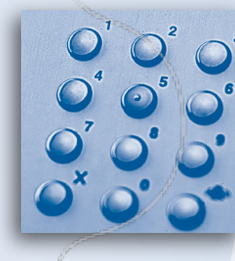
DIGITAL SYSTEMS

ACI FARFISA INTERCOMS

TECHNICAL MANUAL 2010



FN 4000
DF 6000

BASED ON FARNET

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.

CE European Mark of conformity to the EEC Directives.

CE MARK

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.

DVE Mark of VDE a German Testing and Certification Institute.

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

ANIE Italian Association of Electrotechnical and Electronic Industries

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MAIN FEATURES

The Farfisa **FN4000** digital system has been developed with advanced technology and microprocessors to allow for the installation of intercom and video intercom systems with medium or high number of users using a reduced number of wires (5 for intercom systems, 5 plus coaxial cable or twisted pari for video intercom systems). Different combinations of the units provide a wide range of functions in order to satisfy multiple user's needs.

FARNET system platform

The **FN4000** system is the first ACI Farfisa product developed on the FARNET platform. Technically this platform is made up of a combination of specifications both physical and software. Based on this, systems are developed in order to make services for flats and houses. It is a new possibility for installers, who will be able to offer compatible and flexible systems that can communicate with the **FN4000** system (through FARNET) to expand the existing installation and offer new opportunity for domestic automation.

Type of installation

The Farfisa digital system allows the realisation of many different types of installation.

- Intercom systems
- Video intercom systems
- Mixed intercom/video intercom systems/with telephone interfaces
- Systems with doorkeeper exchanger
- Systems with 1 or more equally important door stations (without exchanger)
- Systems with 1 or more main door stations and secondary door stations (with exchanger)

Choosing the equipment

When choosing the articles for the installation, the following aspects must be considered:

- the user's needs
- the number of users
- the installation possibilities
- the possible locations.

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

- main and secondary door stations with digital push-button panels (recommended for medium-large installations)
- main and secondary door stations with conventional push-button panels and digital encoder (recommended for small-medium installations)
- secondary door stations with conventional push-button panels without digital encoder (recommended for one user or up to 4 calls)

As regards **internal stations**, apart from the esthetical model, the type of decoder:

- internal stations with integrated decoding (simple and rapids installation)
- single decoding module (a little more expensive, but easier to connect and install)
- multiple decoding module (cost optimization of single intercom; the decoding module must be located on the stage outside the apartments)

Systems with one or more door stations

- digital or conventional push-button panels with digital encoder
- coded call with 12-button keypad on 4-digit display or 2x16-character LCD
- call by means of conventional buttons with digital encoder
- call by means of conventional button without digital encoder (recommended for a few users)
- call reception by means of electronic DIN-DON or continuous note for floor calls or analogue standard secondary door stations and without digital encoder
- timed conversation (1-minute 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
- busy signal on intercoms and video intercoms during conversation

Systems with doorkeeper exchanger

(in addition to the functions above)

- Day-Night operating mode: in day mode all calls are received by the doorkeeper exchanger; in night mode calls are directly transferred to the users
- call display on alphanumeric 32-character LCD
- possibility of memorising and booking calls at the doorkeeper exchanger during conversations in progress – they will be automatically made when the line is free
- communication between 2 internal stations
- possibility of connecting an internal station with a door station
- possibility of using a wide range of Farfisa intercoms or video intercoms
- possibility of connecting a monitor at the exchanger with automatic switching ON and visualisation of the image from the last calling door station
- direct dialling – the desired user can be called directly from the door station
- call transfer – all calls to the doorkeeper exchanger can be transferred to a programmed intercom

Connection of video signal using coaxial cable or twisted pair

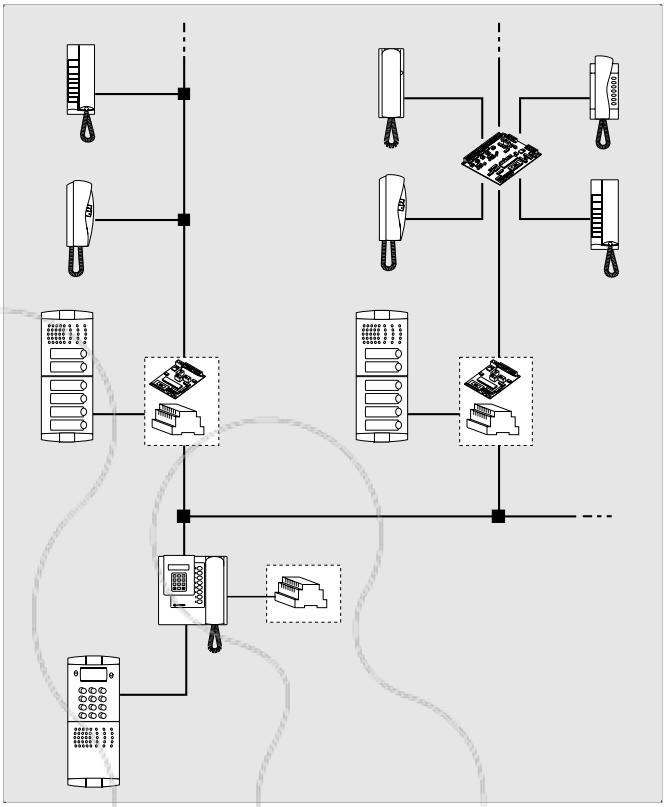
With the Studio videointercom series or using the video converter module can also be chosen the type of installation.

- connection of video signal using a 75Ω coax cable and video distributors DV2, DV4 and 476
- connection of video signal using a twisted pair and video distributors DV2D and DV4D.

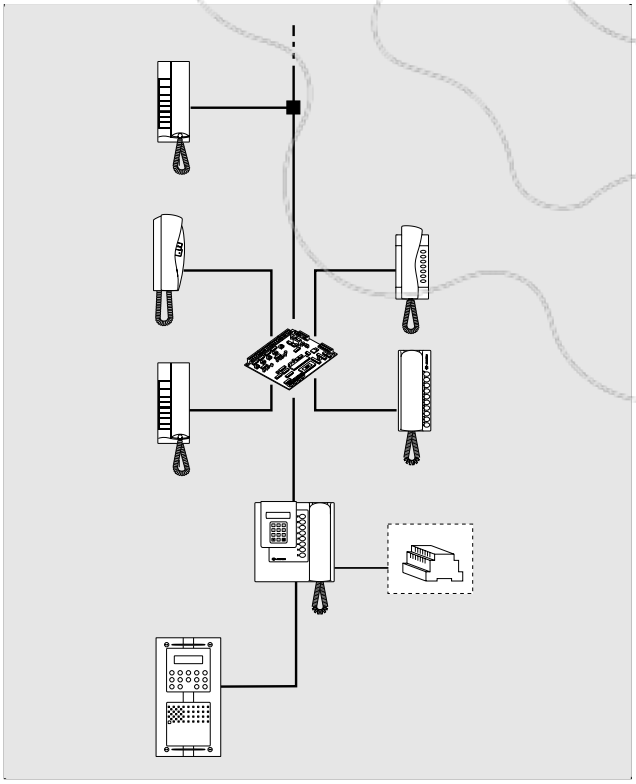
INTERCOM SYSTEMS

- **doorkeeper exchanger only**
- **1 door station with/without doorkeeper exchanger**
- **multiple main door stations with/without doorkeeper exchanger**
- **1 or multiple main door stations, distribution on multiple risers and with/without doorkeeper exchanger**
- **1 or multiple main door stations, distribution on multiple risers with secondary door stations and with/without doorkeeper exchanger**
- **1 or multiple main door stations, one-way secondary door stations and with/without doorkeeper exchanger**

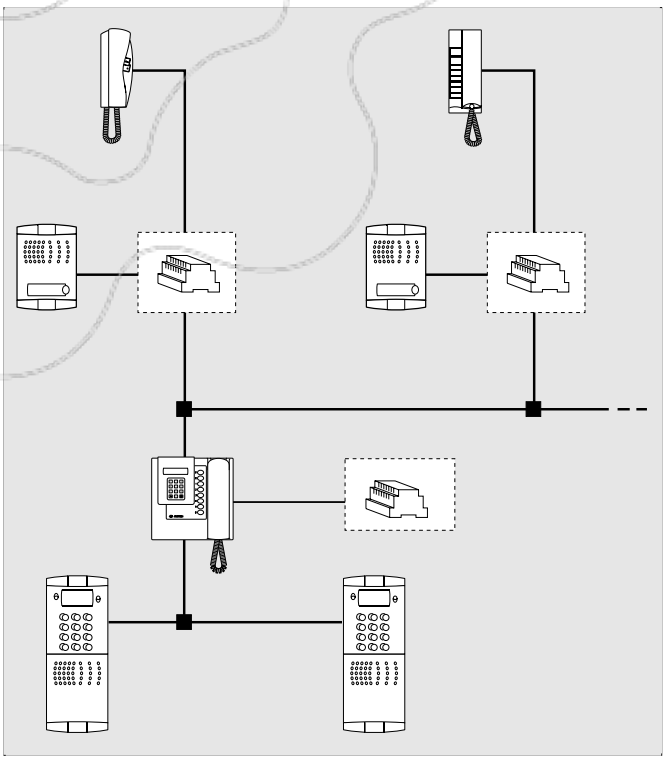
Installation example of an intercom system with digital main station, secondary door stations with digital encoder for conventional push-button panels and intercoms with integrated decoding and/or multiple decoding module *(optional doorkeeper exchanger).*



Installation example of an intercom system with one digital station and intercoms with integrated decoding and/or multiple decoding module *(optional doorkeeper exchanger).*



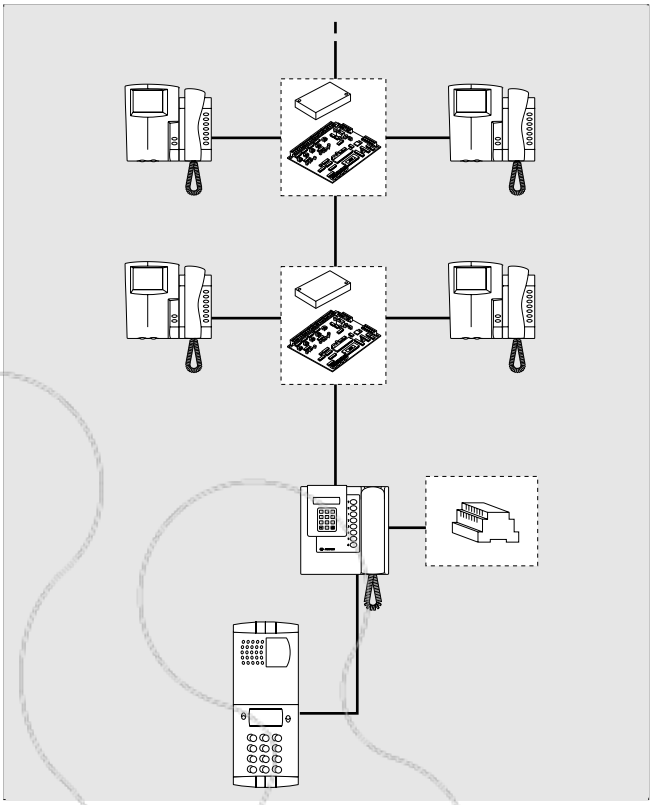
Installation example of an intercom system with multiple digital main door stations, one-way secondary door stations and intercoms with integrated decoding *(optional doorkeeper exchanger).*



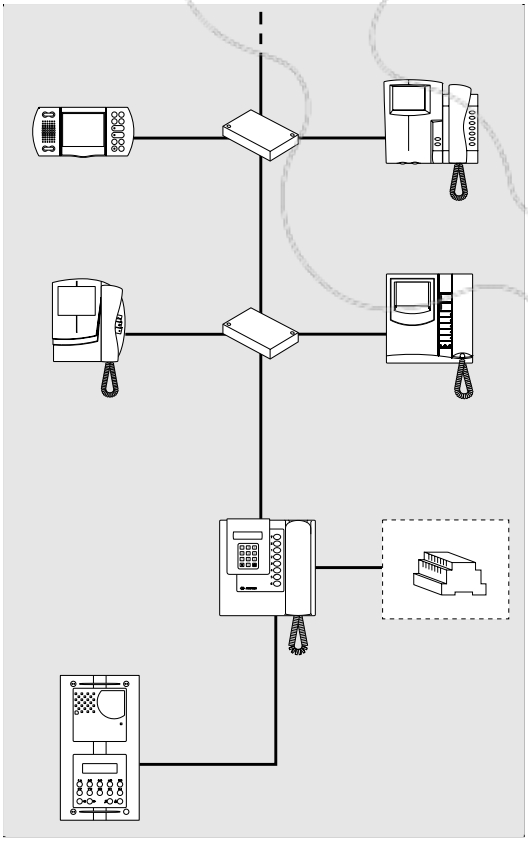
VIDEO INTERCOM SYSTEMS

- **doorkeeper exchanger only with surveillance camera** *(optional)*
- **1 video door station with/without doorkeeper exchanger**
- **multiple main video door stations with/without doorkeeper exchanger**
- **1 or multiple main video door stations, distribution on multiple risers and with/without doorkeeper exchanger**
- **1 or multiple main video door stations, distribution on multiple risers with audio-video secondary door stations or only audio and with/without doorkeeper exchanger**
- **1 or multiple main video door stations, one-way secondary door stations and with/without doorkeeper exchanger**

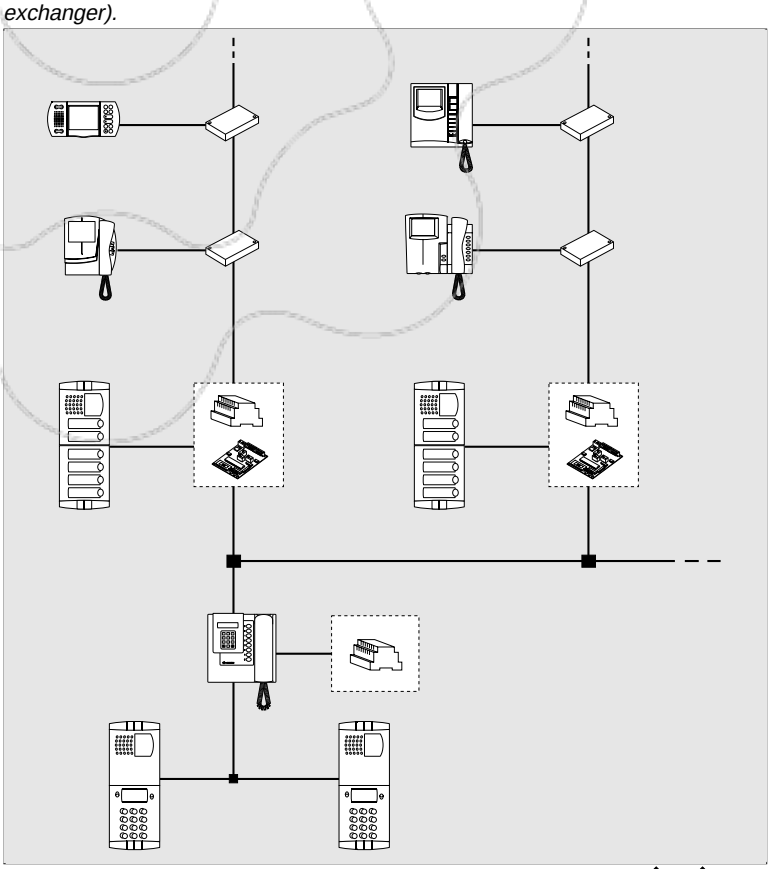
Installation example of a video intercom system with video digital door station and video intercoms with multiple decoding module *(optional doorkeeper exchanger).*



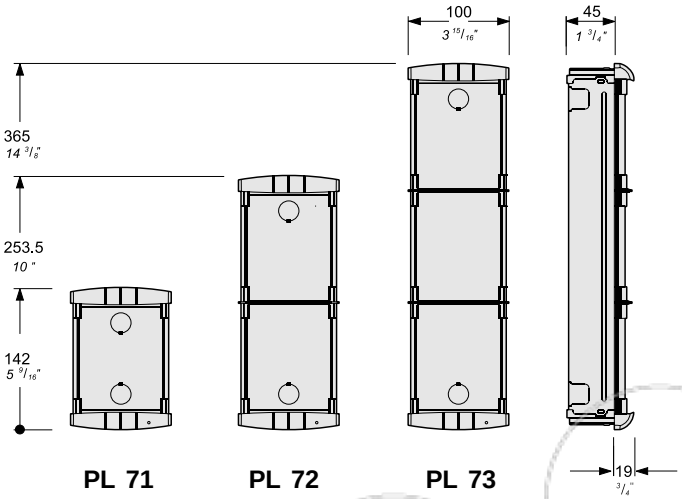
Installation example of a video intercom system with one digital video door station and video intercoms with integrated decoding *(optional doorkeeper exchanger).*



Installation example of a video intercom system with main digital video door station, secondary door stations with digital encoder for conventional push-button panels and intercoms with integrated decoding *(optional doorkeeper exchanger).*



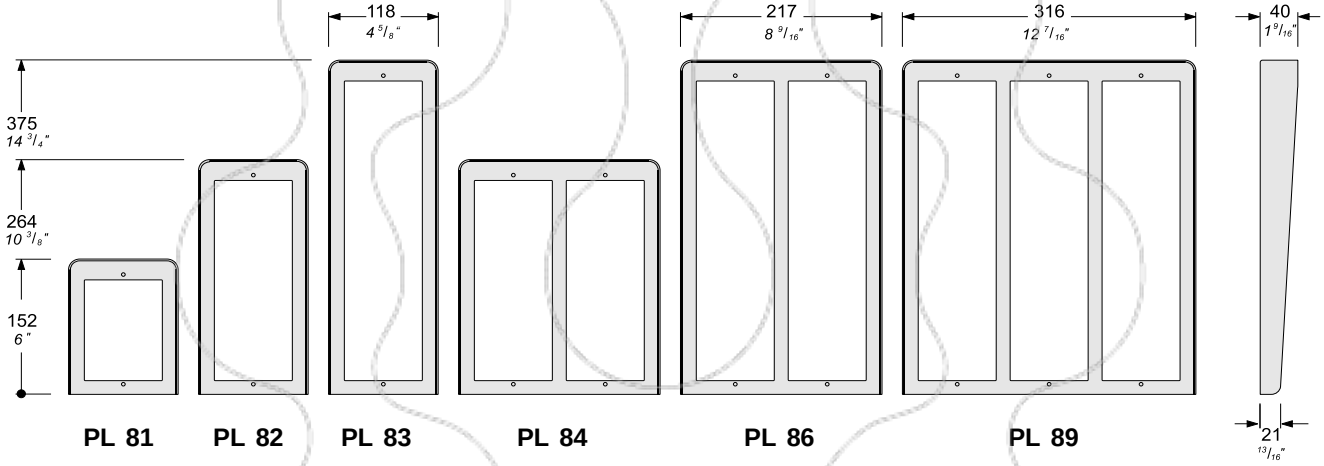
Module frames complete with back box



PL 71 PL 72 PL 73

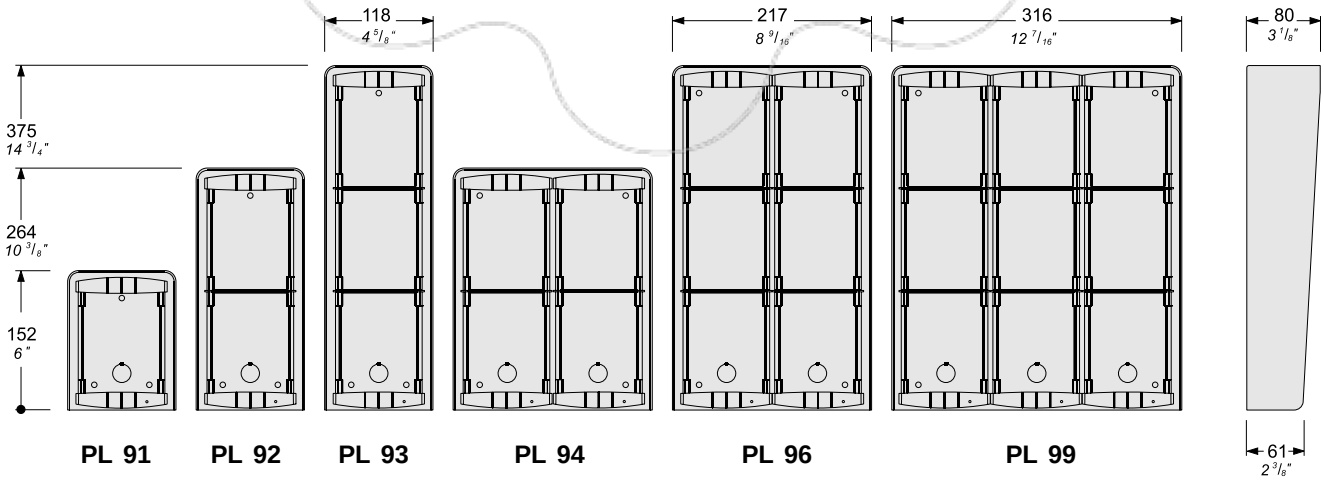
Push-button panels in extruded aluminium and steel push-buttons made up of modular elements. Suitable for the most diverse installation requirements. The careful selection of modules allows for multiple application opportunities; from one-way installations to blocks of flats; from intercom to video intercom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

Hood covers



PL 81 PL 82 PL 83 PL 84 PL 86 PL 89

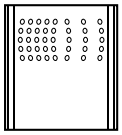
Rain shelters with module frames



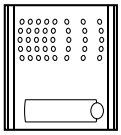
PL 91 PL 92 PL 93 PL 94 PL 96 PL 99

DOOR STATIONS

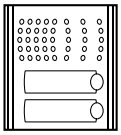
Modules with door speaker integrated



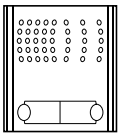
PL 10P
without call buttons



PL 11P
with 1 call button

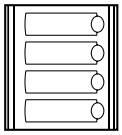


PL 12P
with 2 call buttons

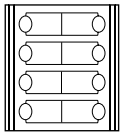


PL 122P
with 2 call buttons (2 row)

Push-button modules

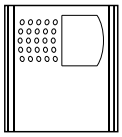


PL 24S
with 4 call buttons

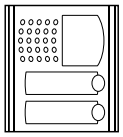


PL 228S
with 8 call buttons (2 row)

Video modules with door speaker integrated



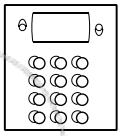
PL 40PCDG
without call buttons and with color camera



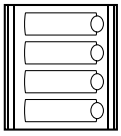
PL 42PCDG
with 2 call buttons and color camera

For specifications see page 7.

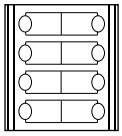
Modules: digital push-button and digitiser



TD4100PL
with 12 buttons

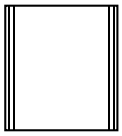


CD4134PL
with 4 call buttons (1 row)

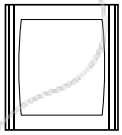


CD4138PL
with 8 call buttons (2 row)

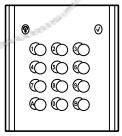
Modules: blank, number and access control



PL 20
Blank module



PL 50
number module



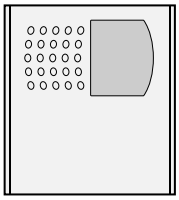
FC 52PL
Keypad module for access control *(see characteristics on page 8).*

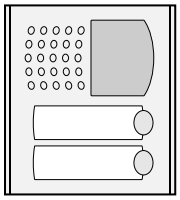
FP 52PL
Proximity reader for access control *(see characteristics on page 8).*

Technical characteristics of PROFILO modules terminal boards

PL10P	PL11P	PL12P	PL122P	PL50	PL24S	PL228S	PL40PCDG	PL42PCDG	
1	1	1	1				1	1	Reception audio line
2	2	2	2				2	2	Transmission audio line
3	3	3	3				3	3	Power supply input for electric door speaker (6÷12Vdc)
4	4	4	4				4	4	Audio ground
-	-	-	-	-	A-	A-	-	-	Ground for Led
A	A	A	A	A	A+	A+			AC or DC power supply input for nameplate Led (12Vac-dc)
	C	C	C(C2)					C	Call push-buttons common
	P1	P1	P1					P1	Call push-button
		P2	P3(C2)					P2	Call push-button
							V	V	Video signal output (coaxial cable)
							M	M	Video ground (coaxial shield)
							+	+	Positive voltage input for camera and Led (12Vdc)
							EC	EC	Camera enable input (ground command)
L-	L-	L-	L-				L-	L-	AC power supply input or ground for service Led
L+	L+	L+	L+				L+	L+	AC or DC power supply input for service Led (12Vac-dc)

Video modules with integrated audio amplifier





PL40PCDG. Modules complete with:
- CCD color camera with autoiris, fixed 3.6mm lens and 6 white LED's.
- amplified speaker unit with volume adjustment of 2 channels (reception and transmission)
- aluminium front plate with transparent screen
- horizontal and vertical adjustments
- red operation LED

PL42PCDG.
Same as **PL40PCDG**, with 2 call buttons and name plate panel with transparent screen and green LED backlighting.

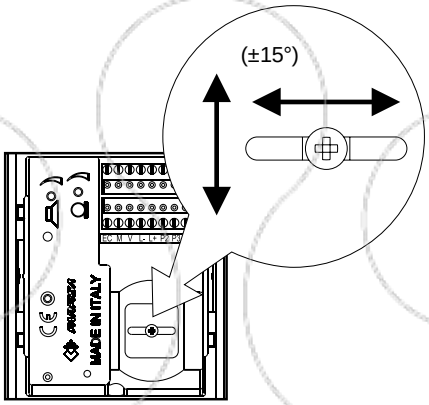
Terminals
1 Reception audio line
2 Transmission audio line
3 Power supply input for electric door speaker (6÷12Vdc)
4 Audio ground
- Ground for Led
+ Positive voltage input for camera and Led (12Vdc)
C Call push-buttons common
P1-P2 Call push-buttons
V Video signal output (coaxial cable)
M Video ground (coaxial shield)
EC Camera enable input *
L- Negative power supply input for service Led
L+ Positive power supply input for service Led

* **Operating timed mode** if connected to the EC terminal of the push-button panel or **continuous mode** if grounded.

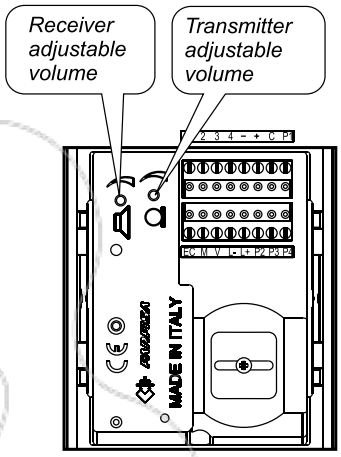
Technical data

Power supply	12±1Vdc
Operating current	0.4A
Video signal output	1Vpp on 75Ω
Video signal standard	PAL
Minimum illumination	2.5 Lux
White balance	auto
Led's	6 white
Sensor	CCD 1/3" color
Number of pixels	291,000
Horizontal frequency	15,625Hz
Vertical frequency	50Hz
Lens	3.6mm
Focus	0.6m ÷ ∞
Autoiris	electronic
Horizontal adjustment	± 15°
Vertical adjustment	± 15°
Operating temperature	-10°÷+40°C
Max. permissible humidity	80%RH

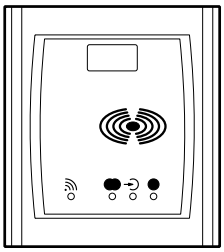
Adjustments
You can manually change the camera framing by unloosening and adjusting the horizontal and vertical screws in the desired direction.



Audio adjustments
If necessary, it is possible to adjust the volume of the 2 channels audio opportunely varying the external knobs.



PROXIMITY READER MODULE



FP52PL.

This article allows for the activation of 2 relays by means of keytags or electronic ISO cards based on transponder technology.
Programmable activation time from 1 to 63 seconds for every relay. 4 user cards and 1 master card supplied with the product. Acoustic and visual control signals and 3-digit display to view numbers and codes during setup and operation.

Technical data

Power supply	12Vac/dc ±10%
Standby current	0.1A
Maximum current consumption	0.25A
Contact ratings	24Vac - 2A
Max. number of cards	490
Max. number of Master cards	10
Number of relays	2
Relay time	1 to 63 sec.
Minimum recognition distance	3 cm
Maximum recognition time	1 sec.
Operating temperature	0° ÷ +40°C
Maximum permitted humidity	85% RH

Terminals

+/A positive or alternate current input
-/A ground or alternate current input
PB door open button
NC2 normally closed contact of relay 2
NA2 normally open contact of relay 2
C2 common terminal of relay 2
NC1 normally closed contact of relay 1
NA1 normally open contact of relay 1
C1 common terminal of relay 1

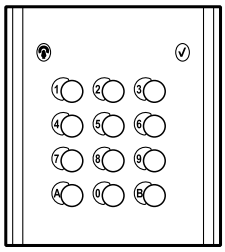
***Card recognition LED**. It turns ON during card recognition.*

***Relay activation LED.** It indicates relay deactivation (red) or activation (green).*

***Program LED.** It turns ON during system programming.*

***Card cancellation and system setup LED**. It turns ON during Master or user card cancellation and system setup.*

ACCESS CONTROL KEYPAD MODULE



FC 52PL.

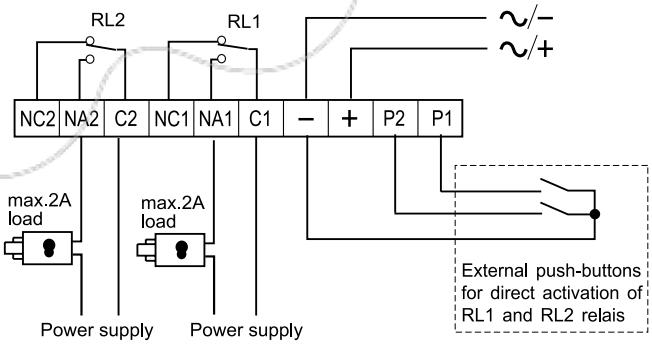
Electronic keypad with 12 keys and 2 relays for lock release and access control of door stations.
12 programmable access codes for each relay. Programmable door opening time from 1 up 99 sec. for each relay (or bistable operation of relay). Acoustic and visual confirmation for entered keys, accepted programming and for wrong codes.

Technical data

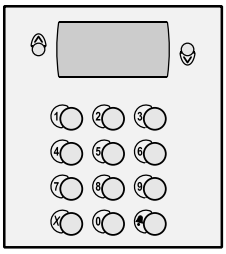
Power supply:	12Vac/dc ±10%
Standby current:	0.06A
Max. current consumption:	0.15A
Contact ratings:	12Vac - 2A
Numbers of codes for relay 1:	12 + direct activation
Numbers of codes for relay 2:	12 + direct activation
Activation time for each relay:	from 1 to 99 seconds (or bistable)
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	85% RH

Terminals

NC2 normally closed contact of relay 2
NA2 normally open contact of relay 2
C2 common contact of relay 2
NC1 normally closed contact of relay 1
NC1 normally open contact of relay 1
C1 common contact of relay 1
– ground or alternating voltage input
+ positive or alternating voltage input
P2 enable of relay 2; if the contacts are temporarily closed relay 2 is activated for the programmed time
P1 enable of relay 1; if the contacts are temporarily closed relay 1 is activated for the programmed time



DIGITAL PUSH-BUTTON PANEL



TD4100PL. Push-button panel with 14 steel buttons and alphanumerical LCD. Used to dial and send calls over FN4000 digital line.

Technical features

Power supply	12Vdc ± 1
Operating current	0.05A
Maximum absorption	0.12A
Door-opening time	3 / 6 sec.
LCD	2 lines x 16 characters
Number of calls (hypothetical)	9999
Memory	250 names
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

Terminals

F1 audio from internal stations
F2 audio to internal stations
- ground
+ +12Vdc power supply input
DB serial data bus
P1 direct call button input to the exchanger or to an user
EC output command for a analog exchanger (grounded contact upon call and during conversation)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

1 audio receiver
2 audio transmitter
3 +12Vdc (0.2A) power supply output
4 audio ground

PROGRAMMING

Before programming you must:

- Press the button **PROG** on the back of the push-button panel using a small screwdriver; the displays 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 ∧∨*" or the text set during the programming phase (see "**Personalisation of display initial text**").

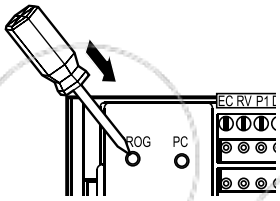


Table 1
Programming codes

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

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 ✗ 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.

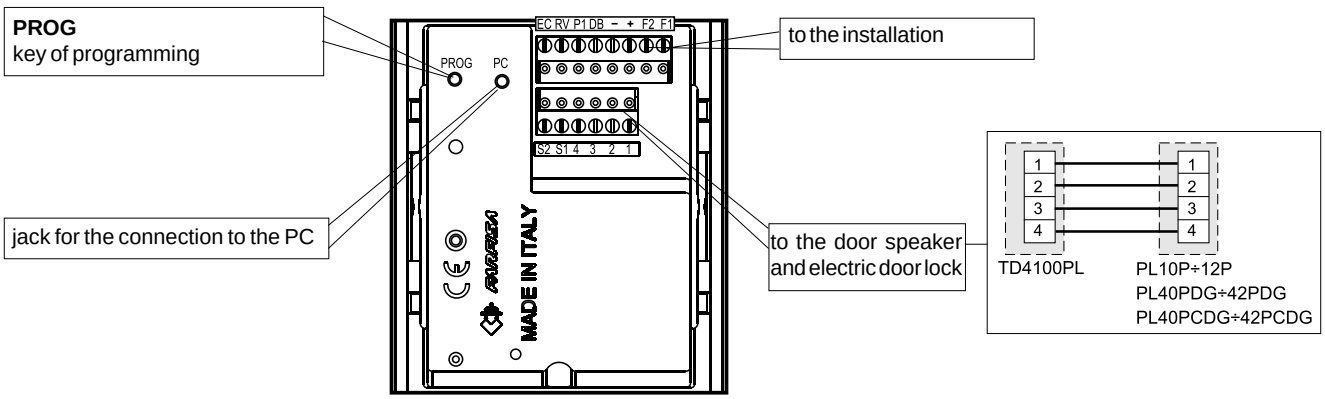
Deleting a code

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.

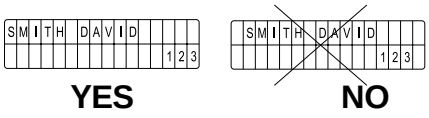
Entry / modification / deletion of names *(code 01)*

The digital keyboard TD4100PL 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



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 ✗ 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 ✗ 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.
- 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 ✗ 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 ✗ 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 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 ✗ to go to the last cell (bottom right); enter a space to delete the existing number.
- Press ✗ again; the display shows *"DELETE USER / YES ∧∨ 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 ∧∨ 1"* in case of first programming or *"bit 0 = 1 / 0 ∧∨ 1"* if

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

Programming code	*Function description*	*Default settings*	*Value entered with buttons* = 0	= 1
bit 0	door lock activation time	3 sec.	3 sec.	6 seconds
bit 1	activation upon call from internal station *(1)*	NO	NO	YES
bit 2	door lock activation with ✗ *(2)*	NO	NO	YES
bit 3	not used	-	-	-
bit 4	call numbers displayed with initial letter *(see relative paragraph)*	NO	NO	YES
bit 5	activation of personalised initial screen *(3)*	NO	NO	YES
bit 6	deactivation of FARFISA and activation of personalised text	NO	NO	YES
bit 7	deactivation of tone generator	NO	NO	YES

(1) This function allows the internal stations to press the door lock button, start a conversation with the external station (in case of more external stations in parallel the function must be activated on one external station only) and activate the door lock by pressing the button again.

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

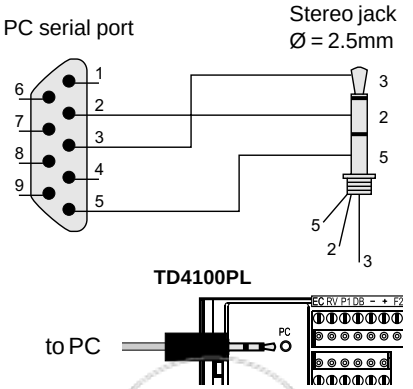
(3) You can alternate *"FARFISA"* with the personalised text (see **"Personalisation of text to be shown on the display"**).

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.

- Enabling of alphanumerical calling mode (bit 4)
If the installation is divided into several blocks, it could be useful call each block with a letter instead of a number (e.g. block "A", block "B", etc.). If you program such a operating mode the number of thousands in the user code is displayed as a letter and not as a number (1=A, 2=B, 3=C, 4=D, 5=E, 6=F, 7=G, 8=H, 9=I, 0=J). Please consider that it is only a question of displaying because the codes send to the users are always numerical codes, really the user identified by the code "B001" is stored as user 2001 and this code must be programmed on its intercom, videointercom or floor decoding module. It is still important to note that if an alphanumeric code, with less than 4 digit, is entered on the keypad, the system automatically fills the empty numbers with zeros, for instance entering only the code "E" the display shows the code "E000" and the system transmits the code 5000. In the same way if the code "E2" is entered the display shows "E002" and the system transmits the code 5002, therefore the user you want to be identified by the code "E002" must be programmed as user 5002.

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 *"FARNET"*, 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 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.



- 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 *"TD4100PL ---- PC / in progress....0"*.
- Download the names from the PC within 15 seconds; the display shows *"TD4100PL ---- PC / in progress....1"*, *"TD4100PL ---- 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.

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.

Return to operation mode
Press the button **PROG** at the end of programming; the display shows "*FARFISA / dial the number or press ∧∨*" or the text you have entered during programming (see **"Personalisation of display initial text**").

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 ∧∨* (∧∨ 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 ✗ (only before sending the call) and dial the correct to number.
If the user is busy or if the user code does not exist the display shows "*busy/ "* for 3 seconds.
If the user exists you hear the ringing tone and the display shows "*ringing / ----"*; the called intercom rings for about 25 seconds.

The called user picks up the handset to interrupt the call and enables the conversation with the external station for 60 seconds. The display shows "*connection /---- ".*
The text on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 60 seconds press 🔔 again.
Press the intercom button (🔑) to release the door lock. Door lock activation time is 3 seconds (or 6 seconds if properly programmed).
Replace the handset 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.
In installations **with doorkeeper exchanger** in "**Day**" mode without direct dialling function, all calls are sent to the exchanger.
Once the call is received, the operator can put the push-button panel on hold and call the internal station; the push-button display shows *"hold-on / "*.

If the operator connects the internal station with the push-button panel, the display returns to the conversation status. The number displayed on the push-button panel is the number of the internal station called by the operator and it may not correspond to the called number because of the call transfer function.

Door lock release

The door lock, even if in busy state, can be released from the push-button panel by dialling one of the 16 four digit personal access codes you have stored.

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).

DISPLAY SETTINGS

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

Contrast

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

Background color

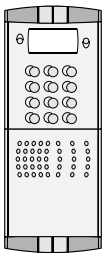
- dial **0091**; the display shows "*press ∧ or ∨*" with a state bar;
- press the buttons and to select the color;
- press the button to save.

Tone table. See page 29.

Composition PROFILO digital push-button panel

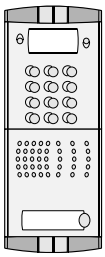
Audio composition

traditional



Composed of:
1 TD4100PL
1 PL10P
1 PL72
1 PL82 *

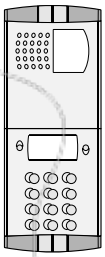
with push-button for the direct call of an user



Composed of:
1 TD4100PL
1 PL11P
1 PL72
1 PL82 *

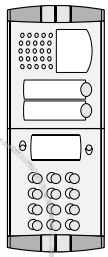
Audio-video composition

traditional



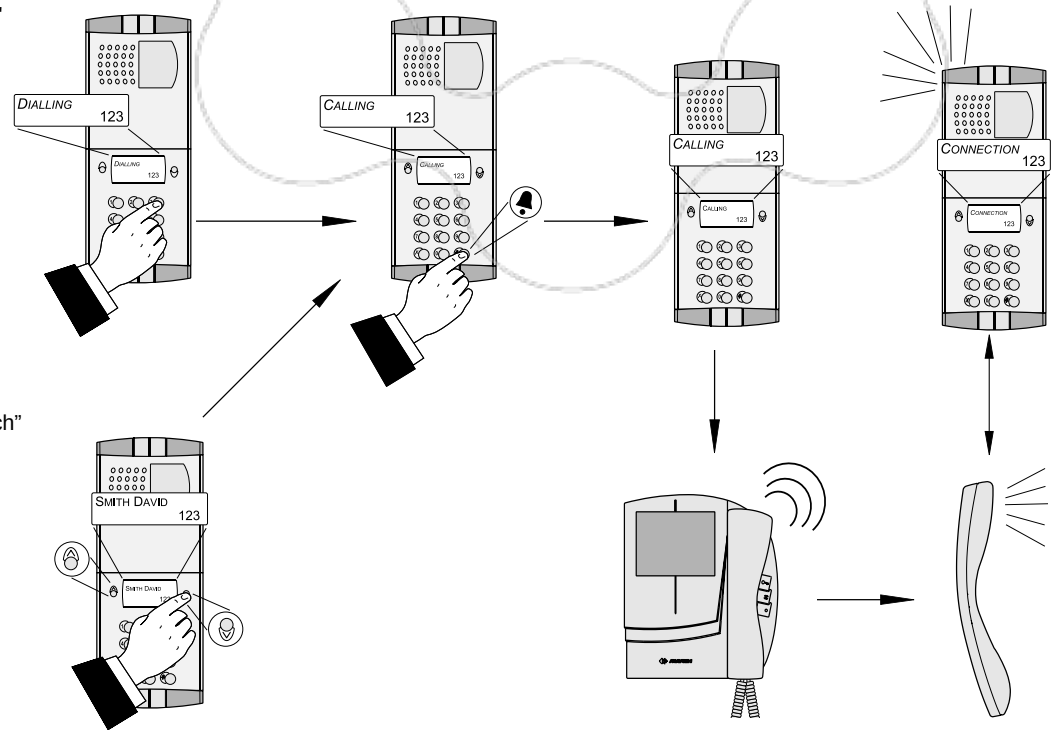
Composed of:
1 TD4100PL
1 PL40PCDG
1 PL72
1 PL82 *

with push-button for the direct call of an user

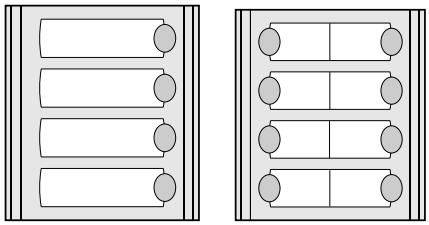


Composed of:
1 TD4100PL
1 PL42PCDG
1 PL72
1 PL82 *

* optional



DIGITAL ENCODERS



CD4134PL. Encoding module with front plate and four aluminium buttons. Complete with name-holders with transparent screen green backlighting, breaking resistant.
Used to send calls over **FN4000** digital line.

CD4138PL. Same as the previous, but with 8 call buttons on two rows.

Technical features

Power supply:	12Vdc ± 1
Operating current:	0.1A
Maximum number of users:	63
Door-opening time:	3 seconds
Dimensions:	1 module
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH

Terminals

F1 audio from internal stations
F2 audio to internal stations
- general ground
+ +12Vdc power input
DB serial data bus
L+ +12Vdc output for LED busy
EC command for an analog exchanger (grounded contact upon call and during conversation)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

1 audio receiver
2 audio transmitter
3 +12Vdc (0.2A) power output
4 audio ground
P1- P2 call push-buttons *

* To be connected only if included in the push-button panel composition.

Programming

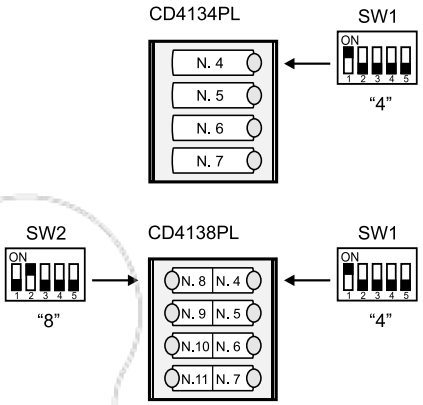
Following programming can be made in digital encoders:

- **starting user's address of buttons**
- **user's address related to the first button**
- **operating mode**

Programming of starting **user's address of buttons** and **user's address related to the first button** fix the user's address which is called by pressing the first button, next buttons will get the 3 sequential values. In case of use of the module **CD4138PL** it is possible to set also the user's address called by the first button of the second column and consequently the next three.
Programming of **operating mode** gives the possibility to change the activation time of the relay (terminals S1-S2) and to enable the automatic connection of the internal station to the external station simply by pressing the button "lock release" on the internal station; ex factory the automatic connection is disabled while the activation time of relay is set to 3 seconds.

Factory settings

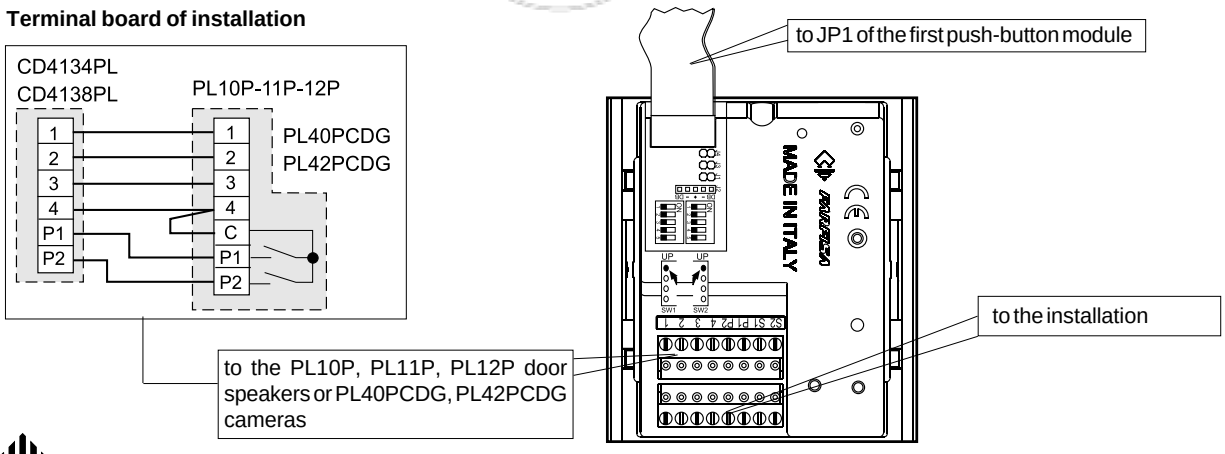
Ex factory products are set as follows:
- starting user's address of buttons = **0** (sending addresses from 1 to 63);
- user's address related to the first button = **4** and, only for the **CD4138PL**, user's address related to the first button of the left column = **8**; since buttons of digital encoder CD4134PL, starting from the top, will call users with users' addresses 4,5,6 and 7 (right side column); while buttons of digital encoder CD4138PL will call users with users' addresses 4,5,6 and 7 (right side column) and 8,9,10 and 11 (left side column);



- **operating mode** of the digital encoder with factory settings (activation time of relay = **3 seconds; no automatic connection** between internal stations and external station.

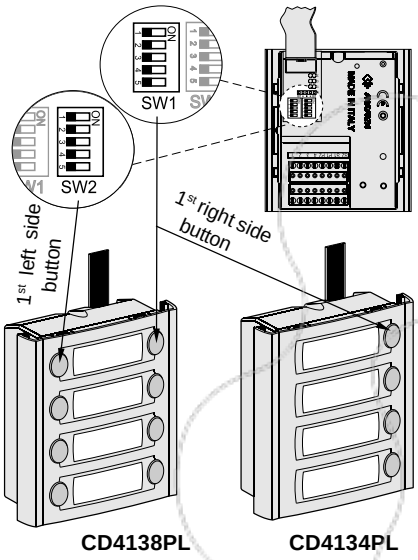
In general this is the setting for the most frequent installations; it is necessary to change parameters in the following cases:
- installations with more than 63 users (**second encoder** must be programmed with starting user's address of buttons equal or **higher** than 63).
- digital encoder together with digital exchanger in installations with more blocks. In this case it is mandatory that the programming of digital encoder and digital exchanger are compatible.
Example: the digital encoder of the entrance of one block is programmed with users' addresses from 100 to 163 (enabled users' addresses from 101 to 163), the digital encoder of the entrance of another block must be programmed with different users' addresses for example from 200 to 263 (en-

Terminal board of installation

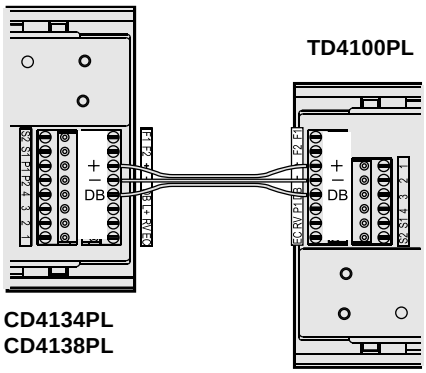


abled users' addresses from 201 to 263), etc.;
- installations where a digital doorkeeper exchanger is present and requirement to show on its display users' addresses according to the floor of the building where the apartment is located (e.g. first floor users' addresses 111, 112, 113....etc; second floor users' addresses 121,122,123...etc).

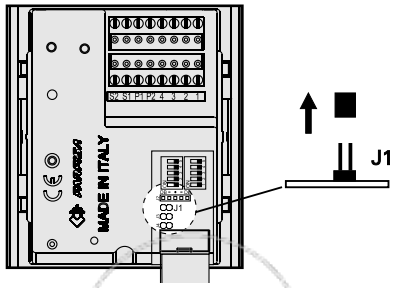
User's address related to the first button
To program the user's address related to the first button it is sufficient to set micro-switches **SW1** and **SW2** (the last present only on the CD4138PL) located on the back of the digital encoder. Table 1 shows how to set micro-switches **SW** to set the requested address.



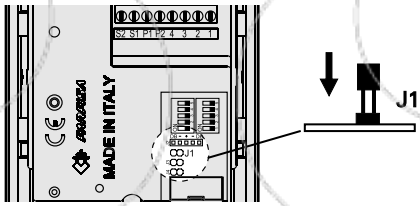
Programming of starting user's address of buttons and operating modes
To program the starting user's address of buttons and the operating modes it is necessary that the digital encoder is connected on the same riser on which it is even connected one digital push-button panel TD4100PL or digital doorkeeper exchanger PDX4000; In the case this is not true it is possible to connect temporarily, just for the time of programming, one of the two equipments joining only terminals +, - and DB.



Entering programming mode
To program the starting user's address of buttons and the operating modes it is necessary to enter in the programming mode just pulling-out jumper **J1** in order to free the two poles; digital encoder generates an intermitting waiting tone.



Exit the programming mode
To exit programming mode insert again jumper **J1** in order to short-circuit the two poles.



Programming starting user's address
- Enter the programming mode as described in the specific paragraph.
- Dial on the keypad of **TD4100PL** or **PDX4000** the address you wish to program and send enter; an acknowledge tone will be heard.
- Make other programming or exit the programming mode as described in the specific paragraph.

In the case of sending more address only the last one is stored.

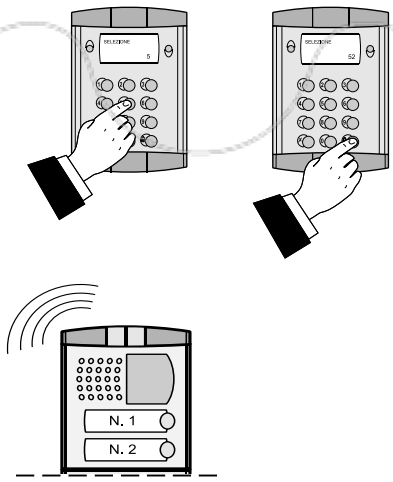
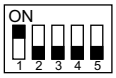
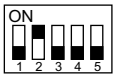
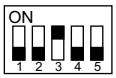
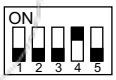
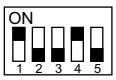
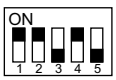
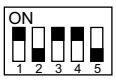
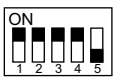
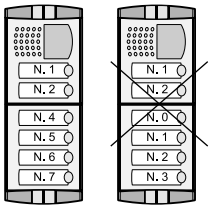


Table 1.
Value to add to the starting user address programmed on the digital encoder to obtain the address called by the first button.

Value to set	Position of micro-switches SW
0	
4	
8	
12	
16	
20	
24	
28	
32	
36	
40	
44	
48	
52	
56	
60	

Important notes.
Setting all the micro-switches of SW2 in OFF position (all the triggers set down; code 0) the system will not send the user's address related to the first button (being 0). Besides, if are present buttons connected to P1 and P2 they will have the same user's address of 2nd and 3rd button of the digital encoder.



Some examples of programming

J1	SW	1st button (N4)	range of addresses
0	**+ 4**	**4**	1 ÷ 63
0	**+ 12**	**12**	1 ÷ 63
0	**+ 56**	**56**	1 ÷ 63
15	**+ 4**	**19**	16 ÷ 78
15	**+ 12**	**27**	16 ÷ 78
15	**+ 56**	**71**	16 ÷ 78
32	**+ 4**	**36**	33 ÷ 96
100	**+ 0**	**100**	101 ÷ 163
100	**+ 32**	**132**	101 ÷ 163
150	**+ 36**	**186**	151 ÷ 213
699	**+ 4**	**703**	700 ÷ 762
			users' addresses which can be managed by the encoder
		user's address related to the first button from the top (N.4)	
	micro-switching settings (see table 1)		
address to send to the encoder during the programming phase			

Programming of the operating modes
- Enter the programming mode as described in the specific paragraph.
- Dial on the keypad of **TD4100PL** or **PDX4000** the code you wish to program (see table 2) and press button "enter"; an acknowledge tone will be heard.
- Exit the programming mode as described in the specific paragraph.

In the case of sending more codes only the last one is stored.

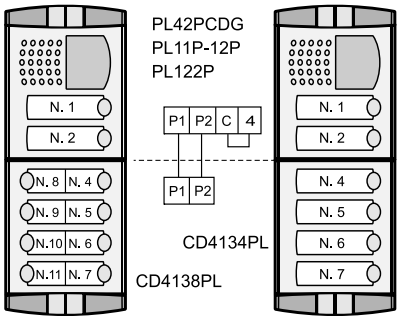
Table 2. Operating modes

Operating mode	Codes to dial			
	9990	**9991**	**9994**	**9995**
Timing of relay-ON	3 sec.	6 sec.	3 sec.	6 sec.
Enabling automatic connection of door station from internal station*	No	No	Yes	Yes

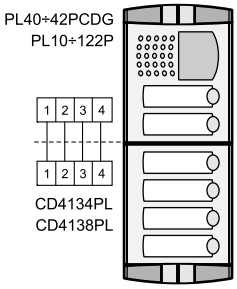
* Enabling this function from any internal station it would be possible, pressing button 🔑, to communicate with the external station and to activate the lock release pressing again the button 🔑.

Terminals P1 and P2
Connecting to the terminals P1 and P2 of the digital encoder the two buttons of modules PL42PCDG or PL12P they will call users with the two next addresses from the starting user's address of buttons programmed in the digital encoder.

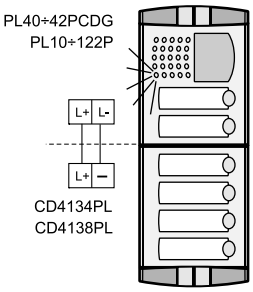
***Example*:** if the starting user's address of buttons programmed in the digital encoder is equal to 0, by pressing the two buttons of modules PL42PCDG or PL12P they will call respectively users coded with the addresses 1 and 2, the user's address called by P1 and P2 has no relation with the address associated to the first button of the digital encoder.



Audio Connection
The digital encoder should be connected to an audio or video module by means of 4 wires joined to the terminals 1, 2, 3 and 4.

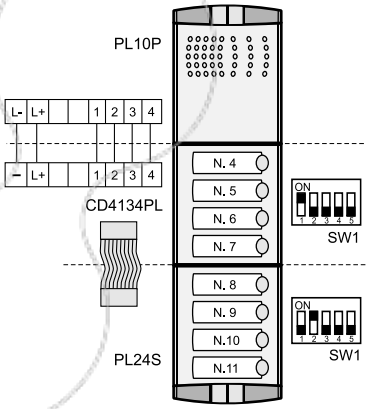


Signalling of busy line.
If more than one entrance is present on the same installation it would be advisable to have a signalling of busy line when another external station is already in communication. This can be achieved, by the LED present on the audio or audio/video module which will flash when the line is busy, connecting their terminals L+ and L- to the terminals L+ and -present on the digital encoder.

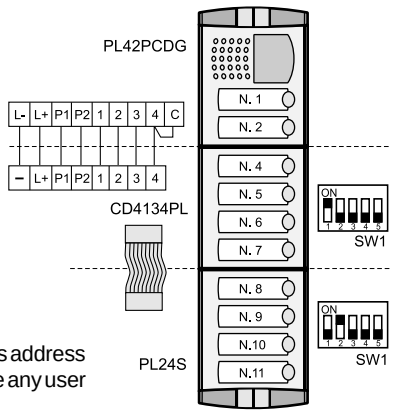


Example of composition of push-buttons with programming of the user's address associated to the first button and connections between several modules

1) 8 call intercom push-button panel with PL10P, CD4134PL and PL24S

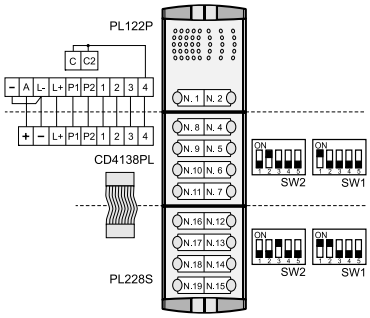


2) 10 call videointercom push-button panel with PL42PDG, CD4134PL and PL24S



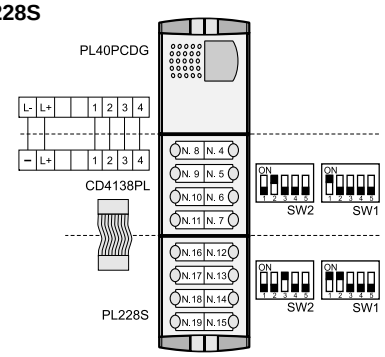
Note. In this example the user's address 3 is not achievable; do not code any user with the address 3.

3) 18 call intercom push-button panel with PL122P, CD4138PL and PL228S

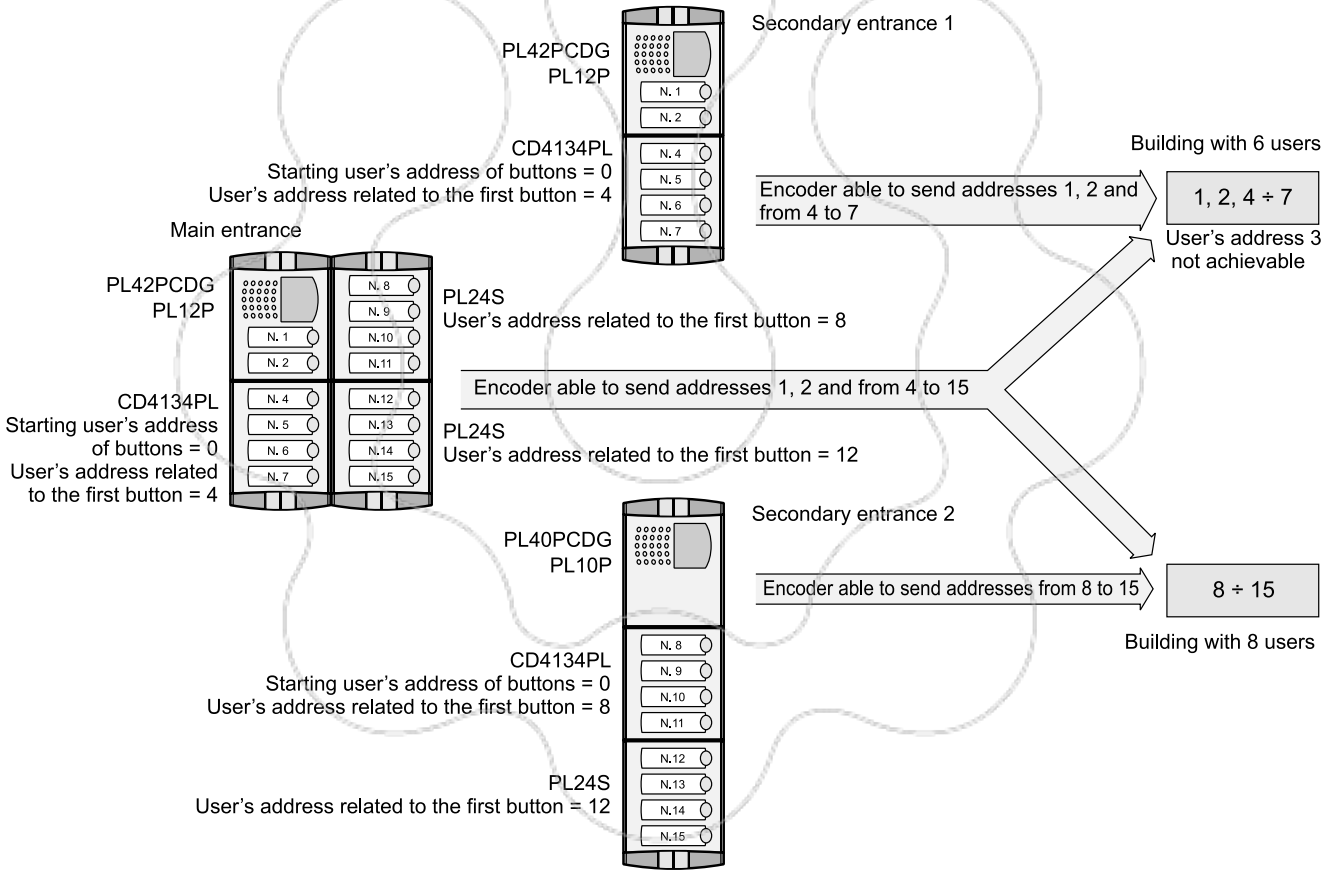


Note. In this example the user's address 3 is not achievable; do not code any user with the address 3.

4) 16 call videointercom push-button panel with PL40PDG, CD4138PL and PL228S



5) Example of coding of an installation with one main entrance and two secondary entrances (block division)



Tone table

Free- *Indicates that the line is free*

Busy - *Indicates that the called user is busy*

End of conversation - *10 seconds before conversation ends*

Confirmation - *Indicates that programming was executed*

Programming and waiting - *Indicates the programming mode or the waiting status of the external user*

PUSH-BUTTON MODULES WITH INTEGRATED ENCODING BOARD

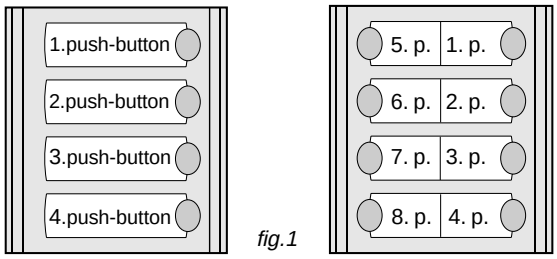


fig.1

The button modules with integrated encoding board, thanks to the connection to the encoder module CD4134PL÷CD4138PL, allow the calls in digital systems.

PL24S.
Module with front plate and four aluminium call buttons. Complete with name holders with transparent screen green backlighting, resistant to breaking and connection cable to the next module.

PL228S.
Same as the previous, but with 8 call buttons on two rows.

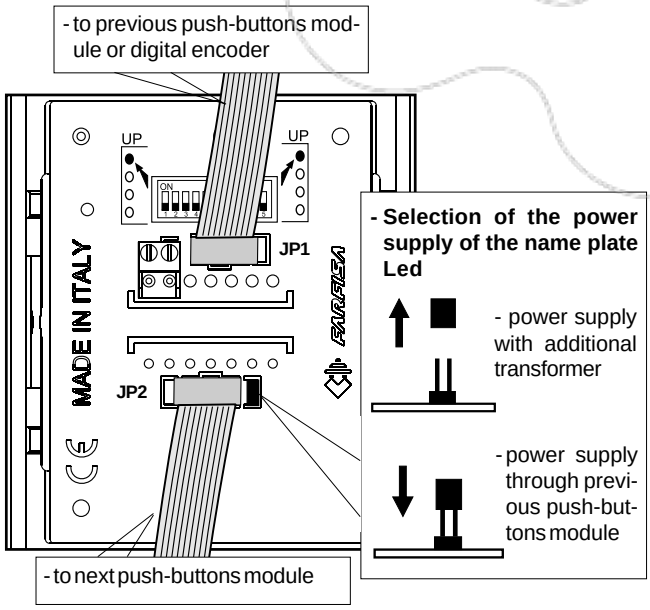
Terminals
A+ AC or DC power supply input for nameplate Led (13Vac/dc-80mA)
A- AC power supply or ground input for nameplate Led

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.

Important notes

- Pay attention when program code 0 (address interval 0-3) because in this case the first push-button from the top does not call any user. This is due to the fact that the system does not recognize the address **0 (zero)** as a valid address.



Programming

The microswitches, present on the back of the PL24S and PL228S, allow the digital encoder to recognize the code of the connected buttons, consequently they must be programmed properly. The code set on the microswitches (*see tables on the page 18*) determines the address associate to the 1st push-button of the module (*see fig.1*); the other push-buttons on the module automatically are associated the next addresses. The address of the Called User is obtained combining the address associated to the First button of the module at which the push-button is connected to and the Address associated to the Encoder according to the following rule:
Called User Address (IUC) by pressing the buttons of the CD4134PL, CD4138PL, PL24S or PL228S module = **Address Associated to the Encoder (IAC)** + **Number Associated with Button (NAP**) of the CD4134PL, CD4138PL, PL24S or PL228S module.

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

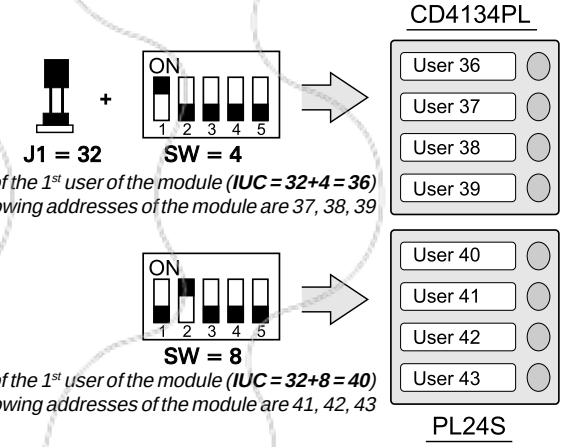
General rule applied to the first example below;
- if you press the first button from above of the PL24S:

40 (IUC) = 32 (IAC) + 8 (1st NAP)

the user with address 40 will be called.

Examples:

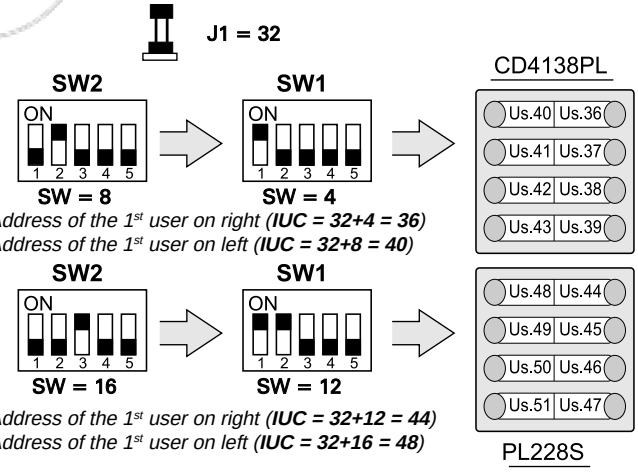
● In the example the following codes have been set:
- Address associated to the encoder = **32**
- Address associated to the first button of the encoder = **4**
- Address associated to the first button of the module **PL24S** = **8**



*Address of the 1st user of the module (**IUC = 32+4 = 36**)*
The 3 following addresses of the module are 37, 38, 39

*Address of the 1st user of the module (**IUC = 32+8 = 40**)*
The 3 following addresses of the module are 41, 42, 43

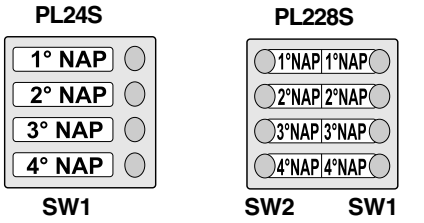
● In the example the following codes have been set:
- Address associated to the encoder = **32**
- Address associated to the 1st button on right of the encoder = **4**
- Address associated to the 1st button on left of the encoder = **8**
- Address associated to the 1st button on right of the mod. **PL228S** = **12**
- Address associated to the 1st button on left of the module **PL228S** = **16**

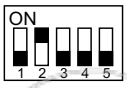
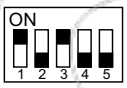
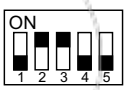
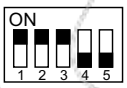
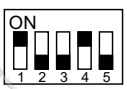
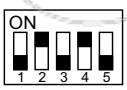
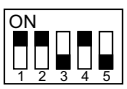
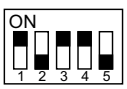
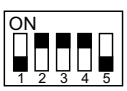


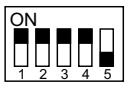
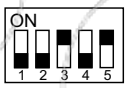
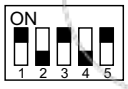
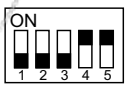
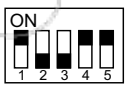
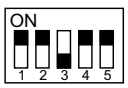
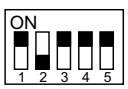
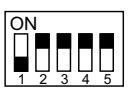
*Address of the 1st user on right (**IUC = 32+4 = 36**)*
*Address of the 1st user on left (**IUC = 32+8 = 40**)*

*Address of the 1st user on right (**IUC = 32+12 = 44**)*
*Address of the 1st user on left (**IUC = 32+16 = 48**)*

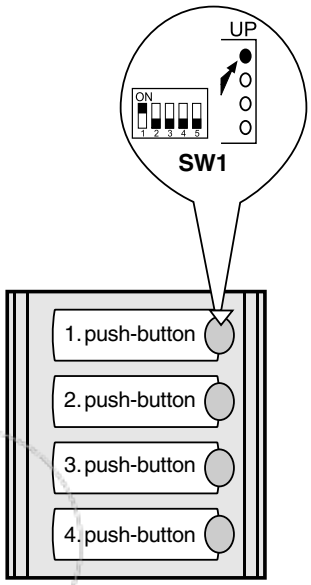
Example of order used to associate numbers with buttons



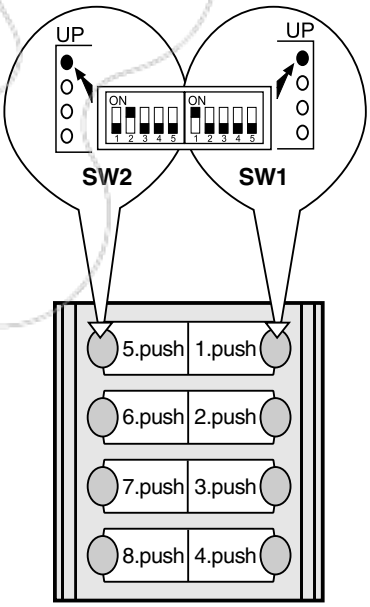
Code to be set	*Numbers associated with buttons- NAP*	Push-button micro-switch SW
4	*1st NAP = 4 2nd NAP = 5 3rd NAP = 6 4th NAP = 7*	
8	*1st NAP = 8 2nd NAP = 9 3rd NAP = 10 4th NAP = 11*	
12	*1st NAP = 12 2nd NAP = 13 3rd NAP = 14 4th NAP = 15*	
16	*1st NAP = 16 2nd NAP = 17 3rd NAP = 18 4th NAP =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

Code to be set	*Numbers associated with buttons- NAP*	Push-button micro-switch SW
60	*1st NAP = 60 2nd NAP = 61 3rd NAP = 62 4th NAP = 63*	
64	*1st NAP = 64 2nd NAP = 65 3rd NAP = 66 4th NAP = 67*	
68	*1st NAP = 68 2nd NAP = 69 3rd NAP = 70 4th NAP = 71*	
72	*1st NAP = 72 2nd NAP = 73 3rd NAP = 74 4th NAP = 75*	
76	*1st NAP = 76 2nd NAP = 77 3rd NAP = 78 4th NAP = 79*	
80	*1st NAP = 80 2nd NAP = 81 3rd NAP = 82 4th NAP = 83*	
84	*1st NAP = 84 2nd NAP = 85 3rd NAP = 86 4th NAP = 87*	
88	*1st NAP = 88 2nd NAP = 89 3rd NAP = 90 4th NAP = 91*	
92	*1st NAP = 92 2nd NAP = 93 3rd NAP = 94 4th NAP = 95*	
96	*1st NAP = 96 2nd NAP = 97 3rd NAP = 98 4th NAP = 99*	
100	*1st NAP = 100 2nd NAP = 101 3rd NAP = 102 4th NAP = 103*	
104	*1st NAP = 104 2nd NAP = 105 3rd NAP = 106 4th NAP = 107*	
108	*1st NAP = 108 2nd NAP = 109 3rd NAP = 110 4th NAP = 111*	
112	*1st NAP = 112 2nd NAP = 113 3rd NAP = 114 4th NAP = 115*	
116	*1st NAP = 116 2nd NAP = 117 3rd NAP = 118 4th NAP = 119*	
120	*1st NAP = 120 2nd NAP = 121 3rd NAP = 122 4th NAP = 123*	
124	*1st NAP = 124 2nd NAP = 125 3rd NAP = 126 4th NAP = 127*	

First button indication and relevant microswitch for coding



PL24S



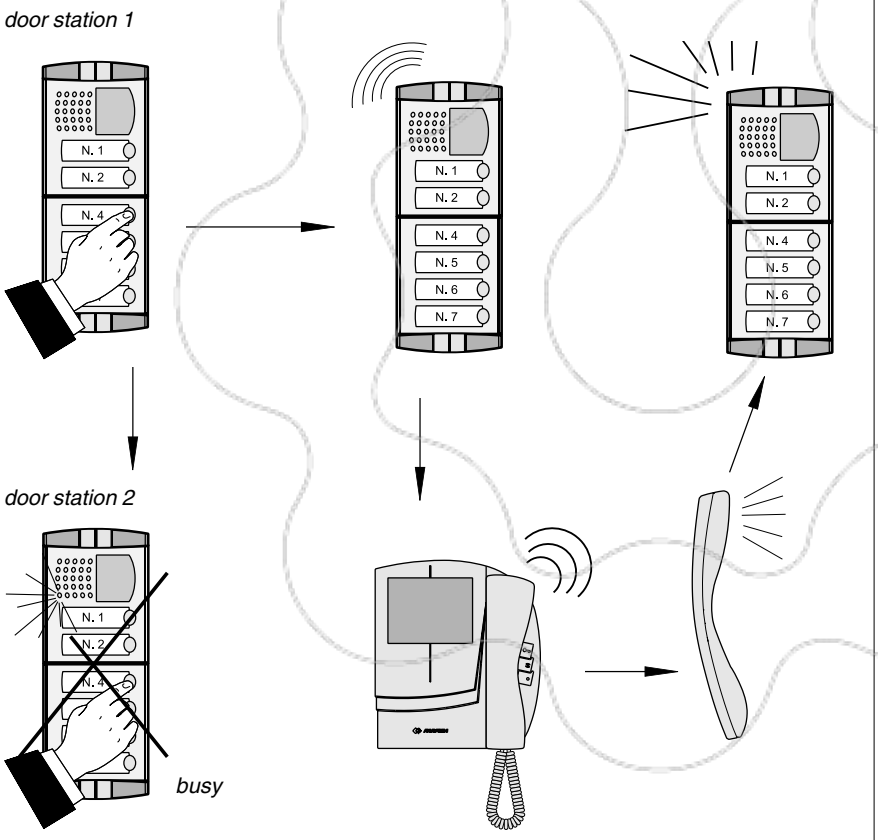
PL228S

DOOR STATIONS

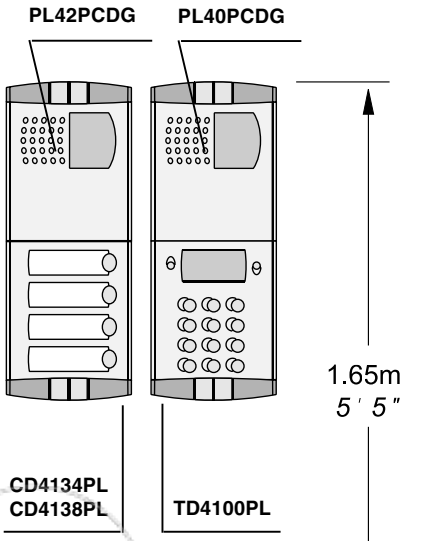
Operation

Check that the connections of the system are correct.
Connect the power supply unit to the mains to start operation.
Press the button that corresponds to the desired user. The free tone indicates that the call has been sent and the internal station rings for about 25 seconds.
The called user picks up the handset (or press ≡▷□ for Echos series) to interrupt the call and enable the external conversation for 60 seconds.
Both users hear the end tone 10 seconds before the conversation ends. Press the call button again to continue the conversation for other 60 seconds.
The system returns to the idle state when the user hangs up (or press ≡▷□ for Echos series).

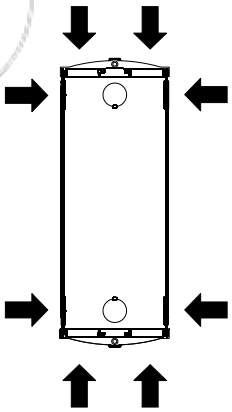
If no answer is received from the internal user when the call button is pressed, a 25-second wait is necessary before making other calls.
The door can only be opened while the conversation is in progress.
The busy indicator turns on when a conversation is in progress in case of systems with more than one main entrance or systems provided with the doorkeeper exchanger. Wait until the indicator turns off before making a call.
The external station hears the busy tone when calling a user who is having a conversation with a floor entrance or with a secondary staircase entrance and the busy indicator turns on for 5 seconds. Use the ◁ trimmer to adjust the tone volume.



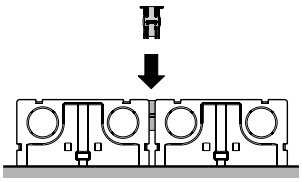
INSTALLATION

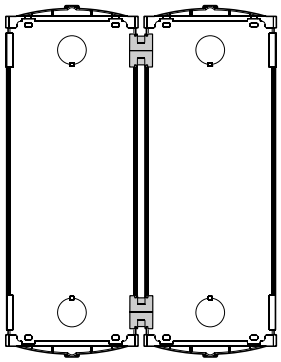


Place the push-button panel back box at a height of about 1.65m *(5' 5")* from the floor keeping the front edges flush-mounted and vertical to the finished plaster.
Position the camera in such a way that sunlight or other direct or reflected light sources with high intensity do not hit the camera lens.

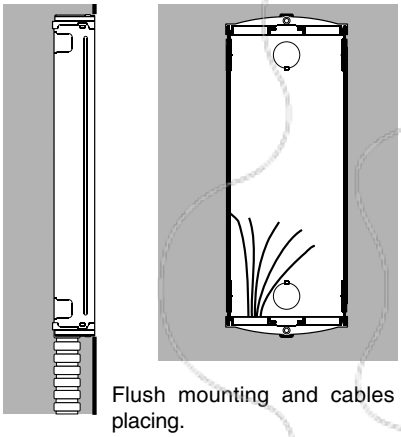


Openings for cables.

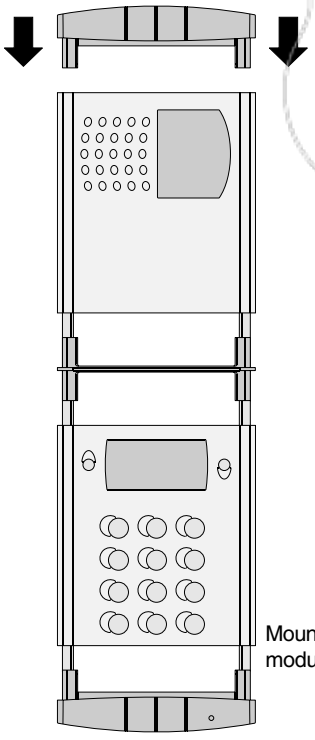




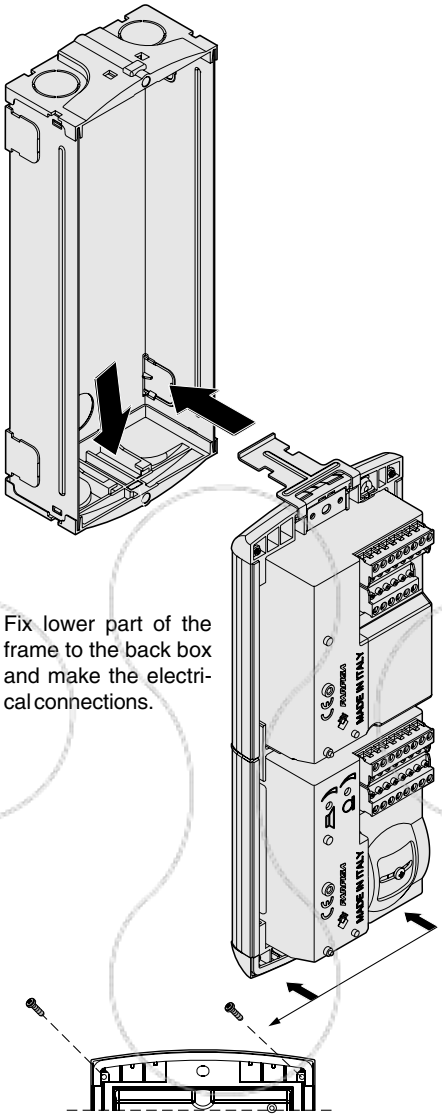
Insertion of spacers between back boxes. Spacers and cable bushing (not supplied with the products) must be inserted before brick work.



Flush mounting and cables placing.

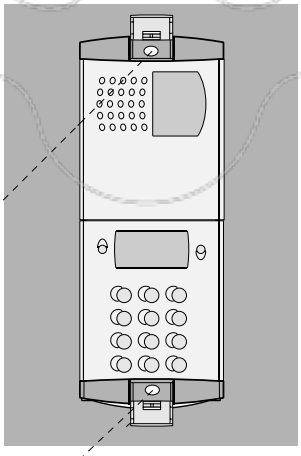


Mounting modules.



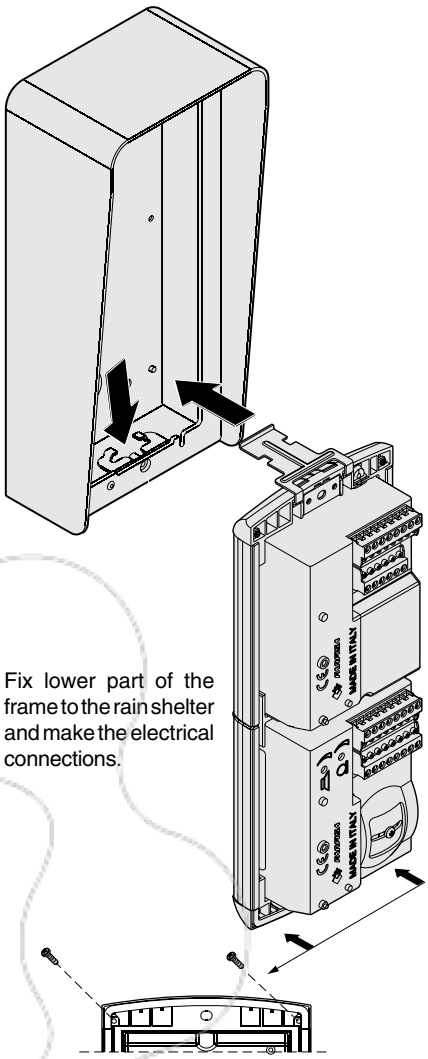
Fix lower part of the frame to the back box and make the electrical connections.

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



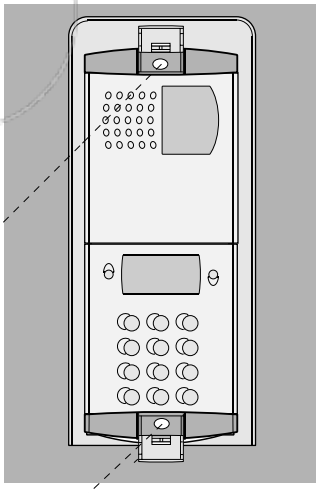
Fixing of frame to back box. Align the frame before tightening the screws.

Rain shelter



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

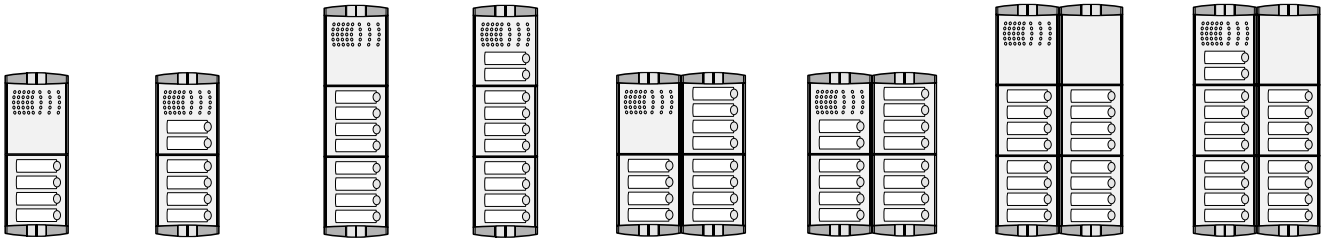
Fixing of the module frames on the upper side by the 2 small screws included in the rain shelter.



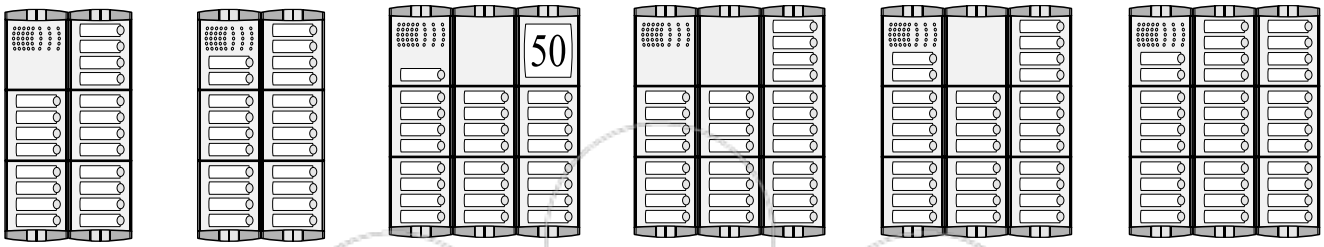
Fixing of frame to rain shelter. Align the frame before tightening the screws.

1 ROW PUSH-BUTTON PANEL

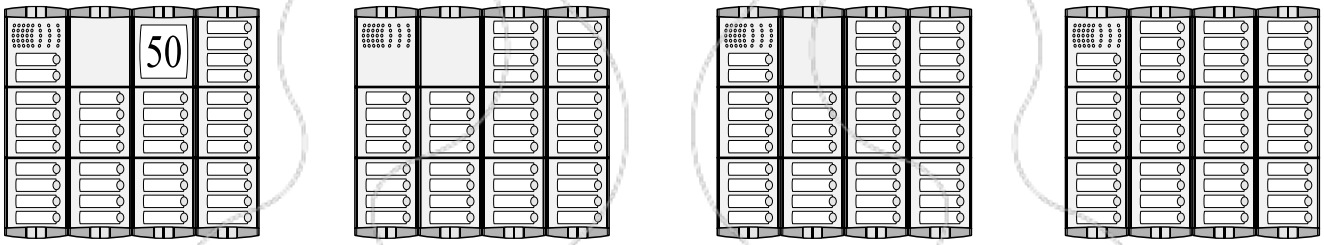
Examples of installations in intercom systems



4 buttons | 6 buttons | 8 buttons | 10 buttons | 12 buttons | 14 buttons | 16 buttons | 18 buttons



20 buttons | 22 buttons | 25 buttons | 28 buttons | 30 buttons | 34 buttons



38 buttons | 40 buttons | 42 buttons | 46 buttons

Composition board of INTERCOM push-button panels.

Nr calls	Composition and dimensions	Encoder module	Speaker module	Buttons, blank or number modules (*)		Back boxes and mod. frame (**)	Rain shelters
4	100x253.5x19 *(3 15/16" x 10" x 3/4")*	1 CD4134PL	1 PL10P	-	-	1 PL72	1 PL92
6		1 CD4134PL	1 PL12P	-	-	1 PL72	1 PL92
8	100x365x19 *(3 15/16" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL10P	1 PL24S	-	1 PL73	1 PL93
10		1 CD4134PL	1 PL12P	1 PL24S	-	1 PL73	1 PL93
12	200x253.5x19 *(7 7/8" x 10" x 3/4")*	1 CD4134PL	1 PL10P	2 PL24S	-	2 PL72	1 PL94
14		1 CD4134PL	1 PL12P	2 PL24S	-	2 PL72	1 PL94
16	200x365x19 *(7 7/8" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL10P	3 PL24S	1 PL20	2 PL73	1 PL96
18		1 CD4134PL	1 PL12P	3 PL24S	1 PL20	2 PL73	1 PL96
20		1 CD4134PL	1 PL10P	4 PL24S	-	2 PL73	1 PL96
22		1 CD4134PL	1 PL12P	4 PL24S	-	2 PL73	1 PL96
25	300x365x19 *(11 13/16" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL11P	5 PL24S	2 PL20	3 PL73	1 PL99
26		1 CD4134PL	1 PL12P	5 PL24S	2 PL20	3 PL73	1 PL99
28		1 CD4134PL	1 PL10P	6 PL24S	1 PL20	3 PL73	1 PL99
30		1 CD4134PL	1 PL12P	6 PL24S	1 PL20	3 PL73	1 PL99
34		1 CD4134PL	1 PL12P	7 PL24S	-	3 PL73	1 PL99
36	400x365x19 *(15 3/4" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL10P	8 PL24S	2 PL20	4 PL73	-
38		1 CD4134PL	1 PL12P	8 PL24S	2 PL20	4 PL73	-
40		1 CD4134PL	1 PL10P	9 PL24S	1 PL20	4 PL73	-
42		1 CD4134PL	1 PL12P	9 PL24S	1 PL20	4 PL73	-
46		1 CD2134PL	1 PL12P	10 PL24S	-	4 PL73	-

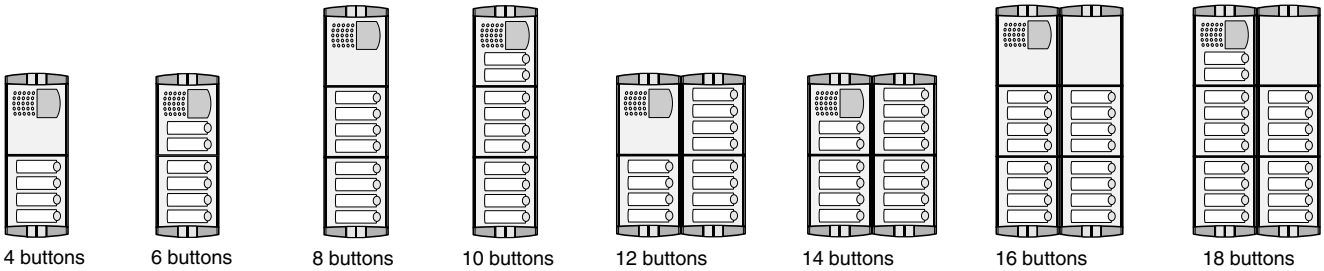
(**) Hood covers can be added, if necessary *(see page 5)*

(*) or PL50

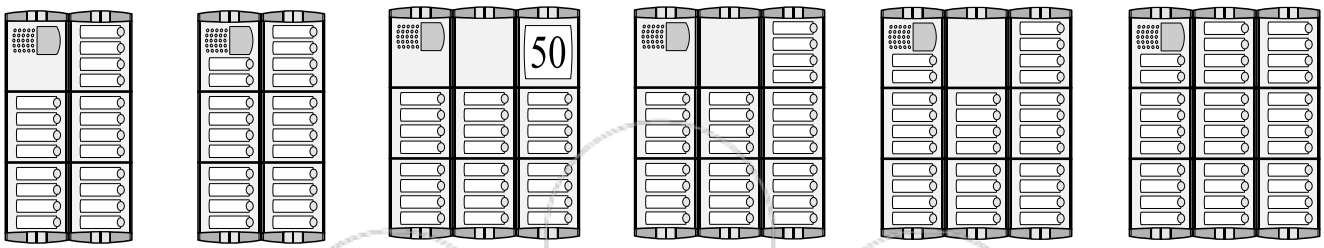
It replaces PL72 or PL73

1 ROW PUSH-BUTTON PANEL

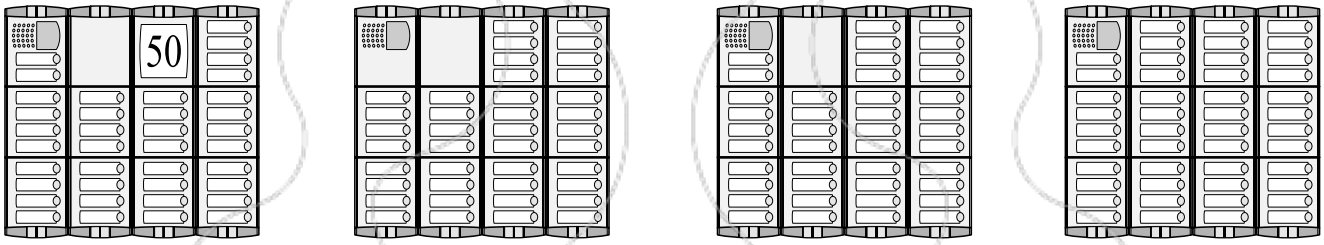
Examples of installations in videointercom systems



4 buttons | 6 buttons | 8 buttons | 10 buttons | 12 buttons | 14 buttons | 16 buttons | 18 buttons



20 buttons | 22 buttons | 24 buttons | 28 buttons | 30 buttons | 34 buttons



38 buttons | 40 buttons | 42 buttons | 46 buttons

Composition board of VIDEO INTERCOM 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
4	100x253.5x19 *(3 15/16" x 10" x 3/4")*	1 CD4134PL	1 PL40PDG	-	-	1 PL72	1 PL92
6		1 CD4134PL	1 PL42PDG	-	-	1 PL72	1 PL92
8	100x365x19 *(3 15/16" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL40PDG	1 PL24S	-	1 PL73	1 PL93
10		1 CD4134PL	1 PL42PDG	1 PL24S	-	1 PL73	1 PL93
12	200x253.5x19 *(7 7/8" x 10" x 3/4")*	1 CD4134PL	1 PL40PDG	2 PL24S	-	2 PL72	1 PL94
14		1 CD4134PL	1 PL42PDG	2 PL24S	-	2 PL72	1 PL94
16	200x365x19 *(7 7/8" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL40PDG	3 PL24S	1 PL20	2 PL73	1 PL96
18		1 CD4134PL	1 PL42PDG	3 PL24S	1 PL20	2 PL73	1 PL96
20		1 CD4134PL	1 PL40PDG	4 PL24S	-	2 PL73	1 PL96
22		1 CD4134PL	1 PL42PDG	4 PL24S	-	2 PL73	1 PL96
24	300x365x19 *(11 13/16" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL40PDG	5 PL24S	2 PL20	3 PL73	1 PL99
26		1 CD4134PL	1 PL42PDG	5 PL24S	2 PL20	3 PL73	1 PL99
28		1 CD4134PL	1 PL40PDG	6 PL24S	1 PL20	3 PL73	1 PL99
30		1 CD4134PL	1 PL42PDG	6 PL24S	1 PL20	3 PL73	1 PL99
34		1 CD4134PL	1 PL42PDG	7 PL24S	-	3 PL73	1 PL99
36	400x365x19 *(15 3/4" x 14 3/8" x 3/4")*	1 CD4134PL	1 PL40PDG	8 PL24S	2 PL20	4 PL73	-
38		1 CD4134PL	1 PL42PDG	8 PL24S	2 PL20	4 PL73	-
40		1 CD4134PL	1 PL40PDG	9 PL24S	1 PL20	4 PL73	-
42		1 CD4134PL	1 PL42PDG	9 PL24S	1 PL20	4 PL73	-
46		1 CD2134PL	1 PL42PDG	10 PL24S	-	4 PL73	-

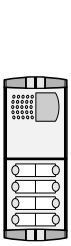
(**) Hood covers can be added, if necessary *(see page 5)*

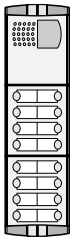
(*) or PL50

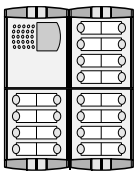
It replaces PL72 or PL73

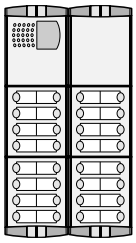
2 ROW PUSH-BUTTON PANEL

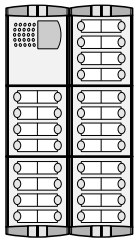
Examples of installations in videointercom systems

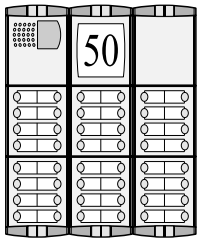

8 buttons


16 buttons

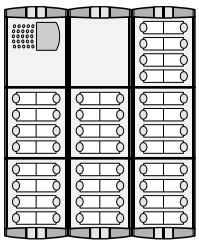

24 buttons

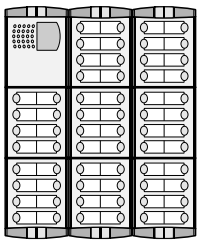

32 buttons

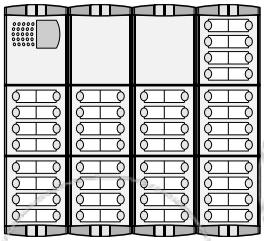

40 buttons

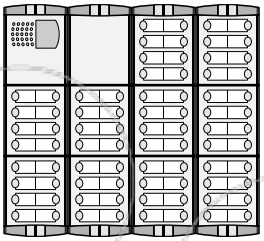


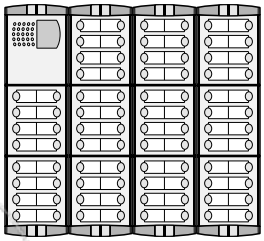
48 buttons


56 buttons


64 buttons


72 buttons


80 buttons


88 buttons

Composition board of VIDEO INTERCOM 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
8	100x253.5x19 *(3 15/16" x 10" x 3/4")*	1 CD4138PL	1 PL40PCDG	-	-	1 PL72	1 PL92
16	100x365x19 *(3 15/16" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL40PCDG	1 PL228S	-	1 PL73	1 PL93
24	200x253.5x19 *(7 7/8" x 10" x 3/4")*	1 CD4138PL	1 PL40PCDG	2 PL228S	-	2 PL72	1 PL94
32	200x365x19 *(7 7/8" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL40PCDG	3 PL228S	1 PL20	2 PL73	1 PL96
40		1 CD4138PL	1 PL40PCDG	4 PL228S	-	2 PL73	1 PL96
48	300x365x19 *(11 13/16" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL40PCDG	5 PL228S	2 PL20	3 PL73	1 PL99
56		1 CD4138PL	1 PL40PCDG	6 PL228S	1 PL20	3 PL73	1 PL99
64		1 CD4138PL	1 PL40PCDG	7 PL228S	-	3 PL73	1 PL99
72	400x365x19 *(15 3/4" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL40PCDG	8 PL228S	2 PL20	4 PL73	-
80		1 CD4138PL	1 PL40PCDG	9 PL228S	1 PL20	4 PL73	-
88		1 CD4138PL	1 PL40PCDG	10 PL228S	-	4 PL73	-

Composition board of INTERCOM push-button panels.

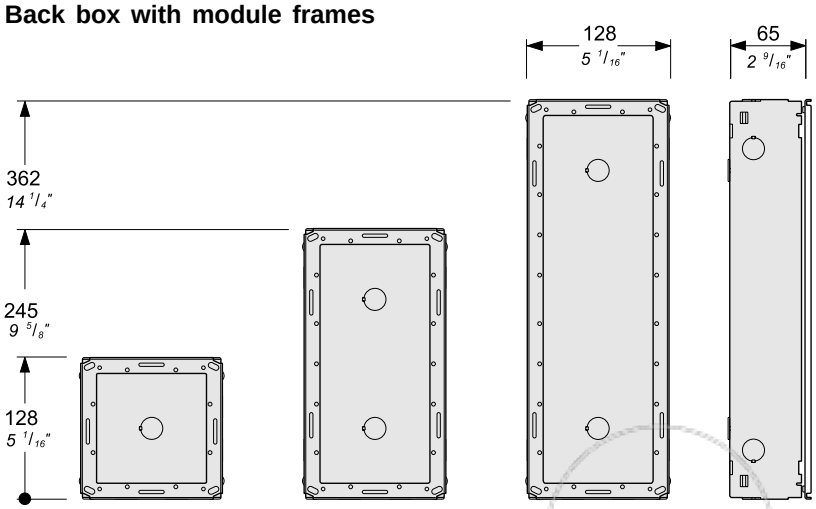
Nr calls	Composition and dimensions	Encoder module	Speaker module	Buttons, blank or number modules (*)		Back boxes and mod. frame (**)	Rain shelters
8	100x253.5x19 *(3 15/16" x 10" x 3/4")*	1 CD4138PL	1 PL10P	-	-	1 PL72	1 PL92
10		1 CD4138PL	1 PL122P	-	-	1 PL72	1 PL92
18	100x365x19 *(3 15/16" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL122P	1 PL228S	-	1 PL73	1 PL93
26	200x253.5x19 *(7 7/8" x 10" x 3/4")*	1 CD4138PL	1 PL122P	2 PL228S	-	2 PL72	1 PL94
34	200x365x19 *(7 7/8" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL122P	3 PL228S	1 PL20	2 PL73	1 PL96
42		1 CD4138PL	1 PL122P	4 PL228S	-	2 PL73	1 PL96
50	300x365x19 *(11 13/16" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL122P	5 PL228S	2 PL20	3 PL73	1 PL99
58		1 CD4138PL	1 PL122P	6 PL228S	1 PL20	3 PL73	1 PL99
66		1 CD4138PL	1 PL122P	7 PL228S	-	3 PL73	1 PL99
74	400x365x19 *(15 3/4" x 14 3/8" x 3/4")*	1 CD4138PL	1 PL122P	8 PL228S	2 PL20	4 PL73	-
82		1 CD4138PL	1 PL122P	9 PL228S	1 PL20	4 PL73	-
90		1 CD4138PL	1 PL122P	10 PL228S	-	4 PL73	-

(**) Hood covers can be added, if necessary *(see page 5)*

(*) or PL50

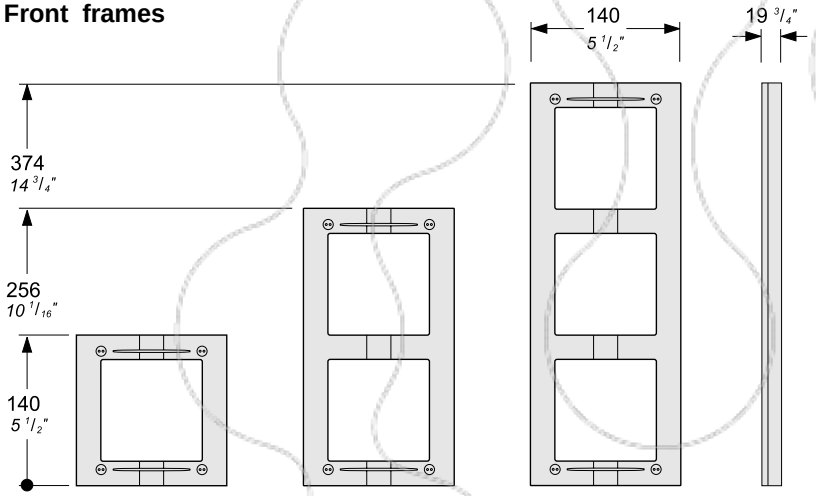
It replaces PL72 or PL73

Back box with module frames



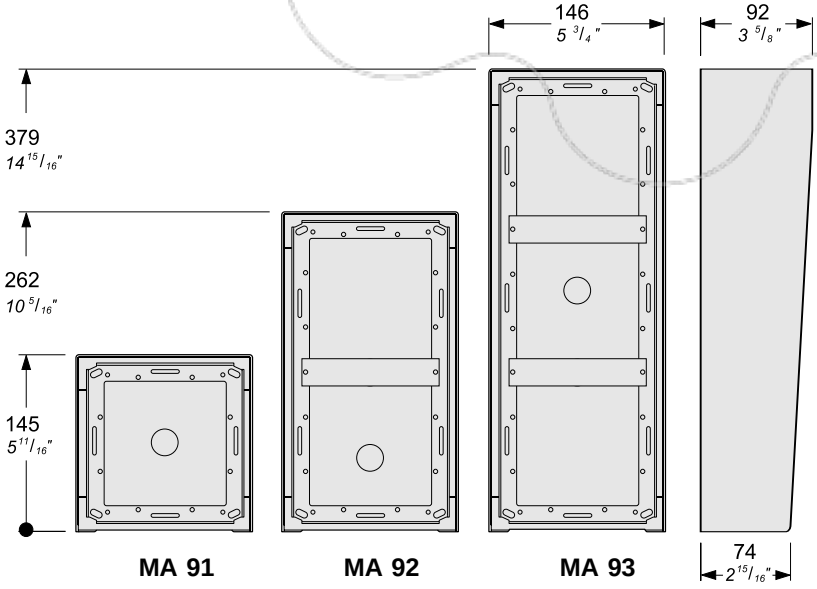
MA 71 MA 72 MA 73

Front frames



MA 61 MA 62 MA 63

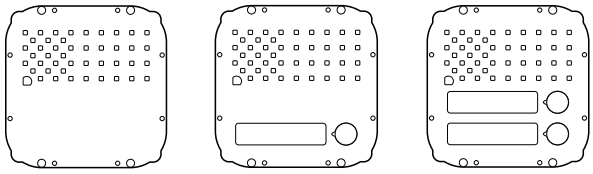
Rain shelters with module frames



MA 91 MA 92 MA 93

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, module frames, die-cast aluminium decorative frames, button modules, and modules with built-in speaker unit (with or without camera).
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 push-button elements have been developed to allow both for horizontal and vertical configuration.

Modules with integrated audio amplifier



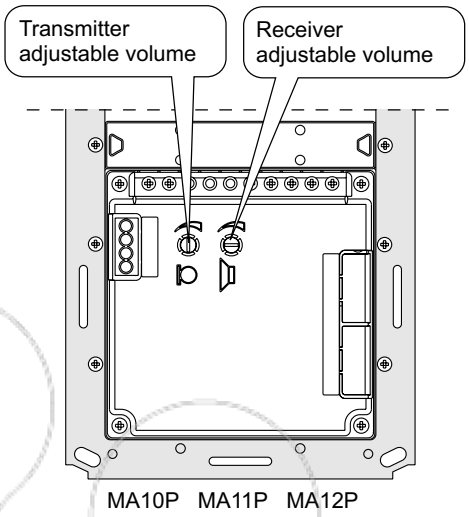
MA 10P. Amplified speaker unit with volume adjustment of 2 channels (reception and transmission), steel front plate and red operation LED.

MA 11P. Same as MA 10P, with call button and name plate panel with breakproof transparent screen and green LED backlight.

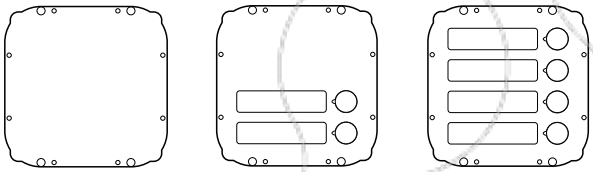
MA 12P. With 2 call buttons.

Audio adjustments

If necessary, it is possible to adjust the volume of the 2 channels audio opportunely varying the external knobs.



Push-button modules



MA 20. Blank module in stainless steel.

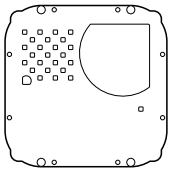
MA 22S. Module with 2 call buttons and name plate panel with breakproof transparent screen and green LED backlight. *See page 32.*

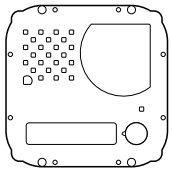
MA 24S. With 4 call buttons.

Technical characteristics of MATRIX modules terminal boards

MA10P	MA11P	MA12P	MA20	MA22S	MA24S	MA42DG MA42CDG	MA43DG MA43CDG	
1	1	1				1	1	Reception audio line
2	2	2				2	2	Transmission audio line
3	3	3				3	3	Power supply input for electric door speaker (6÷12Vdc)
4	4	4				4	4	Audio ground
-	-	-	-	-	-	-	-	General ground
A	A	A	A	A	A			AC or DC power supply input for nameplate Led (12Vac-dc)
	C	C					C	Call push-buttons common
	P1	P1					P	Call push-button
		P2						Call push-button
								Call push-button
								Call push-button
						V	V	Video signal output (coaxial cable)
						M	M	Video ground (coaxial shield)
						+	+	Positive voltage input for camera and Led's (12Vdc)
						EC	EC	Camera enable input (ground command)
L-	L-	L-				L-	L-	Alternated power supply input or ground for service Led
L+	L+	L+				L+	L+	AC or DC power supply input for service Led (12Vac-dc)

Video modules with integrated audio amplifier





MA 42DG. Modules complete with:
- CCD camera with autoiris, fixed 3.6mm lens and 6 infrared LED's.
- amplified speaker unit with volume adjustment of 2 channels (reception and transmission)
- steel front plate with breakproof transparent screen
- horizontal and vertical adjustments
- red operation LED.

MA 42CDG.
Colour version of model **MA42DG**.

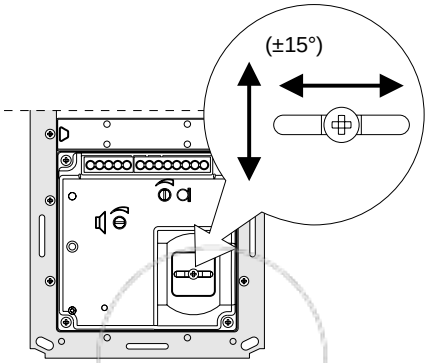
MA 43DG.
Same as **MA42DG**, with call button and name plate panel with breakproof transparent screen and green LED backlighting.

MA 43CDG.
Colour version of model **MA43DG**.

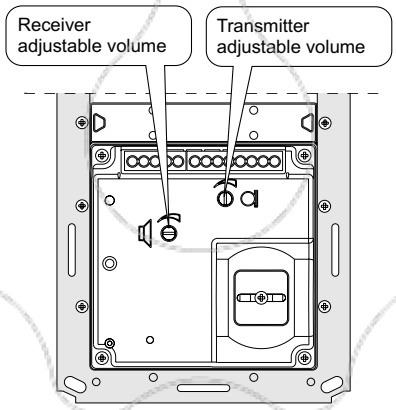
Terminals
1 Reception audio line
2 Transmission audio line
3 Power supply input for electric door speaker (6÷12Vdc)
4 Audio ground
- Ground for Led
+ Positive voltage input for camera and Led (12Vdc)
C Call push-buttons common
P Call push-button
V Video signal output (coaxial cable)
M Video ground (coaxial shield)
EC Camera enable input *
L- Negative voltage input for service Led
L+ Positive voltage input for service Led

* **Operating timed mode** if connected to the EC terminal of the push-button panel or **continuous mode** if grounded.

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



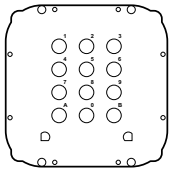
Audio adjustments
If necessary, it is possible to adjust the volume of the 2 audio channels opportunely varying the external knobs.



MA42 MA42C MA43 MA43C

Technical data	MA42DG-MA43DG	MA42CDG-MA43CDG
Power supply	12±1Vdc	12±1Vdc
Operating current	0.2A	0.4A
Video signal output	1Vpp on 75Ω	1Vpp on 75Ω
Video signal standard	CCIR	PAL
Minimum illumination	2 Lux	2.5 Lux
White balance	-	auto
Sensor	CCD 1/4" B/W	CCD 1/3" colour
Number of pixels	291,000	291,000
Horizontal frequency	15,625Hz	15,625Hz
Vertical frequency	50Hz	50Hz
Lens	3.6mm; F5	4mm; F4
Focus	0.1m ÷ ∞	0.6m ÷ ∞
Autoiris	electronic	electronic
Horizontal adjustment	± 15°	± 15°
Vertical adjustment	± 15°	± 15°
Operating temperature	-10°÷+40°C	-10°÷+40°C
Max. permissible humidity	80%RH	80%RH

ACCESS CONTROL KEYPAD

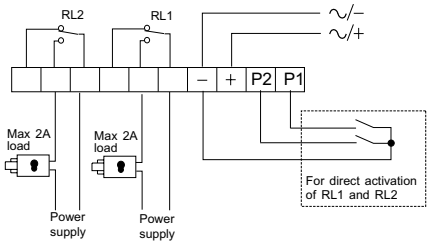


FC 52MA. Electronic keypad with 12 keys and 2 relays for lock release and access control of door stations.
12 programmable access codes for each relay. Programmable door opening time from 1 up 99 sec. for each relay (or bistable operation of relay). Acoustic and visual confirmation for entered keys, accepted programming and for wrong codes.

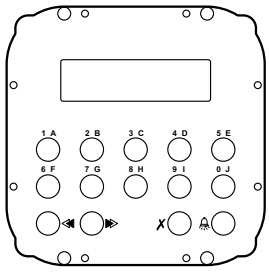
Technical data

Power supply:	12Vac/dc ±10%
Standby current:	0.02A
Max. current consumption:	0.1A
Contact ratings:	12Vac - 2A
Numbers of codes for relay 1:	12 + direct activation
Numbers of codes for relay 2:	12 + direct activation
Activation time for each relay:	from 1 to 99 sec. (or bistable)
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	85% RH
Degree of protection	IP 45

Terminals
2 normally closed contact of relay 2
normally open contact of relay 2
common contact of relay 2
1 normally closed contact of relay 1
normally open contact of relay 1
common contact of relay 1
– ground or alternating voltage input
+ positive or alternating voltage input
P2 activation of the relay 2; if momentarily connected to ground it allows the activation for the programmed time
P1 activation of the relay 1; if momentarily connected to ground it allows the activation for the programmed time



DIGITAL PUSH-BUTTON PANEL



TD4100MA. Matrix series anti-vandalism steel push-button panel with 14 steel buttons and alphanumerical LCD. Used to dial and send calls over FN4000 digital line.

Technical features

Power supply	12Vdc ± 1
Operating current	0.05A
Maximum absorption	0.12A
Door-opening time	3 / 6 sec.
LCD	2 lines x 16 characters
Number of calls (hypothetical)	9999
Memory	250 names
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

Terminals

F1 audio from internal stations
F2 audio to internal stations
- ground
+ +12Vdc power supply input
DB serial data bus
P1 direct call button input to the exchanger or to an user
EC output command for a analog exchanger (grounded contact upon call and during conversation)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

1 audio receiver
2 audio transmitter
3 +12Vdc (0.2A) power supply output
4 audio ground

Terminal board for electronic index connection

CS clock signal
DS data input
V+ +12Vdc (0.2A) power supply output
GN ground

PROGRAMMING

To program you must:

- Move the jumper **J1** on the back of the push-button panel from **A** to **B**; the display shows *"Programming / type:* ".
- Dial the requested programming code (*see table*) and press 🔔 to confirm.
- At the end of each programming phase, move the jumper **J1** back to **A**.

Positions of jumper J1
A = operation mode
B = programming mode

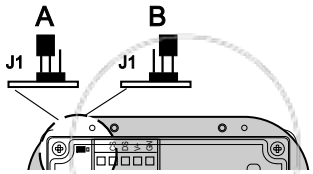


Table 1.
Programming phases

0000	Entry of codes for door lock release / address of push-button P1 / address of external station PE
0001	Entry-modification-erasing of names in the electronic index
0002	Language selection
0003	System programming
0004	Entry of text to be shown on the display
0005	Loading names from PC
0006	Alphabetical ordering of names

Entry of codes for door lock / address push-button P1 / address of external station PE *(code 0000)*

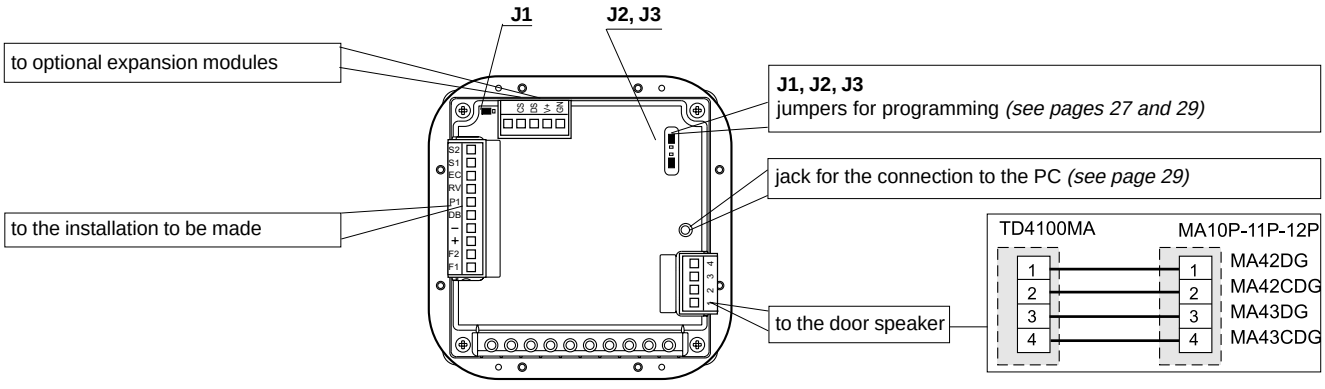
Enter the code **0000** to access the "**entry of door lock codes"** mode. The display shows *"PASSWORD 0 / ".*

- 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 automatically the last code (PASSWORD 15) you enter the **"entry of address P1 code"** mode. You can now store the number of the internal station that can be called directly by pushing a button connected between terminals **P1** and **-**.
- Press 🔔; the display shows *"P1 / 1000".*
- Press ✗ 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.
- Press 🔔 to confirm and go to the **"entry of address PE code";** the display shows *"PE / ".* You can enter the address for the external station. The push-button panels can be coded with numbers from 9950 to 9979.
- Dial the addresses and press 🔔 to confirm. You go back address to the "**entry of door lock codes"** mode. The display shows the code stored as password 0 (*PASSWORD 0 /*stored code)".
- To exit programming move the jumper **J1** back to the original position (from B to A).

Note. To delete a password or the address associated with P1 and PE it is necessary first to select the code you want to erase and that press ✗ and 🔔 again.

Entry / modification / erasing of names in the electronic index *(code 0001)*

You can enter 32 characters, of which 28 characters for the name and the last 4 characters on bottom right of display are for the internal station number. When searching for characters, the display shows uppercase letters, low case letters, numbers, characters . <> and space in a sequence.
Enter the names from the top and from left to right. You must enter at least a number in the last place on bottom right of the display to save the name (see "**deleting a name**"). The push-button panel reorders the list in alphabetical order every time you enter and confirm a name.



Function of buttons

🔔 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

Entry of names

- Move the jumper **J1** from **A** to **B**.
- Enter the code **0001**; the display shows the first name. The display is empty if no names are programmed.
- Press ▶▶ or ◀◀ to select the character for the first cell; press ✗ to go to the second cell; press ▶▶ or ◀◀ to select the character for the second cell; continue until you have entered the complete name and code. Press ✗ 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, move the jumper back to the original position (from **B** to **A**). 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 (max number of users that can be stored) the display shows "*waiting"* and an automatic status bar. After a few seconds the display shows *"Programming / type:* " and you can continue with programming.
You can enter 2 or more names with the same call number (i.e. different family names in the same apartment).

- Modification of names

- Press 🔔 to search for the name you want to modify; (hold the button pressed for quick searching).
- Press ✗ to go to the character you want to modify.
- Select the character with ▶▶ (forward) ◀◀ (backward). Enter a space to delete a letter.
- Repeat the operation until you have completed the name modification.
- Once you have completed the modification, hold ✗ pressed until the display shows *"STORE USER / YES < > NO"* Press ◀◀ to confirm or ▶▶ to modify the name again.

- Add names to the list

To add a new name to the existing list press 🔔 to scroll the list; 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.

- Delete names from the list

- Press 🔔 to search for the name you want to delete; (hold the button pressed for quick searching).
- Press ✗ to go to the last cell (bottom right); enter a space to delete the existing number.
- Press ✗ again; the display shows *"DELETE USER / YES < > 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 0002)*
You can choose the language from 6 different options (Italian, English, French, German, Spanish and Portuguese) in operation mode.

- Move the jumper **J1** from **A** to **B**.
- Enter the code **0002**; 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: "*.

System programming *(code 0003)*
You can change or activate the functions of the push-button panel *(see table).*

- Move the jumper **J1** from **A** to **B**.
- Enter the code **0003**; the display shows *"bit 0 = 0 / 0 < > 1"* in case of first programming or *"bit 0 = 1 / 0 < > 1"* if changed in a previous programming.
- Press ▶▶ to select 1 or ◀◀ to select 0.
- Press 🔔 to confirm and go to the next bit (see code table with descriptions).
- Once you have confirmed the value of the last bit (bit7), the display shows *"Programming / type:* " and you can continue with programming.

- Enabling of alphanumerical calling mode (bit 4)
If the installation is divided into several blocks, it could be useful call each block with a letter instead of a number (e.g. block "A", block "B", etc.). If you program such a operating mode the number of thousands in the user code is displayed as a letter and not as a number (1=A, 2=B, 3=C, 4=D, 5=E, 6=F, 7=G, 8=H, 9=I, 0=J). Please consider that it is only a question of displaying because the codes send to the users are always numerical codes, really the user identified by the code "B001" is stored as user 2001 and this code must be programmed on its intercom, videointercom or floor decoding module. It is still important to note that if an alphanumeric code, with less than 4 digit, is entered on the keypad, the system automatically fills the empty numbers with zeros, for instance entering only the code "E" the display shows the code "E000" and the system transmits the code 5000. In the same way if the code "E2" is entered the display shows "E002" and the system transmits the code 5002, therefore the user you want to be identified by the code "E002" must be programmed as user 5002.

Table 2 - System programming codes *(code 0003)*

Programming code	*Function description*	*Default settings*	*Value entered with buttons* ◀◀ = 0	▶▶ = 1
bit 0	door lock activation time	3 sec.	3 sec.	6 seconds
bit 1	activation upon call from internal station *(1)*	NO	NO	YES
bit 2	door lock activation with ✗ *(2)*	NO	NO	YES
bit 3	not used	-	-	-
bit 4	call numbers displayed with initial letter *(see relative paragraph)*	NO	NO	YES
bit 5	activation of personalised initial screen *(3)*	NO	NO	YES
bit 6	deactivation of ACI FARFISA and activation of personalised text	NO	NO	YES
bit 7	deactivation/activation of tone generator	NO	NO	YES

(1) This function allows the internal stations to press the door lock button, start a conversation with the external station (in case of more external stations in parallel the function must be activated on one external station only) and activate the door lock by pressing the button again.

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

(3) You can alternate *"ACI FARFISA"* with the personalised text (see **"Personalisation of text to be shown on the display"**).

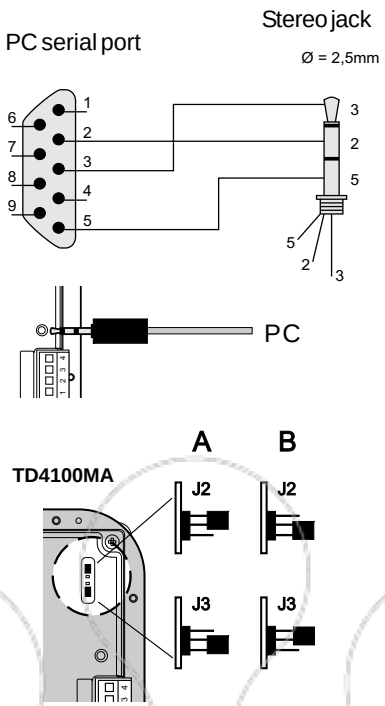
Personalisation of text to be shown on the display *(code 0004)*
You can modify the text shown on the display during normal operation or idle state. To display it program bit5 (**"system programming**").

- Move the jumper **J1** from **A** to **B**.
- Enter the code **0004**; the display shows *"??* ", 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:* " and you can continue with programming.

You must program properly bit5 in system programming phase to enable to display it.

Loading names from PC
You can load names in the electronic index 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 **J2** and **J3** on the back of the push-button panel from **A** to **B** (also the jumper **J1** must be on **B**).
- Turn ON the PC and then the push-button panel.
- On the push-button panel enter the code **0005**; the display shows *"TD4100MA > PC / in progress 0".*
- Download the names from the PC within 15 seconds; the display shows *"TD4100MA < —> PC / in progress 1"*, "*TD4100MA <—> 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 PC and push-button panel.
- Move the jumpers **J2** and **J3** back to **A**; move the jumper **J1** back to **A** if you have completed programming, otherwise continue with programming.



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

- Enter the code **0006**; 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: "*).

Return to operation mode
Once you have completed programming, move the jumper **J1** back to **A**; the display shows "*ACI FARFISA / press < >*" or the text you have entered during programming (see **"Personalisation of text to be shown on the display**").

Tone table

Free - The internal station you have called is ringing

Hold-on - The exchanger has put the push-button panel on hold

End of conversation - 10 seconds before conversation ends

Confirmation - Sending of call, door lock opening during conversation and acknowledgement of door lock code

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 /*----"; in case of error press ✗ and dial the correct number. Press 🔔 to make the call. A tone and the text "*calling / ----*" confirm that the call has been made.
If the user is busy or if the user code does not exist the display shows "*busy/ "* for 3 seconds.
If the user exists you hear the ringing tone and the display shows "*ringing / ----".*
You can select the internal station from the names in the electronic index. Press ◀◀ or ▶▶ to search for the internal station and press 🔔 to send the call.
The called intercom rings for about 25 seconds.

The called user picks up the handset to interrupt the call and enables the conversation with the external station for 60 seconds. The display shows "*connection /---- ".*

The text on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 60 seconds press 🔔 again.
Press the intercom button to release the door lock. Door lock activation time is 3 seconds (or 6 seconds if properly programmed).
Replace the handset 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.

In installations **with doorkeeper exchanger** in "**Day**" mode without direct dialling function, all calls are sent to the exchanger.
Once the call is received, the operator can put the push-button panel on hold and call the internal station; the push-button display shows *"hold-on / ".*

If the operator connects the internal station with the push-button panel, the display returns to the conversation status. The number displayed on the push-button panel is the number of the internal station called by the operator and it may not correspond to the called number because of the call transfer function.

Door lock release

The door lock, even if in busy state, can be released from the push-button panel by dialling one of the 16 four digit personal access codes you have stored.

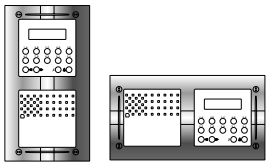
Door lock activation

- 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).

Composition MATRIX digital push-button panel

Audio composition

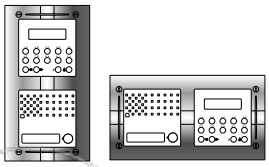
traditional



vertical horizontal

Composed of:
1 TD4100MA
1 MA10P
1 MA62
1 MA72

with push-button for the direct call of an user

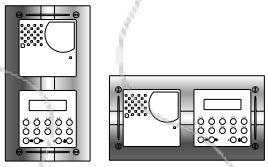


vertical horizontal

Composed of:
1 TD4100MA
1 MA11P
1 MA62
1 MA72

Audio-video composition

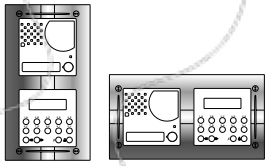
traditional



vertical horizontal

Composed of:
1 TD4100MA
1 MA42DG or MA42CDG
1 MA62
1 MA72

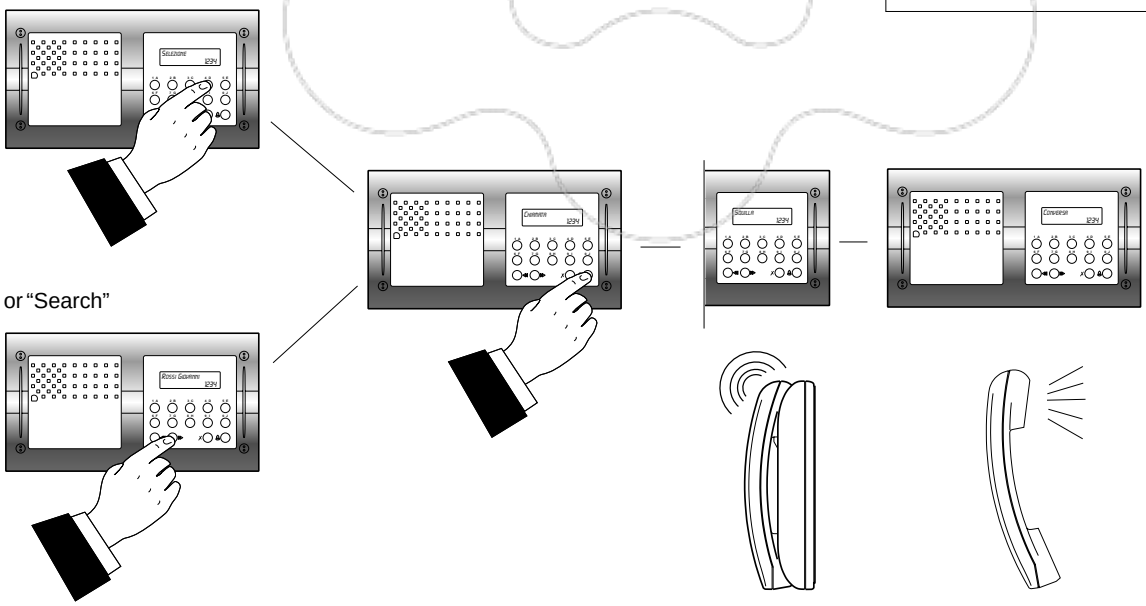
with push-button for the direct call of an user



vertical horizontal

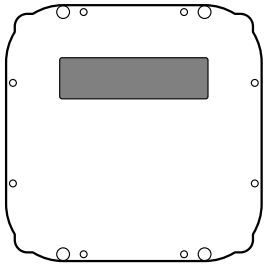
Composed of:
1 TD4100MA
1 MA43DG or MA43CDG
1 MA62
1 MA72

"Dialling"



or "Search"

DIGITAL ENCODER



CD4130MA.

It allows for using **Matrix** conventional push-button panels in **FN4000** digital systems. Complete with busy state signal.

Technical features

Power supply:	12Vdc ± 1
Operating current:	0.1A
Maximum number of users:	63
Door-opening time:	3 sec.
Dimensions:	1 module
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH

Terminals

F1 audio from internal stations
F2 audio to internal stations
- general ground
+ +12Vdc power input
DB serial data bus
EC output command for an analog exchanger (grounded contact upon call and during conversation)
SV video ON command (temporary ground contact - 0.5 seconds approx.)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

1 audio receiver
2 audio transmitter
3 +12Vdc (0.2A) power output
4 audio ground
P1 1st call push-button *
P2 2nd call push-button *

* To be connected only if included in the push-button panel composition.

The **CD4130MA** digital encoder can manage max. 63 users. If more calls are necessary, another **CD4130MA** must be connected in parallel and properly programmed.

Programming

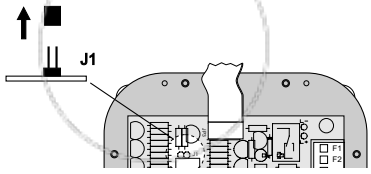
The **CD4130MA** digital encoder can be programmed to change the first user code (0 by default). Programming must be made only if more than 63 users are present (the second **CD4130MA** must be coded starting from number **63** or **higher**) or in installations with multiple entrances and in the presence of digital exchanger. In this case the decoding modules and the digital exchanger must be compatibly programmed.

Attention. The code of the first programmed user is not accessible by the system.

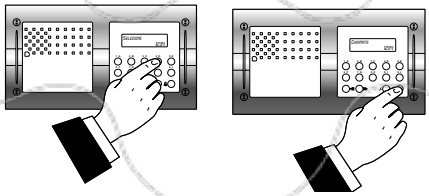
For example: the first **CD4130MA** with user codes from 0 to 63 (default programming; accessible codes are from 1 to 63), the second **CD4130MA** with user codes from 63 to 126 (accessible codes are from 64 to 126). In case of multiple entrances, the first **CD4130MA** with user codes from 100 to 163 (accessible codes are from 101 to 163), the second **CD4130MA** with user codes from 200 to 263 (accessible codes are from 201 to 263).

Programming can be made with the **TD4100MA** digital push-button panel or the **PDX4000** doorkeeper exchanger (if present in the installation) as follows:

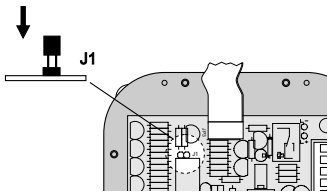
- unloosen the 4 screws to remove the cover
- remove jumper **J1** to free the 2 poles



- dial the first user code on the **TD4100MA** push-button panel keypad or the **PDX4000** doorkeeper exchanger and press Enter; the speaker unit generates an acknowledge tone



- insert jumper **J1** to short-circuit the 2 poles

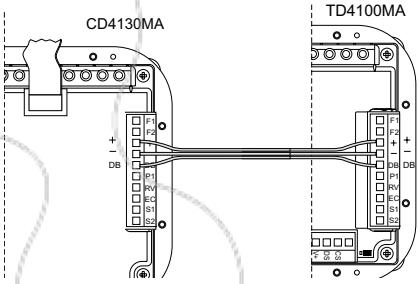


- make a call to a user to check the number
- replace the cover.

The last number is stored if more codes are sent.

If the system does not include a **TD4100MA** push-button panel or a **PDX4000** doorkeeper exchanger, they can be temporarily added for programming by connecting the **+**, **-** and **DB** terminals to the corresponding terminals of the digital encoder (as shown in the drawing of the right side).

Connection of a push-button panel TD4100MA for programming the encoder CD4130MA



Programming of the operating modes

- Remove the **J1** jumper for entering in the programming mode.
- Dial from the keypad of **TD4100MA** or **PDX4000** the required code (see table 1) and press button “enter”; an acknowledge tone will be heard.
- For exit to the programming mode insert the **J1** jumper.

In the case of several codes dialled, only the last one is stored.

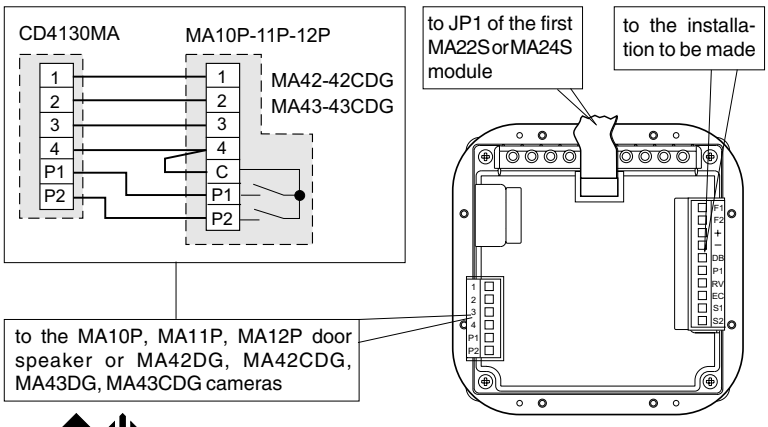


Table 1. Operating modes

Operating mode	Codes to dial			
	9990	**9991**	**9994**	**9995**
Relay activation time	3 sec.	6 sec.	3 sec.	6 sec.
Monitoring from internal station to door station	No	No	Yes *	Yes *

* Enabling this function from any internal station it is possible, by pressing the button, get the connection with the door station and activate the lock release pressing again the button.

PUSH-BUTTON MODULES WITH INTEGRATED ENCODING BOARD

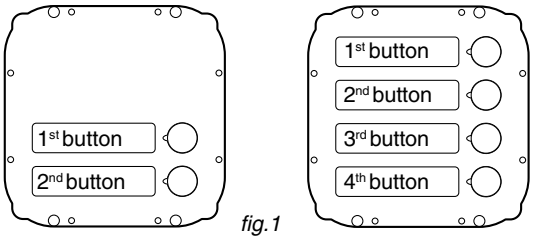


fig.1

The button modules with integrated encoding board, thanks to the connection to the encoder module CD4130MA, allow the calls in FN4000 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.

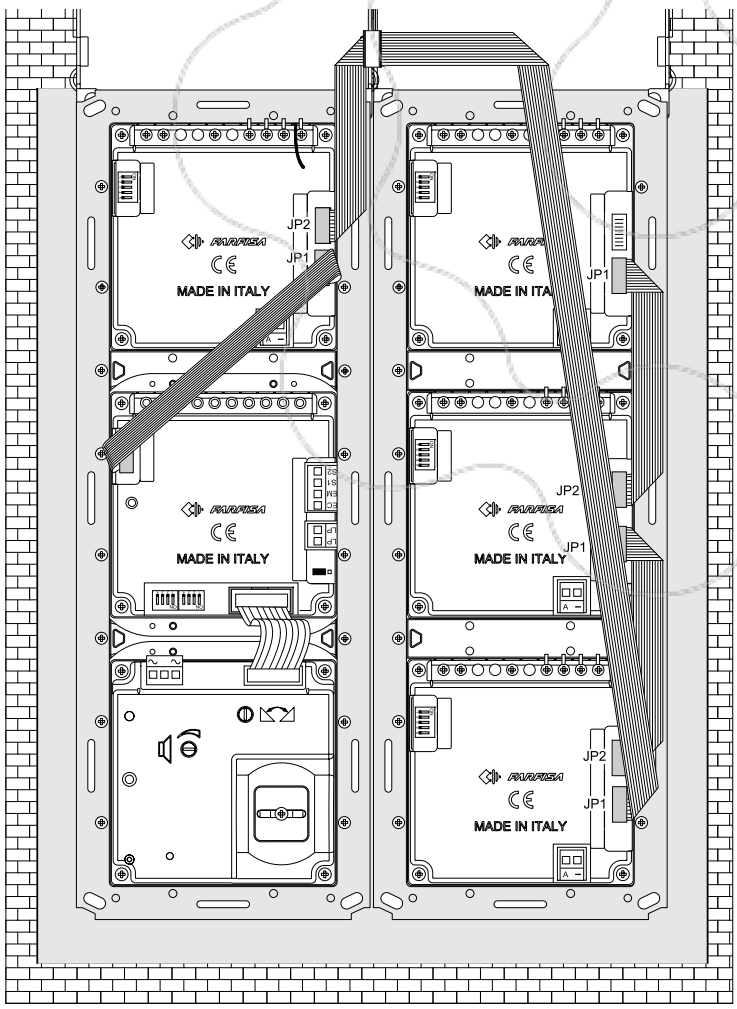
Terminals

A AC or DC power supply input for nameplate Led (13Vac or dc)

– AC power supply or ground input for nameplate 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 code set on the microswitches (*see tables on the following page*) determines the address associate to the 1st push-button of the module (*see fig.1*); the other push-buttons on the module automatically are associated the next addresses.

Important notes

- Pay attention when program code 0 (address interval 0-3) because in this case the first push-button from the top does not call any user. This is due to the fact that the system does not recognize the address **0 (zero)** as a valid address.
- In the case of using module MA22S, which has only 2 push-buttons, addresses associates to the 3rd and 4th push-button will be lost.

The address of the Called User is obtained combining the address associated to the First button of the module at which the push-button is connected to and the Address associated to the Encoder according to the following rule:
Called User Address (IUC) by pressing the buttons of the MA22S or MA24S module = **Address Associated to the Encoder (IAC)** + **Number Associated with Button (NAP**) of the MA22S or MA24S module.

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

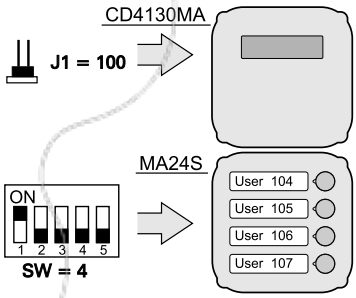
General rule applied to the first example below;
- if you press the first button from above of the MA24S:

100 (IAC) + 4 (1st NAP) = 104 (IUC)

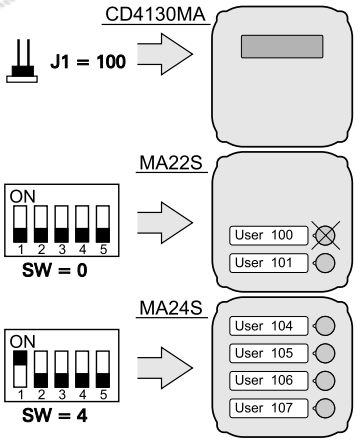
the user with address 104 will be called.

Examples:

- In this example the buttons with call the users 104, 105, 106 and 107.

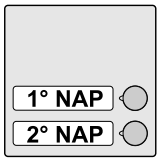


- In this example the buttons with call the users 101, 104, 105, 106 and 107. Addresses 100, 102 and 103 are not available.

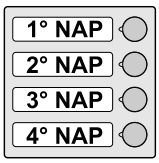


Example of order used to associate numbers with buttons

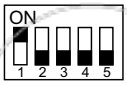
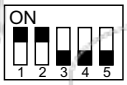
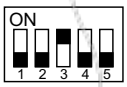
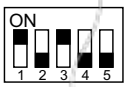
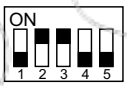
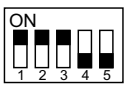
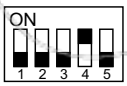
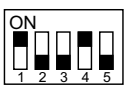
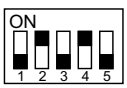
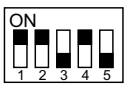
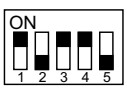
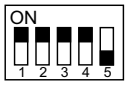
MA22S



MA24S



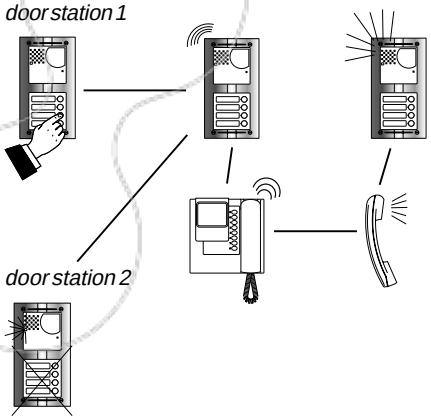
3rd NAP and **4th NAP** are not usable

Code to be set	*Numbers associated with buttons- NAP*	Push-button microswitch
0	*1st NAP = 0* *2nd NAP = 1* *3rd NAP = 2* *4th NAP = 3*	
4	*1st NAP = 4* *2nd NAP = 5* *3rd NAP = 6* *4th NAP = 7*	
8	*1st NAP = 8* *2nd NAP = 9* *3rd NAP = 10* *4th NAP = 11*	
12	*1st NAP = 12* *2nd NAP = 13* *3rd NAP = 14* *4th NAP = 15*	
16	*1st NAP = 16* *2nd NAP = 17* *3rd NAP = 18* *4th NAP = 19*	
20	*1st NAP = 20* *2nd NAP = 21* *3rd NAP = 22* *4th NAP = 23*	
24	*1st NAP = 24* *2nd NAP = 25* *3rd NAP = 26* *4th NAP = 27*	
28	*1st NAP = 28* *2nd NAP = 29* *3rd NAP = 30* *4th NAP = 31*	
32	*1st NAP = 32* *2nd NAP = 33* *3rd NAP = 34* *4th NAP = 35*	
36	*1st NAP = 36* *2nd NAP = 37* *3rd NAP = 38* *4th NAP = 39*	
40	*1st NAP = 40* *2nd NAP = 41* *3rd NAP = 42* *4th NAP = 43*	
44	*1st NAP = 44* *2nd NAP = 45* *3rd NAP = 46* *4th NAP = 47*	
48	*1st NAP = 48* *2nd NAP = 49* *3rd NAP = 50* *4th NAP = 51*	
52	*1st NAP = 52* *2nd NAP = 53* *3rd NAP = 54* *4th NAP = 55*	
56	*1st NAP = 56* *2nd NAP = 57* *3rd NAP = 58* *4th NAP = 59*	
60	*1st NAP = 60* *2nd NAP = 61* *3rd NAP = 62* *4th NAP = 63*	

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 enables the conversation with the external station for 60 seconds.
A tone will advise the user 10 seconds before the conversation ends. To continue conversation for additional 60 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 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.



Tone table

Free - Indicates that the line is free

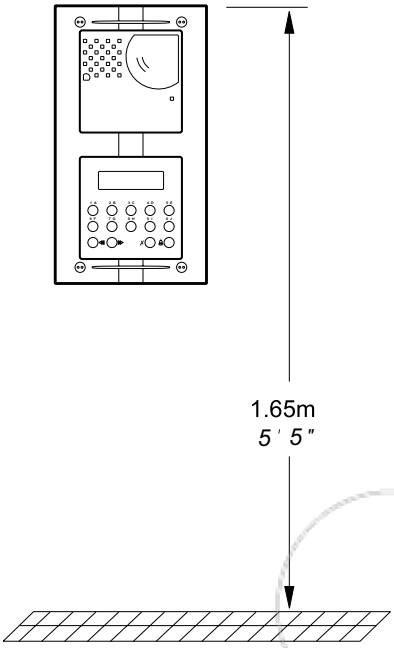
Busy - Indicates that the called user is busy

Confirmation - Indicates that programming was executed

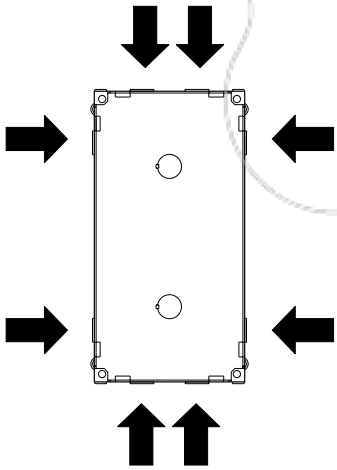
End of conversation - 10 seconds before conversation ends

Programming and waiting
Indicates the programming mode or the waiting status of the external user

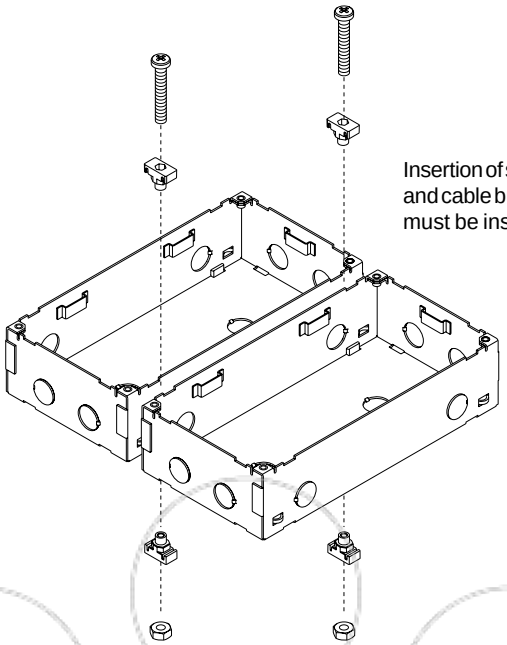
INSTALLATION



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.

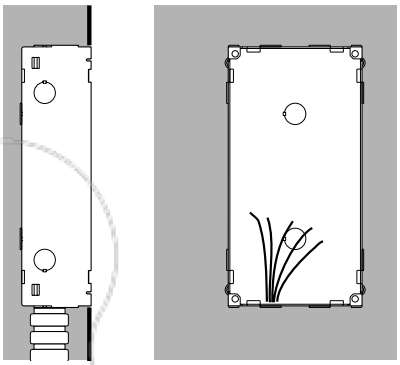


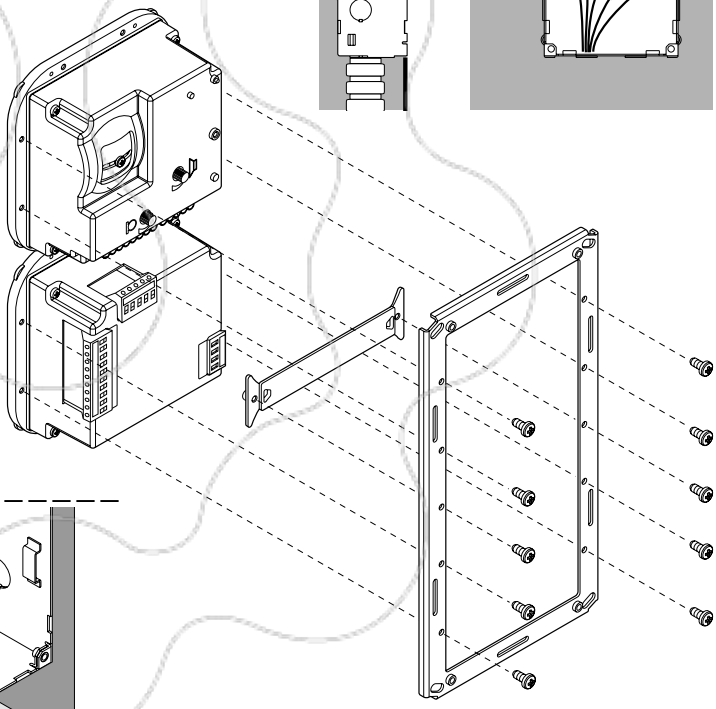
Openings for cables.



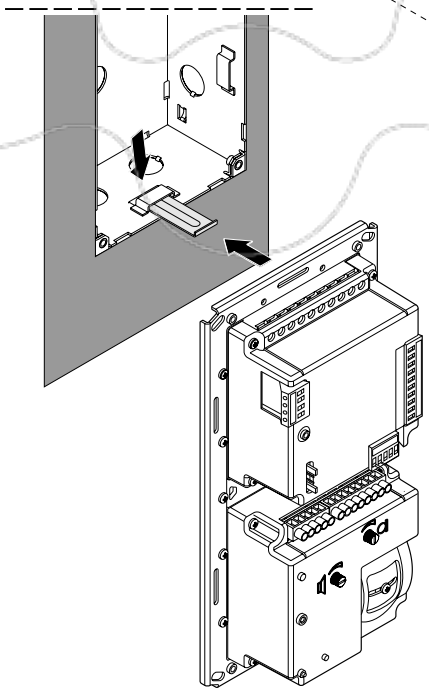
Insertion of spacers between back boxes. Spacers and cable bushing (not supplied with the products) must be inserted before brick work.

Flush mounting and cables placing.

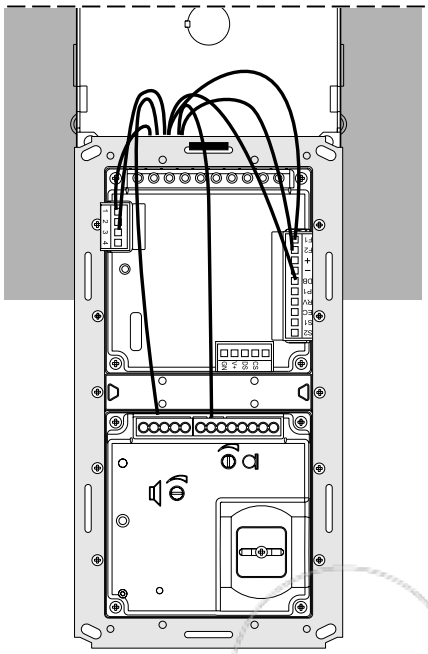




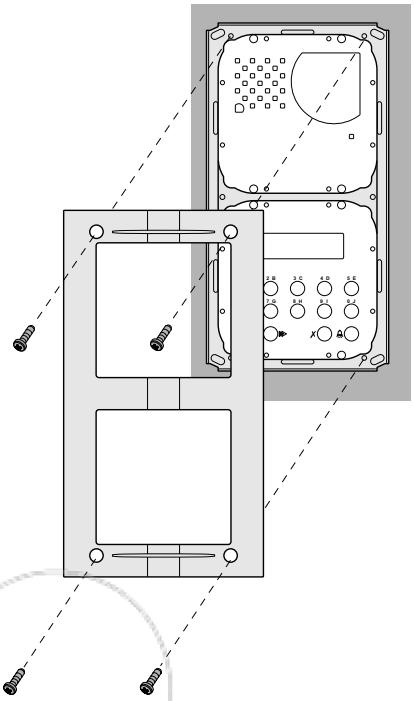
Mounting modules.



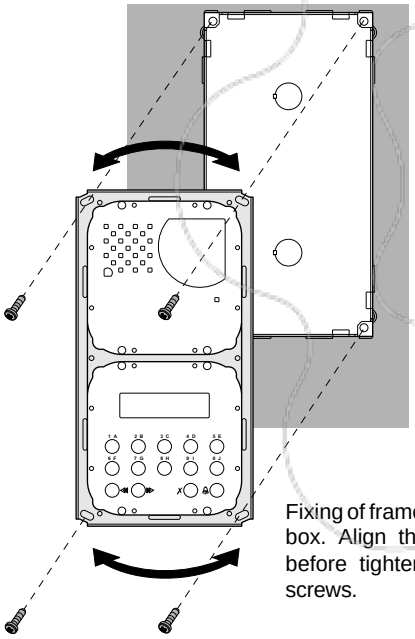
For easier connection to the electrical system, it is recommended to insert the metal plate supplied with the product in the back box opening, as shown in the figure. The plate is used to hook the frame with pre-assembled modules. Leave the plate in the box to reuse it for maintenance operations.



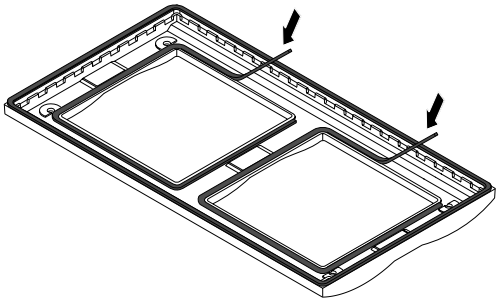
Connection of wires to module terminal boxes.



Fixing of frame to module frame.

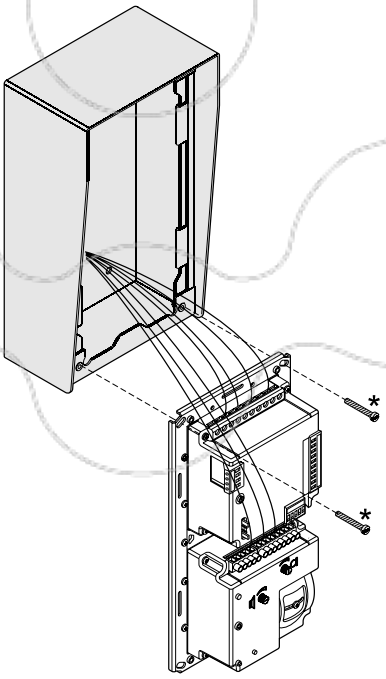


Fixing of frame to back box. Align the frame before tightening the screws.

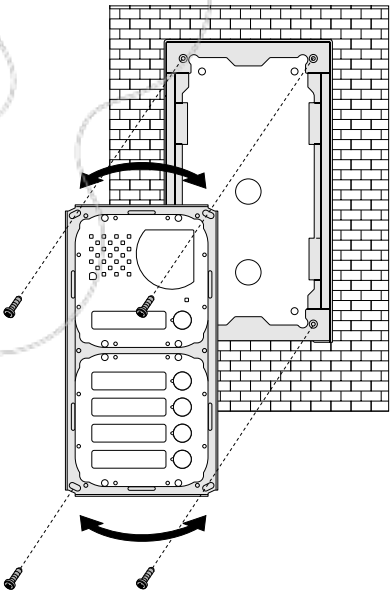


Apply the protection gaskets supplied with the product on the internal part of the frame openings.

Rain shelters

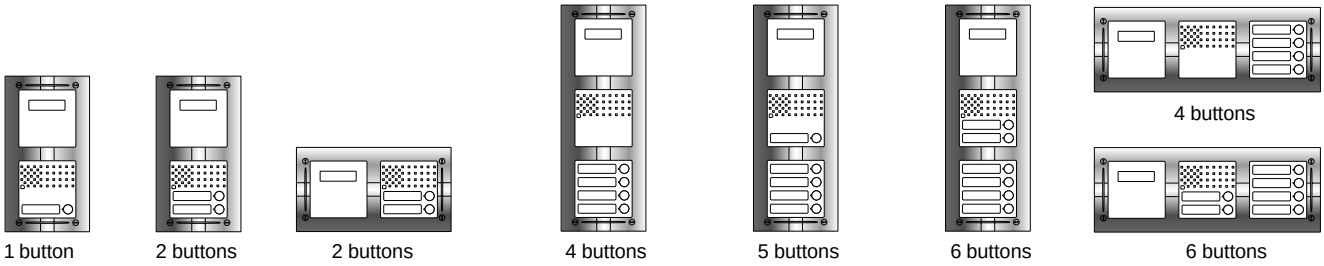


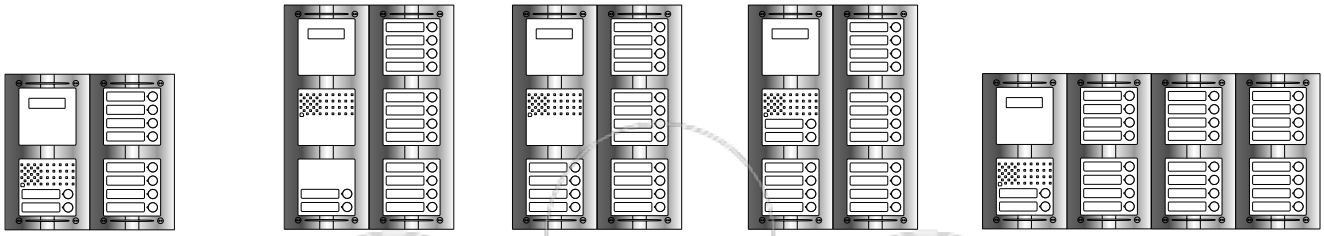
* Long screws can be used to anchor the frame during wire connection to modules.

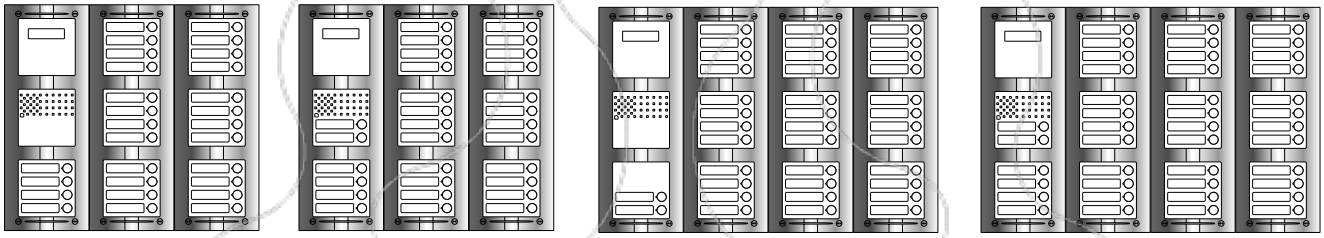


Fixing of frame to rain shelter. Align the frame before tightening the screws.

Examples of installations in intercom systems





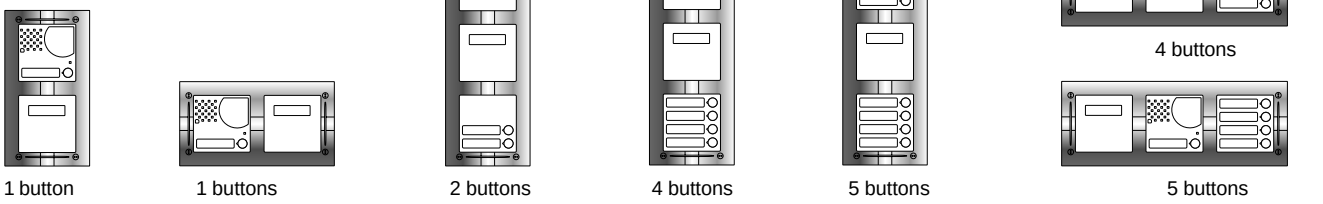


Composition board of Matrix push-button panels.

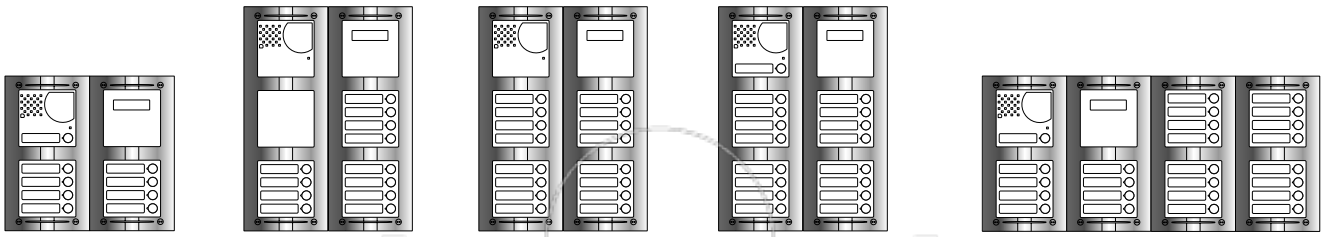
N° calls	Dimensions	Encoder module	Door speaker modules	Button modules and blank module		Front frames	Back box with module frames	Rain shelters (*)
1	140x256x19 (5 1/2" x 10 1/16" x 3/4")	1 CD4130MA	1 MA11P	-	-	1 MA62	1 MA72	1 MA92
2		1 CD4130MA	1 MA12P	-	-	1 MA62	1 MA72	1 MA92
4	140x374x19 (5 1/2" x 14 3/4" x 3/4")	1 CD4130MA	1 MA10P	1 MA24S	-	1 MA63	1 MA73	1 MA93
5		1 CD4130MA	1 MA11P	1 MA24S	-	1 MA63	1 MA73	1 MA93
6		1 CD4130MA	1 MA12P	1 MA24S	-	1 MA63	1 MA73	1 MA93
8	280x256x19 (11" x 10 1/16" x 3/4")	1 CD4130MA	1 MA10P	2 MA24S	-	2 MA62	2 MA72	-
9		1 CD4130MA	1 MA11P	2 MA24S	-	2 MA62	2 MA72	-
10		1 CD4130MA	1 MA12P	2 MA24S	-	2 MA62	2 MA72	-
12	280x374x19 (11" x 14 3/4" x 3/4")	1 CD4130MA	1 MA10P	3 MA24S	1 MA20	2 MA63	2 MA73	-
14		1 CD4130MA	1 MA12P	3 MA24S	1 MA20	2 MA63	2 MA73	-
16		1 CD4130MA	1 MA10P	4 MA24S	-	2 MA63	2 MA73	-
18		1 CD4130MA	1 MA12P	4 MA24S	-	2 MA63	2 MA73	-
22	560x256x19 (22 1/16" x 10 1/16" x 3/4")	1 CD4130MA	1 MA10P	5 MA24S	1 MA22S	4 MA62	4 MA72	-
25		1 CD4130MA	1 MA11P	6 MA24S	-	4 MA62	4 MA72	-
26		1 CD4130MA	1 MA12P	6 MA24S	-	4 MA62	4 MA72	-
28	420x374x19 (16 9/16" x 14 3/4" x 3/4")	1 CD4130MA	1 MA10P	7 MA24S	-	3 MA63	3 MA73	-
30		1 CD4130MA	1 MA12P	7 MA24S	-	3 MA63	3 MA73	-
32	560x374x19 (22 1/16" x 14 3/4" x 3/4")	1 CD4130MA	1 MA10P	8 MA24S	2 MA20	4 MA63	4 MA73	-
34		1 CD4130MA	1 MA12P	8 MA24S	2 MA20	4 MA63	4 MA73	-
38		1 CD4130MA	1 MA10P	9 MA24S	1 MA22S	4 MA63	4 MA73	-
42		1 CD4130MA	1 MA12P	10 MA24S	-	4 MA63	4 MA73	-

(*) Rain shelters are used in replacement of back boxes

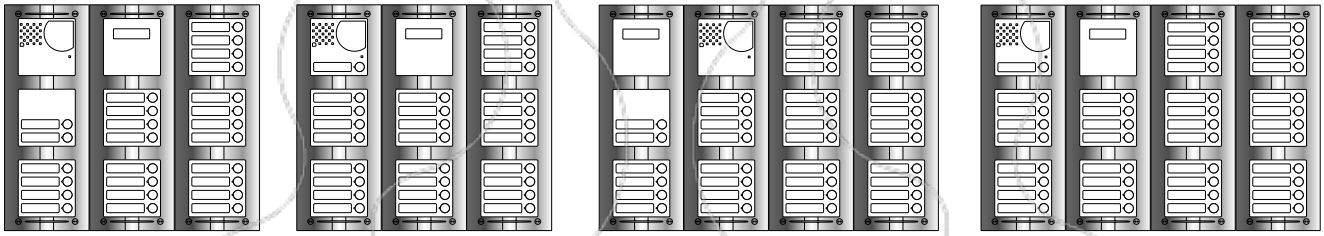
Examples of installations in video intercom systems



1 button | 1 buttons | 2 buttons | 4 buttons | 5 buttons | 4 buttons | 5 buttons



9 buttons | 12 buttons | 16 buttons | 17 buttons | 25 buttons



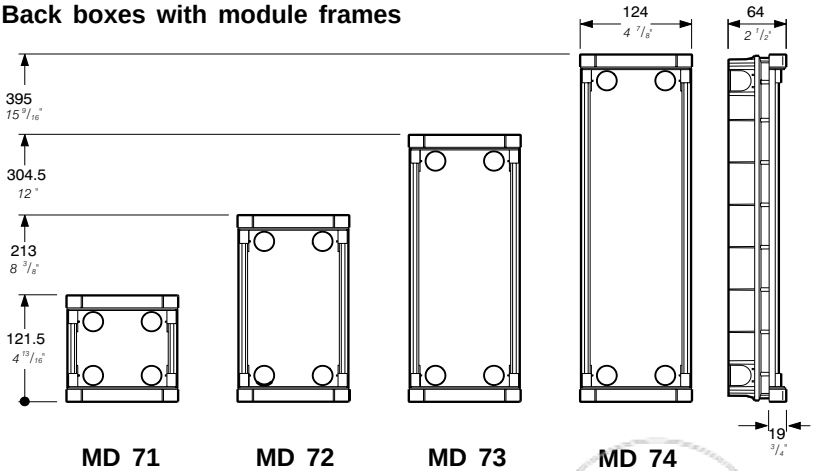
26 buttons | 29 buttons | 38 buttons | 41 buttons

Composition board of Matrix push-button panels.

N° calls	Dimensions	Encoder module	Camera and speaker mod.	Button modules and blank module		Front frames	Back box with module frames	Rain shelters (*)
1	140x256x19 (5 1/2" x 10 1/16" x 3/4")	1 CD4130MA	1 MA43DG	-	-	1 MA62	1 MA72	1 MA92
2	140x374x19 (5 1/2" x 14 3/4" x 3/4")	1 CD4130MA	1 MA42DG	1 MA22S	-	1 MA63	1 MA73	1 MA93
4		1 CD4130MA	1 MA42DG	1 MA24S	-	1 MA63	1 MA73	1 MA93
5		1 CD4130MA	1 MA43DG	1 MA24S	-	1 MA63	1 MA73	1 MA93
6	280x256x19 (11" x 10 1/16" x 3/4")	1 CD4130MA	1 MA42DG	1 MA24S	1 MA22S	2 MA62	2 MA72	-
8		1 CD4130MA	1 MA42DG	2 MA24S	-	2 MA62	2 MA72	-
9		1 CD4130MA	1 MA43DG	2 MA24S	-	2 MA62	2 MA72	-
12	280x374x19 (11" x 14 3/4" x 3/4")	1 CD4130MA	1 MA42DG	3 MA24S	1 MA20	2 MA63	2 MA73	-
13		1 CD4130MA	1 MA43DG	3 MA24S	1 MA20	2 MA63	2 MA73	-
14		1 CD4130MA	1 MA42DG	3 MA24S	1 MA22S	2 MA63	2 MA73	-
16		1 CD4130MA	1 MA42DG	4 MA24S	-	2 MA63	2 MA73	-
17		1 CD4130MA	1 MA43DG	4 MA24S	-	2 MA63	2 MA73	-
22	560x256x19 (22 1/16" x 10 1/16" x 3/4")	1 CD4130MA	1 MA42DG	5 MA24S	1 MA22S	4 MA62	4 MA72	-
23		1 CD4130MA	1 MA43DG	5 MA24S	1 MA22S	4 MA62	4 MA72	-
25		1 CD4130MA	1 MA43DG	6 MA24S	-	4 MA62	4 MA72	-
26	420x374x19 (16 9/16" x 14 3/4" x 3/4")	1 CD4130MA	1 MA42DG	6 MA24S	1 MA22S	3 MA63	3 MA73	-
29		1 CD4130MA	1 MA43DG	7 MA24S	-	3 MA63	3 MA73	-
33	560x374x19 (22 1/16" x 14 3/4" x 3/4")	1 CD4130MA	1 MA43DG	8 MA24S	2 MA20	4 MA63	4 MA73	-
36		1 CD4130MA	1 MA42DG	9 MA24S	1 MA20	4 MA63	4 MA73	-
38		1 CD4130MA	1 MA42DG	9 MA24S	1 MA22S	4 MA63	4 MA73	-
41		1 CD4130MA	1 MA43DG	10 MA24S	-	4 MA63	4 MA73	-

(*) Rain shelters are used in replacement of back boxes

Back boxes with module frames



MD 71 MD 72 MD 73 MD 74

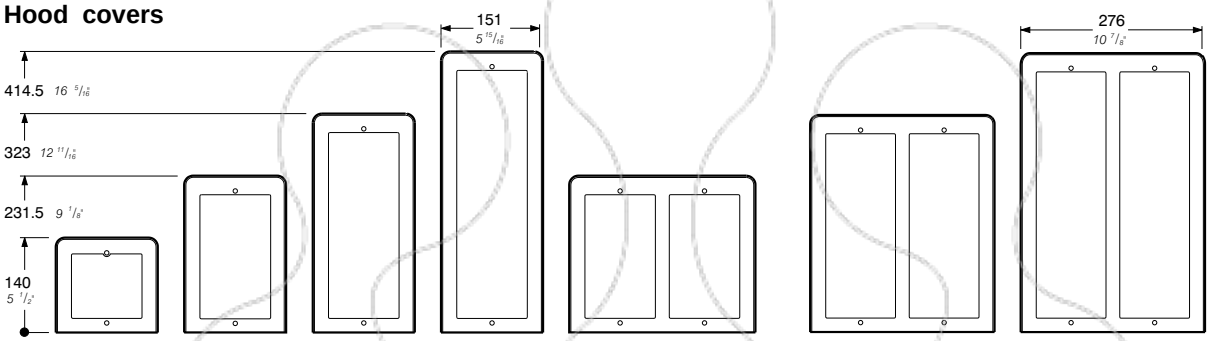
MODY. Push-button panels in extruded aluminium made up of modular elements. Suitable for the most diverse installation requirements.

MD71. 72. 73. 74. Plastic back boxes with module frame.

MD81.82.83.804.84.86.808.89.812. Aluminium hood covers. They can be added to MD71.72.73.74 back boxes.

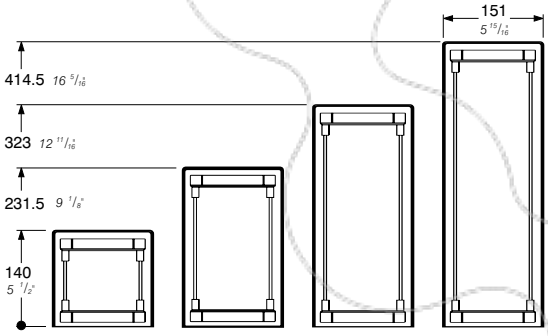
MD91.92.93.904.94.96.908.99.912. Anodised aluminium rain shelters with module frame. Used for wall fixing.

Hood covers

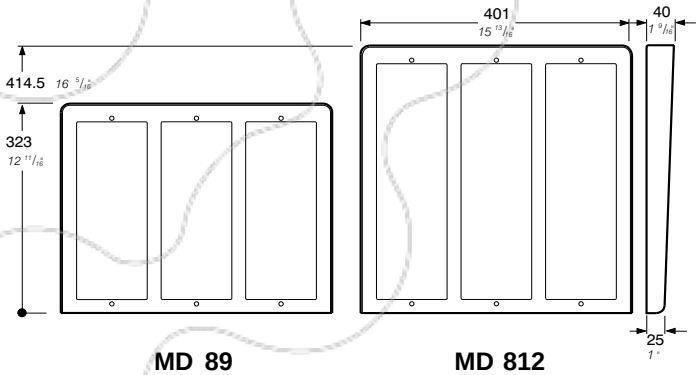


MD 81 MD 82 MD 83 MD 804 MD 84 MD 86 MD 808

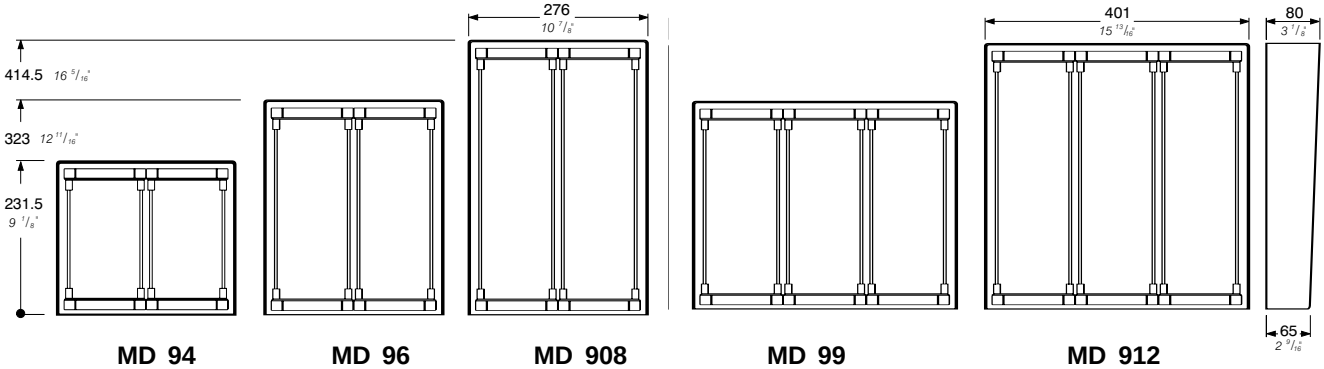
Rain shelters with module frames



MD 91 MD 92 MD 93 MD 904



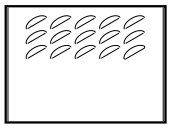
MD 89 MD 812



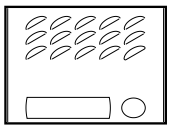
MD 94 MD 96 MD 908 MD 99 MD 912

BUTTON MODULES with single row

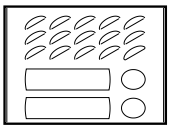
Electric door-speaker module



MD 10
without buttons

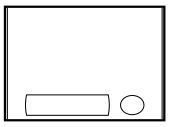


MD 11
1 button

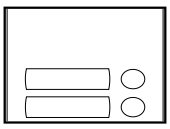


MD 12
2 buttons

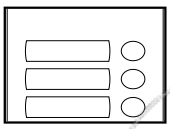
Button modules



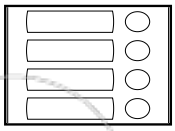
MD 21
1 button



MD 22
2 buttons



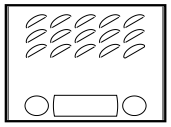
MD 23
3 buttons



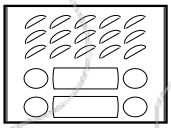
MD 24
4 buttons

BUTTON MODULES with double row

Electric door-speaker module

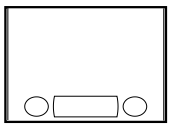


MD 122
2 buttons

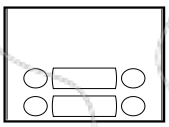


MD 124
4 buttons

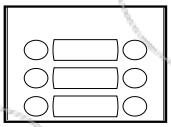
Button modules



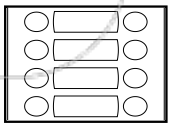
MD 222
2 buttons



MD 224
4 buttons



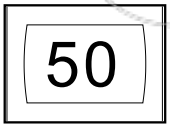
MD 226
6 buttons



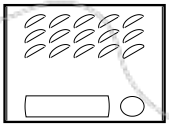
MD 228
8 buttons

VARIOUS MODULES: blank, number, amplified door stations, access control and cameras

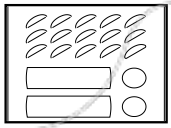
MD20
blank module



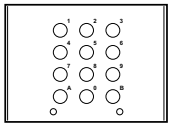
MD50
number module



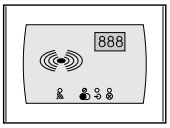
MD 100
Amplified door station with 1 push-button *(see page 41)*



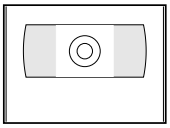
MD 200
Amplified door station with 2 push-buttons *(see page 41)*



FC52P. Keypad for access control *(see characteristics on page 41)*

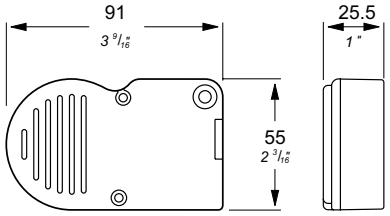


FP52. Proximity reader for access control *(see characteristics on page 41)*

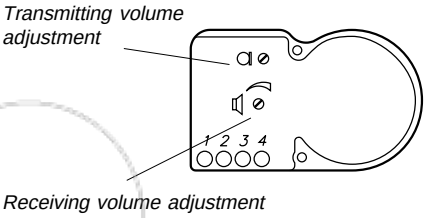


MD41. MD41DG. Black and white cameras.
MD41C. MD41CDG. Colour cameras *(see characteristics on page 40).*

DOOR SPEAKER

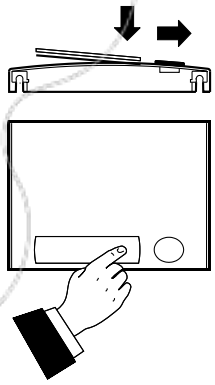


MD 30.
It consists a double amplifier (receiver and transmitter) with adjustable volume for the 2 channels.

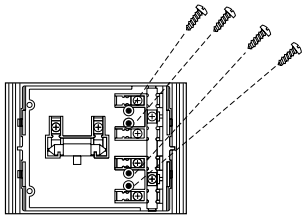


Terminals
1 audio receiver
2 audio transmitter
3 positive power supply (6÷12Vdc-60mA)
4 ground

Dismounting and protection of name plates



Dismounting of name holder to insert name label.

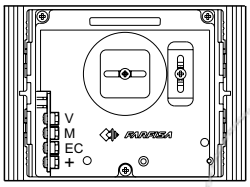


In any button module, in order to avoid the dismounting of the name holder, insert a 3MAx12 screw in the holes shown in the picture for each name to be blocked (screws are not supplied by the manufacturer).

CAMERAS

MD41DG.
Black and white camera module with:
- solid state camera (CCD), electronic autoiris, fixed 3.6mm lens and 6 infrared LEDs;
- front panel in anodised aluminium with breakproof transparent screen;
- horizontal and vertical adjustment.

MD41CDG.
Colour camera module with:
- solid state camera (CCD), autoiris and 4mm fixed lens;
- front plate in anodised aluminium with breakproof transparent screen;
- horizontal and vertical adjustment.

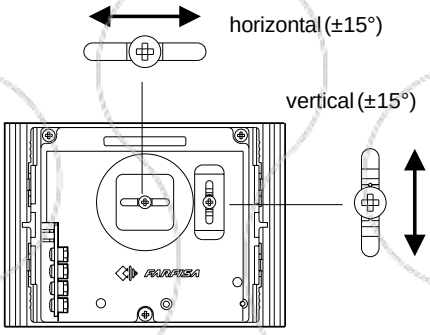


Terminals
V video signal output
M ground
EC camera enable input
+ positive voltage input

MD41- MD41C.
As above, except that it operates at **21 Vdc** and has no **EC** terminal.

Adjustments

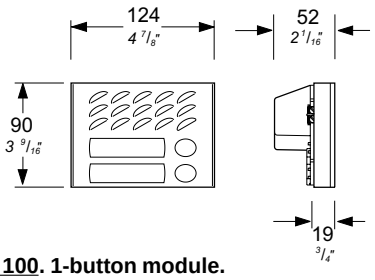
If necessary, you can manually modify the camera position by means of the horizontal and vertical adjustments located on the back of the camera.
To do this, you must:
- remove the upper screw of the push-button panel to access the back of the camera;
- loosen the screw of the horizontal or vertical adjustment (or both screws, if you want to adjust the image in all the directions);
- move the camera in the desired direction;
- tighten the screw to block the camera in the desired position;
- fix the push-button panel.



Note.
All the previous mentioned cameras are suitable for a video signal connection using a **75Ω coax cable**.
If a twisted pair connection is required, the video signal converter **CV01** must be added (see page 108) or the camera **MD41D** must be installed (see features on page 181). Please note that such a camera has not the terminal **EC** and must be powered with at **minimum 15Vdc** (max 21Vdc), therefore it is required to add a power supply art.**1281** or **6220**.

Technical data	MD41DG	MD41CDG	MD41	MD41C
Power supply	12±1Vdc	12±1Vdc	21±3Vdc	21±3Vdc
Operating current	0.2A	0.4A	0.2A	0.4A
Video signal on 75Ω	1Vpp	1Vpp	1Vpp	1Vpp
Video signal standard	CCIR	PAL	CCIR	PAL
Minimum illumination	2 Lux	2.5 Lux	2 Lux	2.5 Lux
White balance	-	auto	-	auto
Sensor	CCD 1/4" B/W	CCD 1/3" colour	CCD 1/4" B/W	CCD 1/3" colour
Pixel number	291,000	291,000	291,000	291,000
Horizontal frequency	15,625Hz	15,625Hz	15,625Hz	15,625Hz
Vertical frequency	50Hz	50Hz	50Hz	50Hz
Lens	3.6mm; F5	4mm; F4	3.6mm; F5	4mm; F4
Focus	0.1m ÷ ∞	0.6m ÷ ∞	0.1m ÷ ∞	0.6m ÷ ∞
Autoiris	electronic	electronic	electronic	electronic
Horizontal adjustment	± 15°	± 15°	± 15°	± 15°
Vertical adjustment	± 15°	± 15°	± 15°	± 15°
Operating temperature	-10°÷+40°C	-10°÷+40°C	-10°÷+40°C	-10°÷+40°C
Maximum permissible humidity	80%RH	80%RH	80%RH	80%RH

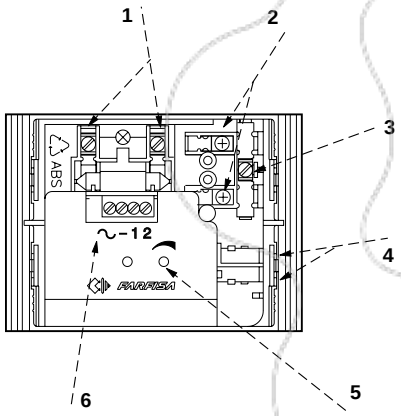
AMPLIFIED DOOR STATIONS



MD 100. 1-button module.
Fixable in all intercom, telephone, intercommunicating and video intercom systems.
Complete with electric door speaker amplified in the two channels, receiving adjustable volume, call button and anodized aluminium front plate. It can replace the **MD11** and **MD30** module and use all the other accessories of the **Mody** series.

MD 200. 2-button module.

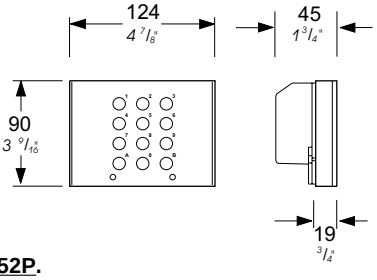
Terminals
- **-** ground
- ~ power supply 13Vac / 12÷21Vdc-0.13A
- **1** audio receiver
- **2** audio transmitter
- **C** call push-buttons common
- call push-buttons
- ⊗ nameplate lamp (24V-70mA)



1 Lamp terminals
2 Push-button terminal board
3 Call push-buttons common
4 Stair light push-button terminals
5 External volume adjustment
6 Terminal board for connection to the system

Installation diagrams
For the installation of the **MD100** and **MD200** modules see the installation diagrams of the pages 162 and 168.

ACCESS CONTROL KEYPAD

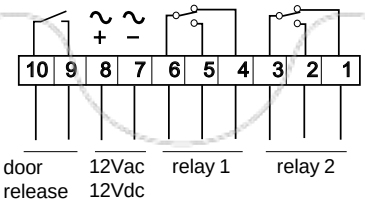


FC52P.
Electronic keypad with 12 keys and 2 relays for lock release. It can be used as access control of door stations or in combination with the **CD4130** digital encoder.
4 programmable access codes for each relay. Programmable door opening time from 1 up 99 sec. for each relay (or bistable operation of relay 1). Acoustic and visual confirmation for entered keys, accepted programming and for wrong codes.
Power supply: 12 Vac/dc-0.1A max.

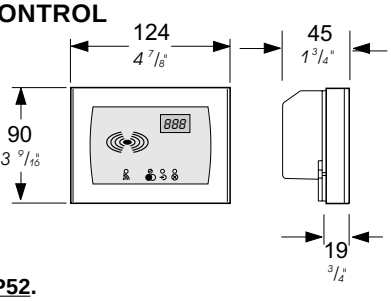
Technical data

Power supply:	12Vac/dc ±10%
Standby current:	0.015A
Max. current consumption:	0.1A
Contact ratings:	12Vac - 5A
Numbers of codes for relay 1:	4
Numbers of codes for relay 2:	4 or direct activation
Activation time for each relay:	from 1 to 99 sec. (or bistable relay 1)
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	85% RH

Terminals
- **1** normally closed contact of relay 2
- **2** normally open contact of relay 2
- **3** common contact of relay 2
- **4** normally closed contact of relay 1
- **5** normally open contact of relay 1
- **6** common contact of relay 1
- **7** ground or alternating voltage input
- **8** positive or alternating voltage input
- **9-10** enable of relay 1; if the contacts are temporarily closed relay 1 is activated for the programmed time



PROXIMITY READER FOR ACCESS CONTROL

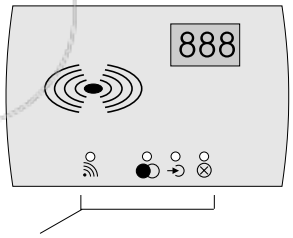


FP52.
This article allows for the activation of 2 relays by means of keytags or electronic ISO cards based on transponder technology.
Programmable activation time from 1 to 63 seconds for every relay. 4 user cards and 1 master card supplied with the product. Acoustic and visual control signals and 3-digit display to view numbers and codes during setup and operation.

Technical data

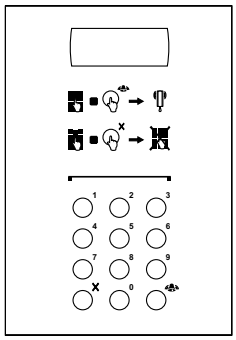
Power supply	12Vac/dc ±10%
Standby current	0.1A
Maximum current consumption	0.25A
Contact ratings	24Vac - 2A
Max. number of cards	490
Max. number of Master cards	10
Number of relays	2
Relay time	1 to 63 sec.
Minimum recognition distance	3 cm
Maximum recognition time	1 sec.
Operating temperature	0° ÷ +40°C
Maximum permitted humidity	85% RH

Terminals
- **+/A** positive or alternate current input
- **-/A** ground or alternate current input
- **PB** door open button
- **NC2** normally closed contact of relay 2
- **NA2** normally open contact of relay 2
- **C2** common terminal of relay 2
- **NC1** normally closed contact of relay 1
- **NA1** normally open contact of relay 1
- **C1** common terminal of relay 1



-))) ***Card recognition LED**. It turns ON during card recognition.*
- ●) ***Relay activation LED.** It indicates relay deactivation (red) or activation (green).*
- → ***Program LED.** It turns ON during system programming.*
- ⊗ ***Card cancellation and system setup LED**. It turns ON during Master or user card cancellation and system setup.*

DIGITAL PUSH-BUTTON PANEL



TD4100. Push-button panel in anodised aluminium with 12-button keypad and 4-digit display. It allows to make and send up to a maximum of 9999 calls with door-opening directly from the keypad with a private 4-digit code.

Technical data

Power supply	12Vdc ± 1
Operating current	0.1A
Door opening time	3 sec.
Operating temperature	0° ÷ +40°C
Maximum permissible humidity	90% RH
Dimensions	2 modules

Terminal board

F1 audio from internal stations
F2 audio to internal stations
- general ground
+ +12V power input
DB serial data bus
EC output command for a analog exchanger (grounded contact upon call and during conversation)
SV video-ON command (temporary ground command – 0.5 sec. approx.)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

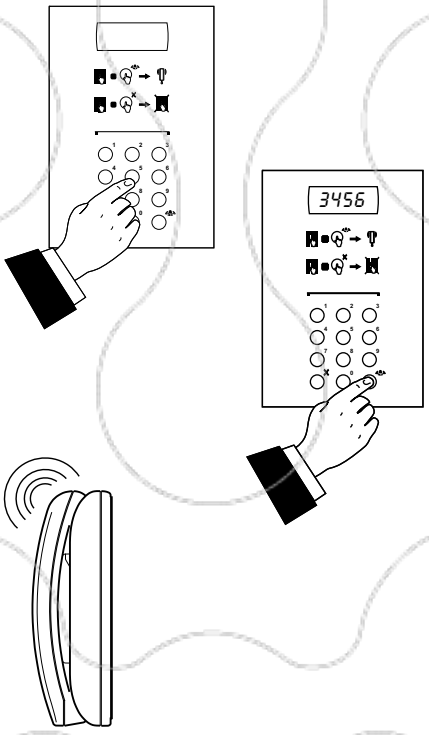
1 audio receiver
2 audio transmitter
3 +12Vdc power supply output
4 audio ground

Terminal board for electronic index connection

CK clock signal
DT data input
VA +5Vdc power supply output
GN ground

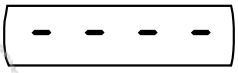
Operation

Dial the desired user number, check that the number is correct on the display and press the key to make the call. 4 dots turn ON the display to indicate that the call has been sent.
In case of wrong entry press the "**X**" key and dial the correct number. The number can only be cancelled before pressing .
You can press more than 4 keys, but the display will show the last 4 digits.
2 dots turn OFF and 2 dots remain ON after the number if the dialled number exists in the system.
The display turns OFF after 5 seconds if the number does not exist.
The called intercom rings for about 25 seconds.



The called user picks up the handset to interrupt the call and enable conversation with the door station for 60 seconds.
The number on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 60 seconds press again.
Press the intercom button to release the door lock. Enabling time is 3 seconds.
Hanging up the handset the conversation is end and the system comes in idle state.
Numbers that are not send or not cancelled turn OFF after 25 seconds.

In systems with 2 or more main digital push-button panels, when a call is made from one push-button panel, the other push-button panels are disabled and their display shows the busy symbol (4 lines). Wait until the display turns OFF to make the call.



In systems with door-keeper exchanger in "**Day**" mode without "**direct dialling**" all calls are sent to the doorkeeper exchanger.
Once the call is received, the operator can put the push-button panel in hold-on state to call the desired internal station. The display shows **4 A.**

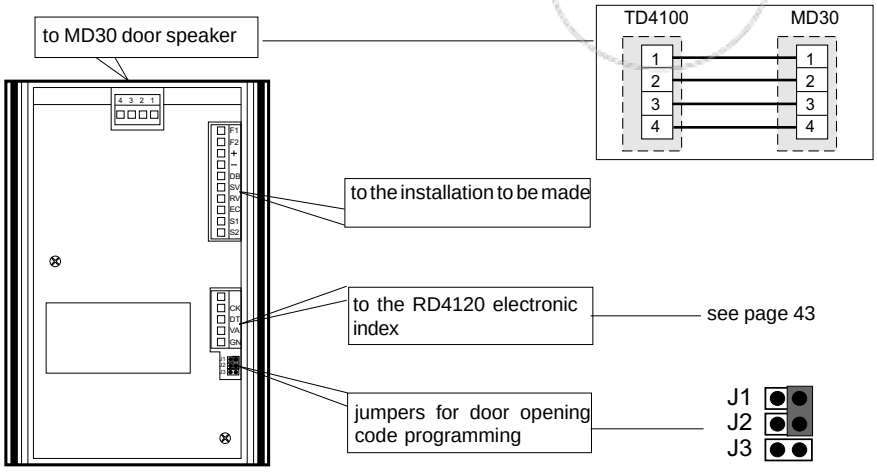
The display shows the internal station number when the operator connects the internal station with the push-button panel. The number displayed on the push-button panel is the number of the internal station called by the operator and it may not correspond to the number called on the push-button panel because of call transfer.

Door opening with secret code

The door can be opened from the push-button panel by dialling a 4-digit access code chosen between 12 programmable secret numbers.

Entering the secret code

- Move the jumper located on the back of the push-button panel (*from position **A** to position **B***) to connect the 2 upper pins.



Position A

J1
J2
J3

Position used for push-button panel operation

Position B

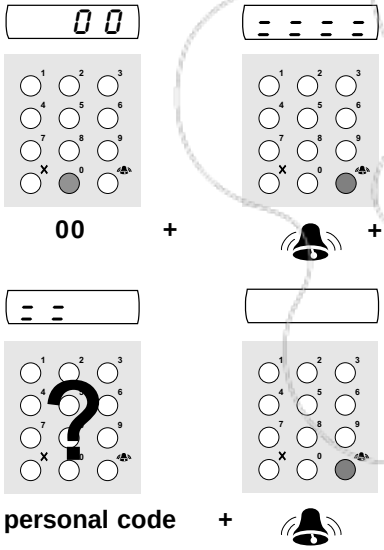
J1
J2
J3

Position used for code programming

- dial the first secret code for door opening on the keypad (from 0 to 9999)
- press 🔔
- dial the second secret code for door opening (from 0 to 9999)
- press 🔔
- repeat the operations up to the 12th code or as necessary.
- press the "**X**" key to erase an unused code or to cancel a wrong code before sending it.
- insert the jumper in the original position (*position A*) to exit the programming mode.

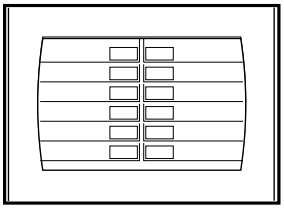
Door opening with secret code
- dial **00**
- press 🔔; 8 horizontal bars appear on the display
- enter the secret access code within 15 seconds; each entered digit cancels 2 horizontal bars; press "**X**" to cancel the entered number and to display the 8 horizontal bars again.
- press 🔔; the door opens and the push-button panel resumes the current operating mode of the system (free or busy).

Note
Door lock release with personal code can also take place when the push-button panel is busy (4 lines on the display).



Viewing and changing secret codes
Move the jumper to position B (see page 8) to view the secret codes. The first code appears on the display.
Press 🔔 to view the second number and so on, up to the 12th number (if present).
To erase a secret code press "**X**" and then 🔔. The display turns OFF to indicate missing or erased numbers. It is recommended to check all 12 secret codes.
Replace the jumper in position A at the end of the procedure.

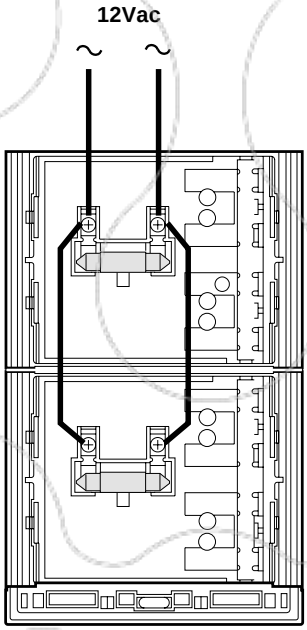
NAME PLATE MODULE



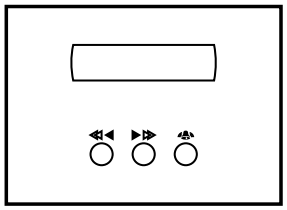
TD4110.
It allows to match 12 names with the codes to be dialled on the digital keypad.
Each name plate module is complete with back-lighting lamp. The lamp is 12Vac powered, with 75mA operating current.

Dimensions: 1 module

Connection of nameplate lamps



ELECTRONIC INDEX



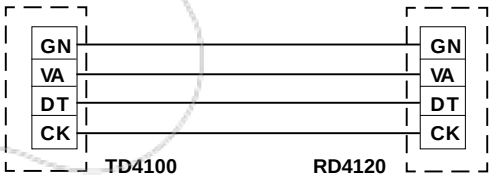
RD4120.
When connected to the **TD4100** digital push-button panel, it allows for displaying 200 names with extension number and making the call directly. Additional **RD4120** can be added for higher numbers of names. The **TD4100** push-button panel supplies power for max. 3 **RD4120**. A +5V power supply must be added for additional units.

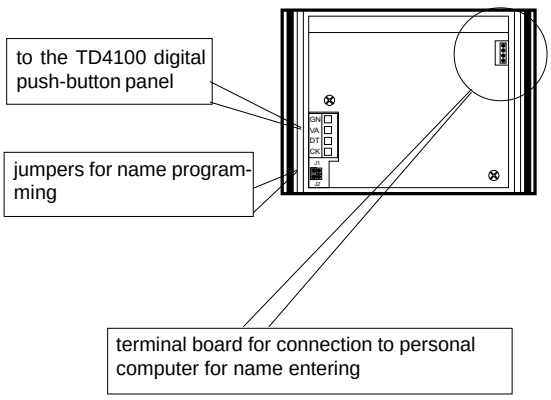
Technical data

Power supply:	5Vdc
Operating current:	50mA
LCD:	2x16 characters
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH
Dimensions:	1 module

Installation and connections
Insert the electronic index in the module frame. Make the connections from the electronic index to the **TD4100** push-button panels using 4x0.35mm² wires *(AWG21)*.

Connection of electronic index to the TD4100 push-button panel





BUTTON FUNCTION DURING PROGRAMMING

Select character
Press this button to select the letter (upper or lower case) and number for each character or digit to be entered.

Move to the next character
Press this button to move to the character to be entered or changed.

Confirm and move to the next entry
Press this button to confirm the name and go to the next one.

PROGRAMMING

Names can be programmed using the 3 electronic index buttons (◀, ▶ and 🔔). The display allows for entering 16 letters in the upper line and 12 letters plus 4 numbers in the lower line.

ABCDEFGHIJKLMNOP
QRSTUVWXYZab1234

Letters are displayed in alphabetical order (upper cases, lower cases and space).
Enter names from above from left to right.
Numbers must be entered in the last 4 positions in the bottom from right to left.

NB: The name will not be stored if the first character on top left and the digit on bottom right are missing (see *"erasing a name"*).

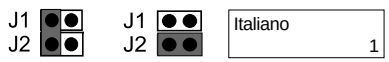
Smith Robert 1425

or

Taylor David 7

Changing the language and saving the names

1) Move the jumper located on the back of the electronic index (from position A to B) to connect the 2 lower pins. The display shows "*Italiano*" and number "*1*";



2) press ◀ to change language;
3) press 🔔 to confirm. When first installed, the display shows "*AAA*" and number "1" on the right, or the first name;
4) press ◀ to search for the first letter;
5) press ▶ to go to the second letter;
6) press ◀ to search for the second letter;
7) press ▶ to go to the third letter;
8) continue until the name and number of the first user are completed;
9) press 🔔 to confirm and go to the next name;
10) repeat the operations (from step 4 to 9);
11) continue until the last user has been entered;
12) press 🔔 to confirm the last user.

Place the jumper in the original position (from B to A) to exit the programming mode. The display shows "*WAIT*" while names are ordered alphabetically (from A to Z). At the end the display shows "*ACI FARFISA RD4120*".

Note. Once 200 names have been entered (maximum number of names) the display shows the last name and no other names can be entered. It is possible to enter 2 or more names with the same call number (i.e. different last names in the same apartment).

Modifying a name

To modify a name or number (while in the programming mode):
- press 🔔 to search for the name;
- press ▶ to go to the letter or number to be modified;
- press ◀ to search for the correct letter or number;
- press 🔔 to confirm.

Replacing a name

To replace a name with another name (while in the programming mode):
- press 🔔 to search for the name to be replaced;
- press ◀ to search for the letter;
- press ▶ to go to the next letter;
- press ◀ to search for the second letter;
- continue until the name has been replaced completely;
- press 🔔 to confirm replacement.

If the new name is shorter, cancel the unnecessary letter by inserting a space.

Entering a name

To enter a new name (while in the programming mode):
- hold 🔔 pressed to go the end of the list and find the first empty field;
- press ◀ to search for the letter;
- press ▶ to go to the next character;
- press ◀ to search for the second letter;
- continue until the name and number have been entered completely;
- press 🔔 to confirm the name.

Erasing a name

To erase a name (while in the programming mode):
- press 🔔 to search for the name to be erased;
- insert a space on the first letter on top left. To search for the space hold ◀ pressed;
- press ▶ to go to the last digit of the number to be erased;
- press ◀ to search for the space again;
- press 🔔 to confirm erasing.

BUTTON FUNCTION DURING OPERATION

Backward name search
Press this button to search names backwards.

Forward name search
Press this button to search names forward.

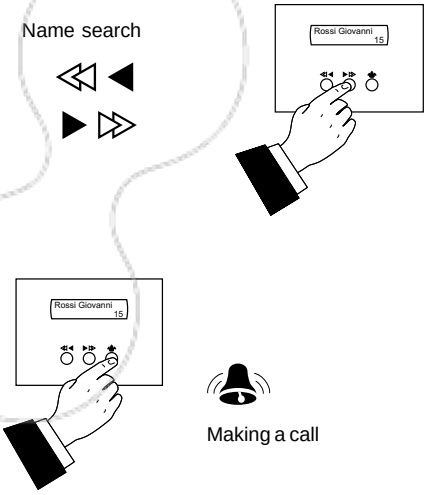
Call
Press this button to make the call directly from the electronic index.

OPERATION

Power up the system. The display shows *"ACI FARFISA RD4120*" continuously if no names are entered or in alternation with *"to select press ◀◀◀– –▶▶▶*" in the presence of names.

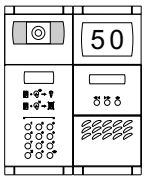
- Press ◀ to search the names backwards.
- Press ▶ to search the names forward.
- Press 🔔 to make the call.

The display shows the names for about 5 seconds. Then *"ACI FARFISA RD4120*" appears in alternation with "*to select press ◀◀◀– –▶▶▶*" and the called number appears on the display of the digital push-button panel.

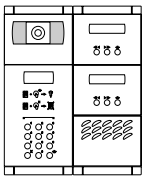


EXAMPLES OF INSTALLATIONS

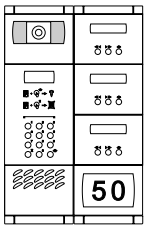
Video intercom push-button panels with electronic index



from 1 to 200 names



from 201 to 400 names



from 401 to 600 names

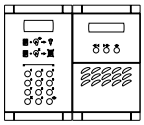
No. calls	Compositions and dimensions	Push-button panel	Door speaker	Module for speaker	Camera module	Number or blank module	Electronic index	Back boxed and frames	Rain shelters
1÷200	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 TD4100	1 MD30	1 MD10	1 MD41DG	1 MD20 *	1 RD4120	2 MD73	1 MD96
201÷400		1 TD4100	1 MD30	1 MD10	1 MD41DG	-	2 RD4120	2 MD73	1 MD96
401÷600	248x304,5x19mm (9 3/4" x 12" x 3/4")	1 TD4100	1 MD30	1 MD10	1 MD41DG	1 MD20 *	3 RD4120	2 MD74	1 MD908

It replaces MD72, 73, 74

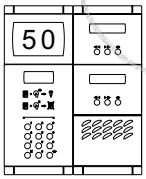
■ or MD74 or MD904

* or MD50 or FC52P

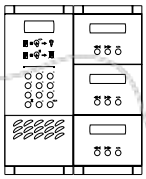
Intercom push-button panels with electronic index



from 1 to 200 names



from 201 to 400 names



from 401 to 600 names

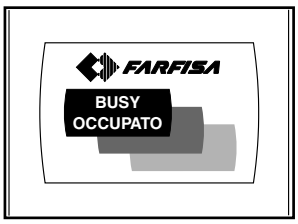
No. calls	Compositions and dimensions	Push-button panel	Door speaker	Module for speaker	-	Number or blank module	Electronic index	Back boxed and frames	Rain shelters
1÷200	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 TD4100	1 MD30	1 MD10	-	-	1 RD4120	2 MD72 ■	1 MD94 ■
201÷400		1 TD4100	1 MD30	1 MD10	-	1 MD20 *	2 RD4120	2 MD73	1 MD96
401÷600	248x304,5x19mm (9 3/4" x 12" x 3/4")	1 TD4100	1 MD30	1 MD10	-		3 RD4120	2 MD73	1 MD96

It replaces MD72, 73, 74

■ or MD74 or MD904

* or MD50 or FC52P

DIGITAL ENCODER



CD4130.
It allows for using **Mody** conventional push-button panels (with 1 or 2 rows) in **FN4000** digital systems.
Complete with busy state signal.

Technical data

Power supply:	12Vdc ± 1
Operating current:	0.1A
Maximum number of users:	63
Door opening time:	3 sec.
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH
Dimensions:	1 module

Terminal board

F1 audio from internal stations
F2 audio to internal stations
- general ground
+ +12V power input
DB serial data bus
EC output command for an analog exchanger (grounded contact upon call and during conversation)
SV video-ON command (temporary ground command – 0.5 sec. approx.)
RV video-OFF command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

Terminal board for door speaker connection

1 audio receiver
2 audio transmitter
3 +12V power output
4 audio ground
P1 1° call button *
P2 2° call button *

* To be connected only if included in the push-button panel composition.

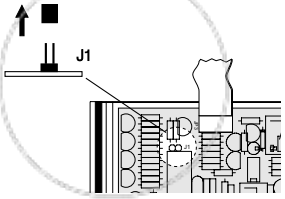
The **CD4130** digital encoder can manage max. 63 users. If more calls are necessary, another **CD4130** can be connected in parallel and properly programmed.

Programming
The **CD4130** digital encoder can be programmed to change the first user code (0 by default). Programming must be made only if more than 63 users are present (the second **CD4130** must be coded starting from number **63** or **higher**) or in installations with multiple entrances and in the presence of digital exchanger. In this case the decoding modules and the digital exchanger must be compatibly programmed.

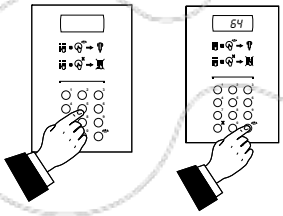
Attention. The code of the first programmed user is not accessible by the system.

For example: the first **CD4130** with user codes from 0 to 63 (default programming; accessible codes from 1 to 63), the second **CD4130** with user codes from 63 to 126 (accessible codes from 64 to 126); or, in case of multiple entrances, the first **CD4130** with user codes from 100 to 163, the second **CD4130** with user codes from 200 to 263.

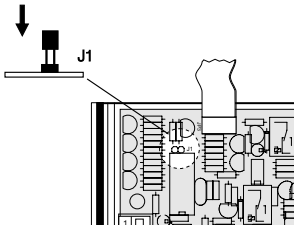
Programming can be made with the **TD4100** digital push-button panel or the **PDX4000** doorkeeper exchanger (if present in the installation) as follows:
- unloosen the 2 screws to remove the cover
- remove jumper **J1** to free the 2 poles



- dial the first user code on the **TD4100** push-button panel keypad or the **PDX4000** doorkeeper exchanger and press Enter; the speaker unit generates an acknowledge tone



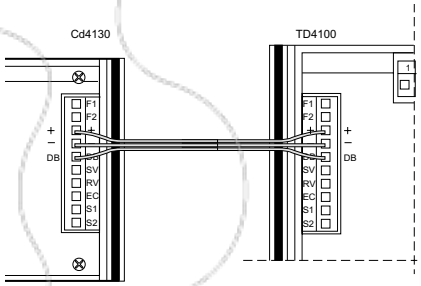
- insert jumper **J1** to short-circuit the 2 poles



- make a call to a user to check the number
- replace the cover.

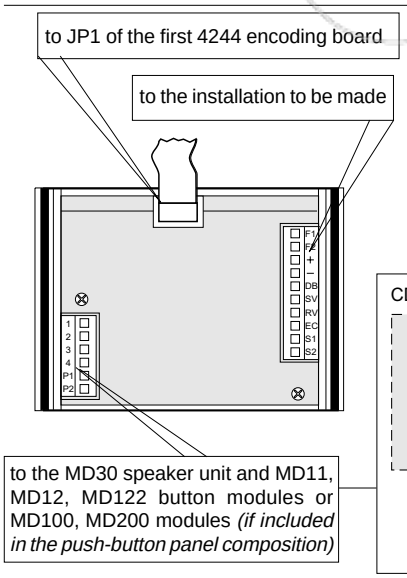
The last number is stored if more codes are sent. If the system does not include a **TD4100** push-button panel or a **PDX4000** doorkeeper exchanger, they can be temporarily added for programming by connecting the **+**, **-** and **DB** terminals to the corresponding terminals of the decoding module (as shown in the drawing below).

Connection of a TD4100 push-button panel to programme the CD4130 digital encoder



Programming of the operating modes
(only for digital encoders with software T100 or higher)
- Remove the **J1** jumper for entering in the programming mode.
- Dial from the keypad of **TD4100** or **PDX4000** the required code (see table 1) and press button "enter"; an acknowledge tone will be heard.
- For exit to the programming mode insert the **J1** jumper.

In the case of several codes dialled, only the last one is stored.



to the MD30 speaker unit and MD11, MD12, MD122 button modules or MD100, MD200 modules *(if included in the push-button panel composition)*

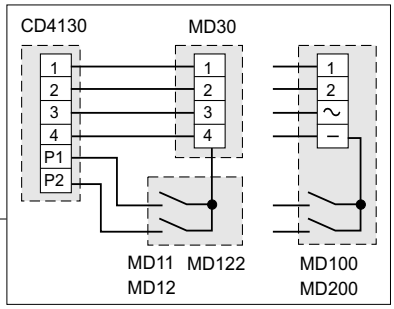
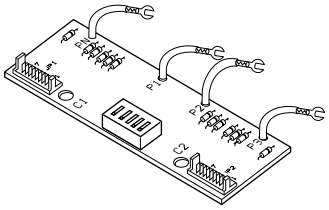


Table 1. Operating modes

Operating mode	Codes to dial			
	9990	**9991**	**9994**	**9995**
Relay activation time	3 sec.	6 sec.	3 sec.	6 sec.
Monitoring from internal station to door station	No	No	Yes *	Yes *

* Enabling this function from any internal station it is possible, by pressing the button 🔑, get the connection with the door station and activate the lock release pressing again the button 🔑.

ENCODING BOARD FOR 4 BUTTONS

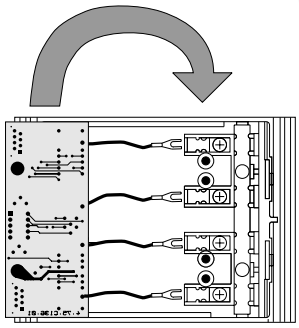


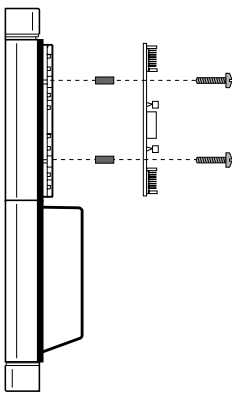
4244.
It allows for connecting the Mody or Matrix button modules to the **FN4000** serial data bus by means of the **CD4130** or **CD4130MA** digital encoder.
One **4244** encoding board is installed in 1 row button modules (**MA22, 24, MD21, 22, 23, 24**), while two encoding boards are necessary in 2 row modules (**MD226, MD228)**. One **4244** encoding board can be used for **MD222** and **MD224** modules by connecting together the common terminals of the buttons.

KIT 4244.
Kit with 4x**4244** encoding boards, no. 3x100mm *(3x3 15/16")* connection cables and no.1x500mm *(1x19 11/16")* connection cable. 8 screws and 8 washers to fix the board to the modules of Mody series and 8 self- threading screws to fix the board to the modules of Matrix series.

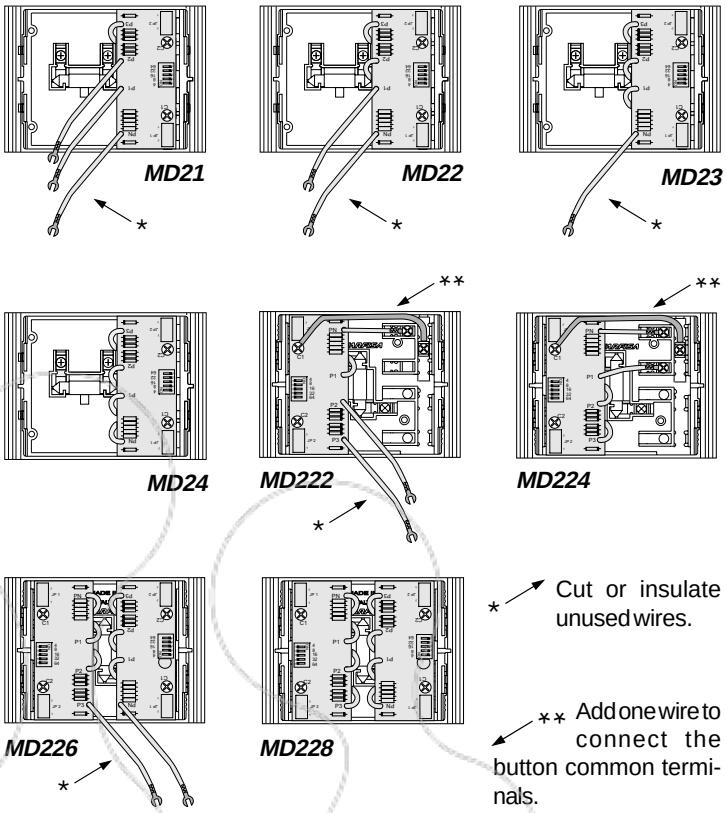
Installation and connections on the Mody push-button modules
- Remove the screws of the common terminals of the buttons.
- Connect the call wires of the **4244** encoding board to the corresponding buttons. **Cut or insulate unused wires.**
- Fix the encoding board to the button module using the screws and washers supplied.
  ***Warning**. The encoding board fixing screws also allow for connecting the encoding boards to the common terminal of the buttons. Therefore they need to be well tightened.*
- Connect the **CD4130** digital encoder to the JP1 connector of the first **4244** encoding board using the cable present on the product.
- Connect the JP2 connector to the JP1 of the second **4244** encoding board using the cables supplied with the **4244 kit.**
- Connect all the encoding boards in a sequence.

***Attention**. An inversion of connection to connectors JP1 and JP2 makes the system not working properly.*





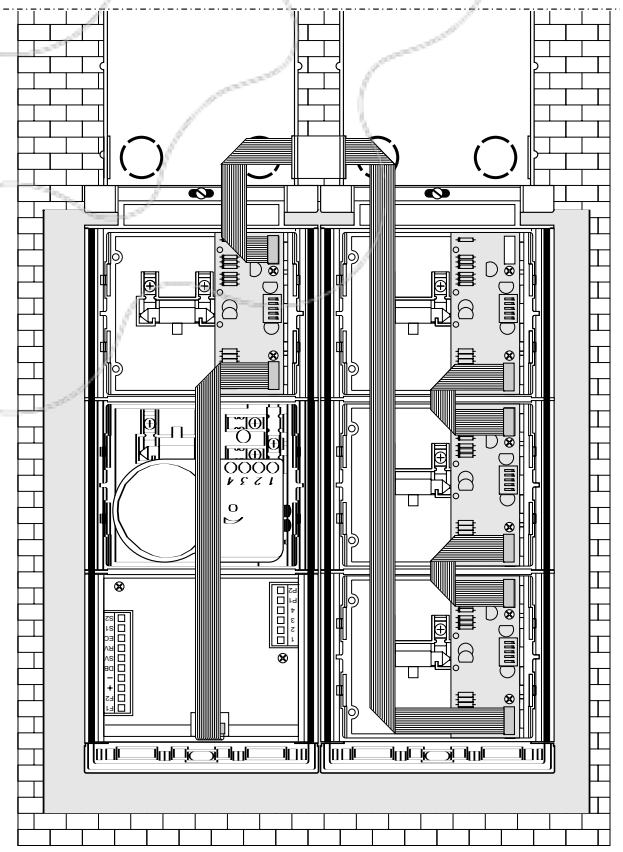
Installation with Mody push-button panels



* Cut or insulate unused wires.

** Add one wire to connect the button common terminals.

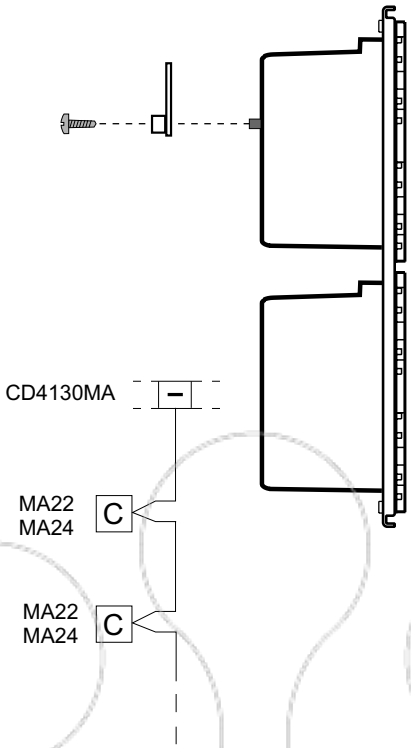
Example of installation of 18-call intercom **MODY** push-button panel



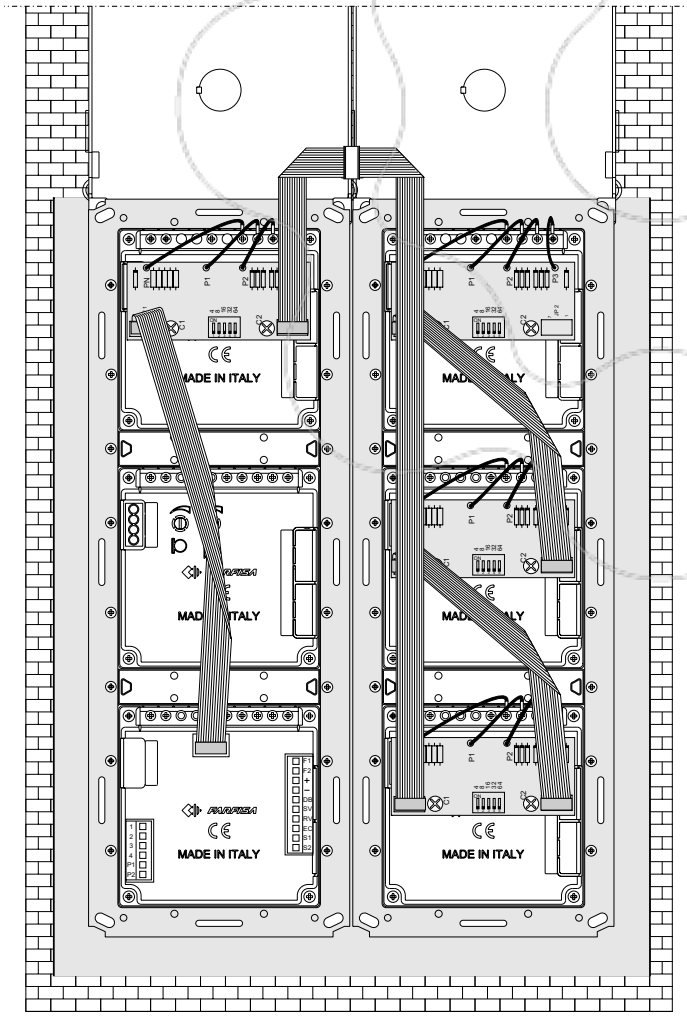
Installation and connections with Matrix push-button panels

- Fix board 4244 to push-button panel with 2 self-threading screws supplied.
- Connect call wires (PN, P1, P2 and P3) of board 4244 to P1, P2, P3 and P4 buttons in the push-button panel. **Cut or insulate unused wires.**
- Connect the button common terminals (terminals C) to the - (ground) terminal of encoder **CD4130MA**.
- Connect the **CD4130MA** digitizer to the JP1 connector of the first module **4244** using the cable present in the product.
- Connect the JP2 connector to the JP1 connector of the second **4244** module using the cables supplied with the **4244 Kit**.
- Connect all the encoding boards in a sequence.

***Attention**. An inversion of connection to connectors JP1 and JP2 makes the system not working properly.*



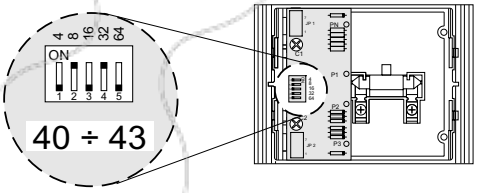
Example of installation of 18-call intercom **MATRIX** push-button panel



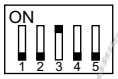
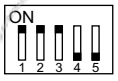
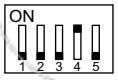
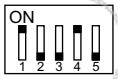
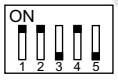
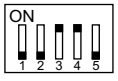
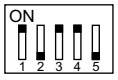
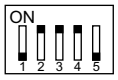
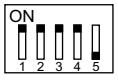
Programming 4244 board

The microswitch programming allows the **CD4130** or **CD4130MA** digitizer to recognise the sequence of connected buttons. The numbers must correspond to a predetermined numeration plan only when a door-keep exchanger is present. In case of installations with secondary door stations (multiple entrance), attention must be paid to the numerical interval recognised by the **4273** digital exchanger.
If the P1 and P2 buttons of the digitizer are connected, programming must begin from the first **4244** module with number 4. In this case number 3 cannot be used in the installation. The first call button is not used when the **MA24**, **MD24** or **MD228** module is used as first button module and the **4244** module is coded with numbers from 0 to 3, because the system does not recognise digit **0 (zero)** as call number.
The factory setting of the microswitches is code 0 (OFF). Set the microswitches to ON according to the requested numerical sequence (see the table on page 49).
Attention: lever no. 5 *(64 code)* must remain OFF because the **CD4130** or **CD4130MA** digital encoder does not recognise numbers higher than 63.

Example: leaving the default setting of the **CD4130** or **CD4130MA** digital encoder unchanged, with first programmable number 0 (zero) and setting levers 2 and 4 of a **4244** board on ON, the connected buttons will call users with 40, 41, 42 and 43 codes. If the **CD4130** or **CD4130MA** digital encoder is programmed with 100 as first programmable number, the users with 140, 141, 142 and 143 codes will be called.

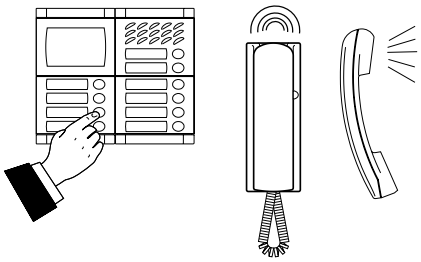


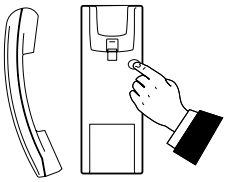
Microswitch position and user's codes correspondence

User codes	Microswitch position
0 ÷ 3	
4 ÷ 7	
8 ÷ 11	
12 ÷ 15	
16 ÷ 19	
20 ÷ 23	
24 ÷ 27	
28 ÷ 31	
32 ÷ 35	
36 ÷ 39	
40 ÷ 43	
44 ÷ 47	
48 ÷ 51	
52 ÷ 55	
56 ÷ 59	
60 ÷ 63	

System operation

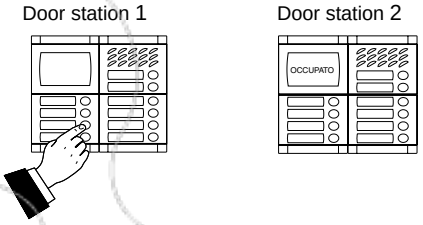
Make sure that connections are correct. Connect the power supply to the mains to power up the system.
Press the button of the desired user. The speaker unit generates the call tone to indicate that the call has been sent. The intercom rings for approximately 25 seconds.
The called user picks up the handset to interrupt the call and enable conversation with the door station for 60 seconds.
Both users receive an acoustic signal 10 seconds before conversation ends. Press the call button again to continue conversation for additional 60 seconds.
The system returns to the idle state when hanging up the handset.
If no answer is received from the internal station when pressing the call button, it is necessary to wait for 25 seconds before making a call to another user.
The door can be opened during conversation only.
In systems with multiple main door stations or doorkeeper exchanger the busy lamp turns ON to indicate conversation in progress. Wait until the lamp turns OFF to make a call.
If the called user is having a conversation with a floor station or secondary station, the main door station will receive the busy tone. The busy lamp turns ON for 5 seconds.
The tone volume can be adjusted using the R22 trimmer.



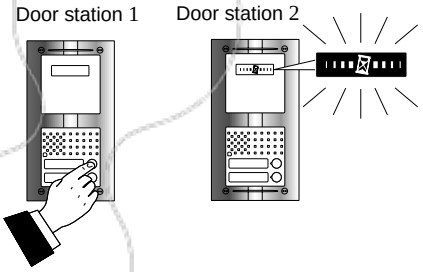


Door opening or call to doorkeeper exchanger

Busy signalling on the Mody push-button panel



Busy signalling on the Matrix push-button panel

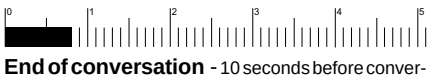


Tone table of the CD4130 and CD4130MA encoder

Free - Indicates that the line is free

Busy - Indicates that the called user is busy

Confirmation - Indicates that programming was executed



End of conversation - 10 seconds before conversation ends

Programming and waiting
Indicates the programming mode or the waiting status of the external user

Composition board of INTERCOM push-button panels.

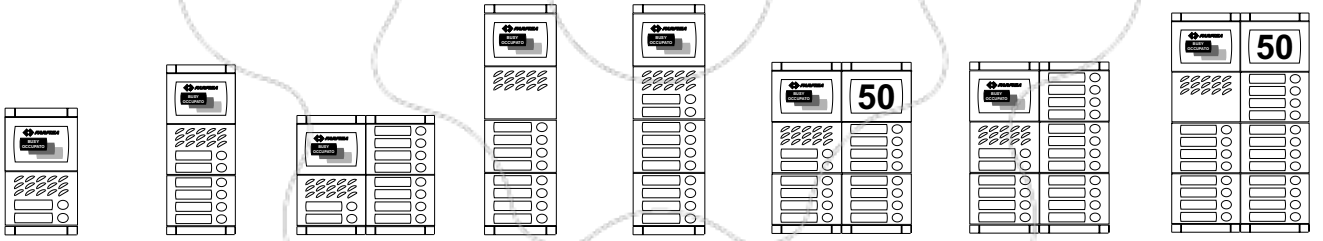
No. calls	Composition and dimensions	Digital encoder	Door speaker	Module for speaker	Button modules and number or blank module	Encoding board kit	Back boxes and frames	Rain shelters
1	124x213x19mm (4 7/8" x 8 3/8" x 3/4")	1 CD4130	1 MD30	1 MD11	- - -	-	1 MD72	1 MD92
2		1 CD4130	1 MD30	1 MD12	- - -	-	1 MD72	1 MD92
4	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	1 MD24 - -	1 4244	1 MD73	1 MD93
6		1 CD4130	1 MD30	1 MD12	1 MD24 - -	1 4244	1 MD73	1 MD93
7	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD4130	1 MD30	1 MD10	1 MD24 1 MD23 -	1 4244	2 MD72 ■	1 MD94 ■
10		1 CD4130	1 MD30	1 MD12	2 MD24 - -	1 4244	2 MD72 ■	1 MD94 ■
12	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	3 MD24 - 1 *	1 4244	2 MD73	1 MD96
15		1 CD4130	1 MD30	1 MD10	3 MD24 1 MD23 -	1 4244	2 MD73	1 MD96
18		1 CD4130	1 MD30	1 MD12	4 MD24 - -	1 4244	2 MD73	1 MD96
19	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD4130	1 MD30	1 MD10	4 MD24 1 MD23 1 *	2 4244	2 MD74	1 MD908
20		1 CD4130	1 MD30	1 MD10	5 MD24 - 1 *	2 4244	2 MD74	1 MD908
23		1 CD4130	1 MD30	1 MD10	5 MD24 1 MD23 -	2 4244	2 MD74	1 MD908
26		1 CD4130	1 MD30	1 MD12	6 MD24 - -	2 4244	2 MD74	1 MD908
28	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	7 MD24 - -	2 4244	3 MD73	1 MD99
30		1 CD4130	1 MD30	1 MD12	7 MD24 - -	2 4244	3 MD73	1 MD99
33	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD4130	1 MD30	1 MD11	8 MD24 - 2 *	2 4244	3 MD74	1 MD912
36		1 CD4130	1 MD30	1 MD10	9 MD24 - 1 *	3 4244	3 MD74	1 MD912
38		1 CD4130	1 MD30	1 MD12	9 MD24 - 1 *	3 4244	3 MD74	1 MD912
40		1 CD4130	1 MD30	1 MD10	10 MD24 - -	3 4244	3 MD74	1 MD912
42		1 CD4130	1 MD30	1 MD12	10 MD24 - -	3 4244	3 MD74	1 MD912
45	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD4130	1 MD30	1 MD11	11 MD24 - 3 *	3 4244	4 MD74	-
50		1 CD4130	1 MD30	1 MD12	12 MD24 - 2 *	3 4244	4 MD74	-
54		1 CD4130	1 MD30	1 MD12	13 MD24 - 1 *	4 4244	4 MD74	-
58		1 CD4130	1 MD30	1 MD12	14 MD24 - -	4 4244	4 MD74	-

■ or MD74 or MD904

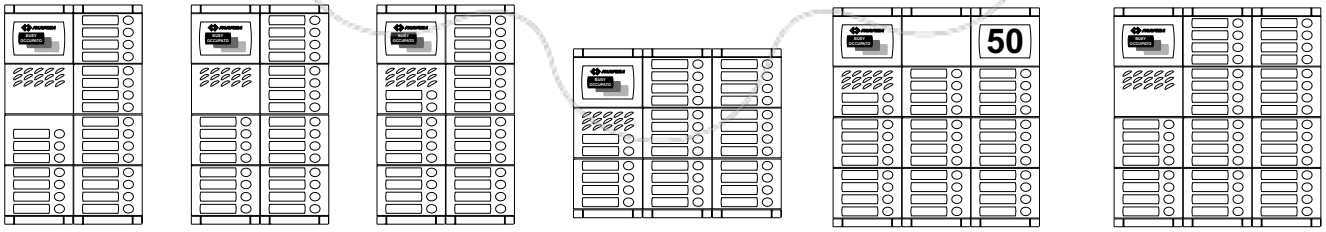
* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

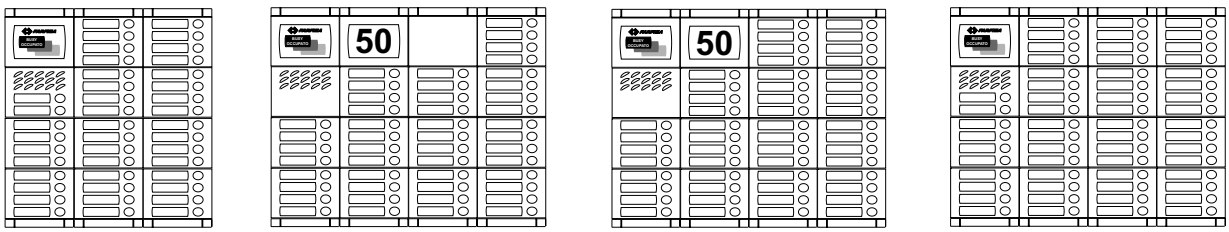
Examples of installations of push-button panels with 1 row in intercom systems



2 call buttons | 6 call buttons | 10 call buttons | 8 call buttons | 10 call buttons | 14 call buttons | 18 call buttons | 20 call buttons



23 call buttons | 24 call buttons | 26 call buttons | 30 call buttons | 34 call buttons | 40 call buttons



42 call buttons | 48 call buttons | 52 call buttons | 58 call buttons

Composition board of VIDEO INTERCOM push-button panels.

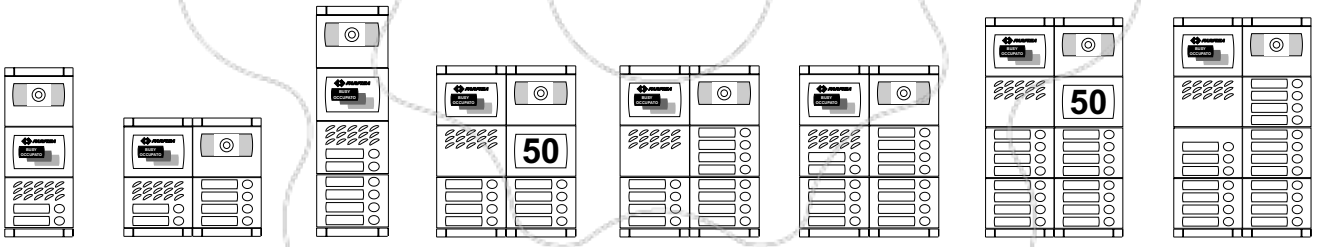
No. calls	Composition and dimensions	Digital encoder	Camera module	Door speaker	Module for speaker	Button modules and number or blank module			Encoding board kit	Back boxes and frames	Rain shelters
1	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD11	-	-	-	-	1 MD73	1 MD93
2		1 CD4130	1 MD41DG	1 MD30	1 MD12	-	-	-	-	1 MD73	1 MD93
4	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	1 MD24	-	-	1 4244	2 MD72 ■	1 MD94 ■
6		1 CD4130	1 MD41DG	1 MD30	1 MD12	1 MD24	-	-	1 4244	2 MD72 ■	1 MD94 ■
7	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	1 MD24	1 MD23	1 *	1 4244	2 MD73	1 MD96
10		1 CD4130	1 MD41DG	1 MD30	1 MD12	2 MD24	-	1 *	1 4244	2 MD73	1 MD96
12		1 CD4130	1 MD41DG	1 MD30	1 MD10	3 MD24	-	-	1 4244	2 MD73	1 MD96
14		1 CD4130	1 MD41DG	1 MD30	1 MD12	3 MD24	-	-	1 4244	2 MD73	1 MD96
15	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	3 MD24	1 MD23	1 *	1 4244	2 MD74	1 MD908
18		1 CD4130	1 MD41DG	1 MD30	1 MD12	4 MD24	-	1 *	1 4244	2 MD74	1 MD908
20		1 CD4130	1 MD41DG	1 MD30	1 MD10	5 MD24	-	-	2 4244	2 MD74	1 MD908
22		1 CD4130	1 MD41DG	1 MD30	1 MD12	5 MD24	-	-	2 4244	2 MD74	1 MD908
24	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	6 MD24	-	-	2 4244	3 MD73	1 MD99
26		1 CD4130	1 MD41DG	1 MD30	1 MD12	6 MD24	-	-	2 4244	3 MD73	1 MD99
28	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	7 MD24	-	2 *	2 4244	3 MD74	1 MD912
30		1 CD4130	1 MD41DG	1 MD30	1 MD10	7 MD24	1 MD22	1 *	2 4244	3 MD74	1 MD912
33		1 CD4130	1 MD41DG	1 MD30	1 MD11	8 MD24	-	1 *	2 4244	3 MD74	1 MD912
36		1 CD4130	1 MD41DG	1 MD30	1 MD10	9 MD24	-	-	3 4244	3 MD74	1 MD912
38		1 CD4130	1 MD41DG	1 MD30	1 MD12	9 MD24	-	-	3 4244	3 MD74	1 MD912
40	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	10 MD24	-	3 *	3 4244	4 MD74	-
42		1 CD4130	1 MD41DG	1 MD30	1 MD10	10 MD24	1 MD22	2 *	3 4244	4 MD74	-
45		1 CD4130	1 MD41DG	1 MD30	1 MD11	11 MD24	-	2 *	3 4244	4 MD74	-
50		1 CD4130	1 MD41DG	1 MD30	1 MD12	12 MD24	-	1 *	3 4244	4 MD74	-
54		1 CD4130	1 MD41DG	1 MD30	1 MD12	13 MD24	-	-	4 4244	4 MD74	-

■ or MD74 or MD904

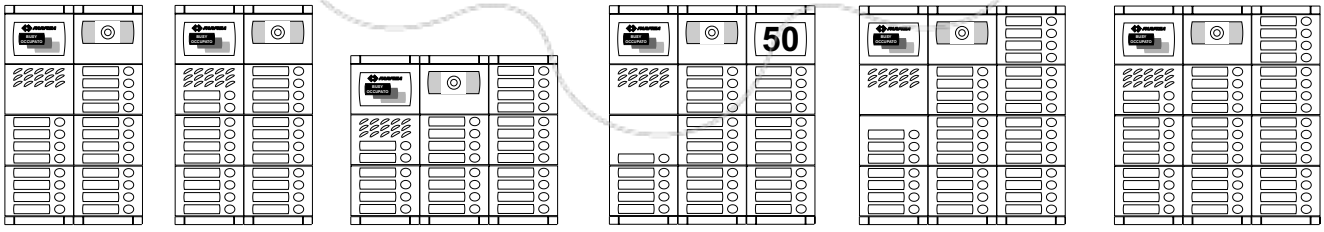
* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

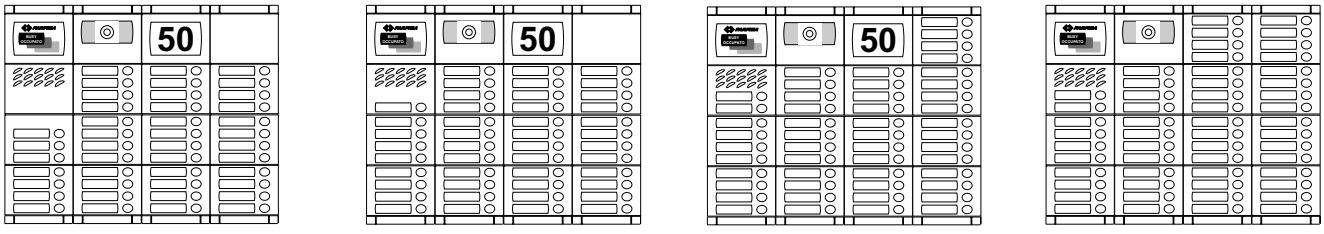
Examples of installations of push-button panels with 1 row in video intercom systems



2 call buttons 6 call buttons 6 call buttons 8 call buttons 12 call buttons 14 call buttons 16 call buttons 19 call buttons



20 call buttons 22 call buttons 26 call buttons 29 call buttons 35 call buttons 38 call buttons



43 call buttons 45 call buttons 50 call buttons 54 call buttons

Composition board of INTERCOM push-button panels.

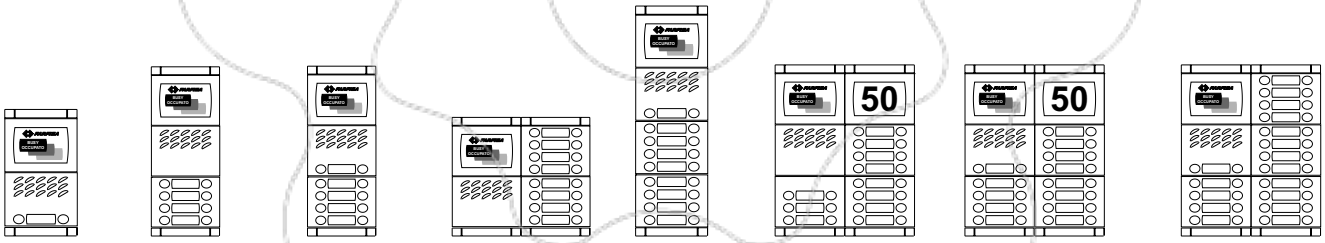
No. calls	Composition and dimensions	Digital encoder	Door speaker	Module for speaker	Button modules and number or blank module			Encoding board kit	Back boxes and frames	Rain shelters
2	124x213x19mm (4 7/8" x 8 3/8" x 3/4")	1 CD4130	1 MD30	1 MD122	-	-	-	-	1 MD72	1 MD92
4	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	1 MD224	-	-	1 4244	1 MD73	1 MD93
8		1 CD4130	1 MD30	1 MD10	1 MD228	-	-	1 4244	1 MD73	1 MD93
10		1 CD4130	1 MD30	1 MD122	1 MD228	-	-	1 4244	1 MD73	1 MD93
14	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD4130	1 MD30	1 MD10	1 MD228	1 MD226	-	1 4244	2 MD72 ■	1 MD94 ■
18		1 CD4130	1 MD30	1 MD122	2 MD228	-	-	1 4244	2 MD72 ■	1 MD94 ■
24	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	3 MD228	-	1 *	2 4244	2 MD73	1 MD96
30		1 CD4130	1 MD30	1 MD10	3 MD228	1 MD226	-	2 4244	2 MD73	1 MD96
34		1 CD4130	1 MD30	1 MD122	4 MD228	-	-	2 4244	2 MD73	1 MD96
38	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD4130	1 MD30	1 MD10	4 MD228	1 MD226	1 *	3 4244	2 MD74	1 MD908
40		1 CD4130	1 MD30	1 MD10	5 MD228	-	1 *	3 4244	2 MD74	1 MD908
46		1 CD4130	1 MD30	1 MD10	5 MD228	1 MD226	-	3 4244	2 MD74	1 MD908
50		1 CD4130	1 MD30	1 MD122	6 MD228	-	-	3 4244	2 MD74	1 MD908
54	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD4130	1 MD30	1 MD10	6 MD228	1 MD226	-	4 4244	3 MD73	1 MD99
58		1 CD4130	1 MD30	1 MD122	7 MD228	-	-	4 4244	3 MD73	1 MD99
62	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD4130	1 MD30	1 MD10	7 MD228	1 MD226	2 *	4 4244	3 MD74	1 MD912
66		2 CD4130	1 MD30	1 MD122	8 MD228	-	1 *	4 4244	3 MD74	1 MD912
72		2 CD4130	1 MD30	1 MD10	9 MD228	-	-	5 4244	3 MD74	1 MD912
74		2 CD4130	1 MD30	1 MD122	9 MD228	-	-	5 4244	3 MD74	1 MD912
84	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	2 CD4130	1 MD30	1 MD10	10 MD228	1 MD224	2 *	6 4244	4 MD74	-
90		2 CD4130	1 MD30	1 MD122	11 MD228	-	2 *	6 4244	4 MD74	-
94		2 CD4130	1 MD30	1 MD10	11 MD228	1 MD226	1 *	6 4244	4 MD74	-
100		2 CD4130	1 MD30	1 MD10	12 MD228	1 MD224	-	7 4244	4 MD74	-
106		2 CD4130	1 MD30	1 MD122	13 MD228	-		7 4244	4 MD74	-

■ or MD74 or MD904

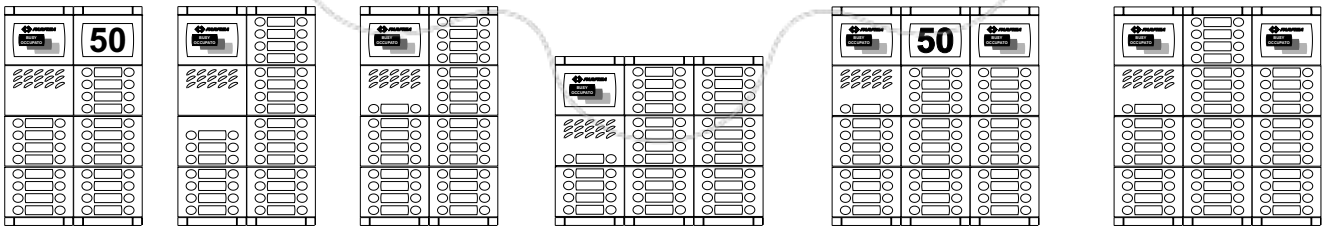
* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

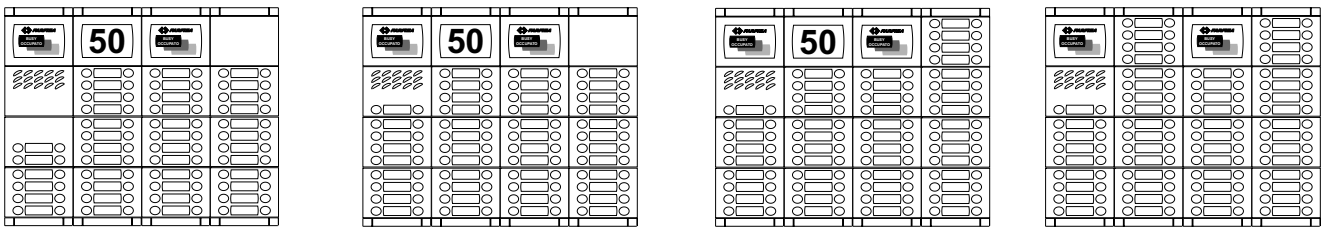
Examples of installations of push-button panels with 1 row in intercom systems



2 call buttons | 6 call buttons | 10 call buttons | 16 call buttons | 18 call buttons | 22 call buttons | 26 call buttons | 34 call buttons



40 call buttons | 46 call buttons | 50 call buttons | 58 call buttons | 66 call buttons | 74 call buttons



84 call buttons | 90 call buttons | 98 call buttons | 106 call buttons

Composition board of VIDEO INTERCOM push-button panels.

No. calls	Composition and dimensions	Digital encoder	Camera module	Door speaker	Module for speaker	Button modules and number or blank module			Encoding board kit	Back boxes and frames	Rain shelters
2	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD122	-	-	-	-	1 MD73	1 MD93
6		1 CD4130	1 MD41DG	1 MD30	1 MD10	1 MD226	-	-	1 4244	2 MD72 ■	1 MD94 ■
8	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	1 MD228	-	-	1 4244	2 MD72 ■	1 MD94 ■
10		1 CD4130	1 MD41DG	1 MD30	1 MD122	1 MD228	-	-	1 4244	2 MD72 ■	1 MD94 ■
14	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	1 MD228	1 MD224	1 *	1 4244	2 MD73	1 MD96
16		1 CD4130	1 MD41DG	1 MD30	1 MD10	2 MD228	-	1 *	1 4244	2 MD73	1 MD96
20		1 CD4130	1 MD41DG	1 MD30	1 MD10	2 MD228	1 MD224	-	2 4244	2 MD73	1 MD96
26		1 CD4130	1 MD41DG	1 MD30	1 MD122	3 MD228	-	-	2 4244	2 MD73	1 MD96
30	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	3 MD228	1 MD226	1 *	2 4244	2 MD74	1 MD908
34		1 CD4130	1 MD41DG	1 MD30	1 MD122	4 MD228	-	1 *	2 4244	2 MD74	1 MD908
38		1 CD4130	1 MD41DG	1 MD30	1 MD10	4 MD228	1 MD226	-	3 4244	2 MD74	1 MD908
42		1 CD4130	1 MD41DG	1 MD30	1 MD122	5 MD228	-	-	3 4244	2 MD74	1 MD908
46	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	5 MD228	1 MD226	-	3 4244	3 MD73	1 MD99
50		1 CD4130	1 MD41DG	1 MD30	1 MD122	6 MD228	-	-	3 4244	3 MD73	1 MD99
54	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD4130	1 MD41DG	1 MD30	1 MD10	6 MD228	1 MD226	2 *	4 4244	3 MD74	1 MD912
58		1 CD4130	1 MD41DG	1 MD30	1 MD10	7 MD228	1 MD222	1 *	4 4244	3 MD74	1 MD912
62		1 CD4130	1 MD41DG	1 MD30	1 MD10	7 MD228	1 MD226	1 *	4 4244	3 MD74	1 MD912
66		2 CD4130	1 MD41DG	1 MD30	1 MD122	8 MD228	-	-	4 4244	3 MD74	1 MD912
72	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	2 CD4130	1 MD41DG	1 MD30	1 MD10	9 MD228	-	3 *	5 4244	4 MD74	-
78		2 CD4130	1 MD41DG	1 MD30	1 MD10	9 MD228	1 MD226	2 *	5 4244	4 MD74	-
82		2 CD4130	1 MD41DG	1 MD30	1 MD122	10 MD228	-	2 *	5 4244	4 MD74	-
88		2 CD4130	1 MD41DG	1 MD30	1 MD10	11 MD228	-	1 *	6 4244	4 MD74	-
94		2 CD4130	1 MD41DG	1 MD30	1 MD10	11 MD228	1 MD226	-	6 4244	4 MD74	-
98		2 CD4130	1 MD41DG	1 MD30	1 MD122	12 MD228	-		6 4244	4 MD74	-

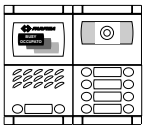
■ or MD74 or MD904

* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

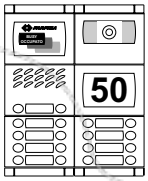
Examples of installations of push-button panels with 1 row in video intercom systems

2 call buttons

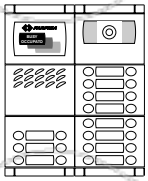


10 call buttons

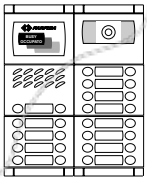
10 call buttons



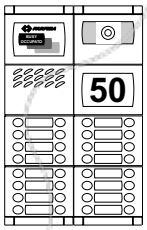
18 call buttons



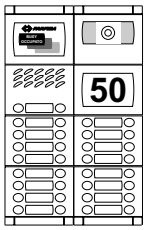
22 call buttons



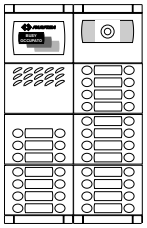
26 call buttons



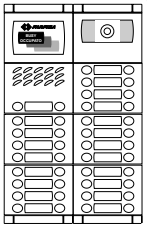
32 call buttons



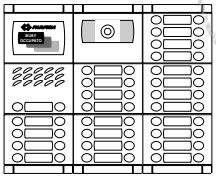
34 call buttons



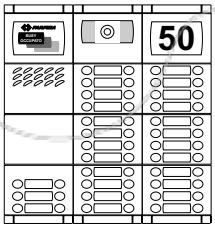
38 call buttons



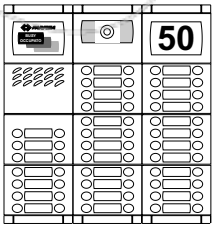
42 call buttons



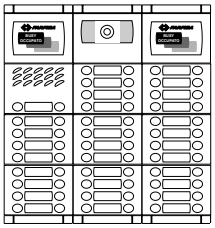
50 call buttons



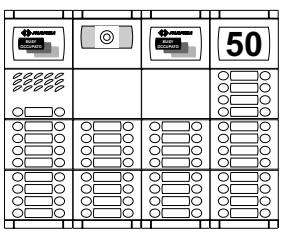
54 call buttons



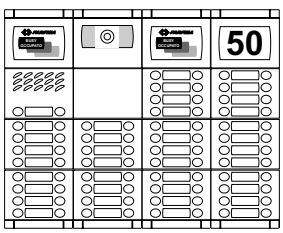
62 call buttons



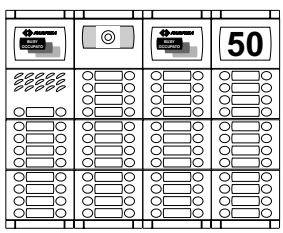
66 call buttons



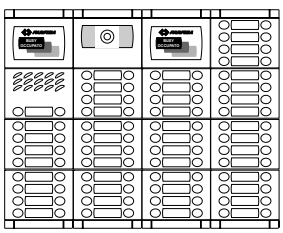
74 call buttons



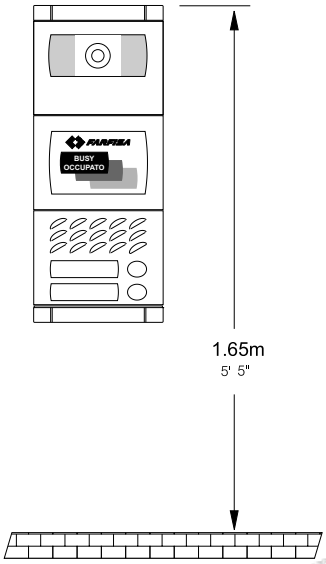
82 call buttons



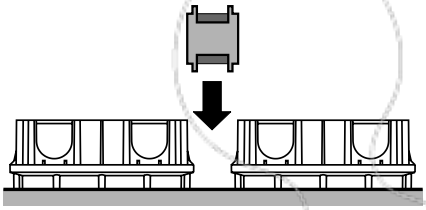
90 call buttons

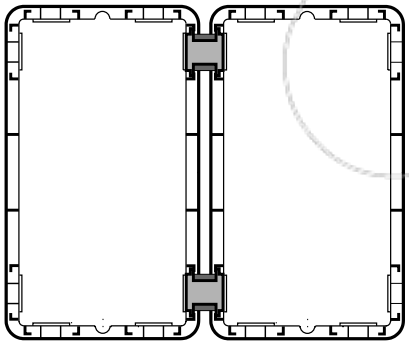


98 call buttons

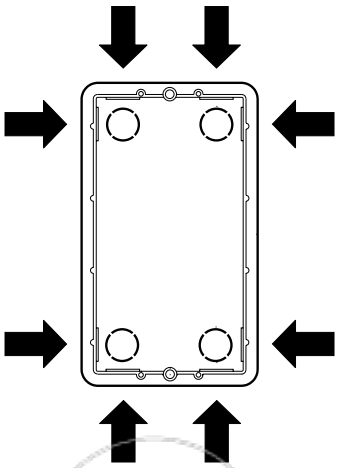


Place the box of the camera unit at a height of about 1.65m *(5' 5")* from the floor keeping the front edges flush-mounted and vertical to the finished plaster.
Position the camera unit in such a way that solar rays or other direct light or intense reflections do not hit the camera lens.

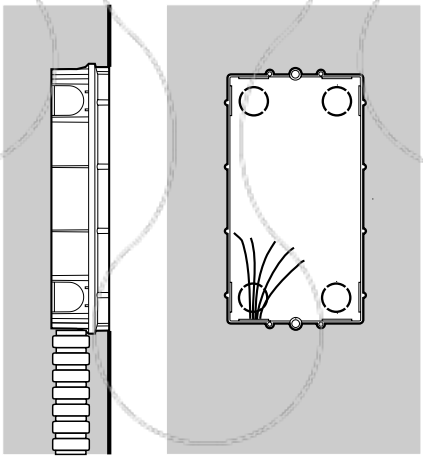




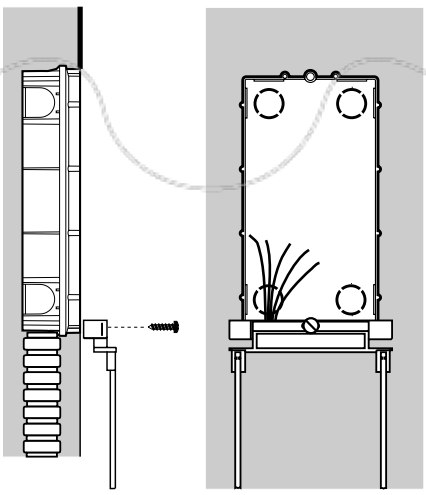
Insertion of cable bush between back boxes. The cable bushes must be inserted before brickwork.



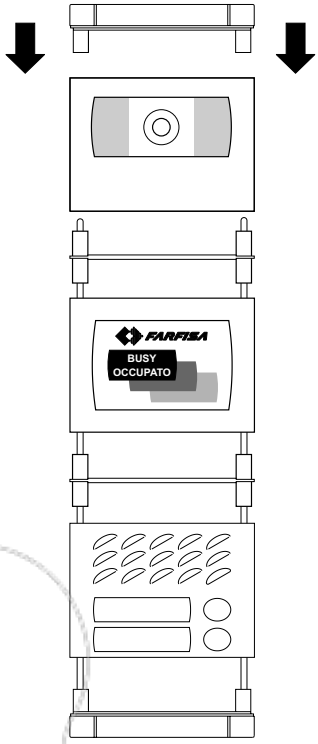
Openings for cables.



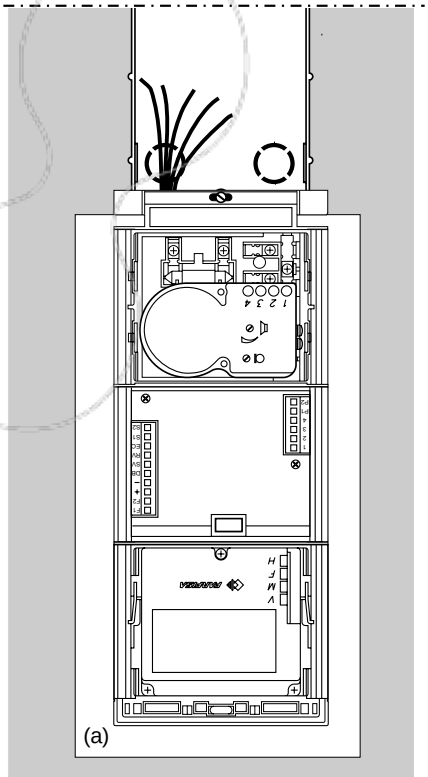
Flush mounting and cables placing.



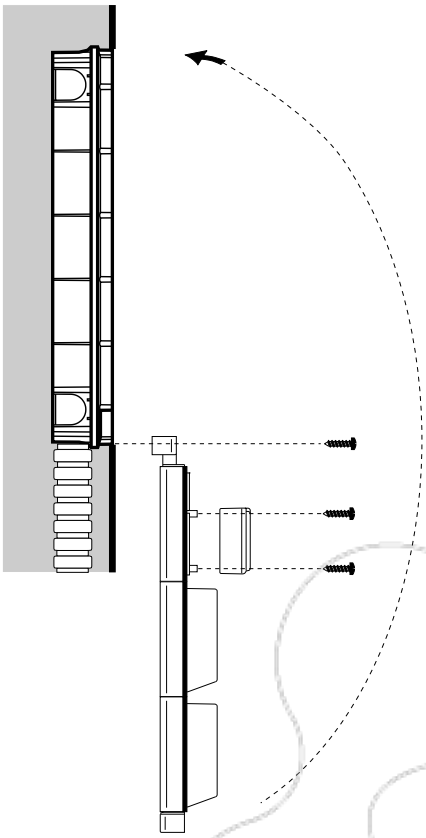
Lower fixing of the module frame.



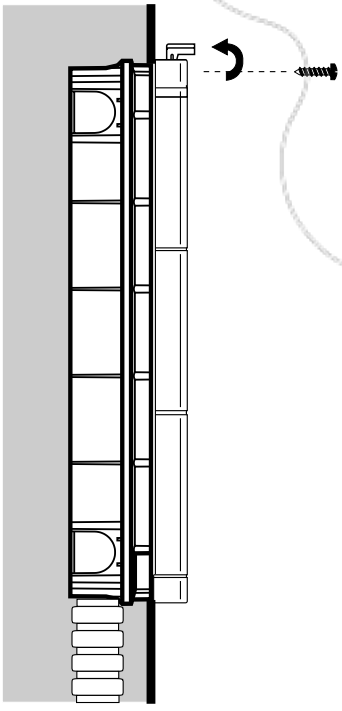
Mounting of button module.



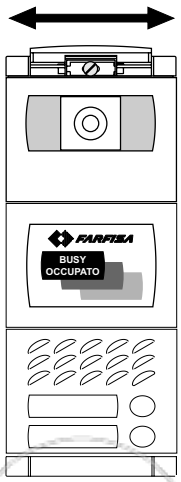
Lower fixing of the module frame on back box. It is advised to insert a protection (a) between the panel and wall while fixing.



Mounting of frame bottom and door speaker.

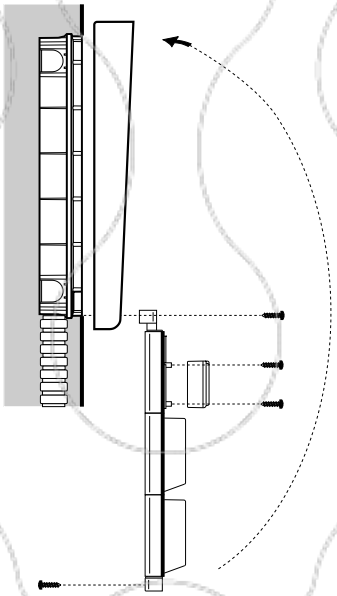


Top fixing of the panel.



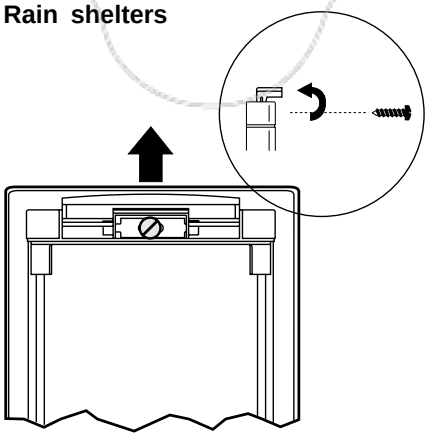
Alignment of the panel.

Hood covers

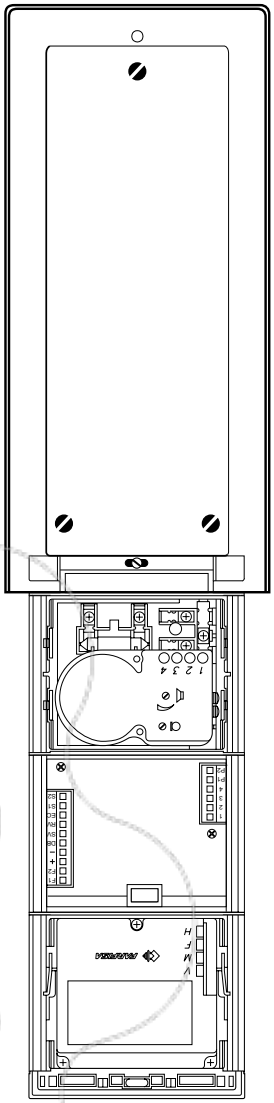


Fixing of the hood cover between the back box and the module frame.

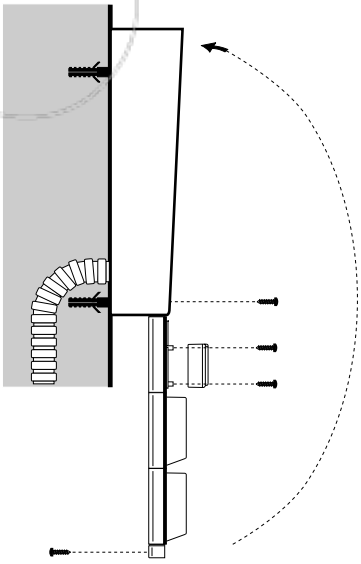
Rain shelters



Dismounting of the frame top side from the rain shelter.

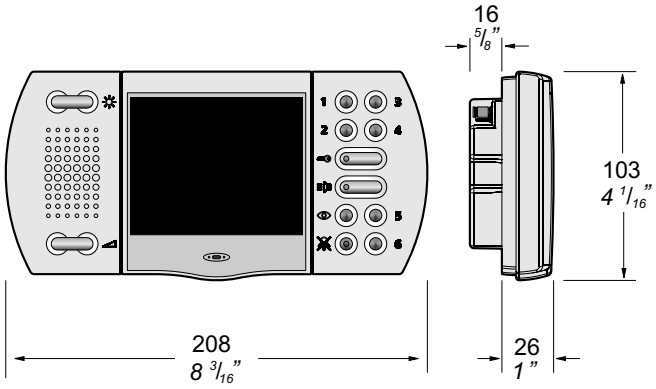


Modules insertions and wall fixing of rain shelter.



Mounting of the frame top to the rain shelter.

VIDEOINTERCOMS



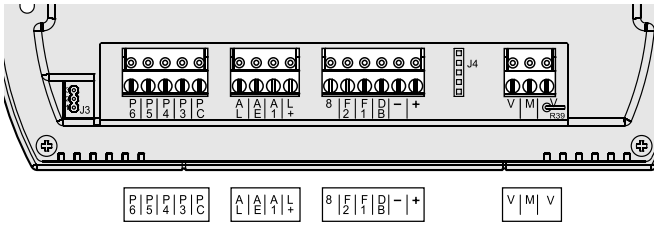
EH9160CWDG. **Hands Free Colour Video Intercom** with audio-video privacy, 4 types of calls, 14 differentiated programmable ring tones, audio, contrast, and brightness adjustment. White colour finish. Complete with 10 keys for turn-on test function, door lock opening, intercom calls and miscellaneous services. It can be installed on the wall by using the back box art.**9083** or wall adaptor **WA9100W**.

Technical characteristics

Power supply:	12Vdc
Standby current:	55mA
Operating current:	0.3A
Screen:	3.5" LCD
Television standard:	PAL
Horizontal frequency:	15625Hz
Vertical frequency:	50Hz
Band width:	>5MHz
Video signal on 75Ω:	0,8÷1,5Vpp
Starting up time:	1 second
Number of bell rings:	8 (programmable)
Number of programmable bells:	8
Operating temperature:	0° ÷ +50°C
Maximum admissible humidity:	90%RH

Terminals

V Video signal input 0.8÷1.5Vpp
M Video ground
- Ground
+ +12V power input
F1 Audio transmitter
F2 Audio receiver
DB Serial data bus
8 +12V power output for video distributor
AL Alarm input; ground command
AE Auxiliary functions output; ground contact
A1 Secondary or floor call input; grounded contact
L+ Floor call or LED for open-door signalling or other functions
PC Common terminal for buttons P3÷P6
P3÷P6 Service buttons - max 50mA

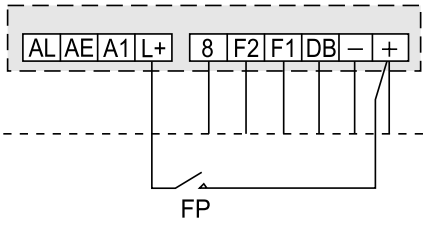


Additional functions

Call floor

To receive a floor call you must:
- connect a button (FP) between terminals **L+** and **+** of the videointercom;
- insert the mobile jumper **J3** in position **2-3**.

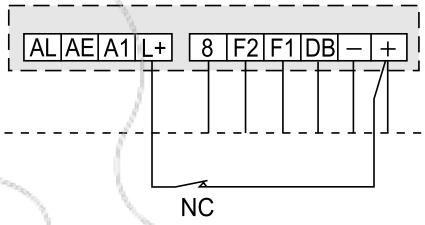
When the button FP is pressed, the videointercom speaker will receive a call different from calls from the external stations or exchanger. The call is received also if the videointercom is in conversation.



Open door signal or other functions

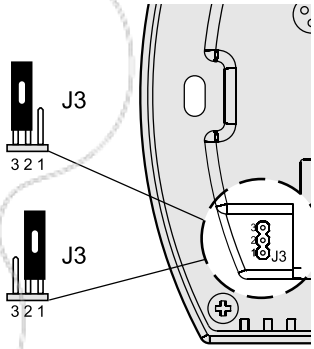
To receive the open door signal or use other similar functions, you must:
- connect a normally closed contact (NC) of a sensor or relay between terminals **L+** and **+** of the videointercom;
- insert the mobile jumper **J3** in position **1-2**.

The orange LED goes on when the contact is closed.



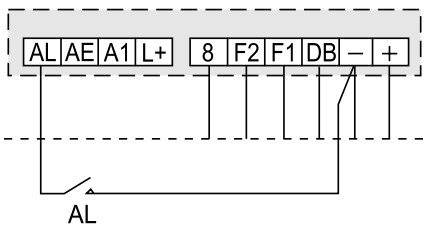
2 - 3
Floor call

1 - 2
Open door signal or other similar services



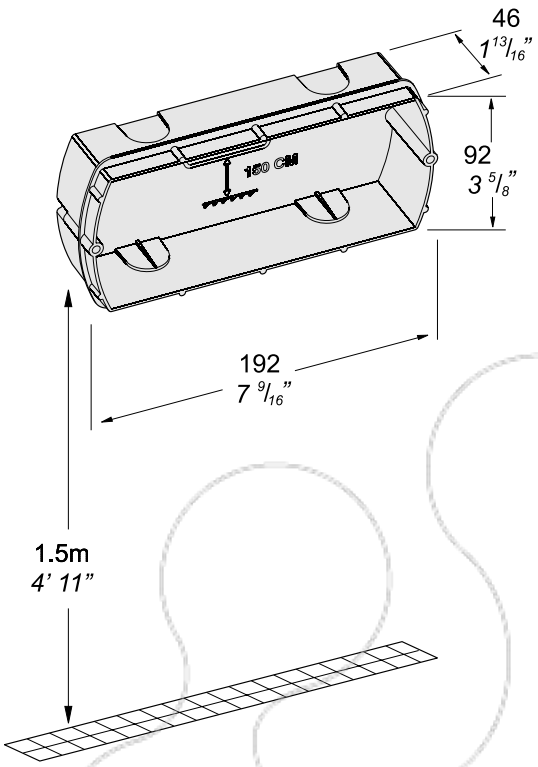
Alarm call

To send an alarm signal to the exchanger or night extension you must connect a button (AL) between terminals **AL** and **-** of the videointercom. When the button is pressed, an alarm signal is sent to the exchanger or to the extension the exchanger function was transferred to (night extension). To deactivate the alarm signal from the night extension you must press the "⊂◎" button.

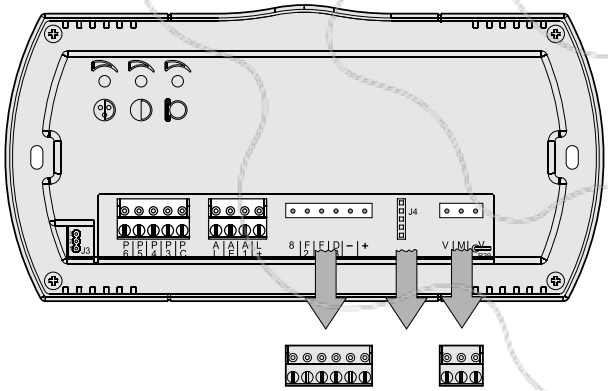


Installation

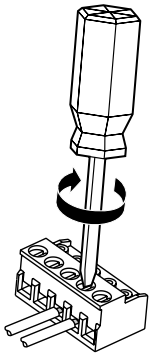
9083. Back-box for video intercoms **EH9160CWDG**.



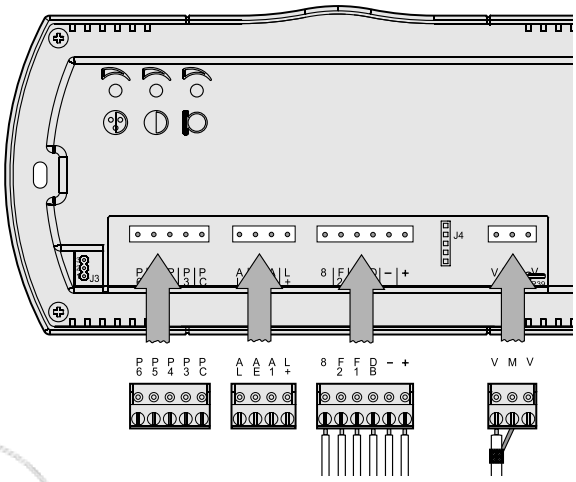
1 - Wall-up the back box art.**9083** at an height of about 1.5 meters above the floor.



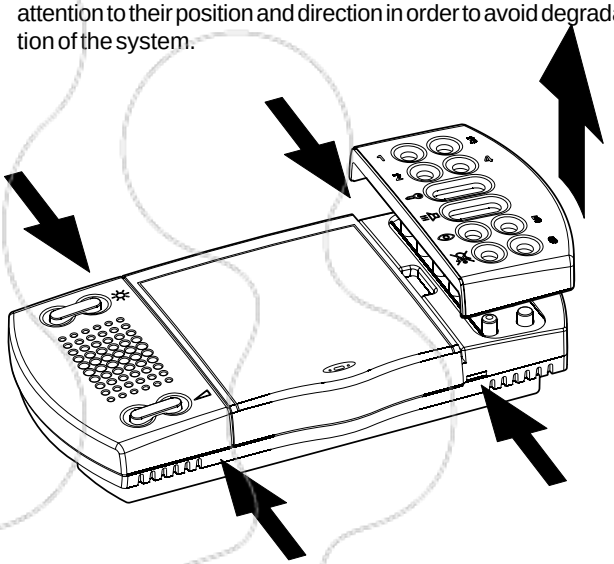
2 - Unplug the terminal block from the video intercom.



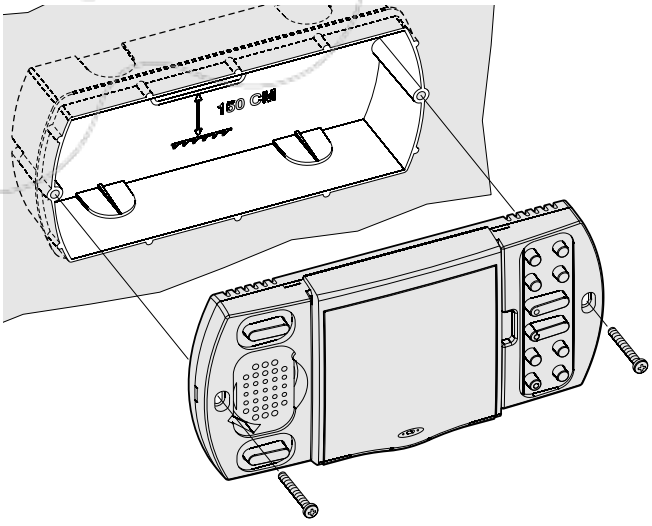
3 - Make the connections as required by the electric diagram to wire.



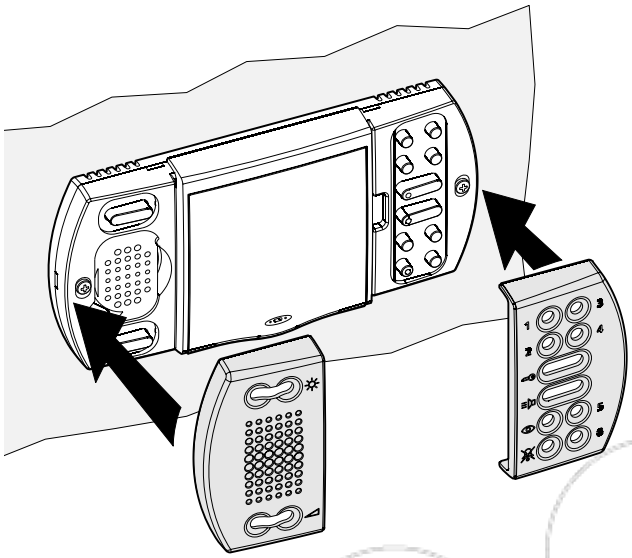
4 - Plug-in back the terminal blocks on the video intercom paying attention to their position and direction in order to avoid degradation of the system.



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

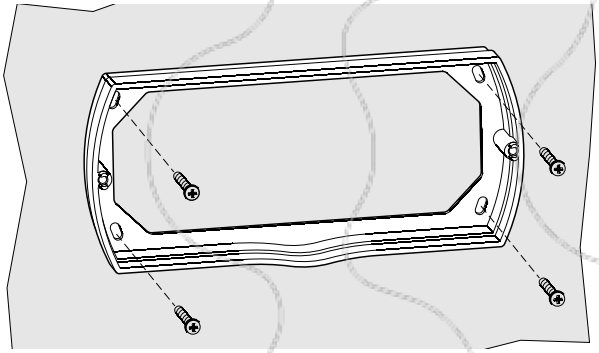


6 - Fix the video intercom to the back box using the two screws supplied with the product.

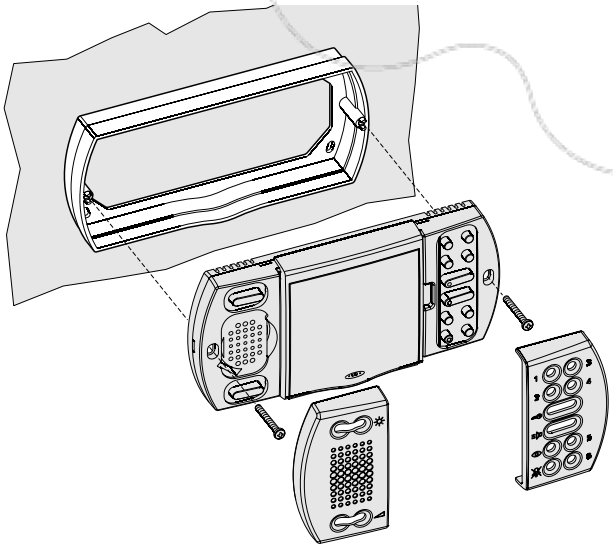


7 - Re-insert the two frontal plastic frames to the video intercom.

WA9100W. Wall adaptor for the **EH9160CWDG** videointercom.

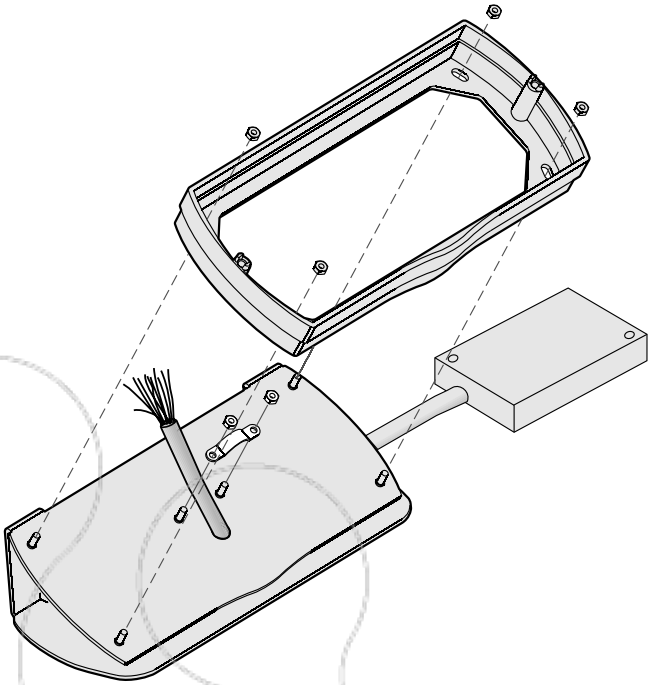


1 - Fix the adaptor to the wall with 4 expansion plugs at approx. 1.5m *(4' 13")* from the floor.

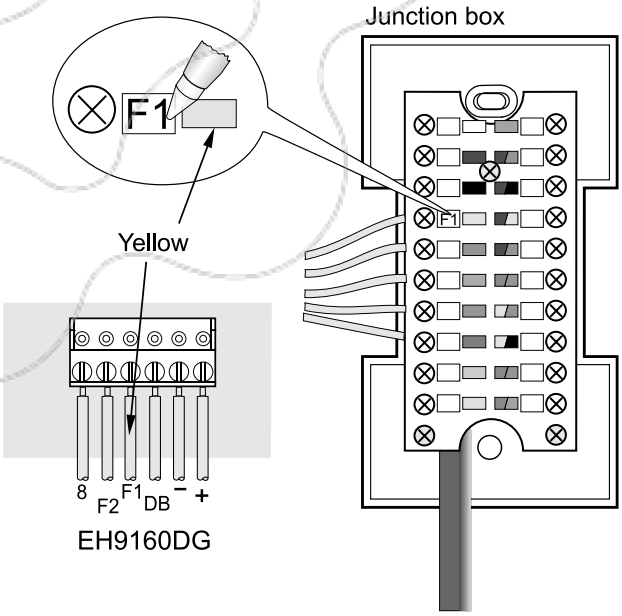


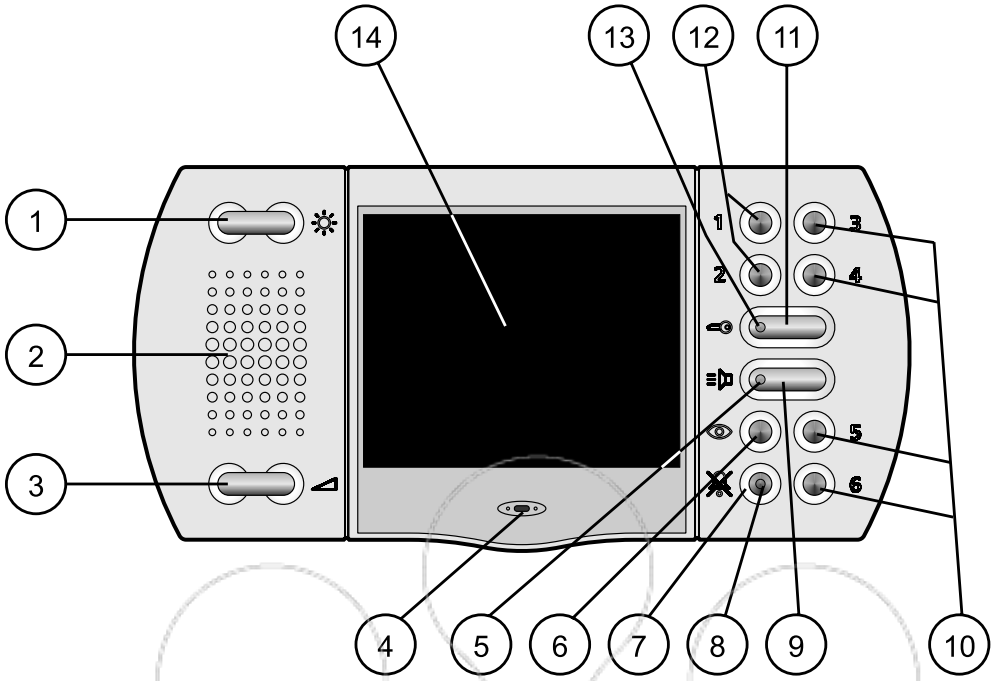
2 - Fix the video intercom to the wall adaptor using the two screws supplied with the product.

TA9160. Table adaptor for **Echos** videointercoms with junction box and 2.4m connection cable with 20 wires.



- Fix the **WA9100W** adaptor on the table adaptor using the nuts presents in the product.
- Pass the connection cable through the proper hole and fix the cable to the table adaptor using the supplied nuts and frame.
- Connect wires of the cable to the terminal blocks of the videointercom and write down on the junction box the correspondence between each single terminal and its wire colour.
- Fix the videointercom as visualized in the figure 2 of this page.





Characteristics

① Image **brightness** adjustment ☼.

② **Loudspeaker**. It allows to hear the conversation and to receive the calls from the external door station, doorkeeper exchanger 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 from external station or exchanger 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 then 2 seconds after receiving a call or making a control switching ON function;
- **enter/exit the programming mode** if pressed for more than 2 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. The LED flashes when a call is received and during the conversation with an external door station and in stand-by;
- the videointercom is in programming operation mode when it is continuously lit-up.

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;
- **enter / exit the user programming mode** if pressed after entering the programming mode with the **Mute** 🔇 button.

⑩ Buttons **3**,**4**,**5** and **6** are available for supplementary services. Buttons with free voltage contacts (max 50mA).
Attention: buttons have a single common terminal (PC terminal).

⑪ **Door lock** 🔑 button. It allows to:
- actuate the electric door lock with the videointercom on;
- call the doorkeeper exchanger (if any and in "day" position);
- deactivate the alarm (if present in the installation and the videointercom is in "night extension" function).

⑫ Buttons **1** and **2** for system functions.

⑬ **Orange LED.** The LED goes on only if a positive voltage (8÷12Vdc) is connected to terminal **L+** and if the **jumper J3** is in position **1-2**. To signal an open-door state it is necessary to install to the door a proper sensor whose contacts must be a normally closed type.

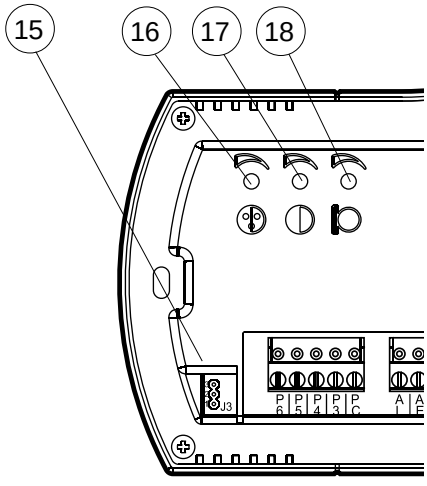
⑭ **3.5" Colour LCD Display.**

⑮ **Jumpers** used to **programme** floor call or open door signal.

⑯ **Colour adjustment** ◎.

⑰ **Contrast adjustment** ◑.

⑱ **Microphone sensitivity adjustment** 🎙.



PROGRAMMING

In the programming mode you can select:
- the duration (max. 8 rings) and the ring tone among the 8 available ones
- the user code
- auxiliary functions

Entering the programming mode

To keep pressed for more than 2 seconds the buttons ⛌; a beep will confirm the correct operation and the red LED lights up. If no operating is carried out during one minute, the system will automatically exit the programming mode.

Programming the ring tone

After you have entered the programming mode as described in the corresponding chapter, you can modify the:

- Number of rings of the bell (*)
- to press the button ◿ to verify the number of the rings currently programmed;
- 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.
- after you have selected the desired number of rings, proceed with the next programming operation or exit the programming mode by holding the ⛌ button for more than 2 seconds; the red LED goes off.

- Ringer tone selection (*)
- to push the ☼ button in order to check the ringer tone now programmed;
- to push laterally (left or right side) the ☼ button to select the previous or next ringer tone;
- after you have selected the desired ring tone, proceed with the next programming operation ("user code programming") or exit the programming mode by holding the ⛌ button for more than 2 seconds; the red LED goes off.

(*) the DIN-DON ring tone with 2-ring duration is selected by default.

User-code programming

The videointercom must be programmed to receive a call from exchanger and/or external station (*Factory Code is 1*). The user number can be programmed in two ways:
a) - by sending a code from the digital push-button panel or doorkeeper exchanger;
b) - by sending a code from a digital push-button panel directly connected with the videointercom.

a) - Programming from digital push-button panel or exchanger

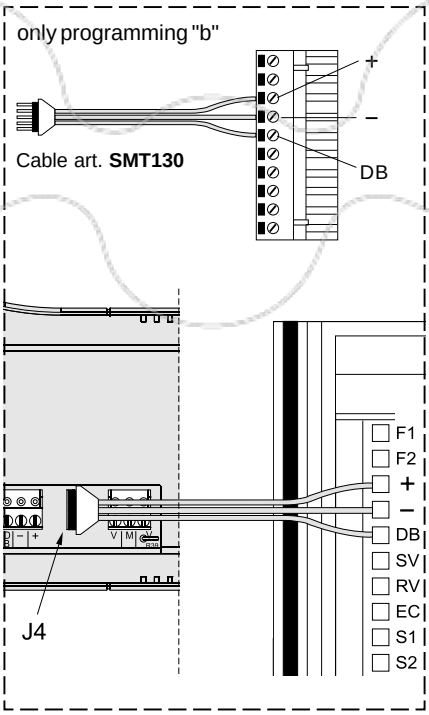
***Warning**: when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

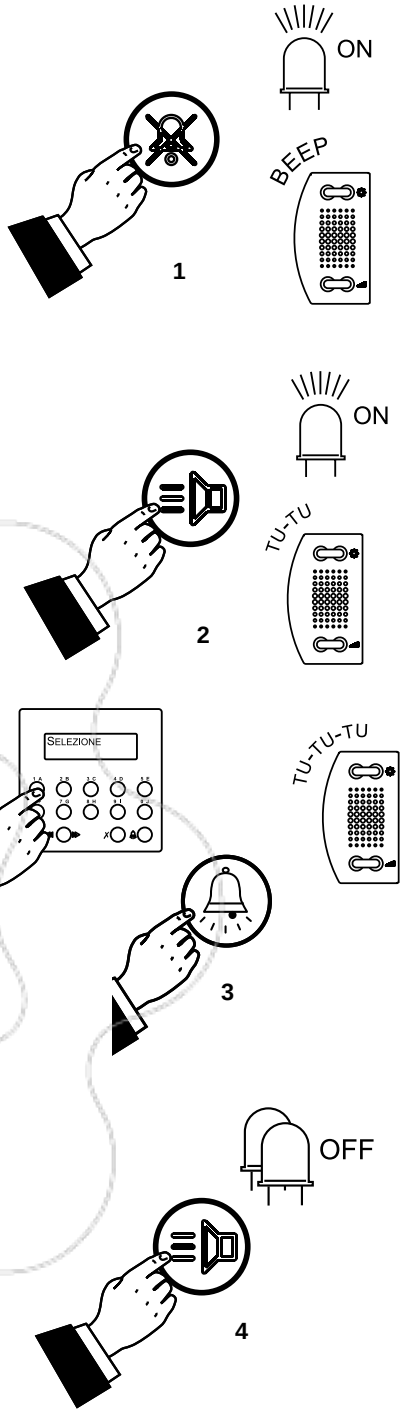
1 - To keep pressed for more than 2 seconds the buttons ⛌; a beep will confirm the correct operation and the red LED lights up. If no operating is carried out during one minute, the system will automatically exit the programming mode.
2 - Press the ≡◫ button; you hear the programming invitation tone; the green LED's go ON during the entire programming.
3 - In the push-button panel or exchanger keyboard dial the extension number you want to give to the videointercom and press Enter; the videointercom speaker receives the confirmation tone for 1 second.
4 - Continue with **step 3 of auxiliary functions programming** or exit the programming mode by pressing the ≡◫ button; the red and green LED's go OFF.

***b)* - Programming from digital push-button panel directly connected with the videointercom with cable art. SMT130**

- Connect the **+**, **-** and **DB** terminals of the cable art. **SMT130** with the terminal block of the **TD4100..** digital push-button panel.
- Insert the small connector of the cable into the **J4** terminal block of the videointercom.
- Make the programming as indicated in items 1, 2, 3 and 4 of the previous paragraph.

Notes. The last number is saved when sending more codes.
At the end of the programming procedure, turn off the installation and disconnect the cable from the videointercom.





Programming auxiliary functions

1 - To keep pressed for more than 2 seconds the buttons ; a beep will confirm the correct operation and the red LED lights up. If no operating is carried out during one minute, the system will automatically exit the programming mode.
2 - Press the button; you hear the programming invitation tone; the green LED's go ON during the entire programming.
3 - In the push-button or exchanger keyboard dial the desired function code from the table below and press Enter; the videointercom speaker receives the confirmation tone for one second.
4 - Continue with the codes you want to change and press the Enter button to confirm, or exit the programming mode by pressing the button; the red and green LED's go OFF.

Table of the codes of the auxiliary functions

- Operating mode of the videointercom
(select one of the following codes)

9980 Master videointercom (*default setting*).
9981 Slave videointercom.

- Activation/deactivation of buttons , 1 and 2

9984 Activation of button (*default setting*).
9985 Deactivation of button
9986 Activation of buttons 1 and 2
9987 Deactivation of buttons 1 and 2 (*default setting).*

Note: to check the button programming status, press the buttons during the normal operation when the videointercom is ON; a confirmation tone is received if the buttons are activated.

- AE port (output)
(select one of the following codes)

9970 Grounded signal during call and conversation with an individual secondary door station (*default setting*)
9971 Grounded signal during call and conversation with a main or common secondary external door station
9972 Grounded signal only during the call ringing (supplementary input for ring tone with relay).

- A1 port (input)
(select one of the following codes)

9990 Input for call from individual secondary door station. Call duration 25 seconds. No busy code sent (*default setting*).
9991 Input for call from individual secondary door station. Call duration 5 seconds. No busy code sent.
9992 Input for call from individual secondary door station. Call duration 25 seconds. Busy code sent.
9993 Input for call from individual secondary door station. Call duration 5 seconds. Busy code sent.

ADJUSTMENTS

Brightness adjustment.
With the video intercom switched ON, press left and right the button to adjust the brightness of the image. To store the current setting press the button. The pressure of this button switches OFF the video intercom.

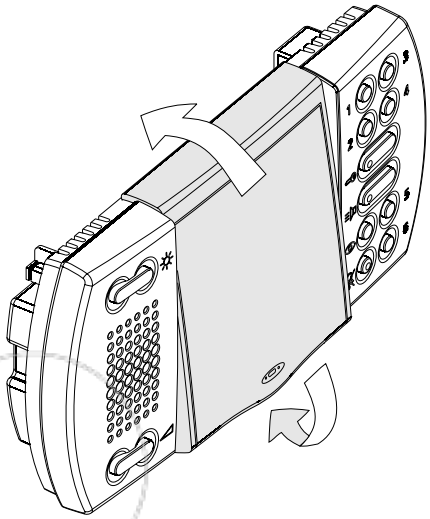
Colour and Contrast adjustment.
The trimmers are located on the back of the video intercom and can be operated by means of a small screwdriver. To adjust the trimmers is required:
- dismount the video intercom from the wall to accede to the adjustment points;
- power ON the video intercom;
- insert the 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 you receive a call from the door station it is possible to adjust the level of the ringing sound pressing left and right the button. To store the current setting press the button.
To disable the ringing sound it is necessary, during a receiving call, 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
- With the video intercom switched ON, press the button to enable the communication. To set the receiving audio level (loudspeaker) press left and right the button. To store the selected level press the button. The pressure of this button switches OFF the video intercom.
- If required the communication the audio is intermittent or distorted it is advisable to adjust the microphone sensitivity by acting on the trimmer located on the back of the video intercom.
- In case of incorrect automatic switching of the video intercom 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.
- **Attention**. For a better setting of the audio levels on the video intercom adjust the microphone sensitivity of the door station to the minimum value and the loudspeakers volume to an intermediate value.

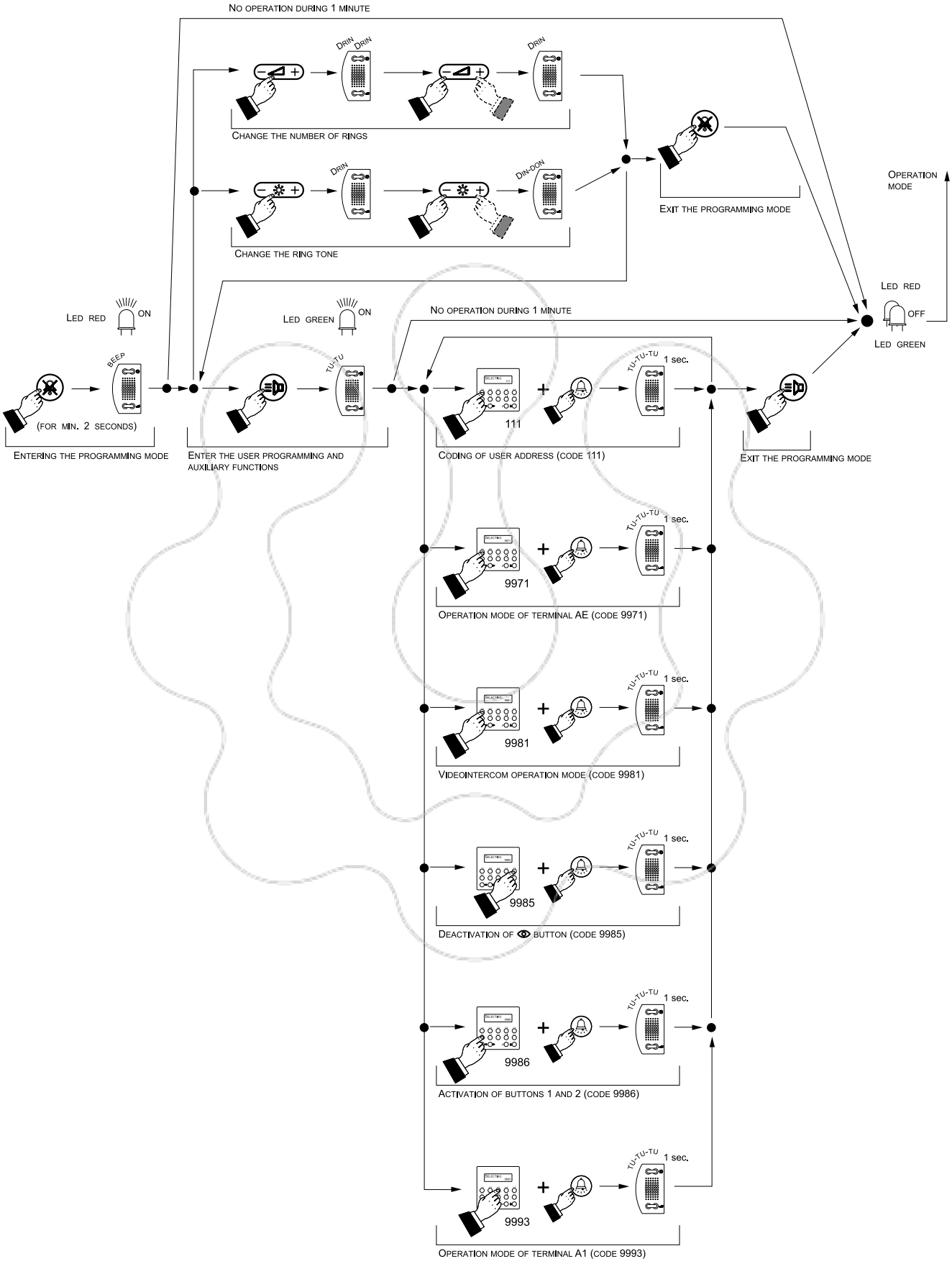
Display adjustment

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



INTERNAL STATIONS WITH INTEGRATED DECODER

Example of programming of videointercom with user address 111, codes of auxiliary services 9971, 9981, 9993, modification of operation for codes 9985, 9986 and possibility to change the number of rings and ring tone *(descriptions to the pages 60 and 61).*



OPERATIONS

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. Also the red LED flashes if the ring has been deactivated.

To start the conversation with the external station 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; in this status the red LED will light up continuously.

To restore the audio to the door station press again the button; the red LED will recover the previous status.

To operate the electric door lock release press the button.

To end the communication and switch OFF the video intercom press the button. The video intercom switches OFF automatically when the communication time expires.

Control switching ON

When the installation is in idle condition, press the button (if activated; see "activation/ deactivation of buttons , 1 and 2" of page 20) to switch ON the videointercom; if permitted by the installation, the main or secondary external station connected to the videointercom is displayed. If the external station allows it, you can start the external conversation by pressing the button**.** Press this button again to switch OFF the videointercom.

In complex installations you can have multiple videointercom-ON test functions using buttons from 3 to 6.

Tone table

Dialling tone. Indicates that the line is free

Free. Indicates that the exchanger has no reservations

Busy. Indicates that the line is busy

Dissuasion. Indicates that no reservations can be made

Programming and waiting. Indicates the programming mode or the waiting status of the external user

Confirmation. Indicates that programming was executed

Call table

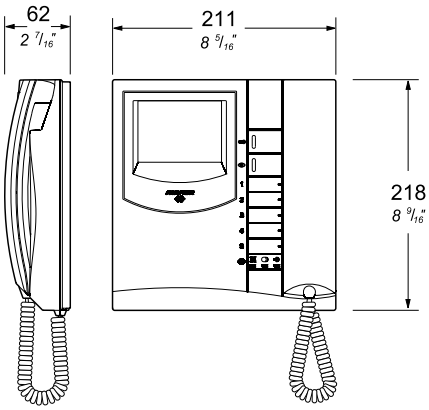
Digital intercom call. Indicates the call from the digital entrances or the exchanger. The ring tone and number of rings depend on the programming you have selected

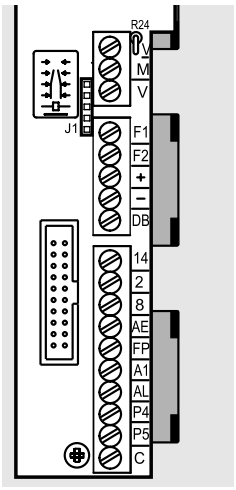
Floor call. Indicates the call from the floor

Analogue secondary entrance call. Indicates the call from the analogue secondary entrance. The number of rings depends on the programming you have selected

Alarm call. It indicates a call from alarm; only in videointercom in night extension

Video intercoms





+ +12V power input
F1 audio transmitter
F2 audio receiver
DB serial data bus
AL alarm input; grounded contact
AE auxiliary functions output; grounded contact
A1 entry called by secondary push-button panel; grounded contact
FP floor call input; grounded contact
14 +12V power input
2 ground
8 +12V power output for video distributors
C common terminal for buttons P4 and P5
P4 - P5 service buttons - max 0.5A

Note. In order to power the video section with a separate power supply source from those available on the riser:
- add a +12V power supply unit and connect it between terminals 14 and 2.
- cut **R47** and **R48 resistors** on **WB3160DG** wall bracket.

EX3160. White Flat video intercom with integrated decoding module, private audio-video function, electronic microphone, differentiated double electronic ringing sounds (modulated and continuous) and terminal board for the connection to the wall bracket. Equipped with 3 led's and 7 buttons (5 of them comes with the product but are not mounted) for camera control switch ON, door-open and various services.
The video intercom can be fixed to the wall (flush-mounted) with the **WB3160DG** bracket.

Technical data

Power supply		12÷15Vdc
Operating current	- stand by	20mA
	- in operation	0.4A
Monitor		4" FLAT CRT
TV standard		CCIR-625 lines
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		2 seconds
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

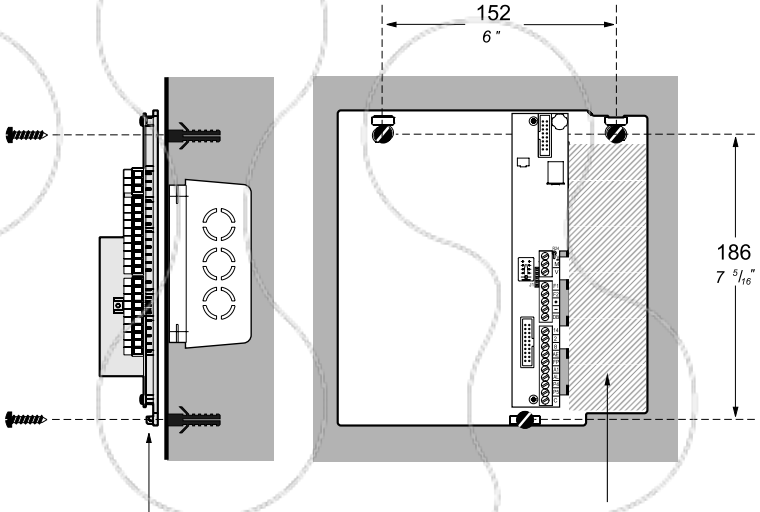
EX3160C. Version of **EX3160** video intercom with colour LCD.

Technical data

Power supply		12÷15Vdc
Operating current	- stand by	20mA
	- in operation	0.4A
Screen		4" LCD
TV standard		PAL
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		1 second
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

WB3160DG. Wall bracket for **EX3160** and **EX3160C** video intercoms with two terminal boards for connection to the system.

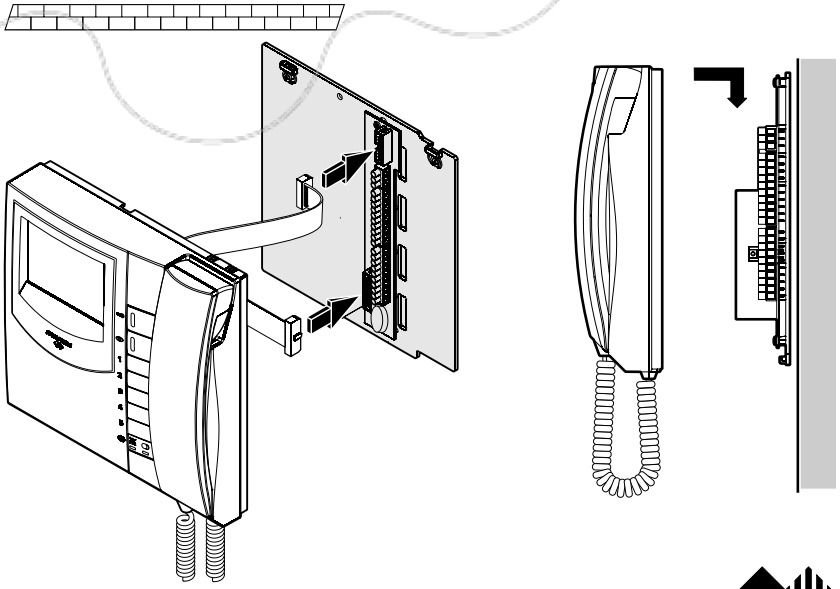
Terminals
V video signal input 0.8÷1.5Vpp
M video ground
- ground

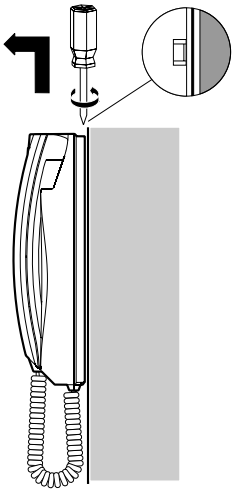


- This area has to be free, to move possible present cables.

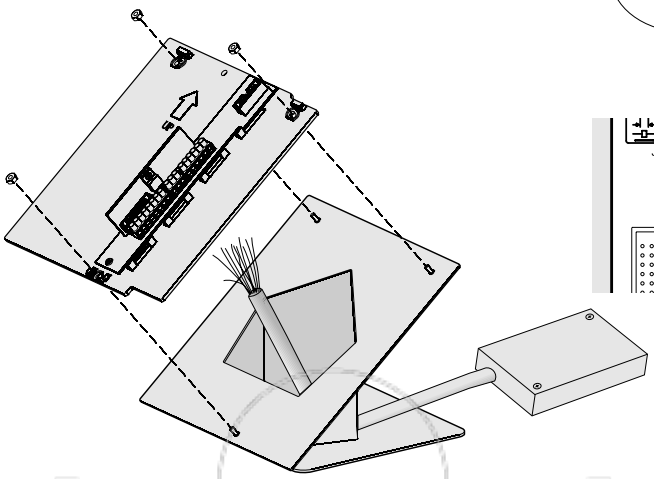
140 ÷ 150 cm
4' 7" ÷ 4' 11"

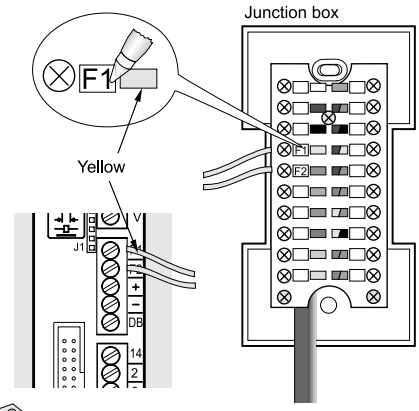
-Don't shut the 3 screws of fixing if the wall is irregular.





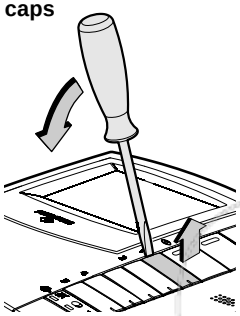
TA3160. Table adaptor with weighted base, junction box and 2.4m connection cable with 20 wires.



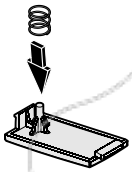


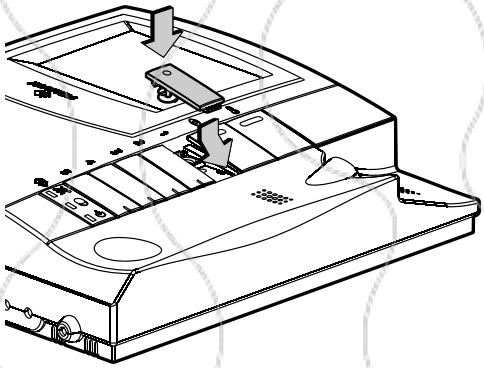
Remove the cover to the junction box and connect wires to the terminals matching the colour of wire with that of the label. Write in the proper space the code of the connection.

Taking out of button caps



Mounting of the additional buttons





User-code programming

Videointercom address (user code) **must be programmed** to receive a call from exchanger and/or external door stations (*default value = 100*). Setting values are stored on the wall brackets consequently videointercoms can be changed without being re-programmed.
User code can be programmed in two ways:

a) - by sending a code from the digital push-button panel or doorkeeper exchanger already present in the system;

b) - by sending a code from a digital push-button panel momentarily connected to the wall bracket of the videointercom.

***a)* - Programming from digital push-button panel or exchanger**

***Warning**: when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

1 - Keep pressed for more than 2 seconds the button ; a beep will confirm the correct operation and the yellow LED's go ON during the entire programming;
- hold the button pressed and lift the handset; you hear the waiting tone;
- release the button .
Note. If no operation is done during one minute, the system will automatically exit the programming mode.

2 - In the push-button panel or exchanger keyboard dial the extension number you want to give to the videointercom and press Enter; the videointercom speaker receives the confirmation.

3 - Continue with **step 3 of auxiliary functions programming** or exit the programming mode hanging-UP the handset; yellow LED goes OFF.

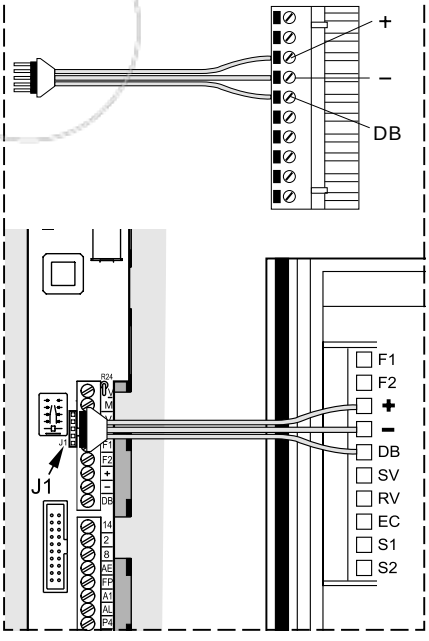
***b)* - Programming from digital push-button panel momentarily connected to the videointercom wall bracket with cable art.SMT130**

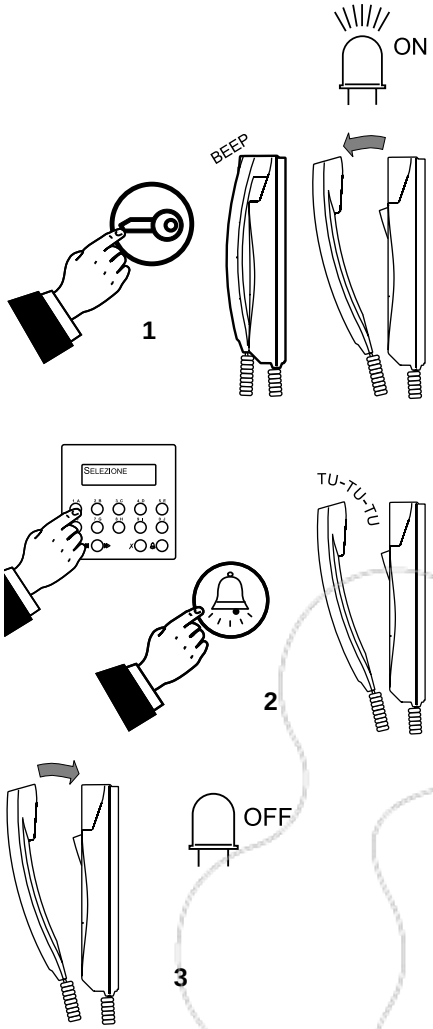
- Connect the **+**, **-** and **DB** terminals of the cable art.**SMT130** with the terminal block of the **TD4100..** digital push-button panel.
- Insert the small connector of the cable into the **J1** terminal block of the wall bracket of the videointercom.
- Make the programming as indicated in items 1, 2 and 3 of the previous paragraph.

Notes. The last value is saved when sending more codes.
At the end of the programming procedure, turn OFF the installation and disconnect the cable from the videointercom.

only programming "b"

Cable art. **SMT130**





Programming auxiliary functions

Additional programming may be necessary for special installation and performance requirements, as indicated below:

1 - Keep pressed for more than 2 seconds the button ; a beep will confirm the correct operation and the yellow LED's go ON during the entire programming;
- hold the button pressed and lift the handset; you hear the waiting tone;
- release the button .

Note. If no operation is done during one minute, the system will automatically exit the programming mode.

2 - In the push-button or exchanger keyboard dial the desired function code from the paragraph below and press Enter; the videointercom speaker receives the confirmation tone for one second.

3 - Continue with the codes you want to change and press the Enter button to confirm, or exit the programming mode hanging-up the handset; yellow LED goes OFF.

Codes of the auxiliary functions

- Videointercoms in parallel with or without intercommunicating service

9961÷9968 Internal address codes for videointercoms installed in the same apartment with or without intercommunicating service. If a user has more intercoms in parallel (all videointercoms with the same user code), they must be identified with progressive numbers (9961, 9962, 9963, etc.). The default code is 9961. See the corresponding paragraph for information on call button codes.

● Power-ON control for multi-videointercom system in the same apartment when called from main or secondary external door station

9982 Videointercom switches-ON after an incoming call (*).

9983 After receiving a call videointercom do not switches-ON (only for videointercoms connected in the same apartment with internal address code from 9961 to 9967).

To switch it ON press the button .

- AE port (output) *(select one of the following codes)*

9970 Grounded signal during call and conversation with an individual secondary door station (*)

9971 Grounded signal during call and conversation with a main or common secondary external door station

9972 Grounded signal only during ringing tone (supplementary input for ring tone with relay).

9973 Grounded signal during intercommunicating call and conversation.

- A1 port (input) *(select one of the following codes)*

If to a videointercom (or to other videointercoms connected in parallel to it) is locally connected a door station using terminal **A1**, should be necessary to make some programming as follows.

● Sending the busy code during a conversation with a secondary door station.

9990 No busy code sent (*).

9991 Busy code sent.

● Receiving an incoming call tone during a conversation with a local secondary door station. To accept the call it is necessary to hang-up and then pickup the handset.

9992 Incoming call tone OFF, when receiving a call videointercom will send a busy code to the system (*).

9993 Incoming call tone ON, when receiving a call videointercom will send an accepted call code to the system.

● Re-direction of ringing tone to other videointercom installed in the same apartment. If no other videointercoms are installed in the same apartment set value to 9994 (default).

9994 NO re-direction of ringing tone to other videointercoms (*).

9995 Ringing tone re-directed to the other videointercoms in the same apartment.

● Presence of a local secondary door station to which it would be possible to enable the monitoring and, picking-up the handset, the audio-video communication.

9996 Local secondary door station not present (*).

9997 Local secondary door station present.

- FP port (input) *(select one of the following codes)*

● Floor call button connected to **FP** terminal of a videointercom and re-direction of the call to other videointercoms installed in the same apartment.

9980 NO re-direction of the call to other videointercoms installed in the same apartment (*).

9981 Enabling of re-direction of the call to other videointercoms installed in the same apartment.

(*) default setting

● Programming the buttons 1, 2 and 3 for intercommunication calls

The buttons 1, 2 and 3 are programmed by default to send reservations to the doorkeeper exchangers of the installation. To make intercommunication call with the buttons, follow the instructions below:

1 - enter the programming mode by holding the button pressed for more than 2 seconds;

2 - hold the button **to program (1, 2** or **3)** pressed for more than 2 seconds; a temporary tone is generated and the yellow led starts flashing rapidly;

3 - press the button as many times as the last digit of the identification code you want to call; a tone is generated every time the button is pressed. For example: if you want to call the identification code 9961 from button 2, press the button only once. The identification code of the videointercom used for programming must be excluded;

4 - hold the button pressed for more than 2 second to confirm programming; you hear a number of tones that corresponds to the button code;

5 - program another button by following the instructions contained in items 2, 3 and 4 or exit programming by lifting and hanging up the handset; the yellow led goes off.

Only the buttons for intercom service must be programmed.

Restoring the default configuration of each button.

To restore the default programming of a button:
- repeat the programming steps described in items 1 and 2;
- press the button ; you hear a confirmation tone;
- exit the programming mode by lifting and hanging up the handset.

Programming of call parameters
In this programming mode you can select the number of the rings (max.8 rings) and the ringing tone (among the 8 available ones) for the following calls:
- **system calls** (from main or secondary door stations and/or exchanger)
- **call generated by a local secondary door station**
- **call floor**
- **intercommunicating call**

Procedure of programming
1 - Keep pressed for more than 2 seconds the buttons ; an acknowledge tone will be heard for a while, whilst during all the programming time the yellow LED will light-ON and the programming tone will be heard.
2 - press the button to verify the ringing tone now programmed;
3 - press several times the button to select the desired ringing tone;
4 - keep pressed the button for more than 2 seconds to increase the ringing volume. Once the volume reaches the maximum it drops to the minimum and starts to increase again;
5 - proceed with other settings or exit the programming mode as described in the point 8;
6 - press the button to verify the number of the rings currently programmed;
7 - press several times the button to select the desired number of rings;
8 - proceed with other settings or exit the programming mode by picking-UP and then hanging-UP the handset; the yellow LED will switch-OFF.

- **Ringing tone for System Calls** (*main and secondary door stations and/or exchanger*)
- Follow the programming procedure described above.

- **Ringing tone for calls generated by a local secondary door station**
- If this programming follows the previous one, follow the same procedure from step 2 to step 8.
- To access this programming, without changing the previous one, press the button twice and follow the procedure from step 2 to step 8.

- **Ring tone for floor call**
- If this programming follows the previous one, follow the same procedure from item 2 to item 8.
- To access this programming, without changing the previous one, press the button twice and follow the procedure from step 2 to step 8.

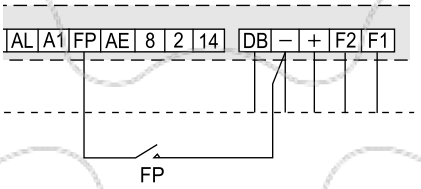
- **Ring tone for intercommunication call**
- Hold the button pressed for more than 2 seconds; a momentary confirmation tone is generated and the yellow led starts flashing rapidly.
- Follow the same procedure from step 2 to step 7 of the corresponding paragraph.
- Exit programming by lifting and hanging UP the handset; the yellow led goes OFF.

Note. The programming mode is exited automatically if no operation is made during 1 minute.

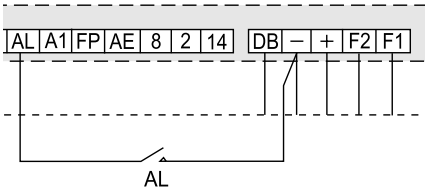
Calls muting
For setting call muting it is necessary to press the button for 3 times with the videointercom handset hanged-UP; red LED will show the status of ringing calls: LED OFF (ringing tone active), LED FLASHING (muting)
- **muting: red LED flashes**
- **ringing tone active: red LED OFF**

Additional functions

- **Call floor (push-button only)**
To receive a floor call it is necessary to connect the two poles of a normally-open push button (FP) to the terminals **FP** and **–** of the wall bracket.
When the button FP is pressed, the videointercom speaker will receive a call different from calls from the external stations or exchanger. The call is received also if the videointercom is in conversation. If in one apartment there are more than one videointercom, the FP button must be connected only to the terminals of one videointercom. This videointercom must be programmed with the code 9981 if it is required to redirect the call also on the other videointercoms present in the same apartment.



- **Alarm call**
To send an alarm signal to the exchanger or night extension you must connect a button (AL) between terminals **AL** and **-** of the videointercom. When the button is pressed, an alarm signal is sent to the exchanger or to the extension the exchanger function was transferred to (night extension). To deactivate the alarm signal from the night extension you must press the "" button while the handset is hanged-up.



OPERATIONS

Call from the door station
When a call is made from the external station, the videointercom receives the call and rings (*according to programming*), the green LED starts flashing and the calling user is displayed on the screen. If the call comes from the exchanger the videointercoms switches-ON without displaying any image. Red LED flashes if the ringing tone has been deactivated (muting).
Pickup the handset to enable the communication with the door station; green LED goes ON.
To operate the electric door lock release press the button .
To end the communication and switch-OFF the videointercom hang-up the handset; green LED will switch-OFF.
Videointercom switches-OFF automatically when the communication time expires.

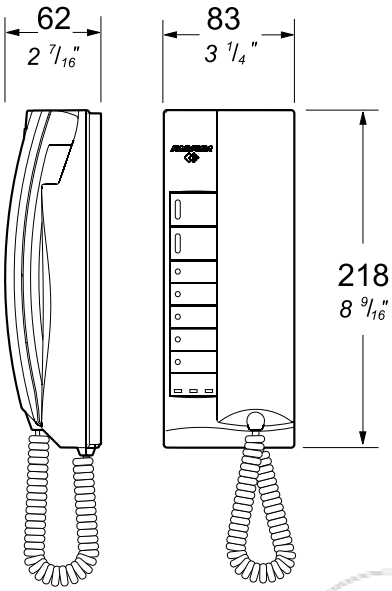
Call to exchanger (if present)
To call the exchanger (or the first of multi-exchanger system) pick up the handset and:
- if the line is busy, make a reservation by pressing the button and hang up. The user will be called again;
- if the line is free, press the button:
  - if the exchanger is not engaged in a conversation and has no reservations, the dialing tone is heard and the call is received by the exchanger;
  - if the exchanger is engaged in a conversation or has reservations, the confirmation tone is heard and the user will be called again. The dissuasion tone is heard if the handset is picked up in the next 10 seconds.

Dissuasion tone is also heard if the installation has no exchanger.

Intercommunication call
To make an intercommunication call, lift the handset and:
- if you hear a busy tone, hang up the handset and wait until the line is free;
- if you hear the dialling tone, press the button programmed for this function; you hear the free tone and conversation starts when the called user lifts the handset.

Control switching ON (monitoring)
Pressing button (monitoring function) with the system in standby the videointercom switches-ON and, if allowed by the system configuration, the image of the main or secondary external door station connected to it is displayed.
When the system is complex it would be possible to have more than one monitoring function using buttons 4 and 5 (for example to monitor the local secondary door station).

Call and tone tables
See the table on page 71.



INTERCOM

EX320DG. White electronic intercom with decoding module, 7 buttons, spiral cord, electronic microphone and 3 led's.
Wall-mountable with expansion plugs or wall box.

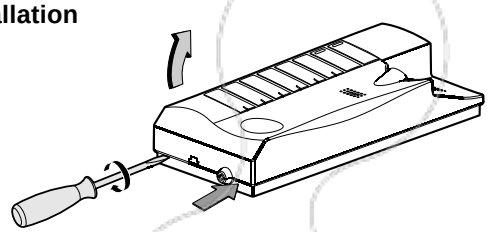
Technical features

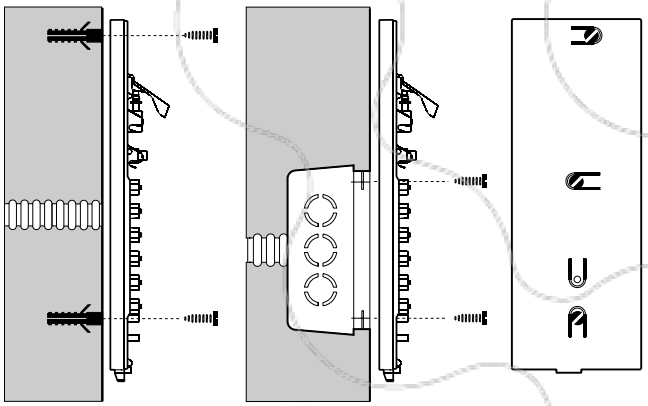
Power supply:	12Vdc ± 1
Operating current: standby	20mA
during the operating	70mA
Max. number of intercoms for installation:	100
Max. distance from the door station:	300m
Operating temperature:	0° ÷ +40°C
Maximum humidity acceptable:	90% RH

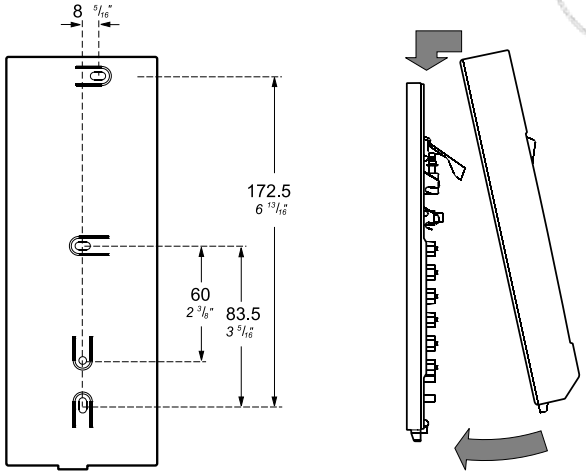
Terminals

F1 audio transmitter
F2 audio receiver
– ground
+ +12V power input
DB serial data bus
A1 entry called by secondary push-button panel; grounded contact
AE auxiliary functions output; grounded contact
AL alarm input; grounded contact
FP floor call input; grounded contact
P5-P6 service buttons (max 0.3A)
C common terminal for buttons P5 and P6

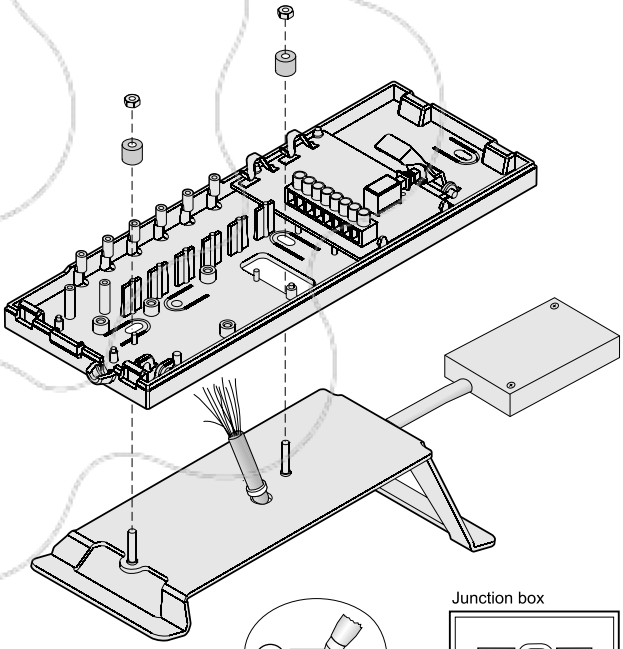
Installation

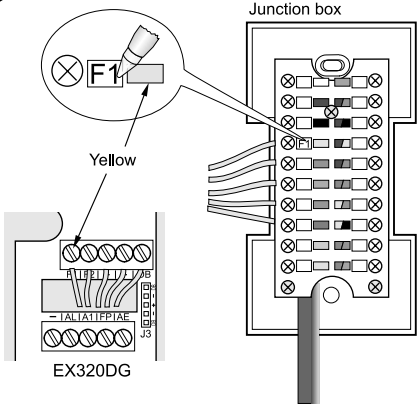






TA320. Table adaptor with weighted base, junction box and 2.4m connection cable with 20 wires.





Remove the cover to the junction box and connect wires to the terminals matching the colour of wire with that of the label. Write in the proper space the code of the connection.

User-code programming

Intercom address (user code) **must be programmed** to receive a call from exchanger and/or door stations (*default value = 100*).
User code can be programmed in two ways:

a) - by sending a code from the digital push-button panel or doorkeeper exchanger already present in the system;

b) - by sending a code from a digital push-button panel momentarily connected to the intercom.

***a)*- Programming from digital push-button panel or exchanger**

Warning: *when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

1 - Keep pressed for more than 2 seconds the button ; a beep will confirm the correct operation and the yellow LED's go ON during the entire programming;
- hold the button pressed and lift the handset; you hear the waiting tone;
- release the button .
Note. If no operation is done during one minute, the system will automatically exit the programming mode.

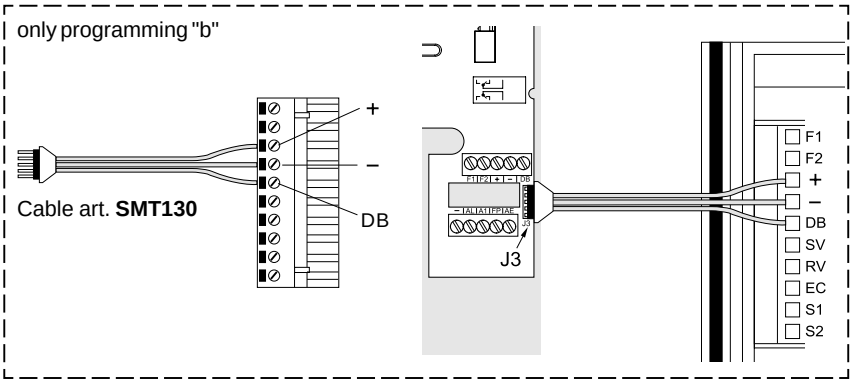
2 - In the push-button panel or exchanger keyboard dial the extension number you want to give to the intercom and press Enter; the intercom speaker receives the confirmation.

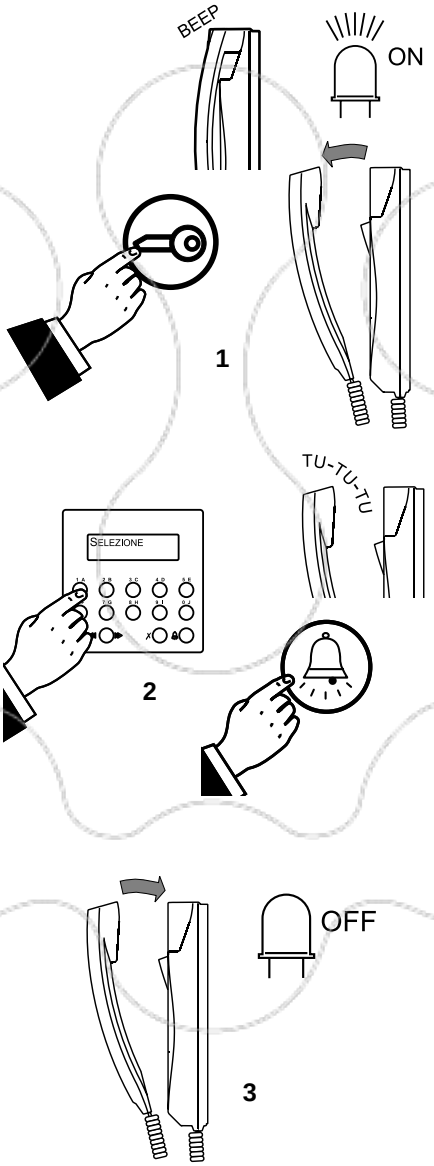
3 - Continue with **step 3 of auxiliary functions programming** or exit the programming mode hanging-UP the handset; yellow LED goes OFF.

***b)*- Programming from digital push-button panel momentarily connected to the intercom with cable art.SMT130**

- Connect the **+**, **-** and **DB** terminals of the cable art.**SMT130** with the terminal block of the **TD4100..** digital push-button panel.
- Insert the small connector of the cable into the **J3** terminal block of the intercom.
- Make the programming as indicated in items 1, 2 and 3 of the previous paragraph.

Notes. The last value is saved when sending more codes.
At the end of the programming procedure, turn OFF the installation and disconnect the cable from the intercom.





Programming auxiliary functions

Additional programming may be necessary for special installation and performance requirements, as indicated below:

1 - Keep pressed for more than 2 seconds the button ; a beep will confirm the correct operation and the yellow LED's go ON during the entire programming;
- hold the button pressed and lift the handset; you hear the waiting tone;
- release the button .
Note. If no operation is done during one minute, the system will automatically exit the programming mode.

2 - In the push-button or exchanger keyboard dial the desired function code from the paragraph below and press Enter; the intercom speaker receives the confirmation tone for one second.

3 - Continue with the codes you want to change and press the Enter button to confirm, or exit the programming mode hanging-up the handset; yellow LED goes OFF.

Codes of the auxiliary functions

- Intercoms in parallel with or without intercommunicating service

9961÷9968 Internal address codes for intercoms installed in the same apartment with or without intercommunicating service. If a user has more intercoms in parallel (all intercoms with the same user code), they must be identified with progressive numbers (9961, 9962, 9963, etc.). *The default code is 9961*. See the corresponding paragraph for information on call button codes.

- AE port (output) *(select one of the following codes)*

9970 Grounded signal during call and conversation with an individual secondary door station (*).

9971 Grounded signal during call and conversation with a main or common secondary external door station.

9972 Grounded signal only during ringing tone (supplementary input for ring tone with relay).

9973 Grounded signal during intercommunicating call and conversation.

- A1 port (input)

If to a intercom (or to other intercoms connected in parallel to it) is locally connected a door station using terminal **A1**, should be necessary to make some programming as follows.

● Sending the busy code during a conversation with a secondary door station.
9990 No busy code sent (*).
9991 Busy code sent.

● Receiving an incoming call tone during a conversation with a local secondary door station. To accept the call it is necessary to hang-up and then pickup the handset.
9992 Incoming call tone OFF, when receiving a call intercom will send a busy code to the system (*).
9993 Incoming call tone ON, when receiving a call intercom will send an accepted call code to the system.

● Re-direction of ringing tone to other intercoms installed in the same apartment. If no other intercoms are installed in the same apartment set value to 9994 (default).
9994 NO re-direction of ringing tone to other intercoms (*).
9995 Ringing tone re-directed to the other intercoms in the same apartment.

- FP port (input) *(select one of the following codes)*
● Floor call button connected to **FP** terminal of a intercom and re-direction of the call to other intercoms installed in the same apartment.
9980 NO re-direction of the call to other intercoms installed in the same apartment (*).
9981 Enabling of re-direction of the call to other intercoms installed in the same apartment.

(*) default setting

● Programming the buttons 1, 2, 3 and 4 for intercommunication calls

The buttons 1, 2, 3 and 4 are programmed by default to send reservations to the doorkeeper exchangers of the installation. To make intercommunication call with the buttons, follow the instructions below:

1 - enter the programming mode by holding the button pressed for more than 2 seconds;
2 - hold the button **to program (1, 2, 3** or **4)** pressed for more than 2 seconds; a temporary tone is generated and the yellow led starts flashing rapidly;
3 - press the button as many times as the last digit of the identification code you want to call; a tone is generated every time the button is pressed. For example: if you want to call the identification code 9961 from button 2, press the button only once. The identification code of the intercom used for programming must be excluded;
4 - hold the button pressed for more than 2 second to confirm programming; you hear a number of tones that corresponds to the button code;
5 - program another button by following the instructions contained in items 2, 3 and 4 or exit programming by lifting and hanging up the handset; the yellow led goes off.

Only the buttons for intercom service must be programmed.

Restoring the default configuration of each button.
To restore the default programming of a button:
- repeat the programming steps described in items 1 and 2;
- press the button ; you hear a confirmation tone;
- exit the programming mode by lifting and hanging up the handset.

Programming of call parameters

In this programming mode you can select the number of the rings (max.8 rings) and the ringing tone (among the 8 available ones) for the following calls:
- **system calls** (from main or secondary door stations and/or exchanger)
- **call generated by a local secondary door station**
- **call floor**
- **intercommunicating call**

Procedure of programming

1 - Keep pressed for more than 2 seconds the buttons **1**; an acknowledge tone will be heard for a while, whilst during all the programming time the yellow LED will light-ON and the programming tone will be heard;
2 - press the button to verify the ringing tone now programmed;
3 - press several times the button **1** to select the desired ringing tone;
4 - keep pressed the button **1** for more than 2 seconds to increase the ringing volume. Once the volume reaches the maximum it drops to the minimum and starts to increase again;
5 - continue with the next programming operation or exit as described in item 8;
6 - press the button to verify the number of the rings currently programmed;
7 - press several times the button **1** to select the desired number of rings;
8 - proceed with other settings or exit the programming mode by picking-UP and then hanging-UP the handset; the yellow LED will switch-OFF.

● **Ringing tone for System Calls** (*main and secondary door stations and/or exchanger*)
- Follow the programming procedure described above.

● Ringing tone for calls generated by a local secondary door station
- If this programming follows the previous one, follow the same procedure from step 2 to step 8.
- To access this programming, without changing the previous one, press the button twice and follow the procedure from step 2 to step 8.

● Ringing tone for floor call
- If this programming follows the previous one, follow the same procedure from item 2 to item 8.
- To access this programming, without changing the previous one, press the button twice and follow the procedure from step 2 to step 8.

● Ring tone for intercommunication call
- Hold the button pressed for more than 2 seconds; a momentary confirmation tone is generated and the yellow led starts flashing rapidly.
- Follow the same procedure from step 2 to step 7 of the corresponding paragraph.
- Exit programming by lifting and hanging UP the handset; the yellow led goes OFF.

Note. The programming mode is exited automatically if no operation is made during 1 minute.

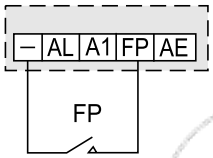
Calls muting

For setting call muting it is necessary to press the button for 3 times with the intercom handset hanged-UP; red LED will show the status of ringing calls: LED OFF (ringing tone active), LED FLASHING (muting)
● **muting:** red LED **flashes**
● **ringing tone active:** red LED **OFF**

Additional functions

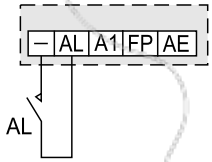
• Call floor

To receive a floor call it is necessary to connect the two poles of a normally-open push button (FP) to the terminals **FP** and **–** of the intercom. When the button FP is pressed, the intercom speaker will receive a call different from calls from the external stations or exchanger. The call is received also if the intercom is in conversation. If in one apartment there are more than one intercom, the FP button must be connected only to the terminals of one intercom. This intercom must be programmed with the code 9981 if it is required to redirect the call also on the other intercoms present in the same apartment.



• Alarm call

To send an alarm signal to the exchanger or night extension you must connect a button (AL) between terminals **AL** and **-** of the intercom. When the button is pressed, an alarm signal is sent to the exchanger or to the extension the exchanger function was transferred to (night extension). To deactivate the alarm signal from the night extension you must press the "🔑" button while the handset is hanged-up.



OPERATIONS

Call from the door station

When a call is made from the external station, the intercom receives the call and rings (*according to programming*) and the green LED starts flashing.
Red LED flashes if the ringing tone has been deactivated (muting).
Pickup the handset to enable the communication with the door station; green LED goes ON.
To operate the electric door lock release press the button 🔑.
To end the communication and switch-OFF the intercom hang-up the handset; green LED will switch-OFF

Call to exchanger *(if present)*

To call the exchanger (or the first of multi-exchanger system) pick up the handset and:
- if the line is busy, make a reservation by pressing the 🔑 button and hang up. The user will be called again;
- if the line is free, press the 🔑 button:
  - if the exchanger is not engaged in a conversation and has no reservations, the dialing tone is heard and the call is received by the exchanger;
  - if the exchanger is engaged in a conversation or has reservations, the confirmation tone is heard and the user will be called again. The dissuasion tone is heard if the handset is picked up in the next 10 seconds.

Dissuasion tone is also heard if the installation has no exchanger.

Intercommunication call

To make an intercommunication call, lift the handset and:
- if you hear a busy tone, hang up the handset and wait until the line is free;
- if you hear the dialling tone, press the button programmed for this function; you hear the free tone and conversation starts when the called user lifts the handset.

Tone table

Dialling tone. Indicates that the line is free

Free. Indicates that the exchanger has no reservations

Busy. Indicates that the line is busy

Dissuasion. Indicates that no reservations can be made

Programming and waiting. Indicates the programming mode or the waiting status of the external user

Confirmation. Indicates that programming/operation/reservation was executed

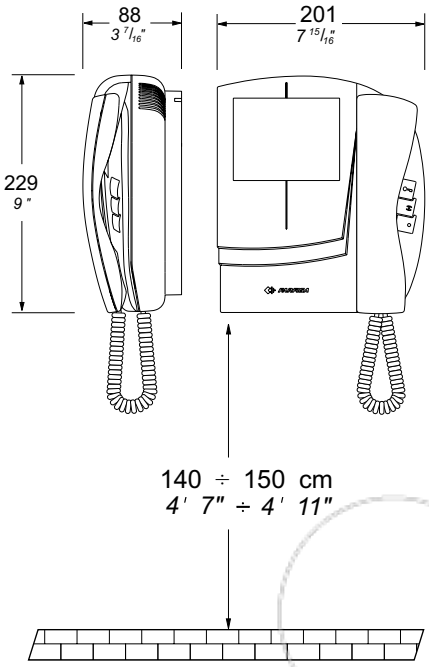
End of conversation. 10 seconds before conversation ends

Alarm call. It indicates a call from alarm; only in intercom in night extension

Calling table

1	**DIN-DON1**
2	**DIN-DON2**
3	**DRING1**
4	**DRING2**
5	**MELODY1**
6	**MELODY2**
7	**MELODY3**
8	**MELODY4**

Videointercoms



KM8100WDG. White Flat video intercom with integrated decoding module, private audio-video function, electronic microphone, differentiated double electronic ringing sounds (modulated and continuous) and terminal board for the connection to the wall bracket. Equipped with 3 buttons for camera control switch ON, door-open and various services. Maximum acceptable current of buttons is 0.3A. For higher currents use relay art. **1471** or **1472**.
The video intercom can be fixed to the wall (flush-mounted) with the **WB8100DG** bracket.

Technical data

Power supply		12Vdc±1
Operating current	- stand by	20mA
	- in operation	0.6A
Monitor		4" FLAT CRT
TV standard		CCIR-625 lines
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		2÷4 seconds
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

KM8100CWDG. Version of **KM8100WDG** video intercom with colour LCD.

Technical data

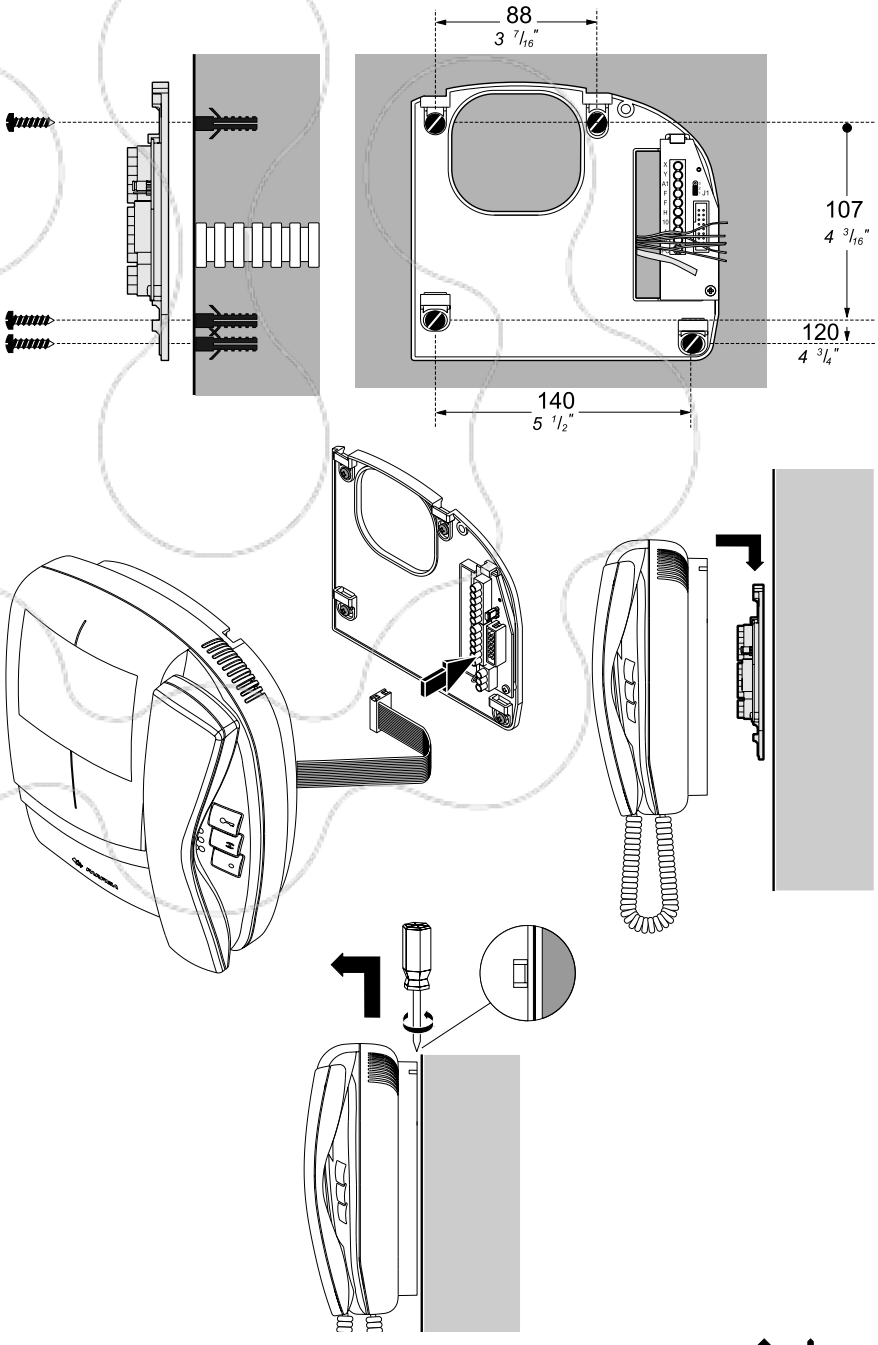
Power supply		12Vdc±1
Operating current	- stand by	20mA
	- in operation	0.6A
Screen		4" LCD
TV standard		PAL
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		1 second
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

WB8100DG. Wall bracket for **KM8100WDG** and **KM8100CWDG** video intercoms with 2 terminal boards for connection to the system. The printed circuit includes the jumper **J1** to be used for programming.

Terminals

V	video signal input 0.8÷1.5Vpp
M	video ground
-	ground
+	+12V power input
F1	audio transmitter
F2	audio receiver
DB	serial data bus
AE	auxiliary functions output; grounded contact
A1	entry called by secondary push-button panel; grounded contact
14	+12V power input
2	ground
8	+12V power output for video distributors
P - PC	service button ● (max. 0,5A)

Note. In order to power the video section with a separate power supply source from those available on the riser:
- add a +12V power supply unit and connect it between terminals 14 and 2.
- cut **W2** jumper on **WB8100DG** wall bracket.



User-code programming

The videointercom must be programmed in order to receive a call from the exchanger and/or the external door station (*default value = 100*). The programming code is memorized in the decoding circuit located inside the videointercom.

The device can be programmed in two ways:

a) -by sending a code from the digital push-button panel or doorkeeper exchanger;

b)-by sending a code from a digital push-button panel directly connected with the wall bracket of the videointercom.

***a)* - Programming from digital push-button panel or exchanger**

***Warning**: when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

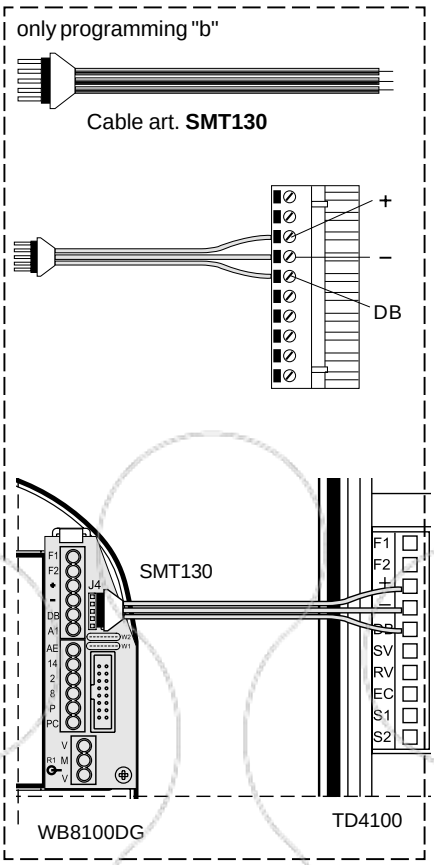
1 - Move **jumper J1** from position 2-3 to 1-2.
2 - Pick up the handset (programming tone).
3 - Dial the extension number from the push-button panel or the exchanger and press enter (confirmation tone for a second).
4 - Move **jumper J1** from position 1-2 to 2-3.
5 - Hang up the handset.
6 - Call the user to check the number.

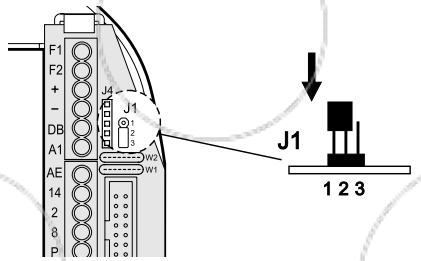
Note. The last number is saved when sending more codes.

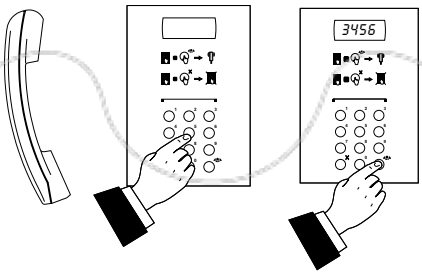
***b)* - Programming from digital push-button panel directly connected with the wall bracket of the videointercom with cable art. SMT130**

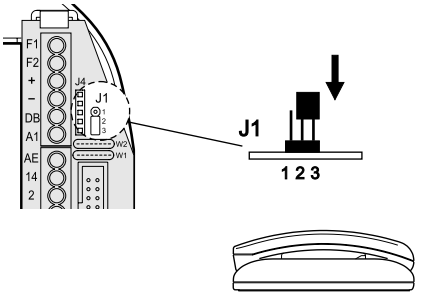
- Connect the **+**, **-** and **DB** terminals of the cable art. **SMT130** with the terminal block of the **TD4100..** digital push-button panel.
- Insert the small connector of the cable into the **J4** terminal block of the wall bracket of the videointercom.
- Make the programming as indicated in items 1, 2, 3, 4, 5 and 6 of the previous paragraph.
- At the end of the programming procedure, turn OFF the installation and disconnect the SMT130 cable from the videointercom.

Note. The last number is saved when sending more codes.









Programming auxiliary functions

- Move **jumper J1** from position 2-3 to 1-2
- Pick up the handset (programming tone)
- Dial the code associated to the auxiliary functions to be programmed (see table below) from the push-button panel or the exchanger and press enter (confirmation tone for a second)
- Move **jumper J1** from position 1-2 to 2-3
- Hang up the handset

Codes of the auxiliary functions

- Operating mode of the videointercom

9980 Master videointercom. Call ringing 25 seconds (*default*)
9981 Secondary videointercom. Call ringing 25 seconds
9982 Master videointercom. Call ringing 12 seconds
9983 Secondary videointercom. Call ringing 12 seconds

- Auxiliary functions output. AE terminal

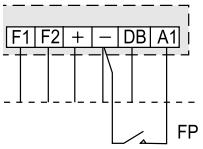
9970 Grounded signal during call and conversation with an individual secondary door station (*default*)
9971 Grounded signal during call and conversation with a main or common secondary external door station.
9972 Grounded signal only during the call ringing (supplementary bell)

- Auxiliary functions input. A1 terminal

9990 Input for call from individual secondary door station. Call ringing 25 seconds . No busy code sent. (*default*)
9991 Input for call from individual secondary door station. Call ringing 5 sec. No busy code sent.
9992 Input for call from individual secondary door station. Call ringing 25 sec. Busy code sent.
9993 Input for call from individual secondary door station. Call ringing 5 sec. Busy code sent.
9994 Input for floor call (audio functions not enabled, only ringing sound).

● Call floor

To receive a floor call it is necessary to connect the two poles of a normally-open push button (FP) to the terminals **A1** and **–** of the videointercom. When the button FP is pressed, the intercom speaker will receive a call different from calls from the external stations or exchanger. The call is received also if the videointercom is in conversation.



Operation

When the call is made from the main external station or from the exchanger (if present), the videointercom receives an acoustic signal (DIN-DON). The videointercom turns ON.
Lift the handset to communicate with the external station for about 1 minute.
Press the 🔑 button to open the door.
The videointercom turns ON with no image if the call comes from a door keeper exchanger.
Press the 👁 button to turn ON the video input for control purposes (only if no conversation is in progress) and the handset is hang-up.
Picking-up the handset and pressing the button 👁 a call to a possible second door keeper exchanger is made.
To call the doorkeeper exchanger (or the first one more doorkeeper exchangers) pick up the handset and:

- if the line is busy, make a reservation by pressing the 🔑 button and hang up. The user will be called again;
- if the line is free, press the 🔑 button:
  - if the exchanger is not engaged in a conversation and has no reservations, the dialing tone is heard and the call is received by the exchanger;
  - if the exchanger is engaged in a conversation or has reservations, the confirmation tone is heard and the user will be called again. The dissuasion tone is heard if the handset is picked up in the next 10 seconds.

The dissuasion tone is also heard if the installation has no exchanger.

Calling table

Digital intercom call. Indicates the call from the digital entrances or the exchanger

Analogue secondary entrance call. Indicates the call from the analogue secondary entrance

Floor call. Indicates the call from the floor (if properly programmed)

Tone table

Dialling tone. Indicates that the line is free

Free. Indicates that the exchanger has no reservations

Busy. Indicates that the line is busy

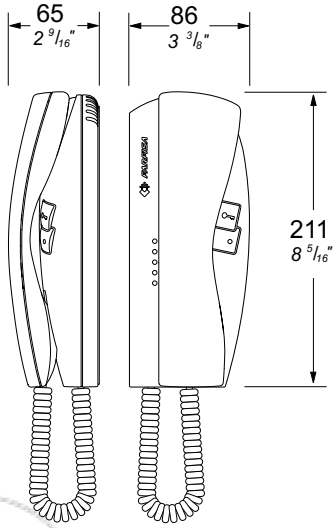
Dissuasion. Indicates that no reservations can be made

Programming and waiting.
Indicates the programming mode or the waiting status of the external user

Confirmation. Indicates that programming/operation/reservation was executed

End of conversation. 10 seconds before conversation ends

INTERCOM



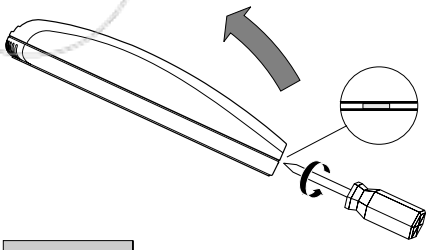
KM810WDG. White electronic intercom with decoding module, 2 buttons, spiral cord and electronic microphone.
Wall-mountable with expansion plugs or wall box.

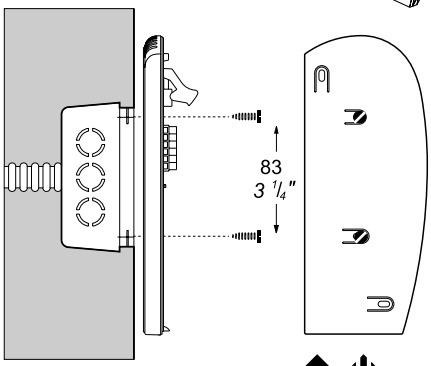
Terminals

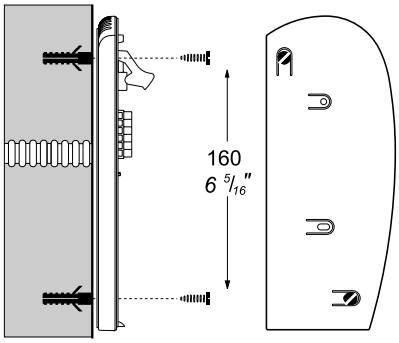
F1 audio transmitter
F2 audio receiver
– ground
+ +12V power input
DB serial data bus
A1 auxiliary functions input
AE auxiliary functions output
P/P service button ● (max 0.3A)

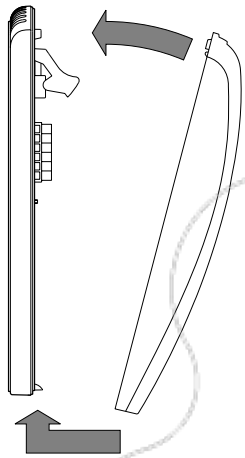
Technical features

Power supply:		12Vdc ± 1
Operating current:	standby	20mA
	during the operating	50mA
Max. number of intercoms for installation:		100
Max. distance from the door station:		300m
Operating temperature:		0° ÷ +40°C
Maximum humidity acceptable:		90% RH









User-code programming

The intercom must be programmed in order to receive a call from the exchanger and/or the external door station (*default value = 100*).
The device can be programmed in two ways:
a) -by sending a code from the digital push-button panel or doorkeeper exchanger;
b)-by sending a code from a digital push-button panel directly connected with the intercom.

***a)* - Programming from digital push-button panel or exchanger**

***Warning**: when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

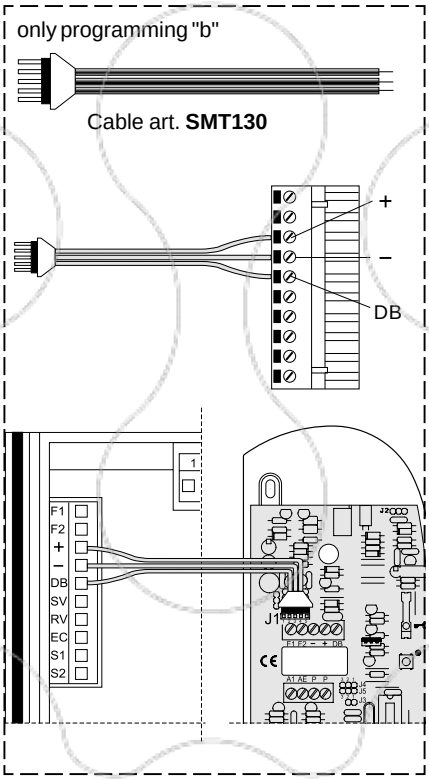
1 - On the intercom insert the jumper on the **J3** connector to short-circuit the 2 poles
2 - Pick up the handset (programming tone).
3 - Dial the extension number from the push-button panel or the exchanger and press enter (confirmation tone for a second).
4 - Remove the **J3** jumper
5 - Hang up the handset.
6 - Call the user to check the number.

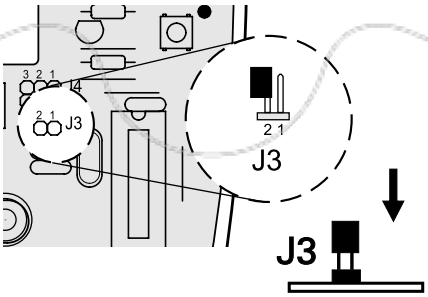
Note. The last number is saved when sending more codes.

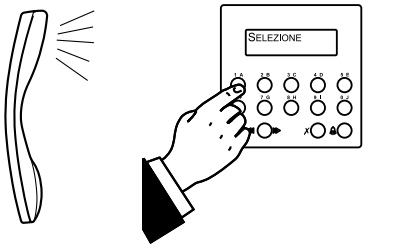
***b)* - Programming from digital push-button panel directly connected with the intercom with cable art. SMT130**

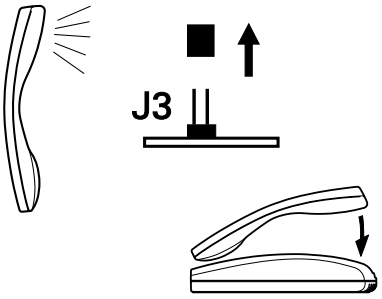
- Connect the **+**, **-** and **DB** terminals of the cable art. **SMT130** with the terminal block of the **TD4100..** digital push-button panel.
- Insert the small connector of the cable into the **J1** terminal block of the intercom.
- Make the programming as indicated in items 1, 2, 3, 4, 5 and 6 of the previous paragraph.
- At the end of the programming procedure, turn OFF the installation and disconnect the SMT130 cable from the intercom.

Note. The last number is saved when sending more codes.









Programming auxiliary functions

The following operating modes would be possible programming properly the auxiliary functions:
- Ringing time (selection between 12 or 25 seconds)
- Master or Slave Intercom (in the case of more intercoms connected in parallel only one can be defined as a Master, all the others must be set as a Slaves)
- AE port grounded when:
  - the intercom receive a call from the main door stations or secondary door stations (multiple calls).
  -the intercom receive a call only from single secondary door stations (individual call).
  -the intercom rings (useful to drive a supplementary bell)
- A1 port set to:
  - receive a call from a secondary single door station (with the possibility to set the ringing time between 5 or 25 seconds).
  - receive a local call from the door without any audio function.

How to program the auxiliary functions
- Insert the jumper on the **J3** connector to short-circuit the 2 poles
- Pick up the handset (programming tone)
- From the push-button panel or the exchanger dial the code associated to the auxiliary functions to be programmed (see table below) and press enter (confirmation tone for a second)
- Remove the **J3** jumper
- Hang up the handset.

Table of the codes of the auxiliary functions

- Operating mode of the intercom

9980 Master intercom. Calls ringing 25 seconds (*default*)
9981 Slave intercom. Calls ringing 25 seconds
9982 Master intercom. Calls ringing 12 seconds
9983 Slave intercom. Calls ringing 12 seconds

- AE port (output)

9970 Grounded signal during call and conversation with an individual secondary door station (*default*)
9971 Grounded signal during call and conversation with a main or common secondary external door station

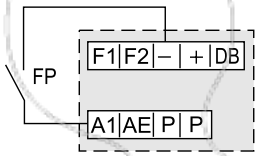
9972 Grounded signal only during the call ringing (supplementary bell)

- A1 port (input)

9990 Input for call from individual secondary door station. Call duration 25 seconds. No busy code sent (*default*).
9991 Input for call from individual secondary door station. Call duration 5 seconds. No busy code sent.
9992 Input for call from individual secondary door station. Call duration 25 seconds. Busy code sent.
9993 Input for call from individual secondary door station. Call duration 5 seconds. Busy code sent.
9994 Input for floor call (audio functions not enabled, only ringing sound).

• Call floor

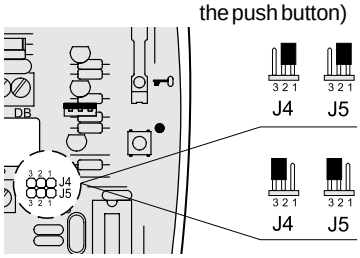
To receive a floor call it is necessary to connect the two poles of a normally-open push button (FP) to the terminals **A1** and **–** of the intercom. When the button FP is pressed, the intercom speaker will receive a call different from calls from the external stations or exchanger. The call is received also if the intercom is in conversation.



• Push-button " ● "

From the factory the push button " ● " is directly connected to the terminals **P** and **P** (free contacts). For specific applications it would be possible to change this configuration moving the jumpers **J4** and **J5**.

1-2 - Push button used by the system (terminals **P** and **P** are not available because not connected to the push button)



2-3 - Push button with free contacts (terminals **P** and **P** are available because are directly connected to the push button)

Operation

When the call is made from the main external station or from the exchanger (if present), the intercom receives an acoustic signal (DIN-DON). Pick up the handset to talk with the external station (or the exchanger) for about 1 minute. Press the 🔑 button to open the door. To call the doorkeeper exchanger (or the first one more doorkeeper exchangers) pick up the handset and:

- if the line is busy (intermittent tone), make a reservation by pressing the 🔑 button (or the button "●" if J4 and J5 are in 1-2 position) and hang up. The user will be called again
- if the line is free (continuous tone), press the 🔑 button (or the button "●" if J4 and J5 are in 1-2 position)
  - if the exchanger is not engaged in a conversation and has no reservations, the dialing tone is heard and the call is received by the exchanger
  - if the exchanger is engaged in a conversation or has reservations, the confirmation tone is heard and the user will be called again. The dissuasion tone is heard if the handset is picked up in the next 10 seconds.

The dissuasion tone is also heard if the installation has no exchanger.

Calling table

Digital intercom call. Indicates the call from the digital entrances or the exchanger

Analogue secondary entrance call. Indicates the call from the analogue secondary entrance

Floor call. Indicates the call from the floor (if properly programmed)

Tone table

Dialling tone. Indicates that the line is free

Free. Indicates that the exchanger has no reservations

Busy. Indicates that the line is busy

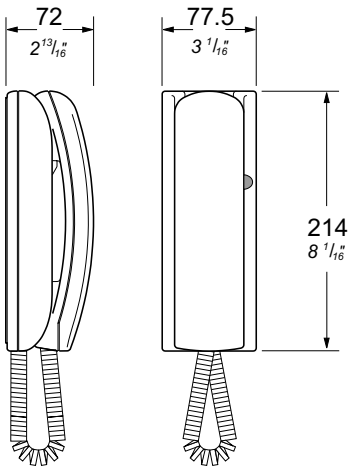
Dissuasion. Indicates that no reservations can be made

Programming and waiting.
Indicates the programming mode or the waiting status of the external user

Confirmation. Indicates that programming/operation/reservation was executed

End of conversation. 10 seconds before conversation ends

INTERCOM

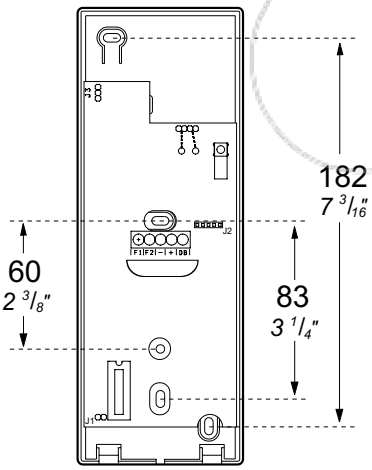


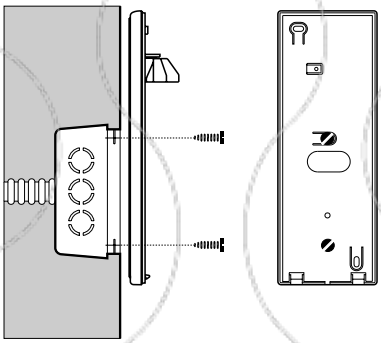
PT510WDG. White electronic intercom with decoding module, 1 button, spiral cord and electronic microphone.
Wall-mountable with expansion plugs or wall box.

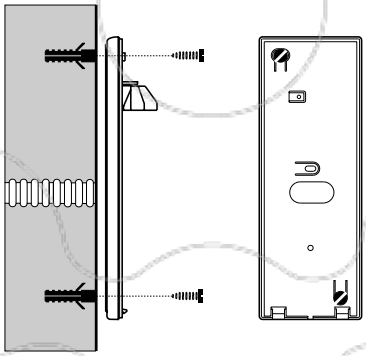
Terminals
F1 audio transmitter
F2 audio receiver
– ground
+ +12V power input
DB serial data bus

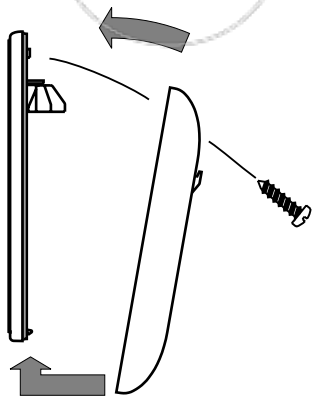
Technical features

Power supply:	12Vdc ± 1
Operating current: standby	20mA
during the operating	80mA
Max. number of intercoms for installation:	100
Max. distance from the door station:	300m
Operating temperature:	0° ÷ +40°C
Maximum humidity acceptable:	90% RH









User-code programming

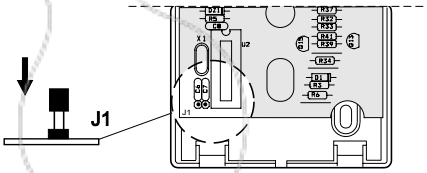
The user number can be programmed in two ways:
- by sending a code from the digital push-button panel or doorkeeper exchanger
- by sending a code from a digital push-button panel directly connected with the module.

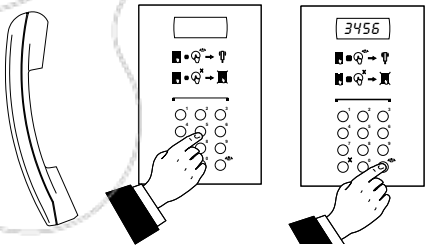
Programming from digital push-button panel or exchanger

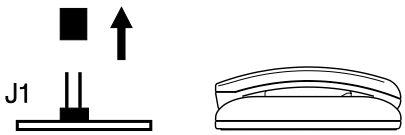
***Warning**: when using the push-button panel of the main entrance, the exchanger (if any) must be in night mode.*

- Insert the jumper on the **J1** terminal block to short-circuit the 2 poles
- Pick up the handset (programming tone)
- Dial the extension number from the push-button panel or the exchanger and press enter (confirmation tone)
- Remove the **J1** jumper
- Hang up the handset
- Call the user to check the number.

Note. The last number is saved when sending more codes.





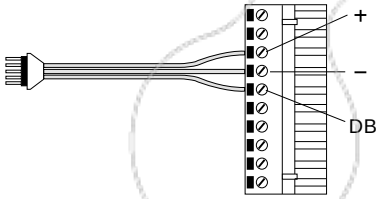


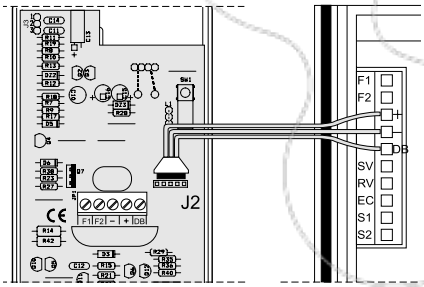
Programming from digital push-button panel directly connected with the intercom with cable art. SMT130

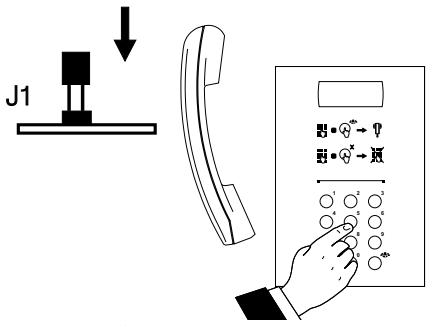
- Connect the **+**, **-** and **DB** terminals of the cable art. **SMT130** with the terminal block of the **TD4100** digital push-button panel
- Insert the small connector of the cable into the **J2** terminal block of the intercom
- Insert the jumper on the **J1** terminal block to short-circuit the 2 poles
- Pick up the handset (programming tone)
- Dial the extension number from the push-button panel or the exchanger and press enter (confirmation tone)
- Remove the **J1** jumper
- Hang up the handset
- Call the user to check the number
- Disconnect the cable from the module.

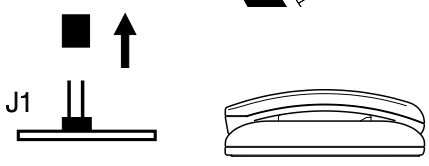
Note. The last number is saved when sending more codes.

Cable art. **SMT130**









Programming the duration of the call

- Insert the jumper on the **J1** terminal block to short-circuit the 2 poles
- Pick up the handset (programming tone)
- From the push-button panel or the exchanger dial:
  9990 25 seconds duration
  9991 6 seconds duration (about 2 rings)
- Press enter (confirmation tone)
- Remove the **J1** jumper
- Hang up the handset.

Operation

When the call is made from the main external station or from the exchanger (if present), the intercom receives an acoustic signal (DIN-DON). Pick up the handset to talk with the external station (or the exchanger) for about 1 minute. Press the 🔑 button to open the door. To call the exchanger pick up the handset and:

- if the line is busy, make a reservation by pressing the 🔑 button and hang up. The user will be called again.
- if the line is free, press the 🔑 button
  - if the exchanger is not engaged in a conversation and has no reservations, the dialing tone is heard and the call is received by the exchanger
  - if the exchanger is engaged in a conversation or has reservations, the confirmation tone is heard and the user will be called again. The dissuasion tone is heard if the handset is picked up in the next 10 seconds.

The dissuasion tone is also heard if the installation has no exchanger.

Calling table

Digital intercom call. Indicates the call from the digital entrances or the exchanger

Analogue secondary entrance call. Indicates the call from the analogue secondary entrance

Floor call. Indicates the call from the floor (if properly programmed)

Tone table

Dialling tone. Indicates that the line is free

Free. Indicates that the exchanger has no reservations

Busy. Indicates that the line is busy

Dissuasion. Indicates that no reservations can be made

Programming and waiting.
Indicates the programming mode or the waiting status of the external user

Confirmation. Indicates that programming/operation/reservation was executed

End of conversation. 10 seconds before conversation ends

INTERNAL STATIONS WITH DECODING MODULE

VIDEOINTERCOMS AND INTERCOMS

In the **FN4000** digital systems all intercoms and videointercoms listed in the table on the right side can may be installed. Even if present in the intercom, the buzzer is not normally used in digital systems.
Digital signals can be decoded with:
- the multiple decoding modules (art.**4235**, **4235TV** or **4235TVP**) installed on the floor junction box;
- the single decoding module (**4231TP** for **Project** and **Compact** series or **ST4231** for **Studio** series) applied in each intercom can be used to decode digital signals.

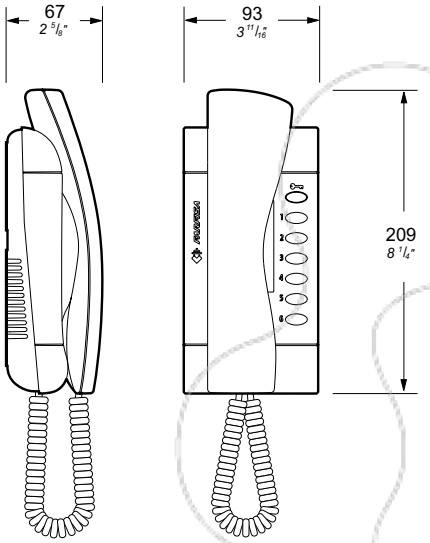
Main features of the intercoms that can be used in digital installations

Article	Colour	Electronic call	Buzzer or alternate current call	4235-4235TV-4235TVP decoding module	Inside coding through article	No. push-button
ST720W	white	*	-	*	**ST4231**	1+6 (art.ST701)
PT510	two-colour	*	*	*	**4231TP**	1
PT510EW	white	*	-	*	**4231TP**	1
PT510N	beige	*	*	*	**4231TP**	1
PT510W	white	*	*	*	**4231TP**	1
PT520	two-colour	*	*	*	**4231TP**	2+8 (art.PT501)
PT520N	beige	*	*	*	**4231TP**	2+8 (art.PT501)
PT520W	white	*	*	*	**4231TP**	2+8 (art.PT501)
PT526EW	white	*	-	*	**4231TP**	2+8 (art.PT501)
KM810W	white	*	-	*	**4231TP**	1+1 (art.ST701)
PV100	two-colour	*	*	*	-	1
PV100W	white	*	*	*	-	1
924W	white	*	*	*	-	1
EX320	white	*	-	*	**4231TP**	2+6 (art.EX301)

Main features of the videointercoms that can be used in digital installations

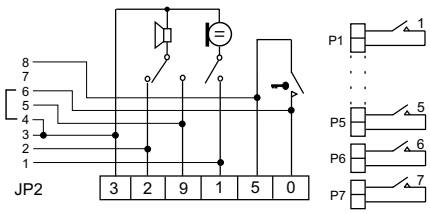
Article	Colour	Electronic call	Screen	4235-4235TV-4235TVP decoding module	Inside coding through article	No. push-button
ST7100W+ST720W	white	*	**b/w**	*	**ST4231**	3+6 (art.ST701)
ST7100CW+ST720W	white	*	**colour**	*	**ST4231**	3+6 (art.ST701)
KM8100W	white	*	**b/w**	*	-	3
KM8100CW	white	*	**colour**	*	-	3
KM8600W	white	*	**b/w**	*	-	3
KM8800W	white	*	**b/w**	*	-	3
EX3160	white	*	**b/w**	*	-	7
EX3160C	white	*	**colour**	*	-	7
EH9100CW	white	*	**colour**	*	-	6
EH9160CT	grey	*	**colour**	*	-	10
EH9160CW	white	*	**colour**	*	-	10

INTERCOMS Studio series

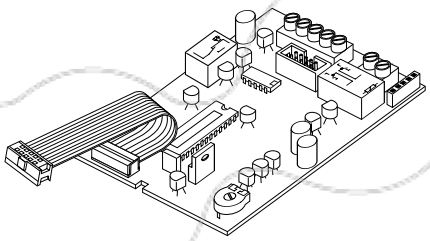


ST 720W. White electronic intercom with spiral cord, electronic microphone and 1 button than can be increased up to 7 by adding the single push-button unit art.**ST701**. Possibility of application of **ST4231** or **4231TP** single decoding module.
Wall-mountable with expansion plugs or wall box or with **WB700** bracket if combined with **ST 7100** monitor or other modules.

Terminals
1 microphone
2 speaker
3 ground
5 door release button (max 1A)
0 common button grounded with the jumper present in the **JP2** connector
9 electronic call input
P1 ÷ P6 service push-buttons (max 0.5A)



SINGLE DECODING MODULE FOR STUDIO INTERCOM



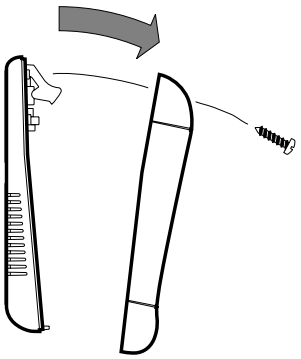
ST4231.
Installed in **ST720** intercoms to decode data of the **FN4000** serial digital bus.

Technical data

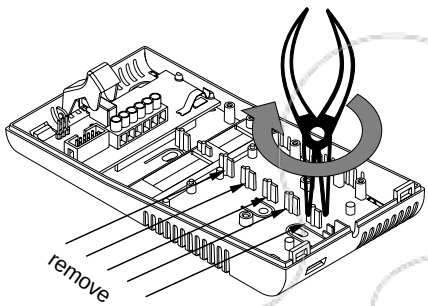
Power supply:	12Vdc ± 1
Operating current: - stand by	20mA
- during operation	80mA
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH
Dimensions:	71x88mm ($2\,^{13}/_{16}$"x$3\,^{7}/_{16}$")

Terminals
F1 audio transmitter
F2 audio receiver
– ground
+ positive voltage input
DB serial data bus
AE command for an analog exchanger (grounded contact upon call and during conversation)
A1 secondary or floor call input; active when grounded

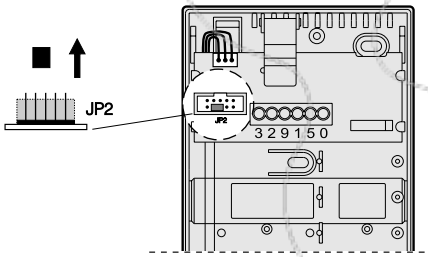
Installation



1) remove the intercom cover

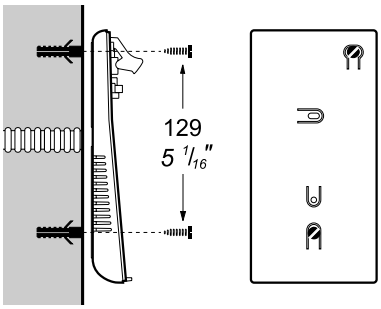


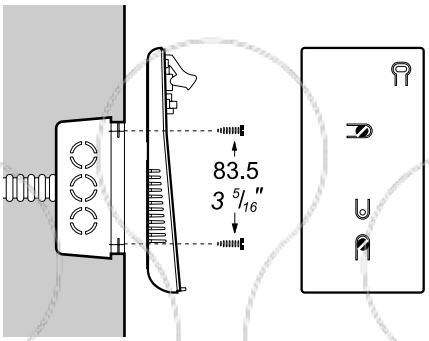
2) remove the 5 module supports from the intercom base starting from the bottom



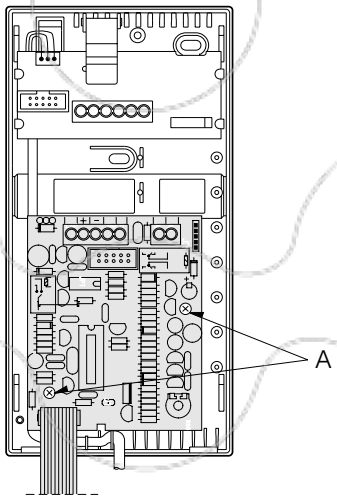
3) remove the jumper located inside connector **JP2** of the intercom

Wall version

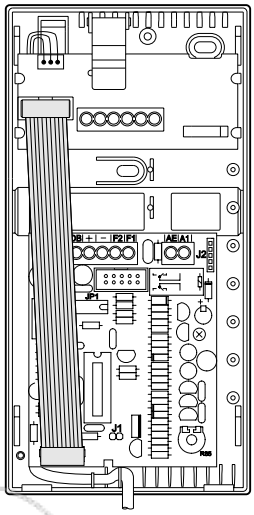




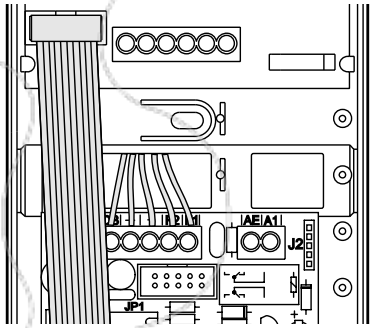
4) fix the intercom to the wall using a wall box or two screws. Use the **WB700** bracket and to follow the suitable procedure in the pages 84 and 85 (videointercom system) if the intercom is set to side of a **ST7100** monitor.



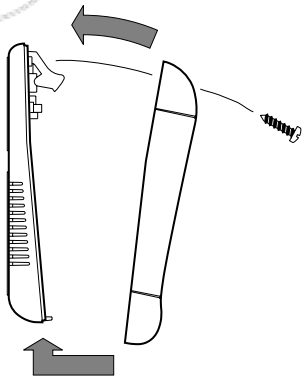
5) fix the board **ST4231** using the fixing points (A) inside the intercom.



6) connect the flat cable of the board to connector **JP2** of the intercom



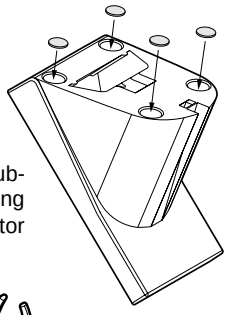
7) make the required connections on the terminal blocks of board the **ST4231** module. If the intercom is installed in combination with a **ST7100** monitor it is necessary, for assembly, follow instructions reported on pages 84 and 85.



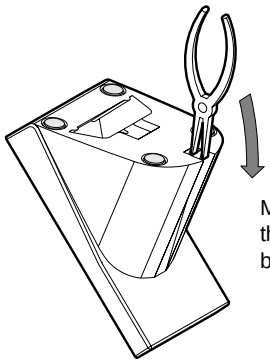
8) close the intercom and hang up the handset.

Table version

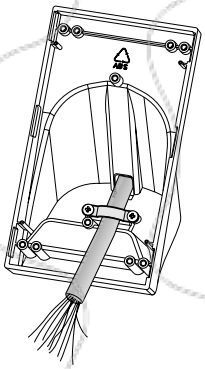
TA 720W. Table adaptor, white colour. Complete with junction box and 2.4m connection cable with 20 wires.



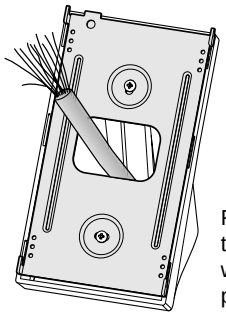
Apply the 4 anti-slip rubber pads in their housing under the table adaptor base.



Make the hole for the connection cable.

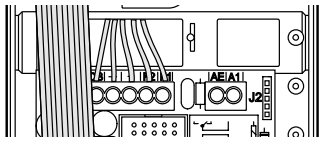


Block the connection cable to the table adaptor and block it with the cable clamp.

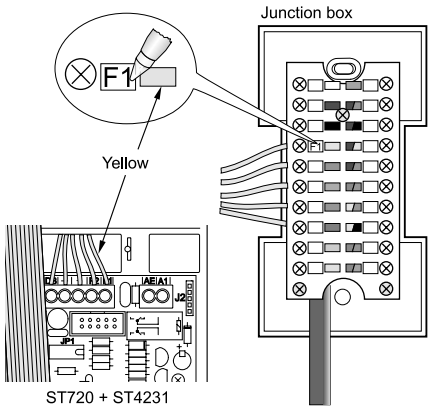


Fix the **WB700** bracket to the table adaptor with the 2 screws supplied.

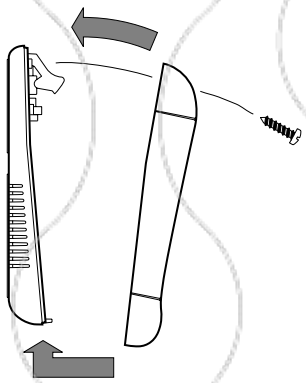
Fix the decoding board **ST4231** inside the intercom as shown on page 80 (points 1, 2, 3, 5 and 6).



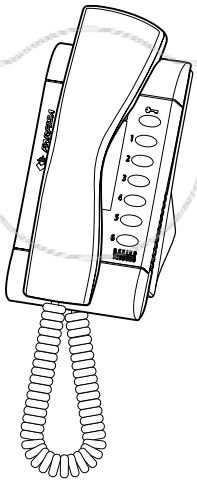
On the terminal block of the **ST4231** module to connect the only necessary conductors to the installation. Isolate the conductors not used.



Remove the cover to the junction box and mark the code of the terminal in the spaces between screw and colour of the corresponding conductor. Make the connection of the installation to the terminal boards of the junction box.

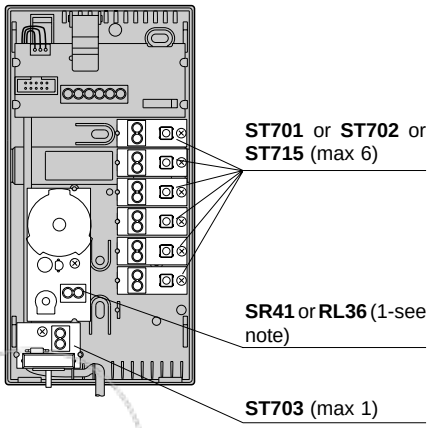


Close the intercom and hang up the handset.

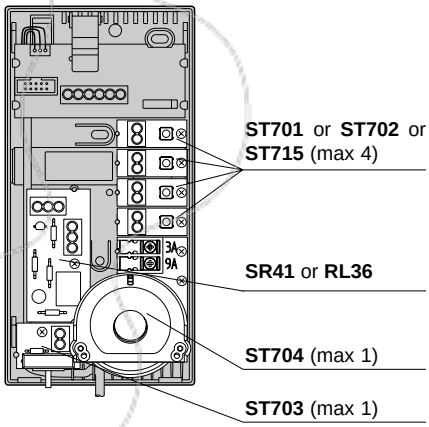


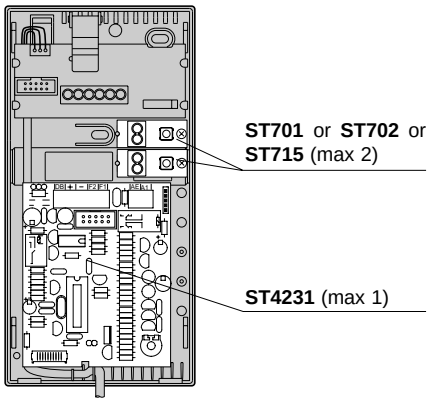
Hook the intercom to the adaptor.

Combination of additional modules
All modules described above can be installed inside the **ST 720** intercoms. It must be kept in mind that they cannot be installed all at the same time. Below are some examples of possible combinations.



Note. An additional SR41 or RL36 module can be installed taking the place of the last 4 positions of the push-button modules after removing the plastic holders.



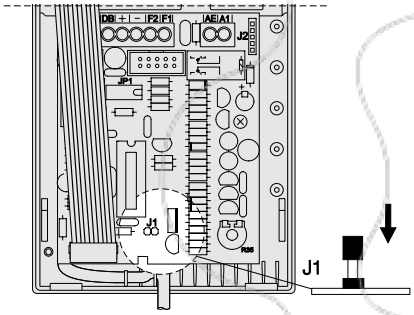


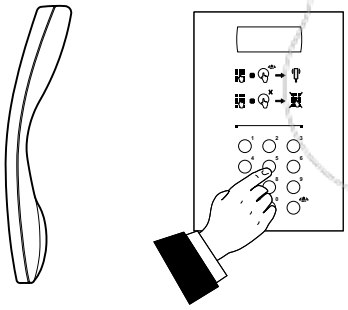
User code programming
The user code can be programmed in two different ways:
- by sending the code from the digital push-button panel or doorkeeper exchanger.
- by sending the code from a digital push-button panel directly connected to the module.

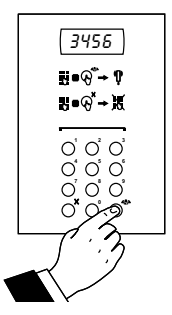
Programming from digital push-button panel or doorkeeper exchanger
Warning*: when using the push-button panel of the main door station the doorkeeper exchanger (if present) must be in night mode.*

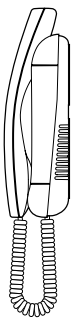
- Insert the jumper in the **J1** terminal board in order to short-circuit the 2 poles
- hold the handset off hook (programming tone)
- dial the user code on the push-button panel or the doorkeeper exchanger keypad and press Enter (acknowledge tone)
- remove the **J1** jumper
- hang up the handset
- call the user to check the code.

Note. The last code is stored when sending various codes.





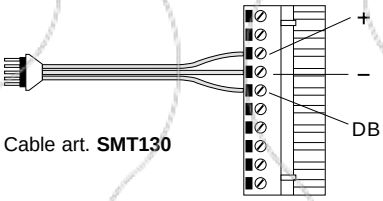




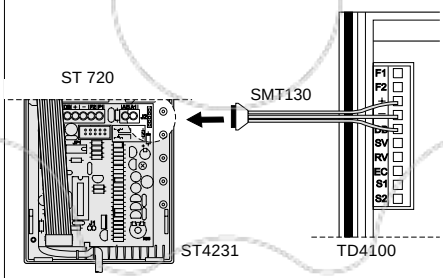
Programming from a digital push-button panel connected directly to the interface board with the SMT130 cable

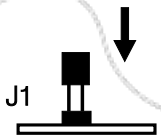
- Connect the **+**, **-** and **DB** terminals of the **SMT130** cable to the **TD4100**... digital push-button panel terminal board.
- insert the small cable connector into the **J2** terminal board of the **ST4231** single decoding module
- insert the jumper into the **J1** terminal board to short-circuit the 2 poles
- hold the handset off hook (programming tone)
- dial the user code on the push-button panel or doorkeeper exchanger keypad and press Enter (acknowledge tone)
- remove the **J1** jumper
- hang up the handset
- call the user to check the code
- disconnect the cable from the interface board.

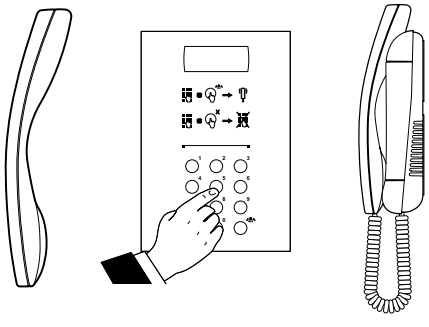
Note. The last code is stored when sending various codes.



Cable art. **SMT130**







Operation

The intercom receives an acoustic signal (DIN-DON) when the call is made from the main door station or the doorkeeper exchanger (if present). Pick up the handset to start conversation with the door station (or the doorkeeper exchanger) for about 1 minute. Press the button to open the door.
To call the doorkeeper exchanger, pick up the handset and:
- if the line is busy, push the button to make a booking and hang up. The user will be called back.
- if the line is free, press
  - if the doorkeeper exchanger is free and has no booking, you will hear the calling tone and the doorkeeper exchanger will receive the call. The call will be memorised in case of no reply within 25 seconds.
  - if the doorkeeper exchanger is having a conversation or has bookings, you will hear the acknowledge tone and the user will be called back. A dissuasion tone will be heard even if the user picks up the handset within 10 seconds from the booking.

The dissuasion tone will be generated if the doorkeeper exchanger is not present or if the doorkeeper exchanger is in “night” mode.

Additional functions

The following additional services are possible with the single decoding module:
- **floor call** (for information on connection and operation see page 170)
- **call from secondary door station** (for information on connection and operation see pages 158, 159, 162 and 164)

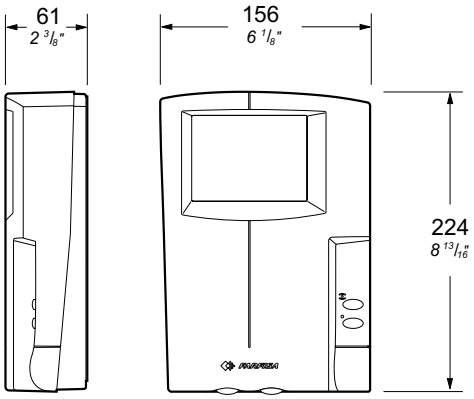
Some of these services must be programmed as indicated below.

Programming the floor call duration and sending of busy code upon call from secondary door station

- Insert the jumper in the **J1** terminal board to short-circuit the 2 poles.
- pick up the handset (programming tone)
- on the push-button panel or doorkeeper exchanger dial:
  9990 25 sec. duration, no busy code sent (default programming)
  9991 5 sec. duration, no busy code sent
  9992 25 sec. duration, busy code sent
  9993 5 sec. duration, busy code sent
- press Enter (acknowledge tone on the handset)
- remove the **J1** jumper
- hang up the handset.

Tone and call tables (see page 86)

MONITORS Studio series



ST7100W. White monitor with flat CRT and 2 buttons. One button for control switch ON and one button for supplementary services. Maximum acceptable current of buttons is 0.3A. For higher currents use relay art. **1471** or **1472**.
The monitor can be surface mounted on the wall with bracket art. **WB7100DG**.

Technical data

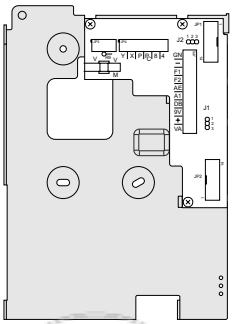
Power supply	12÷15Vdc
Operating current	0.4A
Monitor	4" FLAT CRT
TV standard	CCIR-625 lines
Horizontal frequency	15625Hz
Vertical frequency	50Hz
Bandwidth	>5MHz
Video signal on 75Ω	0.8÷1.5Vpp
Starting up time	2÷4 sec.
Operating temperature	0°÷+50°C
Max. permissible humidity	90%RH

ST7100CW. Version with colour LCD of monitor **ST7100W**.

Technical data

Power supply	12÷15Vdc
Operating current	0.5A
Monitor	4" LCD
TV standard	PAL
Horizontal frequency	15625Hz
Vertical frequency	50Hz
Bandwidth	>5MHz
Video signal on 75Ω	0.8÷1.5Vpp
Starting up time	1 sec.
Operating temperature	0°÷+50°C
Max. permissible humidity	90%RH

FIXING ELEMENTS



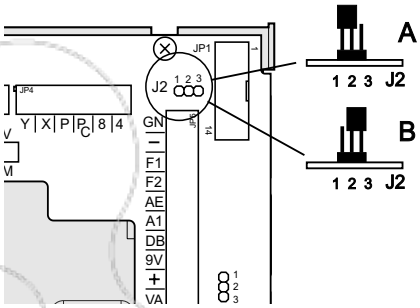
WB7100DG. Bracket to fix the monitor **ST7100** to the wall or to the table adaptor (art.**TA7100**). Complete with terminal board for connection to the system and connectors for connection to the monitor. One or more brackets **WB 700** can be combined with **WB 7100DG** to expand the system. The bracket is arranged to be electrically connected to the intercom **ST720** (the connection cable is supplied with bracket **WB 700**).

Terminals

V Video signal input 0.8÷1.5Vpp
M Video ground
- General ground
+ Positive power supply input 12Vdc
X Negative balanced video signal input
Y Positive balanced video signal input
F1 Audio transmitter
F2 Audio receiver
4 Control switching ON – button ⊙
DB Serial data bus
8 Positive power supply output for video distributors 12Vdc
AE Command for an analog exchanger (grounded contact upon call and during conversation)
A1 Secondary or floor call input; grounded contact
9V Input for direct activation from FN4000 digital system (ground command)
VA +12V power input
GN Ground
P Service button (symbol ● - max 0.3A)
PC Common of service button

With monitor **ST7100** the video connection can be made with 75 Ohm coaxial cable or twisted pair. The choice between the two systems depends on the correct selection of video distributor and camera. The number of wires and possible installations does not change. **Do not forget to position jumper J2 correctly and use the proper input terminals on bracket WB7100DG**.

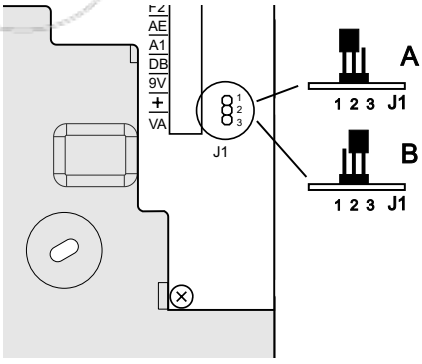
Choosing the video connection with coaxial cable or twisted pair



A = Video connection with coaxial cable at terminals **V** and **M**
B = Video connection with twisted pair at terminals **X** and **Y**

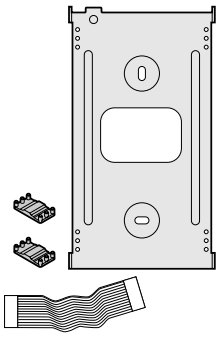
Selection of the power source (single or common)

For powering the monitor with a different power source from that available on the riser it is required:
- add a 12Vdc/0.5A local power supply connecting it with the "+" output to VA and the "-" output to GN.
- on the wall bracket **WB7100DG** move the jumper **J1** from position **1-2** to **2-3**.

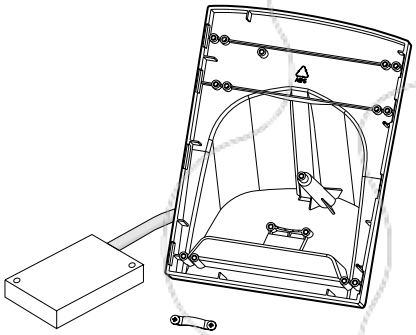


A = monitor powered by the riser
B = monitor powered by a local power supply

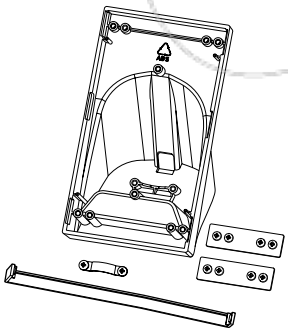
WB 700. Bracket for fixing mechanically intercom **ST 720** and/or accessories of Studio line to monitor **ST7100** or among them.
Complete with:
- flat cable for electrical connection of one intercom **ST 720** to monitor **ST 7100**
- templates for correct alignment with bracket **WB7100DG** and/or brackets **WB700**.



TA7100W. White Table adaptor for **ST7100W** and **ST7100CW** monitors. Complete with cable clamp, junction box and 2.4m connection cable with 20 wires.



TA700W. White table adaptor for accessories, intercoms and telephones of Studio series. Complete with cable clamp, plastic and metallic frames for correct alignment with **TA7100** adaptors and/or additional **TA700** or **TA720**.



TA720W. White table adaptor for **ST720W** intercoms. Complete with cable clamp, junction box and 2.4m connection cable with 20 wires, plastic and metallic frames for correct alignment with **TA7100** adaptors and/or additional **TA700** or **TA720**.

INSTALLATION

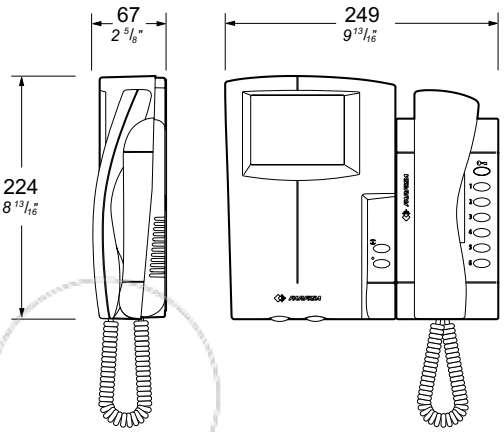
The modularity of the Studio articles permits the realisation of different types of system. Some of the possible compositions are illustrated below.
- **monitor only**
- **digital video intercom**
- **digital video intercom with video memory** (see the technical manual 11 for the characteristics and the assembling of the video memory).

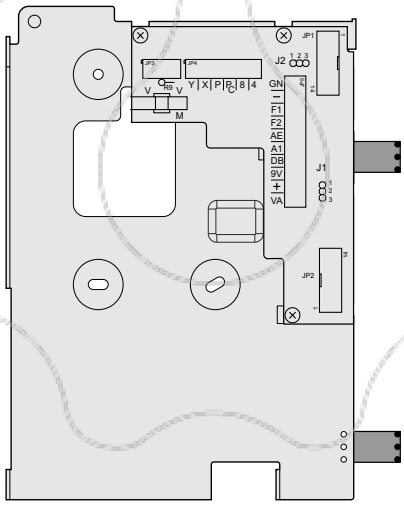
DIGITAL VIDEO INTERCOM

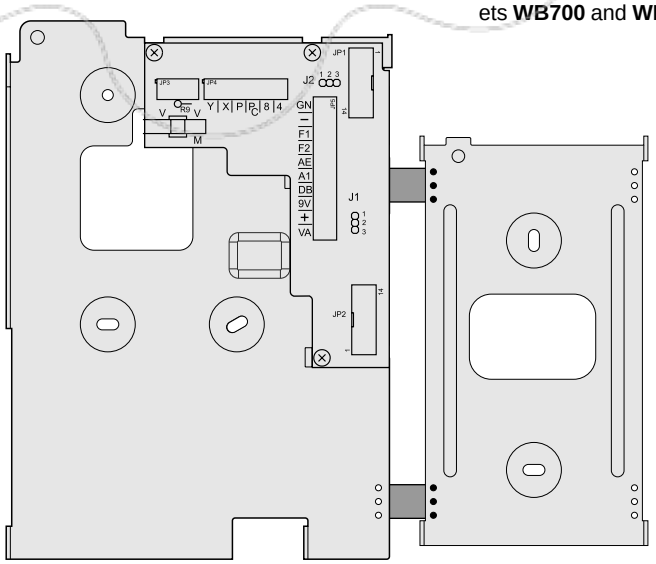
Installation steps for the assembly of one digital video intercom station in wall or table version.

For this composition you need:
1 **ST7100** or **ST7100C** (monitor)
1 **ST720** (intercom)
1 **ST4231** (decoder module)
1 **WB7100DG** (bracket for monitor)
1 **WB700** (brackets for intercom and video memory)

For the table version you must add:
1 **TA7100** (table adaptor for monitor)
1 **TA700** (table adaptor for intercom)

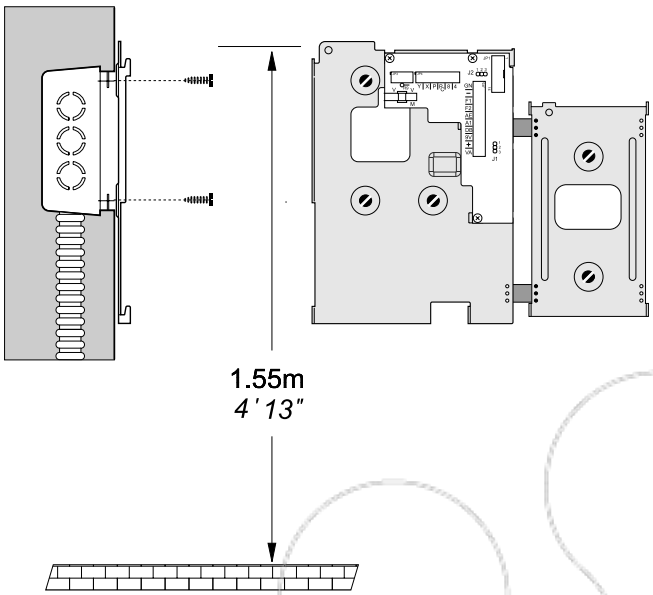






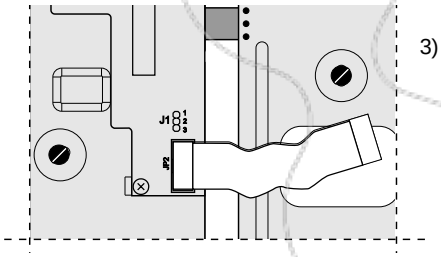
1) Before fixing the brackets on the wall or on the table adaptor insert the two small plastic frames, which come with the products, into the proper holes present on the wall brackets **WB700** and **WB7100DG**.

Wall version

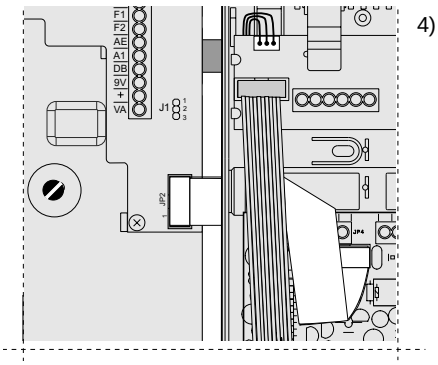


1) Fix the brackets to the wall with the 5 fixing points at approximately 1.55m *(4'13")* distance from the floor to the upper part of the bracket.

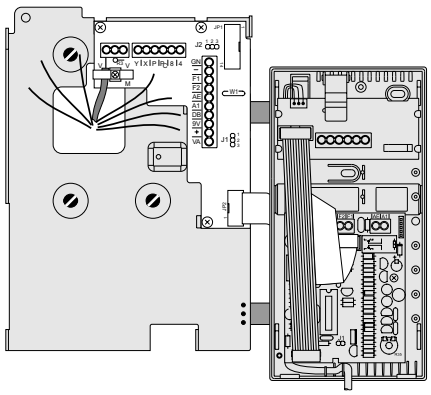
2) Fix the decoding board **ST4231** inside the intercom as shown on page 80 (points 1, 2, 3, 5 and 6).



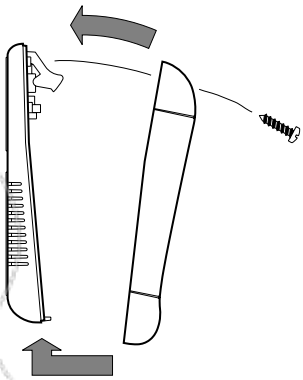
3) Connect the flat cable supplied with bracket **WB700** to connector JP2 of bracket **WB7100DG**.



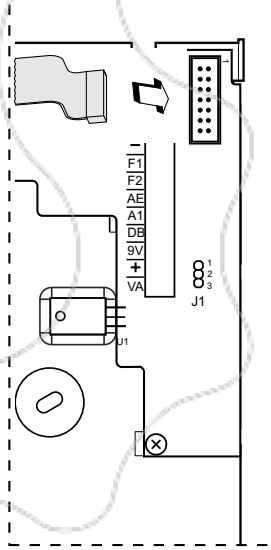
4) Hook the intercom base to bracket **WB700** and connect the other end of the flat cable to connector JP1 of the **ST4231** board by passing the cable between the intercom base and the bracket. Pull the cable in such a way that the extra part of the cable remains inside the intercom.



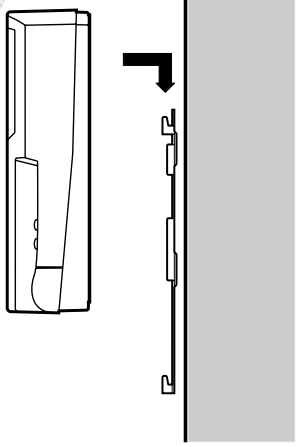
5) Make the connection on the terminal board of bracket **WB7100DG** according to the installation diagram.



6) Close the intercom.



7) Connect the monitor cable to the bracket.



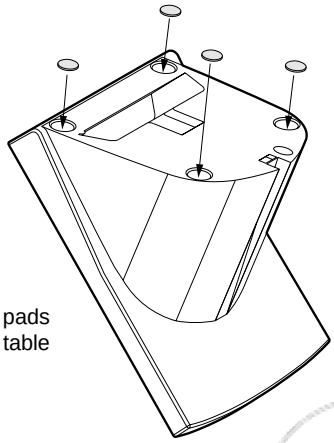
8) Hang-up the videointercom and the intercom to their wall brackets.

Operating mode and special functions

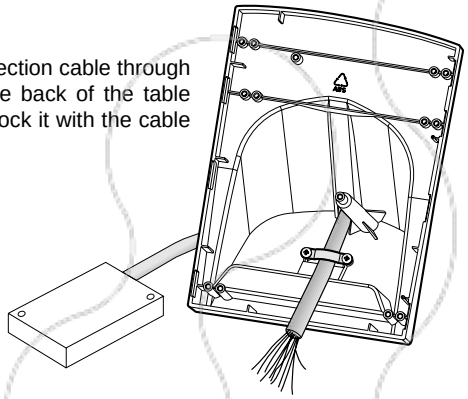
For the operating mode of the system and for the special functions see specific points on page 82.

For floor installation diagrams see page 170.

Table version

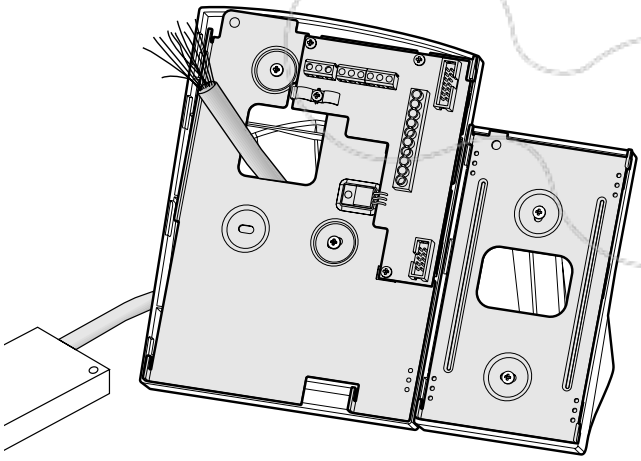


1) Apply the 4 anti-slip rubber pads in their housing under the table adaptor base.

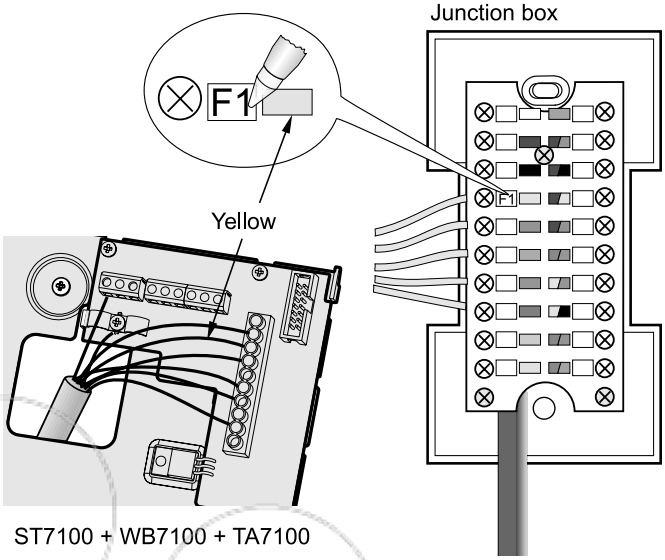


2) Pass the connection cable through the hole on the back of the table adaptor and block it with the cable clamp.

3) Fix the decoding board **ST4231** inside the intercom as shown on page 80 (points 1, 2, 3, 5 and 6).
4) Fix together wall brackets **WB7100DG** and **WB700** as shown on page 84.



5) Screw the wall brackets to their table adaptors.



ST7100 + WB7100 + TA7100

6) Make the connection on the terminal board of bracket **WB7100DG** according to the installation diagram.
7) Mark the colour/terminal combination on the junction box.

8) Close the intercom.
9) Connect the monitor cable to the bracket.
10) Fix the monitor and the intercom to the respective table adaptors.

Call table

Digital intercom call.

It indicates a call from the digital door stations or the doorkeeper exchanger.

Floor call or analogue secondary door station call.

It indicates a call from the floor or analogue secondary door station.

Tone table

Dialling tone.

It indicates that the line is free

Calling.

It indicates that the door-keeper exchanger has no reservations

Busy.

It indicates that the line is busy

Dissuasion.

It indicates that reservations cannot be made

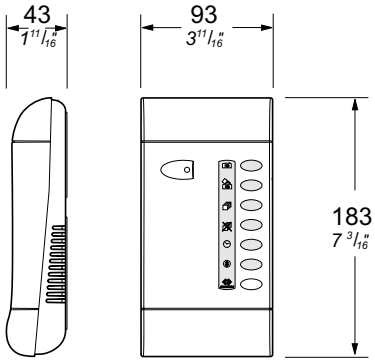
Programming and hold-on.

It indicates the programming mode or the stand-by mode of the internal user

Acknowledge.

It indicates that programming was executed.

VIDEO INTERCOM WITH VIDEO MEMORY



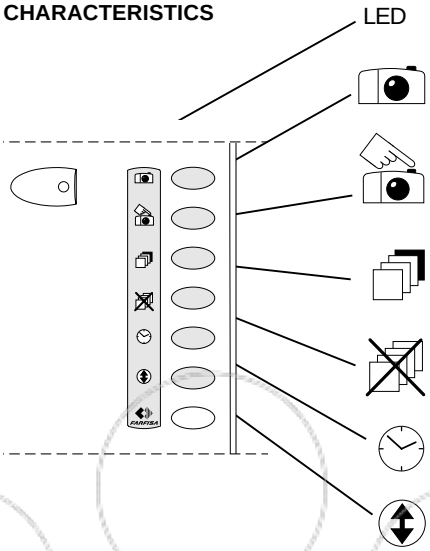
ST 7M32W. 32-image video memory.
With white housing, it records the image, hour and date of the last 32 persons who have made a call from the video intercom station.
It can be installed in any video intercom system through coaxial cable or twisted pair connection.

Technical data
Positive power supply: 12Vdc-0.3A
Alternate power supply: 13Vac-0.5A
Video signal standard: CCIR
Recording delay after a call: 5 sec.
Rec. inhibition after image storing: 30 sec.
Memory capacity: 32 images
Hour and date storage in case of power failure: 5 min.

Terminals
VI Video input into 75Ω 1Vpp
VO Video output into 75Ω 1Vpp
M Video ground
XI Balanced negative video input
YI Balanced positive video input
XO Balanced negative video output
YO Balanced positive video output
+ +12Vdc power supply
— Ground
~/~ 13Vac power supply
8 12Vdc voltage input (from video intercom)
DV 12Vdc voltage output (to video distributor)
F Ground
D Input supplementary command
R Input supplementary command
A Input supplementary command
P Input supplementary command

The video memory can be powered with:
13VAC by connecting a transformer (i.e. PRS210) to terminals ~/~
12VDC by connecting a power supply (i.e. 4220) to terminals +/ —
15VDC by connecting a power supply (i.e. 6220) to terminals ~/ —

CHARACTERISTICS

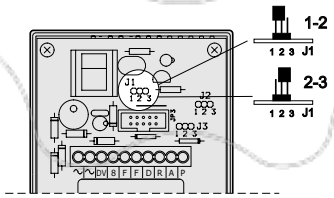


INSTALLATION DIAGRAMS

The video memory **ST7M32** is designed for application in one-way video intercom systems with video connection through coaxial cable. It can be also installed in multi-way video intercom systems and/or with video connection through twisted pair by changing the configuration of some of the jumpers.

ONE/MULTI-WAY INSTALLATIONS

Configuration of jumper J1

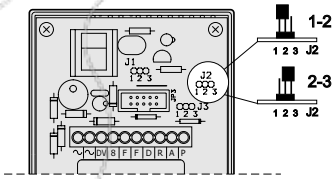


- for one-way installations **1-2**
- for multi-way installations **2-3**

For the operation of video memory, see the instruction manual provided with the product.

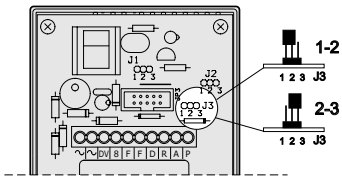
INSTALLATIONS WITH COAXIAL CABLE OR TWISTED PAIR

Configuration of jumper J2



- for video input with coaxial cable **1-2**
- for video input with twisted pair **2-3**

Configuration of jumper J3

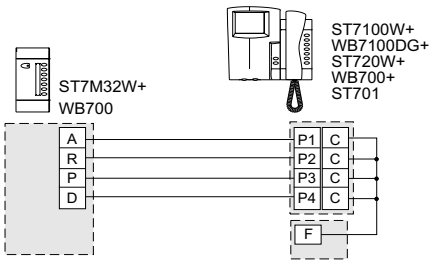


- for video output with coaxial cable **1-2**
- for video output with twisted pair **2-3**

INTERNAL STATIONS WITH DECODING MODULE

VIDEO MEMORY INSTALLATION DIAGRAMS

It is advisable to install the video memory close to the video intercom and use the control buttons on the video memory. If this is not possible or if the system uses one video memory for several video intercoms, you can connect in parallel the 4 main commands (, , and ; terminals A, R, P and D, respectively) and use the video intercom buttons.

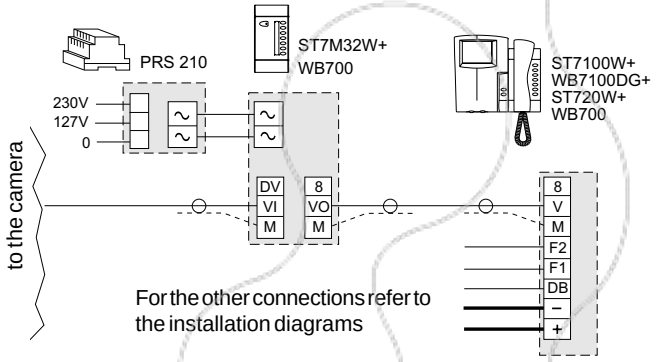


SYSTEMS with COAXIAL CABLE

- One-way system.

Jumper configuration

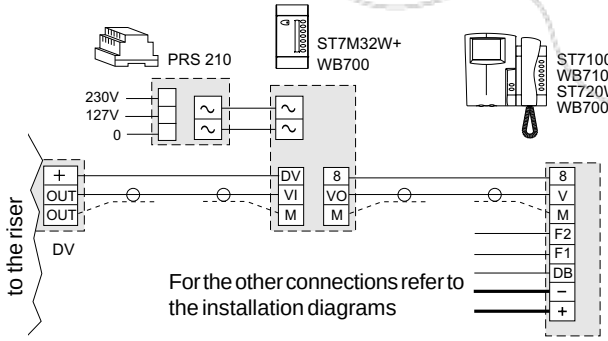
J1	J2	J3
1-2	1-2	1-2



- Multi-way system.
Terminal 8 must be always connected (even if the video distributor is not included in the system).

Jumper configuration

J1	J2	J3
2-3	1-2	1-2

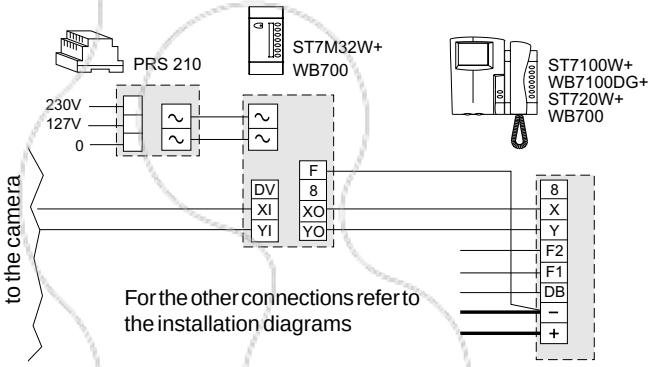


SYSTEMS with TWISTED PAIR

- One-way system.

Jumper configuration

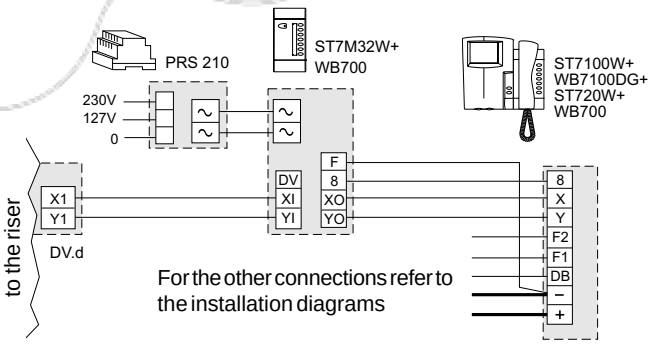
J1	J2	J3
1-2	2-3	2-3



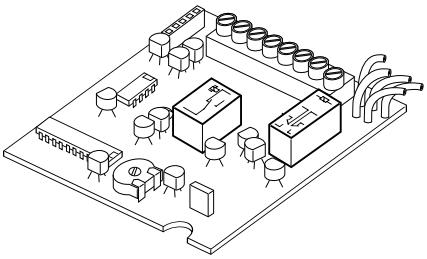
- Multi-way system.

Jumper configuration

J1	J2	J3
2-3	2-3	2-3



SINGLE DECODING MODULE FOR PROJECT AND COMPACT INTERCOMS



4231TP.

Installed in **PT510EW, PT526EW, EX320** and **KM810W** intercoms to decode data of the **FN4000** serial digital bus.

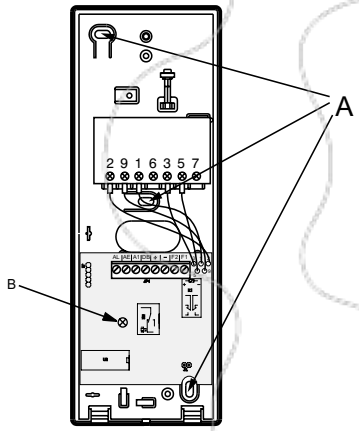
Technical data

Power supply:		12Vdc ± 1
Operating current:	- stand by	20mA
	- during operation	80mA
Operating temperature:		0° ÷ +40°C
Maximum permissible humidity:		90% RH
Dimensions:		70x69mm *(2 3/4"x 2 11/16")*

Installation and connection

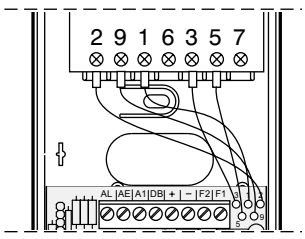
Fix the intercom to the wall using the three holes shown in figure (A).

Install the **4231TP** single decoding module using the fixing point (B) in the intercom.



Connect the 5 wires with different colour (see table) to the intercom terminal board.

Terminals	*Wire colour*
1	white
2	red
3	black
5	green
9	yellow



Make the connections to the module terminal board according to the installation to be made.

Terminals

F1 audio transmitter
F2 audio receiver
- ground
+ positive voltage input
DB serial data bus
AL alarm input; ground contact (NA)
AE command for an analog exchanger (grounded contact upon call and during conversation)
A1 secondary or floor call input; active when grounded

User code programming

The user code can be programmed in two different ways:

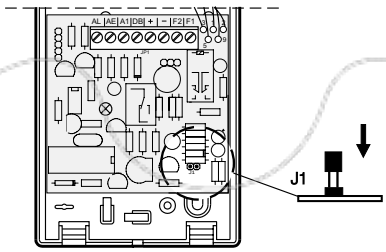
- by sending the code from the digital push-button panel or doorkeeper exchanger.
- by sending the code from a digital push-button panel directly connected to the module.

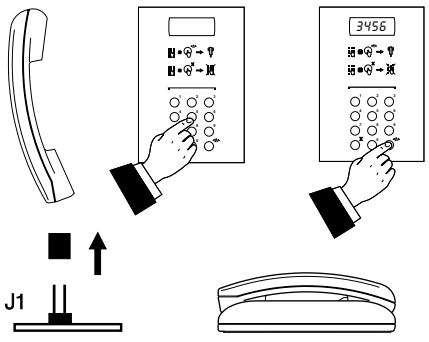
Programming from digital push-button panel or doorkeeper exchanger

***Warning**: when using the push-button panel of the main door station the doorkeeper exchanger (if present) must be in night mode.*

- Insert the jumper in the **J1** terminal board in order to short-circuit the 2 poles
- hold the handset off hook (programming tone)
- dial the user code on the push-button panel or the doorkeeper exchanger keypad and press Enter (acknowledge tone)
- remove the **J1** jumper
- hang up the handset
- call the user to check the code.

Note. The last code is stored when sending various codes.



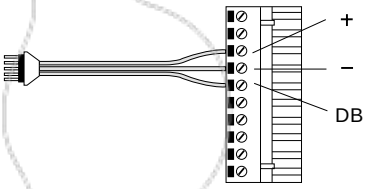


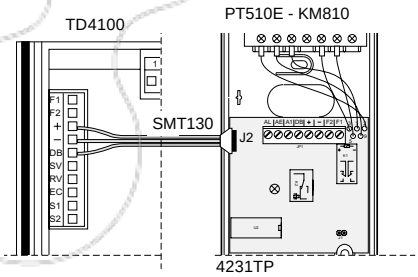
Programming from a digital push-button panel connected directly to the interface board with the SMT130 cable

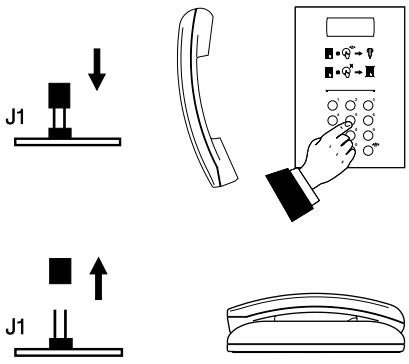
- Connect the **+**, **-** and **DB** terminals of the **SMT130** cable to the **TD4100..** digital push-button panel terminal board.
- insert the small cable connector into the **J2** terminal board of the **4231TP** single decoding module
- insert the jumper into the **J1** terminal board to short-circuit the 2 poles
- hold the handset off hook (programming tone)
- dial the user code on the push-button panel or doorkeeper exchanger keypad and press Enter (acknowledge tone)
- remove the **J1** jumper
- hang up the handset
- call the user to check the code
- disconnect the cable from the interface board.

Note. The last code is stored when sending various codes.


Cable art. **SMT130**







Operation

The intercom receives an acoustic signal (DIN-DON) when the call is made from the main door station or the doorkeeper exchanger (if present). Pick up the handset to start conversation with the door station (or the doorkeeper exchanger) for about 1 minute. Press the 🔑 button to open the door.
To call the doorkeeper exchanger, pick up the handset and:
- if the line is busy, push the 🔑 button to make a booking and hang up. The user will be called back.
- if the line is free, press 🔑
  - if the doorkeeper exchanger is free and has no booking, you will hear the calling tone and the doorkeeper exchanger will receive the call. The call will be memorised in case of no reply within 25 seconds.
  - if the doorkeeper exchanger is having a conversation or has bookings, you will hear the acknowledge tone and the user will be called back. A dissuasion tone will be heard even if the user picks up the handset within 10 seconds from the booking.

Note. The dissuasion tone will be generated if the doorkeeper exchanger is not present or if the doorkeeper exchanger is in "night" mode.

Additional functions

The following additional services are possible with the single decoding module:
- **floor call** (for information on connection and operation see page 170)
- **call from secondary door station** (for information on connection and operation see page 158)
- **anti-panic call** (for information on connection and operation see page 170)

Some of these services must be programmed as indicated below.

Programming the floor call duration and sending of busy code upon call from secondary door station

- Insert the jumper in the **J1** terminal board to short-circuit the 2 poles.
- pick up the handset (programming tone)
- on the push-button panel or doorkeeper exchanger dial:
  9990 25 seconds duration, no busy code sent (default programming)
  9991 5 seconds duration, no busy code sent
  9992 25 seconds duration, busy code sent
  9993 5 seconds duration, busy code sent
- press Enter (acknowledge tone on the handset)
- remove the **J1** jumper
- hang up the handset.

Call table

Digital intercom call. Indicates the call from the digital entrances or the exchanger

Floor or analogue secondary entrance call. Indicates the call from the floor or the analogue secondary

Tone table

Dialling. It indicates that the line is free

Calling. It indicates that the doorkeeper exchanger has no reservations

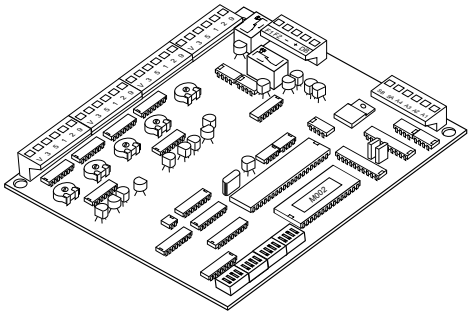
Busy. It indicates that the line is busy

Dissuasion. It indicates that reservations cannot be made

Programming and hold-on.
It indicates the programming mode or hold-on mode of the internal user

Acknowledge. It indicates that programming was executed

MULTIPLE DECODING MODULES



The modules are composed of electronic circuits allowing for data decoding, processing and execution (call, audio reception and transmission, door opener or call to doorkeeper exchanger, etc.).

Technical data

Power supply		12Vdc ± 1
Operating current:	- stand by	50mA
	- during operation	80mA
Operating temperature		0° ÷ +40°C
Maximum permissible humidity		90% RH
Dimensions		135x159mm *(5 5/16" x 6 1/4")*

4235. Module for 4 intercoms

It allows for connecting 4 intercoms to the digital system.

Terminals

F1 transmitter
F2 receiver
- ground
+ positive voltage input
DB serial data bus
9 electronic bell output (DIN-DON)
2 from the intercom or video intercom loudspeaker
1 from the intercom or videointercom microphone
5 door opener or call to doorkeeper exchanger
3 ground

4235TV. Module for 4 video intercoms

It allows for connecting 4 video intercoms (or intercoms) to the digital system.

Terminals

In addition to the **4235** terminals:
V video intercom activation and call

4235TVP. Module for 4 video intercoms and conventional push-button panel interface

It allows for connecting 4 video intercoms or a combination of intercoms/video intercoms to the digital system. It also allows for connecting a conventional push-button panel with a low number of buttons (i.e. floor or stair push-button panel).

Terminals

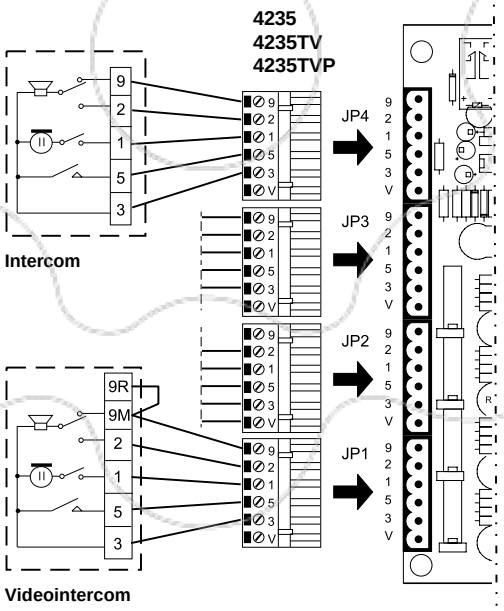
In addition to the **4235** terminals:
V video intercom activation and call
SB position "b" analog exchanger activation
SA position "a" analog exchanger activation
A4 button 4 input
A3 button 3 input
A2 button 2 input
A1 button 1 input

The operation of the A1÷A4 buttons is determined according to a specific programming (see page 92).

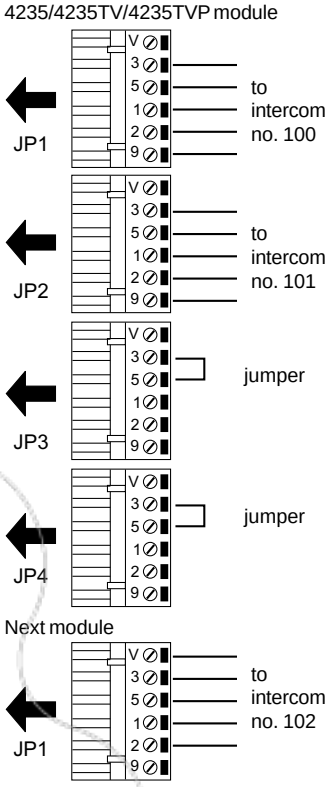
Installation and connections

Extract the terminal boards from the module.
Place the multiple decoding module in the box (art. **4236** or **4237**).
Make the terminal board connections according to the installation to be made.
Replace the terminal boards in the module housing without changing their position. The terminal board for connection to the installation (F1, F2, DB, - and +) must be the last one to be inserted.
The module can be connected to a lower number of intercoms or video intercoms. If the unused terminals remain free, the corresponding numbers cannot be used for the next modules. Viceversa if the terminals 3 and 5 are shored together, the corresponding numbers may be used for the next modules.

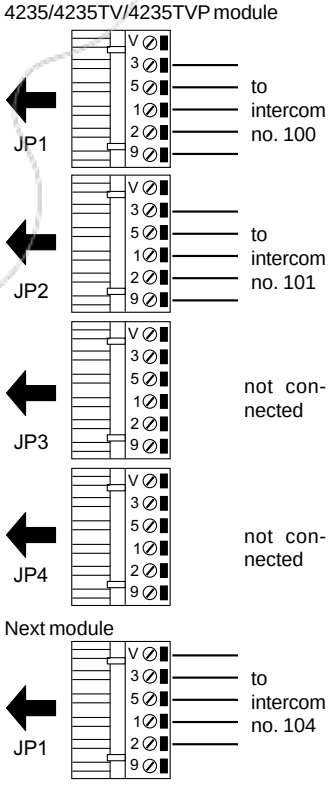
Example of connection to intercoms and/or video intercoms



Example of connection with CONTINUOUS numbering



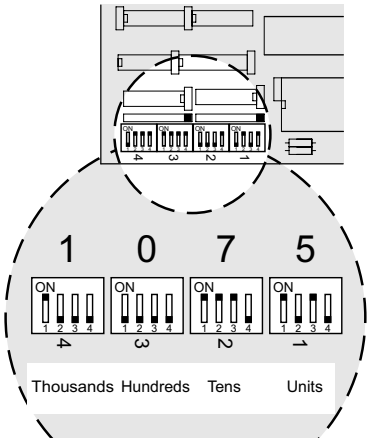
Example of connection with DISCONTINUOUS numbering

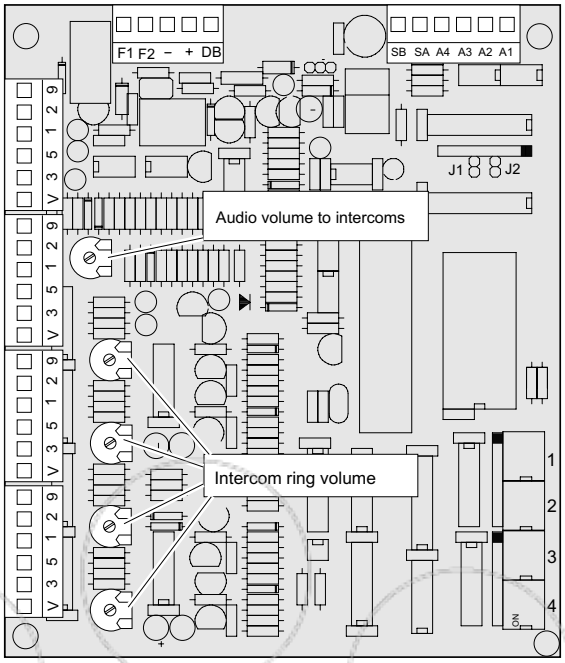


User code programming

Each decoding module features 4 blocks with 4 microswitches each, to code a 4-digit number (from 0001 to 9999). Block no.1 is used for units, block no.2 for tens, block no.3 for hundreds and block no.4 for thousands.
Only the first intercom or video intercom (JP1 terminal board) must be coded for each module. The second, third and fourth intercom or video intercom will automatically recognise the next 3 numbers.
Example: if number 1075 is coded, the module will recognise number 1075 at JP1, 1076 at JP2, 1077 at JP3 and 1078 at JP4. See the enclosed table for information on the coding of each digit.

Digit	Microswitch position
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	





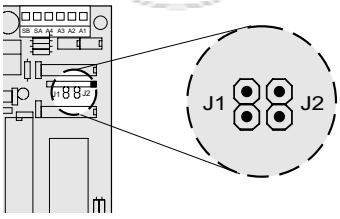
Volume settings
All settings are factory-made. The following adjustments are possible:
- audio volume to internal stations. Used to adjust the reception volume of the 4 intercoms connected to the interface (terminal 2)
- intercom ring volume. Each trimmer is used to adjust the ring volume of each intercom (terminal 9).

Additional functions only for 4235TVP

The following additional services are possible with the decoding module 4235TVP:
- **floor call** (for information on connection and operation see page 170)
- **call from secondary door station** (for information on connection and operation see page 162)
- **anti-panic call** (for information on connection and operation see page 170)
- **CCTV monitor switching ON** (the use of the 1471 relay allows for enabling a CCTV monitor; the use of the 1472 relay allows for switching the video signal from an individual surveillance camera to the cameras of the digital video installation).

Some of these services must be programmed as indicated below.

Programming the additional functions. The **J1** and **J2** programming jumpers can be used to determine the following operating modes:



Call from secondary door station without sending a busy code

J1 without jumper
J2 without jumper

Call from secondary door station sending a busy code

J1 with jumper
J2 without jumper

Anti-panic

J1 without jumper
J2 with jumper

CCTV monitor switching ON, grounded **V** terminal throughout the call and conversation

J1 with jumper
J2 with jumper

Call table

Digital intercom call (terminal 9). It indicates a call from a digital door station or doorkeeper exchanger

Accessories

4236. Back box for **4235, 4235TV, 4235TVP** multiple decoding modules and **4273** digital exchanger.

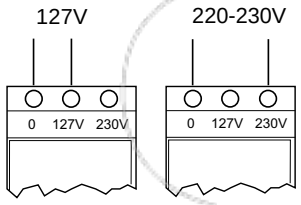
4237. External housing for **4235, 4235TV, 4235TVP** multiple decoding modules and **4273** digital exchanger.

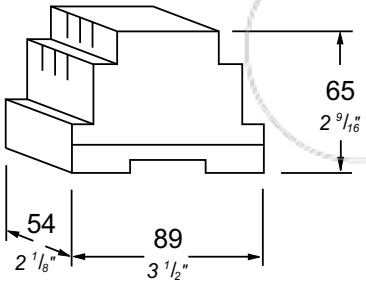
Power supplies are protected against overloading or short circuits by a temperature sensor. To reset the power supply, power must be cut OFF for about one minute and can be restored after having eliminated the defect.
Do not obstruct the openings for ventilation or heat dissipation in order to avoid damaging the power supply.
Power supplies are contained in housings that can be fixed on DIN bar (except for art. **PRS3220K**) or on the wall by using two expansion plugs.
All power supplies deliver power for max. **8 24V-3W lamps** to provide lighting to the push-button panel name plates. If required, add the necessary **PRS210** transformers (approx. 1 for 10 lamps).

General technical data

Input voltage:	127V or 220-230Vac
Frequency:	50/60Hz
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH

Notice
All power supplies and the transformer described in this manual can operate with 127V or 220-230V mains voltage.
Make sure that connection is correct.



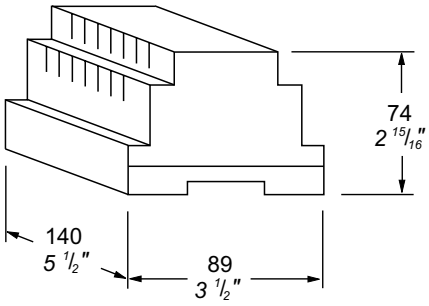


PRS210. TRANSFORMER.

It is used to power nameplate lights, electric door release buttons, etc.

Technical data

Power:	15VA
Output voltage:	13Vac
Max. current with direct use:	0.7A
Max. current with intermittent use:	1A
Housing:	DIN 3 modules A
Approved:	VDE according to the EN60065
Weight:	0.44Kg



PRS4220. STABILISED POWER SUPPLY WITH SWITCHING REGULATOR

It delivers the necessary power to operate a digital intercom or video intercom system. Additional **PRS4220** power supplies must be added for systems with long distances or high number of users. To determine the number of power supplies see the table on page 103 with information on the power consumption of all units.

Technical data

Power:	40VA
Housing:	DIN 8 modules A
Approved:	VDE according to the EN60065
Weight:	0.96Kg

Output terminals

\+ 12Vdc-1.5A positive voltage
\- Ground
~ 13Vac power supply for:
- name plate lights, analog exchangers (0.6A direct service)
- electric door release button (1A intermittent service)

1281. STABILISED POWER SUPPLY WITH SWITCHING REGULATOR

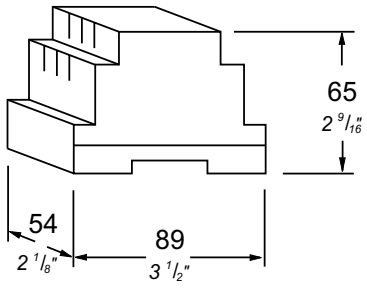
It delivers the necessary power to operate a video intercom system.
It provides low voltage for a monitor, a camera unit with solid state sensor (CCD), analog exchangers, and name plate lights.

Technical data

Power:	48VA
Housing:	DIN 8 modules A
Approved:	VDE according to the EN60065
Weight:	0.96Kg

Terminals

A 13Vac power supply for:
-nameplate lights, analog exchangers (0.6A continuous service)
- electric door release button and buzzers (1A intermittent service)
- Ground
+ 21Vdc-1A positive power (timed operation)
I Logic command input of timing
0 = enabled +5Vdc = disabled



1471. RELAY UNIT

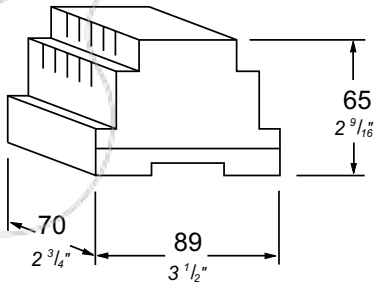
A low voltage, low current (DC/AC) unit, it can switch voltages up to 50V and 5A max.
Used for auxiliary services (i.e. stair lights, call for more bells, supplementary door release, etc.). It installs on DIN bar or with two expansion plugs. In housing DIN bar 3 modules A.

Terminals

1 12Vac/dc voltage input
2 21÷24Vdc voltage input
3 ground
5 common terminal of relay
6 normally open contact of relay
7 normally closed contact of relay

Technical data

Power supply:	13Vac; 12÷24Vdc
Current consumption:	0.05A
Number of exchanges:	1
Max. switching current:	5A (50V)
Housing:	DIN 3 modules A
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH

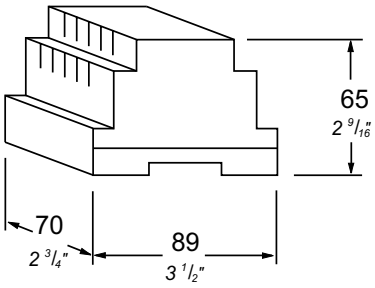


1471E. RELAY UNIT

Same as above, with 3 supplementary inputs for electronic call activation. In housing DIN bar 4 modules A.

Terminals
Same terminals as model above plus:

9P electronic call input without resistive load
9S electronic call input with resistive load
- ground for electronic call inputs
9T timed electronic call input (1 second)



1472. 2-CONTACT RELAY UNIT

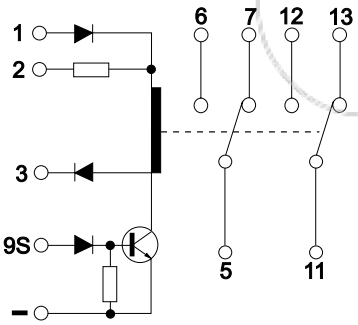
Used for auxiliary services or for audio, video or control signal switching.
A low voltage, low current (DC/AC) unit, it can switch up to 24V and 0.8A max. for each contact.
It installs on DIN bar or with two expansion plugs. In housing DIN bar 4 modules A.

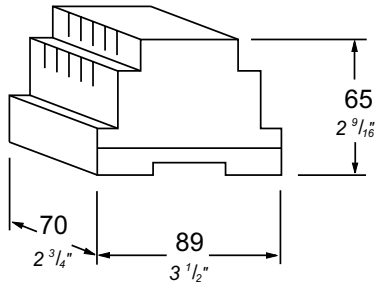
Technical data

Power supply:	13Vac; 12÷24Vdc
Current consumption:	0.05A
Number of exchanges:	2
Max. switching current:	1A (24V)
Housing:	DIN 4 modules A
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH

Terminals

1 12Vac/dc voltage input
2 21÷24Vdc direct voltage input
3 ground
5 common terminal of contact 1
6 normally open terminal of contact 1
7 normally closed terminal of contact 1
9S electronic call input with resistive load
- ground for electronic call inputs
11 common terminal of contact 2
12 normally open terminal of contact 2
13 normally closed terminal of contact 2





RL37. RELAY MODULE.

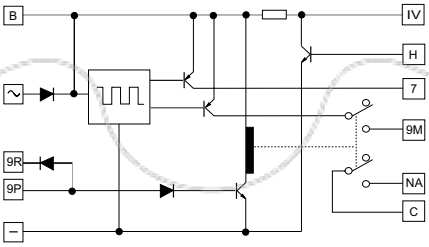
Relay module used to regenerate the electronic call for additional 3 intercoms or video intercoms. It permits to activate/deactivate max. 3 additional video power supplies. Complete with electronic ringing generator for intercommunication.
Can be fixed on DIN bar or screwed to the wall with 2 expansion plugs.

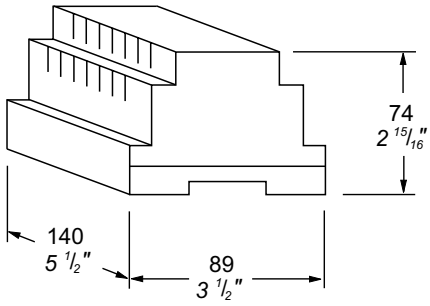
Technical data

Power supply: 13Vac
Current consumption: 0.04A
Current consumption with ringing ON: 0.6A
Number of exchanges: 1
Max. switching current: 1A (24V)
Housing: DIN 4 modules A
Operating temperature:0° ÷ 50°C
Maximum permissible humidity: 90% RH

Terminals

~ Alternate current input
- Ground
H Timed continuous current input 21Vdc
IV Additional power supply activation
C Common contact of relay
NA Normally open contact of relay
9P Electronic call input
9M Regenerated electronic call output activated by terminal 9P
9R Direct electronic call output from terminal 9P
B 8Vdc voltage output





1473. ANALOG EXCHANGER

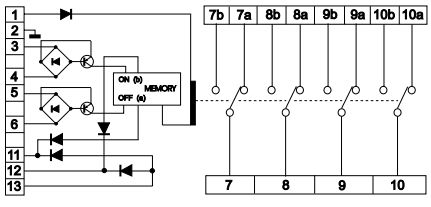
Used in systems with two or more video intercom door stations to switch video signals or in analogue intercom systems to switch audio lines and door opener on the calling door station. It installs on DIN bar or with two expansion plugs. In housing DIN bar 8 modules A.

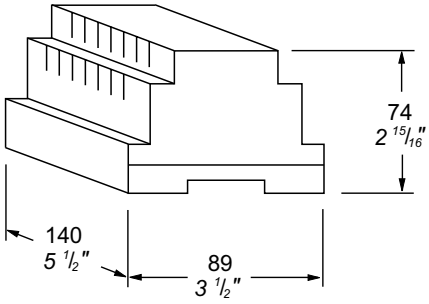
Technical data

Power supply:	13Vac; 15÷21Vdc
Current consumption:	0.1A
Number of exchanges:	4
Max. switching current:	5A (50V)
Housing:	DIN 8 modules A
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH

Terminals

1 13Vac/18Vdc-0.1A power
2 Ground
3 and **4** To switch the relay to position **"b"** – ON position
5 and **6** To switch the relay to position **"a"** – OFF position
7,**8**,**9** and **10** Common terminal of relay contacts
7a,**8a**,**9a** and **10a** OFF position of relay contacts
7b,**8b**,**9b** and **10b** ON position of relay contacts
11 Logic enabling, with ground command, to switch the relay to position **"a"** – OFF position
12 Logic enabling, with ground command, to switch the relay to position **"b"** – ON position
13 Common output of terminals **11** and **12**





4230. DECODING MODULE FOR SUPPLEMENTARY SERVICES.

It allows for connecting multiple intercoms and/or video intercoms in parallel with/without intercommunication service and one or more secondary door stations (only audio or audio/video door stations) in one apartment. One **4230** module is required for each apartment.

Technical data

Power supply:	13Vac÷21Vdc
Operating current in stand by:	0.2A
Operating current with max. load:	1A
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH
Housing:	DIN 8 modules A

Terminals

X / ∼ 13Vac power input
X / **-** +21Vdc power input
- general ground
C1 continuous call signal output for intercom intercommunication service
C2 modulated call signal output for intercom calls (max. 3 intercoms)
1 audio to secondary door station
2 audio from secondary door station
3 +12Vdc positive voltage output
4 video control switching ON
9 door release command or doorkeeper exchanger call
10 video intercom activation and call
11 audio ground
12 audio from video intercom
13 audio to video intercom
14 +21Vdc voltage output to supply 2 video intercoms or 1 video intercom and 1 camera
F1 audio to riser
F2 audio from riser
DB serial data bus
A1 floor call or secondary door station input
EC grounded command during call and conversation with the main line (to indicate secondary door station activation, video signal switching, etc.)
AE grounded command during floor or secondary call and conversation
IV activation/deactivation command output for supplementary power supply
S1/S2 door release command (normally open contact of relay)

User code programming

The module must be programmed with the user code in order to receive and send calls to the intercoms and/or video intercoms. To access programming unscrew the 4 fixing screws to remove the cover. The user code can be programmed in two different ways:

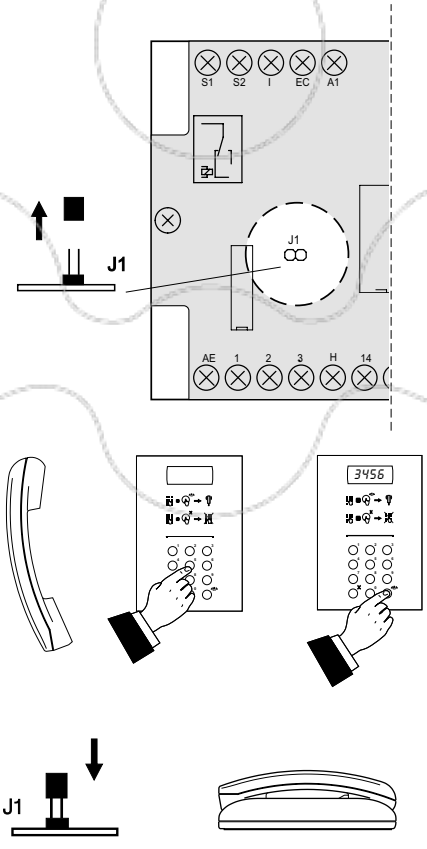
- by sending the code from the digital push-button panel or doorkeeper exchanger
- by sending the code from a digital push-button panel directly connected to the decoding module.

Programming from digital push-button panel or doorkeeper exchanger

***Warning**: when using the push-button panel of the main door station the doorkeeper exchanger (if present) must be in night mode.*

- remove the jumper from the **J1** terminal board
- pick up the handset (programming tone)
- dial the user number on the push-button panel or on the doorkeeper exchanger keypad and press Enter (acknowledge tone)
- insert the **J1** jumper
- hang up the handset
- call the user to check the code.

Note. The last code is stored when sending various codes.

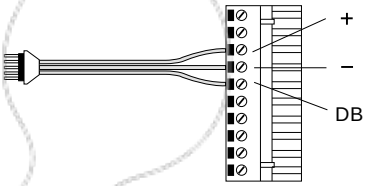


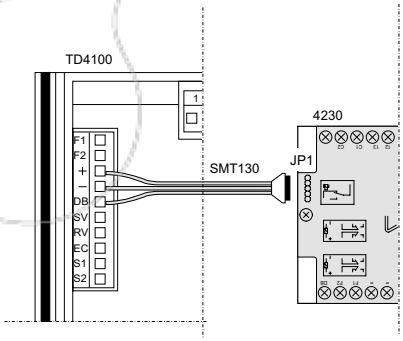
Programming from a digital push-button panel connected directly to the module with the SMT130 cable

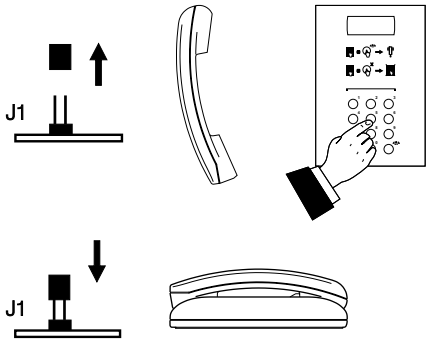
- Connect the **+**, **-** and **DB** terminals of the **SMT130** cable to the **TD4100..** digital push-button panel terminal board
- insert the small cable connector into the **J1** terminal board connector of the **4230** module
- remove the jumper from the terminal **J1** board
- pick up the handset (programming invitation tone)
- dial the user code on the push-button panel or on doorkeeper exchanger keypad and press Enter (acknowledge tone)
- insert the **J1** jumper
- hang up the handset
- call the user to check the code
- disconnect the cable from the module.

Note. The last code is stored when sending various codes.

Cable art. **SMT130**







Programming the floor call duration and sending a busy code on the serial data bus

- Insert the jumper in the **J1** terminal board to short-circuit the 2 poles.
- pick up the handset (programming tone)
- on the push-button panel or on doorkeeper exchanger dial:
  - **9990** 25 sec. duration, no busy code sent *(default programming)*
  - **9991** 5 sec. duration, no busy code sent
  - **9992** 25 sec. duration, busy code sent
  - **9993** 5 sec. duration, busy code sent
- press Enter (acknowledge tone on the handset)
- insert the **J1** jumper
- hang up the handset.

Operation

The **4230** module decodes the call from the main line (digital door stations or doorkeeper exchanger).
If the user is free, the call is sent to the video intercoms and/or intercoms. A light turns ON in the floor or secondary push-button panel (if present) to indicate the busy state. Pick up the handset from one intercom to start conversation with the door station (or the doorkeeper exchanger) for about 1 minute. Press the 🔑 button to open the door of the calling station.
The busy state is shown on the calling door station (or doorkeeper exchanger) if the user is having a conversation with his floor or secondary entrance.
To call the doorkeeper exchanger pick up the handset and press the 🔑 button:
- if the doorkeeper exchanger is free and has no booking, you will hear the dialling tone and the doorkeeper exchanger will receive the call.
- if the doorkeeper exchanger is having a conversation or has booking, you will hear the acknowledge tone and the user will be called back. A dissuasion tone will be heard even if the user picks up the handset within 10 seconds from the booking.

The dissuasion tone will be generated if the doorkeeper exchanger is not present or if the doorkeeper exchanger is in "night" mode.
If the call is generated by the floor or secondary audio-video entrance, all the internal intercoms will be automatically switched to the floor or secondary audio-video entrance allowing for conversation, visualisation and door release button, if present.
When the **4230** module is in idle state (no connection with door stations or doorkeeper exchanger) the intercommunication service between the intercoms/monitors enabled for this service is possible.
In video intercom systems, press the 👁 button to switch the video intercom ON and connect with the floor or secondary audio-video entrance. Press the 👁 button again to connect with the main line (only video mode).

Call table

Digital intercom call. It indicates a call from a digital door station or doorkeeper exchanger.

Floor call or analogue secondary door station call. It indicates a call from the floor or analogue secondary door station.

Anti-panic call. It indicates an alarm call from the doorkeeper exchanger.

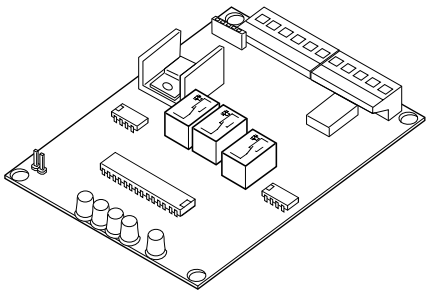
Tone table

Calling. It indicates that the doorkeeper exchanger has no reservations.

Dissuasion. It indicates that reservations cannot be made

Programming and hold-on. It indicates the programming mode or the hold-on state of the internal user

Acknowledge. It indicates that programming was executed.



4273P. DIGITAL EXCHANGER

Used in digital systems when the intercom and/or video intercom installation includes one ore more common main door stations and multiple secondary door stations or independent buildings with or without digital exchanger. It allows for making the secondary door stations independent, also from the main door stations.

Technical data

Power supply	12Vdc ± 1
Operating current	0.1A
Operating temperature	0° ÷ +40°C
Maximum permissible humidity	90% RH
Dimensions	84x118mm *(3 5/16"x4 5/8")*

Installation and connections

Remove the 2 terminal boards from the module.
Place the digital exchanger in a suitable housing (art.**4236** or **4237** or other types).
Make the connections to the terminal boards according to the installation to be made.
Replace the 2 terminal boards in their housing in the digital exchanger without changing their position.

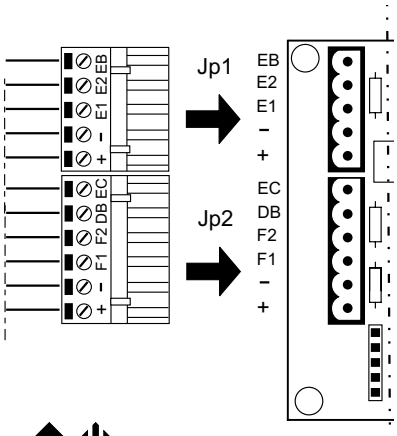
Terminals

Main line

DB serial data bus
F2 audio receiver
F1 audio transmitter
- ground
+ positive voltage input/output
EC command for analogue exchanger (grounded contact upon call and during conversation)

Secondary line

EB serial data bus
E2 audio transmitter
E1 audio receiver
- ground
+ positive voltage input/output

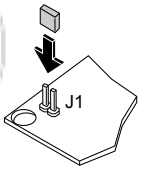


Programming

In the digital exchanger a yellow LED is present to show the status of the device: operating mode (slow blinking) or programming mode (fast blinking); there are also 4 red LED's only active during the programming phase. For correct operations the digital exchanger must be programmed in order to univocally recognise the groups of users connected to it. It is necessary to program the numerical intervals (max 4) inside which all the user addresses, belonging to that specific digital exchanger, are included (i.e. building or block "A" user addresses from 100 to 120 and from 140 to 150; building or block "B" user addresses from 0 to 119 and from 121 to 139; building or block "C" user addresses from 200 to 299; building or block "D" user addresses from 300 to 450, from 1000 to 2000, from 4789 to 4790 and the user 5000.

Two are the ways to program the digital exchanger:
- sending codes using the digital push-button panel **TD4100..** present in the installation (during the programming phase it is mandatory to switch OFF a digital door keeper exchanger, if present)
- sending codes using a digital push-button panel **TD4100..** temporarily connected to the device using terminals "**+**", "**-**" and "**DB**".

Starting programming mode

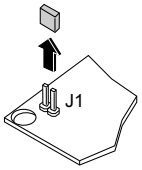


- Insert the jumper onto terminal board **J1** short circuiting the two pins. The yellow LED starts blinking faster.
- On the digital push-button panel enter the programming codes followed by the button "🔔". The display of the push-button panel switches OFF immediately if the code is recognized by the digital exchanger, otherwise it remains ON for about 5 second to indicate that the code has not been recognized and something wrong happened in the programming phase.

Programming codes

9990	**programming of numerical intervals**
9991	**system programming "a"**
9992	**system programming "b"**
9999	**download and display of programmed numerical intervals**

Exiting programming mode



- Remove the jumper from terminal board **J1**. The yellow LED starts blinking slower.

Programming numerical intervals (code 9990)

To program the numerical intervals it is necessary:
- enter the code **9990** on the push-button panel and then press the key "🔔"
- enter the starting address of the 1st numerical interval and then press the key "🔔"
- the device stores the address, LED1 lights-up and the display of the push-button panel turns OFF
- enter the ending address of the 1st numerical interval and then press the key "🔔"
- the device stores the address, LED 1 turns OFF, LED2 lights-up and the display of the push-button panel turns OFF.

Repeat the operations reported above for all the numerical intervals you want to program (max 4). Red LED's show in binary code the numerical interval you are programming (see table). After sending the 8th and last address on the display of the push-button panel appears the symbol "**AAAA**" for about 2 seconds to show that the device has ended the programming of numerical intervals and is back in "**programming mode**".

Notes
- If an address is not recognized by the digital exchanger the display of the push button panel turns OFF with a delay of about 5 seconds.
- If it is not necessary to program all the numerical intervals it is possible to exit the programming mode by removing the jumper from the terminal board **J1**. In such a case only the complete programmed numerical intervals are stored.
- If the numerical interval it is composed only of a single address it must be entered twice as starting and ending address.

System programming

a) code 9991

In this section it is possible to program:
- **type of data sent from the exchanged to the main branch of installation** (booking request and/or self power ON request from user devices, access control data).
- **4 different operating modes** (normal operation mode-data bus regeneration-operation as alarm device-normal operation mode extended with the sending on the main branch of data about the busy state of the exchanged branch).
- **configuration of terminal EC** (activation on call coming from the main branch - activation on call coming from exchanged branch) and activation of functions of **red LED's**.

To program the above mentioned feature it is necessary:
- enter the code **9991** on the push-button panel and then press the key "🔔"

- enter one of the following codes:
  0 booking request managed, self power ON request from internal users not managed, data for access control system managed (*default value*)
  1 booking request not managed, self power ON request from internal users not managed, data for access control system managed
  2 booking request managed, self power ON request from internal users managed, data for access control system managed
  3 booking request not managed, self power ON request from internal users managed, data for access control system managed
  4 booking request managed, self power ON request from internal users not managed, data for access control system not managed
  5 booking request not managed, self power ON request from internal users not managed, data for access control system not managed
  6 booking request managed, self power ON request from internal users managed, data for access control system not managed
  7 booking request not managed, self power ON request from internal users managed, data for access control system not managed
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, LED1 lights-up and the display on the digital push button panel turns OFF immediately
- enter one of the following codes to select the operating mode:
  0 Normal operating mode (*default value*)
  1 Data Bus re-generation.
  2 Operation as Alarm Detector Device
  4 Normal operation mode extended with the sending on the main branch of data about the busy state of the exchanged branch
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, LED1 turns OFF, LED2 lights-up and the display of the digital push button panel turns OFF immediately.
- enter one of the following codes to select the activation mode of the terminal **EC** and to activate the **red LED's**:
  0 EC activated only on call received from the main branch, functions of red LED's deactivate (*default value*)
  1 EC activated only on call received from the exchanged branch, functions of red LED's deactivate
  2 EC activated only on call received from the main branch, functions of red LED's activated
  3 EC activated only on call received from the exchanged branch, functions of red LED's activated
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, all red LED's turn OFF and the display of the digital push button shows "**AAAA**" to indicate that the device has ended the system programming and is back on the "**programming mode**" status.

b) code 9992

In this section it is possible to program:

- **booking control**
- **alarm control and booking timing**
- **EC terminal configuration for intercommunicating purposes**

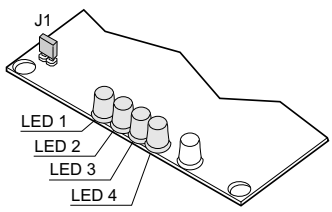
To program the above mentioned feature it is necessary:
- enter the code **9992** on the push-button panel and then press the key "🔔"
- enter one of the following codes:
0 no control (*default*)
1 booking data not sent to 1st doorkeeper exchanger
2 booking data not sent to 2nd doorkeeper exchanger
3 booking data not sent to 1st and 2nd doorkeeper exchanger
4 booking data not sent to 3rd doorkeeper exchanger
5 booking data not sent to 1st and 3rd doorkeeper exchanger
6 booking data not sent to 2nd and 3rd doorkeeper exchanger
7 booking data not sent to 1st, 2nd and 3rd doorkeeper exchanger
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, LED1 lights-up and the display on the digital push button panel turns OFF immediately;
- dial on the keypad of the door station one of the following number to configure the alarm and booking data transmission to doorkeeper exchangers, this function is used to allow a secondary door entry station to connect to an user, against a booking request of the latter, before the booking request is sent to the doorkeeper exchanger (for this function also the secondary door entry station must be properly programmed).
  0 alarm data immediately sent and booking data delayed *(default)*
  1 alarm data not sent and booking data delayed
  2 alarm and booking data immediately sent
  3 alarm data not sent and booking data immediately sent
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, LED1 turns OFF, LED2 lights-up and the display of the digital push button panel turns OFF immediately.
- dial on the keypad of the door station one of the following numbers to select the timing of the EC terminal during calls and intercommunication (available only with Exhito videointercoms):
  0 EC disabled *(default)*
  1 EC enabled
- press the key "🔔" on the push-button panel, the digital exchanger stores the code, all red LED's turn OFF and the display of the digital push button shows "**AAAA**" to indicate that the device has ended the system programming and is back on the "**programming mode**" status.

Table 1. Lightings led's during the programmation of the numerical intervals

LED	*1st numer. interval*		*2nd numer. interval*		*3rd numer. interval*		*4th numer. interval*	
	1.	n.	1.	n.	1.	n.	1.	n.
1	●	○	●	○	●	○	●	○
2	○	●	●	○	○	●	●	○
3	○	○	○	●	●	●	●	○
4	○	○	○	○	○	○	○	●

Legenda

1. = First user
n. = Last user
● = LED ON
○ = LED OFF



Operation as Alarm Device

If the digital exchanger is programmed as an alarm detector device it is sufficient to connect only the terminals "**+**", "**-**" and "**DB**" on the data Bus line. When an alarm code is received by the device it will activate its internal relays in a way that terminal "**F1**" is shorted to "**E1**" and terminal "**F2**" is shorted to "**E2**". To deactivate alarms it is necessary to insert and remove jumper **J1**.

Data bus re-generation

If, in long distance installations, the digital exchanger is programmed as a Data Bus Re-generator it is necessary:
- to connect the conductors coming from the main line to the terminals "**F1**", "**F2**", "**-**", "**DB**".
- to connect the conductors to the re-generated data bus line to the terminals "**E1**", "**E2**", "**-**", "**EB**".
- to connect the terminal "**+**" (positive power supply) only to the conductor coming from the closest power supply.

Downloading and display of numerical intervals (code 9999)

To download and display on the digital push-button panel the numerical intervals programmed in the digital exchanger it is necessary:

- enter on the digital push button panel the code **9999** and press the key "🔔". Automatically the digital exchanger will send the stored codes to the push-button panel which displays them in a sequential mode for about 2 seconds each code; between a numerical interval and the next one symbol **AAAA** will be displayed shortly.

If some numerical intervals are not programmed the display of push-button panel **TD4100** will remain OFF, whilst the display of the **TD4100PL** or **TD4100MA** shows **000**.

After the 8th and last numerical interval the figures **AAAA** will be shown for about 2 seconds to indicate that the digital exchanger has ended the downloading and it is back in "**programming mode**".

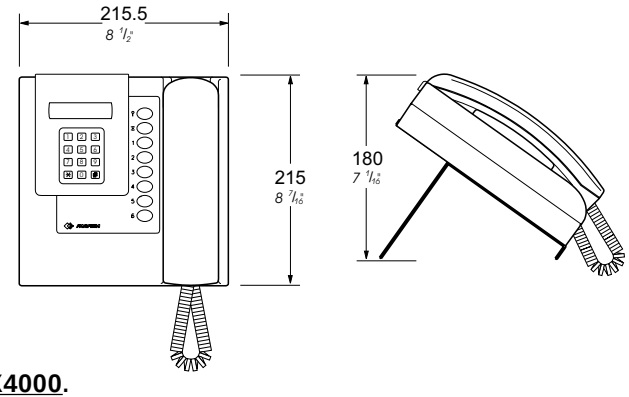
Operation

In case of calls from the main external station or the doorkeeper (if present), after recognizing the number included in its coding, the exchanger switches and establishes the audio connection between the intercom and the main external station or doorkeeper. The secondary push-button panel remains disabled with busy signal. All the other secondary push-button panels can have conversations with the users of the same building. No calls (or audio connections) can be made from secondary push-button panels to the users of the other buildings and to the doorkeeper.

In case of calls to a building which is already connected with its secondary entrance, on the display the indication of busy line will appear momentarily.

In this case, wait until the line is free. In the meantime calls can be sent to users of the buildings not busy.

Calls from the secondary push-button panel are directly sent to the desired user even in installations with common doorkeeper for all users.



PDX4000.

The **PDX4000** doorkeeper exchanger with table adaptor allows for communication with max. 9999 users (intercoms or video intercoms) and for connection with one or more digital door stations. Equipped with 12-key keypad, LCD and 7 service buttons.

Technical data

Power supply	12Vdc ± 1
Operating current	0.25A
Alphanumeric LCD	16x2 characters
Non-volatile memory of programming data	
Operating temperature	0° ÷ +40°C
Maximum permissible humidity	90% RH

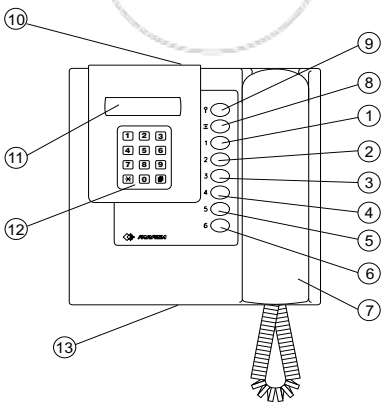
Installation and connections

Fix the junction box to the wall with expansion plugs or wall box (Ø = 60mm / 2 3/8").

Make the connections according to the installation to be made.

Main features (see figure)

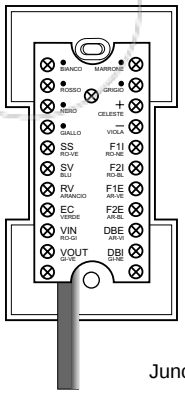
1) "Hold-on" button
2) "External-internal station communication" button
3) "Internal-internal station communication" button
3) "Booking" button
5) "Inclusion" button
6) Not connected
7) Handset
8) "Video automatic switch ON" button
9) "Door release" button
10) ON/OFF switch
11) Alphanumeric LCD
12) Keypad
13) Ring volume adjustment



Terminals

Connections must be made to the junction box, which has the following terminals:

+	12Vdc voltage input
-	ground
F1I	audio from internal stations (decoding modules or digital exchanger)
F2I	audio to internal stations (decoding modules or digital exchanger)
DBI	internal serial data bus (decoding modules or digital exchanger)
F1E	audio to door stations
F2E	audio from door stations
DBE	external serial data bus
SS	Activation of a supplementary bell (ground command; 25-sec. duration; 3 3-sec. rings)
SV	Video switch ON command (ground command with 82Ω resistor; 0.5-sec duration)
RV	Video switch OFF command (grounded contact upon call and during conversation, open contact at the end of conversation)
EC	Analog exchanger command (grounded contact upon call and during conversation, open contact at the end of conversation)
VIN and **VOUT**	Normally open contacts of a relay. Closed contacts upon call from external serial data bus (DBE) and during conversation or by pressing the automatic switch ON button.



Junction box

Door-Keeper Exchanger ring volume adjustment

The trimmer used to adjust the doorkeeper exchanger ring volume is located in the lower part of the doorkeeper exchanger (hole on the left side) and can be operated with a small screwdriver.

OPERATION

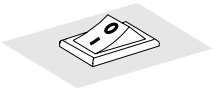
Make sure that the system connections are correct.
Power up the system by connecting the power supply to the mains.
The digital system with doorkeeper exchanger can operate in two different modes: "**Day**" and "**Night**".

NIGHT – Doorkeeper exchanger disabled

Place the doorkeeper exchanger switch ON **O** and display OFF.
In Night mode the doorkeeper exchanger is disabled and the communication between the external (if present) and the users are direct.

DAY – Doorkeeper exchanger enabled

All communications, both internal and external, are enabled by the operator, except for secondary station communications.
Place the doorkeeper exchanger switch ON **I**. The display shows *"ACI FARFISA PDX4000*".

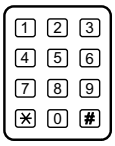


ACI FARFISA PDX4000

Selecting the language

With the handset on-hook:

- dial **9910** to select Italian (default setting)
- dial **9911** to select English
- dial **9911** to select French
- press #; the display shows "*ACI FARFISA PDX4000*".

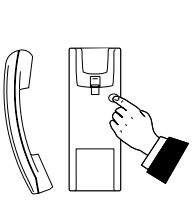


Italian **9910 + #**
English **9911 + #**
French **9912 + #**

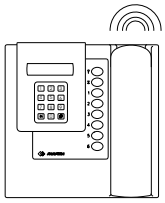
Call to doorkeeper exchanger

To call the doorkeeper exchanger from the internal stations:

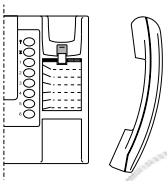
- pick up the handset;
  - dialling tone if the line is free (continuous tone)
  - busy tone if the line is busy
- press the call button (usually the button with the key)
  - if the line is free and the doorkeeper exchanger does not answer, a booking is made after 30 seconds
  - if the line is busy, the booking is automatically made (acoustic tone)
  - if the line and the doorkeeper exchanger are free, a DIN-DON call (4 rings) is generated on the doorkeeper exchanger and the display shows "*Call from user ----*"; in case of bookings only one ring is generated
- pick up the doorkeeper exchanger handset within 30 seconds from the call to start conversation (or see the "Booking" chapter).
  The display starts flashing 10 seconds before the end of the conversation.
  Press # to continue the conversation.



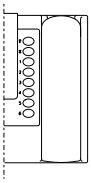
ACI FARFISA PDX4000



Call from user _ _ _ _



Talking with extension _ _ _ _



ACI FARFISA PDX4000

Call from doorkeeper exchanger

To call the internal stations:

- dial the number of the desired user; the number appears on the display after "*Dialling extension*" (press * in case of error)
- press # to send the call to the desired user; an arrow appears on the display ➞
- pick up the doorkeeper exchanger handset; the display shows "*Calling extension*"
- the called intercom receives an acoustic signal and the doorkeeper exchanger display shows "*Extension ringing"*. Pick up the handset within 30 seconds.
  - if the handset of the called intercom is off hook, the connection to the doorkeeper exchanger is direct
  - if the internal station is busy, the doorkeeper exchanger display shows "*Ext. busy ----"* for 5 seconds.

The maximum conversation time is approximately 60 seconds. After 60 seconds or when the handset is hung up, the system returns to the idle state and the display shows "*ACI FARFISA PDX4000*". The display starts flashing 10 seconds before the conversation time ends. If necessary, press # to continue the conversation.

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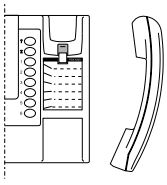
#

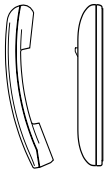
Dialling extension _ _ _ _

Dialling extension ➞ _ _ _



Calling extension _ _ _ _

Extension ringing _ _ _ _



Talking with extension _ _ _ _

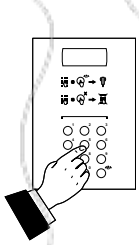
ACI FARFISA PDX4000

Call from door station

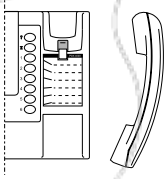
When a call is made from the main door station, the DIN-DON tone is generated on the doorkeeper exchanger for about 30 seconds and the display shows "*Call from external*".
Pick up the handset to start conversation. The display shows "*Talking with external*".
Press 🔑 to open the door.
Conversation ends after about 60 seconds or when the doorkeeper exchanger handset is hung up. The display shows "*ACI FARFISA PDX4000*".

Note

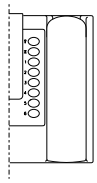
When a call is made from the door station, if the doorkeeper exchanger has a conversation with an internal station or is in hold-on state, or in case of conversation between two internal stations, the call will be heard, but not shown on the display. Clear the communication in order to start conversation with the door station,



Call from external _ _ _ _



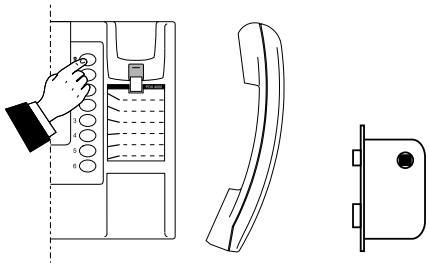
Talking with external _ _ _ _



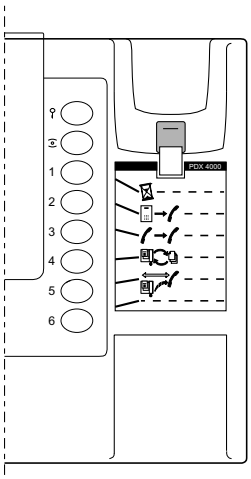
ACI FARFISA PDX4000

Door release button

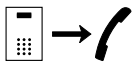
Press the 🔑 button to open the door during the conversation between doorkeeper exchanger and door station (only the door of the external station in connection with the doorkeeper exchanger will be opened).

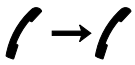


OTHER SERVICES

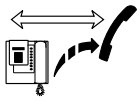



Hold-on mode


Door-internal station communication


Internal-internal station communication

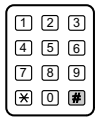

Booking queue


Inclusion

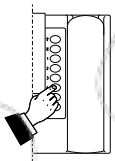
Hold-on mode

The internal or door station can be put in hold-on state for max. 1 minute during the conversation by pressing the button. The doorkeeper exchanger display shows "*Hold-on*". The internal user intercom receives the hold-on tone. If the station in hold-on state is a door station, the push-button panel display shows "*AAAA*".

Press the button to resume conversation.


#

Dialling
User → _ _ _ _


ACI FARFISA
PDX4000

Booking queue

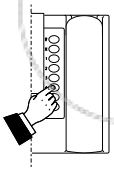
The presence of booking queues in the doorkeeper exchanger is indicated by the ⋙ flashing symbol on top right.
To view the internal stations that have made a booking (with handset on-hook):

- press to display:
  - "*No users*" if no bookings are present
  - "*booking queue user ----*" if one or more bookings are present
- pick up the handset to automatically call to the number shown on the display
  - if the internal station does not answer, the booking will remain valid
  - if the internal station answers, the booking will be cancelled.

Hang up the handset at the end of the conversation.

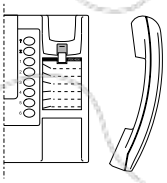
To view or cancel the booking queue (with handset on-hook):
- press # to view the next booking
- press * to cancel the displayed number.

Press the button to exit the booking queue.


ACI FARFISA ⋙
PDX4000

No
users

Booking queue
User _ _ _ _


Calling
User _ _ _ _

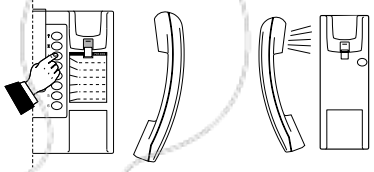

Ringing
User _ _ _ _

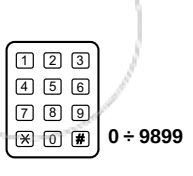
Internal-internal station communication

It is possible to connect 2 internal stations for a maximum of 60 seconds. During the conversation between the doorkeeper exchanger and an internal station, if the user wishes to communicate with another user:

- press the button; the internal intercom receives the hold-on tone and the doorkeeper exchanger display shows "*Hold-on user*"
- dial the number of the desired second user
  - if the internal station does not answer in 30 seconds, the hold-on mode is restored
  - if the operator does not want to wait, press again
  - to resume the conversation with the first user, press again
  - if the second user answers and does not want to communicate with first one, wait until the second user hangs up or press the button; then press the button again to resume the conversation with the user in hold-on state
  - if the second user answers and wants to communicate with the first one, press the button; the display shows "*Connection usr ---- —> usr----*".

"*ACI FARFISA PDX4000*" appears at the end of the conversation.
To interrupt the communications in progress, see the "Inclusion" chapter.


Hold-on
User _ _ _ _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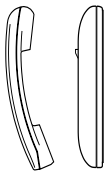
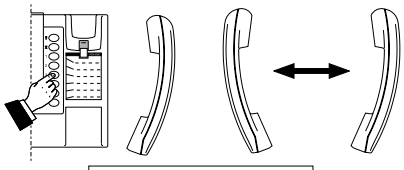
Dialling
User _ _ _ _


Connection with
User _ _ _ _

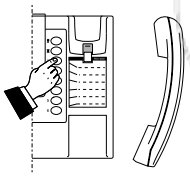

Connection
usr_ _ _ _ —> usr_ _ _ _

Door– internal station communication

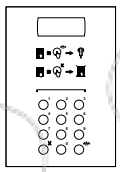
To transfer the communication to the desired internal station for 60 seconds during the conversation between the doorkeeper exchanger and the door station:

- press the button; the display of the door station shows "*AAAA*" and the display of the doorkeeper exchanger shows "*Hold-on ext. station ----"*
  - if the number shown on the display is correct, press #
  - if the number shown on the display is not correct, press * to cancel and dial the correct number
  - if the internal station does not answer in 30 seconds, the hold-on mode is restored
  - if the operator does not want to wait, press again
  - if the operator wants to resume conversation with the door station, press again
  - if the internal station answers and does not want to communicate with the door station, wait until the user hangs up or press the button.
  - if the internal station answers and wants to communicate with the door station, press the button; the display shows "*Connection <—> ext usr----".*

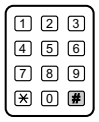
"*ACI FARFISA PDX4000*" appears at the end of the conversation.
To interrupt the communications in progress, see the "Inclusion" chapter.



Hold-on
ext. station ____

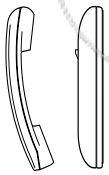


AAAA

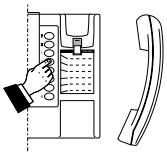


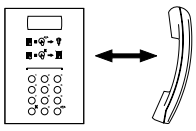
#

Dialling
User → ____



Connection with
user ____

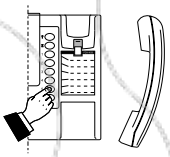




Connection
ext <—> usr ___

Inclusion service

The doorkeeper exchanger can be included in the internal station-internal station or door station-internal station communication with an acoustic signal by pressing the button (handset picked-up); the display shows "*Inclusion Usr---- Usr----* or "*Inclusion Ext---- Usr----".*
The operator can listen to the conversation and speak with the internal users only.
To exit the Inclusion service, press the button again or hang up the handset.
The operator can terminate the conversation by pressing or according to the active communication.



Inclusion
Usr____ —> Usr___

Inclusion
Ext <—> Usr ___

Direct dialling service

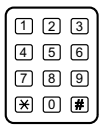
This function allows for sending the calls from the door stations to the called user without passing through the doorkeeper exchanger. The doorkeeper exchanger remains in operation for **internal calls, bookings and inclusions**.

To enable the service:
- dial **9902#;** the display shows "*ACI FARFISA Ext. Direct*".

During the external-internal communications the display shows "*Call from ext. station*".

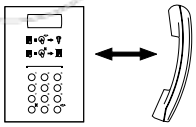
To disable the direct dialling service dial **9902#** with the handset on-hook and the doorkeeper exchanger in idle state. The display shows "*ACI FARFISA PDX4000*".

Note
The Direct Dialling service is stored in case of power failure or if the doorkeeper exchanger is switched OFF.



9902#

ACI FARFISA
Ext. Direct



Call from
ext. Station

Call transfer service

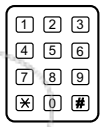
Internal and door calls to the doorkeeper exchanger can be temporarily transferred to any internal station.

With the handset on-hook and the doorkeeper exchanger in idle state:
- dial **9901#;** the display shows "*DESTINATION*"
- dial the user number; the display shows "*DESTINATION* ----"
- press #; the display shows *"ACI FARFISA Switched to ----".*

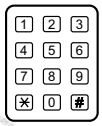
All calls to the doorkeeper exchanger are now transferred to the selected user. Booking is not possible.
During the communications in progress the display shows *"BUSY Switched to ----".*

To disable the call transfer service dial **9901#** with the handset on-hook and the doorkeeper exchanger in idle state. The display shows "*ACI FARFISA PDX4000*".

Note
The Call Transfer service is stored in case of power failure or if the doorkeeper exchanger is switched off.



9901#



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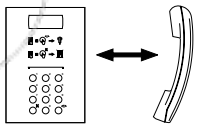
DESTINATION

DESTINATION
____

#

ACI FARFISA
Switched to ___



BUSY
Switched to ___

Main features

The cable runs in any intercom or video intercom system must be kept separate from the electrical or industrial installation as required by the **International Standards**. In each Country the Installer must comply with the technical and safety regulations stated by their own Government or Technical Committee. In the following are reported only some general rules:
- A protective circuit breaker must be installed on the power supply line. A single general circuit breaker must be used in case of multiple power supply units (also with multiple entrances).
- Before connecting the power supply make sure that the rating complies with the electrical mains.

Digital intercom system

A **FN4000** digital intercom system is composed of the following 5 wires:

DB serial data bus
F1 audio from internal to door stations
F2 audio from external to internal stations
+ +12Vdc power supply
- ground

Two wires with appropriate cross section (see table) must be added from the power supply to the door station for electric door release and name plate lamps, if any.

If the system includes art.**4235** multiple decoding module, the maximum distance between module and intercoms is 20m *(65Ft)*, with minimum 0.5mm² *(AWG20)* cross section. Connections are:

1 microphone
2 loudspeaker
3 ground
5 door release button or call to a doorkeeper exchanger
9 electronic call

Digital video intercom system

Two different systems can be used to realise a **FN4000** digital video intercom system: a system with video intercoms equipped with integrated decoding module and a system with multiple decoding module. Although the two systems are compatible, choose one system for easier installation.

a) digital system with integrated or additional decoding module:

DB serial data bus
F1 audio from internal to door stations
F2 audio from door to internal stations
+ +12Vdc power supply
- ground
V video signal
M video signal ground

- Two wires with appropriate cross section (see table) must be added from the power supply to the door station for electric door release and name plate lamps, if any.

b) digital system with multiple decoding modules:

conductors of the riser connected to the decoding board and to the video intercom through floor video distributor

DB serial data bus
F1 audio from internal to door stations
F2 audio from door to internal stations
+ +12Vdc power supply
- ground
V video signal
M video signal ground
H +21Vdc video power supply

Connections from the **4235TV** or **4235TVP** multiple decoding modules to the video intercoms cannot exceed the maximum distance of 20m *(65Ft)*, with minimum 0.5mm² *(AWG20)* cross section. They are:

Studio
1 microphone
2 loudspeaker
3 ground
5 door release or call to a doorkeeper exchanger
9M digital command for video intercom call
F video power supply ground

- Two wires with appropriate cross section (see table) must be added for electric door release and name plate lamps, if any
- 1 wire for video activation/deactivation must be added from the power supply to the door station.

Operating current of digital units

The operating current of each unit (+12V voltage) must be known in order to determine the number of power supply units required in a digital system.

Article	Operating current in Ampere	
	stand by	*in operation*
TD4100	0.06	0.1
TD4100MA/TD4100PL	0.05	0.12
RD4120	0.05	0.05
CD4130-MA, CD4134-38PL	0.1	0.1
PL24S-PL228S	-	-
PDX4000	0.25	0.25
4235, 4235TV, 4235TVP	0.05	0.08
ST4231, 4231TP	0.02	0.08
EH9160DG	0.055	0.3
ST7100W, EX3160	0.02	0.4
ST7100CW	0.02	0.5
KM8100DG-CDG	0.02	0.6
EX320DG	0.02	0.07
KM810DG	0.02	0.05
MD41DG/MA42DG-43DG	0	0.25
MD41CDG/MA42-43CDG/PL40-42PCDG	0	0.4
4273P	0.08	0.08

Maximum current delivered by power supply units

PRS4220	1.5A

The system operating current is obtained by adding the maximum current of one article to the minimum current of all the other articles of the same kind. If the result is equal or higher than the maximum load allowed by the power supply, more power supply units must be added according to the method describe above.

Examples:
1) In a digital intercom system with:

3 TD4100PL push-button panels	0.12 + 2x0.05	= 0.22A
1 PDX4000 doorkeeper exchanger	0.25	= 0.25A
98 EX320DG intercoms	0.07 + 97x0.02	= 2.01A
the total operating current is:		3.10A

For correct installation **no. 2 PRS4220 power supply units** are necessary as shown below:

1 power supply for 2 TD4100PL + 1 PDX4000 + 36 EX320DG
= 0.12+0.05+0.25+0.07+(35x0.02) = 1.19A
1 power supply for 1 TD4100PL + 62 EX320DG
= 0.12+0.07+(61x0.02) = 1.41A

2) In a digital video intercom system with:

2 TD4100PL push-button panels +1 PL40PCDG 0.12 + 0,4 = 0.52A
1 PDX4000 doorkeeper exchanger 0.25 = 0.25A
48 EX3160 video intercoms 0.4+47x0.02 = 1.34A

the total operating current is: 2.11A

For correct installation **no. 2 PRS4220 power supply units** are necessary as shown below:

1 for 2 TD4100PL + PL40PCDG + PDX4000
0.1+0.06+0.25+0.25 = 0.66A
1 for 48 EX3160 0.4+47x0.02 = 1.34A

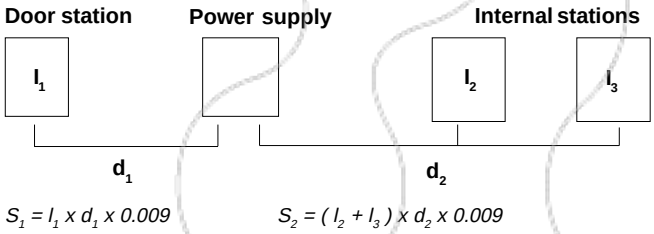
The cross section of the power supply wires (**-** and **+**) are directly proportional to the total distance and the total operating current of the units. The cross section of these 2 wires is obtained with the following formula:

S = I x d x 0.009

where **S** is the minimum cross section in mm²; **I** is the total current in Ampere of the units connected to that specific line; **d** is the distance in metres between the power supply and the last unit on the line.

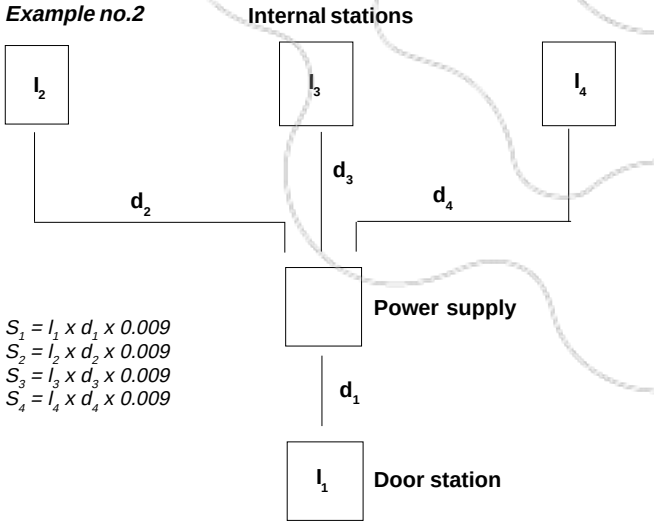
Example of connection to calculate the cross sections of + and - wires

Example no.1



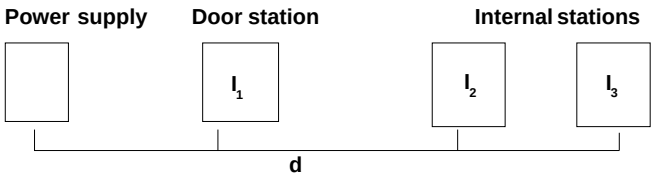
$S_1 = I_1 \times d_1 \times 0.009$ $S_2 = (I_2 + I_3) \times d_2 \times 0.009$

Example no.2



$S_1 = I_1 \times d_1 \times 0.009$
$S_2 = I_2 \times d_2 \times 0.009$
$S_3 = I_3 \times d_3 \times 0.009$
$S_4 = I_4 \times d_4 \times 0.009$

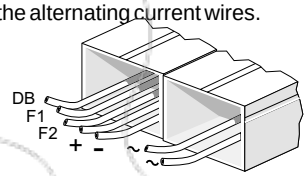
Example no.3



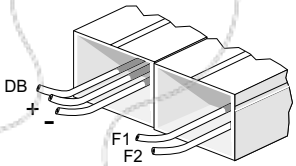
$S = (I_1 + I_2 + I_3) \times d \times 0.009$

Conductors

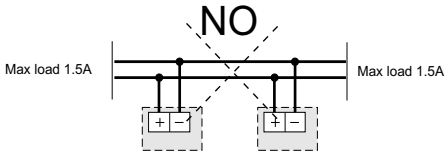
The type of wires used in the system deeply influences the functionality of a digital system.
The cross section of the wires depends on the distance between the units and on the number of modules to be connected. During the designing and computation of the system if the cross section of wires becomes too big or if the current required by the units is close to the maximum current delivered by the power supply, a suitable number of power supply units must be added in order to optimise the power distribution and divide the power consumption.
Make sure not to use more wires in parallel to reach the required cross section (i.e. multi-pair telephone cables). Only use one wire with suitable cross section. When using multipolar cables, they must be characterised by low parasite parameters (low capacity per metre, low inductance on Ohm).
When designing a large installation, it is advisable to divide it in sub-installations with their own power supply and connected in a single point (star connection) to the other sub-installations. Priority must be always given to the shortest connections with the required wire cross-sections.
If the installation includes additional power supply units, make sure to place them in the proximity of the unit to be powered.
To avoid possible noise on the audio line, place the power supply in the proximity of the door station to avoid a long distance for the two alternate voltage wires of the electrical door release button. Alternatively, use separate raceways for the alternating current wires.

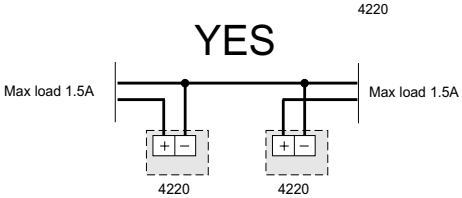


In case of long distances (>800m - *>2620Ft*), in order to avoid possible noise of data signals on the audio, it is advisable to keep audio wires separate from power supply and serial data bus wires.



If the raceway between the push-button panel and the decoding modules exceeds 10 metres *(33Ft)* outside the building, wires must be protected with systems for the suppression of extra currents caused by lightening or other electromagnetic phenomena.
The cable runs in intercom and video intercom systems must be kept separate from the electrical or industrial installation as required by the International Standards.
Each power supply must power a separate group of modules. The only connection to be made between power supply units is the ground reference (**-** wire). **Never connect the + output between power supply units.**





WIRE CROSS SECTION

Digital intercom system

Distance		Terminals DB; F1; F2			Terminals +; - (*)			Terminals ~ (*)		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
100	330	0.35	0,7	21	0.75	1	18	1	1,2	16
200	660	0.5	0,8	20	1	1,2	16	2	1,6	14
400	1310	0.75	1	18	2	1,6	14	4	2,3	11
600	1970	1	1,2	16	3	2	12	-	-	-
800	2620	1.5	1,4	15	4	2,3	11	-	-	-

Digital video intercom system

Distance		Terminals DB; F1; F2; EC; 4; RV; SV; H; A			Terminals +; -; 14; H; F (*)			Terminals ~ (*)		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
50	164	0.35	0,7	21	0.75	1	18	0.75	1	18
100	330	0.35	0,7	21	1	1,2	16	1	1,2	16
200	660	0.5	0,8	20	1.5	1,4	15	2	1,6	14
300	990	0.75	1	18	2	1,6	14	3	2	12
400	1310	1	1,2	16	2.5	1,8	13	4	2,3	11

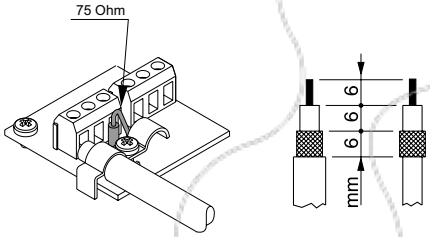
Notice: For + and – wires the table shows cross sections for 1A load. For higher currents (not exceeding the maximum allowable by the power supply) see the formula illustrated previously.

(*) Wires in **bold**.

VIDEO SIGNAL DISTRIBUTION

For the video signal use a TV 75Ω low loss coaxial cable.

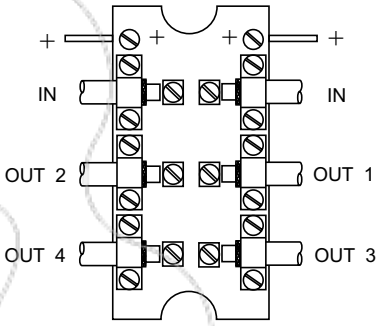
Video intercom terminal board
The resistor for closing of video signal (75Ω) is located on the PCB of the video intercom wall bracket.



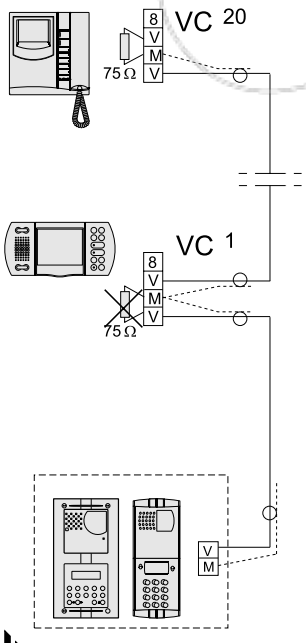
DV2-DV4. VIDEO DISTRIBUTORS.
They allow for the distribution of the video signal from the riser on 2 or 4 outputs. It can be installed on the wall, on a wall box, with expansion plugs or it can be placed in the junction box.

Technical data

Power supply	12Vdc±2
Operating current	**DV2** 50mA
	DV4 100mA
Insertion loss	0.8dB
Maximum input signal	2Vpp
Bandwidth	>5MHz

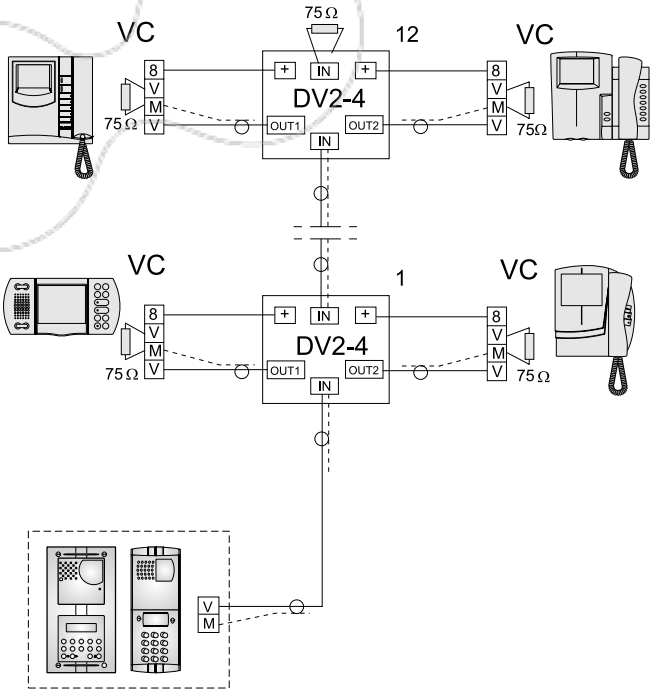


Serial connection of the coaxial cable (input and output from video intercom)
To carry out the video connection in a serial mode it is necessary to cut the 75Ω resistor located on the wall bracket. Leave it only on the last video intercom. A maximum number of 20 video intercoms can be connected serially. In case of more units, a suitable number of art.**476** video-amplifier distributors must be added *(see page 106)*.



Connection of the coaxial cable with video distributors

For digital video systems it is advisable to use video distributors. Being powered by the video intercoms connected to them (terminal 8), they do not create overloads on the video power supply. Unused outputs must be closed with 75Ω resistor supplied in the kit.
A maximum of 12 video distributors can be used. For more units a suitable number of art.**476** video-amplifier distributors must be added *(see page 106)*.



476. VIDEO DISTRIBUTOR-AMPLIFIER.
It allows for the distribution of the video signal coming from the camera on 5 independent lines. It can also be used as video amplifier for long distance installations by connecting one output only.

Terminals

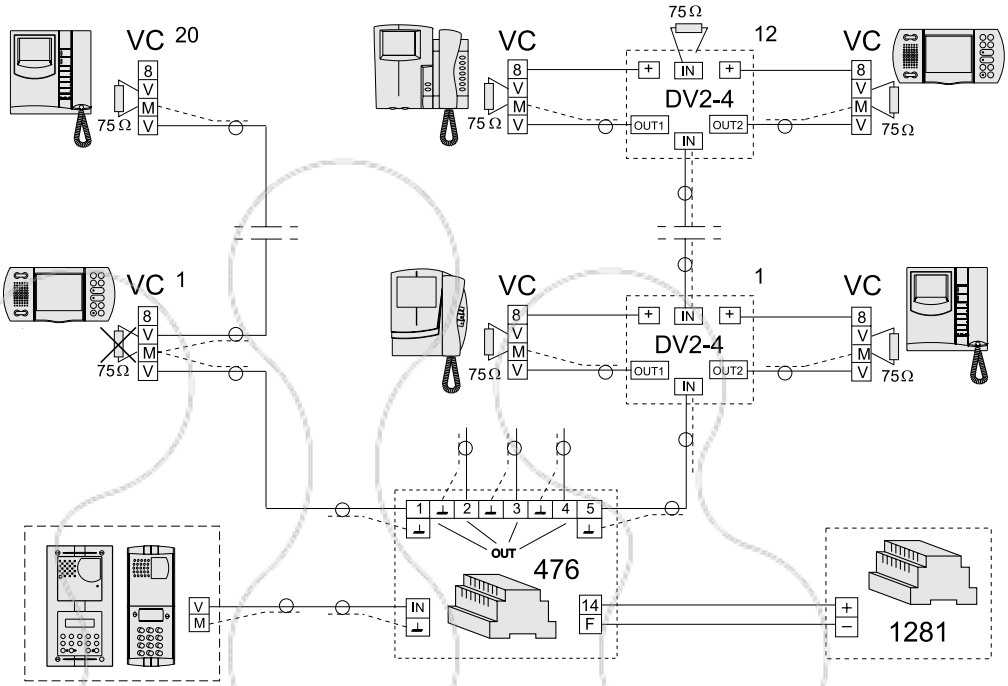
F	General ground
14	Positive power supply
IN	Video signal input
1-2-3-4-5	Video signal outputs
	Video ground (shield of coaxial cable)

Technical data

Power supply	21 ± 3Vdc
Max. operating current	250mA
Gain:	
- at max. load	from 0 to 3,5dB (adjustable)
- with 1 output closed to 75Ω	from 0 to 9dB (adjustable)
Bandwidth	>5MHz
Operating temperature:	0°÷+50°C
Maximum permissible humidity:	90% RH
Housing DIN 8 modules A	

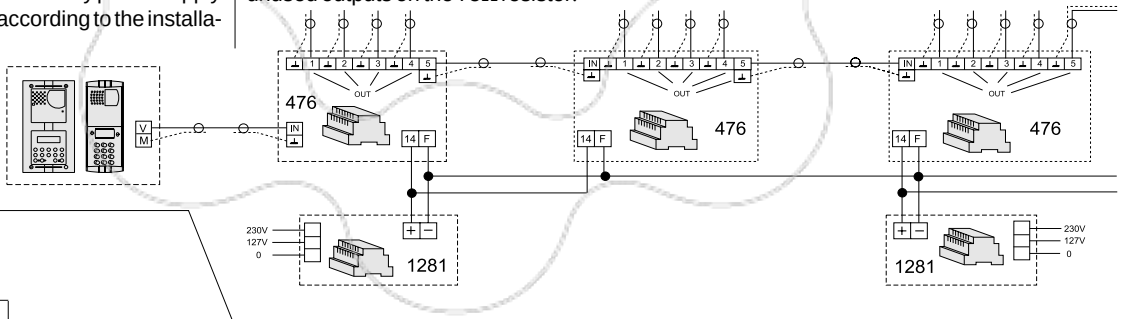
Connection of the coaxial cable with distribution on max. 5 risers (serial and/or with video distributors)

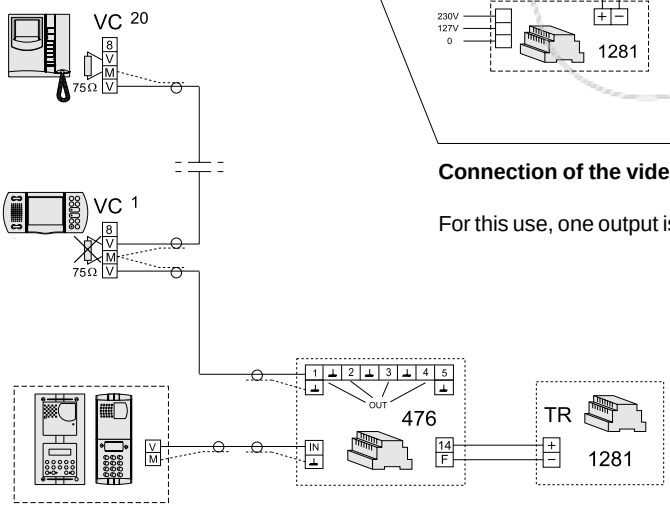
In video systems with different riser or with a high number of users, it is necessary to use the video distributor-amplifier art.**476**.
It is not necessary to close the unused outputs on the 75Ω resistor.



Connection of the coaxial cable with distribution of the video signal on more than 5 risers

The power supply art. **1281** can power max. no.2 art.**476**. Add the necessary power supply units and distributors according to the installation to be made. It is not necessary to close the unused outputs on the 75Ω resistor.



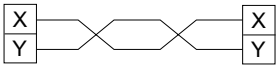


Connection of the video distributor as video amplifier for long distance systems

For this use, one output is to be connected; do not close the other outputs on the 75Ω resistor.

VIDEO SIGNAL DISTRIBUTION WITH TWISTED PAIR (only series Studio)

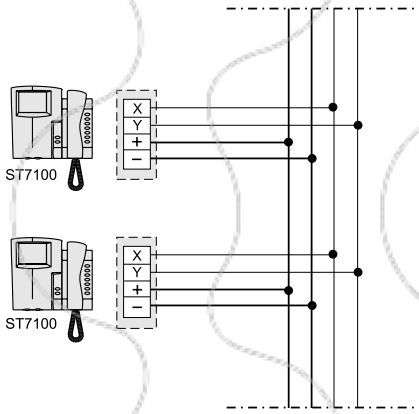
If the distance between the camera and the last video intercom in the system is lower than 200m *(660ft)*, the connection can be made with 2x0.35mm² wires *(Ø=0,6mm; AWG22)* instead of the coaxial cable. For distances from 100m *(330ft)* to 200m *(660ft)* a twisted pair must be used.



For the connection of the video signal you can choose from:
- **connection with junction box**
- **serial connection (input and output)**
- **connection with floor distributor**

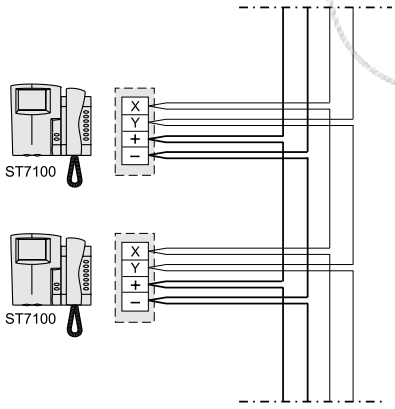
CONNECTION WITH JUNCTION BOX

All wires are distributed in the floor junction box.
Due to the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in serial mode is 20. Two 75Ω resistances must be inserted between X and F and between Y and F in the last video intercom. The maximum distance between the video intercoms and the connector block is 2.5 metres.



SERIAL CONNECTION

Connections are made on the video intercom brackets, and not in the junction box. Due to the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in serial mode is 20. Two 75Ω resistances must be inserted between X and F and between Y and F in the last video intercom.



CONNECTION WITH FLOOR DISTRIBUTOR

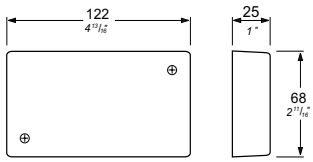
The video wires of each video intercom are insulated from the riser. Connections are made on the **DV2D** or **DV4D** floor video signal distributor box.

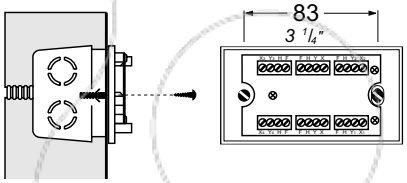
DV2D-DV4D. FLOOR VIDEO SIGNAL DISTRIBUTORS.

They allow for the distribution of the video signal taken from the riser on 2 or 4 outputs. They can be installed on the wall on a wall box, with expansion plugs or it can be placed in the junction box.

Technical data

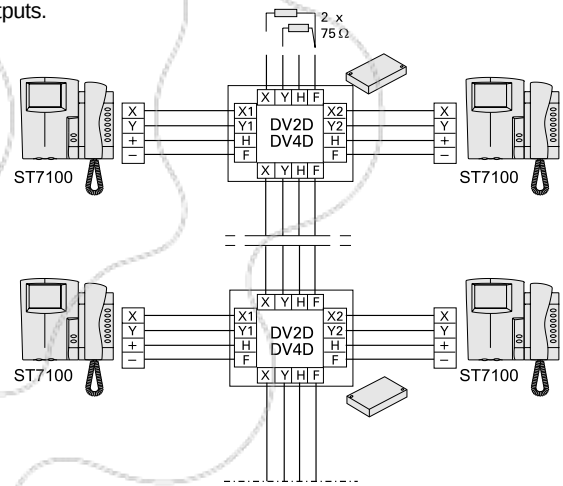
Power supply	15÷21Vdc
Operating current	60mA
Max. input video signal	2Vpp
Insertion loss	0.8dB
Bandwidth	>5MHz





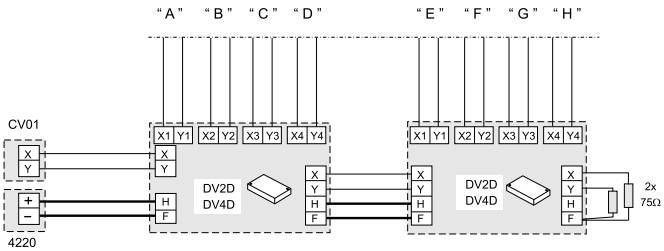
Connection of the video signal on a single riser

Terminals X and Y of the last distributor must be terminated with the 75Ω resistances supplied with the article. It is not necessary to terminate the unused outputs.



Connection of the video signal with distribution on several risers

In video systems with different risers you must user 1 or more video distributors art. **DV2D** or **DV4D**.
Terminals X and Y of the last distributor must be terminated with the 75Ω resistances supplied with the article. It is not necessary to terminate the unused outputs.



Example of connection on 8 risers

The **FN4000** digital videointercom installations are normally cabled using, for video transmission, a 75Ω coaxial cable. It is also however possible, if the distances are less than 200 meters *(660Ft)*, transmit the video signal using a twisted pair, telephone type, adding proper video converter modules.

CV 01.

VIDEO SIGNAL CONVERSION FROM COAXIAL CABLE TO BALANCED LINE.

To send a video signal from a camera to a balanced line it is necessary to use a signal converter between the camera and the line.
The board **CV01** permits this type of conversion and can be fixed on the back of cameras **Mody** or **Matrix** series, or near any **CCTV camera** (in outdoor housings, connector blocks, etc.).

Wires

V (white) video signal input
M (green) video ground
-F (black) ground
+H (red) 12÷21Vdc power supply input (according to the position of jumper J1)

Terminals

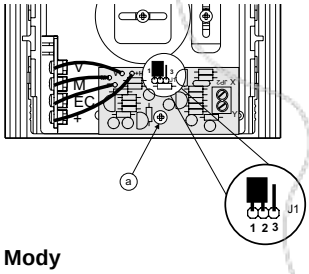
X negative balanced video signal output
Y positive balanced video signal output

Systems with PROFILO, MATRIX or MODY cameras

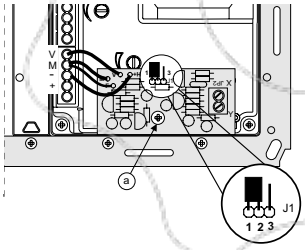
Installation

- Fix the **CV01** board on the back of the housing of the camera with the screw supplied (a).
- Make the connections as shown on the diagram.
- Move the **jumper J1** from position 2-3 to 1-2 (power supply=12Vdc).

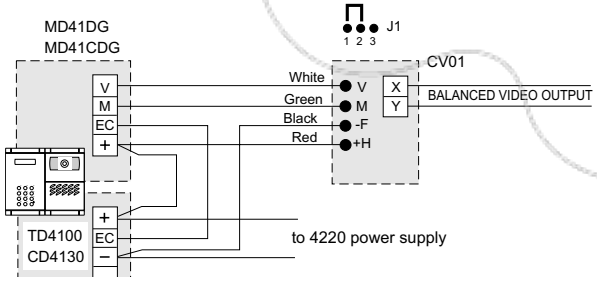
Mody



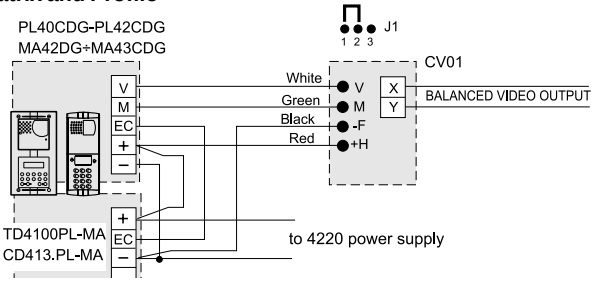
Matrix



Mody



Matrix and Profilo



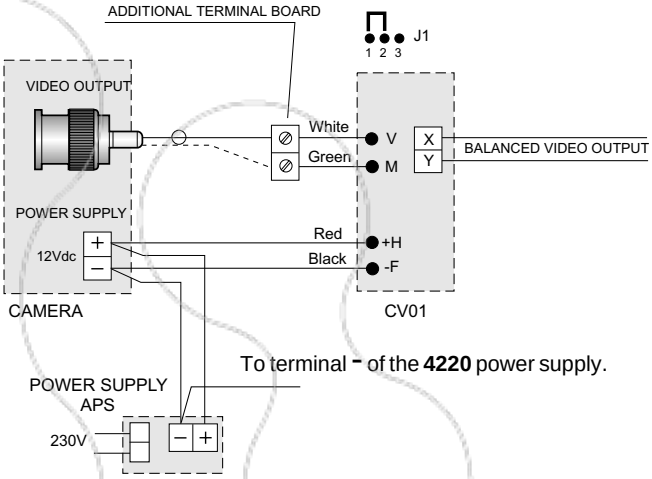
Systems with CCTV cameras

Installation

- Place the **CV01** board in the outdoor housing of the **CCTV** camera or in any other housing.
- Make the connections as shown on the diagram.

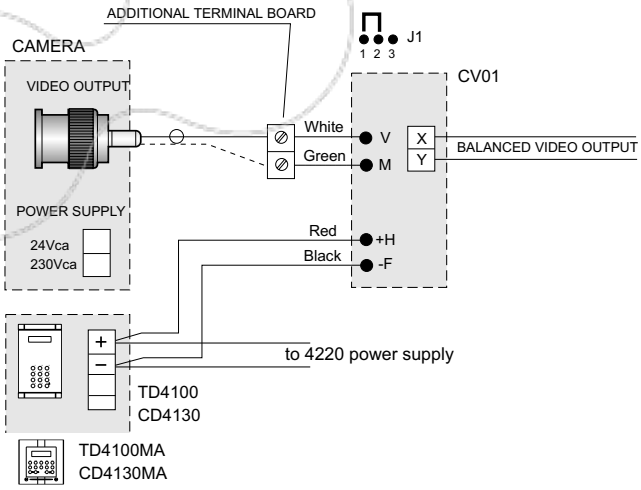
Connection with 12Vdc CCTV camera

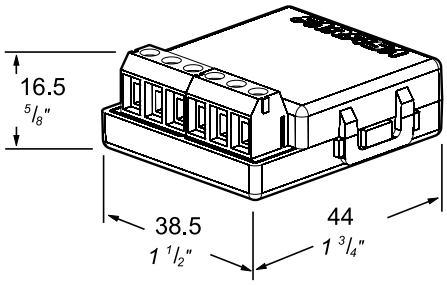
This type of connection allows for powering the board with the camera power supply.
- Move the **jumper J1** from position 2-3 to 1-2 (power supply=12Vdc).



Connection with 24Vac or 230Vac CCTV camera

This type of connection allows for powering the board in timed mode.
- Move the **jumper J1** from position 2-3 to 1-2 (power supply=12Vdc).





CV 03.

VIDEO SIGNAL CONVERTER FROM TWISTED PAIR TO CO-AXIAL CABLE.

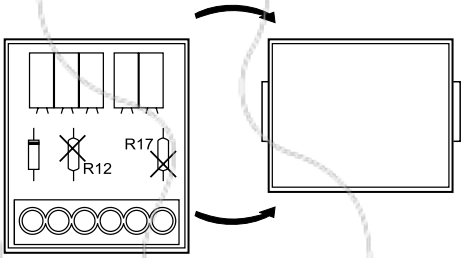
To connect one or more videointercoms to a video balanced line (twisted pair) it is necessary to use videointercoms Studio series or to an unbalanced signal using video converter **CV03**.

Terminals

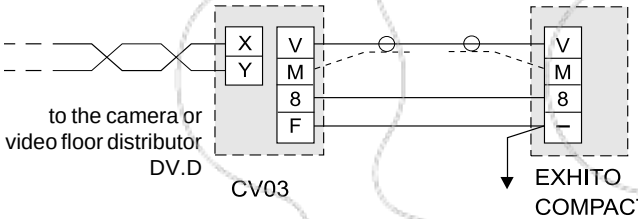
8 12÷15Vdc power supply input
F ground
X balanced negative signal input
Y balanced positive signal input
V 75Ω video signal output
M video ground

Notes

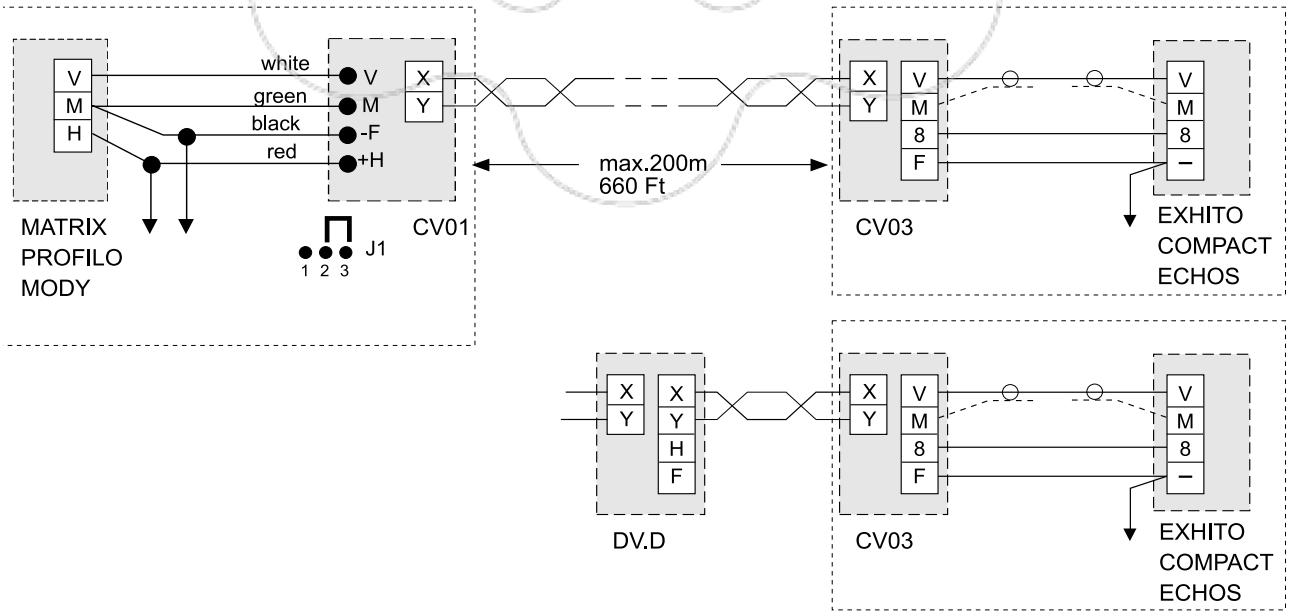
- Install the module **CV03** close to the videointercom.
- In the example are shown only the conductors which are different with respect to the standard installation. For all the other conductors (and for that indicated by an arrow) refers to the basic diagrams.
- In case of more videointercoms in parallel in a single apartment, it is advisable to install one CV03 module for each videointercom and cut the resistors R12 and R17 on all the CV03 modules **except on the CV03 module connected to the farthest videointercom**.



Application of Video Converter CV03 in Farfisa Videointercom systems to transform a video signal from balanced (twisted pair) to unbalanced (coaxial cable).



Example of video signal converter modules CV01 and CV03 to transmit video signal with twisted pair



INSTALLATION DIAGRAMS

The following pages show the installation diagrams most often used in digital intercom/video intercom systems.
Upon request ACI Farfisa supplies installation diagrams for the configurations not present in this manual.

- **Systems with doorkeeper exchanger**
- **Intercom systems with 1 or more main entrances**
- **Intercom systems with 1 or more main entrances and secondary entrances**
- **Video intercom systems with 1 or more main entrances**
- **Video intercom 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 apartments**

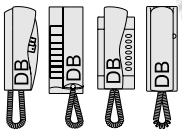
For a clearer understanding of the diagrams, **the sequence of terminals** in each individual article has not been followed. Only the terminal code is valid (letter and/or number), not the graphic sequence.
Terminals with the same letter or number have the same functions.

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

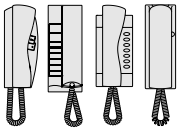
The installation diagrams for 1 or more door stations illustrated in this technical manual have been represented with only one intercom or video intercom for each user. However, it is possible to "personalise" the installation by matching properly the applications on pages 111÷153 to the base diagrams of pages 155÷168.

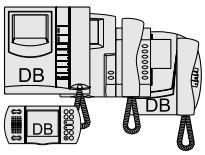
Graphic symbols

For a better comprehension of the installation diagrams we have made a list of the graphic symbols most often used.

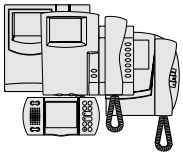


Intercoms with integrated or additional single decoding module

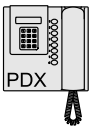

Intercoms without single decoding module



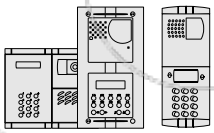
Video intercom with integrated decoding module

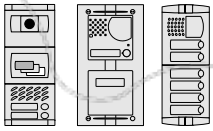

Video intercom without decoding module

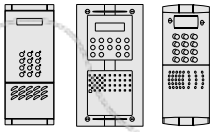
Multiple decoding module

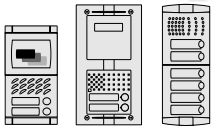


Doorkeeper exchanger


Videointercom digital push-button panels

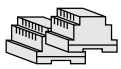

Videointercom conventional push-button panels with digital encoder


Intercom digital push-button panels


Intercom conventional push-button panels with digital encoder

Digital exchanger


Electric door lock


DIN bar modules


Loudspeaker


Microphone

Button


Resistor


Lamp


Diode

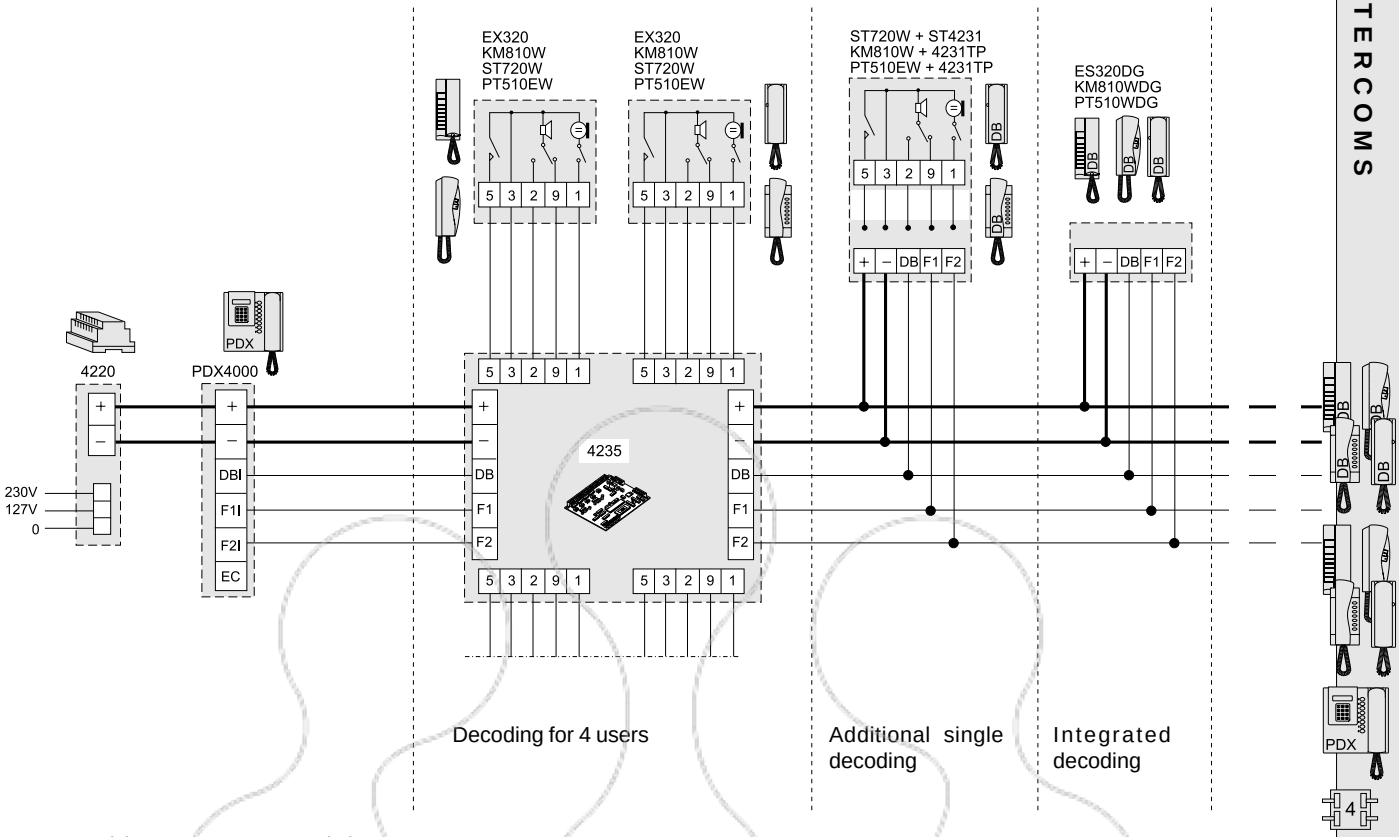
Electronic buzzer

Coaxial cable

Optional wire (usually control switching ON or intercommunicating calls)


Extension lines (the system may continue with more internal stations, door stations and/or buildings according to the specific requirements)

DIGITAL INTERCOM SYSTEM WITH DOORKEEPER EXCHANGER AND WITHOUT DOOR STATIONS



Qty	*Article*	*Description*
...	**EX320DG**	Exhito intercom with 7 buttons and integrated decoding
...	**KM810WDG**	Compact intercom with 2 buttons and integrated decoding
...	**PT510WDG**	Project intercom with 17 button and integrated decoding
...	**ST720W** (2)	1-button intercom Studio series
...	**ST4231**	Single decoding module for Studio intercom
...	**KM810W**	1-button intercom Compact series
...	**PT510EW** (2)	1-button intercom Project series
...	**4231TP**	Single decoding module for Compact or Project intercom
...	**4235**	Multiple decoding module for 4 users
1	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger

... According to the number of users.
(2) Apart from this model, the intercoms listed on page 79 can be used.

Note
- For information on the wire cross section and characteristics see pages 103, 104 and 105.

Operation instructions
For information on the operation of the system see the description of the doorkeeper exchanger from page 99 to 102.

Programming
The following units must be programmed for the correct operation of the system.

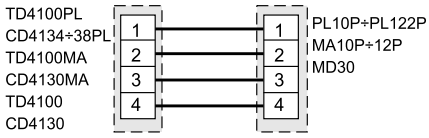
EX320DG	see page 69
KM810WDG	see page 75
PT510WDG	see page 77
ST4231	see page 82
4231TP	see page 89
4235	see page 92

DIGITAL INTERCOM SYSTEM WITH 1 DOOR STATION. With or without doorkeeper exchanger.

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	**MATRIX** series	**MODY** series
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
1 **PL82÷PL89**	... **MA62÷MA63**	1 **MD84÷MD812**
1 **PL92÷PL99 ***	1 **MA92÷MA93***	1 **MD94÷MD912 ***
1 **TD4100PL**	1 **TD4100MA**	1 **TD4100**
1 **PL10P-PL11P**	1 **MA10P-MA11P**	1 **MD10**
... **PL20, PL50**	... **MA20**	1 **MD30**
		1 **RD4120** (1)
		... **TD4110** (1)
		... **MD20, MD50**

Connection of the door speaker to the digital push-button panels or encoders

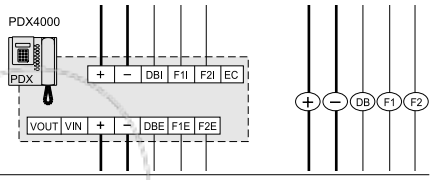


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 21, 23, 36, 50 or 52)

PROFILO series	**MATRIX** series	**MODY** series
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
1 **PL82÷PL89**	1 **MA62÷MA63**	1 **MD84÷MD812**
1 **PL92÷PL99 ***	1 **MA92÷MA93***	1 **MD94÷MD912 ***
1 **CD4134PL-CD4138PL**	1 **CD4130MA**	1 **CD4130**
1 **PL10P÷PL122P**	1 **MA10P÷MA12P**	1 **MD10÷MD122**
... **PL20, PL50**	... **MA20**	1 **MD30**
... **PL24S-PL228S**	... **MA22S-MA24S**	... **MD20-MD50**
		... **MD21÷MD228**
		... **Kit4244**

The diagram includes the doorkeeper exchanger; if this article is not required, connect the +, -, DB, F1 and F2 wires directly.



- **INTERNAL STATIONS**

...	**EX320DG**	Exhito intercom with 7 buttons and integrated decoding
...	**KM810WDG**	Compact intercom with 2 buttons and integrated decoding
...	**PT510WDG**	Project intercom with 17 button and integrated decoding
...	**ST720W**	1-button intercom Studio series
...	**ST4231**	Single decoding module for Studio intercom
...	**KM810W**	1-button intercom Compact series
...	**PT510EW**	1-button intercom Project series
...	**4231TP**	Single decoding module for Compact or Project intercom
...	**4235** (2)	Multiple decoding module for 4 users

- **OTHER ARTICLES**

...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1	**PA ****	Door release button *(optional)*
1	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
(2) Apart from this model, the intercoms listed on page 79 can be used.

Notes
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For information on the wire cross section and characteristics see pages 103, 104 and 105.

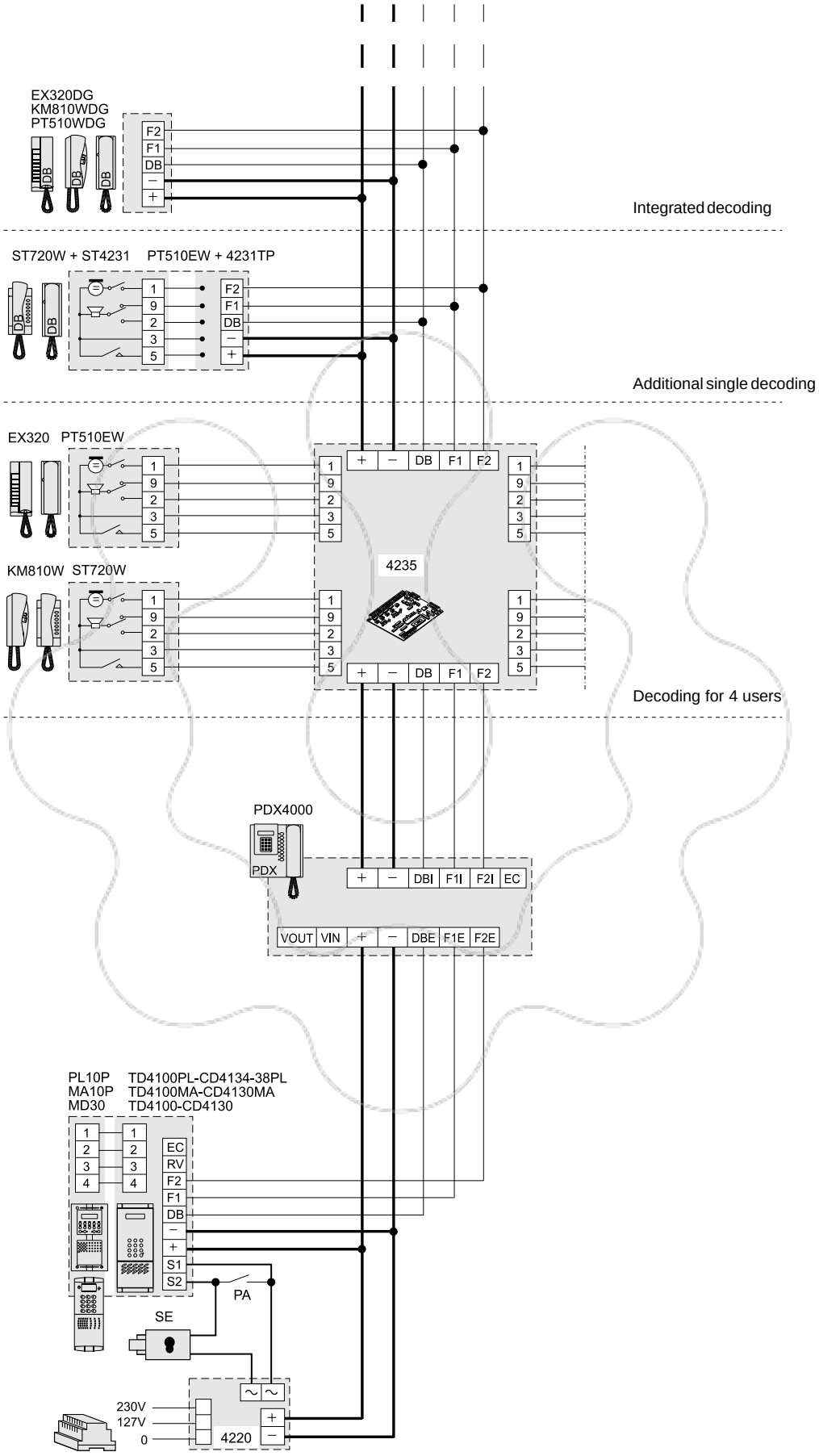
Operating modes
Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode
The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

Doorkeeper exchanger in "night" mode
When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The intercom receives the call. Pick up the handset to start conversation with the calling door station. Press the 🔑 button to open the door of the calling station.

Programming
The following units must be programmed for the correct operation of the system:
EX320DG (page 69); **KM810WDG** (page 75); **PT510WDG** (page 77);
ST4231 (page 82); **4231TP** (page 89); **4235** (page 92);
TD4100PL (page 9); **TD4100MA** (page 27); **TD4100** (page 42);
CD4134PL-CD4138PL (page 13); **CD4130MA** (page 31); **CD4130** (page 46);
PL24S-PL228S (page 17); **MA22S-MA24S** (page 32); **4244** (page 48).

DIGITAL INTERCOM SYSTEM WITH 1 DOOR STATION. With or without doorkeeper exchanger.

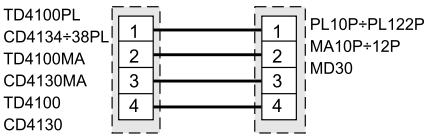


DIGITAL INTERCOM SYSTEM WITH 2 OR MORE DOOR STATIONS. With or without doorkeeper exchanger.

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	**MATRIX series**	**MODY series**
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
... **PL82÷PL89**	... **MA62÷MA63**	... **MD84÷MD812**
... **PL92÷PL99 ***	... **MA92÷MA93***	... **MD94÷MD912 ***
... **TD4100PL**	... **TD4100MA**	... **TD4100**
... **PL10P-PL11P**	... **MA10P-MA11P**	... **MD10**
... **PL20, PL50**	... **MA20**	... **MD30**
		... **RD4120** (1)
		... **TD4110** (1)
		... **MD20, MD50**

Connection of the door speaker to the digital push-button panels or encoders

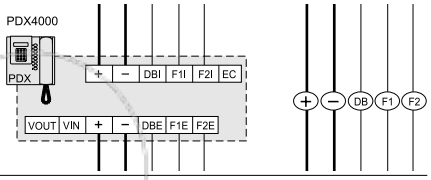


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 21, 23, 36, 50 or 52)

PROFILO series	**MATRIX series**	**MODY series**
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
... **PL82÷PL89**	... **MA62÷MA63**	... **MD84÷MD812**
... **PL92÷PL99 ***	... **MA92÷MA93***	... **MD94÷MD912 ***
... **CD4134PL-CD4138PL**	... **CD4130MA**	... **CD4130**
... **PL10P÷PL122P**	... **MA10P÷MA12P**	... **MD10÷MD122**
... **PL20, PL50**	... **MA20**	... **MD30**
... **PL24S-PL228S**	... **MA22S-MA24S**	... **MD20-MD50**
		... **MD21÷MD228**
		... **Kit4244**

The diagram includes the doorkeeper exchanger; if this article is not required, connect the +, -, DB, F1 and F2 wires directly.



- **INTERNAL STATIONS**

...	**EX320DG**	Exhito intercom with 7 buttons and integrated decoding
...	**KM810WDG**	Compact intercom with 2 buttons and integrated decoding
...	**PT510WDG**	Project intercom with 17 button and integrated decoding
...	**ST720W**	1-button intercom Studio series
...	**ST4231**	Single decoding module for Studio intercom
...	**KM810W**	1-button intercom Compact series
...	**PT510EW**	1-button intercom Project series
...	**4231TP**	Single decoding module for Compact or Project intercom
...	**4235** (2)	Multiple decoding module for 4 users

- **OTHER ARTICLES**

...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
...	**PA ****	Door release button *(optional)*
...	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
(2) Apart from this model, the intercoms listed on page 79 can be used.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For information on the wire cross section and characteristics see pages 103, 104 and 105.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

Doorkeeper exchanger in "night" mode

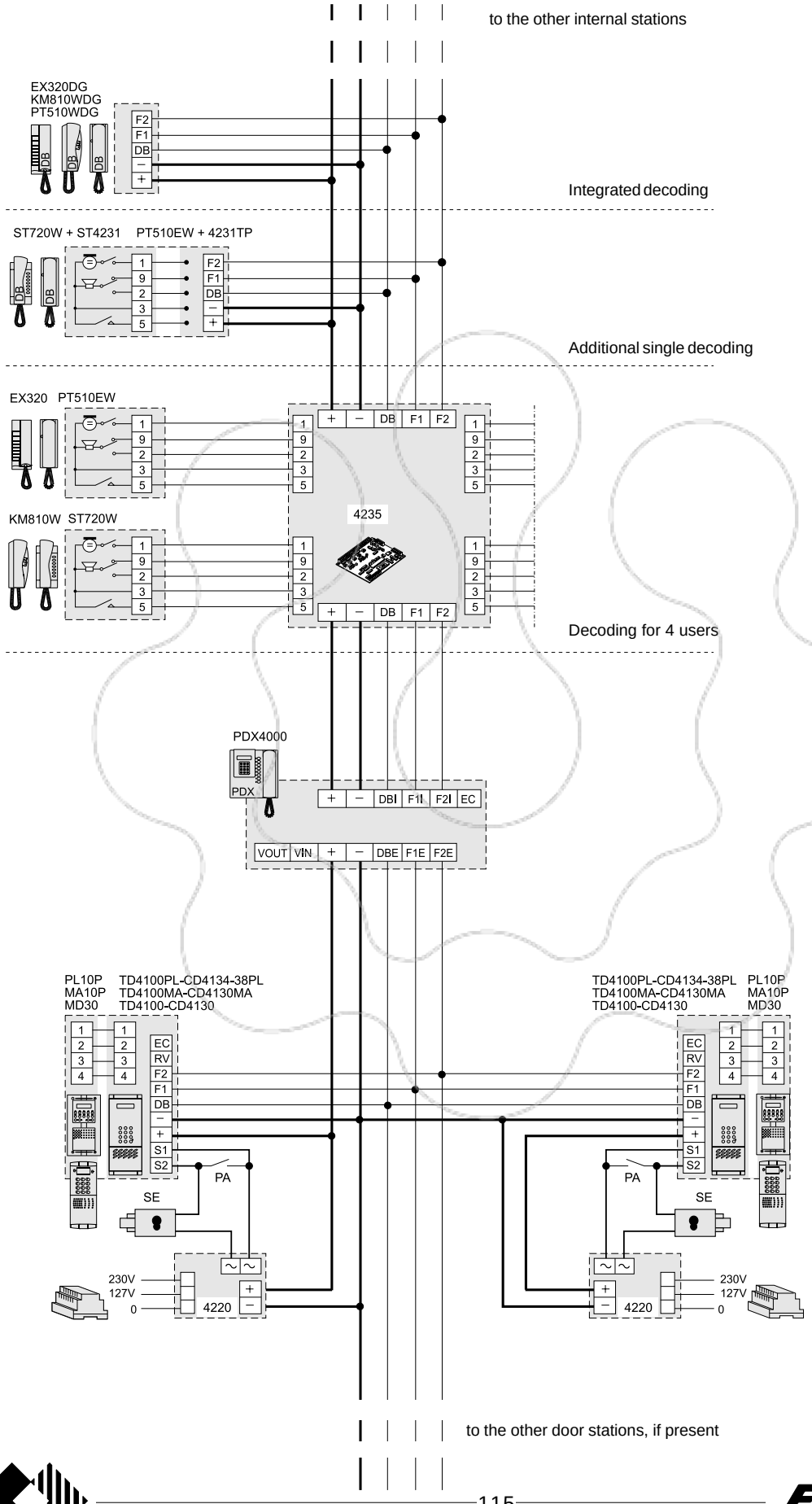
When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The intercom receives the call. Pick up the handset to start conversation with the calling door station. Press the 🔑 button to open the door of the calling station.

Programming

The following units must be programmed for the correct operation of the system:

EX320DG (page 69);	**KM810WDG** (page 75);	**PT510WDG** (page 77);
ST4231 (page 82);	**4231TP** (page 89);	**4235** (page 92);
TD4100PL (page 9);	**TD4100MA** (page 27);	**TD4100** (page 42);
CD4134PL-CD4138PL (page 13);	**CD4130MA** (page 31);	**CD4130** (page 46);
PL24S-PL228S (page 17);	**MA22S-MA24S** (page 32);	**4244** (page 48).

DIGITAL INTERCOM SYSTEM WITH 2 OR MORE DOOR STATIONS. With or without doorkeeper exchanger

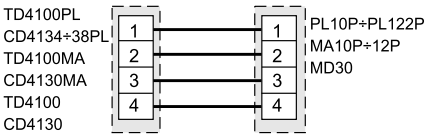


DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 1 COMMON MAIN DOOR STATION (multiple entrance). With or without doorkeeper exchanger.

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series		**MATRIX** series		**MODY** series	
...	**PL72-PL73**	...	**MA72-MA73**	...	**MD72-MD73-MD74**
1+X	**PL82÷PL89**	...	**MA62÷MA63**	1+X	**MD84÷MD812**
1+X	**PL92÷PL99 ***	1+X	**MA92÷MA93***	1+X	**MD94÷MD912 ***
1+X	**TD4100PL**	1+X	**TD4100MA**	1+X	**TD4100**
1+X	**PL10P-PL11P**	1+X	**MA10P-MA11P**	1+X	**MD10**
...	**PL20, PL50**	...	**MA20**	1+X	**MD30**
				1+X	**RD4120** (1)
				...	**TD4110** (1)
				...	**MD20, MD50**

Connection of the door speaker to the digital push-button panels or encoders

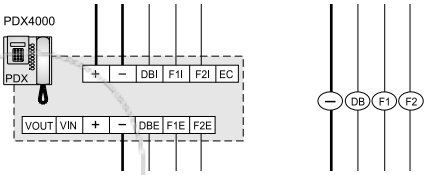


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 21, 23, 36, 50 or 52)

PROFILO series		**MATRIX** series		**MODY** series	
...	**PL72-PL73**	...	**MA72-MA73**	...	**MD72-MD73-MD74**
1+X	**PL82÷PL89**	...	**MA62÷MA63**	1+X	**MD84÷MD812**
1+X	**PL92÷PL99 ***	1+X	**MA92÷MA93***	1+X	**MD94÷MD912 ***
1+X	**CD4134PL-CD4138PL**	1+X	**CD4130MA**	1+X	**CD4130**
1+X	**PL10P÷PL122P**	1+X	**MA10P÷MA12P**	1+X	**MD10÷MD122**
...	**PL20, PL50**	...	**MA20**	1+X	**MD30**
...	**PL24S-PL228S**	...	**MA22S-MA24S**	...	**MD20-MD50**
				...	**MD21÷MD228**
				...	**Kit4244**

The diagram includes the doorkeeper exchanger; if this article is not required, connect the +, -, DB, F1 and F2 wires directly.



- **INTERNAL STATIONS**

...	**EX320DG**	Exhito intercom with 7 buttons and integrated decoding
...	**KM810WDG**	Compact intercom with 2 buttons and integrated decoding
...	**PT510WDG**	Project intercom with 17 button and integrated decoding
...	**ST720W**	1-button intercom Studio series
...	**ST4231**	Single decoding module for Studio intercom
...	**KM810W**	1-button intercom Compact series
...	**PT510EW**	1-button intercom Project series
...	**4231TP**	Single decoding module for Compact or Project intercom
...	**4235** (2)	Multiple decoding module for 4 users

- **OTHER ARTICLES**

1+X	**4220**	Power supply
X	**4273P**	Digital exchanger
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
(2) Apart from this model, the intercoms listed on page 79 can be used.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For information on the wire cross section and characteristics see pages 103, 104 and 105.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The intercom receives the call and starts conversation with the calling door station. The display of the push-button panel of the secondary station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.

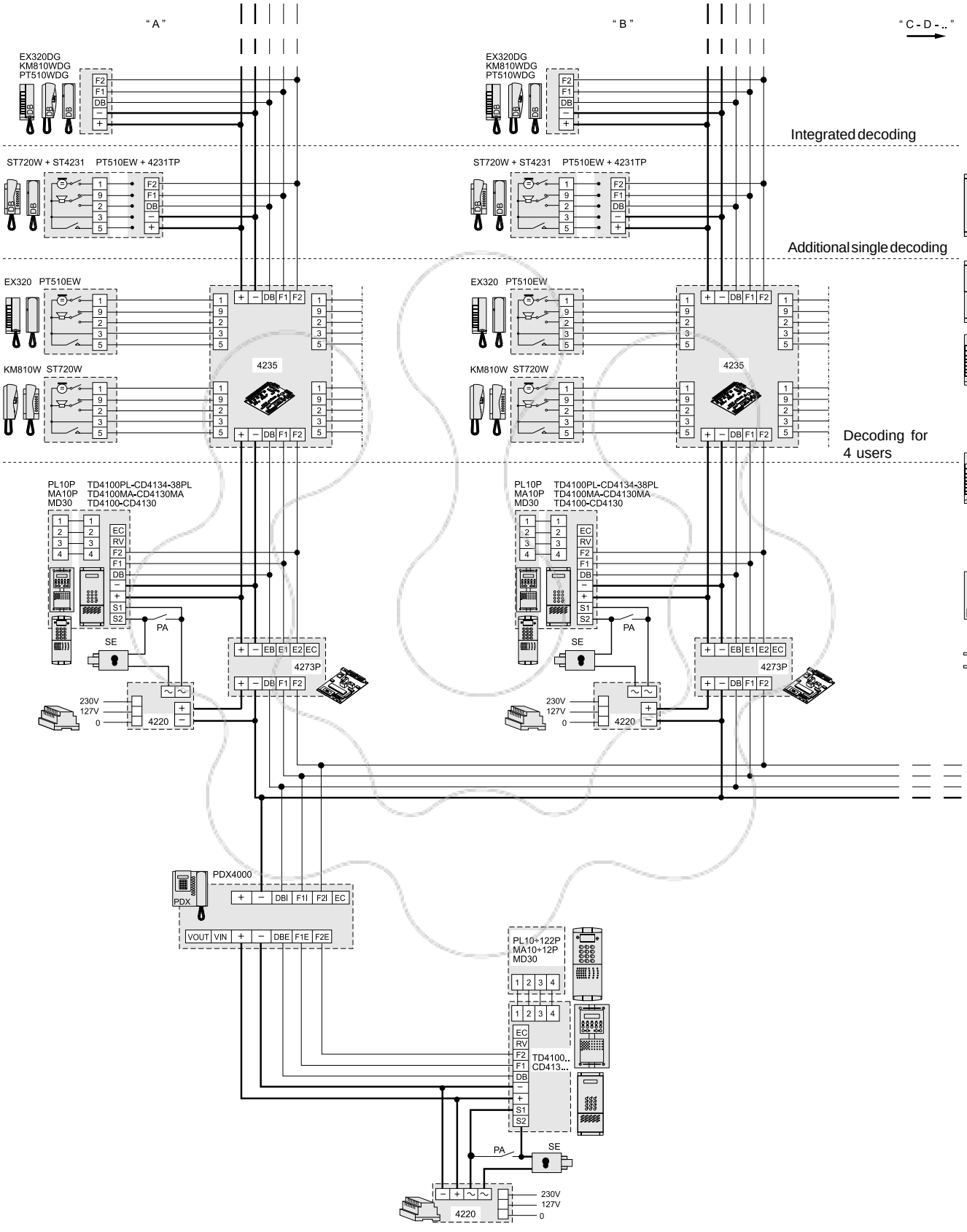
Programming

The following units must be programmed for the correct operation of the system:

EX320DG (page 69);	**KM810WDG** (page 75);	**PT510WDG** (page 77);
ST4231 (page 82);	**4231TP** (page 89);	**4235** (page 92);
TD4100PL (page 9);	**TD4100MA** (page 27);	**TD4100** (page 42);
CD4134PL-CD4138PL (page 13);	**CD4130MA** (page 31);	**CD4130** (page 46);
PL24S-PL228S (page 17);	**MA22S-MA24S** (page 32);	**4244** (page 48).
4273P (page 97).		

Note. In this system the digital exchanger 4273P must be programmed as first.

DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 1 COMMON MAIN DOOR STATION (multiple entrance). With or without doorkeeper exchanger.

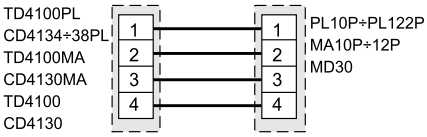


DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS (multiple entrance). With or without doorkeeper exchanger.

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
2+X **PL82÷PL89**	... **MA62÷MA63**	2+X **MD84÷MD812**
2+X **PL92÷PL99 ***	2+X **MA92÷MA93***	2+X **MD94÷MD912 ***
2+X **TD4100PL**	2+X **TD4100MA**	2+X **TD4100**
2+X **PL10P-PL11P**	2+X **MA10P-MA11P**	2+X **MD10**
... **PL20, PL50**	... **MA20**	2+X **MD30**
		2+X **RD4120** (1)
		... **TD4110** (1)
		... **MD20, MD50**

Connection of the door speaker to the digital push-button panels or encoders

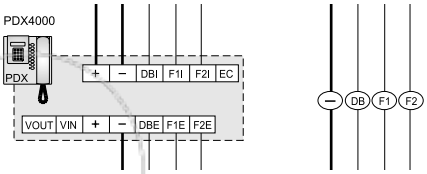


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 21, 23, 36, 50 or 52)

PROFILO series	MATRIX series	MODY series
... **PL72-PL73**	... **MA72-MA73**	... **MD72-MD73-MD74**
2+X **PL82÷PL89**	... **MA62÷MA63**	2+X **MD84÷MD812**
2+X **PL92÷PL99 ***	2+X **MA92÷MA93***	2+X **MD94÷MD912 ***
2+X **CD4134PL-CD4138PL**	2+X **CD4130MA**	2+X **CD4130**
2+X **PL10P÷PL122P**	2+X **MA10P÷MA12P**	2+X **MD10÷MD122**
... **PL20, PL50**	... **MA20**	2+X **MD30**
... **PL24S-PL228S**	... **MA22S-MA24S**	... **MD20-MD50**
		... **MD21÷MD228**
		... **Kit4244**

The diagram includes the doorkeeper exchanger; if this article is not required, connect the +, -, DB, F1 and F2 wires directly.



- **INTERNAL STATIONS**

...	**EX320DG**	Exhito intercom with 7 buttons and integrated decoding
...	**KM810WDG**	Compact intercom with 2 buttons and integrated decoding
...	**PT510WDG**	Project intercom with 17 button and integrated decoding
...	**ST720W**	1-button intercom Studio series
...	**ST4231**	Single decoding module for Studio intercom
...	**KM810W**	1-button intercom Compact series
...	**PT510EW**	1-button intercom Project series
...	**4231TP**	Single decoding module for Compact or Project intercom
...	**4235** (2)	Multiple decoding module for 4 users

- **OTHER ARTICLES**

2+X	**4220**	Power supply
X	**4273P**	Digital exchanger
1	**PDX4000**	Doorkeeper exchanger *(if any)*
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
(2) Apart from this model, the intercoms listed on page 79 can be used.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For information on the wire cross section and characteristics see pages 103, 104 and 105.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 8 to 73).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the two main push-button panels. The display of the other push-button panel indicates the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.

Doorkeeper exchanger in "night" mode

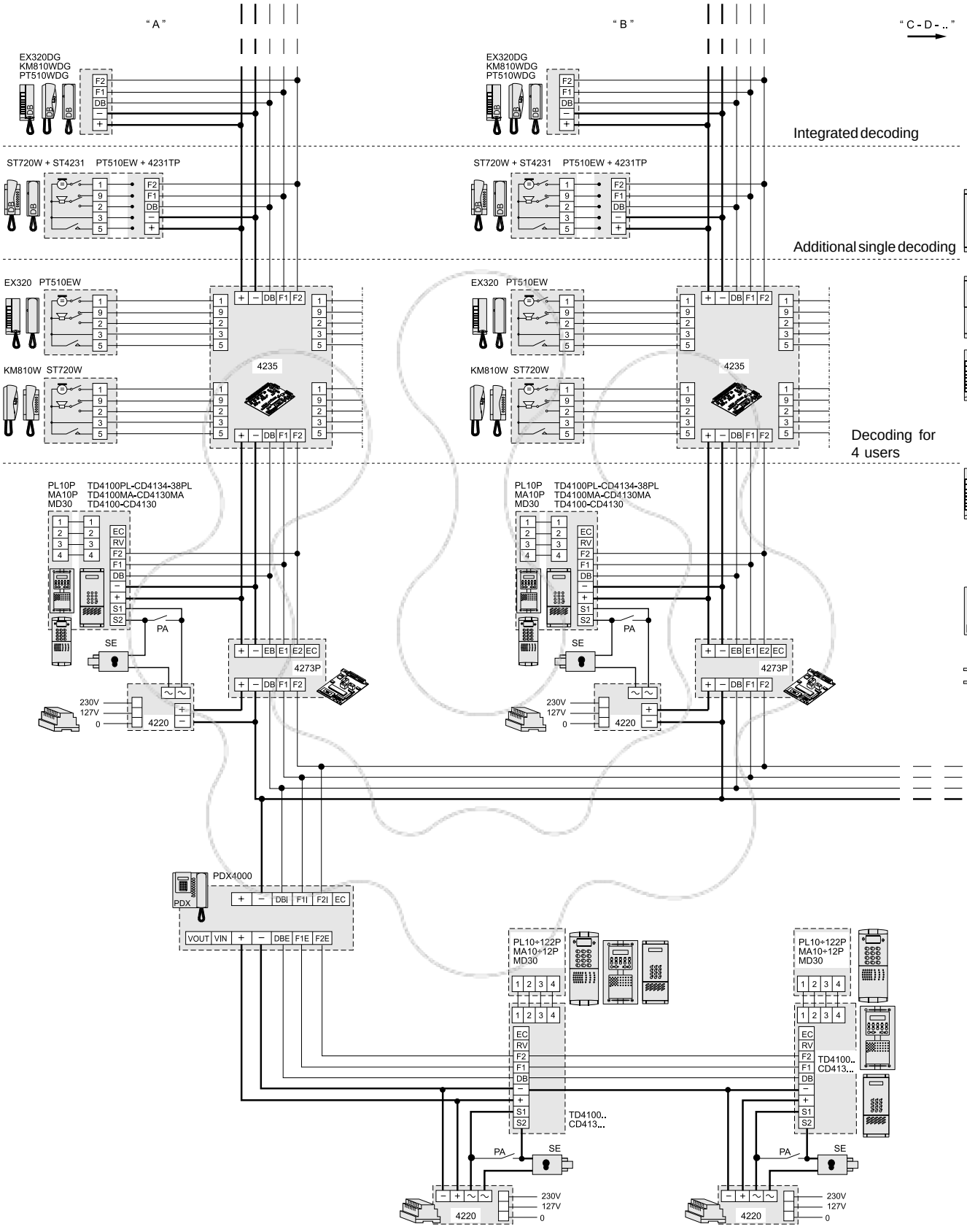
When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The intercom receives the call and starts conversation with the calling door station. The display of the push-button panels of the other main station and of the secondary station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.

Programming

The following units must be programmed for the correct operation of the system:
EX320DG (page 69); **KM810WDG** (page 75); **PT510WDG** (page 77);
ST4231 (page 82); **4231TP** (page 89); **4235** (page 92);
TD4100PL (page 9); **TD4100MA** (page 27); **TD4100** (page 42);
CD4134PL-CD4138PL (page 13); **CD4130MA** (page 31); **CD4130** (page 46);
PL24S-PL228S (page 17); **MA22S-MA24S** (page 32); **4244** (page 48).
4273P (page 97).

Note. In this system the digital exchanger 4273P must be programmed as first.

DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS (multiple entrance). With or without doorkeeper exchanger.



DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION. With or without doorkeeper exchanger.

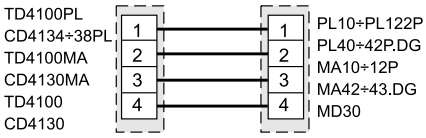
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 TD4100PL	1 TD4100MA	1 TD4100
1 PL40PCDG÷PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1 MD10
	... MA20	1 MD30
		1 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders



These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 CD4134PL-CD4138PL	1 CD4130MA	1 CD4130
1 PL40PCDG-PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1 MD10-11-12
... PL24S-PL228S	... MA20	1 MD30
	.... MA22S-MA24S	.. MD20-MD50
		... MD21÷MD228
		... Kit4244

- **OTHER ARTICLES**

... **DV2-DV4** Video distributor
... **4220** Power supply
1 **PDX4000** Doorkeeper exchanger *(if any)*
1 **1471** Relay unit *(optional)*
1 **PA **** Door release button *(optional)*
1 **SE **** Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

Diagram (a)

Press the ⦿ button to switch the video intercom on and display the image of the door station.
The control switch ON function is not activated if the video intercom is ON.

Diagram (b)

The following is necessary to have the control switch ON function:
- install a relay art.1471 or 1472
- make the connections drawn with dashed lines
- insert an additional button in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold additional button pressed to activate the camera.

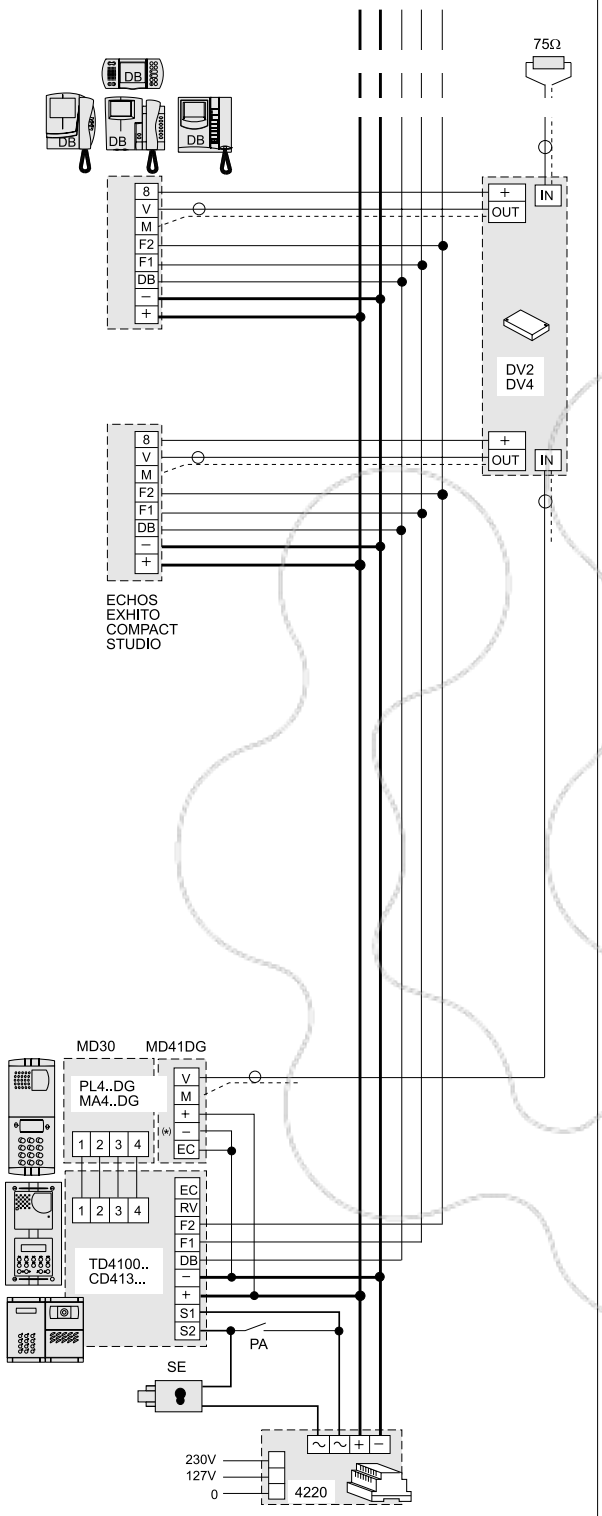
The control switch ON function is not activated if one video intercom is already ON.

Programming

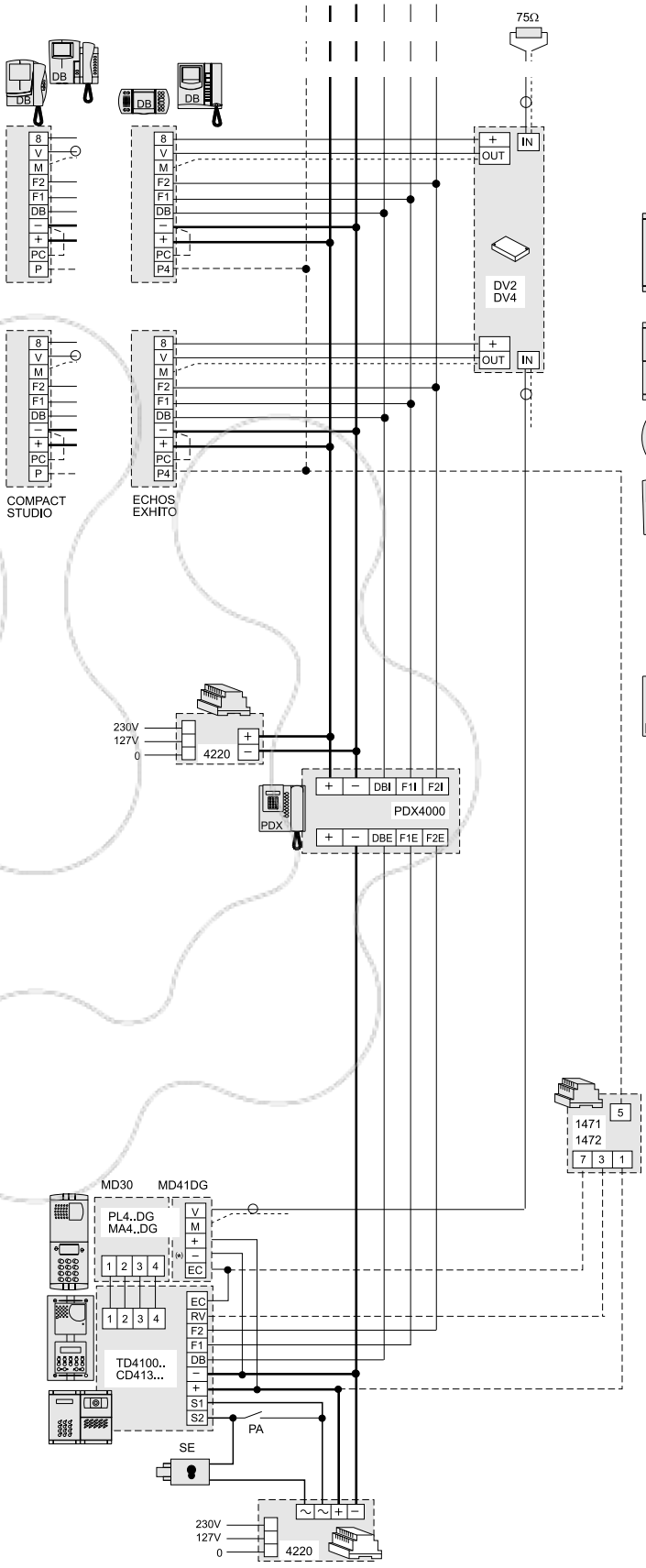
The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION. With or without doorkeeper exchanger.

a) Without doorkeeper exchanger.



b) With doorkeeper exchanger.



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION. With or without doorkeeper exchanger and video connection with twisted pair.

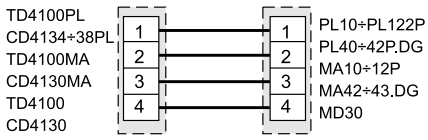
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... CV03	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160	... CV03	... ST720W
	... CV03		... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 TD4100PL	1 TD4100MA	1 TD4100
1 PL40PCDG-PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
1 CV01	MA42CDG-MA43CDG	1 CV01
... PL20, PL50	1 CV01	1 MD10
	... MA20	1 MD30
		1 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders



These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 CD4134PL-CD4138PL	1 CD4130MA	1 CD4130
1 PL40PCDG-PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
1 CV01	MA42CDG-MA43CDG	1 CV01
... PL20, PL50	1 CV01	1 MD10-11-12
... PL24S-PL228S	... MA20	1 MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

- **OTHER ARTICLES**

... **DV2D-DV4D** Video distributor
... **4220** Power supply
1 **PDX4000** Doorkeeper exchanger *(if any)*
1 **1471** Relay unit *(optional)*
1 **PA **** Door release button *(optional)*
1 **SE **** Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106 and 107÷109.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

Diagram (a)

Press the ⦿ button to switch the video intercom on and display the image of the door station. The control switch ON function is not activated if the video intercom is ON.

Diagram (b)

The following is necessary to have the control switch ON function:
- install a relay art.1471 or 1472
- make the connections drawn with dashed lines
- insert an additional button in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold additional button pressed to activate the camera.

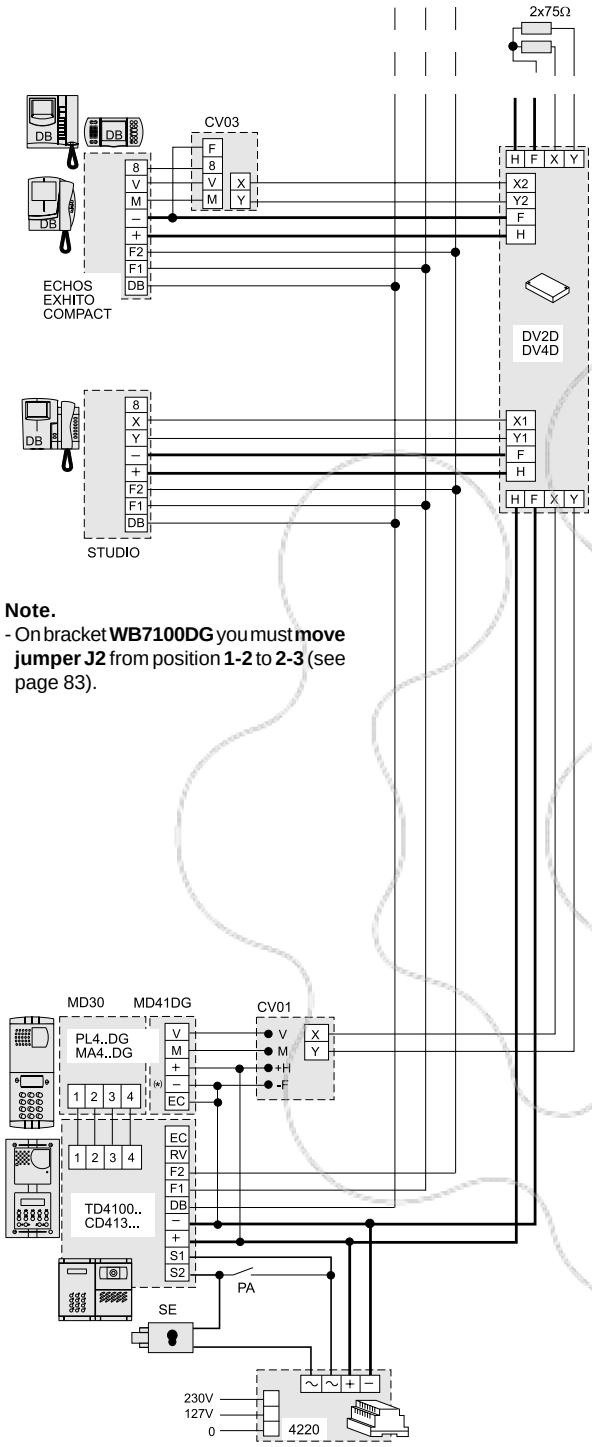
The control switch ON function is not activated if one video intercom is already ON.

Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73);
ST4231 (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13);
PL24S-PL228S (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31);
MA22S-MA24S (page 32); **TD4100** (page 42); **CD4130** (page 46);
4244 (page 48).

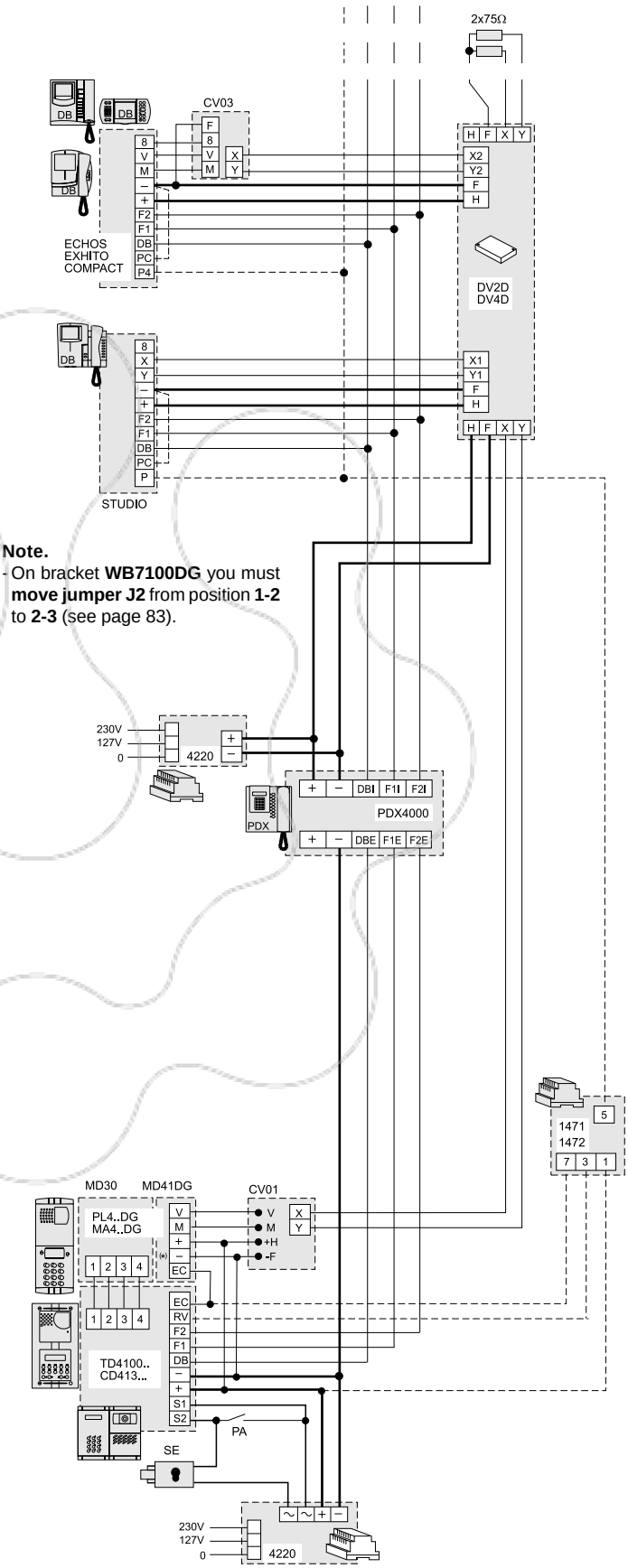
DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION. With or without doorkeeper exchanger and video connection with pair twisted.

a) Without doorkeeper exchanger.



Note.
- On bracket **WB7100DG** you must **move jumper J2** from position **1-2** to **2-3** (see page 83).

b) With door-keeper exchanger.



Note.
- On bracket **WB7100DG** you must **move jumper J2** from position **1-2** to **2-3** (see page 83).

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION WITH SURVEILLANCE CAMERA. With or without doorkeeper exchanger.

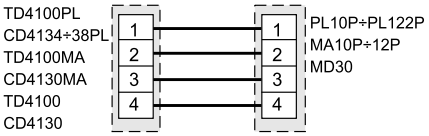
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 TD4100PL	1 TD4100MA	1 TD4100
1 PL10P÷PL122P	1 MA10P÷MA12P	1 MD10
... PL20, PL50	... MA20	1 MD30
		1 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders



These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 21, 23, 36, 50 or 52)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 CD4134PL-CD4138PL	1 CD4130MA	1 CD4130
1 PL10P÷PL122P	1 MA10P÷MA12P	1 MD10÷MD12
... PL20, PL50	... MA20	1 MD30
... PL24S-PL228S	... MA22S-MA24S	.. MD20-MD50
		... MD21÷MD228
		... Kit4244

- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
1	**TVT..**	CCTV camera
1	**H..**	Lens with or without autoiris
1	**CU..**	Outdoor heated housing
1	**AST..**	Bracket for camera or housing
1	**APS..**	Power supply for camera
...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1	**1471**	Relay unit *(optional)*
1	**LL****	Lamp with maximum power 800W *(optional)*
1	**PA ****	Door release button *(optional)*
1	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON

Diagram (a)

Press the ⊙ button to switch the video intercom on and display the image of the door station. The control switch ON function is not activated if the video intercom is ON.

Diagram (b)

The following is necessary to have the control switch ON function:
- install a relay art.1471 or 1472
- make the connections drawn with dashed lines
- insert an additional button in each video intercom.

To operate the function:
- press the ⊙ button to switch the video intercom ON;
- hold additional button pressed to activate the camera.

The control switch ON function is not activated if one video intercom is already ON.

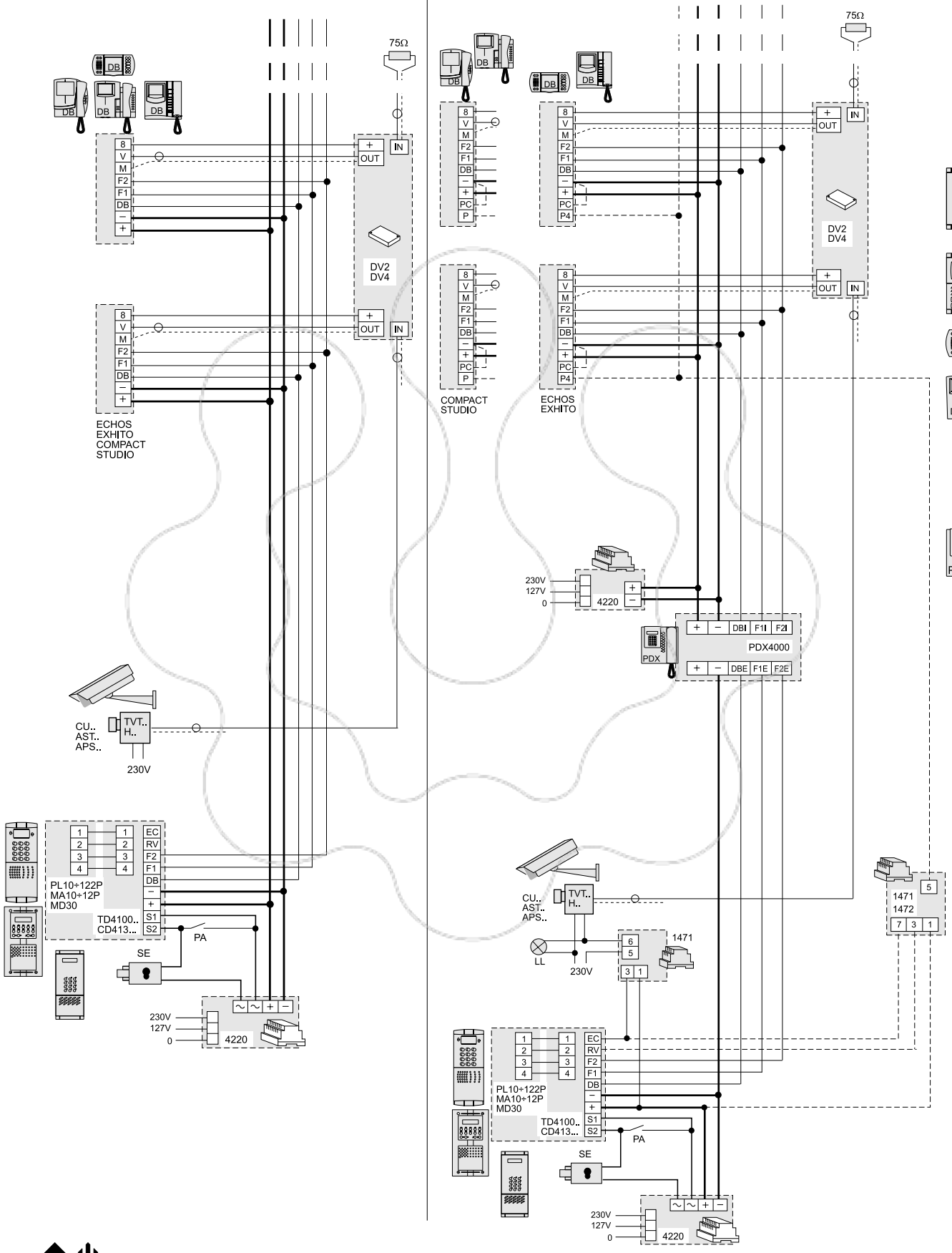
Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION WITH SURVEILLANCE CAMERA. With or without doorkeeper exchanger.

a) Without doorkeeper exchanger.

b) With doorkeeper exchanger.



DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS. With or without doorkeeper exchanger.

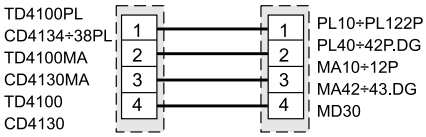
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 TD4100PL	2 TD4100MA	2 TD4100
2 PL40PCDG-PL42PCDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2 MD10
	... MA20	2 MD30
		2 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

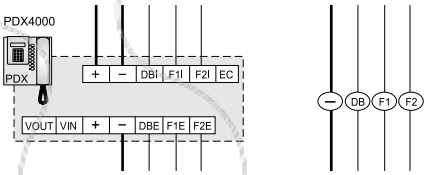


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 CD4134PL-CD4138PL	2 CD4130MA	2 CD4130
2 PL40PCDG-PL42PCDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2 MD10-11-12
... PL24S-PL228S	... MA20	2 MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
2	**1472**	2-contact relay
2	**PA ****	Door release button *(optional)*
2	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the push-button panels in the system. The display of the other push-button panels indicate the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the 2 door stations:
- install a relay art.1472
- make the connections drawn with dashed lines
- insert two additional buttons in each video intercom.

To operate the function:
- press the 👁 button to switch the video intercom ON;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if one video intercom is already ON.

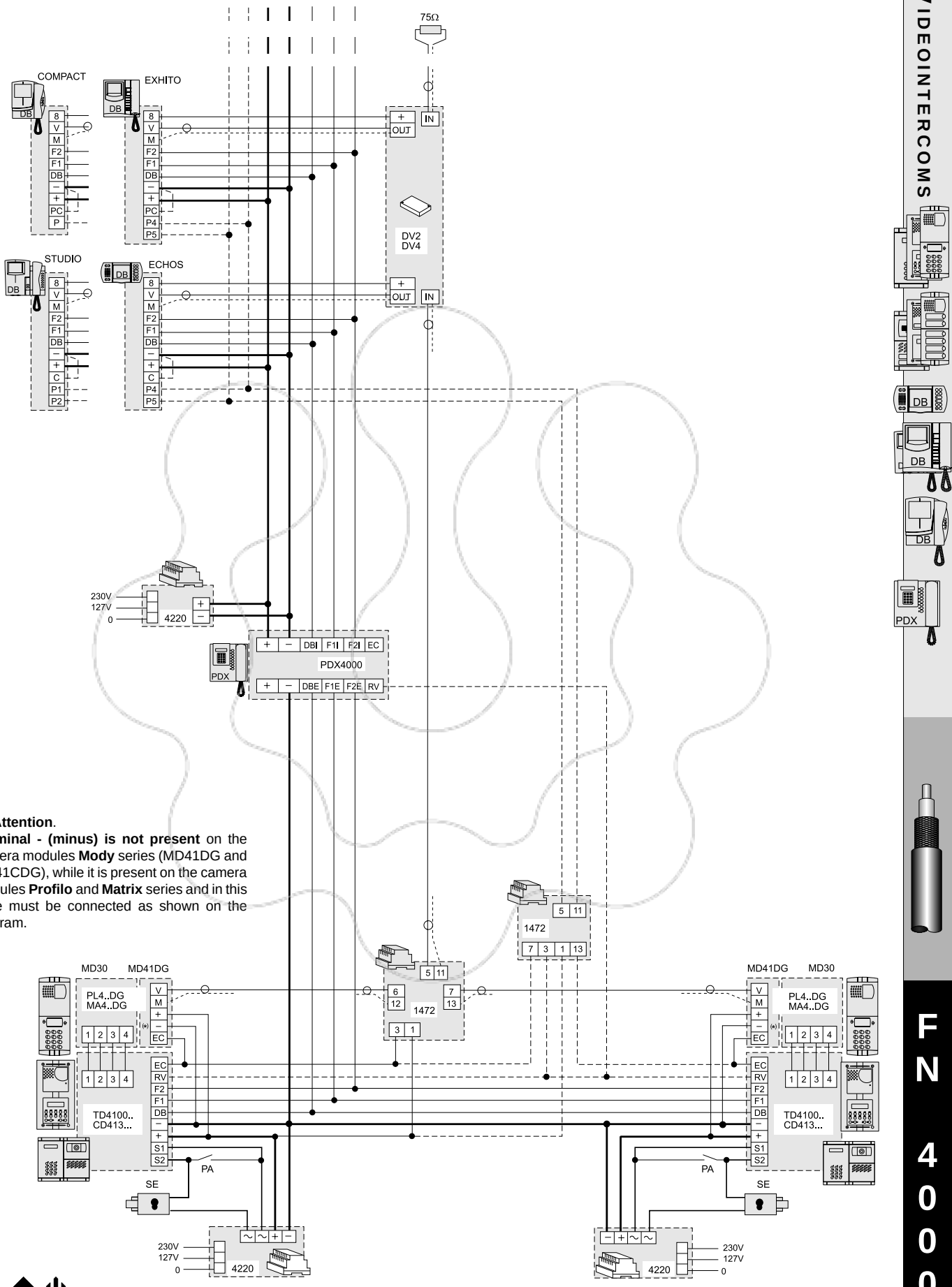
Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS. With or without doorkeeper exchanger.



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS. With or without doorkeeper exchanger and video connection with twisted pair.

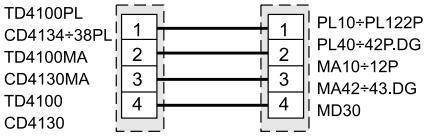
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
... CV03	... TA9160	... CV03	... ST720W
	... CV03		... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 TD4100PL	2 TD4100MA	2 TD4100
2 PL40PCDG-PL42PCDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
2 CV01	MA42CDG-MA43CDG	2 CV01
... PL20, PL50	2 CV01	2 MD10
	... MA20	2 MD30
		2 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

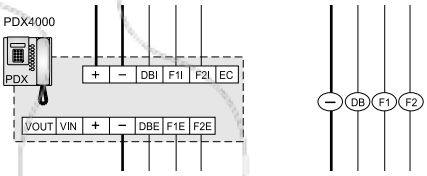


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 CD4134PL-CD4138PL	2 CD4130MA	2 CD4130
2 PL40PDG-PL42PDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
2 CV01	MA42CDG-MA43CDG	2 CV01
... PL20, PL50	2 CV01	2 MD10-11-12
... PL24S-PL228S	... MA20	2 MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

... **DV2D-DV4D** Video distributor
... **4220** Power supply
1 **PDX4000** Doorkeeper exchanger *(if any)*
2 **1472** 2-contact relay
2 **PA **** Door release button *(optional)*
2 **SE **** Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106 and 107÷109.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the push-button panels in the system. The display of the other push-button panels indicate the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the 2 door stations:
- install a relay art.1472
- make the connections drawn with dashed lines
- insert two additional buttons in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if one video intercom is already ON.

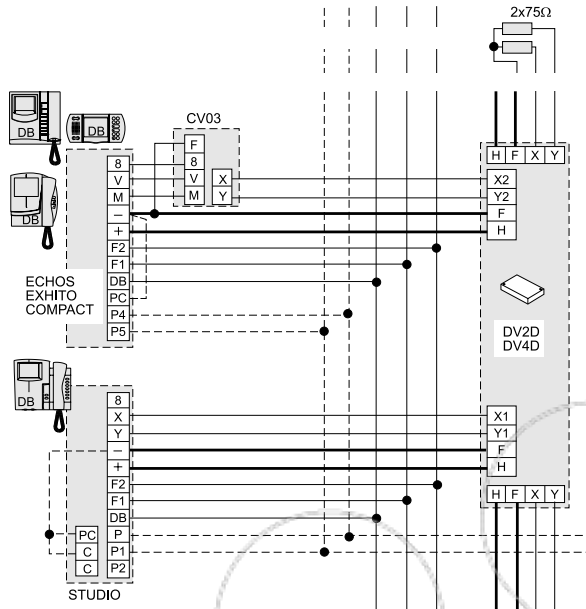
Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73);
ST4231 (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13);
PL24S-PL228S (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31);
MA22S-MA24S (page 32); **TD4100** (page 42); **CD4130** (page 46);
4244 (page 48).

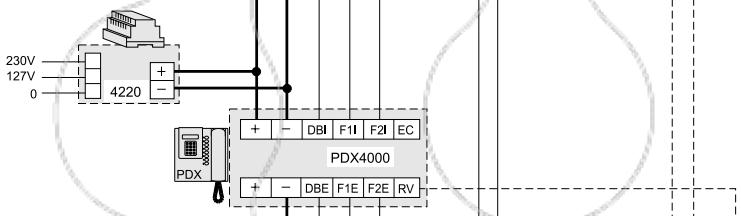
Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

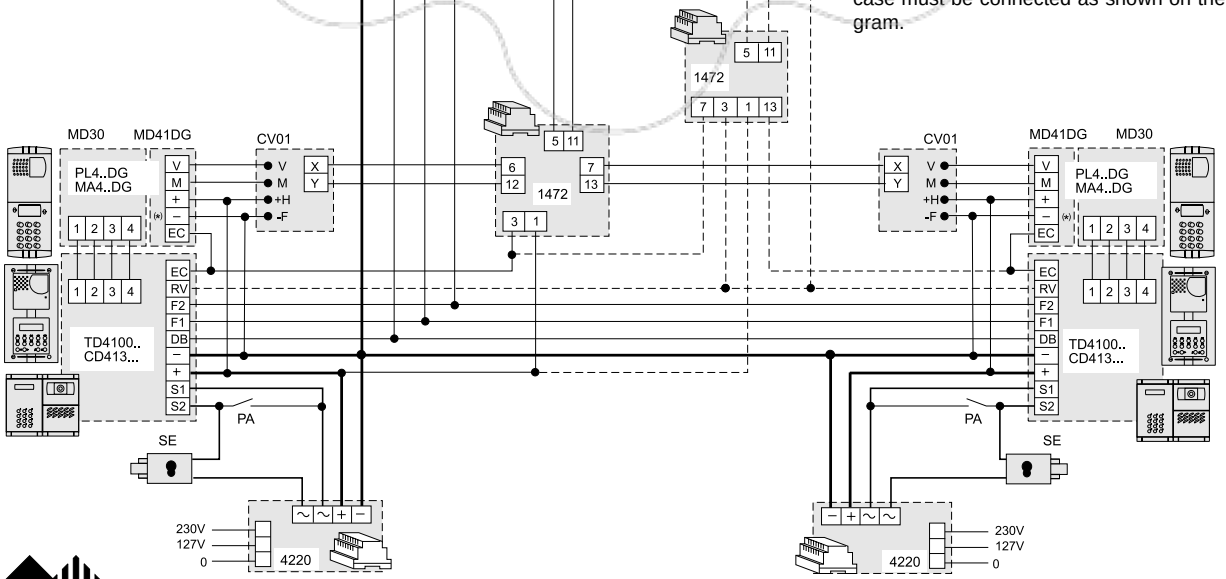
DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS. With or without doorkeeper exchanger and video connection with twisted pair.



Note.
On bracket **WB7100DG** you must **move jumper J2** from position **1-2** to **2-3** (see page 83).



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.



DIGITAL VIDEO INTERCOM SYSTEM WITH 2 DOOR STATIONS ONE OF WHICH IS ONLY AUDIO. With or without doorkeeper exchanger.

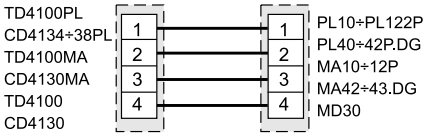
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 TD4100PL	2 TD4100MA	2 TD4100
1 PL40PCDG÷PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
1 PL10P-PL11P	MA42CDG-MA43CDG	2 MD10
... PL20, PL50	1 MA10P÷MA11P	2 MD30
	... MA20	2 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

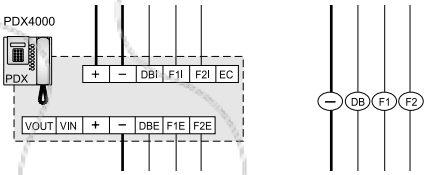


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2 PL82÷PL89	... MA62÷MA63	2 MD84÷MD812
2 PL92÷PL99 *	2 MA92÷MA93*	2 MD94÷MD912 *
2 CD4134PL-CD4138PL	2 CD4130MA	2 CD4130
1 PL40PDG-PL42PDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
PL40PDG-PL42PDG	MA42DG-MA43DG	2 MD10-11-12
1 PL10P÷PL122P	1 MA10P÷MA12P	2 MD30
... PL20, PL50	... MA20	... MD20-MD50
... PL24S-PL228S	... MA22S-MA24S	... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1	**1471**	Relay unit *(optional)*
2	**PA ****	Door release button *(optional)*
2	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the push-button panels in the system. The display of the other push-button panels indicate the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user (only door station with camera).
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 8 to 73).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function:
- install a relay art.1471 or 1472
- make the connections drawn with dashed lines
- insert an additional button in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if one video intercom is already ON.

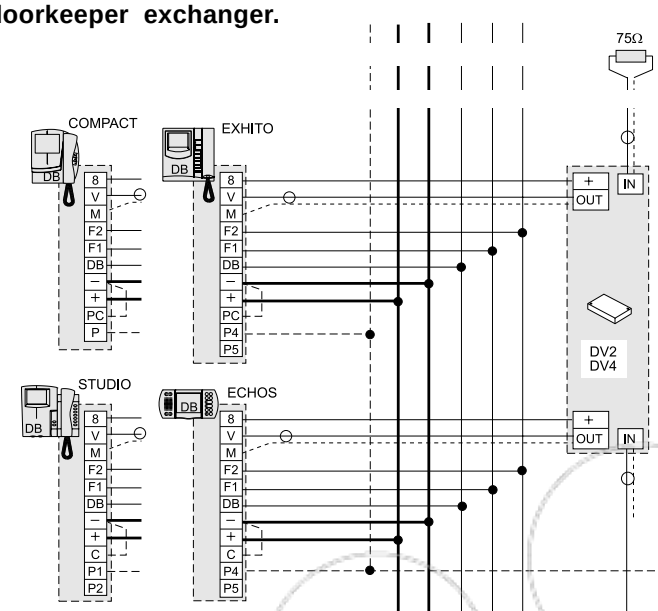
Programming

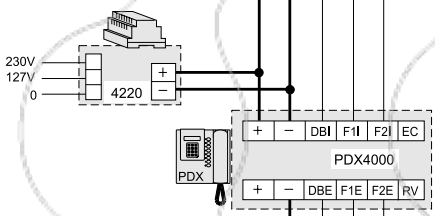
The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

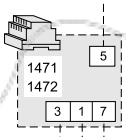
Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

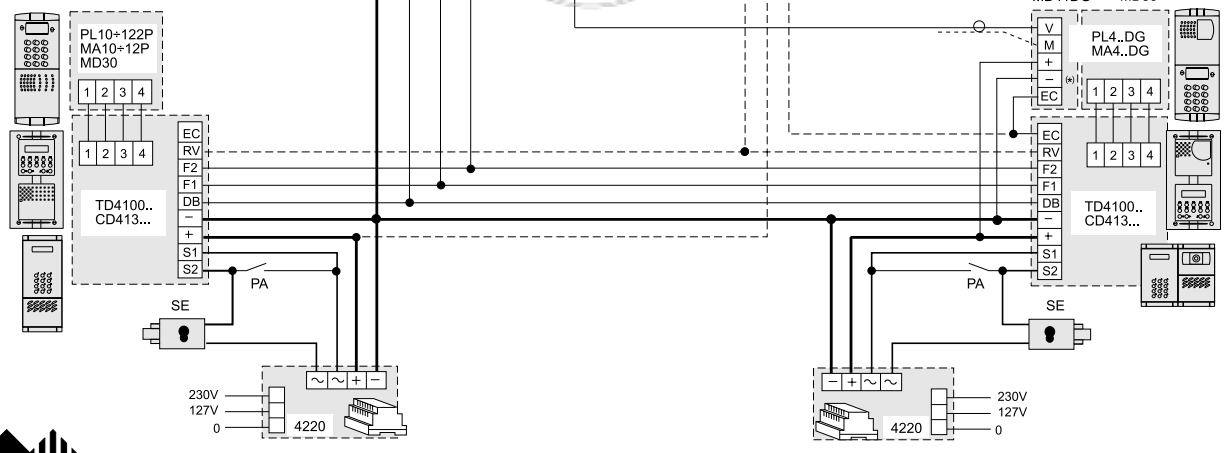
Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH 2 DOOR STATIONS ONE OF WHICH IS ONLY AUDIO. With or without doorkeeper exchanger.









(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 3 VIDEO DOOR STATIONS. With or without doorkeeper exchanger.

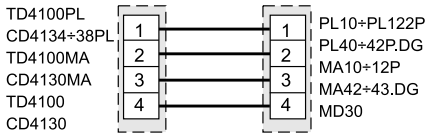
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
3 PL82÷PL89	... MA62÷MA63	3 MD84÷MD812
3 PL92÷PL99 *	3 MA92÷MA93*	3 MD94÷MD912 *
3 TD4100PL	3 TD4100MA	3 TD4100
3 PL40PCDG-PL42PCDG	3 MA42DG-MA43DG	3 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	3 MD10
	... MA20	3 MD30
		3 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

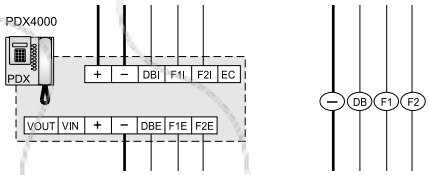


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
3 PL82÷PL89	... MA62÷MA63	3 MD84÷MD812
3 PL92÷PL99 *	3 MA92÷MA93*	3 MD94÷MD912 *
3 CD4134PL-CD4138PL	3 CD4130MA	3 CD4130
3 PL40PCDG-PL42PCDG	3 MA42DG-MA43DG	3 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	3 MD10-11-12
... PL24S-PL228S	... MA20	3 MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
4	**1472**	2-contact relay
3	**PA ****	Door release button *(optional)*
3	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the 3 push-button panels in the system. The display of the other push-button panels indicate the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the 3 door stations:
- install two relays art. 1472
- make the connections drawn with dashed lines
- insert three additional buttons in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold the button of the camera to be activated pressed.

The control switch ON function is not activated if one video intercom is already ON.

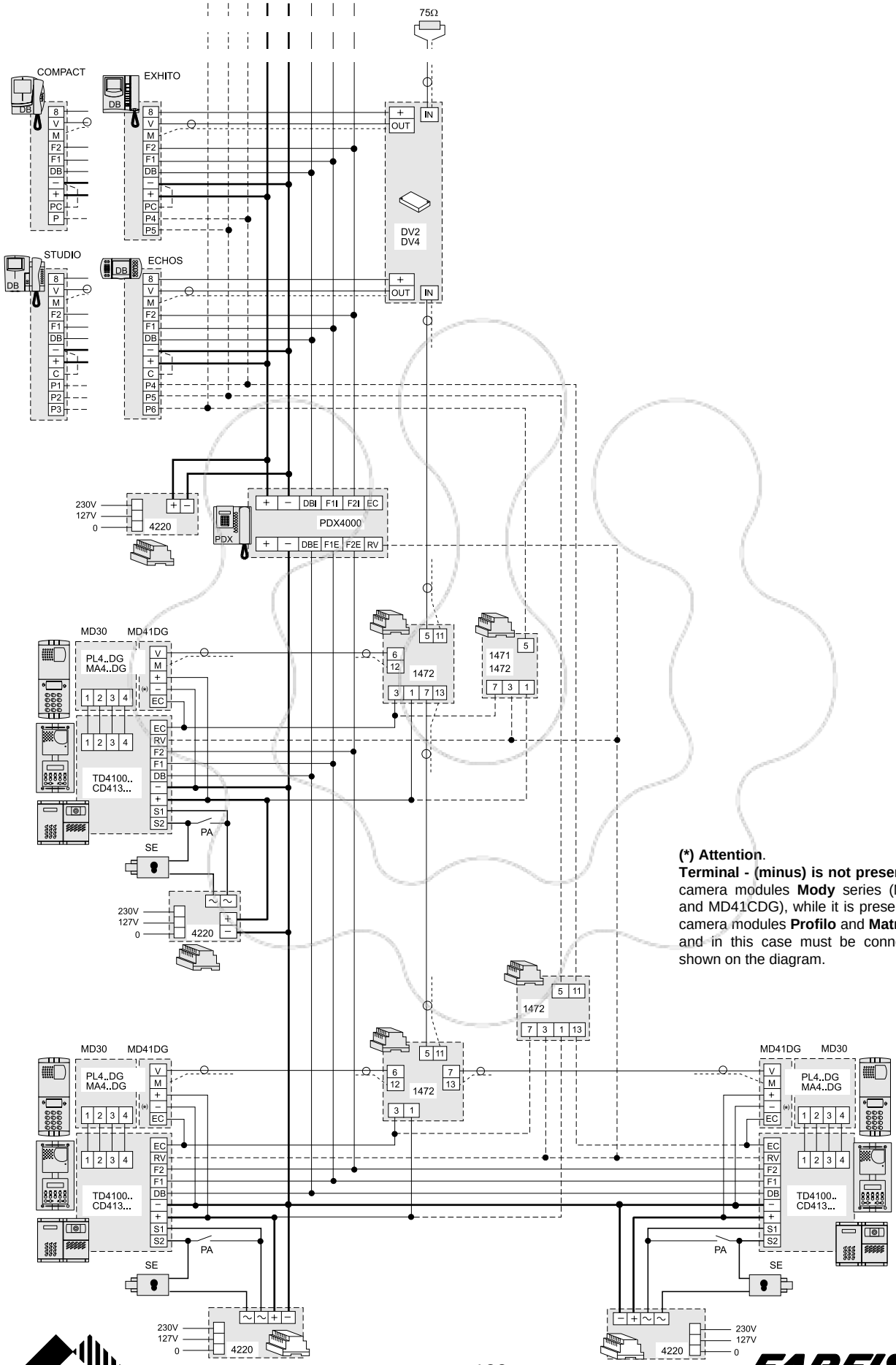
Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

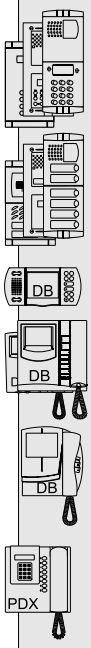
Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH 3 VIDEO DOOR STATIONS. With or without doorkeeper exchanger.



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.



DIGITAL VIDEO INTERCOM SYSTEM WITH 3 DOOR STATIONS ONE OF WHICH IS ONLY AUDIO. With or without doorkeeper exchanger.

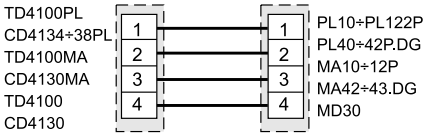
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
3 PL82÷PL89	... MA62÷MA63	3 MD84÷MD812
3 PL92÷PL99 *	3 MA92÷MA93*	3 MD94÷MD912 *
3 TD4100PL	3 TD4100MA	3 TD4100
2 PL40PCDG-PL42PCDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
1 PL10P-PL11P	MA42CDG-MA43CDG	3 MD10
... PL20, PL50	1 MA10P÷MA11P	3 MD30
	... MA20	3 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

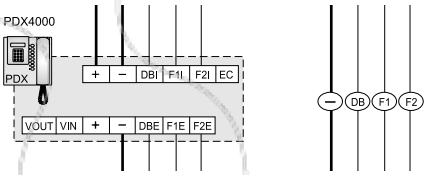


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
3 PL82÷PL89	... MA62÷MA63	3 MD84÷MD812
3 PL92÷PL99 *	3 MA92÷MA93*	3 MD94÷MD912 *
3 CD4134PL-CD4138PL	3 CD4130MA	3 CD4130
2 PL40PDG-PL42PDG	2 MA42DG-MA43DG	2 MD41DG-MD41CDG
1 PL10P÷PL122P	MA42CDG-MA43CDG	3 MD10-11-12
... PL20, PL50	1 MA10P÷MA12P	3 MD30
... PL24S-PL228S	... MA20	... MD20-MD50
	... MA22S-MA24S	... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**PDX4000**	Doorkeeper exchanger *(if any)*
2	**1472**	2-contact relay
3	**PA ****	Door release button *(optional)*
3	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the 3 push-button panels in the system. The display of the other push-button panels indicate the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user (only door station with camera).
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the 2 door stations:
- install a relay art.1472
- make the connections drawn with dashed lines
- insert two additional buttons in each video intercom.

To operate the function:
- press the ⦿ button to switch the video intercom ON;
- hold the button of the camera to be activated pressed.

The control switch ON function is not activated if one video intercom is already ON.

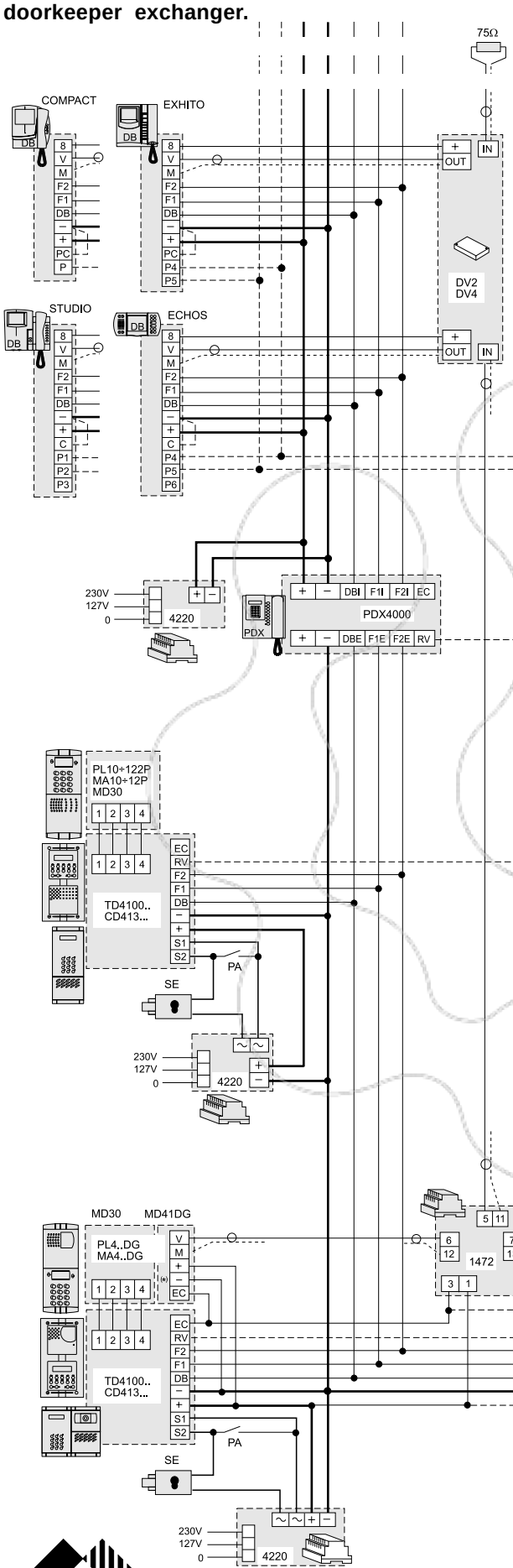
Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48).

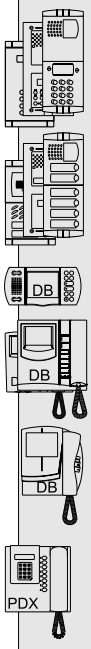
Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH 3 DOOR STATIONS ONE OF WHICH IS ONLY AUDIO. With or without doorkeeper exchanger.



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance). Doorkeeper exchanger with monitor and surveillance camera.

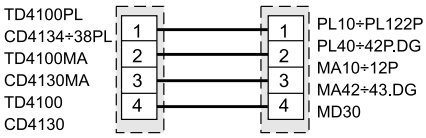
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X TD4100PL	1+X TD4100MA	1+X TD4100
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1+X MD10
	... MA20	1+X MD30
		1+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders



These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X CD4134PL-CD4138PL	1+X CD4130MA	1+X CD4130
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1+X MD10-11-12
... PL24S-PL228S	... MA20	1+X MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

Programming

The following units must be programmed for the correct operation of the system:

WB3160DG (page 65); **EH9160DG** (page 60);
KM8100DG (page 73); **ST4231** (page 82);
TD4100PL (page 9); **CD4134-38PL** (page 13);
PL24S-228S (page 17); **TD4100MA** (page 27);
CD4130MA (page 31); **MA22S-24S** (page 32);
TD4100 (page 42); **CD4130** (page 46);
4244 (page 48); **4273P** (page 97).

Note. In this system the digital exchangers (4273P) must be programmed as first.

- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**1281**	Video power supply
1+X	**1471**	Relay unit
1+X	**1472**	2-contact relay
X	**4273P**	Digital exchanger
...	**476**	Video amplifier-distributor for 5 risers
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1	**TVM..**	CCTV monitor *(see catalogue)*
1	**TVT..**	CCTV 12Vdc camera *(see catalogue)*
2X+1	**D ****	Min. 100V-1A diodes (1N4007 type)
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 5 buildings, additional video distributors art.**476** must be added (1 for each 4 additional buildings). Art.**1281** must be added to power 2 art.**476** (for the connection see page 106).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating mode

For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator's monitor displays the image of the calling user. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom displays the image from the camera positioned near the doorkeeper exchanger.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

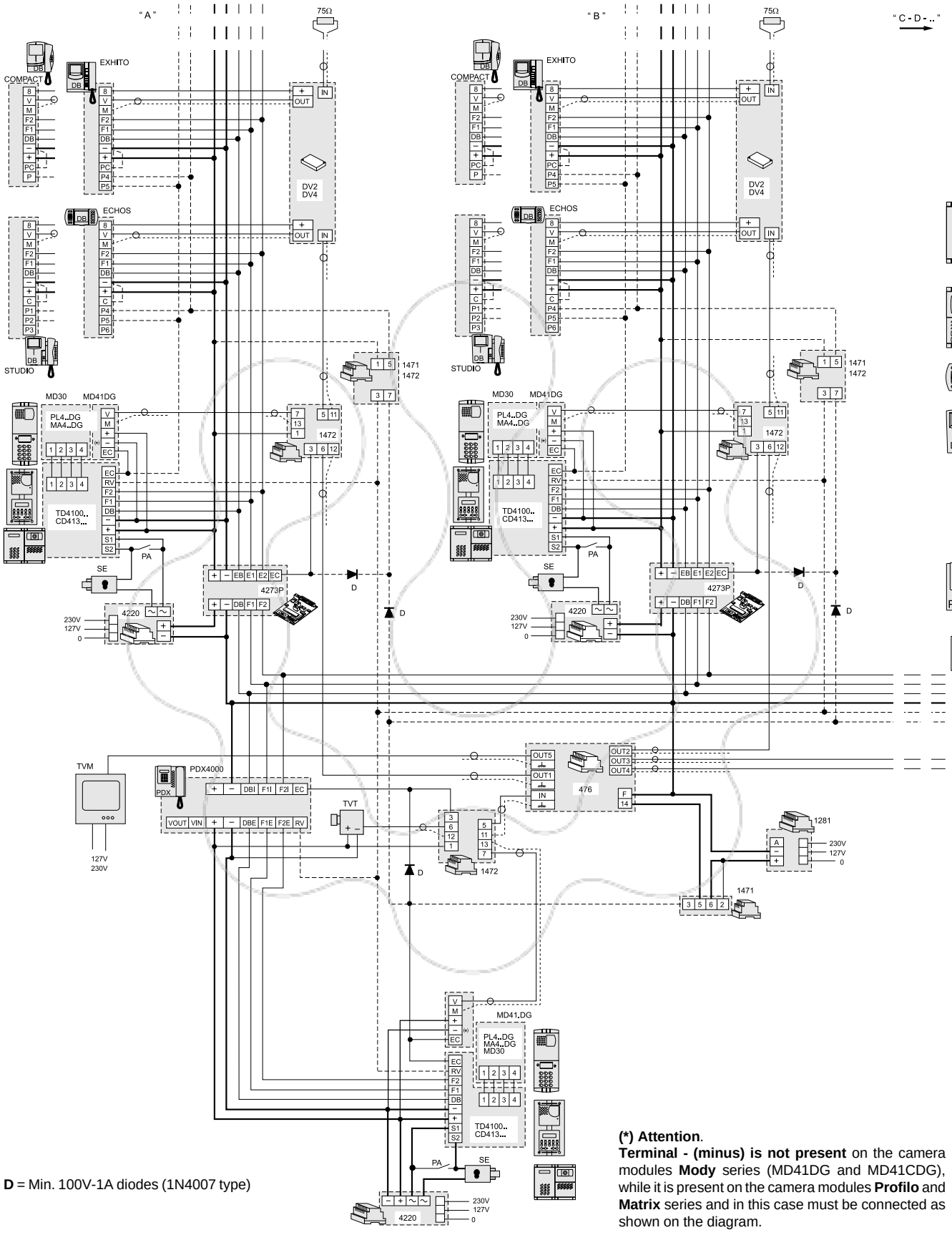
Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the related secondary station and in the common door station:
- install a relay art.1471 or 1472 and 2 diodes for each stairs
- make the connections drawn with dashed lines
- insert 2 additional buttons in each video intercom (*if available on the chosen model of installed videointercoms - see table on page 139*).

To operate the function:
- press the ⦿ button to switch the video intercom on;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if a video intercom on the stair is already ON or when the main video push-button panels or the doorkeeper exchanger is in operation with any stair.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance). Doorkeeper exchanger with monitor and surveillance camera.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION. With or without doorkeeper exchanger and video connection with twisted pair.

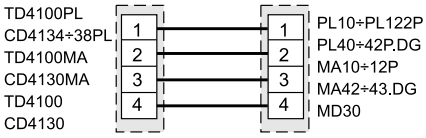
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
... CV03	... TA9160	... CV03	... ST720W
	... CV03		... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X TD4100PL	1+X TD4100MA	1+X TD4100
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
1+X CV01	MA42CDG-MA43CDG	1+X CV01
... PL20, PL50	1+X CV01	1+X MD10
	... MA20	1+X MD30
		1+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

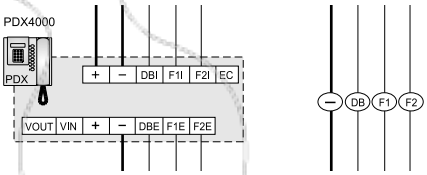


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X CD4134PL-CD4138PL	1+X CD4130MA	1+X CD4130
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
1+X CV01	MA42DG-MA43DG	1+X CV01
... PL20, PL50	1+X CV01	1+X MD10-11-12
... PL24S-PL228S	... MA20	1+X MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributor
...	**4220**	Power supply
X	**1471**	Relay unit
X	**1472**	2-contact relay
X	**4273P**	Digital exchanger
1	**PDX4000**	Doorkeeper exchanger *(if any)*
2xX	**D ****	Min. 100V-1A diodes (1N4007 type)
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages from 103 to 105 and from 107 to 109.

Operating mode

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom switches ON with no picture.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the secondary door station connected to the riser of the called user indicates that the line is busy. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the related secondary station and in the common door station:
- install a relay art.1471 or 1472 and 2 diodes for each stairs
- make the connections drawn with dashed lines
- insert 2 additional buttons in each video intercom (*if present and available in the model used in the installation - see table on page 139*).

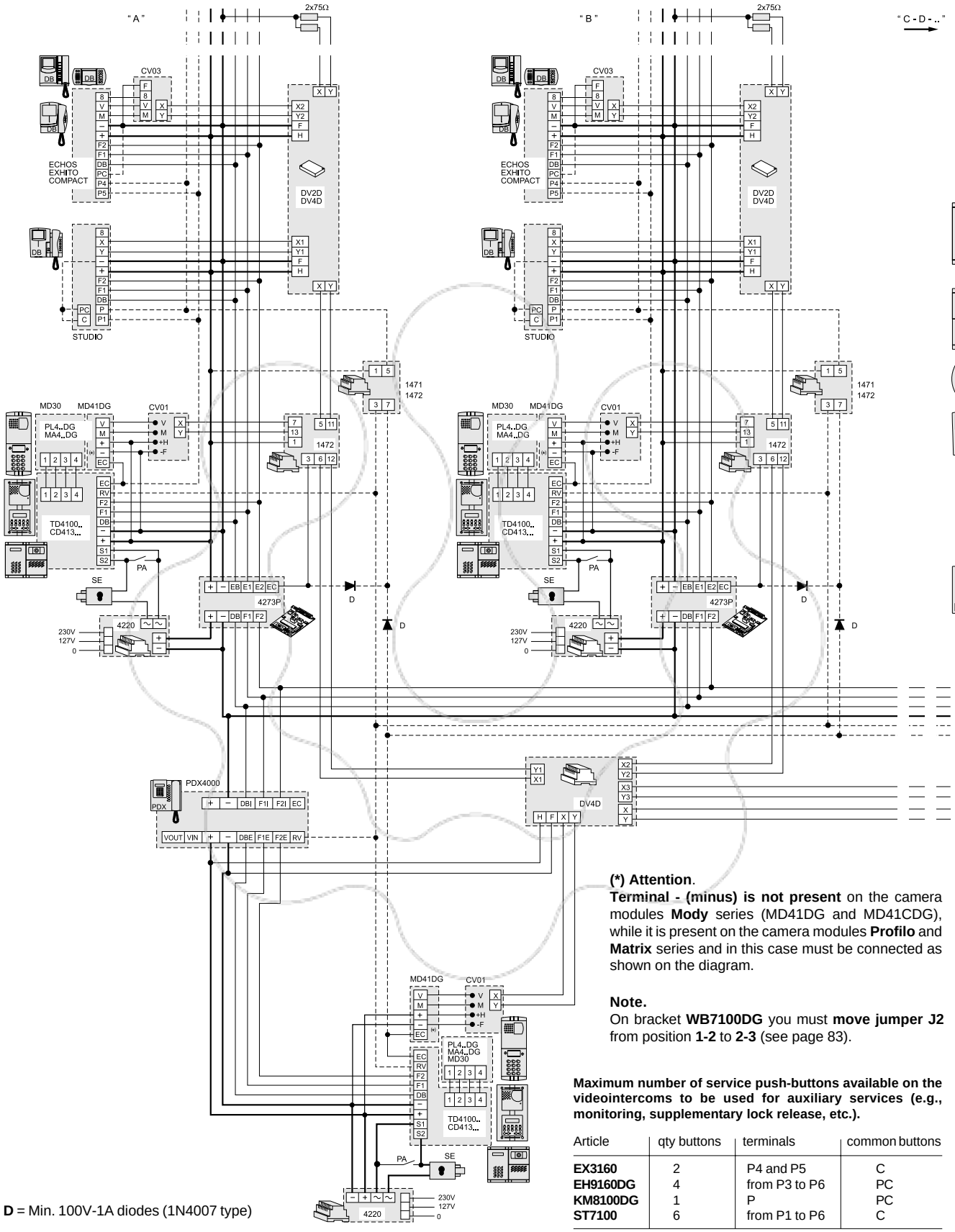
To operate the function:
- press the ⦿ button to switch the video intercom on;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if a video intercom on the stair is already ON or when the main video push-button panels or the doorkeeper exchanger is in operation with any stair.

Programming

The following units must be programmed for the correct operation of the system:
WB3160DG (page 65); **EH9160DG** (page 60); **KM8100DG** (page 73); **ST4231** (page 82); **TD4100PL** (page 9); **CD4134PL-CD4138PL** (page 13); **PL24S-PL228S** (page 17); **TD4100MA** (page 27); **CD4130MA** (page 31); **MA22S-MA24S** (page 32); **TD4100** (page 42); **CD4130** (page 46); **4244** (page 48). **4273P** (page 97). **Note**. In this system the digital exchangers (4273P) must be programmed as first.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION. With or without doorkeeper exchanger and video connection with twisted pair.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

Note.
On bracket **WB7100DG** you must **move jumper J2** from position **1-2** to **2-3** (see page 83).

Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty buttons	terminals	common buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH ONLY AUDIO SECONDARY DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance). With or without doorkeeper exchanger.

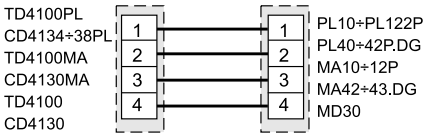
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X TD4100PL	1+X TD4100MA	1+X TD4100
1 PL40PDG-PL42PDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
PL40PCDG-PL42PCDG	MA42CDG-MA43CDG	1+X MD10
X PL10P-PL11P	X MA10P÷MA11P	1+X MD30
		1+X RD4120 (1)
		... TD4110 (1)
... PL20, PL50	... MA20	... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

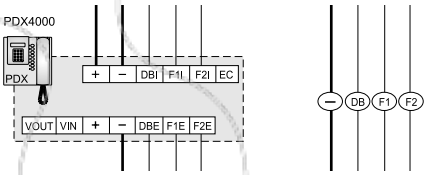


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X CD4134PL-CD4138PL	1+X CD4130MA	1+X CD4130
1 PL40PCDG-PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
X PL10P÷PL122P	MA42CDG-MA43CDG	1+X MD10-11-12
... PL20, PL50	X MA10P÷MA12P	1+X MD30
... PL24S-PL228S	... MA20	... MD20-MD50
	... MA22S-MA24S	... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**1281**	Video power supply
1+X	**1471**	Relay unit
X	**1472**	2-contact relay
X	**4273P**	Digital exchanger
...	**476**	Video amplifier-distributor for 5 risers
1	**PDX4000**	Doorkeeper exchanger *(if any)*
2xX	**D ****	Min. 100V-1A diodes (1N4007 type)
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 5 buildings, additional video distributors art.**476** must be added (1 for each 4 additional buildings). Art.**1281** must be added to power 2 art.**476** (for the connection see page 106).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating mode

For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator's monitor displays the image of the calling user. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user.
To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom displays the image from the camera positioned near the doorkeeper exchanger.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the related secondary station and in the common door station:
- install a relay art.1471 or 1472 and 2 diodes for each stairs
- make the connections drawn with dashed lines
- insert 1 additional button in each video intercom (*if present and available in the model used in the installation - see table on page 141*).

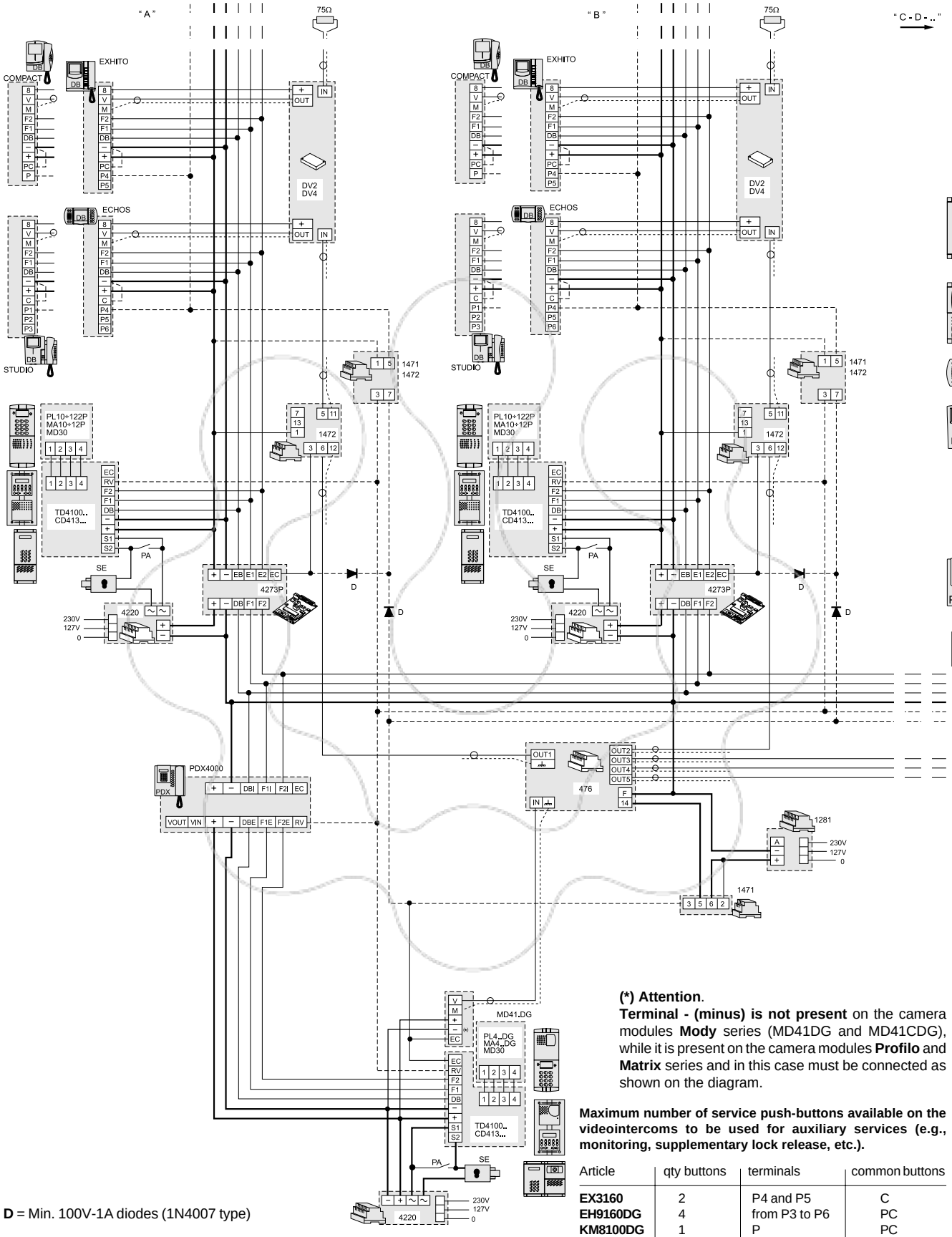
To operate the function:
- press the ⦿ button to switch the video intercom on;
- hold the additional button of the camera to be activated pressed.

The control switch ON function is not activated if a video intercom on the stair is already ON or when the main video push-button panels or the doorkeeper exchanger is in operation with any stair.

Programming

See the list of items to be programmed on page 136.

DIGITAL VIDEO INTERCOM SYSTEM WITH ONLY AUDIO SECONDARY DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance). With or without doorkeeper exchanger.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty buttons	terminals	common buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN ONLY AUDIO DOOR STATION (multiple entrance). With or without doorkeeper exchanger.

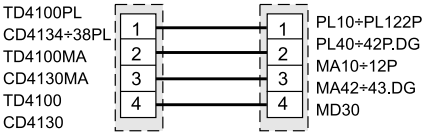
• INTERNAL STATIONS

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

• DIGITAL DOOR STATIONS (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X TD4100PL	1+X TD4100MA	1+X TD4100
X PL40PCDG-PL42PCDG	X MA42DG-MA43DG	X MD41DG-MD41CDG
1 PL10P-PL11P	MA42CDG-MA43CDG	1+X MD10
... PL20, PL50	1 MA10P÷MA11P	1+X MD30
	... MA20	1+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

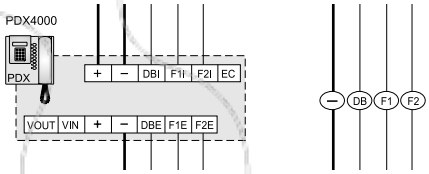


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

• CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X CD4134PL-CD4138PL	1+X CD4130MA	1+X CD4130
X PL40PCDG-PL42PCDG	X MA42DG-MA43DG	X MD41DG-MD41CDG
1 PL10P÷PL122P	MA42CDG-MA43CDG	1+X MD10-11-12
... PL20, PL50	1 MA10P÷MA12P	1+X MD30
... PL24S-PL228S	... MA20	... MD20-MD50
	... MA22S-MA24S	... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



• OTHER ARTICLES

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
X	**4273P**	Digital exchanger
1	**PDX4000**	Doorkeeper exchanger *(if any)*
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating mode

For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.

When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom switches ON with no picture.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the main door station are directly transferred to the users.
The video intercom receives the call and the monitor switches ON with no picture. The display of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible. The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the secondary door stations:
- make the connections drawn with dashed lines
- insert one additional button in each video intercom.

To operate the function:
- press the 👁 button to switch the video intercom ON;
- hold additional button pressed to activate the camera.

The control switch ON function is not activated if a video intercom on your stairs is already ON.

Programming

The following units must be programmed for the correct operation of the system:

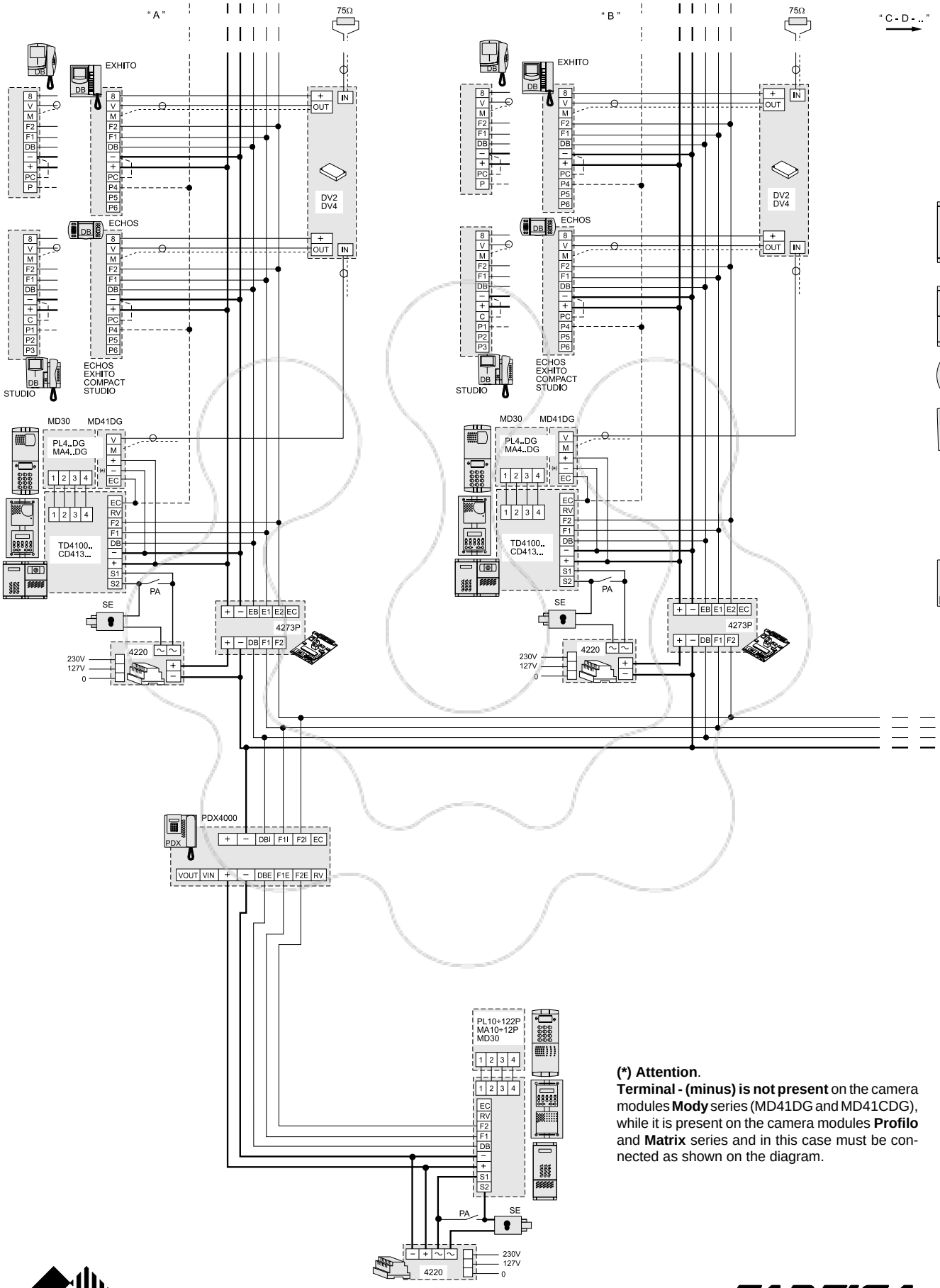
WB3160DG (page 65); **EH9160DG** (page 60);
KM8100DG (page 73); **ST4231** (page 82);
TD4100PL (page 9); **CD4134-38PL** (page 13);
PL24S-228S (page 17); **TD4100MA** (page 27);
CD4130MA (page 31); **MA22S-24S** (page 32);
TD4100 (page 42); **CD4130** (page 46);
4244 (page 48); **4273P** (page 97).

Note. In this system the digital exchangers (4273P) must be programmed as first.

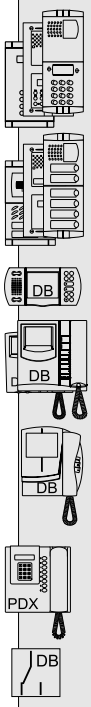
Maximum number of service push-buttons available on the videointercoms to be used for auxiliary services (e.g., monitoring, supplementary lock release, etc.).

Article	qty push-buttons	terminals	common push-buttons
EX3160	2	P4 and P5	C
EH9160DG	4	from P3 to P6	PC
KM8100DG	1	P	PC
ST7100	6	from P1 to P6	C

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN ONLY AUDIO DOOR STATION (multiple entrance). With or without doorkeeper exchanger.



(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance). Doorkeeper exchanger with monitor and surveillance camera.

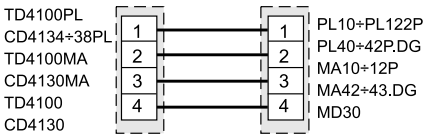
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CWDG	... KM8100WDG	... ST7100W
... EX3160C	... 9083	... KM8100CWDG	... ST7100CW
... WB3160DG	... WA9100W	... WB8100DG	... WB7100DG
	... TA9160		... ST720W
			... ST4231
			... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2+X PL82÷PL89	... MA62÷MA63	2+X MD84÷MD812
2+X PL92÷PL99 *	2+X MA92÷MA93*	2+X MD94÷MD912 *
2+X TD4100PL	2+X TD4100MA	2+X TD4100
2+X PL40PCDG-PL42PCDG	2+X MA42DG-MA43DG	2+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2+X MD10
	... MA20	2+X MD30
		2+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders



These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2+X PL82÷PL89	... MA62÷MA63	2+X MD84÷MD812
2+X PL92÷PL99 *	2+X MA92÷MA93*	2+X MD94÷MD912 *
2+X CD4134PL-CD4138PL	2+X CD4130MA	2+X CD4130
2+X PL40PCDG-PL42PCDG	2+X MA42DG-MA43DG	2+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2+X MD10-11-12
... PL24S-PL228S	... MA20	2+X MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

Programming

The following units must be programmed for the correct operation of the system:

WB3160DG (page 65); **EH9160DG** (page 60);
KM8100DG (page 73); **ST4231** (page 82);
TD4100PL (page 9); **CD4134-38PL** (page 13);
PL24S-228S (page 17); **TD4100MA** (page 27);
CD4130MA (page 31); **MA22S-24S** (page 32);
TD4100 (page 42); **CD4130** (page 46);
4244 (page 48); **4273P** (page 97).

Note. In this system the digital exchangers (4273P) must be programmed as first.

- **OTHER ARTICLES**

...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1	**1281**	Video power supply
1	**1471**	Relay unit
2xX+1	**1472**	2-contact relay
1	**1473**	Analog exchanger
X	**4273P**	Digital exchanger
...	**476**	Video amplifier-distributor for 5 risers
1	**PDX4000**	Doorkeeper exchanger
1	**TVM..**	CCTV monitor *(see catalogue)*
1	**TVT..**	CCTV 12Vdc camera *(see catalogue)*
4xX+1	**D ****	Min. 100V-1A diodes (1N4007 type)
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 5 buildings, additional video distributors art.**476** must be added (1 for each 4 additional buildings). Art.**1281** must be added to power 2 art.**476** (for the connection see page 106).
- A maximum of 15 video intercoms can be connected in this diagram. If more video intercoms are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 40 video intercoms.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from one of the two main push-button panels. The operator monitor shows the image of the calling user and the display of the other push-button panel indicates the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom displays the image from the camera located near the doorkeeper exchanger.

Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the push-button panels of the other main station and of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible. The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

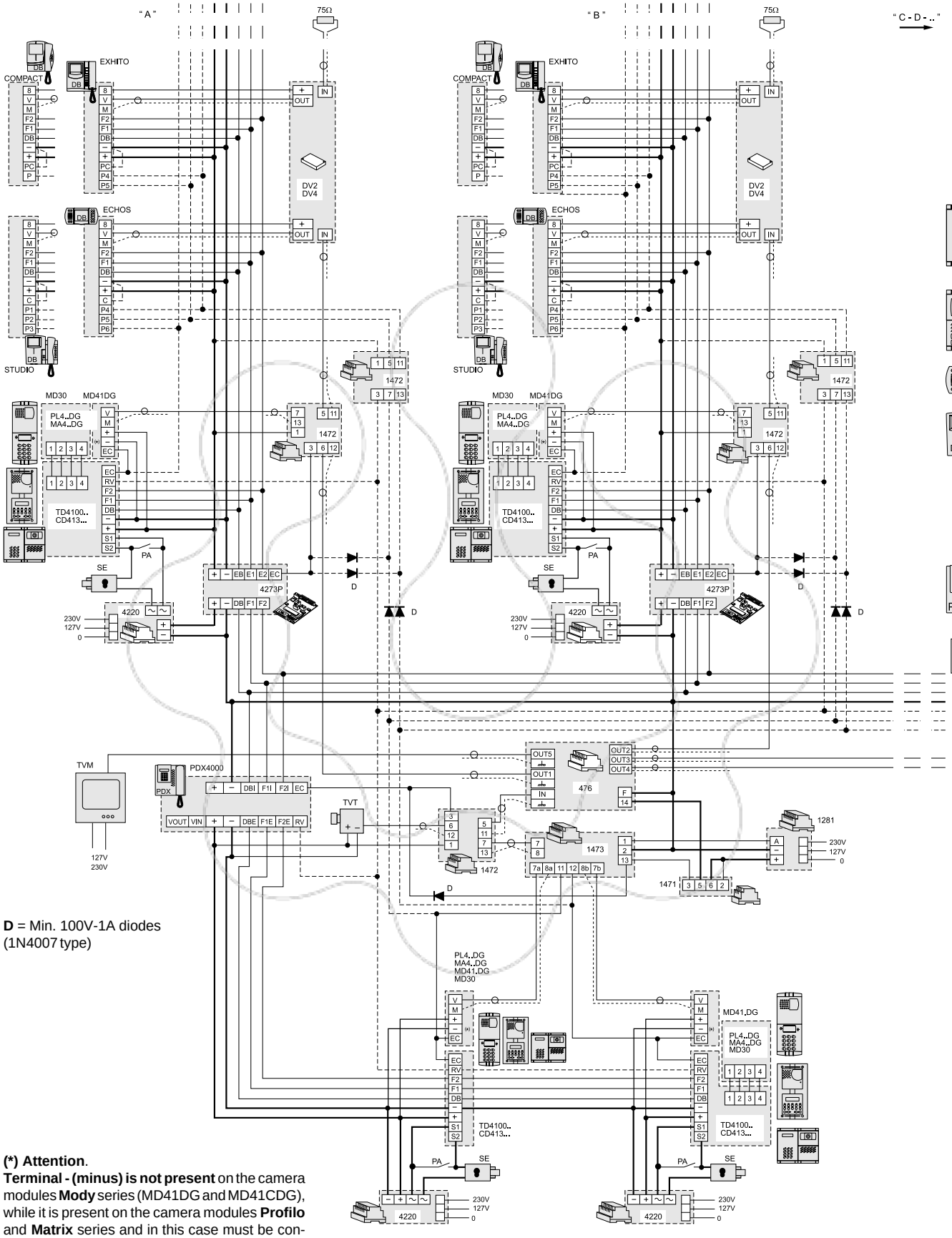
Control switch ON *(optional)*

The following is necessary to have the control switch ON function in the secondary door stations and in the two common door stations:
- install a relay 1472 and 4 diodes for each stairs
- make the connections drawn with dashed lines
- insert 2 additional buttons in each video intercom (*if available on the chosen model of installed videointercoms - see table on page 142*).

To operate the function:
- press the ⦿ button to switch the video intercom on;
- hold the button of the camera to be activated pressed.

The control switch ON function is not activated if a video intercom on the stair is already ON or when the main video push-button panels or the doorkeeper exchanger is in operation with any stair.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance). Doorkeeper exchanger with monitor and surveillance camera.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger. Video intercoms powered with 21Vdc.

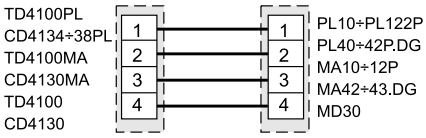
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CW	... KM8100W	... ST7100W
... EX3160C	... EH9160CT	... KM8100CW	... ST7100CW
... WB3160	... 9083	... WB8600	... WB7100
	... WA9100T/W		... ST720W
	... TA9160		... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 TD4100PL	1 TD4100MA	1 TD4100
1 PL40PCDG-PL42PCDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1 MD10
	... MA20	1 MD30
		1 RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

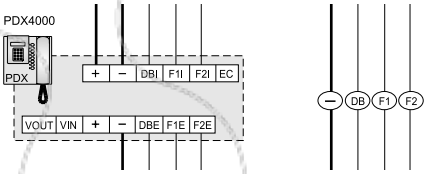


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1 PL82÷PL89	... MA62÷MA63	1 MD84÷MD812
1 PL92÷PL99 *	1 MA92÷MA93*	1 MD94÷MD912 *
1 CD4134PL-CD4138PL	1 CD4130MA	1 CD4130
1 PL40PDG-PL42PDG	1 MA42DG-MA43DG	1 MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1 MD10-11-12
... PL24S-PL228S	... MA20	1 MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

... **4235, 4235TV, 4235TVP** Multiple decoding module
... **DV2-DV4** Video distributor
... **4220** Power supply
1 **1281** Video power supply
1 **1471** Relay unit
1 **PDX4000** Doorkeeper exchanger *(if any)*
1 **PA **** Door release button *(optional)*
1 **SE **** Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 12 multiple decoding modules can be connected in this diagram. If more multiple decoding modules are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 20 multiple decoding modules.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

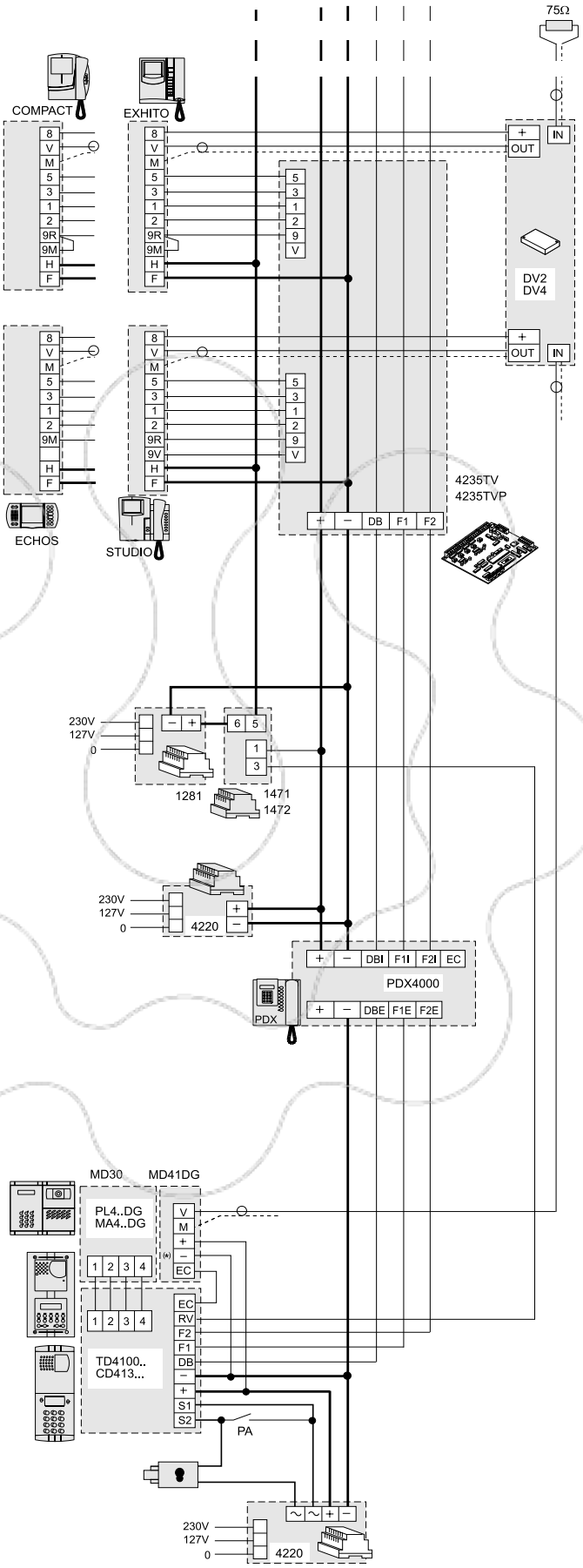
Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Programming

The following units must be programmed for the correct operation of the system:
4235 (page 92); **4235TV** (page 92); **4235TVP** (page 92);
TD4100PL (page 9); **TD4100MA** (page 27); **TD4100** (page 42);
CD4134-38PL (page 13); **CD4130MA** (page 31); **CD4130** (page 46);
PL24S-228S (page 17); **MA22S-24S** (page 32); **4244** (page 48).

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger. Video intercoms powered with 21Vdc.



Note.
On bracket **WB7100** you must **move jumper J1** from position **2-3** to **1-2**.

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger and video connection with twisted pair. Video intercoms powered with 12Vdc.

- **INTERNAL STATIONS**

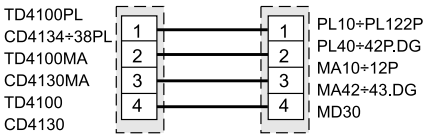
STUDIO series

... **ST7100W**
... **ST7100CW**
... **WB7100DG**
... **ST720W**
... **WB700**

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series		**MATRIX series**		**MODY series**	
...	**PL72-PL73**	...	**MA72-MA73**	...	**MD72-MD73-MD74**
1	**PL82÷PL89**	...	**MA62÷MA63**	1	**MD84÷MD812**
1	**PL92÷PL99 ***	1	**MA92÷MA93***	1	**MD94÷MD912 ***
1	**TD4100PL**	1	**TD4100MA**	1	**TD4100**
1	**PL40PCDG-PL42PCDG**	1	**MA42DG-MA43DG**	1	**MD41DG-MD41CDG**
1	**CV01**		**MA42CDG-MA43CDG**	1	**CV01**
...	**PL20, PL50**	1	**CV01**	1	**MD10**
		...	**MA20**	1	**MD30**
				1	**RD4120** (1)
				...	**TD4110** (1)
				...	**MD20, MD50**

Connection of the door speaker to the digital push-button panels or encoders

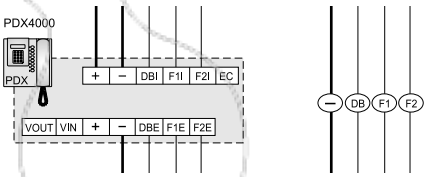


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series		**MATRIX series**		**MODY series**	
...	**PL72-PL73**	...	**MA72-MA73**	...	**MD72-MD73-MD74**
1	**PL82÷PL89**	...	**MA62÷MA63**	1	**MD84÷MD812**
1	**PL92÷PL99 ***	1	**MA92÷MA93***	1	**MD94÷MD912 ***
1	**CD4134PL-CD4138PL**	1	**CD4130MA**	1	**CD4130**
1	**PL40PCDG-PL42PCDG**	1	**MA42DG-MA43DG**	1	**MD41DG-MD41CDG**
1	**CV01**		**MA42CDG-MA43CDG**	1	**CV01**
...	**PL20, PL50**	1	**CV01**	1	**MD10**
...	**PL24S-PL228S**	...	**MA20**	1	**MD30**
		...	**MA22S-MA24S**	...	**MD20-MD50**
				...	**MD21÷MD228**
				...	**Kit4244**

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

... **4235TVP** Multiple decoding module
... **DV2D-DV4D** Video distributor
... **4220** Power supply
1 **PDX4000** Doorkeeper exchanger *(if any)*
1 **PA **** Door release button *(optional)*
1 **SE **** Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- A maximum of 12 multiple decoding modules can be connected in this diagram. If more multiple decoding modules are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 20 multiple decoding modules.
- For the cross section of the wires and the video connection see pages from 103 to 105 and from 107 to 109.

Operating modes

Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the push-button panel. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door, press the 🔑 button.

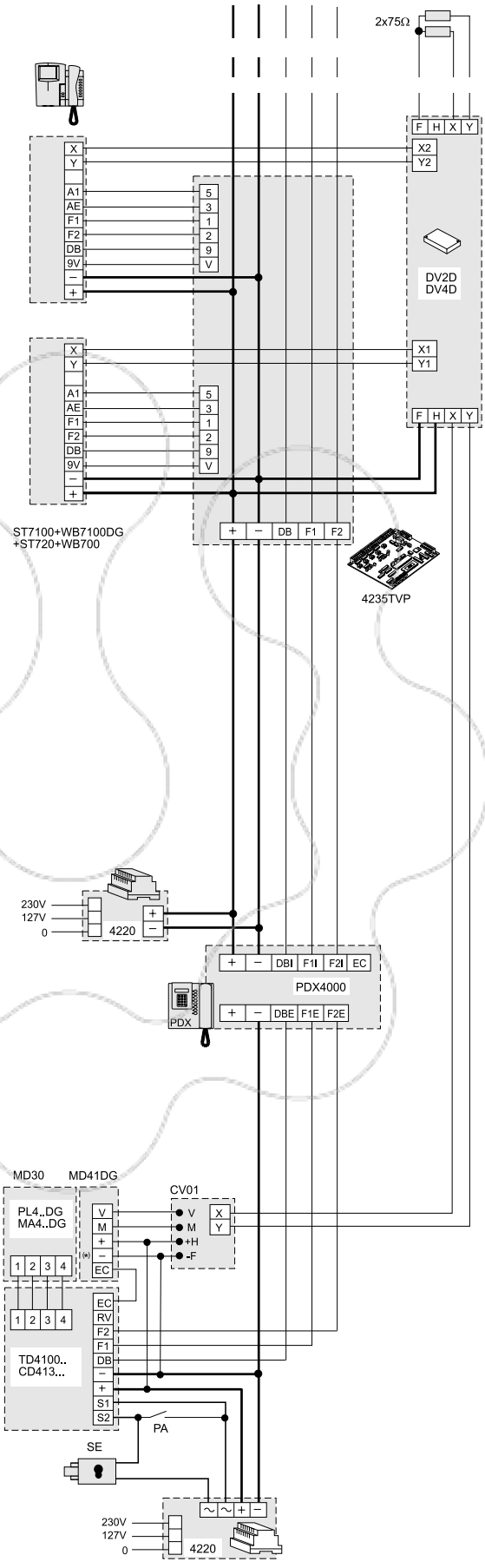
Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and displays the image of the calling user.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door.
For more information see the description of the different products (from page 11 to 102).

Programming

The following units must be programmed for the correct operation of the system:
4235TVP (page 92); **TD4100PL** (page 9); **TD4100MA** (page 27);
TD4100 (page 42); **CD4134-38PL** (page 13); **CD4130MA** (page 31);
CD4130 (page 46); **PL24S-228S** (page 17); **MA22S-24S** (page 32);
4244 (page 48).

DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger and video connection with twisted pair. Video intercoms powered with 12Vdc.



Notes

- In the multiple decoding modules **4235TVP** it is required **to insert jumpers J1** and **J2** (see page 92).
- To connect monitors use wall bracket **WB7100DG** and **move jumper J2** from position **1-2** to position **2-3** (see page 83).

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance) USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger. Video intercoms powered with 21Vdc.

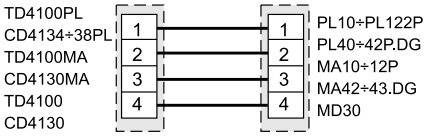
• INTERNAL STATIONS

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CW	... KM8100W	... ST7100W
... EX3160C	... EH9160CT	... KM8100CW	... ST7100CW
... WB3160	... 9083	... WB8600	... WB7100
	... WA9100T/W		... ST720W
	... TA9160		... WB700

• DIGITAL DOOR STATIONS (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X TD4100PL	1+X TD4100MA	1+X TD4100
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1+X MD10
	... MA20	1+X MD30
		1+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

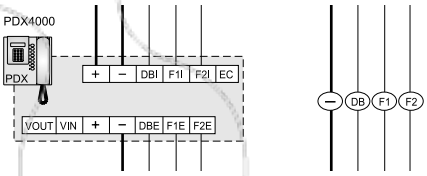


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

• CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
1+X PL82÷PL89	... MA62÷MA63	1+X MD84÷MD812
1+X PL92÷PL99 *	1+X MA92÷MA93*	1+X MD94÷MD912 *
1+X CD4134PL-CD4138PL	1+X CD4130MA	1+X CD4130
1+X PL40PCDG-PL42PCDG	1+X MA42DG-MA43DG	1+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	1+X MD10-11-12
... PL24S-PL228S	... MA20	1+X MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



• OTHER ARTICLES

...	**4235, 4235TV, 4235TVP**	Multiple decoding module
...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1+X	**1281**	Video power supply
1+X	**1471**	Relay unit
X	**1472**	2-contact relay
X	**4273P**	Digital exchanger
...	**476**	Video amplifier-distributor for 5 risers
1	**PDX4000**	Doorkeeper exchanger *(if any)*
X	**D ****	Min. 100V-1A diodes (1N4007 type)
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 5 buildings, additional video distributors art.**476** must be added (1 for each 4 additional buildings). Art.**1281** must be added to power 2 art.**476** (for the connection see page 106).
- A maximum of 12 multiple decoding modules for each building can be connected in this diagram. If more multiple decoding modules are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 20 multiple decoding modules.
- For the cross section of the wires and the video connection see pages 103÷106.

Operating mode

For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode

The doorkeeper exchanger rings when a call is made from the main push-button panel. The operator's monitor displays the image of the calling user. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom displays the image from the camera positioned near the doorkeeper exchanger.

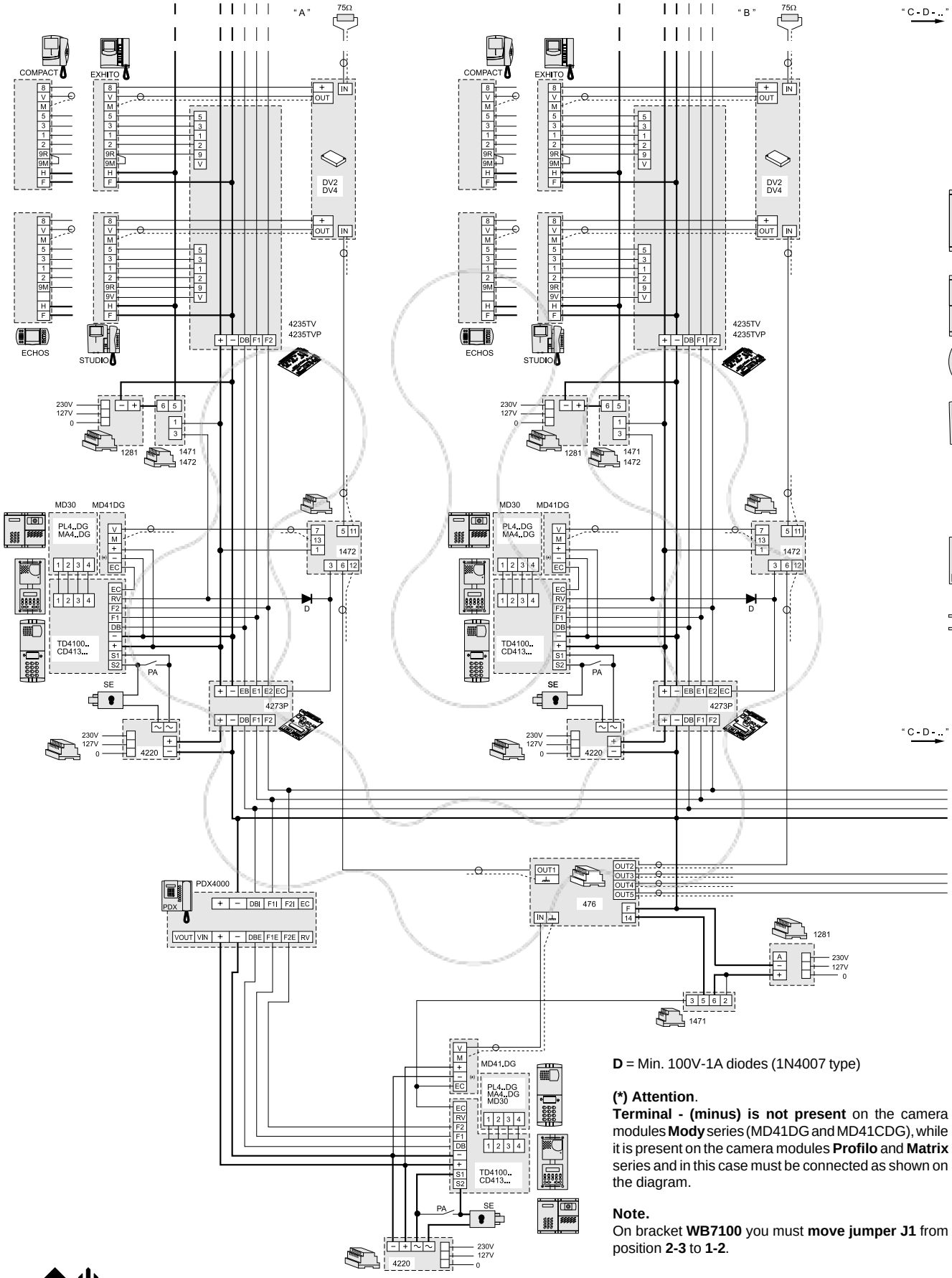
Doorkeeper exchanger in "night" mode

When the doorkeeper exchanger is off, the calls from the door station are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

Programming

The following units must be programmed for the correct operation of the system:
4235 (page 92); **4235TV** (page 92); **4235TVP** (page 92);
TD4100PL (page 9); **TD4100MA** (page 27); **TD4100** (page 42);
CD4134-38PL (page 13); **CD4130MA** (page 31); **CD4130** (page 46);
PL24S-228S (page 17); **MA22S-24S** (page 32); **4244** (page 48).
4273P (page 97).
Note. In this system the digital exchangers (4273P) must be programmed as first.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance) USING MULTIPLE DECODING MODULES. With or without door-keeper exchanger. Video intercoms powered with 21Vdc.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

Note.
On bracket **WB7100** you must **move jumper J1** from position **2-3** to **1-2**.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance) USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger. Video intercoms powered with 21Vdc.

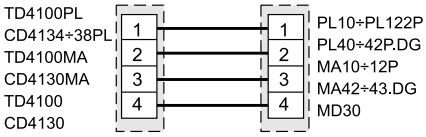
- **INTERNAL STATIONS**

EXHITO series	ECHOS series	COMPACT series	STUDIO series
... EX3160	... EH9160CW	... KM8100W	... ST7100W
... EX3160C	... EH9160CT	... KM8100CW	... ST7100CW
... WB3160	... 9083	... WB8600	... WB7100
	... WA9100T/W		... ST720W
	... TA9160		... WB700

- **DIGITAL DOOR STATIONS** (for the composition see pages 12, 30 or 45)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2+X PL82÷PL89	... MA62÷MA63	2+X MD84÷MD812
2+X PL92÷PL99 *	2+X MA92÷MA93*	2+X MD94÷MD912 *
2+X TD4100PL	2+X TD4100MA	2+X TD4100
2+X PL40PCDG-PL42PCDG	2+X MA42DG-MA43DG	2+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2+X MD10
	... MA20	2+X MD30
		2+X RD4120 (1)
		... TD4110 (1)
		... MD20, MD50

Connection of the door speaker to the digital push-button panels or encoders

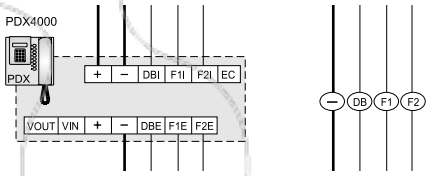


These connections must be made in all of the door stations (see pages 9, 13, 27, 31, 42 and 46).

- **CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 22, 23, 37, 51 or 53)

PROFILO series	MATRIX series	MODY series
... PL72-PL73	... MA72-MA73	... MD72-MD73-MD74
2+X PL82÷PL89	... MA62÷MA63	2+X MD84÷MD812
2+X PL92÷PL99 *	2+X MA92÷MA93*	2+X MD94÷MD912 *
2+X CD4134PL-CD4138PL	2+X CD4130MA	2+X CD4130
2+X PL40PCDG-PL42PCDG	2+X MA42DG-MA43DG	2+X MD41DG-MD41CDG
... PL20, PL50	MA42CDG-MA43CDG	2+X MD10-11-12
... PL24S-PL228S	... MA20	2+X MD30
	... MA22S-MA24S	... MD20-MD50
		... MD21÷MD228
		... Kit4244

The diagram includes the doorkeeper exchanger; if this article is not required, connect the -, DB, F1 and F2 wires directly.



- **OTHER ARTICLES**

...	**4235, 4235TV, 4235TVP**	Multiple decoding module
...	**DV2-DV4**	Video distributor
...	**4220**	Power supply
1+X	**1281**	Video power supply
1+X	**1471**	Relay unit
X	**1472**	2-contact relay
1	**1473**	Analog exchanger
X	**4273P**	Digital exchanger
...	**476**	Video amplifier-distributor for 5 risers
1	**PDX4000**	Doorkeeper exchanger *(if any)*
X	**D ****	Min. 100V-1A diodes (1N4007 type)
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Notes
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **4220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 5 buildings, additional video distributors art.**476** must be added (1 for each 4 additional buildings). Art.**1281** must be added to power 2 art.**476** (for the connection see page 106).
- A maximum of 12 multiple decoding modules for each building can be connected in this diagram. If more multiple decoding modules are present, a suitable number of power supply units **4220** must be added. Each additional power supply can power 20 multiple decoding modules.
- For the cross section of the wires and the video connection see pages 103÷106.

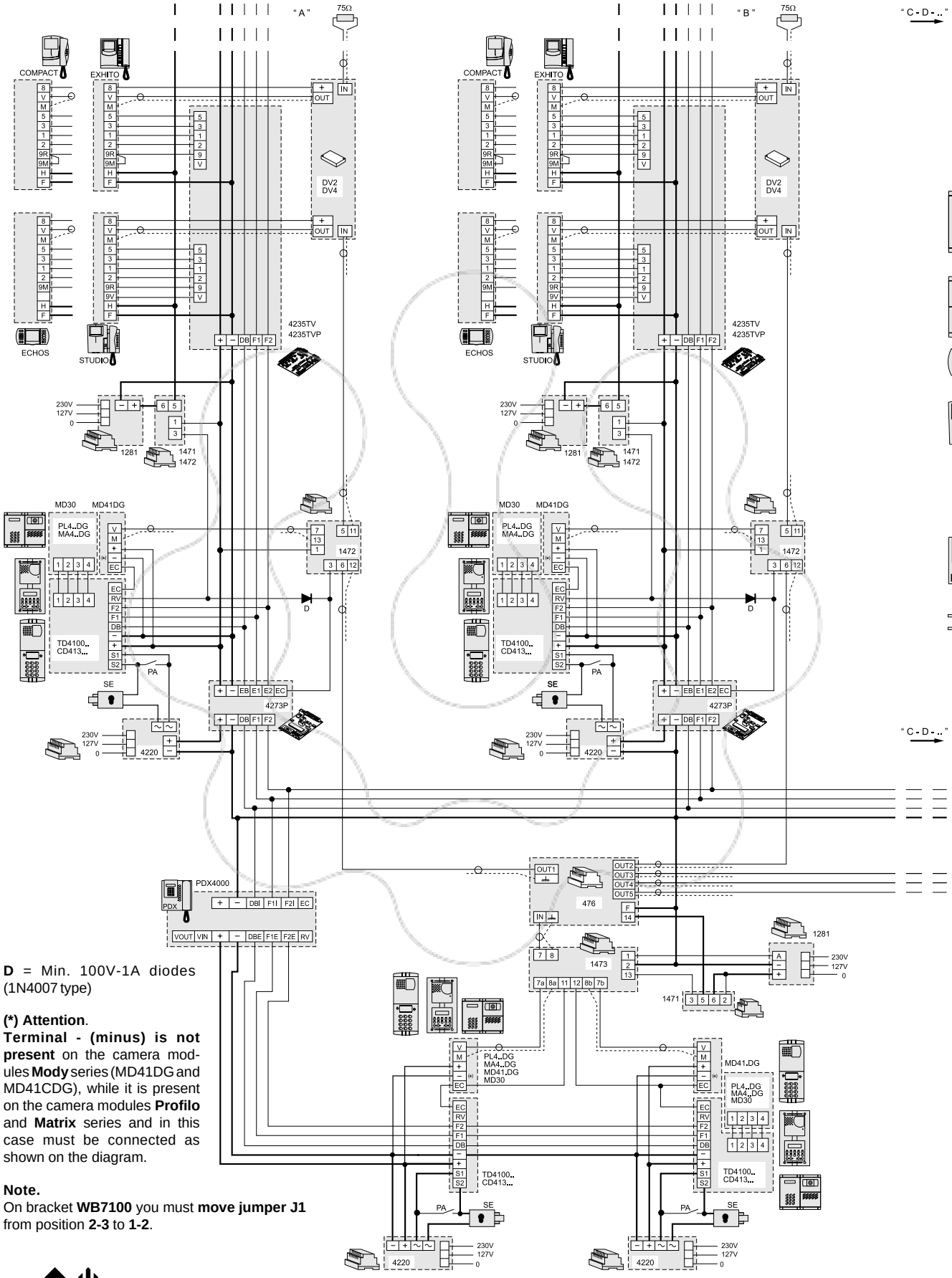
Operating modes
Operating modes refer to a system with doorkeeper exchanger. If the doorkeeper exchanger is not installed, read the "Doorkeeper exchanger in night mode" chapter only. For more detailed information on operation see the description of the different products (from page 11 to 102).

Doorkeeper exchanger in "day" mode
The doorkeeper exchanger rings when a call is made from one of the two main push-button panels. The operator monitor shows the image of the calling user and the display of the other push-button panel indicates the busy state. The operator picks up the handset to start conversation with the door station. If necessary, he can transfer the call to the internal user. To open the door at the calling station, press the 🔑 button.
When a call is made from the doorkeeper exchanger, only the riser of the called internal user is busy. The users of the other stairs are left free to operate with their secondary door station. The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
When the internal users make or receive a call to/from the doorkeeper exchanger, their video intercom switches ON with no picture.

Doorkeeper exchanger in "night" mode
When the doorkeeper exchanger is off, the calls from the door stations are directly transferred to the users.
The video intercom receives the call and the monitor switches on, showing the door station. The display of the push-button panels of the other main station and of the secondary door station connected to the riser of the called user indicates that the line is busy.
The other stairs are all independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible. The internal user picks up the handset to start conversation. Press the 🔑 button to open the door at the calling station.
For more information see the description of the different products (from page 11 to 102).

Programming
The following units must be programmed for the correct operation of the system:
4235 (page 92); **4235TV** (page 92); **4235TVP** (page 92);
TD4100PL (page 9); **TD4100MA** (page 27); **TD4100** (page 42);
CD4134-38PL (page 13); **CD4130MA** (page 31); **CD4130** (page 46);
PL24S-228S (page 17); **MA22S-24S** (page 32); **4244** (page 48).
4273P (page 97).
Note. In this system the digital exchangers (4273P) must be programmed as first.

DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance) USING MULTIPLE DECODING MODULES. With or without doorkeeper exchanger. Video intercoms powered with 21Vdc.



D = Min. 100V-1A diodes (1N4007 type)

(*) Attention.
Terminal - (minus) is not present on the camera modules **Mody** series (MD41DG and MD41CDG), while it is present on the camera modules **Profilo** and **Matrix** series and in this case must be connected as shown on the diagram.

Note.
On bracket **WB7100** you must **move jumper J1** from position **2-3** to **1-2**.

Notes to installation diagrams

In this technical manual all of the diagrams of the **FN4000** series are realised with only one intercom or video intercom for each user. The installation can be "personalised" by combining the applications illustrated in the following pages (from page 155 to 170) with the "base" diagrams shown from page 111 to 153.

Intercom systems

"Base" diagrams are shown from page 111 to 119, while installation diagrams are illustrated from page 155 to page 162.

Notes

1) Intercommunicating service

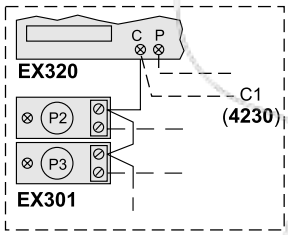
To have the intercommunicating service needs:

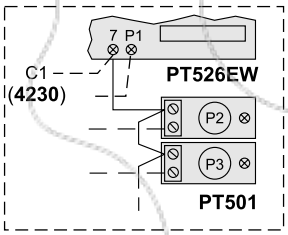
- make the connections which have been drawn with a dashed line;
- insert the supplementary loudspeaker **ST704** or **EX304** in the intercoms (or the electronic buzzer **SR41**);
- insert the necessary number of single buttons in the intercoms *(see table 1)* connected as suitable in the following diagrams.

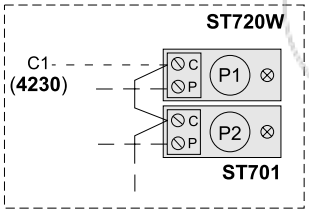
Table 1.

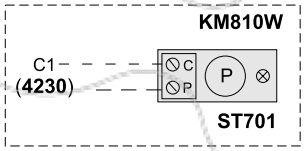
Quantity of buttons to be added for every single intercom

	Intercommunicating intercom models			
Qty intercoms	**EX320**	**ST720**	**PT526**	**KM810**
2 x	-	1	-	1
3 x	1	2	1	
4 x	2	3	2	
5 x	3	4	3	
6 x	4	5	4	
article buttons	**EX301**	**ST701**	**PT501**	**ST701**









2) Individual secondary door station

a) **Nameplate lamp (A)**. The lamp (or Led's) is included in the **Profilo, Matrix** and **Mody** door stations. It must be connected only if the push-button panel is installed in a quite dark place where the name plate is not visible or legible.

b) **"Busy" signalling (lamp B)**. Signalling of door station "**busy**" says that the internal user we wash to call is momentarily unavailable because it engaged in a conversation with the main door station. When the lamp is ON, no calls can be made in the door station; wait until the lamp turns OFF. With the external door stations **Profile** and **Matrix**, you can use the red service Led available on the audio or audio-video modules. With **Mody** door stations add **MD50** number module. **Busy** signalling is not necessary using the **EX320DG** intercoms and the videointercoms EX3160 with the wall bracket **WB3160DG**.

c) **"Free system" signalling (lamp C)**. Signalling of door station "**free system**" says that the call from the secondary door station as be sent to the internal user. If the lamp remains OFF after a call, it indicates the presence of a conversation between the internal users and the main line. Wait and try again after a while. With the external door stations **Profile** and **Matrix**, you can use the red service Led available on the audio or audio-video modules. With **Mody** door stations add **MD50** number module. **Free system** signalling is not necessary using the **EX320DG** intercoms and the videointercoms EX3160 with the wall bracket **WB3160DG**.

Video intercom systems

"Base" diagrams are shown from page 121 to 153, while installation diagrams are illustrated from page 163 to 168.

Notes

3) Intercommunicating service

To have the intercommunicating service needs:

- make the connections which have been drawn with a dashed line;
- disable the audio privacy function moving on the wall brackets of the videointercoms **jumper J1** from position 2-3 to **1-2**;
- insert the supplementary loudspeaker **ST704** or **EX304** in the intercoms *(if present). See the note 1 of chapter "intercom systems"*.

4) If the video signal is connected in serial mode (input and output), it is necessary to cut the 75Ω resistor located on the intercom wall bracket. Leave it only on the last video intercom.

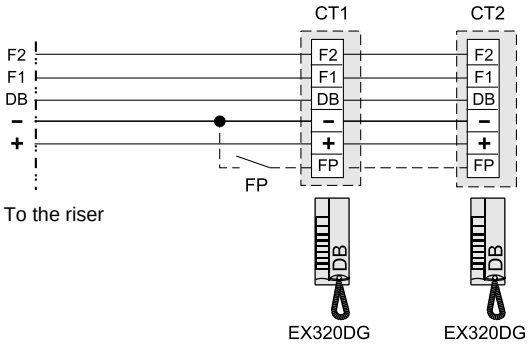
5) **KM8600W** models (with the addition **8083** back box) and **KM8800W** models can be used instead of **KM8100W** video intercoms. In this case another **1281** power supply must be added (each power supply can power max. 2 video intercoms).

6) Control switching ON of the various door stations of the installation can be made from the video intercoms. To do this:

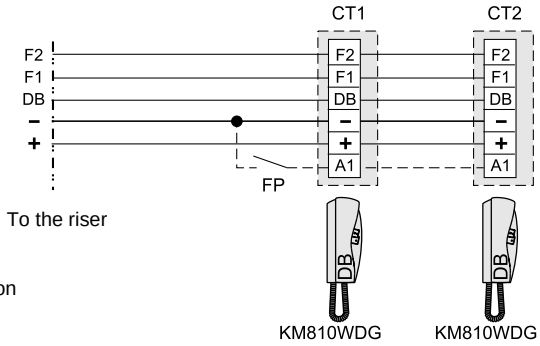
- press the ⊙ button to switch ON the video intercom and display the image from the secondary camera;
- press the ⊙ button again to display the image from the main camera (if the line is free and the main camera is permanently powered).

7) The diagrams illustrated in the following pages can be used to realise video intercom installations with audio only secondary door stations. To this end, the camera must not be connected. In this case the call from the external secondary door stations will switch the video intercom ON with no image.

2 PARALLEL INTERCOMS (NOT INTERCOMMUNICATING) CONNECTED TO THE RISER



FP = Floor call push-button *(optional)*



Mandatory system programming for the correct working of the system

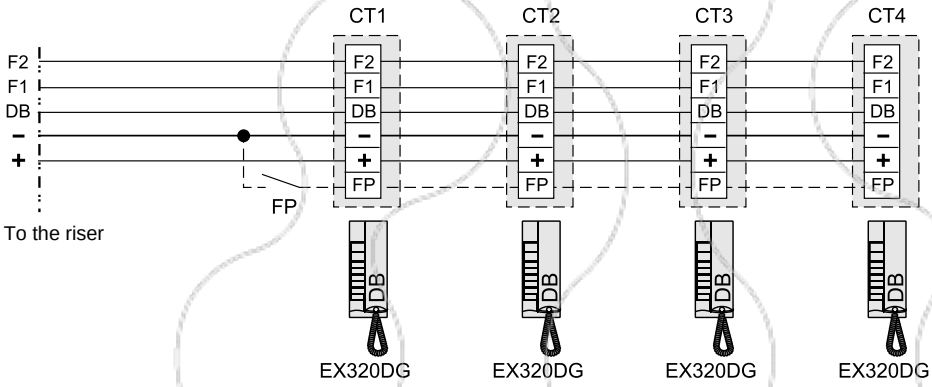
CT1	user code	9961	
CT2	user code	9962	

All intercoms must have the **same "user code"**. Other parameters should remain as they are set in the factory. For the characteristics of the codes see pages 69, 70, 75 and 76.

Mandatory system programming for the correct working of the system

CT1	user code	9980	9994
CT2	user code	9981	9994

4 PARALLEL INTERCOMS (NOT INTERCOMMUNICATING) CONNECTED TO THE RISER



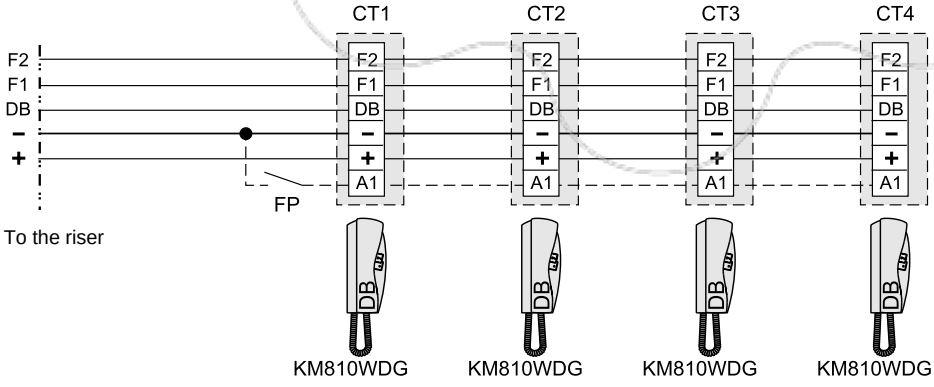
Mandatory system programming for the correct working of the system

CT1	user code	9961
CT2	user code	9962
CT3	user code	9963
CT4	user code	9964

All intercoms must have the **same "user code"**. Other parameters should remain as they are set in the factory. For the characteristics of the codes see pages 69 and 70.

FP = Floor call push-button *(optional)*

4 PARALLEL INTERCOMS (NOT INTERCOMMUNICATING) CONNECTED TO THE RISER



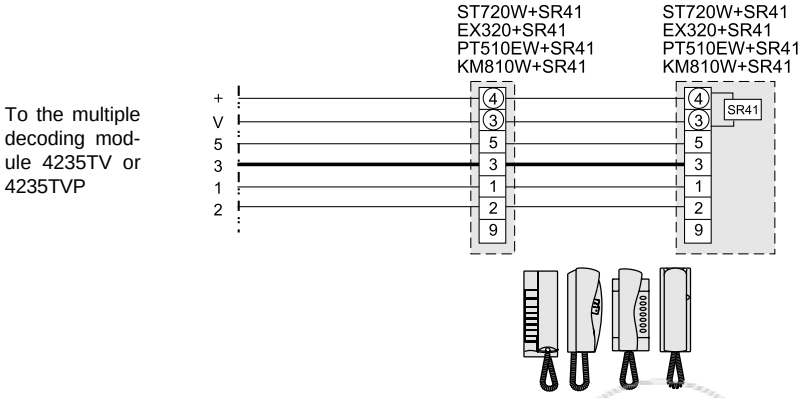
Mandatory system programming for the correct working of the system

CT1	user code	9980	9994
CT2	user code	9981	9994
CT3	user code	9981	9994
CT4	user code	9981	9994

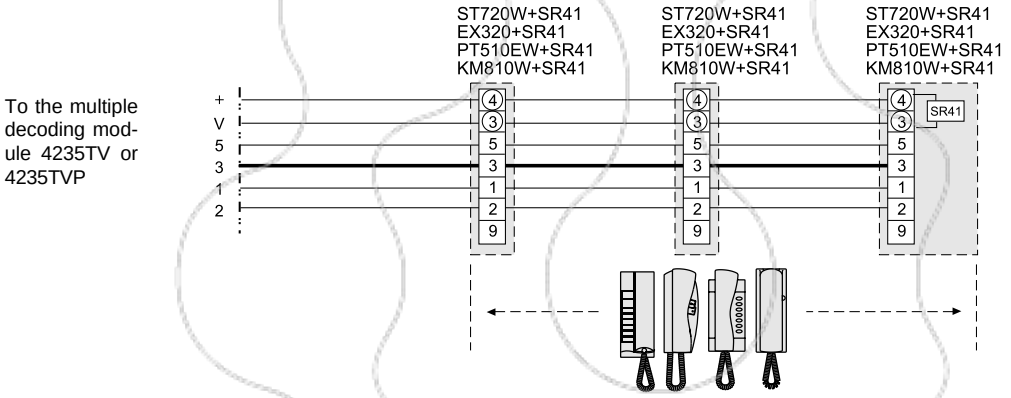
All intercoms must have the **same "user code"**. Other parameters should remain as they are set in the factory. For the characteristics of the codes see pages 75 and 76.

FP = Floor call push-button *(optional)*

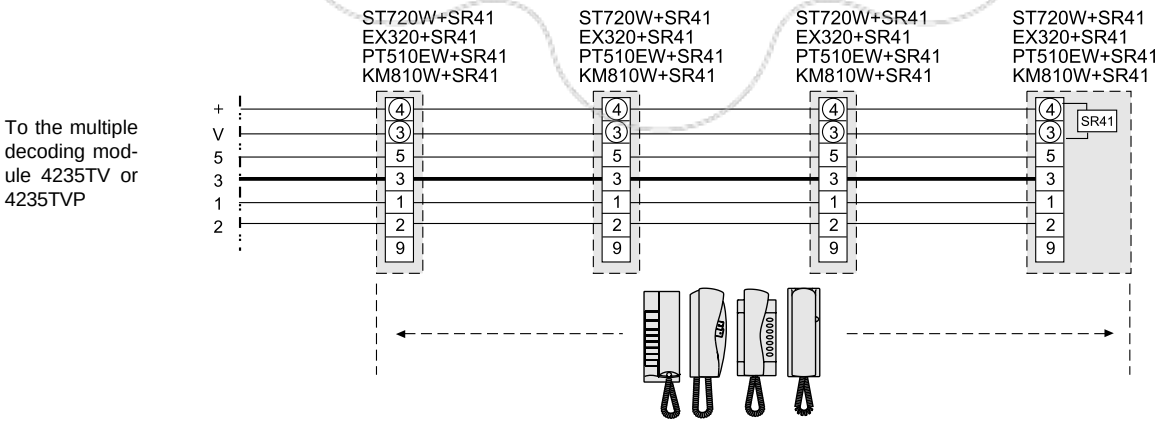
2 PARALLEL INTERCOMS CONNECTED TO THE MULTIPLE DECODING MODULE 4235TV OR 4235TVP



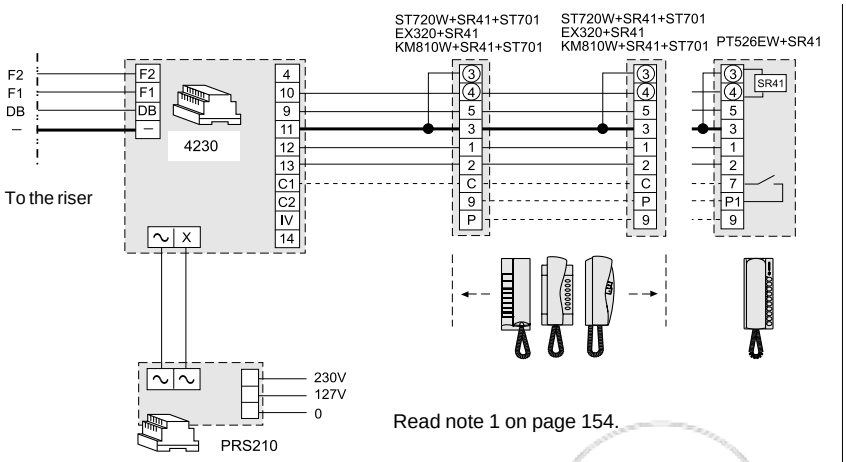
3 PARALLEL INTERCOMS CONNECTED TO THE MULTIPLE DECODING MODULE 4235TV OR 4235TVP



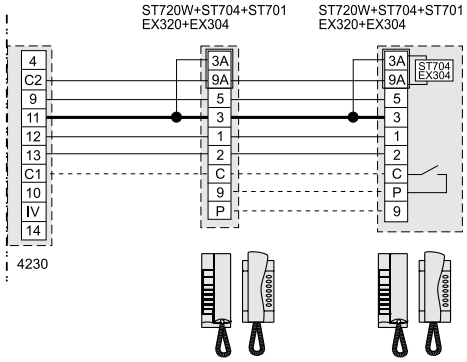
4 PARALLEL INTERCOMS CONNECTED TO THE MULTIPLE DECODING MODULE 4235TV OR 4235TVP



2 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER

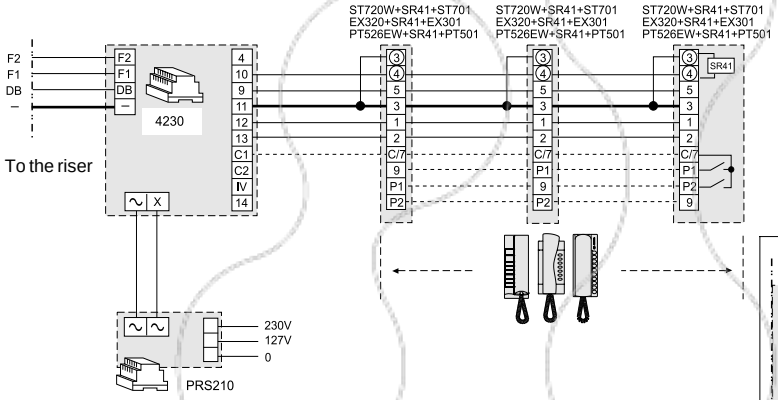


Read note 1 on page 154.



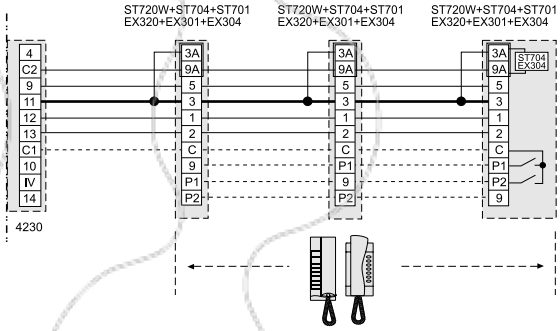
Read note 1 on page 154.

3 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER

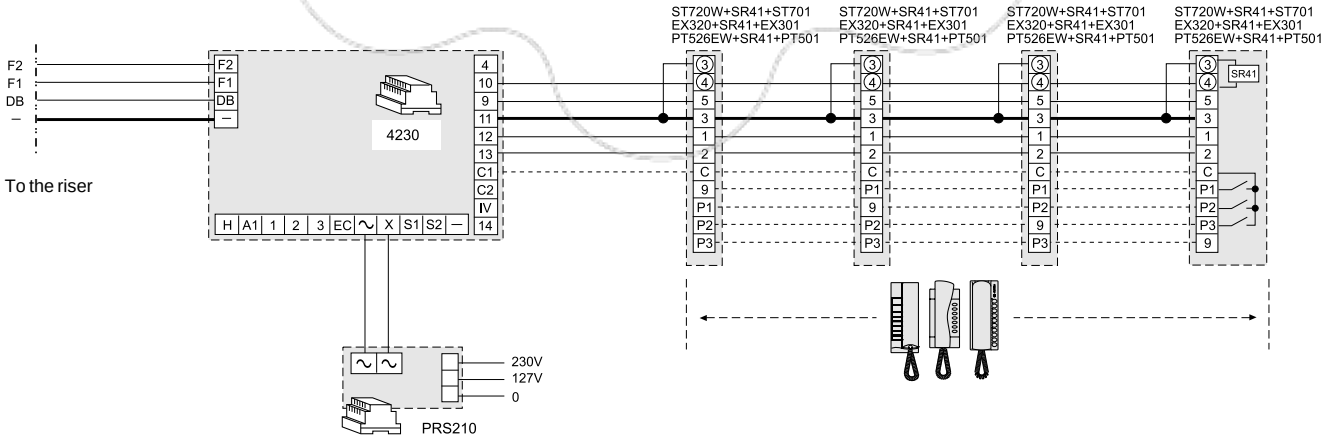


Read note 1 on page 154.

Read note 1 on page 154.



4 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER

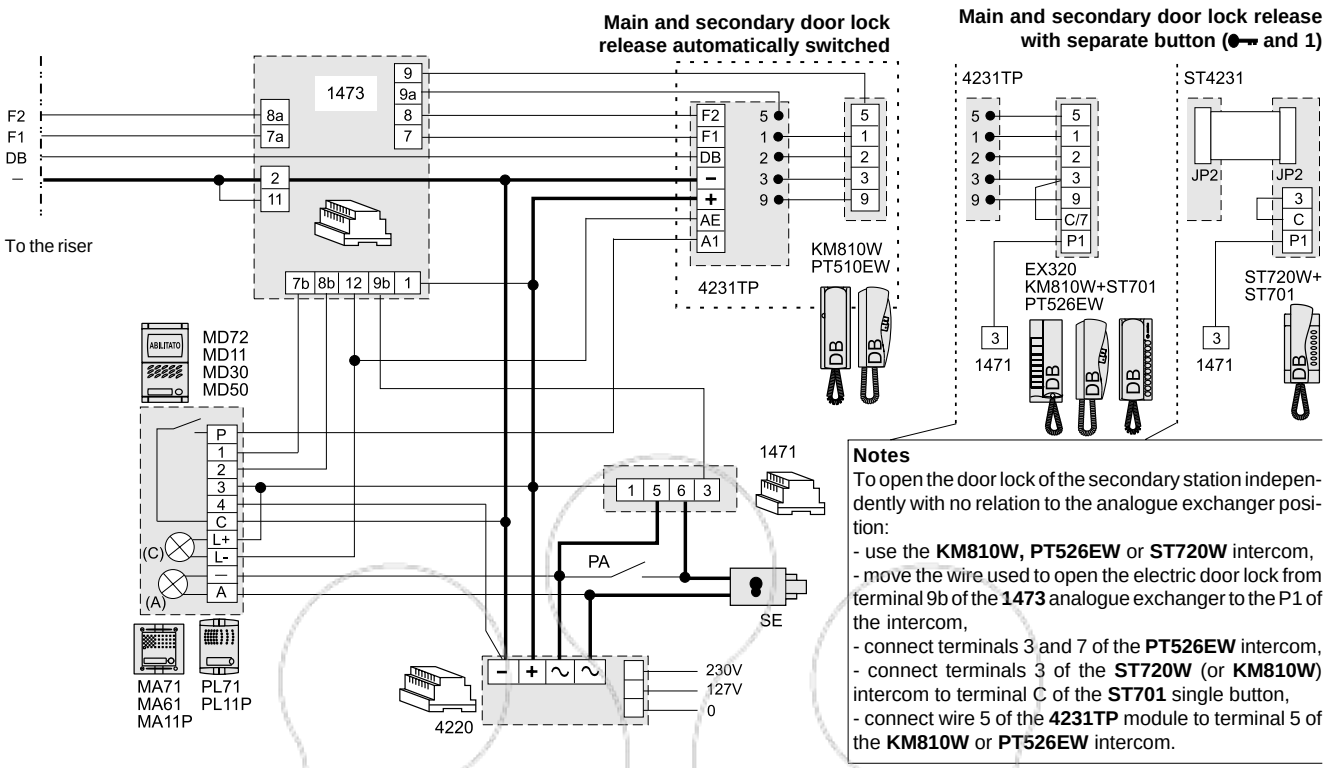


Read note 1 on page 154.

Installation diagrams

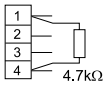
With individual secondary door station

1 INTERCOM CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION



Notes

To open the door lock of the secondary station independently with no relation to the analogue exchanger position:
- use the **KM810W, PT526EW** or **ST720W** intercom,
- move the wire used to open the electric door lock from terminal 9b of the **1473** analogue exchanger to the P1 of the intercom,
- connect terminals 3 and 7 of the **PT526EW** intercom,
- connect terminals 3 of the **ST720W** (or **KM810W**) intercom to terminal C of the **ST701** single button,
- connect wire 5 of the **4231TP** module to terminal 5 of the **KM810W** or **PT526EW** intercom.

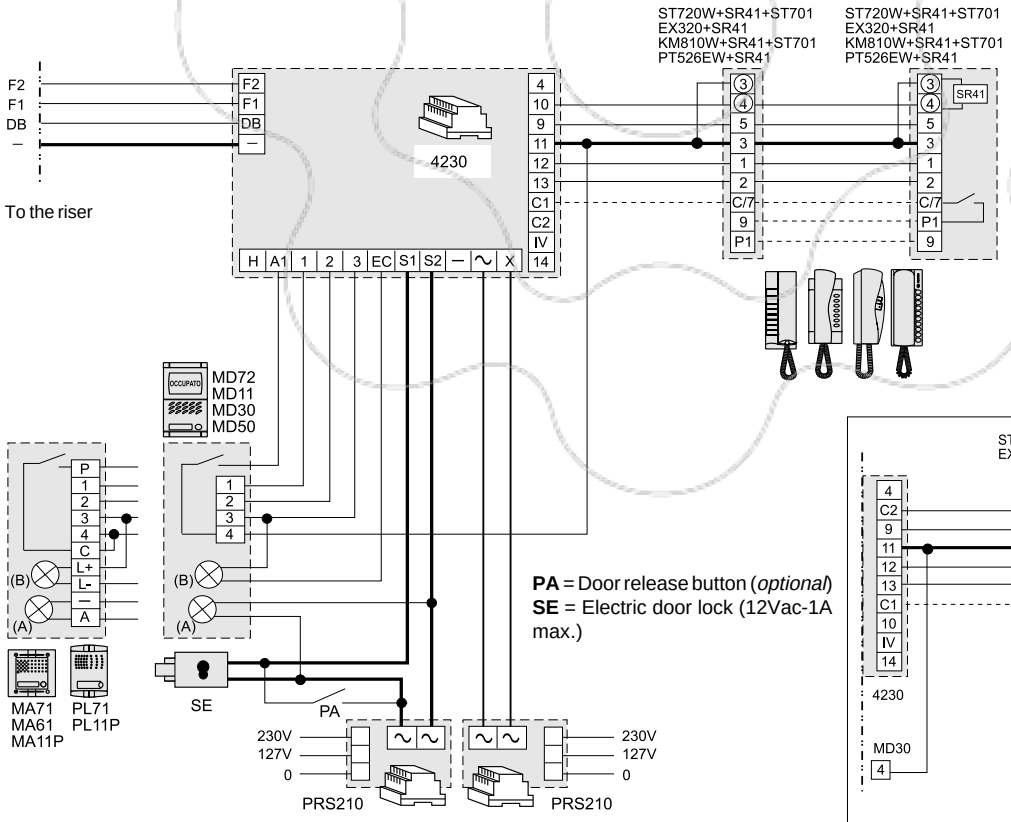


Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

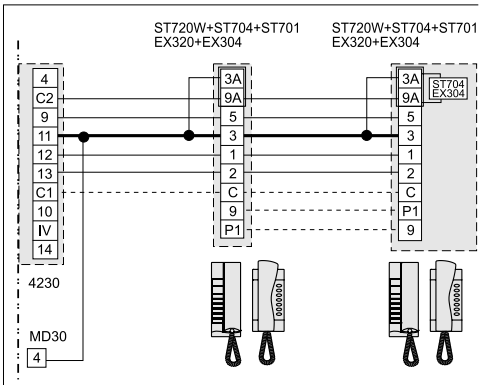
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

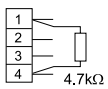
Read notes 2a and 2c on page 154.

2 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION



PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)



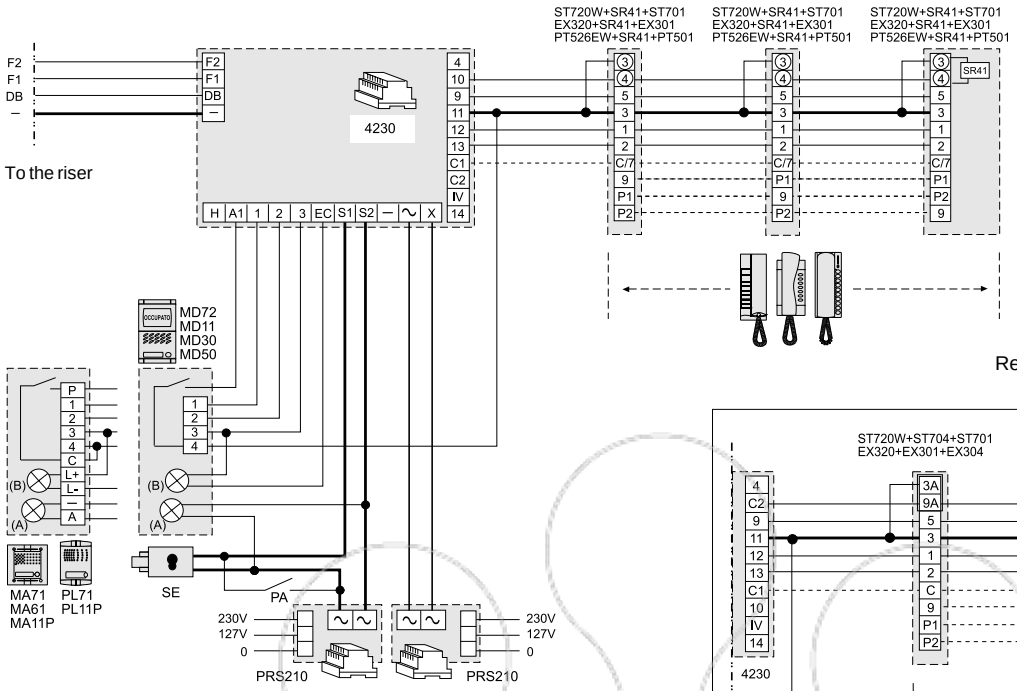


Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

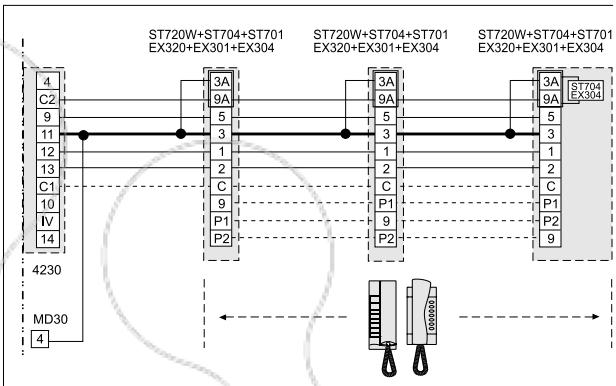
Read notes 1, 2a and 2c on page 154.

Read notes 1, 2a and 2c on page 154.

3 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION

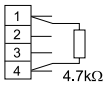


Read notes 1, 2a and 2c on page 154.



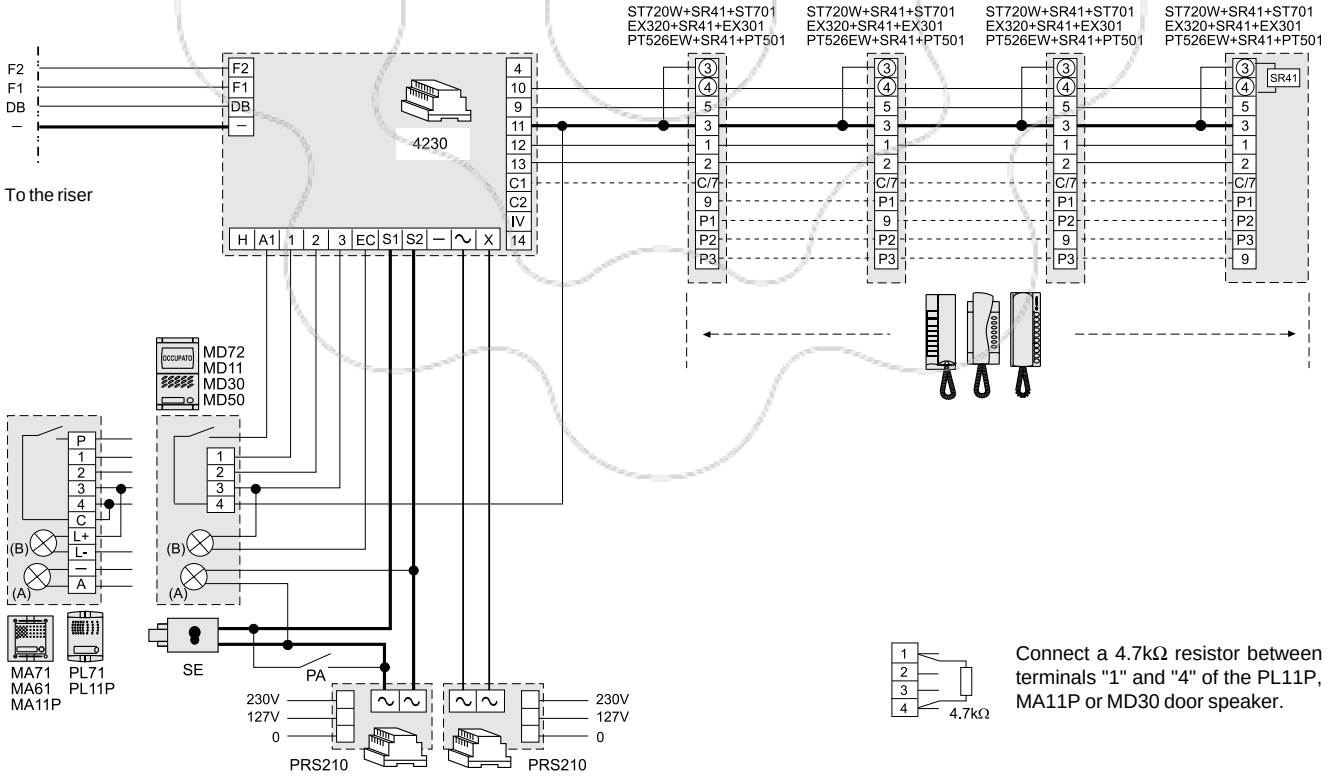
Read notes 1, 2a and 2c on page 154.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)



Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

4 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION

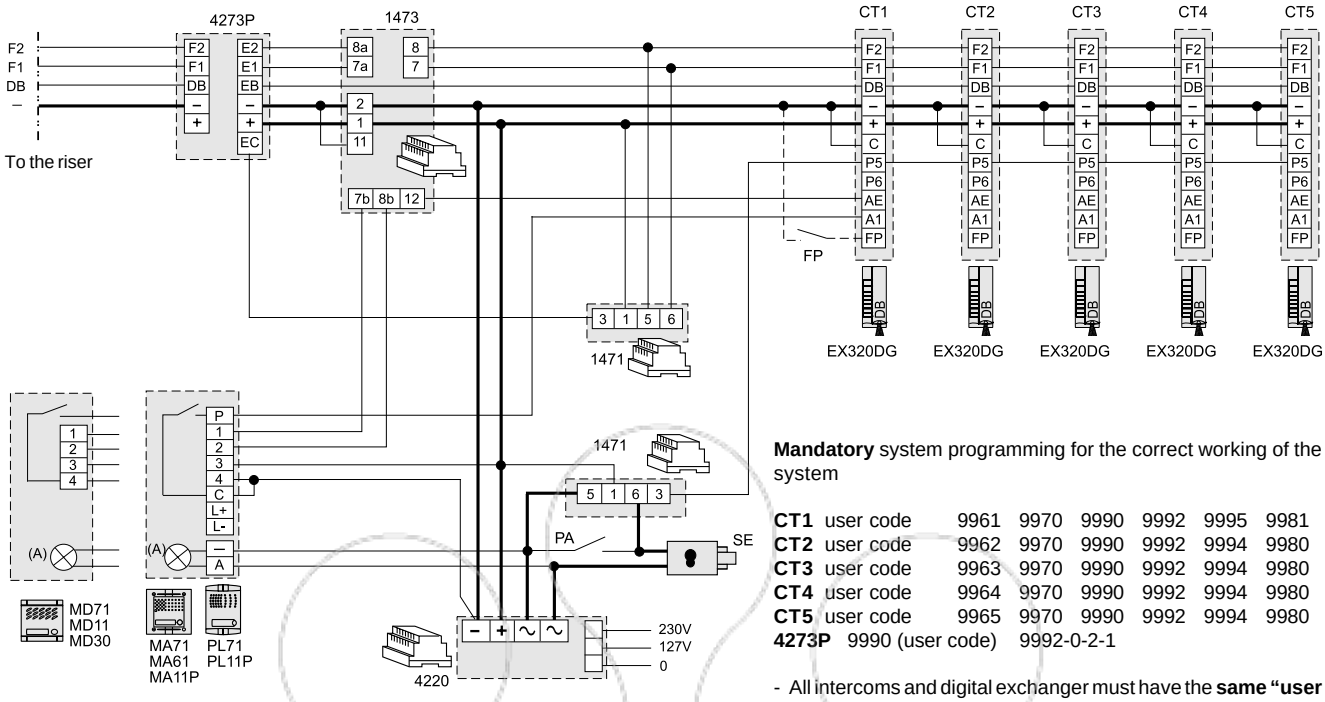


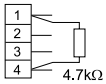
Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

Read notes 1, 2a and 2c on page 154.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

5 INTERCOMMUNICATING PARALLEL INTERCOMS (EXHITO SERIES) CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION





Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

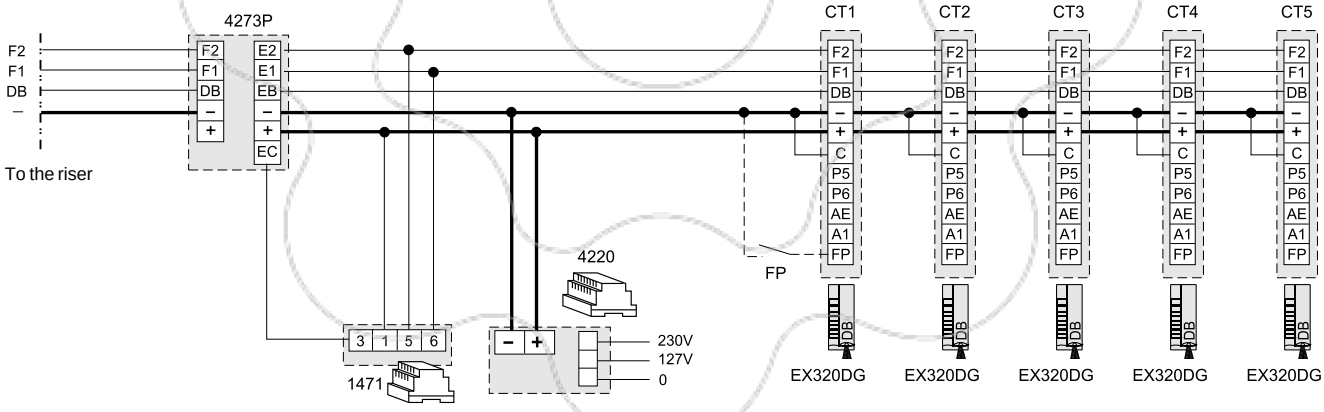
FP = Floor call push-button *(optional)*
PA = Door release button *(optional)*
SE = Electric door lock (12Vac-1A max.)

Mandatory system programming for the correct working of the system

CT1	user code	9961	9970	9990	9992	9995	9981
CT2	user code	9962	9970	9990	9992	9994	9980
CT3	user code	9963	9970	9990	9992	9994	9980
CT4	user code	9964	9970	9990	9992	9994	9980
CT5	user code	9965	9970	9990	9992	9994	9980
4273P	9990 (user code)	9992-0-2-1					

- All intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- To make intercommunicating calls it is necessary to program properly the push-buttons 1 to 4 of each intercom.
- For more details about codes and programming push-buttons see pages 69 and 70.
- Read note 2a on page 154.

5 INTERCOMMUNICATING PARALLEL INTERCOMS (EXHITO SERIES) CONNECTED TO THE RISER



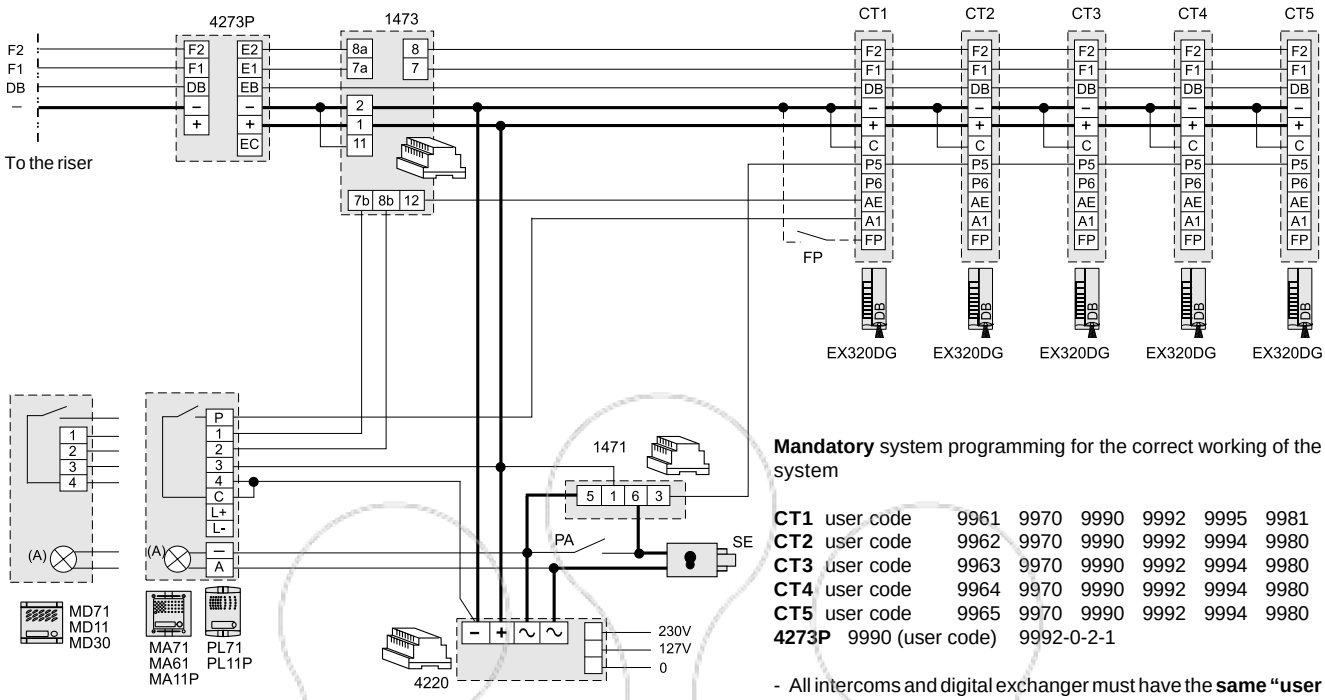
FP = Floor call push-button *(optional)*

Mandatory system programming for the correct working of the system

CT1	user code	9961	9981
CT2	user code	9962	9980
CT3	user code	9963	9980
CT4	user code	9964	9980
CT5	user code	9965	9980
4273P	9990 (user code)	9992-0-2-1	

- All intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- To make intercommunicating calls it is necessary to program properly the push-buttons 1 to 4 of each intercom.
- For more details about codes and programming push-buttons see pages 69 and 70.

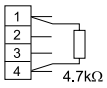
5 PARALLEL INTERCOMS EXHITO SERIES (NOT INTERCOMMUNICATING) CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION



Mandatory system programming for the correct working of the system

CT1	user code	9961	9970	9990	9992	9995	9981
CT2	user code	9962	9970	9990	9992	9994	9980
CT3	user code	9963	9970	9990	9992	9994	9980
CT4	user code	9964	9970	9990	9992	9994	9980
CT5	user code	9965	9970	9990	9992	9994	9980
4273P	9990 (user code)	9992-0-2-1					

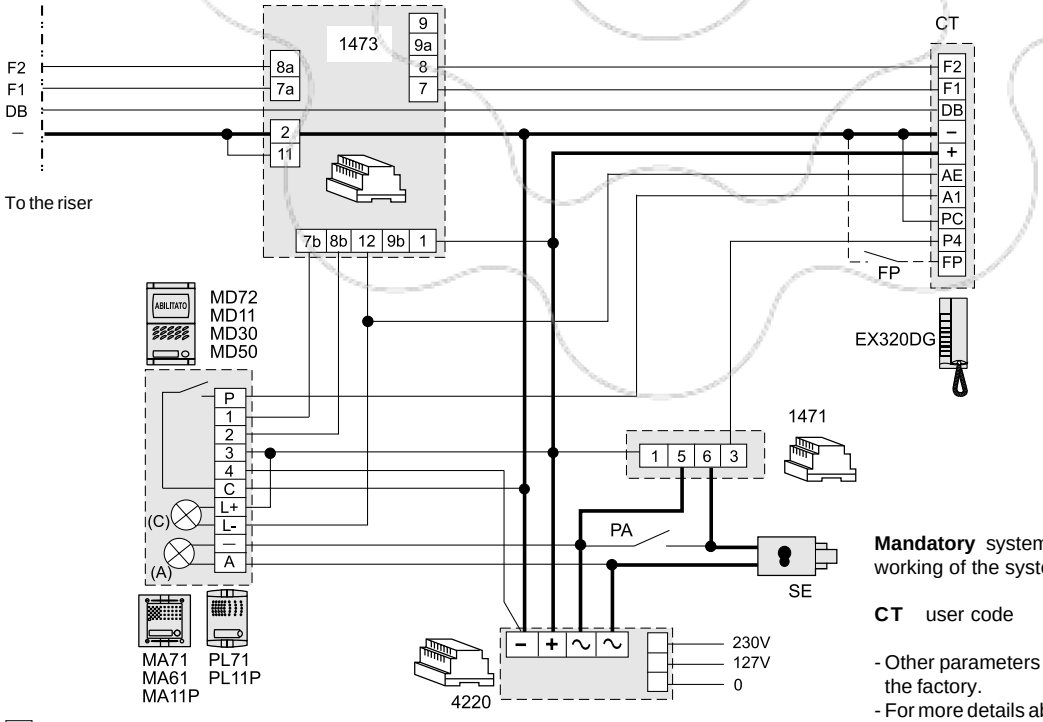
- All intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- To make intercommunicating calls it is necessary to program properly the push-buttons 1 to 4 of each intercom.
- For more details about codes and programming push-buttons see pages 69 and 70.
- Read note 2a on page 154.



Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

FP = Floor call push-button *(optional)*
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

1 EXHITO INTERCOM CONNECTED TO THE RISER AND TO SECONDARY DOOR STATION

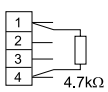


Main and secondary door lock release with separate button (🔑 and 4)

Mandatory system programming for the correct working of the system

CT user code

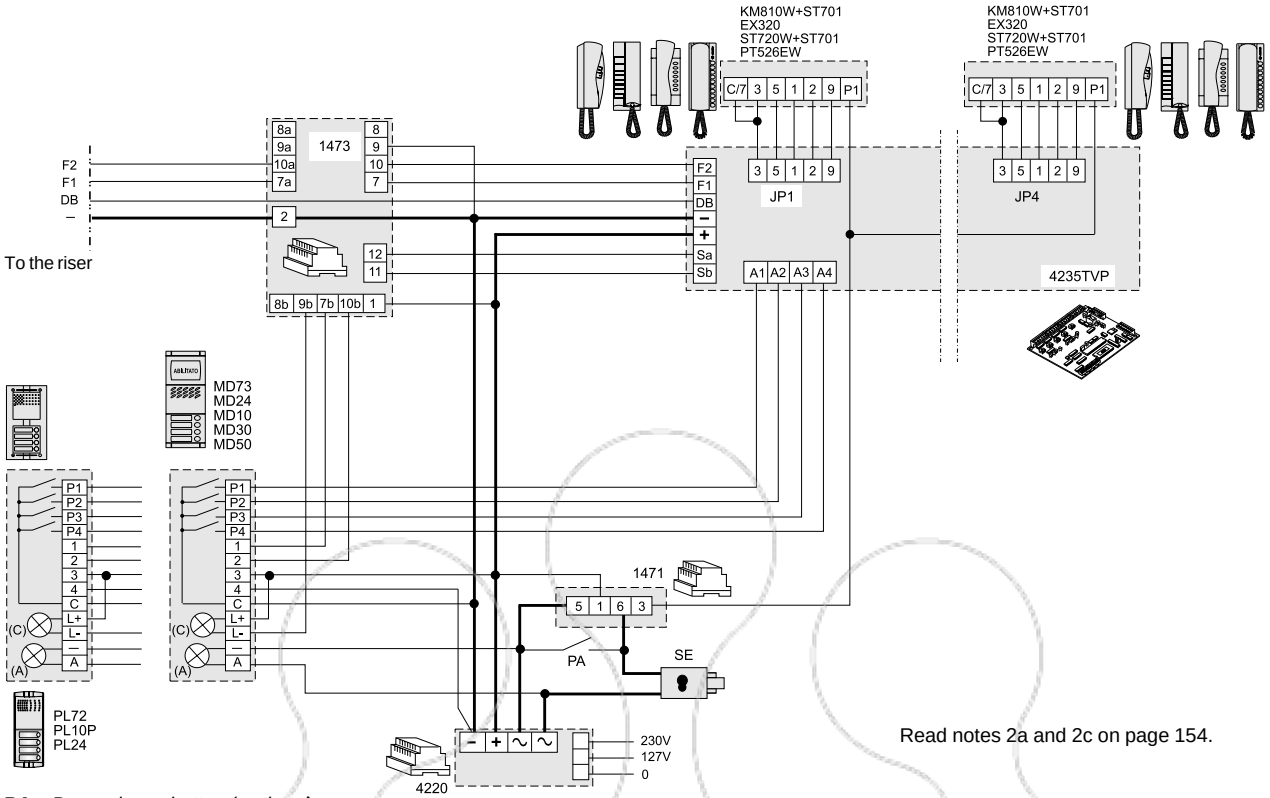
- Other parameters should remain as they are set in the factory.
- For more details about codes see pages 69 and 70.
- Read notes 2a and 2c on page 154.



Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL11P, MA11P or MD30 door speaker.

FP = Floor call push-button *(optional)*
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

4 INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO DOOR STATION WITH 4 BUTTONS



Read notes 2a and 2c on page 154.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

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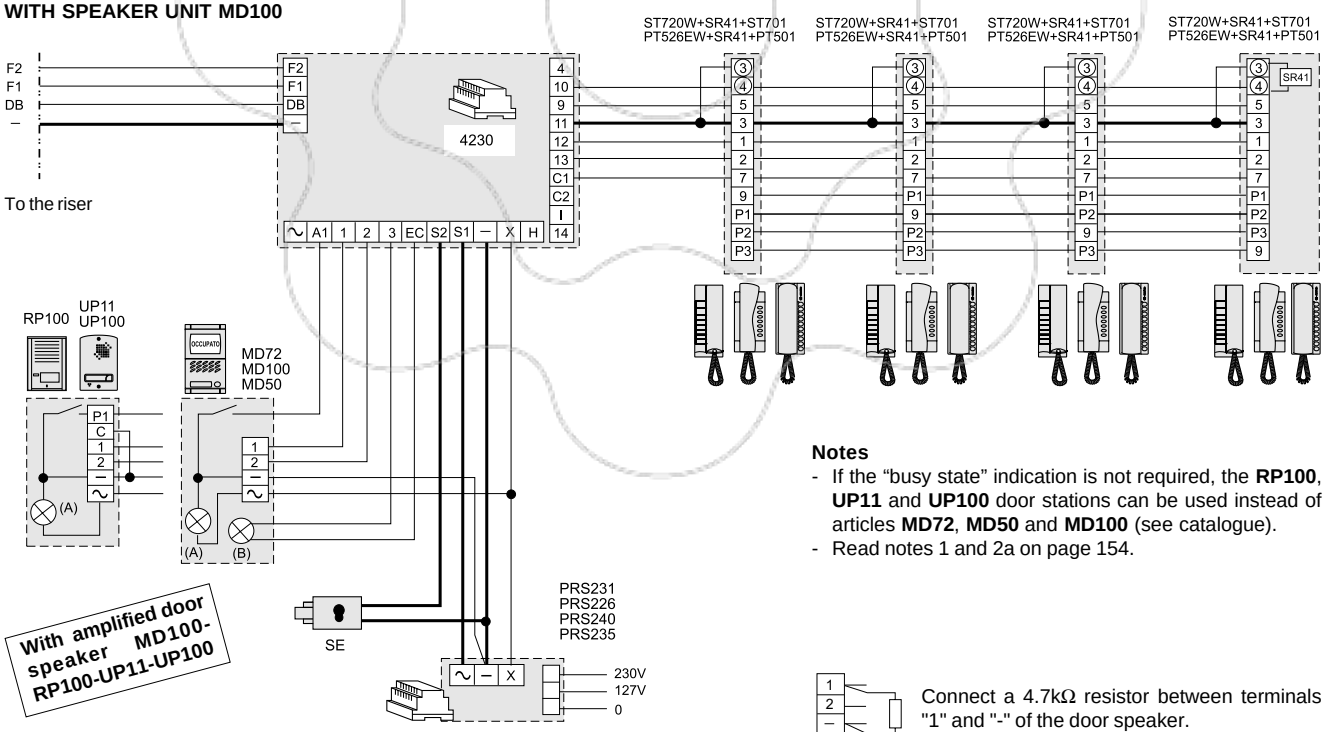
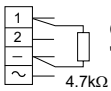
4 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION WITH SPEAKER UNIT MD100



Notes

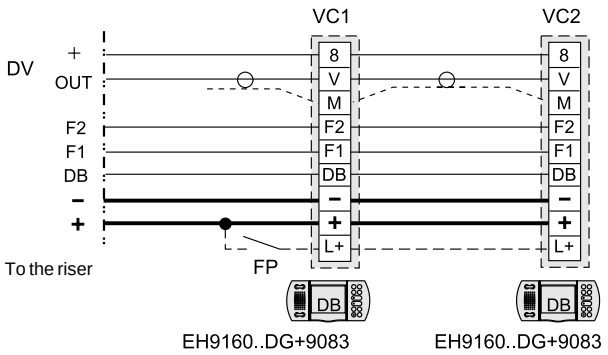
- If the "busy state" indication is not required, the **RP100**, **UP11** and **UP100** door stations can be used instead of articles **MD72**, **MD50** and **MD100** (see catalogue).
- Read notes 1 and 2a on page 154.



Connect a 4.7kΩ resistor between terminals "1" and "-" of the door speaker.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

2 PARALLEL ECHOS VIDEO INTERCOMS WITH INTEGRATED DECODING MODULE CONNECTED TO THE RISER



Mandatory system programming for the correct working of the system

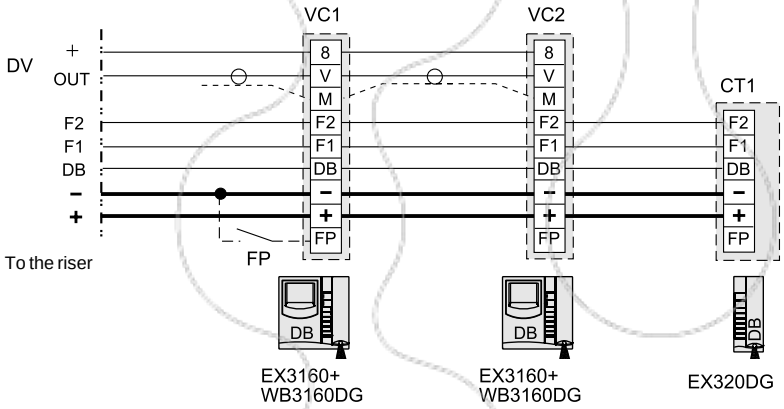
VC1	user code	9980
VC2	user code	9981

- All videointercoms must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 61.

FP = Floor call push-button *(optional)*. To enable this function move the **jumper J3** to position **2-3** (see page 56).

Read note 4 on page 154.

2 PARALLEL EXHITO VIDEO INTERCOMS AND 1 INTERCOM WITH INTEGRATED DECODING MODULE CONNECTED TO THE RISER



Mandatory system programming for the correct working of the system

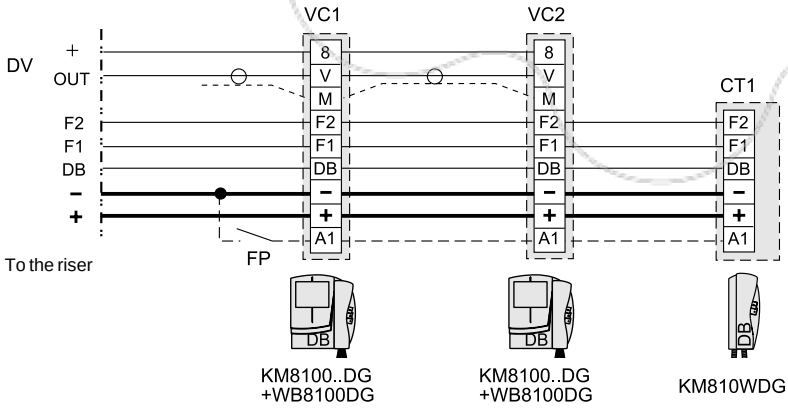
VC1	user code	9961	9982
VC2	user code	9962	9983
CT1	user code	9963	-

- All videointercoms and intercom must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 66, 67, 69 and 70.

FP = Floor call push-button *(optional)*

Read note 4 on page 154.

2 PARALLEL COMPACT VIDEO INTERCOMS AND 1 INTERCOM WITH INTEGRATED DECODING MODULE CONNECTED TO THE RISER



Mandatory system programming for the correct working of the system

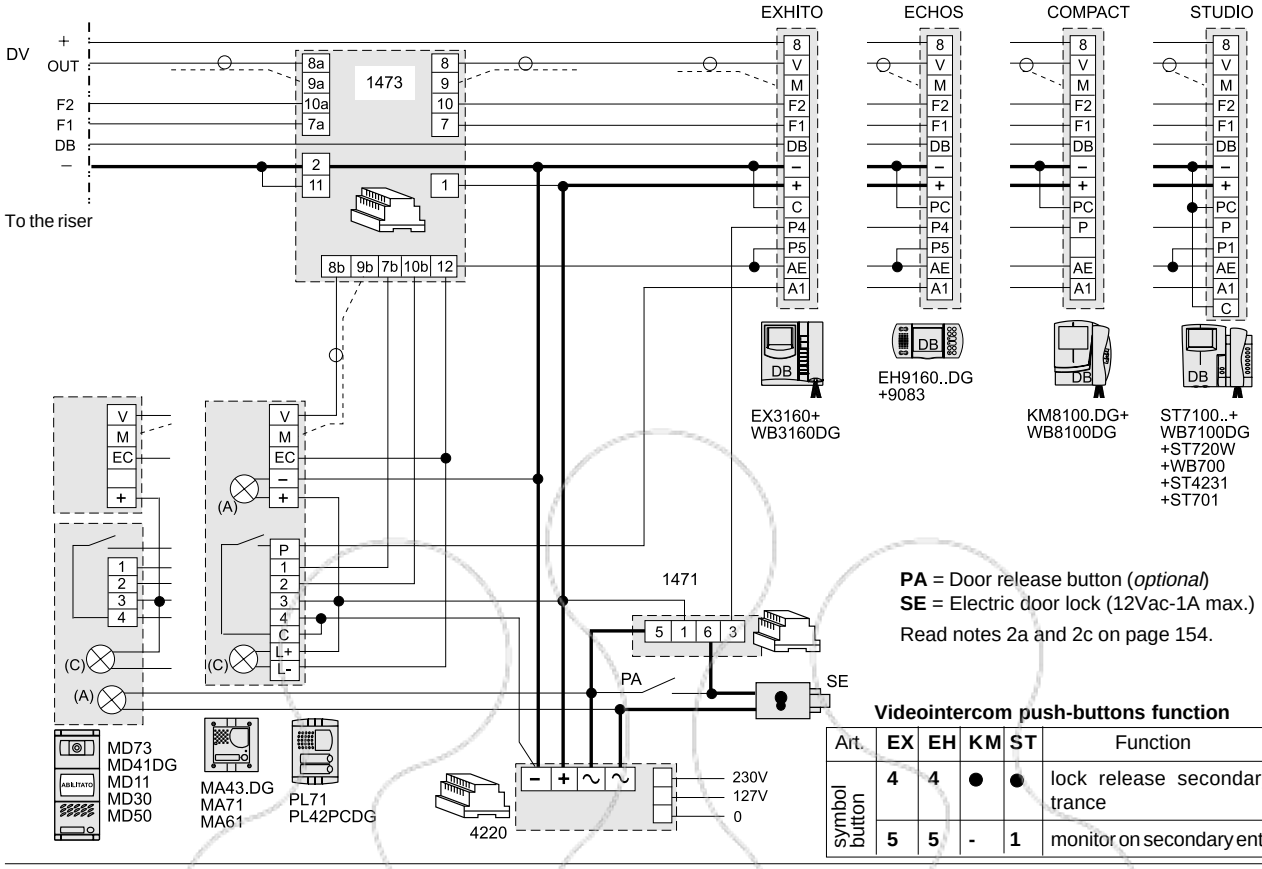
VC1	user code	9980	9994
VC2	user code	9981	9994
CT1	user code	9981	9994

- All videointercoms and intercom must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 73, 75 and 76.

FP = Floor call push-button *(optional)*

Read note 4 on page 154.

1 VIDEO INTERCOM CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION



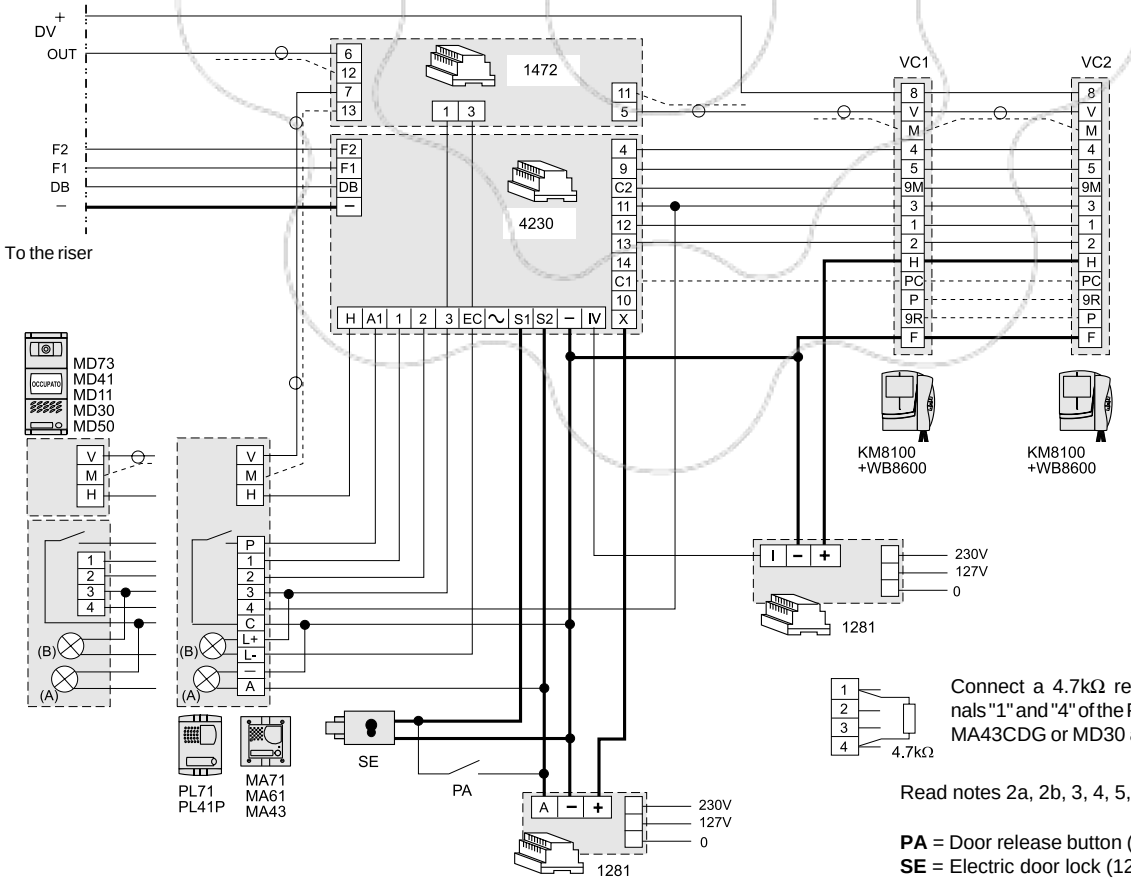
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Read notes 2a and 2c on page 154.

Videointercom push-buttons function

Art.	EX	EH	KM	ST	Function
symbol button	4	4	●	●	lock release secondary entrance
	5	5	-	1	monitor on secondary entrance

2 INTERCOMMUNICATING PARALLEL VIDEO INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION

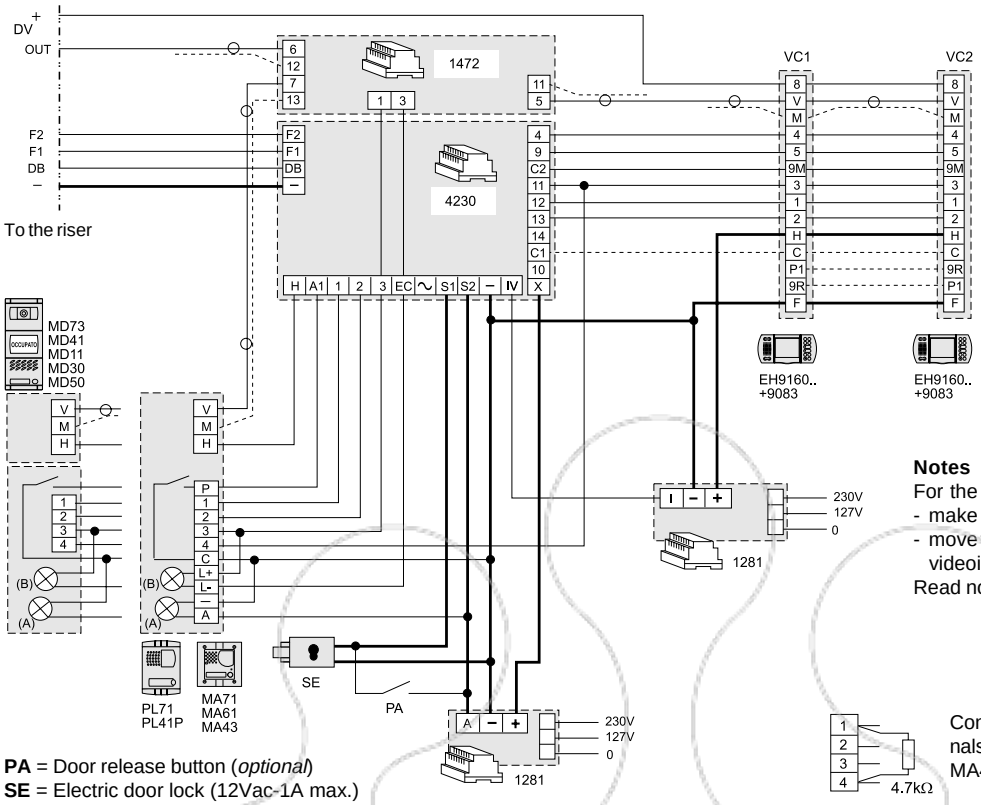


Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL42PCDG, MA43DG, MA43CDG or MD30 article.

Read notes 2a, 2b, 3, 4, 5, 6 and 7 on page 154.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

2 PARALLEL ECHOS VIDEO INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION



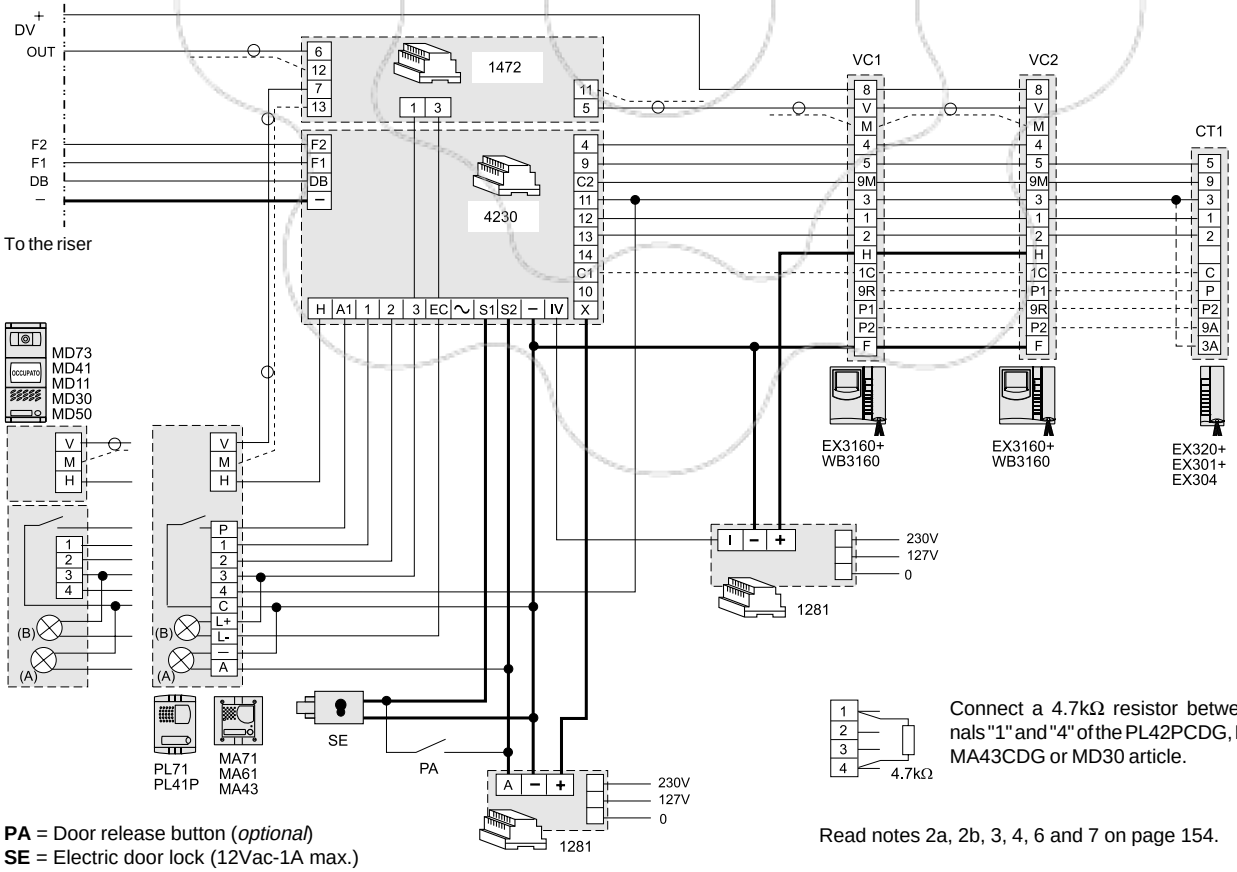
Notes
For the intercommunicating service must:
- make the connections in dashed lines;
- move the jumper **J5**, located on the back of the videointercoms, to **1-2** position.

Read notes 2a, 2b, 4, 6 and 7 on page 154.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL42PCDG, MA43DG, MA43CDG or MD30 article.

2 PARALLEL ECHOS VIDEO INTERCOMS AND 1 EXHITO INTERCOM CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION

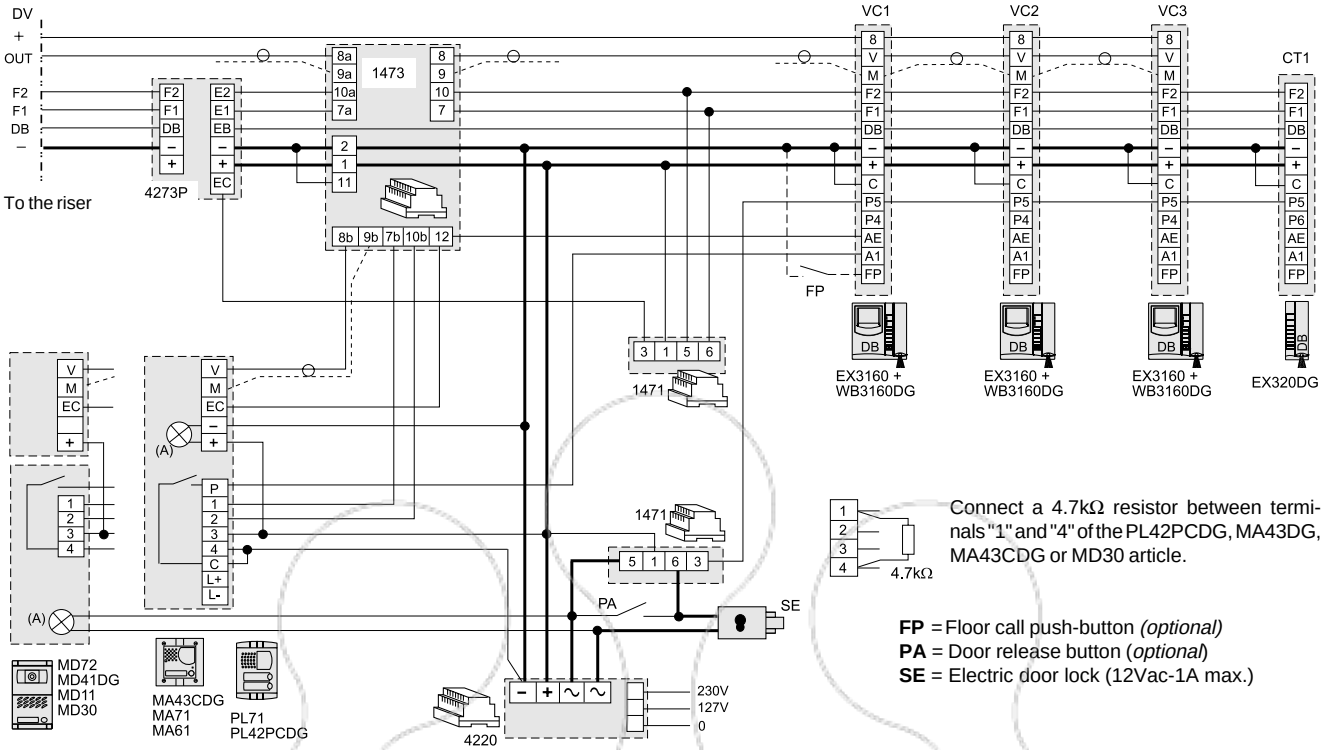


Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL42PCDG, MA43DG, MA43CDG or MD30 article.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Read notes 2a, 2b, 3, 4, 6 and 7 on page 154.

3 VIDEO INTERCOMS AND 1 INTERCOMMUNICATING PARALLEL INTERCOM CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION. During the call only VC1 videointercom is powered ON, the other can be switched ON by pressing the push-button "control switching ON"



Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL42PCDG, MA43DG, MA43CDG or MD30 article.

FP = Floor call push-button *(optional)*
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Mandatory system programming for the correct working of the system

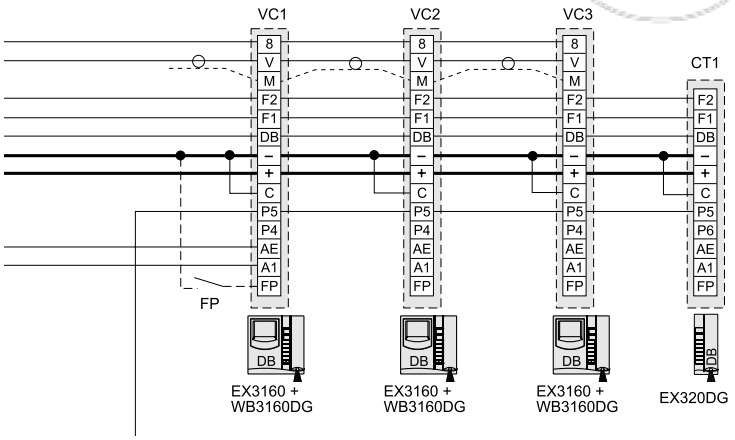
VC1	user code	9961	9970	9981	9982	9995	9997	9990	9992
VC2	user code	9962	9970	9980	9983	9994	9997	9990	9992
VC3	user code	9963	9970	9980	9983	9994	9997	9990	9992
CT1	user code	9964	9970	9980	-	9994	-	9990	9992

4273P 9990 (user code) 9992-0-2-1

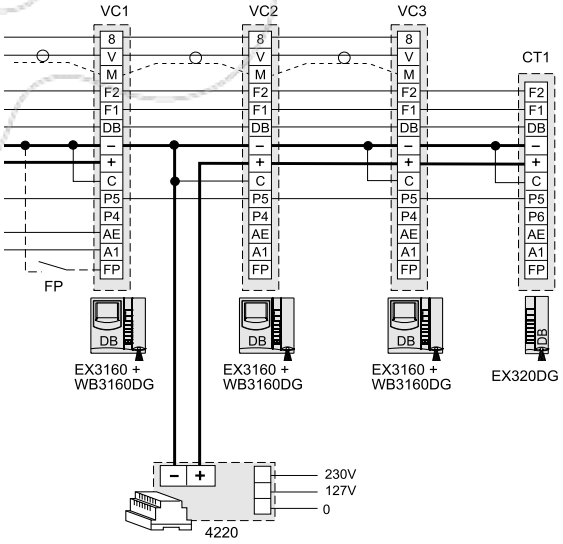
- All videointercoms, intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 66, 67, 69, 70, 97 and 98.

Read notes 2a, 2c, 4, 6 and 7 on page 154.

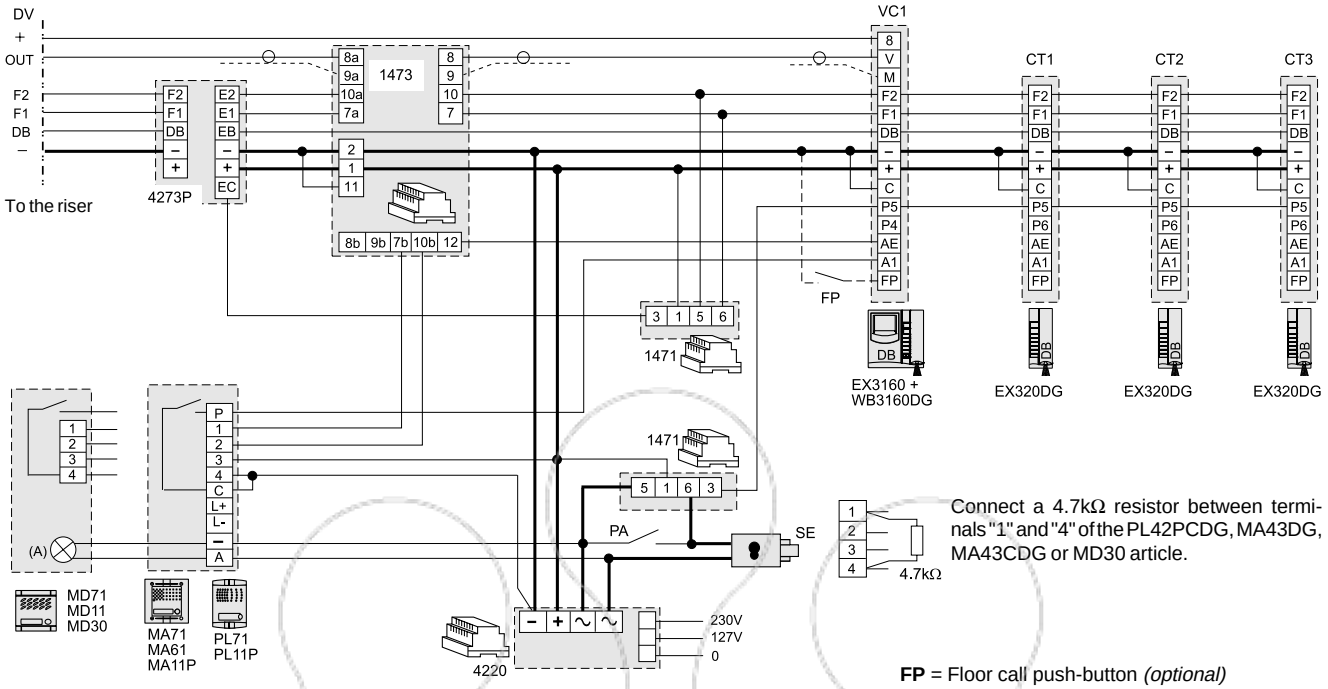
If intercommunicating function is not requested it is sufficient to remove 1471 relays from the diagram reported above and do not program the call push-buttons (see below diagram). To power ON all videointercoms during an incoming call add a supplementary power supply type 4220 as shown in the diagram on the right.



To power ON all videointercoms during an incoming, it is necessary to add an supplementary power supply type 4220 connected as shown in the below diagram and to program videointercoms VC2 and VC3 with the code 9982.



1 VIDEO INTERCOM AND 3 INTERCOMMUNICATING PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION.



Connect a 4.7kΩ resistor between terminals "1" and "4" of the PL42PCDG, MA43DG, MA43CDG or MD30 article.

FP = Floor call push-button *(optional)*
PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Mandatory system programming for the correct working of the system

VC1	user code	9961	9970	9981	9982	9995	9997	9990	9992
CT1	user code	9962	9970	9980	-	9994	-	9990	9992
CT2	user code	9963	9970	9980	-	9994	-	9990	9992
CT3	user code	9964	9970	9980	-	9994	-	9990	9992

4273P 9990 (user code) 9992-0-2-1

- All videointercoms, intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 66, 67, 69, 70, 97 and 98.

Read notes 2a, 2c, and 6 on page 154.

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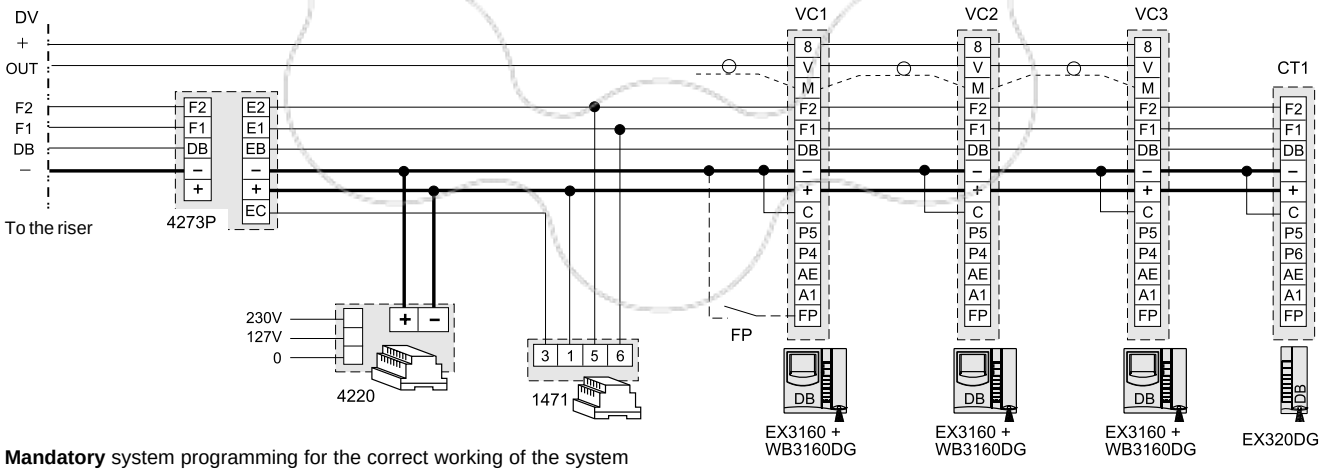
3 VIDEO INTERCOMS AND 1 INTERCOMMUNICATING PARALLEL INTERCOM CONNECTED TO THE RISER. Only VC1 videointercom is enabled after receiving a call, the other can be switched by pressing the button "Control ON"



Mandatory system programming for the correct working of the system

VC1	user code	9961	9981	9982	9995	9997	9990	9992
VC2	user code	9962	9980	9983	9994	9997	9990	9992
VC3	user code	9963	9980	9983	9994	9997	9990	9992
CT1	user code	9964	9980	-	9994	-	9990	9992

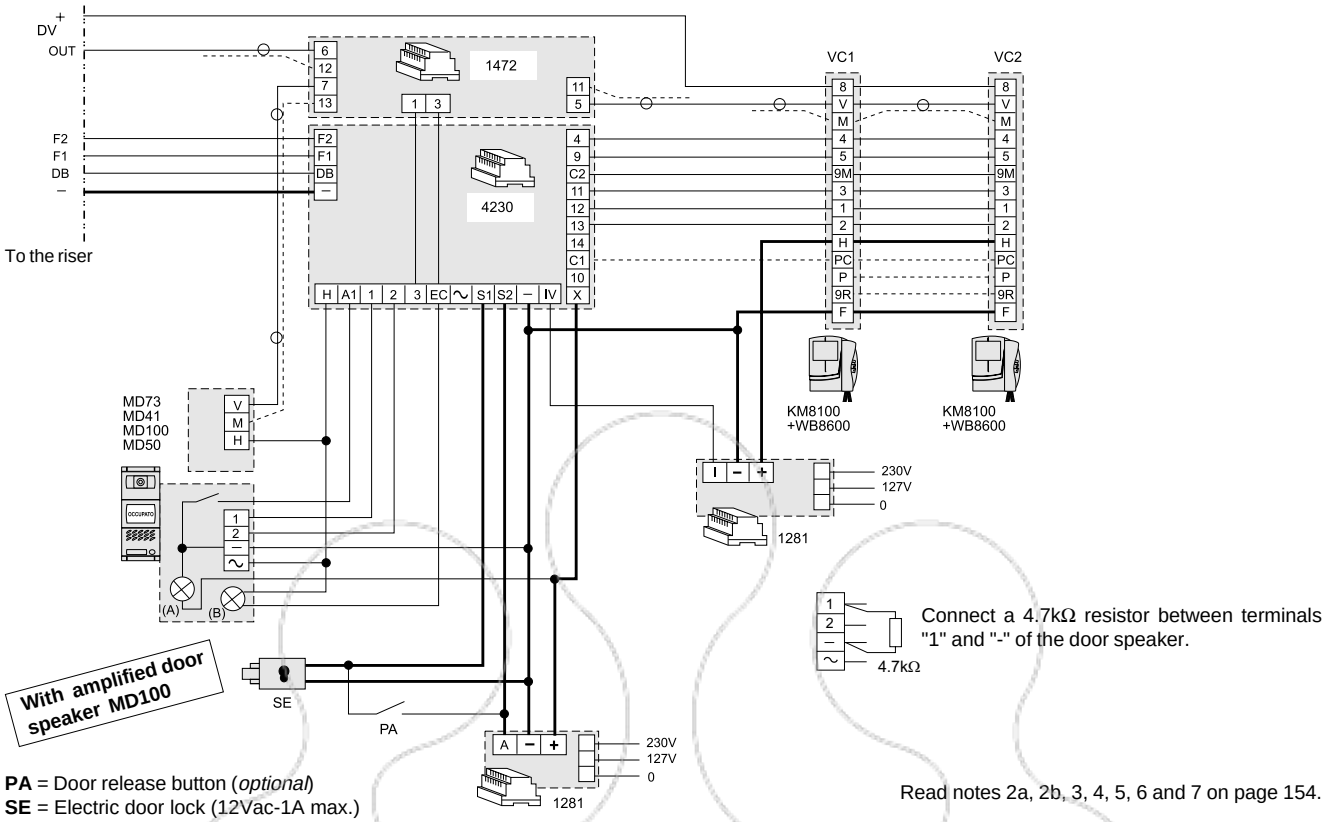
4273P 9990 (user code) 9992-0-2-1

- All videointercoms, intercoms and digital exchanger must have the **same "user code"**. Other parameters should remain as they are set in the factory.
- For the characteristics of the codes see page 66, 67, 69, 70, 97 and 98.

FP = Floor call push-button *(optional)*

Read note 4 on page 154.

2 INTERCOMMUNICATING PARALLEL VIDEO INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO-VIDEO DOOR STATION WITH SPEAKER UNIT MD100

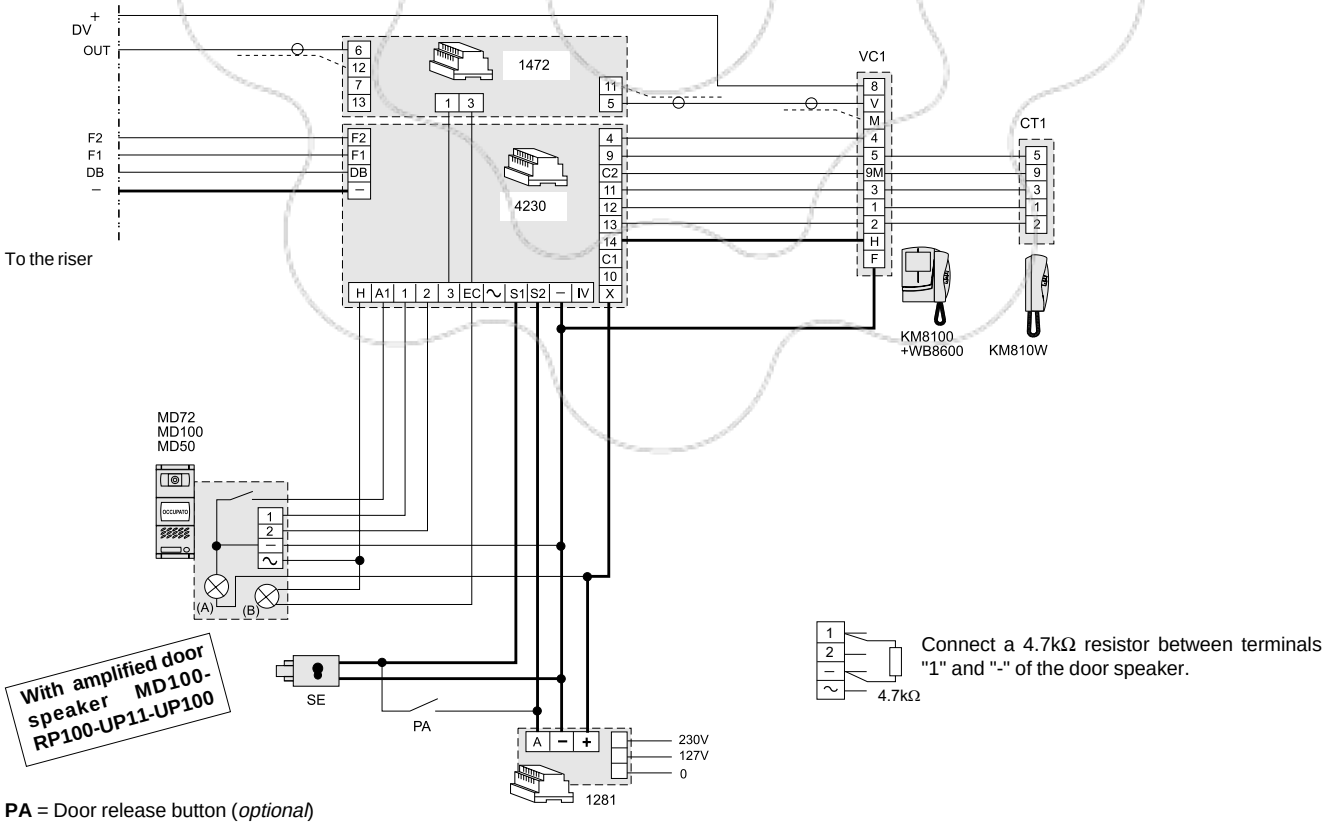


Connect a 4.7kΩ resistor between terminals "1" and "-" of the door speaker.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Read notes 2a, 2b, 3, 4, 5, 6 and 7 on page 154.

1 VIDEO INTERCOM AND 2 PARALLEL INTERCOMS CONNECTED TO THE RISER AND TO A SECONDARY AUDIO DOOR STATION WITH SPEAKER UNIT MD100, RP100, UP11 OR UP100

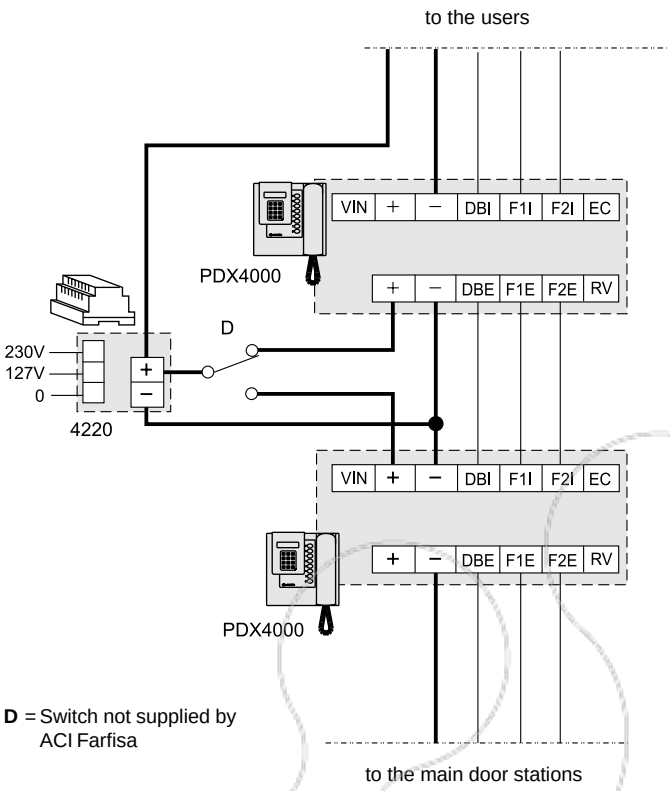


Connect a 4.7kΩ resistor between terminals "1" and "-" of the door speaker.

PA = Door release button (*optional*)
SE = Electric door lock (12Vac-1A max.)

Read notes 2a, 2b, and 5 on page 154.

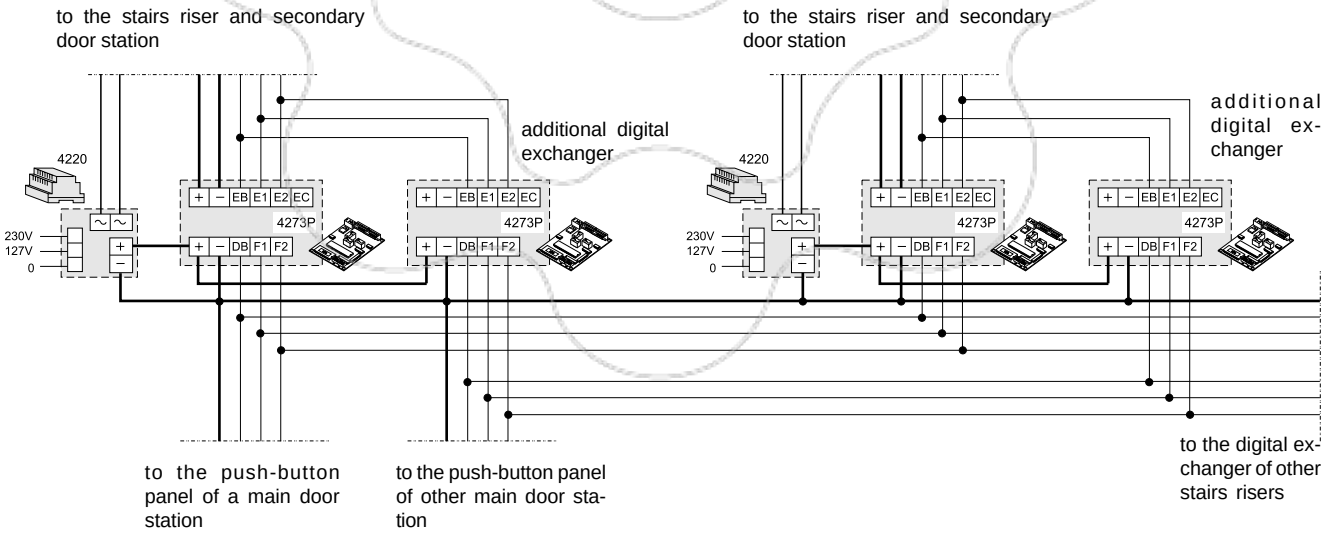
2 DOORKEEPER EXCHANGER SELECTED BY A SWITCH



Notes
- The switch gives power to only one doorkeeper exchanger at time.
- In order not to lose bookings it is necessary to serve them before switching to the other doorkeeper exchanger.

D = Switch not supplied by ACI Farfisa

2 INDEPENDENT COMMUNICATION LINES (FOR INTERCOM SYSTEMS WITH 2 MAIN DOOR STATIONS AND SECONDARY DOOR STATIONS)

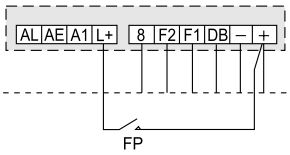


Operation notes
The installation of one additional digital exchanger for each entrance (as shown in the figure) allows for simultaneous conversations from the 2 main door stations with the users of 2 different entrances.
The doorkeeper exchanger (if any) can only be connected to one of the main door stations.

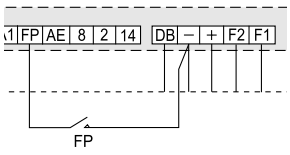
FLOOR CALL IN SYSTEMS WITH SINGLE DECODING MODULE

To have the floor call is sufficient connect a push-button (FP) to the terminals shown in the diagrams on the right.
When the button is pressed, the intercom or video intercom receives an acoustic signal (DIN) that is different from the signal coming from the outside (push-button panels and/or doorkeeper exchanger). In video intercom systems the monitor switches ON with no image. The floor ringer cannot be activated if the called intercom or video intercom is having a conversation.

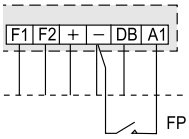
EH9160CWDG



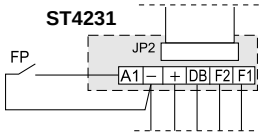
WB3160DG



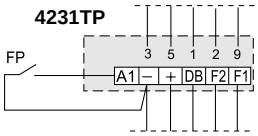
WB8100DG KM810WDG



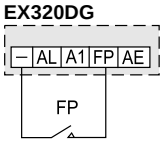
ST4231



4231TP

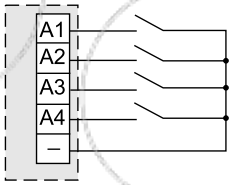


EX320DG



FLOOR CALL IN SYSTEMS WITH MULTIPLE DECODING MODULE 4235TVP

For the floor call simply connect a button to terminals **A1, A2, A3, A4** and **–** for each user connected to the board and programme properly the **4235TVP** multiple decoding module (*see page 91*).
When a button is pressed, the intercom or video intercom receives an acoustic signal (DIN-DON). In video intercom systems the monitor switches ON with no image. The floor ringer cannot be activated if the called intercom or video intercom is having a conversation.

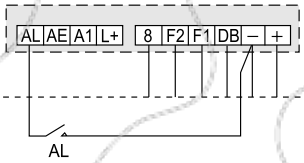


4235TVP

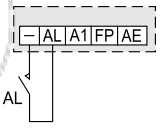
ANTI-PANIC CALL

For the anti-panic call simply connect a button to terminals **AL** and **- .**
When the anti-panic button is pressed, the doorkeeper exchanger receives a continuous modulated call and the display shows *"ALARM from int.----"*. To interrupt the call, press the ∗ button with the handset on-hook. If the "Call Transfer" function is active in the doorkeeper exchanger (*see page 101*), also the intercom to which the call has been transferred receives the anti-panic signal. Press the call button on the intercom and the ∗ button in the doorkeeper exchanger to interrupt the call, both with the handset on-hook.
The anti-panic call is a high-priority call and will interrupt all conversations in progress.

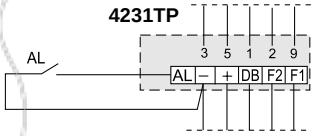
EH9160CWDG
WB3160DG



EX320DG

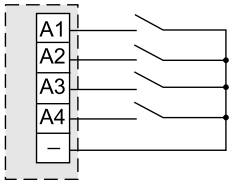


4231TP



ANTI-PANIC CALL IN SYSTEMS WITH MULTIPLE DECODING MODULE 4235TVP

For the anti-panic call simply connect a button to terminals **A1, A2, A3, A4** and **–** for each user connected to the board and programme properly the **4235TVP** multiple decoding module (*see page 91*).
In the multiple decoding module insert a jumper between the two poles of **J2** (*see page 91*).
When the anti-panic button is pressed, the doorkeeper exchanger receives a continuous modulated call and the display shows *"ALARM from int.----"*. To interrupt the call, press the ∗ button with the handset on-hook. If the "Call Transfer" function is active in the doorkeeper exchanger (*see page 101*), also the intercom to which the call has been transferred receives the anti-panic signal. Press the call button on the intercom and the ∗ button in the exchanger to interrupt the call, both with the handset on-hook.
The anti-panic call is a high-priority call and will interrupt all conversations in progress.



4235TVP

INDEX **Page**

MAIN FEATURES

The Farfisa **DF6000** digital system has been developed with advanced solid state technology and microprocessors to allow for the installation of intercom and video intercom systems with medium or high number of users using a reduced number of conductors (2 for intercom systems; 5 for video intercom systems). Different combinations of the units provide a wide range of functions in order to satisfy multiple user's needs.

Type of installation
The **DF6000** digital system allows for the realisation of many different types of installation.

- Intercom systems
- Video intercom systems
- Mixed intercom/video intercom systems
- Systems with 1 or more main door stations (without digital exchanger)
- Systems with 1 or more main door stations and secondary door stations (with digital exchanger)

Choosing the articles
When choosing the articles for the installation, the following aspects must be considered:

- the user's needs
- the installation possibilities
- the number of users
- the possible locations.

The following options are available for **door stations**:
- main and secondary door stations with digital push-button panels (recommended for medium-large installations)
- main and secondary door stations with conventional push-button panels and digital encoder (recommended for small-medium installations)

Intercom and video intercoms with integrated decoding module are available for the **internal stations**.

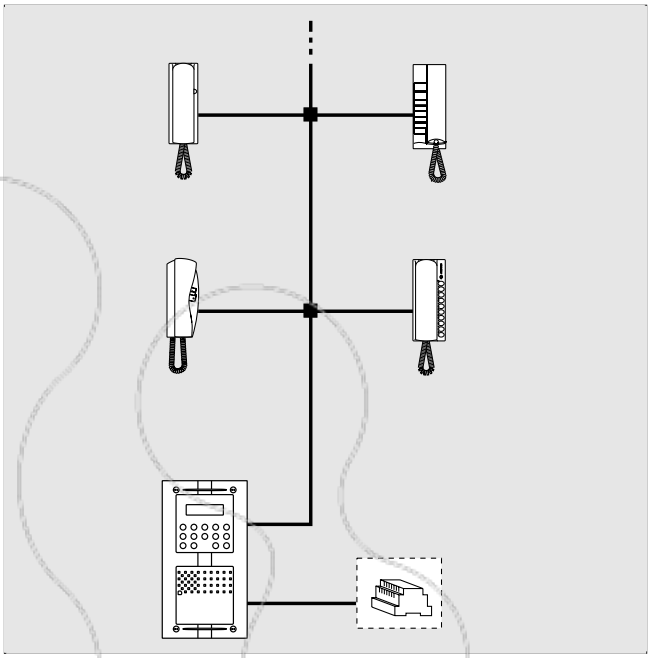
Digital systems with one or more door stations
- digital or conventional push-button panels with digital encoder
- coded call with 12-button keypad on 4-digit display
- call by means of conventional buttons with digital encoder
- call reception by means of electronic DIN-DON or continuous note for floor calls
- timed conversation (1-minute duration with possibility of increasing conversation time by pressing a specific button on the push-button panel)
- 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 in case of 2 or more stations
- acoustic signal of conversation time near to end

TYPICAL INSTALLATIONS

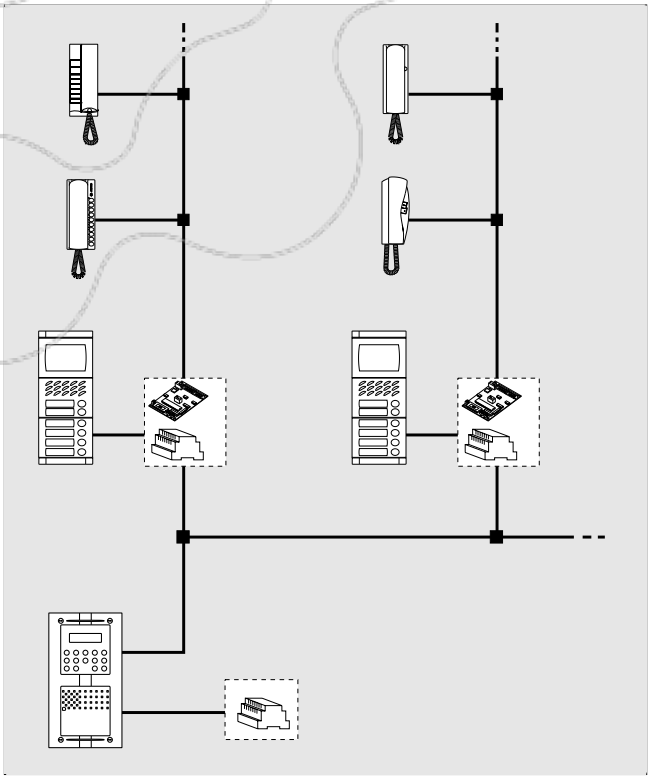
INTERCOMS

- **1 door station**
- **multiple main door stations**
- **1 or more main door stations and distribution on multiple risers**
- **1 or more main door stations and distribution on multiple risers with secondary door stations**

Installation example of digital intercom system with one door station.



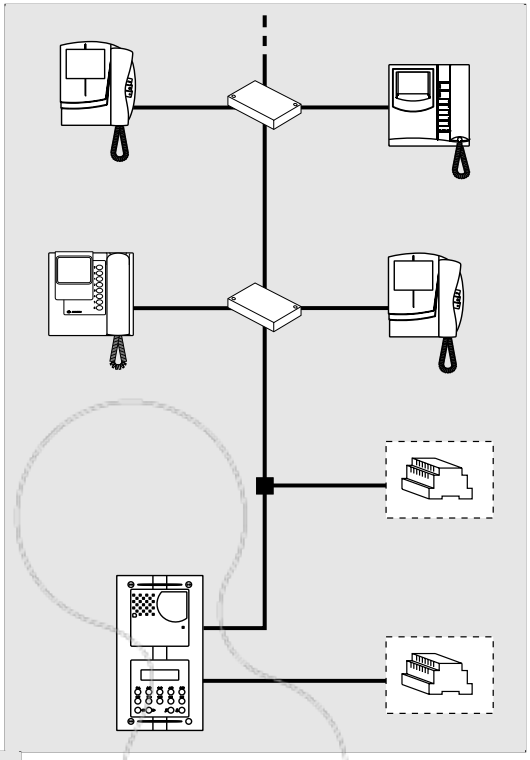
Installation example of digital intercom system with secondary door stations and one common main door station



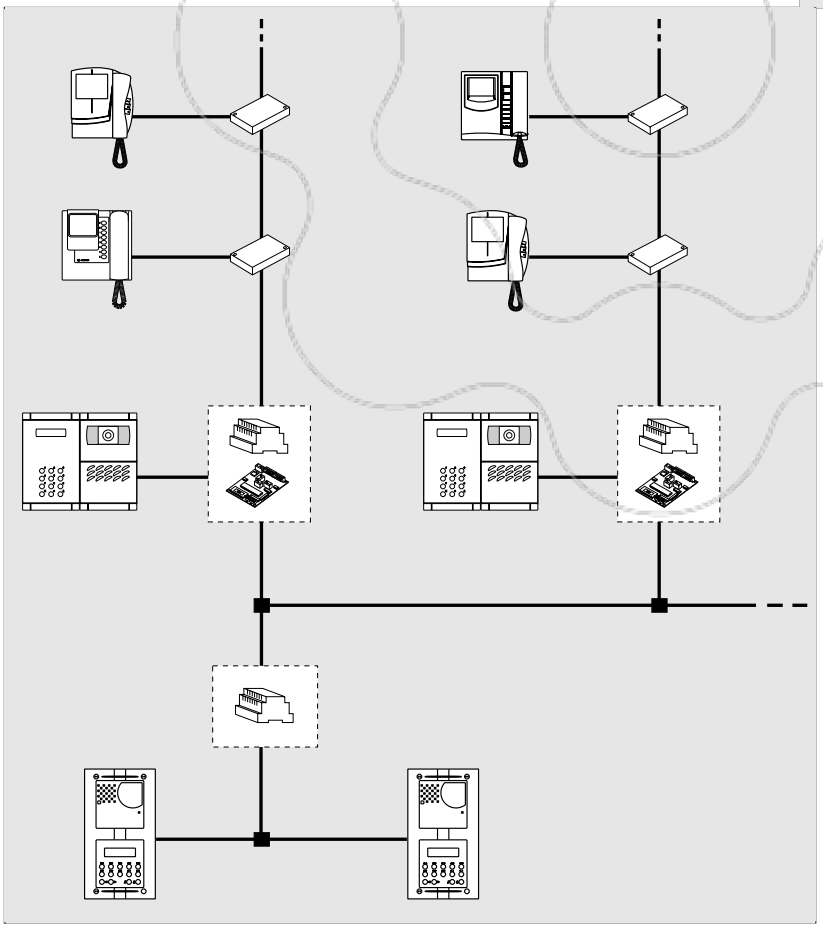
VIDEO INTERCOMS

- **1 video door station**
- **multiple main video door stations**
- **1 or more main video door stations and distribution on multiple risers**
- **1 or more main video door stations and distribution on multiple risers with audio-video or only audio secondary door stations**

Installation example of digital video intercom system with one video door station.



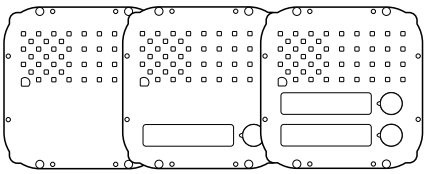
Installation example of digital video intercom system with video secondary door stations and 2 common main video door stations.



PUSH-BUTTON PANELS

Here are the specific articles for the realization of DF6000 digital systems using the Matrix push-button panels. The characteristics of the module buttons, back boxes, rain shelters and front frames to complete the installation of the push-button panel Matrix are described on pages 24 and 25.

AMPLIFIED DOOR STATIONS

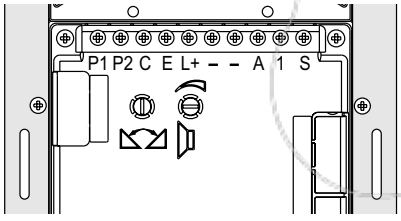


MA10PED. Module audio amplifier without buttons. It can be installed in all **DF6000** digital intercom systems. It includes door speaker amplified in the two channels, volume control of "receiver" and steel front plate and red operation LED.

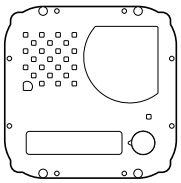
MA11PED. Same as MA10PED, with call button and name plate panel with breakproof transparent screen and green LED backlight.

MA12PED. With 2 call buttons.

Terminals
A 13Vac/15Vdc-70mA power supply
- Ground
1 Receiver-transmitter
S Not used
E Not used
P1-P2 Call push-buttons
C Call push-buttons common
L+ DC power supply input for service Led



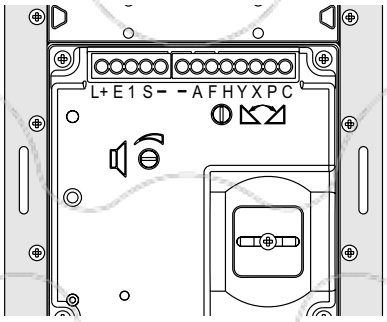
CAMERAS



MA43ED.
B/W camera module for **DF6000** video systems, including:
- solid-state CCD camera, with auto iris, 3.6mm fixed optics and 6 infrared LED's;
- stainless steel front plate complete with transparent anti-temper screen, steel call button with corresponding name plate holder;
- horizontal/vertical adjustment;
- red operation LED;
- amplified door speaker.

MA43CED.
Colour version of model **MA43ED**.

Terminals
A 13Vac/15Vdc-70mA power supply
- Ground
1 Receiver-transmitter
S Not used
E Not used
P Call push-button
C Call push-button common
L+ DC power supply input for service Led
Y Positive video signal output
F Ground
X Negative video signal output
H Voltage input

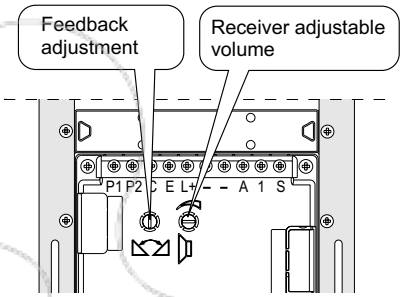


Technical data	MA43ED	MA43CED
Power supply	15÷21Vdc	15÷21Vdc
Operating current	0.3A	0.4A
Video signal output	balanced	balanced
Video signal standard	CCIR	PAL
Minimum illumination	2 Lux	2.5 Lux
White balance	-	auto
Sensor	CCD 1/4" B/W	CCD 1/3" colour
Number of pixels	291,000	291,000
Horizontal frequency	15,625Hz	15,625Hz
Vertical frequency	50Hz	50Hz
Lens	3.6mm	3.6mm
Focus	0.1m ÷ ∞	0.6m ÷ ∞
Autoiris	electronic	electronic
Horizontal adjustment	± 15°	± 15°
Vertical adjustment	± 15°	± 15°
Operating temperature	-10°÷+40°C	-10°÷+40°C
Max. permissible humidity	80%RH	80%RH

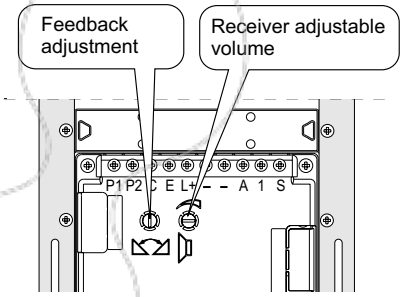
Testing and adjustments
Adjustments are carried out in the factory; should any be necessary they can be re-adjusted from the outside with a screwdriver with the trimmers identified by the symbols and .

Volume adjustment
To increase the volume from the amplifier in the transmission mode, turn the trimmer in a clockwise direction.

Antilocale 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 of an intercom or videointercom;
- adjust the trimmer until the whistling stops (Larsen effect).

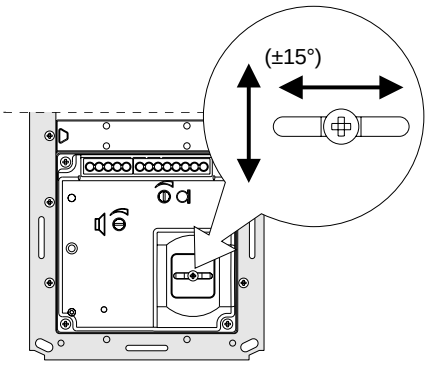


MA10PED MA11PED MA12PED



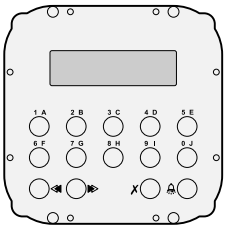
MA43ED MA43CED

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



MA43ED
MA43CED

DIGITAL PUSH-BUTTON PANEL



TD6100MA. Matrix series anti-vandalism steel push-button panel with 14 buttons and alphanumerical LCD. Used to dial and send calls over DF6000 digital line.

Technical features

Power supply	15Vdc ± 1
Operating current	0.08A
Maximum absorption	0.16A
Door-opening time	from 1 to 60 sec.
LCD	2 lines x 16 characters
Number of calls	250
Electronic index	250 names
Dimensions	1 module
Operating temperature	0°÷+40°C
Maximum humidity acceptable	90% RH

Terminals

LP positive line
LN negative line
- general ground
+ +15V power input
1 receiver/transmitter (to speaker unit)
DB serial data bus
EC analog exchanger command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)
P1 Call push-button input

PROGRAMMING

To program you must:

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

Positions of jumper J1
1-2 = operation mode
2-3 = programming mode

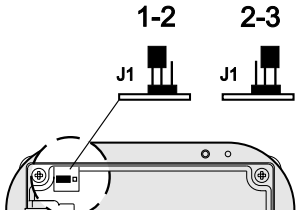


Table 1.
Programming codes

00	Entry of passwords for door lock release (0÷15)
01	Entry-modification-erasing of names in the electronic index
02	Language selection
03	System programming
04	Entry of text to be shown on the display
05	Loading names from PC
06	Alphabetical ordering of names
10	Door lock activation time
11	Address of push-button P1
12	Choice the calling tone
16	Entry of passwords for door lock release (16÷31)
32	Entry of passwords for door lock release (32÷47)
48	Entry of passwords for door lock release (48÷63)
64	Entry of passwords for door lock release (64÷79)
90	Default settings
91	Erase all passwords
92	Erase all user names

Entry of passwords for door lock release (code 00-16-32-48-64)

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

- Dial the first password on the keypad, for example 7890; the display shows *"PASSWORD 0 / 7890"*.
- Press 🔔; the display shows *"PASSWORD 1 / "*.
- Dial the second password 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 passwords; when you press the button 🔔 to confirm the sixteenth password (PASSWORD 15) the display shows *"Programming / type:"*.
- If you need additional passwords follow the same procedure by replacing the 00 code with the codes 16, 32, 48 or 64. The display will show in sequence the number of passwords (16, 17, ...; 32, 33.... etc.) in conjunction with code the drive the lock.
- Continue by entering the code of a new programming or exit by moving the jumper **J1** back 1-2.

Modifying passwords

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

- select the programming code **00/16/32/48/64**;
- press the button 🔔 until the password you want to modify is displayed;
- press ✗ to go to the password you want to modify;
- enter the new password on the keyboard and then press the button 🔔
- repeat the operation for all the passwords you want to modify;
- move the jumper **J1** from 2-3 to **1-2** to exit the programming mode.

Deleting a code

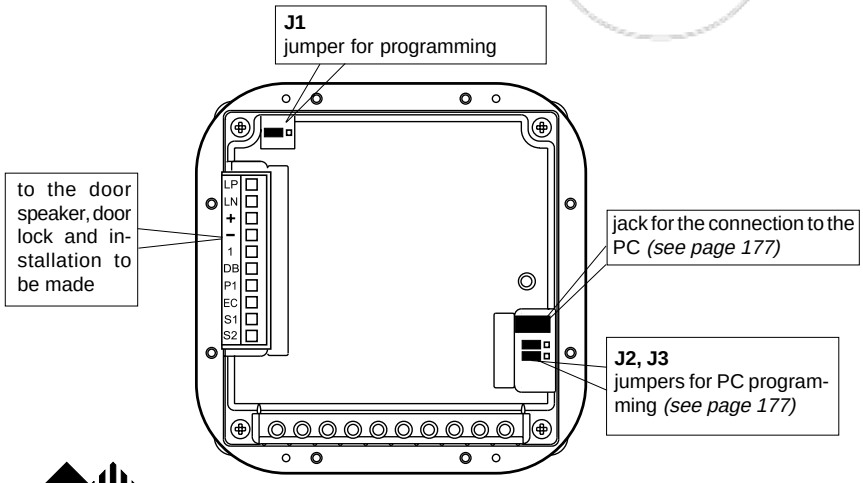
To delete the previously saved passwords you must enter the programming mode and then:

- select the programming code **00/16/32/48/64**;
- press the button 🔔 until the password you want to delete is displayed;
- press the button ✗ and then 🔔;
- repeat the operation for all the passwords you want to modify;
- move the jumper **J1** from 2-3 to **1-2** to exit the programming mode.

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

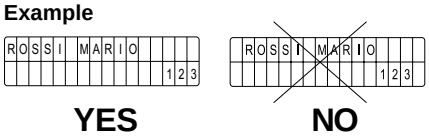
The digital keyboard TD6100MA has an alphanumerical display with 32 characters that displays the user name and extension number (28 characters are used for user name and the last 4 characters on bottom right are used for extension number). To save them, you must follow the procedure illustrated below. 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

Installation terminals



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



YES **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

- Move the jumper **J1** from **1-2** to **2-3**.
- 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 ✗ 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 ✗ 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; enter the name and code as indicated above.
- Once you have confirmed the last name, bring the jumper **J1** back to the original position (from **2-3** to **1-2**). 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 **1-2**.
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 **1-2** to **2-3**.
- 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 ✗ 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 ✗ 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 **1-2** to **2-3**.
- 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 **1-2** to **2-3**.
- 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 ✗ to go to the last cell (bottom right); enter a space to delete the existing number.
- Press ✗ 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)*
In operating mode you can choose one of available languages. To select a language you need:

- move the jumper **J1** from **1-2** to **2-3**.
- 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 **1-2**.

System programming *(code 03)*
You can change or activate the functions of the push-button panel *(see table 2)*.
Before programming you must:

- Move the jumper **J1** from **1-2** to **2-3**.
- Enter the code **03** and press 🔔; the display shows *"bit 0 = 0 / 0 < > 1"*.
- press 🔔 for no change and go to the next code; the display shows *"bit 1 = 0 / 0 < > 1"* in case of first programming or *"bit 1 = 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 **1-2**.

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

Programming code	*Function description*	*Default value*	*Value entered with buttons* ◀◀ = 0	▶▶ = 1
bit 0	not used	0	-	-
bit 1	call number rings	5	5	1
bit 2	door lock activation with ✗ *(1)*	NO	NO	YES
bit 3	deactivation of tone generator on the external door station	NO	NO	YES
bit 4	activation of personalised initial screen *(2)*	NO	NO	YES
bit 5	deactivation of ACI FARFISA and activation of personalised text	NO	NO	YES
bit 6	not used	0	-	-
bit 7	not used	0	-	-

(1) This functions allows for quicker door lock activation by pressing ✗ rather than dialling the code 00+🔔. For example: press ✗ + password + 🔔.
(2) You can alternate *"ACI FARFISA"* with the personalised text (see **"personalisation of display initial text"**).

Personalisation of display initial text *(code 04)*

You can modify the text shown on the display during normal operation or idle state. You must program bit 4 or bit 5 to display the text (see **"system programming**").

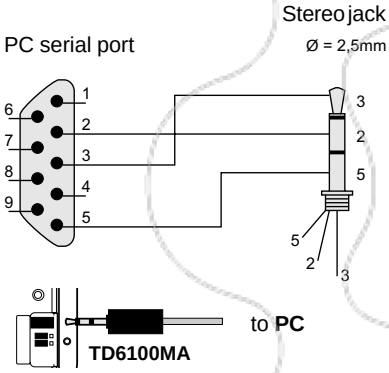
To insert the personalized text, you must:

- Move the jumper **J1** from **1-2** to **2-3**.
- Enter the code **04** and press 🔔; the display shows "*DF6000 system / TD6100MA*", 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 **1-2**

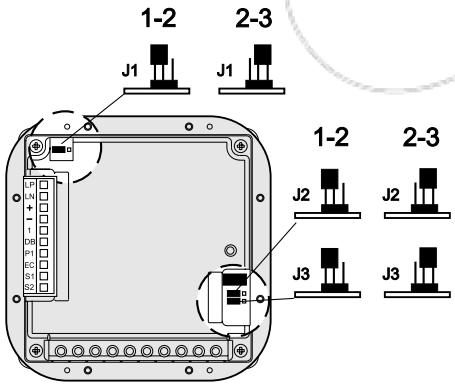
Loading names from PC *(code 05)*

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 **1-2** to **2-3**.



- Turn on the PC and then the push-button panel.
- Enter the code **05**; the display shows *"TD6100MA > PC / in progress 0".*
- Download the names from the PC within 15 seconds; the display shows *"TD6100MA < —> PC / in progress 1",* "*TD6100MA <—> 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 **1-2**.

Ordering names *(code 06)*

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

- Move the jumper **J1** from **1-2** to **2-3**.
- 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 **1-2**.

Door lock activation time (code *10*)

To change the time of release the door lock, you must:

- move the jumper **J1** from **1-2** to **2-3**;
- enter code **10** and press the button 🔔; the display shows "*TIME S1*";
- dial the number corresponding to the desired timing seconds to activate the door lock (from 1 to 60);
- press the button 🔔 to confirm;
- exit the programming mode by bringing the jumper **J1** back to **1-2**.

Inserting the button address P1 *(code 11)*

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

- move the jumper **J1** from **1-2** to **2-3**;
- enter the code **11** and press the button 🔔; the display shows "*ADDRESS P1*";
- dial the extension number. Extensions must be coded with numbers from 1 to 255;
- press the button 🔔 to confirm;
- exit the programming mode by bringing the jumper **J1** back to **1-2**.

Choice the calling tone (*code 12*)

To change the calling tone, you must:

- move the jumper **J1** from **1-2** to **2-3**;
- enter code **12** and press the button 🔔; the display shows "*MELODY*";
- dial the number corresponding to the preferred calling tone (from 00 to 03 - *see table of the calling tones on page 178*);
- press the button 🔔 to confirm;
- exit the programming mode by bringing the jumper **J1** back to **1-2**.

Reset default programming *(code 90-91-92)*

To return the keypad to program the factory and then delete all changes made during programming, you must:

- move the jumper **J1** from **1-2** to **2-3**.
- enter code **90**, **91** or **92** and press the button 🔔; the display shows respectively "*DEFAULT SETTINGS / YES < > NO"; "ERASE PASSWORDS / YES < > NO"; "ERASE USERS / YES < > NO".* Press ◀◀ to execute the operation or ▶▶ to leave parameters unchanged;
- exit the programming mode by bringing the jumper **J1** back to **1-2**.

Return to operation mode

Once you have completed programming, bring the jumper **J1** back to **1-2**; the display shows "*ACI FARFISA / press < >*" or the text you have entered during programming (see **"Personalisation of display initial text**").

OPERATION

Check that all connections are correct. Connect the power supply unit to the mains; the push-button panel automatically checks the status of the line displaying for 5 seconds *"TD6100MA / Rel. SW ....."*; at the end of checking, in case of failure, the display shows *"TD6100MA / ERROR. ...."* in case of a positive check on the display appears the message "*Dial the number or press ∧∨"* (∧∨ in alternate mode).
Dial the number or select the desired user name (if previously stored) by pressing the ▶▶ or ◀◀ buttons, once the desired user name appears on the display press the 🔔 to make a call.
In case of error press ✗ (only before sending the call) and dial the correct to number.
If the line is free you will hear the confirmation tone and the display shows "*Call /----*"; the internal station rings the number of times defined by system programming.
If press ✗ the call is terminated and the system is ready for a new call.
The called user picks up the handset enables the conversation with the external station for 60 seconds. The display shows "*Connection /----*".
The text on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 60 seconds press 🔔 again (up to 3 times).
Press the 🔑 button to release the door lock; this operation requires that the user is in conversation and wait about 1 second after lifting the handset. The lock release activation time is defined by programming "*door lock activation time*" (code 10).
Replace the handset 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 80 4-digit passwords 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).

If properly programmed you can access the door lock opening function with the following simplified procedure *(see note 1 on page 176):*

X + Password + 🔔

Tone table

Dialling. Invitation to dial

Busy. The line is busy

Programming. Indicates the programming mode

Acknowledge. Indicates that programming has been executed.

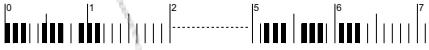
Dissuasion. Indicates that a wrong code was dialled (higher than 250)

Warning. Indicates that conversation time is about to end.

Calling tone table

Call no. 0

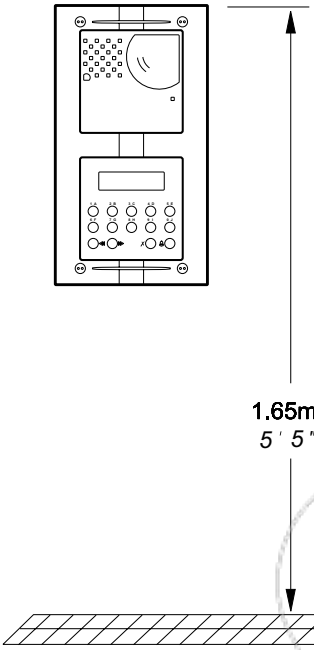
Call no. 1



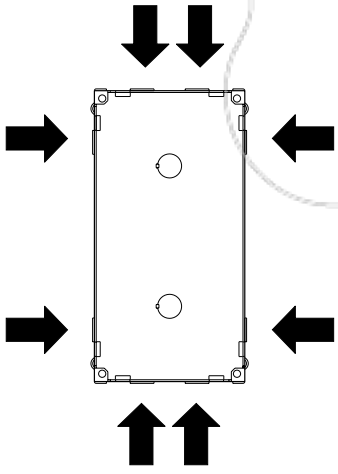
Call no. 2

Call no. 3

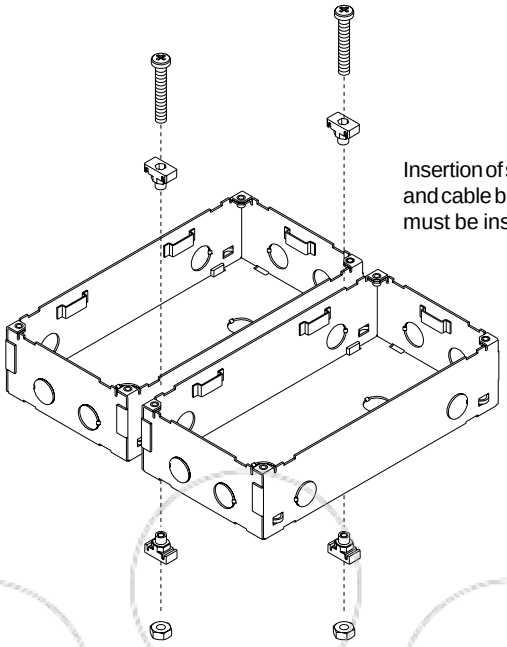
INSTALLATION



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.

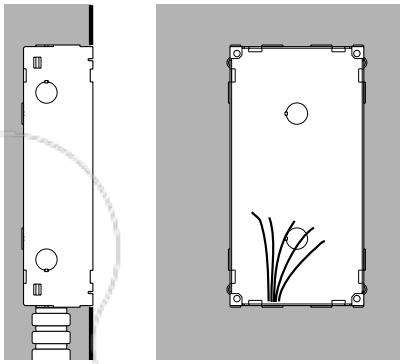


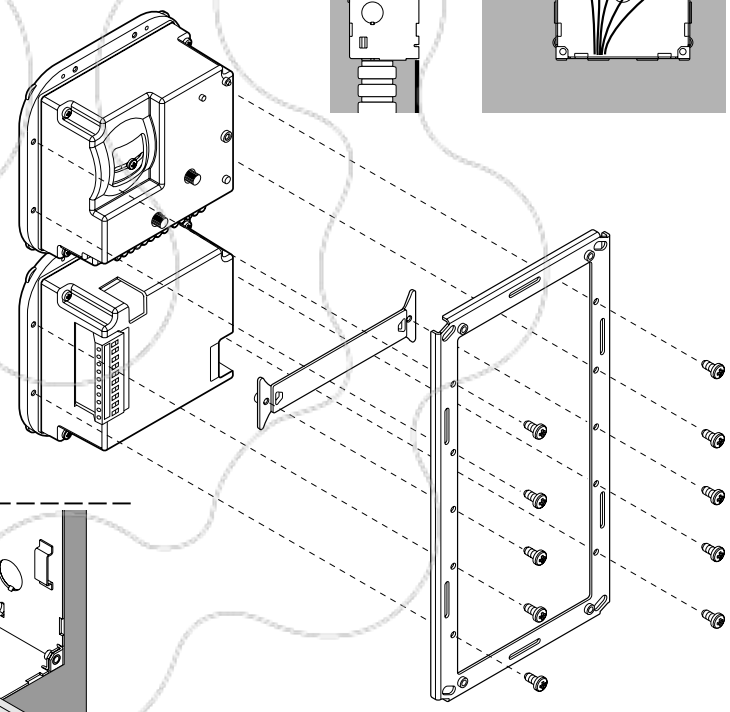
Openings for cables.



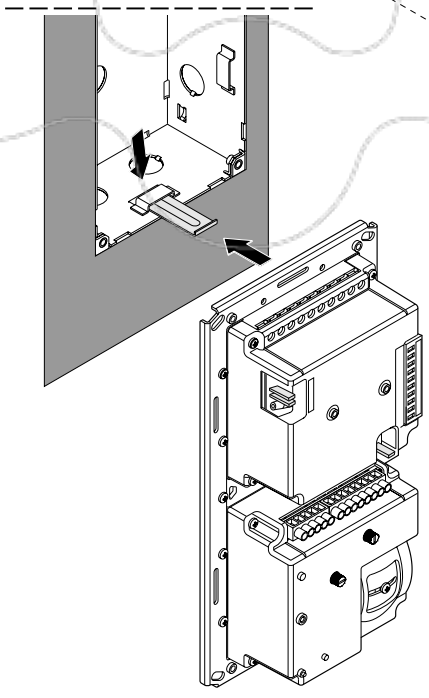
Insertion of spacers between back boxes. Spacers and cable bushing (not supplied with the products) must be inserted before brick work.

Flush mounting and cables placing.

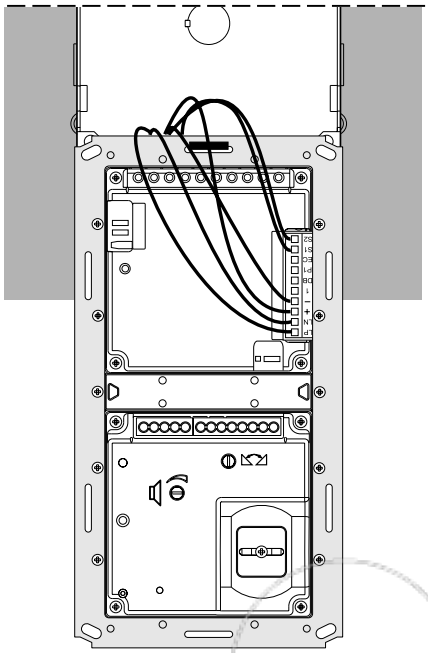




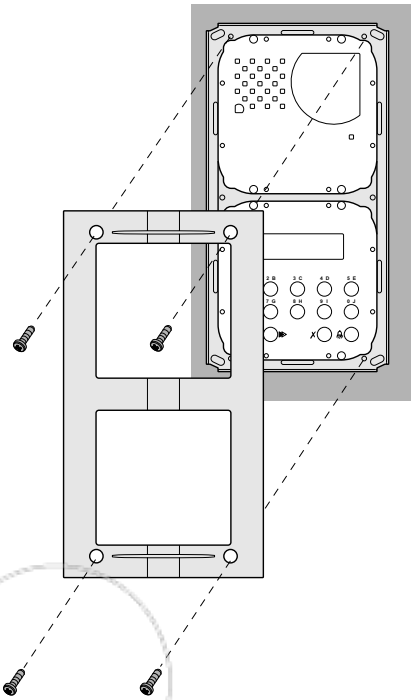
Mounting modules.



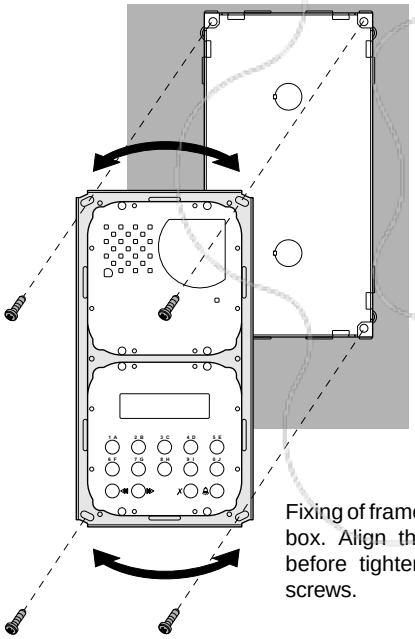
For easier connection to the electrical system, it is recommended to insert the metal plate supplied with the product in the back box opening, as shown in the figure. The plate is used to hook the frame with pre-assembled modules. Leave the plate in the box to reuse it for maintenance operations.



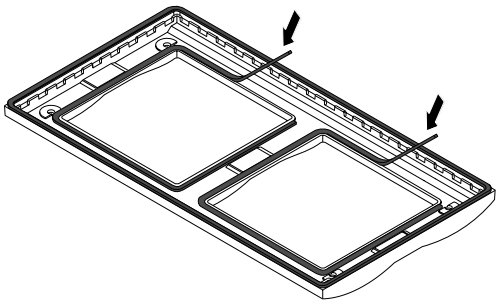
Connection of wires to module terminal boxes.



Fixing of frame to module frame.

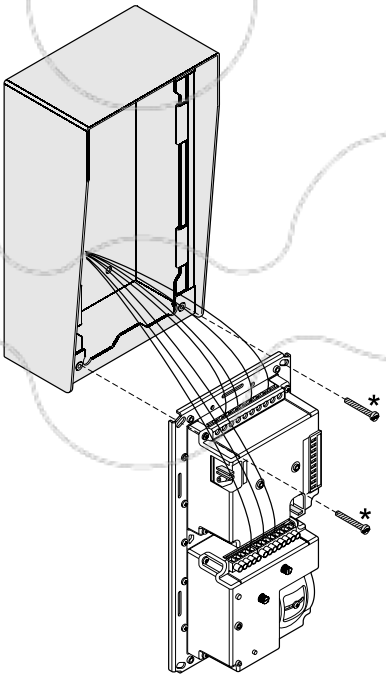


Fixing of frame to back box. Align the frame before tightening the screws.

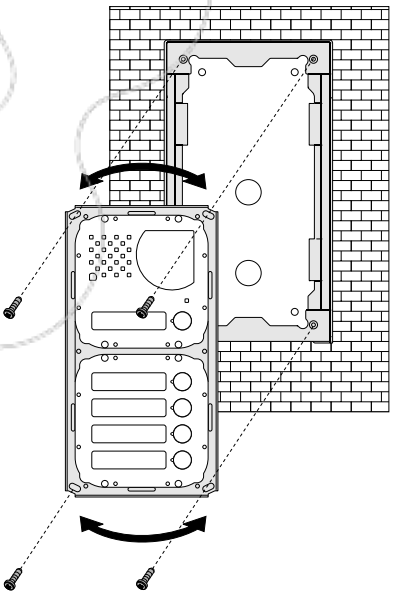


Apply the protection gaskets supplied with the product on the internal part of the frame openings.

Rain shelters



* Long screws can be used to anchor the frame during wire connection to modules.

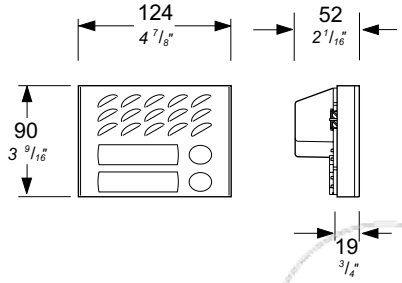


Fixing of frame to rain shelter. Align the frame before tightening the screws.

PUSH-BUTTON PANELS

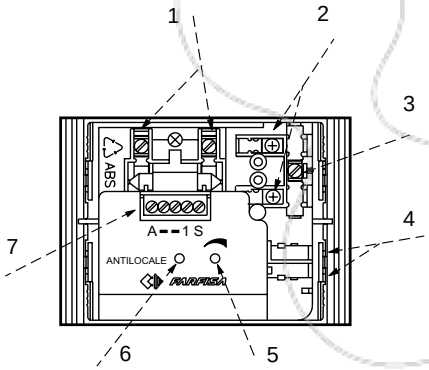
Here are the specific articles for the realization of DF6000 digital systems using the Mody push-button panels. The characteristics of the module buttons, back boxes, rain shelters and hood covers to complete the installation of the push-button panel Mody are described on pages 38 and 39.

AMPLIFIED DOOR STATIONS



MD 10D. Module complete with speaker unit without buttons.
It can be installed in all **DF6000** digital intercom and video intercom systems.
It includes door speaker amplified in the two channels, volume control of "receiver" and front plate in anodised aluminium.

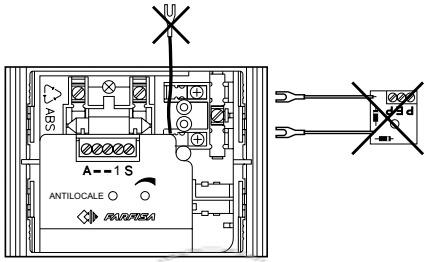
MD 11D. 1-button module.
MD 12D. 2- button module.



1 Lamp terminals
2 Button terminal board
3 Call buttons common (terminal C)
4 Stair light button terminals
5 External volume adjustment
6 Feedback adjustment (Larsen effect)
7 Terminal board for audio/powering/electrical door lock release

Terminals
A 13Vac/15Vdc-70mA power supply
- Ground
1 Receiver-transmitter; electric door lock release; call
S Not used
P Call button

Note
In the **MD11D** and **MD12D** modules disconnect and insulate the yellow wire and remove the diode module.

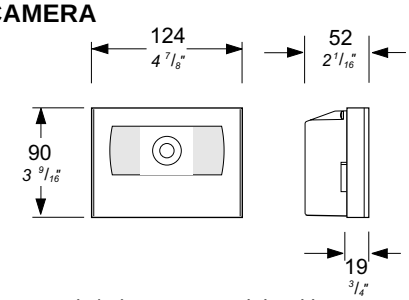


Testing and adjustments
All settings are factory-made. If necessary, adjust the trimmers marked as ANTILOCALE and using a screwdriver.

Volume adjustment
Turn the trimmer clockwise to increase the amplifier gain in the reception channel.

Feedback adjustment
In presence of a whistle (Larsen effect) on the door station, in order to eliminate it:
- make the call from the door station and pick up the handset of an internal station;
- adjust the ANTILOCALE trimmer on the door station until the whistle is eliminated.

CAMERA

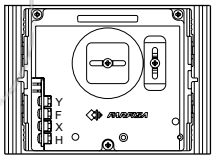


MD 41D. (B/W) camera module with:
- solid state camera (CCD), electronic autoiris, fixed 3.6mm lens and 6 infrared LEDs.
- front plate in anodised aluminium with breakproof transparent screen.
- horizontal and vertical adjustment.

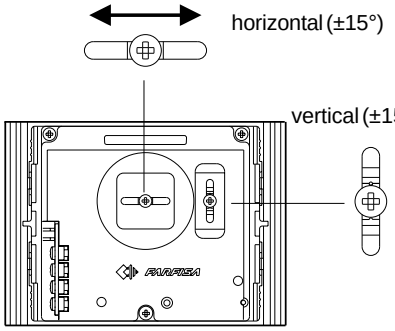
Technical data

Power supply	15 ÷ 21Vdc
Operating current	0.3A
Video signal output	balanced
Minimum illumination	2 lux
Sensor	CCD 1/4"
Pixel number	291,000
Horizontal frequency	15,625Hz
Vertical frequency	50Hz
Lens	3.6mm; F5
Fixed focus	0.1m ÷ ∞
Autoiris	electronic
Video signal standard	CCIR
Operating temperature	-10°÷+40°C
Maximum permissible humidity	80%RH

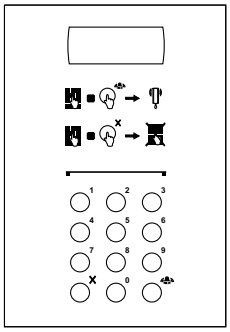
Terminals
Y positive video signal output
F ground
X negative video signal output
H voltage input



Adjustments
If necessary, you can manually modify the camera position by means of the horizontal and vertical adjustments located on the back of the camera.
To do this, you must:
- remove the upper screw of the push-button panel to access the back of the camera;
- loosen the screw of the horizontal or vertical adjustment (or both screws, if you want to adjust the image in all the directions);
- move the camera in the desired direction;
- tighten the screw to block the camera in the desired position;
- fix the push-button panel.



DIGITAL PUSH-BUTTON PANEL



TD6100. Push-button panel in anodised aluminium with 12-button keypad and 4-digit display. It allows to make and send up to a maximum of 255 calls with door-opening directly from the keypad with a private 4-digit code

Technical data

Power supply	15Vdc ± 1
Operat. current in stand by or busy state	0.12A
Operating current in conversation	0.3A
Door opening time	3 or 6 sec.
Operating temperature	0° ÷ +40°C
Maximum permissible humidity	90% RH
Dimensions	2 modules

Terminals

LP positive line
LN negative line
- general ground
+ +15V power input
1 receiver/transmitter (to speaker unit)
DB serial data bus
IV video power supply activation
EC analog exchanger command (grounded contact upon call and during conversation)
S1-S2 door opener command (normally open contacts of relay)

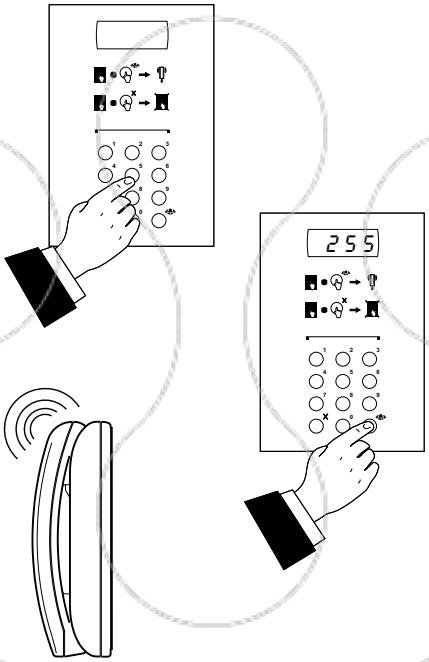
Terminals for electronic index connection

CK clock
DT data input
VA +5Vdc power output
GN ground

Notice. When powering up the digital system, the push-button panel checks the status of the line and gets ready for operation only if the checking is OK; otherwise the display starts flashing. This operation will take a few seconds.

Operation

Dial the desired user number, check that the number is correct on the display and press the key to make the call. 4 dots turn ON the display to indicate that the call has been sent.
In case of wrong entry press the "**X**" key and dial the correct number.
You can press more than 4 keys, but only the last 4 digits will be recognised and shown on the display.
The display turns OFF after 5 seconds if the number does not exist (dissuasion tone on the speaker unit).
The called intercom rings for about 5 or 25 seconds according to programming.



The called user picks up the handset to interrupt the call and enable conversation with the door station for 60 seconds.
The number on the display starts flashing 10 seconds before conversation ends. To continue conversation for additional 60 seconds press again (this operation can be done 3 times maximum).

To release the door lock the user must have a conversation in progress and wait about 1 second after picking up the handset. Activation time is 3 or 6 seconds.
Hanging up the handset the conversation is end.
Numbers that are not sent or not cancelled turn OFF after 25 seconds.

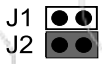
In systems with 2 or more main digital push-button panels, when a call is made from one push-button panel, the other push-button panels are disabled and its display shows 4 lines (busy state). Wait until the display turns OFF to make the call.

Door opening with secret code

The door can be opened from the push-button panel by dialling a 4-digit access code chosen between 16 programmable numbers.

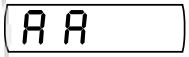
Entering the secret code

- Move the jumper located on the back of the push-button panel to connect the 2 pins of **J1**; the displays shows **AA**



Position used for push-button panel operation

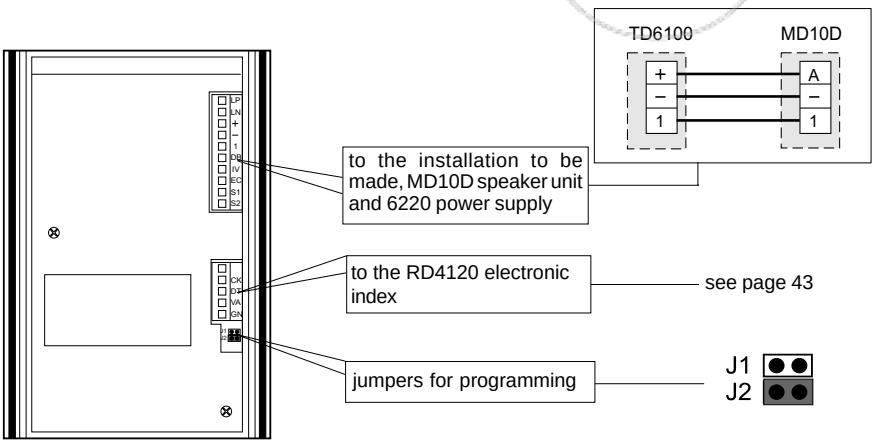
Position used for code programming



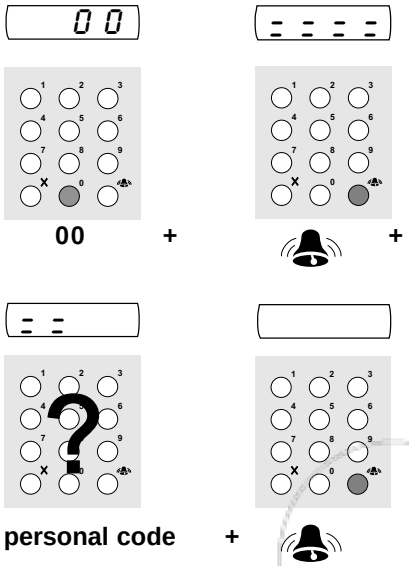
- dial **00** and press the button
- dial the first code for door lock release on the keypad (from 0 to 9999)
- press the button
- dial the second code for door lock release (from 0 to 9999)
- press the button
- repeat the operations up to the 16th code or as necessary
- press the "**X**" button to erase an unused code or to cancel a wrong code before sending it.
- remove the **J1** jumper to exit programming.

Door lock release with secret code

- dial **00**
- press ; 8 horizontal bars appear on the display
- enter the access code within 10 seconds; each entered digit cancels 2 horizontal bars; press **"X"** to display the 8 horizontal bars again.
- press ; the door lock is released (acknowledge tone); the push-button panel resumes the current operating mode of the system (free or busy).



Note
Door lock release with personal code can also take place when the push-button panel is busy (4 lines on the display).



Viewing and changing secret codes
To view the entered codes:
- insert the jumper in **J1**; the display shows **AA**.
- dial **00** and press the key; the first of the 16 code appears on the display.
- press the key to display the second number
- continue up to the 16th number.

The display turns OFF to indicate missing or cancelled numbers. It is recommended to check all 16 secret codes.
To erase a code press "**X**" and then ; the next number appears on the display.
Remove the **J1** jumper at the end of the cancellation or replacement procedure.

Call personal codes

To optimise user coding (multiple entrances, floor division, etc.) a personal code other than the real one can be associated with each user. These codes replace the normal number associated with the user in the keypad composition.

Programming the call personal codes
To enter new codes:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **01** and press the key; the display shows **I**
- dial the number of the user whose code must be replaced; the display turns off
- dial the new code to be associated with the user (from 0 to 9999; do not use numbers 00,01,02,03 and the numbers coded in the intercoms)
- press the key; the display shows **I**
- dial the number of the second user whose code must be replaced
- dial the new code
- press the key
- repeat the procedure for all the numbers to be replaced
- to cancel a wrong code press the "**X**" key before sending it.
- remove the **J1** jumper to exit programming.

Viewing the call personal codes
To view the codes associated with the internal users:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **01** and press the key; the display shows **I**
- dial the user code on the keypad (the number coded in the intercom)
- press the key; the display shows the personal code to be dialled on the keypad
- repeat the procedure for all the codes to be viewed
- press the key; the display shows **I**
- remove the **J1** jumper to exit programming.

Erasing a call personal code
To erase a personal code:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **01** and press the key; the display shows **I**
- dial the user code to be cancelled on the keypad
- press the **X** key (the display turns OFF) and then ;
- repeat the procedure for all the codes to be erased
- remove the **J1** jumper to exit programming.

Erasing all call personal codes
To erase all personal codes:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **99** and press the key; the display shows **AAAI**
- press the key again;
- wait until the display shows **AA** (about 10 sec.)
- remove the **J1** jumper to exit programming.

Other programming

Some of the keypad configuration parameters can be changed as illustrated below.

Changing the call or door lock release time
To change the door lock release time or the number of rings of the intercoms:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **02** and press the key; the display shows **- -**
- dial:
  - **00** door lock release duration 3 seconds and 5 call rings *(default programming)*
  - **01** door lock release duration 6 seconds and 5 call rings
  - **02** door lock release duration 3 seconds and 1 call ring
  - **03** door lock release duration 6 seconds and 1 call ring
- press the key; the display shows **AA**
- remove the **J1** jumper to exit programming.

Tone disabling on the door station
To disable tones on the door station remove the **J2** jumper located on the back of the push-button panel.

Restoring the default programming (erasing of all entered data)

To erase all the entered data:
- move the jumper located on the back of the push-button to connect the two pins of **J1**; the display shows **AA**
- dial **90** and press the key; the display shows **AAAA**
- press the key again;
- wait until the display shows **AA** (about 20 sec.)
- remove the **J1** jumper to exit the erasing mode.

Changing the calling tone

On the **TD6100** digital push-button panel it is possible to change permanently or temporarily the calling tone sent to the internal stations. This allows the user to know from which door stations has been called or to recognise who is calling.

Permanent changing

To vary permanently the calling tone it is necessary to program the push-button panel in the following way:

- move the jumper located on the back of the push-button panel to connect the two pins of **J1**, the display shows **AA**
- dial **03** and press the 🔔 key; the display shows **--** or the number previously programmed
- dial the code:
  00 calling tone n°0 *(default programming)*
  01 calling tone n°1
  02 calling tone n°2
  03 calling tone n°3
- press the 🔔 key; the display shows **AA**
- remove the **J1** jumper to exit programming.

From now all the call will be sent to the user with the chosen calling tone.

Note.
See the calling tone table to chose the desired tone.

Temporary changing

To vary temporary (only for the present call) the calling tone it is necessary to dial, the code of the desired tone followed by the 🔔 key and than the code of the user.

I.e. to call the user 54 with the calling tone n° 2 dial:

02 🔔 54 🔔

Note.
If for a temporarily change of the calling tone it is chosen the same tone programmed in the push-button panel as a permanent calling tone no variation will be achieved.

Tone table

Dialling. Invitation to dial

Busy. The called user is busy

Programming. Indicates the programming mode

Acknowledge. Indicates that programming has been executed.

Dissuasion. Indicates that a wrong code was dialled (higher than 255)

Warning. Indicates that conversation time is about to end.

Calling tone table

Call no. 0

Call no. 1

Call no. 2

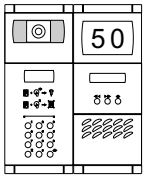
Call no. 3

TD4110. NAME PLATE MODULE
For information on the characteristics see page 43.

RD4120. ELECTRONIC INDEX
For information on characteristics, operation and connection to **TD6100** see pages 43 and 44.

COMPOSITION EXAMPLES

Video intercom push-button panel with electronic index



from 1 to 110 names

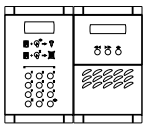
No. of calls	Compositions and dimensions	Push-button panel	Amplified door station	Camera module	Number or blank module	Electronic index	Back boxed and frames	Rain shelters
1÷110	248x304,5x19mm (9 3/4" x 12" x 3/4")	1 TD6100	1 MD10D	1 MD41D	1 MD20 *	1 RD4120	2 MD73	1 MD96

■ or MD74 or MD904

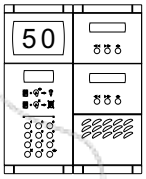
* or MD50 or FC52P

Instead of MD72, 73, 74

Intercom push-button panels with electronic index



from 1 to 200 names



from 201 to 255 names

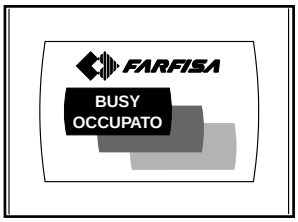
No. of calls	Compositions and dimensions	Push-button panel	Amplified door station	-	Number or blank module	Electronic index	Back boxed and frames	Rain shelters
1÷200	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 TD6100	1 MD10D	-	-	1 RD4120	2 MD72 ■	1 MD94 ■
201÷255	248x304,5x19mm (9 3/4" x 12" x 3/4")	1 TD6100	1 MD10D	-	1 MD20 *	2 RD4120	2 MD73	1 MD96

■ or MD74 or MD904

* or MD50 or FC52P

Instead of MD72, 73, 74

DIGITAL ENCODER



CD6130. It allows for using **Mody** conventional push-button panels (with 1 or 2 rows) in **DF6000** digital systems.
Complete with busy state signal.

Technical data

Power supply:	15Vdc ± 1
Operating current:	0.35A
Maximum number of users:	127
Door opening time:	3 sec.
Operating temperature:	0° ÷ +40°C
Maximum permissible humidity:	90% RH
Dimensions:	1 module

Terminal board

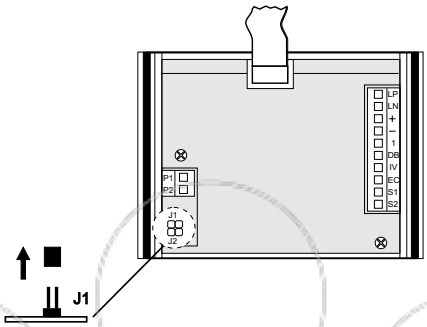
LP positive line
LN negative line
- general ground
+ +15V power input
1 receiver/transmitter (to speaker unit)
DB serial data bus
IV video power supply activation
EC analog exchanger command (grounded contact upon call and during conversation)
S1-S2 door lock release commands (normally open contacts of relay)
P1 1st call button *
P2 2nd call button *

* To be connected only if included in the push-button panel composition.

Notice. When powering up the digital system, the digital encoder checks the line status and gets ready only if the checking is OK; otherwise the busy state signal starts flashing. This operation will take a few seconds.

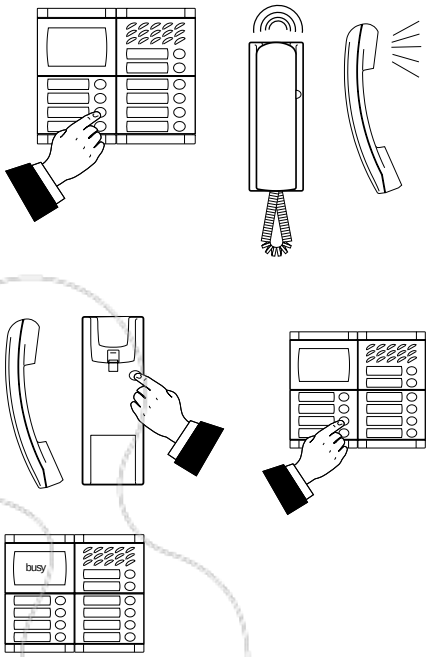
System with 2 digital encoders

The **CD6130** digital encoder allows for sending up to 127 calls (from 1 to 127); In case of more users, another digital encoder must be added to make calls from 128 to 254. Remove the **J1** jumper in the second digital encoder to free the 2 poles.

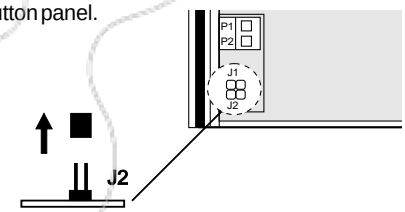


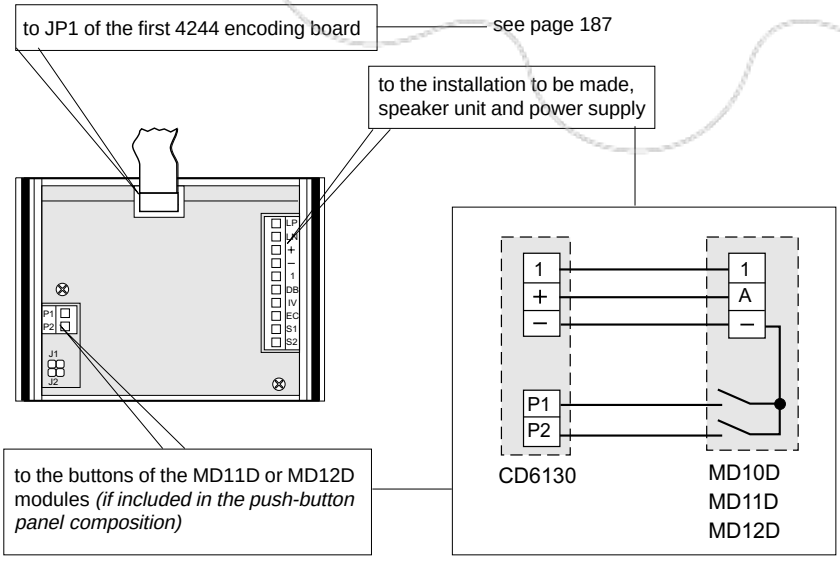
Operation
Make sure that connections are correct. Connect the power supply to the mains to power up the system.
Press the button of the desired user, the speaker unit receives the acknowledge tone followed by the dialling tone to indicate that the call has been sent. The intercom rings for approximately 25 seconds.
The called user picks up the handset to interrupt the call and enable conversation with the door station for 60 seconds.
Either visitor and users receive an acoustic signal 10 seconds before conversation ends. Press the call button again to continue conversation for additional 60 seconds (maximum conversation time is 4 minutes).
The system returns to the idle state when hanging up the handset.
If no answer is received from the internal station when pressing the call button, it is necessary to wait for 25 seconds before making a call to another user.

The door can be opened during conversation only. Wait 1 second after picking up the handset.
In systems with multiple main door stations, the busy lamp turns ON if a conversation is in progress. Wait until the lamp turns OFF to make a call.

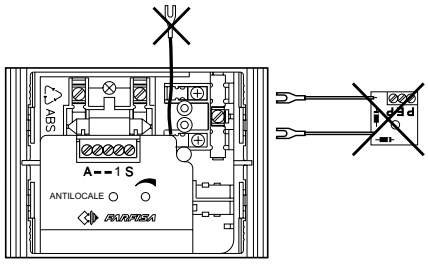


Tone disabling on the door station
To disable tones on the door station remove the **J2** jumper located on the back of the push-button panel.

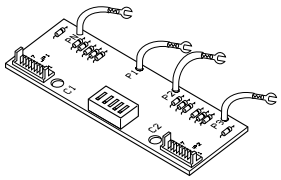




Note
In the **MD11D** and **MD12D** modules disconnect and insulate the yellow wire and remove the diode module.



ENCODING BOARD FOR 4 BUTTONS

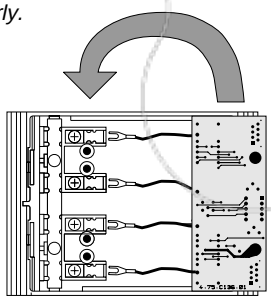


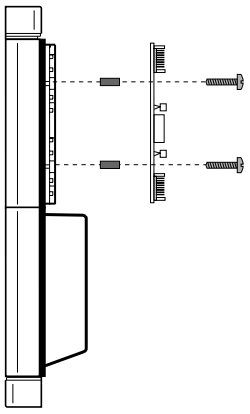
4244. It allows for connecting the Mody button modules to the **DF6000** digital system by means of the **CD6130** digital encoder.
One **4244** encoding board is installed in 1 row button modules (**MD21, 22, 23, 24**), while two encoding boards are necessary in 2 row modules (**MD226, MD228)**. One **4244** encoding board can be used for **MD222** and **MD224** modules by connecting the button common terminals.

Installation and connections

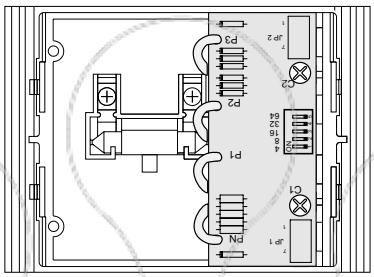
- Remove the screws of the button common terminals.
- Connect the call wires of the **4244** encoding board to the corresponding buttons
- Fix the encoding board to the button module using the screws and washers supplied. **Warning**. The encoding board fixing screws also allow for connecting the encoding boards to the common terminal of buttons. Therefore they need to be well tightened.
- Connect the **CD6130** digital encoder to the JP1 connector of the first **4244** encoding board using the cable supplied with the encoding board.
- Connect the JP2 connector to the JP1 of the second **4244** encoding board using the cables supplied with the **4244** kit.
- Connect all the encoding boards.

***Attention**. An inversion of connection to connectors JP1 and JP2 makes the system not working properly.*

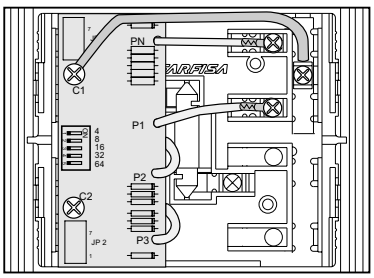




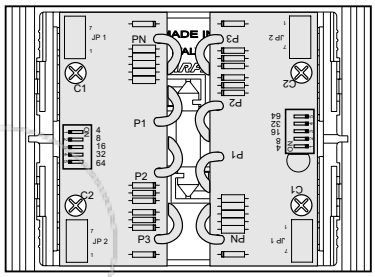
4244 kit.
Kit with 4x**4244** encoding boards, no. 3x100mm *(3x3 15/16")* connection cables and no.1x500mm *(1x19 11/16")* connection cable. 8 screws and 8 washers to fix the board to the modules of Mody series.



Installation on MD21-22-23-24 modules.

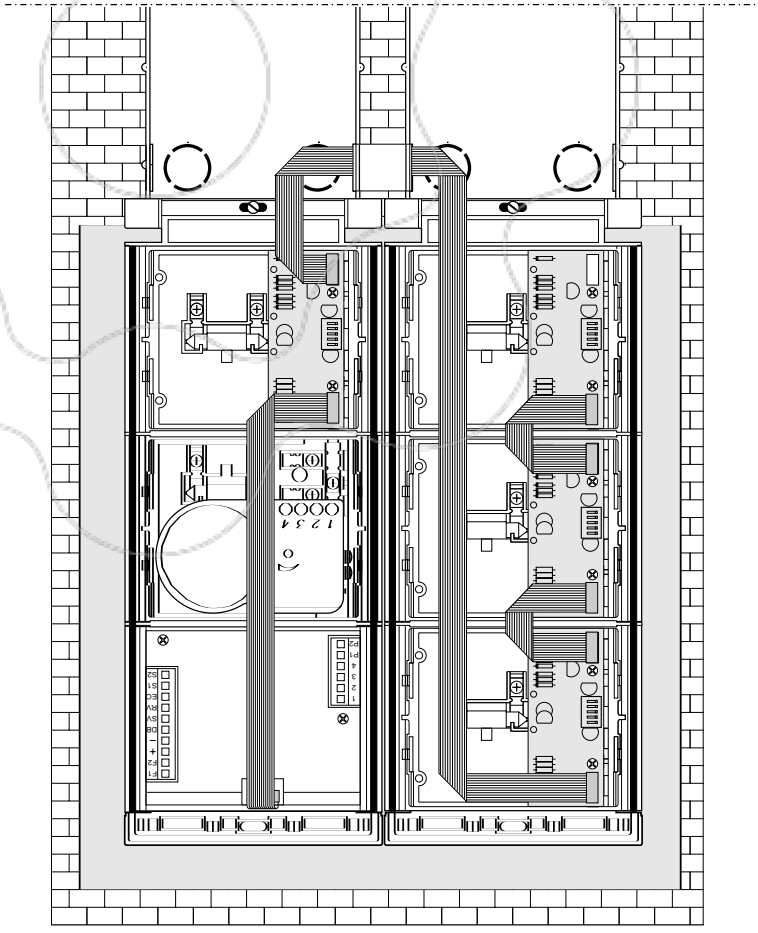


Installation on MD222-224 modules *(connect the button common terminals together).*



Installation on MD226-228 modules.

Example of installation of 18-call intercom push-button panel.

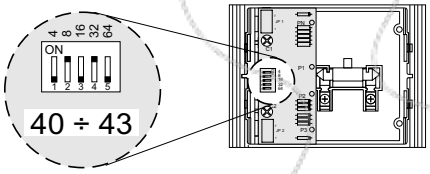


4244 encoding board programming

The microswitch programming allows the **CD6130** digital encoder to recognise the sequence of the connected buttons. Numbering must follow a predetermined code plan which should correspond to the code of the internal users. In systems with secondary door stations (multiple entrance) attention must be paid to the number range recognised by the **6273** digital exchanger. Programming must begin from the first **4244** encoding board with number 4 if the P1 and P2 buttons of the digital encoder are connected. In this case number 3 cannot be used in the system. The first button call is not used when the **MD24** or **MD228** module is used as first button module and the **4244** encoding board is programmed with 0-3 number range. This happens because the digital system does not recognise digit **0 (zero)** as call number.

The default microswitch setting is 0 (OFF). Move them to ON as necessary (see table).

Example: leaving the default setting (zero) of the **CD6130** digital encoder unchanged and setting levers 2 and 4 of a **4244** board on ON, the connected buttons will call users with 40, 41, 42 and 43 codes. If the **CD6130** digital encoder is programmed to recognise codes starting from 128, the users with 168, 169, 170 and 171 codes will be called.



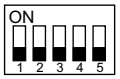
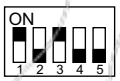
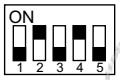
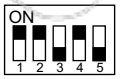
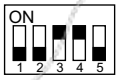
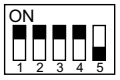
Tone table

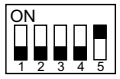
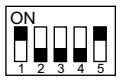
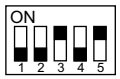
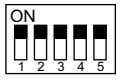
Call. A correct call is in progress and the called user is free.

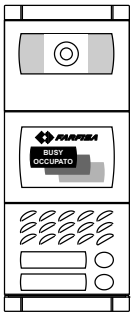
Busy. The called user is busy.

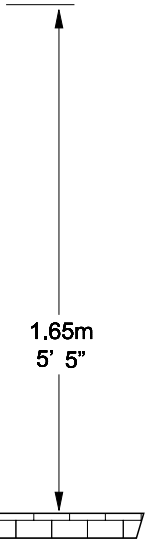
Programming. Indicates the programming mode.

Acknowledge. Indicates that programming has been executed.

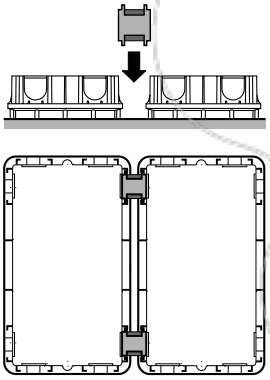
Numerical range	Microswitch position
0 ÷ 3	
4 ÷ 7	
8 ÷ 11	
12 ÷ 15	
16 ÷ 19	
20 ÷ 23	
24 ÷ 27	
28 ÷ 31	
32 ÷ 35	
36 ÷ 39	
40 ÷ 43	
44 ÷ 47	
48 ÷ 51	
52 ÷ 55	
56 ÷ 59	
60 ÷ 63	

Numerical range	Microswitch position
64 ÷ 67	
68 ÷ 71	
72 ÷ 75	
76 ÷ 79	
80 ÷ 83	
84 ÷ 87	
88 ÷ 91	
92 ÷ 95	
96 ÷ 99	
100 ÷ 103	
104 ÷ 107	
108 ÷ 111	
112 ÷ 115	
116 ÷ 119	
120 ÷ 123	
124 ÷ 127	

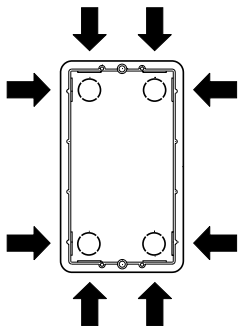




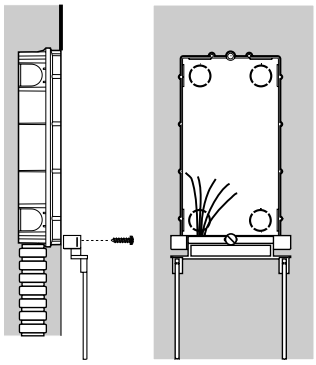
Place the back box on the wall at a height of about 1.65m *(5'5")* from the floor keeping the front edges flush-mounted and vertical to the finished plaster.
Place the camera so that the sun or other direct/reflected light sources with high intensity do not hit the camera lens.



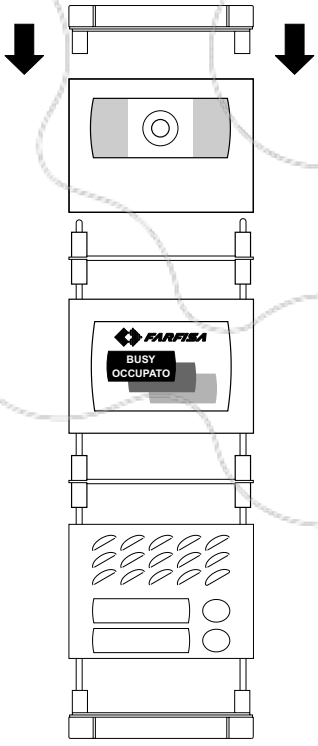
Insertion of cable bush between back boxes. The cable bushes must be inserted before brickwork.



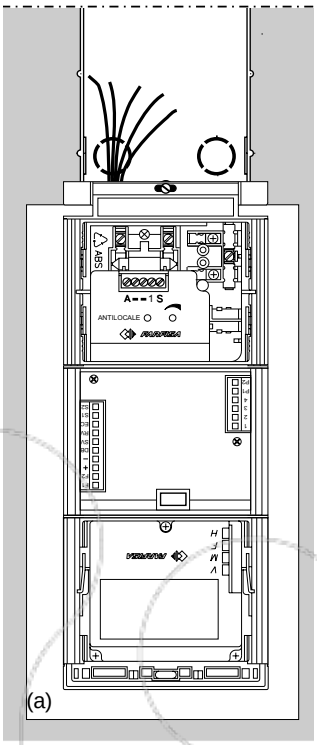
Openings for cables.



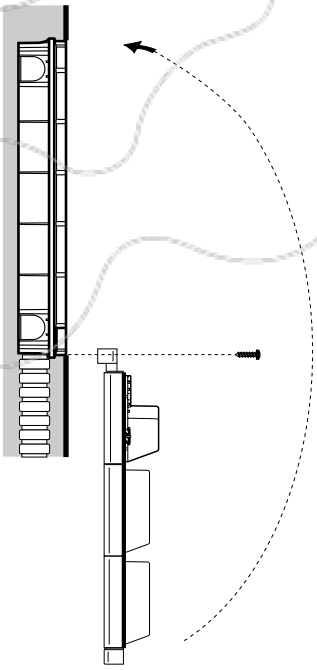
Flush mounting, cables placing and lower fixing of the frame module.



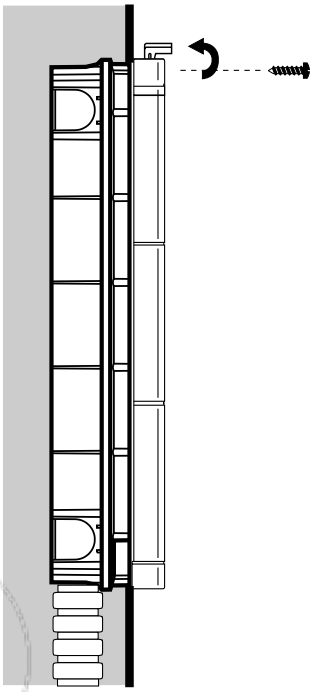
Module fixing to the frame.



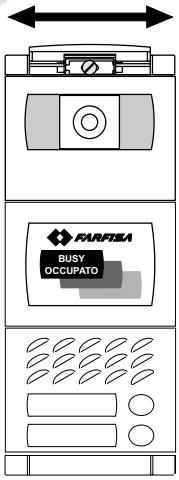
Lower fixing of the frame module to the back box.
It is advised to insert a protection (a) between the panel and the wall while fixing.



Lower fixing of the frame module.



Top fixing of the push-button panel.



Alignment of the push-button panel.

Composition board of INTERCOM push-button panels.

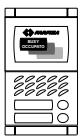
No. calls	Compositions and dimensions	Digital encoder	Amplified door station	Buttons, number or blank module			Encoding board (kit)	Back boxes and frames	Rain shelters
1	124x213x19mm (4 7/8" x 8 3/8" x 3/4")	1 CD6130	1 MD11D	-	-	-	-	1 MD72	1 MD92
2		1 CD6130	1 MD12D	-	-	-	-	1 MD72	1 MD92
4	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD6130	1 MD10D	1 MD24	-	-	1 4244	1 MD73	1 MD93
6		1 CD6130	1 MD12D	1 MD24	-	-	1 4244	1 MD73	1 MD93
7	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD6130	1 MD10D	1 MD24	1 MD23	-	1 4244	2 MD72 ■	1 MD94 ■
10		1 CD6130	1 MD12D	2 MD24	-	-	1 4244	2 MD72 ■	1 MD94 ■
12	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD6130	1 MD10D	3 MD24	-	1 *	1 4244	2 MD73	1 MD96
15		1 CD6130	1 MD10D	3 MD24	1 MD23	-	1 4244	2 MD73	1 MD96
18		1 CD6130	1 MD12D	4 MD24	-	-	1 4244	2 MD73	1 MD96
19	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD6130	1 MD10D	4 MD24	1 MD23	1 *	2 4244	2 MD74	1 MD908
20		1 CD6130	1 MD10D	5 MD24	-	1 *	2 4244	2 MD74	1 MD908
23		1 CD6130	1 MD10D	5 MD24	1 MD23	-	2 4244	2 MD74	1 MD908
26		1 CD6130	1 MD12D	6 MD24	-	-	2 4244	2 MD74	1 MD908
28	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD6130	1 MD10D	7 MD24	-	-	2 4244	3 MD73	1 MD99
30		1 CD6130	1 MD12D	7 MD24	-	-	2 4244	3 MD73	1 MD99
33	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD6130	1 MD11D	8 MD24	-	2 *	2 4244	3 MD74	1 MD912
36		1 CD6130	1 MD10D	9 MD24	-	1 *	3 4244	3 MD74	1 MD912
38		1 CD6130	1 MD12D	9 MD24	-	1 *	3 4244	3 MD74	1 MD912
40		1 CD6130	1 MD10D	10 MD24	-	-	3 4244	3 MD74	1 MD912
42		1 CD6130	1 MD12D	10 MD24	-	-	3 4244	3 MD74	1 MD912
45	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD6130	1 MD11D	11 MD24	-	3 *	3 4244	4 MD74	-
50		1 CD6130	1 MD12D	12 MD24	-	2 *	3 4244	4 MD74	-
54		1 CD6130	1 MD12D	13 MD24	-	1 *	4 4244	4 MD74	-
58		1 CD6130	1 MD12D	14 MD24	-	-	4 4244	4 MD74	-

■ or MD74 or MD904

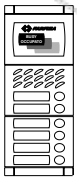
* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

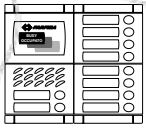
Examples of installations of Mody push-button panels with 1 row in intercom systems



2 call buttons



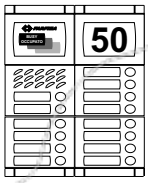
6 call buttons



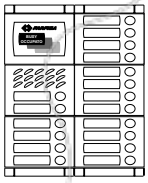
10 call buttons

8 call buttons

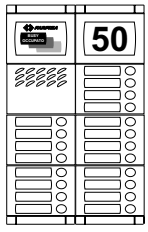
10 call buttons



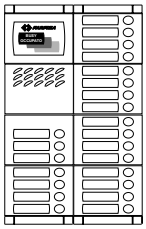
14 call buttons



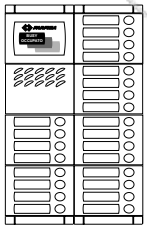
18 call buttons



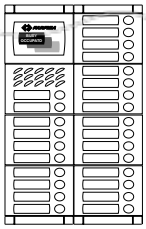
20 call buttons



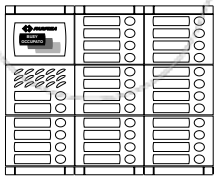
23 call buttons



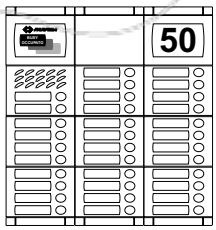
24 call buttons



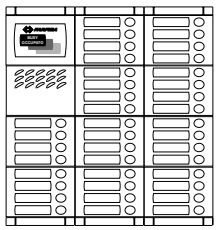
26 call buttons



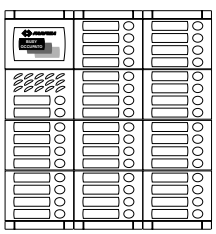
30 call buttons



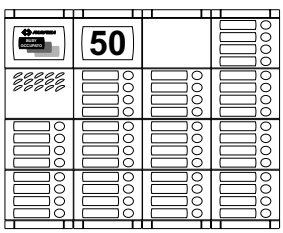
34 call buttons



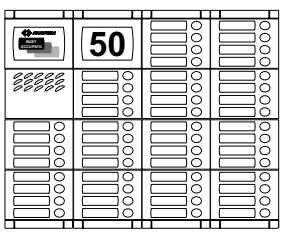
40 call buttons



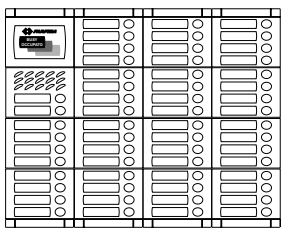
42 call buttons



48 call buttons



52 call buttons



58 call buttons

Composition board of VIDEOINTERCOM push-button panels.

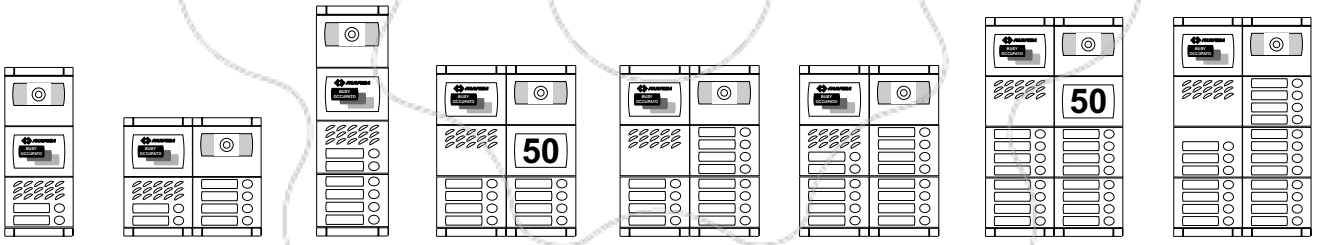
No. calls	Compositions and dimensions	Digital encoder	Camera module	Amplified door station	Buttons, number or blank module	Encoding board (kit)	Back boxes and frames	Rain shelters
1	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD6130	1 MD41D	1 MD11D	- - -	-	1 MD73	1 MD93
2		1 CD6130	1 MD41D	1 MD12D	- - -	-	1 MD73	1 MD93
4	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD6130	1 MD41D	1 MD10D	1 MD24 - -	1 4244	2 MD72 ■	1 MD94 ■
6		1 CD6130	1 MD41D	1 MD12D	1 MD24 - -	1 4244	2 MD72 ■	1 MD94 ■
7	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD6130	1 MD41D	1 MD10D	1 MD24 1 MD23 1 *	1 4244	2 MD73	1 MD96
10		1 CD6130	1 MD41D	1 MD12D	2 MD24 - 1 *	1 4244	2 MD73	1 MD96
12		1 CD6130	1 MD41D	1 MD10D	3 MD24 - -	1 4244	2 MD73	1 MD96
14		1 CD6130	1 MD41D	1 MD12D	3 MD24 - -	1 4244	2 MD73	1 MD96
15	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	3 MD24 1 MD23 1 *	1 4244	2 MD74	1 MD908
18		1 CD6130	1 MD41D	1 MD12D	4 MD24 - 1 *	1 4244	2 MD74	1 MD908
20		1 CD6130	1 MD41D	1 MD10D	5 MD24 - -	2 4244	2 MD74	1 MD908
22		1 CD6130	1 MD41D	1 MD12D	5 MD24 - -	2 4244	2 MD74	1 MD908
24	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD6130	1 MD41D	1 MD10D	6 MD24 - -	2 4244	3 MD73	1 MD99
26		1 CD6130	1 MD41D	1 MD12D	6 MD24 - -	2 4244	3 MD73	1 MD99
28	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	7 MD24 - 2 *	2 4244	3 MD74	1 MD912
30		1 CD6130	1 MD41D	1 MD10D	7 MD24 1 MD22 1 *	2 4244	3 MD74	1 MD912
33		1 CD6130	1 MD41D	1 MD11D	8 MD24 - 1 *	2 4244	3 MD74	1 MD912
36		1 CD6130	1 MD41D	1 MD10D	9 MD24 - -	3 4244	3 MD74	1 MD912
38		1 CD6130	1 MD41D	1 MD12D	9 MD24 - -	3 4244	3 MD74	1 MD912
40	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	10 MD24 - 3 *	3 4244	4 MD74	-
42		1 CD6130	1 MD41D	1 MD10D	10 MD24 1 MD22 2 *	3 4244	4 MD74	-
45		1 CD6130	1 MD41D	1 MD11D	11 MD24 - 2 *	3 4244	4 MD74	-
50		1 CD6130	1 MD41D	1 MD12D	12 MD24 - 1 *	3 4244	4 MD74	-
54		1 CD6130	1 MD41D	1 MD12D	13 MD24 - -	4 4244	4 MD74	-

■ or MD74 or MD904

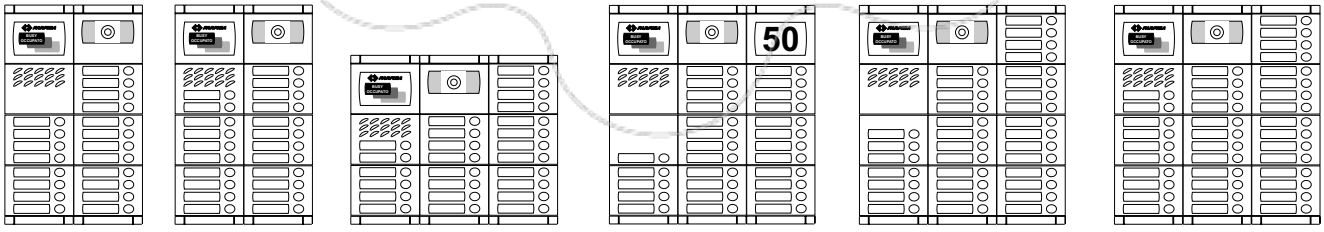
* MD20 or MD50 or FC52P

It replaces MD72, 73, 74

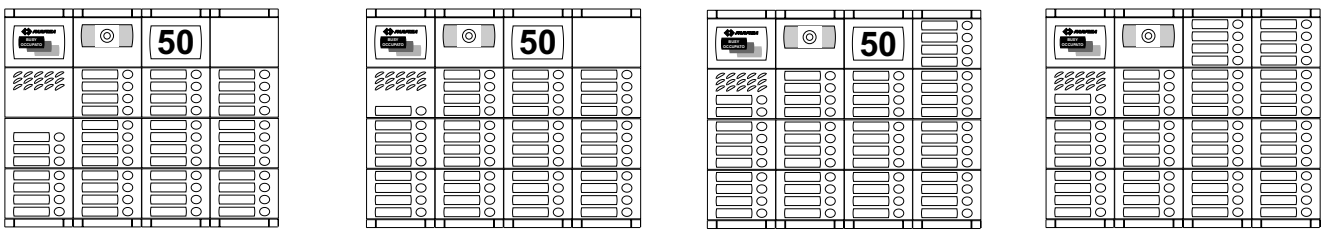
Examples of installations of Mody push-button panels with 1 row in videointercom systems



2 call buttons 6 call buttons 6 call buttons 8 call buttons 12 call buttons 14 call buttons 16 call buttons 19 call buttons



20 call buttons 22 call buttons 26 call buttons 29 call buttons 35 call buttons 38 call buttons



43 call buttons 45 call buttons 50 call buttons 54 call buttons

Composition board of INTERCOM push-button panels.

No. calls	Compositions and dimensions	Digital encoder	Amplified door station	Buttons, number or blank module			Encoding board (kit)	Back boxes and frames	Rain shelters
4	124x305x19mm (4 7/8" x 12" x 3/4")	1 CD6130	1 MD10D	1 MD224	-	-	1 4244	1 MD73	1 MD93
8		1 CD6130	1 MD10D	1 MD228	-	-	1 4244	1 MD73	1 MD93
12	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD6130	1 MD10D	1 MD228	1 MD224	-	1 4244	2 MD72 ■	1 MD94 ■
16		1 CD6130	1 MD10D	2 MD228	-	-	1 4244	2 MD72 ■	1 MD94 ■
20	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD6130	1 MD10D	2 MD228	1 MD224	1 *	2 4244	2 MD73	1 MD96
24		1 CD6130	1 MD10D	3 MD228	-	1 *	2 4244	2 MD73	1 MD96
28		1 CD6130	1 MD10D	3 MD228	1 MD224	-	2 4244	2 MD73	1 MD96
32		1 CD6130	1 MD10D	4 MD228	-	-	2 4244	2 MD73	1 MD96
36	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD6130	1 MD10D	4 MD228	1 MD224	1 *	3 4244	2 MD74	1 MD908
40		1 CD6130	1 MD10D	5 MD228	-	1 *	3 4244	2 MD74	1 MD908
44		1 CD6130	1 MD10D	5 MD228	1 MD224	-	3 4244	2 MD74	1 MD908
48		1 CD6130	1 MD10D	6 MD228	-	-	3 4244	2 MD74	1 MD908
52	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD6130	1 MD10D	6 MD228	1 MD224	-	4 4244	3 MD73	1 MD99
56		1 CD6130	1 MD10D	7 MD228	-	-	4 4244	3 MD73	1 MD99
60	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD6130	1 MD10D	7 MD228	1 MD224	2 *	4 4244	3 MD74	1 MD912
64		1 CD6130	1 MD10D	8 MD228	-	2 *	4 4244	3 MD74	1 MD912
70		1 CD6130	1 MD10D	8 MD228	1 MD226	1 *	5 4244	3 MD74	1 MD912
74		1 CD6130	1 MD10D	9 MD228	1 MD222	-	5 4244	3 MD74	1 MD912
80		1 CD6130	1 MD10D	10 MD228	-	-	5 4244	3 MD74	1 MD912
90	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD6130	1 MD10D	11 MD228	1 MD222	2 *	6 4244	4 MD74	-
94		1 CD6130	1 MD10D	11 MD228	1 MD226	2 *	6 4244	4 MD74	-
100		1 CD6130	1 MD10D	12 MD228	1 MD224	1 *	7 4244	4 MD74	-
106		1 CD6130	1 MD10D	13 MD228	1 MD222	-	7 4244	4 MD74	-
112		1 CD6130	1 MD10D	14 MD228	-	-	7 4244	4 MD74	-

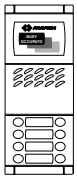
■ or MD74 or MD904

* MD20 or MD50 or FC52P

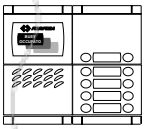
It replaces MD72, 73, 74

Examples of installations of Mody push-button panels with 2 row in intercom systems

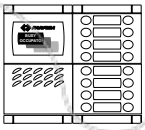
4 call buttons



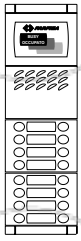
8 call buttons



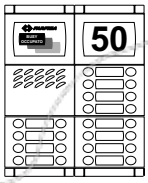
10 call buttons



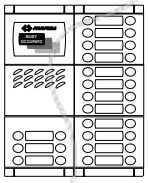
16 call buttons



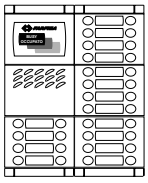
16 call buttons



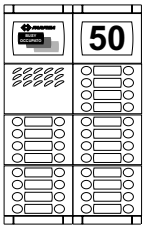
24 call buttons



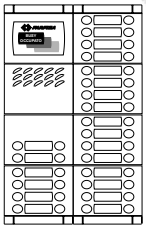
30 call buttons



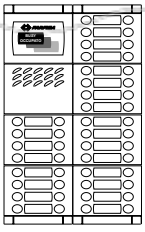
32 call buttons



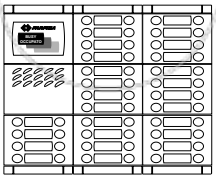
40 call buttons



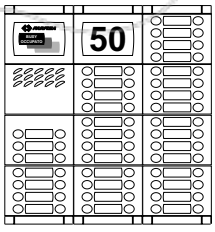
44 call buttons



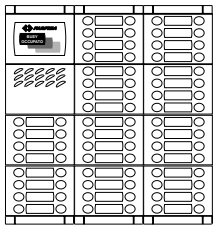
48 call buttons



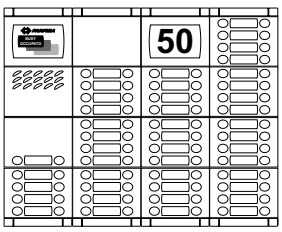
56 call buttons



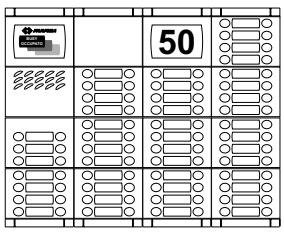
70 call buttons



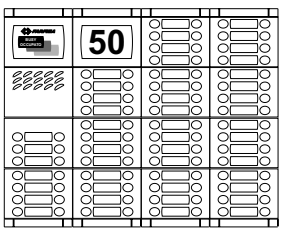
80 call buttons



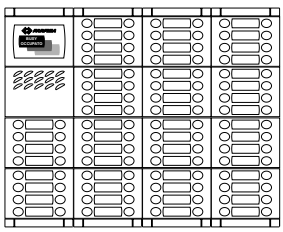
90 call buttons



94 call buttons



102 call buttons



112 call buttons

Composition board of VIDEOINTERCOM push-button panels.

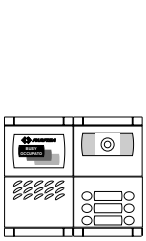
No. calls	Compositions and dimensions	Digital encoder	Camera module	Amplified door station	Buttons, number or blank module			Encoding board (kit)	Back boxes and frames	Rain shelters
6	248x213x19mm (9 3/4" x 8 3/8" x 3/4")	1 CD6130	1 MD41D	1 MD10D	1 MD226	-	-	1 4244	2 MD72 ■	1 MD94 ■
8		1 CD6130	1 MD41D	1 MD10D	1 MD228	-	-	1 4244	2 MD72 ■	1 MD94 ■
10	248x305x19mm (9 3/4" x 12" x 3/4")	1 CD6130	1 MD41D	1 MD10D	1 MD228	1 MD222	1 *	1 4244	2 MD73	1 MD96
14		1 CD6130	1 MD41D	1 MD10D	1 MD228	1 MD226	1 *	1 4244	2 MD73	1 MD96
16		1 CD6130	1 MD41D	1 MD10D	2 MD228	-	1 *	1 4244	2 MD73	1 MD96
20		1 CD6130	1 MD41D	1 MD10D	2 MD228	1 MD224	-	2 4244	2 MD73	1 MD96
22		1 CD6130	1 MD41D	1 MD10D	2 MD228	1 MD226	-	2 4244	2 MD73	1 MD96
24		1 CD6130	1 MD41D	1 MD10D	3 MD228	-	-	2 4244	2 MD73	1 MD96
30	248x395x19mm (9 3/4" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	3 MD228	1 MD226	1 *	2 4244	2 MD74	1 MD908
34		1 CD6130	1 MD41D	1 MD10D	4 MD228	1 MD222	-	3 4244	2 MD74	1 MD908
38		1 CD6130	1 MD41D	1 MD10D	4 MD228	1 MD226	-	3 4244	2 MD74	1 MD908
40		1 CD6130	1 MD41D	1 MD10D	5 MD228	-	-	3 4244	2 MD74	1 MD908
44	372x305x19mm (14 5/8" x 12" x 3/4")	1 CD6130	1 MD41D	1 MD10D	5 MD228	1 MD224	-	3 4244	3 MD73	1 MD99
48		1 CD6130	1 MD41D	1 MD10D	6 MD228	-	-	3 4244	3 MD73	1 MD99
54	372x395x19mm (14 5/8" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	6 MD228	1 MD226	2 *	4 4244	3 MD74	1 MD912
60		1 CD6130	1 MD41D	1 MD10D	7 MD228	1 MD224	1 *	4 4244	3 MD74	1 MD912
68		1 CD6130	1 MD41D	1 MD10D	8 MD228	1 MD224	-	5 4244	3 MD74	1 MD912
72		1 CD6130	1 MD41D	1 MD10D	9 MD228	-	-	5 4244	3 MD74	1 MD912
76	496x395x19mm (19 1/2" x 15 9/16" x 3/4")	1 CD6130	1 MD41D	1 MD10D	9 MD228	1 MD224	3 *	5 4244	4 MD74	-
82		1 CD6130	1 MD41D	1 MD10D	10 MD228	1 MD222	2 *	6 4244	4 MD74	-
88		1 CD6130	1 MD41D	1 MD10D	11 MD228	-	2 *	6 4244	4 MD74	-
94		1 CD6130	1 MD41D	1 MD10D	11 MD228	1 MD226	1 *	6 4244	4 MD74	-
98		1 CD6130	1 MD41D	1 MD10D	12 MD228	1 MD222	-	7 4244	4 MD74	-
104		1 CD6130	1 MD41D	1 MD10D	13 MD228	-	-	7 4244	4 MD74	-

■ or MD74 or MD904

* MD20 or MD50 or FC52P

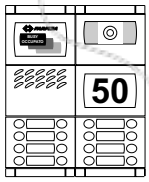
It replaces MD72, 73, 74

Examples of installations of Mody push-button panels with 2 row in videointercom systems

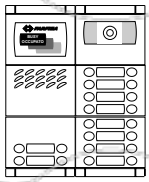


6 call buttons

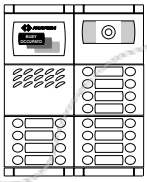
8 call buttons



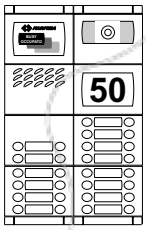
16 call buttons



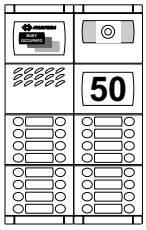
20 call buttons



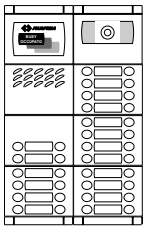
24 call buttons



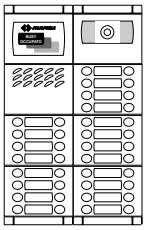
28 call buttons



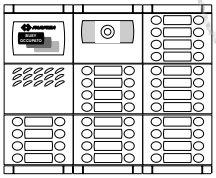
32 call buttons



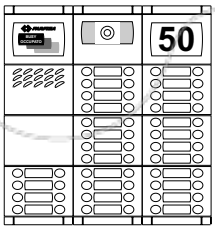
36 call buttons



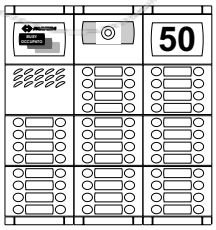
40 call buttons



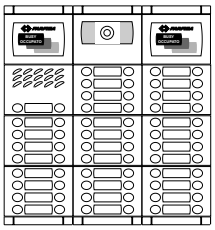
48 call buttons



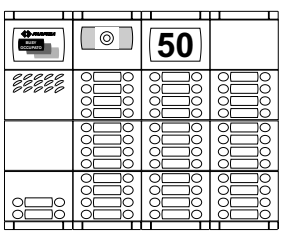
56 call buttons



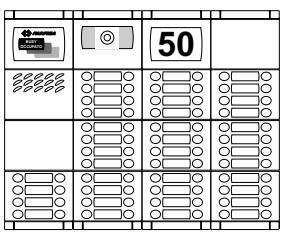
64 call buttons



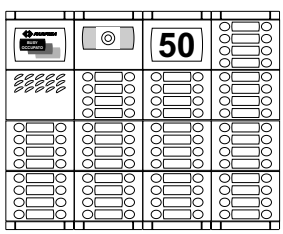
72 call buttons



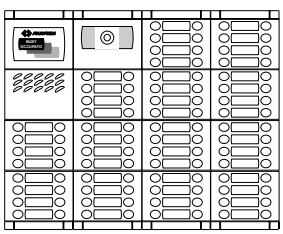
76 call buttons



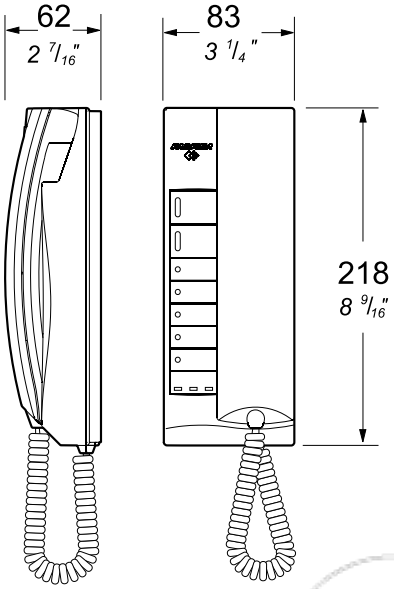
80 call buttons



96 call buttons



104 call buttons



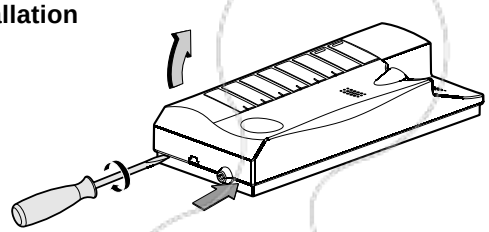
INTERCOM

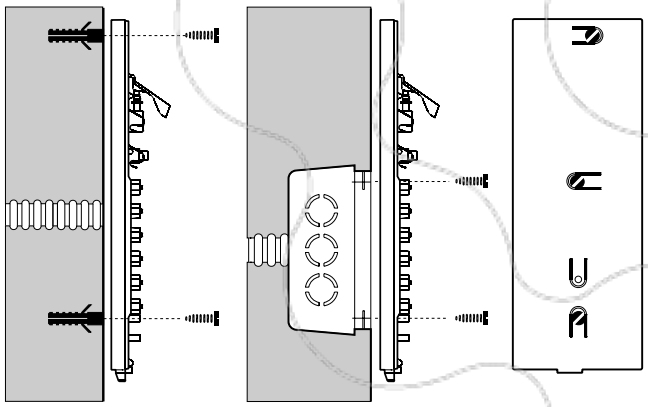
EX322. White electronic intercom for **DF6000** digital systems with programmable electronic decoding circuit. Equipped with floor call, 1 door lock release button and 1 supplementary button. Expandable with additional buttons, switches and LEDs up to a maximum of 8. It can be installed on the wall with expansion plugs or on a wall box.

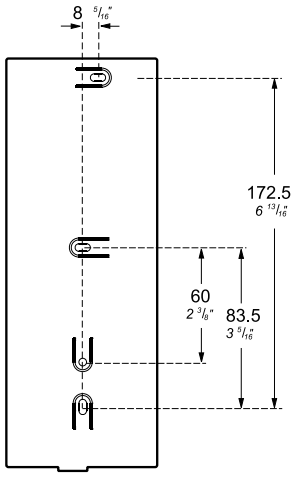
Terminals

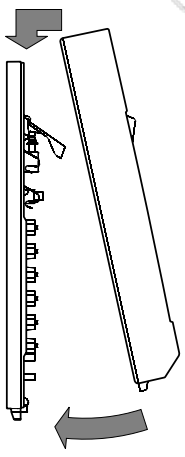
LP positive line
LN negative line
EC grounded contact upon call and during conversation
W2 high/low/OFF ringer volume adjustment
C common for ringer volume adjustment
P floor call input
P1 supplementary button "**1**"

Installation

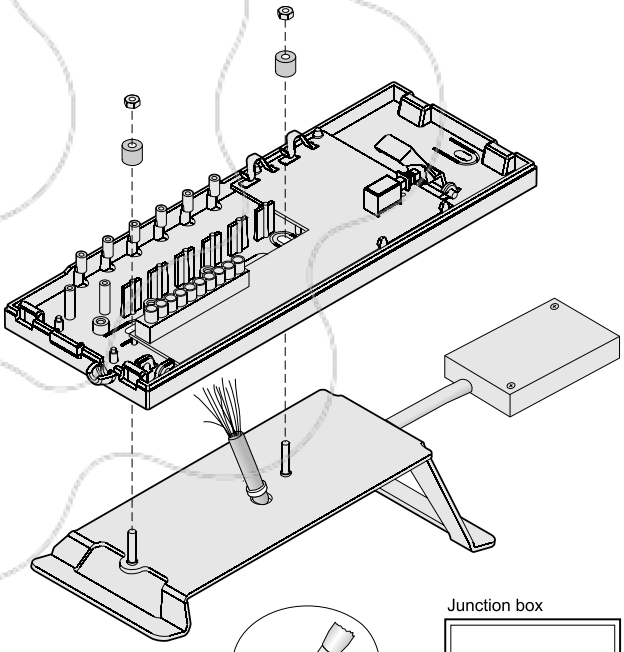


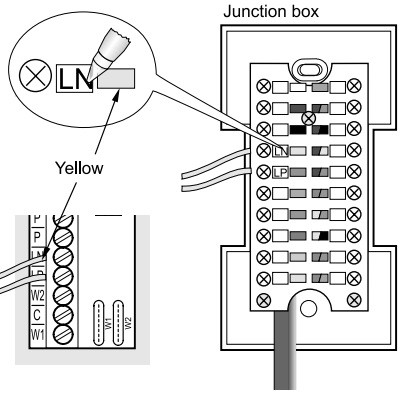






TA320. Table adaptor with weighted base, junction box and 2.4m connection cable with 20 wires.

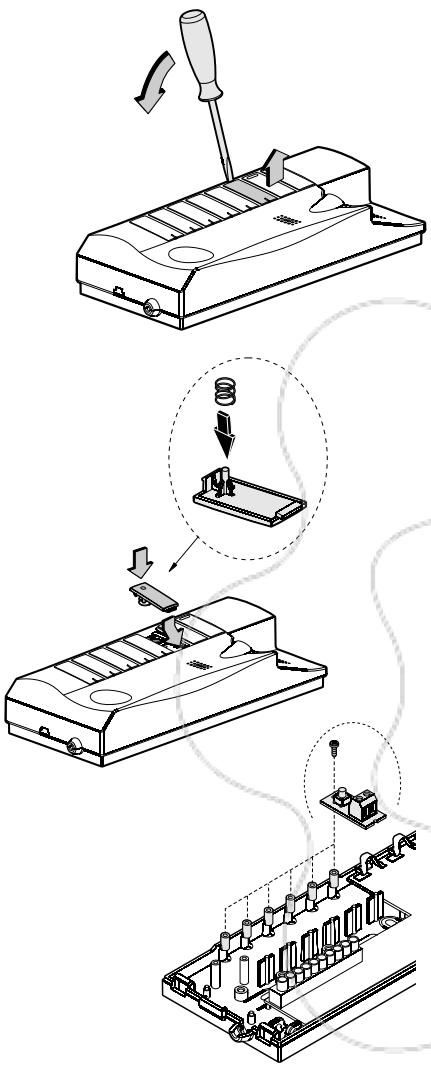




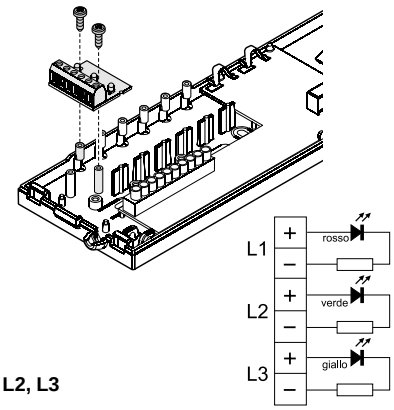
Remove the cover to the junction box and mark the code of the terminal in the spaces between screw and colour of the corresponding conductor. Make the connection of the installation to the terminal boards of the junction box.

Accessories

EX301. Single button unit for **Exhito** intercoms. Maximum contact current is 0.1A. For higher currents use a relay.
Note. For easier reference the 2 terminals of the module are defined as C and P, but they have no polarity and can be inverted.

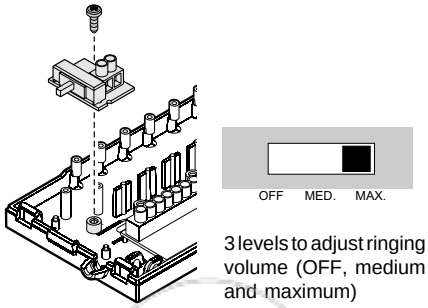


EX332. 3-LED module



L1, L2, L3
terminals input **+** / **-** **:** 13Vac / 24Vdc maximum

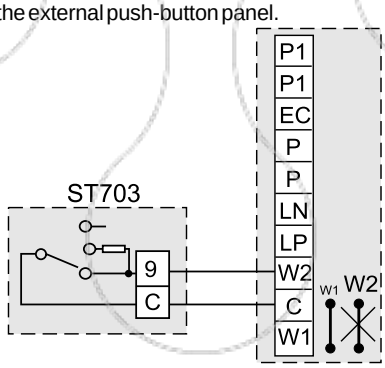
ST703. Ringing volume adjustment switch.



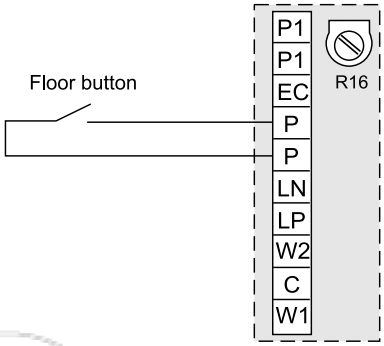
3 levels to adjust ringing volume (OFF, medium and maximum)

Adjusting call volume from external push-button panel

Cutting the **W2** jumper and connecting the **ST703** ringing volume adjustment module between the terminals **W2** and **C**, you can exclude or reduce the volume of the call from the external push-button panel.

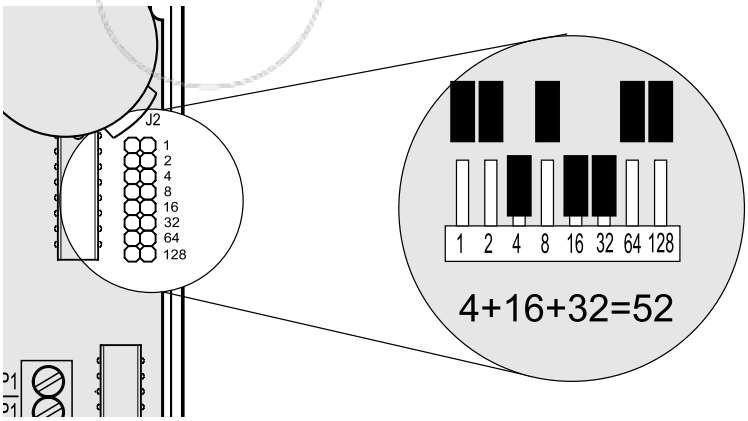


Floor call
To have a floor calls with different sound from external calls simply connect a button to the terminals **P**.
Use **R16** to adjust the floor call ringer volume.

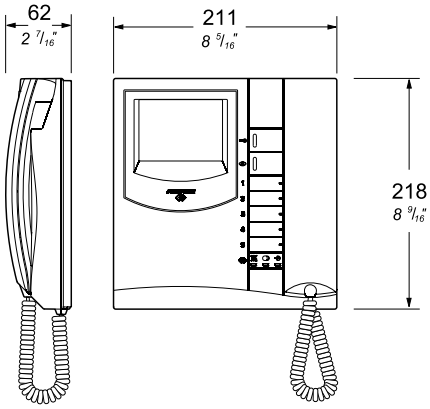


N.B.: The floor call can interfere with the conversation in progress.

Programming
Coding is effected by removing the jumpers from the intercom board as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 4, 16, 32 and remove jumpers 1, 2, 8, 64, 128 to programmed 52). *The table of numbers encoding is on page 203.* Each user must have a different code from the other users; do not programme two intercoms with the same code. **Do not use code 0.**



VIDEOINTERCOMS



EX3160. White Flat video intercom with integrated decoding module, private audio-video function, electronic microphone, differentiated double electronic ringing sounds (modulated and continuous) and terminal board for the connection to the wall bracket. Equipped with 3 led's and 7 buttons (5 of which are not installed but included in the package) for camera control switch ON, door-open and various services. The video intercom can be fixed to the wall (flush-mounted) with the **WB3162** bracket.

Technical data

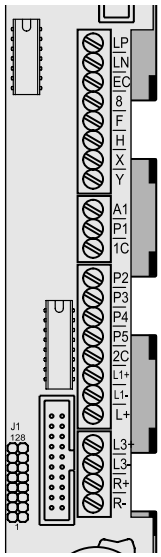
Power supply		12÷15Vdc
Operating current	- stand by	20mA
	- in operation	0.4A
Monitor		4" FLAT CRT
TV standard		CCIR-625 lines
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		2 seconds
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

EX3160C. Version of **EX3160** video intercom with colour LCD.

Technical data

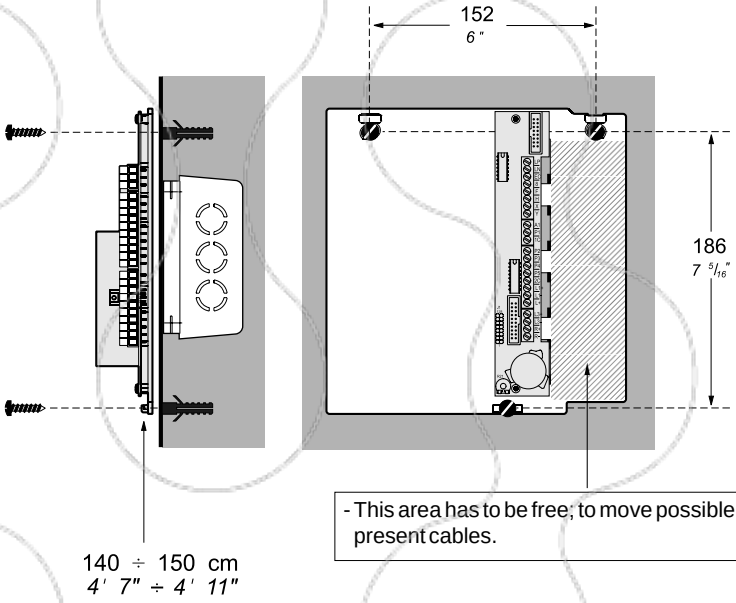
Power supply		12÷15Vdc
Operating current	- stand by	20mA
	- in operation	0.4A
Screen		4" LCD
TV standard		PAL
Line frequency		15625Hz
Frame frequency		50Hz
Bandwidth		>5MHz
Video signal on 75Ω		0.8÷1.5Vpp
Switching ON time		1 second
Operating temperature		0°÷+50°C
Maximum permissible humidity		90%RH

WB3162. Wall bracket for **EX3160** and **EX3160C** video intercoms with 2 terminal boards for connection to the system.



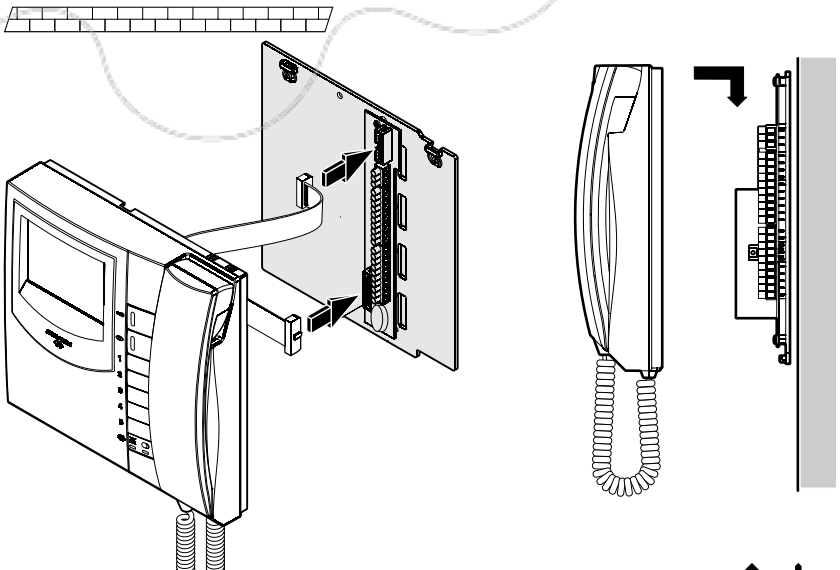
Terminals

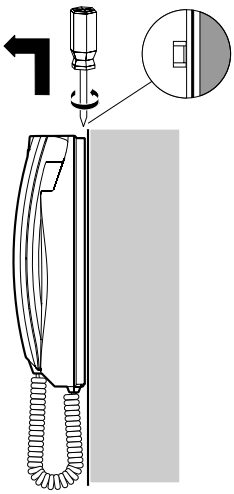
LP	positive line
LN	negative line
EC	output command for an analog exchanger *(grounded contact upon call and during conversation)*
8	+12V timed power output
F	ground
H	voltage input
X	negative video signal input
Y	positive video signal input
A1	floor call input *(grounded contact)*
P1÷P5	supplementary buttons (max.0.5A – *ground command)*
1C	common terminal for buttons P1, P2 and P3
2C	common terminal for buttons P4 and P5
L1+	positive power supply input for Led (12Vdc)
L1-	negative power supply input for Led
L+	not connected



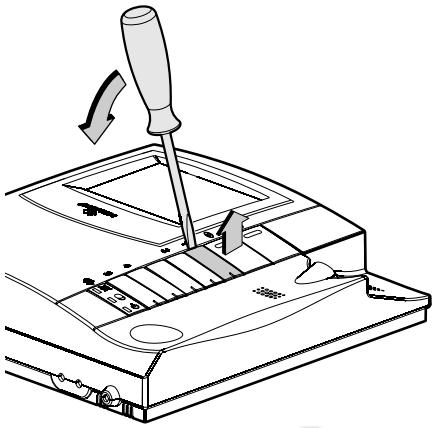
- This area has to be free, to move possible present cables.

-Don't shut the 3 screws of fixing if the wall is irregular.

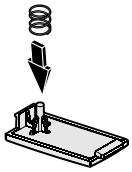


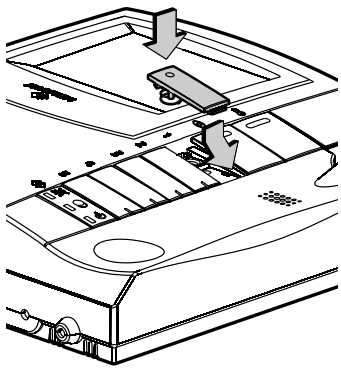


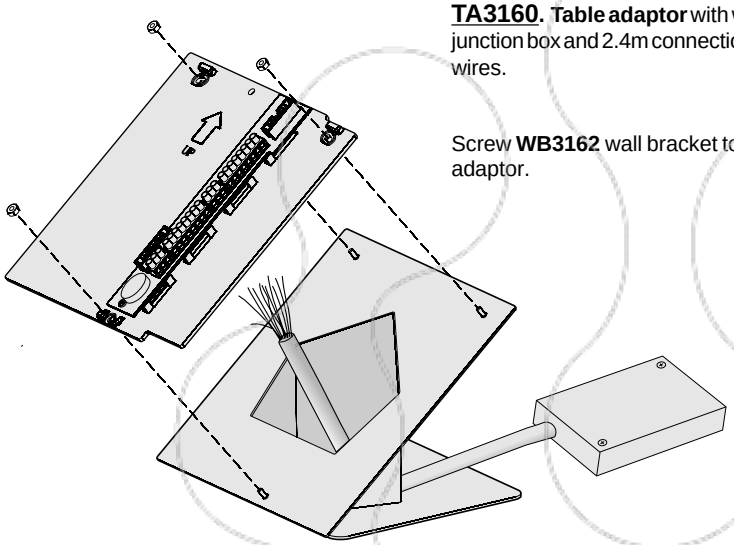
Taking out of button caps



Mounting of the additional buttons

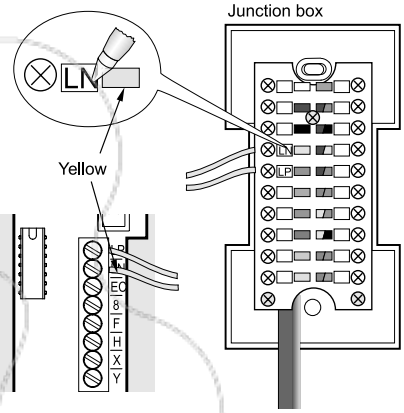






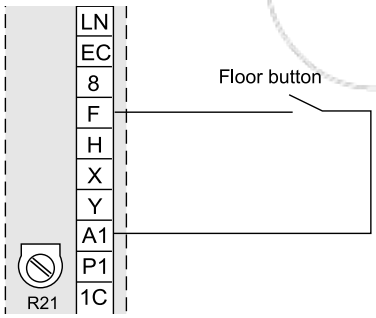
TA3160. Table adaptor with weighted base, junction box and 2.4m connection cable with 20 wires.

Screw **WB3162** wall bracket to **TA3160** table adaptor.



Remove the cover to the junction box and mark the code of the terminal in the spaces between screw and colour of the corresponding conductor. Make the connection of the installation to the terminal boards of the junction box.

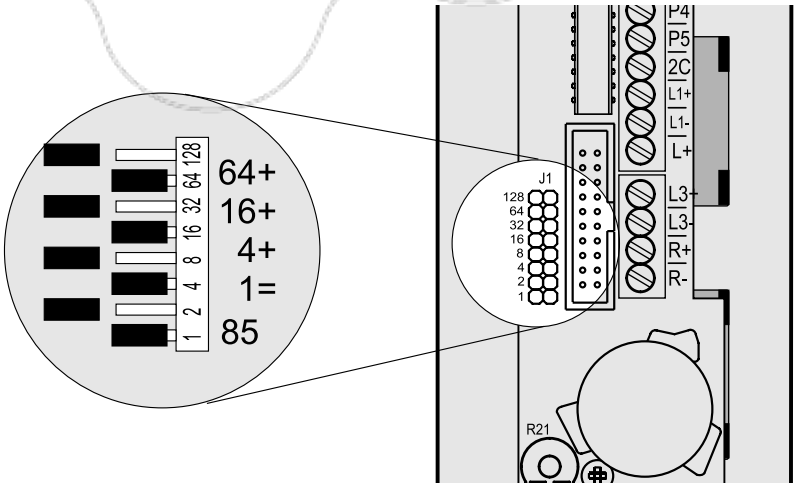
Floor call



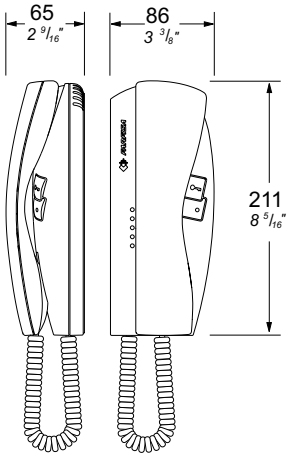
Use trimmer **R21** to adjust the floor ringer volume.

Programming

Coding is effected by removing the jumpers from the videointercom wall bracket as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 1, 4, 16, 64 and remove jumpers 2, 8, 32, 64, 128 to programmed 85). *The table of numbers encoding is on page 203.* Each user must have a different code from the other users; do not programme two videointercoms with the same code. **Do not use code 0.**



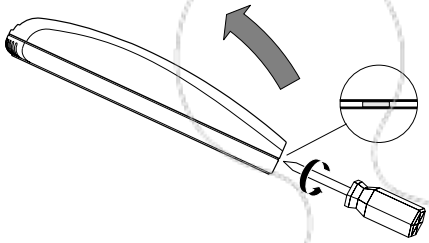
INTERCOM

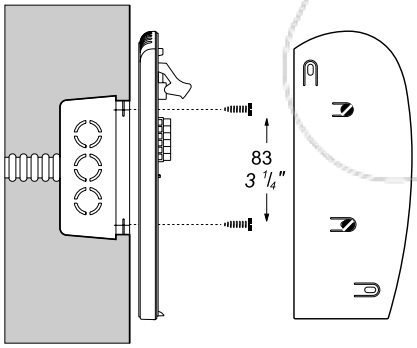


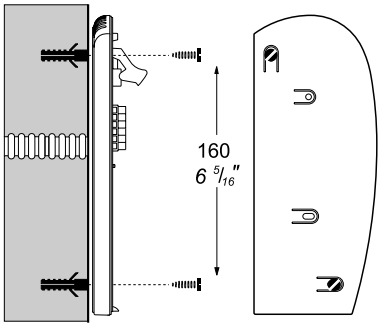
KM812W. White electronic intercom for **DF6000** digital systems with programmable electronic decoding circuit. Equipped with a door lock release button. It can be installed on the wall with expansion plugs or on a wall box.

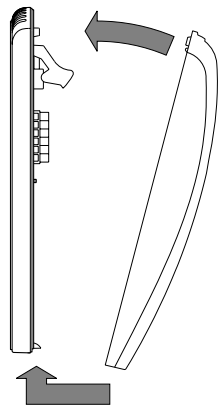
Terminals
LP * positive line
LN * negative line

* Terminals LP and LN are doubled for easier installation.

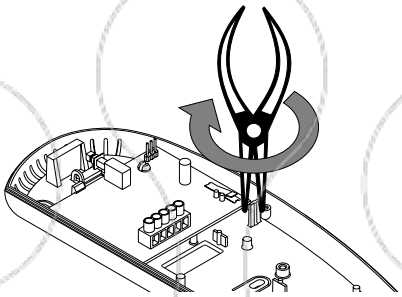


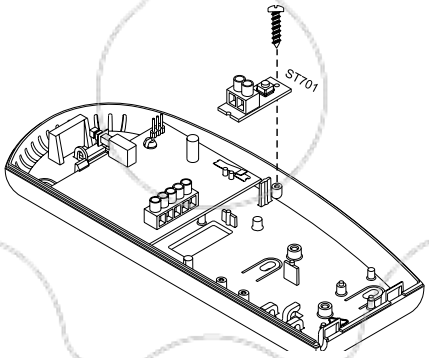






Mounting of the additional button **ST701.**



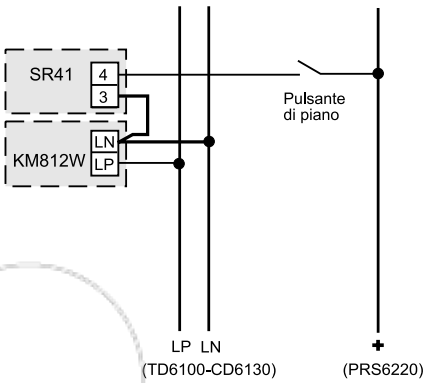


Floor call

The **SR41** buzzer module must be added to have the floor call with the **KM812W** intercom.

SR41. Electronic buzzer module.

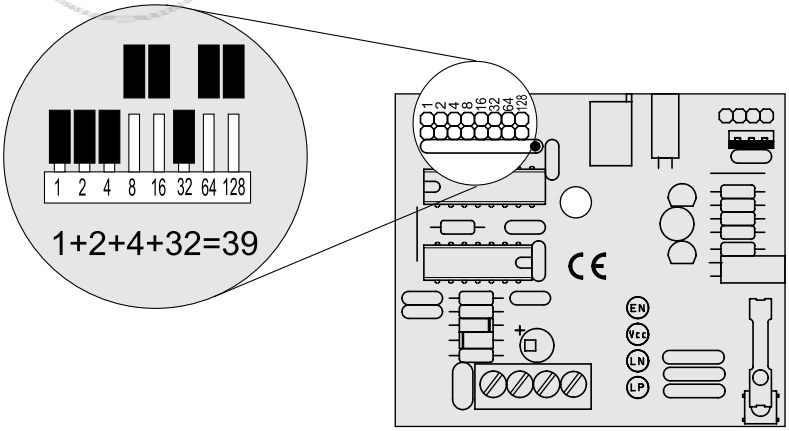
Terminals
3 ground
4 power supply input (12Vac/15Vdc-0.3A)



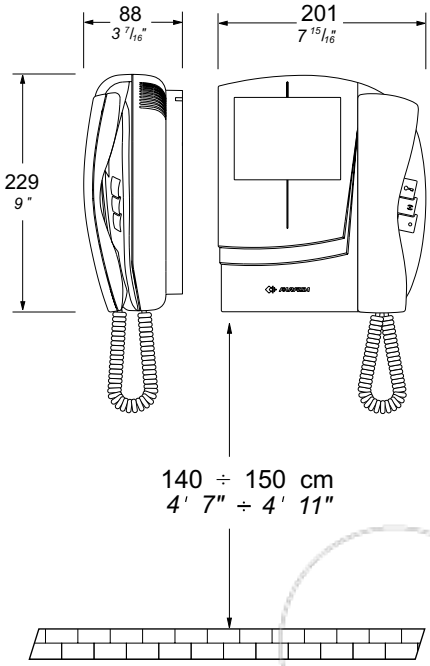
Video signal	balanced
Switching ON time	2 seconds
Operating temperature	0°÷+50°C
Maximum permissible humidity	90%RH

Programming

Coding is effected by removing the jumpers from the intercom board as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 1, 2, 4, 32 and remove jumpers 8, 16, 64, 128 to programmed 39). *The table of numbers encoding is on page 203.* Each user must have a different code from the other users; do not programme two intercoms with the same code. **Do not use code 0.**



VIDEOINTERCOM

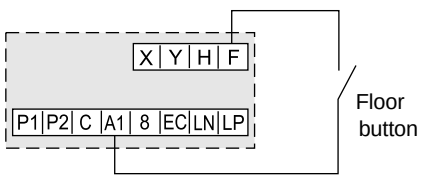


KM8162W. White Flat video intercom with integrated decoding module, private audio-video function, electronic microphone, differentiated double electronic ringing sounds (modulated and continuous) and terminal board for the connection to the wall bracket. Equipped with 1 button for door -open and 2 buttons for various services. Maximum acceptable current of buttons is 0.5A. For higher currents use relay art. **1471**.
Button 1 (terminal P1) is internally referred to ground (LN).
The video intercom can be fixed to the wall (flush-mounted) with the **WB3162** bracket.

Technical data

Power supply	15Vdc
Operating current - stand by	20mA
- in operation	0.4A
Monitor	4" FLAT CRT
TV standard	CCIR-625 lines
Line frequency	15625Hz
Frame frequency	50Hz
Bandwidth	>5MHz
Video signal	balanced
Switching ON time	2 seconds
Operating temperature	0°÷+50°C
Maximum permissible humidity	90%RH

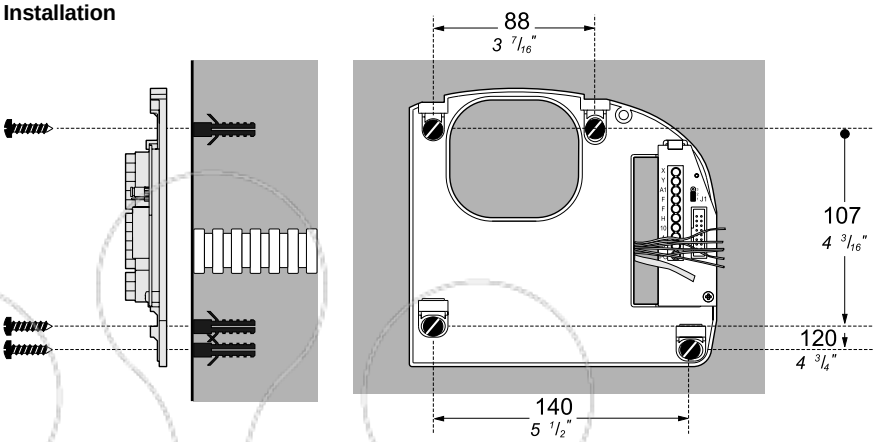
Floor call

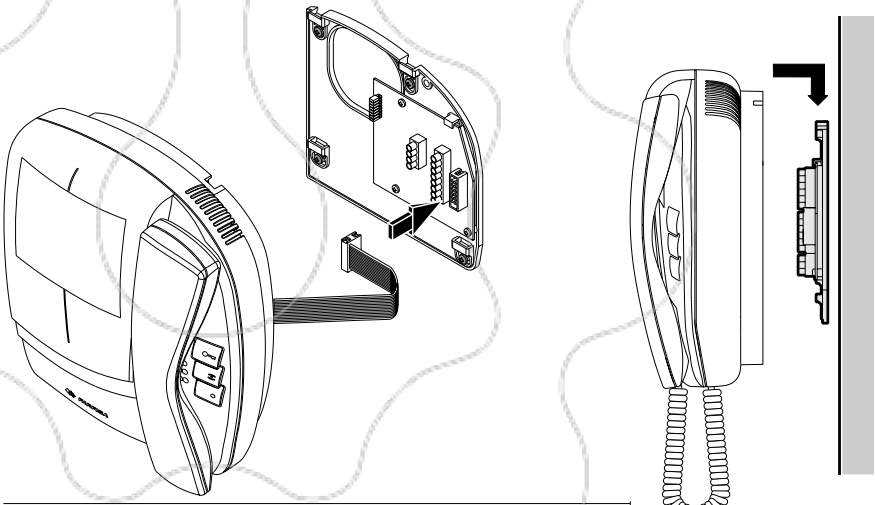


WB8162. Wall bracket for **KM8162** video intercom with terminal boards for connection to the system.

Terminals
LP positive line
LN negative line
EC output command for an analog exchanger *(grounded contact upon call and during conversation)*
8 +12V timed power output
F ground
H voltage input
X negative video signal input
Y positive video signal input
A1 floor call input *(grounded contact)*
P1-P2 supplementary buttons (max.0.5A – *ground command)*
C common terminal for buttons P1 and P2

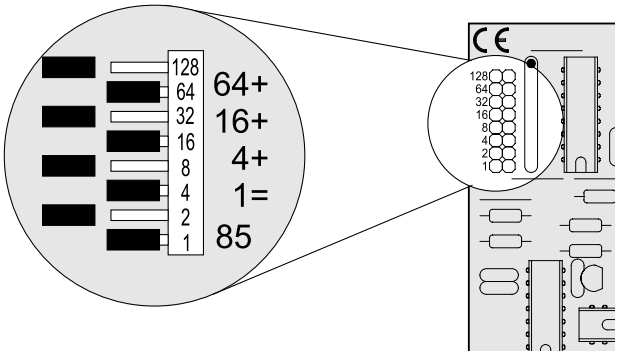
Installation

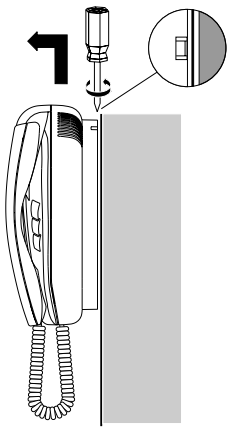




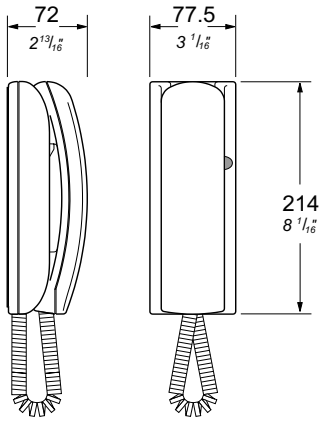
Programming

Coding is effected by removing the jumpers from the videointercom wall bracket as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 1, 4, 16, 64 and remove jumpers 2, 8, 32, 64, 128 to programmed 85). *The table of numbers encoding is on page 203.* Each user must have a different code from the other users; do not programme two videointercoms with the same code. **Do not use code 0.**





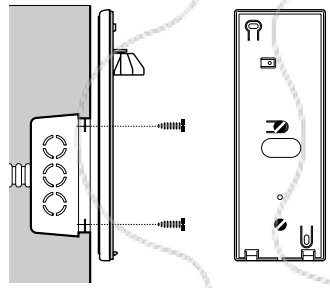
INTERCOMS

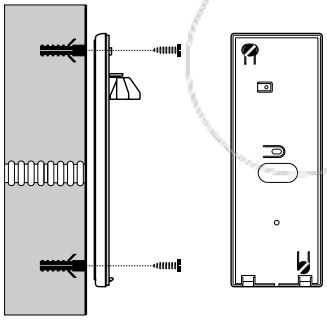


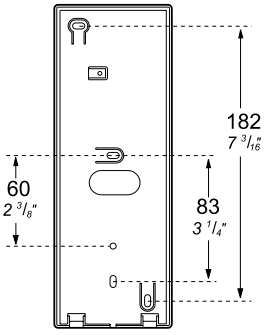
PT512W. White electronic intercom for **DF6000** digital systems with door lock release button and programmable electronic decoding circuit.
It can be installed on the wall with expansion plugs or on a wall box.

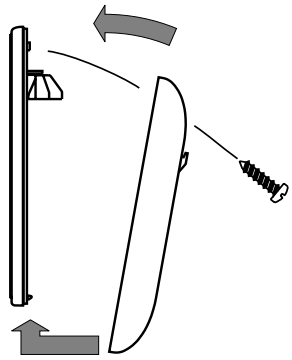
Terminals
LP * positive line
LN * negative line

* Terminals LP and LN are doubled for easier installation.





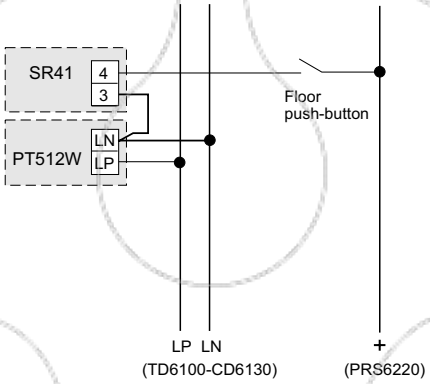




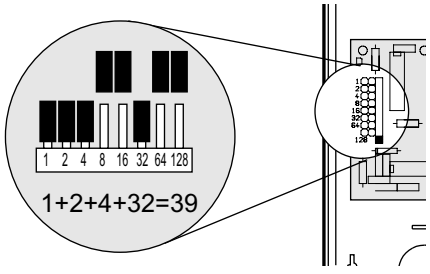
Floor call
The **SR41** buzzer module must be added to have the floor call with the **PT512W** intercom.

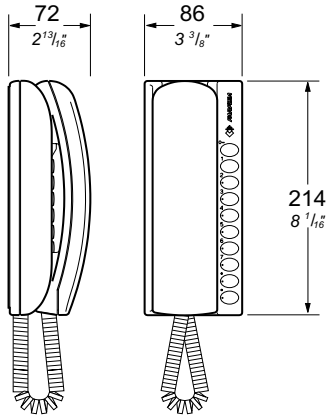
SR41. Electronic buzzer module.

Terminals
3 ground
4 power supply input (12Vac/15Vdc-0.3A)



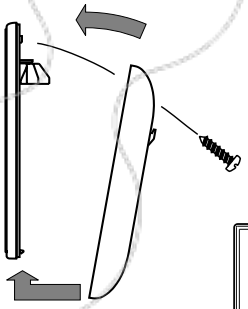
Programming
Coding is effected by removing the jumpers from the intercom board as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 1, 2, 4, and 32 and remove jumpers 8, 16, 64, 128 to programmed 39). *The table of numbers encoding is on page 203.* Each intercom must have a different code from the other intercoms; do not programme two intercoms with the same code. **Do not use code 0.**

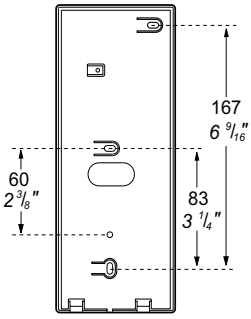


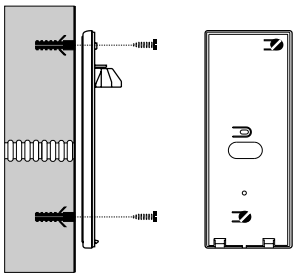


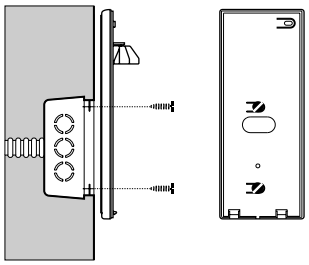
PT522W. White electronic intercom for **DF6000** digital systems with programmable electronic decoding circuit. Equipped with floor call, 1 door lock release button and 1 supplementary button. Expandable with additional buttons, switches and LEDs up to a maximum of 10. It can be installed on the wall with expansion plugs or on a wall box.

Terminals
LP positive line
LN negative line
EC output command for an analog exchanger (grounded contact upon call and during conversation)
W1 high/low ringer volume adjustment
W2 ringer enabling/disabling
C common terminals W1 and W2
P floor call input
P1 supplementary button (internally referred to LN)



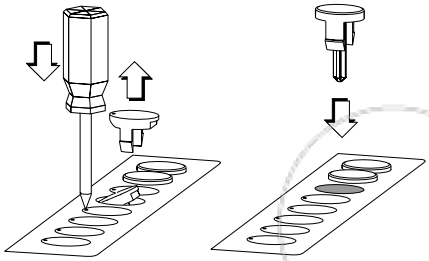


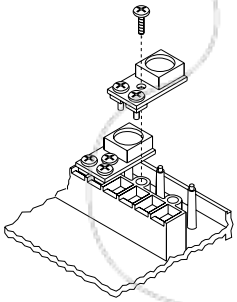




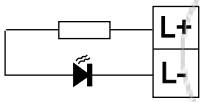
Accessories for PT522W intercom

PT501. Single push button unit.

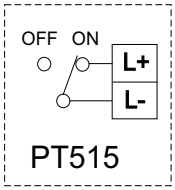




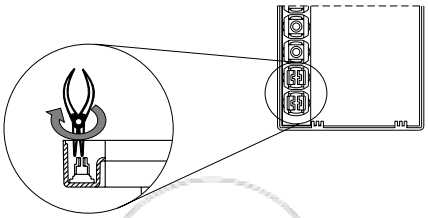
PT502. LED module to indicate door-open and other functions.

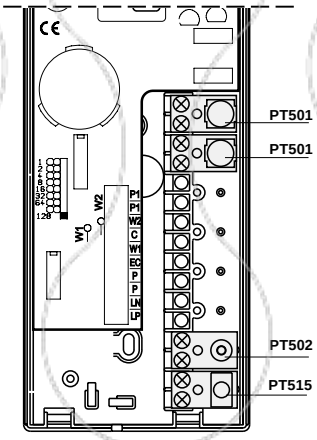


PT515. Switch module to disconnect ringer (privacy).



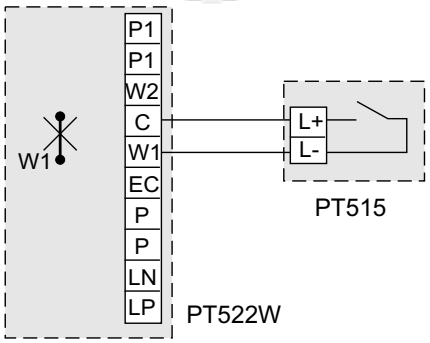
Note
The **PT502** LED module and the **PT515** switch module must be installed in the 2 bottom housing marked with ● and ●●.
To install them, remove the button insertion guides from the inside of the intercom base (see figure).





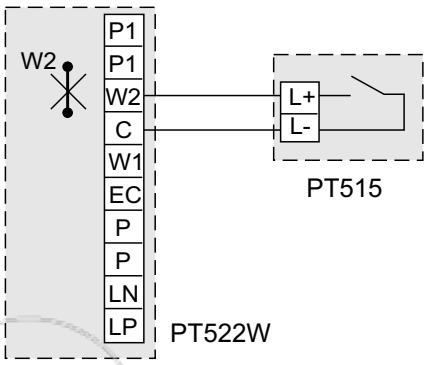
Volume adjustment for incoming calls

Cut the **W1** jumper to lower the volume of incoming calls.
Cut the **W1** jumper and connect a **PT515** switch between terminals **W1** and **C** to adjust the ringer volume (high/low).

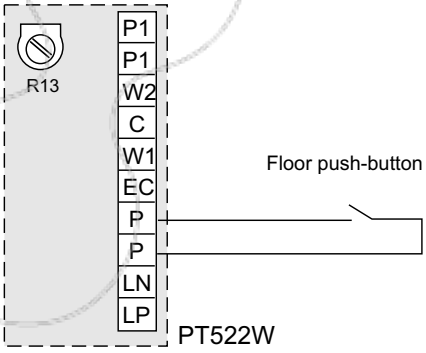


Call ringer disabling

Cut the **W2** jumper and connect a **PT515** switch between terminals **W2** and **C** to enable/disable the ringer.



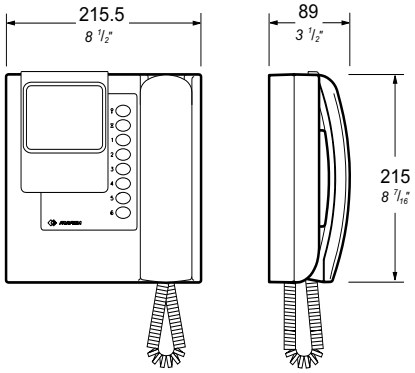
Floor call
To have a floor calls with different sound from external calls simply connect a button to the two terminals **P**.
Use **R13** to adjust the floor call ringer volume.



N.B.: The floor call can interfere with the conversation in progress.

Programming
See page 200.

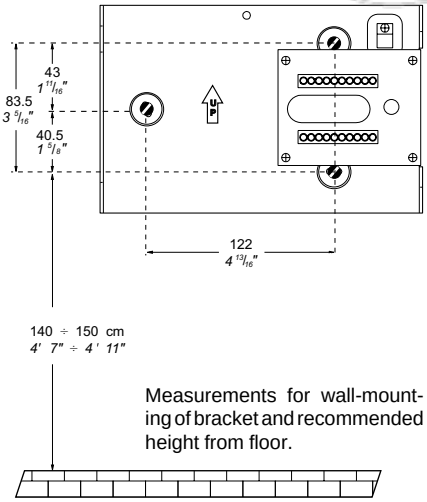
VIDEO INTERCOMS



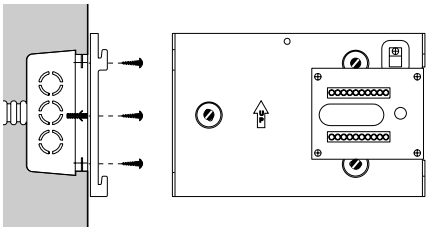
PT5162W. White Flat video intercom with programmable electronic decoding circuit, private audio-video function, electronic microphone, differentiated double electronic ringing sounds (modulated and continuous note for floor call), and terminal board for the connection to the wall bracket. Equipped with door lock release button and supplied with 1 additional button for supplementary services for stair light, supplementary door lock release, etc. The maximum permissible current for the additional button is 0.5A. For higher current use the relay unit, art.**1471**.
Button **1** (terminal P1) is internally referred to ground (LN).
The video intercom can be fixed to the wall (without back box) with the bracket art. **WB5162**.

Technical data

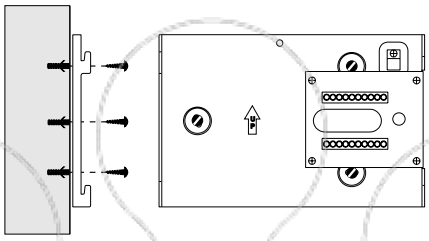
Power supply	15Vdc±1
Operating current	0.4A
Monitor	4" FLAT CRT
TV standard	CCIR
Line frequency	15,625Hz
Frame frequency	50Hz
Bandwidth	>5MHz
Video signal	balanced
Switching ON time	2÷4 sec.
Operating temperature	0°÷+50°C
Maximum permissible humidity	90%RH



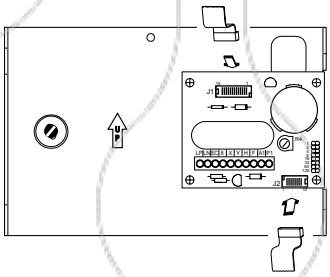
Measurements for wall-mounting of bracket and recommended height from floor.



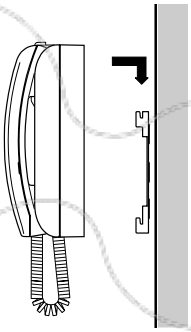
Fixing of the bracket to the wall with 83.5mm (3 5/16") box and expansion plug.



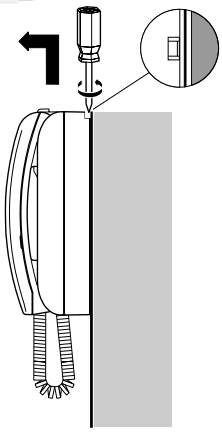
Fixing of the bracket to the wall with expansion plugs.



Insertion of video intercom connectors into the bracket terminal boards.



Fixing of the monitor on the bracket.



Dismounting of the monitor from the bracket.

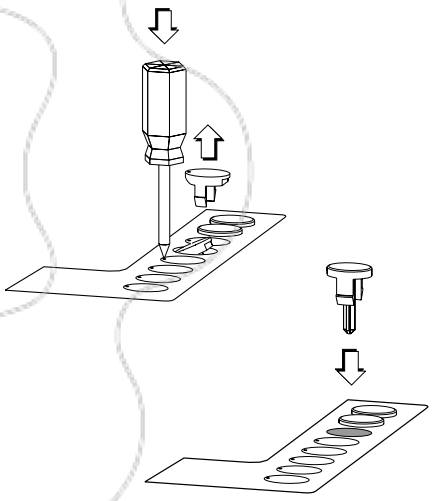
WB5162. Wall-mounting bracket for **PT5162W** video intercoms with terminal board for connection to the system.

Terminals

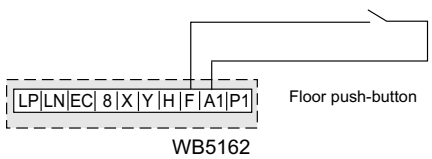
LP positive line
LN negative line
EC output command for an analog exchanger (grounded contact upon call and during conversation)
8 +12V timed power output
X negative video signal input
Y positive video signal input
H voltage input
F ground
A1 floor call input *(grounded contact)*
P1 supplementary button (max.0.5A – *ground command)*

Note. In order to power the video section with a local power supply source:
- add a +12÷16V power supply unit and connect it between terminals H and F.
- cut jumper W1 on WB5162 bracket.

Supplementary button installation



Floor call

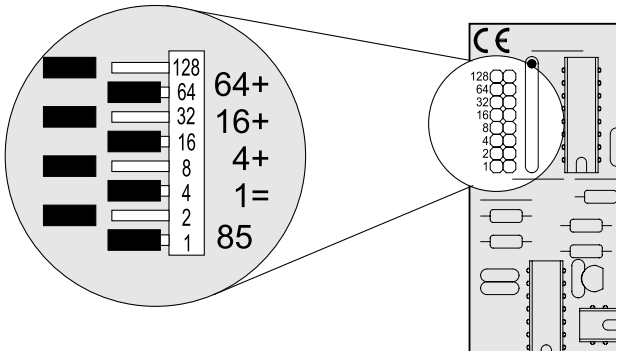


Use trimmer **R4** to adjust the floor ringer volume.

Programming
See page 203.

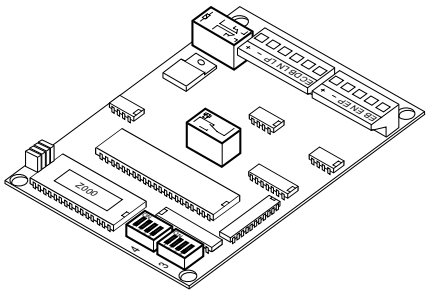
Programming of intercoms and videointercoms

All intercoms and video intercoms must be programmed before powering up the system. Coding is effected by removing the jumpers from the intercom board or the video intercom bracket as appropriate (the 8 jumpers are inserted by default). Leave only the jumpers that give the required number when added (leave jumpers 1, 4, 16, 64 and remove jumpers 2, 8, 32, 128 to programmed 85). Each user must have a different code from the other users; do not programme two intercoms or videointercoms with the same code. **Do not use code 0.**



Intercom and videointercoms programming table (jumper number and position)

1	2	3	4	129	130	131	132
5	6	7	8	133	134	135	136
9	10	11	12	137	138	139	140
13	14	15	16	141	142	143	144
17	18	19	20	145	146	147	148
21	22	23	24	149	150	151	152
25	26	27	28	153	154	155	156
29	30	31	32	157	158	159	160
33	34	35	36	161	162	163	164
37	38	39	40	165	166	167	168
41	42	43	44	169	170	171	172
45	46	47	48	173	174	175	176
49	50	51	52	177	178	179	180
53	54	55	56	181	182	183	184
57	58	59	60	185	186	187	188
61	62	63	64	189	190	191	192
65	66	67	68	193	194	195	196
69	70	71	72	197	198	199	200
73	74	75	76	201	202	203	204
77	78	79	80	205	206	207	208
81	82	83	84	209	210	211	212
85	86	87	88	213	214	215	216
89	90	91	92	217	218	219	220
93	94	95	96	221	222	223	224
97	98	99	100	225	226	227	228
101	102	103	104	229	230	231	232
105	106	107	108	233	234	235	236
109	110	111	112	237	238	239	240
113	114	115	116	241	242	243	244
117	118	119	120	245	246	247	248
121	122	123	124	249	250	251	252
125	126	127	128	253	254	255	



6273. DIGITAL EXCHANGER

Used in the **DF6000** digital system when the intercom and/or video intercom installation includes one ore more common main door stations and multiple secondary door stations or independent buildings. It allows for making the secondary door stations independent, also from the main door stations.

Technical data

Power supply	15Vdc ±1
Operating current	80mA
Operating temperature	0° ÷ +40°C
Maximum permissible humidity	90% RH
Dimensions	84x118mm *(3 5/16"x4 5/8")*

Terminals

Main line

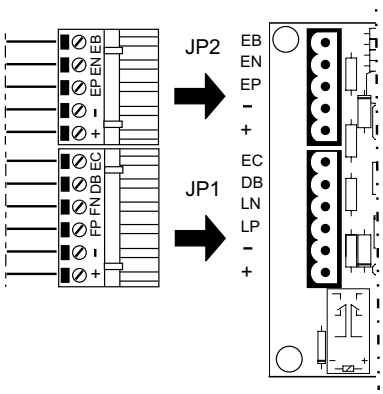
DB serial data bus
LN negative line
LP positive line
EC output command for an analog exchanger (grounded contact upon call and during conversation)
- ground
+ positive voltage input/output

Secondary line

EB serial data bus
EN negative line
EP positive line
- ground
+ positive voltage input/output

Installation and connections

Remove the 2 terminal boards from the module.
Place the digital exchanger in a suitable housing (art. **4236** or **4237** or other types).
Make the connections to the terminal boards according to the installation to be made.
Replace the 2 terminal boards in their housing in the digital exchanger without changing their position.



Programming

For correct operation the digital exchanger must be programmed in order to univocally recognise the group of users connected to the secondary door station. A number range with all the user codes must be programmed (i.e. building "a" numbers from 1 to 63; building "b" from 78 to 111; building "c" from 128 to 159; etc.). The numbers included in the range allow for making the building or the stair independent from the other ones and from the main door station. The codes of the first and last users in the group must be programmed.

Programming the first user code

Programme the code of the first user with the 2 4-microswitch blocks identified as 3 and 4. Being 8-bit binary coding, block no.3 identifies numbers 1, 2, 4, and 8, while block no.4 identifies numbers 16, 32, 64, and 128.
The microswitch combination of the two blocks allows for programming codes from 0 to 255.
To program a second digital exchanger in the same installation, the last number of the first digital exchanger must be considered. Use a higher number to programmed the second digital exchanger.

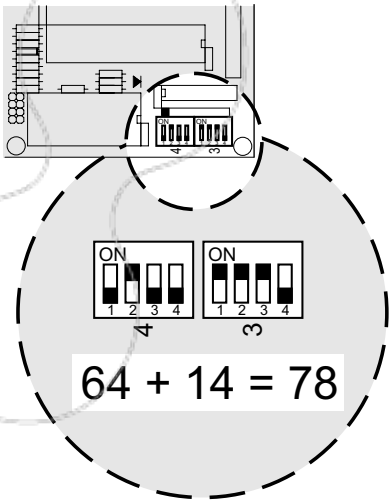
Digit **Microswitch position of block no. 3**

Digit		Digit	
0		8	
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7		15	

Digit **Microswitch position of block no. 4**

Digit		Digit	
0		128	
16		144	
32		160	
48		176	
64		192	
80		208	
96		224	
112		240	

Example of first user programming



To program the first user as **78**, place **lever 2** of block **no. 4** and levers **1, 2** and **3** of block **no. 3** on ON (up).

Programming the code of the last user

Once the code of the first user has been programmed, program the code of the last user in the switched group by correctly inserting jumpers **A**, **B**, **C** and **D** in the **J1** terminal board (see table).

Obviously, the code of the last user must be higher than the code of the first user.

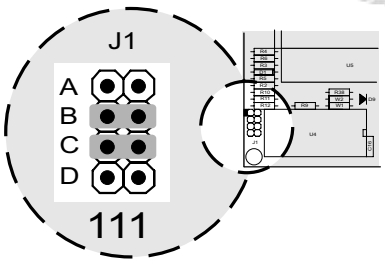
Position of J1 jumpers	Last user code
without jumpers	**15**
jumper A inserted	**31**
jumper B inserted	**47**
jumpers A and B inserted	**63**
jumper C inserted	**79**
jumpers A and C inserted	**95**
jumpers B and C inserted	**111**
jumpers A, B and C inserted	**127**
jumper D inserted	**143**
jumpers A and D inserted	**159**
jumpers B and D inserted	**175**
jumpers A, B and D inserted	**191**
jumpers C and D inserted	**207**
jumpers A, C and D inserted	**223**
jumpers B, C and D inserted	**239**
all jumpers inserted	**255**

Operation

When making a call from the main door station, the digital exchanger recognises the number included in its code range, switches and connects the intercom with the main door station. The secondary push-button panel remains disabled with busy signal. All the secondary push-button panels can have a conversation with the users in their building. Calls (and audio connection) from secondary push-button panels to the users of other buildings are not possible.

When the call is made to a building that is already in communication with its secondary door station, the busy state indication will temporarily appear. In this case wait and call again when the line is free. In the meantime the internal stations of other free buildings can be called.

Example of last user code



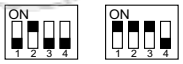
Example: if number 78 is programmed as first user in the group with block no. 3 and 4 and only jumpers B and C are left on the **J1** terminal board, the digital exchanger will recognise codes from 78 to 111, thus allowing for the connection to the main door station only to users with a code included in this range.

It is obvious that the decoding electronic circuit of the internal stations connected to the digital exchanger must be programmed with codes included in this numerical range.

If the internal code is different from the code recognised by the digital exchanger, calls from the secondary door station will be possible, but not from the main push-button panel.

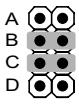
The next digital exchanger must be programmed starting from **number 112 or higher.**

First user number



64 + 14 = 78

Last user number



= 111

78 – 111 numerical range of first digital exchanger.

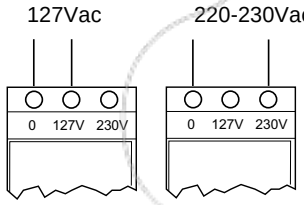
The second digital exchanger must be programmed starting from 112 or higher.

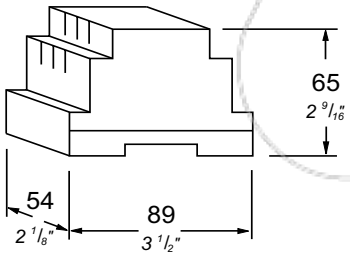
Power supplies are protected against overloading or short circuits by a temperature sensor. To reset the power supply, power must be cut OFF for about one minute and can be restored after having eliminated the defect.
Do not obstruct the openings for ventilation or heat dissipation in order to avoid damaging the power supply.
Power supplies are contained in housings that can be fixed on DIN bar or on the wall by using two expansion plugs.
All power supplies deliver power for max. **8 24V-3W lamps** to provide lighting to the push-button panel name plates. If required, add the necessary **PRS210** transformers (approx. 1 for 10 lamps).

General technical data

Input voltage:	127V or 220-230Vac
Frequency:	50/60Hz
Operating temperature:	0° ÷ 50°C
Maximum permissible humidity:	90% RH

Notice
All power supplies and the transformer described in this manual can operate with 127V or 230V mains voltage.
Make sure that connection is correct.

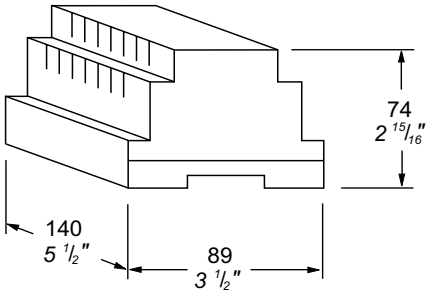




PRS210. TRANSFORMER.
It is used to power name plate lights, electrical door locks, etc.

Technical data

Power:	15VA
Output voltage:	13Vac
Max. current with direct use:	0.7A
Max. current with intermitten.	1A
Housing:	DIN 3 module A
Weight:	0.42Kg
Approved:	VDE according to the EN60065



6220. STABILISED POWER SUPPLY WITH SWITCHING REGULATOR
It delivers the necessary power to operate a digital intercom or video intercom system. Additional **6220** power supplies must be added for systems with long distances or high number of users. To determine the number of power supplies see the table on page 207 with information on the power consumption of all units.

Technical data

Power:	45VA
Housing:	DIN 8 modules A
Weight:	0.95 Kg
Approved:	VDE according to the EN60065

Output terminals
\+ 15Vdc-1.2A positive voltage
\- Ground
~ 13Vac power supply for:
- name plate lights, analog exchangers (0.6A direct service)
- electric door release button (1A intermittent service)

1471. RELAY UNIT
For information on the characteristics see page 93.

1471E. RELAY UNIT
For information on the characteristics see page 93.

1472. 2-CONTACT RELAY UNIT
For information on the characteristics see page 94.

1473. ANALOG EXCHANGER
For information on the characteristics see page 94.

Main features

Maximum number of units that can be connected in the installation

The **DF6000** digital system is a flexible product that allows for connecting all the units designed for this system and illustrated above. It is also possible to realise mixed systems (intercoms/video intercoms) provided that the following limitations are complied with:
- maximum capacity: 255 users
- maximum number of parallel door stations: 6
- maximum number of digital exchangers for secondary door stations: 8
- maximum number of KM812W or PT512W intercoms: 255
- maximum number of EX322 or PT522W intercoms: 110
- maximum number of video intercoms: 110

When determining the number of products that can be connected in mixed systems, always consider that articles **EX322, PT522W, EX3160, KM8162W** and **PT5162W** have a line load 2.3 times higher than **KM812W** or **PT512W** intercoms. The limitations illustrated above must therefore be properly considered for the calculation of the total number of users.

Example: if 128 KM812W intercoms are connected in the system, only 55 EX322 or videointercoms can be connected (255-128=127/2.3=55); with 85 EX322 intercoms 59 KM812W (85x2.3=196, 255-196=59) can be connected.

Digital intercom system

A **DF6000** digital intercom system is realised with only 2 wires, that is:

LP Positive line
LN Negative line

2 or 4 wires with suitable cross-section (see table) must be added from the power supply to the door station.

+ positive voltage
- ground

For door lock release and name plate lights
~ alternate voltage
~ alternate voltage

Digital video intercom system

A **DF6000** digital video intercom system is realised with only 5 wires, that it:

LP positive line
LN negative line
H +15Vdc power supply
X negative video signal
Y positive video signal

2 or 4 wires with suitable cross-section (see table) must be added from the power supply to the door station.

+ positive voltage
- ground

For door lock release and name plate lights
~ alternate voltage
~ alternate voltage

Operating current of digital units

The operating current of each unit (+15V voltage) must be known in order to determine the number of power supply units in a digital system.

Article	Operating current in Ampere	
	stand-by	in operation
TD6100MA	0.12	0.3
TD6100	0.12	0.3
RD4120	0.05	0.05
CD6130	0.25	0.35
EX3160	0	0.4
KM8162W	0	0.4
PT5162W	0	0.4
MA43ED	0.3	0.3
MA10ED÷MA12ED	0.07	0.07
MD41D	0.3	0.3
MD10D÷MD12D	0.07	0.07
6273	0.08	0.08

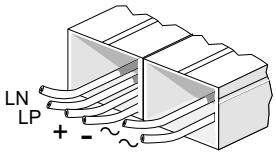
Maximum current delivered by power supply units

6220	1.2A

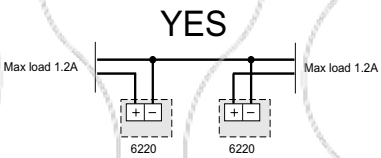
Conductors

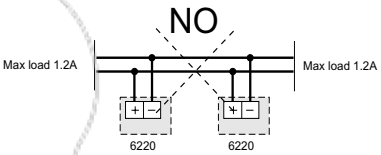
The type of wires used in the system deeply influences the functionality of the digital system. The cross section of the wires depends on the distance between the units and on the number of modules to be connected.
Make sure not to use more wires in parallel to reach the required cross section (i.e. multi-pair telephone cables). Only use one wire with suitable cross section.
To avoid possible noise on the audio line, place the power supply in the proximity of the door station to avoid a long distance for the two alternate voltage wires of the electrical door release button. Alternatively, use separate raceways for the alternate voltage wires.

The cable runs in intercom and video intercom systems must be kept separate from the electrical or industrial installation as required by the International Standards.



Each power supply must power a separate group of push-button panels. The only connection to be made between power supply units is the ground reference (- wire). **Never connect the + output between power supply units.**





WIRE CROSS-SECTION

Digital intercom systems

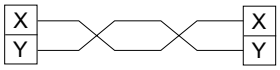
Distance		Terminals					
		LP; LN; DB; EB			**+; -; ~ (*)**		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
50	165	0.25	0,5	21	0.75	1	18
100	330	0.35	0,7	20	1	1,2	16
200	660	0.5	0,8	18	2	1,6	14
400	1310	0.75	1	16	-	-	-
600	1970	1	1,2	15	-	-	-

Digital video intercom systems

Distance		Terminals											
		DB; EB			**LP; LN; H; F**			**+; -; ~ (*)**			**X; Y** [1]		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
50	164	0.35	0,7	21	0.75	1	18	1.5	1,4	15	0.25	0,5	21
100	330	0.35	0,7	21	1	1,2	16	2.5	1,8	13	0.25	0,5	21
200	660	0.5	0,8	20	1.5	1,4	15	-	-	-	0.25	0,5	21

(*) Wires in **bold**.

([1]) **Notice.** Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.

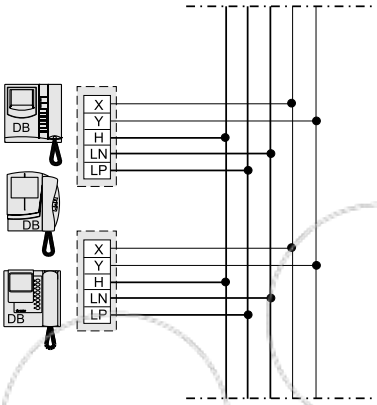


VIDEO SIGNAL DISTRIBUTION

The following modes are possible for the connection of the video signal:
- star connection
- serial connection (input and output)
- connection with floor distributor

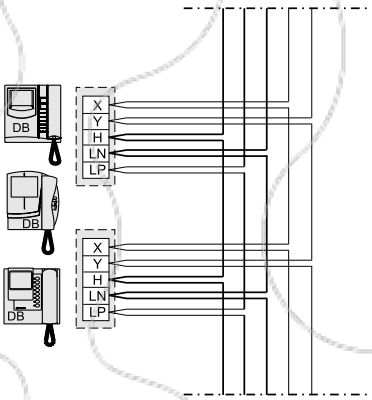
STAR CONNECTION

This connection allows for distributing all wires in the floor junction box.
Because of the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in a star way is 20.
2x75Ω resistor must be connected between X and LN and Y and LN in the last video intercom. The maximum connection distance between the video intercoms and the junction box is 2.5 meters *(8.2Ft)*.



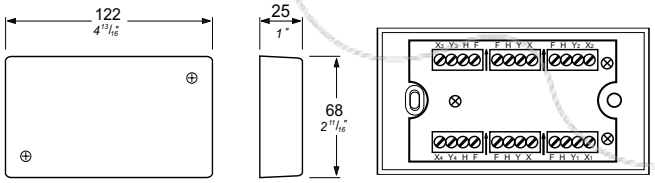
SERIAL CONNECTION

In the serial connection, connections are all made on the video intercom brackets, and not in the junction boxes. Because of the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in series way is 20.
2x75Ω resistor must be connected between X and LN and Y and LN in the last video intercom.



CONNECTION WITH FLOOR DISTRIBUTOR

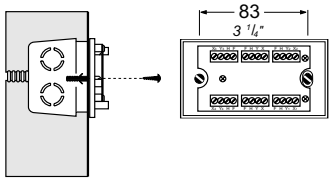
This connection allows for separate the video signal of each video intercom from the riser. Connections are all made on the **DV2D** or **DV4D** video distributors.



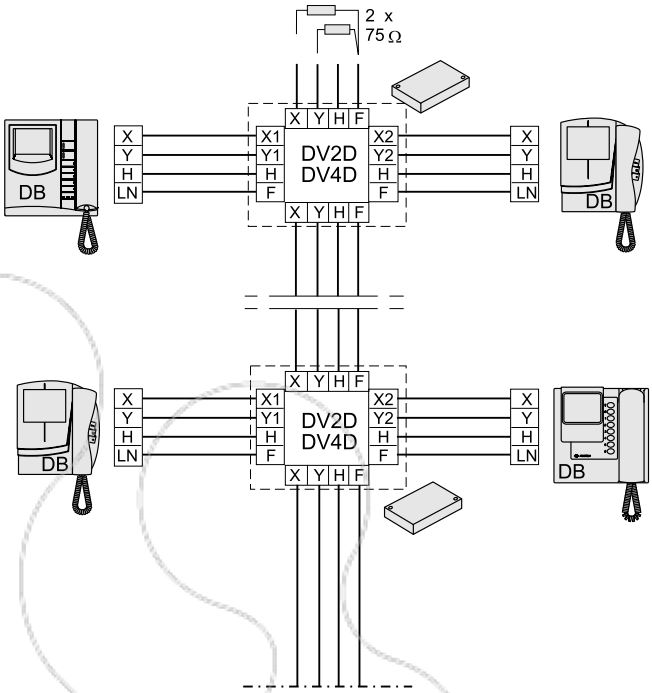
DV2D-DV4D. FLOOR VIDEO DISTRIBUTORS.
They allow for the distribution of the video signal from the riser on 2 or 4 outputs. It can be installed on the wall, on a wall box, with expansion plugs or it can be placed in the junction box.

Technical data

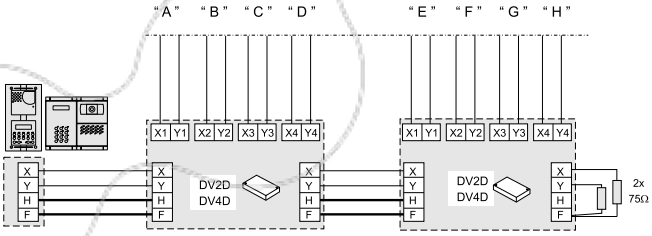
Power supply	15÷21Vdc
Operating current	60mA
Maximum input signal	2Vpp
Insertion loss	0.8dB
Bandwidth	>5MHz



Connection of the video signal to a single riser
Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.



Connection of the video signal with distribution to multiple risers
One or more video distributors art. **DV2D** or **DV4D** must be used in video installations with multiple risers.
Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.



Example of connection to 8 risers

Note
In large installations it is advisable to power the monitors locally or to separate the ground connection as shown on the pages 220 and 221.

INSTALLATION DIAGRAMS

The following pages show the installation diagrams most often used in digital intercom/video intercom systems.
Upon request ACI Farfisa supplies installation diagrams for the configurations not present in this manual.

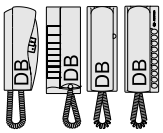
- **Intercom systems with 1 or more main entrances**
- **Intercom systems with 1 or more main entrances and secondary entrances**
- **Video intercom systems with 1 or more main entrances**
- **Video intercom systems with 1 or more main entrances and secondary entrances**
- **Combination intercom-video intercom systems**
- **Systems with floor call**

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.

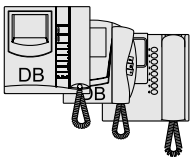
The items may have more terminals than the ones in the installation diagrams. **The excess terminals must not be used.**

Graphic symbols

For a better comprehension of the installation diagrams we have made a list of the graphic symbols most often used.



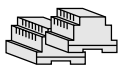
Intercoms with integrated decoding circuit

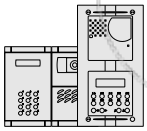


Video intercom with integrated decoding circuit

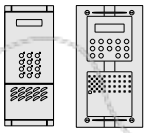
Digital exchanger


Electric door lock


DIN bar modules


Videointercom digital push-button panel


Videointercom conventional push-button panel with digital encoder


Intercom digital push-button panel

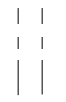

Intercom conventional push-button panel with digital encoder


Resistor


Lamp

Electronic buzzer

Optional wire (usually name plate lamps power supply)


Extension lines (the system may continue with more internal stations, door stations and/or buildings according to the specific requirements)


Loudspeaker


Microphone

Push-button

DIGITAL INTERCOM SYSTEM WITH 1 DOOR STATION

- **INTERNAL STATIONS**

...	**EX322**	Exhito modular intercom with decoding module
...	**KM812W**	Compact intercom with decoding module
...	**PT512W**	Project intercom with decoding module
...	**PT522W**	Project modular intercom with decoding module

- **MATRIX DIGITAL DOOR STATIONS**

...	**MA72-MA73**	Back boxes with module frames
...	**MA62÷MA63**	Front frames
1	**MA92÷MA93***	Rain shelters with module frames
1	**TD6100MA**	Digital push-button panel
1	**MA10PED-MA11PED**	Amplified door stations
...	**MA20**	Blank module

- **MODY DIGITAL DOOR STATIONS** (for the composition see page 185)

..	**MD72-MD73-MD74**	Back boxes with module frames
1	**MD84÷MD812**	Hood covers *(optional)*
1	**MD94÷MD912 ***	Rain shelters with module frames
1	**TD6100**	Digital push-button panel
1	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
1	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 190 and 192)

...	**MD72-MD73-MD74**	Back boxes with module frames
1	**MD84÷MD812**	Hood covers *(optional)*
1	**MD94÷MD912 ***	Rain shelters with module frames
1	**CD6130**	Digital encoder
1	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

- **OTHER ARTICLES**

1	**6220**	Power supply
1	**PA ******	Door release button *(optional)*
1	**SE ******	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Operating mode

The intercom of the desired user rings when a call is made from the push-button panel.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the station door lock release.
For more detailed information on operation see the description of the different products.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For cross section and characteristics of wires see pages 206 and 207.

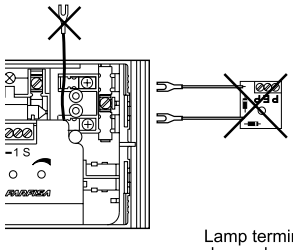
Programming

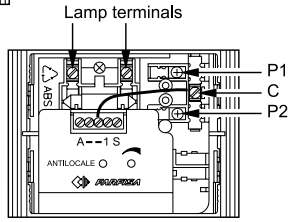
The following units must be programmed for the correct operation of the system:

EX322	see page 195
KM812W	see page 198
PT512W	see page 200
PT522W	see page 201
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

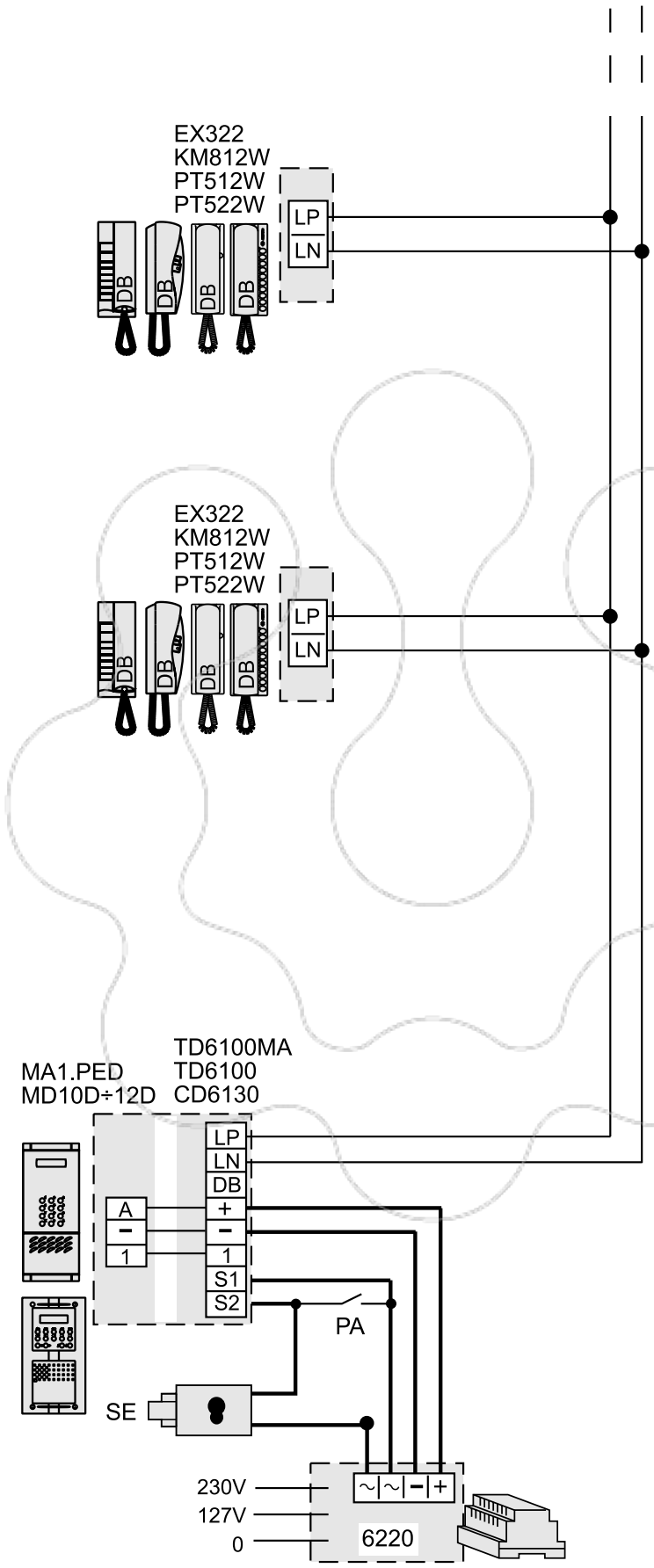
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL INTERCOM SYSTEM WITH 1 DOOR STATION



DIGITAL INTERCOM SYSTEM WITH 2 OR MORE DOOR STATIONS (MAX. 6)

- **INTERNAL STATIONS**

...	**EX322**	Exhito modular intercom with decoding module
...	**KM812W**	Compact intercom with decoding module
...	**PT512W**	Project intercom with decoding module
...	**PT522W**	Project modular intercom with decoding module

- **MATRIX DIGITAL DOOR STATIONS**

...	**MA72-MA73**	Back boxes with module frames
...	**MA62÷MA63**	Front frames
...	**MA92÷MA93***	Rain shelters with module frames
...	**TD6100MA**	Digital push-button panel
...	**MA10PED-MA11PED**	Amplified door stations
...	**MA20**	Blank module

- **MODY DIGITAL DOOR STATIONS** (for the composition see page 185)

..	**MD72-MD73-MD74**	Back boxes with module frames
...	**MD84÷MD812**	Hood covers *(optional)*
...	**MD94÷MD912 ***	Rain shelters with module frames
...	**TD6100**	Digital push-button panel
...	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
...	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 190 and 192)

...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MD84÷MD812**	Hood covers *(optional)*
...	**MD94÷MD912 ***	Rain shelters with module frames
...	**CD6130**	Digital encoder
...	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

- **OTHER ARTICLES**

...	**6220**	Power supply
...	**PA ******	Door release button *(optional)*
...	**SE ******	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Operating mode

The intercom of the desired user rings when a call is made from the push-button panel.
The display of the other push-button panel indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the station door lock release.
For more detailed information on operation see the description of the different products.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For cross section and characteristics of wires see pages 206 and 207.

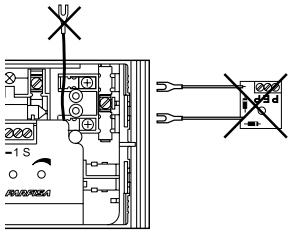
Programming

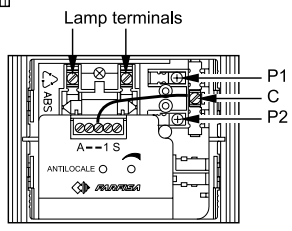
The following units must be programmed for the correct operation of the system:

EX322	see page 195
KM812W	see page 198
PT512W	see page 200
PT522W	see page 201
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

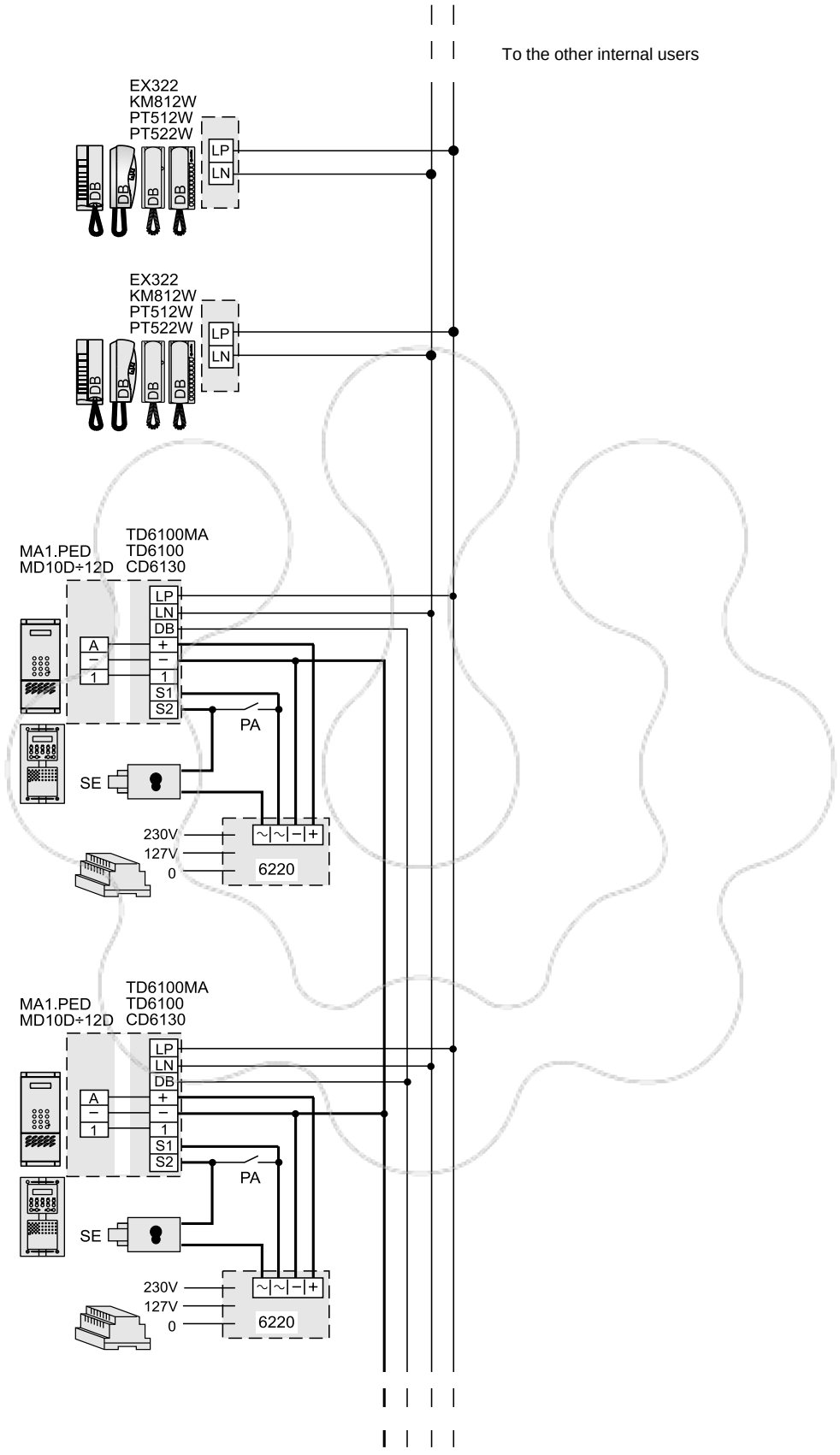
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL INTERCOM SYSTEM WITH 2 OR MORE DOOR STATIONS (MAX. 6)



DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 1 COMMON MAIN DOOR STATION (multiple entrance).

- **INTERNAL STATIONS**

...	**EX322**	Exhito modular intercom with decoding module
...	**KM812W**	Compact intercom with decoding module
...	**PT512W**	Project intercom with decoding module
...	**PT522W**	Project modular intercom with decoding module

- **MATRIX DIGITAL DOOR STATIONS**

...	**MA72-MA73**	Back boxes with module frames
...	**MA62÷MA63**	Front frames
1+X	**MA92÷MA93***	Rain shelters with module frames
1+X	**TD6100MA**	Digital push-button panel
1+X	**MA10PED-MA11PED**	Amplified door stations
...	**MA20**	Blank module

- **MODY DIGITAL DOOR STATIONS** (for the composition see page 185)

..	**MD72-MD73-MD74**	Back boxes with module frames
1+X	**MD84÷MD812**	Hood covers *(optional)*
1+X	**MD94÷MD912 ***	Rain shelters with module frames
1+X	**TD6100**	Digital push-button panel
1+X	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
1+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 190 and 192)

...	**MD72-MD73-MD74**	Back boxes with module frames
1+X	**MD84÷MD812**	Hood covers *(optional)*
1+X	**MD94÷MD912 ***	Rain shelters with module frames
1+X	**CD6130**	Digital encoder
1+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

- **OTHER ARTICLES**

1+X	**6220**	Power supply
X	**6273**	Digital exchanger
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Operating mode

The intercom of the desired user rings when a call is made from the main push-button panel. The display of the other push-button panel at the secondary door station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock release of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For cross section and characteristics of wires see pages 206 and 207.

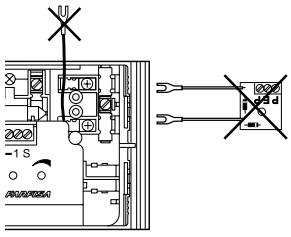
Programming

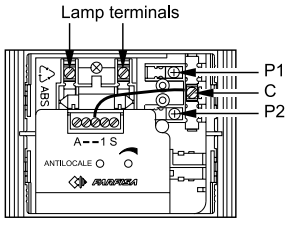
The following units must be programmed for the correct operation of the system:

EX322	see page 195
KM812W	see page 198
PT512W	see page 200
PT522W	see page 201
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

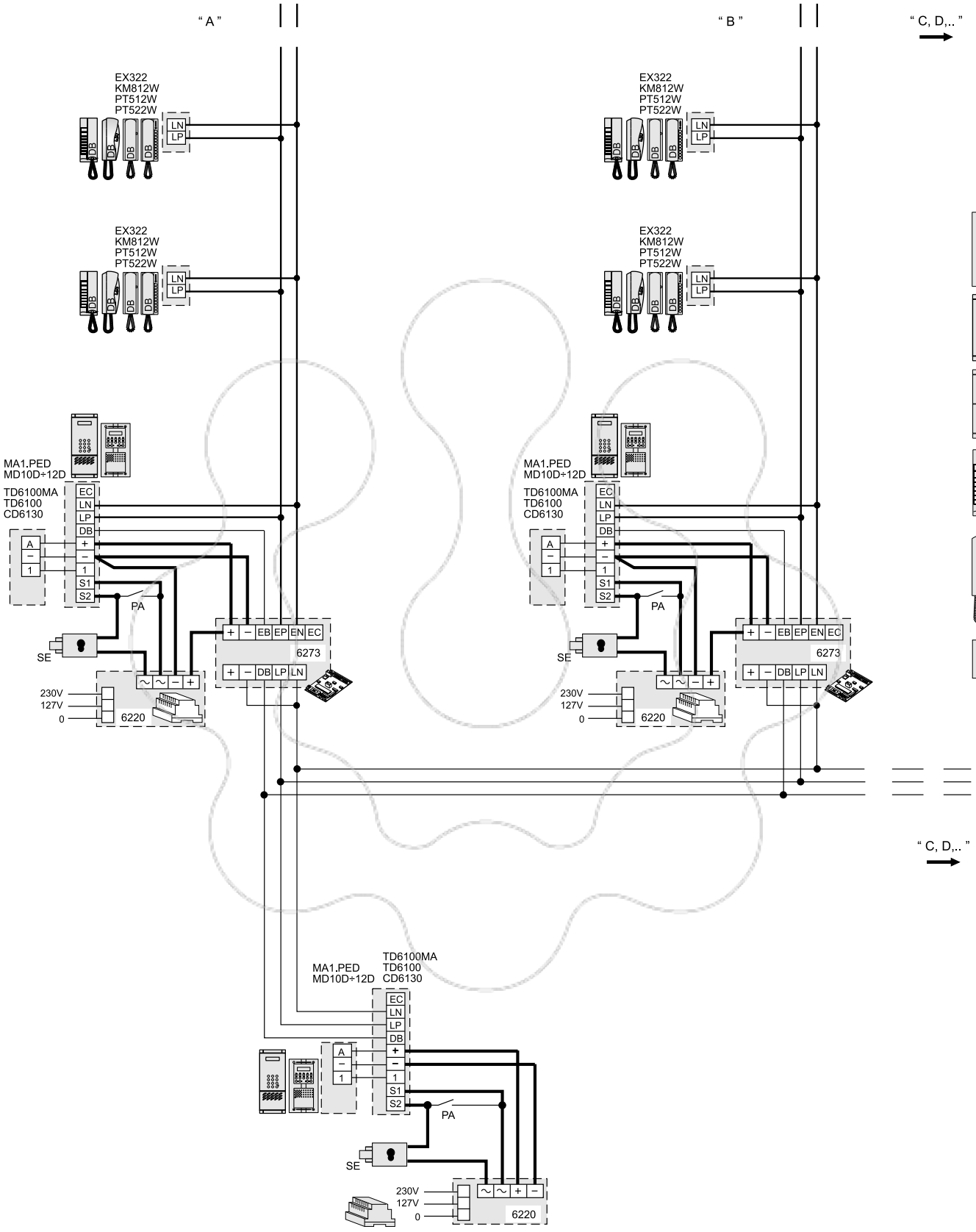
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 1 COMMON MAIN DOOR STATION (multiple entrance).



DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS (multiple entrance).

- **INTERNAL STATIONS**

...	**EX322**	Exhito modular intercom with decoding module
...	**KM812W**	Compact intercom with decoding module
...	**PT512W**	Project intercom with decoding module
...	**PT522W**	Project modular intercom with decoding module

- **MATRIX DIGITAL DOOR STATIONS**

...	**MA72-MA73**	Back boxes with module frames
...	**MA62÷MA63**	Front frames
2+X	**MA92÷MA93***	Rain shelters with module frames
2+X	**TD6100MA**	Digital push-button panel
2+X	**MA10PED-MA11PED**	Amplified door stations
...	**MA20**	Blank module

- **MODY DIGITAL DOOR STATIONS** (for the composition see page 185)

..	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optional)*
2+X	**MD94÷MD912 ***	Rain shelters with module frames
2+X	**TD6100**	Digital push-button panel
2+X	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
2+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 190 and 192)

...	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optional)*
2+X	**MD94÷MD912 ***	Rain shelters with module frames
2+X	**CD6130**	Digital encoder
2+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

- **OTHER ARTICLES**

2+X	**6220**	Power supply
X	**6273**	Digital exchanger
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.

Operating mode

The intercom of the desired user rings when a call is made from a main push-button panel. The display of the other main push-button panel and the secondary door station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock release of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products (from page 166 to 190).

Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- For cross section and characteristics of wires see pages 206 and 207.

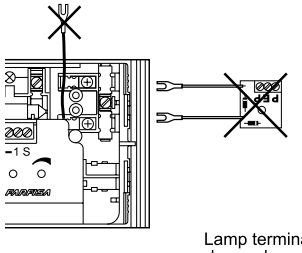
Programming

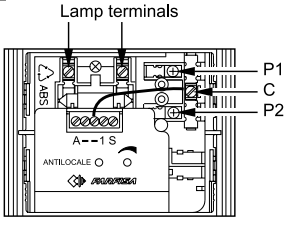
The following units must be programmed for the correct operation of the system:

EX322	see page 195
KM812W	see page 198
PT512W	see page 200
PT522W	see page 201
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

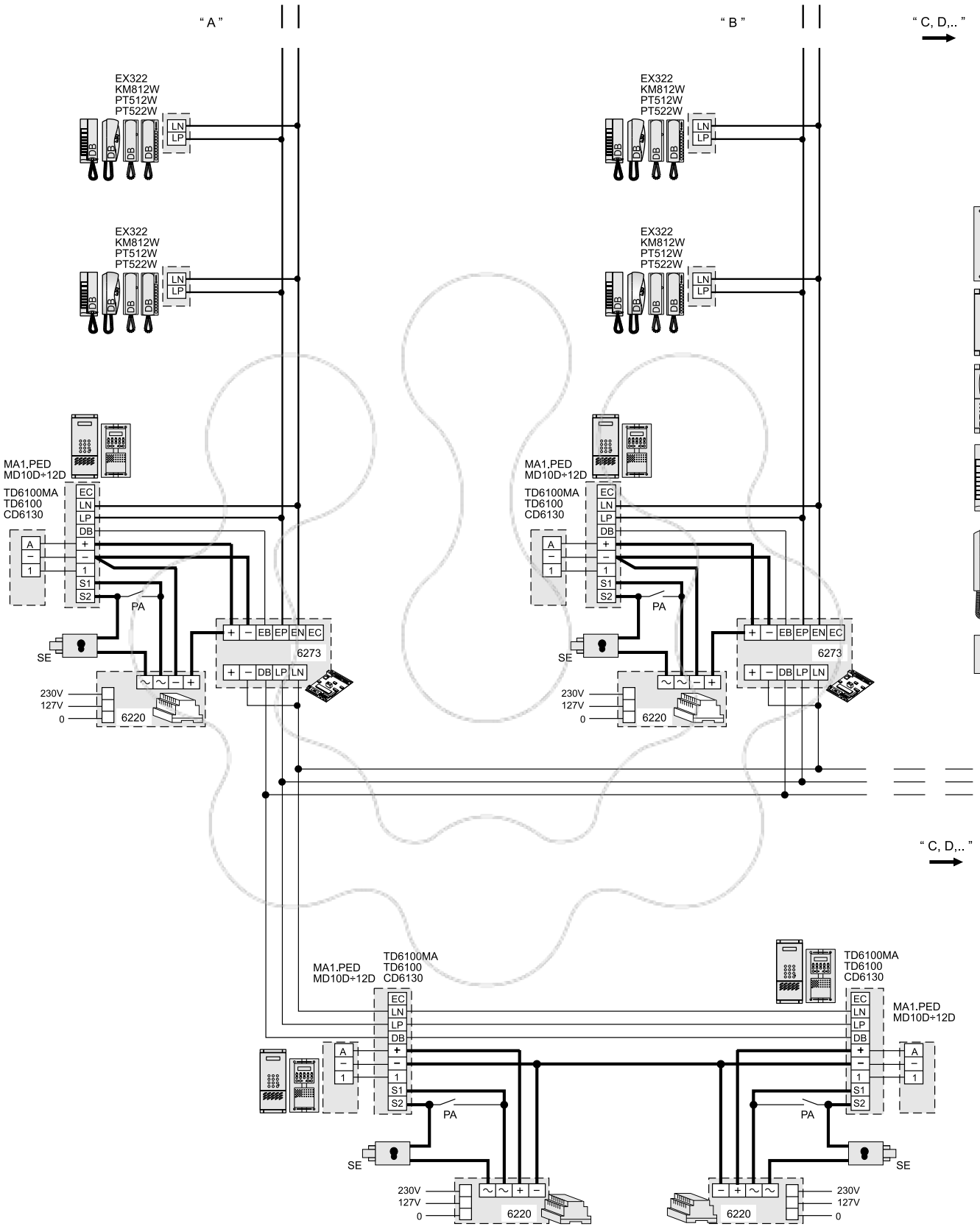
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS (multiple entrance).



DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION

• INTERNAL STATIONS

EXHITO series	COMPACT series	PROJECT series	
... **EX3160*** **	... **KM8162W**	... **PT5162W**	Video intercom
... **WB3162**	... **WB8162**	... **WB5162**	Video intercom wall bracket
... **TA3160**			Video intercom table adaptor

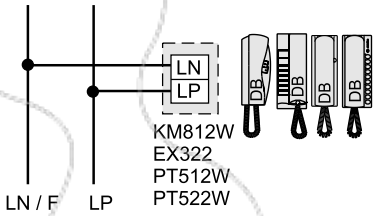
• DIGITAL DOOR STATIONS

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	1	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
1	**MA92÷MA93***	1	**MD94÷MD912 ***	Rain shelter with module frames
1	**TD6100MA**	1	**TD6100**	Digital push-button panel
1	**MA43ED*** **	1	**MD41D**	Camera module
		1	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		1	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

• MODY CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
1	**MD84÷MD812**	Hood covers *(optionals)*
1	**MD94÷MD912 ***	Rain shelter with module frames
1	**CD6130**	Digital encoder
1	**MD41D**	Camera module
1	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



• OTHER ARTICLES

...	**DV2D-DV4D**	Video distributors
2	**6220**	Power supply
1	**PA ** **	Door release button *(optional)*
1	**SE ** **	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from the push-button panel. The video intercom switches ON and the image appears on the display.
The internal user picks up the handset to start conversation and presses the ⊶ button to open the station door lock.
For more detailed information on operation see the description of the different products.

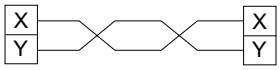
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

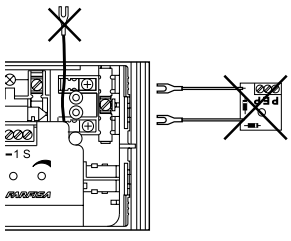
Notes

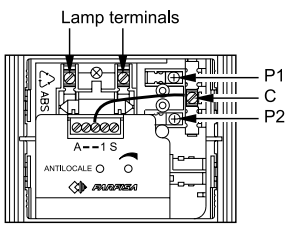
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



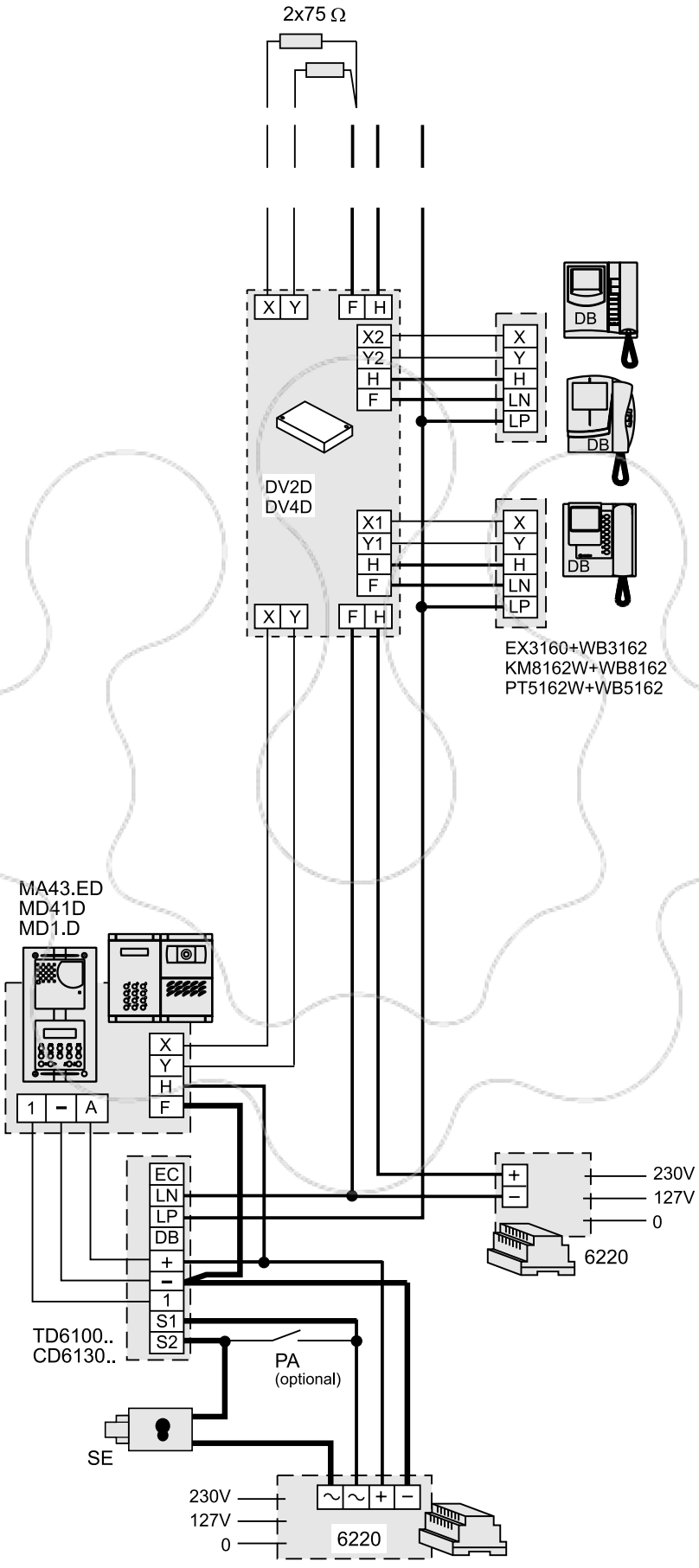
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION



DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION AND VIDEO INTERCOMS LOCALLY POWERED

Q.ty	*Article*	*Description*
...	**EX3160+WB3162*** **	Exhito video intercom + wall bracket
...	**KM8162W+WB8162**	Compact video intercom + wall bracket
...	**PT5162W+WB5162**	Project video intercom + wall bracket
...	**DV2D - DV4D**	Video distributors
1+...	**6220**	Power supply
1	**PA ****	Door release button *(optional)*
1	**SE ****	Electric door lock (12Vac-1A max.)

MATRIX DIGITAL door stations

...	**MA72-MA73**	Back boxes with module frames
...	**MA62-MA63**	Front frames
1	**MA92÷MA93***	Rain shelter with module frames
1	**TD6100MA**	Digital push-button panel
1	**MA43ED*****	Camera module with door speaker
...	**MA20**	Blank module

MODY DIGITAL door stations (for the composition see page 185)

...	**MD72-73-74**	Back boxes with module frames
1	**MD84÷812**	Hood covers *(optionals)*
1	**MD94÷912 ***	Rain shelter with module frames
1	**TD6100**	Digital push-button panel
1	**MD41D**	Camera module
1	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
1	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

MODY CONVENTIONAL door stations with digital encoder (for the composition see pages 191 and 193)

...	**MD72-73-74**	Back boxes with module frames
1	**MD84÷812**	Hood covers *(optionals)*
1	**MD94÷912 ***	Rain shelter with module frames
1	**MD41D**	Camera module
1	**CD6130**	Digital encoder
1	**MD10D,11D,12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**Kit 4244**	Encoding board kit for 16 buttons
...	**MD20, MD50**	Modules: blank and number

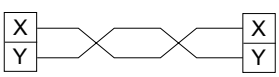
... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

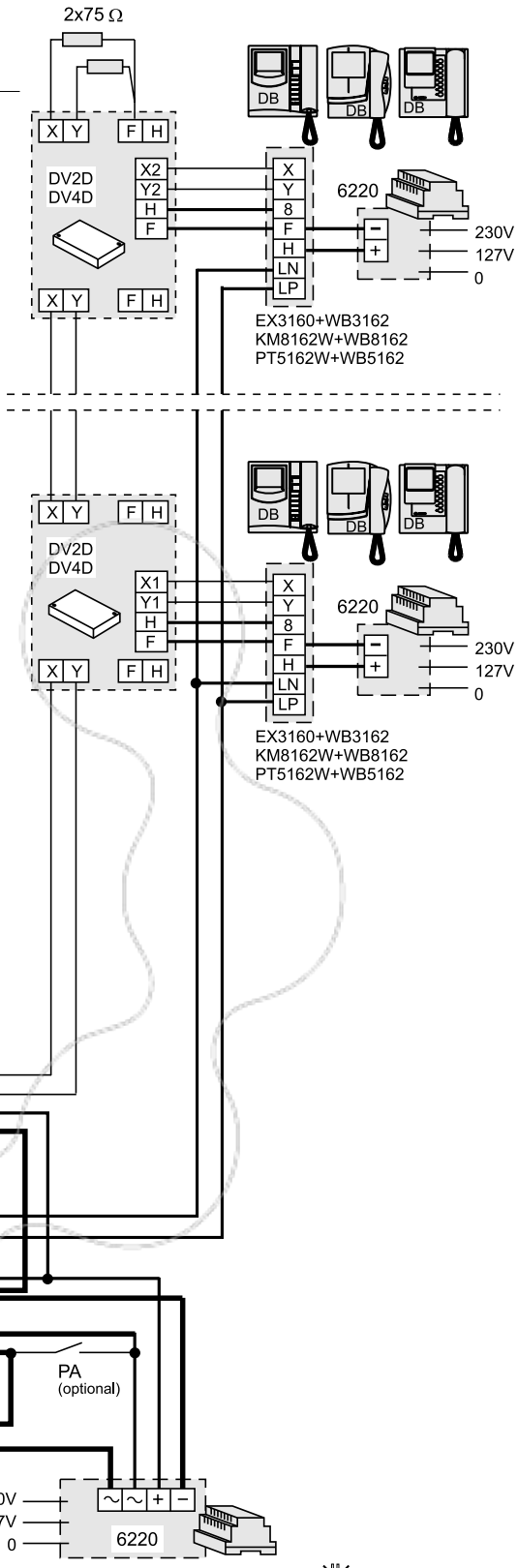
Operating mode *(see page 218)*

Programming
The following units must be programmed for the correct operation of the system:

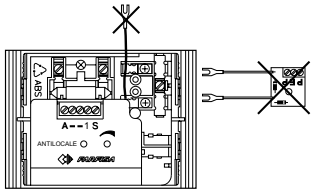
WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

Notes
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∿ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.





Notice
In the **MD11D** and **MD12D** modules disconnect and insulate the yellow wire and remove the diode module.



DIGITAL VIDEO INTERCOM SYSTEM WITH 1 VIDEO DOOR STATION WITH SEPARATE GROUND CONNECTION

Q.ty	*Article*	*Description*
...	**EX3160+WB3162*** **	Exhito video intercom + wall bracket
...	**KM8162W+WB8162**	Compact video intercom + wall bracket
...	**PT5162W+WB5162**	Project video intercom + wall bracket
...	**DV2D - DV4D**	Video distributors
2	**6220**	Power supply
1	**PA ****	Door release button *(optional)*
1	**SE ****	Electric door lock (12Vac-1A max.)

MATRIX DIGITAL door stations

...	**MA72-MA73**	Back boxes with module frames
...	**MA62-MA63**	Front frames
1	**MA92÷MA93 ***	Rain shelter with module frames
1	**TD6100MA**	Digital push-button panel
1	**MA43ED*** **	Camera module with door speaker
...	**MA20**	Blank module

MODY DIGITAL door stations (for the composition see page 185)

...	**MD72-73-74**	Back boxes with module frames
1	**MD84÷812**	Hood covers *(optionals)*
1	**MD94÷912 ***	Rain shelter with module frames
1	**TD6100**	Digital push-button panel
1	**MD41D**	Camera module
1	**MD10D**	Amplified door station
...	**MD20, MD50**	Modules: blank and number
1	**RD4120** (1)	Electronic index with 200 names *(optional)*
...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

MODY CONVENTIONAL door stations with digital encoder (for the composition see pages 191 and 193)

...	**MD72-73-74**	Back boxes with module frames
1	**MD84÷812**	Hood covers *(optionals)*
1	**MD94÷912 ***	Rain shelter with module frames
1	**MD41D**	Camera module
1	**CD6130**	Digital encoder
1	**MD10D,11D,12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**Kit 4244**	Encoding board kit for 16 buttons
...	**MD20, MD50**	Modules: blank and number

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode *(see page 218)*

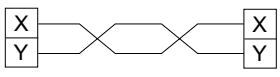
Programming

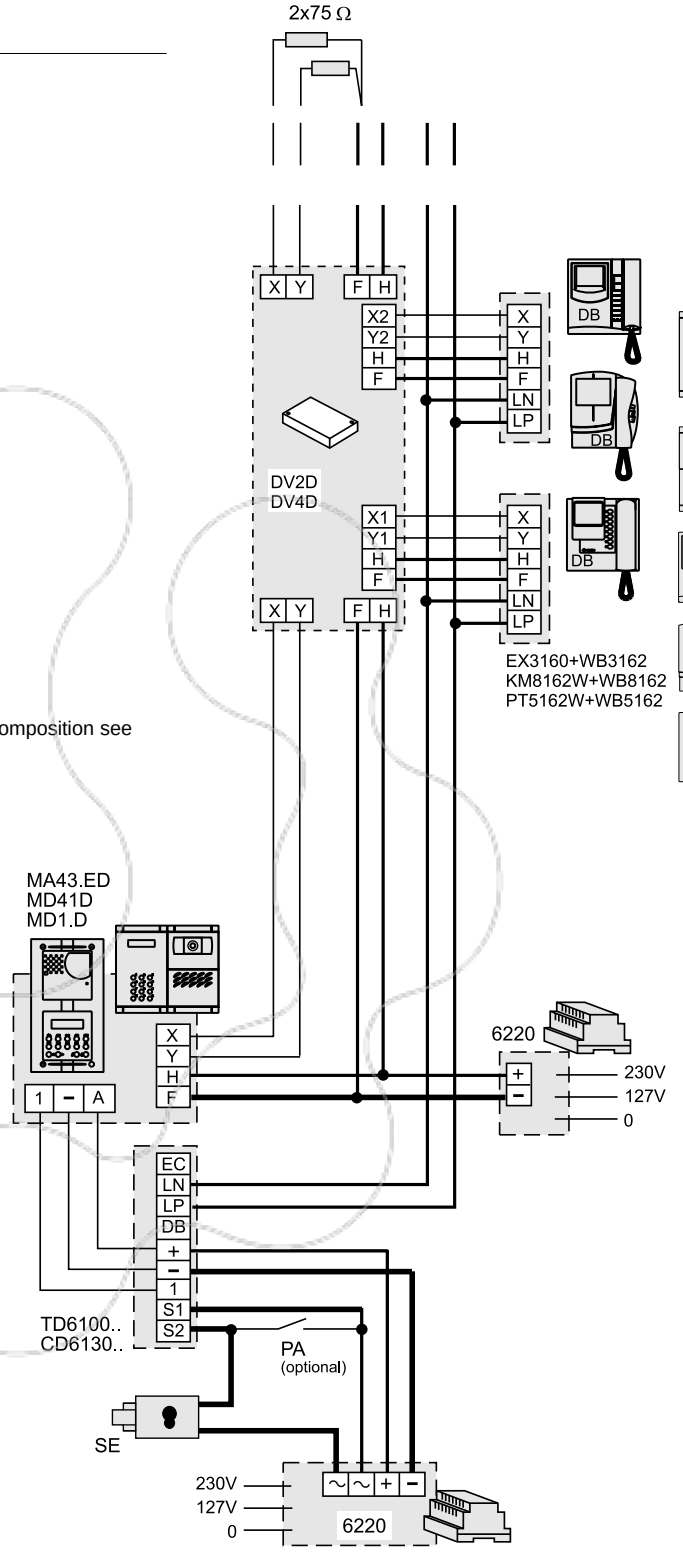
The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

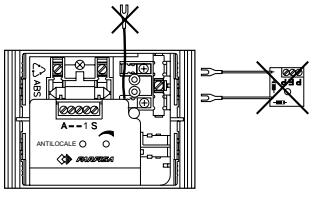
Notes

- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.





Notice
In the **MD11D** and **MD12D** modules disconnect and insulate the yellow wire and remove the diode module.



DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS

- **INTERNAL STATIONS**

EXHITO series	COMPACT series	PROJECT series	
... **EX3160*** **	... **KM8162W**	... **PT5162W**	Exhito video intercom + wall bracket
... **WB3162**	... **WB8162**	... **WB5162**	Video intercom wall bracket
... **TA3160**			Video intercom table adaptor

- **DIGITAL DOOR STATIONS**

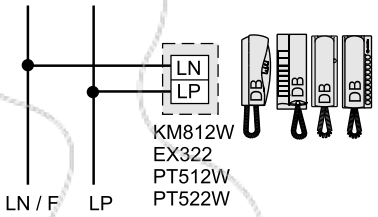
MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2	**MA92÷MA93***	2	**MD94÷MD912 ***	Rain shelter with module frames
2	**TD6100MA**	2	**TD6100**	Digital push-button panel
2	**MA43ED*****	2	**MD41D**	Camera module
		2	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series

...	**MD72-MD73-MD74**	Back boxes with module frames
2	**MD84÷MD812**	Hood covers *(optionals)*
2	**MD94÷MD912 ***	Rain shelter with module frames
2	**CD6130**	Digital encoder
2	**MD41D**	Camera module
2	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
3	**6220**	Power supply
1	**1472**	2 contact relay
2	**PA ****	Door release button *(optional)*
2	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two push-button panels. The video intercom switches ON and the image appears on the display. The display of the other push-button panel indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock of the calling station.
For more detailed information on operation see the description of the different products.

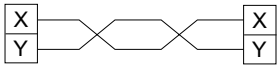
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

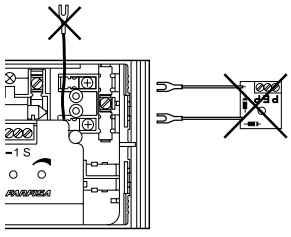
Notes

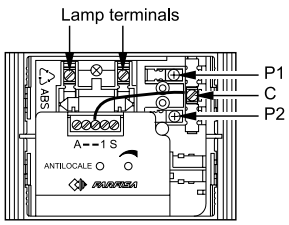
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



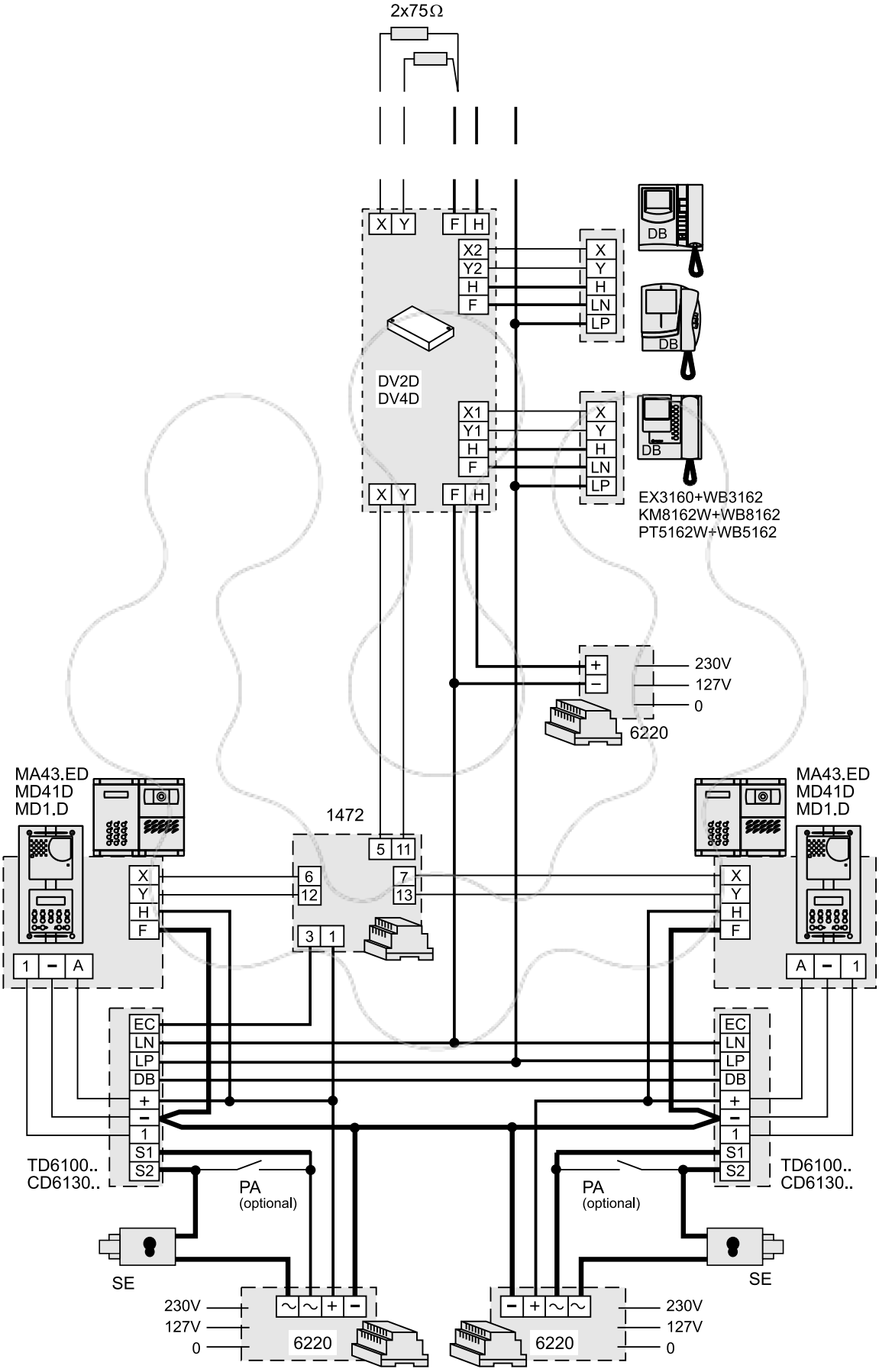
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH 2 VIDEO DOOR STATIONS



DIGITAL VIDEO INTERCOM SYSTEM WITH 2 DOOR STATIONS ONE OF WHICH ONLY AUDIO

- **INTERNAL STATIONS**

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

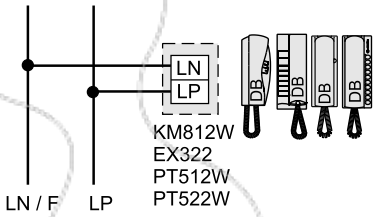
- **DIGITAL DOOR STATIONS**

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2	**MA92÷MA93***	2	**MD94÷MD912 ***	Rain shelter with module frames
2	**TD6100MA**	2	**TD6100**	Digital push-button panel
1	**MA43ED*****	2	**MD41D**	Camera module
1	**MA10PED-MA11PED**	2	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
2	**MD84÷MD812**	Hood covers *(optionals)*
2	**MD94÷MD912 ***	Rain shelter with module frames
2	**CD6130**	Digital encoder
1	**MD41D**	Camera module
2	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
3	**6220**	Power supply
1	**1472**	2 contact relay
2	**PA ****	Door release button *(optional)*
2	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two push-button panels. The video intercom switches ON and the image appears on the display. The display of the other push-button panel indicates the busy state.
The internal user picks up the handset to start conversation and presses the ⊶ button to open the door lock of the calling station.
For more detailed information on operation see the description of the different products.

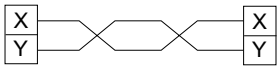
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183

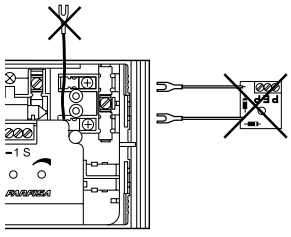
Notes

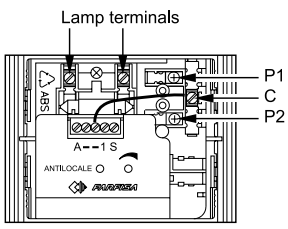
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



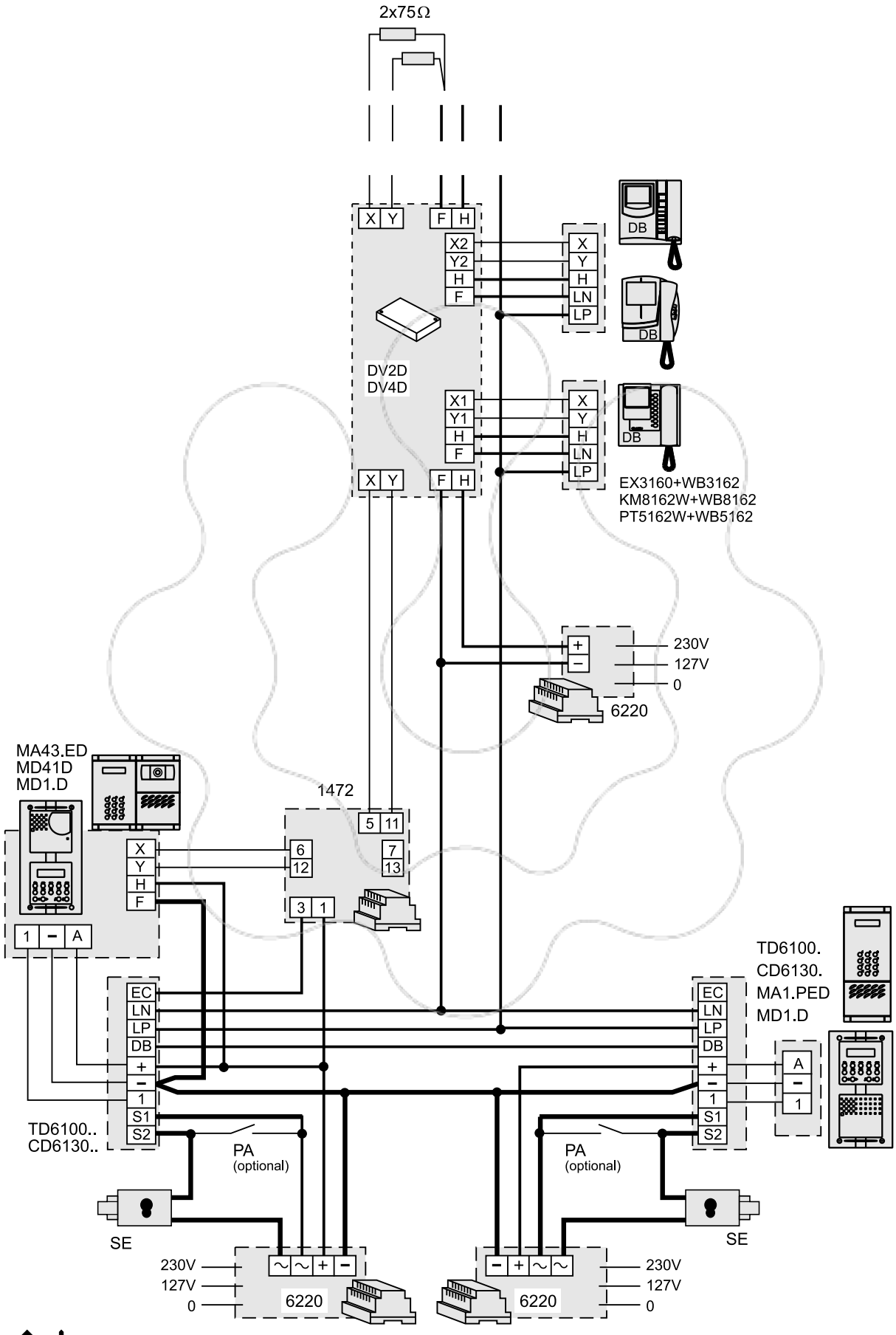
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH 2 DOOR STATIONS ONE OF WHICH ONLY AUDIO



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance).

• INTERNAL STATIONS

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

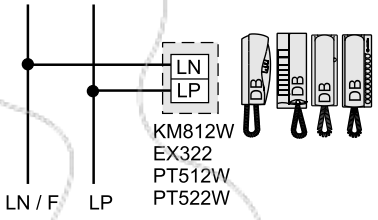
• DIGITAL DOOR STATIONS

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	1+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
1+X	**MA92÷MA93***	1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**TD6100MA**	1+X	**TD6100**	Digital push-button panel
1+X	**MA43ED*****	1+X	**MD41D**	Camera module
		1+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		1+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

• MODY CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
1+X	**MD84÷MD812**	Hood covers *(optionals)*
1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**CD6130**	Digital encoder
1+X	**MD41D**	Camera module
1+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



• OTHER ARTICLES

...	**DV2D-DV4D**	Video distributors
2xX+1	**6220**	Power supply
X	**1472**	2 contact relay
X	**6273**	Digital exchanger
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from the main push-button panel. The video intercom switches ON and the image of the calling station appears on the display. The display of the push-button panel of the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

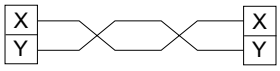
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

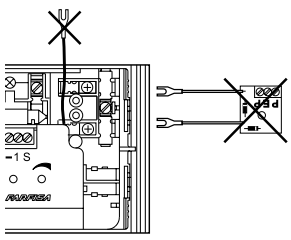
Notes

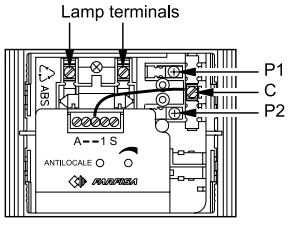
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 4 buildings, additional video distributors art. **DV2D** or **DV4D** must be added (1 for each 4 additional buildings).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



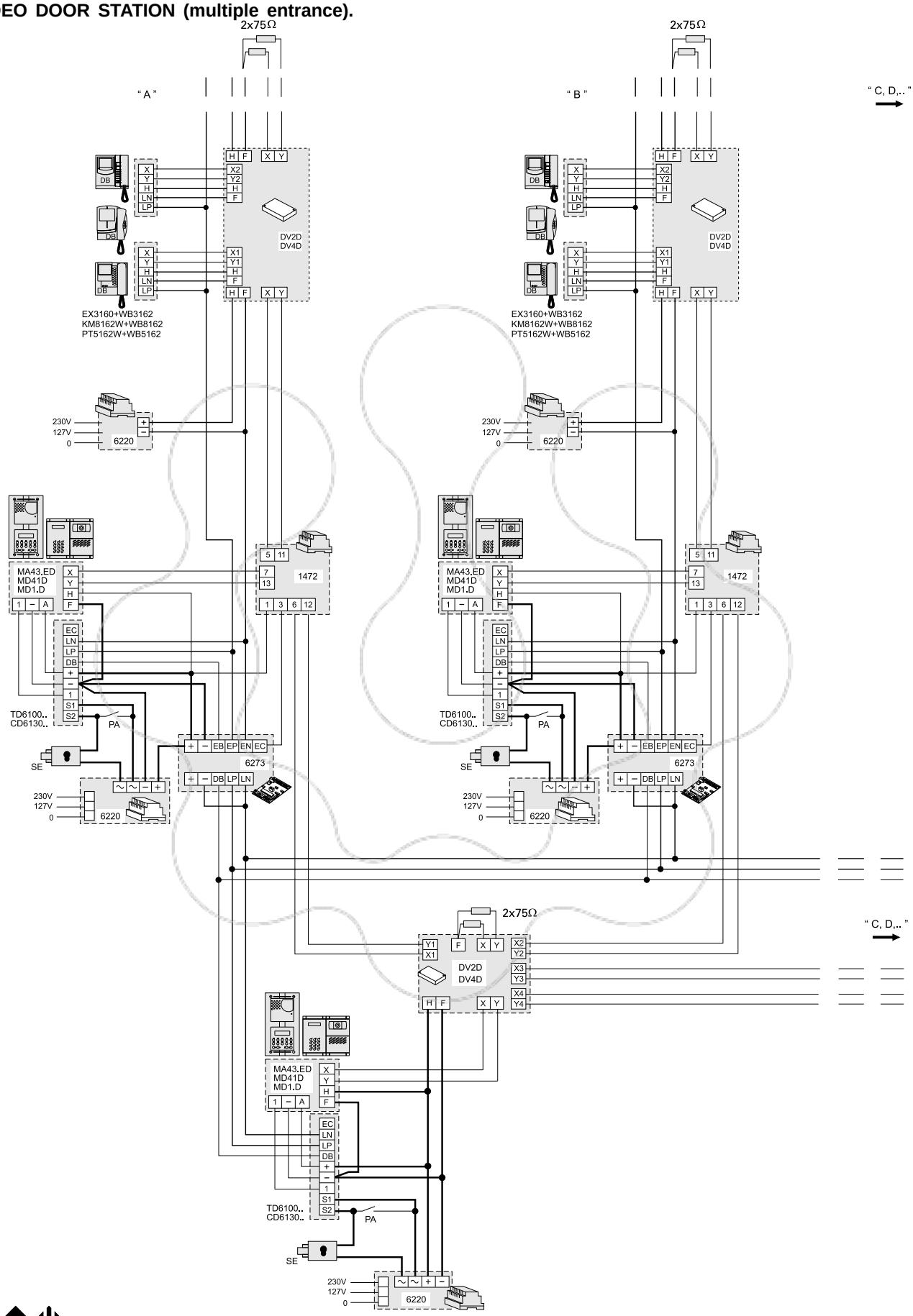
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance).



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS ONLY AUDIO AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance).

- **INTERNAL STATIONS**

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

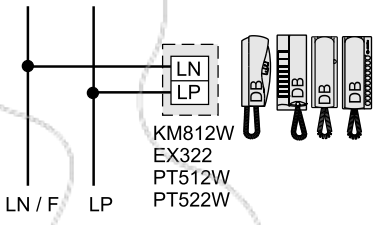
- **DIGITAL DOOR STATIONS**

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	1+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
1+X	**MA92÷MA93***	1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**TD6100MA**	1+X	**TD6100**	Digital push-button panel
1	**MA43ED*****	1	**MD41D**	Camera module
X	**MA10PED-MA11PED**	1+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		1+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
1+X	**MD84÷MD812**	Hood covers *(optionals)*
1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**CD6130**	Digital encoder
1	**MD41D**	Camera module
1+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
2xX+1	**6220**	Power supply
X	**1472**	2 contact relay
X	**6273**	Digital exchanger
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from the main push-button panel. The video intercom switches ON and the image of the calling station appears on the display. The display of the push-button panel of the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The calls from the secondary door stations will switch the video intercom ON without image.
For more detailed information on operation see the description of the different products.

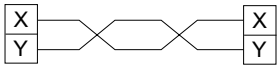
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

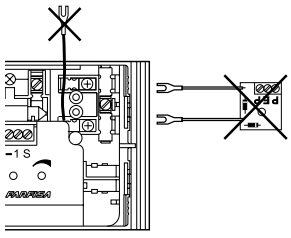
Notes

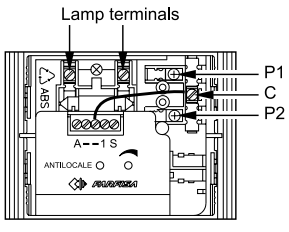
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ~ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 4 buildings, additional video distributors art. **DV2D** or **DV4D** must be added (1 for each 4 additional buildings).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



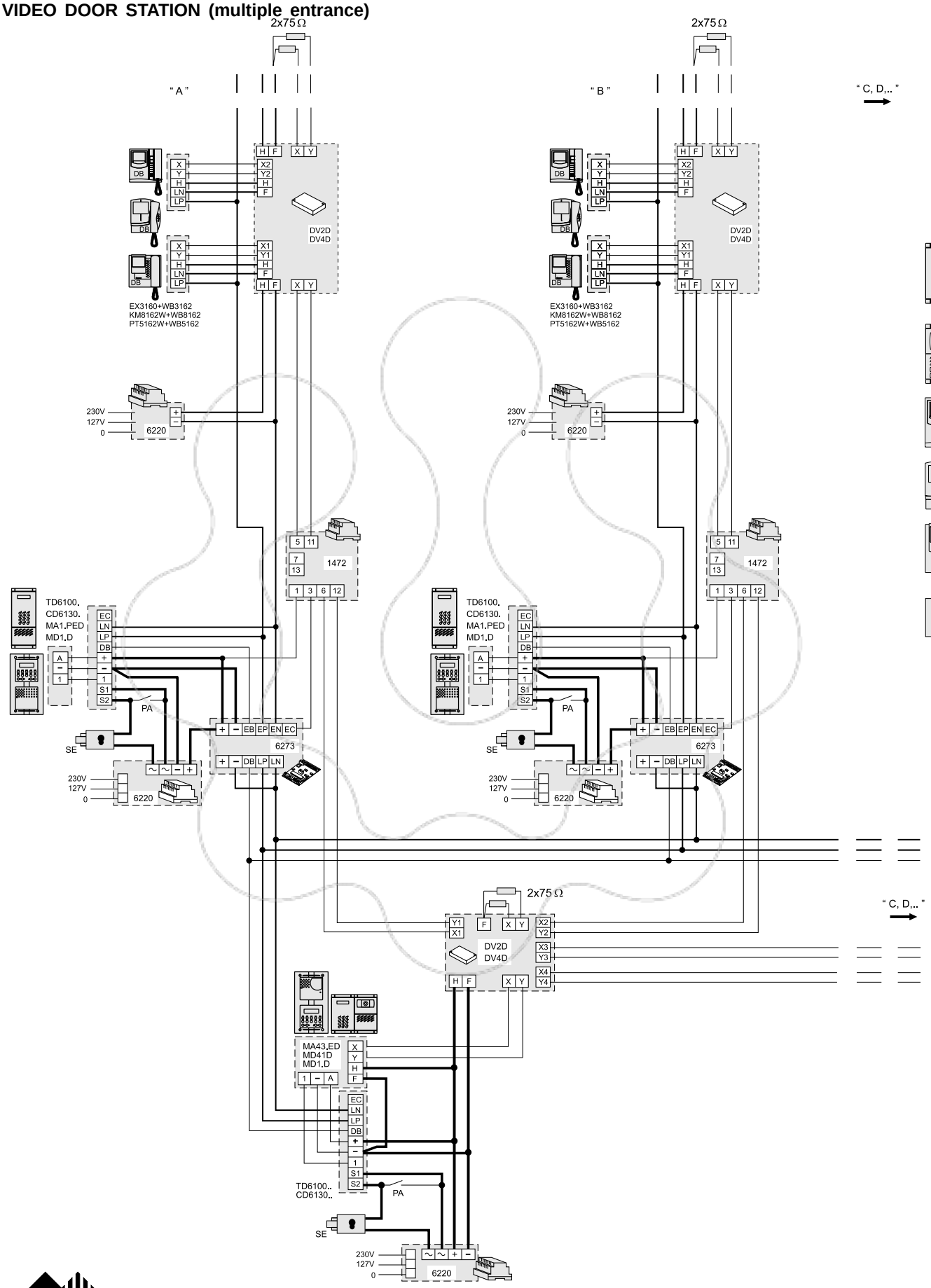
Notice

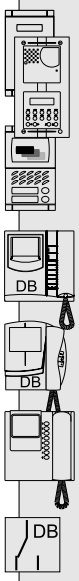
In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ~ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS ONLY AUDIO AND 1 COMMON MAIN VIDEO DOOR STATION (multiple entrance)





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN DOOR STATION ONLY AUDIO (multiple entrance).

- **INTERNAL STATIONS**

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

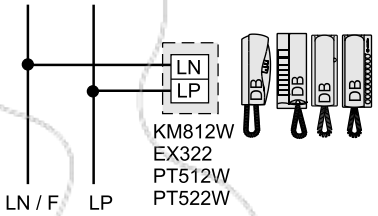
- **DIGITAL DOOR STATIONS**

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	1+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
1+X	**MA92÷MA93***	1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**TD6100MA**	1+X	**TD6100**	Digital push-button panel
X	**MA43ED*****	X	**MD41D**	Camera module
1	**MA10PED-MA11PED**	1+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		1+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
1+X	**MD84÷MD812**	Hood covers *(optionals)*
1+X	**MD94÷MD912 ***	Rain shelter with module frames
1+X	**CD6130**	Digital encoder
X	**MD41D**	Camera module
1+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
2xX+1	**6220**	Power supply
X	**1472**	2 contact relay
X	**6273**	Digital exchanger
1+X	**PA ****	Door release button *(optional)*
1+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from the main push-button panel. The video intercom switches ON without image. The display of the push-button panel of the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the ⊶ button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

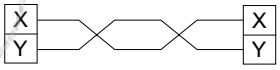
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

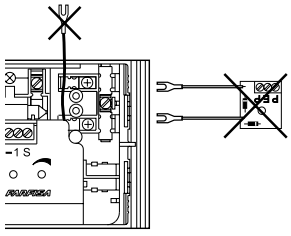
Notes

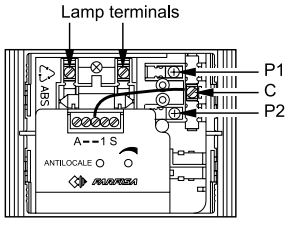
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



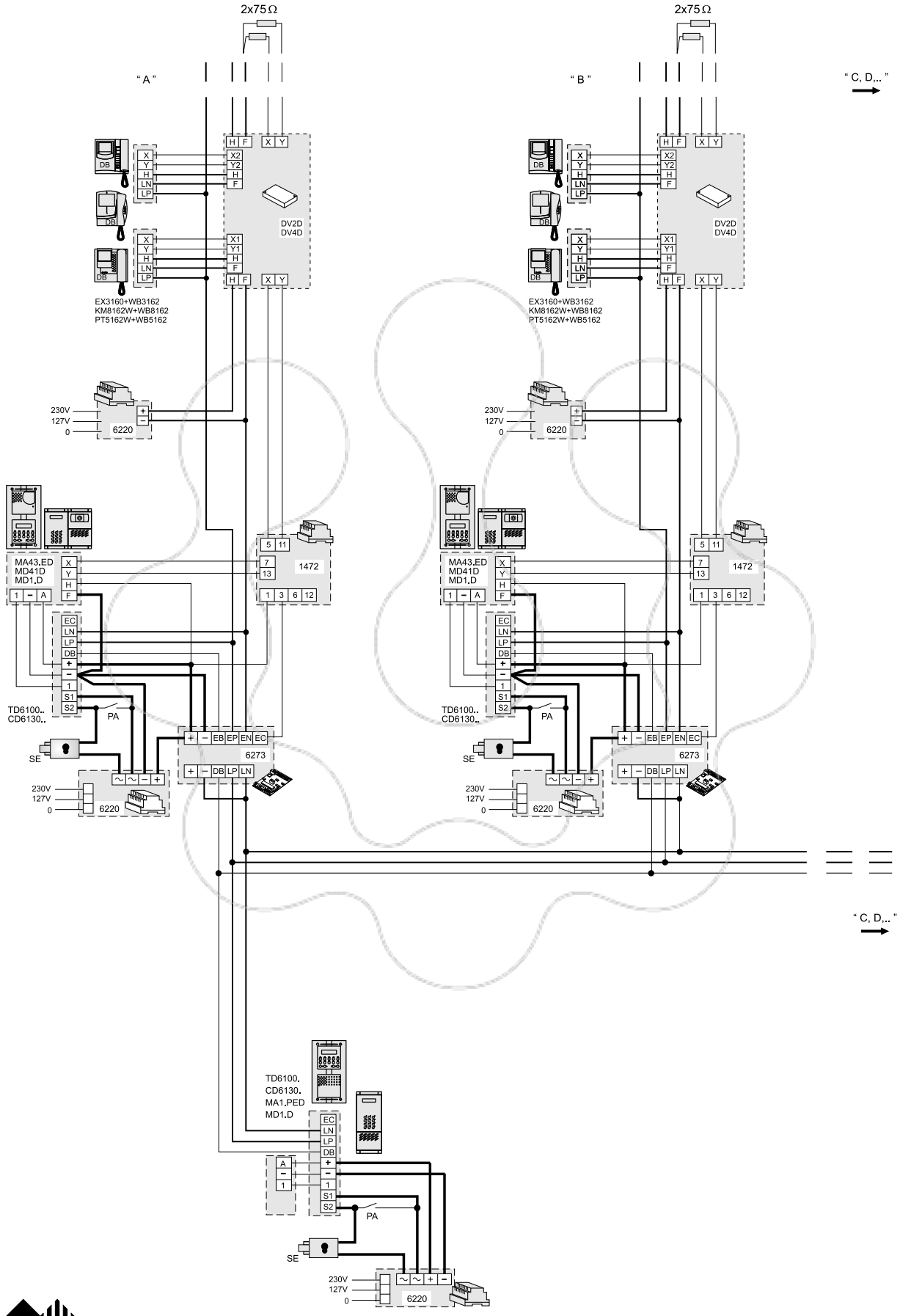
Notice

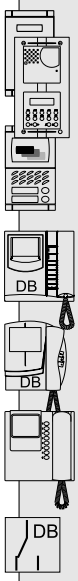
In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 1 COMMON MAIN DOOR STATION ONLY AUDIO (multiple entrance)





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance).

• INTERNAL STATIONS

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

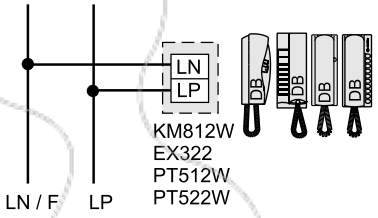
• DIGITAL DOOR STATIONS

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2+X	**MA92÷MA93***	2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**TD6100MA**	2+X	**TD6100**	Digital push-button panel
2+X	**MA43ED*****	2+X	**MD41D**	Camera module
		2+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

• MODY CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optionals)*
2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**CD6130**	Digital encoder
2+X	**MD41D**	Camera module
2+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



• OTHER ARTICLES

...	**DV2D-DV4D**	Video distributors
2xX+2	**6220**	Power supply
1+X	**1472**	2 contact relay
X	**6273**	Digital exchanger
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two main push-button panels. The video intercom switches ON and the image of the calling station appears on the display. The display of the push-button panels of the other main station and the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

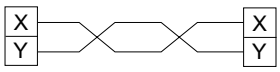
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

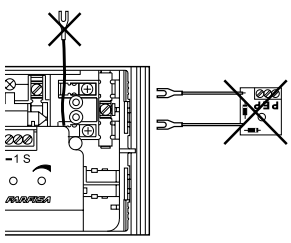
Notes

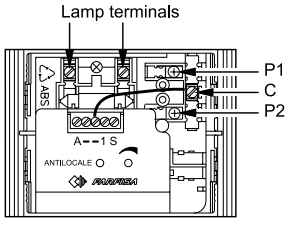
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 4 buildings, additional video distributors art. **DV2D** or **DV4D** must be added (1 for each 4 additional buildings).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



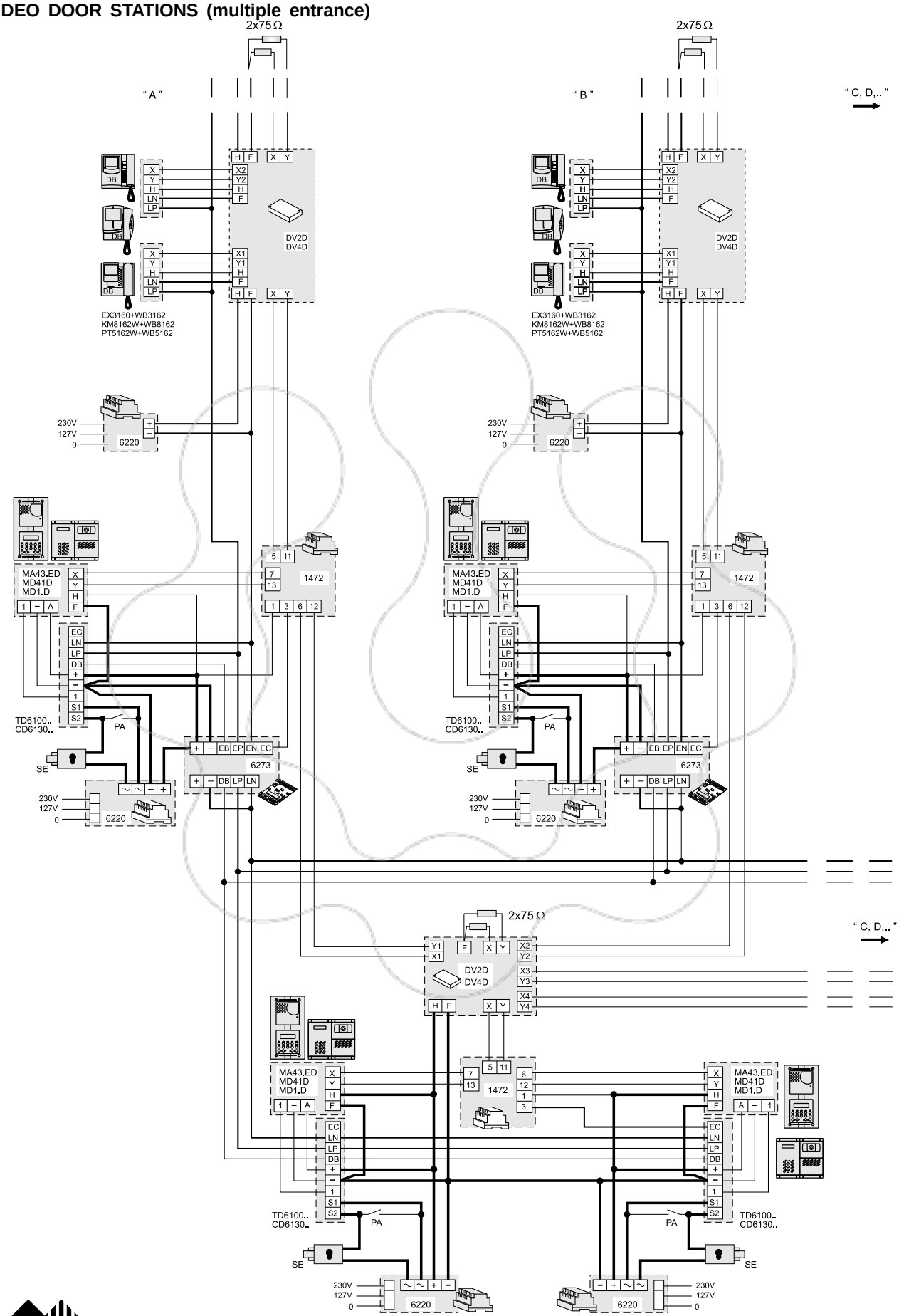
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance)



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS ONE OF WHICH ONLY AUDIO (multiple entrance)

• INTERNAL STATIONS

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

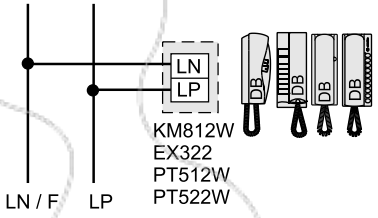
• DIGITAL DOOR STATIONS

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2+X	**MA92÷MA93***	2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**TD6100MA**	2+X	**TD6100**	Digital push-button panel
1+X	**MA43ED*****	1+X	**MD41D**	Camera module
1	**MA10PED-MA11PED**	2+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

• MODY CONVENTIONAL DOOR STATIONS with digital encoder (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optionals)*
2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**CD6130**	Digital encoder
1+X	**MD41D**	Camera module
2+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



• OTHER ARTICLES

...	**DV2D-DV4D**	Video distributors
2xX+2	**6220**	Power supply
1+X	**1472**	2 contact relay
X	**6273**	Digital exchanger
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two main push-button panels. The video intercom switches ON and the image of the calling station appears on the display. The display of the push-button panels of the other main station and the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the 🔑 button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

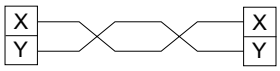
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

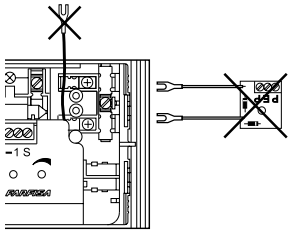
Notes

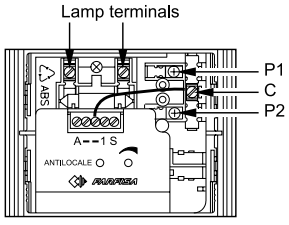
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 4 buildings, additional video distributors art. **DV2D** or **DV4D** must be added (1 for each 4 additional buildings).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



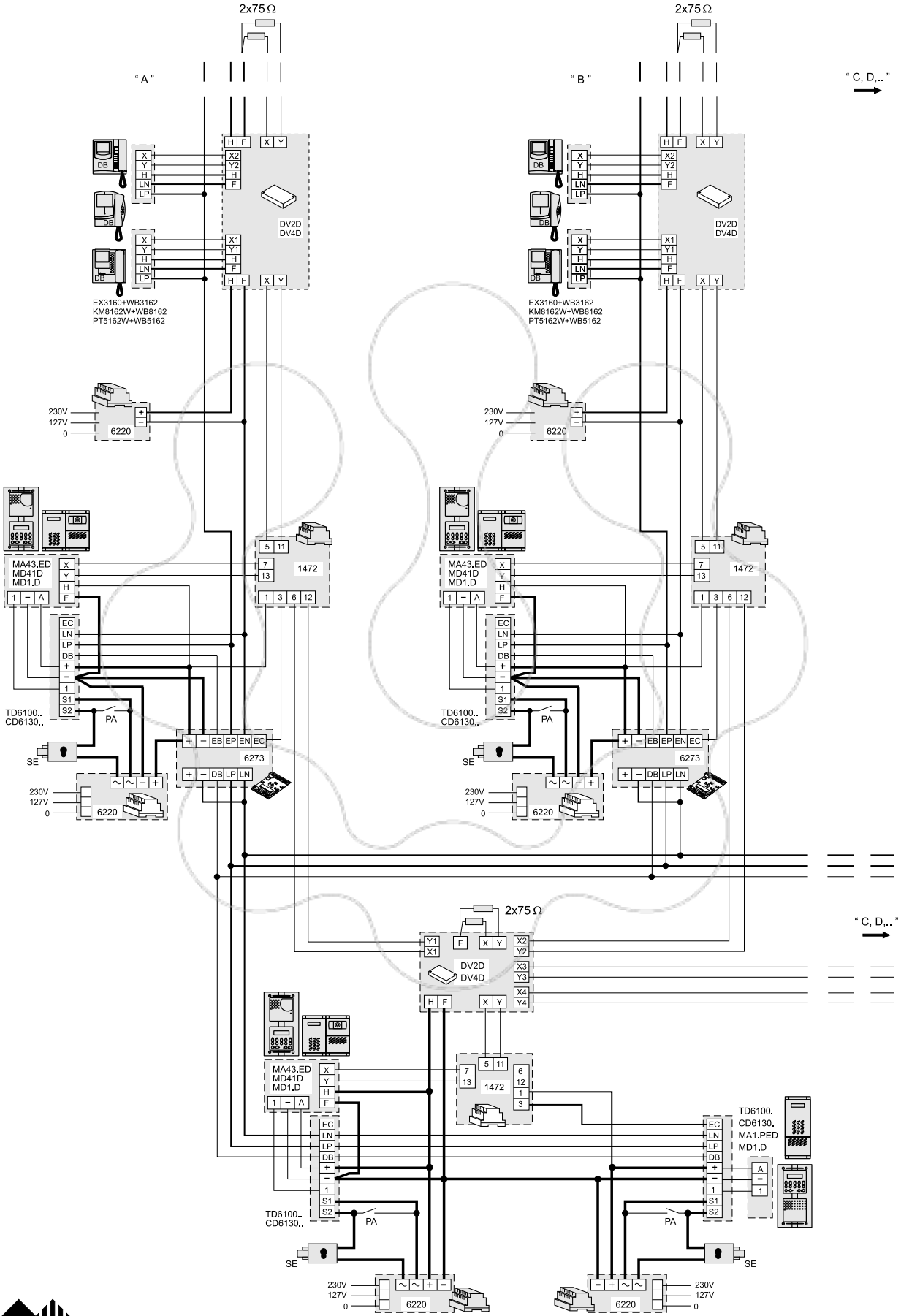
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS ONE OF WHICH ONLY AUDIO (multiple entrance)



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS ONLY AUDIO AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance).

- **INTERNAL STATIONS**

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

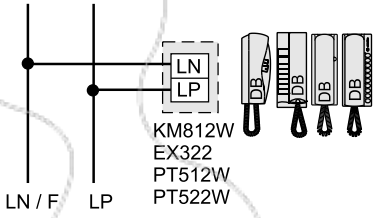
- **DIGITAL DOOR STATIONS**

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2+X	**MA92÷MA93***	2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**TD6100MA**	2+X	**TD6100**	Digital push-button panel
2	**MA43ED*****	2	**MD41D**	Camera module
X	**MA10PED-MA11PED**	2+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optionals)*
2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**CD6130**	Digital encoder
2	**MD41D**	Camera module
2+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
2xX+2	**6220**	Power supply
1+X	**1472**	2 contact relay
X	**6273**	Digital exchanger
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two main push-button panels. The video intercom switches ON and the image of the calling station appears on the display. The display of the push-button panels of the other main station and the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
The calls from the secondary door stations will switch the video intercom ON without image.
For more detailed information on operation see the description of the different products.

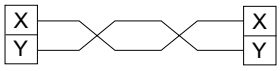
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

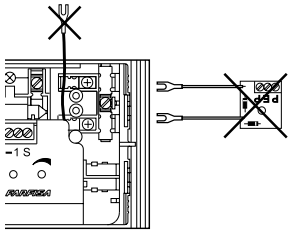
Notes

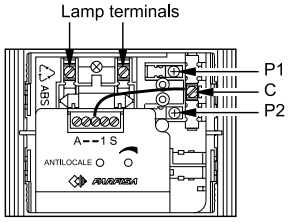
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ~ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- If the system includes more than 4 buildings, additional video distributors art. **DV2D** or **DV4D** must be added (1 for each 4 additional buildings).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



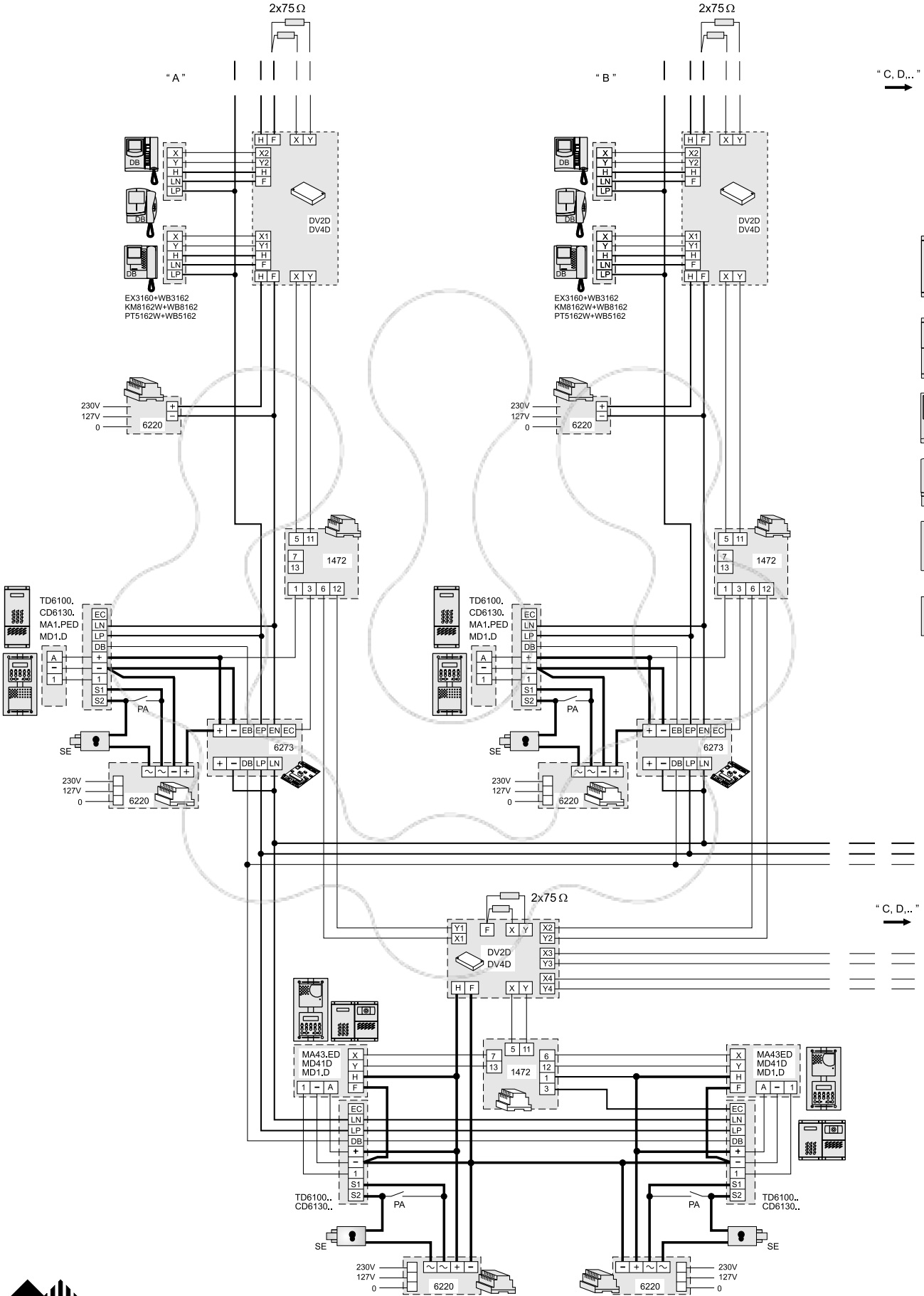
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ~ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY DOOR STATIONS ONLY AUDIO AND 2 COMMON MAIN VIDEO DOOR STATIONS (multiple entrance)



DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS ONLY AUDIO (multiple entrance).

- **INTERNAL STATIONS**

EXHITO series		COMPACT series		PROJECT series		
...	**EX3160*** **	...	**KM8162W**	...	**PT5162W**	Exhito video intercom + wall bracket
...	**WB3162**	...	**WB8162**	...	**WB5162**	Video intercom wall bracket
...	**TA3160**					Video intercom table adaptor

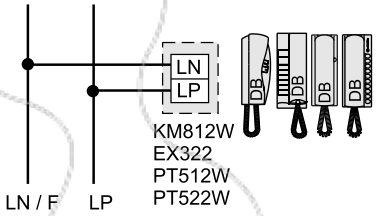
- **DIGITAL DOOR STATIONS**

MATRIX series		MODY series		
...	**MA72-MA73**	...	**MD72-MD73-MD74**	Back boxes with module frames
...	**MA62÷MA63**	2+X	**MD84÷MD812**	Front frames (*Matrix*) or hood covers *(Mody - optionals)*
2+X	**MA92÷MA93***	2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**TD6100MA**	2+X	**TD6100**	Digital push-button panel
X	**MA43ED*****	X	**MD41D**	Camera module
2	**MA10PED-MA11PED**	2+X	**MD10D**	Amplified door station
...	**MA20**	...	**MD20, MD50**	Modules: blank and number
		2+X	**RD4120** (1)	Electronic index with 200 names *(optional)*
		...	**TD4110** (1)	Name plate panel with 12 names *(optional)*

- **MODY CONVENTIONAL DOOR STATIONS with digital encoder** (for the composition see pages 191 and 193)

MODY series		
...	**MD72-MD73-MD74**	Back boxes with module frames
2+X	**MD84÷MD812**	Hood covers *(optionals)*
2+X	**MD94÷MD912 ***	Rain shelter with module frames
2+X	**CD6130**	Digital encoder
X	**MD41D**	Camera module
2+X	**MD10D÷MD12D**	Amplified door stations
...	**MD21÷MD228**	Button modules
...	**MD20-MD50**	Modules: blank and number
...	**Kit 4244**	Encoding board kit for 16 buttons

Connection of an intercom to the riser for the realisation of mixed intercom-video intercom installations.



- **OTHER ARTICLES**

...	**DV2D-DV4D**	Video distributors
2xX+2	**6220**	Power supply
X	**1472**	2 contact relay
X	**6273**	Digital exchanger
2+X	**PA ****	Door release button *(optional)*
2+X	**SE ****	Electric door lock (12Vac-1A max.)

... According to the number of users.
X According to the number of buildings.
***** Rain shelters are used in replacement of back boxes and hood covers.
****** Articles not supplied by ACI Farfisa.
(1) The electronic index and the name plate panel are optional and must be installed according to the specific requirements.
******* Use the EX3160C and MA43CED articles for colour systems.

Operating mode

The video intercom of the desired user rings when a call is made from one of the two main push-button panels. The video intercom switches ON without image. The display of the push-button panels of the other main station and the secondary station connected to the riser of the called user indicates the busy state.
The internal user picks up the handset to start conversation and presses the button to open the door lock of the calling station.
All the other stairs are independent and therefore a simultaneous conversation in all of the stairs between a single user and its secondary station is possible.
For more detailed information on operation see the description of the different products.

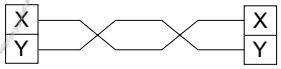
Programming

The following units must be programmed for the correct operation of the system:

WB3162	see page 197
WB8162	see page 199
WB5162	see page 203
TD6100MA	see pages 175÷177
CD6130	see page 186
4244	see page 188
TD6100	see pages 182-183
6273	see pages 204-205

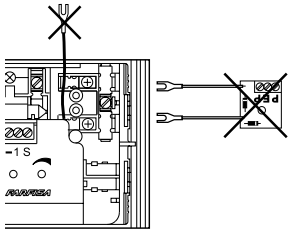
Notes

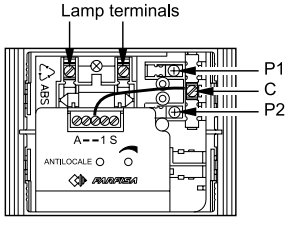
- Each name plate panel and button module is equipped with a lamp to provide lighting to the name plates. A maximum of 8 lamps can be connected to the terminals ∼ of the **6220** power supply. If more lamps are present, one or more 12V transformers with suitable power must be added to power them (**PRS210**).
- Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.
- For information on the wire cross section and the video connection see pages 206÷208.
- Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.



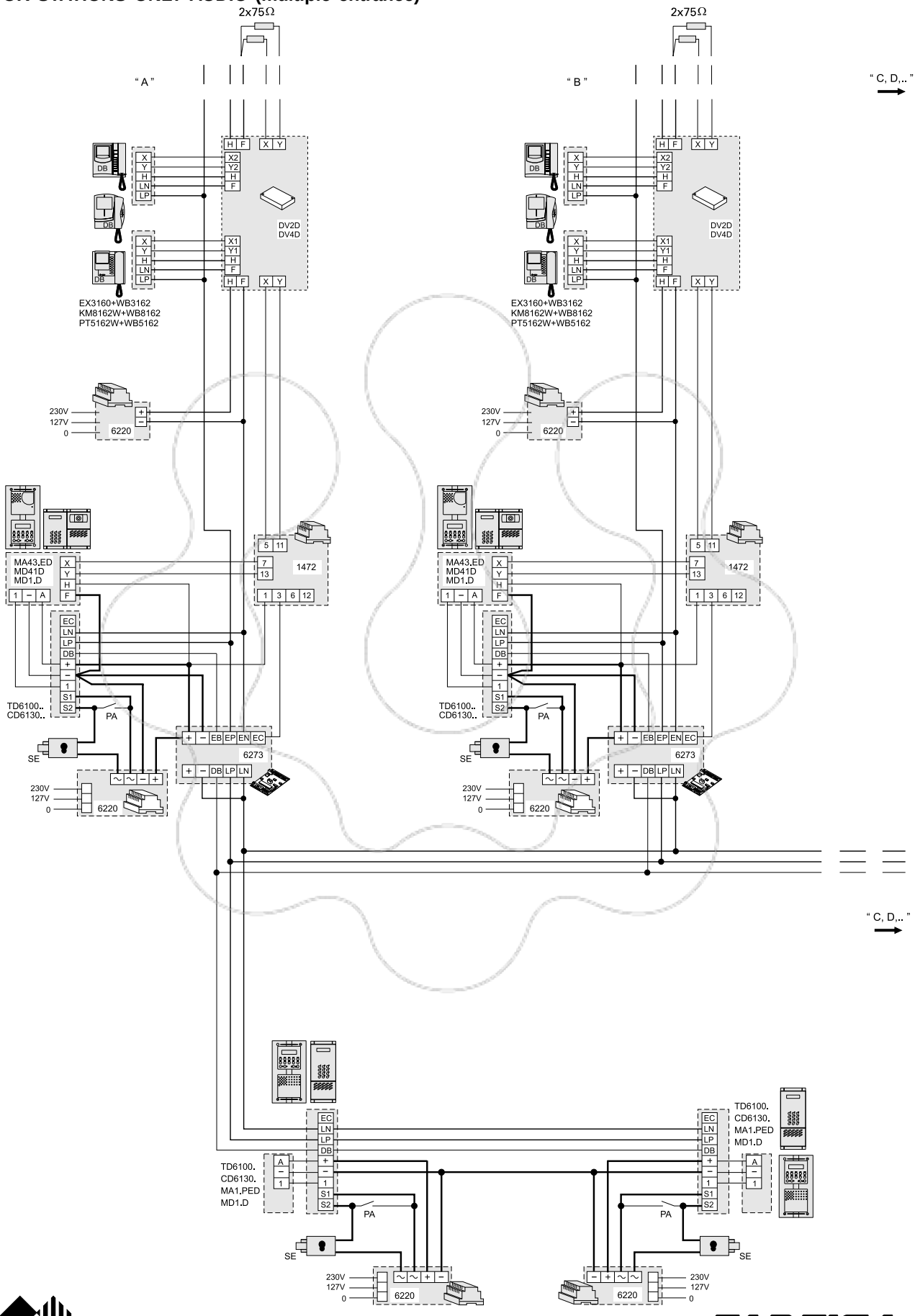
Notice

In the **MD11D** and **MD12D** modules must:
- disconnect and insulate the yellow wire;
- remove the diode module;
- connect the common buttons (C) to the **terminal -**
- connect the push-buttons P1 and P2 to the respective terminals of the **CD6130;**
- connect to the lamp name-plate to the terminals ∼ of the **6220** power supply.





DIGITAL VIDEO INTERCOM SYSTEM WITH SECONDARY VIDEO DOOR STATIONS AND 2 COMMON MAIN DOOR STATIONS ONLY AUDIO (multiple entrance)



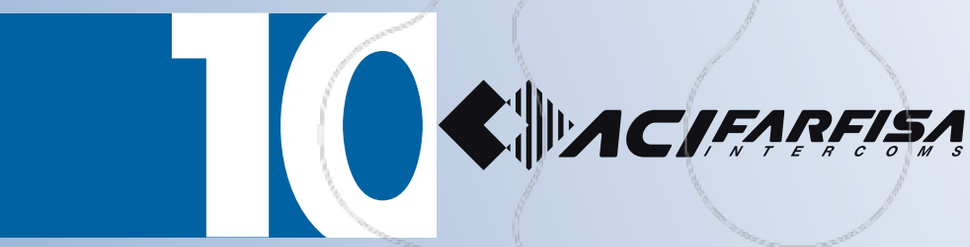
PRODUCT LIST

List of articles that can be used in digital installation with page reference.

FN4000 series

FN4000 series

DF6000 series



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