GB2 TECHNOLOGY

golmar

USER MANUAL

GB2 Video Door Entry System Kit 2-wire installation Stainless Steel Nexa Modular

Code 50122171

TKIT632A PENTHA EN REV.0217

INTRODUCTION

First of all, we thank and congratulate you for purchasing this product.

Our commitment to achieving the satisfaction of customers like you is manifested through our ISO-9001 certification and the manufacture of products like the one you have just purchased.

Its advanced technology and strict quality control will ensure that customers and users enjoy the numerous features that this device offers. To get the most out of them and ensure proper operation from day one, we recommend that you read this instruction manual.

CONTENTS

SET-UP WARNINGS

- Do not overtighten the screws on the power supply connector.
- **Always disconnect the power supply** before installing or making modifications to the devices.
- The fitting and handling of these devices must be carried out by **authorised personnel**.
- The wiring must run at least **40cm away from any other wiring**.
- Before connecting the device to the mains, check the connections between the door panel, power supply unit, distributors, camera interface, GSM interface, monitors and telephones.
- Use the Golmar **RAP-2150** cable (2x1mm^2).
- Always follow the instructions contained in this manual.

SAFETY PRECAUTIONS

- **Always disconnect the power supply** before installing or making modifications to the devices.
- The fitting and handling of these devices must be carried out by **authorised personnel**.
- The wiring must run at least **40 cm away from any other wiring.**
- On the power supply unit:
  - Do not overtighten the screws on the connector.
  - Install the power supply unit in a dry protected location free from the risk of dripping or splashing water.
  - Avoid locations that are humid, dusty or near heat sources.
  - Ensure that the air vents are free from obstruction so that air can circulate freely.
  - To avoid damage, the power supply unit must be firmly secured in place.
  - To prevent electric shock, do not remove the cover or handle the wires connected to the terminals.

CHARACTERISTICS

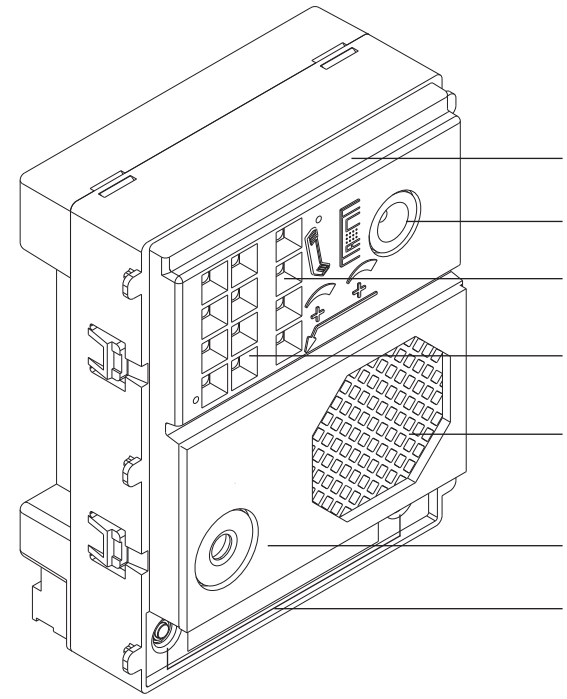
- Video door entry system with simplified wiring (non-polarised 2-wire bus).
- Up to 4 access panels (DP-GB2A distributor required for more than one access panel) per installation.
- Up to 2 apartments (NX5110 Pentha 1-apartment kit and NX5220 Pentha 2-apartment kit) per installation.
- Maximum 18 Pentha monitors per installation.
- Maximum 16 Pentha monitors in one apartment.
- Maximum 4 Pentha monitors in parallel (without distributors) per installation.
- Call confirmation tone.
- Visual signals on the door panel for people with impaired hearing (indicating call process, communication, door open and channel busy).
- Audible signals on the door panel for people with impaired vision (indicating call in progress, missed call, door open, call finished and engaged).
- Door opening timeable at 1 or 5 seconds.
- 2 outputs for independently activated lock releases.
- Relay 1 output to activate the DC or AC lock releases actuated by relay.
- Relay 2 output to activate the DC or AC lock releases actuated by relay.
- Input for exterior door opening button (Relay 1 output).
- Input for exterior door opening button (Relay 2 output).
- Maximum distance between the power supply and the furthest door panel: 80m with a cross-section of 1mm^2.
- Maximum distance between the power supply and the last distributor: 80m with a cross-section of 1mm^2.
- Maximum distance between distributor and monitor: 40m with a cross-section of 1mm^2.

SYSTEM OPERATION

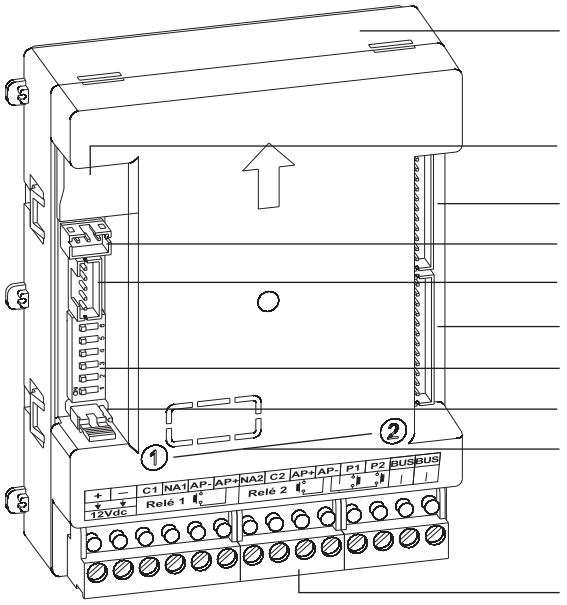
- To make a call, the visitor must press the button of the apartment; an audible sound indicates that the call is being made and LED will turn on. If vocal synthesis is enabled, a 'Call is in progress' message appears indicating that a call is being made. At this moment, the apartment's monitors receive the call. If another apartment is called by mistake, press the button for the correct apartment and the first call will be cancelled.
- The call lasts for 40 seconds. The image appears on the monitor (with code 0 'apartment 1' or code 16 if the call is in 'apartment 2') when receiving the call without the visitor knowing.
  If the call is not answered within 40 seconds, LED will turn off and the channel will be freed.
- To establish communication, press option on the screen of the master monitor or the Golmar logo on the front of any slave monitor in the apartment (unless the 'display image in call' function is enabled on the slave monitor, in which case, option must be pressed), and LED on the door panel will illuminate. If the monitor is a PENTHA GB2/H with icon on the front, make sure that the hearing aid is between 15 and 25 cm away from the monitor to ensure maximum audio quality during communication with the door panel
- Communication will last for one and a half minutes or until option on the screen is pressed. When communication has finished, LEDs and will turn off and the channel will be freed. If vocal synthesis is activated, a 'Communication is finished' message will indicate that the call is over.
- To open the door 1 or 2, press corresponding button 1/2 on the screen during the call or communication processes: one press will activate the lock release for 5 seconds and LED will also illuminate for 5 seconds. If vocal synthesis is enabled, a 'Door Opened!' message will be indicated on the door panel.
- For a description of the functioning and setup of the monitor, see the monitor's user manual.

DESCRIPTION OF THE EL632 GB2A SOUND MODULE

Description of the EL632 GB2A sound module:



Front.
Colour television camera.
LEDs (visual signals for people with impaired hearing).
LEDs (activation in low light conditions).
Speaker.
Microphone.
Sound module buttons (x2).



Back.
Internal use.
Do not use.
Do not use.
Do not use.
Button connector (in houses unused).
DIP switch.
Do not use (internal use).
Button number.
Terminal strip connector (GB2 Bus).

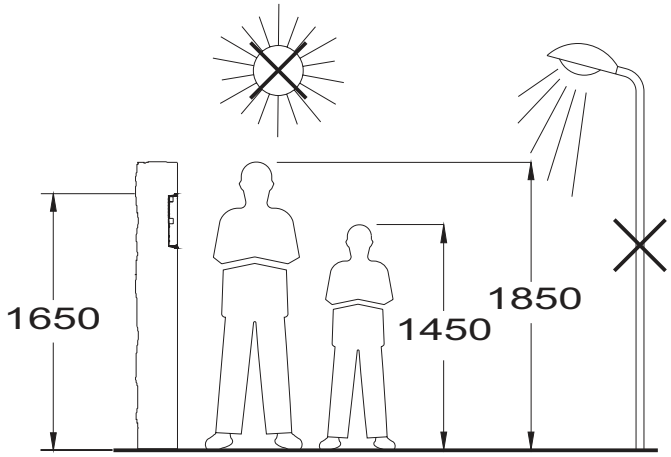
Connection terminals:

+, – : Positive, negative (12Vdc output for Golmar DC electric lock).
C1 : Contact 'C' for electric lock (Relay 1).
NA1 : Contact 'NO' for electric lock (Relay 1).
AP –,AP+ : Input for exterior door opening button (Relay 1).
NA2 : Contact 'NO' for electric lock (Relay 2).
C2 : Contact 'C' for electric lock (Relay 2).
AP+,AP – : Input for exterior door opening button (Relay 2).
P1 : Input for exterior call button (button 1).
P2 : Input for exterior call button (button 2).
BUS : Communication BUS (non-polarised).
BUS : Communication BUS (non-polarised).

Note: See wiring diagrams for connections (pages 11-18).

INSTALLATION OF THE DOOR PANEL

Positioning the embedding box:

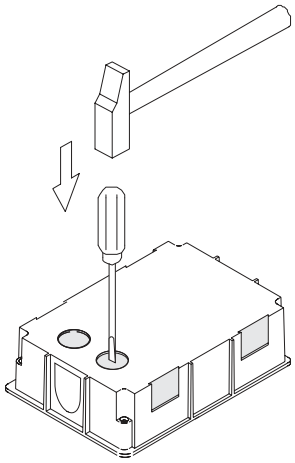


Make a hole in the wall to position the top of the door panel at a height of 1.65m.
Hole dimensions:

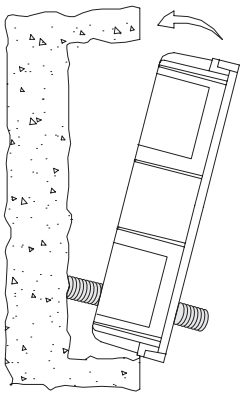
CE-610 embedding box: 125(W) x 140(H) x 56(D) mm.

The door panel has been designed to withstand diverse environmental conditions. It is however advisable to take extra precautions to prolong its service life (shields, covered areas, etc.). To obtain optimum video door entry system image quality, avoid direct contact from light sources (sunshine, street lights, etc.)

Preparing the cable entry:



Break the flange to allow entry of cables through the bottom part of the embedding box.

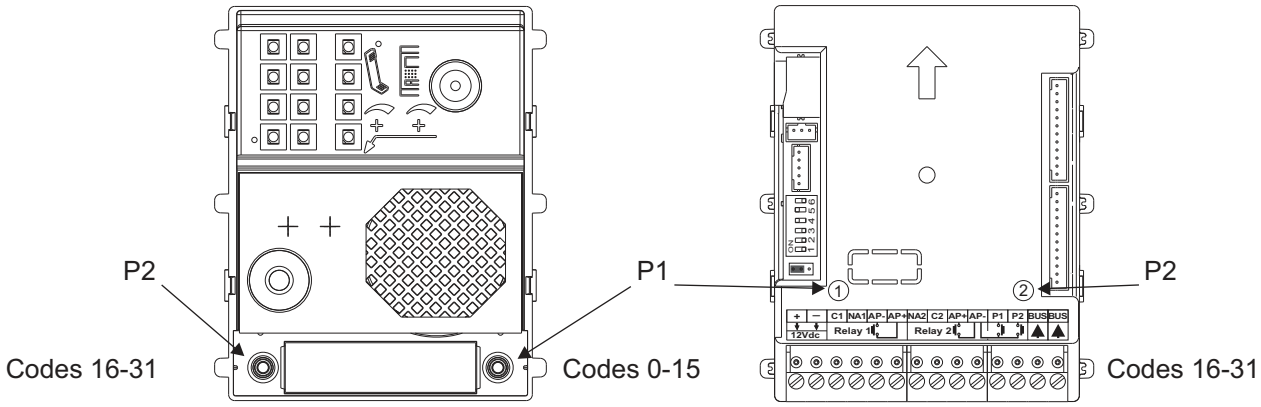


Pass the cable through the hole made in the embedding box.
Embed the box and ensure that it is level and flush.
Once embedded, remove the protective stickers from the screw holes.

INSTALLATION OF THE DOOR PANEL

Codes assigned to the call buttons of the sound module:

EL632 GB2A



The sound module's P1 and P2 buttons are assigned with factory codes.

- **Apartment 1, button 'P1':** Assigned with codes 0-15.

  Monitors in this apartment must be set with codes in order of allocation from 0 to 15.

  When button 'P1' on the door panel is pressed, all of the monitors in apartment 1 will receive the call and only the monitor assigned with code 0 will show the door panel image. If the call is answered from any other monitor in the apartment, the image on the monitor assigned with code 0 will disappear and audio and video communication will be established with the door panel.

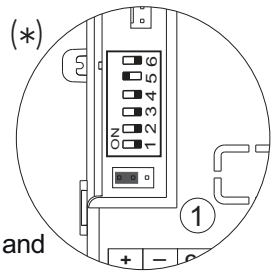
- **Apartment 2, button 'P2':** Assigned with codes 16-31 (only kits with 2 buttons).

  Monitors in this apartment must be set with codes in order of allocation from 16 to 31.

  When button 'P2' on the door panel is pressed, all of the monitors in apartment 2 will receive the call and only the monitor assigned with code 16 will show the door panel image. If the call is answered from any other monitor in the apartment, the image on the monitor assigned with code 0 will disappear and audio and video communication will be established with the door panel.

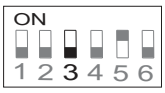
Description of the sound module DIP switch:

The DIP switch is located on the left side of the back of the module.

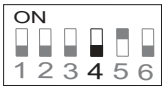


(*) 

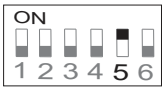
Door panel address:
DIP switches: 1 and 2 OFF (address 1), 1 ON and 2 OFF (address 2), 1 OFF and 2 ON (address 3), 1 and 2 ON (address 4).

(*) 

Leave in the OFF position.

(*) 

Leave in the OFF position for use with door panels in houses and set to ON for use in apartment buildings.

(*) 

Leave in the ON position to set the door opening time to 5 seconds. Set to OFF to set the door opening time to 1 second.

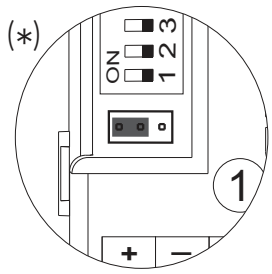
(*) 

Set to ON to configure: (see pp. 8-9)
Vocal synthesis language, vocal synthesis volume, relay 1 and relay 2 of the lock release is NO or NC Leave in the OFF position once configuration is complete.

(*) **Factory setting.**

INSTALLATION OF THE DOOR PANEL

Description of the configuration jumper:



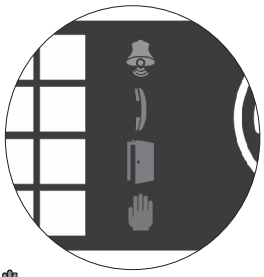
Important: Do not change the configuration jumper's factory position.

(*) **Factory setting.**

Description of the door panel illumination LEDs (for low light conditions):

The door panel lighting LEDs will turn on during a call if the door panel lighting at that moment is low. This enables the user to view the person who has called from the apartment monitor.

Description of the visual signals on the door panel:



Visual signals on the door panel for people with impaired hearing, indicating:

- In call: LED ' ' will illuminate during in call and in communication times.
- In communication: LED ' ' will illuminate during the communication process.
- When the door is open: LED ' ' will illuminate when the door is open.
- When ending communication: LEDs ' ' and ' ' will turn off.
- With more than one door panel, when calling and one is already in communication: LED ' ' will illuminate for 3 seconds..
- In call and the monitor is in 'Do not disturb' mode: LED ' ' will illuminate for 4 seconds.
- In call (apartment without monitor or telephone): LED ' ' will illuminate for 4 seconds.

Description of the vocal synthesis (audible signals on the door panel):

Audible signals on the door panel for people with impaired vision.

If vocal synthesis is enabled on the sound module (see page 6 and 8 for configuration), the following voice messages can be heard on the door panel:

- In call: 'Call is in progress'.
- When the door is open: 'Door Opened!'.
- When ending communication: 'Communication is finished'.
- With more than one door panel, when calling and one is already in communication: 'System is busy, try later'.
- While calling and the monitor is in 'Do not disturb' mode: 'Call is in progress'.
- In call (apartment without monitor or telephone): 'Resident Unavailable'.

INSTALLATION OF THE DOOR PANEL

Setting the door panel communication volume:

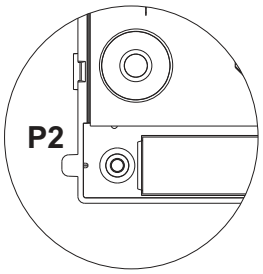
If the audio volume of the door panel is too low after turning it on, follow these steps:

- Call the apartment.
- The call is received in the apartment. Establish communication by pressing option on the screen of the master monitor or the 'Golmar' logo on the front of any slave monitor in the apartment (unless the 'display image in call' function is enabled on the slave monitor, in which case, option must be pressed).
- Then press the button used to call the apartment for 3 seconds until a number of confirmation tones are heard and the door panel communication LED starts to blink.
- Each press on the call button will increase the door panel volume and blink speed of the LED. There are 5 volume settings and the blink speed of LED will increase for each. Slow to fast blink - low to high volume. After reaching setting 5, maximum blink speed and volume, the next setting is 1, minimum blink speed and volume (carousel mode).
- To save the volume setting keep the button pressed until a number of confirmation tones are heard and the door panel communication LED turns off.

Selecting the vocal synthesis language:

To activate the vocal synthesis of the door panel, follow these steps:

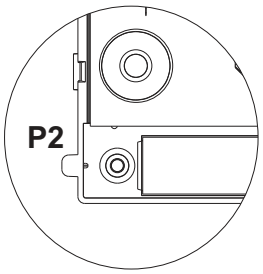
- Disconnect the door panel's power supply.
- Set DIP 6 on the sound module (see page 6) to ON.
- Reconnect the door panel's power supply.
- Press and hold down button P2 on the sound module for 6 seconds (until the confirmation tones end).
- Then continue pressing until the required language is reached.
- Finally, set DIP 6 to OFF.
  A confirmation tone will be heard.



Adjusting the vocal synthesis volume:

If after starting the system the vocal synthesis volume of the door panel seems inadequate, follow these steps:

- Disconnect the door panel's power supply.
- Set DIP 6 on the sound module (see page 6) to OFF.
- Reconnect the door panel's power supply.
- Set DIP 6 to ON.
- Press and hold down button P2 on the sound module for 6 seconds (until the vocal synthesis volume is heard and LED on the door panel starts to blink).
- Then continue pressing to increase the vocal synthesis volume and the blink speed of LED . There are 5 volume settings and the blink speed of LED will increase for each. Slow to fast blink - low to high volume. After reaching setting 5, maximum blink speed and volume, the next setting will be 1, minimum blink speed and synthesis volume (carousel mode). Once the required volume is selected, stop pressing button P2.
- Finally, set DIP 6 to OFF.
  A confirmation tone will be heard and LED on the door panel will turn off.



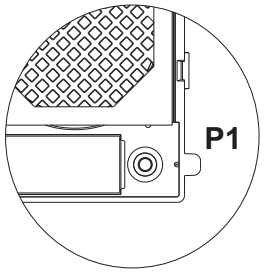
INSTALLATION OF THE DOOR PANEL

Configuring the contact type for Relay 1 and Relay 2 (lock release):

To change the contact type for lock release activation of Relay 1 and Relay 2 of the door panel, follow these steps:

- Disconnect the door panel's power supply.
- Set DIP 6 on the sound module (see page 6) to ON.
- Reconnect the door panel's power supply.
- Press and hold down button P1 on the sound module for 6 seconds (until the confirmation tones end and LED on the door panel blinks).
- After this, each press will change the type of contact, LED on the door panel will blink rapidly if the contact selected is NO (factory setting) or slowly if the contact selected is NC. Once the required option is selected, stop pressing P1.
- Finally, set DIP 6 to OFF.
  A confirmation tone will be heard and LED on the door panel will turn off.

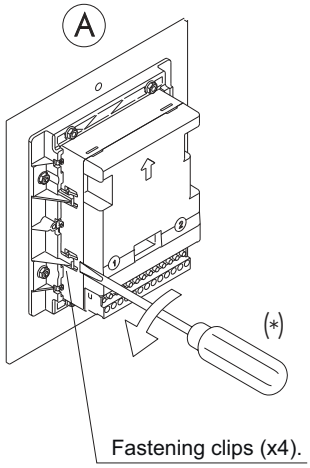
Important: The type of contact selected will be for Relay 1 and Relay 2.

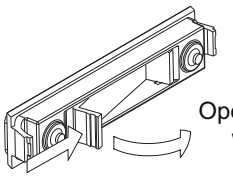


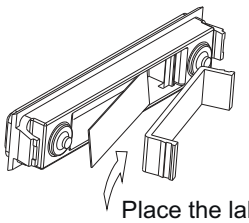
Description:
Normally open NO
Normally closed NC

Inserting the push button identification labels:

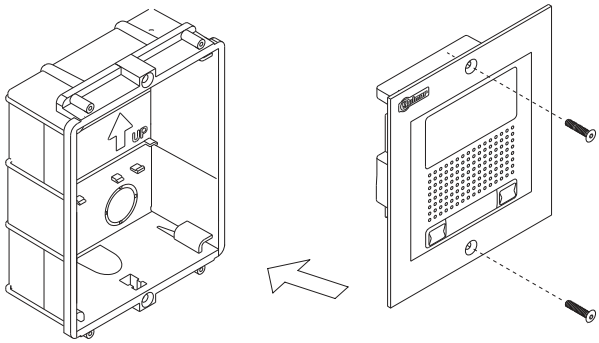
To insert the push button identification labels, remove the sound module from the door panel to access the label holder and use a flat screwdriver to gently lever open the fastening clips, as shown in drawing (A). Once the identification labels have been inserted, reattach the sound module to the door panel. Line up the tabs on the sound module with their respective fastening clips and then press gently until correctly positioned.







Closing the door panel:



Once the door panel has been correctly wired, configured and adjusted, fix it to the embedding box using the tamper-proof screws and ¼" tamper-proof screwdriver bit supplied.

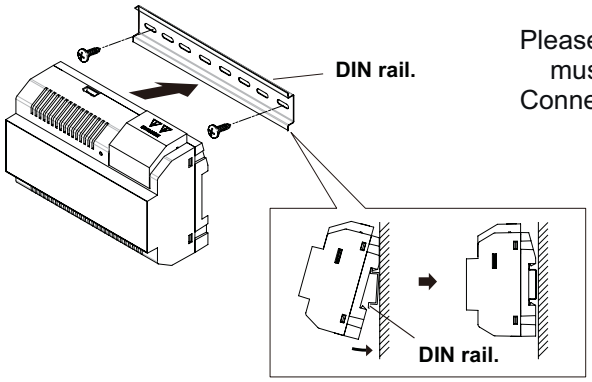
Important:

- Before closing the door panel, make a test call to any apartment to ensure that everything works correctly.
- Keep the tamper-proof screwdriver bit in a safe place in case the door panel needs to be reopened.

INSTALLATION OF THE POWER SUPPLY UNIT

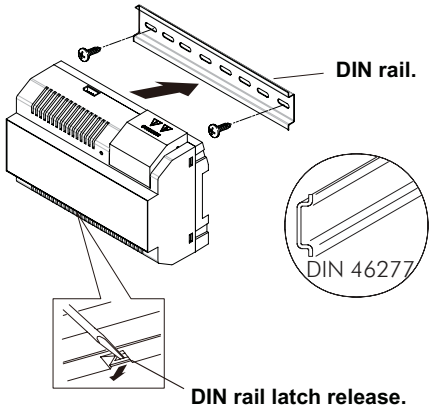
Installing the FA-GB2/A power supply unit:

Install the power supply unit in a dry protected location free from the risk of dripping or splashing water.
To prevent electric shock, do not remove the protective cover of the primary or handle the wiring.
The fitting and handling of this device must be carried out by **authorised personnel** in the absence of electrical current.
To avoid damage, the power supply unit must be firmly secured in place.



Please note that current regulations stipulate that the power supply must be protected by a circuit breaker.
Connect the FA-GB2/A power supply unit to the earth connection.

Mount the DIN rail to the wall with the plugs and screws supplied.
Then attach the power supply by applying slight pressure.



The power supply can be installed on a DIN 46277 rail.

To remove the power supply unit from the DIN rail, use a flat screwdriver to lever it off, as shown in the drawing.

The FA-GB2/A model requires 8 elements on the rail.

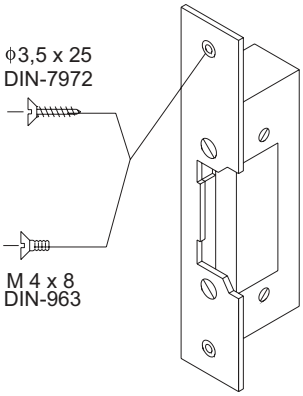
IMPORTANT: the maximum number of units that can be connected to an FA-GB2/A power supply is 18 PENTHA GB2 monitors.

Replace the protective cover once the input terminals have been wired.

INSTALLATION OF THE LOCK RELEASE

Installing the lock release:

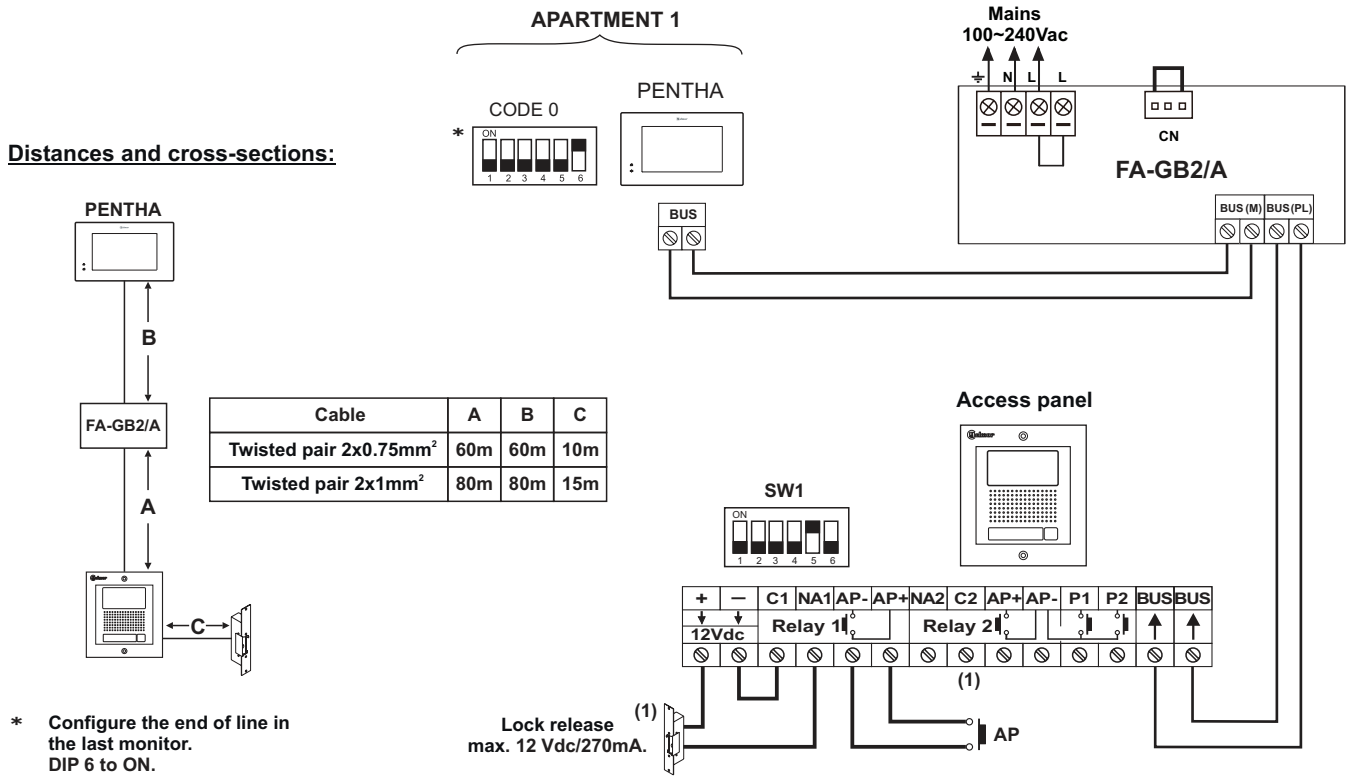
If the lock release is to be fitted to a metal door, use a Ø3.5mm drill bit and thread the hole made. For wooden doors, use a Ø3mm drill bit.



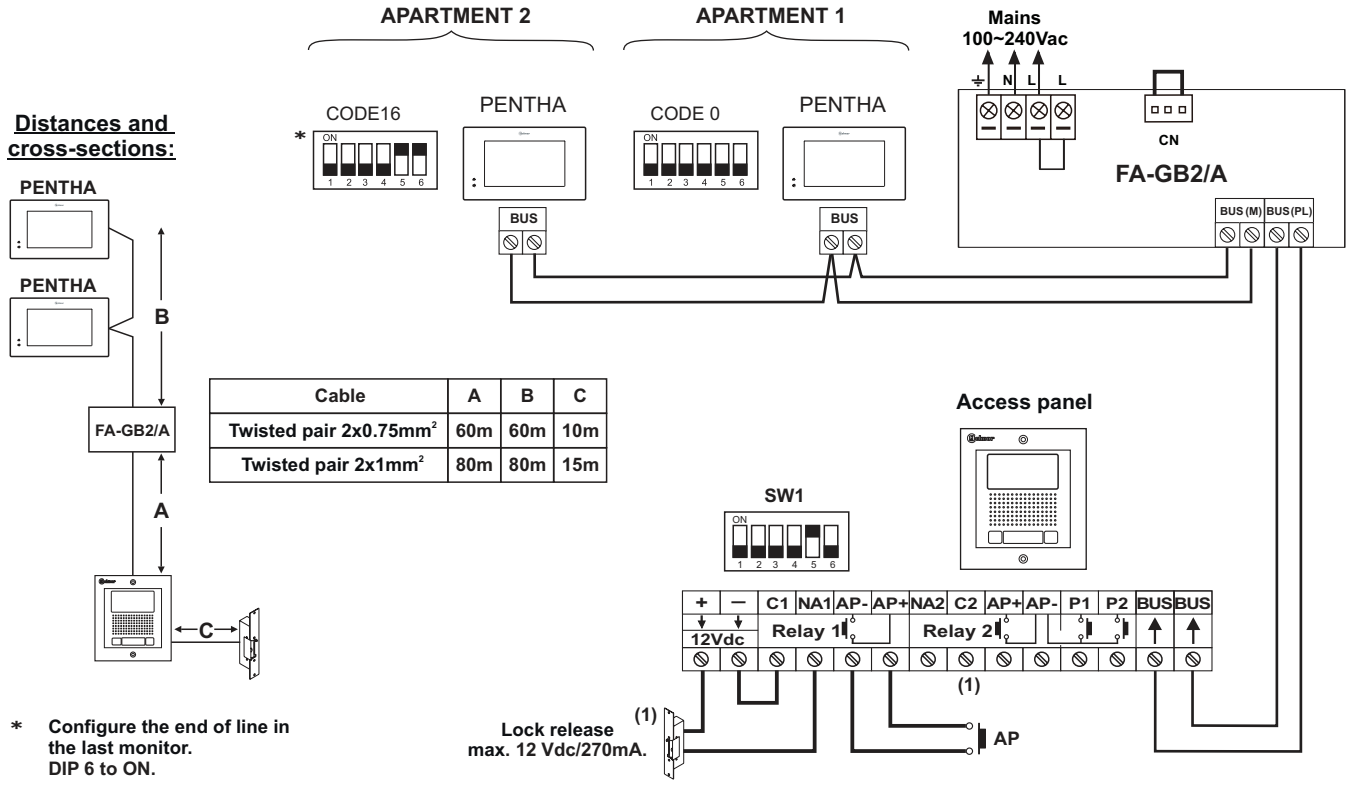
IMPORTANT:
- The lock release must be 12V DC or AC (Golmar).
  (See page 18 for AC lock releases and pages 11-18 for DC lock releases).
- The kit is supplied with two varistors. If connecting an AC lock release to one of the outputs, fit the varistor supplied directly to the lock release terminals to ensure the device functions correctly.

WIRING DIAGRAMS:

One apartment kit (NX5110 PENTHA kit) and Golmar DC lock release.



Two apartment kit (NX5220 PENTHA kit) and Golmar DC lock release.

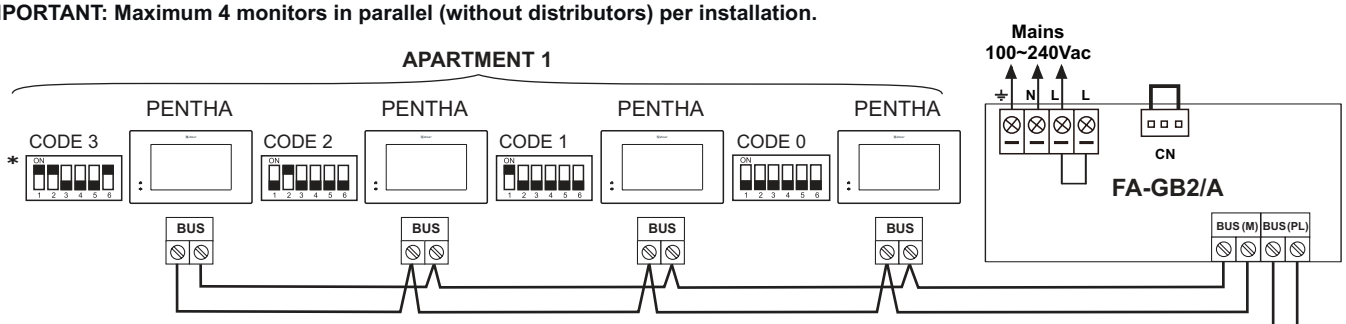


(1) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

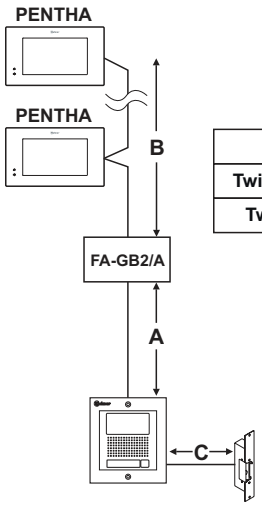
WIRING DIAGRAMS:

One apartment kit (NX5110 PENTHA kit) with monitors in parallel (In-Out) and Golmar DC lock release.

IMPORTANT: Maximum 4 monitors in parallel (without distributors) per installation.

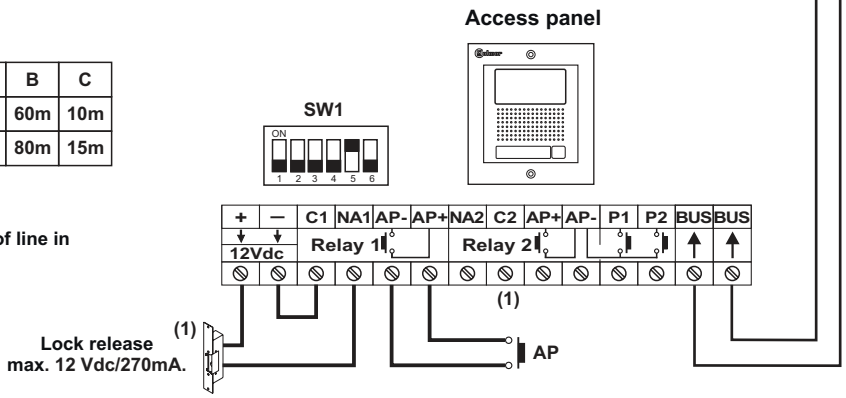


Distances and cross-sections:



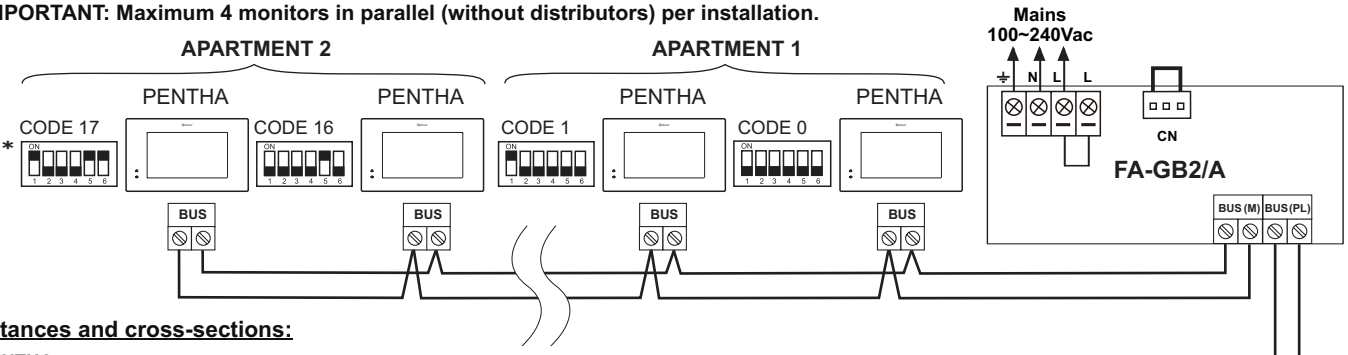
Cable	A	B	C
Twisted pair 2x0.75mm²	60m	60m	10m
Twisted pair 2x1mm²	80m	80m	15m

* Configure the end of line in the last monitor. DIP 6 to ON.

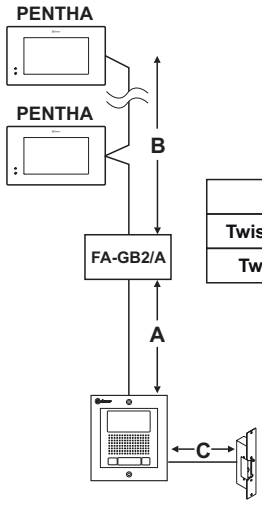


Kit Two apartment kit (NX5110 PENTHA kit) with monitors in parallel (In-Out) and Golmar DC lock release.

IMPORTANT: Maximum 4 monitors in parallel (without distributors) per installation.

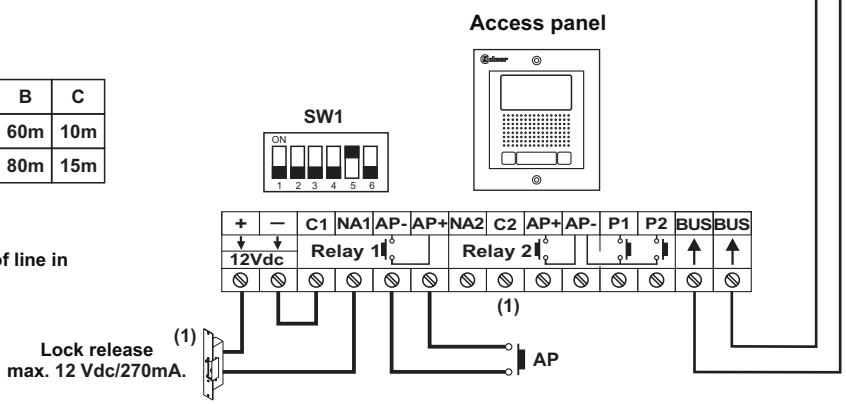


Distances and cross-sections:



Cable	A	B	C
Twisted pair 2x0.75mm²	60m	60m	10m
Twisted pair 2x1mm²	80m	80m	15m

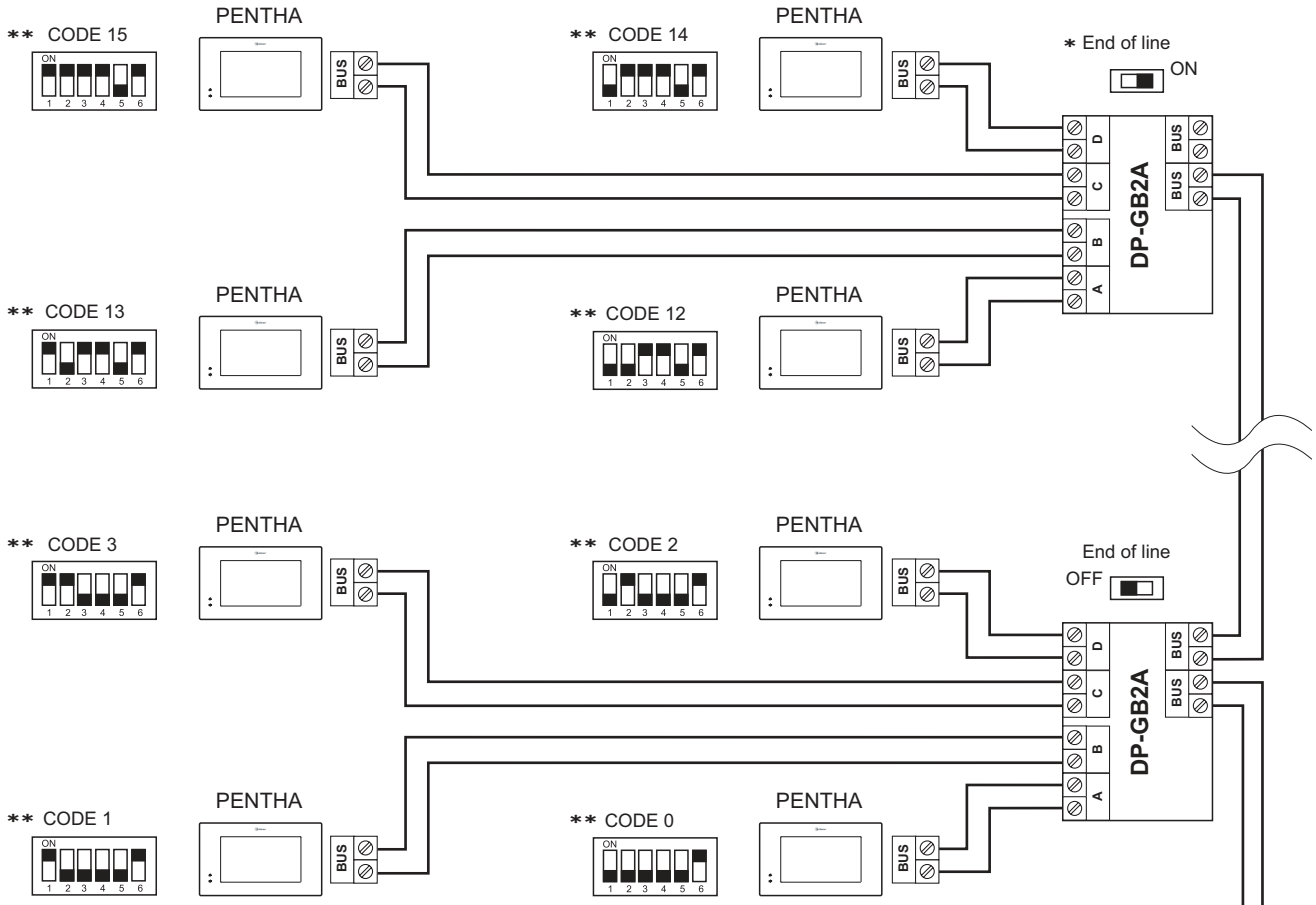
* Configure the end of line in the last monitor. DIP 6 to ON.



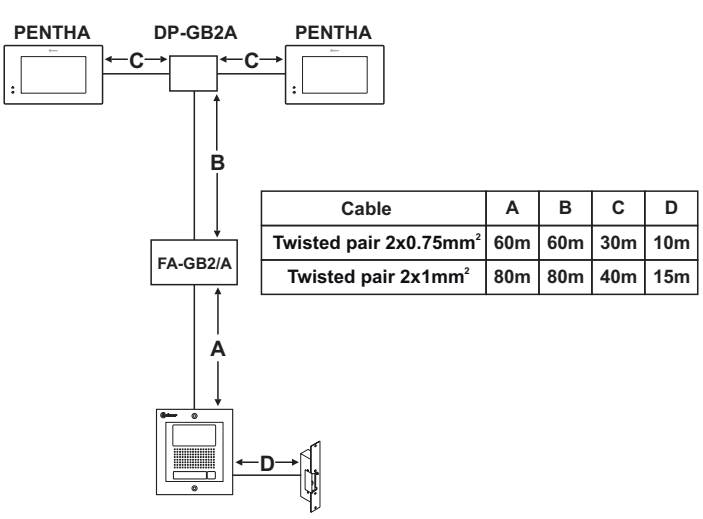
(1) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

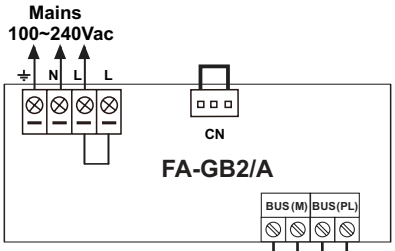
One apartment with 16 PENTHA monitors, 4 DP-GB2A distributors and Golmar DC lock release.

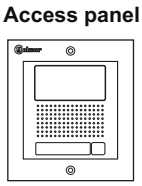


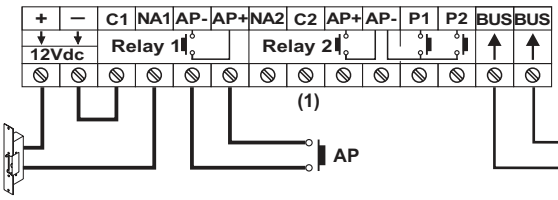
Distances and cross-sections:



Cable	A	B	C	D
Twisted pair 2x0.75mm²	60m	60m	30m	10m
Twisted pair 2x1mm²	80m	80m	40m	15m







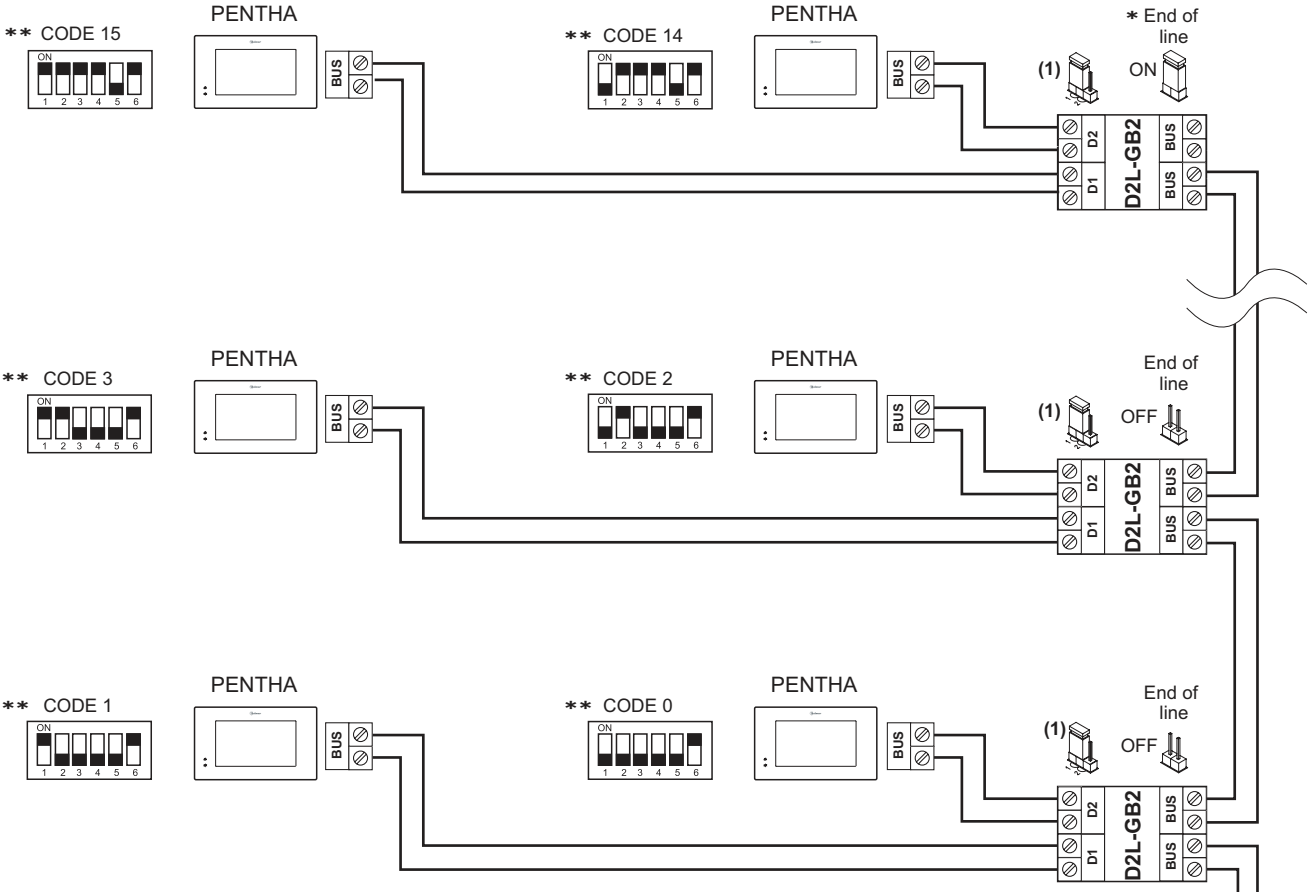
* **Configure the end of line in the last distributor. Switch to ON.**

** **Configure the end of line in the last monitor. DIP 6 to ON.**

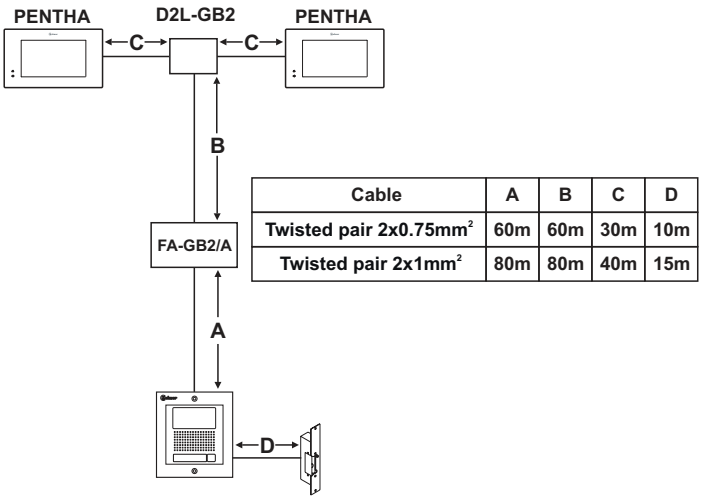
(1) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

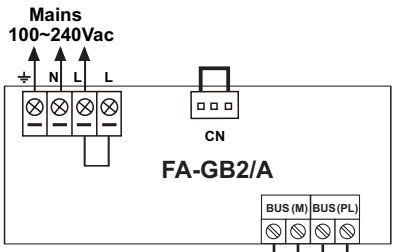
One apartment with 16 PENTHA monitors, 8 D2L-GB2 distributors and Golmar DC lock release.

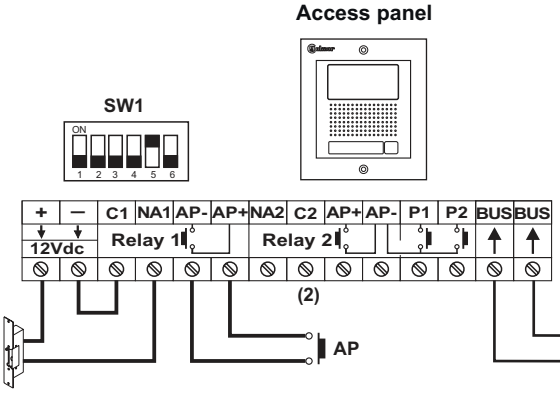


Distances and cross-sections:



Cable	A	B	C	D
Twisted pair 2x0.75mm²	60m	60m	30m	10m
Twisted pair 2x1mm²	80m	80m	40m	15m





(1) **Set the jumper in this position for 7" GB2 monitors of all of the D2L-GB2 distributors..**

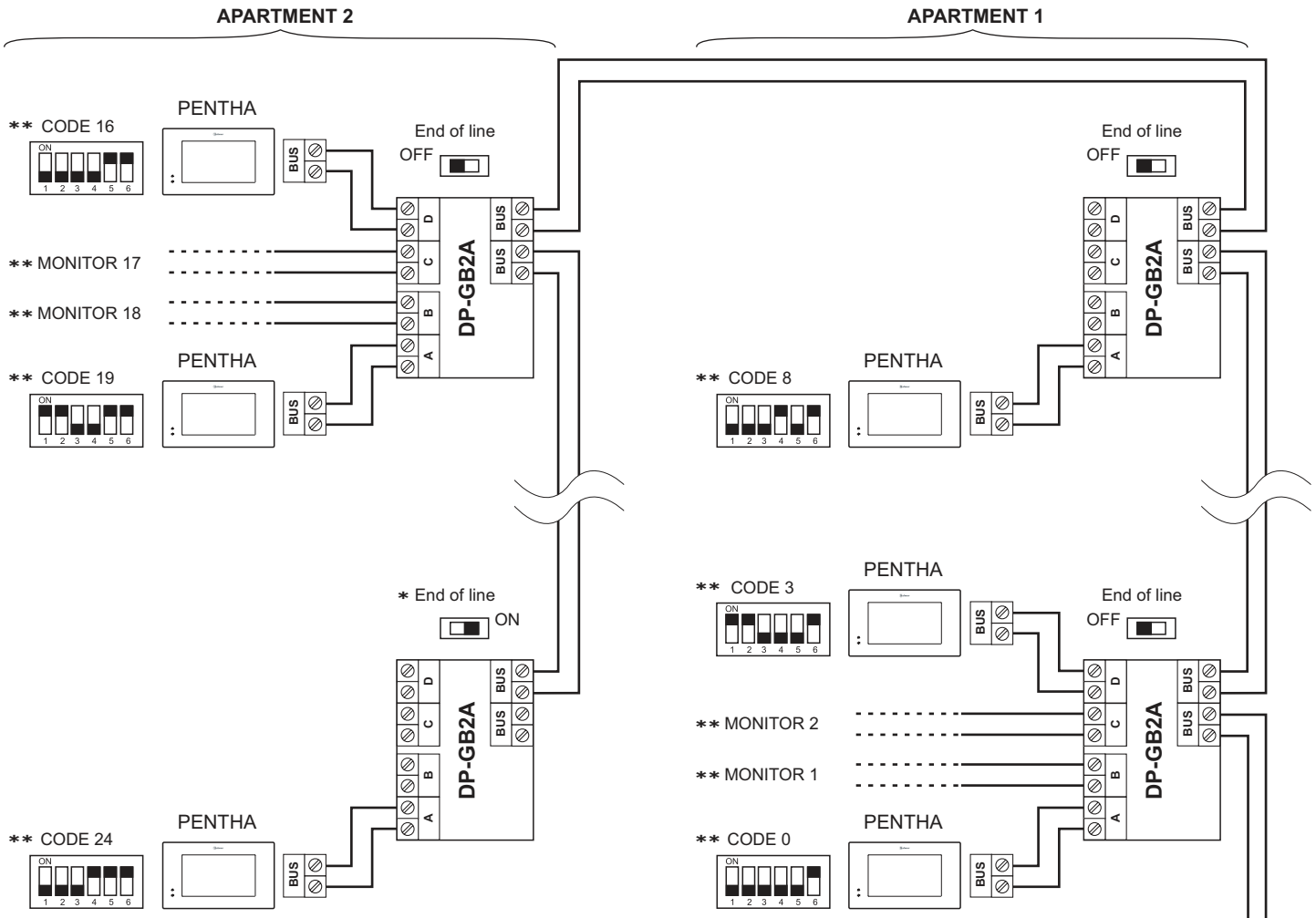
* **Remove the jumper from all of the distributors except the last.**

** **Configure the end of line in the last monitor. DIP 6 to ON.**

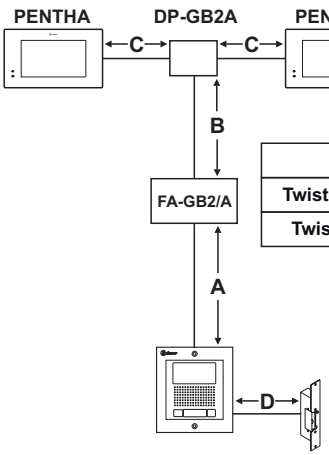
(2) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

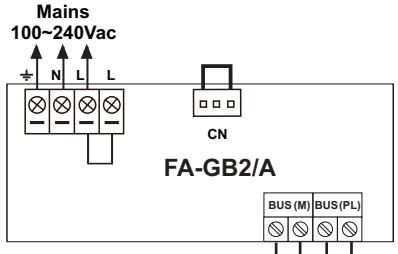
Two apartments with 18 PENTHA monitors, 5 DP-GB2A distributors and Golmar DC lock release.

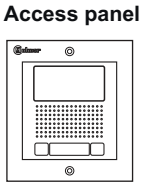


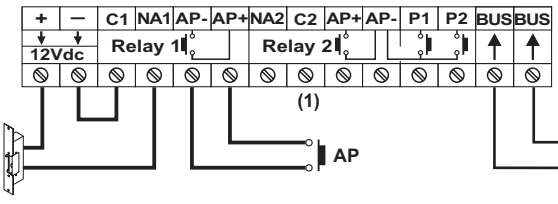
Distances and cross-sections:



Cable	A	B	C	D
Twisted pair 2x0.75mm²	60m	60m	30m	10m
Twisted pair 2x1mm²	80m	80m	40m	15m







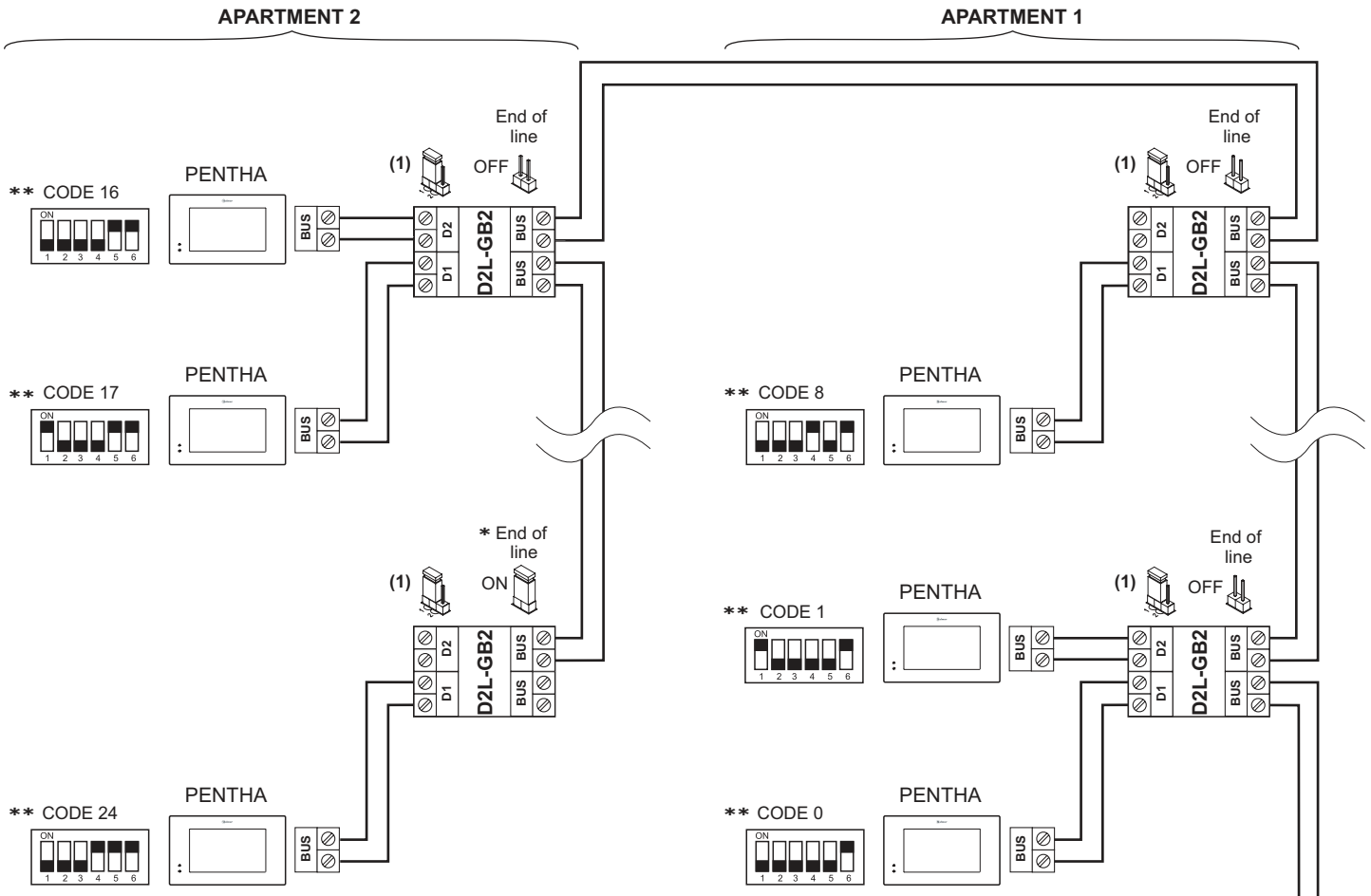
* **Configure the end of line in the last distributor. Switch to ON.**

** **Configure the end of line in the last monitor. DIP 6 to ON.**

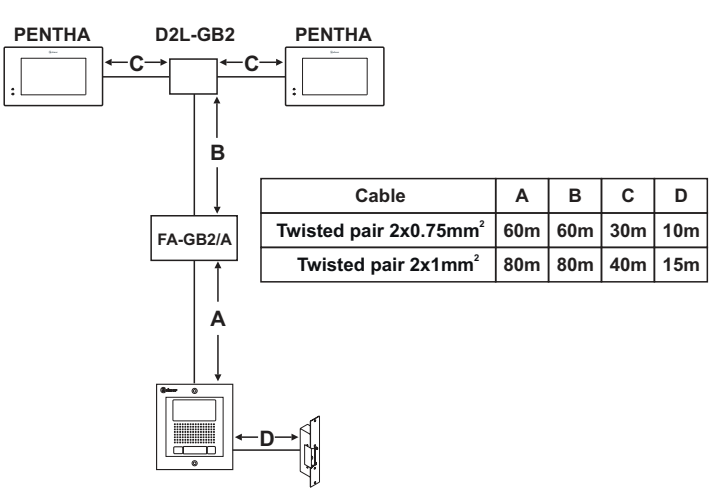
(1) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

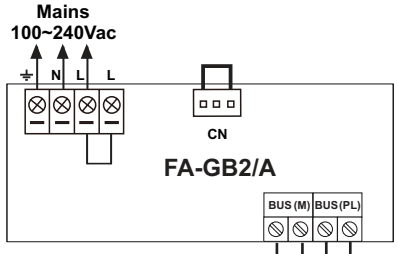
Two apartments with 18 PENTHA monitors, 9 D2L-GB2 distributors and Golmar DC lock release.

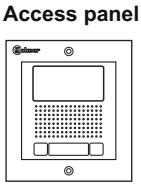


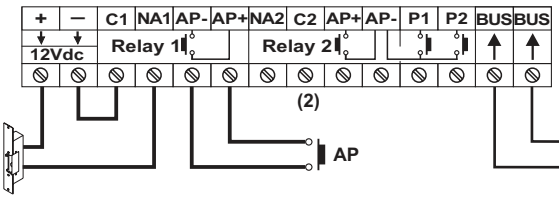
Distances and cross-sections:



Cable	A	B	C	D
Twisted pair 2x0.75mm²	60m	60m	30m	10m
Twisted pair 2x1mm²	80m	80m	40m	15m







(1) **Set the jumper in this position for 7" GB2 monitors of all of the D2L-GB2 distributors.**

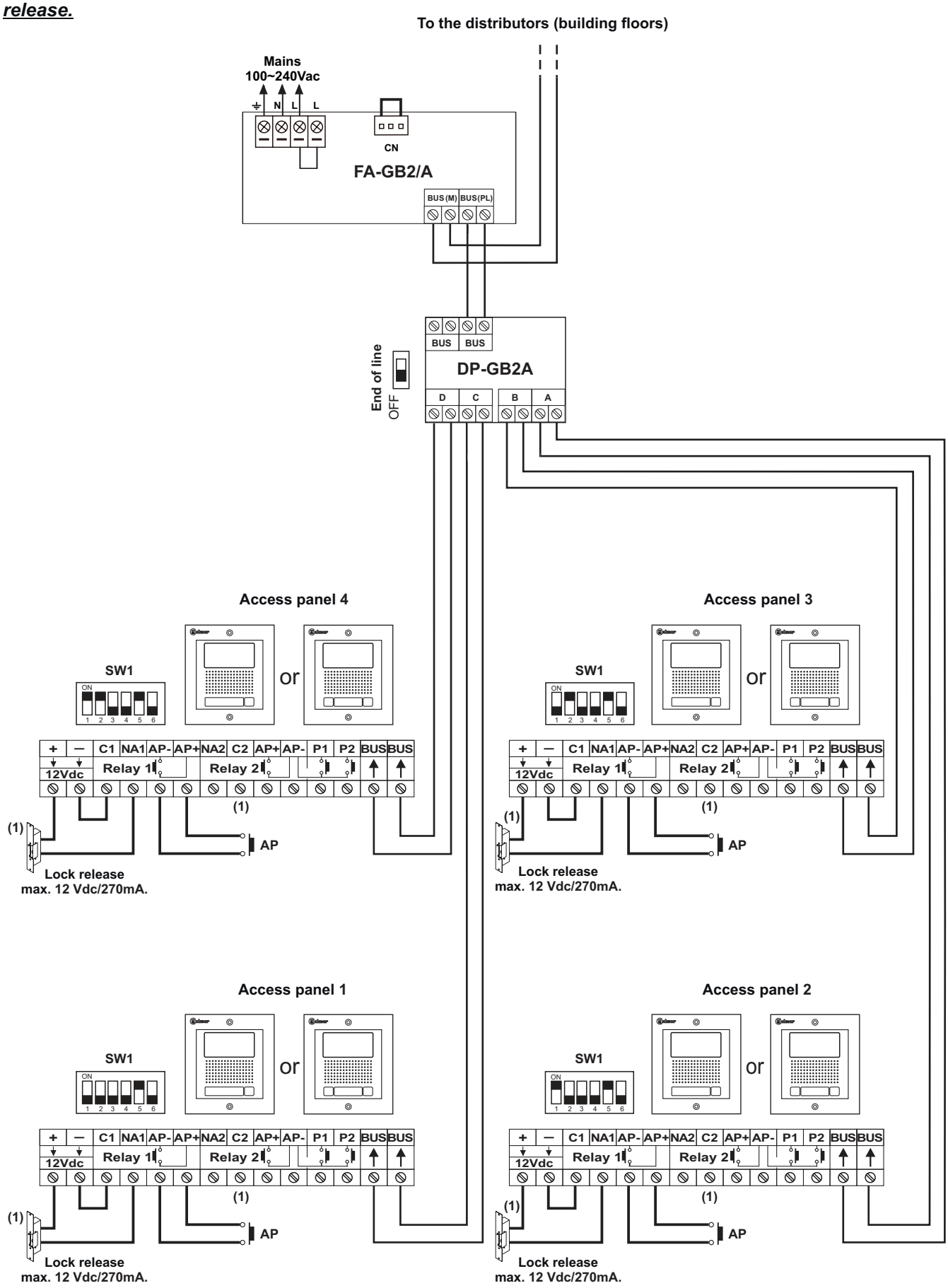
***** **Remove the jumper from all of the distributors except the last.**

****** **Configure the end of line in the last monitor. DIP 6 to ON.**

(2) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

Video door entry system with 4 access panels, DP-GB2A distributor for door panels and Golmar DC lock release.

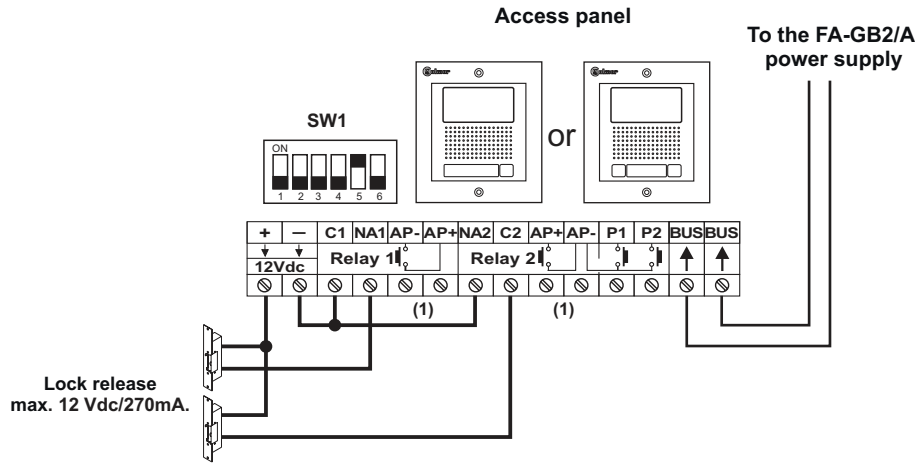


(1) **Important:** For AC lock releases or a second lock release, see diagram 'Connection of Golmar AC and DC lock releases' on p. 18.

WIRING DIAGRAMS:

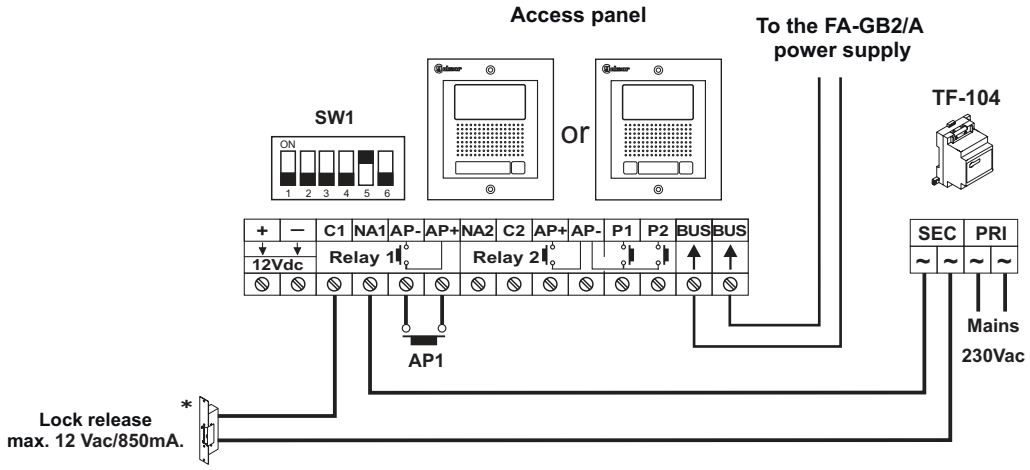
Connection of Golmar DC and AC lock releases.

Connection of 2 DC lock releases without 'AP':



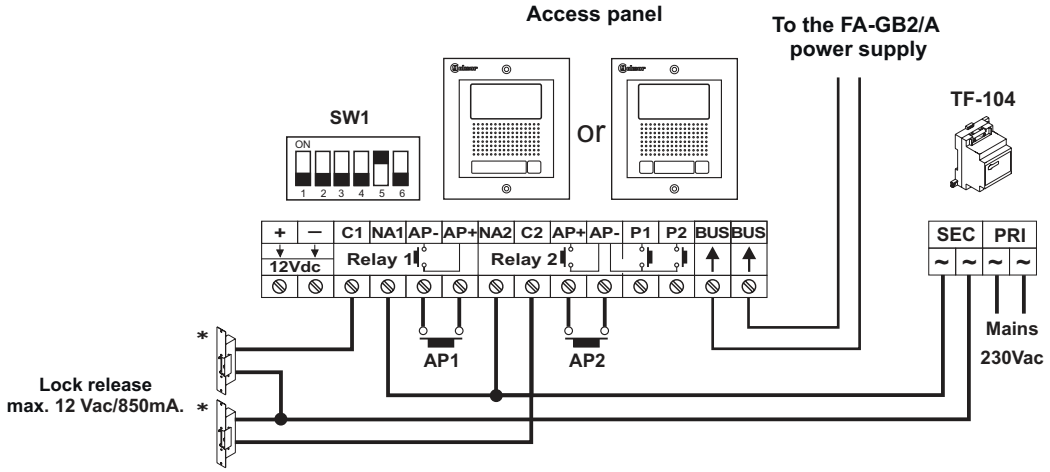
(1) **Important:** With 2 DC lock releases, it is not possible to use the "AP" door release buttons.

Connection of 1 AC lock release with 'AP':



∗ **Important:** Fit the varistor supplied with the kit directly to the terminals of the lock release.

Connection of 2 AC lock release with 'AP':



∗ **Important:** Fit the varistor supplied with the kit directly to the terminals of each of the 2 lock releases.

NOTES:

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