STAR GDO

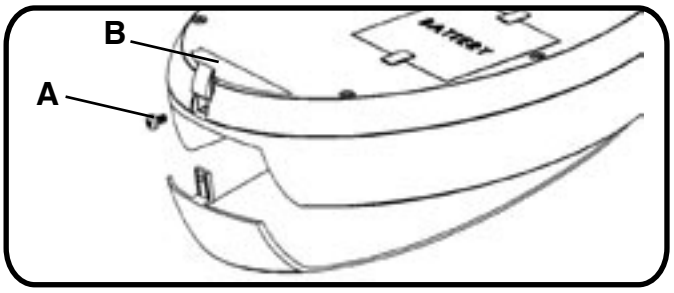
KING gates

UK **INSTRUCTION MANUAL**

CE

ELECTRICAL CONNECTIONS

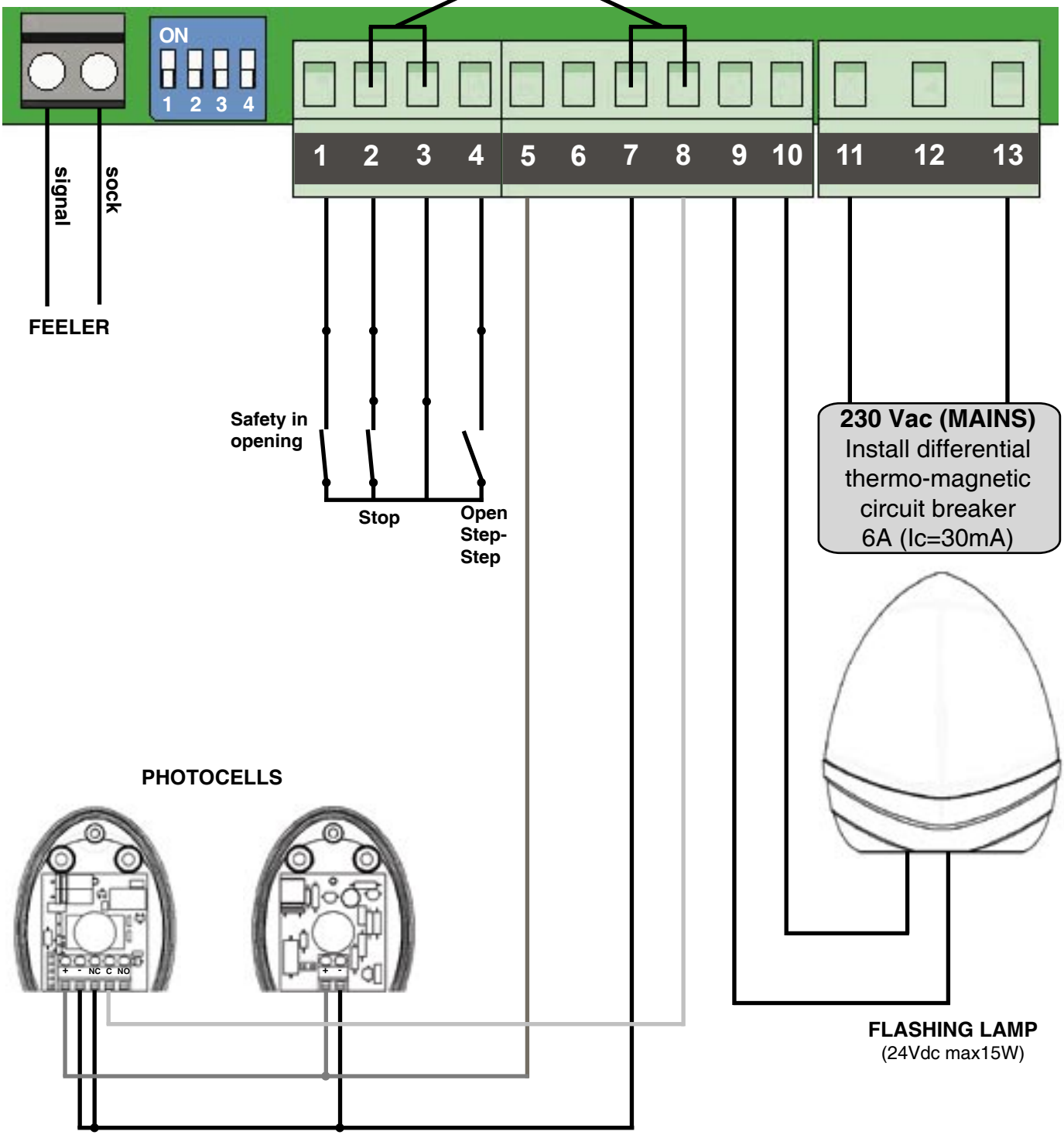
To get the control unit, open the fascia lifting the cover and loosening the screw (**A**).
Pass the cables through **zone B**.
Carry out the cabling according to the diagram below.



⚠ The connections must be made exclusively by qualified personnel when the voltage is off.

CONNECTION DIAGRAM

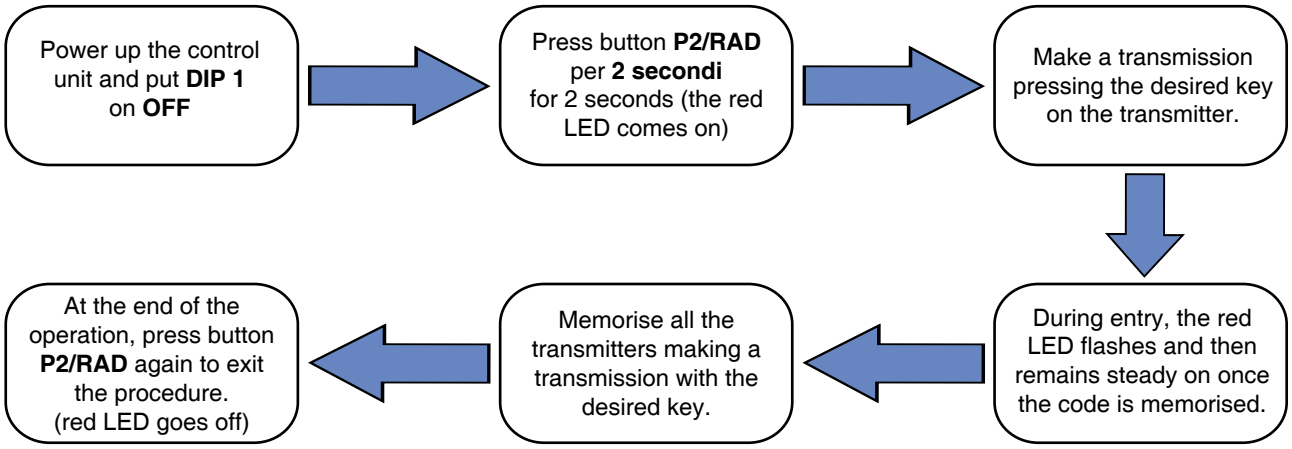
⚠ PHO AND STP INPUTS MUST BE BRIDGED IF NOT USED



PROGRAMMING THE RADIO REMOTE CONTROLS

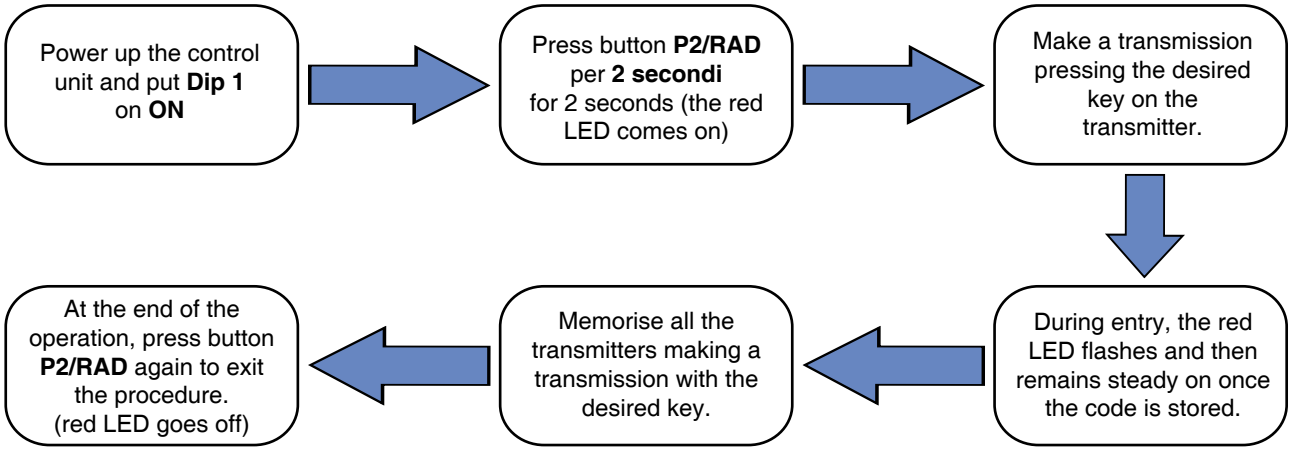
PROGRAMMING THE CHANNEL FOR ACTIVATING THE AUTOMATION

Ⓘ Check that the control units is not set to operate with the dead man's switch (DIPs 2 and 3 must not both be OFF).



PROGRAMMING THE CHANNEL FOR ACTIVATING THE COURTESY LIGHT

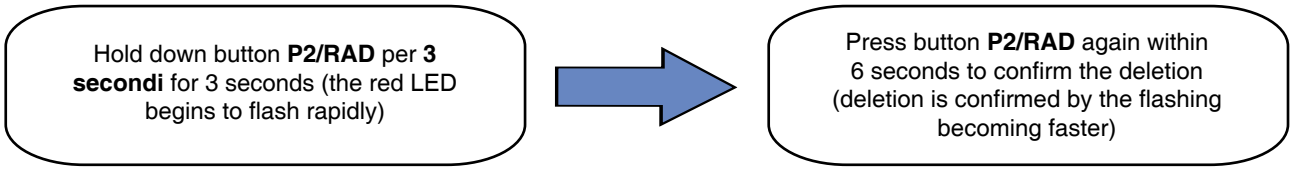
Using this procedure the installer can switch on the courtesy light independently with a radio remote control key (different from the one selected in the previous paragraph for opening and door).



Ⓘ The programming procedures are exited automatically in any case 10 seconds after the last transmission.

DELETING ALL THE CODES

Using this procedure the installer can delete all the previously programmed radio remote controls from the memory.



PROGRAM THE TRAVEL LIMITS

SIMPLIFIED LEARNING PROCEDURE

ⓘ For better adjustment of the obstruction control, it may be necessary (mainly with the trimmer "FOR" set at the maximum or with heavy doors), to intervene during the opening and closing phases (points 7 - 8 - 10) by pressing the activation key of the transmitter or the push button P1/SET on the control unit as soon as the driving carriage comes into contact with the mechanical stop.

1. Put the door in an intermediate position.

→

2. RESET: press and hold the programming button **P1/SET** for **2 sec.**

→

3. Yellow led flashes

↓

4. Within 5 seconds, press the programming button **P1/SET** per **1 sec.**

↓

5. Yellow LED stays on

↓

6. The control unit briefly open

↓

7. The door close until mechanical stop

↓

8. The control unit briefly open

↓

9. Pause for one second

←

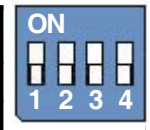
10. The door close until mechanical stop. Yellow LED switches off

←

END of learning procedure

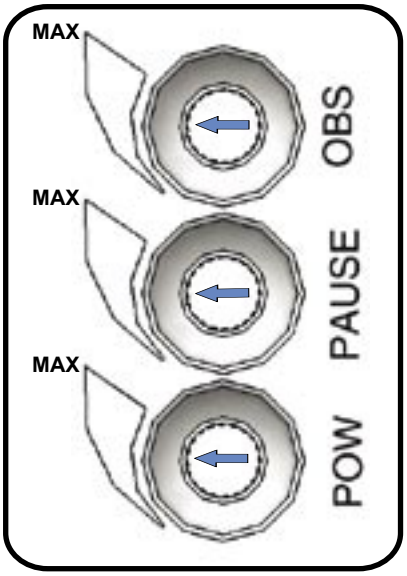
INITIAL SETTINGS OF DIP-SWITCHES

Dip	Status	Operation
01	OFF	Safety test disabled
	ON	Safety test enabled
02 - 03	OFF - OFF	Dead man's switch mode
	OFF - ON	Automatic closing mode
	ON - OFF	Step by step mode (Open - Stop - Close - Stop)
	ON - ON	Step by step mode with automatic closing
04	OFF	Flashing light fixed
	ON	Flashing light flashing



TRIMMER

A variation of the trimmer "**FOR**" (speed) requires the reset learning procedure to be repeated (point 2) since the manoeuvre times vary. Decelerations are automatically defined in the last 10% of the manoeuvre.



Obstacle sensitivity (OBS):
Regulation of the activation time from 0.1 to 3 seconds.

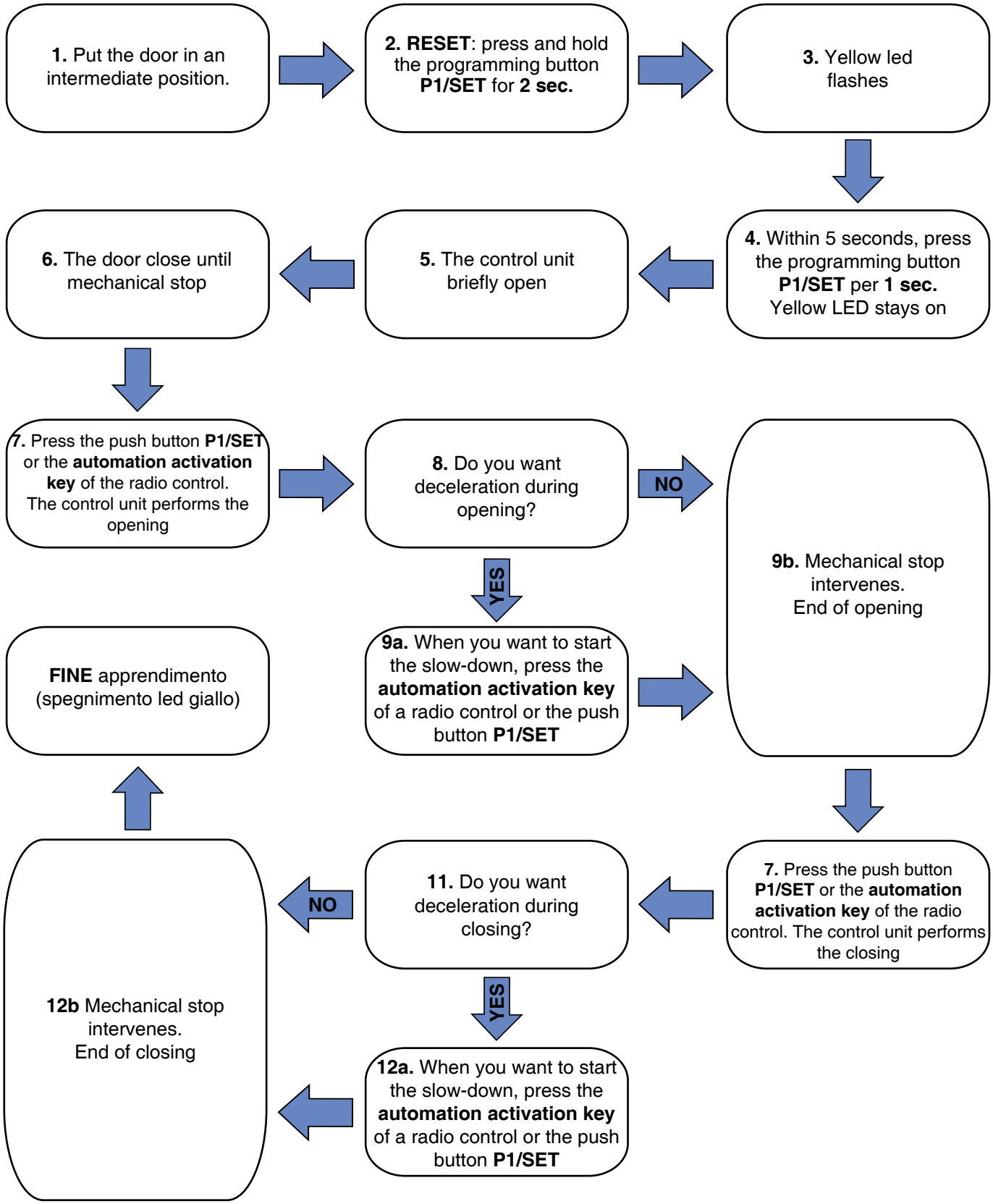
Pause time (PAU):
Regulation of the pause time from 0 to 60 seconds.

Power / Speed (POW):
Regulation from 50% to 100% of the power.

PROFESSIONAL LEARNING PROCEDURE

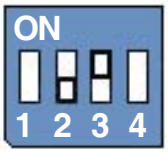
Using this procedure the installer can determine the instant in which deceleration begins.
This can differ between opening and closing.

! For better adjustment of the obstruction control, it may be necessary (mainly with the trimmer "FOR" set at the maximum or with heavy doors), to intervene during the opening and closing phases (points 6 - 9b - 12b) by pressing the activation key of the transmitter or the push button P1/SET on the control unit as soon as the driving carriage comes into contact with the mechanical stop.



OPERATION MODES

TIMED AUTOMATIC CLOSING MODE

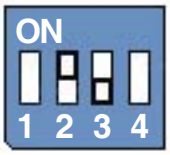


Put **DIP 3** in the **ON** position and **DIP 2** in the **OFF** position.
In this mode, if a command is given via radio or through the “STR” input, the control unit:
- gives a steady flash of one second.
- starts the motor at the speed set on the trimmer **FOR.**
- opening is halted by the limit switch triggering, an obstacle being detected or the manoeuvre timing out. If additional commands are given during opening, they have no effect.
- with the automation at a standstill or in automatic pause, when a command is given, the pause count restarts from zero each time.

when the pause times out, the door is closed and the control unit:
- gives a steady flash of one second.
- starts the motor for one second at a reduced speed (softstar) and then at the speed set on the trimmer FOR.
- if a command is given during closing, the control unit reopens the door fully.
- closing is halted by the limit switch triggering, an obstacle being detected or the manoeuvre timing out.

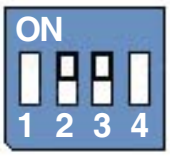
⓵ Keeping the opening contact closed (“STR” terminal) for example with a timed relay, the control unit opens the door and the automation remains disconnected and automatic closing is disabled until the contact is reopened (Company Function).

STEP BY STEP MODE WITHOUT AUTOMATIC CLOSING



Put **DIP 3** in the **OFF** position and **DIP 2** in the **ON** position.
The step by step command sequence is OPEN-STOP-CLOSE-STOP
The opening and closing manoeuvres take place as described in the previous paragraph.

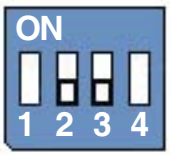
STEP BY STEP MODE WITH AUTOMATIC CLOSING



Put **DIP 3** in the **ON** position and **DIP 2** in the **ON** position.
La logica del passo-passo è: APRE - STOP - CHIUDE - STOP.
The step-step logic is OPEN/STOP/CLOSE/STOP.
When the opening manoeuvre has been completed and the pause time set on the “**PAU**” trimmer has elapsed the control unit effects automatic closing.
If, when the automation is closed, a radio command is given, either through the “**STR**” input command or the **STAR** pushbutton on the board, the control unit:
- commands a one second fixed pre-flash
- it activates the motor for 1,5 second at maximum power and then at the power set with the “**FOR**” trimmer.
- The opening terminates when the limit switch or the mechanical stop are triggered or the manoeuvre time has elapsed.

If the automation is completely open, once the pause time has elapsed the closing manoeuvre takes place. The control unit:
- carries out a fixed two seconds pre-flash.
- it activates the motor for 1,5 second at maximum power and then at the power set with the “power” trimmer.
- The opening terminates when the limit switch or the mechanical stop are triggered or the manoeuvre time has elapsed.

DEAD MAN'S SWITCH MODE



Put **DIP 3** in the **OFF** position and **DIP 2** in the **OFF** position.
Hold down the **STAR** button located on the electronic board, the control unit opens the door until the end of oper reached or the button is released.
Hold down the **P2/RAD** button located on the electronic board, the control unit closes the door until the end of closing stroke is reached or the button is released.
The radio command has no effect. When the control unit is in this mode it is not possible to enter the programming of the radio codes.

TRIMMER

Trimmer “FOR” - Motor speed

Use the “**FOR**” trimmer to adjust the voltage with which the motor is powered during operation, thus adjusting its speed. This is settable between 50% and 100% of the maximum force and can be increased by turning the trimmer clockwise.
Thus if the trimmer is set on the minimum then the speed is equal to about 50%, if adjusted in an intermediate position it is equal to 75%, while at the maximum the speed will be the largest obtainable.

⚠ A variation of the “FOR” trimmer requires the repetition of the learning procedure since the operation times, and thus the moments in which to start the slow-down, vary.

Trimmer “PAU” - Pause time

The “**PAU**” trimmer is used to set the pause time of the control unit if the automatic closing is enabled by means of **DIP 3**.
The pause time is settable between 3 and 60 seconds and can be increased by turning the trimmer clockwise.
Thus if the trimmer is set at the minimum then the pause time is equal to about 3 seconds, if adjusted to an intermediate position it is equal to about 28 seconds, while at the maximum the pause time will be about 60 seconds.

Trimmer “OBS” - Obstacle sensitivity

The “**OBS**” trimmer is used to adjust both the intervention delay after detection of an obstruction and the opposing force to be used by the automation. This function is useful to overcome any critical points of the automation where, for a brief time interval, there is greater power absorption by the motor.
Both the intervention delay and the opposing force can be increased by turning the trimmer clockwise. The intervention delay can be set between 0.1 and 3 seconds.
Thus if the trimmer is set at the minimum then the intervention time is equal to about 0.1 seconds, if adjusted to an intermediate position it is equal to about 1.5 seconds, while at the maximum the intervention time will be about 3 seconds.

OPERATION OF THE SAFETY DEVICES

PHOTOCELL (PHO input)

When triggered, the photocell provokes:
- in closing phase, an inversion of the motion, either immediate or when cleared, according to the programming,
- in opening phase it has no effect,
- when the access is closed it has no effect on the opening commands if set for immediate inversion, otherwise it delays the opening until it is cleared,
- if the access is open it inhibits the closing commands.

SAFETY IN OPENING (SFT/PED input)

Safety devices can be connected (self-testing or not) to the “**SFT**” input on the control unit (e.g. fixed wire ribs, pneumatically-operated ribs, etc.).
The safety acts as follows:
- in closing phase it has no effect
- in opening phase it provokes an inversion of direction for 2 seconds,
- when the gate is closed the opening commands are inhibited,
- when the gate is open the closing commands are inhibited

SAFETIES SELF-TEST

The control unit has a self-test function of the safeties connected to the “PHO” and “SFT” input.
It switches off the transmitter to check the commutation of the corresponding receiver contact before the execution of each manoeuvre. In this case, the “gate open warning light” is not available.
To activate this self-test function proceed as follows:
- switch **DIP1** to **ON**
- connect the positive of the photocell transmitter power to the terminal “**+TX**”

If the enabling of the safety self-test is not required switch **DIP1** to **OFF**.

FLASHING LIGHT

The control unit has two output terminals (LAMP) to command a low voltage flashing light (**24Vdc**). The light start flashing 1 second before each manoeuvre
If the **DIP 4** è in in the **OFF** position the power supply to the flashing light is continuous. Therefore the terminals must be connected to a flashing light with a built-in oscillating circuit..
Se il **DIP 4** is in the **ON** position the power supply is intermittent and therefore a normal lamp without oscillating circuit can be connected (230VAC).
The power rating of the lamp must not be greater than 15W.

SLOW-DOWN

The slow-down function allows the gate to apply a reduced force before reaching the limit stop. The speed is reduced to about one third of the normal working speed
The “slow” dip activates the slow-down system enable.
With the simplified self learning procedure the starting point of slow-down are fixed at 90%.
With the professional learning procedure the fitter can choose the opening and closing point of slow-down.

COURTESY LIGHT

The control unit controls the courtesy light located inside the gear motor. Contact for turning on the light is provided before each manoeuvre and remains active for about two minutes from the opening.
To turn on the light independently, with a radio channel other than the one for opening the door.

STOP-GAP BATTERIES

The control unit is equipped with a Molex connector for connecting a battery charger ; this requires two 12V batteries connected in series (or one 24V battery). Cod. **BAT 12 K. (fig. 21 - 21b)**

LOGICAL STOP (STP INPUT)

The activation of the logical stop input stops all the function.
To resume the cycle the stop must be deactivate d and another command given.

SIGNALLING LED

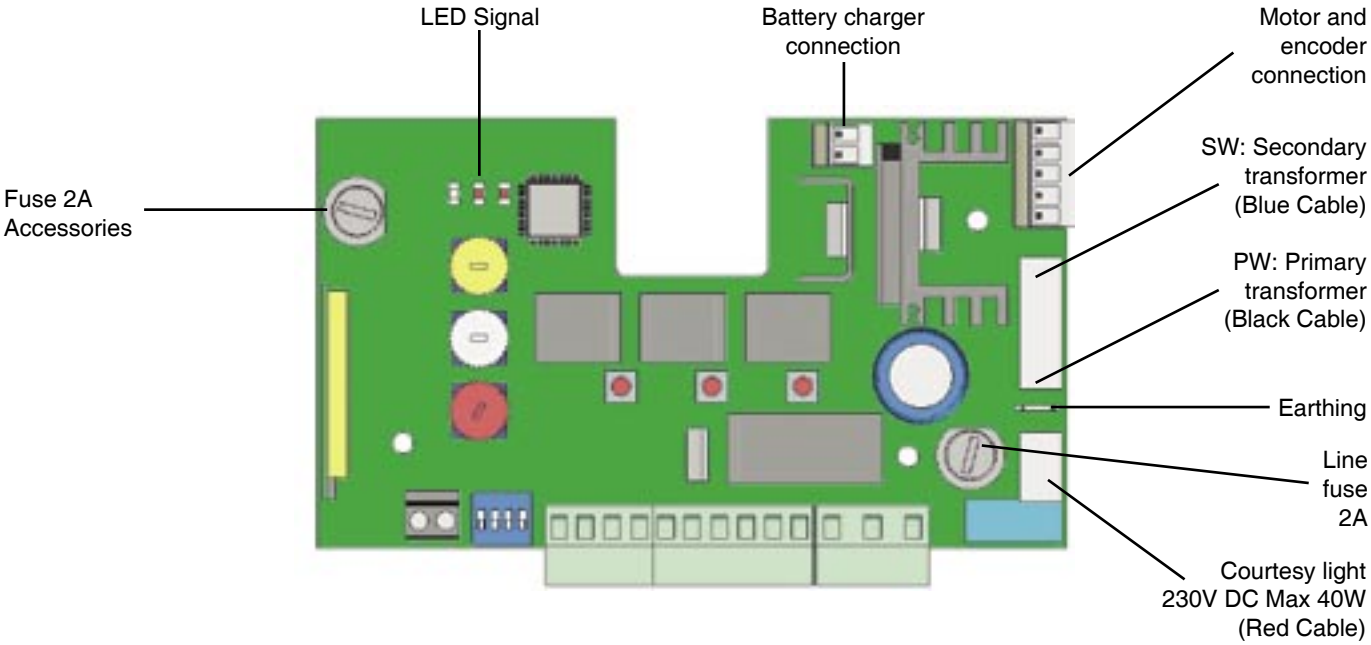
Yellow led set (L1):
- flashes for 5 seconds when turned on to indicate that it is possible to enter the professional or simplified learning modes.
- lights up with a fixed light while professional or simplified learning are carried out.
- is turned off when the control unit function normally

Green led RAD (L2):
- flashes briefly when a 433 MHz Multipass radio code is received
- is alight (fixed light) when radio codes are being memorised
- flashes rapidly when the control unit is switched on and the radio code memory is defective
- flashes rapidly during the cancellation of radio codes
Flashes more quickly in case of attempt to insert codes with the memory full
- is switched off when the control unit is functioning normally and waiting to receive a command via radio.

Red status LED ST (L3):
- On when the gate is closed
- Flashes quickly when the control unit is in block (safety tests failed, for example)
- Flashes when the automation is open or during opening or closing

MAINTENANCE

The system does not require any specific maintenance. However, what is required is a periodic inspection of the state of the fastenings, wear on the moving parts (pulleys, carriages...) and the belt tension.



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