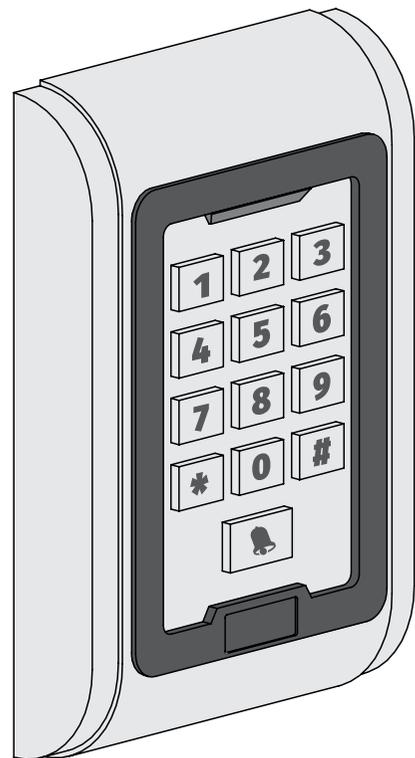




# TEC100

## 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.
	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.

## SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information



• Buttons information

## 02. TEC100

### TECHNICAL CHARACTERISTICS

**TEC100** is a multifunctional access controller by Wiegand keyboard or encoded card reader. It can be installed internally or externally due to its galvanized zinc alloy structure which makes it robust and anti-vandal..

The structured is fully prepared to be waterproof, having water resistance (IP68).

Developed to function autonomously as a security measure, or connected to the central **MCA01/02/04** for access control. Ideal for any type of access control, commercial, industrial or residential.

#### Technical Parameters

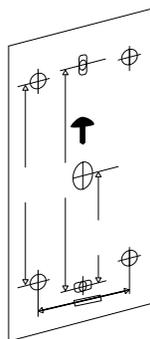
- Capacity for 2000 users
- Lower energy consumption
- Light keyboard
- Interference System
- Independent Passwords
- Short circuit protection
- Output for lock
- Anti-vandalism and waterproof (IP68)

In the kit you will find these components:

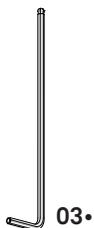
- 01• TEC100
- 02• Hole chart
- 03• Hex wrench
- 04• Screws
- 05• Bushings



01•



02•



03•



05•

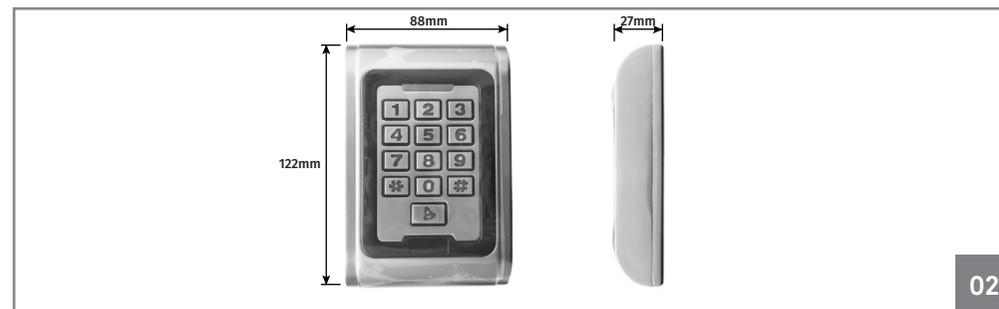


04•

## 02. TEC100

### TECHNICAL CHARACTERISTICS

The dimensions of the TEC100 are as follows:



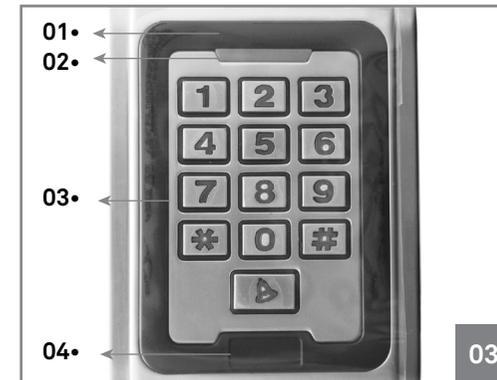
02

#### TEC100 Technical Data

• Working voltage	12-24Vdc
• Static current	<30mA
• Reading distance	3-8cm
• Capacity	2000 Users
• Environment temperature	-25~55°C
• Environment humidity	10% ~ 90%
• Electric lock output	<3A
• Alarm Output	<20A
• Short-circuit protection time output	<100µS
• Opening time	0 ~ 99 Seconds (adjustable)

#### LEGEND:

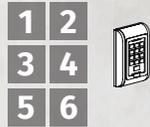
- 01• Card reader
- 02• Signal light
- 03• Light keyboard
- 04• Bell



03

# 03. INSTALLATION

## STEPS TO FOLLOW



**1 DRILL THE HOLES**  
Position the hole chart (B) at the desired installation location.

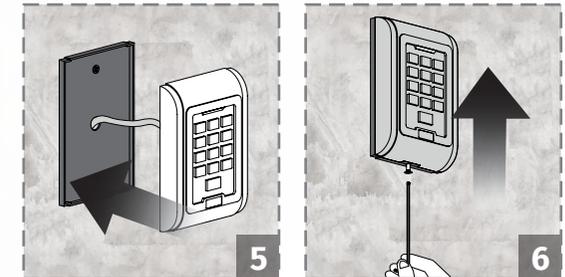
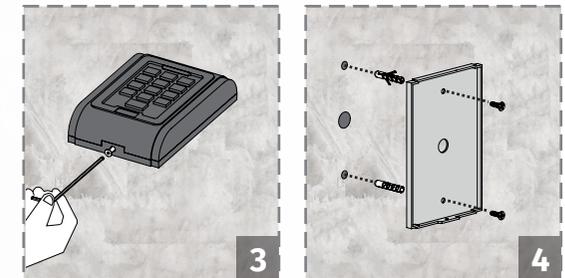
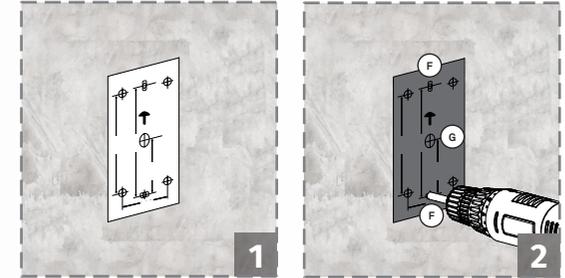
**2 Drill holes:**  
F - TEC100 fixation holes;  
G - Hole for cable.

**3 REMOVE THE REAR COVER**  
With the hexagon wrench (C), loosen the screws in full and remove the back cover.

**4 FIX THE REAR COVER**  
Insert the bushings, position the cover on the holes and fix it with the screws.

**5** Insert the cable into the hole.

**6 FIT TEC100**  
Attach the TEC100 to the back cover, and tighten the set screws.



## 04. ACOUSTIC-OPTICAL INSTRUCTIONS

### SOUNDS AND LIGHTS

OPERATION STATUS	RED LIGHT	GREEN LIGHT	BELL
Standby	Slowly blink	OFF	
Press key buttons			Di
Success	OFF	ON	Di iiii
Fail			Di Di Di
To be programmed	ON	OFF	Di iiii
Confirm condition	ON	ON	
Quit programming	Slowly blink	OFF	Di iiii
Unlock	OFF	ON	Di iiii

## 05. PROGRAMMING

### PROGRAMMING MODE

To make any programming or change of operating parameters, you must enter **Programming Mode** (red light on). While in Programming Mode, you can make any changes you want without having to go out and re-enter. After all the settings are completed, exit the Programming Mode to the Stand-By mode (flashing red light) in order to use the device normally.

OPERATIONS	INSTRUCTIONS
• Enter Programming Mode	* Master Code # (The default master code is 999999)
• Exit Programming Mode	*

## 05. PROGRAMMING

### INITIAL SETTING

At first use of the device, you must always change the master code for security, and set the operating mode for authorization of access.

OPERATIONS	INSTRUCTIONS
01• Enter Programming Mode	* Master Code #
02• Change Master Code	0 New Code # New Code #
03• Defina o Modo de Funcionamento	3 Value #
04• Exit Programming Mode	*

### MASTER CODE

This code gives you access to the Programming Mode. Without it, you will not be able to do any user programming or device changes. The default Master Code is **999999**.

To change the master code, enter programming mode and select the following values:

OPERATIONS	INSTRUCTIONS
• Change Master Code	0 New Code # New Code #

Once changed, you can exit programming mode.

### USERS

This device has the capacity to record up to 2000 users, with or without associated card. Each user is recorded by an ID between 1 and 2000, selected at the time of recording, or with automatic assignment when adding multiple users in a row. Users may also contain a four-digit security PIN (0000 to 9999), with the exception of PIN 1234 because it is the default PIN for automatically added cards.

• ID	User number between 1 and 2000
• PIN	4-digit code, between 0000 and 9999 assigned to a user (except 1234)
• Card	Card with embedded code



Must keep registration of ID's and user name for later visualization.

## 05. PROGRAMMING

### DOOR OPENING

To unlock the door you can use the PIN, Card or both (depending on the Operating Mode) while the device is in Stand-By (flashing red light).

OPERATIONS	INSTRUCTIONS
• User with PIN	Enter your <b>PIN</b> and then click <b>#</b>
• User with Card	<b>Read Card</b>
• User with Card and PIN	Pass the Card into the reader and enter the <b>PIN</b>



**Be careful** when using the **TEC100** at high voltages (do not use in power contacts).

### OPERATING MODE

This is the validation method that the device uses to authorize access to users. To make changes, you must enter programming mode.

OPERATIONS	INSTRUCTIONS
• Card or PIN Input	<b>3 2 #</b>
• Card and PIN Input	<b>3 1 #</b>
• User with Card	<b>3 0 #</b>



The default validation mode on the device is **3 2 #**. Entry with Card or PIN.

## 05. PROGRAMMING

### OPERATING MODE: CARD OR PIN INPUT

In the **3 2 #**, operating mode, card or pin input, you can perform the following operations:

*These operations can only be done in **Programming Mode**.*

OPERATIONS	INSTRUCTIONS	
• Add User with PIN  > <i>These users are only added with a PIN. If you want to add a card, you'll need to create a new one.</i>	Add 1 User	<b>1</b> <b>User ID</b> <b>#</b> <b>PIN</b> <b>#</b>
	Add Multiple Users	<b>1</b> <b>User ID 1</b> <b>#</b> <b>PIN</b> <b>#</b> <b>User ID 2</b> <b>#</b> <b>PIN</b> <b>#</b>
• Add Card User  > <i>These users are only added with Card. If you want to add PIN, you will need to create a new user.</i>	Add 1 User	<b>1</b> <b>Read Card</b> <b>#</b>
	Add Multiple Users	<b>1</b> <b>Read Card 1</b> <b>#</b> <b>Read Card 2</b> <b>#</b>
• Delete User with PIN		<b>2</b> <b>User ID</b> <b>#</b>
• Delete User with Card		<b>2</b> <b>Read Card</b> <b>#</b>

*To perform the following operation, it must be in **Stand-By Mode**.*

OPERATIONS	INSTRUCTIONS
• Change a User's PIN	<b>*</b> <b>User ID</b> <b>#</b> <b>Old PIN</b> <b>#</b> <b>New PIN</b> <b>#</b> <b>New PIN</b> <b>#</b>

## 05. PROGRAMMING

### OPERATING MODE: CARD AND PIN INPUT

In the **3 1 #**, operating mode, input with card and pin, you can perform the following operations:

*These operations can only be done in **Programming Mode**.*

OPERATIONS	INSTRUCTIONS
• Add a user with PIN (To add a user with ID, see the next page)	1 Read Card # * * Read Card 1234 # PIN # PIN #
• Delete User with Card	2 Read Card #

*To perform the following operation, it must be in **Stand-By Mode**.*

OPERATIONS	INSTRUCTIONS
• Change PIN with Card	* Read Card Old PIN # New PIN # New PIN #
• Change PIN with ID	* User ID # Old PIN # New PIN # New PIN #

## 05. PROGRAMMING

### OPERATING MODE: CARD INPUT

In the **3 0 #**, operating mode, card input, you can perform the following operations:

*These operations can only be done in **Programming Mode**.*

OPERATIONS	INSTRUCTIONS
• Add User with Card (ID assigned automatically)	Add 1 User: 1 Read Card # Add Multiple Users: 1 Read Card 1 # Read Card 2 #
• Add User with ID and Card	Add 1 User: 1 User ID # Read Card # Add Multiple Users: 1 User ID # Read Card 1 # User ID # Read Card 2 #
• Add User with Card No (ID assigned automatically)	Add 1 User: 1 Card No # Add Multiple Users: 1 Card No 1 # # Card No 2 #
• Add User with ID and Card No	Add 1 User: 1 User ID # Card No # Add Multiple Users: 1 User ID # Card No 1 # User ID # Card No 2 #
• Delete User with Card	2 Read Card #

## 05. PROGRAMMING

### OPERATING MODE: CARD INPUT

• Delete User with ID      2    User ID    #

• Delete User with Card No      2    Card No    #



These options can be used when the user wants to make a change but has lost the card.

### ELIMINATE ALL USERS

*These operations can only be done in **Programming Mode**.*

OPERATIONS	INSTRUCTIONS
• Delete all Users	<p>2    0000    #</p> <p>(This device allows you to delete all users recorded with card, PIN or both at once).</p>

### DOOR RELAY SHOOTING TIME

*These operations can only be done in **Programming Mode**.*

OPERATIONS	INSTRUCTIONS
• Trip time of the door relay.	<p>4    00 a 99    #    *</p> <p>(The activation time of the relay for door opening can be set between 00 and 99 seconds).</p>

## 05. PROGRAMMING

### KEYBOARD LOCK AND ALARM OUTPUT OPTIONS

If there are 10 invalid cards or 10 incorrect PINs within 10 minutes, the keypad will lock for 10 minutes or the internal bell will be active for 10 minutes depending on the option selected. By default, the Keypad is unlocked (70 #).

*These operations can only be done in **Programming Mode**.*

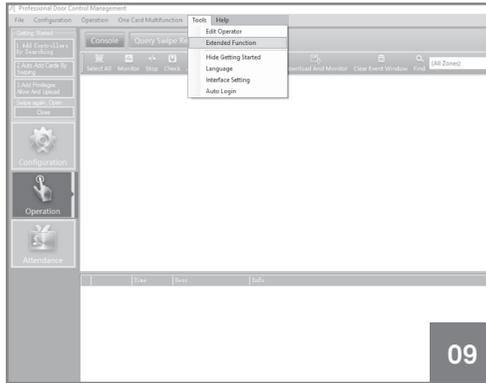
OPERATIONS	INSTRUCTIONS
• Keyboard and alarm unlocked (default)	7    0    #
• Keyboard lock	7    1    #
• Enable internal Bell	7    2    #

# 05. PROGRAMMING

## ACCESS CONTROL BY CODE (MCA)



When there is an MCA connected with a TEC100 to operate only with code, we need to follow the following steps to register inputs and outputs.



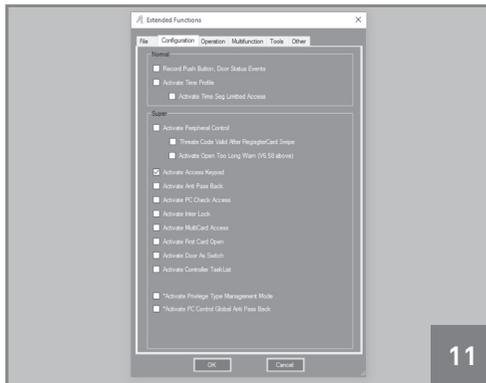
09



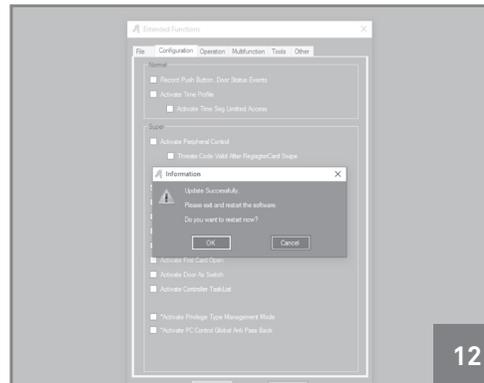
10

01 • Access "Operation" and select the "Tools" tab.  
02 • Press "Extended Function".

03 • Enter password 5678.



11



12

04 • Go to "Configuration" and select "Activate Access Keypad".

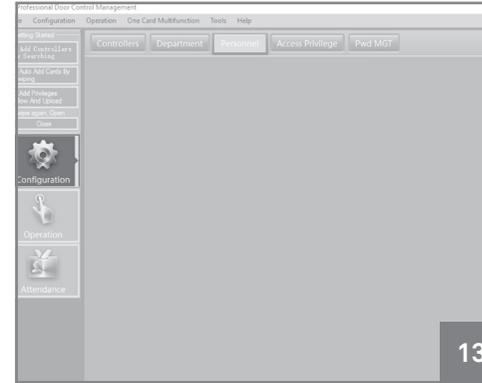
05 • Press "OK".



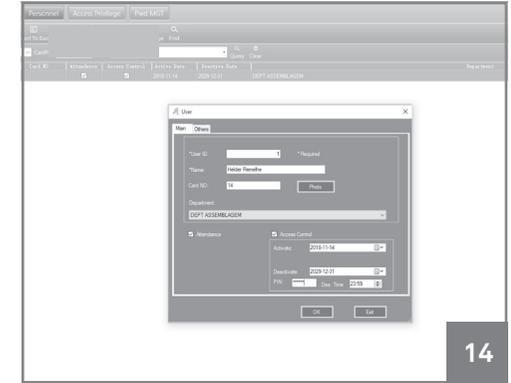
**NOTE:** For the changes to take effect, you must restart the device.

# 05. PROGRAMMING

## ACCESS CONTROL BY CODE (MCA)



13



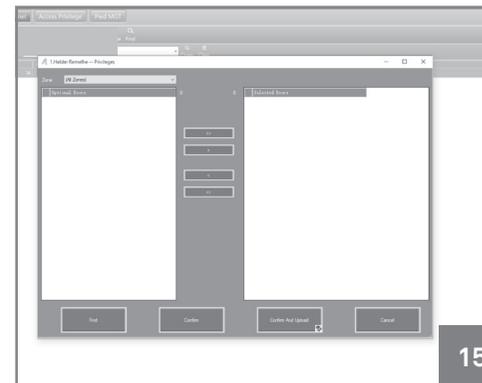
14

06 • Access "Configuration" and select the "Personnel" tab.

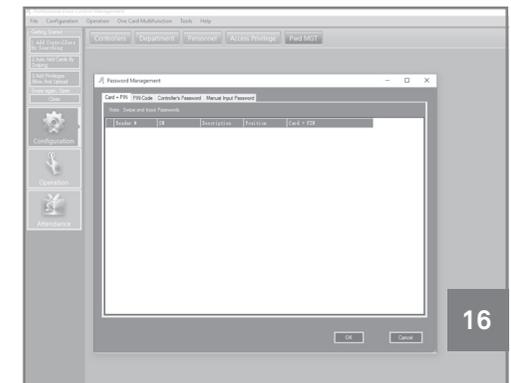
07 • Press "Edit" or double-click the person.  
08 • Fill in the required information and press "OK". Later, to identify yourself, you will have to enter the Card No. and the PIN, eg: \*14#4567.



**NOTE:** PIN 1234 is invalid.



15



16

09 • Select the user you want to grant privilege and click on "Access Privilege".

12 • Now access the "Pwd MGT" tab to set the type of access you want (PIN-Card).

10 • The box appears to add / remove doors to the user.

11 • To end this edition press "Confirm and Upload".

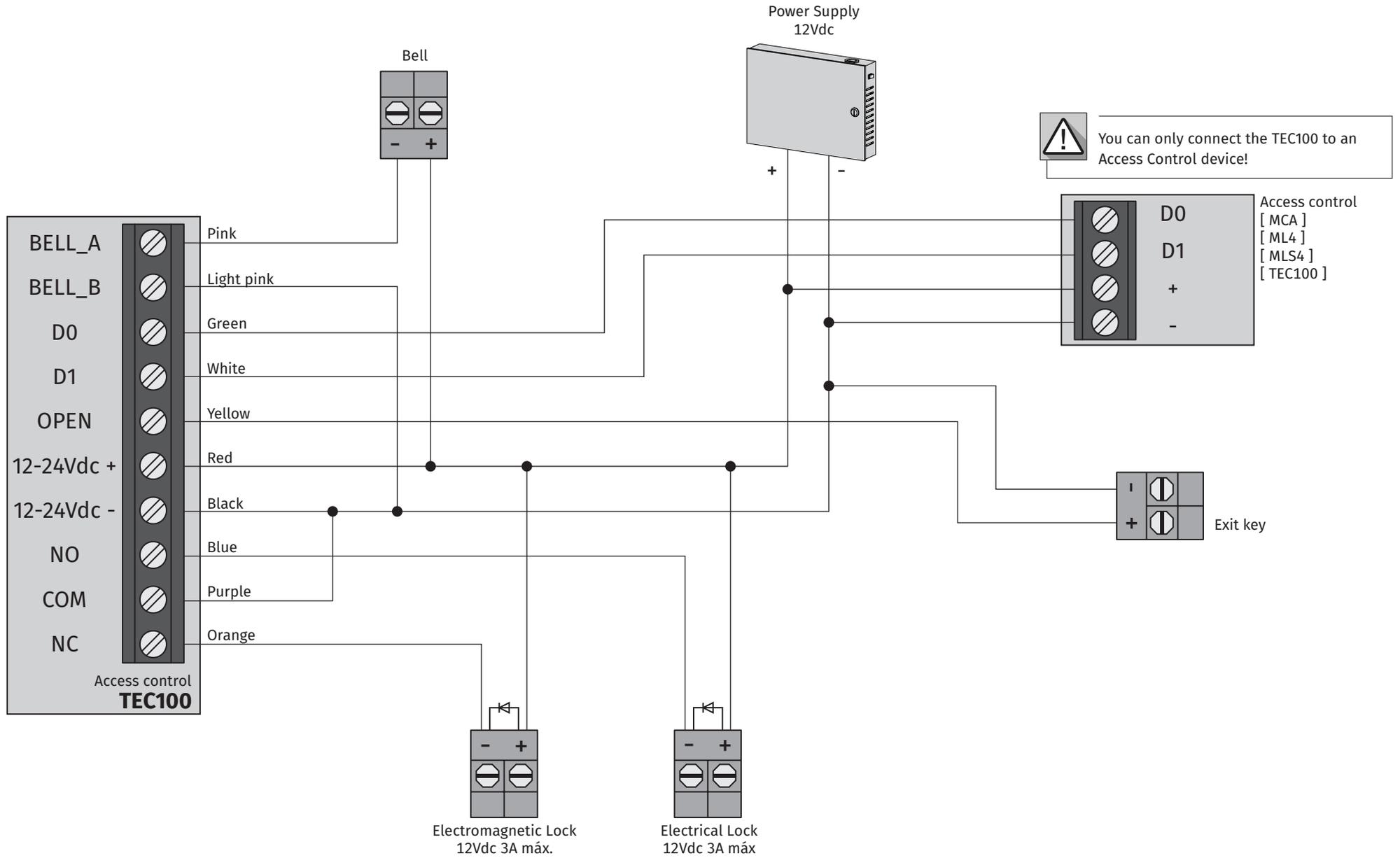
## 06. CONNECTIONS

### DESCRIPTION OF THE MAIN CABLE

Line Sequence	Marks	Color	Function description
1	BELL_A	Pink	One end of the Bell button
2	BELL_B	Light pink	Other end of Bell button
3	D0	Green	Output line WG D0
4	D1	White	Output line WG D1
5	OPEN	Yellow	One end of the output button (Output button of the other end connected GND)
6	DC	Red	Power Input 12-24Vdc (Input + DC)
7	DC	Black	Power Input 12-24Vdc (Input + DC)
8	NO	Blue	NO Relay
9	COM	Purple	Common Relay
10	NC	Orange	NC Relay

# 06. CONNECTIONS

## CONNECTION SCHEME



# 06. CONNECTIONS

## CONNECTION SCHEME

