N3301 / NX3301
Standalone access control

INTRODUCTION

First and foremost we would like to thank you for purchasing this product.

Our commitment to satisfying our customers can be seen from our ISO-9001 certification and from the manufacturing of products like this one.

Its advanced technology and exacting quality control will ensure that customers and users enjoy the many features this system offers. To obtain the maximum benefit from these features and a properly wired installation, we kindly recommend that you spend a few minutes of your time reading this manual.

MOUNTING CONFIGURATIONS

SET-UP WARNINGS

- Do not overtighten the screws on the power supply connector.

- **Always disconnect the power supply** before installing or making modifications to the devices.

- The fitting and handling of these devices must be carried out by **authorised personnel**.

- The wiring must run at least **40cm away from any other wiring**.

- Before connecting the device, check the connections between the door panel, power supply, distributors, monitors and telephones.

- Always follow the instructions contained in this manual.

SAFETY PRECAUTIONS

- Do not overtighten the screws on the door panel connector.
- **Always disconnect the power supply** before installing or making modifications to the device.

- The fitting and handling of these devices must be carried out by **authorised personnel**.

- The wiring must run at least **40cm away from any other wiring**.

- For the power supply

    Do not overtighten the screws on the connector.

    Install the power supply in a dry and protected place free from the risk of water leaks or sprays.

    Avoid locations that are humid, dusty or near heat sources.

    Ensure that the air vents are free from obstruction so that air can circulate freely.

    To prevent damage, the power supply must be firmly secured in place.

    To prevent electric shock, do not remove the cover or handle the wiring connected to the terminals.

- For the monitor, telephones and distributors:

    Do not overtighten the screws on the connector.

    Install the devices in a dry protected location free from the risk of dripping or splashing water.

    Do not place in humid, dusty or smoky locations, or near sources of heat.

    Ensure that the air vents are free from obstruction so that air can circulate freely.

- Remember that the installation and handling of these devices must be performed by **authorised personnel** and in the absence of electrical current.

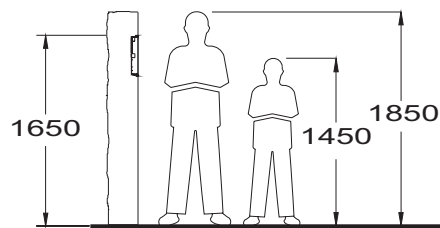- Always follow the instructions contained in this manual.

CONTENTS

CHARACTERISTICS

The standalone access control enables access to the building by entering a numeric code using the N3301 module.

DOOR PANEL INSTALLATION
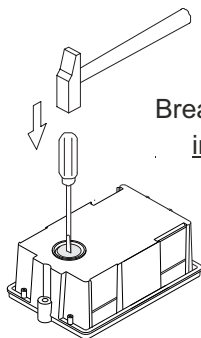
Location of the embedding box:

Make a hole in the wall so that the top of the module is located at a height of 1.65m.
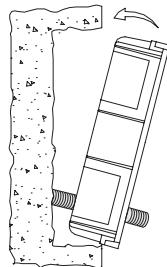Hole dimensions:

NCEV-90CS embedding box: 99(W) x 135.5(H) x 40(D) mm.

The module has been designed to withstand all environmental conditions. We do however recommend taking extra precautions to prolong its life (shields, covered areas, etc.).

Positioning the embedding box:

Break through the hole to allow the <u>entry of the cable into the bottom of the embedding box</u>.

Pass the cable through the hole made in the embedding box.
Embed the box and ensure that it is level and flush.
Once embedded, remove the protective stickers from the screw holes

Securing the frame and closing the panel:

Embedding box.

Frame.

Panel.
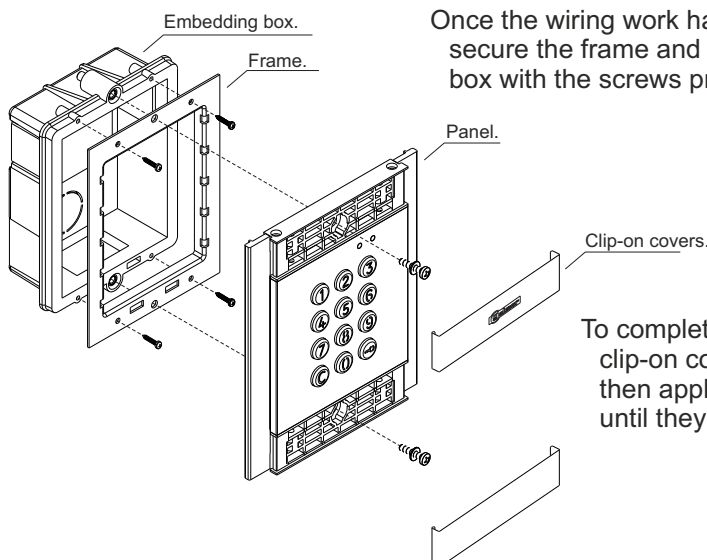
Clip-on covers.

Once the wiring work has been completed, secure the frame and panel to the embedding box with the screws provided.

To complete the fitting of the panel, attach the clip-on covers by positioning one end and then applying slight pressure to the other end until they clip into place.

MODULE DESCRIPTION

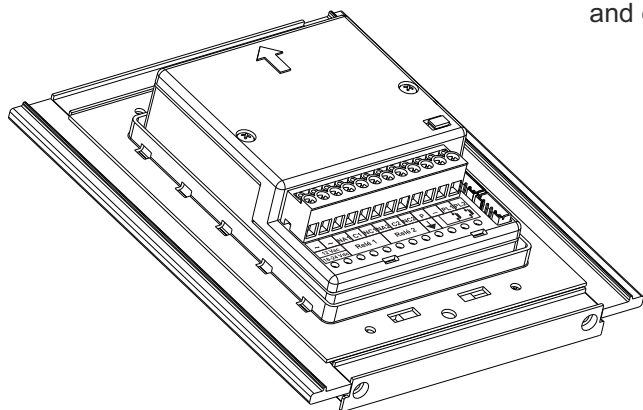### Description of the N3301/AL - NX3301 module:

The wiring terminals are located at the back of the module and correspond to the following connections:

~, ~ : power supply.
NA1 : normally open output relay 1.
C1 : common relay 1.
NC1 : normally closed output relay 1.
NA2 : normally open output relay 2.
C2 : common relay 2.
NC2 : normally closed output relay 2.
P : panic output.
− : negative.
PL1 : input for external relay 1 button.
PL2 : input for external relay 2 button.

Description of the JP1 jumper:

The JP1 jumper, located on the right-hand side of the connection block, activates the tamper alarm.

Normal operation, alarm not activated.

Tamper alarm mode activated. In this mode, the module's keypad operation and external buttons are disabled. The LEDs and the keypad's backlight are turned off and a constant audible alarm and the "P" panic output of the open collector (3 seconds every minute) are activated. Alarm mode ends when the JP1 jumper is replaced.
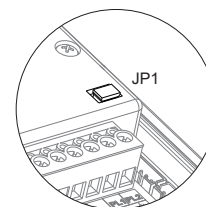
Description of the SW1 DIP switch:

The SW1 DIP switch is located on the left-hand side of the module.

Use to reset the special installer PIN to the factory code. Proceed as follows: Set DIP switch 1 to ON. The module will emit 2 beeps and the green LED on the front will light up for 1 second. Then set the DIP switch to OFF (the code is now the one assigned at the factory). If, during this process, the access control module was locked, the "special unlock" pin code will also be reset to the assigned factory code.

No standalone access control function (leave in the OFF position).

(∗) Factory default setting.
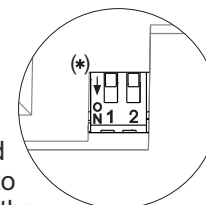
### Description of the beeps:

The access control module features an internal beeper for reproducing operation beeps.

Operation	Duration
Programming	5 rapid beeps
Confirm field	2 rapid beeps
Confirm sequence	4 rapid beeps
Cancel	1 long beep (0.5 sec)
Error	1 long beep (1 sec)
Key press	1 rapid beep
Alarm activated	1 constant beep

DESCRIPTION OF THE MODULE

Description of the self-testing LEDs:
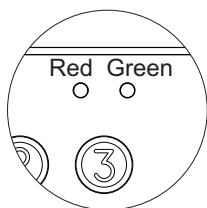
Red   Green

The self-testing LEDs are located on the upper right side of the front of the module.

	Operation	Red LED	Green LED
Standby	Normal	On	Off
	Lock	Rapid blink	Off
	Correct code	On	On (1 second)
	Wrong code	4 rapid blinks	Off
Programming mode	Normal	Slow blink	Off
	Confirm field	Slow blink	2 rapid blinks
	Confirm sequence	Slow blink	4 rapid blinks
	Wrong code	4 rapid blinks	Off

POWER SUPPLY UNIT INSTALLATION

Detail of the TF-104 power supply unit installation:

φ3,5 x 25
DIN-7971
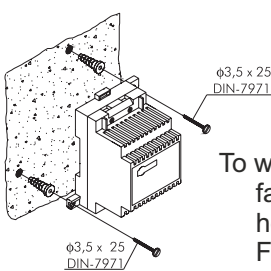
Install the transformer in a dry and protected location.
Please note that current regulations stipulate that the transformer must be protected by a circuit breaker.

To wall mount the transformer, position the fastening tabs. Drill two 6mm diameter holes and insert the wall plugs. Fix the transformer with the specified screws.

φ3,5 x 25
DIN-7971

DIN 46277
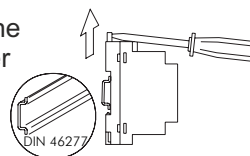
The power supply unit can be mounted onto a DIN rail (3 elements) by applying slight pressure. To remove the transformer from the rail, use a flat screwdriver and lever it off, as shown in the drawing.

LOCK RELEASE INSTALLATION

Lock release

φ3,5 x 25
DIN-7972

If the lock release is to be fitted to a metal door, use a Ø3.5mm drill bit and thread the hole made.
For wooden doors, use a Ø3mm drill bit.

M 4 x 8
DIN-963
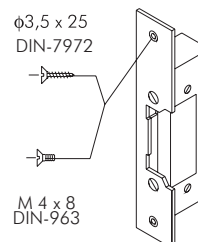
IMPORTANT: the access control module is supplied with two varistors. If connecting an AC lock release to one of the outputs, fit the varistor supplied directly to the lock release terminals to ensure that the module functions correctly.

MODULE OPERATION

Description of module operation

Module in standby mode.

With the module in standby mode, the following operations can be performed:

Activation of external push buttons: Allows activation of relay outputs 1 and 2 by means of external push buttons PL1 and PL2 respectively.
The push button can be configured by means of programming to activate and deactivate the output by pressing the button or activate the output by pressing the button and deactivate after a period of between 1 and 99 seconds.

With the keypad:

Special default codes: (bear in mind the number of digits in the code).

Administrator pin:	271800. 2718 if the number of digits configured = 4.
CP1 button code:	111100. 1111 if the number of digits configured = 4.
CP2 button code:	222200. 2222 if the number of digits configured = 4.
Unlocking code:	333300. 3333 if the number of digits configured = 4.

Opening through the user pin: Allows activation of the outputs (relay 1/relay 2/panic) associated with the existing user. Press the key button, followed by the user pin.

"key button" + "user pin".

Administrator pin: Allows entry into programming mode. Also enables the panel to be unlocked if it has been previously locked. Press the key button three times and then enter the administrator pin.

"key button" + "key button" + "key button" + "administrator pin".

CP1 button code: Enables or disables external button PL1 and/or PL2 associated with the CP1 code. Press the key button three times and then enter the CP1 code.

"key button" + "key button" + "key button" + "CP1 code".

CP2 button code: Enables or disables external button PL1 and/or PL2 associated with the CP2 code. Press the key button three times and then enter the CP2 code.

"key button" + "key button" + "key button" + "CP2 code".

Unlocking code: Allows the module to be unlocked only if it has previously been locked. Press the key button three times and then enter the Unlocking code.

"key button" + "key button" + "key button" + "unlocking code".

Change user pin: Allows users to change their own codes. Does not modify the outputs (relay 1/relay 2/panic) associated with the user. Press the key button twice, followed by the current user pin, then press the key button again, followed by the new user pin, and then press the key button a final time. The new user pin must have the same number of digits as the current user pin and cannot be the same as an existing user pin.

"key button" + "key button" + "current user pin" + "key button" + "new user pin" + "key button".

MODULE PROGRAMMING

Programming mode entry and exit:

To enter programming mode, press the key button three times and then enter secret administrator pin "271800".[*]

key button + key button + key button + administrator pin.

To exit programming mode, press the C button (cancel) once if it is in a programming field or twice if not.
   If, after 2 minutes, no key has been pressed, it exits programming mode.
Programming mode entry and exit is confirmed by the emitting of 5 rapid beeps.

[*]**Important:**
   Bear in mind the number of digits in the configured code (factory setting 2718 = 4).

Programming mode structure and sequence:

Programming of the keypad functions is performed by entering the field or function code, followed by the field value(s).
Once in programming mode, the programming sequence is as follows:

0 Enter the field code: this code is always 1 digit. The keypad will emit 2 rapid confirmation beeps.

4 Enter the value of the field being programmed. Once the value has been entered, the keypad will emit 2 rapid confirmation beeps. To finish programming the field, press the key button and the keypad will emit 4 rapid confirmation beeps.
   Note: If, after 10 seconds, no key has been pressed, a long error beep will be emitted and the field code will need to be re-entered.

1 or **C** Enter the code of the following field or press the C button (cancel) to exit programming mode.

If an incorrect value has been entered, press the C button (cancel). The keypad will emit a long confirmation beep. If the field code was being entered, even after the confirmation beep, exit this menu and re-enter the field code.
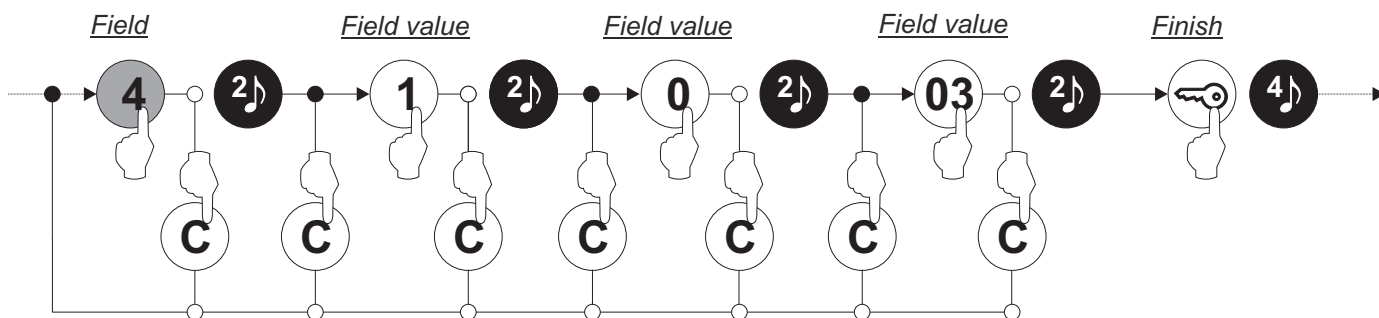
MODULE PROGRAMMING

Programming fields:

The module comes programmed with factory settings except for the activation codes (user), which are left empty for security reasons. For system operation tailored to the needs of the user, check all of the values in all of the fields. The fields do not need to be programmed in numerical order.

Enter programming mode:

Step 1: Press the key button three times and then enter the administrator pin.

key button + key button + key button + administrator pin.

(1) Bear in mind the number of digits in the configured code (factory setting = 4, 2718).

Step 2: Then press the field number:

Field "0": Configuring the number of digits in the activation codes (user) and special codes.

Steps: Field + number of digits + key button.

(Step 1)　　Press "0" to select field "0".

(Step 2)　　Set the number of digits for the "user" activation codes (relay 1/relay 2/panic) and special codes. Enter 4, 5 or 6 digits.

The factory setting has 4 digits.

To change this value, add or remove 1 or 2 zeros from the end of the existing codes, for example:

Administrator pin 2718 ("factory setting" 4 digits).
Administrator pin 27180 (5 digits).
Administrator pin 271800 (6 digits).

(Step 3)　　Press the key button to finish programming the field.

(Step 4)　　Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

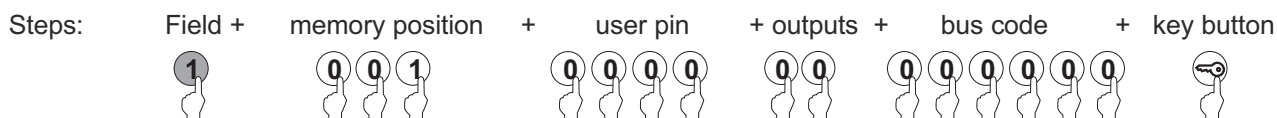## MODULE PROGRAMMING

Programming fields:

Continued from previous page

Field "1": Programming a new activation code (user).

Allows new user pins (from "0000" to "9999") to be created and outputs to be assigned for activation with the created codes.

Note: Depending on the number of digits configured in field "0" (factory setting = 4).

Number of digits = 4, user pin from "0000" to "9999".
Number of digits = 5, user pin from "00000" to "99999".
Number of digits= 6, user pin from "000000" to "999999".

Steps:	Field +	memory position +	user pin	+ outputs +	bus code	+ key button
	1	0 0 1	0 0 0 0	0 0	0 0 0 0 0 0	🔑

(Step 1)   **1**   Press "1" to select field "1".

(Step 2)   **0 0 1**   Set the memory position number for the location of the new user pin.
Possible memory positions: "001" to "999".

(Step 3)   **0 0 0 0**   Set the user pin. Possible user pins: "000000" to "999999" with "6" digits. Factory setting of "4" digits: "0000" to "9999".
(see example of number of digits on page 12, step 2).
Duplicate user pins are not allowed.

(Step 4)   **0 0**   Set the output(s) that the user pin entered in step 3 will activate. Enter one of the following options or press the key button: [(*)]
"00": relay 1 + relay 2 + panic output (terminal "P" on the terminal block).
"01": relay 1.
"02": relay 2.
"03": relay 1 + relay 2.
"04": panic output (terminal "P" on the terminal block).
"05": relay 1 + panic output (terminal "P" on the terminal block).
"06": relay 2 + panic output (terminal "P" on the terminal block).
[(*)]Note: If the key button is pressed, option "03" is set in this value field: relay 1 + relay 2, in the value field "bus code" as "000000" and the programming of the field finishes.
With access control module V03 or later.

(Step 5)   **0 0 0 0 0 0**   Only enter "000000" or press the key button. [(*)]
[(*)]Note: If the key button is pressed, "000000" is set in this value field and the programming of the field finishes.

(Step 6)   🔑   Press the key button to finish programming the field.
Note: It is not necessary to press the key button if it has already been pressed in step 4 or 5.

(Step 7)   **2** or **C**   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING

Programming fields:

Continued from previous page

Field "2": Changing special codes.

Allows the current code of the special codes to be changed (see p. 10). The new special code must have the same number of digits as the current code.
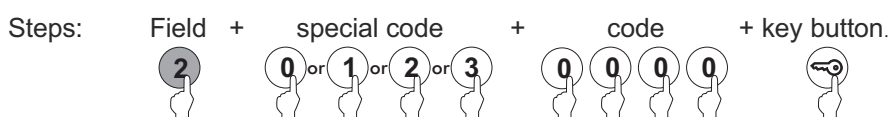Duplicate special codes are not allowed.

Note: Depending on the number of digits configured in field "0" (factory setting = 4).

    Number of digits = 4, special codes from "0000" to "9999".
    Number of digits = 5, special codes from "00000" to "99999".
    Number of digits = 6, special codes from "000000" to "999999".

Steps: Field +   special code   +   code   + key button.
2   **0** or **1** or **2** or **3**   **0 0 0 0**   🔑

(Step 1)   **2**   Press "2" to select field "2".

(Step 2)   **0** or **1** or **2** or **3**   Set the special code to select for subsequent code changes. Enter one of the following options:
    "0": Select the administrator pin.
    "1": Select the CP1 button code.
    "2": Select the CP2 button code.
    "3": Select the unlock button code.

(Step 3)   **0 0 0 0**   Set a new code number. Possible special codes: "000000" to "999999" with "6" digits. Factory setting of "4" digits: "0000" to "9999" (see example of number of digits on p. 12, step 2).
    Duplicate special codes are not allowed.

(Step 4)   🔑   Press the key button to finish programming the field.

(Step 5)   **3** or **C**   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING

Programming fields:

Continued from previous page

Field "3": Deleting user pins.

Allows the deletion of existing user pins.

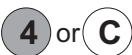Note: Possible memory positions: "001" to "999".

Steps: Field + memory position + key button + key button.

(Step 1)   **3**   Press "3" to select field "3".

(Step 2)   **0 0 1**   Set the existing memory position number to select for deletion.
Note: Possible memory positions: "001" to "999".
Enter an existing memory position to be deleted.
If the value "000" is entered, <u>all memory positions will be deleted</u>.

(Step 3)   Press the key button twice to confirm the deletion and to finish programming the field.

(Step 4)   **4** or **C**   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING
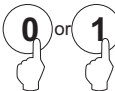
Programming fields:
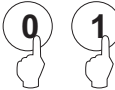
Continued from previous page

Field "4": Set the outputs.

Enables the setting of the relay 1 and relay 2 outputs and the panic output (terminal "P" on the connector).
The setting of the relay 1, relay 2 and panic outputs is common to all valid user pins.

The relay 1, relay 2 and panic outputs can be activated in impulse mode (01 to 99 seconds) or stable mode.

Steps: Field +   output number + output mode + activation time + key button.

(Step 1)   **4**   Press "4" to select field "4".

(Step 2)   **1** or **2** or **4**   Set the output to be selected for configuration.
Enter one of the following options:
  "1": Select the relay 1 output.
  "2": Select the relay 2 output.
  "4": Select the panic output.

(Step 3)   **0** or **1**   Set the activation mode of the output selected in step 2. Enter one of the following options:
  "0": Impulse mode.
  "1": Stable mode.

(Step 4)   **0** **1**   Set the activation time of the output selected in step 2. Only takes effect if the output is set
    as impulse in step 3.
    Enter a value from "01" to "99" seconds or press the key button.[*]
  [*]Note: If the key button is pressed, this field is set with a value of "03" seconds and the
      programming of the field finishes.

(Step 5)   🔑   Press the key button to finish programming the field.
Note: It is not necessary to press the key button if it has already been pressed in step 4.

(Step 6)   **5** or **C**   Then press the number of the next field to configure or press the C button (cancel) to exit
    programming mode.

MODULE PROGRAMMING

### *Programming fields:*

Continued from previous page

Field "5": Configuring the external buttons.

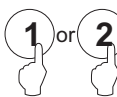Allows external buttons PL1 and PL2 to be configured with the following modes:
 -Allows the button to: Always be enabled or, through button codes CP1 or CP2, enable/disable the functioning of the button.
 -Allows an activation time for external buttons PL1 and PL2 of between "01" and "99" seconds for relay 1 and relay 2 outputs respectively. Only takes effect if the relay output of the external button has been configured in impulse mode (see p. 16, "step 3").
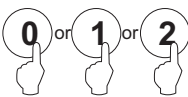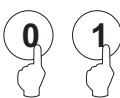 Note: External buttons PL1 and PL2 activate relays 1 and 2 respectively.

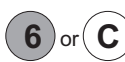Steps: Field + button + button mode + activation time + key button

    5   **1** or **2**   **0** or **1** or **2**   **0** **1**   🔑
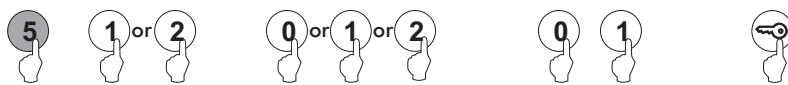
(Step 1)   **5**   Press "5" to select field "5".

(Step 2)   **1** or **2**   Set the external button to select for configuration. Enter one of the following options:
 "1": Select external button PL1.
 "2": Select external button PL2.

(Step 3)   **0** or **1** or **2**   Set the push button mode selected in step 2.
Enter one of the following options:
 "0": Always enabled.
 "1": Enable/disable function with the CP1 button code.
 "2": Enable/disable function with the CP2 button code.

(Step 4)   **0** **1**   Set the activation time for the external button selected in step 2. Only takes effect if the relay output has been configured in impulse mode (see p. 16, "step 3").
Enter a value from "01" to "99" seconds or press the key button.[*]
 [*]Note: If the key button is pressed, this field is set with a value of "03" seconds and the programming of the field finishes.

(Step 5)   🔑   Press the key button to finish programming the field.
Note: It is not necessary to press the key button if it has already been pressed in step 4.

(Step 6)   **6** or **C**   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING

Programming fields:

Continued from previous page

<u>**Field "6"**</u>: Configuring locking mode.

Allows the access control module's locking mode to be configured.

Steps: Field + locking mode + time between attempts + lock time + panic output + key button.

⑥ ⓪ ⓪① ⓪③ ⓪ or **①** 🔑

(Step 1)   **⑥**   Press "6" to select field "6".

(Step 2)   **⓪**   Set the access control module's locking mode.
Enter one of the following options:
"0": Never locks.
"3" to "9": Locks after "3" to "9" failed attempts to enter the user pin.

(Step 3)   **⓪①**   Set the minimum amount of time that must elapse between failed attempts before the access control module is locked. Only takes effect if option "0" has not been selected in step 2.
The times to select are "01" to "15" minutes or press the key button.(*)
(*)Note: If the key button is pressed, this field value is set as "03" <u>minutes</u>, the "locking time" field value is "03" <u>minutes</u>, the "panic output" value field is "0" <u>not activated</u> and the programming of the field finishes.

(Step 4)   **⓪①**   Set the amount of time that the access control module remains in locking mode after the last wrong code has been entered. Only takes effect if option "0" has not been selected in step 2.
The times to select are "03" to "15" minutes or press the key button.(*)
(*)Note: If the key button is pressed, the field value is set as "03" <u>minutes</u>, the "panic output" value field is "0" <u>not activated</u> and the programming of the field finishes.

(Step 5)   **⓪** or **①**   Set the activation of the panic output (terminal "P" of the terminal block) during locking mode. Only takes effect if option "0" has not been selected in step 2.
Enter one of the following options or press the key button:(*)
"0" : Output not activated.
"1" : Output activated (for 3 seconds in intervals of 1 minute).
(*)Note: If the key button is pressed, the field value is set as "0" and the programming of the field finishes.

(Step 6)   🔑   Press the key button to finish programming the field.
Note: It is not necessary to press the key button if it has already been pressed in steps 3, 4 or 5.

(Step 7)   **⑦** or **Ⓒ**   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING

Programming fields:

Continued from previous page

Field "7": Configure the identification ID of the access control module. (Not configure).

Allows an identification code (ID) to be configured for the access control module.

Note: Possible identification codes (ID): "000" to "999".

IMPORTANT: This programming field *is not applicable* for standalone access control.

Steps: Field +   ID code   + key button.

(Step 1)   Press "7" to select field "7".

(Step 2)   Set an identification code (ID) for the access control module.
Note: Possible identification codes (ID): "000" to "999".

(Step 3)   Press the key button to finish programming the field.

(Step 4)   8 or C   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.

Field "8": Configure depth of field. (Not configure).

Allows the number of digits in the calling code to be configured.

IMPORTANT: This programming field *is not applicable* for standalone access control.

Steps: Field + number of calling code digits + direct call + key button.

(Step 1)   8   Press "8" to select field "8".

(Step 2)   1 or 2 or 3   Set the number of digits in the calling code.
Enter one of the following options:
"1" or "2" or "3"

(Step 3)   0 or 1   Set the direct call: by entering a call code on the keypad if necessary or do not press the key button to confirm.
Enter one of the following options:
"0" : Disable.
"1" : Enable.

(Step 4)   Press the key button to finish programming the field.

(Step 5)   9 or C   Then press the number of the next field to configure or press the C button (cancel) to exit programming mode.
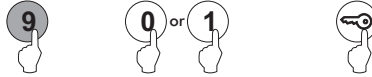
MODULE PROGRAMMING

Programming fields:

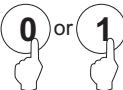**Continued from previous page**

Field "9": Configuring the keypad beep.

Allows a beep to be heard when pressing the access control module's keypad buttons.

Steps: Field +   keypad beep +   key button.

9   **0** or **1**   ⚷

(Step 1)   **9**   Press "9" to select field "9".

(Step 2)   **0** or **1**   Allows a beep to be heard when pressing the access control module's keypad buttons.
Enter one of the following options:
"0": No keypad beep.
"1": Keypad beep.

(Step 3)   ⚷   Press the key button to finish programming the field.

(Step 4)   **C**   Then press the C button (cancel) to exit programming mode.

MODULE PROGRAMMING

Factory setting:

- **Special codes:** Bear in mind the number of digits in the code (see p. 10).

  Administrator pin: 271800.   2718 if the number of digits configured = 4.
  CP1 button code: 111100.   1111 if the number of digits configured = 4.
  CP2 button code: 222200.   2222 if the number of digits configured = 4.
  Unlocking code: 333300.   3333 if the number of digits configured = 4.

- **Number of digits in user and special codes:** Programming field "0" (page 12)

  Step 2: "4" – 4 digit code.

- **Setting relay 1:** Programming field "4" (page 16).

  Step 3: "0" Impulse.
  Step 4: "03" Activation time (seconds).

- **Setting relay 2:** Programming field "4" (page 16).

  Step 3: "0" Impulse.
  Step 4: "03" Activation time (seconds).

- **Setting the panic output:** Programming field "4" (p. 16).

  Step 3: "0" Impulse.
  Step 4: "10" Activation time (seconds).

- **Setting external push button PL1:** Programming field "5" (page 17).

  Step 3: "1" Enable/disable the functioning of the push button with button code CP1.
  Step 4: "10" Activation time (seconds).

- **Setting external push button PL2:** Programming field "5" (page 17).

  Step 3: "2" Enable/disable the functioning of the push button with button code CP2.
  Step 4: "05" Activation time (seconds).

- **Setting locking mode:** Programming field "6" (page 18).

  Step 2: "3" Maximum number of failed attempts to enter user pin.
  Step 3: "03" Minimum time between failed attempts (minutes).
  Step 4: "03" Duration of locking mode (minutes).
  Step 5: "1" The panic output is activated during locking mode.

- **Setting identification ID:** Programming field "7" (page 19) (Not to be configured).

  Step 2: "000" Identification ID. Do not modify this field value.

- **Setting depth of field:** Programming field "8" (page 19) (Not to be configured).

  Step 2: "3" Depth of field. Do not modify this field value.
  Step 3: "0" Direct call disabled. Do not modify this field value.

- **Setting the keypad beep:** Programming field "9" (see page 20).

  Step 2: "1" Beep when keypad buttons pressed (activated).

WIRING DIAGRAMS

Standalone operation:

In the diagrams below, a TF-104 transformer (12Vac) is used to power the module.
(*) If using an AC lock release, fit the varistor supplied to the terminals of the lock release.
If connecting two lock releases, use an additional TF-104 transformer.
If using a safety lock release with inverted functioning (lock release activated in the absence of voltage), connect the lock
  release between C1 and NC1 or C2 and NC2.