

13



# TWO WIRE DIGITAL SYSTEM

**ACI/FARFISA**  
INTERCOMS

TECHNICAL  
MANUAL  
2009



ECHOS  
COMPACT  
PROJECT  
PROFILO  
MATRIX

**DUO** system  
color

**DUO** system

## INTRODUCTION

This edition contains helpful information on the operation and installation of Farfisa video intercoms systems.

In order to make the systems work properly it is necessary to install only Farfisa equipment, keeping strictly to the items referred to in each diagram.

Read all the notes carefully, (even the small ones) in each installation scheme and the working instructions of the system given in the following pages.

For the sake of clarity, please notice that the sequence of the terminals of each article has not been followed. Only the terminal code (letter and/or number) is valid not the graphic sequence.

The items may have more terminals than the ones in the installation diagrams. The excess terminals must not be used.

## Notice to the installer and user

Check the integrity of the product after removing it from the packing.

Packing materials (such as plastic bags, cardboard, polystyrene foam, etc.) must be kept out of the reach of children.

The manufacturer cannot be held responsible for possible damages caused by improper, erroneous and unreasonable use.

The cable runs of any intercom and video-intercom system must be kept separate from the mains or any other electrical installation as required by **International Safety Standards**.

## WARNINGS

**An all-pole mains switch with a contact separation of at least 3mm in each pole shall be incorporated in the electrical installation of the building.**

**Before connecting the unit, make sure its data correspond to those of the mains.**

**The apparatus shall not be exposed to dripping or splashing.**

**For correct operation make sure that ventilation or heat dissipation openings are not obstructed.**

**Do not open or tamper with power supply or video intercom apparatus when they are ON. There is high voltage inside.**

**Avoid bumping and hitting the video intercom apparatus, it could break of the CRT with consequent projections of fragmented glass.**

**For installation or maintenance refer only to qualified personnel.**



European Mark of conformity to the EEC Directives.

## CEMARK

The CE mark ensures that the product complies with the requirements of the European Community Directives in force; in particular, Electrical Safety LVD73/23, Electromagnetic Compatibility EMC89/336 and Telecommunication Terminals R&TTE99/5 Directives.

As set forth by the Directives, the technical documentation and Conformity Declarations are available in the Company's offices for verifications and controls by competent Authorities.



Mark of VDE a German Testing and Certification Institute.



Quality assured firm according to standard ISO 9001:2000certified SGS.



Italian Association of Electrotechnical and Electronic Industries

## 13 TECHNICAL MANUAL

2009 edition

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## MAIN FEATURES

Farfisa digital **DUO System**, developed with innovative technology, allows the installation of videointercom systems up to 200 users and 20 door stations, drawing **two non-polarized wires only**, including the power supply to the system. The very reduced number of conductors with no coaxial cable allows a fast and simple videointercom and/or intercom installation, reducing mounting costs.

The 2-wire technology allows a videointercom system, with 1 or more entrances, without having to think to the calculation of the conductors on the riser and on the various branches; the wires are always two.

For a good result of the installation it is necessary to follow carefully the indications in this manual and especially it is requested not to exceed the distances recommended by ACI Farfisa.

### Choosing the equipment

The following options are available for **door stations**:

- door stations with digital push-buttons panels series **Matrix** or **Profilo**
- door stations with conventional push-button panels and digital encoder series **Matrix** or **Profilo**

The **internal stations** can indifferently be videointercoms or intercoms:

- Hands free colour **Echos** videointercoms with integrated decoder.
- **Compact** or **Project** videointercoms with black and white flat CRT or with color LCD and decoding incorporated.
- **Compact** or **Project** intercoms with integrated decoder.

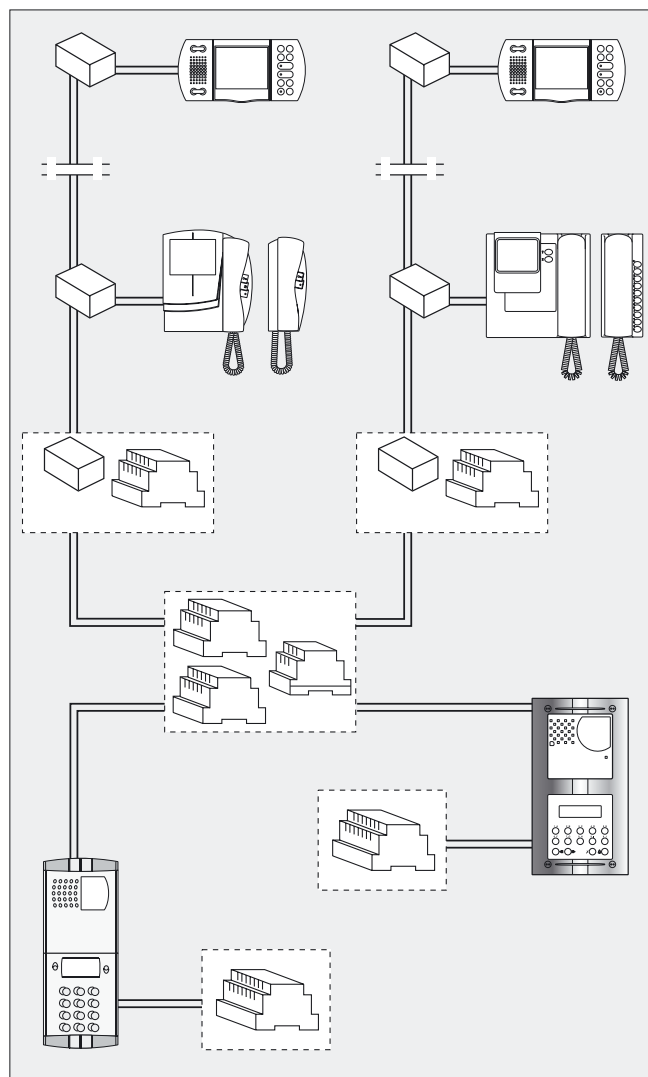
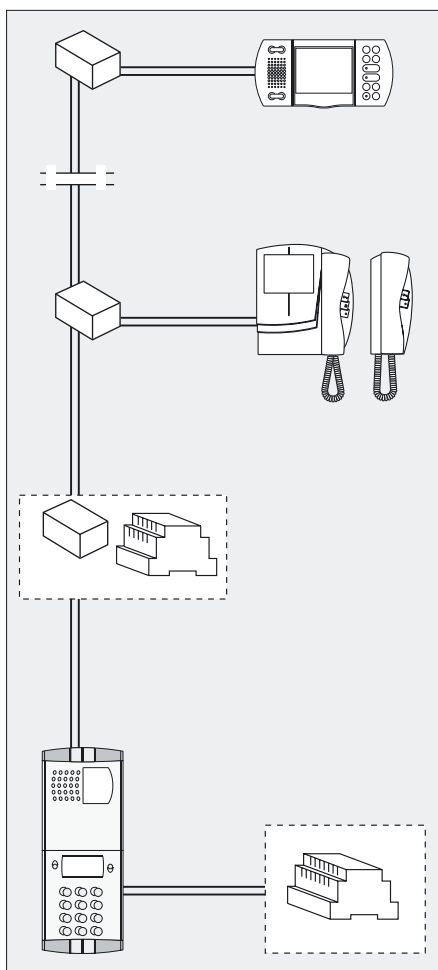
### Performances of DUO installations

- Maximum number of risers **4**
- Maximum number of videointercoms for each riser **50**
- Maximum number of external main door stations **8**
- Maximum number of external secondary door stations **12**
- Maximum distance between external station and farthest videointercom (without amplifier) **200 meters (150 meters in the color version)**
- Digital or conventional push-button panels with digital encoder
- Call from landing or intercommunicating is differentiated from the outdoor one
- Timed conversation (90-second duration with possibility of increasing conversation time by pressing a specific button on the push-button panel)
- Acoustic signal of conversation end
- Private audio-video and lock function (only the called user can see, talk and release lock)
- Coded lock release directly from the digital push-button panel (by means of programmable personal code)
- Busy signal on door stations
- Free tone on internal stations when the installation is available for intercommunicating calls or video auto switching
- Connection up to 6 internal stations in parallel and intercommunicating for each user

### Installation example of a multi-family system with two digital video door stations and two risers

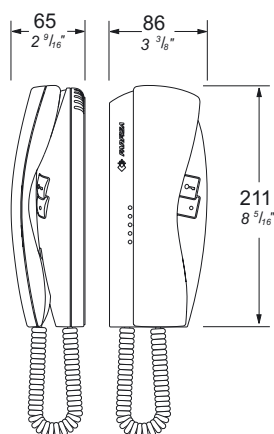
### Installation examples

#### Installation example of a multi-family system with digital video door station





## INTERCOM WITH INTEGRATED CODING



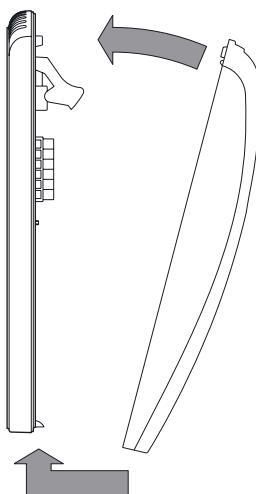
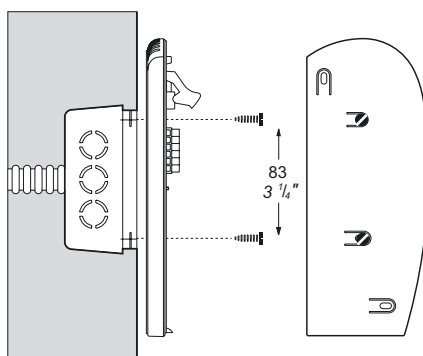
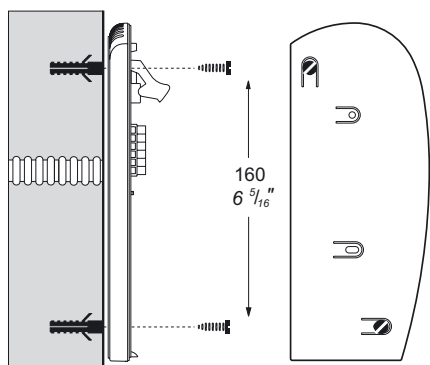
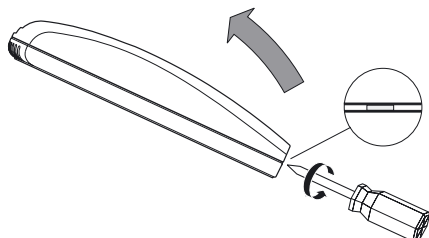
**KM862W.** White colour intercom with integrated coding, two push-buttons and spiral cord. Wall-mountable with expansion plugs or wall box.

### Technical characteristics

Power supply directly from the line	
Stand-by current:	5mA
Operating current:	0.1A
Operating temperature:	0° ÷ +50°C
Maximum admissible humidity:	90% RH

### Terminals

<b>LM/LM</b>	Line inputs
<b>A1</b>	Floor call positive input
<b>GN</b>	Floor call negative input
<b>GC</b>	Positive output for additional functions
<b>GE</b>	Negative output for additional functions



### Push-buttons

#### Door open button

- **Button for internal or intercom calls.** This button can be associated with the address of one digital actuator, the address another user in the building to make internal calls between two users or with code 000 to make intercom calls with other videointercoms or intercoms (maximum others 2) installed in the apartment.

### Programming

The intercom must be suitably programmed for operation.

Two programming modes are available:

- **automatic** (quick programming of user code acting from external station);
- **manual** (programming of all intercom functions)

The following programming is possible:

- 1) **user address** (mandatory: the intercom is programmed with address 100 by default);
- 2) **internal address** (optional: the intercom is programmed with address 000 by default);
- 3) **code to assign to button "●"** to make intercom calls or for enable actuators (optional: no code is associated to the button by default).

### Using the push-button for programming

Press button "●" and "●" to enter addresses or codes.

- : Press this button to **access the programming mode** (when pressed for 4 seconds with off-hook handset), **confirm address or code programming** or **go to the next programming step**.
- : Press this button to **increase the value you want to enter**. Press the button for a number of times equal to the digit you want to enter (digit 1 = 1 time; digit 9 = 9 times; digit 0 = 10 times button "●").

Pressure of button "●" is confirmed by an acoustic tone.

### Entering the programming mode

To enter the programming mode you must:

- pick up the handset and leave it off-hook during the entire programming step;
- press button "●" for at least 4 seconds until you receive the confirmation tone;
- start programming within 2 minutes, otherwise the intercom returns to the "operation" mode.

### Entering codes or addresses

- Codes and/or addresses must have three digits (hundreds, tens, units); codes and/or addresses with tens and units or units only must be completed by adding zeros. For example, address 96 will become 096 and address 5 will become 005.
- Digits must be entered individually, by pressing the button "●" for a number of times "n", where "n" is the value of the digit you want to enter, followed by a pause of about 2 seconds before you go to the next digit (a tone in the handset will tell you when to go to the next digit).

For example, to enter code 096 you must:

- press button "●" 10 times to enter digit 0, wait for 2 seconds until you hear a sound in the handset;



## INTERNAL STATIONS

- press button "●" 9 times to enter digit 9, wait for 2 seconds until you hear a sound in the handset;
- press button "●" 6 times to enter digit 6, wait for 2 seconds until you hear a sound in the handset;
- press button "●" to confirm entering and go to the next programming step. An acoustic tone in the handset will confirm that the code has been stored and you can go to the next step.

### Exiting the programming mode

You will automatically exit the programming mode after pressing button "●" to confirm the 3rd programming, i.e. "code to assign to button "●". You can also exit the programming mode at any time by hanging up the handset. Settings will not be saved if you exit the programming mode without confirming with button "●".

You will also exit the programming mode automatically if you make a mistake or an operation that is not permitted when entering a code. In this case, you must access the programming mode again to continue.

### Automatic programming

You can use the automatic programming mode to save the intercom address from the external station.

### Automatic programming procedure

To enter the automatic programming mode you must:

- enter the programming mode** following the instructions described in "Entering the programming mode";
- make a call from an external station within 2 minutes.** In case of installations with digital push-button keyboard TD2100, key in the number you want to assign to the intercom and press "A". In case of installations with digital encoder CD2131÷CD2138 press the button you want to assign to the user on the push-button keyboard. When the call is received, the intercom is programmed automatically, you hear the call tone in the handset. Close and pick up the handset to start a conversation with the external station and check the correct operation of the system;
- at the end of the conversation hang up the handset** to exit the automatic programming mode.

### Manual programming

The manual programming mode allows you to enter the user address, assign the internal address and code to button "●".

### Manual programming procedure

To enter the manual programming mode you must:

- enter the programming mode** following the instructions described in "Entering the programming mode";
- program the following functions in sequence:**
  - User address** – this code allows you to receive an external call, have a conversation and open the door at the calling external station. For information on address entering see "Entering codes or address".
  - Internal address** – these codes are used to identify the intercoms installed in the apartment (max. 3). In case of one intercom only, the internal code must be 000 (default value); if other intercoms are present (max. others 2) you must assign codes 001 and 002 to them. By entering these codes, all intercoms will ring when an intercom call is made; if you prefer not to activate the intercom ring in the third intercom, you must assign code 003 instead of 002. For information on code entering see "Entering codes or addresses".
  - Address associated with button "●"**  
This button can be used for one of the following functions:
    - call to users of other apartments by entering the user address (from 001 to 200).
    - intercom calls between intercoms or videointercoms in the same apartment by entering code 000.
    - activation of one actuator 2281 (codes from 211 to 220).
For information on code entering see "Entering codes or addresses".

In "Manual Programming" mode the 3 steps above must be performed in sequence from step 1 to step 3. Each step must be confirmed by pressing button "●". Press button "●" again if you want to skip a programming operation and go to the next one. For example, after you have programmed the "user address (step 1)" and confirmed it by pressing button "●", you will automatically go to the "internal address (step 2)". If this setting is not necessary, press button "●" to skip it and

go to "address associated with button "●". Again, you can enter the code or press button "●" to skip this programming. Since there are no other programming to make, this operation will automatically exit the programming mode.

- exit the programming mode** following the instructions described in "Exiting the programming mode".

### General Notes.

- Always hang up the handset at the end of programming for each intercom.
- Repeat the programming steps for all intercoms in the installation.
- Intercom conversations or connections with users and external stations of other buildings will not be possible if digital exchanger art.2273 is installed.

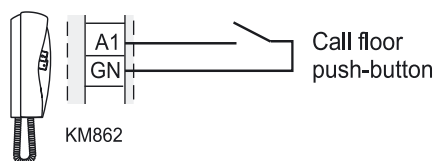
### Ring volume adjustment

To adjust the ring level you must adjust the trimmer R52 on the intercom.

### Additional functions

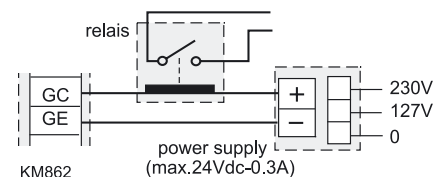
#### Call floor

When you make a call floor, you will hear a different tone. The floor call is used to inform that somebody is ringing at the house door. The function is active both when the system is free and busy.



#### Call Repeat

You can connect the intercoms as illustrated in the diagram below to send the intercom ring to other locations in the house.



### Example of manual programming of an intercom

0	2	5	+	0	0	0	+	0	0	0
---	---	---	---	---	---	---	---	---	---	---

user  
address

internal  
address

address for  
button ●

└ (these codes can be stored—  
only with the manual  
programming procedure)



## Operation

### Call from external station.

When a call is made from the external station, the intercom generates an acoustic tone and stays on for about 30 seconds. Pick up the handset to start conversation with the external station for about 90 seconds and press button "●" to open the door.

### Connection with one or more external stations without receiving the call.

Picking-up the handset when the system in stand-by you will hear the tone of system ready. Press the button "●" to start a communication with the door station, from which the last call has been made; to release the door lock press again the "●" button.

If you pick up the handset and receive no tone, the installation is busy and you must wait until it is free.

### Making or receiving a call from another user.

When the installation is in stand-by, you can make a call to another user. You must have stored the address of the desired user's in the button "●".

To make the call, pick up the handset, wait for the free tone and press button "●".

You will hear the call tone and the intercom of the called user will ring with a ring different from calls from external stations or intercom calls from the same apartment.

If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

If you pick up the handset and receive no tone, the installation is busy and you must wait until it is free.

### Making or receiving an intercommunicating call in your apartment.

When the installation is in stand-by, you can make an intercommunicating call to all intercom in the same apartment (max. 3) by pressing the button "●" you have programmed with code 000.

To make the intercommunicating call, pick up the handset, wait for the free tone and press button "●".

You will hear the call tone and the intercoms that are enabled to receive intercommunicating calls (internal address 001 or 002) will ring with a ring tone different from calls from external stations or other users. The intercom will not ring if it is coded with internal address 003.

However, you can pick up the handset and start a conversation with the calling user.

If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

## Tone table

**Tone of pressure of a button.** It is activated to indicate the pressure of one of the buttons "●" and "●" during the programming phase.



**Acknowledge tone.** It is activated to confirm the correct operation of the door lock release and during the programming phase to indicate a valid operation.



**Tone of system ready.** Activated for 30 seconds if the system is free



**Calling tone.** It is activated during a call to another user or during an intercommunicating call (active for 30 seconds or until the called user answers).



**Dissuasion tone.** It is activated when a nonexistent device is call or when a device is not available.



**End conversation tone.** It is activated 10 seconds before the conversation time ends.



## Calling table

### External call



### Call from another user (continuous tone)



### Intercommunicating call (modulated note)



### Floor Call

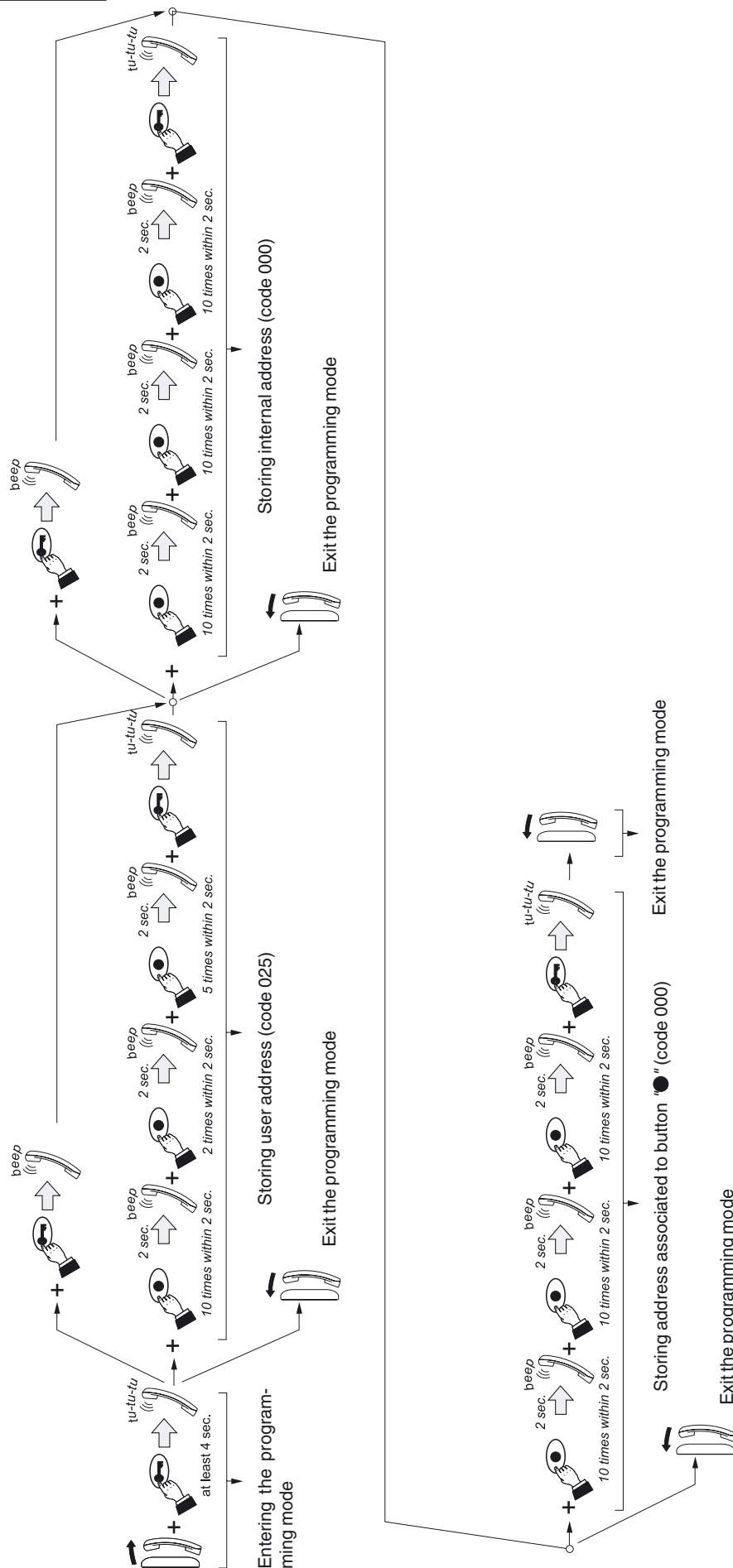


**Note.** All the acoustic signalling, with the exception of the system ready and calling tone, last after about 2 seconds.

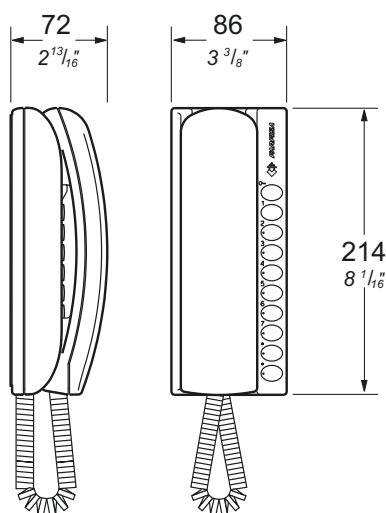


# INTERNAL STATIONS

Programming example of a intercom with user address 025, internal address 000 and code 000 associated to button "●" to intercommunicate with other intercoms within the same apartment



## INTERCOM WITH INTEGRATED CODING



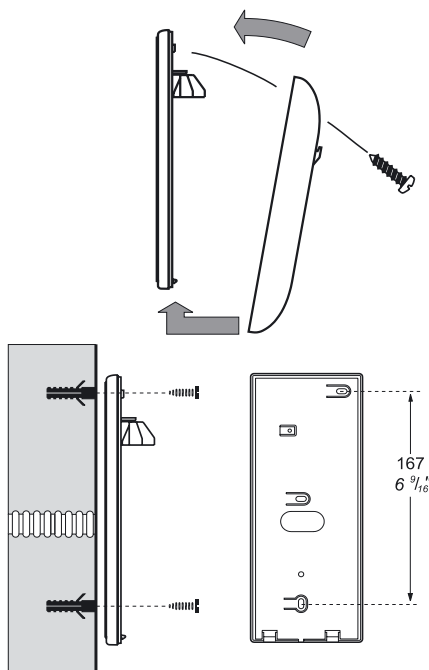
**PT562W.** White colour intercom with integrated coding, 8 push-buttons and spiral cord. Wall-mountable with expansion plugs.

### Technical characteristics

Power supply directly from the line	
Stand-by current:	5mA
Operating current:	0.1A
Operating temperature:	0° ÷ +50°C
Maximum admissible humidity:	90% RH

### Terminals

<b>LM/LM</b>	Line inputs
<b>A1</b>	Floor call positive input
<b>GN</b>	Floor call negative input
<b>GC</b>	Positive output for additional functions
<b>GE</b>	Negative output for additional functions
<b>P / P</b>	Contact of push-button ●● (max 24Vac/dc 0.3A)



### Programming

Intercom must be programmed properly to define its operating mode. Function that can be programmed are:

- **user address** (mandatory programming: the intercom is programmed with address 100 by default);
- **internal address** for intercommunicating calls (optional programming: the intercom is programmed with address 000 by default);
- **code for supplementary push-buttons** (optional programming: no code is associated to the buttons by default).

### Keypad meaning

To enter addresses or codes you must use the buttons 1÷5 and the button ● as described in the following table.

- To enter numbers from 1 to 5 uses buttons 1÷5.
- To enter numbers from 6 to 0 press the button ● (second button from down-up) and then the corresponding buttons 1÷5 as in the table (buttons must be pressed one after the other, not simultaneously).

### Intercom buttons cross-reference

figure	push-buttons
1	= 1
2	= 2
3	= 3
4	= 4
5	= 5
6	= ●+1
7	= ●+2
8	= ●+3
9	= ●+4
0	= ●+5

*Example:* to enter the code 028 it is necessary to press in sequence: ●+5+2+●+3.

### Enter the programming phase

To enter from the programming phase it is necessary to do the following steps:

- leave the handset on hook and press the button ● for at least 4 seconds;  
- you will hear the programming tone;
- lift the handset while holding the button ● pressed;  
- you will hear the confirmation tone;
- leave the handset off hook and release the button ●.

### Exit the programming phase

Replace the handset on hook to exit the programming mode.

You will also exit the programming mode if you make a mistake or an operation that is not permitted when entering a code.

### User address

In order to receive a call from the door station the intercom must be programmed with an address which is stored in a non-volatile memory.

To program the intercom it is necessary to:

- enter the programming mode following the instructions contained in "Enter the programming phase";
- press the button ● until a programming tone will be heard;
- enter the user address by pressing the buttons from 1 to 5 and ● in the correct sequence (see chapter "keypad meaning" and relevant table). The code must be included between 001 and 200; three digits must be dialled. After you have entered the third digit, if the value is correct, you will hear the confirmation tone, otherwise you will exist the programming mode;
- continue if you want to program other functions, otherwise replace the handset on hook to exit the programming mode.

### Internal address

In case of multiple intercoms (max. 6) in parallel in the same apartment, with or without intercommunicating service, the intercoms must be programmed with codes from 000 and 005. The main intercom must be programmed with internal code 000 and the other intercoms with the following codes (001, 002, 003, 004 and 005).

This programming comes after the **user address** programming (see chapter above). If necessary, programming should be made after entering the user address and before exiting the programming mode. If you have already exited the programming mode, you must repeat the operations described in the "user address" chapter and then:

- enter the internal identification code (value from 000 to 005) and press the buttons from 1 to 5 in the correct sequence (to enter 0 you must press ● and then 5); three digits must be dialled. After you have entered the third digit, if the value is correct, you will hear the confirmation tone, otherwise you will exit the programming mode;
- continue if you want to program other functions, otherwise replace the handset on hook.

### Codes assigned to buttons

To use the intercom buttons for calls to other users, intercommunicating calls or connection with 1 or more external door stations, you must program the buttons as described below:

- enter the programming mode following the instructions contained in chapter "Enter the programming phase";
- hold the button you want to program (1÷5) pressed until you hear the programming tone;
- enter the code you want to assign to the button (code 000 for calls to intercoms with intercommunicating call in the same apartment; codes from 001 to 200 for calls to users of other apartments; codes from 231 to 250 for connection with one or more external door stations; codes from 211 to 220 to activate actuator 2281);
- always enter 000 for calls to an **intercommunicating intercom in the same**





## INTERNAL STATIONS

**apartment**, with the same user address. After you have entered the third digit, if the value is correct, you will hear the confirmation tone. The value of the buttons 1÷5 will automatically determine the address of the intercom to call;

- to call **another user** enter the corresponding address (value from 001 to 200 – value set during the “user address” programming of the intercom to call). Three digits must be entered. After you have entered the third digit, if the value is correct, you will hear the confirmation tone;

- for connection to an **external door station** enter the corresponding address (value from 231 to 250 that was previously programmed on the external door station). After you have entered the third digit, if the value is correct, you will hear the confirmation tone;

- enter the address to activate one **digital actuator** (value from 211 to 220 that was previously programmed on actuator). After you have entered the third digit, if the value is correct, you will hear the confirmation tone;

■ repeat the operations illustrated above for all the buttons you want to program;

■ replace the handset on hook to exit the programming mode.

### Notes.

- You do not need to program the unused buttons.
- Intercom conversations or connections with users and external stations of other buildings will not be possible if digital exchanger art.2273 is installed.
- To delete a code assigned to a button enter the address 255.

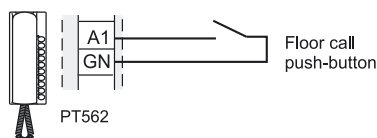
### Example of programming with 3 intercoms in parallel with intercommunicating function and connection with 3 external door stations from intercoms

1 <sup>st</sup> intercom	0	1	5	+	0	0	0	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
2 <sup>nd</sup> intercom	0	1	5	+	0	0	1	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
3 <sup>rd</sup> intercom	0	1	5	+	0	0	2	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
	user address				internal address				button 1 for intercommunicating call				button 2 for intercommunicating call				push-button 3 to enable the 1 <sup>st</sup> door station				push-button 4 to enable the 2 <sup>nd</sup> door station				push-button 5 to enable the 3 <sup>rd</sup> door station		

## Supplementary Functions

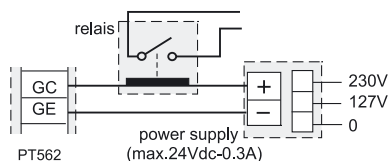
### Floor call

A floor call will generate a different sound on the intercom. Floor call will only advise you that someone is calling from the door of your apartment. This function is enabled either with the system free or with the system busy.



### Call repeater

If you connect the devices according to the diagram reported below it would be possible to repeat the calling sound of the intercom in other rooms of your apartment.



### Button ●●

Button ●● is a free voltage button and contacts are P and P on the terminal board (max 24Vac-dc/ 0.3A).

### Ring volume adjustment

If it is required to adjust the volume of the ringing tone it is possible to operate on the trimmer R12.

- Enter the programming mode following the instructions contained in chapter “Enter the programming phase”;

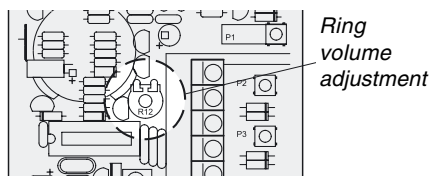
- Remove the intercom cover to access the

adjustment trimmer.

- Press the button ● to generate the confirmation tone and adjust the volume. If necessary, press the button again to repeat the tone.

- Replace the intercom cover.

- Hang up the handset.



## Calling table

### External call



### Call from another user (continuous tone)



### Intercommunicating call (modulated note)



### Floor Call



**Note.** All the acoustic signalling, with the exception of the system ready and calling tone, last after about 2 seconds.

## Tone table

**Tone of pressure of a button.** It is activated to indicate the pressure of one of the buttons ●, 1÷5 during the programming phase.



**Programming tone.** It is activated to indicate the system is waiting to be programmed.



**Acknowledge tone.** It is activated to confirm the correct operation of the door lock release and during the programming phase to indicate a valid operation and for ring volume adjustment.



**Tone of system ready.** Activated for 30 seconds if the system is free.



**Calling tone.** It is activated during a call to another user or during an intercommunicating call (active for 30 seconds or until the called user answers).



**Dissuasion tone.** It is activated when a nonexistent device is called or when a device is not available.



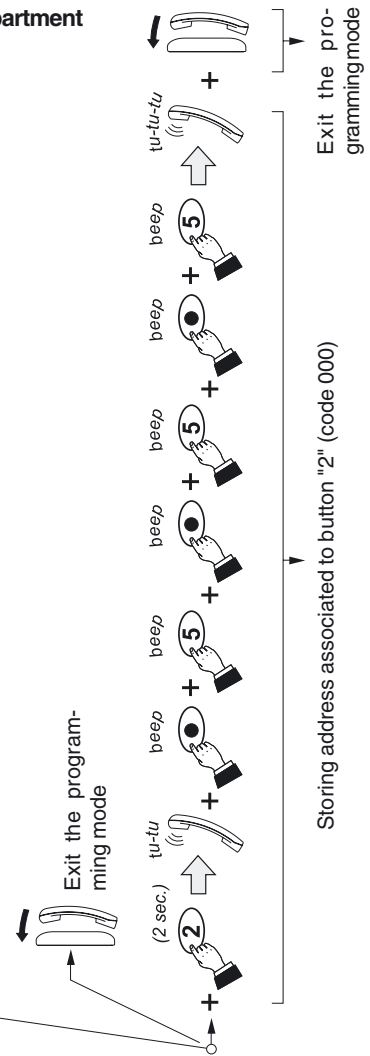
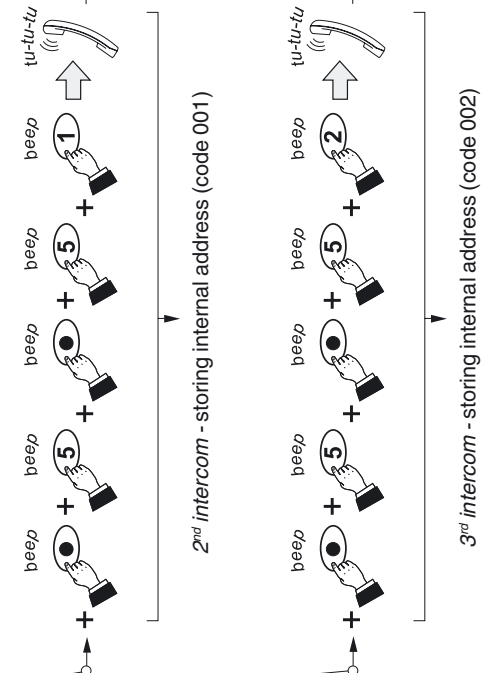
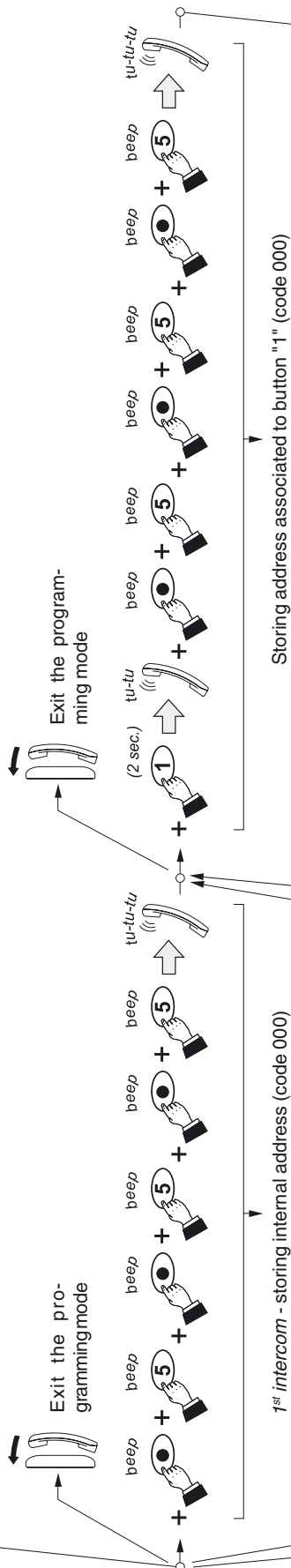
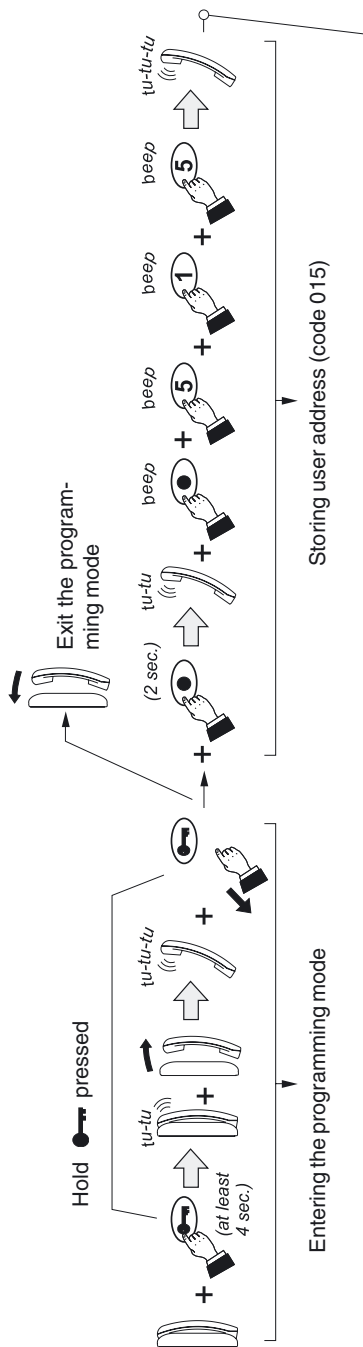
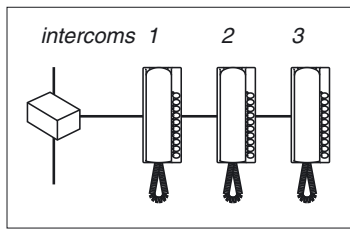
**End conversation tone.** It is activated 10 seconds before the conversation time ends.





## INTERNAL STATIONS

Example of programming with 3 intercoms with intercommunicating function in the same apartment (user code 015)



## INTERNAL STATIONS

### Operation

#### Call from external station.

When a call is made from the external station, the intercom generates an acoustic tone and stays on for about 30 seconds. Pick up the handset to start conversation with the external station for about 90 seconds and press button "●" to open the door.

#### Connection with one or more external stations without receiving the call.

Picking-up the handset when the system is stand-by you will hear the tone of system ready. Pressing the ● button you will be connected with the external door station or the last calling external station if more than one door stations are present on the system: in this case, if the buttons 1÷5 on the intercom have been programmed with the address of the external stations, it would be possible to connect selectivity with them by pressing the related buttons and, if necessary, to operate the opening of the relative electric door lock pressing the button ●.

If picking up the handset you did not get any tone, the system is busy (a conversation is in progress with other user), and no other operations are allowed until the system become free.

#### Make or receive a call from another user

When the system is in stand by mode it would be possible call another user.

To execute this operation it is necessary to have properly programmed the buttons 1÷5 with the address of the user you want to call (max 5).

To make the call it is necessary to pick up the handset, verify the presence of the tone of system ready and press the button corresponding to the user you want to call; a calling tone is heard whilst the intercom of the called user will ring with a different sound with respect to that of the external or intercommunicating call.

If the called user lifts the handset within 30 seconds a connection will be set for about 90 seconds, otherwise the system returns in stand by mode.

Any call from the external door station will interrupt the internal call.

If picking up the handset you did not get any tone, the system is busy, and no other operations are allowed until the system become free.

#### Make or receive an intercommunicating call in own apartment.

When the system is in stand by mode it would be possible call another device installed in the same apartment (max 6). To execute this operation it is necessary to have properly programmed the buttons 1÷5 with the code 000 (refer to "codes assigned to buttons").

By pressing one button from 1 to 5, the intercommunicating intercom is automatically set by the system and cannot be modified (see table below).

To make the call it is necessary to pick up the handset, verify for the presence of the system ready tone and press the button corresponding to the device you want to call (see table below). On the handset of the called user a ring is heard with a different sound with respect to that of the external or intercommunicating call.

If the called device answers within 30 seconds a connection will be set for about 90 seconds, otherwise the system returns in stand by mode.

Any call from the external door station will interrupt the intercommunicating call.

#### Making an intercommunicating call in the same apartment or to another apartment.

If programmed correctly, the buttons 1-5 can be used to make mixed calls; some of the buttons can be used to call the intercommunicating intercoms in the same apartment, some other buttons can be used to call users in other apartments, and the remaining buttons can be used to connect with other external door stations, if included in the installation.

The buttons with lower numbers should be used for calls to the intercommunicating intercoms in the same apartment, because the system automatically assigns the address of the intercommunicating intercom that can be called with each button according to the table above.

If there are only three intercommunicating intercoms in the same apartment, they should be programmed with internal addresses "000", "001" and "002" and the first two buttons 1 and 2 should be used to make calls; the buttons 3, 4 and 5 can be used for other functions (see the example on the next page).

Table on button use for intercom calls of max. 6 intercoms in the same apartment.

Calling intercoms	Intercom to call					
	CT0	CT1	CT2	CT3	CT4	CT5
CT0 (000)	-	①	②	③	④	⑤
CT1 (001)	①	-	②	③	④	⑤
CT2 (002)	①	②	-	③	④	⑤
CT3 (003)	①	②	③	-	④	⑤
CT4 (004)	①	②	③	④	-	⑤
CT5 (005)	①	②	③	④	⑤	-

Buttons to press

**N.B.:** The codes in parenthesis in the table are the identification addresses of the internal stations that were programmed previously (see chapter "internal address").

#### Examples:

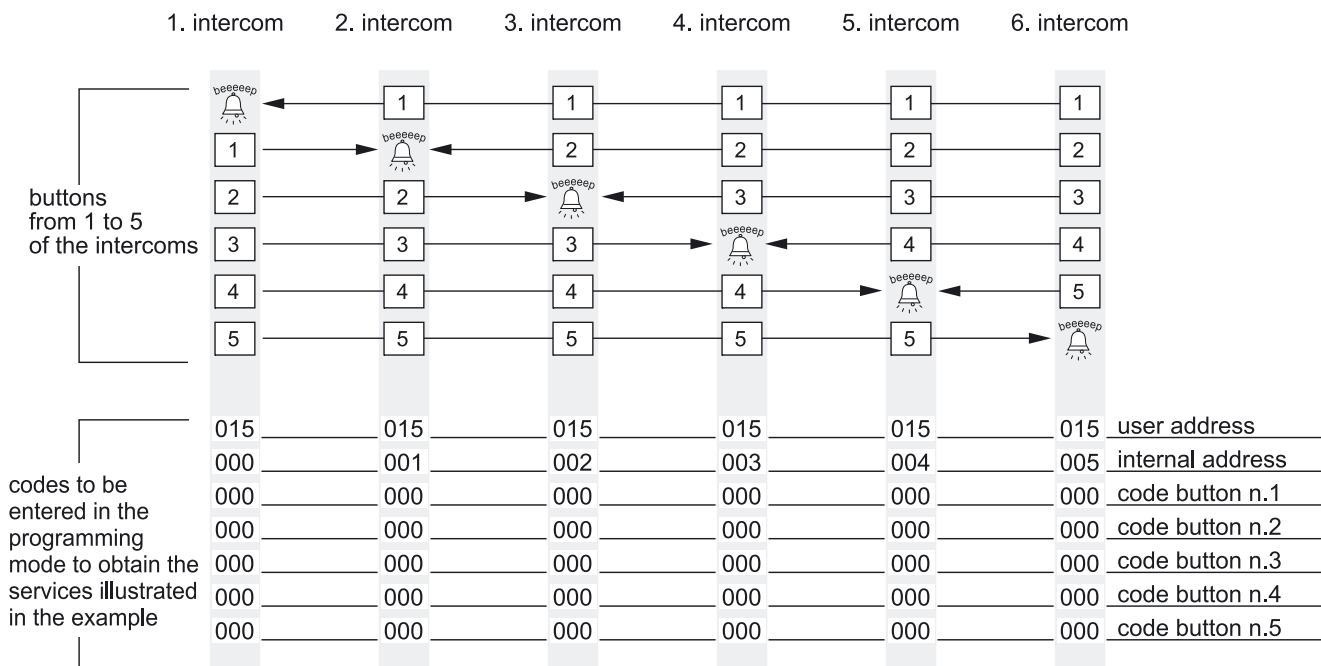
- From intercom CT1 (internal address 001) press the button 1 for calls to intercom CT0.
- From intercom CT2 (internal address 002) press the button 4 for calls to intercom CT4.
- From intercom CT4 (internal address 004) press the button 2 for calls to intercom CT1.



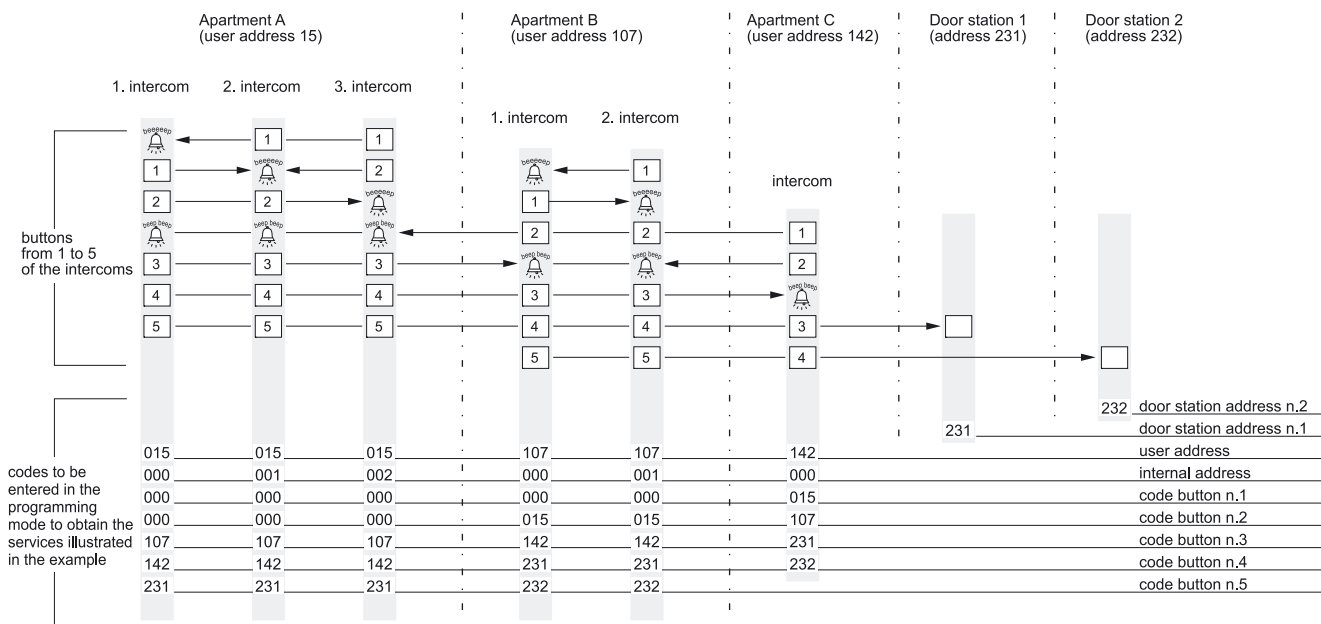
## INTERNAL STATIONS

### Example of operation for buttons P1 ÷ P5 of intercoms with programming

#### a) Apartment with 6 intercommunicating intercoms and address user 15



#### b) Three apartments (A, B and C) with intercommunicating function and possibility to enable two external door stations from the internal station



#### Button management

##### Apartment A (3 parallel intercoms)

Buttons 1 and 2: internal intercommunicating calls  
 Button 3: call apartment B (107)  
 Button 4: call apartment C (142)  
 Button 5: enable external door station 1

##### Apartment B (2 parallel intercoms)

Button 1: internal intercommunicating calls  
 Button 2: call apartment A (15)  
 Button 3: call apartment C (142)  
 Button 4: enable external door station 1  
 Button 5: enable external door station 2

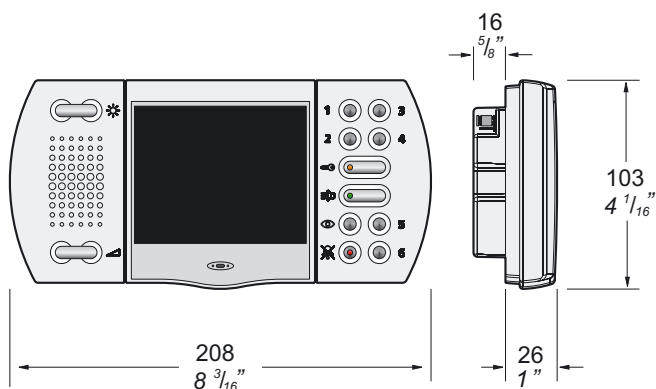
##### Apartment C (1 intercom)

Button 1: call apartment A (15)  
 Button 2: call apartment B (107)  
 Button 3: enable external door station 1  
 Button 4: enable external door station 2  
 Button 5: not used



## INTERNAL STATIONS

### VIDEOINTERCOMS WITH INTEGRATED DECODER



**EH9262CT. Hands Free Colour Video Intercom** with audio-video privacy, 4 types of calls, 14 differentiated programmable ring tones, audio, contrast, and brightness adjustment. Metallized grey colour. Complete with 10 keys for turn-on test function, door lock opening, intercom calls and miscellaneous services. It can be installed on the wall by using the back box art.**9083** or wall adaptor **WA9100T**.

**EH9262CW. Hands-free videointercom** with same features as above, in white colour finish. It can be installed on the wall by using the back box art.**9083** or wall adaptor **WA9100W**.

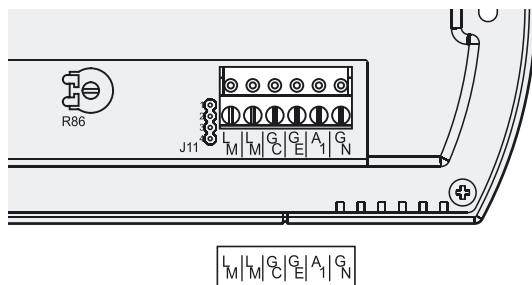
#### Technical characteristics

Power supply directly from the line	7mA
Stand-by current:	0.4A
Operating current:	0.4A
Screen:	3.5" LCD
Television standard:	PAL
Horizontal frequency:	15625Hz
Vertical frequency:	50Hz
Band width:	>5MHz
Starting up time:	1 second
Number of bell rings:	1÷4 (programmable)
Number of programmable bells:	14
Operating temperature:	0° ÷ +50°C
Maximum admissible humidity:	90%RH

#### Terminals

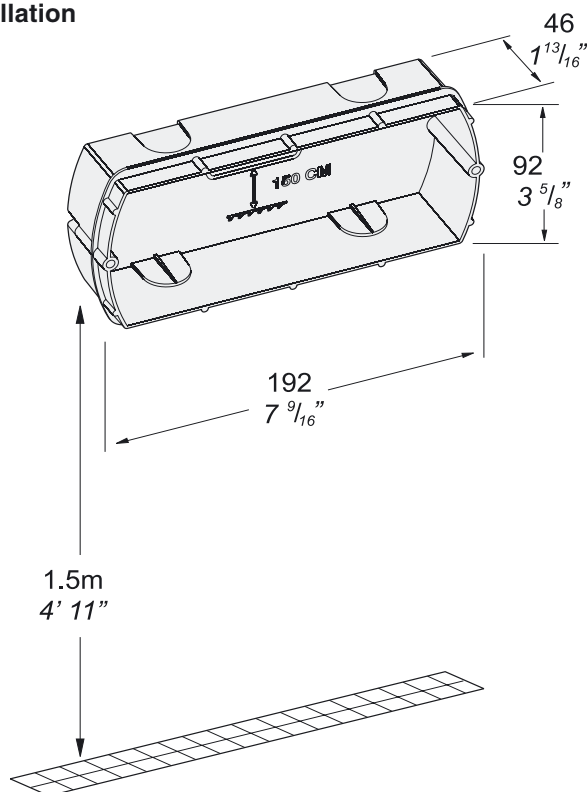
##### LM/LM Line inputs

- A1** Floor call positive input
- GN** Floor call negative input
- GC** Positive output for additional functions
- GE** Negative output for additional functions

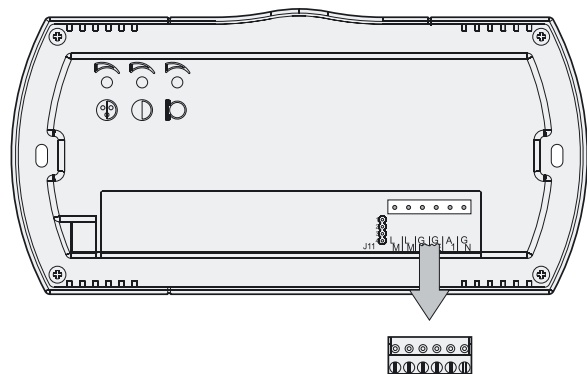


**9083. Back-box** for video intercoms **EH9262CT** and **EH9262CW**.

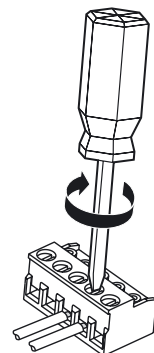
### Installation



- 1 - Wall-up the back box art.**9083** at an height of about 1.5 meters above the floor.



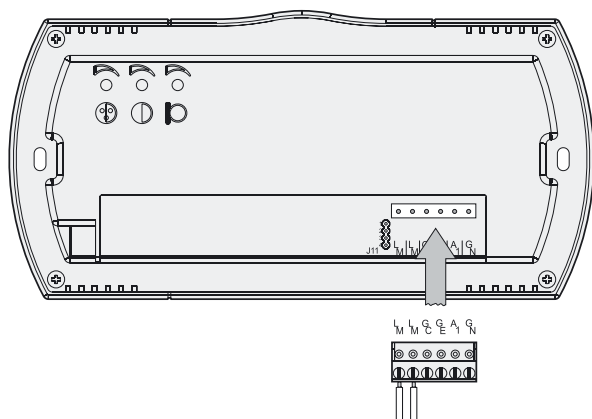
- 2 - Unplug the terminal block from the video intercom.



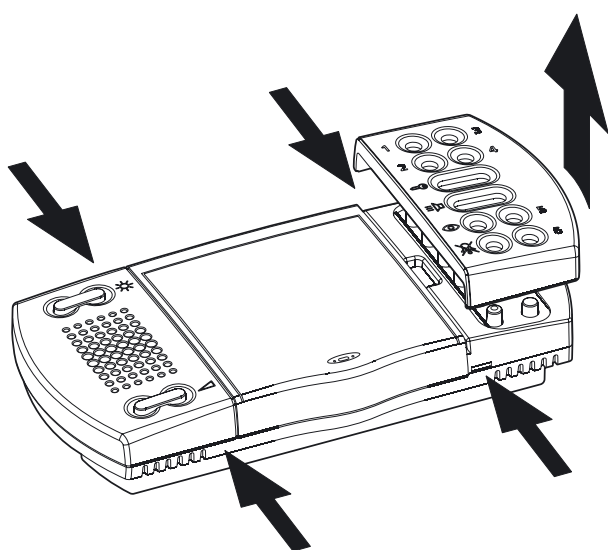
- 3 - Make the connections as required by the electric diagram to wire.



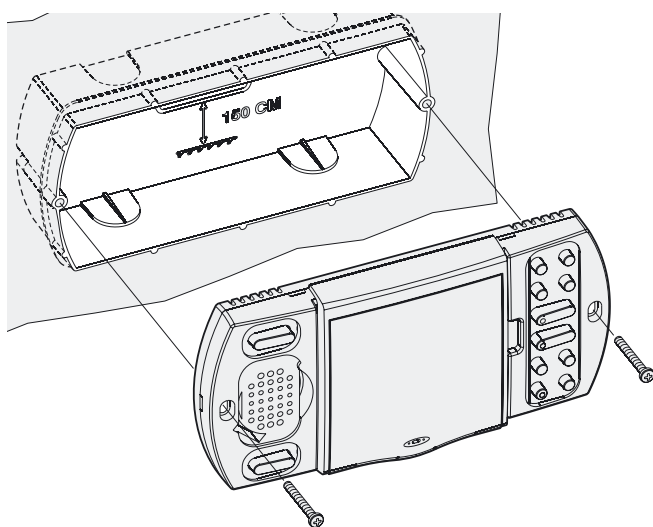
## INTERNAL STATIONS



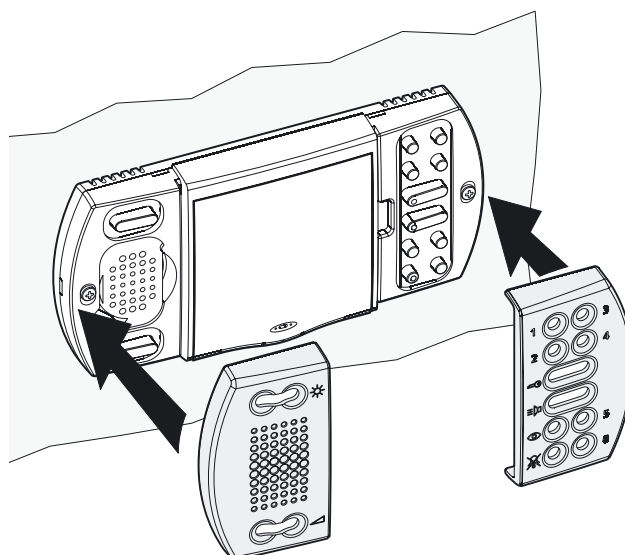
4 - Plug-in back the terminal block on the video intercom.



5 - Remove the two frontal plastic frames to approach the two fixing points of the video intercom.



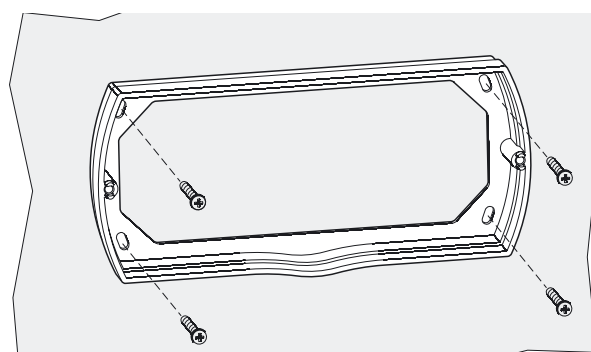
6 - Fix the video intercom to the back box using the two screws supplied with the product.



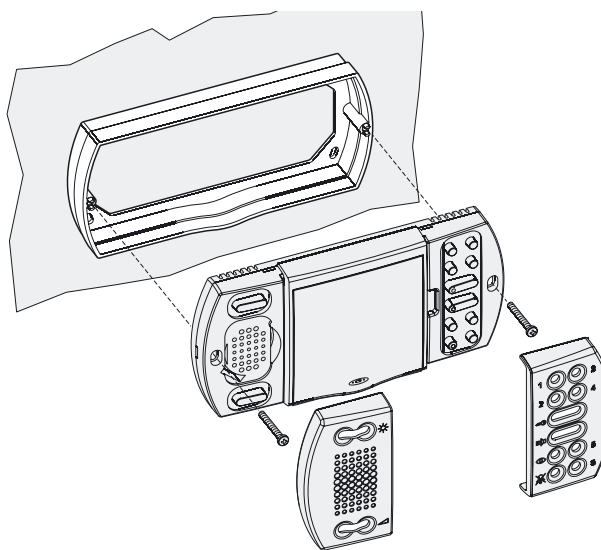
7 - Re-insert the two frontal plastic frames to the video intercom.

**WA9100T.** Wall adaptor for the EH9262CT video intercom.

**WA9100W.** Wall adaptor for the EH9262CW video intercom.



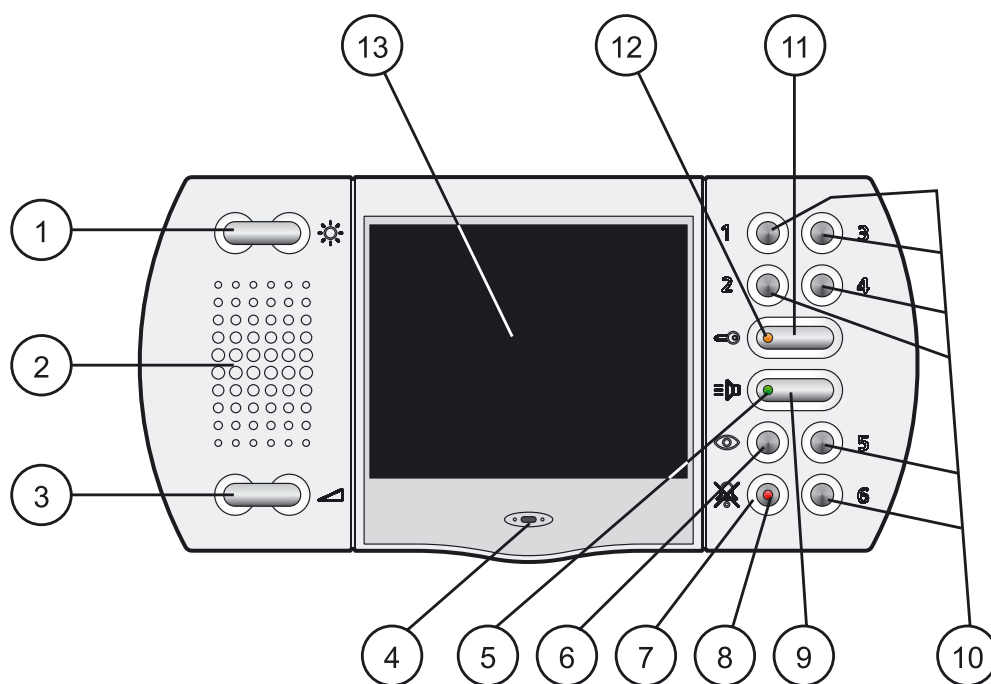
1 - Fix the adaptor to the wall with 4 expansion plugs at approx. 1.5m from the floor.



6 - Fix the video intercom to the wall adaptor using the two screws supplied with the product.



## INTERNAL STATIONS



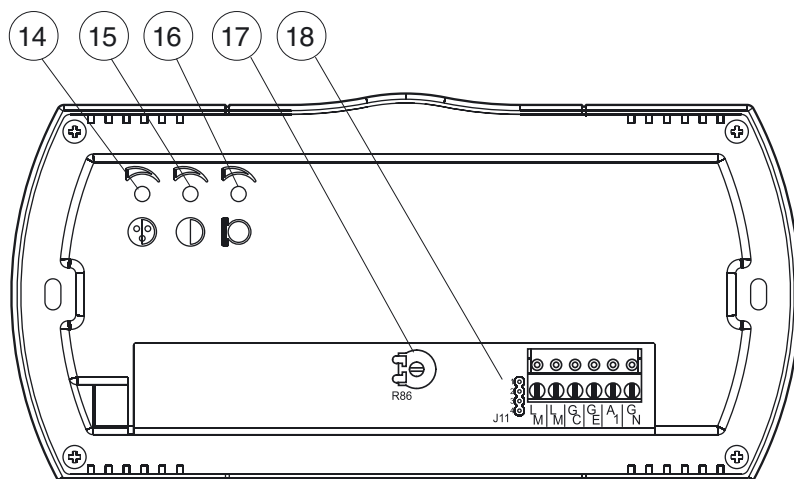
### Characteristics

- ① Image **brightness** adjustment ☀.
- ② **Loudspeaker**. It allows to hear the conversation and to receive the calls from the external door station or from floor.
- ③ Call and communication **volume** adjustment ▲.
- ④ **Microphone**. It allows to talk with the door station.
- ⑤ **Green LED**. The LED shows:
  - a communication in progress when it lights up continuously;
  - an incoming call when flashing.
- ⑥ **Control switching ON** button 👁. It allows to power ON the video intercom and monitoring the entrance.
- ⑦ **Mute** button ✖. It allows to:
  - **enable/disable the audio** (microphone) to the door station during a conversation;
  - **enable/disable the bell rings** if pressed for less than 4 seconds;
  - **enter in the programming mode** if pressed for more than 4 seconds.
- ⑧ **Red LED**. The LED shows:
  - temporary disabling of audio when it continuously lights-up. If audio is enabled again the LED recover the previous operating mode;
  - bell rings disabling when the LED slowly flashes;
  - the videointercom is in the select programming operation mode when the LED

it is continuously lit-up;  
- the videointercom is in the programming operation mode when the LED quickly flashes.

- ⑨ **Audio communication** button ≡🔊. It allows to enable the audio communication with the door station. The audio communication is end pressing again the button or if the communication time expires.
- ⑩ Buttons **1, 2, 3, 4, 5** and **6** are available for supplementary services.
- ⑪ **Door lock** 🚪 button. It allows to actuate the electric door lock with the videointercom ON.


- ⑫ **Orange LED**. Signalling for "main door left open" or other services. To achieve this feature it is necessary to have on the installation one or more actuators art. 2281 properly connected.
- ⑬ **3.5" Colour LCD Display**.
- ⑭ **Colour adjustment** 🎨.
- ⑮ **Contrast adjustment** 🔍.
- ⑯ **Microphone volume adjustment** 🔊.
- ⑰ **Microphone sensitivity adjustment (R86)**.
- ⑱ **Jumpers** to select the matching impedance of the video signal (J11).





## ADJUSTMENTS

### Brightness adjustment.

With the videointercom switched ON, press left and right the button  to adjust the brightness of the image.



### Colour and Contrast adjustment.

The trimmers are located on the back of the videointercom and can be operated by means of a small screwdriver.

To adjust the trimmers is required:




- dismount the videointercom from the wall to accede to the adjustment points;
- power ON the videointercom;
- insert the screwdriver in the hole marked with the symbol of the adjustment required;
- rotate the screwdriver clock or anti-clock wise to find the desired image quality;
- fix again the video intercom to the wall.

### Enabling, disabling and level of the ringing sound.

When the videointercom is switched-OFF, it is possible to adjust the level of the ringing sound pressing left and right the button . To disable the ringing sound it is necessary to press momentarily the button ; the red LED flashes during the call and the conversation.

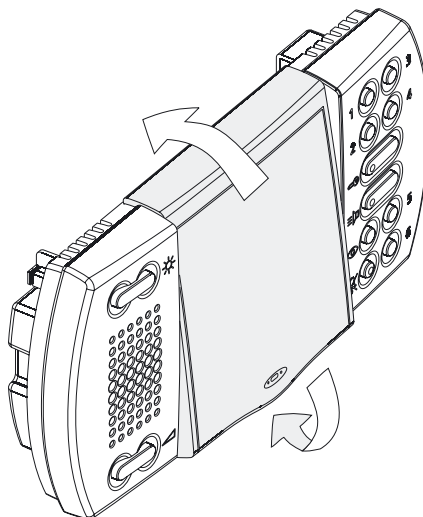
The status (enabled or disabled) and the level of the ringing sound are stored and they are used for next calls.

### Setting of the audio level

- During a conversation with the external door station or with an other intercommunicating video door phone it would be possible to adjust the loudspeaker's volume pressing to one side the button ; selected audio level is automatically stored and used for next conversations.
- If the communication the audio is intermittent or distorted it is advisable to adjust the microphone sensitivity by acting on the trimmer **R86** located on the back of the videointercom.
- In case of incorrect automatic switching of the videointercom between talk and listening function decrease the level of the preferred function and increase the other one by acting on the button  or on the trimmer  of the videointercom.

### Display adjustment

To optimize the angle of view of the display it can be adjusted up and down for about 15°.



### Selecting the closing impedance

Echos videointercoms are provided on the back with a jumper **J11** that, when set in the correct position, readjusts the signal coming from the riser to ensure the correct operation of the connected systems.

#### J11 Jumper to select impedance termination line



1-2 open line



2-3 termination 15Ω



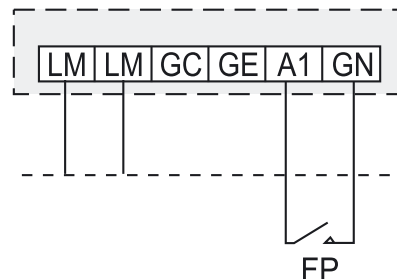
3-4 termination 100Ω (default)

## Additional functions

### Call floor

To receive a floor call you must connect a button (FP) between terminals **A1** and **GN** of the videointercom.

When the button FP is pressed, the videointercom speaker will receive a call different from calls from the external stations. The call is received also if the videointercom is in conversation.



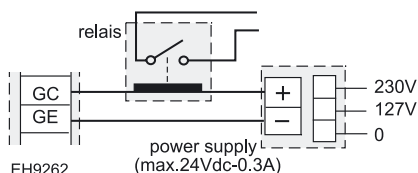
### Open door signal or other functions

To have a "main door left open" signalling or other similar services it is necessary to connect on the installation an actuator art.2281 (see page 75).

When the contact is closed orange LED lights-ON if the actuator has been correctly programmed.

### Call repeater

Connecting equipments as shown in the following diagram, it is possible to repeat the call in other places of the apartment.



## INTERNAL STATIONS

### PROGRAMMING

The videointercom must be suitably programmed for operation.

Two programming modes are available:

- **automatic** (quick programming of user code acting from external station);
- **manual** (programming of all videointercom functions)

The following programming is possible:

- **user address**;
- **internal address**;
- **address to assign to button** "☺"; maximum 4 addresses of external door stations;
- **code to assign to buttons** "1", "2", "3", "4", "5" and "6" to make intercom calls, door station monitoring or for special services;
- **call timing** (max 4 rings) for 4 different call melodies (see table 1);
- **selection of the call melody** for 4 different call melodies (see table 1).

#### Factory setting

- **user address** = 100
- **internal address** = 000
- **buttons** "☺", "1", "2", "3", "4", "5", "6" = no codes are stored to the buttons
- **number of call rings and call melody** (see table 1)

**Table 1.**  
**Factory setting for calls**

Calls	Number of rings	Type of melody
from door station	1	Din-Don
intercommunicating	4	Dring 1
from other users	4	Dring 2
floor (local)	1	Dring 3

**Attention:** it is mandatory to program the equipment only with the user code (address) all other programming are optional.

#### Enter the programming mode

Keep pressed the button ☒ for more than 4 seconds; an acknowledge tone will be shortly heard while red LED will lights-ON for all programming phase. If for 2 minutes no keys are pressed, system switches back to the operating mode.

#### Automatic programming

You can use the automatic programming mode to save the videointercom address from the external station. To enter the automatic programming mode you must:

- **enter the programming mode** following the instructions described in "Enter the programming mode";
- **keep pressed the button** ☒ for more than 4 seconds; red LED starts flashing;
- **make a call from an external station within**

**2 minutes.** In case of installations with digital push-button keyboard TD2100, key in the number you want to assign to the videointercom and press "☒". In case of installations with digital encoder CD2131÷CD2138 press the button you want to assign to the user on the push-button keyboard. When the call is received, the videointercom is programmed automatically, you hear the call tone in the loudspeaker and the videointercom is turned on, showing the calling external station. Press the button ☒ to start the conversation with the external door station and verify the correct working mode of the equipment; programming mode is signalled on the external door station by an acknowledge tone if accepted or a dissuasion tone if rejected;

- repeat programming phases for all the videointercoms connected to the system.

#### Manual programming

The manual programming mode allows you to enter the user address, assign the internal address and codes to numerical buttons (from 1 to 6) and "☺".

**Using the push-buttons for programming**  
Press button "☒", "☺" and "1" to enter addresses or codes.

☒: Press this button to **confirm address or code programming or go to the next programming step.**

☺: Press this button to **confirm the digit just dialled** and to proceed to enter next digit in the following order: hundreds +☺, tens +☺, units +☺.

1: Press this button to **increase the value you want to enter.** Press the button for a number of times equal to the digit you want to enter (digit 1 = 1 time; digit 9 = 9 times; digit 0 = 10 times button "1").

#### Entering codes or addresses

- Codes and/or addresses must have three digits (hundreds, tens, units); codes and/or addresses with tens and units or units only must be completed by adding zeros. For example, address 96 will become 096 and address 5 will become 005.

- Digits must be entered individually (beginning from the hundred), by pressing the button "1" for a number of times "n", where "n" is the value of the digit you want to enter. Store the digit pressing the button "☺"; a tone will confirm the acquisition of the 1<sup>st</sup> digit.

- Follow the same procedure to store the 2<sup>nd</sup> and 3<sup>rd</sup> digit.

For example, to enter code 096 you must:

- press button "1" 10 times to enter digit 0 and press the button "☺"; you will get a tone on the loudspeaker;
- press button "1" 9 times to enter digit 9 and press the button "☺"; you will get a tone on the loudspeaker;

- press button "1" 6 times to enter digit 6 and press the button "☺"; you will get a tone on the loudspeaker.

#### Programming of the user address and internal address

- **User address** – this code allows you to receive an external call, turn on the videointercom, have a conversation and open the door at the calling external station.
- **Internal address** – these codes are used to identify the videointercoms installed in the apartment (max. 7). In case of one videointercom only, the internal code must be 000 (default value); if other videointercoms are present (max. other 6) you must assign to them the codes 001, 002, 003 etc. Programming these addresses all the videointercoms will ring-UP when receiving an external, intercommunicating or floor (local) call (if programmed - see page 18).

To program the **user address** and **internal address** it is necessary to:

- **enter the programming mode** following the instructions described in "Enter the programming mode";
- keep pressed the button ☒ for more than 4 seconds; red LED starts flashing;
- enter the 3 digit of the **user address** following the procedure reported on the paragraph "Entering codes or addresses";
- press the button ☒ to confirm the present phase and move to the next phase which is: programming of the **internal address**; an acknowledge tone will be heard;
- enter the 3 digit of the **internal address** following the procedure reported on the paragraph "Entering codes or addresses";
- press the button ☒ to confirm; an acknowledge tone will be heard and the red LED lights-ON continuously;
- proceed with another programming phase or exit the programming mode pressing button ☒ or ☒.

**Note.** If one of the two above mentioned addresses is already correctly programmed and you don't want to program it again it would be possible to skip its programming by simply pressing button ☒.

#### Programming address to be stored to each button

**Button "☺".** To this button can be stored the addresses of maximum 4 external stations which can be connected sequentially. In this way the user can monitor, communicate or open the door of 4 different external stations without being called from them but simply pressing several times the button ☺.

**In the case of a system with only 1 external door station it isn't necessary**



to store any address because it will be acquired automatically at the first call.

To make the programming it necessary to:

- enter the programming mode following the instructions described in "Enter the programming mode";
- keep pressed the button "☺" for more than 4 seconds; red LED starts flashing;
- enter the 3 digit of the address of the 1st external door station to be stored (codes from 231 to 250) following the procedure reported on the paragraph "Entering codes or addresses";
- press the button "☺" to confirm the present address move to the 2nd one; an acknowledge tone will be heard;
- enter the 3 digit of the address of the 2nd external door station and confirm by pressing button "☺";
- proceed entering the addresses of the 3rd and 4th external stations (if present) or exit the present programming phase pressing several times the button "☺", you will be back to selecting programming mode;
- proceed with another programming or exit programming mode by pressing button "X" or "☺".

**Note:** store only the addresses of the external door stations to which the user can be connected. Don't store the addresses of external door stations belonging to different buildings even if in the same installation.

## Buttons 1,2,3,4,5 and 6.

These buttons can be used to:

- make intercommunicating calls;
  - to call users of different apartments it is necessary to store in each button of your monitor the address of the user you wish to call pressing that button (codes from 001 to 200).
  - to call other videointercoms installed in the same apartment (local intercommunicating service), it is necessary to store in the buttons 1,2,3,4,5,6 of each monitor always the code 000; start from button 1 and go on until you have programmed, with the code 000, as many buttons as are the videointercoms installed in the apartment (max 6 units)

you wish to call; automatically by pressing buttons 1,2,3,4,5 of one unit you will call the unit whose internal address is related to the pressed button according to table 2.

**Table 2.**  
Addresses for intercommunicating calls

Internal address	Button to press					
	1	2	3	4	5	6
000	001	002	003	004	005	006
001	000	002	003	004	005	006
002	000	001	003	004	005	006
003	000	001	002	004	005	006
004	000	001	002	003	005	006
005	000	001	002	003	004	006
006	000	001	002	003	004	005

For example if you press the button 3 from the videointercom whose intercommunicating address is 002 you will call the intercommunicating user 003.

- monitoring external door stations (it is suggested to use button "☺" to monitor the 1st external door station) to enable this feature store the address of the external door station (codes from 231 to 250).
- optional functions operated by means of the actuators art.2281; to enable this functions store the address of the actuator to be operated (codes from 211 to 220).

To make the programming it is necessary:

- enter the programming mode following the instructions described in "Enter the programming mode";
- a - keep pressed for more than 4 seconds the button you wish to program; red LED starts flashing;
- b - enter the 3 digit of the code of the desired function following the procedure reported on the paragraph "Entering codes or addresses";
- c - press the button "☺"; an acknowledge tone will be heard and the red LED lights-ON continuously;
- repeat phases a-b-c to program the other buttons or exit the programming mode pressing button "X" or "☺"; red LED turns-OFF.

## Notes.

- In each button can be stored only one code.
- Intercom conversations or connections with users and external stations of other buildings

will not be possible if digital exchanger art.2273 is installed.

## Programming the number of ringing call

- enter the programming mode following the instructions described in "Enter the programming mode";
- a - press button "☺"; only one ring will be heard;
- b - to press left and right the button "☺" to respectively increase or decrease the number of rings. After each pressure of the button the selected number of rings will be heard;
- c - press one of the buttons (1,2,3 or 4) to select the type of call you wish to change (see table 3);
- if it's required to modify the number of ringing call of another type of call, repeat points a-b-c;
- proceed with other programming phases or exit the programming mode pressing the button "X" or "☺"; red LED turns-OFF.

## Programming a melody for a call type

- enter the programming mode following the instructions described in "Enter the programming mode";
- a - press the button "☺"; the melody actually programmed will be heard;
- b - to push laterally (left or right side) the "☺" button to select the previous or next ringer tone;
- c - press one of the button 1,2,3 or 4 to select the type of call to modify (see table 3);
- if it is required to modify the melody of another type of call, repeat the points a-b-c;
- exit the programming mode pressing the button "X" or "☺"; red LED turns-OFF.

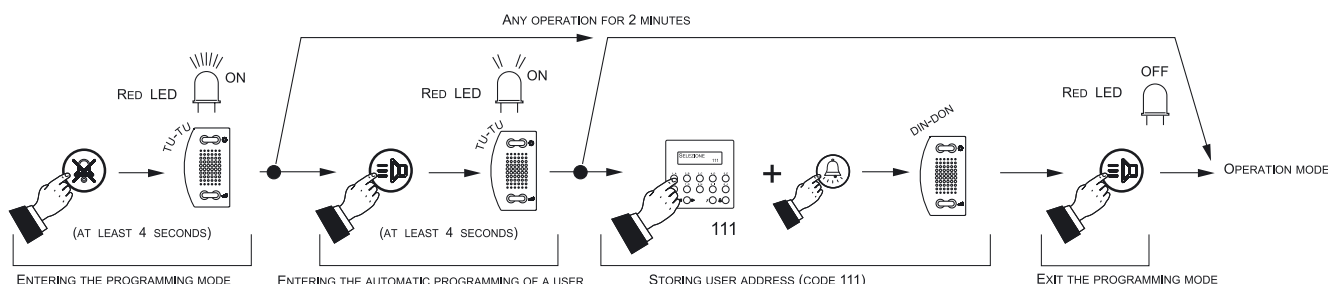
**Table 3.**  
Buttons to programming the type of call

Button	Type of call
1	from external door station
2	from other users
3	intercommunicating
4	floor (local)

## Exit the programming phase

In any situation it is possible to exit the programming mode by pressing the button "X" or "☺".

## Example of automatic programming of a user address (code 111)



## INTERNAL STATIONS

### More programming operations for specific functions

#### How to program secondary addresses

(additional programming operation that does not depend on the programming operations of user and internal station addresses)

The following programming operation allows you to save 4 additional user addresses on the same videointercom (i.e.: exchanger function, videointercom installed in common area with multiple users, etc.)

To make the programming it is necessary:

- enter the **programming mode** following the instructions described in "Enter the programming mode";
- keep pressed the button "⌘" (right side) for more than 4 seconds; red LED starts flashing;
- enter the 3 digit of the **1st user address** (codes from 1 to 200) following the procedure reported on the paragraph "Entering codes or addresses";
- press the button "⬅" to confirm the present address and move to the 2nd user address; an acknowledge tone will be heard;
- enter the 3 digit of the **2nd user address** and confirm by pressing button "⬅";
- proceed entering the 3rd and 4th address consumer (if necessary) or to press twice the button "⬅" to pass to the insertion of the common inside address;

- enter the 3 digit that compose the **inside address common** to the 4 new user addresses (codes from 000 to 007) following the procedure of the paragraph "Entering codes or addresses".

*Note:* the internal address has to be unique and different from you address him inside eventually programmed on other videointercoms and/or intercoms that has the same user address;

- to press "⬅" to confirm and to return of choice of programming; an acknowledge tone will be heard and the red LED lights-ON continuously;
- proceed with another programming or exit programming mode by pressing button "⌘" or "⏏".

*Note:* If you want to make intercom calls, you must program the call buttons with the codes of the users you want to call.

#### Examples

Programming of three videointercoms (VC101, VC102 and VC103), with one intercom with reception of all three external calls (VC103).

- a) programming with direct switch-on of videointercoms upon their own call. Videointercom 103 will receive all calls, but will switch on only upon its own call.

VC101. User address = 101; internal address = 000

VC102. User address = 102; internal address = 000

VC103. User address = 103; internal address = 000; programming secondary addresses = 101⬅102⬅⬅⬅001⬅

- b) programming with direct switch-on of videointercom 103 only upon any call. The other two videointercoms will receive the call, but will stay off. Press the button "⏏" to switch them on. In this case the intercom service is not possible.

VC101. User address = 101; internal address = 001

VC102. User address = 102; internal address = 001

VC103. User address = 103; internal address = 000; programming secondary addresses = 101⬅102⬅⬅⬅000⬅

#### System programming

The following programming allows you to personalise the operation mode of button "⌘" used to deactivate the ring tones and the GC-GE terminals and send the floor call to the systems with the same user address (internal stations in parallel). See table 4.

To make the programming it is necessary:

- enter the **programming mode** following the instructions described in "Enter the programming mode";

- keep pressed the button "⌘" (right side) for more than 4 seconds; red LED starts flashing;
- press the key "⏏" and/or "1" eight times according to the desired programming;
- press "⬅" to confirm and return to programming selection; you will hear the confirmation tone and the red LED will turn on and stay on;
- proceed with another programming or exit programming mode by pressing button "⌘"

or "⏏".

#### Example

To activate the function illustrated in table 4 for **bits 0 and 2** and deactivate it for the **other bits**, press the following buttons in a sequence:

1 ⏏ 1 ⏏ ⏏ ⏏ ⏏ ⏏ ⏏ ⏏

Table 4 - Table of system programming codes

Programming code	Function description	Default value	Value entered with buttons	
			⏏ = 0	1 = 1
bit 0	send floor call to other internal stations in parallel (1)	NO	NO	YES
bit 1	button "⌘" deactivates all ring tones (2)	NO	NO	YES
bit 2	button "⌘" deactivates all ring tones and button tones (2)	NO	NO	YES
bit 3	button "⌘" does not deactivate ring tones and button tones (2)	NO	NO	YES
bit 4	reserved	NO	NO	-
bit 5	the GC-GE terminals are activated upon call from external door station (3)	NO	NO	YES
bit 6	the GC-GE terminals are activated upon intercom call (3)	NO	NO	YES
bit 7	reserved	NO	NO	-

- (1) From the internal station connected to the floor call button FP and with programming value 1 for bit 0 the floor call is also sent to the other systems in parallel.
- (2) If bits 1, 2 and 3 are programmed with value 0 (NO), press the button "⌘", without a conversation in progress, to deactivate the external and intercom ring tones.
- (3) If bits 5 and 6 are programmed with value 0 (NO), the GC and GE terminals are activated to send the calls.





## OPERATION

### Call from the door station

When a call is made from the external station, the videointercom speaker receives the rings (according to programming), the green LED starts flashing and the calling user is displayed on the screen for around 30 seconds. Also the red LED flashes if the ring has been deactivated. If the call time has expired and the videointercom has turned OFF, press the button "☺" to reconnect with the calling external station.

To start the conversation with the external station for once of around 90 seconds, press the button "☺"; the green LED goes ON.

If it is desired to disable the audio to the door station, but continuing hearing the audio from the door station press shortly the button "X"; in this status the red LED will light up continuously. To restore the audio to the door station press again the button "X"; the red LED will recover the previous status.

In case of a call to a user with more than one videointercom in parallel installed in the apartment, all the videointercom will ring, but only the videointercom with internal address 000 will turn ON. You can answer from this videointercom by following the instructions above. From others videointercoms it is possible to answer by pressing button "☺".

This operation will automatically turn ON this videointercom and will turn OFF the intercom that had been turned ON before. If, before answering, you wish display who is ringing, press the button "☺" and then the button "☺". To operate the electric door lock release press the button "☺".

To end the communication and switch OFF the video intercom press the button "☺"; the green LED goes OFF.

The video intercom switches OFF automatically when the communication time expires.

### Monitor function and connection with one or more external stations.

With the system in stand-by and no conversation in progress, it would be possible to monitor the external door stations by pressing on the videointercom the button "☺" or the other buttons previously programmed for this function.

If the installation includes more external stations and button "☺" is programmed correctly, you can monitor the external stations (max. 4) in sequence by pressing the same button again and again.

The videointercom will be turned ON for about 30 seconds. The monitoring will be interrupted in case of request of monitor service by another user, call between users or from an external station.

Pressing the button "☺" while monitoring, automatically the communication with the external door stations is enabled.

If after pressing the button "☺" the monitor remains switched-OFF and a busy tone is heard, another conversation is in progress and it is necessary to wait until the system becomes free.

### Making or receiving a call from another user.

When the installation is in stand-by, you can make a call to another user. You must have stored the address of the desired user's in the numerical buttons.

Before making a call press the button "☺"; if you get a busy tone, wait until the system becomes free; if you get a free tone it is possible to make a call by pressing the proper button. After pressing the button you will get a calling tone on the loudspeaker, while the videointercom of the called user rings (without switching-ON) with the programmed melody. If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

### Making or receiving an intercom call in your apartment.

When the system is in stand-by it would be possible to make a local intercommunicating call to all the videointercoms installed in the apartment (max 7 monitors with internal address from 000 to 006) by pressing buttons previously programmed with code 000.

Before making the internal call press the button "☺", if you get a busy tone wait until the system becomes free; if you get a free tone it is possible to make an internal call by pressing the proper button. After pressing the button you will get a calling tone on the loudspeaker, while the videointercom of the called user rings (without switching-ON) with the programmed melody. If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

## Tone table

**Tone of pressure of a button.** It is activated to indicate the pressure of the buttons.



**Monitor function.** Activated on monitor function and confirmation of programming value



**Communication.** Activated on button "☺" pressure, during the conversation, programming and attended answer



**Activation.** Activated on button "☺" pressure and numerical buttons if programmed with actuator address



**Programming.** It confirms the beginning of the programming mode



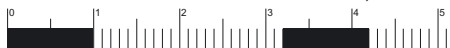
**Acknowledge.** It is activated during the programming phase to indicate a valid operation.



**System ready.** Activated for 30 seconds if the system is free



**Calling.** It is activated during a call to another user or during an intercommunicating call (active for 30 seconds or until the called user answers).



**Busy.** Activated on pressure of the buttons with busy line



**Dissuasion.** It is activated when a non-existent device is call or when a device is not available



**End conversation.** It is activated 10 seconds before the conversation time ends



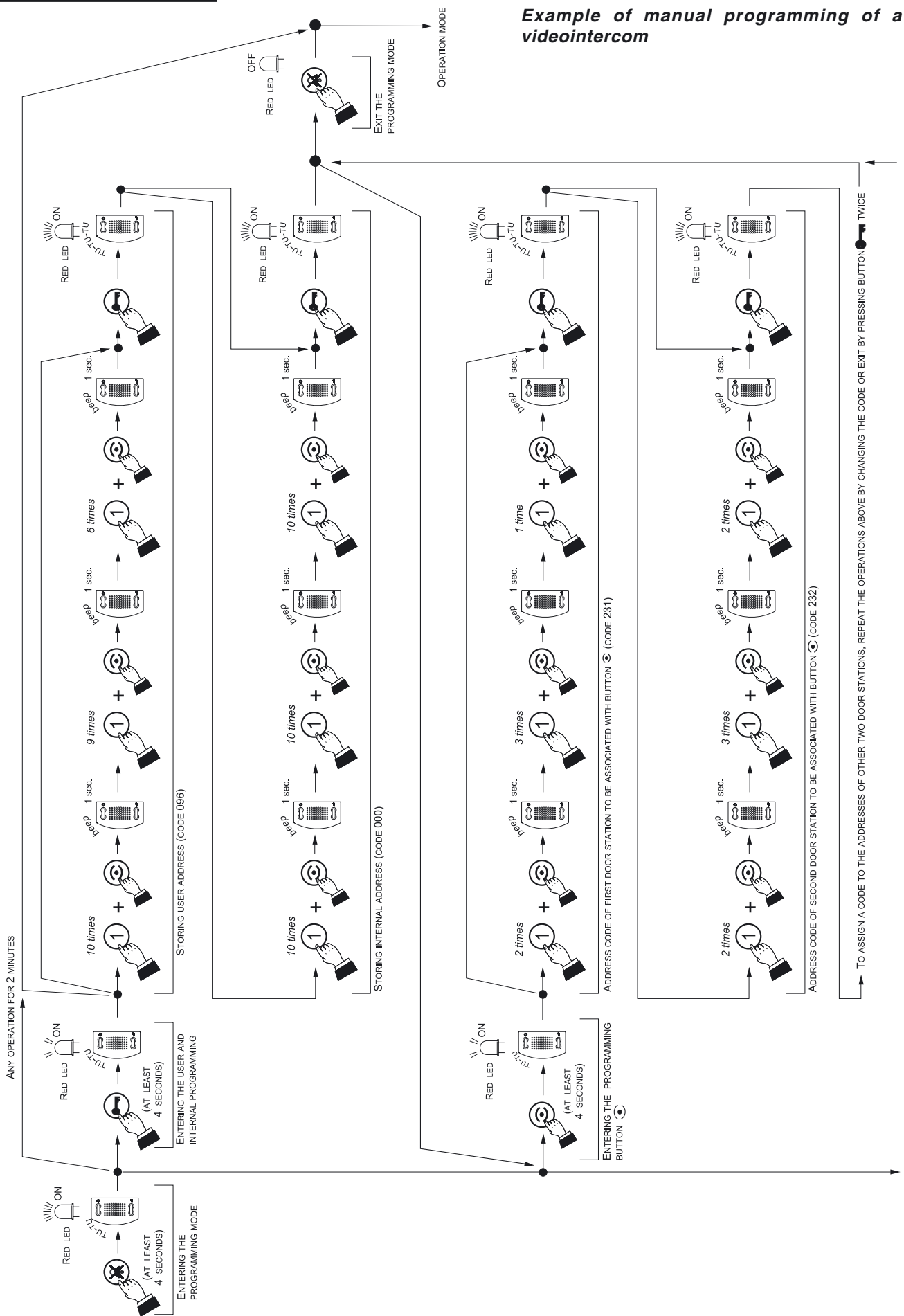
**Note.** All the acoustic signalling, with the exception of the system ready and calling tone, last after about 2 seconds.

## Calling table

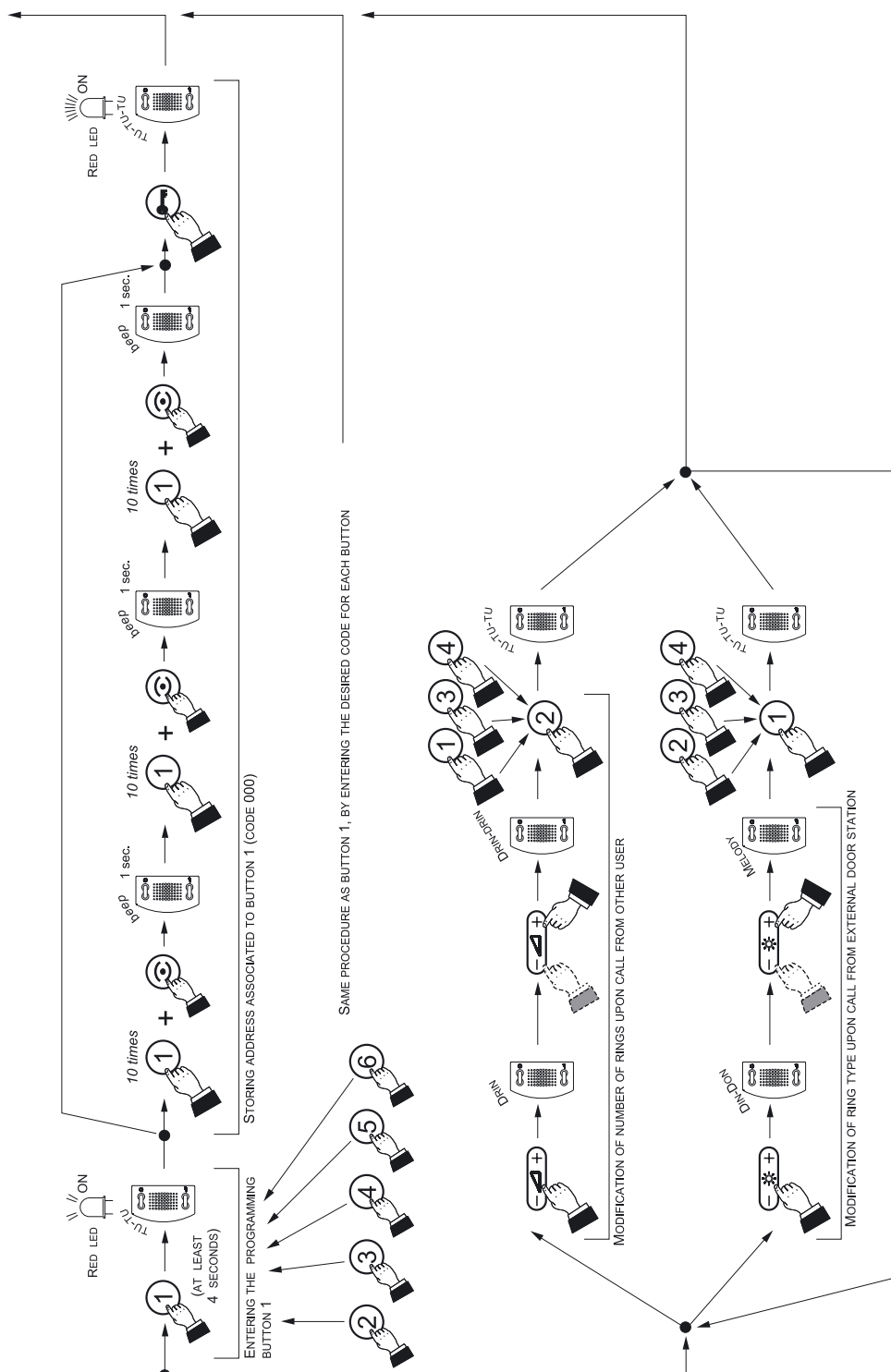
1	DIN-DON	9	MELODY4
2	DRING1	10	MELODY5
3	DRING2	11	MELODY6
4	DRING3	12	MELODY7
5	DRING4	13	MELODY8
6	MELODY1	14	BEEP
7	MELODY2		
8	MELODY3		



## INTERNAL STATIONS







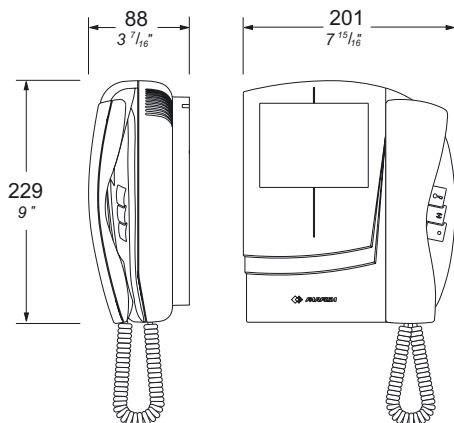
**Example of manual programming of videointercom connected to 4 external door stations, intercom call in own apartment with other 3 videointercoms, intercom call with other 2 extensions and activation of actuator for supplementary services.**

0	9	6	+	0	0	0	+	2	3	1	•	2	3	2	+	2	3	3	+	2	3	4	•	0	0	0	•	0	0	0	•	0	0	0	•	0	9	7	•	1	2	5	•	2	1	1					
user address (mandatory)												1st address for button 1				2nd address for button 2				3rd address for button 3				4th address for button 4				address for button 1				address for button 2				address for button 3				address for button 4				address for button 5				address for button 6			
_____ (optional programming - these codes can be stored only with the manual programming procedure) _____																																																			

**Note.** The example refers to an apartment with 4 videointercoms in parallel with intercom service. To allow for the individual intercom call between videointercoms the internal station address must be changed in the other 3 videointercoms by entering the following numbers (intercom 2 001, intercom 3 002 and intercom 4 003)

## INTERNAL STATIONS

### VIDEOINTERCOMS WITH INTEGRATED DECODER



**KM8262W.** White flat tube videointercom with audio-video privacy, electronic microphone, modulated electronic ringing sounds, terminal board for the connection to the wall-bracket and 3 push-buttons for door lock release, control switch ON and additional functions. It can be installed on the wall (with no built-in) by using the wall-bracket **WB8262**..

**KM8262CW.** Version with 4" colour LCD.

**WB8262.** The wall bracket for the **KM8262W** videointercom includes a terminal board for connection to the system.

**WB8262C.** The wall bracket for the **KM8262CW** videointercom.

#### Technical characteristics

Power supply directly from the line

Stand-by current

6 mA

Operating current

0.6A (KM8262W)

0.4A (KM8262CW)

Screen

4" FLAT CRT or LCD

Starting up time

2 ÷ 4 sec.

Operating temperature

0° ÷ +50°C

Maximum admissible humidity

90%RH

#### Terminals

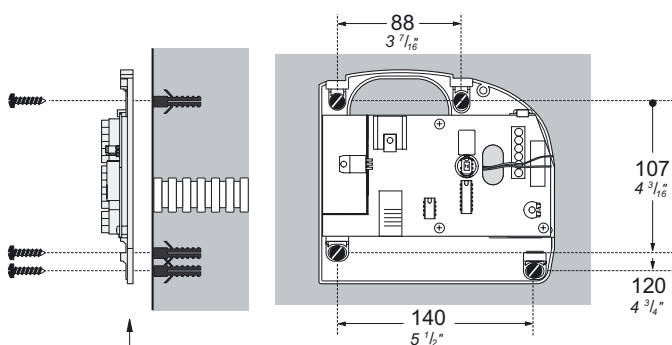
**LM/LM** Line inputs

**A1** Floor call positive input

**GN** Floor call negative input

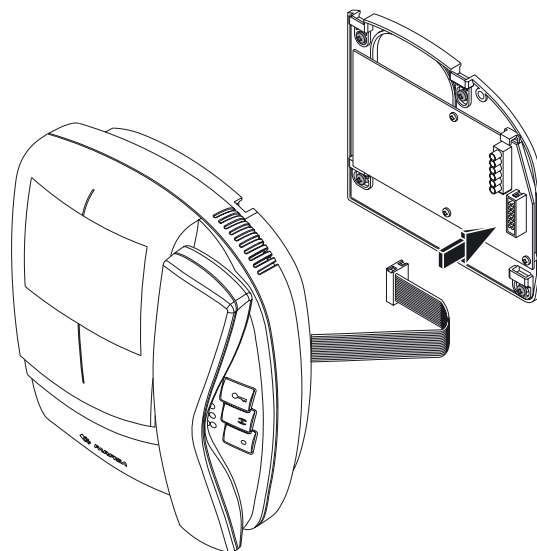
**GC** Positive output for additional functions

**GE** Negative output for additional functions

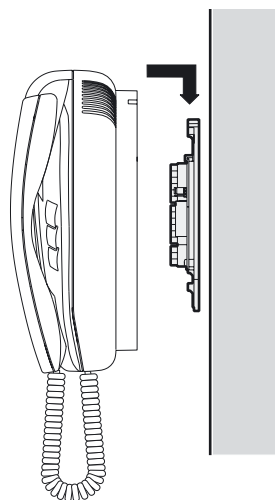


1.4 ÷ 1.5 m  
4' 7" ÷ 4' 11"

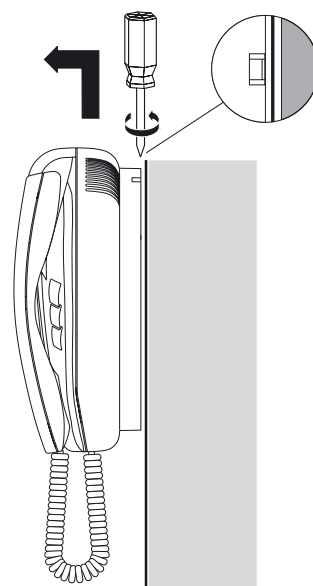
Measures for the installation of the wall bracket **WB8262** to the wall, and recommended height from the floor.



Plugging in of videointercom connectors to the terminal boards of wall bracket.



Installation of videointercom onto the wall bracket.



Installation of videointercom onto the wall bracket.



## Buttons

### Door open button

● **Monitor button.** This button can be associated with 4 addresses of external stations to monitor the entrances. When you press the button for the first time, the videointercom connects with the external station that called last. When you press the button again, the videointercom connects in sequence with the external stations whose addresses have been previously stored. If the installation has only one external station, the address does not need to be stored, since it will be automatically acquired upon the first call. If the installation has more than 4 external stations, you must select the 4 external stations you want to control. Of course, calls will be received from all the external stations (also more than 4) in the installation that are enabled to call according to the installation diagram.

● **Button for internal or intercom calls.** This button can be associated with the address of a digital actuator, the address another user in the building to make internal calls between two users or with code 000 to make intercom calls with other videointercoms or intercoms (maximum others 2) installed in the apartment. The videointercoms will ring simultaneously if not otherwise programmed.

## Programming

The videointercom must be suitably programmed for operation. Two programming modes are available:

- **automatic** (quick programming of user code acting from external station);
- **manual** (programming of all videointercom functions)

The following programming is possible:

- 1) **user address** (mandatory: the videointercom is programmed with address 100 by default);
- 2) **internal address** (optional: the videointercom is programmed with address 000 by default);
- 3) **address of external station 1 to assign to button "☺"** (optional: no code is associated to the button by default);
- 4) **address of external station 2 to assign to button "☺"** (optional: no code is associated to the button by default);
- 5) **address of external station 3 to assign to button "☺"** (optional: no code is associated to the button by default);
- 6) **address of external station 4 to assign to button "☺"** (optional: no code is associated to the button by default);
- 7) **code to assign to button "●"** to make intercom calls or for enable actuators (optional: no code is associated to the button by default).

## Using the push-button keyboard for programming

Press button "☺" and "●" to enter addresses or codes.

☺: Press this button to **access the programming mode** (when pressed for 4 seconds with off-hook handset), **confirm address or code programming or go to the next programming step.**

●: Press this button to **increase the value you want to enter.** Press the button for a number of times equal to the digit you want to enter (digit 1 = 1 time; digit 9 = 9 times; digit 0 = 10 times button "●").

Pressure of button "●" is confirmed by an acoustic tone.

## Entering the programming mode

To enter the programming mode you must:

- pick up the handset and leave it off-hook during the entire programming step;
- press button "☺" for at least 4 seconds until you receive the confirmation tone;
- start programming within 2 minutes, otherwise the videointercom returns to the "operation" mode.

## Entering codes or addresses

- Codes and/or addresses must have three digits (hundreds, tens, units); codes and/or addresses with tens and units or units only must be completed by adding zeros. For example, address 96 will become 096 and address 5 will become 005.
- Digits must be entered individually, by pressing the button "●" for a number of times "n", where "n" is the value of the digit you want to enter, followed by a pause of about 2 seconds before you go to the next digit (a tone in the handset will tell you when to go to the next digit). For example, to enter code 096 you must:
  - press button "●" 10 times to enter digit 0, wait for 2 seconds until you hear a sound in the handset.
  - press button "●" 9 times to enter digit 9, wait for 2 seconds until you hear a sound in the handset.
  - press button "●" 6 times to enter digit 6, wait for 2 seconds until you hear a sound in the handset.
  - press button "☺" to confirm entering and go to the next programming step. An acoustic tone in the handset will confirm that the code has been stored and you can go to the next step.

## Exiting the programming mode

You will automatically exit the programming mode after pressing button "☺" to confirm the 7th programming, i.e. "code to assign to button "●". You can also exit the programming mode at any time by hanging up the handset. Settings will not be saved if you exit the programming mode without confirming with button "☺".

You will also exit the programming mode automatically if you make a mistake or an

operation that is not permitted when entering a code. In this case, you must access the programming mode again to continue.

## Automatic programming

You can use the automatic programming mode to save the videointercom address from the external station.

## Automatic programming procedure

To enter the automatic programming mode you must:

- a) **enter the programming mode** following the instructions described in "Entering the programming mode";
- b) **make a call from an external station within 2 minutes.** In case of installations with digital push-button keyboard TD2100, key in the number you want to assign to the videointercom and press "☺". In case of installations with digital encoder CD2131÷CD2138 press the button you want to assign to the user on the push-button keyboard. When the call is received, the videointercom is programmed automatically, you hear the call tone in the handset and the videointercom is turned on, showing the calling external station. Close and pick up the handset to start a conversation with the external station and check the correct operation of the system;
- c) **at the end of the conversation hang up the handset** to exit the automatic programming mode.

## Manual programming

The manual programming mode allows you to enter the user address, assign the internal address and codes to buttons "☺" and "●".

## Manual programming procedure

To enter the manual programming mode you must:

- a) **enter the programming mode** following the instructions described in "Entering the programming mode";
- b) **program the following functions in sequence:**
  - 1) **User address** – this code allows you to receive an external call, turn on the videointercom, have a conversation and open the door at the calling external station. For information on address entering see "Entering codes or address".
  - 2) **Internal address** – these codes are used to identify the videointercoms installed in the apartment (max. 3). In case of one videointercom only, the internal code must be 000 (default value); if other videointercoms are present (max. others 2) you must assign codes 001 and 002 to them. By entering these codes, all videointercoms will ring when an intercom call is made; if you prefer not to activate the intercom ring in the third videointercom, you must assign code



## INTERNAL STATIONS

003 instead of 002. For information on code entering see **"Entering codes or addresses"**.

- 3) **Address of external station 1 associated with button "☺"** – address of external station 1 you want to connect with when button "☺" is pressed. If the installation only includes one external station, the address does not need to be stored, since it will be automatically acquired upon the first call.
- 4) **Address of external station 2 associated with button "☺"** – address of external station 2 you want to connect with when button "☺" is pressed. This code does not need to be saved if the installation does not include two external stations. For information on code entering see **"Entering codes or addresses"**.
- 5) **Address of external station 3 associated with button "☺"** – address of external station 3 you want to connect with when button "☺" is pressed. This code does not need to be saved if the installation does not include three external stations. For information on code entering see **"Entering codes or addresses"**.
- 6) **Address of external station 4 associated with button "☺"** – address of external station 4 you want to connect with when button "☺" is pressed. This code does not need to be saved if the installation does not include four external stations. For information on code entering see **"Entering codes or addresses"**.
- 7) **Address associated with button "●"**  
This button can be used for one of the following functions:
  - call to users of other apartments by entering the user address (from 001 to 200).
  - intercom calls between intercoms or videointercoms in the same apartment by entering code 000.
  - activation of one actuator 2281 (codes from 211 to 220).
 For information on code entering see **"Entering codes or addresses"**.

In **"Manual Programming"** mode the 7 steps above must be performed in sequence from step 1 to step 7. Each step must be confirmed by pressing button "☺". Press button "●" again if you want to skip a programming operation and go to the next one. For example, after you have programmed the **"user address"** (step 1) and confirmed it by pressing button "☺", you will automatically go to the **"internal**

**address"** (step 2)". If this setting is not necessary, press button "●" to skip it and go to **"address of external station 1 to be assigned to button ☺"** (step 3)". Now you can enter the code. Otherwise you can press button "●" 4 times to skip steps 3, 4, 5 and 6 and go to **"address associated with button ●"** (step 7)". Again, you can enter the code or press button "●" to skip this programming. Since there are no other programming to make, this operation will automatically exit the programming mode.

- c) **exit the programming mode** following the instructions described in **"Exiting the programming mode"**.

### General Notes.

- Always hang up the handset at the end of programming for each videointercom.
- Repeat the programming steps for all videointercoms in the installation.
- Intercom conversations or connections with users and external stations of other buildings will not be possible if digital exchanger art.2273 is installed.

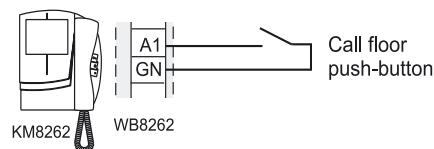
### Ring volume adjustment

To adjust the ring level you must adjust the trimmer **R8** on the wall bracket **WB8262**.

## Additional functions

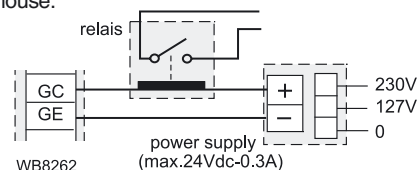
### Call floor

When you make a call floor, you will hear a different tone. The floor call is used to inform that somebody is ringing at the house door. The function is active both when the system is free and busy.



### Call Repeat

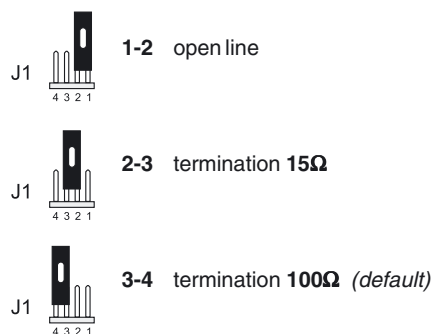
You can connect the videointercoms as illustrated in the diagram below to sent the videointercom ring to other locations in the house.



## Jumper the closing impedance

The wall bracket **WB8262C** are provided with the jumper **J1** that, when placed in the correct position, allows to readapt the signal from the riser for the correct operation of the connected devices.

### J1 Jumper to select impedance video signal

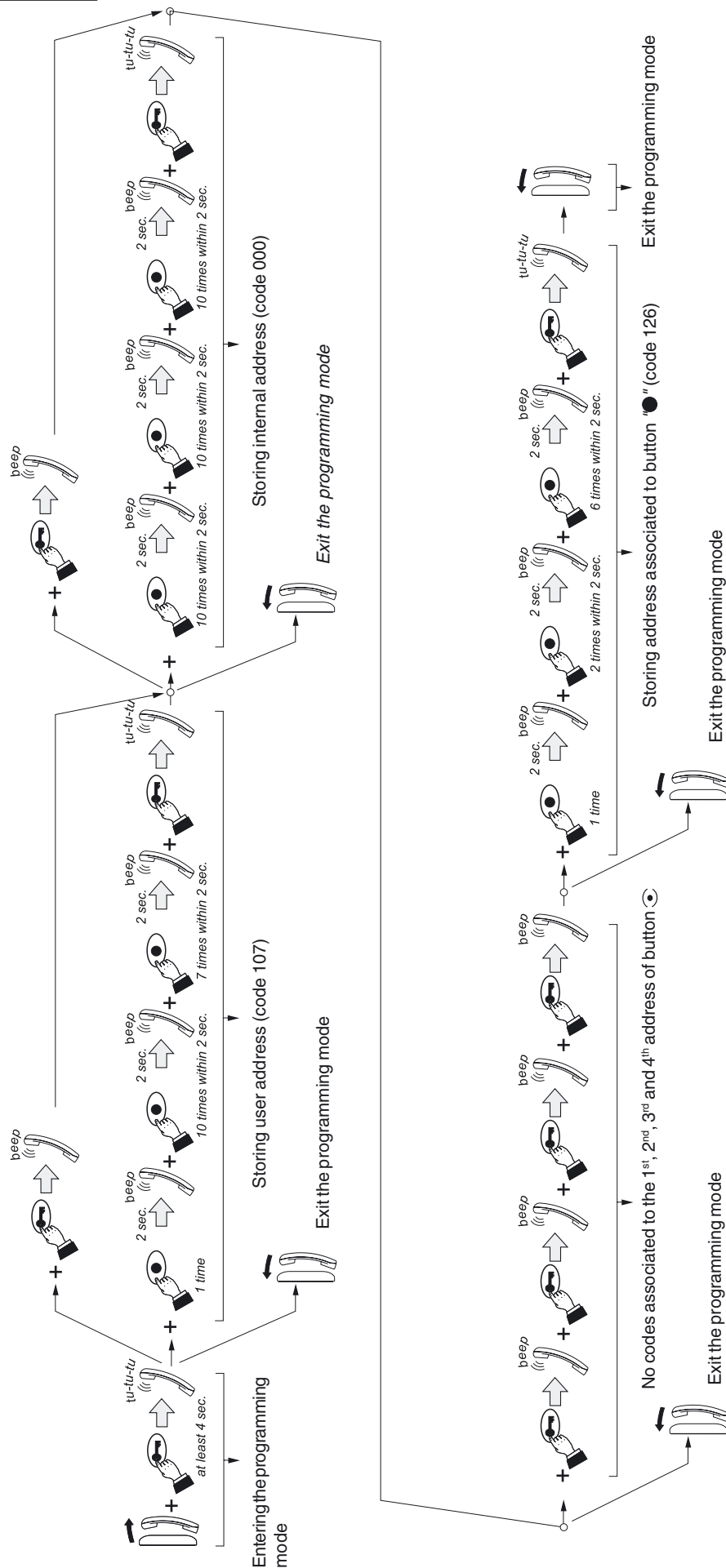


To make the programming easier and to remind your self the stored codes, please fill in the following table

1	0	7	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3	+	2	3	4	+	1	2	6	
user address				internal address				1. address for button ☺				2. address for button ☺				3. address for button ☺				4. address for button ☺				Address for button ●			
(these codes can be stored only with the manual programming procedure)																											



Programming example of a videointercom with user address 107, internal address 000, no code associated to button "●" and code 126 associated to button "●" to intercommunicate with the user 126





## INTERNAL STATIONS

### Operation

#### Call from external station.

When a call is made from the external station, the videointercom turns on, generates an acoustic tone and stays on for about 30 seconds. If the call time has expired and the videointercom has turned off, press the button "☺" to reconnect with the calling external station. Pick up the handset to start conversation with the external station for about 90 seconds and press button "●" to open the door.

In case of a call to a user with more than one videointercom in parallel installed in the apartment, all the videointercom will ring, but only the videointercom with internal address 000 will turn on. You can answer from this videointercom by following the instructions above. You can answer from the other videointercom by picking up the handset. This operation will automatically turn ON this videointercom and will turn OFF the videointercom that had been turned ON before. Press button "☺" if you want to see the caller before answering and then pick up the handset.

#### Monitor function and connection with one or more external stations.

When the installation is in stand-by and no conversation is in progress, you can monitor the entrance by picking up the handset and pressing button "☺".

If the installation includes more external stations and button "☺" is programmed correctly, you can monitor the external stations (max. 4) in sequence by pressing the same button again and again.

The videointercom will be turned ON for about 30 seconds. The monitoring will be interrupted in case of request of monitor service by another user, call between users or from an external station. If you pick up the handset during the monitoring, you will automatically establish a voice conversation with the external station.

If the videointercom will not turn ON when you press button "☺", this means the installation is busy and you will have to wait until it becomes free again.

#### Making or receiving a call from another user.

When the installation is in stand-by, you can make a call to another user. You must have stored the address of the desired user's in the button "●". To make the call, pick up the handset, wait for the free tone and press button "●". You will hear the call tone and the videointercom of the called user will ring (without turning on) with a ring different from calls from external stations or intercom calls from the same apartment. If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

If you pick up the handset and receive no tone, the installation is busy and you must wait until it is free.

#### Making or receiving an intercommunicating call in your apartment.

When the installation is in stand-by, you can make an intercommunicating call to all videointercom in the same apartment (max. 3) by pressing the button "●" you have programmed with code 000.

To make the intercommunicating call, pick up the handset, wait for the free tone and press button "●". You will hear the call tone and the videointercoms that are enabled to receive intercommunicating calls (internal address 001 or 002) will ring (without turning ON) with a ring tone different from calls from external stations or other users. The videointercom will not ring if it is coded with internal address 003. However, you can pick up the handset and start a conversation with the calling user. If the called user answers within 30 seconds, a 90-second conversation starts, otherwise the system goes back to free.

The internal conversation in progress will be automatically interrupted in case of call from external station to any other user.

### Tone table

**Tone of pressure of a button.** It is activated to indicate the pressure of one of the buttons ☺ and ● during the programming phase.



**Acknowledge tone.** It is activated to confirm the correct operation of the door lock release and during the programming phase to indicate a valid operation.



**Tone of system ready.** Activated for 30 seconds if the system is free.



**Calling tone.** It is activated during a call to another user or during an intercommunicating call (active for 30 seconds or until the called user answers).



**Dissuasion tone.** It is activated when a nonexistent device is called or when a device is not available.



**End conversation tone.** It is activated 10 seconds before the conversation time ends.



### Calling table

#### External call



#### Call from another user (continuous tone)



#### Intercommunicating call (modulated note)



#### Floor Call



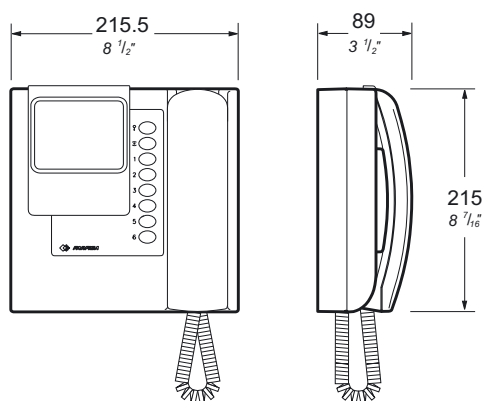
**Note.** All the acoustic signalling, with the exception of the system ready and calling tone, last after about 2 seconds.





## INTERNAL STATIONS

### VIDEOINTERCOMS WITH INTEGRATED DECODER



**PT5262W.** White flat tube videointercom with audio-video privacy, electronic microphone, modulated electronic ringing sounds, terminal board for the connection to the wall-bracket and 7 push-buttons for door lock release, control switch ON and intercommunicating calls. It can be installed on the wall (with no built-in) by using the wall-bracket **WB5262**.

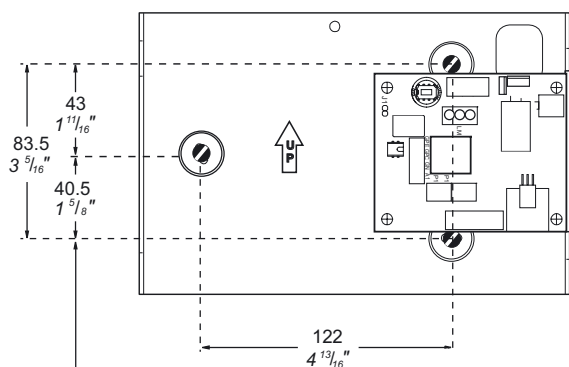
**WB5262.** The wall bracket for the **PT5262W** videointercom includes a terminal board for connection to the system.

#### Technical characteristics

Power supply directly from the line	
Stand-by current	5 mA
Operating current	0.6A
Screen	4" FLAT CRT
Starting up time	2 ÷ 4 sec.
Operating temperature	0° ÷ +50°C
Maximum admissible humidity	90%RH

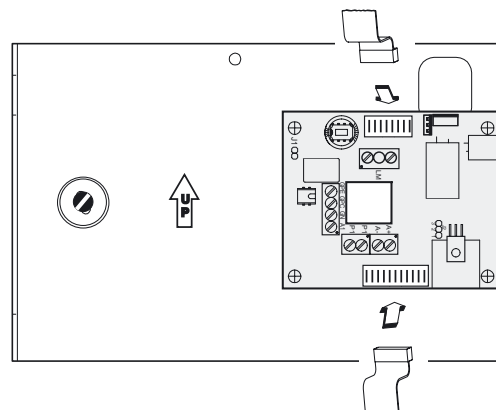
#### Terminals

<b>LM/LM</b>	Line inputs
<b>A1</b>	Floor call positive input
<b>GN</b>	Floor call negative input
<b>GPC</b>	Positive output for additional functions
<b>GPE</b>	Negative output for additional functions
<b>P1/P1</b>	Contact of push-button n.6 (max 24Vac/dc 0.3A)

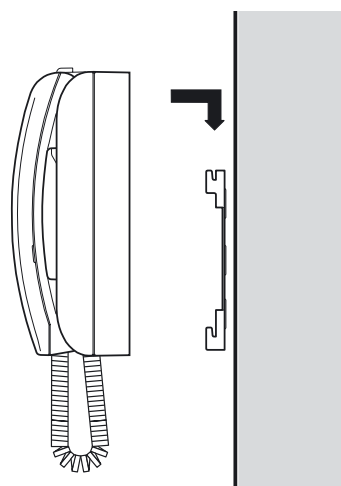


140 ÷ 150 cm  
4' 7" ÷ 4' 11"

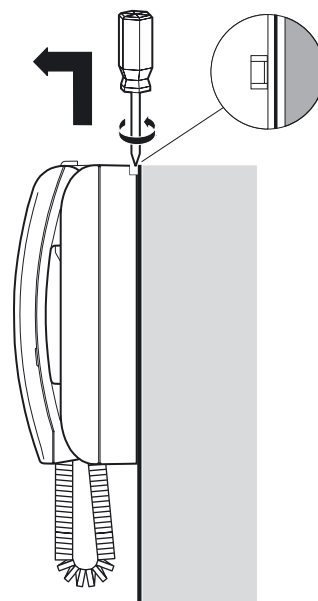
Measures for the installation of the wall bracket **WB5262** to the wall, and recommended height from the floor.



Plugging in of videointercom connectors to the terminal boards of wall bracket.



Installation of videointercom onto the wall bracket.



Dismounting of videointercom from the wall bracket.



## INTERNAL STATIONS


### Programming


Videointercom must be programmed properly to define its operating mode.

Function that can be programmed are:
















- **user address** (mandatory programming: the videointercom is programmed with address 100 by default);
- **internal address** for intercommunicating calls (optional programming: the videointercom is programmed with address 000 by default);
- **code for supplementary push-buttons** (optional programming: no code is associated to the buttons by default);
- **bell volume** (two level adjustment; high-low).



### Keypad meaning

To enter addresses or codes you must use the buttons 1÷5 and  as described in the following table.

- To enter numbers from 1 to 5 uses buttons 1÷5.
- To enter numbers from 6 to 0 press the button  (second button from down-up) and then the corresponding buttons 1÷5 as in the table (buttons must be pressed one after the other, not simultaneously).




### Videointercom buttons cross-reference

	figure	push-buttons
	1 =	1
	2 =	2
	3 =	3
	4 =	4
	5 =	5
	6 =	 +1
	7 =	 +2
	8 =	 +3
	9 =	 +4
	0 =	 +5

Example: to enter the code 028 it is necessary to press in sequence: +5+2++3.

### Enter the programming phase

To enter from the programming phase it is necessary to do the following steps:

- leave the handset on hook and press the button  for at least 2 seconds;
  - you will hear the programming tone;
- lift the handset while holding the button  pressed;
  - you will hear the confirmation tone;
- leave the handset off hook and release the button .



### Exit the programming phase

Replace the handset on hook to exit the programming mode.

You will also exit the programming mode if you make a mistake or an operation that is not permitted when entering a code.

### User address


In order to receive a call from the door station the videointercom must be programmed with an address witch is stored in a non-volatile memory. To save the code you must:

- enter the programming mode following the instructions contained in "Enter the programming phase";
- press the button  until a programming tone will be heard;
- enter the user address by pressing the buttons from 1 to 5 and  in the correct sequence (see chapter "keypad meaning" and relevant table). The code must be included between 001 and 200; three digits must be dialled. After you have entered the third digit, if the value is correct, you will hear the confirmation tone, otherwise you will exist the programming mode;
- continue if you want to programme other functions, otherwise replace the handset on hook to exit the programming mode.

### Internal address

In case of multiple videointercoms (max. 6) in parallel in the same apartment, with or without intercommunicating service, the videointercoms must be programmed with codes from 000 and 005. The main videointercom must be programmed with internal code 000 and the other videointercoms with the following codes (001, 002, 003, 004 and 005).

This programming comes after the **user address** programming (see chapter above). If necessary, programming should be made after entering the user address and before exiting the programming mode. If you have already exited the programming mode, you must repeat the operations described in the "user address" chapter and then:

- enter the internal identification code (value from 000 to 005) and press the buttons from 1 to 5 in the correct sequence (to enter 0 you must press  and then 5); three digits must be dialled. After you have entered the third digit, if the value is correct, you will hear the confirmation tone, otherwise you will exit the programming mode;
- continue if you want to programme other functions, otherwise replace the handset on hook.

### Codes assigned to buttons

To use the videointercom buttons for calls to other users, intercommunicating calls, enable actuators or connection with one or more external door stations, you must programme the buttons as described below:

- enter the programming mode following the instructions contained in chapter "Enter the programming phase";
- hold the button you want to programme (1÷5) pressed until you hear the programming tone;
- enter the code you want to assign to the button (code **000** for calls to videointercoms with intercommunicating function in the same apartment; codes **from 001 to 200** for calls to users of other apartments; codes **from 231 to 250** for connection with one or more

external door stations; codes **from 211 to 220** to activate actuator 2281);


- always enter 000 for calls to an **video-intercom with intercommunicating function in the same apartment**, with the same user address. After you have entered the third digit, if the value is correct, you will hear the confirmation tone. The value of the buttons 1÷5 will automatically determine the address of the videointercom to call;
- to call **another user** enter the corresponding address (value from 001 to 200 – value set during the "user address" programming of the videointercom to call). Three digits must be entered. After you have entered the third digit, if the value is correct, you will hear the confirmation tone;
- for connection to an **external door station** enter the corresponding address (value from 231 to 250 that was previously programmed on the external door station). After you have entered the third digit, if the value is correct, you will hear the confirmation tone;
- enter the address to activate one **digital actuator** (value from 211 to 220 that was previously programmed on actuator). After you have entered the third digit, if the value is correct, you will hear the confirmation tone;
- repeat the operations illustrated above for all the buttons you want to programme;
- replace the handset on hook to exit the programming mode.

### Notes.

- You do not need to programme the unused buttons.
- Intercom conversations or connections with users and external stations of other buildings will not be possible if digital exchanger art.2273 is installed.
- To delete a code assigned to a button enter the address 255.

### Ring volume adjustment

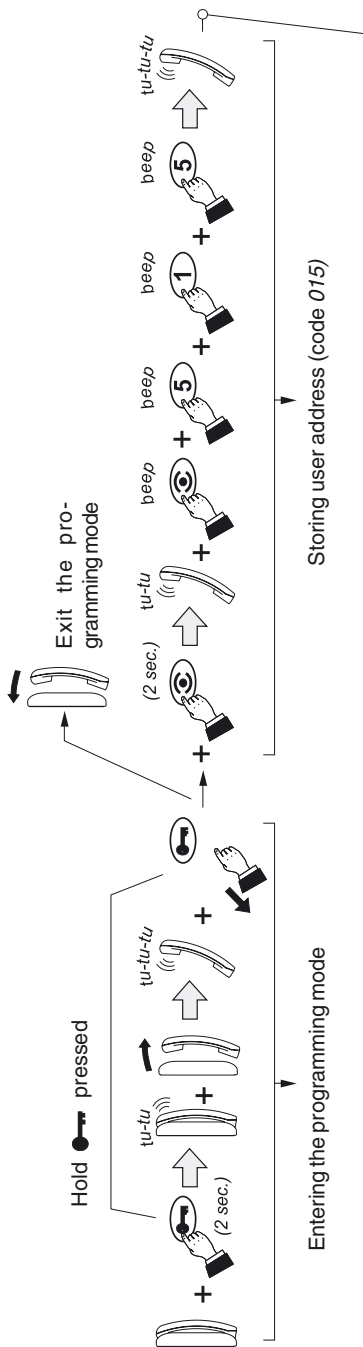
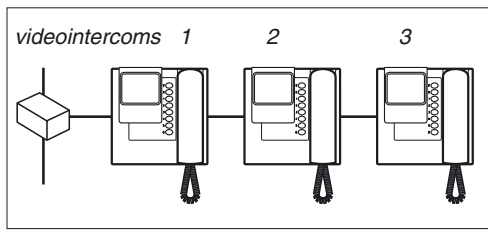
In order to modify the bell level, you have to:

- enter the programming mode following the instructions contained in "Enter the programming phase";
  - press the  button to change the level (from high to low and vice-versa),
- The videointercom shall confirm the operation with a tone which sound level is equal to the recorded bell level.

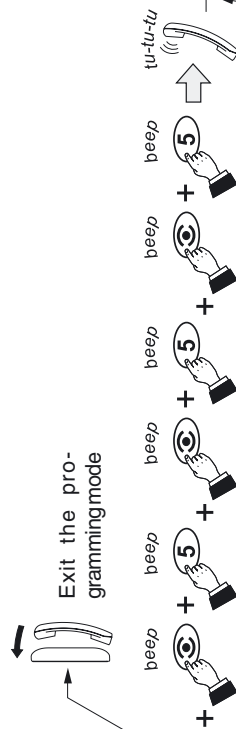


## INTERNAL STATIONS

Example of programming with 3 videointercoms with intercommunicating function in the same apartment (user code 015)



Exit the programming mode



1<sup>st</sup> videointercom - storing internal address (code 000)

Storing address associated to button "1" (code 000)



2<sup>nd</sup> videointercom - storing internal address (code 001)



3<sup>rd</sup> videointercom - storing internal address (code 002)

Storing address associated to button "2" (code 000)

Exit the programming mode

Exit the programming mode

PROJECT

DUO system



## INTERNAL STATIONS

**Example of programming with 3 videointercoms in parallel with intercommunicating function and connection with 3 external door stations from videointercoms**

1 <sup>st</sup> videointercom	0	1	5	+	0	0	0	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
2 <sup>nd</sup> videointercom	0	1	5	+	0	0	1	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
3 <sup>rd</sup> videointercom	0	1	5	+	0	0	2	+	0	0	0	+	0	0	0	+	2	3	1	+	2	3	2	+	2	3	3
	user address				internal address				button 1 for intercommunicating call				button 2 for intercommunicating call				push-button 3 to enable the 1 <sup>st</sup> door station				push-button 4 to enable the 2 <sup>nd</sup> door station				push-button 5 to enable the 3 <sup>rd</sup> door station		

### Operation

#### Call from external station.

When a call is originated from an external station you get an acoustic signal on the monitor and it powers ON for about 30 seconds; if the calling time expires and the monitor turns OFF you can press the buttons to establish again the connection with the calling external door station. Picking up the handset you install a connection with the door station for about 90 seconds, and pressing the button you will open the door.

In case of a call to a user with more than one videointercom in parallel installed in the apartment, all videointercoms will ring, but only the videointercom with internal address 000 will be switched on. You can answer from this videointercom by following the instructions above. You can answer from the other videointercoms by picking up the handset; this operation will automatically switch on this videointercom and will turn off the intercom that had been switched on before. Press the button if you want to see who is making the call before answering and then pick up the handset.

#### Monitor function and connection with one or more external stations.

When the system is in stand by mode and no communications are in progress, it would be possible from an apartment to make a control power ON function by pressing, without picking up the handset, the button or buttons 1-5 if properly programmed. The button switches the videointercom ON and connects it with the external door station that has made the last call; if programmed with the same addresses as the external door stations, the buttons from 1 to 5 are used to select the station to be controlled and, if necessary, open the electric door lock by pressing the button . Control power ON ends after about 30 seconds, but it is interrupted if in the system another control power ON or a call is made. If you pick up the handset during the test, you will automatically establish a voice conversation with the external station. If the videointercom is not switched ON when you press the button , the installation is busy and you will have to wait until it is free again.

#### Make or receive a call from another user

When the system is in stand by mode it would be possible call another user. To execute this operation it is necessary to have properly programmed the buttons 1÷5 with the address of the user you want to call (max 5).

To make the call it is necessary to pick up the handset, verify the presence of the tone of system ready and press the button corresponding to the user you want to call; a calling tone is heard whilst the videointercom of the called user will ring with a different sound with respect to that of the external or intercommunicating call.

If the called user lifts the handset within 30 seconds a connection will be set for about 90 seconds, otherwise the system returns in stand by mode.

Any call from the external door station will interrupt the internal call.

If picking up the handset you did not get any tone, the system is busy, and no other operations are allowed until the system become free.

#### Make or receive an intercommunicating call in own apartment.

When the system is in stand by mode it would be possible call another device installed in the same apartment (max 6). To execute this operation it is necessary to have properly programmed the buttons 1÷5 with the code 000 (refer to "codes assigned to buttons").

By pressing one button from 1 to 5, the videointercom with intercommunicating function is automatically set by the system and cannot be modified (see table below).

To make the call it is necessary to pick up the handset, verify for the presence of the system ready tone and press the button corresponding to the device you want to call (see following table).

On the handset of the called user a ring is heard with a different sound with respect to that of the external or intercommunicating call. If the called device answers within 30 seconds a connection will be set for about 90 seconds, otherwise the system returns in stand by mode. Any call from the external door station will interrupt the intercommunicating call.

**Table on button use for intercommunicating calls of maximum 6 videointercoms in the same apartment.**

Calling video-intercoms	Videointercom to call					
	VC0	VC1	VC2	VC3	VC4	VC5
VC0 (000)	-	①	②	③	④	⑤
VC1 (001)	①	-	②	③	④	⑤
VC2 (002)	①	②	-	③	④	⑤
VC3 (003)	①	②	③	-	④	⑤
VC4 (004)	①	②	③	④	-	⑤
VC5 (005)	①	②	③	④	⑤	-
Buttons to press						

**N.B.:** The codes in parenthesis in the table are the identification addresses of the internal stations that were programmed previously (see chapter "internal address").

#### Examples:

- From videointercom VC1 (internal address 001) press the button 1 for calls to videointercom VC0.
- From videointercom VC2 (internal address 002) press the button 4 for calls to videointercom VC4.
- From videointercom VC4 (internal address 004) press the button 2 for calls to videointercom VC1.

### Supplementary Functions

For information on functions and connection of floor call and call repeat see page 8.

#### Button 6

Button n.6 is a free voltage button and contacts are P1 and P1 on the terminal board (max 24Vac/dc/0.3A).

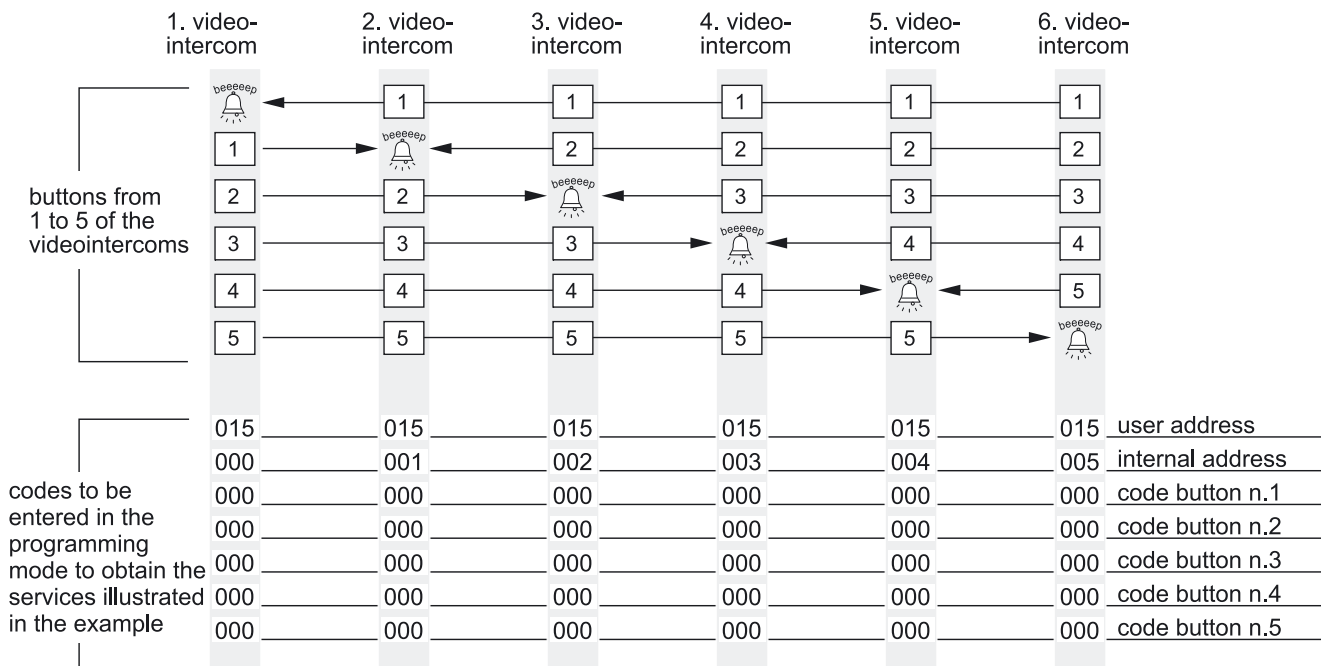
#### Tone and calling tables

See page 8.

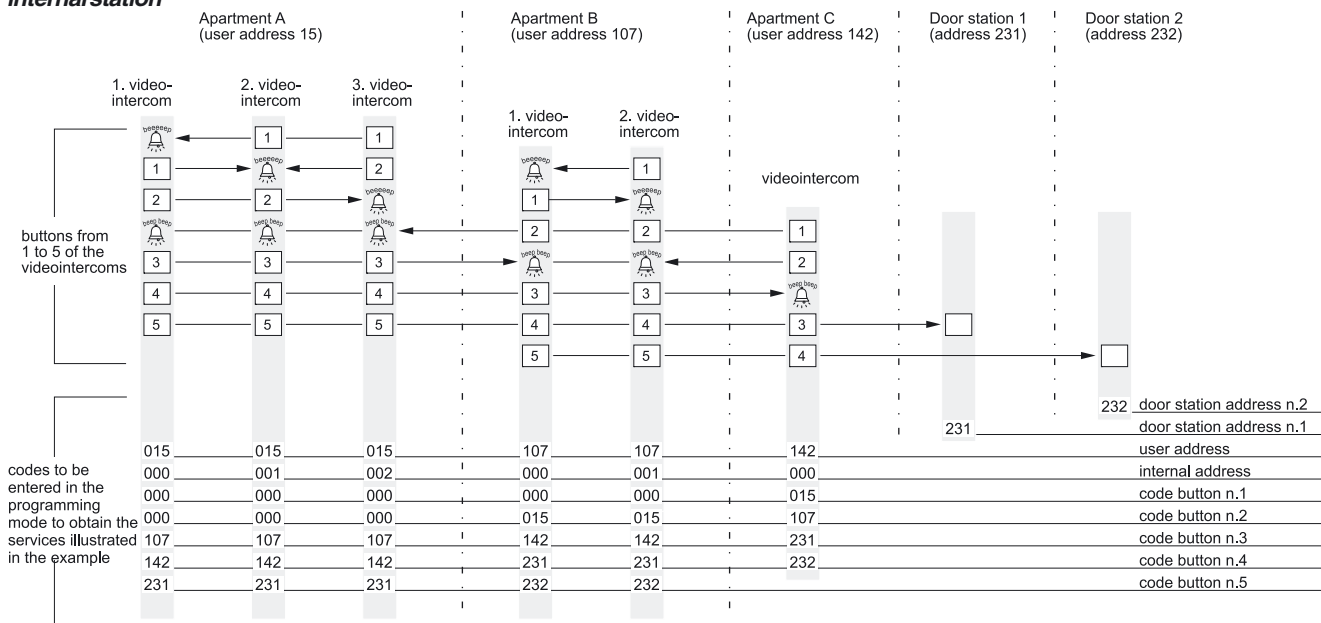


## Example of operation for buttons P1 ÷ P5 of videointercoms with programming

### a) Apartment with 6 intercommunicating videointercom and user address 15



### b) Three apartments (A, B and C) with intercommunicating function and possibility to enable two external door stations from the internal station



### Button management

#### Apartment A (3 parallel videointercoms)

Buttons 1 and 2: internal intercommunicating calls  
 Button 3: call apartment B (107)  
 Button 4: call apartment C (142)  
 Button 5: enable external door station 1

#### Apartment B (2 parallel videointercoms)

Button 1: internal intercommunicating calls  
 Button 2: call apartment A (15)  
 Button 3: call apartment C (142)  
 Button 4: enable external door station 1  
 Button 5: enable external door station 2

#### Apartment C (1 videointercom)

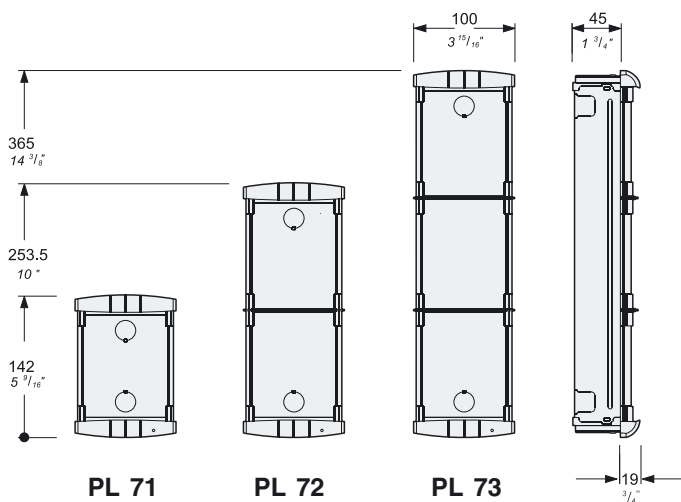
Button 1: call apartment A (15)  
 Button 2: call apartment B (107)  
 Button 3: enable external door station 1  
 Button 4: enable external door station 2  
 Button 5: not used





## DOOR STATIONS

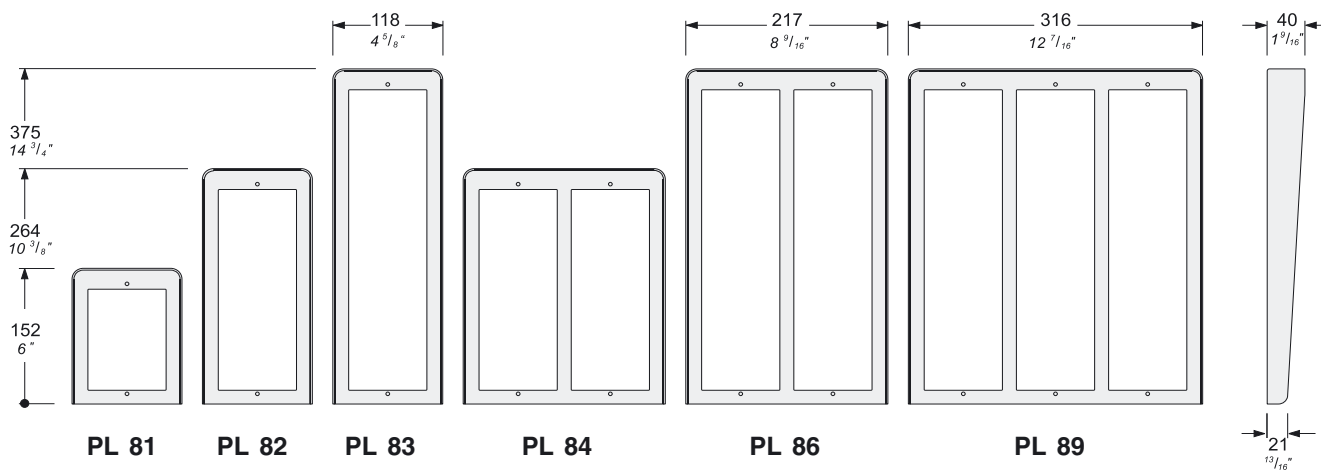
### Module frames complete with back box



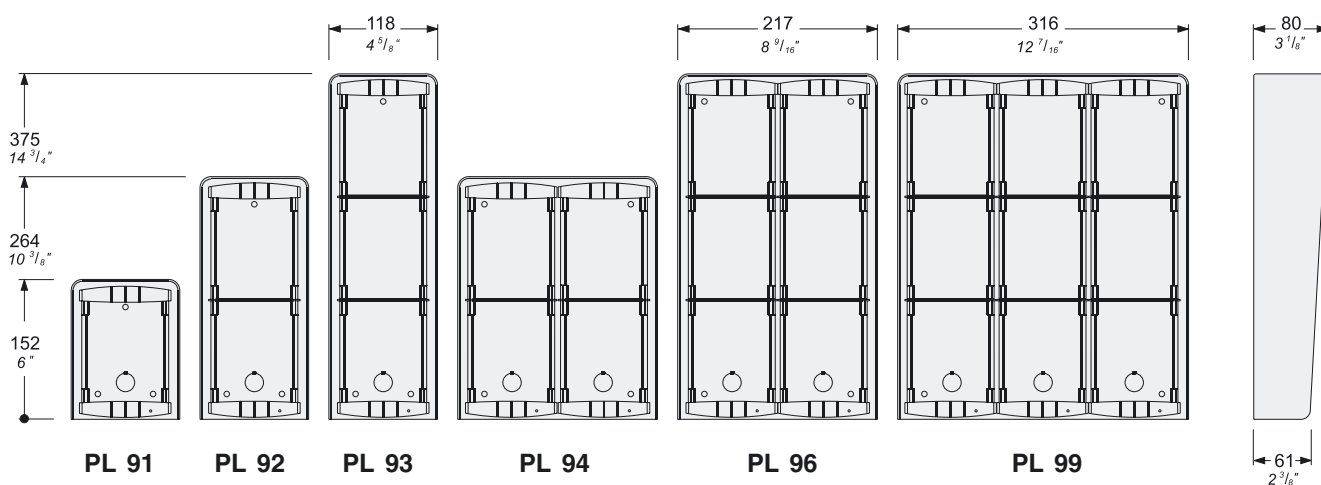
Push-button panels in extruded aluminium and steel push-buttons made up of modular elements. Suitable for the most diverse installation requirements. The careful selection of modules allows for multiple application opportunities; from one-way installations to blocks of flats; from intercom to video intercom installations.

The optimized size of modules allows for easy installation on the gage jamb.

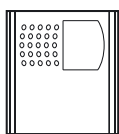
### Hood covers



### Rain shelters with module frames

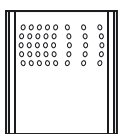


## Profilo modules for DUO series



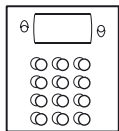
### VD2120CPL

colour camera with door speaker and auxiliary input for supplementary camera



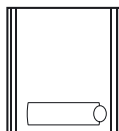
### AD2120CPL

door speaker with auxiliary input for camera



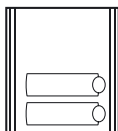
### TD2100PL

digital push-button with 14 buttons and alphanumeric LCD



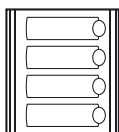
### CD2131PL

digitizer module with 1 call button



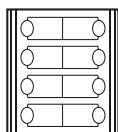
### CD2132PL

digitizer module with 2 call buttons



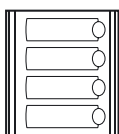
### CD2134PL

digitizer module with 4 call buttons



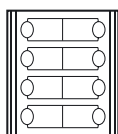
### CD2138PL

digitizer module with 8 call buttons (2 row)



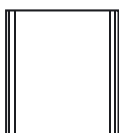
### PL 24S

module with 4 call buttons



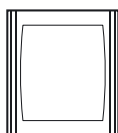
### PL 228S

module with 8 call buttons (2 row)



### PL 20

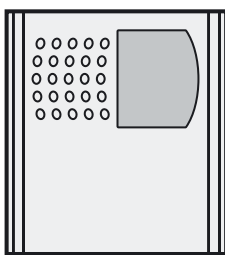
blank module



### PL 50

number module

## AUDIO-VIDEO MODULE



### VD2120CPL. Module complete with:

- CCD camera with autoiris, fixed 3.6mm lens and 6 white LED's
- amplified door speaker with reception and transmission volume and anti-feedback adjustments
- front plate with breakproof transparent screen
- horizontal and vertical adjustments
- red operation LED
- connection to the digital encoding modules (CD2131PL÷CD2138PL) and digital door station (TD2100PL) through the cable complete with connectors supplied together with the items listed here above.

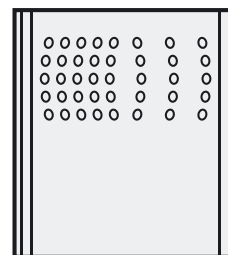
### Technical data

Power supply	13Vac±1
Absorption with connection to encoder CD2131÷CD2138PL	0.8A
Video signal standard	PAL
Minimum illumination	2.5 Lux
Illumination system	6 (white)
Sensor	CCD 1/3" colour
Number of pixels	291,000
Lens	3.6mm
Focus	0.6m ÷ ∞
Horizontal/vertical adjustment	±15°
Operating temperature	-10°÷+40°C
Max. permissible humidity	80%RH

### Terminals

- ~ / ~ 13VAC voltage input
- V Video signal input of a supplementary external camera (coaxial cable)
- M Video ground (coaxial shield)
- EC Positive signal for supplementary camera
- EM Negative signal for supplementary camera

## AUDIO MODULE



### AD2120CPL. Integrated door speaker module and input for external camera

Same terminals and features as model VD2120CPL, but without on-board camera.

In this module the EM and EC terminals are bridged by default.

### VD2120CPL and AD2120CPL audio adjustments

If necessary, you can adjust the volume of the 2 audio channels and the Larsen effect (feedback) with the relevant potentiometers.

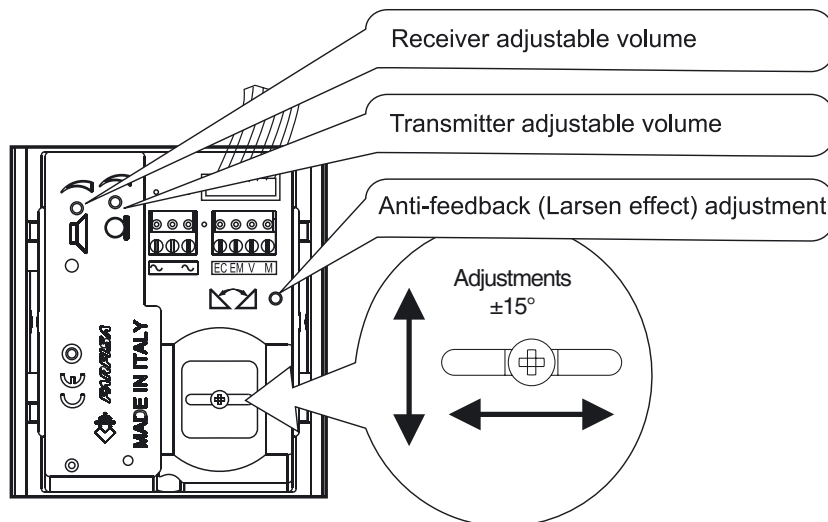
### Anti-feedback adjustment

In case of "feedback" (Larsen effect) in the external unit it is necessary to operate as follow:

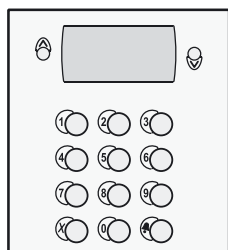
- make the call from the door station and lift the handset (press for Echos series) of the called user;
- adjust the trimmer " " until the whistling stops (Larsen effect).

### Adjustments

You can manually change the camera framing by unloosening and adjusting the horizontal and vertical screws in the desired direction.



## DIGITAL PUSH-BUTTON PANEL



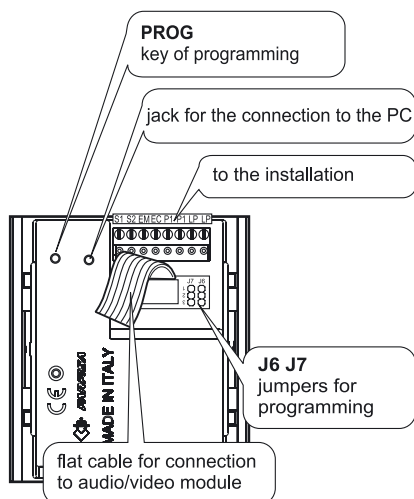
**TD2100PL.** Profilo series steel push-button panel with 14 buttons and alphanumeric LCD. Used to dial and send calls over DUO digital line.

## Technical features

Power supply from audio/video module	
Door-opening time	3/6 seconds
LCD	2 lines x 16 characters
Number of calls	200
Memory	250 names
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH


## Terminals

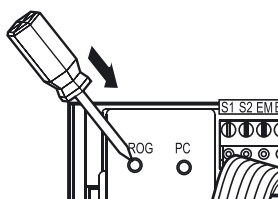
<b>LP/LP</b>	audio-data-video to and from internal users
<b>P1/P1</b>	direct call button inputs
<b>EC</b>	positive signal for auxiliary service
<b>EM</b>	negative signal for auxiliary service
<b>S1/S2</b>	door opening contacts



## PROGRAMMING

Before programming you must:

- Press the button **PROG** on the back of the push-button panel using a small screwdriver; the display shows “*Programming / type:*”.
- Dial the programming code (see table 1) and press  to confirm.
- Once you have programmed each code, press the button **PROG** again; the display shows “*FARFISA / dial the number or press ^v*” or the text set during the programming phase (see “**Personalisation of display initial text**”).



**Table 1**  
**Programming codes**




- 00 Entry of codes for door lock
- 01 Entry-modification-deletion of names
- 02 Language selection
- 03 System programming
- 04 Entry of display initial text
- 05 Loading names from PC
- 06 Ordering names
- 10 Address door station (PE)
- 11 Address button P1
- 12 Address associated with EC-EM terminals

### Codes to deactivate the camera upon call of 2 user groups

- 20 First address in group 1  
21 Last address in group 1  
22 First address in group 2  
23 Last address in group 2



### Entry of codes for door lock (code 00)

Enter the programming mode and insert code 00 to access the "entry of codes for door lock" mode; the display shows "PASSWORD 0/ "

- Dial the first opening code on the keypad, for example 7890; the display shows *"PASSWORD 0 / 7890"*.
- Press ; the display shows *"PASSWORD 1 / "*.
- Dial the second opening code on the keypad, for example 1234; the display shows *"PASSWORD 1 / 1234"*.
- Press ; the display shows *"PASSWORD 2 / "*.
- Repeat the operations to insert max. 16 codes; when you press the button  to confirm the sixteenth code (PASSWORD 15) the display shows *"Programming / type: "*.
- Continue by entering the code of a new programming function or press the button **PROG** to exit.




## Modifying a code

To change the previously saved code you must enter the programming mode and then:

- select the programming code **00**;
- press the button  until the code you want to modify is displayed;
- press **X** to go to the code you want to modify;
- enter the new code on the keyboard and then press the button ;
- repeat the operation for all the codes you want to modify;
- press the button **PROG** to exit the programming mode.

### Deleting a code

To delete the previously saved code you must enter the programming mode and then:

- select the programming code **00**;
- press the button  until the code you want to delete is displayed;
- press the button  and then ;
- repeat the operation for all the codes you want to modify;
- press the button **PROG** to exit the programming mode.

**Entry / modification / deletion of names**  
(code01)

The digital keyboard TD2100PL has an alphanumerical display with 32 characters that displays the user name and extension number (28 characters are used for user name and the last 4 characters on bottom right are used for extension number). To save them, you must follow the procedure illustrated below. The name must be entered starting from the first character on top left and the last digit of the extension number must be entered in the last position on bottom right, otherwise the number will not be saved (see “**deletion of names**”).

After you have entered all the names, the system will automatically arrange them in alphabetical order.

### Example





S	M	I	T	H	D	A	V	I	D				
											1	2	3

**YES**

[illegible]

**NO**

### Function of buttons when entering or modifying a name

-  Hold this button pressed to scroll the list of existing names
-  Hold this button pressed to move the cursor to the name characters
-  Hold this button pressed to scroll down the list of characters
-  Hold this button pressed to scroll up the list of characters

When searching for characters, the display shows uppercase letters, low-case letters, numbers, special characters and space in a sequence.



**Entry of names**

- Press the button **PROG** to enter the programming mode.
- Enter the code **01** and press the button ; the display shows the first name. The display is empty if no codes are programmed.
- Press or to select the character for the first cell; press **X** to go to the second cell; press or to select the character for the second cell; continue until you have entered the complete name with code. Press **X** after you have entered the number in the last cell on bottom right; the display shows "STORE USER / YES ^ V NO"; press to confirm; press to modify the name.
- If confirmed, the display shows the second name. The display is empty if no names are programmed.
- Press the button **PROG** again to confirm the last name to insert. The display shows "waiting" and an automatic status bar. Normal operation is restored after a few seconds and the display shows the initial text (see "Operation").

**Notes.** Once you have entered 250 names the display shows "waiting" and an automatic status bar. After a few seconds the display shows "Programming / type: " and you can continue with programming or press the button **PROG** to exit.

You can enter 2 or more names with the same call number (i.e. different family names in the same apartment).

**Modification or correction of names**

- Press the button **PROG** to enter the programming mode.
- Enter the code **01** and press the button ; the display shows the first name.
- Press to search for the name you want to modify (hold the button pressed for quick searching).
- Press **X** to go to the character you want to modify.
- Select the character with (forward) (backward).

- Repeat the operation until you have completed the name modification.
- Once you have completed the modification, hold **X** pressed until the display shows "STORE USER / YES ^ V NO". Press to confirm or to modify the name again. Enter a space to delete a letter.

**Addition of 1 or more names to the list**

To add a new name to the existing list you must:

- press the button **PROG** to enter the programming mode;
- enter the code **01** and press the button ; the display shows the first name;
- press to scroll the list (hold the button pressed for quick searching); the display is empty after the last name;
- to enter a new name follow the operations described in "Entry of names". If confirmed, the name is placed in the list in alphabetical order.

**Deletion of names**

- Press the button **PROG** to enter the programming mode.
- Enter the code **01** and press the button ; the display shows the first name.
- Press to search for the name you want to delete (hold the button pressed for quick searching).
- Press **X** to go to the last cell (bottom right); enter a space to delete the existing number.
- Press **X** again; the display shows "DELETE USER / YES ^ V NO" Press to confirm or to go back to the name. The next name is displayed after you have deleted the name.

**Language selection (code 02)**

You can choose the language from 8 different options (Italian, English, French, German, Spanish, Portuguese, Turkish and Polish) in operation mode.

To select the language:

- press the button **PROG** to enter the programming mode;

- enter the code **02** and press the button ; the display shows "Italiano" in case of first programming or the programmed language;
- press or to select the language.
- press to confirm; the display shows "Programming / type: ";
- continue by entering the code of a new programming function or press the button **PROG** to exit.

**System programming (code 03)**

You can change or activate the functions of the push-button panel (see table 2).

For programming you must:

- press the button **PROG** to enter the programming mode;
- enter the code **03** and press the button ; the display shows "bit 0 = 0 / 0 ^ V 1" in case of first programming or "bit 0 = 1 / 0 ^ V 1" if changed in the previous programming;
- press to select 0 or to select 1;
- press to confirm and go to the next code (see code table with descriptions);
- once you have confirmed the value of the last code (bit 7), the display shows "Programming / type: ";
- continue by entering the code of a new programming function or press the button **PROG** to exit.

**Personalisation of display initial text (code 04)**

You can modify the text shown on the display during normal operation or idle state. For visualization you must set bit 4 or bit 5 with value "1" (see "system programming").

To insert a personalized text:

- press the button **PROG** to enter the programming mode;
- enter the code **04** and press the button ; the display shows "DUO System", in case of first programming, or the text you want to replace;
- for information on how to enter the characters see "entry of names";

**Table 2 - System programming codes (code 03)**

Program- ming code	Function description	Default settings	Value entered with buttons	
			= 0	= 1
<b>bit 0</b>	door lock activation time	3 sec.	3 seconds	6 seconds
<b>bit 1</b>	activation upon call from internal station (1)	YES	NO	YES
<b>bit 2</b>	door lock activation with <b>X</b> (2)	NO	NO	YES
<b>bit 3</b>	deactivation of tone generator on the external door station	NO	NO	YES
<b>bit 4</b>	activation of personalised initial screen (3)	NO	NO	YES
<b>bit 5</b>	deactivation of FARFISA and activation of personalised text	NO	NO	YES
<b>bit 6</b>	EC-EM terminals for additional camera switching	NO	NO	YES
<b>bit 7</b>	activation time of the EC-EM terminals for supplementary lock	3 sec.	3 seconds	6 seconds

- 1) With this function, by pressing the button and lifting the handset up (or pressing in Echos models), you can start a conversation with an external door station from any internal station (in case of multiple external door stations in parallel a conversation can be started with the last external door station that has made the call) and activate the door lock by pressing the key .
- 2) This functions allows for quicker door lock activation by pressing **X** rather than dialling the code 00+. For example: press **X** + password + .
- 3) You can alternate "FARFISA" with the personalised text (see "personalisation of display initial text").





## DOOR STATIONS

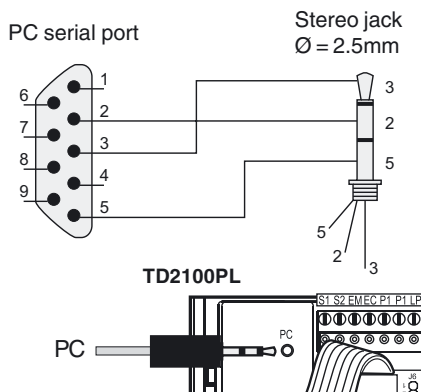
## DIGITAL PUSH-BUTTON PANEL

- press to confirm; the display shows "Programming / type: ";
- continue by entering the code of a new programming function or press the button **PROG** to exit.

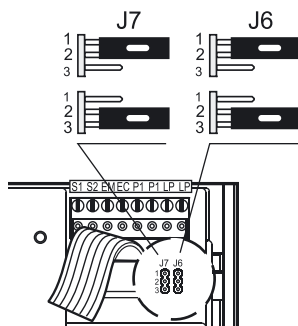
### Loading names from PC (code 05)

You can load names directly from your PC.

- Load the names on the PC using a dedicated software application (*software supplied on demand*).
- Turn off the push-button panel and the PC.
- Connect the PC serial port to the stereo jack on the back of the push-button panel with a cable as shown in the figure.



- Move the jumpers **J6** and **J7** on the back of the push-button panel from 1-2 to 2-3.



- Turn on the PC and then the push-button panel.
- Press the button **PROG** to enter the programming mode.
- Enter the code **05** and press the button ; the display shows "TD2100PL ---- PC / in progress....0".
- Download the names from the PC within 15 seconds; the display shows "TD2100PL ---- PC/in progress....1", "TD2100PL ---- PC/in progress....2" and then the downloaded names.
- At the end of download the push-button deletes the existing names. The first line of the display shows "waiting" and the second line shows a status bar to show the progress of the deletion operation. At the end the display shows "Programming / type: ".
- Turn off the push-button panel and then the PC.
- Disconnect the cable from the PC and the push-button panel.
- Bring the jumpers **J6** and **J7** back to 1-2.

### Ordering names (code 06)

You can list the names in alphabetical order (from A to Z).

- Press the button **PROG** to enter the programming mode.
- Enter the code **06** and press the button ; the first line of the display shows "waiting" and the second line shows a status bar; at the end of the operation the push-button panel returns automatically to the programming mode (the display shows "Programming / type: ").
- Continue by entering the code of a new programming function or press the button **PROG** to exit.

### Inserting the external door station address PE (code 10)

You can code the external door station address with codes from 231 to 250.

- Press the button **PROG** to enter the programming mode.
- Enter the code **10** and press the button ; the display shows "ADDRESS PE".
- Dial the coding number for the door station and press the button to confirm.
- Continue by entering the code of a new programming function or press the button **PROG** to exit.

### Inserting the button address P1 (code 11)

To save an extension number and call it directly from a button connected between terminals **P1/P1**:

- press the button **PROG** to enter the programming mode;
- enter the code **11** and press the button ; the display shows "ADDRESS P1";
- dial the extension number. Extensions must be coded with numbers from 001 to 200;
- press the button to confirm;
- continue by entering the code of a new programming function or press the button **PROG** to exit.

### How to enter the address of EC-EM terminals (code 12)

- press the button **PROG** to enter the programming mode;
- enter code **12** and press the button ; the display shows "ADDRESS EC";
- dial the number of the desired address (255 for relay or camera activation mode; 250 for door lock mode; number of internal station before the first user of the supplementary door lock service);
- press the button to confirm programming;
- press the button **PROG** to exit the programming mode.

### Return to operation mode

Press the button **PROG** at the end of programming; the display shows "FARFISA / dial the number or press  $\wedge \vee$ " or the text you have entered during programming (see "Personalisation of display initial text").

### EC-EM TERMINALS

The EC-EM terminals can be used to connect:

- one active relay during the call and for the entire conversation (default)
- one additional camera
- one additional door lock

To have these functions you must connect the terminals correctly and make some programming operations on the TD2100PL push-button panel.

#### - Connection of one relay (see fig. 1)

Programming operations to be made:

- code **03** = set bit 6 at 0
- code **03** = set bit 7 at 0
- code **12** = enter address **255**

#### - Connection of one additional camera

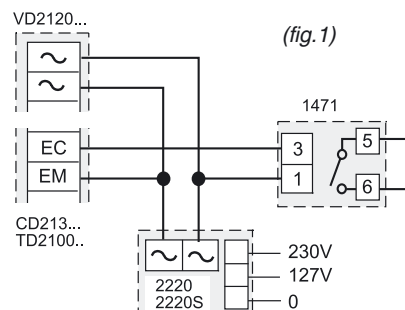
For this use you must connect the EC and EM terminals to the corresponding terminals of the audio/video module (see diagram on page 97).

Programming operations to be made:

- code **03** = set bit 6 at 1
- code **03** = set bit 7 at 0
- code **12** = enter address **255**

#### - Connection of one additional door lock.

For this use you must connect a relay as shown in the figure and program the push-button panel according to the desired service. The presence of the additional door lock requires to change the password (code 00). The first 8 passwords will activate the door lock connected to terminals S1 and S2, and the remaining 8 passwords will activate the door lock connected to terminals EC and EM.



**1) - activation of door lock from turn-on button of internal stations** (☞ from videointercoms; ● from intercoms). This function can be activated only during a conversation with the external door station. In idle state the buttons will activate the external door station.

Programming operations to be made:

- code **03** = set bit 6 at 0
- code **03** = set bit 7 at 0 (3 seconds) or 1 (6 seconds)
- code **12** = enter address **250**

**2) - activation of door lock from button of internal stations**

This programming allows for having two groups of users connected to a single external door station, each of them with its own door lock. The division between the two groups is indicated by

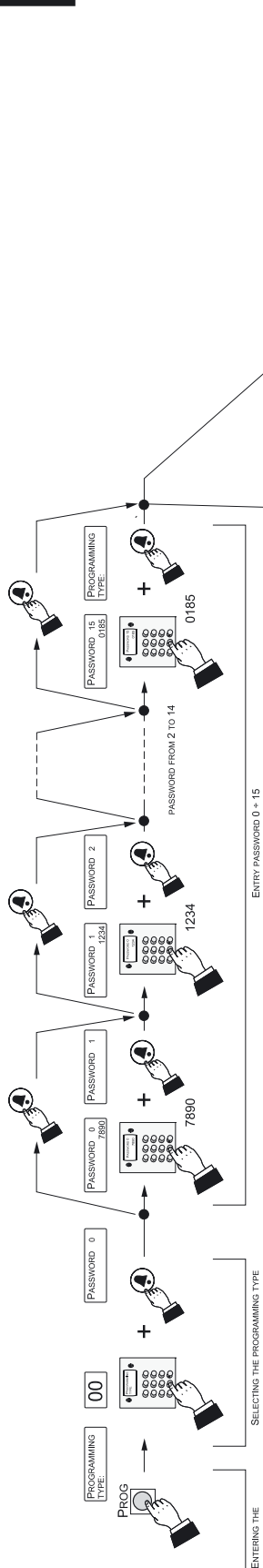
(to page 39)



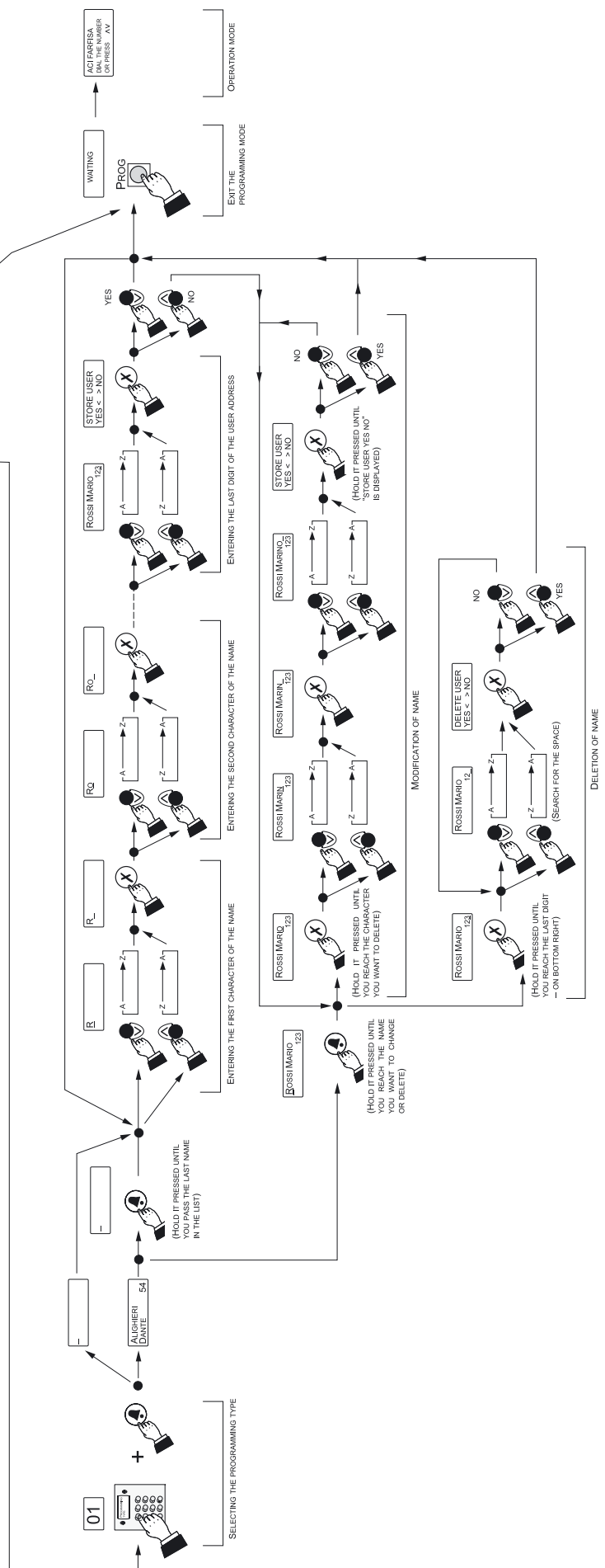


# Example of programming for digital push-button panel TD2100PL

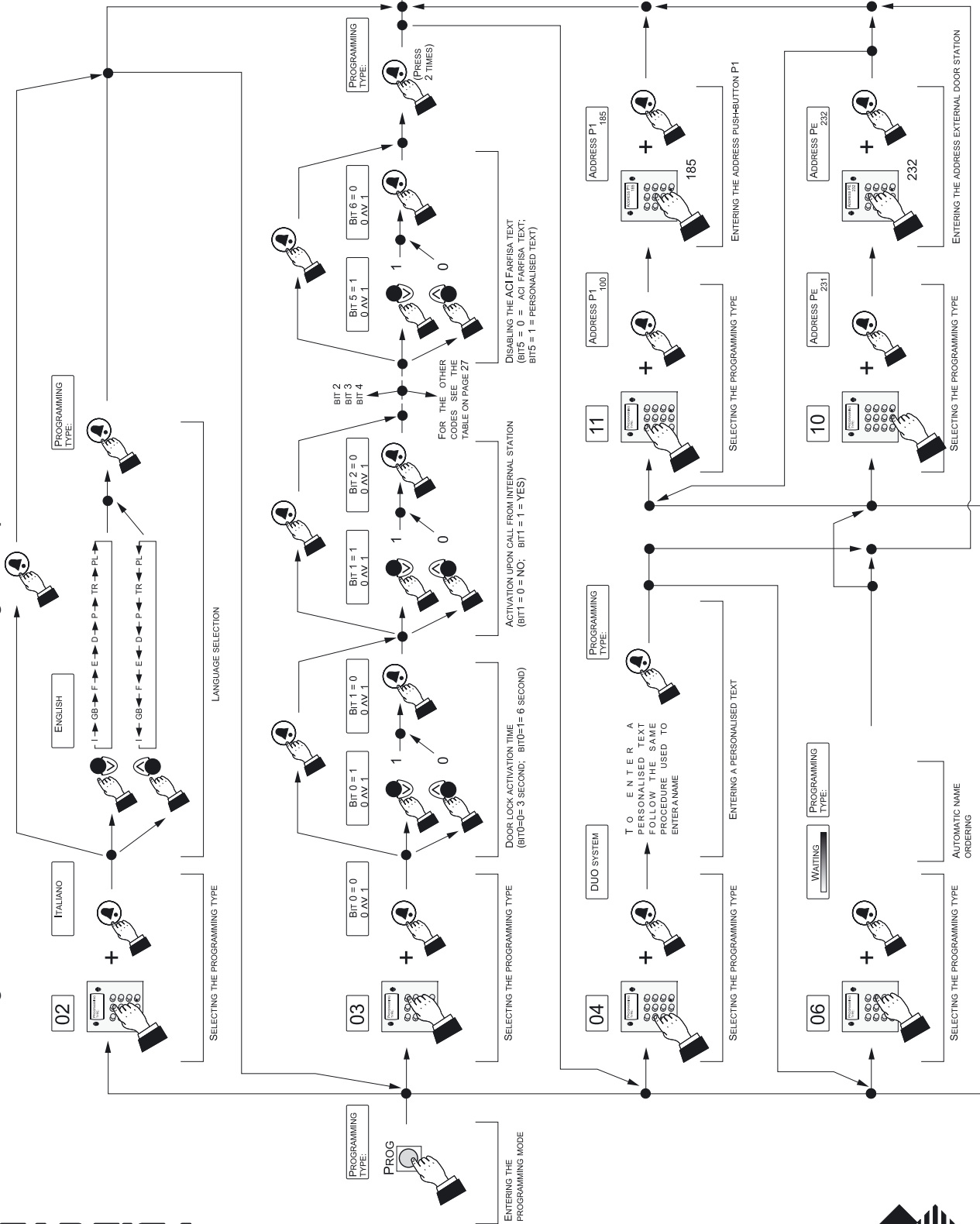
## Code 00 - Entry of password



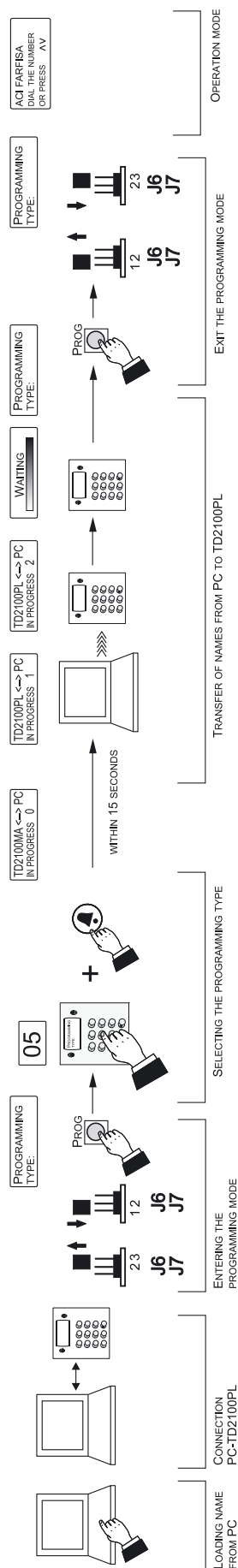
## Code 01 - Entry, modification and deletion of names



## Code 06 - Ordering names



## Code 05 - Loading names from Personal Computer



(from page 36)

the number that is inserted in the programming of code 12 (see page 36). You must insert the last user number recognised by group 1 that will activate the door lock connected to terminals S1 and S2; all higher numbers will automatically be in group 2 and will activate the door lock connected to terminals EC and EM.

Programming operations to be made:

- code 03 = set bit 6 at 0
- code 03 = set bit 7 at 0 (3 seconds) or 1 (6 seconds)
- code 12 = insert address of **last user in group 1** (example: if you enter 99 you will have: group 1 with codes from 1 to 99; group 2 from 100 to 200).

**How to deactivate the camera upon call**

You can create 2 groups of user addresses that will not activate the camera during the call from the external door station. This function is used to avoid the temporary turn-on of white LEDs in the colour camera module during calls to intercoms or actuators 2281.

**How to set address groups (codes 20, 21, 22 and 23)**

- press the button **PROG** to enter the programming mode;
- enter code **20** and press the button ; the display shows "ADDRESS 1S";
- dial the address number of first user in group 1;
- press the button to confirm programming;
- enter code **21** and press the button ; the display shows "ADDRESS 1E";
- dial the address number of the last user in group 1;
- press the button to confirm programming;
- repeat the operations above to enter the address of the first and last user in group 2 (codes **22** and **23**, respectively);
- press the button **PROG** to exit the programming mode.

**DISPLAY SETTINGS**

You can adjust the display contrast and background colour with the buttons of the push-button panel.

**Contrast**

- dial **0090**; the display shows "press ^ or v" with a state bar;
- within 5 seconds press the buttons and to increase or decrease the display contrast;
- press the button to save.

**Background colour**

- dial **0091**; the display shows "press ^ or v" with a state bar;
- press the buttons and to select the colour;
- press the button to save.

**OPERATION**

Check that all connections are correct. Connect the power supply unit to the mains; the displays shows for 3 seconds "FARFISA", followed by the software version of the push-button panel and "Dial the number or press ^v (^v in alternate mode).

Dial the user number or select the internal station from the names in the list (press or to search), to verify its exactness on the display and press to make the call.

In case of error press **X** (only before sending the call) and dial the correct to number.

If the line is free and the called number exists you hear the confirmation tone and the display shows "Calling / ----" otherwise you hear the busy tone and the display shows "Busy /".

If press **X** the call is terminated and the system is ready for a new call.

The called user picks up the handset (or press for Echos series) enables the conversation with the external station for 90 seconds. The display shows "Connection / ----".

The text on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 90 seconds press again.

Press the button to release the door lock. Door lock activation time is 3 seconds (or 6 seconds).

Replace the handset (or press for Echos series) or press **X** on the door station to restore the idle state.

Numbers that are not sent or deleted go off after 25 seconds.

**Door lock opening**

The door lock can be opened from the push-button panel, including in "busy" mode, by dialling one of the 16 4-digit codes you have entered.

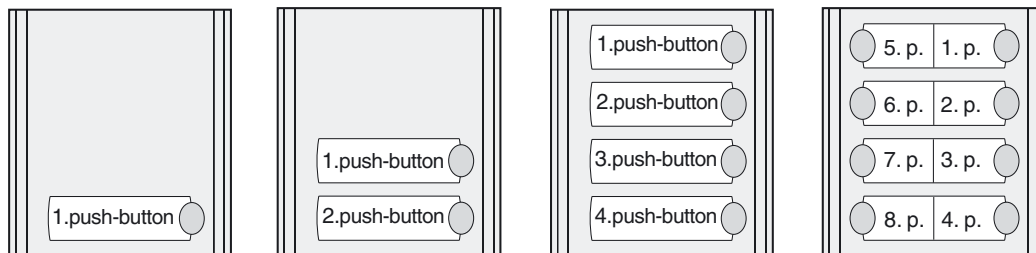
**Door lock activation**

- Dial **00**
- Press ; the display shows "Password / ■■ ■■"
- Dial the personal access code within 10 seconds; each digit is visualised with \* instead of ■.
- Press to release the door lock; you hear the confirmation tone and the push-button panel returns to the current system operation mode (free or busy).

**Tone table.** See page 60.



## DIGITAL ENCODER



**CD2131PL.** Encoding module with front plate and one aluminium button. Complete with name-holders with transparent screen green backlighting, breaking resistant. Used to send calls over DUO digital line.

**CD2132PL.** With 2 call buttons.

**CD2134PL.** With 4 call buttons

**CD2138PL.** Same as the previous, but with 8 call buttons on two rows

## Technical features

Power supply from audio/video module	
Door-opening time	3 / 6 seconds
Number of calls	128
Default address	231
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

## Terminals

<b>LP/LP</b>	audio-data-video to and from internal users
<b>EC</b>	positive signal for auxiliary service
<b>EM</b>	negative signal for auxiliary service
<b>S1/S2</b>	door opening contacts

## PROGRAMMING

(instruction for article with software **AF100 or higher**)

To program the device it is necessary to perform the following phases:

- 1) enter programming mode
- 2) insert code of desired programming
- 3) insert required address or functional code
- 4) exit programming mode

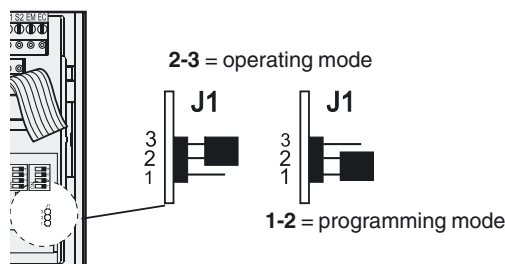
## Notes

- In any situation it would be possible to exit the programming phase following the instructions reported on paragraph 4.
- To proceed with other programming repeat the phases 2 and 3.

## 1) ENTER PROGRAMMING MODE

- Move the jumper **J1** from **2-3** to **1-2** position; a programming tone will confirm the correct operation.

## Position of jumper J1

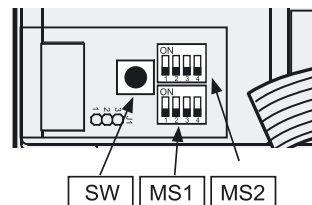


## 2) INSERT CODE OF DESIRED PROGRAMMING

- On the micro-switches **MS1** and **MS2** set the code corresponding to the programming operation you wish to enter as reported on table 1 on page 41 (codes **1A**, **2A**, **1B**, **2B** and **AA**).
- Press the programming button **SW**.

## 3) INSERT REQUIRED ADDRESS OR FUNCTIONAL CODE

- On the microswitches **MS1** and **MS2** set the address you wish to enter in accordance with the cross-references reported on table 3 on the pages 43, 44 and 45.
- For system programming see table 2 on the page 41 (code **2B**).



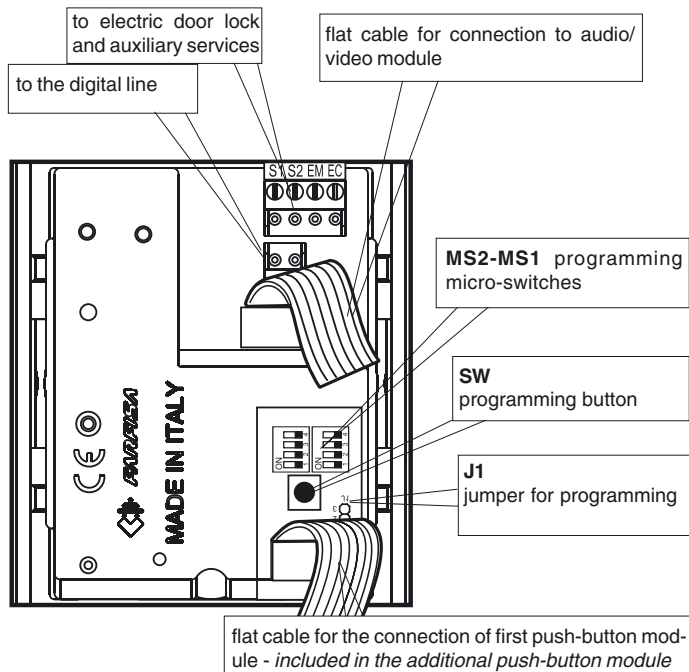
- Press the programming button **SW**.
- Repeat phases 2 and 3 until you have completely programmed the digital encoder.
- Any time you press the **SW** button an acknowledge or error tone will warning you whether the entered code is correct or not; in case of incorrect code you must enter again the correct one.

## 4) EXIT PROGRAMMING MODE



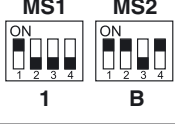
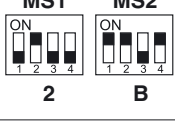
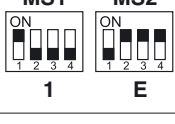
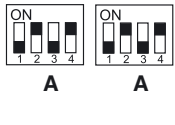
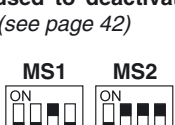
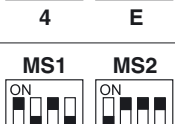

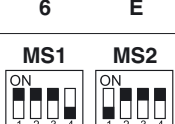
To exit the programming phase it is necessary to set OFF all the microswitches **MS1** and **MS2** and move back the jumper **J1** from **1-2** to **2-3** position.



## Connection terminal boards


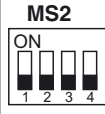


**Table 1**  
Selection code of the programming



<b>1A</b>		User address associated to the first button. Codes from 1 to 200 (see table 3 of pages 43, 44 and 45). Factory setting 100.
<b>2A *</b>		User address associated to the last button. Codes from 1 to 200 (see table 3 of pages 43, 44 and 45). Factory setting 200.
<b>1B</b>		Address of the external door station. Codes from 231 to 250 (see table 3 of page 45). Factory setting 231.
<b>2B</b>		System programming (see table 2).
<b>1E</b>		Address associated with terminals EC-EM (see corresponding section for codes to be inserted).
<b>AA</b>		Set the device back to factory settings. Code 170 (see table 3 of page 43).
<b>Codes used to deactivate the camera upon call of 2 user groups (see page 42)</b>		
<b>4E</b>		first address in group 1 (see codes of table 3 on pages 43, 44 and 45)
<b>5E</b>		last address in group 1 (see codes of table 3 on pages 43, 44 and 45)
<b>6E</b>		first address in group 2 (see codes of table 3 on pages 43, 44 and 45)
<b>7E</b>		last address in group 2 (see codes of table 3 on pages 43, 44 and 45)

\* This programming is useful when the push button panel has more buttons than the connected users and to prevent the case when, by pressing an enabled button, the system gets busy

**Table 2**  
Operating mode of the system (code 2B)

Microswitches position of MS1 and MS2		
Micro-switches	OFF	ON
	<b>1</b> door lock activation time; 3 seconds **	door lock activation time; 6 seconds
	<b>2</b> deactivation upon call from internal station ***	activation upon call from internal station **
	<b>3</b> reserved: to leave in position OFF **	
	<b>4</b> ACTIVATION of tone generator on the external door station **	DEACTIVATION of tone generator on the external door station
	<b>1-2</b> reserved: to leave in position OFF **	
	<b>3</b> ordinary management of terminals EC-EM (see programming 1E-table 1)	management of terminals EC-EM for additional camera
	<b>4</b> supplementary door lock activation time; 3 seconds **	supplementary door lock activation time; 6 seconds

\*\* Factory setting.

\*\*\* This function allows the internal stations to press the  button and pick up the handset, start a conversation with the external station (in case of more external stations in parallel the connection is established with the last calling door station) and activate the door lock by pressing the button .

#### EC-EM TERMINALS

The EC-EM terminals can be used to connect:

**-one active relay during the call and for the entire conversation (default)**

**-one additional camera**

**-one additional door lock**

To have these functions you must connect the terminals correctly and make some programming operations on the push-button panel.

#### - Connection of one relay (see fig. 1)

Programming operations to be made:

- microswitch **3** of **MS2** = position **OFF**

- microswitch **4** of **MS2** = position **OFF**

- code **1E** = enter address **255**

#### - Connection of one additional camera

For this use you must connect the EC and EM terminals to the corresponding terminals of the audio/video module (see diagram on page 97). Programming operations to be made:

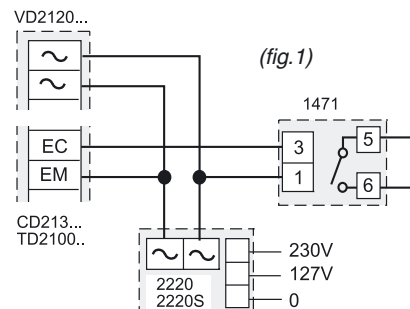
- microswitch **3** of **MS2** = position **ON**

- microswitch **4** of **MS2** = position **OFF**

- code **1E** = enter address **255**

#### - Connection of one additional door lock.

For this use you must connect a relay as shown in the figure and program the push-button panel according to the desired service.





**1) - activation of door lock from turn-on button of internal stations** (☺ from videointercoms; ● from intercoms). This function can be activated only during a conversation with the external door station. In idle state the buttons will activate the external door station.

Programming operations to be made:

- microswitch 3 of **MS2** = position **OFF**
- microswitch 4 of **MS2** = position **OFF** (3 seconds) or **ON** (6 seconds)
- code **1E** = enter address **250**

**2) - activation of door lock from button of internal stations**

This programming allows for having two groups of users connected to a single external door station, each of them with its own door lock. The division between the two groups is indicated by the number that is inserted in the programming of code **1E**. You must insert the last user number recognised by group 1 that will activate the door lock connected to terminals **S1** and **S2**; all higher numbers will automatically be in group 2

and will activate the door lock connected to terminals **EC** and **EM**.

Programming operations to be made:

- microswitch 3 of **MS2** = position **OFF**
- microswitch 4 of **MS2** = position **OFF** (3 seconds) or **ON** (6 seconds)
- code **1E** = insert address of **last user in group 1** (example: if you enter 99 you will have: group 1 with codes from 1 to 99; group 2 from 100 to 200).

**How to deactivate the camera upon call**

You can create 2 groups of user addresses that will not activate the camera during the call from the external door station. This function is used to avoid the temporary turn-on of white LEDs in the colour camera module during calls to intercoms or actuators 2281.

**How to set address groups (codes 4E, 5E, 6E and 7E)**

- enter the programming mode as illustrated in "enter the programming mode";
- set code **4E** in microswitches **MS1** and **MS2**

and press button **SW**; you will hear the confirmation tone;

- set the address number of the first user in group 1 in microswitches **MS1** and **MS2** (see table 3 on page 43);
- press button **SW**; you will hear the confirmation tone;
- set code **5E** in microswitches **MS1** and **MS2** and press button **SW**; you will hear the confirmation tone;
- set the address number of the last user in group 1 and press button **SW**; you will hear the confirmation tone;
- repeat the operations above to enter the address of the first and last user in group 2 (codes **6E** and **7E**, respectively);
- press button **SW** to exit the programming mode.

### Example of programming for digital encoders CD2131PL, CD2132PL, CD2134PL and CD2138PL

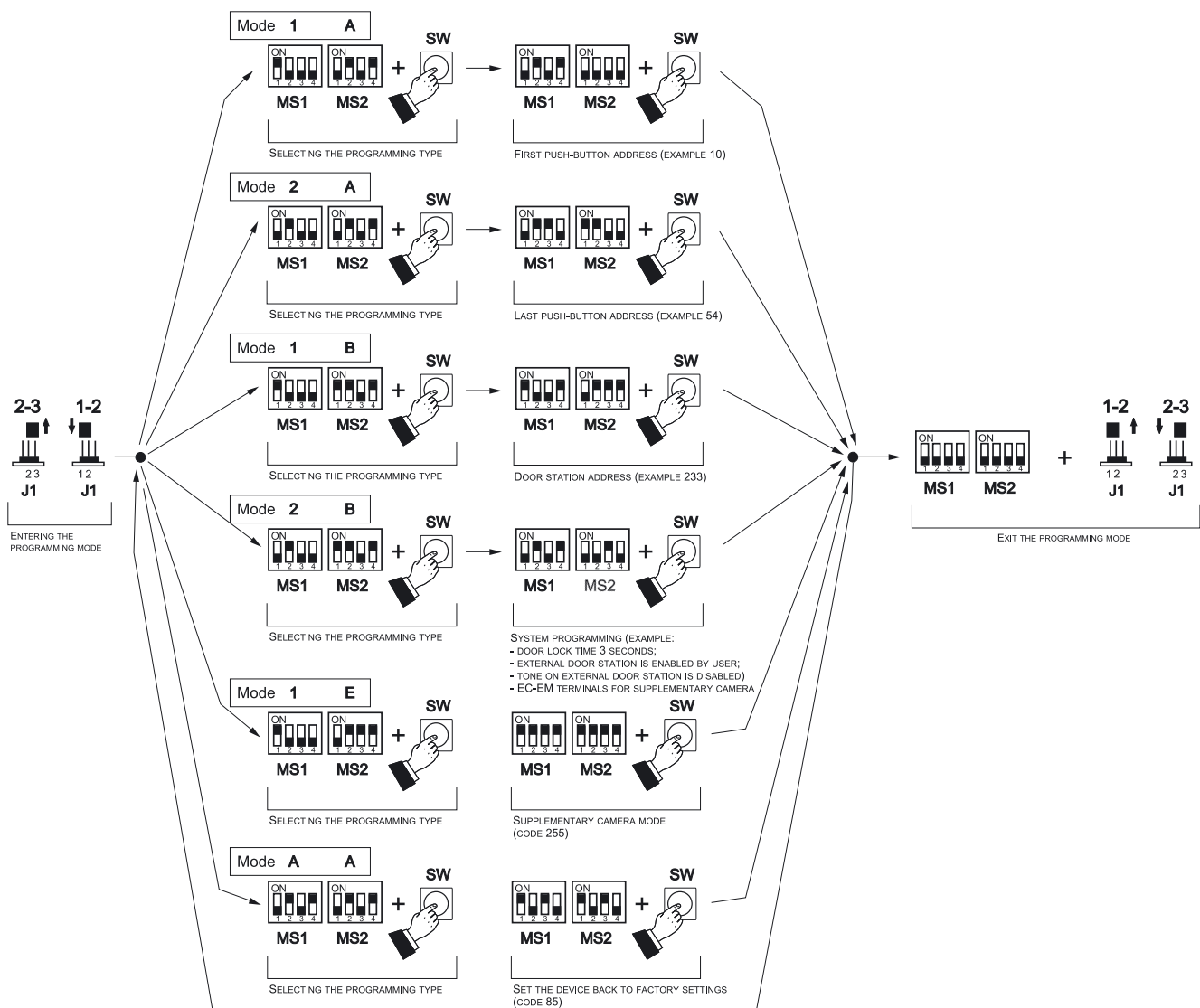





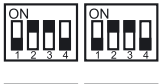


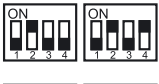






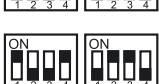
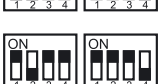
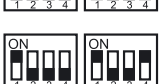
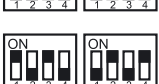
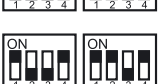
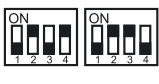

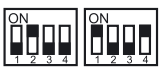
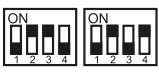
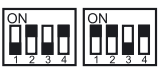










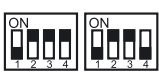
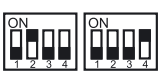
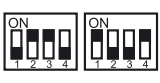
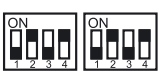



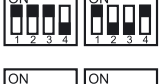







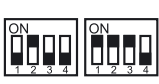

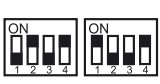












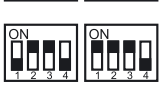

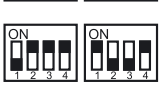
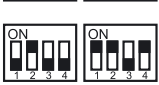


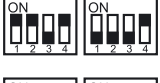






























Table 3

Cross-reference table between codes and microswitches position of MS1 and MS2.

	MS1	MS2		MS1	MS2		MS1	MS2		MS1	MS2		MS1	MS2
1			21			41			61			81		
2			22			42			62			82		
3			23			43			63			83		
4			24			44			64			84		
5			25			45			65			85		
6			26			46			66			86		
7			27			47			67			87		
8			28			48			68			88		
9			29			49			69			89		
10			30			50			70			90		
11			31			51			71			91		
12			32			52			72			92		
13			33			53			73			93		
14			34			54			74			94		
15			35			55			75			95		
16			36			56			76			96		
17			37			57			77			97		
18			38			58			78			98		
19			39			59			79			99		
20			40			60			80			100		



101		121		141		161		181	
102		122		142		162		182	
103		123		143		163		183	
104		124		144		164		184	
105		125		145		165		185	
106		126		146		166		186	
107		127		147		167		187	
108		128		148		168		188	
109		129		149		169		189	
110		130		150		170		190	
111		131		151		171		191	
112		132		152		172		192	
113		133		153		173		193	
114		134		154		174		194	
115		135		155		175		195	
116		136		156		176		196	
117		137		157		177		197	
118		138		158		178		198	
119		139		159		179		199	
120		140		160		180		200	



201		212		223		234		245	
202		213		224		235		246	
203		214		225		236		247	
204		215		226		237		248	
205		216		227		238		249	
206		217		228		239		250	
207		218		229		240		251	
208		219		230		241		252	
209		220		231		242		253	
210		221		232		243		254	
211		222		233		244		255	

### Tone table

#### End of conversation / wrong programming.

Indicates an error during the programming phase or that the conversation time is near to expire.



#### Busy.

Indicates that the user is busy or not existing or that the line is busy.



#### Dissuasion.

Indicates that the push-buttons were wrongly programmed.



#### Programming .

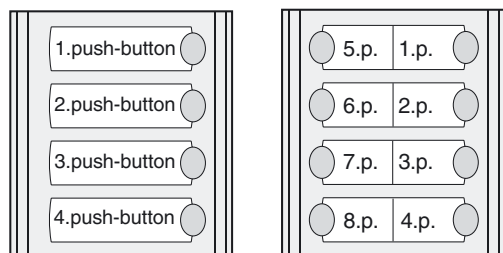
Indicates that the programming mode was accessed.



**Acknowledge.** It indicates that the operation was performed correctly (programming, call send, door lock in conversation, extension of conversation time)



## PUSH-BUTTON MODULES WITH INTEGRATED ENCODING BOARD



The button modules with integrated encoding board, thanks to the connection to the encoder module CD2131PL÷CD2138PL, allow the calls in DUO systems.

**PL24S.**

Module with front plate and four aluminium call buttons. Complete with name holders with transparent screen green back-lighting, resistant to breaking and connection cable to the next module.

**PL228S.**

Same as the previous, but with 8 call buttons on two rows.

**Terminals**

**A+** AC or DC power supply input for name-plate Led (13Vac/dc-80mA)

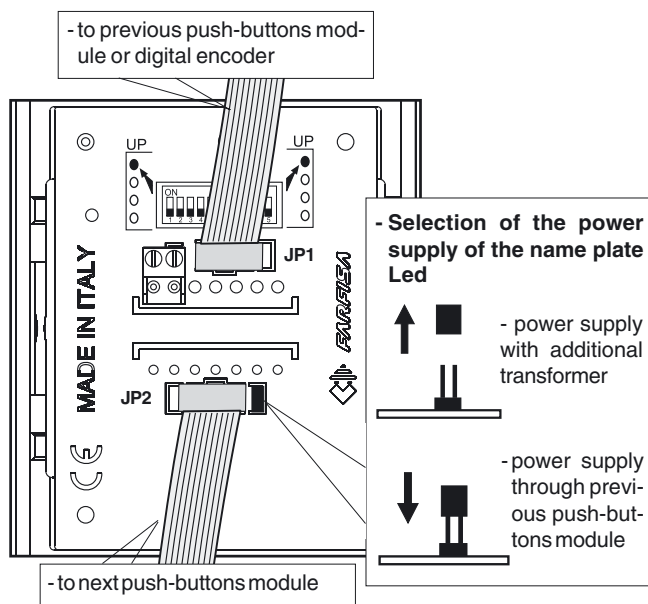
**A-** AC power supply or ground input for name-plate Led

**Installation and connections**

- Connect the first push-button panel to the digital encoder module with the cable supplied.
- Connect the second push-button module to the first one with the cable supplied with the second module.
- Connect all modules in a sequence.
- Connect the two power supply wires of the name plate LED's (13Vac) to terminals **A+/A-** of the first push-button panel and remove jumper **J1** only in this module.

**Note**

Great attention must be paid when the code 0 (numerical interval 0-3) is set on the micro-switches because in this case the first button, starting from the top of the module PL24S or PL228S will call no users. This is because the digital system does not recognize the address **0 (zero)**.

**Programming**

The microswitches, present on the back of the PL24S or PL228S, allow the digital encoder to recognize the code of the connected buttons, consequently they must be programmed properly. The programmed codes must correspond to the addresses of the internal users.

In case of installations with secondary door stations (multiple entrances), attention must be paid also to the numerical interval recognized by the digital exchanger. The code set on the microswitches (see tables on page 47) determines the address of the users called by pressing the buttons of the push-button module in a sequence (starting from above) according to the following rule:

**Called User Address (IUC)** by pressing the buttons of the module (PL24S or PL228S) = **Address Associated with First Button (IPP)** of the digital encoder (CD2131-32-34PL or CD2138PL) + **Number Associated with Button (NAP)**.

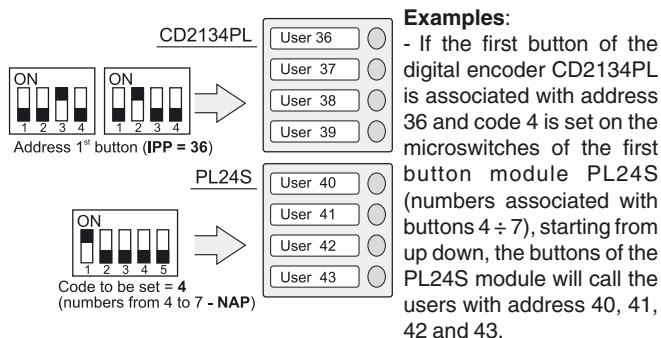
General rule: **IUC = IPP + NAP**

General rule applied to the first example below;

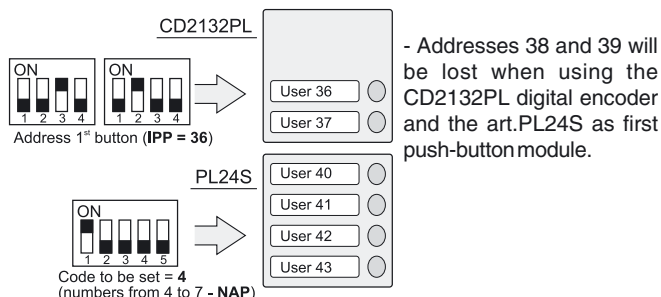
- if you press the first button from above of the PL24S:

$$36 \text{ (IPP)} + 4 \text{ (1st NAP)} = 40 \text{ (IUC)}$$

the user with address 40 will be called.

**Examples:**

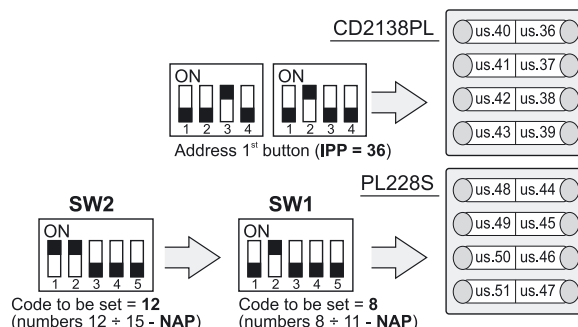
- If the first button of the digital encoder CD2134PL is associated with address 36 and code 4 is set on the microswitches of the first button module PL24S (numbers associated with buttons  $4 \div 7$ ), starting from up down, the buttons of the PL24S module will call the users with address 40, 41, 42 and 43.



- When using the digital coder CD2138PL the first 8 addresses are used for the coder itself. Therefore, set code 8 or higher on the first push-button module art. PL228S.

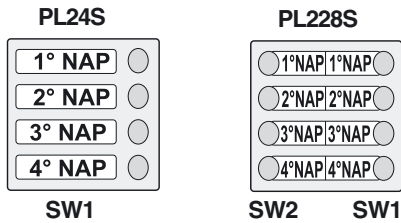
The following addresses are set in the example:

- 36 to coder CD2138PL
- 8 to first key on the right in module PL228S
- 12 to first key on the left in module PL228S





Example of order used to associate numbers with buttons



Code to be set	Numbers associated with buttons- NAP	Push-button micro-switch SW
4	1 <sup>st</sup> NAP = 4 2 <sup>nd</sup> NAP = 5 3 <sup>d</sup> NAP = 6 4 <sup>th</sup> NAP = 7	
8	1 <sup>st</sup> NAP = 8 2 <sup>nd</sup> NAP = 9 3 <sup>d</sup> NAP = 10 4 <sup>th</sup> NAP = 11	
12	1 <sup>st</sup> NAP = 12 2 <sup>nd</sup> NAP = 13 3 <sup>d</sup> NAP = 14 4 <sup>th</sup> NAP = 15	
16	1 <sup>st</sup> NAP = 16 2 <sup>nd</sup> NAP = 17 3 <sup>d</sup> NAP = 18 4 <sup>th</sup> NAP = 19	
20	1 <sup>st</sup> NAP = 20 2 <sup>nd</sup> NAP = 21 3 <sup>d</sup> NAP = 22 4 <sup>th</sup> NAP = 23	
24	1 <sup>st</sup> NAP = 24 2 <sup>nd</sup> NAP = 25 3 <sup>d</sup> NAP = 26 4 <sup>th</sup> NAP = 27	
28	1 <sup>st</sup> NAP = 28 2 <sup>nd</sup> NAP = 29 3 <sup>d</sup> NAP = 30 4 <sup>th</sup> NAP = 31	
32	1 <sup>st</sup> NAP = 32 2 <sup>nd</sup> NAP = 33 3 <sup>d</sup> NAP = 34 4 <sup>th</sup> NAP = 35	
36	1 <sup>st</sup> NAP = 36 2 <sup>nd</sup> NAP = 37 3 <sup>d</sup> NAP = 38 4 <sup>th</sup> NAP = 39	
40	1 <sup>st</sup> NAP = 40 2 <sup>nd</sup> NAP = 41 3 <sup>d</sup> NAP = 42 4 <sup>th</sup> NAP = 43	
44	1 <sup>st</sup> NAP = 44 2 <sup>nd</sup> NAP = 45 3 <sup>d</sup> NAP = 46 4 <sup>th</sup> NAP = 47	
48	1 <sup>st</sup> NAP = 48 2 <sup>nd</sup> NAP = 49 3 <sup>d</sup> NAP = 50 4 <sup>th</sup> NAP = 51	
52	1 <sup>st</sup> NAP = 52 2 <sup>nd</sup> NAP = 53 3 <sup>d</sup> NAP = 54 4 <sup>th</sup> NAP = 55	
56	1 <sup>st</sup> NAP = 56 2 <sup>nd</sup> NAP = 57 3 <sup>d</sup> NAP = 58 4 <sup>th</sup> NAP = 59	

Code to be set

60

64

68

72

76

80

84

88

92

96

100

104

108

112

116

120

124

Numbers associated with buttons- NAP

1<sup>st</sup> NAP = 60  
2<sup>nd</sup> NAP = 61  
3<sup>d</sup> NAP = 62  
4<sup>th</sup> NAP = 63

1<sup>st</sup> NAP = 64  
2<sup>nd</sup> NAP = 65  
3<sup>d</sup> NAP = 66  
4<sup>th</sup> NAP = 67

1<sup>st</sup> NAP = 68  
2<sup>nd</sup> NAP = 69  
3<sup>d</sup> NAP = 70  
4<sup>th</sup> NAP = 71

1<sup>st</sup> NAP = 72  
2<sup>nd</sup> NAP = 73  
3<sup>d</sup> NAP = 74  
4<sup>th</sup> NAP = 75

1<sup>st</sup> NAP = 76  
2<sup>nd</sup> NAP = 77  
3<sup>d</sup> NAP = 78  
4<sup>th</sup> NAP = 79

1<sup>st</sup> NAP = 80  
2<sup>nd</sup> NAP = 81  
3<sup>d</sup> NAP = 82  
4<sup>th</sup> NAP = 83

1<sup>st</sup> NAP = 84  
2<sup>nd</sup> NAP = 85  
3<sup>d</sup> NAP = 86  
4<sup>th</sup> NAP = 87

1<sup>st</sup> NAP = 88  
2<sup>nd</sup> NAP = 89  
3<sup>d</sup> NAP = 90  
4<sup>th</sup> NAP = 91

1<sup>st</sup> NAP = 92  
2<sup>nd</sup> NAP = 93  
3<sup>d</sup> NAP = 94  
4<sup>th</sup> NAP = 95

1<sup>st</sup> NAP = 96  
2<sup>nd</sup> NAP = 97  
3<sup>d</sup> NAP = 98  
4<sup>th</sup> NAP = 99

1<sup>st</sup> NAP = 100  
2<sup>nd</sup> NAP = 101  
3<sup>d</sup> NAP = 102  
4<sup>th</sup> NAP = 103

1<sup>st</sup> NAP = 104  
2<sup>nd</sup> NAP = 105  
3<sup>d</sup> NAP = 106  
4<sup>th</sup> NAP = 107

1<sup>st</sup> NAP = 108  
2<sup>nd</sup> NAP = 109  
3<sup>d</sup> NAP = 110  
4<sup>th</sup> NAP = 111

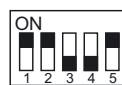
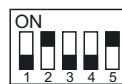
1<sup>st</sup> NAP = 112  
2<sup>nd</sup> NAP = 113  
3<sup>d</sup> NAP = 114  
4<sup>th</sup> NAP = 115

1<sup>st</sup> NAP = 116  
2<sup>nd</sup> NAP = 117  
3<sup>d</sup> NAP = 118  
4<sup>th</sup> NAP = 119

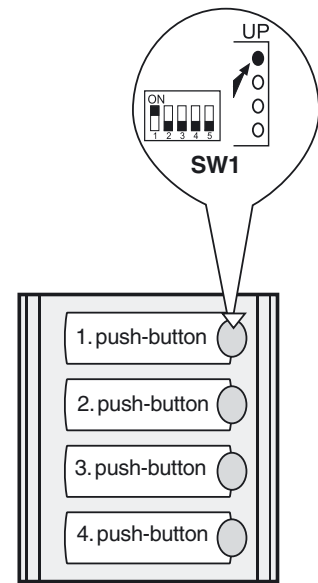
1<sup>st</sup> NAP = 120  
2<sup>nd</sup> NAP = 121  
3<sup>d</sup> NAP = 122  
4<sup>th</sup> NAP = 123

1<sup>st</sup> NAP = 124  
2<sup>nd</sup> NAP = 125  
3<sup>d</sup> NAP = 126  
4<sup>th</sup> NAP = 127

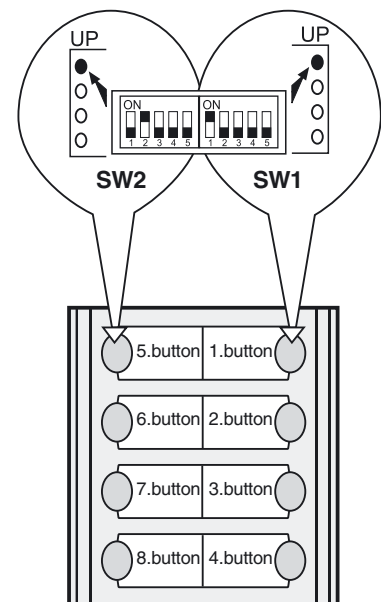
Push-button micro-switch SW



First button indication and relevant microswitch for coding



PL24S

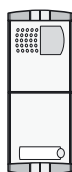


PL228S



## 1 ROW PUSH-BUTTON PANEL

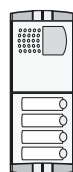
## Examples of installations in videointercom systems



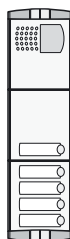
1 call button



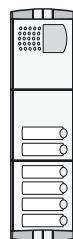
2 call buttons



4 call buttons



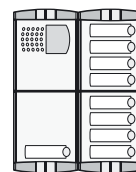
5 call buttons



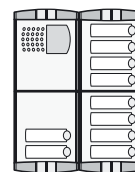
6 call buttons



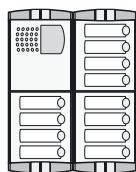
8 call buttons



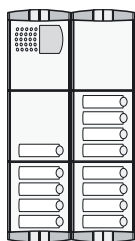
9 call buttons



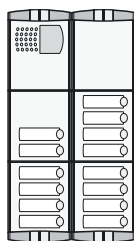
10 call buttons



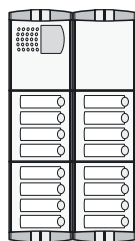
12 call buttons



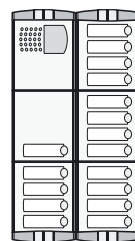
13 call buttons



14 call buttons



16 call buttons



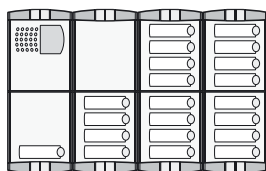
17 call buttons



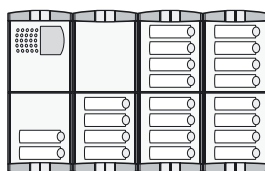
18 call buttons



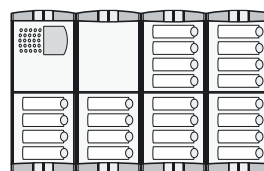
20 call buttons



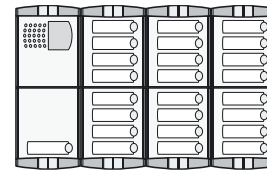
21 call buttons



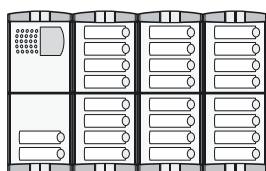
22 call buttons



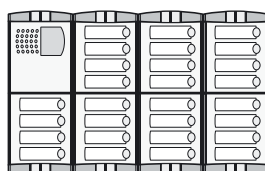
24 call buttons



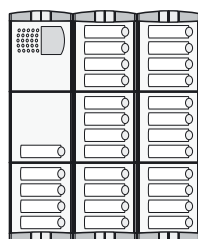
25 call buttons



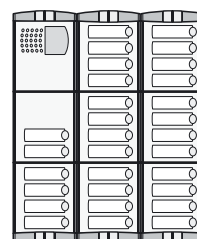
26 call buttons



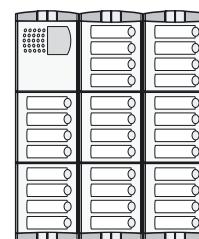
28 call buttons



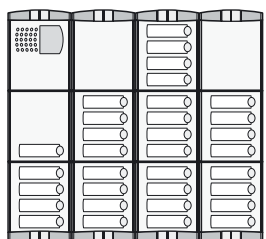
29 call buttons



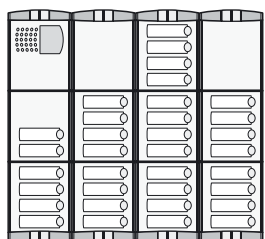
30 call buttons



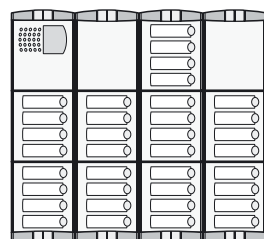
32 call buttons



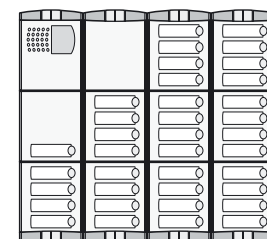
33 call buttons



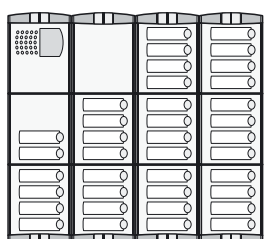
34 call buttons



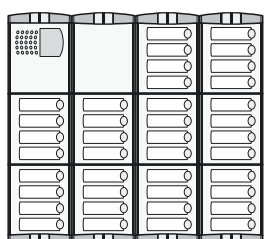
36 call buttons



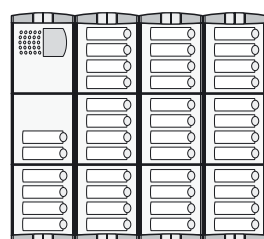
37 call buttons



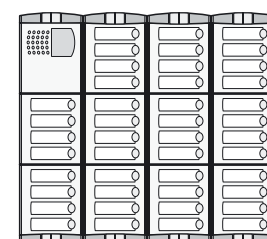
38 call buttons



40 call buttons



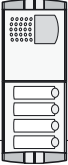

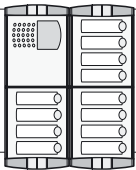
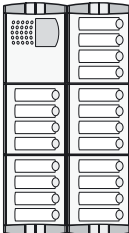
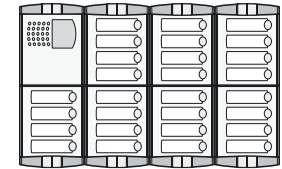
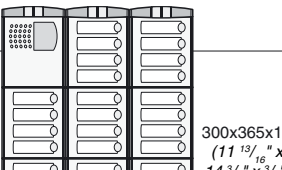
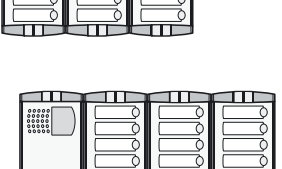
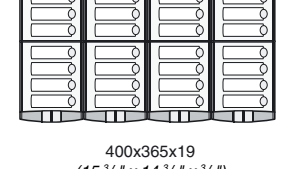
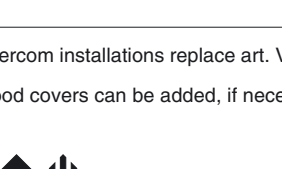

42 call buttons



44 call buttons



## Composition board of push-button panels.

Nr calls	Composition and dimensions	Encoder module	Camera and speaker mod.	Buttons, blank or number modules (*)	Back boxes and mod. frame (**)	Rain shelters
1	 100x253.5x19 (3 15/16" x 10" x 3/4")	1 CD2131PL	1 VD2120CPL	- -	1 PL72	1 PL92
2		1 CD2132PL	1 VD2120CPL	- -	1 PL72	1 PL92
3		1 CD2134PL	1 VD2120CPL	- -	1 PL72	1 PL92
4		1 CD2134PL	1 VD2120CPL	- -	1 PL72	1 PL92
5	 100x365x19 (3 15/16" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	1 PL24S -	1 PL73	1 PL93
6		1 CD2132PL	1 VD2120CPL	1 PL24S -	1 PL73	1 PL93
7		1 CD2134PL	1 VD2120CPL	1 PL24S -	1 PL73	1 PL93
8		1 CD2134PL	1 VD2120CPL	1 PL24S -	1 PL73	1 PL93
9	 200x253.5x19 (7 7/8" x 10" x 3/4")	1 CD2131PL	1 VD2120CPL	2 PL24S -	2 PL72	1 PL94
10		1 CD2132PL	1 VD2120CPL	2 PL24S -	2 PL72	1 PL94
11		1 CD2134PL	1 VD2120CPL	2 PL24S -	2 PL72	1 PL94
12		1 CD2134PL	1 VD2120CPL	2 PL24S -	2 PL72	1 PL94
13	 200x365x19 (7 7/8" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	3 PL24S 1 PL20	2 PL73	1 PL96
14		1 CD2132PL	1 VD2120CPL	3 PL24S 1 PL20	2 PL73	1 PL96
15		1 CD2134PL	1 VD2120CPL	3 PL24S 1 PL20	2 PL73	1 PL96
16		1 CD2134PL	1 VD2120CPL	3 PL24S 1 PL20	2 PL73	1 PL96
17	 200x365x19 (7 7/8" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	4 PL24S -	2 PL73	1 PL96
18		1 CD2132PL	1 VD2120CPL	4 PL24S -	2 PL73	1 PL96
19		1 CD2134PL	1 VD2120CPL	4 PL24S -	2 PL73	1 PL96
20		1 CD2134PL	1 VD2120CPL	4 PL24S -	2 PL73	1 PL96
21	 400x253.5x19 (15 3/4" x 10" x 3/4")	1 CD2131PL	1 VD2120CPL	5 PL24S 1 PL20	4 PL72	2 PL94
22		1 CD2132PL	1 VD2120CPL	5 PL24S 1 PL20	4 PL72	2 PL94
23		1 CD2134PL	1 VD2120CPL	5 PL24S 1 PL20	4 PL72	2 PL94
24		1 CD2134PL	1 VD2120CPL	5 PL24S 1 PL20	4 PL72	2 PL94
25	 400x253.5x19 (15 3/4" x 10" x 3/4")	1 CD2131PL	1 VD2120CPL	6 PL24S -	4 PL72	2 PL94
26		1 CD2132PL	1 VD2120CPL	6 PL24S -	4 PL72	2 PL94
27		1 CD2134PL	1 VD2120CPL	6 PL24S -	4 PL72	2 PL94
28		1 CD2134PL	1 VD2120CPL	6 PL24S -	4 PL72	2 PL94
29	 300x365x19 (11 13/16" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	7 PL24S -	3 PL73	1 PL99
30		1 CD2132PL	1 VD2120CPL	7 PL24S -	3 PL73	1 PL99
31		1 CD2134PL	1 VD2120CPL	7 PL24S -	3 PL73	1 PL99
32		1 CD2134PL	1 VD2120CPL	7 PL24S -	3 PL73	1 PL99
33	 400x365x19 (15 3/4" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	8 PL24S 2 PL20	4 PL73	2 PL99
34		1 CD2132PL	1 VD2120CPL	8 PL24S 2 PL20	4 PL73	2 PL99
35		1 CD2134PL	1 VD2120CPL	8 PL24S 2 PL20	4 PL73	2 PL99
36		1 CD2134PL	1 VD2120CPL	8 PL24S 2 PL20	4 PL73	2 PL99
37	 400x365x19 (15 3/4" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	9 PL24S 1 PL20	4 PL73	2 PL99
38		1 CD2132PL	1 VD2120CPL	9 PL24S 1 PL20	4 PL73	2 PL99
39		1 CD2134PL	1 VD2120CPL	9 PL24S 1 PL20	4 PL73	2 PL99
40		1 CD2134PL	1 VD2120CPL	9 PL24S 1 PL20	4 PL73	2 PL99
41	 400x365x19 (15 3/4" x 14 3/8" x 3/4")	1 CD2131PL	1 VD2120CPL	10 PL24S -	4 PL73	2 PL99
42		1 CD2132PL	1 VD2120CPL	10 PL24S -	4 PL73	2 PL99
43		1 CD2134PL	1 VD2120CPL	10 PL24S -	4 PL73	2 PL99
44		1 CD2134PL	1 VD2120CPL	10 PL24S -	4 PL73	2 PL99

For intercom installations replace art. VD2120CPL with AD2120CPL

(\*) or PL50

It replaces PL72 or PL73

(\*\*) Hood covers can be added, if necessary (see page 32)



## 2 ROW PUSH-BUTTON PANEL

### Composition board of push-button panels.

Nr calls	Dimensions	Encoder module	Camera and speaker mod.	Buttons, blank or number modules (*)		Back boxes and mod. frame (**)	Rain shelters
8	100x253.5x19 ( $3\frac{15}{16}" \times 10" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	-	-	1 PL72	1 PL92
16	100x365x19 ( $3\frac{15}{16}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	1 PL228S	-	1 PL73	1 PL93
24	200x365x19 ( $7\frac{7}{8}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	2 PL228S	-	2 PL72	1 PL94
32	200x365x19 ( $7\frac{7}{8}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	3 PL228S	1 PL20	2 PL73	1 PL96
40	200x365x19 ( $7\frac{7}{8}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	4 PL228S	-	2 PL73	1 PL96
48	300x365x19 ( $11\frac{13}{16}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	5 PL228S	2 PL20	3 PL73	1 PL99
56	300x365x19 ( $11\frac{13}{16}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	6 PL228S	1 PL20	3 PL73	1 PL99
64	300x365x19 ( $11\frac{13}{16}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	7 PL228S	-	3 PL73	1 PL93
72	400x365x19 ( $15\frac{3}{4}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	8 PL228S	2 PL20	4 PL73	-
80	400x365x19 ( $15\frac{3}{4}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	9 PL228S	1 PL20	4 PL73	-
88	400x365x19 ( $15\frac{3}{4}" \times 14\frac{3}{8}" \times \frac{3}{4}"$ )	1 CD2138PL	1 VD2120CPL	10 PL228S	-	4 PL73	-

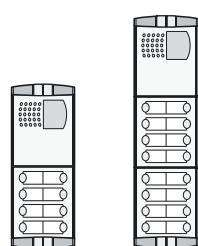
For intercom installations replace art. VD2120CPL with AD2120CPL

(\*) PL50

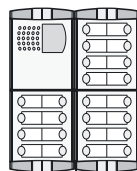
It replaces PL72 or PL73

(\*\*) Hood covers can be added, if necessary (see page 32)

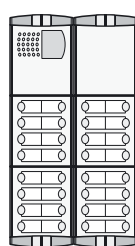
### Examples of installations in videointercom systems



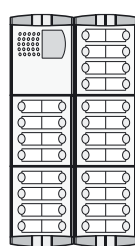
8 call buttons



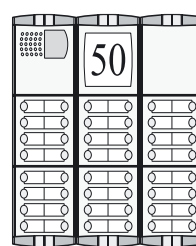
16 call buttons



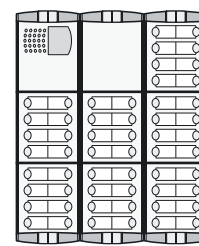
24 call buttons



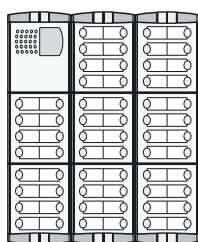
32 call buttons



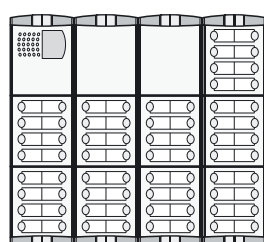
40 call buttons



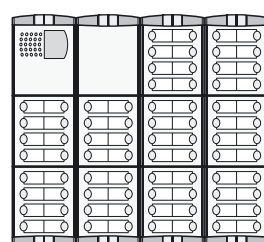
48 call buttons



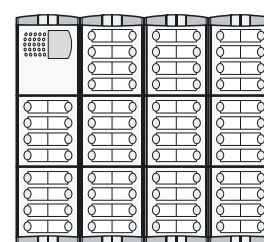
56 call buttons



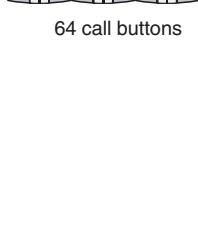
64 call buttons



72 call buttons



80 call buttons




88 call buttons




## OPERATION


Check that all the connections are correct. Connect the power supply unit to the mains. To make a call press the button corresponding to the desired user. Call is confirmed by an acknowledge tone, if the communication line is available, or denied by a busy tone if the communication line is not available (see tone table). Called equipment rings only once, but if in this phase the same calling button on the external station is pressed again the equipment will ring another time.

The called user picks up the handset (or press  for Echos series) enables the conversation with the external station for 90 seconds.

A tone will advise the user 10 seconds before

the conversation ends. To continue conversation for additional 90 seconds on the external station the calling button must be pressed again.

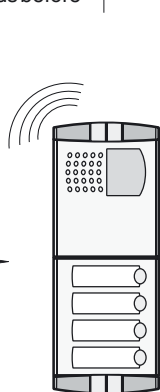
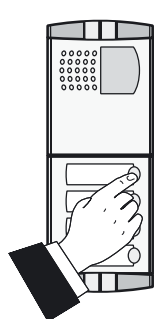
Press the  button to release the door lock. Door lock activation time is 3 seconds (or 6 seconds according to the system programming).

Replace the handset (or press  for Echos series) to end the conversation and restore the idle state.

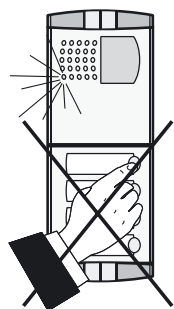
In installations with **2 or more external door stations** when a call is made from one push-button panel, the other push-button panel are deactivated with a busy indication (red LED flashing on the audio or audio/video module).

Wait until the line is free to make a call.

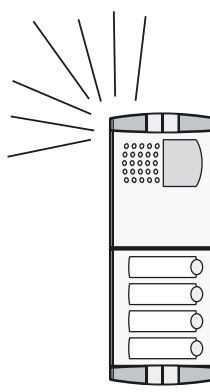
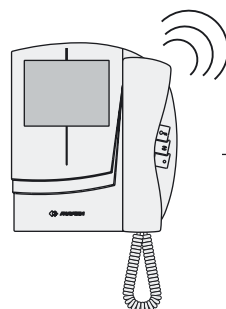
door station 1



door station 2

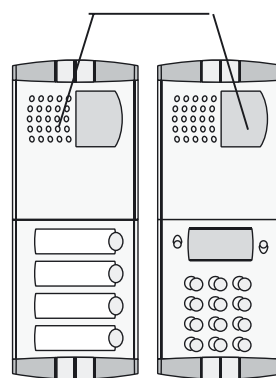


busy



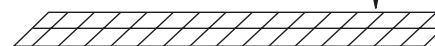
## INSTALLATION

VD2120CPL

1.65m  
5' 5"

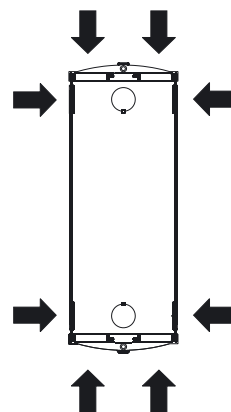
CD2131PL  
CD2132PL  
CD2134PL  
CD2138PL

TD2100PL



Place the push-button panel back box at a height of about 1.65m (5' 5'') from the floor keeping the front edges flush-mounted and vertical to the finished plaster.

**Position the camera in such a way that sunlight or other direct or reflected light sources with high intensity do not hit the camera lens.**

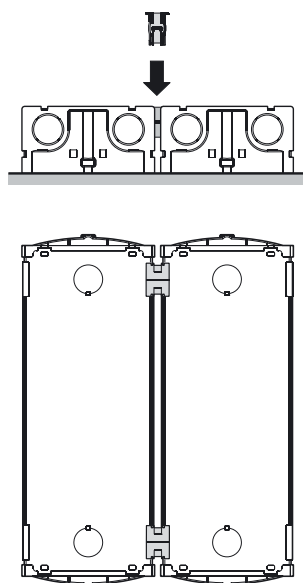


Openings for cables.

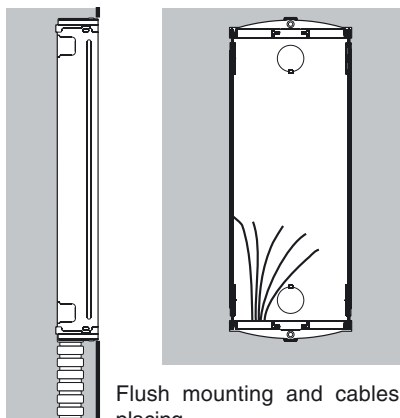




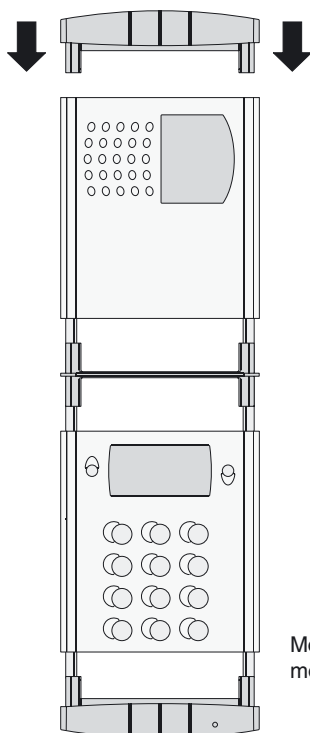
## DOOR STATIONS



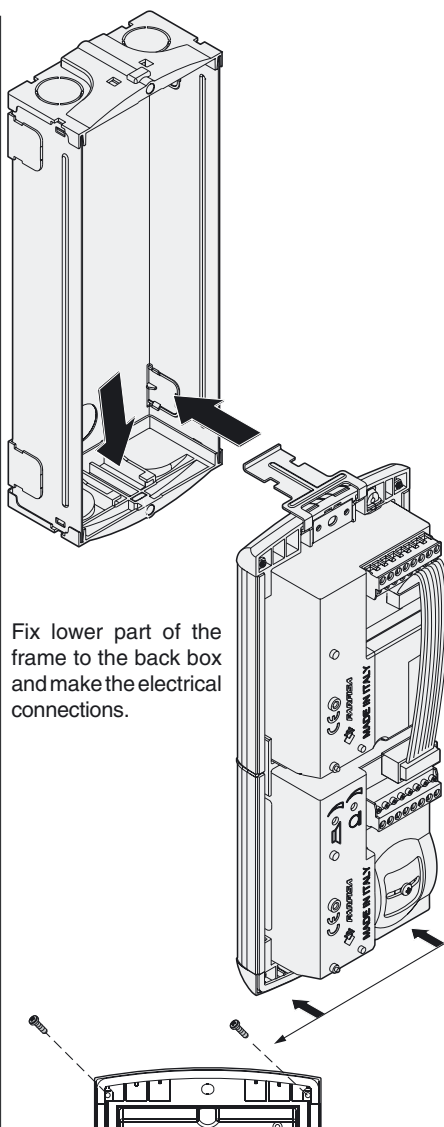
Insertion of spacers between back boxes. Spacers and cable bushing (not supplied with the products) must be inserted before brick work.



Flush mounting and cables placing.

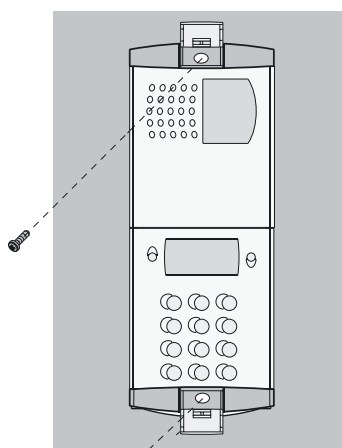


Mounting modules.



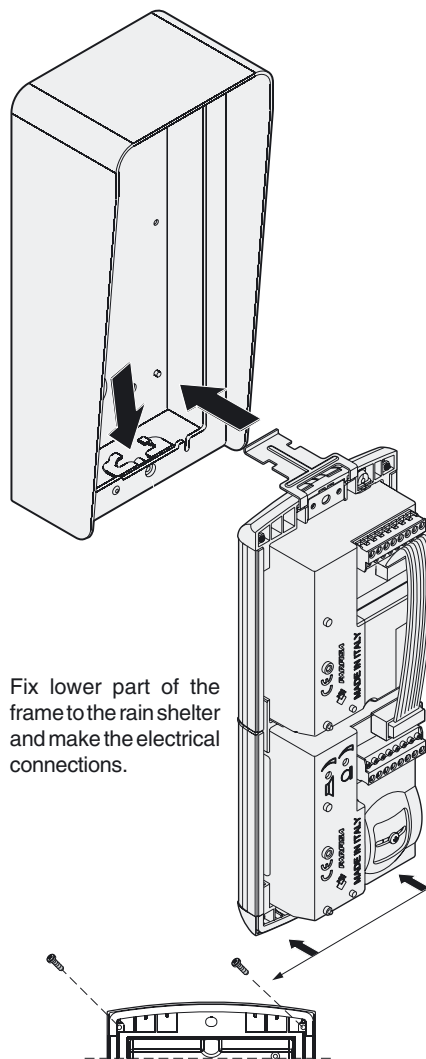
Fix lower part of the frame to the back box and make the electrical connections.

Fixing of the module frames on the upper side by the 2 small screws included in the back boxes.



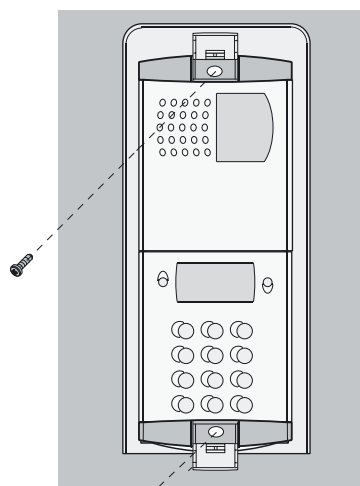
Fixing of frame to back box. Align the frame before tightening the screws.

## Rain shelter



Fix lower part of the frame to the rain shelter and make the electrical connections.

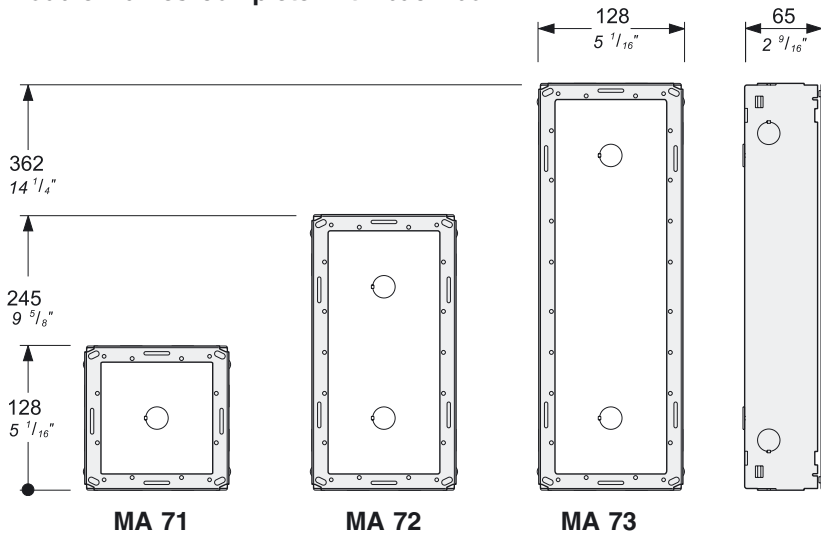
Fixing of the module frames on the upper side by the 2 small screws included in the rain shelter.



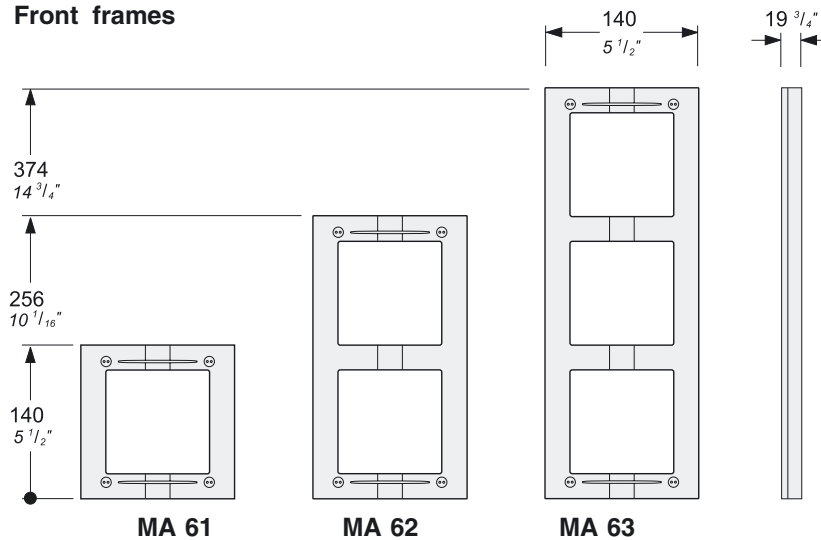
Fixing of frame to rain shelter. Align the frame before tightening the screws.



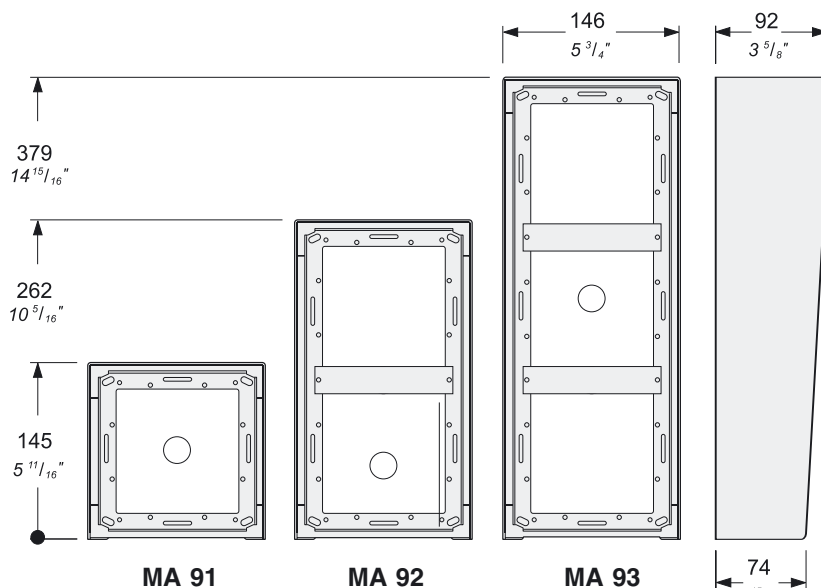
## Module frames complete with back box



## Front frames



## Rain shelters with module frames



Stainless steel anti-vandalism push-button panels especially studied to withstand burglary, penetration of solids and water jets (IP 45 protection degree against the penetration of external solids and water; IK09 against shocks).

The Matrix push-button panels include back boxes, rain shelters, module frames, die-cast aluminium decorative frames, button modules, and video modules with built-in speaker unit.

The push-button elements have been developed to allow both for horizontal and vertical configuration.

## Audio-video modules

### VD2120MA

Audio-video module without call buttons with B/W camera and door speaker integrated (see page 54).

### VD2120CMA

With colour camera.

## Audio module

### AD2110MA

Audio module without call buttons with door speaker integrated (for specifications see page 54).

## Digital modules

### CD2132MA

Digitizer module with 2 call buttons (for specifications see page 61).

### CD2134MA

Digitizer module with 4 call buttons (for specifications see page 61).

### TD2100MA.

Digital door station (for specifications see page 55).

## Blank and button modules

### MA 20.

Blank module in stainless steel.

### MA 22S.

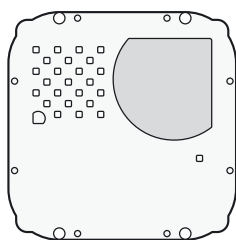
Module with 2 call buttons and encoding board (for specifications see page 64).

### MA 24S.

Module with 4 call buttons and encoding board (for specifications see page 64).



## AUDIO-VIDEO MODULE



### VD2120MA. Module complete with:

- CCD camera with autoiris, fixed 3.6mm lens and 6 infrared LED's
- amplified speaker unit with reception volume and anti-feedback adjustments
- steel front plate with breakproof transparent screen
- horizontal and vertical adjustments
- red operation LED
- connection to the digital encoding modules (CD2132MA and CD2134MA) and digital door station (TD2100MA) through the cable complete with connectors supplied together with the items listed here above.

#### Technical data

Power supply	13Vac±1
Absorption with connection to encoder CD2134MA or CD2132MA	0.7A
Minimum illumination	2 Lux
Illumination system	6 infrared Led's
Sensor	CCD 1/4" B/W
Number of pixels	291,000
Lens	3.6mm
Focus	0.1m ÷ ∞
Autoiris	electronic
Horizontal/vertical adjustment	±15°
Operating temperature	-10°÷+40°C
Max. permissible humidity	80%RH

#### Terminals

~ AC power supply 13Vac

### VD2120CMA. Colour version of model VD2120MA.

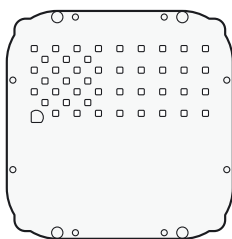
#### Technical data

Power supply	13Vac±1
Absorption with connection to encoder CD2134MA or CD2132MA	0.8A
Video signal standard	PAL
Minimum illumination	2.5 Lux
Led	6 (white)
Sensor	CCD 1/3" colour
Number of pixels	291,000
Lens	3.6mm
Focus	0.6m ÷ ∞
Horizontal/vertical adjustment	±15°
Operating temperature	-10°÷+40°C
Max. permissible humidity	80%RH

#### Terminals

- ~ 13VAC voltage input
- V Video signal input of a supplementary external camera (coaxial cable)
- M Video ground (coaxial shield)
- EC Positive signal for supplementary camera
- EM Negative signal for supplementary camera

## AUDIO MODULE



### AD2110MA. Integrated door speaker module

#### Module complete with:

- amplified speaker unit with reception volume and anti-feedback adjustments
- steel front plate
- red operation LED
- connection to the digital encoding modules (CD2132MA and CD2134MA) and digital door station (TD2100MA) through the cable complete with connectors supplied together with the items listed here above.

#### Technical data

Power supply	13Vac±1
Absorption with connection to encoder CD2134MA or CD2132MA	0.4A
Operating temperature	-10°÷+40°C
Max. permissible humidity	80%RH

#### Terminals

~ AC power supply 13Vac

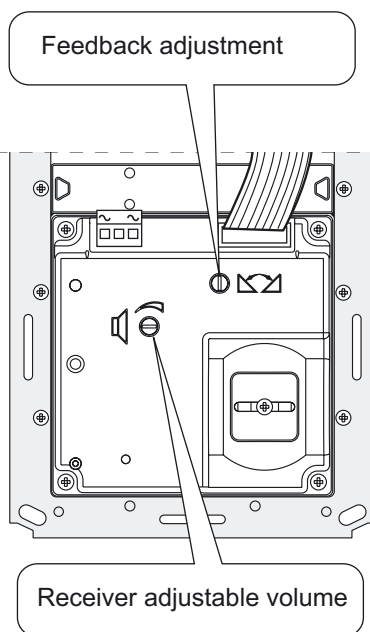
### VD2120MA, VD2120CMA and AD2110MA audio adjustments

If necessary, you can adjust the volume of the 3 audio channels and the Larsen effect (feedback) with the relevant potentiometers.

#### Anti-feedback adjustment

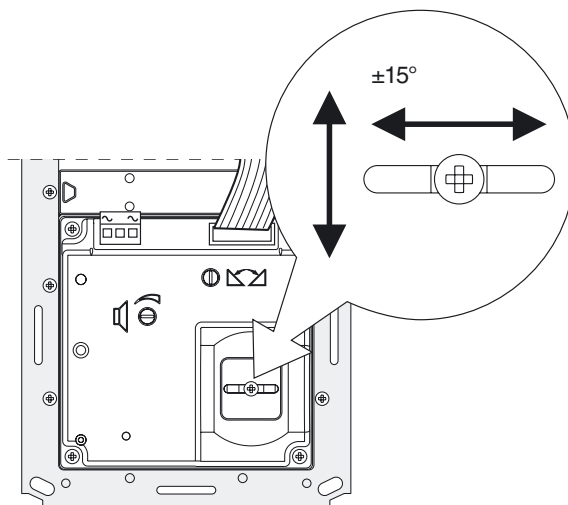
In case of "feedback" (Larsen effect) in the external unit it is necessary to operate as follow:

- make the call from the door station and lift the handset (press for Echos series) of the called user;
- adjust the trimmer " " until the whistling stops (Larsen effect).

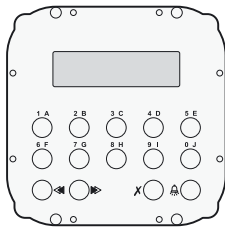


#### Adjustments

You can manually change the camera framing by unloosening and adjusting the horizontal and vertical screws in the desired direction.



## DIGITAL PUSH-BUTTON PANEL



**TD2100MA.** Matrix series anti-vandalism steel push-button panel with 14 steel buttons and alphanumeric LCD. Used to dial and send calls over DUO digital line.

## Technical features

Power supply from audio/video module	
Door-opening time	3/6 seconds
LCD	2 lines x 16 characters
Number of calls	200
Memory	250 names
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

## Terminals

**LP/LP** audio-data-video to and from internal users

**P1/P1** direct call button inputs

**EC** positive signal for auxiliary service

**EM** negative signal for auxiliary service

**S1/S2** door opening contacts

## PROGRAMMING

(instruction for article with software **AE040** or higher)

Before programming you must:

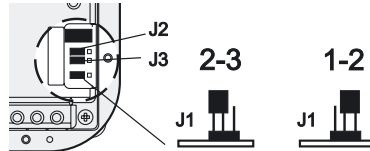
- Move the jumper **J1** on the back of the push-button panel from **2-3** to **1-2**; the display shows "Programming / type:".
- Dial the programming code (see table 1) and press to confirm.

- After you program each single code, bring the jumper **J1** back to **2-3**.

## Positions of jumper J1

**2-3** = operation mode

**1-2** = programming mode



**Table 1**  
Programming codes

<b>00</b>	Entry of codes for door lock / address P1 / address PE
<b>01</b>	Entry-modification-deletion of names
<b>02</b>	Language selection
<b>03</b>	System programming
<b>04</b>	Entry of display initial text
<b>05</b>	Loading names from PC
<b>06</b>	Ordering names
<b>10</b>	Address associated with EC-EM terminals

## Entry of codes for door lock / address P1 / address PE (code 00)

Enter the code **00** to access the "entry of door lock codes" mode. The display shows "PASSWORD 0 / ".

- Dial the first opening code on the keypad, for example 7890; the display shows "PASSWORD 0 / 7890".
- Press ; the display shows "PASSWORD 1 / ".
- Dial the second opening code on the keypad, for example 1234; the display shows "PASSWORD 1 / 1234".
- Press ; the display shows "PASSWORD 2 / ".
- Repeat the operation to enter a maximum of 16 codes. When you press to confirm the

last code (PASSWORD 15) you enter the "entry of address P1 code" mode automatically. You can memorise the number of the internal station that can be called directly by pushing a button connected between terminals **P1/P1**.

- Press ; the display shows "P1 / 0100".
- Press **X** to delete the code shown on the display and enter the number of the internal station you want to enable for the direct call function. The internal stations can be coded with numbers from 1 to 200.
- Press to confirm and go to the "entry of address PE code"; the display shows "PE / 0231 ". You can enter the code for the external station address. The push-button panels can be coded with numbers from 231 to 250.
- Dial the code and press to confirm. You go back to the "entry of door lock codes" mode. The display shows the PASSWORD 0 code (PASSWORD 0 / internal station)".
- To exit programming bring the jumper **J1** back to the original position (from 1-2 to 2-3).

## Modifying a code or address

To change a code or address, you must enter the programming mode by moving the jumper **J1** from 2-3 to 1-2 and then:

- select the programming code **00**;
- press the button until the code you want to modify is displayed;
- press **X** to go to the code you want to modify.
- enter the new code on the keyboard and then press the button
- repeat the operation for all the codes you want to modify;
- move the jumper **J1** from to 2-3 to exit the programming mode.

## Deleting a code or address

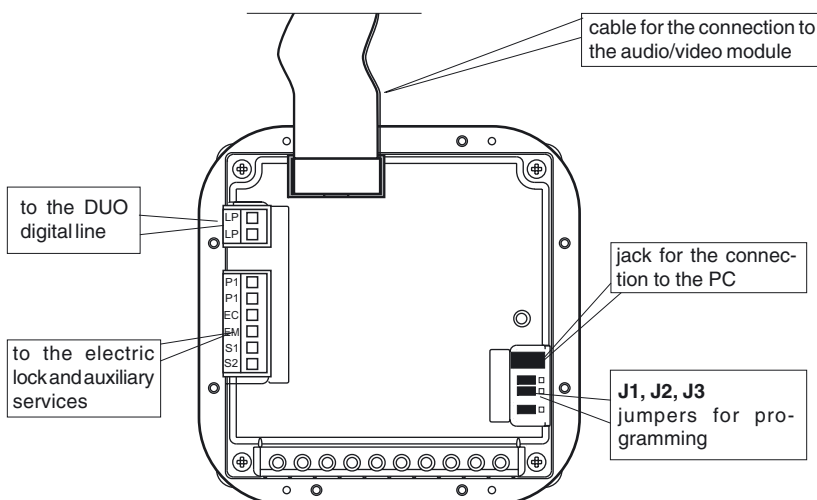
To delete a code or address, you must enter the programming mode by moving the jumper **J1** from 2-3 to 1-2 and then:

- select the programming code **00**;
- press the button until the code you want to delete is displayed;
- press **X** and then
- repeat the operation for all the codes you want to delete;
- move the jumper **J1** from to 2-3 to exit the programming mode.

## Entry / modification / deletion of names (code 01)

The digital keyboard TD2100MA has an alphanumeric display with 32 characters that displays the user name and extension number (28 characters are used for the user name and the last 4 characters on bottom right are used for the extension number). To save them, you must follow the procedure illustrated below. The name must be entered starting from the first character on top left and the last digit of the extension number must be entered in the last position on bottom right, otherwise the number will not be saved (see "procedure to delete a name").

## Connection terminal boards

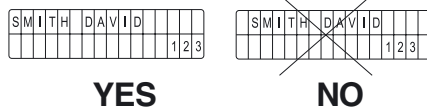


## DOOR STATIONS

## DIGITAL PUSH-BUTTON PANEL

After you have entered all the names, the system will automatically order them alphabetically.

### Example



### Function of buttons when entering or modifying a name

- ⏏ Hold this button pressed to scroll the list of existing names
- X Hold this button pressed to move the cursor to the name characters
- Hold this button pressed to scroll down the list of characters
- ⏪ Hold this button pressed to scroll up the list of characters

When searching for characters, the display shows uppercase letters, low-case letters, numbers, characters . <> and space in a sequence.

### Entry of names

- Move the jumper J1 from 2-3 to 1-2.
- Enter the code 01 and press ⏏; the display shows the first name. The display is empty if no codes are programmed.
- Press ➤ or ⏪ to select the character for the first cell; press X to go to the second cell; press ➤ or ⏪ to select the character for the second cell; continue until you have entered the complete name with code. Press X after you have entered the number in the last cell on bottom right; the display shows "STORE USER / YES <> NO"; press ⏪ to confirm; press ➤ to modify the name.
- If confirmed, the display shows the second name. The display is empty if no names are programmed.
- Once you have confirmed the last name, bring the jumper J1 back to the original position (from 1-2 to 2-3). The display shows "waiting" and an automatic status bar. Normal operation is restored after a few seconds and the display shows the initial text (see "Operation").

**Notes.** Once you have entered 250 names the display shows "waiting" and an automatic status bar. After a few seconds the display shows "Programming / type:" and you can continue with programming or exit by moving the jumper J1 back to 2-3.

You can enter 2 or more names with the same call number (i.e. different family names in the same apartment)

### Modification or correction of names

- Move the jumper J1 from 2-3 to 1-2.
- Enter the code 01 and press ⏏; the display shows the first name.
- Press ⏏ to search for the name you want to modify; (hold the button pressed for quick searching).
- Press X to go to the character you want to modify.
- Select the character with ➤ (forward) ⏪ (backward).
- Repeat the operation until you have completed the name modification.
- Once you have completed the modification, hold X pressed until the display shows "STORE USER / YES <> NO". Press ⏪ to confirm or ➤ to modify the name again. Enter a space to delete a letter.

### Addition of 1 or more names to the list

To add a new name to existing list you must:

- move the jumper J1 from 2-3 to 1-2.
- enter the code 01 and press ⏏; the display shows the first name.
- press ⏏ to scroll the list; the display is empty after the last name (hold the button pressed for quick searching).
- to enter a new name follow the operations described in "Entry of names". If confirmed, the name is placed in the list in alphabetical order.

### Deletion of name

- Move the jumper J1 from 2-3 to 1-2.
- Enter the code 01 and press ⏏; the display shows the first name.
- Press ⏏ to search for the name you want to delete; (hold the button pressed for quick

searching).

- Press X to go to the last cell (bottom right); enter a space to delete the existing number.
  - Press X again; the display shows "DELETE USER / YES <> NO". Press ➤ to confirm or ⏪ to go back to the name.
  - Press ➤ to confirm or ⏪ to go back to the name.
- The next name is displayed after you have deleted the name.

### Language selection (code 02)

You can choose the language from 6 different options (Italian, English, French, German, Spanish and Portuguese) in operation mode:

- Move the jumper J1 from 2-3 to 1-2.
- Enter the code 02 and press ⏏; the display shows "Italiano" in case of first programming or the programmed language.
- Press ➤ or ⏪ to select the language.
- Press ⏏ to confirm; the display shows "Programming / type: "
- Continue by entering the code of a new programming or exit by moving the jumper J1 back to 2-3.

### System programming (code 03)

You can change or activate the functions of the push-button panel (see table 2 of page 56).

Before programming you must:

- Move the jumper J1 from 2-3 to 1-2.
- Enter the code 03 and press ⏏; the display shows "bit 0 = 0 / 0 <> 1" in case of first programming or "bit 0 = 1 / 0 <> 1" if changed in the previous programming.
- Press ➤ to select 1 or ⏪ to select 0.
- Press ⏏ to confirm and go to the next code (see code table with descriptions).
- Once you have confirmed the value of the last code (bit 7), the display shows "Programming / type: "
- Continue by entering the code of a new programming or exit by moving the jumper J1 back to 2-3.

### Personalisation of display initial text (code 04)

You can modify the text shown on the display during normal operation or idle state. You must

Table 2 - Table of system programming codes (code 03)

Programming code	Function description	Default value	Value entered with buttons	
			⏪ = 0	➤ = 1
bit 0	door lock activation time	3 sec.	3 seconds	6 seconds
bit 1	activation upon call from internal station (1)	YES	NO	YES
bit 2	door lock activation with X (2)	NO	NO	YES
bit 3	deactivation of tone generator on the external door station	NO	NO	YES
bit 4	activation of personalised initial screen (3)	NO	NO	YES
bit 5	deactivation of ACI FARFISA and activation of personalised text	NO	NO	YES
bit 6	EC-EM terminals for additional camera switching	NO	NO	YES
bit 7	activation time of the EC-EM terminals for supplementary lock	3 sec.	3 seconds	6 seconds

\*\*\* This function allows the internal stations to press the ⏏ button and pick up the handset, start a conversation with the external station (in case of more external stations in parallel the connection is established with the last calling door station) and activate the door lock by pressing the button ⏏.

(2) This functions allows for quicker door lock activation by pressing X rather than dialling the code 00+⏏. For example: press X + password + ⏏.

(3) You can alternate "ACI FARFISA" with the personalised text (see "personalisation of display initial text").





program bit 5 to display the text (see "system programming").

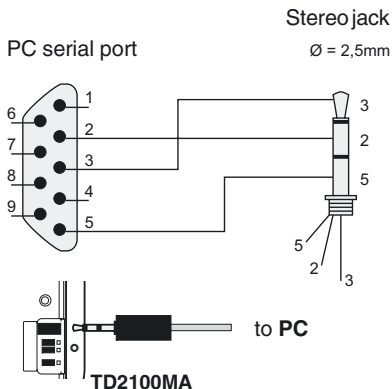
To insert the personalized text you must:

- Move the jumper **J1** from **2-3** to **1-2**.
- Enter the code **04** and press ; the display shows "DUO System", in case of first programming, or the text you want to replace.
- For information on how to enter the characters see "entry of names".
- Press to confirm; the display shows "Programming / type: " .
- Continue by entering the code of a new programming or exit by moving the jumper **J1** back to **2-3**.

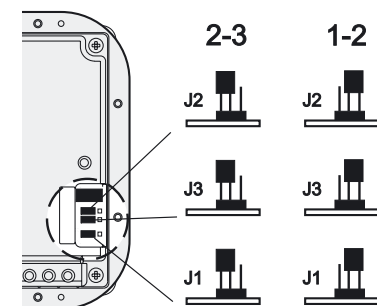
#### Loading names from PC (code 05)

You can load names directly from your PC.

- Load the names on the PC using a dedicated software application (software supplied on demand).
- Turn OFF the push-button panel and the PC.
- Connect the PC serial port to the stereo jack on the back of the push-button panel with a cable as shown in the figure.



- Move the jumpers **J1**, **J2** and **J3** on the back of the push-button panel from **2-3** to **1-2**.



- Turn on the PC and then the push-button panel.
- Enter the code **05**; the display shows "TD2100MA > PC / in progress 0".
- Download the names from the PC within 15 seconds; the display shows "TD2100MA <=> PC / in progress 1", "TD2100MA <=> PC / in progress 2" and then the downloaded names.

At the end of download the push-button deletes the existing names. The first line of the display shows "waiting" and the second line shows a status bar to show the progress of the deletion operation. At the end the display shows "Programming / type: " .

- Turn off the push-button panel and then the PC.
- Disconnect the cable from the PC and the push-button panel.
- Bring the jumpers **J1**, **J2** and **J3** back to **2-3**.

#### Ordering names (code 06)

You can list the names in alphabetical order (from A to Z).

- Move the jumper **J1** from **2-3** to **1-2**.
- Enter the code **06**; the first line of the display shows "waiting" and the second line shows a status bar; at the end of the operation the push-button panel returns automatically to the programming mode (the display shows "Programming / type: " .
- Exit the programming mode by bringing the jumper **J1** back to **2-3**.

#### How to enter the address of EC-EM terminals (code 10)

- Move the jumper **J1** from **2-3** to **1-2**.
- Enter the code **10** and press ; the display shows "ADDRESS EC".
- Dial the number of the desired address (255 for relay or camera activation mode; 250 for door lock mode; number of internal station before the first user of the supplementary door lock service).
- Press to confirm.
- Exit the programming mode by bringing the jumper **J1** back to **2-3**.

#### Return to operation mode

Once you have completed programming, bring the jumper **J1** back to **2-3**; the display shows "ACI FAREFISA / press < >" or the text you have entered during programming (see "Personalisation of display initial text").

#### EC-EM TERMINALS

The EC-EM terminals can be used to connect:

- one active relay during the call and for the entire conversation (default)
- one additional camera
- one additional door lock

To have these functions you must connect the terminals correctly and make some programming operations on the TD2100MA push-button panel.

#### - Connection of one relay (see fig. 1)

Programming operations to be made:

- code **03** = set **bit 6** at **0**
- code **03** = set **bit 7** at **0**
- code **10** = enter address **255**

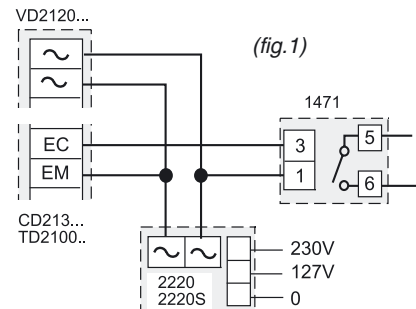
#### - Connection of one additional camera

For this use you must connect the EC and EM terminals to the corresponding terminals of the audio/video module (see diagram on page 97).

Programming operations to be made:

- code **03** = set **bit 6** at **1**
- code **03** = set **bit 7** at **0**
- code **10** = enter address **255**

- **Connection of one additional door lock.** For this use you must connect a relay as shown in the figure and program the push-button panel according to the desired service. The presence of the additional door lock requires to change the password (code 00). The first 8 passwords will activate the door lock connected to terminals S1 and S2, and the remaining 8 passwords will activate the door lock connected to terminals EC and EM.



**1) - activation of door lock from turn-on button of internal stations** (☉ from videointercoms; ● from intercoms). This function can be activated only during a conversation with the external door station. In idle state the buttons will activate the external door station.

Programming operations to be made:

- code **03** = set **bit 6** at **0**
- code **03** = set **bit 7** at **0** (3 seconds) or **1** (6 seconds)
- code **10** = enter address **250**

#### 2) - activation of door lock from button of internal stations

This programming allows for having two groups of users connected to a single external door station, each of them with its own door lock. The division between the two groups is indicated by the number that is inserted in the programming of code 10 (see page 36). You must insert the last user number recognised by group 1 that will activate the door lock connected to terminals S1 and S2; all higher numbers will automatically be in group 2 and will activate the door lock connected to terminals EC and EM.

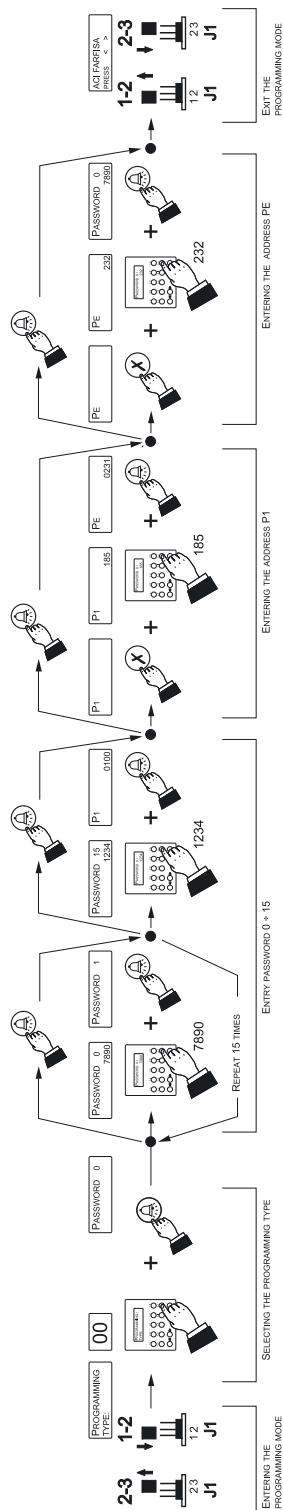
Programming operations to be made:

- code **03** = set **bit 6** at **0**
- code **03** = set **bit 7** at **0** (3 seconds) or **1** (6 seconds)
- code **10** = insert address of **last user in group 1** (example: if you enter 99 you will have: group 1 with codes from 1 to 99; group 2 from 100 to 200).

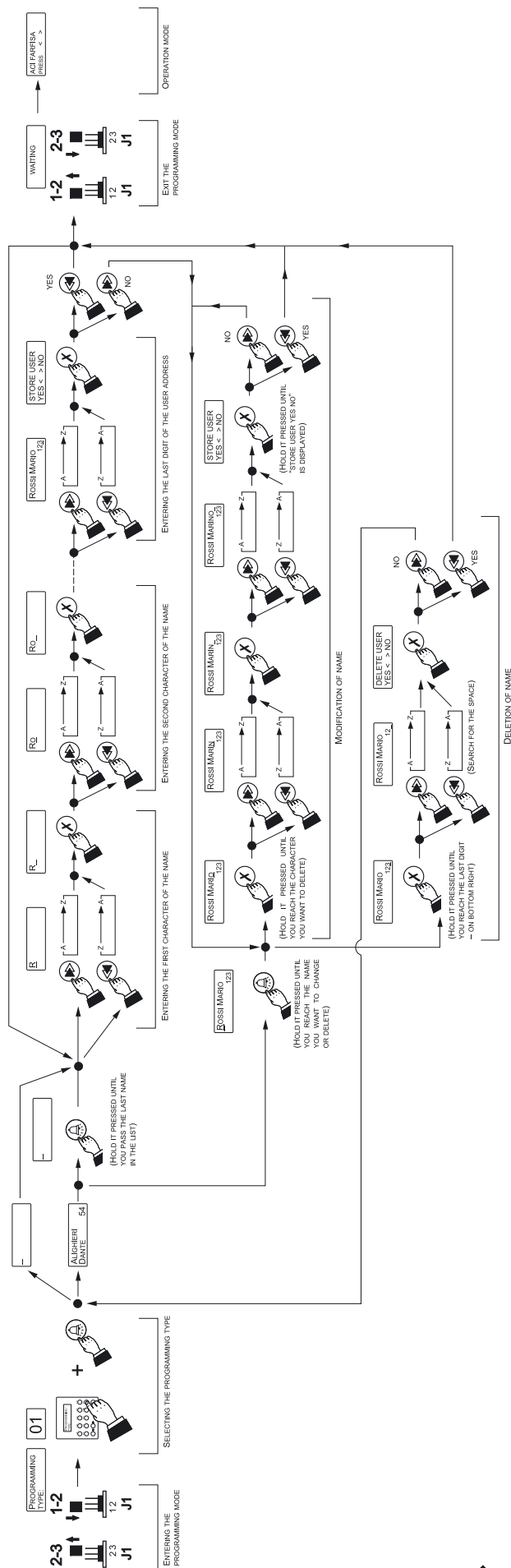


## Example of programming for digital push-button panel TD2100MA

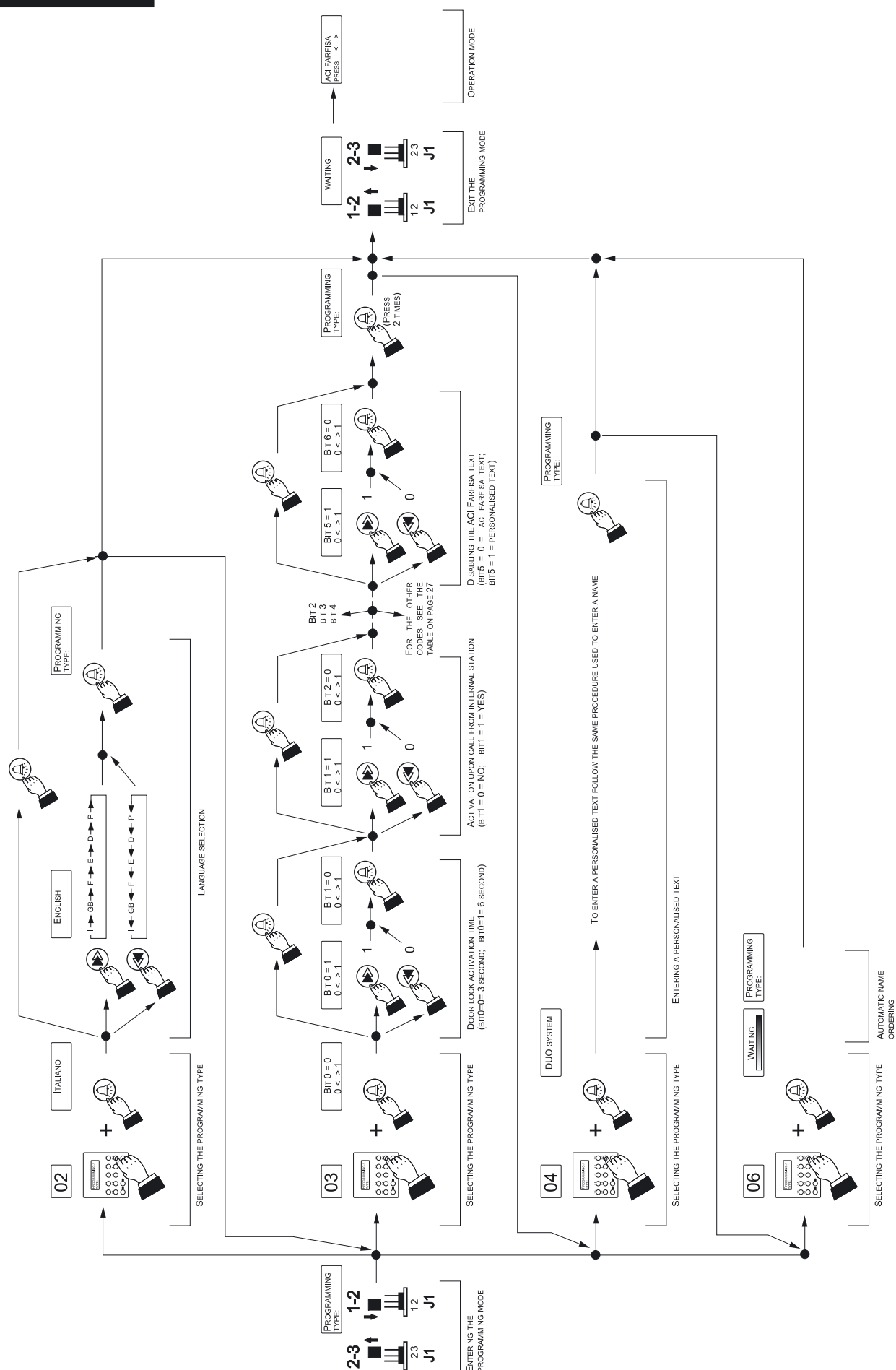
### Code 00 - Entry of password, address button P1 and address door station



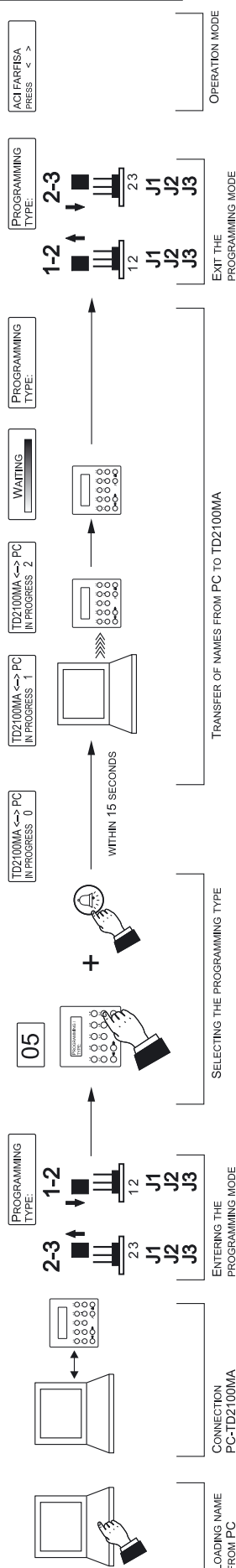
### Code 01 - Entry, modification and deletion of names



## Code02 - Language selection



Code 05 - Loading names from Personal Computer



OPERATION

Check that all connections are correct. Connect the power supply unit to the mains; the displays shows the software version of the push-button panel for 3 seconds followed by "ACI FARFISA /press <> (<> in alternate mode).

Dial the user number, check that the number is correct on the display "dialling / ----" and press to make the call. The tone and the text "calling / ----" confirm that the call has been made.

In case of error press (only before sending the call) and dial the correct to number.

If the number exists you will hear the confirmation tone; if not, you will hear the busy tone and the display will show "busy /".

You can select the internal station from the names in the list. Press or to search for the internal station and press to send the call.

The called station will ring only once; but, if in this phase, press another time the station rings again. If press the call is terminated and the system is ready for a new call.

The called user picks up the handset (or press for Echos series) enables the conversation with the external station for 90 seconds. The display shows "connection /---". The text on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 90 seconds press again.

Press the button to release the door lock. Door lock activation time is 3 seconds (or 6 seconds).

Replace the handset (or press for Echos series) or press on the door station to restore the idle state.

Numbers that are not sent or deleted go off after 25 seconds.

In installations with 2 or more digital push-button panels, when a call is made from one push-button panel, the other push-button panels are deactivated and their display shows "busy /". Wait until the line is free to make the call.

Door lock opening

The door lock can be opened from the push-button panel, including in "busy" mode, by dialling one of the 16 4-digit codes you have entered.

Door lock activation

- Dial 00
- Press ; the display shows "Password / ■■■■"
- Dial the personal access code within 10 seconds; each digit is visualised with \* instead of ■.
- Press to release the door lock; you hear the confirmation tone and the push-button panel returns to the current system operation mode (free or busy).

Tonetable

End conversation tone



Indicates an error during the programming phase or that the conversation time is near to expire.

Busy

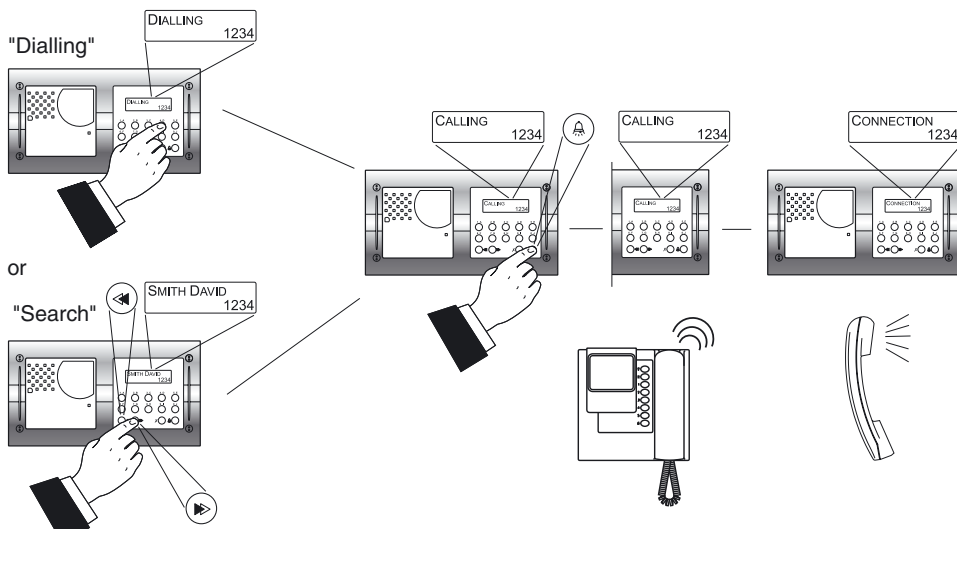


Indicates that the user is busy or not existing

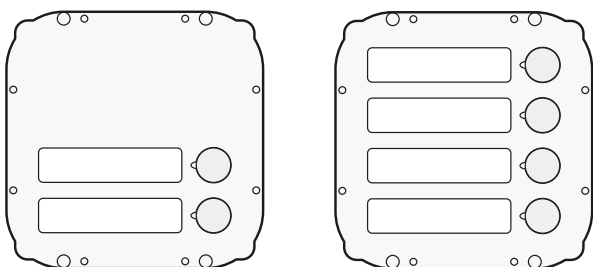
Acknowledge



It indicates that the operation is correct (call, password entering, door opening in conversation)



## DIGITAL ENCODER



**CD2132MA.** Encoding module with front plate and two stainless steel buttons. Complete with name-holders with transparent screen green backlighting, breaking resistant and with connection cable to the next module. Used to send calls over DUO digital line.

**CD2134MA.** With 4 call buttons.

**Technical features**

Power supply from audio/video module	
Door-opening time	3 / 6 sec.
Number of calls	128
Default address	231
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

**Terminals**

<b>LP/LP</b>	audio-data-video to and from internal users
<b>EC</b>	positive signal for auxiliary service
<b>EM</b>	negative signal for auxiliary service
<b>S1/S2</b>	door opening contacts

**PROGRAMMING**

(instruction for article with software **AF100 or higher**)

To program the device it is necessary to perform the following phases:

- 1) enter programming mode
- 2) insert code of desired programming
- 3) insert required address or functional code
- 4) exit programming mode

**Notes**

- In any situation it would be possible to exit the programming phase following the instructions reported on paragraph 4.
- To proceed with other programming repeat the phases 2 and 3.

**1) ENTERING THE PROGRAMMING MODE**

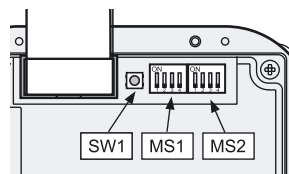
- Move the jumper **J1** from 2-3 to 1-2 position; a programming tone will confirm the correct operation.

**Position of jumper J1****2) INSERT CODE OF DESIRED PROGRAMMING**

- On the microswitches **MS1** and **MS2** set the code corresponding to the programming operation you wish to enter as reported on table 1 on page 62 (codes **1A**, **2A**, **1B**, **2B** and **AA**).
- Press the programming button **SW1**.

**3) INSERT REQUIRED ADDRESS OR FUNCTIONAL CODE**

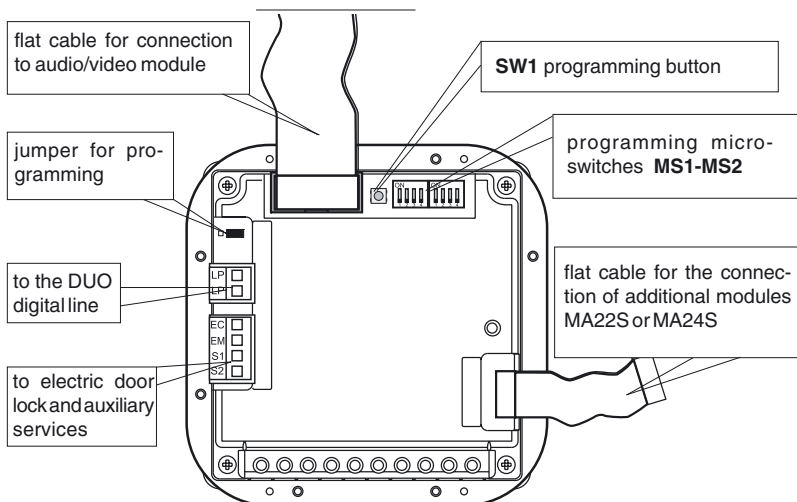
- On the microswitches **MS1** and **MS2** set the address you wish to enter in accordance with the cross-references reported on table 3 on the pages 43, 44 and 45.
- For system programming see table 2 on the page 62 (code **2B**).
- Press the programming button **SW1**.



- Repeat phases 2 and 3 until you have completely programmed the digital encoder.
- Any time you press the **SW1** button an acknowledge or error tone will warn you whether the entered code is correct or not; in case of incorrect code you must enter again the correct one.

**4) EXIT PROGRAMMING MODE**

To exit the programming phase it is necessary to set OFF all the microswitches **MS1** and **MS2** and move back the jumper **J1** from 1-2 to 2-3 position.

**Connection terminal boards**



**Table 1**  
Selection code of the programming

<b>1A</b>		User address associated to the first button. Codes from 1 to 200 (see table 3 on page 43, 44 and 45). Default value 100.
<b>2A *</b>		User address associated to the last button. Codes from 1 to 200 (see table 3 on page 43, 44 and 45). Default value 200.
<b>1B</b>		Address of the external door station. Codes from 231 to 250 (see table 3 on page 45). Default value 231.
<b>2B</b>		System programming (see table 2).
<b>1E</b>		Address associated with terminals EC-EM (see corresponding section for codes to be inserted).
<b>AA</b>		Set the device back to factory settings. Code 170 (see table 3 of page 43).
<b>Codes used to deactivate the camera upon call of 2 user groups (see page 63)</b>		
<b>4E</b>		first address in group 1 (see codes of table 3 on pages 43, 44 and 45)
<b>5E</b>		last address in group 1 (see codes of table 3 on pages 43, 44 and 45)
<b>6E</b>		first address in group 2 (see codes of table 3 on pages 43, 44 and 45)
<b>7E</b>		last address in group 2 (see codes of table 3 on pages 43, 44 and 45)

\* This programming is useful when the push button panel has more buttons than the connected users and to prevent the case when, by pressing an enabled button, the system gets busy

**Table 2**  
Operating mode of the system (code 2B)

Microswitches position of MS1 and MS2		
Microswitches	OFF	ON
	<b>1</b> door lock activation time; 3 seconds **	door lock activation time; 6 seconds
	<b>2</b> deactivation upon call from internal station ***	activation upon call from internal station **
	<b>3</b> reserved: to leave in position OFF **	
	<b>4</b> ACTIVATION of tone generator on the external door station **	DEACTIVATION of tone generator on the external door station
	<b>1-2</b> reserved: to leave in position OFF **	
	<b>3</b> ordinary management of terminals EC-EM (see programming 1E-table 1)	management of terminals EC-EM for additional camera
	<b>4</b> supplementary door lock activation time; 3 seconds **	supplementary door lock activation time; 6 seconds

\*\* Factory setting.

\*\*\* This function allows the internal stations to press the button and pick up the handset, start a conversation with the external station (in case of more external stations in parallel the connection is established with the last calling door station) and activate the door lock by pressing the button.

### EC-EM TERMINALS

The EC-EM terminals can be used to connect:

- one active relay during the call and for the entire conversation (default)
- one additional camera
- one additional door lock

To have these functions you must connect the terminals correctly and make some programming operations on the push-button panel.

#### - Connection of one relay (see fig. 1)

Programming operations to be made:

- microswitch **3** of **MS2** = position **OFF**
- microswitch **4** of **MS2** = position **OFF**
- code **1E** = enter address **255**

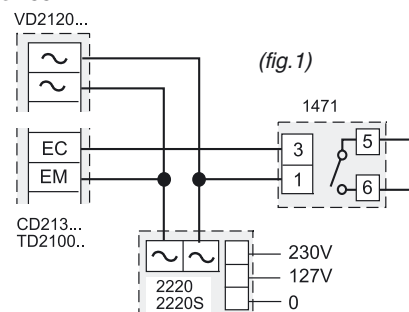
#### - Connection of one additional camera

For this use you must connect the EC and EM terminals to the corresponding terminals of the audio/video module (see diagram on page 97). Programming operations to be made:

- microswitch **3** of **MS2** = position **ON**
- microswitch **4** of **MS2** = position **OFF**
- code **1E** = enter address **255**

#### - Connection of one additional door lock.

For this use you must connect a relay as shown in the figure and program the push-button panel according to the desired service.



**1) - activation of door lock from turn-on button of internal stations** (☺ from videointercoms; ● from intercoms). This function can be activated only during a conversation with the external door station. In idle state the buttons will activate the external door station.

Programming operations to be made:

- microswitch **3** of **MS2** = position **OFF**
- microswitch **4** of **MS2** = position **OFF** (3 seconds) or **ON** (6 seconds)
- code **1E** = enter address **250**

**2) - activation of door lock from button of internal stations**

This programming allows for having two groups of users connected to a single external door station, each of them with its own door lock. The division between the two groups is indicated by the number that is inserted in the programming of code **1E**. You must insert the last user number recognised by group 1 that will activate the door lock connected to terminals **S1** and **S2**; all higher numbers will automatically be in group 2

and will activate the door lock connected to terminals **EC** and **EM**.

Programming operations to be made:

- microswitch **3** of **MS2** = position **OFF**
- microswitch **4** of **MS2** = position **OFF** (3 seconds) or **ON** (6 seconds)
- code **1E** = insert address of **last user in group 1** (example: if you enter 99 you will have: group 1 with codes from 1 to 99; group 2 from 100 to 200).

**How to deactivate the camera upon call**

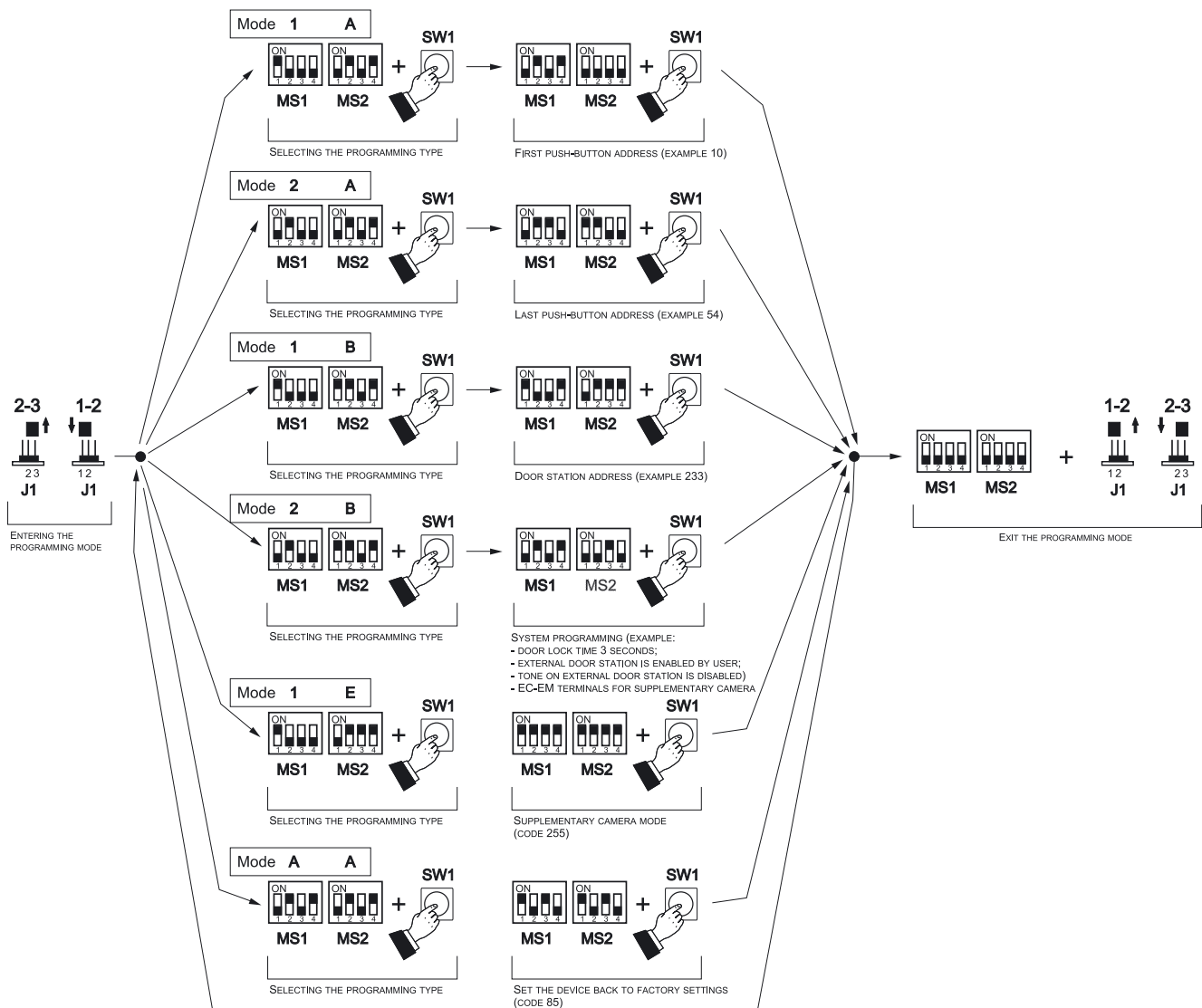
You can create 2 groups of user addresses that will not activate the camera during the call from the external door station. This function is used to avoid the temporary turn-on of white LEDs in the colour camera module during calls to intercoms or actuators 2281.

**How to set address groups (codes 4E, 5E, 6E and 7E)**

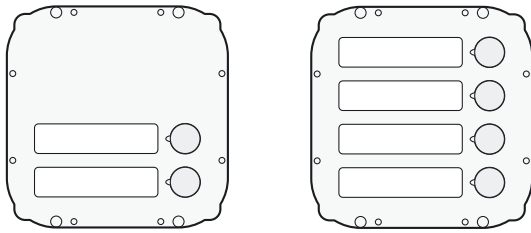
- enter the programming mode as illustrated in "enter the programming mode";

- set code **4E** in microswitches **MS1** and **MS2** and press button **SW1**; you will hear the confirmation tone;
- set the address number of the first user in group 1 in microswitches **MS1** and **MS2** (see table 3 on page 43);
- press button **SW1**; you will hear the confirmation tone;
- set code **5E** in microswitches **MS1** and **MS2** and press button **SW1**; you will hear the confirmation tone;
- set the address number of the last user in group 1 and press button **SW1**; you will hear the confirmation tone;
- repeat the operations above to enter the address of the first and last user in group 2 (codes **6E** and **7E**, respectively);
- press button **SW1** to exit the programming mode.

### Example of programming for digital encoders CD2132MA and CD2134MA



## PUSH-BUTTON MODULES WITH INTEGRATED ENCODING BOARD



The button modules with integrated encoding board, thanks to the connection to the encoder module CD2132MA or CD2134MA, allow the calls in DUO systems.

**MA 22S.** Module with antivandal stainless steel front plate and two call buttons. Complete with name holders with transparent screen green back-lighting, resistant to breaking and connection cable to the next module.

**MA 24S.** Same as the previous, but with 4 call buttons.

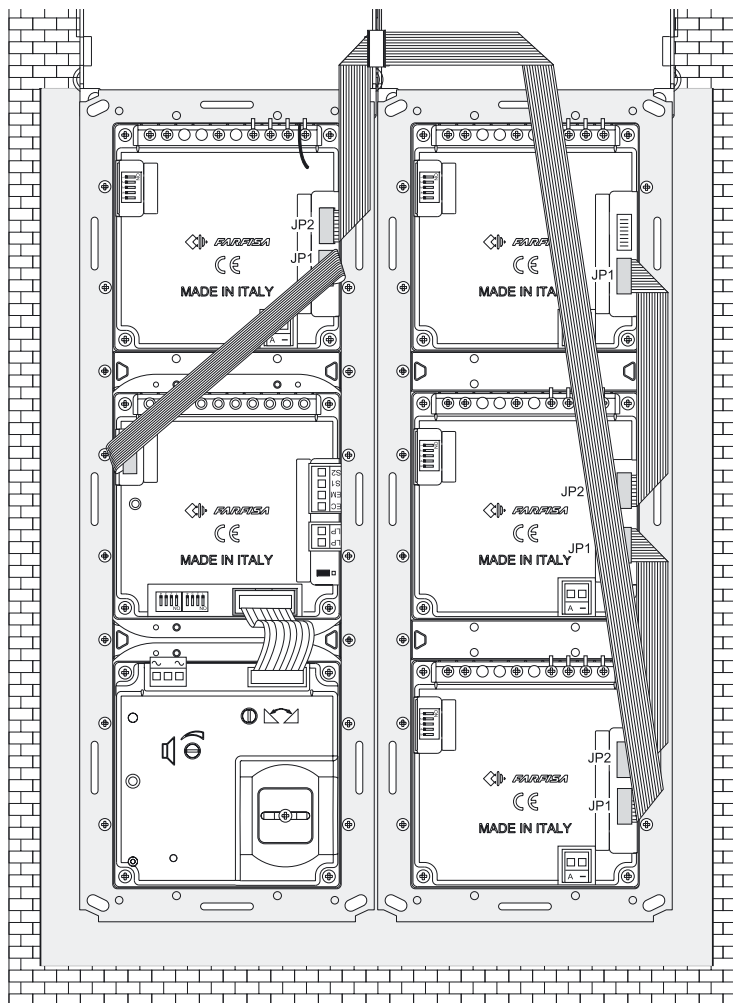
## Terminals

A AC or DC power supply input for name-plate Led (13Vac or dc)

- AC power supply or ground input for name-plate Led

## Installation and connections

- Connect the digital encoder to the connector JP1 of the first MA22S or MA24S module using the flat cable supplied with the digital encoder.
- Connect the connector JP2 of the first MA22S or MA24S module to the connector JP1 of the second MA22S or MA24S module using the flat cable supplied with the product.
- Connect in the same way all the other MA22S or MA24S modules.
- Remove the flat cable from the last MA22S or MA24S module because it is not used.



## Programming

The microswitches, present on the back of the MA22S or MA24S, allow the digital encoder to recognize the code of the connected buttons, consequently they must be programmed properly. The programmed codes must correspond to the addresses of the internal users. The code set on the microswitches (see tables on page 65) determines the address of the users called by pressing the buttons of the push-button module in a sequence (starting from above) according to the following rule:

**Called User Address (IUC) by pressing the buttons of the module (MA22S or MA24S) = Address Associated with First Button (IPP) of the digital encoder (CD2132MA or CD2134MA) + Number Associated with Button (NAP).**

General rule:  $IUC = IPP + NAP$

General rule applied to the first example below;

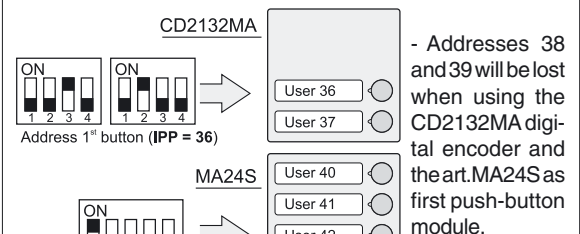
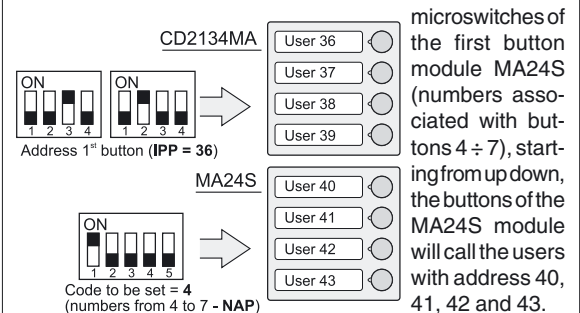
- if you press the first button from above of the MA24S:

$$36 (IPP) + 4 (1^{st} NAP) = 40 (IUC)$$

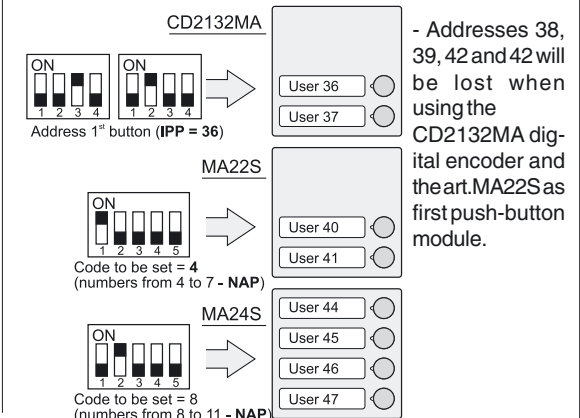
the user with address 40 will be called.

## Examples:

- If the first button of the digital encoder CD2134MA is associated with address 36 and code 4 is set on the



- Addresses 38 and 39 will be lost when using the CD2132MA digital encoder and the art. MA24S as first push-button module.

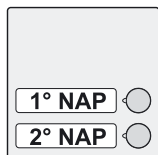


- Addresses 38, 39, 42 and 43 will be lost when using the CD2132MA digital encoder and the art. MA22S as first push-button module.



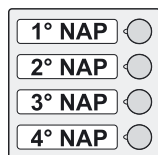
Example of order used to associate numbers with buttons

## MA22S



3<sup>rd</sup> NAP and 4<sup>th</sup> NAP are not usable

## MA24S



Code to be set	Numbers associated with buttons- NAP	Push-button microswitch
4	1 <sup>st</sup> NAP = 4 2 <sup>nd</sup> NAP = 5 3 <sup>rd</sup> NAP = 6 4 <sup>th</sup> NAP = 7	
8	1 <sup>st</sup> NAP = 8 2 <sup>nd</sup> NAP = 9 3 <sup>rd</sup> NAP = 10 4 <sup>th</sup> NAP = 11	
12	1 <sup>st</sup> NAP = 12 2 <sup>nd</sup> NAP = 13 3 <sup>rd</sup> NAP = 14 4 <sup>th</sup> NAP = 15	
16	1 <sup>st</sup> NAP = 16 2 <sup>nd</sup> NAP = 17 3 <sup>rd</sup> NAP = 18 4 <sup>th</sup> NAP = 19	
20	1 <sup>st</sup> NAP = 20 2 <sup>nd</sup> NAP = 21 3 <sup>rd</sup> NAP = 22 4 <sup>th</sup> NAP = 23	
24	1 <sup>st</sup> NAP = 24 2 <sup>nd</sup> NAP = 25 3 <sup>rd</sup> NAP = 26 4 <sup>th</sup> NAP = 27	
28	1 <sup>st</sup> NAP = 28 2 <sup>nd</sup> NAP = 29 3 <sup>rd</sup> NAP = 30 4 <sup>th</sup> NAP = 31	
32	1 <sup>st</sup> NAP = 32 2 <sup>nd</sup> NAP = 33 3 <sup>rd</sup> NAP = 34 4 <sup>th</sup> NAP = 35	
36	1 <sup>st</sup> NAP = 36 2 <sup>nd</sup> NAP = 37 3 <sup>rd</sup> NAP = 38 4 <sup>th</sup> NAP = 39	
40	1 <sup>st</sup> NAP = 40 2 <sup>nd</sup> NAP = 41 3 <sup>rd</sup> NAP = 42 4 <sup>th</sup> NAP = 43	
44	1 <sup>st</sup> NAP = 44 2 <sup>nd</sup> NAP = 45 3 <sup>rd</sup> NAP = 46 4 <sup>th</sup> NAP = 47	
48	1 <sup>st</sup> NAP = 48 2 <sup>nd</sup> NAP = 49 3 <sup>rd</sup> NAP = 50 4 <sup>th</sup> NAP = 51	
52	1 <sup>st</sup> NAP = 52 2 <sup>nd</sup> NAP = 53 3 <sup>rd</sup> NAP = 54 4 <sup>th</sup> NAP = 55	
56	1 <sup>st</sup> NAP = 56 2 <sup>nd</sup> NAP = 57 3 <sup>rd</sup> NAP = 58 4 <sup>th</sup> NAP = 59	

## Code to be set

60

64

68

72

76

80

84

88

92

96

100

104

108

112

116

120

124

## Numbers associated with buttons- NAP

1<sup>st</sup> NAP = 60  
2<sup>nd</sup> NAP = 61  
3<sup>rd</sup> NAP = 62  
4<sup>th</sup> NAP = 63

1<sup>st</sup> NAP = 64  
2<sup>nd</sup> NAP = 65  
3<sup>rd</sup> NAP = 66  
4<sup>th</sup> NAP = 67

1<sup>st</sup> NAP = 68  
2<sup>nd</sup> NAP = 69  
3<sup>rd</sup> NAP = 70  
4<sup>th</sup> NAP = 71

1<sup>st</sup> NAP = 72  
2<sup>nd</sup> NAP = 73  
3<sup>rd</sup> NAP = 74  
4<sup>th</sup> NAP = 75

1<sup>st</sup> NAP = 76  
2<sup>nd</sup> NAP = 77  
3<sup>rd</sup> NAP = 78  
4<sup>th</sup> NAP = 79

1<sup>st</sup> NAP = 80  
2<sup>nd</sup> NAP = 81  
3<sup>rd</sup> NAP = 82  
4<sup>th</sup> NAP = 83

1<sup>st</sup> NAP = 84  
2<sup>nd</sup> NAP = 85  
3<sup>rd</sup> NAP = 86  
4<sup>th</sup> NAP = 87

1<sup>st</sup> NAP = 88  
2<sup>nd</sup> NAP = 89  
3<sup>rd</sup> NAP = 90  
4<sup>th</sup> NAP = 91

1<sup>st</sup> NAP = 92  
2<sup>nd</sup> NAP = 93  
3<sup>rd</sup> NAP = 94  
4<sup>th</sup> NAP = 95

1<sup>st</sup> NAP = 96  
2<sup>nd</sup> NAP = 97  
3<sup>rd</sup> NAP = 98  
4<sup>th</sup> NAP = 99

1<sup>st</sup> NAP = 100  
2<sup>nd</sup> NAP = 101  
3<sup>rd</sup> NAP = 102  
4<sup>th</sup> NAP = 103

1<sup>st</sup> NAP = 104  
2<sup>nd</sup> NAP = 105  
3<sup>rd</sup> NAP = 106  
4<sup>th</sup> NAP = 107

1<sup>st</sup> NAP = 108  
2<sup>nd</sup> NAP = 109  
3<sup>rd</sup> NAP = 110  
4<sup>th</sup> NAP = 111

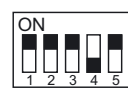
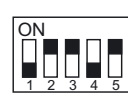
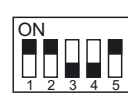
1<sup>st</sup> NAP = 112  
2<sup>nd</sup> NAP = 113  
3<sup>rd</sup> NAP = 114  
4<sup>th</sup> NAP = 115

1<sup>st</sup> NAP = 116  
2<sup>nd</sup> NAP = 117  
3<sup>rd</sup> NAP = 118  
4<sup>th</sup> NAP = 119

1<sup>st</sup> NAP = 120  
2<sup>nd</sup> NAP = 121  
3<sup>rd</sup> NAP = 122  
4<sup>th</sup> NAP = 123

1<sup>st</sup> NAP = 124  
2<sup>nd</sup> NAP = 125  
3<sup>rd</sup> NAP = 126  
4<sup>th</sup> NAP = 127

## Push-button microswitch



## OPERATION

Check that all the connections are correct. Connect the power supply unit to the mains.

To make a call press the button corresponding to the desired user. Call is confirmed by an acknowledge tone, if the communication line is available, or denied by a busy tone if the communication line is not available (see tone table).

Called equipment rings only once, but if in this phase the same calling button on the external station is pressed again the equipment will ring another time.

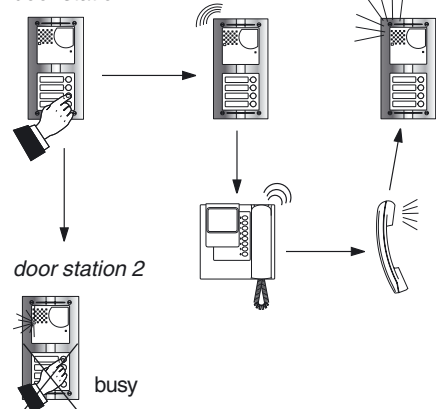
The called user picks up the handset (or press for Echos series) enables the conversation with the external station for 90 seconds.

A tone will advise the user 10 seconds before the conversation ends. To continue conversation for additional 90 seconds on the external station the calling button must be pressed again. Press the button to release the door lock. Door lock activation time is 3 seconds (or 6 seconds according to the system programming).

Replace the handset (or press for Echos series) to end the conversation and restore the idle state.

In installations with **2 or more external door stations** when a call is made from one push-button panel, the other push-button panel are deactivated with a busy indication (red LED flashing on the audio or audio/video module). Wait until the line is free to make a call.

## door station 1



## door station 2

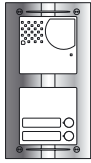
busy

system

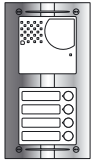
MATRIX



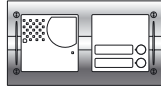
## Examples of installations in videointercom systems



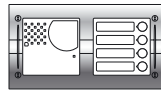
2 call buttons



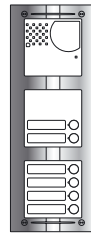
4 call buttons



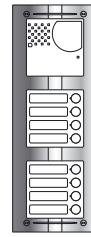
2 call buttons \*



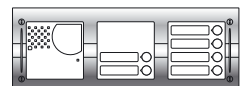
4 call buttons \*



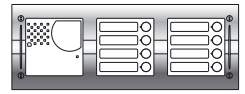
6 call buttons



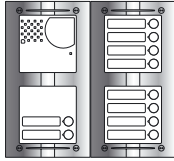
8 call buttons



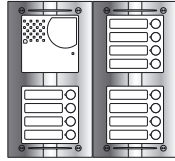
6 call buttons \*



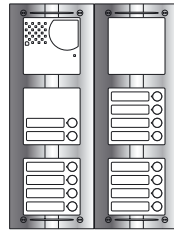
8 call buttons \*



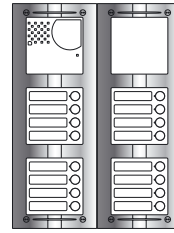
10 call buttons \*



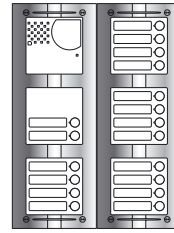
12 call buttons \*



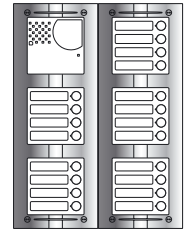
14 call buttons \*



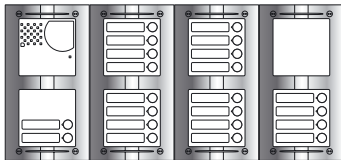
16 call buttons \*



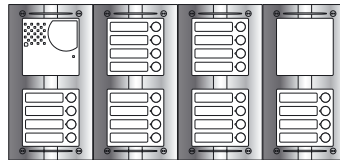
18 call buttons \*



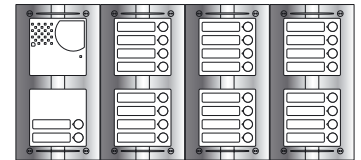
20 call buttons \*



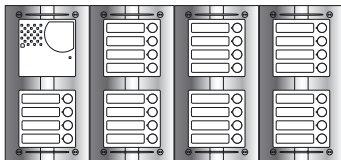
22 call buttons \*



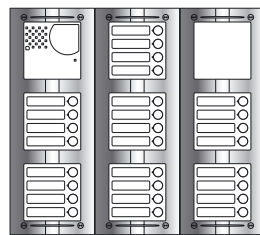
24 call buttons \*



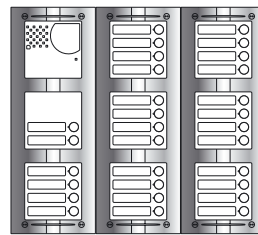
26 call buttons \*



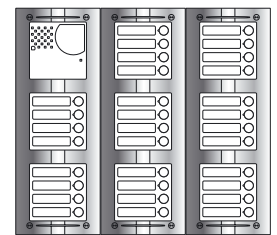
28 call buttons \*



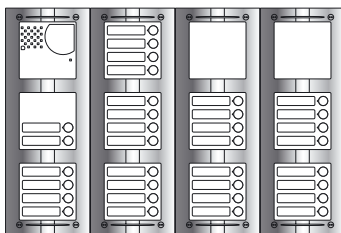
28 call buttons \*



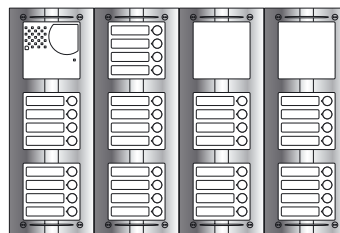
30 call buttons \*



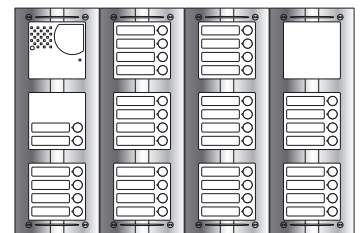
32 call buttons \*



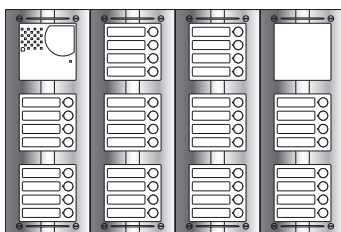
34 call buttons \*



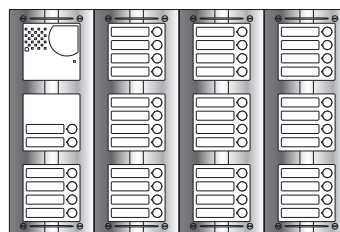
36 call buttons \*



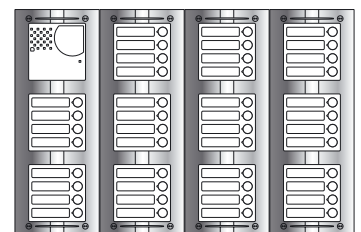
38 call buttons \*



40 call buttons \*



42 call buttons \*




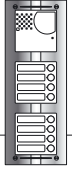
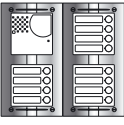
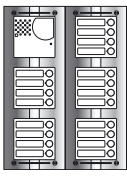
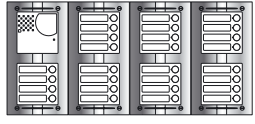
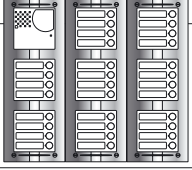
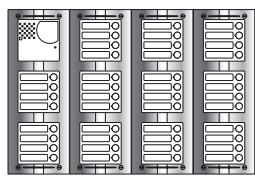
44 call buttons \*

\* rain shelters cannot be used in these compositions





## Composition board of push-button panels.

Nr calls	Composition and dimensions	Encoder module	Camera and speaker mod.	Button module and blank module	Front frames	Back boxes and mod. frame	Rain shelters
1	 140x256x19 (5 1/2" x 10 1/16" x 3/4")	1 CD2132MA	1 VD2120MA	- -	1 MA62	1 MA72	1 MA92
2		1 CD2132MA	1 VD2120MA	- -	1 MA62	1 MA72	1 MA92
3		1 CD2134MA	1 VD2120MA	- -	1 MA62	1 MA72	1 MA92
4		1 CD2134MA	1 VD2120MA	- -	1 MA62	1 MA72	1 MA92
5	 140x374x19 (5 1/2" x 14 3/4" x 3/4")	1 CD2132MA	1 VD2120MA	1 MA24S -	1 MA63	1 MA73	1 MA93
6		1 CD2132MA	1 VD2120MA	1 MA24S -	1 MA63	1 MA73	1 MA93
7		1 CD2134MA	1 VD2120MA	1 MA24S -	1 MA63	1 MA73	1 MA93
8		1 CD2134MA	1 VD2120MA	1 MA24S -	1 MA63	1 MA73	1 MA93
9	 280x256x19 (11" x 10 1/16" x 3/4")	1 CD2132MA	1 VD2120MA	2 MA24S -	2 MA62	2 MA72	-
10		1 CD2132MA	1 VD2120MA	2 MA24S -	2 MA62	2 MA72	-
11		1 CD2134MA	1 VD2120MA	2 MA24S -	2 MA62	2 MA72	-
12		1 CD2134MA	1 VD2120MA	2 MA24S -	2 MA62	2 MA72	-
13	 280x374x19 (11" x 14 3/4" x 3/4")	1 CD2132MA	1 VD2120MA	3 MA24S 1 MA20	2 MA63	2 MA73	-
14		1 CD2132MA	1 VD2120MA	3 MA24S 1 MA20	2 MA63	2 MA73	-
15		1 CD2134MA	1 VD2120MA	3 MA24S 1 MA20	2 MA63	2 MA73	-
16		1 CD2134MA	1 VD2120MA	3 MA24S 1 MA20	2 MA63	2 MA73	-
17		1 CD2132MA	1 VD2120MA	4 MA24S -	2 MA63	2 MA73	-
18		1 CD2132MA	1 VD2120MA	4 MA24S -	2 MA63	2 MA73	-
19		1 CD2134MA	1 VD2120MA	4 MA24S -	2 MA63	2 MA73	-
20		1 CD2134MA	1 VD2120MA	4 MA24S -	2 MA63	2 MA73	-
21	 560x256x19 (22 1/16" x 10 1/16" x 3/4")	1 CD2132MA	1 VD2120MA	5 MA24S 1 MA20	4 MA62	4 MA72	-
22		1 CD2132MA	1 VD2120MA	5 MA24S 1 MA20	4 MA62	4 MA72	-
23		1 CD2134MA	1 VD2120MA	5 MA24S 1 MA20	4 MA62	4 MA72	-
24		1 CD2134MA	1 VD2120MA	5 MA24S 1 MA20	4 MA62	4 MA72	-
25		1 CD2132MA	1 VD2120MA	6 MA24S -	4 MA62	4 MA72	-
26		1 CD2132MA	1 VD2120MA	6 MA24S -	4 MA62	4 MA72	-
27		1 CD2134MA	1 VD2120MA	6 MA24S -	4 MA62	4 MA72	-
28		1 CD2134MA	1 VD2120MA	6 MA24S -	4 MA62	4 MA72	-
29	 420x374x19 (16 9/16" x 14 3/4" x 3/4")	1 CD2132MA	1 VD2120MA	7 MA24S -	3 MA63	3 MA73	-
30		1 CD2132MA	1 VD2120MA	7 MA24S -	3 MA63	3 MA73	-
31		1 CD2134MA	1 VD2120MA	7 MA24S -	3 MA63	3 MA73	-
32		1 CD2134MA	1 VD2120MA	7 MA24S -	3 MA63	3 MA73	-
33	 560x374x19 (22 1/16" x 14 3/4" x 3/4")	1 CD2132MA	1 VD2120MA	8 MA24S 2 MA20	4 MA63	4 MA73	-
34		1 CD2132MA	1 VD2120MA	8 MA24S 2 MA20	4 MA63	4 MA73	-
35		1 CD2134MA	1 VD2120MA	8 MA24S 2 MA20	4 MA63	4 MA73	-
36		1 CD2134MA	1 VD2120MA	8 MA24S 2 MA20	4 MA63	4 MA73	-
37		1 CD2132MA	1 VD2120MA	9 MA24S 1 MA20	4 MA63	4 MA73	-
38		1 CD2132MA	1 VD2120MA	9 MA24S 1 MA20	4 MA63	4 MA73	-
39		1 CD2134MA	1 VD2120MA	9 MA24S 1 MA20	4 MA63	4 MA73	-
40		1 CD2134MA	1 VD2120MA	9 MA24S 1 MA20	4 MA63	4 MA73	-
41		1 CD2132MA	1 VD2120MA	10 MA24S -	4 MA63	4 MA73	-
42		1 CD2132MA	1 VD2120MA	10 MA24S -	4 MA63	4 MA73	-
43		1 CD2134MA	1 VD2120MA	10 MA24S -	4 MA63	4 MA73	-
44		1 CD2134MA	1 VD2120MA	10 MA24S -	4 MA63	4 MA73	-

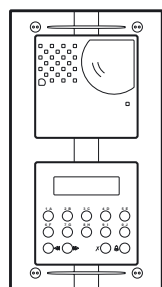
- For colour videointercom installations to replace the article VD2120MA with VD2120CMA  
 - For intercom installations replace art. VD2120MA with AD2110MA

It replaces  
MA72 or MA73

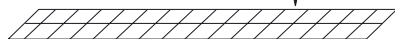


## DOOR STATIONS

### INSTALLATION

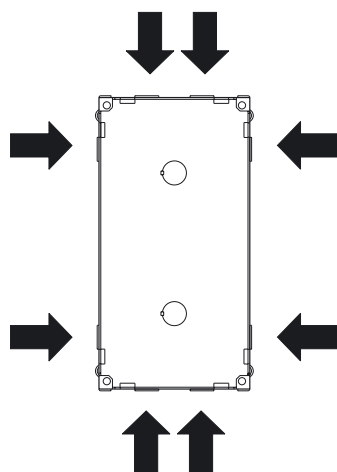


1.65m  
5' 5"

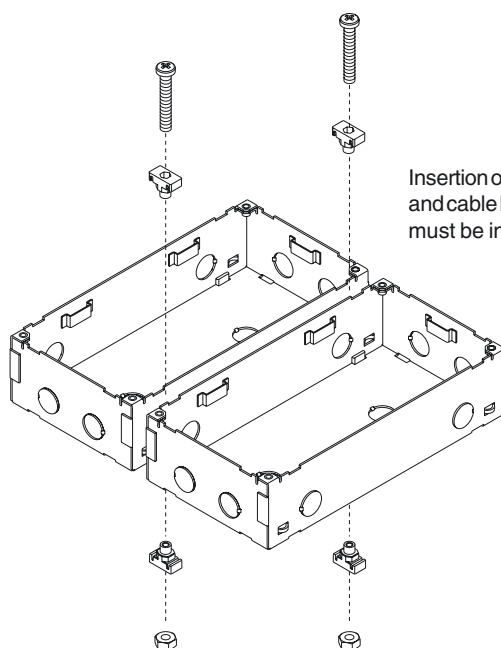


Place the push-button panel back box at a height of about 1.65m (5' 5") from the floor keeping the front edges flush-mounted and vertical to the finished plaster.

**Position the camera in such a way that sunlight or other direct or reflected light sources with high intensity do not hit the camera lens.**

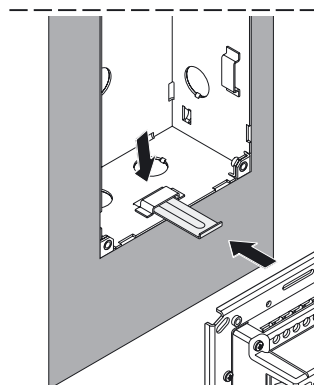
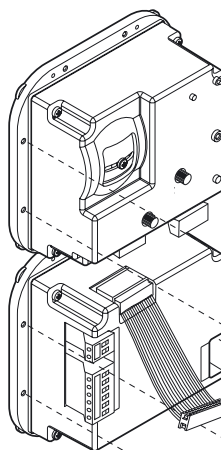
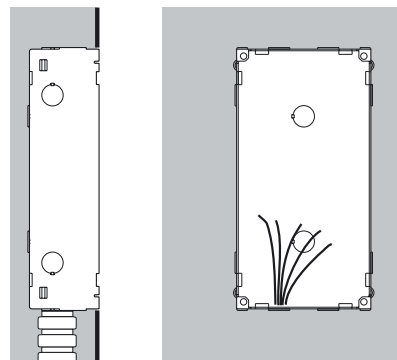


Openings for cables.

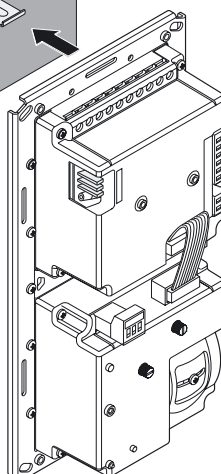


Insertion of spacers between back boxes. Spacers and cable bushing (not supplied with the products) must be inserted before brick work.

Flush mounting and cables placing.



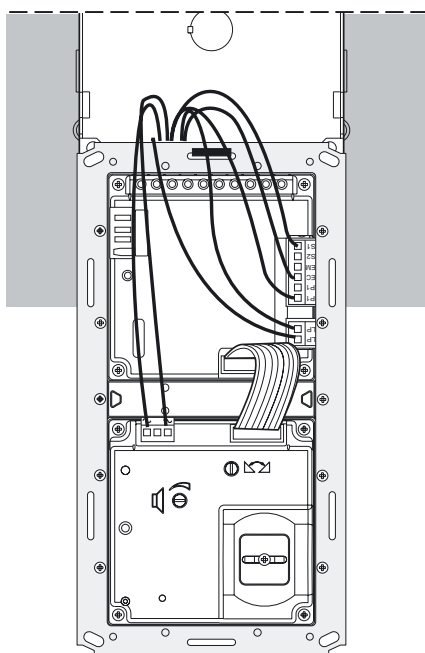
Mounting modules.



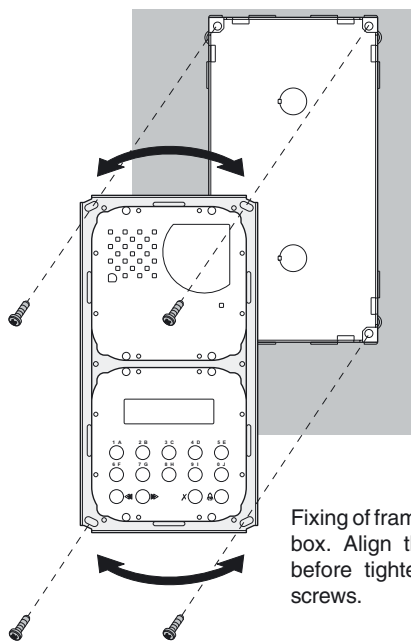
For easier connection to the electrical system, it is recommended to insert the metal plate supplied with the product in the back box opening, as shown in the figure. The plate is used to hook the frame with pre-assembled modules. Leave the plate in the box to reuse it for maintenance operations.



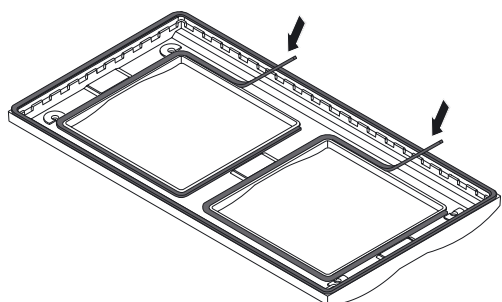
## DOOR STATIONS



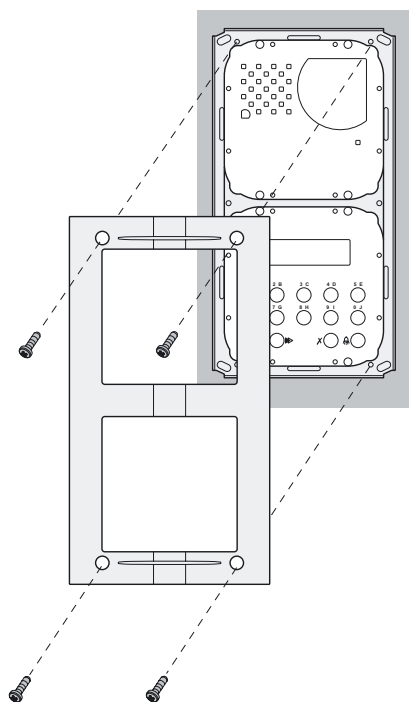
Connection of wires to module terminal boxes.



Fixing of frame to back box. Align the frame before tightening the screws.

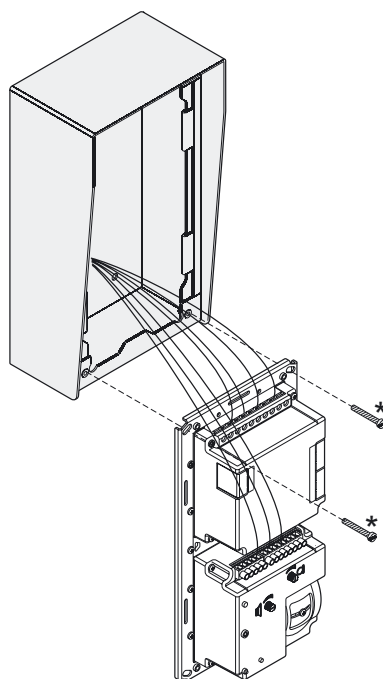


Apply the protection gaskets supplied with the product on the internal part of the frame openings.

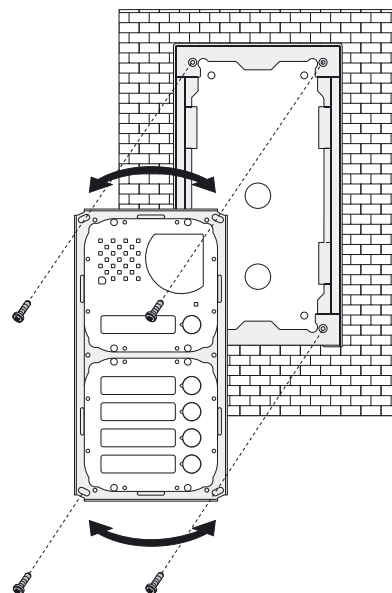


Fixing of frame to module frame.

### Rain shelters



\* Long screws can be used to anchor the frame during wire connection to modules.



Fixing of frame to rain shelter. Align the frame before tightening the screws.



## POWER SUPPLIES

The power supplies and transformers are protected against overloading or short-circuiting by a heat sensor (thermoprotector), to restore power, it is necessary to cut off the mains voltage for about one minute. Reconnect power after having repaired the fault.

Do not obstruct the openings or the ventilation or heat ejection slots to allow the equipment to operate correctly.

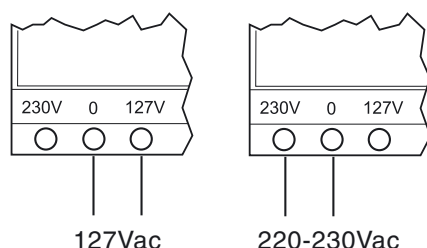
The power supply can be installed on DIN rail or screwed to the wall.

Each transformer **2220S** and **2220** can power a max. of **6 modules of the external door station** (modules: audio/video, audio only, digital keyboard, digital encoder, buttons, etc...). Add a transformer **PRS210** for a higher number of modules.

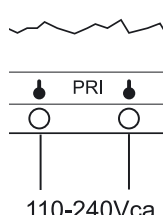
### Input terminals for electrical mains

All power supplies and transformers (except the art.2221S) in this manual can work either 127Vac or 220-230Vac.

**Check carefully the right connection.**



Unlike all other power supplies and transformers, art. **2221S** only has 2 input terminals for connection to the electrical mains (terminals **PRI**). Voltage from 110V to 240V can be applied to the two terminals.



## TRANSFORMER

**PRS 210.** Transformer used to power other 13Vac devices (for example: 2273 exchanger, additional locks, name-plate LEDs, etc...).

### Technical data

Mains voltage: 127 or 220-230Vac  
Frequency: 50/60Hz  
Power: 15VA  
Output voltage: 13Vac±1  
Maximum load: 0.7A  
Maximum of intermittent load: 1A  
Housing: DIN 3 modules A  
Approved by: VDE according to the Safety Standard EN60065  
Operating temperature: 0°÷+40°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

### Terminals

~ AC voltage output (13Vac)

## TRANSFORMERS

**2220S.** Transformer that can be used to power the door station for DUO system and electric door locks connected to it.

### Technical data

Mains voltage: 127 or 220-230Vac  
Frequency: 50/60Hz  
Power: 22VA  
Output voltage: 13Vac±1  
Maximum load: 1A  
Output protection: PTC  
Approved by: according to the Safety Standard EN60065  
Housing: DIN 3 modules A  
Operating temperature: 0°÷+40°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

### Terminals

~ AC voltage output (13Vac)

**2220.** It differs from art. **2220S** for the higher power.

### Technical data

Mains voltage: 127 or 220-230Vac  
Frequency: 50/60Hz  
Power: 30VA  
Output voltage: 13Vac±1  
Maximum load: 1.5A  
Output protection: PTC  
Approved by: according to the Safety Standard EN60065  
Housing: DIN 8 modules A  
Operating temperature: 0°÷+40°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

**2221.** Line power supply that can be used to power the line driver 2222.

### Technical data

Mains voltage: 127 or 220-230Vac  
Frequency: 50/60Hz  
Power: 60VA  
Output voltage: 40Vac±1  
Maximum current: 1A  
Output protection: PTC  
Approved by: according to the Safety Standard EN60065  
Housing: DIN 8 modules A  
Operating temperature: 0°÷+40°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

### Terminals

~ AC voltage output (40Vac)

## LINE POWER SUPPLY

**2221S.** Device to power up to 50 videointercoms with a proper audio, video and data impedance for the correct operation of the DUO system. It replaces art. 2221 and 2222 in all DUO installations.

### Technical data

Mains voltage: 110V÷240Vac  
Frequency: 50 ÷ 60 Hz  
Power: 60VA  
Output protection: PTC  
Approved by: according to the Safety Standard EN60065  
Housing: DIN 6 modules A  
Operating temperature: 0°÷+50°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

### Terminals

**PRI** Mains voltage input  
**LP/LP** Line output

**2222.** Device to power up to 50 videointercoms with a proper audio, video and data impedance for the correct operation of the DUO system.

The maximum allowed distance from the device to the last videointercom is 200m (150 meters in the color version) using the ACI Farfisa cable art. **2302**.

To use with the transformer art.2221.

### Technical data

Power supply: 40Vac ± 1  
Operating current: 0.1A + line current  
Housing: DIN 6 modules A  
Operating temperature: 0°÷+50°C  
Maximum permissible humidity: 90%RH  
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs

### Terminals

~ AC voltage input (40Vac)  
**LP/LP** Line output

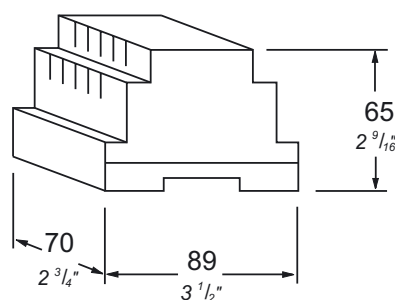






## SERVICE MODULES

### EXCHANGER



**2273.** It can be used for DUO System when the installation includes one or more main common door stations and risers with or without secondary door stations.

The device is basically a relay used to switch a common line (LP) over two switched lines (L1 normally closed and L2 normally open).

Switching between common line LP and exchanged lines L1 and L2 depends on the need to connect the users connected to line L1 or line L2 to the common line.

To carry out this operation, the exchanger must be programmed to define which users or external door stations are connected to the lines (see chapter "Programming").

#### Technical features

Power supply: 13Vac  $\pm$  1  
Absorption: 0.1 A  
Operating temperature: 0°  $\div$  +50°C  
Maximum humidity acceptable: 90% RH  
Housing: DIN 4 modules A

#### Terminals

~ / ~ Power supply input  
LP/LP Main common line  
L1/L1 Normally closed switched line  
L2/L2 Normally open switched line  
GC Positive command for auxiliary services  
GE Negative command for auxiliary services

#### WARNING:

**THE DIP-SWITCH SW2 MUST BE SET CORRECTLY BEFORE POWERING THE DEVICE (for detailed information refer to "External door station connected to line L2" and "Internal Users connected to line L2").**

### Programming

To ensure correct operation of the system, the exchanger must be programmed to identify users (internal stations) or external door stations connected to the terminals of the secondary line **L2**; no programming is needed to identify devices connected to the main line **LP** and secondary line **L1**. Four numerical intervals are available to save the codes of the devices connected to line **L2**. Codes of individual users or numerical intervals (one lower and one higher value) can be saved.

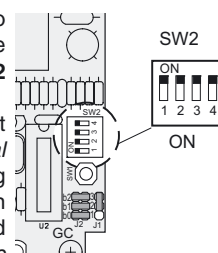
In case of installation with multiple exchangers, the user or external door station code assigned to an exchanger cannot be assigned to other exchangers. Each exchanger must have a group of users or external door stations with univocal identification.

Programming must be executed according to the type of connected device.

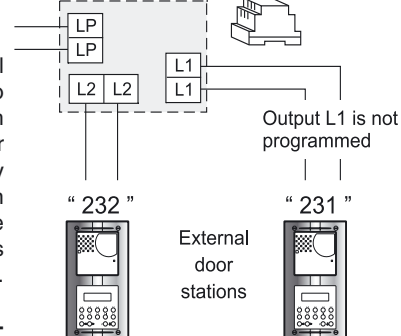
#### ■ External door station connected to line L2.

- When an external door station is connected to the exchanger line L2, before powering up the installation, it is necessary to set all SW2 microswitches on **ON**.

- Then the exchanger numerical interval 1 must be programmed (see chapter "numerical interval programming-page 73") by entering the address of the external door station (address that must be previously programmed also in the external door station - see the external door station programming to pages 36, 40, 55 and 61).



Example of coding for art.2273



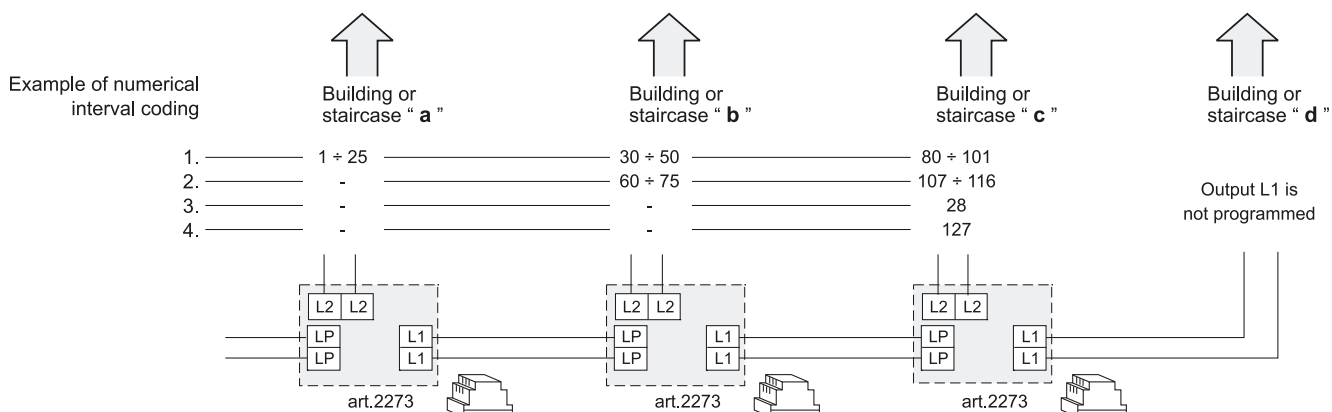
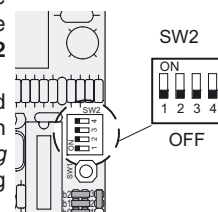
**Example.** If the external door station connected to line L2 was coded with code 232, the exchanger must be programmed by saving code 232 in numerical interval 1. The other numerical intervals must not be programmed.

#### ■ Internal Users connected to L2.

- When the internal users are connected to the exchanger line L2, before powering up the installation, it is necessary to set all SW2 microswitches on **OFF**.

- Then the user addresses must be entered according to the procedure illustrated in chapter "numerical interval programming (see page 73)" according to the following instructions:

- if user numbers are progressive, the addresses of the first and last user in the group must be programmed



in numerical interval 1 (addresses must be assigned to users during programming - see the internal users programming to pages 4, 7, 16, 23 and 28).

- In case of various groups of users - each group being composed of users with progressive addresses - the other three numerical intervals can be used to code the groups.

- Users must be saved individually (one user for each interval) in case of one or more users connected to the installation with an address that is not included in any group.

## Example of installation with 4 risers (buildings or staircases).

See programming on bottom of page.

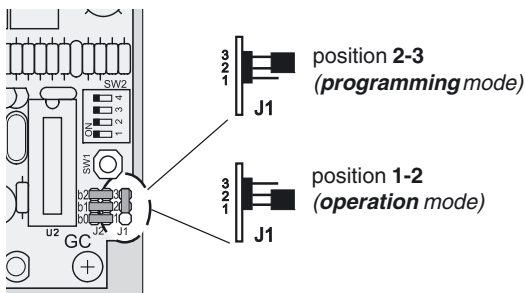
- Building "a" with users coded with numbers from 1 to 25. The exchanger numerical interval 1 must be programmed with number 1 as first user and number 25 as last user; all the other numbers (from 2 to 24) will be automatically included in the interval. The other numerical intervals must not be programmed.
- Building "b" with users coded with numbers from 30 to 50 and from 60 to 75. The exchanger numerical interval 1 must be programmed with number 30 as first user and number 50 as last user. Numerical interval 2 must be programmed with number 60 as first user and number 75 as last user. The other numerical intervals must not be programmed.
- Building "c" with users coded with numbers from 80 to 101, from 107 to 116 and individual users 28 and 127. The exchanger numerical interval 1 must be programmed with number 80 as first user and number 101 as last user. Numerical interval 2 must be programmed with number 107 as first user and number 116 as last user. Numerical interval 3 must be programmed with number 28 only and numerical interval 4 must be programmed with number 127 only.
- Being connected to output L1 of the last exchanger, building "d" is not programmed.

## Entering the programming mode

- Move the mobile jumper J1 from position 1-2 to 2-3. The red LED turns on and stays on.

## Exiting the programming mode

- Move the mobile jumper J1 from position 2-3 to 1-2. The red LED flashes slowly (every 2 seconds).



## Programming the numerical intervals

To program the numerical intervals:

- 1) - Move the mobile jumper J1 from position 1-2 to 2-3. The red LED turns on and stays on.
  - 2) - Select the numerical interval to be programmed by setting jumpers J2 as shown in table 1 and press SW1 to confirm the selection.
    - Set jumpers J2 to program numerical interval n. 1 (remove jumper b0 and leave jumpers b1 and b2 - see table 1 "Selection of numerical interval to program on the exchanger") and press SW1; the LED starts flashing every 2 seconds according to the selected numerical interval (i.e.: numerical interval n.1 corresponds to 1 flashing every 2 seconds; numerical interval n.2 corresponds to 2 flashings every 2 seconds, etc.).
- If line L2 is connected to **internal users**:
    - lift the handset of the device with the lowest address and press "☎" key on the videointercom ("●" PT562; "●" KM862); an intermittent tone is generated. Replace the handset;

- lift the handset of the device with the highest address and press "☎" key on the videointercom ("●" PT562; "●" KM862); an intermittent tone is generated. Replace the handset;
- the exchanger red LED turns off for 1 second and starts flashing again to confirm correct programming.
- repeat the operations above to program the other numerical intervals, if necessary.

- If line L2 is connected to one **external door station** you must make a call to any user. The exchanger automatically saves the address of the calling external door station and the external door station receives the busy line tone;
- the exchanger red LED turns off for 1 second and starts flashing again to confirm correct programming.

- 3) - To exit the programming mode, move the jumper J1 from position 2-3 to 1-2. The red LED flashes slowly (every 2 seconds).

Table 1

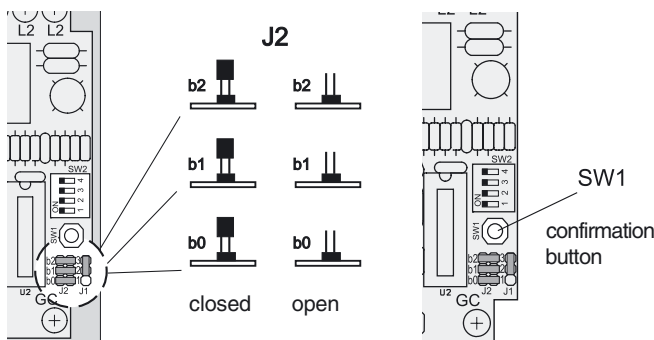
Selection of numerical interval to programme on the exchanger

Jumper J2			
b0	b1	b2	numerical interval selection
closed	closed	closed	reset default programming
open	closed	closed	numerical interval n. 1 of L2
closed	open	closed	numerical interval n. 2 of L2
open	open	closed	numerical interval n. 3 of L2
closed	closed	open	numerical interval n. 4 of L2
open	closed	open	not used
closed	open	open	not used
open	open	open	not used

closed = jumper inserted

open = jumper removed

## Setting of jumpers J2 and button SW1



## Reset default programming

By default the exchanger is not programmed with numbers in the four numerical intervals.

The four numerical intervals are disabled by default.

To reset default programming:

- move the mobile jumper J1 from position 1-2 to 2-3. The red LED turns on and stays on;
- insert all jumpers J2;
- hold SW1 pressed for about 4 seconds; the LED flashes rapidly (no programming is set if the key is released during this time), turns off and turns on again to confirm correct programming;
- to exit the programming mode, move the jumper J1 from position 2-3 to 1-2. The red LED flashes slowly (every 2 seconds).

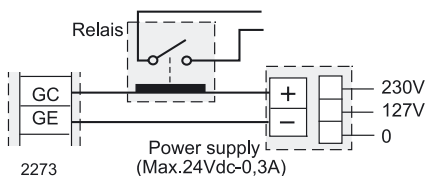
## Warnings.

- Do not power the exchanger with the power supply used by external door stations in the installation (6 max.).
- In case of multiple exchangers in the same switchboard, they can be powered by the same power supply unit. Otherwise, it is recommended to use separate power supplies to avoid any interference.



### Auxiliary service

If you connect terminals **GC** and **GE** according to the following diagram, you can activate an auxiliary relay for line L2 activation time.



## Operation

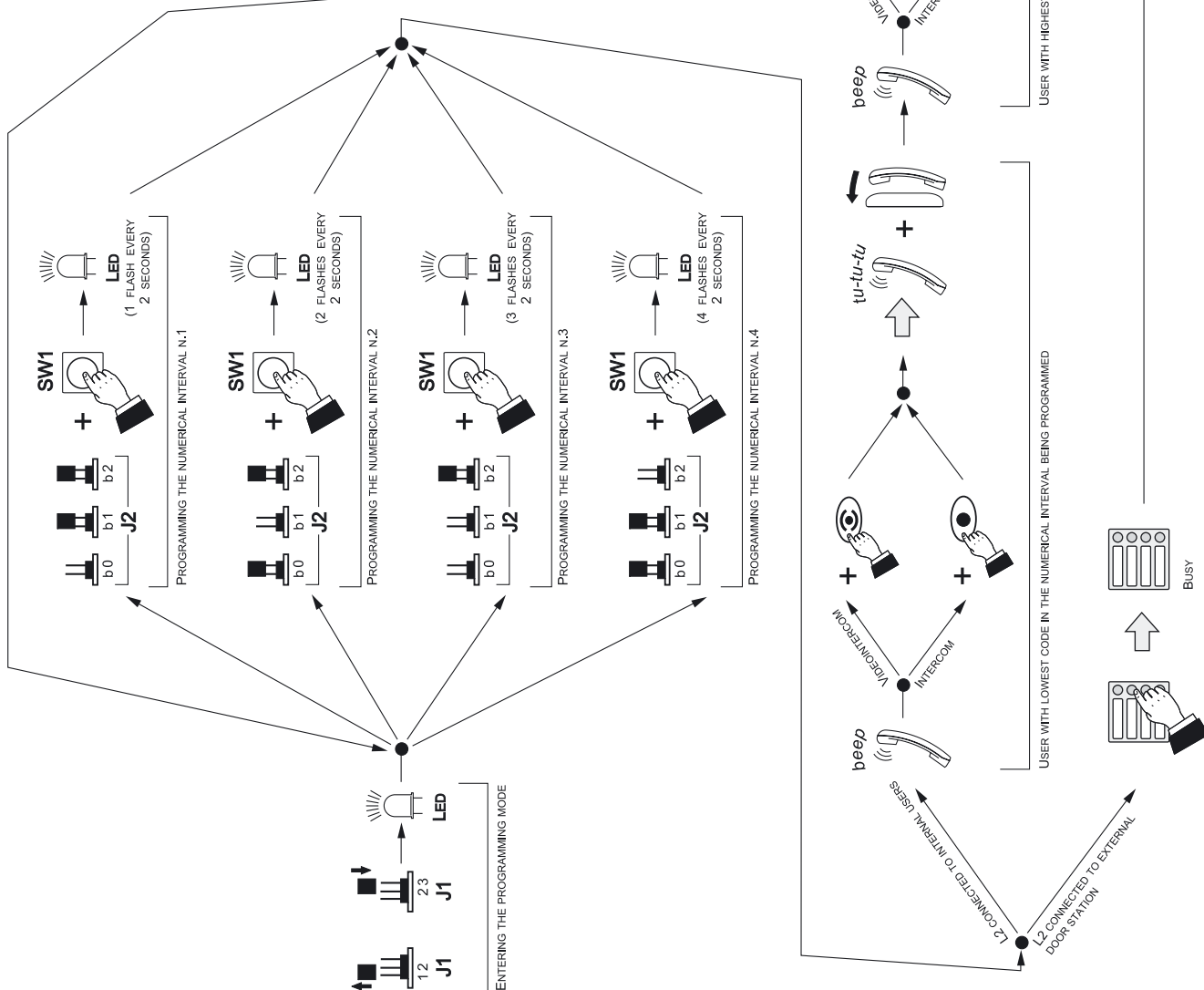
When a call is made from the main external door station, the exchanger checks if the address of the called user is included in its

numerical intervals, switches and connects line LP with line L1 or L2 and consequently connects the user of the called building with the main external door station.

The secondary push-button panel is disabled and a busy tone is generated. All the other secondary push-button panels can make a call to the other users of the same building. Calls from secondary push-button panels to users of other buildings or to the exchanger are not possible (with audio-video connection).

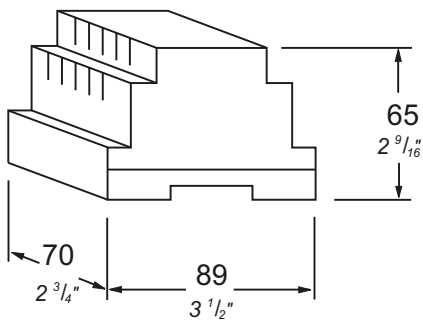
When you make a call from the main door station to a building connected with the secondary door station, the external door station momentarily shows the busy status. In this case you need to wait and make the call again when the line is free. In the meantime calls to internal users of free buildings are possible.

### Example of programming over 4 numerical intervals to switch external door stations or internal calls over multiple staircases (or buildings)



## SERVICE MODULES

### ACTUATOR MODULE



**2281.** The actuator, designed for the DUO system, allows to activate auxiliary services, such as additional door locks, staircase-lights, and rings without adding wires on the riser line. It is provided with one relay and one IN/OUT configurable port; the port configured as output (OUT) activates a relay to manage a second auxiliary service; when configured as input (IN) it acquires information about the status of the device connected to it, typically a contact (switch, automatic stop device, etc.) that sends open/close information.

By programming the device, the acquired information can be sent on line and made available for other devices in the system.

Multiple actuators can be connected in the same installation by suitably programming the addresses of the relay and the IN/OUT port of each actuator; moreover, the activation time and operating modes can be set for the relay and the port that was configured previously as output.

The operating modes are:

- **monostable** (upon reception of the command, the relay and/or port is activated for the programmed time and then is deactivated)
- **bistable** (upon reception of the command the relay and/or port changes its status from activated to deactivated or vice versa until the next command, which changes the status of the relay and/or port again).

#### Technical data

Power supply directly from line or external:

13VAC  $\pm$  10%

Operating current: 0.1A

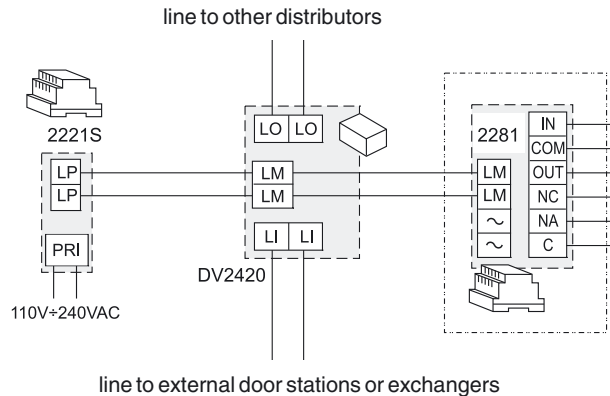
Operating temperature: 0°  $\div$  +50°C

Maximum permitted humidity: 90% RH

#### Terminals

- ~/~ External power supply input
- LM/LM Line inputs
- IN IN/OUT port input
- COM IN/OUT port common
- OUT IN/OUT port output
- C Relay contact common
- NA Relay normally open contact
- NC Relay normally closed contact

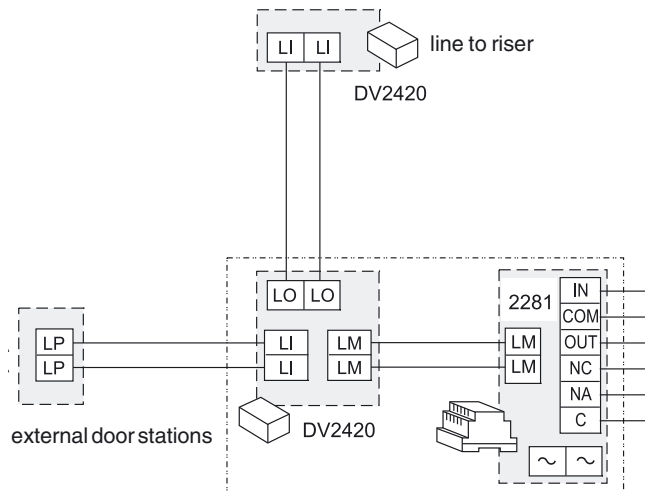
### Connecting the actuator to the distributor DV2420 of the installation



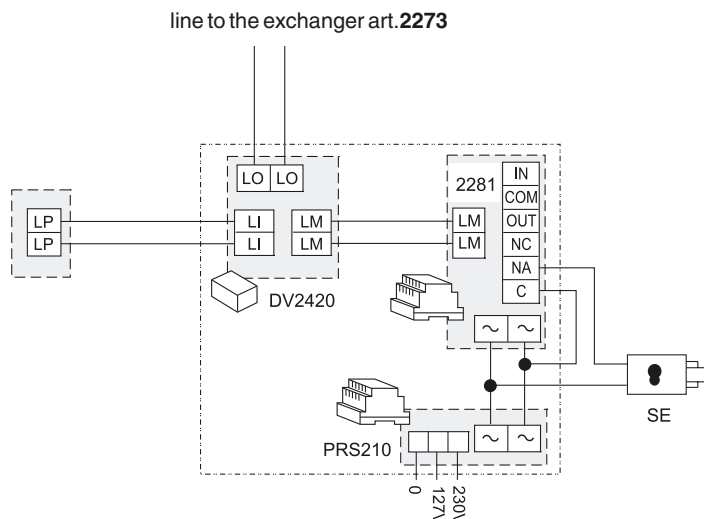
### Connecting the actuator to an additional distributor DV2420

To connect the actuator in the proximity of the external door station or along the line of an external door station, a DV2420 must be added as shown in the following examples.

#### Connection in installation without exchanger (actuator power supply directly from line)

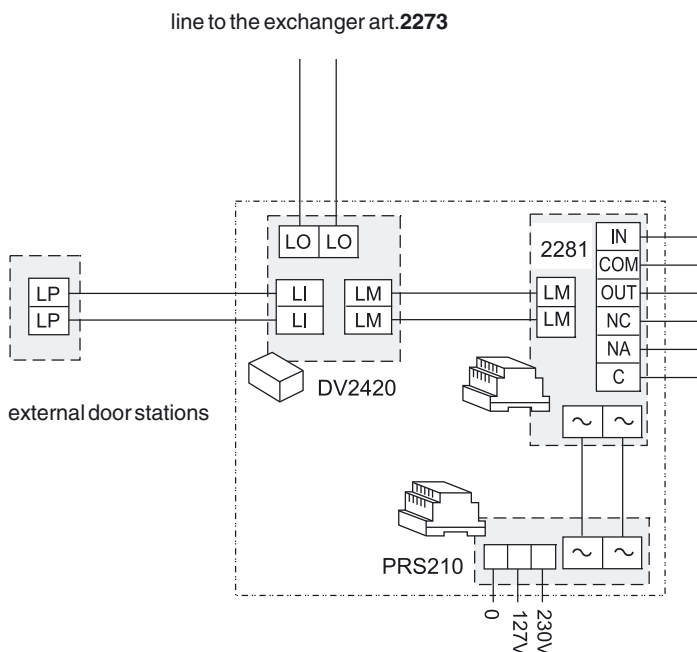


#### Connection in installation with exchanger (actuator and additional lock power supply with additional transformer - PRS210 type)

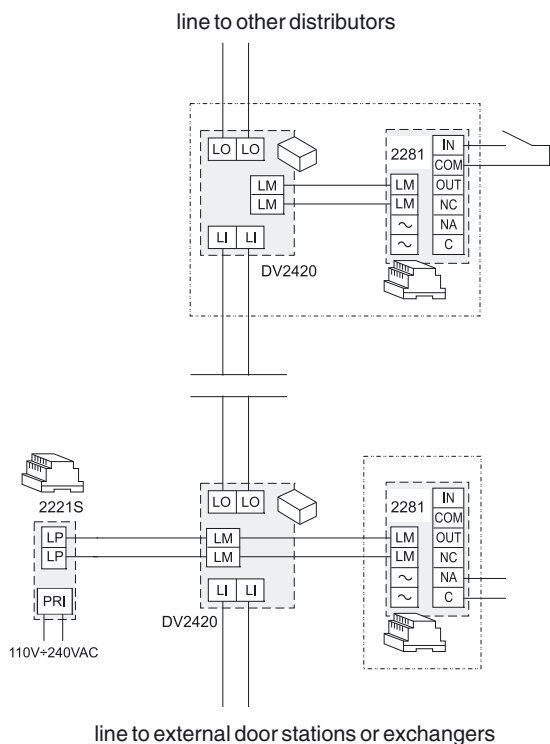


## SERVICE MODULES

Connection in installation with exchanger (actuator power supply with additional transformer - PRS210 type)



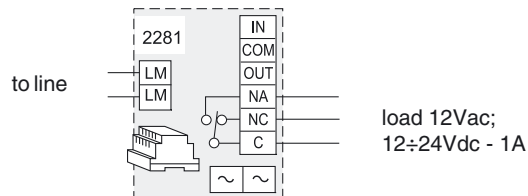
Connection of 2 actuators connected on the same riser line. One actuator with input command (i.e.: a button) and one actuator with output switching (i.e.: connection to relay to actuate staircase lights, electrical door locks, etc.)



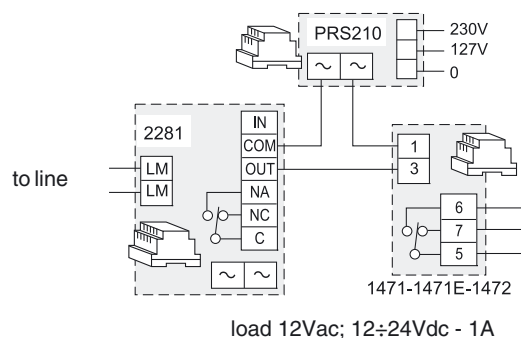
**Attention:** the actuators must be suitably programmed.

### Connections coming from the actuator

- In stand-by the relay C and NA contacts are open; they are closed when the actuator is activated.

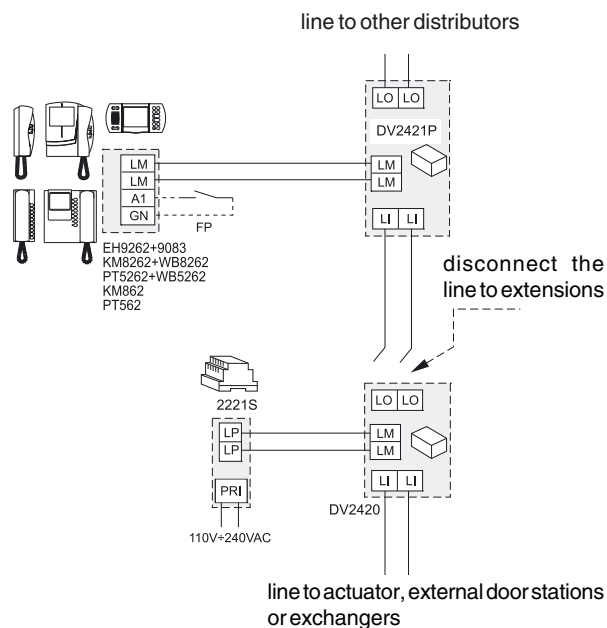


- How to activate a relay 1471 or 1471E or 1472 using the **OUT** and **COM** commands. **Attention:** you can only use these Farfisa relays and the actuator must be suitably programmed.



### PROGRAMMING (only with TD2100..)

The actuator must be connected to the TD2100 digital external door station; **all internal stations or other actuators must be disconnected.** The addresses that can be called from the external door station are decoded by the actuator as programming codes.





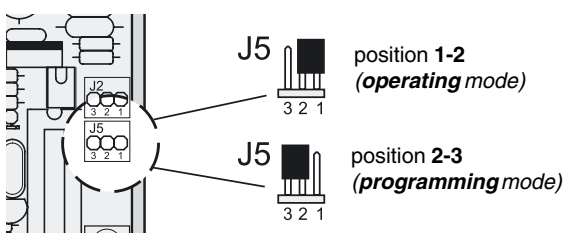
The following programming operations are possible:

- **Address to be associated with the actuator relay** (address 211 by default);
- **Address to be associated with the IN/OUT port** (no address by default);
- **Relay activation time** (1 second by default);
- **IN/OUT port activation time** (1 second by default);
- **Relay operating mode** (optional programming: code 0 by default);
- **IN/OUT port operating mode** (optional programming: code 0 by default).

## Entering the programming mode

To enter the programming mode you must:

- loosen the 2 fixing screws to remove the actuator cover;
- move the jumper **J5** from position 1-2 to position 2-3; the red LED turns on and stays on.



**Table 1 - Programming codes**

111	Code used to enter the address to be assigned to relay and IN/OUT port
122	Code used to program the relay and IN/OUT port activation time
133	Code used to program the relay and IN/OUT port operating mode

## Programming the addresses to be associated with relay and IN/OUT commands

If the actuator is connected to line L2 of an exchanger art.2273, you must assign 2 consecutive codes to the relay and IN/OUT port addresses (if you want to use both).

- Enter the programming mode as described in the “Entering the programming mode” section;
- in the external door station key in the code **111** and press ; the actuator LED starts flashing (1 flash every 2 seconds), the external door station receives the confirmation tone;
- in the external door station key in the code you want to assign as relay address (from **211** and **220** or **0** to deactivate the relay) and press ; the external door station receives the confirmation tone;
- in the external door station key in the code you want to assign as IN/OUT port address (from **211** and **220** or **0** to deactivate the port) and press ; the LED stops flashing and stays on, the external door station receives the confirmation tone;
- continue to program the relay and IN/OUT port activation time and operating mode or exit the programming mode as described below.

**Programming the relay and IN/OUT port activation time.** If you have exited, enter the programming mode again as described in the “Entering the programming mode” section.

- in the external door station key in the code **122** and press ; the actuator LED starts flashing (2 consecutive flashes every 2 seconds), the external door station receives the confirmation tone;
- in the external door station enter the value you want to assign as relay activation time and press (from **1** to **120** seconds; assign the

value 0 to deactivate the relay); the external door station receives the confirmation tone;

- in the external door station enter the value you want to assign as IN/OUT port activation time and press (from **1** to **120** seconds; assign the value 0 to deactivate the port); the external door station receives the confirmation tone;
- continue to program the relay and IN/OUT port operating modes or exit the programming mode as described below.

## Programming the relay and IN/OUT port operating modes.

If you have exited, enter the programming mode again as described in the “Entering the programming mode” section.

- in the external door station key in the code **133** and press ; the actuator LED starts flashing (3 consecutive flashes every 2 seconds), the external door station receives the confirmation tone;
- in the external door station key in the code for the relay operating mode and press (see table 2); the external door stations receive the confirmation tone;
- in the external door station key in the code for the IN/OUT port operating mode and press (see table 3); the external door stations receive the confirmation tone;
- exit the programming mode as described below.

**Table 2 - Relay operating mode <sup>(1)</sup>**

Code	0	1	2	3	4	5	6	7
monostable	✓		✓		✓		✓	
bistable		✓		✓		✓		✓
activation from door stations			✓	✓			✓	✓
master	✓	✓	✓	✓				
slave					✓	✓	✓	✓

<sup>(1)</sup> If you need to code multiple relays with the same address in the installation, you must programme **only** one relay as MASTER and all the other relays with the same address as SLAVE.

**Table 3 - IN/OUT port operating mode <sup>(2)</sup>**

Code	0	1	2	3	4	5	6	7	8
monostable	✓		✓		✓		✓		
bistable		✓		✓		✓		✓	
activation from door stations			✓	✓			✓	✓	
master	✓	✓	✓	✓					
slave					✓	✓	✓	✓	
output	✓	✓	✓	✓	✓	✓	✓	✓	
input									✓

<sup>(2)</sup> If you need to code multiple IN/OUT ports with the same address in the installation, you must programme **only** one port as MASTER and all the other ports with the same address as SLAVE.



## SERVICE MODULES

### Exiting the programming mode

To exit the programming mode you must:

- move the jumper **J5** from position **2-3** to position **1-2**; the red LED flashes slowly;
- close the actuator cover with the 2 fixing screws.

### Resetting the default programming values

To reset the actuator default programming values and delete all the variations made in the programming mode you must:

- enter the programming mode as described in the "Entering the programming mode" section;
- hold the key **SW1** pressed; after 2 seconds the LED starts flashing rapidly; after other 2 seconds the LED turns off, turns on again and stays on;
- release the key **SW1**;
- move the jumper **J5**, from position **2-3** to position **1-2** to exist the programming mode.

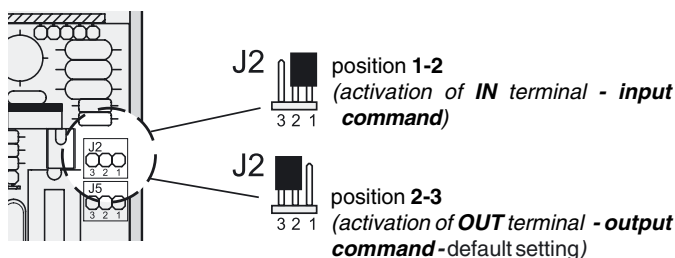
### Configuring the COM terminal of the IN/OUT port

To configure the COM terminal of the IN/OUT port (configured as OUT output by default), after programming the relay and IN/OUT port operating modes as described above, you must set the jumper **J2** to associate the COM terminal to the IN terminal, if the port is used as **input**, or to the OUT terminal if the port is used as **output** (see table 4).

Table 4

Position jumpers	Terminals activation			Activation command in:
J2	COM	OUT	IN	
1-2	YES	NO	YES	Input
2-3	YES	YES	NO	Output

(2-3 default setting)



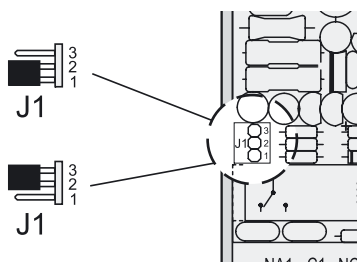
### Selecting the actuator power supply mode

The actuator can be directly powered from the line or with 12V alternate voltage applied to the two terminals  $\sim/\sim$ .

To select the power supply mode close the jumper **J1** in pins 2-3 to select power supply from the line (default setting) or in pins 1-2 to select an additional power supply source.

Position 1-2  
(power supply with additional transformer)

Position 2-3  
(power supply from line - default setting)



### Integration in installation with DUO technology

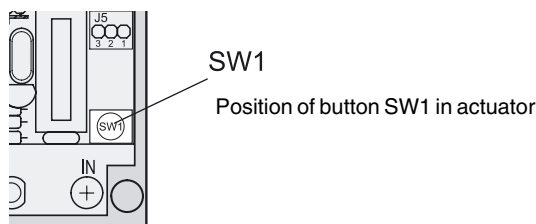
To activate the actuator relay or IN/OUT port, you must perform two additional operations in the devices of the installation:

- in the button of the internal stations (intercoms or videointercoms) where you want to activate the service (for information on programming see the instructions manual of the internal station), you must store the same address assigned to the actuator relay or IN/OUT port; in case of internal stations from the COMPACT series the address of the auxiliary service can only be programmed in the button "●"; in case of internal stations from the ECHOS series the address can be programmed in buttons 1, 2, 3, 4, 5 and 6.
- if one or more actuators are connected to line L2 of the exchanger art. 2273, you must reserve one of the 4 numerical intervals of the exchanger to the address of the actuator or actuators connected to line L2. in this case you must use consecutive codes (211 - 212 - 213 - 214 - 215 - 216, etc.) for the relay and port addresses.

To perform this operation you must:

- set the exchanger in wait-for-programming mode for the selected numerical interval (see page 73);
- in the actuator or actuators connected to line L2 of the exchanger (\*), enter the programming mode and press the key **SW1** of the first actuator twice; then press the key **SW1** twice in all the other actuators. When you press the key for the first time, the actuator sends the address of the relay that was programmed previously to the exchanger; when you press the key for the second time the actuator sends the IN/OUT port address; press the key **SW1** twice also if no address was assigned to the relay or port.
- in all articles perform the operations to exit the programming mode.

(\*) if the actuator (or actuators) is connected to line L1 of the exchanger, NO programming operation must be performed.



**Example:** if you want to actuate an automatic gate controlled by the relay of an actuator connected to terminals L2 of one of the exchangers of the main entrances with the button "●" of a videointercom KM8262, you must:

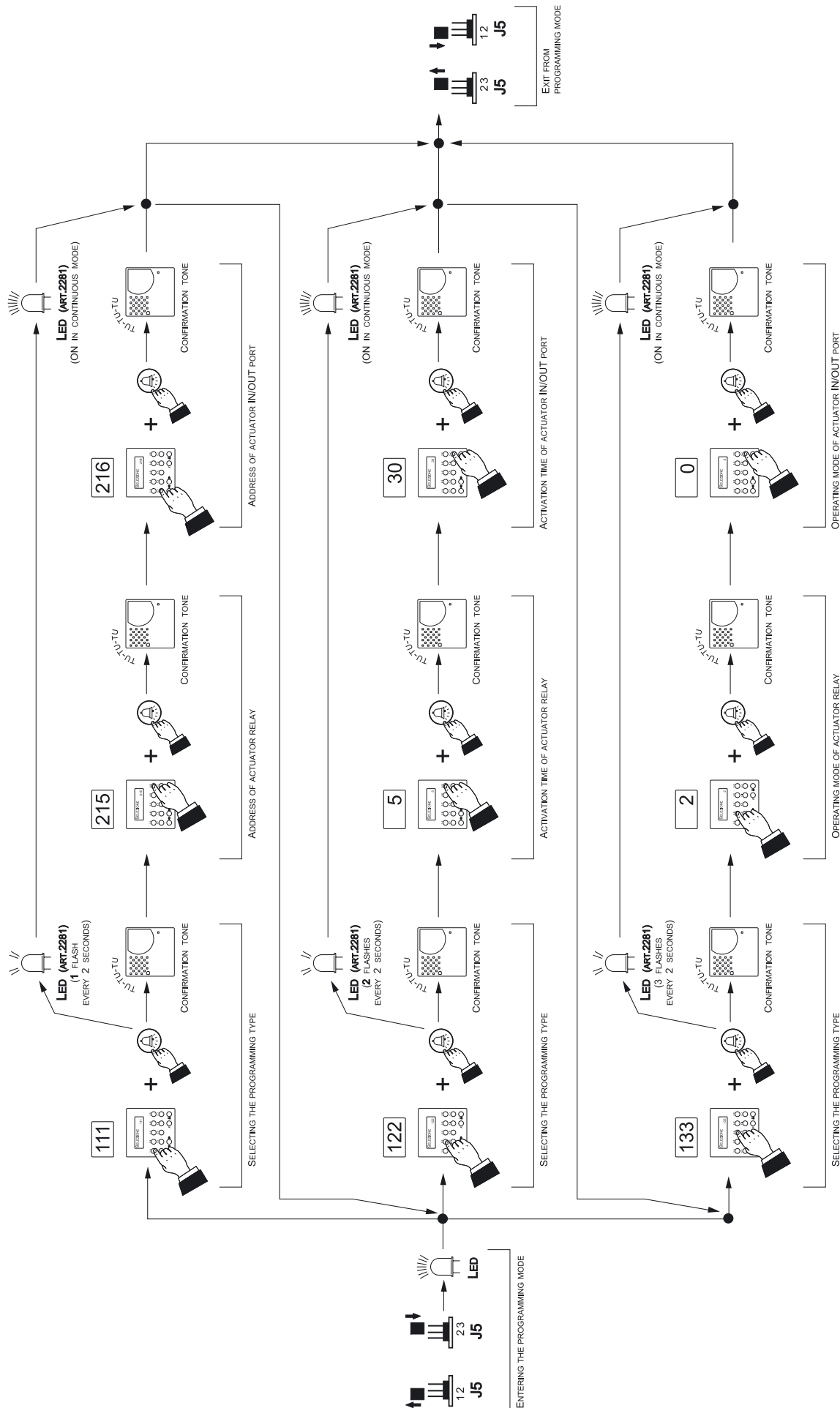
- 1) program the address, time and operating mode of the actuator relay;
- 2) program the button "●" of the video intercom used to open the gate with the address of the relay you want to activate;
- 3) program a numerical interval of the exchanger, different from any other numerical intervals used, with the address of the relay you want to activate.

**Note.** Do not perform the operation described in 3 if the actuator is connected to line L1 of the exchanger.



## Programming example of actuator with the following features:

Relay - Address: 215; Activation time: 5 seconds; Operating mode: monostable, activation from external door stations permitted, master IN/OUT port (configured as OUT. Jumper J2 in position 2-3); Address: 216; Activation time: 30 seconds; Operating mode: monostable, activation from external door stations not permitted, master, output



## SERVICE MODULES

### Operation

#### Activating the actuator from the internal stations

The activation of the relay or the IN/OUT port configured as output from the internal stations is permitted in the following cases:

- **Echos** series, activation is possible with turned-on/off videointercom and with or without active conversation. If the line is not free you will hear the busy tone on the speaker.
- **Compact** series, activation is possible with turned-on/off videointercom and by lifting up the handset (with or without conversation).
- **Project** series, activation is possible only with idle installation and lifted-up handset (without conversation).

In all cases the service cannot be activated if the installation is busy.

To activate the actuator relay or port from the internal stations with installation in idle state, you must:

- lift the handset and check that the line is free (except Echos series);
- press the button that was previously programmed to activate the relay or port; the speaker receives a continuous confirmation tone of 1 second;
- hang up the handset (except Echos series).


To activate the relay or the actuator port from the internal units during a conversation, you must:

- press the button that was previously programmed to activate the relay or port; the speaker receives a continuous confirmation tone of 1 second;
- continue or close the conversation.

If the installation includes digital exchangers art. 2273, the videointercom must be turned on before performing the operations illustrated above (with call or turn-on test function).

#### Activating the actuator from the external door stations

To activate the relay or IN/OUT port from the external door stations, after you have enabled this option in the actuator operating modes, you must:

- from the push-button keyboards with coder (CD2131..÷ CD2138..) press the button where you have saved the address of the relay or IN/OUT port you want to activate;
- from the digital push-button keyboards (TD2100..) key in the address of the relay or IN/OUT port to activate and press .

#### Activation from other actuator

You can activate the relay or IN/OUT port (configured as output) of an actuator by pressing a button connected with the IN and COM terminals of another actuator with IN/OUT configured as input. To activate this function you must program the address of the IN port of the actuator connected with the button with the address of the relay or OUT port you want to activate in the other actuator.

## INSTALLATION INSTRUCTIONS

### Main features

- **The cable runs** of intercom and video intercom installations must be kept separate from the mains or any other electrical installation as required by the **International Safety Standards** and the entire installation must be realized in compliance with the safety rules in force in any specific Country.
- It is necessary to provide a disconnecting and safety switch before the power supply. Use a single general switch in case of several power supplies (also in multiple entrance).
- Before connecting the power supply make sure that the rating complies with the electrical mains.

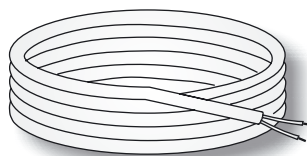
#### External door stations with CD2131, CD2132, CD2134, CD2138 digital encoder

In installations with digital encoding module using the button modules **MA22S**, **MA24S**, **PL24S** and **PL228S**, it is recommended to power the name-holders LED's with 13 Vac supplementary transformer with proper power. Consumption of each module is **0.1A**.

By using the transformer **PRS210** you can power a maximum of **7** push-button modules.

### Conductors

The cable art.2302 is the ideal solution for wiring DUO systems. For other cables use, please see page 81. The use of inappropriate cables may have an adverse effect on the performance of the system.



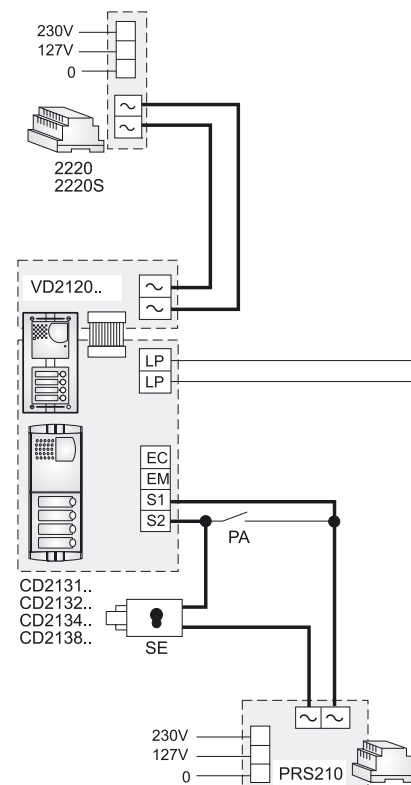
**2302.** Twisted pair cable specified for the digital installation with DUO systems.

#### Technical characteristics of cable

Number of conductors	2 (red/black)
Cross-section of conductors	2x1 mm <sup>2</sup>
Material of conductors	tinned copper
Twisting pitch	40mm
Nominal impedance	100Ω

### Electric door lock

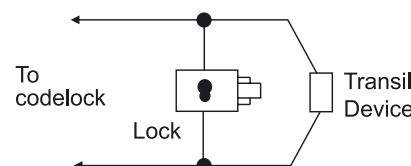
As shown in the installation diagrams the electric lock can be operated using the same power supply which powers the door station, but for a correct operation the electric lock must be a 12VAC/1A max type. During the release of the electric lock the video signal can be disturbed. To avoid this inconvenient or to operate a powerful electric lock it would be advisable to use an extra power supply as reported in the following diagram.



### VERY IMPORTANT

To comply with the European Standards on Electromagnetic Compatibility and to increase the reliability of the product, it is necessary to connect a suppression device when switching inductive loads i.e. electric releases and electric locks.

The enclosed suppression devices (transil) must be connected as close as possible to the loads (ideally across the terminals. See figure).



## INSTALLATION INSTRUCTIONS

### Maximum distances guaranteed by cable art.2302

A	Art.2220S Art.2220	← 50m. →	TD2100 CD2131+38
	Art.2221	← 50m. →	Art.2222
	PRS210	← 50m. →	Art.2273
B	TD2100 CD2131+38	← 200m.*** →	DV2420
C	TD2100 CD2131+38	← 200m.*** →	Farthest internal station
D	Art.2221S Art.2222	← 50m. →	DV2420
E	DV2421P	← 30m.** →	Internal station
F	DV2420	← 200m.*** →	Farthest internal station

#### Notes

\* Letters for reference on the diagrams

\*\* The total length of cables from line distributors to internal stations should not exceed 300 meters (adding all the "E" sections).

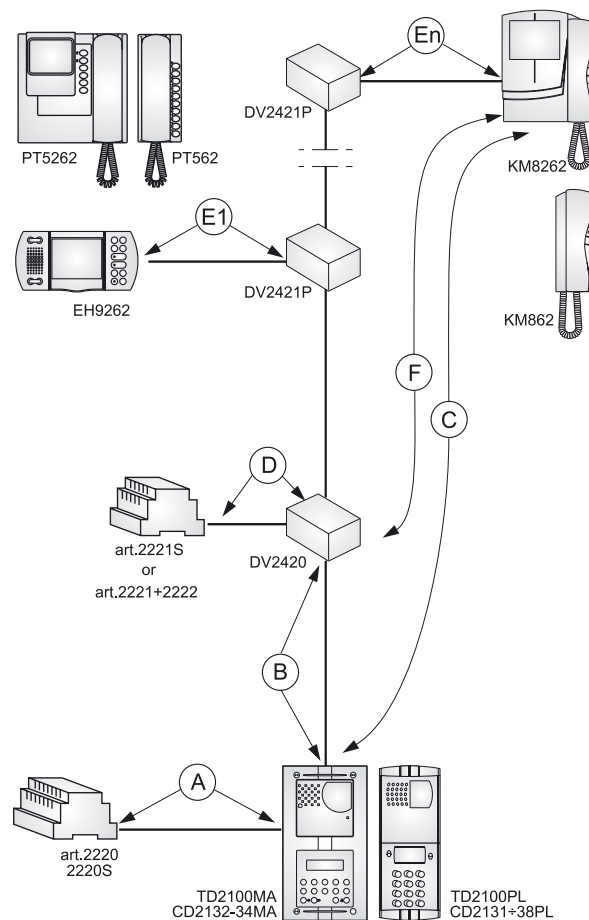
\*\*\* The distance becomes 150 meters in installations with colour camera.

For higher distances apply one or more video amplifiers (see pages 85, 86 and 87). Each amplifier increases the distance by 200 meters (150 meters with colour camera).

In intercom-only installations the maximum distance is 1 000 m between the farthest external door station and intercom (section C; see diagram on page 91).

### Schematic for distance calculation

#### Video intercom system to 1 external station and 1 riser



### Maximum permitted distances by the colour and black and white installations (measures in meters)

Section	Farfisa cable art.2302 (2x1mm <sup>2</sup> )		NOT twisted cable AWG18 (2x0.75mm <sup>2</sup> )	Twisted cable AWG22 (2x0.32mm <sup>2</sup> )		CAT5 cable AWG24 (2x0.2mm <sup>2</sup> )		Distance between:
	b/w	colour		b/w	colour	b/w	colour	
A	50	50	35	10	10	5	5	art.2220-2220S and external door station art.2221 and 2222 art.PRS210 and 2273
B (*)	200	150	100	200	150	200	150	external door station and art.DV2420
C (*)	200	150	150	200	150	200	150	farthest external door stations and internal stations
D	50	50	35	5	5	5	5	art.2221S-2222 and DV2420
E	30	30	20	20	20	20	20	art.DV2421P and internal station connected to it
E1+E2+...En	300	300	200	300	300	300	300	adding all the E sections
F (*)	200	150	130	50	50	35	35	art.DV2420 and farthest internal station

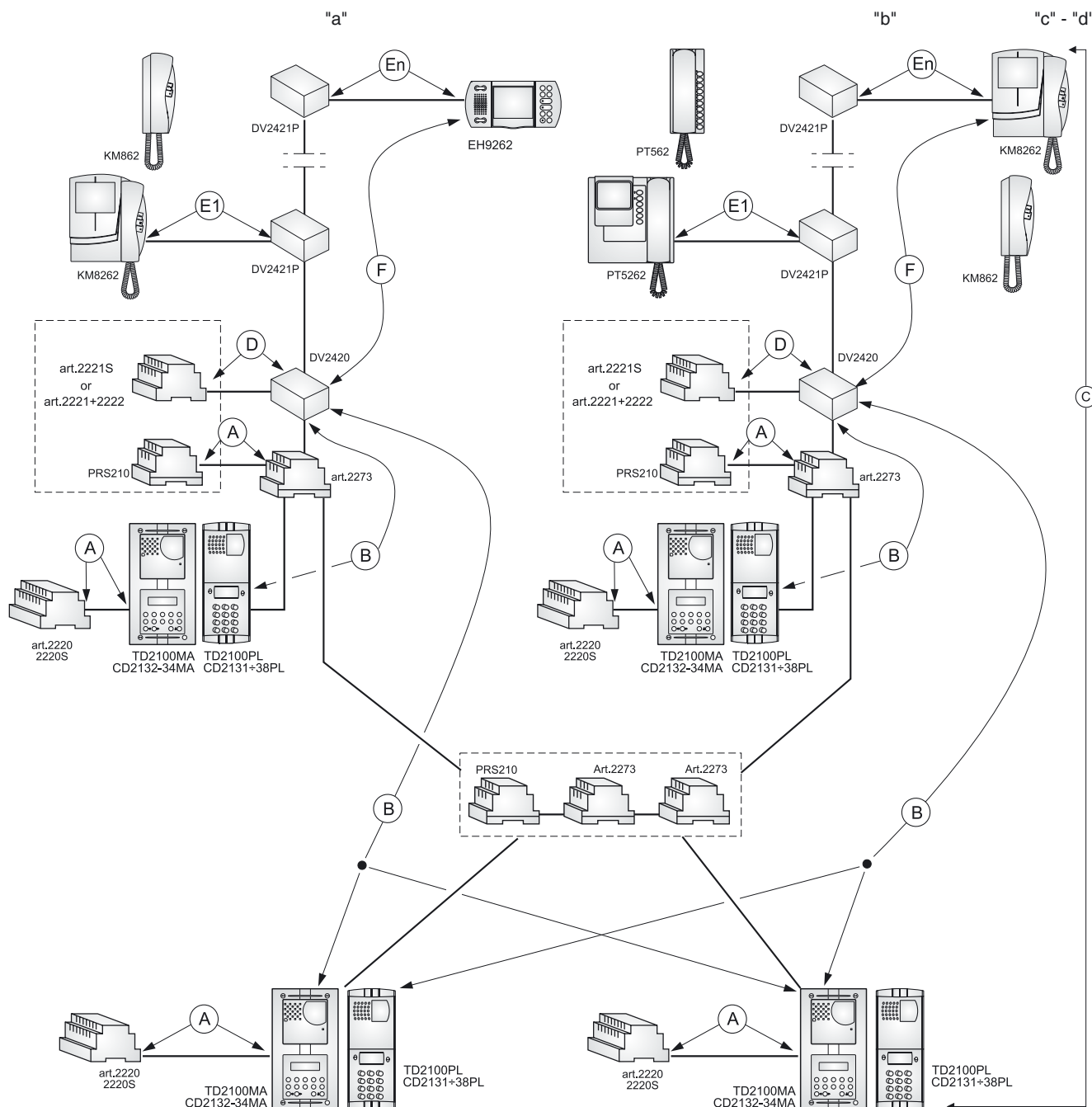
(\*) These distances can be increased by applying one or more video amplifiers correctly (examples from page 85 to 87).





## INSTALLATION INSTRUCTIONS

### Multi-way installation with 2 main common entrances and 2 risers, each riser with 1 secondary door station



#### Notes.

- The total length of (E1), (E2) .. (En) should not exceed 300 meters.
  - The section C is the maximum distance of the installation (distance between farthest internal station and external door station).
  - To calculate the distance, you must add the section F of a riser and the section B of the farthest external door station. Repeat the calculation with the other risers. Each measurement must not exceed 200 meters (or 150 meters in colour installations).
  - Sections B and F may vary according to the installation requirements, as long as the sum does not exceed 200 meters (or 150 meters in colour installations) of distance C. For higher distances one or more line amplifiers art. 2223 or 2223C must be used (see application diagrams on pages 86 and 87).
- Example of videointercom installation with 2 main common entrances and 3 risers ("a", "b", "c"), each riser with 1 secondary door station:*
- riser "a" - section F 100 m + section B (external secondary door station) 70 m = **total 170 m.**
  - section F 100 m + section B (farthest external main door station) 100 m = **total 200 m.**
  - riser "b" - section F 50 m + section B (external secondary door station) 20 m = **total 70 m.**
  - section F 50 m + section B (farthest main external door station) 80 m = **total 130 m.**
  - riser "c" - section F 110m + section B (external secondary door station) 40m = **total 150 m.**
  - section F 110 m + section B (farthest external main door station) 200 m = **total 310 m** (add one amplifier art. 2223 or 2223C and transformer PRS210 at the beginning of section F of riser "c")
- The line distributor DV2420 is NOT necessary if the length of section D is lower than 1 meter.



## INSTALLATION INSTRUCTIONS

### Connection of art. 2221S or 2222 to the line

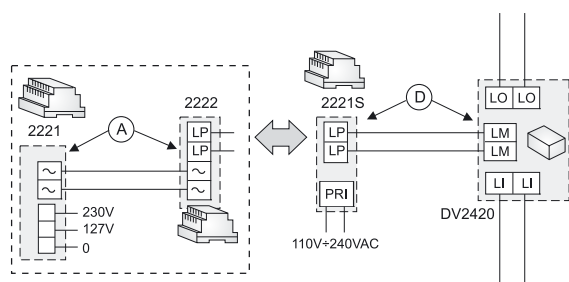
The DUO system needs a correct power supply and audio, video and data impedance over the riser line.

This function is provided by art. **2221S** (or **2222**) that must be installed between the first internal station and the external door station (or exchanger, in case of multiple risers). Each riser must have its own line power supply.

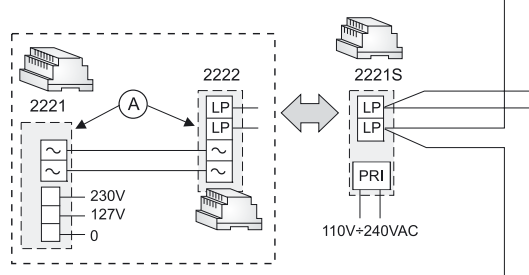
Art. **2221S** (or **2222**) can be connected to its line in three different modes:

- through line distributor **DV2420**;
- directly to the line with in-out connection of wires;
- through connector box with 1 metre maximum distance.

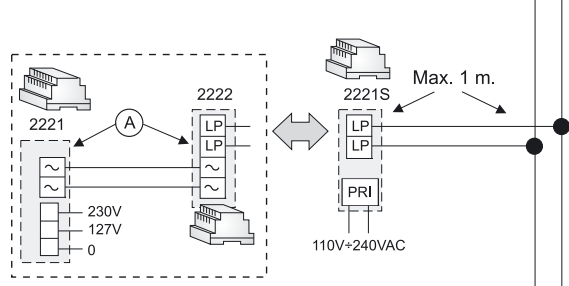
#### Connection with line distributor DV2420



#### Direct connection to line (only in installations without digital exchanger 2273)



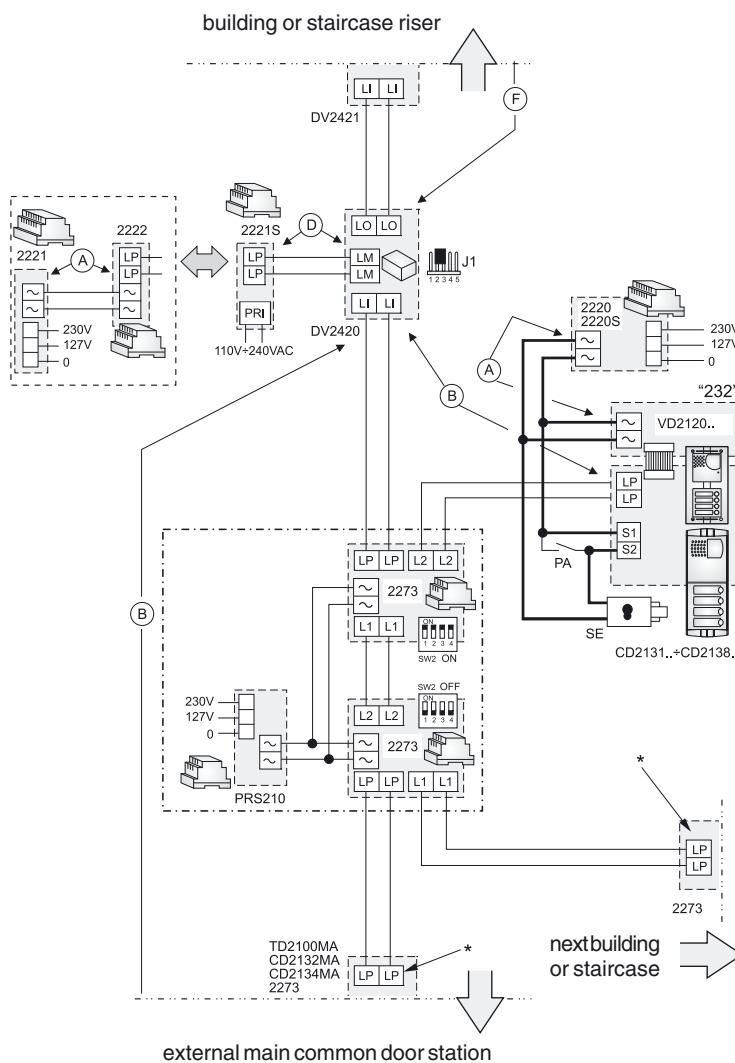
#### Connection to line with 1 metre maximum distance (only in installations without digital exchanger 2273)



### Connection of power supplies and exchangers in installations with staircase secondary door stations

The installation diagrams with a secondary door station are illustrated with power supplies and exchangers NOT grouped in the same switchboard (*basic diagrams from page 117 to page 119*). This allows for a better distribution of articles according to the installation distances to be obtained. To calculate the maximum distances, compare the reference letters shown in a circle in the installation diagrams with the table on page 81. Three connection options of the different staircase devices are illustrated below according to different installation requirements.

#### a) Connection of line power supply, power supplies and staircase exchangers NOT GROUPED (connection of installation diagrams – see pages 107, 109, 111, 113 and 115)

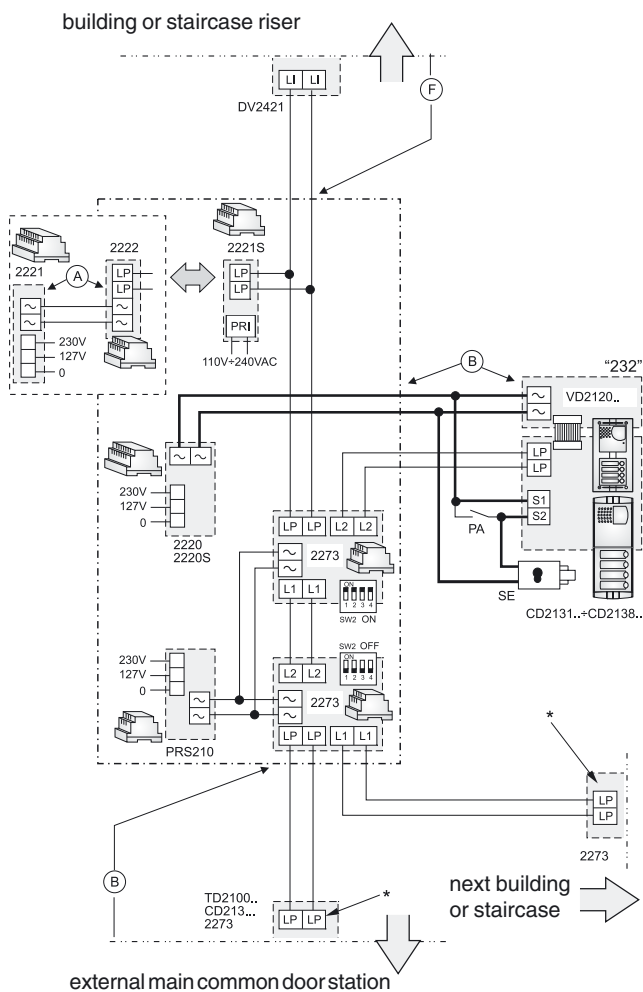


\* In the last building it is connected to terminals **L1** of the staircase exchanger.



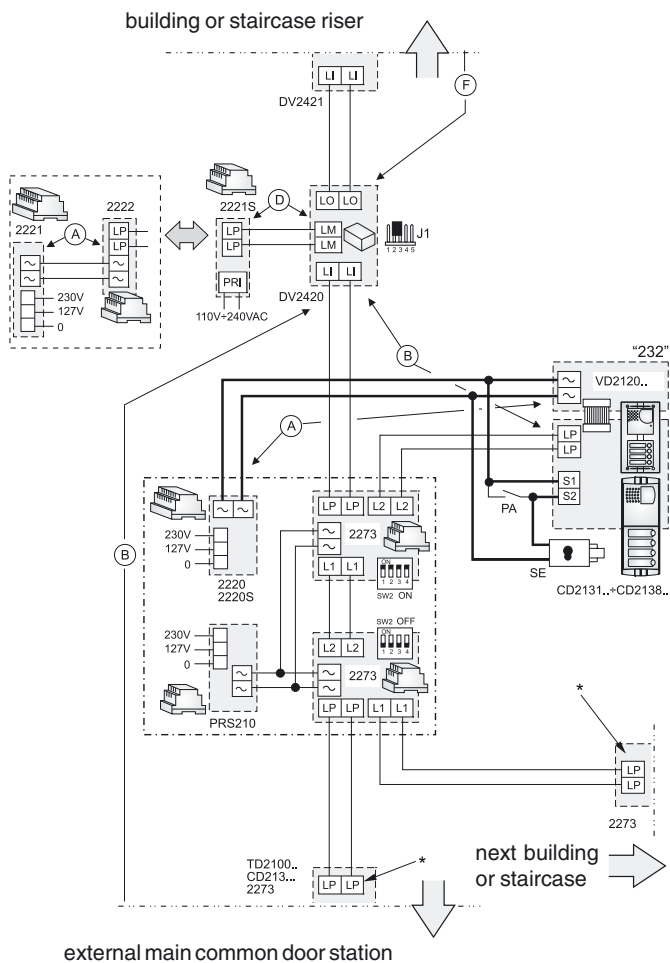
## INSTALLATION INSTRUCTIONS

**b) Connection of line power supply, power supplies and staircase exchangers GROUPED in the same switchboard**



\* In the last building it is connected to terminals **L1** of the staircase exchanger.

**c) Connection of power supplies and staircase exchangers  
GROUPED in the same switchboard, with line power supply NOT  
GROUPED**



\* In the last building it is connected to terminals **L1** of the staircase exchanger.



## VIDEO SIGNAL AMPLIFICATION

The connection of the video amplifier art.2223 or 2223C in the DUO video-intercom installation allows to increase the permitted maximum distance of a single section of the installation, while the maximum number of videointercoms remains unchanged (max. 50).

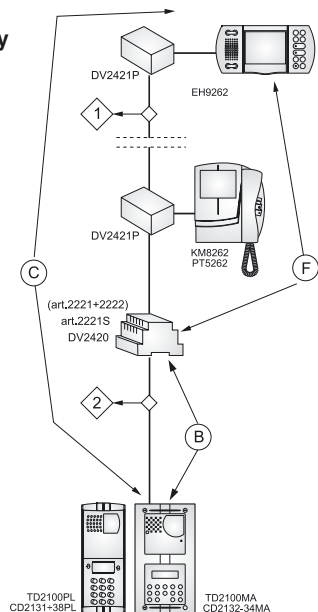
### Recommended position of video amplifier.

The following block diagrams show the recommended position of the video amplifier.

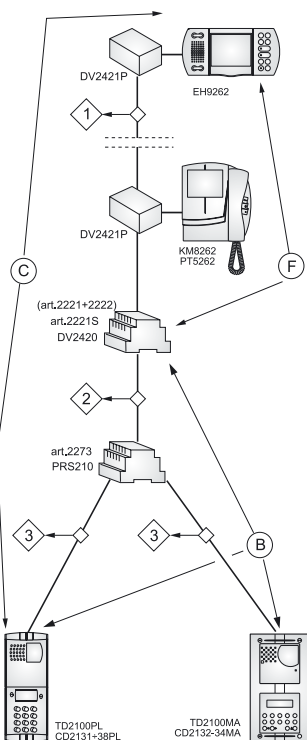
The recommended position is shown by a number shown in a diamond that corresponds to the chapter that contains the application diagram to be used.

Each amplified section of the installation allows to connect additional 200 metres (or 150 metres in colour installations) of Farfisa 2302 cable.

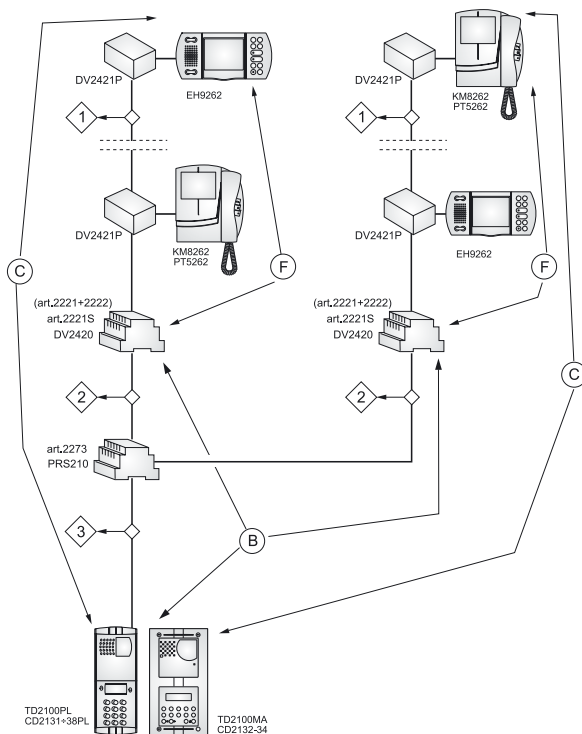
**Block diagram of multi-way installation with 1 entrance**



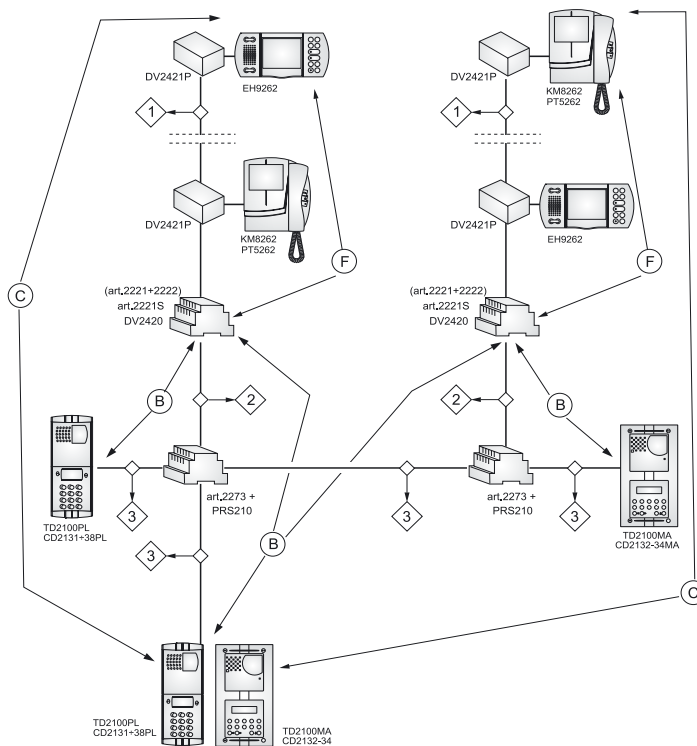
**Block diagram of multi-way installation with 2 entrances**



**Block diagram of multi-way installation with 1 entrance and 2 risers**



**Block diagram of multi-way installation with 1 main common entrance and 2 secondary entrances (staircase division)**



# INSTALLATION INSTRUCTIONS

## Amplification of section F

### 1 Connection of video amplifier to increase the riser length

If the length of section **F** (distance from line power supply and farthest videointercom) or section **C** (distance between external door station and last videointercom) is **higher than 200 meters** (or **150 meters** in colour installations), the riser line must be interrupted by adding the necessary systems according to the information contained in the 2 application diagrams below. These diagrams can be inserted in all basic videointercom diagrams (see from page 87 to page 115). On page 99 you will find an installation diagram with 2 video amplifiers; one amplifier for section **B** and one for section **F**.

#### a) - Application diagram of amplifier art. 2223C directly powered from DUO line

This diagram uses the amplifier art. **2223C** directly powered from **DUO** line.

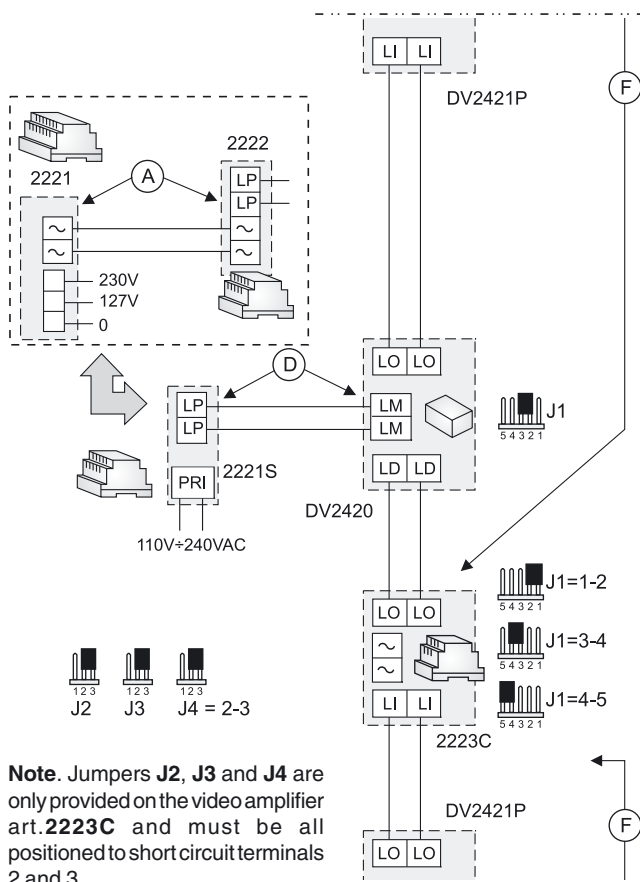
The following articles must be added to the basic diagram as illustrated in the diagram below:

- video amplifier art. **2223C**

and to restore the line power supply

- line distributor **DV2420**

- line power supply art. **2221S** or art. **2221+2222**



**Note.** Jumpers **J2**, **J3** and **J4** are only provided on the video amplifier art. **2223C** and must be all positioned to short circuit terminals 2 and 3.

#### b) - Application diagram of amplifier art. 2223C or 2223 powered from additional transformer

This diagram uses amplifier art. **2223C** or **2223** powered from **additional transformer**.

The following articles must be added to the basic diagram as illustrated in the diagram below:

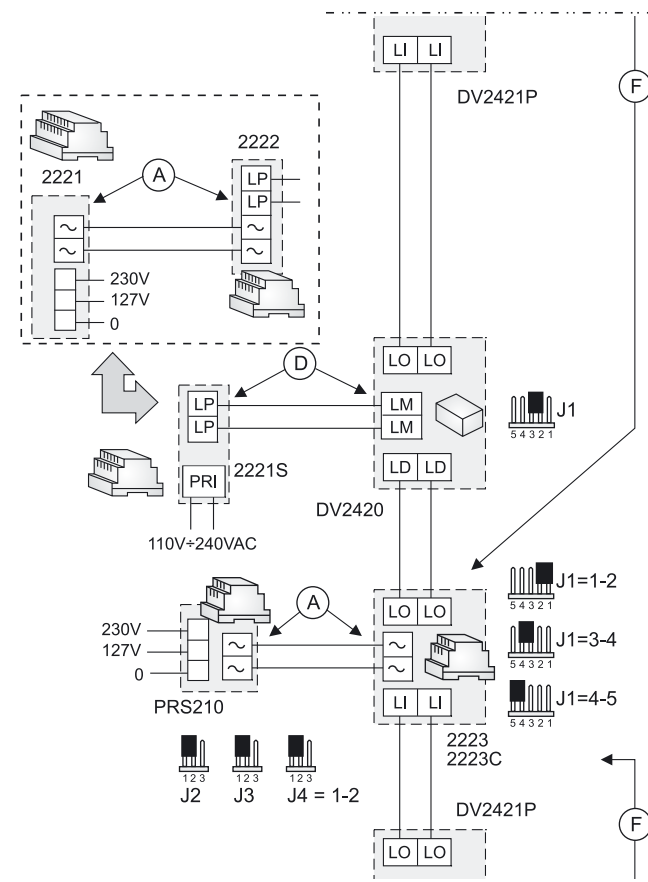
- video amplifier art. **2223** or **2223C**

- transformer **PRS210**

and to restore the line power supply

- line distributor **DV2420**

- line power supply art. **2221S** or art. **2221+2222**



**Note.** Jumpers **J2**, **J3** and **J4** are only provided on the video amplifier art. **2223C** and must be all positioned to short circuit terminals 2 and 3.

#### Position of jumpers

Articles	Jumpers	Description
DV2420	J1	2-3 open line
2223C	J1	1-2 termination 47Ω
2223		3-4 termination 70Ω
		4-5 termination 100Ω
2223C	J2 J3 J4	1-2 external power supply 12Vac
		2-3 line power supply





## Amplification of section B

If the length of section **B** (distance between line power supply and external door station) or section **C** (distance between external door station and last videointercom) is **higher than 200 meters**, the following articles must be added to the installation (*basic diagrams from page 93 to page 115*) as shown in the two enclosed diagram. On page 99 you will find an installation diagram with 2 video amplifiers; one for section **B** and one for section **F**.

- video amplifier art. **2223** or **2223C**
- transformer **PRS210**

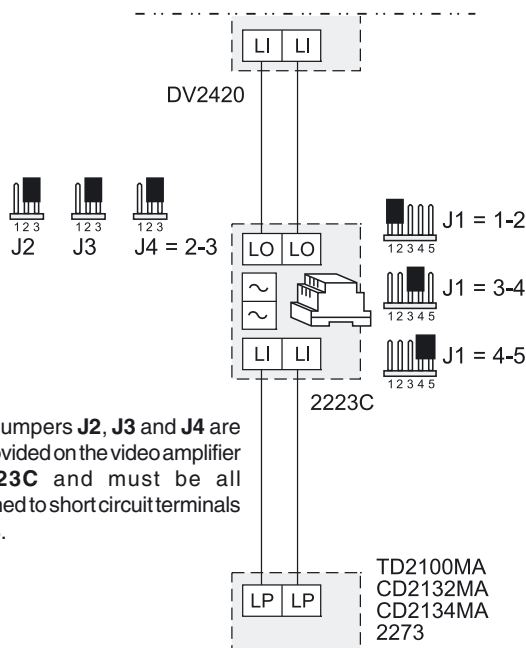
### 2 Connection of video amplifier to increase distance between riser and external door station or exchangers

#### a) - Application diagram of amplifier art. 2223C directly powered from DUO line

This diagram uses the amplifier art. **2223C** directly powered from **DUO** line.

The following articles must be added to the basic diagram as illustrated in the diagram below:

- video amplifier art. **2223C**



**Note.** Jumpers **J2**, **J3** and **J4** are only provided on the video amplifier art. **2223C** and must be all positioned to short circuit terminals 2 and 3.

#### General notes.

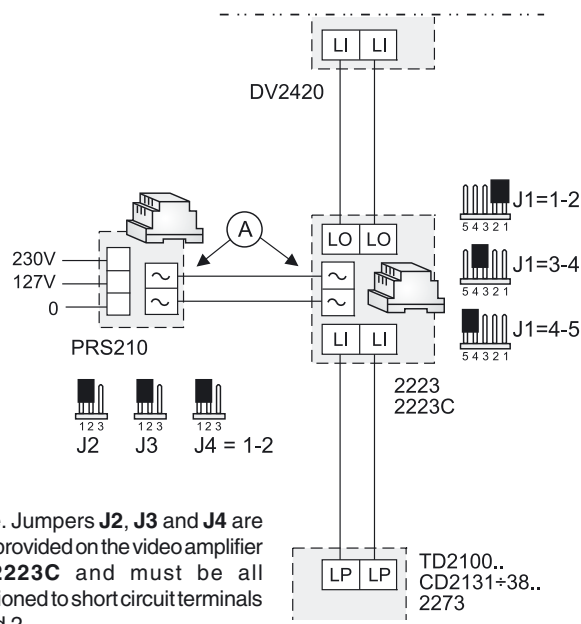
- By increasing the distance of sections **B** and/or **F**, the distance of section **C** in the amplified section will automatically increase.
- If the video amplifier and one or more exchanger are installed in a switchboard, the said articles can be powered with the same power supply PRS210 (max. 5 articles).
- For the correct operation of the installation, select the closing impedance of the amplifier **2223** or **2223C** by positioning the jumper **J1** correctly (see pages 71 and 86).

#### b) - Application diagram of amplifier art. 2223C or 2223 powered from additional transformer

This diagram uses amplifier art. **2223C** or **2223** powered from **additional transformer**.

The following articles must be added to the basic diagram as illustrated in the diagram below:

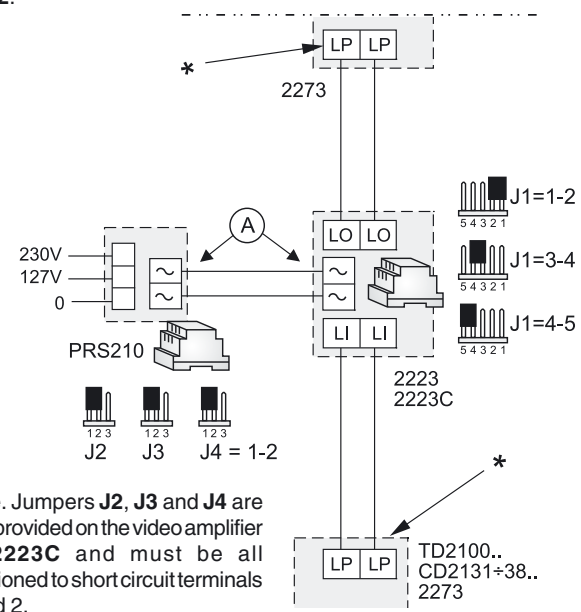
- video amplifier art. **2223** or **2223C**
- transformer **PRS210**



**Note.** Jumpers **J2**, **J3** and **J4** are only provided on the video amplifier art. **2223C** and must be all positioned to short circuit terminals 1 and 2.

### 3 Connection of video amplifier to increase distance between exchangers or between external door station or exchangers

\* In some diagrams the terminals of exchanger **2273** may be **L1/L1** or **L2/L2**.



**Note.** Jumpers **J2**, **J3** and **J4** are only provided on the video amplifier art. **2223C** and must be all positioned to short circuit terminals 1 and 2.



## INSTALLATION DIAGRAMS

The following pages show the installation diagrams most often used in DUO digital intercom/video intercom systems. Upon request ACI Farfisa supplies installation diagrams for the configurations not present in this manual.

- Videointercom systems with 1 or more main entrances
- Videointercom systems with 1 or more main entrances and secondary entrances
- Combination intercom-video intercom systems
- Systems with floor call
- Systems with intercommunicating service between video intercoms and intercoms in single or apartments

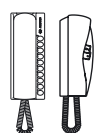
For a clearer understanding of the diagrams, **the sequence of terminals** in each individual article has not been followed. Only the terminal code is valid (letter and/or number), not the graphic sequence. Terminals with the same letter or number have the same functions.

The items may have more terminals than the ones in the installation diagrams. **The excess terminals must not be used.**

**The installation diagrams** for 1 or more door stations illustrated in this technical manual have been represented with only one intercom or video intercom for each user. However, it is possible to "personalise" the installation by matching properly the applications on page 116 to the base diagrams of pages 93÷115.

### Graphic symbols

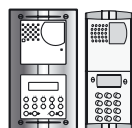
For a better comprehension of the installation diagrams we have made a list of the graphic symbols most often used.



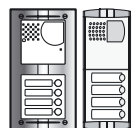
**Intercoms**



**Videointercoms**



**Digital push-button panel**



**Conventional push-button panel with digital encoder**



**Power supplies, transformers, exchangers and actuators**



**J.. mobile jumpers** to adjust line impedance (available in floor distributors and video amplifiers) and programme external door stations, exchangers and actuators. Their correct position allows for the correct operation of the installation.



**SW.. microswitches** in exchangers, digital encoders and push-button modules. They must be positioned as indicated in the installation diagrams and installation instructions.



**Floor distributors**



**Push-button**



**Electric door lock**

— — — **Optional wire** (normally for connection of floor buttons and door lock button)

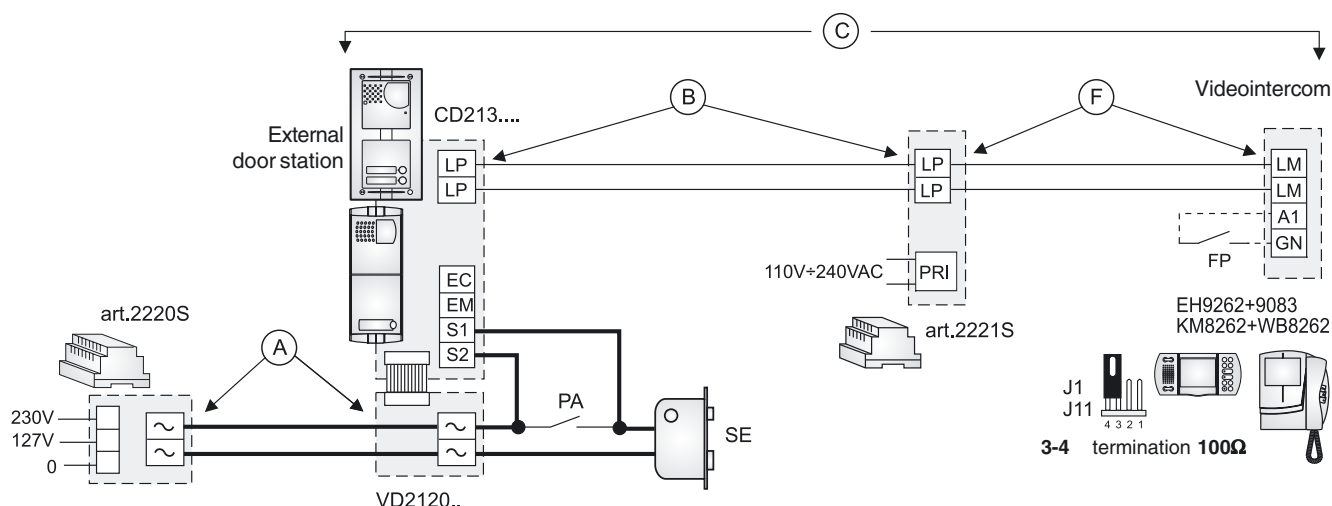
: — — : **Division lines** (for convenience purposes only the first and last user are illustrated in multi-way installations. Theoretically, all articles that are necessary for the installation are included between the two division lines)

□ **Switchboard.** We recommend to install all articles in this frame in the same switchboard.

○ **Sections.** The letters shown in the circle are the reference letters of the distance table on page 81.

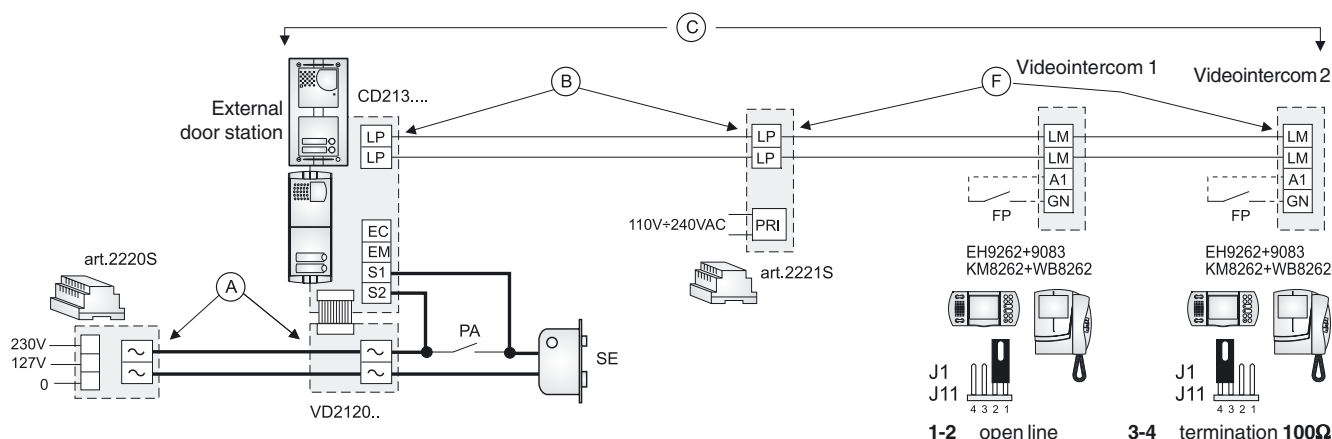


## ONE-WAY VIDEOINTERCOM SYSTEM



## Si 51VM/37

## TWO-WAY VIDEOINTERCOM SYSTEM



Q.ty	Article	Description
1-2	<b>EH9262CT+9083</b>	Echos videointercom + back box
1-2	<b>EH9262CW+9083</b>	Echos videointercom + back box
1-2	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
1-2	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
1	<b>2220S</b>	Transformer
1	<b>2221S</b>	Line power supply
1-2	<b>FP **</b>	Floor push-button (optional)
1	<b>PA **</b>	Door release button (optional)
1	<b>SE **</b>	Electric door lock (12Vac-1A)
<b>● MATRIX series DIGITAL door station</b>		
1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>VD2120MA</b>	Camera modules with integrated door speaker
1	<b>CD2132MA</b>	Digital encoder module
<b>● PROFILO series DIGITAL door station</b>		
1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelters with module frames
1	<b>VD2120CPL</b>	Camera modules with integrated door speaker
1	<b>CD2131PL-CD2132PL</b>	Digital encoder modules

\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

○ See table of the distance on page 81.

**Note to two-family installations**

- The user code of external door stations and videointercoms is 100 by default; for this reason, the second videointercom must be programmed with code 101 (see automatic programming of videointercoms on pages 16 and 23).
- In videointercom 1 move jumper **J11** (EH9262..) or **J1** (KM8262..) from position 3-4 to 1-2 (open line).



## MULTI-WAY INTERCOM SYSTEM CONNECTED TO 1 DOOR STATION

Q.ty	Article	Description
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
1	<b>2220 - 2220S</b>	Transformer
1	<b>2221S</b>	Line power supply
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
1	<b>PA **</b>	Door release button ( <i>optional</i> )
1	<b>SE **</b>	Electric door lock (12Vac-1A)
<b>• MATRIX series DIGITAL door station</b>		
1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>AD2110MA</b>	Module with integrated door speaker
1	<b>TD2100MA</b>	Digital push-button panel
<b>• MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)</b>		
...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
1	<b>AD2110MA</b>	Module with integrated door speaker
1	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules
<b>• PROFILO series DIGITAL door station</b>		
1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelter with module frames
1	<b>AD2120CPL</b>	Module with integrated door speaker
1	<b>TD2100PL</b>	Digital push-button panel
<b>• PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)</b>		
...	<b>PL72-73</b>	Back boxes with module frames
1	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
1	<b>AD2120CPL</b>	Module with integrated door speaker
1	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 100).

\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

### Installation notes

- If you use more than 4 push-button modules art. **MA22S, MA24S, PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.

- In this diagram you can install max. 100 intercoms.

- For the cross section and installation of the wires see pages 80 and 81.

### Programming

After you have made all the connections in the installation, you must program the following devices. Power the installation and program the external door stations first and then the internal stations.


<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>KM862</b>	see page 3
<b>PT562</b>	see page 7

**Maximum distance of the sections A and C (see diagram)**

Section	Cable type 1mm <sup>2</sup> (art.2302)	0.2mm <sup>2</sup> (AWG24)
<b>A</b>	50 metres	5 metres
<b>C</b>	1000 metres	100 metres

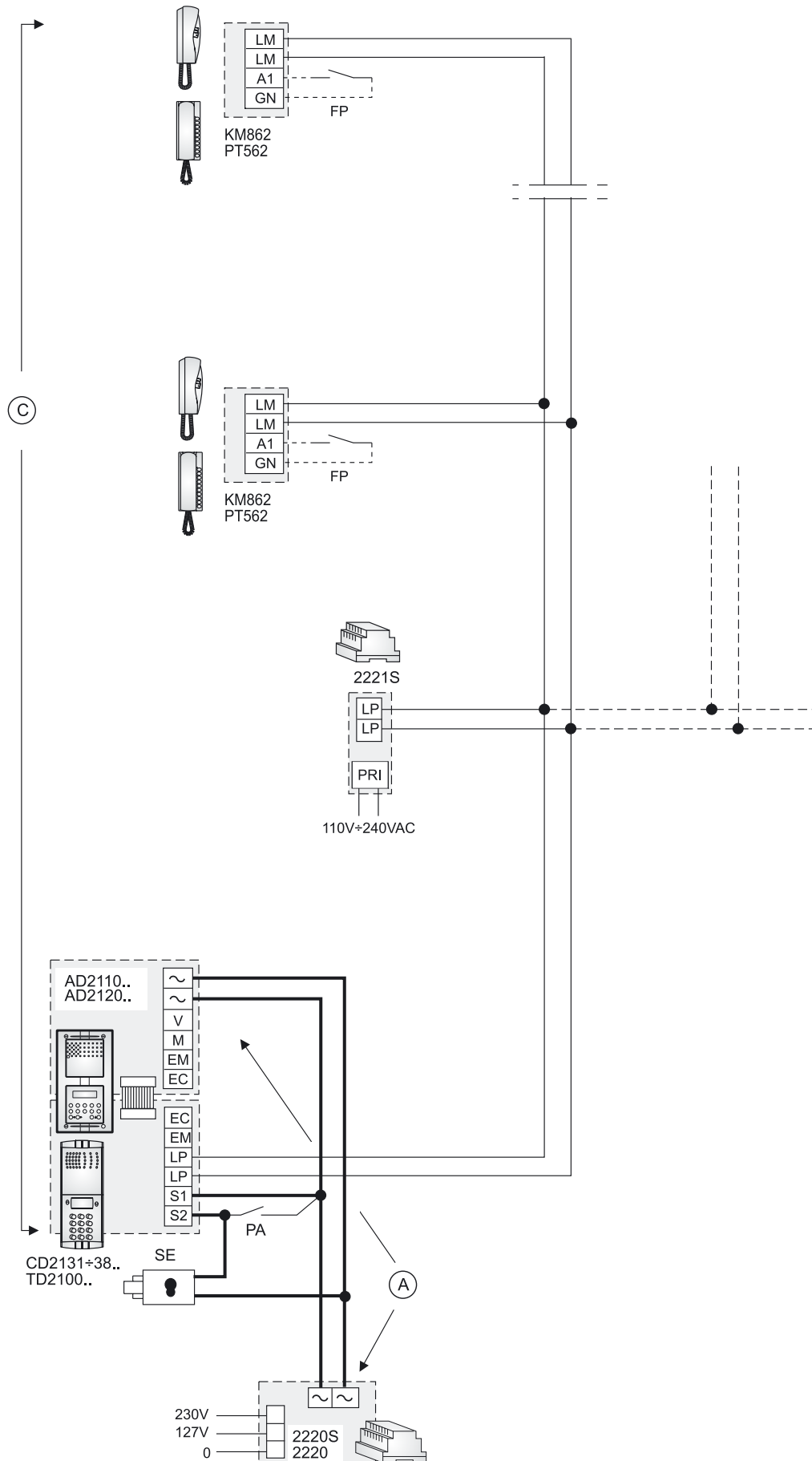
With 1mm<sup>2</sup> wires this intercom installation can reach the maximum distance of 1 000 metres.

### Operation mode.

By making a call from the door external station you can activate the call of the desired intercom. When you lift the handset, the internal station starts the conversation and can activate the door lock by pressing the key . For more detailed information on operation see the description of the different products (from page 3 to page 65).



## MULTI-WAY INTERCOM SYSTEM CONNECTED TO 1 DOOR STATION





## MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO DOOR STATION

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
1	<b>DV2420</b>	Line distributor
1	<b>2220 - 2220S</b>	Transformer
1	<b>2221S</b>	Line power supply
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
1	<b>PA **</b>	Door release button ( <i>optional</i> )
1	<b>SE **</b>	Electric door lock (12Vac-1A)
<b>● MATRIX series DIGITAL door station</b>		
1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>TD2100MA</b>	Digital push-button panel
<b>● MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)</b>		
...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules
<b>● PROFILO series DIGITAL door station</b>		
1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelter with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>TD2100PL</b>	Digital push-button panel
<b>● PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)</b>		
...	<b>PL72-73</b>	Back boxes with module frames
1	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50).

\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

### Installation notes


- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations.
- For the cross section and installation of the wires see pages 80 and 81.
- The diagrams show the connection of the riser line with the distributor DV2420; the distributor may not be used if the line connection is made to the terminals of art. 2221S (or 2222) directly or if the distance between art. 2221S (or 2222) and the riser is lower than 1 meter (*examples on page 83*).
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (*see page 71*).

### Programming


After you have made all the connections in the installation, you must program the following devices. Power the installation and program the external door stations first and then the internal stations.

<b>TD2100MA</b>	<i>see page 55</i>
<b>CD2132MA-34MA</b>	<i>see page 61</i>
<b>MA22S-24S</b>	<i>see page 64</i>
<b>TD2100PL</b>	<i>see page 34</i>
<b>CD2131÷38PL</b>	<i>see page 40</i>
<b>PL24S-228S</b>	<i>see page 46</i>
<b>EH9262</b>	<i>see page 16</i>
<b>KM8262</b>	<i>see page 23</i>
<b>KM862</b>	<i>see page 3</i>
<b>PT5262</b>	<i>see page 28</i>
<b>PT562</b>	<i>see page 7</i>

### Operating mode.

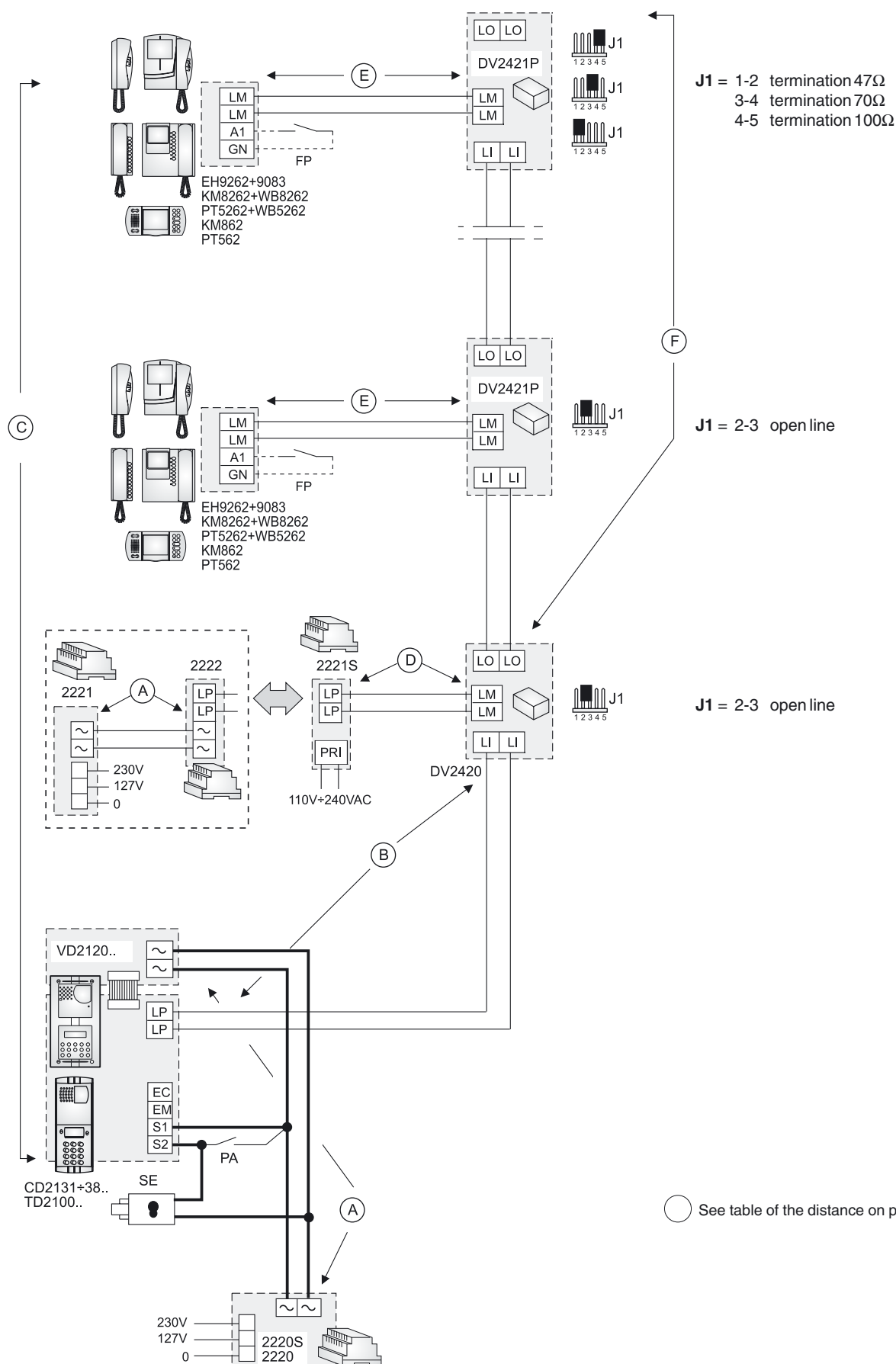
The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button  to actuate the door lock. For more detailed information on operation see the description of the different products (*from page 3 to page 65*).

### Control switching ON from the videointercoms

To have the control switching ON of the entrance press the button  from the videointercom. The control switching ON is not enabled when another videointercom is switched on.



## MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO DOOR STATION



# MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO DOOR STATION AND DIVISION IN 2 RISERS

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
2	<b>DV2420</b>	Line distributor
1	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
1	<b>2273</b>	Exchanger
1	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button (optional)
1	<b>PA **</b>	Door release button (optional)
1	<b>SE **</b>	Electric door lock (12Vac-1A)

## MATRIX series DIGITAL door station

1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>TD2100MA</b>	Digital push-button panel

## MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## PROFILO series DIGITAL door station

1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelter with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>TD2100PL</b>	Digital push-button panel

## PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)

...	<b>PL72-73</b>	Back boxes with module frames
1	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for riser).

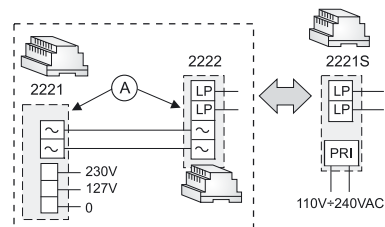
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72

Before you power the installation, place the **SW2** microswitches of the exchanger on **OFF** (see installation diagram). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button **⬅** to actuate the door lock of the calling entrance.

For more detailed information on operation see the description of the different products (from page 3 to page 74).

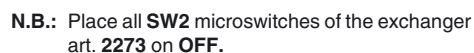
## Control switching ON from the videointercoms

To enable the control switching ON for the entrance, you must program the videointercoms and external door station correctly (see from page 3 to page 65). Press the button **⌂** to switch ON the videointercom and view the entrance.

The control switching ON is not enabled when a videointercom of the installation is switched on or in case of conversation between the push-button panel and an apartment, including from another staircase.



**J1** = 1-2 termination 47Ω  
3-4 termination 70Ω  
4-5 termination 100Ω



○ See table of the distance on page 81.

# MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO EXTERNAL DOOR STATION, ADDITIONAL SURVEILLANCE CAMERA AND ACTIVATION OF AUTOMATIC GATE BY MEANS OF ACTUATOR

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
1	<b>DV2420</b>	Line distributor
1	<b>2220 - 2220S</b>	Transformer
1	<b>2221S</b>	Line power supply
1	<b>2281</b>	Actuator module
...	<b>FP **</b>	Floor push-button (optional)
1	<b>PA **</b>	Door release button (optional)
1	<b>SE **</b>	Electric door lock (12Vac-1A)

## MATRIX series DIGITAL door station

1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>VD2120CMA</b>	Camera module with integrated door speaker
1	<b>TD2100MA</b>	Digital push-button panel

## MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
1	<b>VD2120CMA</b>	Camera module with integrated door speaker
1	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## PROFILO series DIGITAL door station

1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelter with module frames
1	<b>VD2120CPL-AD2120CPL</b>	Camera modules with integrated door speaker
1	<b>TD2100PL</b>	Digital push-button panel

## PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)

...	<b>PL72-73</b>	Back boxes with module frames
1	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
1	<b>VD2120CPL-AD2120CPL</b>	Camera modules with integrated door speaker
1	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50).

\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.

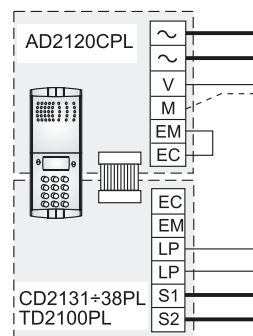
- In this diagram you can install max. 50 internal stations.

- For the cross section and installation of the wires see pages 80 and 81.

- The diagrams show the connection of the riser line with the distributor DV2420; the distributor may not be used if the line connection is made to the terminals of art. 2221S (or 2222) directly or if the distance between art. 2221S (or 2222) and the riser is lower than 1 meter (examples on page 83).

- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).

## Connection of audio module AD2120CPL instead of audio-video module VD2120CMA or VD2120CPL




## Programming

After you have made all the connections in the installation, you must program the following devices. Power the installation and program the external door stations first and then the internal stations.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2281</b>	see page 76


To program the actuator **2281**, with TD2100..., you must disconnect terminals **LO** of **DV2420** (see page 76). You must encode the actuator and a key of the internal stations with the same code (from 211 to 220).

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button  to actuate the door lock of the calling entrance. To actuate the automatic gate press the key chosen during programming according to the instructions on page 80.

For more detailed information on operation see the description of the different products (from page 3 to page 80).

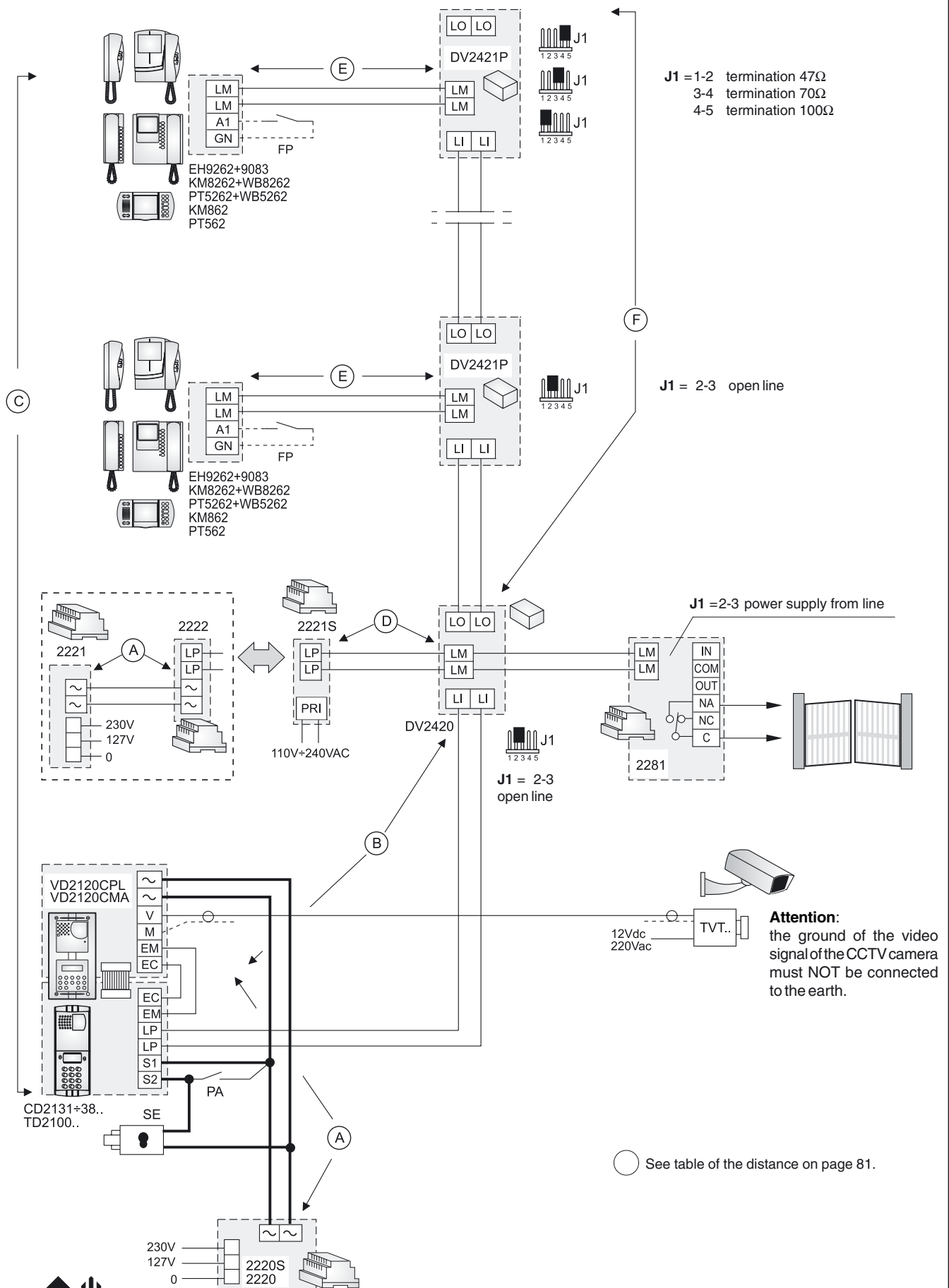
## Control switching ON from the videointercoms

To have the control switching ON of the entrance press the button  from the videointercom; press the button again to display the image of the surveillance camera. The control switching ON is not enabled when another videointercom is switched on.





# MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO EXTERNAL DOOR STATION, ADDITIONAL SURVEILLANCE CAMERA AND ACTIVATION OF AUTOMATIC GATE BY MEANS OF ACTUATOR



# MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO EXTERNAL DOOR STATION WITH VIDEO AMPLIFIER TO INCREASE INSTALLATION DISTANCE AND DIVISION IN TWO RISERS

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
3	<b>DV2420</b>	Line distributor
1	<b>2220 - 2220S</b>	Transformer
3	<b>2221S</b>	Line power supply
2	<b>2223C</b>	Video amplifier
1	<b>2273</b>	Exchanger
2	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button (optional)
1	<b>PA **</b>	Door release button (optional)
1	<b>SE **</b>	Electric door lock (12Vac-1A)

## MATRIX series DIGITAL door station

1	<b>MA72</b>	Back box with module frames
1	<b>MA62</b>	Front frame
1	<b>MA92 *</b>	Rain shelter with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>TD2100MA</b>	Digital push-button panel

## MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
1	<b>VD2120MA-VD2120CMA</b>	Camera modules with integrated door speaker
1	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## PROFILO series DIGITAL door station

1	<b>PL72</b>	Back box with module frames
1	<b>PL82</b>	Hood cover
1	<b>PL92 *</b>	Rain shelter with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>TD2100PL</b>	Digital push-button panel

## PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)

...	<b>PL72-73</b>	Back boxes with module frames
1	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
1	<b>VD2120CPL</b>	Camera module with integrated door speaker
1	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for riser).

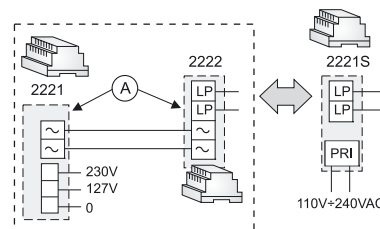
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72

Before you power the installation, place the **SW2** microswitches of the exchanger on **OFF** (see installation diagram). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button **●** to actuate the door lock of the calling entrance.

For more detailed information on operation see the description of the different products (from page 3 to page 74).

## Control switching ON from the videointercoms

To enable the control switching ON for the entrance, you must program the videointercoms and external door station correctly (see from page 3 to page 65).

Press the button **☺** to switch ON the videointercom and view the entrance.

The control switching ON is not enabled when a videointercom of the installation is switched on or in case of conversation between the push-button panel and an apartment, including from another staircase.

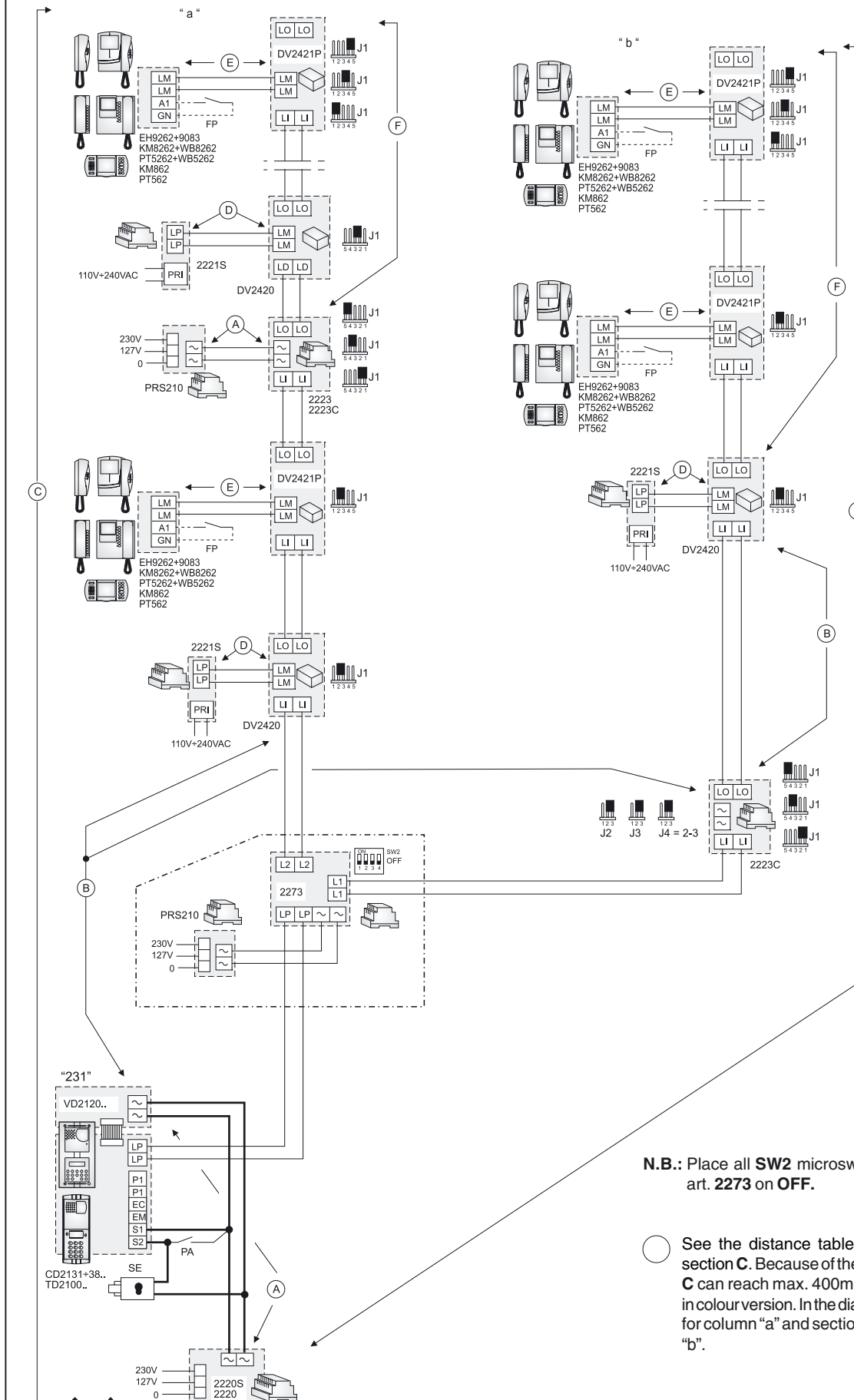


# MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO EXTERNAL DOOR STATION WITH VIDEO AMPLIFIER TO INCREASE INSTALLATION DISTANCE AND DIVISION IN TWO RISERS

**J1 =**  
1-2 termination 47Ω  
3-4 termination 70Ω  
4-5 termination 100Ω

**J1 = 2-3 open line**

**J1 = 2-3 open line**



**N.B.:** Place all SW2 microswitches of the exchanger art. 2273 on OFF.

See the distance table on page 81 except for section C. Because of the video amplifiers, section C can reach max. 400m in b/w version and 300m in colour version. In the diagram section F is doubled for column "a" and section B is doubled for column "b".

# MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO DOOR STATIONS

Q.ty	Article	Description
...	EH9262CT+9083	Echos videointercom + back box
...	EH9262CW+9083	Echos videointercom + back box
...	KM8262W+WB8262	Compact videointercom + wall bracket
...	KM8262CW+WB8262C	Compact videointercom + wall bracket
...	PT5262W+WB5262	Project videointercom + wall bracket
...	KM862W	Compact intercom
...	PT562W	Project intercom
...	DV2421P	Line distributor
1	DV2420	Line distributor
2	2220 - 2220S	Transformer
1	2221S	Line power supply
1	2273	Exchanger
1	PRS210	Transformer
...	FP **	Floor push-button ( <i>optional</i> )
2	PA **	Door release button ( <i>optional</i> )
2	SE **	Electric door lock (12Vac-1A)

## ● MATRIX series DIGITAL door station

2	MA72	Back box with module frames
2	MA62	Front frame
2	MA92 *	Rain shelter with module frames
2	VD2120MA/CMA-AD2110MA	Door speaker modules with/without camera
2	TD2100MA	Digital push-button panel

## ● MATRIX series CONVENTIONAL door station with digital encoder (*for the composition see pages 66 and 67*)

...	MA72-73	Back boxes with module frames
...	MA62-63	Front frames
...	MA92-93 *	Rain shelters with module frames
2	VD2120MA/CMA-AD2110MA	Door speaker modules with/without camera
2	CD2132MA-CD2134MA	Digital encoder modules
...	MA20-MA22S-MA24S	Button and blank modules

## ● PROFILO series DIGITAL door station

2	PL72	Back box with module frames
2	PL82	Hood cover
2	PL92 *	Rain shelter with module frames
2	VD2120CPL-AD2120CPL	Door speaker modules with/without camera
2	TD2100PL	Digital push-button panel

## ● PROFILO series CONVENTIONAL door station with digital encoder (*for the composition see from page 48 to 50*)

...	PL72-73	Back boxes with module frames
2	PL82÷89	Hood covers
...	PL92÷99 *	Rain shelters with module frames
2	VD2120CPL-AD2120CPL	Door speaker modules with/without camera
2	CD2131PL÷CD2138PL	Digital encoder modules
...	PL24S-PL228S-PL20-PL50	Button, blank and number modules

... According to the number of users (max. 50).

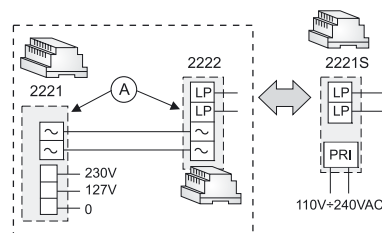
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (*see page 71*).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S




## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	<i>see page 55</i>
<b>CD2132MA-34MA</b>	<i>see page 61</i>
<b>MA22S-24S</b>	<i>see page 64</i>
<b>TD2100PL</b>	<i>see page 34</i>
<b>CD2131÷38PL</b>	<i>see page 40</i>
<b>PL24S-228S</b>	<i>see page 46</i>
<b>EH9262</b>	<i>see page 16</i>
<b>KM8262</b>	<i>see page 23</i>
<b>KM862</b>	<i>see page 3</i>
<b>PT5262</b>	<i>see page 28</i>
<b>PT562</b>	<i>see page 7</i>
<b>2273</b>	<i>see page 72</i>

Before you power the installation, place the **SW2** microswitches of the exchanger on **ON** (*see installation diagram*). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode



The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button  to actuate the door lock of the calling entrance. The other external station will hear the busy tone.

For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

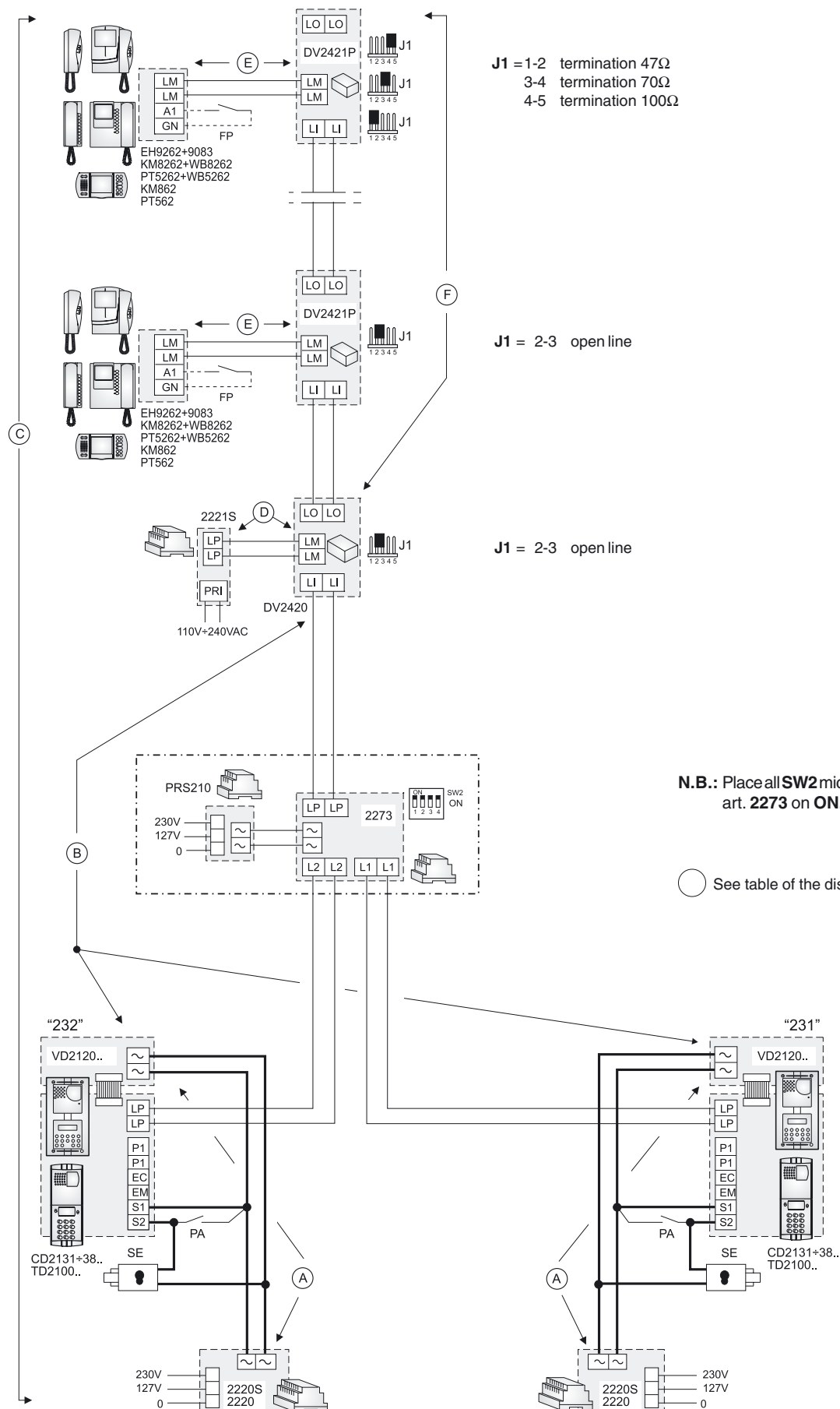
To enable the control switching ON for the main entrances, you must program the videointercoms and external door station correctly (*see from page 3 to page 65*).

To operate the function:

- press the button  to switch on the videointercom and view the entrance that made the last call;
  - (**KM8262-EH9262**) repeatedly press the button  to activate the cameras in a sequence and stop when you reach the desired entrance.
  - (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1 or 2).
- The control switching ON are not enabled when a videointercom of the installation is switched on or in case of conversation between the push-button panel and any apartment.



## MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO DOOR STATIONS





# MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO DOOR STATIONS AND DIVISION IN 2 RISERS

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
2	<b>DV2420</b>	Line distributor
2	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
2	<b>2273</b>	Exchanger
1	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
2	<b>PA **</b>	Door release button ( <i>optional</i> )
2	<b>SE **</b>	Electric door lock (12Vac-1A)

## ● MATRIX series DIGITAL door station

2	<b>MA72</b>	Back box with module frames
2	<b>MA62</b>	Front frame
2	<b>MA92 *</b>	Rain shelter with module frames
2	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
2	<b>TD2100MA</b>	Digital push-button panel

## ● MATRIX series CONVENTIONAL door station with digital encoder (*for the composition see pages 66 and 67*)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
2	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
2	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## ● PROFILO series DIGITAL door station

2	<b>PL72</b>	Back box with module frames
2	<b>PL82</b>	Hood cover
2	<b>PL92 *</b>	Rain shelter with module frames
2	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
2	<b>TD2100PL</b>	Digital push-button panel

## ● PROFILO series CONVENTIONAL door station with digital encoder (*for the composition see from page 48 to 50*)

...	<b>PL72-73</b>	Back boxes with module frames
2	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
2	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
2	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for riser).

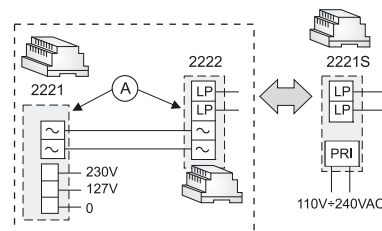
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (*see page 71*).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S




## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	<i>see page 55</i>
<b>CD2132MA-34MA</b>	<i>see page 61</i>
<b>MA22S-24S</b>	<i>see page 64</i>
<b>TD2100PL</b>	<i>see page 34</i>
<b>CD2131÷38PL</b>	<i>see page 40</i>
<b>PL24S-228S</b>	<i>see page 46</i>
<b>EH9262</b>	<i>see page 16</i>
<b>KM8262</b>	<i>see page 23</i>
<b>KM862</b>	<i>see page 3</i>
<b>PT5262</b>	<i>see page 28</i>
<b>PT562</b>	<i>see page 7</i>
<b>2273</b>	<i>see page 72</i>

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - *see installation diagram*). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode



The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button  to actuate the door lock of the calling entrance. The other external station will hear the busy tone.

For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

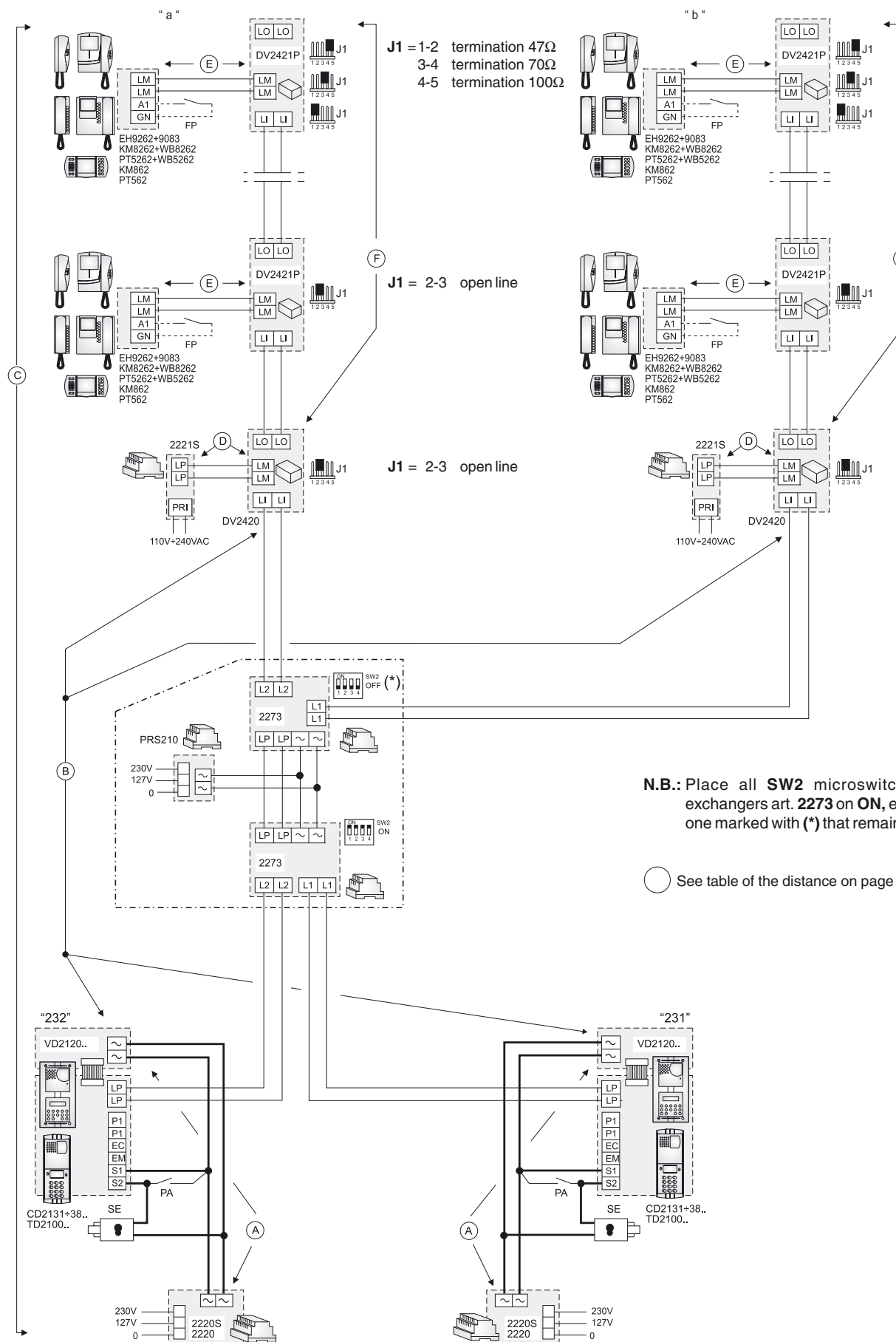
To enable the control switching ON for the main entrances, you must program the videointercoms and external door station correctly (*see from page 3 to page 65*).

To operate the function:

- press the button  to switch on the videointercom and view the entrance that made the last call;
  - (**KM8262-EH9262**) repeatedly press the button  to activate the cameras in a sequence and stop when you reach the desired entrance.
  - (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1 or 2).
- The control switching ON are not enabled when a videointercom of the installation is switched on or in case of conversation between the push-button panel and any apartment.



## MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO DOOR STATIONS AND DIVISION IN 2 RISERS



**N.B.:** Place all **SW2** microswitches of the exchangers art. **2273** on **ON**, except for the one marked with **(\*)** that remains **OFF**.

See table of the distance on page 81.



# MULTI-WAY SYSTEM CONNECTED TO 3 AUDIO-VIDEO DOOR STATIONS

Q.ty	Article	Description
...	EH9262CT+9083	Echos videointercom + back box
...	EH9262CW+9083	Echos videointercom + back box
...	KM8262W+WB8262	Compact videointercom + wall bracket
...	KM8262CW+WB8262C	Compact videointercom + wall bracket
...	PT5262W+WB5262	Project videointercom + wall bracket
...	KM862W	Compact intercom
...	PT562W	Project intercom
...	DV2421P	Line distributor
1	DV2420	Line distributor
3	2220 - 2220S	Transformer
1	2221S	Line power supply
2	2273	Exchanger
1	PRS210	Transformer
...	FP **	Floor push-button (optional)
3	PA **	Door release button (optional)
3	SE **	Electric door lock (12Vac-1A)

## ● MATRIX series DIGITAL door station

3	MA72	Back box with module frames
3	MA62	Front frame
3	MA92 *	Rain shelter with module frames
3	VD2120MA/CMA-AD2110MA	Door speaker modules with/without camera
3	TD2100MA	Digital push-button panel

## ● MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)

...	MA72-73	Back boxes with module frames
...	MA62-63	Front frames
...	MA92-93 *	Rain shelters with module frames
3	VD2120MA/CMA-AD2110MA	Door speaker modules with/without camera
3	CD2132MA-CD2134MA	Digital encoder modules
...	MA20-MA22S-MA24S	Button and blank modules

## ● PROFILO series DIGITAL door station

3	PL72	Back box with module frames
3	PL82	Hood cover
3	PL92 *	Rain shelter with module frames
3	VD2120CPL-AD2120CPL	Door speaker modules with/without camera
3	TD2100PL	Digital push-button panel

## ● PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)

...	PL72-73	Back boxes with module frames
3	PL82÷89	Hood covers
...	PL92÷99 *	Rain shelters with module frames
3	VD2120CPL-AD2120CPL	Door speaker modules with/without camera
3	CD2131PL÷CD2138PL	Digital encoder modules
...	PL24S-PL228S-PL20-PL50	Button, blank and number modules

... According to the number of users (max. 50).

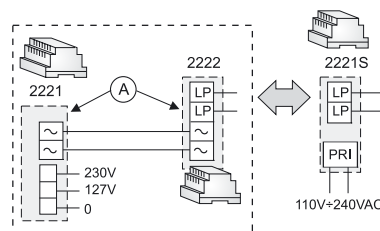
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72

Before you power the installation, place the **SW2** microswitches of the exchanger on **ON** (see installation diagram). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button to actuate the door lock of the calling entrance. The other external station will hear the busy tone.

For more detailed information on operation see the description of the different products (from page 3 to page 74).

## Control switching ON from the videointercoms

To enable the control switching ON for the main entrances, you must program the videointercoms and external door station correctly (see from page 3 to page 65).

To operate the function:

- press the button to switch on the videointercom and view the entrance that made the last call;
  - (**KM8262-EH9262**) repeatedly press the button to activate the cameras in a sequence and stop when you reach the desired entrance.
  - (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1, 2 or 3).
- The control switching ON are not enabled when a videointercom of the installation is switched on or in case of conversation between the push-button panel and any apartment.



[illegible]

**N.B.:** Place all **SW2** microswitches of the exchanger art. **2273** on **ON**.

# MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO MAIN COMMON DOOR STATION AND DIVISION IN 2 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (*staircase division*)

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
2	<b>DV2420</b>	Line distributor
3	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
3	<b>2273</b>	Exchanger
3	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
3	<b>PA **</b>	Door release button ( <i>optional</i> )
3	<b>SE **</b>	Electric door lock (12Vac-1A)

## ● MATRIX series DIGITAL door station

3	<b>MA72</b>	Back box with module frames
3	<b>MA62</b>	Front frame
3	<b>MA92 *</b>	Rain shelter with module frames
3	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
3	<b>TD2100MA</b>	Digital push-button panel

## ● MATRIX series CONVENTIONAL door station with digital encoder (*for the composition see pages 66 and 67*)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
3	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
3	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## ● PROFILO series DIGITAL door station

3	<b>PL72</b>	Back box with module frames
3	<b>PL82</b>	Hood cover
3	<b>PL92 *</b>	Rain shelter with module frames
3	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
3	<b>TD2100PL</b>	Digital push-button panel

## ● PROFILO series CONVENTIONAL door station with digital encoder (*for the composition see from page 48 to 50*)

...	<b>PL72-73</b>	Back boxes with module frames
3	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
3	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
3	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for each riser).

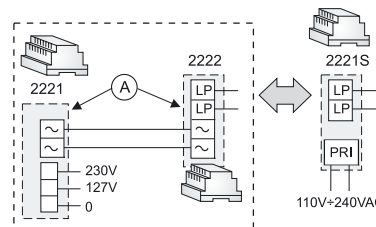
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (*see page 71*).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	<i>see page 55</i>
<b>CD2132MA-34MA</b>	<i>see page 61</i>
<b>MA22S-24S</b>	<i>see page 64</i>
<b>TD2100PL</b>	<i>see page 34</i>
<b>CD2131÷38PL</b>	<i>see page 40</i>
<b>PL24S-228S</b>	<i>see page 46</i>
<b>EH9262</b>	<i>see page 16</i>
<b>KM8262</b>	<i>see page 23</i>
<b>KM862</b>	<i>see page 3</i>
<b>PT5262</b>	<i>see page 28</i>
<b>PT562</b>	<i>see page 7</i>
<b>2273</b>	<i>see page 72</i>

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - *see installation diagram*). Power the installation and program the external door stations first, then the internal stations and finally the exchangers

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button to actuate the door lock of the calling entrance. The other external door stations (of your own secondary or main door station) will hear the busy tone. All the other staircases are independent and therefore a simultaneous conversation between a single user and its own secondary door station is possible.

For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

To enable the control switching ON for the main entrances and for your own staircase, you must program the videointercoms and external door station correctly (*see from page 3 to page 65*).

To operate the function:

- press the button to switch on the videointercom and view the entrance that made the last call;
- (**KM8262-EH9262**) repeatedly press the button to activate the cameras in a sequence and stop when you reach the desired entrance.
- (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1 or 2).

No turn-on tests can be performed to:

- an external secondary door station in conversation with internal station of the same staircase;
- the main external door station in conversation with an internal station of the same or different staircase.







# MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO MAIN COMMON DOOR STATION AND DIVISION IN 4 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (*staircase division*)

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
4	<b>DV2420</b>	Line distributor
5	<b>2220 - 2220S</b>	Transformer
4	<b>2221S</b>	Line power supply
7	<b>2273</b>	Exchanger
4	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
5	<b>PA **</b>	Door release button ( <i>optional</i> )
5	<b>SE **</b>	Electric door lock (12Vac-1A)

## • MATRIX series DIGITAL door station

5	<b>MA72</b>	Back box with module frames
5	<b>MA62</b>	Front frame
5	<b>MA92 *</b>	Rain shelter with module frames
5	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
5	<b>TD2100MA</b>	Digital push-button panel

## • MATRIX series CONVENTIONAL door station with digital encoder (*for the composition see pages 66 and 67*)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
5	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
5	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## • PROFILO series DIGITAL door station

5	<b>PL72</b>	Back box with module frames
5	<b>PL82</b>	Hood cover
5	<b>PL92 *</b>	Rain shelter with module frames
5	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
5	<b>TD2100PL</b>	Digital push-button panel

## • PROFILO series CONVENTIONAL door station with digital encoder (*for the composition see from page 48 to 50*)

...	<b>PL72-73</b>	Back boxes with module frames
5	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
5	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
5	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for each riser).

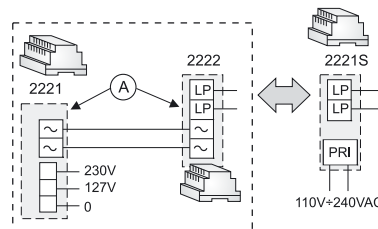
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (*see page 71*).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	<i>see page 55</i>
<b>CD2132MA-34MA</b>	<i>see page 61</i>
<b>MA22S-24S</b>	<i>see page 64</i>
<b>TD2100PL</b>	<i>see page 34</i>
<b>CD2131÷38PL</b>	<i>see page 40</i>
<b>PL24S-228S</b>	<i>see page 46</i>
<b>EH9262</b>	<i>see page 16</i>
<b>KM8262</b>	<i>see page 23</i>
<b>KM862</b>	<i>see page 3</i>
<b>PT5262</b>	<i>see page 28</i>
<b>PT562</b>	<i>see page 7</i>
<b>2273</b>	<i>see page 72</i>

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - *see installation diagram*). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button to actuate the door lock of the calling entrance. The other external door stations (of your own secondary or main door station) will hear the busy tone. All the other staircases are independent and therefore a simultaneous conversation between a single user and its own secondary door station is possible. For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

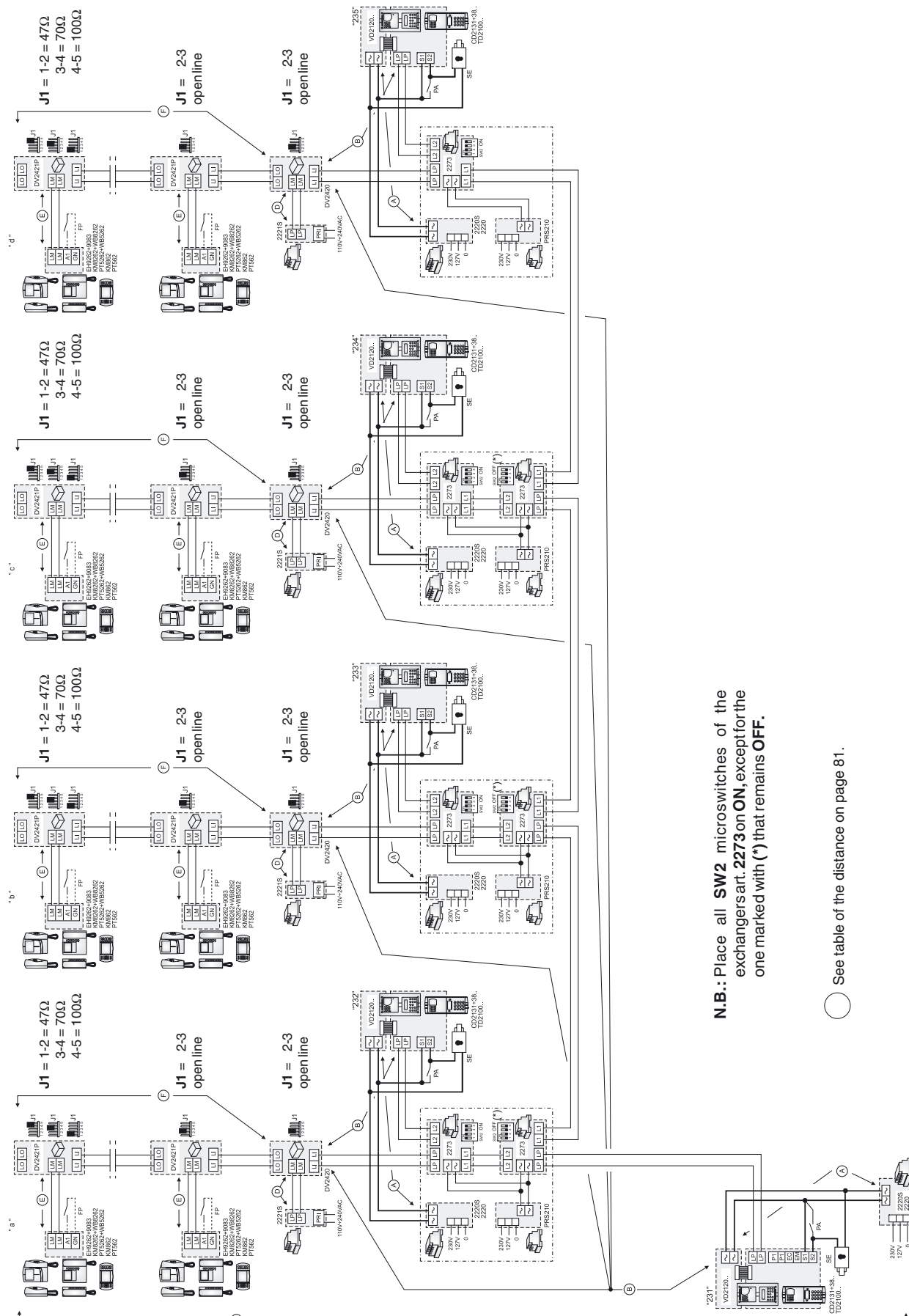
To enable the control switching ON for the main entrances and for your own staircase, you must program the videointercoms and external door station correctly (*see from page 3 to page 65*).

To operate the function:

- press the button to switch on the videointercom and view the entrance that made the last call;
  - (**KM8262-EH9262**) repeatedly press the button to activate the cameras in a sequence and stop when you reach the desired entrance.
  - (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1 or 2).
- No turn-on tests can be performed to:
- an external secondary door station in conversation with internal station of the same staircase;
  - the main external door station in conversation with an internal station of the same or different staircase.



# MULTI-WAY SYSTEM CONNECTED TO 1 AUDIO-VIDEO MAIN COMMON DOOR STATION AND DIVISION IN 4 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (staircase division)



N.B.: Place all SW2 microswitches of the exchangers art. 2273 on ON, except for the one marked with (\*) that remains OFF.

○ See table of the distance on page 81.



# MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO MAIN COMMON EXTERNAL DOOR STATION WITH ACTIVATION OF AUTOMATIC GATE AND DIVISION IN TWO RISERS, WITH ONE RISER WITH ONE AUDIO-VIDEO SECONDARY EXTERNAL DOOR STATION (STAIRCASE DIVISION)

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
3	<b>DV2420</b>	Line distributor
2	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
2	<b>2273</b>	Exchanger
1	<b>2281</b>	Actuator module
3	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button (optional)
2	<b>PA **</b>	Door release button (optional)
2	<b>SE **</b>	Electric door lock (12Vac-1A)

## MATRIX series DIGITAL door station

2	<b>MA72</b>	Back box with module frames
2	<b>MA62</b>	Front frame
2	<b>MA92 *</b>	Rain shelter with module frames
2	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
2	<b>TD2100MA</b>	Digital push-button panel

## MATRIX series CONVENTIONAL door station with digital encoder (for the composition see pages 66 and 67)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
2	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
2	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## PROFILO series DIGITAL door station

2	<b>PL72</b>	Back box with module frames
2	<b>PL82</b>	Hood cover
2	<b>PL92 *</b>	Rain shelter with module frames
2	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
2	<b>TD2100PL</b>	Digital push-button panel

## PROFILO series CONVENTIONAL door station with digital encoder (for the composition see from page 48 to 50)

...	<b>PL72-73</b>	Back boxes with module frames
2	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
2	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
2	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for each riser).

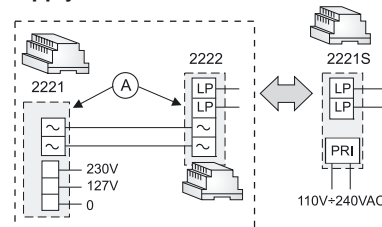
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72
<b>2281</b>	see page 76

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - see installation diagram). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

To program the actuator **2281**, with TD2100..., you must disconnect terminals **LO** of **DV2420** (see page 76). You must encode the actuator and a key of the internal stations with the same code (from 211 to 220).

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button to actuate the door lock of the calling entrance. The other external door stations (of your own secondary or main door station) will hear the busy tone. All the other staircases are independent and therefore a simultaneous conversation between a single user and its own secondary door station is possible.

To actuate the automatic gate press the key chosen during programming according to the instructions on page 80. For more detailed information on operation see the description of the different products (from page 3 to page 80).

## Control switching ON from the videointercoms

To enable the control switching ON for the main entrances and for your own staircase, you must program the videointercoms and external door station correctly (see from page 3 to page 65).

To operate the function:

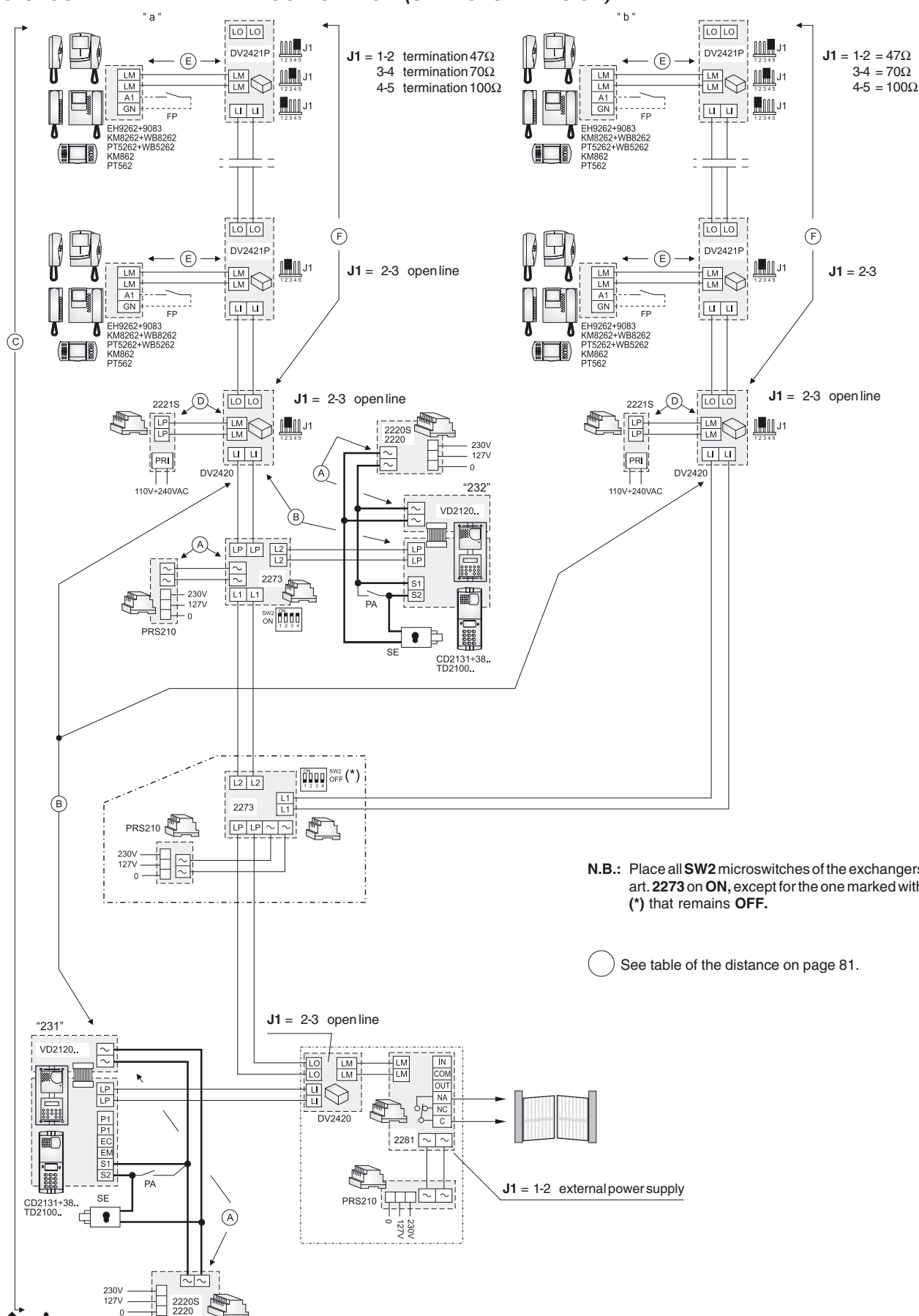
- press the button to switch on the videointercom and view the entrance that made the last call;
- (**KM8262-EH9262**) repeatedly press the button to activate the cameras in a sequence and stop when you reach the desired entrance.
- (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1 or 2).

No turn-on tests can be performed to:

- an external secondary door station in conversation with internal station of the same staircase;
- the main external door station in conversation with an internal station of the same or different staircase.



**MULTI-WAY INSTALLATION CONNECTED TO ONE AUDIO-VIDEO MAIN COMMON EXTERNAL DOOR STATION WITH ACTIVATION OF AUTOMATIC GATE AND DIVISION IN TWO RISERS, WITH ONE RISER WITH ONE AUDIO-VIDEO SECONDARY EXTERNAL DOOR STATION (STAIRCASE DIVISION)**





# MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO MAIN COMMON DOOR STATIONS AND DIVISION IN 2 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (*staircase division*)

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
2	<b>DV2420</b>	Line distributor
4	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
4	<b>2273</b>	Exchanger
3	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
4	<b>PA **</b>	Door release button ( <i>optional</i> )
4	<b>SE **</b>	Electric door lock (12Vac-1A)

## • MATRIX series DIGITAL door station

4	<b>MA72</b>	Back box with module frames
4	<b>MA62</b>	Front frame
4	<b>MA92 *</b>	Rain shelter with module frames
4	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
4	<b>TD2100MA</b>	Digital push-button panel

## • MATRIX series CONVENTIONAL door station with digital encoder (*for the composition see pages 66 and 67*)

...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
4	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
4	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules

## • PROFILO series DIGITAL door station

4	<b>PL72</b>	Back box with module frames
4	<b>PL82</b>	Hood cover
4	<b>PL92 *</b>	Rain shelter with module frames
4	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
4	<b>TD2100PL</b>	Digital push-button panel

## • PROFILO series CONVENTIONAL door station with digital encoder (*for the composition see from page 48 to 50*)

...	<b>PL72-73</b>	Back boxes with module frames
4	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
4	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
4	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules

... According to the number of users (max. 50 for each riser).

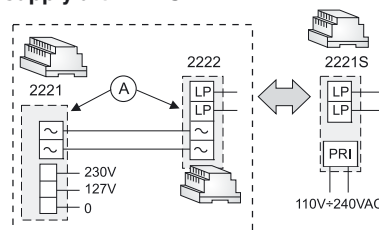
\* Rain shelters are used in replacement of back boxes and hood covers.

\*\* Articles not supplied by ACI Farfisa.

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S



## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - see installation diagram). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode

The internal station will receive the call and, if the called user if a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button to actuate the door lock of the calling entrance. The other external door stations (of your own secondary or main door station) will hear the busy tone. All the other staircases are independent and therefore a simultaneous conversation between a single user and its own secondary door station is possible.

For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

To enable the control switching ON for the main entrances and for your own staircase, you must program the videointercoms and external door station correctly (see *from page 3 to page 65*).

To operate the function:

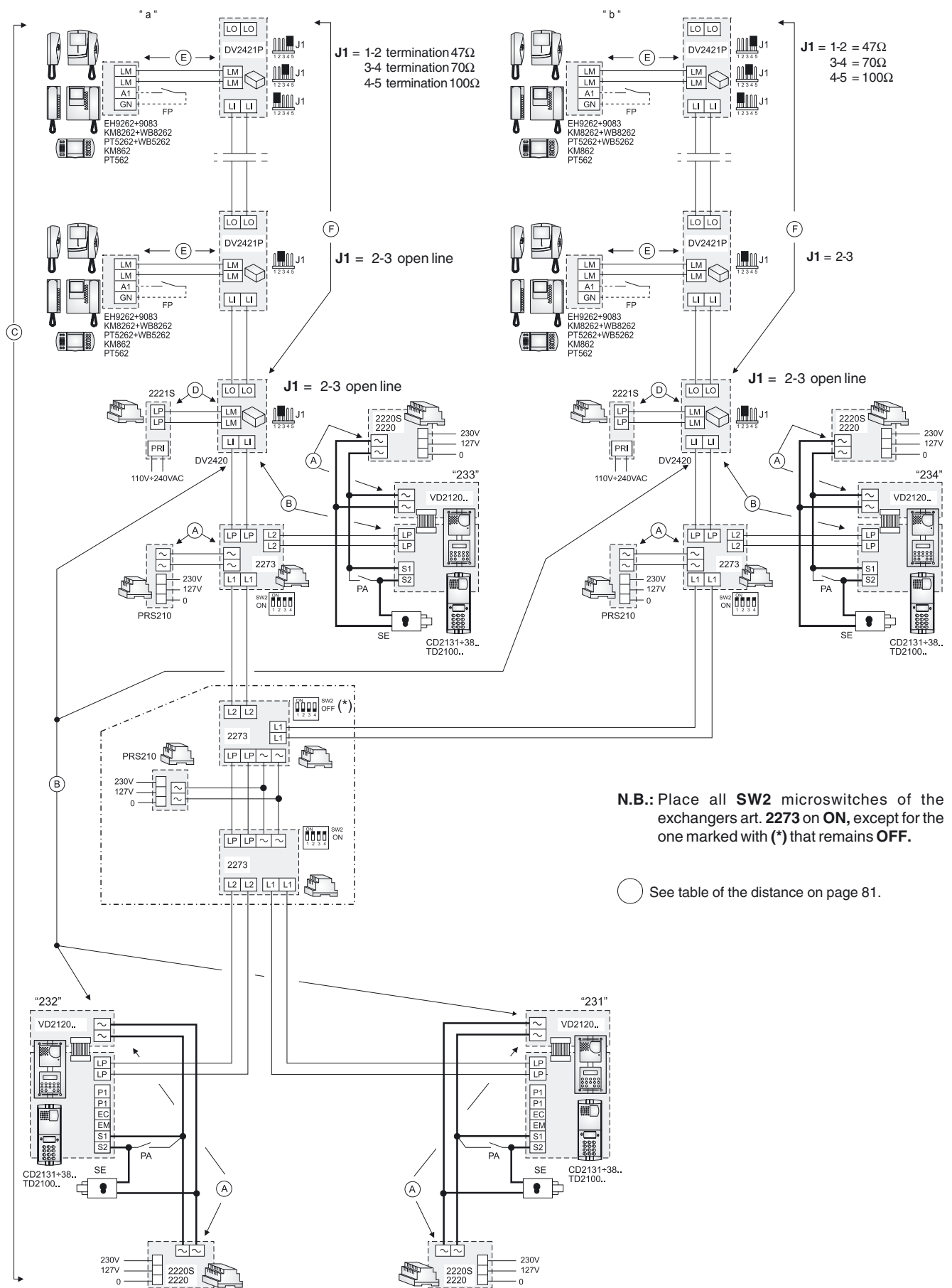
- press the button to switch on the videointercom and view the entrance that made the last call;
- (**KM8262-EH9262**) repeatedly press the button to activate the cameras in a sequence and stop when you reach the desired entrance.
- (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1, 2 or 3).

No turn-on tests can be performed to:

- an external secondary door station in conversation with internal station of the same staircase;
- the main external door stations in conversation with an internal station of the same or different staircase.



**MULTI-WAY SYSTEM CONNECTED TO 2 AUDIO-VIDEO MAIN COMMON DOOR STATIONS AND DIVISION IN 2 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (staircase division)**



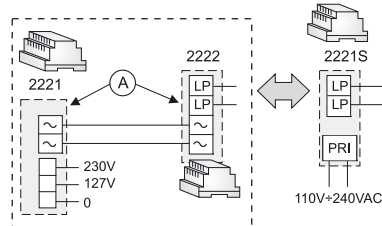
# MULTI-WAY SYSTEM CONNECTED TO 3 AUDIO-VIDEO MAIN COMMON DOOR STATIONS AND DIVISION IN 2 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (*staircase division*)

Q.ty	Article	Description
...	<b>EH9262CT+9083</b>	Echos videointercom + back box
...	<b>EH9262CW+9083</b>	Echos videointercom + back box
...	<b>KM8262W+WB8262</b>	Compact videointercom + wall bracket
...	<b>KM8262CW+WB8262C</b>	Compact videointercom + wall bracket
...	<b>PT5262W+WB5262</b>	Project videointercom + wall bracket
...	<b>KM862W</b>	Compact intercom
...	<b>PT562W</b>	Project intercom
...	<b>DV2421P</b>	Line distributor
2	<b>DV2420</b>	Line distributor
5	<b>2220 - 2220S</b>	Transformer
2	<b>2221S</b>	Line power supply
5	<b>2273</b>	Exchanger
3	<b>PRS210</b>	Transformer
...	<b>FP **</b>	Floor push-button ( <i>optional</i> )
5	<b>PA **</b>	Door release button ( <i>optional</i> )
5	<b>SE **</b>	Electric door lock (12Vac-1A)
<b>● MATRIX series DIGITAL door station</b>		
5	<b>MA72</b>	Back box with module frames
5	<b>MA62</b>	Front frame
5	<b>MA92 *</b>	Rain shelter with module frames
5	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
5	<b>TD2100MA</b>	Digital push-button panel
<b>● MATRIX series CONVENTIONAL door station with digital encoder (<i>for the composition see pages 66 and 67</i>)</b>		
...	<b>MA72-73</b>	Back boxes with module frames
...	<b>MA62-63</b>	Front frames
...	<b>MA92-93 *</b>	Rain shelters with module frames
5	<b>VD2120MA/CMA-AD2110MA</b>	Door speaker modules with/without camera
5	<b>CD2132MA-CD2134MA</b>	Digital encoder modules
...	<b>MA20-MA22S-MA24S</b>	Button and blank modules
<b>● PROFILO series DIGITAL door station</b>		
5	<b>PL72</b>	Back box with module frames
5	<b>PL82</b>	Hood cover
5	<b>PL92 *</b>	Rain shelter with module frames
5	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
5	<b>TD2100PL</b>	Digital push-button panel
<b>● PROFILO series CONVENTIONAL door station with digital encoder (<i>for the composition see from page 48 to 50</i>)</b>		
...	<b>PL72-73</b>	Back boxes with module frames
5	<b>PL82÷89</b>	Hood covers
...	<b>PL92÷99 *</b>	Rain shelters with module frames
5	<b>VD2120CPL-AD2120CPL</b>	Door speaker modules with/without camera
5	<b>CD2131PL÷CD2138PL</b>	Digital encoder modules
...	<b>PL24S-PL228S-PL20-PL50</b>	Button, blank and number modules
... According to the number of users (max. 50 for each riser).		
* Rain shelters are used in replacement of back boxes and hood covers.		
** Articles not supplied by ACI Farfisa.		

## Installation notes

- If you use more than 4 push-button modules art. **MA22S**, **MA24S**, **PL24S** and **PL228S** you must power the name-plate LEDs (terminals **A** and **-**) of the additional modules with an 12Vac supplementary transformer with suitable power (**PRS210** type). Absorption for each module is 0.1A.
- In this diagram you can install max. 50 internal stations for each riser.
- For the cross section and installation of the wires see pages 80, 81 and 82.
- For a correct operation of the installation, select the closing impedance of the last distributor **DV2421P** of each riser by positioning the jumper **J1** correctly. The line must not remain open (see page 71).
- We recommend to install all articles framed with a broken line in the same switchboard.
- Pages 117, 118 and 119 show the possible expansions of the installation over multiple risers (max. 4) and multiple entrances (max. 8).

## Connection of art. 2221 and 2222 instead of line power supply art. 2221S




## Programming

After you have made all the connections in the installation, you must program the following devices.

<b>TD2100MA</b>	see page 55
<b>CD2132MA-34MA</b>	see page 61
<b>MA22S-24S</b>	see page 64
<b>TD2100PL</b>	see page 34
<b>CD2131÷38PL</b>	see page 40
<b>PL24S-228S</b>	see page 46
<b>EH9262</b>	see page 16
<b>KM8262</b>	see page 23
<b>KM862</b>	see page 3
<b>PT5262</b>	see page 28
<b>PT562</b>	see page 7
<b>2273</b>	see page 72

Before you power the installation, place the **SW2** microswitches of the exchangers correctly (**ON** or **OFF** - see *installation diagram*). Power the installation and program the external door stations first, then the internal stations and finally the exchangers.

## Operating mode



The internal station will receive the call and, if the called user is a videointercom, the display will turn ON and show the entrance. Lift the handset to start the conversation and press the button  to actuate the door lock of the calling entrance. The other external door stations (of your own secondary or main door station) will hear the busy tone. All the other staircases are independent and therefore a simultaneous conversation between a single user and its own secondary door station is possible.

For more detailed information on operation see the description of the different products (*from page 3 to page 74*).

## Control switching ON from the videointercoms

To enable the control switching ON for the main entrances and for your own staircase, you must program the videointercoms and external door station correctly (see *from page 3 to page 65*).

To operate the function:

- press the button  to switch on the videointercom and view the entrance that made the last call;
- (**KM8262-EH9262**) repeatedly press the button  to activate the cameras in a sequence and stop when you reach the desired entrance.

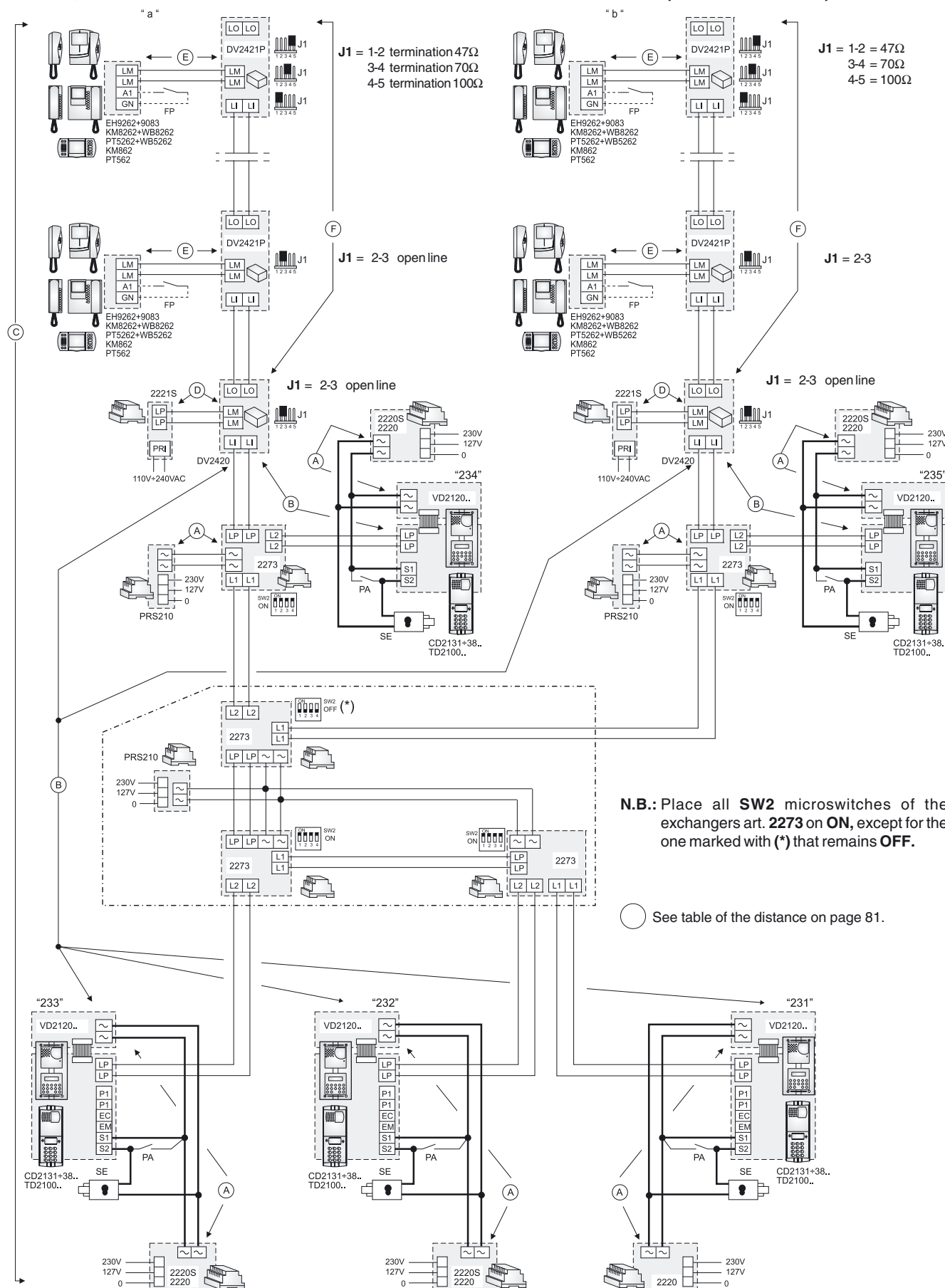
- (**PT5262-EH9262**) press the button that corresponds to the camera you want to activate (buttons 1, 2, 3 or 4).

No turn-on tests can be performed to:

- an external secondary door station in conversation with internal station of the same staircase;
- the main external door stations in conversation with an internal station of the same or different staircase.



**MULTI-WAY SYSTEM CONNECTED TO 3 AUDIO-VIDEO MAIN COMMON DOOR STATIONS AND DIVISION IN 2 RISERS, EACH RISER WITH 1 AUDIO-VIDEO SECONDARY DOOR STATION (*staircase division*)**



## Application diagrams

### PARALLEL INTERNAL STATIONS WITH/WITHOUT INTERCOMMUNICATING SERVICE

The following diagrams can be used in all installations and provide more internal stations (intercoms or videointercoms) in each apartment.

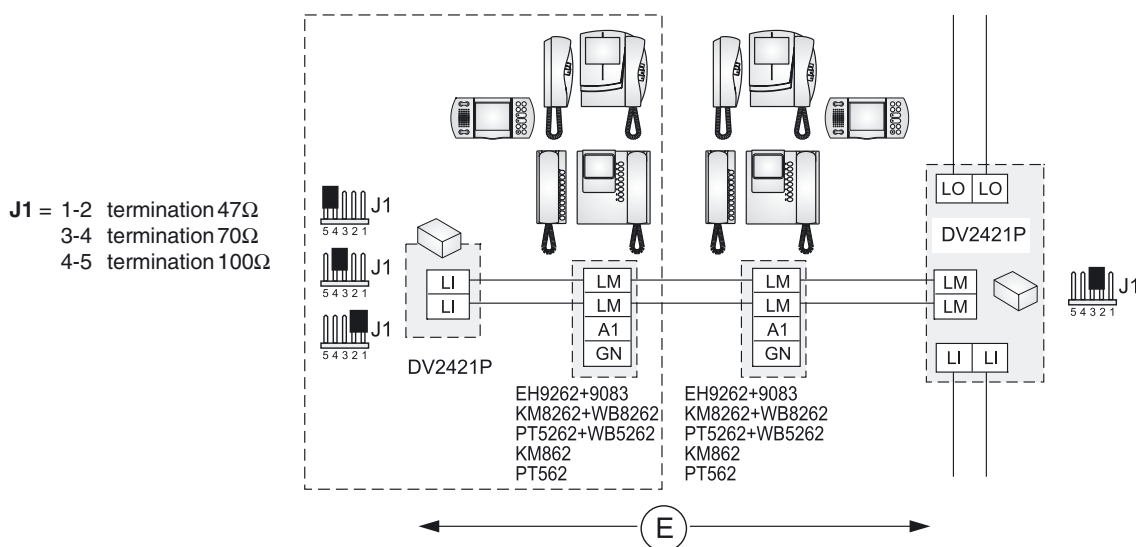
If you want to have the intercom service, you simply need to programme the devices correctly (see chapters "Manual programming" on pages 4, 16 and 24; "Internal address" and "Codes assigned to buttons" on pages 7 and 28).

The intercom calls in the same apartment can be individual (each internal station is called from a dedicated button) or general (the same button calls all intercoms at the same time). Using devices from the

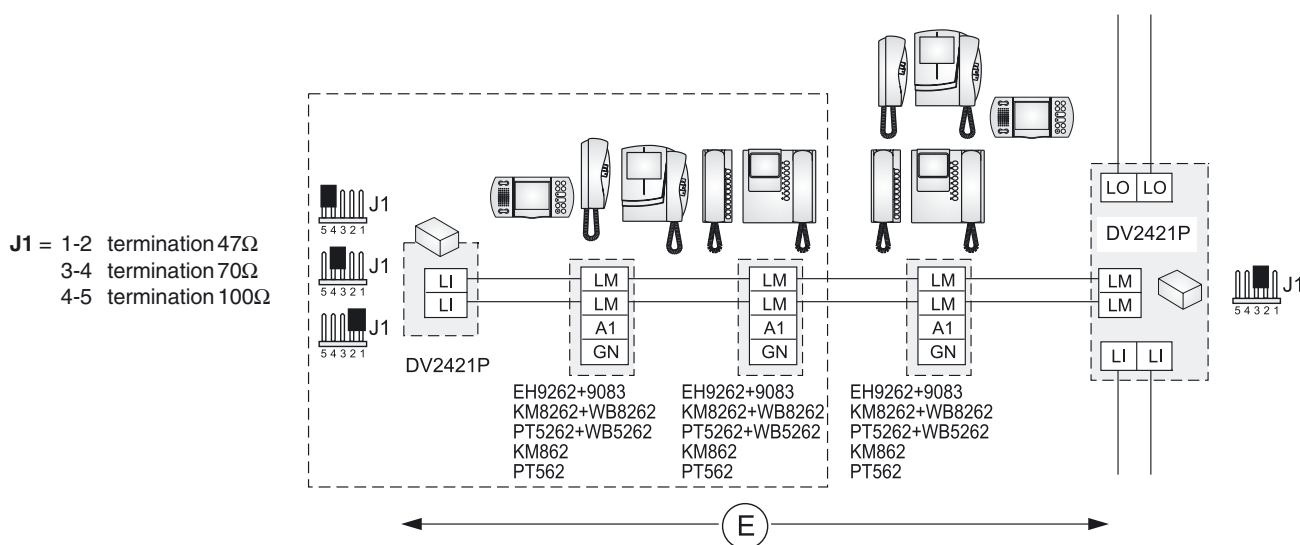
Echos and Project series you can make individual intercom calls. Since there is only one additional button, with the Compact series you can make a single call (to a device of your own apartment or another apartment) or a general call. For information about operation see pages 5, 10, 19, 26 and 30.

In the squared pictures the additional items to the basic schematics. For the distance (E) please see on page 81.

#### 2 PARALLEL INTERNAL STATIONS WITH OR WITHOUT INTERCOMMUNICATING SERVICE



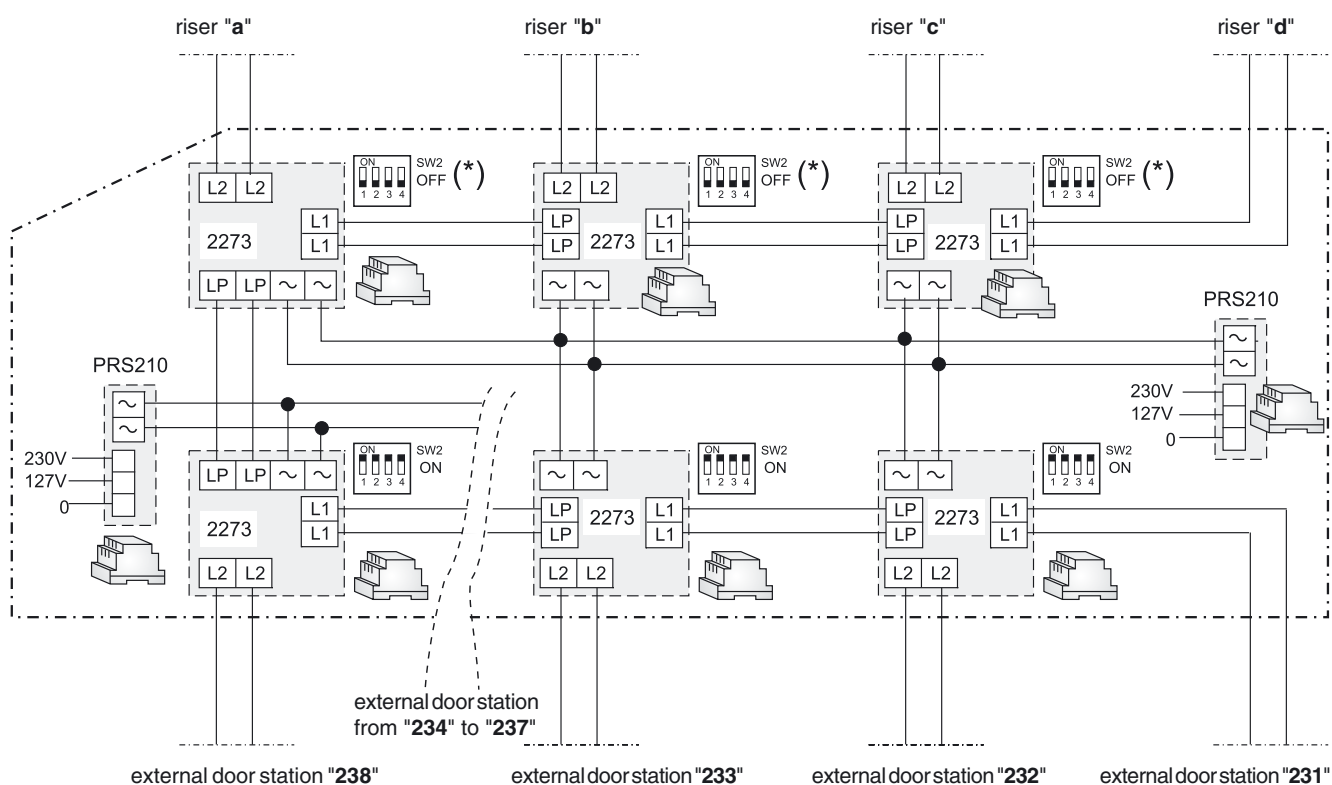
#### 3 PARALLEL INTERNAL STATIONS WITH OR WITHOUT INTERCOMMUNICATING SERVICE





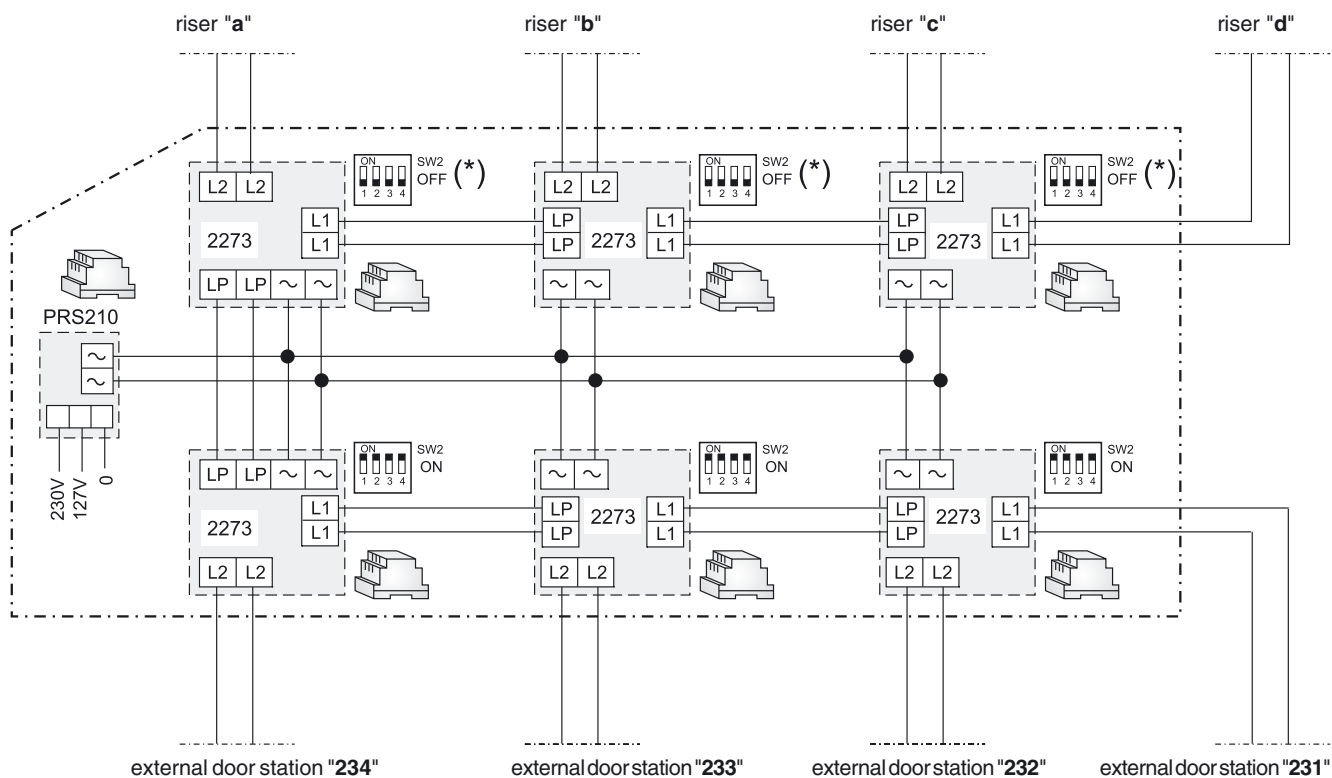
## Application diagrams

### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO MAX. 8 COMMON EXTERNAL DOOR STATIONS AND 4 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS



**N.B.:** Place all **SW2** microswitches of the exchangers art. **2273** on **ON**, except for the one marked with (\*) that remains **OFF**.

### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO 4 COMMON EXTERNAL DOOR STATIONS AND 4 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS

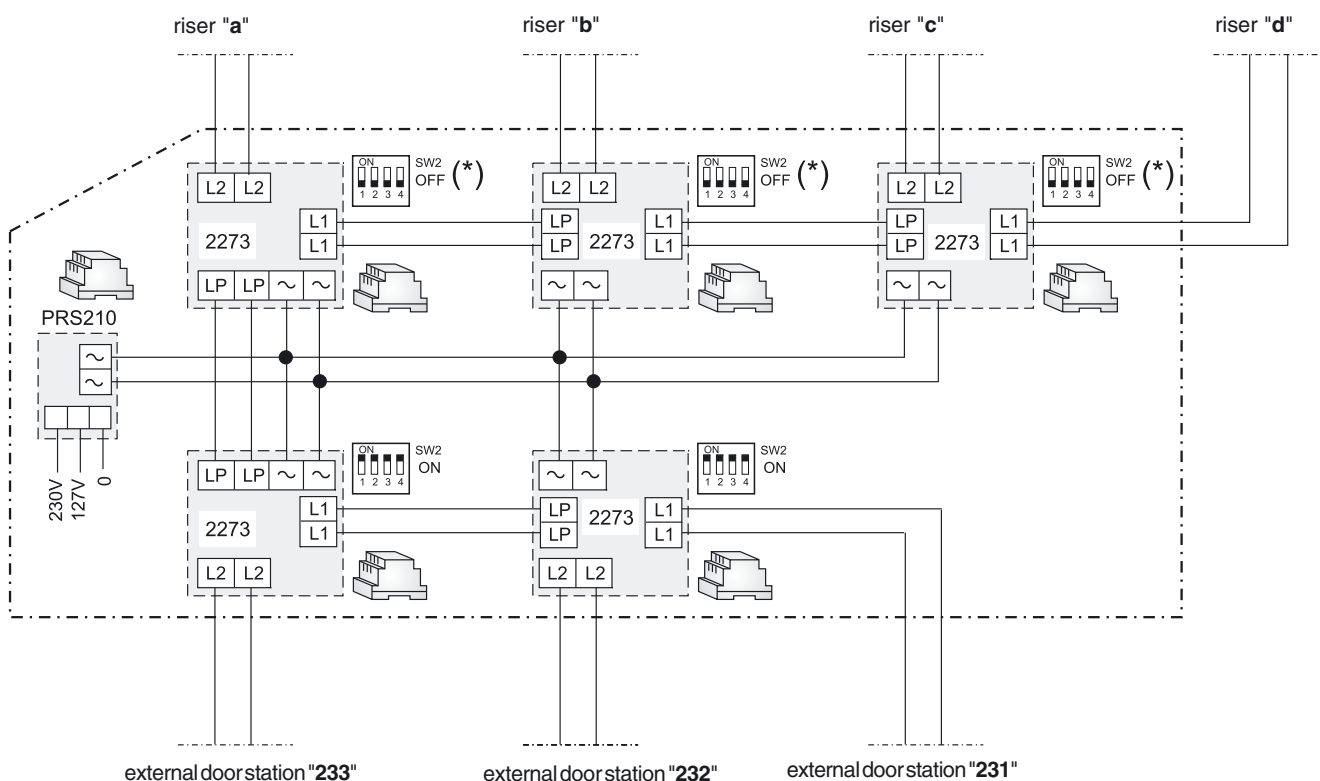


**N.B.:** Place all **SW2** microswitches of the exchangers art. **2273** on **ON**, except for the one marked with (\*) that remains **OFF**.



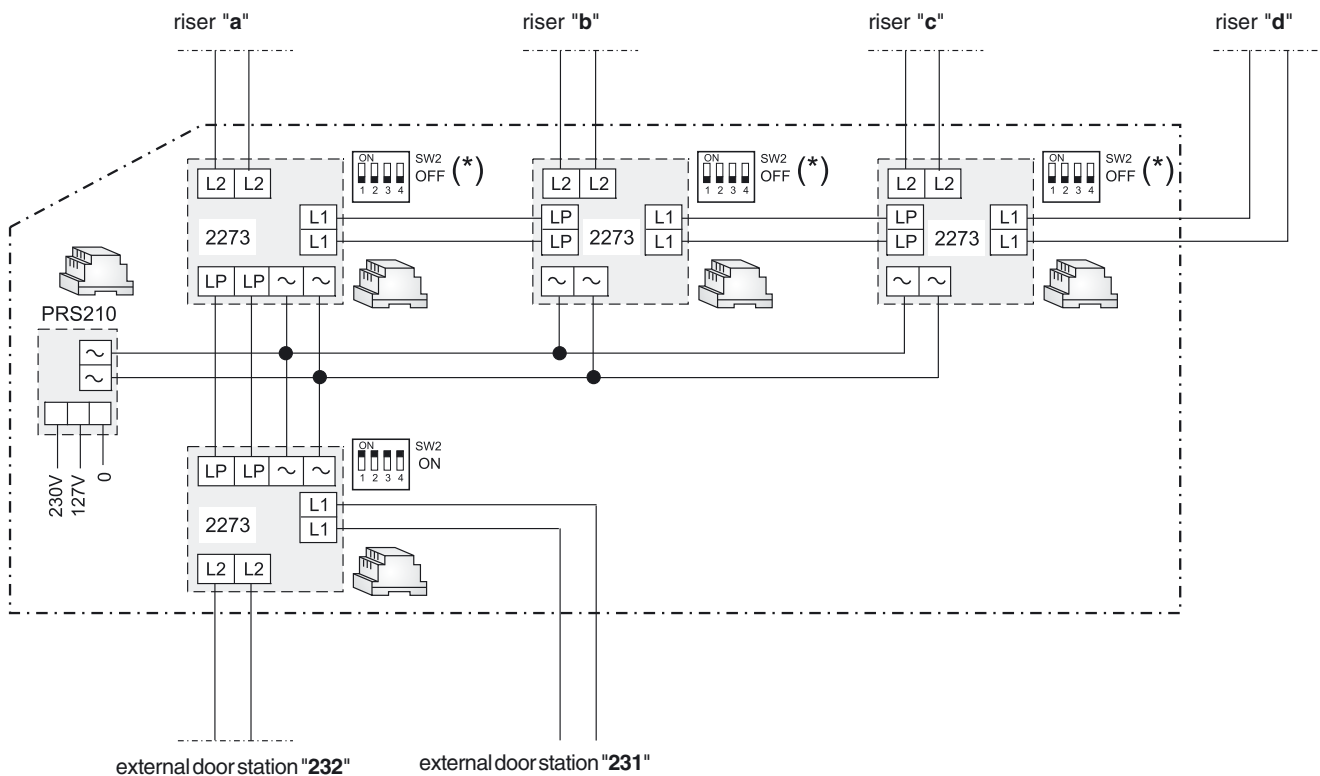
## Application diagrams

### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO 3 COMMON EXTERNAL DOOR STATIONS AND 4 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS



**N.B.:** Place all **SW2** microswitches of the exchangers art. **2273** on **ON**, except for the one marked with (\*) that remains **OFF**.

### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO 2 COMMON EXTERNAL DOOR STATIONS AND 4 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS

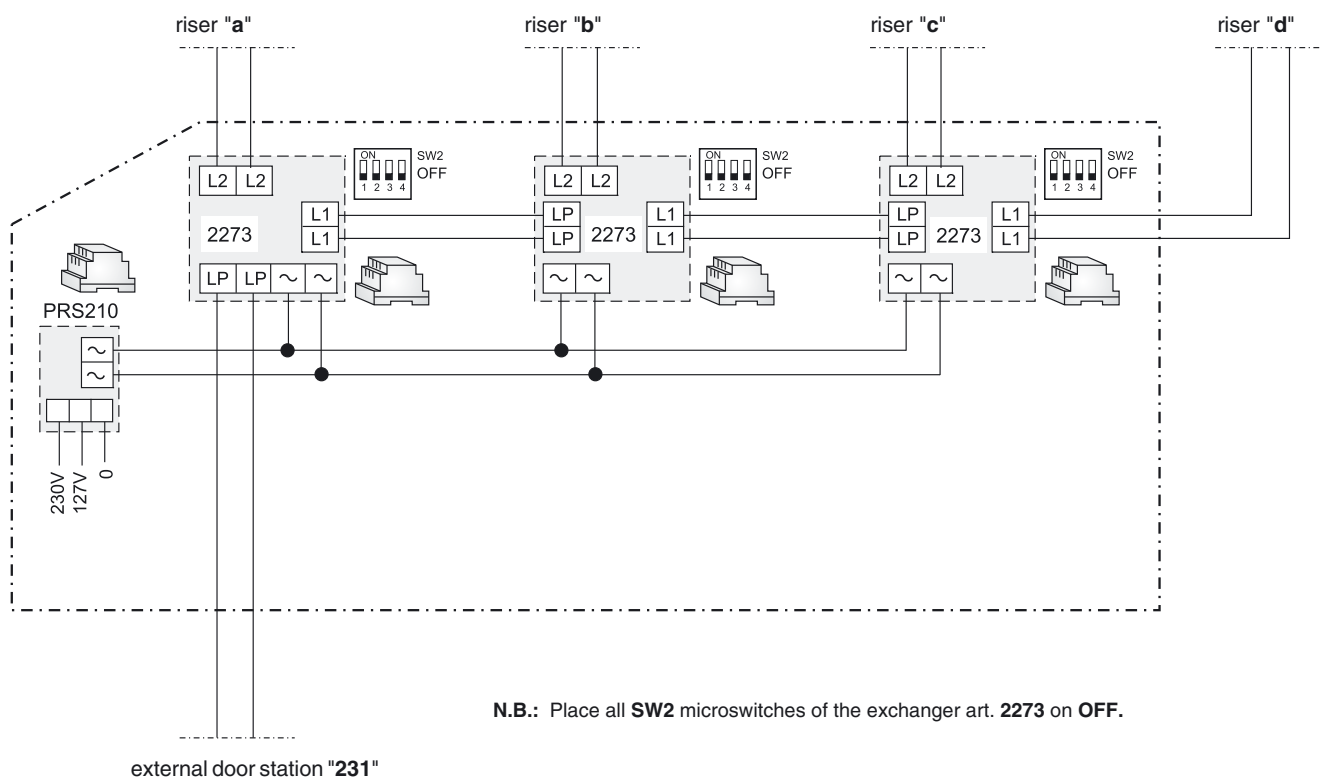


**N.B.:** Place all **SW2** microswitches of the exchangers art. **2273** on **ON**, except for the one marked with (\*) that remains **OFF**.

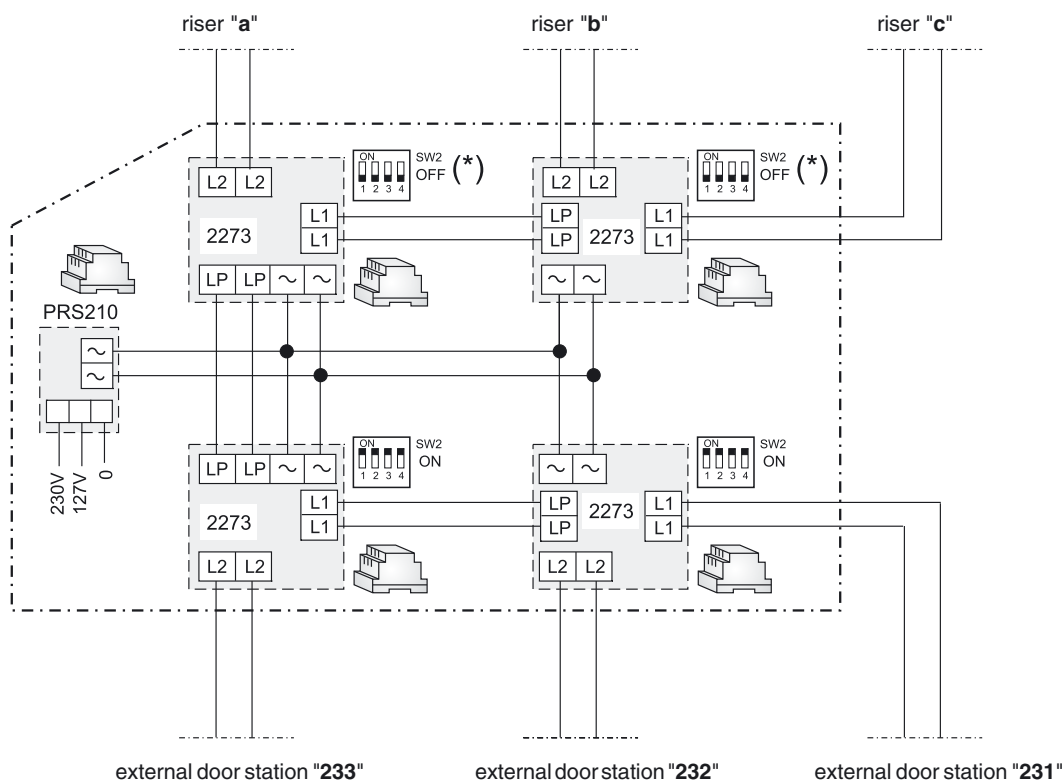


## Application diagrams

### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO 1 COMMON EXTERNAL DOOR STATION AND 4 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS



### APPLICATION DIAGRAM FOR MULTI-WAY SYSTEM CONNECTED TO 3 COMMON EXTERNAL DOOR STATIONS AND 3 RISERS WITH OR WITHOUT SECONDARY DOOR STATIONS



## Product list

<i>Article</i>	<i>Description</i>	<i>Page ref.</i>
2220.	Transformer for door stations	70
2220S.	Transformer for door stations	70
2221.	Transformer for line driver	70
2221S.	Line power supply	70
2222.	Line driver	70
2223.	Video amplifier	71
2223C.	Colour video amplifier	71
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