

- IT Istruzioni ed avvertenze per l'installazione e l'uso
- EN Instructions and warnings for installation and use
- FR Instructions et consignes pour l'installation et l'utilisation
- DE Anleitung und Warnhinweise für die Installation und Nutzung
- ES Instrucciones y advertencias para la instalación y uso
- PT Instruções para instalação e programação



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**Note:** Professional programming is not required for standard installations. When special functions and adjustments are required, refer to the advanced/professional programming in the instruction manual (supplied with the unit and available on our website).

# 1. General warnings

## 1.1 - Safety warnings

**⚠ WARNING!**

**This manual contains important instructions and warnings for personal safety.**

**An incorrect installation can cause serious injury. Before starting work it is necessary to carefully read all the parts of the manual. If in doubt, suspend the installation and request clarification from the King-Gates Support Service.**

**⚠ WARNING!**

**According to the most recent European legislation, the implementation of an automation system must comply with the harmonised standards set forth in the Machinery Directive in force, which allow for declaring the presumed conformity of the automation. On account of this, all operations regarding connection to the mains electricity, as well as product testing, commissioning and maintenance, must be performed exclusively by a qualified and skilled technician!**

**⚠ WARNING!**

**Important instructions: keep this manual for the possible future maintenance and disposal of the product.**

## 1.2 - Installation warnings

- Before beginning the installation procedure, check that this product is suitable for the intended use (see sections 3.1 and 3.2). If it is not suitable, DO NOT proceed with the installation.

The contents of this manual refer to an installation like the one shown in **fig. 1**.

- Taking into account the hazards which could occur during installation and product operation, the automation system should be installed according to the following procedure:

- Ensure there is a system device which is a means of disconnection from the supply mains. This device must have a contact separation in all poles which ensures full disconnection under overvoltage category III conditions.

- All installation and maintenance operations must be carried out with the automation system switched off and the power supply disconnected. If the disconnection device is not visible from where the automation system has been installed, a sign must be attached to it before attempting any work. The sign should read:

“CAUTION! MAINTENANCE IN PROGRESS”.

- The product must be connected to a power supply line equipped with safety grounding system.

- Take care not to crush, bang, drop or spill any kind of liquid on the automation system during installation. Do not place the product near heat sources or expose it to open flames. All these actions can damage it and cause malfunctions or dangerous situations. If this were to happen, stop installation immediately and contact KING-gates Customer Service.

- Do not make alterations to the product in any way. Unauthorized tampering can only cause malfunctions. The manufacturer declines all liability for any damages deriving from arbitrary changes to the product.

- This product is not intended for use by people

(including children) with reduced physical, sensory or mental capabilities or who lack experience and knowledge, unless they have been given supervision or instruction concerning the use of the product by a person responsible for their safety.

- The product is not intended as an intruder protection system. Additional devices must be installed alongside the automation system to guarantee effective protection.
- Do not allow children to play with the fixed control devices. Keep remote control devices out of their reach as well.
- The automation system must not be used until it has been commissioned as described in chapter 5 (“Testing and commissioning”).
- The packing materials of the product must be disposed of in compliance with local regulations.

## 2. Product description

ROLLS is a gearmotor designed for the automation of sectional and overhead doors.

ROLLS operates using electric power, in the event of a power failure from the electrical network, it is possible to release the gearmotor and move the door manually.

### 2.1 - Operating limits

Chapter 16 (“Technical specifications”) provides the data needed to determine whether the product is suitable for the intended application. Its structural characteristics make it suitable for use on sectional and overhead doors within the limits shown in **table 1**.

Table 1 - ROLLS gearmotor operating limits				
Model:	SECTIONAL door		Overhead door	
ROLLS 700	Height: 3.7 m	Surface: 12 m <sup>2</sup>	Height: 3.7 m	Surface: 10 m <sup>2</sup>
ROLLS 1200	Height: 3.7 m	Surface: 23 m <sup>2</sup>	Height: 3.7 m	Surface: 14 m <sup>2</sup>

The effective suitability of ROLLS for automating a specific door depends on the degree of door leaf balancing, guide friction and other aspects, including occasional phenomena such as wind pressure or the presence of ice, which could obstruct leaf movement.

To establish effective conditions, the force required to move the leaf throughout its stroke must be measured to ensure that this value does not exceed the “nominal torque” specified in section 16 (“Technical specifications”); also, to avoid overheating, the control unit provides a limiter based on engine effort and cycle duration, that intervenes when

the maximum limit is exceeded.

**N.B.:** 1 kg = 9.81 N, for example, 500 N = 51 kg

### 2.2 - Typical system

**Fig. 1** shows a typical system for automating a sectional door

**a** ROLLS

**b** Photocells

**c** Main edge

**d** Flashing light with in-built aerial

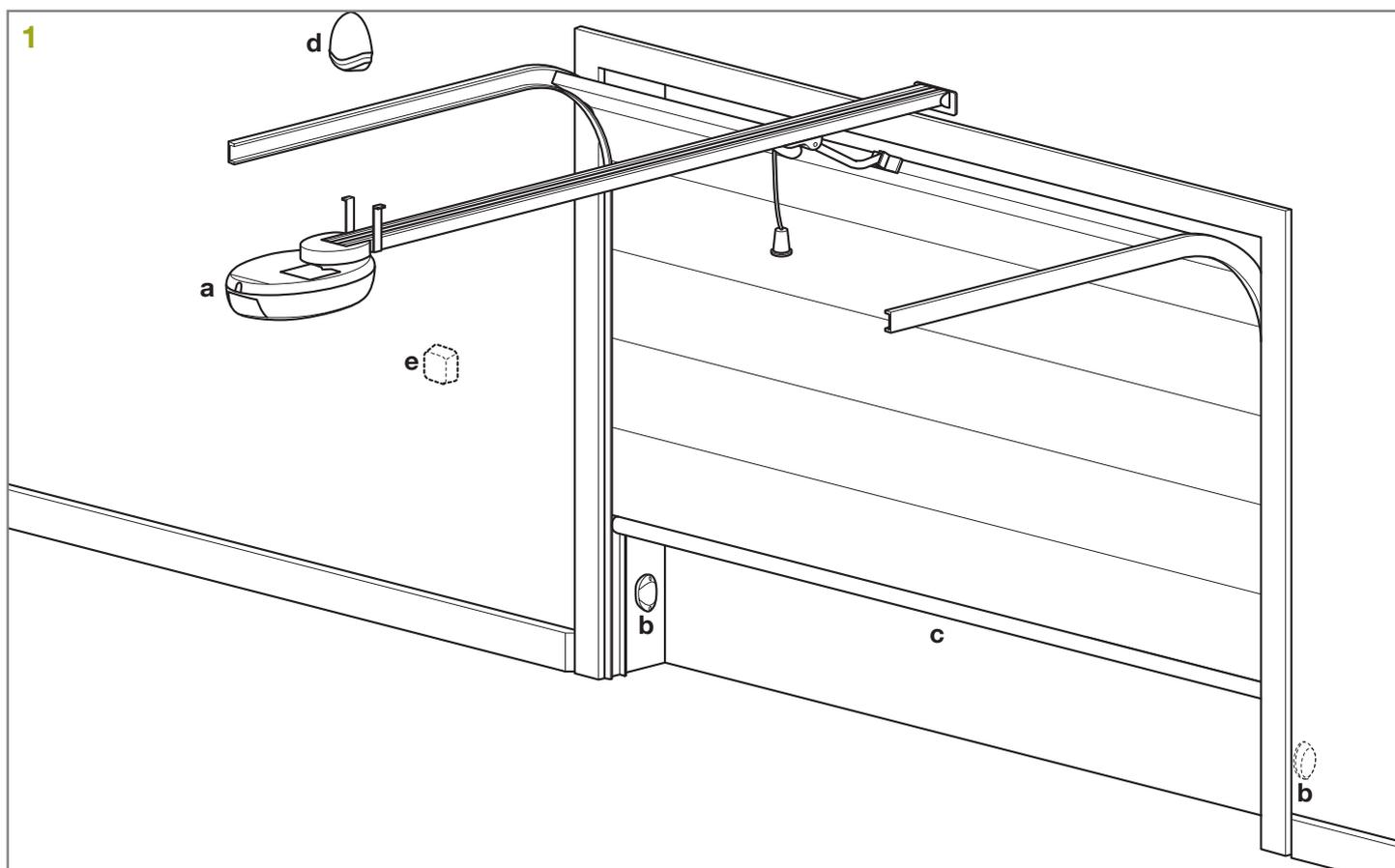
**e** Key-operated selector switch

### 2.3 - List of cables

**Table 2** shows the specifications of the cables needed to connect up the various devices.

The cables used must be suitable for the type of installation, for instance an H03VV-F type cable is recommended for indoor applications.

Table 2 - List of cables		
Connection	Cable type	Maximum length allowed
Flashing light with aerial	No.1 2x0.5 mm <sup>2</sup> cable	20 m
	1 RG58 type shielded cable	20 m (recommended less than 5 m)
Photocells	No. 1 2x0.25 mm <sup>2</sup> cable for TX	30 m
	No. 1 4x0.25 mm <sup>2</sup> cable for TX	30 m
Key-operated selector switch	No. 2 2x0.5 mm <sup>2</sup> cables (note 1)	50 m
<b>Note 1:</b> a single 4x0.5 mm <sup>2</sup> cable can be used instead of two 2x0.5mm <sup>2</sup> cables.		



## 2.4 - Main features of the control unit

- Automated access command for 1 24V motor.
- Flasher control with/without integrated intermittency function (Paragraph 10.3).
- This output can also be used to control courtesy lights (Paragraph 13).
- Inputs for start, stop opening wired commands, (Paragraph 10.7).
- Double input for safety devices: "S2 Photo" and "S1 Edge" (paragraph 10.5).
- Possibility of powering 24VDC accessories  $\equiv$  (paragraph 10.6).
- Input for external antenna that can be used for increasing the range of the transmitters (Paragraph 10.8).
- Pause time for automatic re-closing adjustable to between 0 and 180 sec. with knob (Paragraph 4.2).
- Obstacle sensitivity adjustment with knob (Paragraph 4.2).
- Motor force adjustment with knob (Paragraph 4.2).
- Incorporated radio receiver (433.92MHz), compatible with King-Gates rolling transmitters.
- 6 indication LEDs (Paragraph 8).
- Slow-speed opening and closing (customizable through dedicated programming).

## 2.5 - Technical features of the control unit

<b>Power supply</b>	230Vac $\pm$ 10%, 50-60 Hz
<b>Motor power supply</b>	Rolls 700: 24V DC 120W Rolls 1200: 24V DC 150W
<b>Warning light power supply</b>	24V max 10W
<b>Accessories' power supply (photocells...)</b>	24VDC $\equiv$ 10 W max
<b>Radio receiver frequency</b>	433.920 MHz
<b>Storable remote controls</b>	180
<b>Radio antenna input</b>	RG58
<b>Operating temperature</b>	-20 $\div$ 55 °C

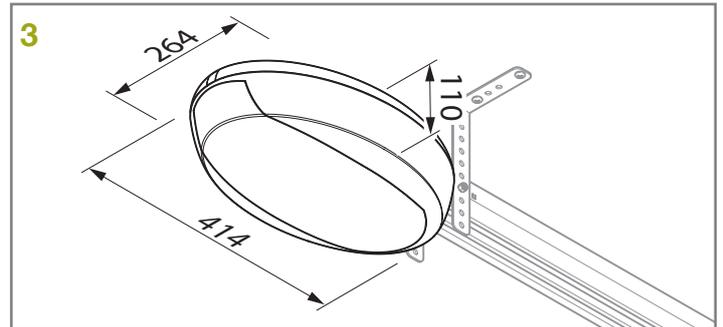
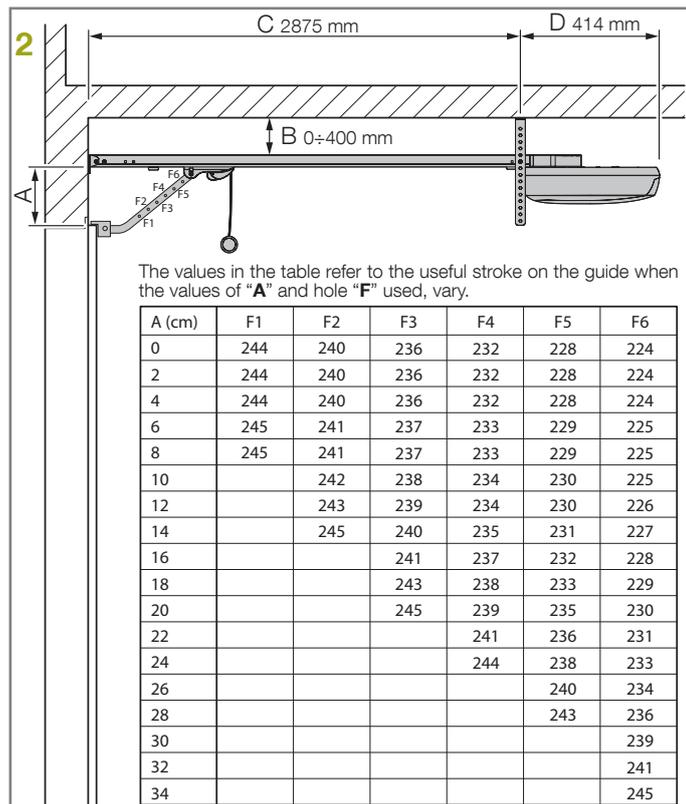
# 3. Installation

The installation of ROLLS must be carried out by qualified personnel in compliance with current legislation, standards and regulations, and the directions provided in this manual.

## 3.1 - Preliminary checks

Before proceeding with the installation of ROLLS you must:

- Verify and ensure that, after installation, no door parts obstruct public roadways or pavements.
- Check that all the materials are in excellent condition, suitable for use and that they conform to the standards currently in force.
- Make sure that the structure of the gate is suitable for automation.
- Make sure that the force and dimensions of the door fall within the specified operating limits provided in chapter 2.1 ("Operating limits").
- Check that the static friction (that is, the force required to start the movement of the leaf) is less than half the "maximum torque", and that the dynamic friction (that is, the force required to keep the leaf moving) is less than half the "nominal torque". Compare the resulting values with those specified in section 17 ("Technical specifications"). The manufacturer recommends a 50% margin on the force, as unfavourable climatic conditions may cause an increase in the friction.
- Make sure that there are no points of greater friction in the opening or closing travel of the door.
- Make sure that the mechanical stops are sturdy enough, and that there is no danger of the door derailing.
- Make sure that the door is well balanced: it must not move by itself when left stationary in any position.
- Make sure that the mounting positions of the various devices (photocells, keys, etc.) are protected from impact and that the mounting surfaces are sufficiently sturdy.
- Make sure that the minimum and maximum clearances specified in **fig. 2** and **3** are complied with.



- Check and ensure that the manual release is fitted at a maximum height of 1.8 m.
- Components must never be immersed in water or other liquids.
- Keep all ROLLS components away from heat sources and open flames; these could damage the components and cause malfunctions, fire or dangerous situations.
- If the door includes an access door, make sure that it does not obstruct normal travel. Fit a suitable interlock system if necessary.
- Only insert the ROLLS plug into sockets equipped with a safety grounding system.
- The socket must be protected by suitable magneto-thermal and differential switches.

## 3.2 - Fitting ROLLS

The installation of the ROLLS gearmotor comprises 3 stages:

- Assembly of the GRB23, GRB4 and GRB3 guides (see sections 3.2.1 and 3.2.2).
- Mounting the gearmotor to the guide (see section 3.2.3).

### 3.2.1 - Assembly of guide supplied GRB23

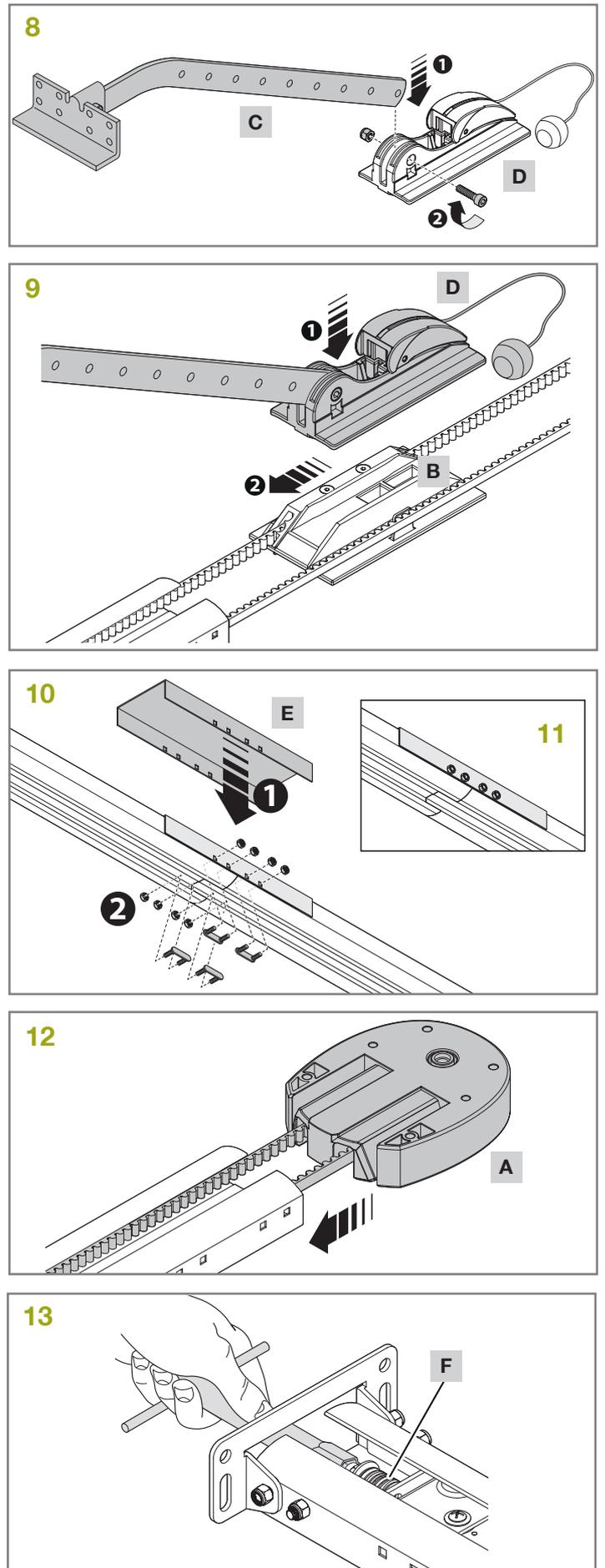
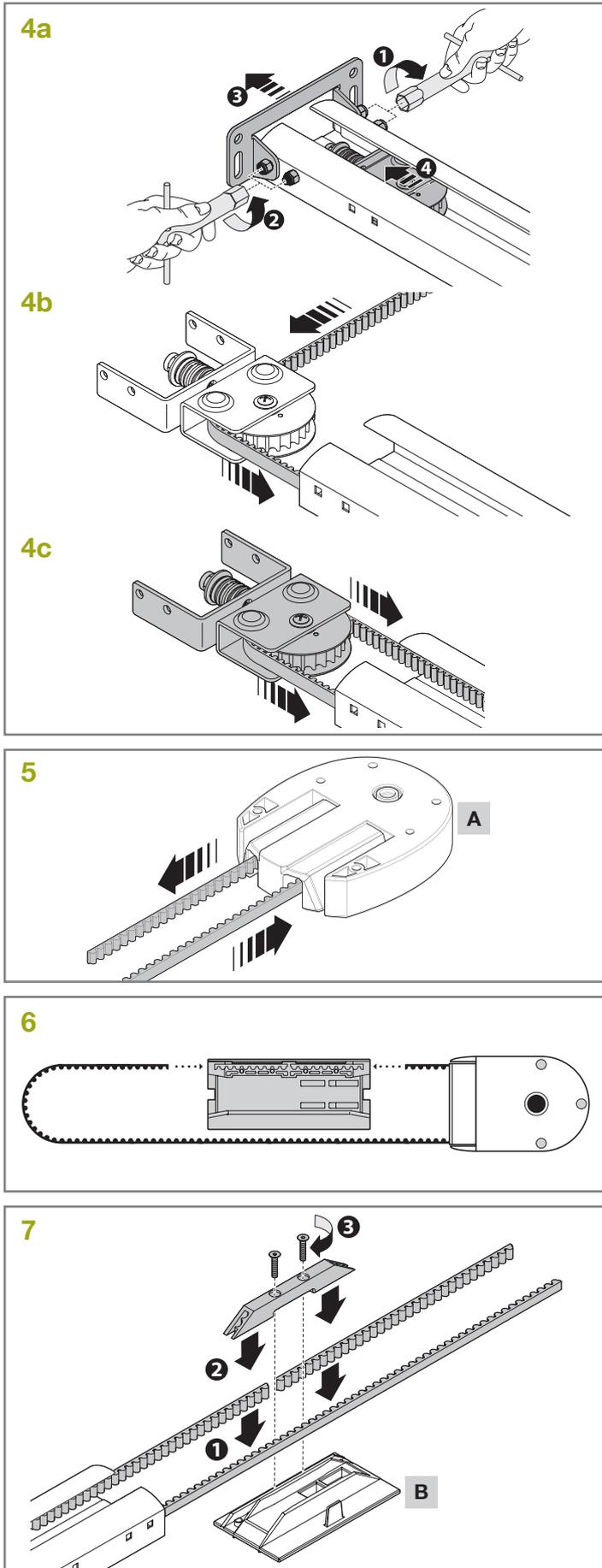
The guide that is supplied with GRB23 must be assembled as follows:

01. Referring to **fig. 4**, remove the belt tensioner device (**4a**); insert one end of the belt into the pulley (**4b**); reintroduce the belt tensioner device into the guide (**4c**).
02. Pass the same end of the belt through the head [A], as in **fig. 5**. NB - Make sure that the belt is correctly positioned: it must be with the teeth facing inwards, straight and without twists.
03. Turn the lower section of the carriage so that the grooves correspond with the two ends of the belt, as in **fig. 6**.
04. Place both ends of the belt into all the shaped slots of the lower carriage [B]. Fix the ends of the belt using the appropriate 2 screws V4. 2 x 9.5 and the 2 R05 washers, as in **fig. 7**.
05. Fix the belt guide [C] to the upper carriage [D] with the V6x18 screw and relative M6 nut, as in **fig. 8**.
06. Insert the upper carriage [D] into the lower carriage [B] and place the entire carriage assembly inside the guide, as in **fig. 9**.
07. Assemble the two pieces of the guide with the joint [E] and join the two guides and the joint using the supplied fixings **fig. 10** and **11**.
08. Carefully position the belt into the guide, making sure that it is not twisted.
09. Push the head [A] into the free end of the guide using significant force, as in **fig. 12**.
10. Finally, tension the belt with the adjustment screw [F] of the belt tensioner device, As in **fig. 13**.

**⚠ WARNING! The gearmotor could break if the belt is TOO taut, and it could cause unpleasant noise if it is TOO slack. [F] (fig. 13).**

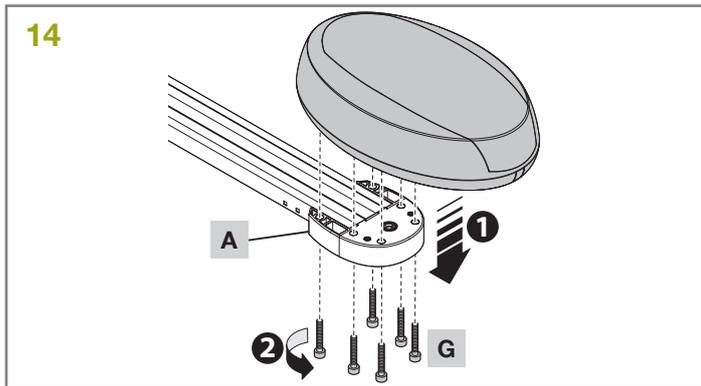
### 3.2.2 - Assembly of guide supplied GRB3

The GRB3 guide is already assembled. All you have to do is tensioning the belt using the M8 nut [F] (fig. 13).



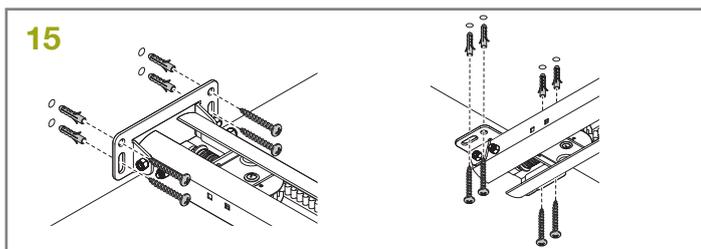
## 3.2.3 - Fitting the gearmotor to the guide

**01.** Fit the ROLLS gearmotor output shaft to the guide head [A] and secure using 4 M6.3x38 screws [G]; (**fig. 14**).



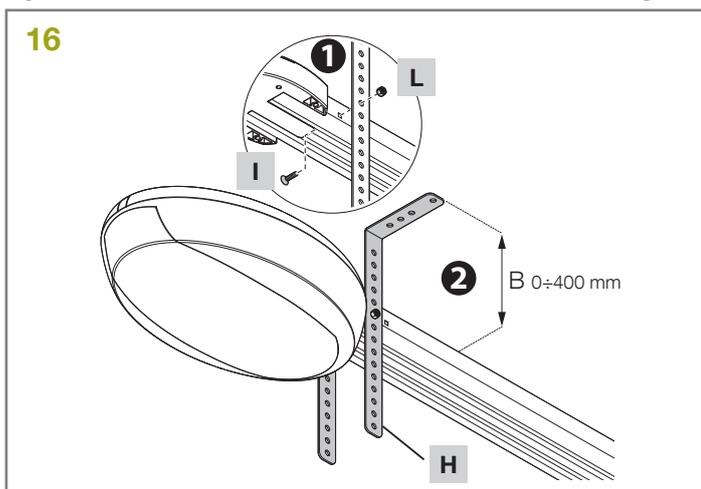
## 3.2.4 - Mounting the gearmotor to the ceiling

**01.** On the basis of distances A, B and C in **figures 2 and 3**, trace the two fixing points of the front guide bracket at the centre of the door. On the basis of the type of material, the front bracket can be fixed with rivets, plugs or screws (**fig. 15**). If distances A, B and C (**fig. 2 and 3**) are sufficient, the bracket can be fixed directly onto the ceiling.



**02.** After drilling the holes in the relative points, leaving the gearmotor on the ground, lift the guide from the front section and secure using two screws, plugs or rivets, according to the installation surface.

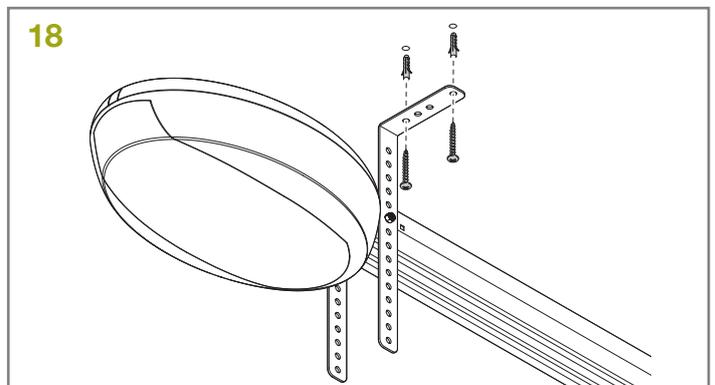
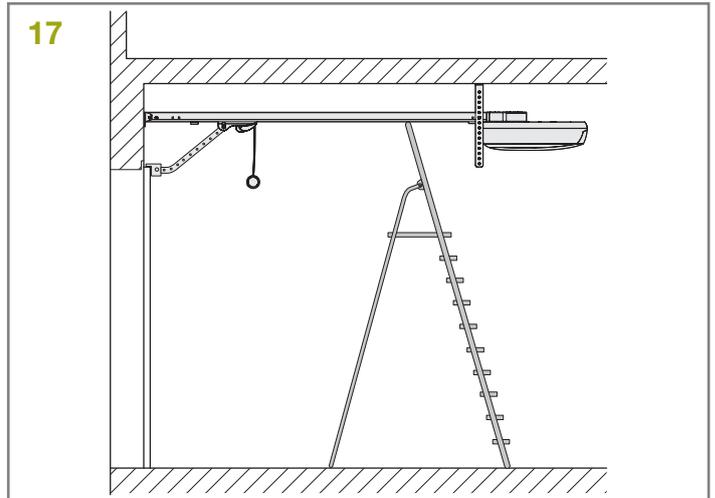
**03.** Secure the brackets [H] using the screws [I] and nuts [L], selecting the hole most suited to ensure distance B, as shown in **fig. 16**.



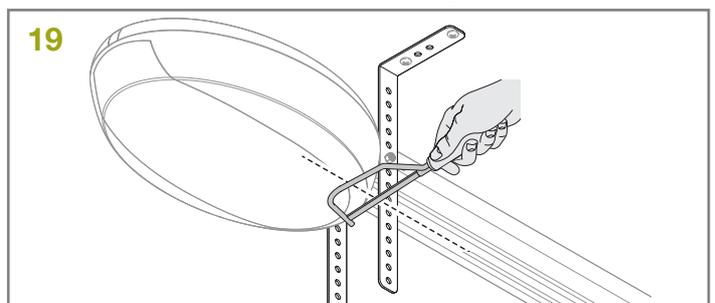
**04.** Using a ladder, lift the gearmotor until the brackets are touching the ceiling. Trace the drilling points and then return the gearmotor to the ground.

**05.**

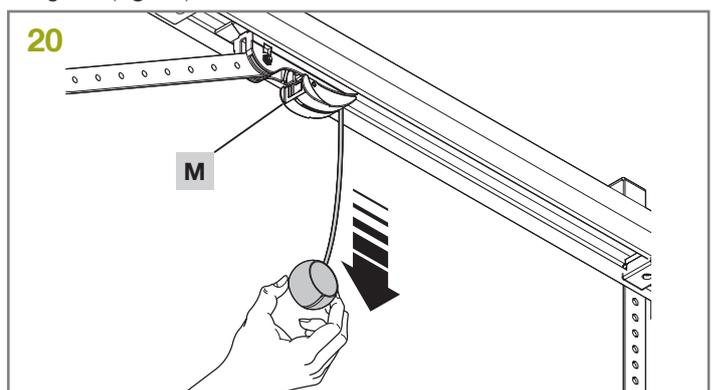
**06.** Drill at the outlined points and then, using a ladder, rest the brackets against the drilled holes (**fig. 17**) and secure using screws and plugs suited to the support surface (**fig. 18**).



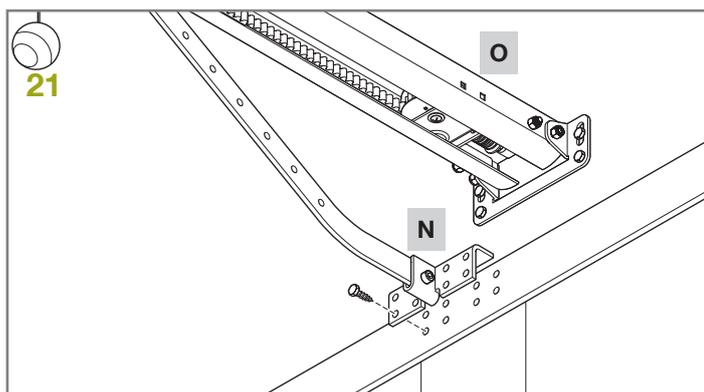
**07.** Ensure that the guide is perfectly horizontal, then cut off the excess section of the brackets with a saw (**fig. 19**).



**08.** With the door closed, pull the cord to release carriage [M] from the guide (**fig. 20**).

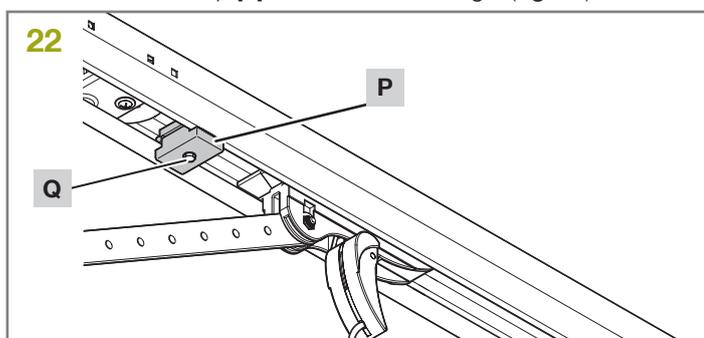


**09.** Slide the carriage until the leaf connecting bracket [N] in **fig. 21** on the upper edge of the door is perfectly perpendicular to the guide [O].



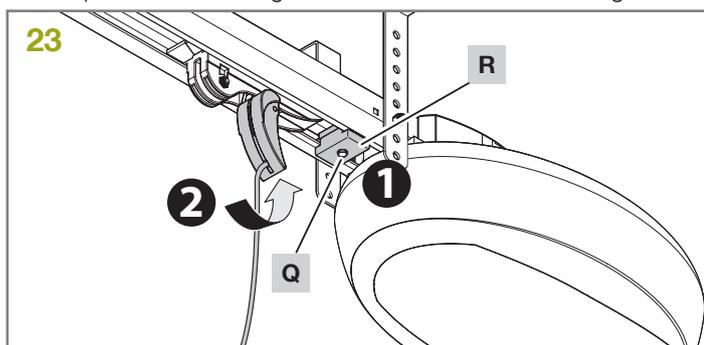
**10.** Then secure the leaf connecting bracket [N] with rivets or screws (fig. 21). Use screws or rivets suited to the leaf material, and ensure that they are able to withstand the maximum force required for leaf opening and closing.

**11.** Loosen the screws of the two mechanical stops, then move the front mechanical stop [P] in front of the carriage (fig. 22).



**12.** Push the carriage in the closing direction and, on reaching the position, tighten the screw [Q] fully down.

**13.** Manually open the door to the required opening position, move the rear mechanical stop [R] next to the carriage (fig. 23) and tighten the screw [Q] fully down. **Important!** - Make sure the release cord can be pulled below a height of 1.8 m. Secure the motor again.

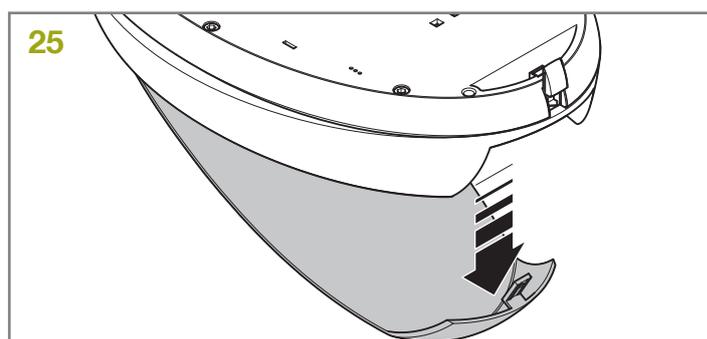
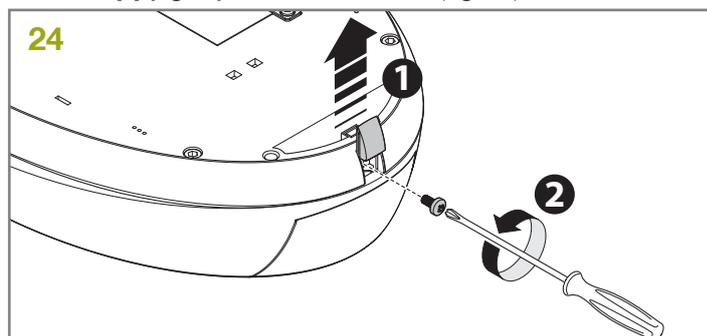


### 3.3 - Installation of other devices

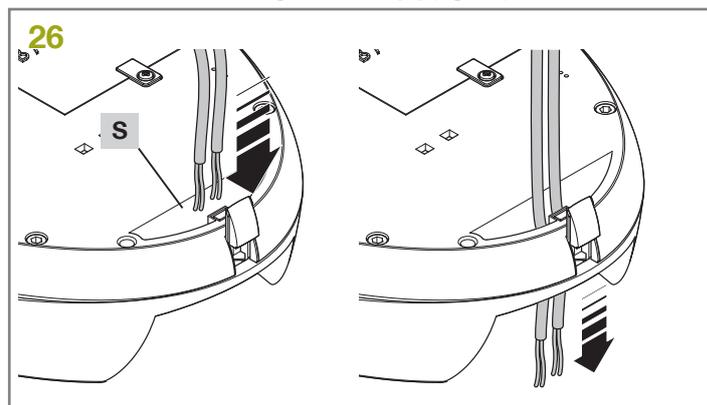
If other devices are needed, install them following the directions provided in the corresponding instructions. Check the devices which can be connected to ROLLS in fig. 1 and in section 3.5 ("Description of electrical connections"). -

### 3.4 - Electrical connections

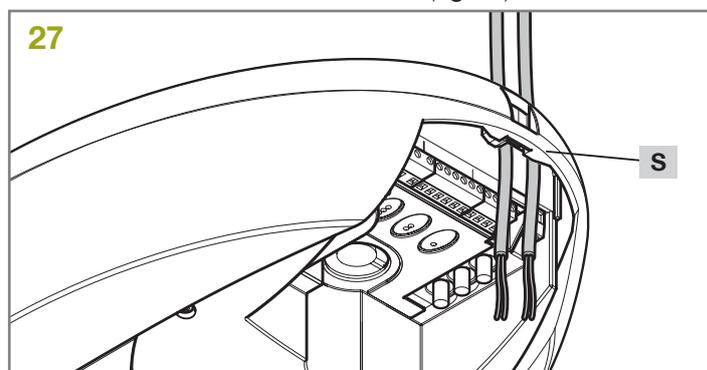
**01.** Open the cover by removing the cover plastic [1] and unscrewing the screw [2] (fig.24). Slide the cover out (fig. 25).



**02.** Feed the cables through the hole [S] (fig. 26).



**03.** The cables must then be connected (fig. 27).



**04.** Refer to fig. 28 and the connection descriptions in table 5 when making the connections:

- if using the flashing light aerial, remove the wire clip (connected to terminal 14 as standard) and connect the RG58 shielded cable.

**05.** Once you have connected up all the cables, secure them using cable clips.

**06.** To close the cover, reinsert it in place, tighten the screw and replace the plastic cover.

## 3.5 - Description of the electrical connections

The following is a brief description of the electrical connections (table 5); for further information, please read section 10 ("Devices connectable to the control unit").

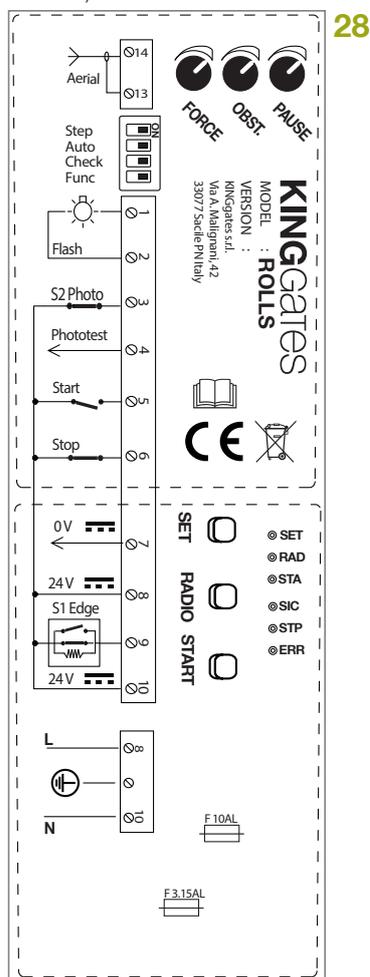


Table 5

Terminals	Function	Description
1 - 2	Flash	24Vdc max. 15W warning light
3	S2 Photo	Input for safety devices, normally closed contact. Function associated to dip switch Func
4	Phototest	24Vdc output for safety test
5	Start	Start, normally open contact
6	Stop	Stop, normally closed contact
7	0 V	Negative terminal for accessories devices connected
8	24V	Power supply 24Vdc
9	S1 Edge	Input for safety edges, normally closed contact. Brief movement inversion in case of obstacle during closing and block of the movement during opening.
10	24V	Power supply 24Vdc
L - N	Power supply	Power supply 230V ac
13 - 14	Aerial	Antenna ground (13) Antenna signal (14)

**! TIMER FUNCTION:** if START contact is kept closed (for instance through a timer-controlled or bistable relay), control unit opens the door and leaves the door opened. The automation does not accept closing commands (neither automatic nor wired) until START contact is reopened.

In this mode, dip switch 1 STEP is set to OFF and dip 2 AUTO to ON to ensure that the gate never remains locked open.

**! If START contact is kept closed during the control unit starting after a blackout, the door will immediately execute the start command.**

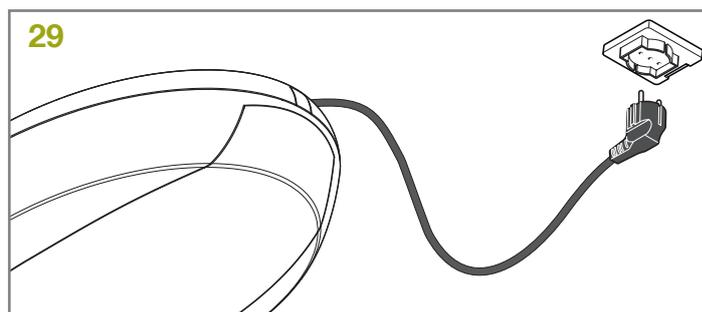
## 3.6 - Connecting ROLLS to the mains

**! CAUTION!**

- Never cut or remove the cable supplied with ROLLS.  
- If not already available, create a power outlet for ROLLS. This operation must be performed by qualified and experienced personnel in strict compliance with the current legislation, regulations and standards.

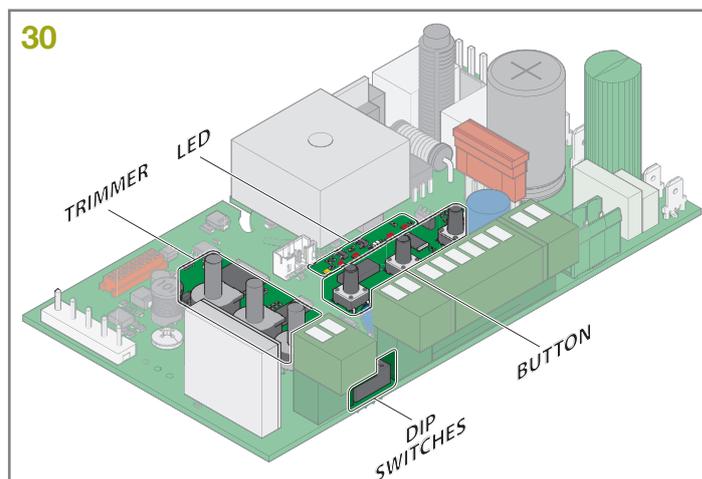
ROLLS must be connected to the supply mains by a qualified electrician.

To test ROLLS, just insert the plug into a power outlet, using an extension if necessary (fig. 29).



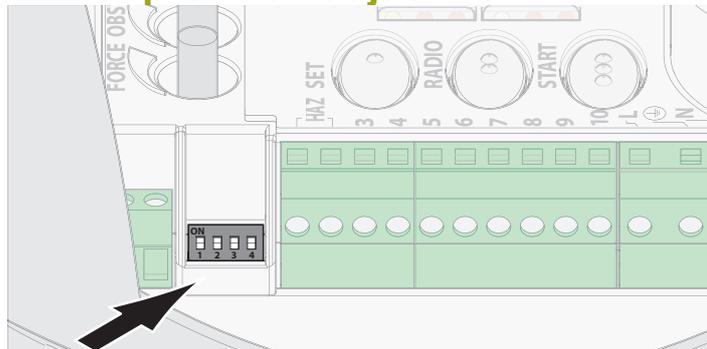
## 3.7 - Electronic control unit

The following figure (fig. 29) the buttons, LEDs, trimmers and dip switches, which are used for the various configurations, are identified inside the electronic board.



# 4. Control unit setting

## 4.1 - Dip-switch adjustment



### DIP SWITCHES

31

DIP	DIP-SWITCH status	Description of operation
DIP 1 STEP	1-ON 2-OFF	Step-by-step command mode: Open / Stop / Close / Stop
DIP 2 AUTO	1-ON 2-ON	Step-by-step with automatic closing (time set with the "Pause" knob)
	1-OFF 2-ON	Opening only command mode with automatic closing (condominium function)
	1-OFF 2-OFF	Open / Close / Open command mode (no Stop)
DIP 3 CHECK	ON	Test of the safety devices connected to terminal [4] "Phototest" enabled after learning the new stroke
	OFF	Test of the safety devices connected to terminal [4] "Phototest" disabled
DIP 4 FUNCTION	ON	Devices connected to "S2 Photo" terminal [3] intervene by stopping the movement both in opening and closing phases
	OFF	Devices connected to "S2 Photo" terminal [3] intervene just during closing phase with immediate inversion

#### DIP1 "STEP":

If the dip-switch is put to **ON**, the step-by-step operating mode is activated. At every start pulse (wired or via transmitter), the control unit performs an action. Starts the motor if the automation system is stopped, and stops it if it is moving.

If the **STEP** dip-switch is put to **OFF**, the OPEN FULLY/PAUSE/CLOSE FULLY/STOP operating mode is activated (apartment block). The control unit only accepts commands (either wired or via transmitter) for the opening phase. With the automation in the opening phase, it continues to open, and with the system in the closing phase it reopens fully. The automation can re-close with the time set through the "PAUSE" potentiometer, if the "AUTO" dip-switch is set to **ON**. If not, it is necessary to give a START command (either wired or via transmitter) with the automation fully open.

#### DIP2 "AUTO":

If the dip-switch is put to **ON**, the automatic re-closing function is activated. The control unit automatically closes the leaves after the time set through the "PAUSE" potentiometer (see Paragraph 4.2). If the "AUTO" dip-switch is put to **OFF**, the automatic re-closing function is deactivated. To close the leaves, therefore, a command must be given (either wired or via transmitter).

#### DIP3 "CHECK":

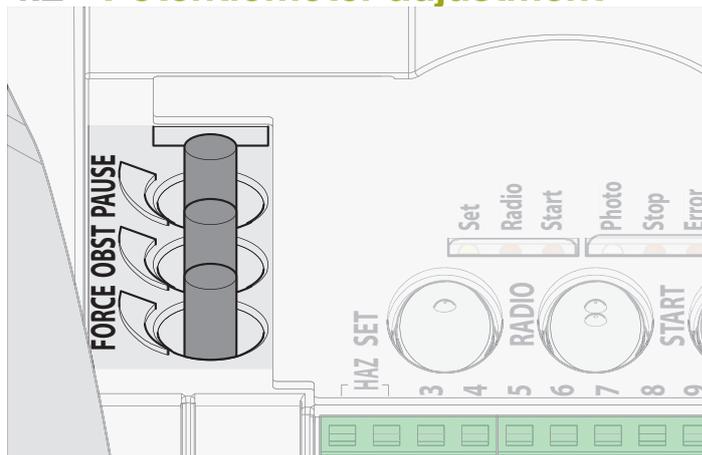
If the dip-switch is put to **ON**, the safety devices connected to terminal "Phototest" [4] are subject to a preventive check before starting any movement.

If the "CHECK" dip-switch is put to **OFF**, the safety devices connected to terminal "Phototest" [4] are constantly supplied.

#### DIP4 "FUNCTION":

If the dip-switch is put to **ON**, the safety devices connected to "S2 Photo" terminal [3] intervene by stopping the movement during both the opening and closing phases. If the dip-switch is put to **OFF**, the safety devices connected to "S2 Photo" terminal [3] intervene just during the closing phase with immediate inversion.

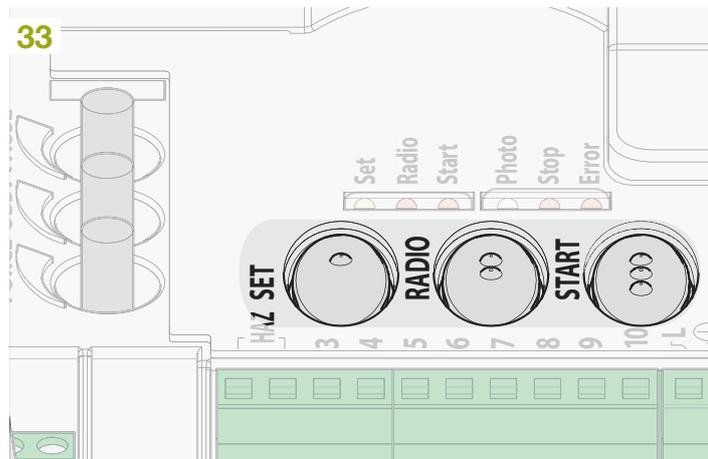
## 4.2 - Potentiometer adjustment



KNOB	Description of operation	32
<b>FORCE</b>	Power: adjustment of motor power. Turning the knob clockwise increases the motor's power and speed. To validate the modification, it is necessary to programme the gate path.	
<b>OBSTACLE</b>	Obstacle, sensitivity to obstacles: adjustment of the obstacle detection function. Turning the knob clockwise increases the drive time before obstacle detection (less sensitivity). Therefore, in systems with particularly unfavorable mechanical conditions, it is advisable to keep the drive time high. OBSTACLE is set at half position (50%) as factory setup.	
<b>PAUSE</b>	Pause time before automatic gate closing. Turning the knob clockwise increases the pause time from 0 to 180 seconds. Please note: this knob is functional only when AUTO dip-switch is put to ON.	

**!** The variation of the "FORCE" potentiometer requires repeating the programming of the door path (par. 6).

## 5. Transmitter (remote control unit) programming



**!** The transmitters to be programmed must be of the “Stylo4K”, “Stylo2K”, DigiPad, Myo C4, NovoTX, NovoDigi series by King Gates. See pictures below.

**!** If, at the start of the following procedures, the “set”, “radio” and “error” LEDs flash, it means that the programming protections have been activated – see Paragraph 14.1. Therefore, radio transmitters learning is not possible.

**!** To interrupt the following programming procedures at any time, press the RADIO button or wait 20 seconds.



### 5.1 - Start button programming

This procedure allows for programming the button of the radio control linked to the automation’s start function.

STEP	ACTION	RESULT
1	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red “radio” LED turns on in the fixed mode (if not, consult Paragraph 14.1)
2	PRESS THE DESIRED BUTTON ON EVERY TRANSMITTER TO BE PROGRAMMED	The red “radio” LED flashes
3	PRESS TRHE <b>RADIO</b> BUTTON UNTIL RADIO LED TURNS OFFOR WAIT 20 SECONDS TO EXIT THE PROCEDURE	The red “radio” LED turns off

### 5.2 - Programming the button linked to the “AUX” output

This procedure allows you to program the radio control connected to the “AUX” output (output not active at the factory).

To use this function, the “AUX” output must be set to courtesy light.

STEP	ACTION	RESULT
1	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red “radio” LED turns on in the fixed mode
2	PRESS THE <b>START</b> BUTTON FOR 1 SECOND	The red “radio” LED remains lit in fixed mode and the red “error” LED turns on in fixed mode
3	PRESS THE DESIRED BUTTON OF ALL THE TRANSMITTERS TO BE PROGRAMMED	The red “radio” LED flashes and the red “error” LED turns on in fixed mode
4	PRESS THE <b>RADIO</b> BUTTON UNTIL THE RADIO LED TURNS OFF OR WAIT 20 SECONDS TO EXIT THE PROCEDURE	The red “radio” LED and the red “error” LED turn off

### 5.3 - Programming of the button linked to the on-board courtesy light

This procedure allows for programming the button of the radio control linked to the on-board led courtesy light.

STEP	ACTION	RESULT
1	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED turns on in the fixed mode
2	PRESS THE <b>SET</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED remains lit and the yellow " <b>set</b> " LED turns on in fixed mode
3	PRESS THE DESIRED BUTTON OF ALL THE TRANSMITTERS TO BE PROGRAMMED	The red " <b>radio</b> " LED flashes and the yellow " <b>set</b> " LED remains lit in fixed mode
4	PRESS THE <b>RADIO</b> BUTTON UNTIL THE RADIO LED TURNS OFF OR WAIT 20 SECONDS TO EXIT THE PROCEDURE	The red " <b>radio</b> " LED and the yellow " <b>set</b> " LED turn off

### 5.4 - Deleting all memorised transmitters

This operation deletes all memorized transmitters from the memory.

STEP	ACTION	RESULT
1	PRESS THE <b>RADIO</b> BUTTON FOR 4 SECONDS AND RELEASE IT WHEN THE RADIO LED STARTS FLASHING	The red " <b>radio</b> " LED flashes (if not, refer to Paragraph 14.1)
2	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED flashes quickly to signal the deletion in progress
3	WAIT FOR THE END OF THE PROCEDURE	The red " <b>radio</b> " LED turns off

### 5.5 - Deleting a single transmitter

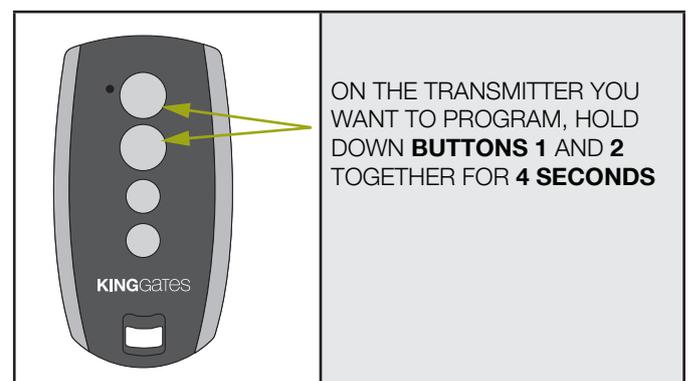
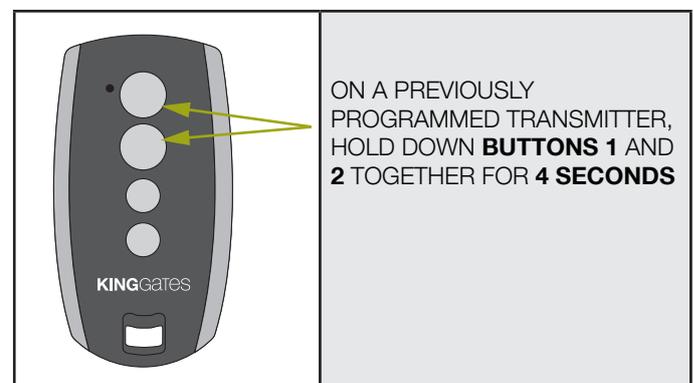
This operation deletes a single transmitter from the memory.

STEP	ACTION	RESULT
1	PRESS THE <b>RADIO</b> BUTTON FOR 4 SECONDS AND RELEASE IT WHEN THE RADIO LED STARTS FLASHING	The red " <b>radio</b> " LED flashes (if not, refer to Paragraph 14.1)
2	PRESS THE <b>SET</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED flashes and the yellow " <b>set</b> " LED turns on in fixed mode
3	PRESS A BUTTON ON THE TRANSMITTER YOU WISH TO CANCEL	The red " <b>radio</b> " LED flashes and the yellow " <b>set</b> " LED flashes
4	PRESS THE <b>RADIO</b> BUTTON UNTIL THE RADIO LED TURNS OFF OR WAIT 20 SECONDS TO EXIT THE PROCEDURE	The red " <b>radio</b> " LED and the yellow " <b>set</b> " LED turn off

### 5.6 - Remote (tools free) transmitter programming

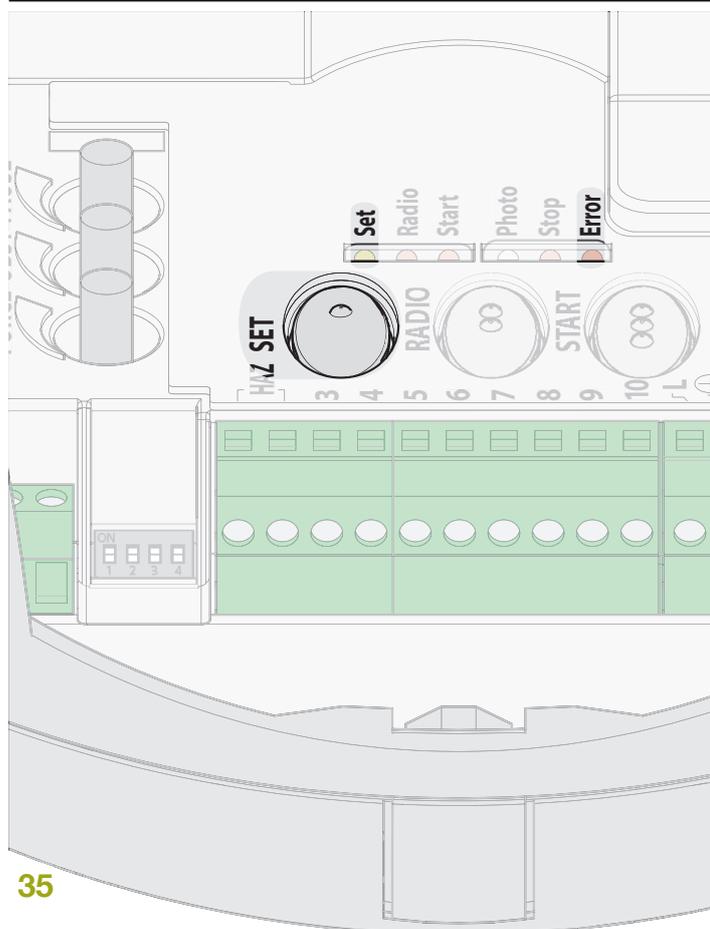
This procedure enables you to program a new transmitter ("Stylo2K" or "Stylo4K") without accessing the control unit, but keeping close to it.

To run the procedure you will require a previously programmed transmitter, to inherit its functions.



## 6. Programming the door path

EN



### 6.1 - Basic programming of the automation's movement

Through this procedure, the control unit memorizes working times and power required for opening and closing the system.

**The slowdown points are automatically set to ensure a correct arrival to the end of gate path.**

- To exclude the deceleration, see the paragraph "Advanced programming of the automation's movement."

STEP	ACTION	RESULT
1	PUT THE DOOR TO HALF WAY POSITION	
2	PRESS THE <b>SET</b> BUTTON FOR 3 SECONDS	The yellow "set" LED flashes and then turns on in fixed mode
3	THE DOOR PERFORMS A PARTIAL OPENING MOVEMENT	The yellow "set" LED stays on in fixed mode
4	THE DOOR PERFORMS A FULL CLOSING MOVEMENT	The yellow "set" LED stays on in fixed mode
5	THE DOOR PERFORMS A FULL OPENING MOVEMENT	The yellow "set" LED stays on in fixed mode
6	THE DOOR PERFORMS A FULL CLOSING MOVEMENT	The yellow "set" LED stays on in fixed mode
7	THE DOOR PERFORMS A FULL OPENING MOVEMENT WITH SLOWDOWNS	The yellow "set" LED turns off
8	THE DOOR PERFORMS A FULL CLOSING MOVEMENT WITH SLOWDOWNS	
9	END OF THE PROGRAMMING PROCEDURE	

To start up the system, one of the following programming procedures must be carried out:

- basic programming of the automation's movement: self-learning of the manoeuvre times and slowdown start points.
- advanced programming of the automation's movement: self-learning of the manoeuvre times and manual setting of the slowdown start points.

**!** If, at the start of the following procedures, the "set", "radio" and "error" LEDs flash, it means that the programming protection has been activated – see Paragraph 14.1.

**!** To interrupt the following programming sequences at any time, press the SET and RADIO buttons simultaneously.

**!** If the "FORCE" potentiometer is adjusted, the automation's movement must be reprogrammed.

**!** The red "Error" LED flashes during the automation's movement when a mechanical stress point is detected (this corresponds to increased motor effort). Adjust OBSTACLE and FORCE knobs (slightly turn them clockwise) to solve this and check gate mechanics if necessary.

## 6.2 - Advanced programming of the automation's movement

With this procedure, the control unit memorizes the times and power required for opening and closing the system.

Moreover, this procedure allows for setting:

- start point of slowdowns or their deletion.

STEP	ACTION	RESULT
1	PUT THE DOOR TO HALF WAY POSITION	
2	PRESS THE <b>SET</b> BUTTON FOR 2 SECONDS	The yellow "set" LED flashes (if not, refer to Paragraph 14.1)
3	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The yellow "set" LED turns on in fixed mode
4	THE DOOR PARTIALLY OPENS	The yellow "set" LED stays on
5	THE DOOR MOVES TO FULL CLOSING POSITION	The yellow "set" LED flashes
6	PRESS THE <b>SET</b> BUTTON OR A BUTTON OF A PROGRAMMED <b>TRANSMITTER</b> OR CLOSE THE <b>WIRED START CONTACT</b>	The yellow "set" LED stays on
7	THE DOOR PERFORMS THE OPENING OVEMENT	The yellow "set" LED stays on
8	PRESS THE <b>SET</b> BUTTON OR A BUTTON OF A PROGRAMMED <b>TRANSMITTER</b> OR CLOSE THE <b>WIRED START CONTACT</b> TO SET THE SLOWDOWN START POINT (*), TO HAVE NO SLOWDOWN, WAIT FOR THE MOVEMENT TO BE COMPLETED	The yellow "set" LED stays on
9	THE DOOR COMPLETES THE OPENING PHASE	The yellow "set" LED stays on
10	PRESS THE <b>SET</b> BUTTON OR A BUTTON OF A PROGRAMMED <b>TRANSMITTER</b> OR CLOSE THE <b>WIRED START CONTACT</b>	The yellow "set" LED stays on
11	THE DOOR PERFORMS A FULL CLOSING MOVEMENT	The yellow "set" LED stays on

12	DURING MOVEMENT: PRESS THE <b>SET</b> BUTTON OR A BUTTON OF A PROGRAMMED <b>TRANSMITTER</b> OR CLOSE THE <b>WIRED START CONTACT</b> TO SET THE SLOWDOWN START POINT (*), TO HAVE NO SLOWDOWN, WAIT FOR THE MOVEMENT TO BE COMPLETED	The yellow "set" LED stays on in fixed mode
13	THE DOOR COMPLETES THE CLOSING PHASE	The yellow "set" LED turns off
14	END OF THE PROGRAMMING PROCEDURE	The LEDs return to the normal operation configuration

(\*) Minimum slowdown time must be 3 seconds.

**⚠** If the "FORCE" potentiometer is adjusted, the automation's movement must be reprogrammed.

**⚠** The red "Error" LED flashes during the automation's movement when a mechanical stress point is detected (this corresponds to increased motor effort).

Adjust **OBSTACLE** Adjust **OBSTACLE** and **FORCE** knobs (slightly turn them clockwise) to solve this and check gate mechanics if necessary.

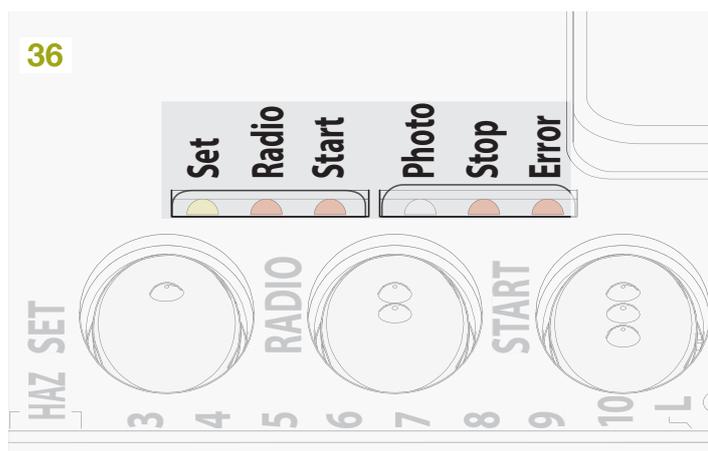
## 7. Testing and commissioning

Once the programming setup has been completed, verify that:

- the motors turn off after a few seconds once the opening or closing phases end (the "error" LED turns off too);
- the control unit responds to the connected wired commands: "START" (terminal 5), and "STOP" (terminal 6);
- all programmed radio transmitters are operational;
- the safety devices connected to "S2 Photo" (terminal 3) intervene while the door closes and prevent the open door from closing;
- the safety devices connected to "S1 Edge" (terminal 9) intervene while the door opens and closes with a brief movement inversion;

If the "Func" dip-switch is put to ON, check that S2 Photo safety devices intervene also when the door opens and that they prevent the closed door from opening.

## 8. LED indication



With the control unit powered up (if control unit protection is not activated) the yellow "Set" led flashes briefly and, if everything is correctly connected, the red "Stop" and "SIC" LEDs turn on to indicate that the three safety contacts are closed circuits.

The yellow "Set" LED is reserved only for programming.

### 8.1 - Input status LED indication

#### SIC LED:

- Green: contact S1 Edge (terminal 9) closed and S2 Photo (terminal 3) open
- red: contact S1 Edge open and S2 Photo closed
- yellow: contacts S1 Edge and S2 Photo both closed
- off: contacts S1 Edge and S2 Photo both open

#### RED START LED:

- on in fixed mode if the Start contact (terminals 5-8) is closed
- off if the Start contact (terminals 5-8) is open

#### RED STOP LED:

- on in fixed mode if the Stop contact (terminals 6-8) is closed
- off if the Stop contact (terminals 6-8) is opened

#### YELLOW SET LED:

- is on in fixed mode or flashes when the control unit is in a programming menu
- is off when the control unit is in out of a programming menu

#### RED RADIO LED:

- flashes when a command is received through King Gates transmitter
- is on in fixed mode when the control unit is in a radio programming menu
- is off when the control unit is in standby mode

#### RED ERROR LED:

- see paragraph 8.2

#### RED START LED, RED RADIO LED AND YELLOW SET LED:

- If, when attempting to enter any programming scheme, the "Set", "Radio" and "Error" LEDs flash fast three times, it means that the "control unit protection" is activated. See Paragraph 14.1 for solving the problem.

### 8.2 - Error status LED

#### RED "ERROR" LED:

The red "error" LED has two functions:

- **During the automation's movement, the LED flashes when a mechanical stress point is detected (this corresponds to increased motor effort). Adjust FORCE and OBS knobs (slightly turn them clockwise) to solve this and check gate mechanics if necessary. Attention: a minimum flash of this LED during the door movement can be considered as normal.**

- In standby mode, the LEDs shows the current error type with a series of regular flashes according to the following scheme:

Number of flashes per series	Error description
1	On-board memory fault
2	Photo-test of safety devices failed. See Paragraph 4.1 for solving the problem.
3	Automation's movement programming required. See Paragraph 6.
4	Input "S1 Edge" set as a resistive edge and check failed. See Paragraph 13.4 for solving the problem.
5	Power limit threshold
6	Obstacle detection due to encoder
7	Obstacle detection due to current

## 9. RESET procedure

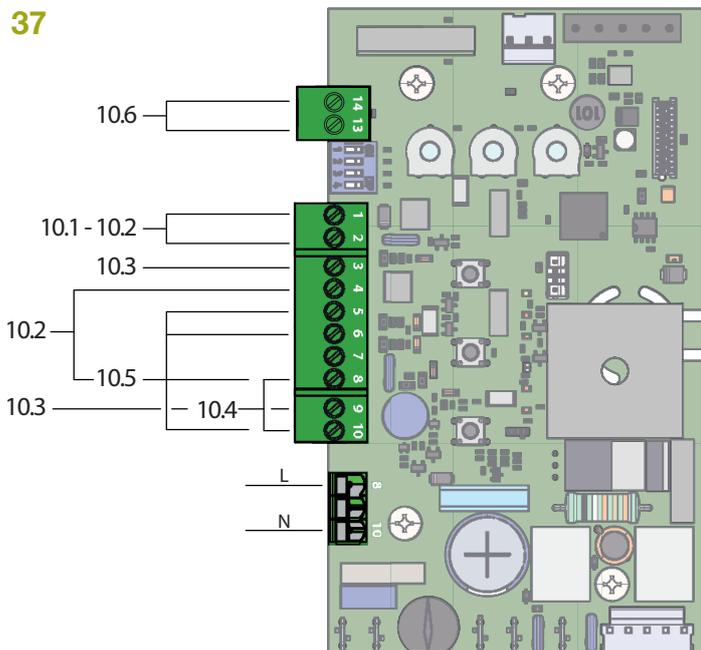
Reset procedure deletes door travel parameters (par. 6) and all advanced functions (par. 11). It can be performed in case of programming mistakes and it brings the STAR GDO control board back to factory settings.

 This reset doesn't affect memorized radio transmitters (see par. 5 for radio transmitters management).

STEP	ACTION	RESULT
1	PRESS THE <b>START</b> BUTTON FOR 8 SECONDS	All LED flash
2	RELEASE THE <b>START</b> BUTTON	All LED continue to flash
3	PRESS THE <b>START</b> BUTTON FOR 3 SECONDS	All LED light up in series
4	RESET IS NOW COMPLETED	The red "ERROR" LED lights flashes 3 times continuously
5	A NEW PROGRAMMING OF THE AUTOMATION'S MOVEMENTS IS REQUIRED	

# 10. Devices connectable to the control unit

37



## 10.1 - Warning light

TERMINALS: 1-2.

The warning light is an accessory used for signaling any movement of the gate leaf.

Connected lamps: 24V 15W maximum power.

## 10.2 - AUX output contact

TERMINALS: 1-2 or 4-8.

Default setting: 24Vdc output for inductive loads (relay) not active at the factory.

See paragraph 13 to activate the AUX output. By default, the AUX output is bistable and is associated with the remote control key memorized for this function.

## 10.3 - Safety devices

TERMINALS: 3 (S2 Photo) and 9 (S1 Edge).

The control unit has two safety inputs available for voltage free (dry contact) connection(s).

**“S2 Photo” CLOSING or OPENING/CLOSING PHASE SAFETY DEVICES** Terminal 3 allows the connection of safety devices active during the closing and opening phases. This input is normally closed (NC). For infrared photocells and safety edges with micro-switch contact. The factory wire bridge connected to S2 Photo must be removed when using this input.

These devices intervene during the gate’s closing and opening phase according to DIP switch 4 (see par. 4.1).

In particular:

DIP4 set to ON:

- during the closing phase, they stop the movement and reopen when disengaged
- during the opening phase they stop the movement and reopen when disengaged
- with the opened door they lock closing commands
- with the closed door they lock the opening commands.

DIP4 set to OFF:

- during the closing phase they lock the movement and re-open the door fully when released
- during the opening phase they do not intervene
- with the opened door they lock closing commands
- with the door closed they allow opening

Figures 38a, 38b and 38c show examples of King Gates “Viky30” photocell connections.

**⚠ When multiple devices are connected on this contact, they must be connected in series (see Fig. 38c).**

**⚠ If more photocell pairs are connected, RX and TX units of the safety set should be cross installed (see Fig. 38c).**

### “S1 Edge” OPENING/CLOSING PHASE SAFETY DEVICES

It is possible to connect devices (e.g. photocells or edges) with normally closed (NC) contact or 8K2 resistive edges to the “S1 Edge” input (terminal 9-10).

The factory wire bridge connected to PHO2 must be removed when using this input.

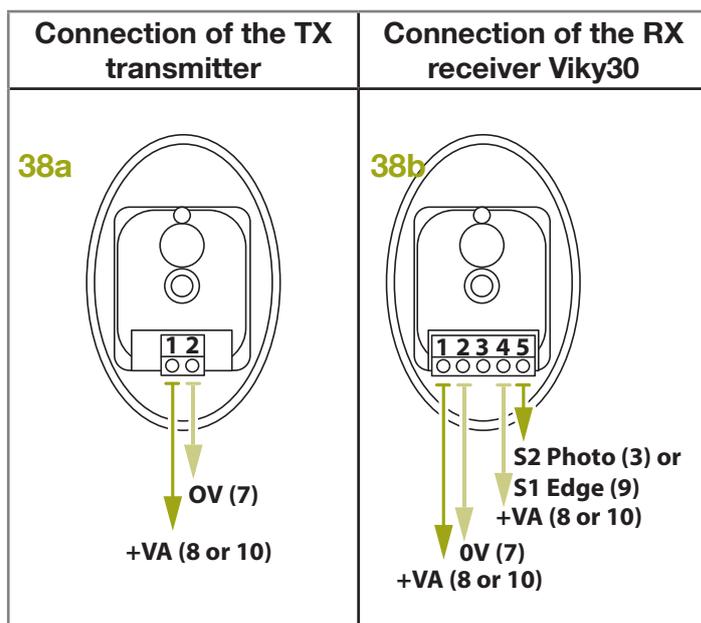
These devices intervene while the door is moving, in particular:

- with the door closed they stop the opening commands.
- with the door open they stop the closing commands.
- during the closing phase they command a brief inversion
- during the opening phase they stop movement

Figures 38a, 38b and 38c show examples of King Gates “Viky30” photocell connections.

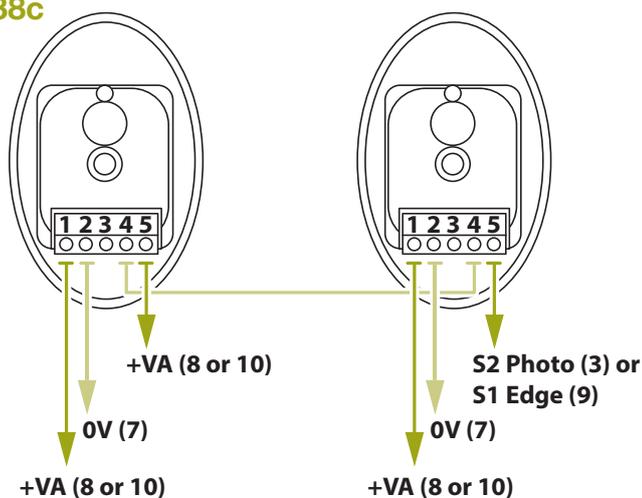
**⚠ When multiple devices are connected on this contact, they must be series connected (see Fig. 38c).**

**⚠ If more photocell pairs are connected, RX and TX units of the safety set should be cross installed (see Fig. 38c).**



### Connection of multiple receiver pairs Viky30

38c



Receiver pair 1



Transmitter pair 2



Transmitter pair 1



Receiver pair 2



### 10.4 - 24 VDC accessories' power supply

TERMINALS: 8-7, 10-7.

Nominal voltage 24 VDC  $\equiv$ , max. 250mA, output for powering external accessories like photocells, radio receivers, etc.

**Real voltage output can be greater than nominal value, check the compatibility of external accessories.**

### 10.5 - Wired commands

TERMINALS: 5-6-8-10.

Inputs for starting and stopping the motor via wired commands

#### START CONTACT

The "START" input (terminals 5-8) is a normally open gate activation command by wire. The activation method is set up by dip switches 1 and 2 - see Paragraph 4.1.

**This input is a voltage free (dry contact) only. Connecting power to this input will void warranty.**

**⚠ TIMER FUNCTION: if START contact is kept closed (for instance through a timer-controlled or bistable relay), control unit opens the gate and leaves the gate opened. The automation does not accept closing commands (neither automatic nor wired) until START contact is reopened. In this mode, dip switch 1 STEP is set to OFF and dip 2 AUTO to ON to ensure that the gate never remains locked open.**

**⚠ If multiple START contacts are connected, connect the contacts in parallel.**

**⚠ If START contact is kept closed during the control unit starting after a blackout, the gate will immediately execute the start command.**

#### STOP CONTACT

The "STOP" input (terminal 6) is for stopping and locking any movement of the gate immediately. This input is a normally closed and voltage free (dry contact) only. Connecting power to this input will void warranty. To restore operation this contact must be closed.

### 10.6 - Antenna

TERMINALS: 13-14.

Antenna terminal for transmitter signal reception. A wire is factory connected to this terminal.

For extending the reception range, an external antenna can be connected (present in the King Gates flashing lights range).

**⚠ If an external antenna is connected, the wire connected in series must be disconnected.**

# 11. Advanced programming

The control unit has additional special features not required for most of standard installations. All descriptions are reported here below.

# 12. Backjump adjustment

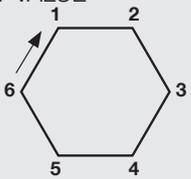
This procedure allows for adjusting or eliminating the backjump. It consists in inverting the door movement at the end of the path to perform belt recovery, facilitate unlocking and safeguard the mechanical system. On certain installations this is unnecessary, therefore this value can be adjusted.

DEFAULT: STAR GDO backjump = value 1, equal to 200ms

**⚠ Prior to proceeding with this programming procedure, first verify whether either the “basic path programming” or the “advanced path programming” of the automation’s movement have been completed.**

STEP	ACTION	RESULT
1	PUT THE DOOR IN THE CLOSED POSITION	
2	PRESS THE <b>START</b> BUTTON FOR 3 SECONDS	All the LEDs turn off (if not, consult Paragraph 14.1)
3	PRESS THE <b>SET</b> BUTTON FOR 1 SECOND	The yellow “ <b>set</b> ” LED turns on in fixed mode and the red “ <b>error</b> ” LED indicates the backjump level
4	PRESS THE <b>SET</b> BUTTON FOR 1 SECOND	The yellow “ <b>set</b> ” LED flashes then turns on in fixed mode and the red “ <b>error</b> ” LED indicates the backjump level*

**backjump value setting**

5	<p>EVERY TIME THE <b>SET</b> BUTTON IS PRESSED, THE VALUE CHANGES FROM 1 TO 6 STARTING FROM THE CURRENTLY SET VALUE</p>  <p>example 1: current backjump = 3 after SET is pressed, backjump = 4</p> <p>example 2: current backjump = 5 after SET is pressed 2 times, backjump = 1</p>	The yellow “ <b>set</b> ” LED remains lit in fixed mode and the red “ <b>error</b> ” LED indicates the backjump level
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**saving of the set backjump**

6	PRESS THE <b>RADIO</b> BUTTON FOR 2 SECONDS	The yellow “ <b>set</b> ” LED remains lit in fixed mode and the red “ <b>error</b> ” LED flashes fast
7	PRESS THE <b>SET</b> AND <b>RADIO</b> BUTTONS SIMULTANEOUSLY OR WAIT 10 SECONDS TO EXIT THE PROCEDURE	The LEDs return to the normal operation configuration

\* The backjump value is indicated by the number of flashes of the series based on the set value.

Backjump levels: 0 / 200mS / 400mS / 600mS / 800mS / 1Sec.

When the series consists of one flash, the backjump value is zero (no inversion of movement at end-of-path), when there are 6 flashes, the backjump is set to the maximum value.

Clearly, the other series indicate growing intermediate values from 1 to 6.

The backjump value can be known at any time after the SET button is pressed the first time, by counting the number of flashes of the green “photo” LED.

**⚠ If the backjump value is set too high, some undesired clearance may remain between the door and the mechanical stop.**

# 13. AUX output programming

These programming sequences are not essential for system operation, but allow the AUX output to be activated by choosing the relevant terminals.

**⚠ The AUX output delivers 24Vdc**

To interrupt the following programming sequences at any time, press the **SET** and **RADIO** buttons simultaneously or wait 10 seconds.

### AUX USED AS COURTESY LIGHT

If the AUX output is used as courtesy light to control the lamps, a **relay must be connected**.

The light can be activated via a special transmitter button (to be programmed as indicated in the relevant paragraph)

### SWITCHING ON/OFF OF THE LIGHT THROUGH A DEDICATED TRANSMITTER BUTTON:

- connect a **monostable relay**;
- set the AUX output on the desired terminals;
- the work mode is only bistable, ON / OFF;
- program the desired transmitter button for the AUX output (see the relevant paragraph)

The AUX output switches on/off whenever the programmed transmitter is pressed.

## 13.1 - Selection of AUX output and operating mode

### Default setting = AUX disabled

This procedure allows activating the "AUX" output. By default, the AUX output is bistable and is associated with the remote control key memorized for this function.

**⚠ To control the AUX output you need to register a radio transmitter by following the procedure described in the relevant paragraph and connect a suitable relay.**

STEP	ACTION	RESULT
1	PRESS THE <b>START</b> BUTTON FOR 3 SECONDS	All the LEDs turn off (if not, refer to Paragraph 14.1)
2	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	
2.1a	<b>If the "Sic" LED is off, the AUX output is deactivated. (if the setting is correct, go to Point 4; if not, proceed to Point 3a)</b>	The " <b>SIC</b> " LED is switched off
3a	<b>Setting the AUX output on the Phototest terminals (4 and 8)</b> PRESS THE <b>SET</b> BUTTON FOR 1 SECOND	The " <b>SIC</b> " LED lights up in red
<i>or</i>		
3b	<b>Setting the AUX output on the Flash terminals (1 and 2)</b> PRESS THE <b>SET</b> BUTTON AGAIN FOR 1 SECOND	The " <b>SIC</b> " LED lights up in green

4	PRESS THE <b>SET AND RADIO</b> BUTTONS SIMULTANEOUSLY OR WAIT 10 SECONDS TO EXIT THE PROCEDURE	The LEDs return to the normal operation configuration
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STEP	ACTION	RESULT
1	PRESS <b>START</b> BUTTON FOR 3 SECONDS	All the LEDs turn off (if not, consult Paragraph 14.1)
2	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND:	
2.1a	<b>If the yellow "Set" LED is on AUX = Electric lock (if the setting is correct, go to Point 4; if not, proceed to Point 3a)</b>	The red " <b>radio</b> " LED turns on in the fixed mode
3a	<b>Courtesy light setting</b> PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED remains lit in the fixed mode and the red " <b>Error</b> " LED lights up. The yellow " <b>Set</b> " LED goes off.
<i>or</i>		
2.1b	<b>If the red "Error" LED is on in fixed mode AUX = Courtesy light (if the setting is correct, go to Point 4; if not, proceed to Point 3b)</b>	The red " <b>radio</b> " LED turns on in the fixed mode
3b	<b>Electric lock setting</b> PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND	The red " <b>radio</b> " LED remains lit in the fixed mode and the yellow " <b>Set</b> " LED lights up. The red " <b>Error</b> " LED goes off
4	PRESS THE <b>SET AND RADIO</b> BUTTONS SIMULTANEOUSLY OR WAIT 10 SECONDS TO EXIT THE PROCEDURE	The LEDs return to the normal operation configuration

## 13.2 - Selection of the type of devices connected to "S1 Edge"

**Default = "S1 Edge" set for devices with normally closed contact (terminal 9)**

This procedure allows for setting the "S1 Edge" output for managing 8.2kOhm resistive edges.

The control unit constantly verifies the integrity of the edge by measuring the resistance between the two dedicated terminals.

STEP	ACTION	RESULT
1	PRESS THE <b>START</b> BUTTON FOR 3 SECONDS	All the LEDs turn off (if not, consult Paragraph 14.1)
2	PRESS THE <b>RADIO</b> BUTTON FOR 1 SECOND:	
2.1a	<b>If the yellow "Set" LED is on "S1 Edge" = resistive edge (if the setting is correct, go to Point 4; if not, proceed to Point 3a)</b>	The red "RADIO" LED turns on in fixed mode
3a	<i>device with normally closed (NC) contact</i> PRESS THE <b>START</b> BUTTON FOR 1 SECOND	The red "RADIO" LED remains lit in fixed mode and the yellow "SET" LED turns off
<i>or</i>		
2.1b	<b>If the yellow "set" LED is off, "S1 Edge" = device with normally closed contact (NC) (if the setting is correct, go to point 4; if not, proceed to point 3b)</b>	The red "ERROR" LED turns on in fixed mode
3b	<i>8.2 kOhm resistive edge</i> PRESS THE <b>START</b> BUTTON FOR 1 SECOND	The red "ERROR" LED remains lit in fixed mode and the yellow "SET" LED turns on
4	PRESS THE <b>SET</b> AND <b>RADIO</b> BUTTONS SIMULTANEOUSLY OR WAIT 10 SECONDS TO EXIT THE PROCEDURE	All the LEDs go back to standard behavior

**⚠ In order to carry out the check on the safety devices, the connected edges must be of the resistive type with 8.2 kOhm.**

## 14. Other functions

**⚠ To interrupt the following programming sequences at any time, press the SET and RADIO buttons simultaneously or wait 10 seconds.**

### 14.1 - Activating/deactivating the control unit protection device

**Default = control unit protection device not active.**

This programming sequence allows for locking all control unit programming sequences and the settings adjustable through the dip-switches. To perform a new programming sequence or make a dip-switch/trimmer modification effective, the protection must be deactivated.

STEP	ACTION	RESULT
1	PRESS THE <b>START</b> BUTTON FOR 3 SECONDS	All the LEDs turn off
2.1a	<b>If the yellow "SET", the red "RADIO" and the red "START" LEDs are ON: central unit lock = enabled (if it is the correct setting, go to step 4, otherwise proceed to step 3a)</b>	
3a	<i>Disabling control unit lock</i> PRESS BOTH <b>START</b> AND <b>RADIO</b> BUTTONS FOR 2 SECONDS	The yellow "SET", the red "RADIO" and red "START" LEDs go OFF
<i>or</i>		
2.1b	<b>If the yellow led "Set", the red led "Radio" and red led "Start" are OFF: central unit lock = disabled (if it is the correct setting, go to step 4, otherwise proceed to step 3b)</b>	
3b	<i>Enabling control unit lock</i> PRESS BOTH <b>START</b> AND <b>RADIO</b> BUTTONS FOR 2 SECONDS	The yellow "SET", the red "RADIO" and red "START" LEDs light up
4	PRESS THE <b>SET</b> AND <b>RADIO</b> BUTTONS SIMULTANEOUSLY OR WAIT 10 SECONDS TO EXIT THE PROCEDURE	All the LEDs go back to standard behavior

# 15. F.A.Q

	Problem	Symptoms / Causes	Solution
9a	The control unit LEDs are turned off	No power to the control unit.	Check the mains voltage. For solar/battery power, check the 24V supply  to the board.
		The fuses blown. You must disconnect power before touching fuses. Check for no short-circuits or problems before replacing fuse with same value ones.	Replace the fuses. If the fuses blow up again, check for short circuits or damages of power circuits, cables, wires, accessories, transformer and control unit.
9b	The control unit cannot enter to programming mode	When the SET button is pressed and all the indication LEDs flash the control unit is in protection mode.	Deactivate the protection – see the relative paragraph.
9c	The control unit completes the programming setup, but does not respond to commands in the standard operating mode	Problem with the safety and/or stop circuits if the SIC LED is off/green/red and/or the STOP LED is off. The SIC LED must be orange and the red STOP LED with a steady light.	Check that the “S2 Photo”, “S1 Edge” and “Stop” circuits are closed.
		Photo-test of safety devices failed. After a command is pressed for a few seconds, the red “ERROR” LED turns on.	Deactivate the Phototest.
9d	Door is moving but not all the way to fully close and/or open.	Obstacle detection problems. The control unit detects power draw peaks during the manoeuvre and goes into obstacle mode.	1. Disengage the door from the motor(s) with manual release; check door to move free all the way. If not, please fix. 2. Turn the "OBS" potentiometer slightly in a clockwise direction a) make sure that the control unit stops feeding the motor at the end of its stroke. 3. If not sufficient, turn the “POWER” knob slightly clockwise and reprogram automation’s movement. 4. Avoid/reduce the slowdown travel phase
		Intervention of the safety devices. Check that the orange SIC LED and the red STOP LED remain lit during the entire manoeuvre. If there are multiple photocell pairs, these may signal false obstacles.	Apply the jumpers to “S2 Photo”, “S1 Edge” and “Stop” to check if the problem is from the control unit or other circuits connected to these terminals.
9e	The radio transmitter does not functioning	Check that LED on the transmitter is flashing, if not replace the transmitter’s battery	Check that radio LED of the control unit flashes while pressing a button on the transmitter. If yes, try to reprogram the radio transmitter.
9f	The transmitter has little range	Note: transmitter’s range varies in relation to the environmental conditions	Replace the transmitter’s battery. Connect an external antenna (see Paragraph 10.8) if not sufficient.
9g	The door does not slowing down	Repeating the automation’s movement programming is required	1. Repeat the automation’s movement programming 2. If that’s not enough, do the advanced programming of the automation’s movement and set a longer slowdown area.
9h	The control unit does not make the dip-switch or knobs adjustments	The control unit protection (lock mode) is active.	Deactivate the control unit lock.
		No effect with “POWER” knob or dip-switches adjustment	To make “POWER” knob and dip-switches changes effective, it is necessary to repeat the automation’s movement programming. If not possible, deactivate the control unit lock.

## 16. Disposal

### 16.1 - Scrapping the product

This product is made of various types of materials, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged by local regulations in your area for this product category.

**WARNING! - Some parts of the product may contain polluting or hazardous substances which, if released into the environment, constitute serious environmental and health risks.**



As indicated by the adjacent symbol, the product may not be disposed of together with domestic waste. Sort the materials for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing an equivalent product.

**WARNING! - Local regulations may envisage the application of heavy fines in the event of improper disposal of this product.**

### 16.2 - Spent battery disposal

Discharged battery contain pollutant substances and therefore must never be disposed of as normal waste. Dispose of them in observance of local sorted waste disposal regulations.

# 17. Technical specifications

King Gates srl, in order to improve its products, reserves the right to modify their technical specifications at any time without prior notice. In any case, the manufacturer guarantees their functionality and suitability for the intended purposes.

All the technical characteristics refer to a room temperature of 20°C (±5°C).

ROLLS technical specifications	ROLLS 700 NG	ROLLS 1200 NG
<b>Type</b>	Electromechanical gearmotor for the automatic movement of garage doors for residential use, complete with electronic control unit	
<b>Pinion</b>	Pitch 8, Z18	
<b>Peak starting torque [corresponds to the force necessary to keep set the leaf in motion]</b>	700N	1200N
<b>Speed under no load [corresponds if "Fast" speed is programmed]</b>	0.17m/s	
<b>Operating limits</b>	In general, ROLLS is suitable for the automation of sectional or overhead doors which remain within the dimensions stated in table 1.	
<b>ROLLS power supply</b>	230Vac (±10%) 50/60Hz.	
<b>Max. absorbed power</b>	250W	300W
<b>Insulation class</b>	1 (a safety grounding system is required)	
<b>ROLLS courtesy light</b>	LED	
<b>Flashing Light Output</b>	for 1 flashing light (24V, 15W)	
<b>Working temp.</b>	-20°C ÷ 55°C	
<b>Use in acid, saline or potentially explosive atmosphere</b>	No	
<b>Protection class</b>	IP 40 use only in indoor or protected environments	
<b>Dimensions</b>	414 x 264 x h 110 mm	

Guide technical characteristics				
Code	Transmission type	Guide length	Door maximum height	Type of guide
Grb 3	Belt	3 m	2.40 m	1 x 3 m
Grb 23		3 m	2.40 m	2 x 1.5 m
Grb 35		3.5 m	2.90 m	1 x 3.5 m
Grb 4		4 m	3.40 m	3 m + 1 m
Grb 425		4.25 m	3.70 m	1 x 4.25 m
<b>Resistance to traction</b>	1200 N			

Incorporated radio receiver technical specifications	
<b>Type</b>	4 channel receiver for incorporated radio command
<b>Frequency</b>	433.92 MHz
<b>Coding</b>	King
<b>Transmitter compatibility (*)</b>	DigyPad, Stylo 4K, Myo C4, Novo TX and Novo Digy
<b>No. of transmitters that can be memorised</b>	170
<b>Input impedance</b>	50 Ω
<b>Sensitivity</b>	better than 0.5µV
<b>Range of the transmitters</b>	From 100 to 150m. The range can vary if there are obstacles or electromagnetic disturbances, and is also affected by the position of the receiving aerial
<b>Outputs</b>	/
<b>Working temp.</b>	-20°C ÷ 55°C

# 18. EU Declaration of Conformity and declaration of incorporation of “partly completed machinery”

Document	N. 1111
Language	English (translated from Italian)
Revision	1
Manufacturer's Name:	KING GATES S.r.l.
Address:	Via Malignani, 42 - 33077 - Sacile (PN) Italy
Authorized Person to constitute the technical documentation:	KING GATES S.r.l.
Address:	Via Malignani, 42 - 33077 - Sacile (PN) Italy
Type of product:	Electromechanical gearmotor for sectional doors with control unit and receiver
Model/Type:	ROLLS 700 NG ROLLS 1200 NG
Accessories:	refer to the catalog

The undersigned, Giorgio Zanutto, in the role of Chief Executive Officer, declares under his sole responsibility, that the product specified above conforms to the provisions of the following directives:

- Directive 2014/53/UE (RED)
  - Health protection standards (art. 3(1)(a)): EN 62479:2010
  - Electrical safety (art. 3(1)(a)): EN 60950-1:2006 + A11:2009 + A12:2011 + A1:2010 + A2:2013
  - Electromagnetic compatibility (art. 3(1)(b)): EN 301 489-1 V2.2.0:2017, EN 301 489-3 V2.1.1:2017
  - Radio spectrum (art. 3(2)): EN 300 220-2 V3.1.1:2017

The product also complies with the following directives according to the requirements envisaged for “partly completed machinery” (Annex II, part 1, section B):

Directive 2006/42/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 17 May 2006 related to machinery, and which amends the directive 95/16/EC (recast).

- It is hereby declared that the pertinent technical documentation has been compiled in compliance with appendix VII B of directive 2006/42/EC and that the following essential requirements have been observed:  
1.1.1- 1.1.2- 1.1.3- 1.2.1-1.2.6- 1.5.1-1.5.2- 1.5.5- 1.5.6- 1.5.7- 1.5.8- 1.5.10- 1.5.11
- The manufacturer undertakes to transmit to the national authorities, in response to a motivated request, all information regarding the “partly completed machinery”, while maintaining full rights to the related intellectual property.
- Should the “partly completed machinery” be put into service in a European country with an official language other than that used in this declaration, the importer is obliged to arrange for the relative translation to accompany this declaration.
- The “partly completed machinery” must not be used until the final machine in which it is incorporated is in turn declared as compliant, if applicable, with the provisions of directive 2006/42/EC.

The product also complies with the following standards:

- EN 60335-1:2012+A11:2014, EN 62233:2008
- EN 60335-2-95:2015+A1:2015
- EN 61000-6-2:2005, EN 61000-6-3:2007+A1:2011

Place and Date: Sacile 20/09/2018

**Giorgio Zanutto**  
(Chief Executive Officer)





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### Technical support

Monday/Friday 8.30-12.30 ; 14-18  
(UTC+01:00 time)



More



IST. ROLLS cod. IS0707A00MM rev. 00 - 20/05/2019

### Dati dell'installatore / Installer details

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Azienda / Company \_\_\_\_\_

Timbro / Stamp \_\_\_\_\_

Località / Address \_\_\_\_\_

Provincia / Province \_\_\_\_\_

Recapito telefonico / Tel. \_\_\_\_\_

Referente / Contact person \_\_\_\_\_

### Dati del costruttore / Manufacturer's details

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