


# BARRY

BARRIER GATE AUTOMATION

## 1. WARNINGS AND GENERAL SAFETY INSTRUCTIONS

This manual contains important safety information.

An incorrect installation or an improper use may cause serious damages to persons or objects. Read this manual carefully and completely. and store it safely for future use

Pay particular attention to the sections marked by the symbol: 



**Always disconnect main power supply before starting installation or maintenance.**



**Make sure that the earth system is perfectly working and always connect the barrier to it. An earth leakage breaker is needed on the main power supply.**



**Keep away from children radio transmitters and any other device which the automation can unconsciously be activated by.**

- As for the electric cable type and section, we recommend you to use a <HAR> type cable with minimum section of 2.0mm<sup>2</sup>.
- Do not change the original inside wiring.
- In case of power failure, please switch off the mains first, then open the door and rotate the handle on the motor manually to completely lift the boom.
- Use radio transmitters or any other control only when the automation is clearly in sight.
- Never open the door or lift the cover of the barrier when it is working
- Do not allow children to play in the automation area.
- Fixed control systems must be installed at a minimum height of 1.5m from the ground.

The installation of automatic gates and doors must fully comply with the requirements set forth in 2006/42/EC Directive, with particular reference to EN 12445 and EN 12453 standards.

The final connection to the electrical mains, testing and start-up of the automation must be performed by skilled and qualified personnel, who is responsible for carrying out the risks analysis and verifying the compliance of the system with the current safety standards.

This product is exclusively designed and manufactured for the intended use specified in this manual. Any other use than stated could compromise the integrity and the safety of the product and therefore is strictly prohibited

Use exclusively original parts for maintenance.

Do not carry out any alteration on the components of the automatic road barrier.

Proteco S.r.l. declines all liability in case not original components or additional devices are used.



**Automatic road barriers are not for pedestrians!** BARRY road barriers are designed for vehicular traffic only. Direct all pedestrian traffic to a separate walk-through gate.

## 2. TECHNICAL SPECIFICATIONS

### AC models

Power supply: 220V 50Hz  
 Motor's power: 90W/220Vac  
 Revolutions: 2800r/min  
 Opening time: 2" (boom 1 to 3m)  
                   6" (boom 4 to 6m)  
 Max boom's length: 6m

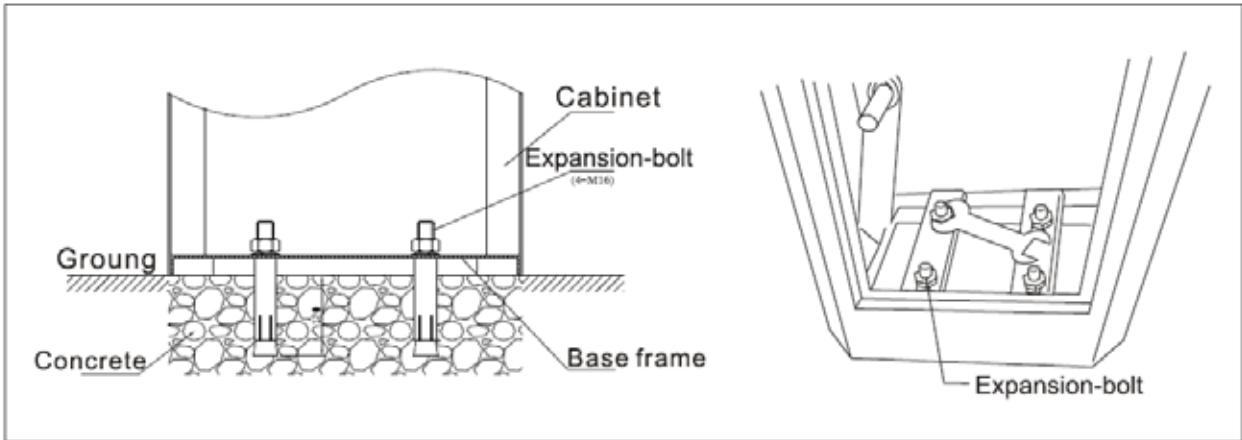
### DC models

Power supply: 220V 50 Hz  
 Motor's power: 80W/24Vdc  
 Revolutions: 1400r/min  
 Opening time: 2" (boom 1 to 3m)  
                   6" (boom 4 to 6m)  
 Max boom's length: 6m

### 3. INSTALLATION

#### 3.1 Fixing to the ground

Fig.1



#### 3.2 Assembling the boom

Fig.2

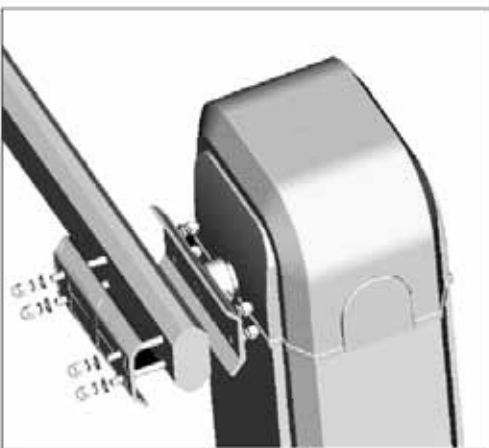
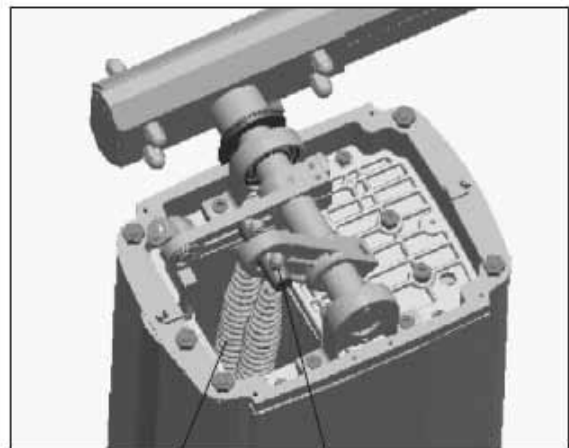


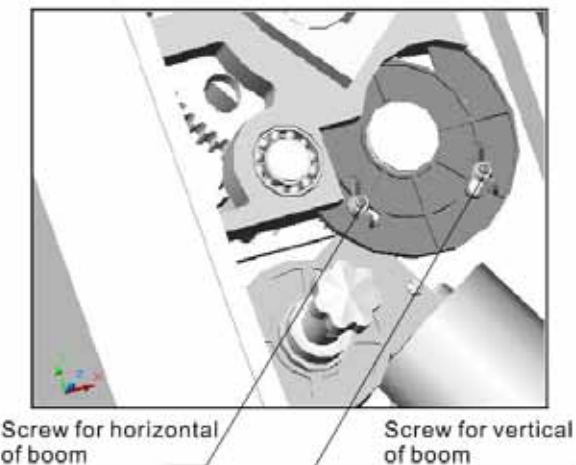
Fig.3



#### 3.2 Limit-switch adjusting

The magnetic limit-switch and the mechanical limit-switch of the barrier are already pre-set for an optimal movement of the boom. Limit-switches position doesn't need to be changed.

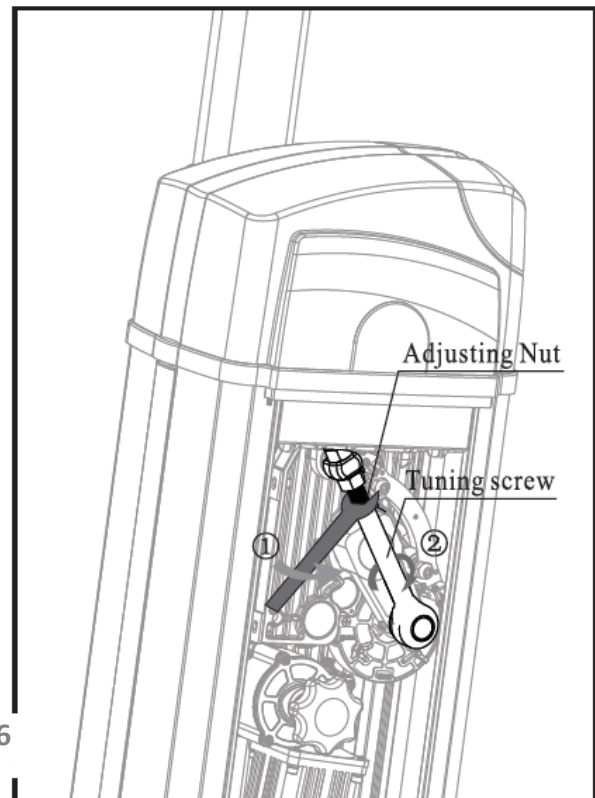
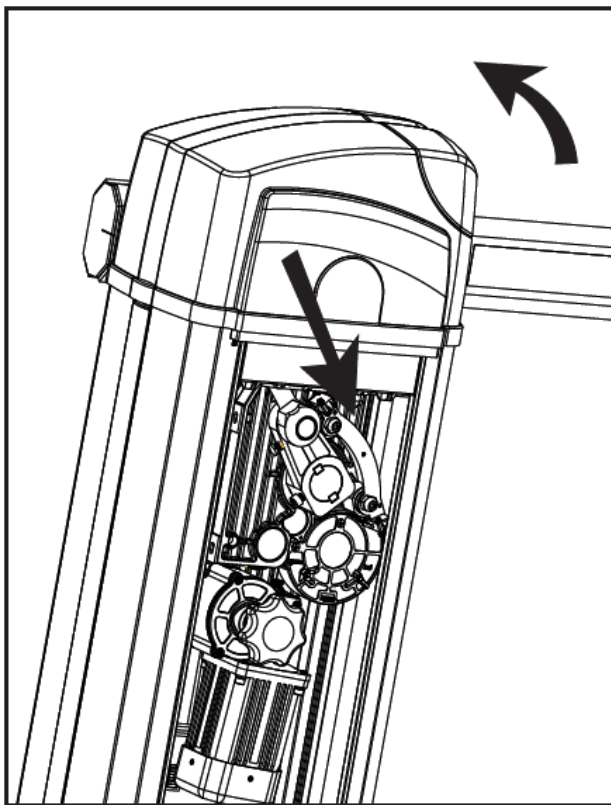
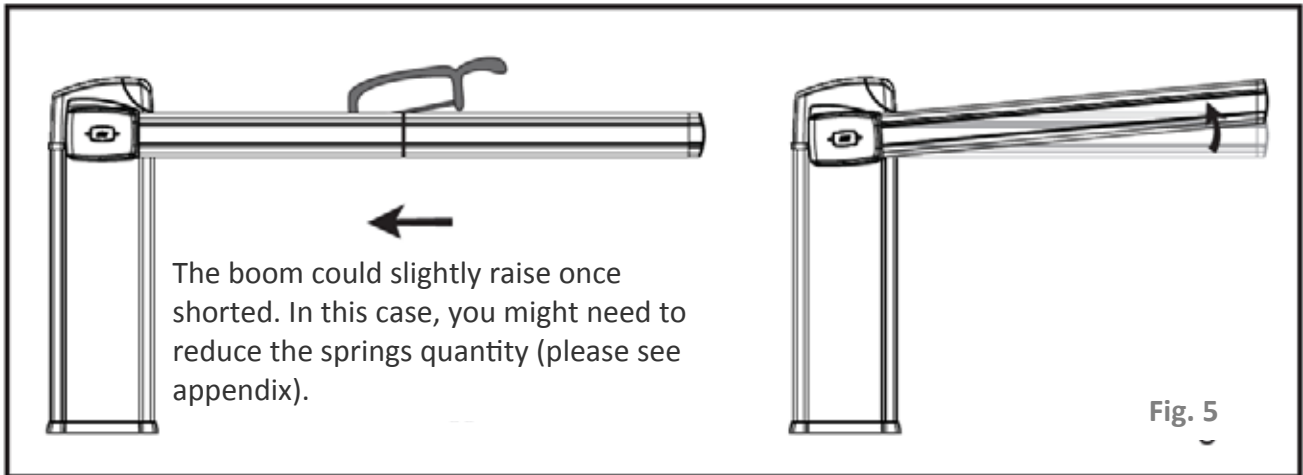
Fig.4



## 4. ADJUSTING THE BOOM

### 4.1 Short boom

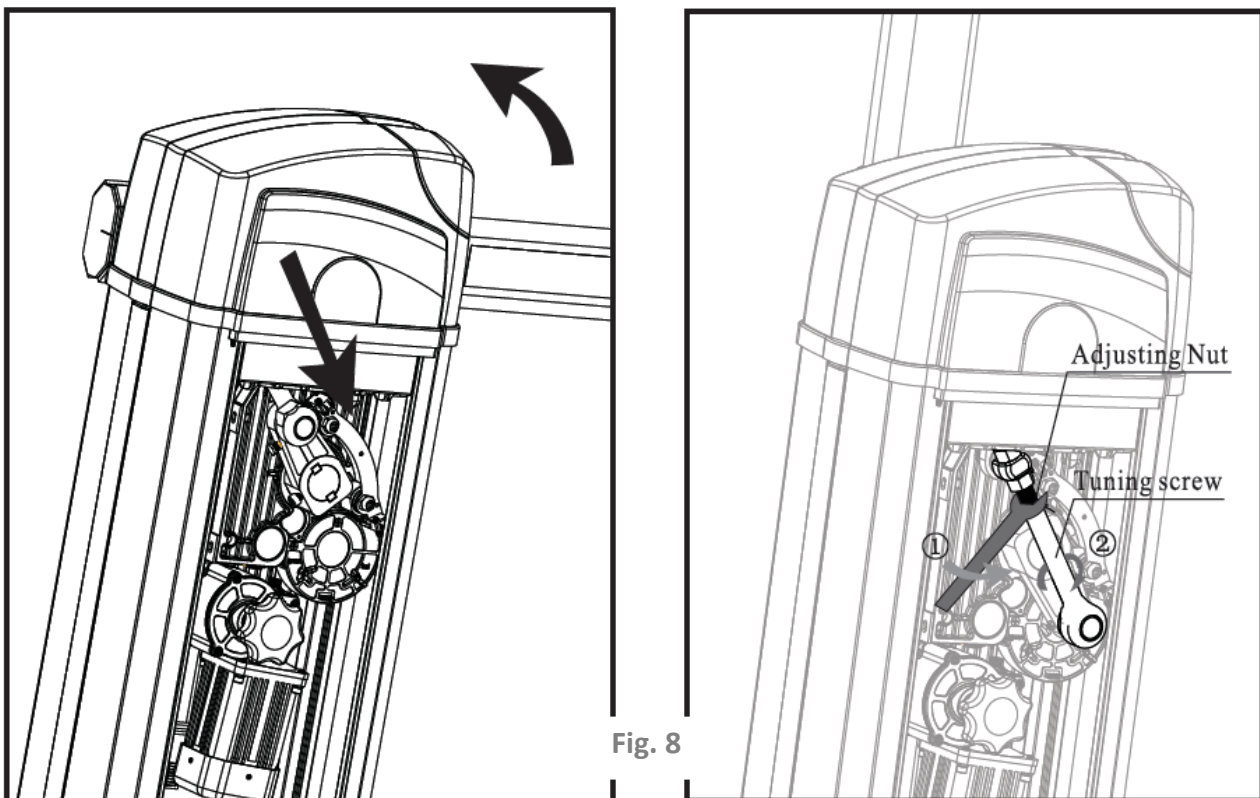
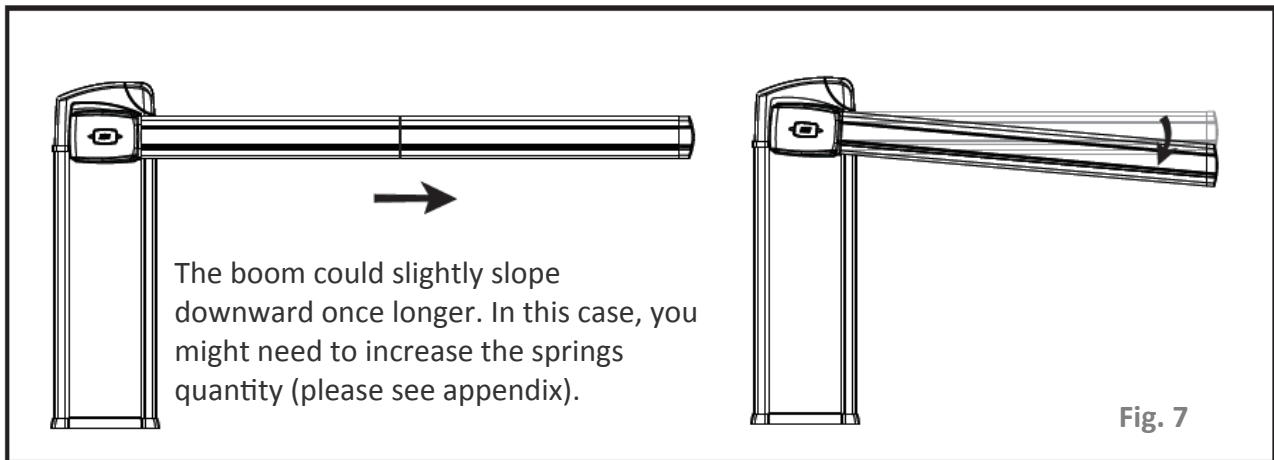
In case you need to use a shorter size of the telescopic boom, please pay attention to the following adjustments



1. Move the boom manually to the upright position
2. Unfasten the adjusting nut
3. Adjust the tuning screw till the boom is perfectly upright
4. Tighten the adjusting nut

## 4.2 Long boom

In case you need to use the longest size of the telescopic boom, please pay attention to the following adjustments



1. Move the boom manually to the upright position
2. Unfasten the adjusting nut
3. Adjust the tuning screw till the boom is perfectly upright
4. Tighten the adjusting nut

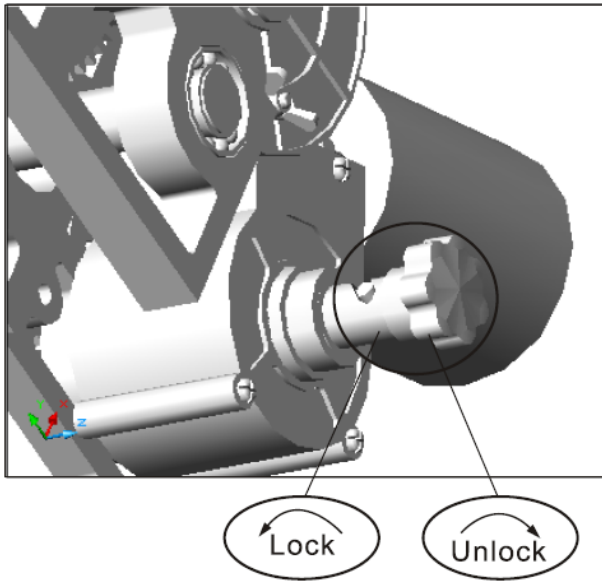
### **Balancing springs adjustment**

The springs are already pre-set for a perfect balancing according to the boom's length. In some cases (very short or very long boom) you may need to re-adjust the balancing springs. Please see the appendix and pictures 5,6,7,8.

## 5. RELEASE FOR MANUAL OPERATION

Please see picture below

Fig.5

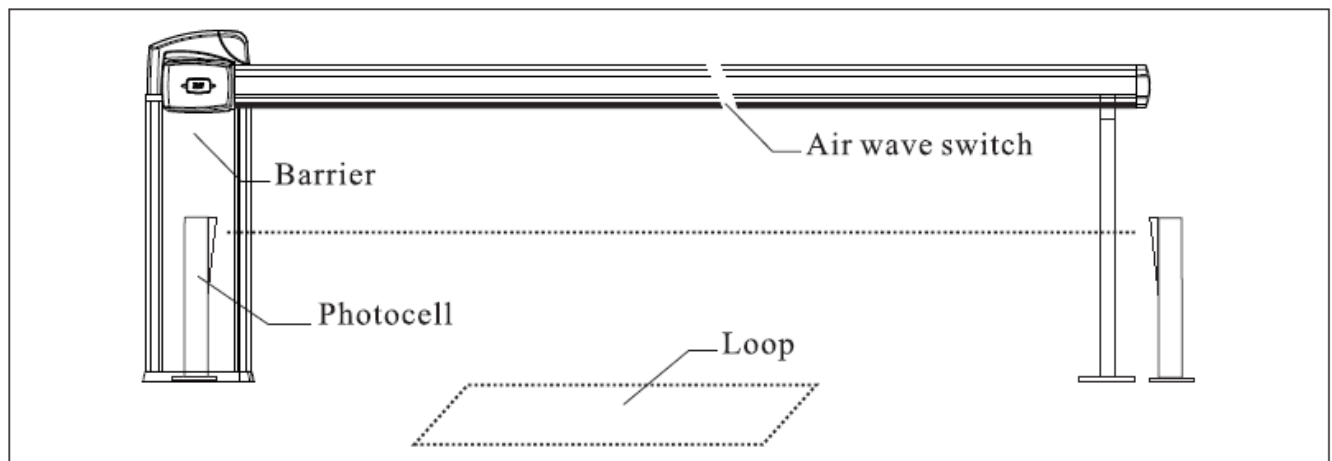


When unlocking the boom could suddenly move upwards. Always control the boom movement with your hands.

## 6. ELECTRICAL SET-UP

Motor, control panel and limit-switches are already wired.

Optional controls or safety devices, such as photocells, loop detectors or air-wave switches can be connected to the automatic road barrier.

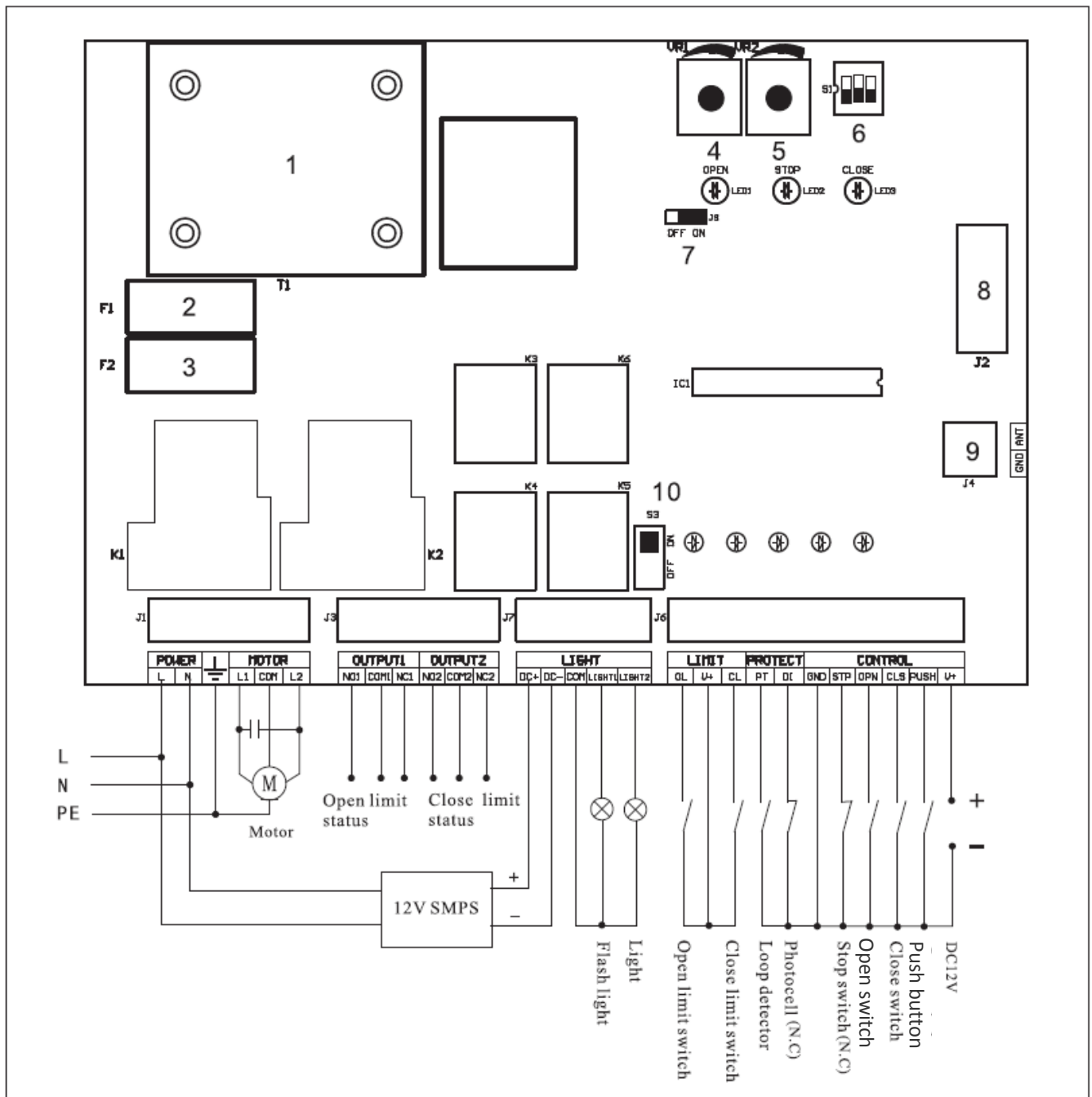


## 7A. WIRING AND PROGRAMMING SET-UP (AC version)

### 7A.1 Technical specifications

Power supply	AC 230V 50Hz/ 110V 60HZ
Max. consumption	10W
Accessories power supply	DC12V 8W MAX
Working temperature	- 20°C ~ +50°C
Radio transmitters frequency	433,92 Mhz
Automatic closing pause	1 -120"

### 7A.2 Wiring Scheme (AC version)



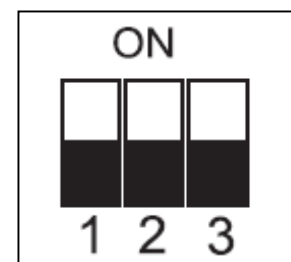
- 1 – T1: Transformer
- 2 – F1: 0.2A fuse
- 3 – F2: 5A fuse
- 4 – VR1: Working force potentiometer
- 5 – VR2: Pause time for automatic closing potentiometer
- 6 – S1: DIP switch block
- 7 – Reverse function jumper (ON= function enabled)
- 8 – Plug for receiver module
- 9 – Terminal for aerial
- 10 – Power switch for lights

### 7A.3 Programming DIP-switches

#### DIP-switch 1:

**ON** – An air-wave switch is wired to the PT terminal on the control panel, the boom reverses when the airwave beam is obstructed

**OFF** - A loop detector is wired to the PT terminal on the control panel, if a car enters into the loop's range the boom stays open. When the car leaves the loop area the barrier closes.



#### DIP-switch 2:

**ON** – Automatic closing function is enabled, the pause time can be adjusted by VR2 potentiometer.

**OFF**- Automatic closing function is off.

**DIP-switch 3:** Not used

### 7A.4 Signalling LEDES

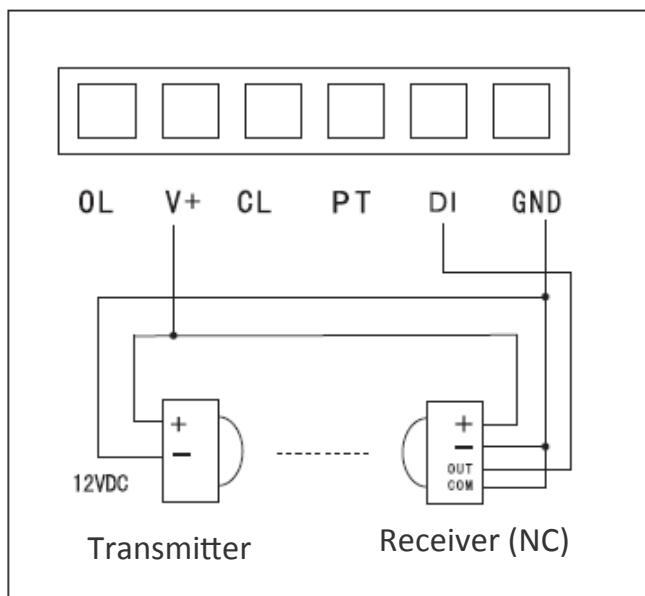
Nr	Name	Meaning
1	OL	Opening limit-switch LED: it lights on once the barrier has completed the opening
2	CL	Closing limit-switch LED: it lights on once the barrier has completed the closing
3	PT	Air-wave switch. It lights on when the air-wave beam is obstructed by an obstacle.
4	LP	Photochells LED: it get off when the photo-cells beam is obstructed by an obstacle.
5	Power	Power supply LED . It lights on when the automation is powered



## 7A.5 Opening Safety Devices

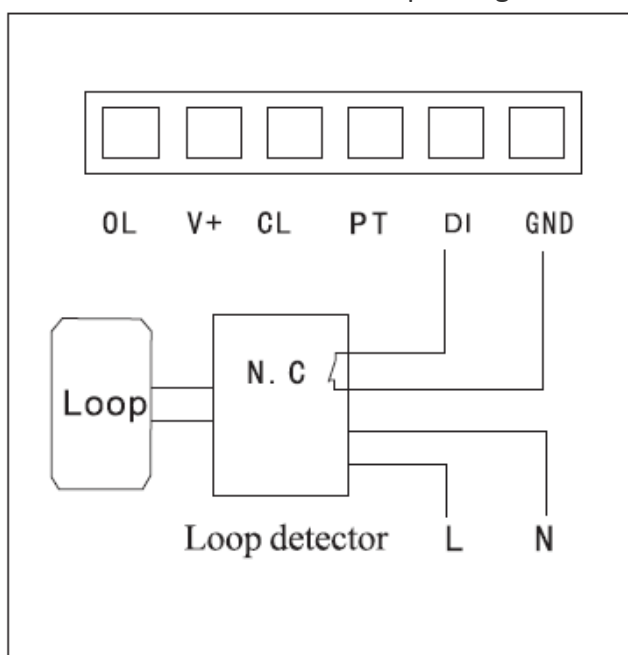
### 7A.5.1 PHOTOCELLS (NC contact)

- If the infrared beam is obstructed when closing, the barrier immediately reverses
- If the infrared beam is obstructed when opening, the barrier keeps opening.



### 7A.5.2 LOOP DETECTOR (NC contact)

- If a car enters in the loop's range when closing, the barrier immediately reverses
- If a car enters in the loop's range when opening, the barrier keeps opening.

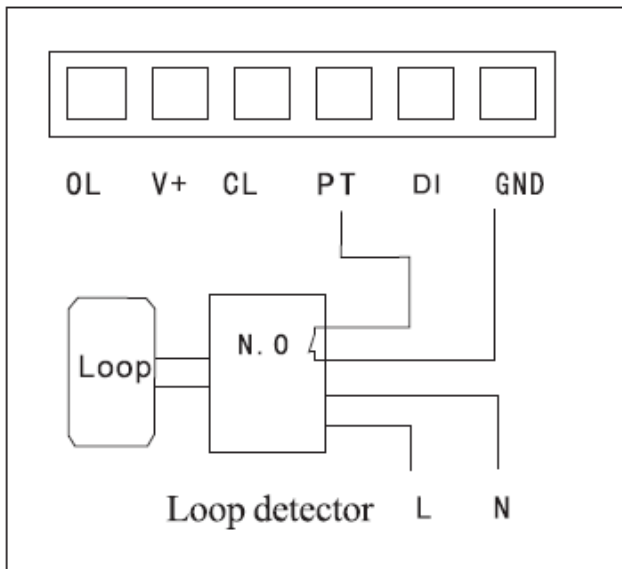


**Note:** If the automatic closing function is on, the barrier automatically closes after a pause time. The pause time can be set from 1 to 120 seconds

### 7A.5.3 LOOP DETECTOR (NO contact)

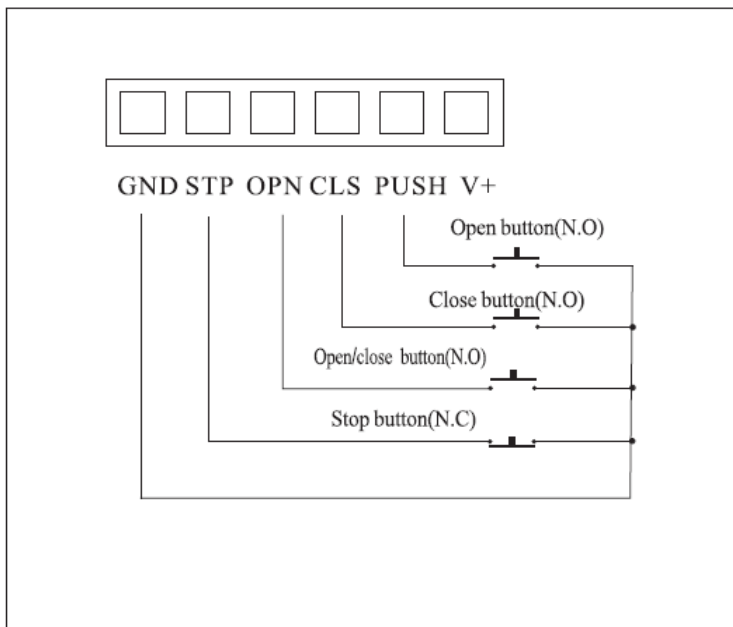
(DIP-switch 2 must be in OFF position)

- If a car stops in the loop's range, the barrier stays open
- Once the car leaves the loop's range when opening, the barrier closes.



### 7A.6 External Terminal

When an IC card reader is used, it has to be wired to OPN and GND terminals.

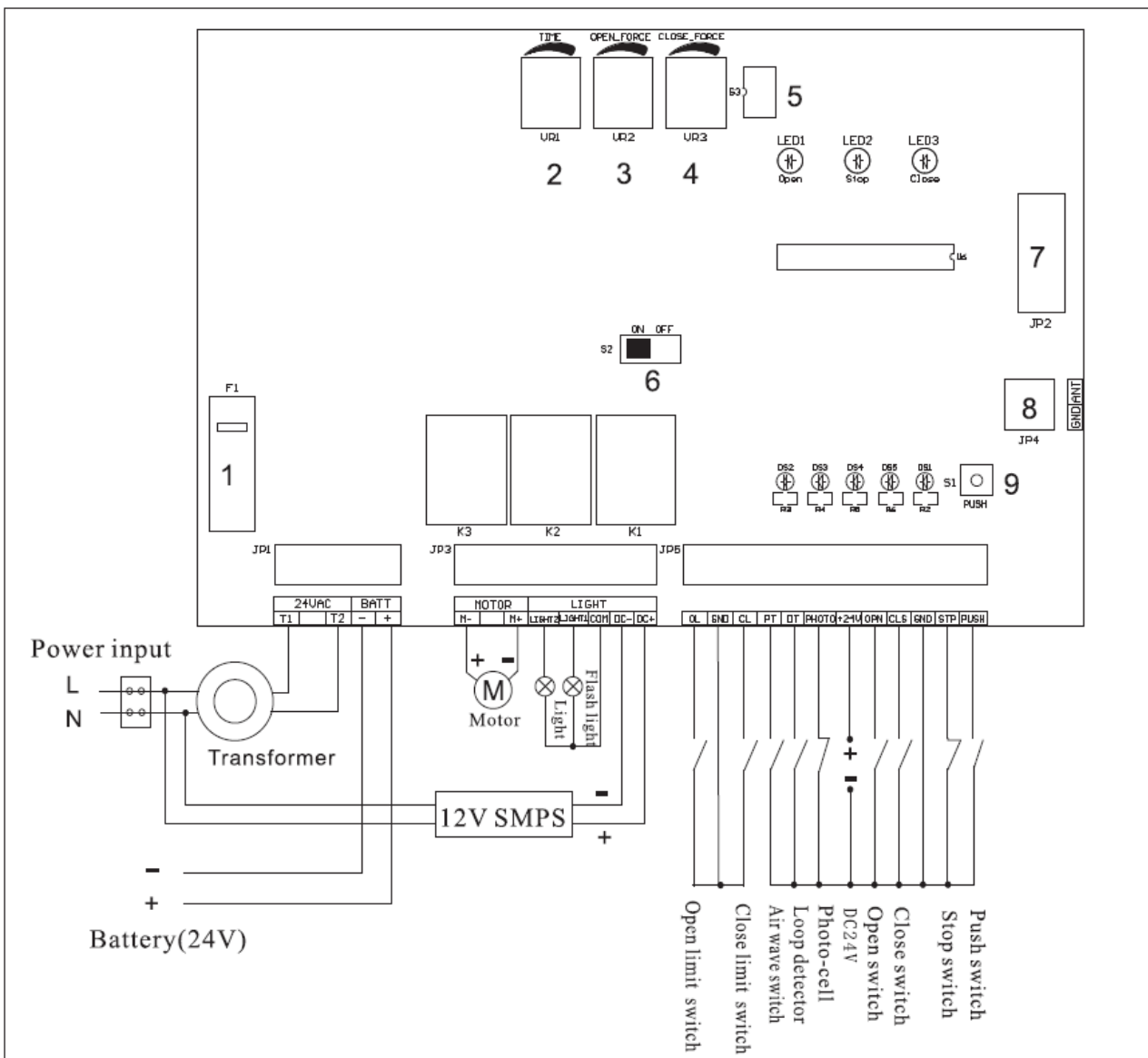


## 7B. WIRING AND PROGRAMMING SET-UP (DC version)

### 7B.1 Technical specifications

Power supply	AC 230V 50Hz/ 110V 60HZ
Max. consumption	120W
Accessories power supply	DC24V 10W MAX
Working temperature	- 20°C ~ +50°C
Radio transmitters frequency	433,92 Mhz
Automatic closing pause	1 -120"

### 7B.2 Wiring Scheme (DC version)



- 1 – F1: 8A fuse
- 2 – VR1: Pause time for automatic closing potentiometer
- 3 – VR2: Opening force potentiometer
- 4 – VR3: Closing force potentiometer
- 5 – DIP-switch block
- 6 – Power switch for lights
- 7 – Plug for receiver module
- 8 – Terminal for aerial
- 9 – Button

## 7B.3 Programming

### DIP-switch 1:

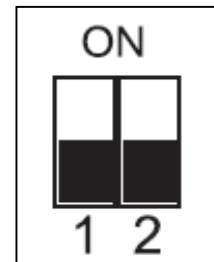
**ON** – Automatic closing function is enabled, the pause time can be adjusted by VR2 potentiometer.

**OFF**- Automatic closing function is off.

### DIP-switch 2:

**ON** – The flashing light is off when the barrier is in stop status.

**OFF** - The flashing light is on when the barrier is in stop status.



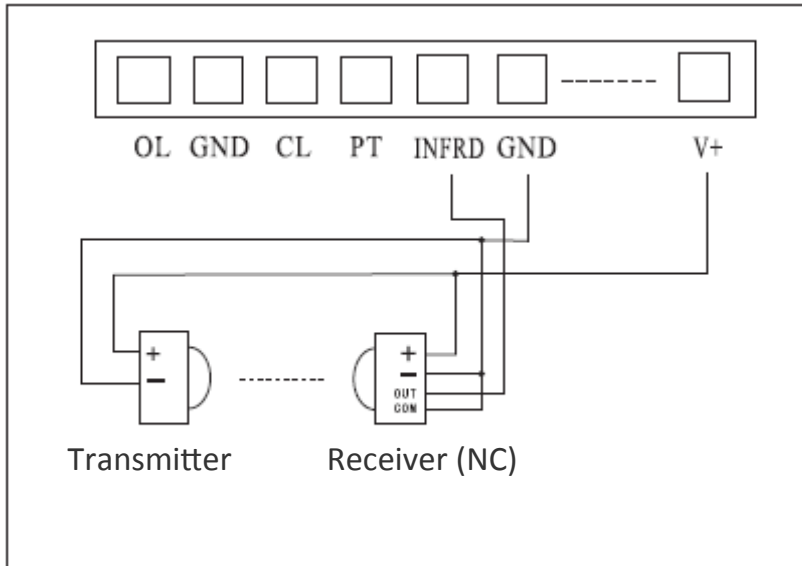
## 7B.4 Signalling LEDs

Nr	Name	Meaning
1	DS2	Opening limit-switch LED: it lights on once the barrier ha completed the opening
2	DS3	Closing limit-switch LED: it lights on once the barrier ha completed the closing
3	DS4	Air-wave switch. It lights on when the air-wave detects an obstacle
4	DS5	Loop detector LED: it lights on when a car enters in the loop's range
5	Power	Power supply LED . It lights on when the automation is powered

## 7B.5 Opening Safety Devices

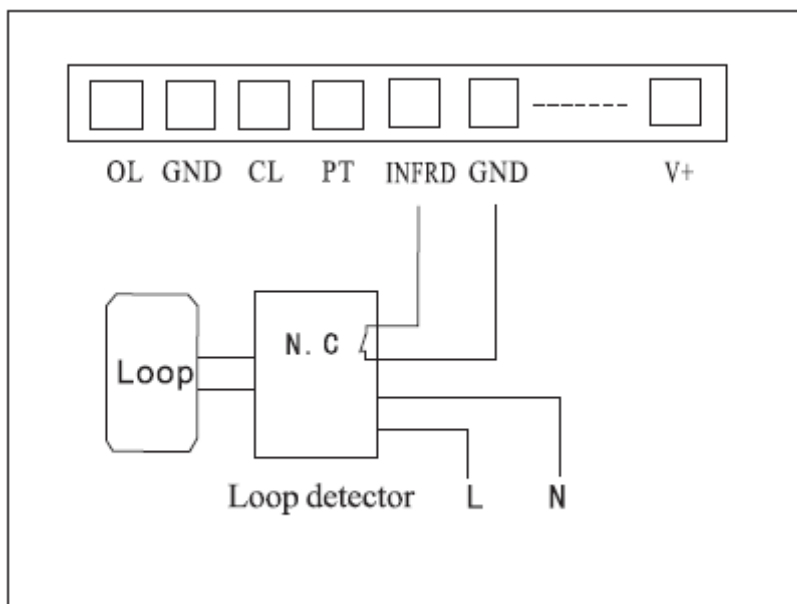
### 7B.5.1 PHOTOCELLS (NC contact)

- If the infrared beam is obstructed when closing, the barrier immediately reverses
- If the infrared beam is obstructed when opening, the barrier keeps opening.



### 7B.5.2 LOOP DETECTOR (NC contact)

- If a car enters in the loop's range when closing, the barrier immediately reverses
- If a car enters in the loop's range when opening, the barrier keeps opening

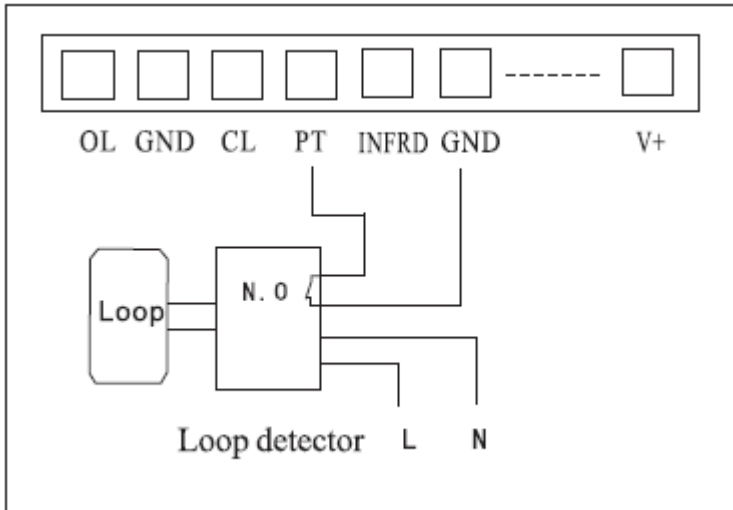


**Note:** If the automatic closing function is on, the barrier automatically closes after a pause time. The pause time can be set from 1 to 120 seconds.

### 7B.5.3 LOOP DETECTOR (NO contact)

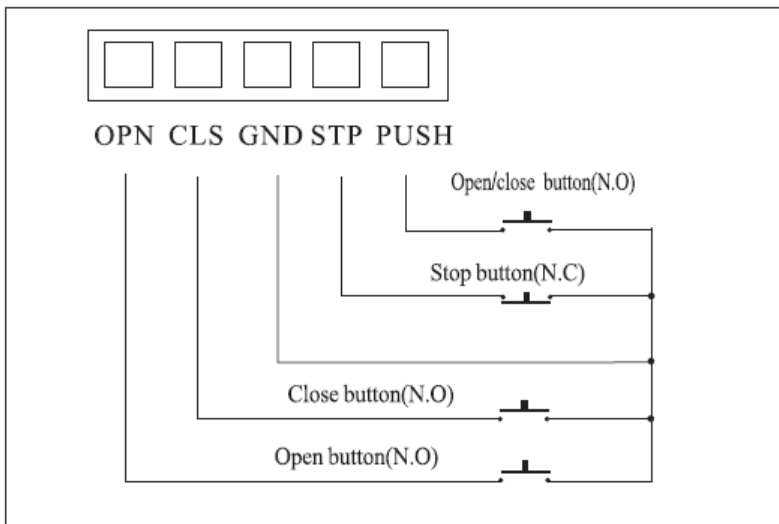
(DIP-switch 1 must be in OFF position)

- If a car stops in the loop's range, the barrier stays open
- Once the car leaves the loop's range when opening, the barrier closes



### 7B.6 External Terminal

When an IC card reader is used, it has to be wired to OPN and GND terminals.



## 8. RADIO PROGRAMMING

### 8.1 How to program a radio-transmitter

1. Press the button on the receiver card, when the LED lights on release it
2. Press the radio-transmitter's button you want to use till the light gets off
3. The radio-transmitter is now coded into the receiver.

Additional radio-transmitters can be coded following the same procedure

### 8.2 How to delete a radio-transmitter

Press the button on the receiver card till the LED lights on and hold it pressed till the light gets off.  
Now all radio codes previously learnt have been deleted.

## APPENDIX

### Balancing springs table

Boom Length	Quantity of Springs	Spring size
3 - 4m	1	Ø 5 x440mm
4 - 5m	2	Ø 5 x440mm
5 - 6m	2	Ø 5 x440mm Ø 6 x440mm