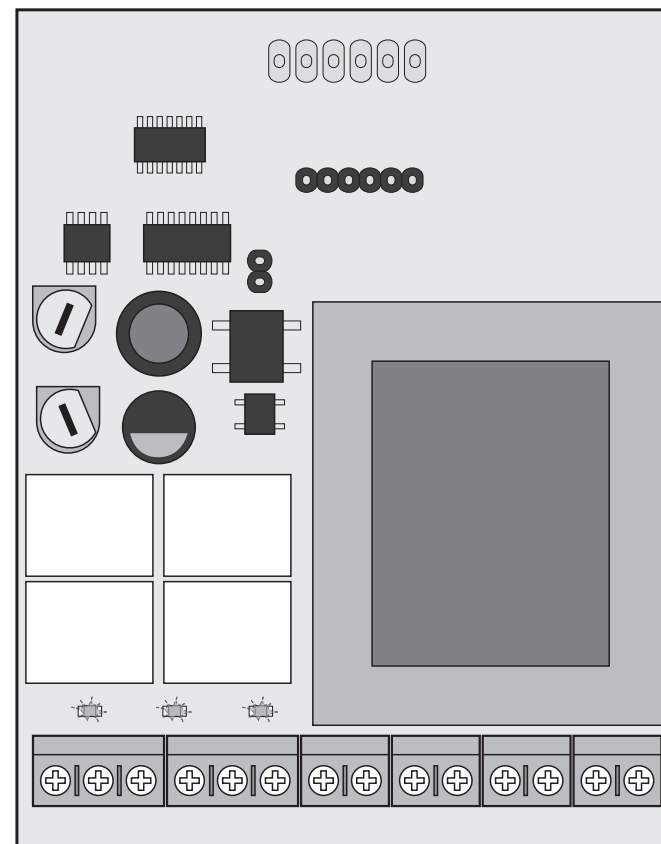




MR-12

USER'S AND INSTALLER'S MANUAL









00. CONTENT

INDEX

| | |
|---|----|
| 01. SAFETY INSTRUCTIONS | |
| STANDARDS TO FOLLOW | 1B |
| 02. CONNECTIONS SCHEME | |
| MR-12 (EXAMPLE OF A CONNECTION WITH IMPULSE FROM ANOTHER CONTROL BOARD OR FITTING RECEIVER) | 4 |
| 03. FUNCTIONING | |
| RECEIVERS | 5A |
| ELECTRIC LOCK APERTURE WITH TRANSMITTER OR IMPULSE | 5B |
| ORDER THROUGH TRANSMITTER OR IMPULSE (COURTESY LIGHT) | 6A |
| ORDER THROUGH TRANSMITTER OR IMPULSE (LOCK) | 6B |
| 8K2 (NC) SAFETY BAND CONTROL | 7A |
| MOTOR WITH UNIVERSAL RECEIVER CONTROL | 7B |

01. SAFETY INSTRUCTIONS

| | |
|---|---|
|  | This product is certified in accordance with European Community (EC) safety standards. |
|  | This product complies with Directive 2011/65/EU of the European Parliament and of the Council, of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment and with Delegated Directive (EU) 2015/863 from Commission. |
|  | (Applicable in countries with recycling systems). This marking on the product or literature indicates that the product and electronic accessories (eg. Charger, USB cable, electronic material, controls, etc.) should not be disposed of as other household waste at the end of its useful life. To avoid possible harm to the environment or human health resulting from the uncontrolled disposal of waste, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Home users should contact the dealer where they purchased this product or the National Environment Agency for details on where and how they can take these items for environmentally safe recycling. Business users should contact their vendor and check the terms and conditions of the purchase agreement. This product and its electronic accessories should not be mixed with other commercial waste. |
|  | This marking indicates that batteries should not be discarded like other household waste at the end of their useful life. Batteries must be delivered to selective collection points for recycling. |
|  | The different types of packaging (cardboard, plastic, etc.) must be subject to selective collection for recycling. Separate packaging and recycle it responsibly. |
|  | This marking indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) are susceptible to electric shock by direct or indirect contact with electricity. Be cautious when handling the product and observe all safety procedures in this manual. |

01. SAFETY INSTRUCTIONS

GENERAL WARNINGS

- This manual contains very important safety and usage information. Read all instructions carefully before beginning the installation/usage procedures and keep this manual in a safe place that it can be consulted whenever necessary.
- This product is intended for use only as described in this manual. Any other enforcement or operation that is not mentioned is expressly prohibited, as it may damage the product and put people at risk causing serious injuries.
- This manual is intended firstly for specialized technicians, and does not invalidate the user's responsibility to read the "User Norms" section in order to ensure the correct functioning of the product.
- The installation and repair of this product may be done by qualified and specialized technicians, to assure every procedure are carried out in accordance with applicable rules and norms. Nonprofessional and inexperienced users are expressly prohibited of taking any action, unless explicitly requested by specialized technicians to do so.
- Installations must be frequently inspected for unbalance and the wear signals of the cables, springs, hinges, wheels, supports and other mechanical assembly parts.
- Do not use the product if it is necessary repair or adjustment is required.
- When performing maintenance, cleaning and replacement of parts, the product must be disconnected from power supply. Also including any operation that requires opening the product cover.
- The use, cleaning and maintenance of this product may be carried out by any persons aged eight years old and over and persons whose physical, sensorial or mental capacities are lower, or by persons without any knowledge of the product, provided that these are supervision and instructions given by persons with experienced in terms of usage of the product in a safe manner and who understands the risks and dangers involved.

- Children shouldn't play with the product or opening devices to avoid the motorized door or gate from being triggered involuntarily.
- If the power cable is damaged, it must be replaced by the manufacturer, after-sales service or similarly qualified personnel to avoid danger.
- The device must be disconnected from the electrical network when removing the battery.
- Ensure that blocking is avoided between the actuated part and its fixed parts due to the opening movement of the actuated part.

WARNINGS FOR TECHNICIANS

- Before beginning the installation procedures, make sure that you have all the devices and materials necessary to complete the installation of the product.
- You should note your Protection Index (IP) and operating temperature to ensure that is suitable for the installation site.
- Provide the manual of the product to the user and let them know how to handle it in an emergency.
- If the automatism is installed on a gate with a pedestrian door, a door locking mechanism must be installed while the gate is in motion.
- Do not install the product "upside down" or supported by elements do not support its weight. If necessary, add brackets at strategic points to ensure the safety of the automatism.
- Do not install the product in explosive site.
- Safety devices must protect the possible crushing, cutting, transport and danger areas of the motorized door or gate.
- Verify that the elements to be automated (gates, door, windows, blinds, etc.) are in perfect function, aligned and level. Also verify if the necessary mechanical stops are in the appropriate places.
- The control board must be installed on a safe place of any fluid (rain, moisture, etc.), dust and pests.
- You must route the various electrical cables through protective tubes, to protect them against mechanical exertions, essentially on

01. SAFETY INSTRUCTIONS

the power supply cable. Please note that all the cables must enter the control board from the bottom.

- If the automatism is to be installed at a height of more than 2,5m from the ground or other level of access, the minimum safety and health requirements for the use of work equipment workers at the work of Directive 2009/104/CE of European Parliament and of the Council of 16 September 2009.
- Attach the permanent label for the manual release as close as possible to the release mechanism.
- Disconnect means, such as a switch or circuit breaker on the electrical panel, must be provided on the product's fixed power supply leads in accordance with the installation rules.
- If the product to be installed requires power supply of 230Vac or 110Vac, ensure that connection is to an electrical panel with ground connection.
- The product is only powered by low voltage safety with control board (only at 24V motors).
- Parts/products weighing more than 20 kg must be handled with special care due to the risk of injury. It is recommended to use suitable auxiliary systems for moving or lifting heavy objects.
- Pay special attention to the danger of falling objects or uncontrolled movement of doors/gates during the installation or operation of this product.

WARNINGS FOR USERS

- Keep this manual in a safe place to be consulted whenever necessary.
- If the product has contact with fluids without being prepared, it must immediately disconnect from the power supply to avoid short circuits, and consult a specialized technician.
- Ensure that technician has provided you the product manual and informed you how to handle the product in an emergency.
- If the system requires any repair or modification, unlock the automatism, turn off the power and do not use it until all safety

conditions have been met.

- In the event of tripping of circuits breakers or fuse failure, locate the malfunction and solve it before resetting the circuit breaker or replacing the fuse. If the malfunction is not repairable by consult this manual, contact a technician.
- Keep the operation area of the motorized gate free while the gate in in motion, and do not create strength to the gate movement.
- Do not perform any operation on mechanical elements or hinges if the product is in motion.

RESPONSABILITY

- Supplier disclaims any liability if:
 - Product failure or deformation result from improper installation use or maintenance!
 - Safety norms are not followed in the installation, use and maintenance of the product.
 - Instructions in this manual are not followed.
 - Damaged is caused by unauthorized modifications
 - In these cases, the warranty is voided.

MOTORLINE ELECTROCELOS SA.

Travessa do Sobreiro, nº29
4755-474 Rio Côvo (Santa Eugénia)
Barcelos, Portugal

SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information



• Buttons information

02. CONNECTIONS SCHEME

MR-12 (EXAMPLE OF A CONNECTION WITH IMPULSE FROM ANOTHER CONTROL BOARD OR FITTING RECEIVER)

This control board is designed to simplify some installations:

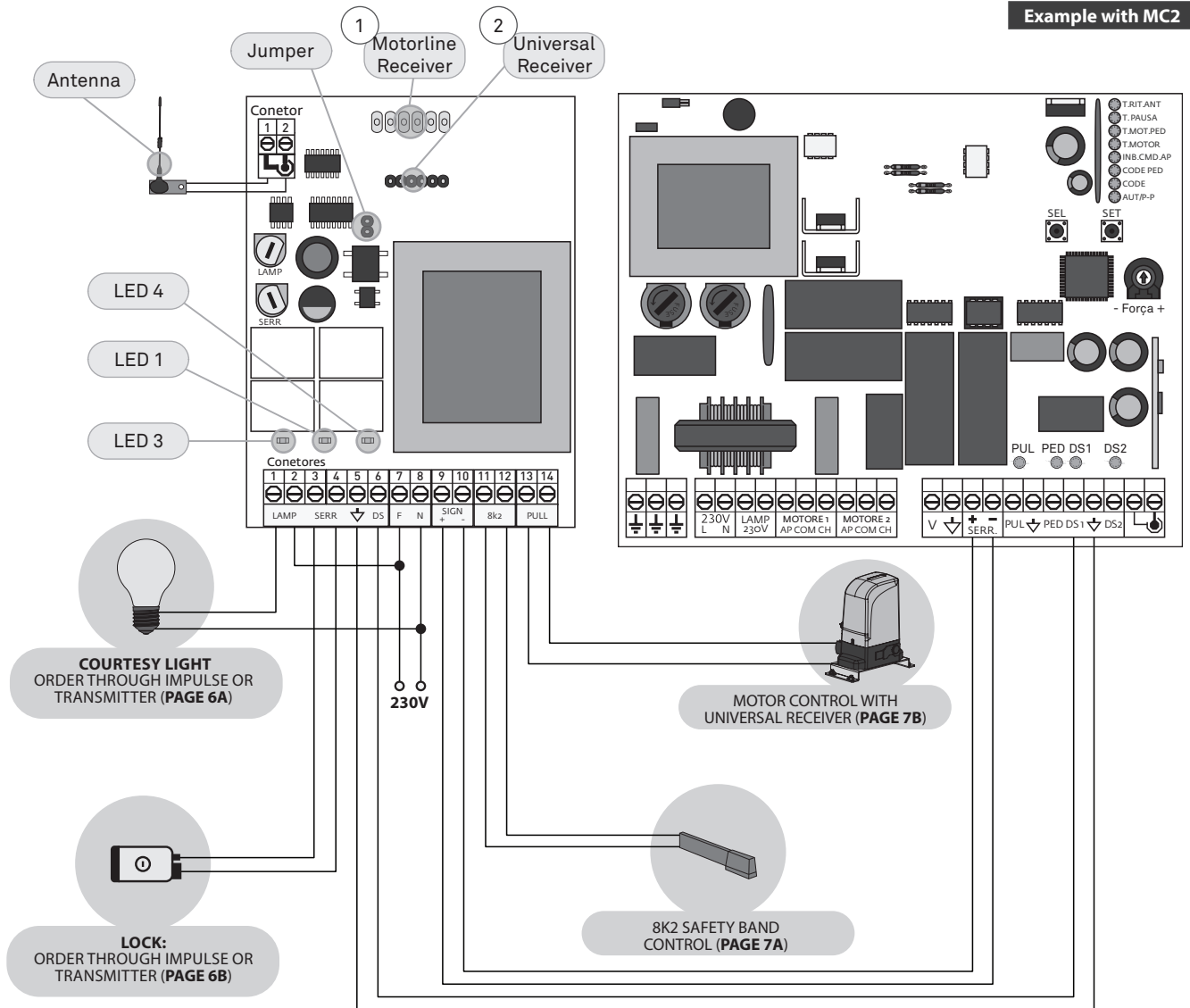
- Extension of electric lock impulse (from MC2).
- Changing the safety bands contact from 8K2 to NC.
- Enable timed or bistable courtesy light, by radio frequency or impulse in contact 9-10.
- Enable with timing a 12 VDC lock, by radio frequency or impulse in contact 9-10.
- Application of universal receiver to emit an impulse to a new control board.

| MR-12 Connectors | 1 | LAMP | Courtesy light output - 3Amp max. |
|------------------|----|----------|---|
| | 8 | SERR | 12V Electric lock output (500mA max) |
| | 3 | DS | Photocells output (NC dry contact when installed 8K2 safety band) |
| | 4 | F | 230V Power supply |
| | 5 | N | |
| | 6 | SIGN + - | 12V to 36V impulse input |
| | 7 | 8K2 | Resistive input for 8K2 security bands |
| | 8 | PULL | Dry contact (NO) for new automation |
| | 9 | | |
| | 10 | | |
| | 11 | | |
| | 12 | | |
| | 13 | | |
| | 14 | | |

LED 1 When lit it indicates that the lock is to be activated.

LED 3 When lit it indicates that the courtesy light is on.

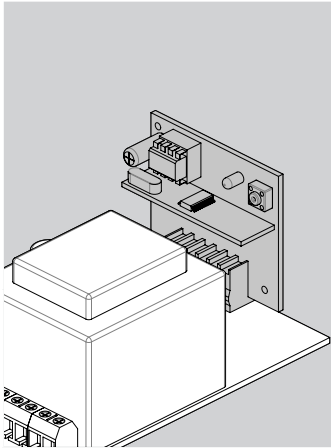
LED 4 When lit it indicates that the circuit is closed.



03. FUNCTIONING

RECEIVERS

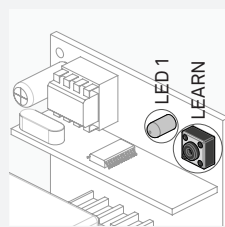
1 MR-10 receiver placement



The **MR-10 receiver** can store **30 transmitters**.

To add a new transmitter:

- 01** • Press the **LEARN** key.
- 02** • The **LED 1** will flash.
- 03** • Press the transmitter key you want to memorize.
- 04** • **LED 1** stops flashing and the command is saved.

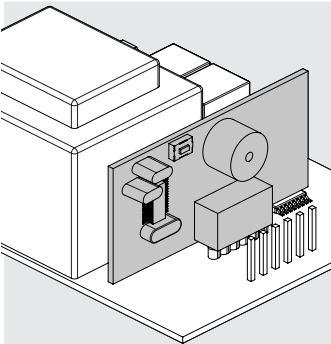


RESET: press the **LEARN** key for 10 seconds.

The **LED 1** will stop flashing, all transmitters have been deleted.

MR-12 with MR-10 receiver installed and programmed - When triggered, the receiver always sends a NC start through a **PULL** contact. If you want a receiver to turn on the light or trigger the lock, place a jumper.

2 Universal receiver placement



MR-12 with universal receiver - When triggered, the receiver always sends a NC start through a **PULL** contact. If you want a receiver to turn on the light or trigger the lock, place a jumper.

According to what you intended, choose a functioning option on the following pages.

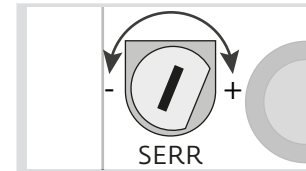
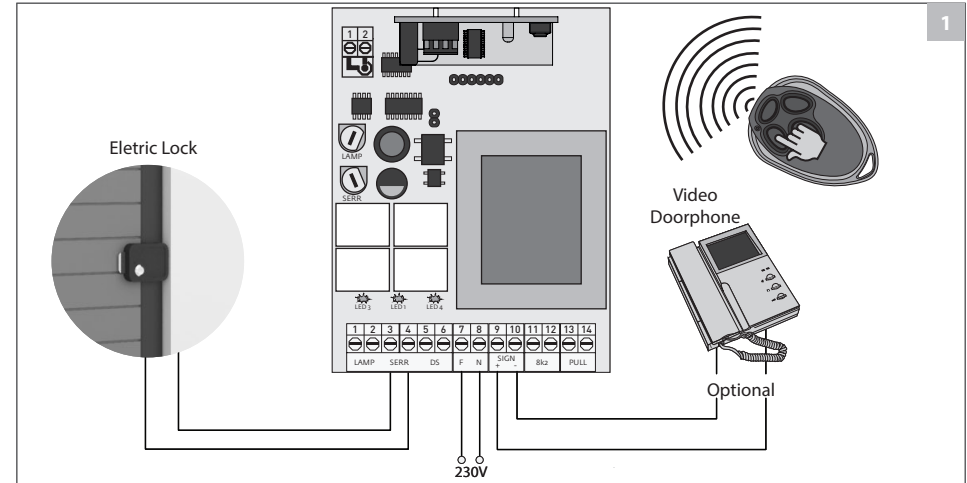
- MR-12 for courtesy light functioning, may be ordered through the receiver (place the jumper) or impulse from 9-10 connector from 12 to 36V.

- MR-12 can perform all functions at the same time (img 2, 3, 4 and 5 on the following pages).

When the courtesy light output is programmed as bistable, the lock functioning is excluded (img 3).

03. FUNCTIONING

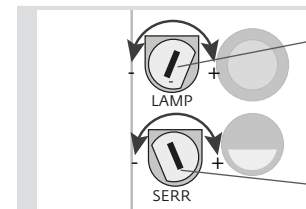
ELECTRIC LOCK APERTURE WITH TRANSMITTER OR IMPULSE



Increases the time, the inverse decreases it.

Example:

With the NR-12 can open the door lock, using one command. When you have a video door phone with output 12 / 24V for lock, it is possible to connect a MR-12, thus doing the opening of the lock with the transmitter and the video door phone. It is also possible to program a keyboard (TEC 1).



It is only adjusted for the courtesy light (**approximately maximum 4 minutes**).

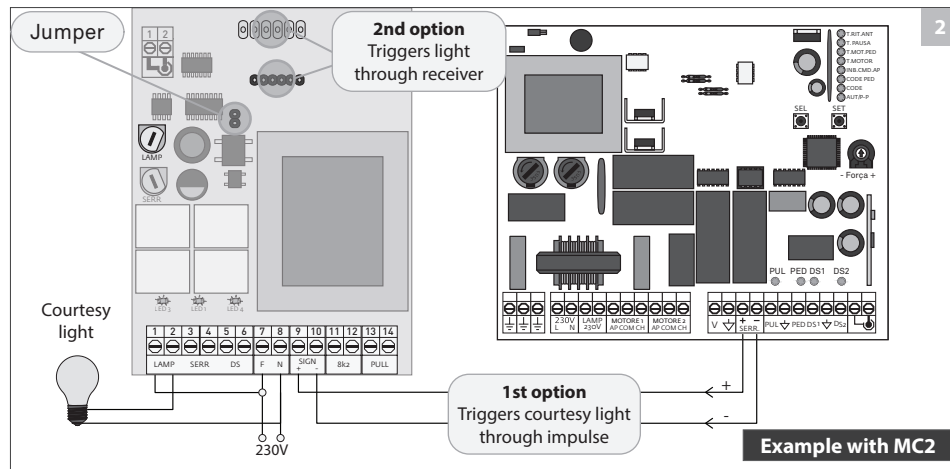
Adjust to the desired lock time (**maximum 7 seconds**).



The **LED 1** lights up when the lock is activated

03. FUNCTIONING

ORDER THROUGH TRANSMITTER OR IMPULSE (COURTESY LIGHT)



Rotating in the clockwise direction increases the time, the inverse decreases it. It is possible to adjust this potentiometer to a maximum time of 4 minutes approximately. The light will light up when it receives an order and will turn off automatically when it reaches the programmed time.

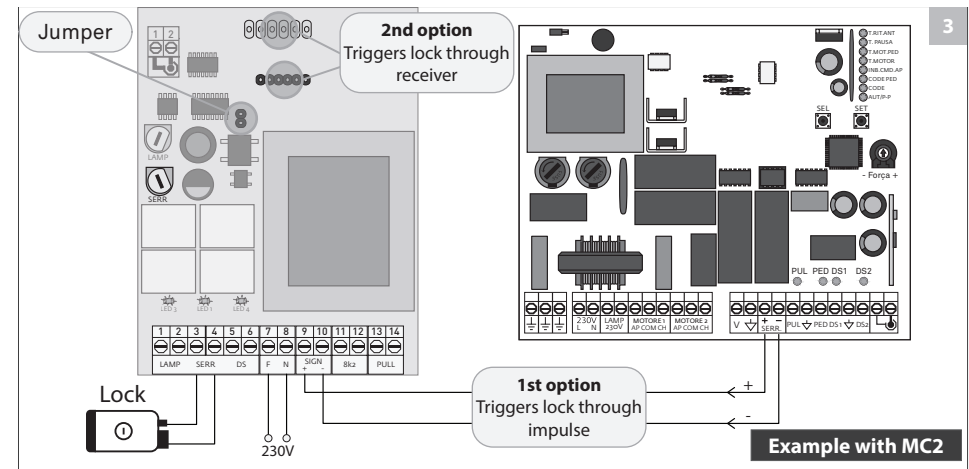
Bistable mode: rotate the **LAMP** potentiometer to the maximum and **SERR** to the minimum (as the picture shows). The light will turn on when you press the transmitter key or send an order through impulse and will only turn off when receives another order.

! With the bistable function, only operates the **LAMP** output.

The **LED 3** remains lit when the courtesy light is on.

03. FUNCTIONING

ORDER THROUGH TRANSMITTER OR IMPULSE (LOCK)



Rotating in the clockwise direction increases the time, the inverse decreases it.

Example:

The impulse time given by **MC2** for opening the lock may not be enough for certain types of locks. In this way the **MR-12** is prepared, when connected to the **MC2** (see figure above) to define itself the lock impulse time through its potentiometer for a maximum of 7 seconds.


It is only adjusted for the courtesy light.

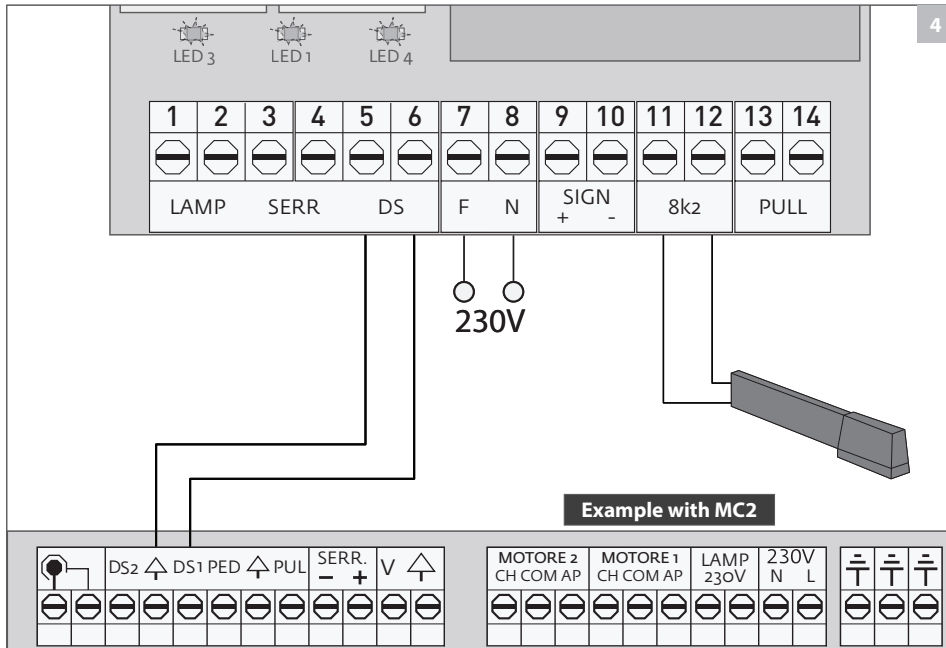
Adjust to the desired lock time (maximum 7 seconds).

The **LED 1** lights up when the lock is activated

03. FUNCTIONING

8K2 (NC) SAFETY BAND CONTROL

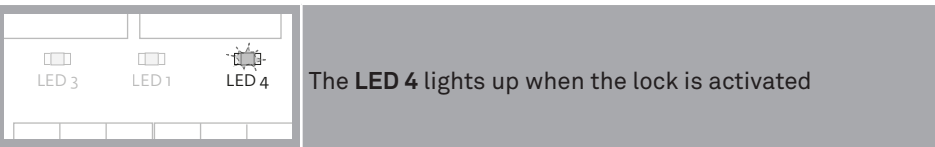
 In this function, it is not needed to adjust the potentiometer.



Some control boards (for example, MC2) are not prepared to receive 8K2 resistive type security bands. The use of MR-12 enables the connection of 8K2 resistive type safety bands and transforms it into NC contact.

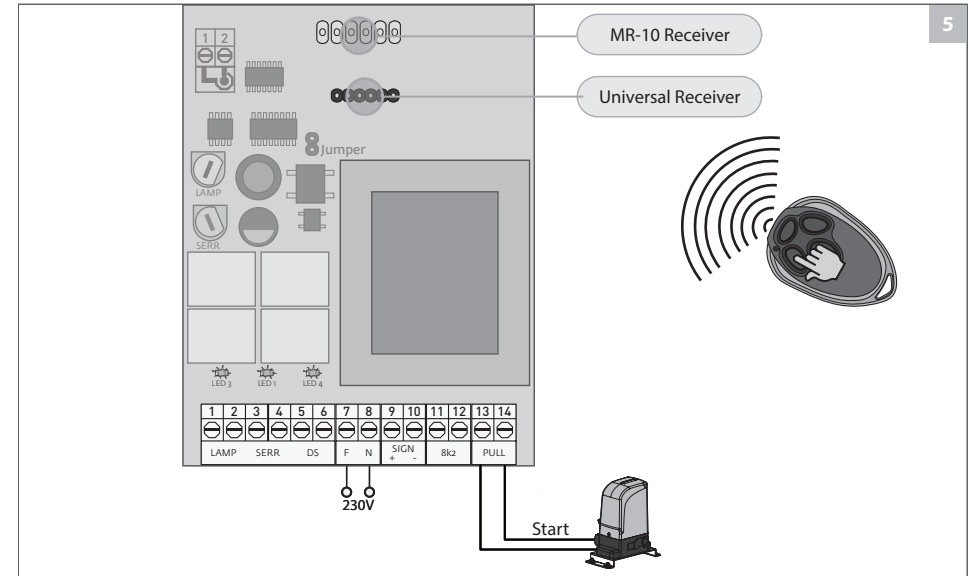
The safety band is connected in the MR-12's 8K2 input and the MR-12's DS output connects with the automatism's control board in the same connections of, for example, the photocells.

When 8K2 is triggered, it is transformed into NC contact.



03. FUNCTIONING

MOTOR WITH UNIVERSAL RECEIVER CONTROL



In case of having a universal receiver with external memory, it is possible to connect directly to a new Motorline control board, using the MR-12 interface as interconnection..