

BARRY

AUTOMATIC ROAD BARRIER

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1. WARNINGS AND INSTALLATION TIPS

This manual contains important information concerning personal safety. An incorrect installation or an improper use may lead to severe injuries. Read carefully and store for future use.

Pay particular attention to this symbol. 



Switch the power OFF before any operation.



Double check the electrical grounding and fit a disconnection device as well as overcurrent protection.



Keep the remote controls away from children.

- Use <HAR> wires/cables, minimum section 2 mm².
- Do not alter the original internal wiring.
- If power cut occurs, turn the power off and only then proceed to open and release the system.
- Give any start command only if the system is visible.
- Do not open the barrier housing when the system is operating.
- Do not allow children to play within the system area.
- Fixed start commands must be positioned at a minimum height of 1,5 m from ground.

The installation of automatic doors and gates must comply with the **Machine Directive 2006/42/CE**, in particular with **EN 12453** provision.

The definitive connection to the power supply, as well as testing and starting shall be performed by qualified personnel, who will be held to check risks and ensure the system complies with the current regulations.

This product has been designed only for its intended use. Any other use could affect the integrity and safety of the product, therefore has to be considered prohibited.

Use only original spare parts. No alteration on the system has to be carried out. Proteco Srl will not respond in case of using additional and/or fake spares.



Automatic barriers are not suitable for pedestrian clearance.
BARRY is designed for vehicular clearance only.

CE COMPLIANCE DECLARATION

Manufacturer: PROTECO S.r.l.
Address: Via Neive, 77 – 12050 Castagnito (CN) – ITALIA
Declares
The Product: **BARRY Automatic Road Barrier**
Type: **BARRY 230V, BARRY DC 24V**

Complies with the essential requirements of EEC Directives:
2014/35/UE Low Voltage Directive
2014/30/UE Electromagnetic Compatibility Directive
2014/53/UE RED Directive
RoHS2 2011/65/CE

It complies, where applicable, with the following provisions:
EN 61000-6-2, EN 61000-6-4
EN 61000-3-2, EN 61000-3-3
EN 12453
EN 60335-1, EN 60335-2-103

The manufacturer declares that the start-up of the machinery is not permitted unless the machine, in which the product is incorporated or of which is becoming a component, has been identified and declared as conformed to 2006/42/EC Machinery Directive.

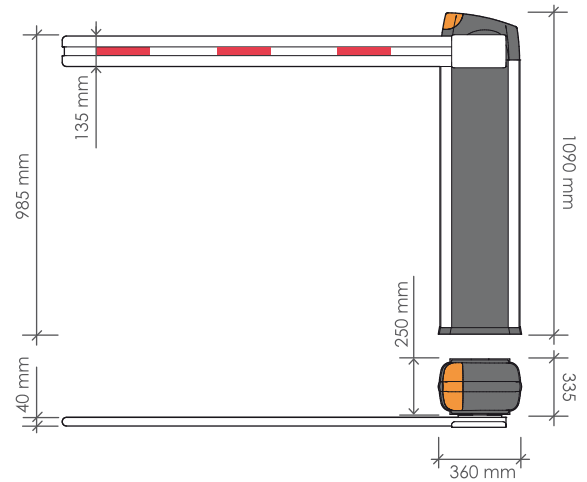
Castagnito, 2018 November 8th

Marco Gallo
CEO



2 TECHNICAL FEATURES

| | 230V AC | 24V DC |
|----------------------|-----------------|-----------------|
| Main power: | 230V 50Hz | 230V 50 Hz |
| Motor power supply: | 230V ac | 24V dc |
| Motor power: | 200W | 160W |
| Absorption max.: | 1,5A 230V | 1,2A 230V |
| Opening time: | circa 6 secondi | circa 6 secondi |
| Automatic closing: | da 1 a 60 sec. | da 1 a 60 sec. |
| Boom max. length: | 6m | 6m |
| Accessories: | 12Vdc, 8W max | 24Vdc, 8W max |
| Working temperature: | da -20 a +50 °C | da -20 a +50 °C |
| Radio frequency: | 433,92 MHz | 433,92 MHz |

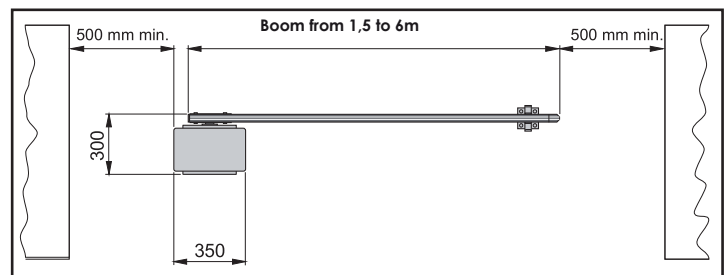


3. INSTALLATION

3.1 Standard Layout

Look at the beside layout and keep a safety distance of 500 mm each side.

The length of the boom will be accordingly, but the concrete basement position is fixed.



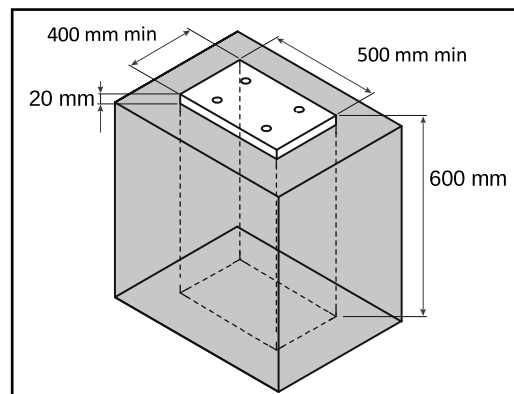
3.2 Basement preparation

The concrete basement must be resisting (EN206 C25/30 minimum resistance). Basement plant has to be at least 400x500 and 600 mm deep.

Keep a projection of 20 mm from the ground floor to ensure stability.

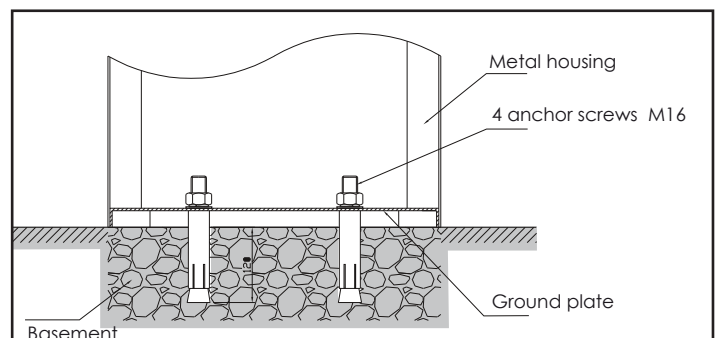
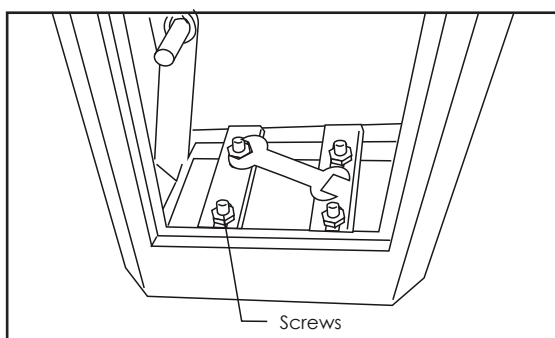
In any case the concrete work cannot impede to stud the fixing screws.

Do not forget wirings! While preparing the concrete basement keep a duct of the right dimension to connect the main power and any additional devices, if needed.



3.3 Fixing the barrier on ground

Drill the concrete basement, put the screws provided and fix the barrier body:



4. MANUAL OPERATION

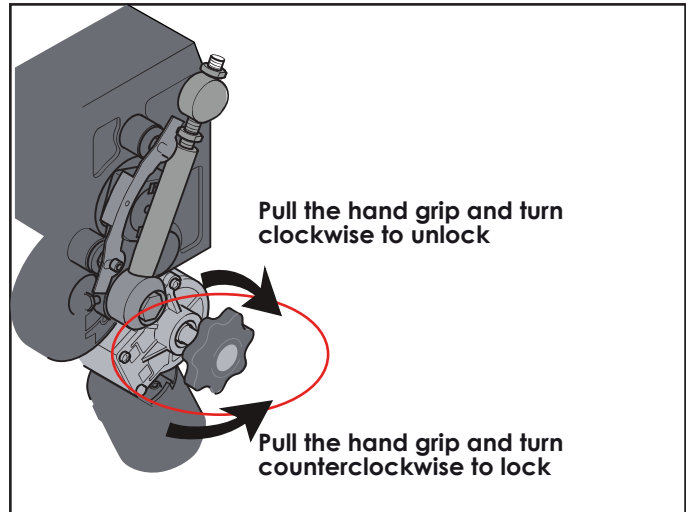
For manual operation pull the hand grip and turn clockwise.
Release the hand grip and move manually the boom.



During manual operation the boom could suddenly lift up: be careful and always hold the boom with your hands to avoid damages.

To lock the system, pull the hand grip and turn counterclockwise.
Release the hand grip, now the barrier is locked.
When unlocking the barrier it is possible to adjust the tension of the springs, set the limit switches, etc etc.

NB: In the 24Vdc version the manual operation can not be done if the boom is fully raised.

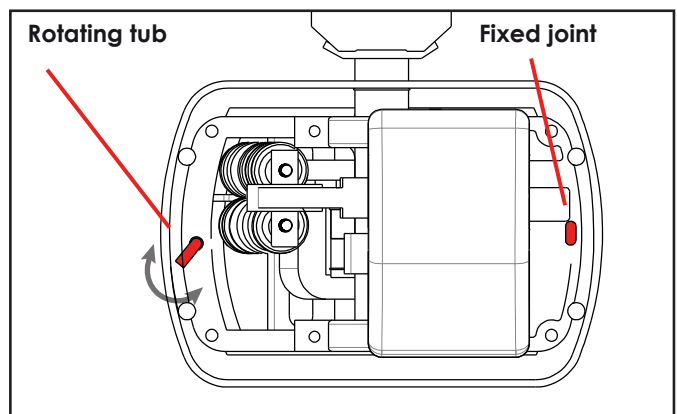
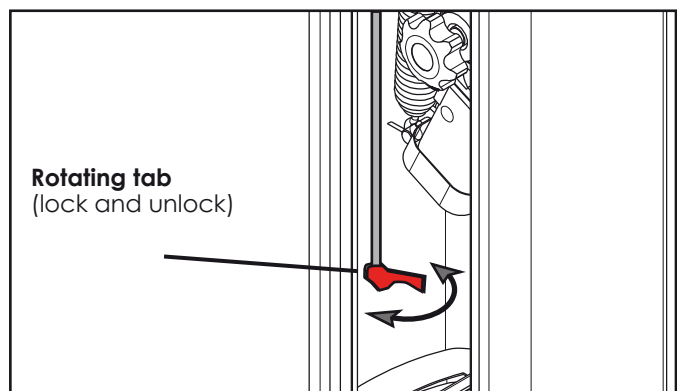


5. LOCK AND UNLOCK THE TOP COVER

Remove the top cover if adjustments are needed.
The cover is secured on the right by a fixed joint, while on the left by a rotating tab, which can be unlocked by a hand grip inside the barrier housing.
To remove the cover, unlock the rotating tab pulling the hand grip towards the bottom, then lift the cover from the left and disengage from the right upwards.

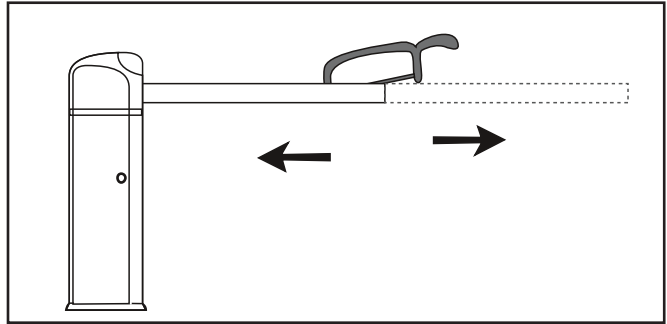
To reposition the cover, engage on the right and lower the lid, then rotate the hand grip towards yourself and turn the rotating tab to lock.

NB: Pls. consider that the hand grip, rotating tab and fixed joint can be found in a different position, according if the barrier is LH or RH.

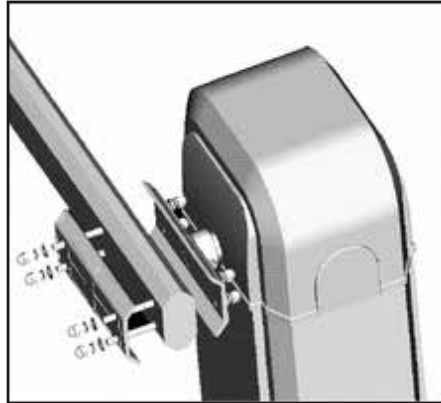


6. BALANCING OF THE BOOM

Size the boom length before installation: the boom is modularized, cut or join according the length you need.

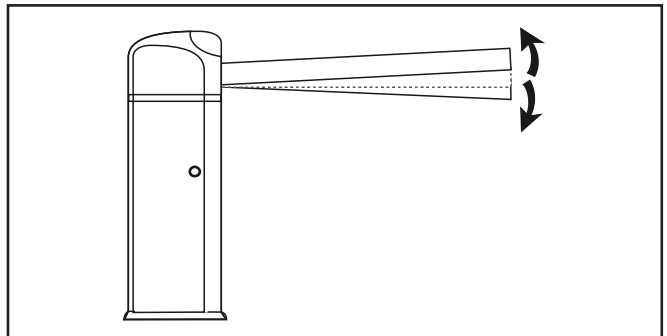


Fix the boom as shown in the picture.



Once the boom is fixed on the barrier and for any reason the length has to be changed, proceed to readjust the springs and the limit switches, in the following way:

If the length has been decreased, the boom may lift up a little bit, therefore proceed to reduce the number of spring.

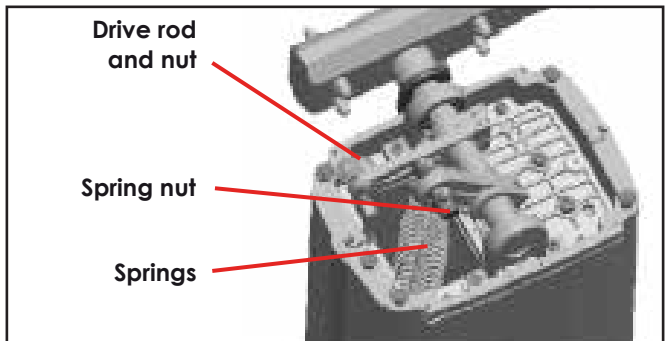


On the contrary if the length has been increased, the boom may get down, therefore proceed to fit both springs.

Look at the below table to fit correctly the springs according to the boom length :

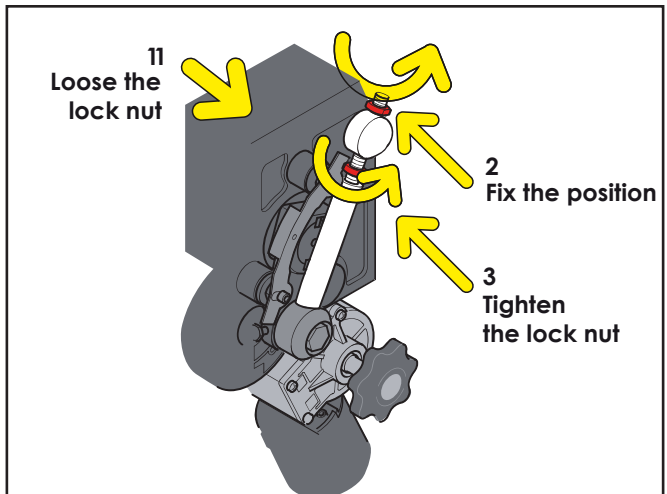
| Boom length | Springs | Dimension |
|-------------|---------|----------------------------------|
| 3 - 4 m | 1 | Ø 5,0 x 440 mm |
| 4,5 - 5 m | 2 | Ø 4,5 x 440 mm Ø 5,0 x 440 mm |
| 6 m | 2 | Ø 4,5 x 440 mm Ø 5,0 x 440 mm |

Fit the springs, by number and type, following the instructions shown here in the picture.



The tension of the spring has to be as much as to allow to lift the boom safely and easily with your hand.

Once the springs have been adjusted, proceed to align the boom when in horizontal position.



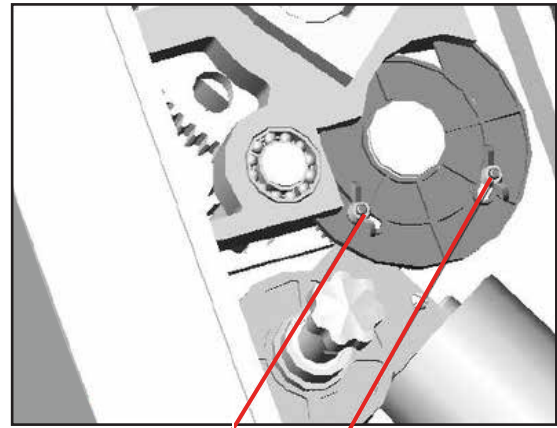
- 1 Loose the lock nut
- 2 Fix the position
- 3 Tighten the lock nut

7. LIMIT SWITCHES

The barrier comes with both magnetic and mechanical limit switches, pre-set by factory.

Normally it is not necessary to adjust them.

However if this were the case, see how to proceed as shown in the below picture:



CLOSING position

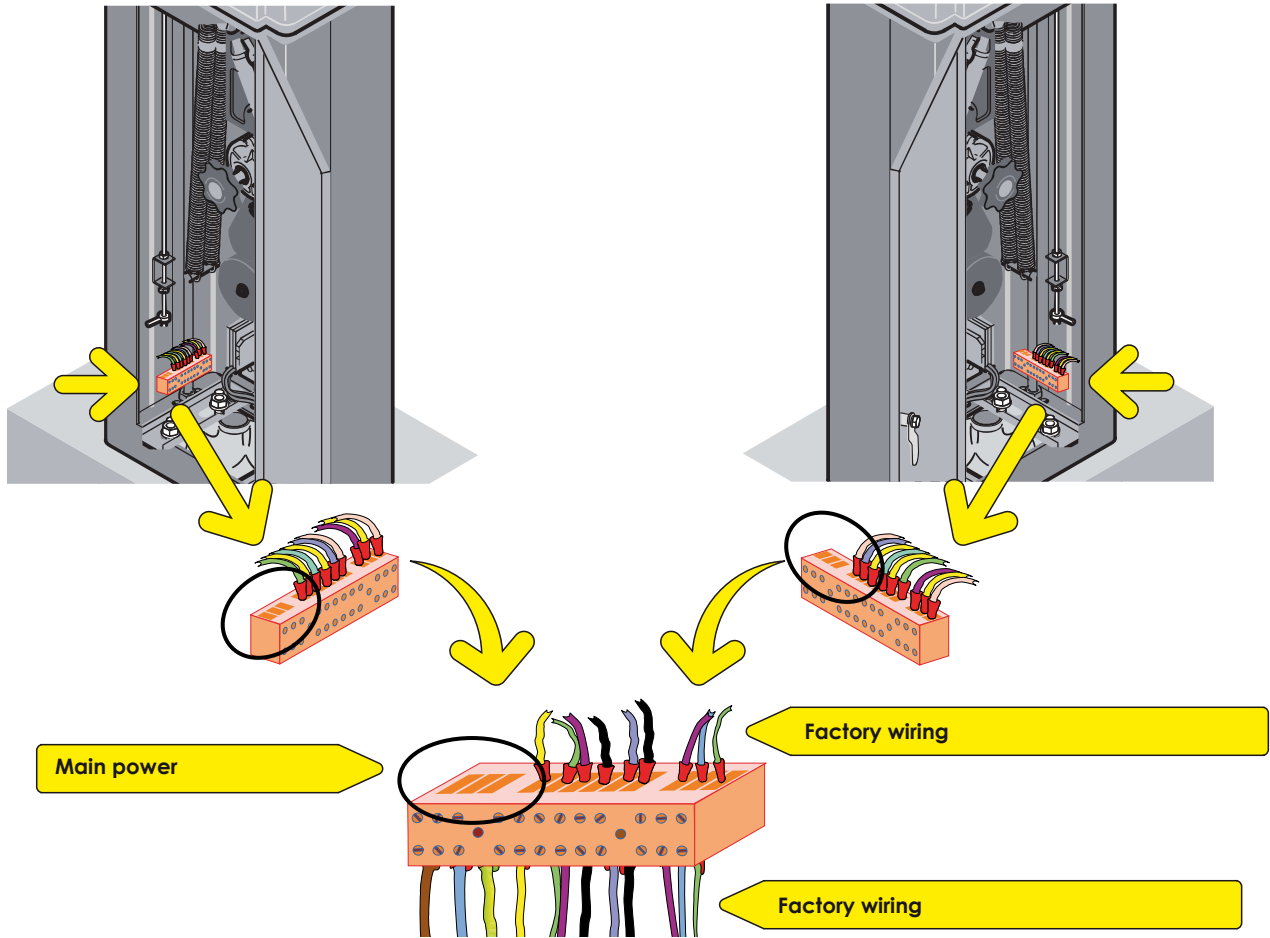
OPENING position

8. MAIN POWER (230V + GROUNDING)

The barrier can be powered both 230V and 115V AC, and main power has to be wired as shown in the below picture:

LH BARRIER - control unit positioned on the left

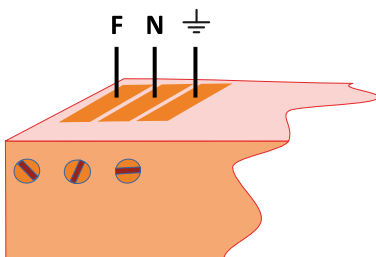
RH BARRIER - control unit positioned on the right



Main power

Factory wiring

Factory wiring

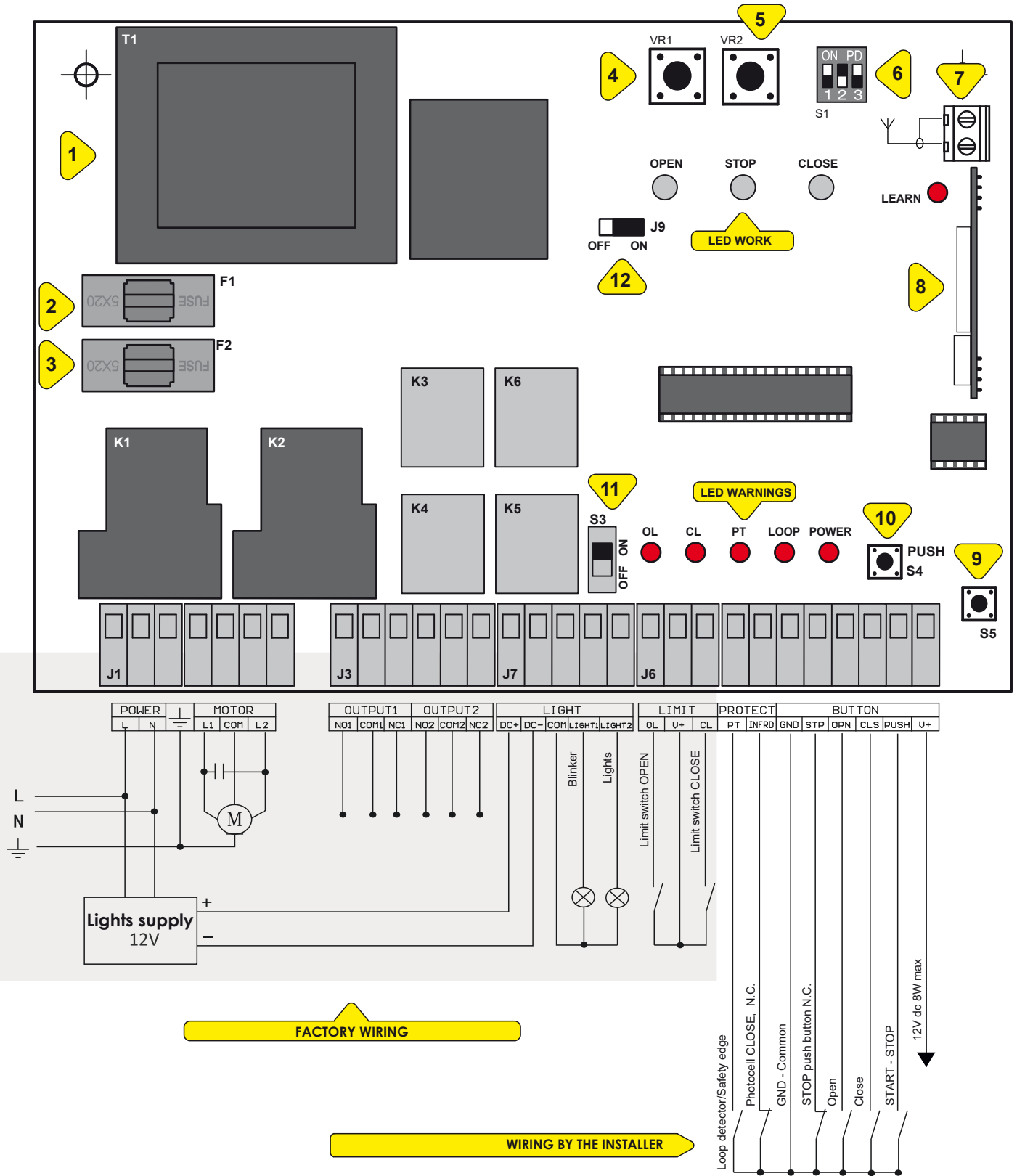


Terminals are partially factory prewired, just wire **Phase, Common and Ground** as shown below:



Always wire the GROUND!
The ground wire section has to be of the same size of Phase and Common wires.

9. AC WIRING DIAGRAM (230/115Vac)



- 1 = Transformer
- 2 = F1, fuse 0,2 A
- 3 = F2, fuse 5 A
- 4 = VR1, force
- 5 = VR2, automatic closing
- 6 = S1, DIP-switch terminals
- 7 = J2, aerial
- 8 = Receiver
- 9 = LEARN, transmitter storage
- 10 = Start commands
- 11 = Lights disconnecter
- 12 = J9, obstacle detection (keep to ON)

The control unit comes from factory with no. 2 bridges on N.C. contacts

VR1 - FORCE

VR1 trimmer sets the force and the obstacle detection. Turning the trimmer clockwise the force increases while the obstacle detection decreases. If J9 jumper is set right side (ON), the obstacle detection will stop the barrier during closing and will reverse to opening position. Calibrate the obstacle detection force properly, to avoid faults during normal operation.



VR2 – AUTOMATIC CLOSING

VR2 trimmer sets the automatic closing time (DIP-switch 2 = ON). The automatic closing time can be adjusted between 1 and 60 seconds.



DIP-SWITCHES

DIP-switch 1:

ON - Set dip-switch 1 to ON if you need to wire a safety edge (the safety edge shall be wired as well on terminal **PT** on the control unit).

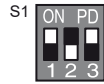
OFF – Set dip-switch 1 to OFF if you need to wire a loop detector (the loop detector shall be wired as well on terminal **PT** on the control unit).

DIP-switch 2:

ON - Automatic closing **ACTIVATED** (from 1 to 60 seconds).

OFF - Automatic closing **DEACTIVATED**.

DIP-switch 3: Void



LED Work

| | |
|--------------|---------------------------------|
| OPEN | The barrier is opening |
| STOP | The barrier is in stand-by |
| CLOSE | The barrier is closing |
| LEARN | Transmitter storage in progress |

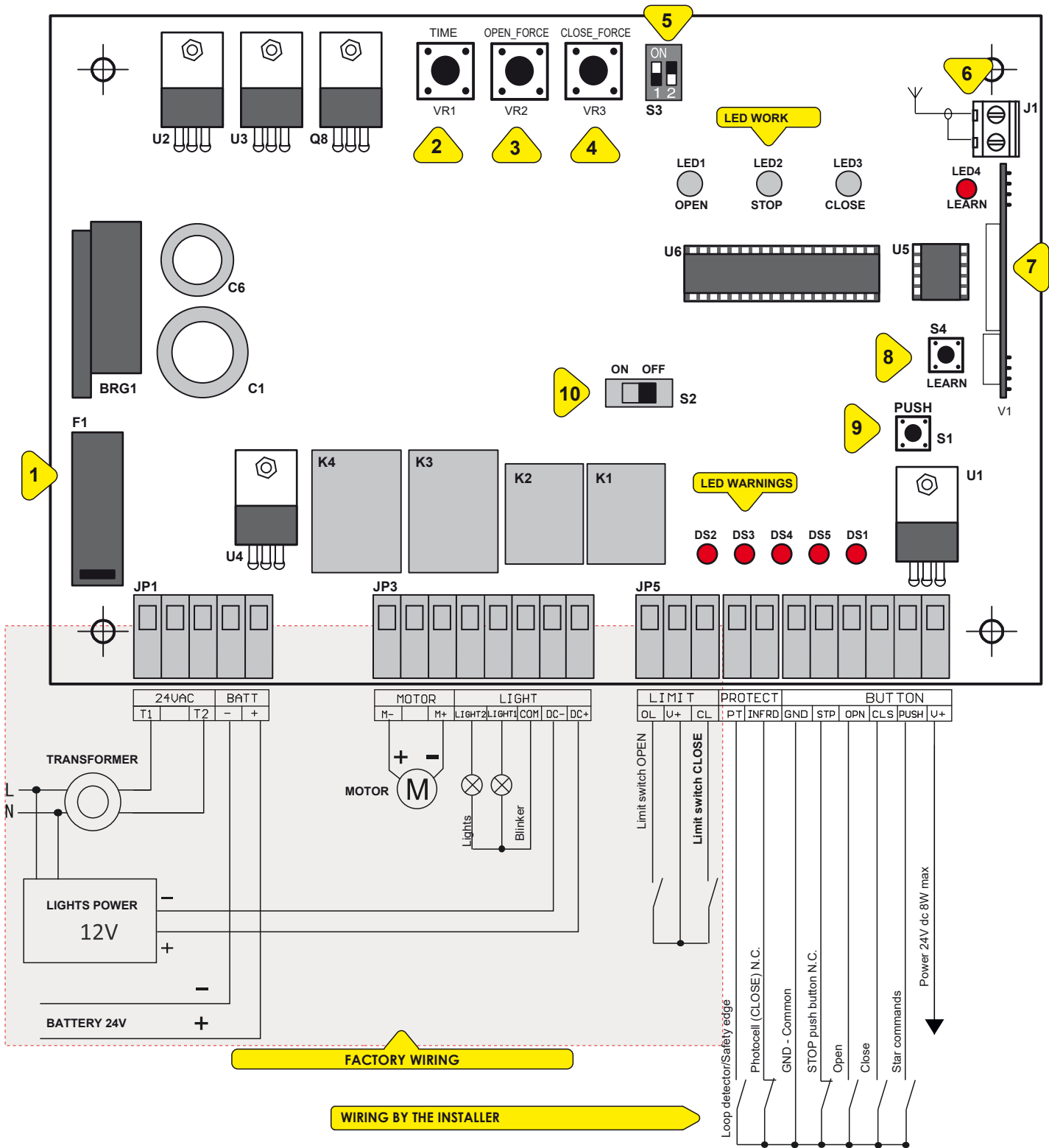


LED Warnings

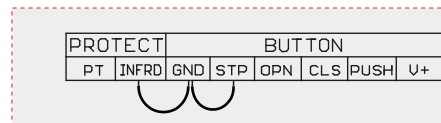
| | |
|--------------|-------------------------------------|
| OL | Opening completed |
| CL | Closing completed |
| PT | Safety edge/loop detector operating |
| LOOP | Photocells calibrated |
| POWER | Barrier powered |



10. DC WIRING DIAGRAM (24V DC)



- 1 = F1, fuse 8 A
- 2 = VR1, automatic closing
- 3 = VR2, force in opening
- 4 = VR3, force in closing
- 5 = DIP-switch
- 6 = Aerial
- 7 = Radio receiver
- 8 = LEARN, transmitter storage
- 9 = Start commands
- 10 = Lights and blinker disconnecter



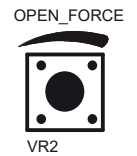
The control unit comes from factory with no. 2 bridges on N.C. contacts

VR1- AUTOMATIC CLOSING

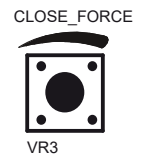
VR1 trimmer sets the automatic closing time (DIP-switch 2 = ON).
The automatic closing time can be adjusted between 1 and 60 seconds.

**VR2- FORCE IN OPENING**

VR2 trimmer sets the force and the obstacle detection. Turning the trimmer clockwise the force increases while the obstacle detection decreases. Calibrate the obstacle detection force properly, to avoid faults during normal operation. We recommend to start setting the force to minimum and after adjust step by step

**VR3- FORCE IN CLOSING**

VR3 trimmer sets the force and the obstacle detection. Turning the trimmer clockwise the force increases while the obstacle detection decreases. Calibrate the obstacle detection force properly, to avoid faults during normal operation. We recommend to start setting the force to minimum and after adjust step by step

**DIP-switch****DIP-switch 1:**

ON - Automatic closing **ACTIVATED**
OFF - Automatic closing **DEACTIVATED**

DIP-switch 2:

ON - The flashing light is **OFF** when the barrier is in stand-by .
OFF - The flashing light is **ON** when the barrier is in stand-by.

**LED Work**

| | |
|--------------|---------------------------------|
| OPEN | The barrier is opening |
| STOP | The barrier is in stand-by |
| CLOSE | The barrier is closing |
| LEARN | Transmitter storage in progress |

**LED Warnings**

| | |
|------------|---------------------------------------|
| DS2 | Opening completed |
| DS3 | Closing completed |
| DS4 | Safety edge / loop detector operating |
| DS5 | Photocells calibrated |
| DS1 | Barrier powered |

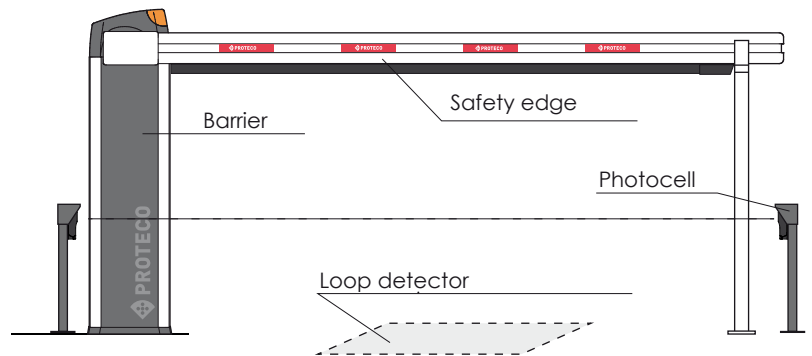


11. ADDITIONAL DEVICES

The following devices can be connected to the barrier: photocell, loop detector, safety edge, keypad.

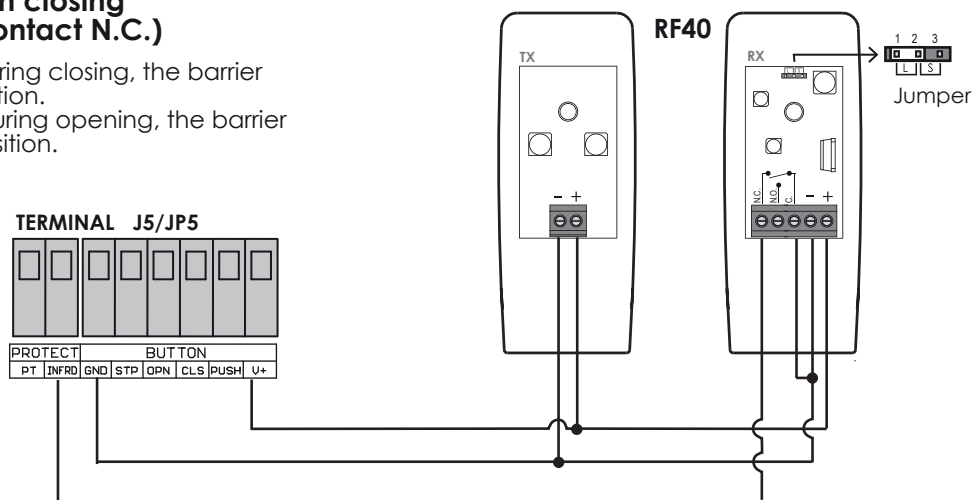
The wiring is the same for both 230V and 24V systems, the only key difference is the **voltage supplied** by the control unit (**terminal V+**):

- THE 230V (AC) VERSION SUPPLIES 12 VOLT
- THE 24V (DC) VERSION SUPPLIES 24 VOLT



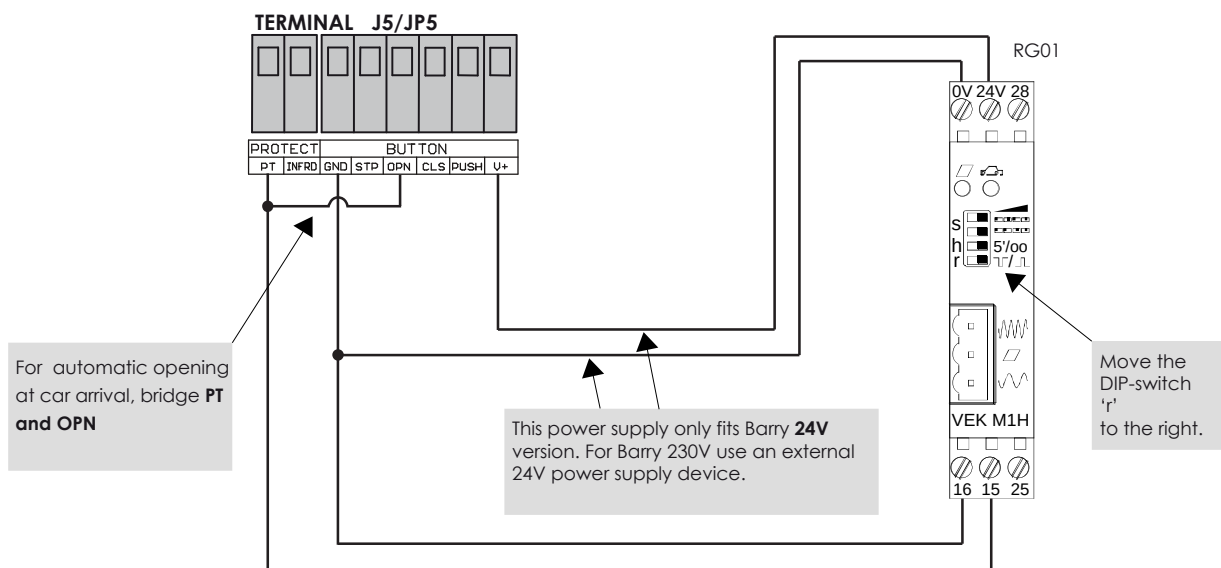
11.1 Safety devices in closing PHOTOCELLS (contact N.C.)

- If the beam is broken during closing, the barrier reverses to opening position.
- If the beam is broken during opening, the barrier keeps on to opening position.



11.2 LOOP DETECTOR (contact N.C.)

- If a car crosses through during closing, the barrier reverses to opening position.
- If a car crosses through during opening, the barrier keeps on to opening position.



The RG01 detector is equipped with both **N.C.** and **N.O.** contacts.

For this application, select N.O. mode, simply moving the DIP-switch 'r' to the right.

Outputs **15** and **16** must be connected to the barrier's controller on **PT** and **GND** respectively.

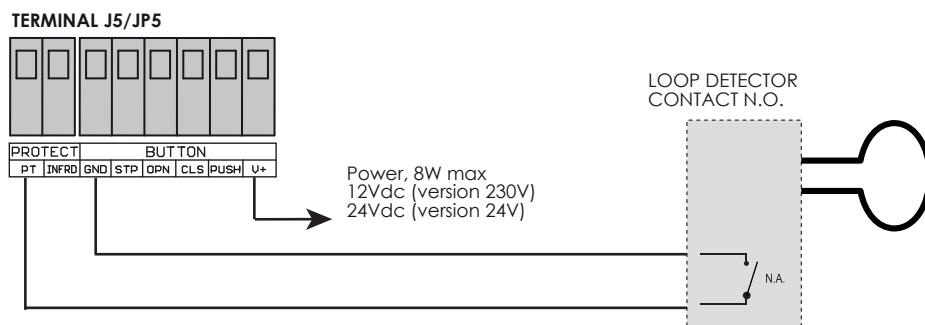
For automatic opening at car arrival, make an additional jumper between **PT** and **OPN**.

The RG01 device requires a 24 volt power supply; to fit it with Barry 230V we recommend to use an external power supply, connected to terminals **0V** and **24V** of the RG01 loop device.

11.3 OTHER TYPES OF MASS RECEIVERS

- If the car stays within the loop area, the barrier remains opened.
- When the car leaves the loop area, the barrier goes to closing position.

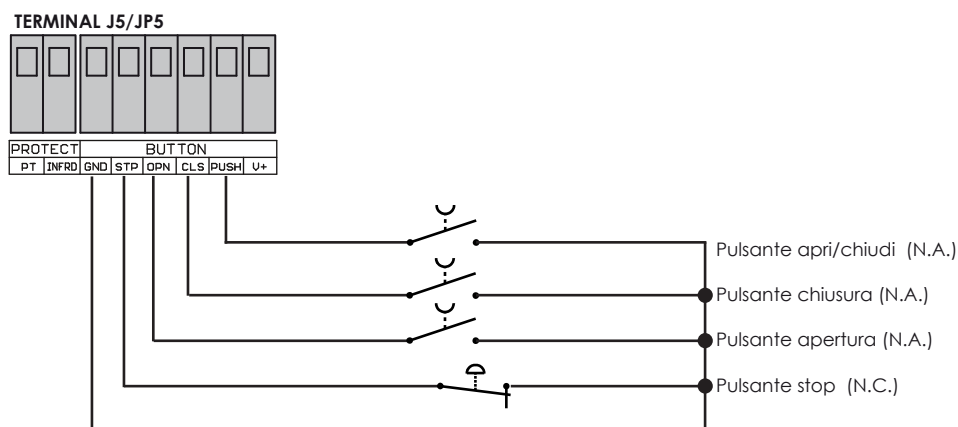
The following illustration shows how to connect a loop detector with N.O. contact



If the loop detector has a N.C. contact, wire it to **INFRD**, as photocells connection does wire. In this case, it is also possible to connect photocells and loop detector in series.

11.4 START COMMANDS

It is possible to wire an IC reader, just connect it to terminals **OPN** and **GND**.



12. RADIO PROGRAMMING

12.1 Transmitter storage

- 1) Press "**LEARN**" (**S5** version 230/115V - **S4** version 24V) and release just when the LED lights up.
- 2) Press the key on the transmitter until the LED turns OFF.
- 3) The transmitter has been duly stored.

It is possible to store additional transmitters following the same procedure.

The radio can store up to 32 different users. Each user can clone unlimited copies.

12.2 Deleting all transmitters

Press "**LEARN**" (**S5** version 230/115V - **S4** version 24V) and release just when the LED turns OFF:

now all transmitters have been deleted.



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