



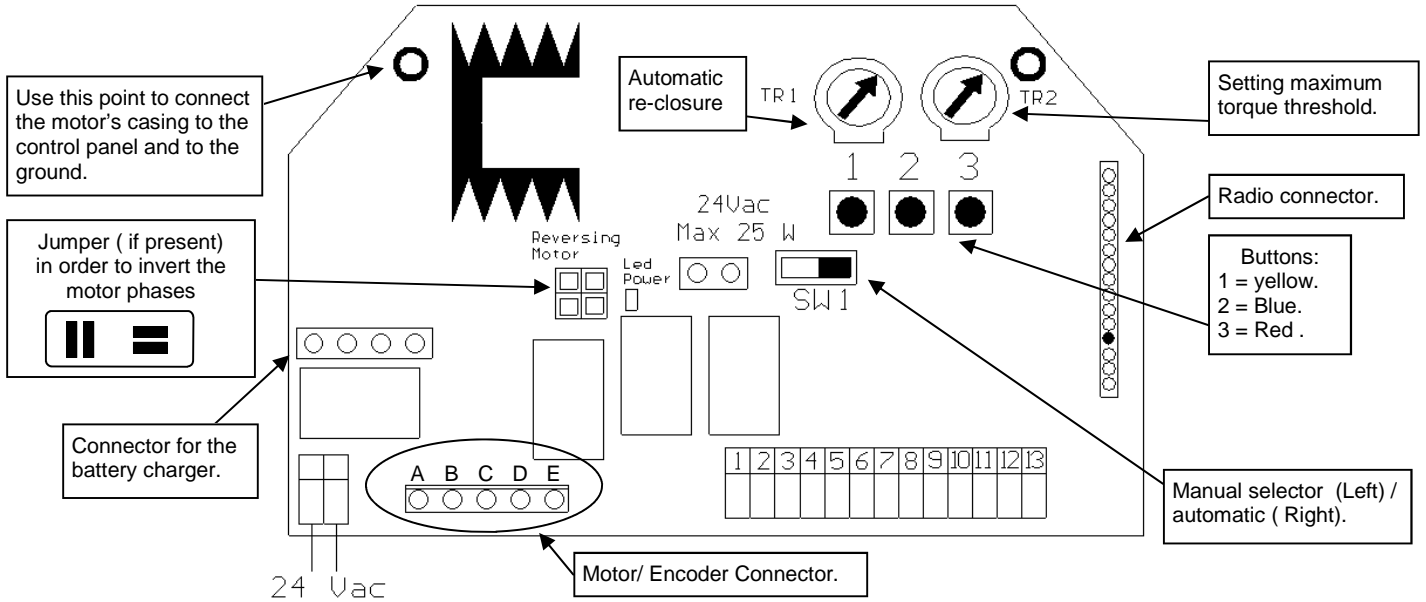
# ACTION CONTROL UNIT for Tecno-cat

## INSTRUCTIONS FOR INSTALLATION

### 1. Introduction

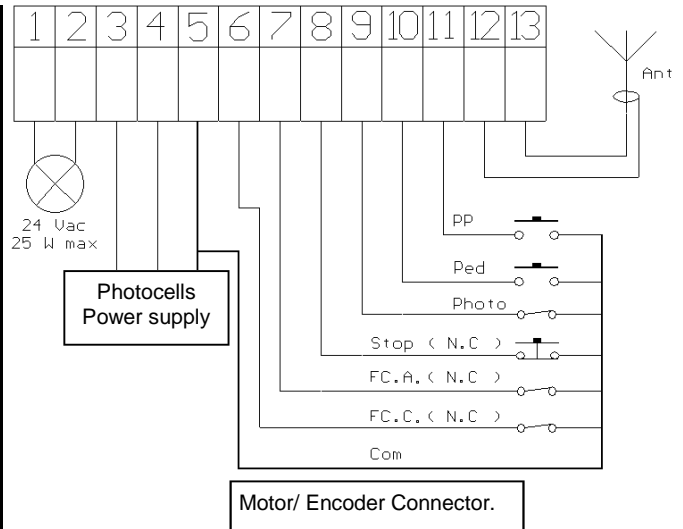
Action is a control unit dedicated to the movement of the chain barrier with 24Vdc motor. The coexistence of various types of safeties such as the control of the absorbed power by the motor and the velocity of the motor allows a rapid intervention of the anti – squeezing security (sense). Through the encoder present in the motor it is possible to control the exact position of the chain and to use it without mechanical limit switches. The control unit has inputs for mechanical limit switches, for the step by step button, for the pedestrian opening, for the safety photocells and the output for flashing light 24 Vac. The unit also allows the regulation by trimmer both the automatic re-closure and the motor force. Action can control motors at 24 – 30 Vcc with a maximum consumption of 7A.

### 2. Configuration

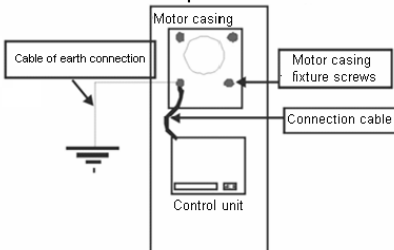


### 3. Electrical connections

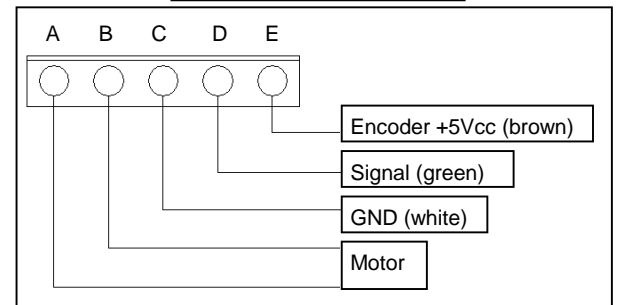
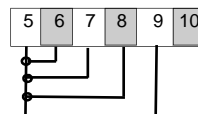
Terminal	Function	Setting
1 – 2	Flashing signal output	OUT: 24 Vac 25 W MAX
3	Positive power supply TX & RX photocell	OUT: +24Vcc
4	Negative power supply TX photocell	OUT: GND TX
5	Negative power supply RX photocell and common button and safety	OUT: GND RX Common
6	Stop closure button input	Normally closed (NC)
7	Stop open button input	Normally closed (NC)
8	STOP button input	Normally closed (NC)
9	RX photocell contact input	Normally closed (NC)
10	Pedestrian button input	Normally open (NO)
11	Relay button input	Normally open (NO)
12	Antenna screen input	GND
13	Antenna input	Antenna



Example of connection



**Any contact which is Normally Closed (N.C.) Must be bridged to the common if not used.**



**Note:** Cable colours valid only for Tecno-cat motor.

**IMPORTANT:** to obtain a correct working of the accessories (photo devices in particular) connected to the control box, it is very important that the entire system (motor+ control box) has a single mass reference system. You must therefore connect a small cable between the motor casing and the control box at the point shown in the figure. If there is a good ground connection it is advisable to connect it to the system.

## 4. Settings



This chapter contains important informations for a secure and correct installation. Follow exactly all the instructions because a wrong installation can cause serious damages to the automation.

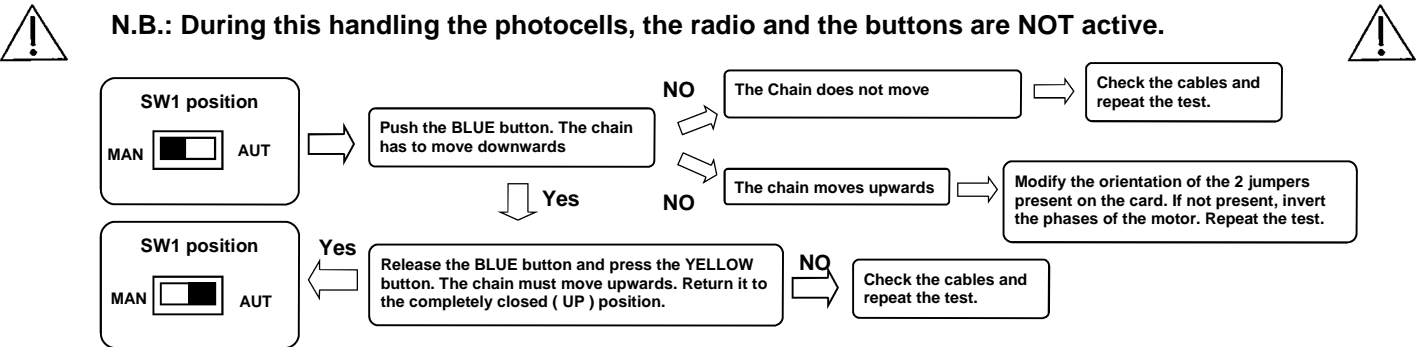
### 4.1 Preliminary checks.

Before powering up the control panel, check the wirings. In particular check that there are no damaged wires, short-circuits between wires and that all the accessories are connected to the terminal board in the points indicated in the diagram on the previous page.

Once the power supply is on check that:

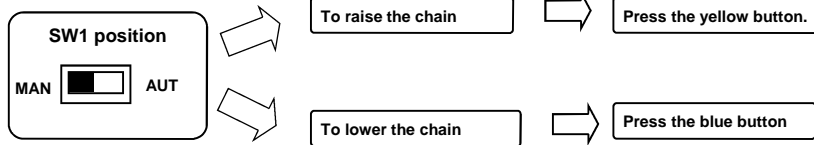
1. The POWER LED is constantly on.
2. The radio module is inserted and working.
3. The motor and the encoder connections are correct by following the procedure described below:

This procedure allows us to check the rotation sense of the motors, any possible blockages during the movement of the chain. It is important to carry out this check in order to locate any wiring errors or anything else that can jeopardize.



### 4.2 Manual moving

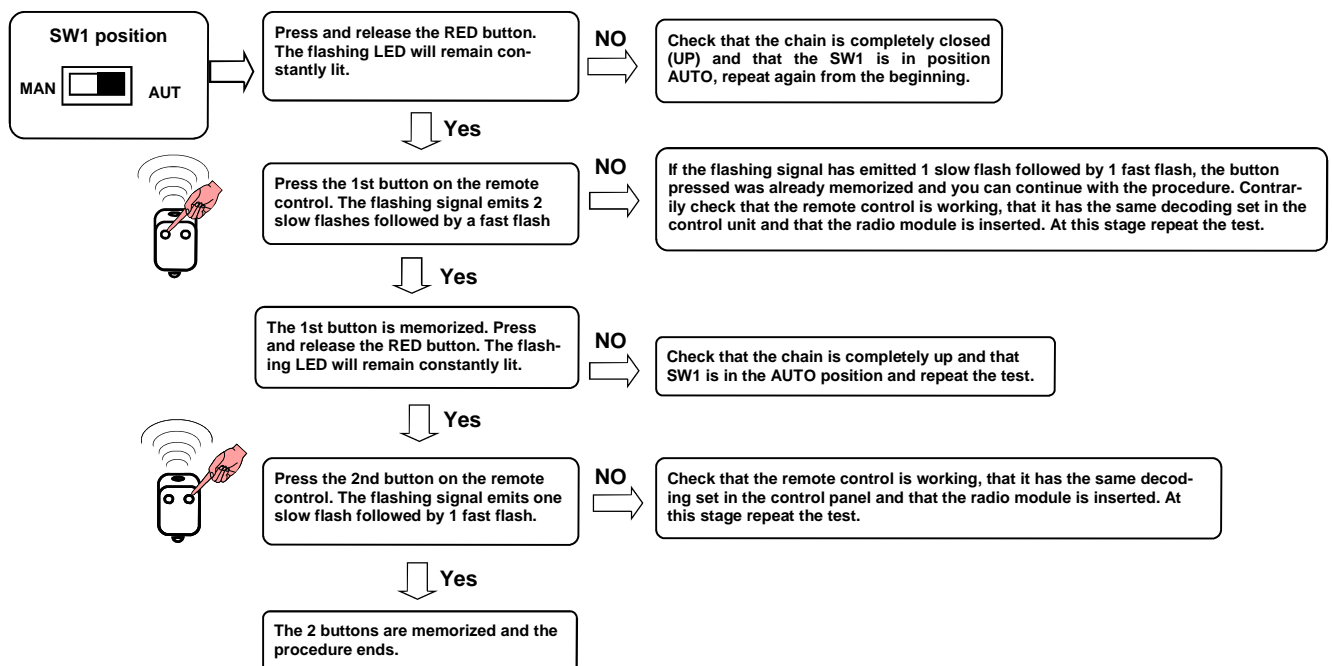
This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system. The movement can be effectuated in particular situations in which it is not possible to move the chain to the closed (UP) position in automatic mode.



**WARNING: the reactivation of the automatic mode (AUT) implies the use of the reached position as totally closed position.**  
**WARNING: During the manually moving, the anti-squeezing safety is not active.**

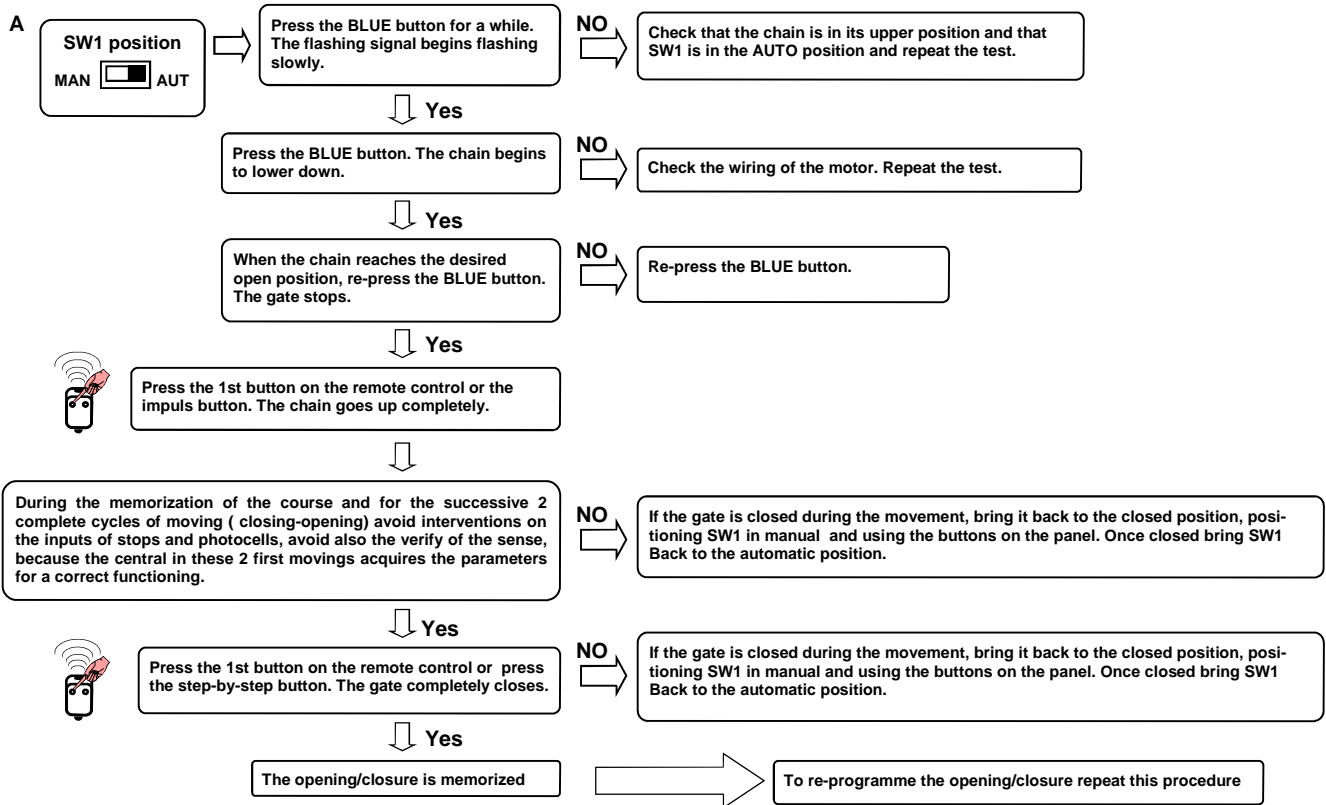
### 4.3 Memorisation of the transmitters (only with the chain totally closed (UP) ).

Memorize at least one single channel transmitter. The control unit is provided with the rolling code decodifying. To vary the decodifying see paragraph 5.3. During the normal functioning the first memorized button executes the step-by-step function (opening and closing), the second button (optional) controls the courtesy light.



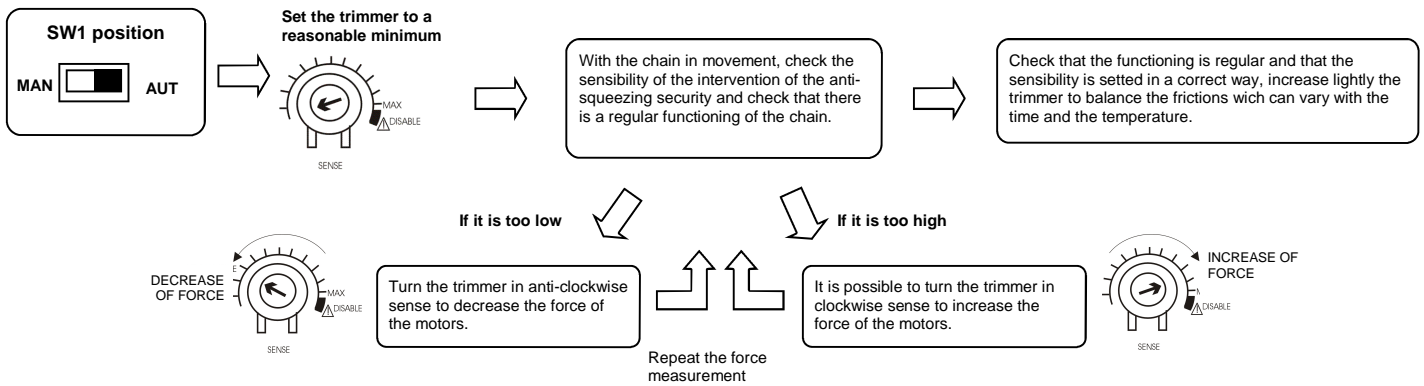
#### 4.4 Setting the chain movement.

This procedure must be carried out ONLY by the installer and ONLY during the setting up of the system . For correct setting, before carrying out alterations, bring the chain to a completely closed (UP) position (see paragraph 4.2)



#### 4.5 Regulation of the anti-squeezing security (sense)

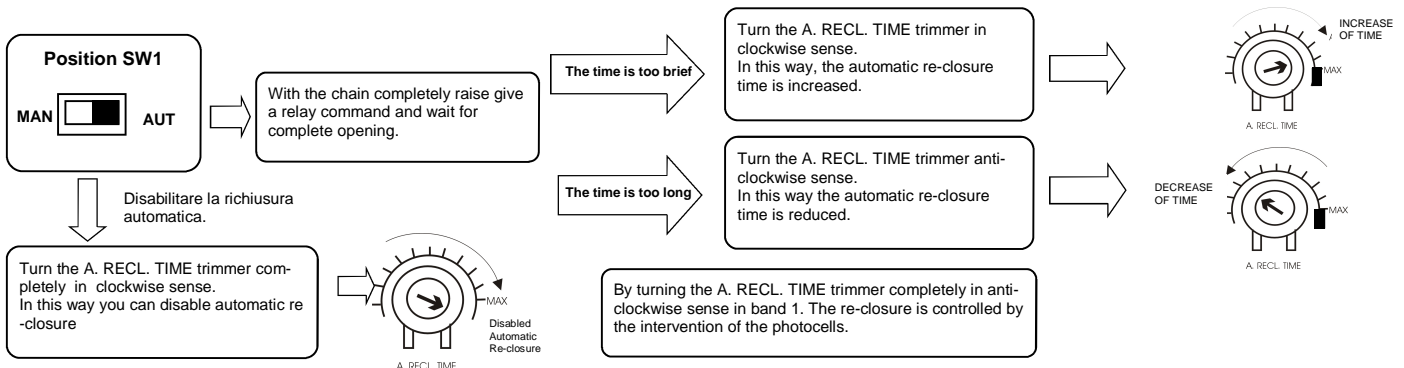
This procedure must ONLY be carried out by an installer and ONLY during setting up of the system. For correct setting, before carrying out alterations, bring the chain to the completely upper position (see paragraph 4.2).



**Warning: With the trimmer in disabled position ( flashing light turned on), the anti-squeezing security is excluded.**

#### 4.6 Regulation of the automatic re-closure time

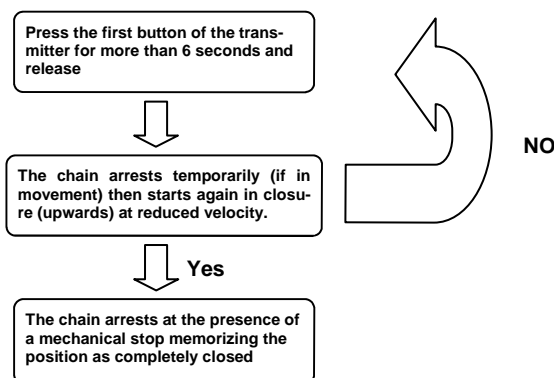
This procedure must ONLY be carried out by an installer and ONLY during setting up of the system. For correct setting, before carrying out alterations, bring the chain to the completely upper position (see paragraph 4.2).



## 4.7 Resynchronization

This operation must be done only in case if it is repeatedly observed that the door doesn't reach the correspondent position of reclosing (or if it tends to exceed it), or in case you find yourself in the conditions described at point 4.8.

The operation of resynchronisation consists on the activation towards the UP (completely closed) position at reduced velocity, with the intent to find the point of total closure; the moving arrests automatically on the point in which you find a mechanical stop that hampers the movement. This point is identified like position of closure (chain completely up).



**Warning:** During the operation of resynchronization, the intervention of the anti-squeezing security is interpreted like identification of the closing position. To avoid the non-voluntary intervention the sense results remarkably reduced respect to the conditions of its normal functioning.

## 5. Advanced functions.

This procedure must be carried out ONLY by an installer and ONLY during setting up of the system. For correct setting, before carrying out alterations, bring the chain to the completely closed position (up) (see paragraph 4.2).

### 5.1 Reset.

In case if it is necessary to reset the control unit proceed as follows: (total erasing of the memory and deactivation of pre-blinking, photocell test and multi-user function )

1. Remove power supply from the system.
2. Set the selector SW1 on AUT (automatic).
3. Press the red button.
4. Keep it pressed while reconnecting the power supply
5. Keep it pressed until the flashing signal lights up for the 3rd time.
6. Release the button and wait until the flashing light turns off. The reset is done

### 5.2 Deleting of a single transmitter ( only with rolling code decoding).

In case if it is necessary to cancel a single transmitter, proceed as follows:

1. Set the selector SW1 on AUT (automatic).
2. Push the hidden button of a transmitter already learned, or push the red button of the control unit; the flashing light turns on.
3. Push the hidden button and at the same time the first button of the transmitter that you want to cancel, the flashing turns off and the deletion is complete.

### 5.3 Selection of the type of decoding and total deleting of memory.

In case if it is necessary to change the decoding mode (from fixed mode to rolling code mode or vice versa) or to erase all the transmitters learned, proceed as follows:

1. Remove power supply from the system.
2. Set the selector SW1 on MAN (manual).
3. Press the blue + red button at the same time if you want fixed code decoding or press only the red one if you want the rolling code decoding.
4. Keep them pressed while the power supply is reconnected to the system.
5. Keep them pressed until the flashing signal lights up for the 3rd time.
6. Release the buttons. At the end of the programming the flashing signal turns off. Set the selector SW1 on AUTO. The selection of the type of decoding and the total erasing of the memory are done.

**Note:** This procedure executes a total deletion of the memory of the control unit. So you have the complete deletion of the parameters previously memorized ( course of the gate, memorized transmitters) and the disconnection of the pre-flashing function. Therefore we recommend to set the codification mode as first point, before any other programming.

**To re-programm the total run of the chain it is not necessary to reset the memory!!!!**

## 6. Enabling and disabling the pre-flashing, photocell test and the multi-user function.

To modify the status of any of these functions it is necessary to enable the setting mode. In the phase of learning the control unit automatically goes through all possible functions in which it is possible to intervene. The led of the flashing light signals the selected function each time with a variable number of flashings. The passage from a function to another one is executed automatically (it is enough to maintain always pressed the red button). The control unit starts selecting the first function (signaled by 1 flashing), successively, keeping pressed the red button you pass at the second function (signaled by 2 flashings) and so on. To enable the setting / learning mode proceed as follows:

1. Raise the chain to its upper position (completely closed).
2. Press and keep pressed the red button
3. After 4 - 5 seconds the led of the flashing - light executes a series of 8 flashings (notifying the next entry to the learning mode). Once the series of flashings end the control unit is in the learning mode. **Do not release the red button yet.**
4. Once individualized (through the number of flashings of the flashing-light led) the function that you want to modify, release the red button. In this way the function is selected. Once selected the function, the control unit puts in evidence the setting by flashing with a slow frequency ( 1 flashing /second) or with a rapid frequency ( 2 flashings / second) as pointed out on the next table:

No. of flashes	Selected function	Flash	Yellow button	Blue button
1	Pre-flashing	Slow= disabled	activation	deactivation
2	Photocell Test	Fast= disabled	activation	deactivation
3	Multi-user setting	Slow= disabled	activation	deactivation
4	Reserved			
5	Reserved			
6	Reserved			

5. Press now the button ( see table) correspondant to the new status you wish set for the selected function. The frequency of flashing will vary according to the chosen mode.

At this point it is possible to modify further functions or, if you have finished, go out from the setting phase. In case you want to modify other functions, press and keep pressed the red button. After few seconds, the control unit will start again to select in sequence the several functions. Instead if you want to exit from the learning mode, it is sufficient to bring the lever of the selector Sw1 in manual position, wait 1-2 sec and successively report it in automatic position. In this way, the control unit gets out of the learning mode and prepares itself for the normal functioning.

**6.1 Pre-flashing:** The chain movement is always signaled by a pre-blinking, advising the user that the chain is next to move.

**6.2 Multi-user function:** During the opening phase of the chain, every other command is ignored. Once opened the chain (completely down, it is possible to close it using the step-by-step command or using the automatic re-closure. During the closing phase, a step-by-step command blocks and inverts the movement.

**6.3 Photocell test:** Every time the motor is switched on, the control unit automatically controls if the photocells are functioning properly. This operation increases the security system. If a photocell is damaged (for instance output relay stuck) or in case of undesired photocell input short circuit. This test is executed immediately after that the control unit has received an order of "moving", but before power is applied to the motor.

## 7. Problems and their solutions

Type of problem	Probable cause	Solution
On activating the opening command the automation does not move.	Lack of electrical power supply	Check the presence of the electrical voltage and all the connections to the electrical network.
	Burned fuse	Replace the fuse with a similar one.
On activating the opening command the chain moves for a brief time and then stops.	Incorrect encoder connection	Check the connections of the encoder's wires.
On activating the opening command, the automation moves to closure.	Jumper direction motor inverted	Invert the Jumpers.
You cannot manage to enter into the remote control learning phase	The chain is not completely closed (UP)	Close the chain (in the manual). If the chain was closed set selector S1 to manual, wait 1 second and re-set it to automatic. Try again entering into setting mode.
You cannot manage to memorise the remote controls	The type of set decoding in the control panel does not correspond to the type of remote control in use.	Check which decoding has been set and possibly select that which corresponds to the remote control in use.
You cannot manage to enter into the opening/closure programming mode. (run-time)	The chain is not completely closed (UP)	Close the chain (in the manual). If the chain was closed set selector S1 to manual, wait 1 second and re-set it to automatic. Try again entering into setting mode.
The control panel is powered but the gate does not move.	A normally closed input is not active	Check the photocell, stop and limit switch input. If not used they must be bridged to the common.

**GUARANTEE** - In compliance with legislation, the manufacturer's guarantee is valid from the date stamped on the product and is restricted to the repair or free replacement of the parts accepted by the manufacturer as being defective due to poor quality materials or manufacturing defects. The guarantee does not cover damage or defects caused by external agents, faulty maintenance, overloading, natural wear and tear, choice of incorrect product, assembly errors, or any other cause not imputable to the manufacturer. Products that have been misused will not be guaranteed or repaired. Printed specifications are only indicative. The manufacturer does not accept any responsibility for range reductions or malfunctions caused by environmental interference. The manufacturer's responsibility for damage caused to persons resulting from accidents of any nature caused by our defective products, are only those responsibilities that come under Italian law.