# SYSTEM INSTALLATION AND ACTIVATION



## SECTION CONTENTS

# SYSTEM INSTALLATION

## REGULATIONS AND NOISE IMMUNITY

All devices must be perfectly installed and wired, observing national installation rules.
Pay attention to power supply units and transformers, that must be placed in suitable electrical service panels and provided with properly dimensioned protection switches and circuit breakers.
All system devices are compliant with EC Directives concerning electromagnetic compatibility and electric safety. The power supply unit is also provided with IMQ and VDE approval marks.
**However, to improve noise immunity, do not lay system wires near power supply cables, that generate strong electromagnetic fields.**
If the above described rules are not observed, the following problems, typical for all video door phone systems, could occur with unforeseeable frequency and importance:

- Errors during data transmission among devices, with possible problem when performing calls.
- Low image quality: loss of details, double vision, …
- Noisy video image.
- Noisy audio signal.

## SYSTEM POWER SUPPLY

In brief, to evaluate the number of system power supply units Ref. 1083/20, consider that 1 power supply unit is enough for a one-column system with 1 or 2 call stations, up to 128 apartment stations and 1 column interface.
In systems with more than one column, 1 power supply must be added for each column.
In systems with more than one main call station and door units interface, add one power supply.

## ALLOWED CABLES

The 2VOICE bus is NON polarized. The cable (Ref.1083/90 or Ref.1083/92) has been designed to ensure the maximum distance and dimensions of the system. Because this cable is twisted, a good noise immunity is ensured.

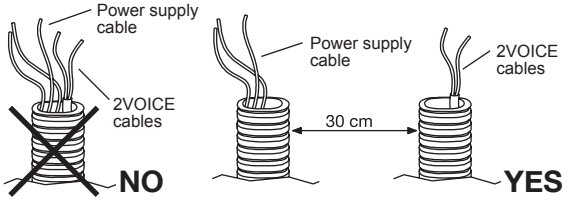
*For system max. extensions and types when different kinds of cables are used, see the next paragraphs.*

***WARNING ! If multi-pole cables are used, it is absolutely forbidden to short-circuit several conductors in order to increase the cable section.***

*For long distance branches, it is suggested to reduce to the minimum joint points between cables. For joints, use devices ensuring a good and lasting connection between cables, protecting the joint against humidity and bad weather.*

## WIRING

To improve noise immunity, do not lay system wires near power supply cables, that generate strong electromagnetic fields.




Besides main devices (for allowed distances, see the paragraph “Max. distances and dimensions”, the system can be composed by other additional devices. To connect these devices, the max. distances (in metres) are shown in the following tables, provided that suitable sections cables are used.

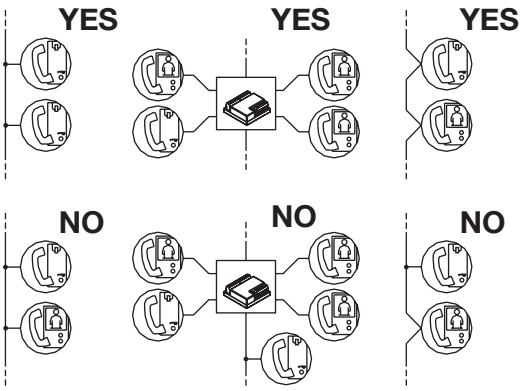
| Cable section [mm²] / From call station to … | 0,28 | 0,5 | 1 |
|---|---|---|---|
| Pedestrian electric lock | 10m | 20m | 30m |
| Gate opening control unit | 30m | 50m | 100m |
| Entrance hall button | 25m | | |
| Door sensor | 25m | | |
| Surveillance camera switch | 300m | | |

| Cable section [mm²] / From call station to … | 0,75 | 1,5 | 2,5 |
|---|---|---|---|
| Name holder lighting transformer | 100m | 200m | 300m |

| Cable section [mm²] / From ap. stations to… | 0,28 | 0,5 | 1 |
|---|---|---|---|
| Floor call button (CP) | 10m | | |
| Additional ringer (S+,S-) | 10m | | |

Follow the instructions below for a correct wiring, in order not to change cables specifications:

- Use only the cable indicated in the previous paragraphs;
- The min. radius of curvature must not be shorter than 10 times the external diameter of the cable (about 7 cm);
- The system cable must be unsheathed only for the needed segment. This allows to minimize the separation of the wire pair of the double-wire line;
- Do not perform electrical junctions to connect devices out of the devices terminal pins, except for column segments only composed by door phones.



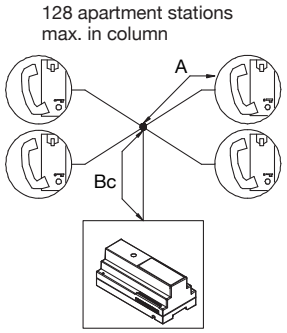
# MAX. DISTANCES AND EXTENSIONS

## DOOR PHONE RISERS CONNECTION

This chapter describes the different connection modes of an audio only riser, regardless if it is derived from a system power supply, a column interface or a door units interface.

*The following indications are valid for audio only systems; these distances can not be applied if even one video device is present (video door entrance panel or video door phone).*

**Connection of a door phone riser with electric nodes.**

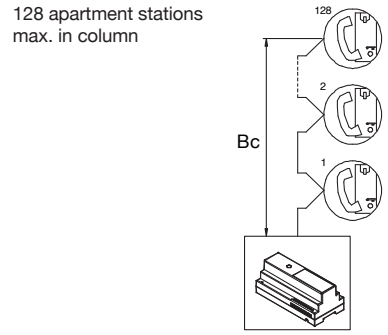



A = distance between the node and the door phone
Bc = distance between the device from which the riser is derived and the most distant node

| Cable | No. of users | distance | | |
|---|---|---|---|---|
| | | A | Bc | A+Bc |
| 2Voice cable | 128 | 50m | 600m | 600m |
| Ø 0,6mm telephone pair without sheath | 64 | 50m | 300m | 300m |
| CAT5 UTP (one twisted pair) | 64 | 50m | 200m | 200m |
| HVV05-F 1,5 mm² rubber covered | 128 | 50m | 300m | 300m |
| 7057/235 Urmet cable (blue/red) | 64 | 50m | 300m | 300m |
| 1mm² section single cable | 32 | 50m | 300m | 300m |

*For system extensions and connection of street side branch and call stations see the next paragraphs.*

**In-out connection for a door phone riser**

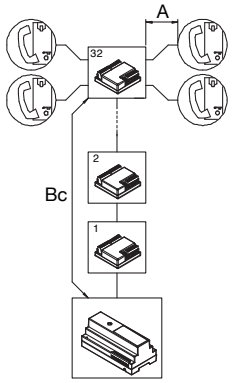



Bc = distance between the device from which the riser is derived and the most distant door phone

| Cable | No. of users | distance Bc |
|---|---|---|
| 2Voice cable | 128 | 600m |
| Ø 0,6mm telephone pair without sheath | 64 | 300m |
| CAT5 UTP (one twisted pair) | 64 | 200m |
| HVV05-F 1,5 mm² rubber covered | 128 | 300m |
| 7057/235 Urmet cable (blue/red) | 64 | 300m |
| 1mm² section single cable | 32 | 300m |

*For system extensions and connection of street side branch and call stations see the next paragraphs.*

**Connection of a door phone riser with distributors**




A = distance between the 4-user distributor and the door phone
Bc = distance between the device from which the riser is derived and the most distant 4-user distributor

| Cable | No. of users | distance | | |
|---|---|---|---|---|
| | | A | Bc | A+Bc |
| 2Voice cable | 128 | 50m | 200m | 200m |
| Ø 0,6mm telephone pair without sheath | 64 | 50m | 150m | 150m |
| CAT5 UTP (one twisted pair) | 64 | 50m | 125m | 125m |
| HVV05-F 1,5 mm² rubber covered | 128 | 50m | 125m | 125m |
| 7057/235 Urmet cable (blue/red) | 64 | 50m | 125m | 125m |
| 1mm² section single cable | 32 | 50m | 50m | 75m |

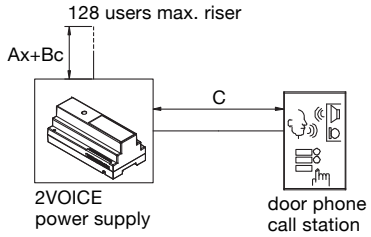
*For system extensions and connection of street side branch and call stations see the next paragraphs*

## CONNECTION OF ONE-COLUMN DOOR PHONE SYSTEMS

This chapter describes different connection modes of door phone call stations in systems with only one riser column of door phones

*The following indications are valid for audio only systems; these distances can not be applied if even one video door phone device is present (video door entrance panel or video door phone).*

**One-column with one door phone call station**



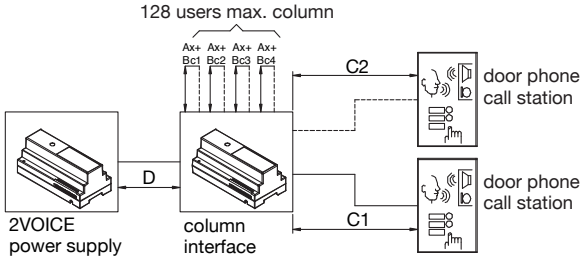

C = distance between the power supply and the call station

*For connection and distances of the riser, see the paragraph "Door phone risers connection"*

| Cable | distance | estension (*) |
|---|---|---|
| | C | |
| 2Voice cable | 600m | 800m |
| Ø 0,6mm telephone pair without sheath | 300m | 600m |
| CAT5 UTP (one twisted pair) | 200m | 800m |
| HVV05-F 1,5 mm$^2$ rubber covered | 300m | 300m |
| 7057/235 Urmet cable (blue/red) | 300m | 300m |
| 1mm$^2$ section single cable | 300m | 300m |

(*) the system extension is the sum of all the single segments which compose it:
C+Bc+A1+A2+…+An

**Devices derived from a column interface with one or two door phone call stations**




Cx = distance between the column interface and the call station
D = distance between the column interface and the power supply

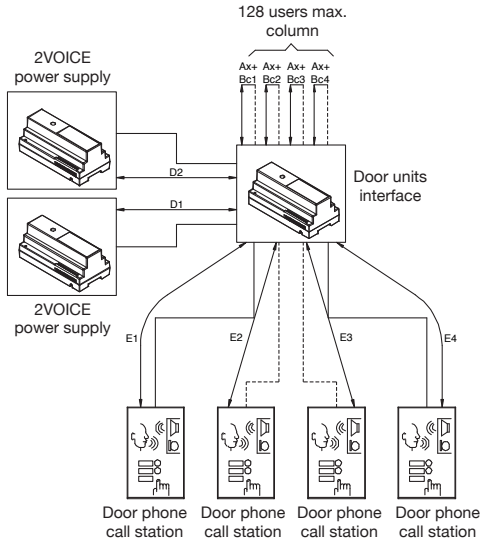
*For connection and distances of the riser, see the paragraph "Door phone risers connection"*

| Cable | distance | | estension (*) |
|---|---|---|---|
| | Cx | D | |
| 2Voice cable | 400m | 5m | 800m |
| Ø 0,6mm telephone pair without sheath | 100m | 5m | 600m |
| CAT5 UTP (one twisted pair) | 100m | 5m | 800m |
| HVV05-F 1,5 mm$^2$ rubber covered | 50m | 5m | 300m |
| 7057/235 Urmet cable (blue/red) | 50m | 5m | 300m |
| 1mm$^2$ section single cable | 50m | 5m | 150m |

(*) the system extension is the sum of all the single segments which compose it:
C1+C2+D+Bc1+Bc2+Bc3+Bc4+A1+A2+…+An

*The above mentioned indications must be considered also when the column interface is connected on the street side branch in systems with more than one column.*

**Devices derived from a door units interface with 4 door phone call stations max.**




Ex = distance between the door units interface and the call station
Dx = distance between the door units interface and the power supply

*For connection and distances of the riser, see the paragraph "Door phone risers connection"*

| Cable | distance | | estension | |
|---|---|---|---|---|
| | Ex | Dx | call station | column |
| 2Voice cable | 400m | 5m | 1600m | 800m |
| Ø 0,6mm telephone pair without sheath | 200m | 5m | 800m | 600m |
| CAT5 UTP (one twisted pair) | 100m | 5m | 400m | 800m |

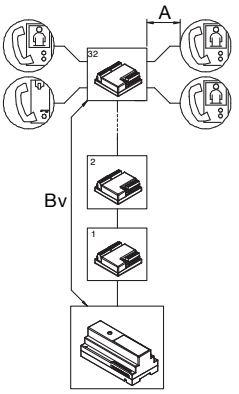
The call stations extension is the sum of segments E1+E2+E3+E4+D1 and the column extension is the sum of segments Bc1+Bc2+Bc3+Bc4+A1+A2+… +An+D2.

## VIDEO DOOR PHONE RISERS CONNECTION

This chapter describes the different connection modes of a riser provided with at least one video door phone, regardless if it is derived from a system power supply, a column interface or a door units interface.

*Special decoders and door phone connections are similar, but special decoders must be installed at the end of a branch. On the decoder In/out connection can not be performed.*

**Connection of a video door phone riser with distributors**

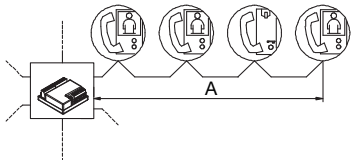



A = distance between the 4-user distributor and the apartment station
Bv = distance between the device from which the riser is derived and the most distant 4-user distributor

| Cable | No. of users | video | distance | | |
|---|---|---|---|---|---|
| | | | A | Bv | A+Bv |
| 2Voice cable | 128 | Colori | 50m | 200m | 200m |
| | | B/N | 50m | 200m | 200m |
| Ø 0,6mm telephone pair without sheath | 64 | Colori | 50m | 150m | 150m |
| | | B/N | 50m | 125m | 125m |
| CAT5 UTP (one twisted pair) | 64 | Colori | 50m | 125m | 125m |
| | | B/N | 50m | 75m | 75m |
| HVV05-F 1,5 $mm^2$ rubber covered | 128 | Colori | 50m | 125m | 125m |
| | | B/N | 50m | 125m | 125m |
| 7057/235 Urmet cable (blue/red) | 64 | Colori | 50m | 125m | 125m |
| | | B/N | 50m | 125m | 125m |
| 1$mm^2$ section single cable | 32 | Colori | 50m | 50m | 75m |
| | | B/N | 50m | 50m | 75m |

*For system extensions and connection of street side branch and call stations see the next paragraphs.*

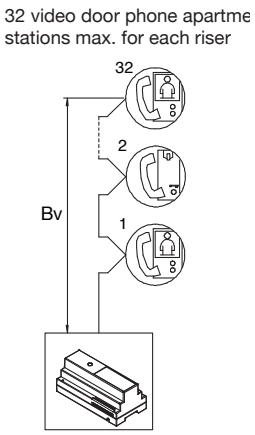
**Apartment stations derived by a distributor**




A = distance between the 4-user distributor and the most distant apartment station

| Cable | No. of users | distance |
|---|---|---|
| | | A |
| 2Voice cable | Max 4 | 50m |
| Ø 0,6mm telephone pair without sheath | | |
| CAT5 UTP (one twisted pair) | | |
| HVV05-F 1,5 $mm^2$ rubber covered | | |
| 7057/235 Urmet cable (blue/red) | | |
| 1$mm^2$ section single cable | | |

**In/out connection of a video door phone riser**




Bv = distance between the device from which the riser is derived and the most distant apartment station

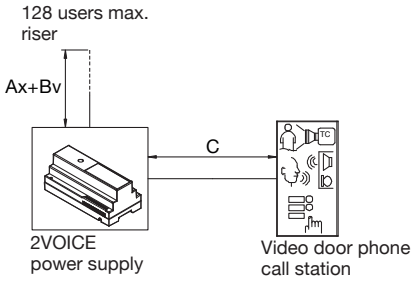
| Cable | No. of users | video | distance Bv |
|---|---|---|---|
| 2Voice cable | 32 | Colori | 200m |
| | | B/N | 200m |
| Ø 0,6mm telephone pair without sheath | 32 | Colori | 190m |
| | | B/N | 190m |
| CAT5 UTP (one twisted pair) | 32 | Colori | 190m |
| | | B/N | 115m |
| HVV05-F 1,5 mm² rubber covered | 32 | Colori | 150m |
| | | B/N | 150m |
| 7057/235 Urmet cable (blue/red) | 32 | Colori | 100m |
| | | B/N | 100m |
| 1mm² section single cable | 32 | Colori | 100m |
| | | B/N | 100m |

*For system extensions and connection of street side branch and call stations see the next paragraphs.*

## ONE-COLUMN VIDEO DOOR PHONE SYSTEMS CONNECTION

This chapter describes the different connection modes of video door phone call stations in systems with only one riser column of apartment stations.

**One-column with one video door phone call station**



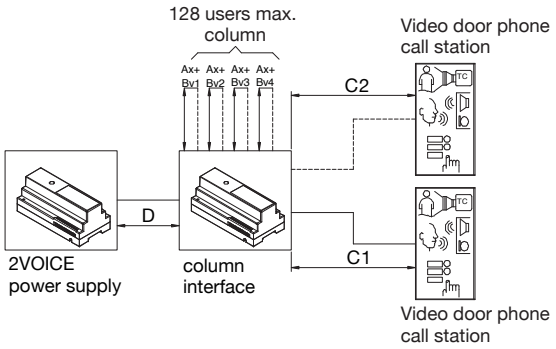

C = distance between the power supply and the call station

*For connection and distances of the riser, see the paragraph "Video door phone risers connection"*

| Cable | video | distance C | estension (*) |
|---|---|---|---|
| 2Voice cable | Colori | 200m | 800m |
| | B/N | 200m | 800m |
| Ø 0,6mm telephone pair without sheath | Colori | 100m | 600m |
| | B/N | 100m | 600m |
| CAT5 UTP (one twisted pair) | Colori | 100m | 800m |
| | B/N | 100m | 800m |
| HVV05-F 1,5 mm² rubber covered | Colori | 50m | 300m |
| | B/N | 50m | 300m |
| 7057/235 Urmet cable (blue/red) | Colori | 50m | 300m |
| | B/N | 50m | 300m |
| 1mm² section single cable | Colori | 50m | 150m |
| | B/N | 50m | 150m |

(*) the system extension is the sum of all the single segments which compose it:
C+Bv+A1+A2+…+An

**Devices derived from a column interface with one or two video door phone call stations**




Cx = distance between the column interface and the call station
D = distance between the column interface and the power supply

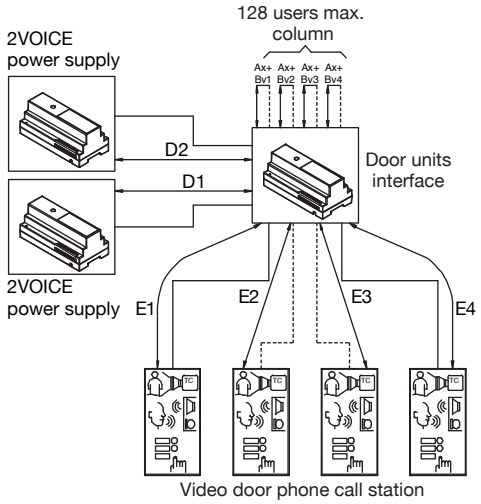
*For connection and distances of the riser, see the paragraph "Video door phone risers connection"*

| Cavo | distance | | estension (*) |
|---|---|---|---|
| | Cx | D | |
| 2Voice cable | 200m | 5m | 800m |
| Ø 0,6mm telephone pair without sheath | 100m | 5m | 600m |
| CAT5 UTP (one twisted pair) | 100m | 5m | 800m |
| HVV05-F 1,5 mm² rubber covered | 50m | 5m | 300m |
| 7057/235 Urmet cable (blue/red) | 50m | 5m | 300m |
| 1mm² section single cable | 50m | 5m | 150m |

(*) the system extension is the sum of all the single segments which compose it:
C1+C2+D+Bv1+Bv2+Bv3+Bv4+A1+A2+…+An

*The above mentioned indications must be considered also when the column interface is connected on the street side branch in systems with more than one column.*

**Devices derived from a door units interface with 4 video door phone call stations max.**




Ex = distance between the door units interface and the call station
Dx = distance between the door units interface and the power supply

*For connection and distances of the riser, see the paragraph "Video door phone risers connection"*

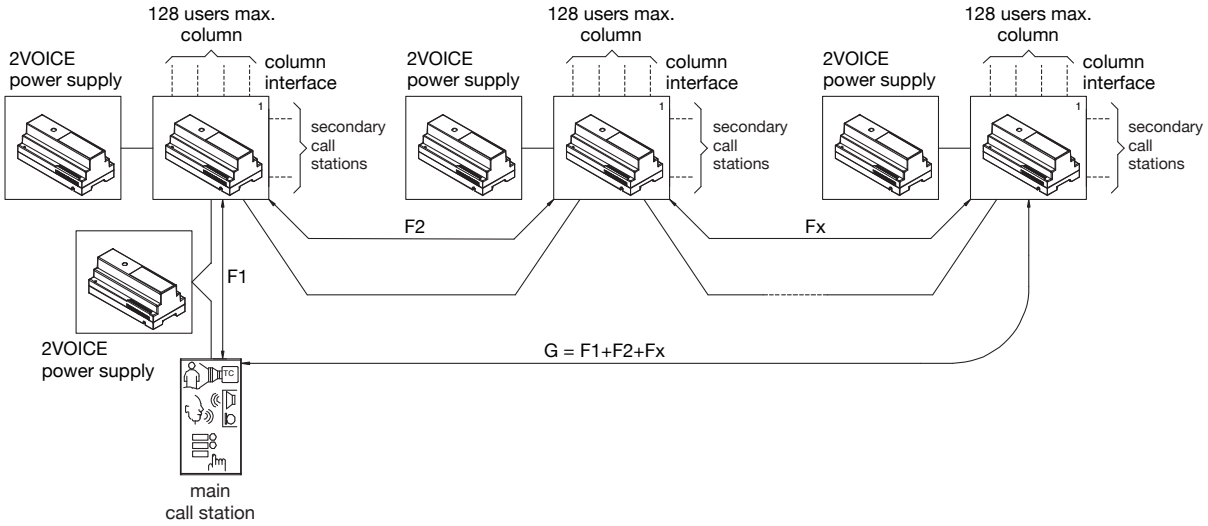
| Cable | distance | | estension | |
|---|---|---|---|---|
| | Ex | Dx | call station | column |
| 2Voice cable | 200m | 5m | 800m | 800m |
| Ø 0,6mm telephone pair without sheath | 200m | 5m | 800m | 600m |
| CAT5 UTP (one twisted pair) | 100m | 5m | 400m | 800m |

The call stations extension is the sum of segments E1+E2+E3+E4+D1 and the column extension is the sum of segments Bv1+Bv2+Bv3+Bv4+A1+A2+… +An+D2.

## STREET SIDE BRANCHES CONNECTION IN SYSTEMS WITH MORE THAN ONE COLUMN

This chapter describes the different connection modes of street side branch between the door units interface and the various column interfaces.

**Connection of 16 columns max., each one with 2 secondary call stations and one main call station**

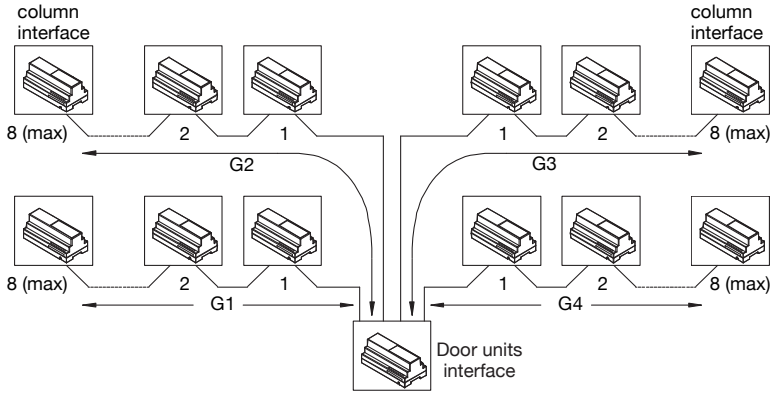



G = distance between the main call station and the most distant column interface

| Cable | distance |
|---|---|
| | G |
| 2Voice cable | 200m |

For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

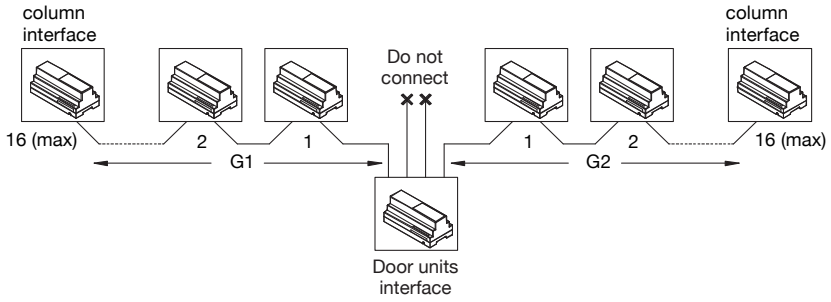
**Street side branch connection split on the 4 outputs of door units interface**




| Cable | No. of column interfaces for each branch | distance | Street side branch extension |
|---|---|---|---|
| | | Gx | G1+G2+G3+G4 |
| 2Voice cable | Max 8 | 600m | 2400m |

For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

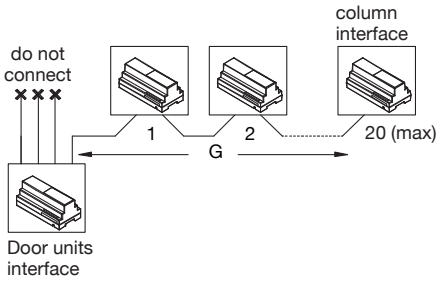

**Street side branch connection split on the 2 outputs of door units interface**




| Cable | No. of column interfaces for each branch | distance | Street side branch extension |
|---|---|---|---|
| | | Gx | G1+G2 |
| 2Voice cable | Max 16 | 400m | 800m |

For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

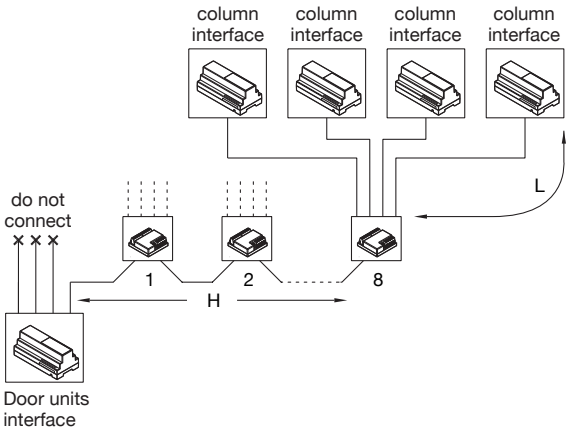
**Street side branch connection split on only 1 output of the door units interface**




| Cable | No. of column interfaces for each branch | distance |
|---|---|---|
| | | G |
| 2Voice cable | Max 20 | 400m |

For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

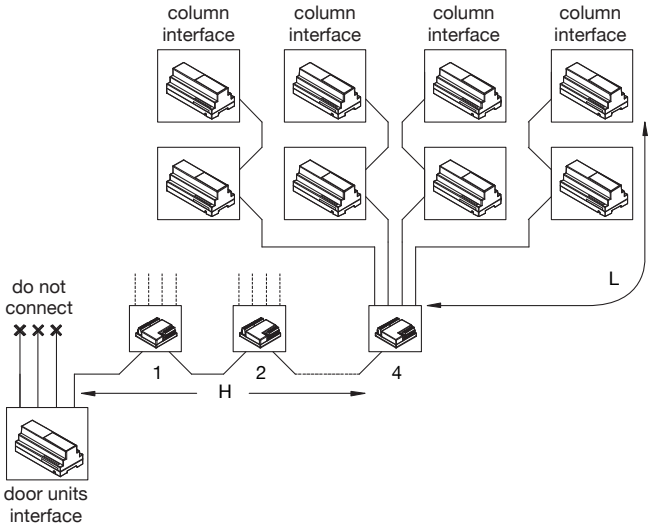
**Street side branch connection split on only 1 output of the door units interface using 8 4-user distributors Ref. 1083/55**




| Cable | No. of 4-user distributors | No. of column interfaces | distance | | Street side branch extension |
|---|---|---|---|---|---|
| | | | H | L | H+L1+L2+...+L32 |
| 2Voice cable | Max 8 | Max 32 | 200m | 50m | 1800m |

For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

**Street side branch connection split on only 1 output of the door units interface using 8 4-user distributors Ref. 1083/55**




| Cable | No. of 4-user distributors | No. of column interfaces | distance | | Street side branch extension |
|---|---|---|---|---|---|
| | | | H | L | H+L1+L2+...+L16 |
| 2Voice cable | Max 4 | Max 32 | 200m | 50m | 1000m |

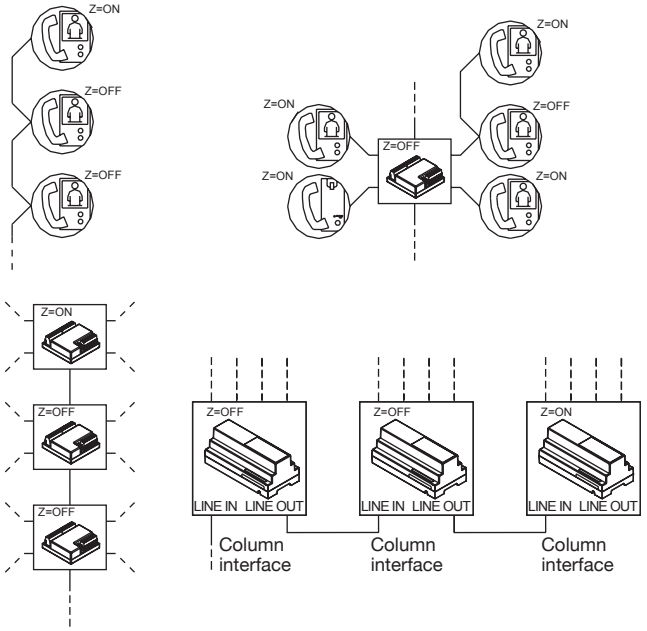
For distances and extension of each column, see paragraph “Devices derived from a column interface with one or two video door phone call stations”.

## SYSTEM ACTIVATION

After wiring the devices, perform the following operations in sequence:
1. Set line terminations
2. Configure the devices
3. Power the system on and check power supply voltage
4. Check the system
5. Assign door units buttons to users
6. Perform basic functional check
7. After all the previous operations, perform optional programming procedures, if requested.

## LINE TERMINATIONS SETTING

2VOICE system elements must be connected each other via a true transmission network. To ensure correct operation, each segment of the network must match the cable impedance.
On apartment stations, distributors and column interfaces there is a jumper that allows to add the line termination (Z).
The line termination must be activated in all the wired devices at the end of a line that has no other segments starting from the same terminal pins of the device (line end):




To identify the position of the line termination jumper on devices, see the sections concerning the single products.

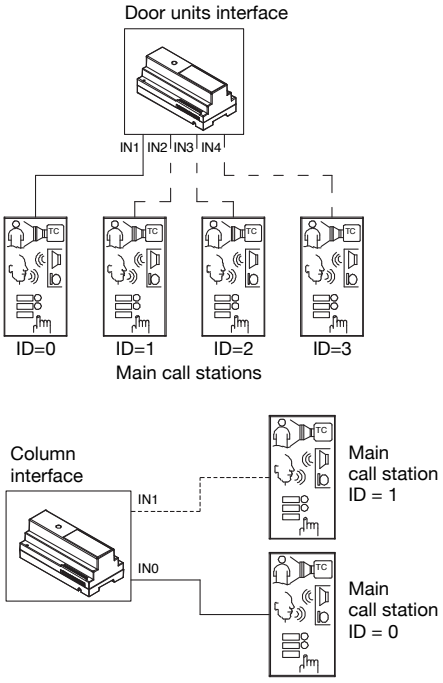
*Call stations and special decoder are provided with a not removable termination line, so they must always be connected to the end of a line*

## DEVICES CONFIGURATION

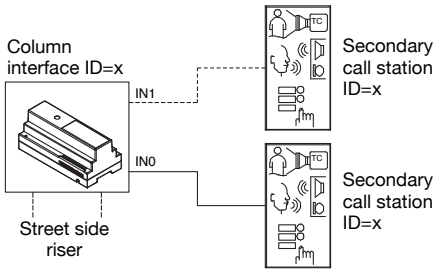
This paragraph analyses only the parameters essential for system operation. For custom configurations (door lock release mode and time, busy time, etc.), see the section about each product.

### CALL STATIONS

**ID**: door unit identifier
- Each main call station must have a unique code (called ID, i.e. IDentifier);




- In case of secondary call station, the ID must be the same as the column ID configured on the column interface.




**AUX**: auxiliary settings

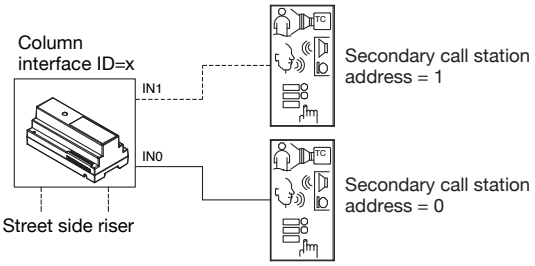
- Station type

The door unit can be configured as main or secondary. From the main door unit, all the system users can be called, from the secondary door unit only the users of that column can be called. The called user can identify the call source thanks to the call ring timing.

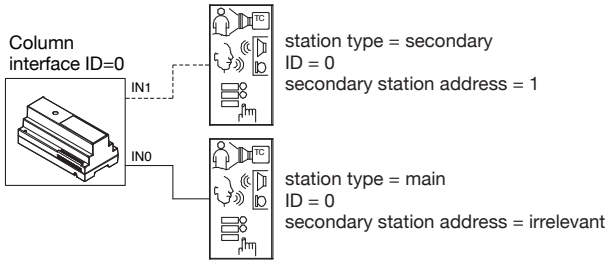
- Secondary call station number

In the same column 2 secondary call stations can be installed, but they must have different addresses (0 or 1).

The secondary call station number 0 must be connected to column interface IN0 input, the secondary call station number 1 must be connected to IN1 input.




*In one-column systems with one main and one secondary call station directly connected to the column interface, devices must be connected and configured as follows:*




## APARTMENT STATIONS (DOOR PHONES AND BRACKETS)

Each apartment station must be configured with a user code which can be set by dip-switch, with values from 0 to 127 and with an internal code which can be set from 0 to 3.
All apartment stations automatically acquire a column identifier from their column interface. If no column interfaces are present in the system, the identifier is the one set in factory, the same for all the devices.
If a new apartment station is installed in a column, wait at least two minutes until the identification code is updated.

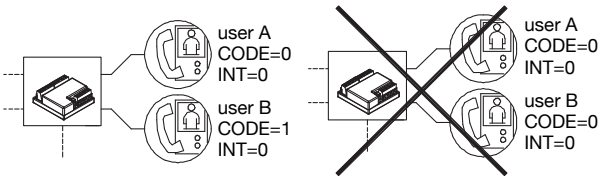
*If the new apartment station is already used in other systems, perform the procedure used to reset all the programmed data. This procedure is described in the paragraph about the apartment station.*

**CODE**: user code
Set a number from 0 to 127, according to the following rules:
- In the same column, each apartment must have a different user code.
- Apartment stations in parallel in the same apartment must have the same user code.

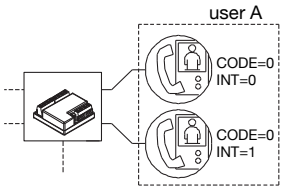
**INT**: apartment station internal code.
The internal code is used to identify the single apartment stations of the same user. This allows to perform intercom calls to the single station inside the same apartment.
Set a number from 0 to 3, following the instructions below:
- If in the apartment there is only one apartment station, the internal code must be set to 0.
- In apartments, up to 4 apartment stations can be connected in parallel with the same user code, but with different internal codes.
- If in the system there are door phone and video door phone apartment stations in parallel, the internal code 0 must be set on a video door phone.

In case of intercom calls to another apartment, calls coming from call stations or floor call, all the apartment stations of that user ring. After receiving a call, the internal code 0 rings immediately and the internal codes 1,2 and 3 ring in sequence.
If the call comes from a video door phone call station, the internal code 0 switches also the monitor on.
However, the other stations of that user can press a specific button to switch their monitor on and switch off the other ('video switching' function – see section 1, paragraph "calls receiving").

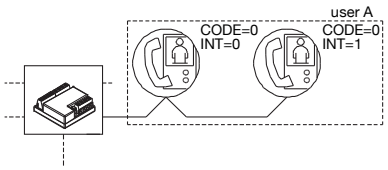
Programming examples:
- 2 users each with 1 apartment station, connection with distributor



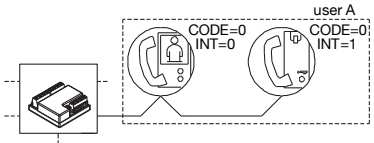

- user with 2 apartment stations called at the same time, connection with distributor

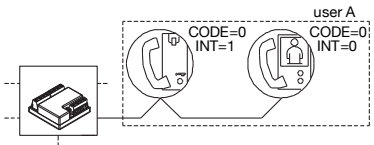


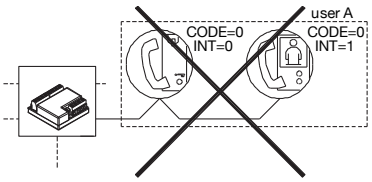

- 1 user with 2 apartment stations called at the same time, In/out connection




- 1 user with 2 apartment stations (one audio only) called at the same time, In/out connection



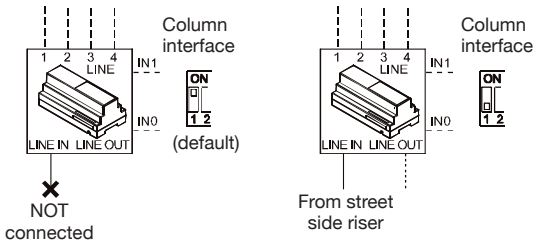



## COLUMN INTERFACES

Each column interface must be indentified by a unique code (called column ID), set with dip-switch with values from 0 to 31.
If present, door units connected to the column interface must have the same ID.

• DIP1
This switch allows to inform the system if the column interface is connected to any devices on LINE IN terminal pins: if no devices are connected to LINE IN (in case of a simple system, with only one or two call stations directly connected to IN1 and IN0 inputs of the column interface), it must be set to ON.




• DIP 2 ÷ 6
Used to program the column identification code (ID).

## POWER-UP AND SUPPLY VOLTAGE CHECK

After performing carefully line terminations settings and devices configurations, before mounting monitors on brackets, the system can be powered and the following checks can be performed, with the system in standby mode:

**Power supply unit Ref. 1083/20**
Check that on each pair of terminal pins LINE1 and LINE2 there is a continuous voltage between 44Vcc and 48Vcc.

**Call stations**
Check that on terminal pins LINE there is a continuous voltage between 38Vcc and 48Vcc.

**Video distributors Ref. 1083/55**
Check that on terminal pins LINE (IN/OUT) and LINE1-4 there is a continuous voltage between 38Vcc and 48Vcc.

**Apartment stations**
Check that on terminal pins LINE there is a continuous voltage between 38Vcc and 48Vcc.

**Column interfaces**
Check that on terminal pins POWER, LINE IN and LINE OUT, if connected, there is a continuous voltage between 38Vcc and 48Vcc.

**Interfaces for door units**
Check that on terminal pins POWER IN and POWER LINE there is a continuous voltage between 38Vcc and 48Vcc.

## SYSTEM CHECK

To check that call stations have different identification codes, follow the instructions below:
- Access the advanced configuration according to the modes indicated for each call station in respective sections.
- Quit the advanced configuration.

In case of presence of more than one call station with the same identification code, the emission of repetitive beeps signals the error.

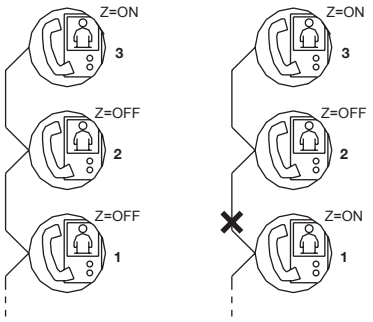
## HOW TO SPLIT THE SYSTEM

It may be useful to split the system into sections to isolate suspected branches when troubleshooting or seeking incorrectly wired areas.

*Always disconnect the wiring starting side, not the ending one; avoid leaving connected cables without connected devices.*

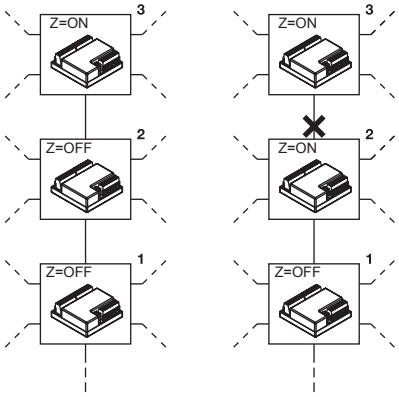
As already mentioned, the interconnection of devices forms an adapted transmission network. It is not therefore possible to disconnect parts of the system without considering the changes that this operation will cause. Observe the following rules:

- If a segment connected in in/out mode is disconnected, activate the line termination on the last device of the branch.



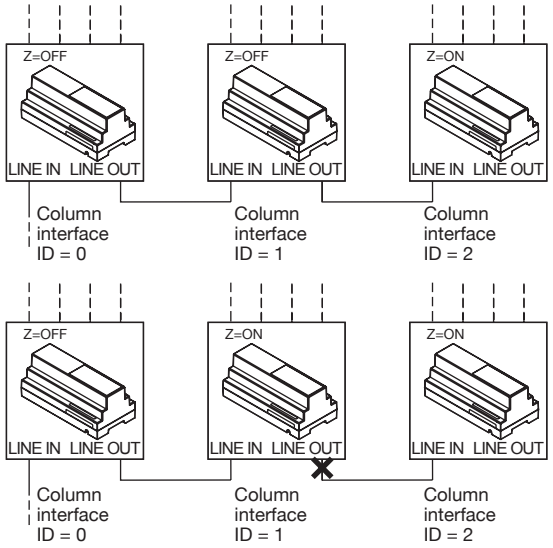

In the figure, the apartment stations 2 and 3 are separated from the rest of the system, so the apartment station 1 becomes the last one and must have the line termination active.

- If a segment that uses distributors is disconnected, the line termination must be activated on the last distributor.



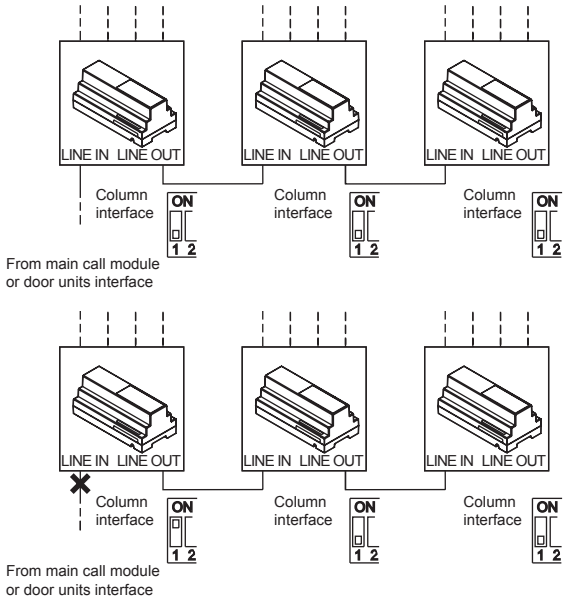

In the example, the distributor 3 is separated from the rest of the system, so the distributor 2 becomes the last one and must have the line termination active.

- If a column interface street side segment is disconnected, put the interface line termination in ON position.




In the example shown in the figure, the interface with ID=2 is separated from the rest of the system, so the interface with ID=1 becomes the last one and must have the line termination active.

- If a column interface street side incoming line is disconnected, put the interface dip-switch 1 in ON position.



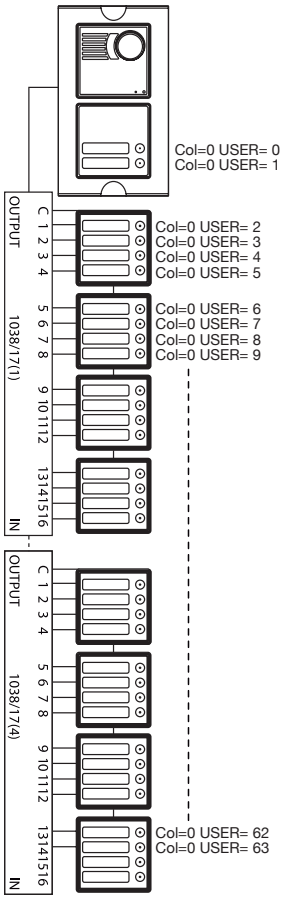

## ASSOCIATION OF DOOR UNITS BUTTONS TO USERS

Buttons can be connected to the door unit with expansion modules 1038/17 or 1083/17.

*The expansion module Ref. 1083/17 is provided with pre-wired connectors for the connection to Sinthesi Steel 3- or 4-button modules. To use this module with the other button modules, cut the connector.*

### MAIN DOOR UNITS

If the door unit is configured as main, buttons are automatically associated to column 0; this makes installation of main call stations easier in one-column systems.

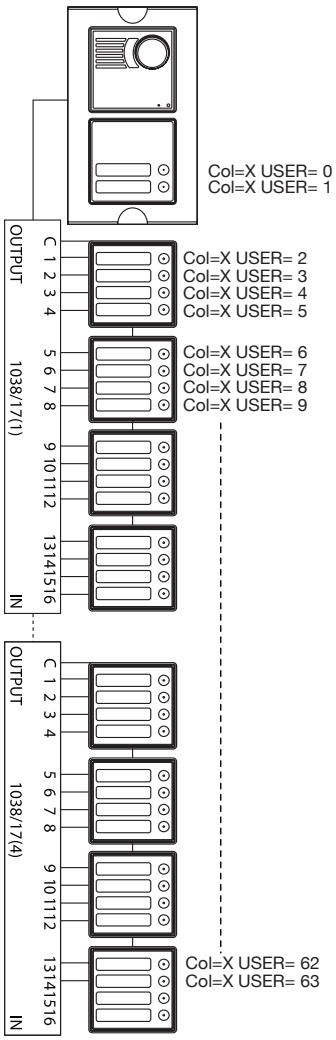



If the door unit is configured as main and in the system there are more than one column, buttons and column users must be associated, following the procedure indicated for each call station in respective sections.

*If the call station is composed by a call module with directory, to associate codes to users enter names in directory with respective codes.*

## SECONDARY DOOR UNITS

In door units configured as secondary, buttons are associated by default to the users from 0 to 63 of their column.




If door units are configured as secondary, but each station must call a different group of users, it is possible to follow the procedure indicated for each call station in respective sections.

## BASIC FUNCTIONAL CHECK

After checking that all devices are properly powered and line terminations correctly activated, check the system operation. This check consists in calling users from door units, verify the call ring tone in all the apartment stations of the called user, verify the image, in case of video door phone call, verify audio, pedestrian electric lock activation and driveway door lock release.

1. Press a call button in a main call station.
   - The door unit emits a tone indicating that the call has been issued.
2. When the user receives the call, check the following points:
   - The internal user code 0 rings and the display shows the image of the calling user. The user must answer within 60 seconds, by picking up the handset or pressing the audio button (in case of hands-free apartment stations).
   - In case of several apartment stations in parallel, the display of internal stations 1, 2 and 3 does not show any image. Press the auto-on button on one of these internal stations to switch on the display of that video door phone ('video switching' function). This operation can be repeated on all the monitors of the called user within 60 seconds from the call or until an internal station answers. In this case, the image is shown only in the apartment station which has answered.
   - When the user answers, the conversation with the caller starts for a max. time of 10 minutes.
   - From the call beginning and until the conversation ends, the user can activate the pedestrian electric lock or the driveway door lock release by pressing the dedicated buttons.
3. Close the conversation by hanging up the handset or pressing again the audio button (on hands-free apartment stations). All the system goes back to standby mode.
4. Repeat the same operations for all system users.
5. If other call stations are present in the system, repeat all the operations starting from point 1 for the other call stations. Consider that monitors are not activated if the door unit is not video type.

## OPTIONAL PROGRAMMING

After system basic operation check has been performed, follow the advanced programming procedure below.

1. Auto-on function on surveillance cameras: in case of surveillance cameras connected to one or more call stations, this function must be programmed.
2. Intercom function between apartment stations: a user code or an internal code must be associated to a button.
3. Door phone call ring tone: 5 different call ring tones can be selected.
4. Floor call ring tone: 5 different call ring tones can be selected.

These operations are necessary only if these additional functions are requested.

*For programming modes of these functions, see chapters about the single devices.*