

# Video Entryphone Technical Manual



## ▶ Copyright and disavowal of responsibility

**Warning!** The safety of this appliance is only guaranteed if all the instructions given here are followed scrupulously.

These should be read thoroughly and kept in a safe place. Chorus products can be installed in environments which are dust-free and where no special protection against the penetration of water is required.

They shall be installed in compliance with the requirements for household devices set out by the national standards and rules applicable to low-voltage electrical installations which are in force in the country where the products are installed, or, when there are none, following the international standard for low-voltage electrical installations IEC 60364, or the European harmonization document HD 60364.

Gewiss sales organization is ready to provide full explanations and technical data on request.

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## ▶ Abbreviations and graphic symbols used

The following abbreviations and acronyms may be found in the text and illustrations:

|     |                    |
|-----|--------------------|
| HA  | Home Automation    |
| IP  | Internet protocol  |
| LAN | Local area Network |
| FDU | Front door unit    |
| AU  | Apartment unit     |
| PoL | Power over LAN     |

The following graphic symbols may be found in the manual:



Indicates an important safety warning.



Indicates an important warning relating to installation and operation.

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# THE SYSTEM

## General description

Digital Vision is the video entryphone system on IP technology integrated - from a design and practical viewpoint - with the Chorus devices (domestic range for electric and Home Automation systems). The video entryphone devices are connected to each other via a LAN network that also provides the necessary power supply (PoL – Power over LAN). This means you can create a wide range of systems, from the detached home to the medium-sized block of flats.

The range of system devices covers all needs, from simple vocal communication to colour video entryphones, from intercom communications to video control and integration with KNX domotic systems. The apartment units can be made up of different combinations of video entryphones, entryphones with speakerphone, and wall-mounting entryphones.

The system is programmed via a PC equipped with the special software, allowing you to configure the entire video entryphone system quickly and easily. Alternatively, for small/medium systems there is also a simplified procedure that does not require the use of a computer.

## Functions available

**Call:** this allows a call to be made from the front door unit to the apartments linked with that position. If there is a video function, this is immediately activated along with the call, while the choice of whether to enable the 2-way audio communication is left to the person called. If the apartment already has a communication in progress, or has activated the *Privacy* function, the front door unit will indicate the "busy" status. The person calling may also record a video message after the call, if the *Video mail* function is enabled.

**Privacy:** the system can manage several calls and communications simultaneously, yet keeping them entirely separate.

**Multiple apartment units:** in each apartment, more than one apartment unit can be installed, using the combination of devices you require.

**Primary and secondary front door units:** this distinction allows you to subdivide the front door units in a logical manner (for example a street entrance position and a building entrance position), and also to use different ringers to identify where the call is coming from. The electro-lock of the primary position can also be activated without any incoming call.

**Intercom:** direct communications can be made between the apartment units of a single apartment, and (if configured) between the apartment units of different apartments. The intercom function between different apartments is only possible with audio/video apartment units (GW 18 341xx, GW 18 343xx, GW 18 000xx).

**Video surveillance:** on the video entryphone, it is possible to see the images filmed by the telecameras of the front door units, even without any incoming call in progress, or those filmed by other telecameras connected to the video entryphone system via the camera interface (GW 18 376).

**Identifying the calls:** different tones can be used to distinguish the type of call, for example from a front door unit, from the landing, or intercom.

**Adjustable volumes:** the volume of the communications and buzzers can be adjusted.

**Electro-lock:** different types of electro-lock can be activated, connecting them directly to the front door units or using the relay unit (GW 18 381). The electro-locks can only be activated from the apartment units in response to a call, or in "free" mode (without an incoming call). In the case of a call, the system recognises which front door unit it is coming from and activates the relative electro-lock.

**"Door open" alarm:** some electro-lock models are equipped with a sensor that detects when the door is open, and this information can be used to inform the video entryphones that the entrance door is not closed.

**Auxiliary implementations:** thanks to the relays of the apartment units/front door units and relay units, it is possible to command other systems of the building, such as lights on stairs or access pathways.

**Local push-buttons:** external push-buttons can be connected to the apartment units/front door units and relay units, to create functions such as the landing call or door opener.

**Internal number busy:** the system indicates to the person calling if the internal number is already busy with another communication.

**Privacy:** by activating this apartment unit function, any incoming call will automatically obtain the "busy" signal and the occupant will not

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be disturbed.

**Call transfer:** it is possible to transfer incoming calls to another apartment or to the video mail.

**Free hands:** the apartment unit (video entryphone) can be configured to respond automatically to the call, without needing to press any keys.

**Baby monitoring:** this function allows you to monitor what is happening in the room where another video entryphone is installed; only the devices of the same apartment can be activated.

**Office:** the opening of the electro-lock can be automatically activated when a call is received during the time bands specified. This function cannot be activated if the office has installed both video entryphones and wall-mounting entryphones.

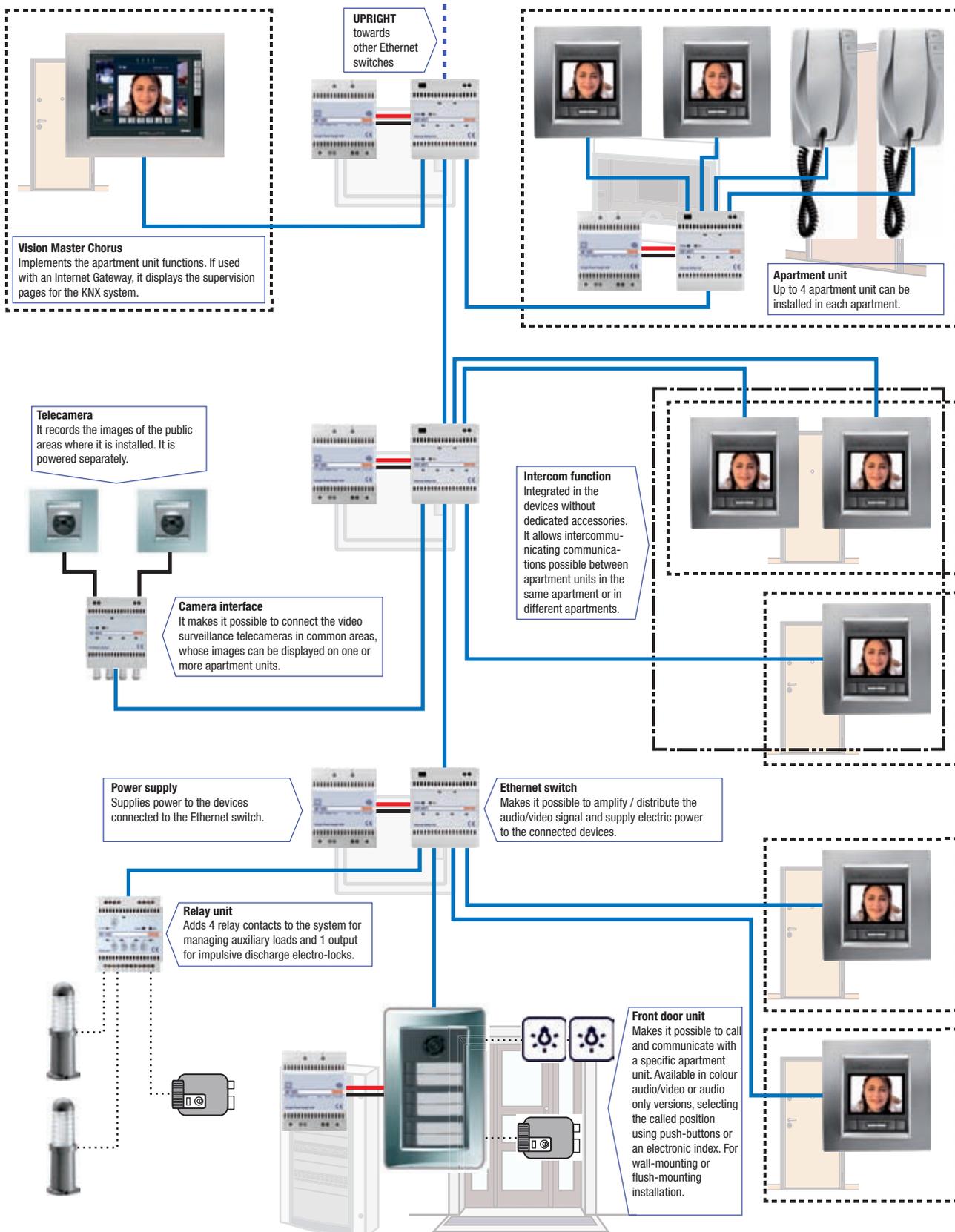
**Video mail:** if enabled, this allows the person calling from a front door unit to leave a 30-second video message that can subsequently be viewed on the video entryphone of the apartment called.

**Concierge service:** using a PC equipped with the *porter's desk software* (GW 18 392), is possible to receive calls from the apartment units(\*) and front door units, make calls to each apartment unit(\*), activate auxiliary services (electro-locks, lights, etc.), activate the video control, and set the Night&Day operating mode to transfer calls from the front door units to the porter's desk.

(\*) The porter's desk software can only be used with audio/video apartment units (GW 18 341xx, GW 18 343xx, GW 18 000xx).

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## System architecture



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## Maximum system expansion

The video entryphone system configured with the aid of a PC can include up to:

- 8 front door units
- 160 separate apartments
- 4 apartment units per apartment
- 4 relay units - DIN rail (GW 18 381)
- 4 camera interfaces - DIN rail (GW 18 376)

Without the aid of a computer (using the simplified programming procedure), it is possible to install systems of up to:

- 2 front door units (one primary and one secondary)
- 34 separate apartments
- 4 apartment units per apartment
- 1 relay unit - DIN rail (GW 18 381)
- 1 camera interface - DIN rail (GW 18 376)

## System components

### Devices and accessories for front door units



#### Audio/video module for front door unit (GW 18 301)

This main module allows you to create the front door units of the video entryphone system, located for example at the entrance to the building or individual staircases. It allows a 2-way audio communication with the visitor, and films the area in front of the front door unit itself. The colour telecamera has a fixed lens, automatic exposure adjustment, and white LEDs for night-time vision or when visibility is poor. The speaker volume can be adjusted by means of the potentiometer. The module has an output for an electro-lock, a relay output for external loads, an input for a local external push-button (local gate opener), and an input to detect the open status of the electro-lock.



#### Audio/video module with 2 push-buttons for front door unit (GW 18 302)

The same characteristics as the *Audio/video module for front door unit* (GW 18 301), plus 2 additional push-buttons with name plate (backlit with a white light) for calling two separate apartments.



#### Audio module for front door unit (GW 18 311)

The same characteristics as the *Audio/video module for front door unit* (GW 18 301), but without the telecamera.

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## Audio module with 2 push-buttons for front door unit (GW 18 312)

The same characteristics as the *Audio module for front door unit* (GW 18 311), plus 2 additional push-buttons with name plate (backlit with a white light) for calling two separate apartments.



## 4 push-button module for front door unit (GW 18 321)

This auxiliary module, which must be used together with the audio/video module (GW 18 301 or GW 18 302) or the audio module (GW 18 311 or GW 18 312), allows you to add call push-buttons in the front door units of the video entryphone system. The front door unit can include up to 8 modules of this type. Each module has 4 push-buttons with a backlit name plate for calling the apartments.



## Call module with electronic index for front door unit (GW 18 322)

This auxiliary module, which must be used together with the audio/video module (GW 18 301) or the audio module (GW 18 311), allows you to create the front door units of the video entryphone system in structures with a high number of apartments, or when - for lack of space or design reasons - you cannot (or do not want to) install the modules with the 4 push-buttons (GW 18 321) needed. Each front door unit can have a single call module with electronic index.

The module has a backlit single-colour LCD screen for viewing the index. By means of the 5 keys and simple menus, the visitor can choose and call the required name or apartment.

To configure the call module, you must use a PC with the special system configuration software.



## Module with street number for front door unit (GW 18 331)

This auxiliary module allows you to complete the front door units of the video entryphone system with the street number or staircase name/number. The module is backlit by a LED.



## Blank module for front door unit (GW 18 332)

This auxiliary module allows you to complete the front door units, closing off the unused module spaces.



## Flush-mounting boxes for front door unit (GW 18 131, GW 18 132, GW 18 133)

Boxes for the flush-mounting assembly of the front door unit. Available for one (GW 18 131), two (GW 18 132) or three (GW 18 133) modules. Up to 3 boxes can be combined (for a maximum of 9 modules), using the special coupling elements supplied.

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**Wall-mounting boxes with rainproof roof for front door unit** (GW 18 141, GW 18 142, GW 18 143)  
With these, the front door unit can be installed on a wall or other type of support without needing to make any opening in the wall. Available for one (GW 18 141), two (GW 18 142) or three (GW 18 143) modules.



**Frames for front door unit** (GW 18 121, GW 18 122, GW 18 123)  
These allow the modules to be fixed in the boxes. They have a hinged joint and suspension cords so the modules can be easily connected. Available for one (GW 18 121), two (GW 18 122) or three (GW 18 123) modules. The frame must be chosen on the basis of the box used.



**Metal frames for front door unit - titanium or slate colour**  
(GW 18 101 VT, GW 18 102 VT, GW 18 103 VT, GW 18 101 VA, GW 18 102 VA, GW 18 103 VA)  
These complete the front door unit. Available for boxes with one (GW 18 101 xx), two (GW 18 102 xx) or three (GW 18 103 xx) modules.  
The last letters of the product code indicate the colour of the finish plate: VT = titanium, VA = slate.

## Devices and accessories for apartment units



**Vision Master Chorus** (GW 18 000 TB, GW 18 000 VT, GW 18 000 VA)  
Colour touchscreen panel which, when combined with an *Internet Gateway* (GW 90 816), acts as an apartment unit and allows you to view the graphic pages for the command and supervision of the KNX Home & Building Automation system.  
The video entryphone functions are managed by simulating - on the screen - the appearance and keys of a video entryphone with speakerphone.  
Vision Master Chorus has 2 USB ports (that can be accessed from the outside) for connecting a keyboard and mouse.

The last letters of the product code indicate the colour of the finish plate: VT = titanium, VA = slate, TB = white.



**Video entryphone with speakerphone - flush-mounting and wall-mounting** (GW 18 341 TB, GW 18 341 VT, GW 18 341 VA flush-mounting / GW 18 343 TB, GW 18 343 VT, GW 18 343 VA wall-mounting)  
The video entryphone allows you to establish a 2-way audio communication with the person calling, and reproduces - on the colour LCD screen - the images filmed by the *Audio-video module for front door unit* (GW 18 301, GW 18 302) or by the control telecameras connected to the video entryphone system.  
If not used, the screen switches off automatically after the set standby time.  
The video entryphone has 6 command push-buttons that allow you to perform the most common actions directly (e.g. respond to a call, open the door). They can also be used to access the menu and enable the advanced functions or customise the use of the device.  
The video entryphone has an input for a local push-button (call from landing) and a relay output for a local implementation.  
The last letters of the product code indicate the colour of the finish plate: VT = titanium, VA = slate, TB = white.

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## Entryphone with speakerphone - flush-mounting (GW 18 350, GW 18 352, GW 18 354)

The entryphone allows you to establish a 2-way audio communication with the person calling. The device has 4 push-buttons (touch) for accessing the functions of response, electro-lock command to front door units, intercom call with another three apartment units, and privacy. The latter function deactivates the call buzzer from both front door and apartment units. The entryphone has 5 LEDs to indicate the indoor intercom position selected, and for the privacy function.



## Wall-mounting entryphone (GW 18 360)

The wall-mounting entryphone allows you to establish a 2-way audio communication with the person calling.

The device has 7 push-buttons (touch) for accessing the functions of response, electro-lock command, intercom call with another three apartment units, privacy, and ringtone adjustment.

The wall-mounting entryphone has an input for a local push-button (call from landing) and a relay output for a local implementation.



## Flush-mounting box for video entryphone (GW 24 237)

Box for the flush-mounting assembly of the flush-mounting video entryphone (GW 18 341 XX).



## Flush-mounting box for Vision Master Chorus (GW 24 101)

Box for the flush-mounting assembly of Vision Master Chorus (GW 18 000 xx).



## Flush-mounting box for entryphone with speakerphone (GW 24 403)

Box for the flush-mounting assembly of the flush-mounting entryphone with speakerphone (GW 18 350, GW 18 352, GW 18 354).

## System components



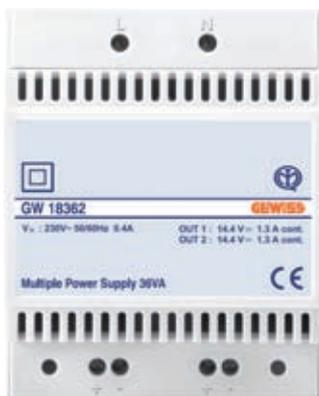
## Single audio/video power supply unit - DIN rail (GW 18 361)

This device provides the supply current (SELV - Safety Extra Low Voltage - 14.4V DC rated) to the devices of the video entryphone system.

It has a single 18 VA output.



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## Multiple audio/video power supply unit - DIN rail (GW 18 362)

The same characteristics as the *Single audio/video power supply unit - DIN rail* (GW 18 361), but with a double output (2 x 18 VA).



## Ethernet switch - DIN rail (GW 18 371)

The device makes it possible to connect the various devices of the video entryphone system together, enabling audio, video and data communication and distributing the electric power supply to the devices themselves, as needed, via the PoL ports.

The power supply current (SELV - Safety Extra Low Voltage - 14.4V DC rated) is supplied to the switch from the audio/video power supply unit (GW 18 361 or GW 18 362).

The switch has two standard Ethernet LAN ports and 4 PoL Ethernet LAN ports (Power over LAN, device power supply through the LAN cable), which can be reconfigured as standard by disabling the PoL power supply using the relative slide-type switch.



## Ethernet 6-port LAN switch - DIN rail (GW 38 371)

The same characteristics as the *Ethernet switch - DIN rail* (GW 18 371), but without the possibility to configure the ports as PoL (Power over LAN, whereby the device is powered via a LAN cable).

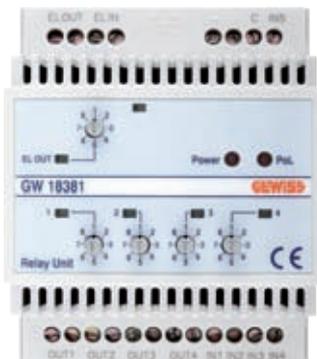


## Camera interface - DIN rail (GW 18 376)

This device allows you to complete the video entryphone system with PAL or NTSC analogue telecameras in order to create a video control system.

The analogue video signal of the telecameras is converted into a digital signal by the camera interface, so it can then be transmitted via the LAN video entryphone network and display the images on any video entryphone with speakerphone (GW 18 341 xx, GW 18 343 xx) or Vision Master Chorus (GW 18 000 xx).

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## Relay unit - DIN rail (GW 18 381)

This device allows you to complete the video entryphone system with additional relays for commanding general electric loads, and an additional electro-lock.

Each relay unit is equipped with:

- 4 relay outputs
- 4 inputs for the local command of the relay outputs
- 1 output for the electro-lock
- 1 input for the local command of the electro-lock
- 1 input for detecting the open status of the electro-lock.

The outputs can be activated from the apartment units or using the push-buttons connected to the inputs. The contact closure time is timed, for each individual output, by rotary selectors.

## LAN UTP network cable, cat. 5e, for indoor wiring (GW 38 189)

Wire in solid copper 24 AWG, external sheath in LSZH, external diameter 5.3mm.

## LAN UTP network cable, cat. 5e, for outdoor wiring (GW 38 195)

Wire in solid copper 24 AWG, double sheath in PVC - PE, external diameter 7.2mm.

## Software



## Porter's desk software (GW 18 392)

This software allows you to implement - with the aid of a PC - a concierge enclosure for the video entryphone system. The main functions obtained are:

- receiving a call from the front door unit
- forwarding a call to the apartment
- video control
- activating the contacts of the relay units



## GW-VCT Configurator

GW-VCT Configurator is the software for the initial start-up of the video entryphone system. This software allows you to create the logic connection between the various system devices, without any need for the manual procedure.

The main functions are:

- the automatic recognition of the devices connected to the system (front door and apartment units, relay units and camera interfaces).
- the selective search for the devices
- the automatic creation of the intercom call inside the apartment
- the configuration of the front door units
- the customisation of the names in the electronic index
- the customisation of the device identification elements
- the synchronisation of the time/date on the video entryphones
- the storage and printing of the project file

The latest version of the software can be downloaded, free of charge, from the website:

[www.gewiss.com/irj/portal/gwvct\\_IT](http://www.gewiss.com/irj/portal/gwvct_IT)



**ATTENTION:** the devices must only be installed by qualified personnel, observing the current regulations and the guidelines for video entryphone installations.

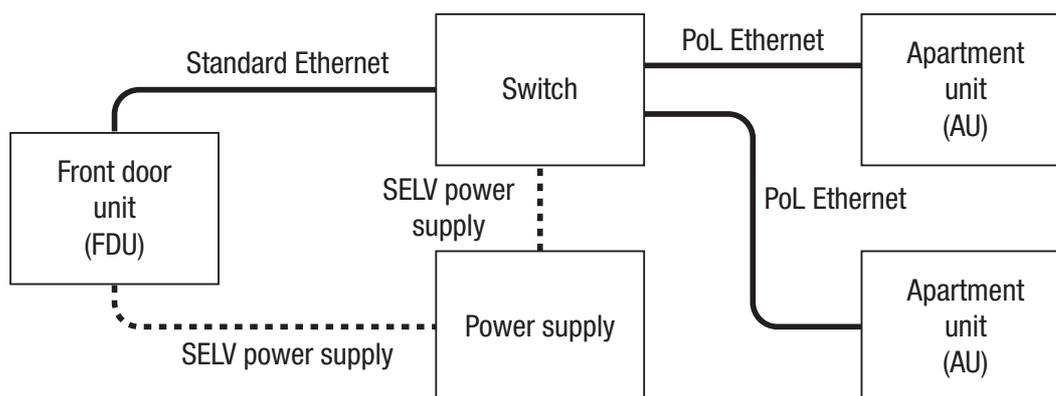
## Reference Standards:

By creating the system, it shall be observed the requirements for household devices set out by the national standards and rules applicable to low-voltage electrical installations which are in force in the country where the products are installed, or, when there are none, following the international standard for low-voltage electrical installations IEC 60364, or the European harmonization document HD 60364.

## Technology and composition of the video entryphone system

The Chorus video entryphone system is a digital system. Audio, video, information and commands are all transferred in the form of data packages on an IP network.

In its standard form<sup>1</sup>, a video entryphone system consists of a front door unit, two apartment units, a switch for connecting these devices, and a power supply unit to provide the 14.4V SELV supply voltage. The devices are connected to each other via Ethernet standard cables.



The power supply arrives directly to the front door units, while for the apartment units it is distributed by the switch, via the Ethernet cables (PoL – Power over LAN). The switch has 4 PoL ports, and allows you to connect 4 devices that need to be powered (apartment unit, camera interface or relay unit) in whatever combination you prefer. In addition to the PoL ports, the switch has two Ethernet standard ports (not powered) that can be used to connect front door units, Vision Master, Internet Gateway, a programming PC, or other switches (to expand the system). If extra LAN standard ports are needed, you can use the switch to disable the power supply on all the PoL ports or, alternatively, add an *Ethernet 6-port LAN switch - DIN rail (GW 38 371)*.

The switches are connected to each other in cascade form.

The camera interface and relay unit may also be powered from an external power supply unit.



**IMPORTANT:** the order in which the various devices are connected has no effect on the operation. For example, apartment units belonging to a single apartment can be connected to different switches, and front door units belonging to different staircases can be connected to the same switch.

For further information about the connections, refer to the section *Connection diagrams* and the chapters *Types of electrical connections* and *Connecting the front door units*.

1) In the case of a single-family system, there is another (reduced) configuration requiring only a front door unit, a single apartment unit, and the power supply unit, but a special cable is needed to connect the front door and apartment units.

## Dimensions and maximum extension of the system

When planning the video entryphone system, it is important to bear in mind the following maximum values:

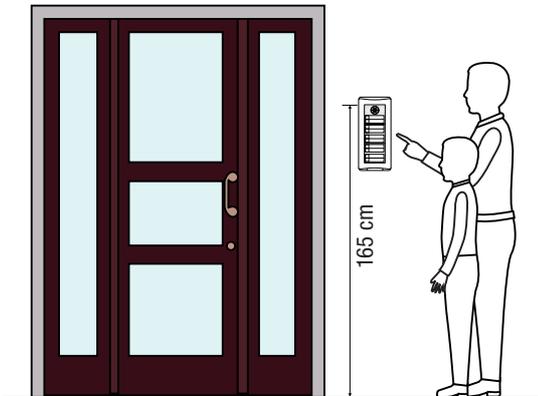
|  |  |
|--|--|
| Max. number of front door units  | 8  |
| Max. number of apartments  | 160  |
| Max. number of apartment units per apartment                               | 4  |
| Max. number of relay units   | 4  |
| Max. number of camera interfaces   | 4  |
| Max. length of LAN cable   | 100m   |
| Max. length of supply cable between power supply unit and any other device | 100m, with a cable section of 1mm <sup>2</sup> |
| Max. number of switches between any two devices                            | 60   |
| Max. length of connection cable for electro-lock opening button            | 40m, with a cable section of 1mm <sup>2</sup>  |
| Max. length of connection cable for electro-lock                           | 50m, with a cable section of 1mm <sup>2</sup>  |
| Max. length of cable for landing call                                      | 50m, with a cable section of 1mm <sup>2</sup>  |
| Max. length of connection cable for electric load / device relay           | 50m, with a cable section of 1mm <sup>2</sup>  |

**NB:** for further information about how to increase the distance between the devices, refer to *Signal extension and long distances*.



**ATTENTION:** for the maximum voltages and currents allowed on the relays, refer to the technical specifications of the individual devices.

## Positioning the front door unit



The upper side of the front door unit must be about 160-165cm from the ground.

When using an audio/video module with telecamera, the front door unit must not be positioned to face strong light sources, or in places where the person is against the light (for instance, when the person calling has a lamp-post behind him). A strong background light will, in fact, reduce the brightness and the contrast of the image because the telecamera adjusts its exposure level to the brightest areas of the image.

NB: to ensure the person is well-lit in the dark, you are advised to install an outdoor light source.

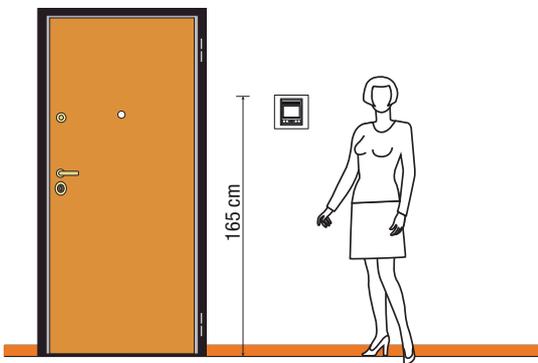
If there is no other suitable place for the front door unit, you can try raising it to a height of 180cm from the ground, so the telecamera is pointing downwards and thereby reduces the back lighting effect.

For further information about the creation of front door units, refer to *Combinations for front door units*.

For the degree of environmental protection (IP) and the operating temperatures of the front door unit modules, refer to *Technical characteristics*.

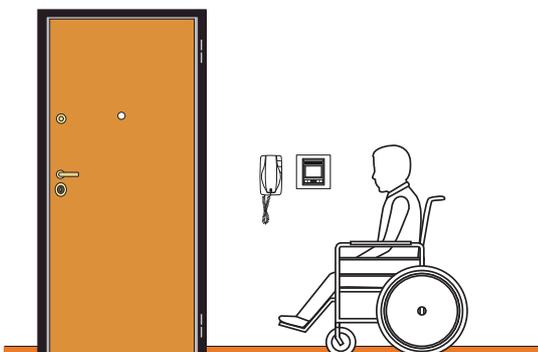
NB: if the front door unit is to be used mainly or wholly by people in wheelchairs, it may be better to install the position at a lower height.

## Positioning the apartment unit



The upper side of the apartment unit (video entryphone, flush-mounting entryphone with speakerphone, or wall-mounting entryphone) must be about 160-165cm from the floor.

If the apartment unit is a video entryphone, make sure the screen is not hit by a direct light (sunlight or lamps) as this would reduce the quality of the image viewed.



If the apartment is inhabited by a person with mobility problems, it is a good idea to lower the apartment unit to a height of about 120-125cm from the floor; the standard height (160-165cm) does not prevent the apartment unit being used by disabled people, but it does make it more difficult for them.

## Positioning the other system devices

The other devices of the video entryphone system must be installed in distribution boards fitted with a DIN rail, or in the Gewiss PTDIN flush-mounting boxes (for instance GW 48 109). As the PTDIN boxes have a DIN rail, and dividers can be inserted in them, they are ideal when installing power supplies and switches for the various floors of blocks of flats or other types of building.

## Wiring infrastructure



**ATTENTION:** the video entryphone system must be kept separate from any data network of the apartment or block of flats.

### The coexistence of electric and data cables (LAN)

The DIGITAL VISION System is based on IP technology, and device wiring is regulated by the same rules applied for so-called “structured wiring”. In particular, it is known that in certain cases there are no alternatives to using the same cable path for laying the data cable (LAN) and the energy cable. For example, when restructuring or replacing an old video entryphone system there may be only one cable path available for connecting the front door unit, and the laying of a new, separate one would involve costly work. This gives rise to the problem of whether and how the data and energy cables can coexist in a single cable path.

#### What the regulations say

The regulations specify that certain distances must be maintained between data cables and energy cables, for two distinct reasons:

- **Electrical safety:** for the purposes of electrical safety, the data and energy cables may only be installed in the same cable path (the same conduit) if the data cable has double insulation. In any case, a LAN cable may coexist with SELV power supply cables (14.4V).
- **Disturbance immunity:** Standard EN50174-2 defines the distance to be maintained when laying energy cables and data cables. This distance varies according to the shielding of the cables and the presence of a metal divider between the cables: the two cables may only be laid in the same path (same conduit) if they are both shielded. The table below shows the minimum distances from electric supply lines, as specified by the above-mentioned standard.

| Type of cable  | Application field: 2kVA - 500V |                        |                    |
|--|--------------------------------|------------------------|--------------------|
|  | Without divider                | With non-metal divider | With metal divider |
| Non-shielded energy cable<br>Non-shielded data cable | 200mm                          | 100mm                  | 50mm               |
| Non-shielded energy cable<br>Shielded data cable     | 50mm                           | 20mm                   | 5mm                |
| Shielded energy cable<br>Non-shielded data cable     | 30mm                           | 10mm                   | 2mm                |
| Shielded energy cable<br>Shielded data cable         | 0mm                            | 0mm                    | 0mm                |

#### What Gewiss recommends

The Gewiss cables for wiring the DIGITAL VISION system are:

- GW 38 189: LAN UTP cable, cat 5e, for indoor wiring
- GW 38 195: LAN UTP cable, cat 5e, for outdoor wiring, with double insulation.

To ensure the correct functioning of the system, you are advised to lay the DIGITAL VISION system cables and the energy cables in separate cable paths. If you need to pass the DIGITAL VISION cable and the energy cable in the same path (same conduit), the only Gewiss cable you can use is the GW 38 195. The double insulation of this cable guarantees electrical safety, but not disturbance immunity. To obtain full disturbance immunity, it is necessary for both the data and the energy cable to be shielded. If this is not possible, there may be disturbances due to electromagnetic couplings and this means the optimum quality performance of the system is not guaranteed.

### Cable routes and junction boxes

The cable routes can be chosen on the basis of the cables they must contain. Bear in mind that a shielded data cable usually has a diameter of about 8mm, and a shielded energy cable (with 3 wires with a section of 2.5mm<sup>2</sup>) has a diameter of more than 15mm. In addition, the cable routes and junction boxes must prevent the cables being subjected to sharp bends.

## System composition

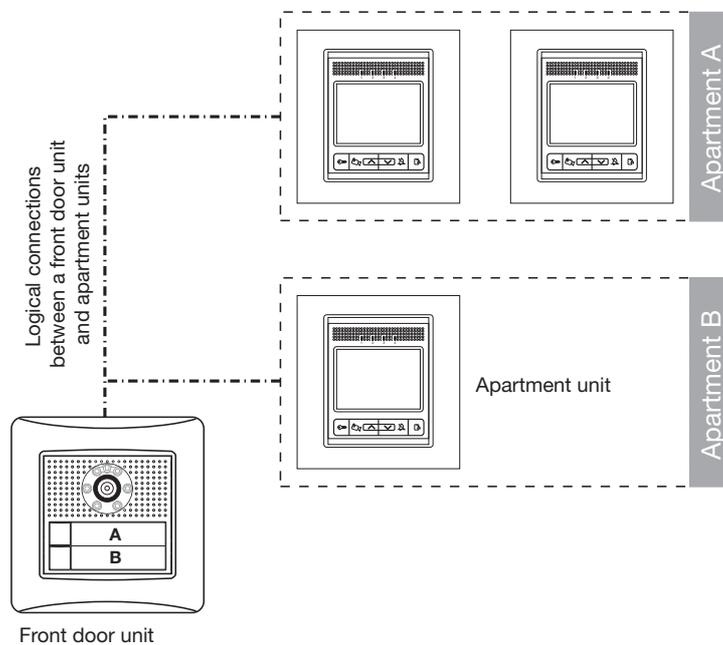
### Determining the necessary number of devices

A video entryphone system consists of:

- a front door unit, situated at the entrance from the street
- in the case of structures with several buildings or staircases, there may be additional (secondary) front door units
- at least one apartment served.

"Apartment" generally refers to a single inhabited unit (apartment, office, shop, etc.) that may be called and that corresponds to a single push-button of the front door unit.

In every apartment, up to 4 apartment units can be installed, and these are all connected to the same push-button of the push-button panel.



There is usually only one front door unit in a system, situated at the entrance from the street, but in certain cases (such as accommodation structures with several buildings or staircases, or buildings with several entrances from the street) there may be more than one.

The front door units on the street must be able to call all the apartments, while the call positions at the entrance to the staircase or individual buildings call only the apartments of that particular staircase or building.

A system always has at least one primary front door unit, coinciding with the call position situated at the entrance from the street. The electro-lock of the primary front door units can be activated even without a call or conversation in progress ("free" mode, to be purposely activated). **Important:** if several primary front door units are associated with an apartment unit in "free" mode, the electro-lock command only acts on the main primary front door unit (the first position programmed).

# DESIGN

To facilitate the calculation of the number of devices needed, you can fill in a table like the one below:

| Front door unit | Primary (on the street)  | Secondary (at the entrance to the staircase/ building) | No. of apartments | Total apartment units | No. of relay units | No. of camera interfaces |
|-----------------|--------------------------|--|-------------------|-----------------------|--------------------|--------------------------|
| 1               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 2               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 3               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 4               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 5               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 6               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 7               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |
| 8               | <input type="checkbox"/> | <input type="checkbox"/>                               |                   |                       |                    |                          |

## Notes for compilation

1. Only fill in the lines corresponding to the number of front door units you want to install.
2. There must be at least one primary front door unit in the system.
3. If the front door unit is on the street, the number of apartments is the total number of the entire structure.
4. If the front door unit is at the entrance to the staircase or single building, the number of apartments is the number in that staircase or building.
5. The number of apartment units must be clearly indicated for staircases/buildings in the relative line (if the system only has a front door unit on the street, it must be indicated in this line only); the number of apartment units cannot be higher than 4 times the number of the respective apartments.
6. The total number of relay units in the entire system must not exceed 4.
7. The total number of camera interfaces in the entire system must not exceed 4.

## Determining the necessary number of switches

Below there is an explanation of how to calculate the minimum number of switches needed in the system. The real number of switches may be higher, and will have to be defined by examining and checking the wiring requirements and the physical distribution of the buildings, apartments, apartment units, relay units and camera interfaces.

To calculate the minimum number of switches, proceed as follows:

- In the case of a single front door unit, add together the number of apartment units, the number of relay units, and the number of camera interfaces. Divide the total by 4, rounding up if necessary.
 

**Example:** a building with 4 apartments, each with an apartment unit, a camera interface and a relay unit. The switch calculation is therefore:  
 $4 \text{ apartment units} + 1 \text{ relay unit} + 1 \text{ camera interface} = 6 \text{ connections}$   
 $6 \text{ connections} \div 4 = 1.5 \text{ switches}$   
 rounding up, this means 2 switches.
- In the case of several front door units, add together - for each staircase or building - the number of apartment units, the number of relay units, and the number of camera interfaces. Divide the total by 4, rounding up if necessary (as in the previous example). Then divide the number of front door units by 2 and round up again.
 

**Example:** a block of flats with a main entrance from the street and two separate internal buildings, one with 15 apartment units on 7 apartments and the other with 12 apartment units on 6 apartments. A single front door unit at the entrance from the street, and a separate front door unit for each building entrance. The switch calculation is therefore:  
 $15 \text{ apartment units (connections)} \div 4 = 3.75$  (which, rounded up, means 4 switches for the first building)  
 $12 \text{ apartment units (connections)} \div 4 = 3$  switches for the second building  
 $3 \text{ front door units} \div 2 = 1.5$  (which, rounded up, means 2 switches).  
 The overall requirement is therefore  $4 + 3 + 2 = 9$  switches

## Determining the necessary number of power supplies

To determine the number of power supplies needed, you must first calculate the minimum number of powered outputs needed.

**Number of outputs needed = number of front door units + number of switches installed**

Choose the most suitable combination of single and multiple power supplies (2 outputs) that together provide at least the number of outputs required, bearing in mind also the maximum distances allowed for power supply cables (refer to *Technical characteristics*).

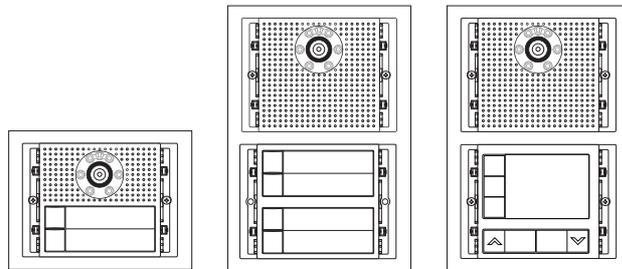
## ▶ Creating the front door unit

One front door unit consists of a main module (GW 18 301, GW 18 302, GW 18 311, GW 18 312) to which the auxiliary modules are added as necessary: the push-button panel (GW 18 321), electronic index (GW 18 322) and street number (GW 18 331). The push-button panel and electronic index are mutually excluding. The same is true for main modules with two push-buttons (GW 18 302, GW 18 312) and a push-button panel.

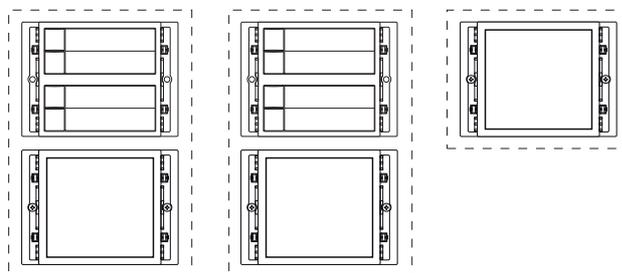
In single-family or two-family systems, if main modules with two push-buttons are used (GW 18 302, GW 18 312), no other auxiliary modules are needed.

### Standard combinations

(module GW 18 301 / GW 18 302 can be replaced with module GW 18 311 / GW 18 312)



Modules that can be used to expand the standard combination



If the system has several front door units, they do not all need to be created in the same way. For example, the front door unit on the street may be equipped with a telecamera, unlike those at the entrances to the staircases. Or some front door units may have an electronic index, while others could have a push-button panel.

The front door unit must be able to call all the apartments belonging to it. This means that the front door unit on the street must be able to call all the apartments, while the one at the entrance to a staircase can call only the apartments of that specific staircase.

The front door units with push-button panel can call up to 34 apartments; for a higher number, it is necessary to use the electronic index. The electronic index can also be used for a number lower than 34, perhaps for design or practical reasons, or because of a lack of space for the installation of the front door unit.

## Combinations for front door units

Below you can find the possible combinations for creating the front door unit, on the basis of the number of apartments to be served. The following table lists the number and code of the products needed for each combination.

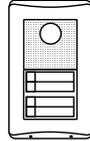
The combinations suggested here are the best ones from a design point of view, but there is nothing to prevent you modifying the order of the modules used. The only rule to be observed is that the main module (GW 18 301, GW 18 302, GW 18 311, GW 18 312) must always be at the top. The front door unit may consist of up to 3 boxes containing 3 modules.

# DESIGN

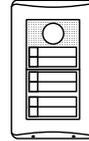
## Combinations for front door units



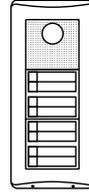
1-2 apartments



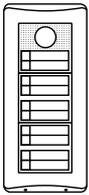
3-4 apartments



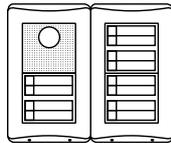
5-6 apartments



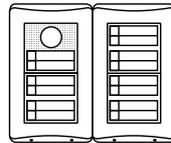
7-8 apartments



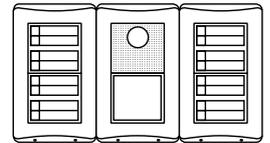
9-10 apartments



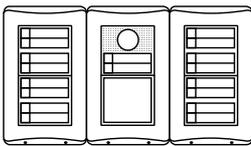
11-12 apartments



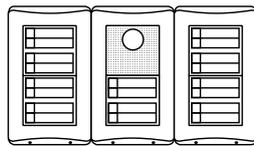
13-14 apartments



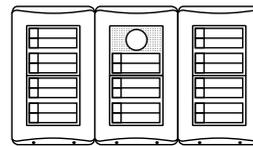
15-16 apartments



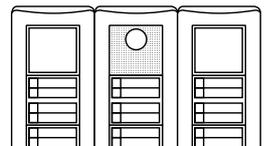
17-18 apartments



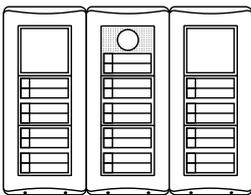
19-20 apartments



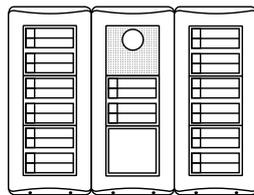
21-22 apartments



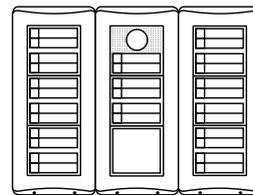
23-24 apartments



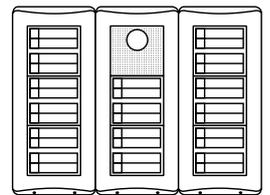
25-26 apartments



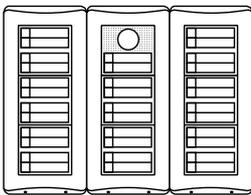
27-28 apartments



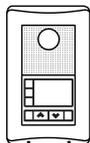
29-30 apartments



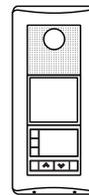
31-32 apartments



33-34 apartments



1...160 apartments



1...160 apartments

# DESIGN

| Number of apartments | Box (GW 18 131 / GW 18 141) + Frame (GW 18 121) + Plate (GW 18 101 xx) | Box (GW 18 132 / GW 18 142) + Frame (GW 18 122) + Plate (GW 18 102 xx) | Box (GW 18 133 / GW 18 143) + Frame (GW 18 123) + Plate (GW 18 103 xx) | Audio/video module for front door unit (GW 18 301) | Audio/video module with 2 push-buttons for the front door unit (GW 18 302) | 4 push-buttons module for front door unit (GW 18 321) | Module with street number for front door unit (GW 18 331) * | Call module with electronic index for front door unit (GW 18 322) |
|----------------------|--|--|--|--|--|---|---|---|
| 1-2                  | 1  |  |  |  | 1  |   |   |   |
| 3-4                  |  | 1  |  | 1  |  | 1   |   |   |
| 5-6                  |  | 1  |  |  | 1  | 1   |   |   |
| 7-8                  |  |  | 1  | 1  |  | 2   |   |   |
| 9-10                 |  |  | 1  |  | 1  | 2   |   |   |
| 11-12                |  | 2  |  | 1  |  | 3   |   |   |
| 13-14                |  | 2  |  |  | 1  | 3   |   |   |
| 15-16                |  | 3  |  | 1  |  | 4   | 1   |   |
| 17-18                |  | 3  |  |  | 1  | 4   | 1   |   |
| 19-20                |  | 3  |  | 1  |  | 5   |   |   |
| 21-22                |  | 3  |  |  | 1  | 5   |   |   |
| 23-24                |  |  | 3  | 1  |  | 6   | 2   |   |
| 25-26                |  |  | 3  |  | 1  | 6   | 2   |   |
| 27-28                |  |  | 3  | 1  |  | 7   | 1   |   |
| 29-30                |  |  | 3  |  | 1  | 7   | 1   |   |
| 31-32                |  |  | 3  | 1  |  | 8   |   |   |
| 33-34                |  |  | 3  |  | 1  | 8   |   |   |
| 1-160                |  | 1  |  | 1  |  |   |   | 1   |
| 1-160                |  |  | 1  | 1  |  |   | 1   | 1   |

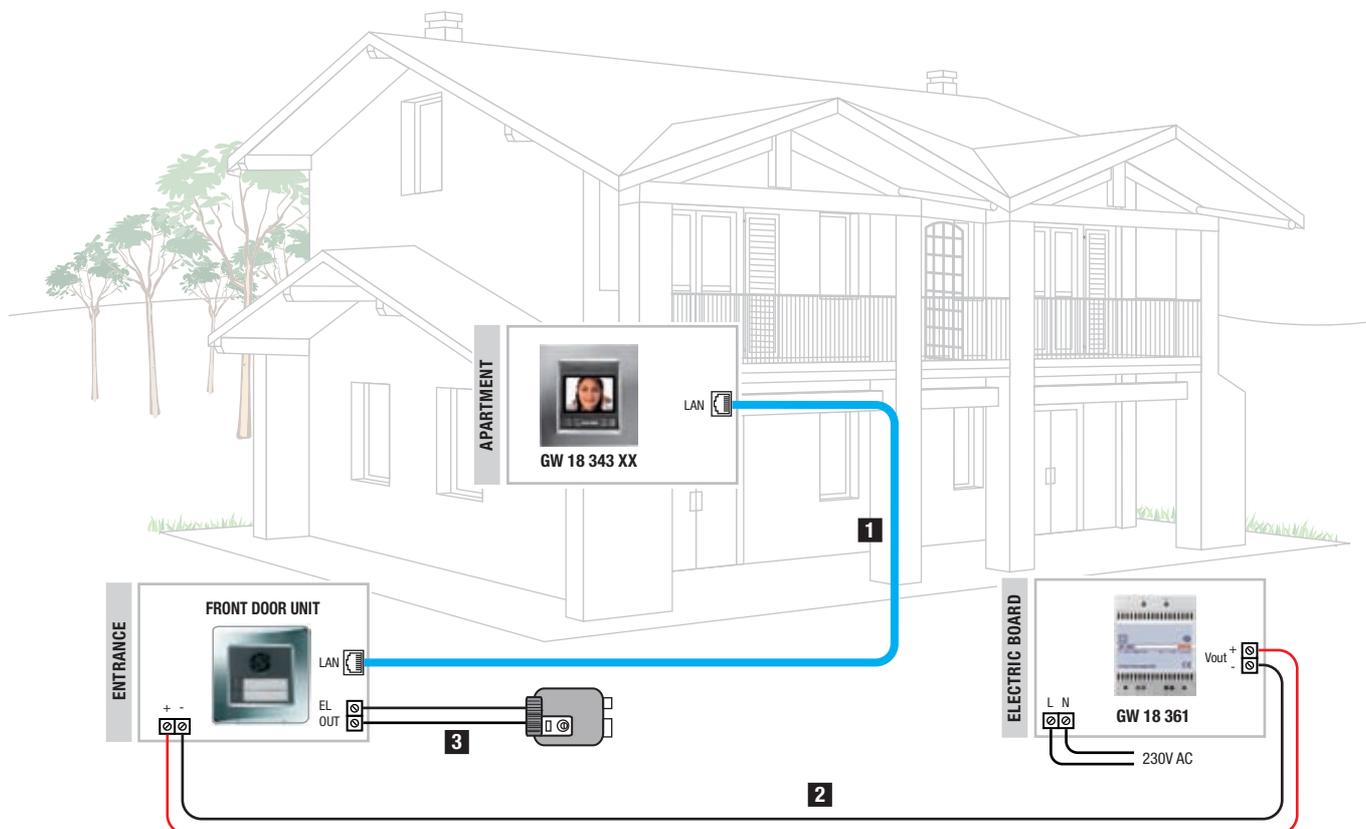
\* Alternatively, you can replace the article with a *Blank module for front door unit* (GW 18 332).

## Notes

- The combinations for 15-16, 17-18, 19-20 and 21-22 apartments can also be created using 2 boxes with 3 modules (GW 18 133 / GW 18 143 + GW 18 123 + GW 18 103 xx) instead of 3 boxes with 2 modules.
- These compositions are also valid for front door units with audio only. In this case, use the *Audio module for front door unit* (GW 18 311) or the *Audio module with 2 push-buttons for front door unit* (GW 18 312) instead of the equivalent *Audio/video module for front door unit* (GW 18 301) and the *Audio/video module with 2 push-buttons for front door unit* (GW 18 302).

# CONNECTION DIAGRAMS

## Single-family video entryphone kit



The system is available as a KIT.

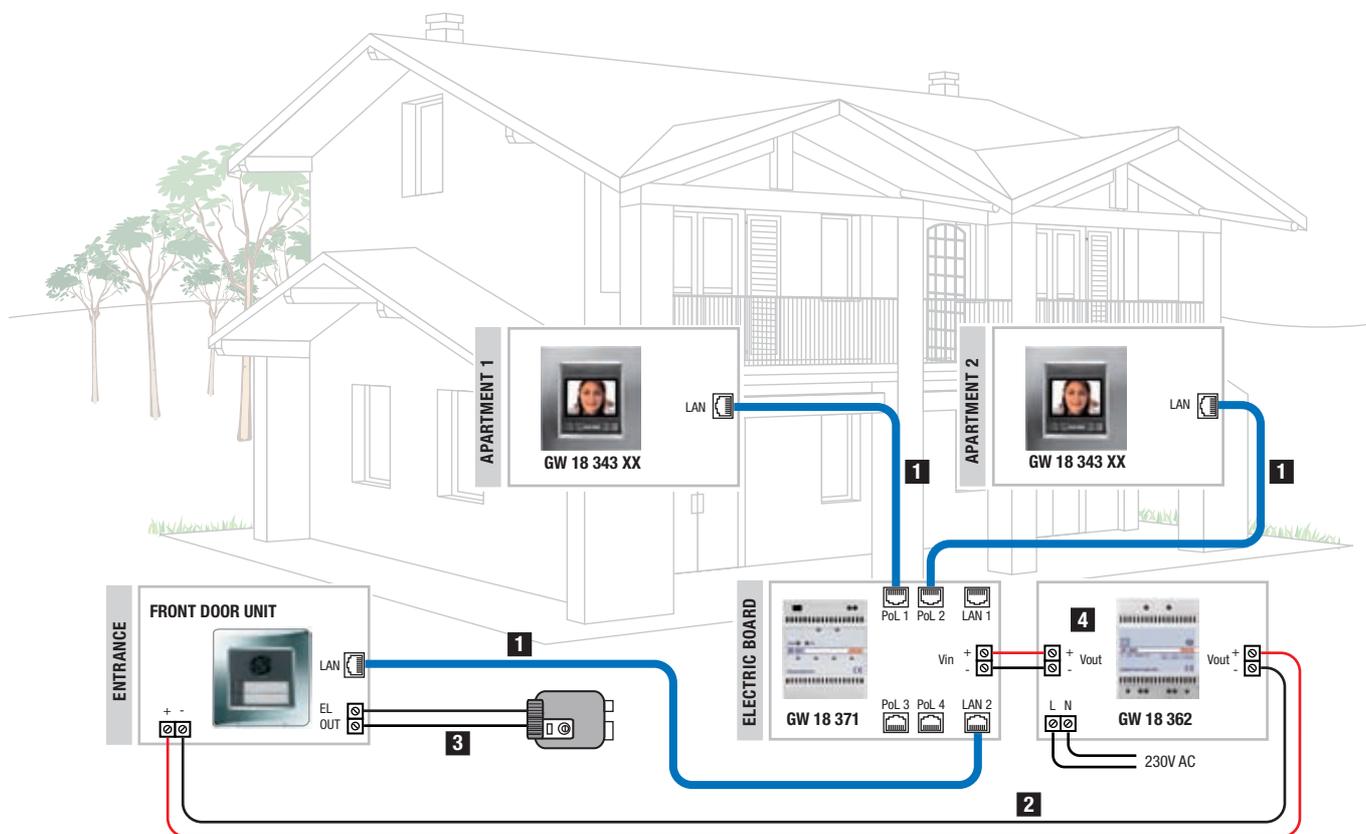
| COMPOSITION OF THE SINGLE-FAMILY VIDEO ENTRYPHONE KIT GW 18 401 VT - GW 18 401 VA |   |          |
|---|---|----------|
| Code  | Description   | Quantity |
| GW 18 343 VT or GW 18 343 VA  | Video entryphone with speakerphone - wall-mounting - titanium or slate colour | 1        |
| GW 18 361   | Single audio/video power supply unit - DIN rail                               | 1        |
| GW 18 302   | Audio/video module with 2 push-buttons for front door unit                    | 1        |
| GW 18 101 VT or GW 18 101 VA  | Metal plate for front door unit - titanium or slate colour                    | 1        |
| GW 18 121   | Frame for front door unit   | 1        |
| GW 18 131   | Flush-mounting box for front door unit  | 1        |

### Installation notes

- 1** The wiring of the single-family kit requires the use of a non-direct LAN cable.
- 2** Using 1mm<sup>2</sup> cables, the maximum distance between the power supply unit and the front door unit is 20m if the distance between the apartment unit and the front door unit is 100m (the sum of the two distances must not exceed 120m). Using cables with a section greater than 1mm<sup>2</sup>, the voltage to the front door unit power supply terminals must be at least 14V DC.
- 3** Using 1mm<sup>2</sup> cables, the maximum distance between the front door unit and the electro-lock is 50m.
- 4** To connect the various devices, you can use the LAN cables GW 38 189 (cat. 5e UTP for indoor laying) and GW 38 195 (cat. 5e UTP for outdoor laying), or the equivalent cables available on the market.

# CONNECTION DIAGRAMS

## Two-family video entryphone kit



The system is available as a KIT.

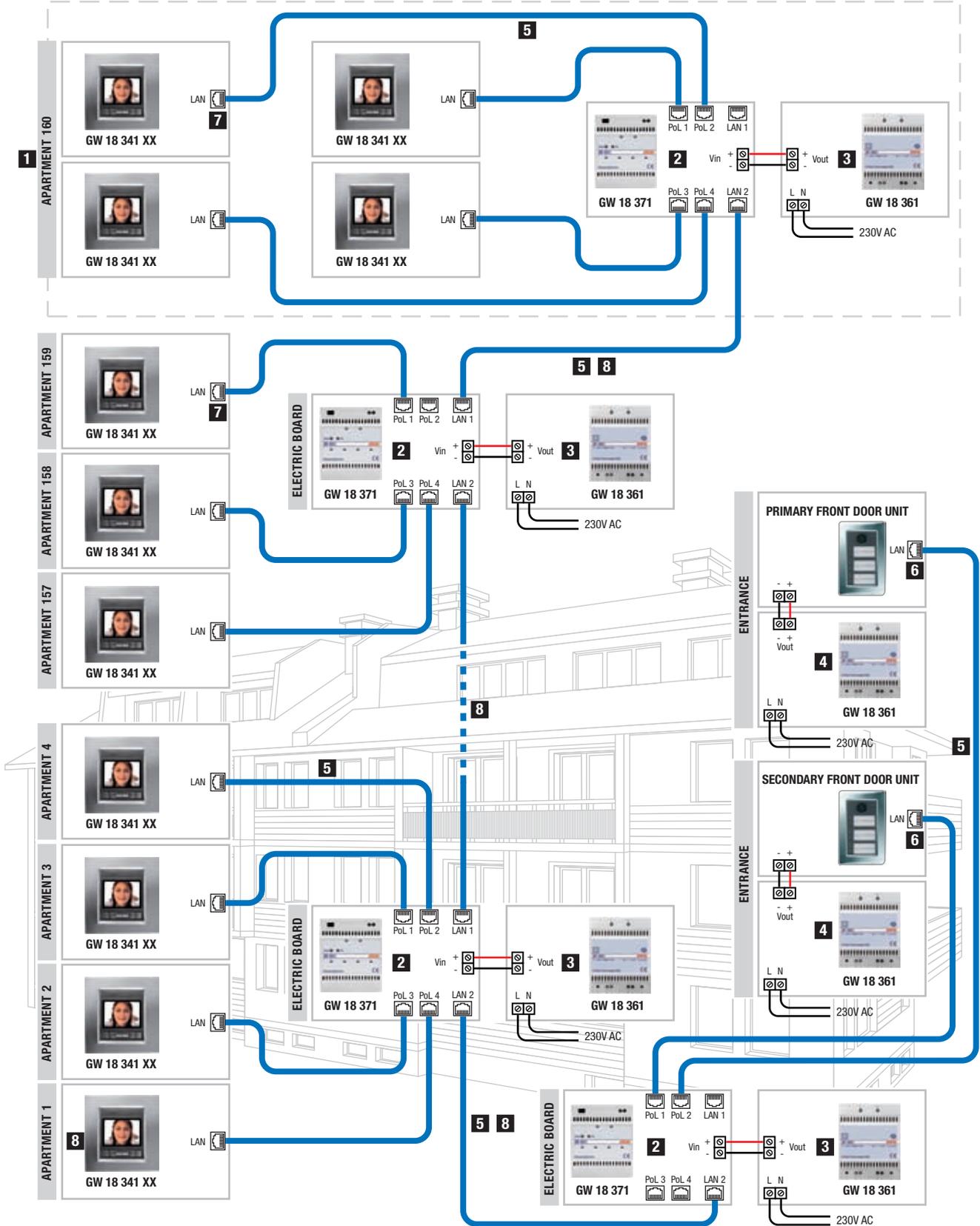
| COMPOSITION OF THE TWO-FAMILY VIDEO ENTRYPHONE KIT GW 18 402 VT - GW 18 402 VA |   |          |
|--|---|----------|
| Code   | Description   | Quantity |
| GW 18 343 VT <i>or</i> GW 18 343 VA  | Video entryphone with speakerphone - wall-mounting - titanium or slate colour | 2        |
| GW 18 362  | Multiple audio/video power supply unit - DIN rail                             | 1        |
| GW 18 302  | Audio/video module with 2 push-buttons for front door unit                    | 1        |
| GW 18 101 VT <i>or</i> GW 18 101 VA  | Metal plate for front door unit - titanium or slate colour                    | 1        |
| GW 18 121  | Frame for front door unit   | 1        |
| GW 18 131  | Flush-mounting box for front door unit  | 1        |
| GW 18 371  | Ethernet switch - DIN rail  | 1        |

### Installation notes

- 1** The wiring of the two-family kit requires the use of a direct LAN cable.
- 2** Using 1mm<sup>2</sup> cables, the maximum distance between the power supply unit and the front door unit is 100m.
- 3** Using 1mm<sup>2</sup> cables, the maximum distance between the front door unit and the electro-lock is 50m.
- 4** Using 1mm<sup>2</sup> cables, the maximum distance between the power supply unit and the ethernet switch is 20m if the distance between the apartment unit and ethernet switch is 100m (the sum of the two distances must not exceed 120m).
- 5** To connect the various devices, you can use the LAN cables GW 38 189 (cat. 5e UTP for indoor laying) and GW 38 195 (cat. 5e UTP for outdoor laying), or the equivalent cables available on the market.

# CONNECTION DIAGRAMS

## Video entryphone system - 160 apartments, 1 upright



# CONNECTION DIAGRAMS

| VIDEO ENTRYPHONE SYSTEM FOR UP TO 160 APARTMENTS, 1 UPRIGHT<br>- GEWISS PRODUCTS NEEDED |  |
|---|--|
| Code  | Description  |
| GW 18 341 xx  | Flush-mounting video entryphone with speakerphone    |
| GW 24 237   | Flush-mounting box for video entryphone              |
| GW 18 361   | Single audio/video power supply unit - DIN rail      |
| GW 18 371   | Ethernet switch - DIN rail                           |
| GW 38 189   | LAN UTP network cable - cat. 5e - for indoor laying  |
| GW 38 195   | LAN UTP network cable - cat. 5e - for outdoor laying |

For the products needed for the front door unit, refer to *Combinations for front door units*.

## Variations

- The flush-mounting video entryphone with speakerphone is available in the colours titanium (GW 18 341 VT), milk white (GW 18 341 TB) and slate (GW 18 341 VA).
- As an alternative to the flush-mounting video entryphone with speakerphone, you can use the wall-mounting video entryphone with speakerphone, available in the colours milk white (GW 18 343 TB), titanium (GW 18 343 VT) and slate (GW 18 343 VA), or the wall-mounting entryphone (GW 18 360).
- As an alternative to the LAN cables GW 38 189 - GW 38 195, you can use any cables with the same or improved characteristics, available on the market.

## Installation notes

- 1** The diagram is valid for a number of apartment units between 1 and 640 (160 apartments with 4 apartment units each).
- 2** Up to 4 apartment units can be connected to each Ethernet switch.
- 3** Each Ethernet switch must be individually powered by a power supply unit GW 18 361; the possibility of powering several switches with the same power supply unit may be evaluated on the basis of the current absorbed by the switches, and by the devices connected to them. Using 1mm<sup>2</sup> cables, the maximum distance between the power supply unit and the ethernet switch is 20m if the distance between the apartment unit and ethernet switch is 100m (the sum of the two distances must not exceed 120m).
- 4** Each front door unit must be individually powered by a power supply unit GW 18 361.
- 5** The LAN cable segment used for each tract connecting two devices must be no longer than 100m.
- 6** To connect the front door units, refer to the paragraphs *Front door unit modules* and *LAN network*, and the chapter *Connecting the outdoor devices*.
- 7** To connect the apartment units, refer to the paragraph *LAN network* and the chapter *Connecting the outdoor devices*.
- 8** The diagram assumes the connection of the uprights via LAN ports, in order to leave the PoL ports free for connecting the apartment units and for any future extensions.

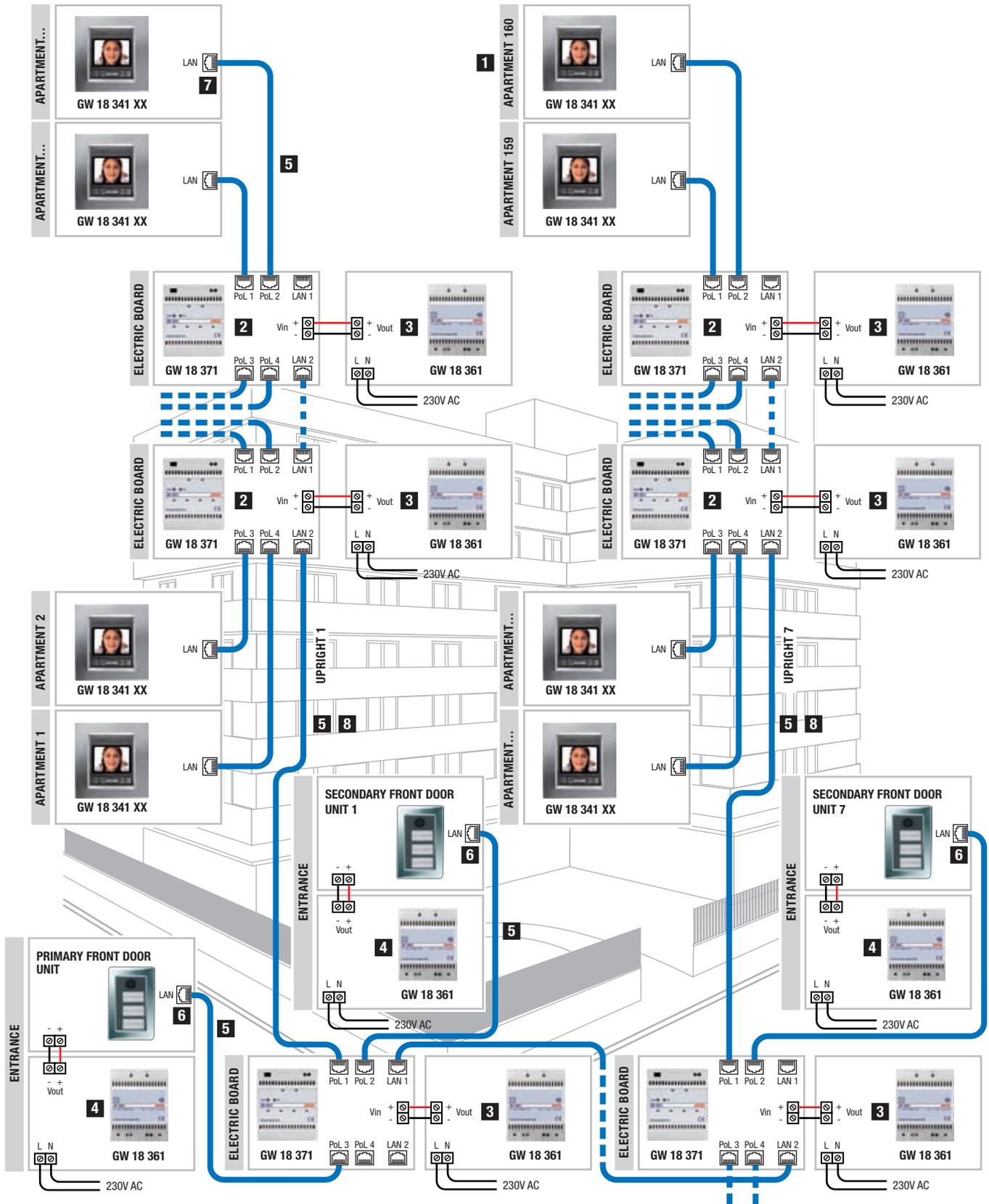
## Programming notes

The video entryphone system is programmed simply matching the front door unit calling push-button with the apartment units. In this manner it is possible to install up to 1 relay unit and up to 1 camera interface for the connection of analogue telecameras (use cables with an impedance of 75 Ohm, e.g. RG59). The video entryphone system must be programmed via PC for the following additional functions: programming with more than 1 relay unit or more than 1 camera interface.

The PC must be equipped with the system configuration software and must be connected to the video entryphone system via the LAN port of an ethernet switch or, alternatively, a switched OFF PoL port.

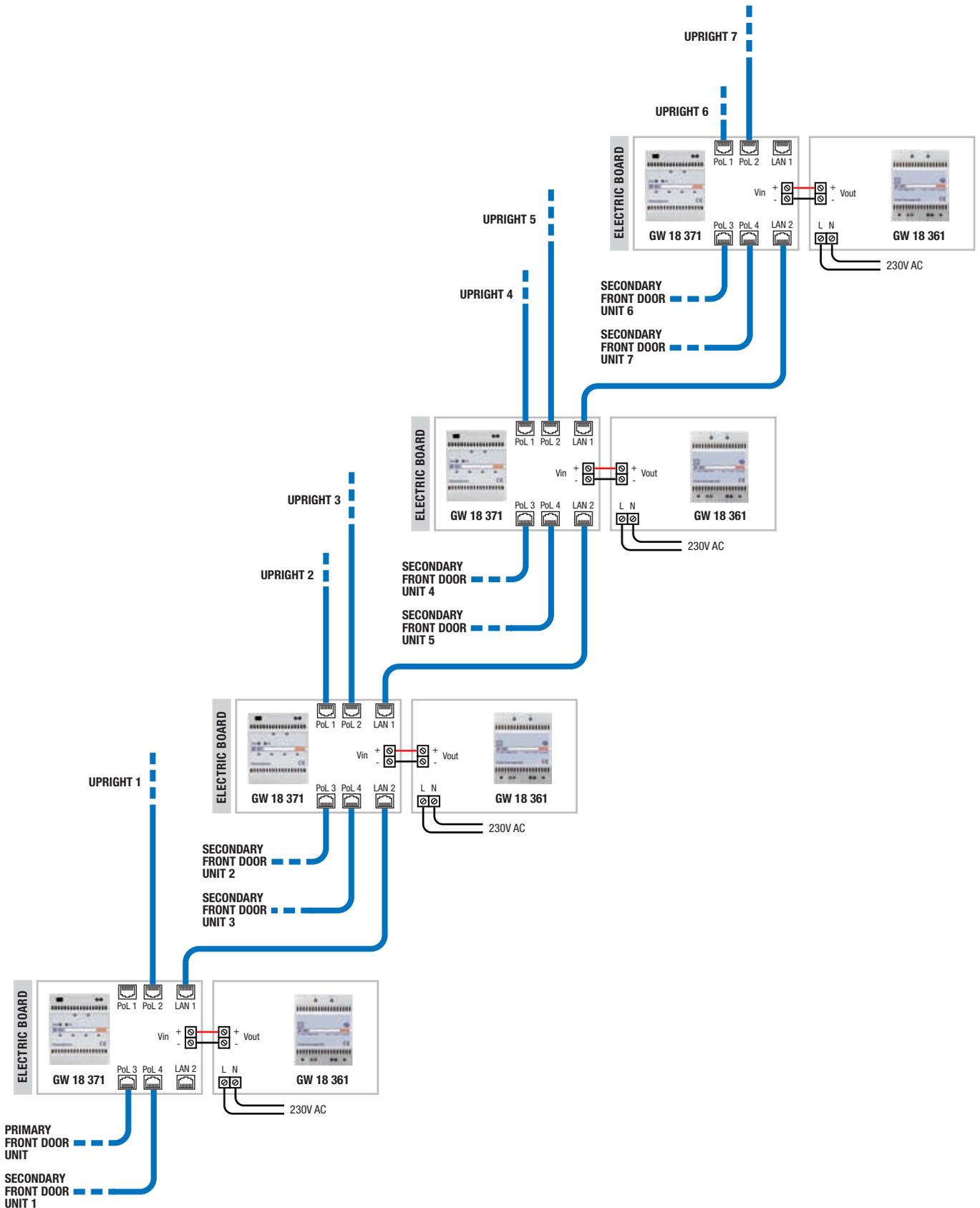
# CONNECTION DIAGRAMS

## Video entryphone system - 160 apartments, 7 uprights



# CONNECTION DIAGRAMS

Example of how to connect the uprights and primary/secondary front door units



# CONNECTION DIAGRAMS

| VIDEO ENTRYPHONE SYSTEM FOR UP TO 160 APARTMENTS, 7 UPRIGHTS<br>- GEWISS PRODUCTS NEEDED |  |
|--|--|
| Code   | Description  |
| GW 18 341 xx   | Flush-mounting video entryphone with speakerphone    |
| GW 24 237  | Flush-mounting box for video entryphone              |
| GW 18 361  | Single audio/video power supply unit - DIN rail      |
| GW 18 371  | Ethernet switch - DIN rail                           |
| GW 38 189  | LAN UTP network cable - cat. 5e - for indoor laying  |
| GW 38 195  | LAN UTP network cable - cat. 5e - for outdoor laying |

For the products needed for the front door unit, refer to *Combinations for front door units*.

## Variations

- The flush-mounting video entryphone with speakerphone is available in the colours titanium (GW 18 341 VT), milk white (GW 18 341 TB) and slate (GW 18 341 VA).
- As an alternative to the flush-mounting video entryphone with speakerphone, you can use the wall-mounting video entryphone with speakerphone, available in the colours milk white (GW 18 343 TB), titanium (GW 18 343 VT) and slate (GW 18 343 VA), or the wall-mounting entryphone (GW 18 360).
- As an alternative to the LAN cables GW 38 189 - GW 38 195, you can use any cables with the same or improved characteristics, available on the market.

## Installation notes

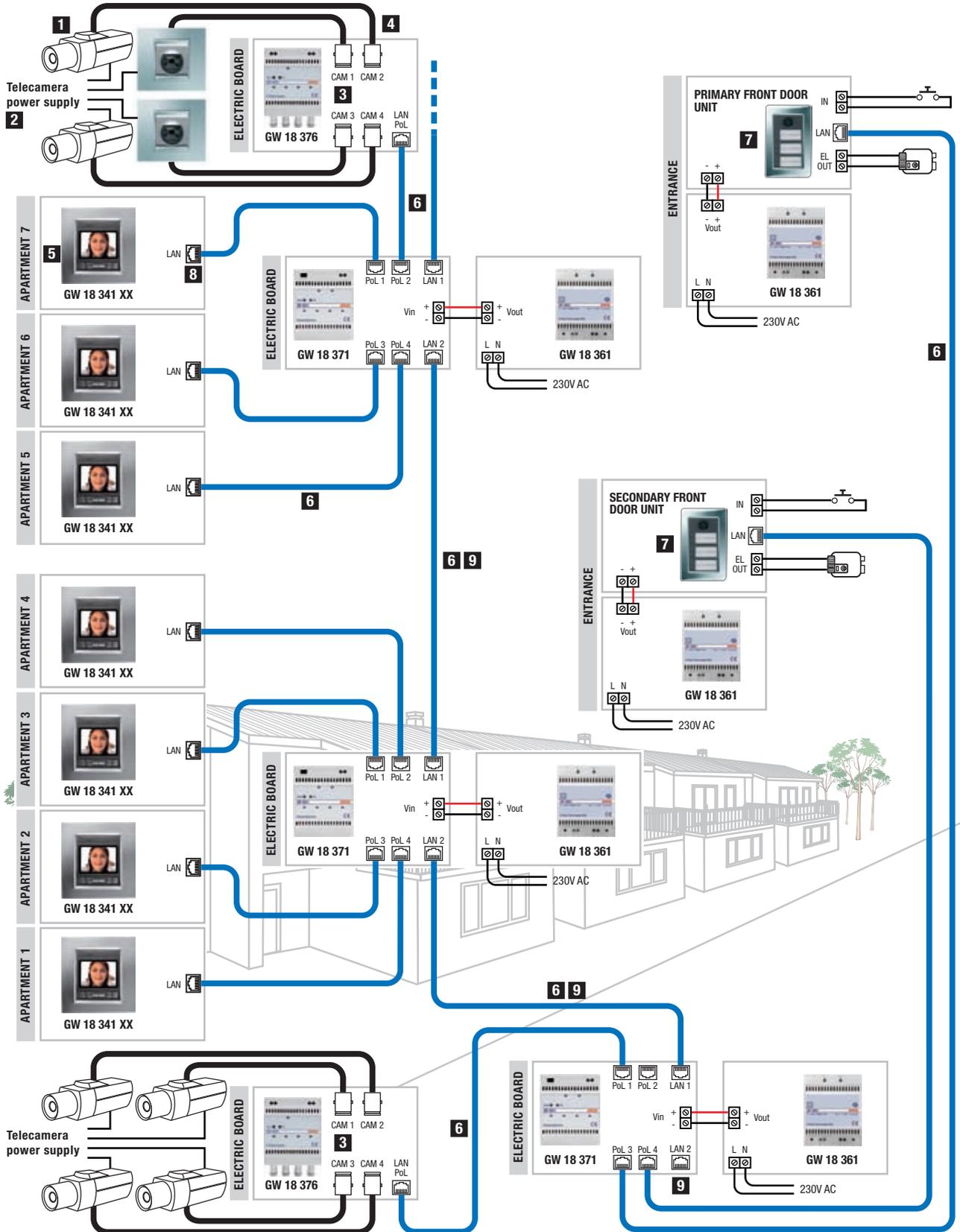
- 1** The diagram is valid for a number of apartment units between 1 and 640 (160 apartments with 4 apartment units each).
- 2** Up to 4 apartment units can be connected to each Ethernet switch.
- 3** Each Ethernet switch must be individually powered by a power supply unit GW 18 361; the possibility of powering several switches with the same power supply unit may be evaluated on the basis of the current absorbed by the switches, and by the devices connected to them. Using 1mm<sup>2</sup> cables, the maximum distance between the power supply unit and the ethernet switch is 20m if the distance between the apartment unit and ethernet switch is 100m (the sum of the two distances must not exceed 120m).
- 4** Each front door unit must be individually powered by a power supply unit GW 18 361.
- 5** The LAN cable segment used for each tract connecting two devices must be no longer than 100m.
- 6** To connect the front door units, refer to the paragraphs *Front door unit modules* and *LAN network*, and the chapter *Connecting the outdoor devices*.
- 7** To connect the apartment units, refer to the paragraph *LAN network* and the chapter *Connecting the outdoor devices*.
- 8** The diagram assumes the connection of the uprights via LAN and PoL ports, without distinction.

## Programmation notes

The video entryphone system is programmed via PC (equipped with the system configuration software), connected to the video entryphone system via the LAN port of an ethernet switch or, alternatively, a switched OFF PoL port.

# CONNECTION DIAGRAMS

## Video entryphone system with video control cameras



# CONNECTION DIAGRAMS

| VIDEO ENTRYPHONE SYSTEM WITH CONTROL TELECAMERAS<br>- GEWISS PRODUCTS NEEDED |  |
|--|--|
| Code   | Description  |
| GW 18 341 xx   | Flush-mounting video entryphone with speakerphone        |
| GW 24 237  | Flush-mounting box for video entryphone                  |
| GW 18 361  | Single audio/video power supply unit - DIN rail          |
| GW 18 371  | Ethernet switch - DIN rail                               |
| GW 18 376  | Camera interface - DIN rail                              |
| GW 14 770  | PAL indoor telecamera - flush-mounting (titanium colour) |
| GW 38 189  | LAN UTP network cable - cat. 5e - for indoor laying      |
| GW 38 195  | LAN UTP network cable - cat. 5e - for outdoor laying     |

For the products needed for the front door unit, refer to *Combinations for front door units*.

## Variations

- The flush-mounting video entryphone with speakerphone is available in the colours titanium (GW 18 341 VT), milk white (GW 18 341 TB) and slate (GW 18 341 VA).
- As an alternative to the flush-mounting video entryphone with speakerphone, you can use the wall-mounting video entryphone with speakerphone, available in the colours milk white (GW 18 343 TB), titanium (GW 18 343 VT) and slate (GW 18 343 VA), or the wall-mounting entryphone (GW 18 360).
- As an alternative to the LAN cables GW 38 189 - GW 38 195, you can use any cables with the same or improved characteristics, available on the market.

## Installation notes

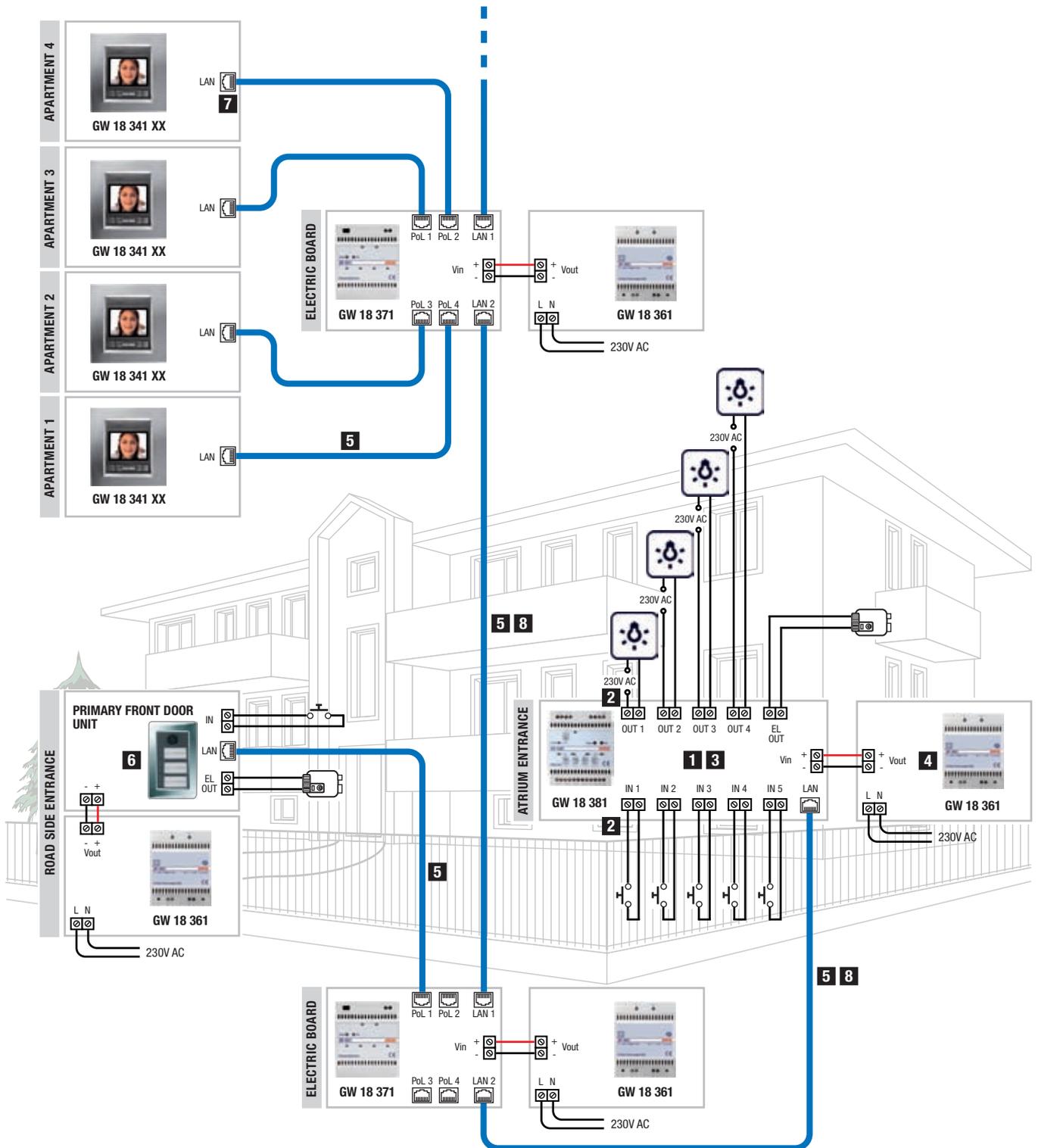
- 1** Up to 4 analogue telecameras (PAL/NTSC standard) can be connected to each camera interface for video control.
- 2** Each telecamera must be individually powered.
- 3** The system may contain up to 4 camera interfaces (a total of 16 telecameras).
- 4** The length of the cable connecting the telecamera to the camera interface must be no longer than 100m (use cables with an impedance of 75 Ohm, e.g. RG59).
- 5** Each apartment unit can cyclically show the images of the telecameras connected to the camera interfaces.
- 6** The LAN cable segment used for each tract connecting two devices must be no longer than 100m.
- 7** To connect the front door units, refer to the paragraphs *Front door unit modules* and *LAN network*, and the chapter *Connecting the outdoor devices*.
- 8** To connect the apartment units, refer to the paragraph *LAN network* and the chapter *Connecting the outdoor devices*.
- 9** The diagram assumes the connection of the uprights via LAN ports, in order to leave the PoL ports free for connecting the apartment units and for any future extensions.

## Programming notes

The video entryphone system is programmed via PC (equipped with the system configuration software), connected to the video entryphone system via the LAN port of an ethernet switch or, alternatively, a switched OFF PoL port.

# CONNECTION DIAGRAMS

## Video entryphone system with relay unit



# CONNECTION DIAGRAMS

| VIDEO ENTRYPHONE SYSTEM WITH RELAY UNIT<br>- GEWISS PRODUCTS NEEDED |  |
|---|--|
| Code  | Description  |
| GW 18 341 xx  | Flush-mounting video entryphone with speakerphone    |
| GW 24 237   | Flush-mounting box for video entryphone              |
| GW 18 361   | Single audio/video power supply unit - DIN rail      |
| GW 18 371   | Ethernet switch - DIN rail                           |
| GW 18 381   | Relay unit - DIN rail                                |
| GW 38 189   | LAN UTP network cable - cat. 5e - for indoor laying  |
| GW 38 195   | LAN UTP network cable - cat. 5e - for outdoor laying |

For the products needed for the front door unit, refer to *Combinations for front door units*.

## Variations

- The flush-mounting video entryphone with speakerphone is available in the colours titanium (GW 18 341 VT), milk white (GW 18 341 TB) and slate (GW 18 341 VA).
- As an alternative to the flush-mounting video entryphone with speakerphone, you can use the wall-mounting video entryphone with speakerphone, available in the colours milk white (GW 18 343 TB), titanium (GW 18 343 VT) and slate (GW 18 343 VA), or the wall-mounting entryphone (GW 18 360).
- As an alternative to the LAN cables GW 38 189 - GW 38 195, you can use any cables with the same or improved characteristics, available on the market.

## Installation notes

- 1 Each relay unit has 4 potential-free relay contacts for managing loads at 230V, and 1 output for an electro-lock.
- 2 Each output is linked with a separate input for connecting the command push-buttons.
- 3 The system may contain up to 4 relay units (a total of 16 relay outputs and 4 outputs for electro-locks).
- 4 Each relay unit must be individually powered by a power supply unit GW 18 361 if an electro-lock is used, or if it is connected to a non-powered LAN port.
- 5 The LAN cable segment used for each tract connecting two devices must be no longer than 100m.
- 6 To connect the front door units, refer to the paragraphs *Front door unit modules* and *LAN network*, and the chapter *Connecting the outdoor devices*.
- 7 To connect the apartment units, refer to the paragraph *LAN network* and the chapter *Connecting the outdoor devices*.
- 8 The diagram assumes the connection of the uprights via LAN ports, in order to leave the PoL ports free for connecting the apartment units and for any future extensions.

## Programmation notes

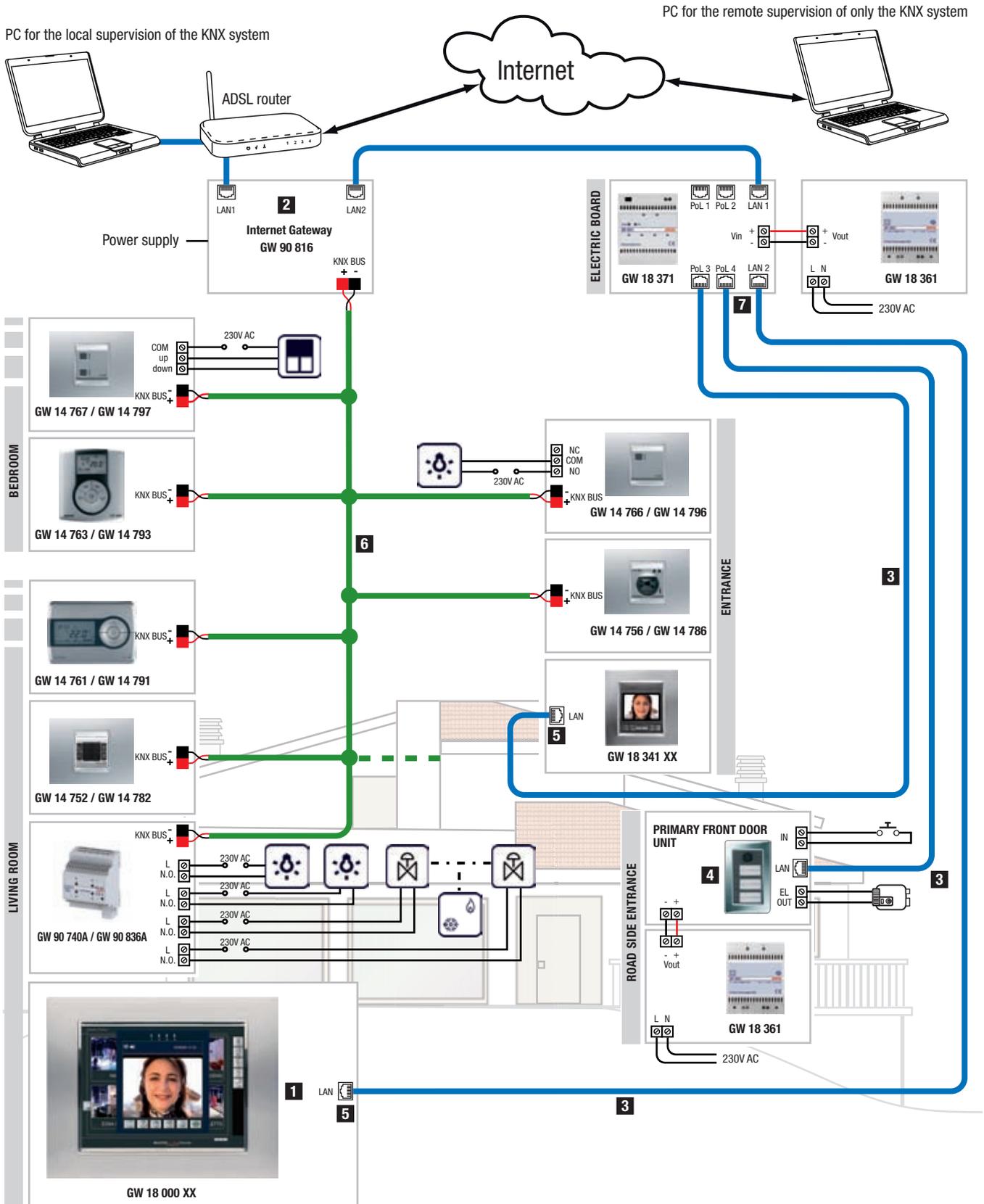
The video entryphone system is programmed simply matching the front door unit calling push-button with the apartment units. In this manner it is possible to install up to 1 relay unit and up to 1 camera interface for the connection of analogue telecameras (use cables with an impedance of 75 Ohm, e.g. RG59).

The video entryphone system must be programmed via PC for the following additional functions: programming with more than 1 relay unit or more than 1 camera interface.

The PC must be equipped with the system configuration software and must be connected to the video entryphone system via the LAN port of an ethernet switch or, alternatively, a switched OFF PoL port.

# CONNECTION DIAGRAMS

## Video entryphone system with Vision Master Chorus



# CONNECTION DIAGRAMS

| VIDEO ENTRYPHONE SYSTEM WITH VISION MASTER CHORUS<br>- GEWISS PRODUCTS NEEDED |  |
|---|--|
| Code  | Description  |
| GW 18 000 xx  | Vision Master Chorus                                 |
| GW 24 101   | Flush-mounting box for Vision Master Chorus          |
| GW 18 341 xx  | Flush-mounting video entryphone with speakerphone    |
| GW 24 237   | Flush-mounting box for video entryphone              |
| GW 18 361   | Single audio/video power supply unit - DIN rail      |
| GW 18 371   | Ethernet switch - DIN rail                           |
| GW 90 816   | Internet Gateway                                     |
| GW 38 189   | LAN UTP network cable - cat. 5e - for indoor laying  |
| GW 38 195   | LAN UTP network cable - cat. 5e - for outdoor laying |

For the products needed for the front door unit, refer to *Combinations for front door units*.

## Variations

- The flush-mounting video entryphone with speakerphone is available in the colours titanium (GW 18 341 VT), milk white (GW 18 341 TB) and slate (GW 18 341 VA).
- As an alternative to the flush-mounting video entryphone with speakerphone, you can use the wall-mounting video entryphone with speakerphone, available in the colours milk white (GW 18 343 TB), titanium (GW 18 343 VT) and slate (GW 18 343 VA), or the wall-mounting entryphone (GW 18 360).
- As an alternative to the LAN cables GW 38 189 - GW 38 195, you can use any cables with the same or improved characteristics, available on the market.

## Installation notes

- 1** Master Chorus creates the apartment unit functions of the video entryphone system, and visualises the graphic pages for supervising the KNX automation system. The automation functions are controlled and made available to Vision Master Chorus by the Internet Gateway.
- 2** The Internet Gateway guarantees that the LAN network of the video entryphone system is separated from the LAN network of the home, allowing the supervision of the KNX system as well.
- 3** The LAN cable segment used for each tract connecting two devices must be no longer than 100m.
- 4** To connect the front door units, refer to the paragraphs *Front door unit modules* and *LAN network*, and the chapter *Connecting the outdoor devices*.
- 5** To connect the apartment units, refer to the paragraph *LAN network* and the chapter *Connecting the outdoor devices*.
- 6** This composition of the KNX Home/Building Automation system is just an example; for this reason, the diagram shows both Home and Building Automation products. For information about the devices and installation method, refer to the relative documentation.

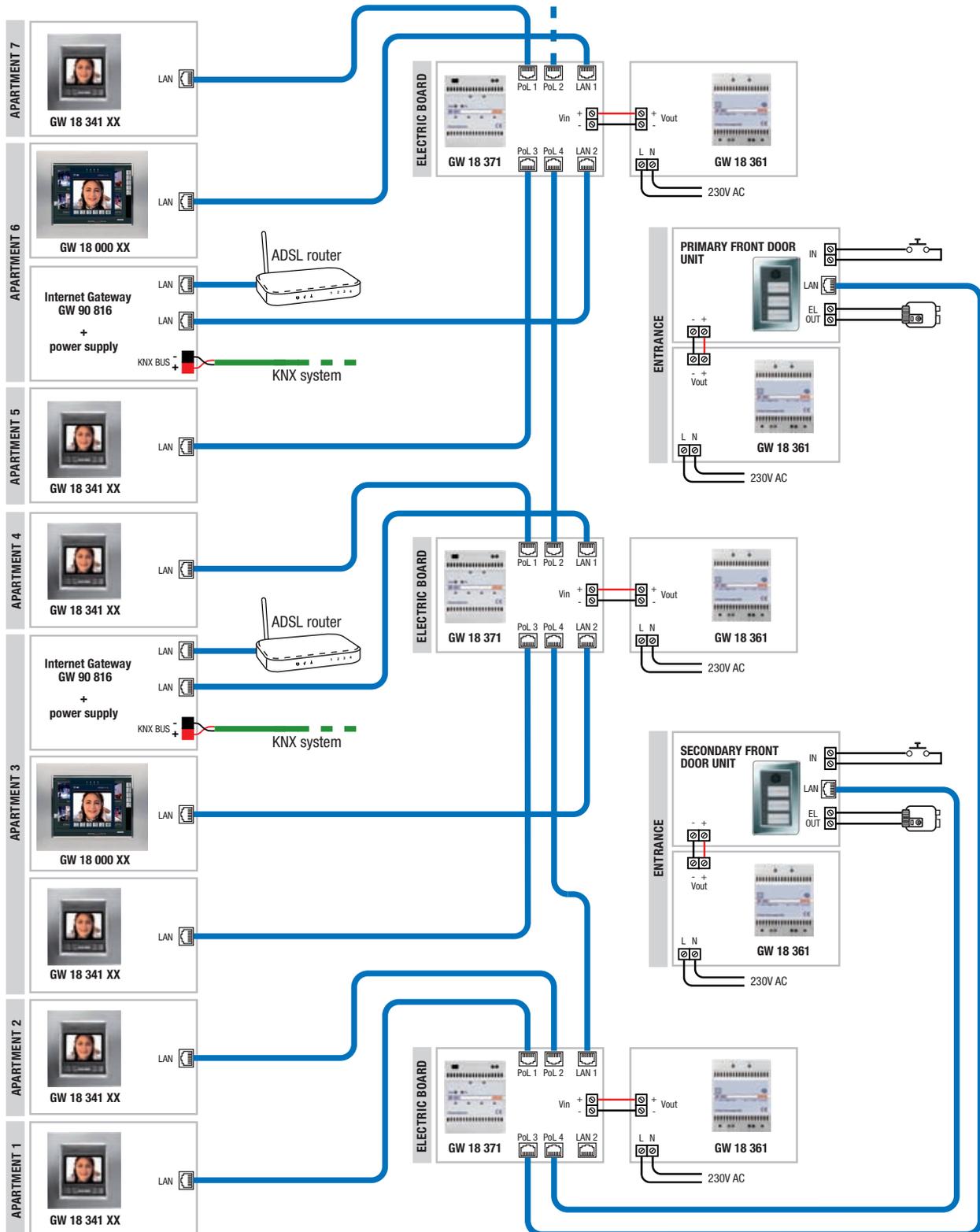
## Programmation notes

The video entryphone system is programmed via PC (equipped with the system configuration software), connected to the video entryphone system via the LAN port of an ethernet switch or, alternatively, a switched OFF PoL port.

# CONNECTION DIAGRAMS

## Using Vision Master Chorus in video entryphone systems with uprights and several inhabited units

Vision Master Chorus can also be used in video entryphone systems involving several inhabited units. In this case, the connections to the individual apartments with Vision Master Chorus must be made according to the diagram below. This type of connection guarantees the insulation of both the various Home/Building Automation systems and the connections with local and remote PCs. In this example, the upright is created via PoL ports so as to leave the LAN ports free for connections to Vision Master Chorus and Internet Gateway.



# INSTALLATION

## Wiring

### Cables that can be used

For the wiring, use non-shielded LAN cables (UTP) of category 5e or above, such as the following Gewiss cables:

- LAN UTP network cable, cat. 5e, for indoor wiring (GW 38 189)
- LAN UTP network cable, cat. 5e, for outdoor wiring (GW 38 195)

If the Gewiss cables are not available for any reason, you can use the equivalent cables available on the market.

### Laying the LAN cable

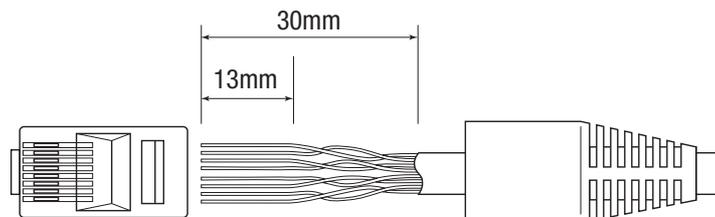
When laying the LAN cable, you must respect the following rules:

- The minimum radius of curvature of the cable must be no less than 4 times its diameter. With shielded cables, the minimum radius could be greater.
- During the laying phase, the maximum cable pulling force must not exceed the values indicated by the manufacturer.
- Do not bend, crush or twist the cable.
- Do not exceed the maximum number of cables that a conduit can hold.
- Respect the distances for separating the LAN cables from the energy cables (refer to *The coexistence of electric and data cables*). A single conduit can hold the LAN cable and the SELV power supply cables (14.4V) of the system.
- Do not lay the cable near non-shielded electromagnetic sources (motors, transformers, etc.).

### Terminating the cable with an RJ45 connector

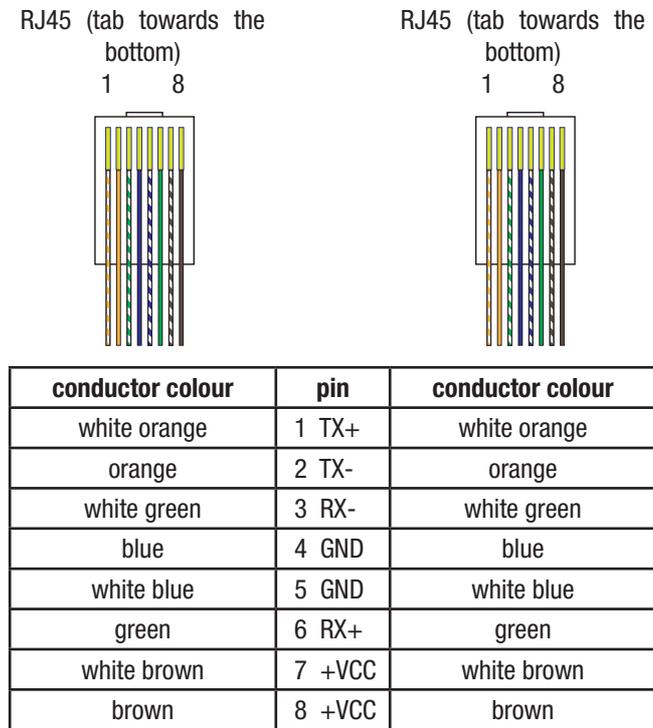
The LAN cables should be terminated at both ends with RJ45 connectors. The connectors must be crimped to the cable in the following way:

1. insert the connector cap
2. remove 30mm of sheath from the cable, taking care not to damage the sheath of the wires
3. untwist - by no more than 13mm - the four pairs of twisted cables
4. flatten the cables and insert them in the connector in the right order
5. crimp the connector with the aid of the special crimper.



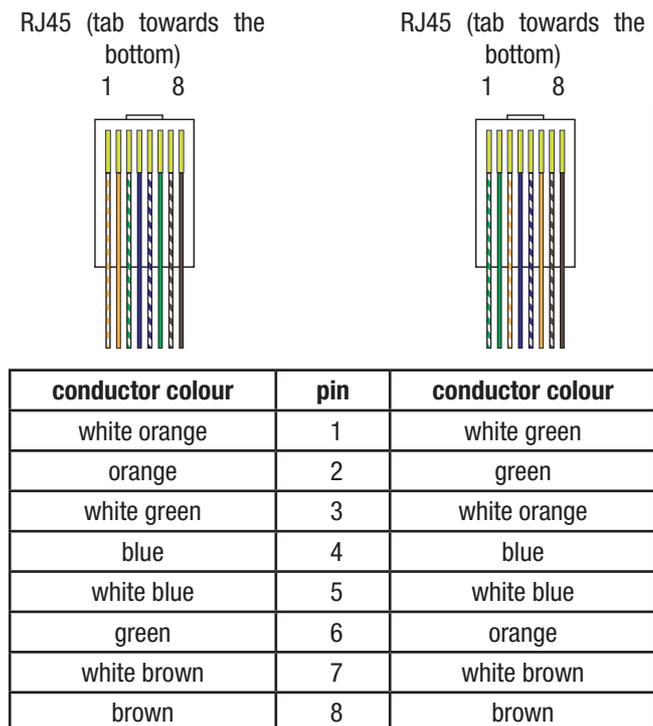
# INSTALLATION

The **direct wiring** of a LAN RJ45-RJ45 network cable is as follows:



After terminating the cable, it is a good idea to test it in order to check the correctness of the wiring and the galvanic continuity of the individual wires. There are specific devices for this purpose, allowing you to carry out these checks quickly in one single operation.

Solely in the case of the direct connection of the front door unit with a single apartment unit (single-family video entryphone kit), you must use the following **non-direct wiring** layout for the LAN cable:



# INSTALLATION

## Video cables

When connecting the auxiliary telecameras to the camera interface, it is necessary to use a coax cable with an impedance of 75 Ohm, such as the RG59/U cable. To lay it, follow the indications already given for LAN cables:

- no tight curves, crushing or bends
- do not insert the video cable in the same conduit used for the electricity supply
- do not subject the video cable to degrees of tensile stress higher than those it can sustain.

The video and LAN cables may coexist in the same conduit.

To terminate the camera interface end of the cable, use a BNC connector. These connectors are available on the market in different assembly versions (welded or crimped).

The RG59/U cable is the most common coax cable for video use. There are other types of coax cable on sale however, with the same impedance (75 Ohm) but different characteristics that may be more suitable in certain situations: for example, cables with a lower signal loss (for long tracts) or thinner cables (for laying in difficult conditions).

Coax cables of different types can be connected simultaneously to a single camera interface.

## Connecting the video entryphone devices

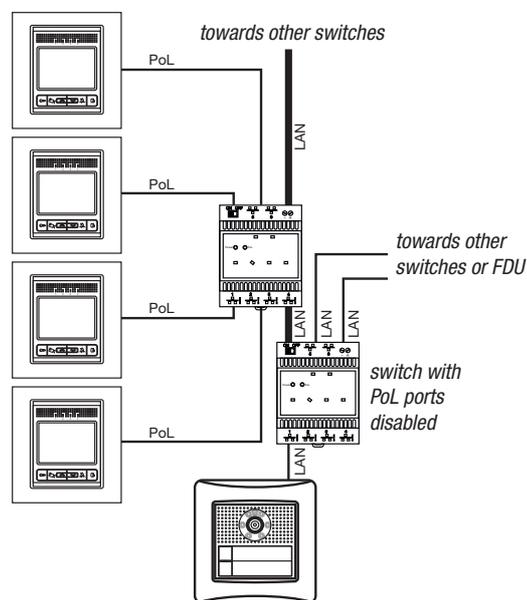


**ATTENTION:** before making the electric connections, make sure all the equipment and cables are not powered.



**ATTENTION:** do not exceed the permitted voltage and current levels!

## LAN network



The LAN network consists of at least one Backbone Line connecting the system switches, and various cut-out lines that start from the switches and connect the various devices to the system.

The *Ethernet switches* (GW 18 371) have several connection ports: 2 of the LAN standard type and 4 PoL (Power over LAN). The PoL ports, which also supply power to the devices connected, can be converted into LAN standard ports using the special three-way switch (this modification holds true for all the PoL ports of the switch).



**ATTENTION:** the power supplied by the configurable LAN Ethernet ports (PoL) of the switch does not comply with Standard IEEE 802.3af (PoE - Power over Ethernet).

As an alternative to disabling the PoL ports, you can use the *Ethernet 6-port LAN switch - DIN rail* (GW 38 371), which only has LAN standard ports.

The *Connection diagrams* section shows various examples of systems you can use as a starting point for your own.

It is important to pay special attention when connecting the various devices to the switch ports, because the use of the wrong port may compromise system operation and, in some cases, even cause irreparable damage to the device connected.

The following table shows the various ways of connecting the video entryphone devices. To verify the possibility of connecting any two devices to each other, just find them in the table and check the point where the line meets the column.

# INSTALLATION

|  |     | Ethernet switch (GW 18 371) |     |     |     | Ethernet 6-port LAN switch (GW 38 371) | Front door unit | Apartment unit | Camera interface (GW 18 376) Relay unit (GW 18 381) | Vision Master (GW 18 000) Internet Gateway (GW 90 816) | PC, printers, etc. |
|--|-----|-----------------------------|-----|-----|-----|--|-----------------|----------------|---|--|--------------------|
|  |     | Off                         |     | On  |     |  |                 |                |   |  |                    |
|  |     | PoL                         | LAN | PoL | LAN |  |                 |                |   |  |                    |
| Ethernet switch (GW 18 371)            | Off | PoL                         | ■   | ■   | ■   | ■                                      | ■               | □              | ⊙   | †  | †                  |
|  |     | LAN                         | ■   | ■   | ■   | ■                                      | ■               | ■              | □   | ⊙  | ■                  |
|  | On  | PoL                         | ■   | ■   | ■   | ■                                      | ■               | ■              | ■   | †  | †                  |
|  |     | LAN                         | ■   | ■   | ■   | ■                                      | ■               | ■              | □   | ⊙  | ■                  |
| Ethernet 6-port LAN switch (GW 38 371) |     |                             | ■   | ■   | ■   | ■                                      | ■               | □              | ⊙   | ■  | ■                  |
| Front door unit                        |     |                             | ■   | ■   | ■   | ■                                      | ■               | □              | ⊙   | ■  | ■                  |

## Key

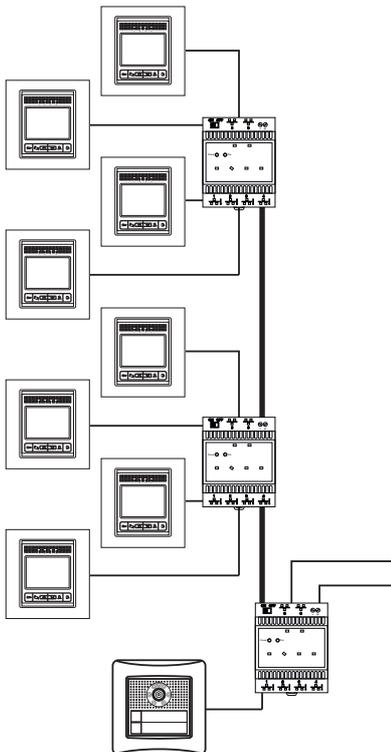
**Front door unit:** Audio/video module for front door unit (GW 18 301), Audio/video module with 2 push-buttons for front door unit (GW 18 302), Audio module for the front door unit (GW 18 311), Audio module with 2 push-buttons for front door unit (GW 18 312).

**Apartment unit:** Video entryphone with speakerphone - flush-mounting and wall-mounting (GW 18 341 TB - GW 18 341 VT - GW 18 341 VA flush-mounting / GW 18 343 TB - GW 18 343 VT - GW 18 343 VA wall-mounting), Flush-mounting entryphone with speakerphone (GW 18 350, GW 18 352, GW 18 354), Wall-mounting entryphone (GW 18 360).

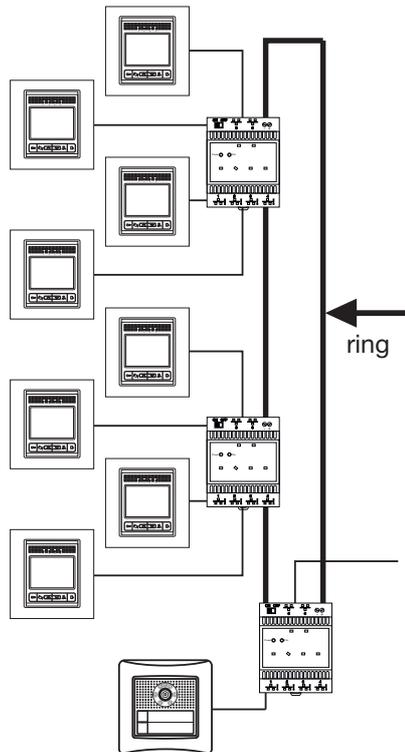
- The connection can be made.
- † The connection could damage the devices involved.
- The connection prevents the correct functioning of the devices involved.
- ★ The connection can be made, but using a non-direct LAN cable (only for a single-family system).
- ⊙ The connection can be made, as long as an auxiliary power supply is fed to the Vin terminals of the device (camera interface/relay unit).



**IMPORTANT:** the maximum length of the LAN connection between two system devices must not exceed 100m.



CORRECT WIRING



INCORRECT WIRING



## ATTENTION!

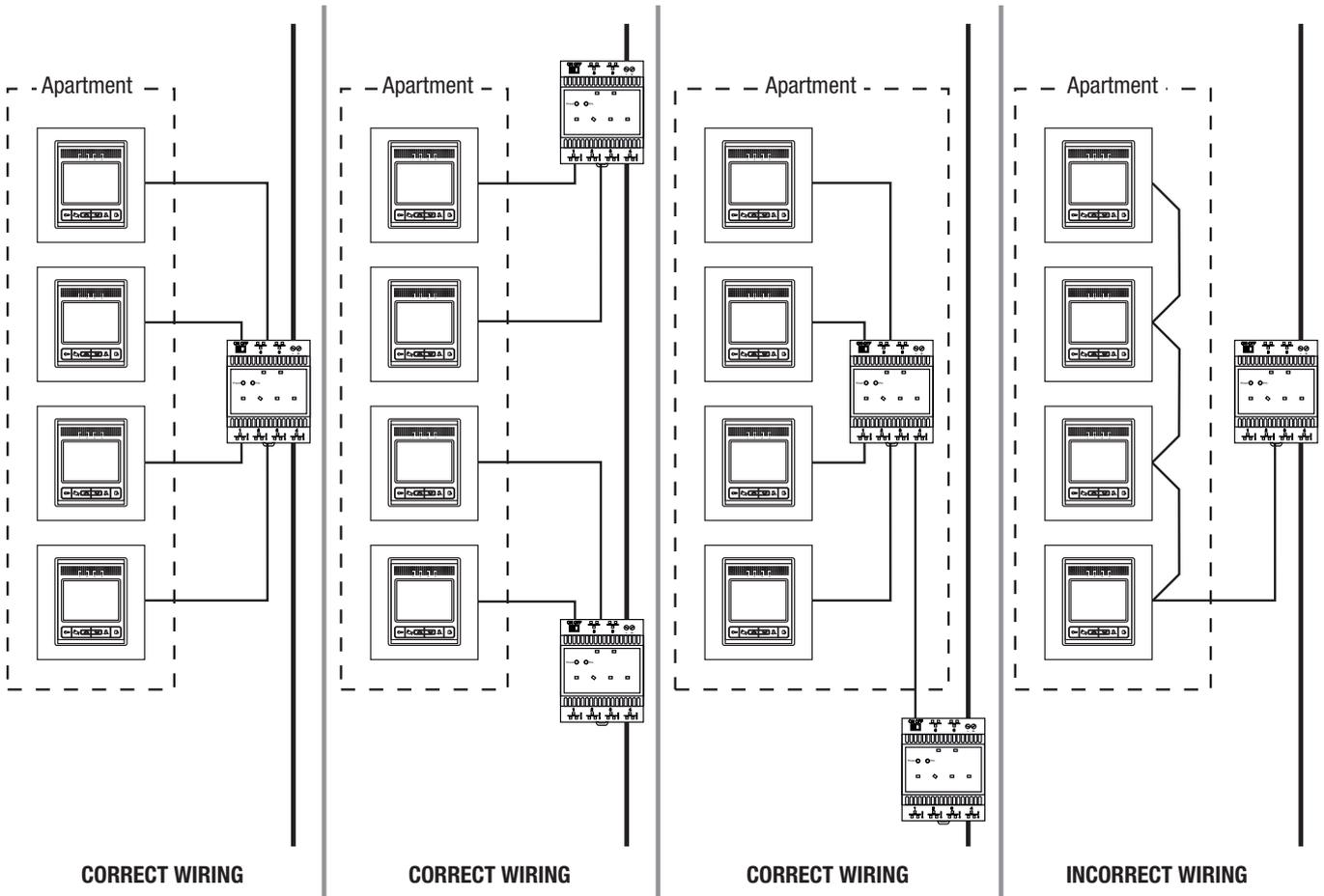
When making the connections, do not create "rings": the connection path between any two system devices must be unique.

A "ring" is created when a LAN connection returns to the starting device, even passing through other devices (as shown in the figure below).

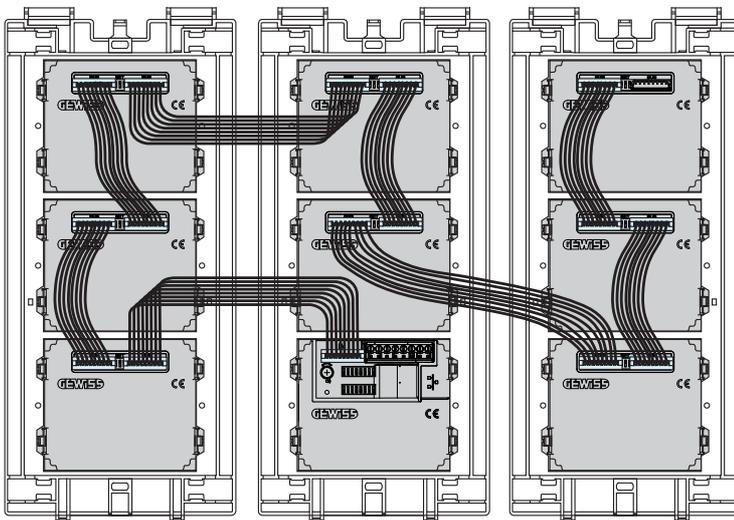
# INSTALLATION

## Apartment with several apartment units

Each apartment can house up to 4 apartment units. The connection of these apartment units must not be of the cascade type (a single LAN cable with cut-outs for each apartment unit); each apartment unit must be connected to a separate port of the switch. It is not essential for all the apartment units of the apartment to be connected to the same switch.



## Front door unit modules



The front door units consist of a main module (GW 18 301, GW 18 302, GW 18 311, GW 18 312) combined, if necessary, with one or more auxiliary modules.

The connection with the LAN network is made on the main module only.

The auxiliary modules are connected in cascade form to the main module, using the multi-pole cable with polarised connectors (supplied). The auxiliary modules have a double through connector to allow the connection input and output. Of the two connectors, one has a protection cover.

The auxiliary modules can be connected to each other in whatever sequence you prefer and that facilitates the wiring operation.

# INSTALLATION

## Vision Master Chorus

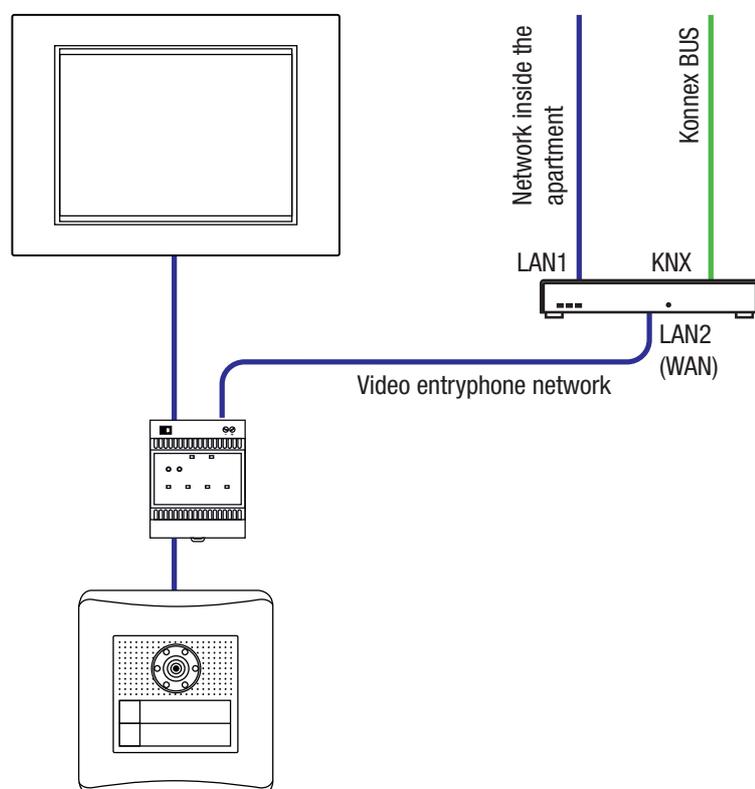
Vision Master Chorus, in combination with an *Internet Gateway* (GW 90 816), acts as an apartment unit and allows you to visualise the graphic pages for the command and supervision of the KNX Home & Building Automation system.

The separation of the LAN video entryphone network and the LAN network inside the apartment is guaranteed by the two separate ports (LAN1 and LAN2) of the Internet Gateway (not configured as a bridge). To avoid any unauthorised access, you are advised to immediately change the predefined user password and “safe IP” address in the Internet Gateway.

Even using the Internet Gateway, it is not possible to receive calls on the local PC or via remote supervision.



**ATTENTION:** Vision Master Chorus and Internet Gateway must be connected to the LAN ports of the switch, not to the PoL (Power over LAN) ports.



The diagram uses a direct type LAN network cable. For the pinout of the direct cable, refer to *Terminating the cable with the RJ45 connector*.

The diagram shows how to connect the video entryphone system, the KNX system, and the indoor LAN network to Vision Master Chorus. For more information, refer to *Video entryphone system with Vision Master Chorus* in the section *Connection diagrams*.

NB: in order for Vision Master Chorus to visualise any telecameras installed on the LAN1 network (telecameras configured in the pages of the Internet Gateway), the FW version of the Internet Gateway must be 2.0b or greater. In addition, the gateway of the Vision Master Chorus network card must be set with the same IP address as the LAN2 port.

### A CONFIGURATION EXAMPLE

To better clarify how to configure the IP addresses, there is an example below; it can be adapted to your own particular requirements (the IP addresses can be freely selected within the IP classes allowed).

#### Vision Master Chorus

IP: 10.182.1.10  
Subnet mask: 255.0.0.0  
Gateway: 10.182.1.100  
(same IP address as the LAN2 Gateway, in order to visualise any possible telecameras on the LAN1 network)

#### Internet Gateway

|             |              |  |
|-------------|--------------|--|
| <u>LAN1</u> | IP:          | 192.168.0.100  |
|             | Subnet mask: | 255.255.255.0  |
|             | Gateway:     | 10.182.0.1   |
| <u>LAN2</u> | IP:          | 10.182.1.100 (same IP class as Vision Master Chorus) |
|             | Subnet mask: | 255.0.0.0  |
|             | Gateway:     | 10.182.1.100   |

# INSTALLATION

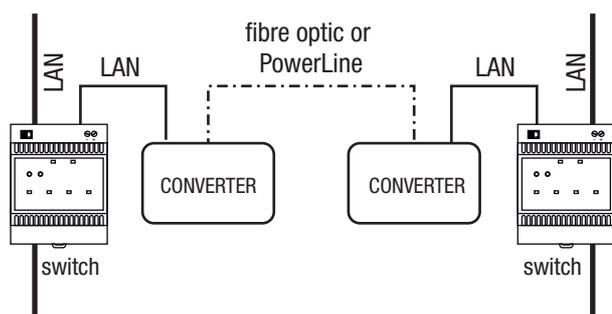
## Signal extension and long distances

The switches regenerate the packages that carry the information along the LAN video entryphone network, thereby guaranteeing the maximum data quality. In this way, it is possible to create highly extended systems, as long as each LAN tract does not exceed 100m.

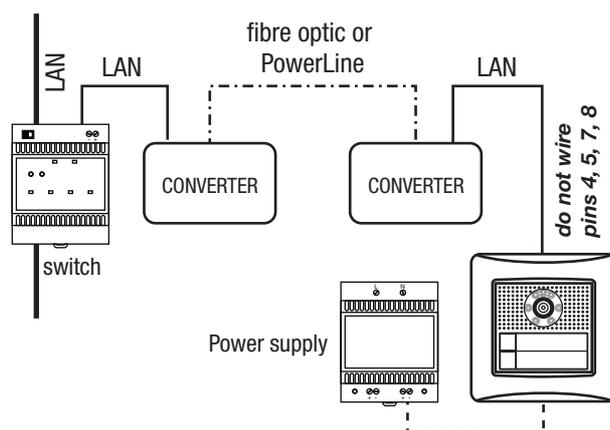
If the tract between two devices exceeds 100m, and you do not want to - or cannot - use intermediate switches to regenerate the signal, you can use the same techniques as used for the Ethernet networks, i.e. special signal converters (easily found on the market) to overcome the 100-metre limit.

Two possible solutions are:

- a LAN (Ethernet) / optic fibre converter, that transmits the signal on an optic fibre and can extend the single tract by several kilometres. One of the advantages of this technique is that the optic fibre is immune to electromagnetic fields, so the LAN / optic fibre converters can also be useful for passing signals near strong electromagnetic fields.
- LAN (Ethernet) / PowerLine converter, that transmits the signal in the form of waves channelled along the electricity network. Compared with the optic fibre solution, there are pros and cons with the PowerLine. The pros include the simplification of actually producing the system, while one of the cons is the possibility of subsequent malfunctioning owing to the “opening” characteristic of electric networks.



Connecting distant sections of the video entryphone system via an optic fibre or PowerLine. This is the general connection diagram for connecting any type of device by means of the switches.



Connecting a single distant device to the video entryphone system via an optic fibre or PowerLine. This layout can be used for those devices (front door unit, camera interface and relay unit) that may be directly powered by a power supply unit.

For the technical specifications of the converters, and installation methods, refer to the technical documentation provided by the converter manufacturers.



**ATTENTION:** when using a converter, you must take the following precautions to guarantee the functioning and safety of the video entryphone system:

- the converters must be connected to the LAN port, not to the PoL ports of the Ethernet switches: if necessary, disconnect the PoL supply of the switches GW 18 371 or, alternatively, use the switches GW 38 371
- the tract made in optic fibre or with a PowerLine only carries the signals, not the power supply, so you must ensure the devices downstream from this tract are powered in another way (via switches or with a power supply unit, if the device is suitable)
- if the converter is to be directly connected to the front door unit, camera interface or relay unit, do not wire pins 4, 5, 7, 8 of the RJ45 connector because these devices carry a power supply to these pins that would damage the converter.

# INSTALLATION

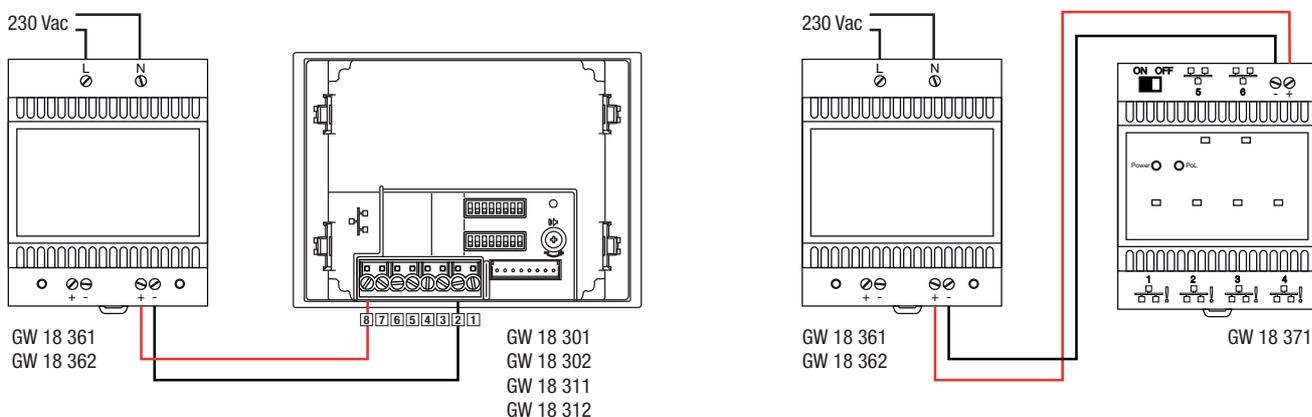
## Powering the devices



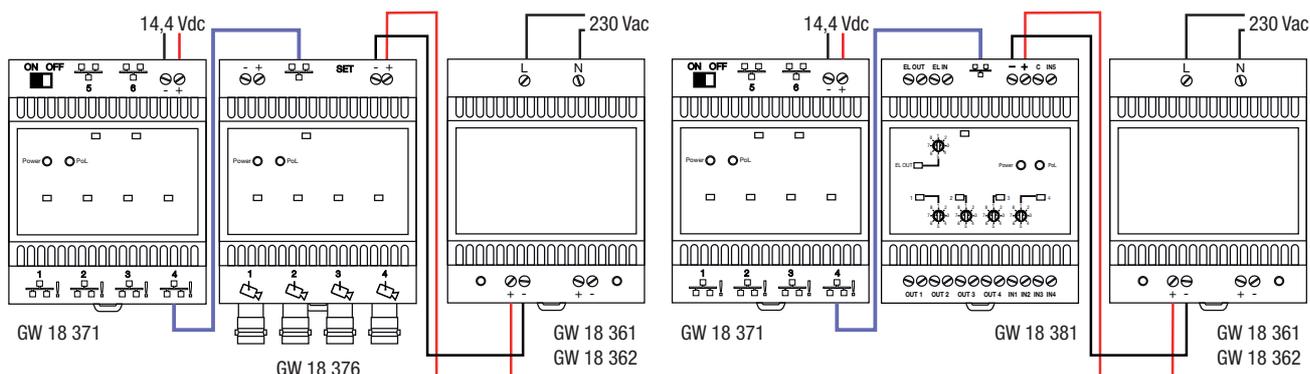
**ATTENTION:** only power the system after making all the connections (LAN network and external devices).

The devices of the video entryphone system can be powered:

- Directly from a power supply unit**, by connecting the device to a single audio/video power supply unit (GW 18 361) or a multiple one (GW 18 362) that provides the 14.4V DC SELV voltage needed for operation. The devices that can be powered in this way are: *Audio/video module for front door unit* (GW 18 301), *Audio/video module with 2 push-buttons for front door unit* (GW 18 302), *Audio module for front door unit* (GW 18 311), *Audio module with 2 push-buttons for front door unit* (GW 18 312), *Ethernet switch - DIN rail* (GW 18 371), *Ethernet 6-port LAN switch - DIN rail* (GW 38 371). *Vision Master Chorus* (GW 18 000), on the other hand, is directly powered with the mains voltage (230V AC), connecting it to the electricity supply of the apartment where it is located.



- Indirectly**, connecting the device to another one that provides a power supply via a data connection. In this way, the following devices can be powered from the audio/video module or the audio module for front door unit: *4 push-button module for front door unit* (GW 18 321), *Call module with electronic index for front door unit* (GW 18 322), *Module with street number for front door unit* (GW 18 331). For further details on how to connect the modules, refer to *Front door unit modules*. Thanks to its PoL ports, the Ethernet switch (GW 18 371) powers the following devices: *Video entryphone with speakerphone - flush-mounting and wall-mounting* (GW 18 341 xx, GW 18 343 xx), *Flush-mounting entryphone with speakerphone* (GW18 350, GW 18 352, GW 18 354), *Wall-mounting entryphone* (GW 18 360). In single-family systems with just one apartment unit, this can also be powered from the front door unit. For further details, refer to the diagram *Single-family video entryphone kit* and the paragraph *Terminating the cable with the RJ45 connector*.
- Directly from a power supply unit, or indirectly.** The *Camera interface - DIN rail* (GW 18 376) and *Relay unit - DIN rail* (GW 18 381) can receive their power supply either from the PoL port of the Ethernet switch (GW 18 371) they are connected to, or from an audio/video power supply unit (GW 18 361, GW 18 362). The two power supply sources may coexist. The camera interface also has a double pair of terminals for an external power supply, thereby allowing the through connection of the power supply unit.



# INSTALLATION



**TIP:** although it is possible to derive the supply voltage (230V AC) of the audio/video power supplies (GW 18 361, GW 18 362) from any point of the mains supply of the building, you are advised to connect all the power supplies of the video entryphone system to a separate circuit fitted with a suitable isolation device (a 2-pole miniature circuit breaker), so the entire system can be disconnected safely.



## Connecting the outdoor devices

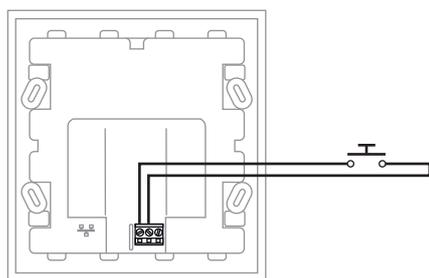
### Apartment unit

#### Local call push-button (doorbell)

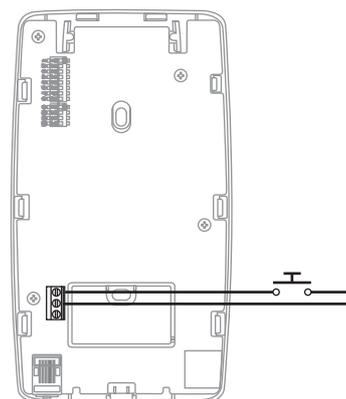
You can connect an external push-button to the apartment unit (video entryphone or wall-mounting entryphone), for the local call (from the doorbell). The ringtone for the call on this button can be differentiated from that of the other types of call (front door unit, intercom, concierge). Like all the other types of call, the local call is excluded when the Privacy function is activated.

If the apartment has several apartment units, they will all ring when a call is received from the landing; you can also connect an outdoor call push-button to each position, but it is not possible to distinguish which one of these activated the call).

The call sound is interrupted by pressing the opening push-button.



GW 18 341 xx  
GW 18 343 xx



GW 18 360

#### Relay output for a local implementation

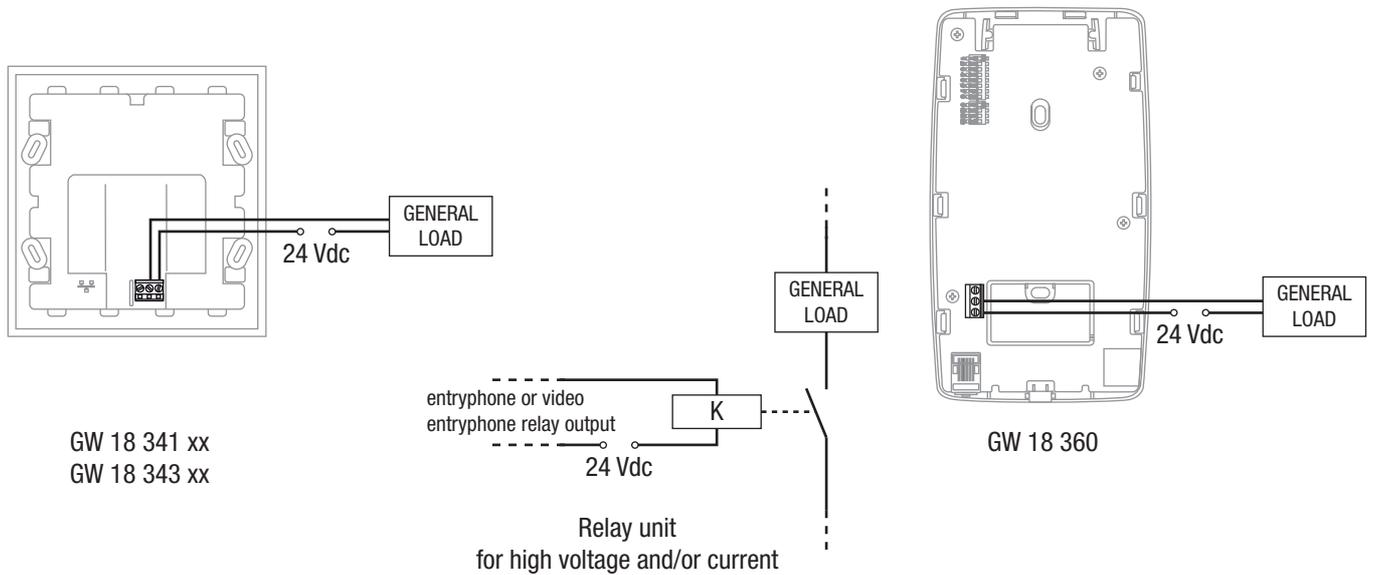
The apartment unit (video entryphone or wall-mounting entryphone) is equipped with a local relay commanded by the opening push-button. The relay output must be enabled during the configuration phase. The relay closure can be time-set.

If the apartment has several apartment units, the pressing of the opening push-button on any one of them will activate all the enabled relays of the various positions (the individual relays can have different closure time settings). The relay output can be used to command an electro-lock for example, or local lighting.



**ATTENTION:** the electric load must not exceed the voltage and current limits allowed for the relay. If you need to manage circuits with higher voltages or currents, use a relay unit (as shown below).

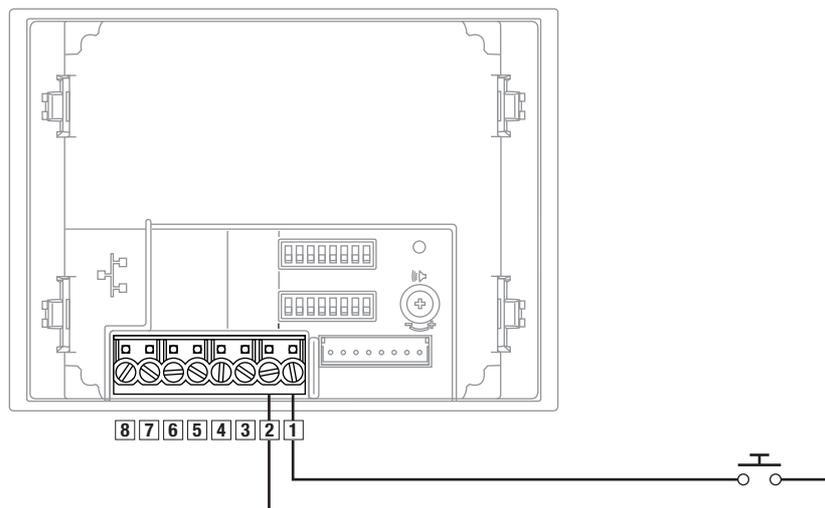
# INSTALLATION



## Front door unit

### Local outdoor push-button with electro-lock (local gate opener)

The main module of the front door unit has an input for connecting a local outdoor push-button (potential-free) that can be configured to activate the electro-lock and local relay (if enabled).



# INSTALLATION

## Relay output for a local actuation

The relay unit output can be configured in two ways:

- activated during a call
- activated at the same time as the electro-lock.

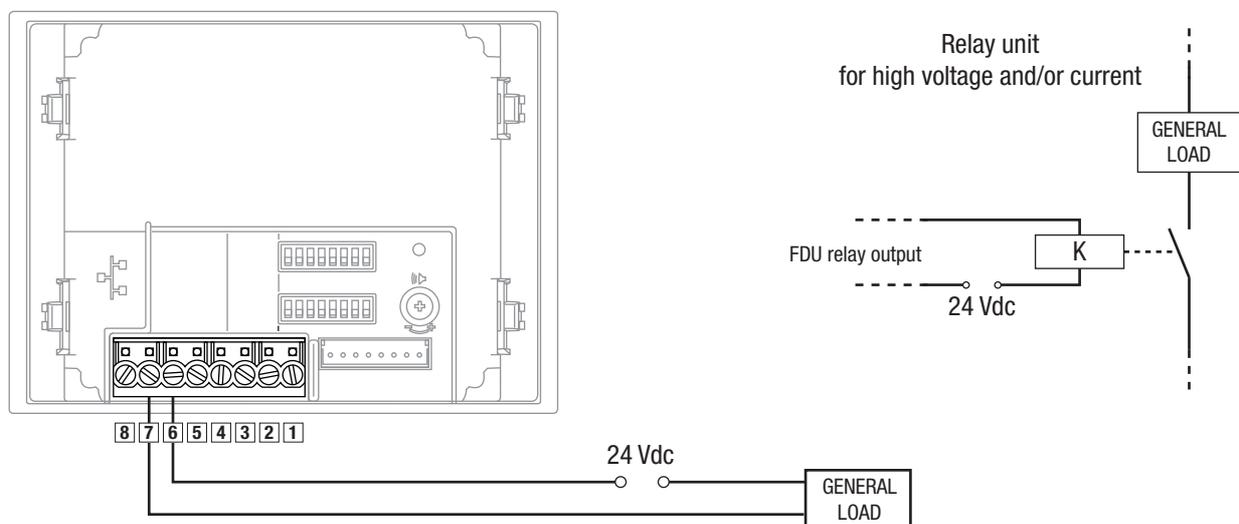
The first function is useful for activating an outdoor light, so you can see the person during the call. Once the call has ended, this output remains active for the time set on the DIP switches.

The second function is useful for activating an outdoor lock, or for an auxiliary command. The output is enabled via the local push-button or the opening push-button of the apartment unit. The duration of the relay closure time is set via the DIP switches.

The relay output is of the potential-free NO type.



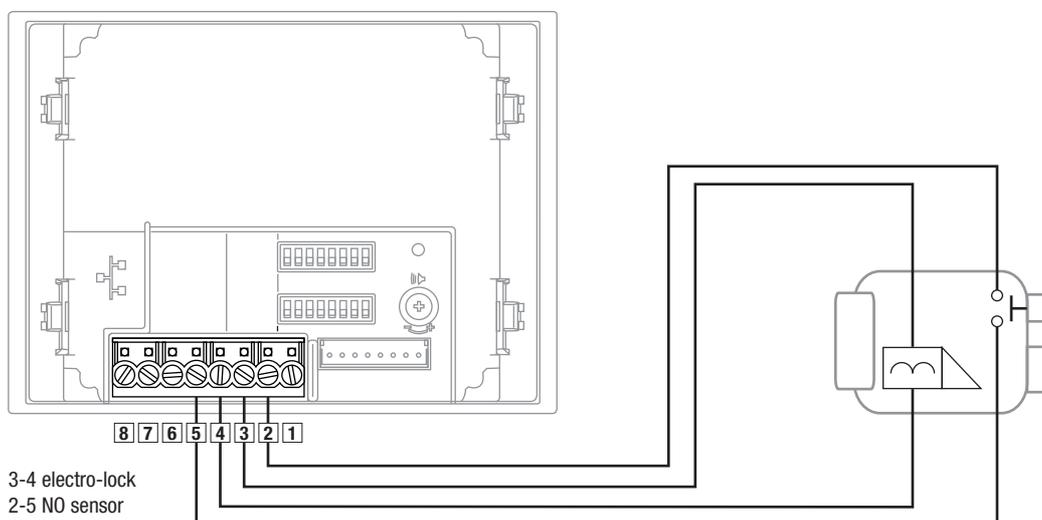
**ATTENTION:** the electric load must not exceed the voltage and current limits allowed for the relay. If you need to manage circuits with higher voltages or currents, use a relay unit (as shown below).



## Detecting the open status of the electro-lock

The main module of the front door unit has an input for connecting a sensor (normally open - NO) that indicates the open status of the electro-lock. Not all electro-locks are equipped with this sensor.

By making this connection, you can receive an alarm on the apartment units (if enabled) when the door stays open for longer than 5 minutes.



3-4 electro-lock  
2-5 NO sensor

# INSTALLATION

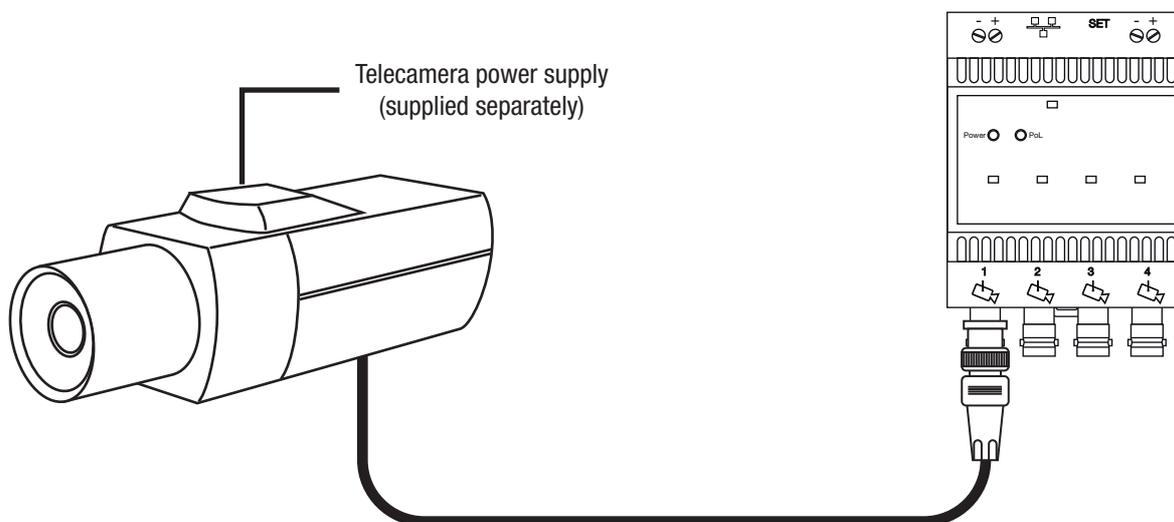
## Telecameras

The signal from the telecamera of the front door unit audio/video module (GW 18 301, GW 18 302) is already coded in the module itself so it can then travel along the LAN network. This means that no other connections are needed.

To connection outdoor analogue telecameras to the system however, you must use the *Camera interface - DIN rail* (GW 18 376) that codes the video signal so it can travel on the LAN network. The composite video output is connected - via a coax cable with an impedance of 75 Ohm (e.g. an RG59 cable) - to one of the video inputs of the camera interface, using a BNC connector.



**ATTENTION:** the camera interface does not power the telecameras connected to it (for information about the powering of the telecameras, refer to the instruction sheets of the cameras themselves).

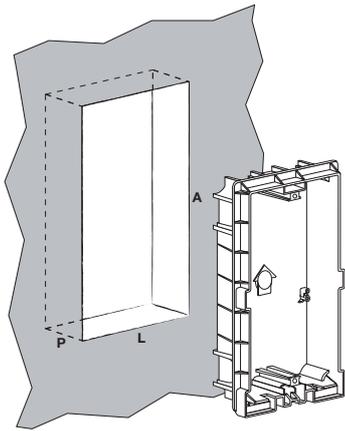


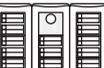
# INSTALLATION

## ▶ Assembling the front door units

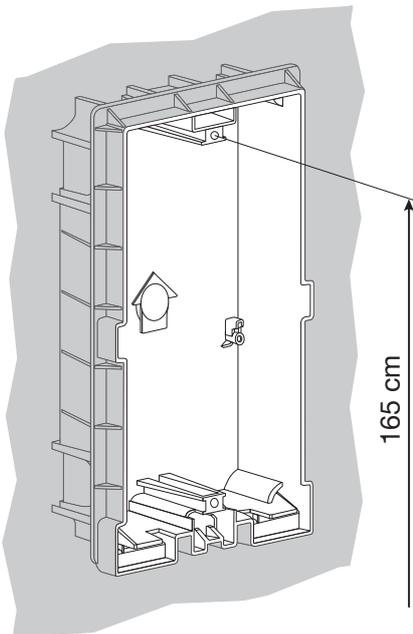
### Assembling and fixing the front door unit boxes

In the case of flush-mounting boxes, a suitable opening must be made in the wall to house them. The following table shows the dimensions required for combinations of boxes of one, two, and three modules.

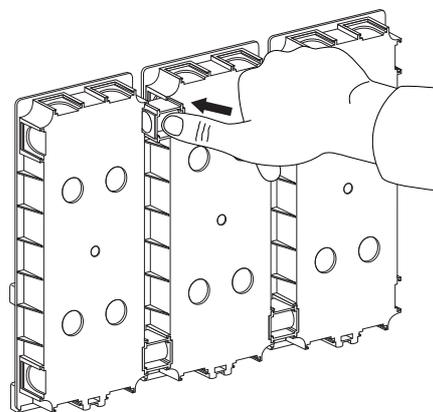


|            |  |  |  |  |  |  |  |
|------------|---|---|---|---|---|---|---|
|            | 1 x 1 module  | 1 x 2 modules   | 2 x 2 modules   | 3 x 2 modules   | 1 x 3 modules   | 2 x 3 modules   | 3 x 3 modules   |
| width (W)  | 14  | 14  | 29  | 44  | 14  | 29  | 44  |
| height (H) | 15.5  | 24  | 24  | 24  | 32.5  | 32.5  | 32.5  |
| depth (D)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |

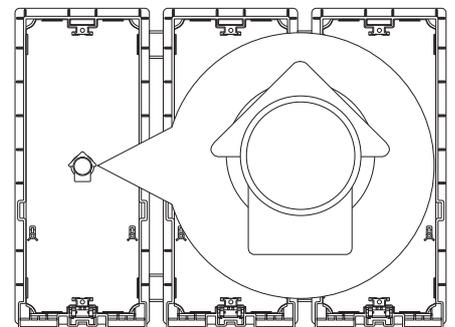
All the measurements are in centimetres



When you make the opening and assemble the flush-mounting boxes, remember to observe the correct height from the ground. The easiest way to do this is to position the seat for the frame fixing screw at 165cm from the ground.



If the flush-mounting boxes are joined together, this is done using interlocking spacers (included in the box package) to ensure the boxes correctly distanced and aligned so the plates can then be fixed in place. The spacer is perforated so the multi-pole connection cable (for joining together the modules not installed in the same box) can pass through.

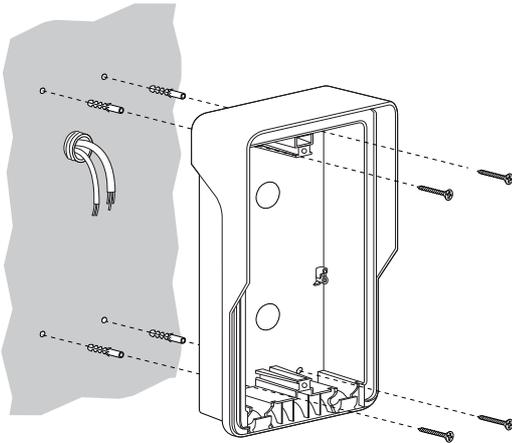


The flush-mounting boxes must be embedded in the wall, making sure the arrow inside is pointing upwards.

When carrying out this operation, leave in place the mortar guards covering the seats for the fixing screws and elastic hinge; they will be removed later, when the frames and modules are assembled.

# INSTALLATION

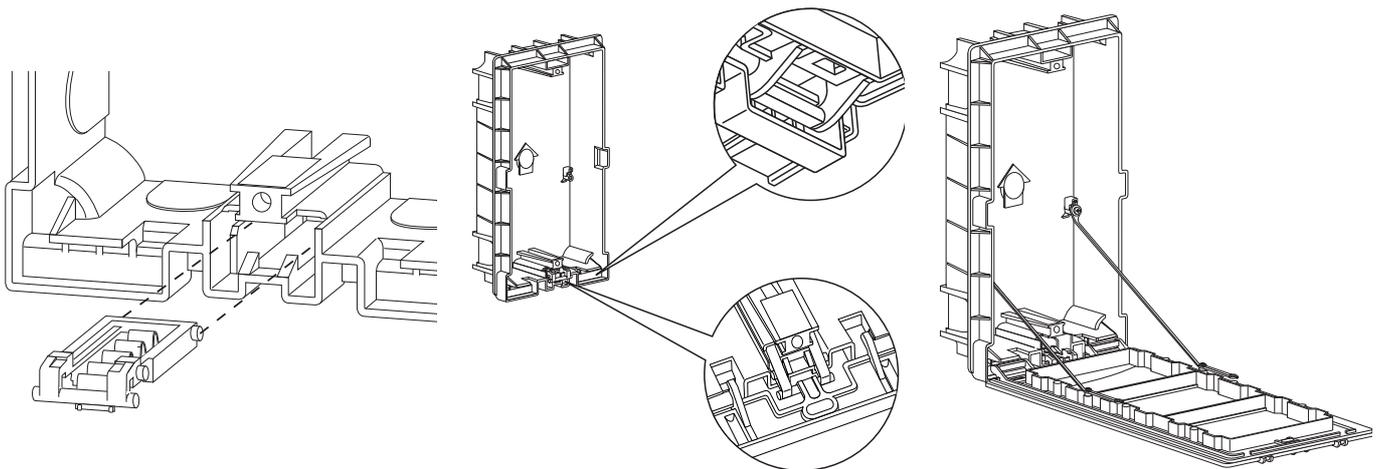
For wall-mounting boxes, open the knockout cable passage and fix the box on the wall using 6mm wall plugs.



**ATTENTION:** if you need to assemble several wall-mounting boxes alongside each other, you will have to make a passage in the supporting wall for the multi-pole connection cables needed, and connect together the modules not installed in the same box.

## Assembling the module-holder frame and suspension cords

To assemble the module-holder frame and suspension cords in the front door unit flush-mounting box, proceed as follows:



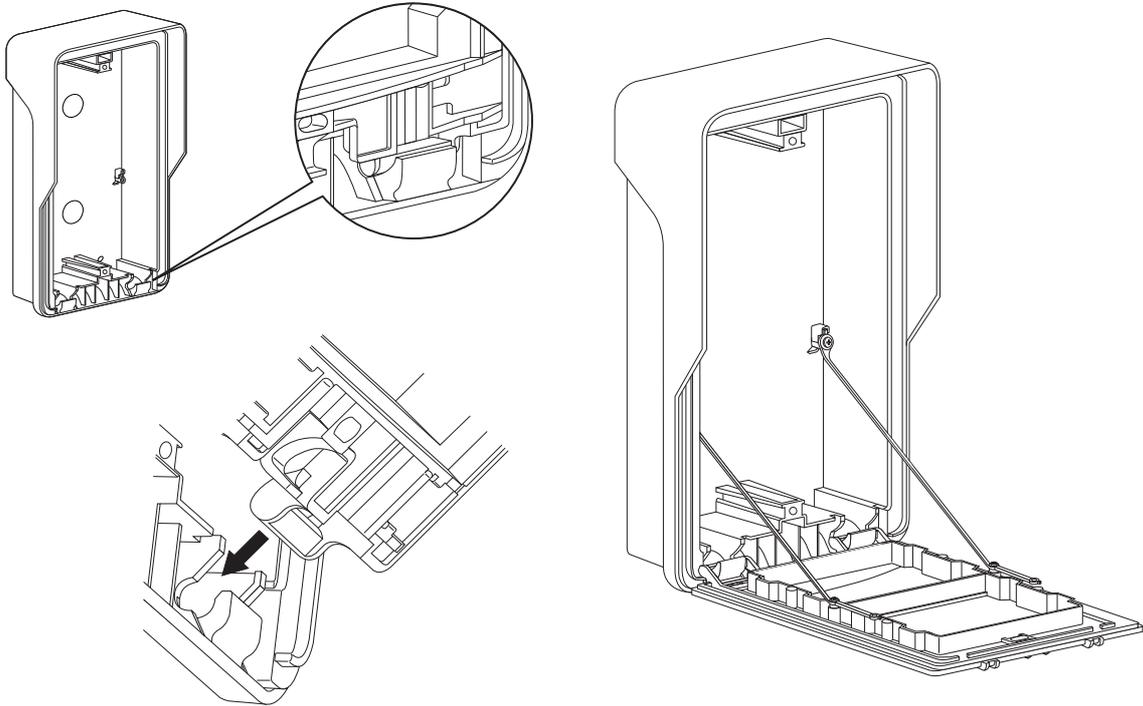
Insert the elastic hinge in its seat in the flush-mounting box; use a screwdriver for this operation.

Rest the frame against the box, inserting its hinges in the two side slits in the box. Insert the horizontal seal bar of the elastic hinge, and block it in the tooth of the module-holder frame.

Complete the operation by fixing the two suspension cords to the frame and box, using the screws supplied.

# INSTALLATION

To assemble the module-holder frame and suspension cords in the front door unit wall-mounting box, proceed as follows:



Insert the frame on the two side hinges of the box itself. To do this, the frame must be tilted by about 45° in relation to the box. The tooth located between the two frame hinges must be facing downwards.

Complete the operation by fixing the two suspension cords to the frame and box, using the screws supplied.

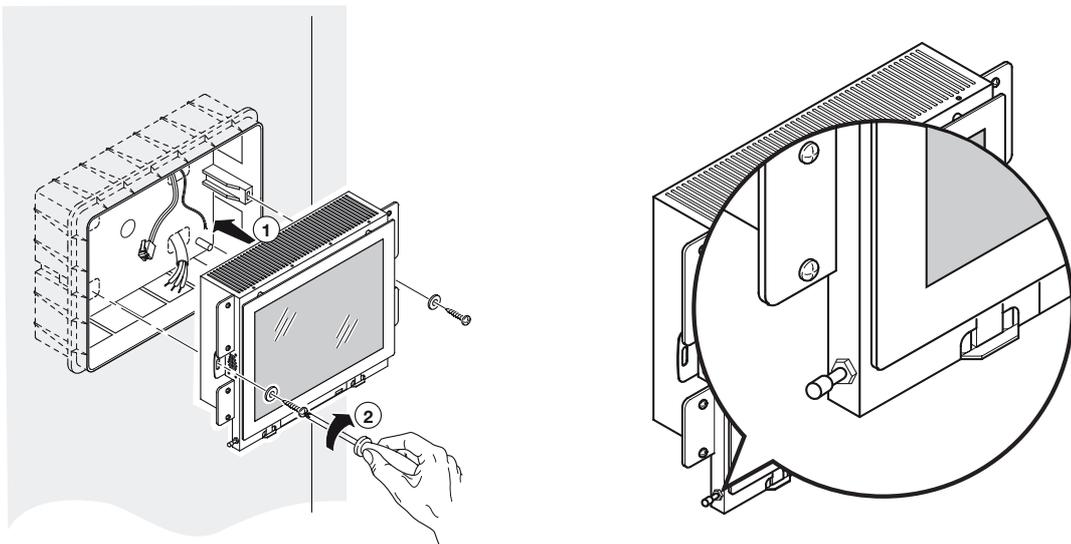
# INSTALLATION

## Assembling the apartment units

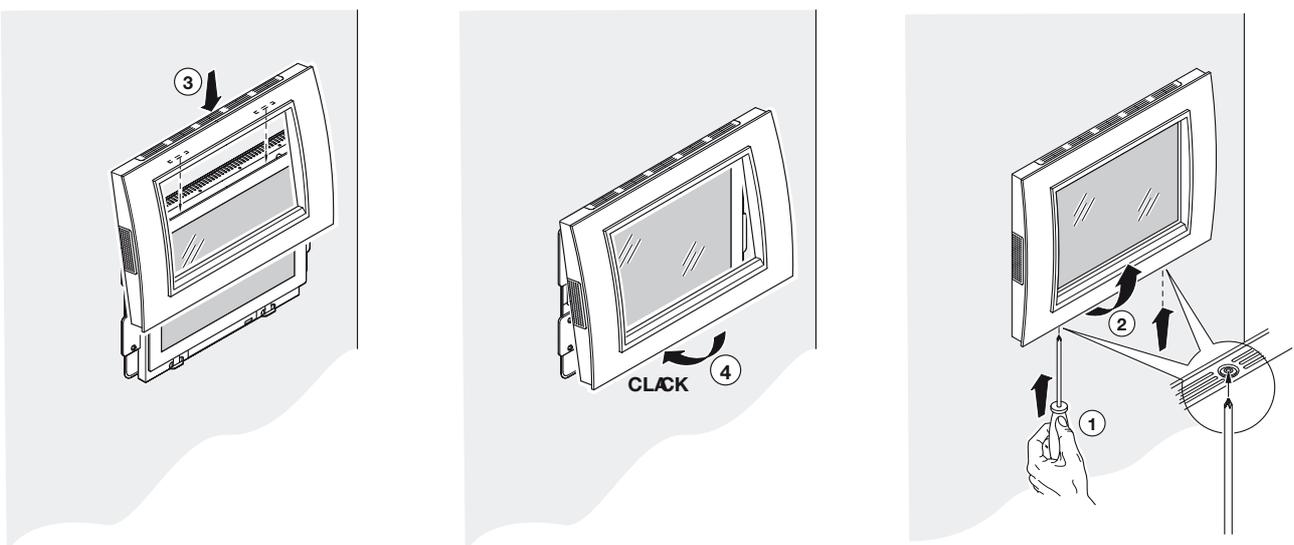
The apartment unit may be a video entryphone (flush-mounting or wall-mounting), a flush-mounting entryphone with speakerphone, or a wall-mounting entryphone. Vision Master Chorus can also be used as an apartment unit. Each apartment can have up to 4 apartment units, with whatever combination of devices you require.

### Assembling Vision Master Chorus

1. Connect the power supply (230V AC) and LAN network cable to Vision Master Chorus.
2. Fix Vision Master Chorus in its flush-mounting box (GW 24 101), using the screws supplied.  
**IMPORTANT:** after fixing Vision Master Chorus in its flush-mounting box and powering it, switch it on by pressing the key at the bottom left.



3. Complete Vision Master Chorus with the cover plate supplied. The plate is fixed in place simply by pressing it down (thanks to its clip fasteners), without the need for tools. To disassemble the plate, use a screwdriver to press on the clip fastener and pull the plate away.

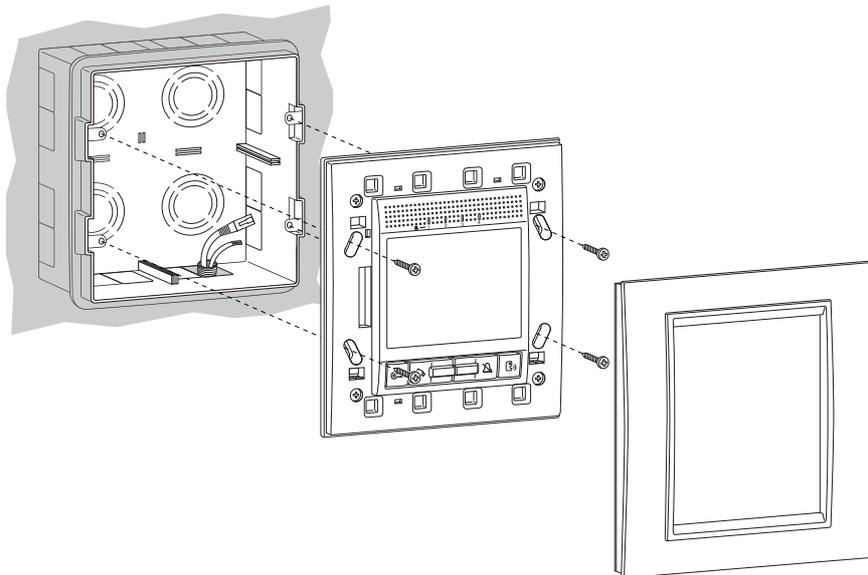


Disassembling the plate

# INSTALLATION

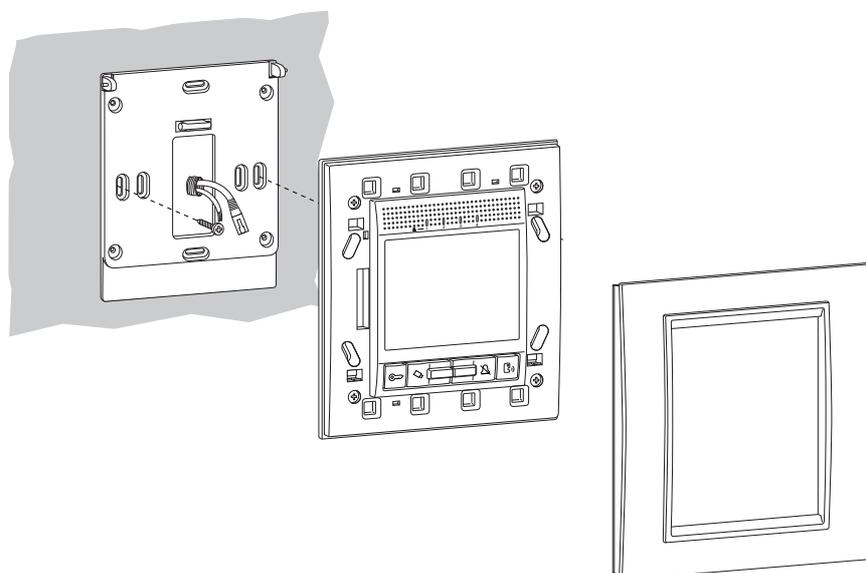
## Assembling the flush-mounting video entryphone

1. Connect the LAN network cable.
2. Connect any outdoor devices to the video entryphone terminal block.
3. Fix the video entryphone in its flush-mounting box (4 + 4 gangs - GW 24 237), using the screws supplied.
4. Complete the video entryphone with the cover plate supplied.



## Assembling the wall-mounting video entryphone

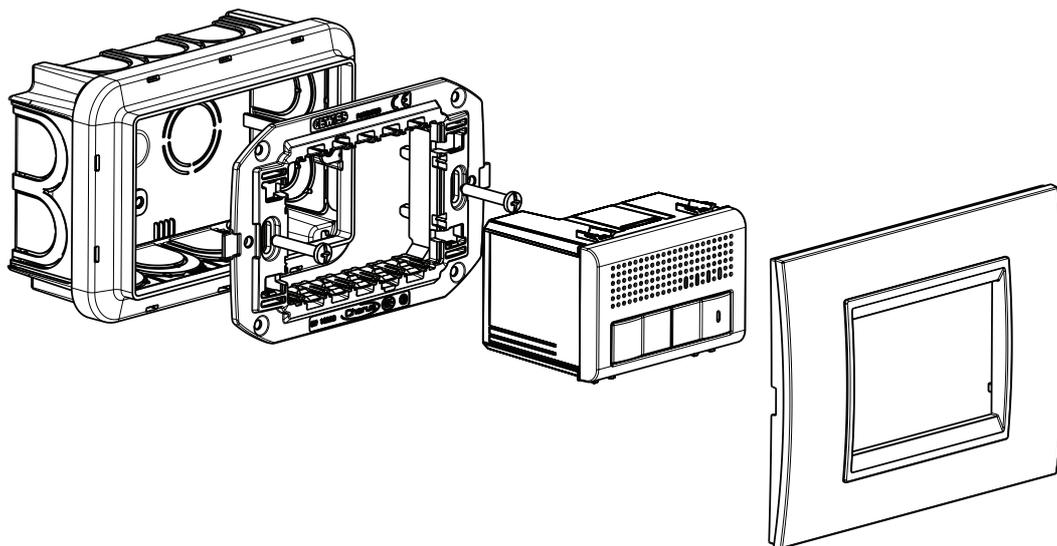
1. Fix the wall bracket using the wall plugs supplied (or suitable screws). Alternatively, you can screw the bracket to the wall above 3-gang flush-mounting boxes (positioned horizontally or vertically without distinction) or round/square 2-gang flush-mounting boxes (centre distance 60mm). The bracket has its own level indicator so you can check the levelling is correct.
2. Connect the LAN network cable.
3. Connect any outdoor devices to the video entryphone terminal block.
4. Fix the video entryphone on the bracket.
5. Complete the video entryphone with the cover plate supplied.



# INSTALLATION

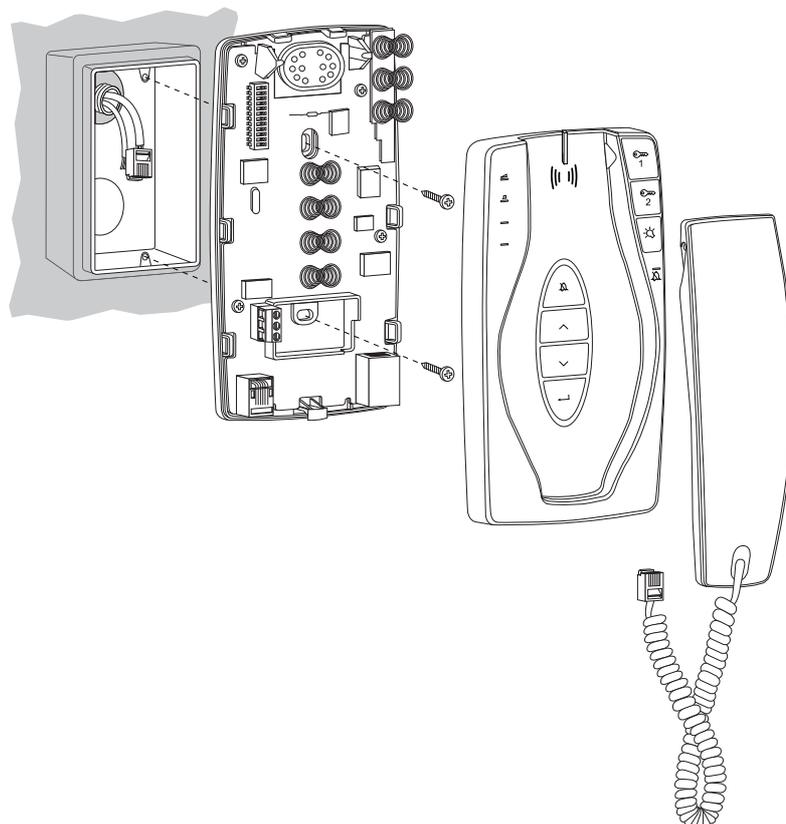
## Assembling the entryphone with speakerphone

1. Insert the entryphone with speakerphone in the 3-gang Chorus support (GW 16 803).
2. Connect the LAN network cable.
3. Connect any outdoor devices to the terminal block of the entryphone with speakerphone.
4. Fix the entryphone in the standard 3-gang flush-mounting box, using the screws supplied with the support.
5. Complete the entryphone with speakerphone by fitting the Chorus cover plate (purchased separately).



## Assembling the wall-mounting entryphone

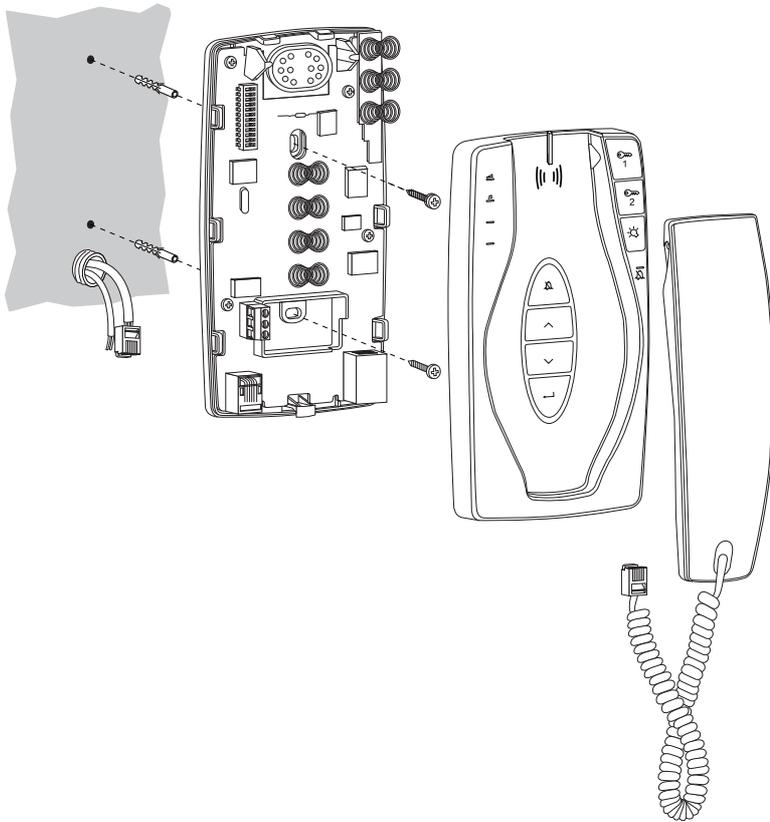
### Assembling on a flush-mounting box



1. Pass the LAN network cable and any other cables through the rectangular hole at the base of the entryphone. Fix the entryphone base above a 3-gang flush-mounting box (positioned vertically), using the screws supplied.
2. Connect the LAN network cable and the terminal block (if used).
3. Configure the entryphone before closing it up.
4. Connect the handset to the entryphone base.

# INSTALLATION

## Wall-mounting



1. Pass the LAN network cable and any other cables through the rectangular hole at the base of the entryphone. Fix the entryphone base using the wall plugs supplied.
2. Connect the LAN network cable and the terminal block (if used).
3. Configure the entryphone before closing it up.
4. Connect the handset to the entryphone base.

# CONFIGURATION

## ► Configuration operations

The configuration of the video entryphone system involves the following operations:

- **Customising the devices:** using the DIP switches, one-way switches or selectors, you can enable and configure the functions of each single device. With Vision Master Chorus, the video entryphone, and the call module with index, certain functions are configured via local menus or a PC.
- **Logic connections between front door units and apartment units:** the apartment units are combined with the push-buttons or electronic indexes of the front door units: the LAN network ensures the passage of the data, but does not create a unique physical connection between front door units and apartment units.
- **Adjustments and calibrations:** using potentiometers, mechanical systems and menus, you can adapt - if necessary - the factory image and audio adjustments to the needs of the environment where the video entryphone is located, and also set other parameters such as the language, date and time.
- **Completing the front door units:** the name labels are inserted in the push-button panels, and the labels with the street number or staircase number are inserted in the street number modules. In the case of the electronic index, a PC is used to create and load the database with the names of the residents.

## ► Configuration with PC and manual configuration

The video entryphone system is programmed using a PC and system configuration software (*GW-VCT Configurator*). The main programming operations include the configuration of the Vision Master Chorus, the logic connection between the front door units, the matching of relay units and camera interfaces with the apartments, the creation and download of the database of names for the electronic indexes. For details about how to use the *GW-VCT Configurator*, refer to the documentation supplied with the software.

In the case of video entryphone systems with a limited extension, it is also possible to use the manual configuration procedure (that does not require the use of a PC and configuration software).

To manually configure the system, it must not contain more than:

- 2 front door units (one primary and one secondary), equipped exclusively with push-buttons (no electronic indexes)
- 34 apartments (up to 4 apartment units for each apartment)
- 1 relay unit (GW 18 381)
- 1 camera interface (GW 18 376).



**TIP:** you are advised to carry out all the configuration operations on the bench, before installing the devices.

If the configuration is carried out directly on site rather than on the bench, 2 people may be needed to make the manual logic connections between the push-buttons of the front door units and the apartment units.

## ► System layout and identification of the devices

The video entryphone devices with a LAN port or PoL leave the factory with double adhesive labels showing their MAC (Media Access Control) address. The MAC address is a code that unmistakably identifies each device of the system.

One of the two labels must be removed and glued to the system layout plan, next to the symbol identifying the device itself. The reason for this is so that the devices can be immediately identified when programming with a PC (especially when done on the bench), and then correctly positioned during the installation phase.

Not all video entryphone devices have a MAC address: for example the power supplies, Ethernet switch, 4 push-button module, index module and street number module do not have one.

# CONFIGURATION

## Customising the devices

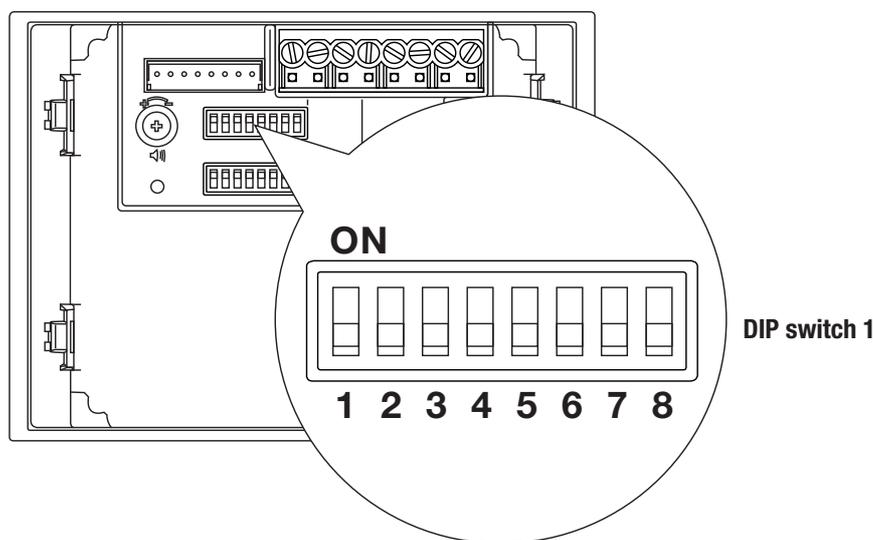
### Audio/video module for front door unit (GW 18 301, GW 18 302)

The audio/video module is customised via 2 DIP switches (each 8-way) located on the back of the device. The tables below show the functions associated with each switch, and the possible options.



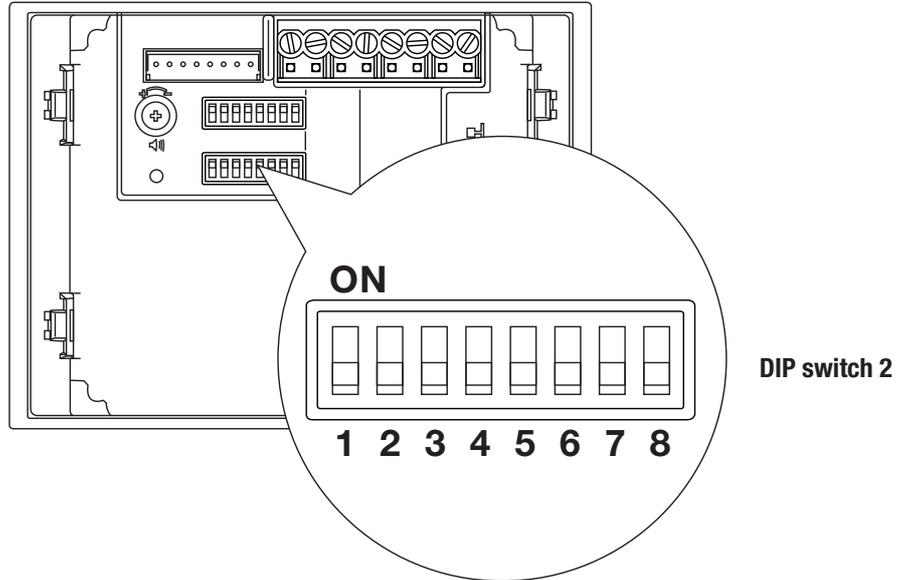
**ATTENTION:** before changing the position of any switch, make sure that the module is not powered.

To access the DIP switches, remove the protection cover and put it in a safe place. When you have finished programming, replace the cover on the audio/video module.



| DIP switch 1 |                     |                                 |     |     |     |   |
|--------------|---------------------|---------------------------------|-----|-----|-----|---|
| Switch       | Function            | Options                         |     |     |     | Description   |
| 1            | Call tone           | OFF = disabled<br>ON = enabled  |     |     |     | If it is enabled, the audio/video module will emit a brief ringtone (call in progress or busy tone, depending on the situation) when a call is made.  |
| 2            | Electro-lock timing | 2                               | 3   | 4   | sec | This determines whether, in order to open the electro-lock, an electric impulse must be sent while the push-button of the apartment unit is pressed (0 sec), or whether a current must also be maintained for a pre-fixed time in seconds (electro-lock with self-closure). |
|              |                     | OFF                             | OFF | OFF | 0   |   |
|              |                     | OFF                             | OFF | ON  | 10  |   |
|              |                     | OFF                             | ON  | OFF | 30  |   |
| 3            |                     | OFF                             | ON  | ON  | 60  |   |
|              |                     | ON                              | OFF | OFF | 90  |   |
| 4            |                     | ON                              | OFF | ON  | 120 |   |
|              |                     | OFF                             | ON  | OFF | 30  |   |
| 5            | Response time       | 5                               | 6   | sec |     | This is the time after which the call is automatically ended if the apartment unit has not responded.   |
|              |                     | OFF                             | OFF | 15  |     |   |
|              |                     | OFF                             | ON  | 30  |     |   |
|              |                     | ON                              | OFF | 45  |     |   |
| 6            |                     | ON                              | ON  | 60  |     |   |
| 7            | Primary /secondary  | OFF = primary<br>ON = secondary |     |     |     | This determines whether the front door unit is of the primary or secondary type.  |
| 8            | Reserved use        | OFF                             |     |     |     | Factory setting - do not modify   |

# CONFIGURATION



| DIP switch 2 |  |   |     |     |     |          |   |
|--------------|--|---|-----|-----|-----|----------|---|
| Switch       | Function   | Options   |     |     |     |          | Description   |
| 1            | Programming mode   | OFF = normal operation<br>ON = programming                                |     |     |     |          | This allows you to program the system, logically connecting the call push-buttons to the apartment units of the apartments. |
| 2            | Reserved use   | GW 18 301 = ON<br>GW 18 302 = OFF   |     |     |     |          | Factory setting - do not modify.  |
| 3            | Relay closure timing, or selection of language for voice message on the video mail | 3   | 4   | 5   | sec | language | This determines how long - in seconds - the local relay must remain closed, or it allows you to select the language.        |
|              |  | OFF   | OFF | OFF | 0   | ITA      |   |
|              |  | OFF   | OFF | ON  | 2   | ENG      |   |
| 4            |  | OFF   | ON  | OFF | 10  | FRE      |   |
|              |  | OFF   | ON  | ON  | 30  | SPA      |   |
|              |  | ON  | OFF | OFF | 60  | POR      |   |
| 5            |  | ON  | OFF | ON  | 120 | DEU      |   |
|              |  | ON  | ON  | OFF | 180 | -        |   |
|              | ON   | ON  | ON  | 300 | -   |          |   |
| 6            | Relay output   | OFF = activated with electro-lock command<br>ON = activated during a call |     |     |     |          | This determines the logic of the local relay  |
| 7            | Voice message  | OFF = normal operation<br>ON = voice message selection mode               |     |     |     |          | This enables the selection of the language for the voice message (see switch 3, 4, 5)                                       |
| 8            | Electro-lock mode  | OFF = free mode<br>ON = restricted mode                                   |     |     |     |          | This determines the operating mode of the electro-lock.   |

# CONFIGURATION

## NOTES

### RELAY CLOSURE TIMING

The audio/video module for front door unit can manage two types of electro-lock:

- Standard (with an impulsive charge): the electro-lock stays open until the door is opened and then closed again by the user (timing = 0 seconds)
- With self-closure: the electro-lock closes automatically once the time set via the Relay Closure Timing function has elapsed. This operating mode requires a maintenance current for the entire time the electro-lock must remain open.

### ELECTRO-LOCK MODE

The audio/video module for front door unit can manage two electro-lock operating modes:

- Restricted: the apartment unit can enable the electro-lock of the front door unit that has called, at any moment while the call/conversation is in progress.
- Free: in addition to the "restricted" mode behaviour, the apartment unit can enable the electro-lock of the primary front door unit even if no call/conversation is in progress.



**ATTENTION:** if several primary front door units are associated with an apartment unit in "free" mode, the electro-lock command only acts on the primary front door unit (the first unit programmed).

### ENABLING THE ELECTRO-LOCK/RELAY

This establishes whether the local push-button connected to the audio/video module must activate the electro-lock only, or both the electro-lock and the local relay.

## Audio module for front door unit (GW 18 311, GW 18 312)

As per the *Audio/video module for front door unit*. The only differences are:

- DIP switch 1, switch 8: must be ON.
- DIP switch 2, switch 2: must be ON for GW 18 311 and OFF for GW 18 312.

## 4 push-button module for front door unit (GW 18 321)

Set the ID code (from 0 to 7) using the DIP switches on the back of the device. Modules with the same identification code may not coexist in the same front door unit (the same identification code may be used in other front door units).



**ATTENTION:** before changing the position of any switch, make sure that the module is not powered.

| Code | DIP 1 | DIP 2 | DIP 3 |
|------|-------|-------|-------|
| 0    | OFF   | OFF   | OFF   |
| 1    | OFF   | OFF   | ON    |
| 2    | OFF   | ON    | OFF   |
| 3    | OFF   | ON    | ON    |
| 4    | ON    | OFF   | OFF   |
| 5    | ON    | OFF   | ON    |
| 6    | ON    | ON    | OFF   |
| 7    | ON    | ON    | ON    |

# CONFIGURATION

## Vision Master Chorus (GW 18 000 xx)

For information about the procedure to follow, refer to the Vision Master Chorus instruction sheet.

## Video entryphone with speakerphone - flush-mounting and wall-mounting (GW 18 341)

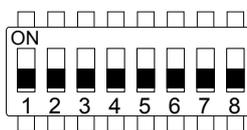
The functions and operating parameters of the video entryphone are configured via a PC with GW-VCT Configurator software, and with the video entryphone menus. For information about the procedure to follow, refer to the video entryphone instruction sheet.

## Entryphone with speakerphone - flush-mounting (GW 18 350, GW 18 352, GW 18 354)

The flush-mounting entryphone with speakerphone is customised via 1 DIP switch (8-way) located on the back of the entryphone. The table below shows the functions associated with each switch, and the possible options.



**ATTENTION:** before changing the position of any switch, make sure that the entryphone is not powered.



| DIP SWITCHES |                                      |   |     |                        |   |
|--------------|--------------------------------------|---|-----|------------------------|---|
| Switch       | Function                             | Options   |     |                        | Description   |
| 1            | Programming mode                     | OFF = normal operation<br>ON = programming      |     |                        | This allows you to activate the entryphone programming mode.                  |
| 2            | Ringtone selection                   | 2   | 3   | <i>ringtone number</i> | Sets the ringtone for the call  |
|              |                                      | OFF   | OFF | 1                      |   |
|              |                                      | OFF   | ON  | 2                      |   |
|              |                                      | ON  | OFF | 3                      |   |
| 3            |                                      | ON  | ON  | 4                      |   |
| 4            | Address of the associated relay unit | 4   | 5   | <i>module number</i>   | This sets the number of the relay unit commanded with the push-buttons.       |
|              |                                      | OFF   | OFF | 1                      |   |
|              |                                      | OFF   | ON  | 2                      |   |
|              |                                      | ON  | OFF | 3                      |   |
| 5            |                                      | ON  | ON  | 4                      |   |
| 6            | Relay number of the relay unit       | 6   | 7   | <i>relay number</i>    | This sets the relay number of the relay unit commanded with the push-buttons. |
|              |                                      | OFF   | OFF | 1                      |   |
|              |                                      | OFF   | ON  | 2                      |   |
|              |                                      | ON  | OFF | 3                      |   |
| 7            |                                      | ON  | ON  | 4                      |   |
| 8            | Reset entryphone                     | OFF = normal operation<br>ON = entryphone reset |     |                        | Restores the factory configuration of the entryphone.                         |

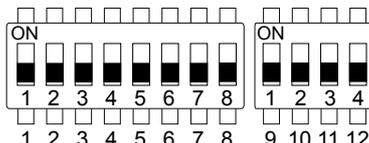
# CONFIGURATION

## Wall-mounting entryphone (GW 18 360)

The wall-mounting entryphone is customised via 1 DIP switch (12-way) located inside the base of the entryphone. The table below shows the functions associated with each switch, and the possible options.



**ATTENTION:** before changing the position of any switch, make sure that the entryphone is not powered.



| DIP SWITCHES |  |  |     |                      |   |   |
|--------------|--|--|-----|----------------------|---|---|
| Switch       | Function   | Options  |     |                      | Description   |   |
| 1            | Learning mode  | OFF = normal operation<br>ON = learning mode   |     |                      | This allows you to activate the entryphone learning mode.   |   |
| 2            | Sets the number of the relay unit                                | 2  | 3   | <i>module number</i> | This sets the number of the relay unit commanded with the push-buttons. The number corresponds to the sequence in the project file, when programming with a PC. With manual programming on the other hand, these switches must necessarily be set at OFF - OFF. |   |
|              |  | OFF  | OFF | 1                    |   |   |
|              |  | OFF  | ON  | 2                    |   |   |
| 3            |  | ON   | OFF | 3                    |   |   |
|              |  | ON   | ON  | 4                    |   |   |
| 4            | Sets the command for the AUX1 button                             | OFF = activates the electro-lock of the secondary front door unit<br>ON = activates the electro-lock of the relay unit |     |                      | This determines whether the AUX1 command activates the electro-lock of the secondary front door unit or of the associated relay unit.   |   |
| 5            | Sets the relay of the relay unit associated with the AUX2 button | 5  | 6   | <i>relay number</i>  | This determines which relay output of the associated relay unit is activated with the AUX2 command.   |   |
|              |  | OFF  | OFF | 1                    |   |   |
|              |  | OFF  | ON  | 2                    |   |   |
| 6            |  | ON   | OFF | 3                    |   |   |
|              |  | ON   | ON  | 4                    |   |   |
| 7            | Sets the operation of the local relay                            | OFF = relay activated when a call is received<br>ON = relay activated with the "Door opener" button                    |     |                      | This determines whether the relay is activated automatically when a call is received, or whether it is activated with the "Door opener" push-button.  |   |
| 8            | Confirmation beep when using the buttons                         | OFF = deactivated<br>ON = activated  |     |                      | Activates or deactivates the "confirm" sound when using the push-buttons.   |   |
| 9            | Relay timing   | 9  | 10  | 11                   | <i>sec</i>  | This determines how long - in seconds - the local relay must remain closed. |
|              |  | OFF  | OFF | OFF                  | 2   |   |
|              |  | OFF  | OFF | ON                   | 5   |   |
|              |  | OFF  | ON  | OFF                  | 10  |   |
| 10           |  | OFF  | ON  | ON                   | 30  |   |
|              |  | ON   | OFF | OFF                  | 60  |   |
| 11           |  | ON   | OFF | ON                   | 120   |   |
|              |  | ON   | ON  | OFF                  | 180   |   |
|              | ON   | ON   | ON  | 300                  |   |   |
| 12           | Reset entryphone   | OFF = normal operation<br>ON = entryphone reset  |     |                      | Restores the factory configuration of the entryphone.   |   |

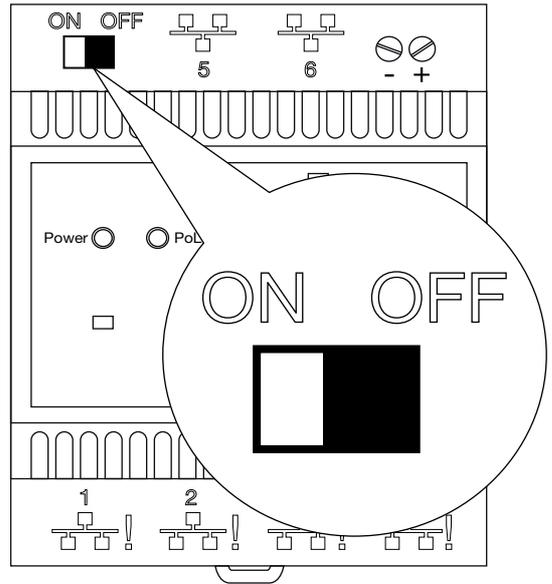
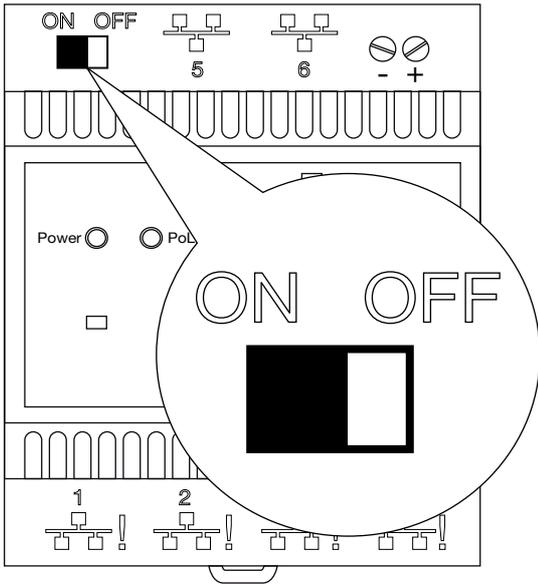
# CONFIGURATION

## Ethernet switch - DIN rail (GW 18 371)

Enable or disable the power supply to the PoL ports (on the basis of the project requirements) using the one-way switch on the front of the device. Further information about the type of port to use when connecting the various devices can be found in *LAN network*.

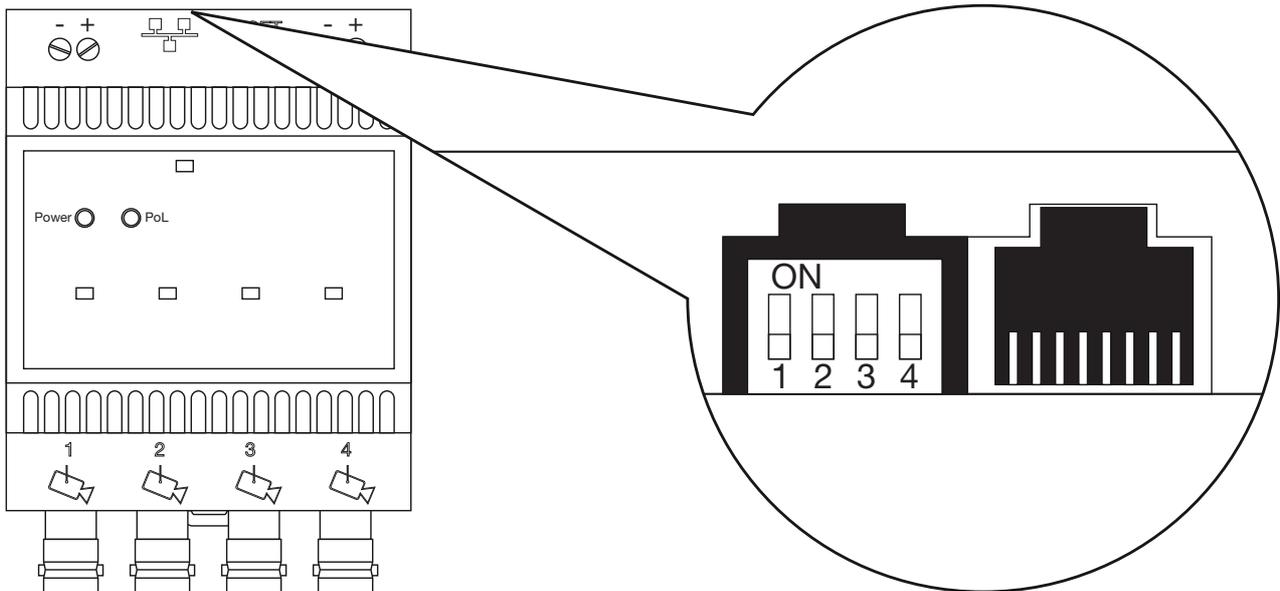


**ATTENTION:** the use of an incorrect port to connect the devices or configuration PC could cause the malfunctioning of the system, and/or damage to the equipment connected to it.



## Camera interface - DIN rail (GW 18 376)

Set the switches of the configuration DIP switch to obtain the required operation of the telecameras. It is not necessary to switch the camera interface off in order to make any modifications. The table shows the ways in which the images are sent.

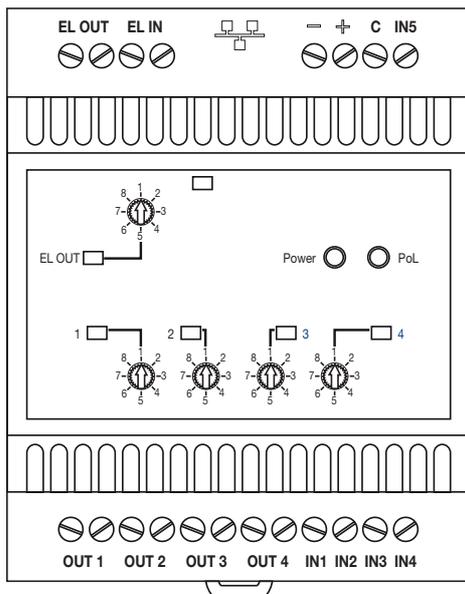


# CONFIGURATION

| DIP SWITCHES |     |     |     |  |
|--------------|-----|-----|-----|--|
| 1            | 2   | 3   | 4   | Operation  |
| OFF          | OFF | OFF | OFF | Images from telecamera 1 only                              |
| OFF          | OFF | OFF | ON  | Images from telecamera 2 only                              |
| OFF          | OFF | ON  | OFF | Images from telecamera 3 only                              |
| OFF          | OFF | ON  | ON  | Images from telecamera 4 only                              |
| OFF          | ON  | OFF | OFF | Cyclical vision of all telecameras, changing every 2 secs  |
| OFF          | ON  | OFF | ON  | Cyclical vision of all telecameras, changing every 5 secs  |
| OFF          | ON  | ON  | OFF | Cyclical vision of all telecameras, changing every 10 secs |
| OFF          | ON  | ON  | ON  | Cyclical vision of all telecameras, changing every 15 secs |
| ON           | OFF | OFF | OFF | Cyclical vision of all telecameras, changing every 20 secs |
| ON           | OFF | OFF | ON  | Cyclical vision of all telecameras, changing every 30 secs |
| ON           | OFF | ON  | OFF | Cyclical vision of all telecameras, changing every 1 min   |
| ON           | OFF | ON  | ON  | Cyclical vision of all telecameras, changing every 2 mins  |
| ON           | ON  | OFF | OFF | Cyclical vision of all telecameras, changing every 4 mins  |
| ON           | ON  | OFF | ON  | Cyclical vision of all telecameras, changing every 8 mins  |
| ON           | ON  | ON  | OFF | Cyclical vision of all telecameras, changing every 16 mins |
| ON           | ON  | ON  | ON  | Cyclical vision of all telecameras, changing every 30 mins |

## Relay unit - DIN rail (GW 18 381)

Turn the front rotary selectors to set the output closure time (relay electro-lock). It is not necessary to switch the relay unit off in order to make any modifications. The table shows the times that can be set.



| Rotary selector position | Closure time |
|--------------------------|--------------|
| 1                        | 2 seconds    |
| 2                        | 5 seconds    |
| 3                        | 10 seconds   |
| 4                        | 30 seconds   |
| 5                        | 1 minute     |
| 6                        | 2 minutes    |
| 7                        | 3 minutes    |
| 8                        | 5 minutes    |

# CONFIGURATION

## ► Logic connections between front door units and apartment units

The logic connection of an apartment unit (video entryphone, entryphone with speakerphone, or wall-mounting entryphone) with the push-button of the front door unit can be made by means of the manual configuration procedure. Proceed as follows:

1. Check that all the devices have been connected to the system, and that the system is powered.



**ATTENTION:** the camera interfaces (GW18 376) and relay units (GW 18 381) must be connected and operating before carrying out the configuration operations, so they can be automatically inserted in the video entryphone menu.



**ATTENTION:** during the configuration, there must be no calls in progress.

2. After powering the system, wait a couple of minutes until all the initialisation operations are complete.
3. With the audio/video module of the front door unit switched off, put it into Configuration and learning mode by turning switch 1 of DIP switch 2 to ON.



**ATTENTION:** if 2 front door units are installed in the system, configure the secondary one first, then the primary one.

4. Switch on the audio/video module.
5. Wait until the audio/video module emits 1 beep followed by 3 beeps, indicating the enabling of the learning procedure for the devices connected to it.
6. Set the learning mode of the apartment unit in the following way:

#### Video entryphone:

- Access the menu by pressing the MENU key.
- On the main menu page, use the ▼ and ▲ keys to select SETTINGS, then confirm the selection with SELECT.
- On the settings page, use the ▼ and ▲ keys to select LEARNING MODE, then confirm the selection with SELECT.
- The video entryphone will go into standby until it receives a call from the front door unit (FDU).

#### Entryphone with speakerphone:

- Set switch 1 of the DIP switch to ON, then power the device by connecting the LAN cable.

#### Wall-mounting entryphone:

- Set switch 1 of the DIP switch to ON, then power the device by connecting the LAN cable.

7. Wait until the front door unit emits a single beep, then press the call key that you want to associate with the apartment unit. Every old association with other apartment unit modules will be deleted. **NB:** if the front door unit does not receive the confirmation, re-enable the learning mode in the apartment unit.

8. Associate the apartment unit in the following way:

#### Video entryphone:

- The video entryphone emits a sound to confirm that the logic connection has been made. Press the ANSWER key: the screen will visualise the message “CONFIGURED”.
- The green LED corresponding to the assigned intercom number (the number of the intercom inside the apartment) will light up, and the video entryphone will quit the menu.

#### Entryphone with speakerphone:

- The entryphone will begin to ring. Press the “Door opener” key. The entryphone will emit a long beep to confirm the logical connection. The green LED corresponding to the assigned intercom number (the internal intercom number of the apartment) will light up.
- Switch off the entryphone by disconnecting the LAN cable, then set switch 1 of its DIP switch to OFF and repower it. Replace the entryphone and wait about 1 minute for the complete restart.

#### Wall-mounting entryphone:

- The entryphone will begin to ring. Press the “Door opener” button (the first button at the top right). The entryphone will emit a long beep to confirm the logical connection. The green LED corresponding to the assigned intercom number (the internal intercom number of the apartment) will light up.
- Switch off the entryphone by disconnecting the LAN cable, then set switch 1 of its DIP switch to OFF and repower it. Replace the entryphone and wait about 1 minute for the complete restart.

# CONFIGURATION

9. If there are other apartment units in the apartment, that need to be logically connected to the same push-button of the front door unit, repeat steps 6-8 for each of them. When associating other devices with the same push-button of the front door unit, they automatically adopt the first number available (2, 3 or 4) for the indoor intercom. **NB:** each push-button of the front door unit can manage up to 4 devices per apartment unit (the upper limit for an apartment).



**IMPORTANT:** if additional apartment units are added to a push-button at a later moment, it will also be necessary to re-configure the devices of that apartment that have already been programmed, respecting the previous programming order.

10. Repeat the procedure from point 6 in order to connect the next push-button of the front door unit to the corresponding apartment unit.
11. After configuring all the necessary push-buttons of the front door unit (if the total number of push-buttons is greater than that of the apartments, you do not need to configure the extra ones), switch off the audio/video module of the front door unit, take it out of the Configuration and learning mode by turning switch 1 of DIP switch 2 to OFF, then switch the device back on again.
12. If the system has another front door unit, repeat the entire procedure (from point 3) with that position as well.



**IMPORTANT:** this front door unit - if it exists and is configured as the second one - will be recognised by the devices as the primary one.

13. At the end of the procedure, switch all the apartment units off, then back on again.

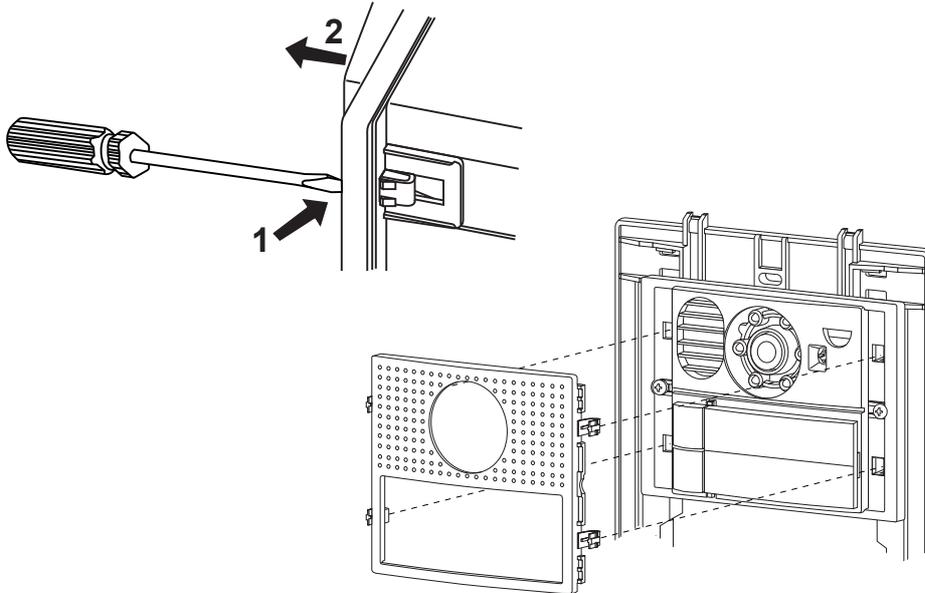
# CONFIGURATION

## Adjustments and calibrations

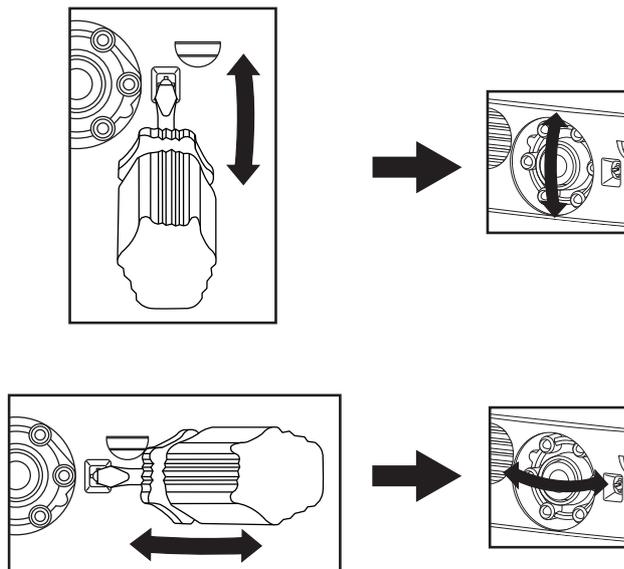
### Orientating the telecamera of the audio/video module for front door unit

To orientate the telecamera, so that it perfectly frames the call area, proceed as follows:

1. Remove the module frame by lightly pressing with a small flat-head screwdriver on the 4 clip fastener teeth. Put the frame to one side, along with any transparent name-holder plate.



2. Use the friction-based traverse mechanism (to the right of the lens) to adjust the orientation of the telecamera, i.e. traverse its height and direction. To do this, insert a screwdriver in the cross-shaped notch of the mechanism.



**ATTENTION:** do not rotate the mechanism - just move it up/down and right/left. Do not force the mechanism beyond its stopping points.

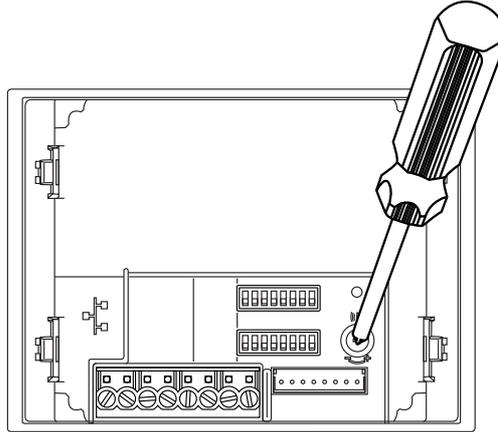
3. Reinsert the module frame and any transparent name-holder plate previously removed.

# CONFIGURATION

## Adjusting the volume of the front door unit

The audio/video module leaves the factory with the volume already calibrated to guarantee good communication in most situations. In particular cases where this calibration is not suitable, you can alter the volume in the following way:

1. If necessary, open the module-holder frame.
2. Adjust the volume by gently rotating (with the aid of a small cross-head screwdriver) the potentiometer on the back of the audio/video module (under the protection cap). Turn the potentiometer clockwise to increase the volume, or anticlockwise to reduce it.



**ATTENTION:** the potentiometer only acts on the loudspeaker of the audio/video module; the sensitivity of the microphone remains unaltered. To modify the volume of the apartment units, you must intervene on them directly.

3. Reclose the module-holder frame.

## Configuring the call module with electronic index

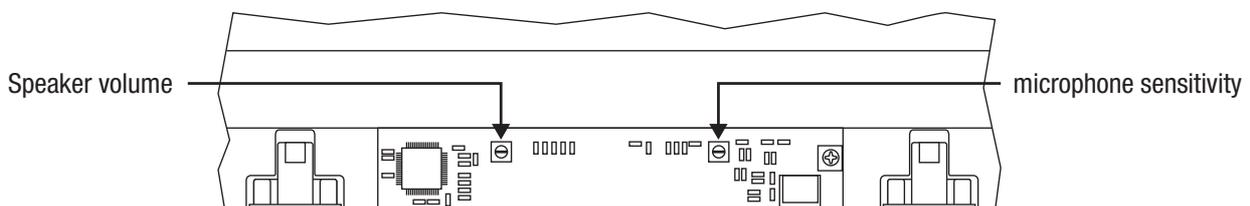
The software configuration of the electronic index is carried out via a PC equipped with GW-VCT Configurator software. If necessary, you can configure some of these functions and parameters locally, via the menu of the electronic index module. For information about the procedure to follow, refer to the instruction sheet of the call module with electronic index.

## Adjusting the Vision Master Chorus parameters

For information about the procedure to follow, refer to the Vision Master Chorus instruction sheet. It is fundamental that the following functions and parameters are configured: IP address of the Internet Gateway, IP address of Vision Master Chorus, language, date, time and volume.

## Adjusting the sensitivity of the Vision Master Chorus echo canceller

Vision Master Chorus leaves the factory with its microphone and loudspeaker levels already calibrated to guarantee the cancelling of the echo. In particular cases where this calibration is not suitable, you can alter these levels by gently rotating (with the aid of a small screwdriver) the relative front potentiometers in the electronic card located between the two USB connectors. Turn the potentiometer clockwise to reduce the level, or anticlockwise to increase it; the factory-set value is in the middle. For information about the Vision Master Chorus opening procedure, refer to *Assembling Vision Master Chorus*.



# CONFIGURATION

## Video entryphone

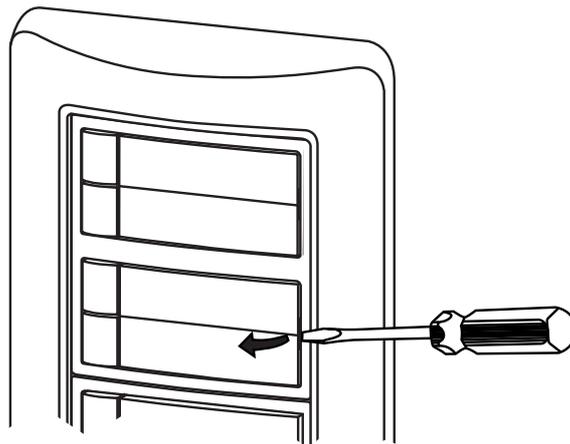
The functions and operating parameters of the video entryphone are configured via a PC with GW-VCT Configurator software, and with the video entryphone menus. For information about the procedure to follow, refer to the video entryphone instruction sheet. It is fundamental that the following functions and parameters are configured: language, date, time and volume. The other functions must be enabled and configured according to your own individual needs.

## ▶ Completing the front door units

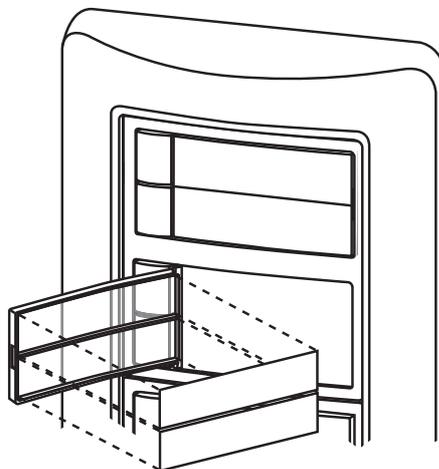
### Inserting name labels in the push-button panels

To insert, or replace, the name label associated with a call push-button, proceed as follows:

1. Open the transparent name holder label using a small screwdriver with a flat tip.



2. Insert the name label on the back of the transparent label. Empty name holder labels are provided; if you want to print your own labels, the size must be 64 x 15mm.



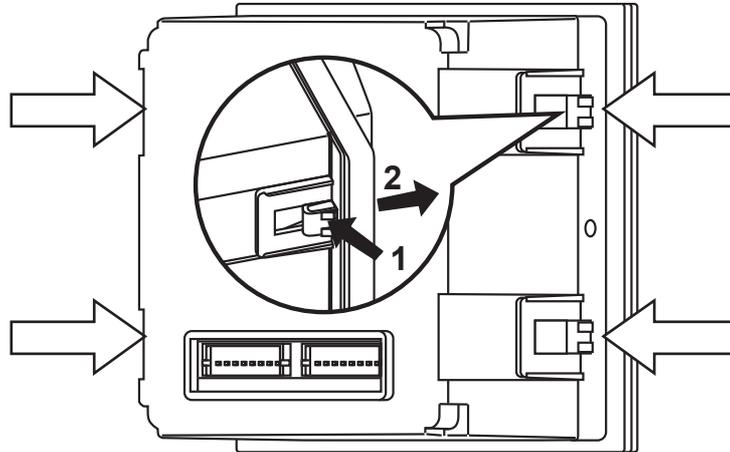
3. Press the transparent name holder label to close it.

# CONFIGURATION

## Inserting the street number label

To insert or replace the label with the street number (or staircase number) in the street number module, proceed as follows:

1. Press on the 4 fixing tabs to remove the front grey frame and the transparent panel that protects the label.



2. Place the street or staircase number on the translucent label using the supplied adhesive numbers and letters.
3. Place the label on the inner part of the module and protect it with the transparent panel, fixing everything by reinserting the module's front frame.

# TESTING AND INITIAL START-UP

## ▶ Testing procedure

The testing is carried out on-site, after installing the system. After connecting all the power supplies to the mains voltage, check all the devices are powered.

### Checking calls from front door units

From each front door unit, try to call all the apartments connected to it. When a call is made to an apartment, all the apartment units must ring. If an apartment unit does not ring, check:

- the volume is not at zero. If the volume is not at zero, or the privacy function is not enabled, it may be necessary to repeat the logic connection between the call push-button and the apartment unit
- the wiring is correct and, in particular, the crimping of the RJ45 connector has been carried out in compliance with the diagram in *Terminating the cable with the RJ45 connector*.

### Checking the apartment units

For each apartment unit, ensure the following functions are working correctly:

- activation of the electro-lock on the entrance door (front door units and apartment units logically connected) when a call is made
- activation of the electro-lock on the entrance door even without a call (if enabled)
- local push-button (call from landing, if configured)
- video mail (video entryphone only, if this function is enabled)
- indoor intercom
- outdoor intercom (if configured and enabled)
- video surveillance (selection of telecameras, if the audio/video modules and camera interface are installed)
- activation of the relay unit outputs (if present in the system, and if the outputs are configured)

The other available functions - if configured and enabled - must be tested in the individual apartment unit.

## ▶ Initial start-up

After completing all the installation and testing phases, there are no particular initial start-up procedures.

If the system has been installed without knowing the names of the residents in advance, a subsequent maintenance intervention will be needed in order to insert or update the names in the push-button panels and electronic index.

## ▶ Inserting new devices in an existing system



**ATTENTION:** by inserting new devices, you might exceed the limits that allow manual programming. If this happens, you must carry out subsequent programming with a PC.

### Adding a new primary or secondary front door unit

To add a new front door unit in an existing system, proceed as follows:

1. Configure the DIP switches of the main module and any auxiliary modules as necessary.
2. Connect the front door unit to the existing system.
3. Power the new front door unit, then wait 1 minute before carrying out the programming.
4. Make sure there are no communications in progress, then program the new front door unit (refer to *Logic connections between front door units and apartment units*).

### Adding a new apartment unit



**ATTENTION:** in an apartment, the maximum number of apartment units is 4.

To add a new apartment unit in an existing system, proceed as follows:

1. Connect the apartment unit to the existing system.
2. Carry out the programming and, in particular, make the logic connection with the push-buttons of the front door units.  
**ATTENTION:** if the apartment has several apartment units, you must reconfigure the logic connection on the other apartment units too, respecting their order (refer to *Logic connections between outdoor and apartment units*).

### Adding a camera interface or relay unit

To add a new camera interface or relay unit in an existing system, proceed as follows:

- if this is the first device of this type to be added to the existing system, and if the system covers no more than 34 apartments, you can make the configuration manually. In this case, add and connect the new device then reprogram the system completely
- if there are more than 34 apartments, or if devices of the same type have already been installed, the programming must be carried out with a PC. In this case, add and connect the new device then follow the relevant procedure.

### Expanding the front door unit with a 4 push-buttons module

To add a 4 push-buttons module to an existing front door unit:

1. Disconnect the front door unit from the power supply.
2. Configure the DIP switch of the 4 push-buttons module to set the ID code (that must be unique in the front door unit in question).
3. Connect the 4 push-buttons module to the other modules of the front door unit, using the multi-pole cable with polarised connector.
4. Enable the programming with the DIP switch of the primary module of the front door unit.
5. Power the front door unit, then wait 1 minute before carrying out the programming.
6. Make sure there are no communications in progress, then program the push-buttons of the new module (refer to *Logic connections between front door units and apartment units*).
7. Once the programming is completed, turn the main module programming DIP switch to OFF.

### Expanding the front door unit with a street number module

To add a street number module to an existing front door unit, connect it to the other modules using the multi-pole cable with polarised connector. No programming is needed.

## ▶ Reducing an existing system

If you need to reduce the size of a system, apply the corresponding procedure (manual or via a PC) described below. Remember the manual procedure can be used in systems with no more than 34 apartments, 1 camera interface, 1 relay unit, 1 primary front door unit, and 1 secondary front door unit. Using a PC with the *GW-VCT Configurator* software, there are no limits but you must first retrieve the original project file.

### Removing a secondary front door unit manually

To remove a secondary front door unit, proceed as follows:

1. Restore the factory configuration for all the apartment units logically connected to the front door unit.
2. Eliminate the front door unit from the system.
3. Reconfigure the system as if it were new (refer to *Logic connections between outdoor and apartment units*).

Alternatively, you can simply remove the front door unit, without any further operations. In this case, the menus of the video entryphones that were logically connected to it will continue to list it amongst the video control devices, but if it is selected nothing will be visible and there will be no malfunctioning).

### Removing a secondary front door unit via PC

To remove a secondary front door unit, proceed as follows:

1. Eliminate the front door unit from the project.
2. Disconnect the front door unit from the system, and remove it.
3. Reset all the devices, using the command in the special software menu.
4. Link up with the remaining front door units, one at a time, and download the configuration.

### Removing an apartment unit manually

To remove an apartment unit, proceed as follows:

1. Disconnect the apartment unit from the system.
2. If the apartment unit was the only one in the apartment, you can leave the front door unit key programmed without causing any malfunctioning. The video entryphone system will still work anyway, and you can thus avoid having to delete and reprogram the entire system.

### Removing an apartment via PC

To remove an apartment, proceed as follows:

1. Eliminate the apartment from the project. Its apartment units will automatically be eliminated.
2. Link up with the first front door unit.
3. Carry out the reset.
4. Download the configuration.
5. Repeat points 3 and 4 for the other front door units.

# MAINTENANCE

## Removing a camera interface or relay unit manually

To remove a camera interface or relay unit, proceed as follows:

1. Restore the factory configuration for all the devices.
2. Eliminate the camera interface or relay unit from the system.
3. Reconfigure the system as if it were new (refer to *Logic connections between front door units and apartment units*).

Otherwise, leave the device in the video entryphone menu (it will remain in the list of video surveillance/auxiliary services devices, but if it is selected there will be no malfunctioning).

## Removing a camera interface or relay unit via PC

To remove a camera interface or relay unit, proceed as follows:

1. Eliminate the camera interface or relay unit from the project.
2. Disconnect the camera interface or relay unit from the system, and remove it.
3. Link up with each IP, and download the configuration (check whether a reset is needed beforehand).

## ▶ Replacing faulty devices

If any of the system devices are faulty, you can replace them by following the relevant procedure - manual or via PC - explained below. Remember the manual procedure can be used in systems with no more than 34 apartments, 1 camera interface, 1 relay unit, 1 primary front door unit, and 1 secondary front door unit. Using a PC with the *GW-VCT Configurator* software, there are no limits but you must first retrieve the original project file.

## Replacing the main front door unit module manually

To replace the main module (*Audio/video module for front door unit* or *Audio module for front door unit*) of the front door unit, proceed as follows:

1. Disconnect the front door unit from the power supply.
2. Replace the faulty main module, repeating the same DIP switch configuration on the new one.
3. Repower the front door unit.
4. Make a note of the configuration (volume, text customisation, outdoor intercom, functions enabled, etc.) of every apartment unit of the system.
5. Restore the factory configuration in each apartment unit of the system (reset).
6. Configure the entire system as if it were new (including the combination of logic push-buttons with apartments for the other front door unit, if present).
7. Restore the configuration of each apartment unit, using the data noted previously (point 4).

## Replacing the main front door unit module via PC

To replace the main module (*Audio/video module for front door unit* or *Audio module for front door unit*) of the front door unit, proceed as follows:

1. Open the system project file (the file where the previous system programming was stored) - this is obligatory.
2. Read the IP address of the faulty main module, and note it down on a piece of paper. The IP address is a numerical string of 4 groups of figures (10.182.x.y or 10.183.x.y, where x and y may assume any value between 0 and 255). To read the IP address, open the *Device properties* window by double clicking with the mouse on the MAC address of the faulty main module that appears in the list of available devices.
3. Disconnect the front door unit from the power supply.
4. Replace the faulty main module with the new one, then restore all the connections.
5. Repeat the same DIP switch configuration on the new module.
6. Repower the front door unit.

# MAINTENANCE

7. Launch a new device search with the program. The new device will have a different MAC address from the old one. The MAC address is an alphanumerical string (6 alphanumerical groups separated by “:”) which is visualised next to the icon of the main module.
8. Open the Device property window of the new module, then modify the IP address (assigning it the one previously noted down in point 2). Wait a few seconds.
9. From the project tree, link up with the new main module even if it has a different MAC address (the software uses the IP address to link up). To update the MAC address, you must modify it manually with a text editor (using the "search and replace" function).
10. Download the configuration in the new front door unit.
11. Save the project.

## Replacing the 4 push-buttons module of the front door unit

Replace the faulty 4 push-buttons module with a new one, repeating the same DIP switch configuration on the new one.

## Replacing the call module with electronic index of the front door unit

To replace the call module with electronic index, proceed as follows:

1. Disconnect the front door unit from the power supply.
2. Replace the faulty electronic index with a new one, repeating the same DIP switch configuration on the new one.
3. Repower the front door unit.

**NB:** it is not necessary to reprogram the names in the electronic index as they are stored in the main module of the front door unit.

## Replacing the street number module of the front door unit

Replace the faulty street number module with a new one. No configurations are needed.

## Replacing the power supply unit

To replace the power supply unit, proceed as follows:

1. Disconnect the power supply unit from the mains.
2. Replace the faulty power supply unit with a new one.
3. Repower the power supply unit.

## Replacing the Ethernet switch

To replace an Ethernet switch, proceed as follows:

1. Disconnect the Ethernet switch from the power supply.
2. Mark the LAN cables connected to the LAN standard ports, so they can be distinguished.
3. Replace the faulty switch with a new one, ensuring the PoL circuit breaker of the new switch is in the same position as the old one.
4. Check the previously marked LAN cables are connected to the LAN standard ports.
5. Repower the Ethernet switch.

## Replacing the Ethernet 6-port LAN switch

To replace an Ethernet 6-port LAN switch, proceed as follows:

1. Disconnect the Ethernet 6-port LAN switch from the power supply.
2. Replace the faulty switch with a new one.
3. Repower the Ethernet 6-port LAN switch.

## Replacing the camera interface or relay unit manually

To replace the camera interface or relay unit, proceed as follows:

# MAINTENANCE

1. Disconnect the camera interface or relay unit from the power supply.
2. Replace the faulty camera interface or relay unit, repeating the same DIP switch/rotary selector configuration on the new device. Make sure the inputs and outputs are connected in the same order (inverting the connections made in the old device may cause malfunctioning); the best method is to connect the cables to the new device one by one, as you disconnect them from the old device.
3. Repower the device.
4. Make a note of the configuration (volume, text customisation, outdoor intercom, functions enabled, etc.) of *every apartment unit* of the system.
5. Restore the factory configuration in each apartment unit of the system (reset).
6. Configure the entire system as if it were new (including the combination of logic push-buttons with apartments of the front door units).
7. Restore the configuration of each apartment unit, using the data noted previously (point 4).

## Replacing the camera interface or relay unit via a PC

To replace the camera interface or relay unit, proceed as follows:

1. Open the system project file (the file where the previous system programming was stored) - this is obligatory.
2. Read the IP address of the faulty device, and note it down on a piece of paper. The IP address is a numerical string of 4 groups of figures (10.182.x.y or 10.183.x.y, where x and y may assume any value between 0 and 255). To read the IP address, open the *Device properties* window by double clicking with the mouse on the MAC address of the faulty device that appears in the list of available devices.
3. Disconnect the device from the power supply.
4. Replace the faulty device with the new one, then restore all the connections.
5. If you are replacing a relay unit, repeat the same rotary selector configuration on the new device.
6. Repower the device.
7. Launch a new device search with the program. The new device will have a different MAC address from the old one. The MAC address is an alphanumerical string (6 alphanumerical groups separated by “:”) which is visualised next to the icon of the device.
8. Open the Device property window of the new device, then modify the IP address (assigning it the one previously noted down in point 2). Wait a few seconds.
9. From the project tree, link up with the new device even if it has a different MAC address (the software uses the IP address to link up). To update the MAC address, you must modify it manually with a text editor (using the "search and replace" function).
10. Download the configuration in the new device.
11. Save the project.

## Replacing the apartment unit (any type) manually

To replace any type of apartment unit, proceed as follows:

1. Replace a faulty apartment unit with a new one, repeating any DIP switch configurations on the new one (wall-mounting / flush-mounting entryphone).
2. Enable the learning function on the front door unit.
3. Associate the new apartment unit with the relative push-button of the front door unit. If there are other apartment units in that same apartment, re-associate these with the same front door unit push-button.
4. In the case of a video entryphone, reconfigure the functions previously used.
5. Reconfigure any outdoor INTERCOMs of the new apartment unit (you can do this from any apartment unit of the apartment). Reconfigure any outdoor INTERCOMs in the apartment units of the other apartments too. If the new apartment number is the same as the old one, reconfirm the same intercom number in the relevant menu.
6. Repeat points 2 and 3 for any secondary front door unit.

# MAINTENANCE

## Replacing the apartment unit (any type) via PC

To replace any type of apartment unit, proceed as follows:

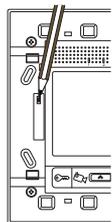
1. Open the system project file (the file where the previous system programming was stored) - this is obligatory.
2. Read the IP address of the faulty device, and note it down on a piece of paper. The IP address is a numerical string of 4 groups of figures (10.182.x.y or 10.183.x.y, where x and y may assume any value between 0 and 255). To read the IP address, open the *Device properties* window by double clicking with the mouse on the MAC address of the faulty device that appears in the list of available devices.
3. Disconnect the device from the power supply.
4. Replace the faulty device with the new one, then restore all the connections.
5. If you are replacing a wall-mounting or flush-mounting entryphone, repeat the same DIP switch configuration on the new device.
6. Repower the device.
7. Launch a new device search with the program. The new device will have a different MAC address from the old one. The MAC address is an alphanumerical string (6 alphanumerical groups separated by “:”) which is visualised next to the icon of the device.
8. Open the Device property window of the new device, then modify the IP address (assigning it the one previously noted down in point 2). Wait a few seconds.
9. From the project tree, link up with the new device even if it has a different MAC address (the software uses the IP address to link up). To update the MAC address, you must modify it manually with a text editor (using the "search and replace" function).
10. Download the configuration in the new device.
11. Save the project.
12. Reconfigure any outdoor INTERCOMs of the new apartment unit (you can do this from any apartment unit of the apartment). Reconfigure any outdoor INTERCOMs in the apartment units of the other apartments too. If the new apartment number is the same as the old one, reconfirm the same intercom number in the relevant menu.

## Cleaning

To clean the various devices, use a dry cloth. Do not use abrasive products, and take care not to scratch the glass of the screens and telecameras. Clean the glass of the front door unit telecameras (if installed) regularly.

## Reset procedures

### Resetting the video entryphone



In the unlikely case that the video entryphone becomes blocked, or an anomaly arises during operation, you can restart the device without disconnecting the power supply.

To do this, remove the plate that protects the video entryphone, then press the flush-mounted button on the left with the aid of a pencil or pen (as shown in the figure).

After resetting, wait a minute to allow the video entryphone to complete the initialisation operations.

Check the video entryphone is working correctly, then replace its plate.

### Resetting the wall-mounting entryphone

If necessary, you can restore the factory configuration of the wall-mounting entryphone, annulling the logical connections configured (indoor intercom and front door units) and resetting the default ringtones and the volume adjustment at 50%.

The reset operation is irreversible and produces a new entryphone programming.

To reset the factory configuration of the wall-mounting entryphone, turn switch 12 of the DIP switch to ON, then to OFF.

### Resetting the entryphone with speakerphone

If necessary, you can restore the factory configuration of the entryphone with speakerphone, annulling the logical connections configured (indoor intercom and front door units) and resetting the default ringtones and the volume adjustment at 50%.

The reset operation is irreversible and produces a new entryphone programming. To reset the factory configuration of the entryphone with speakerphone, turn switch 8 of the DIP switch to ON, power it, then wait for the acoustic confirmation.

# TROUBLESHOOTING

## Preliminary check

If the resulting system does not work as required, use the following coded procedures to identify the reason for the malfunctioning, and solve the problem.

Before making any checks on the individual devices and connections, there is a preliminary check that must be carried out. This check can be omitted if the system was working correctly before the malfunctioning occurred, and if no modifications have been made to the system in the meantime.

|   |  |  |
|---|--|--|
| 1 | Does the LAN wiring follow the indications in the wiring diagrams and, in particular, have the cables been correctly terminated (direct or non-direct connection, depending on the single situation)?          | <b>Yes:</b> move on to the next point<br><b>No:</b> make the LAN cable terminations again  |
| 2 | Are there any rings in the LAN connections (the rings are shown in <i>Connecting the video entryphone devices</i> )?   | <b>Yes:</b> eliminate the rings by modifying the wiring layout<br><b>No:</b> move on to the next point   |
| 3 | Are all the LAN cables less than 100m long?  | <b>Yes:</b> move on to the next point<br><b>No:</b> reduce the length of the cables that exceed 100m, if necessary modifying the wiring layout used. Move on to the next point   |
| 4 | Are the cables used for the LAN connection in category 5e or higher?   | <b>Yes:</b> move on to the next point<br><b>No:</b> replace the LAN cables installed with others of category 5e or higher (e.g. GW ...). Move on to the next point   |
| 5 | Is the length of the other connections (power supply, electrolocks, outdoor telecameras, relay units, etc.) within the limits allowed and specified in <i>Dimensions and maximum extension of the system</i> ? | <b>Yes:</b> move on to the next point<br><b>No:</b> reduce the length of the connections that exceed the allowed measurements, if necessary modifying the path they follow too; alternatively, increase the section of the wires |
| 6 | Is the number, type and distribution of the system devices within the limits allowed and specified in <i>Dimensions and maximum extension of the system</i> ?  | <b>Yes:</b> move on to the next point<br><b>No:</b> if possible, modify the structure/layout of the system, or reduce the number of devices  |
| 7 | Do the electric connections between the power supply unit and the connected devices respect the polarities indicated?  | <b>Yes:</b> move on to the next point<br><b>No:</b> restore the correct connection polarity  |
| 8 | Do the devices connected to each individual power supply unit have an overall absorption level lower than the current which the power supply unit is able to distribute?                                       | <b>Yes:</b> contact the customer service<br><b>No:</b> redistribute the loads, adding extra power supplies if necessary  |

# TROUBLESHOOTING

## ► Identifying and solving an operating problem

A system fault is detected when an apartment unit or front door unit (i.e. any of the devices that the user may use) does not work as envisaged. Given that the malfunctioning may have various underlying causes, it is necessary to first of all examine the apartment unit or front door unit where the problem has arisen, then moving on - if necessary - to the other system components.

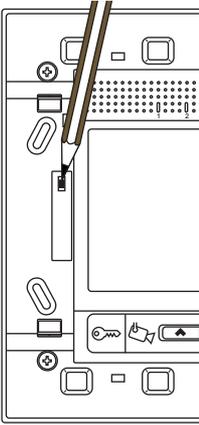
If all the following checks produce a positive result, but the problem persists, try replacing the device where the malfunctioning occurs.

### Possible problems with the apartment unit

Remember that the apartment unit may be - without distinction - a video entryphone, Vision Master Chorus, entryphone with speakerphone, or wall-mounting / flush-mounting entryphone.

|  |  |
|--|--|
| The apartment unit does not switch on (intercom LED switched off)            | <ul style="list-style-type: none"><li>• Check the switch to which the apartment unit is connected is powered (refer to <i>Possible problems with the switch</i>).</li><li>• Check the LAN cable is connected to an active PoL port of the switch (refer to <i>Possible problems with the switch</i>).</li><li>• Check the functioning of the LAN cable (refer to <i>Possible problems with the LAN cable</i>).</li></ul>   |
| The “system connection status” icon flashes                                  | <ul style="list-style-type: none"><li>• Check at least one front door unit of the system is configured as primary.</li><li>• Check the primary front door unit is powered.</li><li>• Check there is a LAN connection between the primary front door unit and the apartment unit, and that all the intermediate switches are powered.</li><li>• Check at least 1 minute has elapsed after powering the primary front door unit, to allow it the time to start up.</li></ul> |
| It is not possible to make an outdoor intercom call (between two apartments) | Check the association between the apartment units of the two apartments has been configured, and check also the apartment number is correct.   |
| When making an intercom call, the “user busy” message appears                | <ul style="list-style-type: none"><li>• On the apartment unit that is calling, check the “intercom call” function is not disabled.</li><li>• On the apartment unit you are trying to call, check the “privacy” function is not enabled.</li><li>• On the apartment unit you are trying to call, check there is no call (or call attempt) already in progress.</li></ul>  |
| The “privacy” function does not work   | Check the privacy function has been set on the main apartment unit (green LED switched on).  |
| The call coming from the frond door unit is not received                     | Check the logic connection has been made between the push-button of the front door unit, and the apartment unit.   |

# TROUBLESHOOTING

|  |   |
|--|---|
| <p>The video entryphone is blocked or displays a fault</p> | <p>Restart the device. To do this without disconnecting the power supply, proceed as follows:</p> <ol style="list-style-type: none"> <li>1. Remove the plate that protects the video entryphone, then press the flush-mounted button on the left with the aid of a pencil or pen (as shown in the figure).</li> </ol>  <ol style="list-style-type: none"> <li>2. After resetting, wait a minute to allow the video entryphone to complete the initialisation operations.</li> <li>3. Check the video entryphone is working correctly, then replace its plate.</li> </ol> |
|--|---|

## Possible problems with the front door unit

|   |  |
|---|--|
| <p>The front door unit does not switch on</p>   | <ul style="list-style-type: none"> <li>• Check the front door unit is connected to the power supply unit, respecting the input polarity (+ and -).</li> <li>• Check the power supply unit is switched on and working (refer to <i>Possible problems with the power supply unit</i>).</li> <li>• Check at least 1 minute has elapsed after powering the front door unit, to allow it the time to start up.</li> </ul> |
| <p>During the configuration phase, the apartment units cannot be combined with the front door units</p> | <p>Check only one front door unit is in "learning" mode.</p>   |
| <p>When the call button is pressed, the "busy" tone is heard</p>  | <ul style="list-style-type: none"> <li>• Check the push-button is associated with an apartment unit.</li> <li>• On the apartment unit, check the "privacy" function is not enabled (fixed red LED on the push-button panel of the front door unit).</li> <li>• On the apartment unit, check there is no call already in progress (fixed red LED on the push-button panel of the front door unit).</li> </ul>         |
| <p>When the push-button is pressed, the video message recording function starts up immediately</p>      | <p>On the apartment unit, check the call transfer function towards the video mail is not enabled.</p>  |
| <p>The red call LED lights up on other push-buttons of the same front door unit as well</p>             | <ul style="list-style-type: none"> <li>• Check the 4 push-button modules of the front door unit all have different ID codes (the codes are set via the rear DIP switches).</li> <li>• Check that several push-buttons of the front door unit have not all been matched with the same apartment units.</li> </ul>   |
| <p>When a call is made from the front door unit, the relative apartment unit does not ring</p>          | <ul style="list-style-type: none"> <li>• Check the apartment unit is working properly.</li> <li>• Check the apartment unit has been associated with the front door unit.</li> </ul>  |

# TROUBLESHOOTING

|   |  |
|---|--|
| After the front door unit has switched on, it is impossible to make a call to any apartment for about 5 minutes | Check all the apartment units are connected and working properly.  |
| Two or more push-buttons call the same apartment  | Check the configuration of the DIP switches of the 4 push-button modules (each module must have a unique code).  |
| The electronic index does not make the call   | Wait until 2 minutes have elapsed after powering the main module, to allow it the time to start up.  |
| The electro-lock does not work  | <ul style="list-style-type: none"> <li>• Check the electro-lock is correctly connected to the main module of the front door unit.</li> <li>• Check the enabling and timing configuration of the electro-lock (rear DIP switches of the main module of the front door unit).</li> </ul> |
| The relay does not work   | <ul style="list-style-type: none"> <li>• Check the relay is correctly connected to the main module of the front door unit.</li> <li>• Check the enabling and timing configuration of the relay (rear DIP switches of the main module of the front door unit).</li> </ul>               |
| The “door opener” button does not work  | <ul style="list-style-type: none"> <li>• Check the outdoor push-button is correctly connected to the main module of the front door unit.</li> <li>• Check the push-button has been enabled (rear DIP switches of the main module of the front door unit).</li> </ul>                   |
| The electro-lock on the entrance is activated immediately after a call is made to an apartment                  | On the apartment unit of the apartment being called, check the “office function” has not been enabled.   |

## Possible problems with the power supply unit

|   |  |
|---|--|
| The red LEDs do not light up on the power supply unit | <ul style="list-style-type: none"> <li>• Check the mains voltage (230V AC) is present.</li> <li>• Check there are no short-circuits on the output (to do this, disconnect the powered devices one at a time).</li> </ul> |
| The red LED flashes                                   | Check no powered device is faulty (try disconnecting them, one at a time).   |

## Possible problems with the Ethernet switch

|  |  |
|--|--|
| The green LEDs are permanently lit up  | Check the wiring of the front door units and/or camera interfaces is correct (12/14.4V DC and crimped cable).  |
| The “Power” LED is switched off  | Check the input polarity (+ and -).  |
| The PoL ports do not supply power (for GW 18 371 only)                                       | <ul style="list-style-type: none"> <li>• Check the “PoL” LED is switched on (fixed light).</li> <li>• Check the PoL one-way switch is “ON”.</li> </ul> |
| The green LEDs are switched off  | <ul style="list-style-type: none"> <li>• Check the LAN wiring.</li> <li>• If the devices are in the start-up phase, wait about 1 minute.</li> </ul>    |
| The green LEDs flash, but the apartment units do not receive calls from the front door units | Disconnect any camera interfaces from the system, then check whether the LEDs flash.   |

# TROUBLESHOOTING

## Possible problems with the relay unit

|  |  |
|--|--|
| Both red LEDs (power supply and PoL) are switched off  | The module is not powered. Check that: <ol style="list-style-type: none"> <li>the power supply unit is switched on (if the module is also directly connected to such a unit);</li> <li>the LAN connection to the relay unit is working, the switch is powered, and the PoL ports are enabled.</li> </ol> |
| The green LED of the LAN/PoL port does not flash       | There is no communication with the rest of the system: check the LAN connection cable.   |
| The device, when connected to an output, does not work | Check the green LED of the output is switched on (output relay = ON): if the LED is on, check the connection between the relay unit and the device.  |
| All the green output LEDs flash                        | There is no connection with the primary front door unit.   |

## Possible problems with the camera interface

|   |  |
|---|--|
| Both red LEDs (power supply and PoL) are switched off | The module is not powered. Check that: <ol style="list-style-type: none"> <li>the power supply unit is switched on (if the module is also directly connected to such a unit);</li> <li>the LAN connection to the switch is working, the switch is powered, and the PoL ports are enabled.</li> </ol> |
| The green LED of the LAN/PoL port does not flash      | There is no communication with the rest of the system: check the LAN connection cable.   |
| The green LED of the telecamera is switched off       | There is no video input signal (the telecamera is absent, badly connected, or not powered).  |
| The green LED of the telecamera flashes               | The telecamera is enabled via the DIP switch.  |
| All the green LEDs of the telecameras are flashing    | There is no connection with the primary front door unit.   |

## Possible problems with the LAN cable

The problems that may arise with the LAN cable fall into three categories:

- interrupted cable
- false contacts
- crimping error.

To check a LAN cable that is not working correctly, use the special tool (for example GW 38 052); move the connector and the cable coupling. **ATTENTION:** the connectors and couplings at both ends of the cable must be moved.

On the basis of what you see, you can identify the reason for the malfunctioning and then attempt to resolve the problem.

|  |  |
|--|--|
| Some wires of the LAN cable are interrupted (the tool indicates the lack of galvanic continuity) | The cable is interrupted, or some wires have not been correctly crimped. Try replacing the connectors one at a time (crimping them again), then recheck the cable. If the problem persists, this means the interruption is on the cable: replace it. |
| When the connector is moved, the tool indicates a lack of contact                                | There is a false contact. Replace the connector (crimping it again).   |
| The tool indicates that the pinout of the connectors is incorrect                                | For LAN standard cables only: replace the connectors at both ends of the LAN cable (crimping them again).<br><b>Attention:</b> the special non-direct cable, used for single-family units, indicates an incorrect pinout in any case.                |

# TECHNICAL CHARACTERISTICS

## Technical data

### Vision Master Chorus (GW 18 000 TB - GW 18 000 VT - GW 18 000 VA)

|   |  |
|---|--|
| Communication   | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4 |
| Audio/video coding                                      | MPEG   |
| Operating system  | Windows XP Embedded  |
| RAM   | 1 GB   |
| Power supply  | 230V AC - 50/60 Hz   |
| Power consumption                                       | < 25W  |
| LAN network cable                                       | Cat 5e or higher   |
| Control elements  | Resistive touchscreen  |
| Display elements  | 1 LCD TFT colour display, backlit,<br>diagonal 10.4", resolution VGA (800 x 600 pixels)  |
| Audio elements  | Microphone: sensitivity -47dB ±3 dB<br>Loudspeaker: 1W, answer in a frequency of 670 Hz - 4 kHz  |
| Warning elements  | Ringer with 10 ringtones<br>Adjustable volume  |
| Connection to a video entryphone system                 | RJ45 port  |
| Connections for peripheral devices (keyboard/<br>mouse) | 2 USB ports 2.0  |
| Electric connections                                    | Extractable screw terminals<br>Maximum cable section 1.5mm <sup>2</sup>  |
| Usage environment                                       | Dry indoor places  |
| Operating temperature                                   | 0 ÷ +40°C  |
| Storage temperature                                     | -15 ÷ +70°C  |
| Relative humidity                                       | Max. 93% (non-condensative)  |
| Degree of protection                                    | IP20   |
| Dimensions (L x H)                                      | 323 x 255mm  |
| Weight  | 2.8kg  |
| Reference Standards                                     | Low Voltage Directive 2006/95/EC<br>Electromagnetic compatibility: 2004/108/EC, EN 60950, EN 50090-2-2   |

# TECHNICAL CHARACTERISTICS

## Audio/video module for front door unit (GW 18 301)

## Audio/video module with 2 push-buttons for front door unit (GW 18 302)

|  |  |
|--|--|
| Communication                                    | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4   |
| Audio/video coding                               | MPEG   |
| Power supply                                     | 14.4V DC SELV  |
| Current consumption                              | 200 mA in standby<br>Telecamera and LED switched on: 240 mA<br>Max: 500 mA   |
| LAN network cable                                | Cat 5e or higher   |
| Video section                                    | 1 colour telecamera<br>Standard: PAL<br>Sensor: 1/3"<br>Resolution: QVGA (320 x 240 pixels)<br>Frames per second: 25<br>Contrast: automatic<br>Light intensity: automatic<br>Focusing: fixed, from 1m to infinite<br>Visual angle: 70° |
| Audio section                                    | 1 loudspeaker and 1 microphone - separated, with echo canceller function   |
| Inputs   | 1 auxiliary contact for potential-free local push-button<br>1 auxiliary contact for the electro-lock status sensor   |
| Outputs  | 1 discharge outlet for the electro-lock (24 V - 4 A), with programmable maintenance current (300 mA)<br>1 timed single-pole relay output NO (24 V – 3 A)   |
| Control elements                                 | 2 call keys (GW 18 302)  |
| Display elements                                 | 2 red LEDs for call status signalling (GW 18 302)  |
| Configuration elements                           | 2 DIP switches - 8-way<br>1 rotary potentiometer for loudspeaker volume  |
| Lighting elements                                | 6 high power white LEDs for telecamera<br>4 LEDs for push-button panel backlight (GW 18 302)   |
| Sensors  | 1 photocell for environmental light measurement  |
| Connection to additional front door unit modules | 1 8-pin polarised connector  |
| Connection to a video entryphone system          | RJ45 port  |
| Electric connections                             | Extractable screw terminals<br>Maximum cable section 1.5mm <sup>2</sup>  |
| Usage environment                                | Outdoor/indoor, protected from the rain and water infiltrations  |
| Operating temperature                            | -15 ÷ +50°C  |
| Storage temperature                              | -15 ÷ +70°C  |
| Relative humidity                                | Max. 93% (non-condensative)  |
| Degree of protection                             | IP44   |
| Dimensions (L x H x D)                           | 115 x 85 x 56mm  |
| Weight   | 0.2kg  |
| Reference Standards                              | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## Audio module for front door unit (GW 18 311)

## Audio module with 2 push-buttons for front door unit (GW 18 312)

|  |  |
|--|--|
| Communication                                    | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4 |
| Audio coding                                     | MPEG   |
| Power supply                                     | 14.4V DC SELV  |
| Current consumption                              | 200 mA in standby<br>Max: 500 mA   |
| LAN network cable                                | Cat 5e or higher   |
| Audio section                                    | 1 loudspeaker and 1 microphone - separated, with echo canceller function   |
| Inputs   | 1 auxiliary contact for potential-free local push-button<br>1 auxiliary contact for the electro-lock status sensor   |
| Outputs  | 1 discharge outlet for the electro-lock (24 V - 4 A), with programmable maintenance current (300 mA)<br>1 timed single-pole relay output NO (24 V - 3 A)                 |
| Control elements                                 | 2 call keys (GW 18 312)  |
| Display elements                                 | 2 red LEDs for call status signalling (GW 18 312)  |
| Configuration elements                           | 2 DIP switches - 8-way<br>1 rotary potentiometer for loudspeaker volume  |
| Lighting elements                                | 4 LEDs for push-button panel backlight (GW 18 312)   |
| Connection to additional front door unit modules | 1 8-pin polarised connector  |
| Connection to a video entryphone system          | RJ45 port  |
| Electric connections                             | Extractable screw terminals<br>Maximum cable section 1.5mm <sup>2</sup>  |
| Usage environment                                | Outdoor/indoor, protected from the rain and water infiltrations  |
| Operating temperature                            | -15 ÷ +50°C  |
| Storage temperature                              | -15 ÷ +70°C  |
| Relative humidity                                | Max. 93% (non-condensative)  |
| Degree of protection                             | IP44   |
| Dimensions (L x H x D)                           | 115 x 85 x 56mm  |
| Weight   | 0.2kg  |
| Reference Standards                              | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## 4 push-button module for front door unit (GW 18 321)

|   |  |
|---|--|
| Power supply                                    | Via the audio or audio/video module                                    |
| Current consumption                             | 70 mA max.   |
| Control elements                                | 4 call buttons   |
| Display elements                                | 4 red LEDs for signalling the call status                              |
| Configuration elements                          | 1 - 3 pin DIP switch   |
| Lighting elements                               | 4 LEDs for name holder label rear illumination                         |
| Connection to the other front door unit modules | 2 8-pin polarised through-connectors                                   |
| Usage environment                               | Outdoor/indoor, protected from the rain and water infiltrations        |
| Operating temperature                           | -15 ÷ +50°C  |
| Storage temperature                             | -15 ÷ +70°C  |
| Relative humidity                               | Max. 93% (non-condensative)  |
| Degree of protection                            | IP44   |
| Dimensions (L x H x D)                          | 115 x 85 x 43.5mm  |
| Weight  | 0.13kg   |
| Reference Standards                             | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3 |

## Call module with electronic index for front door unit (GW 18 322)

|   |  |
|---|--|
| Communication with audio or audio/video module  | Via multi-pole cable   |
| Power supply                                    | Via the audio or audio/video module                                    |
| Current consumption                             | max. 40 mA   |
| Control elements                                | 5 keys   |
| Display elements                                | 1 LCD single-colour screen, 128 x 96 pixel, backlit with white LEDs    |
| Configuration elements                          | 1 4-pin DIP switch   |
| Connection to the other front door unit modules | 1 8-pin polarised connector  |
| Usage environment                               | Outdoor/indoor, protected from the rain and water infiltrations        |
| Operating temperature                           | -15 ÷ +50°C  |
| Storage temperature                             | -15 ÷ +70°C  |
| Relative humidity                               | Max. 93% (non-condensative)  |
| Degree of protection                            | IP44   |
| Dimensions (L x H x D)                          | 115 x 85 x 46mm  |
| Weight  | 0.16kg   |
| Reference Standards                             | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3 |

# TECHNICAL CHARACTERISTICS

## Module with street number for front door unit (GW 18 331)

|   |  |
|---|--|
| Power supply                                    | Via the audio or audio/video module                                    |
| Current consumption                             | max. 60 mA   |
| Lighting elements                               | 4 white LEDs for rear illumination                                     |
| Connection to the other front door unit modules | 2 8-pin polarised through-connectors                                   |
| Usage environment                               | Outdoor/indoor, protected from the rain and water infiltrations        |
| Operating temperature                           | -15 ÷ +50°C  |
| Storage temperature                             | -15 ÷ +70°C  |
| Relative humidity                               | Max. 93% (non-condensative)  |
| Degree of protection                            | IP44   |
| Dimensions (L x H x D)                          | 115 x 85 x 43.5mm  |
| Label dimensions (L x H)                        | 81 x 75 mm   |
| Weight  | 0.13kg   |
| Reference Standards                             | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3 |

# TECHNICAL CHARACTERISTICS

## Video entryphone with speakerphone - flush-mounting and wall-mounting

(GW 18 341 TB - GW 18 341 VT - GW 18 341 VA - GW 18 343 TB - GW 18 343 VT - GW 18 343 VA)

|   |   |
|---|---|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4                    |
| Audio/video coding                      | MPEG  |
| Power supply                            | Via LAN network cable (PoL – Power over LAN), 14.4V DC SELV   |
| Current consumption                     | 200 mA in standby<br>240 mA during the communication<br>max. 250 mA   |
| LAN network cable                       | Cat 5e or higher  |
| Inputs                                  | 1 auxiliary contact for potential-free local push-button  |
| Outputs                                 | 1 timed single-pole relay output NO (24 V – 3 A)  |
| Control elements                        | 6 front push-buttons  |
| Display elements                        | 1 LCD TFT colour display, backlit, diagonal 3.5", 320 x 240 pixel resolution<br>1 red LED for Privacy function<br>1 green LED for Answer function<br>4 green/red LEDs for Intercom function |
| Audio elements                          | Microphone: sensitivity -40dB;<br>Loudspeaker: 0.5W - answer in a frequency of 0,6 ÷ 4 kHz  |
| Warning elements                        | Ringer with 10 ringtones<br>Adjustable volume   |
| Connection to a video entryphone system | RJ45 port   |
| Electric connections                    | Extractable screw terminals<br>Maximum cable section 1.5mm <sup>2</sup>   |
| Usage environment                       | Dry indoor places   |
| Operating temperature                   | 0 ÷ +45°C   |
| Storage temperature                     | -15 ÷ +70°C   |
| Relative humidity                       | Max. 93% (non-condensative)   |
| Degree of protection                    | IP20  |
| Dimensions (L x H x D)                  | 150 x 158 x 43mm (including the plate supplied)   |
| Weight                                  | 0.33kg  |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3  |

# TECHNICAL CHARACTERISTICS

## Entryphone with speakerphone - flush-mounting (GW 18 350, GW 18 352, GW 18 354)

|   |  |
|---|--|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4 |
| Audio coding                            | MPEG   |
| Power supply                            | Via LAN network cable (PoL – Power over LAN), 14.4V DC SELV  |
| Current consumption                     | 180 mA in standby<br>max. 200 mA   |
| LAN network cable                       | Cat 5e or higher   |
| Control elements                        | 4 front push-buttons   |
| Display elements                        | 4 green/red LEDs for Intercom function<br>1 green/red LED for device status  |
| Configuration elements                  | 1 DIP switch - 8-way   |
| Audio elements                          | Microphone: sensitivity -40dB;<br>Loudspeaker: 0.5W - answer in a frequency of 0,6 ÷ 4 kHz   |
| Warning elements                        | Ringer with 4 ringtones<br>Adjustable volume   |
| Connection to a video entryphone system | RJ45 port  |
| Usage environment                       | Dry indoor places  |
| Operating temperature                   | 0 ÷ +45°C  |
| Storage temperature                     | -15 ÷ +70°C  |
| Relative humidity                       | Max. 93% (non-condensative)  |
| Degree of protection                    | IP20   |
| Dimensions (L x H x D)                  | 66 x 45 x 51 mm  |
| Weight                                  | 0.075kg  |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## Wall-mounting entryphone (GW 18 360)

|   |  |
|---|--|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast and TCP<br>Internetworking level protocol: IPv4 |
| Audio coding                            | MPEG   |
| Power supply                            | Via LAN network cable (PoL – Power over LAN), 14.4V DC SELV  |
| Current consumption                     | 220 mA in standby and during the call<br>290 mA max.   |
| LAN network cable                       | Cat 5e or higher   |
| Inputs                                  | 1 auxiliary contact for potential-free local push-button   |
| Outputs                                 | 1 timed single-pole relay output NO (24 V – 3 A)   |
| Control elements                        | 7 front push-buttons   |
| Display elements                        | 1 red LED for Privacy function<br>4 green/red LEDs for Intercom function<br>4 LEDs for backlighting of central buttons   |
| Configuration elements                  | 1 DIP switch - 12-way  |
| Audio elements                          | Micro-telephone<br>Microphone: sensitivity -40dB;<br>Loudspeaker: 0.5W - answer in a frequency of 0,6 ÷ 4 kHz  |
| Warning elements                        | Ringer with 9 ringtones<br>Adjustable volume   |
| Connection to a video entryphone system | RJ45 port  |
| Micro-telephone connection              | Extendable cable L = approx. 2m, RJ11 connectors   |
| Electric connections                    | Screw terminals<br>Maximum cable section 1.5mm <sup>2</sup>  |
| Usage environment                       | Dry indoor places  |
| Operating temperature                   | 0 ÷ +45°C  |
| Storage temperature                     | -15 ÷ +70°C  |
| Relative humidity                       | Max. 93% (non-condensative)  |
| Degree of protection                    | IP20   |
| Dimensions (L x H x D)                  | 180 x 100 x 38mm   |
| Weight                                  | 0.36kg   |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## Single audio/video power supply unit - DIN rail (GW 18 361)

## Multiple audio/video power supply unit - DIN rail (GW 18 362)

|                          |  |
|--------------------------|--|
| Power supply             | 230V AC $\pm$ 10%, 50/60 Hz  |
| Powered outputs          | GW 18 361: 1 x 14.4V DC rated, SELV<br>GW 18 362: 2 x 14.4V DC rated, SELV                             |
| Maximum delivered power  | GW 18 361: 18 VA<br>GW 18 362: 2 x 18 VA   |
| Maximum dissipated power | GW 18 361: 3.9 W<br>GW 18 362: 6.9 W   |
| Display elements         | Red LED for signalling output voltage (one per output)   |
| Protections              | Short circuit protected at the output  |
| Electric connections     | Screw terminals<br>Maximum cable section 2.5mm <sup>2</sup>  |
| Usage environment        | Indoor, protected from the rain and water infiltrations  |
| Operating temperature    | 0 - +45°C  |
| Storage temperature      | -15 - +70°C  |
| Relative humidity        | Max. 93% (non-condensative)  |
| Degree of protection     | IP20   |
| Width (DIN modules)      | 4  |
| Weight                   | 0.12kg   |
| Reference Standards      | Safety: 2006/95/EC, EN 60065<br>Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3 |

# TECHNICAL CHARACTERISTICS

## Ethernet switch - DIN rail (GW 18 371)

|   |   |
|---|---|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps   |
| Power supply                            | 14.4V DC SELV   |
| Maximum dissipated power                | 0.4 W   |
| Current consumption                     | 30 mA   |
| LAN network cable                       | Cat 5e or higher  |
| Display elements                        | Red LED for input voltage signalling<br>Red LED for signalling the PoL power supply<br>Green LED signalling active communication and correct connection with the connected device (one per RJ45 port) |
| Configuration elements                  | Slide-type one-way switch for disabling the PoL power supply (Power over LAN)   |
| Connection to a video entryphone system | 2 standard RJ45 LAN ports<br>4 configurable RJ45 PoL ports  |
| Electric connections                    | Screw terminals<br>Maximum cable section 2.5mm <sup>2</sup>   |
| Usage environment                       | Indoor, protected from the rain and water infiltrations   |
| Operating temperature                   | -15 ÷ +50°C   |
| Storage temperature                     | -15 ÷ +70°C   |
| Relative humidity                       | Max. 93% (non-condensative)   |
| Degree of protection                    | IP20  |
| Width (DIN modules)                     | 4   |
| Weight                                  | 0.14kg  |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3  |

# TECHNICAL CHARACTERISTICS

## Ethernet 6-port LAN switch - DIN rail (GW 38 371)

|   |  |
|---|--|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps  |
| Power supply                            | 14.4V DC SELV  |
| Maximum dissipated power                | 0.4 W  |
| Current consumption                     | 30 mA  |
| LAN network cable                       | Cat 5e or higher   |
| Display elements                        | Red LED for input voltage signalling<br>Green LED signalling active communication and correct connection with the connected device (one per RJ45 port) |
| Connection to a video entryphone system | 6 standard RJ45 LAN ports  |
| Electric connections                    | Screw terminals<br>Maximum cable section 2.5mm <sup>2</sup>  |
| Usage environment                       | Indoor, protected from the rain and water infiltrations  |
| Operating temperature                   | -15 ÷ +50°C  |
| Storage temperature                     | -15 ÷ +70°C  |
| Relative humidity                       | Max. 93% (non-condensative)  |
| Degree of protection                    | IP20   |
| Width (DIN modules)                     | 4  |
| Weight                                  | 0.14kg   |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## Camera interface - DIN rail (GW 18 376)

|   |  |
|---|--|
| Communication                           | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast<br>Internetworking level protocol: IPv4   |
| Power supply                            | 14.4V DC SELV / PoL  |
| Maximum dissipated power                | With external power supply: 2.3W<br>With power supply from the PoL port: 2.9W  |
| Current consumption                     | With external power supply: 160 mA<br>With power supply from the PoL port: 200 mA  |
| LAN network cable                       | Cat 5e or higher   |
| Configuration elements                  | 1 4-pin DIP switch   |
| Display elements                        | Red LED for input voltage signalling<br>Red LED for signalling LAN/PoL port power supply<br>Green LED for signalling active communication with the Ethernet switch<br>4 green LEDs for incoming video signal |
| Connection to a video entryphone system | 1 LAN/PoL RJ45 port  |
| Connection of the telecameras           | 4 BNC connectors, input impedance 75 Ohm   |
| Incoming video signal                   | Analogue - NTSC or PAL Standard  |
| Electric connections                    | Screw terminals<br>Maximum cable section 2.5mm <sup>2</sup>  |
| Usage environment                       | Indoor, protected from the rain and water infiltrations  |
| Operating temperature                   | -15 ÷ +50°C  |
| Storage temperature                     | -15 ÷ +70°C  |
| Relative humidity                       | Max. 93% (non-condensative)  |
| Degree of protection                    | IP20   |
| Width (DIN modules)                     | 4  |
| Weight                                  | 0.18kg   |
| Reference Standards                     | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS

## Relay unit - DIN rail (GW 18 381)

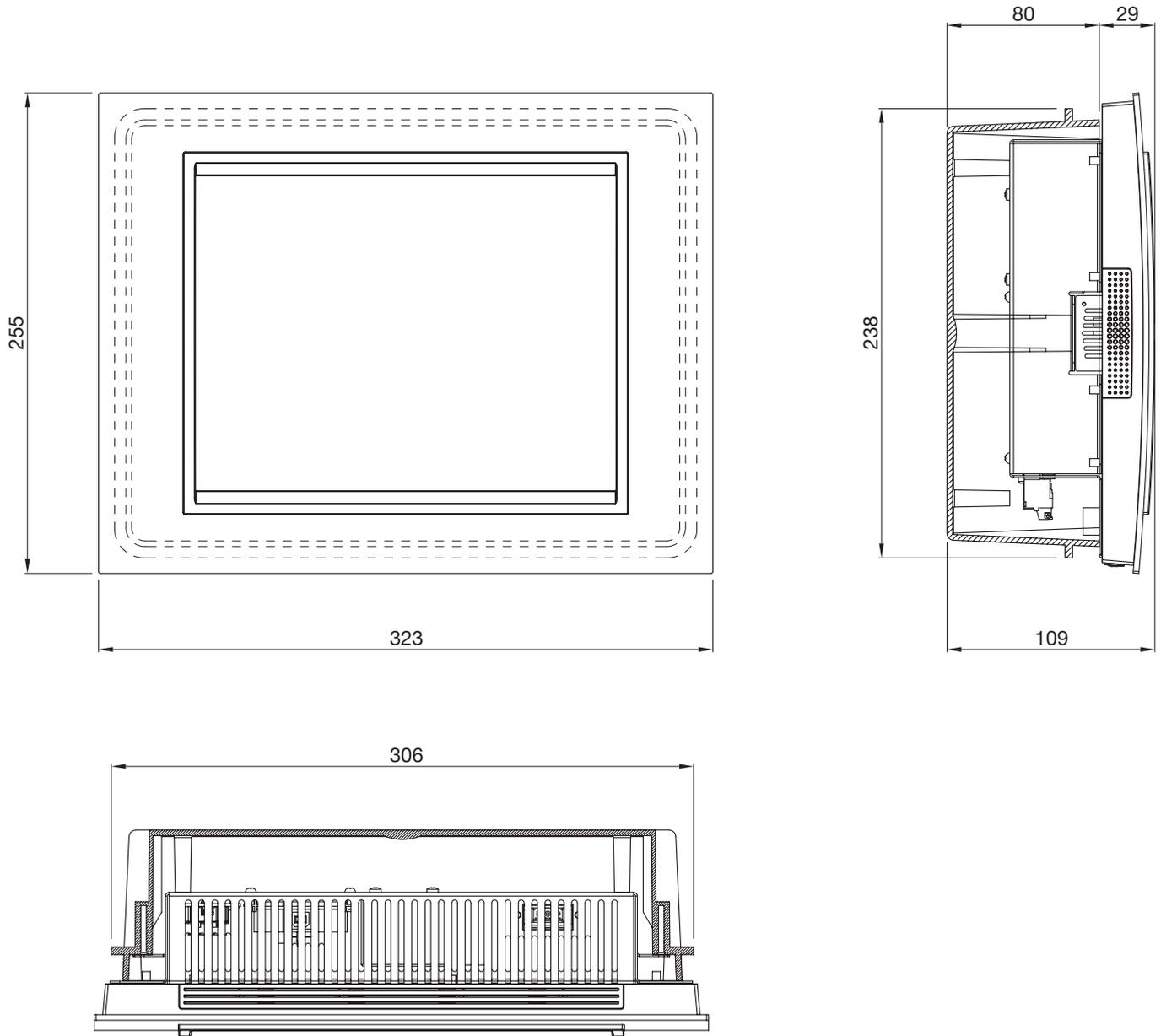
|  |  |
|--|--|
| Communication                                    | Ethernet LAN network, max. speed 100 Mbps<br>Application level protocol: RTSP<br>Transport level protocol: UDP multicast<br>Internetworking level protocol: IPv4   |
| Power supply                                     | 14.4V DC SELV / PoL  |
| Maximum dissipated power                         | With external power supply: 5.5 W<br>With power supply from the PoL port: 6 W  |
| Current consumption                              | With external power supply: 130 mA<br>With power supply from the PoL port: 90 mA   |
| LAN network cable                                | Cat 5e or higher   |
| Inputs   | 5 auxiliary contacts for the local potential-free push-buttons<br>1 auxiliary contact for the electro-lock status sensor   |
| Outputs  | 1 discharge outlet for the electro-lock (24V - 4 A), with programmable maintenance current (300 mA)<br>4 timed NO (250V AC) single-pole relay outputs, with maximum power, with maximum power for load types equal to: <ul style="list-style-type: none"> <li>• Incandescent and halogen lamps (230V AC): 2000 W</li> <li>• Loads controlled by toroidal transformers: 2000 W</li> <li>• Loads controlled by electronic transformers: 1500 W</li> <li>• Energy efficient lamps (compact fluorescent): 50 x 23</li> </ul> |
| Maximum relay switchover current (OUT 1...OUT 4) | 10 A (AC1)<br>10 AX (140 µF ref. EN 60669-1) fluorescent loads with maximum surge current 400A (200 µs)  |
| Configuration elements                           | 5 rotary selectors with 8 positions  |
| Display elements                                 | Red LED for input voltage signalling<br>Red LED for signalling LAN/PoL port power supply<br>Green LED for signalling active communication with the Ethernet switch<br>5 green LEDs for signalling relay status   |
| Connection to a video entryphone system          | 1 LAN/PoL RJ45 port  |
| Electric connections                             | Screw terminals<br>Maximum cable section 2.5mm <sup>2</sup>  |
| Usage environment                                | Indoor, protected from the rain and water infiltrations  |
| Operating temperature                            | -15 ÷ +50°C  |
| Storage temperature                              | -15 ÷ +70°C  |
| Relative humidity                                | Max. 93% (non-condensative)  |
| Degree of protection                             | IP20   |
| Width (DIN modules)                              | 4  |
| Weight   | 0.2kg  |
| Reference Standards                              | Electromagnetic compatibility: 2004/108/EC, EN 61000-6-1, EN 61000-6-3   |

# TECHNICAL CHARACTERISTICS



## Dimension tables

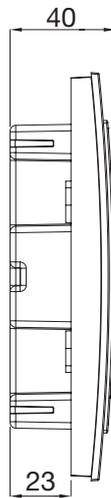
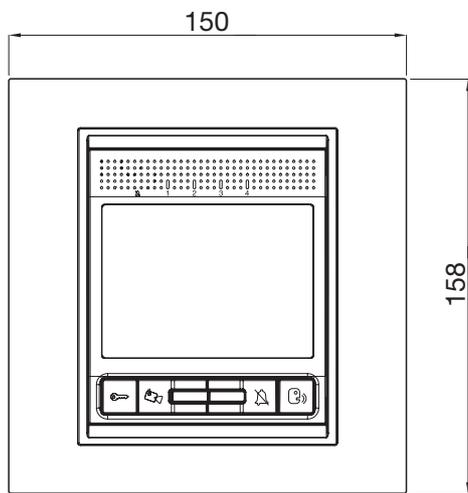
**Vision Master Chorus (GW 18 000 TB - GW 18 000 VT - GW 18 000 VA)**



# TECHNICAL CHARACTERISTICS

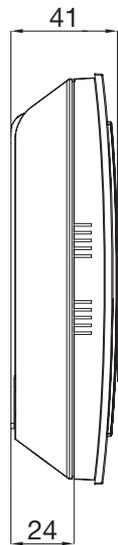
## Video entryphone with speakerphone - flush-mounting and wall-mounting

(GW 18 341 TB - GW 18 341 VT - GW 18 341 VA - GW 18 343 TB - GW 18 343 VT - GW 18 343 VA)



FLUSH-MOUNTING

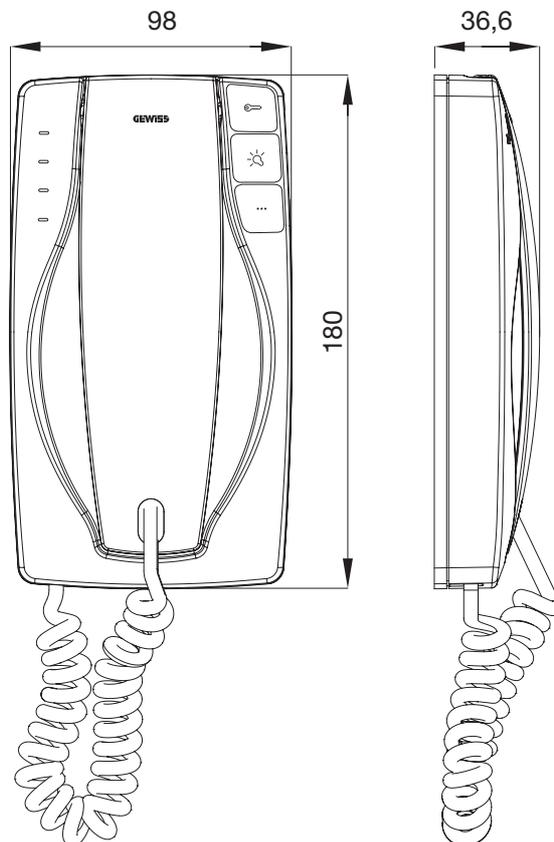
GW 18 341 TB - GW 18 341 VT  
GW 18 341 VA



WALL-MOUNTING

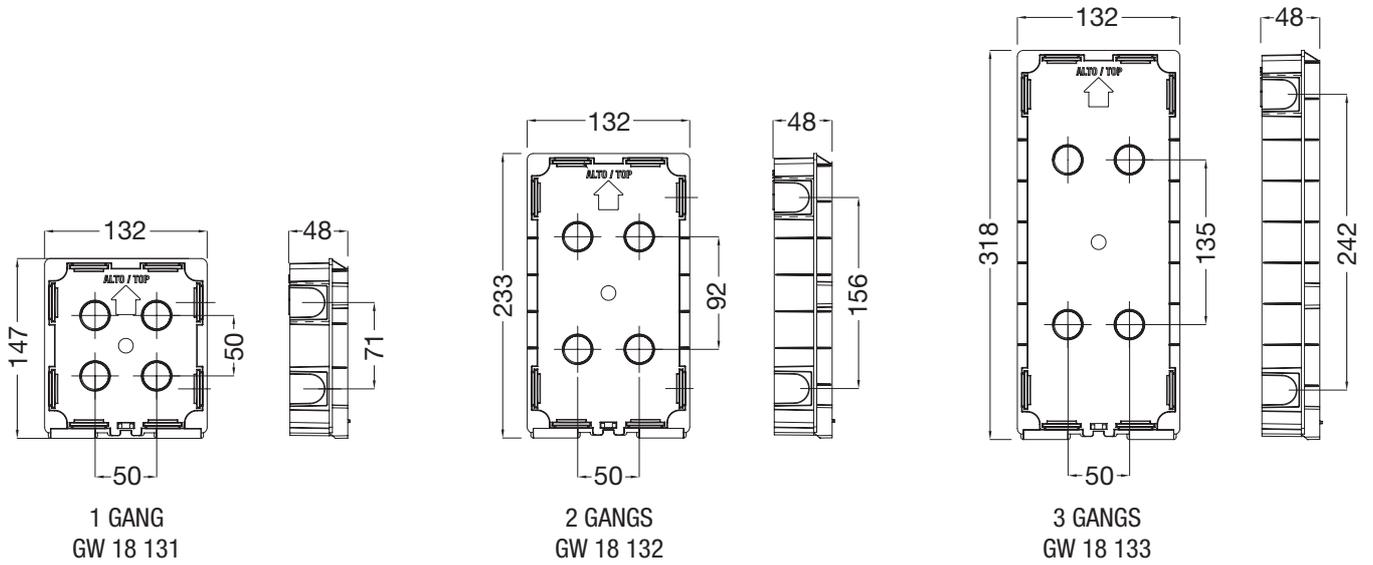
GW 18 343 TB - GW 18 343 VT  
GW 18 343 VA

## Wall-mounting entryphone (GW 18 360)

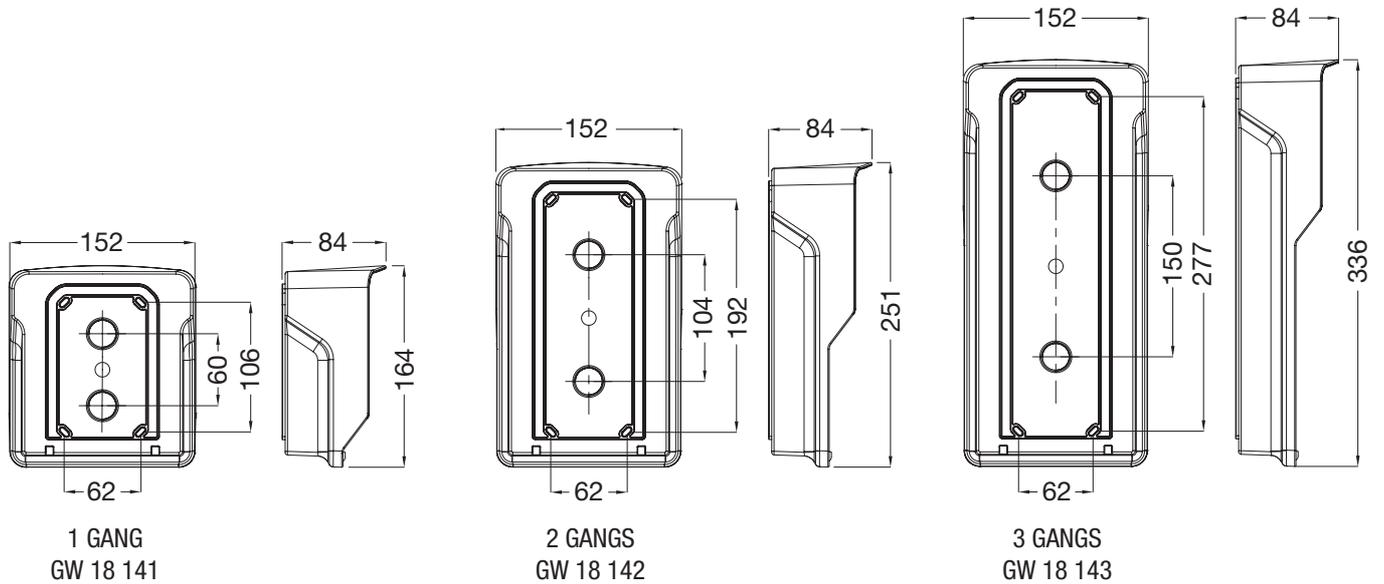


# TECHNICAL CHARACTERISTICS

## Flush-mounting boxes for front door unit (GW 18 131, GW 18 132, GW 18 133)

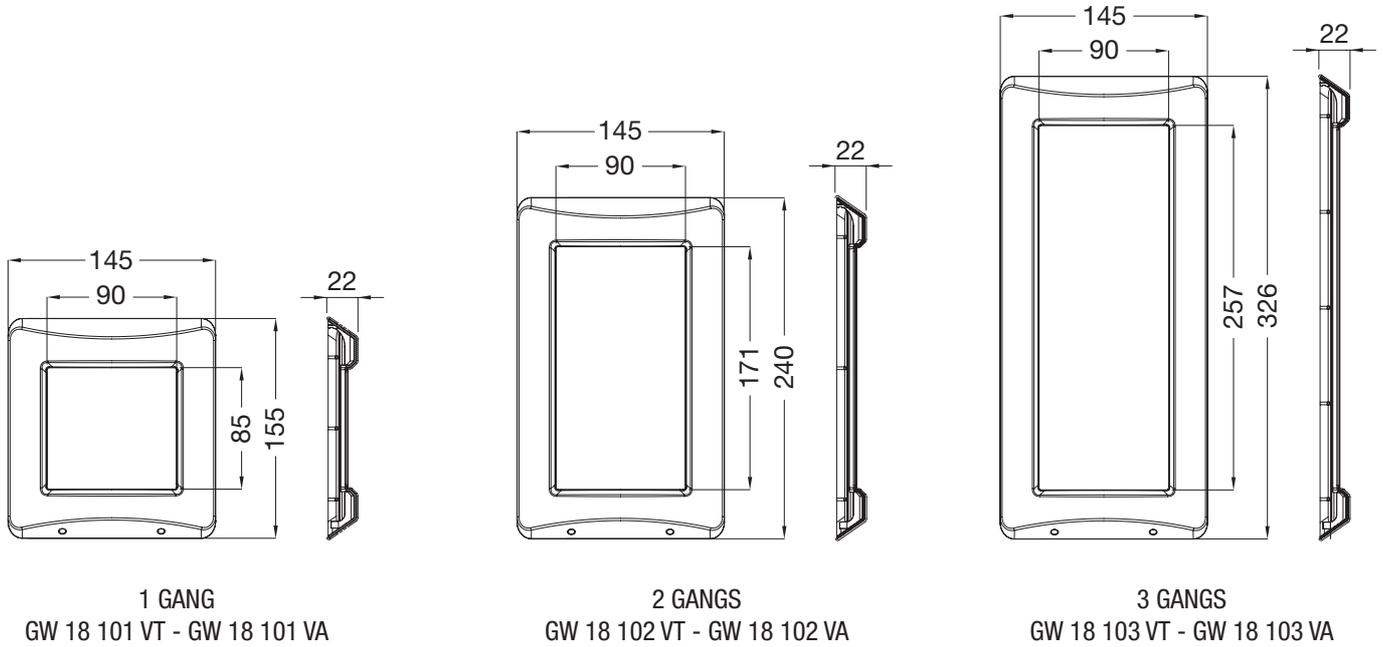


## Wall-mounting boxes with rainproof roof for front door unit (GW 18 141, GW 18 142, GW 18 143)

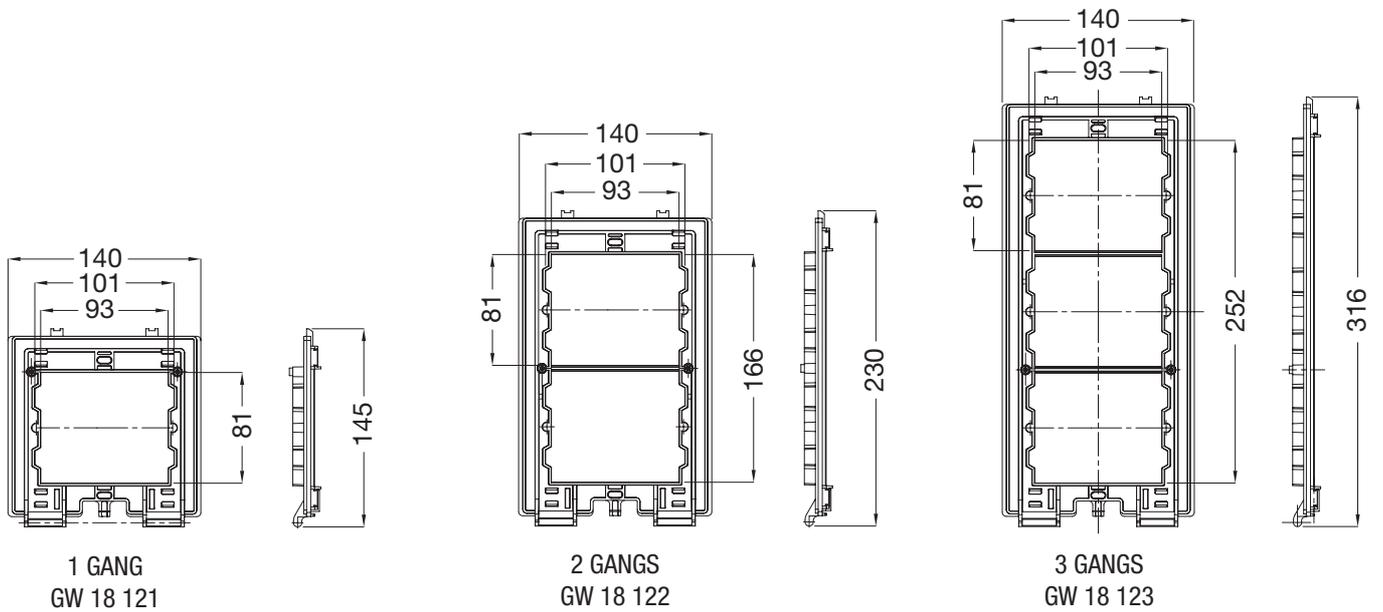


# TECHNICAL CHARACTERISTICS

**Metal frames for front door unit - titanium or slate colour (GW 18 101 VT, GW 18 102 VT, GW 18 103 VT, GW 18 101 VA, GW 18 102 VA, GW 18 103 VA)**

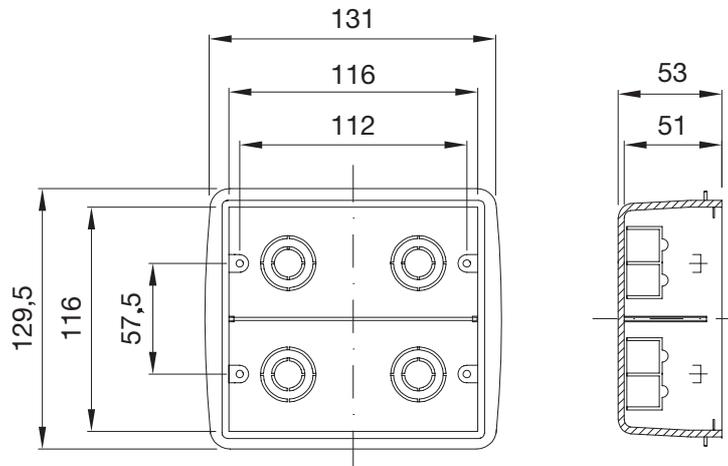


**Frames for front door unit (GW 18 121, GW 18 122, GW 18 123)**

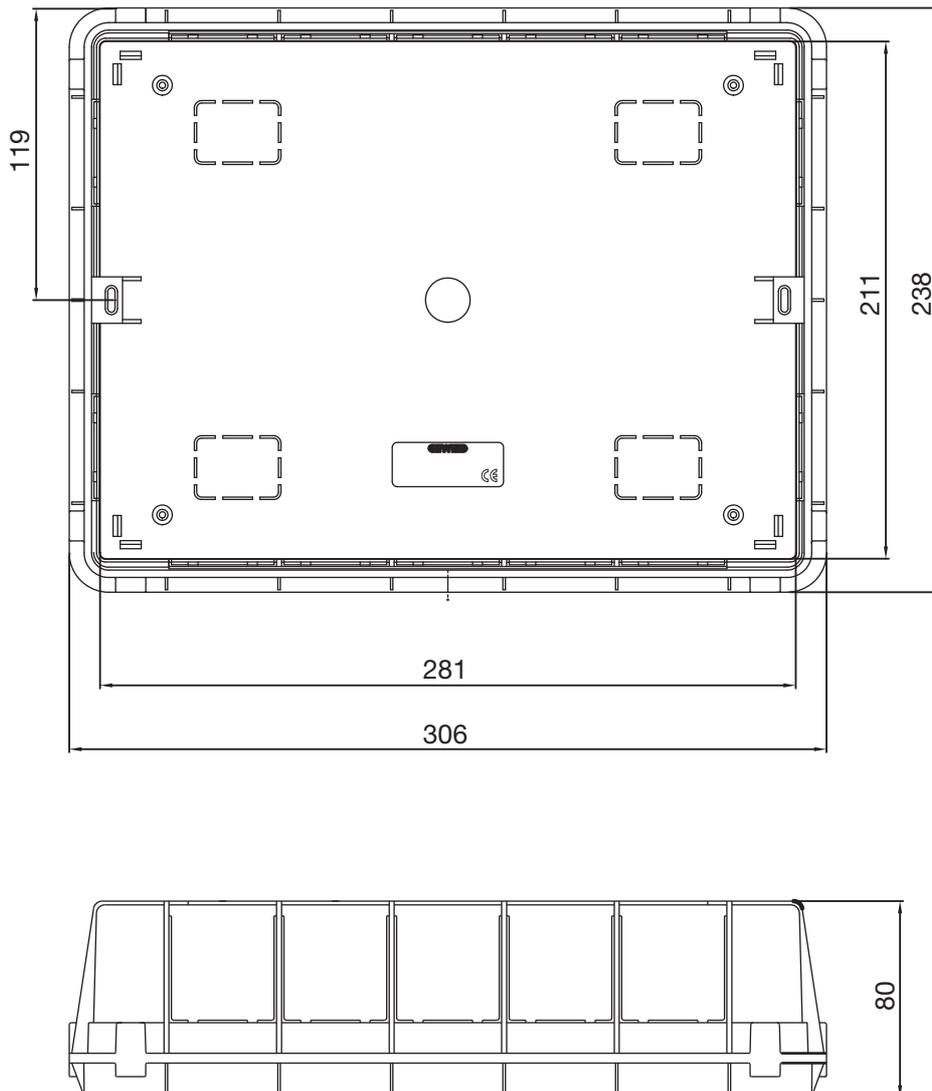


# TECHNICAL CHARACTERISTICS

## Flush-mounting box for video entryphone (GW 24 237)

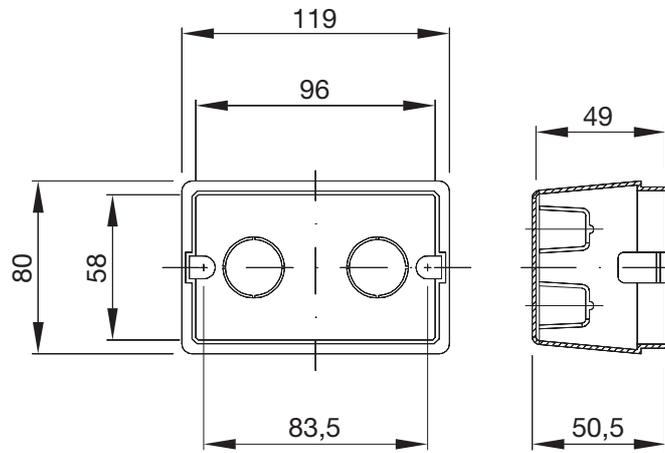


## Flush-mounting box for Vision Master Chorus (GW 24 101)



# TECHNICAL CHARACTERISTICS

## Flush-mounting box for entryphone with speakerphone (GW 24 403)





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