



# MA115

## INSTALLER AND USER'S MANUAL








# 00. CONTENT

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# 01. SAFETY INSTRUCTIONS

	This product is certified in accordance with European Community (EC) safety standards.
<b>RoHS</b>	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.**

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Barcelos, Portugal

## SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information



• Buttons information

## 02. PRODUCT

### MA115 AND MB3

The **MA115** is a long-range RFID antenna, designed to work as a vehicle or even a personal access control, provided it is accompanied with an **MB3** programmed for that antenna.

The **MB3** is an RFID tag with adhesive that can be attached to the car's windscreen, forklift, or personal belongings (eg purse or mobile phone).



It only works connected to the MCA01 / 02 control board or to an access control device with built-in relay (eg MLB1).

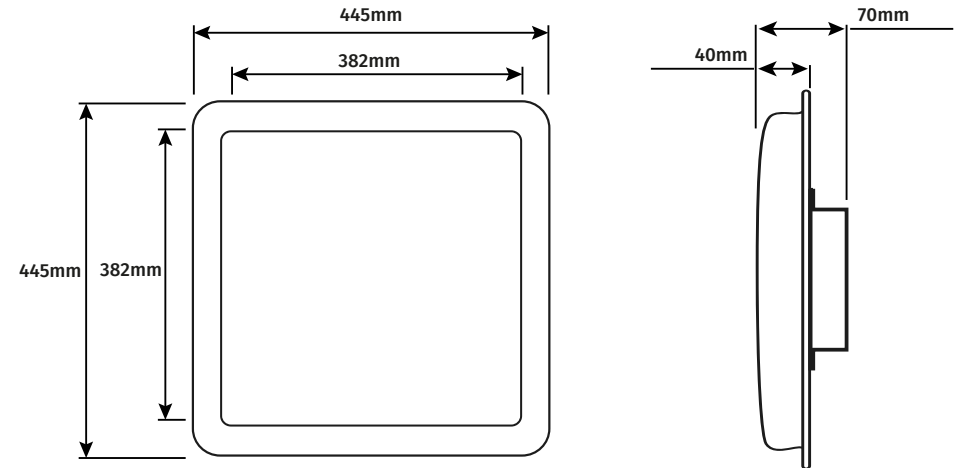
### TECHNICAL CHARACTERISTICS

	MA115 Technical Data
• Working frequency	US: 902–928 MHz (America) CH: 920–925 MHz (China) EU: 865–868 MHz (Europe)
• Working voltage	12Vdc
• Reading distance	5-15m (adjustable)
• Protocols	MA3 MOTORLINE, ISO18000-6B, (EPC GEN2)
• Environment temperature	-25~55° C
• Environment humidity	20% ~ 95% (IP54)
• Power	2.4W standby 14W TAG reading: 14W
• Antenna	8dB to 12dBi
• Interface	Wiegand26-bit, Wiegand34-bit
• Signal power	0 ~ 30dBm (adjustable)
• Reading Sensitivity	Dual polarization reading
• Working indication	Alarm and LED

## 02. PRODUCT

### TECHNICAL CHARACTERISTICS

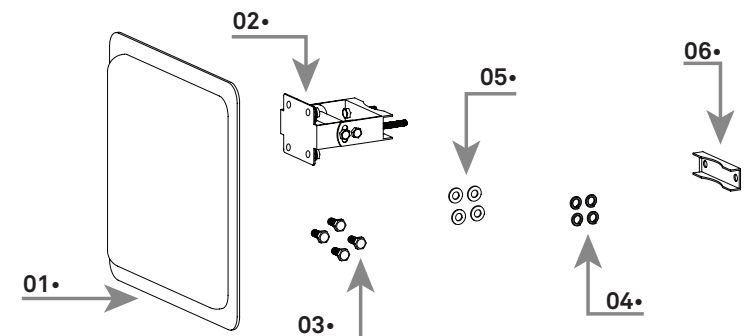
The dimensions of the MA115 are as follows:



### PACKING

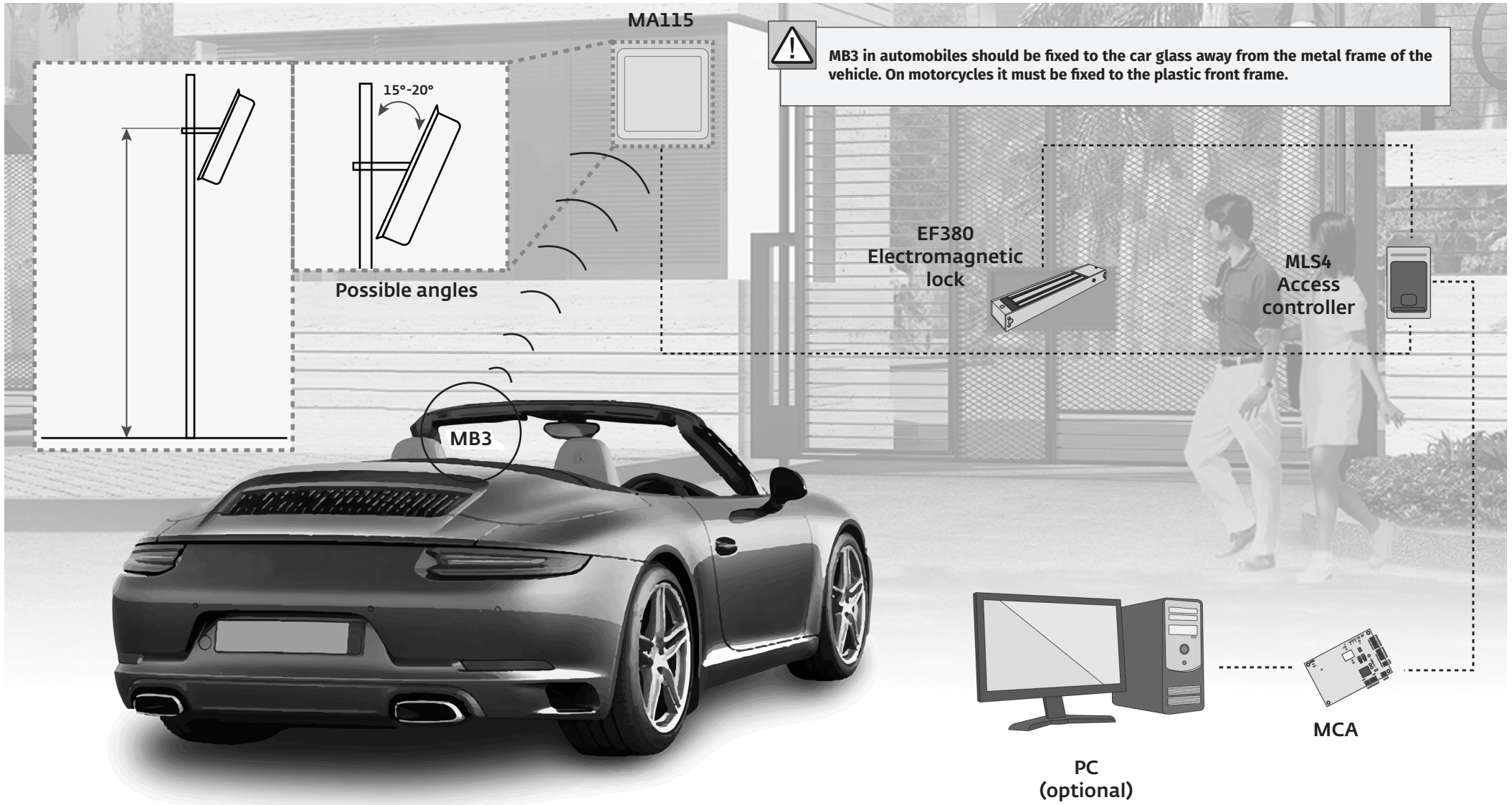
In the kit you will find these components:

- 01• 01 MA115
- 02• 01 Fixing bracket
- 03• 04 Screws DIN933 M8x20
- 04• 04 Power rammers DIN127 M8
- 05• 04 Washers DIN125 M8
- 06• 01 Wall bracket



# 04. INSTALLATION MAP

## INSTALLATION GUIDE





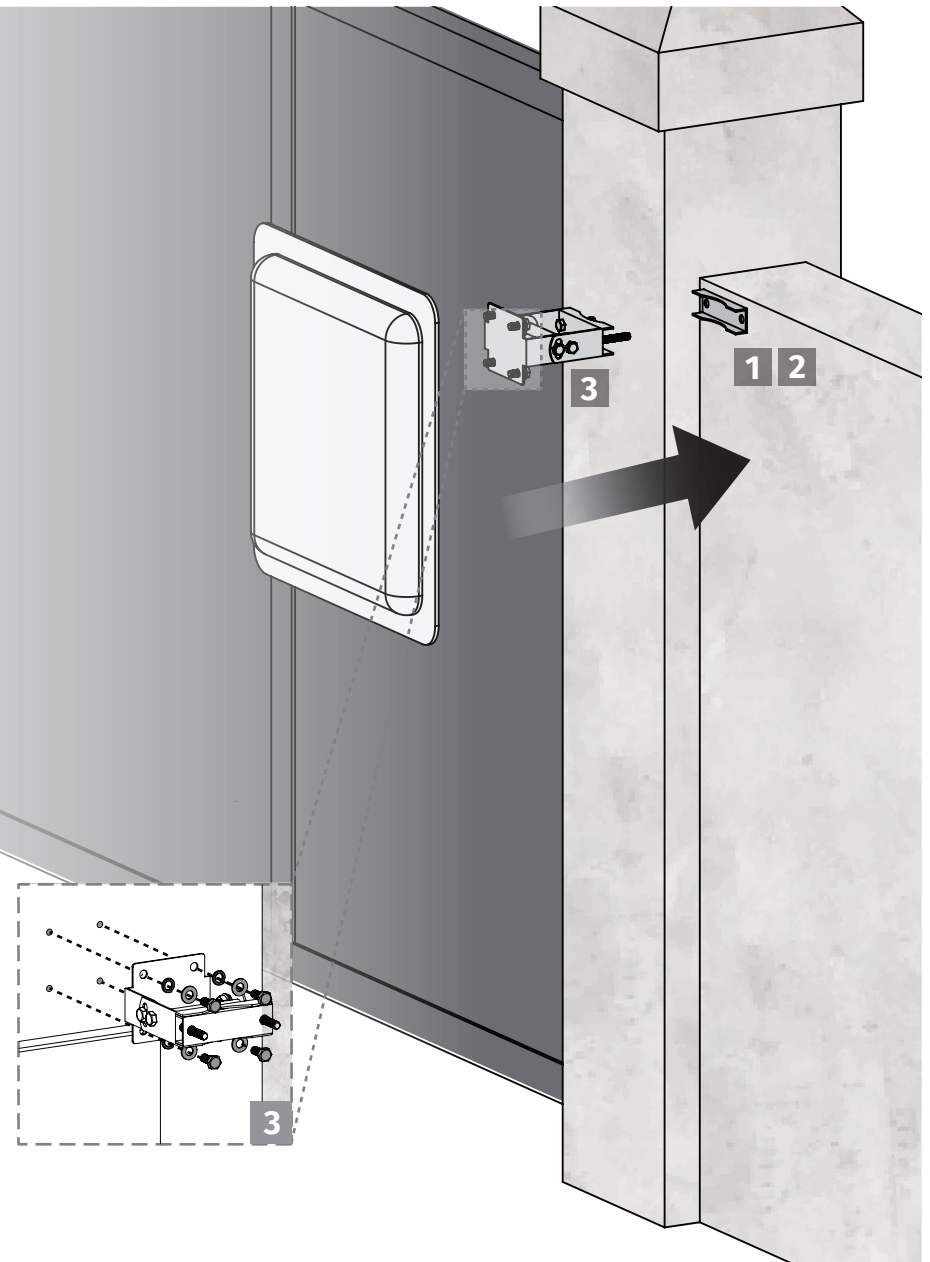
## 03. INSTALLATION

### STEPS TO FOLLOW

- 1 MARKING THE HOLES**  
Position the wall bracket at the desired installation location between a height of 1.5m and 2m.
- 2 DRILL HOLES**  
Drill holes. Replace the wall bracket and attach the two brackets to the wall through the bracket.
- 3 FIX THE ANTENNA**  
Attach the antenna to the fixing bracket with the four screws, force rings and washers successively, provided in the kit
- 4 POSITION THE ANTENNA**  
Position the antenna at the angle that is most convenient for you to read the MB3.
- 5 CONNECTING ANTENNA**  
Connect the antenna to the MCA, the USB cable to the computer and the power supply according to the diagrams on the following pages.

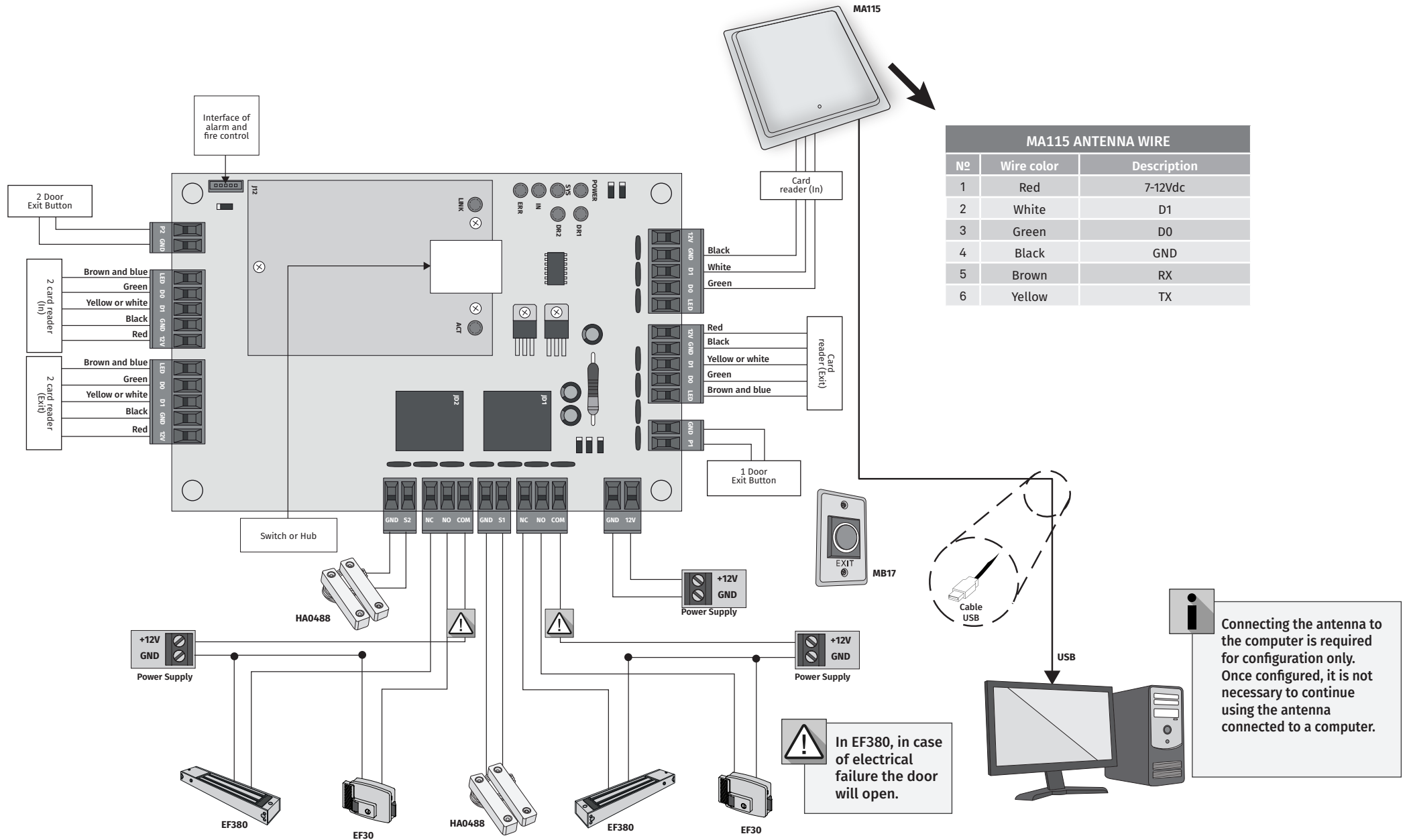


The same antenna can not be used for entrances and exits. You will need to get an antenna for each effect.



# 04. CONNECTIONS

## CONNECTION SCHEME



MA115 ANTENNA WIRE		
Nº	Wire color	Description
1	Red	7-12Vdc
2	White	D1
3	Green	D0
4	Black	GND
5	Brown	RX
6	Yellow	TX



# 05. PROGRAMMING

## INITIAL SETTING

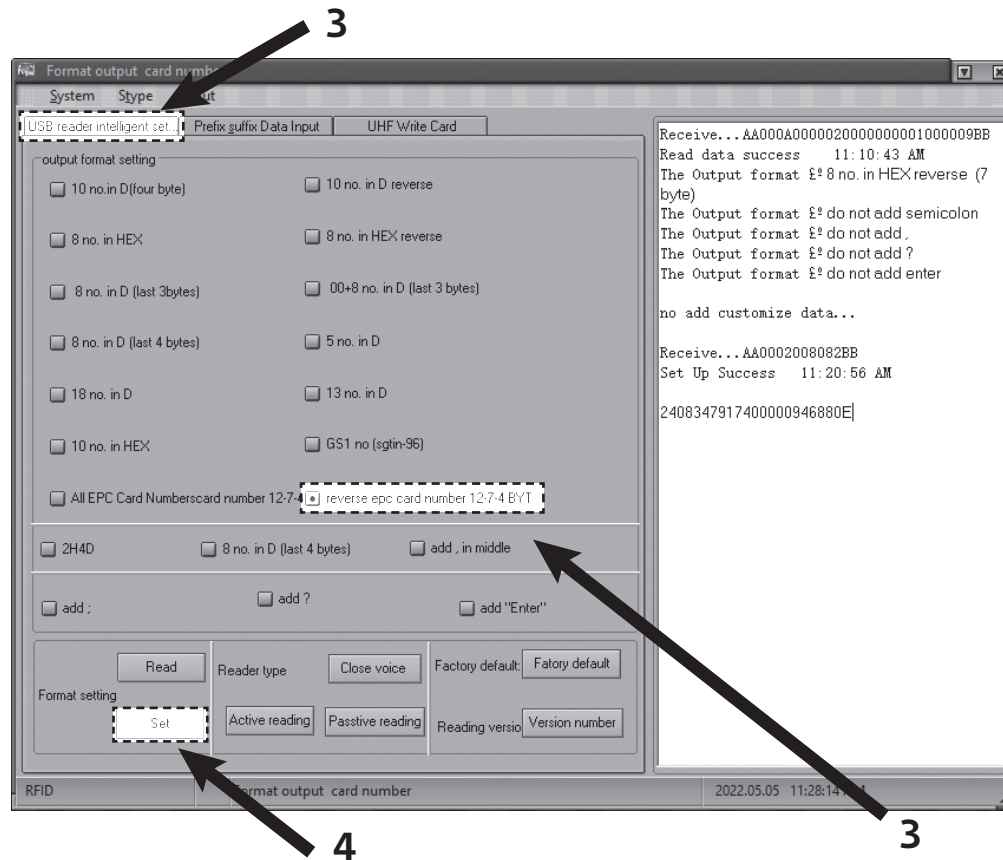
When using the device for the first time, you must program it:

- 1 • Connect the antenna to the computer using the **USB** cable.



**Attention: before connecting the USB cable to the computer, disconnect the antenna from the MCA. When setup is complete, disconnect the USB cable and reconnect to the MCA.**

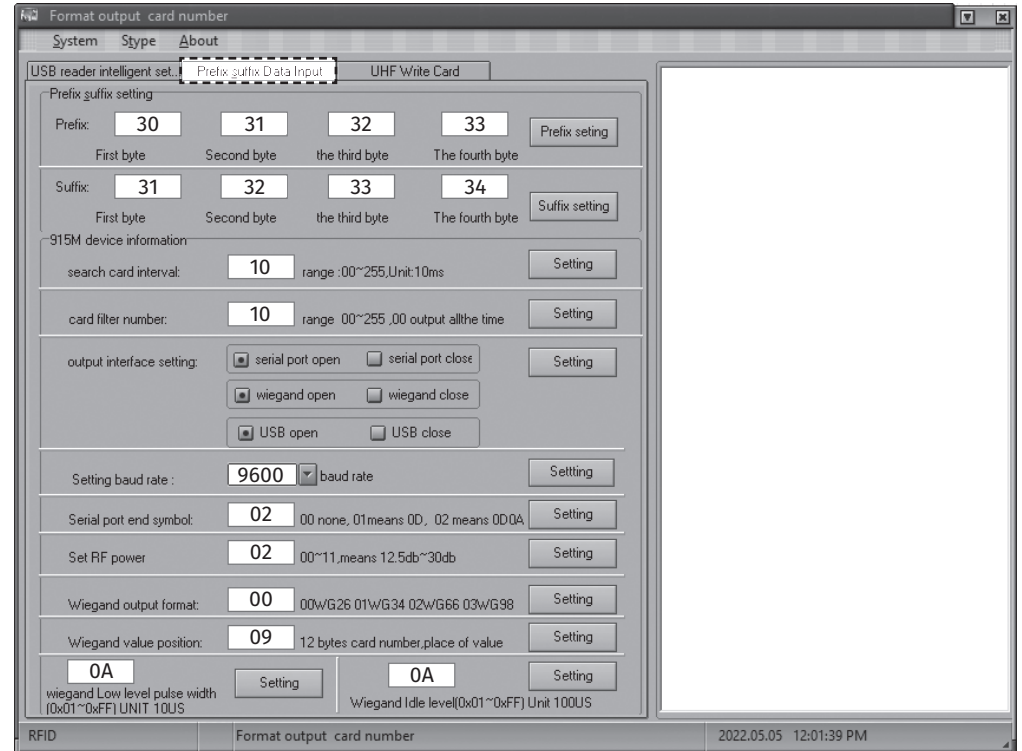
- 2 • Download the software and install.
- 3 • On the **USB reader intelligent set** tab, select the option **reverse epc card number 12-7-4 BYT**.
- 4 • Click **Set** to send the information to the antenna and confirm.



# 05. PROGRAMMING

## INITIAL SETTING

- 5 • On the **Prefix suffix Data Input** tab, the values must remain unchanged as shown in the image.

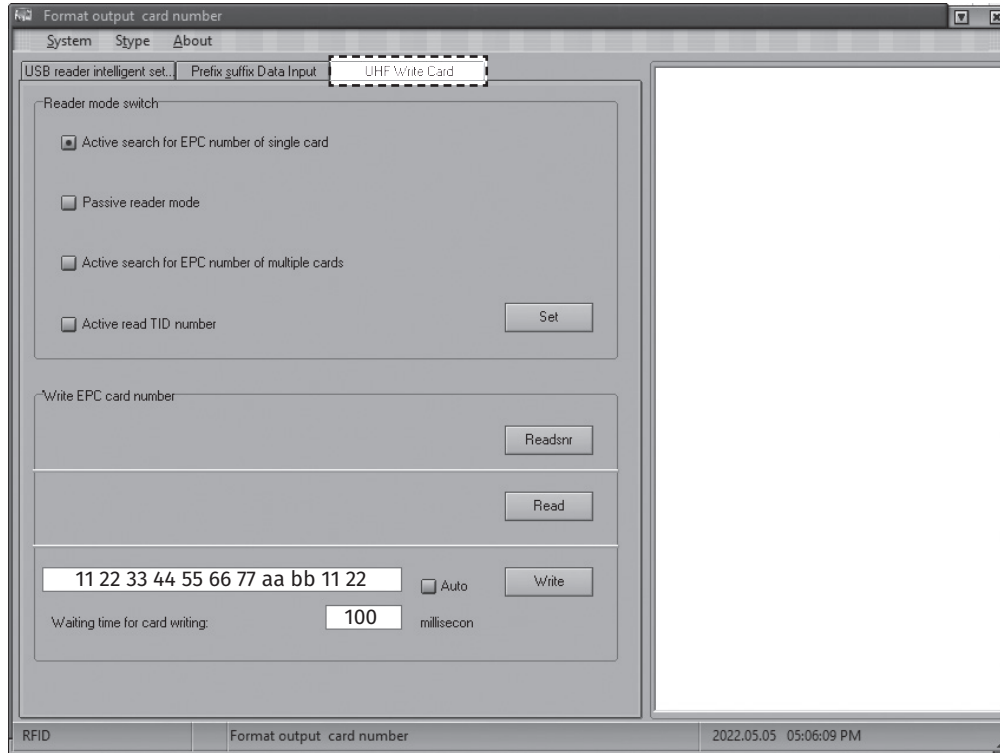


**Any alteration of these values in the table may disturb the normal functioning of the antenna. Check the values or contact a Motorline technician to reset the values.**

# 05. PROGRAMMING

## INITIAL SETTING

6 • In the **UHF Write Card** tab, the values must remain unchanged according to the image.



**Any alteration of these values in the table may disturb the normal functioning of the antenna. Check the values or contact a Motorline technician to reset the values.**