



EKSELANS BY ITS

# USER MANUAL

**CCA+**  
370005

ACCESS CONTROLLER

V06

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## Overview.

The access controller, CCA+, allows the opening of all types of door openers once an authorized RFID card has been read. The reading is performed by an external reader connected to the controller (Ref. LCA). The controller is compatible with various input supply voltages and allows you to control the passage of the voltage that feeds the current lock or use the controller's own power to power the lock. Thanks to all these compatibilities, the controller can be coupled to existing systems or installed in new scenarios.

The programming of user cards can be done by using other cards (called the acquisition master and the retirement master). Master cards make it easy to register users.

There is no distinction between cards except their programming; For example, a master card could be programmed as a user card. As explained below, it is important to properly identify each user card with an identifier number.

Key features:

- It allows several types of locks (AC/DC) to be powered by the voltage that feeds the controller.
- It allows you to control the voltage that feeds the lock from an external source, either AC or DC (dry contact).
- It allows the connection of a button (pushbutton) for instant door opening.
- Users registered on one controller can be cloned, via  $\mu$ SD, on other controllers.
- It supports up to 5000 users.
- Compatible with Wiegand readers.
- You can export and import configurations from a  $\mu$ SD card.

## Accessories.

- 1x Master card to add users (green dot). **If it is not configured, you have to follow the step : [Add MCA \(master card to add\) and MCD \(master card to delete\)](#).**
- 1x Master card to delete users (red dot). **If it is not configured, you have to follow the step : [Add MCA \(master card to add\) and MCD \(master card to delete\)](#).**
- 1x Jumper Setup.
- 1x Protection diode.
- 1x Double-sided sticker.
- 1x 128Mb  $\mu$ SD card.

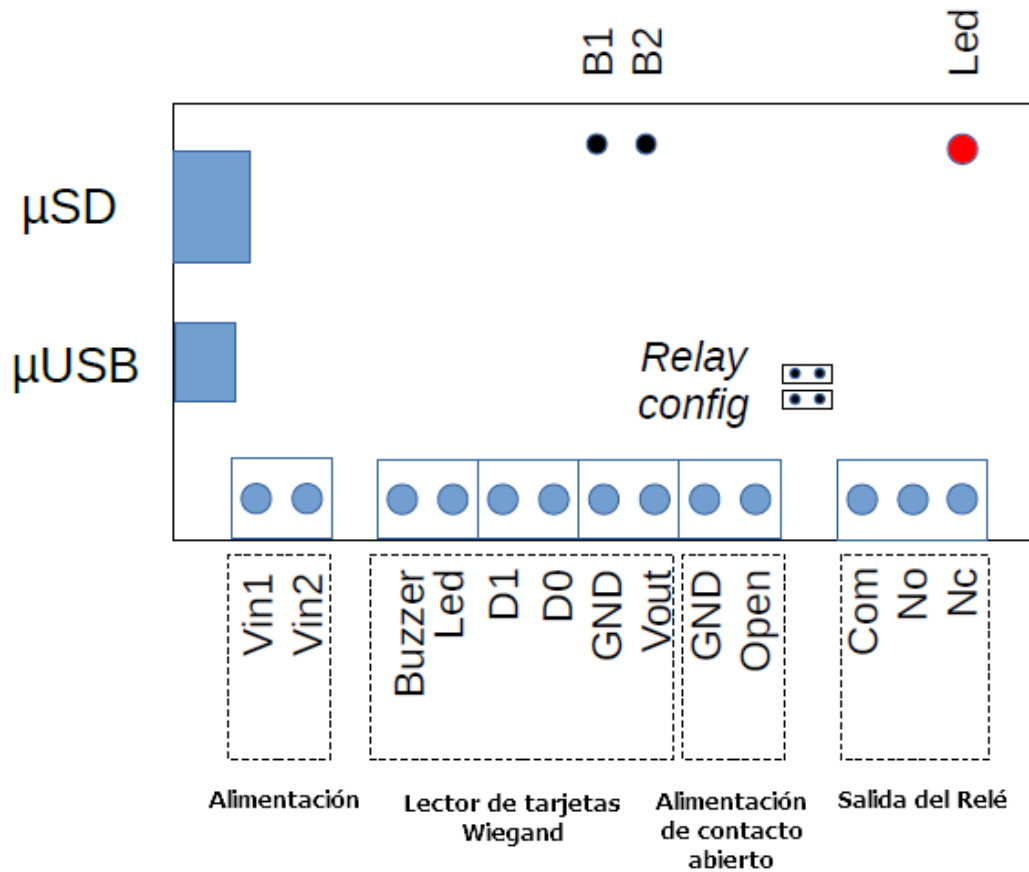
## Steps to install the CCA+:

1. Connecting and configuring the relay. Explained in detail in [Connection](#).
2. Registering MCA and MCD cards: Explained in detail in [Add MCA \(master card to add\) and MCD \(master card to delete\)](#).
3. Add User Cards: Explained in detail in [Adding Users with the MCA](#).

## Connection.

### Connections.

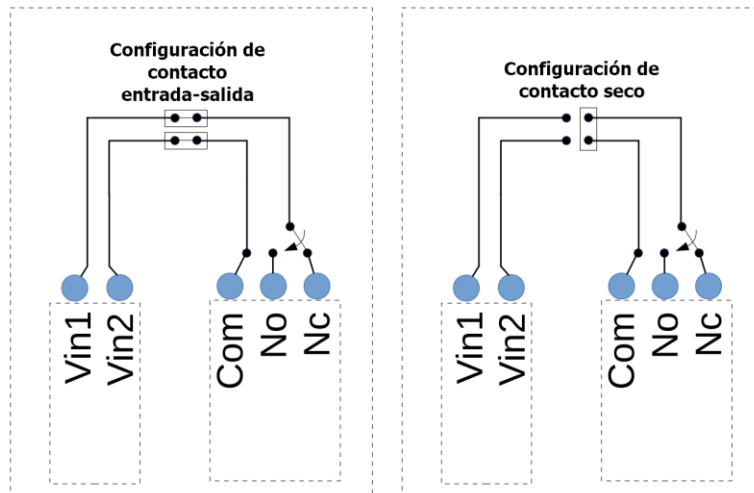
Normally Closed Contact



Señal	Colores LCA	Regletero	Tipo	Descripción
Vin 1		Entrada	Entrada	Entrada Vac o V+(Vdc)
Vin 2			Entrada	Entrada Vac o V-(Vdc)
Buzzer	Amarillo	Lector de tarjetas Wiegand.	Salida	(Zumbador) "beep" que indica lectura
Led	Marrón		Salida	Led indicador de lectura.
D1	Blanco		Entrada	Entrada de datos (0) desde lector.
Do	Verde		Entrada	Entrada de datos (0) desde lector.
GND	Negro		GND	Toma a tierra
Vout	Rojo		Salida	Alimentación DC al lector de tarjetas
GND		Entrada de botón de apertura	GND	Toma a tierra
Open			Entrada	Botón de apertura
Com		Salida del Relé	Salida	Punto común
No			Salida	Contacto normalmente abierto
Nc			Salida	Contacto normalmente cerrado

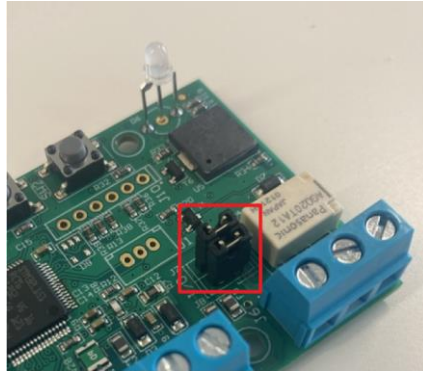
### Configuring the door lock relay.

The CCA+ allows the door lock relay to be operated in two different configurations, which can be configured by connecting a set of jumpers on J7 and J8 connectors.

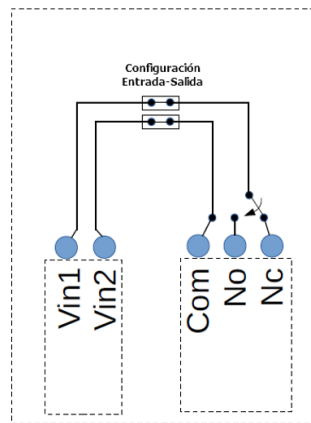


### I/O configuration (default).

With this configuration, the contact output is fed with the same input as the CCA+.



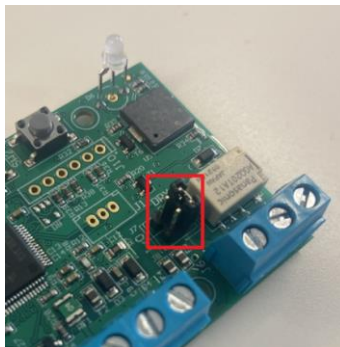
The Jumpers must be connected horizontally, as shown in the following diagram:



**Attention:** Please note that the CCA+ can be powered regardless of the input polarity, but the output Com terminal is connected to the Vin2 input and the No/Nc to the Vin1.

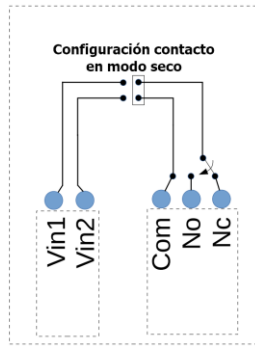
### Contact in dry mode.

This setting allows the relay to be in dry contact mode. **The lock will have to be powered independently.**



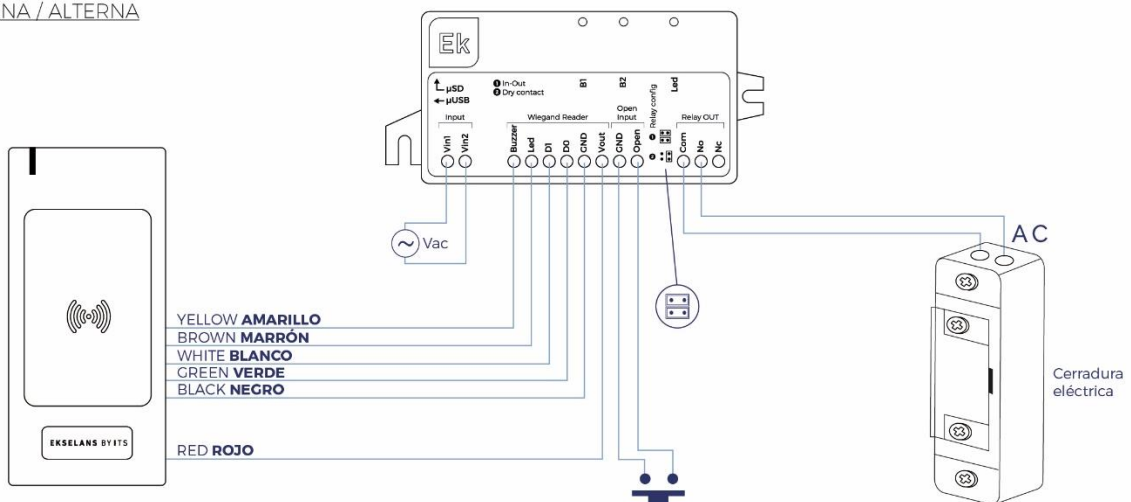
For this configuration, you only have to connect the Jumper in a vertical position as indicated in the

diagram:

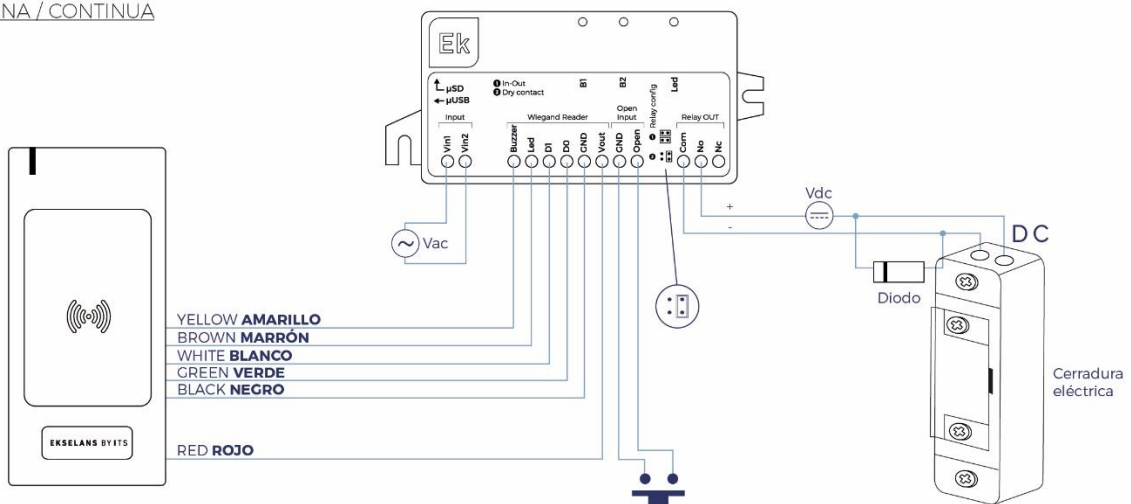


Connection Schemes:

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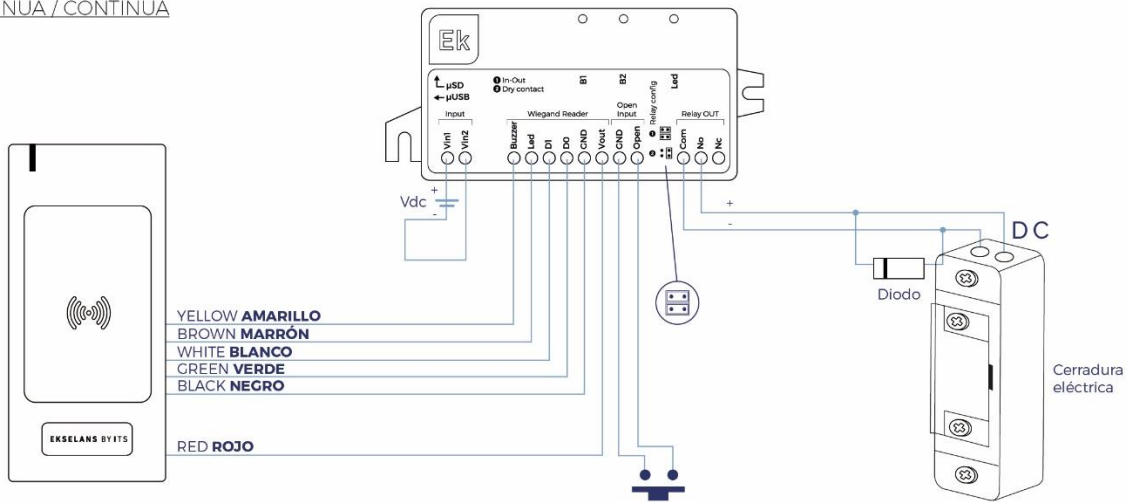


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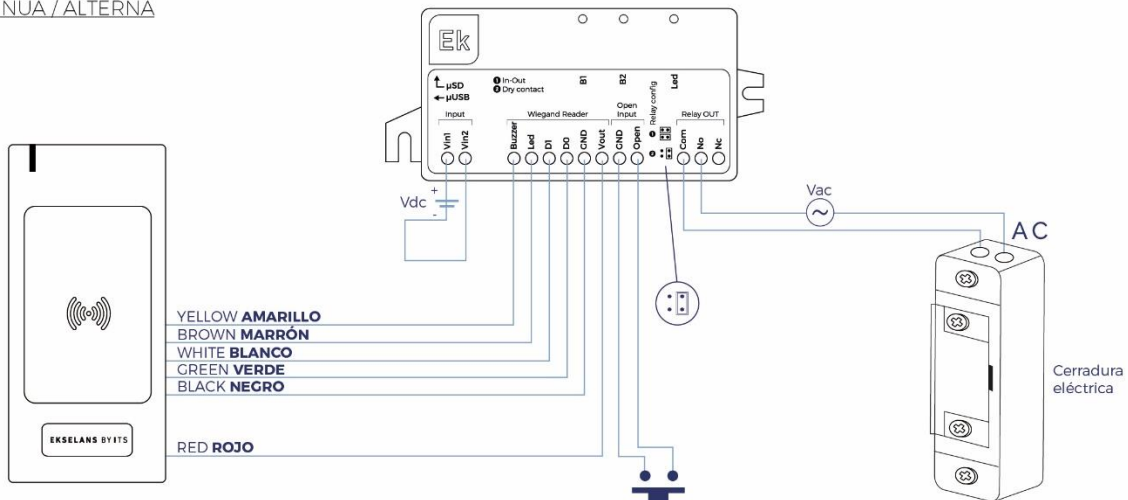




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## Indicators.

### Buzzer.

Depending on the user's actions, the buzzer will produce different beeps:

- 3 long beeps when starting the computer.
- 1 short beep is generated when a button is pressed.
- 3 beeps that are generated whenever an error occurs in the system, for example, when reading an RFID card not saved in the system.
- 1 long beep that is generated when an operation is performed successfully, for example, when SD  $\mu$  files are imported successfully.

### LEDS.

There is a two-color LED (RED and GREEN) that lights up according to the user's actions.

Usually, the RED LED lights up in the normal state waiting for an action and the GREEN LED lights up when the action was successful.

During start-up, both LEDs are ON, providing an orange color.

## USB.

The required USB cable is USB type  $\mu$ . The USB acts as a VCP (Virtual Com Port) and can receive commands from a PC. **It is not usable at the moment.**

## Memory card.

The memory card uses the physical format of the  $\mu$  SD card.

Accepted file system formats are FAT16 and FAT32.

## Bellboy.

There are two buttons, button 1 (B1) and button 2 (B2), which allow for different configuration actions. Most actions require the buttons to be pressed before starting and to hold them down during start-up, until the action is performed. The buttons can then be released.

Outburst

Botón	Acción	Fase
B1	Importa la configuración desde la SD	Arranque
B2	Exporta la configuración a la $\mu$ SD.	Arranque
B1+B2	Reset de fabrica	Arranque

B1+B2

Botón	Acción	Fase
B1	Registra tarjetas MCA y MCD.	Funcionamiento
B2		
LCA Colors		

## Configuration.

### Add MCA (Master Card to Add) and MCD (Master Card to Delete).

- To enter this mode, the user must press the B1 button while the CCA+ is in normal mode. In that case, the buzzer (CCA+ and LCA) will beep long and the RED LED (CCA+) will flash, while the LCA LED will flash green/red.  
The first RFID card will be saved as an MCA. When the first RFID card is read, the system can react in 2 different ways:
  - Successfully save it as MCA: The buzzer (CCA+ and LCA) will beep long and the GREEN LED (CCA+ and LCA) will light up for 2 seconds.
  - Rejected: The buzzer (CCA+ and LCA) will beep 3 short times and the RED LED (CCA+ and LCA) will light up for 2 seconds. This can happen because the card is already saved in the system as an MCA, MCD, or as a regular RFID card.
- After reading the MCA card, the RED LED (CCA+) will flash again waiting for the MCD card.
- The second reading of the RFID card will be saved as MCD. When the second RFID card is read, the system can react in 2 different ways:
  - Successfully save it as (MCD): The buzzer (CCA+ and LCA) will beep long and the GREEN LED (CCA+ and LCA) will light up for 2 seconds.

- Rejected: The buzzer (CCA+ and LCA) will beep 3 short times and the RED LED (CCA+ and LCA) will light up for 2 seconds. This can happen because the card is already saved in the system as an MCA, MCD, or as a regular RFID card (Table 7: UID Table Parameters).
4. After reading the second RFID card, the system will return to normal operation and the buzzer (CCA+ and LCA) will beep long.

If no MCD card is scanned before the setup timeout, only the MCA is saved and the system returns to normal operating mode.

### Add users with the MCA.

1. To access this option, the user must scan the MCA master card. In this case, the doorbell (CCA+ and LCA) will beep long and the RED LED (CCA+) will flash.
2. Pass the card to be added by the reader. When an RFID card is read, the system can react in 2 different ways:
  - It successfully saves it as a valid RFID card in the UID table: the buzzer (CCA+ and LCA) will beep long, and the GREEN LED (CCA+ and LCA) will light up for 2 seconds.
  - Rejected: The buzzer (CCA+ and LCA) will beep 3 short times and the RED LED (CCA+ and LCA) will light up for 2 seconds. This can happen because the card is already saved as an MCA, MCD, or as a regular card.
3. After reading an RFID card, the system will wait for another RFID card and the RED LED (CCA+) will flash.
4. If the MCA card is read again, or the configuration timeout expires, the system will return to normal operating mode and the buzzer (CCA+ and LCA) will beep long.

User cards are stored in the first available position in the table (flash memory).

### Delete users using the MCD.

1. To access this option, the user must scan the MCD master card. In this case, the doorbell (CCA+ and LCA) will beep long and the RED LED (CCA+) will flash.
2. We pass the card to be erased by the reader. When an RFID card is read, the system can react in 2 different ways:
  - You successfully remove it from the UID table: the buzzer (CCA+ and LCA) will beep long, and the GREEN LED (CCA+ and LCA) will light up for 2 seconds.
  - Cannot be removed from the system: The buzzer (CCA+ and LCA) will beep 3 short times and the RED LED (CCA+ and LCA) will light up for 2 seconds. This can happen because the card is already saved as an MCA, MCD, or does not exist in the system.
3. After reading an RFID card, the system will wait for another RFID card and the RED LED (CCA+) will flash.
4. If the MCD card is read again, or the setup timeout expires, the system will return to normal operating mode and the buzzer (CCA+ and LCA) will beep long.

The position of the deleted user card can be used to save another card when adding a new user card (this means that deleting cards will create bubbles in the flash memory).

### Export configuration files to $\mu$ SD card.

1. To export the settings, the CCA+ must be turned off at first. The user then needs to insert a valid  $\mu$ SD card into the CCA+, press the B2 button, and then turn on the CCA+. The configuration files are exported to the  $\mu$  SD card during the boot process. The system can react in 2 different ways:
  - If the export is successful: The buzzer on the (CCA+) will beep long and the GREEN LED (CCA+) will light up for 2 seconds.

- If export fails: The buzzer on the (CCA+) will beep 3 short times and the RED LED (CCA+) will light up for 2 seconds.
3. After exporting files and releasing buttons, the system will go into normal operation mode.

The UID table is exported to the last memory location occupied by a user card. If there are empty positions (bubbles) in the center of the table, the deleted UIDs will appear as "0000000" values. If the  $\mu$  SD card already contains configuration files, they will be overwritten.

### Import configuration files from $\mu$ SD card.

1. To import the settings into the CCA+, the system must be turned off at first. The user then needs to insert a valid  $\mu$ SD card into the CCA+, press the B1 button, and then turn on the CCA+. Configuration files are imported during the startup process.
2. The system can react in 2 different ways:
  1. If the import is successful: The buzzer on the (CCA+) will beep long and the GREEN LED on the (CCA+) will light up for 2 seconds.
  2. If the import fails (one or both files): The buzzer on the (CCA+) will beep 3 short times and the RED LED on the (CCA+) will light up for 2 seconds.
3. After importing files and releasing buttons, the system will go into normal operation mode.

If the import is successful, the current CCA+ settings are removed and replaced with the settings contained in the imported files.

### Restore factory settings.

To perform a factory reset of the CCA+, the system must be turned off. The user must then press the B1 and B2 buttons and then turn on the CCA+. When the factory reset is performed, the buzzer (CCA+) will beep long and the GREEN LED (CCA+) will light up for 2 seconds.

Factory reset will force the CCA+ to load the default settings into non-volatile memory and the UID table will be completely cleared (**so the user cards will be erased**).

### Configuring CCA+ parameters.

The configuration must be exported to a  $\mu$ SD card and **the values can be modified in the file** itself ('Config\_Table.csv').

Hexadecimal value of the MCD

Description	Vin 1	Nota
Entrance	Entrance	Input Vac or V+(Vdc)
Vin 2	ON	Valor 0=OFF valor 1=ON
Entrance	Input Vac or V-(Vdc)	Buzzer
Yellow	Wiegand card reader.	Exit
(Buzzer) "beep" indicating reading	LED	Brown
MCA	Exit	LED reading indicator.
D1	White	Valor Hexadecimal de la MCD

71DD8823\*UID\_Table.csv' file saves the list of authorized cards in the system. An example would be the following table:

Entrance
Data entry (0) from reader.
Do
Green
8D3684F3
Entrance

## Normal working mode.

Normal operation is the standard mode of the CCA+ access controller where when scanning user cards, if the card's UID is stored in the UID table in flash memory, the CCA+ will grant you access. Otherwise, access will be rejected. When the system is turned on, it will enter normal operation. In this mode, the CCA+ and LCA will light up the RED LED while waiting for a card to be read.

## Activation of the relay.

There are 2 ways to activate the relay output on the CCA+ access controller: By scanning an RFID card whose UID is stored in the UID table, or by pressing the OPEN button (shorting the open terminal and the ground).

Reading an RFID card or pressing the OPEN button, when the relay is already active (i.e. the door lock is open), this will keep the relay active and reset the unlock door timer. For example, let's say the door unlock time is set to 5 seconds. If the door is opened with a card, and after 3 seconds another card is successfully read, the door will remain open for a total of 8 seconds.

- Using an RFID card: The CCA+ has been designed to work with the LCA reader, accepting Wiegand formats using 26-bit and 34-bit. When the system reads an RFID card, it can react in two different ways:
  - Activate the relay because the card's UID is stored in the UID table: The buzzer (CCA+ and LCA) will beep long and the GREEN LED (CCA+ and LCA) will light up while the relay is open.
  - It is rejected because the card's UID is not stored in the UID table: the buzzer (CCA+ and LCA) will beep 3 times.
- Pressing the OPEN button: If the user uses the OPEN button (shortening the OPEN terminal to ground), the CCA+ will activate the relay. In addition, the buzzer (CCA+ and LCA) will beep long and the GREEN LED (CCA+ and LCA) will light up while the relay is activated.

## Recommendations.

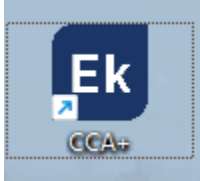
- Ideally, it is recommended not to exceed 20m of cable between LCA and CCA+ with 6x0.25mm<sup>2</sup> cable. A greater distance can lead to a deterioration in the quality of the service.
- Up to three ACLs could be fitted without a problem. By externally feeding the LCAs, more could be included without any problem, always being aware that the risk of data collision is increasing.

## Installing CCA+ Software

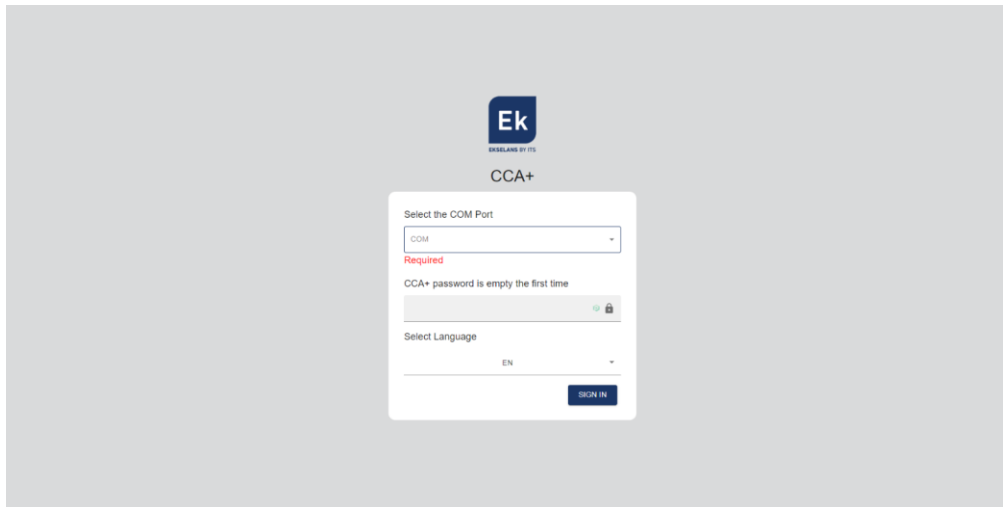
To install the configuration program for your CCA+ click on the following [link](#) or search our website for "SW CCA+".

### First Login

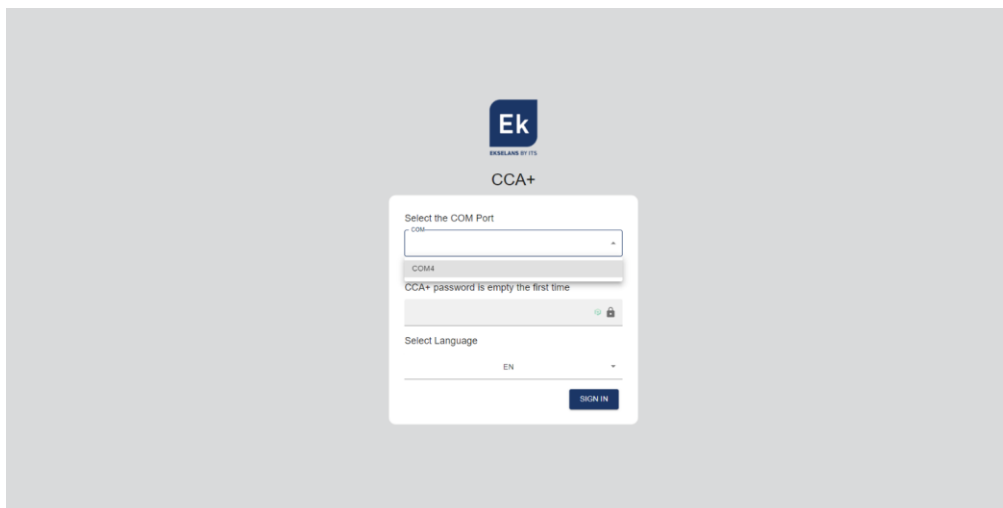
Once you have installed the "CCA+" program and connected the controller via the micro-USB port to your computer, you will see a shortcut on your desktop.



Once opened, your default browser will open with the following URL (<http://localhost:9090/login>)



Select the COM port on which the CCA+ was detected:



And tap SIGN IN.

## CCA+ Software Interface

### Home page

Parametros	Valor
Tipo de Wiegand	0
Zumbador	1
Tiempo de apertura (1-99) segundos	5
Tiempo anti-rebote pulsador (1-5000) milisegundos	50
Tiempo de espera de la configuración (1-99) segundos	10

There are currently two menus on the interface.

**General:** Here you will find all the information about the CEC+. Lock status, number of registered RFID cards, autojoin status, and configuration settings.

**Configuration:** In this section you can configure the Wiegand type, autojoin status, buzzer, opening time, anti-bounce time and waiting time to exit the configurator.

## Configuration

### Parameters

Parameter	Value
Tipo de Wiegand	Auto
Registro Automatico	No
Zumbador	Activated
Tiempo de apertura (1-99) segundos	5
Tiempo anti-rebote pulsador (1-5000) milisegundos	50
Tiempo de espera de la configuracion (1-99) segundos	10

**Wiegand Type:** Section for the selection of Wiegand type. It is recommended to leave it in *the car*.

**Auto-Login:** Selecting settings to enable/disable "auto-join" mode.

**Buzzer:** Enable/disable the CCA+ controller buzzer.

**Opening Time:** Time that the opener will be fed to open.

**Push Button Anti-Bounce Time:** Setting time between opening and opening.

**Configuration Timeout:** Timeout to exit the settings menu.

### Block CCA+

CCA+ PIN (0-9999) ?	0
Bloquear botones CCA+	No

**CCA+ PIN:** If you want to lock the controller, set a lock PIN. To disable the lock, set the PIN to "0".

**Lock CCA+ Buttons:** Settings to lock/unlock physical buttons on the CCA+ controller.



## Autojoin Mode

The "autojoin" mode is used to enable/disable the registration and all cards that are read from the LCA/LCA Mini reader. Once read, it will add this card to the database and open it.

### Case Study:

A controller (CCA/CCA+) fails, it is not possible to dump all memory back into the new CCA+, and all customer cards need to be re-registered. Enable the "autojoin" option for a period of time and warn customers to swipe their cards through the reader. Once the desired cards are registered, disable the "autojoin" mode.

### Activation of the "autojoin" mode using the buttons:

If you want to enable the "autojoin" option, go to the CCA+ and press 4 Button 2 + 1 press Button 1. There needs to be less than 3 seconds between keystrokes, otherwise the CCA+ will consider it an error and the sequence will have to be started again. If the CCA+ is restarted with the button-activated mode, the "autojoin" mode will remain active.

### Disabling "autojoin" mode

To disable the "autojoin" mode, perform 1 press of more than 3 seconds duration on Button 2 on the CCA+

### Activating/deactivating the "autojoin" mode via the CCA+ software:

The screenshot shows the CCA+ configuration software interface. On the left, a sidebar contains menu items: 'Ek CCA+', 'General', and 'Configuración'. An orange arrow labeled '1' points to the 'Configuración' item. The main area is titled 'Configuración' and contains a 'PARAMETROS BLOQUEAR CCA+' section with a 'GUARDAR' button. The configuration table is as follows:

Tipo de Wiegand	Auto
Registro Automatico	No
Zumbador	Activated
Tiempo de apertura (1-99) segundos	5
Tiempo anti-rebote pulsador (1-5000) milisegundos	50
Tiempo de espera de la configuración (1-99) segundos	10

An orange arrow labeled '2' points to the 'Registro Automatico' dropdown menu, which is currently set to 'No'.

The screenshot shows the configuration interface for 'BLOQUEAR CCA+'. The left sidebar contains the 'Ek CCA+' logo and navigation options: 'General' and 'Configuración'. The main content area is titled 'Configuración' and 'BLOQUEAR CCA+'. At the top right, there is a language selector 'ES' and a user profile icon. Below this, there is a 'PARAMETROS' button and a 'GUARDAR' button. A blue circle with the number '3' and a red arrow points to the 'GUARDAR' button. The configuration parameters are as follows:

Parameter	Value
Tipo de Wiegand	Auto
Registro Automatico	Yes (Select YES)
Zumbador	Activated
Tiempo de apertura (1-99) segundos	5
Tiempo anti-rebote pulsador (1-5000) milisegundos	50
Tiempo de espera de la configuración (1-99) segundos	10