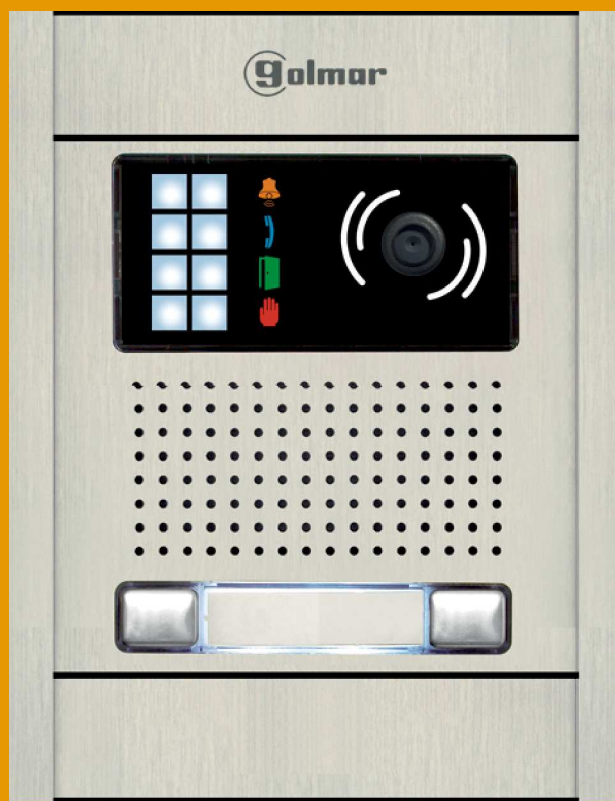**GB2**
TECNOLOGY

golmar

USER MANUAL

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

INTRODUCTION

First and foremost we would like to thank you for purchasing this product.

Our commitment to satisfying our customers can be seen from our ISO-9001 certification and from the manufacturing of products like this one.

Its advanced technology and exacting quality control will ensure that customers and users enjoy the many features this system offers.To obtain the maximum benefit from these features and a properly wired installation, we kindly recommend that you spend a few minutes of your time reading this manual.

CONTENTS

SET-UP WARNINGS

- Do not use excessive force when tightening the power supply connection block screws.

- **Always disconnect the power supply** before making modifications to the device.

- The installation 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 installations.**

- Before connecting the device to the mains, check the connections between the door panel, power supply, distributors, camera unit, GSM interface, monitors and telephones.

- Use Golmar **RAP-2150** cable (2x1mm^2).

- Always follow the instructions contained in this manual.

SAFETY PRECAUTIONS

- **<u>Always disconnect the power supply</u>** before making modifications to the device**.**
- The installation and handling of these devices must be carried out by **<u>authorised personnel</u>**.
- The wiring must run at least **<u>40 cm away from any other wiring</u>**.
- In the power supply unit:
  - Do not overtighten the screws on the connection block.
  - Install the power supply in a dry and protected whithout risk of drip or water projections.
  - Avoid locations that are humid, dusty or near heat sources.
  - Do not block ventilation holes of the unit so that air can circulate freely.
  - To avoid damage, the power supply must be firmly secured in place.
  - To prevent electric shock, do not remove the cover or handle the wiring connected to the terminals.

CHARACTERISTICS

- Video door entry system with simplified installation (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 (N5110 Vesta2 1-apartment kit and N5220 Vesta2 2-apartment kit) per installation.
- Maximum 23 Vesta2 monitors per installation.
- Maximum 16 Vesta2 monitors in one apartment.
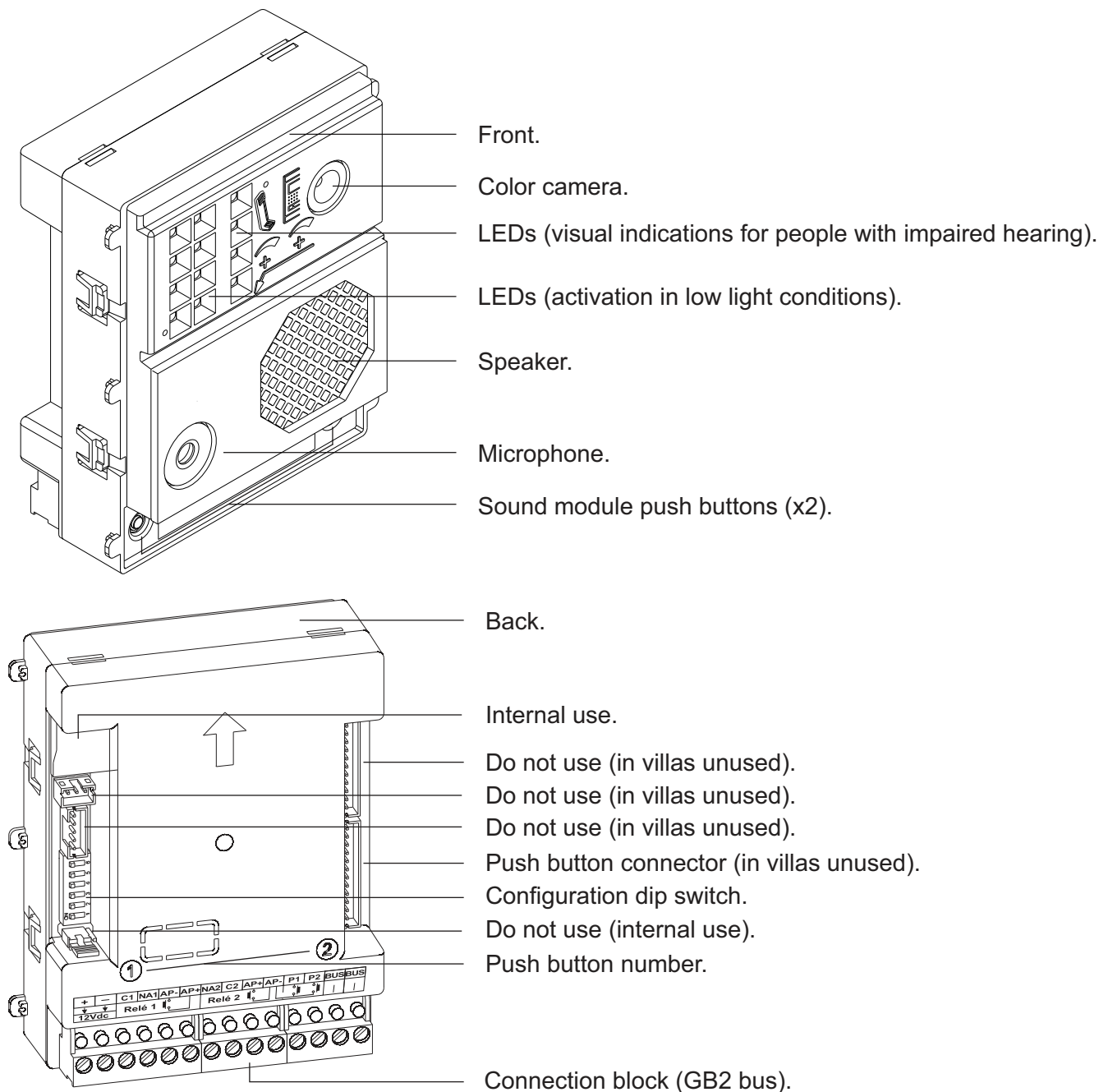- Maximum 4 Vesta2 monitors in parallel (without distributors) per installation.
- Call confirmation tone.
- Visual indications on the door panel for people with impaired hearing (indicating call process, communication, door open and channel busy).
- Audible indications on the door panel for people with impaired vision (indicating call is in progress, you can speak now, resident unavailable, door is open, communication is finished and system is busy, try later).
- 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 external door opening button (Relay 1 output).
- Input for external 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 the 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 activated, a "Call is in progress" message will indicate a call is being made. At this moment the apartment's monitor(s) receives the call. During the call the visitor can correct his call by pressing a push button corresponding to a different apartment, in which case the original call is cancelled.
- In systems with several access doors, the other door panel(s) will be automatically disconnected. If another visitor tries to call, a telephone tones will be heard to indicate that the system is busy and LED ✋ will illuminate. If vocal synthesis is activated, the message "System is busy, try later" will be indicated on the door panel.
- The call lasts for 40 seconds. The image appears on the monitor (with code 0 "apartment 1" or monitor 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 button ☎ on any monitor in the apartment. Door panel LED 🔔 will turn on. If the vocal synthesis is activated the message "you can speak now" will be heard confirming the communication is activated.
- Communication will last for one and a half minutes or until button ☎ is pressed again. When communication has finished, LEDs 🔔 and 🔔 will turn off and the channel will be freed. If the vocal synthesis is activated, a "Communication is finished" message will indicate that the call is over on the door panel.
- To open the door, press button 🔑 during the call or communication processes: one press will activate the lock release for five seconds and LED 🚪 will also turn on for five seconds. If vocal synthesis is activated, a "Door is open" 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.

Color camera.

LEDs (visual indications for people with impaired hearing).

LEDs (activation in low light conditions).

Speaker.

Microphone.

Sound module push buttons (x2).

Back.

Internal use.

Do not use (in villas unused).

Do not use (in villas unused).

Do not use (in villas unused).

Push button connector (in villas unused).

Configuration dip switch.

Do not use (internal use).

Push button number.

Connection block (GB2 bus).

Connection terminals:

+, —   : Positive, negative (12Vdc output for Golmar DC lock release).
C1   : Contact "C" for lock release (Relay 1).
NA1   : Contact "NO" for lock release (Relay 1).
AP —,AP+ : Input for external door opening button (Relay 1).
NA2   : Contact "NO" for lock release (Relay 2).
C2   : Contact "C" for lock release (Relay 2).
AP+,AP — : Input for external door opening button (Relay 2).
P1   : Input for external call button (push button 1).
P2   : Input for external call button (push button 2).
BUS   : Connection BUS (non-polarised).
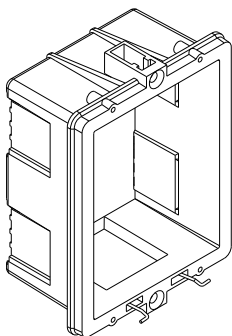BUS   : Connection BUS (non-polarised).

Note: See wiring diagrams for connections (pages 12-19).

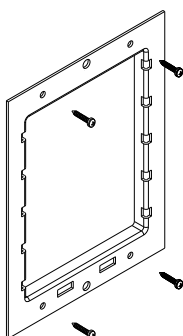## DESCRIPTION OF THE NEXA MODULAR DOOR PANEL

Description of the door panel:

Door panel component assembly drawing:
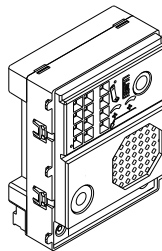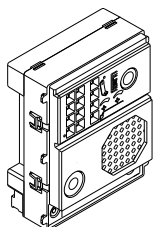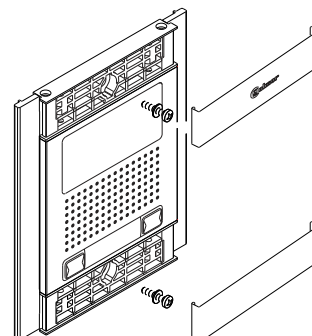
Embedding box   Frame module   Sound module   Aluminium panel

Sound module
   EL632 GB2A, video door entry system with colour camera.

DOOR PANEL INSTALLATION

Positioning the embedding box:

1650   1450   1850
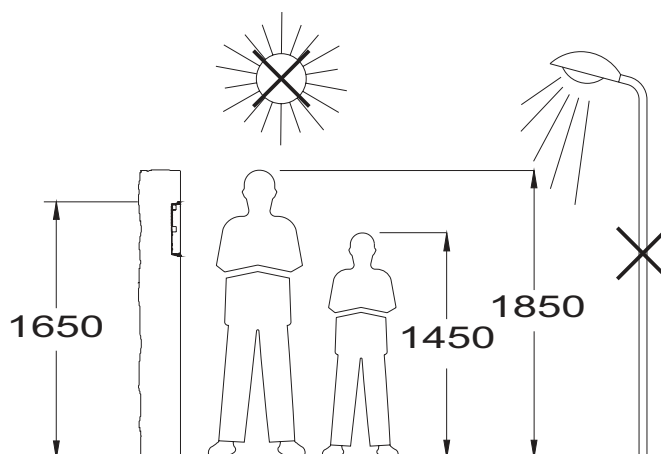
Make a hole in the wall to position the top of the door panel at a height of 1.65m.
   Hole dimensions:

        NCEV-90CS embedding box: 99(W) x 132,5(H) x 56,5(D) mm.

The door panel has been designed to be used under most environmental conditions. It is
   however advisable to take nextra 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.).

DOOR PANEL INSTALLATION INSTALLATION
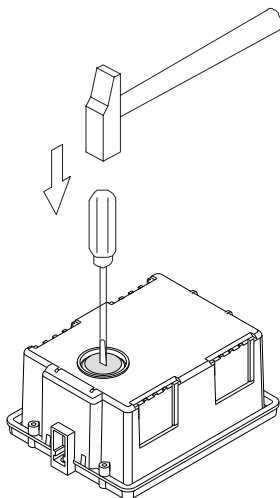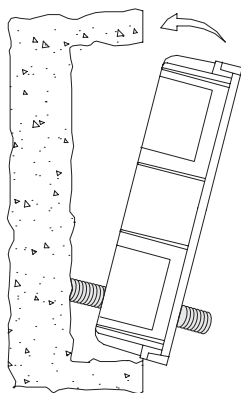
Preparing the cable entry:

Break the flange to allow <u>entry of cables through</u>
<u>the bottom part of the embedding box</u>.

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.

Fastening the frame to the embedding box:
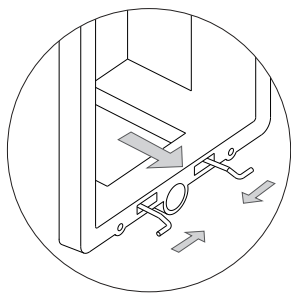
Insert the spring hinge which attaches to the product in
the embedding box, as shown in the drawing.

To fasten the frame to the embedding box, insert the spring
hinge into the housings provided for this purpose
in the frame, as shown in the drawing.
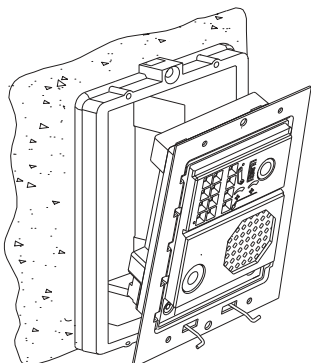
The frame can now be tilted horizontally to enable
sound module connection and setting.

DOOR PANEL INSTALLATION

Codes assigned to the call buttons of the sound module:

EL632 GB2A

P2   Codes 16-31   P1   Codes 0-15   P2   Codes 16-31

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

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

  Monitors in this apartment must be set with codes in order of allocation of 0-15.
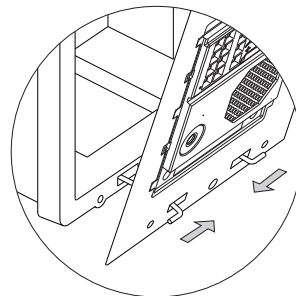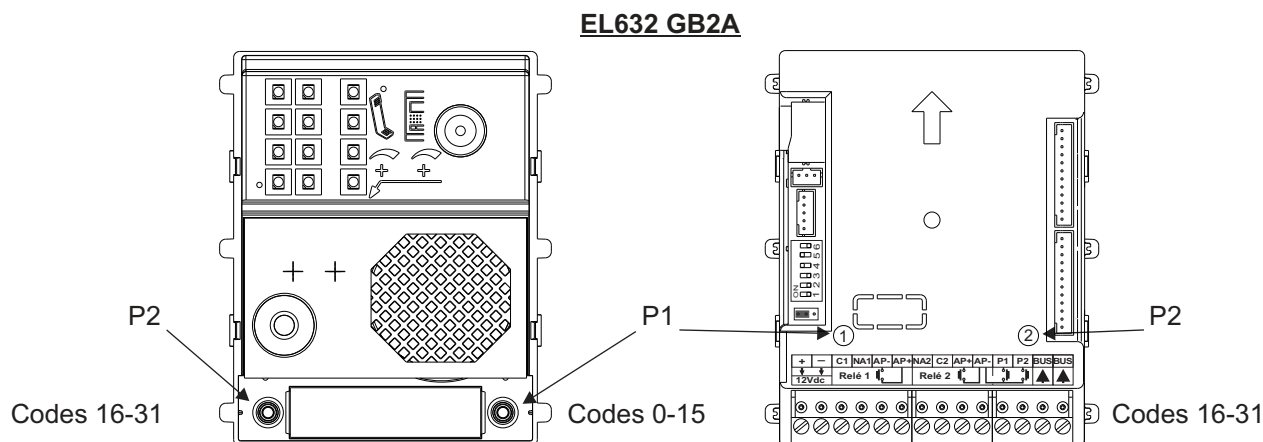
  When push button "P1" on the door panel is pressed, all of the monitors in apartment 1 will receive the call and only the monitor assigned with code 0 will show the door panel image.If the call is answered from any other monitor in the apartment, the image on the monitor assigned with code 0 will disappear and audio and video communication will be established with the door panel.

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

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

  When push 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 configuration dip switch of the sound module:

The configuration dip switch is located on the left side of the rear part 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).

(∗) Set to OFF.

(∗) Set to OFF for use with door panels in villas and set to ON for use in apartment buildings.

(∗) Set to ON to configure the door release time to 5 seconds. Set to OFF to configure the door release time to 1 second.

(∗) Set to ON to configure: (see pages 9-10)
The vocal synthesis language, vocal synthesis volume, relay 1 and Relay 2 of the lock release will be NO or NC. Set to OFF when configuring is complete.
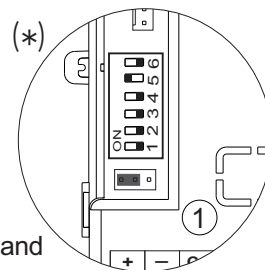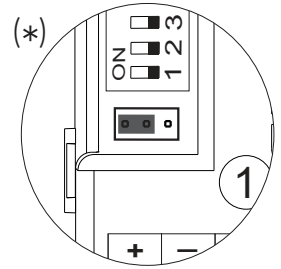
(∗) **Factory default setting.**

DOOR PANEL INSTALLATION

Description of the configuration jumper:

Important: Do not change the factory default position of the configuration jumper.

(∗) **Factory default setting.**

Description of the door panel LED lights (for low light conditions):

The door panel LED lights will turn on during a call if there is low light, allowing the person who called to be seen on the apartment's monitor.

Description of the visual indications on the door panel:

Visual indications on the door panel for people with impaired hearing :

- While calling: LED 🔔 will turn on during the call and while in communication.
- During communication: LED 📞 will turn on during the communication process.
- During door release: LED 🚪 will turn on during door release.
- End of communication: LEDs 🔔 and 📞 will turn off.
- Calling at one door panel while another door panel is communicating: LED ✋ will turn on for 3 seconds.
- While calling and the monitor is in "Do not disturb" mode: LED 🔔 will turn on for 4 seconds.
- While calling (apartment with no monitor or telephone): LED 🔔 will turn on for 4 seconds.
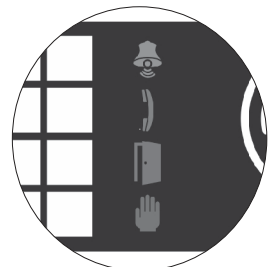
Description of the vocal synthesis (audible indications on the door panel):

Audible indications from the door panel for people with impaired vision.

If the vocal synthesis in the sound module is activated (see pages 7 and 9 for setup), a voice with the following messages can be heard from the door panel:

- While calling: "Call is in progress".
- Start communication: "You can speak now".
- During door release: "Door is open".
- End of communication: "Communication is finished".
- Calling at one door panel while another door panel is communicating:" System is busy, try later".
- While calling and the monitor is in "Do not disturb" mode: "Resident unavailable".
- While calling (apartment with no monitor or telephone): "Resident unavailable".

DOOR PANEL INSTALLATION

Adjusting the door panel communication volume:

If after starting the system the door panel audio volume seems inadequate, follow these steps:
 - Call an apartment.
 - The call is received in the apartment. Establish communication by pressing the push button ⊝ on the monitor.
 - Next, press the push 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 same call button will increase the door panel volume and LED blink speed.
   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", that is, maximum blink speed and volume, the next setting is "setting 1", that is, minimum blink speed and volume (carousel mode).
 - To save the volume setting keep the push button used to call the apartment 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 voice synthesis of the door panel, follow these steps:
 - Remove the power supply in the door panel.
 - Set dip 6 of the sound module's configuration dip switch to ON (see page 7).
 - Connect the power supply in the door panel.
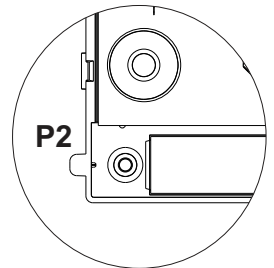 - Press the sound module' s P2 push button for 6 seconds (until finish the confirmation tones).
 - Each press will change the language. Continue doing this until the desired language is heard.
 - Once finished set dip 6 of the configuration dip switch to OFF. A confirmation tone will be heard.

P2

Adjusting the vocal synthesis volume:

If after starting the system the vocal synthesis volume of the door panel seems inadequate, follow these steps:
 - Remove the power supply in the door panel.
 - Set dip 6 of the sound module's configuration dip switch to OFF (see page 7).
 - Connect the power supply in the door panel.
 - Set dip 6 of the sound module´s configuration dip switch to ON.
 - Press the sound module's P2 push button for 6 seconds (until the sysnthesis volume is heard and the door panel led ⌡ starts to blink.).
 - Each press will increase the synthesis volume and the led ⌡ blink speed.
   There are 5 volume settings and the led ⌡ blink speed will vary for each. Slow to fast blink - low to high volume. After reaching "setting 5", that is maximum blink speed and volume, the next setting is "setting 1", that is minimum blink speed and synthesis volume (carousel mode). Stop pressing P2 when the desired synthesis volume is selected.
 - Once finished set dip 6 of the configuration dip switch to OFF. A confirmation tone will be heard and the door panel led ⌡ turns off.

P2

DOOR PANEL INSTALLATION

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

To change the contact type for door release activation of Relay 1 and Relay 2 of the door panel, follow these steps:
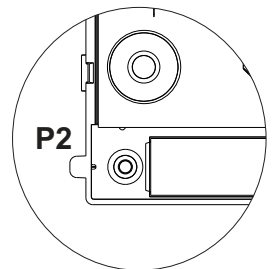
- Remove the power supply in the door panel.
- Set dip 6 of the sound module's configuration dip switch to ON (see page 7).
- Connect the power supply in the door panel.
- Press the sound module' s P1 push button for 6 seconds (until finish the confirmation tones and the door panel led ▯ starts to blink.).
- Each press will change the contact type, the door panel led ▯ will quick blink if the selected contact is N.O (factory default) or slow blink if the selected contact is N.C. Stop pressing P1 when the desired contact type is selected.
- Once finished set dip 6 of the configuration dip switch to OFF. A confirmation tone will be heard and the door panel led ▯ turns off.

Important: The selected contact type will apply to both Relay 1 and Relay 2.
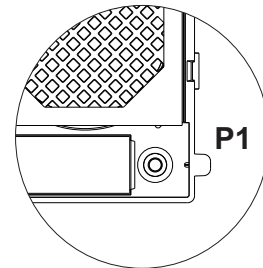
Description:
Normally open: N.O
Normally close: N.C
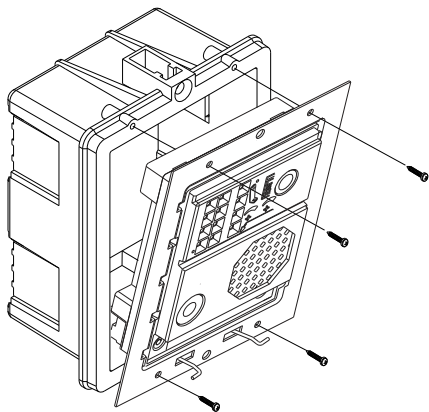
Closing the frame:

Once the wiring and configuration work is done, fix the frame to the embedding box using the screws supplied.

Important: Before closing the door panel, make a test call to any apartment to ensure that everything works correctly.

Inserting the push button identification labels:
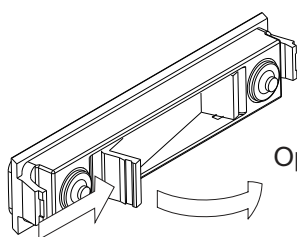
Open the label holder.
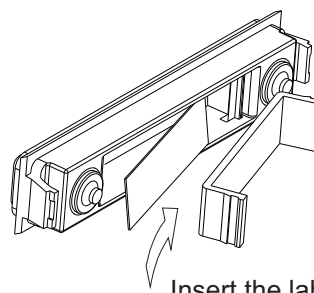
Insert the label and close.

Closing the door panel:
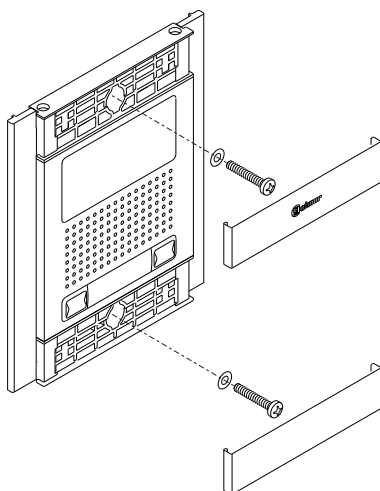
Fix the door panel to the embedding box using the screws supplied.

Finish the door panel assembly by placing the closing heads, put the head on one side and then make a slight pressure on the other end, to its correct placement.

POWER SUPPLY UNIT INSTALLATION

FA-GB2/A power supply installation instructions:

Install the power supply in a dry and protected place free from the risk of drip or water projections.
To prevent electric shock, do not remove the protective cover of the primary or handle the wiring.
The installation and handling of this device must be carried out by **authorised personnel** in the absence of electrical current.
To avoid damage, the power supply has to be firmly fixed.
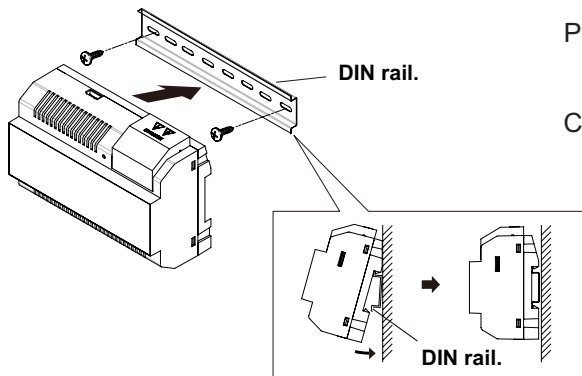
DIN rail.

DIN rail.

Please note that current regulations stipulate that the power supply must be protected by a thermo-magnetic circuit breaker.
Connect the FA-GB2/A power supply 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.

DIN rail.

DIN 46277

DIN rail latch release.
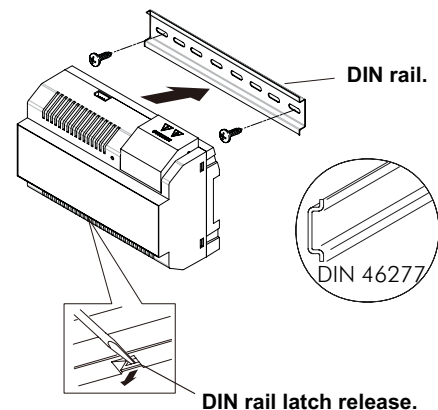
The power supply can be installed on a DIN 46277 rail.
To remove the power supply from the DIN rail, use a flat screwdriver to lever it off, as shown in the drawing.
The FA-GB2/A model requires 8 elements on the rail.

IMPORTANT: the maximum number of units that can be connected to an FA-GB2/A power supply is 23 VESTA 2 GB2 monitors.

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

LOCK RELEASE INSTALLATION

Lock release installation instructions:

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.

φ3.5 x 25
DIN-7972

M 4 x 8
DIN-963
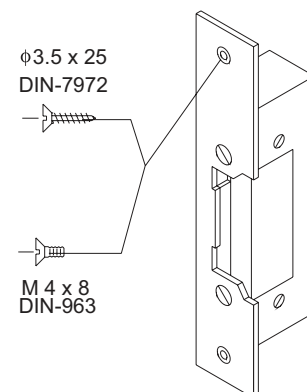
IMPORTANT:
- The lock release must be 12V DC or AC (Golmar).
  (See page 19 for AC lock releases and pages 12-19 for DC lock releases).

- 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 (N5110 VESTA2 kit) and Golmar DC lock release.

Distances and Sections:

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

* Configuring the end of line in the last monitor. Dip 6 to On.

Lock release max. 12 Vdc/270mA.

Access door panel

Two apartment kit (N5220 VESTA2 kit) and Golmar DC lock release.

Distances and Sections:

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

* Configuring the end of line in the last monitor. Dip 6 to On.

Lock release max. 12 Vdc/270mA.

Access door panel

(1)Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.

WIRING DIAGRAMS:

One apartment kit (N5110 VESTA2 kit) with monitors in parallel (In-Out) and Golmar DC lock release.

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

Distances and Sections:

Cable	A	B	C
Twisted pair 2x0.75mm^2	60m	60m	10m
Twisted pair 2x1mm^2	80m	80m	15m

* Configuring the end of line in the last monitor. Dip 6 to On.

Lock release max. 12 Vdc/270mA.

Two apartment kit (N5220 VESTA2 kit) with monitors in parallel (In-Out) and Golmar DC lock release.

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

Distances and Sections:

Cable	A	B	C
Twisted pair 2x0.75mm^2	60m	60m	10m
Twisted pair 2x1mm^2	80m	80m	15m

* Configuring the end of line in the last monitor. Dip 6 to On.

Lock release max. 12 Vdc/270mA.

(1)Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.

WIRING DIAGRAMS:

One apartment with 16 VESTA2 monitors, 4 DP-GB2A distributors and Golmar DC lock release.
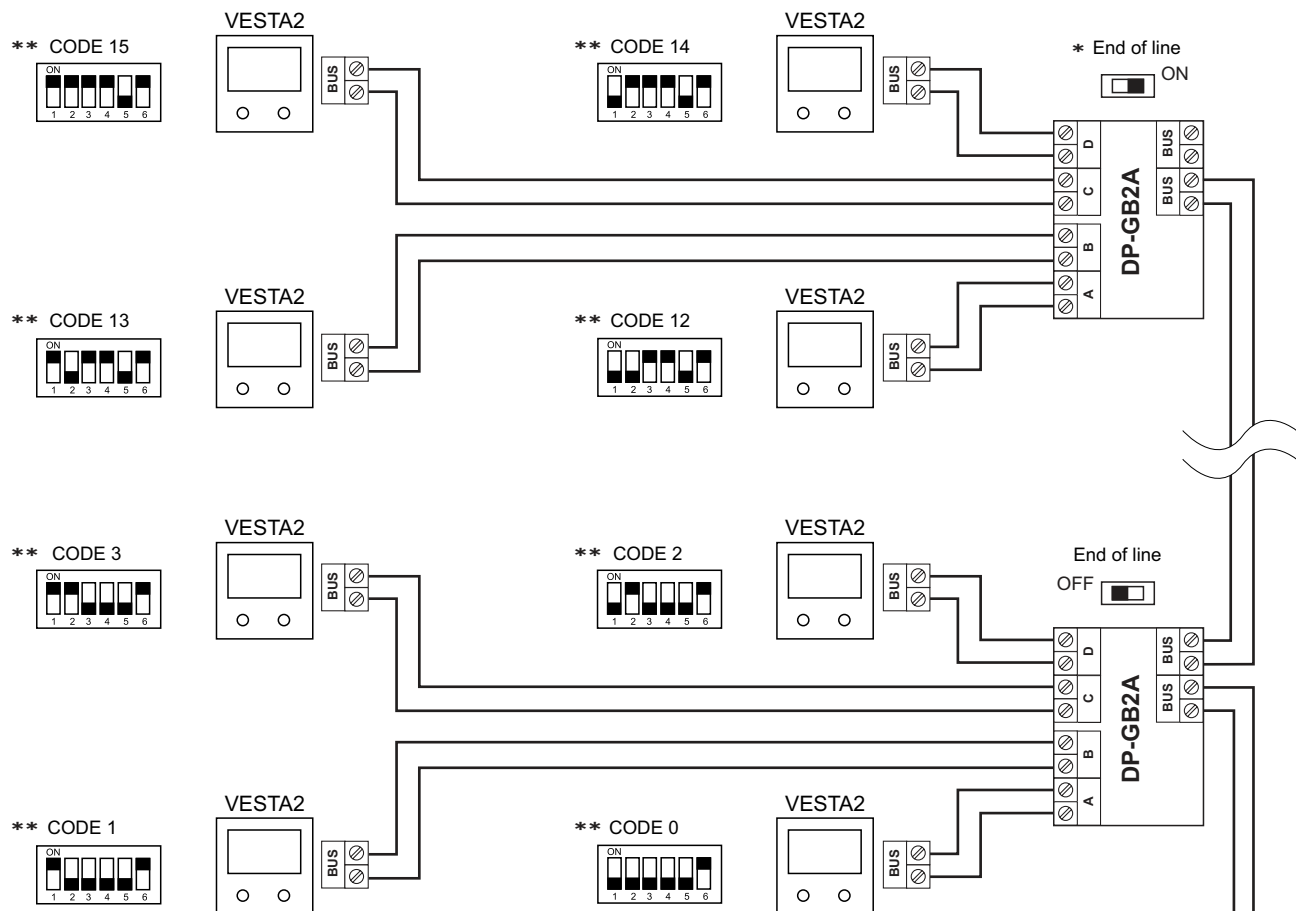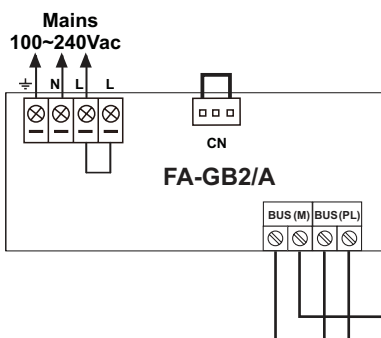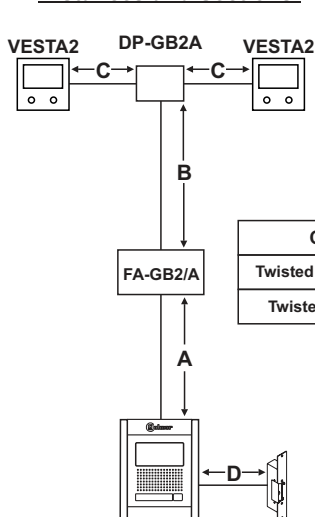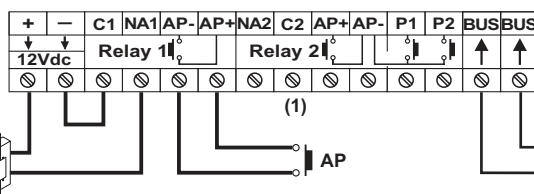
Distances and Sections:

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

* **Configuring the end of line in the last distributor. Switch to On.**

** **Configuring the end of line in the last monitor. Dip 6 to On.**

Access door panel

Lock release max. 12 Vdc/270mA.

(1)Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.

WIRING DIAGRAMS:

One apartment with 16 VESTA2 monitors, 8 D2L-GB2 distributors and Golmar DC lock release.

Distances and Sections:

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

Mains 100~240Vac

FA-GB2/A

Access door panel

(1) Do not change the factory default position of the configuration jumper.

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

∗∗ Configuring the end of line in the last monitor. Dip 6 to On.

SW1

+	−	C1	NA1	AP-	AP+	NA2	C2	AP+	AP-	P1	P2	BUS	BUS
12Vdc		Relay 1				Relay 2							

(2)

Lock release max. 12 Vdc/270mA.   **(2)**   **AP**

WIRING DIAGRAMS:

Two apartments with 23 VESTA2 monitors, 6 DP-GB2A distributors and Golmar DC lock release.

Distances and Sections:

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

Mains 100~240Vac

FA-GB2/A

Access door panel

SW1

* **Configuring the end of line in the last distributor. Switch to On.**

** **Configuring the end of line in the last monitor. Dip 6 to On.**

Lock release max. 12 Vdc/270mA.

AP

(1) Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.
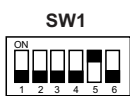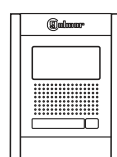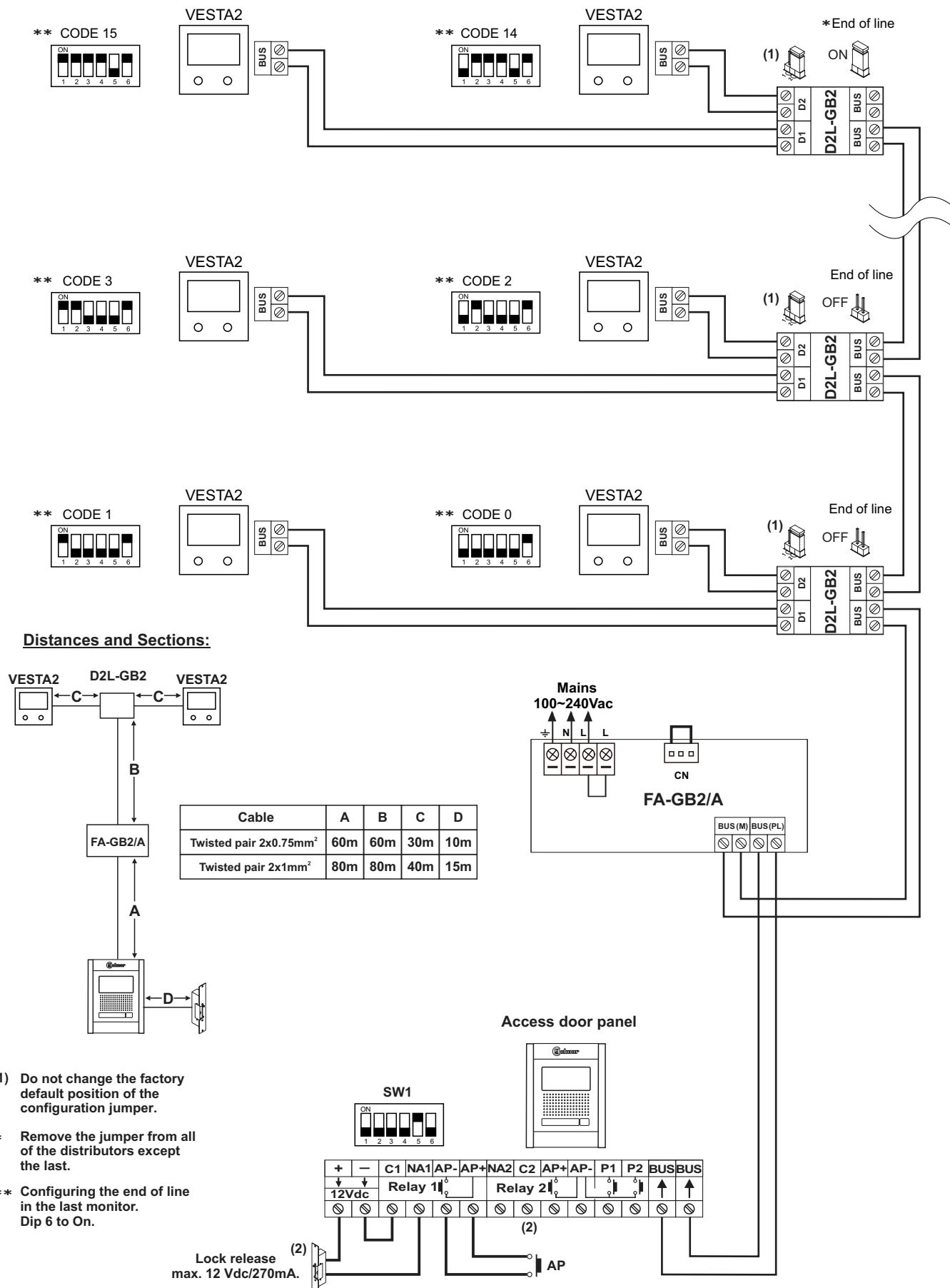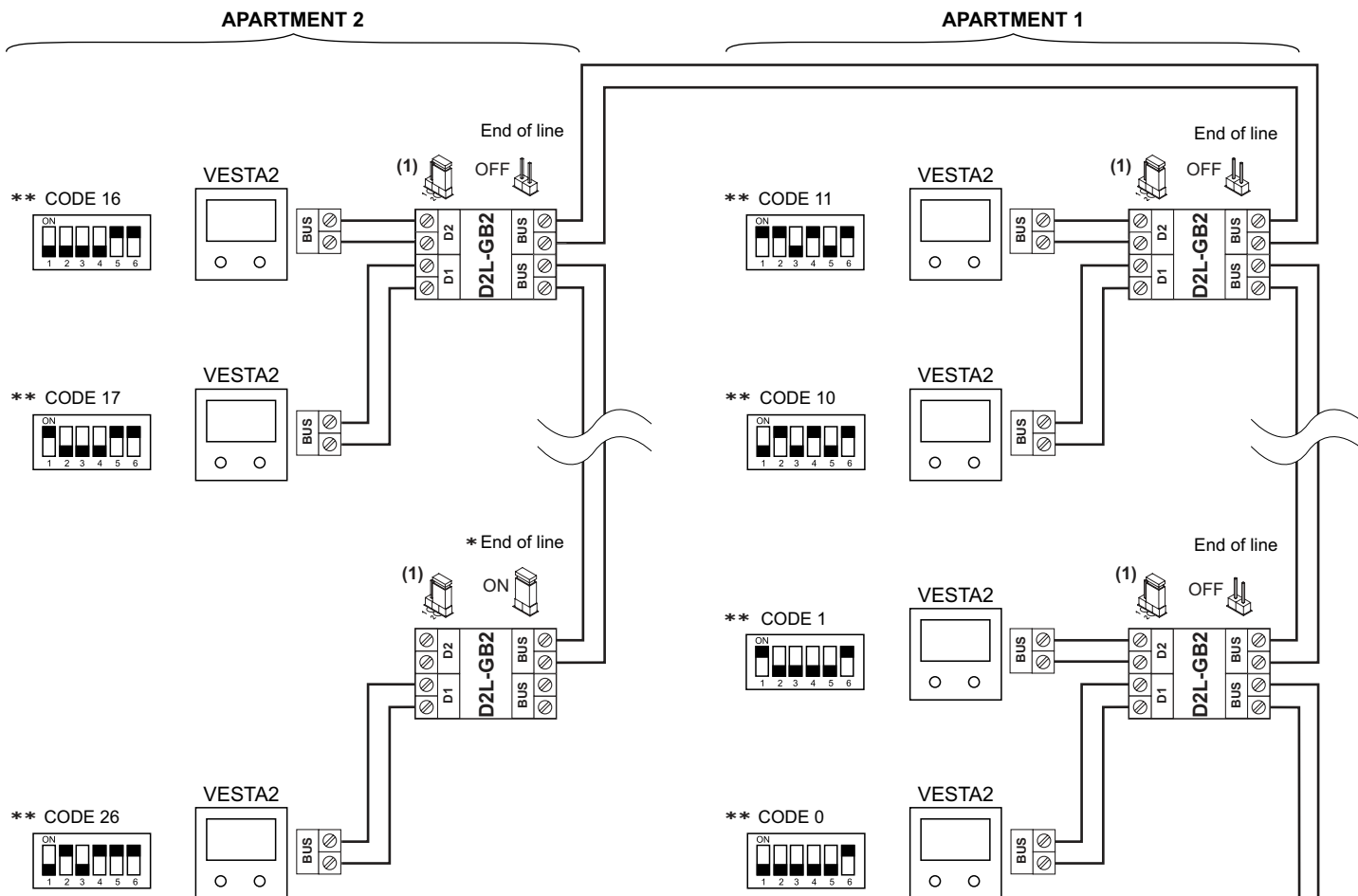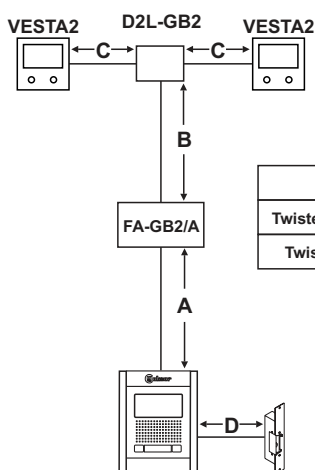
WIRING DIAGRAMS:

Dos viviendas con 23 monitores VESTA2, 12 distribuidores D2L-GB2 y abrepuertas de continua Golmar.

APARTMENT 2

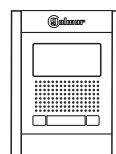**APARTMENT 1**

End of line

** CODE 16   VESTA2   (1)   OFF

** CODE 17   VESTA2

* End of line

** CODE 26   VESTA2

** CODE 11   VESTA2   (1)   OFF   End of line

** CODE 10   VESTA2

** CODE 1   VESTA2   (1)   OFF   End of line

** CODE 0   VESTA2

Distances and Sections:

VESTA2   D2L-GB2   VESTA2

Mains 100~240Vac

CN

FA-GB2/A

BUS (M)   BUS (PL)

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

Access door panel
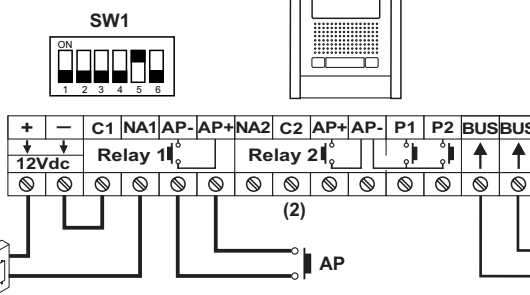
SW1

(1)   **Do not change the factory default position of the configuration jumper.**

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

∗∗   **Configurar final de línea en el último monitor. Dip 6 to On.**

+	−	C1	NA1	AP-	AP+	NA2	C2	AP+	AP-	P1	P2	BUS	BUS
12Vdc		**Relay 1**				**Relay 2**							

Lock release max. 12 Vdc/270mA.   **(2)**

(2)

AP

(2)Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.

WIRING DIAGRAMS:

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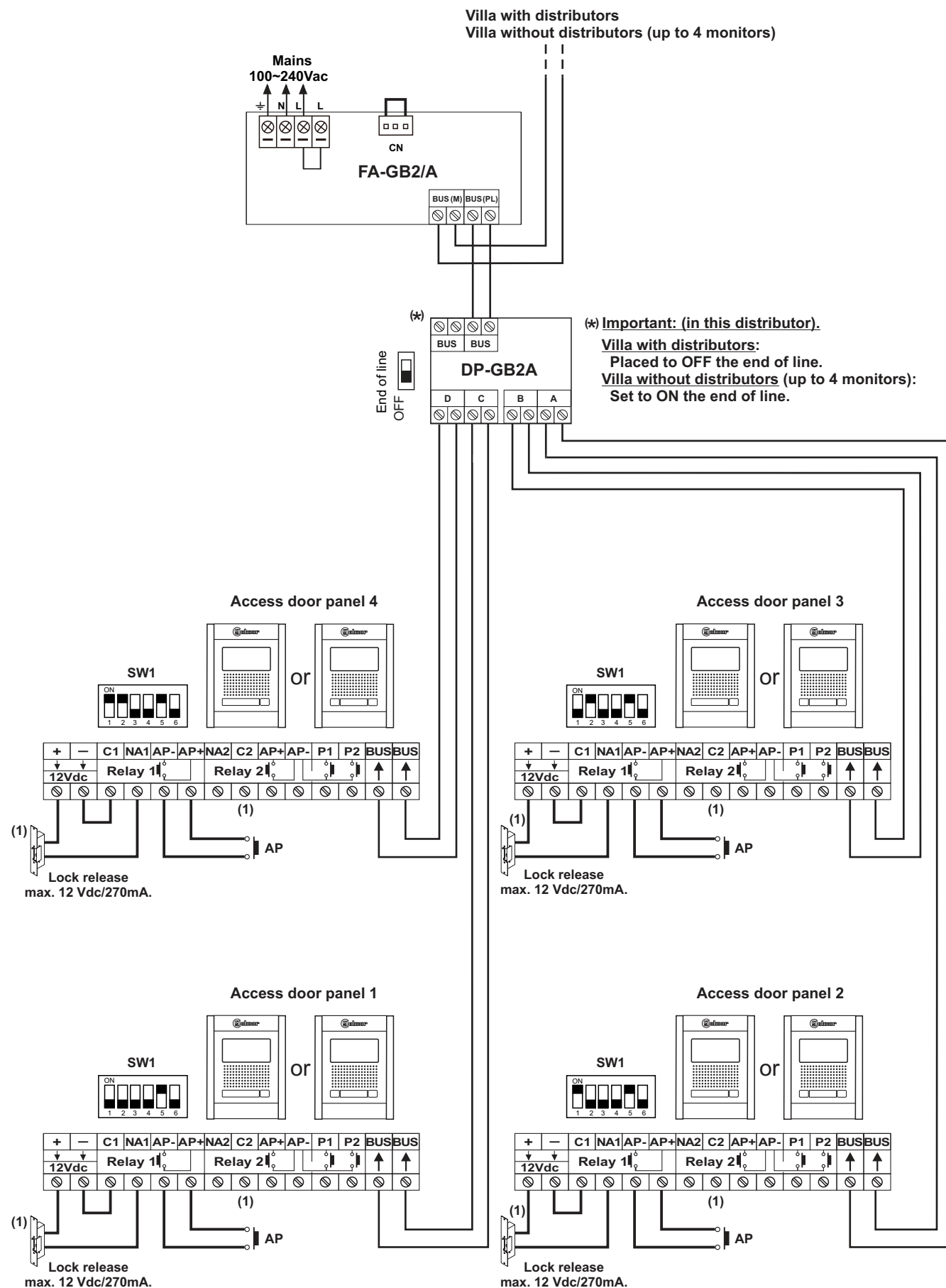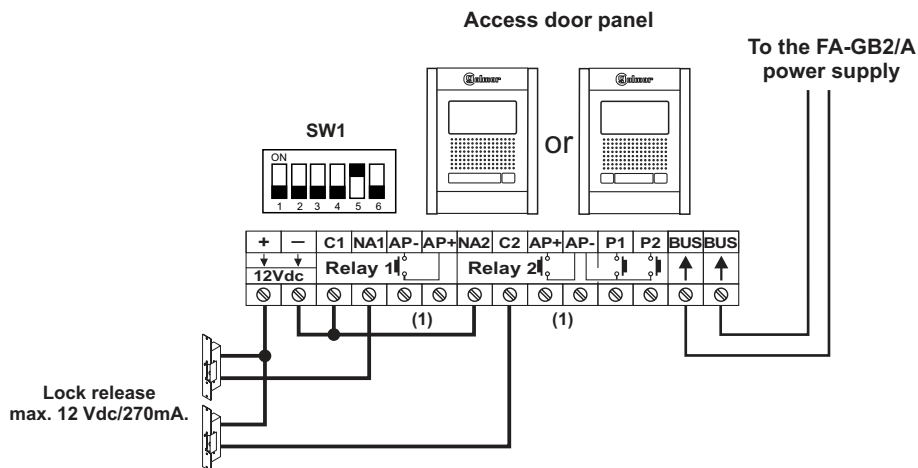

(1)Important: For AC lock releases or a second lock release, see diagram "Connection of Golmar AC and DC lock releases" on page 19.
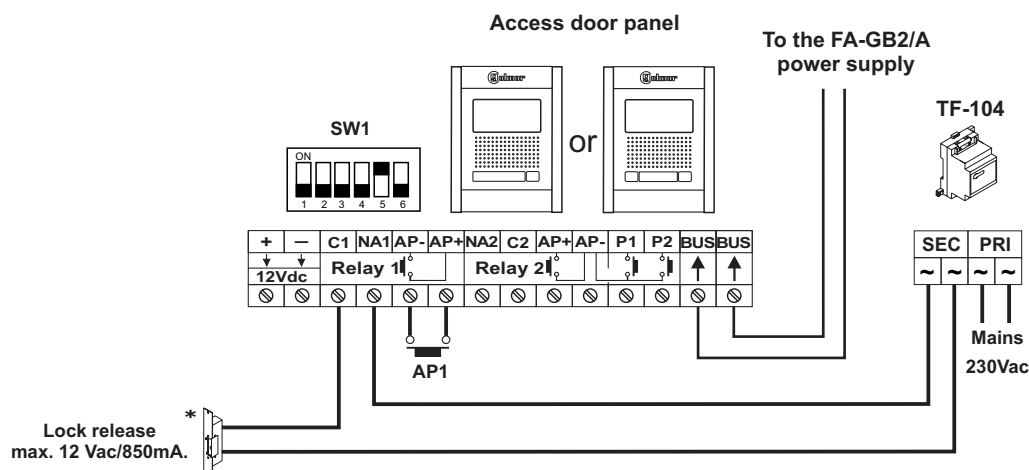
WIRING DIAGRAMS:

Connection of Golmar AC and DC lock releases.
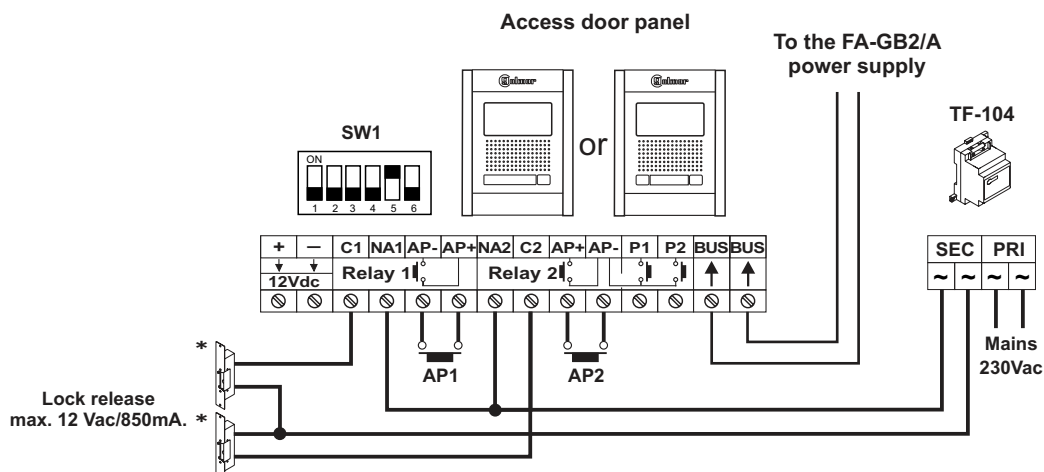
Connection of 2 DC lock releases without "AP":

(1) Important: With 2 DC lock releases, it is not possible to use the "AP" door opening 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 varistors supplied with the kit directly to the terminals of each of the 2 lock releases.

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