1 - PRELIMINARY CHECKS AND IDENTIFICATION OF THE TYPE TO BE USED .....	27
1.2 - DISPOSAL OF THE PRODUCT .....	28
1.3 - TECHNICAL ASSISTANCE SERVICE .....	28
1.4 - EU DECLARATION OF CONFORMITY .....	28
2 - TECHNICAL SPECIFICATIONS .....	29
3 - INSTALLATION LAYOUT .....	30
4 - INSTALLATION OF GUIDE SECTION BAR .....	31
5 - INSTALLATION OF MOTOR ON SECTION BAR .....	32
6 - INSTALLATION .....	32
7 - RELEASE OF THE AUTOMATION .....	33
8 - CONTROL UNIT .....	34
8.1 - COLLEGAMENTI ELETTRICI .....	34
8.2 - FUSE REPLACEMENT .....	35
8.3 - ACTIVATION INPUT .....	36
8.4 - CONNECTING PHOTOCELLS .....	36
8.5 - STOP / SAFETY EDGE .....	36
8.6 - FLASHING / WARNING LIGHT OUTPUT .....	37
8.7 - COURTESY LIGHT .....	37
8.8 - ANTENNA .....	37
8.9 - POWER SUPPLY .....	37
8.10 - BATTERY POWER .....	37
8.11 - PLUG IN RECEIVER .....	38
8.12 - ADI INTERFACE .....	38
9 - CONTROL PANEL .....	39
9.1 - DISPLAY .....	39
9.2 - USE OF THE KEYS FOR PROGRAMMING .....	39
10 - ACCESSING THE CONTROL UNIT SETTINGS .....	40
10.1 - PROGRAMMING THE LIMIT SWITCHES .....	40
10.2 - AUTOMATIC SENSITIVITY ADJUSTMENT .....	41
10.3 - LOADING THE DEFAULT PARAMETERS .....	41
11 - READING OF CYCLE COUNTER .....	42
11.1 - CYCLE COUNTER .....	42
11.2 - SIGNAL OF SERVICE REQUIRED .....	42
12 - PROGRAMMING THE OPERATING PARAMETERS .....	43
13 - OPERATION DEFECTS .....	47



# 1 - IMPORTANT REMARKS

 **Prior to proceeding with installation, it is essential the instructions be read in full, since they contain important information regarding safety, installation, use and maintenance.**

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:

**EN 60204-1, EN 12445, EN 12453, EN 13241-1, EN 12635**

- The installer must provide for a device (es. magnetothermal switch) ensuring the omnipolar sectioning of the equipment from the power supply. The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).
- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (Machine Directive 2006/42/CE).
- It is mandatory to comply with standard EN 13241-1 and any other national provisions.
- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike. V2 S.p.A. declines any responsibility in case of automation upstream electric system not complying with the laws and rules in force and not carried out workmanlike
- The gate's thrust force and its sensitivity to obstacles shall be measured using an appropriate tool and adjusted in compliance with the maximum permitted values, provided in standard EN 12453.
- This test and measurement of force may only be performed by a professional. When hitting an obstacle the door has to stop and reverse (completely or partially, depending on the setting of the PCB).  
If the gate does not slide on the requested path or if it does not change its sliding direction as soon as it detects an obstacle, you need to readjust the obstacle detection sensitivity. Then please repeat the test.  
If the door after the performed corrections does not stop and reverse according to the valid norms, the door may not be operated automatically.
- The use of ATRIS in dusty, saline or explosive environment is forbidden
- The opener is designed for operation in dry rooms exclusively
- For the safety and life of persons it is absolutely necessary to follow all instructions.
- Keep these instructions save for later reference
- Do not permit children to play with the automated garage door. Transmitters are to be kept safe and away from children!
- Only operate the door if the entire door area is in your field of view. Always be sure, that no persons or objects are located within traveling range of the door
- Do not use the opener when service or adjustment work is required. A badly balanced door, or a faulty garage door system may cause injuries.
- Please inform all persons using the door system on how to operate it correctly and safely.
- Check often the automation, particularly the cables, springs and mechanic parts for wear and tear, damages and unbalancing.
- The plug must be at easy reach, after the installation.
- The data on the plate of the product are written on the label put next to the connection terminal board.

- Any control devices installed in fixed locations (such as buttons or similar devices) must be positioned within the field of view of the gate, at a height of at least 1.5m from the ground. It is essential that they are mounted out of reach of children!
- Affix warning signs indicating the risk of being caught in the door where they may be seen immediately or in the vicinity of the permanently mounted push button.

**V2 has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.**



## 1.1 - PRELIMINARY CHECKS AND IDENTIFICATION OF THE TYPE TO BE USED

It should be remembered that the device does not compensate for defects caused by improper installation, or poor maintenance, thus, prior to proceeding with installation, ensure that the structure is suitable and meets current standards and, if necessary, perform any structural modifications aimed at the implementation of safety gaps and the protection or segregation of all crushing, shearing and transit zones, and verify that:

- The door must be suitable to be automated (check the door operation manual and directions). The door structure itself must be stout and appropriate to be automated.
- Check the door to be provided with anti-fall system (independent of the suspension system).
- The door must be functional and safe.
- The door must open and close easily without any friction.
- The door must be properly balanced both before and after its automation: stopping the door in any position, it must not move (carry out a balance weight adjustment, if necessary)..
- Fix the engine steadily and using suitable material.
- If necessary, make the structural calculation and enclose to the technical specification paper.
- It is advisable to install the geared motor in the centre of the door; it is permitted to move aside 100 mm to install the sliding arm accessory 162504 (see paragraph 10 page 27) .
- In case of counterbalanced door, check that the minimum distance between the track and the door must not be under 20 mm

**Warning: The minimum safety level depends on the type of use; please refer to the following outline:**

TYPE OF ACTIVATION COMMANDS	CLOSURE USE TYPE		
	GROUP 1 Informed people (use in private area)	GROUP 2 Informed people (use in public area)	GROUP 3 Informed people (unlimited use)
Man-present command	A	B	Not possible
Remote control and closure in view (e.g. infrared)	C or E	C or E	C and D or E
Remote control and closure not in view (e.g. radio)	C or E	C and D or E	C and D or E
Automatic control (e.g. timed closure control)	C and D or E	C and D or E	C and D or E

**GROUP 1** - Only a limited number of people are authorised for use, and closure is not in a public area. Examples of this type are gates inside business premises, where the sole users are employees, or a part of them who have been suitably informed.

**GROUP 2** - Only a limited number of people are authorised for use, but in this case, closure is in a public area. An example of this may be a company gate that accesses onto a public street, and which is only used by employees.

**GROUP 3** - Anyone can use the automated closure, which is thus located on public land. For example the access gate to a supermarket or an office, or a hospital.

**PROTECTION A** - Closure is activated by means of a control button with the person present, i.e. with maintained action.

**PROTECTION B** - With the person present, closure is activated by a command controlled by means of a key-switch or the like, in order to prevent use by unauthorised persons.

**PROTECTION C** - Restricts the force of the leaf of the door or gate. I.e., in the case of the gate striking an obstacle, the impact force must fall within a curve established by the regulations.

**PROTECTION D** - Devices, such as photocells, capable of detecting the presence of people or obstacles. They may be active on just one side or on both sides of the door or gate.

**PROTECTION E** - Sensitive devices, such as footboards or immaterial barriers, capable of detecting the presence of a person, and installed in such a way that the latter cannot be struck in any way by a moving leaf or panel. These devices should be active within the entire "danger zone" of the gate. The Machinery Directive defines "Danger Zone" as any zone surrounding and/or near machinery where the presence of an exposed person constitutes a risk to the health and safety of that person.

**The risk analysis should take into consideration all danger zones for the automation device, which should be appropriately protected and marked.**

**In a clearly visible area, apply a sign with information identifying the motorised door or gate.**

**The installer should provide the user with all the information relating to automatic operation, emergency opening and maintenance of the motorised door or gate.**



## 1.2 - DISPOSAL OF THE PRODUCT

As for the installation operations, even at the end of this product's life span, the dismantling operations must be carried out by qualified experts.

This product is made up of various types of materials: some can be recycled while others need to be disposed of.

Find out about the recycling or disposal systems envisaged by your local regulations for this product category.

**Important!** – Parts of the product could contain pollutants or hazardous substances which, if released into the environment, could cause harmful effects to the environment itself as well as to human health.

As indicated by the symbol opposite, throwing away this product as domestic waste is strictly forbidden. So dispose of it as differentiated waste, in accordance with your local regulations, or return the product to the retailer when you purchase a new equivalent product.

**Important!** – the local applicable regulations may envisage heavy sanctions in the event of illegal disposal of this product.



## 1.3 - TECHNICAL ASSISTANCE SERVICE

For any installation problem please contact our Customer Service at the number +39-0172.812411 operating Monday to Friday from 8:30 to 12:30 and from 14:00 to 18:00.

## 1.4 - EU DECLARATION OF CONFORMITY AND DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINE

**Declaration in accordance with Directives: 2014/35/UE (LVD); 2014/30/UE (EMC); 2006/42/CE (MD) ANNEX II, PART B**

The manufacturer V2 S.p.A., headquarters in Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy

Under its sole responsibility hereby declares that: the partly completed machinery model(s): ATRIS-700 (\*), ATRIS-1000 (\*), ATRIS-1000-F (\*)

Description: electromechanical actuator for garage doors

- is intended to be installed on garage doors to create a machine according to the provisions of the Directive 2006/42/EC. The machinery must not be put into service until the final machinery into which it has to be incorporated has been declared in conformity with the provisions of the Directive 2006/42/EC (annex II-A).
- is compliant with the applicable essential safety requirements of the following Directives:  
Machinery Directive 2006/42/EC (annex I, chapter 1)  
Low Voltage Directive 2014/35/EU  
Electromagnetic Compatibility Directive 2014/30/EU  
Directive ROHS2 2011/65/CE

The relevant technical documentation is available at the national authorities' request after justifiable request to:

V2 S.p.A.  
Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy

The person empowered to draw up the declaration and to provide the technical documentation:

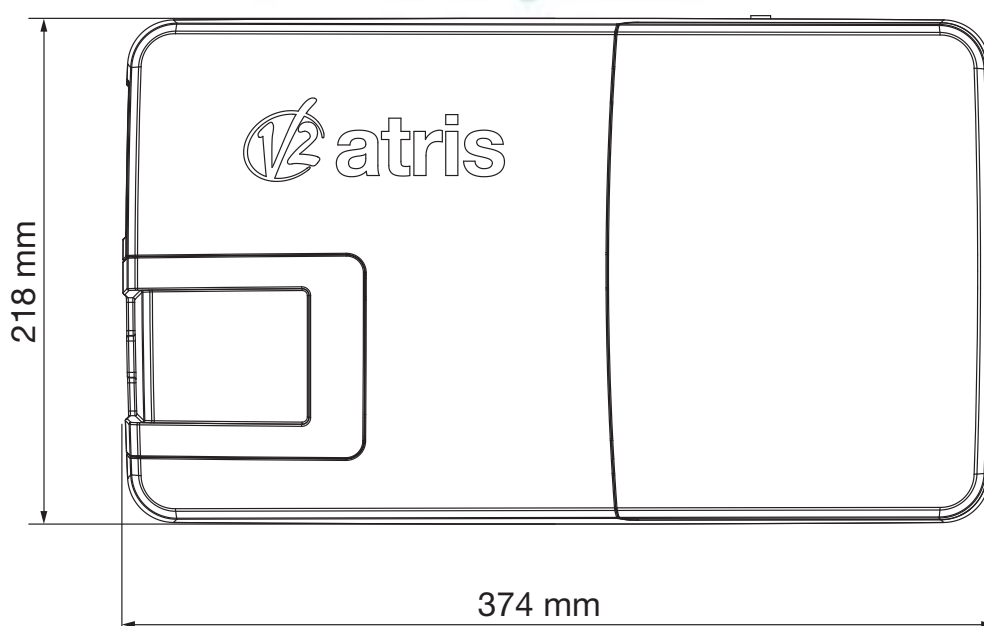
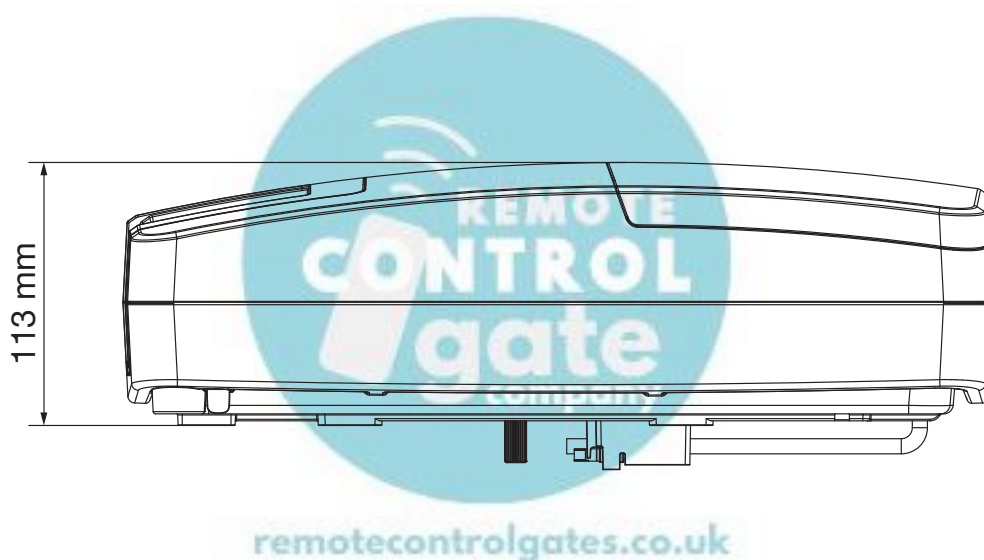
**Sergio Biancheri**  
Legal representative of V2 S.p.A.  
Racconigi, il 01/06/2019

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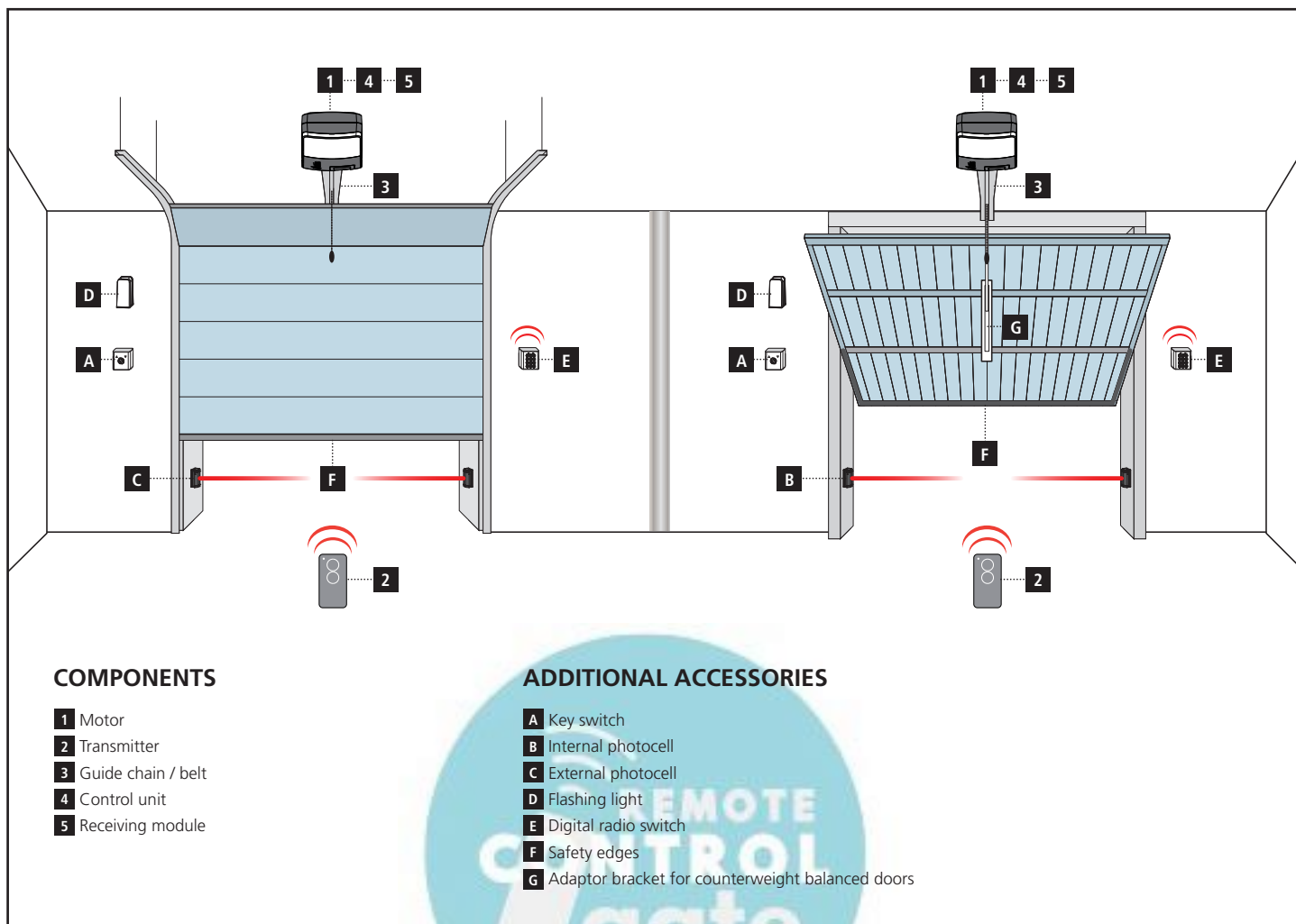
(\*) made in extra EU Countries on behalf of V2 S.p.A.

## 2 - TECHNICAL SPECIFICATIONS

	<b>ATRIS-700</b>	<b>ATRIS-1000</b>	<b>ATRIS-1000-F</b>
Power supply (V - Hz)	230~ - 50/60	230~ - 50/60	230~ - 50/60
Maximum electric power (W)	100	160	160
Consumption in stand-by (W)	< 0,5	< 0,5	< 0,5
Door area (m <sup>2</sup> )	< 10	< 15	< 14
Start force (N)	700	1000	1000
Nominal force (N)	550	850	600
Maximum speed (cm/s)	12	12	20
Working temperature (°C)	-20 ÷ +40	-20 ÷ +40	-20 ÷ +40
Duty cycle (%)	30	30	30
Protection degree (IP)	20	20	20
Motor weight (Kg)	12	12	12
Protection fuses	T2,5A	T2,5A	T2,5A



### 3 - INSTALLATION LAYOUT

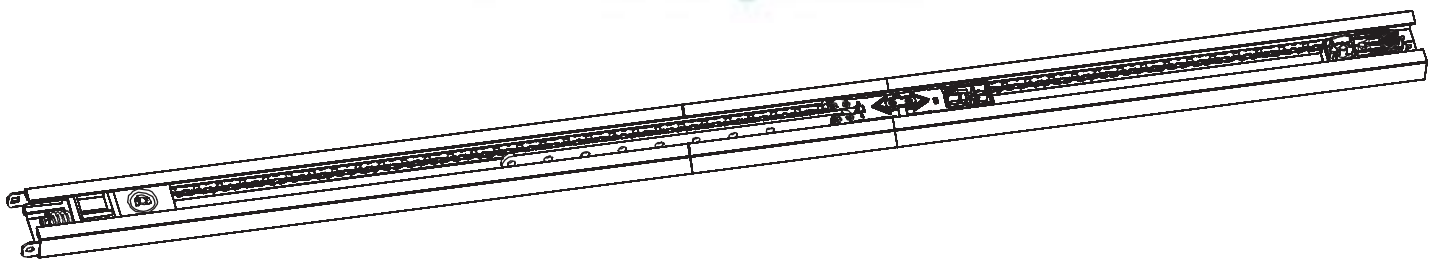
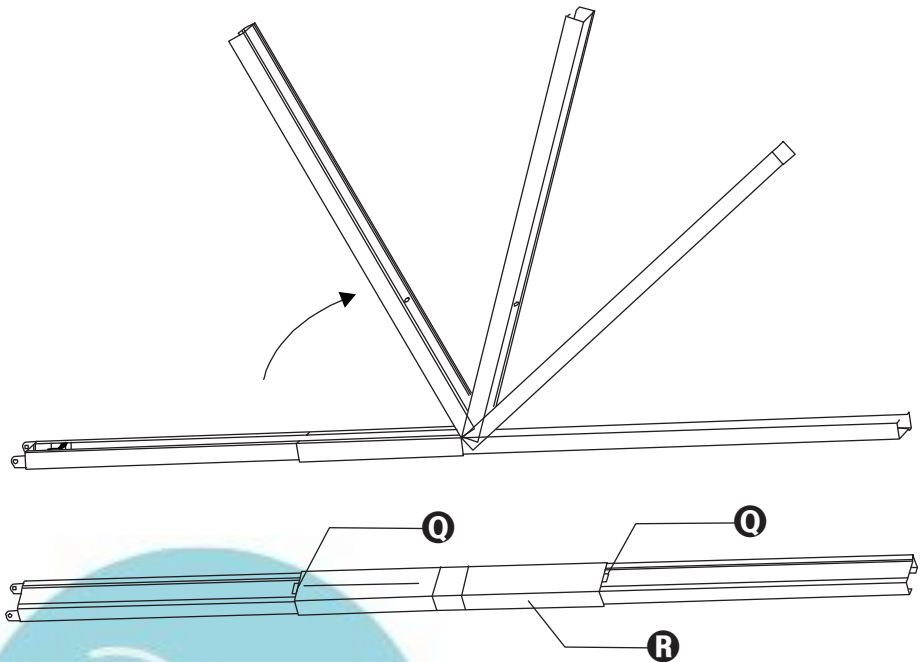


LENGTH OF THE CABLE	< 10 metres	from 10 to 20 metres	from 20 to 30 metres
Power supply 230V	2 x 1,5 mm <sup>2</sup>	2 x 1,5 mm <sup>2</sup>	2 x 2,5 mm <sup>2</sup>
Photocells (TX)	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>
Photocells (RX)	4 x 0,5 mm <sup>2</sup>	4 x 0,5 mm <sup>2</sup>	4 x 0,5 mm <sup>2</sup>
Key switch	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>
Safety edges	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>
Flashing light	2 x 1,5 mm <sup>2</sup>	2 x 1,5 mm <sup>2</sup>	2 x 1,5 mm <sup>2</sup>
Antenna (integrated into the flashing light)	RG174	RG174	RG174

## 4 - INSTALLATION OF GUIDE SECTION BAR

1. Remove the section bar from its cardboard packaging and check its integrity.
2. Unfold the section bar as indicated in the figure below.
3. Once the section bar is elongated, slide the connecting section bar **R** to the end position indicated by the two holes **Q** on the chain-guide section bar.
4. Adjust the tension of the chain/belt using the Allen-head screw with a 10 mm Allen-wrench: turn the bolt until the chain/belt is sufficiently tight.

**⚠ CAUTION:** After tensioning the chain/belt make sure the drive carriage slides freely throughout the length of the guide. Eliminate any friction prior to proceeding with the next phases of installation.



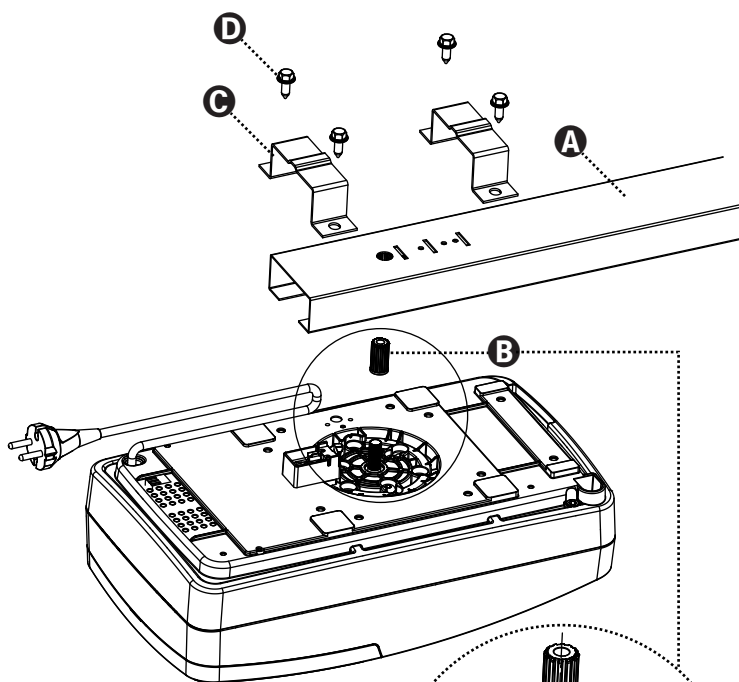
## 5 - INSTALLATION OF MOTOR ON SECTION BAR

1. Insert the shaft/pinion adapter **B** on the motor shaft.

**⚠ WARNING:** the adapter **B** has a direction of insertion. Observe the direction as shown in the figure.

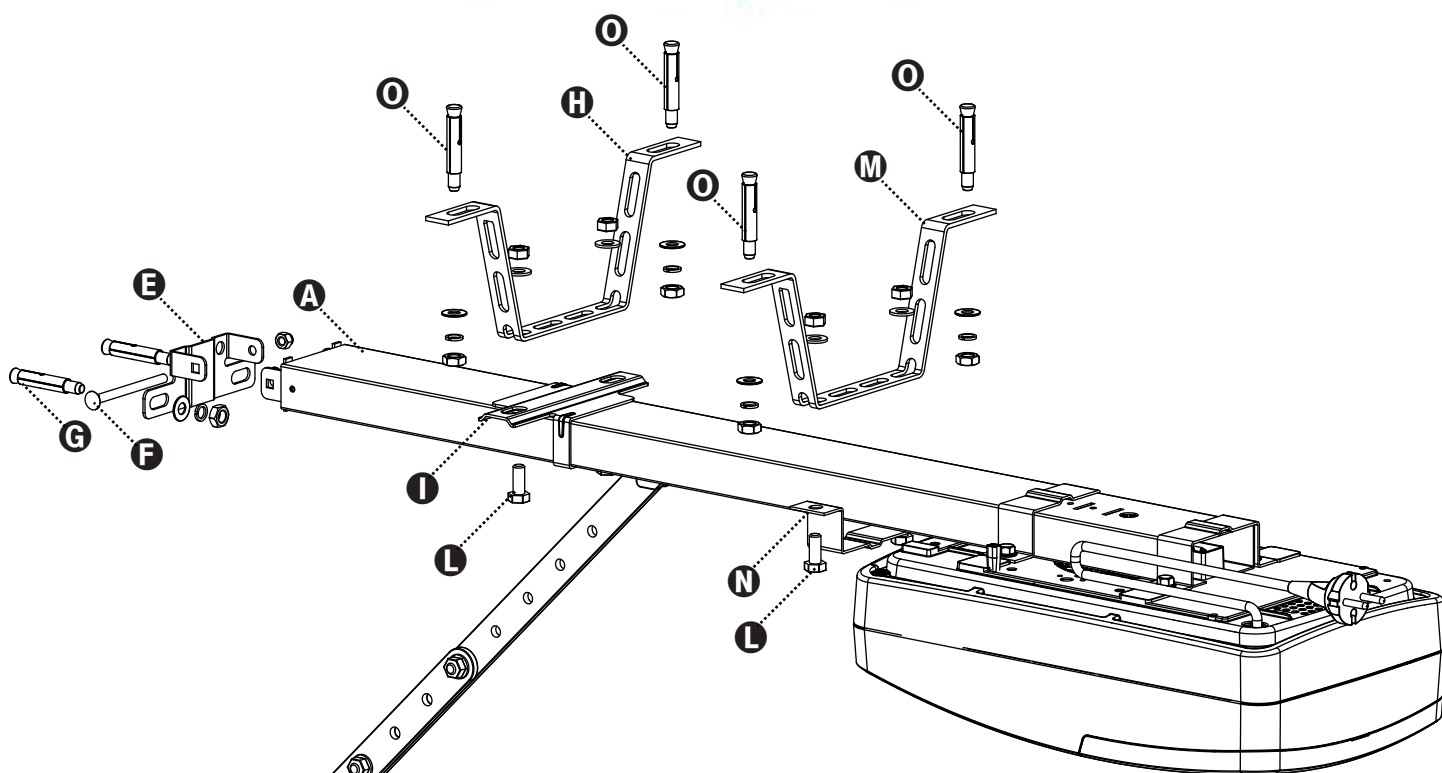
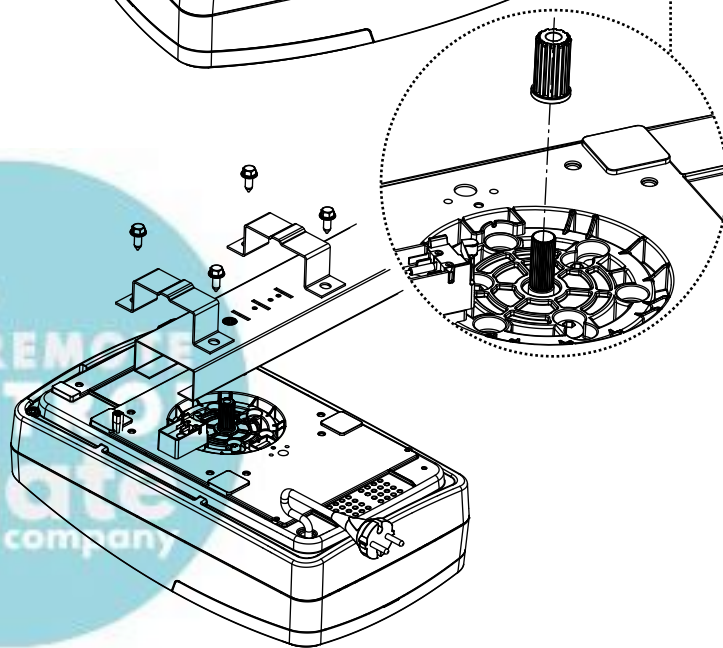
2. Position the section bar **A** on the motor: the shaft/pinion adapter **B** must fit into the seat on the section bar. Verify that the section bar fits snugly against the motor.
3. Position the two omega brackets **C** on the section bar so that they correspond with the holes on the base of the motor.
4. Fasten the two omega brackets using the 6 x 15 self-threading screws provided **D**.

**⚠** In case of lack of space, the motor can be mounted rotated of 90°



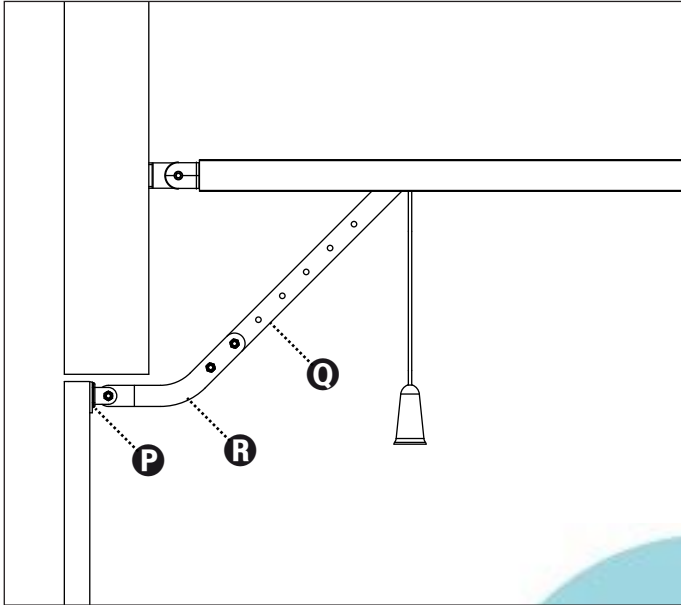
## 6 - INSTALLATION

1. Disassemble the door's locking system.
2. Measure the door, and at exactly half its width mark the reference points on the upper crossbeam and on the ceiling to facilitate positioning of the guide section bar.
3. Fasten the bracket **E** to the upper crossbeam of the door using plugs **G** suitable for the type of wall ( $\varnothing$  minimum 8 mm).
4. Hook the section bar **A** to the bracket **E** using the hexagonal-head **F** 6x80 screw with its self-blocking nut.
5. Bend the 2 pierced bar **H** and **M** at the desired length.
6. Fix the front pierced bar **H** to the fixing bracket **I** in the section bar using the 8x20 screws **L** with their nuts.
7. Fix the rear pierced bar **M** to the omega bracket **N** using the 8x20 screws **L** with their nuts.
8. Following the references previously marked on the ceiling, locate the fixing points for the bars **H** and **M** and using the screws **O** suitable for the type of ceiling (minimum  $\varnothing$  8 mm) anchor the automation.



### 9. Only for sectional and spring operated garage doors

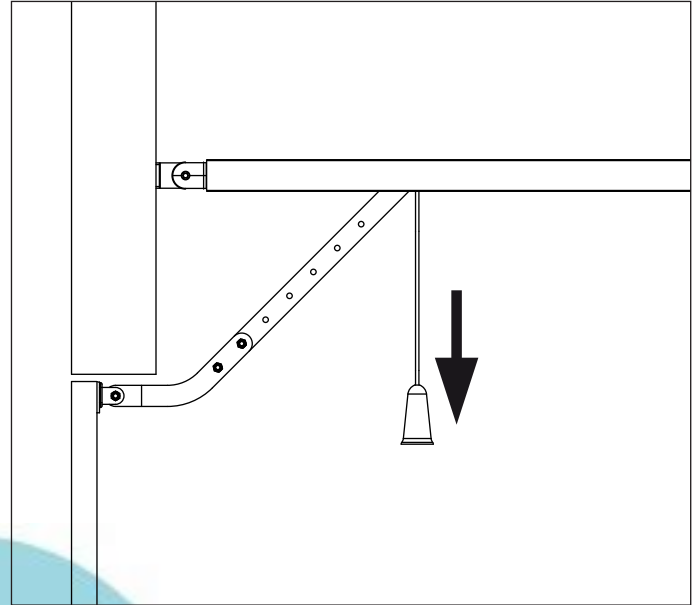
Fasten the draw slide **P** on the upper portion of the door  
Connect the perforated bar **Q** and the bent arm **R** using 2 bolts 6x15 and their relative nuts. Connect the curved arm **R** and the draw plate **P** using the cylindrical headed pivot with the provided split pin.



## 7 - RELEASE OF THE AUTOMATION

In order to release the automation from inside, pull the knob downwards.

Then, accompany the gate manually throughout its path.

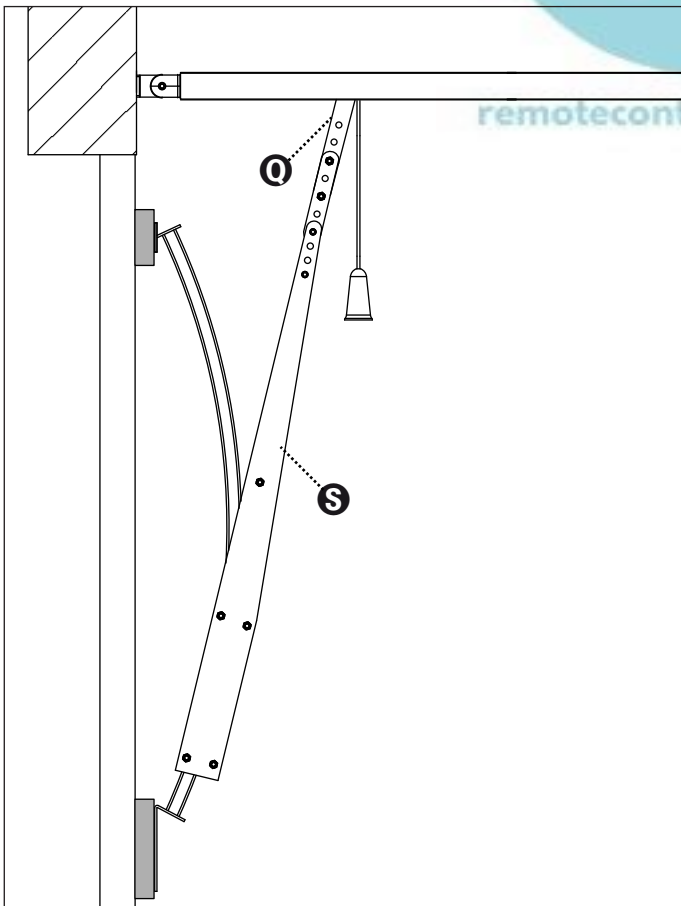


### 10. Only for counter-weighted garage doors

Fasten the arch arm **162504** on the upper portion of the door maintaining the previously marked reference points.

The two anchor plates (upper and lower) of the arch **162504** must be in the same plane. If not, add shims.

Connect the perforated bar **Q** to the perforated arm of the bow-arm **S** using 2 bolts 6 x 15 and their relative nuts.



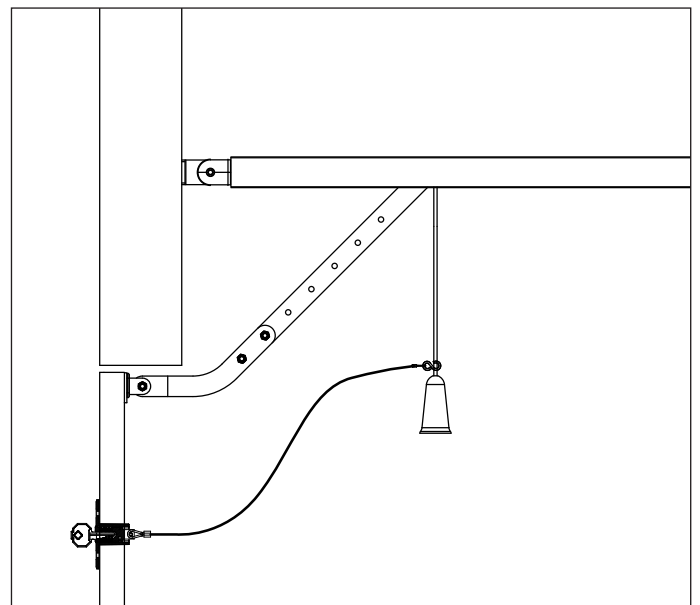
**⚠ CAUTION:** Do not use the knob to open the door.  
It is prohibited to hand objects off the release cord.

If there are no secondary accesses to the garage we recommend the installation of the device to unlock from the outside (code 162518)

**⚠ WARNING:** If the door is unlocked to be opened, when it will be closed it is automatically locked for security reasons.

If the power supply is not available, the door can be opened only by acting again on the release knob.

In order to release the automation from outside, install the accessory release kit (code 162518).




## 8 - CONTROL UNIT

PD22 is provided with a display that, not only makes programming simple, but also allows a continuous monitoring of the input statuses; in addition, thanks to a menu structure, the working schedule and the operation logic can be set easily.

In compliance with the European standards concerning electrical safety and electromagnetic compatibility (EN 60335-1, EN 50081-1 and EN 50082-1) it has been equipped with the low voltage circuit total electric insulation (motors included) from the network voltage.

Other characteristics:

- Power supply protected from short circuits within the controller, on the motors and on the connected accessories.
- Detecting obstacles by monitoring the current on the motors (current sensing probe and encoder)
- Automatic learning of the limit switches position.
- Tests for safety devices (photocells, safety edges and mosfet) before each opening.
- Deactivation of safety inputs through the configuration menu: no jumper is required for terminals concerning safety devices that have not been installed, yet. You will only need to disable this function from its relevant menu.
- Low voltage output that can be used for a signal light or a 24V flashing light.
- Built-in LED courtesy light.
- ENERGY SAVING function

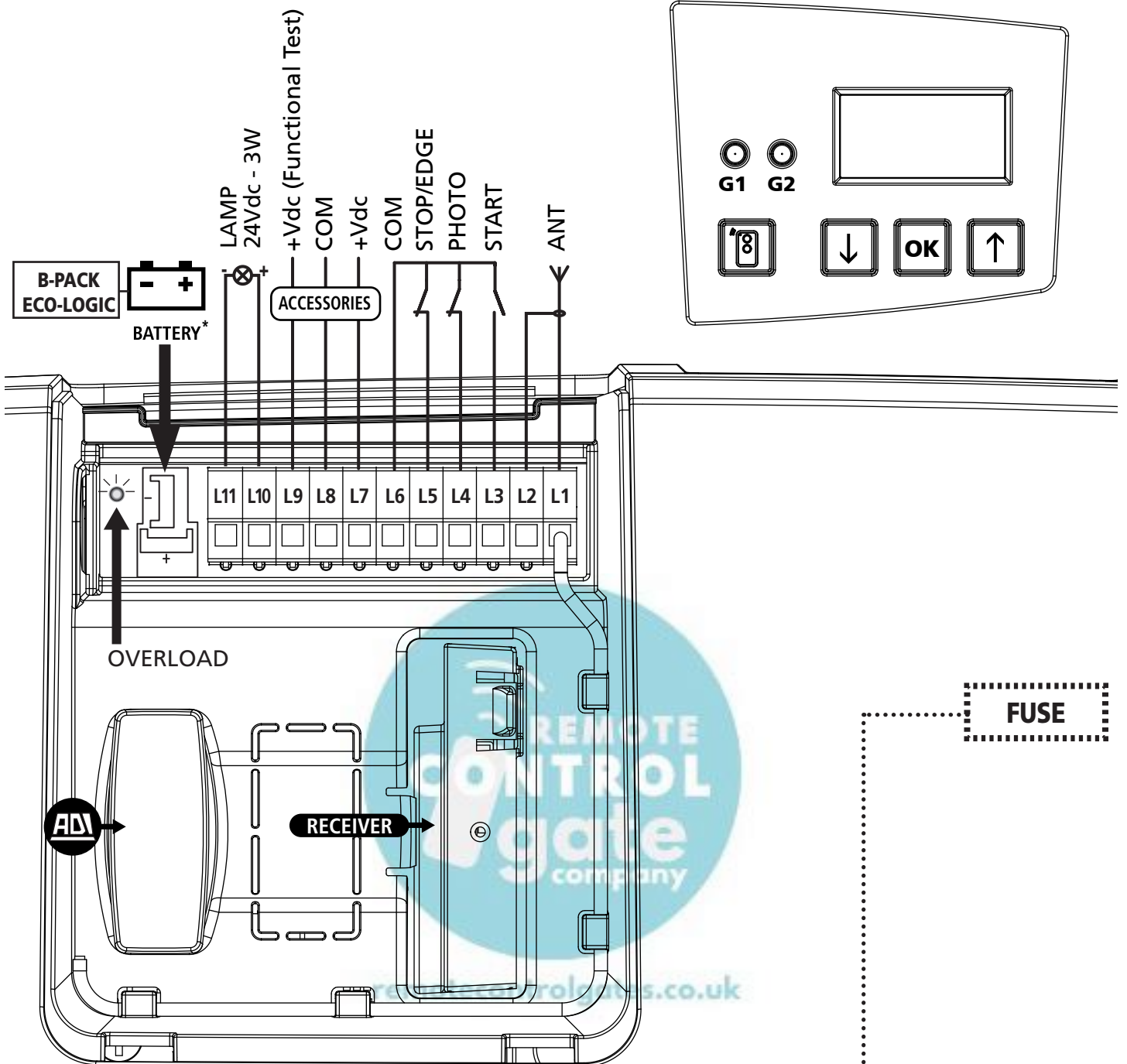
 **WARNING: Installation of control unit and safety devices must be carried out with power disconnected**

## 8.1 - ELECTRICAL CONNECTIONS

L1	Antenna
L2	Antenna shield
L3	START - Open command for connecting traditional devices with N.O. contact
L4	Photocell. N.C. contact (disabled by default)
L5	Configurable safety input: - STOP button. N.C. Contact (disabled by default) - Safety edge (disabled by default)
L6	Common (-)
L7	+24Vdc supply for photocells and other accessories
L8	Accessory power common (-)
L9	+24Vdc supply - photocell/optical edge TX for functional Test. Connect power supply cables of photocells transmitter between terminals L7 and L8
L10	Flashing light 24V / Warning light 24V (+)
L11	Flashing light 24V / Warning light 24V (-)

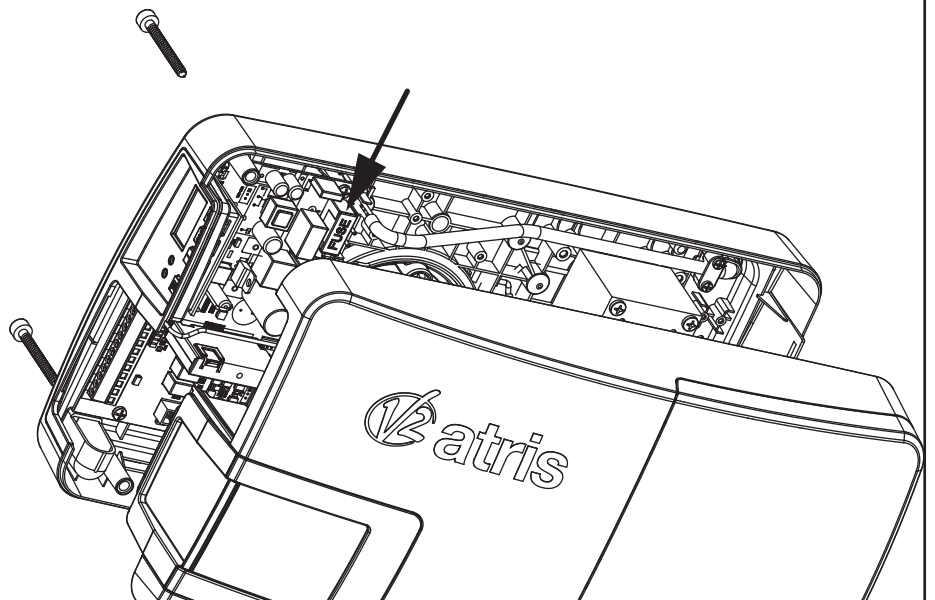
BATTERY	B-PACK or ECO-LOGIC back-up battery pack
RECEIVER	Connector for MR receiver
ADI	ADI Module interface
OVERLOAD	Overload LED indicator light on supply line
G1	MR2 receiver LED indicator light
G2	Automation status LED indicator light STAND-BY: 1 blink every 2" OPENING: flashing 2Hz CLOSING: flashing 2Hz PAUSE: lit

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## 8.2 - FUSE REPLACEMENT

1. Disconnect the motor from power supply.
2. Loosen the screws on the back of the motor using an Allen wrench size 4
3. Remove the cover
4. Replace the fuse with one of equal value



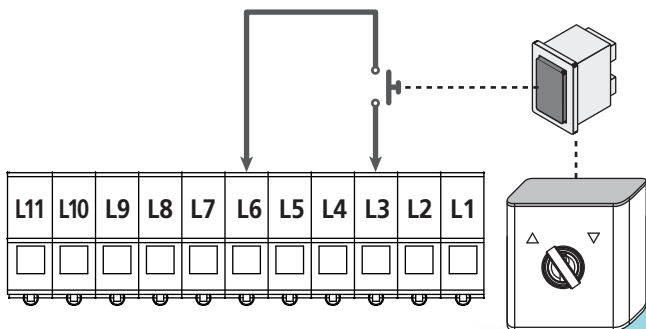
### 8.3 - ACTIVATION INPUT

The control unit has an activation input (START) for the connection of a N.O. button.

Connect the cables of the device that controls the START between terminals **L3 (START)** and **L6 (COM)**

The operating logic of the START button and of the START remote control (channel 1 on the receiver) depends on the settings performed on the following parameters:

- St.AP** : Start command during opening phase  
(default = **PRUS** the gate goes in standby)
- St.Ch** : Start command during closing phase  
(default = **StoP** the gate stops and the cycle ends)
- St.PR** : Start command during Pause  
(default = **ChiU** the gate closes)



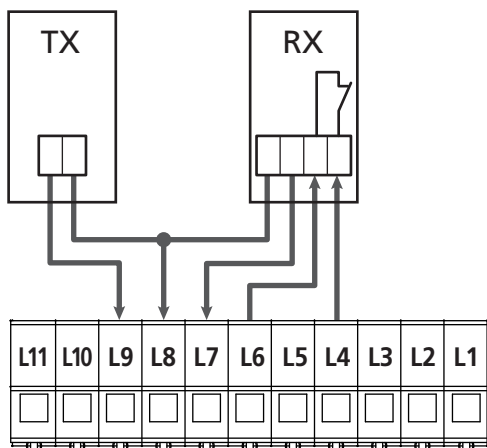
The START function can also be enabled by means of a remote control saved on channel 1 of the MR receiver.

### 8.4 - CONNECTING PHOTOCELLS

PD22 control unit supplies a 24Vdc power supply to photocells. Photocell power terminals are protected by an electronic fuse that stops current in case of overload.

The input is disabled by default; to enable it, change the settings of the **FoLo** parameter

- Connect power supply cables of photocells transmitter between terminals **L8 (COM)** and **L9 (+)** of the control unit.
- Connect power supply cables of photocells receiver between terminals **L7 (+)** and **L8 (COM)** of the control unit.
- Connect N.C. receiver output between terminals **L6 (COM)** and **L4 (PHOTO)** of the control unit. Use outputs having normally closed contact.



### 8.5 - STOP / SAFETY EDGE

The control unit is equipped with a configurable safety input that can be used to connect a STOP button to a safety edge.

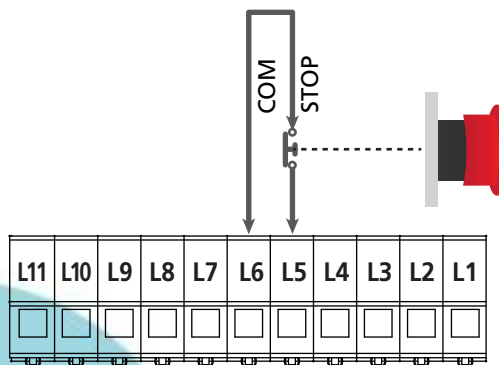
The input is disabled by default; to enable it as STOP or EDGE, you need to change the settings of the **SiC** parameter

#### STOP button

To connect a STOP button, you need to set the parameter **SiC = StoP**

Connect the cables of the STOP button (N.C.) between terminals **L5 (STOP)** and **L6 (COM)**.

Opening the button will cause the motor to stop and will cancel the automatic closing command (if enabled).

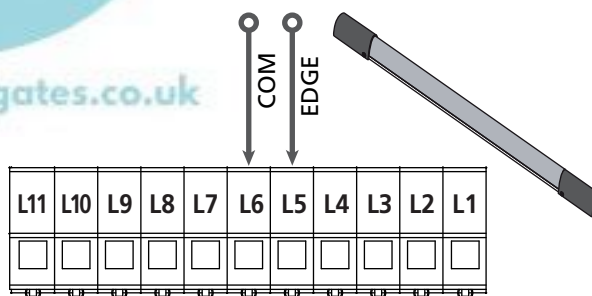


The STOP function can also be enabled by means of a remote control saved on channel 3 of the MR receiver.

#### Safety edge

To connect a safety edge, you need to set the parameter **SiC = EDGE**

Connect the cables of the safety edge between terminals **L5 (EDGE)** and **L6 (COM)**.



The intervention of the edge during the closing phase will cause the gate to open completely and will cancel the automatic closing command (if enabled).

This input can control either the classic edge with N.C. contact, or the conductive rubber ones with nominal resistance 8,2 kohm.

#### WARNING:

- When using more edges with N.C. contact, the inputs have to be series connected.
- If using more conductive rubbers, the outputs have to be cascade connected and only the last one has to be terminated on the nominal resistance.

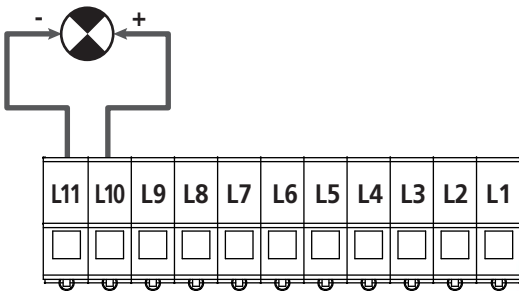
## 8.6 - FLASHING / WARNING LIGHT OUTPUT

The PD22 control unit has a configurable lights output 24Vdc-3W that can be used for a flashing light or a warning light.

- ☞ the input is configured by default as flashing light (parameter SPiR = FLSh).  
To configure the output as warning light, change the settings of the SPiR parameter

The flashing light is enabled during opening and closing phases with the same flashing frequency, while the warning light flashes at 2 Hz during opening phase, at 4 Hz during closing phase and remains lit during the pause.

Connect the cables to terminals **L10 (+)** and **L11 (-)** of the control unit.



## 8.7 - COURTESY LIGHT

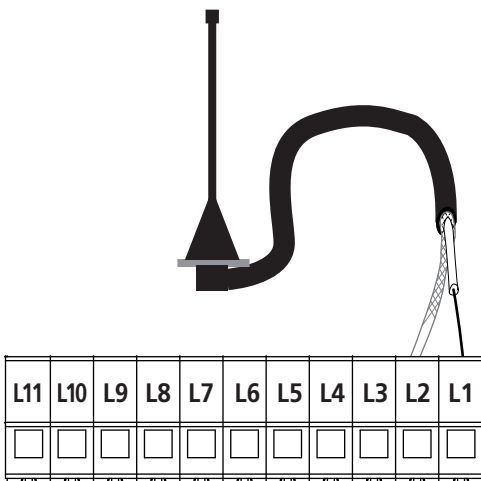
ATRIS is equipped with a built-in courtesy light that stays lit during opening and closing phases for a period of time that can be set from parameter LUCi (default = 1 minute)

**NOTE:** if automatic closing is enabled (parameter Ch.RU = S1) the courtesy light remains on during the pause and starts flashing in the last 20 seconds before the reclosing phase. In the last 20 seconds before the reclosing phase, the device also emits BEEPS.

## 8.8 - ANTENNA

ATRIS comes with an already connected internal antenna. If the radio range is not enough, we recommend you to use the external antenna code 19A001.

Remove the internal antenna connected to terminal **L1**. Connect the antenna hot pole to terminal **L1 (ANT)** of the control unit and the shield to terminal **L2 (ANT-)**.



## 8.9 - POWER SUPPLY

The control unit must be fed by a 230V-50Hz electric line, protected by a differential magnetothermal switch complying with the law provisions in force.

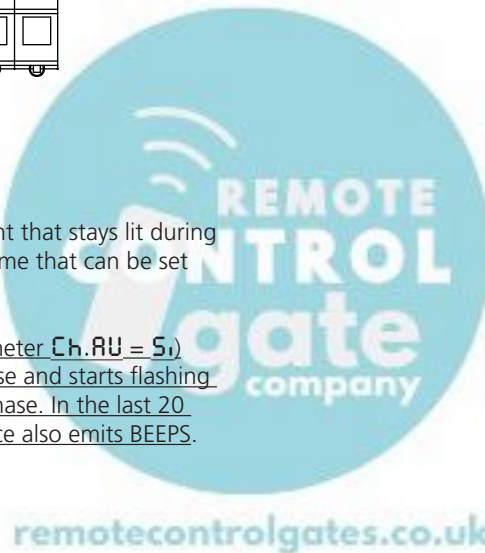
Connect the plug of the device to the power line.

## 8.10 - BATTERY POWER

If you want the device to function even in the event of a black-out, you can connect the B-PACK (accessory code 161212) or ECO-LOGIC (accessory code 28A034) battery pack.

Connect the B-PACK or ECO-LOGIC battery pack connector to the BATTERY terminals of the control unit.

**⚠ ATTENTION:** when using the battery or the ECO-LOGIC device, you need to enable the ENERGY SAVING function (parameter En.SR = S1)




## 8.11 - PLUG IN RECEIVER

PD22 control unit is suitable for plugging in a MR receiver having a high-sensitivity super-heterodyne architecture.

MR module receiver is provided with 4 channels and each of them is suitable for a command of PD22 control unit:

- CHANNEL 1 → START
- CHANNEL 2 → PARTIAL OPENING FOR VENTILATION
- CHANNEL 3 → STOP
- CHANNEL 4 → COURTESY LIGHT

To access the MR module programming without opening the


connections compartment, you can use the  button and **G1** led (only on MR2-U version 1.5 or higher).

**NOTE: Before programming 4 channels and function logics read carefully the instructions of MR.**

## 8.12 - ADI INTERFACE

The ADI (Additional Devices Interface) interface of the control unit PD22 allows the connection to V2 optional modules.

Refer to V2 catalogue or to the technical sheets to see which optional modules with ADI interface are available for this control unit.

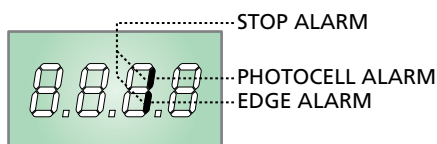
 **WARNING: Please read the instructions of each single module to install the optional modules**

For some devices, it is possible to configure the mode for interfacing with the control unit; in addition, it is necessary to enable the interface so that the control unit can process the signals arriving from the ADI device.

Please refer to the **ADI** programming menu to enable the ADI interface and access the device configuration menu.

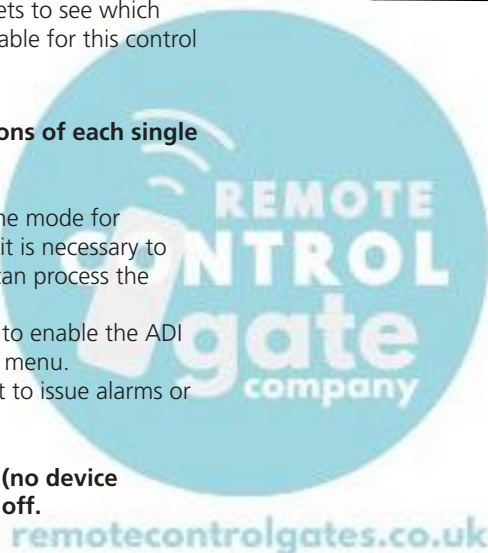
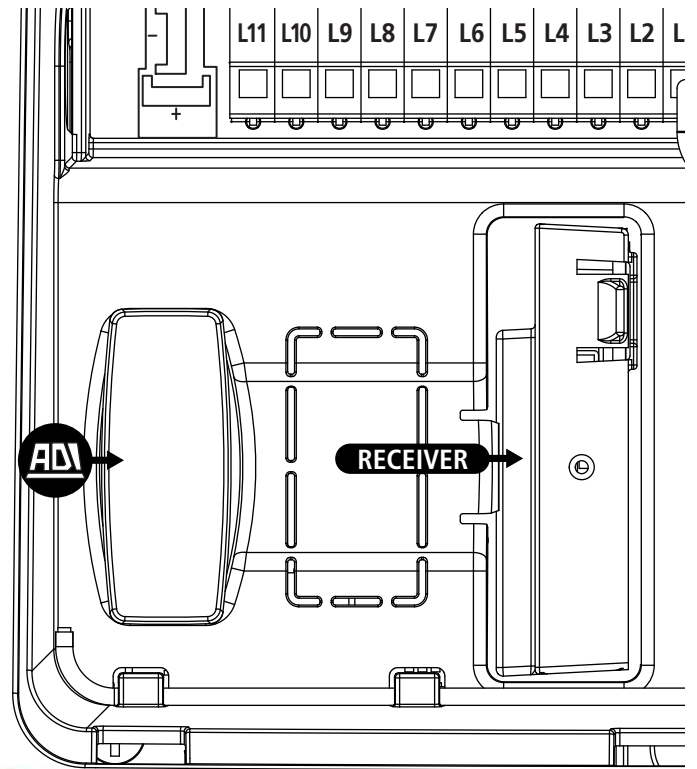
ADI devices use the display of the control unit to issue alarms or display the configuration of the control unit.

**NOTE: If the ADI interface is not enabled (no device connected), the segments remain turned off.**



The device connected to the Adi interface is able to signal to the control unit three alarm signals, which are displayed on the control unit display as follows:

- PHOTOCELL ALARM - the upper segment comes on: the door stops moving, when the alarm stops opening restarts.
- EDGE ALARM - the lower segment comes on: inverts motion of the door for 3 seconds.
- STOP ALARM - both segments start flashing: the door stops and cannot restart until the alarm stops.

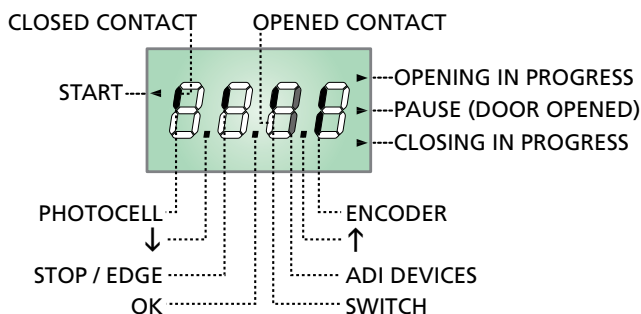


## 9 - CONTROL PANEL

### 9.1 - DISPLAY

When power is on, the control unit checks that display correctly operates by switching on all segments for 1.5 sec. **8.8.8.8**. Firmware version, e.g. **Pr 1.0**, will be viewed in the following 1.5 sec.

Panel will be viewed upon completion of this test.



**PLEASE NOTE: if the panel is off, the control unit should be in ENERGY SAVING mode; press the OK key to turn it on.**

The control panel (in stand-by) displays the physical status of the terminal board contacts, of the realignment switch and of the setup keys: if the upper vertical segment is on, the contact is closed; if the lower vertical segment is on, the contact is open (the above picture shows an instance where the inputs have all been correctly connected).

The encoder segments flash alternately when the motor is running, indicating that the device is working correctly.

**NOTE: if you are using an ADI module, other segments may appear on the display, see the paragraph dedicated to the "ADI INTERFACE"**

Points being among display digits show the status of programming push-buttons: as soon as a push-button is pressed, its relevant point turns on.

The arrow to the left of the display shows the status of the START input. The arrow lights up when the input is closed.

The arrows on the display right side show the door status:

- The highest arrow turns on when the door is into its opening phase. If it blinks, it means that the opening has been caused by a safety device (border or obstacle detector).
- The central arrow shows that the door is on pause. If it blinks, it means that the time countdown for the automatic closing has been activated.
- The lowest arrow blinks when the door is into its closing phase.

### 9.2 - USE OF THE KEYS FOR PROGRAMMING

The control unit functions and times are programmed by means of a special configuration menu, which can be accessed and explored by using the 3 keys, **↑**, **↓** and **OK**, located under the the control unit display.

**ATTENTION: Outside the configuration menu, by pressing the **↑** keys you will enable the OPENING phase and by pressing the **↓** key you will enable the CLOSING phase.**

The main programming menus of the control unit are shown in the next pages.

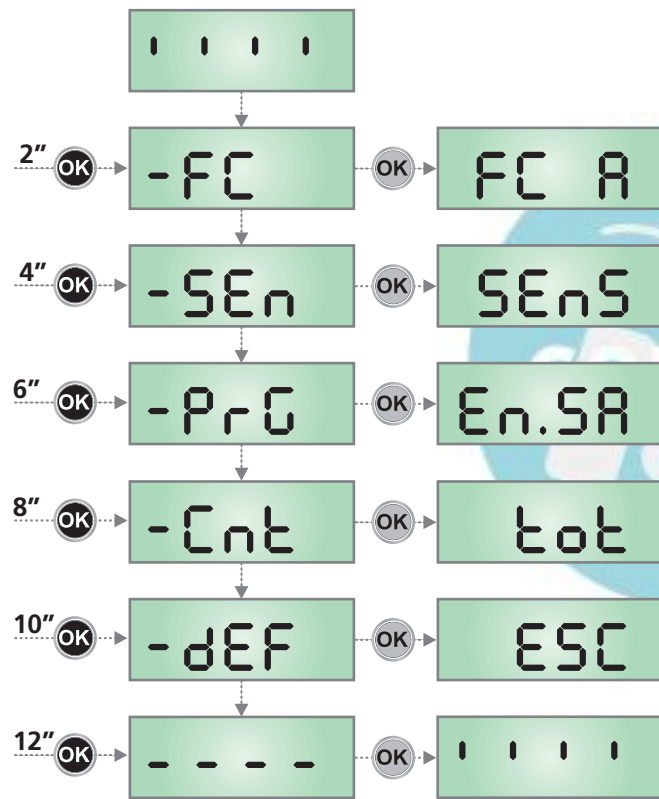
To go through the menus use the three keys **↑**, **↓** and **OK** according to the following chart:

	Press and release the push-button <b>OK</b>
	Keep pressed the push-button <b>OK</b> for 2 seconds
	Release the push-button <b>OK</b>
	Press and release the push-button <b>↑</b>
	Press and release the push-button <b>↓</b>

## 10 - ACCESSING THE CONTROL UNIT SETTINGS

- Press and hold the **OK** key until the display shows the menu desired
  - FC Programming the limit switches (chapter 10.2)
  - SEn Automatic sensitivity adjustment (chapter 10.3)
  - PrG Programming the control unit (chapter 12)
  - Cnt Cycle counter (chapter 11)
  - dEF Loading the default parameters (chapter 8)
- Release the **OK** key: the display will show the first item in the sub-menu

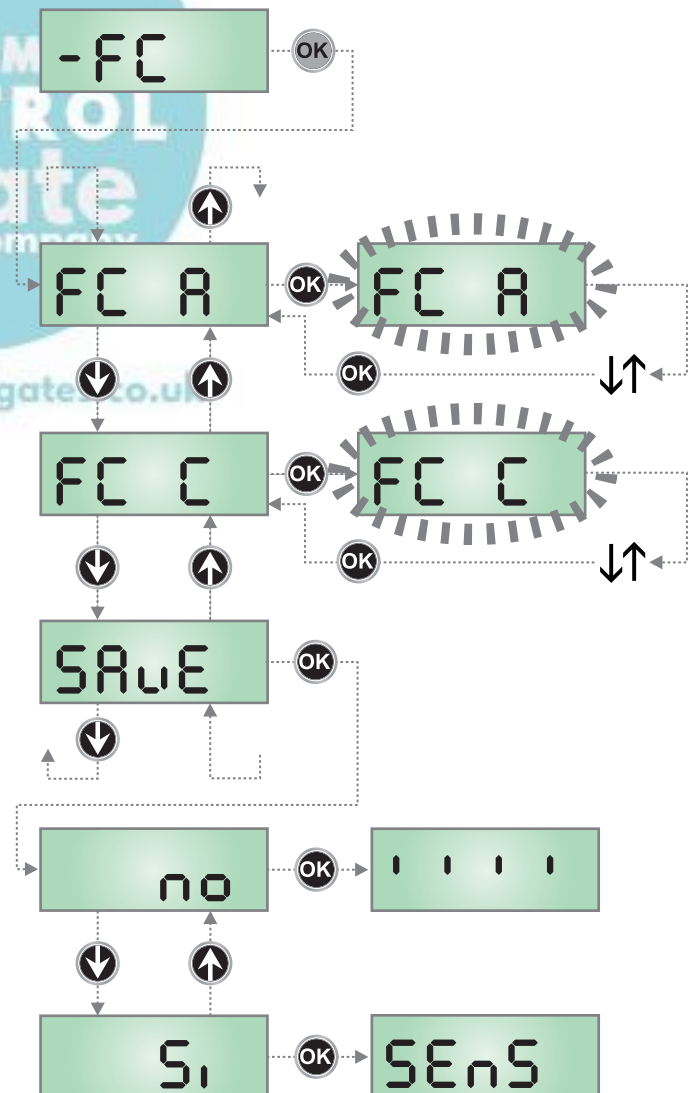
**⚠ WARNING:** in case no operation is carried out for more than one minute, the control unit exits from the programming mode without saving any of your setups and changes, which will get lost.



## 10.1 - PROGRAMMING THE LIMIT SWITCHES

- Press and hold the **OK** button until the display shows -FC
- Release the **OK** button: the display shows FC A (opening limit switch)
- Press **OK**: FC A flashes
- Press and hold the key ↓ or ↑ and move the gate until reaching the position of the opening limit switch
- Press **OK** to confirm: the display shows FC A
- Press the ↓ key: the display shows FC C (closing limit switch)
- Press **OK**: FC C flashes
- Press and hold the key ↓ or ↑ and move the gate until reaching the position of the closing limit switch
- Press **OK** to confirm: the display shows FC C
- Press the ↓ key: the display shows SAuE
- Press **OK**: the display shows no
- Press the ↓ key: the display shows S1
- Press **OK**: the limit switches are stored and the display shows the menu for programming the SEnS sensitivity reported on the next page

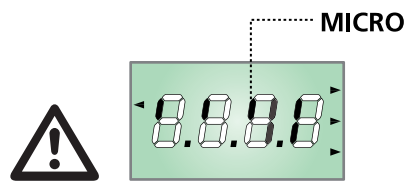
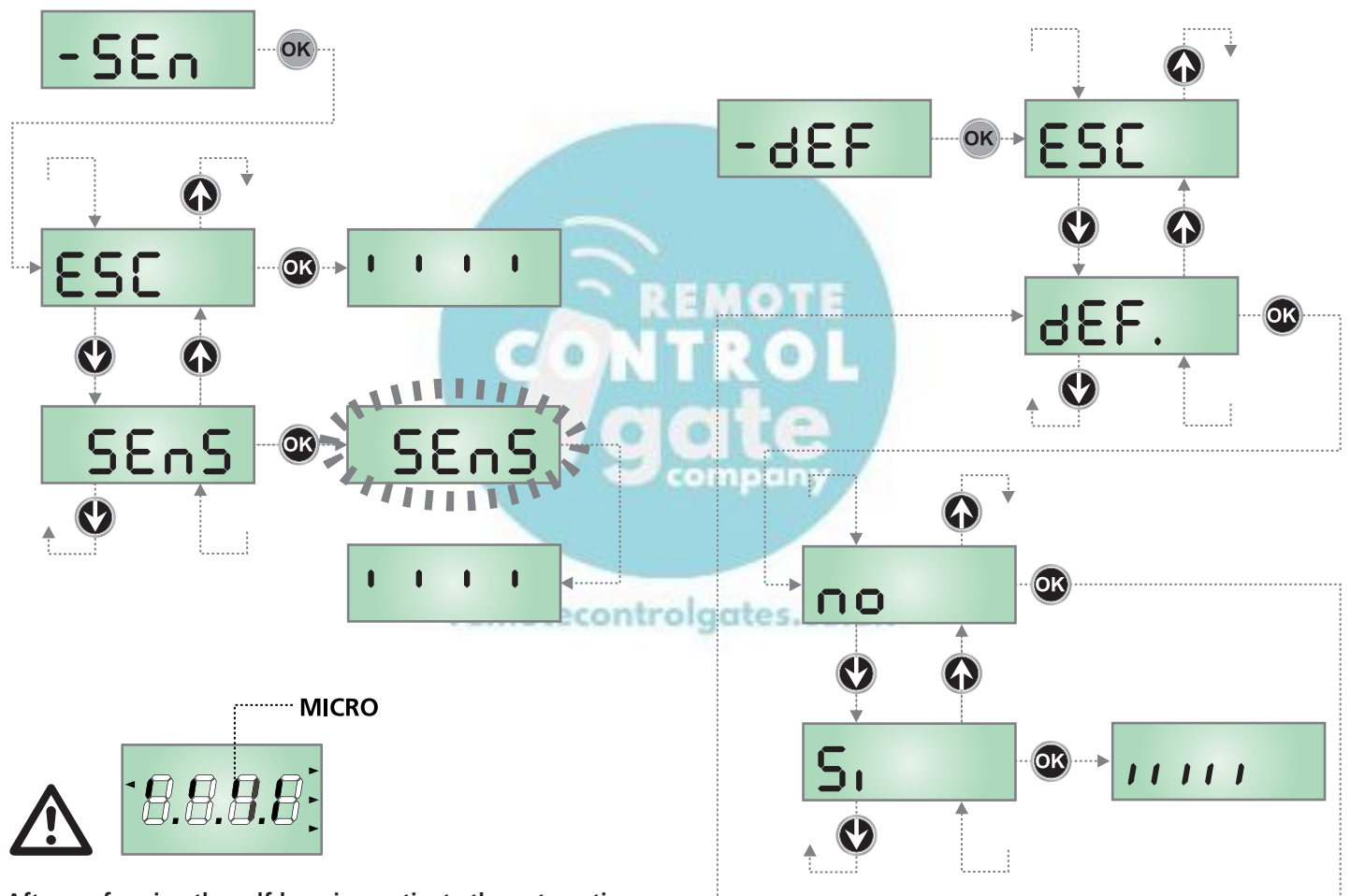
**NOTE:** we recommend you to configure both limit switches in a single programming session



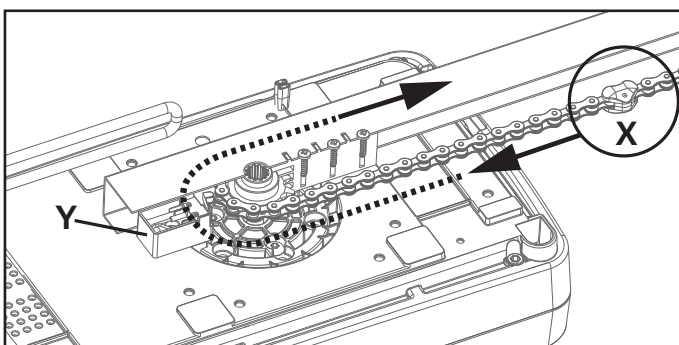
## 10.2 - AUTOMATIC SENSITIVITY ADJUSTMENT

1. Press and hold the **OK** button until the display shows **-SEn**
2. Release the **OK** button: the display shows **ESC** (press **OK** only if you want to exit this menu)
3. Press the **↓** key: the display shows **SEnS**
4. Press the **OK** button to start the procedure: the message **SEnS** flashes on the display and the gate performs a full closing cycle until reaching the end of stroke (complete opening phase and complete closing phase).
5. When the procedure is finished, the display shows the control panel

**⚠ ATTENTION:** if the control unit receives a **START** command during the automatic learning procedure, the procedure is aborted and the control unit stores the partial data determined.



After performing the self-learning, activate the automatism and check through the display the passage of the cam **X** on the position micro **Y**. If the result is negative, position the cam as shown in the figure and repeat the self-learning procedure.



## 10.3 - LOADING THE DEFAULT PARAMETERS

If necessary, it is possible to restore all parameters to their standard or default values (see the final summary table).

**⚠ PLEASE NOTE:** This procedure results in the loss of all customised parameters.

1. Press and hold the **OK** key until the display shows **-dEF**
2. Release the **OK** key: the display shows **ESC** (only press the **OK** key if it is desired to exit this menu)
3. Press the **↓** key: the display shows **dEF.**
4. Press the **OK** key: the display shows **no**
5. Press the **↓** key: the display shows **YES**
6. Press the **OK** key: all parameters are overwritten with their default values (see Chapter 12), the control unit exits programming mode and the display shows the control panel.

## 11 - READING OF CYCLE COUNTER

The PD22 control unit counts the completed opening cycles and, if requested, it informs the user after a preset number of manoeuvres that maintenance operations are required.

There are two counters available:

- A totalizing counter for completed opening cycles that cannot be zeroed (option **tot** of item **Cnt** )
- A downward counter for the number of cycles before the next request for service (option **SerU** of item **Cnt** ).

To access the menu follow these instructions:

1. Press and hold down the **OK** key until the **-Cnt** appears on the display
2. Release the **OK** key: the display will show **ESC**

### 11.1 - CYCLE COUNTER

**Area 1** is the reading of the total number of completed cycles; through **↑** and **↓** keys, you can alternate the display of thousands or units.

**Area 2** is the reading of the number of cycles before the next request for service: its value is rounded down to the hundreds.

**Area 3** is the setup of this latter counter; on first pressing the **↑** or **↓** key the current value of the counter is rounded to the thousand, each press after this increases the setting by 1000 units or decreases by 100. The previous displayed count will get lost.

### 11.2 - SIGNAL OF SERVICE REQUIRED

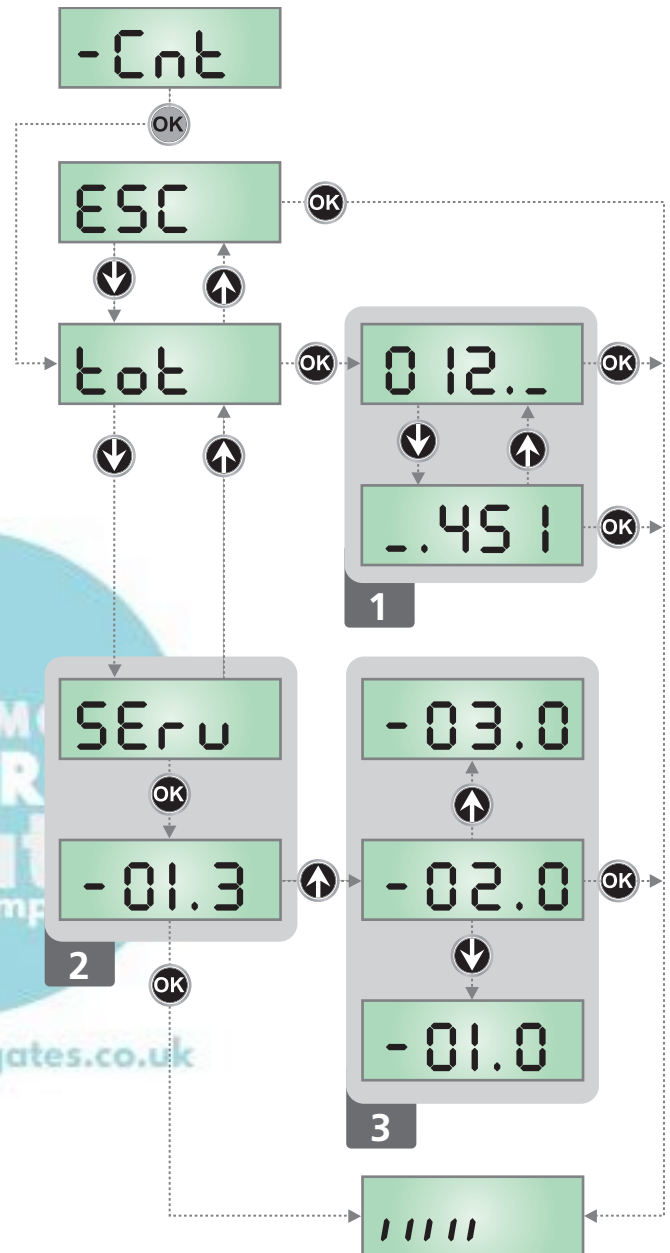
As soon as the counter of cycles before the next request for service is zero, the control unit shows the request for service through an additional 5-second pre-blinking.

This signal will be repeated at each opening cycle, until the installer enters into the counter reading and setup menu, and possibly programs the number of cycles after which the next service will be requested.

In case no new value is setup (that is to say that the counter value is left at zero), the signalling function for the service request will be disabled and no signal will be repeated anymore.

**⚠ WARNING: service operations shall be carried out by qualified staff only.**

The scheme hereafter shows how to read the totalizing counter, how to read the number of cycles before the next service is required as well as how to program the number of cycles before the next request for service (as for the example shown, the control unit completed no. 12451 cycles and there are no. 1300 cycles before the next service request).



## 12 - PROGRAMMING THE OPERATING PARAMETERS

The programming menu -PrG contains a list of configurable items: once you enter this menu, a symbol appears on the display indicating the currently selected item. Press the ↓ key to go to the next item; press the ↑ key to return to the previous item. By pressing ↓, you will pass to the next item; by pressing ↑, you will return to the previous item.

Press **OK** to view the current value of the selected parameter and use the keys ↑ and ↓ to change its value, if you want; to confirm the new value, press once again **OK**.

To access the menu follow these instructions:

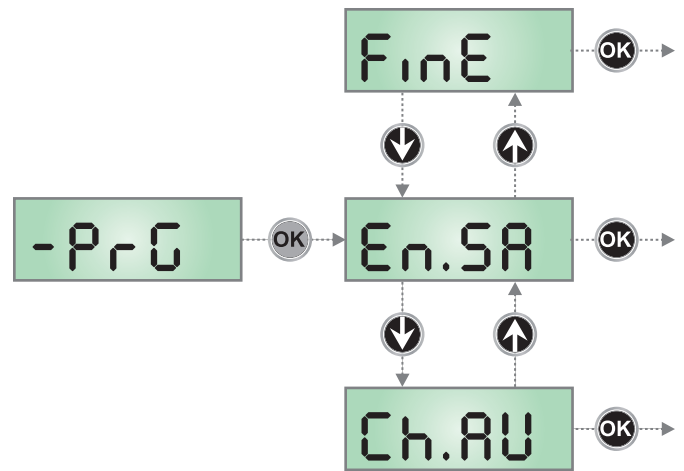
1. Press and hold down the **OK** key until the -PrG appears on the display
2. Release the **OK** key: the display will show En.SR

The last menu item (FinE) allows storing the carried out changes and going back to the control unit normal operation.

**You must exit from programming mode through this menu item if you do not want to lose your configuration.**

**⚠ WARNING:** in case no operation is carried out for more than one minute, the control unit exits from the programming mode without saving any of your setups and changes, which will get lost.

By holding down the ↓ or ↑ keys, configuration menu items will scroll fast, until item FinE is viewed. In this way, you can quickly reach either the top or bottom of the list.

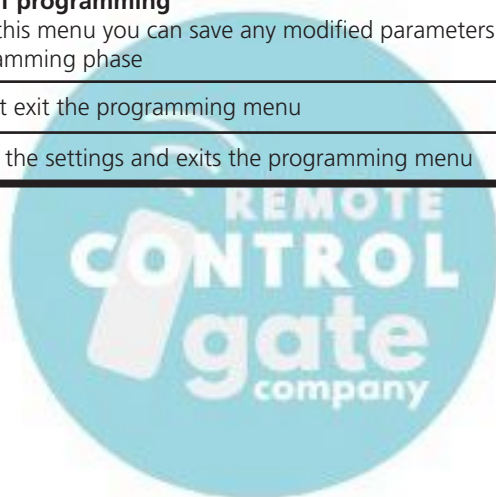


PARAMETER	VALUE	DESCRIPTION	DEFAULT	MEMO
EnSR		<b>Energy saving function</b> This function is useful for reducing the energy consumption of the automation device while in stand-by mode.  <b>ATTENTION: If there is a B-PACK backup battery installed, this parameter should be set to no. If ATRIS is powered by the ECO-LOGIC device, this parameter should be set to Si</b>  If the function is enabled, the control unit will enter ENERGY SAVING mode under the following conditions: <ul style="list-style-type: none"> <li>• 30 seconds after completion of an operational cycle</li> <li>• 30 seconds after an opening (if automatic closure is not enabled)</li> <li>• 30 seconds after exiting the programming menu</li> </ul> In ENERGY SAVING mode, power to the accessories, display, flashing lights and closure electromagnets is deactivated. ENERGY SAVING mode is exited: <ul style="list-style-type: none"> <li>• If an operational cycle is activated</li> <li>• If you press OK</li> </ul>	no	
	no	Function deactivated		
	Si	Function activated		
Ch.AU		<b>Partial opening</b>  The gate closes automatically after the set time. <b>NOTE: 20 seconds before the automatic closure of the gate, the built-in light flashes and the buzzer emits BEEPS to warn the user of the upcoming closure.</b>	no	
	no	Function deactivated		
	0.5" - 4h00			
PR.C.		<b>Automatic closing pre-alarm</b> 20 seconds before the automatic closing of the door (if activated) the control unit sends alerts to warn the operator that the door is closing	b.F.	
	no	Function deactivated		
	bEEP	Sound pre-alarm: the internal buzzer emits BEEPS		
	FLSh	Visual pre-alarm: the integrated light flashes		
	b.F.	Sound + visual pre-alarm		

PARAMETER	VALUE	DESCRIPTION	DEFAULT	MEMO
uEL.A		<b>Opening speed (only ATRIS1000-F)</b>  <b>WARNING:</b> It is recommended to perform the force self-learning (SEn menu) each time the value of this parameter is modified.	h <sub>i</sub>	
	h <sub>i</sub>	High speed (20 cm/s)		
	Lo	Low speed (12 cm/s)		
uEL.C		<b>Closing speed (only ATRIS1000-F)</b>  <b>WARNING:</b> It is recommended to perform the force self-learning (SEn menu) each time the value of this parameter is modified.	Lo	
	h <sub>i</sub>	High speed (20 cm/s)		
	Lo	Low speed (12 cm/s)		
P.APP		<b>Partial opening percentage</b>	20	
	0 - 100	Percentage of travel the door performs when a partial opening command is received.  <b>NOTE:</b> Partial opening can only be controlled by radio via channel 2 of the receiver.		
SE.AP		<b>Start command during the opening phase</b> This menu allows fixing the control unit conduct in case it receives a Start command during the opening phase	PAUS	
	PAUS	The door stops and goes to pause		
	no	The START command is ignored		
	ChU	The door immediately starts closing		
SE.Ch		<b>Start command during the closing phase</b> This menu allows fixing the control unit conduct in case it receives a Start command during the closing phase	Stop	
	Stop	The door stops and the cycle ends		
	APER	The door opens again		
SE.PA		<b>Start command during the pause</b> This menu allows fixing the control unit conduct in case it receives a Start command when the door is open during its pause phase	ChU	
	ChU	The door recloses		
	no	The START command is ignored		
	PAUS	The pause time is reset (if the parameter Ch.AU = no, a START command given during the pause enables the gate closing phase)		
SEn.A		<b>Sensitivity of the obstacles sensor during the opening phase</b>	no	
	no	Function deactivated		
	1.0A - 12.0A	When the current absorbed by the motor exceeds the set value, the control unit detects an alarm, the gate stops and the display shows the message SEnS for several seconds		
SEn.C		<b>Sensitivity of the obstacles sensor during the closing phase</b>	no	
	no	Function deactivated		
	1.0A - 12.0A	When the current absorbed by the motor exceeds the set value, the control unit detects an alarm, reopens the gate completely and the display shows the message SEnS for several seconds		
Foto		<b>Photocell input</b>	no	
	no	Input disabled		
	Si	Input enabled during closing phase. The intervention of the photocell causes the gate to open completely.		

PARAMETER	VALUE	DESCRIPTION	DEFAULT	MEMO
Ft.EE		<b>Photocells test</b> The control unit checks the operation of the photocells before each work cycle, for safety purposes. If the photocells pass the test, the gate begins to open/close. Otherwise, the gate remains still and the control units indicates that there is a malfunction.	no	
	no	Function deactivated		
	Si	Function activated		
SiC		<b>Safety input</b> From this menu you can select the type of device to be connected to input L5	no	
	no	Input disabled		
	StoP	STOP button (see paragraph 8.5)		
	EdGE	Safety edge (see paragraph 8.5)		
Co.EE		<b>Safety edges test</b> The control unit checks the operation of the safety edges before each work cycle, for safety purposes. If the photocells pass the test, the gate begins to open/close. Otherwise, the gate remains still and the control units indicates that there is a malfunction. This menu allows you to activate the test based on the type of safety edge installed.	no	
	no	Function deactivated		
	rESi	Test enabled for conductive rubber safety edges		
	Foto	Test enabled for optical safety edges		
t.PrE		<b>Advance blinking time</b> <b>NOTE: this feature is available only if parameter SPiA = FLSh</b>	no	
	no	Function deactivated		
	0.5" - 1'00	The flashing light is enabled before any door movement to warn the user on the upcoming manoeuvre (the time can be set from 0.5" to 1'00)		
SPiA		<b>Lights output</b> This menu allows you to configure the lights output	FLSh	
	FLSh	Flasher operation (fixed frequency 2Hz)		
	no	Output disabled		
	W.L.	Indicator light operation: indicates the status of the door in real-time. The type of blinking indicates the four possible conditions: - DOOR STOPPED: Light off - DOOR IN PAUSE: the light is on, fixed - DOOR OPENING: the light blinks slowly (2 Hz) - DOOR CLOSING: the light blinks quickly (4 Hz)		
LUCi		<b>Courtesy light</b> This menu allows you to set the built-in courtesy light turn off delay at the end of the cycle	1'00	
	0.0" - 20'0	The light turns on once the automation is enabled and turns off at the end of the cycle, after the time set in this parameter		
AUS		<b>The light is controlled by means of channel 4 of the receiver</b>	t.iM	
	t.iM	TIMER: the light turns on when channel 4 receives an enabling signal and turns off after the time set in parameter LUCi		
	b.iSt	BISTABLE: the light turns on/off each time channel 4 receives an enabling signal		
	Mon	MONOSTABLE: the light remains lit as long as channel 4 receives an enabling signal;		

PARAMETER	VALUE	DESCRIPTION	DEFAULT	MEMO
rLR		<b>Motor release on closing limit switch</b> When the door halts against the closing limit switch, the motor is controlled for a fraction of a second in the opposite direction, decreasing the motor gear tension	0	
	0	Function disabled		
	1 - 10	Time motor release (max. 1 second)		
iAdi		<b>Enabling the ADI device</b> This menu makes it possible to enable operation of the device connected to the ADI connector.  <b>PLEASE NOTE:</b> selecting S <sub>i</sub> and pressing MENU accesses the configuration menu for the device connected to the ADI connector. This menu is managed by the device itself and is different for each device. Refer to the manual of the device for programming. If the S <sub>i</sub> option is selected, but no device is connected, the display will show a series of dotted lines. Exiting the ADI device configuration menu returns to the iAdi option	no	
	no	Interface disabled, any signals will be ignored		
	S <sub>i</sub>	Interface enabled		
FinE		<b>End of programming</b> From this menu you can save any modified parameters and finish the programming phase	no	
	no	Do not exit the programming menu		
	S <sub>i</sub>	Stores the settings and exits the programming menu		



[remotecontrolgates.co.uk](http://remotecontrolgates.co.uk)

## 13 - OPERATION DEFECTS

This paragraph shows some possible operation defects, along with their cause and applicable remedy.

In addition to the messages below, the red G2 led located on the front panel, flashes.

DISPLAYING	DESCRIPTION	SOLUTION
<b>OVERLOAD led is on</b>	It means that there is an overload on accessory power supply.	<ol style="list-style-type: none"> <li>1. Disconnect the terminals <b>L7-L8</b>. The OVERLOAD led turns off.</li> <li>2. Remove the cause of the overload.</li> <li>3. Restore the accessories power supply on terminals L7-L8 and make sure that the led does not turn on again.</li> </ol>
<b>Too long pre-blinking</b>	When a start command is given, the flashing light turns on immediately, but the gate doesn't.	It means that the setup cycle count down expired and the control unit shows that service is required (chapter 11.2)
The display shows <b>Err1</b>	The writing <b>Err1</b> appears on display when you exit from programming	It means that changed data could not be stored. This kind of defect has no remedy. Contact the technical support centre V2.
The display shows <b>Err2</b>	When a start command is given, the door doesn't open at all	It means that MOSFET test failed. Contact the technical support centre V2.
The display shows <b>Err3</b>	When a start command is given, the door doesn't open at all	<p>It means that the photocell test failed.</p> <ol style="list-style-type: none"> <li>1. Be sure that no obstacle interrupted the photocell beam when the Start command was given.</li> <li>2. Be sure that photocells, as enabled by their relevant menus, have been installed actually.</li> <li>3. Be sure that photocells are powered and working; when you interrupt their beam, you should hear the relay tripping.</li> </ol>
The display shows <b>Err5</b>	When a start command is given, the door doesn't open at all	<p>It means that the test of the safety edges failed.</p> <p>Check that the menu of the test of safety edges (<b>Co.tE</b>) have been set correctly.</p> <p>Check that the safety edges enabled from the menu are installed.</p>
The display shows <b>Err7</b>	When a Start command is given and the gate does not open (or does a partial opening)	This indicates an error in the encoders' operation. Contact the technical support centre V2.
The display shows <b>Err9</b>	When you are trying to change the control unit setups	It means that programming was locked by means of the programming lock key CL1+ (code 161213). To change the settings it is necessary to insert in the connector of the ADI interface the same key used to activate the programming lock, and unlock the device.