# 2 WIRES VIDEO DOOR ENTRY SYSTEM

## GUIDE FOR DESIGN AND INSTALLATION

#ImprovingLives

**bticino**

A brand of **legrand**

# 2 WIRES VIDEO DOOR ENTRY SYSTEM

## Guide for design and installation

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## Pre-sale service

**BTICINO** supports the creation of 2 WIRES Audio & Video door entry system with a dedicated estimate software.

**YouDiagram is the BTicino software for the design of Door Entry Systems.**

It allows to draw the single-line diagram of the system in PDF and DXF format, the configuration, choice and finishing of the devices, the verification of the absorptions and the installation rules on each system BUS.

Also provides the list items and the technical documentation of the devices in the project.

Free to download from **www.bticino.com** **International website.**



**For further TECHNICAL INFORMATION see the 2-Wires Door Entry System technical guide**

# After sale service

**For after sales TECHNICAL ASSISTANCE, please refer to the www.bticino.com About Us | BTicino International and www.legrand.com World presence – Legrand in order to find your nearest subsidiaries:**



## WORLD PRESENCE
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| World | Africa | Americas | Asia | Europe | Oceania |
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# 2 Wires systems, the simplest solution for each installation

## Your work is easier

The 2 Wires system is easy to use. Thanks to the NON-POLARISED 2 Wires wiring of each part of the system, connection is simple, easy and fault-proof.

There will be no more mistakes and time lost due to subsequent interventions.

**2 WIRES**
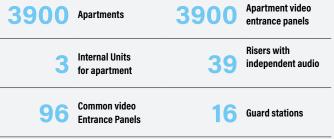
## High performance
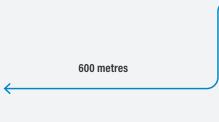
The 2 Wires technology makes it possible to install all types of systems, from villa to the apartment block, with the same ease. Moreover, the possibility of using the existing cables make it an ideal solution in refurbishments.
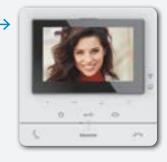
## THE APARTMENT BLOCK SYSTEM CAN HAVE:

| | | | |
|---|---|---|---|
| **3900** | Apartments | **3900** | Apartment video entrance panels |
| **3** | Internal Units for apartment | **39** | Risers with independent audio |
| **96** | Common video Entrance Panels | **16** | Guard stations |

600 metres

The furthest internal unit

Entrance Panel

| The villa | The apartment | The apartment block | The small house block |
|---|---|---|---|

## Maximum versatility

The 2 Wires system is designed to guarantee high versatility and adaptation to the needs of every customer.

The 2 Wires technology allows you to have a door entry system ready for the subsequent addition of the video function, and is ideal in mixed audio/video systems, to meet the needs of the individual residents.  It also offers a wide range of entrance panels and internal units to fit the individual users: from basic door entry functions to the forwarding of calls to a smartphone.

## Integration with IP/2 Wires interface

Thanks to the specific **346891** interface, it is possible to integrate 2 Wires and IP technologies to create very extensive systems with a large number of devices. This system configuration, supported by a dedicated LAN network, offers numerous advantages: high performance, multi-channel distribution, software guard station and centralisation of alarms.

IP/2 Wires interface

⚠ CAUTION: Linea 5000 entrance panels and Classe 300EOS / Hometouch video internal units CANNOT be installed in systems with IP/2 Wires interface.

**THE SYSTEM CAN HAVE:**

| | | | |
|---|---|---|---|
| **1000** | Video Entrance Panels | **10000** | Video Internal Units |
| **100** | IP devices | **10 Km** | Distance from the Entrance Panel to the last Internal Unit |
| **5** | Simultaneous calls on the IP backbone | | |

# Ideal for refurbishments and the renewal of the old door entry system.
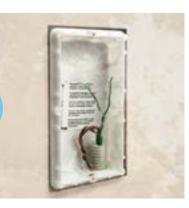
The 2 Wires system offers many advantages for the refurbishment of existing systems: reduced intervention times, ease of execution and consequential cost reduction.

The customer will be able to enjoy aesthetically advanced devices and a wide range of new functions.

## Reuse of existing cables



Removal of the existing entrance panel
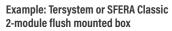
Use of an existing pair of wires to connect the new entrance panel

No need to remove the existing cables and lay the new ones.

## Reuse of flush-mounted boxes



Example: Tersystem or SFERA Classic 2-module flush mounted box

SFERA NEW

SFERA Robur

Or

Linea 3000

No masonry works required to replace the existing flush mounted box.
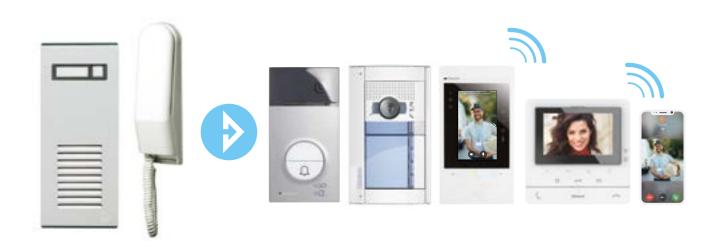
## Switching to video is easy and immediate



Easy shift from the old analogue audio system to the new 2 Wires colour video system.

## Better appearance and functions



In addition to the modern look of the device, the system also offers some additional functions:

- Intercom
- staircase light control
- release of the additional door lock
- call repetition on smartphone
- 5 MP High-Quality camera
- additional activations
- Alexa voice control
- Netatmo safety devices management

# The main devices

## Entrance panel

Audio or video outdoor pushbutton panel with colour camera. Possibility of calling audio/video internal units and activate an associated lock. The call can be sent using address book/keys, by selecting the name on the display, or by entering a code on the keypad. The lock can also be operated using a proximity reader (RFID) or by entering a numerical code on the keypad (only available with preset pushbutton panels).
Available in different styles, finishes, and installation types (wall mounted, flush mounted, with anti-tampering protection and with rainshield).

### LINEA 5000

| Aluminium | Nickel | Gold | Titanium | Steel | Keypad module | RFID Smart Access module |
|---|---|---|---|---|---|---|

Inductive loop module

### SFERA NEW e ROBUR

| Allmetal | Allwhite | Allstreet | Robur |
|---|---|---|---|

### LINEA 3000

| Audio | Video |
|---|---|

### LINEA 2000

| Audio | Video |
|---|---|

### LINEA 300

Video anti-tampering

# Internal Unit (audio and video internal units)

Colour video and audio internal units for the reception of calls from the external pushbutton panel and activation of the corresponding lock. Available in different styles and installation types (wall mounted, table top).
Using specific keys or the menu (preset video internal units only), they give the possibility of managing the video door entry functions (e.g. activation of any cameras, locks, intercom calls, etc.).
Handsfree communication or with handset.

## CLASSE 300EOS AND CLASSE 100X CONNECTED VIDEO INTERNAL UNITS

**Handsfree video internal units with integrated Wi-Fi connectivity**



Classe 300EOS with Netatmo and Classe 100X are video internal units that give the possibility of forwarding the video door entry call to a mobile device. The integrated Wi-Fi connectivity allows connection with your smartphone. Thanks to the dedicated App, both while in your home and when away your will be able to manage video door entry calls, video door entry answering machine functions (Classe 300EOS), the activation of door locks and cameras, the timed activation of lights / garden watering systems and the Netatmo safety devices management (Classe 300EOS) using the smartphone.
Home + Security is the free APP for Android and iOS smartphones which can be downloaded from the respective digital stores. Configuring the App needs just a few steps and, thanks to the BTicino Cloud, the connection is totally automated and managed with the maximum level of security.

| CLASSE 100 | CLASSE 100 | | SPRINT L2 |
|---|---|---|---|
| Video internal units | Handsfree audio internal unit | Internal unit with handset | Internal unit with handset |

# The main devices

## Power supplies

They generate the system 2 Wires BUS and power the devices of the system. The power supplies are SELV double insulation safety devices.

Three types of power supplies are available:

- **346040** Power supply for 2 Wires audio systems in 6 DIN modular enclosure. Power supply PRI 110 – 240 Va.c.@50 – 60 Hz. It supplies a maximum output current of 600 mA.

- **346050** Power supply for 2 Wires audio and video systems (with integrated video adapter) in 6 DIN modular enclosure. Power supply PRI 110 – 240 Va.c.@50 – 60 Hz. It supplies a maximum output current of 1.2 A distributed on the three outputs (IU BUS), (TK BUS) and (SCS).

- **346030** Compact power supply for 2 Wires audio and video systems (with integrated video adapter) in 2 DIN modular enclosure. Suitable for small audio or video one-family systems.
Power supply PRI 230 Va.c.@50 – 60 Hz. It supplies a maximum output current of 600 mA.

- **346020** Additional power supply in 2 DIN modular enclosure. It gives the possibility of locally powering entrance panels and internal units fitted with connection clamps (1 - 2).  Power supply PRI 220 – 240 Va.c. It supplies a maximum output current of 600 mA.



**Audio power supply**
**346040**



**Audio and video power supply**
**346050**



**Audio and video compact power supply 346030**



**Additional power supply 346020**

## Audio video node

It gives the possibility of mixing audio / video signals for the connection to the system of external pushbutton panels and/or 2 Wires cameras. It gives the possibility of connecting up to four 2 Wires external pushbutton panels / cameras and the generation of four 2 Wires risers.
It must be used in conjunction with the system power supply, item 346050. Device in 6 DIN modular enclosure.

In order to avoid jeopardising the possibility of future system expansions, the use of the audio video node is recommended with this system setup.



**Audio video node**
**F441**

## Floor shunt

Can make 2 Wires video door entry systems with star wiring distribution.  It automatically adapts the video signal. Its small size means it can also be placed inside the flush-mounted box.  Device in Basic enclosure with 4 outputs.



**Floor shunt**
**346841**

# Actuators

They give the possibility of controlling / activating additional electric locks, or activating generic loads (e.g. staircase lights, lamp for the illumination of the field of vision of the camera, call forwarding to external devices, etc.) directly from preset video internal units.

Three types of power supplies are available:

- **346210** Relay actuator for generic loads in 2 DIN modular enclosure.
- **346230** Relay actuator for door lock in 2 DIN modular enclosure.
- **346260** Timed relay actuator for door lock in 4 DIN modular enclosure.



**Generic actuator**
**346210**



**Door lock actuator**
**346230**



**Timed actuator**
**346260**

# Apartment interface

It gives the possibility of installing a dedicated apartment system, independent from the apartment block riser. In the apartment, it will therefore be possible to install a video door entry system with dedicated private external pushbutton panels / cameras, possibly also integrated with the home automation system. Device in 4 DIN modular enclosure.



**Apartment interface**
**346850**

# System expansion interface

It gives the possibility of increasing the number of devices connected to the 2 Wires system, of reaching the maximum installation distances, of generating risers with independent audio, and expanding the apartment system performance.



**System expansion interface**
**346851**

# The accessory devices

## Relay module

It gives the possibility of operating "non-standard" door locks.
The device must be connected to the (S+/S-) clamp of the speaker module of the entrance panel.



**Relay module
346250**

## Coaxial/2 Wires interface
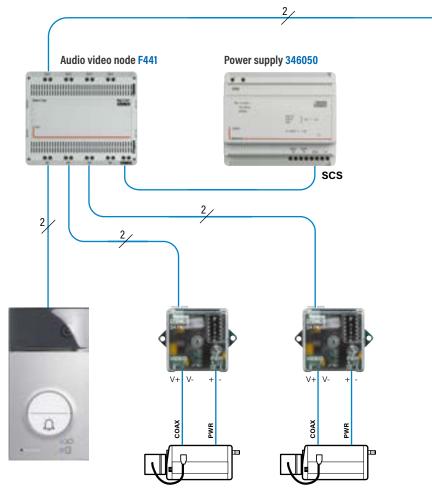
Can connect the cameras (PAL) with 12 Vd.c. power supply (consumption 150 mA max) and coaxial video output (1 Vpp @ 75ohm) to the video 2 Wires BUS. The interface directly powers the camera. The device may be used as separate camera interface. In order to associate a camera to an audio entrance panel, it will be enough to configure the interface and the entrance panel with the same configurator in the P position.



**Coax / 2 Wires interface
347400**



**Audio video node F441**

**Power supply 346050**

**SCS**

**Video internal
unit**

V+ V-  + -        V+ V-  + -

COAX  PWR      COAX  PWR

**NOTE: cameras (PAL) 12 Vdc - 150 mA max.**

## Additional ringtone

Can repeat the audio/video door entry call in several rooms.

The connection is completed with 2 Wires directly connected to the clamps.

Available in "neutral" finish, wall mounted installation without the need of additional accessories.



**Neutral additional ringtone**
**336910**

## Guard station

It's a tabletop device suitable for 2 Wires multifamily systems that provides access to the various apartment block video door entry system services: intercommunication among apartments, management of door locks and staircase lights, monitoring of cameras installed in common areas. It has a large 7" LCD colour display with icon menu, handset and handsfree.
It gives the possibility of creating an internal unit, external pushbutton panel and guard station address book.
It is possible to connect to the system up to 16 guard stations.
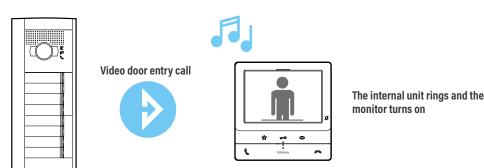


**Guard station**
**346310**

# The system functions
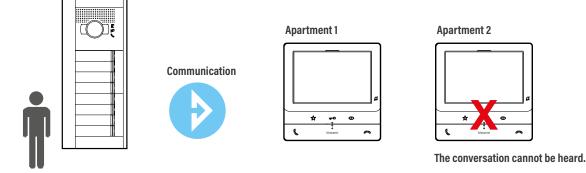
## The call

When the call key on the entrance panel is pressed, the system sends a direct signal only to the internal unit/s configured to receive that call. Users have 30 seconds to respond. Each internal unit is uniquely configured, and when the call is received the device produces an audible signal and switches on the monitor (if available). Answering using the connection key or by lifting the handset starts the communication with the entrance panel, which can last up to a maximum of 1 minute. The communication is automatically interrupted by pressing the connection key again or by replacing the handset, simultaneously switching off the monitor.

**Video door entry call**

**The internal unit rings and the monitor turns on**
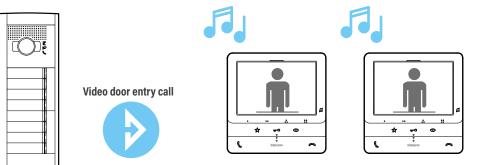
## Conversation secrecy

During a conversation between the entrance panel and a video internal unit, all the other internal and external devices not involved are temporarily excluded, therefore ensuring the confidentiality of the communication. If an excluded external device attempts to make a call during an ongoing conversation, a sound will indicate that the internal line is temporarily busy.

**Communication**

**Apartment 1**

**Apartment 2**

**The conversation cannot be heard.**

## Simultaneous switching on

Some video internal units are preset to allow the simultaneous switching on of the monitor. When a call is received, all internal units ring and the monitors of all video internal units light up. Once the call is accepted, only the monitor of the video internal unit answering the call stays on and connects to the entrance panel. To enable this function, all the video internal units with the exception of one must be powered locally through the additional power supply unit, item 346020.

**Video door entry call**
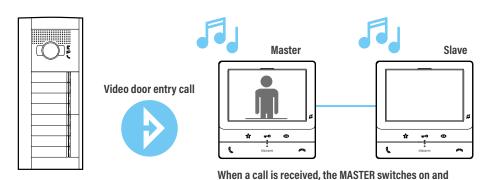
**All the internal unit rings and their monitors switch on for the same call.**

## Master-Slave function
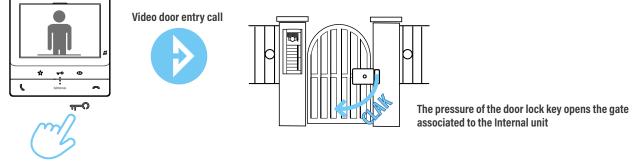
All the video internal units feature the Master-Slave function. When a call is received, all the apartment internal units ring but only the monitor of the video internal unit configured as Master lights up. If the auto-switching on key is pressed on a Slave device, the monitor of the Master device switches off and the monitor of the Slave device switches on, without necessarily activating the communication with the entrance panel. On the other hand, when pressing the connection key (or lifting the handset) of a Slave, the monitor of the Master turns off and the audio-video communication between the Slave and the Entrance panel is established.

Video door entry call

Master

Slave

When a call is received, the MASTER switches on and rings, while the slave only rings.
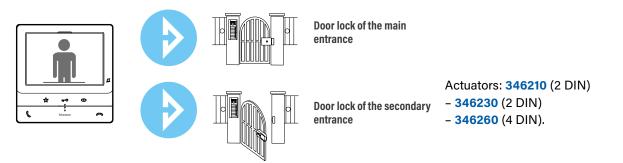
## Door lock release

All internal units have a door lock key, which allows to control the opening of one of the electric lock present in the system. When the system is idle, pressing the button activates the lock associated with the entrance panel via configurator P of the internal unit. On the other hand, during a call the button activates the door lock or actuator connected to the entrance panel that made the call.

Video door entry call

The pressure of the door lock key opens the gate associated to the Internal unit

## Release of the additional door lock
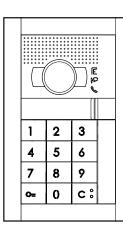
A specific actuator must be used to open one or more additional locks, in addition to the main one connected to the entrance panel speaker module. It is possible to choose between generic actuator 346210, lock actuator 346230 or actuator 346260, which offers more timing flexibility than the 346230 actuator. The correctly configured actuator is controlled via a dedicated button on the internal unit. In case of critical electric locks, it is possible to power the additional door lock using an auxiliary transformer.

Door lock of the main entrance

Door lock of the secondary entrance

Actuators: **346210** (2 DIN)
– **346230** (2 DIN)
– **346260** (4 DIN).

# The system functions

## Release of 2 door locks with Code-Lock

By using the Sfera 353000 keypad module configured with M=3 and integrated in the external pushbutton panel with the speaker module, it is possible to activate of 2 separate electric door locks by entering a numerical code. The device manages both the door lock connected to the speaker module / AV module of the entrance panel, and a second door lock connected to the clamps of the local relay, 353000 (that requires dedicated power supply).



**Door lock of the main entrance**
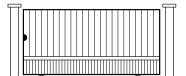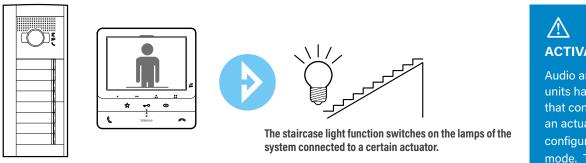
**Door lock of the secondary entrance**

## Staircase light activation



The staircase light function switches on the lamps of the system connected to a certain actuator.

In order to use this function, a generic actuator, item 346210 (2 DIN) is required.
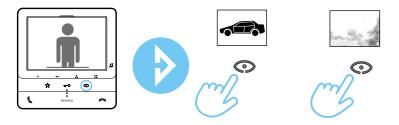
⚠️
**ACTIVATION**

Audio and video internal units have a dedicated key that controls (by default) an actuator item 346210 configured in staircase light mode. The key may also be configured for other functions.

## Auto-switching ON

Pressing the auto-switching on key with the video internal unit idle will establish communication with the entrance panel associated through the P configuration of the internal unit. Continue pressing the auto-switching on key to cycle through the various entrance panels/cameras connected to the system.

The auto-switching on function is not available when the system is already "engaged" in a conversation between entrance panel and internal unit.



**Every time that the auto-switching on key is pressed, the images displayed change.**
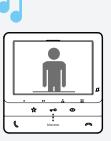
# Intercom call

The system supports the Intercom function, which allows 3-minute audio communications between internal units, both of the same apartment or different apartments.

For apartments with interface 346850 installed, or in case of single-family house, it is possible to call the video internal units individually. In this case, the Intercom connection can take place simultaneously with other external communications.

If the apartment does not use interface 346850, the Intercom call reaches all the video internal units indiscriminately, and the connection cannot coexist with other external communications.



**Video door entry call**

**Apartment 1**

**Apartment 2**
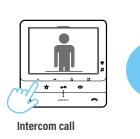
Calls from the outside, including from other apartments, have priority and interrupt the Intercom communication.
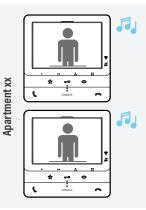
## General Intercom call

The general Intercom call is only available inside the apartments fitted with interface 346850 or in a single-family context. By correctly configuring the video internal units, each device can send, using a dedicated key, an Intercom call to all the other internal units of the apartment. The general intercom connection cannot take place at the same time as other communications.



**Intercom call**

**Apartment xx**
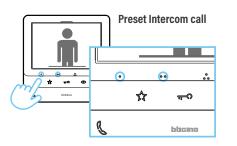
Calls from the outside always have priority, automatically interrupting the Intercom connection.

## Preset Intercom call

From the preset internal units of the apartment block system, it is possible to send an Intercom call to one single preset video internal unit, for example the caretaker's internal unit.

This internal unit can receive Intercom calls but not send them.



**Preset Intercom call**

CUSTODE
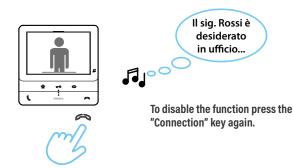
Calls from the outside have priority and automatically interrupt the Intercom connection.

# The system functions

## Pager function (notification)
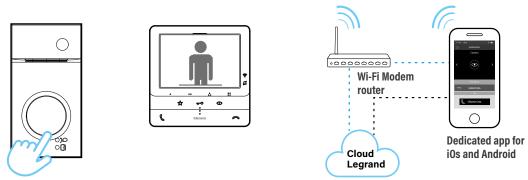
The function can be activated only inside the apartment (therefore with interface 346850) or in a single-family context. This function (only available with handsfree devices) gives the possibility of broadcasting a voice message from the microphone of the audio/video internal unit (preset internal units only) to the speakers of the sound system.



Il sig. Rossi è desiderato in ufficio...

To disable the function press the "Connection" key again.

To activate briefly press the "Connection" key while the device is in the idle condition. The activation of the function is confirmed by the green LED coming on. Audio activates automatically.

## Call repetition on smartphone

In single and multifamily systems with Classe 300EOS and Classe 100X video internal units it is possible to set the forwarding of the video call to a smartphone (android and iOS). The video internal unit integrated Wi-FI connectivity allows connection with a mobile device. The dedicated Home + Security App can be downloaded free from the digital stores (Google Play & Apple Store). Classe 300EOS / Classe 100X internal units give the possibility of managing the system both while at home and when out: taking video/audio entrance panel calls, electric door lock control and activation of any cameras connected to the video/audio door entry system using a smartphone.



Wi-Fi Modem router

Cloud Legrand

Dedicated app for iOs and Android

## Professional studio (office) function

 This function is used mainly in the service sector (offices, GP Doctors surgeries, professionals), and in all those situations when the opening of the gate or the entrance door is required without physical interaction with the internal unit. When a person rings from the entrance panel, the internal unit rings, the video if present switches on and the associated door lock is activated without the need for anyone to press the internal unit door lock key.
■ In order to use this function, the internal unit must be configured appropriately, after which it can be enabled/disabled as needed.
■ It cannot be activated together with the DOOR STATUS function.



The person rings using the entrance panel.

The internal unit rings and automatically opens the associated door lock

CLAK
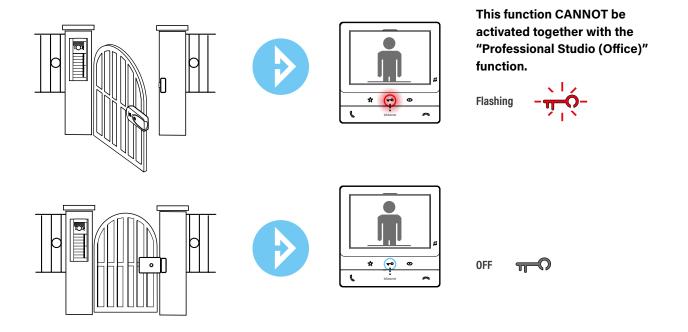
The gate opens
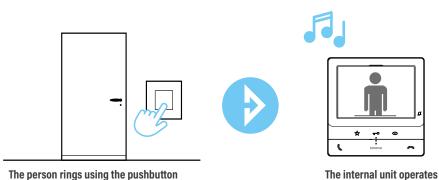
# Door status function

Using internal units preset for this function and the door lock actuator item 346260 integrated in the system, it is possible to monitor the status of doors and gates. When the gate is open, the red LED flashes; when the gate is closed, the LED is off. If two or more entrances are controlled, the LED is off when all entrances are closed and flashes when at least one entrance is open.



**This function CANNOT be activated together with the "Professional Studio (Office)" function.**

**Flashing**

**OFF**

# Floor call function

The internal units (audio and video) of the 2 Wires system make it possible to take advantage of the CALL TO THE FLOOR function; by connecting a pushbutton to the clamps (ET / ), it is possible to use the ringtone of the devices to make calls from the apartment entrance door. In installations with internal units connected in parallel, only the internal unit to which the call pushbutton is connected will ring.



**The person rings using the pushbutton outside the door.**

**The internal unit operates as a bell for the call from outside the door.**

# The system functions
## Integration with Netatmo cameras

This function is available for **CLASSE 300EOS and CLASSE 100X** connected video internal units. Thanks to the Wi-Fi connectivity , and device interoperability, it is possible to integrate the connected video internal units with Netatmo indoor and outdoor smart cameras.

The association with Netatmo cameras allows the use of the face recognition function. When a call is received from an entrance panel, the system shows if there is someone in your home. The integration allows to display the BTicino and Netatmo camera video in an integrated way from a single App: Home + Security. Through the same App, it is also possible to manage the products of the Netatmo security, such as outdoor and indoor cameras, door and window sensors, indoor siren and smoke detector. This makes it possible to quickly and easily create a smart security system.

alexa | built-in

Compatible with
Netatmo

DISPONIBILE SU
Google Play

Scarica su
App Store

**NETATMO
Smart indoor video
camera**

**NETATMO
Smart outdoor
video camera**

The configuration to associate the devices is very simple and no extra wiring/accessory is required.  For both video internal units, it is necessary to have the credentials (Username & Password) of the Netatmo account previously created.

# Video door entry answering machine function

The video door entry answering machine is an exclusive function of the Classe 300EOS video internal unit (344842 - 344884). By activating this function, the system records a video feed of the visitor trying to contact you. These video feeds are accessible to the user either via the video internal unit screen or via the Home + Security app, with detailed information on the date and time of the visit. In addition, it is also possible to record an audio message that will be played externally in the event of unanswered calls.



Siamo momentaneamente assenti...

This function not only increases security by making sure that visitors are identified but also offers a practical way to communicate with those outside, ensuring greater convenience and control for the user.

# Push to talk function
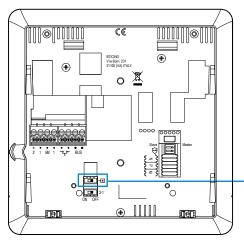
The Push to Talk function is designed to improve the quality of the communication when the entrance panel is in a particularly noisy area. This function can only be activated from handsfree internal units and allows a clearer and less disturbed conversation. To use the function, simply activate or deactivate it directly from the internal unit. The activation and deactivation procedures may vary, so please see the specific data sheets for further details.



With this function, users can enjoy smoother and easier to understand communication, even in situations of high ambient noise levels.

# Safe door lock function

The safe lock function is available on audio and video internal units of the Classe 100 and Classe 300EOS ranges. This function offers an additional level of security, preventing the opening of the electric lock connected to the entrance panel when the internal unit is in stand-by mode or the audio is not connected. This function is particularly useful in apartment buildings or offices where access security is extremely important. To activate the function, simply move the appropriate microswitch, located on the back of the internal unit, to the correct position. This function not only increases the security of the home, but also provides peace of mind to users, who know that access is efficiently controlled.



**NOTE:** when the function is active, all the keys (in all the configurations requiring the activation of a door lock) are disabled, and when they are pressed the white LED flashes.

ON = 🛡 🔑 ▬
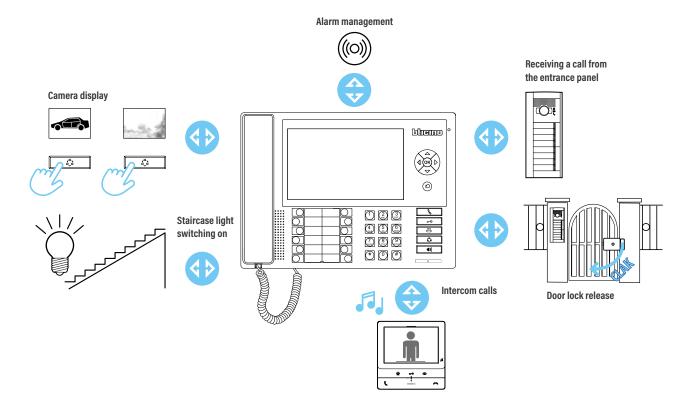
**Note: the "Safe Door Lock" function CANNOT be activated together with the "Professional Studio (Office)" function.**

# The system functions

## Guard station

Designed for multifamily installations, it offers central management and supervision of the apartment block video door entry system services. This device offers several practical functions for communicating with the apartments. It allows direct interaction with residents, facilitating internal communication.
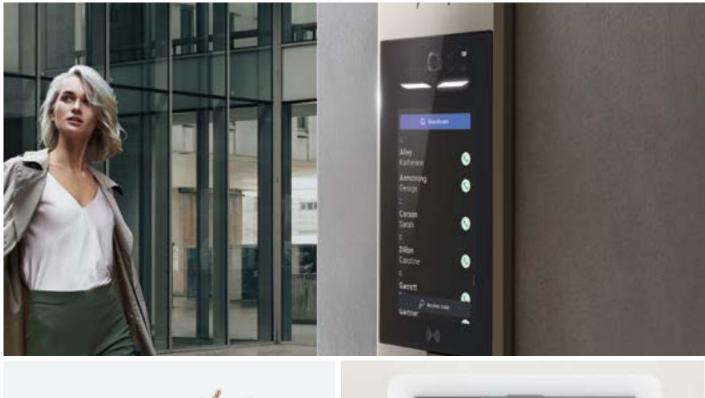
- Door lock management: It allows control of the opening of the connected locks, enhancing the security of the building.
- Staircase light switching on: It facilitates the activation of lights in common areas, ensuring visibility and safety.
- Camera monitoring: It allows images from the cameras installed in common areas to be displayed, increasing security control.
- Alarm management: It allows the monitoring of alarms from apartments or common areas.
- The guard station is fitted with a customisable address book for internal units, entrance panels and other connected guard stations. It can also support an additional bell-type ringtone for call repetition. Call modes vary depending on the type of internal unit.
- Internal unit with handsfree: The call to the guard station is made using the AUTO-SWITCHING ON key on the internal units. When the guard station operator lifts the handset, the internal unit emits an audible signal; pressing the CONNECTION key allows to speak to the guard station operator.
- Internal unit with handset: If the handset is on the hook, the operation is identical to hands-free operation. If it is off the hook, it will be necessary to hang it up and then lift it to communicate. If the guard station is busy, calls are put in a queue and handled by the guard station operator in order of arrival.



Alarm management

Camera display

Receiving a call from the entrance panel

Staircase light switching on

Intercom calls

Door lock release

## Service internal unit (Only systems with Guard Station)

The service internal unit is a device associated with the guard station, which allows the referent, such as a caretaker or receptionist, to answer calls coming from the main entrance panels. This system allows efficient communication management, as the referent can also receive calls from an internal unit located in their office or apartment. In this way, the referent can manage communications in a convenient and direct manner, ensuring that no call is missed.

# GENERAL RULES
# FOR INSTALLATION

# System layout
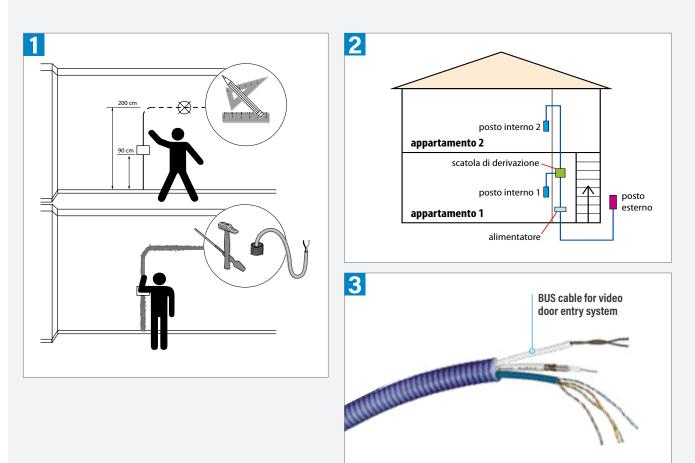
## General information

The first step for the installation of an audio or video door entry system is to design a solid basic setup. Careful planning of cables, conduits and control points makes the installation easier and allows for the future addition of new devices.

It is essential that the installer has the floor plan of the house and a plan of the furniture arrangement available. It is also important to check that what is provided for in the estimate matches the actual situation on site.  Finally, the characteristics of "BUS" systems must be taken into account when installing the system. Meticulous preparation at this early stage is essential to ensure the success of the entire project.

1. **Marking of conduits;**
2. **The type of wiring;**
3. **Coexistence of cables inside conduits.**





posto interno 2

**appartamento 2**

scatola di derivazione

posto interno 1

posto esterno

**appartamento 1**

alimentatore



BUS cable for video door entry system

# Selection and positioning of the electrical panel

The arrangement of the electric systems of a building requires the creation of a central point where to group together all active devices, such as power supply units, interfaces and switchboards, necessary for the control and management of the various functions. This requirement must be met following a few general rules:

## 1. ADDITIONAL SPACE

It is essential to provide extra space to allow for the installation of additional devices in response to new needs.

## 2. POWER SUPPLY POSITION

Power supplies should be installed in the lower part of the switchboard to facilitate heat dissipation.

## 3. DISSIPATION CAPACITY

The switchboard must be capable of dissipating a power higher than the sum of powers dissipated by all the devices that it houses.

BTicino offers a wide range of switchboard suitable for different needs, differentiated by capacity and installation modes (flush or wall mounted). For installations in new or refurbished buildings, whether single or multi-storey, it is possible to choose among different control panel or switchboard solutions, with wall or flush mounted installation.

**All BTicino switchboards and control panels meet the requirements of standard IEC 23-51, therefore ensuring proper calculation of power dissipation and efficient system management.**

**Wall mounted and flush mounted switchboards**

# SELV double insulation safety devices

In addition to entrance panels and internal units, the system also requires only a few accessories, all connected using the 2 Wires system.
The 2 Wires system is classified as **SELV (Safety Extra-Low Voltage)**, as it is powered by independent power supplies with double safety insulation, not connected to the earth.. The maximum operating voltage is limited to 25 Va.c. (effective) or 60 Vd.c. non inverted, therefore ensuring a high level of safety for users.

All BTicino devices are designed with double insulation, therefore ensuring a high level of safety. Compliance with the SELV classification is only guaranteed through strict compliance with the installation regulations in force and the general installation standards of the individual devices and cables that make up the system, as indicated by BTicino.

# Installation of Linea 5000 entrance panels

## Entrance panel height
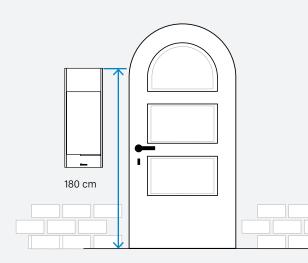
For the installation of Linea 5000 entrance panels, it is recommended that the pushbutton panel is positioned at a height of 180 cm (top edge). It is important to avoid installing the camera directly facing light sources or in areas where the subject being filmed would be strongly backlit, as this would reduce the contrast in dark areas.
The camera automatically adjusts the brightness on the brightest part of the image.
If these conditions cannot be fulfilled, it is recommended to vary and increase the installation height and to point the lens downwards to improve the quality of the shots. In low lit rooms, the installation of an additional light source is recommended.
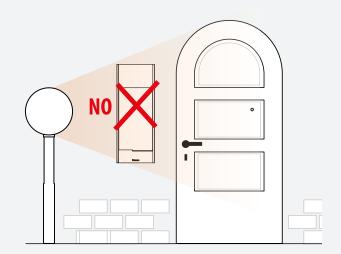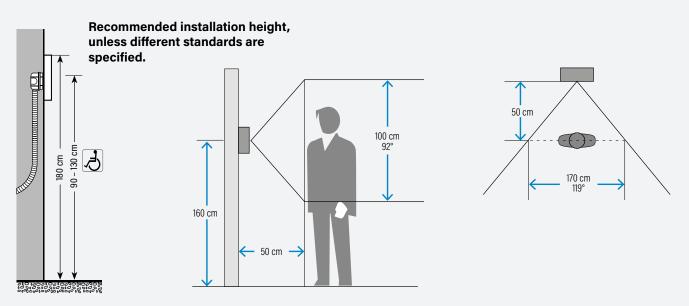
**NOTE:** to ensure access for disabled individuals, the recommended installation height is 90 -130 cm (top edge), as indicated in DM 236/89.
**The recommended heights may vary according to local regulations.**

180 cm

NO

**Recommended installation height, unless different standards are specified.**

180 cm

90 – 130 cm

160 cm

50 cm

100 cm
92°

50 cm

170 cm
119°

# Installation of other entrance panels

## Entrance panel height
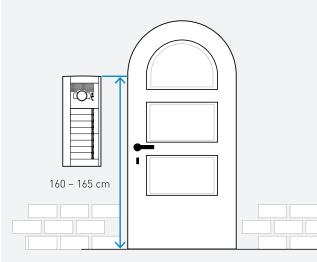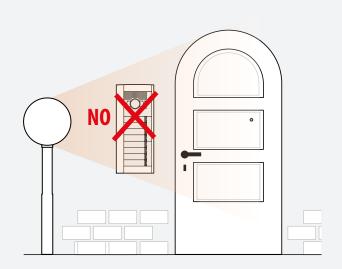
For the installation of the other entrance panels, it is recommended that the pushbutton panel is positioned at a height of 160-165 cm (top edge). It is important to avoid installing the camera directly facing light sources or in areas where the subject being filmed would be strongly backlit, as this would reduce the contrast in dark areas. The camera automatically adjusts the brightness on the brightest part of the image.

If these conditions cannot be met, it is recommended to change the installation height to 180 cm and to point the lens downwards in order to improve the quality of the shots. In low lit rooms, the installation of an additional light source is recommended.
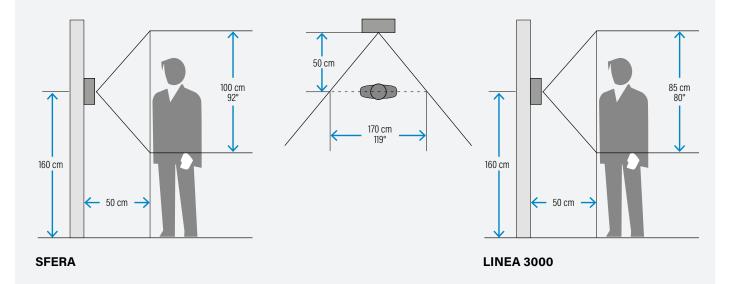
**NOTE:** to ensure access for disabled individuals, the recommended installation height is 120 -125 cm (top edge), as indicated in DM 236/89.
**The recommended heights may vary according to local regulations.**

160 – 165 cm

NO

**The use of Sfera and Linea 3000 entrance panels with wide angle camera makes it possible to expand the shooting field, increasing the security of your home.**

100 cm
92°

160 cm

50 cm

50 cm

170 cm
119°

85 cm
80°

160 cm

50 cm

**SFERA**

**LINEA 3000**
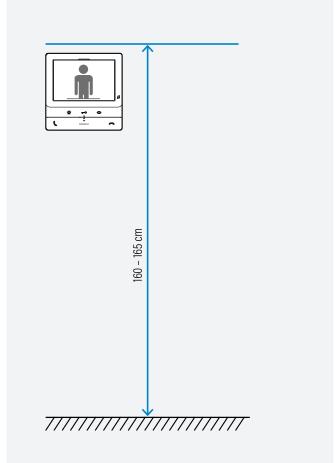
# Installation of internal units and DIN devices

## Internal unit height

It is recommended that the audio or video internal unit is installed at a height of 160-165 cm (measured from the top edge).
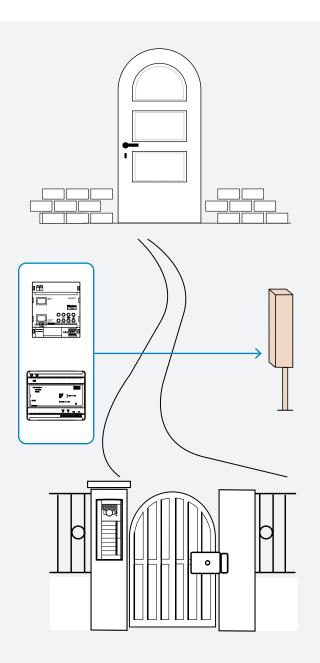
## DIN devices

DIN rail interfaces and devices cannot be installed in wells. They must be placed in an appropriate sealed frame with DIN rail (DIN switchboard).



160 – 165 cm
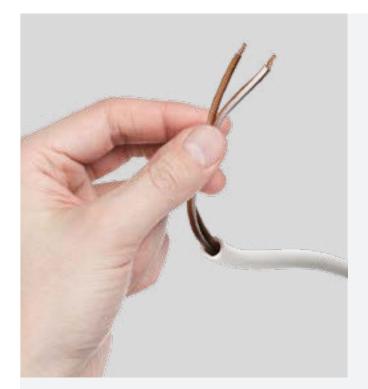
**NOTE: For the use of audio or video internal units by people with disabilities, the recommended height is 120 – 125 cm (top wire) - ref. (M.D 236/89)**

**Recommended installation height, unless different standards are specified.**

# The cable

The 2 Wires system is easy to wire. Thanks to the NON-POLARISED 2 Wires wiring of each part of the system, connection is simple, easy and fault-proof. The 336904/336905 white BUS-SCS cable has purposely been designed and manufactured for the installation of SCS video door entry systems. This cable is used for the distribution of the power supplies and the operating signals to all BUS devices. It consists of a white external sheath with two brown and brown/white flexible twisted conductors (0.50 mm² section). It is sold in a 200 m coil.

Therefore, it is suitable to be used in:

- Free air installation, inside trunking, trays, and conduits;
- Inside masonry walls, in appropriate conduits;
- Underground, in appropriate conduits

Cable channels, trays and conduits must meet the regulatory requirements for the specific type of installation.

Cable 336904/336905

The 336904/336905 cable makes it possible to reach the maximum distance between the entrance panel and the last internal unit.

**COHABITATION WITH OTHER CABLES**

Although the construction of the cable guarantees the necessary electrical insulation for cohabitation with 400 V system cables, there is no guarantee of immunity from electromagnetic disturbance, which may occur when the cable is installed inside the same conduits as the energy cables. It is recommended that the BUS/SCS cable and the power cables are installed in different conduits..

**CABLE UNDERGROUND INSTALLATION**

The 336904/336905 cable can be installed underground (protected inside appropriate conduits), together with other signal cables, for voltages <50V. Installation of cable 336904/336905 together with power cables with energies >50V is strictly forbidden. Failure to comply with the installation requirements shall entitle BTicino to reject all liabilities on the operation of the systems installed.

![bticino]

# The cables that can be used

BTicino recommends the use of the 336904/336905 cable for reaching the maximum installation distances, and to ensure a good quality of the video signal.

Other types of cables may be used, provided that the following requirements are met:

| | CABLES THAT CAN BE USED | | | | |
|---|---|---|---|---|---|
| | Type of cable | Item | Can be installed underground | Audio systems | Video systems |
| | BTicino twisted cable - section 0.50 mm² | 336904 336905 | YES | Recommended | Recommended |
| | BTicino twisted cable - section 0.35 mm² | L4669 | NO | Can be used | Can be used |
| | Telephone twisted pair - section 0.28 mm² < 1mm² | | NO | Can be used | Can be used |
| | Normal sheathed not twisted cables - section ≥ 0.28 mm² < 1mm² | | NO | Can be used | Can be used |
| | Normal sheathed not twisted cables - section = 1mm² | | NO | Can be used | Can be used |
| | BTicino UTP5 cable | 0 327 51 | NO | Can be used | Can be used |
| | UTP5 and UTP6 multi-pair cable | | NO | Can be used | Can be used |
| | BTicino multi-pair green cable (pair of cables: green/white-green) 🟢 Green ◐ White-green | 336900 336903 | NO | Can be used | Can be used |

During the restructurings and refurbishments of old door entry systems, it will be possible to use a pair of existing cables, therefore significantly reducing costs and installation times:



**Removal of the existing entrance panel**



**Use of an existing pair of wires to connect the new 2 Wires entrance panel**

# Physical configuration - general information

Configuring means programming the system; this is done by allocating ID numbers and operating modes to the devices.

**This is done by inserting configurators (with numbers from 0 to 9) in the appropriate sockets**, using an extractor (3502) found in the configurator bag or purchased separately, **or by completing the configuration through the software (recommended).**

**When no configurator is inserted, the configuration is zero.**
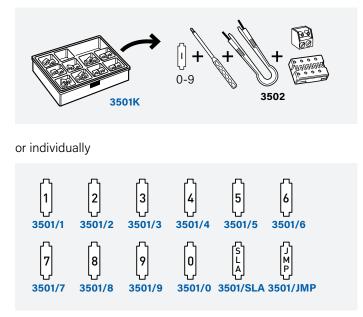
In the system there are two different numbering systems, to identify the entrance panels (EP) and the internal units (IU) respectively.

**The numbering system of the entrance panels (0-95) is normally indicated with P, while the internal unit address (0-99) is normally indicated with N.**
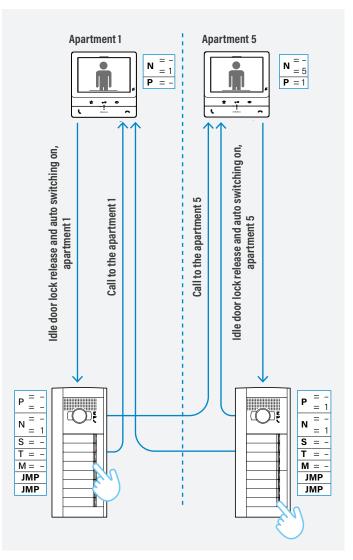
In addition to the P address, on the entrance panels it is also necessary to configure the N address of the internal unit from which to start to call.

In addition to the N address, on each internal unit it is also necessary to configure in P the associated entrance panel, which is the entrance panel to which the door lock and auto-switching on command will be sent when the internal unit is off.

**Should it become necessary to change the configuration of a device, in addition to removing the configurators also disconnect the power supply to the whole system, wait one minute and then reconnect the power supply. There are also specific configurations for every device, which are discussed in details in the technical data sheets of the individual items.**

The configurators can be purchased in kit



**3501K**  0-9  **3502**

or individually



| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| 3501/1 | 3501/2 | 3501/3 | 3501/4 | 3501/5 | 3501/6 |

| 7 | 8 | 9 | 0 | SLA | JMP |
|---|---|---|---|---|---|
| 3501/7 | 3501/8 | 3501/9 | 3501/0 | 3501/SLA | 3501/JMP |

**Example of a configured system and its operation**



Apartment 1

N = - / = 1
P = -

Apartment 5

N = - / = 5
P = 1

Idle door lock release and auto switching on, apartment 1

Call to the apartment 1

Call to the apartment 5

Idle door lock release and auto switching on, apartment 5

| P | = - / = - |
| N | = - / = 1 |
| S | = - |
| T | = - |
| M | = - |
| JMP | |
| JMP | |

| P | = - / = 1 |
| N | = - / = 1 |
| S | = - |
| T | = - |
| M | = - |
| JMP | |
| JMP | |

# Configuration of LINEA 5000 entrance panels

Programming and configuration of the LINEA 5000 pushbutton panel requires the use of **Home + Project (App or PC)**, the digital tool designed for the professional. With the Home + Project app, it is possible to remotely configure, manage and update the pushbutton panel using a smartphone or PC, quickly and without the need for physical configurators. The entire configuration can be conveniently completed from the office, shared with other professionals and uploaded to the display module (345000) via Bluetooth, or remotely if the module is connected via WiFi or Ethernet.

The main parameters to be configured are:

### P - entrance panel number
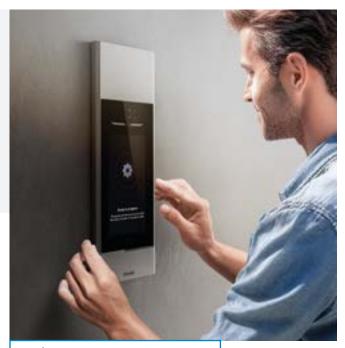
It assigns to the entrance panel an identification number within the system. The numbering of the entrance panels must always start from P=0.

The entrance panel configured with P=0 must be a common (or main) entrance panel.

### N - call number

Assigns the correspondence between the entrance panel pushbuttons and the audio or video internal units. In common entrance panels made using pushbutton modules, 1 must be inserted in N of the speaker module.

⚠️

**CAUTION!  LINEA 5000  IS NOT COMPATIBLE with the following interfaces:**

2 Wires / IP  (346891);
8 / 2 Wires    (346150);
Analog / 2 Wires (349410).

**+**

**Home + Project**    **iOS 12.0 or later**

**Android 10.0 or later required for Bluetooth connection with the device.**
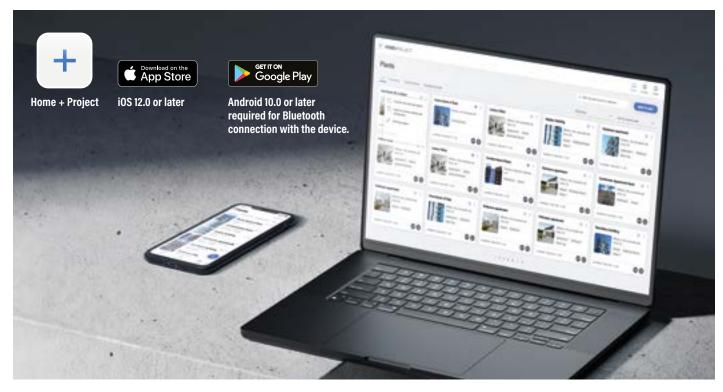
# Configuration of other entrance panels

All the entrance panels must be physically configured by inserting configurators. Sfera entrance panels can also be configured in advanced mode (using the PC and the specific TiSferaDesign configuration software).

> ⚠ **CAUTION :** the configuration of the device completed using physical configurators CANNOT BE MODIFIED in advanced mode.

The sockets of the internal units where the configurators must be inserted are normally the following:

### P - entrance panel number
The configurator in sockets P of the EP assigns to this a recognition number inside the system. The numbering of the entrance panels must always start from P=0. The entrance panel configured with P=0 must be a common (or main) entrance panel.

### N - call number
Assigns the correspondence between the entrance panel pushbuttons and the audio internal units or video internal units. In common entrance panels made using pushbutton modules, 1 must be inserted in N of the speaker module.

### T - door lock time control
The configuration of T defines the door lock release activation time.

### S - type of call signal
The configuration of S sets the internal unit call tone. It is thus possible to differentiate calls coming from different entrance panels.

**ONLY FOR SFERA NEW/ROBUR ENTRANCE PANELS:**

### M - enabling/disabling of call tones and door lock release tones, and management of night lighting always ON
The M configurations gives the possibility of managing the entrance panel call and door lock release tones . It also gives the possibility of enabling night backlighting always ON (light sensor disabled).

### J1 - activation of call pushbutton columns
The J1 configurator gives the possibility of managing the call pushbuttons of the speaker module as follows:

**JMP CONNECTED** = Only the right pushbutton column is enabled

**JMP DISCONNECTED** = Both pushbutton columns are enabled (right + left)
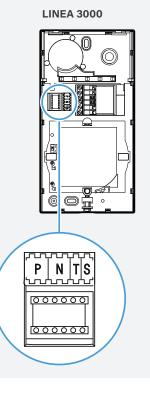
### J2 - additional EP power supply
Configurator J2 gives the possibility of enabling the additional power supply (1-2) of the speaker module in the following mode :
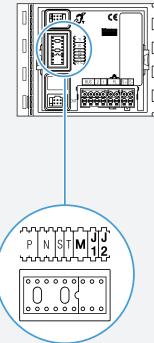
**JMP CONNECTED** = Additional power supply disabled

**JMP DISCONNECTED** = Additional power supply enabled

NOTE: the above are general indications. We recommend that you refer to the device configuration sections in the corresponding technical data sheets for the individual devices.

LINEA 3000

SFERA

# Advanced Configuration of the Sfera NEW/ROBUR entrance panels

The Sfera New/Robur entrance panels may be configured in advanced mode using the PC and the specific configuration software (TiSferaDesign).
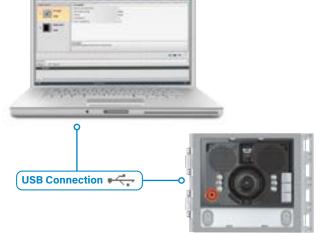
The advanced configuration offers a high level of customisation of the device in terms of: flexible menu composition, text customisation, apartment call / direct guard station call (if present) key position customisation. Residents' contact address book, including the details of the door badges assigned and the access codes.

For the connection to the PC, use a standard USB - mini USB cable. The software configures, programs, and updates the device Firmware. Sfera entrance panels have mini USB front connection, making it possible to carry out all operations without having to remove the pushbutton panel.

The TiSferaDesign programming software can be downloaded free of charge from the website:

**www.homesystems-legrandgroup.com**

⚠️ **CAUTION:** for correct functionality, it is recommended to carry out all the configuration and update operations with the pushbutton panel powered by BUS.



USB Connection

# Internal unit configuration

All the internal units (audio and video) must be physically configured by inserting configurators. Classe 300EOS video internal units can also be configured in advanced mode (directly from the touch screen), through the appropriate configuration section available on the device.

⚠️

**CAUTION:** the device configuration made with physical configurators CANNOT BE MODIFIED using the menu.

The sockets of the internal units where the configurators must be inserted are normally the following:

**N - internal unit number**
The configurators connected to the N sockets of the internal units assign an identification number within the system to each audio and video internal unit. The internal units must be configured in progressive order.

**P – entrance panel association**
The configurators connected to the P sockets of the internal units identify the associated EP, which is the first entrance panel that switches itself on when the pushbutton is pressed the first time, as well as which door lock is activated when pressing the door lock pushbutton while the audio internal unit is idle.

**M / MOD – operating mode**
The configurators in the M / MOD sockets of the internal units assign the operating modes to the configurable device keys.

**J1 – additional power supply**
The (JMP) configurator in J1 is used to enable/disable the additional power supply according to the following mode:

**JMP CONNECTED** = Additional power supply disabled
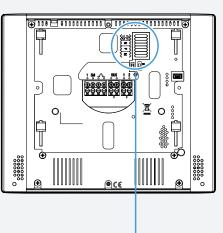
**JMP DISCONNECTED** = Additional power supply enabled

**J2 - MASTER/SLAVE function**
The (JMP) configurator in J2 is used to activate/deactivate the MASTER / SLAVE function according to the following mode:

**JMP CONNECTED** = MASTER

**JMP DISCONNECTED** = SLAVE

**NOTE: the above are general indications.**

**For the correct configuration, please refer to the data sheets of the individual devices.**

# GENERAL RULES FOR INSTALLATION > **AUDIO SYSTEMS**

# Audio systems

## General limits

Below are the maximum limits that can be reached by an AUDIO 2 Wires system when using apartment interfaces (346850) and system expansion interfaces (346851).

| | |
|---|---|
| 96 | Entrance panels |
| 39 | Risers with independent audio |
| 100 | Apartments with interface 346851 on the riser |
| 3900 | Apartments  (100 interfaces 346850 for riser) |
| 3 | Internal units for each apartment |
| 5 | Internal units for each apartment (with interface 346850) |
| 20 | Internal units for each apartment (with interface 346850 + interfaces 346851) |
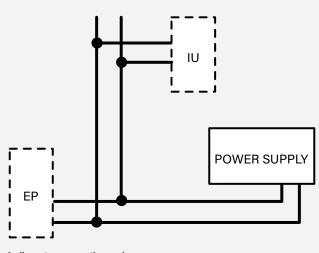
## Audio 2 Wires wiring

2 Wires systems are obtained by shunting the 2 Wires BUS to connect internal units and entrance panels. Devices can be connected anywhere in the system, without the need for twisted cables.

The 2 Wires are not polarised, so there is no need to pay attention to the direction of the connection (positive/negative), which reduces the possibility of errors during the installation.

Devices can be connected at any point along the BUS, without polarity constraints. The connection is free, offering great flexibility based on the layout of the system.

The BUS can be shunted several times to connect various devices. This flexibility allows the system to be adapted to existing structures without the need for a specific wiring layout.



**Audio system connection mode**
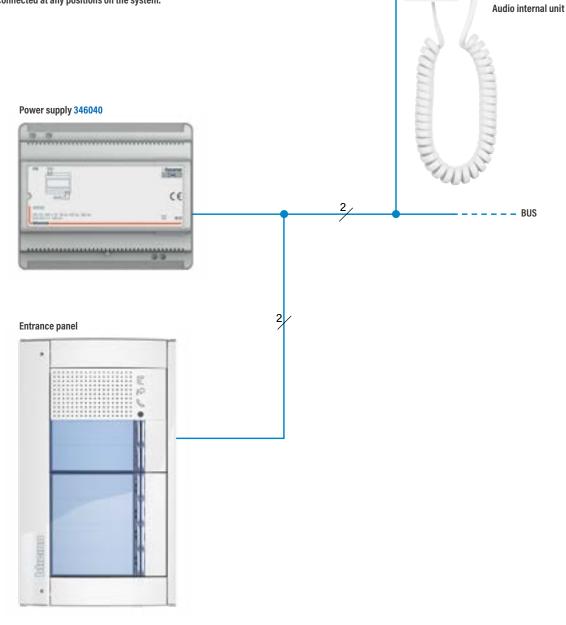
# Audio systems

## EXAMPLE OF TYPE 1 SYSTEM

To complete an audio system, it is necessary to purchase:

- Entrance panel
- Internal unit
- Power supply
- Configurators

**NOTES:**

- connections with 2 non-polarised wires;
- devices that can be connected at any positions on the system.



**Audio internal unit**

**Power supply 346040**



**Entrance panel**



BUS

2

2

# Audio systems

To complete an audio system, it is necessary to purchase:

- Entrance panel
- Internal unit
- Power supply
- Configurators

**NOTES:**

- connections with 2 non-polarised wires;
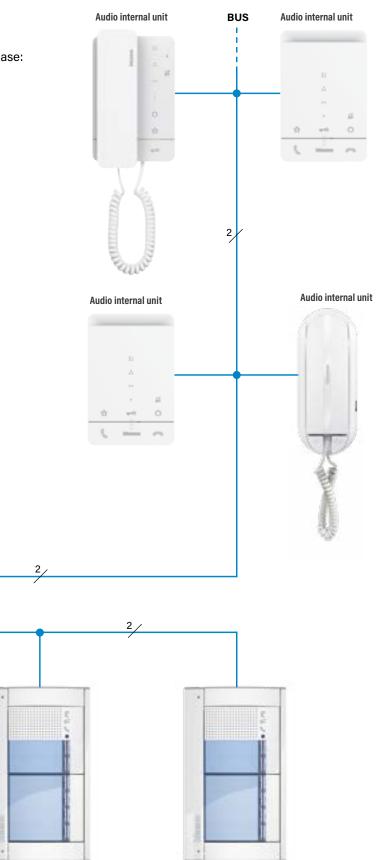
- devices that can be connected at any positions on the system.

Power supply 346040

**Audio internal unit**

BUS

**Audio internal unit**

**Audio internal unit**

**Audio internal unit**
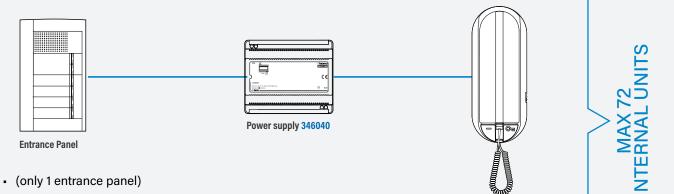
Entrance panel 1

Entrance panel 2

Entrance panel 3

# Possible audio systems
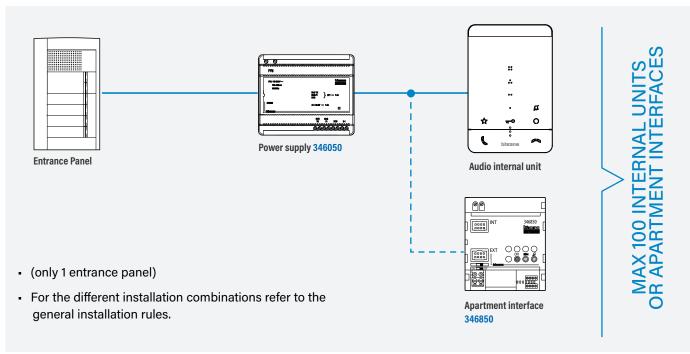
## AUDIO SYSTEM WITH POWER SUPPLY 346040



**Entrance Panel**

**Power supply 346040**

**Audio internal unit**

MAX 72 INTERNAL UNITS

- (only 1 entrance panel)
- For the different installation combinations refer to the general installation rules.

## AUDIO SYSTEM WITH POWER SUPPLY 346050



**Entrance Panel**

**Power supply 346050**

**Audio internal unit**

**Apartment interface 346850**

MAX 100 INTERNAL UNITS OR APARTMENT INTERFACES

- (only 1 entrance panel)
- For the different installation combinations refer to the general installation rules.

**Examples of audio systems:**

Up to 100 internal units maximum may be connected in audio system with 1 entrance panel.
For example it is possible to connect:

- **100** Apartments with 1 IU (or apartment interface 346850)
- **80** Apartments with 1 IU (or apartment interface 346850); **10** Apartments with 2 IU (80 + (10x2)= 100).
- **71** Apartments with 1 IU (or apartment interface 346850), **10** Apartments with 2 IU, 2 apartments with 3 IU and 1 actuator for generic loads (71 + (10x2) + (2x3) + 3 = 100).

# Audio systems

## Possible combinations – audio systems

**AUDIO SYSTEMS MAX. 72 INTERNAL UNITS (with system power supply 346040)**

| SFERA ENTRANCE PANELS WITH KEY MODULES / KEY EXPANSION 346993 / UNIVERSAL PORTER 346991 | | | | |
|---|---|---|---|---|
| | SFERA | | SFERA + KEY EXPANSION 346993 | UNIVERSAL PORTER 346991 |
| Max. No. of entrance panels | Max. No. of internal units | Max. No. of nameplate modules | Max. No. of internal units | Max. No. of internal units with 346991 + 346992 |
| 1 | 72 | 1 | 72 | 56 |
| 2 | 60 | 2 | 64 | 56 |
| 3 | 52 | 3 | 56 | 40 |
| 4 | 44 | 4 | 48 | 32 |
| 1 main + 2 secondary | 52 | 3 | 64 | 48 |
| 1 main + 3 secondary | 48 | 4 | 56 | 48 |
| 1 main + 4 secondary | 40 | 5 | 48 | 48 |

**NOTES:**

– All the combinations are calculated with entrance panels (both main and secondary) with modules with 8 call keys.

- The main entrance panels are those that can call all the internal units, while secondary entrance panels can only call some internal units.

- Systems with "main and secondary" entrance panels HAVE NO independent audio (this means that only 1 communication session at the time is guaranteed).

- The number of call keys for each secondary EP is calculated by dividing the total number of IU that can be installed by the total number of secondary EP (secondary EP consisting of modules with 8 keys, like the main EP).

- In sizing the systems, it will be necessary to also take into account the introduction of other components: these will take away further IU from the system:

■ for each additional plate module (in addition to the already indicated ones), it will be necessary to remove 1 IU;

■ for each generic load actuator 346210 or call repeater, it will be necessary to remove 1 IU;

■ for each door lock actuator 346230, it will be necessary to remove 3 IU;

■ for each floor call interface 346833, it will be necessary to remove 1 IU;

■ for each special control, it will be necessary to remove 1 IU.

⚠ In view of the many installation possibilities, the values shown on the table are only indicative. For correct sizing of the system, we recommend the use of the **YouDiagram** software - which can be downloaded free of charge from **www.bticino.com**

# Possible combinations – audio systems

## AUDIO SYSTEMS MAX. 100 INTERNAL UNITS (WITH SYSTEM POWER SUPPLY 346050)

| SFERA ENTRANCE PANELS WITH KEY MODULES / KEY EXPANSION 346993 / UNIVERSAL PORTER 346991 | | | | |
|---|---|---|---|---|
| | SFERA | | SFERA + KEY EXPANSION 346993 | UNIVERSAL PORTER 346991 |
| Max. No. of entrance panels | Max. No. of internal units | Max. No. of nameplate modules | Max. No. of internal units | Max. No. of internal units with 346991 + 346992 |
| 1 | 100 | 1 | 96 | 100 (*) |
| 2 | 92 | 2 | 96 | 64 (*) |
| 3 | 84 | 3 | 96 | 50 |
| 4 | 76 | 4 | 96 | 38 |
| 5 | 64 | 5 | 96 | 30 |
| 6 | 56 | 6 | 88 | 22 |
| | | | | |
| 1 main + 2 secondary | 92 | 1 | 96 | 76 |
| 1 main + 3 secondary | 84 | 1 | 96 | 48 |
| 1 main + 4 secondary | 76 | 1 | 96 | 48 |

(*) in systems with more than 56 keys, allow for 2 separate pushbutton panels.

**NOTES:**

– All the combinations are calculated with entrance panels (both main and secondary) with modules with 8 call keys.

- The main entrance panels are those that can call all the internal units, while secondary entrance panels can only call some internal units.

- Systems with "main and secondary" entrance panels HAVE NO independent audio (this means that only 1 communication session at the time is guaranteed).

- The number of call keys for each secondary EP is calculated by dividing the total number of IU that can be installed by the total number of secondary EP (secondary EP consisting of modules with 8 keys, like the main EP).

- In sizing the systems, it will be necessary to also take into account the introduction of other components: these will take away further IU from the system:

■ for each additional plate module (in addition to the already indicated ones), it will be necessary to remove 1 IU;

■ for each generic load actuator 346210 or call repeater, it will be necessary to remove 1 IU;

■ for each door lock actuator 346230, it will be necessary to remove 3 IU;

■ for each floor call interface 346833, it will be necessary to remove 1 IU;

■ for each special control, it will be necessary to remove 1 IU.

⚠ In view of the many installation possibilities, the values shown on the table are only indicative.
For correct sizing of the system, we recommend the use of the **YouDiagram** software
- which can be downloaded free of charge from **www.bticino.com**

# Audio systems

## Possible combinations – audio systems

### AUDIO SYSTEMS MAX. 100 INTERNAL UNITS (WITH SYSTEM POWER SUPPLY 346050)

| SFERA ENTRANCE PANELS WITH DISPLAY MODULES | | | | |
|---|---|---|---|---|
| | SFERA includes: speaker module (351100) + display module (352500) | SFERA includes : speaker module (351100) + display module (352500) + keypad module (353000) | | |
| Max. No. of entrance panels | Max. No. of internal units | Max. No. of internal units | Max. No. of name-plate modules | Max. No. of internal units without name-plate modules |
| 1 | 100 | 100 | 13 | 100 |
| 2 | 100 | 80 | 20 | 100 |
| 3 | 100 | 64 | 24 | 95 |
| 4 | 95 | 48 | 24 | 80 |
| 5 | 85 | 32 | 20 | 60 |
| 6 | 75 | 24 | 18 | 45 |
| | | | | |
| 1 main + 2 secondary with pushbuttons | 100 | 88 | 11 | 100 |

**NOTES:**

– Each nameplate module manages 8 names/calls;

- The main entrance panels are those that can call all the internal units, while secondary entrance panels can only call some internal units.

- Systems with "main and secondary" entrance panels HAVE NO independent audio (this means that only 1 communication session at the time is guaranteed).

– The number of call keys for each secondary EP is calculated by dividing the number of IU that can be installed by the total number of secondary EP (secondary EP consisting of modules with 8 keys).

- In sizing the systems, it will be necessary to also take into account the introduction of other components: these will take away further IU from the system:

■ for each additional plate module (in addition to the already indicated ones), it will be necessary to remove 1 IU;

■ for each generic load actuator 346210 or call repeater, it will be necessary to remove 1 IU;

■ for each door lock actuator 346230, it will be necessary to remove 3 IU;

■ for each floor call interface 346833, it will be necessary to remove 1 IU;

■ for each special control, it will be necessary to remove 1 IU.

⚠ In view of the many installation possibilities, the values shown on the table are only indicative.
For correct sizing of the system, we recommend the use of the **YouDiagram**  software
- which can be downloaded free of charge from **www.bticino.com**

# System performance - audio systems

The following pages give a general indication of the maximum distances that can be reached depending on the type of cable used.

For situations or installation conditions other than the ones listed in this document, the current consumptions can be calculated using the YouDiagram software (which can be downloaded free of charge from: www.bticino.com

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## AUDIO SYSTEMS - MAX. 72 INTERNAL UNITS

The device connection is non polarised.
The use of conductors with sections other than the prescribed ones does not guarantee correct performance of the system.

The furthest internal unit

LINE C*

346040

LINE A**

LINE B*

Entrance panel

(*)LINE D

Lock

### Max distance - LINE C - Furthest internal unit - Power supply

| Cable section mm² | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| 72 Internal units | 105 m | 115 m | 165 m | 335 m |
| 60 Internal units | 125 m | 135 m | 195 m | 395 m |
| 52 Internal units | 140 m | 155 m | 220 m | 450 m |
| 44 Internal units | 160 m | 170 m | 240 m | 490 m |

### Max distance - LINE B - Power supply - Entrance panel

| Cable section mm² | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| 72 Pushbuttons | 130 m | 140 m | 190 m | 365 m |
| 60 Pushbuttons | 135 m | 145 m | 200 m | 385 m |
| 52 Pushbuttons | 145 m | 155 m | 225 m | 435 m |
| 44 Pushbuttons | 155 m | 175 m | 235 m | 455 m |

### Max distance - LINE D - Speaker module - Door lock

| Cable section mm² | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| S+ S- clamps | 30 m | 30 m | 50 m | 100 m |
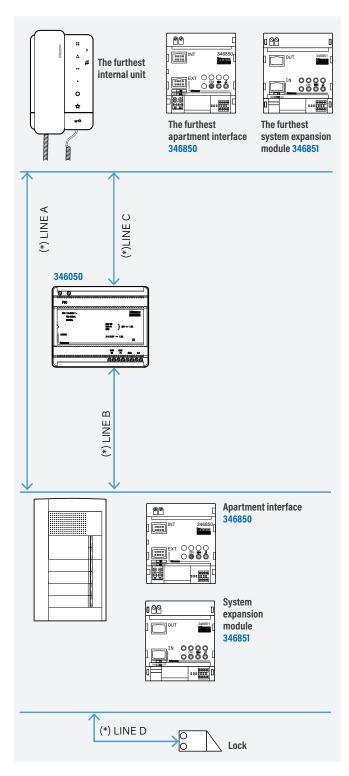
NOTE: with EP made using universal speaker unit 346991, manage the door lock control using actuator 346230.

System made with audio modules:
- SFERA
- Power supply 346040

System with existing pushbutton panel:
- Universal speaker unit 346991
- Additional pushbutton module 346992
- Power supply 346040

(*) max variable distance
(**) Maximum distance variable according to the number of installed devices and their absorption. Max 1000 meters with cables of 1mm² section.
In general Line A = Line B + Line C

# System performance - audio systems

## AUDIO SYSTEMS - MAX. 100 INTERNAL UNITS

The device connection is non polarised.

The use of conductors with sections other than the prescribed ones does not guarantee correct performance of the system.

**The furthest internal unit**

**The furthest apartment interface 346850**

**The furthest system expansion module 346851**

(*) LINE A

(*) LINE C

**346050**

(*) LINE B

**Apartment interface 346850**

**System expansion module 346851**

(*) LINE D

**Lock**

System made with AUDIO modules:
- SFERA
- Power supply 346050

System with existing pushbutton panel:
- universal speaker unit 346991
- additional pushbutton module 346992
- Power supply 346050

The tables show the distances for an audio system with at least one interface (in bold), and for the audio system without interfaces.

### Max distance - LINE C - furthest internal unit - Power supply
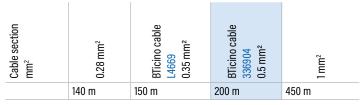
| Cable section mm² | 0.28 mm² | | BTicino cable L4669 0.35 mm² | | BTicino cable 336904 0.5 mm² | | 1 mm² | |
|---|---|---|---|---|---|---|---|---|
| 100 Internal units | 100 m | 100 m | 110 m | 110 m | 150 m | 150 m | 320 m | 320 m |
| 66 Internal units | 120 m | 120 m | 130 m | 130 m | 190 m | 190 m | 380 m | 380 m |
| 50 Internal units | 140 m | 150 m | 150 m | 160 m | 200 m | 250 m | 450 m | 450 m |
| 26 Internal units | 140 m | 180 m | 150 m | 190 m | 200 m | 320 m | 450 m | 560 m |

### Max distance - LINE B - Power supply - Entrance panel
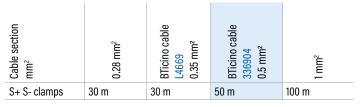
| Cable section mm² | 0.28 mm² | | BTicino cable L4669 0.35 mm² | | BTicino cable 336904 0.5 mm² | | 1 mm² | |
|---|---|---|---|---|---|---|---|---|
| 100 pushbuttons | 100 m | 100 m | 110 m | 110 m | 180 m | 180 m | 310 m | 310 m |
| 66 pushbuttons | 130 m | 130 m | 140 m | 110 m | 200 m | 240 m | 420 m | 420 m |
| 50 pushbuttons | 140 m | 150 m | 150 m | 160 m | 200 m | 250 m | 450 m | 450 m |
| 26 pushbuttons | 140 m | 200 m | 150 m | 210 m | 200 m | 290 m | 450 m | 580 m |

Line A = Line B+Line C with Line A max = 1000m without interfaces 346850 and 346851

### Max distance - LINE A with interfaces 346850 and 346851
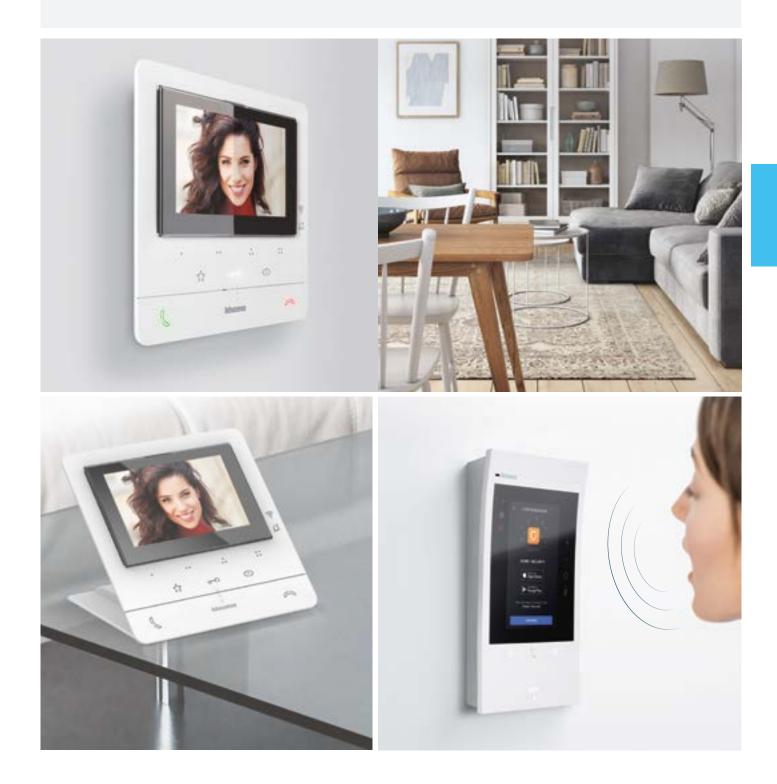
| Cable section mm² | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| | 140 m | 150 m | 200 m | 450 m |

### Max distance - LINE D - Speaker module - Door lock

| Cable section mm² | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| S+ S- clamps | 30 m | 30 m | 50 m | 100 m |

**NOTE: with EP made using universal speaker unit 346991, manage the door lock control using actuator 346230.**

**(*) max variable distance**

# GENERAL RULES FOR INSTALLATION > **VIDEO SYSTEMS**

# Video systems

## General limits
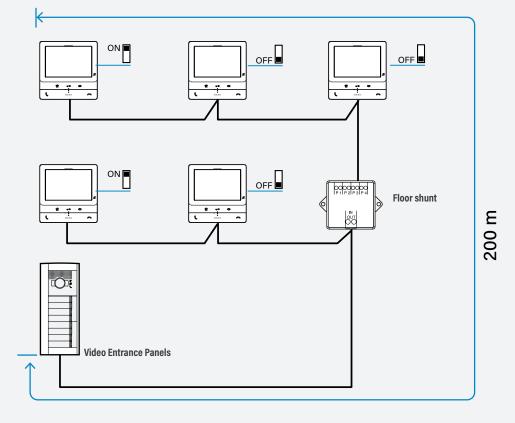
Below are the maximum limits that can be reached by an VIDEO 2 Wires system when using apartment interfaces (346850) and system expansion interfaces (346851).

| | |
|---|---|
| **96** | Video entrance panels |
| **39** | Risers with independent audio |
| **100** | Apartments with interface 346851 on the riser |
| **3900** | Apartments (100 interfaces 346850 for riser) |
| **15** | Entrance panels or cameras for apartment (16 in the one-family system) |
| **3** | Internal units for each apartment |
| **5** | Internal units for each apartment (with interface 346850) |
| **10** | Internal units for each apartment (with interface 346850 + interfaces 346851) |

⚠️ **CAUTION: for info regarding the correct installation and use refer to the technical sheets of the individual devices.**

The distance between the entrance panel and the furthest internal unit must not exceed 200 metres.



Floor shunt

Video Entrance Panels

200 m
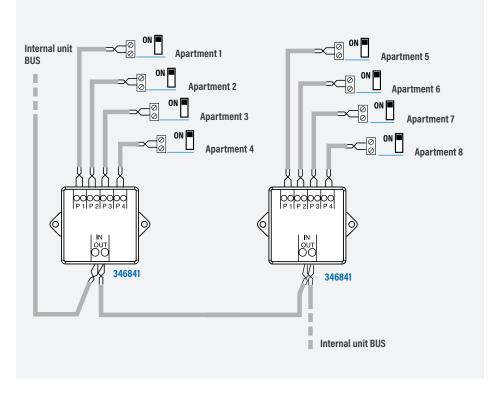
# Video 2 Wires wiring

2 Wires video systems can be installed with star wiring using floor shunt 346841;
in-out or mixed wiring is also possible as an alternative.

## STAR WIRING
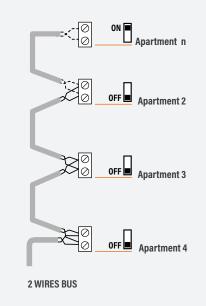
Star wiring is completed by connecting each apartment to a specific output of the floor shunt 346841. Each line must be correctly terminated by setting the micro-switch of the last device to ON. This type of wiring is particularly suitable for multifamily systems, either when there are several residential dwellings on the same floor, or when it is necessary to ensure maximum distance between the entrance panel and the various internal units.

Each shunt output can support up to 3 internal units. In the case of simultaneous switching on or use of table top, it is recommended to set a dedicated shunt output for each internal unit.



## IN-OUT WIRING

IN-OUT wiring is completed by connecting the devices directly to the relevant terminals of the system. Each riser must be correctly terminated by setting the microswitch of the last internal unit to ON. This type of wiring is particularly indicated for one and two family systems, and for vertical or horizontal multifamily systems (dwellings in rows).

# Video systems

## Video 2 Wires wiring

### MIXED WIRING

The IN-OUT and STAR wiring methods can be combined to realise more complex and flexible systems. Mixed wiring allows, in fact, adaptation to most installation requirements. The outputs of the floor shunts may be used to connect an individual device, or to create an apartment line, on which it is possible to connect up to 3 devices, without using the apartment interface 346850.
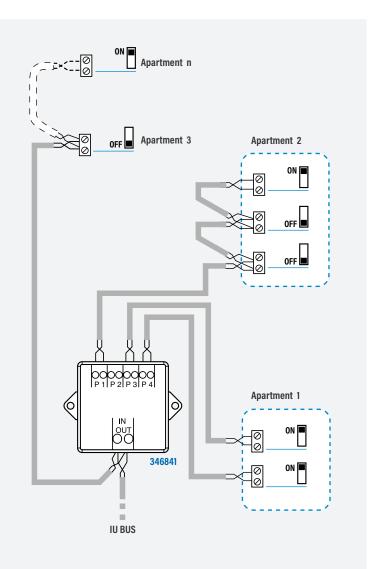
Using the IN-OUT mode, it will be possible to connect floor shunts or internal units to the BUS. The allocation of the internal units to the apartments is completed through the configuration.

### Advantages of the Mixed Wiring

■ **Greater flexibility:** It allows different installation needs to be addressed with a single configuration, optimising the management of the lines and the apartments.

■ **Cost reduction:** By using the IN-OUT solution for internal apartment lines, the total length of the wiring is reduced compared to an all-Star system.

■ **Distance optimisation:** The Star method overcomes distance issues between entrance panel and internal units, whilst also ensuring a reliable and stable connection.

# Video systems
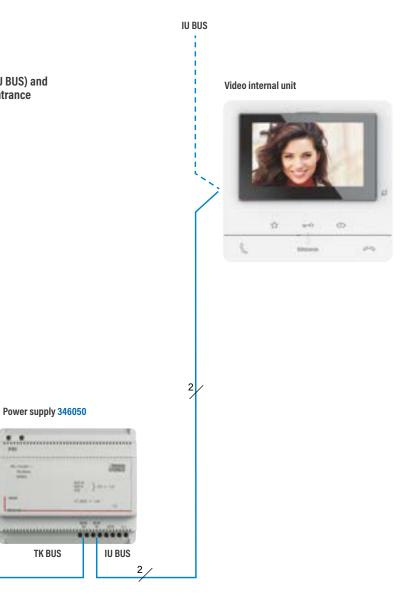
## EXAMPLE OF A SYSTEM WITH POWER SUPPLY 346050

**NOTES:**

- Connection with 2 non-polarised wires

- A maximum of 3 connections are possible on the (IU BUS) and (TK BUS) clamps of power supply unit 346050, (2 entrance panels + 1 riser, or 1 entrance panel + 2 risers).

IU BUS

**Video internal unit**



2

**Power supply 346050**



TK BUS        IU BUS

**Entrance panel**



2                    2

# Video systems

## EXAMPLE OF A SYSTEM WITH AUDIO VIDEO NODE F441
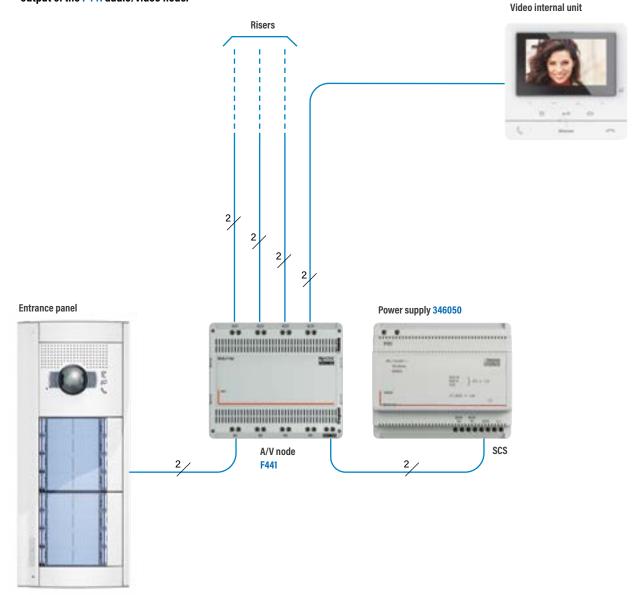
The F441 audio/video node must be used in conjunction with power supply unit  346050, when the system includes more than 2 entrance panels or when more than 2 risers are required.

In case of tabletop installation or internal units with simultaneous switching on, assign a dedicated audio/video output to each video internal unit.

**NOTES:**

- **Connection with 2 non polarised wires.**

- **Up to 26 internal units and 6 floor shunts, item 346841,
   may be connected to each riser connected to the
   output of the F441 audio/video node.**

**Video internal unit**

**Risers**

**Entrance panel**

2

2

2

2

**Power supply 346050**

**A/V node**
**F441**

2

**SCS**

2

⚠️  For correct sizing of the system, we recommend the use of the **YouDiagram**  software
   - which can be downloaded free of charge from **www.bticino.com**
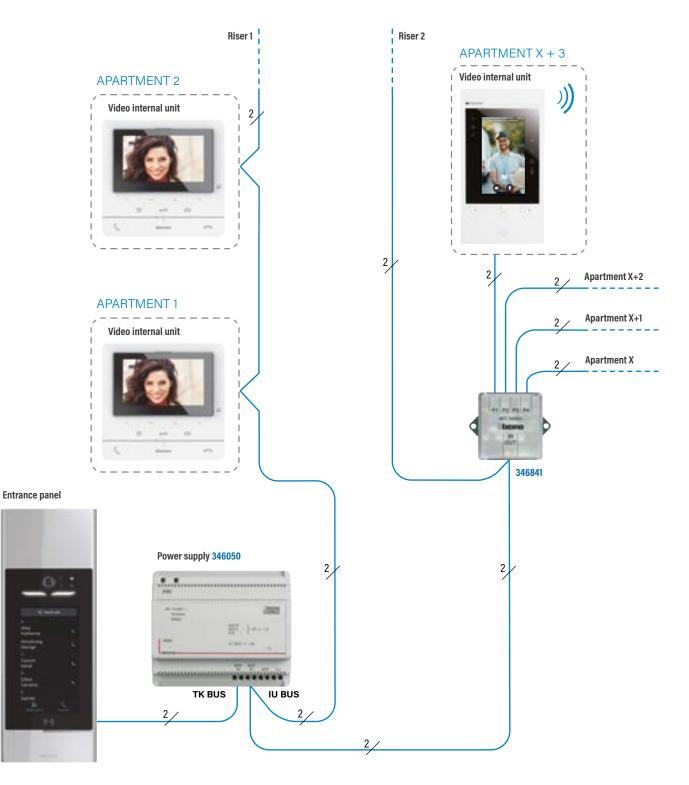
**EXAMPLE OF APARTMENT BLOCK SYSTEM WITH 2 RISERS**

For the installation of multifamily video systems, it is possible to use the floor shunt item 346841.
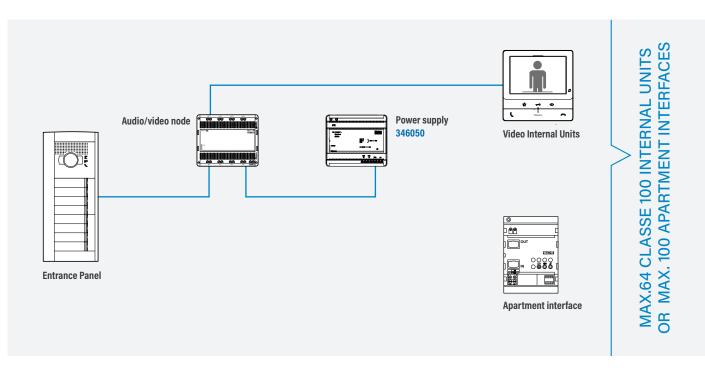
It allows significant savings on the cable being used.

It is particularly suited to multifamily systems with several dwellings on the same floor, and to multifamily systems with high distance between entrance panel and internal units.

Using the star connection method, the floor shunt makes it possible to connect up to 3 apartment internal units (max 1 internal unit for each output with simultaneous switching on).

# Video systems

**VIDEO SYSTEM WITH POWER SUPPLY 346050**



- **(only 1 entrance panel)**
- **For different installation combinations refer to the general installation rules.**

---

**GENERAL CONSIDERATIONS:**

For the sizing of the system when using interfaces 346850 and 346851 galvanically insulated systems must be separated. Interface 346850 is a galvanically insulated device. It therefore requires double power supply (1 device downstream and 1 device upstream the device).

For each galvanically insulated system, the indication of the tables of the following pages apply, considering, as first approximation, interfaces 346850 and 346851 in the same way as an  EP (for the part connected to the TK / IN BUS F441 audio/video node) and as an IU (for the part connected to the IU / OUT BUS F441 audio/video node).

However, we always recommend the use of the YouDiagram software to ascertain the feasibility of the system and calculate absorptions.

The number of internal units varies depending on the number of entrance panels and actuators of the system. When calculating the number of internal units that can be connected, also consider any devices (audio/video internal units, bells/ringtones) connected in parallel.

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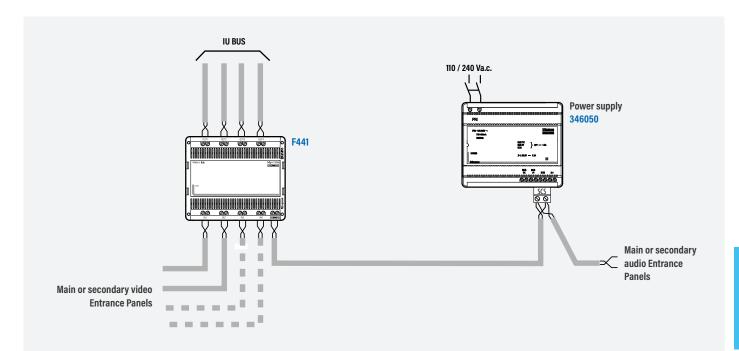
**EXAMPLES OF VIDEO SYSTEMS:**

In a video system with 1 entrance panel, it will be possible to connect up to 64 entrance panels (Classe 100).
For example it is possible to connect:

- 64 Apartments with 1 IU (or 100 apartments with apartment interface 346850).

- 50 Apartments with 1 IU (or apartment interface 346850); 7 Apartments with 2 IU (50 + (7x2)= 64)

- 38 Apartments with 1 IU (or apartment interface 346850), 10 apartments with 2 IU, 1 apartment with 3 IU and 1 actuator for generic loads (38 + (10x2) + (1x3) + 3 = 64).

## SYSTEM WITH AUDIO VIDEO NODE F441

In systems with more than 2 video entrance panels, audio/video node F441 must be used.



Using the **F441** **audio/video node**, it is possible to connect up to **4 video entrance panels and 4 risers**.
**Audio entrance panels** can be connected to both the **SCS** clamp or the IN clamp of the audio/video node. The total absorption of the devices connected to the outputs of the node **MUST be ≤ 720 mA**.

In systems requiring a large number of internal units, two solutions are possible:
1. **Additional power supply:** to supply the **Sfera and Linea 5000** video entrance panels locally.
2. **Riser expansion:** using the expansion interface **346851** and a dedicated power supply.

### Alternatives for Video Entrance Panels

In alternative to the video entrance panels without local power supply, it is possible to use **interfaces 347400** for the connection of cameras with **COAX** output.

### Types of Internal Units

The following tables show the different configurations of video systems, classified according to the internal units used:
- **Classe 100 internal units.**
- **Classe 300EOS / Classe 100X connected internal units**.

Note: In multifamily systems, Classe 300EOS internal units MUST always be powered locally using power supply unit 346020.

# Video systems
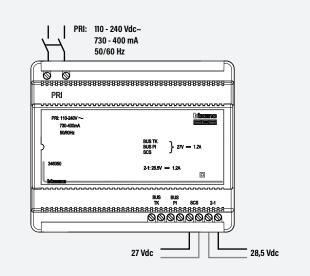
## Power supply 346050 connection rules

The 6 DIN power supply unit is designed for 2 Wires systems, supporting audio, video or mixed configurations. Provides two power supply outputs in low safety voltage, one on the **TK BUS, IU BUS and SCS** clamps, one on the **1-2** clamps, that must be used **alternately** and **not at the same time**.
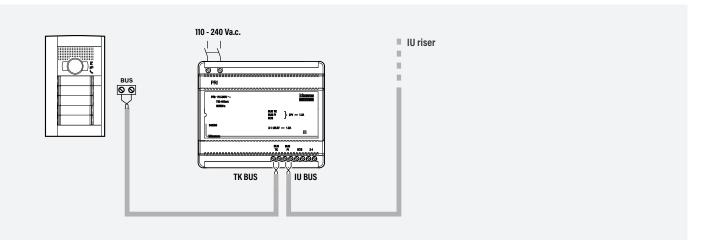
The **TK BUS, IU BUS and SCS** outputs can be used at the same time, if the total absorption does not exceed **1.2 A**. It is possible to have up to **3 connections** or shunts on terminals **BUS TK** and **BUS PI** (e.g. **max. 2 PI risers + 1 TK or 1 PI riser + max. 2 TK**).

The power supply unit can also be used as an additional power supply unit via output **1-2**, to provide local power supply to the installed EP and IU.
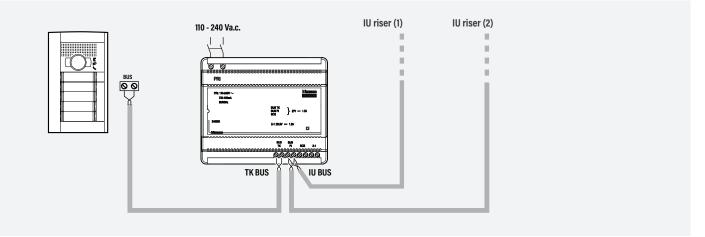
In this case, **it is not possible to use the other outputs**.



**EXAMPLE OF THE CONNECTION 1 EP + 1 IU RISER**
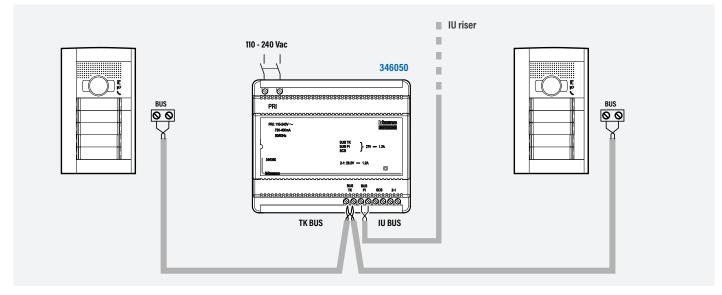


**EXAMPLE OF THE CONNECTION 1 EP + 2 IU RISERS**
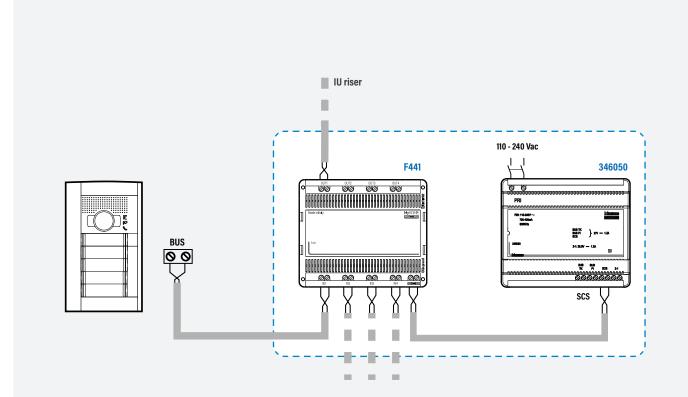
# Power supply 346050 connection

## EXAMPLE OF 2 EP + 1 IU RISER CONNECTION



## EXAMPLE OF AUDIO VIDEO NODE F441 CONNECTION

# Video systems

## Possible combinations (wiring with floor shunt)

**MULTIFAMILY COLOUR BASIC VIDEO SYSTEMS**

**MAX NUMBER OF INTERNAL UNITS FOR SYSTEMS WITH SFERA NEW / ROBUR PUSHBUTTON PANELS**

| No.of video colour entrance panels | System power supply | Additional power supply for entrance panels | PUSHBUTTON PANEL MADE UP OF: SFERA A/V (351500) + PUSHBUTTON MODULE (352100) Max No. of internal units-system only with CLASSE 100 IU | PUSHBUTTON PANEL MADE UP OF: SFERA A/V (351500) + DISPLAY MODULE (352500) Max No. of internal units-system only with CLASSE 100 IU | Pushbutton panel made up of: SFERA A/V (351500) + Display module (352500) + Keypad module (353000) Max No. of internal units-system only with CLASSE 100 IU | Pushbutton panel made up of: SFERA A/V (351500) + Key expansion (346993) Max No. of internal units-system only with CLASSE 100 IU |
|---|---|---|---|---|---|---|
| 1 video | 1 | - | 44 | 42 | 40 | 48 |
| 2 video | 1 | - | 40 | 36 | 32 | 44 |
| 3 video | 1 | - | 36 | 32 | 26 | 40 |
| 4 video | 1 | - | 32 | 26 | – | 36 |
| 1 main video + 2 secondary audio or video (*) | 1 | - | 38 | 40 | 36 | 44 |
| 1 video | 1 | 1 | 64 | 64 | 64 | 64 |
| 2 video | 1 | 2 | 64 | 64 | 64 | 64 |
| 3 video | 1 | 3 | 64 | 64 | 64 | 64 |
| 4 video | 1 | 4 | 64 | 64 | 64 | 64 |
| 1 main video and 2 secondary audio (**) | 1 | 1(*) | 56 | 56 | 56 | 60 |

(*) Additional power supply on main video EP.  (**) Secondary EP have 8-pushbutton modules.

⚠ **CAUTION: the installation of Classe 300EOS internal units in multifamily systems requires additional power supply for the video internal units. Refer to the specific technical sheet.**

**NOTES:**
- All the combinations are calculated with entrance panels (both main and secondary) with modules with 8 call keys.
- The main entrance panels are those that can call all the internal units, while secondary entrance panels can only call some internal units.
- Systems with "main and secondary" entrance panels HAVE NO independent audio (this means that only 1 communication session at the time is guaranteed).
- The number of call keys for each secondary EP is calculated by dividing the total number of IU that can be installed by the total number of secondary EP (secondary EP consisting of modules with 8 keys, like the main EP).
- In sizing the systems, it will be necessary to also take into account the introduction of other components: these will take away further IU from the system:
- for each additional plate module (in addition to the already indicated ones), it will be necessary to remove 1 IU;
- for each generic load actuator 346210 or call repeater, it will be necessary to remove 1 IU;
- for each door lock actuator 346230, it will be necessary to remove 3 IU;
- for each floor call interface 346833, it will be necessary to remove 1 IU;
- for each special control, it will be necessary to remove 1 IU.

⚠ In view of the many installation possibilities, the values shown on the table are only indicative. For correct sizing of the system, we recommend the use of the **YouDiagram** software - which can be downloaded free of charge from **www.bticino.com**

# Possible combinations (in-out wiring)
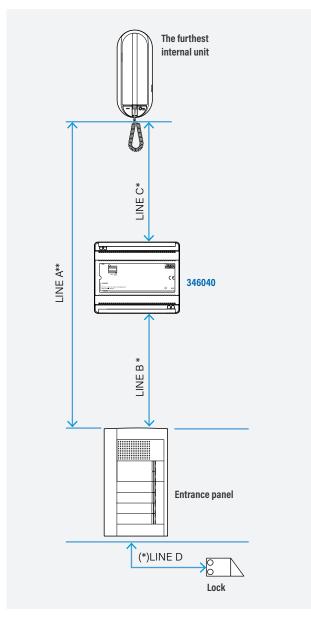
**MULTIFAMILY COLOUR BASIC VIDEO SYSTEMS**

**MAX NUMBER OF INTERNAL UNITS FOR SYSTEMS WITH SFERA NEW / ROBUR PUSHBUTTON PANELS**

| No.of video colour entrance panels | System power supply | Additional power supply for entrance panels | PUSHBUTTON PANEL MADE UP OF: SFERA A/V (351500) + PUSHBUTTON MODULE (352100) Max No. of internal units- system only with CLASSE 100 IU | PUSHBUTTON PANEL MADE UP OF: SFERA A/V (351500) + DISPLAY MODULE (352500) Max No. of internal units-system only with CLASSE 100 IU | Pushbutton panel made up of: SFERA A/V (351500) + Display module (352500) + Keypad module (353000) Max No. of internal units-system only with CLASSE 100 IU | Pushbutton panel made up of: SFERA A/V (351500) + Key expansion (346993) Max No. of internal units-system only with CLASSE 100 IU |
|---|---|---|---|---|---|---|
| 1 video | 1 | - | 60 | 60 | 56 | 64 |
| 2 video | 1 | - | 52 | 52 | 46 | 56 |
| 3 video | 1 | - | 44 | 44 | 36 | 48 |
| 4 video | 1 | - | 40 | 36 | – | 44 |
| 1 main video + 2 secondary audio or video (*) | 1 | - | 52 | 52 | 48 | 56 |
| 1 video | 1 | 1 | 64 | 64 | 64 | 64 |
| 2 video | 1 | 2 | 64 | 64 | 64 | 64 |
| 3 video | 1 | 3 | 64 | 64 | 64 | 64 |
| 4 video | 1 | 4 | 64 | 64 | 64 | 64 |
| 1 main video and 2 secondary audio (**) | 1 | 1(*) | 64 | 64 | 64 | 64 |

(*) Additional power supply on main video EP.          (**) Secondary EP have 8-pushbutton modules.

> ⚠ **CAUTION: the installation of Classe 300EOS internal units in multifamily systems requires additional power supply for the video internal units.  Refer to the specific technical sheet.**

**NOTES:**
- All the combinations are calculated with entrance panels (both main and secondary) with modules with 8 call keys.
- The main entrance panels are those that can call all the internal units, while secondary entrance panels can only call some internal units.
- Systems with "main and secondary" entrance panels HAVE NO independent audio (this means that only 1 communication session at the time is guaranteed).
- The number of call keys for each secondary EP is calculated by dividing the total number of IU that can be installed by the total number of secondary EP (secondary EP consisting of modules with 8 keys, like the main EP).
- In sizing the systems, it will be necessary to also take into account the introduction of other components: these will take away further IU from the system:
- ■ for each additional plate module (in addition to the already indicated ones), it will be necessary to remove 1 IU;
- ■ for each generic load actuator 346210 or call repeater, it will be necessary to remove 1 IU;
- ■ for each door lock actuator 346230, it will be necessary to remove 3 IU;
- ■ for each floor call interface 346833, it will be necessary to remove 1 IU;
- ■ for each special control, it will be necessary to remove 1 IU.

> ⚠ In view of the many installation possibilities, the values shown on the table are only indicative.
> For correct sizing of the system, we recommend the use of the **YouDiagram** software
> - which can be downloaded free of charge from **www.bticino.com**

# Video systems

**SINGLE FAMILY OR MULTIFAMILY COLOUR VIDEO SYSTEMS WITH APARTMENT INTERFACE 346850: MAX. NUMBER OF INTERNAL UNITS**

| | | SFERA A/V | LINEA 2000 | LINEA 3000 |
|---|---|---|---|---|
| No.of private video entrance panels | System power supply | Max. number of INTERNAL UNITS | | |
| 1 video | 1 | 5 | 5 | 5 |
| 2 video | 1 | | | |
| 3 video | 1 | | | |
| 4 video (*) | 1 | | | |

(*) Only for single family systems

**General rules for single family systems:**

- By configuring the EP with (S = 9), general call / call forward is set to all the IU at the same time.

- When more than 1 IU is installed in the home, the configuration of the IU must start from (N=1), while the EP must be configured (in addition to S = 9), with (N = 1).

- To switch the IU on at the same time, each secondary IU must be powered locally.

**NOTES:**
- Only 1 CLASSE 300EOS / Classe 100X connected internal unit can be installed in the system;
- Only 1 internal unit with video answering machine can be installed in the system.
- If the entrance panel is configured for general call (S = 9), the internal unit with video answering machine must be the one configured with (N = 1).
- The system requires the activation of the call repetition through the APP on one video internal unit
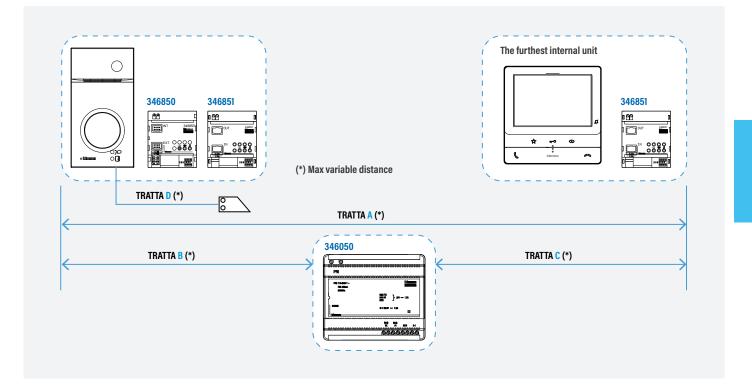
# System performance - single family video systems

**MAXIMUM DISTANCES AND CABLE FEATURES**

⚠️ **CAUTION!**

Distances valid for systems made using LINEA 2000 or LINEA 3000 EP and traditional CLASSE 100 IU.
Please refer to the specific instructions supplied with the kits.
The use of conductors with characteristics other than the prescribed ones does NOT guarantee correct performance of the system and good quality of the video signal.



The furthest internal unit

346850    346851

(*) Max variable distance

TRATTA D (*)

TRATTA A (*)

TRATTA B (*)

346050

TRATTA C (*)

346851

**BTICINO CABLES**

| | BTicino L4669 0.35 mm² | BTicino C9881U/5E AWG24 UTP5 | BTicino 336904 336905 |
|---|---|---|---|
| LINE A | 50 m | 145 m | 200 m |
| LINE B | 50 m | 80 m | 200 m |
| LINE C | 25 m | 65 m | 200 m |
| LINE D | 50 m | – | 50 m |

**OTHER CABLES**

| | >0.2 mm | 0.28 mm² | One PTT 278 TP 0.28 mm² | OneSYT +Digital TP 5/10 | OneSYT +Num TP 5/10 | GIGA TW CAT5E AWG24 | OneSYT +Num TP 8/10 | Cable ARB.6060-1 6/10 | Cable EV6R 6/10 | 1 mm² |
|---|---|---|---|---|---|---|---|---|---|---|
| LINE A | 50 m | 140 m | 200 m | 150 m | | | 200 m | 50 m | | – |
| LINE B | 50 m | 115 m | 115 m | 80 m | | | 200 m | 50 m | | – |
| LINE C | 25 m | 50 m | 100 m | 65 m | | | 200 m | 50 m | | – |
| LINE D | 50 m | 30 m | 30 m | – | | – | – | | | 100 m |
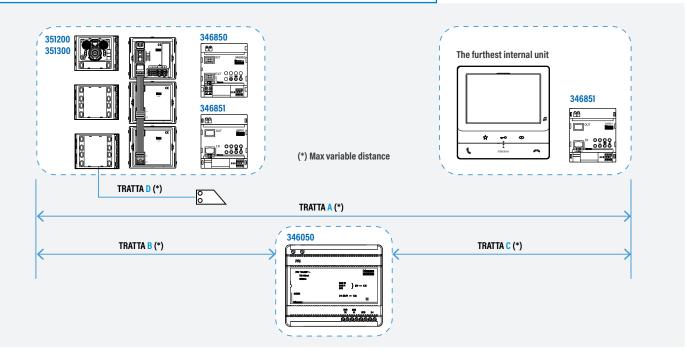
In systems where the EP is replaced by apartment interface 346850, and where the distance (B) is less than 1 m, the (C) line can reach the maximum distance of 200 m when using the cable 336904.

# System performance - single family video systems

**MULTIFAMILY VIDEO SYSTEMS MADE WITH SFERA EP MODULE 351200 - 351300 AND CLASSE 100 AND CLASSE 300EOS ONLY INTERNAL UNITS.**

⚠️ **CAUTION!**
The use of conductors with characteristics other than the prescribed ones does NOT guarantee correct performance of the system and good quality of the video signal.



(*) Max variable distance

## Maximum distance (LINE A) Entrance panel - Furthest internal unit

| | 2 normal cables >0.2 mm² | BTicino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IU/2 pushbuttons | 50 m | 200 m | 140 m | 180 m |
| 5 IU/5 pushbuttons | 50 m | 200 m | 140 m | 155 m |
| 10 IU/10 pushbuttons | 50 m | 200 m | 140 m | 145 m |
| 26 IU/26 pushbuttons | 50 m | 200 m | 140 m | 125 m |
| 38 IU/38 pushbuttons | 50 m | 200 m | 140 m | 110 m |
| 38 IU/ display call | 50 m | 200 m | 140 m | 115 m |
| 64 IU/ display call | 50 m | 200 m | 140 m | – |

## Maximum distance (LINE B) Entrance panel - Power supply

| | 2 normal cables >0.2 mm² or L4669 | BTicino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 pushbuttons | 50 m | 200 m | 130 m | 95 m |
| 5 pushbuttons | 50 m | 190 m | 120 m | 85 m |
| 10 pushbuttons | 50 m | 180 m | 110 m | 80 m |
| 26 pushbuttons | 50 m | 150 m | 100 m | 70 m |
| 38 pushbuttons | 50 m | 140 m | 90 m | 65 m |
| Display call | 50 m | 150 m | 95 m | 65 m |
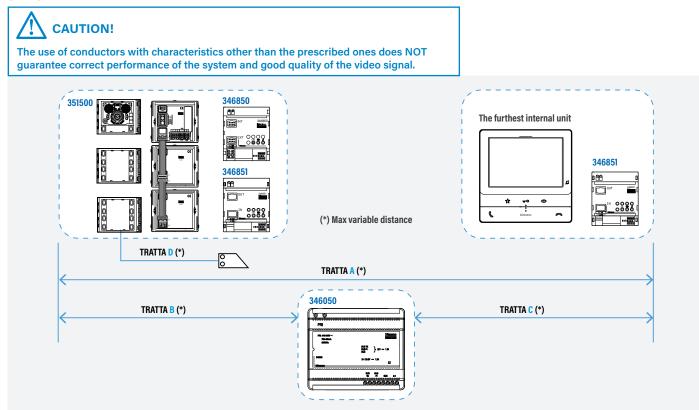
## Maximum distance (LINE C) Power supply - Furthest internal unit

| | 2 normal cables >0.2 mm² | BTicino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IN/OUT IU | 50 m | 200 m | 140 m | 95 m |
| 5 IN/OUT IU | 50 m | 200 m | 135 m | 90 m |
| 10 IN/OUT IU | 50 m | 190 m | 130 m | 85 m |
| 26 IN/OUT IU | 50 m | 170 m | 120 m | 75 m |
| 5 IU ( SHUNTED) | 50 m | 200 m | 110 m | 80 m |
| 10 IU ( SHUNTED) | 50 m | 175 m | 100 m | 70 m |
| 26 IU ( SHUNTED) | 50 m | 145 m | 80 m | 60 m |
| 38 IU ( SHUNTED) | 50 m | 125 m | 70 m | 50 m |
| 64 IU ( SHUNTED) | – | 95 m | 55 m | – |

## Maximum distance (line D) Entrance panel - Door lock

| | 0.28 mm² | BTicino cable L4669 0.35 mm² | Bticino cable 336904/336905 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| (S+/S–) clamps | 30 m | 30 m | 50 m | 100 m |

- Risers with max 26 internal units should be made in systems with more than 26 internal units.
- Classe 300EOS with Netatmo must be always installed with additional power supply (2- 1).
- For correct sizing of the system, we recommend the use of the **YouDiagram** software which can be downloaded free of charge from www.bticino.com

**MULTIFAMILY VIDEO SYSTEMS MADE WITH SFERA EP MODULE (351500) AND CLASSE 100 AND CLASSE 300EOS INTERNAL UNITS.**

> ⚠️ **CAUTION!**
>
> The use of conductors with characteristics other than the prescribed ones does NOT guarantee correct performance of the system and good quality of the video signal.



351500  346850  346851

The furthest internal unit

346851

(*) Max variable distance

TRATTA **D** (*)

TRATTA **A** (*)

TRATTA **B** (*)

346050

TRATTA **C** (*)

## Maximum distance (LINE A) Entrance panel - Furthest internal unit

| | 2 normal cables >0.2 mm² | BTicino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IU/2 pushbuttons | 50 m | 200 m | 140 m | 180 m |
| 5 IU/5 pushbuttons | 50 m | 200 m | 140 m | 155 m |
| 10 IU/10 pushbuttons | 50 m | 200 m | 140 m | 145 m |
| 26 IU/26 pushbuttons | 50 m | 200 m | 140 m | 125 m |
| 38 IU/38 pushbuttons | 50 m | 200 m | 140 m | 110 m |
| 38 IU/ display call | 50 m | 200 m | 140 m | 115 m |
| 64 IU/ display call | 50 m | 200 m | 140 m | – |

## Maximum distance (LINE B) Entrance panel - Power supply

| | 2 normal cables >0.2 mm² or L4669 | Bticino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 pushbuttons | 50 m | 160 m | 100 m | 70 m |
| 5 pushbuttons | 50 m | 158 m | 95 m | 68 m |
| 10 pushbuttons | 50 m | 155 m | 90 m | 65 m |
| 26 pushbuttons | 50 m | 150 m | 85 m | 63 m |
| 38 pushbuttons | 50 m | 140 m | 80 m | 60 m |
| Display call | 50 m | 145 m | 90 m | 65 m |

## Maximum distance (LINE C) Power supply - Furthest internal unit

| | 2 normal cables >0.2 mm² | BTicino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IN/OUT IU | 50 m | 200 m | 140 m | 95 m |
| 5 IN/OUT IU | 50 m | 200 m | 135 m | 90 m |
| 10 IN/OUT IU | 50 m | 190 m | 130 m | 85 m |
| 26 IN/OUT IU | 50 m | 170 m | 120 m | 75 m |
| 5 IU ( SHUNTED) | 50 m | 200 m | 110 m | 80 m |
| 10 IU ( SHUNTED) | 50 m | 175 m | 100 m | 70 m |
| 26 IU ( SHUNTED) | 50 m | 145 m | 80 m | 60 m |
| 38 IU ( SHUNTED) | 50 m | 125 m | 70 m | 50 m |
| 64 IU ( SHUNTED) | – | 95 m | 55 m | – |

## Maximum distance (line D) Entrance panel – door lock

| | 0.28 mm² | BTicino cable L4669 0.35 mm² | BTicino cable 336904/336905 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| (S+/S–) clamps | 30 m | 30 m | 50 m | 100 m |

- Risers with max 26 internal units should be made in systems with more than 26 internal units.
- Classe 300EOS with Netatmo must be always installed with additional power supply (2- 1).
- For correct sizing of the system, we recommend the use of the **YouDiagram** software which can be downloaded free of charge from www.bticino.com
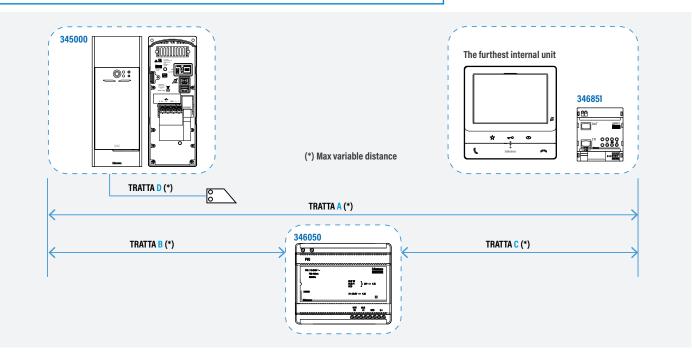
# System performance - multifamily video systems

**MULTIFAMILY VIDEO SYSTEMS MADE WITH LINEA 5000 EP (345000) AND CLASSE 100 AND CLASSE 300EOS INTERNAL UNITS**

⚠️ **CAUTION!**
The use of conductors with characteristics other than the prescribed ones does NOT guarantee correct performance of the system and good quality of the video signal.



345000

The furthest internal unit

346851

(*) Max variable distance

TRATTA **D** (*)

TRATTA **A** (*)

TRATTA **B** (*)

346050

TRATTA **C** (*)

## Maximum distance (LINE A) Entrance panel - The furthest internal unit

| | 2 normal cables >0.2 mm² | Bticino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IU | 50 m | 200 m | 140 m | 180 m |
| 5 IU | 50 m | 200 m | 140 m | 155 m |
| 10 IU | 50 m | 200 m | 140 m | 145 m |
| 18 IU | 50 m | 200 m | 140 m | 125 m |

## Maximum distance (LINE B) Entrance panel - Power supply

| | 2 normal cables >0.2 mm² or L4669 | Bticino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| L5000 (345000) | 40 m | 65 m | 40 m | 29 m |
| L5000 + Keypad (345000 + 345500 - 345510) | 35 m | 55 m | 35 m | 25 m |
| L5000 + RFID (345000 + 345520) | 35 m | 55 m | 35 m | 25 m |
| L5000 + Keypad + RFID (345000 + 345500/10 + 345520) | 35 m | 55 m | 35 m | 25 m |

⚠️ **CAUTION: With additional power supply of EP L5000 and use of cable 336904, 200 m are guaranteed on the line.**

## Maximum distance (LINE C) Power supply - The furthest internal unit

| | 2 normal cables >0.2 mm² | Bticino cable 336904/336905 0.5 mm² | Telephone twisted pair 0.28 mm² | A pair of the multi-pair data cable CAT5 |
|---|---|---|---|---|
| 2 IN/OUT IU | 50 m | 200 m | 140 m | 95 m |
| 5 IN/OUT IU | 50 m | 180 m | 115 m | 75 m |
| 10 IN/OUT IU | 50 m | 140 m | 90 m | 60 m |
| 18 IN/OUT IU | 50 m | 90 m | 50 m | 35 m |
| 5 IU ( SHUNTED) | 50 m | 160 m | 95 m | 70 m |
| 10 IU ( SHUNTED) | 50 m | 120 m | 80 m | 55 m |
| 16 IU ( SHUNTED) | 50 m | 80 m | 45 m | 30 m |

## Maximum distance (line D) Entrance panel - Door lock

| | 0.28 mm² | BTicino cable L4669 0.35 mm² | Bticino cable 336904/336905 0.5 mm² | 1 mm² |
|---|---|---|---|---|
| (S+/S-) clamps | 30 m | 30 m | 50 m | 100 m |
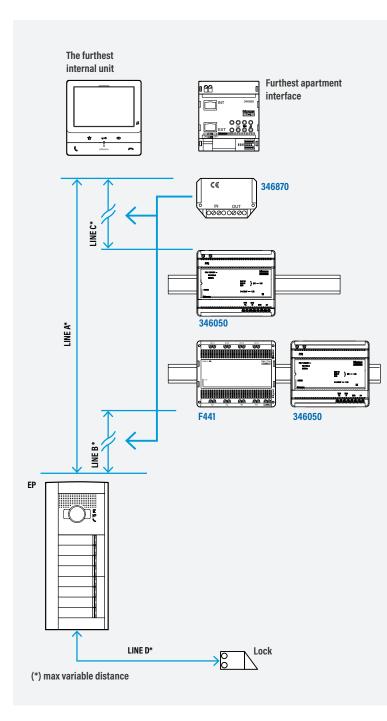
- If all the Classe 300EOS internal units in the system are supplied locally the system should be considered as being made with Classe 100 internal units only (see previous page).
- Risers with max 26 internal units should be made in systems with more than 26 internal units.
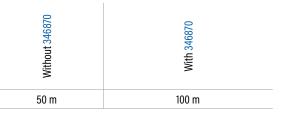
**VIDEO SYSTEMS WITH AMPLIFIER 346870 (ONLY WITH NOT TWISTED CABLES)**

The use of line amplifier 346870 makes it possible to install systems with non-twisted cables longer than 50 metres (up to a maximum of 100 metres). Its use is ideal in restorations and in the repair of existing systems.
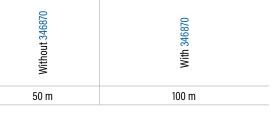
- The signal amplifier must be used using non-twisted cables with section ≥ 0,28 mm$^2$, non polarised.

- The signal amplifier must be connected at the 50th metre distance from the entrance panel (or camera). Connections at shorter distances can cause a distortion of the video signal, while at longer distances they would be pointless. In case of use of audio/video nodeF441, to avoid signal distortions on the inputs of the node that do not require amplification (< 50 m), we recommend to connect item 346870 only to the B line of the inputs to amplify.

- Up to 18 internal units may be installed downstream the amplifier.



**The furthest internal unit**

**Furthest apartment interface**

346870

346050

F441    346050

EP

LINE D*    Lock

**(*) max variable distance**

**Max. distance LINE A**
**Entrance panel - Furthest internal unit**

| Without 346870 | With 346870 |
|---|---|
| 50 m | 100 m |
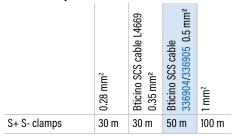
**Maximum distance LINE C**
**The furthest internal unit - Power supply**

| Without 346870 | With 346870 |
|---|---|
| 50 m | 100 m |

**Max. distance LINE D**
**Entrance panel - Door lock**

| | 0.28 mm$^2$ | Bticino SCS cable L4669 0.35 mm$^2$ | Bticino SCS cable 336904/336905 0.5 mm$^2$ | 1 mm$^2$ |
|---|---|---|---|---|
| S+ S- clamps | 30 m | 30 m | 50 m | 100 m |

⚠ **CAUTION: For the B LINE (EP - Power supply unit) the rules of the previous pages apply.**

# System expansion with interfaces

Audio and video 2 Wires systems can be expanded thanks to three different types of interfaces:

## Apartment interface 346850

It gives the possibility of installing a dedicated 2 Wires system independent from the apartment block riser.

The system downstream the interface (internal to the apartment/dwelling) can have dedicated entrance panels and cameras.

It is possible to make intercom calls inside and outside the apartment using preset internal units.

⚠️

**CAUTION: LINEA 5000 internal units CANNOT be installed under apartment interface 346850.**

346850

## System expansion interface 346851

It gives the possibility of creating up to 39 isolated risers with independent audio and video. It can also be used to expand the maximum physical limits of the system (maximum distance 600 m with BTicino cable 336904), or to increase the number of devices that can be connected to the BUS.

It is possible to connect up to a maximum of 3 interfaces in cascade.

⚠️

**WARNING: : in order to ensure correct acquisition and operation of the system with interfaces 346851, the entire system must be restarted after configuration of the Sfera (carried out using the TisferaDesign software) or Linea 5000 (carried out using the Home Project app) entrance panels.**

346851

## 2 Wires / IP interface 346891

It gives the possibility of installing very extended mixed 2 Wires / IP systems with a large number of devices (entrance panels, internal units and interfaces).

The system will have an IP backbone and 2 Wires risers.

The IP backbone must be dedicated to the door entry system. Thanks to the IP guard station (software), it makes it possible to manage advanced functions.

⚠️

**WARNING: Linea 5000 entrance panels and Classe 300EOS / Hometouch video internal units CANNOT be installed in systems with IP/2 Wires interface.**

346891

# System expansion with interfaces

- **Private entrance panels and cameras:** it is possible to connect to the interface entrance panels and cameras specifically dedicated to the apartment.

- **Internal and external intercommunication:** interface 346850 allows intercom calls to be made both inside and outside the apartment via the internal units provided.

- **Galvanic isolation:** Interface 346850 is a galvanically isolated device and requires dual power supply unit (upstream and downstream of the device).

- **Multifamily systems:** in multifamily systems, interface 346850 allows to create an independent 2 Wires system for each apartment, with the possibility of having internal units and private cameras.

- **Doubling of the length/extension of the entrance panel - internal unit line.**

- **Creation of risers with independent audio.**

- **Expansion of the apartment system performance.**

- **Realisation of 2 Wires risers with independent entrance panels, audio and video.**

- **Video signal regeneration and extension of distances of a further 200 metres (using cable 336904).**

- **Increase the number of devices that can be connected to the BUS.**

- **Use of up to a maximum of 3 interface modules connected in cascade**

- **IP Integration Functionality:** 346891 is a network interface that enables the communication and integration of BTicino video door entry system devices with third-party home automation systems, supporting IP based communications.

- **Compatibility:** compatible with BTicino video door entry systems (except Linea 5000 entrance panels and Classe 300EOS and Hometouch video internal units)..
  This allows the integration of video internal units into a home or company network for central and unified control.

- **Connectivity:** it supports Ethernet (RJ45) connections, simplifying the network integration of video internal units and enabling communication with other connected devices.

- **Easy configuration:** the interface offers intuitive installation and configuration, for integration with the network and the interface of the video door entry system through standardised protocols.
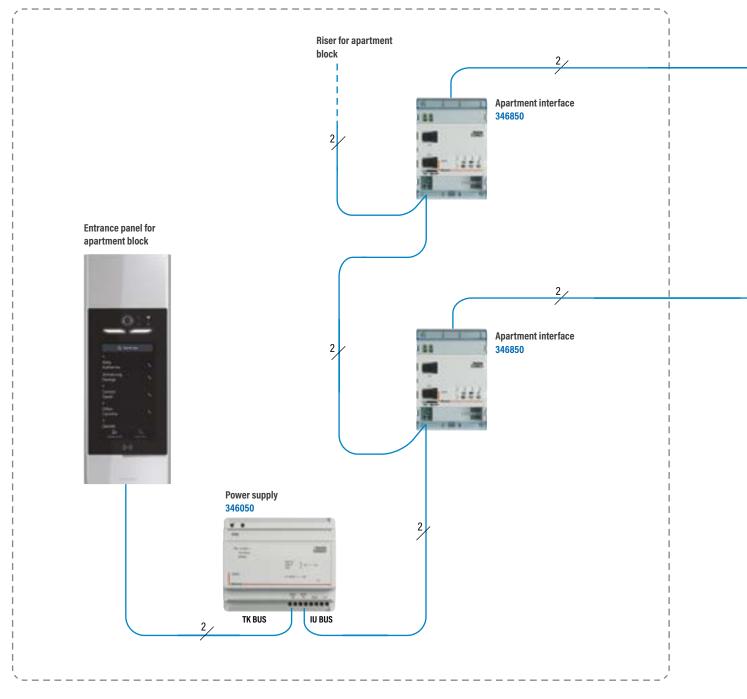
# System expansion with interfaces

**EXAMPLE OF USE OF THE INTERFACE 346850**

Example of connection for the installation of an apartment system independent from the apartment block system.
In this way, the apartment system can have private cameras and entrance panels, and can be integrated with home automation applications.
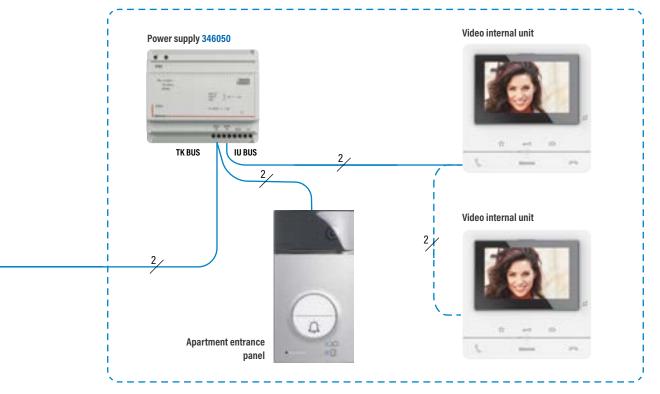
The use of apartment interface 346850 makes it possible to have independent audio intercom inside the apartment.
This gives the possibility making intercom calls inside the apartment that will not be interrupted if the main EP calls another apartment.

**Apartment block system**
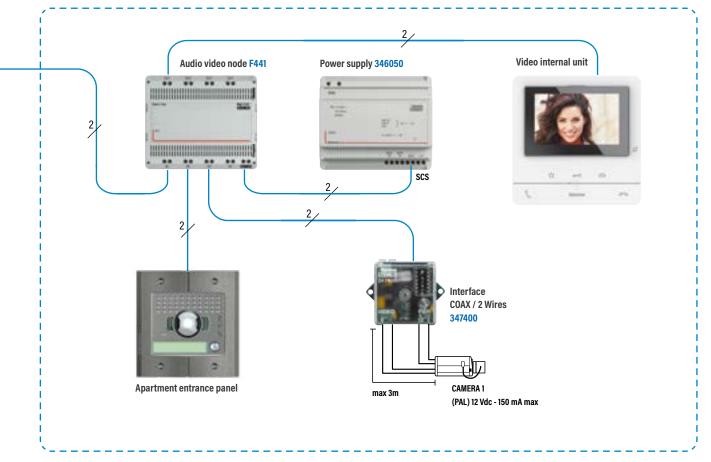
Riser for apartment block

2

Apartment interface
346850

2

Apartment interface
346850

Entrance panel for apartment block

2

Power supply
346050

2

TK BUS    IU BUS

2

## System of Apartment 2

**Power supply 346050**

**Video internal unit**



**TK BUS**   **IU BUS**

2

2

2

2

**Apartment entrance panel**

**Video internal unit**

## System of Apartment 1

2

**Audio video node F441**   **Power supply 346050**   **Video internal unit**

2

2

**SCS**

2

2

2

**Apartment entrance panel**

**Interface COAX / 2 Wires 347400**

**max 3m**   **CAMERA 1 (PAL) 12 Vdc - 150 mA max**
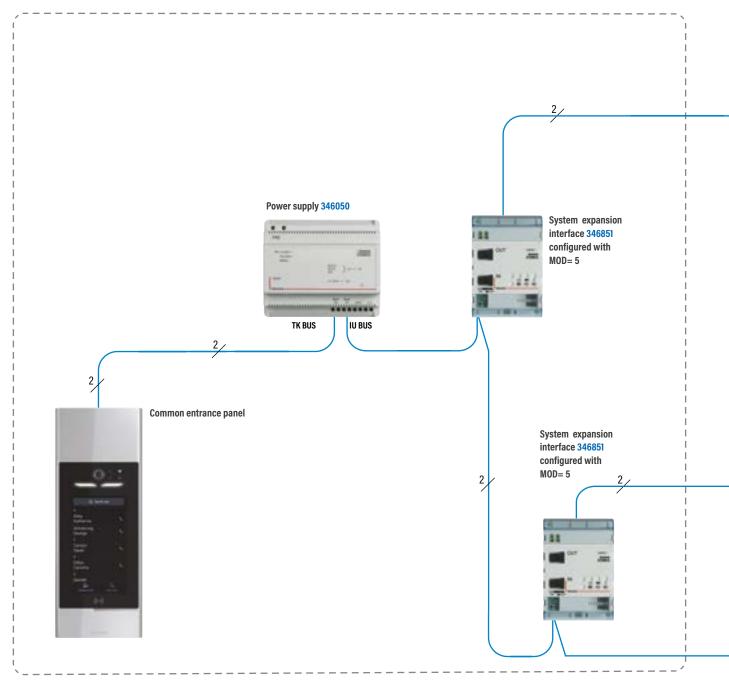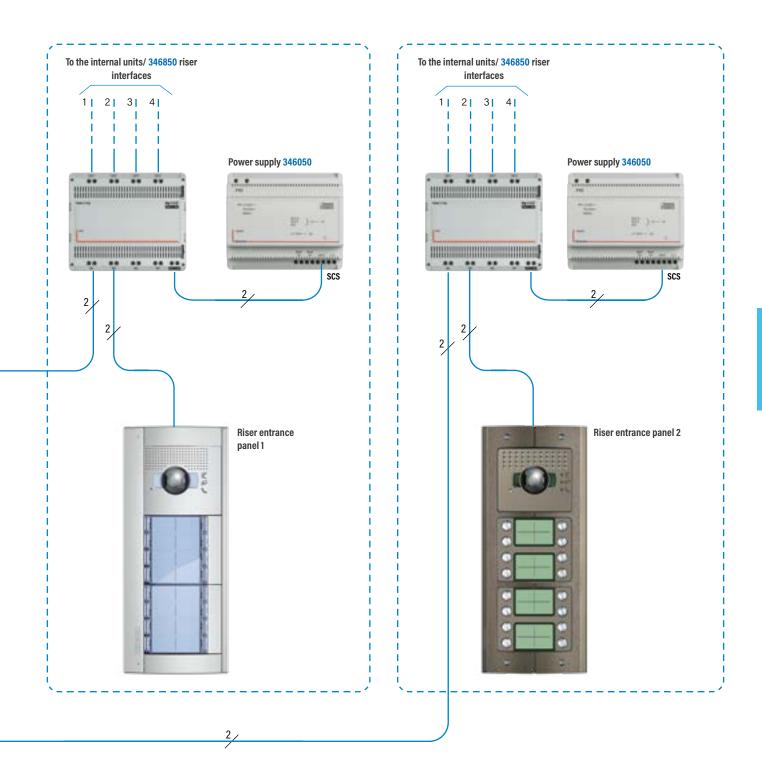
# System expansion with interfaces

**EXAMPLE OF 346851 INTERFACE CONNECTION (MOD=5)**

It must be used in apartment blocks, to install 2 Wires risers with riser entrance panels.
With this solution, audio and video are independent from the other risers.

**Common system section**

Power supply **346050**

**TK BUS**   **IU BUS**

System expansion
interface **346851**
configured with
MOD= 5

Common entrance panel

System expansion
interface **346851**
configured with
MOD= 5

2

2

2

2

2

2

**To the internal units/ 346850 riser interfaces**

1    2    3    4

**Power supply 346050**

SCS

2

2

2

**Riser entrance panel 1**

**To the internal units/ 346850 riser interfaces**

1    2    3    4

**Power supply 346050**

SCS

2

2

2

**Riser entrance panel 2**

2

**To other 346851 interfaces**

# System expansion with interfaces
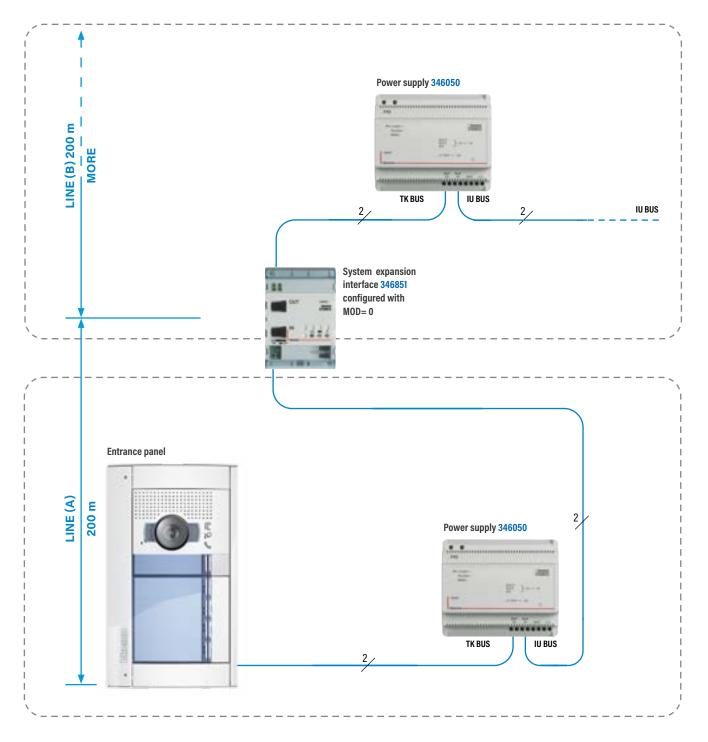
**EXAMPLE (1) OF INTERFACE 346851 CONNECTION IN LINE EXPANSION MODE (MOD=0)**

It must be used to expand the system, in order to:

■ Regenerate the video signal, with the possibility of a further 200 m after the interface (with cable 336904/336905)

■ Increase the number of devices connected to the BUS

**Notes:**
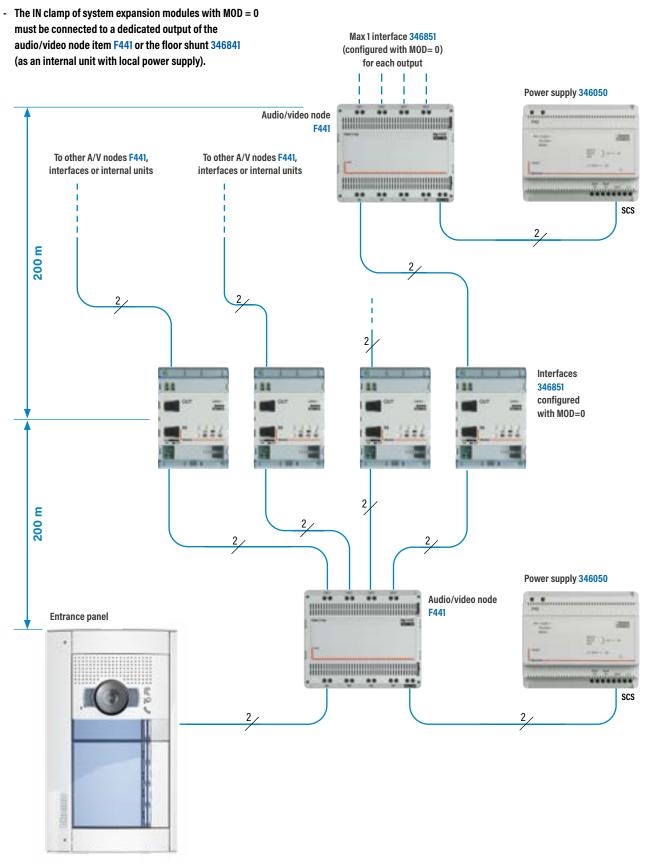
- **200 m with BTicino cable 336904/336905**
- **Up to a maximum of 3 interfaces 346851 in cascade (600 m max.)**
- **In the (A) line, interface 346851 must be considered as an internal unit**
- **In the (B) line, interface 346851 must be considered as an entrance panel**

Power supply 346050

TK BUS    IU BUS    2    2    IU BUS

System expansion
interface 346851
configured with
MOD= 0

LINE (B) 200 m    MORE

Entrance panel

LINE (A)    200 m

Power supply 346050    2

TK BUS    IU BUS    2

## EXAMPLE (2) OF INTERFACE 346851 CONNECTION IN SYSTEM EXPANSION MODE (MOD=0)

**Notes:**

- in order to reach the maximum distance, it is necessary to use the BTicino cable 336904/336905

- The IN clamp of system expansion modules with MOD = 0 must be connected to a dedicated output of the audio/video node item F441 or the floor shunt 346841 (as an internal unit with local power supply).

Max 1 interface 346851 (configured with MOD= 0) for each output

Power supply 346050

Audio/video node F441

To other A/V nodes F441, interfaces or internal units

To other A/V nodes F441, interfaces or internal units

SCS

200 m

2

2

2

2

2

Interfaces 346851 configured with MOD=0

200 m

2

2

2

2

Power supply 346050

Audio/video node F441

Entrance panel

2

2

SCS

# System expansion with interfaces

## General rules for distance calculation

The maximum possible distance for video systems (between EP and the furthest IU) is 600 m when using the BTicino cable 336904/336905.
For audio systems, the maximum distance is 1350 m when using 1 mm² section sheathed cables. The call signal can cross up to 2 interfaces 346851  (and max. 1 apartment interface 346850).

For the calculation of the maximum system distances, it will be necessary to identify the galvanically insulated sections, identify the A, B and C lines of each section, and find on the table (system performance) the maximum permitted distance based on the items installed and the cable used. Below are some examples of identification of the LINES.
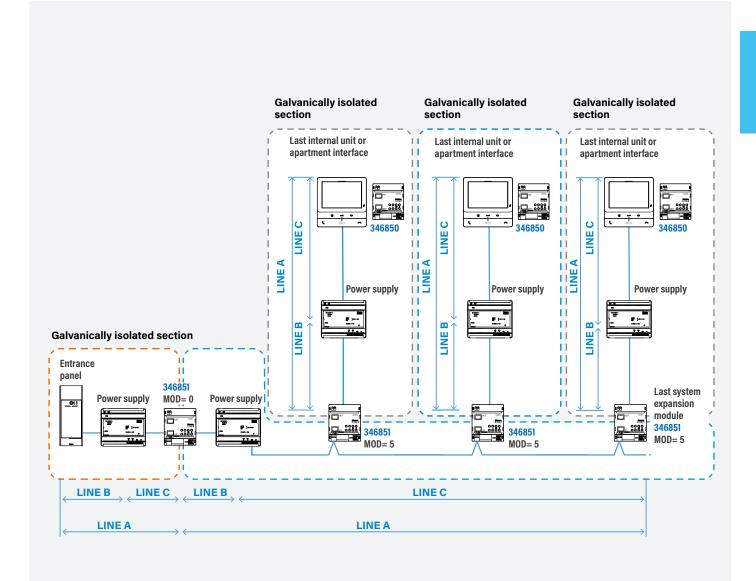
**SYSTEM WITH APARTMENT INTERFACE 346850**



Note: the apartment block riser and the apartment system are galvanically isolated.

## SYSTEM IN EXPANSION WITH INTERFACE 346851

It is possible to use a maximum of 3 interfaces 346851 and 346850 in cascade, taking into account that several interfaces 346850 cannot be connected in cascade to each other. By interfaces in cascade, we mean those crossed by an audio / video connection (entrance panel - internal unit). Only two interfaces (any) can repeat the signal, meaning making available another 200 m on the A LINE. When calculating distances in case of crossing of three interfaces, it must be decided which interface will not repeat the signal. In this mode, it is not considered in the identification of LINE A .
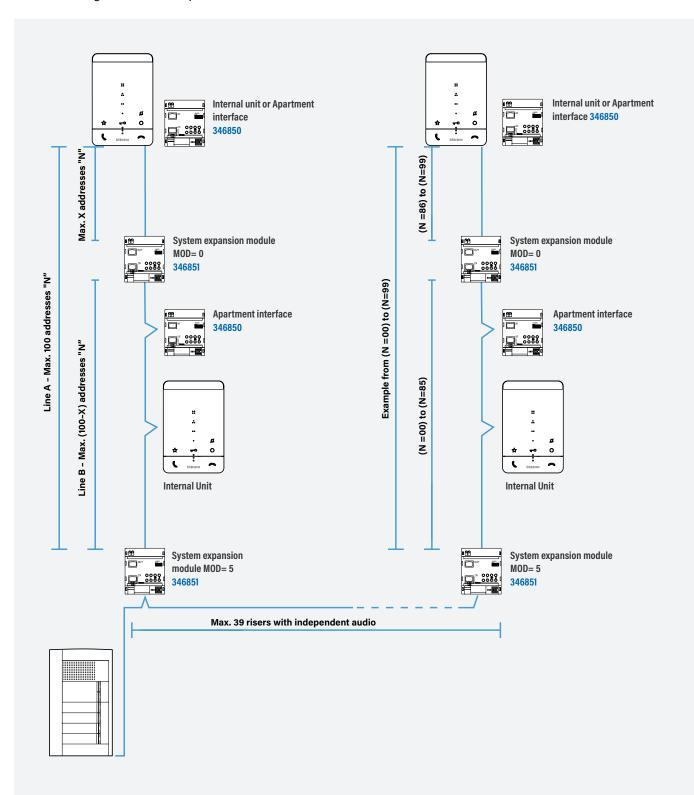
# System expansion with interfaces

## AUDIO SYSTEMS WITH SYSTEM EXPANSION INTERFACE 346851
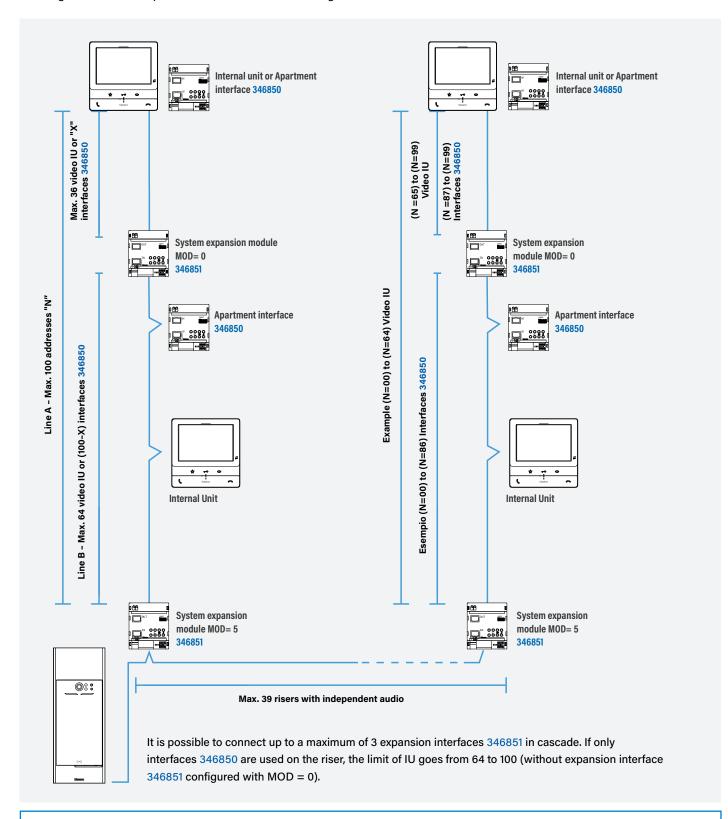
The system expansion interface gives the possibility of increasing the length of the line of an audio door entry system and/or creating risers with independent audio.



Internal unit or Apartment interface
**346850**

Internal unit or Apartment interface **346850**

Max. X addresses "N"

(N =86) to (N=99)

System expansion module
MOD= 0
**346851**

System expansion module
MOD= 0
**346851**

Line A – Max. 100 addresses "N"

Example from (N =00) to (N=99)

Apartment interface
**346850**

Apartment interface
**346850**

Line B – Max. (100-X) addresses "N"

(N =00) to (N=85)

Internal Unit

Internal Unit

System expansion module MOD= 5
**346851**

System expansion module
MOD= 5
**346851**

Max. 39 risers with independent audio

## VIDEO SYSTEMS WITH SYSTEM EXPANSION INTERFACE 346851

The system expansion interface gives the possibility of increasing the length of the line of a video door entry system, of creating risers with independent audio, and of increasing the number of devices that can be connected to the riser.



**Internal unit or Apartment interface 346850**

**Max. 36 video IU or "X" interfaces 346850**

**Line A – Max. 100 addresses "N"**

**Line B – Max. 64 video IU or (100-X) interfaces 346850**

**System expansion module MOD= 0 346851**

**Apartment interface 346850**

**Internal Unit**

**System expansion module MOD= 5 346851**

**(N =65) to (N=99) Video IU**

**(N =87) to (N=99) Interfaces 346850**

**Example (N=00) to (N=64) Video IU**

**Esempio (N=00) to (N=86) Interfaces 346850**

**Internal unit or Apartment interface 346850**

**System expansion module MOD= 0 346851**

**Apartment interface 346850**

**Internal Unit**

**System expansion module MOD= 5 346851**

**Max. 39 risers with independent audio**

It is possible to connect up to a maximum of 3 expansion interfaces 346851 in cascade. If only interfaces 346850 are used on the riser, the limit of IU goes from 64 to 100 (without expansion interface 346851 configured with MOD = 0).

⚠ For the calculation of the maximum number of video IU that can be connected to each individual line (without local power supply), we recommend the use of the **YouDiagram** software – which can be downloaded free of charge from **www.bticino.com.**
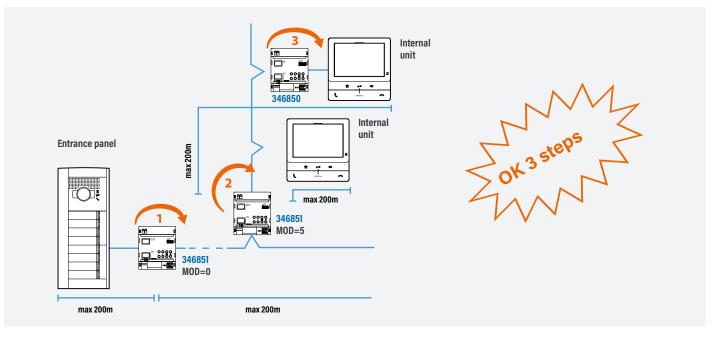
# System expansion with interfaces
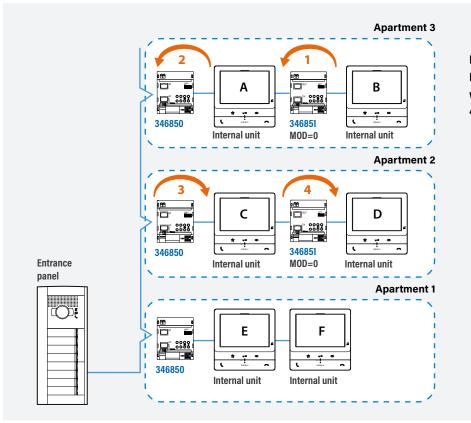
**MAXIMUM USE LIMITS FOR INTERFACES 346850 AND 346851**

It is possible to connect up to a maximum of 3 expansion interfaces 346850 or 346851 in cascade. By interfaces in cascade, we mean those crossed by an entrance panel / internal unit, or internal unit / internal unit (intercom) audio / video connection. Only 2 of these (to be chosen by the installer) will repeat the signal for 200 metres; the maximum distance between the entrance panel and the furthest internal unit is 600 m. Each Line (EP / interface, interface / interface, and interface / IU) is 200 m maximum (with BTicino cable 336904/336905).

**Example 1**



**Example 2**



If the Apartment 3 B IU calls apartment 2, all the IU (C and D) of the apartment ring, but answering will only be possible from IU C (IU D is after the 4th interface).
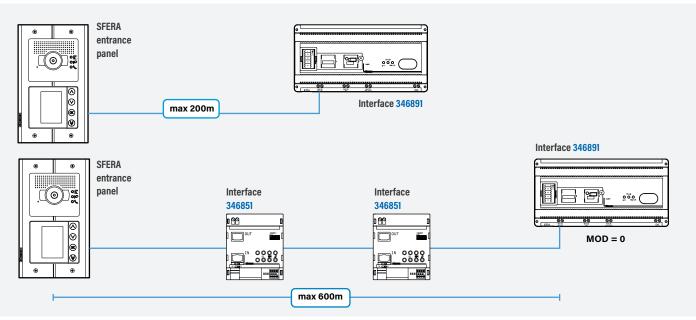
## MAXIMUM USE LIMITS FOR INTERFACE 346891
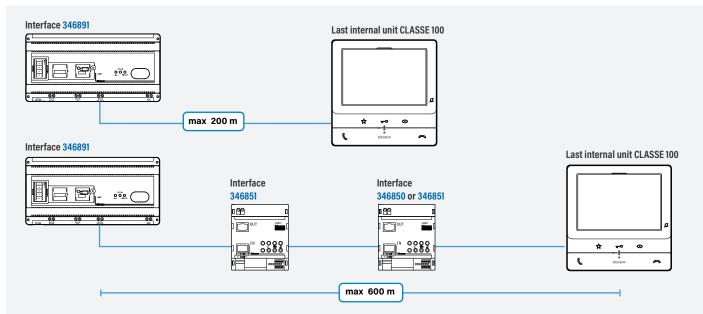
⚠️ **CAUTION: the interface 346891 is NOT compatible with LINEA 5000 entrance panels and with CLASSE 300EOS / HOMETOUCH internal units. ONLY use in systems with Classe 100 internal units.**

### Systems with entrance panels only



SFERA entrance panel — max 200m — Interface 346891

SFERA entrance panel — Interface 346851 — Interface 346851 — Interface 346891 — MOD = 0

max 600m
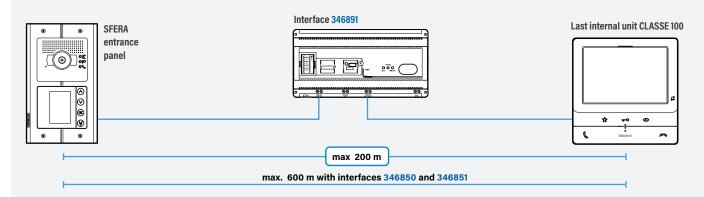
### Systems with internal units only



Interface 346891 — max 200 m — Last internal unit CLASSE 100

Interface 346891 — Interface 346851 — Interface 346850 or 346851 — Last internal unit CLASSE 100

max 600 m

### Systems with entrance panels and internal units



SFERA entrance panel — Interface 346891 — Last internal unit CLASSE 100

max 200 m

max. 600 m with interfaces 346850 and 346851

# Configuration of interface 346850
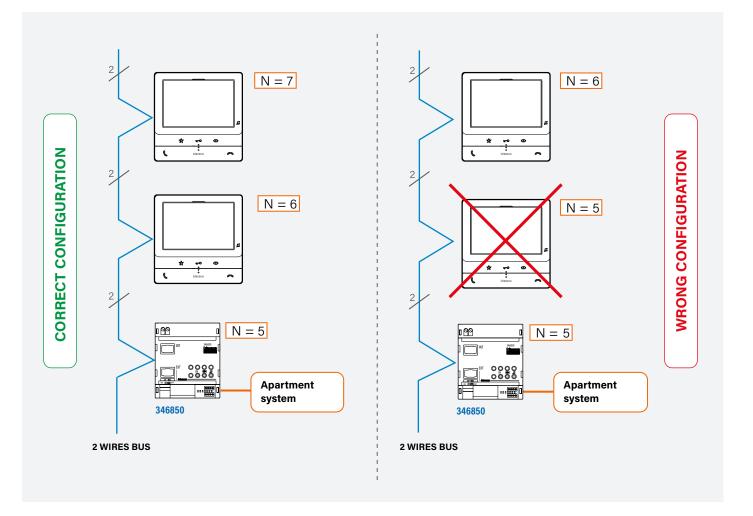
**APARTMENT INTERFACE 346850**

The apartment interface is configured as a normal internal unit and must have a unique configuration. The system cannot include other internal units or interfaces on the same riser with the same address configured in **(N)** of the interface. Downstream the interface, the internal units must be configured starting from **(N=1)**, as the interface generates a general call **(S=9)**. The code **346850** is preconfigured at the factory with **(M=3)**.

**Example**



**CORRECT CONFIGURATION**

N = 7

N = 6

N = 5

**346850**

Apartment system

2 WIRES BUS

**WRONG CONFIGURATION**

N = 6

N = 5

N = 5

**346850**

Apartment system

2 WIRES BUS
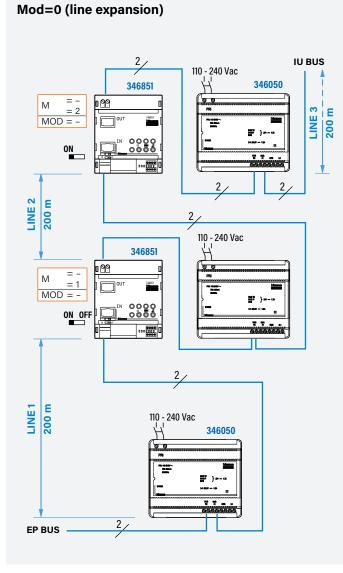
## SYSTEM EXPANSION INTERFACE 346851
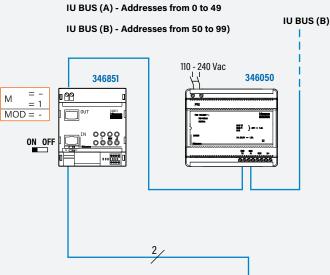
The configurator connected to the M socket sets the operating mode as indicated below:

■ MOD = 0 (equal to no configurator connected) - LINE EXPANSION MODE / EXPANSION NO. OF DEVICES ON BUS

■ MOD = 2 - ENTRANCE PANEL LINE EXPANSION MODE

■ MOD = 5 - INDEPENDENT RISERS MODE

■ MOD = 6 - EXTENDED RISER MODE

■ MOD = 7 - EXTENDED RISER EXPANSION MODE
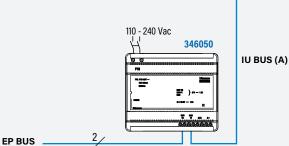
Interface 346851 configured with (MOD=0) can be used for 2 different purposes.
- Physical line expansion (reachable distances);
- Expansion of the number of devices (EP and IU) that can be connected to the BUS.

### Mod=0 (line expansion)



### Mod=0 (expansion no. of devices on riser)



IU BUS (A) - Addresses from 0 to 49

IU BUS (B) - Addresses from 50 to 99)
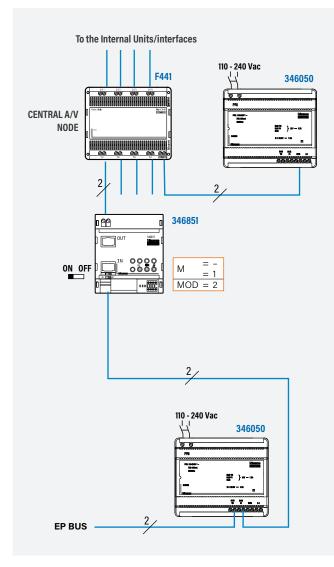
# Configuration of interface 346851
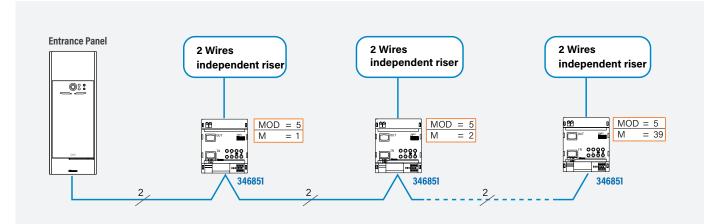
## MOD = 2 (ENTRANCE PANEL LINE EXPANSION)

This mode is used in systems with interface connection between the entrance panel and the F441 audio/video node, to expand the line of the entrance panel.



## MOD= 5 (RISERS WITH INDEPENDENT AUDIO)
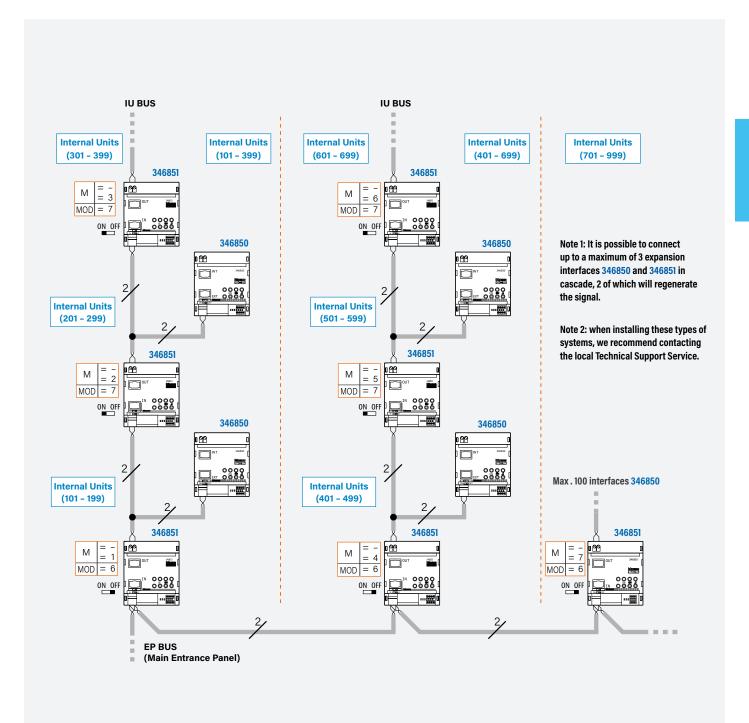
"Independent audio" means that each EP (Entrance Panel) of the riser can call an IU (Internal Unit) of the same riser (regardless of the status of the other risers), allowing up to 39 simultaneous audio/video conversations. (M) is the progressive unique number that identifies the specific riser.

## MOD = 6 (EXTENDED RISER)

## MOD = 7 (EXTENDED RISER EXPANSION)

When used together, these configuration modes allow the line of the riser to be extended to the logical limit of 300 internal units (distributed in 3 sections of 100 audio IU each). In video or mixed audio-video systems, for the first two lines the 100 IU limit is linked to the use of apartment interface 346850. On the third line, the maximum number of IU that can be installed is 100 (audio IU only ) or 64 (if mixed audio / video). It is not possible to install apartment interfaces 346850 on the third riser line.



**Note 1:** It is possible to connect up to a maximum of 3 expansion interfaces 346850 and 346851 in cascade, 2 of which will regenerate the signal.

**Note 2:** when installing these types of systems, we recommend contacting the local Technical Support Service.

# Configuration of interface 346891

**The device must be configured in one of the two available modes:**

■ Physical configuration (with configurator connection)
■ Software configuration using the appropriate application MyHOME_Suite (that can be downloaded free of charge from the website www.homesystems-legrandgroup.com). This mode has the advantage of offering many more options when compared with the physical configuration.

The following parameters must be configured:

| | |
|---|---|
| **M1** | first part of the minimum internal unit address (00 - 99 - OFF) (*) |
| **N1** | second part of the minimum internal unit address (00 - 99) |
| **M2** | first part of the maximum internal unit address (00 - 99) |
| **N2** | second part of the maximum internal unit address (00 - 99) |
| **C** | IP guard station address (1 - 9) |

**NOTE (*) If M1 = OFF, all the other sockets (N1, M2, N2) must not be configured: only entrance panels must be connected to the interface.**

When the interface configuration is completed using physical configurators, the physical address and the system address are the same.
The advanced configuration using MyHOME_Suite makes it possible to exceed the 2 Wires system address limit. This is possible thanks to the allocation of a local basic address to IU (internal units) and EP (entrance panels).
These addresses make it possible to increase the maximum number of IU and EP that can be managed by the video door entry system.

The physical configuration gives the user the possibility of accessing 3 operating modes:

**MODE 1 - The device only manages automatically detected entrance panels and cameras.**
The IP guard station number called (1-9) is inserted in the C socket.

**MODE 2 - The device manages internal units with configurations between N1 and N2 and automatically detected entrance panels/cameras.**
This configuration is used in installations with risers with a low number of internal units and low address.
The IP guard station number called (1-9) is inserted in the C socket.

**MODE 3 - The device manages internal units with address between M1 x 100 < IU < (M1 x 100) + 99.**
The IP guard station number called (1-9) is inserted in the C socket. With this configuration mode, the maximum number of devices that can be connected to the individual interface is 95 entrance panels and 3900 internal units.
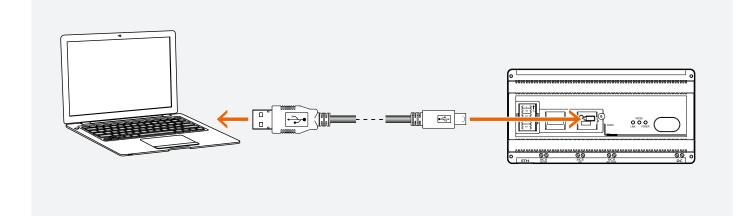
**NOTE: interface 346891 is configured at the factory with "forcing of call to the guard station" ACTIVE.**

**If the device is configured using physical configurators, calls from the entrance panel to the internal units are not allowed.**

The advanced PC configuration using MyHOME_Suite enables the implementation of a higher number of functions, the customisation of text and the complete use of the system performance levels.

To transfer the configuration made with the MyHOME_Suite software or update the device firmware, connect interface 346891 to the PC using a USB-micro USB cable.

The MyHOME_Suite software can be downloaded free of charge from the website: www.homesystems-legrandgroup.com.



**Interface performance according to the different configuration modes:**

| | Physical | Advanced |
|---|---|---|
| Max. No. of IU of the system (audio or video) | 3900 | 10000 |
| Max. No. of EP of the system | 95 | 1000 |
| Maximum address that can be called from the EP | 4000 | 10000 |
| Max. No. of IP devices | 100 (Note 1) | 100 (Note 1) |
| Max. No. of IP guard stations | 9 | max. 100 IP devices (Note 2) |
| Advanced management of the physical and system addresses | NO | YES |
| Check the consistency of the configuration | YES (Note 3) | YES |
| Entrance Panel - Internal Unit direct call | NO | YES |
| Switching on readdressing | NO | YES |
| Camera scrolling | NO | YES |

Note 1: the IP guard station can "weight" 2 to 4 IP devices as far as the activation or not of the Alarm logger and Alarm manager services of the IP guard station itself;

Note 2: maximum no. of IP guard stations that can be installed, within the limit of 100 IP devices maximum, taking into account what indicated in Note 1;

Note 3: the test must be completed using the "MyHOME_Suite" software.

⚠ CAUTION: the interfac is NOT compatible with LINEA 5000 entrance panels and with CLASSE 300EOS / HOMETOUCH internal units. ONLY use in systems with Classe 100 internal units.

# Classe 300EOS / Classe 100X
# connected video internal unit wiring rules
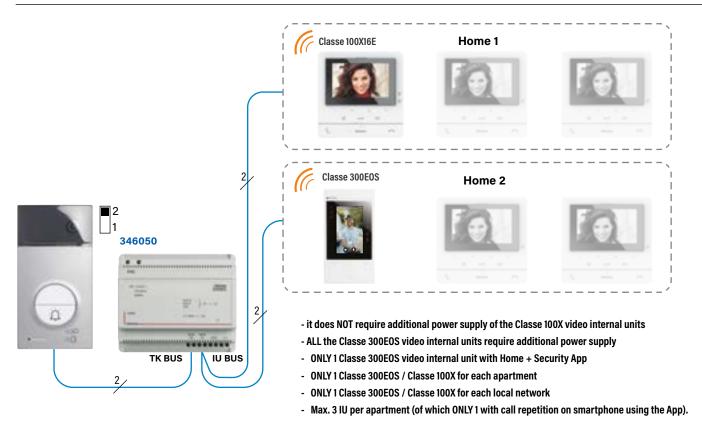
## ONE-FAMILY INSTALLATION



- it does NOT require additional power supply of theClasse 300EOS / Classe 100X video internal unit
- Max 5 IU (of which ONLY 1 with call repetition on smartphone using the App).

## TWO-FAMILY INSTALLATION



- it does NOT require additional power supply of the Classe 100X video internal units
- ALL the Classe 300EOS video internal units require additional power supply
- ONLY 1 Classe 300EOS video internal unit with Home + Security App
- ONLY 1 Classe 300EOS / Classe 100X for each apartment
- ONLY 1 Classe 300EOS / Classe 100X for each local network
- Max. 3 IU per apartment (of which ONLY 1 with call repetition on smartphone using the App).

## MULTIFAMILY INSTALLATION – APARTMENT BUILDING TYPE 1

**Apartment N**

Classe 300EOS

346020

1
2

**Apartment 2**

Classe 100X16E

**IU BUS**

2

P1 P2 P3 P4
ART 346841
bticino
IN
OUT

346841

**Apartment 1**

Classe 300EOS

346020

1
2

2

P1 P2 P3 P4
ART 346841
bticino
IN
OUT

346841

2

**2 Wires riser**

- Additional power supply of the Classe 300EOS video internal unit required in multifamily installations
- ONLY 1 Classe 100X internal unit for each local network
- ONLY 1 Classe 300EOS video internal unit with Home + Security App

# Classe 300EOS / Classe 100X
# connected video internal unit wiring rules

## MULTIFAMILY INSTALLATION – APARTMENT BUILDING TYPE 2

**Apartment N**

Classe 300EOS

346020

1

2

**Max. 3 IU per apartment (of which ONLY 1 with call repetition on smartphone ) using the App.**

2

**Apartment 2**

Classe 100X16E

2

**IU BUS**

2

P1 P2 P3 P4

ART 346841

IN
OUT

346841

**Apartment 1**

Classe 300EOS

2

346020

1

2

2

P1 P2 P3 P4

ART 346841

IN
OUT

346841

2

**2 Wires riser**

- Additional power supply of the C300EOS video internal unit required in multifamily installations
- ONLY 1 Classe 100X for each apartment
- ONLY 1 Classe 100X for each LAN local network
- ONLY 1 Classe 300EOS video internal unit with Home + Security App

# MULTIFAMILY INSTALLATION – APARTMENT BUILDING TYPE 3

**Apartment 1**



**346850**

**IU BUS**

**346841**

**F441**

**346050**

**SCS**

**Classe 300EOS**

**Max. 5 IU per apartment (of which ONLY 1 with call repetition on smartphone ) using the App.**

**Apartment N**

**Classe 100X16E**

**346841**

**2 Wires riser**

- Additional power supply of the Classe 300EOS video internal unit required in multifamily installations
- ONLY 1 Classe 300EOS / Classe 100X for each apartment
- ONLY 1 Classe 300EOS / Classe 100X for each LAN local network
- ONLY 1 Classe 300EOS video internal unit with Home + Security App

# WIRING
# DIAGRAMS



Apartment 18

344842 -344884

Apartment 16

344672

Apartment 2

344652

Apartment 1

344282

346841

345000

P = 0
N = 1

Home + Project

110-240 Vac

346050

S1

PS

HOME + SECURITY

BUS

230 Vac



Home 1

344842 - 344884

230 Vac

346020

Home 2

344882

BUS

HOME + SECURITY

110-240 Vac

346050

343081

Abitazione 1

Abitazione 2

S1

Lock

PS1

HOME + SECURITY

# Example 1 - The villa

**ONE FAMILY VIDEO DOOR ENTRY SYSTEM
WITH SMARTPHONE CALL REPETITION AND DOOR LOCK RELEASE KEY CARD**

**Classe 100 video internal unit**



**Video internal unit
Classe 300EOS with Netatmo**



alexa | built-in

**HOME + SECURITY**

**Power supply**



**LINEA 3000 entrance panel**



**Door lock release
key card**

**Living room**

344672

N = 5
P = –
M = –

ON

MASTER OFF

BUS

**Room 2**

344672

N = 3
P = –
M = –

OFF

MASTER OFF

BUS

**Living room**

344842 - 344884

N = 1
P = –
M = –

OFF

ON MASTER

2-1 OFF

BUS

344672

OFF

MASTER OFF

N = 4
P = –
M = –

**Room 1**

344672

OFF

MASTER OFF

N = 2
P = –
M = –

**Kitchen**

BUS

BUS

**HOME + SECURITY**

110-240 Vac

346050

346210

MOD = –
M = –
N/P = –
T = –

BUS

Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations). For the connection and the configuration, please refer to the technical sheet of the device.

343091

P = –
N = 1
T = –
S = 9

PL | BUS | S+ | S-

Lock
S

PS

- Max. 5 internal units;
- Max. 200 m between the entrance panel and the last internal unit with cable 336904 / 336905;
- Max 110 m between the power supply and the last internal unit with cable 336904 / 336905;
- A domestic Wi-Fi with internet access is needed for the connection between the CLASSE 300EOS with Netatmo connected video internal unit and the smartphone;
- When the call is received, only the video door entry system configured with N=1 that forwards the call to the smartphone switches on (after appropriate configuration);
- CLASSE 300EOS internal unit must be installed ONLY in systems made with BTicino 2 Wires technology.

# Example 2 - The two-family villa

**TWO-FAMILY VIDEO DOOR ENTRY SYSTEM WITH SMARTPHONE CALL REPETITION**

**Classe 300EOS video internal unit
HOME 1**



alexa | built-in

**Classe 100X video internal unit
HOME 2**

**HOME + SECURITY**

**HOME + SECURITY**

**LINEA 3000 entrance panel**

home
1
home
2

**Power supply**

**Home 1**

**344842 - 344884**

N = – = 1
P = – = –
M = – = –

ON
–⊠

ON
MASTER

ON
2-1

230 Vac

346020

2  1
⊘⊘

BUS
⊘⊘

**Home 2**

**344682**

OFF
–⊠

N = – = 2
P = – = –
M = – = –

BUS
⊘⊘

HOME + SECURITY

HOME + SECURITY

110-240 Vac

**346050**

**343081**

2
1

P = – = –
N = – = 1
T = – = –
S = – = –

Abitazione 1
Abitazione 2

PL | BUS | S+ S-
⊘ | ⊘ | ⊘ ⊘

S1

PS1

Lock

- Max. 3 internal units for each dwelling;
- Max. 200 m between the entrance panel and the last internal unit with cable 336904 / 336905;
- Max 1 CLASSE 300EOS / CLASSE100X video internal unit connected for each local LAN;
- A domestic Wi-Fi with internet access is needed for the connection between the CLASSE 300EOS / Classe 100X connected video internal unit and the smartphone;
- In multifamily installations, the connected CLASSE 300EOS video internal unit must be powered locally;
- CLASSE 300EOS / CLASSE 100X internal units must be installed ONLY in systems made with BTicino 2 Wires technology.

# Example 3 - The apartment building

**AUDIO DOOR ENTRY, VIDEO DOOR ENTRY OR MIXED
MULTIFAMILY SYSTEMS WITH SMARTPHONE CALL REPETITION**

**Classe 100 video internal unit**

**Classe 300EOS video internal unit**

**Audio Classe 100**

**HOME + SECURITY**

**LINEA 5000 entrance panel**

**Apartment 18**

344842 -344884

| N | = 1 |
|---|---|
| | = 8 |
| P | = – |
| | = – |
| M | = – |
| | = – |

ON

ON
MASTER

ON
2-1

230 Vac

2  1

BUS

**Apartment 16**

344672

ON

ON
MASTER

BUS

| N | = 1 |
|---|---|
| | = 6 |
| P | = – |
| | = – |
| M | = – |

**Apartment 2**

344652

ON

ON
MASTER

BUS

| N | = – |
|---|---|
| | = 2 |
| P | = – |
| | = – |
| M | = – |

346841
P1 P2 P3 P4
IN
OUT

**Apartment 1**

344282

ON

| N | = – |
|---|---|
| | = 1 |
| P | = – |
| | = – |
| M | = – |

BUS

HOME + SECURITY

346841
P1 P2 P3 P4
IN
OUT

346841
P1 P2 P3 P4
IN
OUT

345000

P = 0
N = 1

+

Home + Project

S- S+ | PL | BUS | 2 1

PS

S1

110-240 Vac

346050

PRI

- Max. 3 internal units for each dwelling;
- Max 1 CLASSE 300EOS / Classe 100X video internal unit connected for each local LAN;
- A domestic Wi-Fi with internet access is needed for the connection between the CLASSE 300EOS / Classe 100X connected video internal unit and the smartphone;
- In multifamily installations, the connected CLASSE 300EOS video internal unit must be powered locally;
- CLASSE 300EOS internal unit must be installed ONLY in systems made with BTicino 2 Wires technology.
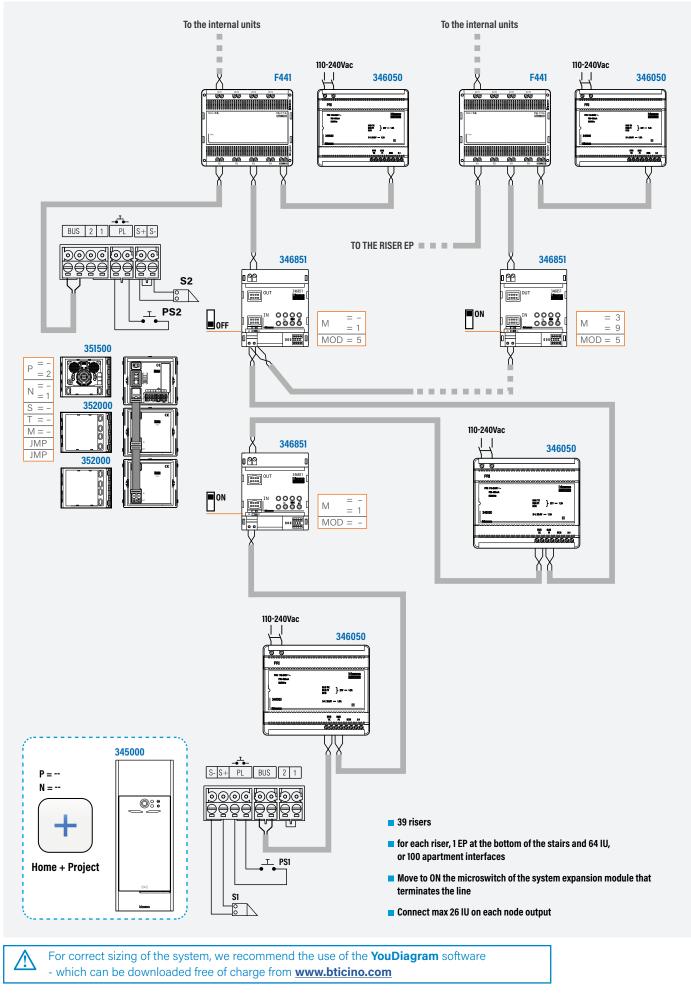
# Example 4 - The apartment block

**MULTIFAMILY SYSTEM CONSISTING OF SEVERAL BUILDINGS, A COMMON APARTMENT BLOCK ENTRANCE PANEL AND LONG DISTANCES**

Classe 100 audio internal unit

Classe 100 video internal unit

SFERA secondary entrance panel

System expansion interface

Common entrance panel LINEA 5000

**To the internal units**

**To the internal units**

F441

110-240Vac

346050

F441

110-240Vac

346050

| BUS | 2 | 1 | PL | S+ | S- |
|-----|---|---|----|----|----|

S2

PS2

TO THE RISER EP

346851

OFF

M = –
= 1
MOD = 5

346851

ON

M = 3
= 9
MOD = 5

351500

| P | = – |
|   | = 2 |
| N | = – |
|   | = 1 |
| S | = – |
| T | = – |
| M | = – |
| JMP | |
| JMP | |

352000

352000

346851

ON

M = –
= 1
MOD = –

110-240Vac

346050

110-240Vac

346050

345000

P = --

N = --

+

**Home + Project**

| S- | S+ | PL | BUS | 2 | 1 |
|----|----|----|-----|---|---|

PS1

S1

- **39 risers**
- **for each riser, 1 EP at the bottom of the stairs and 64 IU, or 100 apartment interfaces**
- **Move to ON the microswitch of the system expansion module that terminates the line**
- **Connect max 26 IU on each node output**

For correct sizing of the system, we recommend the use of the **YouDiagram** software - which can be downloaded free of charge from **www.bticino.com**

# WIRING DIAGRAMS

# Example 5 - the apartment

**APARTMENT WITH DEDICATED ENTRANCE PANEL AND PRIVATE CAMERAS**

Classe 100 video internal unit



**Interface COAX / 2 Wires** 347400

**Interface COAX / 2 Wires** 347400

**Apartment interface**

**Audio / Video node**

**Power supply**

max 3m    CAMERA 1

max 3m    CAMERA 2

**NOTA: camera (PAL) 12 Vdc - 150 mA max**

**Inside the apartment 5**

344672

| N | = – |
|---|---|
| | = 5 |
| P | = – |
| | = 1 |
| M | = – |
| | = 3 |

ON

MASTER

BUS

344672

| N | = – |
|---|---|
| | = 4 |
| P | = – |
| | = 1 |
| M | = – |
| | = 3 |

OFF

MASTER

BUS

344672

| N | = – |
|---|---|
| | = 3 |
| P | = – |
| | = 1 |
| M | = – |
| | = 3 |

OFF

MASTER

BUS

344672

ON

MASTER

BUS

| N | = – |
|---|---|
| | = 2 |
| P | = – |
| | = 1 |
| M | = – |
| | = 3 |

344672

OFF

MASTER

BUS

| N | = – |
|---|---|
| | = 1 |
| P | = – |
| | = 1 |
| M | = – |
| | = 3 |

110-240Vac

F441

346050

346850

| N | = – |
|---|---|
| | = 5 |
| M | = 3 |

OFF

INT  346850

EXT

**RISER FOR APARTMENT BLOCK**

343081

PL  BUS  S+  S-

S

PS

**Lock**

| P | = – |
|---|---|
| | = 1 |
| N | = – |
| | = 1 |
| T | = – |
| S | = 9 |

347400

VIDEO  PWR

| P | = – |
|---|---|
| | = 2 |
| N | = – |
| Z | = – |
| M | = – |
| A | = – |
| PL | = – |

max 3m

**Camera (PAL) 12 Vdc - 150 mA max**

347400

VIDEO  PWR

| P | = – |
|---|---|
| | = 3 |
| N | = – |
| Z | = – |
| M | = – |
| A | = – |
| PL | = – |

max 3m

**Camera (PAL) 12 Vdc - 150 mA max**

- **Max 5 video internal units, 1 apartment EP and 2 apartment cameras**
- **Configure the EP and the apartment cameras starting from P=1**
- **The M=3 configuration of video internal units is optional (intercom request between video internal units).**
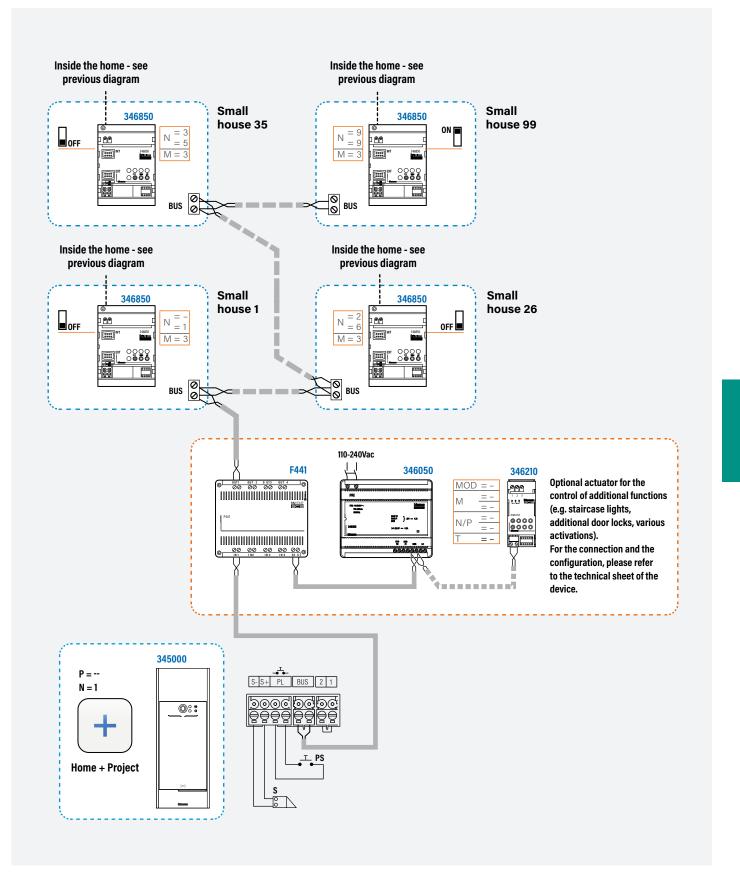
# Example 6 - The small house block

**MULTIFAMILY SYSTEM WITH INDEPENDENT DWELLINGS AND AT LEAST ONE COMMON ACCESS POINT**



**Apartment interface**

**Common entrance panel LINEA 5000**

**Audio / Video node**

**Power supply**

**Inside the home - see previous diagram**

**346850**

OFF

N = 3
= 5
M = 3

**Small house 35**

**Inside the home - see previous diagram**

**346850**

ON

N = 9
= 9
M = 3

**Small house 99**

BUS

BUS

**Inside the home - see previous diagram**

**346850**

OFF

N = -
= 1
M = 3

**Small house 1**

**Inside the home - see previous diagram**

**346850**

OFF

N = 2
= 6
M = 3

**Small house 26**

BUS

BUS

**F441**

110-240Vac

**346050**

**346210**

MOD = -
M = -
N/P = -
T = -

Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**345000**

P = --
N = 1

+

**Home + Project**

S- S+ PL   BUS   2 1

PS

S

■ **Max 99 apartment interfaces and 1 apartment block entrance panel**

■ **Max 50 m between Entrance Panel and audio/video node**

# 1 or more main audio EP and secondary EP

| ITEM | DESCRIPTION |
|------|-------------|
| 351000 | SFERA basic speaker module |
| 352000 | SFERA pushbutton module |
| 344292 | CLASSE 100A16M audio internal unit |
| 344282 | CLASSE 100A16E internal unit |
| 344232 | SPRINT L2 audio internal unit |
| 346040 | Audio power supply |
| 346210 | Actuator |
| PEP | SFERA (main) entrance panel |
| PES | SFERA (secondary) entrance panel |
| PS1-PS2-PS3 | Door lock release pushbutton |
| S1-S2-S3 | Electrical door lock 18V 4A impulsive - 250 mA holding current (30 Ω max) |

⚠️ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the" INTERNAL UNITS VARIANTS" section.

# 1 or more audio Entrance Panels

| ITEM | DESCRIPTION |
|---|---|
| 351100 | SFERA speaker module |
| 352000 | SFERA pushbutton module |
| S1 | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |
| PEP | Main entrance panel |
| 344292 | CLASSE 100A16M audio internal unit |
| 344282 | CLASSE 100A16E internal unit |
| 344232 | SPRINT L2 audio internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PS1 | Door lock release pushbutton |
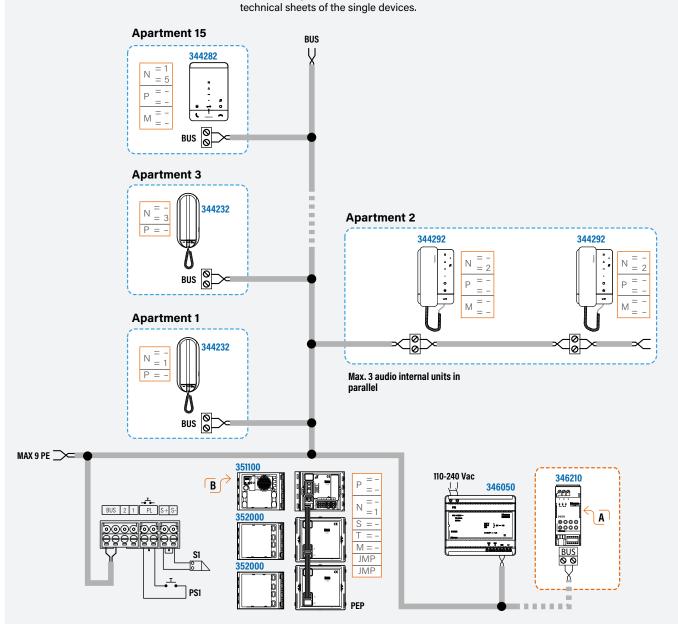
## ⚠ CAUTION

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute

### Example of entrance panel configuration

|  | P | N | T | S |  |
|---|---|---|---|---|---|
| PE0 | - | - | - | 1 | - | - |
| PE1 | - | 1 | - | 1 | - | - |
| PE2 | - | 2 | - | 1 | - | - |
| --- | - | - | - | 1 | - | - |
| PE8 | - | 8 | - | 1 | - | - |

**N =** first apartment that the EP can call

For the configuration of T, S and M, see the technical sheets of the single devices.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use SFERA pushbutton panels, the universal speaker module, or digital call modules.



Apartment 15 — 344282
N = 15, P = –, M = –

Apartment 3 — 344232
N = 3, P = –

Apartment 1 — 344232
N = 1, P = –

Apartment 2 — 344292
N = 2, P = –, M = –
**Max. 3 audio internal units in parallel**

MAX 9 PE

351100 / 352000 / 352000 — PEP
P = –, N = 1, S = –, T = –, M = –, JMP, JMP

110-240 Vac — 346050

346210 — **A**

# One-family system with 1 or more audio Entrance Panels and 5 intercommunicating Internal Units

| ITEM | DESCRIPTION |
|---|---|
| 343071 | Linea 3000 audio entrance panel |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |
| 344292 | CLASSE 100A16M audio internal unit |
| 346040 | Power supply |
| PS | Door lock release pushbutton |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
The intercom function is also operational without connection of the Entrance panel.

**A** For the realisation of the Entrance Panel, it is possible to use SFERA, LINEA 3000 or LINEA 2000 pushbutton panels.

**B** S=9 enables the simultaneous call of all IU

**Example of entrance panel configuration**

|  | P | N | T | S |
|---|---|---|---|---|
| PE0 | - | - | - | 1 | - | 9 |
| PE1 | - | 1 | - | 1 | - | 9 |
| PE2 | - | 2 | - | 1 | - | 9 |
| --- | - | - | - | 1 | - | 9 |
| PE8 | - | 8 | - | 1 | - | 9 |



**Device 4**

Intercom with IU 5
Intercom with IU 3
Intercom with IU 2
Intercom with IU 1

344292
N = −, = 4
P = −, = −
M = −, = 3
BUS

**Device 5**

Intercom with IU 4
Intercom with IU 3
Intercom with IU 2
Intercom with IU 1

344292
N = −, = 5
P = −, = −
M = −, = 3
BUS

**Device 3**

Intercom with IU 4
Intercom with IU 5
Intercom with IU 2
Intercom with IU 1

344292
N = −, = 3
P = −, = −
M = −, = 3
BUS

**Device 2**

Intercom with IU 4
Intercom with IU 3
Intercom with IU 5
Intercom with IU 1

344292
N = −, = 2
P = −, = −
M = −, = 3
BUS

**Device 1**

Intercom with IU 4
Intercom with IU 3
Intercom with IU 2
Intercom with IU 5

344292
N = −, = 1
P = −, = −
M = −, = 3
BUS

110-240 Vac
346040
BUS

MAX 9 PE

343071
P = −, = −
N = −, = 1
T = −, = −
S = 9
PL BUS S+ S−
S
PS

A
B

# Two-family system, 1 EP and 3 IU for each apartment with "Internal intercom and intercom among apartments" function

| ITEM | DESCRIPTION |
|------|-------------|
| 351100 | SFERA speaker module |
| 344282 | CLASSE 100A16E internal unit |
| 346040 | Power supply |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute. The intercom function is also operational without connection of the Entrance panel. The intercom between units makes it possible to call units of the same apartment or of other apartments.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the". INTERNAL UNITS VARIANTS" section.



**Apartment 1**

- Intercom inside the apartment
- Intercom among apartments
- Relay control configured with MOD=9 and P+1
- Relay control configured with MOD=5 and P+1

**Apartment 2**

- Intercom inside the apartment
- Intercom among apartments
- Relay control configured with MOD=9 and P+1
- Relay control configured with MOD=5 and P+1

# 1 or more main audio Entrance Panels with universal speaker unit

In systems with more than 8 pushbuttons, in addition to module 346991 it is necessary to allow for a 346992 module every 8 pushbuttons; for the connection, it will be necessary to use the 2-connector multiple cable supplied with item 346992 itself. The following diagram shows the internal wiring between speaker module 346991, one or more 346992 expansion modules, and the pushbuttons in systems with more than 8 internal units.

| ITEM | DESCRIPTION |
|------|-------------|
| 336842 | Transformer |
| 344292 | CLASSE 100A16M audio internal unit |
| 346230 | Door lock actuator |
| 346991 | Universal speaker module |
| 346992 | Pushbutton expansion |
| PEP | Main Entrance Panel |
| PS1 | Door lock release pushbutton |
| S1 | Electric door lock |

| Possible systems | |
|------------------|---|
| Max. No. of call pushbuttons | 56 |
| Max. No. of expansions | 6 |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**Example of entrance panel configuration**

|  | P | N | | T | S |
|------|---|---|---|---|---|
| PE0 | - | - | - | 1 | - | - |
| PE1 | - | 1 | - | 1 | - | - |
| PE2 | - | 2 | - | 1 | - | - |
| --- | - | - | - | 1 | - | - |

**N** = first apartment that the EP can call
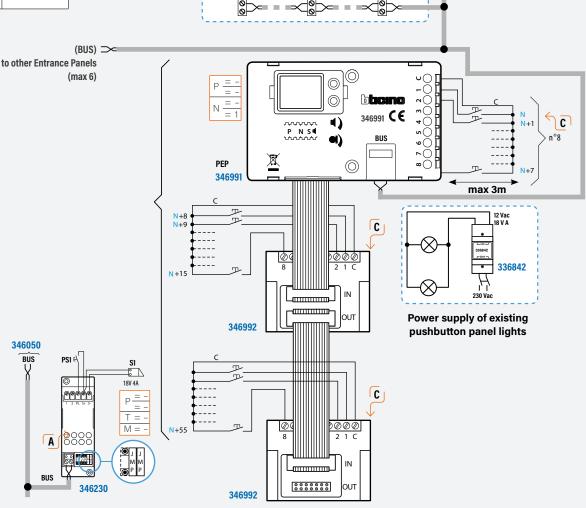
**A** The use of the actuator is necessary if the door lock opening function is required (see the actuator technical sheet).

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**C** The common of the pushbuttons must be connected to the 346991 or 346992 module to which the pushbuttons themselves are connected.



**Apartment N**

**Power supply of existing pushbutton panel lights**

# Multifamily system with 1 or more main EP and 5 intercommunicating audio internal units

| ITEM | DESCRIPTION |
|------|-------------|
| 351000 | SFERA speaker module |
| 352100 | SFERA pushbutton module |
| 344292 | CLASSE 100A16M audio internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PEP | Main Entrance Panel |
| PS1 | Door lock release pushbutton |
| S1 | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

### Example of entrance panel configuration
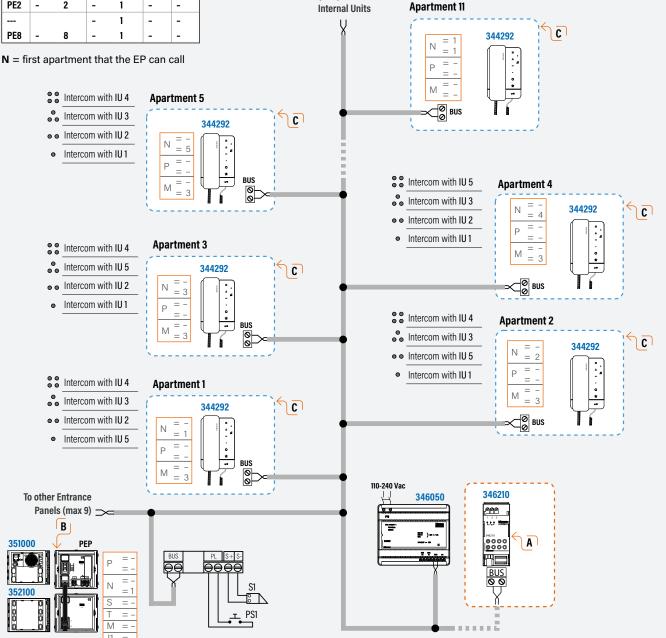
|  | P | N | T | S |
|-----|---|---|---|---|
| PE0 | – | – | – | 1 | – | – |
| PE1 | – | 1 | – | 1 | – | – |
| PE2 | – | 2 | – | 1 | – | – |
| --- |  |  | – | 1 | – | – |
| PE8 | – | 8 | – | 1 | – | – |

**N** = first apartment that the EP can call

## ⚠ CAUTION

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
The intercom function is also operational without connection of the Entrance panel. The intercom among apartments can be used with Classe 100A16M / Classe 100A16E internal units configured from N=1 to N=5.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use any SFERA pushbutton panels (not with digital call).
For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

# Multifamily system with several main audio EP and call to the guard station

| ITEM | DESCRIPTION |
|---|---|
| 351000 | SFERA basic speaker module |
| 352000 | SFERA pushbutton module |
| 344232 | SPRINT L2 audio internal unit |
| 346310 | Guard station |
| 346020 | Additional power supply |
| 346050 | Power supply |
| PEP | Main Entrance Panel |
| PES | Secondary Entrance Panel |
| PS1-PS2-PS3 | Door lock release pushbutton |
| S1-S2-S3 | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**A** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**NOTE:** with this type of installation, the audio is not isolated, and only one communication at the time is possible

# Video system with 1 EP and star-connected riser using non-twisted cables or pre-existing cables

| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 352100 | SFERA pushbutton module |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| 346870 | Line amplifier |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use LINEA 5000 or SFERA pushbutton panels with pushbutton call or digital call.
For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** Move to ON the microswitch on the back of the audio or video internal unit that terminates the line.

**D** On the riser line, after item 346870 it will be possible to install up to 18 IU max (audio and video internal units).

**E** To wire the system, use existing cables or cables with section ≥ 0.28 mm$^2$

**F** Item 346870 must only be used if the distance between the EP and the last IU exceeds 50 m, and must be installed approximately 50 metres from the Entrance Panel

**G** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.



Apartment 18 — 344652 — N = 1, = 8, P = -, M = -

Apartment 9 — 344652 — N = 9, P = -, M = -

Apartment 2 — 344652 — N = 2, P = -, M = -

Apartment 1 — 344652 — N = 1, P = -, M = -

346841

346870 — Total max 50 m (without 346870) / Total max 100 m (with 346870) — max 50 m — 50 m — max 50m

PEP — P = -, N = 1, S = -, T = -, M = -, J1 = -, JMP

351500 / 352100 / 352100

BUS 2 1 PL S+ S- — S — PS

110-240 Vac — 346050

346210 — BUS

# Multifamily video system with universal speaker module 346991 and associated separate camera

| ITEM | DESCRIPTION |
|------|-------------|
| 346050 | Power supply |
| 346991 | Universal speaker module |
| 346992 | Key expansion module |
| 347400 | Coax / 2 Wires interface |

346991

Call pushbuttons

110-240 Vac

346050

The configurators in P of 346991 and of the interface 347400 must be the same

346991

BUS

n°8

N
N+1

N+7

IU BUS

8    2 1 C

IN

OUT

346992

To other modules
346992

347400

VIDEO    PWR

max 3m

Camera (PAL) 12
Vdc - 150 mA max

# 1 main video Entrance Panel and 1 riser with floor shunt wiring

| ITEM | DESCRIPTION |
|------|-------------|
| 345000 | LINEA 5000 audio video display module |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 344282 | CLASSE 100A16E handsfree audio internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| 346841 | Floor shunt |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

## CONNECTION COMBINATIONS

1 video EP, max. 2 risers on IU BUS 346050
2 video EP, max. 1 riser on IU BUS 346050

⚠️ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations). For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use LINEA 5000 or SFERA pushbutton panels with pushbutton call or digital call. For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** Move to ON the microswitch on the back of the audio or video internal unit that terminates the line.

**D** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

# 1 main video Entrance Panel and 2 risers with floor shunt wiring
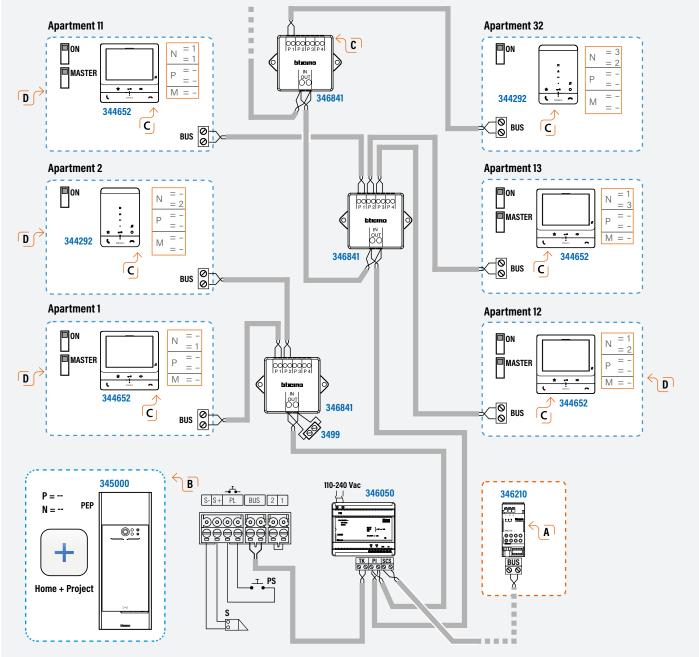
| ITEM | DESCRIPTION |
|------|-------------|
| 345000 | LINEA 5000 audio video display module |
| 344292 | CLASSE 100A16M internal unit |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| 3499 | Line terminator |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |

⚠️ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**CONNECTION COMBINATIONS**

1 video EP, max. 2 risers on IU BUS 346050
2 video EP, max. 1 riser on IU BUS 346050

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use LINEA 5000 or SFERA pushbutton panels with digital or pushbutton call.
For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** Move to ON the microswitch on the back of the audio or video internal unit that terminates the line.

**D** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

# 2 main video Entrance Panels and 1 riser with in-out wiring

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module with high quality camera |
| 352100 | SFERA pushbutton module |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PEP1 - PEP2 | Main Entrance Panel |
| PS1 - PS2 | Door lock release pushbutton |
| S1 - S2 | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

**CONNECTION COMBINATIONS**

1 video EP, max. 2 risers on IU BUS 346050
2 video EP, max. 1 riser on IU BUS 346050

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use LINEA 5000 or SFERA pushbutton panels, with digital or pushbutton call, both as main and secondary EP.
For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** Move to ON the microswitch on the back of the audio or video internal unit that terminates the line.

**D** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**E** Video internal units are installed in the apartment with MASTER-SLAVE function. Upon arrival of the call, the MASTER rings and switches on, while the SLAVE unit only rings. If the call is answered from the SLAVE, the MASTER switches off and the monitor of the SLAVE switches on.



Apartment 17

344652

Apartment 1

344652

351500 PEP1
352100
352100

351500 PEP2
352100
352100

110-240 Vac 346050

346210

# 2 main video EP with additional power supply and star-connected riser

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module with HQ camera |
| 352000 | SFERA pushbutton module |
| 345000 | LINEA 5000 audio video display module |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346020 | Additional power supply |
| 346210 | Actuator |
| 346841 | Floor shunt |
| PEP1 - PEP2 | Main Entrance Panel |
| PS1 - PS2 | Door lock release pushbutton |
| S1 - S2 | Electrical door lock  18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
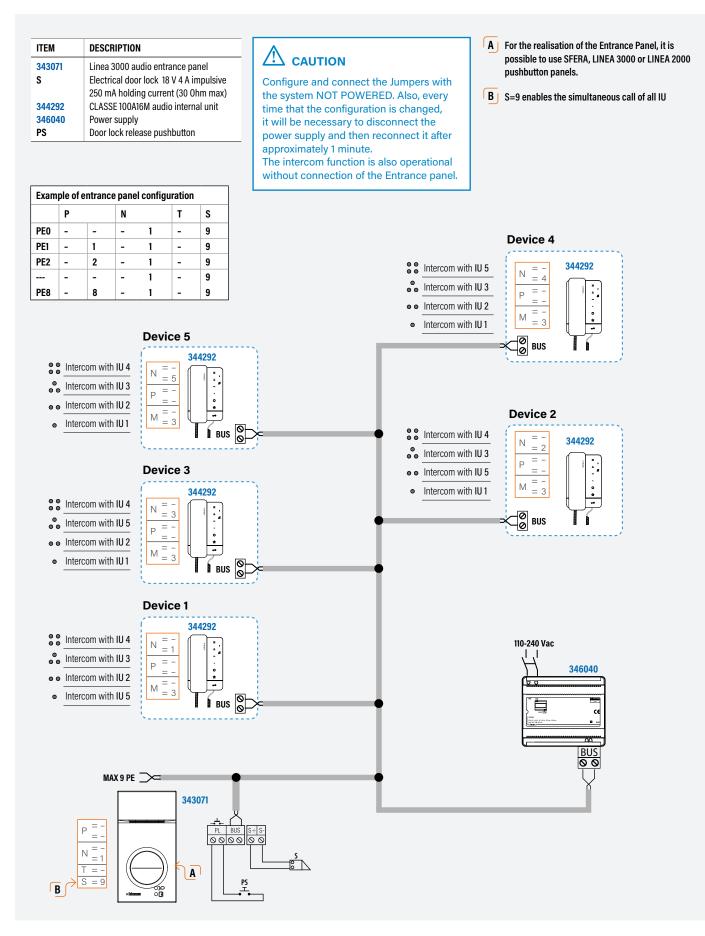
**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**C** Move to ON the microswitch on the back of the audio or video internal unit that terminates the line.



(*) Remove the configurator from the J2 socket to enable the additional power supply to the entrance panel

# One-family system with 1 video Entrance Panel and 5 Internal Units in parallel and intercommunicating
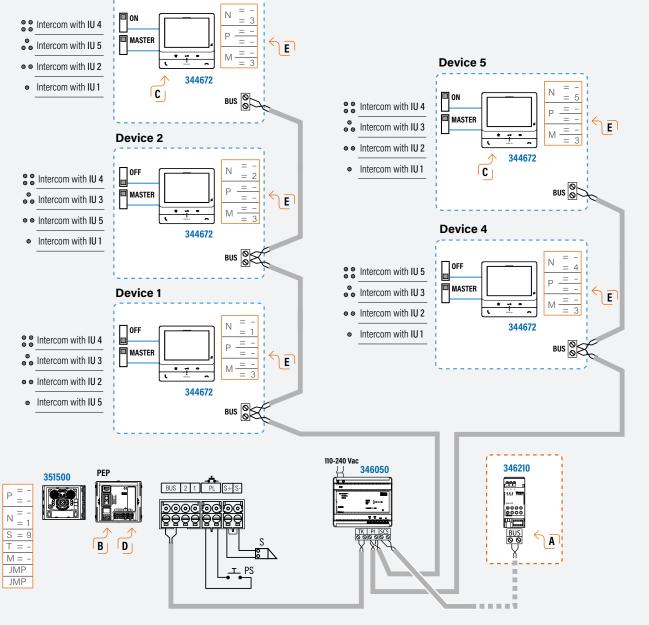
| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module with high quality camera |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure the IU from N = 1
Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
The intercom function is also operational without connection of the Entrance panel.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.

**B** For the realisation of the Entrance Panel, it is possible to use LINEA 5000, SFERA, LINEA 3000 or LINEA 2000 pushbutton panels. For further information, see the "ENTRANCE PANEL VARIANTS" section.

**C** Move to ON the microswitch of the system audio or video internal unit that terminates the line.

**D** Allow for a "9" configurator to be connected to S on the speaker module for making the general call.

**E** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.



**Device 3**
Intercom with IU 4
Intercom with IU 5
Intercom with IU 2
Intercom with IU 1
ON / MASTER
344672
N = 3, P = –, M = 3

**Device 2**
Intercom with IU 4
Intercom with IU 3
Intercom with IU 5
Intercom with IU 1
OFF / MASTER
344672
N = 2, P = –, M = 3

**Device 1**
Intercom with IU 4
Intercom with IU 3
Intercom with IU 2
Intercom with IU 5
OFF / MASTER
344672
N = 1, P = –, M = 3

**Device 5**
Intercom with IU 4
Intercom with IU 3
Intercom with IU 2
Intercom with IU 1
ON / MASTER
344672
N = 5, P = –, M = 3

**Device 4**
Intercom with IU 5
Intercom with IU 3
Intercom with IU 2
Intercom with IU 1
OFF / MASTER
344672
N = 4, P = –, M = 3

**351500**
P = –, N = 1, S = 9, T = –, M = –, JMP, JMP

**PEP**

BUS 2 1 PL S+ S-

S
PS

110-240 Vac
**346050**
TK PI SCS

**346210**
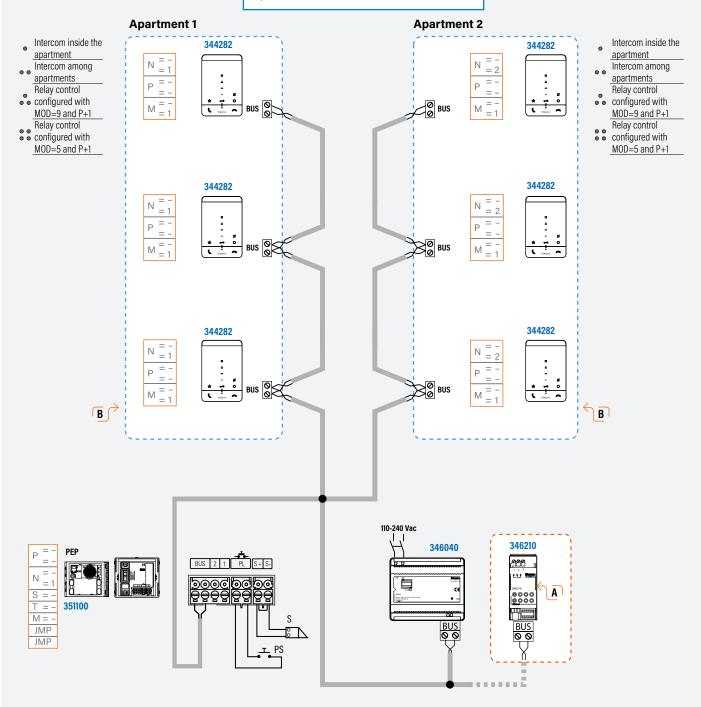BUS

BTICINO.COM    TECHNICAL GUIDE FOR 2 WIRES VIDEO DOOR ENTRY SYSTEM    125

# Two-family system, 1 EP and 3 IU for each apartment with "Internal intercom and among apartments" function
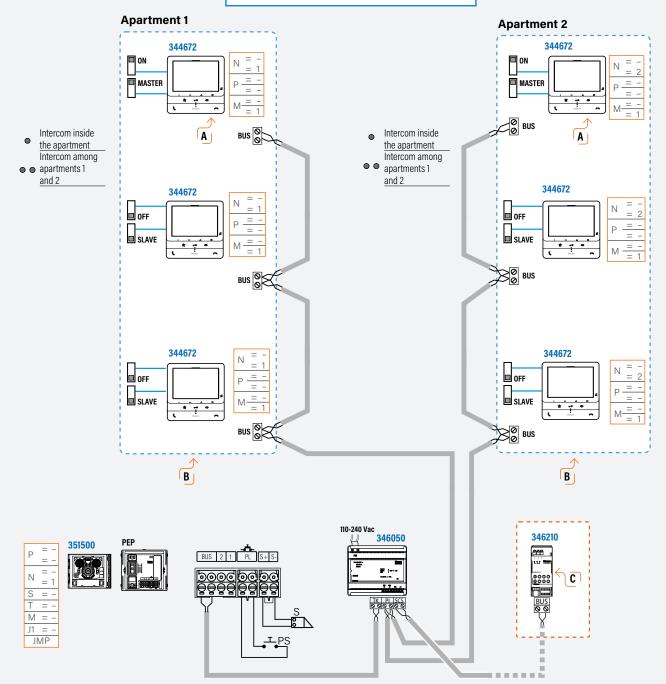
| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346210 | Staircase light actuator |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
It is possible to install up to 3 CLASSE 100 video internal units per apartment with MASTER-SLAVE function. Upon arrival of the call, the MASTER rings and switches on, while the SLAVE units ring. If the call is answered from a SLAVE, the MASTER switches off and the monitor of the SLAVE answering the call switches on.

**A** Move to ON the microswitch on the back of the audio or video internal unit that terminates the LINE.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**C** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations). For the connection and the configuration, please refer to the technical sheet of the device.

# Intercom in apartment without interface 346850

| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 352000 | SFERA pushbutton module |
| 344292 | CLASSE 100A16M internal unit |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

The apartment intercom conversation is interrupted when a call is made from the EP (even if to another apartment). The system only handles one intercom call at the time.



**Apartment 5**

**Apartment 3**

**Apartment 4**

351500
352000
352000
PEP

Must be configured with N ≥ 3

110-240 Vac  346050

346210 Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations). For the connection and the configuration, please refer to the technical sheet of the device.

# Multifamily system with 1 main video EP, 2 risers and max. 5 intercom among apartments
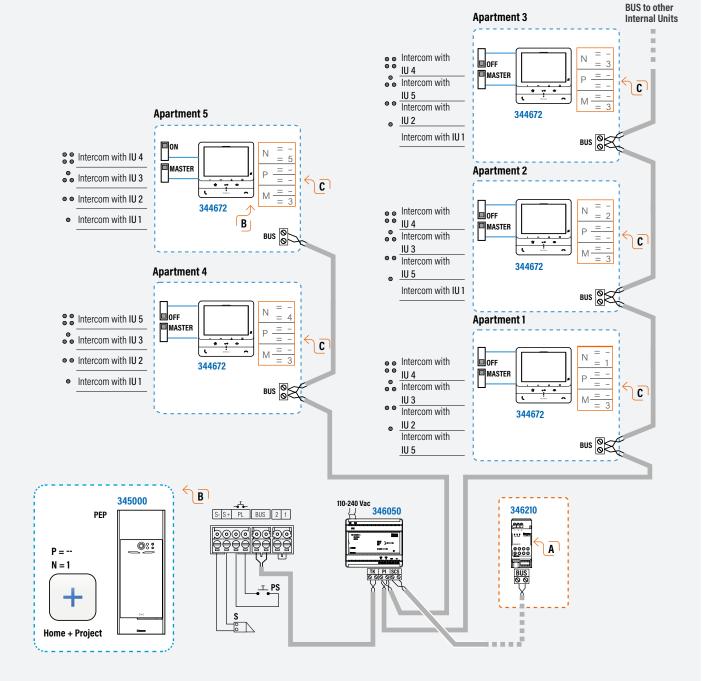
| ITEM | DESCRIPTION |
|------|-------------|
| 345000 | LINEA 5000 audio video display module |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346210 | Actuator |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
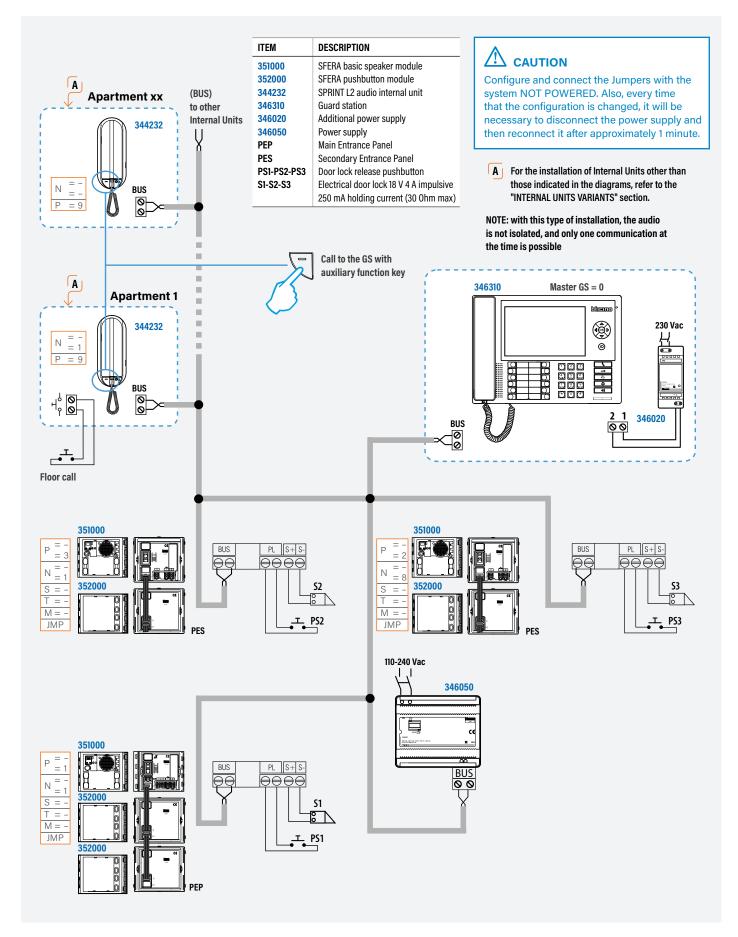Calls from the entrance panels take priority and stop the intercom call.

**A** Optional actuator for the control of additional functions (e.g. staircase lights, additional door locks, various activations).
For the connection and the configuration, please refer to the technical sheet of the device.
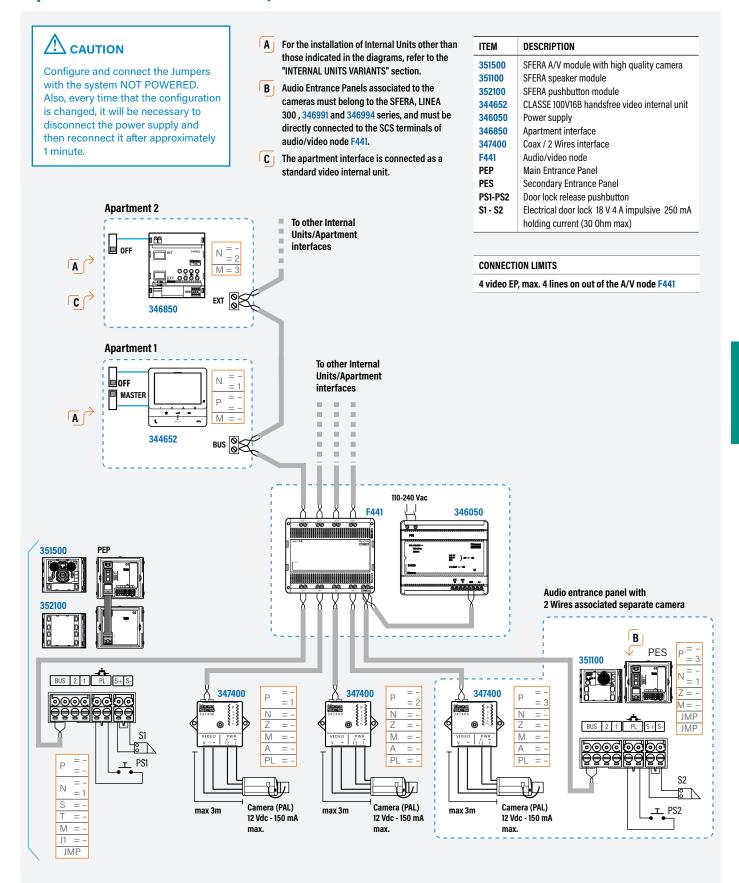
**B** Move to ON the microswitch on the back of the audio or video internal unit that terminates each apartment line.

**C** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.
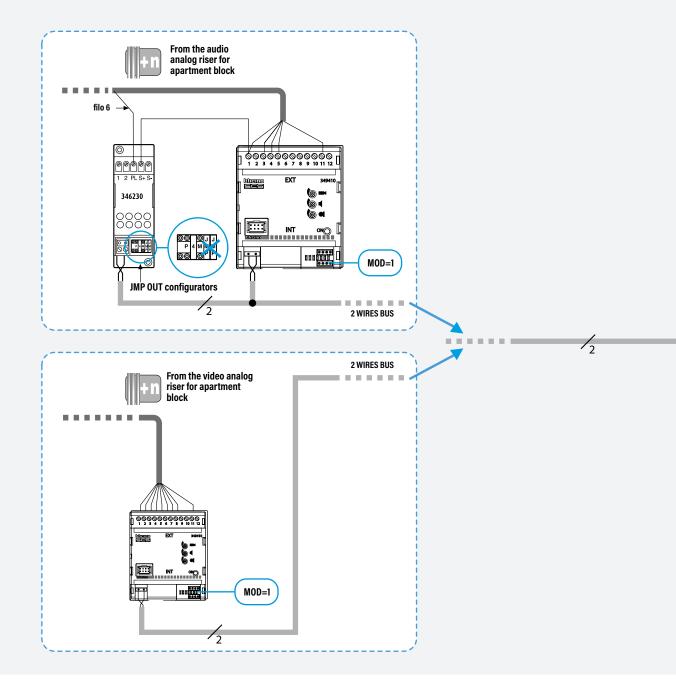
# Multifamily system with 2 EP (1 with separate camera, 2 additional cameras and riser with apartment interface)

⚠ **CAUTION**

Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
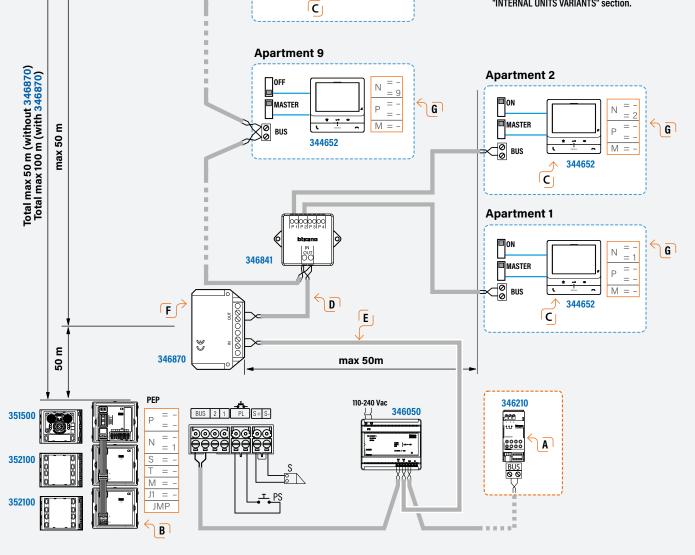
**A** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**B** Audio Entrance Panels associated to the cameras must belong to the SFERA, LINEA 300 , 346991 and 346994 series, and must be directly connected to the SCS terminals of audio/video node F441.

**C** The apartment interface is connected as a standard video internal unit.

| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 351100 | SFERA speaker module |
| 352100 | SFERA pushbutton module |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346850 | Apartment interface |
| 347400 | Coax / 2 Wires interface |
| F441 | Audio/video node |
| PEP | Main Entrance Panel |
| PES | Secondary Entrance Panel |
| PS1-PS2 | Door lock release pushbutton |
| S1 - S2 | Electrical door lock  18 V 4 A impulsive  250 mA holding current (30 Ohm max) |

**CONNECTION LIMITS**

4 video EP, max. 4 lines on out of the A/V node F441

**Apartment 2**

OFF — INT — 346850
N = – = 2
M = 3
A
C
EXT

To other Internal Units/Apartment interfaces

**Apartment 1**

OFF — MASTER — 344652
N = – = 1
P = –
M = –
A
BUS

To other Internal Units/Apartment interfaces

351500
PEP
352100

110-240 Vac
F441      346050

**Audio entrance panel with 2 Wires associated separate camera**

B
PES
351100
P = 3
N = 1
Z = –
M = –
JMP
JMP
BUS 2 1 PL S+ S-
S2
PS2

BUS 2 1 PL S+ S-
S1
PS1
P = –
N = 1
S = –
T = –
M = –
J1 = –
JMP

347400
VIDEO / PWR
P = 1
N = –
Z = –
M = –
A = –
PL = –
max 3m
Camera (PAL) 12 Vdc - 150 mA max.

347400
VIDEO / PWR
P = 2
N = –
Z = –
M = –
A = –
PL = –
max 3m
Camera (PAL) 12 Vdc - 150 mA max.

347400
VIDEO / PWR
P = 3
N = –
Z = –
M = –
A = –
PL = –
max 3m
Camera (PAL) 12 Vdc - 150 mA max.

# System in apartment with 2 Wires analog interface 349410

| ITEM | DESCRIPTION |
|------|-------------|
| 349410 | Analog/2 Wires interface |
| 351500 | SFERA A/V module with high quality camera |
| 344672 | CLASSE 100V16E video internal unit |
| F441 | Audio video node |
| 346050 | Power supply |
| 347400 | Coax / 2 Wires interface |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18V 4A impulsive |
| | 250mA holding current (30ohm max.) |
| PEA | Apartment entrance panel |

**A** Connection for systems with direct lock control

| CLAMPS 349410 | VIDEO | AUDIO |
|---------------|-------|-------|
| 1 | 1 | 1 and S+ (of the actuator) |
| 2 | 2 | – |
| 3 | 3 | 3 |
| 4 | 4 | 4 |
| 5 | 5 | 5 |
| 6 | 6 | A |
| 7 | 7 | – |
| 8 | 8 | – |
| 9 | – | – |
| 10 | – | – |
| 11 | 14 | 14 (optional) |
| 12 | – | – |



**From the audio analog riser for apartment block**

filo 6

346230

1 2 PL S+ S-

**JMP OUT configurators**

P 4 M J J

EXT 349410

INT ON

MOD=1

2

2 WIRES BUS

2

**From the video analog riser for apartment block**

2 WIRES BUS

EXT 349410

INT ON

MOD=1

2

⚠ **CAUTION**
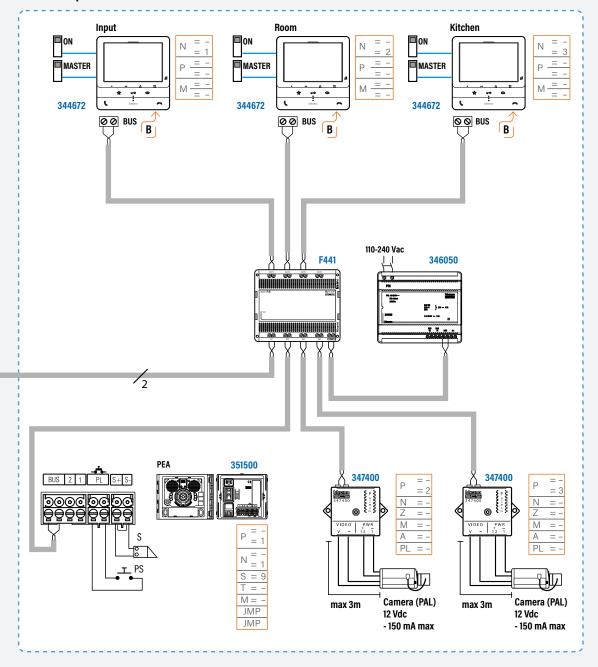
No analog side addressed actuations are possible.
For wiring and system limit purposes, interface 349410 must be considered the same as a 2 Wires EP.
Configure and connect the Jumpers with the system NOT POWERED. Also, every time that the configuration is changed, it will be necessary to disconnect the power supply and then reconnect it after approximately 1 minute.
In case of audio riser, the video IU activates without displaying an image.
Classe 300EOS is NOT compatible with this type of system.

**B** Move to ON the microswitch on the back of the last audio or video internal unit of the line or riser.

**Private apartment**

# System in apartment with apartment interface
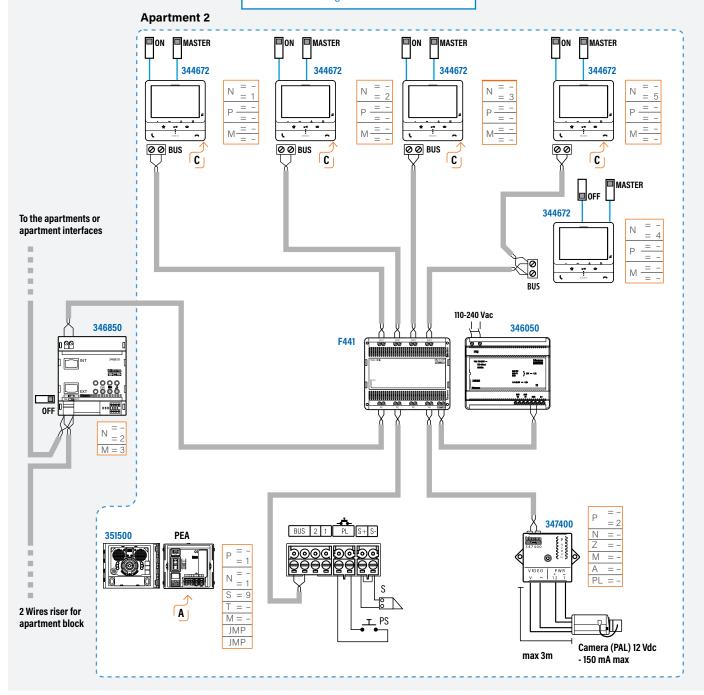
| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346850 | Apartment interface |
| F441 | Audio/video node |
| 347400 | Coax / 2 Wires interface |
| PEA | Apartment Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**

Configure the apartment Entrance Panels from P = 1.
Configure the apartment IU from N = 1
As for one-family systems, all internal units must be configured as MASTER. The internal unit configured with N= 1 rings and switches on, while the others ring. If the call is answered from an internal unit with the monitor switched off, the monitor of the internal unit configured with N = 1 switches off and the monitor of the internal unit being used for answering switches on.

**A** For the realisation of the Entrance Panel, it is possible to use SFERA, LINEA 3000 or LINEA 2000 pushbutton panels.
For further information, see the "ENTRANCE PANEL VARIANTS" section.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**C** Move to ON the microswitch of the internal unit that terminates the line.
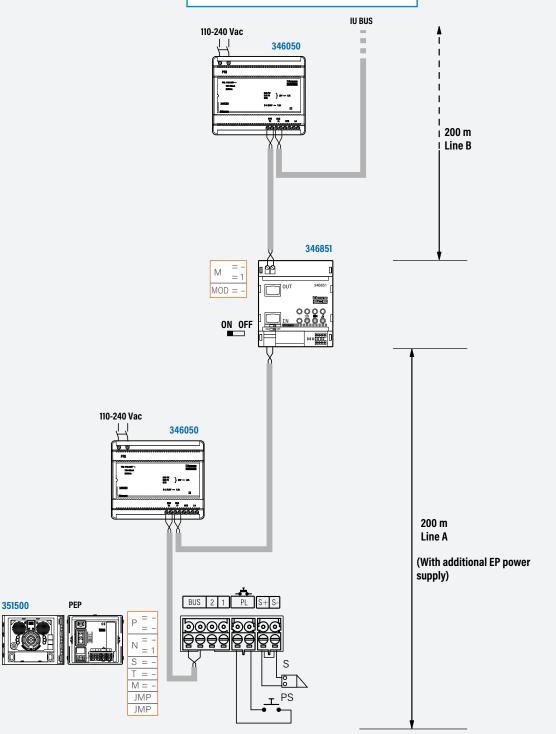
# System line expansion with interface 346851
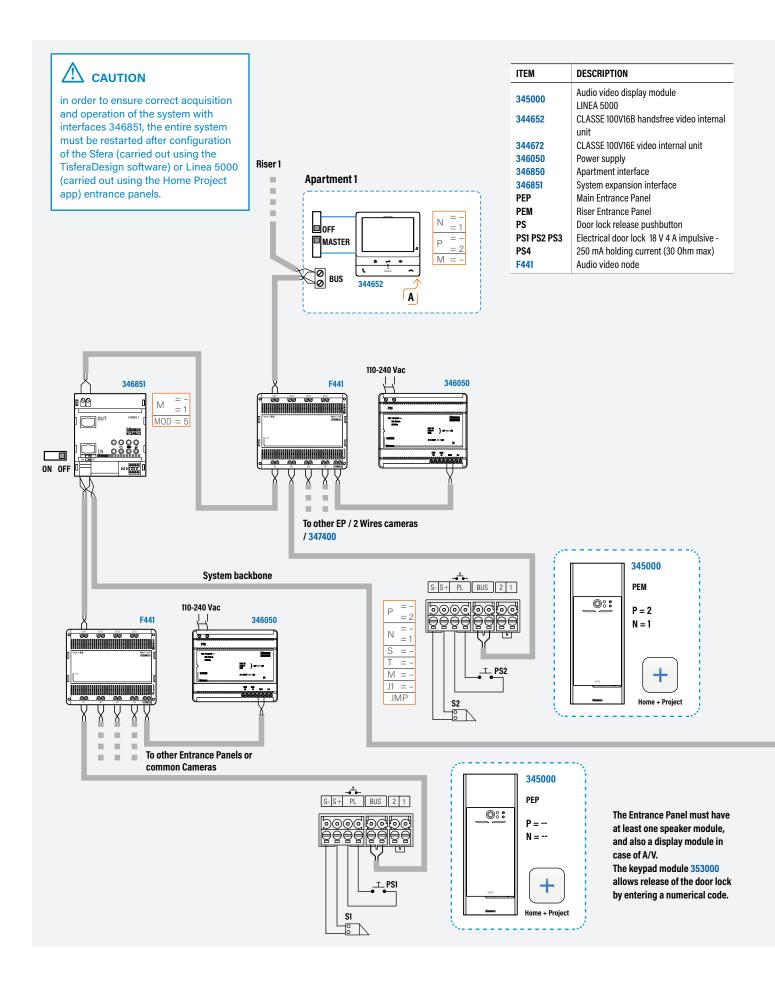
| ITEM | DESCRIPTION |
|---|---|
| 351500 | SFERA A/V module with high quality camera |
| 346050 | Power supply |
| 346851 | System expansion interface |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton |
| S | Electrical door lock 18 V 4 A impulsive |
| | 250 mA holding current (30 Ohm max) |

⚠ **CAUTION**
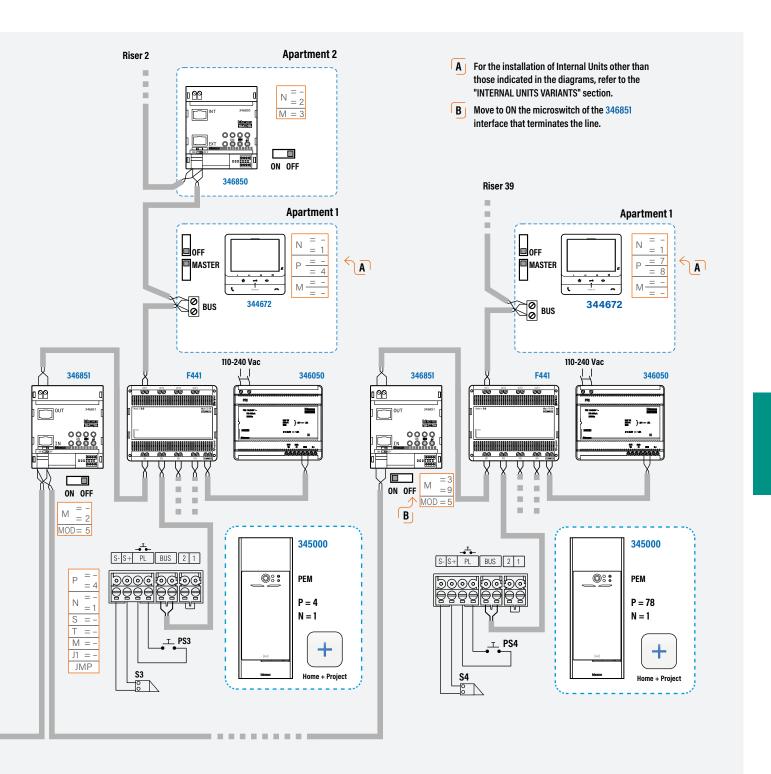
After the system expansion module 346851 there are 200 m of line B available (interface 346851 - Furthest internal unit).
It is possible to install up to a maximum of 3 interfaces 346850 and 346851 in cascade, only 2 of which regenerate the signal.

# Multifamily system with 39 risers with independent audio



⚠ **CAUTION**

in order to ensure correct acquisition and operation of the system with interfaces 346851, the entire system must be restarted after configuration of the Sfera (carried out using the TisferaDesign software) or Linea 5000 (carried out using the Home Project app) entrance panels.

| ITEM | DESCRIPTION |
|---|---|
| 345000 | Audio video display module LINEA 5000 |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 344672 | CLASSE 100V16E video internal unit |
| 346050 | Power supply |
| 346850 | Apartment interface |
| 346851 | System expansion interface |
| PEP | Main Entrance Panel |
| PEM | Riser Entrance Panel |
| PS | Door lock release pushbutton |
| PS1 PS2 PS3 PS4 | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |
| F441 | Audio video node |

**Riser 1**

**Apartment 1**

OFF
MASTER
BUS
**344652**

| N | = –<br>= 1 |
|---|---|
| P | = –<br>= 2 |
| M | = – |

A

**346851**

| M | = –<br>= 1 |
|---|---|
| MOD | = 5 |

OUT    346851

IN

ON  OFF

**F441**

110-240 Vac

**346050**

**To other EP / 2 Wires cameras / 347400**

**System backbone**

**F441**

110-240 Vac    **346050**

**To other Entrance Panels or common Cameras**

| P | = –<br>= 2 |
|---|---|
| N | = –<br>= 1 |
| S | = – |
| T | = – |
| M | = – |
| J1 | = – |
| JMP | |

S- | S+ | PL | BUS | 2 | 1

PS2

S2

**345000**

**PEM**

**P = 2**
**N = 1**

+

**Home + Project**

**345000**

**PEP**

**P = --**
**N = --**

+

**Home + Project**

S- | S+ | PL | BUS | 2 | 1

PS1

S1

The Entrance Panel must have at least one speaker module, and also a display module in case of A/V.
The keypad module **353000** allows release of the door lock by entering a numerical code.

**Riser 2**

**Apartment 2**

$N \begin{array}{l}= -\\= 2\end{array}$
$M = 3$

INT  346850

EXT

**ON  OFF**

**346850**

**Apartment 1**

OFF

MASTER

$N \begin{array}{l}= -\\= 1\end{array}$
$P \begin{array}{l}= -\\= 4\end{array}$
$M \begin{array}{l}= -\\= -\end{array}$

BUS

**344672**

A

---

A  For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

B  Move to ON the microswitch of the 346851 interface that terminates the line.

**Riser 39**

**Apartment 1**

OFF

MASTER

$N \begin{array}{l}= -\\= 1\end{array}$
$P \begin{array}{l}= 7\\= 8\end{array}$
$M \begin{array}{l}= -\\= -\end{array}$

BUS

**344672**

A

---

**110-240 Vac**

**346851**

OUT  346851

IN

**ON  OFF**

$M \begin{array}{l}= -\\= 2\end{array}$
$MOD = 5$

**F441**

**346050**

PRI

---

$P \begin{array}{l}= -\\= 4\end{array}$
$N \begin{array}{l}= -\\= 1\end{array}$
$S = -$
$T = -$
$M = -$
$J1 = -$
$JMP$

| S- | S+ | PL | BUS | 2 | 1 |
|----|----|----|-----|---|---|

PS3

S3

**345000**

PEM

**P = 4**
**N = 1**

+

**Home + Project**

---

**110-240 Vac**

**346851**

OUT  346851

IN

**ON  OFF**

$M \begin{array}{l}= 3\\= 9\end{array}$
$MOD = 5$

B

**F441**

**346050**

PRI

| S- | S+ | PL | BUS | 2 | 1 |
|----|----|----|-----|---|---|

PS4

S4

**345000**

PEM

**P = 78**
**N = 1**

+

**Home + Project**

---

⚠ **CAUTION**

For the main Entrance Panel, riser Internal Units will have an address equal to (the riser number x100) + no. of the Internal Unit.
E.g. IU 15 of riser 9; address for the main EP 9 x 100 + 15 = 915.
Configure the Internal Units from N = 1
It is possible to install up to a maximum of 3 interfaces 346850 and 346851 in cascade, only 2 of which regenerate the signal.

# One-family system with max 16 cameras or Entrance Panels

| ITEM | DESCRIPTION |
|------|-------------|
| 3499 | Line terminator |
| 344672 | CLASSE 100V16E video internal unit |
| F441 | Audio/video node |
| 346050 | Power supply |
| 343081 | Linea 3000 EP |
| 347400 | COAX / 2 Wires interface |
| PEP | Main Entrance Panel |
| PS | Door lock release pushbutton (optional) |
| S | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |

**Device 1**

**To other Internal Units/Apartment interfaces**

**To other Internal Units/Apartment interfaces**

344672

BUS

B

N = –
= 1
P = –
= –
M = –

110-240 Vac

F441    346050

F441

C

3499

P = –
= –
N = –
= 1
T = –
S = 9

PEP    343081

PL    BUS    S+ S–

PS

S

347400

347400

347400

VIDEO    PWR
V   –    1 2   1

VIDEO    PWR
V   –    1 2   1

VIDEO    PWR
V   –    1 2   1

P = –
= 1
N = –
Z = –
M = –
A = –
PL = –

P = –
= 2
N = –
Z = –
M = –
A = –
PL = –

P = –
= 3
N = –
Z = –
M = –
A = –
PL = –

A

**max 3m**    TLC.1

**max 3m**    TLC.2

**max 3m**    TLC.3

⚠ **CAUTION**

By using the nodes in cascade, the distances between video source and the furthest internal unit are halved (max 100 with cable 336904/336905).

Use only (PAL) cameras with power supply 12 Vdc - 150 mA max.

**A** For the realisation of the Entrance Panel, it is possible to use all the 2 Wires pushbutton panels.

**B** It is possible to install all the video internal units of the 2 Wires range.

**C** Only use one output per node and allow for a terminator **3499** connected to the SCS clamp



**F441**　　　**F441**　　　**F441**

**C**　　**C**　　**C**

**3499**　　**3499**　　**3499**

To other Entrance Panels or other common cameras (configured with P= 8 – P= 11)

To other Entrance Panels or other common cameras (configured with P= 12 – P= 15)

**347400**　**347400**　**347400**　**347400**

| P = – = 4 | | P = – = 5 | | P = – = 6 | | P = – = 7 |

N = –　Z = –　M = –　A = –　PL = –

VIDEO / PWR

max 3m　CAMERA 4　max 3m　CAMERA 5　max 3m　CAMERA 6　max 3m　CAMERA 7

# System with module 346851 for Entrance Panel line doubling; max. 39 independent risers and apartment interfaces

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module with high quality camera |
| 352500 | SFERA display module |
| 345000 | Audio video display module LINEA 5000 |
| 344652 | CLASSE 100V16B handsfree video internal unit |
| 346050 | Power supply |
| 346850 | Apartment interface |
| 346851 | System expansion interface |
| PEP | Main Entrance Panel |
| PS1-PS2-PS3 | Door lock release pushbutton |
| S1-S2-S3 | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |
| PEM | Riser Entrance Panel |
| F441 | Audio video node |

⚠ **CAUTION**

In order to ensure correct acquisition and operation of the system with interfaces 346851, the entire system must be restarted after configuration of the Sfera (carried out using the TisferaDesign software) or Linea 5000 (carried out using the Home Project app) entrance panels.

**Riser 1**

**Apartment 1**

**344652**

OFF
MASTER

BUS

| N | = - |
|---|-----|
|   | = 1 |
| P | = - |
|   | = 2 |
| M | = - |

B

**110-240 Vac**

**F441**     **346050**

**346851**

| M | = - |
|---|-----|
|   | = 1 |
| MOD | = 5 |

OUT

346851

IN

ON    OFF

**351500**     **PEM**

**352500**

| P | = - |
|---|-----|
|   | = 2 |
| N | = - |
| S | = - |
| T | = - |
| M | = - |
| JMP | |
| JMP | |

A

| BUS | 2 | 1 | PL | S+ | S- |
|-----|---|---|----|----|----|

S2

PS2

**346851**

| M | = - |
|---|-----|
|   | = 1 |
| MOD | = 2 |

OUT

346851

IN

ON

A

**F441**

**110-240 Vac**     **346050**

**345000**

PEP

P = --
N = --

+

Home + Project

| S- | S+ | PL | BUS | 2 | 1 |
|----|----|----|----|---|---|

PS1

S1

**110-240 Vac**     **346050**

**Backbone**

## CAUTION

For the main Entrance Panel, riser Internal Units will have an address equal to (the riser number x 100) + no. of the Internal Unit.
E.g. IU 15 of riser 9; address for the main EP 9 x 100 + 15 = 915.

Configure the riser Internal Units from N = 1 It is possible to install up to a maximum of 3 interfaces 346850 and 346851 in cascade, only 2 of which regenerate the signal.

**A** For the realisation of the riser Entrance Panel, it is possible to use LINEA 5000, SFERA or LINEA 300 pushbutton panels. For further information, see the "ENTRANCE PANEL VARIANTS" section.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**Apartment 1**

Riser 2

OFF
MASTER

N = –
= 1
P = –
= 4
M = –

344652

BUS

**Apartment 2**

346850

IN T

ON OFF

EXT

N = –
= 2
M = 3

110-240 Vac

F441        346050

PRI

**A**

346851

M = –
= 2
MOD = 5

OUT

IN

ON OFF

345000

PEM
P = 4
N = 1

Home + Project

S- S+ | PL | BUS | 2 1

PS3

To other risers

S3

# System with max 39 independent risers and riser extension (100 video IU)

| ITEM | DESCRIPTION |
|------|-------------|
| 345000 | Audio video display module LINEA 5000 |
| 344652 | CLASSE 100 V16B handsfree video internal unit |
| 346050 | Power supply |
| 346851 | System expansion module |
| PEP | Main Entrance Panel |
| PEM | Riser Entrance Panel |
| F441 | Audio video node |
| S1 - S2 - S3 | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |
| PS1-PS2-PS3 | Door lock release pushbutton |

**Riser 1**

**Apartment 51**

OFF
MASTER

N = 5
= 1
P = −
= 2
M = −

344652

B

Max 50 IU subdivided into 4 node outputs

M = −
= 1
MOD = −

ON

346851

OUT
346851
IN

F441

346050

110-240 Vac

BUS

× × ×

**Apartment 1**

OFF
MASTER

N = −
= 1
P = −
= 2
M = −

344652

B

Max 50 IU subdivided into 4 node outputs

F441

346050

110-240Vac

M = −
= 1
MOD = 5

OFF

346851

OUT
346851
IN

A

S- S+ PL BUS 2 1

PS2

S2

345000

PEM

P = 2
N = 1

+

Home + Project

A

345000

PEP

P = --
N = --

+

Home + Project

S- S+ PL BUS 2 1

PS1

S1

110-240 Vac

346050

**Backbone**

⚠ **CAUTION**

For the main Entrance Panel, riser Internal Units will have an address equal to (the riser number x 100) + no. of the Internal Unit.
E.g. IU 15 of riser 9; address for the main EP $9 \times 100 + 15 = 915$.
Configure the riser Internal Units from $N = 1$
It is possible to install up to a maximum of 3 interfaces 346850 and 346851 in cascade, only 2 of which regenerate the signal.

A — The Entrance Panel must be created using digital call LINEA 5000 or SFERA modules.

B — For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**Apartment 51**

OFF
MASTER

344652
BUS
B

| N | = 5 |
| | = 1 |
| P | = – |
| | = 4 |
| M | = – |

Max 50 IU subdivided into 4 node outputs

346851

| M | = – |
| | = 2 |
| MOD | = – |

OUT 346851
IN
ON

F441

110-240 Vac
346050

**Apartment 1**

OFF
MASTER

344652
BUS
B

| N | = – |
| | = 1 |
| P | = – |
| | = 4 |
| M | = – |

Max 50 IU subdivided into 4 node outputs

F441

110-240 Vac
346050

346851

| M | = – |
| | = 2 |
| MOD | = 5 |

OUT 346851
IN
OFF

S- S+ PL BUS 2 1
PS3
S3

To other risers

345000

PEM
P = 4
N = 1

+

Home + Project

# Internal Units expansion in apartment - (Example up to 10 IU)

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module with high quality camera |
| 346050 | Power supply |
| 346841 | Floor shunt |
| 346850 | Apartment interface |
| 344672 | CLASSE 100V16E video internal unit |
| F441 | Audio video node |
| S | Electrical door lock 18 V 4 A impulsive - 250 mA holding current (30 Ohm max) |
| PEA | Apartment Entrance Panel |
| PS | Door lock release pushbutton |
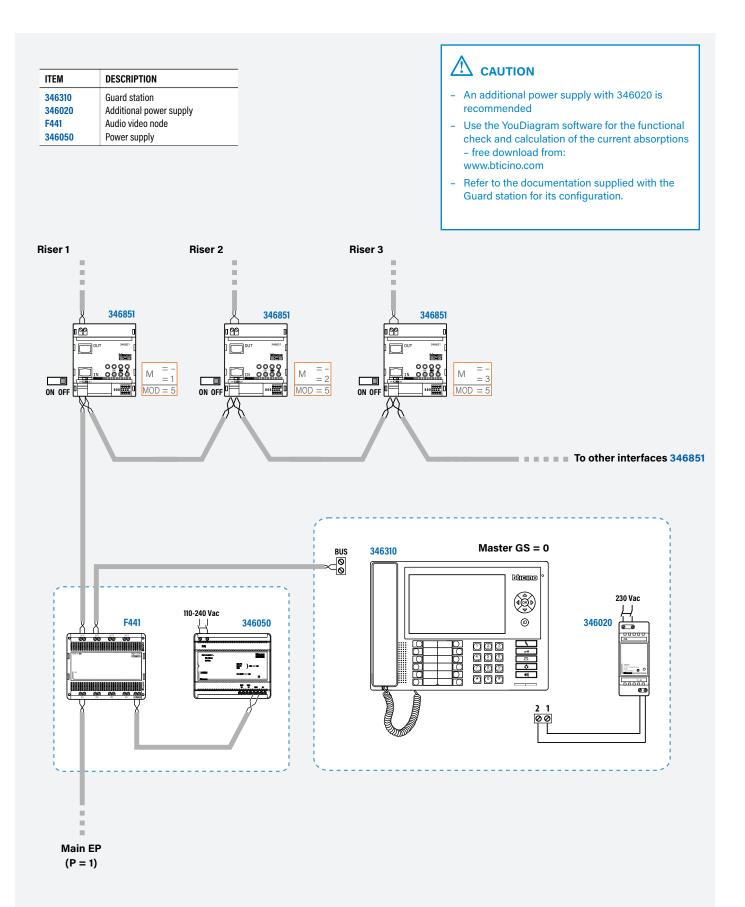
Configuring the IU as indicated, this will ensure the intercom function among all units; when a call is received from the EP, all IU ring, and only the IU configured with N =1 switches on. For functions other than the ones specified above, contact your local technical-commercial representative or the BTicino technical support service.



**Apartment 16**

⚠️ **CAUTION**

Configure the apartment Entrance Panels from P = 1

All the IU must be MASTER.

**A** For the realisation of the Entrance Panel, it is possible to use SFERA, LINEA 3000 or LINEA 2000 pushbutton panels. For further information, see the "ENTRANCE PANEL VARIANTS" section.

**B** For the installation of Internal Units other than those indicated in the diagrams, refer to the "INTERNAL UNITS VARIANTS" section.

**C** Move to ON the microswitch on the back of the internal unit that terminates the line.



B C

N = –
= 9
P = –
= 1
M = –
= –

ON
MASTER

344672

B C

N = 1
= 0
P = –
= 1
M = –
= –

ON
MASTER

344672

B C

N = –
= 8
P = –
= 1
M = –
= –

ON
MASTER

344672

346841
P1 P2 P3 P4
IN
OUT

B C

N = –
= 7
P = –
= 1
M = –
= –

ON
MASTER

344672

B C

N = –
= 6
P = –
= 1
M = –
= –

ON
MASTER

344672

M = –
= 1
MOD = –

OUT 346851

IN

ON

346851

F441

110-240 Vac

346050

# System with 1 guard station and independent risers

| ITEM | DESCRIPTION |
|------|-------------|
| 346310 | Guard station |
| 346020 | Additional power supply |
| F441 | Audio video node |
| 346050 | Power supply |

⚠ **CAUTION**

– An additional power supply with 346020 is recommended

– Use the YouDiagram software for the functional check and calculation of the current absorptions – free download from: www.bticino.com

– Refer to the documentation supplied with the Guard station for its configuration.

**Riser 1**

**346851**

OUT

346851

IN

ON OFF

M = -
= 1
MOD = 5

**Riser 2**

**346851**

OUT

346851

IN

ON OFF

M = -
= 2
MOD = 5

**Riser 3**

**346851**

OUT

346851

IN

ON OFF

M = -
= 3
MOD = 5

**To other interfaces 346851**

BUS

**346310**

**Master GS = 0**

230 Vac

**346020**

2  1

**F441**

110-240 Vac

**346050**

**Main EP
(P = 1)**

# System with several guard stations and independent risers

| ITEM | DESCRIPTION |
|---|---|
| 346310 | Guard station |
| 346020 | Additional power supply |
| F441 | Audio video node |
| 346050 | Power supply |

### ⚠ CAUTION

– An additional power supply with 346020 is recommended
– Max. 3 GS which can be star connected with audio video node.  Up to a max. of 16 GS can be connected in IN/OUT connection or with floor shunt 346841.
– Refer to the documentation supplied with the Guard station for its configuration

# Hierarchical system with 1 backbone GS and 1 GS for each independent riser

| ITEM | DESCRIPTION |
|------|-------------|
| 346310 | Guard station |
| 346020 | Additional power supply |
| F441 | Audio video node |
| 346851 | System expansion interface |
| 346050 | Power supply |

⚠ **CAUTION**

– An additional power supply with 346020 is recommended

– Refer to the documentation supplied with the product for the Guard station configuration and its operation

– The backbone GS do not manage the riser EP video signal

– A maximum of 16 GS can be installed



346310    **Riser GS = 1**    230 Vac
346020

BUS    2  1

To the riser IU 1

346851    F441    110-240 Vac    346050

OUT    346851

IN

ON OFF

M = –
= 1
MOD = 5

**Riser EP**

346310    **Riser GS = 2**    230 Vac
346020

BUS    2  1

To the riser IU 2

346851    F441    110-240 Vac    346050

OUT    346851

IN

ON OFF

M = –
= 2
MOD = 5

**Riser EP**

110-240 Vac    346050

F441

**Main EP**
**(P = 1)**

346310    **Backbone GS**    230 Vac
346020

BUS    2  1

346310  **Riser GS = 15**  230 Vac

346020

BUS  2  1

**To the riser IU 15**

346851  110-240 Vac  346050

F441

OUT  346851

IN

ON OFF

M = 1
= 5
MOD = 5

**Riser EP**

# Hierarchical system with backbone GS, riser GS and Slave GS on the backbone and on the riser

| ITEM | DESCRIPTION |
|------|-------------|
| 346310 | Guard station |
| 346020 | Additional power supply |
| F441 | Audio video node |
| 346851 | System expansion interface |
| 346050 | Power supply |

⚠ **CAUTION**

– An additional power supply with 346020 is recommended
– Refer to the documentation supplied with the product for the Guard station configuration and its operation
– The backbone GS do not manage the riser EP video signal
– A maximum of 16 GS can be installed
– Use the YouDiagram software for the functional check and calculation of the current absorptions – free download from: www.bticino.com
– The slave GS follow the day/night settings of the associated GS

346310   Riser GS = 7   230 Vac

346310   Slave GS = 15   230 Vac

BUS   2   1   346020

BUS   2   1   346020

**To the riser IU 7**

346851

110-240 Vac   346050

F441

OUT   346851

IN

**ON OFF**

$M \begin{array}{l} = - \\ = 7 \end{array}$

MOD = 5

**Riser EP**

346310   Slave GS = 8   230 Vac

BUS   2   1   346020

# 2 wire/IP mixed system with guard station software

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module |
| 352500 | SFERA Display Module |
| 353000 | SFERA Keypad Module |
| 344672 | CLASSE 100 V16E video internal unit |
| 346300 | Guard station software |
| 346050 | Power supply |
| 346020 | Additional power supply |

| ITEM | DESCRIPTION |
|------|-------------|
| 346851 | System expansion module |
| 346850 | Apartment interface |
| F441 | Audio video node |
| 346841 | Floor shunt |
| 347400 | Coax -2 Wires interface |
| 346891 | 2 Wires – IP interface |
| 3499 | Line terminators |

**B**

**ON**

**MASTER**

344672

N = –
= 1

P = –
= –

M = –
= –

**BUS**

To the IU
(9-10)

**Internal units
11– 25**

**Riser** ⋮ ⋮ **Riser**

346851

IN   346851

OUT

110-240 Vac

346050

PRI

M = –
= 1
MOD = –

F441

346841

P1 P2 P3 P4

bticino

IN
OUT

346841

P1 P2 P3 P4

bticino

IN
OUT

3499

**Riser (internal units 1 - 10)**

**Software
Guard station
(346300)**

**LAN**

Configuration using the
SwitchBoardConfigurator software

The LAN network must be dedicated to
the IP video door entry service

Internal units
27 – 45

Riser

Apartment 26

344672

ON

MASTER

346850

| N | = 2 |
| | = 6 |
| M | = 3 |

INT 346850

EXT

110-240 Vac

346050

PRI

| N | = – |
| | = 1 |
| P | = – |
| | = – |
| M | = – |
| | = – |

BUS

**A** Device also configurable using MyHomeSuite, which can be downloaded from:
www.homesystems-legrandgroup.com

**B** For better image quality, it is recommended to use video internal units with display size <7 ".

**C** CAUTION: the interface is NOT compatible with Linea 5000 entrance panels and with Classe 300EOS internal units. ONLY use in systems with Classe 100 internal units.

C A

| M1 | = – |
| | = – |
| N1 | = – |
| | = 1 |
| M2 | = – |
| | = – |
| N2 | = 4 |
| | = 5 |
| C | = 1 |

346891

230 Vac  110-240 Vac

346020  346050

SPEED LINK POWER

ETH

LAN

F441

3499

BUS

351500

352500

353000

| P | = 1 |
| N | = – |
| | = – |
| S | = – |
| T | = – |
| M | = – |
| JMP | |
| JMP | |

BUS

351500

352500

353000

| P | = 2 |
| N | = – |
| | = – |
| S | = – |
| T | = – |
| M | = – |
| JMP | |
| JMP | |

347400

VIDEO    PWR
V   –    12  1

max 3 m

Tlc. (PAL) 12 Vdc - 150 mA max

| P | = – |
| | = 3 |
| N | = – |
| Z | = – |
| M | = – |
| A | = – |
| PL | = – |

# Residential complex with 2 wire/IP mixed system

**Apartment block 1**

**Riser 1**
**(internal units 101 – 199)**

| | |
|---|---|
| M1 | = –<br>= 1 |
| N1 | = –<br>= 1 |
| M2 | = –<br>= 1 |
| N2 | = 9<br>= 9 |
| C | = 1 |

**346851**

| M | = –<br>= 1 |
|---|---|
| MOD | = 5 |

INT    346850

EXT

ON    OFF

**B**  **A**

**346891**

SPEED
LINK   POWER

ETH   SCS   SCS   DC

**230 Vac**

**346020**

**110-240 Vac**

**346050**

PRI

BUS

**351500**

**PEM**

| P | = –<br>= 2 |
|---|---|
| N | = –<br>= – |
| S | = – |
| T | = – |
| M | = – |
| JMP | |
| JMP | |

**352500**

**353000**

**SWITCH HUB**

LAN

LAN

| | |
|---|---|
| M1 | = –<br>= OFF |
| N1 | = –<br>= – |
| M2 | = –<br>= – |
| N2 | = –<br>= – |
| C | = 1 |

**B**  **A**

**346891**

SPEED
LINK   POWER

ETH   SCS   SCS   DC

**230 Vac**

**346020**

**110-240 Vac**

**346050**

PRI

**PEP**

**351500**

| P | = –<br>= 1 |
|---|---|
| N | = –<br>= – |
| S | = – |
| T | = – |
| M | = – |
| JMP | |
| JMP | |

**352500**

**353000**

BUS

**Apartment block 2**

| ITEM | DESCRIPTION |
|------|-------------|
| 351500 | SFERA A/V module |
| 352500 | SFERA Display Module |
| 353000 | SFERA Keypad Module |
| 346050 | Power supply |
| PEP | Main Entrance Panel |
| PEM | Riser Entrance Panel |
| 346020 | Additional power supply |
| 346851 | System expansion interface |
| 346300 | Guard station software |
| 346891 | 2 Wires – IP interface |

Riser 2
(internal units 200 – 299)

Riser 3
(internal units 300 – 350)

346851

346851

M = –
= 2
MOD = 5

M = –
= 3
MOD = 5

ON OFF

ON OFF

**A** Device also configurable using MyHomeSuite, which can be downloaded from:
www.homesystems-legrandgroup.com

**B** CAUTION: the interface is NOT compatible with Linea 5000 entrance panels and with Classe 300EOS and Hometouch internal units. ONLY use in systems with Classe 100 internal units.

B A

230 Vac

110-240 Vac

346891

346050

M1 = –
= 2
N1 = –
= –
M2 = –
= 3
N2 = –
= 5
= 0
C = 1

346020

PEM

351500

P = –
= 3
N = –
= –
S = –
T = –
M = –
JMP
JMP

352500

353000

BUS

LAN

Guard Station Software
(346300)

Configuration using the SwitchBoardConfigurator software

The LAN network must be dedicated to the IP video door entry service

LAN
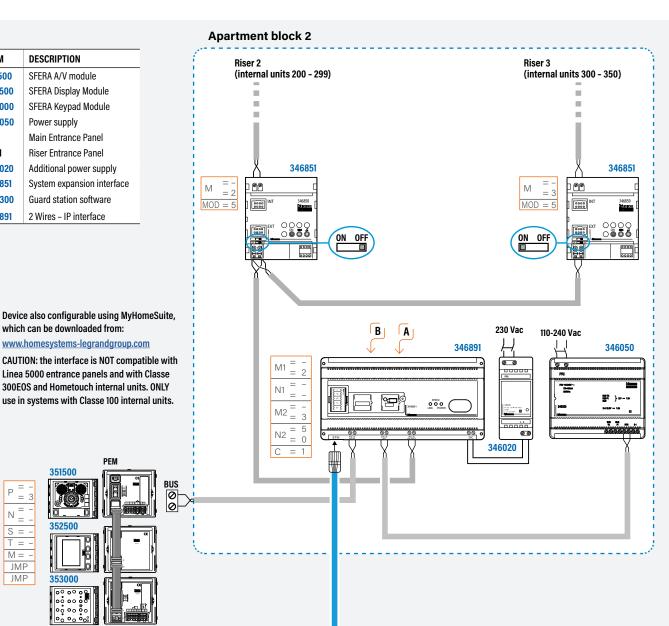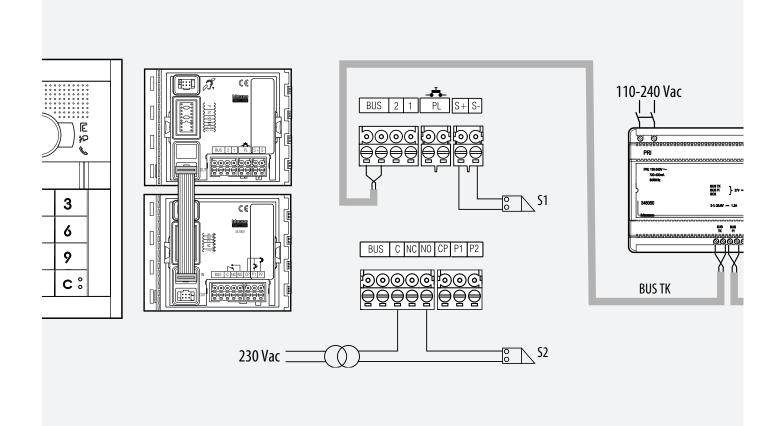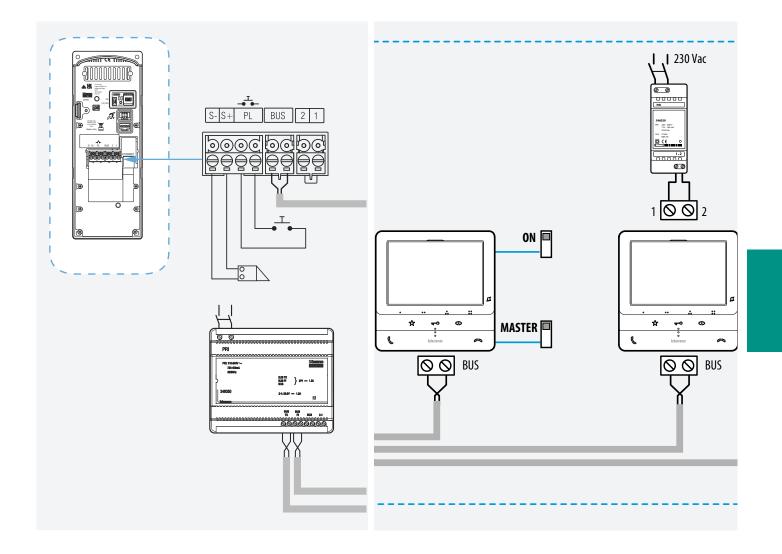
# WIRING DIAGRAM > **VARIANTS**

S- | S+ | PL | BUS | 2 | 1

230 Vac

PRI

346020

1 - 2

1 | 2

ON

MASTER

BUS

BUS

PRI

346050

# LINEA 5000 entrance panels

LINEA 5000 Smart entrance panels include, in a single device - item 345000 -, audio/video speaker module and touch screen display. The Linea 5000 range also includes 3 additional accessory modules, which can be installed in systems with at least 1 display module, item 345000.

⚠️ **CAUTION !  LINEA 5000  IS  NOT COMPATIBLE with the following interfaces:**
2 Wires / IP  (346891);
8 / 2 Wires    (346150);
Analog / 2 Wires (349410).

---
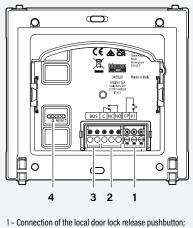
## KEYPAD ACCESSORY MODULE - 345500 AND 345510

It allows the activation of an electrical door lock by means of a code. It is fitted with relay contacts (C – NO - NC) and clamps for the connection of a local door release pushbutton and can be programmed using the Home + Project app. It has the visual notification of the access status and night backlighting. To be completed with an appropriate frame, it can be used stand-alone (there must be at least 1 module 345000 on the BUS) or combined with a display module. Can be installed in 1-module flush mounted box, in wall mounted box or with dedicated accessory for 3+1 composition.



345500

345510
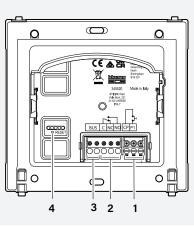
1 – Connection of the local door lock release pushbutton;
2 – Built-in relay contacts;
3 – 2 Wires SCS/BUS connection;
4 – Pushbutton to reset to the factory settings.

---

## RFID SMART ACCESS ACCESSORY MODULE - 345520

It allows the activation of an electrical door lock by means of a keycard or with Home + Security app via bluetooth.
It can be used stand-alone (there must be at least 1 345000 module on the BUS). It is fitted with relay contacts (C – NO - NC) and clamps for the connection of a local door release pushbutton and can be programmed using the Home + Project app. It has some LEDs for the visual notification of the access status. To be completed with an appropriate finishing frame, it can be installed in 1-module flush mounted box or in wall mounted box for surface installation.



345520
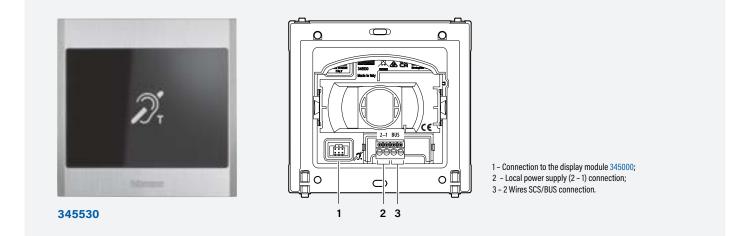
1 – Connection of the local door lock release pushbutton;
2 – Built-in relay contacts;
3 – 2 Wires SCS/BUS connection;
4 – Pushbutton to reset to the factory settings.
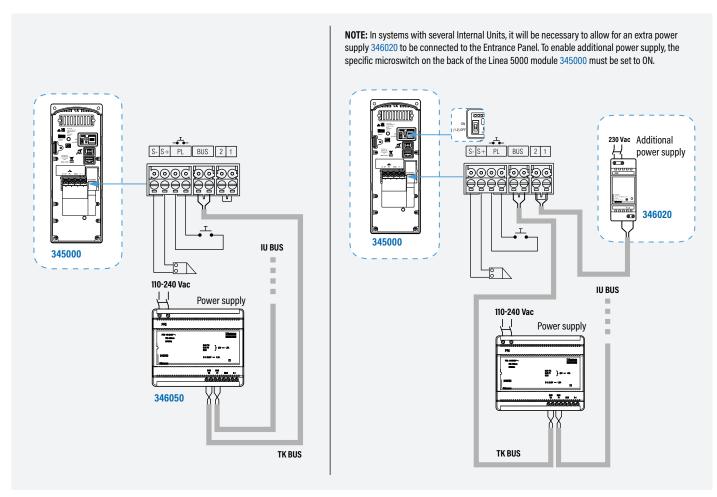
## INDUCTIVE LOOP ACCESSORY MODULE

It allows people wearing hearing aids fitted with (T) selector to use audio door entry communication.
It is connected to the display module using the multicable supplied. To be completed with the appropriate finishing frame.
Installation in 1-module flush mounted box or with the dedicated accessory for 3+1 composition.



**345530**

1 – Connection to the display module 345000;
2 – Local power supply (2 – 1) connection;
3 – 2 Wires SCS/BUS connection.

1    2    3

---

## CONNECTION OF LINEA 5000 ENTRANCE PANELS

**NOTE:** In systems with several Internal Units, it will be necessary to allow for an extra power supply 346020 to be connected to the Entrance Panel. To enable additional power supply, the specific microswitch on the back of the Linea 5000 module 345000 must be set to ON.



345000

| S- | S+ | PL | BUS | 2 | 1 |

IU BUS

**110-240 Vac**

Power supply

**346050**

TK BUS



345000

ON
(1-2) OFF

| S- | S+ | PL | BUS | 2 | 1 |

**230 Vac**  Additional power supply

**346020**

IU BUS

**110-240 Vac**

Power supply
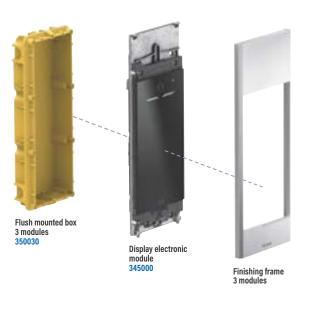
TK BUS

# LINEA 5000 entrance panels

## Installation examples for LINEA 5000 modules

### FLUSH MOUNTED INSTALLATION OF THE DISPLAY MODULE

**Flush mounted box
3 modules
350030**

**Display electronic
module
345000**

**Finishing frame
3 modules**

### WALL OR SURFACE MOUNTED INSTALLATION OF THE DISPLAY MODULE

**Wall mounted box
with rainshield
3 modules**

**Display electronic
module 345000**
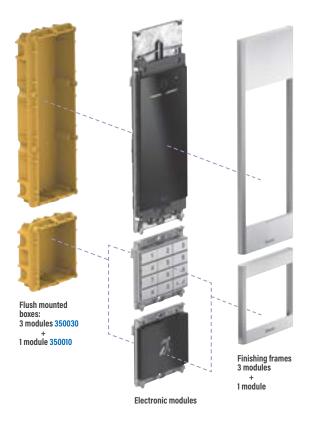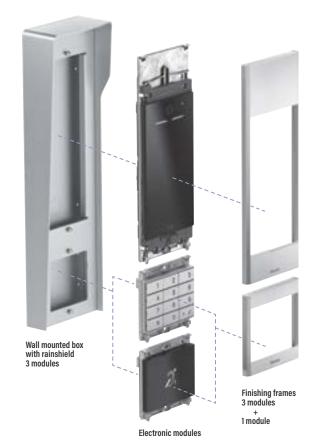
**Finishing frame
3 modules**

### FLUSH MOUNTED INSTALLATION (3 + 1) OF THE DISPLAY MODULE + ADDITIONAL MODULE

**Flush mounted
boxes:
3 modules 350030
+
1 module 350010**

**Electronic modules**

**Finishing frames
3 modules
+
1 module**

### WALL MOUNTED INSTALLATION (3 + 1) OF THE DISPLAY MODULE + ADDITIONAL MODULE

**Wall mounted box
with rainshield
3 modules**

**Electronic modules**

**Finishing frames
3 modules
+
1 module**
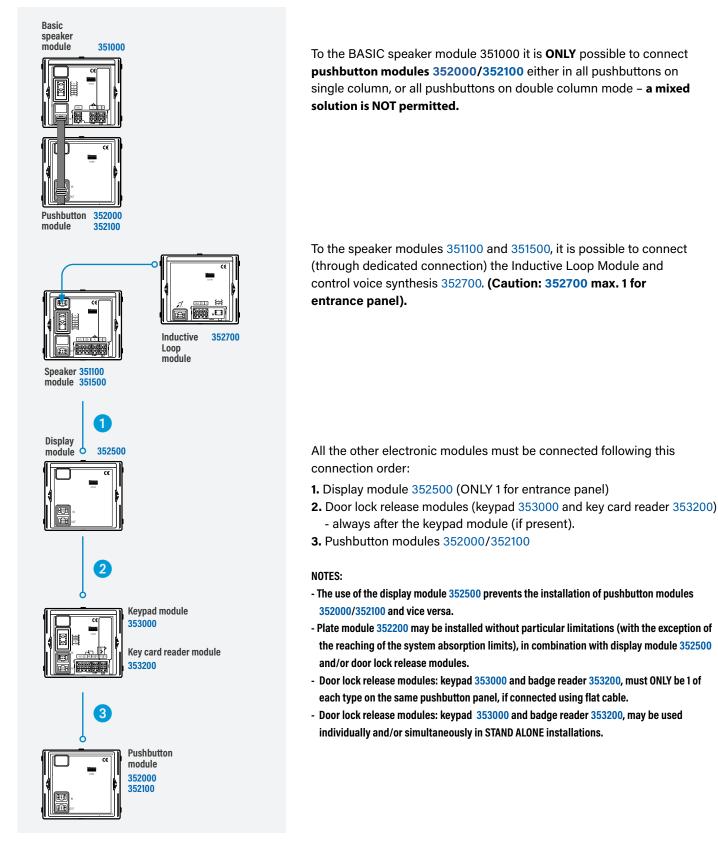
# SFERA entrance panels
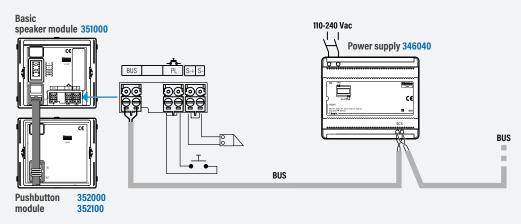
Thanks to their flexibility, SFERA entrance panel offer countless installation combination.  As it is impossible to present all such possible combination, below are some simple **rules that must be complied with for the combination of the electronic modules.**

**For the composition of the entrance panel, always start from the speaker module and/or the audio/video module:**

**Basic speaker module** 351000

**Pushbutton module** 352000 352100

To the BASIC speaker module 351000 it is **ONLY** possible to connect **pushbutton modules 352000/352100** either in all pushbuttons on single column, or all pushbuttons on double column mode – **a mixed solution is NOT permitted.**

**Inductive Loop module** 352700

**Speaker module** 351100 351500

To the speaker modules 351100 and 351500, it is possible to connect (through dedicated connection) the Inductive Loop Module and control voice synthesis 352700. **(Caution: 352700 max. 1 for entrance panel).**

**①**

**Display module** 352500

**②**

**Keypad module** 353000

**Key card reader module** 353200

**③**

**Pushbutton module** 352000 352100

All the other electronic modules must be connected following this connection order:

**1.** Display module 352500 (ONLY 1 for entrance panel)
**2.** Door lock release modules (keypad 353000 and key card reader 353200) - always after the keypad module (if present).
**3.** Pushbutton modules 352000/352100

**NOTES:**
- The use of the display module 352500 prevents the installation of pushbutton modules 352000/352100 and vice versa.
- Plate module 352200 may be installed without particular limitations (with the exception of the reaching of the system absorption limits), in combination with display module 352500 and/or door lock release modules.
- Door lock release modules: keypad 353000 and badge reader 353200, must ONLY be 1 of each type on the same pushbutton panel, if connected using flat cable.
- Door lock release modules: keypad  353000 and badge reader 353200, may be used individually and/or simultaneously in STAND ALONE installations.

# Wiring diagrams variants of Entrance Panels/Cameras

**SFERA ENTRANCE PANELS IN AUDIO SYSTEMS**

## Installation in audio systems with power supply 346040
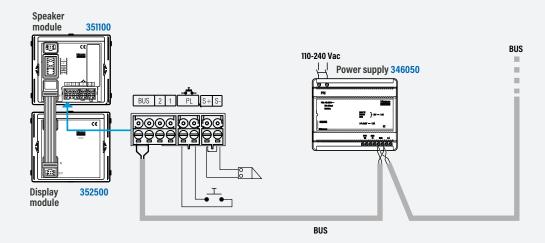


NOTE: it is possible to install other pushbutton modules 352000/352100 complying with the installation rules for SFERA Entrance Panels.

## Installation in audio systems with power supply 346050
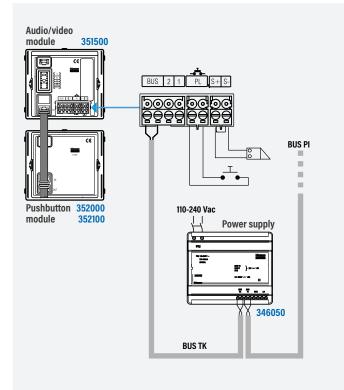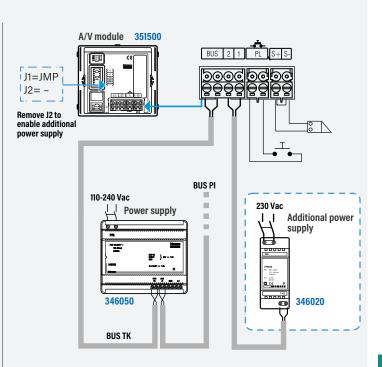


NOTE: it is possible to install other 352000/352100 pushbutton modules, complying with the installation rules for SFERA Entrance Panels.
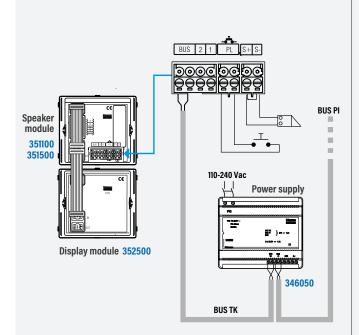


NOTE: The residents' address book of Display module 352500 can be inserted manually, or using a PC and the TiSferaDesign software, and then uploaded to the module using an USB interface (recommended).

# Wiring diagrams variants of Entrance Panels/Cameras

## SFERA ENTRANCE PANELS IN VIDEO SYSTEMS



Audio/video module **351500**
Pushbutton module **352000 352100**

110-240 Vac **Power supply** **346050**

BUS TK

BUS PI

A/V module **351500**

J1=JMP
J2= –

**Remove J2 to enable additional power supply**

110-240 Vac **Power supply** **346050**

BUS TK

BUS PI

230 Vac **Additional power supply** **346020**
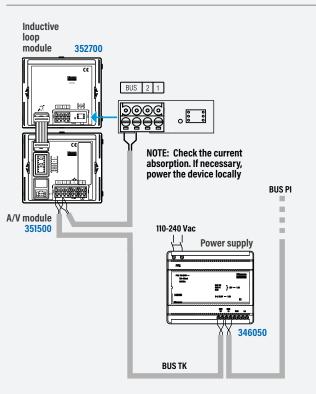
NOTE: In systems with several Internal Units, it will be necessary to allow for an extra power supply to be connected to the speaker module of the Entrance Panel. In order to connect the additional power supply unit, it will be necessary to remove configurator J2 from the speaker module.

Speaker module **351100 351500**
Display module **352500**

110-240 Vac **Power supply** **346050**

BUS TK

BUS PI

NOTE: The residents' address book of Display module 352500 can be inserted manually in the device, or using a PC and the TiSferaDesign software, and then uploaded to the module using an USB interface (recommended).

Inductive loop module **352700**
A/V module **351500**

NOTE: Check the current absorption. If necessary, power the device locally

110-240 Vac **Power supply** **346050**

BUS TK

BUS PI

NOTE:Inductive Loop module 352700 may be connected directly to speaker module 351100 and to A/V modules 351200/351300.

# Wiring diagrams variants of Entrance Panels/Cameras

## SFERA ENTRANCE PANELS IN AUDIO AND VIDEO SYSTEMS

### Connection to the key expansion module 346993

Wiring with separate commons



SFERA speaker modules 351000
351100
351200
351300

Note:
Remove configurator J1

No. 1

346993

P96 P95 P94 P93 P92 P91 P90 P89

max 2m

No. 2

346993

P88 P87 P86 P85 P84 P83 P82 P81

max 1.5m

No. 12

BT-346993

346993

P8 P7 P6 P5 P4 P3 P2 P1

Wiring with unique common



SFERA speaker modules 351000
351100
351200
351300

Note:
Remove configurator J1

No. 1

346993

P96 P95 P94 P93 P92 P91 P90 P89

max 2m

No. 2

346993

P88 P87 P86 P85 P84 P83 P82 P81

max 1.5m

No. 12

BT-346993

346993

P8 P7 P6 P5 P4 P3 P2 P1

Each module 346993 can manage up to 8 call keys It is possible to connect several modules 346993 (Max. 96 call keys for each entrance panel).
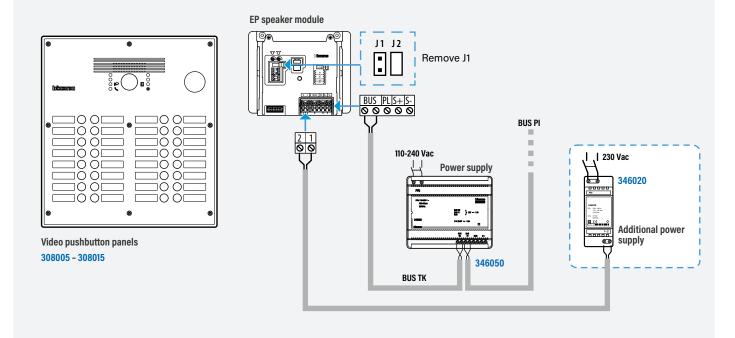
# LINEA 300 ENTRANCE PANELS IN VIDEO SYSTEMS

## Systems with LINEA 300 pushbutton panel

EP speaker module

BUS PI

BUS |PL|S+|S-

110-240 Vac
**Power supply**

346050

BUS TK

**Video pushbutton panels**
308001 – 308011
308002 – 308012
308003 – 308013
308004 – 308014
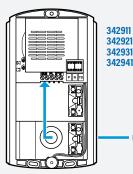
## Systems with LINEA 300 pushbutton panel and additional power supply
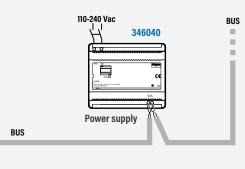
EP speaker module

J1 J2    Remove J1

BUS |PL|S+|S-

2 1

BUS PI

110-240 Vac
**Power supply**

230 Vac

346020

346050

**Additional power supply**

BUS TK

**Video pushbutton panels**
308005 – 308015

NOTE: in systems with several Internal Units, it will be necessary to allow for an extra power supply to be connected to the speaker module of the Entrance Panel. Before connecting the additional power supply, it will be necessary to remove jumper J1 from the speaker module.

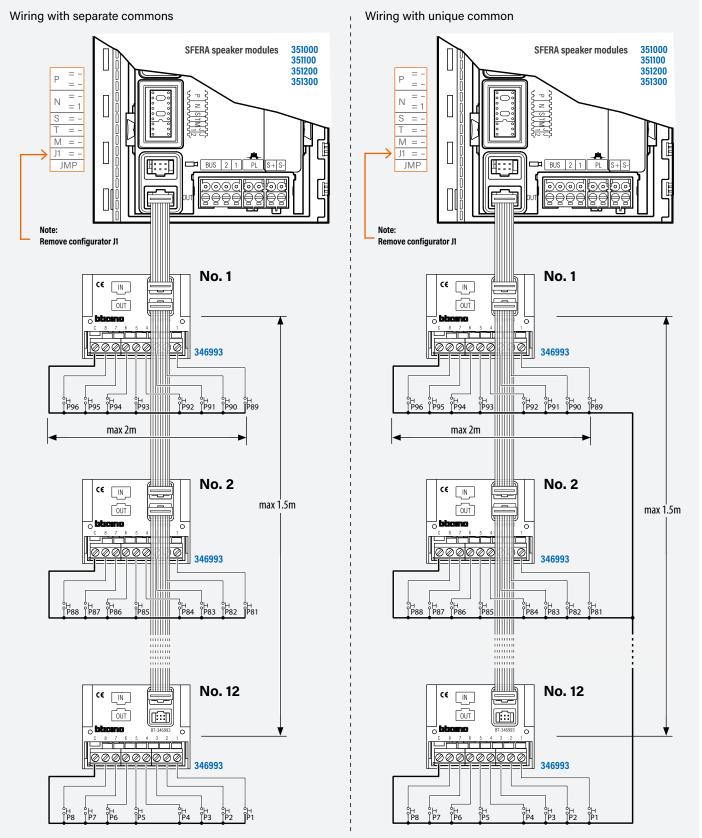# Wiring diagrams variants of Entrance Panels/Cameras
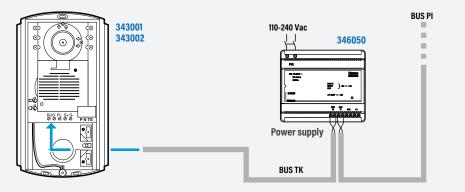
## LINEA 2000 ENTRANCE PANEL

### LINEA 2000 Entrance Panels for installation in audio system (up to 4 calls)
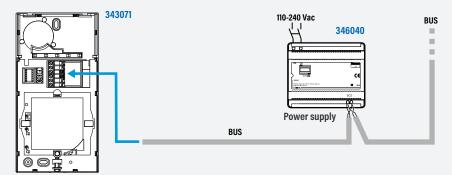
110-240 Vac

BUS

342911
342921
342931
342941

346040

P N TS

**Power supply**

BUS

BUS

### LINEA 2000 Entrance Panels for installation in video one and two family systems

343001
343002

110-240 Vac

BUS PI

346050

PRI

BUS PL S+ S-

P N TS

**Power supply**

BUS TK
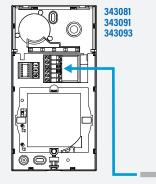
**NOTE: the LINEA 2000 Entrance Panels cannot be powered locally.**
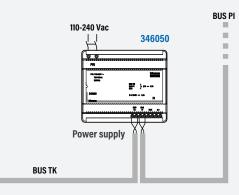
## LINEA 3000 ENTRANCE PANEL

### LINEA 3000 Entrance Panels for installation in audio one and two family systems

343071

110-240 Vac

BUS

346040

**Power supply**

BUS

### LINEA 3000 Entrance Panels for installation in video one and two family systems

343081
343091
343093

110-240 Vac

BUS PI

346050

PRI

**Power supply**

BUS TK
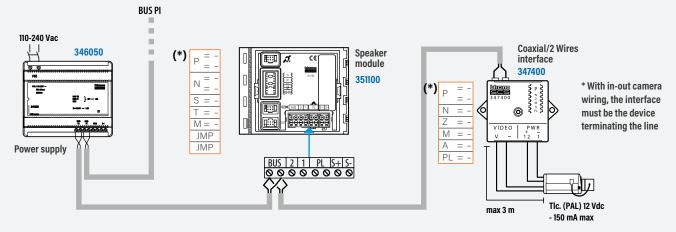
**NOTE: the LINEA 3000 Entrance Panels cannot be powered locally.**

## COAXIAL/2 WIRES INTERFACE MODULE 347400

In the connection diagrams, in alternative to SFERA video Entrance Panels, it is also possible to use the coaxial 2 Wires interface for (PAL) cameras 12 Vdc - 150 mA max., with the corresponding camera. The camera may be connected to the system and associated to the speaker module (separate), or as independent camera. In the system, the coaxial/2 Wires interface (347400) is considered as a video Entrance Panel.
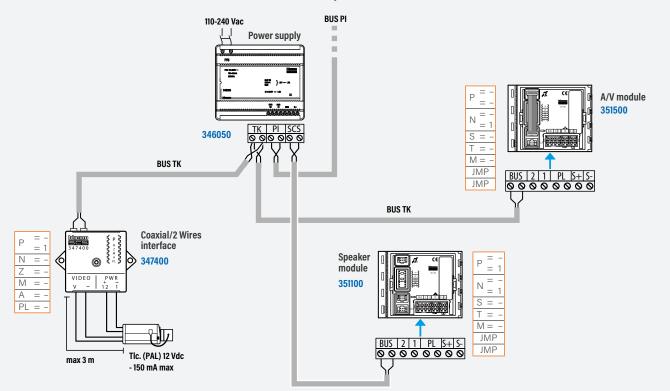
### Separate camera with in-out wiring to the SFERA speaker module 351100

(*) Interface 347400 (used for the connection of the separate camera), and the corresponding speaker module, must be configured with the same value in P.



NOTE: the Entrance Panel created in this way (speaker module 351100 and separate camera), must be considered as a video Entrance Panel, both for the number of risers that can be connected and the number of Internal Units
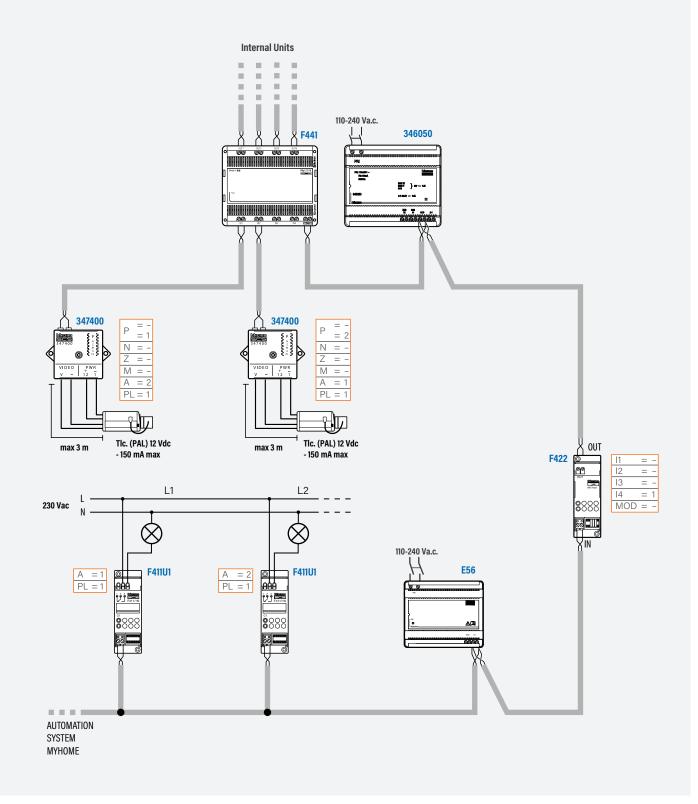
### Video Entrance Panel and audio Entrance Panel with separate coaxial camera



NOTE: the camera must be considered as a video Entrance Panel, both for the number of risers that can be connected and the number of Internal Units.

# Wiring diagrams variants of Entrance Panels/Cameras
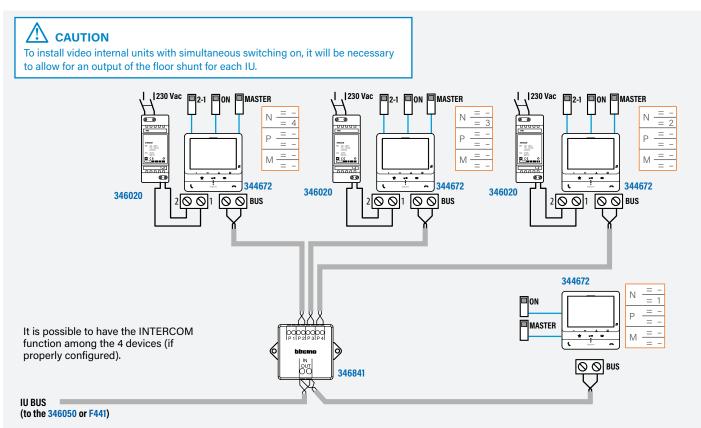
**ACTIVATION OF A LOAD UPON SWITCHING ON OF A CAMERA**

Operating mode of the camera upon switching on of systems integrated with Home automation. Every time that the camera switches on (call, auto-switching on, alarm), the home-automation actuator and the scenario configured in A and PL are activated. When the camera switches off, the associated actuator also switches off, while the scenario remains active.

If an actuator used by the automation system is also associated to the camera, the actuator switches off when the camera is switched off, even if when the camera was switched on it was already on. To avoid this, to activate the load use an F411U2, configuring different PLs and connecting the contacts in parallel.
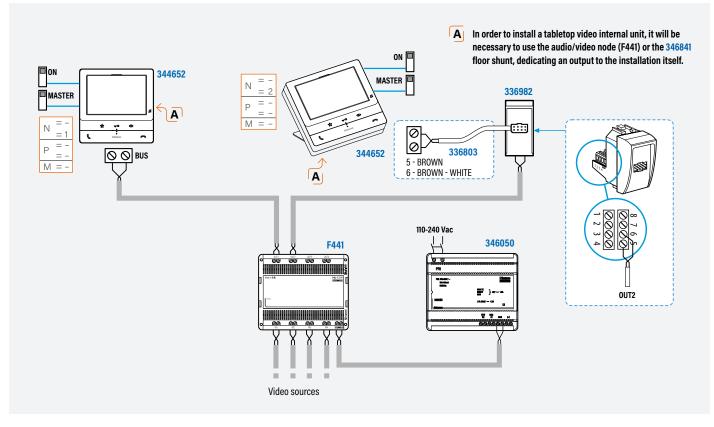
# Internal Unit Variants - Single family or multifamily systems with apartment interface 346850

## EXAMPLE - 4 VIDEO INTERNAL UNITS WITH SIMULTANEOUS SWITCHING ON

⚠ **CAUTION**
To install video internal units with simultaneous switching on, it will be necessary to allow for an output of the floor shunt for each IU.



It is possible to have the INTERCOM function among the 4 devices (if properly configured).

**IU BUS**
(to the **346050** or **F441**)

## ESEMPIO - VIDEO INTERNAL UNIT TABLETOP INSTALLATION

**A** In order to install a tabletop video internal unit, it will be necessary to use the audio/video node (F441) or the **346841** floor shunt, dedicating an output to the installation itself.



5 - BROWN
6 - BROWN - WHITE

110-240 Vac

Video sources
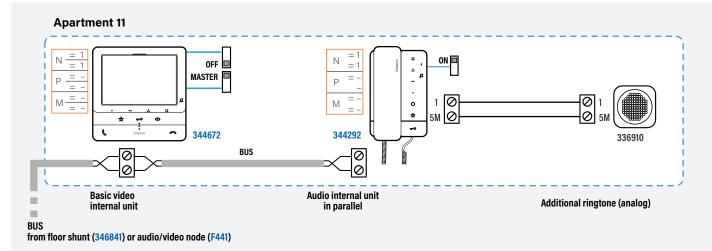
# Internal Unit Variants - Multifamily systems without apartment interface 346850

⚠ **CAUTION**
In the same apartment on the same call, it is possible to install up to 3 devices maximum (audio and video internal units or ringtones).
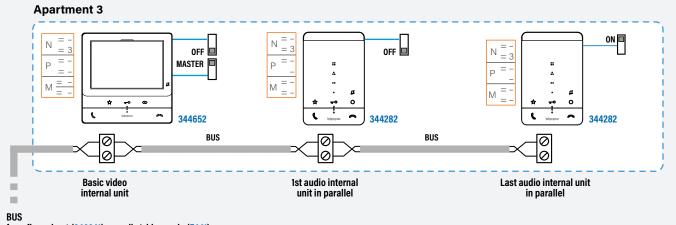
## EXAMPLE - TWO AUDIO INTERNAL UNITS IN ADDITION TO THE BASIC AUDIO INTERNAL UNIT

**Apartment 2**



BUS audio

BUS audio

N = – / = 2  P = – / = –  M = – / = –   OFF   BUS   344282
Basic audio internal unit

N = – / = 2  P = – / = –  M = – / = –   OFF   BUS   344282
Audio internal unit in parallel

N = – / = 2  P = – / = –  M = – / = –   OFF   BUS   344282
Last audio internal unit in parallel

## EXAMPLE - ONE AUDIO INTERNAL UNIT AND ONE RINGTONE, IN ADDITION TO THE BASIC VIDEO INTERNAL UNIT

**Apartment 11**



N = 1 / = 1  P = – / = –  M = – / = –   OFF MASTER   344672
Basic video internal unit

N = 1 / = 1  P = – / = –  M = – / = –   ON   344292
Audio internal unit in parallel

1 5M   1 5M   336910
Additional ringtone (analog)

BUS

**BUS**
from floor shunt (**346841**) or audio/video node (**F441**)

## EXAMPLE - TWO AUDIO INTERNAL UNITS IN ADDITION TO THE BASIC VIDEO INTERNAL UNIT

**Apartment 3**



N = – / = 3  P = – / = –  M = – / = –   OFF MASTER   344652
Basic video internal unit

N = – / = 3  P = – / = –  M = – / = –   OFF   344282
1st audio internal unit in parallel

N = – / = 3  P = – / = –  M = – / = –   ON   344282
Last audio internal unit in parallel

BUS   BUS

**BUS**
from floor shunt (**346841**) or audio/video node (**F441**)

**EXAMPLE - TWO VIDEO INTERNAL UNITS IN ADDITION TO THE BASIC VIDEO INTERNAL UNIT**

The variant is **NOT** possible with IU without MASTER/SLAVE function
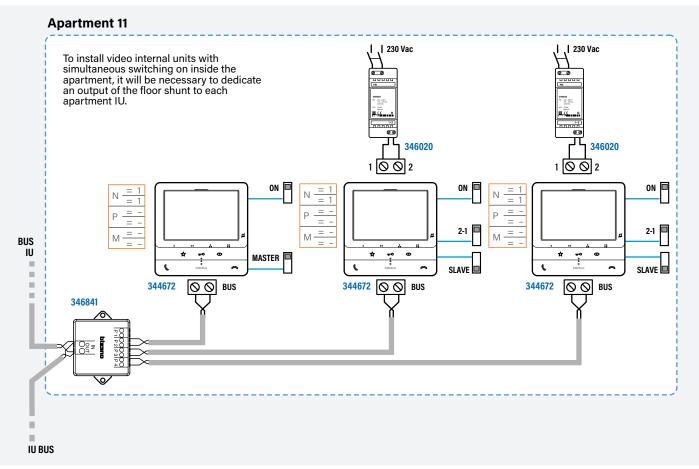
- This variant DOES NOT allow the simultaneous switching on of the video internal units
- The variant is NOT possible with C300EOS and Hometouch internal units.
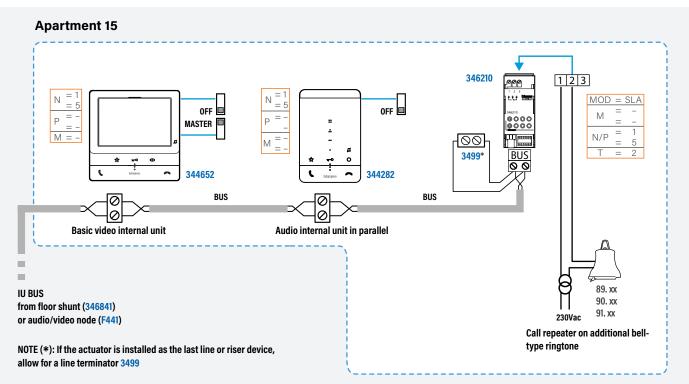
**Apartment 1**



MASTER — OFF MASTER — 344652 — **Basic video internal unit**

SLAVE — OFF SLAVE — 344652 — **First video internal unit in parallel**

SLAVE — ON SLAVE — 344652 — **Last video internal unit in parallel**

N =1, P, M

BUS

**IU BUS**
from floor shunt (**346841**) or audio/video node (**F441**)

**Apartment 4**

**IU BUS**



MASTER — OFF MASTER — 344672 — **Basic video internal unit**

SLAVE — OFF SLAVE — 344672 — **First video internal unit in parallel**

SLAVE — OFF SLAVE — 344672 — **Last video internal unit in parallel**

N =4, P, M

BUS

**IU BUS**

# Internal Unit Variants - Multifamily systems without apartment interface 346850

**EXAMPLE - THREE VIDEO INTERNAL UNITS IN SIMULTANEOUS SWITCHING ON**



**Apartment 11**
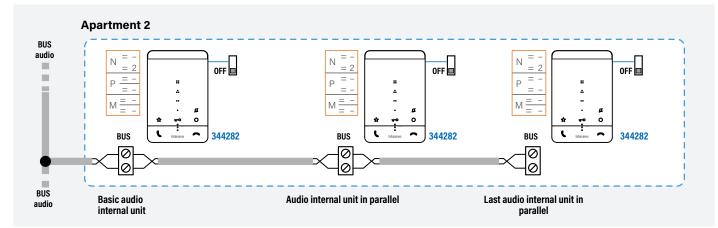
To install video internal units with simultaneous switching on inside the apartment, it will be necessary to dedicate an output of the floor shunt to each apartment IU.

**EXAMPLE - ONE AUDIO INTERNAL UNIT AND ONE ADDITIONAL BELL-TYPE RINGTONE IN ADDITION TO THE BASIC VIDEO INTERNAL UNIT**



**Apartment 15**

**Basic video internal unit**

**Audio internal unit in parallel**

**IU BUS**
**from floor shunt (346841)**
**or audio/video node (F441)**

**NOTE (∗): If the actuator is installed as the last line or riser device, allow for a line terminator 3499**

**Call repeater on additional bell-type ringtone**

89. xx
90. xx
91. xx
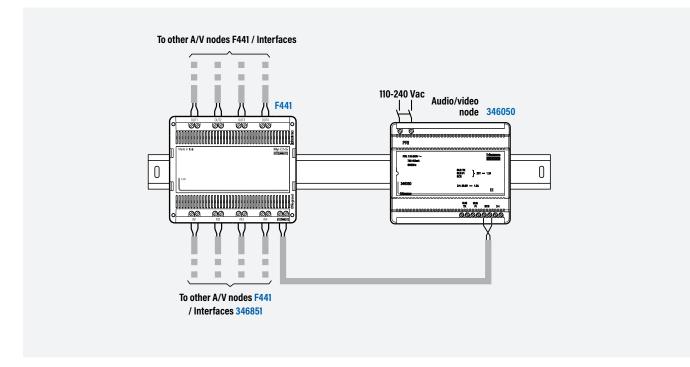
# Wiring diagrams variants for DIN rail devices
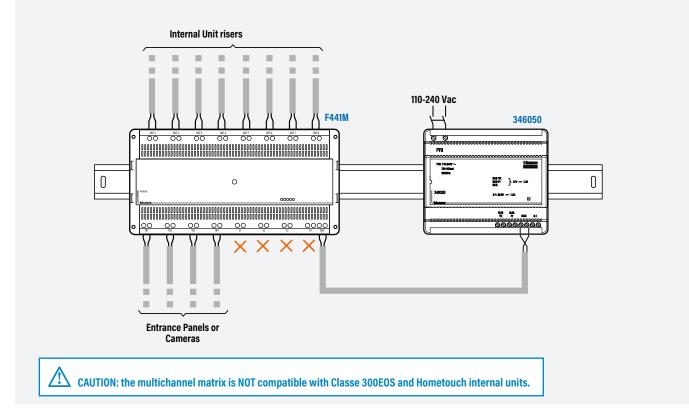
## AUDIO / VIDEO NODE F441

By using the audio/video node, it is possible to connect up to 4 video entrance panels / cameras (or 4 audio/video nodes in cascade) and up to 4 2 Wires video risers.



To other A/V nodes F441 / Interfaces

110-240 Vac

Audio/video node 346050

F441

To other A/V nodes F441 / Interfaces 346851

## MULTI-CHANNEL MATRIX F441M
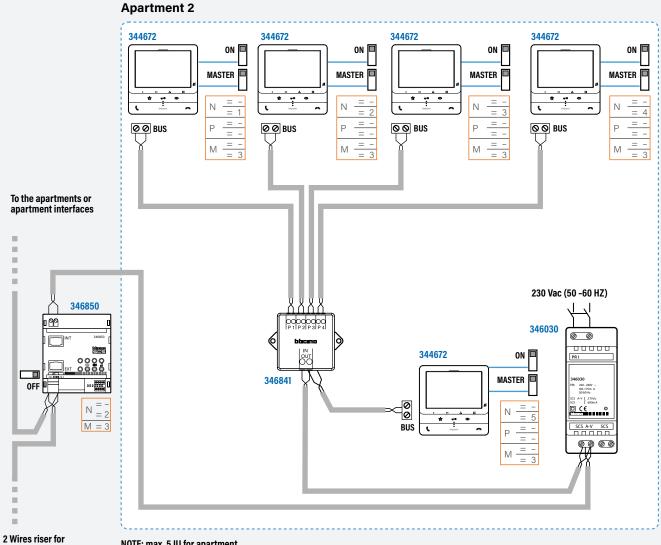
In alternative to the audio/video node F441, it is also possible to use the multichannel matrix F441M. The matrix makes it possible to connect (on the input) up to 4 Entrance Panels. Up to 8 risers can be generated on the output.



Internal Unit risers

110-240 Vac

346050

F441M

Entrance Panels or Cameras

⚠ CAUTION: the multichannel matrix is NOT compatible with Classe 300EOS and Hometouch internal units.

# Wiring diagrams variants for DIN rail devices

**INTERCOM IN APARTMENT WITH 2 DIN COMPACT POWER SUPPLY 346030**

In order to have the **apartment intercom** function whilst saving DIN modules, it is possible to use, as an alternative to the power supply 346050, compact power supply 346030 wired as follows:



**Apartment 2**

**To the apartments or apartment interfaces**

**2 Wires riser for apartment block**
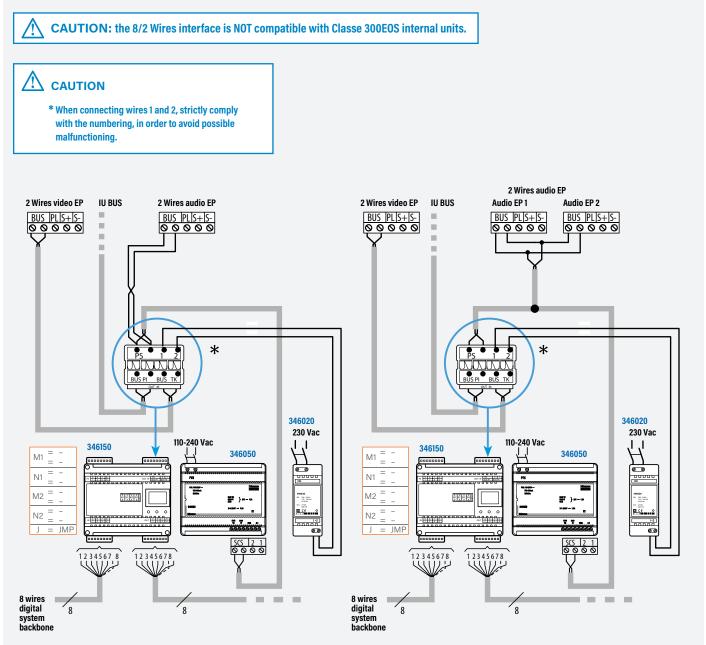
**NOTE: max. 5 IU for apartment**

230 Vac (50 -60 HZ)

⚠ **CAUTION**

- Configure the apartment Entrance Panels from P = 1.
- Configure the apartment IU from N = 1
- As for one-family systems, all internal units must be configured as MASTER. The internal unit configured with N= 1 rings and switches on, while the others ring. If the call is answered from an internal unit with the monitor switched off, the monitor of the internal unit configured with N = 1 switches off and the monitor of the internal unit being used for answering switches on.

## 8/2 WIRES INTERFACE 346150

The diagrams only show one 2 Wires riser Entrance Panel: with these variants, it is possible to install one video EP and up to 2 audio EP.

⚠ **CAUTION:** the 8/2 Wires interface is NOT compatible with Classe 300EOS internal units.

⚠ **CAUTION**

**\*** **When connecting wires 1 and 2, strictly comply with the numbering, in order to avoid possible malfunctioning.**
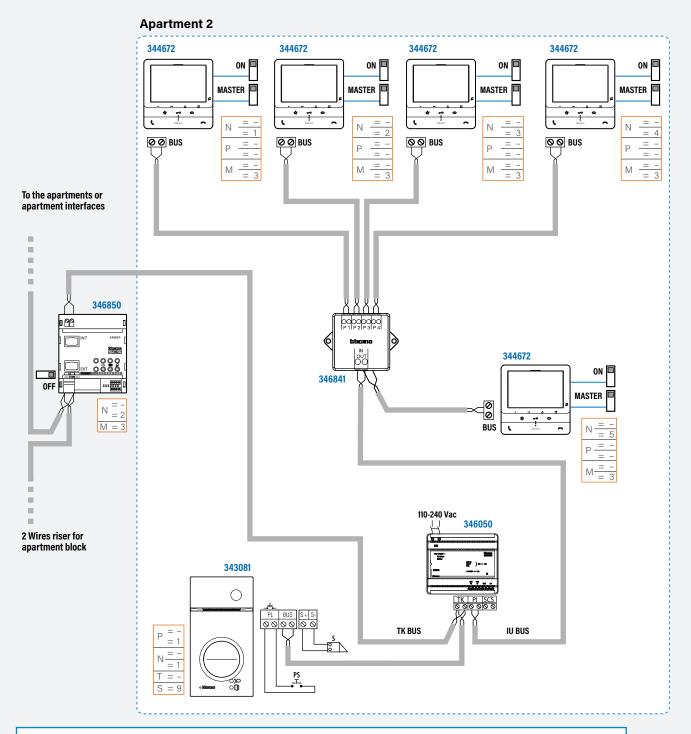


**Interfaces 346150 must always be properly configured**

# Wiring diagrams variants for DIN rail devices

**CONNECTION IN APARTMENT WITH 6 DIN POWER SUPPLY** 346050

In order to connect an apartment EP saving DIN modules, it is possible to use the power supply 346050 without A/V node.

**Apartment 2**



**To the apartments or apartment interfaces**

**2 Wires riser for apartment block**

| 344672 | 344672 | 344672 | 344672 |
|---|---|---|---|
| N = –<br>= 1 | N = –<br>= 2 | N = –<br>= 3 | N = –<br>= 4 |
| P = –<br>= – | P = –<br>= – | P = –<br>= – | P = –<br>= – |
| M = –<br>= 3 | M = –<br>= 3 | M = –<br>= 3 | M = –<br>= 3 |

346850
N = –<br>= 2
M = 3

346841

344672
N = –<br>= 5
P = –<br>= –
M = –<br>= 3

110-240 Vac  346050

343081
P = –<br>= 1
N = –<br>= 1
T = –
S = 9

TK BUS      IU BUS

⚠ **CAUTION**

- Configure the apartment Entrance Panels from P = 1.
- Configure the apartment IU from N = 1
- As for one-family systems, all internal units must be configured as MASTER. The internal unit configured with N= 1 rings and switches on, while the others ring. If the call is answered from an internal unit with the monitor switched off, the monitor of the internal unit configured with N = 1 switches off and the monitor of the internal unit being used for answering switches on.

## RISER CONNECTION WITH 6 DIN POWER SUPPLY 346050

In order to connect an apartment EP saving DIN modules, it is possible to use the power supply 346050 without A/V node.
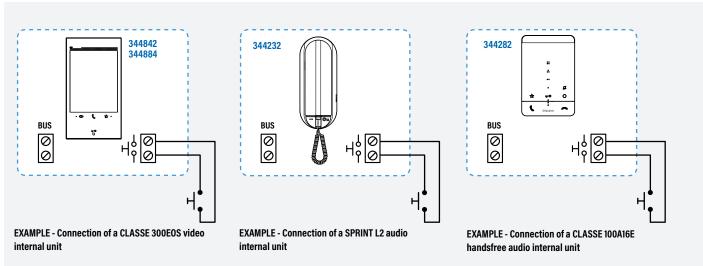


**NOTE: It is not possible to add other riser entrance panels without using the audio/video node F441.**

# Auxiliary services – Floor call

**FLOOR CALL**

With CLASSE 100, CLASSE 300EOS and SPRINT L2 344232) internal units, it is possible to have the "call to the floor" function". In other words, by connecting a pushbutton between the clamps ( $\frac{\top}{-\circ\,\circ-}$ ) it is possible to use the internal ringtone of the devices to make the call from the apartment entrance door. In installations with IU in parallel, only the Internal Unit to which the call pushbutton is connected will ring.
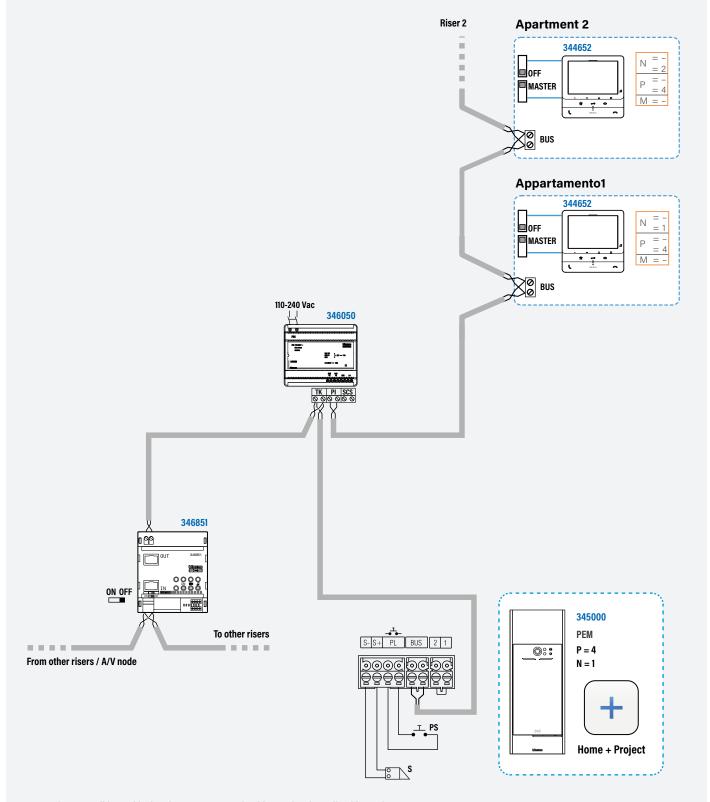


EXAMPLE - Connection of a CLASSE 300EOS video internal unit

EXAMPLE - Connection of a SPRINT L2 audio internal unit

EXAMPLE - Connection of a CLASSE 100A16E handsfree audio internal unit
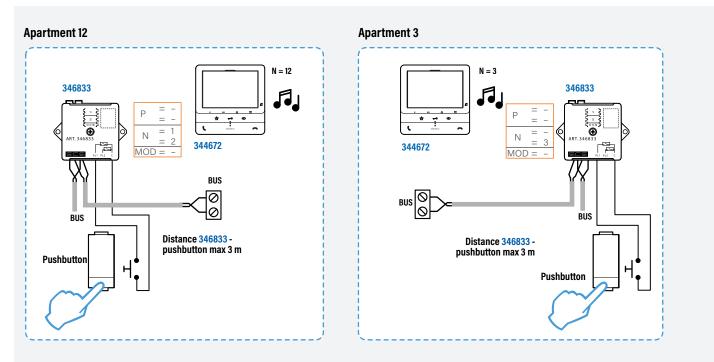
- The maximum distance between the call to the floor pushbutton and the internal unit is 15 metres.
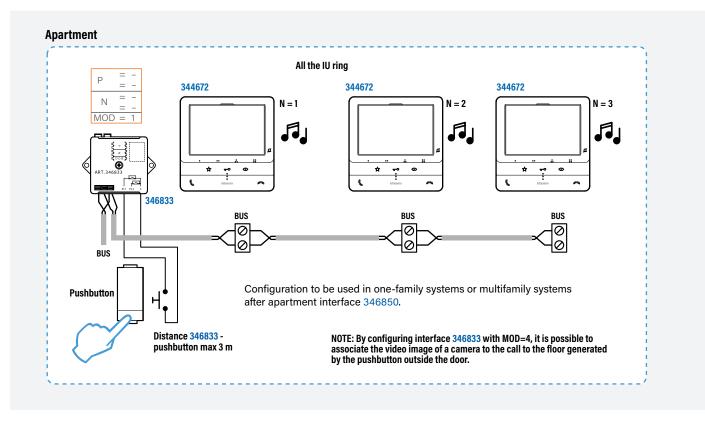
**BUS FLOOR CALL WITH INTERFACE 346833**

To be used for the call to the floor, so that several internal units connected to the BUS will ring with one single button.
By using the call to the floor interface,the following is possible by pressing one pushbutton:
- the addressed floor call MOD = 0
- the general floor call MOD = 1

**ADDRESSED FLOOR CALL WITH 346833 CONFIGURED WITH MOD = 0**



Apartment 12

Apartment 3
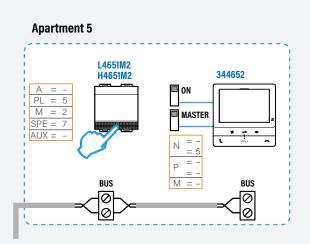
## GENERAL FLOOR CALL WITH 346833 CONFIGURED WITH MOD = 1

**Apartment**



Configuration to be used in one-family systems or multifamily systems after apartment interface 346850.

Distance 346833 - pushbutton max 3 m

NOTE: By configuring interface 346833 with MOD=4, it is possible to associate the video image of a camera to the call to the floor generated by the pushbutton outside the door.
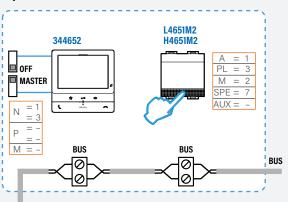
## BUS FLOOR CALL WITH SPECIAL CONTROL L4651M2/H4651M2

By using special control L4651M2/H4651M2, it is possible to make the call to the floor through the BUS. By inserting the special control on the IU BUS (in video systems, the special control must be in-out connected on the IU BUS) and configuring it for the call to the floor, it is possible to have the function without further wiring between entrance and Internal Unit. In installations with IU in parallel, upon arrival of the call to the floor all the Internal Units of the apartment ring.



**EXAMPLE - BUS floor call - connection before the Internal Unit**
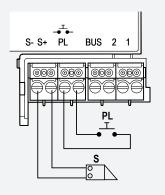
**EXAMPLE - BUS floor call - connection after the Internal Unit. If the special control is connected as the last apartment or riser line device, it is necessary to connect a 3499 terminator in an IN-OUT mode on the control itself.**

# Auxiliary services – Door lock control
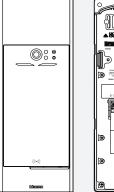
## DOOR LOCK CONTROL CONNECTION

### Linea 5000 entrance panels
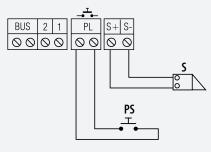


Wiring for door lock release control from the appropriate IU key and the PL key. Between S+ and S- are available 18 V -4 A impulsive (250 mA holding current) 30 Ohm max.
Timing from key (PS) as per T configuration set via Home + Project.
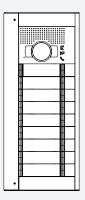
### SFERA entrance panels
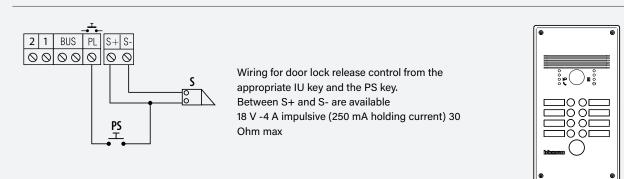


Wiring for door lock release control from the appropriate IU key and the PS key.
Between S+ and S- are available
18 V -4 A impulsive (250 mA holding current)
30 Ohm max
Timing from key (PS) as per the configurator in (T) of the speaker module.

### LINEA 300 entrance panels
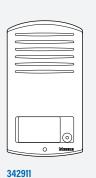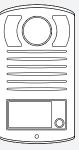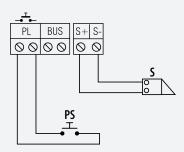


Wiring for door lock release control from the appropriate IU key and the PS key.
Between S+ and S- are available
18 V -4 A impulsive (250 mA holding current) 30 Ohm max

## LINEA 2000 entrance panels

Wiring for door lock release control from the appropriate IU key and the PS key. Between S+ and S- are available 18 V -4 A impulsive (250 mA holding current) 30 Ohm max.

342911

343031

## LINEA 3000 entrance panels
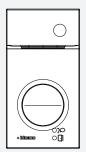
Wiring for door lock release control from the appropriate IU key and the PS key. Between S+ and S- are available 18 V -4 A impulsive (250 mA holding current) 30 Ohm max
Timing from key (PS) as per the configurator in (T) of the speaker module.

343071
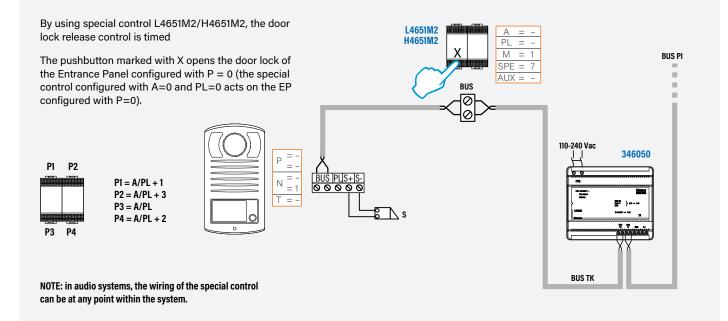
343081
343091
343093

# Auxiliary services - Door lock control
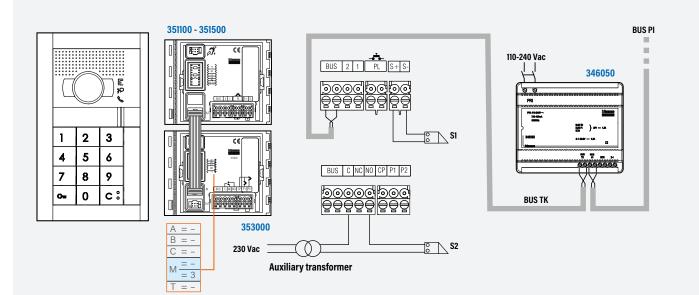
## DOOR LOCK CONTROL FROM BUS

(Installation in video systems)

By using special control L4651M2/H4651M2, the door lock release control is timed

The pushbutton marked with X opens the door lock of the Entrance Panel configured with P = 0 (the special control configured with A=0 and PL=0 acts on the EP configured with P=0).

**L4651M2**
**H4651M2**

| A | = | – |
|---|---|---|
| PL | = | – |
| M | = | 1 |
| SPE | = | 7 |
| AUX | = | – |

**BUS PI**

**BUS**

**110-240 Vac**

**346050**

P1 = A/PL + 1
P2 = A/PL + 3
P3 = A/PL
P4 = A/PL + 2

| P | = | – |
|---|---|---|
| N | = | – |
|   | = | 1 |
| T | = | – |

BUS PL S+ S-

**S**

**BUS TK**

**NOTE: in audio systems, the wiring of the special control can be at any point within the system.**

## CONTROL OF 2 DOOR LOCKS WITH SFERA KEYPAD MODULE 353000

(installation in audio/audio-video systems)
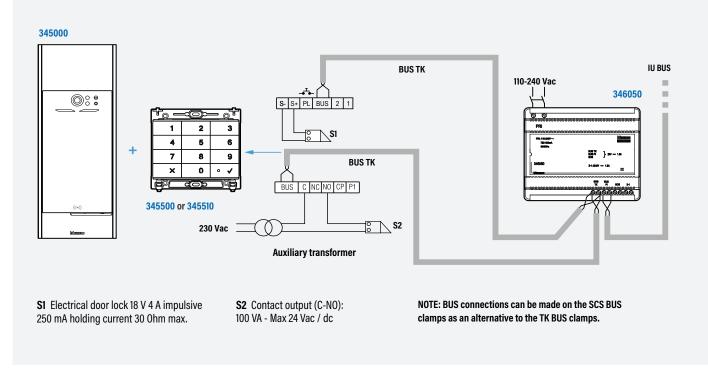
**351100 - 351500**

**BUS PI**

BUS 2 1 PL S+ S-

**S1**

**110-240 Vac**

**346050**

BUS C NC NO CP P1 P2

| A | = | – |
|---|---|---|
| B | = | – |
| C | = | – |
| M | = | – |
|   | = | 3 |
| T | = | – |

**353000**

**230 Vac**

**Auxiliary transformer**

**S2**

**BUS TK**

**S1** Electrical door lock 18 V 4 A impulsive 250 mA holding current 30 Ohm max.

**S2** Contact output (C-NO):
8 A 30 Vdc
8 A 30 Vac cosφ1
3,5 A 30 Vac cosφ0,4

**NOTE: IN ORDER TO CONTROL the door lock directly connected to the speaker or audio/video module, on the keypad enter ⊙ + door lock release code + confirmation if required; to control the second door lock connected to the contact of the local relay, on the keypad enter ⊙ + ⊙ + door lock release code + confirmation if required**
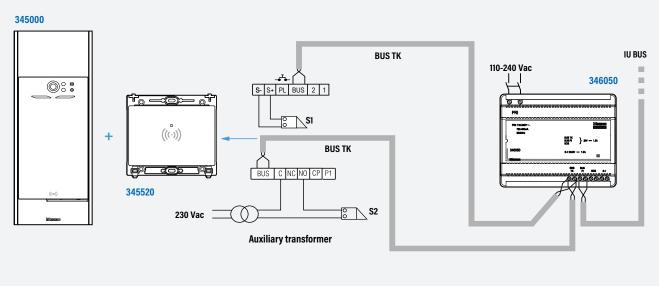
## CONTROL OF 2 DOOR LOCKS WITH LINEA 5000 KEYPAD MODULE (345500 - 345510)

(Installation in audio/audio-video systems)



**345000**

**345500 or 345510**

**BUS TK**

**BUS TK**

**IU BUS**

**110-240 Vac**

**346050**

**S-  S+  PL  BUS  2  1**

**S1**

**BUS  C  NC  NO  CP  P1**

**230 Vac**

**S2**

**Auxiliary transformer**

**S1** Electrical door lock 18 V 4 A impulsive 250 mA holding current 30 Ohm max.

**S2** Contact output (C-NO): 100 VA - Max 24 Vac / dc

**NOTE: BUS connections can be made on the SCS BUS clamps as an alternative to the TK BUS clamps.**

## CONTROL OF 2 DOOR LOCKS WITH LINEA 5000 RFID SMART ACCESS MODULE 345520

(Installation in audio/audio-video systems)
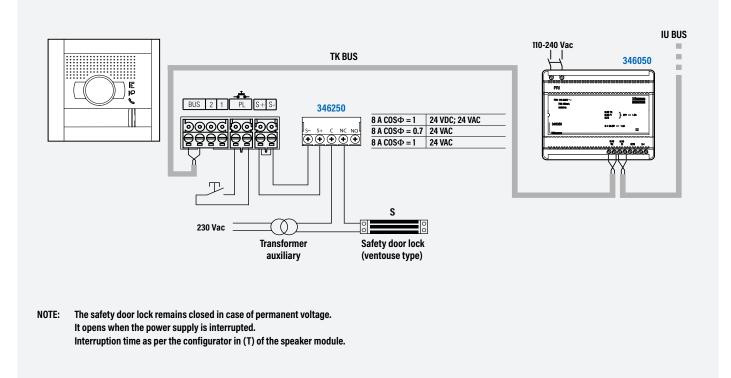


**345000**

**345520**

**BUS TK**

**BUS TK**

**IU BUS**

**110-240 Vac**

**346050**

**S-  S+  PL  BUS  2  1**

**S1**

**BUS  C  NC  NO  CP  P1**

**230 Vac**

**S2**

**Auxiliary transformer**

**S1** Electrical door lock 18 V 4 A impulsive 250 mA holding current 30 Ohm max.

**S2** Contact output (C-NO): 100 VA - Max 24 Vac / dc
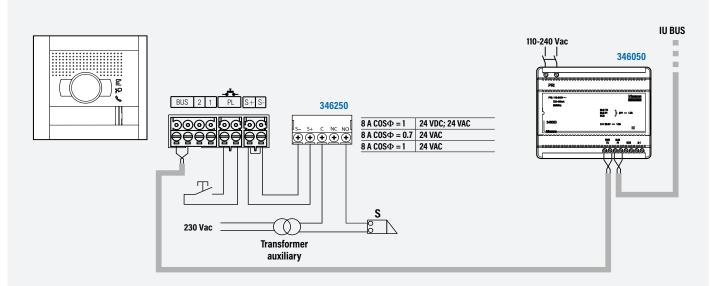
**NOTE: BUS connections can be made on the SCS BUS clamps as an alternative to the TK BUS clamps.**

# Auxiliary services - Door lock control

## SAFETY DOOR LOCK CONTROL (VENTOUSE TYPE)



| | |
|---|---|
| 8 A COSΦ = 1 | 24 VDC; 24 VAC |
| 8 A COSΦ = 0.7 | 24 VAC |
| 8 A COSΦ = 1 | 24 VAC |

**NOTE:** The safety door lock remains closed in case of permanent voltage.
It opens when the power supply is interrupted.
Interruption time as per the configurator in (T) of the speaker module.
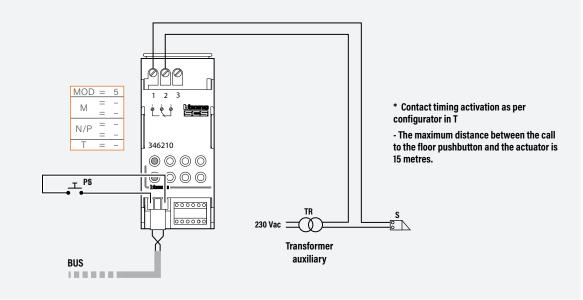
## DOOR LOCK CONTROL NOT MANAGED FROM BUS



| | |
|---|---|
| 8 A COSΦ = 1 | 24 VDC; 24 VAC |
| 8 A COSΦ = 0.7 | 24 VAC |
| 8 A COSΦ = 1 | 24 VAC |
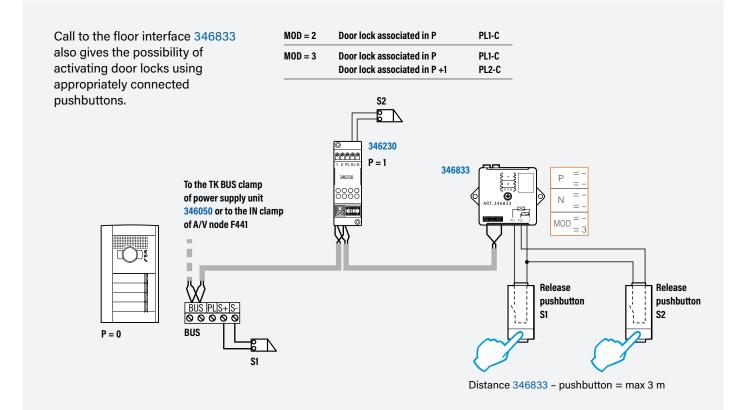
## DOOR LOCK CONTROL WITH GENERIC ACTUATOR 346210

**Should it be necessary to open a door lock at the same time as the one connected to the EP speaker module, or to remotely control the same, actuator 346210 can be used.**

The actuator must be configured with MOD =5 and is controlled by the appropriate pushbutton of the IU and the PS key. The contacts may be crossed by a maximum current of 6 A (resistive) – 2 A (inductive) – cos $\phi$=0,5.



* Contact timing activation as per configurator in T

- The maximum distance between the call to the floor pushbutton and the actuator is 15 metres.

## DOOR LOCK CONTROL WITH INTERFACE 346833

Call to the floor interface 346833 also gives the possibility of activating door locks using appropriately connected pushbuttons.

| MOD = 2 | Door lock associated in P | PL1-C |
|---|---|---|
| MOD = 3 | Door lock associated in P | PL1-C |
| | Door lock associated in P +1 | PL2-C |



Distance 346833 – pushbutton = max 3 m

# Auxiliary services - Door lock control
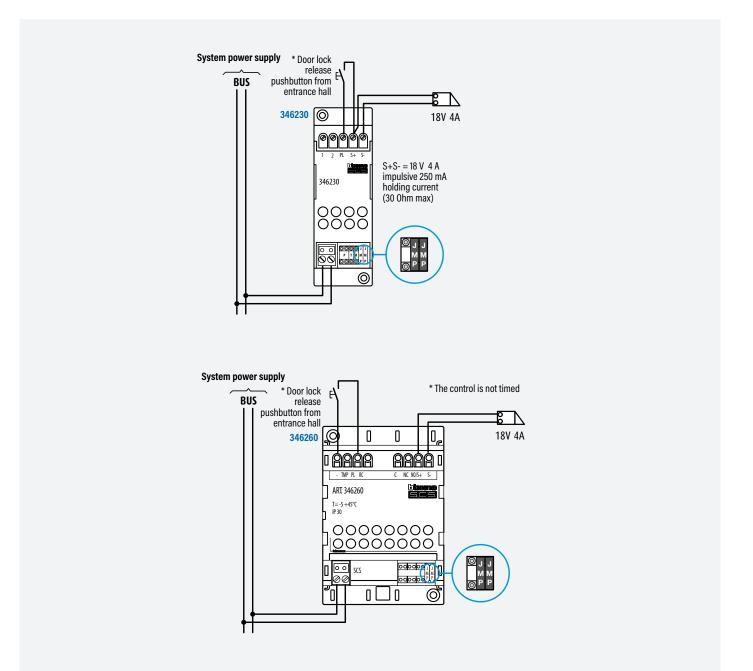
**DOOR LOCK CONTROL WITH ACTUATORS 346230 OR 346260**

The use of the actuators is indicated in installations where the direct connection of the electric door lock release is not wanted, but it is necessary to have, always with 2 Wires, wiring that cannot be accessed from the Entrance Panel, positioning the actuator that controls the door lock in a remote area.
It can also be used for the implementation of the "door lock status control" function (actuator 346260 only).

The wiring is completely of the 2 Wires type, including the power supply to the electric door lock.
The actuator is controlled by the door lock pushbutton of the IU.
The device must be properly configured.
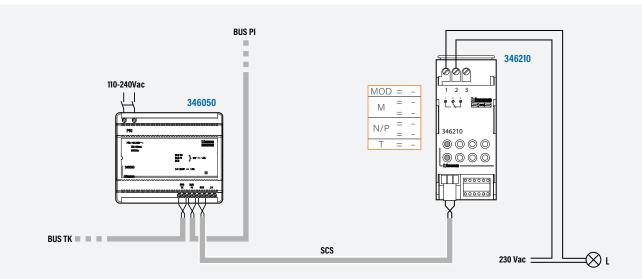
**NOTE: in video systems, the wiring must be completed in IN-OUT mode on the TK BUS clamp of power supply unit 346050 or the IN clamp of the audio/video node.**

# Auxiliary services – Staircase light control

## BUS STAIRCASE LIGHT CONTROL WITH ACTUATOR 346210

(Installation in video systems)
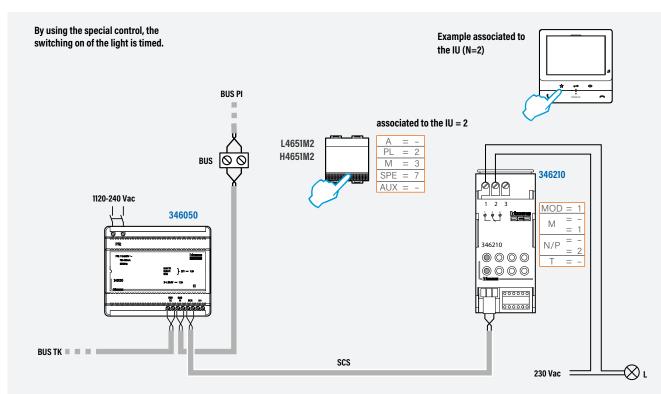


Wiring for staircase light control from the appropriate IU key, and the staircase light key of preset Entrance Panels.

> ⚠️ **CAUTION**
> **the (IU BUS), (TK BUS) and (SCS) outputs can be used at the same time respecting the total maximum absorption of 1.2 A.**

## BUS STAIRCASE LIGHT CONTROL WITH SPECIAL CONTROL L4651M2/H4651M2

(Installation in video systems)



**By using the special control, the switching on of the light is timed.**

**Example associated to the IU (N=2)**

**associated to the IU = 2**

| A | = | – |
|---|---|---|
| PL | = | 2 |
| M | = | 3 |
| SPE | = | 7 |
| AUX | = | – |

| MOD | = | 1 |
|---|---|---|
| M | = | 1 |
| N/P | = | 2 |
| T | = | – |
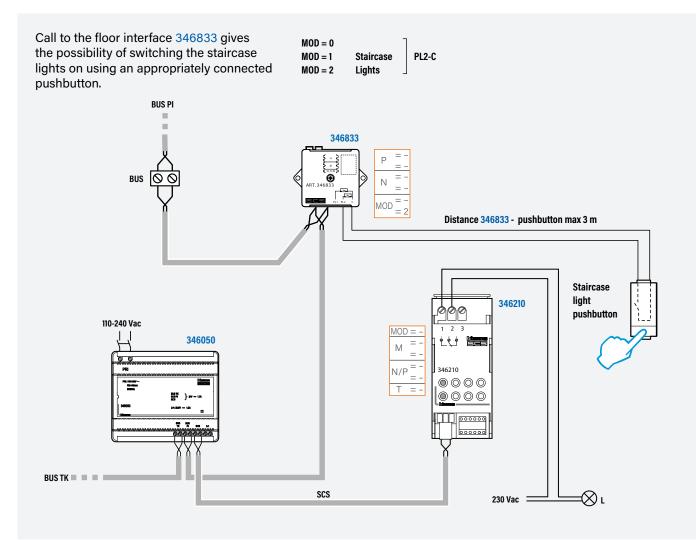
The special control acts on actuator 346210 configured to switch the lights on.
For further details, see the technical sheets of the special control and of actuator 346210.
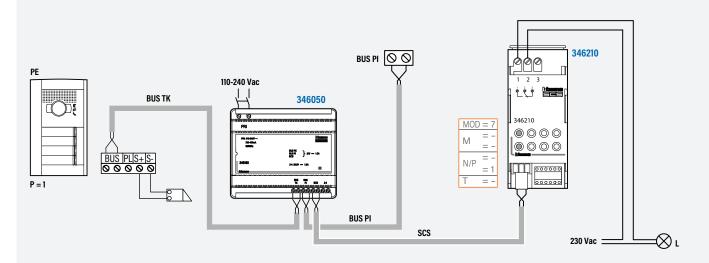
**NOTE: in audio systems, the wiring of the special control can be at any point within the system**

# Auxiliary services – Staircase light control

## STAIRCASE LIGHT CONTROL WITH INTERFACE 346833

Call to the floor interface 346833 gives the possibility of switching the staircase lights on using an appropriately connected pushbutton.

| MOD = 0 | | |
|---|---|---|
| MOD = 1 | Staircase | PL2-C |
| MOD = 2 | Lights | |



Distance 346833 - pushbutton max 3 m

Staircase light pushbutton
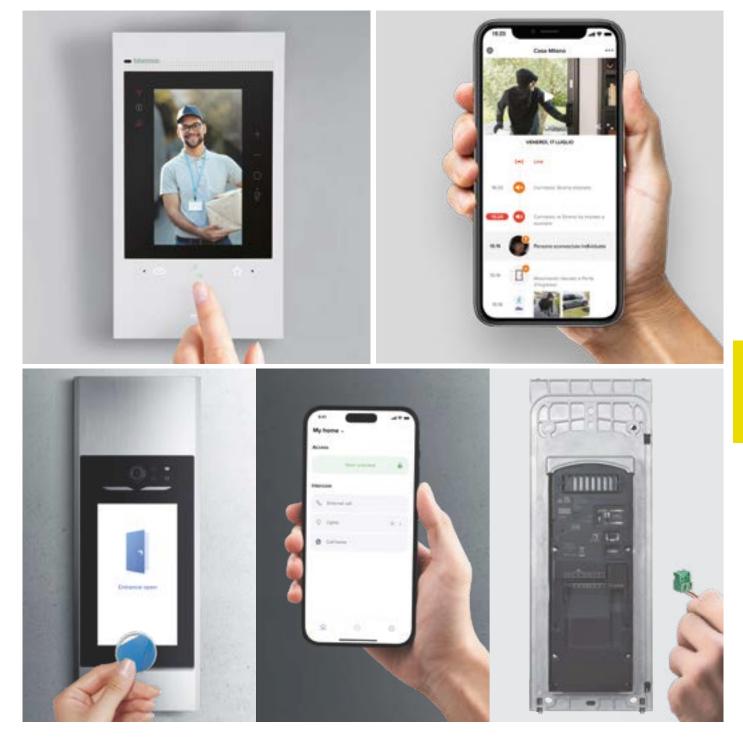
## LIGHT CONTROL FOR THE ILLUMINATION OF THE CAMERA FIELD OF VIEW



Closure of the contact upon call from the EP configured with P=1.
The contact opens after the call is ended and the handset is put down, or after 30 s (without answer).

# INSPECTION AND PUTTING INTO OPERATION
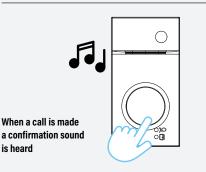
# Inspection and putting into operation of a 2 Wires system

## Inspection

After completing the installation of the 2 Wires audio or video door entry system, before powering the circuit it will be necessary to control that all wiring is correct and that internal units, entrance panels, actuators and all other system accessories have been configured as required.
If all the checks give positive results, carry out the following system operation tests:

**1)** Power the system and wait 1 minute for all the devices to switch on. Make a call from the entrance panel to the first internal unit: this will send an electronic signal to the speaker of the internal unit and a call confirmation sound to the entrance panel speaker module that has made the call.

**When a call is made a confirmation sound is heard**

**2)** By plugging the appropriate configurator to the **M** housing, it is possible to disable the door lock sound or all the sounds at the entrance panel.

**Example for SFERA entrance panels (for other entrance panels the configurators are different)**
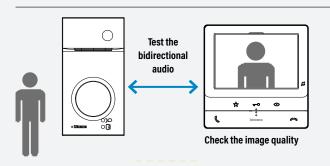
| Configurator | M = 0 | M = 1 | M = 2 | M = 3 |
|---|---|---|---|---|
| Tone status | All tones enabled | Door lock tone disabled | Call tone disabled | All tones disabled |
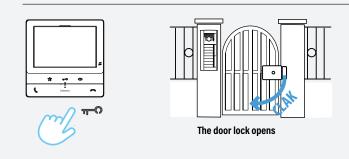
**3)** When the internal unit rings, press the connection key or lift the handset to establish communication with the entrance panel. In video systems, after the call tone the video internal unit monitor switches on; if the call is from an audio only entrance panel, the monitor stays off.
Check that sound travels in both direction (from and to the entrance panel), and that images are displayed correctly.
Make test calls from all the entrance panels to all the internal units of the system.

**Test the bidirectional audio**

**Check the image quality**
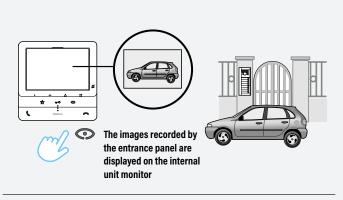
**4)** Check all the internal units to make sure that the door lock, entrance panel auto-switching on and staircase light keys (if present) are working correctly. Check that with the internal unit idle (no active call) the door lock button operates the door lock of the associated entrance panel, and that with the call active it operates the door lock of the entrance panel that has made the call.
With digital call module (display 352500 or display 352500 + keypad 353000),  check that the address book contains the contacts of all residents and repeat the call test from step (**1**).

**The door lock opens**
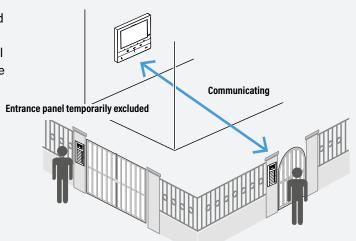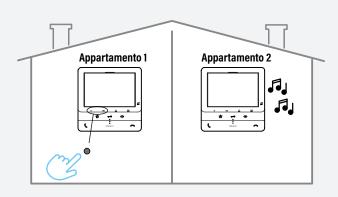
**5)** Check that the auto-switching on / cycling pushbutton operates the entrance panel associated to the internal unit, that cycling is performed correctly (if several entrance panels are installed), and that the door lock pushbutton operates the door lock of the entrance panel activated with the cycling procedure.

**The images recorded by the entrance panel are displayed on the internal unit monitor**

**6)** Check that during a conversation and for the 30 seconds after a call is sent the other internal units and entrance panels of the system (not involved in the communication) are unable to make calls. When a call is made, an engaged sound notification is heard at the entrance panel.

– Check that after 1 minute the internal unit is disconnected
 even if the communication has not been stopped.

– In case of isolated risers, repeat the test for each riser entrance.

**Communicating**

**Entrance panel temporarily excluded**

**7)** For systems with Intercom function, check that it is possible to call other devices, and that during the call the other internal units not involved in the communication are disabled (when a call is made an engaged sound is heard).

**Appartamento 1**   **Appartamento 2**

**Note:** The call from the entrance panel has priority on the Intercom call and will replace it.

**Intercom call**
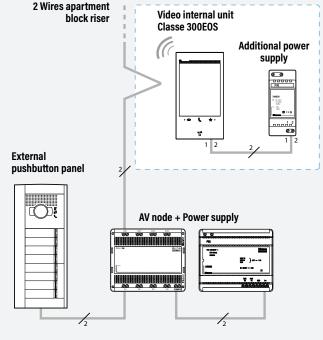
# Inspection and putting into operation of a 2 Wires system

If the system requires the use of one or more connected **Classe 300EOS / Classe 100X16E** video internal units, it will be necessary to consider the following:
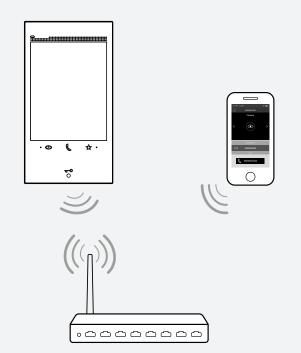
**Apartment building or multifamily context**

**2 Wires apartment block riser**

**Video internal unit Classe 300EOS**

**Additional power supply**

In **multifamily** systems, the Classe 300EOS video internal unit must be powered locally – clamps (**1 – 2**), using the additional power supply unit 346020.

**External pushbutton panel**

**AV node + Power supply**

During the commissioning stage, the Classe 300EOS / Classe 100X video internal unit and the smartphone must both be connected to the same Wi-Fi network.

The Wi-Fi network must be on a **2.4 GHz** band.

In case of abnormal operation, carry out a troubleshooting procedure, making reference **to the DIAGNOSTIC - TROUBLESHOOTING section below.**

# Diagnostic - Troubleshooting
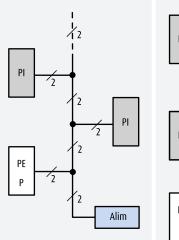
The troubleshooting procedure must be completed rationally. Before carrying out any operations on the system, check the diagram and the type of system, its extension, that the devices are being used and are configured correctly.
With the appropriate splitting into sections, all the systems, even the more complex ones, can be traced back to a basic one to make the activities easier.
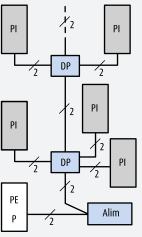
## Basic system

2 Wires audio and video systems can be simplified in line with the following block diagrams.

Legend:

**PE P** = Main entrance panel configured with (P = 0)

**PI** = Audio or video internal unit / apartment interface

**ALIM** = System power supply

**DP** = Video floor shunt



**2 Wires AUDIO system**          **2 Wires VIDEO system**
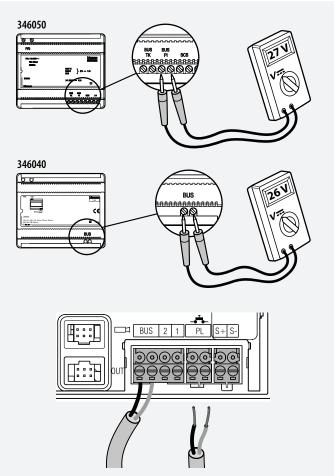
## General controls

- Check that the installation distances have been respected and that the recommended cables have been used.

– Check the voltages (with the components connected) on the clamps of the system power supply unit (TK BUS, IU BUS, SCS clamps 346050 – 27 V) or BUS clamps 346040 – 26 V).

If the voltages are different, check the power supply unit without load (no connected components). If the indicated voltages can be measured in this condition, it means that there is a short circuit on the system: separate the system into sections and repeat the checks. If the voltages are still different, check the network power supply and replace the system power supply unit if necessary.

- Check that the devices are working correctly (by connecting them to another point of the system).

- Check that the plug-in clamps are plugged in correctly and in the correct housings.



**Check that the connections have been completed correctly.**

# Diagnostic - Troubleshooting
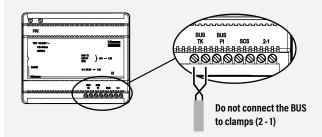
Below is a list of the most common faults and their solutions.

## Type of fault
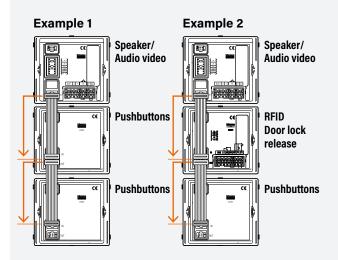
**- The call tone is heard at the entrance panel, but no internal unit rings**

## SOLUTION

- Check the EP and IU configuration in **(N)**.

- Check that the configuration is appropriate for the system (presence of apartment interface, system expansion interface, etc.).

- Check that the cables are correctly connected to the power supply BUS clamps.



**Do not connect the BUS to clamps (2 - 1)**

- When using an additional power supply unit (clamps 2 - 1). make sure that the BUS cable is also connected, and that the polarity requirement is met for clamps 2– 1.

- Check the connection order of the entrance panel SFERA module and the corresponding IN - OUT flat cable connections



**Example 1**

Speaker/ Audio video

Pushbuttons

Pushbuttons

**Example 2**

Speaker/ Audio video

RFID Door lock release

Pushbuttons
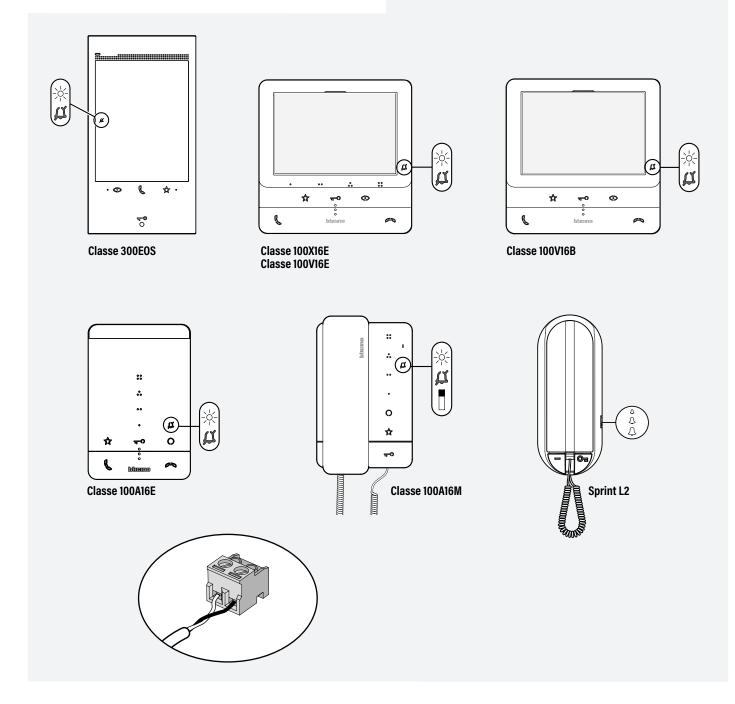
**Caution** : "advanced" function modules (keypad 353000 and door opening RFID 353200), must be connected before any pushbutton modules (352000 – 352100) of the system.

# Type of fault

**– The internal unit does not ring**

## SOLUTION

- Check the IU configuration.

- Check that call exclusion is not active and the volume of the ringtone.

- Check the cables connections to the internal unit clamps.

**Classe 300EOS**

**Classe 100X16E**
**Classe 100V16E**

**Classe 100V16B**

**Classe 100A16E**

**Classe 100A16M**

**Sprint L2**

# Diagnostic - Troubleshooting

## Type of fault

**- The monitor switches on but no image is displayed, or the image quality is poor.**

**- The door lock is excited for too long.**

**- In single-family systems with intercom function, when a call is received from the entrance panel not all internal units ring.**
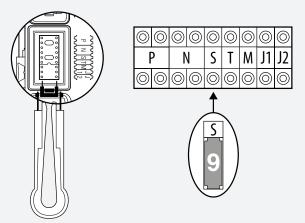
## SOLUTION

– Check that the IU microswitch **(ON – OFF)** is positioned **correctly (ON the last IU of the line)**.

– Check that all system connections and junctions have been completed correctly.

– Check that the entrance panel camera is focused correctly.

– Check that the IU is set to "**MASTER**".

– On the internal unit, check the display brightness, contrast and colour adjustments.

– Check that the maximum distances between entrance panel and internal unit are not exceeded.

– On the EP speaker module check that the configurator plugged in the (T) housing meets the timing requirements, as indicated in the specific technical data sheet.

– Check that a configurator **(9)** has been plugged to the housing **(S)** of the speaker module of the entrance panel.



– Check that the internal units are correctly configured in **N**; refer to the connection diagrams found in the guide.
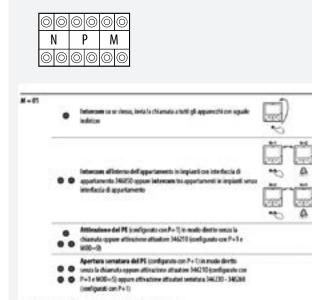
# Type of fault

**- In single-family systems with intercom function, when call is sent from one internal unit to another, nothing happens.**

## SOLUTION

– Check the configuration **M** on the IU. Check that the operating mode assigned to the internal unit keys is consistent with the requested function.
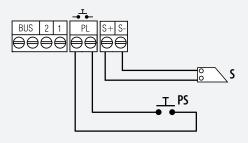
Refer to the specific IU technical sheets.





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**– The door lock control does not work**

– Check the characteristics and operation of the electric door lock.

– In order to rule out any entrance panel faults, open the door lock using the local pushbutton directly connected to the entrance panel.



– If this works correctly, check the configuration **(P)** on entrance panels and internal units.

– Check the operation of the door lock with the system **"IDLE"**.

– Check the operation of the door lock with the system **"CONNECTED"**.
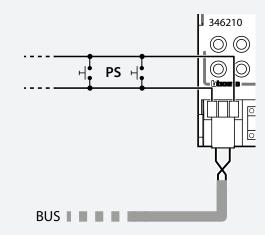
# Diagnostic - Troubleshooting

## Type of fault
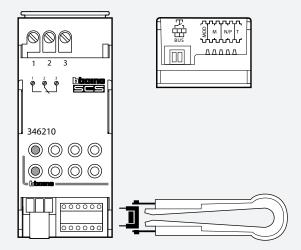
**– The actuator 346210 does not work**

**SOLUTION**

– In order to rule out any actuator faults, send the command using the local control directly connected to the device.



– Check the configuration of the actuator to make sure that it complies with the requirements of the technical data sheet.
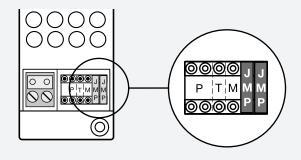


– Check the configuration of the internal unit and that the configurators are correctly plugged into their respective housings.

– Check the BUS wiring.

– Check the voltage on the BUS clamps.

## Type of fault

**– The actuator 346230 does not work**
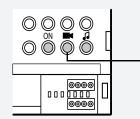
## SOLUTION

– Check the configuration of the actuator to make sure that it complies with the requirements of the technical data sheet.

– Check that the configuration is consistent with the mode of operation of the internal unit and the corresponding key associated to the actuator.

– Check if there is a need for "**JMP**" configurators, depending on the selected operating mode.

**– In video systems with risers and line expansions, the image is degraded and of poor quality.**

– Check that on the last internal unit of the apartment riser or line, the video signal impedance has been adapted (microswitch in the ON position).

– Check that the apartment interface (346850) or the system expansion interface (346851) have been installed, and the status - video signal level - indicated by the LED ▇◀
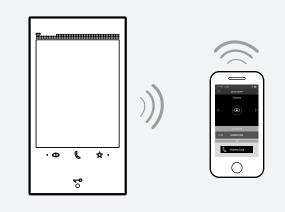
Green LED = **ok**

Green/red LED= **video signal near the limit**

Red LED = **no video signal or limit exceeded**

**NOTE : in the audio systems, the LED is red.**

# Diagnostic - Troubleshooting

Systems with **Classe 300EOS / Classe 100X16E** connected video internal units



## Type of fault
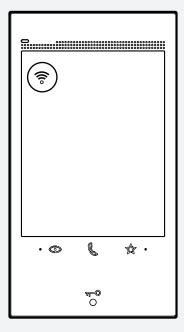
**- No video door entry system call received on the smartphone**

- **Red LED flashing** = Wi-Fi is active but not connected to a network;

- **LED off** = working correctly

## SOLUTION
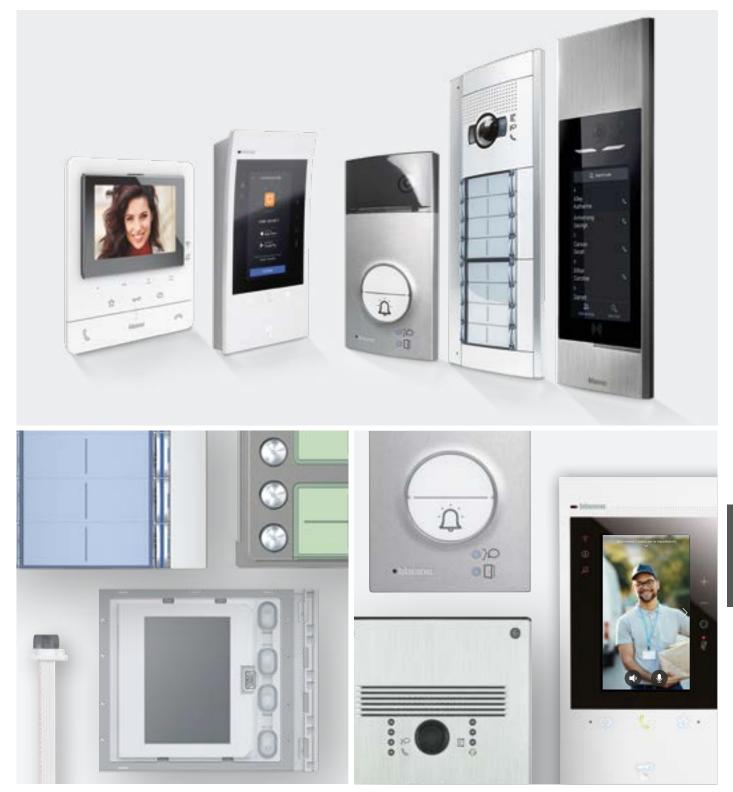
– Check the Wi-Fi signal level on the IU.



– Check that the router is actually connected to the Internet.

– Check that the date and time of the internal unit are correct.

– Check if any internal unit firmware updates are available.

– Check if any Home + Security APP updates are available.

– Check that PUSH notifications are enabled on your smartphone.

# CATALOGUE

# bticino

## Entrance panels
**overview and features**

| | Linea 5000 | Linea Sfera New | Linea Sfera Robur | Linea 3000 |
|---|---|---|---|---|
| Audio | | ● | ● | ● |
| Colour video | ● | ● | ● | ● |
| Finishes / Colours | Aluminium Nickel Gold Titanium Steel | Allmetal Allwhite Allstreet | Zamak Robur | Zamak grey Zamak black |
| Wall mounted installation | ● | ● | ● | ● |
| Flush mounted installation | ● | ● | ● | ● |
| Pushbutton call | ● | ● | ● | ● |
| Digital call | ● | ● | ● | |
| Wide angle camera (1) | ● | ● | ● | ● |
| HQ camera (2) | ● | ● | ● | |
| Control speech synthesis (3) | ● | ● | ● | |
| Door lock release with keypad | ● | ● | ● | |
| Door lock release with key card | ● | ● | ● | ● |
| Rainshield | ● | ● | ● | ● |
| Vandal proof | | | | |
| Protection index | IP65 | IP54 | IP54 | IP54 |
| Sturdiness index | IK08 | Up to IK08 | IK10 | IK10 |
| Max. number of calls | 4000 with digital call | 100 with pushbuttons 4000 with digital call | 100 with pushbuttons 4000 with digital call | 2 |

(1) Horizontal and vertical wide viewing field. Easy to use for children and differently-abled people.
(2) Wide angle HQ Camera 5 MP. Video signal is transmitted to internal units via PAL encoding on 2-Wires BUS SCS technology.
(3) Inductive loop and control speech synthesis. Use by people wearing hearing aids. Easy to use for visually impaired people.

| Linea 2000 | Linea 300 | Linea 100 |
|:---:|:---:|:---:|
| | | |
| | | ● |
| ● | ● | |
| Aluminium | Stainless Steel<br>Aluminium | Stainless Steel |
| ● | ● | ● |
| | ● | |
| ● | ● | ● |
| | | ● |
| | | |
| | | |
| | | |
| | | ● |
| | | |
| | | ● |
| | ● | |
| IP54 | IP54 | IP44 |
| IK07 | IK07 | IK08 |
| 2<br>(up to 4 calls - audio version only) | 32 with pushbuttons<br>4000 with digital call | 8 with pushbuttons<br>4000 with digital call |

**bticino**

# Linea 5000
## Digital. Functional. Performing.

**Linea 5000 with Netatmo is the new BTicino 2 Wires Smart entrance panel.**
Ideal for the "digitalisation" of multi-family settings, it takes access to modern buildings to the next level. Featuring a large 7" touch screen display, a 5 Megapixel wide angle HQ camera, digital filters and a modern and intuitive graphic interface, it integrates perfectly with contemporary buildings, conveying a feeling of innovation and high quality.

Welcome

23, High street

Message
For deliveries, please leave the package in the room near the staircase at ground floor. Thanks.

**iF DESIGN AWARD 2025**

| 2 WIRES | IP65 | IK08 | 7" |
|---|---|---|---|
| HQ | *(Bluetooth)* | WI·FI | ETH. |

**Access the building in different ways:**

CODE | KEY CARD | SMARTPHONE

In summary, Linea 5000 with Netatmo is a modern, safe and customisable digital experience, ideal for building access control and suitable for any installation situation.

# Linea 5000

5 exclusive finishes
to add value to every
entrance.

Two finishes in the catalogue.

Aluminium



Nickel

**Find the solution for any room.**
With 5 exclusive finishes in 60% recycled aluminium
Linea 5000 with Netatmo can be easily adapted
to all types of buildings, from contemporary
of any size to classic architecture. Linea 5000 expresses
robustness and high quality in every colour.

# Three finishes on demand made to order or project.

Gold



Titanium



Steel

![BTicino logo]

# Linea 5000

## BTicino 2 Wires technology.

No changes to your working habits.
Same installation rules as for the 2 wires entrance panels.

Ideal for upgrading existing 2 wires video door entry systems (e.g. systems with Sfera entrance panels or traditional brass pushbutton panels). **Bring your old system to the digital era with the new Linea 5000 with Netatmo.**
Perfectly compatible with all the devices of the BTicino 2 wires video door entry system range: Classe 100 and Classe 300EOS video internal units, power supply units and system accessories.

## Wide angle HQ camera

**Resolution:** 5 Megapixel
**Digital filters**
**Horizontal field of view:** (119°)
**Vertical field of view:** (92°)

NOTE: video signal is transmitted to internal units via PAL encoding on 2-Wires BUS SCS technology.

# Linea 5000 is suitable for all home environments.

With 2 wires technology and the possibility of customising the finish with the desired colour, logo and street number, it guarantees maximum adaptability in any living context.

## Building



## Apartment block
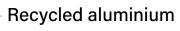


## Villa



# A sustainable approach



### Only active when needed
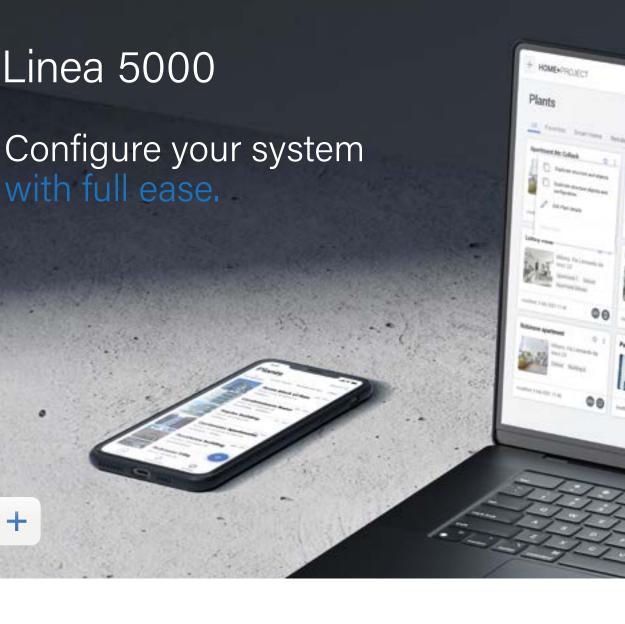
The proximity and brightness sensors contribute to energy efficiency, as the screen only activates when needed, automatically and only when someone approaches.



## Recycled aluminium

The fixing frames of the Linea 5000 modules and the finishing frames are made of **60% recycled aluminium**.

# Linea 5000

## Configure your system
## with full ease.



## HOME + PROJECT.
## To digitally design,
## configure and customise
## the video door entry system
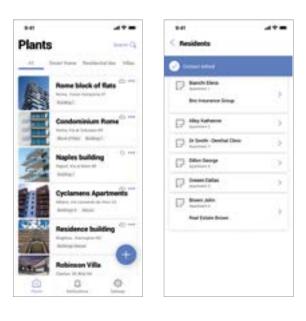
HOME + PROJECT - a new work tool for the installer.
Available as a web app for Desktop PCs
at https://homeproject.legrand.com and as a smart
device mobile app for on-site configuration.
Thanks to the App, creating, configuring, and fine-tuning
the system has never been easier. The Web App for
desktop allows you to create and configure the entire
system directly from the office, with the convenience
of importing files containing entire resident directories.

## SMART REPOSITORY

HOME + PROJECT securely stores all your projects,
allowing you to easily access your work from
anywhere. Forget about searching for codes,
local address book directories, and plant information:
everything is centralized on H + P.
Share your projects with colleagues or administrators
quickly and securely, enhancing collaboration
and increasing productivity. H + P is the ideal
solution to save time and work more efficiently.

## REMOTE ADDRESS
## BOOK EDITING

This digital tool helps simplify not only
the configuration process, but also maintenance
and customisation. Modify system parameters,
update the address book and download
the new entrance panel configuration,
either remotely or directly on site via
Bluetooth connection.

**bticino**

# Linea 5000

## Total adaptability.

The extensive customisation options, both physical
and digital, bring unique freedom of expression.
Possibility of customised finishes, with frames in assorted,
logo and street number for total adaptability.
All this makes Linea 5000 with Netatmo particularly suitable
for **meeting the customisation requests from architects,
design studios, real estate developers and customers.**

Physical customisation
with street number

Physical customisation
with the logo of the facility

Interface customisation
with the logo
of the facility

# Physical customisation of the finishing frames

Using the specific online tool, it is possible to customise the finishing frames.
Frames for customisation must be ordered using the specific custom part numbers
(V/345101-02-03-04-05) - see the relevant catalogue pages.
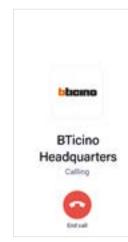




## Digital customisation of the display
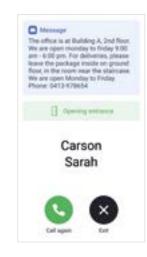
It is also possible to customise the display screens by changing the names of the residents in the address book,
the display mode, adding a logo / address, as well as displaying messages for visitors/couriers, etc.



White mode: for clear
and intuitive use.

Dark mode: protect your eyes
and save battery life.

The logo of adds
a very personal touch.

Customisable messages for Airbnb
guests, couriers and visitors.

# bticino

# Linea 5000

## Multiple call modes.
## Smart call.



### ADDRESS BOOK

with list of residents' names.

### CALL
### WITH CODE
### (numeric or alphanumeric)

In this mode, in addition to the code you can also choose to have the address book.
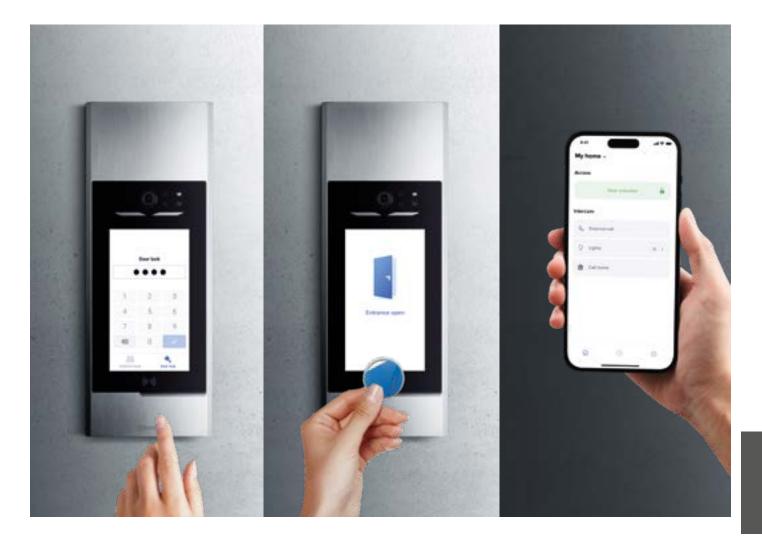
### APARTMENT
### BLOCK/RISER/FLOOR/
### APARTMENT

Entering the exact address of the apartment to call in the system.

# Multiple access modes.
## Smart access.



## NUMERIC CODE

Pre-set.
(maximum of 5 access codes,
also with date/time schedule).

## RFID KEYCARD

Pre-programmed / registered.
Keycards available in different colours.

## SMARTPHONE

With Home + Security App
via Bluetooth connection.

# Linea 5000

**Display module installation**

The Linea 5000 with Netatmo entrance panels and their add-on modules can be installed flush mounted or surface/wall mounted in different combinations, as shown in the following installation examples.

## ■ Flush mounted installation of the display module



Flush mounted box
3 modules
350030

Display electronic module 345000

3-module finishing frame

### 3-module finishing frames

**In the catalogue**



345101
Aluminium

345102
Nickel

**Made to order**



345103
Gold

345104
Titanium

345105
Steel

## ■ Wall or surface mounted installation of the display module



3-module wall mounted box with rainshield
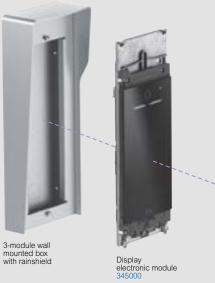
Display electronic module 345000

3-module finishing frame

### 3-module wall mounted boxes with rainshield



345331
Aluminium

345332
Nickel

# Linea 5000

## Additional module installation

### ■ Stand alone flush mounted installation of the additional modules



Flush mounted box - 1 module
350010

Additional electronic module

1-module finishing frame
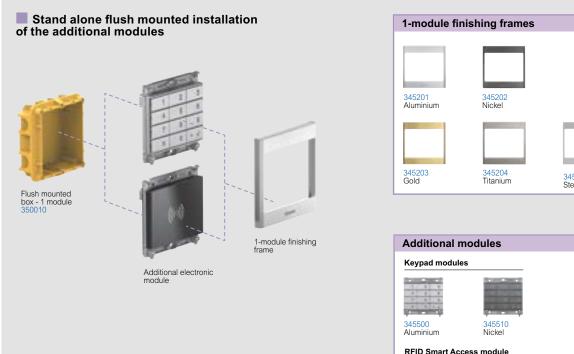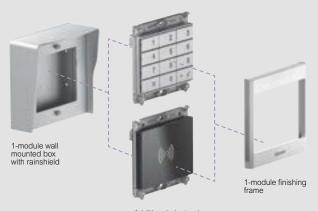
### ■ Stand alone wall mounted installation of the additional modules



1-module wall mounted box with rainshield

Additional electronic module

1-module finishing frame

---

### 1-module finishing frames



| | |
|---|---|
| 345201 Aluminium | 345202 Nickel |
| 345203 Gold | 345204 Titanium |
| | 345205 Steel |

---

### Additional modules

**Keypad modules**



| | |
|---|---|
| 345500 Aluminium | 345510 Nickel |

**RFID Smart Access module**



345520

---

### 1-module wall mounted boxes with rainshield
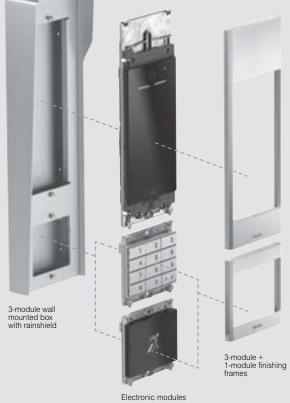


| | |
|---|---|
| 345311 Aluminium | 345312 Nickel |

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## Linea 5000

**Display module + additional module installation**

■ **Flush mounted installation (3 + 1)**
of the display module + additional module



Flush mounted boxes:
3 modules 350030
+
1 module 350010

3-module +
1-module finishing
frames

Electronic modules

■ **Wall mounted installation (3 + 1)**
of the display module + additional module



3-module wall
mounted box
with rainshield

3-module +
1-module finishing
frames

Electronic modules

### 3-module finishing frames

**In the catalogue**

| 345101 | 345102 |
| Aluminium | Nickel |

**Made to order**

| 345103 | 345104 | 345105 |
| Gold | Titanium | Steel |

### 1-module finishing frames

| 345201 | 345202 |
| Aluminium | Nickel |

| 345203 | 345204 | 345205 |
| Gold | Titanium | Steel |

### Additional modules

**Keypad modules**

| 345500 | 345510 |
| Aluminium | Nickel |

**Inductive loop module**

345530

### Wall mounted boxes with rainshield (3+ 1 ) modules

| 345341 | 345342 |
| Aluminium | Nickel |

IN THE CATALOGUE

MADE TO ORDER

345000    345101    345102    345103    345104    345105

Home + Project

Home + Security

| Item | Display module |
|------|----------------|
| 345000 | **7" vertical display module with wide-angle HQ camera (5 MP).**<br>Display and audio/video module to be combined with one of the 5 frames in different finishes for the creation of 2 wires systems. Equipped with an HQ camera with wide-angle field of view (119° horizontal - 92° vertical), white LEDs for lighting and twilight sensor for night vision. High-resolution 7" touch screen display with shatter-proof glass (IK08), anti-fingerprint and proximity sensor for automatic switching on.<br>With a digital microphone and echo eliminator for optimal sound performance. The flexible and user-friendly graphic interface is adaptable to any type of apartment block and allows a choice of 3 different call modes: address book call (list of residents' names), numeric or alphanumeric code call and block-staircase-floor-apartment logic code call.<br>The direct call to the guard station and the customisation of the homepage logos also make it suitable for solutions with concierge or for commercial establishments.<br>With advanced features such as voice feedback, automatic theme change (light/dark), customisation of welcome messages or instructions and temporary access code forwarding, it is suitable for residents and visitors of all ages and abilities. It also supports different modes for accessing the building: lock release with display code, RFID badge or Bluetooth via the Home + Security App, the resident's app. Programming and configuration requires the use of Home + Project (App or PC), the digital tool for the professional. Using this tool, it is possible to complete the entire configuration at the office, share it with other professionals and upload it to the display module via Bluetooth. Changes to residents' names and access codes are quick and smart, either on-site (via Bluetooth) or remotely (if the module has an active WiFi or Ethernet connection).<br>Installation with 3-module flush mounted box 350030 or with wall mounted box 345331 or 345332.<br>The book-like opening of the module allows for easy wiring. It allows the activation of an electrical door lock directly connected to clamps S+ and S- (18 V 4 A impulsive - 250 mA holding current  30 Ohm max) and of connecting a local door lock release pushbutton on clamps PL. |

| Item | Finishing frames - in the catalogue |
|------|-------------------------------------|
| 345101 | **3-module frame – Aluminum finish**<br>3-module frame in aluminum finish for display module 345000 |
| 345102 | **3-module frame – Nickel finish**<br>As 345101 but with Nickel finish |

| Item | Finishing frames - made to order |
|------|----------------------------------|
| 345103 | **3-module frame – Gold finish**<br>3-module frame in Gold finish for display module 345000 |
| 345104 | **3-module frame – Titanium finish**<br>As 345103 but with Titanium finish |
| 345105 | **3-module frame – Steel finish**<br>As 345103 but with Steel finish |

345500    345510    345520    345530

345201    345202    345203    345204    345205

| Item | **Keypad modules** |
|---|---|
| 345500 | **Additional keypad module in Aluminum finish** |

Keypad module with aluminium key finish for door lock opening in 2-wire systems where there is at least one Linea 5000 display module (345000). The keypad module is fitted with relay contacts (C – NO - NC) and clamps (CP - P1) for the connection of a local door release pushbutton and can be programmed using the Home + Project app. It has a programming reset pushbutton, LEDS for the visual notification of the access status and night backlighting. The device, to be completed with an appropriate frame, can be used stand-alone or combined with a display module in a 3+1 composition. To be installed in 1-module flush mounted box 350010, in wall mounted box 345311 or with dedicated accessory 345341 for 3+1 composition.

| Item | |
|---|---|
| 345510 | **Additional keypad module in Nickel finish** |

As 345500 but with NICKEL finish

**1-module finishing frames**

| | |
|---|---|
| 345201 | **1-module frame – Aluminum finish** |

1-module frame in aluminium finish for electronic modules 345500 - 345510 - 345520 - 345530.

| 345202 | **1-module frame – Nickel finish** |
|---|---|

As 345201 but with Nickel finish

| 345203 | **1-module frame – Gold finish** |
|---|---|

As 345201 but with Gold finish

| 345204 | **1-module frame – Titanium finish** |
|---|---|

As 345201 but with Titanium finish

| 345205 | **1-module frame – Steel finish** |
|---|---|

As 345201 but with Steel finish

| Item | **RFID Smart access module** |
|---|---|
| 345520 | **Additional RFID Smart access module** |

RFID/bluetooth smart access module for door lock opening in 2-wire systems where there is at least one Linea 5000 display module (345000), using the badge or using the Home + Security App via bluetooth.
The smart access module is fitted with relay contacts (C – NO - NC) and clamps (CP - P1) for the connection of a local door release pushbutton and can be programmed using the Home + Project app.
It has a programming reset pushbutton, LEDS for the visual notification of the access status and night backlighting. The device, to be completed with an appropriate finishing frame, can be installed in 1-module flush mounted box 350010 or in wall mounted box 345311 or 345312.

**Inductive loop module**

| 345530 | **Additional Inductive loop module** |
|---|---|
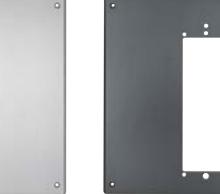
Inductive loop module to be used in conjunction with the display module Linea 5000 (345000). It allows people wearing hearing aids fitted with (T) selector to use audio door entry communication. In this mode, the hearing aid receives the audio signal directly from the amplification system, bypassing the microphone of the hearing aid itself, improving audio quality and reducing background noise. It is connected to the display module using the appropriate multicable supplied. To be completed with the appropriate finishing frame (available in 5 finishes) The device CANNOT be used stand-alone but only as additional module in conjunction with the Linea 5000 display (345000). To be installed in 1-module flush mounted box 350010 or with the dedicated accessory 345341 or 345342 for 3+1 composition.

**bticino**

**2** WIRES SYSTEM



345111



345112



345121



345122



350010



350030



345311



345312



345331



345332



345341



345342

| Item | **XL accessory plates** |
|---|---|
| 345111 | **XL cover plate– Aluminium finish** |
| | XL accessory plate in aluminium finish used for the installation of Linea 5000 entrance panels in place of existing multi-pushbutton panels. The XL dimensions allow for easy replacement by covering the hole left by the existing plate, optimised for three 3-module boxes side by side. |
| 345112 | **XL cover plate– Nickel finish** |
| | As 345111 but with Nickel finish |

**Accessory plates compatible with LINEA 300**

| Item | |
|---|---|
| 345121 | **Accessory plate compatible with Linea 300 – Aluminium finish** |
| | Accessory plate in Aluminium finish compatible with the Linea 300 pushbutton panels. Used for the installation of Linea 5000 entrance panels in replacement of existing Linea 300 pushbutton panels. The specific dimensions allow easy installation of the Linea 5000 digital display module to replace an existing Linea 300 pushbutton panel. |
| 345122 | **Accessory plate compatible with Linea 300 – Nickel finish** |
| | As 345121 but with Nickel finish |

| Item | **Flush mounted boxes** |
|---|---|
| 350010 | **Flush mounted box - 1 module** |
| | Plastic flush mounted box – 1 module |
| 350030 | **Flush mounted box – 3 modules** |
| | Plastic flush mounted box – 3 modules |

**Wall mounted box with rainshield**

| Item | |
|---|---|
| 345311 | **Wall mounted box – 1 module- Aluminium finish** |
| | Wall mounted box with integrated rainshield – 1 module – Aluminium finish. |
| 345312 | **Wall mounted box – 1 module - Nickel finish** |
| | As 345311 but with Nickel finish |
| 345331 | **Wall mounted box – 3 modules - Aluminium finish** |
| | Wall mounted box with integrated rainshield – 3 modules – Aluminium finish. |
| 345332 | **Wall mounted box – 3 modules - Nickel finish** |
| | As 345331 but with Nickel finish |
| 345341 | **Wall mounted box – 4 modules - Aluminium finish** |
| | Wall mounted box with integrated rainshield – (3+ 1 ) modules – Aluminium finish. |
| 345342 | **Wall mounted box – 4 modules - Nickel finish** |
| | As 345341 but with Nickel finish |

# BTICINO

## Linea 5000 - Catalogue

| Customisable finishing frames | Spare parts |
|---|---|

V/345101

V/345102

V/345103

SP115

SP116

V/345104

V/345105

| Item | **Customisable 3-module finishing frames** |
|---|---|
| V/345101 | **Customisable 3-module frame - Aluminum finish**<br>3-module frame that can be customised with dedicated graphics and logos on request. Aluminium finish. Frame to complete the 345000 display module. |
| V/345102 | **Customisable 3-module frame – Nickel finish**<br>As V/345101 but with Nickel finish |
| V/345103 | **Customisable 3-module frame – Gold finish**<br>As V/345101 but with Gold finish |
| V/345104 | **Customisable 3-module frame – Titanium finish**<br>As V/345101 but with Titanium finish |
| V/345105 | **Customisable 3-module frame – Steel finish**<br>As V/345101 but with Steel finish |

| Item | **3-module support frame** |
|---|---|
| SP115 | **3-module support frame**<br>Spare part – 3-module aluminium support frame |
| | **1-module support frame** |
| SP116 | **1-module support frame**<br>Spare part – 1-module aluminium support frame |

CUSTOMIZE LINEA 5000

For the customisation of custom finishing frames with specific logos, text and graphics, use the online tool accessible through the **YouDiagram** software, **the video door entry system configurator and the www.bticino.com portal**.

2 WIRES SYSTEM



| 348200 | 348201 | 348202 | 348203 |
| 348204 | 348205 | 348206 | 3547 |

| Item | **RFID programmable keycards** |
|------|-------------------------------|
| 348200 | Door lock release keycard - black |
| 348201 | Door lock release keycard - red |
| 348202 | Door lock release keycard - green |
| 348203 | Door lock release keycard - blue |
| 348204 | Door lock release keycard - orange |
| 348205 | Door lock release keycard - grey |
| 348206 | Door lock release keycard - yellow |
| 3547 | Door lock release customisable card (ISO 50 x 80 mm) |

**bticino**

# Two styles
## One electronic heart

### 2-wires simplicity, maximum performance

Exceptional audio and video performance as well as fast and simple installation can be achieved with 2-wires technology.

- New HQ Camera (5 MP)
- Up to 4000 dwellings
- 20 handsets per dwelling
- Up to 96 video entrance panels
- Operable range of 600 m between entrance panel and internal unit

SFERA **ROBUR**

SFERA **NEW**

2 WIRES SYSTEM

# SFERA

**New**
AUDIO-VIDEO
MODULE WITH 5 MP
HIGH-QUALITY
CAMERA
**351500**

2 WIRES

HQ

# bticino

SFERA
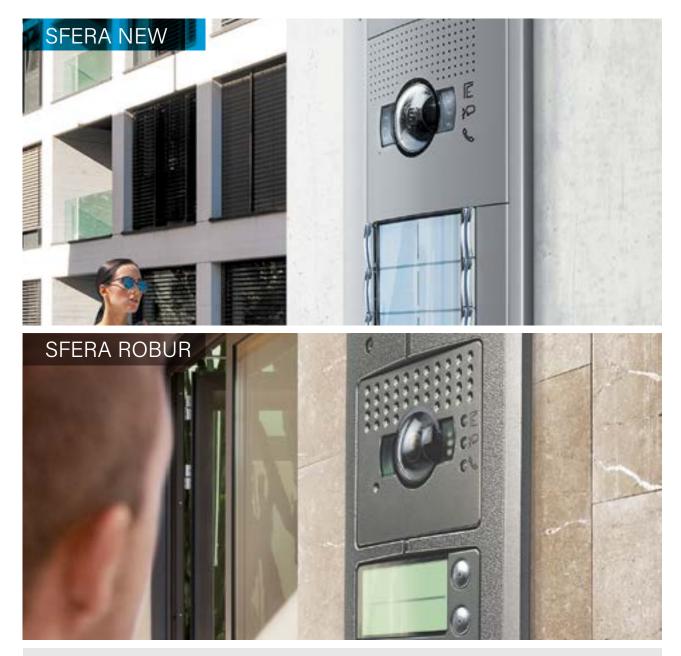
# New audio video module with 5 MP HQ camera 351500



SFERA NEW



SFERA ROBUR

**2 WIRES**

**HQ**



351500 - front



351500 - rear

# Comparison table of new items and dismissed items.

## ✓ Codes of existing front covers

**NEW A/V Module.**

**351500**

**Allmetal finishing front covers**

**351301**  **351311**  **351321**

**Allstreet finishing front covers**

**351303**  **351313**  **351323**

**Allwhite finishing front covers**

**351302**  **351312**  **351322**

**Robur finishing front covers**

**351305**  **351315**  **351325**

## ✗ Codes being discontinued

**A/V module.**

**351200**

**Sfera New - Robur front covers**

**351201**  **351211**  **351221**  **351202**  **351212**  **351222**

**351203**  **351213**  **351223**  **351205**  **351215**  **351225**

**Wide angle N/D camera module**

**352400**

**Sfera New - Robur front covers**

**352401**  **352402**  **352403**  **352405**

**A/V module. Wide angle camera**

**351300**
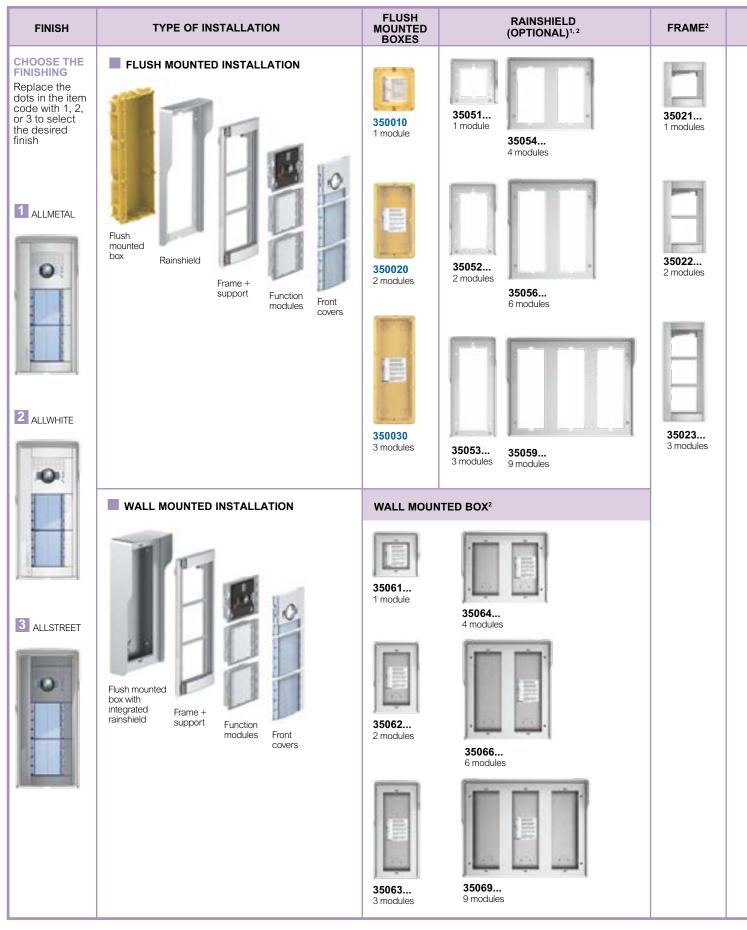
**Sfera New - Robur front covers**

**They are used for the new module 351500**

# bticino

## SFERA
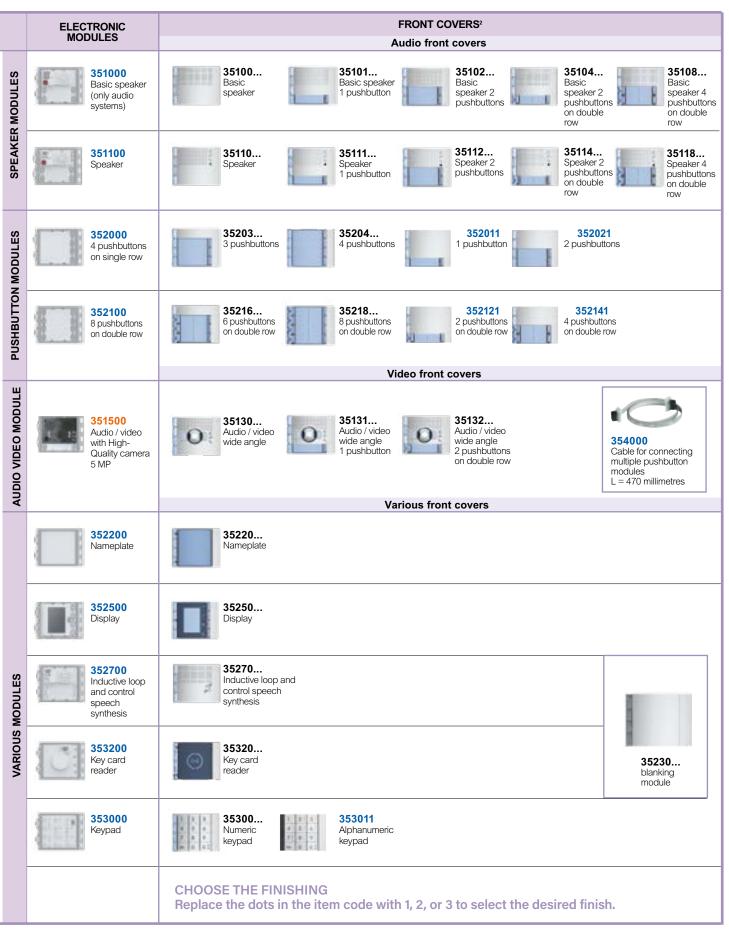
**Sfera New pushbutton panels - selection table**

| FINISH | TYPE OF INSTALLATION | FLUSH MOUNTED BOXES | RAINSHIELD (OPTIONAL)[1, 2] | | FRAME[2] |
|---|---|---|---|---|---|
| **CHOOSE THE FINISHING** Replace the dots in the item code with 1, 2, or 3 to select the desired finish **1** ALLMETAL **2** ALLWHITE **3** ALLSTREET | ■ **FLUSH MOUNTED INSTALLATION**  Flush mounted box · Rainshield · Frame + support · Function modules · Front covers | **350010** 1 module **350020** 2 modules **350030** 3 modules | **35051...** 1 module **35052...** 2 modules **35053...** 3 modules | **35054...** 4 modules **35056...** 6 modules **35059...** 9 modules | **35021...** 1 modules **35022...** 2 modules **35023...** 3 modules |

| | ■ **WALL MOUNTED INSTALLATION**  Flush mounted box with integrated rainshield · Frame + support · Function modules · Front covers | **WALL MOUNTED BOX[2]** | | |
|---|---|---|---|---|
| | | **35061...** 1 module **35062...** 2 modules **35063...** 3 modules | **35064...** 4 modules **35066...** 6 modules **35069...** 9 modules | |

1 : Only for flush mounted installation      2 : To select the desired finishing, see 'CHOOSE THE FINISHING', on the top left

| ELECTRONIC MODULES | FRONT COVERS[2] | | | | |
|---|---|---|---|---|---|
| | **Audio front covers** | | | | |

## SPEAKER MODULES

| ELECTRONIC MODULES | | | | | |
|---|---|---|---|---|---|
| **351000** Basic speaker (only audio systems) | **35100...** Basic speaker | **35101...** Basic speaker 1 pushbutton | **35102...** Basic speaker 2 pushbuttons | **35104...** Basic speaker 2 pushbuttons on double row | **35108...** Basic speaker 4 pushbuttons on double row |
| **351100** Speaker | **35110...** Speaker | **35111...** Speaker 1 pushbutton | **35112...** Speaker 2 pushbuttons | **35114...** Speaker 2 pushbuttons on double row | **35118...** Speaker 4 pushbuttons on double row |

## PUSHBUTTON MODULES

| | | | | |
|---|---|---|---|---|
| **352000** 4 pushbuttons on single row | **35203...** 3 pushbuttons | **35204...** 4 pushbuttons | **352011** 1 pushbutton | **352021** 2 pushbuttons |
| **352100** 8 pushbuttons on double row | **35216...** 6 pushbuttons on double row | **35218...** 8 pushbuttons on double row | **352121** 2 pushbuttons on double row | **352141** 4 pushbuttons on double row |

**Video front covers**

## AUDIO VIDEO MODULE

| | | | | |
|---|---|---|---|---|
| **351500** Audio / video with High-Quality camera 5 MP | **35130...** Audio / video wide angle | **35131...** Audio / video wide angle 1 pushbutton | **35132...** Audio / video wide angle 2 pushbuttons on double row | **354000** Cable for connecting multiple pushbutton modules L = 470 millimetres |

**Various front covers**

## VARIOUS MODULES

| | | |
|---|---|---|
| **352200** Nameplate | **35220...** Nameplate | |
| **352500** Display | **35250...** Display | |
| **352700** Inductive loop and control speech synthesis | **35270...** Inductive loop and control speech synthesis | |
| **353200** Key card reader | **35320...** Key card reader | **35230...** blanking module |
| **353000** Keypad | **35300...** Numeric keypad | **353011** Alphanumeric keypad |

**CHOOSE THE FINISHING**
**Replace the dots in the item code with 1, 2, or 3 to select the desired finish.**

# BTICINO

## SFERA

**Sfera Robur pushbutton panels - selection table**

| FINISH | TYPE OF INSTALLATION | FLUSH MOUNTED BOXES | SUPPORT FRAME | FINISHING FRAME | |
|---|---|---|---|---|---|
| (ROBUR) | **■ FLUSH MOUNTED INSTALLATION**<br><br>Flush mounted box — Support frame — Function modules — Front covers — Finishing frame | **350110**<br>1 module<br><br>**350120**<br>2 modules<br><br>**350130**<br>3 modules | **350315**<br>1 module<br><br>**350325**<br>2 modules<br><br>**350335**<br>3 modules | **350415**<br>1 module<br><br>**350425**<br>2 modules<br><br>**350435**<br>3 modules | |
| | **■ WALL MOUNTED INSTALLATION**<br><br>Flush mounted box with integrated rainshield — Frame + support — Function modules — Front covers — Finishing frame | **WALL MOUNTED BOX [2]**<br><br>**35061...**<br>1 module<br><br>**35062...**<br>2 modules<br><br>**35063...**<br>3 modules<br><br>**35064...**<br>4 modules<br><br>**35066...**<br>6 modules<br><br>**35069...**<br>9 modules | | | |

1 : To select the desired finishing, see SFERA NEW 'CHOOSE THE FINISHING'.

| ELECTRONIC MODULES | FRONT COVERS | | | | | |
|---|---|---|---|---|---|---|
| | **Audio front covers** | | | | | |
| **SPEAKER MODULES** | | | | | | |
| **351000** Basic speaker (only audio systems) | **351005** Basic speaker | **351015** Basic speaker 1 pushbutton | **351025** Basic speaker 2 pushbuttons | **351045** Basic speaker 2 pushbuttons on double row | **351085** Basic speaker 4 pushbuttons on double row | |
| **351100** Speaker | **351105** Speaker | **351115** Speaker 1 pushbutton | **351125** Speaker 2 pushbuttons | **351145** Speaker 2 pushbuttons on double row | **351185** Speaker 4 pushbuttons on double row | |
| **PUSHBUTTON MODULES** | | | | | | |
| **352000** 4 pushbuttons on single row | **352035** 3 pushbuttons | **352045** 4 pushbuttons | | | | |
| **352100** 8 pushbuttons on double row | **352165** 6 pushbuttons on double row | **352185** 8 pushbuttons on double row | | | | |
| | **Video front covers** | | | | | |
| **AUDIO VIDEO MODULE** | | | | | | |
| **351500** Audio / video with High-Quality camera 5 MP | **351305** Audio / video wide angle | **351315** Audio / video wide angle 1 pushbutton | **351325** Audio / video wide angle 2 pushbuttons on double row | | **354000** Cable for connecting multiple pushbutton modules L = 470 millimetres | |
| | **Various front covers** | | | | | |
| **VARIOUS MODULES** | | | | | | |
| **352200** Nameplate | **352205** Nameplate | | | | | |
| **352500** Display | **352505** Display | | | | | |
| **352700** Inductive loop and control speech synthesis | **352705** Inductive loop and control speech synthesis | | | | **352305** blanking module | |
| **353200** Key card reader | **353205** Key card reader | | | | | |
| **353000** Keypad | **353005** Keypad | | | | | |

**Sfera pushbutton panels - electronic modules**



| 351000 | 351100 | 351500 | 352000 | 352100 | 352200 |

| Item | Electronic modules |
|------|---------------------|
| 351000 | BASIC **speaker module** for the creation of 2 WIRES audio systems. Fitted with speaker and microphone volume adjustment. It manages up to 100 pushbutton calls using additional double row pushbuttons. It allows the activation of an electrical door lock directly connected to clamps S+ and S- (18 V 4 A impulsive - 250 mA holding current 30 Ohm max) and of connecting a local door lock release pushbutton on clamps PL. To be completed with surround plate. The device must be physically configured. |
| 351100 | **speaker module** for the creation of 2 WIRES audio systems. Fitted with speaker and microphone volume adjustment. It can manage up to 100 pushbutton calls using the additional double row pushbutton modules. It allows the activation of an electrical door lock directly connected to clamps S+ and S- (18 V 4 A impulsive - 250 mA holding current 30 Ohm max) and of connecting a local door lock release pushbutton on clamps PL. Preset for additional power supply. Fitted with front LEDs for the notification of the operating status: door lock release, active communication, forwarded call, and busy system. Integrated optic sensor for the switching on of the night backlighting. To be completed with surround plate. The device can be configured either physically or using the PC and the specific software. - it can be downloaded free of charge from the website www.homesystems-legrandgroup.com |
| 351500 | **Sfera audio/video module** with HQ Camera for the creation of 2 WIRES video systems. Equipped with a wide-angle 5 MP HQ Camera with digital filters and white LEDs for illumination of the shooting field. The video signal is transmitted to the video intercoms via PAL coding on 2-wires SCS BUS technology. Speaker and microphone volume adjustments. Manages up to a maximum of 98 button calls using additional double row button modules. Horizontal viewing angle (119°), vertical viewing angle (92°). It allows the activation of an electric door lock connected directly to the S+ and S- terminals (18 V 4 A impulsive - 250 mA maintenance at 30 Ohm max) and the connection of a local door lock release button to the PL terminals. Prepared for additional power supply. Equipped with front LEDs and multilingual voice synthesis (can only be activated from the TiSferaDesign software) to signal the operating status: door opener, active communication, call forwarded and system busy. Integrated optical sensor for turning on the backlight at night. To be completed with finishing front plate. The device must be configured physically or via PC and specific software - downloadable for free from the website www.homesystems-legrandgroup.com |

| Item | Electronic modules |
|------|---------------------|
| 352000 | **additional 4-pushbutton modules arranged on single column**. To be used with speaker modules 351000 - 351100 and with video module 351500. Connection using the appropriate multicable supplied. Backlighting of nameplates controlled by the speaker module or the audio/video module connected. To be completed with surround plate. |
| 352100 | **additional 8-pushbutton modules arranged on double column.** To be used with speaker modules 351000 - 351100 and with audio video module 351500. Connection using the appropriate multicable supplied. Backlighting of nameplates controlled by the speaker module or the audio/video module connected. To be completed with surround plate. |
| 352200 | **nameplate module** normally used for displaying the house number or other notifications (e.g. legend for calls using digital pushbutton panels, opening/closing times, etc.). Connection using the appropriate multicable supplied. Night backlighting controlled by the speaker module or the audio/video module connected. To be completed with surround plate. |

# SFERA

**Sfera pushbutton panels - electronic modules**

**2 WIRES SYSTEM**

| 352500 | 352700 | 353000 | 353200 | | 346993 |

| 348200 | 348201 | 348202 | 348203 | 348204 | 348205 | 348206 | 3547 | 348402 |

| Item | **Electronic modules** |
|------|------------------------|
| 352500 | **graphic display module** to be used with speaker module 351100 or with audio/video module 351500 (connection using the multicable supplied). It can operate in two modes: call from address book or digital call. The call from the address book gives the possibility of sending the call by scrolling on the display the names associated to the residents. It is possible to store up to 4000 residents names. Using the keypad module item 353000 it is also possible to directly call the apartment by entering the number corresponding to the resident. The digital call is also performed using the keypad module item 353000 by entering the numerical code. It is recommended that one or more nameplate modules, item 352200, are installed at the side of the pushbutton panel to display the correspondence between the numerical codes and the names of the users. It is possible to program the names in the address book in two different ways: manual inclusion using the pushbuttons of the display module or inclusion using a PC with the specific software, which can be downloaded free of charge from www.homesystems-legrandgroup.com, by downloading the file to the display module (RECOMMENDED). System power supply cuts DO NOT cause the loss of memory data. To be completed with finishing front cover. |
| 352700 | **module for inductive loop and control speech synthesis** to be used with speaker module 351100 or with audio video module 351500. It allows use by hearing (equipped with T-selector) or visually impaired individuals, thanks to the synthesis of voice messages on the connection status (call in progress, end of call, no answer, busy, door open). It is connected to the speaker module using the appropriate multicable supplied. To be completed with surround plate. The device can be configured either physically or using the PC and the specific software. - it can be downloaded free of charge from the website www.homesystems-legrandgroup.com |

| Item | **Electronic modules** |
|------|------------------------|
| 353000 | **Keypad module** for door lock release or for digital call to the apartment (in combination with display module). It's fitted with relay contacts (C – NO - NC) and clamps (CP - P1 - P2) for the connection of a local door release pushbutton. The numerical code for the opening of the door lock can be programmed using the keypad itself, or using a PC after downloading the module programming file. It also has a programming reset pushbutton and LEDS for the visual notification of the access status. Night backlighting with LEDs. To be completed with surround plate. It is connected to the other modules using the appropriate multicable supplied. The device may also be used as a stand alone unit with independent power supply and operation, only for door lock release. Configuration performed using physical configurators, or a PC with the specific software, which can be downloaded free of charge from www.homesystems-legrandgroup.com |
| 353200 | **RFID key card reader module** for the release of the door lock by swiping the key card. It manages up to 20000 key cards. It's fitted with relay contacts (C – NO - NC) and clamps (CP - P1 - P2) for the connection of a local door release pushbutton. The key card for the release of the door lock can be programmed from the module itself, or using a PC after downloading the module programming file. It also has a programming reset pushbutton and LEDS for the visual notification of the access status. Night backlighting with LEDs. To be completed with surround plate. It is connected to the other modules using the appropriate multicable supplied. The device may also be used as a stand alone unit with independent power supply and operation. Configuration performed using physical configurators, or a PC with the specific software, which can be downloaded free of charge from www.homesystems-legrandgroup.com |
| 346993 | **The key expansion module** gives the possibility of connecting the call key to the SFERA speaker modules (items 351000; 351100; 351500). Each module can manage up to 8 call keys It is possible to connect several key expansion modules (max 96 call keys for each entrance panel) |

| | **Door lock release transponder and card for Sfera entrance panels and programmer** |
|------|------------------------|
| 348200 | door lock release keycard - black |
| 348201 | door lock release keycard - red |
| 348202 | door lock release keycard - green |
| 348203 | door lock release keycard - blue |
| 348204 | door lock release keycard - orange |
| 348205 | door lock release keycard - grey |
| 348206 | door lock release keycard - yellow |
| 3547 | door lock release customisable keycard (ISO 50 x 80 mm) |
| 348402 | tabletop key card programmer |

# LINEA 3000

## One entrance panel for every need
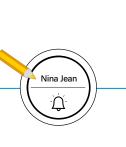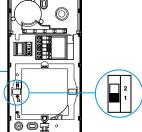
**LINEA 3000** can be configured both for 1 and 2 family house
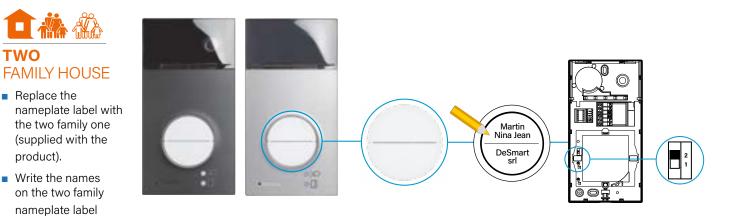
### ONE
FAMILY HOUSE

- Write the name on the one family nameplate label (supplied with the product).
- Set the internal micro-switch on position 1.

Nina Jean

### TWO
FAMILY HOUSE

- Replace the nameplate label with the two family one (supplied with the product).
- Write the names on the two family nameplate label
- Set the internal micro-switch on position 2.

Martin
Nina Jean

DeSmart
srl

2 WIRES SYSTEM

## LINEA 3000 inside of the professional kits
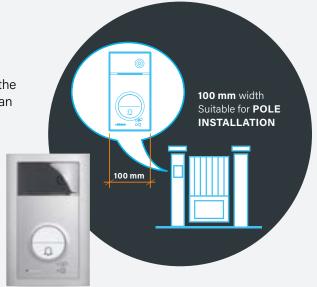
For **ONE FAMILY** house installation, you have to buy only the kit and all you need is inside it.

For **TWO FAMILY** house installation, you have to buy  the kit + an additional 2 wires internal unit. (refer to 2 wires system internal units range).

# High installation flexibilty

■ **LINEA 3000** is sold for wall mounting installation but with the dedicated **accessories** (to be purchased separately), you can use the entrance panel for  **flush mounting installation**.

**100 mm** width Suitable for **POLE INSTALLATION**

100 mm

**350020 +**
**343061 (grey version)**
**343063 (black version)**
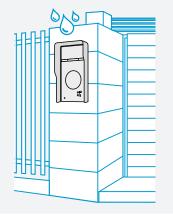
**Also available in black version.**

*Ideal for renovations.........you can reuse the existing flush mounted box.*
*Same 2 Modules Tersystem and SFERA flush mounting box.*

■ **LINEA 3000** can be wall mounted with the dedicated **rainshield accessory** (to be purchased separately).

**343051**
**(grey version)**
**343053**
**(black version)**

**Also available in black version.**

**Entrance panel**
**LINEA 3000**

# LINEA 3000
## Entrance panel

## THE ENTRANCE PANELS RANGE
## DEDICATED TO **VILLA STANDARD**

| **High level applications** | Modern aesthetics feeling of quality |

**REFINED**
detailing

**BRANDED**
quality

**robustness**
**Zamak finishes**

Weatherproof **(IP 54)** protection degree

IP54

Robustness **(IK 10)** protection degree

IK10

**FLOATING**
effect

**HIDDEN**
technology

**HIGH RELEVANCE**
on interaction

# Unique design and robust perception

Same look and ergonomics for all available versions:

**LINEA 3000** video with door lock release badge

**343093**  **343091**

**LINEA 3000** video   **LINEA 3000** audio

**343081**   **343071**

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# Advanced functions

### Wide angle camera

Horizontal and vertical wide viewing field. Easy to use for children and differently-abled People.

### Door lock release

Door lock release with coloured badges or clear discs. Additional safe and comfort for all the residents.

343091    343093    343081    343071    348260

| Item | |
|---|---|
| | **LINEA 3000 Video entrance panel with door lock release proximity reader** |
| 343091 | Wall mounted 2-Wires video pushbutton panel with Zamak front cover, wide angle colour camera and proximity reader. Fitted with white LED for the lighting of the shooting field in low light conditions. Can be set up for one or two family installation. It provides the possibility of opening an electrical door lock connected directly to clamps S+ and S- (18 V 4 A impulsive, 250 mA holding current, 30 ohm max). Can manage a maximum of 20 badges (125 KHz) for electrical door opening (master system badge included). White LED backlight name plate. Protection degree IP54 – protection against mechanical impact IK10. Supplied 1 set of door opening badges made up of : 6 coloured badges and 2 clear discs. |
| 343093 | Same as 343091 but in black finish |
| | **LINEA 3000 Video entrance panel** |
| 343081 | Wall mounted 2-Wires video pushbutton panel with Zamak front cover and wide angle colour camera.. Fitted with white LED for the lighting of the shooting field in low light conditions. Can be set up for one or two family installation. It provides the possibility of opening an electrical door lock connected directly to clamps S+ and S- (18 V 4 A impulsive, 250 mA holding current, 30 ohm max). White LED backlight name plate. Protection degree IP54 – protection against mechanical impact IK10. |
| | **LINEA 3000 Audio entrance panel** |
| 343071 | Wall mounted 2-Wires pushbutton panel with Zamak front cover. Can be set up for one or two family installation. It provides the possibility of opening an electrical door lock connected directly to clamps S+ and S- (18 V 4 A impulsive, 250 mA holding current, 30 ohm max). White LED backlight name plate. Protection degree IP54 – protection against mechanical impact IK10. |

| Item | |
|---|---|
| | **LINEA 3000 Spare part front covers** |
| 343082 | Spare part front cover for video entrance panels 343081 and 343091. |
| 343083 | Spare part front cover black finish for Linea 3000 video entrance panel 343093. |
| 343072 | Spare part front cover for audio entrance panel 343071. |
| | **Door lock release badge** |
| 348260 | Set made up of 6 coloured badges which can be programmed to open the door |

# Entrance panel
## LINEA 3000

IP54  IK10

**2** WIRES SYSTEM



| 343051 | 343053 | 343061 | 343063 | 350020 |

| Item | **LINEA 3000 Rainshield accessory** |
|---|---|
| 343051 | Rainshield roof accessory for Linea 3000 (343071 – 343081 – 343091) entrance panels. To be purchased separately. |
| 343053 | Rainshield roof accessory for Linea 3000 (343093) entrance panel.To be purchased separately. |

| Item | **LINEA 3000  Flush mounting accessory + plastic box** |
|---|---|
| 343061 | Flush mounting frame accessory for Linea 3000 (343071 – 343081 – 343091) entrance panels. To be purchased separately. |
| 343063 | Flush mounting frame accessory for Linea 3000 (343093) entrance panel. To be purchased separately. |
| 350020 | Plastic box suitable for the flush mounting installation of Linea 3000 entrance panels (343071 - 343081 - 343091 - 343093) together with the specific frame accessory 343061 - 343063. To be purchased separately. |

# Entrance panel
## LINEA 2000

IP54  IK07



343031          343032          342911          342921          342931          342941

| Item | **Wall mounted colour video entrance panel** |
|------|-----------------------------------------------|
| 343031 | 2 WIRE video pushbutton panel with a call key and colour camera. Fitted with white LEDs for the lighting of the shooting field in low light conditions. Aluminium front cover. Nameplate lit by green LED |
| 343032 | As item 343031, but with 2 call pushbuttons |

| Item | **Wall mounted audio entrance panel** |
|------|---------------------------------------|
| 342911 | 2 WIRE audio pushbutton panel with one call pushbutton for wall mounted installation. Aluminium front cover. Nameplate lit by green LED |
| 342921 | As item 342911, but with 2 call pushbuttons |
| 342931 | As item 342911, but with 3 call pushbuttons |
| 342941 | As item 342911, but with 4 call pushbuttons |

343101



343102



343100

| Item | **Pushbuttons audio entrance panel** |
|------|--------------------------------------|
| 343101 | 2 WIRE audio pushbutton panel with 4 call pushbuttons for wall mounted installation. It's fitted with rainshield and internal contact (C - NO - NC) for the connection of an electrical door lock or external actuator (for the power supply to the electrical door lock allow for the installation of auxiliary transformer item 336482). Connections (PL) for a local door lock release pushbutton |
| 343102 | 2 WIRE audio pushbutton panel with 8 call pushbuttons for wall mounted installation. It's fitted with rainshield and internal contact (C - NO - NC) for the connection of an electrical door lock or external actuator (for the power supply to the electrical door lock allow for the installation of auxiliary transformer item 336482). Connections (PL) for a local door lock release pushbutton |

| Item | **Digital call audio entrance panel** |
|------|---------------------------------------|
| 343100 | 2 WIRE AUDIO digital call pushbutton panel for wall mounted installation. The device consists of a pushbutton panel with 16 keys and a digital display showing the operating status. Using previously saved numerical (SCS addresses) or alphanumerical (logical addresses) codes, it is possible to call the internal units, and for the residents to release the door lock using a dedicated numerical code. The pushbutton panel manages up to 4000 internal unit addresses (from 0 to 3999), as well as the direct call to the 2 WIRE switchboard. It's fitted with rainshield and internal contact (C - NO - NC) for the connection of an electrical door lock or external actuator (for the power supply to the electrical door lock allow for the installation of auxiliary transformer item 336482). Connections (PL) for a local door lock release pushbutton |

# bticino

## Entrance panel
### LINEA 300

IP54   IK07



308001
308011

308002
308012

308003
308013

308004
308014

308022

| Item | Aluminium finish pushbutton panel |
|------|-----------------------------------|
| 308001 | Monobloc vandal-resistant 2 WIRE video pushbutton panel for 2 and 4 calls with aluminium finish. The item code includes: flush mounted box, frame, colour video and audio electronic module, prewired pushbutton module/s. Presetting for the mounting of transponder reader or key switch. Backlit call keys. Visual and sound notifications of the communication status for: call active, system busy, door lock status |
| 308002 | As item 30800 but for up to 8 calls |
| 308003 | As item 308001 but for up to 12 calls |
| 308004 | As item 308001 but for up to 20 calls |
| 308005 | As item 308001 but for up to 32 calls |

**Wall mounted boxes**

| | |
|------|---|
| 308021 | Wall mounted box for pushbutton panels, items 308001-308011 |
| 308022 | Wall mounted box for pushbutton panels, items 308002-308012 |
| 308023 | Wall mounted box for pushbutton panels, items 308003-308013 |
| 308024 | Wall mounted box for pushbutton panels, items 308004-308014 |
| 308025 | Wall mounted box for pushbutton panels, items 308005-308015 |

| Item | Stainless steel finish pushbutton panel |
|------|------------------------------------------|
| 308011 | Monobloc vandal-resistant 2 WIRE video pushbutton panel for 2 and 4 calls with stainless steel finish. The item code includes: flush mounted box, frame, colour video and audio electronic module, prewired pushbutton module/s. Presetting for the mounting of transponder reader or key switch. Backlit call keys. Visual and sound notifications of the communication status for: call active, system busy, door lock status |
| 308012 | As item 308011 but for up to 8 calls |
| 308013 | As item 308011 but for up to 12 calls |
| 308014 | As item 308011 but for up to 20 calls |
| 308015 | As item 308011 but for up to 32 calls |

# Entrance panel

## LINEA 300

IP54   IK07

2 WIRES SYSTEM



308040



308026



**Digital call entrance panel with flush mounting box**

| Item | **Digital call entrance panel** |
|---|---|
| 308040 | Monobloc vandal-resistant 2 WIRE digital call video pushbutton panel (in stainless steel), flush mounted or wall mounted installation (with specific box item 308026 sold separately). The item includes: flush mounted vandal-resistant steel box, audio and video module with wide angle colour camera, integrated graphic display, and alphanumeric keypad for direct apartment call, fast address book search, and door lock release using a code. Presetting for the installation of a T25 Vigik reader, or a key switch. Backlit display and BLUE keys. It is possible to store up to 4000 residents names. Visual, sound, or control speech synthesis communication status notification, for example: call active, system busy, door lock status. Direct control of an electric door lock 18V-4A impulsive, 250 mA holding current (30 ohm max). System power supply cuts do NOT cause the loss of memory data. Selectable display menu languages are: Italian, English and French. The device can be configured physically or using a PC with the specific software, which can be downloaded free of charge from www.homesystems-legrandgroup.com |
| 308026 | Wall mounted box for digital call entrance panel 308040 |

**bticino**

# INTERNAL UNITS RANGE

**CLASSE 300EOS**

**CLASSE 100**

**SPRINT L2**

alexa | built-in

CLASSE 300EOS

CLASSE 100 X16E          CLASSE 100 A16E

# btıcıno

## Internal units
**overview and features**

| | Classe 300EOS with Netatmo | | Classe 100X16E | Classe 100V16E | |
|---|---|---|---|---|---|
| Audio | | | | | |
| Colour video | ● | | ● | ● | |
| Handsfree | ● | | ● | ● | |
| Call redirection on smartphone | ● | | ● | | |
| Integrated Alexa voice assistant | ● | | | | |
| Wifi connection | ● | | ● | | |
| Finishes / Colours | White - Black | | White | White | |
| Display | LCD Touch 5" | | LCD 5" | LCD 5" | |
| Answering machine | ● | | | | |
| Floor call | ● | | ● | ● | |
| Door lock release | ● | | ● | ● | |
| Staircase light control | ● | | ● | ● | |
| Scrolling EP activation | ● | | ● | ● | |
| Intercom (1) | ● | | ● | ● | |
| Inductive loop (2) | ● | | ● | ● | |
| Professional studio function | ● | | ● | ● | |
| Safe door lock function | ● | | ● | ● | |
| Note / message function | ● | | | | |
| Quick link / Favourite | ● | | | | |
| Wall-mounted installation | ● | | ● | ● | |
| Tabletop installation | | | ● | ● | |

(1) The intercom function allows for up to 3-minute communication between and among video door entry systems in the same apartment / in different apartments.
(2) Use by people wearing hearing aids fitted with (T) selector.
(3) Activated with specific configuration inserted in P.

244

2 WIRES SYSTEM

| | Classe 100V16B | Classe 100V16M | Classe 100A16E | Classe 100A16M | Sprint L2 |
|---|---|---|---|---|---|
| | | | • | • | • |
| | • | • | | | |
| | • | | • | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | White | White | White | White | White |
| | LCD 5" | LCD 4,3" | | | |
| | | | | | |
| | • | • | • | • | • |
| | • | • | • | • | • |
| | • | • | • | • | •(3) |
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# bticino

# CLASSE
# 300EOS
## THE EVOLUTION OF SMART



alexa | built-in

| Video door entry system | Management with smartphone | Voice control | Smart Home | Smart Security |

Classe 300EOS with Netatmo is the 2 wires / Wi-Fi handsfree connected video internal unit with built-in Amazon Alexa voice assistant. Using the Home + Security App, in addition to video door entry calls, it is also possible to manage the devices of the Netatmo security range, creating a simple and fast Smart security system.

# CLASSE 300EOS
WITH Netatmo

Change your idea of a video internal unit.

![bticino]

# Internal units
## Classe 300EOS with Netatmo



# The smart vision
# of the home.

Distinctive design to meet the needs of contemporary living.
Vertical and super slim. With its clean and modern design,
it gives every type of home an innovative look,
and offers a unique user experience.

iF DESIGN AWARD

# Vertical display and curved shape: a disruptive and modern design, but also understated.

### 5" Touch Screen
Vertical display
for a better view
of the caller

### Face detection
Automatic centring of the
subject on the display

### Horizontal display
Double "tap" the display
to view the image
in landscape format

### Curved shape
The shape of a welcome:
a "welcoming effect"
for residents and guests.

# Always aware with the Home + Security App

## Home + Security

**The best App for a safe home**
Alerts and notifications for incoming calls, motion and people detection, event information and door lock management with a simple and intuitive interface.

Download on the App Store | GET IT ON Google Play

**2** WIRES SYSTEM

Answer the calls,
activate the electrical door locks,
activate the cameras and display
the timeline of the events
-
Manage up to 20 homes
with your single account

Home + Security

### Incoming call

Receive notification
when someone
is calling

### See who's calling

Answer the call and
open the gate for
the courier

### Check the events

Check who called you
and if they left you
a message

### Quick actions

- Activate the electrical door locks
- Activate the timed staircase lights
- Call home / Intercom
- Activate the cameras
- Manage the video door entry
  answering machine

## Internal units
### CLASSE 300EOS with Netatmo

Security enhancement with integration of Netatmo devices

# Video door entry system and security. Together.



**Video door entry system** •••

**Main entrance**
Incoming entrance call.



**Security** •••

**Secondary entrance and interiors**
Smart Outdoor Camera with Siren and movement detection. Smart Indoor Camera with face recognition.
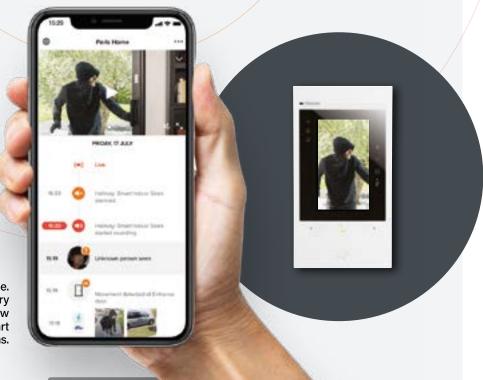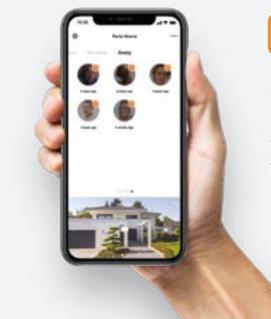


A single App with an intuitive home page. It allows you to answer video door entry calls, activate the door lock and view images from Netatmo smart outdoor and indoor cameras.

**Professional opportunity:** offer your services as an installer of simple smart security systems.

**Business opportunities:** access to a catalogue of smart and easy-to-install security devices.

## Home + Security
The best App for a safe home.

Solutions for a smart and complete protection of your home: security cameras, alarms, opening sensors, smoke detector...

**Leave your home without worries.**

WITH
# Netatmo

## Examples of Netatmo solutions natively integrated in the Home + Security App

| | | | |
|---|---|---|---|
| Smart Outdoor Camera | Smart Outdoor Camera with Siren | Smart Indoor Camera | Smart Door and Window Sensors |
| Smart Alarm System with Camera | Smart Indoor Siren | Smart Smoke Alarm | Smart Carbon Monoxide Alarm |

alexa | built-in

# The first video internal unit with built-in Alexa

**Enjoy the full Alexa experience**
interacting with all its functions, such as:
Custom routines - Play Music - Smart Home
To set the clock alarms – Memos and
**video door entry functions.**
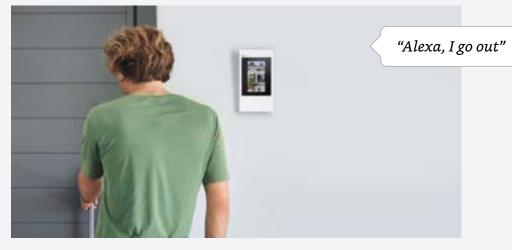
Add any compatible "works with Alexa" devices, to offer your customers an increasingly Smart home.



"Alexa, open the gate"



"Alexa, answer the call"



"Alexa, I go out"
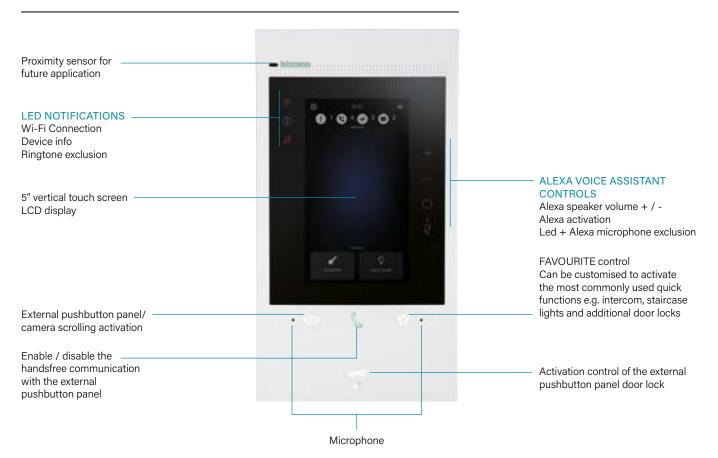
NOTE: Alexa is not available in all languages and Countries.
Alexa features and functionality may vary by location.

# Internal units
**CLASSE 300EOS with Netatmo**

# Front view

Proximity sensor for
future application

LED NOTIFICATIONS
Wi-Fi Connection
Device info
Ringtone exclusion

5" vertical touch screen
LCD display

External pushbutton panel/
camera scrolling activation

Enable / disable the
handsfree communication
with the external
pushbutton panel

ALEXA VOICE ASSISTANT
CONTROLS
Alexa speaker volume + / -
Alexa activation
Led + Alexa microphone exclusion

FAVOURITE control
Can be customised to activate
the most commonly used quick
functions e.g. intercom, staircase
lights and additional door locks

Activation control of the external
pushbutton panel door lock

Microphone

# Back view

Speaker

PLUG-IN CONNECTORS
WITH SCREW CLAMPS
FOR CONNECTION
(BUS-MH) – BUS SCS MyHome Home
             Automation system;
(5M-1) – additional ringtone;
( ) – call to the floor external pushbutton

Dip-switch to enable
the safe door lock function

Dip-switch to select the
MASTER / SLAVE function

Configurator socket

MINI-USB socket
for firmware update

ON / OFF micro switch
to enable the additional
power supply (2-1)

Line termination ON/OFF
micro-switch

Connector for the connection to
the LAN network using Ethernet
accessory 344844

PLUG-IN CONNECTOR WITH SCREW
CLAMPS FOR CONNECTION
(2-1) – Additional power supply;
(BUS-AV) – BUS SCS 2 wires video
door entry system

# Internal units

## CLASSE 300EOS with Netatmo

**2 WIRES SYSTEM**



alexa | built-in

H + S

344842



alexa | built-in

H + S

344884



344844



346020

| Item | |
|---|---|
| | **CLASSE 300EOS with Netatmo connected video internal unit - white finish** |
| 344842 | 2 wires/Wi-Fi handsfree connected video internal unit white finish with built-in Amazon Alexa voice assistant, 5" vertical touch screen LCD display and video door entry answering machine. Integrated SCS Server for managing MyHOME wired systems. It can be used alternatively to the SCS Server DIN Item MhServer 1. It has a physical key for door lock release and capacitive keys for the control of the main video door entry functions: handsfree communication, entrance panel activation / camera scrolling and Favourite key (can be configured to activate the quick actions most frequently used – e.g. additional door locks, staircase light control, intercom). There are notification LEDs for: Wi-Fi network connection status, info / notifications and call exclusion. It is possible to easily interact with the built-in Alexa voice assistant, either using the dedicated capacitive keys or with your voice, and activate several functions, such as the video door entry functions, Smart Home, scenarios, reminders etc. Using the touch display, it is possible to access the notification list, as well as your favourite door entry, security and Smart Home controls (if any). The device must be configured by physically connecting the configurators or using the menu, which will give better possibilities of customisation of associated functions and texts. Thanks to the Wi-Fi connection, you can associate the video internal unit to the Home + Security App (available for Android and iOS). The App allows to use the main video internal unit functions (receiving calls, door lock release, display of the event timeline and activation of the entrance panel/camera cycling). Through the Home + Security App, it is also possible to manage the products of the Netatmo security range (outdoor and indoor cameras, door and window sensors, indoor siren and smoke detector). This allows you to quickly and easily create a Smart security system. Wall mounted installation using the supplied bracket. Possibility of Wi-Fi connection or using RJ45 ethernet cable with the dedicated accessory 344844. |

| Item | |
|---|---|
| | **CLASSE 300EOS with Netatmo connected video internal unit - black finish** |
| 344884 | Same as 344842 but in Black finish. |
| | **Ethernet accessory** |
| 344844 | Accessory cable for the wired connection of the Classe 300EOS video internal unit using an RJ45 Ethernet cable. To be purchased separately. |
| | **2 DIN additional power supply** |
| 346020 | Additional 2 DIN power supply to be used to supply the connected CLASSE 300EOS video internal units (344842 - 344884) locally, when required. |

Classe 100 X16E

# Now the standard is connected

## BTicino introduces Wi-Fi connectivity to the standard video door entry segment.

BTicino renews the range of **Classe 100** indoor units by introducing Wi-Fi connectivity in the standard video door entry system offer. The result is a range of video and audio indoor units with a modern and elegant design, capable of meeting all installation needs.

**Built-in connectivity** for constant connection with the home.

**22 apt** — Up to **22 apartments** without dedicated power supply.

Immediate association with the **Home + Security App**.

**Ideal for the refurbishment** of old door entry systems.

**No extra** work for the installer; **easier to use** for the end user.

After being connected to Classe 100X, the smartphone becomes an "additional virtual video indoor unit" that can be used to answer calls, activate the opening of the door locks and activate the system cameras.

# Always aware with the Home + Security App

## Home + Security

**The best App for a safe home**
Alerts and notifications for incoming calls, motion and people detection, event information and door lock management with a simple and intuitive interface.

Download on the App Store

GET IT ON Google Play

Answer the calls,
activate the electrical door locks,
activate the cameras and display
the timeline of the events
-
Manage up to 20 homes
with your single account

Home + Security

## Incoming call

Receive notification
when someone
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## See who's calling

Answer the call and
open the gate for
the courier

## Check the events

Check who called you
and if they left you
a message

## Quick actions

- Activate the electrical door locks
- Activate the timed staircase lights
- Call home / Intercom
- Activate the cameras

Security enhancement with integration of Netatmo devices

# Video door entry system and security. Together.

### Video door entry system  •••

**Main entrance**
Incoming entrance call.

### Security  •••

**Secondary entrance and interiors**
Smart Outdoor Camera with Siren and movement detection. Smart Indoor Camera with face recognition.

A single App with an intuitive home page. It allows you to answer video door entry calls, activate the door lock and view images from Netatmo smart outdoor and indoor cameras.

**2** WIRES SYSTEM

## Home + Security
## The best App for a safe home.

Solutions for a smart and complete protection of your home: security cameras, alarms, opening sensors, smoke detector...

**Leave your home without worries.**

WITH
# Netatmo

## Examples of Netatmo solutions natively integrated in the Home + Security App

Smart Outdoor
Camera

Smart Outdoor
Camera with Siren

Smart Indoor
Camera

Smart Door
and Window Sensors

Smart Alarm
System with Camera

Smart Indoor
Siren

Smart Smoke
Alarm

Smart Carbon
Monoxide Alarm

# Features and functions

| | CLASSE 100 X16E | CLASSE 100 V16E | CLASSE 100 V16B | CLASSE 100 V16M | CLASSE 100 A16E | CLASSE 100 A16M |
|---|---|---|---|---|---|---|
| | 344682 | 344672 | 344652 | 344625 | 344282 | 344292 |

## Features

| | X16E | V16E | V16B | V16M | A16E | A16M |
|---|---|---|---|---|---|---|
| LCD colour display | 5 inches | 5 inches | 5 inches | 4.3 inches | | |
| Handsfree | ● | ● | ● | | ● | |
| Finish | white | white | white | white | white | white |
| Available in KIT | 364614 | 364612 | 364613 | | 364232 | 364231 |
| Installation | wall / table | wall / table | wall / table | wall | wall / table | wall / table |

## Available functions from audio / video indoor unit

| | X16E | V16E | V16B | V16M | A16E | A16M |
|---|---|---|---|---|---|---|
| Door lock activation | ● | ● | ● | ● | ● | ● |
| Staircase light activation | ● | ● | ● | ● | ● | ● |
| EP / Scrolling activation | ● | ● | ● | ● | ● | ● |
| Intercom (1) | ● | ● | ● | ● | ● | ● |
| Inductive loop (2) | ● | ● | | | | |
| Floor call | ● | ● | ● | ● | ● | ● |
| No. of configurable keys | 4 | 4 | 1 | 1 | 4 | 4 |
| No. of available ringtones | 20 | 16 | 16 | 16 | 16 | 16 |
| Professional Studio (Office) | ● | ● | | | ● | ● |
| Wi-Fi connectivity | ● | | | | | |

## Available functions from HOME + SECURITY APP

| | X16E | V16E | V16B | V16M | A16E | A16M |
|---|---|---|---|---|---|---|
| Answer video door entry system calls | ● | | | | | |
| Door lock activation | ● | | | | | |
| Staircase light activation | ● | | | | | |
| Intercom call from smartphone to video indoor unit | ● | | | | | |
| Management Netatmo Security devices (smoke sensor , burglar alarm siren , opening sensor | ● | | | | | |
| EP / Scrolling activation | ● | | | | | |

1) Audio call, max. 3 minutes, between indoor units of the same apartment/different apartments
2) Use by people wearing hearing aids fitted with T selector

![bticino]

**2 WIRES SYSTEM**

# Front view

**Touch sensitive controls**

⚷ Door lock activation

◉ Entrance panel/camera scrolling activation

☆ Staircase light activation

•  ••  ∴  ∷
Customisable controls for the activation of accessory functions (e.g. intercom, activation of additional door lock, various activations)

**LED notifications**

📶 Wi-Fi Connection

🔕 Ringtone exclusion

**Physical control**

Enable the handsfree communication

Tactile guide

**Physical control**

Disable the handsfree communication

# Back view

Plug-in connectors with screw clamps for connections

Adjustment and programming menu access and navigation joystick

Line termination ON/ OFF micro-switch

ON / OFF micro switch to enable the additional power supply

USB mini socket for firmware update

ON / OFF micro switch to enable the Safe Door Lock function

Configurator socket

344682                    344672                    344652                                    344625

App Home + Security

| Item | **Classe 100X16E connected video indoor unit** |
|---|---|
| 344682 | Classe 100X16E with Netatmo 2 wires / Wifi handsfree connected video internal unit with inductive loop and 5" colour LCD display. It has 2 physical keys for the control of the main video door entry functions – answer and end a call – it has 3 touch keys for the control of the main functions – door lock release, staircase light control and entrance panel activation/scrolling – there are further 4 configurable touch keys that perform different functions – e.g. staircase light control, intercom, additional door lock activation, generic activations. The device has a side lever to adjust: colour, brightness and display contrast, audio volume, call tone volume and Wifi configuration. There are call exclusion notification LEDs and Wifi. Also, thanks to the Wifi connection, you can associate the video internal unit to the Home + Security App (available for Android and iOS). You can manage the main video internal unit functions (receiving calls, opening the door lock, activating the entrance panel/scrolling, FWR updating and additional activations) from the App. Through the Home + Security App it is also possible to manage the products of the Netatmo security offer (Outdoor and Indoor cameras, door and window sensors, internal siren and smoke detector). This allows you to quickly and easily create a Smart security system. The installation can be made to the wall using the bracket supplied or using table support accessories (2 x 344692) – to be purchased separately. The device, also equipped with the professional studio (office) function, must be configured. |

| Item | **Classe 100V16E video indoor unit** |
|---|---|
| 344672 | 2 WIRES handsfree video indoor unit , with inductive loop and 5" colour LCD display It has 2 physical keys for the control of the main video door entry functions – answer and end a call – it has 3 touch keys for the control of the main functions – door lock release, staircase light control and entrance panel activation/scrolling – there are further 4 configurable touch keys that perform different functions – e.g. intercom, additional door lock activation, generic activations. The video indoor unit has a side lever to adjust: colour, brightness and display contrast, audio and call tone volume. There is a call exclusion notification LED. The installation can be made to the wall using the bracket (supplied) or using table support accessories (2 x 344692) – to be purchased separately. The device also has Professional Studio (Office) function and must be configured. |

| Item | **Classe 100V16B video indoor unit** |
|---|---|
| 344652 | 2 WIRES handsfree video indoor unit with 5" colour LCD display. The device has 2 physical keys for the control of the main video door entry functions – answer and end a call – and 3 touch keys that allow the door lock release, the entrance panel activation/scrolling and the customisation of a most frequently used quick action – e.g. staircase light control, intercom, additional door lock activation, generic activations. The device has a side lever to adjust: colour, brightness and display contrast, audio and call tone volume. There is a call exclusion notification LED. The installation can be made to the wall using the bracket (supplied) or using table support accessories (2 x 344692) – to be purchased separately. The device must be configured. |

| Item | **Classe 100V16M video indoor unit** |
|---|---|
| 344625 | 2 WIRES video indoor unit with handset and 4.3" colour LCD display, suitable for wall mounting installation (bracket support included). The device has three touch keys that allows : door lock release, entrance panel camera activation/scrolling and customization of an auxiliary function – e.g. additional door lock activation, additional camera activation. Side easily accessible and independent regulations for : call volume / ringtone exclusion (with notification LED), display colour and brightness. The handset has magnets for easy holding. |

bticino

2 WIRES SYSTEM



344282

344292

344692

336803

336982

346020

| Item | Classe 100A16E handsfree audio indoor unit |
|------|---------------------------------------------|
| 344282 | 2 WIRES handsfree audio indoor unit for wall mounted or table installation. It has 2 physical keys for the control of the main functions – answer and end a call – and has 3 touch keys for the control of the main functions – door lock release, staircase light control and entrance panel activation/scrolling – there are further 4 configurable touch keys that perform different functions – e.g. intercom, additional door lock activation, generic activations. The device has a side lever to adjust the audio volume and call tone and a call exclusion notification LED. The installation can be made to the wall using the bracket (supplied) or using table support accessory (1 x 344692) – to be purchased separately. The device also has Professional Studio (Office) function and must be configured. |

| Item | Classe 100A16M audio indoor unit with handset |
|------|------------------------------------------------|
| 344292 | 2 WIRES audio indoor unit with handset for wall mounted or table installation. It has 3 touch keys for the control of the main functions – door lock release, staircase light control and entrance panel activation/scrolling – there are further 4 configurable touch keys that perform different functions – e.g. intercom, additional door lock activation, generic activations. Ringtone volume adjustment (with call exclusion) using the appropriate selector. The installation can be made to the wall using the bracket (supplied) or using table support accessory (1 x 344692) – to be purchased separately. The device also has Professional Studio (Office) function and must be configured. |

| Item | Accessories - table support - cable - sockets |
|------|-----------------------------------------------|
| 344692 | Table support accessory for CLASSE 100 audio and video hands-free indoor units. |
| 336803 | 8-way cable with connector for tabletop support connection. |
| 336982 | White Livinglight series 8-pole plug for the connection of the 336803 cable in tabletop installations. The socket is available also in the following finishings: - LIVINGLIGHT (336983 - 336984); - AXOLUTE (349414 - 349415 - 349418); - MATIX (336985). |

| | 2 DIN additional power supply |
|------|-------------------------------|
| 346020 | Additional 2 DIN power supply to be used for the local power supply to connected CLASSE 100X16E (344682) video indoor units in multi-family systems in complexes with more than 22 apartments. |

# bticino

## Internal units

**Netatmo safety devices**

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🛡️ Home + Security App

| NOC-PRO | NOC-S-PRO | NOC-S-WPRO | NSC-PRO | NBU-AS-PRO | DTG-PRO |

| Item | **Smart outdoor camera** |
|------|--------------------------|
| NOC-PRO | Smart outdoor safety camera with detection of people, animals and vehicles. Aluminium single monobloc construction. Ultra-resistant glass and plastic, protection against UV rays. Video sensor: 4MP. Resolution: Full HD 1080 p. Coding: H.264. Long-range detection: up to 20 m. Field of view: 100°. 8x digital zoon for videos. Video live microphone. LED spotlight: 12 W, variable intensity. Infrared night vision: 15 m. Encryption protected access to the smartphone using the Home + Security App. Weather resistant: designed for outdoor use (HZO protection). |

| | **Smart outdoor camera with siren** |
|------|-------------------------------------|
| NOC-S-PRO | Smart outdoor safety camera with detection of people, animals and vehicles. Equipped with 105 db alarm siren. Aluminium single monobloc construction. Ultra-resistant glass and plastic, protection against UV rays. Video sensor: 4MP. Resolution: Full HD 1080 p. Coding: H.264. Long-range detection: up to 20 m. Field of view: 100°. 8x digital zoon for videos. Video live microphone. LED spotlight: 12 W, variable intensity. Infrared night vision: 15 m. Encryption protected access to the smartphone using the Home + Security App. Weather resistant: designed for outdoor use (HZO protection). |
| NOC-S-WPRO | Features like NOC-S-PRO. White finish. |

| Item | **Smart indoor camera** |
|------|-------------------------|
| NSC-PRO | Smart indoor safety camera with people detection consisting of an aluminium monobloc unit. Video sensor: 4MP. 130° panoramic view for a wider coverage. High quality video with Full HD 1080 p viewing. Guaranteed day and night protection with infrared vision, for comfortable viewing even in total darkness. Recording only in case of intrusion, in respect of the privacy of the family. Encryption protected access to the smartphone using the Home + Security App. Declaration of conformity and FCC declarations. Open-source compatibility. It has to be connected to an electric socket with the supplied AC adapter. |

| | **Smart video alarm system** |
|------|-------------------------------|
| NBU-AS-PRO | Smart video security alarm system consisting of 1 smart indoor camera, 1 smart indoor siren and 3 smart door and window opening sensors. The products can be easily configured and associated using the Home + Security app. The smart video alarm system activates and deactivates automatically, has pre-recorded sounds to simulate a presence in the home, respects the privacy of the family and activates a 110 dB sound in case of intrusion. |

| | **Smart door and window sensors** |
|------|------------------------------------|
| DTG-PRO | Smart opening sensors for doors and windows ideal for safety. Sensors with waterproof monobloc construction, vibration/motion detection and open/closed status. Power supply with 2 AAA-type batteries included in the package. They only work with the smart indoor camera (sold separately): radio link between the sensors and the camera. Declaration of conformity and FCC. Open-source compatibility. Can be controlled and managed remotely with Home + Security app. |

# Internal units
## Netatmo safety devices

NSA-PRO-EU     NIS-01-PRO     NCO-PRO

| Item | Smart smoke alarm |
|------|-------------------|
| NSA-PRO-EU | Smart Smoke Alarm with 85 dB alarm, high performance photoelectric sensor, average coverage 50 m². When it detects the presence of smoke, it activates its 85-decibel alarm and immediately alerts you to your smartphone. It is equipped with a 10-year battery - the maximum lifetime for all smoke detectors. The Self-Test feature checks if the Smart Smoke Alarm is functioning correctly. If it detects a problem, it sends a notification to your smartphone. Reliability guaranteed by CE (EN 14604) and NF certifications. Standalone device, no hub required. Compatible with Apple HomeKit. Operation via the Home + Security app. Requirements: High-speed wireless internet connection needed. Public hotspots not supported. The Smart Smoke Alarm will detect smoke and will sound even if the Wi-Fi isn't configured. However, you will need Wi-Fi to receive smartphone alerts. Wi-Fi 802.11 b/g/n (2.4 GHz), Open/WEP/WPA/ WPA2-Personal, Bluetooth Low Energy (BLE). |

| Item | Smart indoor siren |
|------|--------------------|
| NIS-01-PRO | Smart indoor siren with 110 dB alarm, pre-recorded sounds and vibration sensor for tamper detection. Battery power supply or with a cable (not supplied) using the USB micro port. It only works with the smart indoor camera and must be installed in the same room: Bluetooth Low Energy (BLE) wireless connection with the smart indoor camera. Declaration of conformity and FCC declarations. Open-source compatibility. Operation using the Home + Security app. |

| | Smart carbon monoxide alarm |
|------|-----------------------------|
| NCO-PRO | Smart carbon monoxide alarm / detector for wall installation. It allows to monitor the fuel-burning appliances (boiler, fireplace, wood-burning stove, gas cooker, etc.) by measuring, in real time, the levels of carbon monoxide, which is an invisible, odourless and potentially fatal gas. When it detects the presence of carbon monoxide, it activates its 85-decibel alarm and immediately alerts you to your smartphone. It is equipped with a 10-year battery - the maximum lifetime for all carbon monoxide detectors. The Self-Test feature checks if the Smart Carbon Monoxide Alarm is functioning correctly. If it detects a problem, it sends a notification to your smartphone. Reliability guaranteed by CE (EN 50291) and NF certifications. Standalone device, no hub required. Compatible with Apple HomeKit. Operation via the Home + Security app. Requirements: High-speed wireless internet connection needed. Public hotspots not supported. The Smart Carbon Monoxide Alarm will detect Carbon Monoxide and will sound even if the Wi-Fi isn't configured. However, you will need Wi-Fi to receive smartphone alerts. Wi-Fi 802.11 b/g/n (2.4 GHz), Open/WEP/WPA/WPA2-Personal, Bluetooth Low Energy (BLE). |

# Internal units

## SPRINT L2



344242          344232

| Item | **Sprint L2 audio handsets** |
|------|------------------------------|
| 344242 | 2 WIRE audio handset (without the possibility of fitting with accessories) for audio systems and mixed audio / video systems. Wall mounted installation without the need of accessories. With door lock release key and auxiliary functions key (that can be configured). Ringtone volume adjustable on 3 levels. White |
| 344232 | As item 344242 but with call to the floor function |

## Universal analogue audio handset



334262

| Item | **Universal analogue audio handset** |
|------|--------------------------------------|
| 334262 | Universal audio handset that can be installed in BTicino analogue (1 + n) and (4 + n) Compatible with most competitors analogue systems. It has a lock release button and it is designed for the installation of 4 buttons accessory (Item 337430) for additional functions. Volume adjustment on 3 levels. |

---

■ **Dimensional data**

78          54,5

194

344232

Size in mm

1   Simple and modern design

2   Ringtone volume, adjustable to 3 levels

3   Two pushbuttons:
    - door lock release
    - available for applications
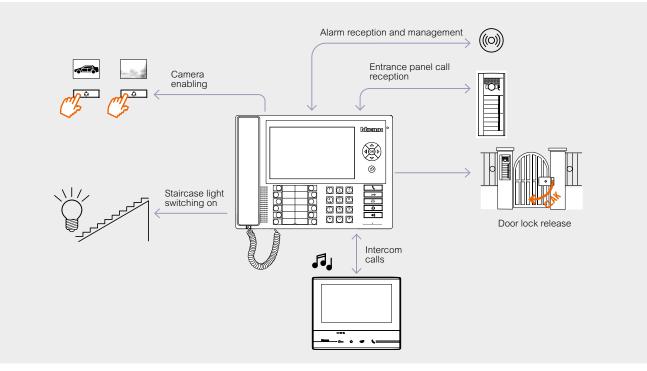      (e.g. control of staircase lights)

346310


346300

| Item | **Switchboard and accessories** |
|---|---|
| 346310 | Switchboard for 2 WIRE audio and video systems. Allows access to various services (video door entry functions, door lock/staircase light management and apartment alarm monitoring) directly from the keypad or via the intuitive icon menu. The switchboard is supplied with an integrated table supporting frame and also features a 7" colour LCD display, receiver and speaker phone, dedicated keys for the main functions and keys which can be configured. The programming can be carried out directly from the device or via PC with TiSwitchBoardDevice software (supplied). The device can manage the phonics of the riser EP (i.e. wired downstream of interface 346851); it cannot however manage the apartment EP (i.e. wired downstream of interface 346850). The use of an additional power supply is recommended. It is possible to connect up to a max. of 16 switchboards (configured from 0 to 15). |
| 336982 | White 8-way socket for table top installation of switchboard item 346310 |
| 336803 | 8 – Way cable with connector for the table top installation connection. |

| Item | **SOFTSWITCHBOARD software** |
|---|---|
| 346300 | Switchboard software for the management of audio and video door entry system calls. The software (Windows operating system compatible) can be installed on any desktop or laptop PC, and gives the possibility of receiving, managing and transferring the calls from the entrance panel and the handset. It implements home video monitoring, with cyclical display of the cameras, night and day functions, and the possibility of displaying the alarms in the various apartments. - Supported operating systems: Microsoft Windows XP Service Pack 2, Windows Vista and Windows 7. - Software required: NET Framework 3.5 or higher |



Alarm reception and management

Camera enabling

Entrance panel call reception

Staircase light switching on

Door lock release

Intercom calls

# SYSTEM ACCESSORIES RANGE

# System accessories

## Accessories


346050 ▣ SELV


346030 ▣ SELV


F441


346850


346851


346040 ▣ SELV


346020 ▣ SELV


F441M

| Item | Power supplies |
|---|---|
| 346050 | Power supply for 2 WIRES system in 6 DIN modular enclosure. Power supply 110 – 240 Vac @ 50 – 60 Hz. The output provides two power supplies in very low safety voltage (one on the 3 TK BUS, IU BUS and SCS clamps, one on the 1 - 2 clamp) to be used alternately and NOT at the same time. To be used in audio, video or mixed audio video systems. The video adapter is integrated in the device (item 346830 must not be used). It is therefore possible to avoid the use of the A/V node (F441) or the Multi-channel Matrix (F441M), if three junctions (MAX 2 IU + 1 TK risers or 1 IU + MAX 2 TK risers) are not exceeded in total from the clamps. It can also be used as additional power supply (1 - 2 output) for the local power supply of the preset internal units or entrance panels (in this case it is not possible to use other outputs). The device is electronically protected against overload and short circuit. It is a SELV double insulation safety device. The installation must be made in compliance with current regulations. The device must not be configured. WARNING: the (IU BUS), (TK BUS) and (SCS) outputs can be used at the same time respecting the total maximum absorption of 1.2 A. WARNING: Disconnect the power supply for 5 minutes after overload or short circuit. |
| 346040 | Power supply for 2 WIRES audio systems in 6 DIN modular enclosure. Power supply 110 – 240 Vac @ 50-60 Hz. The output provides 26 Vdc low rated voltage, and a maximum rated current of 600 mA and it is protected on the PRI side (with fuse) against overload and short circuit. It is a SELV double insulation safety device. |
| 346030 | Mini power supply with integrated video adapter to make small 2-WIRES video systems (intercom). 2 DIN modular enclosure. Power supply 230 Vac @ 50-60 Hz. The output provides 27 Vdc continuous low voltage, with maximum current of 600 mA and it is protected on the PRI side (with fuse) against overload and short circuit. It is a SELV double insulation safety device. |
| 346020 | Additional power supply to be used to supply the set up entrance panels and internal units locally. 2 DIN modular enclosure. Power supply 230 Vac @ 50-60 Hz. The output provides 27 Vdc continuous low voltage, with maximum current of 600 mA and it is protected on the PRI side (with fuse) against overload and short circuit. It is a SELV double insulation safety device. |

| Item | Video mixers |
|---|---|
| F441 | Audio video node in 6-DIN modular enclosure set up with 4 input terminals and 4 output terminals. Can connect up to 4 source devices (entrance panels or cameras) in input and up to 4 2-WIRES video risers in output. The device must be used with the system power supply 346000. It must be used as an alternative to the audio video adapter 346830 |
| F441M | Multi-channel matrix in 10 DIN modular enclosure. Set up for the connection of video entry system entrance panels, cameras and sound system sources in input and internal units and amplifiers in output. 4 inputs are dedicated to entrance panels/cameras and 4 to the sound system sources. It can be used to create multi-channel sound systems. The device must be used with the system power supply 346000. In the systems it replaces the video adapter 346830 and the audio video node F441 |

### System interfaces

| | |
|---|---|
| 346850 | Apartment interface in 4 DIN modular enclosure. Can interface a dedicated apartment video door system with local CCTV, sound system and control of the Home automation applications to a 2-WIRES riser. The device must be configured using physical configurators |
| 346851 | System expansion interface in 4 DIN modular enclosure. Can double the length of the entrance panel-internal unit line, create risers with independent sound and expand the performance of the apartment system. The device must be configured using physical configurators |

346891  346260  346210  346841  347400  346870

346993  346250  3499  354000

| Item | **Interfaces with other BTicino systems** |
|------|-------------------------------------------|
| 346891 | Can make very large mixed 2 WIRES/IP systems with a large number of devices, thanks to the creation of an IP backbone with 2-WIRES risers. The device must be configured using physical configurators or using the software |
| 346150 | 8/2-WIRES interface in 6 DIN modular enclosure. Can make mixed video door entry systems (8-WIRES digital backbone/2-WIRES risers). The device must be configured using physical configurators |
| 349410 | Analogue/2 WIRES interface in 4 DIN modular enclosure. Can interface a dedicated apartment 2-WIRE video door entry system with cameras and control of the MyHOME applications to an analogue riser, digital 8-WIRES, audio TERSYSTEM and VIDEOPORTER 2000. |

| Item | **DIN actuators** |
|------|-------------------|
| 346210 | Relay actuator in 2 DIN modular enclosure. Can switch on lights, open gates, repeat the call on bells (MOD=SLA) or control other devices from the video internal units. The device must be configured using physical configurators |
| 346230 | Door lock relay actuator in 2 DIN modular enclosure. Can supply power and activate an electrical door lock. The device must be configured using physical configurators |
| 346260 | Timed door lock relay actuator in 4 DIN modular enclosure. Can switch on lights, open gates or manage electro-magnetic door locks, timed door opening and door lock status (with NC contact). The device must be configured using physical configurators |

| Item | **Devices in basic enclosure** |
|------|-------------------------------|
| 346841 | Floor shunt with 4 outputs Can make 2-WIRES video door entry systems with star wiring distribution. The device automatically adapts the video signal. Its small size means it can also be placed inside the flush-mounted box |
| 346833 | Call to the floor interface. By connecting a traditional pushbutton, the following functions will be possible: general call to the floor, addressed call to the floor, staircase lights on, and door lock release (specific actuator needed) and association of the video image to the call to the floor. The device must be configured using physical configurators |
| 347400 | Interface for the conversion of the coaxial signal into a 2 WIRES BUS signal. It can be used to connect to the BUS of the 2 WIRES video door entry system a camera with coaxial video output powered at 12 Vdc, with maximum absorption 150 mA and 1 Vpp video output (75 Ω). The device must be configured using physical configurators |

| Item | **Wiring accessories** |
|------|------------------------|
| 346870 | 2 WIRES video amplifier. In video systems wired using non-twisted wires, where the distance between the entrance panels and the internal unit exceeds 50 metres, it enables increasing such distance to up to 100 metres |
| 346250 | Relay module for gate opening to be used with LINEA 2000, LINEA 3000, MINISFERA and SFERA pushbutton panels. Can open door locks (NOT managed by BUS) by means of the entrance panel |
| 3499 | Line terminator. To be used to terminate the riser or apartment line, when the last installed device is not tted with line closing micro switch |
| 354000 | Flat cable for the connection of several SFERA NEW and SFERA ROBUR pushbutton modules. Length 470 mm |

# System accessories

## Accessories

346991          346994          336904          3515          3501/1          3501K
                                336905

| Item | **Universal speaker unit and expansion module** |
|------|------|
| 346991 | The universal speaker unit can be used to install the 2 WIRES audio system in new or refurbished systems, where pushbutton panels of other manufacturers are present or required (mail boxes, patterned brass, compact sheet metal units, etc.), preset for a traditional speaker module (e.g. 2659N). The universal speaker unit has, as base, contacts for the connection of 8 call keys; to make systems with more keys (up to 56 using the 346000 power supply and up to 24 with the 346010 power supply one or more key expansion modules must be used (1 every 8 pushbuttons). |
| 346992 | Expansion module for connecting more than 8 call keys to item 346991 - max. 6 modules (56 calls max.) with power supply 346000. Max. 2 modules (24 calls max.) with power supply 346010 |

| Item | **Universal speaker unit with built-in relay** |
|------|------|
| 346994 | Universal speaker unit with built-in relay (for controlling an electric door lock), designed for the installation of the 2-WIRES audio system in both new and refurbished setups where "special" pushbutton panels are present or required (such as mailboxes, patterned brass, compact sheet metal units, etc.) that are pre-configured for a traditional speaker module (e.g., 2659N).The universal speaker unit includes terminals for connecting up to 4 call pushbuttons and 1 local door release pushbutton. For systems with more than 4 call pushbuttons, it is necessary to add item 346993, with 1 unit required for every 8 pushbuttons (up to a maximum of 100 pushbuttons). The multi-cable with 2 connectors supplied with item 346993 must be used for the connection.Microphone sensitivity and speaker volume can be adjusted using dedicated potentiometers. The microphone of the speaker unit can be detached and placed at a distance of up to 15 cm from the device. In video systems, the device must be paired with cameras featuring coaxial output using interface 347400. |

| | **Cable for systems** |
|------|------|
| 336904 | Specific cable for 2 WIRES video door entry applications with 2 twisted conductors. It can be installed in underground piping, in accordance with standards (CEI 20-13 and CEI 20-14). It ensures the best performance in video systems (higher distance between EP and Handset when compared with other cables). 200 m coil |
| 336905 | Specific cable for BUS / SCS unshielded, consisting of a white outer sheath and 2 flexible conductors twisted together with a cross section of 0.50 mm$^2$. Halogen-free low-toxicity cable; ideal for applications in environments where greater regard is required for safety in the event of fire (halogen free). 400 V insulation. Compliant with standards: EN 50575 EN60811, EN50289, EN50290, EN60228, 50265-2-1, EN50395, EN50396. Cable not suitable for burial. Coil length 200 m. Fire reaction class according to CPR regulation: Ccas1b, d1, a1. |

| | **Spare part terminal/clamp** |
|------|------|
| 3515 | Spare part terminal/clamp for BUS connection of the predisposed devices |

| Item | **Configurators (package of 10 pieces)** |
|------|------|
| 3501/0 | Configurator 0 |
| 3501/1 | Configurator 1 |
| 3501/2 | Configurator 2 |
| 3501/3 | Configurator 3 |
| 3501/4 | Configurator 4 |
| 3501/5 | Configurator 5 |
| 3501/6 | Configurator 6 |
| 3501/7 | Configurator 7 |
| 3501/8 | Configurator 8 |
| 3501/9 | Configurator 9 |
| 3501/JMP | Configurator JMP |

| | **Configurator kit** |
|------|------|
| 3501K | Configurator kit consisting of: <br> - 10 pieces for each type of configurator from 0 to 9 <br> - 4 green removable 2-clamp connectors <br> - 1 configurator connection tool (3502) <br> - 1 plastic screwdriver |

# bticino

## GLOSSARY

**AUTO-SWITCHING ON**
Functions providing audio and video communication between internal unit and entrance panel, or internal unit and outside the door unit, without a call being received.

**BACKBONE**
It provides the connection between entrance panel and distributes the signal to.

**CAT 5E AND CAT 6 CABLE**
Data transmission cables made up of four pairs arranged inside a sheath according to a specific layout, which is necessary to reduce attenuation and crosstalk problems. This layout consists of twisting the pairs of conductors individually. These pairs are identified using standard colours. Each of the pairs has a different pitch, and is in turn twisted differently inside the outer sheath.
The conductor size permitted by the standards is between 22 and 26 AWG: 24 AWG is the most commonly used in all cases and corresponds to a diameter of 0.5 mm.
The acronym AWG (American Wire Gauge) corresponds to the unit of measurement used by the American standards to measure the cross-sections of cables.
As it is a ratio, the smallest cross-sections correspond to the largest AWG sizes. The appropriateness of using cables with different types of sheath must be assessed according to the area in which the wiring system is installed.

The most commonly used cable sheath is PVC or LSZH (Low SmokeZero Halogen).

**CONNECTED INTERNAL UNIT**
It is an internal unit which embeds a wi-fi module able to connect to a wi-fi network.

**ENTRANCE PANEL**
Term used to indicate the device outside the building, from which the internal unit can be called.

**FLOOR CALL**
Term used to indicate the call from an out of the door bell. Usually referred to an internal unit which has an additional contact for a direct connection with an out of the door door bell.

**FLOOR SHUNT**
Hub for the connection of video/audio and audio only internal units, apartment interfaces, and additional power supplies.

**IN / OUT**
Connection of the devices where two clamps act as node between the IN twisted pair and the OUT twisted pair.

**INTERCOM**
Function that provides audio communication between two internal units.

**INTERNAL UNIT**
Individual video/audio or audio only device for the identification of the individual making the call from the entrance panel. Normally, in addition to communicating with the entrance panel, the internal unit also gives the possibility of performing other actions, such as the release of the door lock, intercom calls, automatic switching on, etc.

**MASTER**
It is the video internal unit that turns on when a call is received.

**RISER**
It is the set of vertical wiring connecting the internal units with the power supply.

**SLAVE**
It is the video internal unit connected in parallel to the master video internal unit, and which rings but does not turn on when a call is received (it only turns on when the call is answered).

# NOTE

**NOTE**

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**bticino**

A brand of **legrand**