Installer technical guide

IPer com

INTEGRATED IP
VIDEO DOOR PHONE
SYSTEMS

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Contents

MT124-032 Version 1.0.2

1 Introduction

IPerCom is an IP intercom Video Door Phone System with the following features:

1. it does not have single vulnerabilities, since *IPerCom* does not require the presence of a server to implement the main functions;
2. it combines the advantages of a server system, since from a single device it is possible to configure all the other devices of the system (without accessing from one device at a time) to the advantages of a serverless[1] system, and therefore of a distributed logic system, the operation of which does not depend on a single device;
3. the remote technical support benefits from the fact that the configuration of the system is in a single small file (usually < 1 MB), which can be sent to the assistance by any means and can also be edited remotely; this is a great advantage compared to other systems, where it is necessary to back up the database, which can reach over 100 MB and to be analysed requires a physical server on which to import the backup configuration;
4. it can work on an existing network with other already installed devices;
5. it can be configured via the *IPerCom Configurator* program, released for Android and MS Windows;
6. it provides two security levels: system administrator and installer have their own password;
7. all communications between devices are encrypted using a proprietary algorithm to prevent attacks to the system;
8. the installer does not need to have knowledge of IP networks;
9. it supports small and medium sized systems.

The *Technical Guide for the IPerCom installer* is intended as a user manual for setting up an *IPerCom* system, so for the use of the single devices please refer to the relevant operating instructions.

[1] Unlike the other serverless systems on the market, *IPerCom* can be fully configured without having to access all the devices of the system; this is one of the typical advantages of a server-based system that is maintained on *IPerCom*.

2 *IPerCom* devices and functions offered by the system

IPerCom version 1.0 has the following features:

- it supports the devices indicated below[2]
  - *Door speaker unit* 1060/71-74-75
  - *Call module* 1060/12-13-17-18
  - *MAX* 1717/31-32-33-34-41
  - *RTSP camera*
  - *Relay actuator* 1060/84
  - *Switchboard* 1060/41
  - *Key reader* 1060/82
- Available services
  - Audio/video communication, *Intercom* included
  - Auto-on on RTSP cameras via *MAX* monitor
  - Centralised FW update via MS Windows application (*IPerUpgrade* available for download on the website www.urmet.com)
  - Switchboard service:
    - Day mode to take calls
    - Night mode
    - Stand-by with diversion on other switchboards
    - Door opening
    - Tampering alarms
    - Panic alarms
    - Output activations
    - CCTV function on *Call Modules*
    - Call forwarding to Android and iOS (Apple) Smartphones/tablets.
  - Access control service
  - Alarms and relay activations
  - Call forwarding to Android and iOS (Apple) Smartphones/tablets.

[2] *IPerCom* supports a maximum of 1000 IP devices on the entire system and a maximum of 10 *MAX* monitors per apartment.

3 Basic concepts

IPerCom is based on two basic concepts: *topology* and *competence*.

3.1 Topology

The **topology** of a building (or *site*) is a simplified map that takes into account the various elements that make it up and their relative positioning.

Typically the types of elements that make up a building are: blocks, stairs, floors, apartments.

An example of a topology is provided in the following figure

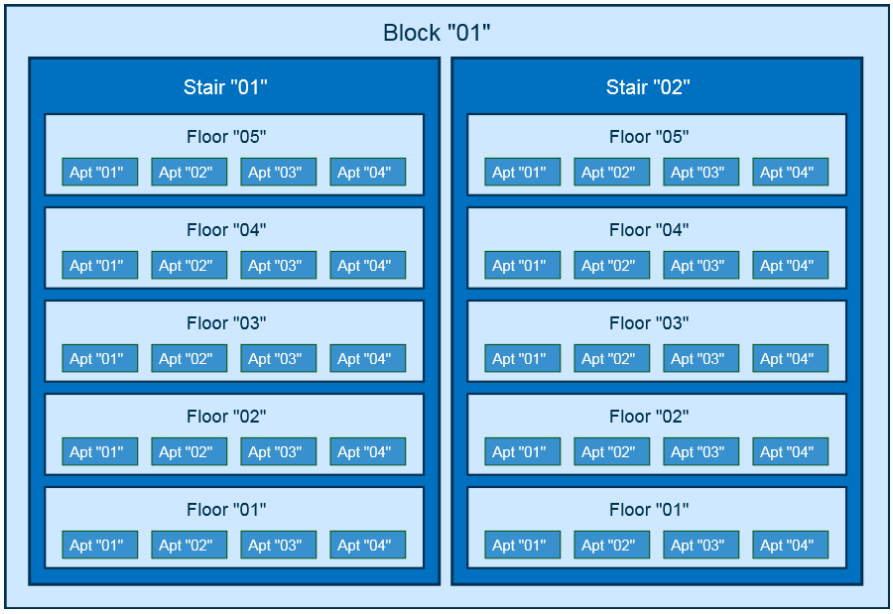

Figure 1: Example of a building topology

In Figure *1* there is a block with two stairs; in stair "01" and "02" there are five floors with four apartments each: each of these elements is a **topological node** within the topology.

In *IPerCom* each topological node is assigned a two-digit alphanumeric code from “01” to “ZZ”, which is automatically assigned by the system when defining the system topology.

In the example given in *Figure 1* we will have a block with code “01” and inside of it a stair with code “01” and one with code “02”; inside each stair we will have floors with codes “01”, “02”, “03”, “04” and “05”, whereas inside each floor we will have apartments with codes “01”, “02”, “03” and “04”.

Since each node can be associated with two digits, if we want to identify in the entire topology an apartment that is below a floor, a stair, a block and a site, we will need a total numeric code of 10 digits: in the example of *Figure 1*, by assigning to the base site a code equal to "01", to the block the code "01", to the second stair "02", to the third floor of the stair "03" and to the second apartment of such floor "02", the concerned apartment can be identified by the 10-digit numeric code "0101020302".

If we decide to use always 10 digits to identify the position of all the topological nodes of the system, to identify the floor of the example above it will not be necessary to enter the numeric code of the apartment; it can be replaced by "##": therefore we will have the following 10-digit code "01010203##". Similarly, the stair, the block and the site of the example will be identified respectively by the following codes: "010102######", " 0101######" and 01########".

The 10-digit code that identifies the generic topological node in the system topology is called "**topological code**".

3.2 Competence

Each *IPerCom* device must be positioned (installed) in a specific topological node (site, block, stair, floor, apartment).

For example, *MAX* monitors are normally installed in an apartment, while *Call Modules* are installed in a stair or block. Similarly, the switchboards will probably be located in the common areas of the block.

Each device in the system, once placed in a specific element of the topology, automatically acquires a *competence*.

The **competence** represents the "visibility" that a device has of the rest of the system, that is, the ability of each device to communicate with other devices (with all or only with some of them).

Competence influences, for example, the following elements:

1. names displayed in the directory of a call module;
2. access via *Proximity Key* and *Door Codes* to all the doors of your house (for residents);
3. list of *Door Speaker Units*, *Call Modules* and *RTSP Cameras* that can be accessed via auto-on mode from the apartment (through the *MAX* monitor);
4. call to the switchboard.

According to this, all *Call Modules* are "automatically" able to call all *MAX* monitors and *Switchboards* that are inside the same building element or its sub-elements.

Please, see the example shown in the following figure

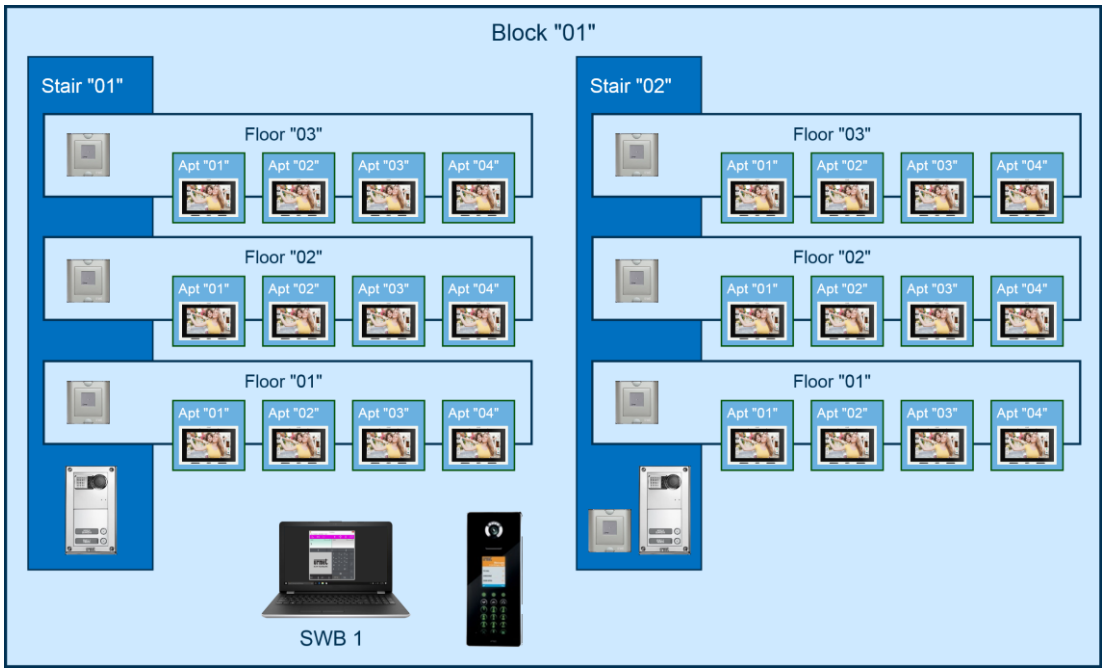

Figure 2: Example of the competence concept

Figure 2 shows a black *Call Module* positioned in block “01”, which is able to call all the apartments and all the switchboards in the entire block. It is also possible to see a *Key Reader* in stair “02”, that will recognize the keys of all residents whose apartments are in the same stair (more precisely in the apartments on the floors belonging to stair “02”).

This means that on *IPerCom*, the position of the devices and of the residents in the correct topological element **automatically determines their competence**.

3.3 Security and configuration distribution

IPerCom has been designed by paying utmost attention to IT security. As a consequence, two security levels with relevant passwords have been defined:

- **installer level**, which provides a password that the installer chooses when creating the system configuration project and that is requested every time you want to access the system configuration project;
- **administrator level**, which provides for a password that the administrator chooses when deciding to secure the system.

Initially the system does not require any administrator password (**system unlocked**) and allows the installer to configure the entire system by entering, where required, the Urmet password “1937” and the installer password.

When the system configuration and commissioning are complete, the administrator can set an “administrator” password (**blocked system**).

When the system is blocked, every access to the system configuration will require the administrator password (instead of the Urmet one). The installer can no longer log in without permission from the administrator.

The administrator can unlock the system to allow the installer to access it, or change the installer password, i.e. block the access to the previous installer to authorise a new one.

4 System installation

The installation of the system can be carried out independently of the system configuration.

All *IPerCom* devices are uniquely identified by their MAC address (physical address of the network interface connected to *IPerCom*, e.g. 00:1E:E0:01:02:03) and are equipped with QR codes which are useful for acquiring devices in one of the configuration modes (see chapter *6.3.3 Adding devices*).

Figure 3: Example of QR code of an IPerCom device

It is recommended to take note of the association between the position of the installed device and its physical MAC address.

4.1 Minimum requirements for the installation of *IPerCom*

IPerCom can be added to **any IP network where the IGMPv2 or IGMPv3 Multicast service is enabled**.

The network must offer an available bandwidth compatible with the number of simultaneous conversations expected on the system (the maximum bandwidth during a single video call session is 2 Mb/s).

The prerequisite for *IPerCom*'s operation is that at least one *MAX* monitor is installed and configured in the system.

4.2 IP network structure

Although no knowledge of IP networks and their configuration is required for the installation of the system, it is recommended to refer to the wiring diagram shown in the following figure

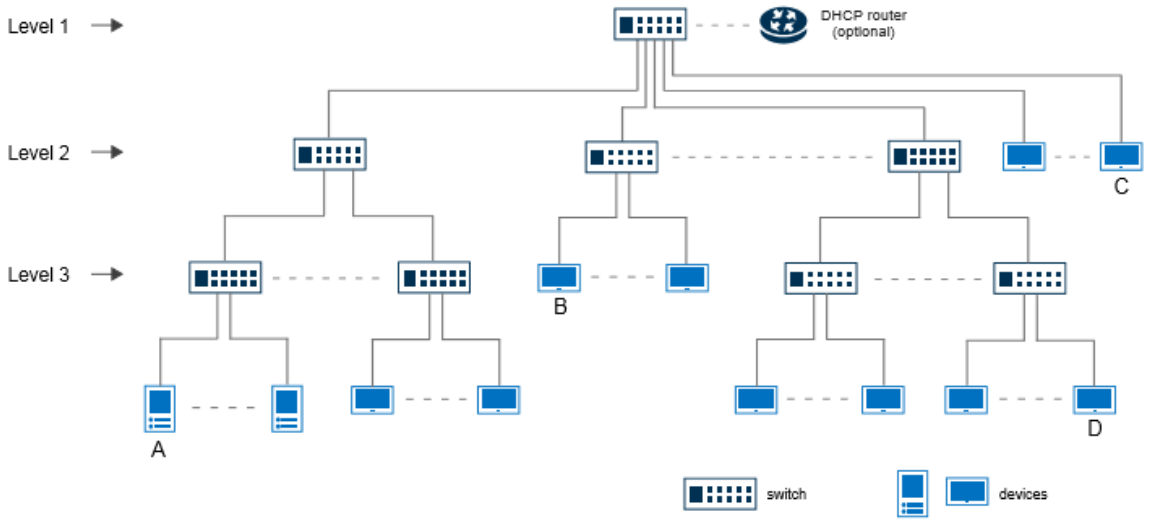

Figure 4: Recommended network topology

The shown network structure is of the "tree type", in which the switches are arranged on different levels of the network: if you use switches with 24 POE ports, **just 3 levels are sufficient** to reach the maximum number of 1000 devices supported by *IPerCom*.

5 Device firmware upgrade

After the system installation and in any case **before configuring it**, it is necessary to **update the firmware** of all the devices installed via the appropriate *IPerUpgrade* application for MS Windows, available at www.urmet.com.

6 System configuration

The **commissioning of a system** essentially involves:

- setting the date and time of the entire system
- setting the system parameters by creating the so-called **system project** or simply **configuration**
- the distribution of the configuration to the devices
- securing the system

Access to these settings is via the ***configuration menu*** of the *MAX* monitors in the system.

Once you have accessed the *configuration menu* from a *MAX* monitor, the system is in the **configuration state**.

It is recommended to access the *configuration menu* **from a single *MAX* monitor at a time**.

The system projects are modified through the *IPerCom Configurator* (or more simply *configurator*): the program is available on *MAX* monitors, on PCs with MS Windows and on Android tablets, in order to provide the installer with all the flexibility possible during the creation/modification phase of the system projects.

The *configurator* allows saving the configurations on files (with CCF extension), which can be imported/exported on the *IPerCom* system through *MAX* monitor (through the use of a micro SD card).

6.1 The *configuration menu*

The *configuration menu* of the *MAX* monitors allows configuring *IPerCom*.

There are two ways to access this menu:

1. via the start screen with QR code on devices not yet configured
2. using the “Top Page” button in case of closed start screen or for devices already configured

Mode 1: Accessing the configuration menu from the start screen of non-configured devices

MAX monitors not configured upon starting show a screen with the QR code of the device

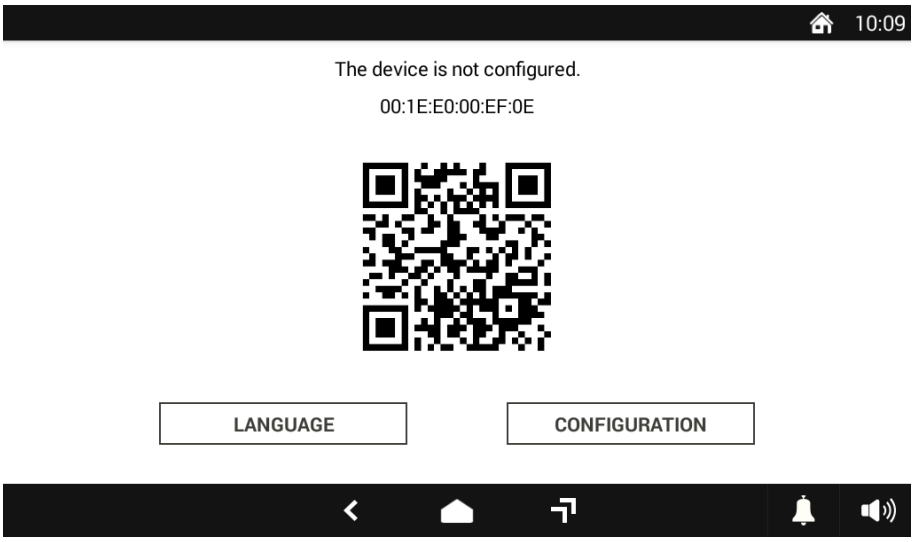

Figure 5: Start screen of a non-configured MAX monitor

Using the “*LANGUAGE*” button, you can change the language of the MAX monitor

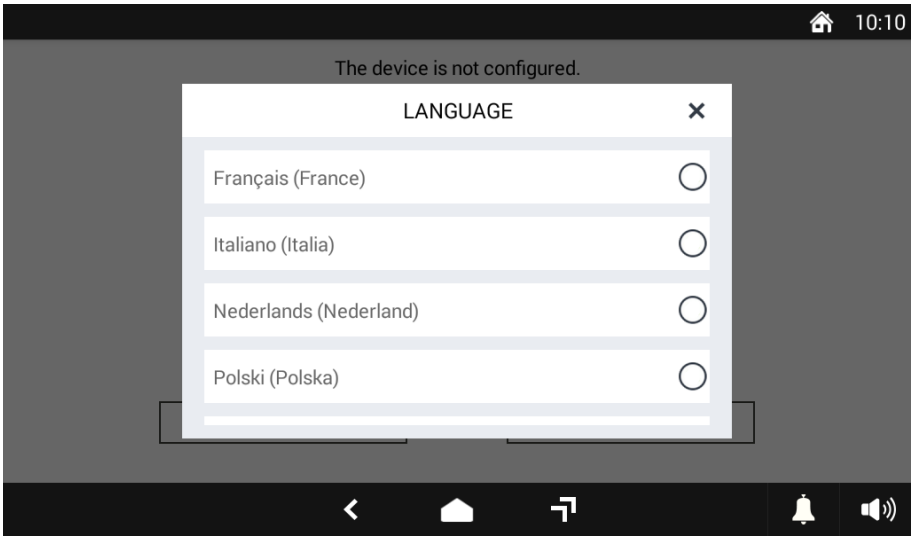

Figure 6: Selection of the device language

The window shows a list from which to select the desired language: once you have made your selection, it will be immediately applied to the device.

For example, if you select the Italian language, the start screen will change as follows

Figure 7: Starting screen translated in Italian

From this screen it is possible to access the *configuration menu* using the *"CONFIGURATION"* button.

Mode 2: Access to the configuration menu through the "Top page" button

If you have exited the starting screen or the devices are already configured, to access the configuration menu go to the *"Top Page"* by pressing button  on the top bar, then press the setting button shown in the following figure

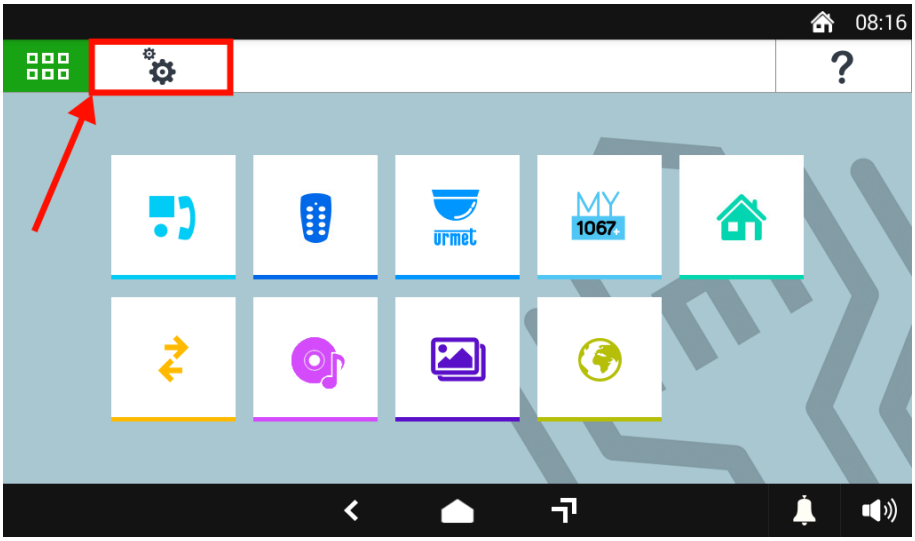

Figure 8: Opening of the settings menu for a MAX 1717/31 monitor

This will display the settings menu

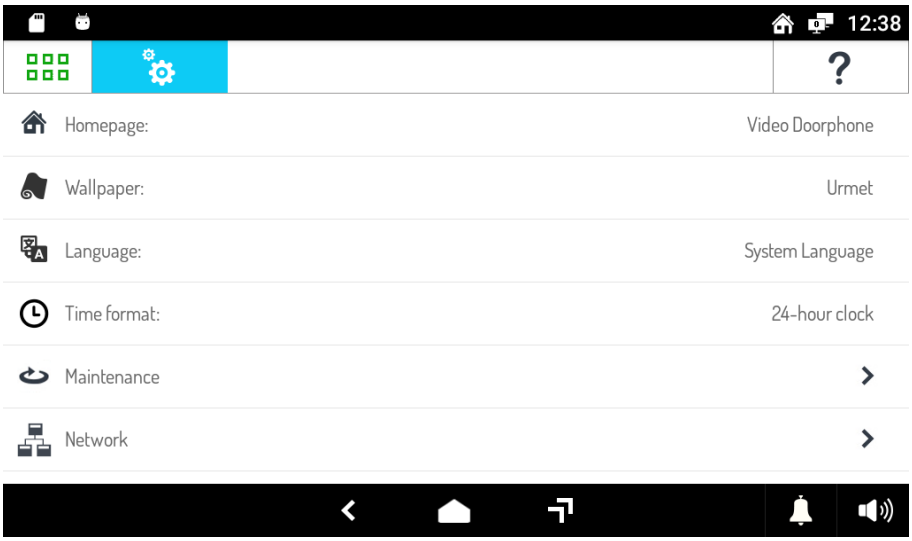

Figure 9: Settings menu (part 1)

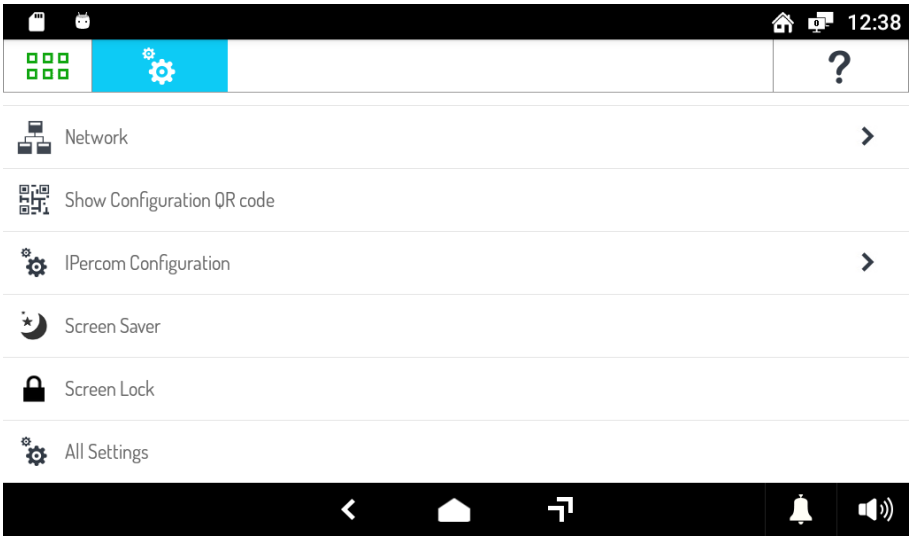

Figure 10: Settings menu (part 2)

The *configuration menu* can be accessed by selecting *"IPerCom Configuration"* (see *Figure 10*).

Regardless of how you access the *configuration menu*, you will be prompted to enter the Urmet "1937" password in case of *unlocked system* or the administrator password in case of *blocked system*.

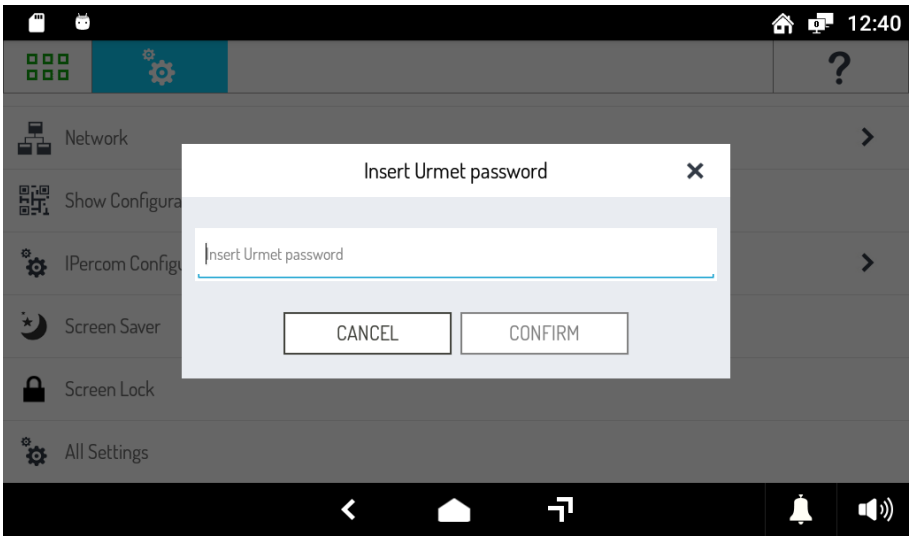

Figure 11: Entering the password to access the configuration menu

After entering the password, the installer will access the *configuration menu*, as shown in the following figure.

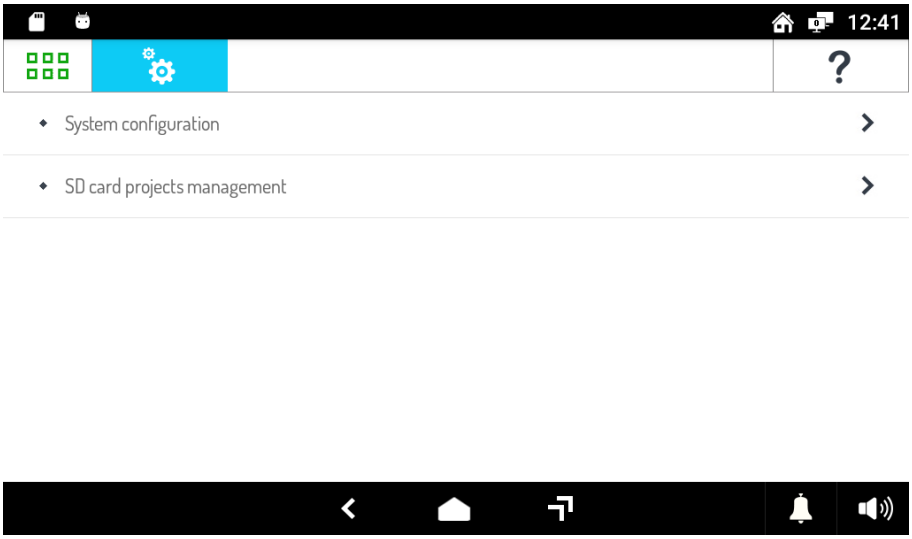

Figure 12: The configuration menu

The *configuration menu* is divided into two sub-menus: *"System configuration"* and *"SD card projects management"*.

The sub-menu *"System configuration"* is structured as follows:

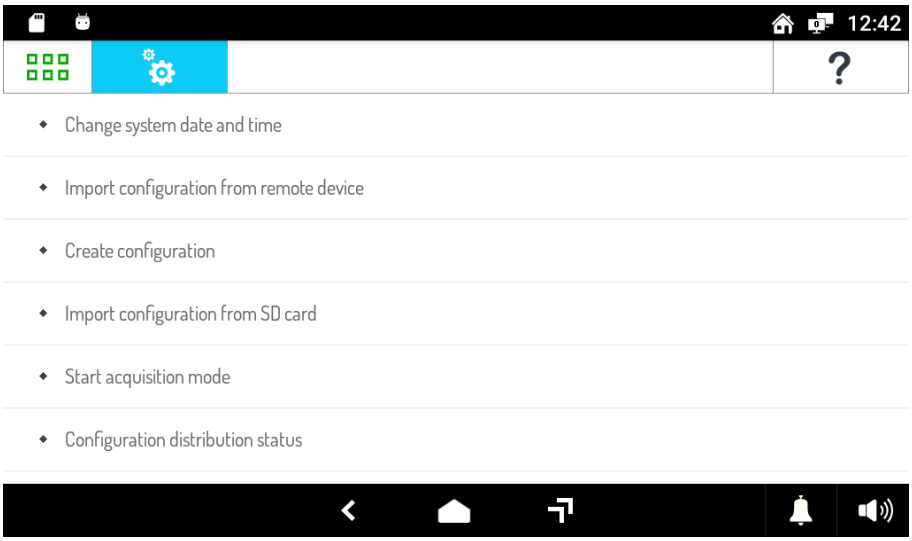

Figure 13: "System configuration" sub-menu (part 1)

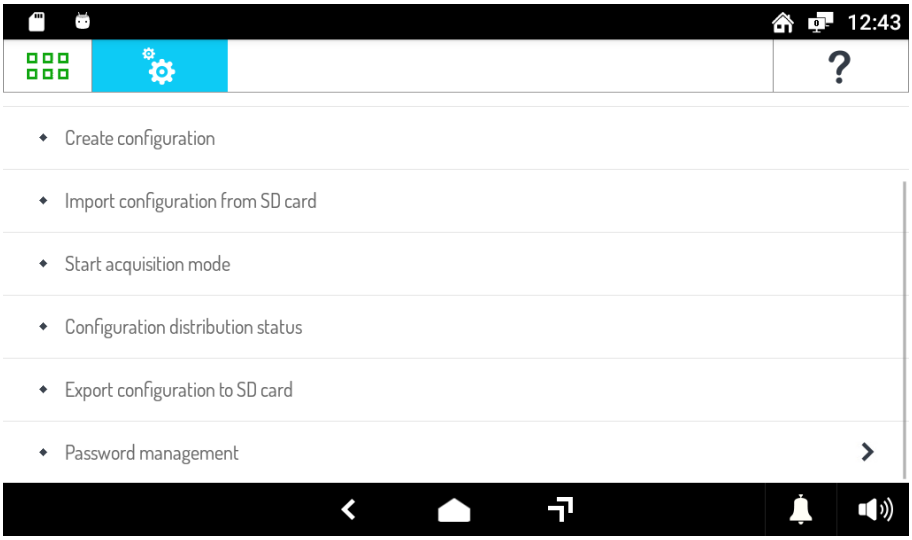

Figure 14: "System configuration" sub-menu (part 2)

This menu allows you to:

1. change the system date and time
2. import the configuration from another already configured device in the network
3. create a new system configuration or change the current one: in the latter case, the *configurator* will open
4. import the configuration from SD card
5. start the "acquisition mode" (described in *6.3.3 Adding devices)*
6. check the status of the configuration distribution to the *IPerCom* devices on the IP network
7. export the system configuration to SD card
8. manage the administrator and installer passwords

The *"SD card projects management"* sub-menu is as follows

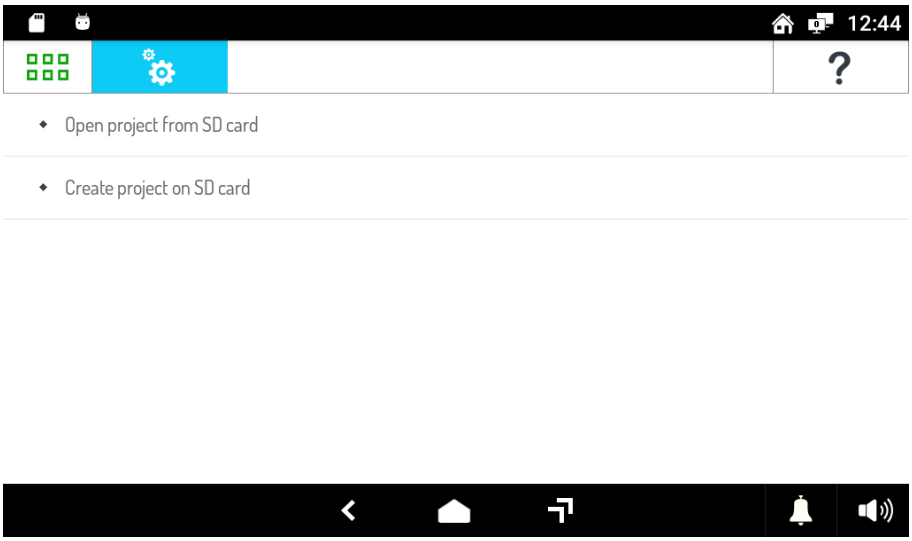

Figure 15: "SD card projects management" sub-menu

This sub-menu allows you to:

1. modify *IPerCom* configuration projects on SD card
2. create a project to be saved directly on SD card.

These operations allow you to use the *MAX* monitor as a configuration editor regardless of which system is installed.

6.2 The configurator

The configurations are created and edited using the ***IPerCom* Configurator** software, also known as the ***configurator***.

The *configurator* can be accessed from the *MAX* monitor through the *configuration menu*, as explained in *6.1 The configuration menu*.

If the system is not configured, choose to create a new configuration and the *configurator* will be opened in the following screen

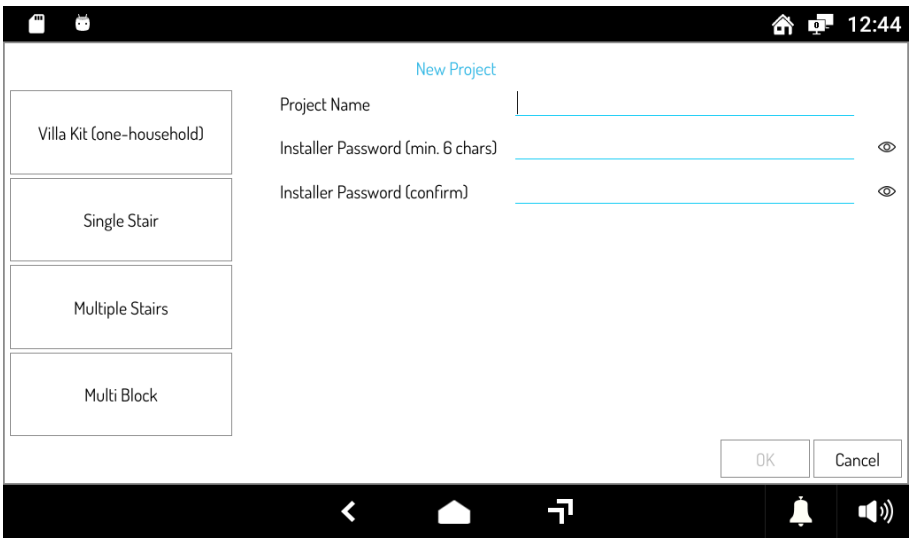

Figure 16: Creating a new project using the configurator on MAX Monitor

If the system has already been configured and the *MAX* monitor is part of it, by changing the current configuration the *configurator* will open with the configuration on the system

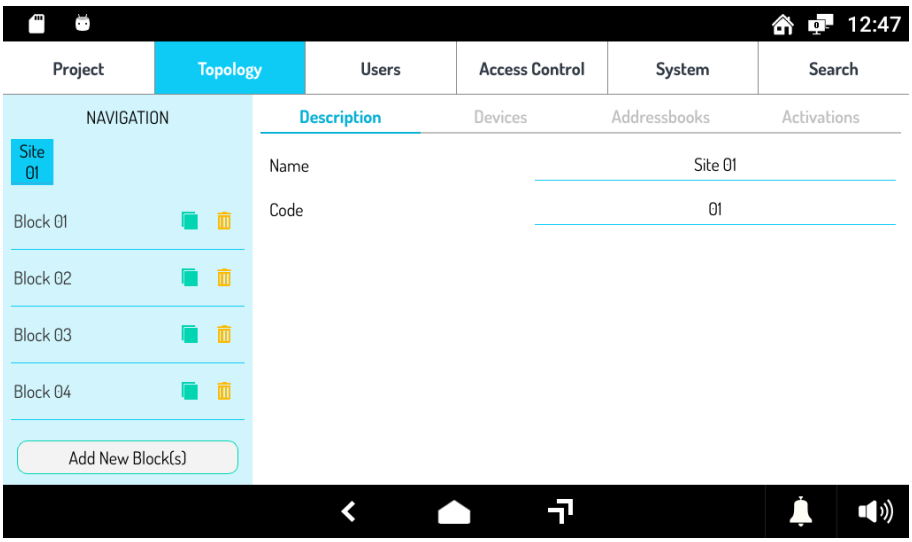

Figure 17: Opening the current configuration using the configurator

As mentioned in *6.1 The configuration menu* the *configurator* can also be opened as a configuration editor, therefore not only to create or modify the current configuration of the system.

In this case you can launch the programme by opening a project from SD Card or by creating a project on SD Card.

In the first case a window will appear with a list of configuration files previously saved on SD Card.

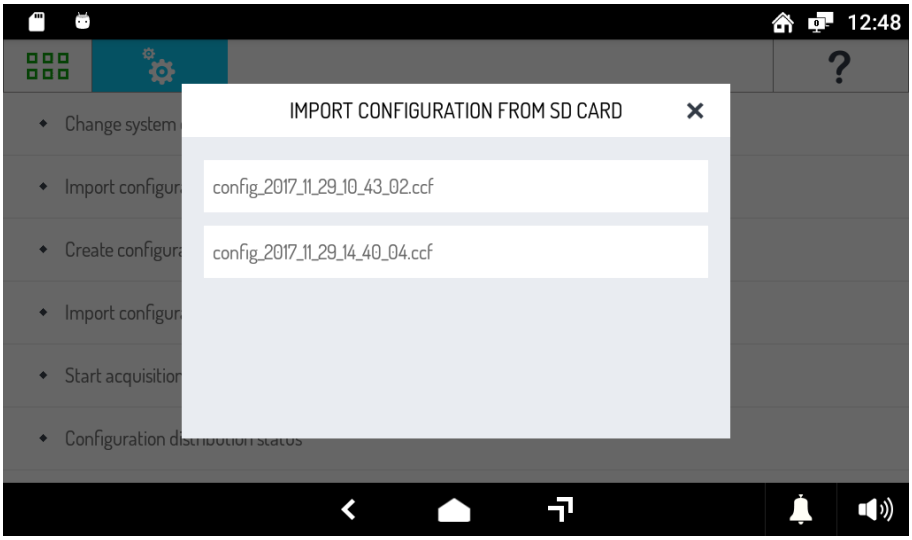

Figure 18: Opening a configuration from SD card

By selecting the desired file name, the *configurator* will open and show the contents of the chosen configuration.

If you want to create a new configuration on SD Card, the *configurator* will be opened on the screen for the creation of a new project, as shown in *Figure 16*: Creating a new project using the *configurator*.

IPerCom Configurator has been designed to offer a simple and efficient user interface. Therefore, great importance was placed on minimizing the number of steps required to configure the system.

The *configurator* consists of three main components, shown in the following figure

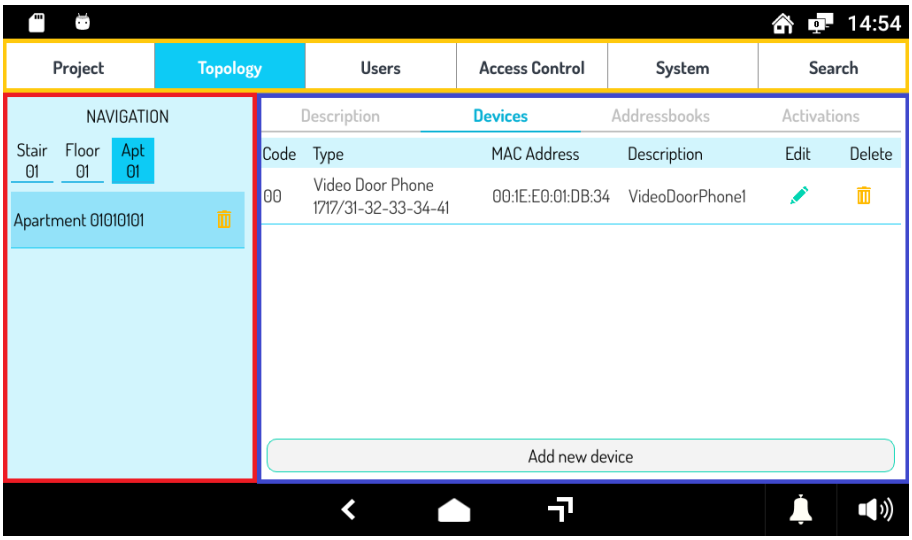

Figure 19: Main components of the configurator

It is possible to see:

- an *upper bar* (in yellow), which allows accessing to the main functions through the following items
  - *"Project"*, to set the basic information about the project (name, installer password, etc.)
  - *"Topology"*, to change the system topology, add devices, create address books and set activations
  - *"Users"*, to add residents and non-residents, as well as switchboards
  - *"Access Control"*, to set the rules to access the system
  - *"System"*, for the system global settings
  - *"Search"*, to perform a fast search among the system elements
- a *navigation module* (in red), to view and add/modify/remove system topological nodes: blocks, stairs, floors and apartments
- a *context module* (in blue), to set the configuration parameters

If the *configurator* is opened, by changing the current configuration, the *"Project"* screen will appear as follows

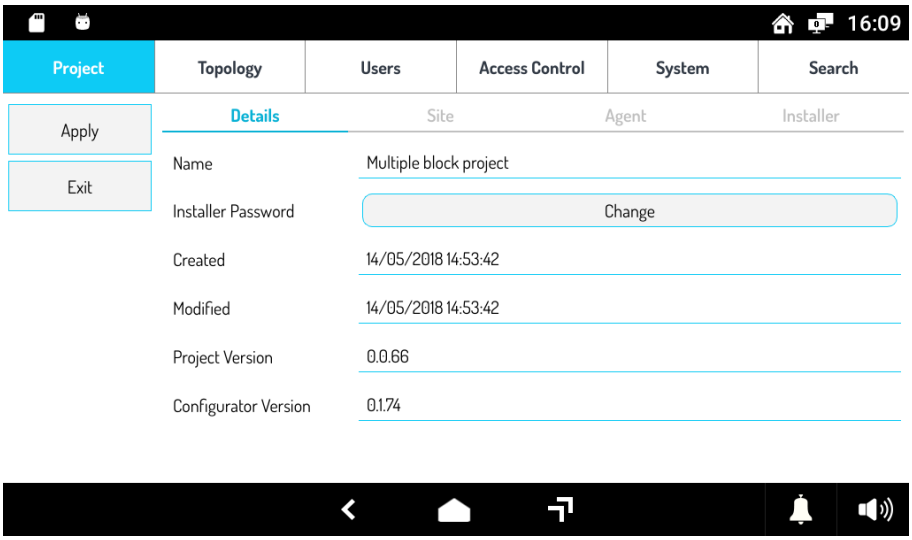

Figure 20: "Project" screen of the configurator when changing the current configuration

Two buttons are shown on the left: *"Apply"*, that allows saving and applying the modified configuration to the entire system, and *"Exit"*, that allows exiting the *configurator* yet losing the last applied changes.

If the *configurator* is opened as configuration editor, the *"Project"* screen will appear as follows

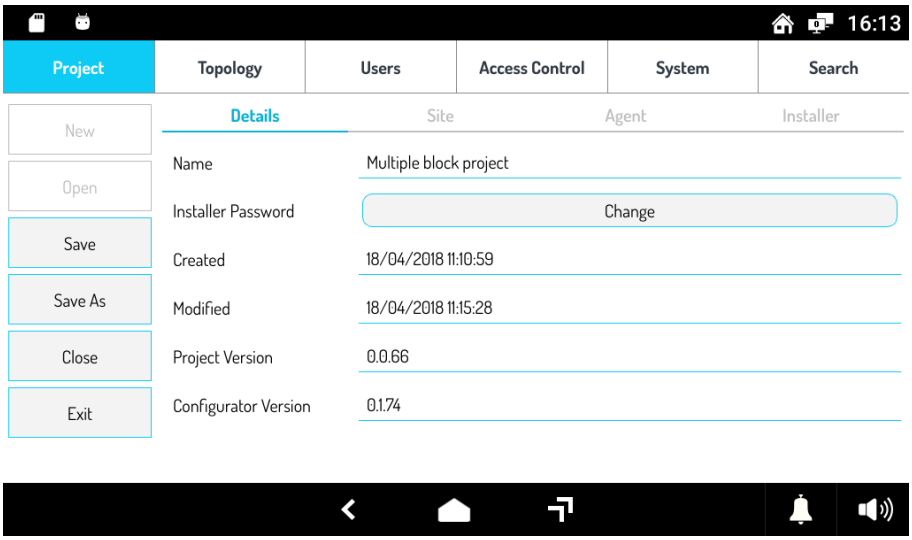

Figure 21: "Project" screen of the configurator in editor mode

In case a configuration has been suspended while using a *MAX* monitor, as soon as you launch the application again you will be asked whether to recover the last interrupted configuration project

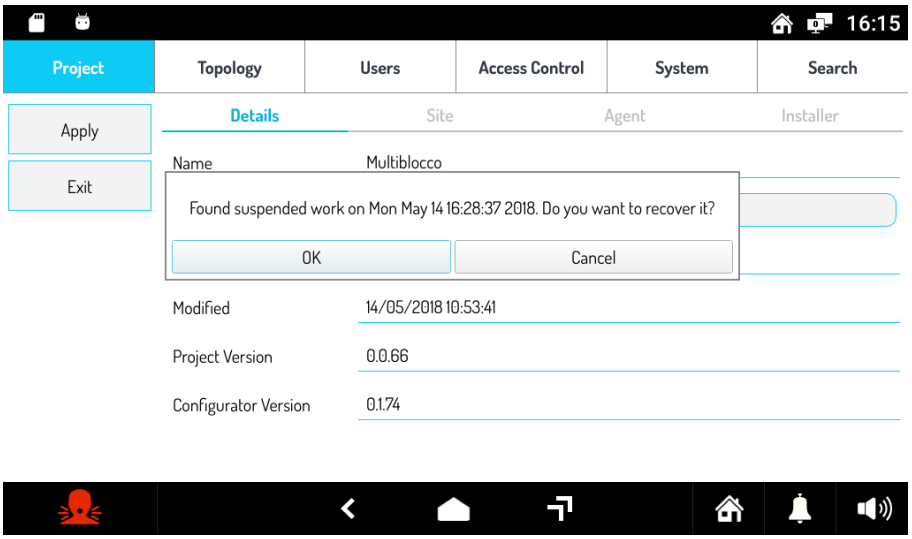

Figure 22: Recovering an unsaved configuration on MAX Monitor

The *IPerCom Configurator* is also released for Windows PCs and Android tablets.

The graphic interface of the programme for MS Windows is similar to that of the *configurator* opened in editor mode for a *MAX* monitor.

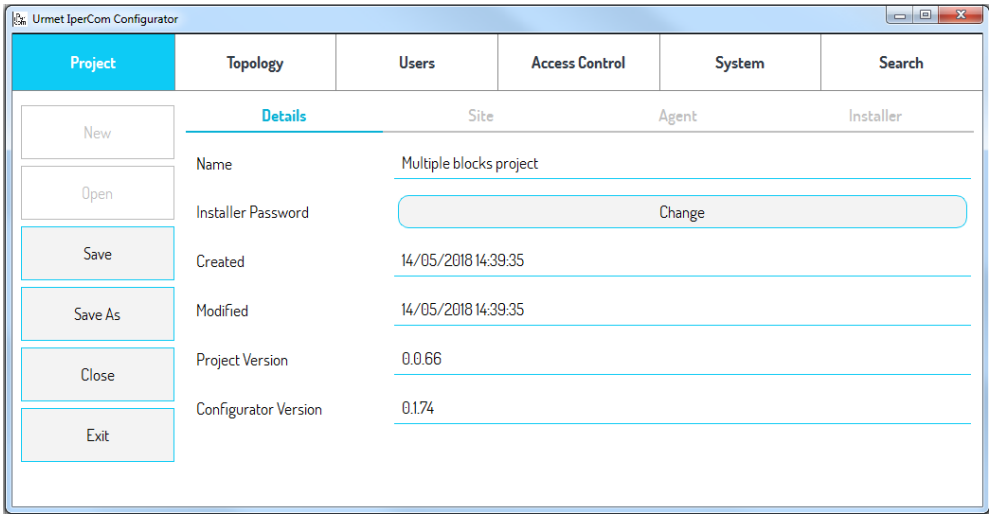

Figure 23: Configurator for MS Windows

The same applies to the *configurator* on Android tablets

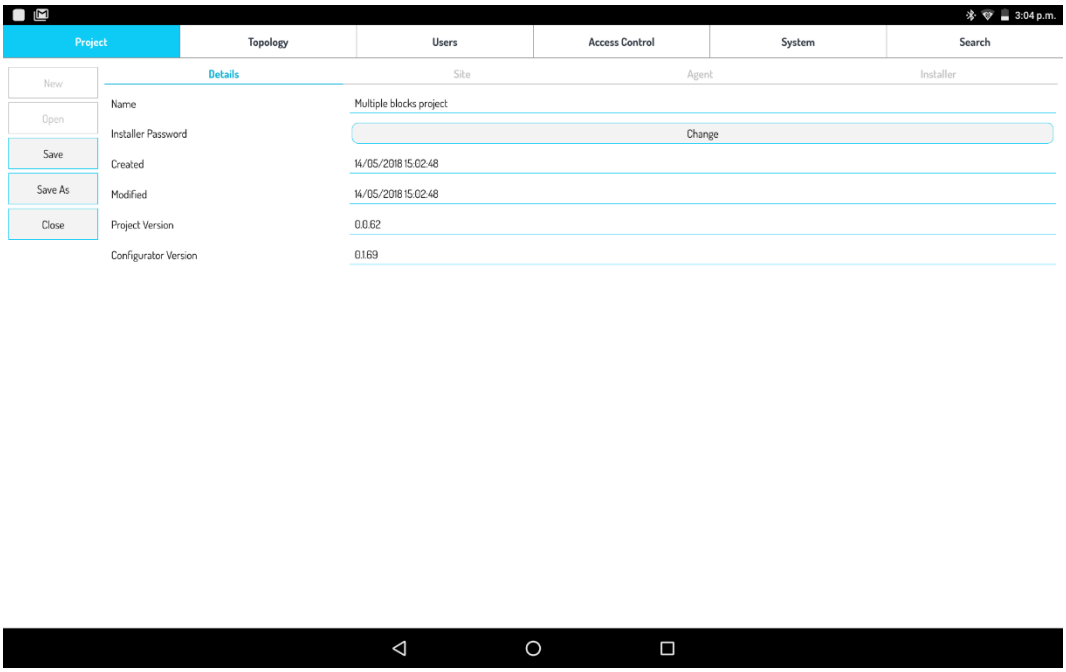

Figure 24: Configurator for Android tablets

Both on MS Windows and Android tablets, as well as on MAX monitors in editor mode, the configurator allows creating, opening and saving system projects from the “Project” screen.

When saving configurations to an SD card, it is recommended not to save the file in subfolders, but directly in the unit associated with the card.

6.2.1 Installing the configurator on MS Windows

The installation file of the *configurator* for MS Windows 7/8/10 is available at www.urmet.com in the section dedicated to software download.

By executing the installation file, a software setup wizard will start

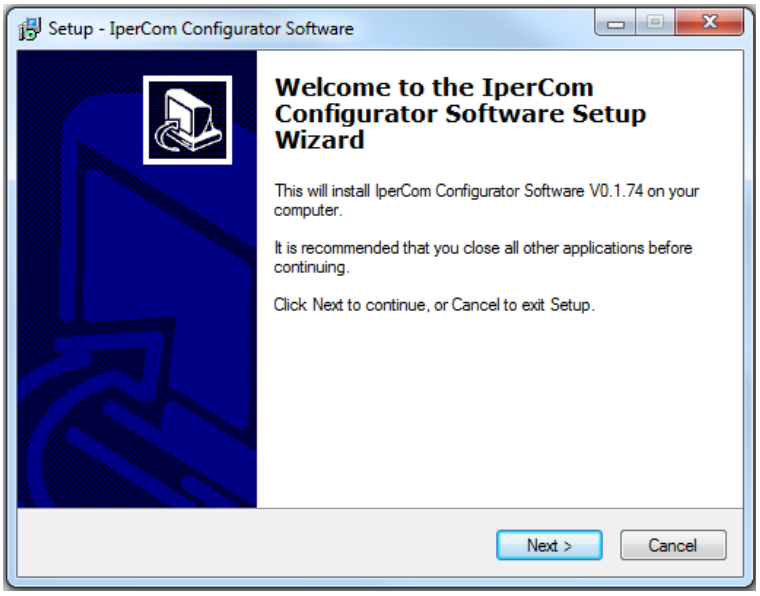

Figure 25: Starting the IPerCom Configurator Software setup wizard

After following the on-screen steps, a message to complete the installation will be displayed

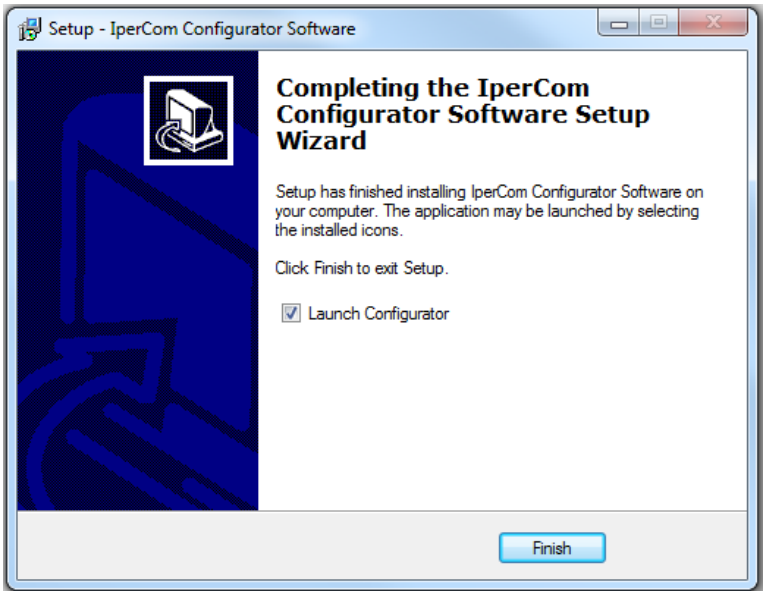

Figure 26: Completing the IPerCom Configurator Software installation

6.2.2 Configurator installation on Android tablets

The *IPerCom Configurator* version for Android tablets (from Android 6.0) is available on *Google Play Store*.

The relevant page can be accessed by scanning the following QR Code

Figure 27: QR Code of the IPerCom Configurator app page on Play Store

6.3 System first configuration

This section describes the steps to be followed when configuring an *IPerCom* system for the first time.

When doing this, all devices must have the factory settings; otherwise, it is necessary to reset to the factory settings (see *6.4.4 Restoring the factory settings*).

The first configuration of the system consists of the following phases

1. setting of date and time
2. creation of a new configuration and definition of the system topology
3. addition of devices to the configuration
4. system customisation (device names, apartments, blocks, ...)
5. addition of intercom contacts that can be displayed on *MAX* monitors
6. setting of the activation rules of the relay actuators
7. addition of users
8. setting of the access control
9. configuration of the system parameters
10. setting of call forwarding
11. configuration distribution via *MAX* monitor
12. exporting the configuration to SD card
13. securing the system

Note1 (date and time setting): we recommend to pay particular attention to the first phase, i.e. setting the system date and time, which must be carried out before any other step.

Note 2 (configuration distribution): we recommend to distribute the configuration to the system only after waiting at least 10 minutes from the connection of the last device.

6.3.1 Date and time setting

The first step of the system configuration is to set the correct date and time.

Date and time are used to identify configuration files and determine which one is the most up-to-date during the automatic distribution between devices; therefore, as already mentioned, it is essential to set them before proceeding with the following steps.

If the system is connected to the Internet, the date and time are set automatically.

Manual setting is normally required as soon as the *configuration menu* is accessed from a MAX monitor that was started for the first time.

In fact, by accessing the *configuration menu* in such conditions, you will be asked to change the system date and time through the following dialog box

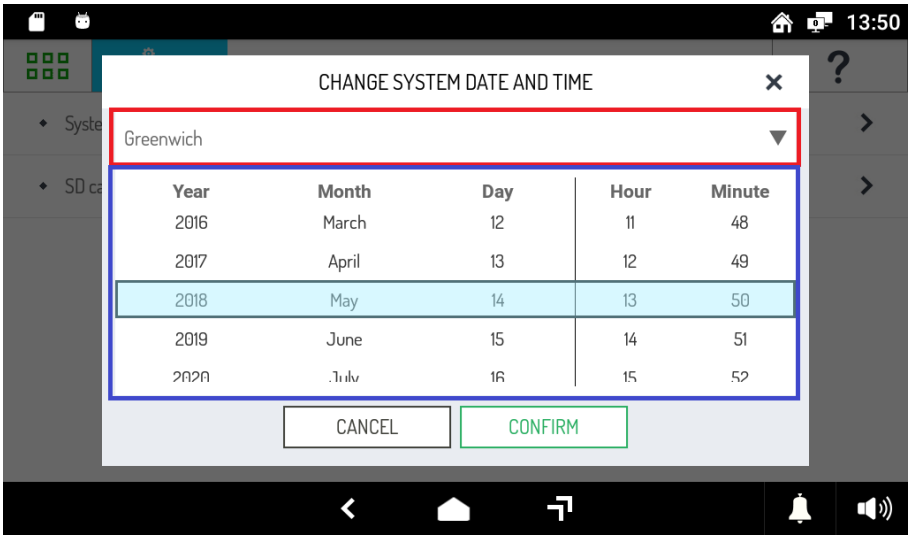

Figure 28: Date and time setting

After selecting the appropriate time zone (red area) and selecting the year, month, day, hour and minutes (blue area), press the "*CONFIRM*" button to make the system acquire the correct date and time.

In fact, once the changes have been applied, the settings will be applied automatically also to all the other devices of the system.

To perform the setting at any time from the *MAX* monitor *configuration menu*, go to "*System configuration*" and then to "*Change system date and time*": the window shown in *Figure 28* will be displayed.

Setting the time zone is not enabled if the *MAX* monitor is configured: changing the time zone in this case requires changing the current system configuration (see *6.3.8 System parameters*).

6.3.2 Creation of a new configuration: definition of the system topology

To create the first configuration on a *MAX* monitor it is necessary to access the *configuration menu*, then to "*System configuration*" and choose *"Create configuration"*, as shown in the figure

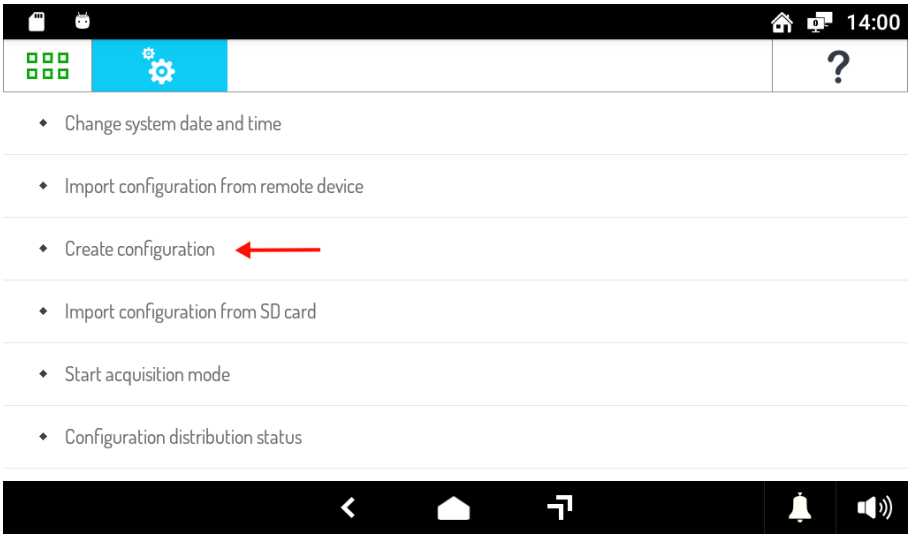

Figure 29: Creation of the first system project on MAX monitor

After confirming the request, the screen for creating a new project will open, as shown in *Figure 16*.

To create a new project on MS Windows, open the *"IPerCom Configurator Software"* and press the *"New"* button, as shown in the figure.

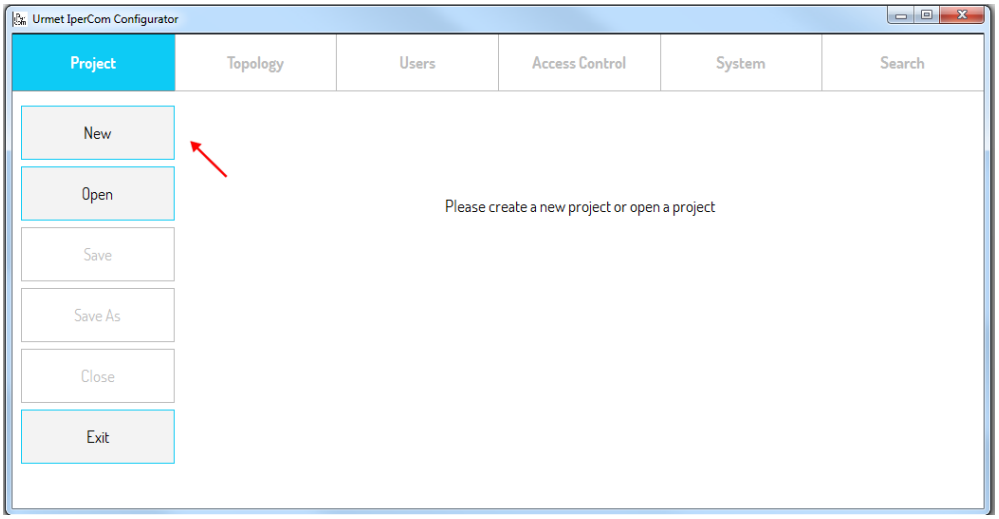

Figure 30: Creation of a new project on MS Windows

On Android tablets, the creation of a project is the same as the version of the *configurator* for MS Windows: once the *"IPerCom Configurator"* app has been started, press the *"New"* button, as shown in the figure

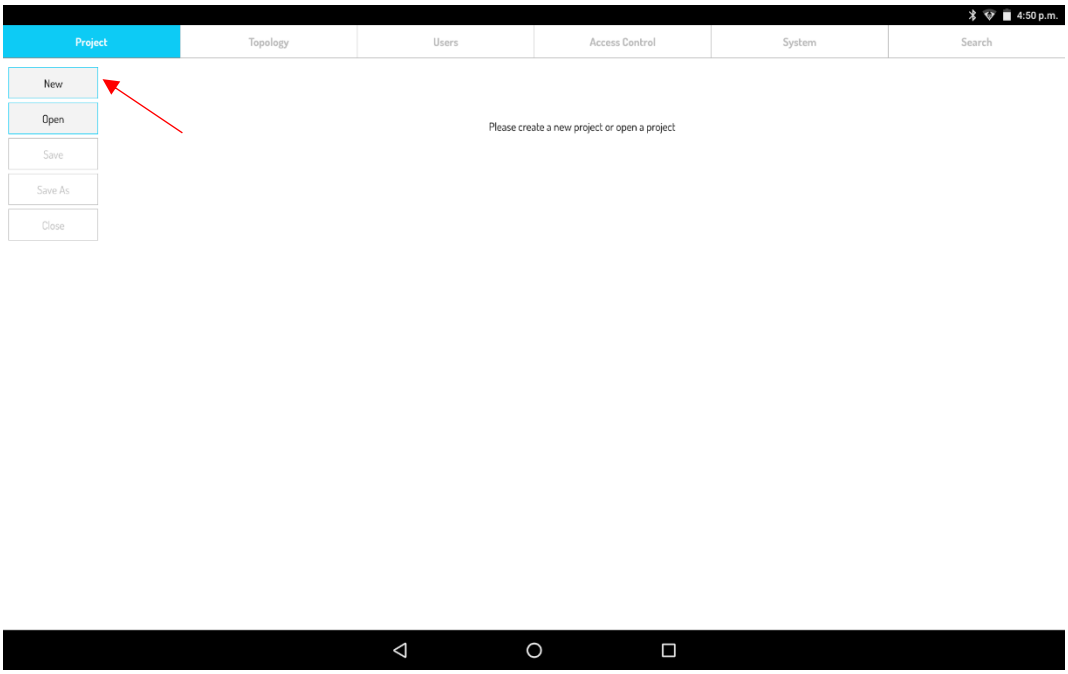

Figure 31: Creation of a new project on Android tablet

Regardless of the device on which you use the *configurator*, the screen for creating a new project will look like the following one

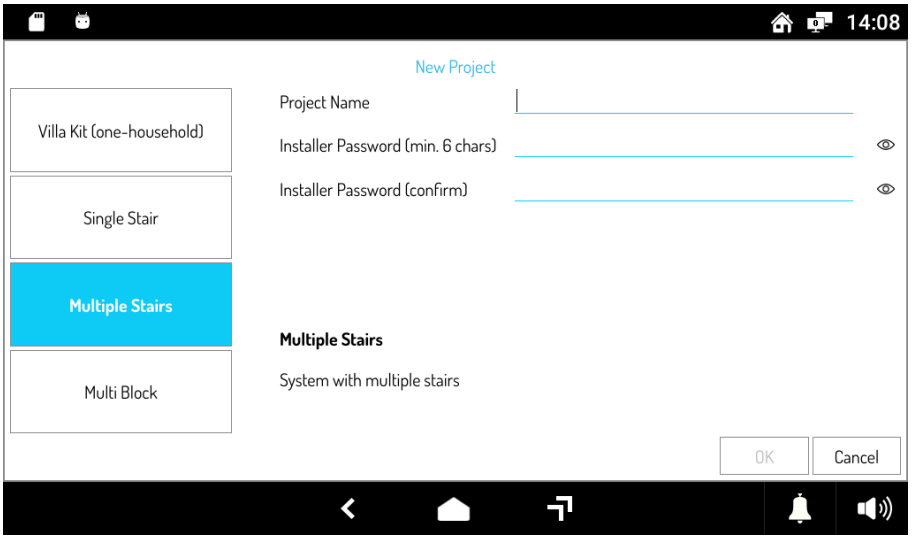

Figure 32: Selecting the type of system when creating a project

The following data are required to create a new project:

- project name
- installer password
- type of system

As for the choice of the system type, there are 4 options available, depending on your needs

1. *Villa Kit (one-household)*
2. *Single Stair*
3. *Multiple Stairs*
4. *Multi Block*

The choice of one system type rather than another permanently determines the topological structure of the system and the behaviour of the network interfaces of the *MAX* monitors connected to the system; if you are not sure of the choice, we recommend to select the most generic type, i.e. *Multi Block*.

As for the last point, the *Villa Kit (one-household)* type is the only one that allows accessing the Internet of the *MAX* monitors through the *ETH0* network interface, which is normally used for other purposes.

Once all the fields have been filled in and the desired type has been selected, by pressing *"OK"* a basic project will be created and the *"Topology"* tab will be displayed.

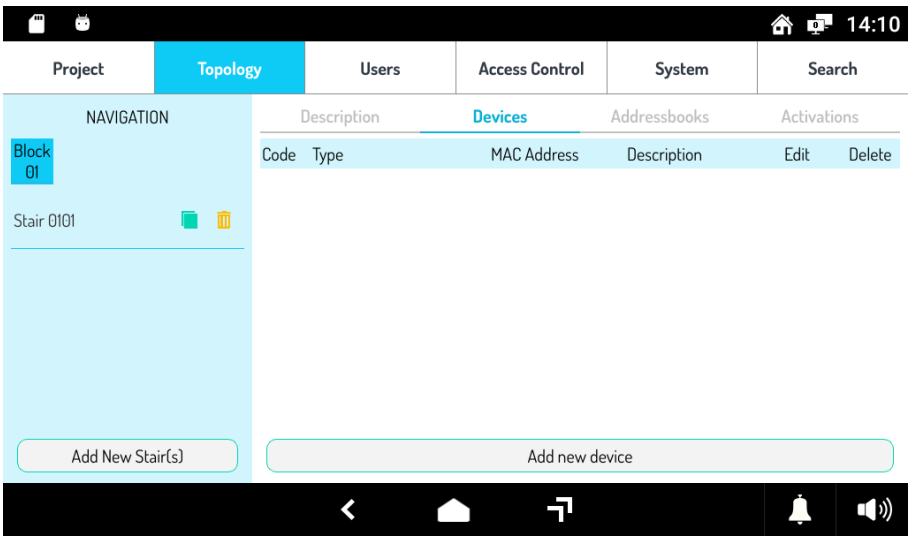

Figure 33: The "Topology" tab of a "Multiple Stairs" configuration

The shown screen is related to the case in which the *Multiple Stairs* topology was chosen during the project creation phase.

To browse through the various topological nodes it is necessary to use the navigation module, visible on the left in *Figure 34*; it is possible to identify three zones

- an upper part (in yellow), showing the current topological node
- a central part (in red), with a list of all the topological nodes that derive directly from it
- a lower button (in blue), to add new nodes to the topology

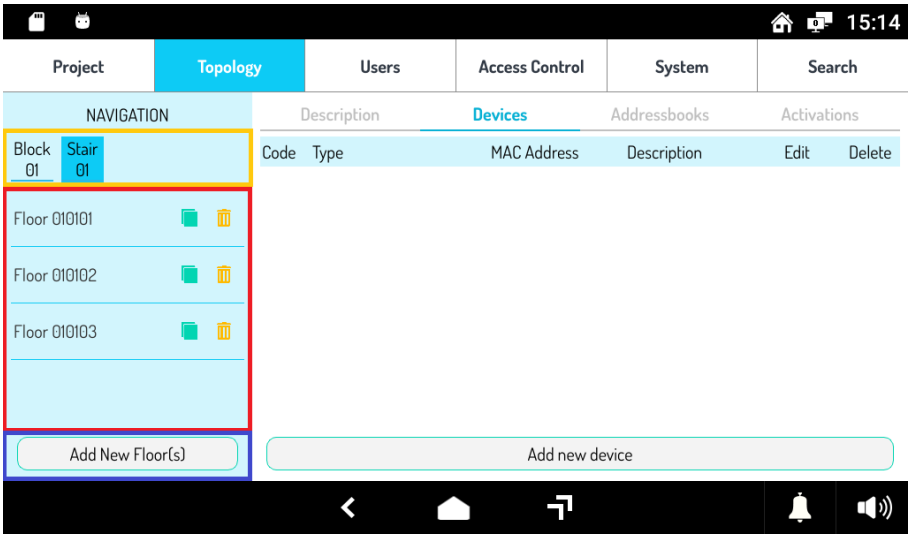

Figure 34: Example of navigation in topology for a "Multiple Stairs" project

Two buttons are available for the topological nodes:

- clone, which allows you to create an identical copy of the topological node and of all the nodes that derive from it; this button is not available in case of apartments
- delete, which allows removing the topological node and all the nodes that derive from it

When creating the topology, it must be taken into account that *IPerCom* supports a maximum number of 99 blocks, a maximum number of stairs per block of 30, and a maximum number of floors per stair of 1000; then a maximum of 1000 apartments can be added to each floor, for a **maximum of 1000 apartments in total in the entire system**.

In the context module within *"Topology"* it is possible to access 4 configuration panels that allow you to make changes related to the current node:

- *"Description"*, that allows accessing the node properties
- *"Devices"*, that allows adding/modifying/removing devices
- *"Address books"*, that allows creating the address books used by some devices of the system
- *"Activations"*, that allows adding control elements of the relay actuators

6.3.2.1 *Villa Kit (one-household) systems*

The **Villa Kit (one-household)** systems are those systems with one floor and only one apartment where up to 10 *MAX* monitors can be installed.

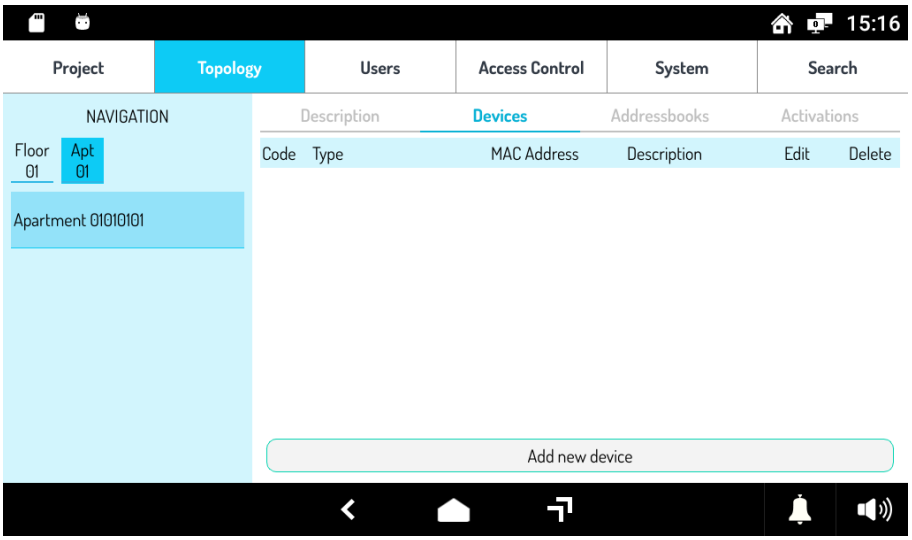

Figure 35: "Topology" tab for Villa Kit (one-household) system

In a *Villa Kit* system, the addition of other apartments is not allowed and the *Call Module*, *Door Speaker Unit* and *Switchboard* devices can only be certified on the floor.

6.3.2.2 *Single Stair systems*

The **single stair** systems are characterised by the fact that all the apartments are arranged on the floors belonging to a single stair. This mode is also suitable for two-family systems. On this system it is possible to have any number of apartments and floors on which *IPerCom* devices will be certified.

By selecting *Single Stair* as project type, a stair with a floor and a single apartment is created automatically.

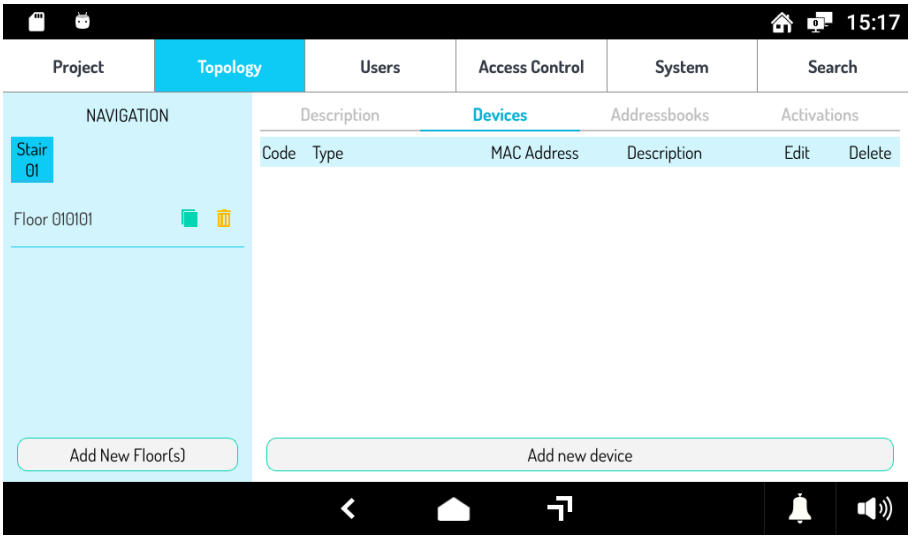

Figure 36: "Topology" tab for Single Stair system

It will then be possible to add the desired number of floors and the relevant apartments by clicking on the relevant button at the bottom of the navigation module.

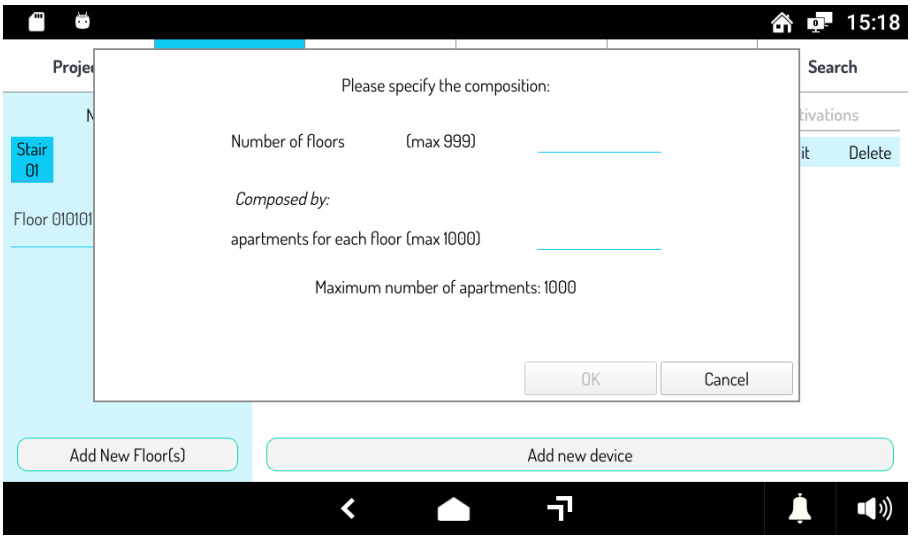

Figure 37: Adding of new floors to the topology

6.3.2.3 *Multiple Stairs systems*

If the system topology consists of several stairs within the same block, a **Multiple Stairs** configuration can be created.

In this case a block is automatically created with one stair, one floor and a single apartment.

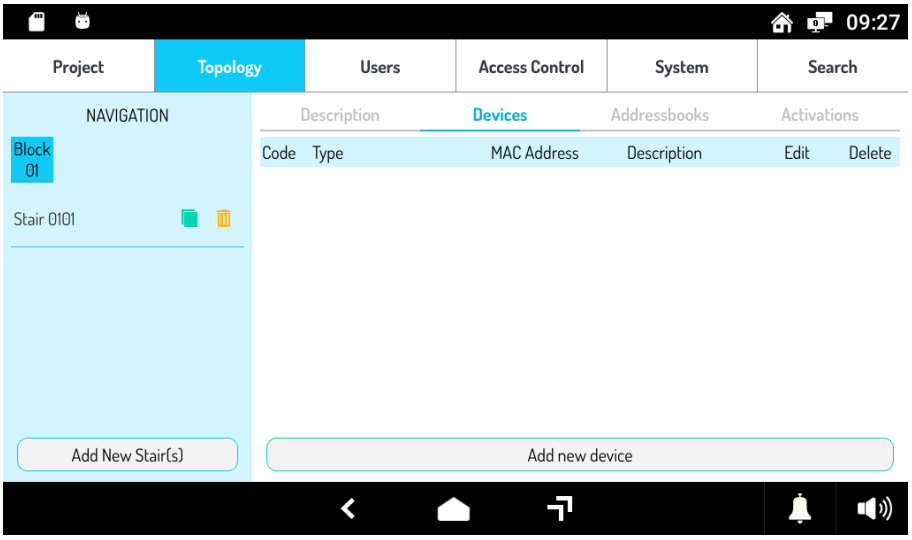

Figure 38: "Topology" tab for Multiple Stairs system

If you need to add or remove stairs/floors/apartments, you can do it in subsequent steps using the relevant button at the bottom of the navigation module.

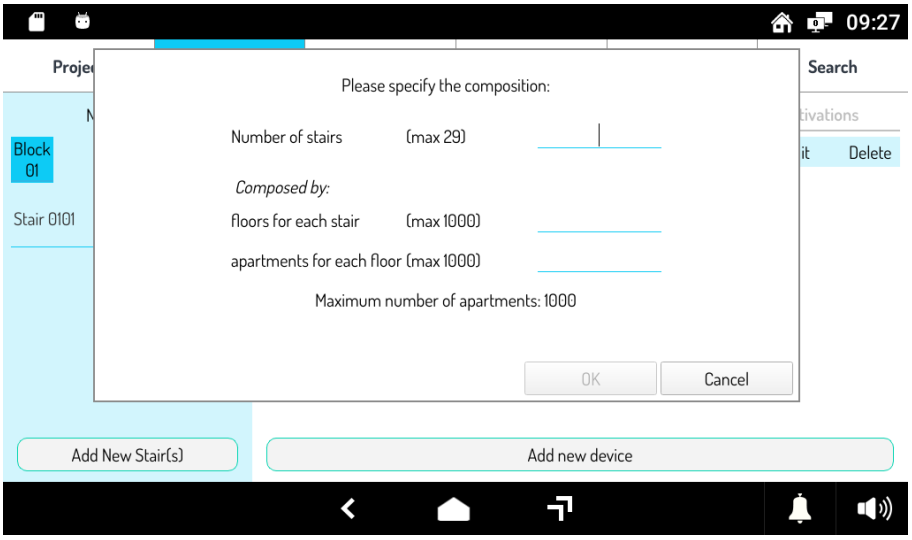

Figure 39: Adding of new stairs to the topology

6.3.2.4 *Multi Block systems*

The last type of system supported by the *configurator* is the **Multi Block** one, that allows creating a project with any number of blocks/stairs/floors/apartments.

The selection of *Multi Block* as project type automatically leads to the creation of a site without blocks, as shown in the following figure

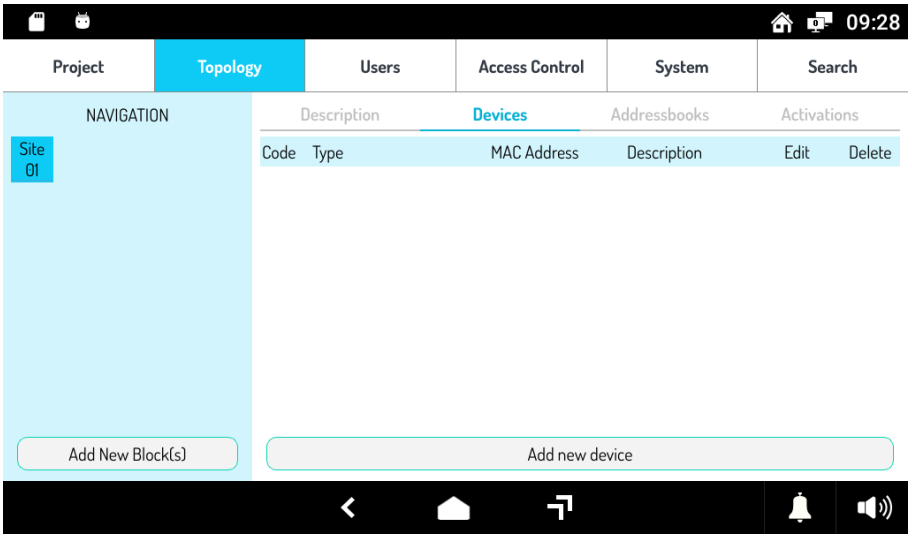

Figure 40: "Topology" tab for Multi Block system

As in the previous cases it will be possible to add all the blocks with their stairs/floors/apartments with a single command.

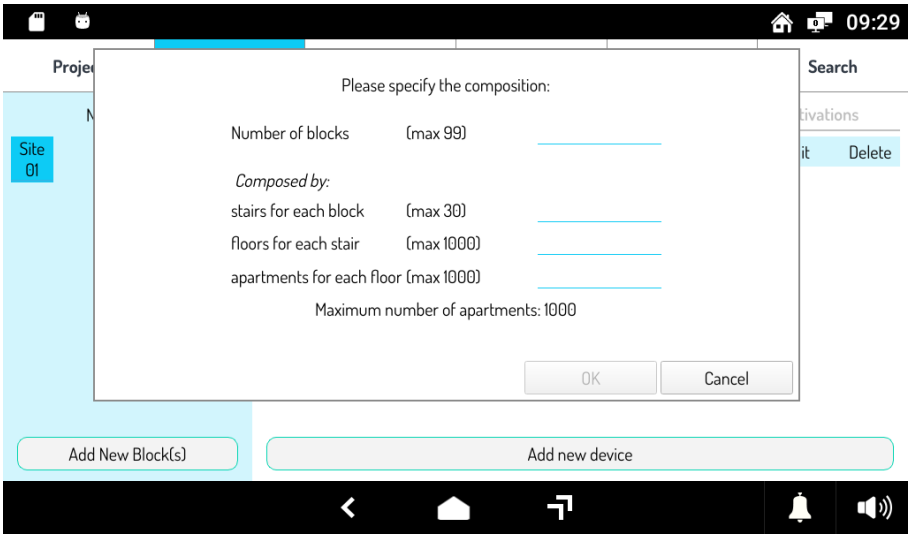

Figure 41: Adding of new blocks to the topology

If the topological structure of the system is not homogeneous, it will be possible to add/remove blocks/floors/stairs/apartments at a later time.

6.3.3 Adding devices

Once the system topology has been defined, it will be possible to add the devices making up the system in the configuration.

A maximum of 1000 devices can be added to a maximum of 1000 apartments on IPerCom.

Each device is associated with a defined topological node, which makes it possible to determine its position in the topology and the level of competence.

Regardless of the complexity of the system topology, any type of *IPerCom* device can be added to each topological node. Therefore, *MAX* monitors can also be used on any topological node (site, block, stair, floor) if you want to provide call stations: for example, in the "Swimming pool" room, which could be located on a specific stair, positioning a *MAX* monitor could allow you to call the switchboard or to receive calls from it or the apartments.

To access the list of devices present in each topological node, you need to select the *"Topology"* tab: by using the navigation module you must select the desired position, then go to the context module to the *"Devices"* tab, where you will find a table showing all the devices installed in the selected node.

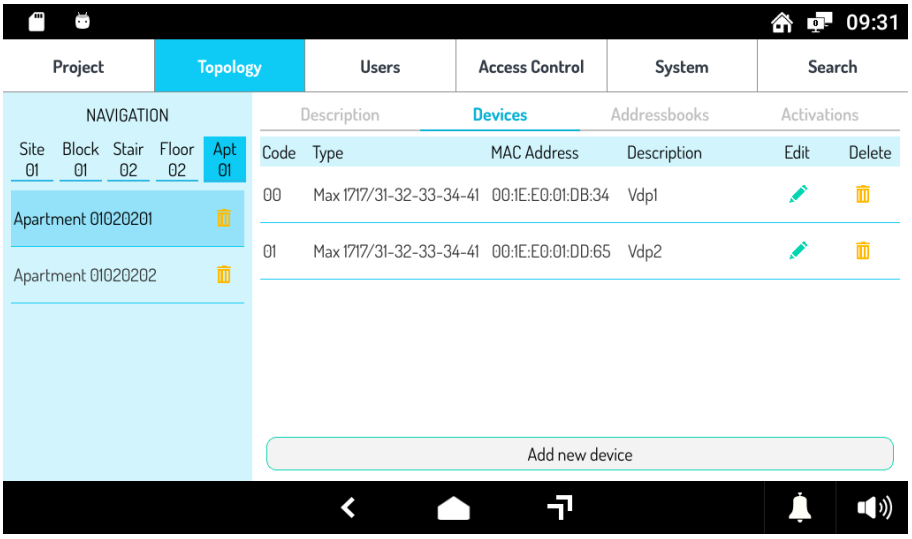

Figure 42: List of devices certified in a topological node

In the example shown in the figure, an apartment has been selected in the topological position 0101020201, in which 2 *MAX* monitors are installed.

The devices can be added to the configuration in 4 different modes, described in the following sub-paragraphs.

6.3.3.1 Mode 1: installer uses only MAX monitors for the system configuration

Application case: The devices are already installed on the system, but not yet configured

Pros: Only *MAX* monitors are required; there is no need of an Android PC or tablet; you do not need to know the physical MAC addresses of your *MAX* monitors

Cons: It requires you to enter the installer password and open the *configurator* in each device; it requires knowledge of the MAC addresses of *Key Reader*, *Relay Actuator*, *Door Speaker Unit* and *Call Module*.

In this case, it is assumed that the system is already installed. The installer uses one of the *MAX* monitors already present in the system and after defining the topology, he/she adds the devices to the configuration.

1. Adding the first *MAX* monitor to the configuration

For example, if you create a *Single Stair* configuration on a system *MAX* monitor, the first step is to add such device to the relevant topological node. Then it is necessary to go to the *"Devices"* tab and click on the *"Add new device"* button.

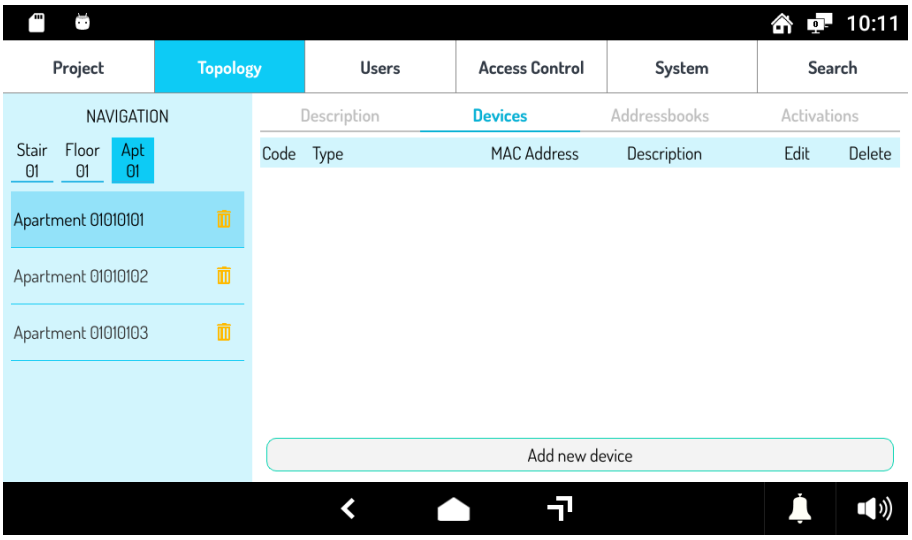

Figure 43: Adding a new device

The following selection screen will be displayed, allowing to choose the type of device to add.

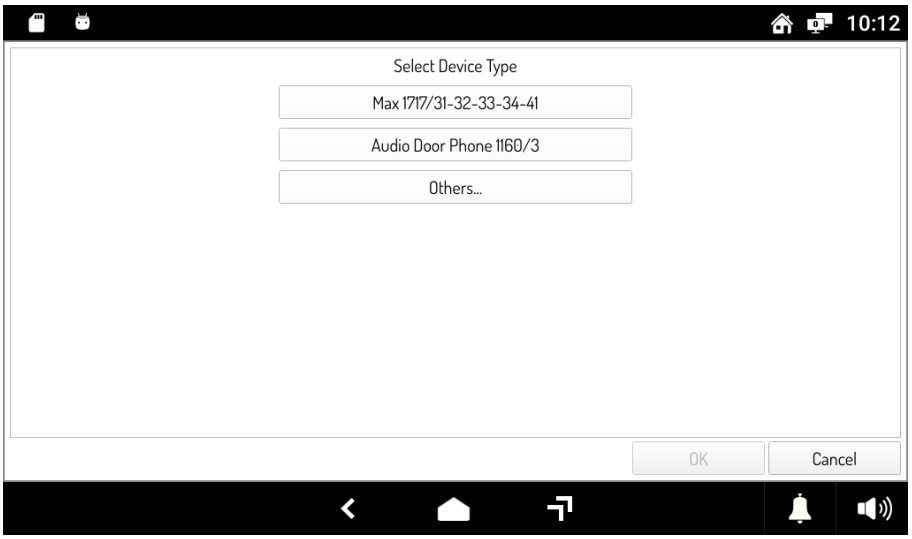

Figure 44: Selecting the type of device to add

If you want to add a *MAX* monitor, select *"MAX 1717/31-32-33-34-41"*: the following screen will open

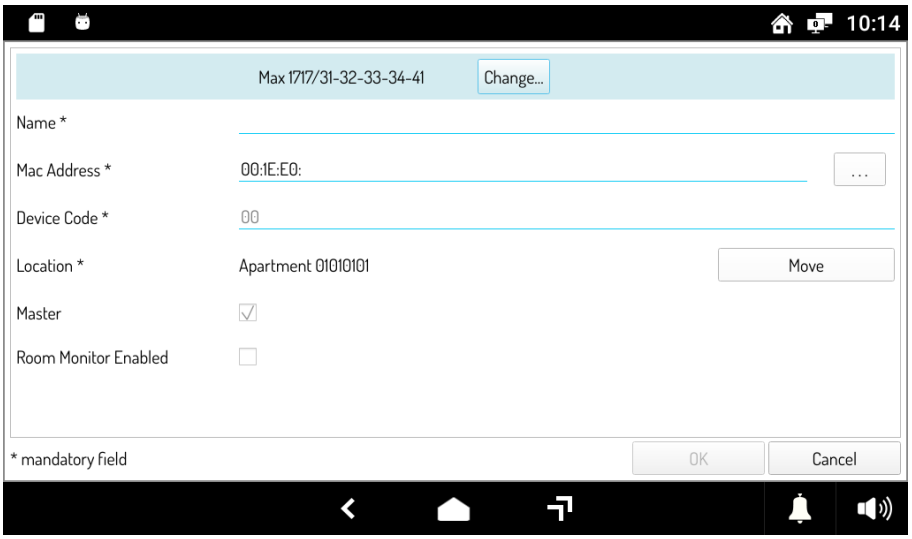

Figure 45: Entering device parameters

The *"Name"*, *"MAC Address"*, *"Device Code"*, and *"Location"* fields are present on the setting page of all devices.

In this case, simply fill in the fields *"Name"* and *"MAC Address"* to add the device: the field *"Name"* is arbitrary and chosen by the installer, the field *"MAC Address"* instead is well defined and associated with the device in use. To enter the latter parameter, in this case you do not need to know the single digits, as there is a quick selection button *"..."* available that allows to set it up immediately.

If you press that button, the following dialog box will appear

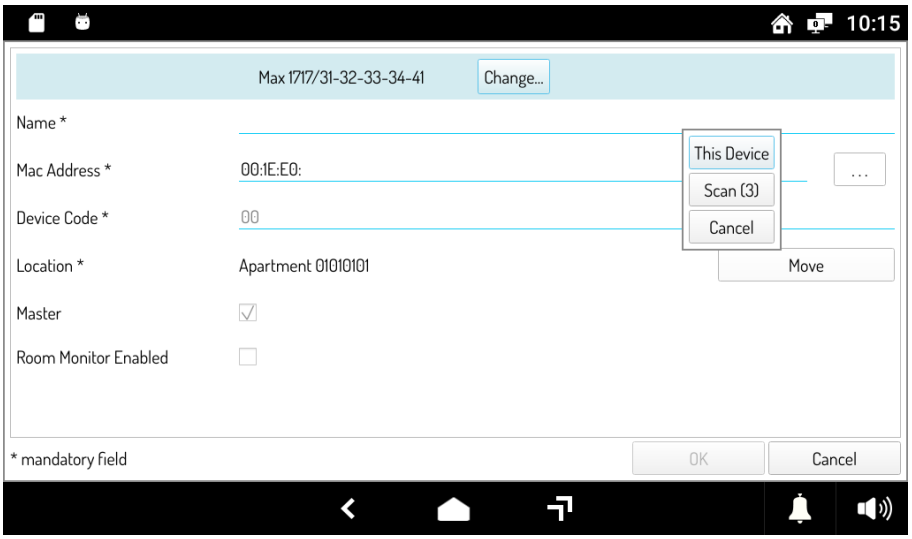

Figure 46: Selecting the MAC Address of the current device

By pressing the button *"This Device"* the MAC address of the *MAX* monitor is set up automatically, as shown in the following figure.

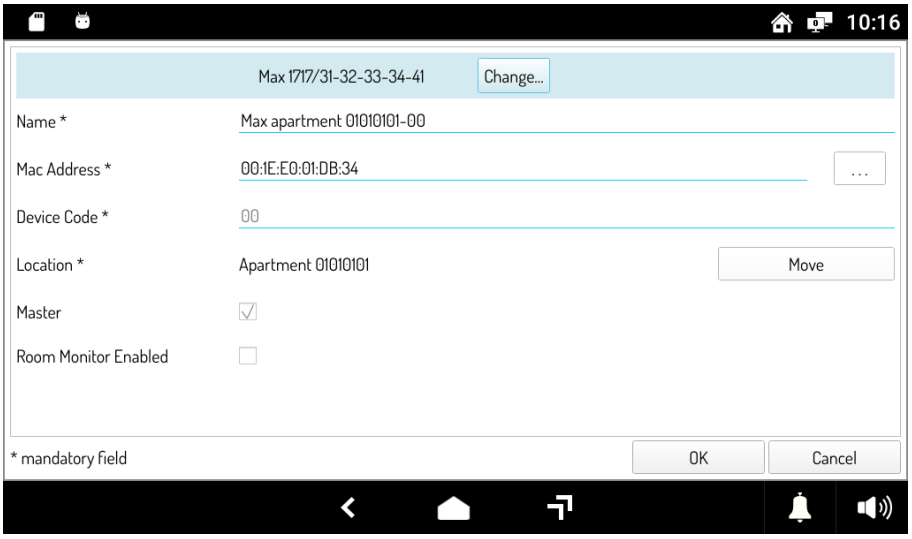

Figure 47: Automatic setting of the current device MAC Address

By pressing "*OK*", the device is added to the device list of the configuration.

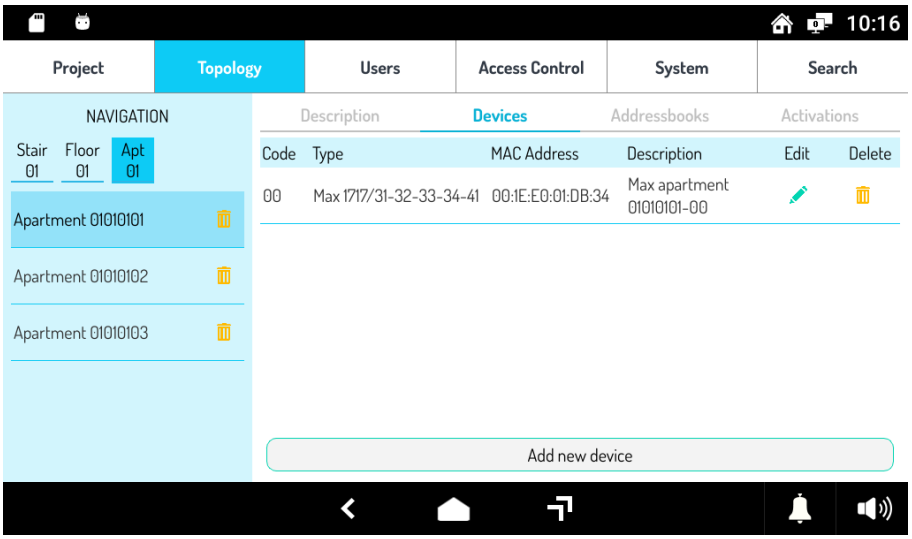

Figure 48: List of devices for the selected apartment

2. Adding other device types to the configuration

Once the first *MAX* monitor has been added, all the *Key Reader*, *Relay Actuator*, *Door Speaker Unit*, and *Call Module* devices installed in the system must be added.

For example, if you want to add a *Call Module* to the configuration in the specific topological node where it is installed, by following the procedure previously indicated for the *MAX* monitor you will see a screen like the following one.

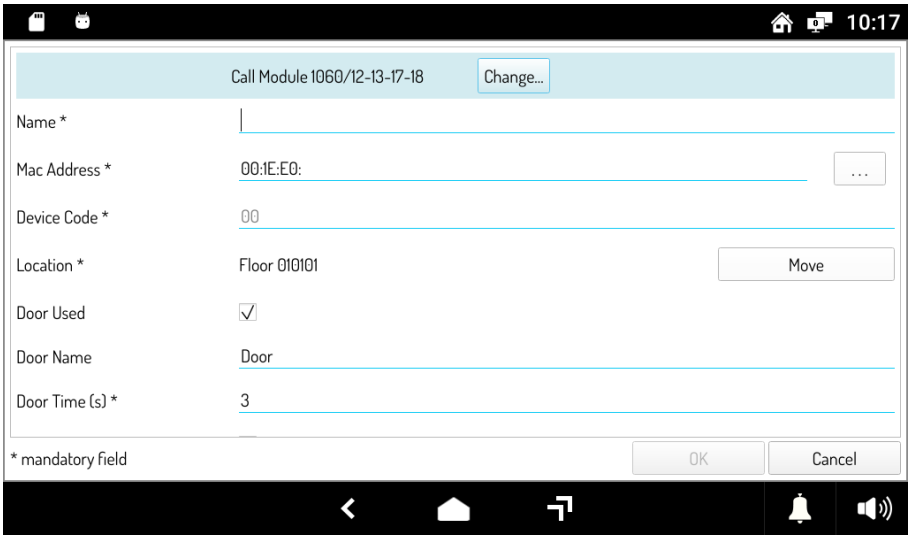

Figure 49: Adding a Call Module to a block

This time you need to know the MAC address of the device to be added in order to fill in the relevant field; there are therefore two possible modes to fill it in:

- manually entering the MAC address digits, or
- pressing the *"..."* button, then the *"Scan"* button, in order to obtain a list with the devices installed in the system (but not yet added to the configuration), and then select the devices from this list, as shown in the following figure

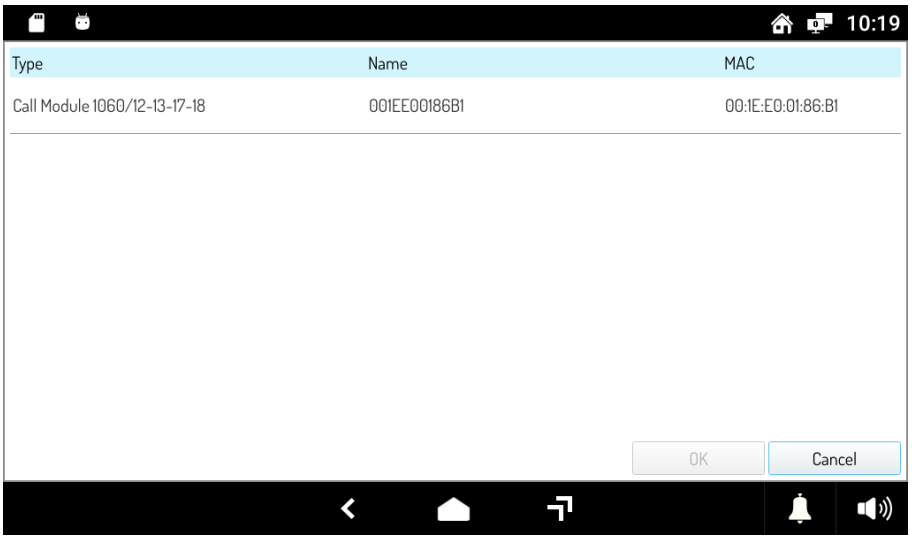

Figure 50: List of "Call Modules" detected in the system

3. Exit from the current configuration and distribution of the configuration

Once all the above devices have been added to the configuration, go to the *"Project"* tab and press the *"Apply"* button to distribute the configuration (refer to paragraph *6.3.10 Configuration distribution*).

At the end of the configuration distribution, a *MAX* monitor and other devices such as *Key Reader*, *Relay Actuator*, *Door Speaker Unit* and *Call Module* correctly updated to the current configuration.

4. Adding the remaining *MAX* monitors to the configuration

The only monitors not yet configured are any other *MAX* monitors present in the system.

To apply the configuration to them as well, you will need to go from *MAX* monitor to *MAX* monitor and follow the instructions below.

So, to proceed with a second *MAX* monitor, you will need to access the *configuration menu*, then go to *"System configuration"* and *"Import configuration from remote device"*: a screen like the following one will appear

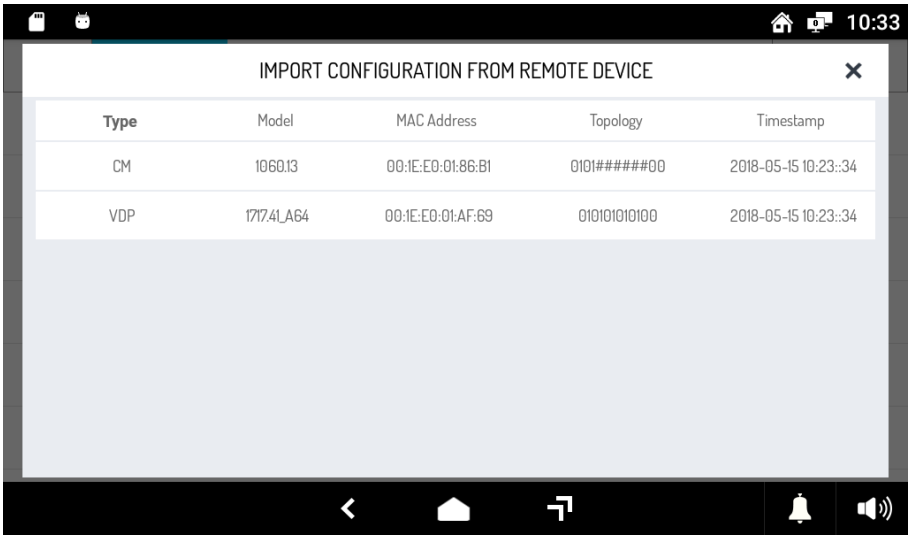

Figure 51: Importing the configuration from a remote device

A list of devices from which to import the configuration is displayed: by pressing on the first configured *MAX* monitor and confirming the request, the configuration will be imported into the system.

Once *IPerCom Configurator* is opened on the new device and the installer password is entered, it is possible to see all the parameters of the previously set up configuration and add the current *MAX* monitor to the same configuration: the steps are the same as described previously for the first *MAX* monitor.

Also in this case, once the addition is complete, you can apply the configuration and distribute it, so that the first *MAX* monitor receives the updated version.

To import the configuration into all other *MAX* monitors, you follow the same procedure.

Note 1 (in the case of an already blocked system): if the system has already been blocked (see *6.3.12 Securing the system*), importing the configuration from an already configured device will require entering the administrator password.

Note 2 (in case of system configured with static IP): importing the configuration from a remote device **is not allowed** if the system has been configured for operation with static IP (a manual setting of the network has been selected in the system parameters).

6.3.3.2 *Mode 1.1: The installer creates the configuration in the laboratory on the MAX monitor/PC/Android tablet and adds the devices to the configuration via the MAX monitor*

Application case: The devices are already installed on the system, but not yet configured. There is a basic configuration on SD Card in which the topology has been defined but the devices have not been added yet

Pros: The advantages are the same as in MODE 1 plus the convenience of creating the topology in the laboratory on a PC.

Cons: The disadvantages are the same as in MODE 1

This is a variant of MODE 1.

1. Configuration creation (topology only) in the laboratory and export to SD card

Instead of creating the configuration on-site on the first *MAX* monitor of the installed system, the installer creates it in the laboratory on the *MAX* monitor/PC/Android tablet, by setting only the system topology, and then exports it to an SD card.

2. Configuration import from SD card and subsequent distribution

Once in the field, with the system installed, the installer goes to the first *MAX* monitor and imports the configuration from the SD card.

To import the SD card, it is necessary to access the *configuration menu*, then press *"System configuration"* and *"Import configuration from SD card"*. A list of projects saved on SD card will be shown from which to select the desired one.

For further information on how to distribute the configuration, refer to paragraph *6.3.10 Configuration distribution*.

3. Following are all the steps indicated in MODE 1

We summarise the steps that need to be taken: add the current *MAX* monitor to the configuration, then add all devices other than the *MAX* monitors, and then import from *MAX* monitor to *MAX* monitor.

6.3.3.3 *Mode 2: The installer creates the configuration in the laboratory on the MAX monitor/PC/Android tablet but adds the devices via Android tablet*

Application case: The devices are already installed on the system, but not yet configured. There is a basic configuration on SD Card in which the topology has been defined but the devices have not been added yet. You have an Android tablet with the *IPerCom Configurator* app installed on it.

Pros: It is possible to create the topology in the laboratory on a PC and add devices (of any type) in the field by simply scanning the QR Code

Cons: An Android tablet is required

The following mode takes advantage of the *IPerCom devices* feature to show a QR Code that contains its MAC address: in the case of *MAX* monitors the QR Code is displayed when not configured, whereas in other devices it is shown frontally on a label.

1. Configuration creation (topology only) in the laboratory and saving on Android tablet

The installer creates the configuration in the laboratory on the *MAX* monitor/PC/Android tablet by setting only the system topology. If you have used a *MAX* monitor or a PC, the configuration must then be copied to an Android tablet (e.g. by saving it on an SD card).

2. Adding devices to the configuration by scanning the QR Code

The installer goes to the area where the system is already installed and brings with him/her an Android tablet containing the configuration

Once the project saved on the tablet has been opened, the installer moves to each device of the system and adds it to the configuration as described below.

First of all, in the Topology tab it is necessary to go to the topological node of the device to be added, then in the context module you must select the *"Devices"* tab and press on *"Add new device"*.

At this point, as already described, you select the type of device to add and fill in the fields shown on the screen, as usual: the only difference is the possibility, for Android tablets, to enter the MAC address by scanning the *QR Code* of the device, by pressing the *"QR Code"* button.

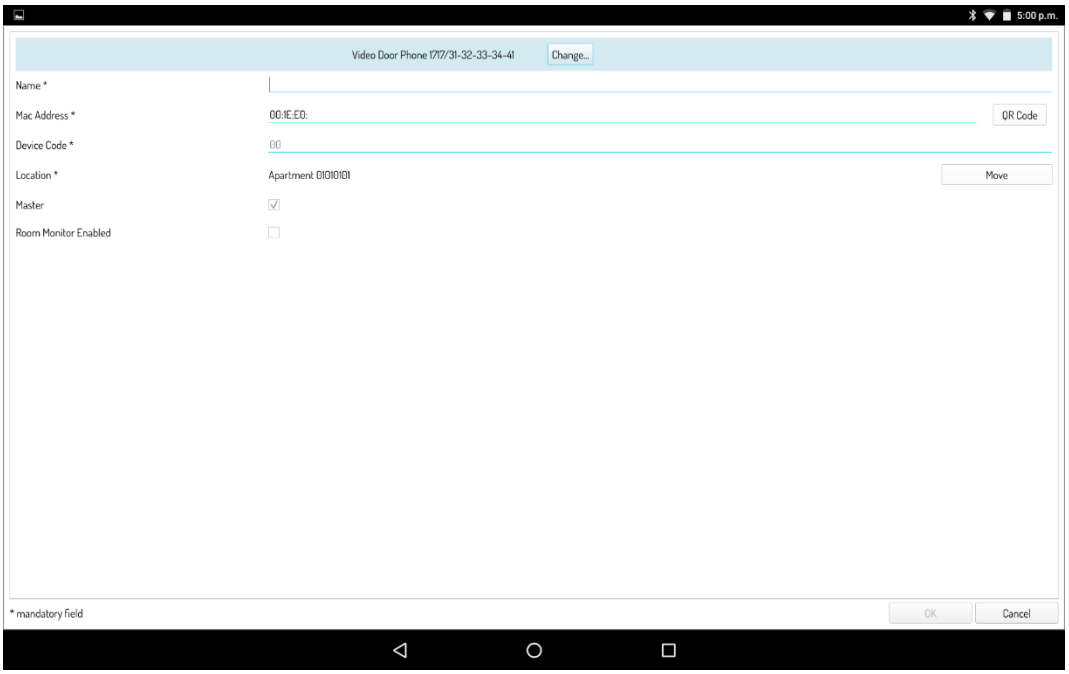

Figure 52: Adding a new device on Android tablet

By pressing said button, the *"Barcode Scanner"* app will start (if it is not in the system, the system will automatically prompt to install it through *Google Play Store*): when you open the app you have to position the camera in front of the *QR Code* of the device and wait for it to be scanned

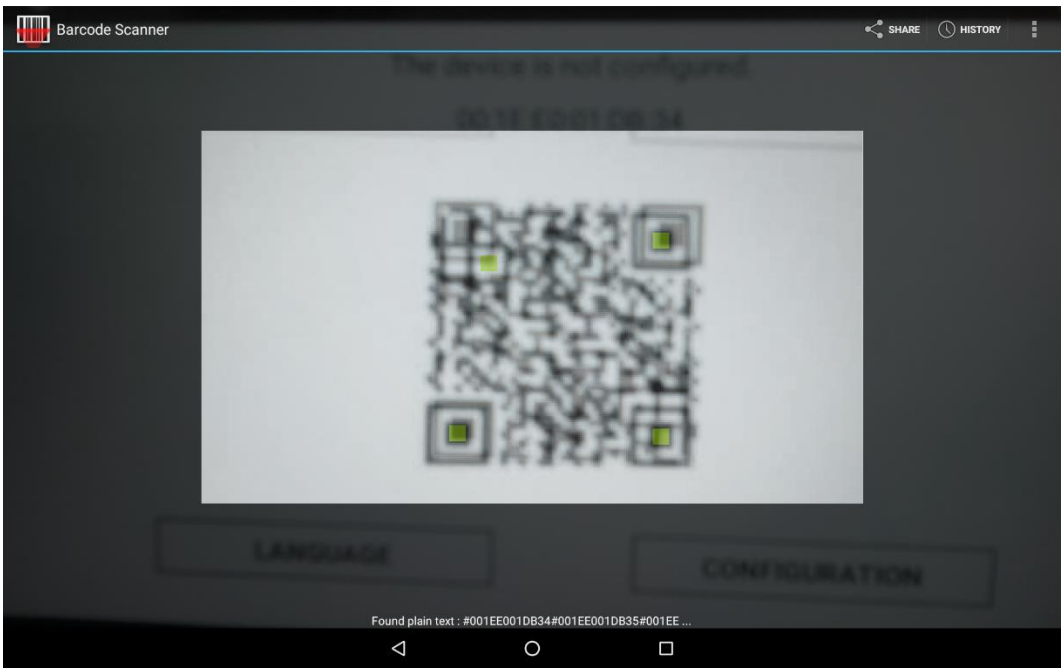

Figure 53: Scanning the QR Code using the "Barcode Scanner" app

As soon as the app has finished the acquisition phase, the MAC address will be added automatically to the relevant field

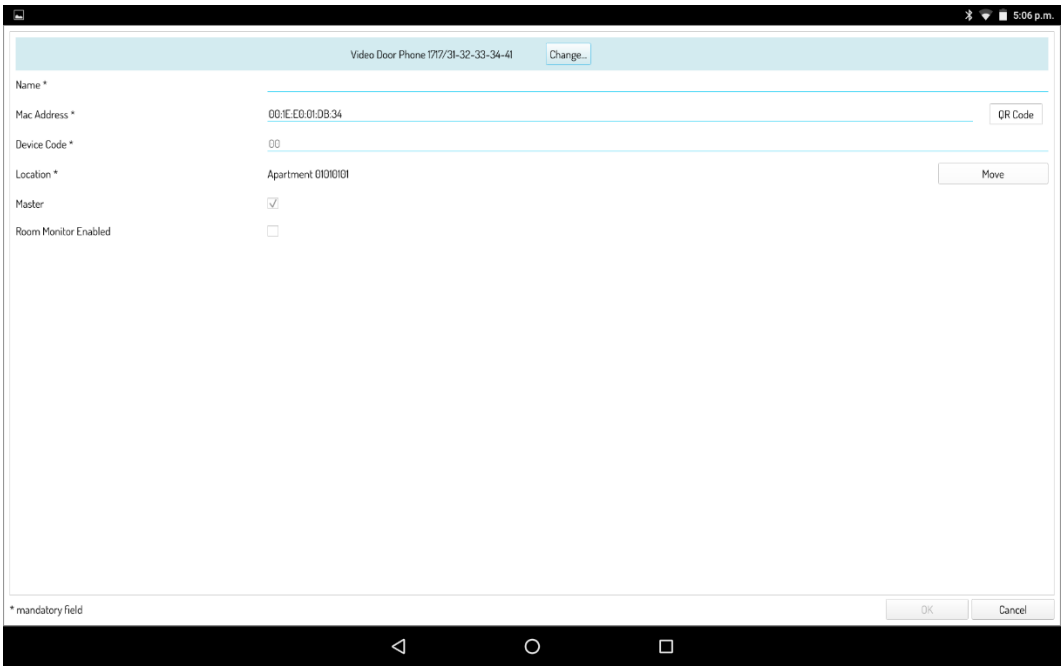

Figure 54: Automatic entering of the MAC address from the scanned QR Code

The device addition will be completed as usual after pressing *"OK"*.

A similar procedure is to be followed to add all other devices installed in the system.

Once the devices are added to the configuration or in any case before distributing the configuration on the system, you will need to save the configuration on the SD card.

Note (extension of the configuration file): when saving the configuration you must assign a name to the file created; by default the name of the file is *"ipercom.ccf"*, but it can be changed by the user only by paying attention to always add the extension *".ccf"* at the end of the name (otherwise the configuration cannot be imported from the *MAX* monitor).

Note (SD card removal after saving): after saving the configuration via Android tablet, to prevent the configuration file from being corrupted, it is recommended that you remove the SD card before removing it from the device

6.3.3.4 *Mode 3: The installer creates the configuration in the laboratory on the MAX monitor/PC/Android tablet and adds at the same time the devices that are not yet installed*

Application case: The devices are still in stock (therefore neither installed in the system nor configured): the configuration is created entirely in the laboratory taking note of the position of the devices and their MAC address.

Pros: It is possible to create the topology in the laboratory on a PC and add devices (of any type) by manually entering their MAC address or by scanning the QR Code.

Cons: Care must be taken when noting the devices arrangement in the system.

In this case, the installer has the devices not yet installed in the system and prepares the configuration offline in the laboratory via *MAX* monitor/PC/Android tablet.

1. Configuration creation (topology only) in the laboratory and export to SD card

The installer creates the configuration in the laboratory on the *MAX* monitor/PC/Android tablet by initially setting only the system topology.

2. Addition of the devices to the configuration directly in the laboratory, before their installation on the system

When the devices are available, it is possible to add them to the configuration as usual, by manually entering the MAC address indicated on the package or, if using an Android tablet, by scanning the QR Code, as described before.

The only thing we suggest to pay attention to, is to write down the position in which each device is to be installed.

6.3.3.5 *Mode 3.1: The installer creates the configuration in the laboratory on the MAX monitor/PC/Android tablet and adds at the same time the previously installed devices*

Application case: The devices have already been installed, taking note of the topological position (block/stair/floor/apartment) and of the relevant MAC.
The configuration is created entirely in the laboratory by relying on the notes taken during the installation (correspondence between device type, MAC address and topological position).

Pros: It is possible to create the topology in the laboratory on a PC and add devices (of any type) by manually entering their MAC address.

Cons: There is a risk of making mistakes when:

- writing down the location of each device (and the relevant MAC), and
- when copying the MAC address

In this case the installer needs a list containing the following information for each installed device:

- the type of device (product model number, e.g. 1060/18)
- the MAC address of the device (e.g. 00:1E:E0:00:01:02), reported manually or by applying the label available on each *IPerCom* device
- the topological location (e.g. Block 01, Stair 02, Floor 04, Apartment 04)

Then, on the basis of this data, the installer prepares the configuration offline in the laboratory via *MAX* monitor/PC/Android tablet.

1. Configuration creation (topology only) in the laboratory and export to SD card

The installer creates the configuration in the laboratory on the *MAX* monitor/PC/Android tablet by initially setting only the system topology.

2. Addition of devices to the configuration directly in the laboratory, based on the written down information

With the above information available, it is possible to add each device to the configuration by manually entering the reported MAC address or, if using an Android tablet, by scanning the QR Code, provided that the device label has been directly applied to the notes.

6.3.3.6 Mode 4: One MAX monitor with configurator in "Acquisition" mode

Application case: The devices are already installed on the system. The configuration has already been created/imported on a *MAX* monitor and the same *MAX* monitor and all other devices (*Call Modules*, *Door Speaker Units*, *Key Readers*, *Relay Actuators*, *RTSP Cameras*) have been added.

Pros: All *MAX* monitors can be added to the configuration via an automatic procedure that can be followed at the same time by several people (the presence of more people speeds up the configuration creation).

Cons: It is necessary to keep one *MAX* monitor with *configurator* in "Acquisition" mode.

In this case, it is assumed that the system has already been installed and that the installer creates a configuration as explained before, by adding only one *MAX* monitor and other devices other than *MAX* monitors: the other *MAX* monitors will be added automatically upon request by the current *MAX* monitor.

1. Creation of the configuration and addition, to that configuration, of a selected *MAX* monitor and of other devices other than *MAX* monitors according to one of the MODES mentioned before

2. Start of the acquisition mode on the field from the selected *MAX* monitor

From the selected *MAX* monitor go to the *configuration menu*, then to *"System configuration"* and to *"Start acquisition mode"*, as shown in the following figure

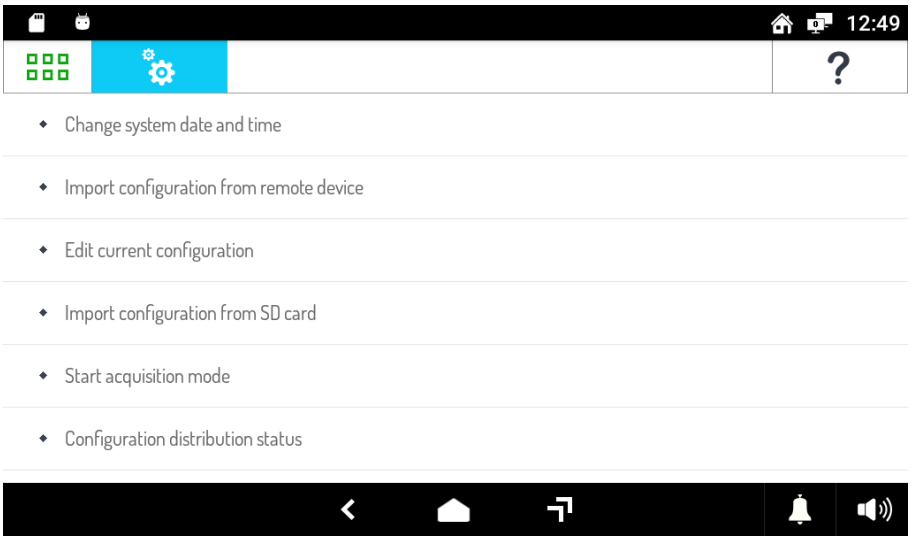

Figure 55: "Start acquisition mode" in the configuration menu

The following window will open

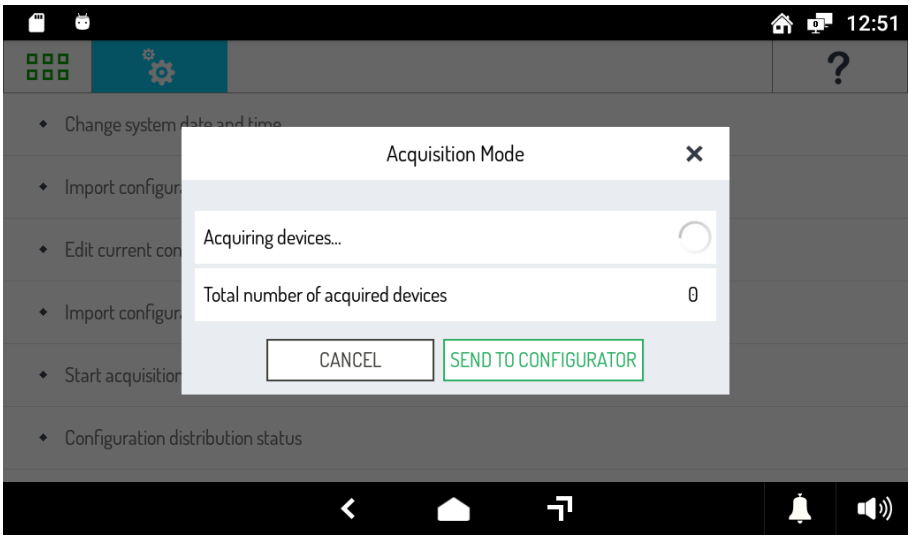

Figure 56: Acquisition mode

The *MAX* monitor then sets to the *"Acquisition"* mode where it waits for all non-configured *MAX* monitors to communicate their position in the system.

In fact, as soon as this mode is started, all the other *MAX* monitors of the system not yet configured will display the following window

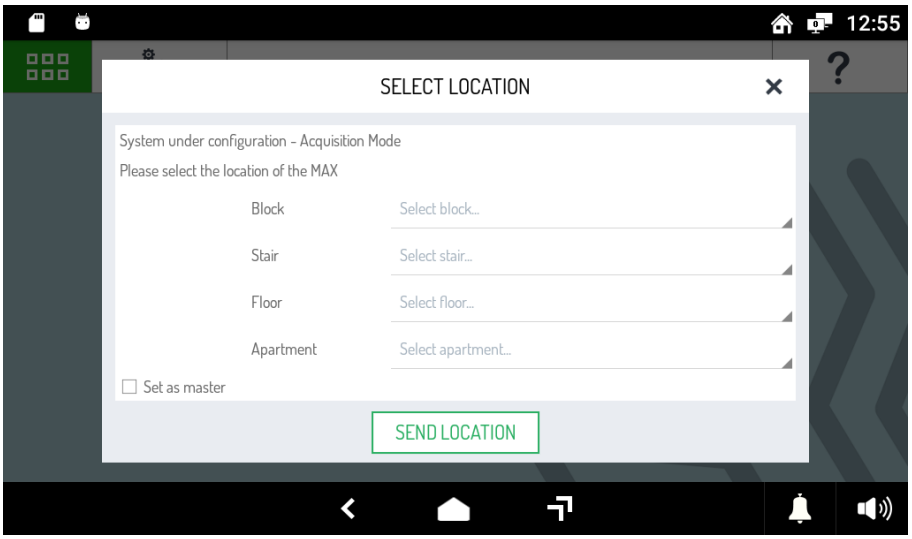

Figure 57: Entering the topology node in non-configured MAX monitors during acquisition mode

3. Sending the position from all other *MAX* monitors to the selected *MAX* monitor

For all *MAX* monitors of the system, except the selected one, it will be necessary to fill in the fields shown in the previous figure and press "SEND LOCATION" to send these data to the *MAX* monitor that is in acquisition mode.

This operation can be performed contemporaneously by several people to speed it up.

Once the positions from all *MAX* monitors have been sent, it is necessary to go back to the selected *MAX* monitor and, after checking that the actual number of *MAX* monitors to be configured is indicated in the "*Number of devices acquired*" field, press *"SEND TO CONFIGURATOR"*.

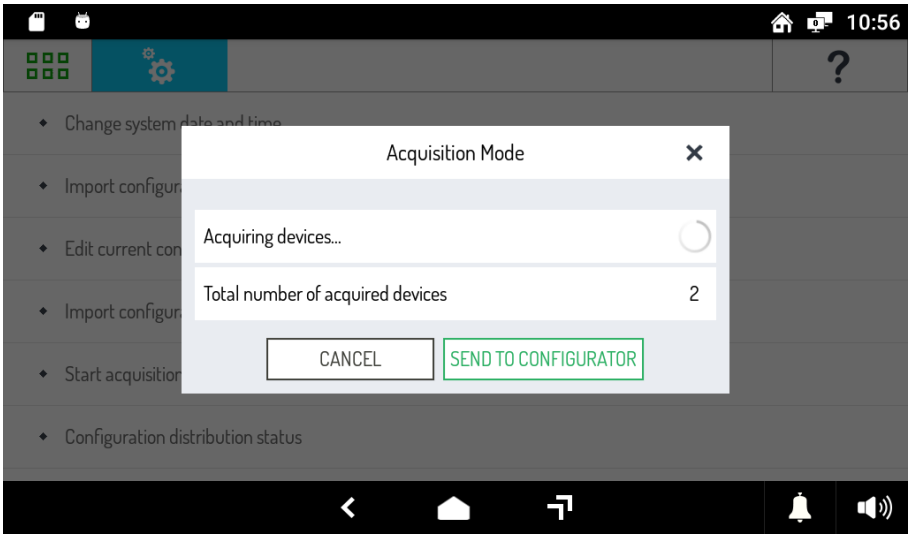

Figure 58: Updating acquisitions from non-configured MAX monitors

IPerCom Configurator will then be opened, showing the automatically updated configuration, with all the *MAX* monitors of the system added in the relevant topological nodes.

Note (in case of manual network settings): Mode 4 for adding devices only works if you select "Automatic" as network setting on the "System" tab; therefore this mode cannot be used with manual network configuration (static IP address of devices).

6.3.4 Address Book

In the "*Topology*" tab, through the "*Address Books*" it is very easy to create the list of **contacts** to be displayed

- in the various *MAX* monitors (most common use)
- in *Call Modules* (special cases)

Every contact added to the address book will also be automatically displayed on all *Switchboards*.

Creating contacts in the address book allows:

- adding *MAX* monitors to the address book of other *MAX* monitors and/or *Call Modules*
- adding *Switchboards* to the address book of *MAX* monitors and/or *Call Modules*
- carrying out the auto-on on *Door Speaker Units*, *Call Modules*, *RTSP Cameras* from *MAX* monitors that are not within their competence.

For all of these cases, the contact creation procedures will be described.

As a common example we take a *Multi Block* project whose topology is shown in the figure

Figure 59: Example of system topology for the creation of the address book

The system consists of two blocks, with two stairs each, with three floors each stair and three apartments each floor.

Let's suppose to have a *Call Module* on the site, one on block "01", a *Switchboard* in block "02", a *MAX* monitor on stair "01" of block "01" and a *MAX* monitor on each apartment.

Contacts are added to the address book by topological node: if a contact is created for a topological node, it will be made available to all *Max* monitors and/or *Call Modules* present on that node (creation of a contact with **private** domain) or even on those below it (creation of contact with **public** domain).

6.3.4.1 *Adding MAX monitors to the address books of other MAX monitors and/or Call Modules*

To make it possible for a *MAX* monitor to contact other *MAX* monitors of the system, it is necessary to add the contact to their address book.

Referring to the example in *Figure 59*, let's suppose you want to add the *MAX* monitor of the apartment with topological code "0101010101" to the address book of the apartment with topological code "0101010102".
In this case, simply use the navigation module to go to the concerned topological node and view the *"Address books"* screen.

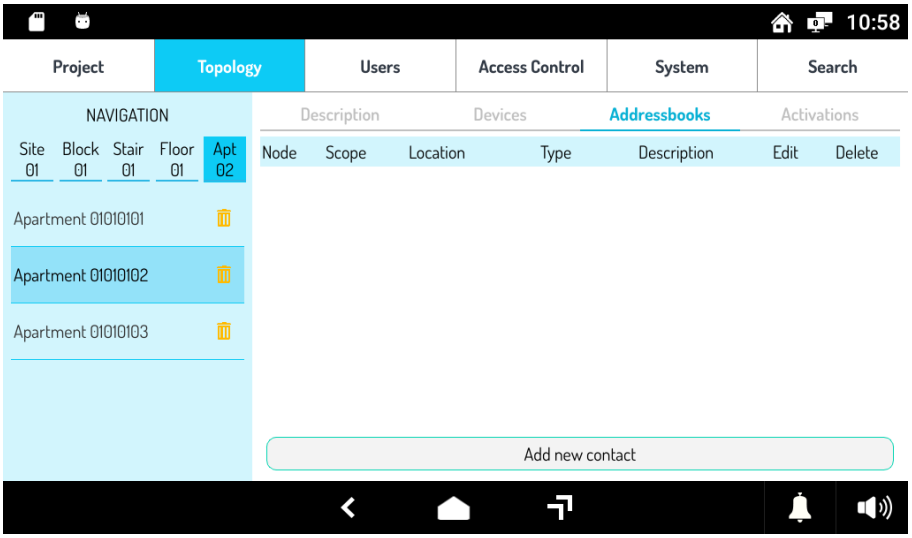

Figure 60: "Address Book" screen

To create the new contact, press the "*Add new contact*" button: the following screen will appear

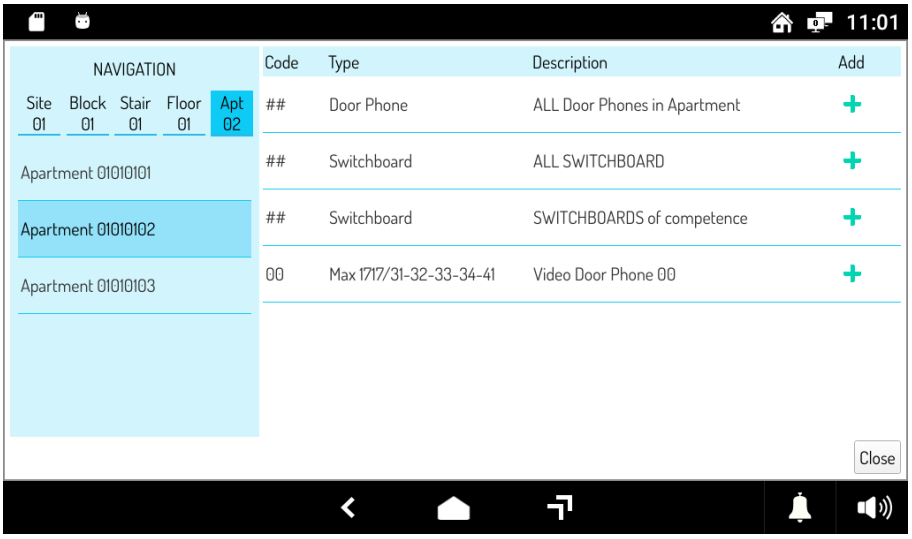

Figure 61: Contact selection screen

Then select apartment “0101010101” in the navigation module on the left and add the contact by pressing the "*+*" button on the right of the entry “*ALL Door Phones in Apartment*".

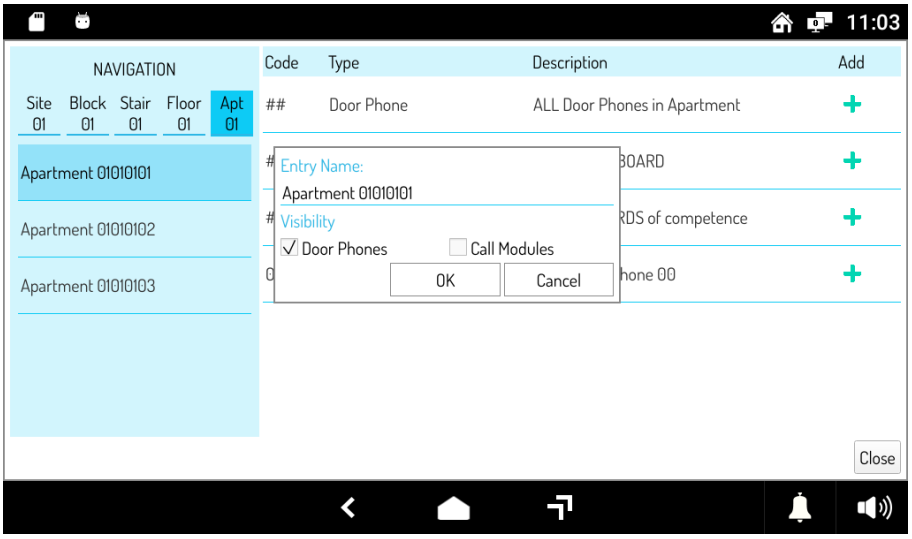

Figure 62: Selection of a contact to add to the address book

In the dialog box that appears, it is necessary to choose whether the contact should be visible to the MAX monitors located in apartment "0101010102" and/or to any Call Modules present on that node: in this case, it is sufficient to select only the "Door Phones" in the *"Visibility"* section.

Once you close the selection screen, you will find the contact added to the address book

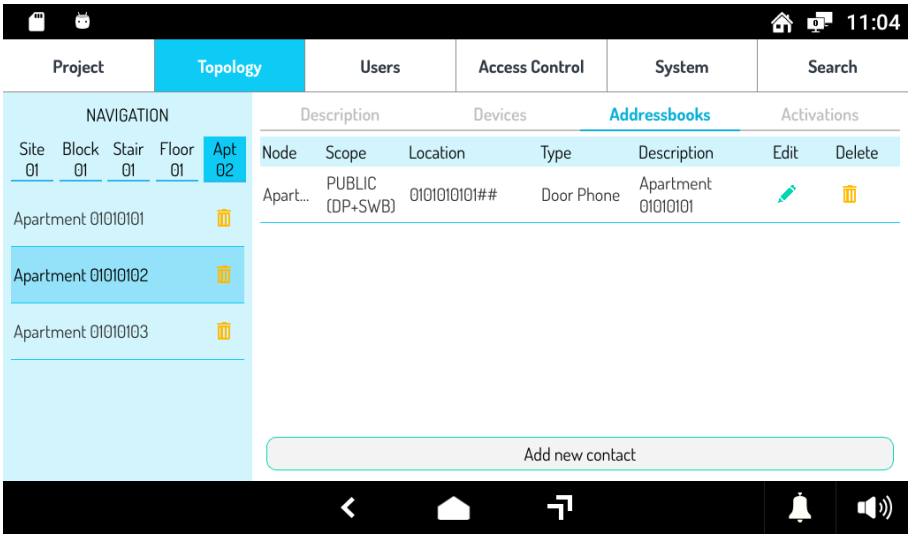

Figure 63: List of contacts with the newly created element

In this way the *MAX* monitor of apartment "0101010102" will see the apartment "0101010101" in the address book and can contact it.

In the contact list, the buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each contact created, respectively (through confirmation pop-up).

If you also wish to add apartment "0101010101" to apartment "0101010103", you must repeat the above procedure.

In this case, however, the fastest procedure would include the addition of the contact of the apartment "0101010101" directly on the floor node "01010101##" as contact with *public* domain, so as to display it automatically in the address book of the apartment "010101002" and in that of the apartment "0101010103".

To do so, open the "*Address Book*" in correspondence of the indicated floor node and add the desired apartment.

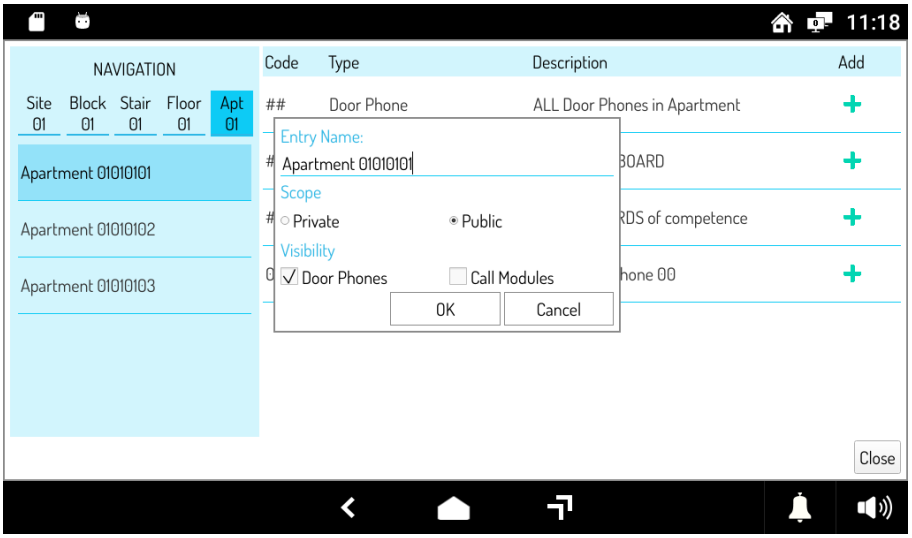

Figure 64: Adding the desired contact to the floor

Confirm the selection of *"Public"* in the *"Scope"* section so that the contact is in the address book of all *MAX* monitors of the nodes that are below the floor node, i.e. of all the apartments that are on the "01010101##" floor.

If you also want to add the contact to the *MAX* monitor's address book on the "010101####" stair, simply create a new contact in the *"Address Book"* by positioning on the stair node rather than on the floor node: in this case, if you select the *"Private"* option, the contact will be displayed only on the *MAX* monitor on the stair, while if you select the *"Public"* option, the contact will also be displayed on all the *MAX* monitor address books of the various stair floors.

Now, suppose you want all the apartments on the "010101####" stair to communicate with each other: this is the same as adding all the *MAX* monitors of the various apartments to the address books of the other *MAX* monitors.

To do this, select the concerned stair, open the *"Address Book"* and add one by one all the *MAX* monitors of the apartments with the *"Public"* option selected.

The same applies if you want to extend the concept to all the *MAX* monitors of the system: all you need to do is create all the contacts with public domain on the site.

In the latter case, if the *"Call Modules"* option is also selected in the *"Visibility"* section of the contact, the system apartments will also be displayed on all the address books of the *Call Modules* of the entire site.

In general, by activating the option *"Call Modules"* the contact can be displayed in the address book of the *Call Modules* in the node where the contact is created (*"Private"* attribute selected) or in all the nodes below it (*"Public"* option selected).

Note 1 (*MAX* monitor contacts for the same apartment): The address books related to *MAX* monitors of the same apartment are created automatically.

Note 2 (*MAX* monitor contacts in nodes other than the apartment): the addition of a contact in the address book is useful whenever a *MAX* monitor is installed in a node other than the apartment; for instance, if we consider a "Swimming pool" room on the stair "010101####" of the example in *Figure 59*, if you would like to contact the *MAX* monitor present therein from the other apartments, simply create a contact in the public domain on the site related to that *MAX* monitor.

6.3.4.2 *Adding Switchboards to the address book of MAX monitors and/or Call Modules*

The addition of *Switchboards* to the *MAX* monitor and *Call Module* address books is similar to the addition of *MAX* monitors.

By referring again to the example in *Figure 59*, let's suppose you want to add to the address book of all the *MAX* monitors of the "0102######" block the *Switchboard* that is in that block: in this case you must open the *"Address Book"* screen in that node and add the new contact by selecting the desired *Switchboard*

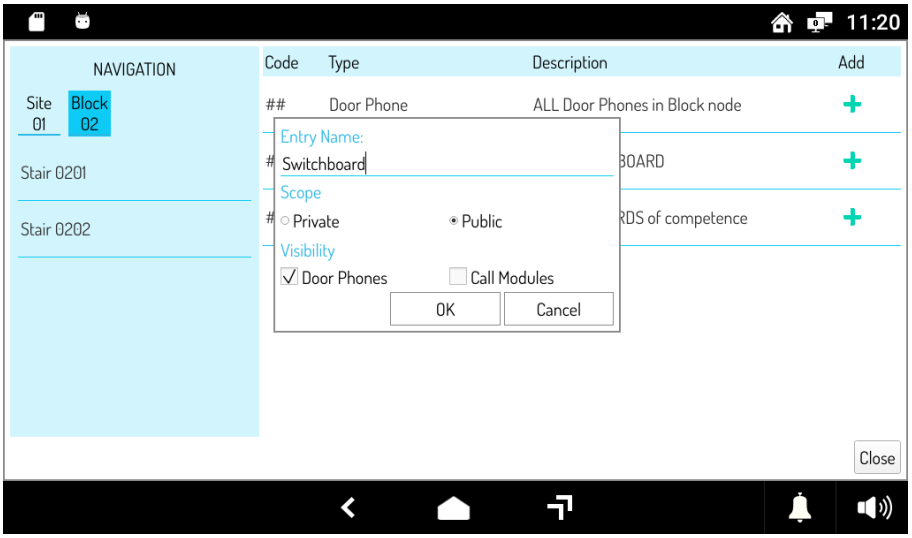

Figure 65: Adding a Switchboard to the MAX monitors' address books

After selecting the *"Public"* option and setting the visibility for *"Door Phones"* only, the *Switchboard* will be displayed in the address book of all *MAX* monitors in the block under examination.

To ensure that the *Switchboard* appears in the address book of all *MAX* monitors and all *Call Modules* in the system, it is necessary to create a contact in correspondence of the site, having care to select the *"Public"* domain and to add also the "*Call Modules*" to the visibility.

6.3.4.3 *Auto-on on Door Speaker Units, Call Modules, RTSP Cameras from MAX monitors that are not within their competence*

The *MAX* monitors can only perform the auto-on in *Door Speaker Units*, *Call Modules* and *RTSP cameras* only if they are within their competence.

If a *MAX* monitor is not within the competence of one of the devices listed above, you can still enable the auto-on by always using the *"Address Book"* screen.

If we consider the example in *Figure 59* again, all MAX monitors under the ""0101######" block are able to perform the auto-on on the *Call Module* on that block.

If you want to perform the auto-on on this *Call Module* from the generic *MAX* monitor in the other block, open the *"Address Book"* screen in correspondence of block "0102######" and add a new contact by selecting the desired *Call Module*.

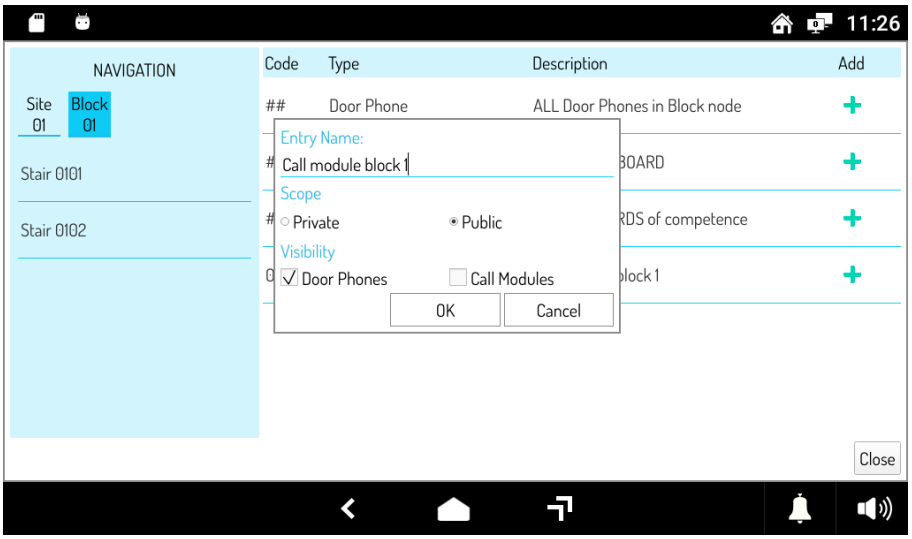

Figure 66: Adding a Call Module to an address book

After selecting the *"Public"* option and setting the visibility for *"Door Phones"* only, the *Call Module* will be displayed in the *"CAMERAS"* list of all *MAX* monitors in block "0102######"; it will then be possible to perform the auto-on on the device of each of them.

6.3.5 Activations

The *"activation rules"* (more briefly *"activations"*) allow defining the behaviour of the relay outputs in relation to events that can occur within the *IPerCom* system.

The devices that provide the control relays are the so-called *Relay Actuators* and have 2 completely independent relay outputs. These devices connect directly to the IP network and can therefore be easily located in any node of the system.

Sources capable of generating an event to be connected to one or more outputs are listed in the following table

SOURCE OR DEVICE	*EVENTS*
Door Speaker Unit	Outgoing call, auto-on
Call Modules	Outgoing call, auto-on, sabotage alarm, duress function alarm, code activation
Apartment	Special buttons, door opening, auto-on, incoming call, lift down/up

Table 1: Sources and related events associated with relay outputs

6.3.5.1 Activations for Door Speaker Units

The setting screens for the *Door Speaker Units* allow creating activation rules using the *"Activations Tables"* button.

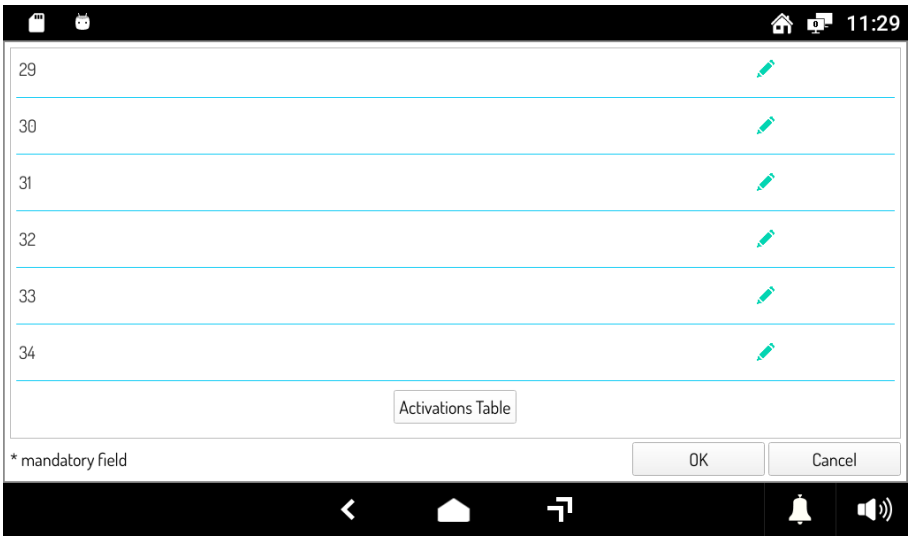

Figure 67: "Activations Tables" button for Door Speaker Units

Pressing this button will open a screen containing a list of the set activation rules: if the device has just been added to the configuration the list will be empty, as shown in the figure

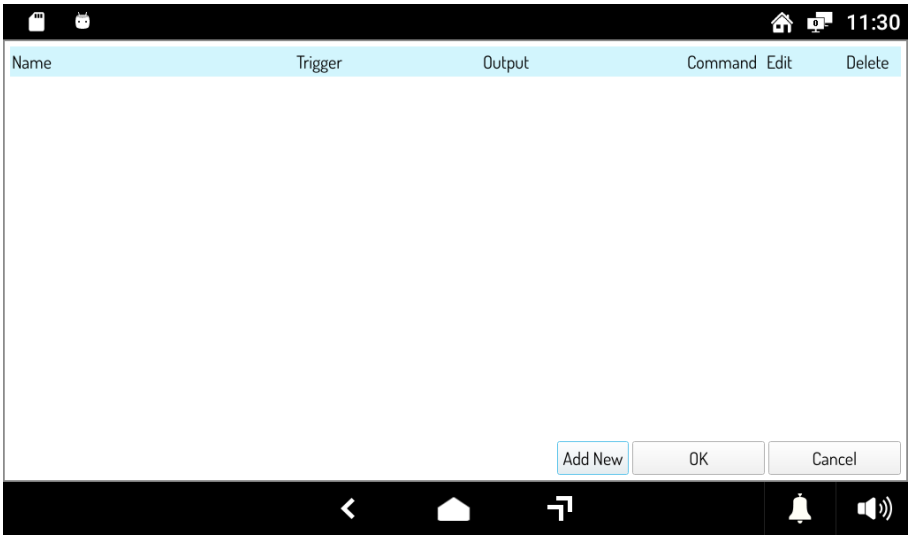

Figure 68: Activations Table for Door Speaker Unit

To create a new activation, press the *"Add"* button: a new screen will open in which you can select the different events to associate to the relay outputs

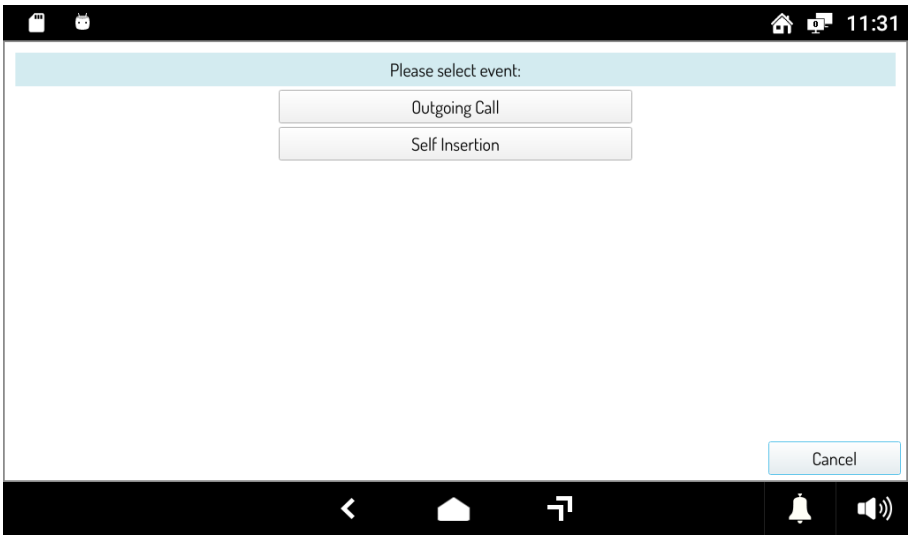

Figure 69: List of events for Door Speaker Unit

There are two items in the list:

- *"Outgoing Call"*, i.e. call from the *Door Speaker Unit* to the *MAX* monitor
- *"Self insertion"*, i.e. connection from the *MAX* monitor to the *Door Speaker Unit* camera.

After selecting an event type, it is necessary to enter a description of the activation rule that will be created

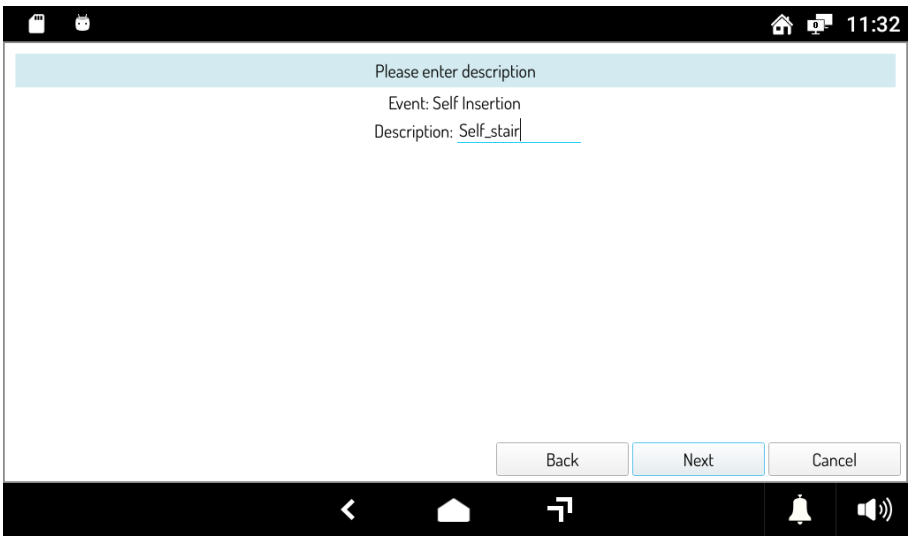

Figure 70: Description of the activation rule

Once a description has been provided, the activation rule setting screen will open and show a list of outputs (initially empty) associated with it

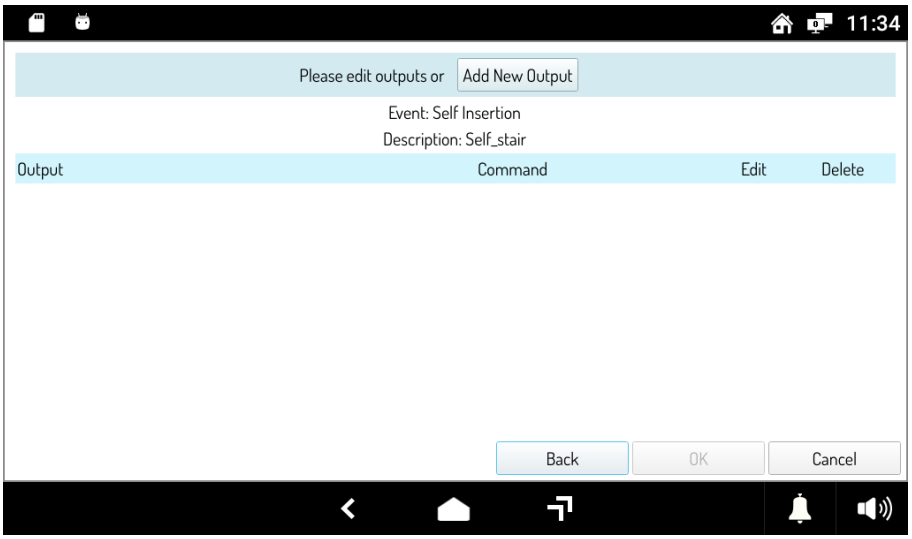

Figure 71: Setting screen of the activation rule

To add an output to the list, press the *"Add New Output"* button: in the new displayed screen, select the topological node of the *Relay Actuator* and select the desired device, in order to choose the output and set the relevant control

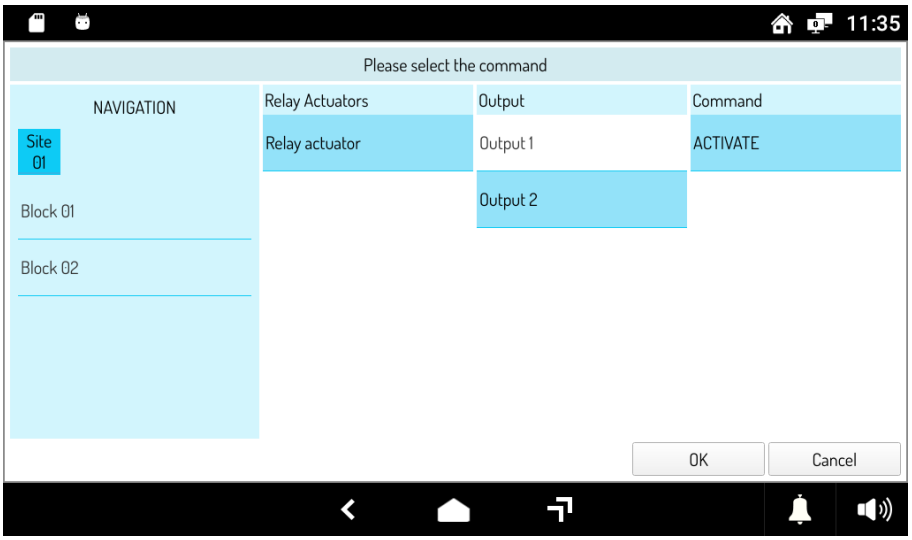

Figure 72: Selection of the desired device output

By pressing the "OK" button the set output will be added to the list in *Figure 71*: Setting screen of the activation rule

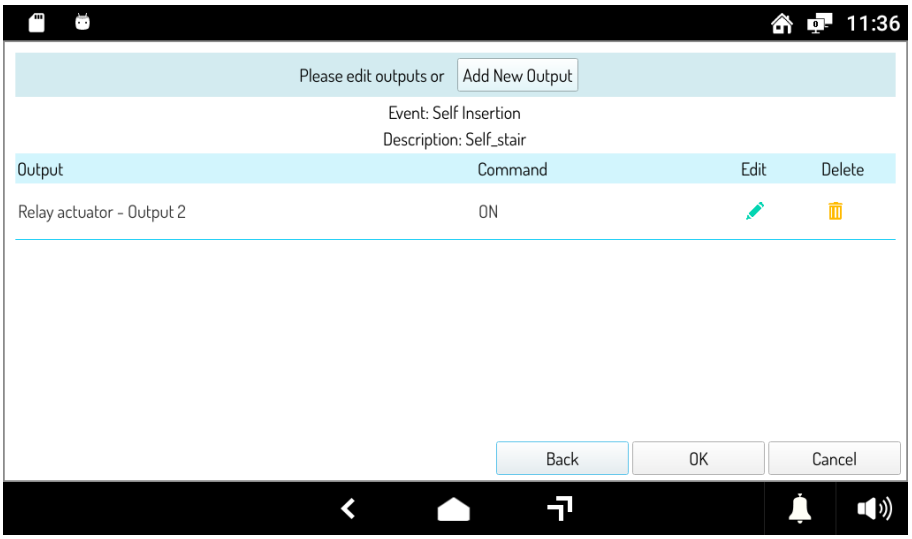

Figure 73: List of outputs associated with the activation rule

It is possible to associate several outputs to the same event by pressing on *"Add New Output"* and repeating the above steps.

Once configuration of the activation rule is finished, press the "OK" button to end the rule creation procedure.

The list of activation rules shown in *Figure 68* will contain the new created activation

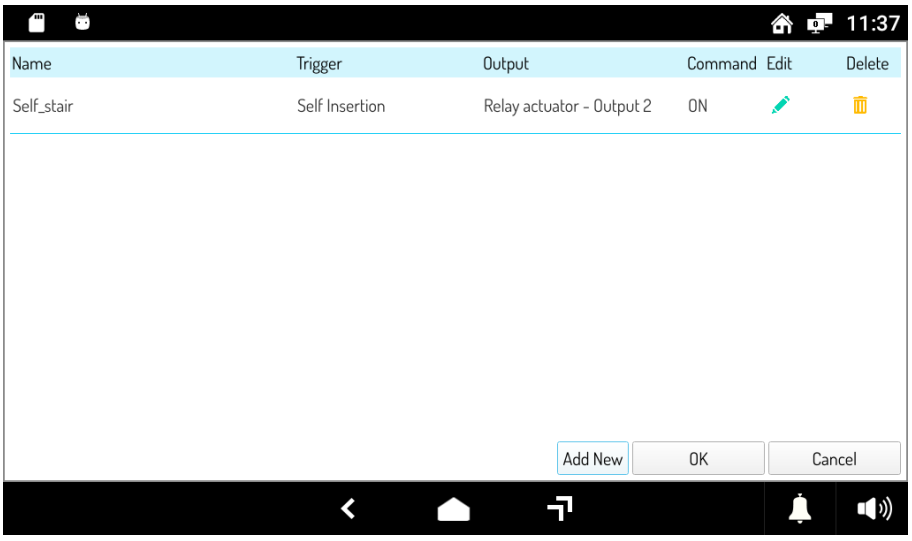

Figure 74: Activation table with the newly created element

With the settings shown in the example, the second output of the *Relay Actuator* is automatically activated every time an auto-on is performed in the Door Speaker Unit.

6.3.5.2 *Activations for Call Modules*

The setting screens of the *Call Modules* allow creating activation rules by pressing the *"Activations Tables"* button.

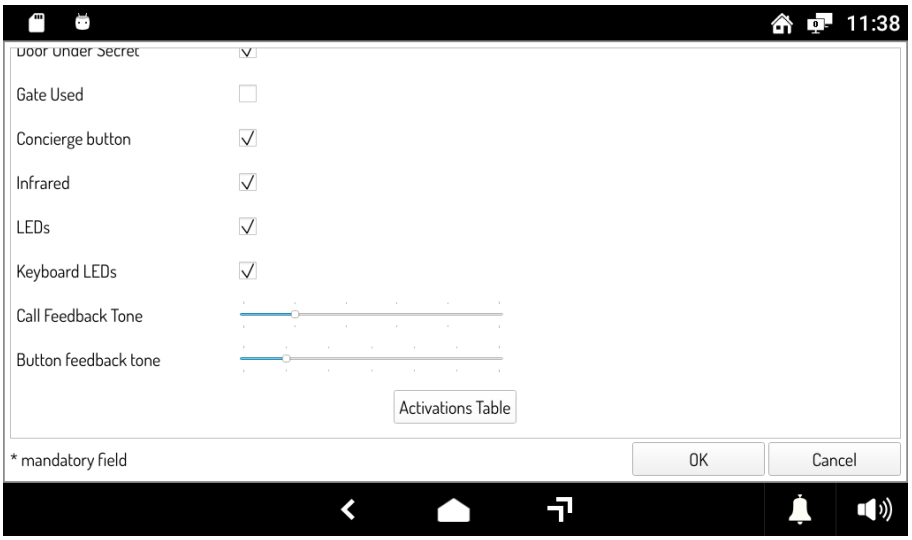

Figure 75: "Activations Tables" button for Call Modules

To create a new activation, press the *"Add"* button: a new screen will open in which you can select the different events to associate to the relay outputs

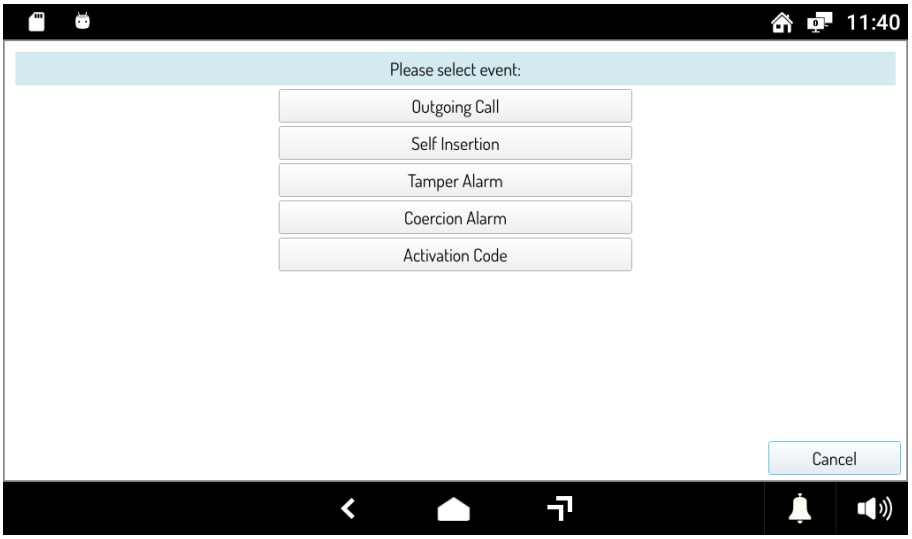

Figure 76: Selection screen of the events to be associated to the relay outputs

There are five items in the list:

- *“Outgoing Call”*, i.e. call from the *Call Module* to the *MAX* monitor
- *“Self insertion”*, i.e. connection from the *MAX* monitor to the *Call Module* camera.
- *“Tamper alarm”*, i.e. attempt of tampering with the *Call Modules*
- *“Coercion Alarm”*, i.e. attempt of adding a forced *Key Code* on the call module (*Key Code* increased by 1)
- *“Activation Code”*, i.e. the entering on a call module of a numeric code with 4 to 8 digits (the code is entered by typing in sequence the characters “0” and “X”)

The creation of the activation rules associated with the *Relay Actuators* is similar to that of the *Door Speaker Units*.

6.3.5.3 *Activations for apartments*

To associate an event at apartment level with one or more outputs of a *Relay Actuator*, it is necessary to click on the "*Topology*" tab and then on the "*Activations*" tab.

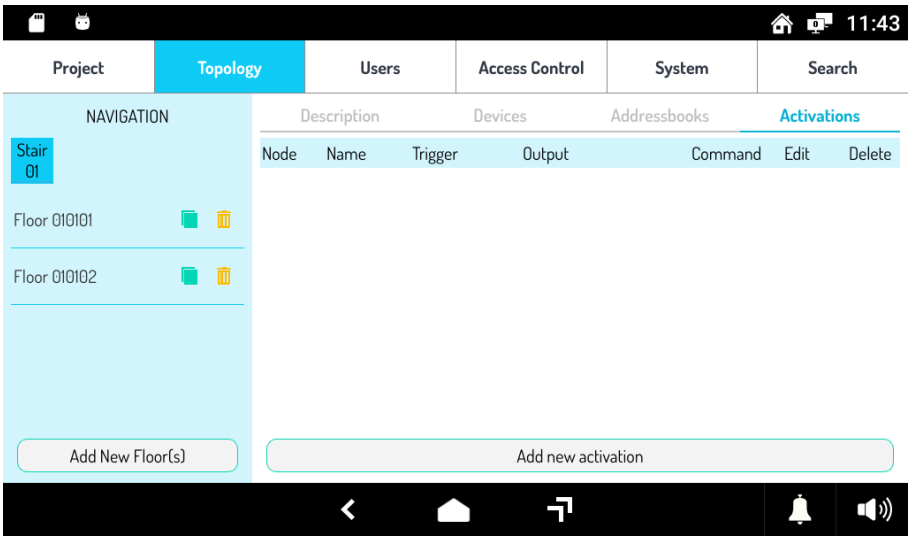

Figure 77: "Activations" screen

In the provided example, the created topology includes one stair with 2 floors and 1 apartment on each floor.

Let's suppose that you have a *Relay Actuator* on the stair and that it has been configured to have 2 monostable outputs (see *APPENDIX A*: *Configuration parameters of IPerCom devices*).

The activation rule can be set in a precise topological point of the system, i.e. at the site, block, stair, floor or apartment level: this means that the activation will be extended to all the apartments of competence of the topological node on which it is created; if the activation has been set on an apartment, it will affect only on that single apartment.

In the case of the figure above, the activation rule will be set to "Stair 01" (since you have selected that topological node in the navigation module) and then it will be applied to both apartments.

To create the activation rule, press the *"Add new activation"* button on the *"Activations*" screen: the following screen will open

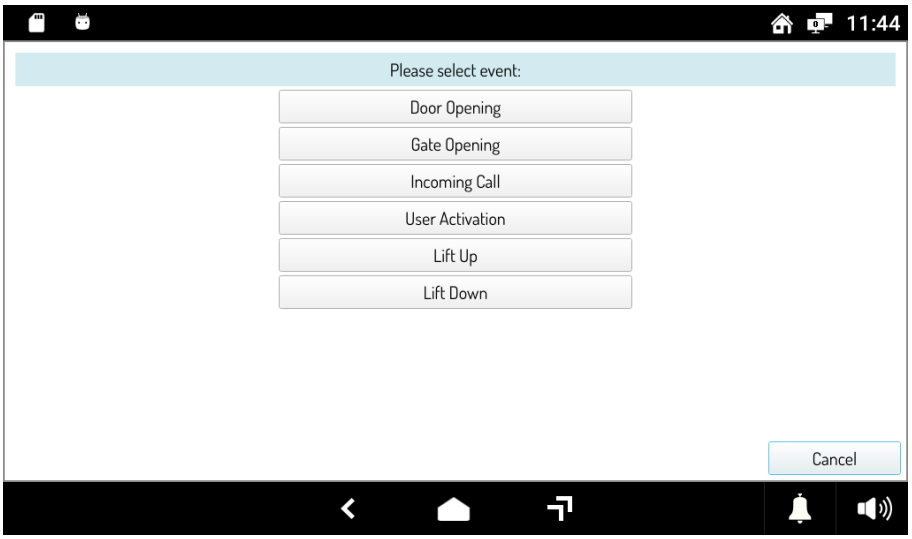

Figure 78: List of events for MAX monitors

On this screen it is necessary to choose one of the available events:

- *Door Opening*, i.e. event caused by pressing the door opening button on the *MAX* monitor
- *Gate Opening*, i.e. event caused by pressing the gate opening button on the *MAX* monitor
- *Incoming Call*, i.e. incoming call event on *MAX* monitor
- *User Activation*, i.e. event caused by pressing some "Buttons" on the MAX monitor
- *Lift Up* and *Lift Down* (lift application), enabled only for stairs, floors and apartments

If you choose *"Incoming Call"* as the event, the following screen will open

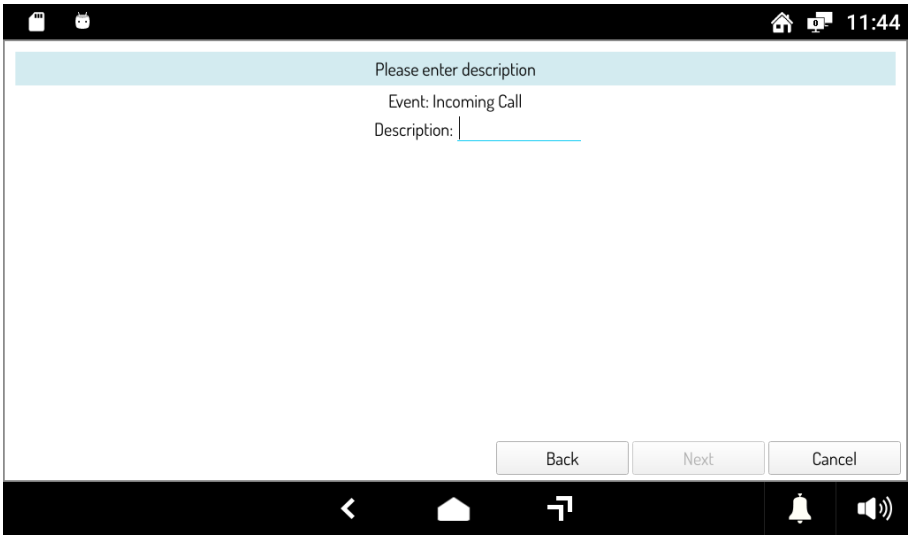

Figure 79: Description of the activation rule

After giving the activation rule a meaningful name, press the "*Next*" button to open the following activation setting screen

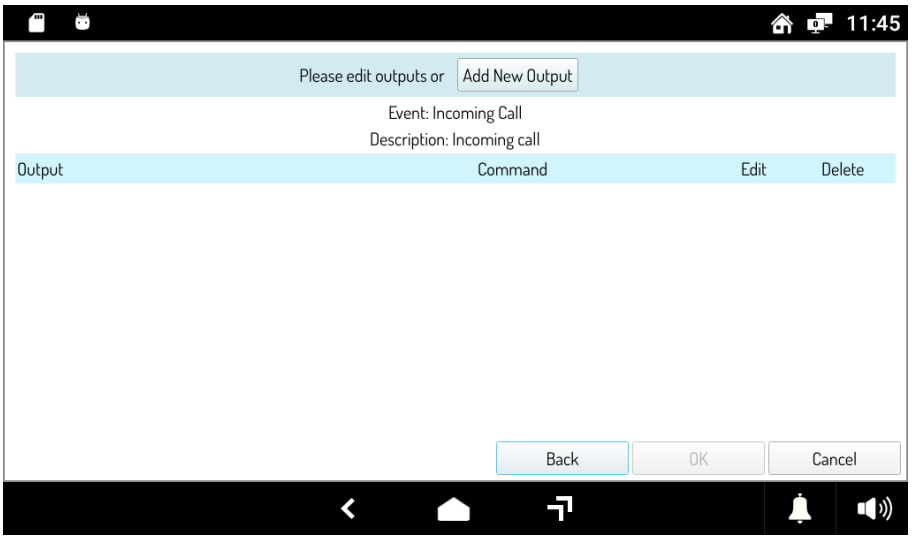

Figure 80: Setting screen of the activation rule

To add outputs to the activation rule, proceed as explained for the creation of Activations for *Door Speaker Units*: a screen like the following one will open

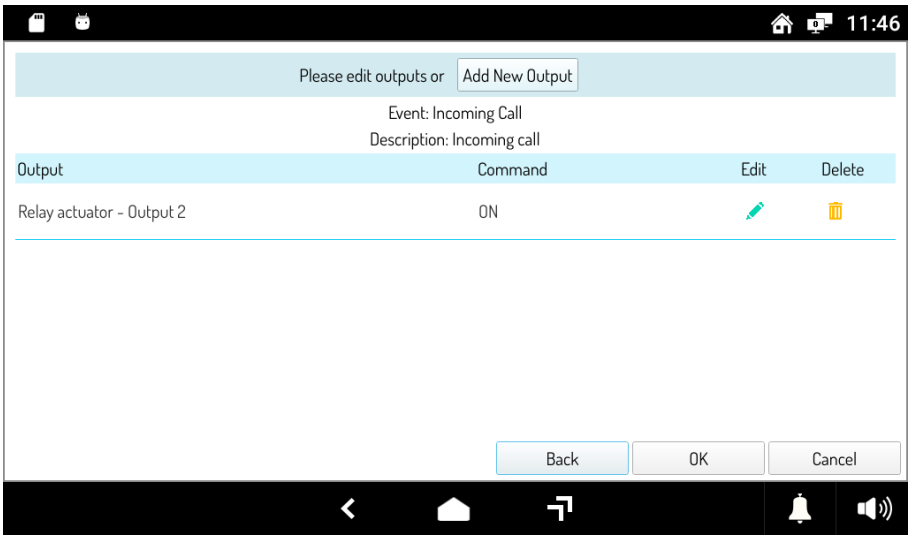

Figure 81: List of outputs associated with the activation rule

After adding all outputs to the activation rule, press the "OK" button to create the activation and add it to the list of activations of the concerned topological node

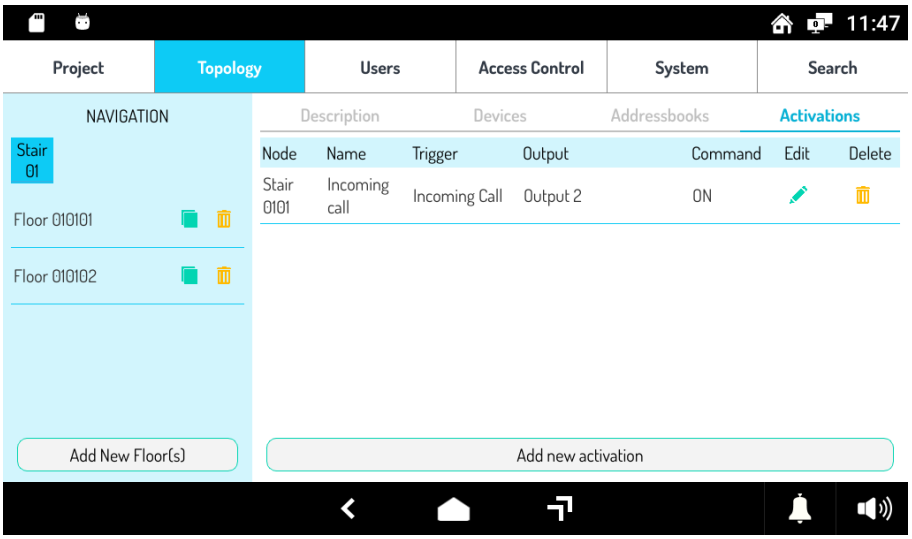

Figure 82: List of activation rules for the "Stair 01" topological node

If you choose "*User Activation*" as the event, the following screen will appear allowing you to set the name of the "Button" to be associated to the activation rule

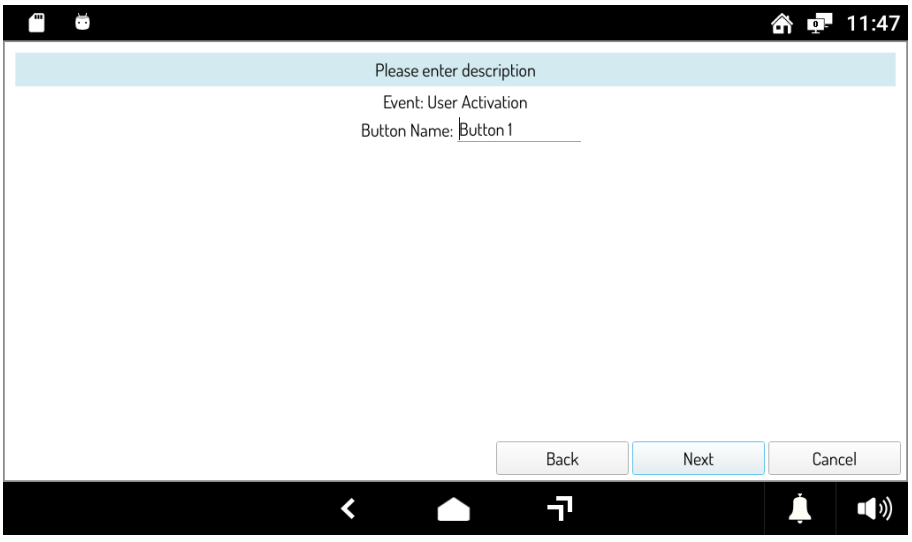

Figure 83: Description of the user activation "Button"

The default is "*Button 1*", but it is possible to give it a more meaningful name (like "*Stair Lights*"). Press the "*Next*" button and then "*Add new output*" to open the same screen described before. The steps leading to the creation of the activation rule are completely identical to those described before for the "*Incoming Call*" event.

Once the activation rules for the "Stair 01" node have been created, these activations will be applied to all the apartments of competence of this topological node.

By selecting an apartment in the navigation module, in correspondence of the *"Activations"* tab we will see the activation applied by the stair node, as shown in the following figure

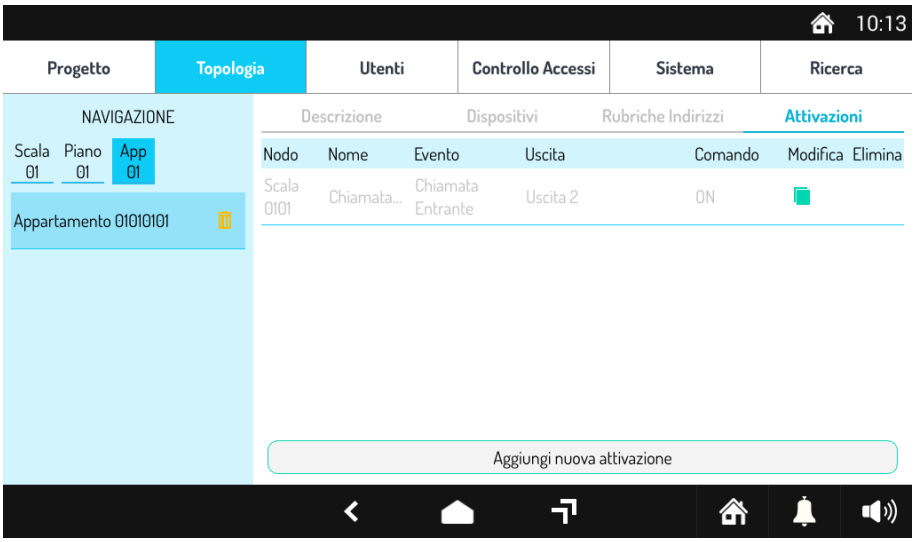

Figure 84: Activation "inherited" from the apartment

The activation is represented in light grey to highlight that it was not created in the apartment node, but in the stair node; it can therefore be modified only by selecting the stair node and not the current topological node.

If you want to replace the apartment activation with another personalised one, press the replacement button and change the data through a screen like that shown in *Figure 81*.

If you want to change the output of the *Relay Actuator* from "Output 2" to "Output 1" in the previously created activation, you will see a screen like the following one

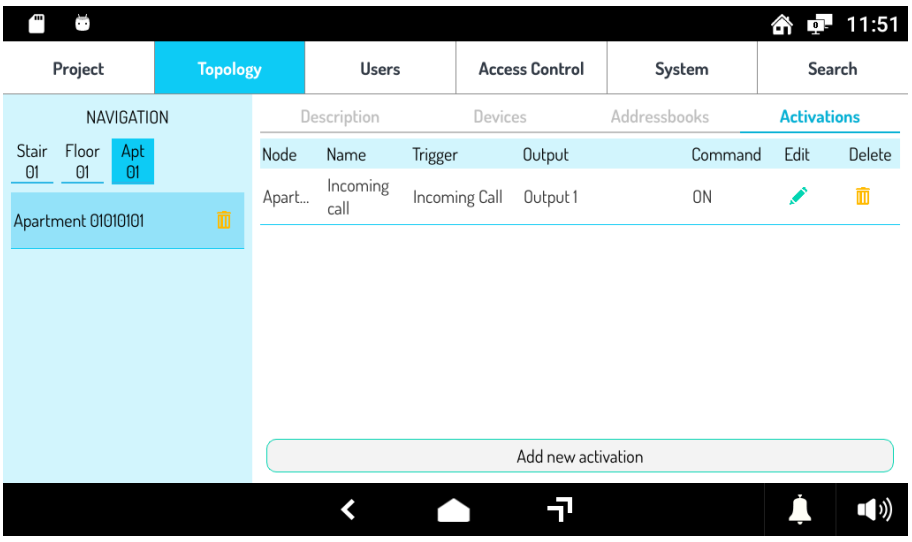

Figure 85: Replacement of the activation on the apartment with a personalised one

When a user activation rule has been set, a new *"ACTIVATION LIST"* button with a "yellow light bulb" icon will appear on the *"Video door phone"* screen of the *MAX* monitor of these apartments.

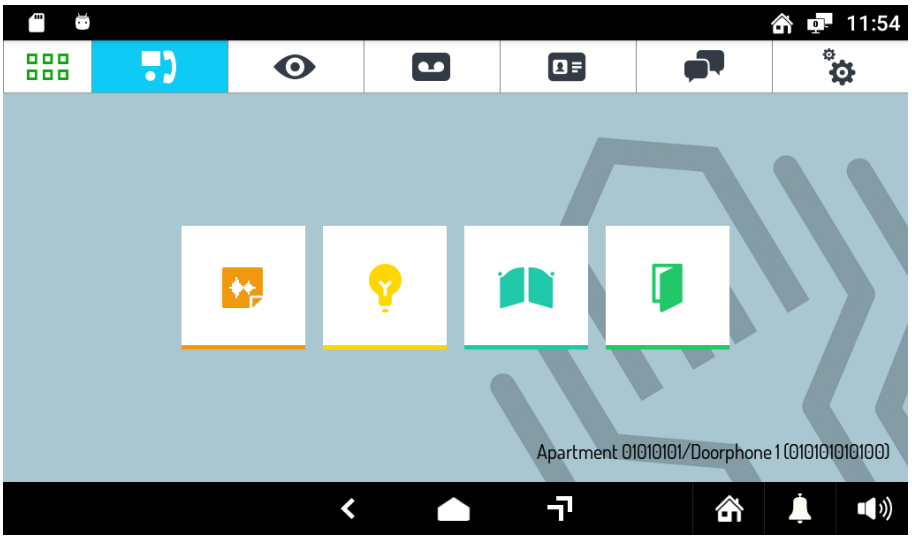

Figure 86: "ACTIVATION LIST" button

By pressing this button, the list of available "Buttons" will be displayed, showing the previously created element

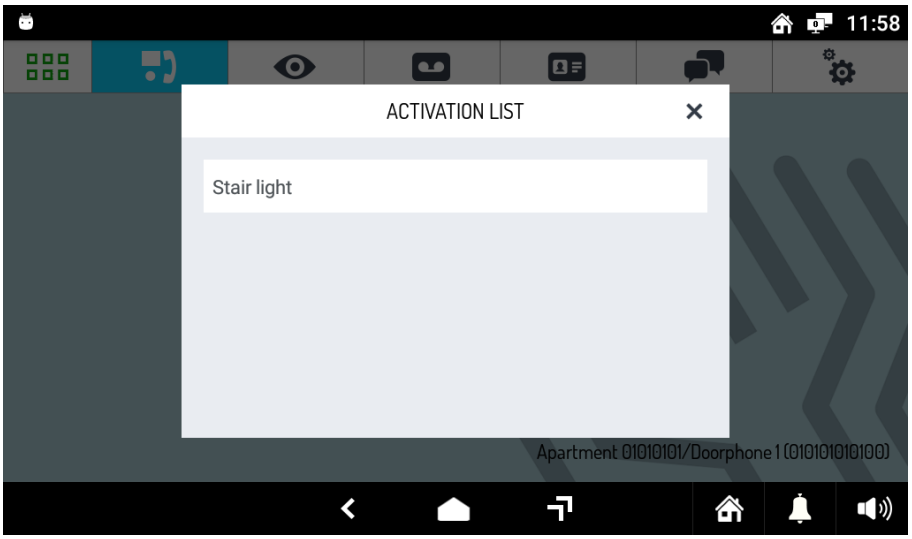

Figure 87: List of the user activation "Buttons"

With regard to the selection of the *Lift Up* and *Lift Down* events, these options are only visible if you go in correspondence of stairs, floors or apartments, as they are only associated with the use of the lifts.

For example, by creating activation rules associated with these events on "Stair 01", a new *"LIFT"* button will appear on the *"Video door phone"* screen of the relevant *MAX* monitors.

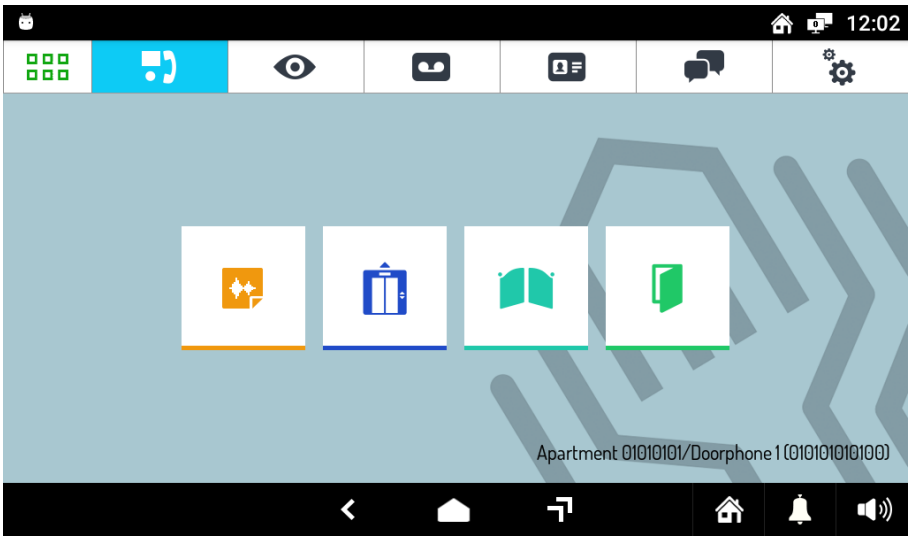

Figure 88: "LIFT" button

Press this button to send the lift *"Up"* or *"Down"* command

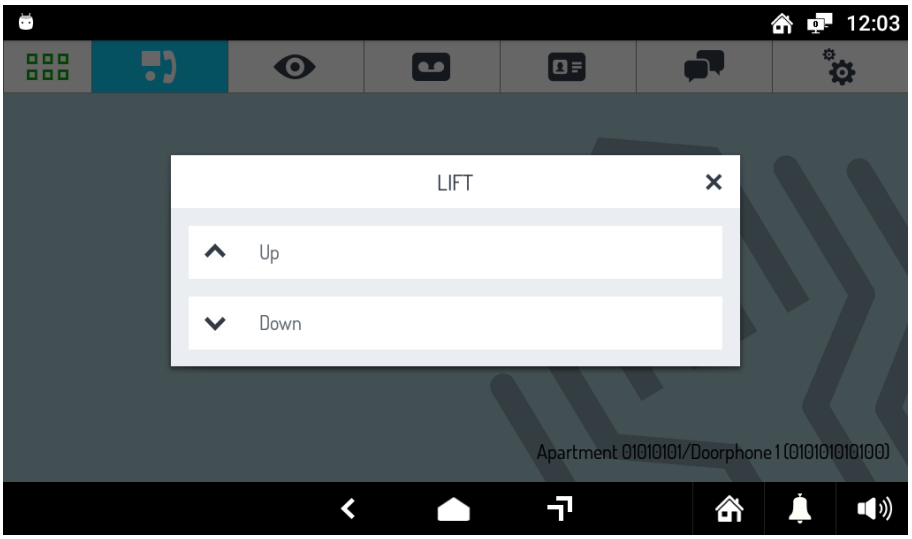

Figure 89: Lift "Up" and "Down" commands

6.3.6 User management

In the four possible types of system (*Villa Kit*, *Single Stair*, *Multiple Stairs*, *Multi Block*) the management of the users is implemented in the relevant "*Users*" tab, as shown in the following figure

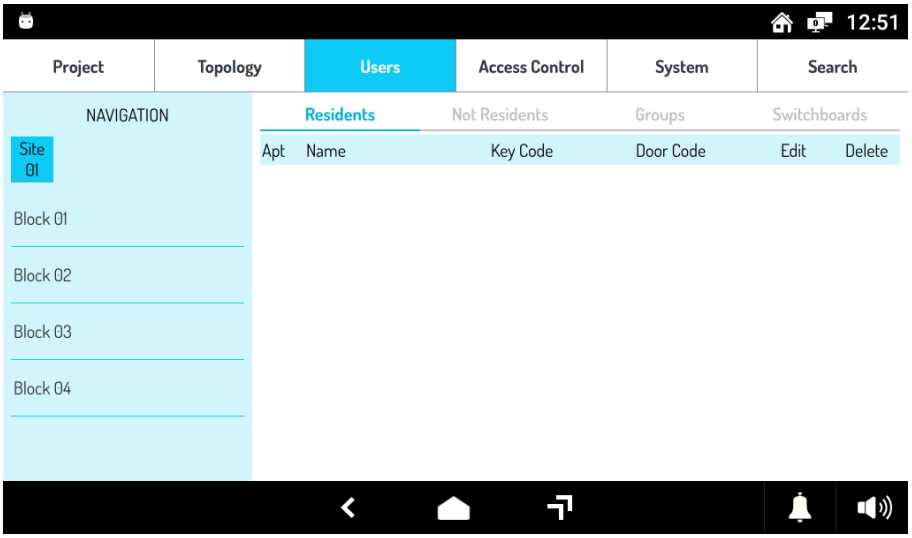

Figure 90: "Users" tab

The screen shows 4 different types of users, described in dedicated paragraphs: "*Residents*", "*Not Residents*", "*Groups*", *"Switchboards"*.

6.3.6.1 Residents

Residents are associated with the apartments, so to be able to add residents it is necessary to access the navigation window on one of the created apartments.

Let's suppose you want to create a *Multi Block* project, as shown in the following figure

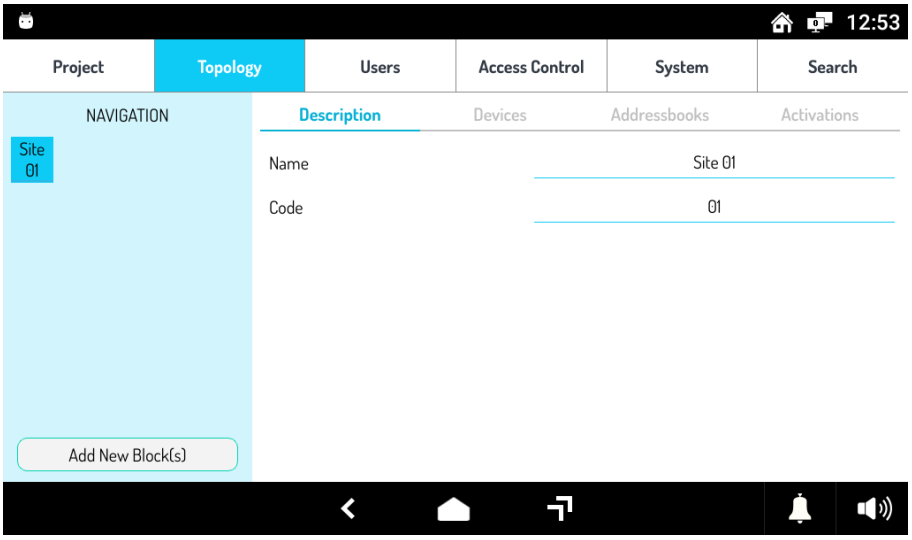

Figure 91: Newly created Multi Block Configuration

In the configuration, no topological node has yet been entered, so the "Users" tab will not allow the addition of residents, since it is only allowed in the apartments

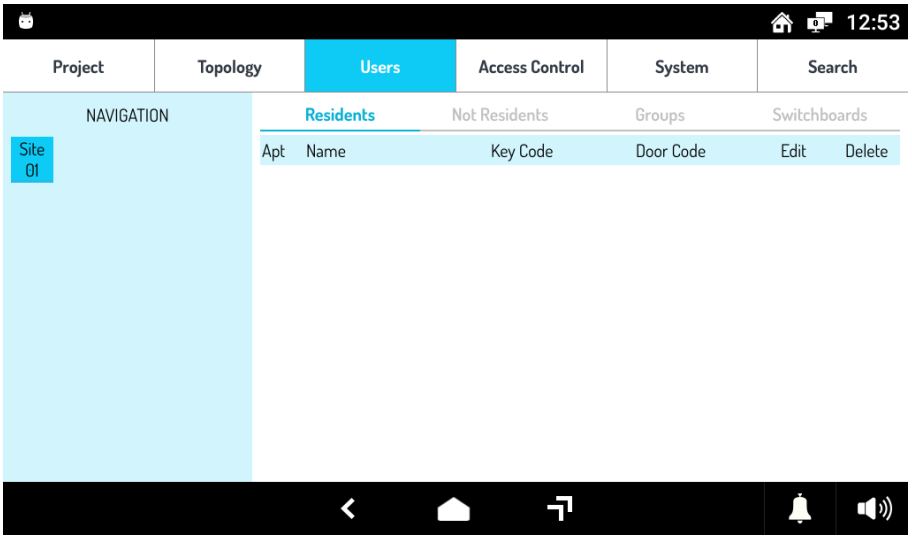

Figure 92: "Residents" screen in a topological node different from the apartment

If you want to add a block, with a stair, a floor and 3 apartments to the topology: go through the navigation module to one of the apartments, you will see the "Add" button in the *"Residents"* tab, as shown in the following figure

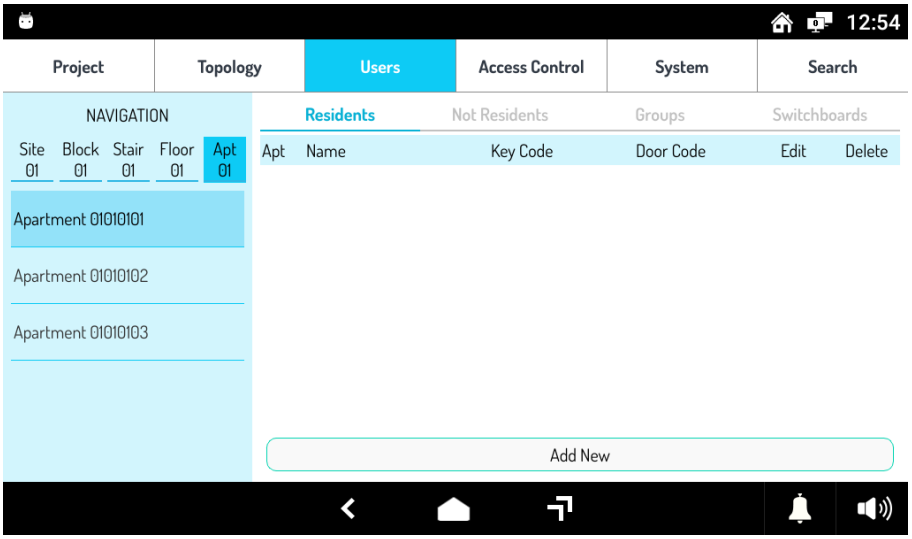

Figure 93: "Residents" screen for an apartment

The "*Add*" button allows adding the residents to be associated with the apartment selected in the navigation module, in this case "Apartment 01010101".

Press the button to access the following screen, with the fields to be added for the creation of the new user

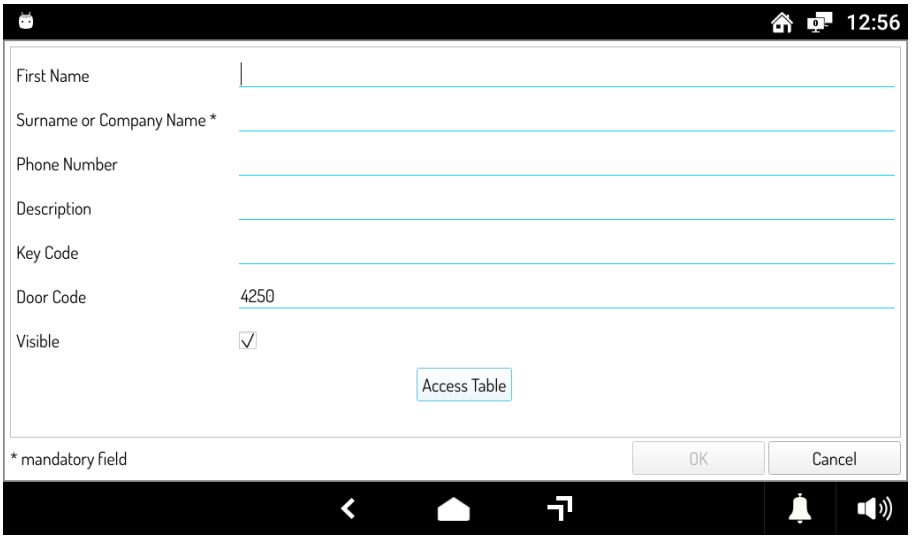

Figure 94: Creation of a new resident

The following table helps you to understand the meaning of the fields

Name	Name of the resident. Maximum length: 32 characters.
Surname or Company Name	Surname of the resident or company name. Maximum length: 32 characters.
Telephone number	Telephone number associated to the resident. Maximum length: 16 numeric characters.
Description	Short description of the resident.
Key Code	*Proximity Key Code* associated to the user. The code must be univocal in the system.
Door Code	Numerical code of the door opener associated to the user; the programme generates one automatically, which can be modified. The code must be univocal in the system.
Visible	If the flag is selected, the name will be shown in the *Call Module*. Otherwise, the name will not be shown in the address book.

Table 2: Resident fields

After adding for example 2 users for the *"Apartment 01010101",* if you go to that topological node you will see the updated list of residents in the context menu

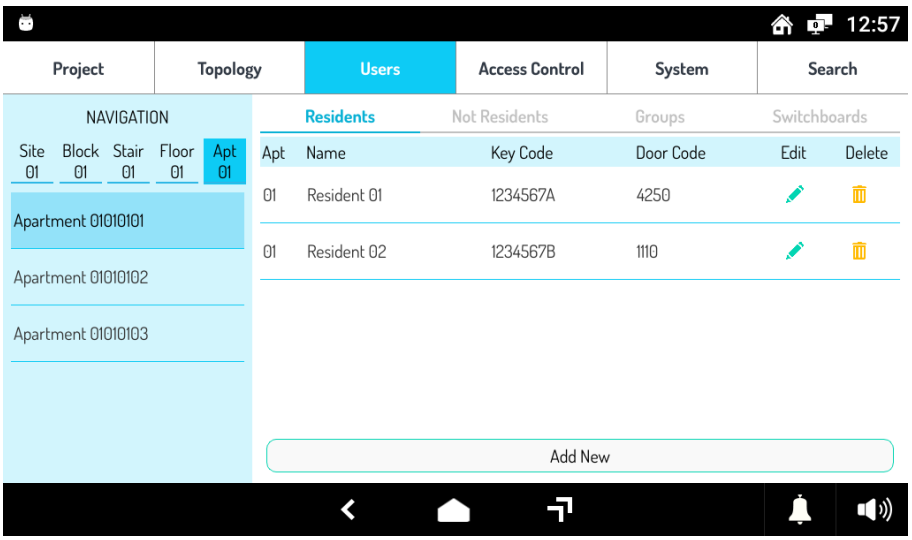

Figure 95: List of residents for the selected apartment

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each user created, respectively (through confirmation pop-up).

The creation of the residents allows:

- having a contact address book that can be viewed on the *Call Modules*;
- giving residents access (by means of *Proximity Keys* or *Door Codes*) to the doors of competence without any time limit;
- giving residents access (by means of *Proximity Keys* or *Door Codes*) to the doors not in their competence with possible time limits (refer to paragraph *6.3.7 Access control*).

6.3.6.2 Not residents

The *IPerCom* system can manage the controlled access to the residential structure also for external personnel (maintenance technicians, suppliers, etc.).

The "not resident" is not associated with any apartment of the system: in fact, by going to the tab "*Not Resident*" in the tab "*Users*", the navigation module will not show the topology of the system.

The addition of a non-resident is therefore always allowed regardless of the topology of the system

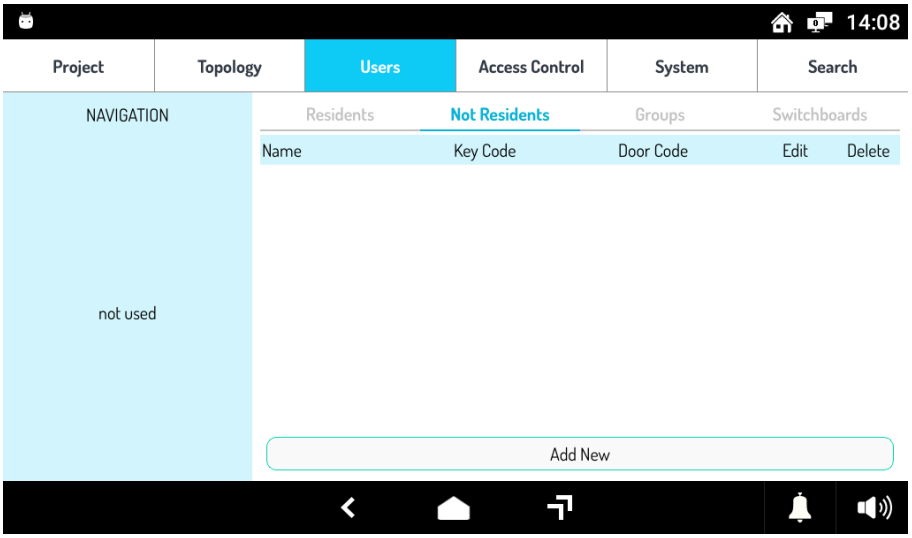

Figure 96: "Not Resident" screen

By pressing the *"Add"* button, a screen like the following one will open

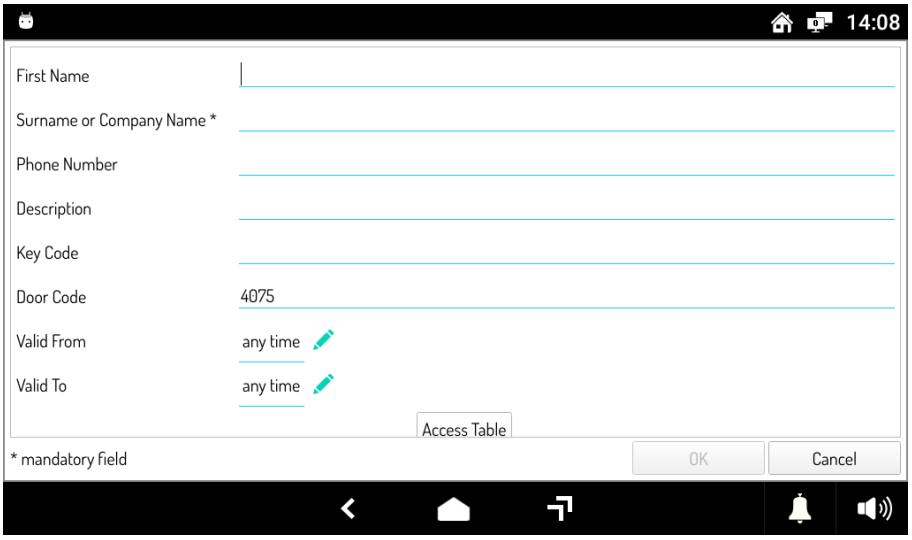

Figure 97: Creation of a not resident

The following table helps you to understand the meaning of the fields

First name	Name of the not resident. Maximum length: 32 characters.
Surname or Company Name	Surname of the not resident or company name. Maximum length: 32 characters.
Telephone number	Telephone number associated to the not resident. Maximum length: 16 numeric characters.
Description	Short description of the not resident.
Key Code	*Proximity Key Code* associated to the not resident. The code must be univocal in the system.
Door Code	Door opener numeric code of access points associated to the not resident. The code must be univocal in the system.

Table 3: Not Resident fields

For security reasons, it may be necessary to make access to the doors available to non-residents in a specific time interval: to do this, at the bottom of the screen it is possible to set a time interval for the validity of the *Key Codes* and of the *Door Codes*

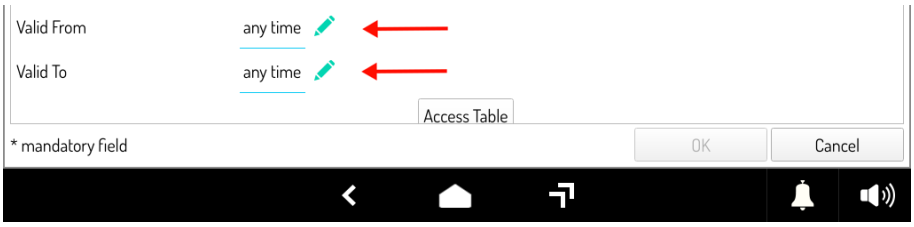

Figure 98: Period of validity of the Key Codes and of the Door Codes

Generally, the validity period is not set, so access is always granted to the resident; to set a validity period, press the edit icons indicated by the red arrows: the date and time selection screen will open

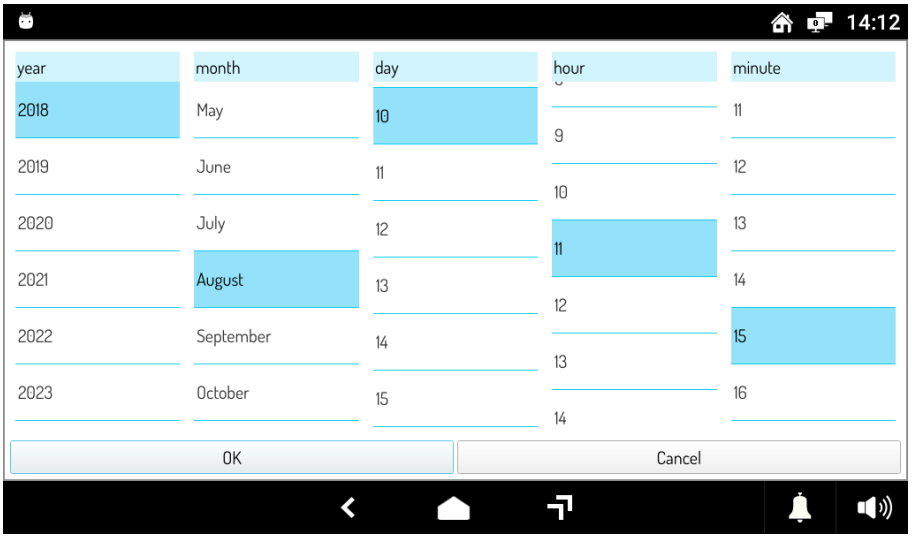

Figure 99: Selection of date and time of the period of validity

After selecting the year, month, day, hours and minutes and pressing the "*OK*" button, the validity period is set as shown in the following figure

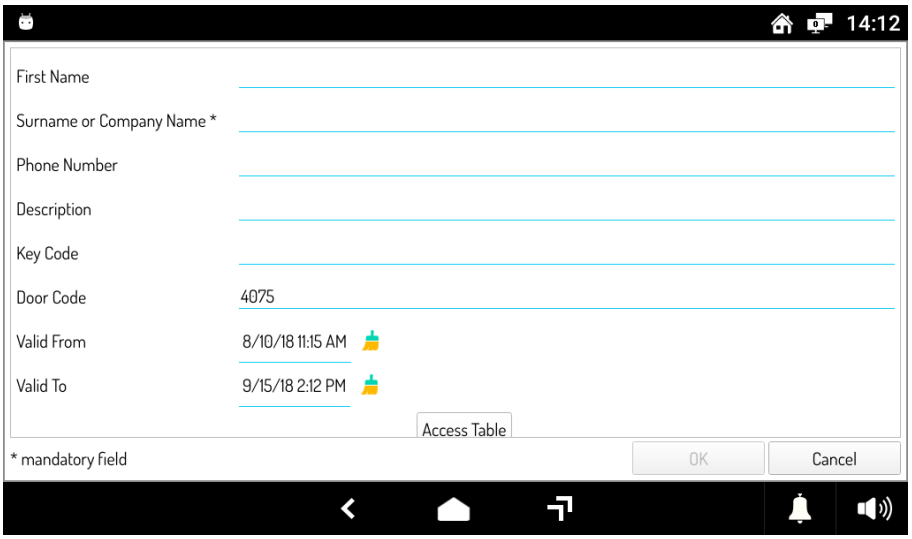

Figure 100: Set validity period

There is an important difference in the operation of the *Door Codes* and *Key Codes*: while for residents the *Door Codes* and the *Key Codes* automatically open the doors associated with the *Call Modules* and the *Key Readers* with competence for the apartment, for non-residents the doors, that can be opened by the relevant *Proximity Keys* and *Door Codes*, must be specified in an external table. This external table can be accessed by pressing the *"Access Table"* button in *Figure 98*.

A screen opens displaying the various access profiles loaded into the system to be associated with non-residents, or a list of doors that can be opened, if necessary, during a certain time period. Access profiles can be created in the "*Access Control*" tab (for more details see paragraph *6.3.7 Access control*).

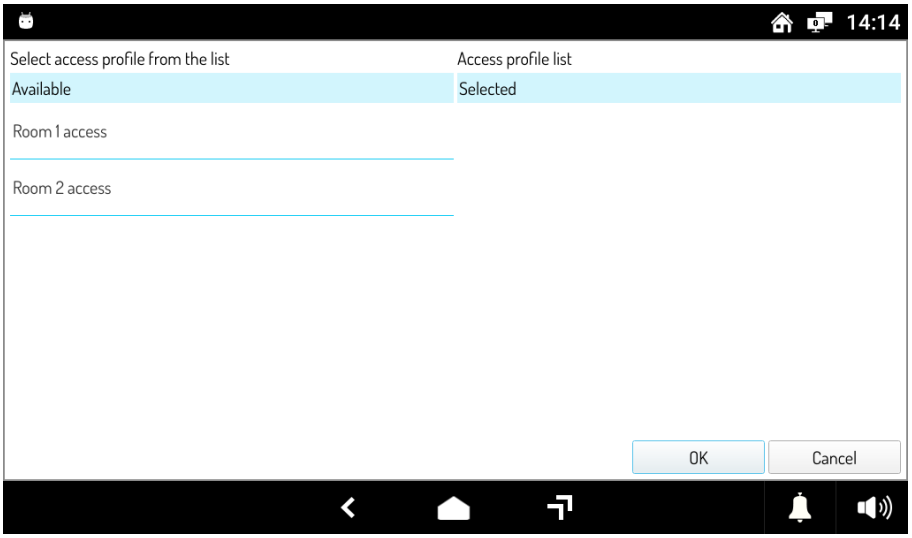

Figure 101: Selection of the access profiles for non-residents

To associate an access profile to a non-resident, press the relevant name: the access profile will move from the list of available profiles to that of the selected profiles. To delete the association, press the same item in the list of selected profiles.

In conclusion, the creation of non-residents allows giving access (through *Proximity Keys* or *Door Codes*) to external personnel only at the relevant access points with or without time limit.

Once you have entered for example 2 non-residents, the list of non-residents in the configuration will appear as shown in the figure

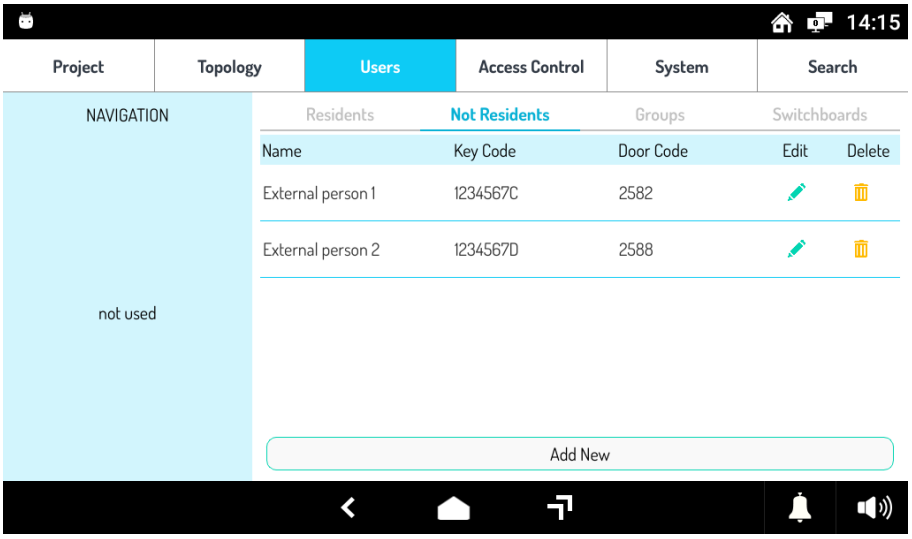

Figure 102: List of non-residents

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each user created, respectively (through confirmation pop-up).

6.3.6.3 Groups

The *"Groups"* screen allows you to quickly create groups of residents and/or non-residents who have special access needs to certain doors, possibly at specific times.

For example, there could be a "Swimming pool" group to which all those with access to the pool must be added. The group, in turn, should be associated with a "Swimming pool access profile" that allows access to the doors of the pool in the time intervals in which the courses are held. In this way, every time a user enrols in the course, it is sufficient to add him/her to the corresponding group.

To create the "Swimming pool" group, click on the *"Users"* tab, then on the *"Groups"* tab.

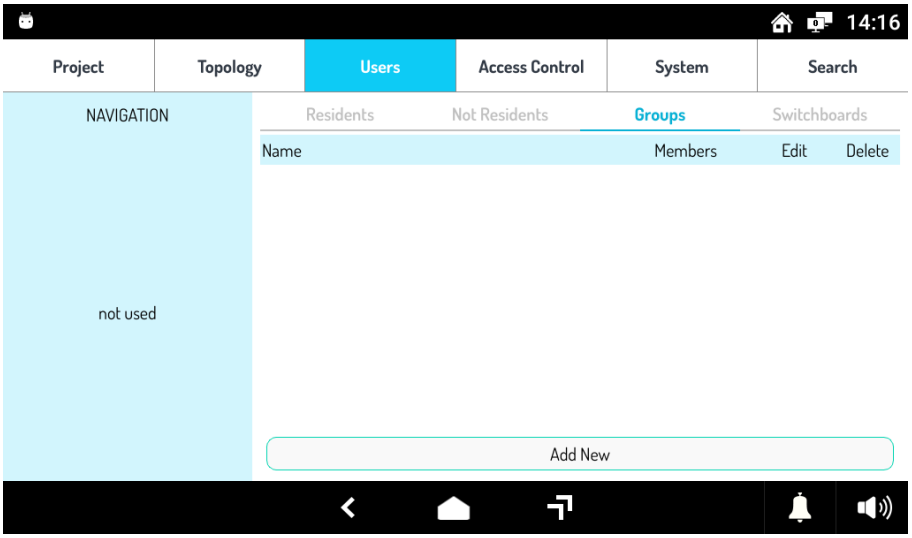

Figure 103: "Groups" screen

Press the *"Add"* button to view the following screen with the list of all residents and non-residents to the left

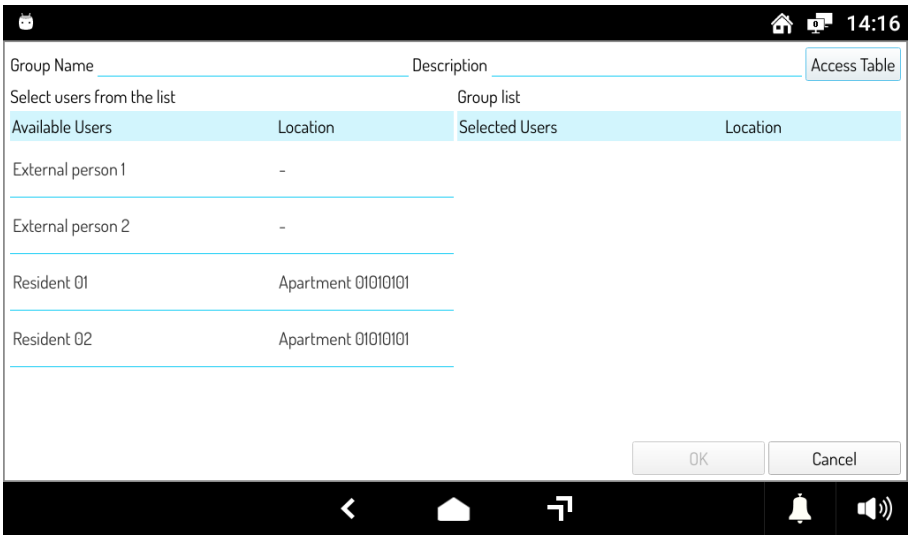

Figure 104: Adding a group

To add, for example, residents to the group, simply select them in the list on the left and they will be moved to the list on the right

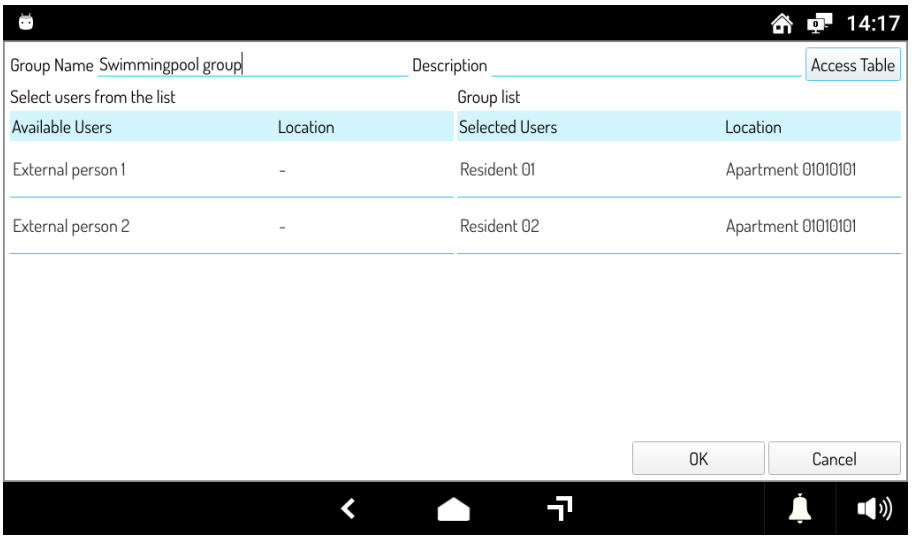

Figure 105: Adding users to a group

Then simply give the group a meaningful name and description and confirm with the *"OK"* button: the group will be added to the list of user groups.

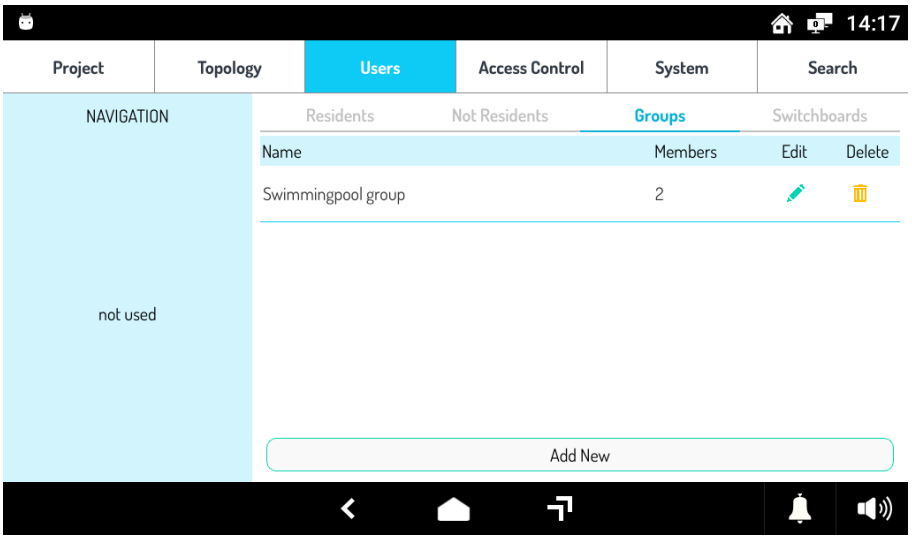

Figure 106: List of groups

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each group created, respectively (through confirmation pop-up).

6.3.6.4 Switchboards

Through the *"Switchboards"* tab of the *"Users"* tab it is possible to manage the users of the switchboards in the system

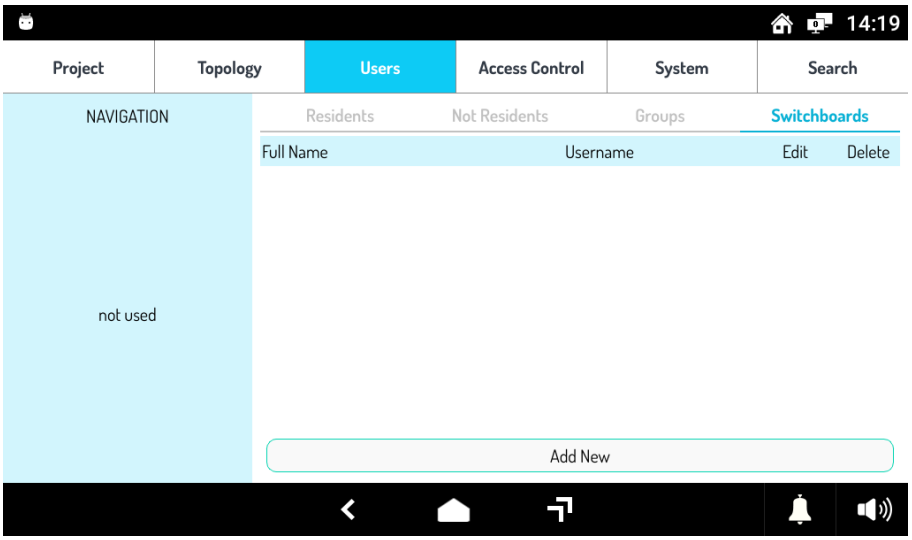

Figure 107: "Switchboard" screen

The ''*Add*'' button allows adding new users of the switchboards: press it to open the following screen

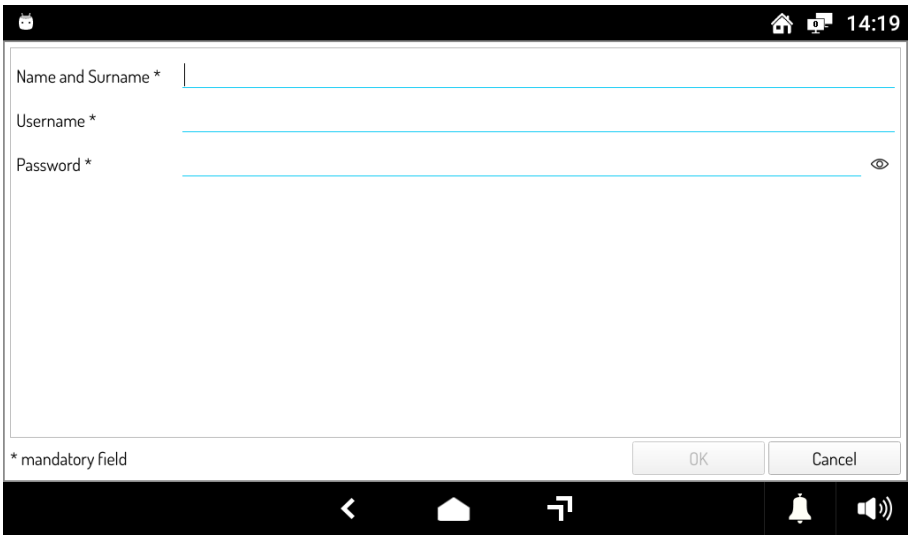

Figure 108: Creation of a new user

Once all fields have been edited appropriately and the *"OK"* button has been pressed, another user is added to the user list

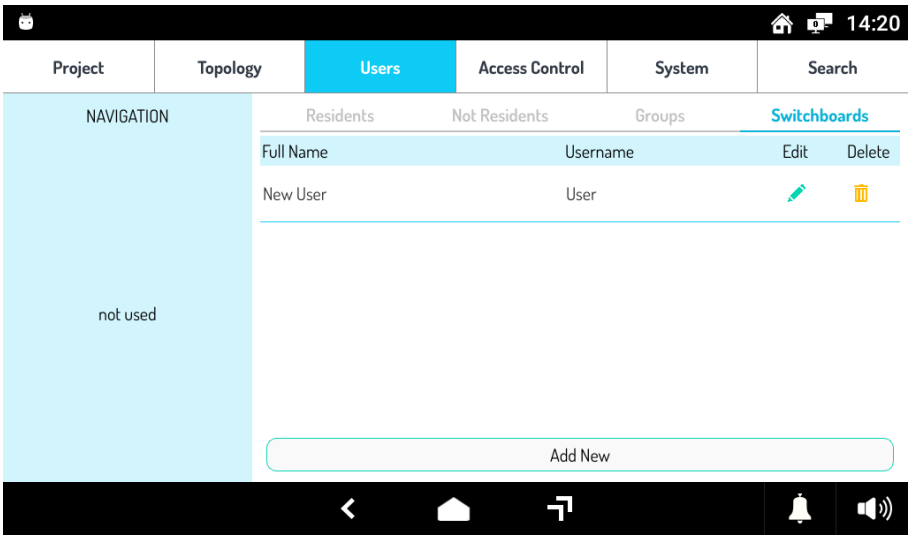

Figure 109: List of the switchboard users

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each user created, respectively (through confirmation pop-up).

The ''*User Name*'' and ''*Password*'' fields associated to each switchboard user correspond respectively to the "User" and the "Password" fields used for the access through the *"Switchboard"* software installed on a PC connected to the system

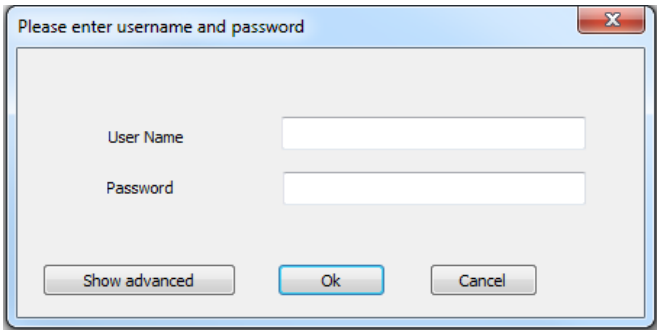

Figure 110: Access screen of the "Switchboard" software

For the operation of the *"Switchboard"* programme, refer to the relevant user manual.

6.3.7 Access control

The *IPerCom* system integrates the **access control** service, which allows the opening of access points (doors, gates, bars, etc.) through the recognition of *Proximity Keys* or the insertion of *Door Codes*. To control the opening of the access point, it is possible to use either the *Call Modules* (which integrate a *Proximity Key* reader) or the *Key Readers*.

The opening of an access point is subject to the recognition of a *Proximity Key* or an access code by a *Call Module* or a *Key Reader*.

In order for a *Proximity Key* or access code to be valid and thus able to open a certain access point

- they must be associated with a user (resident or non-resident)
- they must be associated with the access points to be opened

This is partially already done automatically by the system through the concept of topology and competence.

Let's suppose to have a building with a block and two stairs like the one shown below

Figure 111: System consisting of a block with two stairs

All residents of stair "02" are automatically authorised to open the access points associated with the main *Call Module* and the *Key Reader*, if during the creation of the resident a *Key Code* and a *Door Code* are entered

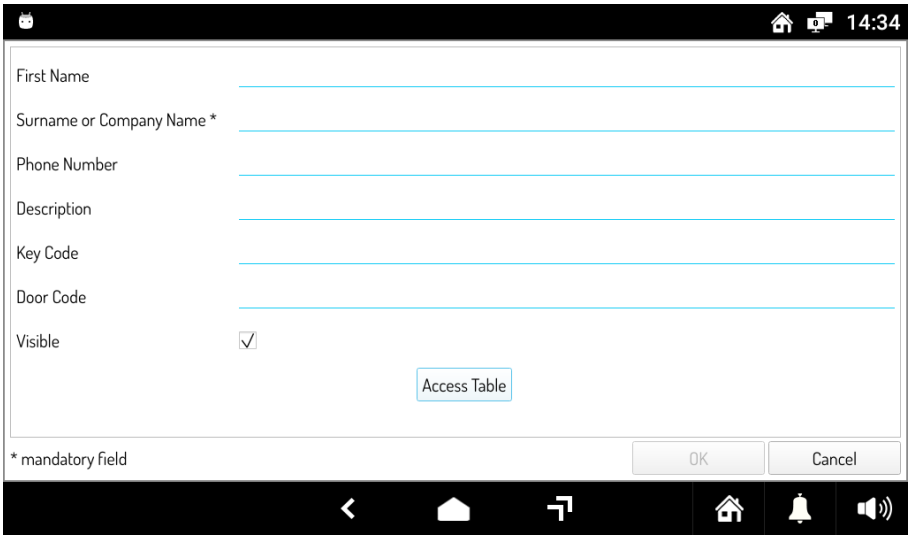

Figure 112: User setting screen

If you want to authorise the access to other access points outside of your competence, it is necessary to use the access control service.

6.3.7.1 Access profiles

The *"Access Profiles"* screen is the same as the one that appears when you open the *"Access Control"* tab.

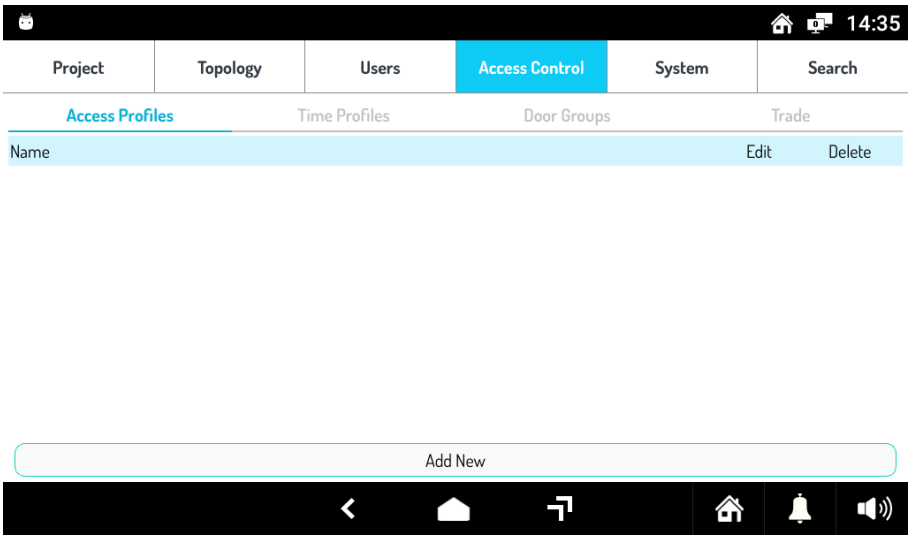

Figure 113: "Access profiles" screen

The access profiles allow you to group in a single rule a set of access points that a group of users needs to open and on which the same users do not have competence.
For example, if two *Key Readers* are outside the competence of the residents, to create an access profile with these two access points, press the "*Add*" button: the following screen will open

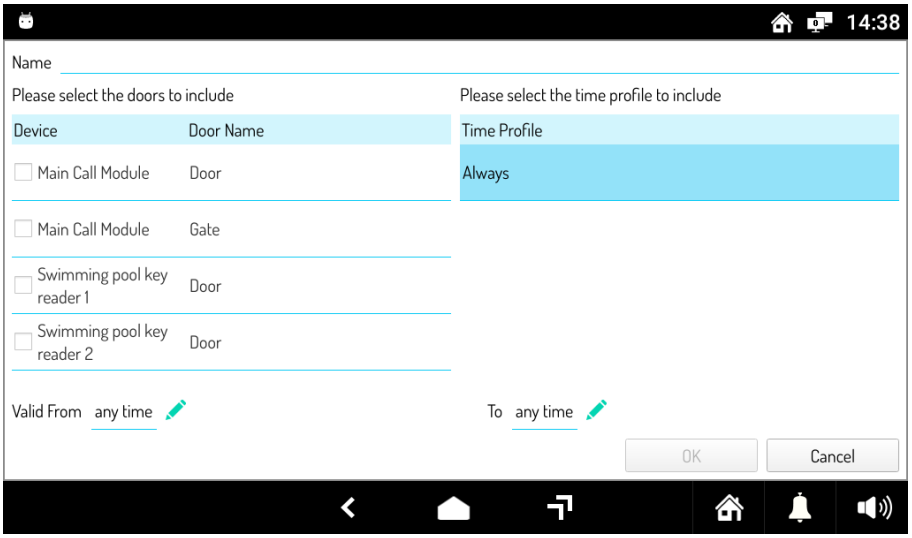

Figure 114: Creation of a new access profile

It is necessary to give a name to the access profile that is being created in the "*Name*" field at the top left, then select the access points that are part of it by simply pressing on the relevant record (the flag is selected automatically). It is also possible to assign a time validity to the access profile, i.e. a time interval (year, month, day and time) in which access to the access points is valid; instead, in the *"Time Profile"* column, an access time limit is defined during the validity period; by default, "Always" is selected, but custom settings can be created (for example, only for weekdays or holidays), as shown in paragraph *6.3.7.2 Time Profiles*.

For example, if the two access points associated with the *Key Readers* give access to a swimming pool in the summer, it is possible to set the name and time validity as shown in the following figure

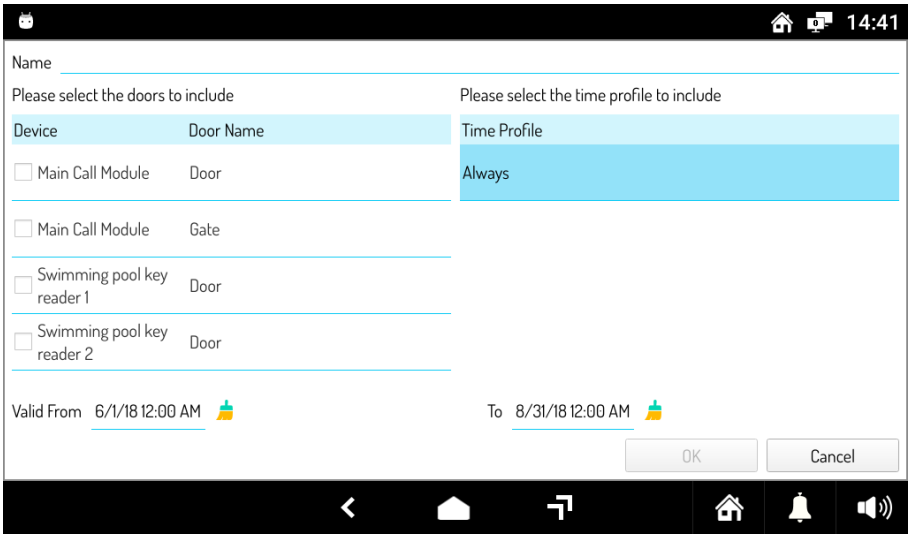

Figure 115: Setting the access profile

By pressing the "*OK*" button, the profile is saved and added to the access profile list.

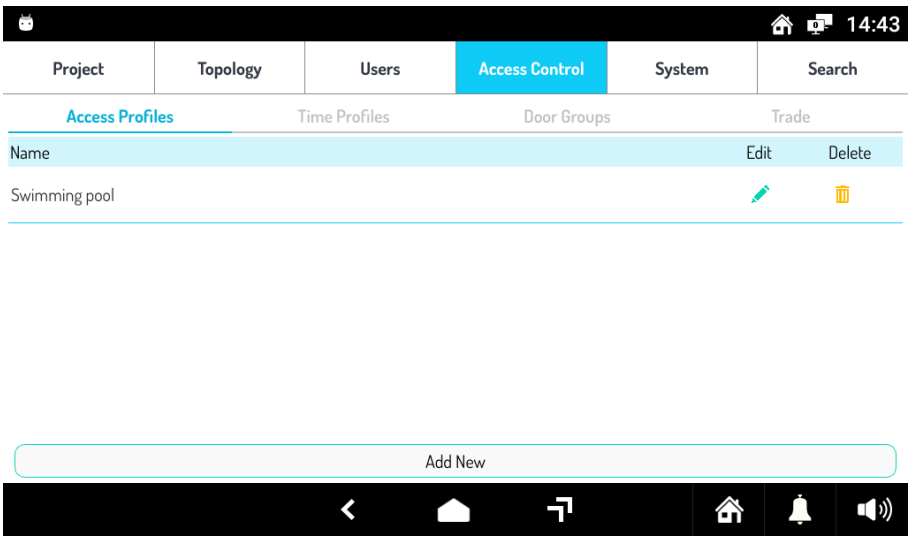

Figure 116: List of the created access profiles

In the *"Access profiles"* screen, the buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each access profile created, respectively (through confirmation pop-up).

Each resident/non-resident can be assigned an access profile during the user creation/editing phase.

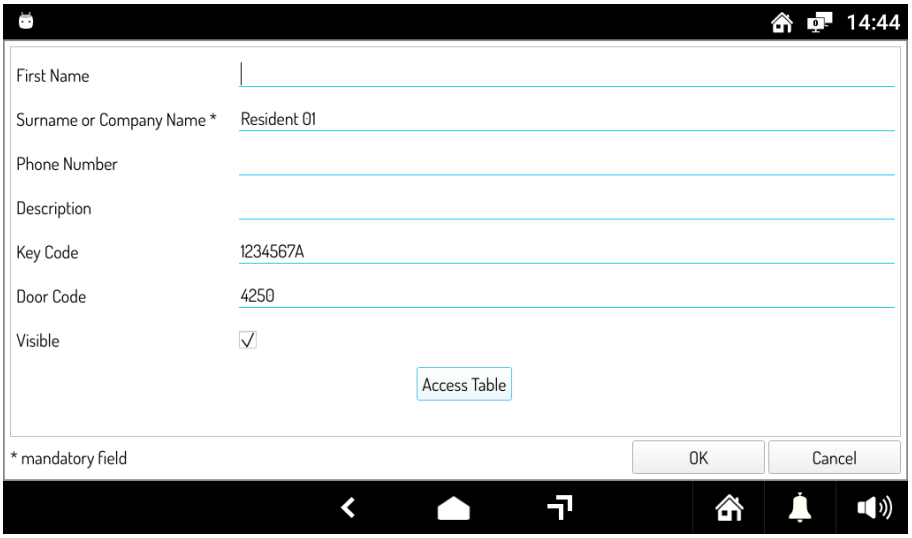

Figure 117: Resident editing screen

By pressing the *"Access Table"* button, the following screen will open

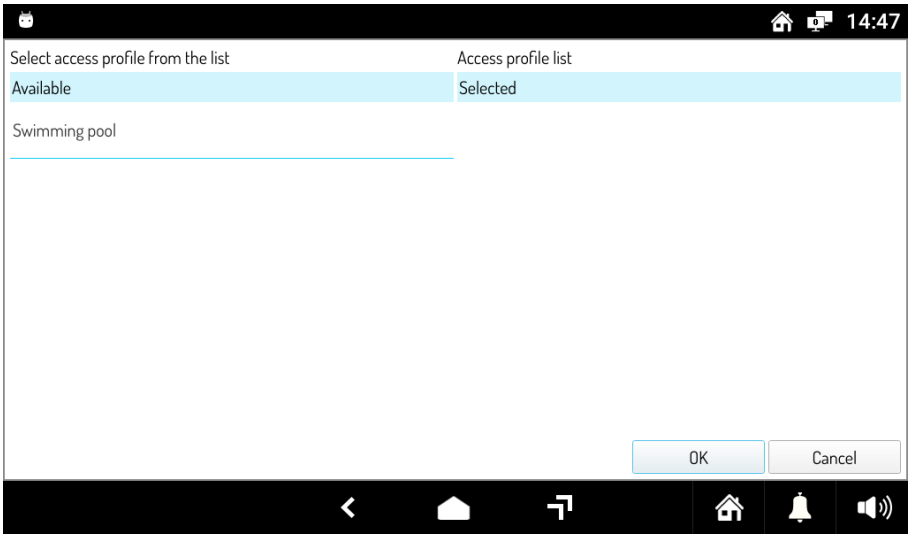

Figure 118: List of access profiles

The access profiles available are listed on the left, while those already selected for the concerned user are listed on the right.
By selecting an item on the left, it will be moved automatically to the right list.

If you want to select the previously created access profile, a screen like the following one will open

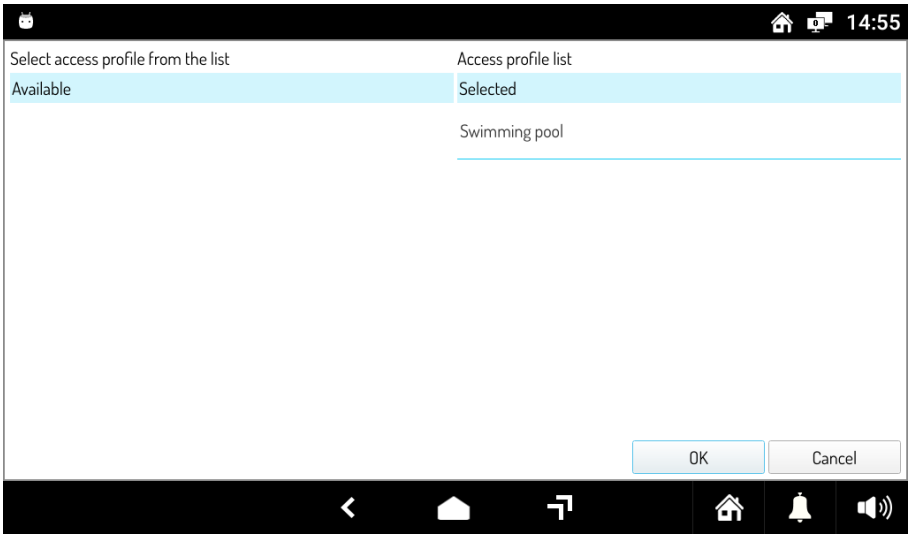

Figure 119: Selection of an access profile

Press the *"OK"* button to automatically associate the access profile with the created user.

6.3.7.2 *Time Profiles*

A **time profile** is a set of time intervals for the validity of accesses.

To manage time profiles go to the *"Access Control"* tab, then click on the *"Time Profiles"* tab: the following screen will open

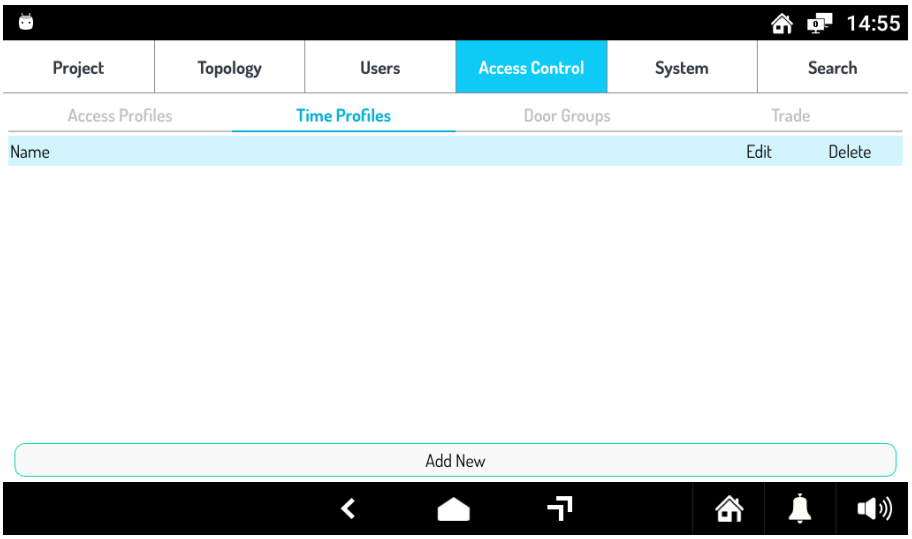

Figure 120: "Time profiles" screen

By pressing the "*Add*" button it is possible to create a time profile associated with the days of the week

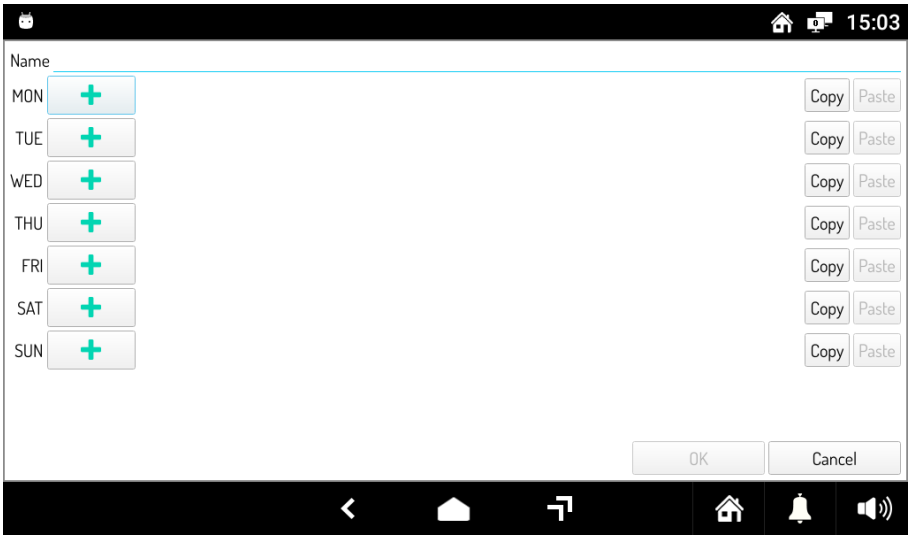

Figure 121: Time profile creation screen

Up to three access time intervals can be created for each day.

To create a new time interval press the "+" button: a screen like the following one will open

Figure 122: Creation of a time interval

After setting the time interval and pressing the "OK" button, the interval will be added to the selected day, as shown in the following figure

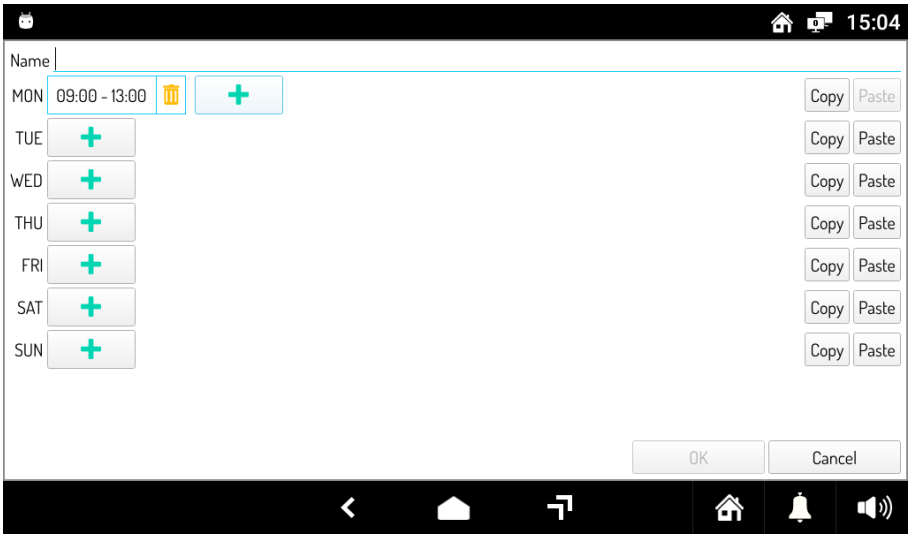

Figure 123: Time interval added in the selected day

The "Copy" button allows copying all time intervals of the day, whereas the "Paste" button allows replacing the time intervals on the day line with the copied ones.

For example, by copying the time intervals set on Monday ("*MON*") and pasting them in the line for Thursday ("*THU*"), the result will be as follows.

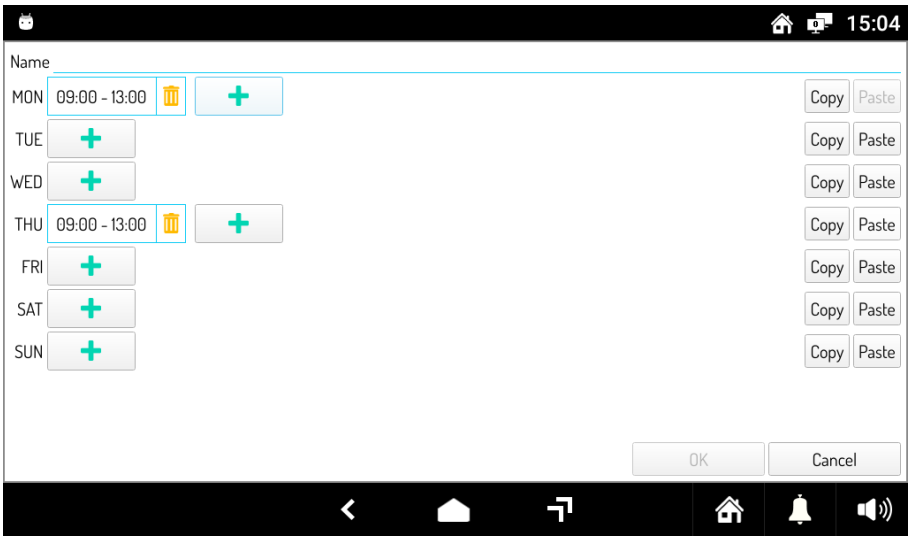

Figure 124: Copying and pasting the time intervals of a day

After naming the time profile and pressing the *"OK"* button, the new time profile will be added to the time profile list.

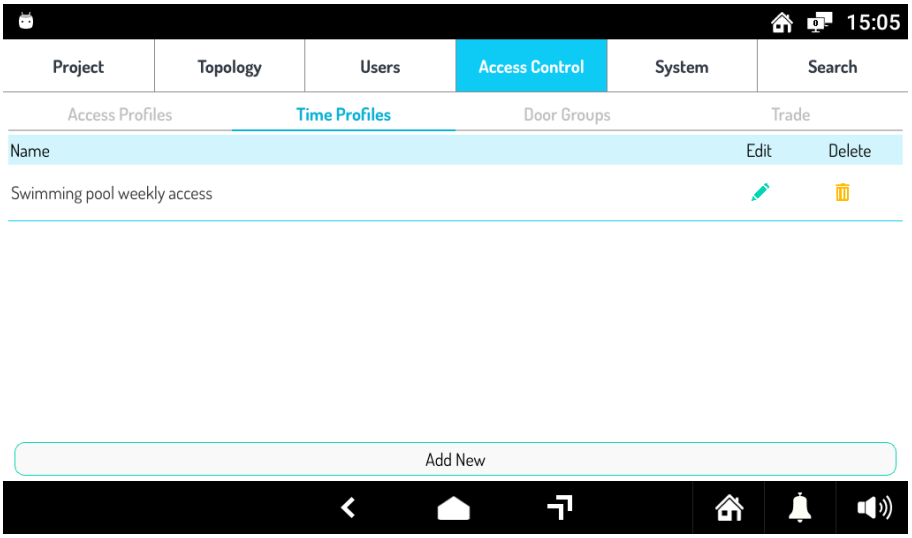

Figure 125: List of the created time profiles

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each time profile created, respectively (through confirmation pop-up).

If you want to associate the time profile “Swimming pool weekly access" to the previously saved access profile, simply reopen the latter in edit mode and select the created time profile, as shown in the following figure

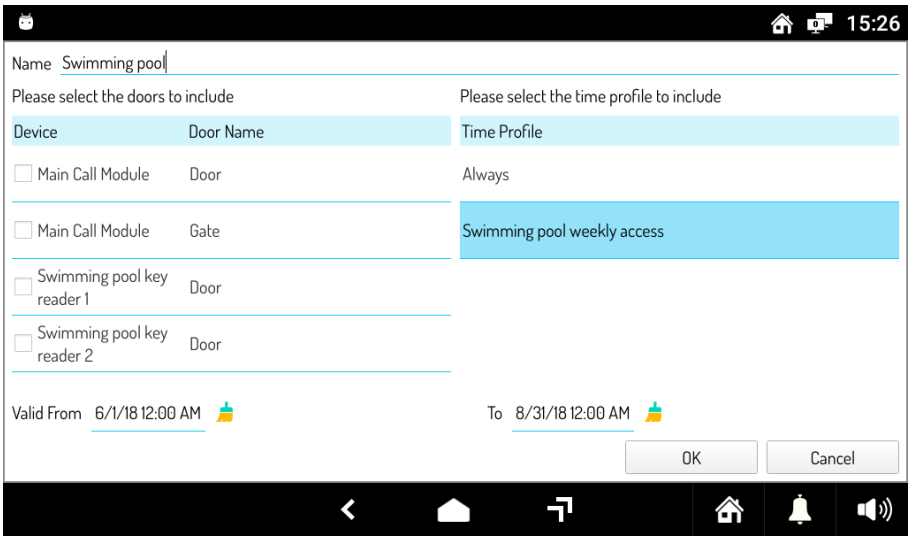

Figure 126: Selection of the new time profile in the saved access profile

6.3.7.3 Door groups

The **door group** is a set of doors that must obey the same rules, have the same temporal validity and the same temporal profile.

To create a group of doors, go to the *"Door Groups"* screen in the *"Access Control"* tab. Once a group of doors has been created, it will be shown in the list of doors on the *"Access Profiles"* screen.

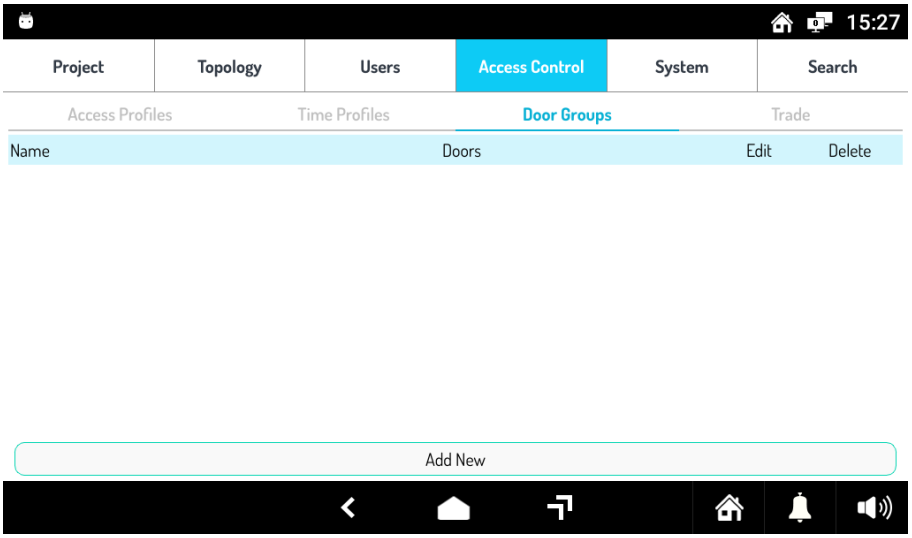

Figure 127: "Door Groups" screen

By pressing the "*Add*" button a creation screen opens with a list of all available doors

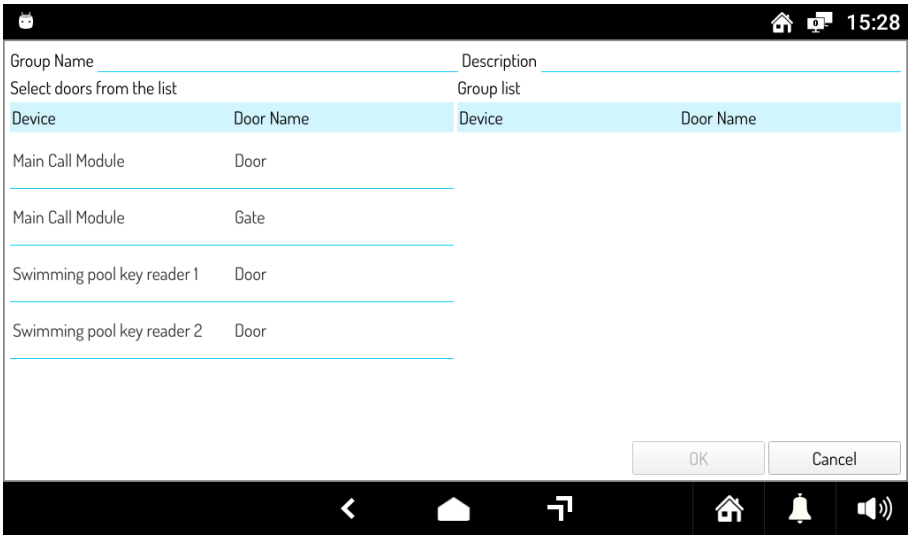

Figure 128: Screen of the door group creation

To create a group of doors, it is necessary to assign a name and select the desired doors: these are moved to a list on the right to form the desired list of doors.

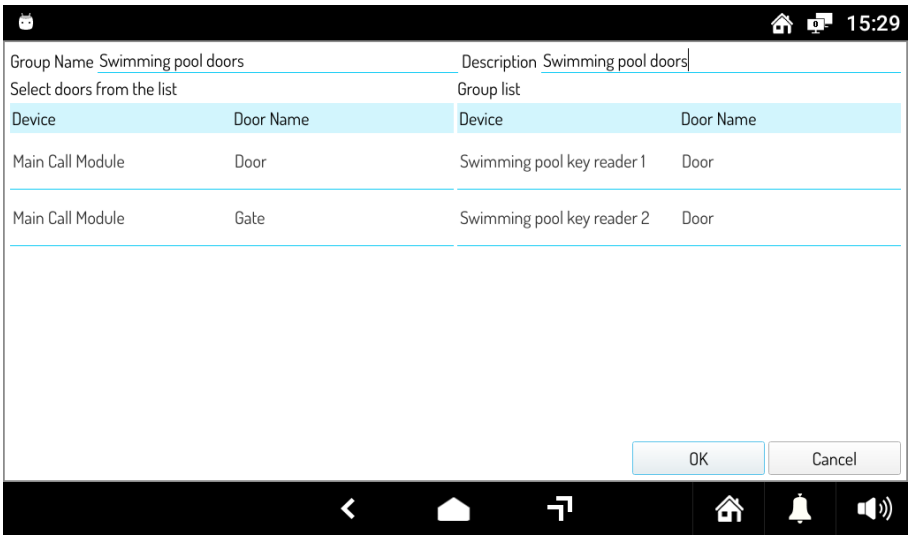

Figure 129: Selection of desired doors

To delete a door from the list, simply select it: it will be moved back to the list on the left.

By pressing the "OK" button you will confirm the creation of the door group, which will be shown in the list in *Figure 127*

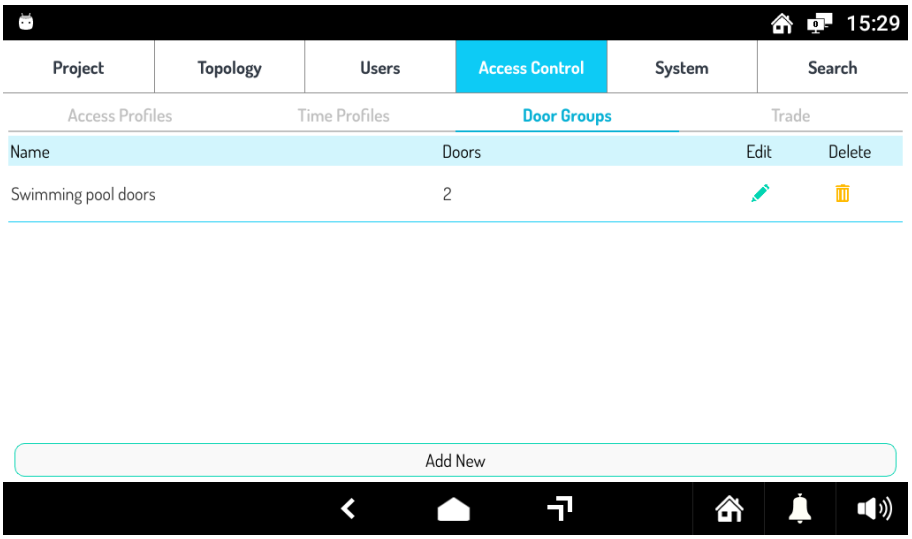

Figure 130: List of the created door groups

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each door group created, respectively (through confirmation pop-up).

If you want to use the "Swimming pool doors" group in the previously saved access profile, simply reopen it and select the above group as door group instead of the previously selected *Key Readers*.

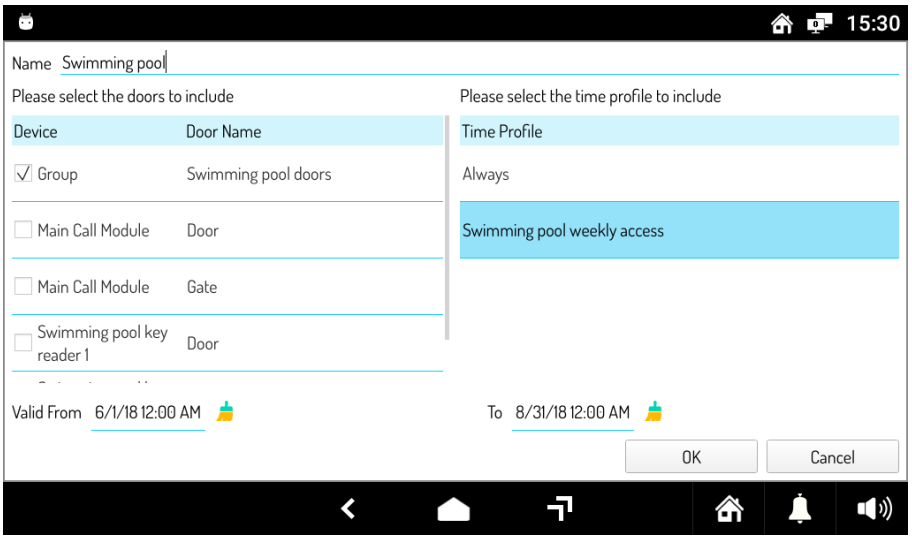

Figure 131: Selection of the new door group in the saved access profile

6.3.7.4 Trade

The **trade** function allows opening the pedestrian door and/or the driveway (if enabled) directly from the *Call Modules* keypad during a time period set during the creation of the *trade* itself.

The application can be useful if external personnel needs to access the residential complex in pre-set time intervals.

The *trade* functionality is set from the *"Access Control"* tab, via the *"Trade"* screen

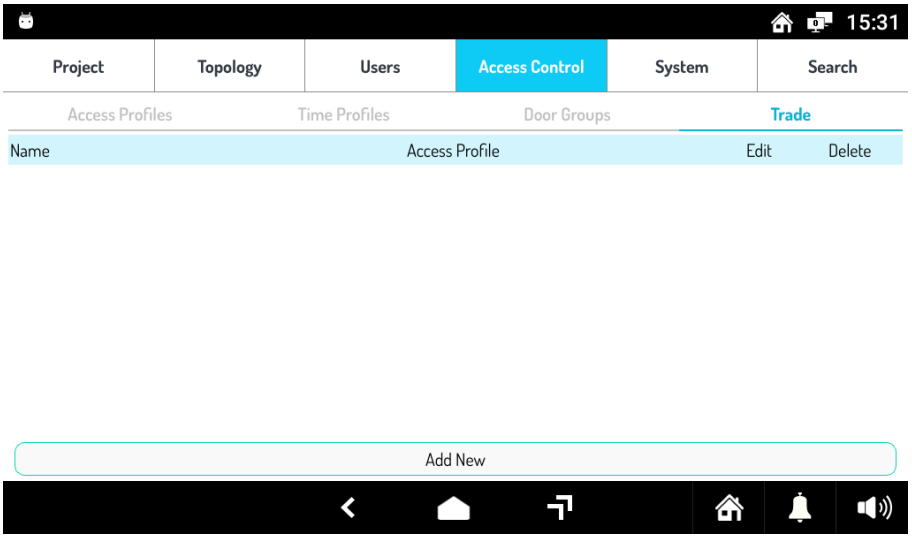

Figure 132: "Trade" screen

To create a trade you first need to create a specific time profile and then press the ''*Add*'' button.

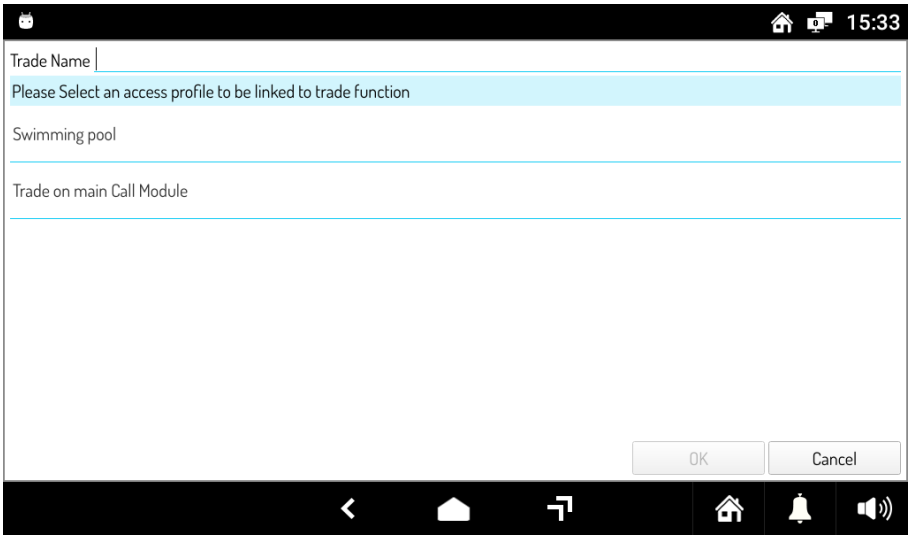

Figure 133: Trade creation screen

After selecting the profile and assigning the name to the *trade*, press the ‘‘*OK*" button to create the *trade* and add it to the list of available *trades*.

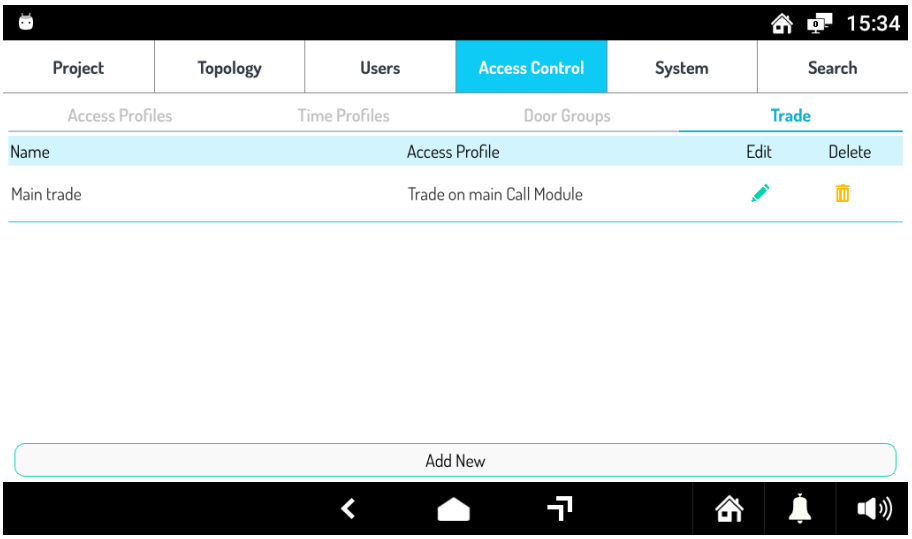

Figure 134: List of created trades

The buttons in the columns "*Edit*" and "*Delete*" allow you to modify the data or delete each *trade* created, respectively (through confirmation pop-up).

For the correct application of the ''*Trade*'' function see the *Call Modules* user manual (Ref. 1060/13-18).

6.3.8 System parameters

The "*System*" tab allows setting some global parameters relating to the system, which are useful for its performance. All values can be selected from a drop-down menu.

The following screen will open

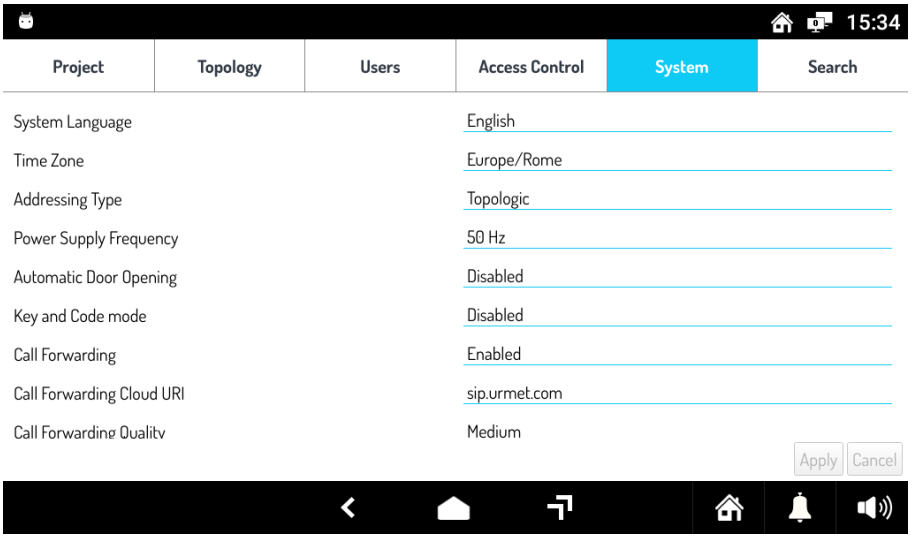

Figure 135: "System" tab (part 1)

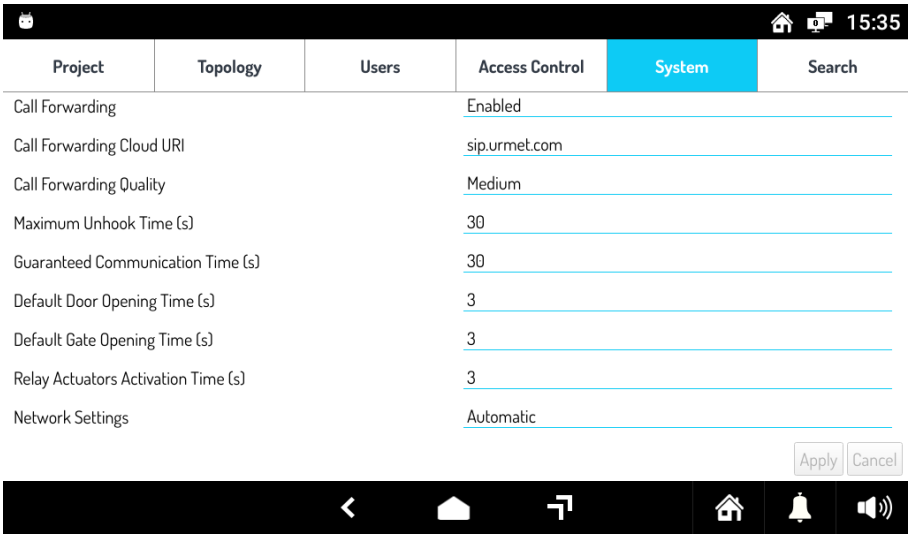

Figure 136: "System" tab (part 2)

The meaning of the single items is shown in the following table

Language	Language used by *IPerCom* devices with display
Time Zone	Time zone selected for time management
Addressing type	Method used to determine the addressing in the call codes. Allowed values: *"Topological"*, *"Numerical"*, *"Logical"*, *"Numerical with blocks"*
Electric power supply frequency	Frequency in Hertz of the electric power supply. Allowed values: 50Hz or 60Hz
Automatic door opening	If enabled, it allows the automatic opening of the doors during the call phase. Default value: disabled.
Key Mode and Code	If enabled, the access to the doors of the *Call Modules* occurs through the use of both the *Proximity Key* and the *Door Code* associated to the user. Default value: disabled.
Call forwarding on Smartphone/Tablet	If enabled, it allows call forwarding on mobile devices. Default value: enabled.
URI Cloud for call forwarding on Smartphone/Tablet	SIP server where to register the user for call forwarding on mobile device. Default value: sip.urmet.com
Quality of call forwarding on Smartphone/Tablet	Video quality of the call forwarded to a mobile device. Allowed values: *"High "*, *"Medium"*, *"Low"*. Default value: medium.
Maximum off-hook waiting time	Answer response time. Min: 30 s, Max monitor: 540 s.
Guaranteed conversation time	Guaranteed communication time. Min: 30 s, Max monitor: 540 s.
Door Opening Default Time	Door opening time. Default value: 3 s.
Gate Opening Default Time	Gate opening time. Default value: 3 s.
Relay actuator activation time	Time of activation of relay actuators. Default value: 3 s.
Network settings	The "*automatic*" value means that the devices automatically acquire an IP address consistent with the network in which they are installed; the "*manual*" value allows setting the network parameters according to your needs and according to the network in which the system is installed.

The "*Apply*" button at the bottom of the screen allows you to apply the selected settings.

6.3.8.1 Selection of the addressing type

The selection of the addressing type in the system parameters affects how an apartment can be called via the keypad of the *Call Modules* and of the *Switchboard*.

There are four types of addressing

- *topological*
- *numerical*
- *logical*
- *numerical with blocks*

The *topological* addressing requires that to call an apartment from a *Call Module* or a *Switchboard*, the topological code of the apartment must be entered via the keypad.

The topological code of an apartment is a fixed parameter defined by the configurator during the creation phase of the system topology, and is visible on the *"Description"* screen of the *"Topology"* tab.

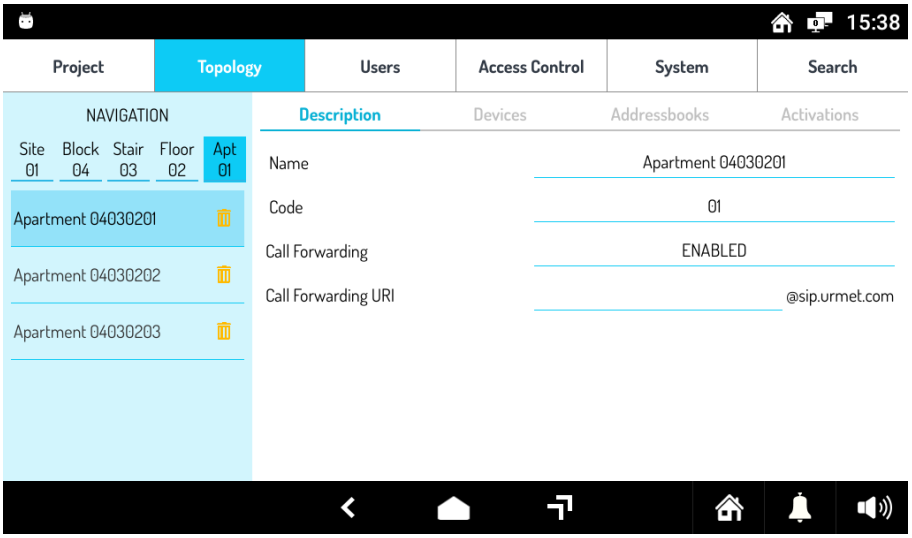

Figure 137: "Description" screen in case of topological addressing

The type of numeric addressing instead requires that the code entered for calling an apartment is numeric: this number is determined for each apartment on the *"Description"* screen of the *"Topology"* tab, which in case of numeric addressing appears as shown below

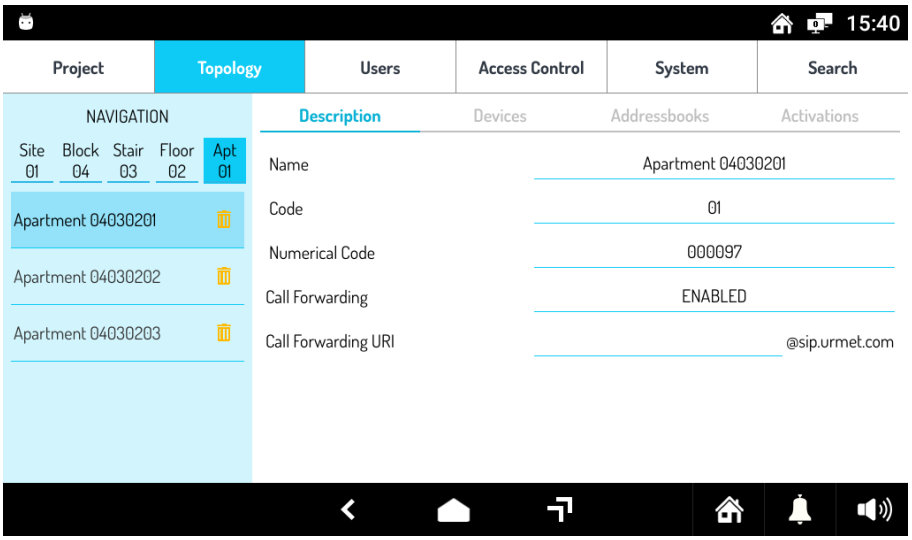

Figure 138: "Description" screen in case of numerical addressing

Normally, the configurator suggests an automatically generated numerical code, but it is possible to modify it at any time.

As for the type of logical addressing, it is an alphanumeric code to associate to each apartment, as shown in the following figure

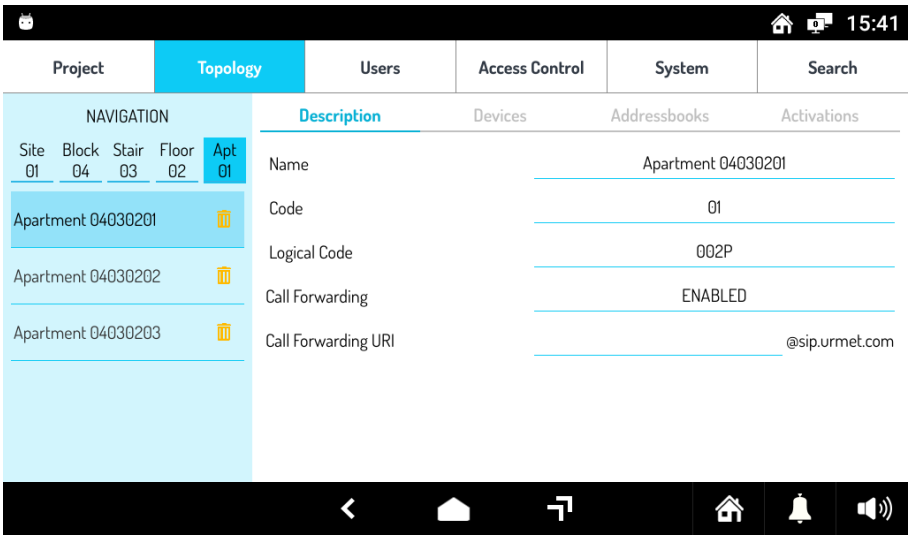

Figure 139: "Description" screen in case of logical addressing

The last type of addressing, mainly used in the English market, is the *numerical with blocks* and in this case, to call an apartment

- from *Call Module*, it is first necessary to select the block in which it is located and then to select the numeric code associated with the apartment
- from the *Switchboard*, it is necessary to enter the block number before the numerical code

The "Description" screen in case of *numerical addressing with blocks* is as follows

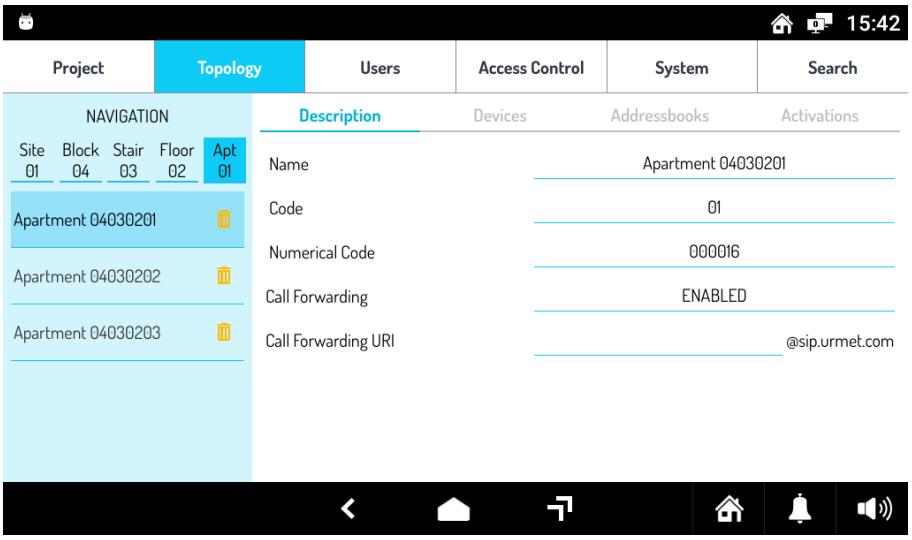

Figure 140: "Description" screen in case of numerical addressing with blocks

6.3.9 Setting of call forwarding

Call forwarding allows receiving a call from a *Door Speaker Unit* or a *Call Module* in the apartment and on a Smartphone/tablet.

Call forwarding requires

- that the installer provides the **connection to the system network of a router** that can allow the connection to the Internet
- that the resident installs the **CallMe** app, distributed for Android and iOS operating systems that can be downloaded from the relevant stores

From the configuration point of view, call forwarding is enabled by changing the system parameters: under *"Call forwarding on Smartphone/Tablet"*, set the value to *"Enabled"*, as shown in the following figure

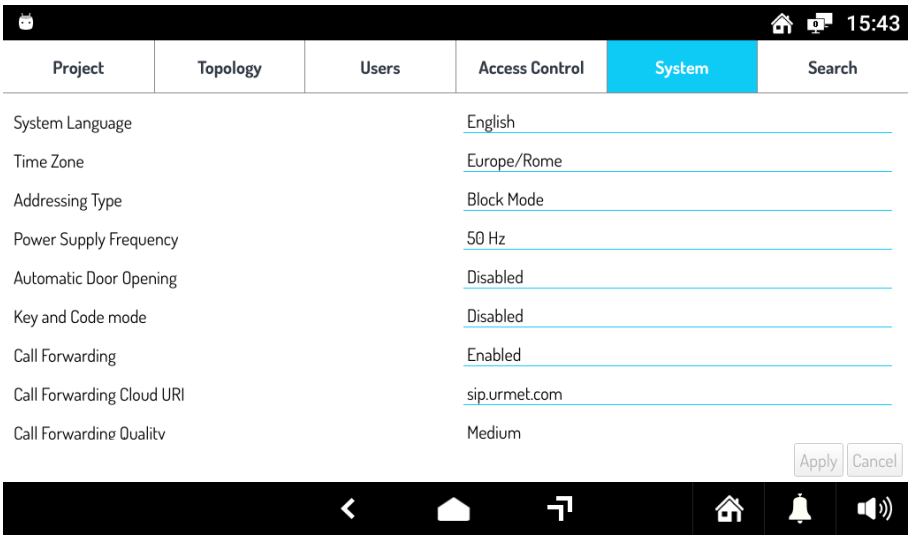

Figure 141: Enabling of call forwarding

Under *"URI Cloud for call forwarding on Smartphone/tablet"* it is necessary to set the SIP server on which through the *CallMe* application the user is registered: by default the SIP server is *"sip.urmet.com"*, while the *"cn.sip.urmet.com"* server is to be used only for the Chinese market.

The call forwarding quality must be set on the basis of the available bandwidth : if there are problems with the call, such as intermittent videos and/or incomprehensible audio, it is better to lower the quality of call forwarding from the settings.

To set the user name registered on the SIP server for an apartment, select the "Topology" tab and, in the "Description" screen for the desired apartment, fill in the *"URI Cloud for call forwarding on Smartphone/tablet"* field.

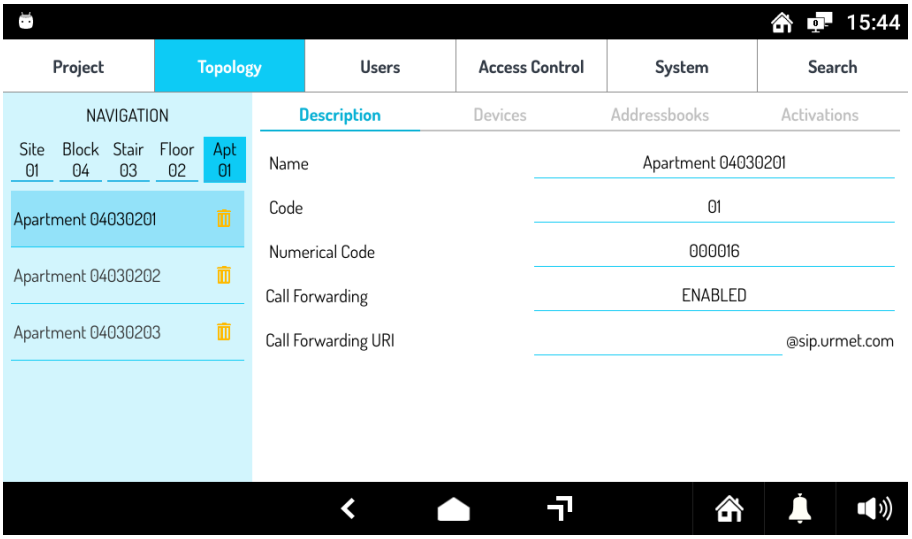

Figure 142: Setting the SIP user name for an apartment

If the user name is not yet available (e.g. if you have not registered in the app, yet), this field can be left blank: in any case, it can also be set directly by the video door phone system application on the *MAX* monitor in the future.

For further information on call forwarding, refer to the relevant *CallMe* application manual, which can be downloaded for free from the download area of the website www.urmet.com.

6.3.10 Configuration distribution

The configuration is always distributed via *MAX* Monitor, and can be done in two ways:

- directly from the *configurator* (if you are changing the configuration from a *MAX* Monitor connected to the system)
- from the *configuration menu* by importing from SD card (if you have a configuration saved on SD card)

If you have just finished modifying the configuration on the *MAX* Monitor *configurator*, to apply it to the system, select the "Project" tab and press the "Apply" button.

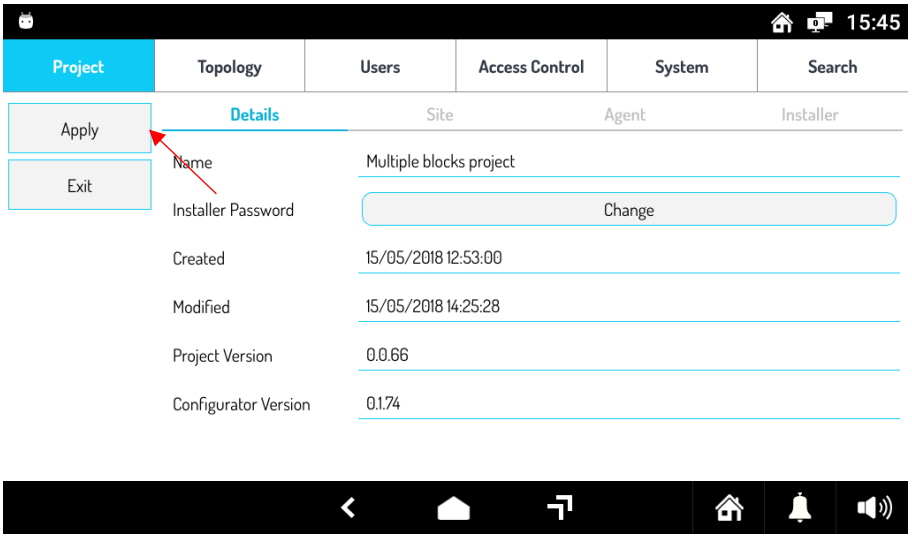

Figure 143: Configuration distribution from the configurator

You will be asked if you really want to apply the configuration to the system: confirm to start the configuration distribution to all the devices of the system.

If, on the other hand, the configuration has been previously saved to a file and you want to distribute it directly to the system without going through the *configurator*, you must import the configuration from the SD card.

To import a configuration from SD card, access the *configuration menu*, then select the option "Import configuration from SD card": the window shown in the figure will open.

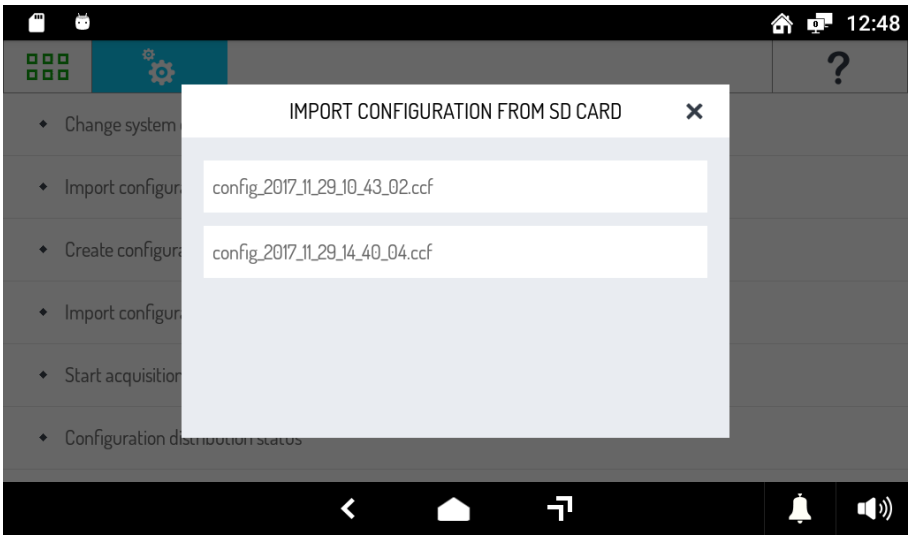

Figure 144: Configuration distribution by importing from SD card

The window shows all the configuration files saved on the SD card: once the desired file has been selected and the configuration distribution request has been confirmed, it will be applied to all the system devices.

Regardless of how the distribution of the configuration is started, the following window will be displayed as soon as it starts, showing the distribution status on the system

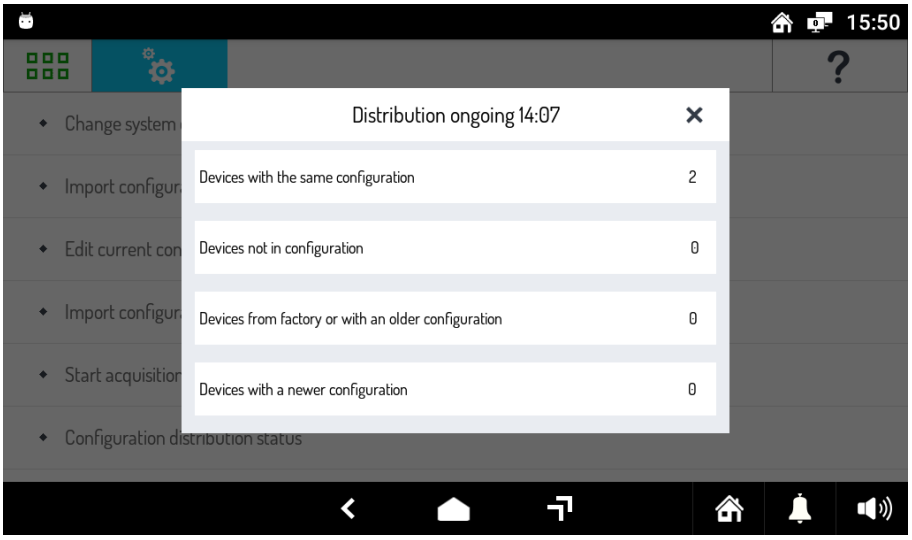

Figure 145: Status of configuration distribution

This window shows in sequence

- the *“Devices with the same configuration”*, i.e. devices that at that moment have the same configuration present on the current device
- the *“Devices not in configuration”*, i.e. devices that have not been included in the configuration present on the current device
- the *“Devices from factory or with an older configuration”*, i.e. devices which are part of a configuration older than that on the current device, or which have no configuration at all
- the *“Devices with a newer configuration"*, i.e. devices that have a configuration that is more recent than the one on the current device

The configuration will be considered complete when the last two items in the list (*"Devices from factory or with an older configuration"* and *"Devices with a newer configuration"*) have a value of 0, as shown in the following figure

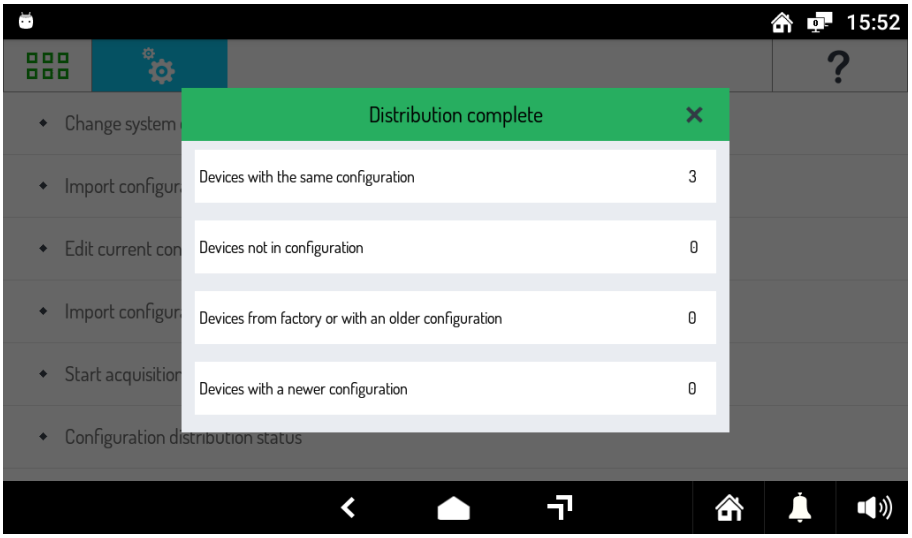

Figure 146: Indication of completed distribution

Note (restarting of the switches): If you want to change network settings, it is recommended that you restart the switches after distributing the configuration.

6.3.11 Configuration export

It is recommended to always make a copy of the configuration on a file.

To this end, in the *configuration menu*, in the sub-menu *"System configuration"* there is the function *"Export configuration to SD card"*, which allows exporting the current configuration to the SD card.

Once the SD card has been inserted and the above item has been selected, the following window will open

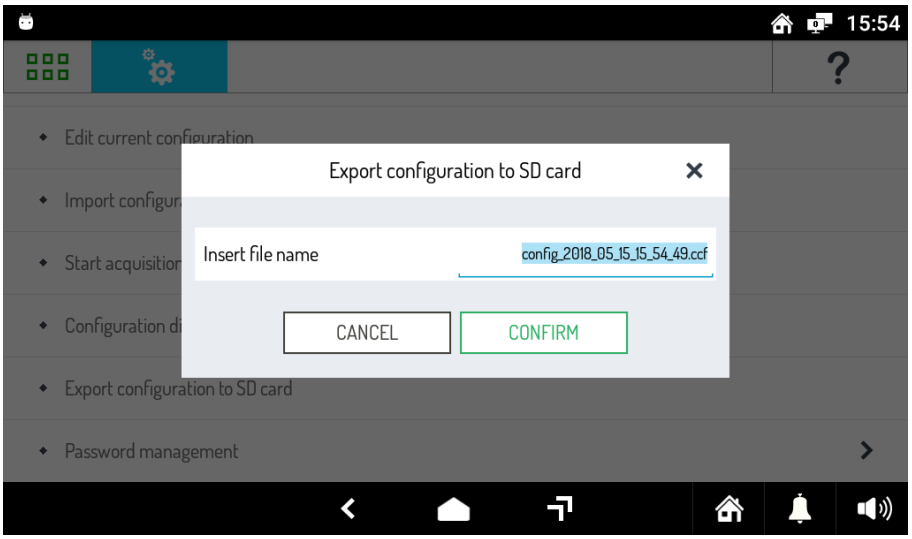

Figure 147: Exporting the configuration to SD card

Assign a name to the file to export, then press *"CONFIRM"* to export to the SD card.

6.3.12 Securing the system

Once the system configuration has been completed and distributed to all the devices, i.e. while the system is running, it is possible to secure the system by setting an administrator password in addition to the installer password. In practice this means that the installer can only make changes to the configuration and the system by requesting the administrator password. On the other hand the administrator cannot change the configuration to the system as he/she does not know the installer password. Therefore, the system has a double security level.

The administrator password can be entered from the *configuration menu* by selecting "*System configuration*", then *"Password management"* and to *"System block"*.

The following screen will be displayed

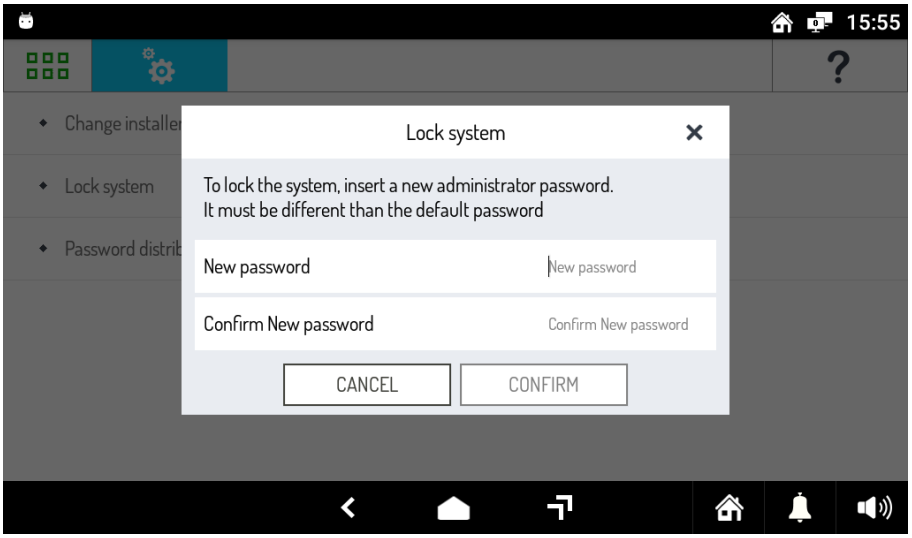

Figure 148: Administrator password setting

Once the password is entered, you will have to wait for the distribution of the administrator password to all the devices of the system: you can monitor the distribution status in the dialog box shown below

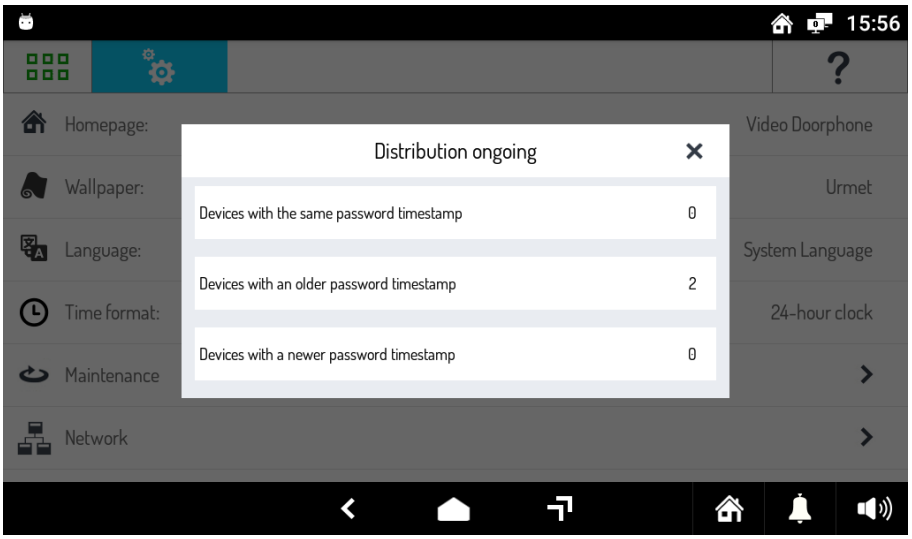

Figure 149: Password distribution status

As soon as the value of *"Devices with the same password timestamp"* equals the number of devices that make up the system, the password distribution will be completed.

Once you have changed the password in the system, to access the *configurator* you will need to enter the administrator password and no longer the Urmet password.

6.4 Changing the system configuration

Once the first configuration of a system has been created, all the devices that make it up work as set in the configuration and any changes are made after entering the administrator password.

In fact, if all the steps of the first configuration have been carried out correctly, the system must have been properly blocked at the end of the procedure.

In these conditions, if you want to access the *configuration menu* of a MAX monitor belonging to the system, you would have to enter the administrator password instead of the Urmet one, as shown in the following figure

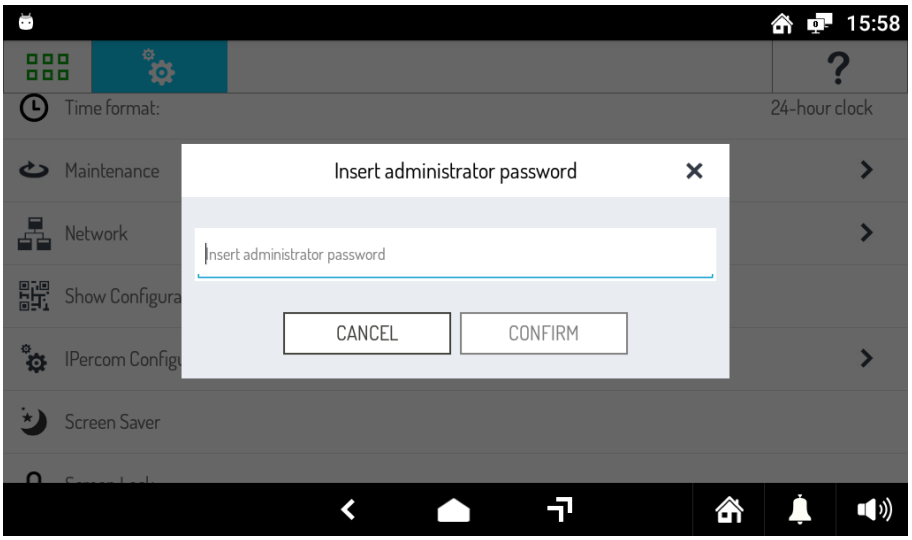

Figure 150: Access to the configuration menu of a blocked system

If you want to make significant changes to the system (for example, add a new block with several new devices), it is recommended to perform these operations with unlocked system (to unlock a system refer to paragraph *6.4.1 Unlocking a system*).

6.4.1 Unlocking a system

To unlock a previously blocked system, open the *configuration menu* from a MAX monitor belonging to the system, then select "System configuration" and then "Password management": the following screen will open

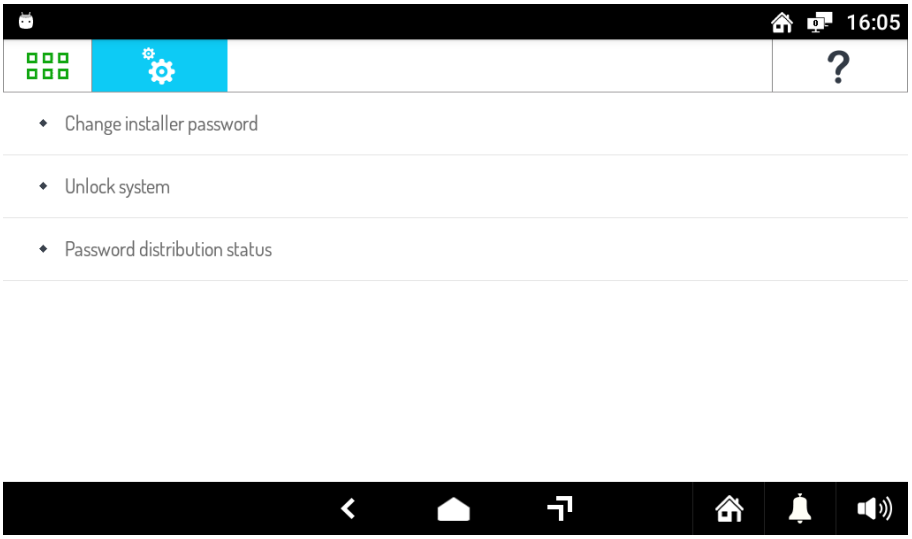

Figure 151: "Password management" screen in case of blocked system

By selecting "Unlock system" and confirming the request, the system will reset the default administrator password; the distribution status of the new password will be visible in the status window shown in the figure below

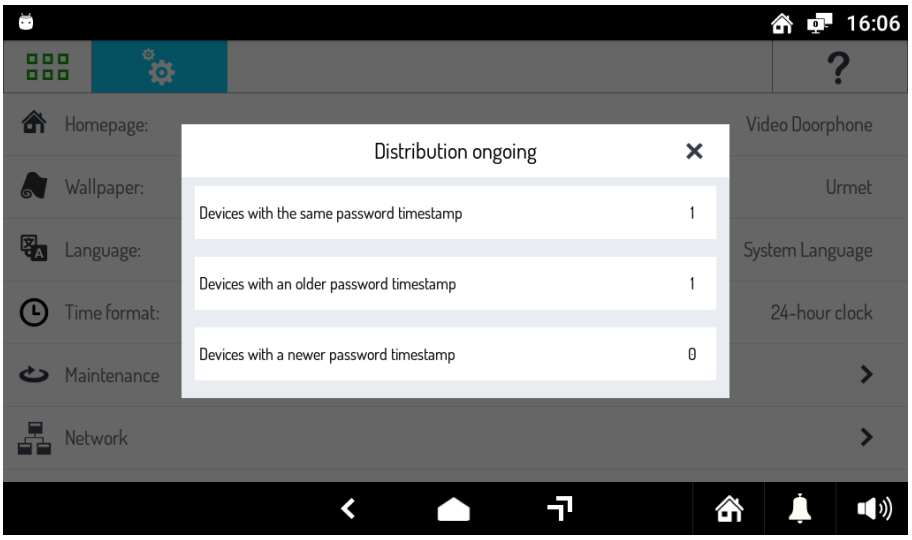

Figure 152: Password distribution status

6.4.2 How to change the configuration

The configuration of a system can be changed in different ways

1. by updating the users from the *Switchboard* programme installed on the system
2. by opening the configurator from the *configuration menu* of a *MAX* monitor installed in the system
3. by exporting the system configuration to the SD card, by modifying the file in the office from the *configurator* for *MAX* monitor/PC/Android tablet and by importing it to the system

While the first mode is performed by the *Switchboard* operator, the other two are used by the system installer.

To change the current configuration of a system, access the *configuration menu* of a properly configured *MAX* monitor belonging to the system, then select *"System configuration"* and *"Change current configuration"*: once the installer password has been entered, the *configurator* will open in the *"Topology"* tab, as shown in the following figure

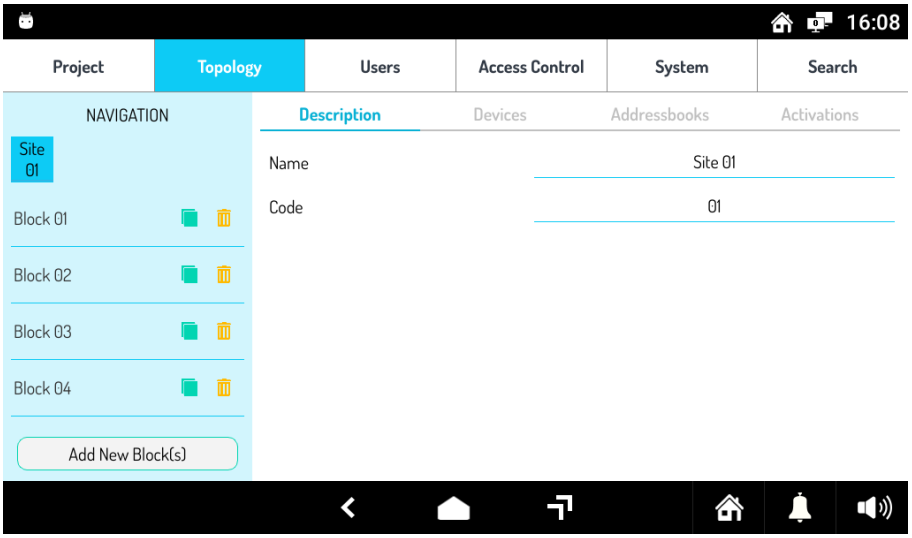

Figure 153: How to change the current configuration

Once the necessary changes have been made, to distribute the configuration to the system, select the *"Project"* tab and press the *"Apply"* button, as shown in *Figure 143*.

The modification of the current configuration from a MAX monitor and that made via the Switchboard affect the current configuration of the system. If on the other hand you decide to use the last mode, i.e. changing the configuration in the office via *MAX* monitor/PC/Android tablet, you must take into account that the change is not applied to the current configuration of the system, but on the latest version exported to SD card.

Exporting to SD card creates a file with CCF extension, which can be opened by clicking on *"Open"* in the *"Project"* tab of the configurator.

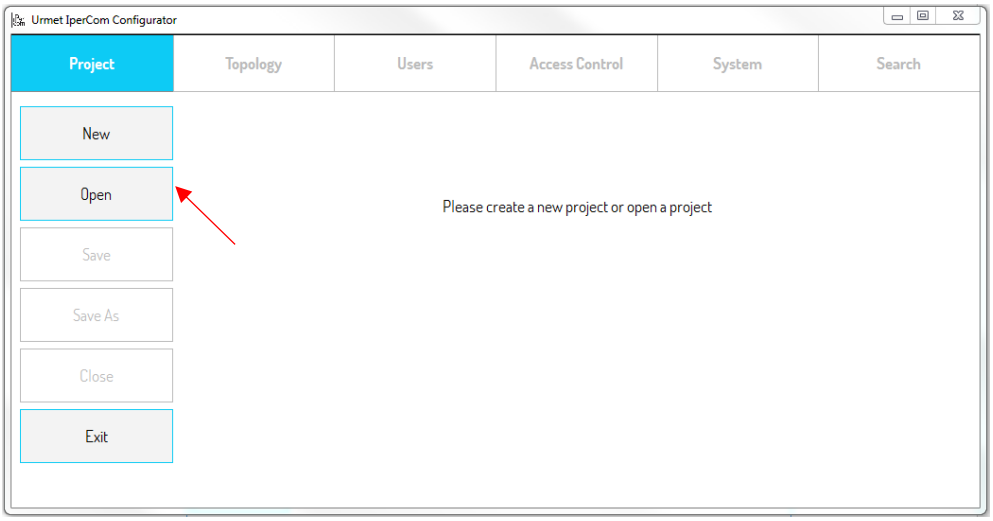

Figure 154: Opening a project from the configurator for MS Windows

Once the configuration changes have been made, in the *"Project"* tab, press the *"Save"* button to overwrite the project file on the SD card.

The last step at this point consists in importing the modified configuration on a *MAX* monitor of the system; then select the *configuration menu*, and in the *"System configuration"* sub-menu choose the option *"Import configuration from SD card"*: the following screen will open

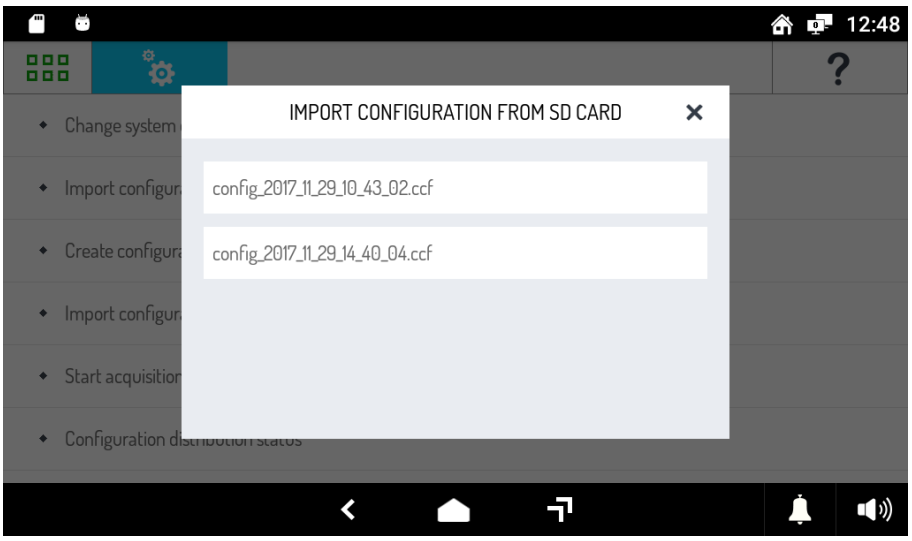

Figure 155: Importing the configuration from SD Card

Once the installer password is entered, the imported configuration will be distributed throughout the system.

Note (change of configuration in the office): if you export a configuration to SD card, change it in the office and then import it back into the system, it will be necessary to prevent the current configuration of the system from being changed in the meantime; otherwise all the changes to the current configuration (from *Switchboard* or *MAX* monitor) made after exporting it to the SD card will be lost.

6.4.3 Changing the administrator password

The administrator-level security of the IPerCom system has only two statuses: blocked and unlocked.

To change the administrator password of a blocked system, it will therefore be necessary to unlock it and as soon as this operation is completed, lock the system again with the new administrator password.

During these steps it is necessary to pay attention to the correct distribution of passwords throughout the system, in order to be sure that the unlocking and the blocking operations are successful. To this end there is a user-friendly status window of the password distribution on the system, shown in the following figure

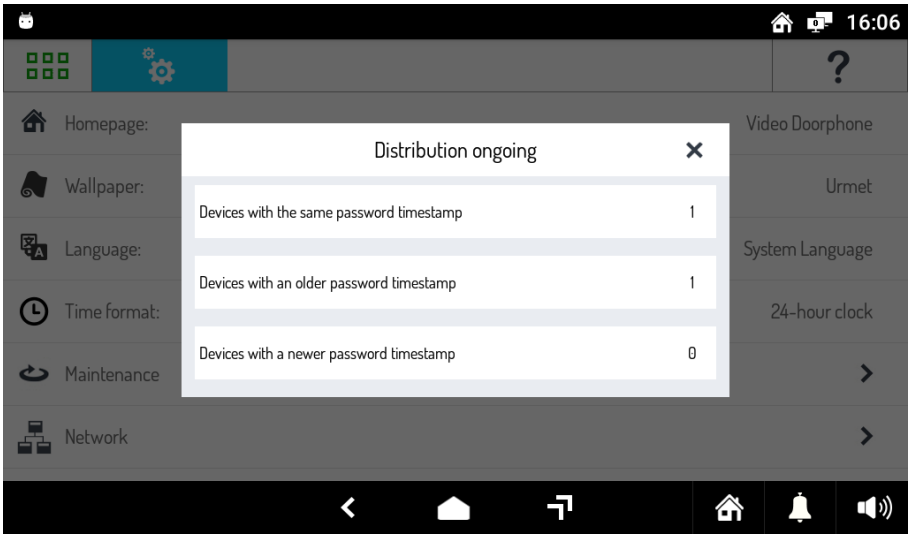

Figure 156: Password distribution status

Once the blocking/unlocking operation is complete, before carrying out the opposite operation, it is therefore necessary to check that the distribution of the passwords is complete, i.e. that in the screen shown above the value of *"Devices with the same password timestamp"* is equal to the number of devices that make up the system.

6.4.4 Restoring the factory settings

If devices are removed from the system or you want to restore the factory settings, it is necessary to select the *"Restoring the factory settings"* or *"Factory reset"* function.

6.4.4.1 MAX Monitor factory reset

To perform the *factory reset* of the *MAX* monitors it is first necessary to access the settings menu

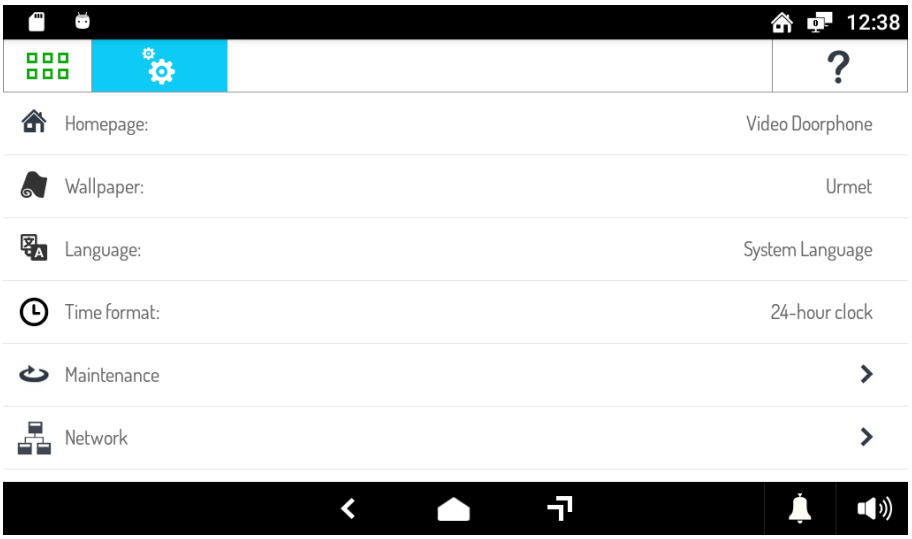

Figure 157: Settings menu

Select *"Maintenance"*, then *"Reset Factory Settings"*: once the administrator password is entered the *MAX* monitor will start the *factory reset* procedure and reboot

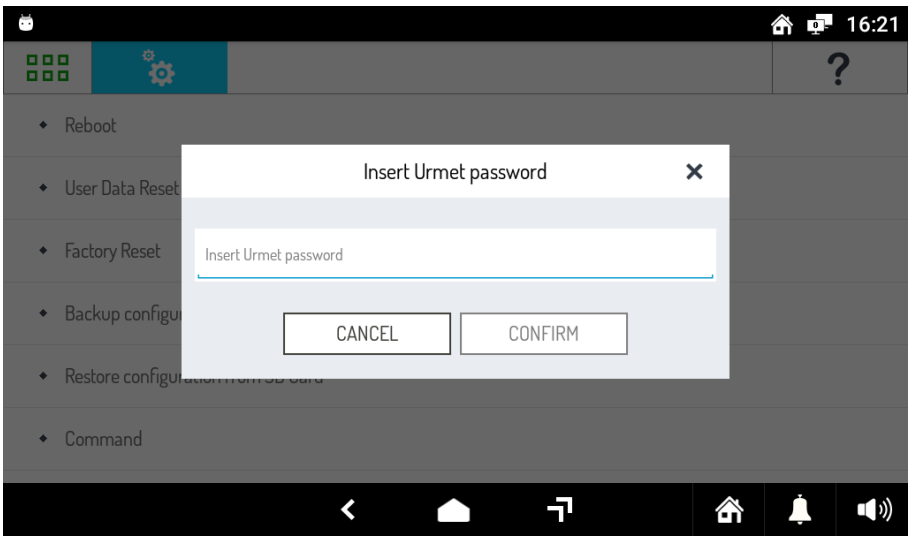

Figure 158: Restoring the factory settings

6.4.4.2 *Factory reset of Call Modules*

The *factory reset* of the *Call Modules* can be carried out in two different steps:

1. during device startup
2. when the device is started and configured

Figure 159: Call Module

In the first case, during the startup phase, the following screen is shown for five seconds

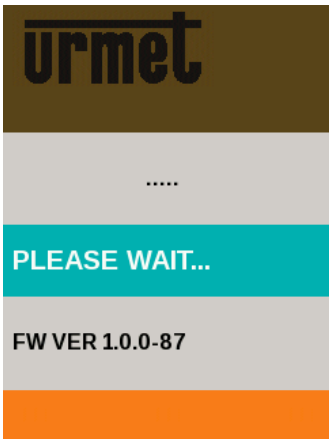

Figure 160: Call Module start screen

If during this time the buttons *"X"* and *"0"* are pressed several times in succession, the device will restart and perform a *factory reset*.

In the second case it is assumed to have a configured *Call Module* already started, as shown in the figure

Figure 161: Main screen of a configured Call Module

In this case, it is necessary to press the *"0"* button twice in succession: a screen will open where to enter the administrator password.

Figure 162: Entering the administrator password

Once the password has been entered and the *"OK"* button pressed, a screen opens where to select *"CALL MODULE"*: press *"OK"* again to access the following *Call Module* maintenance menu

Figure 163: Call Module maintenance menu

By selecting *"RESET ALL SETTINGS"* and pressing the *"OK"* button, you will be asked to confirm the action

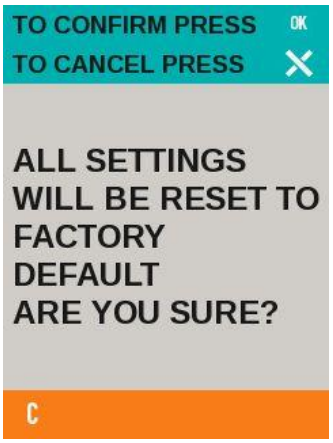

Figure 164: Factory reset confirmation screen

Press the *"OK"* button for the last time to start the factory reset procedure: the device will restart to complete the operation.

6.4.4.3 Factory reset of the Door Speaker Units

To perform a *factory reset* of a *Door Speaker Unit*, press the entrance hall button and at the same time the second button of the keypad (the lowest button) for 20 seconds.

Figure 165: Door Speaker Unit

After 20 seconds, the device emits a beep before restarting; then release both buttons: the device will start the *factory reset* procedure and reboot.

APPENDIX A: Configuration parameters of *IPerCom* devices

MAX 1717/31-32-33-34-41

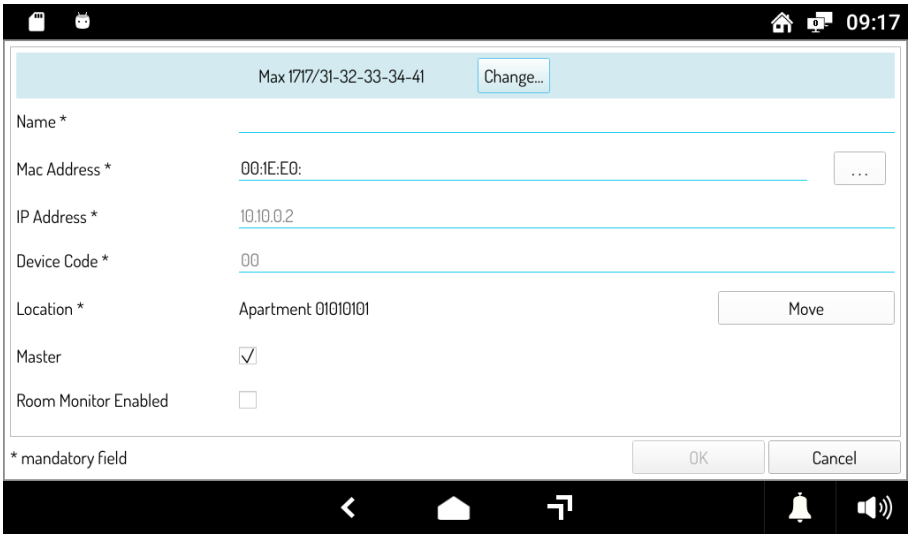

Figure 166: Screen of settings for MAX monitors

The following table shows the meaning of the fields for *"MAX 1717/31-32-33-34-41"*.

Name	Meaningful name of the *MAX* monitor.
MAC Address	MAC address associated with the *MAX* monitor.
IP Address	IP address associated with the *MAX* monitor in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed.
Location	Position in the system topology: it is possible to move the device to another topological node by pressing the *"Move"* button.
Master	If selected, the *MAX* monitor is added as Master in the apartment (it is only possible to have one Master *MAX* monitor in the apartment). The other *MAX* monitors are added as Slaves (box not selected). A Master *MAX* monitor has more functions than a Slave *MAX* monitor (e.g. call forwarding can be enabled).
Enabled Environmental Listening	If selected, in case of an alarm, it is possible to perform the environmental listening from the *Switchboard* in the concerned apartment.

Call Module 1060/12-13-17-18

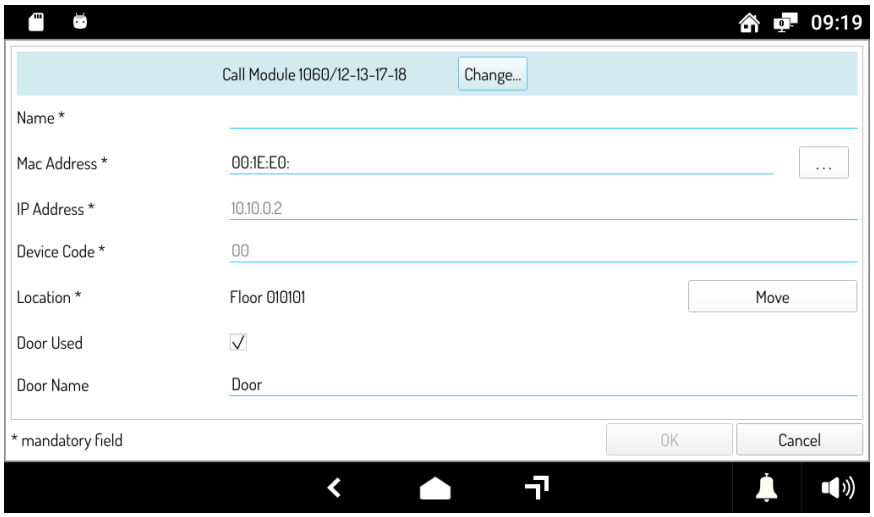

Figure 167: Screen of settings for Call Module (part 1)

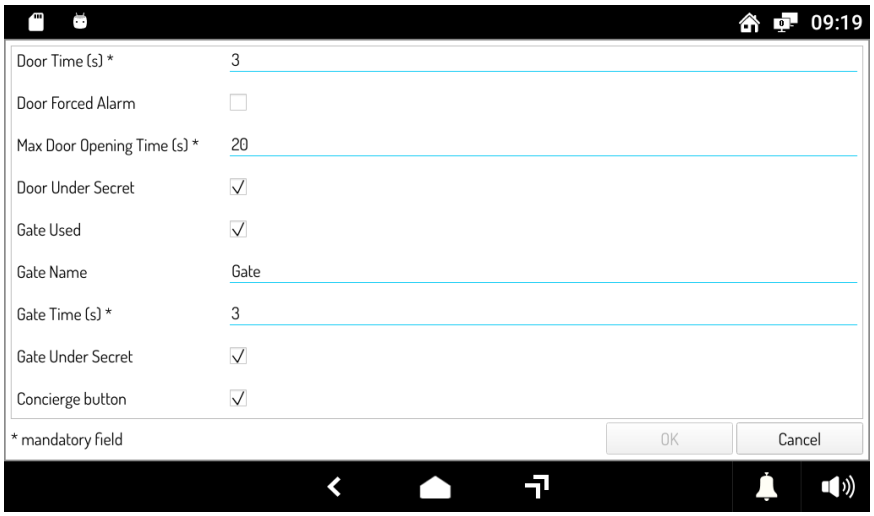

Figure 168: Screen of settings for Call Module (part 2)

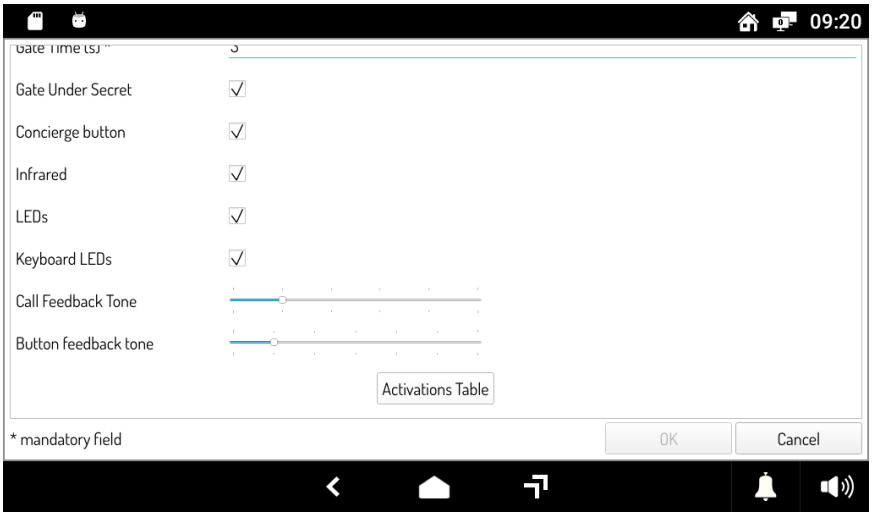

Figure 169: Screen of settings for Call Module (part 3)

The following table shows the meaning of the fields for *Call Module 1060/12-13-17-18.*

Name	Meaningful name of the *Call Module.*
MAC Address	MAC address associated to the *Call Module.*
IP Address	IP address associated to the *Call Module* in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed.
Location	Position in the system topology: it is possible to move the device to another topological node by pressing the "*Move*" button.
Door Used	If this box is checked, the *Call Module* can handle a pedestrian access point. In this case, the following options are shown, marked with an asterisk (*).
Door Name (*)	Meaningful name to be given to the door.
Door Time (s) (*)	Pulse duration on the control relay. Default value: 3 s.
Door Forced Alarm (*)	If selected, if the door is forced, the current event would send an alarm to the switchboard.
Door Under Secret (*)	If selected, by pressing the door release button of a *MAX* monitor it is possible to activate the *Call Module* electric lock only when the caller is in conversation and has a video connection or is waiting for a response. If not selected, the door can also be opened outside the call phase. Selected by default.
Gate Used	If the box is checked, the call module can handle a driveway. In this case, the following options are shown, marked with an asterisk (*).
Gate Name (*)	Meaningful name to be given to the driveway.
Gate Time (3s) (*)	Pulse duration on the control relay. Default value: 3 s.
Gate Under Secret (*)	If selected, by pressing the gate button of a *MAX* monitor it is possible to activate the *Call Module* electric lock only when the caller is in conversation and has a video connection or is waiting for a response. If not selected, the gate can also be opened outside the call phase. Selected by default.
Concierge button	Enabling of the call to the *Switchboard* of competence.
Infrared	Enabling of user presence detection through integrated infrared sensor.
LEDs	Enabling of the camera LED.
Keyboard LEDs	Enabling the keypad backlighting.
Call Feedback Tone	Call feedback setting.
Button Feedback Tone	Setting of audio feedback on buttons.

The function of the *"Activations Table"* button has already been described in paragraph *6.3.5 Activations.*

Relay Actuator 1060/84

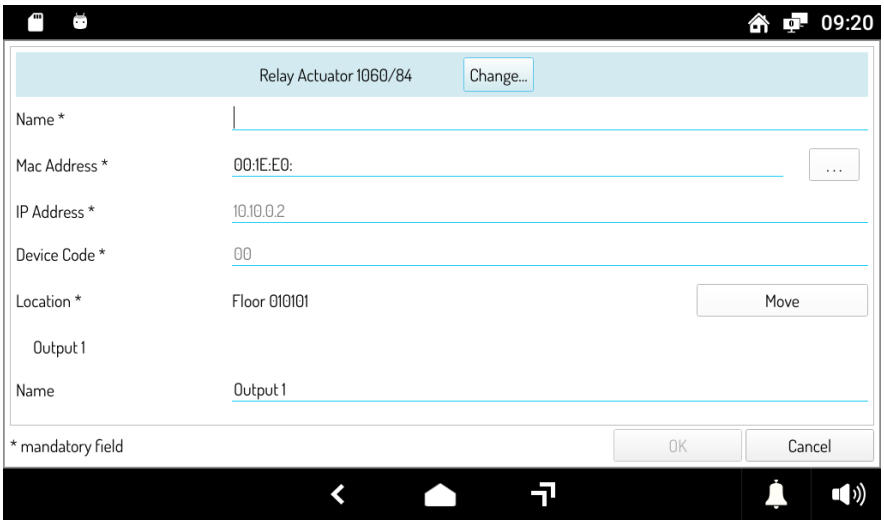

Figure 170: Screen of settings for Relay Actuator (part 1)

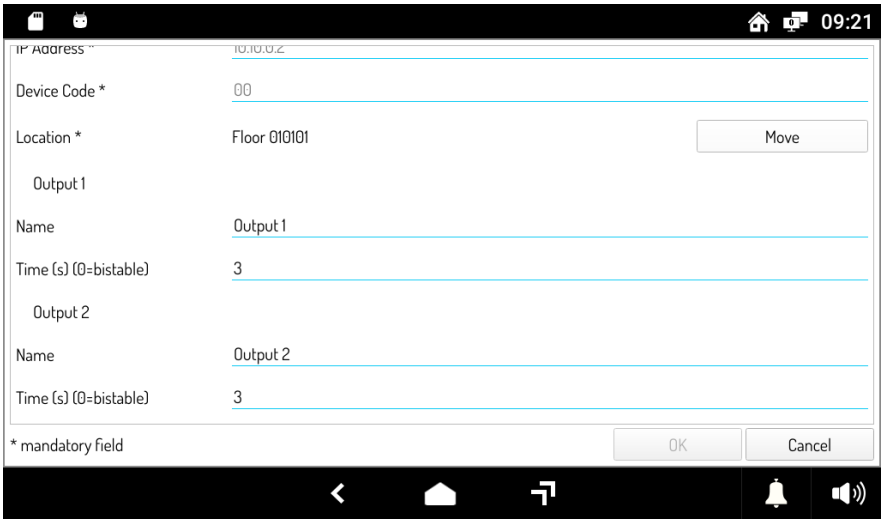

Figure 171: Screen of settings for Relay Actuator (part 2)

The following table shows the meaning of the fields for *Relay Actuator 1060/84.*

Name	Meaningful name of the *Relay Actuator*.
MAC Address	MAC address associated to the *Relay Actuator.*
IP Address	IP address associated to the *Relay Actuator* in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed.
Location	Position in the system topology: it is possible to move the device to another topological node by pressing the *"Move"* button.
Output 1 - Name	Significant name of output number 1.
Output 1 - Time (s)	Pulse duration on the control relay. Default value: 3 s. When set to 0 seconds, the relay works in bistable mode.
Output 2 - Name	Significant name of output number 2.
Output 2 - Time (s)	Pulse duration on the control relay. Default value: 3 s. When set to 0 seconds, the relay works in bistable mode.

Key Reader 1060/82

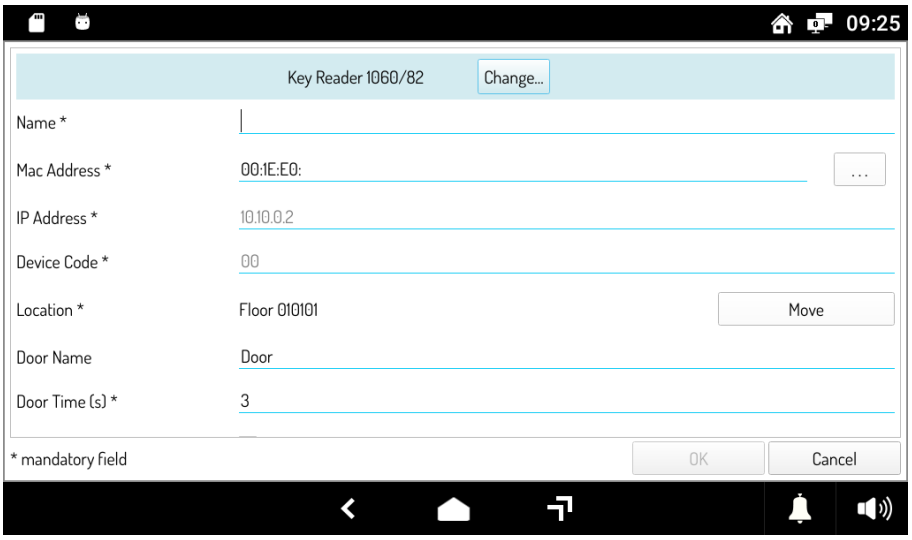

Figure 172: Screen of settings for Key Reader (part 1)

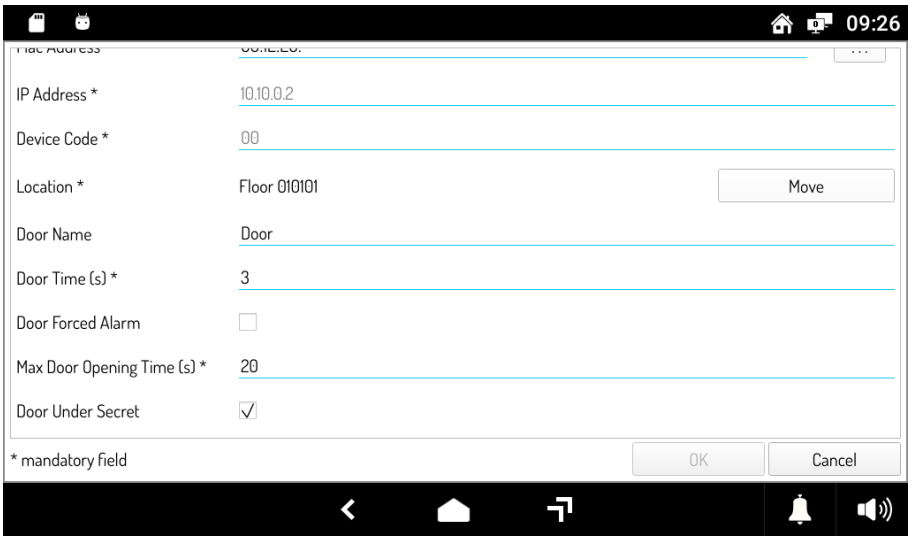

Figure 173: Screen of settings for Key Reader (part 2)

The following table shows the meaning of the fields for *Key Reader 1060/82.*

Name	Meaningful name of the *Key Reader*.
MAC Address	MAC address associated with the *Key Reader*.
IP Address	IP address associated with the *Key Reader* in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed.
Location	Position in the system topology: it is possible to move the device to another point of the system by pressing the *"Move"* button.
Door Name	Meaningful name to be assigned to the door.
Door Time (s)	Pulse duration on the control relay. Default value: 3 s.
Forced Alarm Time	If selected, if the door is forced, the current event would send an alarm to the *Switchboard*.
Max Door Opening Time (s)	Maximum door opening time beyond which an alarm is sent to the *Switchboard*.
Door Under Secret	If selected, by pressing the door release button of a *MAX* monitor of competence of the *Key Reader* it is possible to enable the electric lock only when the caller is in conversation and has a video connection or is waiting for a response. If not selected, the door can also be opened outside the call phase. Selected by default.

RTSP camera

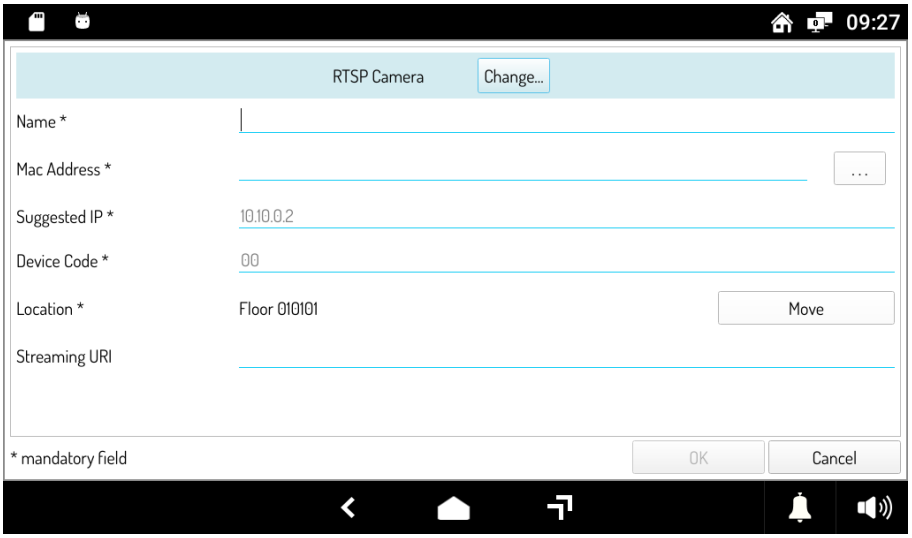

Figure 174: Screen of settings for RTSP Camera

The following table shows the meaning of the fields for *"RTSP Camera"*.

Name	Meaningful name of the *RTSP Camera*.
MAC Address	MAC address associated with the *RTSP Camera*.
Recommended IP Address	Recommended IP address to be associated with the *RTSP Camera* in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed
Location	Position in the system topology: it is possible to move the device to another topological node by pressing the *"Move"* button.
URI for Streaming	Complete URI for video streaming. The format must respect this syntax: rtsp://<IP address camera RTSP>:554/<stream camera>

Note (settings of the device being used): it is recommended to set the IP address and URI of the *RTSP Camera* being used as indicated in the configurator fields.

Door Speaker Unit 1060/71-74-75

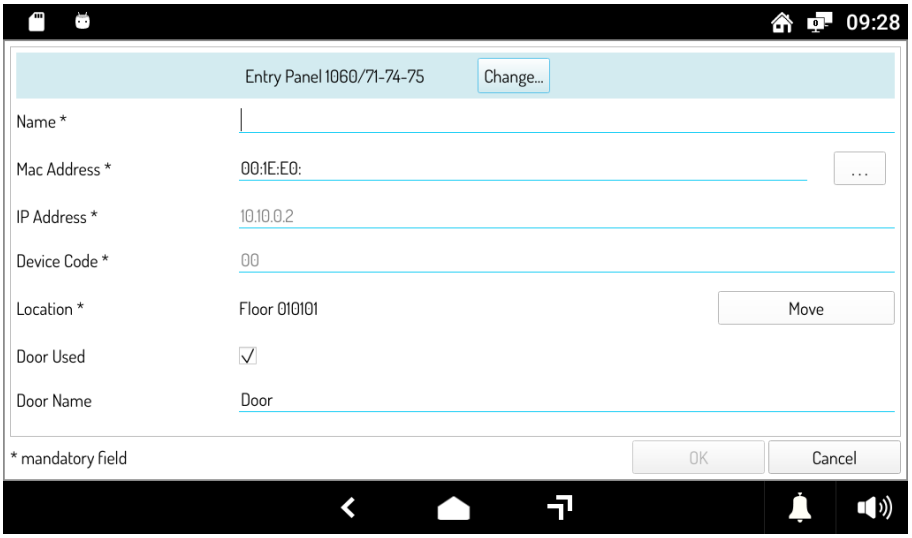

Figure 175: Screen of settings for Door Speaker Unit (part 1)

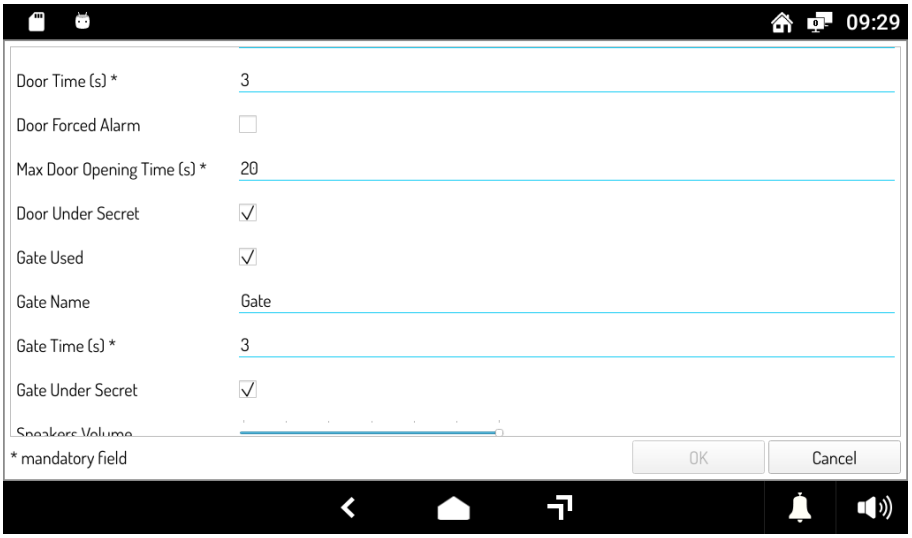

Figure 176: Screen of settings for Door Speaker Unit (part 2)

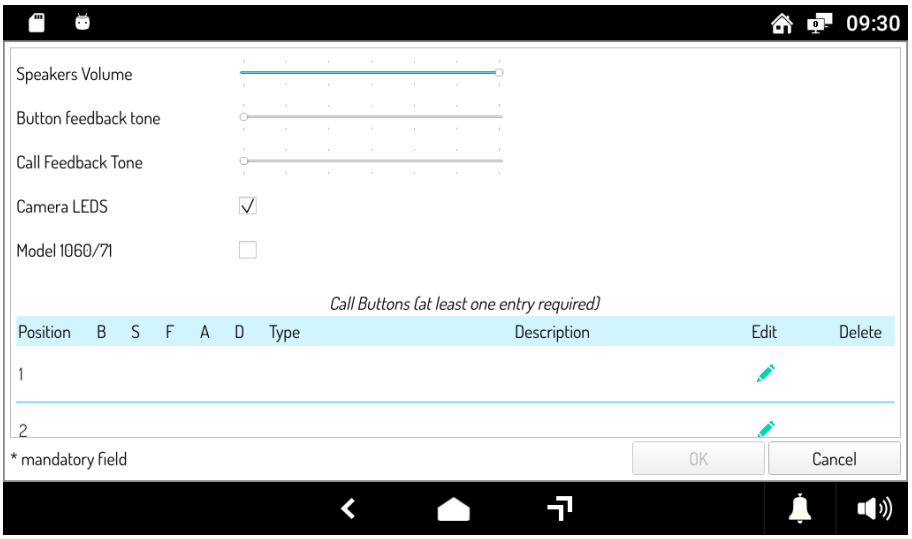

Figure 177: Screen of settings for Door Speaker Unit (part 3)

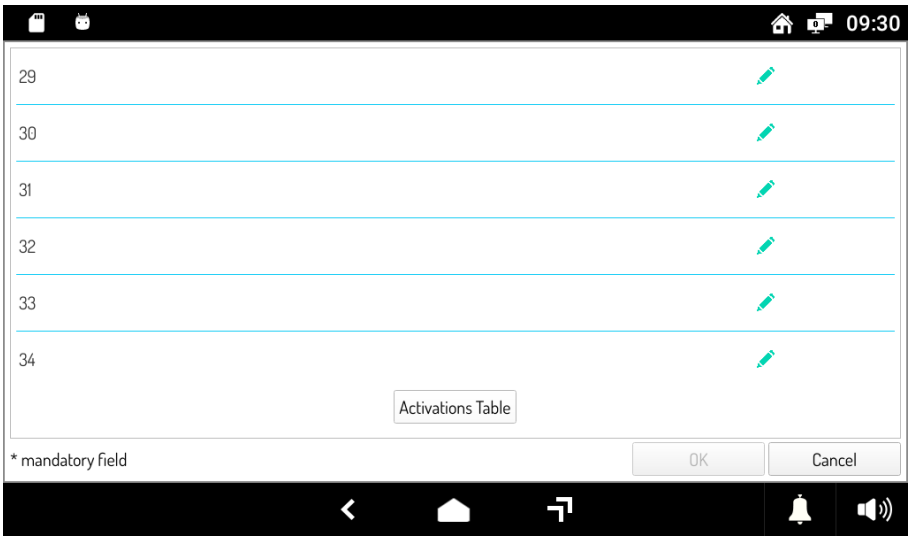

Figure 178: Screen of settings for Door Speaker Unit (part 4)

The following table shows the meaning of the fields for *Door Speaker Unit 1060/71-74-75.*

Name	Meaningful name of the *Door Speaker Unit* .
MAC Address	MAC address associated with the *Door Speaker Unit* .
IP Address	IP address associated with the *Door Speaker Unit* in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed.
Location	Position in the system topology: it is possible to move the device to another topological node by pressing the *"Move"* button.
Door Used	If this box is checked, the *Door Speaker Unit* can handle a pedestrian access point. In this case, the following options are shown, marked with an asterisk (*).
Door Name (*)	Meaningful name to be given to the pedestrian access point.
Door Time (s) (*)	Pulse duration on the control relay of the pedestrian access point. Default value: 3 s.
Door Forced Alarm (*)	If selected, if the door is forced, the current event would send an alarm to the *Switchboard*.
Max Door Opening Time (s) (*)	Maximum door opening time beyond which a warning of opened door is sent to the *Switchboard*.
Door Under Secret	If selected, by pressing the door release button of a *MAX* monitor it is possible to activate the *Door Speaker Unit* electric lock only when the caller is in conversation and has a video connection or is waiting for a response. If not selected, the door can also be opened outside the call phase. Selected by default.
Gate Used	If this box is checked, the *Door Speaker Unit* can handle a driveway. In this case, the following options are shown, marked with an asterisk (*).
Gate Name (*)	Meaningful name to be given to the driveway.
Gate Time (s) (*)	Pulse duration on the control relay. Default value: 3 s.
Gate Forced Alarm	If selected, if the door is forced, the current event would send an alarm to the *Switchboard*.
Gate Under Secret (*)	If selected, by pressing the gate button of a MAX monitor it is possible to activate the call module electric lock only when the caller is in conversation and has a video connection or is waiting for a response. If not selected, the gate can also be opened outside the call phase. Selected by default.
Laudspeakers Volume	Level of loudspeaker volume.
Tones	Audio feedback volume at button pressure.
Audio Messages	Feedback volume of forwarded call.
Camera LEDs	Enabling of the camera LEDs.
Model 1060/71	This box must be ticked in case of *Door Speaker Unit 1060/71*.

The *"Call buttons"* section allows associating the various *MAX* monitors or the *Switchboards* to be called to the buttons of the *Door Speaker Unit*. The possible *MAX* monitors to call are identified by browsing the topological structure of the system, therefore it is possible to call the *MAX* monitors (master or master and slave) on the site, on the block, on the stair, on the floor and on the apartment.

In the case of *Door Speaker Unit 1060/74-75* it is possible to set all buttons from *1* to *34*; in fact, the device has *2* buttons as standard, which can be increased by means of button expansion modules.

In the case of *Door Speaker Unit 1060/71*, once the relative box is checked (as shown in the table), button *1* in the *"Call buttons"* list will be disabled; in fact, the device has only one button in the basic version (the second in the list), but it is possible to increase the number of buttons by means of the button expansion modules.

Switchboard 1060/41

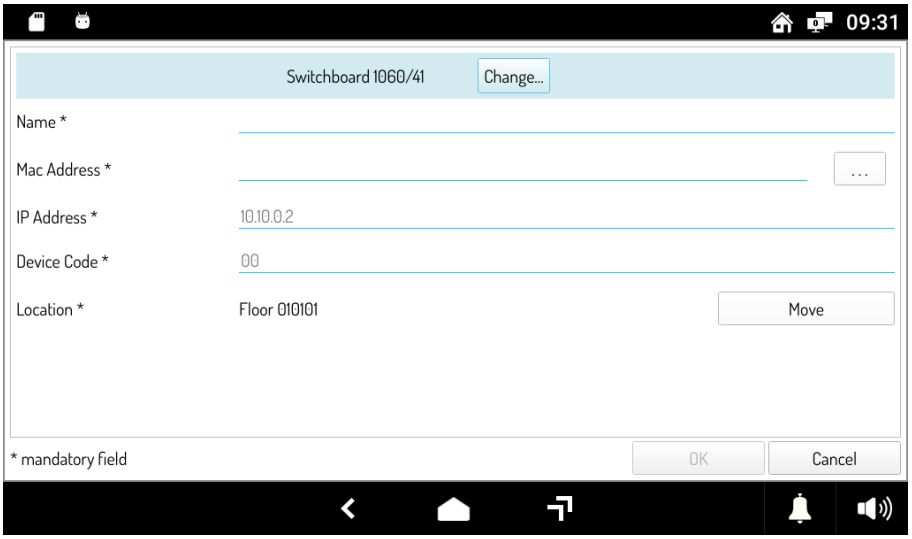

Figure 179: Screen of settings for Switchboard

The following table shows the meaning of the fields for *Switchboard 1060/41.*

Name	Meaningful name of the *Switchboard.*
MAC Address	MAC address associated with the PC on which the *Switchboard* programme is installed
IP Address	IP address associated to the PC on which the *Switchboard* programme is installed in case of manual network configuration. Parameter that can not be changed.
Device Code	Parameter that can not be changed
Location	Position in the system topology: it is possible to move the *Switchboard* to another topological node by pressing the *"Move"* button.

APPENDIX B: Template of the list of devices installed in the system

If the installer adds the devices via *Mode 3.1* during the configuration phase, it is necessary that the basic information of each device (type and MAC address) as well as its topological location are written down during the installation of the system.

At the end of the installation phase you will find a list of devices, each with an associated topological node.

For your convenience, here is a template of this list that can be printed and used by the installers of the system.

DEVICE TYPE	*MAC ADDRESS*	*TOPOLOGICAL LOCATION*