2 WIRE SYSTEM

THE NEWS

PIVOT COLOUR VIDEO HANDSETS
PIVOT series video handsets available in White, Anthracite and Tech with 4" colour monitor

AUDIO - VIDEO NODE
can connect up to 4 video entrance panels and shunt 4 risers

PIVOT AUDIO AND VIDEO HANDSETS
The range of PIVOT audio and video handsets is enriched by two new colours: anthracite and Tech. The three colours mean that they fit perfectly in the Bticino LIVING INTERNATIONAL, LIGHT and LIGHT TECH domestic series.

SECTION CONTENTS

2 wire system

ONLY 2 WIRES
The system has simple wiring with only two unpolarised wires in every stretch of the system.

2 TYPES OF SYSTEM: AUDIO AND VIDEO
Black and white and colour video door entry systems with a maximum of 64 handsets or audio systems in two versions: one with a maximum of 26 handsets and one with a maximum of 100 handsets.

TWO TYPES OF PUSHBUTTON PANEL FOR THE ENTRANCE PANELS
Pushbutton panels of the following series can be installed in both the audio version (max. 100 handsets) and the video version:
- modular MINISFERA,
- SFERA

Warning: modular MINISFERA pushbutton panels cannot be used in the audio version with 26 handsets max.

2-WIRE/DIGITAL MIXED SYSTEMS
Using the interface Item 346150, it is possible to realize mixed door entry and video door entry systems with common backbones realized with the 8-wire digital systems and with vertical risers realized with the 2-wire system. Using the 8/2 interface it is possible also to use the switchboard with the 2 wire system.

SIMPLICITY OF INSTALLATION
The minimum wiring drastically reduces installation times and errors.

It is possible to use also the not twisted cable both in the audio and in the video version.

SPECIFIC SOLUTIONS FOR RENOVATION
In case of renovations, it is possible to maintain every type of pushbutton panel and part of the existent wiring using the universal speaker unit Item 346991 up to a maximun of 100 handset.

WITHDRAWABLE TERMINALS
The connection to the system of all PIVOT, video SWING and SFERA devices with withdrawable terminals, allow the pre-wiring of the system and a much more rapid installation of the devices.
In case of other interventions, the dissection of the system and the substitution of the devices will also be simple, without intervention on the cable.

The "2 wire" system can produce door entry and video door entry systems in dwellings of any size

2 TYPES OF VIDEO HANDSETS: BLACK/WHITE AND COLOUR

The range of PIVOT video handsets is enriched with video handsets with 4" colour monitor. Used together with the new colour camera module Item 342550 you can see colour pictures. Setting up the system with a colour camera module, the user can decide whether to install the video handset with a black and white or colour monitor.

2 NEW COLOURS

For audio and video PIVOT, in addition to White, the colours Anthracite and Tech are now available, to fit in perfectly with the LIGHT, LIGHT TECH and LIVING INTERNATIONAL domestic lines.

2 wire audio

VERSION WITH 100 HANDSETS

In this system version the wiring of the whole system only uses 2 wires in every section, including the door lock, even when there are several handsets.

- A maximum of 9 entrance panels can be cabled with serial or star connection, without accessory devices.

- The entrance panel can be made using the following pushbutton panels:

MINISFERA
- speaker module for max. 6 calls (Item 342702)
- expansion module for max. 10 calls (Item 342704)

To realize MINISFERA pushbutton panels with more than 6 expansion modules per EP (a max. of 66 pushbuttons), two speaker modules must be provided.

SFERA
- speaker module for max. 2 calls (Item 342170)
- expansion module for max. 10 calls (Item 342240)
- numeric digital call modules (Item 342610)
- speaker module integrated with the graphic display digital call (Item 342630)

- 2 speaker modules must be used for SFERA pushbutton panels with more than 50 pushbuttons (56 pushbuttons with universal speaker unit).

VERSION WITH 26 HANDSETS

The 2 wire system with 26 handsets differs from the 100 handset version as follows:
- it manages up to 4 handsets with automatic switchboard with no need for other accessories
- the handset can be made with just SFERA pushbutton modules (Item 342240).
- two extra conductors are required in the power supply - handset/door lock stretch to supply the electric door lock.

- Both in 100 and 26-handsets versions it is possible to install as handsets the following devices:

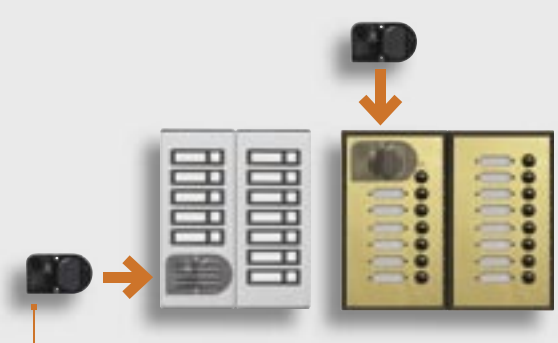
PIVOT
- Audio handsets, White, Anthracite and Tech colour

SWING
- Audio handsets in the colours Ash, Cord and White, can combine the “professional studio” function and the “control door lock state” function.

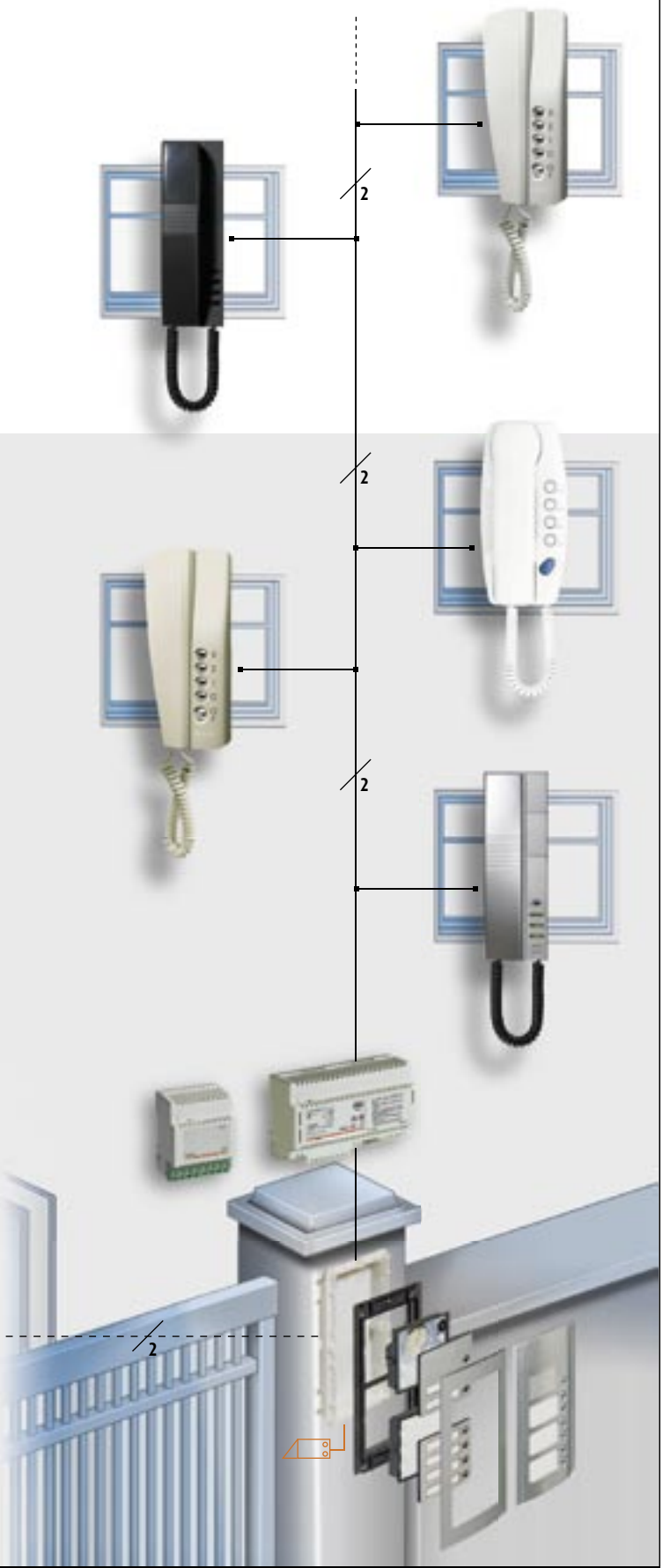
SPRINT
- Basic handset, colour: White
- Audio handsets which can be fitted with accessories, colour: White

TELEPHONE INTERFACE
ITEM 346810

- Up to 3 devices can be installed for each apartment (audio handsets and bells) (5 in the one-family system). It is possible to connect max. 2 bells on every audio handset.
- The handsets can be connected by distributing the 2 wires directly from the riser or connecting them in series. The system has conversation secrecy.
- It combines with the Bticino SCS systems among which the new sound diffusion.



When renovating the existing pushbutton panel can be reused, and part of the wiring using the universal speaker unit (Item 346991) up to a max. of 100 handsets.



2 wire video black/white and colour

The system always only uses 2 non-polarised wires, allowing a reduction of the possibility of error in connections. Having just 2 cabling wires allows great reduction of installation times and costs, making the system ideal when renovating.

FEATURES OF THE SYSTEM:

- always and only 2 wires on the riser and to the handset and to the door lock;
- the monitors do not need a local power supply;
- the monitors must be connected in series (in – out) on the same video handset terminal or in a star using the floor distribution block Item 346840;
- centralized power supply for the entire system;
- in systems to be restructured, it is possible to utilize the existing cables even if not twisted, as long as they are of the ≥0.28mm² section, the distance between the entrance panel and the farther handset can not exceed 50 metres. If the Item 346870 is used, the distance between EP and IU can arrive up to 100 metres.
- in the new installations, it is advisable to use our cable Item 336904, which can be used because its cable sheath complies with the CEI 20-13 and CEI 20-14 rules and allows to reach a 200-metres distance between the video entrance panel and the farthest handset.
- it is possible to wire 4 video entrance panels and 4 risers with audio/video node Item F441 at most;
- possibility to connect 12V d.c. television cameras (Items 391615, 391616, 391617, 391618 and 391619) to the system through coax-2 wires interface (Item 347400). Furthermore, it is possible to associate the television camera to an audio entrance panel;
- conversation secrecy;
- CCTV in the one-family system
- actuator command;

  (correctly configured so that the call can be repeated on bells)
- intercom between apartments (maximum 5).
- possibility to install a maximum of 3 video handsets per apartment without any additional power supplies (MASTER-SLAVE function with IU of PIVOT series).
- simultaneous switching on of more video handsets in the same apartment.

The entrance panel can be made with the following pushbutton panels of the series:

MINISFERA

- speaker module for max. 6 calls (Item 342702)
- speaker module + camera for max. 4 calls (Item 342708)
- expansion module for max. 10 calls (Item 342704)

SFERA

- speaker module for max. 2 calls (Item 342170)
- expansion module for max. 4 calls (Item 342240)
- numeric digital call module (Item 342610)
- speaker module where the graphic display digital call is integrated (Item 342630)
- colour camera module (Item 342550)
- b/w camera module (Item 342510)

- Performance and functions are the same making black and white or colour systems

- In the video 2 wire system, it is possible to install the following handsets:

PIVOT

- video handsets with b/w and Colour monitor, White, Anthracite and Tech colour.
  The PIVOT video handsets can implement the MASTER-SLAVE function

- audio handsets, White, Anthracite and Tech colour

SWING

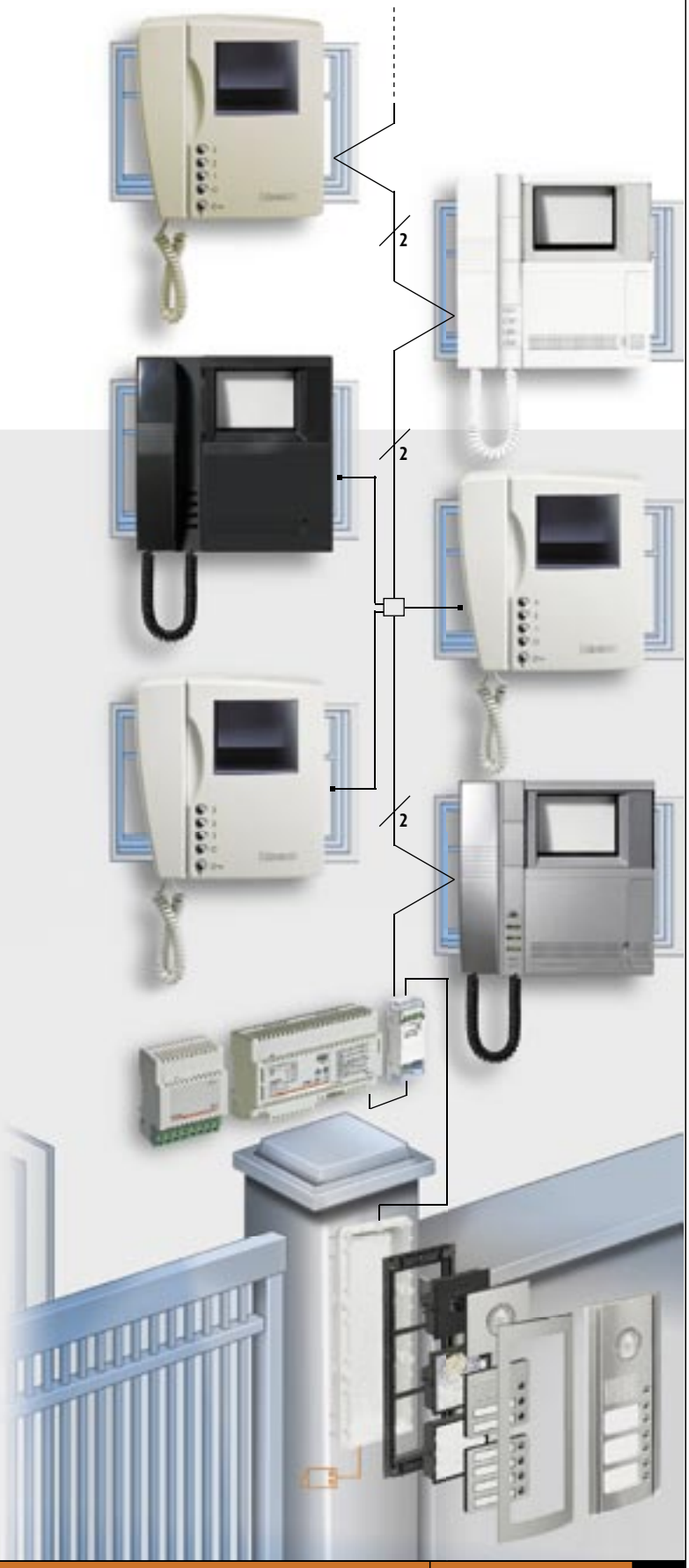
- video and audio handsets, Ash, Cord and White colours, can combine the "studio professional" function and the "control state door locks" function

SPRINT

- audio handsets which can be fitted with accessories, White colour

TELEPHONE INTERFACE
ITEM 346810

It is possible to install up to a maximum of 3 devices in parallel (PIVOT video handset, audio handset and additional bells) on the same call in the multi-family installations and 5 in the one-family installations. On each video handset and /or audio handset, it is possible to connect, at the most, two kinds of bells. Using the 8/2 wire interface Item 346150, it is possible to realize audio and video systems (black/white and colour) with 8 wire common backbones having (Digital system) and different vertical risers in the 2 wire system. Using the 8/2 interface it is possible also to use the switchboard with the 2 wire system.



Performance and functions of the system

PERFORMANCE

2 wire system performances differ for Audio Systems and Video Systems

AUDIO SYSTEM

- Max. 100 handsets
- Max. 9 entrance panels
- Max. distance between entrance panel and last handset 1Km

VIDEO SYSTEM

- Max. 64 Handsets
- With video adapter Item 346830
  1 entrance panel and Max. 2 risers
  2 entrance panels and Max. 1 riser
- With audio/video node Item F441
  Max. 4 entrance panels and Max. 4 risers
- Max. distance between entrance panel and last handset 200m *

* Using the cable - Item 336904

MAIN PERFORMANCE FOR AUDIO AND VIDEO SYSTEMS

- Conversation secrecy
- Centralised power supply, the handsets (audio and video handsets) do not need of any local power supply
- 2 wire door lock
- Control actuators for additional electric loads
- A maximum of 3 audio and/or video devices in the same apartment on the same call (a maximum of 5 in the one-family system).
  Master-Slave and contemporary switching functions are also available for video systems.

FUNCTIONS

Description of the main functions available with the 2 wire system.

THE CALL

By pressing the call pushbutton on the entrance panel, the system generates a signal which is recognised only by the handset/s to which the same call is addressed (we have 30 seconds to answer the call after pressing the button).

The handsets are configured univocally so that the call sent by the entrance panel arrives only to the handset to which it is addressed.
When the call arrives the handset rings, and in case of video system the monitor of the video handset switches ON.

Lifting the receiver we communicate (max. length of the communication 1 minute) with the entrance panel. When we hang up, the communication is cut off and the monitor switched off.

CONVERSATION SECRECY

During the call between the entrance panel and the handset, the handsets and the entrance panels not involved in the call are temporarily excluded, so guaranteeing the confidentiality and the secrecy of audio handsets and video handsets calls. Making the call by an entrance panel temporarily excluded, there will be a dissuasion tone to indicate that the entrance panel/handset is temporarily engaged.

CONTEMPORARY SWITCHING ON

With 2 wire video handsets is available the contemporary monitors switching ON: at call arrival all the handsets ring and the monitors of any video handsets switch ON. Answering the call, only the monitor of the video handset communicating with the entrance panel keeps connected.
The devices contemporarily switched ON can be a maximum of 5 in the one-family and 3 per apartment in multi-family systems.
In order to realize this function, any video handsets, except for one, must have an additional power supply connected.

MASTER-SLAVE FUNCTION

In multi-family systems, with PIVOT video handsets is available the MASTER-SLAVE function: at call arrival any apartment handsets ring and only the monitor of the video handset configured as MASTER switches ON. By pressing the auto-switching ON pushbutton on a SLAVE , the monitor of the master handset switches OFF and the monitor of the SLAVE switches ON (without entering necessarily in communication with the entrance panel). On the contrary, lifting the receiver directly from a SLAVE, the monitor of the MASTER switches OFF and we enter in audio-video communication with the EP.

THE STAIRCASE LIGHT PUSHBUTTON

On the entrance panels and the handsets there is a staircase light pushbutton whose pressure generates the timing switching ON of a light. In order to have this function, it is necessary to install in the system an appropriate actuator configured to realize this function.

THE DOOR LOCK PUSHBUTTON

On the handsets there is a door lock pushbutton whose pressure generates the opening of one of the system locks.
With the resting system, the pressure of the pushbutton opens the door lock of the entrance panel associated to the handset through P configuration of the handset. On the contrary, with the ongoing call it opens the door lock associated with the entrance panel which makes the call.

THE AUTO-SWITCHING ON PUSHBUTTON

Pressing the auto-switching ON pushbutton, with resting handset, we are connected with the entrance panel associated to the handset through P configuration of the handset.
In case of video systems, we make the audio and video monitoring of the entrance panel. Pressing again and again the auto-switching ON pushbutton we go through the several entrance panels and cameras connected to the system.

INTERCOM

In the 2 wire system it is available the intercom function which allows the audio communication between the handsets.

- Intercommunication among a maximum of 5 apartments with a call long 3 minutes.
- Intercommunication among a maximum of 5 devices in the one-family with a call long 3 minutes.
- Intercommunication among devices of the same apartment and between apartments, in the two-family, with a call long 3 minutes.

In those systems where 8/2 interface is used (Item 346150) intercom time is 1 minute and 30 seconds in order to not engage the riser for too long. On the contrary, in those systems with 2 wire/PABX interface (Item 346810) intercom time between telephone devices and other apartments is 1 minute.

GENERAL RULES FOR INSTALLATION

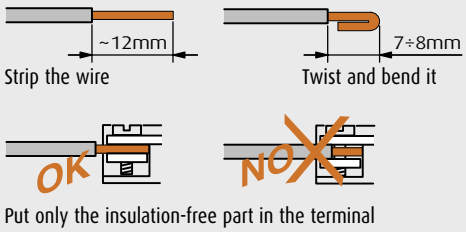
GENERAL INSTRUCTIONS

The piping that contains the conductors must have an adequate diameter, taking also in consideration eventual future enlargements.
The conductors must have sections and characteristics adequate to the dimensions, extension and type of systems, and placed in separate pipings.

The equipment must be positioned and connected perfectly and must complies with the CEI standards, in particular, the power supply and the cameras.
The entrance panels have a protection level IP54.
The power supply must be installed in the "General services" panel adequately supplied and protected by a self-protection switch and sectioning properly measured.

CONNECTING THE CONDUCTORS

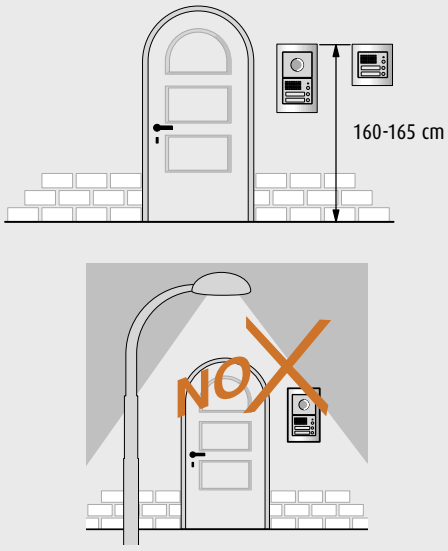
In the connection of the conductors to the blue terminals, together with the equipment, pay attention and observe the indications given here on the right side.



HEIGHT AND POSITIONING THE ENTRANCE PANEL

When installing the entrance panel, in both the audio and video versions, the pushbutton panel should be positioned as in the indications given here at the side.
The camera must not be installed in front of large light sources, or in places where the subject being filmed is in the shadow.
If this condition cannot be respected, the picture will not have much contrast in the darker areas. This is because the brightness is self-regulated on the lighter part of the picture.
To solve these problems change the camera installation height, normally 160 – 165 cm, to a height of 180 cm and direct the lens downwards to improve the quality of the shots.

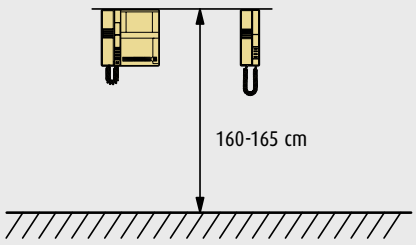
NOTE:
- In bad lighting cameras with colour sensor are less sensitive than black/white cameras.
An extra lighting source should thus be provided in badly lit places.
- To allow the use by disabled persons or those with handicap, the devices must be installed with a height of 120-125cm.



HEIGHT OF THE HANDSET

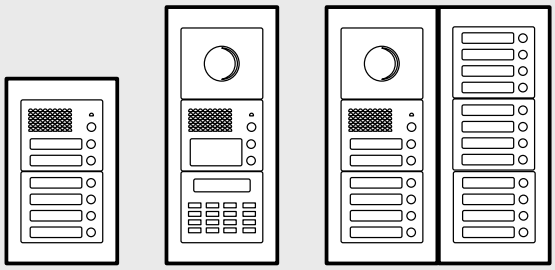
In the handset installation of either the door entry or video door entry, it is advisable to position the devices as indicated here on the right.

NOTE:
To allow the use by disabled persons or those with handicap, the devices must be installed with a height of 120-125cm.



POSITIONING THE SFERA MODULES

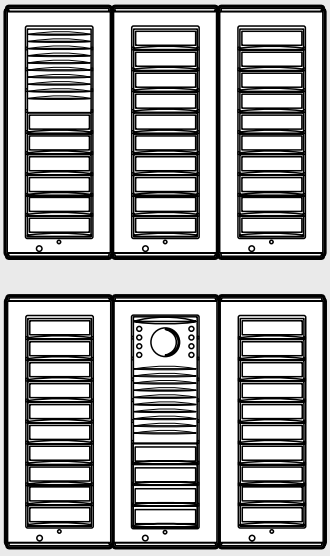
- The camera module must always be at the first highest place.
- The speaker module must always be positioned immediately under the camera module.
- You can not add pushbutton modules to the digital call modules.
- In the last pushbutton module, insert a cover connector.
- Use the connector Item 346903 for the connection between the 6th and 7th pushbutton module Item 342240.
- Additional pushbuttons modules (Item 342240) must be installed all at right or all at left of the speaker module. Indeed, they cannot be installed part at right and part at left of the same speaker module.



POSITIONING THE MINISFERA MODULES

HORIZONTAL POSITIONING

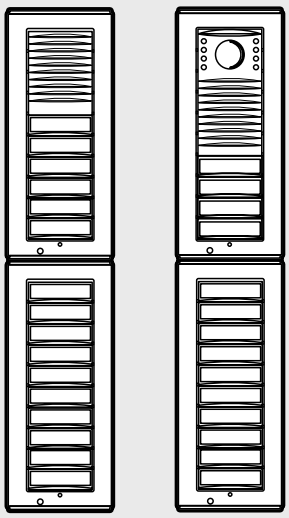
The audio or video speaker module can be indifferently positioned on the left side, the right side or in the middle of the additional call modules.
The central installation of the speaker module can be realized using max. 2 additional call modules.



* Realizable ONLY with 2 additional call modules

VERTICAL POSITIONING

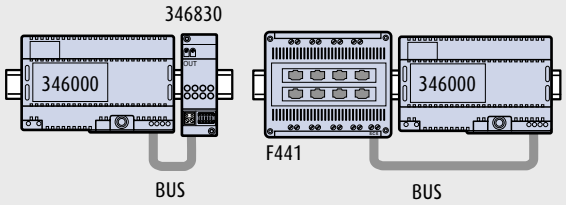
The audio or video speaker module must always be positioned at the first highest place.



GENERAL RULES FOR INSTALLATION

DEVICES ON DIN RAILS

In the video systems install the DIN rail components power supply Item 346000 and video adapter Item 346830 or audio/video node Item F441 on the same DIN rails or at least very close.



CABLES TO BE USED

For the realization of audio and/or video systems with the 2 wire system, it is possible to use the cables mentioned in table, but it is advisable to use the Bticino cable Item 336904. This latter, produced by Bticino for the realization of video systems is made up by 2 twisted conductors with a 0.50 mm2 section for each conductor. This cable allows to get the best performance in the video system (more distance between entrance panel and handset in comparison with the use of other cables).
In addition, Item 336904 is suitable for underground laying provided that it is protected by appropriate pipes because its cable sheath is provided by the CEI 20-13 and CEI 20-14 rules for those cables which can be laid underground.

WARNING:
- Even though Item 336904 constructively guarantees the electric isolation 300/500V, it is not, however, guaranteed the immunity of disturbances that duplicate whenever the same cable is placed in the same pipings where the power supply cables of 230V transit.
We advise therefore to install the cables of the 230V power supply 230V and the video door entry system in separate pipes.

Table

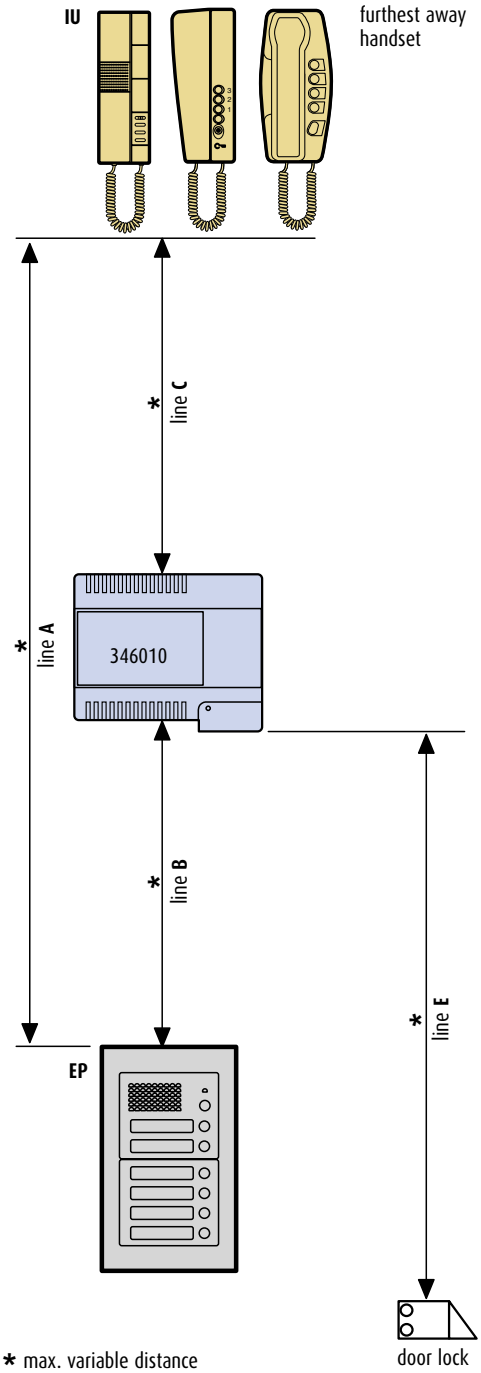
	Type of cable	Item	Can be filled in	Audio systems	Video systems
	Bticino twisted cable Sect. 0.50 mm²	336904	YES	recommended	recommended *
	Bticino twisted cable Sect. 0,35 mm²	L4669	NO	usable	usable
	Twisted telephone pair Sect. 0.28 mm²		NO	usable	usable
	Not twisted normal cable Sect. ≥ 0.28 mm²		NO	usable	usable
	Bticino cable - UTP5	C9881U/5E	NO	usable	usable
	Multipair cable - UTP5		NO	usable	usable

* can reach the greater distances between the entrance panel and the last handset

GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

AUDIO SYSTEMS - MAX. 26 HANDSETS

- The device connection is non-polarised.
- Using conductors with different cross-sections from those prescribed does not guarantee good operation of the system.



* max. variable distance

Max. distance - Line C - Furthest away handset - Power supply

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
26 Handsets	120 m	130 m	220 m	390 m
18 Handsets	130 m	140 m	240 m	420 m

Max. distance - Line B - Power supply - Entrance panel

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
26 Pushbuttons	200 m	215 m	290 m	580 m
18 Pushbuttons	200 m	215 m	290 m	580 m

Line A = line B + line C with line A max = 1000 m

Max. distance - Line E - Power supply - Door lock

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
Transformer voltage 12V a.c.	25 m	25 m	50 m	100 m

NOTE: To reduce the cable cross-section and reach distances greater between the entrance panel and the door lock, install a transformer near the entrance panel .

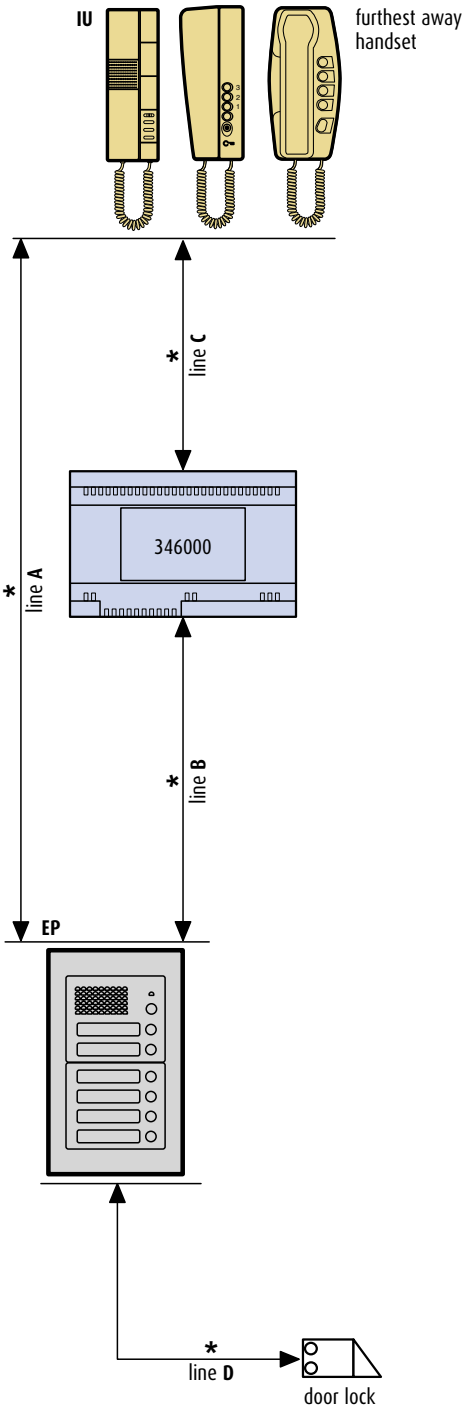
System made with SFERA modules:
- speaker module Item 342150
- pushbutton module Item 342240
- power supply Item 346010

System with existing pushbutton:
- universal speaker unit Item 346991
- module for additional pushbuttons Item 346992
- power supply Item 346010

GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

AUDIO SYSTEMS - MAX. 100 HANDSETS

- The device connection is non-polarised.
- Using conductors with different cross-sections from those prescribed does not guarantee good operation of the system.



* max. variable distance

SFERA ENTRANCE PANEL

Max. distance - Line C - Furthest away handset - Power supply

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
100 Handsets	—	—	—	320 m
50 Handsets	150 m	160 m	250 m	450 m
26 Handsets	180 m	190 m	320 m	560 m

Max. distance - Line B - Power supply - Entrance panel

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
100 Pushbuttons	100 m	110 m	180 m	310 m
50 Pushbuttons	150 m	160 m	250 m	450 m
26 Pushbuttons	200 m	210 m	290 m	580 m
Item 342630 + 342640	130 m	140 m	240 m	420 m
Item 342610 + No. 9 Item 342200	130 m	140 m	240 m	420 m

Line A = line B + line C with line A max = 1000 m

Max. distance - Line D - Speaker module - Door lock

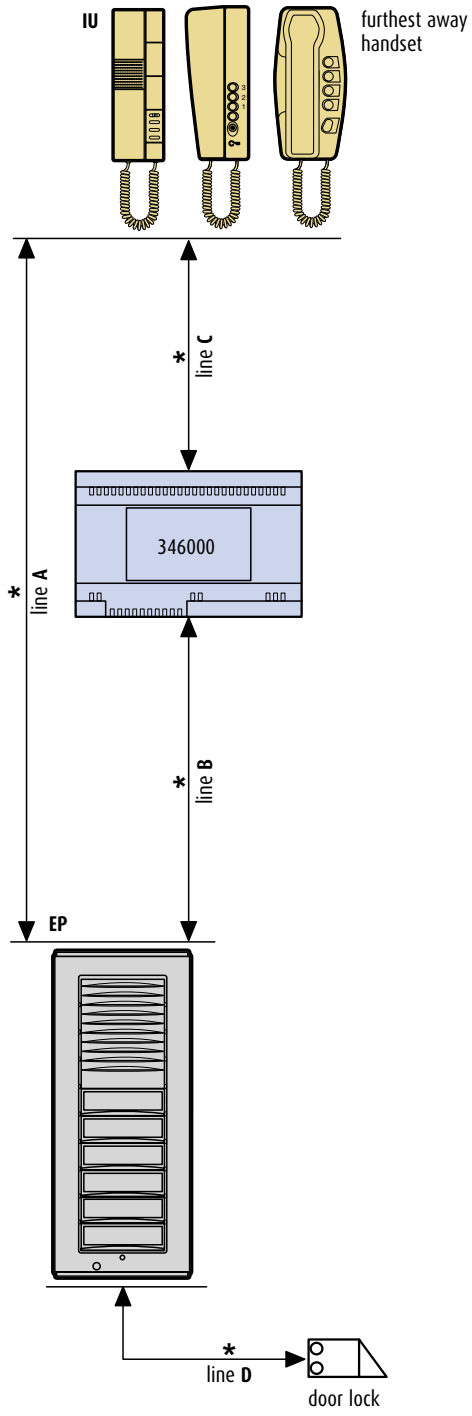
Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
S+ S- terminals	30 m	30 m	50 m	100 m

System made with SFERA modules:
- speaker module Item 342170
- pushbutton module Item 342240
- power supply Item 346000

System with existing pushbutton:
- universal speaker unit Item 346991
- module for additional pushbuttons Item 346992
- power supply Item 346000

AUDIO SYSTEMS - MAX. 100 HANDSETS

- The device connection is non-polarised.
- Using conductors with different cross-sections from those prescribed does not guarantee good operation of the system.



* max. variable distance

MINISFERA ENTRANCE PANEL

Max. distance - Line C - Furthest away handset - Power supply

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
100 Handsets	—	—	—	320 m
66 Handsets	130 m	140 m	230 m	390 m
26 Handsets	180 m	190 m	320 m	560 m

Max. distance - Line B - Power supply - Entrance panel

Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
- 100 Pushbuttons - 2 modules Item 342702 - 9 modules Item 342704	100 m	110 m	180 m	310 m
- 66 Pushbuttons - 1 module Item 342702 - 6 modules Item 342704	140 m	150 m	250 m	430 m
- 26 Pushbuttons - 1 module Item 342702 - 2 modules Item 342704	200 m	210 m	290 m	580 m

Line A = line B + line C with line A max = 1000 m

Max. distance - Line D - Speaker module - Door lock

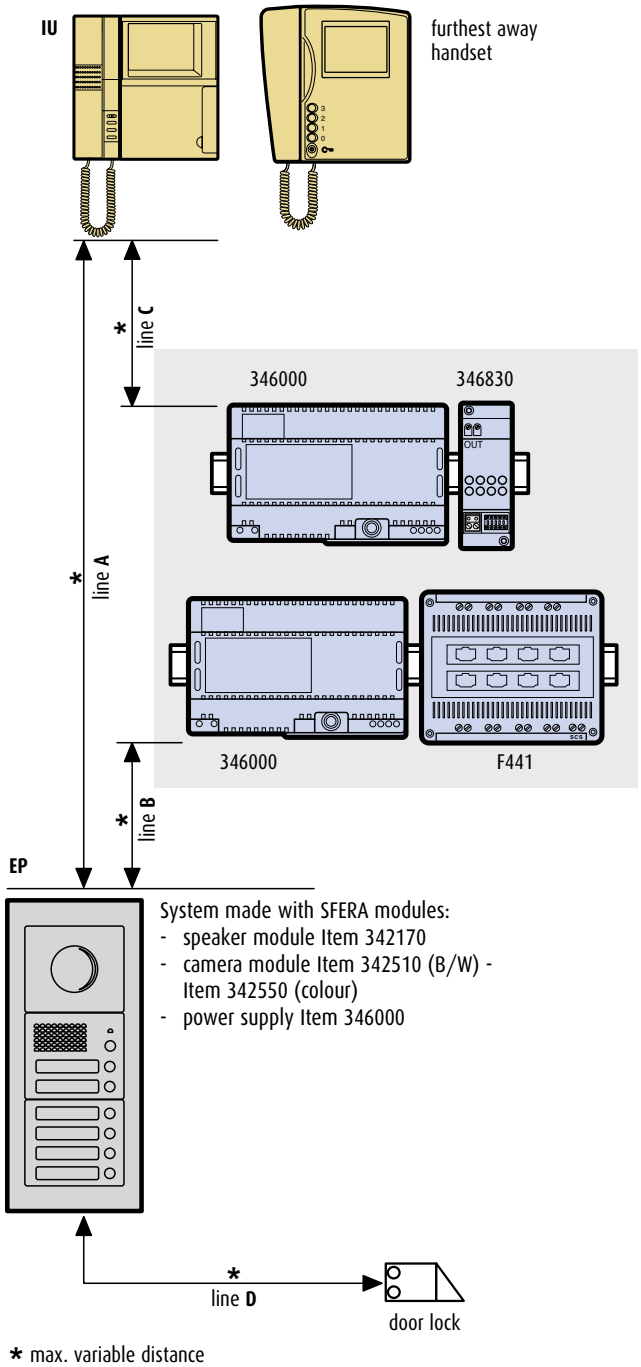
Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
S+ S- terminals	30 m	30 m	50 m	100 m

System made with MINISFERA modules:
- speaker module Item 347202
- expansion module Item 342704
- power supply Item 346000

GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

VIDEO SYSTEMS WITH SFERA MODULES

- The device connection is non-polarised. The devices can be connected by wiring the system in two different ways:
  - **In-out** wiring directly on the device terminals (handsets)
  - **Star** wiring, with the floor distribution block (Item 346840) which can also be directly installed in the round box.
- Using conductors with different cross-sections from those prescribed does not guarantee good operation and the good quality of the video signal. Only cables described in the tables below should be used.



* max. variable distance

Max. distance - Line A - Entrance panel - Furthest away handset

Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Handsets 2 Pushbuttons	50 m	200 m	140 m	170 m
10 Handsets 10 Pushbuttons	50 m	150 m	100 m	150 m
26 Handsets 26 Pushbuttons	50 m	150 m	100 m	130 m
48 Handsets 48 Pushbuttons	—	150 m	100 m	-
digital call modules	50 m	150 m	100 m	130 m

Max. distance - Line C - Furthest away handset - Power supply

Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Handsets **IN-OUT**	50 m	200 m	130 m	90 m
10 Handsets **IN-OUT**	50 m	150 m	100 m	80 m
26 Handsets **IN-OUT**	50 m	150 m	90 m	65 m
10 Handsets **STAR** (with distr. block)	50 m	150 m	100 m	70 m
26 Handsets **STAR** (with distr. block)	50 m	130 m	75 m	50 m
48 Handsets **STAR** (with distr. block)	—	85 m	50 m	—
NOTE: for >26 handsets divide on two or more risers				

Max. distance - Line B - Power supply - Entrance panel

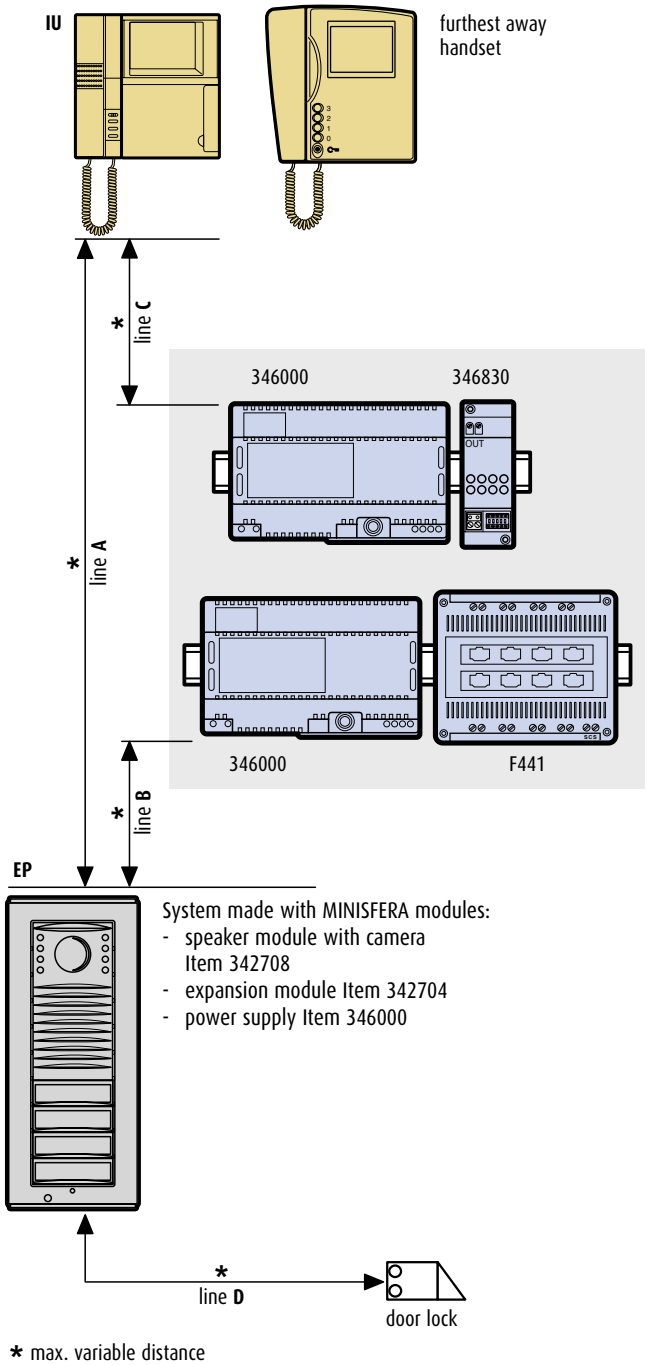
Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Pushbuttons	50 m	200 m	115 m	80 m
10 Pushbuttons	50 m	150 m	100 m	75 m
26 Pushbuttons	50 m	150 m	95 m	65 m
48 Pushbuttons with additional power supply	—	150 m	85 m	—
digital call modules	50 m	150 m	95 m	65 m

Max. distance - Line D - Entrance panel - Door lock

Cable section (mm²)	0.28	SCS cable Bticino Item L4669	Bticino cable Item 336904	1
S+ S- terminals	30 m	30 m	50 m	100 m

VIDEO SYSTEMS WITH MINISFERA MODULES

- The device connection is non-polarised. The devices can be connected by wiring the system in two different ways:
  - **In-out** wiring directly on the device terminals (handsets)
  - **Star** wiring, with the floor distribution block (Item 346840) which can also be directly installed in the round box.
- Using conductors with different cross-sections from those prescribed does not guarantee good operation and the good quality of the video signal. Only cables described in the tables below should be used.



* max. variable distance

Max. distance - Line A - Handset - Furthest away handset

Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Handsets 2 Pushbuttons	50 m	200 m	140 m	170 m
10 Handsets 10 Pushbuttons	50 m	150 m	100 m	150 m
32 Handsets 32 Pushbuttons	50 m	150 m	100 m	140 m

Max. distance - Line C - Furthest away handset - Power supply

Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Handsets **IN-OUT**	50 m	200 m	130 m	90 m
10 Handsets **IN-OUT**	50 m	150 m	100 m	80 m
32 Handsets **IN-OUT**	50 m	150 m	90 m	65 m
10 Handsets **STAR** (with distr. block)	50 m	150 m	100 m	70 m
32 Handsets **STAR** (with distr. block)	50 m	130 m	75 m	50 m
NOTE: for >26 handsets divide on two or more risers				

Max. distance - Line B - Power supply - Handset

Cable section (mm²)	2 normal cables > 0.2 mm² or L4669	Bticino cable Item 336904	twisted telephone pair 0.28 mm²	a pair of the multipair data cable Item C9881U/5E
2 Pushbuttons	50 m	200 m	115 m	80 m
10 Pushbuttons - 1 module Item 342708 - 1 module Item 342704	50 m	150 m	100 m	85 m
32 Pushbuttons - 1 module Item 342708 - 3 modules Item 342704	50 m	150 m	100 m	75 m

Max. distance - Line D - Handset - Door lock

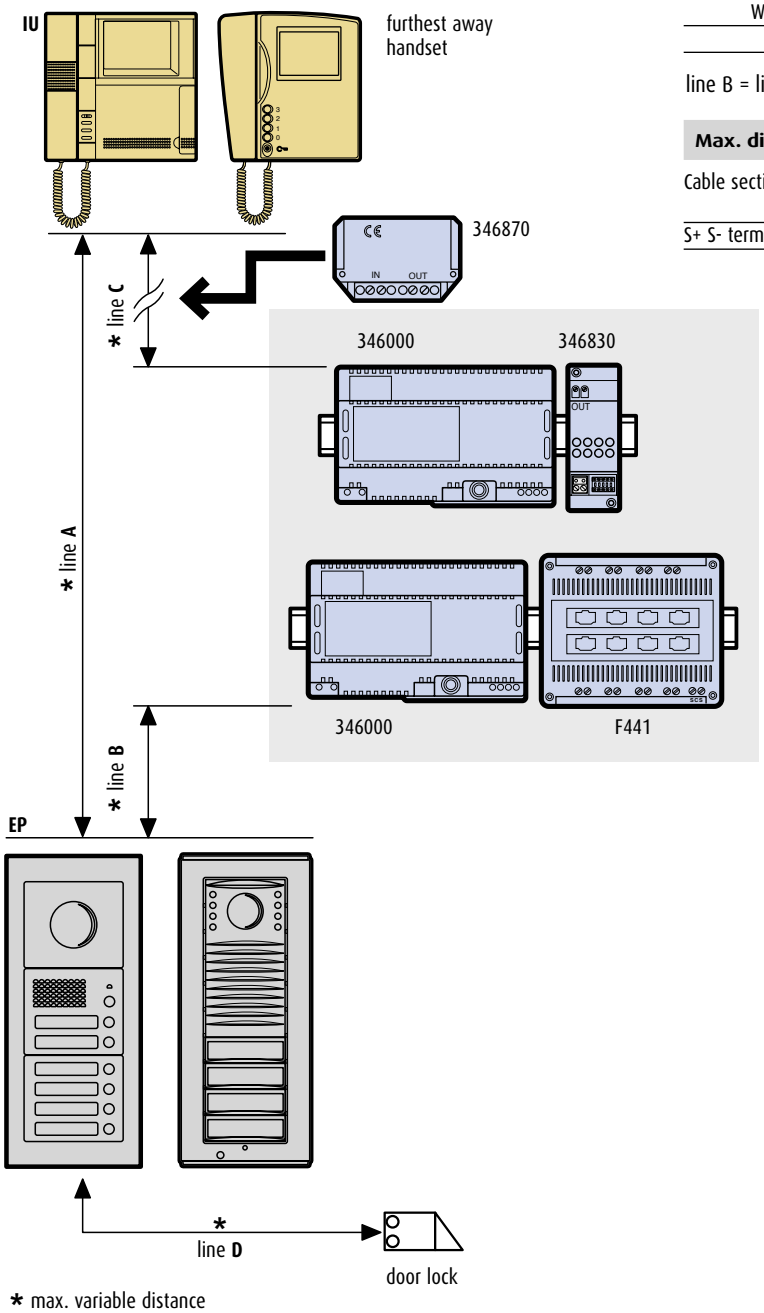
Cable section (mm²)	0.28	SCS cable Bticino Item L4669	Bticino cable Item 336904	1
S+ S- terminals	30 m	30 m	50 m	100 m

GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

VIDEO SYSTEMS WITH AMPLIFIER ITEM 346870

The use of the amplifier Item 346870 allows to realize systems, with non-twisted cables long more than 50 metres (max. 100 m). Its use is perfect in restorations and arrangements of existing systems.

- The device connection is non-polarised. The devices can be connected by wiring the system in two different ways:
  - **In-out** wiring directly on the device terminals (handsets)
  - **Star** wiring, with the floor distribution block (Item 346840) which can also be directly installed in the round box.
- The signal amplifier must be used with untwisted cables, of cross-section ≥28 mm² not polarised.
- The signal amplifier must be inserted near the 50th metre from the entrance panel (or camera) along the power supply - handsets line (C line). Switching on at lesser distances can create a distortion of the video signal, while at greater distances it would be useless.
- Below the amplifier can be connected 18 handsets at most.



* max. variable distance

Max. distance - Line A - Handset - Furthest away handset

Without Item 346870	With Item 346870
50m	100m

Max. distance - Line C - Furthest away handset - Power supply

Without Item 346870	With Item 346870
50m	100m

line B = line A – line C

Max. distance - Line D - Handset - Door lock

Cable section (mm²)	0.28	SCS cable Bticino L4669	Bticino cable Item 336904	1
S+ S- terminals	30 m	30	50 m	100 m

GENERAL RULES FOR INSTALLATION
Possible systems

POSSIBLE SYSTEMS

The number of handsets varies depending on the number of the entrance panels and the actuators existing in the system.
In the calculation of the handsets which can be connected, we must consider also any device (audio handsets, video handsets and bells) connected in parallel.

Audio systems example
In an audio system with an entrance panel Max. 100 handsets can be connected.
For example, we can connect:
- 100 apartments with 1 handset
- 80 apartments with 1 handset and 10 with 2 handsets (80+(10x2)=100)
- 71 apartments with 1 handset, 10 with 2 handsets, 2 with 3 handsets and 1 actuator for generic loads. (71+(10x2)+(2x3)+3=100)

Video systems example
In a video system with an entrance panel Max. 64 handsets can be connected.
For example we can connect:
- 64 apartments with 1 handset
- 50 apartments with 1 handset and 7 with 2 handsets (50+(7x2)=64)
- 38 apartments with 1 handset, 10 con 2 handsets, 1 with 3 handsets and 1 actuator for generic loads. (38+(10x2)+(1x3)+3=64)

To realize audio and/or video systems it is possible to use PIVOT, SWING and SPRINT handsets.
For functions, uses and chromatic variants please make reference to the "Handsets versions" section.

NOTE: in video systems (or audio/video mixed systems) the SPRINT base audio handset Item 344202 cannot be installed.

AUDIO SYSTEMS MAX. 26 HANDSETS

SFERA entrance panels with pushbutton modules and universal PORTER

	SFERA (Item 342150 and Item 342240)		UNIVERSAL PORTER
Entrance panels	max No. handsets	max. No. nameplate modules	max. No. handset with 346991
1	26	1	26
2	18	2	18
3	12	-	12
4	8	-	8
5	-	-	-
6	-	-	-
7	-	-	
8	-	-	-
9	-	-	-
	-	-	-
1 main + 2 sec.	16	-	16
1 main + 3 sec.	12	-	12
1 main + 4 sec.	8	-	8
1 main + 5 sec.	-	-	-
1 main + 6 sec.	-	-	-
1main + 7 sec.	-	-	-
1 main + 8 sec.	-	-	-

NOTE: The table mentions the max. number of entrance panels and handsets for certain types of system functionally tested.
In the systems the main entrance panels are those which can call all the handsets, while the secondary entrance panels are those which can call only a part of the handsets.

In the systems, the number of pushbuttons for each secondary entrance panel is calculated dividing the total number of handsets which can be installed for the total number of the secondary entrance panels.

In the realization of the systems we must consider the possibility to insert other components. These latter will take off some handsets from the system.
- For each additional nameplate module (besides those already mentioned) 3 handsets must be taken off
- For each special control (Item L4651/2) 1 handset must be taken off
- For each actuator Item 346200, for generic loads or call repeaters, 3 handsets must be taken off (if supplied locally with a power supply Item 346000 take off 1 handset)
- For each actuator Item 346230, for door lock, 3 handsets must be taken off

GENERAL RULES FOR INSTALLATION
Possible systems

AUDIO SYSTEMS MAX. 100 HANDSETS

SFERA entrance panels with pushubutton modules, MINISFERA and universal PORTER

	SFERA (Item 342170 and Item 342240)		UNIVERSAL PORTER	MINISFERA (Item 342702)	
Entrance panels	max. No. handsets	max. No. nameplate modules	max. No. handsets with 346991	max. No. handsets	max. No. additional expans. modules Item 342704
1	100*	1	100	100**	9
2	64*	2	64	66	12
3	50	3	50	56	15
4	38	4	38	46	16
5	30	5	30	36	15
6	22	6	22	26	12
7	18	7	18	26	14
8	14	8	14	16	8
9	10	9	10	16	9
1 main + 2 sec.	76*	1	76	72**	12
1 main + 3 sec.	48	1	48	56	11
1 main + 4 sec.	48	1	48	56	9
1 main + 5 sec.	45	1	45	46	9
1 main + 6 sec.	42	1	42	46	10
1 main + 7 sec.	35	1	35	36	3
1 main + 8 sec.	32	1	32	36	3
2 main + 2 sec.	46	2	46	46	12
2 main + 3 sec.	42	2	42	46	11
2 main + 4 sec.	40	2	40	46	12
2 main + 5 sec.	35	2	35	36	11
2 main + 6 sec.	30	2	30	36	6
2 main + 7 sec.	21	2	21	36	6
3 main + 2 sec.	38	3	38	36	13
3 main + 3 sec.	36	3	36	36	12
3 main + 4 sec.	32	3	32	26	10
3 main + 5 sec.	30	3	30	26	6
3 main + 6 sec.	24	3	24	26	6

* For systems with a number of pushbuttons > 50, foresee the digital call modules (Item 342630 and Item 342610) or two separate keypads

** For systems with more than 6 expansion modules connected to a same EP, foresee two separate keypads.
A maximum of 6 Item 342704 can be connected in cascade to the EP Item 342702.

NOTE:

In the realization of the systems we must consider the possibility to insert other components. These latter will take off some handsets from the system.

- For each additional nameplate module (besides those already mentioned) 3 handsets must be taken off
- For each special control (Item L4651/2) 1 handset must be taken off
- For each actuator Item 346200, for generic loads or call repeaters, 3 handsets must be taken off (if supplied locally with a power supply Item 346000 take off 1 handset)
- For each actuator Item 346230, for door lock, 3 handsets must be taken off

SFERA entrance panels realized with digital call modules

	Numerical digital call modules Item 342610		- Digital call speaker module with graphic display Item 342630 - Additional keypad module Item 342640
Entrance panels	max. No. handsets	max. No. nameplate modules	max. No. handsets
1	100	9	100
2	70	12	70
3	64	18	64
4	58	24	58
5	52	25	52
6	46	30	30
7	40	28	
8	34	32	
9	28	27	
1 main + 2 sec.	76	25	66
1 main + 3 sec.	60	21	60
1 main + 4 sec.	56	17	56
1 main + 5 sec.	50	15	50
1 main + 6 sec.	48	17	48
1 main + 7 sec.	42	11	42
1 main + 8 sec.	40	12	40
2 main + 2 sec.	60	26	60
2 main + 3 sec.	54	22	54
2 main + 4 sec.	52	22	52
2 main + 5 sec.	45	20	45
2 main + 6 sec.	42	20	42
2 main + 7 sec.	35	15	35
3 main + 2 sec.	54	29	54
3 main + 3 sec.	51	27	51
3 main + 4 sec.	48	27	48
3 main + 5 sec.	40	22	40
3 main + 6 sec.	36	18	36

NOTE: Secondary entrance panels are realized with pushbutton modules, the main handsets with the relating nameplate modules. The number of pushbuttons for each secondary entrance panel is calculated dividing the total number of the handsets which can be installed for the total number of the secondary entrance panels.

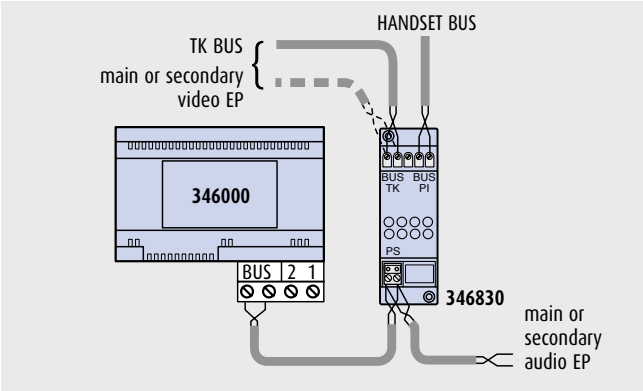
In the realization of the systems we must consider the possibility to insert other components. These latter will take off some handsets from the system.
- For each additional nameplate module (besides those already mentioned) 3 handsets must be taken off
- For each special control (Item L4651/2) 1 handset must be taken off
- For each actuator Item 346200, for generic loads or call repeaters, 3 handsets must be taken off
  (if supplied locally with a power supply Item 346000 take off 1 handset)
- For each actuator Item 346230, for door lock, 3 handsets must be taken off

GENERAL RULES FOR INSTALLATION
Possible systems with Item 346830

VIDEO SYSTEMS WITH 346830

In those systems in which it is necessary to reach a higher number of handsets it is possible to use an additional power supply in order to supply locally the video entrance panels of the series SFERA.
Alternatively to the video entrance panels we can use the cameras at 12V d.c. with the suitable interface Item 347400.
In those systems containing only the power supply it is possible to replace the entrance panel with the interface Item 347400 not varying the number of connectable handsets.
The audio entrance panels must be connected to the PS terminal of the video adapter Item 346830.

Secondary entrance panels are realized with pushbutton modules; the number of pushbuttons for each secondary entrance panel is calculated dividing the total number of the installable handsets for the total number of the secondary entrance panels.
In the realization of systems, we must consider the possibility to insert other components; these latter will take off some handsets from the system.
- For each additional nameplate module (besides those already mentioned) 3 handsets must be taken off
- For each special control (Item L4651/2) 1 handset must be taken off
- For each actuator Item 346200, for generic loads or call repeaters, 3 handsets must be taken off
  (if locally supplied with a power supply Item 346000 take off 1 handset)
- For each actuator Item 346230, per lock, 3 handsets must be taken off



SFERA entrance panels with pushbutton modules and MINISFERA

			SFERA (Item 342170 and Item 342240)		MINISFERA (Item 342708)		
Entrance panels (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block	max. No. additional expans. modules Item 342704
1 video	1	—	26	7	32	8	3
2 video	1	—	18	5	24	6	4
1 main video + 2 main audio	1	—	14	4	14	4	3
1 main video + 2 sec. audio	1	—	16	4	14	4	3
1 video	1	1	50	16	*	*	*
2 video	1	2	50	16	*	*	*
1 main video + 2 main audio	1	1	34	9	*	*	*
1 main video + 2 sec. audio	1	1	36	10	*	*	*

* it is not possible to power supply locally the MINISFERA entrance panels

SFERA entrance panels with digital call modules

			SFERA				
			Numerical digital call modules Item 342610			- Digital call speaker module with graphic display Item 342630 - Additional keypad module Item 342640	
Entrance panels (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. nameplate modules	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block
1 video	1	—	26	3	7	26	7
2 video	1	—	18	4	5	18	5
1 main video + 2 main audio	1	—	14	6	4	—	—
1 main. Video + 2 sec. audio	1	—	16	4	4	—	—
1 video	1	1	64	6	16	64	16
2 video	1	2	64	12	16	64	16
1 main video + 2 main audio	1	1	36	7	10	30	8
1 main video + 2 sec. audio	1	1	46	12	12	36	10

GENERAL RULES FOR INSTALLATION
Possible systems with audio/video node

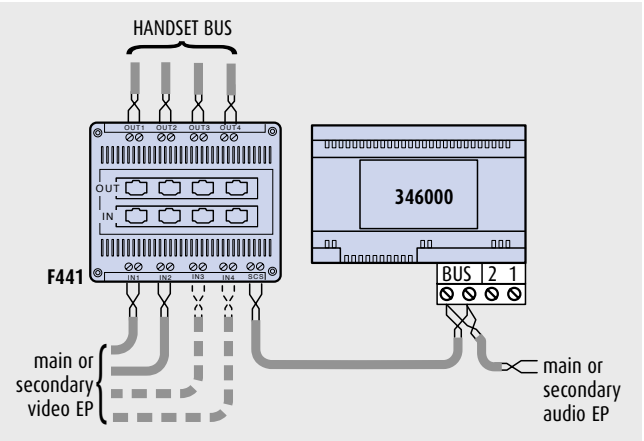
VIDEO SYSTEMS WITH F441 AUDIO/VIDEO NODE

Using the audio/video node, it is possible to have to 4 video entrance panels and 4 risers. On a riser max. 26 handsets and 6 distribution blocks can be connected. The audio EP must be connected to the SCS terminal of the audio/video node.
In those systems in which it is necessary to reach a higher number of handsets it is possible to use an additional power supply in order to supply locally the video entrance panels of the series SFERA.
Alternatively to the video entrance panels we can use the cameras at 12V d.c. with the suitable interface Item 347400.
In those systems containing only the power supply it is possible to replace the entrance panel with the interface Item 347400 not varying the number of connectable handsets.

Secondary entrance panels are realized with pushbutton modules; the number of pushbuttons for each secondary entrance panel is calculated dividing the total number of the installable handsets for the total number of the secondary entrance panels.

In the realization of systems, we must consider the possibility to insert other components; these latter will take off some handsets from the system.

- For each additional nameplate module (besides those already mentioned) 3 handsets must be taken off
- For each special control (Item L4651/2) 1 handset must be taken off
- For each actuator Item 346200, for generic loads or call repeaters, 3 handsets must be taken off
  (if locally supplied with a power supply Item 346000 take off 1 handset)
- For each actuator Item 346230, per lock, 3 handsets must be taken off



SFERA entrance panels with pushbutton modules and MINISFERA

			SFERA (Item 342170 and Item 342240)		MINISFERA (Item 342708)		
Posti esterni (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block	max. No. additional expans. modules Item 342704
1 video	1	—	26	7	32	8	3
2 video	1	—	18	5	24	6	4
3 video	1	—	14	4	16	4	6
4 video	1	—	10	3	14	4	4
1 main video + 2 sec. audio o video	1	—	16	4	18	5	4
1 main video + 3 sec. audio or video	1	—	14	4	14	4	4
2 main audio or video + 2 sec. audio or video	1	—	12	5	14	4	4
1 video	1	1	50	16	*	*	*
2 video	1	2	50	16	*	*	*
3 video	1	3	50	16	*	*	*
4 video	1	4	50	16	*	*	*
1 main video + 2 sec. audio	1	1	42	12	*	*	*
1 main video + 2 main audio	1	1	34	9	*	*	*
1 main video + 3 sec. audio	1	1	42	12	*	*	*
1 main video + 3 main audio	1	1	26	7	*	*	*
2 main video + 2 sec. audio	1	2	42	12	*	*	*
1 main video + 1 main audio + 2 sec. audio	1	1	32	9	*	*	*

* it is not possible to power supply locally the MINISFERA entrance panels

GENERAL RULES FOR INSTALLATION
Possible systems with audio/video node

VIDEO SYSTEMS WITH F441 AUDIO/VIDEO NODE

SFERA entrance panels with digital call modules

			SFERA				
			Numerical digital call modules Item 342610			- Digital call speaker module with graphic display Item 342630 - Additional keypad module Item 342640	
Entrance panels (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. nameplate modules	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block
1 video	1	—	26	5	7	26	7
2 video	1	—	18	4	5	18	5
3 video	1	—	14	6	4		
4 video	1	—	10	4	3		
1 main video + 2 sec. audio or video	1	—	16	4	4	12	3
1 main video + 3 sec. audio or video	1	—	14	2	4	—	—
2 main audio o video + 2 sec. audio or video	1	—	12	2	3	—	—
1 video	1	1	64	6	16	64	16
2 video	1	2	64	12	16	64	16
3 video	1	3	50	12	12	50	12
4 video	1	4	50	12	12	50	12
1 main video + 2 sec. audio	1	1	46	7	12	46	12
1 main video + 2 main audio	1	1	42	7	12	42	12
1 main video + 3 sec. audio	1	1	42	7	12	42	12
1 main video + 3 main audio	1	1	36	7	10	26	7
2 main video + 2 sec. audio	1	2	36	7	10	36	10
1 main video + 1 main audio + 2 sec. audio	1	1	36	7	10	36	10

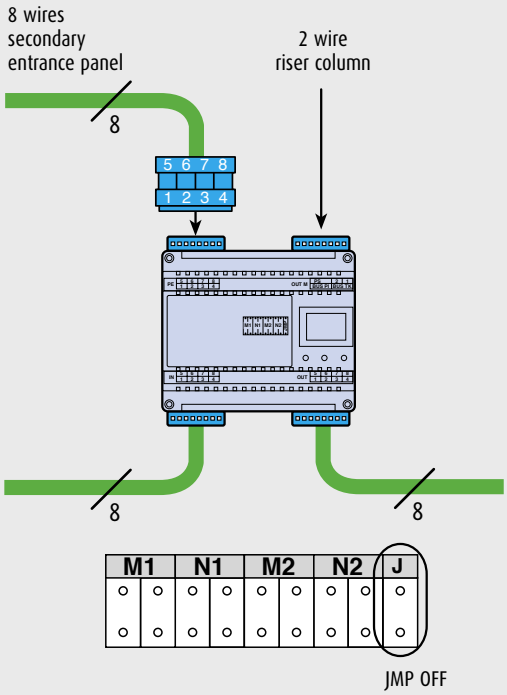
GENERAL RULES FOR INSTALLATION
Possible systems with 8/2 interface

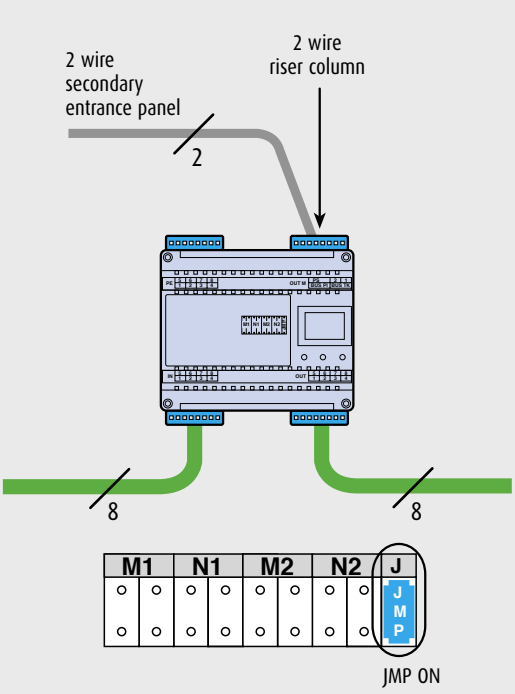
POSSIBLE SYSTEMS WITH 8/2 INTERFACE

The following tables show the dimensions of riser columns, the max. number of the handsets as to the max. number of the installed secondary entrance panels. The riser columns derive from the 8/2-wire interface Item 346150.

Riser entrance panels called also secondary or local, can be realized:
- with the keypads of SFERA or MINISFERA series of the 2 wire system.
- with the keypads only of the SFERA series of the Digital System.

In both cases the keypads can be audio or video.





2 AUDIO WIRE SECONDARY ENTRANCE PANEL

In audio riser columns dimensioning, with the secondary EP realized with the 2 wire system, make reference to the tables “audio systems max. 100 handsets”.

GENERAL RULES FOR INSTALLATION
Possible systems with 8/2 interface

2 VIDEO WIRE SECONDARY ENTRANCE PANEL

In those systems in which it is necessary to reach a higher number of handsets, it is possible to use an additional power supply to supply locally the video entrance panels of the SFERA series.
Audio entrance panels must be connected to the PS terminal of the 8/2 interface Item 346150.

SFERA entrance panels with pushbutton modules and MINISFERA

			SFERA (Item 342170 and Item 342240)		MINISFERA (Item 342708)		
Secondary entrance panels (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block	n. max additional expans. modules Item 342704
1 video	1	—	18	5	24	6	2
1 video + 1 audio	1	—	12	3	16	4	3
1 video + 2 audio	1	—	8	2	12	3	3
1 video	1	1	46	12	*	*	*
1 video + 1 audio	1	1	32	8	*	*	*
1 video + 2 audio	1	1	26	7	*	*	*

* it is not possible to power supply locally the MINISFERA entrance panels

SFERA entrance panels with digital call modules

			SFERA				
			- Numerical digital call modules Item 342610 - Nameplate module Item 342200			- Digital call speaker module with graphic display Item 342630 - Keypad module Item 342640	
Secondary entrance panels (both with b/w and colour camera)	Power supply system	Additional power supplies	max. No. handsets	max. No. nameplate modules	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block
1 video	1	—	18	2	5	18	5
1 video + 1 audio	1	—	12	2	3	—	—
1 video + 2 audio	1	—	8	3	2	—	—
1 video	1	1	50	7	13	50	13
1 video + 1 audio	1	1	38	12	10	38	10
1 video + 2 audio	1	1	28	12	7	28	7

8 AUDIO WIRE SECONDARY ENTRANCE PANEL

Only one power supply for all system

	SFERA pushbuttons call	SFERA digital call		
	- Speaker module Item 342160 - Pushbutton module Item 342240	- Numerical digital call module Item 342610		- Digital call speaker module with graphic display Item 342620 - Keypad module Item 342640
Secondary entrance panels	max. No. handsets	max. No. handsets	max. No. nameplate modules	max. No. handsets
1	92	100	9	100
2	46	70	12	70

2 VIDEO WIRE SECONDARY ENTRANCE PANEL

Only one power supply for all system

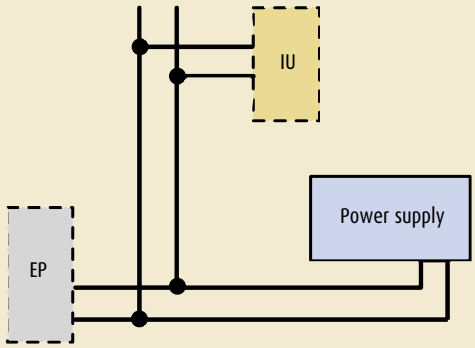
	SFERA pushbuttons call		SFERA digital call				
	- Speaker module Item 342160 - Pushbuttons module Item 342240		- Numerical digital call module Item 342610 - Nameplate module Item 342000			- Digital call speaker module with with graphic display Item 342620 - Keypad module Item 342640	
Secondary entrance panels (both with b/w and colour camera)	max. No. handsets	max. No. floor distribution block	max. No. handsets	max. No. nameplate modules	max. No. floor distribution block	max. No. handsets	max. No. floor distribution block
1 video	18	5	20	2	5	18	5
1 video + 1 audio	12	3	12	4	3	—	—
1 video + 2 audio	8	2	—	—	—	—	—

GENERAL RULES FOR INSTALLATION
Connection mode

2 WIRE SYSTEMS

The audio 2 wire systems are made by shunting the 2 wire bus to connect the audio handsets and the entrance panels.
The video 2 wire systems can be made in 2 ways:
1- in-out wiring
2- star wiring with floor distribution block Item 346840.

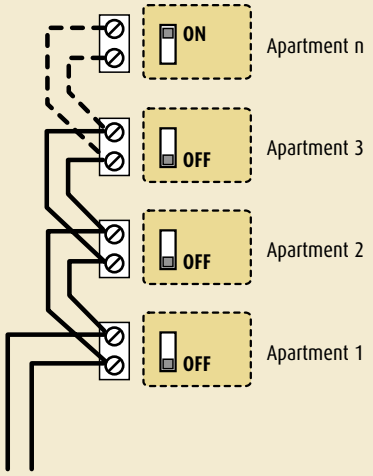
Audio system connection mode



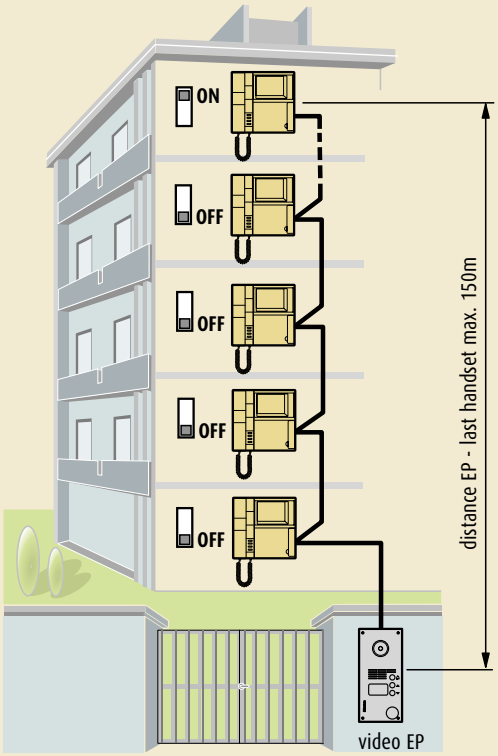
IN-OUT WIRING

IN-OUT wiring is connected directly on the terminal of the appliances which are connected to the system.
Each riser must be terminated positioning the dip-switch of the last audio handset on ON.
IN-OUT wiring is particularly indicated for one and two-family systems and for vertical or horizontal multi-family systems (with the homes in rows)

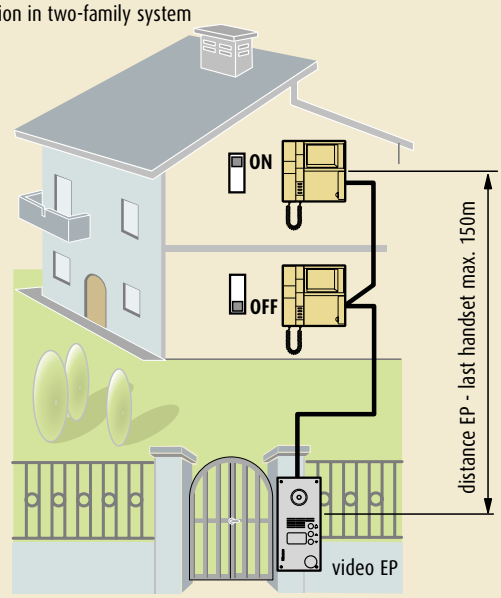
Wiring mode



Connection in multi-family with homes in rows

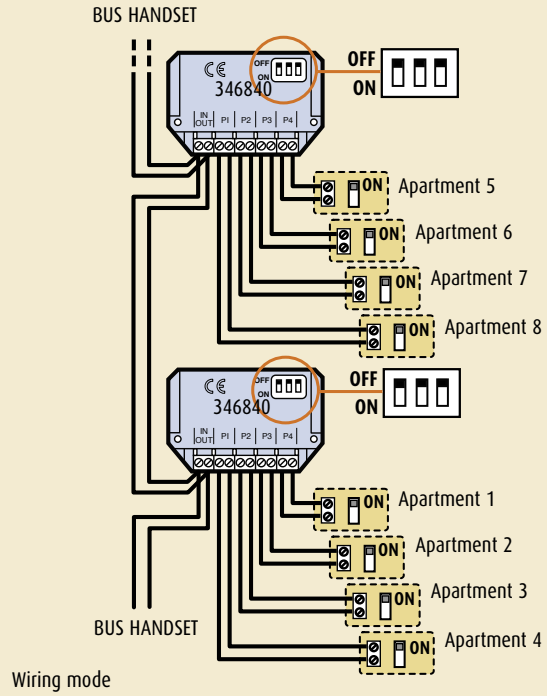


Connection in two-family system

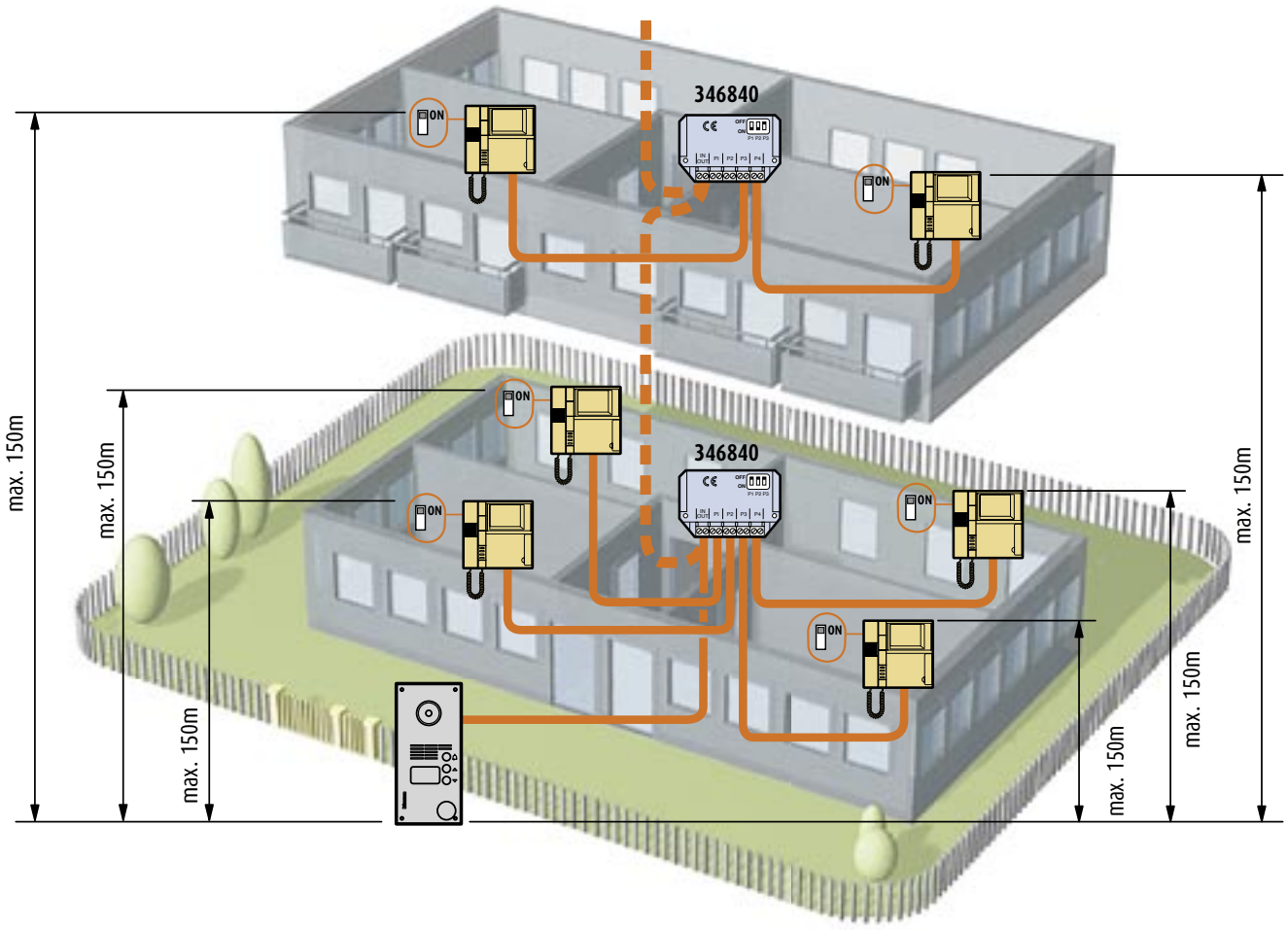


STAR WIRING (ITEM 346840)

The star wiring is made connecting the individual apartment to an output of the floor distribution block Item 346840.
Each apartment must be terminated by positioning the DIP-SWITCH of the last appliance on ON (along each apartment line we can install max. 3 handsets).
Star wiring is particularly indicated in multi-family systems with several homes on the same floor and in multi-family systems where the maximum distance is required between the entrance panel and all the audio handsets.



Wiring mode



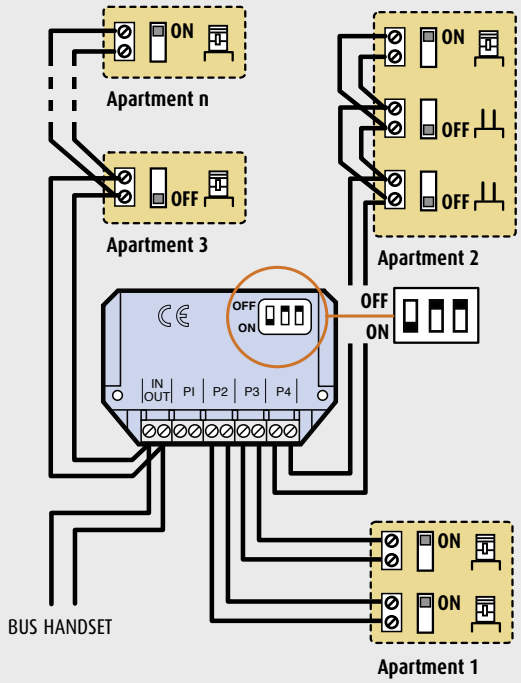
GENERAL RULES FOR INSTALLATION
Connection mode

MIXED WIRING

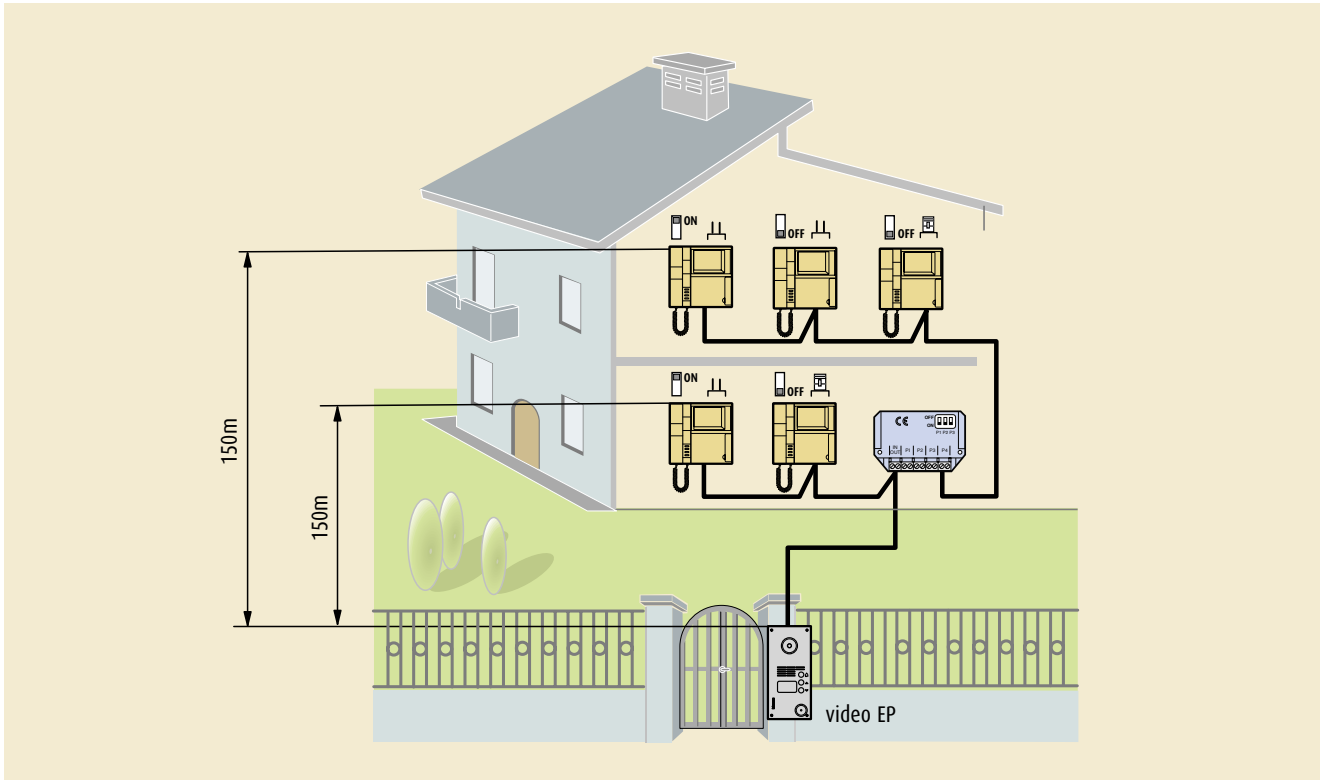
Both wiring methods described previously can be used together, for the realization of more articulated systems.
The mixed wiring (IN-OUT and Star) allows to execute wiring systems in order to satisfy the greatest quantity of requests.
Floor distribution blocks outputs can be used to connect a single device or to generate an apartment line (on which max. 3 devices can be connected).
To the Bus handset can be connected in IN-OUT floor distribution blocks or handsets.

The assignation of the handsets to the apartments occurs through configuration (for further information see the section "General Rules for Installation - Configuration" and the "Configuration" section).

NOTE: MASTER-SLAVE function allows to install to 3 handsets in the same apartment on the same call (for further information see the section "Performances and functions of the system").



Wiring mode



GENERAL RULES FOR INSTALLATION
Configuration of devices

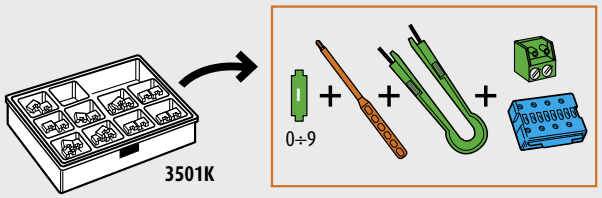
To configure means to program the system. This occurs assigning an identification and operational mode number to the devices.
This operation is made inserting in the appropriate seats some configurators (numbered from 0 to 9), using a clamp provided with the power supply (Item 346000 and Item 346010) or contained in the case of the configurators (Item 3501K).

A seat is left empty corresponds to the configuration of a zero.

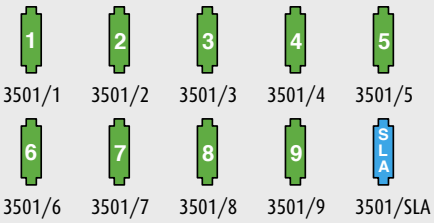
In the system exist two different numerations to identify respectively the entrance panels (EP) and the handsets (handset).
The numeration of the EP (0-9) is generally identified by P, while the address of the handsets (0-99) is identified by N.
Only IU belonging to the same apartment can have the same address (configurator equal in N).

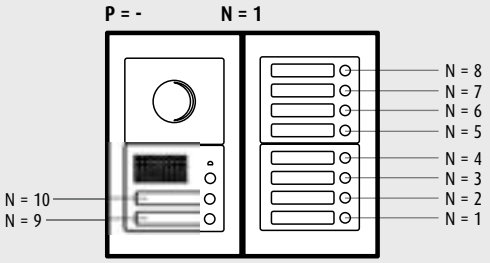
On the EP, in addition to the P address it is necessary to configure also the N address relating to the handset from which we would start to call (associated to the last pushbutton of the keypad; getting closer to the speaker module, the push buttons call the next handsets).

The configurators can be purchased in a case



or severally



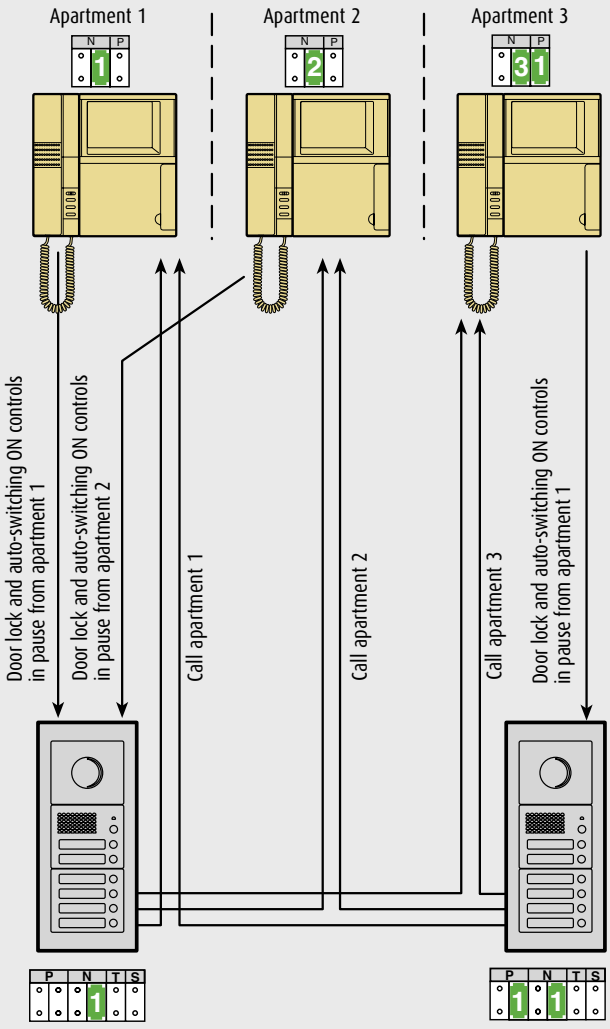


On the handsets in addition to the N address, it is necessary to configure in P the EP associated to the same handset, or the entrance panel on which the door lock and auto-switching ON controls work when the handset is switched OFF.

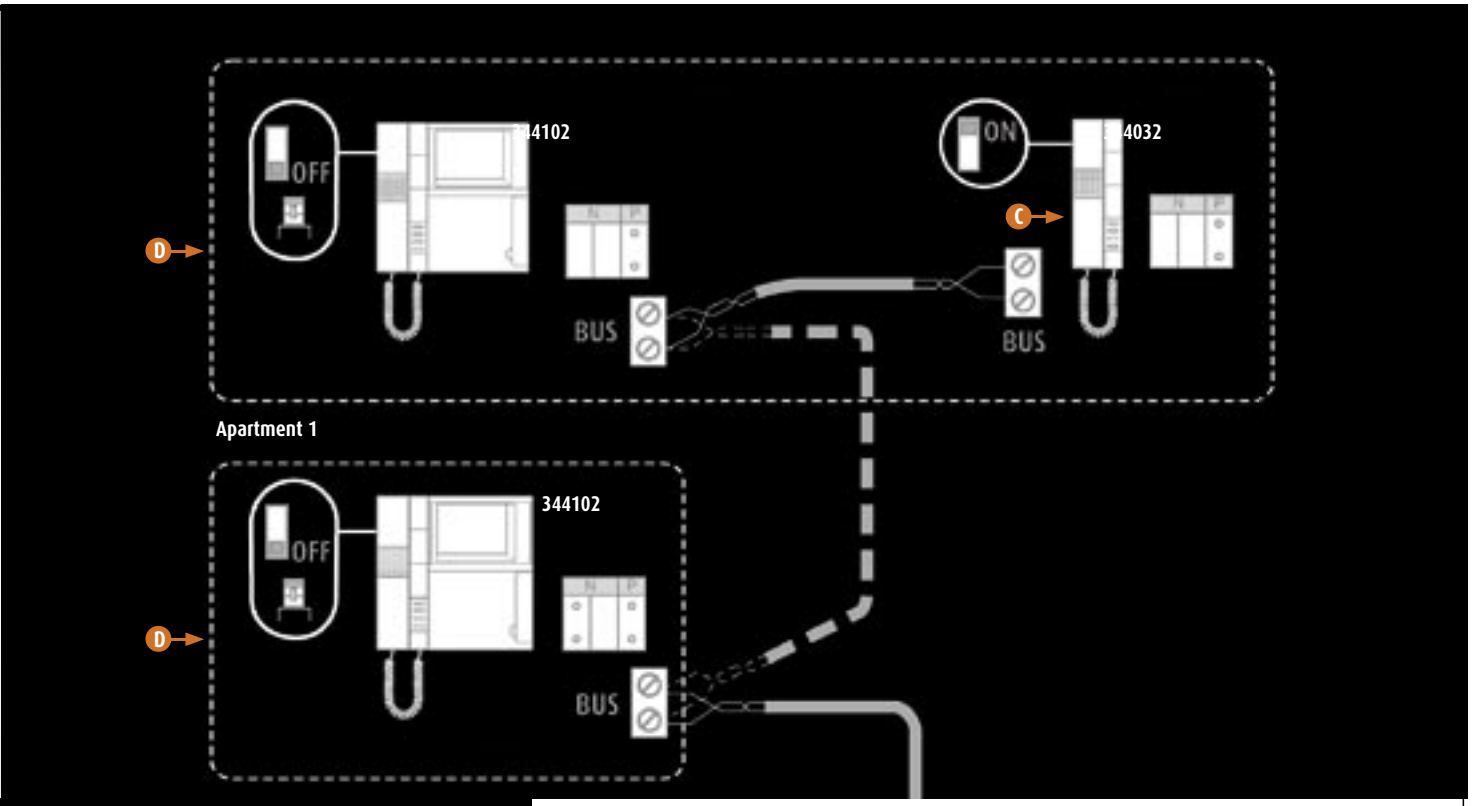
NOTE: Should occur the need to modify the configuration of a device, it is necessary, in addition to change the configurators, take off the power supply to the whole system, wait 1 minute, and then provide voltage again.

For each device exist also particular configurations which will be detailed in the specific section "Configuration".

Example of configured system and its operation



WIRING DIAGRAMS



SECTION CONTENTS

Types of plants

2 WIRE SYSTEMS

The tables show the types of plants of the 2 wire system using some principle schemes.
The following symbols are used in the schemes:

EP P	Main or common entrance panel (audio or video) Entrance panel allowing to call any handsets
EP S	Secondary or local entrance panel (audio or video) Entrance panel allowing to call any handsets
IU	Handset (audio or video)
Power supply	Power supply
F441	Audio/video node
FDP	Floor distribution block
I/F	2 wires/PABX interface
PABX	Telephone switchboard
8/2	Digital/2 wires digital

2F1 - AUDIO SYSTEM WITH 1/9 MAIN EP

One and two-family small houses

Apartment block (free wiring of handsets)

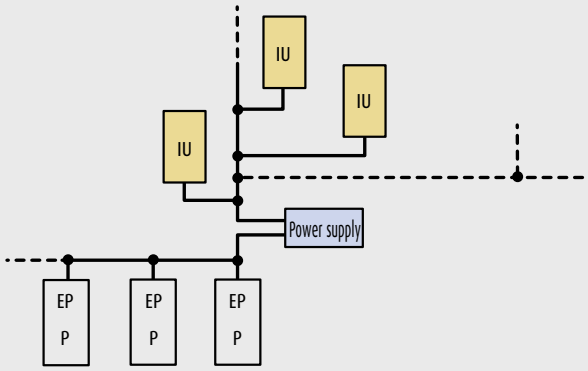
CONSULTING THE DIAGRAMS

2F - Diagram 1
2F - Diagram 3
2F - Diagram 5*
2F - Diagram 6-9

and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between apartaments (max 5)
- PABX
- 5 IU in the small house* also with Intercom and PABX



2F2 - AUDIO SYSTEM WITH 1/3 MAIN EP AND 8/6 SECONDARY EP

Terraced houses (max. 8) Common speaker

Apartment block Common speaker

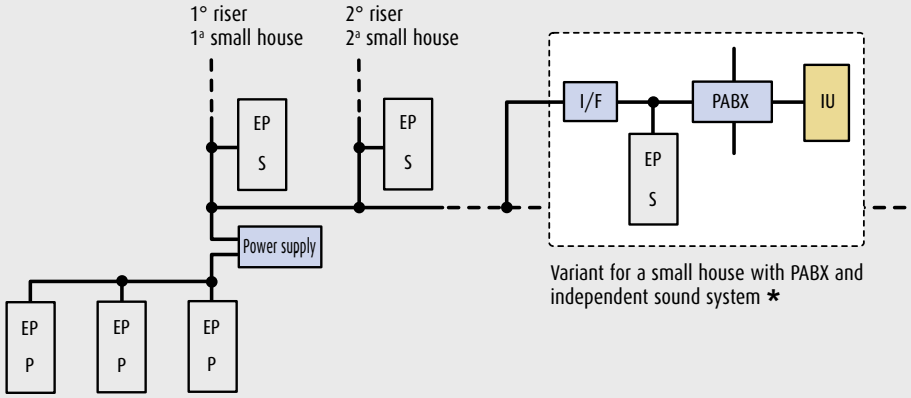
CONSULTING THE DIAGRAMS

2F - Diagram 2
2F - Diagram 4

and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses (max 5)
- PABX in each small house



Variant for a small house with PABX and independent sound system *

2F3 - VIDEO SYSTEM WITH 1/2 MAIN EP

Terraced houses
(max. 8)
Common speaker

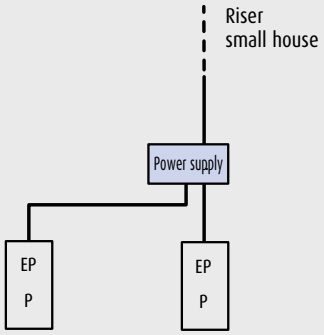
Apartment block
(1 riser)

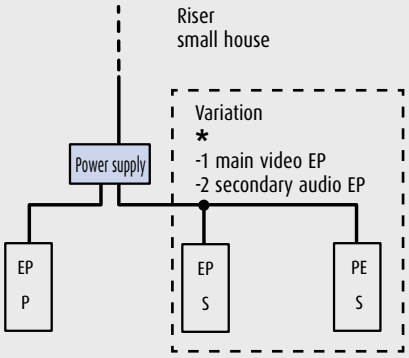
CONSULTING THE DIAGRAMS

2F - Diagrams 10-23
and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses
- To a maximum of 2 secondary audio entrance panels*
- B/W and colours video





2F4 - VIDEO SYSTEM WITH 1 MAIN EP AND 2/5 SECONDARY AUDIO EP

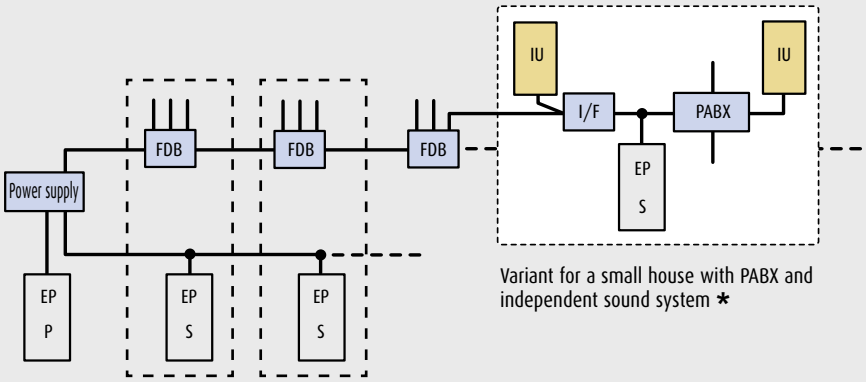
Terraced houses
(max. 6)
Common speaker

CONSULTING THE DIAGRAMS

2F - Diagram 27
and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses
- B/W and colours video
- PABX in each small house*
- To a maximum of 5 secondary audio entrance panels



Variant for a small house with PABX and independent sound system *

Types of plants

2F5 - VIDEO SYSTEM WITH 1 MAIN EP AND 2 RISERS WITH SECONDARY AUDIO EP

CONSULTING THE DIAGRAMS

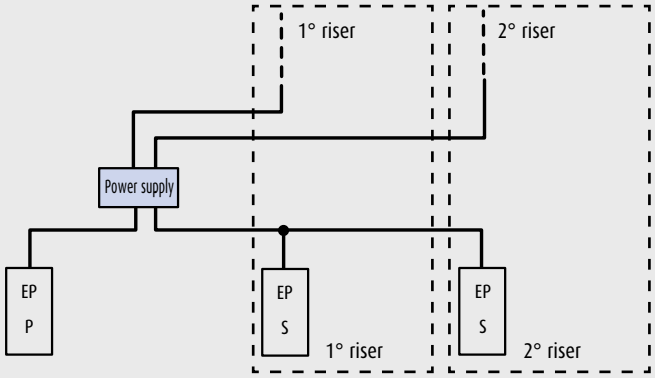
Apartment block
(2 risers)
Common speaker

2F diagrams 10-23

Variations for handsets and entrance panels and configuration

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses
- B/W and colours video
- To a maximum of 2 secondary audio



2F6 - VIDEO SYSTEM WITH 2/4 MAIN EP AND F441

CONSULTING THE DIAGRAMS

One and two-family small houses

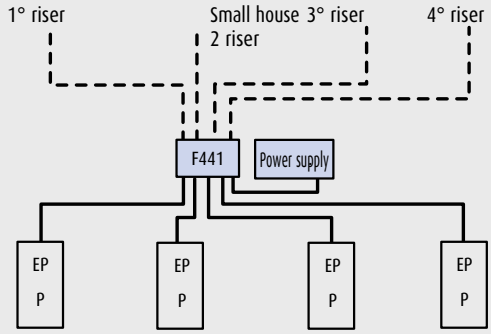
Apartment block
(4 risers)
Common speaker

2F diagrams 24-26

and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses
- B/W or colours video
- Home CCTV in a one-family small house



2F7 - VIDEO SYSTEM WITH 1 MAIN EP, 2/3 SECONDARY VIDEO EP AND F441

Schiera di villette
(max. 3)
Common speaker

Apartment block
(4 risers)
Common speaker

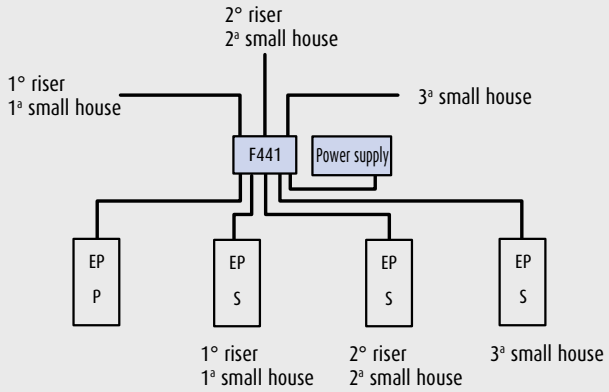
CONSULTING THE DIAGRAMS

2F diagrams 24-26

Variations for handsets and entrance panels and configuration

FUNCTIONS

- Max 3 IU for apartment
- Intercom between small houses
- B/W or colours video
- 2/3 video secondary entrance panel of riser



2F8 - AUDIO OR VIDEO SYSTEM WITH 8/2 INTERFACE

One and
two-family
small houses

Apartment block
(1 riser)
independent
speaker between
backbones and
risers

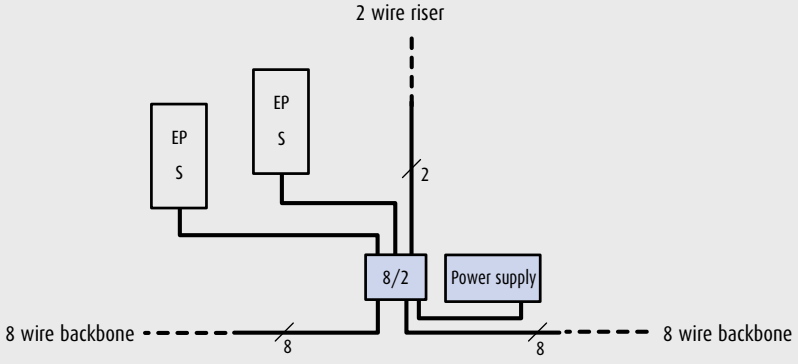
CONSULTING THE DIAGRAMS

2F diagrams 28-32

and variations for handsets and entrance panels

FUNCTIONS

- Max 3 IU for apartment
- Intercom between apartments on the riser
- B/w and color video to a maximum of 1 km
- Switchboard



WIRING DIAGRAMS

2F - DIAGRAM 1 1 OR MORE MAIN AUDIO ENTRANCE PANELS - MAX. 100 HANDSETS

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
346000	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is optional for the staircase light service or generic actuations. (see configuration actuator page).

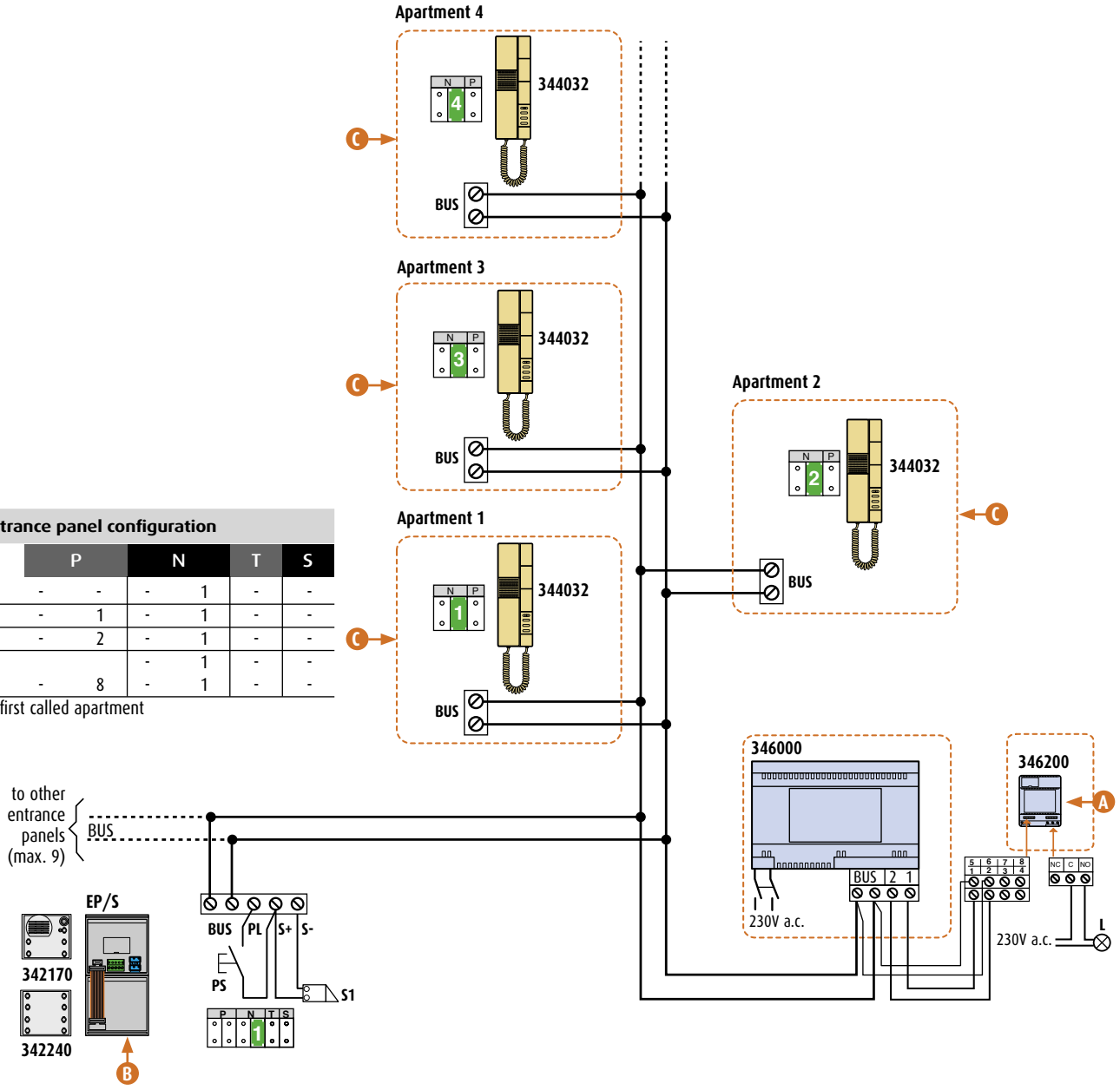
B - For the realization of the entrance panel can be used without distinction the SFERA or MINISFERA pushbutton panels or the universal speaker unit or the digital call modules. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

Entrance panel configuration

	P		N		T	S
EP0	-	-	-	1	-	-
EP1	-	1	-	1	-	-
EP2	-	2	-	1	-	-
---			-	1	-	-
EP8	-	8	-	1	-	-

N = first called apartment



2F - DIAGRAM 2 1 OR MORE MAIN AUDIO EP AND SECONDARY EP - MAX. 100 HANDSETS

Legend

Ref.	Description
EP/M	MINISFERA entrance panel
342702	speaker module
342704	pushbutton module
S2 - S3	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
EP/S	SFERA entrance panel (main)
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
346000	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

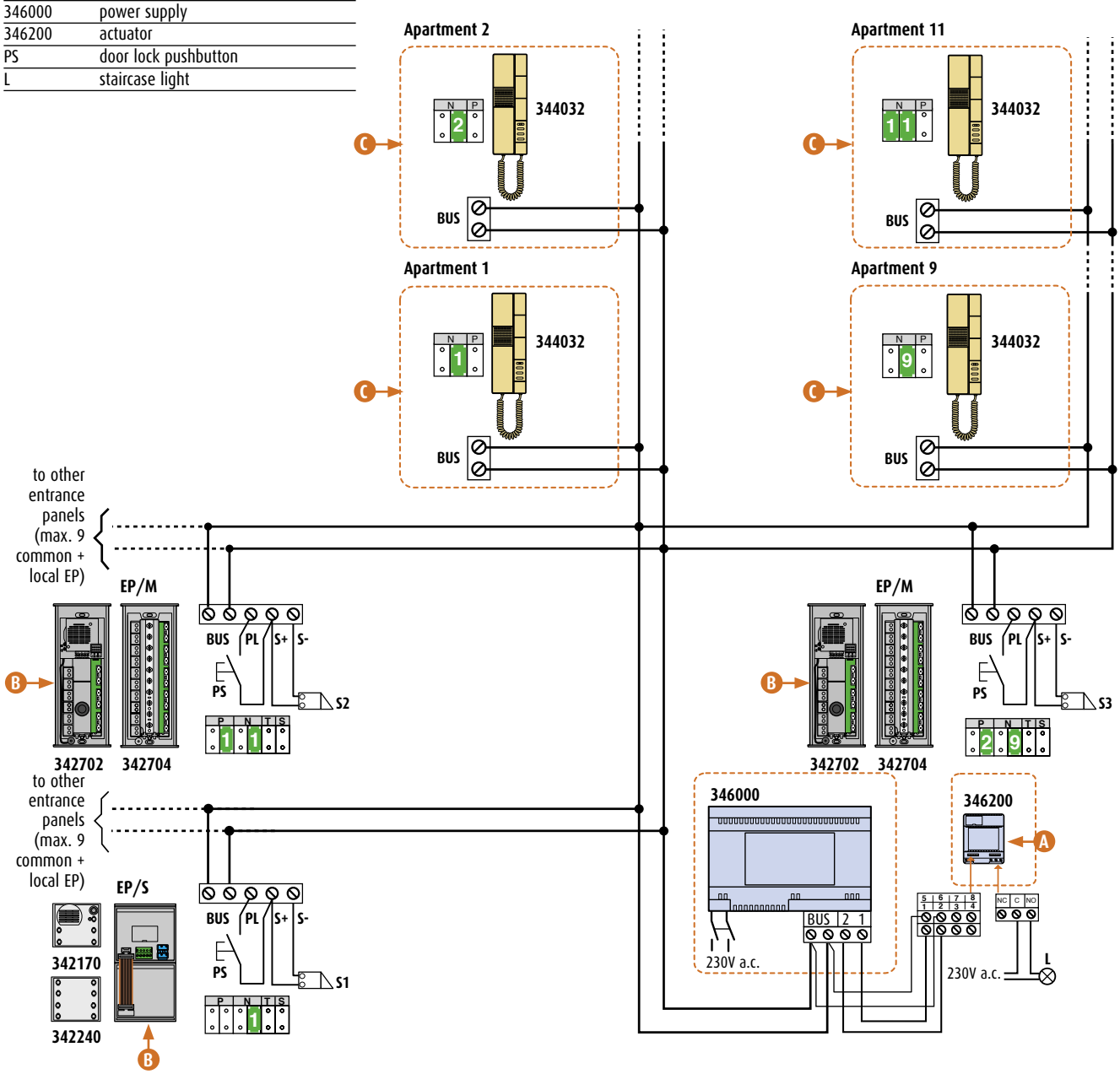
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is optional for the staircase light service or generic actuations. (see configuration actuator page).

B - For the realization of the entrance panel can be used without distinction the SFERA or MINISFERA pushbutton panels or the universal speaker unit or the digital call modules. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 3 1 OR MORE MAIN AUDIO ENTRANCE PANELS - MAX. 26 HANDSETS

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342150	speaker module
342240	pushbutton module
S1	electric door lock - max. 4A
344032	PIVOT audio handset
346010	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is optional for the staircase light service or generic actuations. (see configuration actuator page).

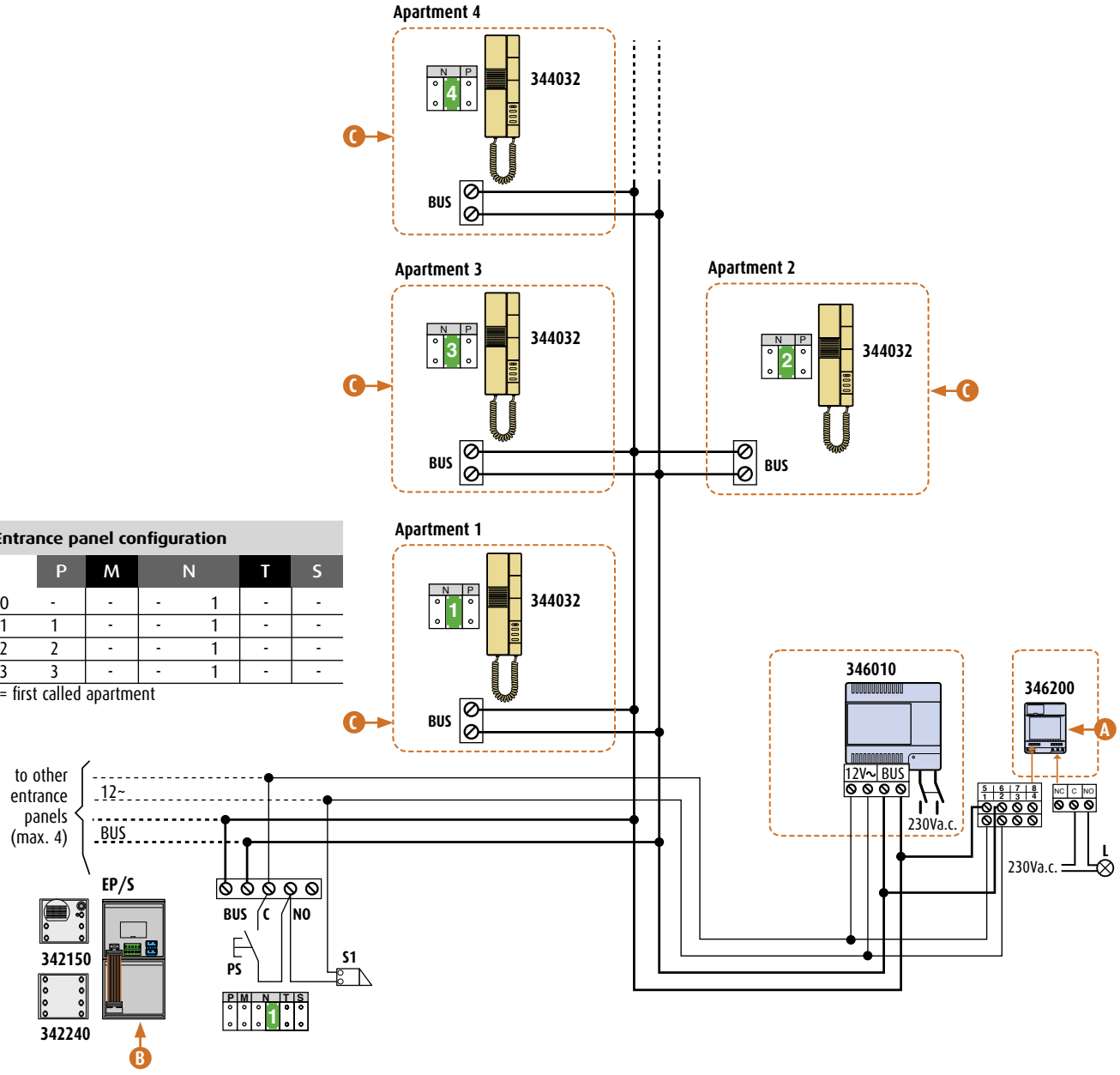
B - For the realization of the entrance panel can be used without distinction the SFERA or MINISFERA pushbutton panels or the universal speaker unit or the digital call modules. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

Entrance panel configuration

	P	M	N	T	S
EP0	-	-	- 1	-	-
EP1	1	-	- 1	-	-
EP2	2	-	- 1	-	-
EP3	3	-	- 1	-	-

N = first called apartment



2F - DIAGRAM 4 1 OR MORE MAIN AUDIO EP AND SECONDARY EP - MAX. 26 HANDSETS

Legend

Ref.	Description
EP	SFERA entrance panel (main)
EP/S	SFERA entrance panel (secondary)
342150	speaker module
342240	pushbutton module
S1-S2-S3	electric door lock - max. 4A
344032	PIVOT audio handset
346010	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

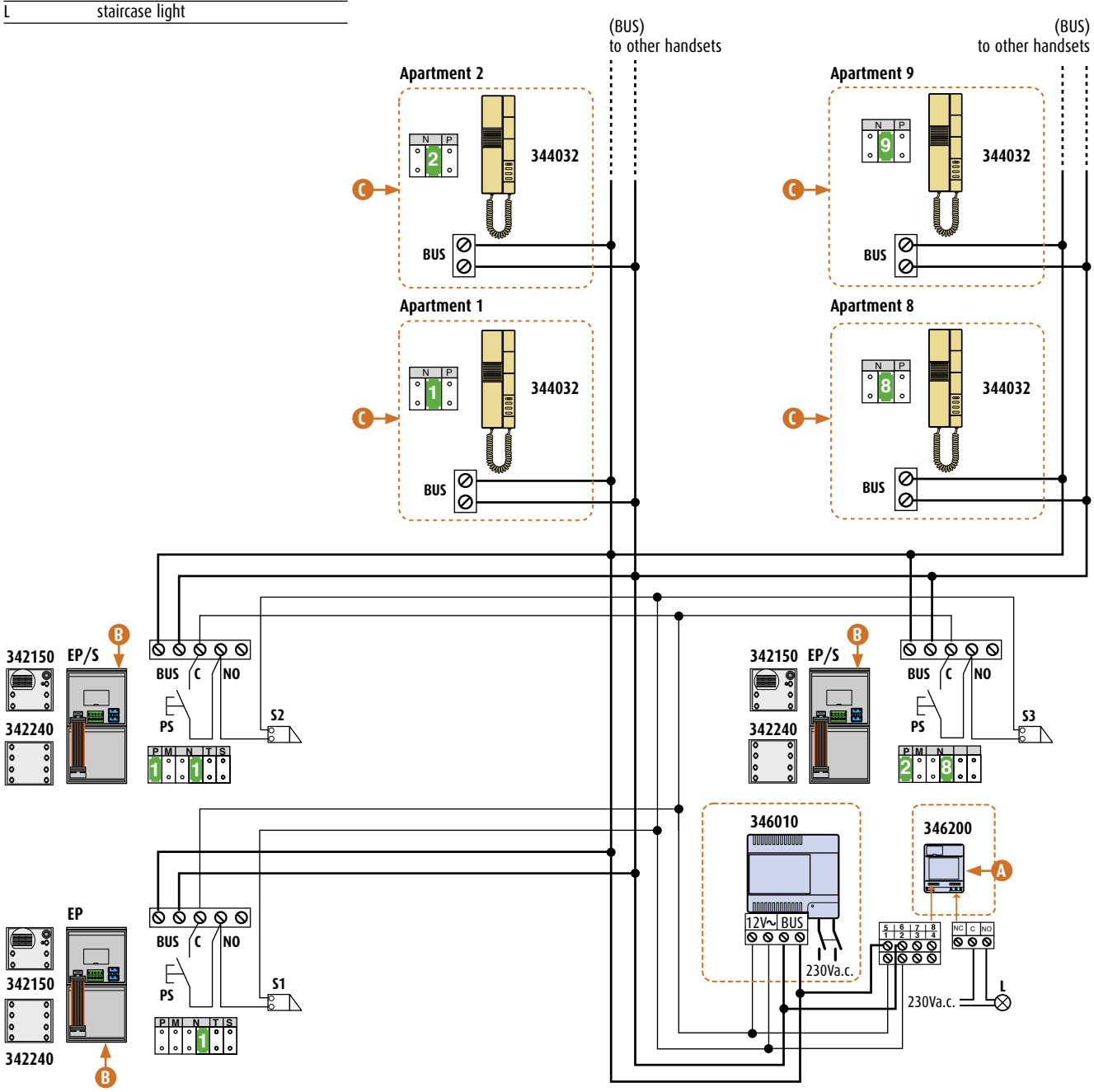
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is optional for the staircase light service or generic actuations. (see configuration actuator page).

B - For the realization of the entrance panel can be used without distinction the SFERA or MINISFERA pushbutton panels or the universal speaker unit or the digital call modules. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 5 ONE-FAMILY SYSTEM WITH 1 AUDIO ENTRANCE PANEL AND 5 INTERNAL UNITS IN PARALLEL AND INTERCOMMUNICATING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The intercom function is operating even with a lack of entrance panel connection.
- The intercom function can also be used with SWING audio handset.

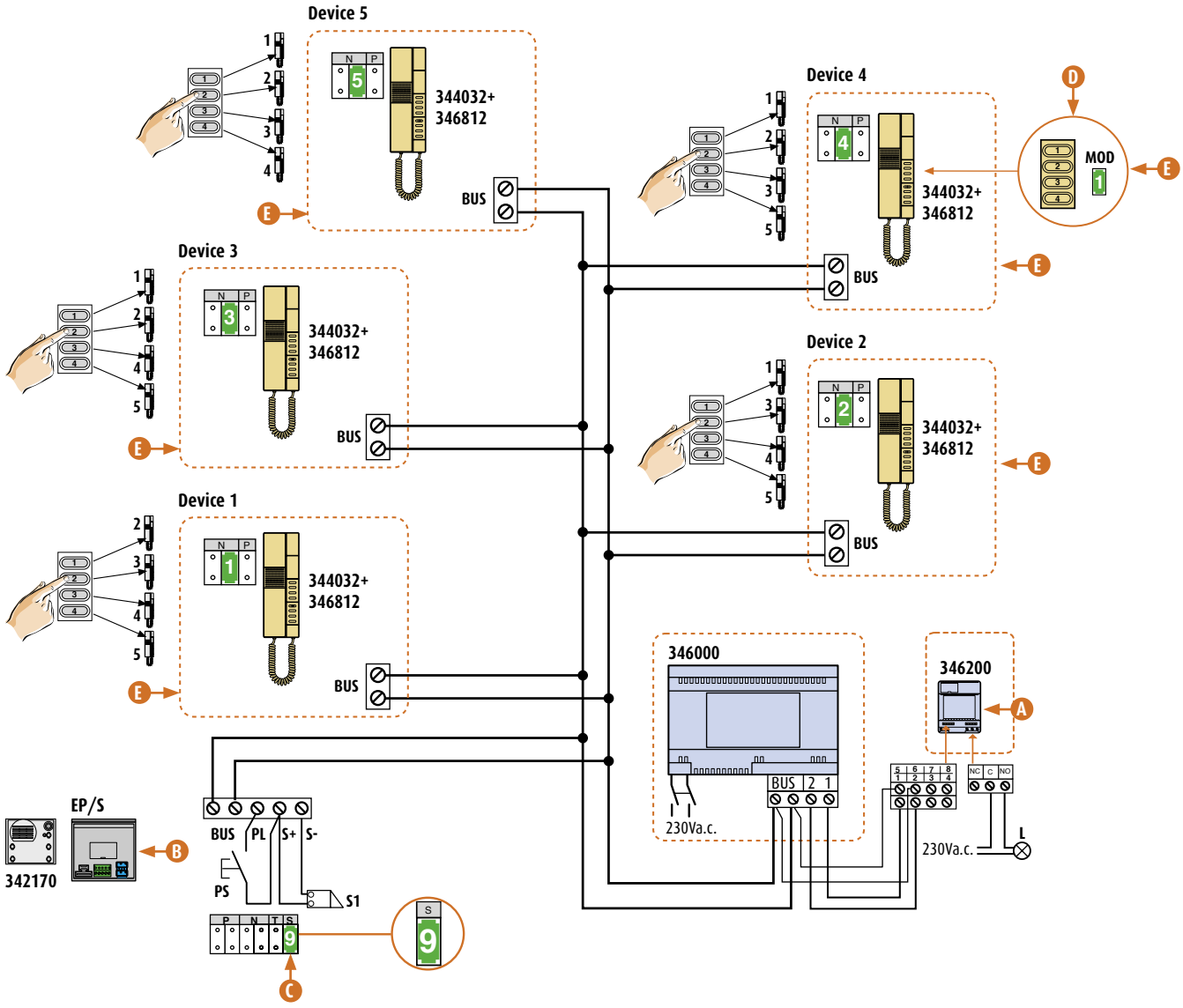
A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Fit a "9" configurator to be inserted in S on the speaker module for the general call; do not insert any configurator in N.

D - All the PIVOT audio handsets used in the intercommunication function must be fitted with Item 346812 and, in turn, configured with MOD=1.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 6 TWO-FAMILY SYSTEM, 1 EP AND 3 HANDSETS FOR APARTMENT WITH "INTERCOM BETWEEN APARTMENTS" FUNCTION

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342170	speaker module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
PS1	door lock pushbutton

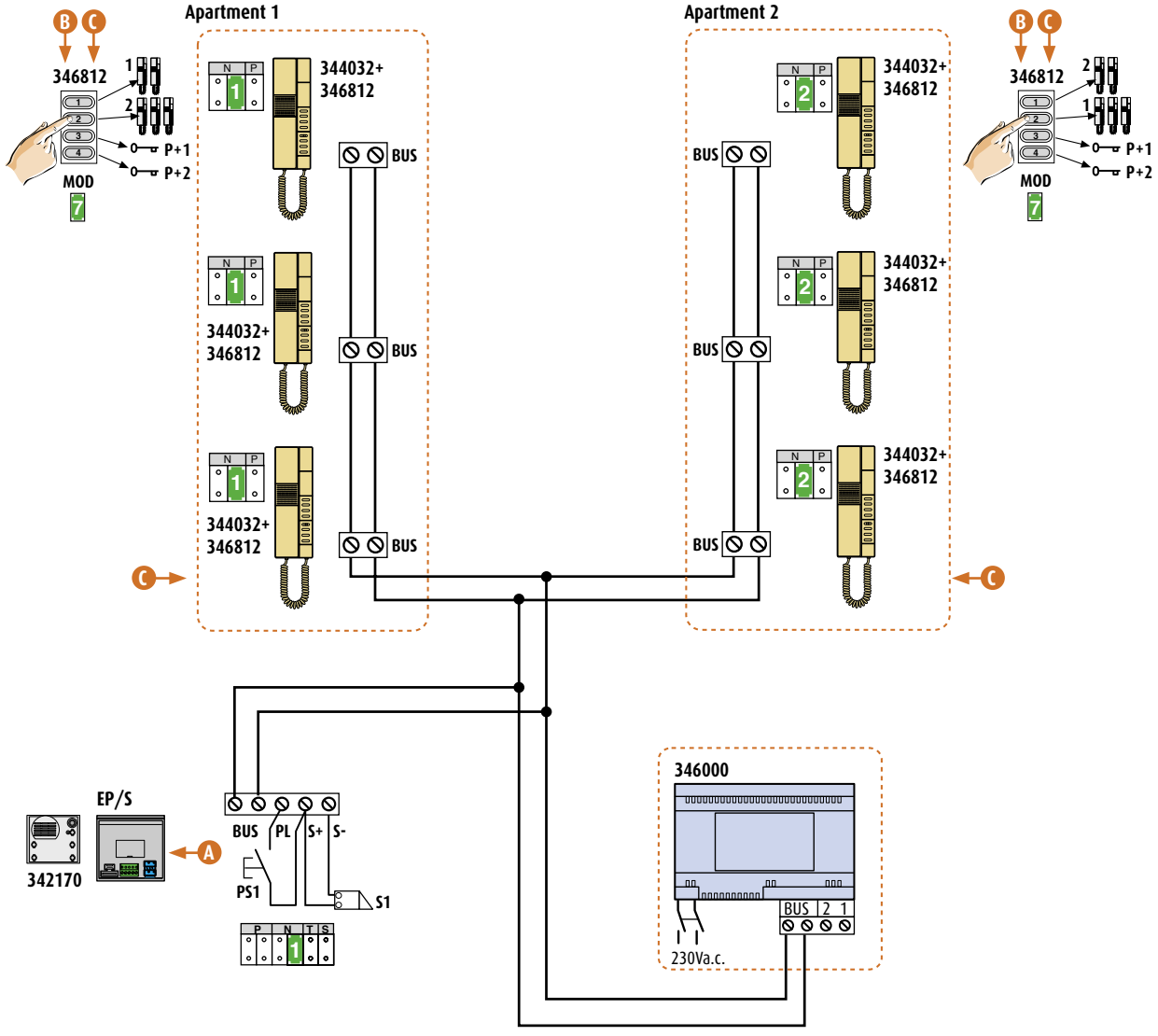
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The intercom function is operating even with a lack of entrance panel connection.
- **Intercom function between devices allows to call the devices of the same apartment or of another apartment and can be realized with PIVOT devices.**

A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

B - All the PIVOT audio handsets used in the intercommunication function must be fitted with Item 346812 and, in turn, configured with MOD=7.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 7 MULTI-FAMILY SYSTEM WITH 1 OR MORE MAIN EP, MAX. 100 HANDSETS WITH 5 INTERCOMMUNICATING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
346200	actuator
PS	door lock pushbutton
L	staircase light

Entrance panel configuration

	P		N		T	S
EP0	-	-	-	1	-	-
EP1	-	1	-	1	-	-
EP2	-	2	-	1	-	-
---			-	1	-	-
EP8	-	8	-	1	-	-

N = first called apartment

WARNING

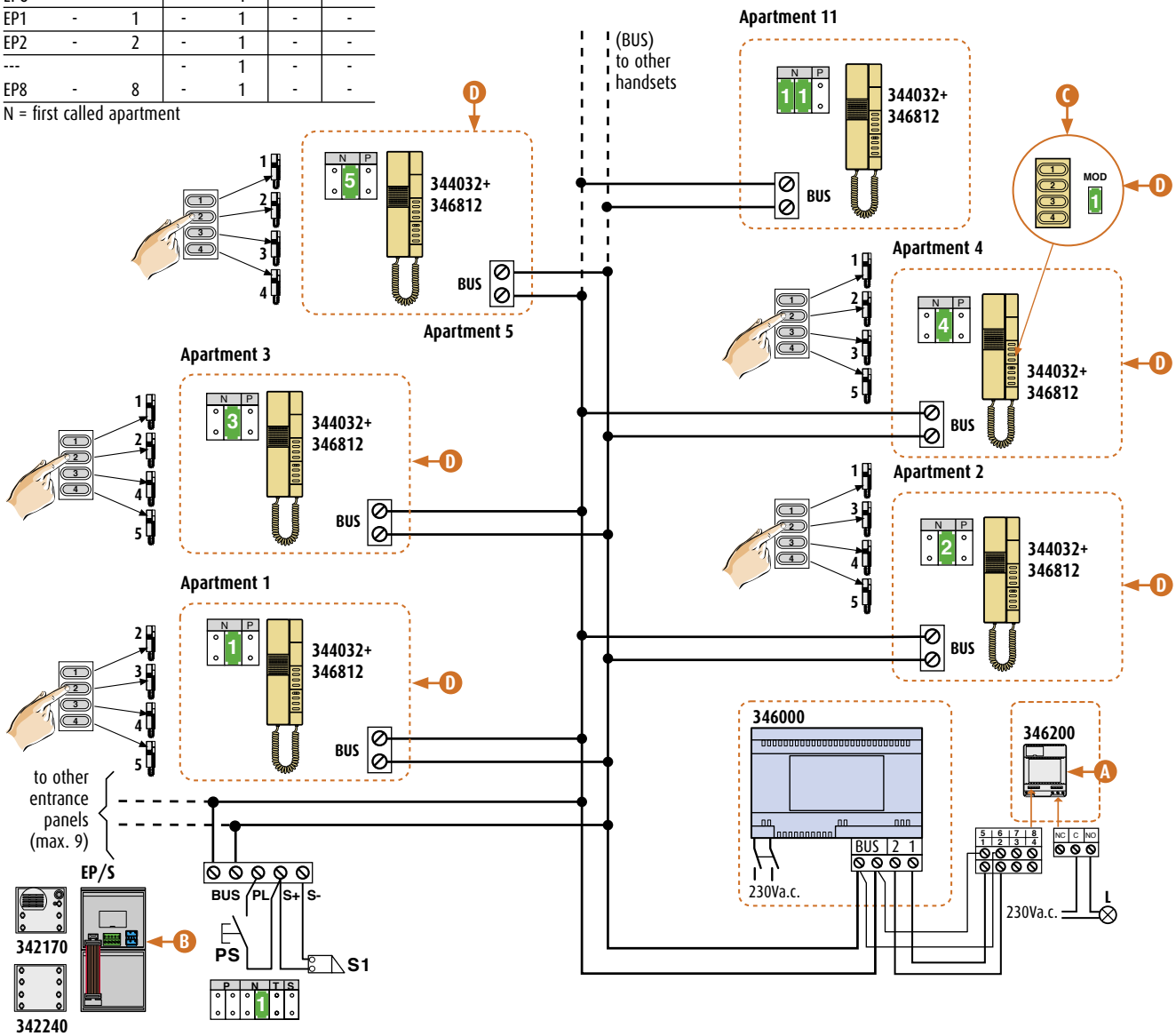
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The Intercom function is operating even with a lack of entrance panel connection.
- The Intercom function can also be used with PIVOT and SWING audio handset configurated from N=1 to N=5.

A - Use of the actuator is optional for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - All the audio handsets used in the intercom function must be fitted with Item 346812 and, in turn, configured with MOD=1.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 8 1 OR MORE MAIN AUDIO ENTRANCE PANELS WITH UNIVERSAL SPEAKER UNIT (MAX. 8 PUSHBUTTONS)

The universal speaker unit Item 346991 allows to realize devices with the 2-wire audio digital system using existing pushbutton panels or Tersystem 500 pushbutton panels. It is particularly useful for the reconstruction of door entry systems, without having to replace the pushbutton panel and the existing system wires. The configuration is the same as the 2-wire speaker module Item 342170 with, in addition, the possibility to regulate the volume of the call return signal. It is supplied with a configurator No. 8 in the seating (maximum level): by replacing the configurator No. 8 with a No. 3, one obtains the minimum level: without the configurator in and with 8 in M, the call return signal is completely taken away.
The diagram below shows the wiring between the speaker module and the pushbuttons (max. 8).

WARNING
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The 2-wire universal speaker module can be used in both versions of the system (max. 26 and max. 100 internal units).

A - The use of the actuator is necessary if the door lock opening function is desired. (see configuration actuator page).

B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

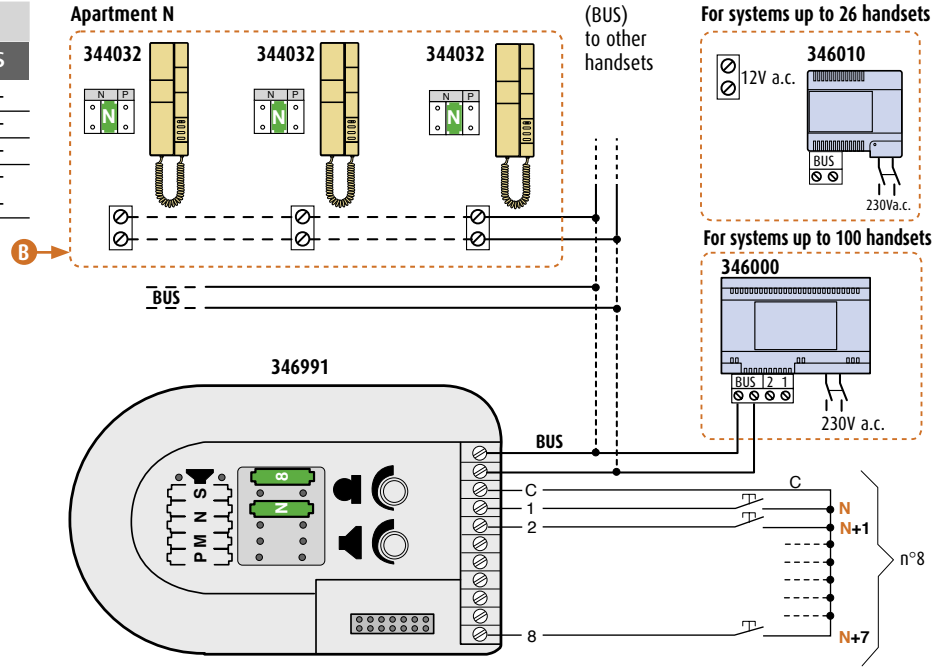
Legend

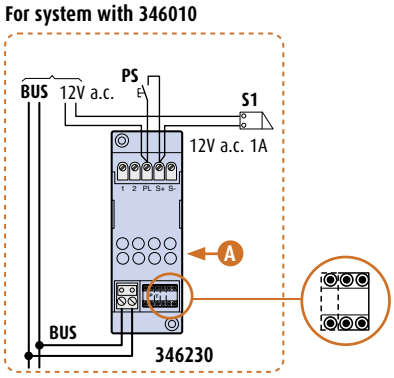
Ref.	Description
346991	universal speaker module
344032	PIVOT audio handset
346000	power supply
346010	power supply
346230	actuator
336842	transformer
PS	door lock pushbutton
S1	electric door lock

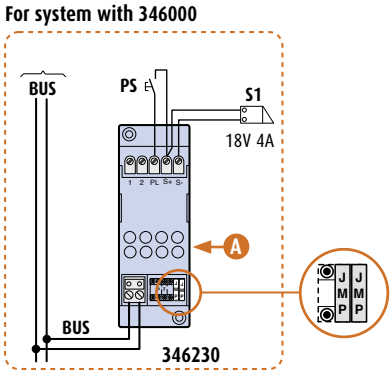
Entrance panel configuration

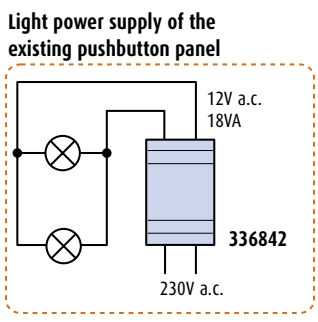
	P	M	N	T	S
EP0	-	-	- 1	-	-
EP1	1	-	- 1	-	-
EP2	2	-	- 1	-	-
---			- 1	-	-
EP8	8	-	- 1	-	-

N = first called apartment









WIRING DIAGRAMS

2F - DIAGRAM 9 1 OR MORE MAIN AUDIO ENTRANCE PANELS WITH UNIVERSAL SPEAKER UNIT (WITH MORE THAN 8 PUSHBUTTONS)

In systems with more than 8 pushbuttons, it is necessary to provide, in addition the the Item 346991 an Item 346992 for every 8 pushbuttons; for the connection, a multicable with 2 connectors together with Item 346992 must be utilized. The diagram below shows the internal wiring between the speaker module Item 346991, one or more expander Item 346992 and the pushbuttons in systems with more than 8 internal units.

Legend

Ref.	Description
346991	universal speaker module
346992	pushbutton expander
344032	PIVOT audio handset
346000	power supply
346010	power supply
346230	actuator
336842	transformer
PS	door lock pushbutton
S1	electric door lock

Entrance panel configuration

	T	S	N	T	S
EP0	-	-	- 1	-	-
EP1	1	-	- 1	-	-
EP2	2	-	- 1	-	-
---			- 1	-	-
EP8	8	-	- 1	-	-

N = first called apartment

Possible systems

	with 346000	with 346010
maximum No. of call pushbuttons	56	24
maximum No. of expanders	6	2

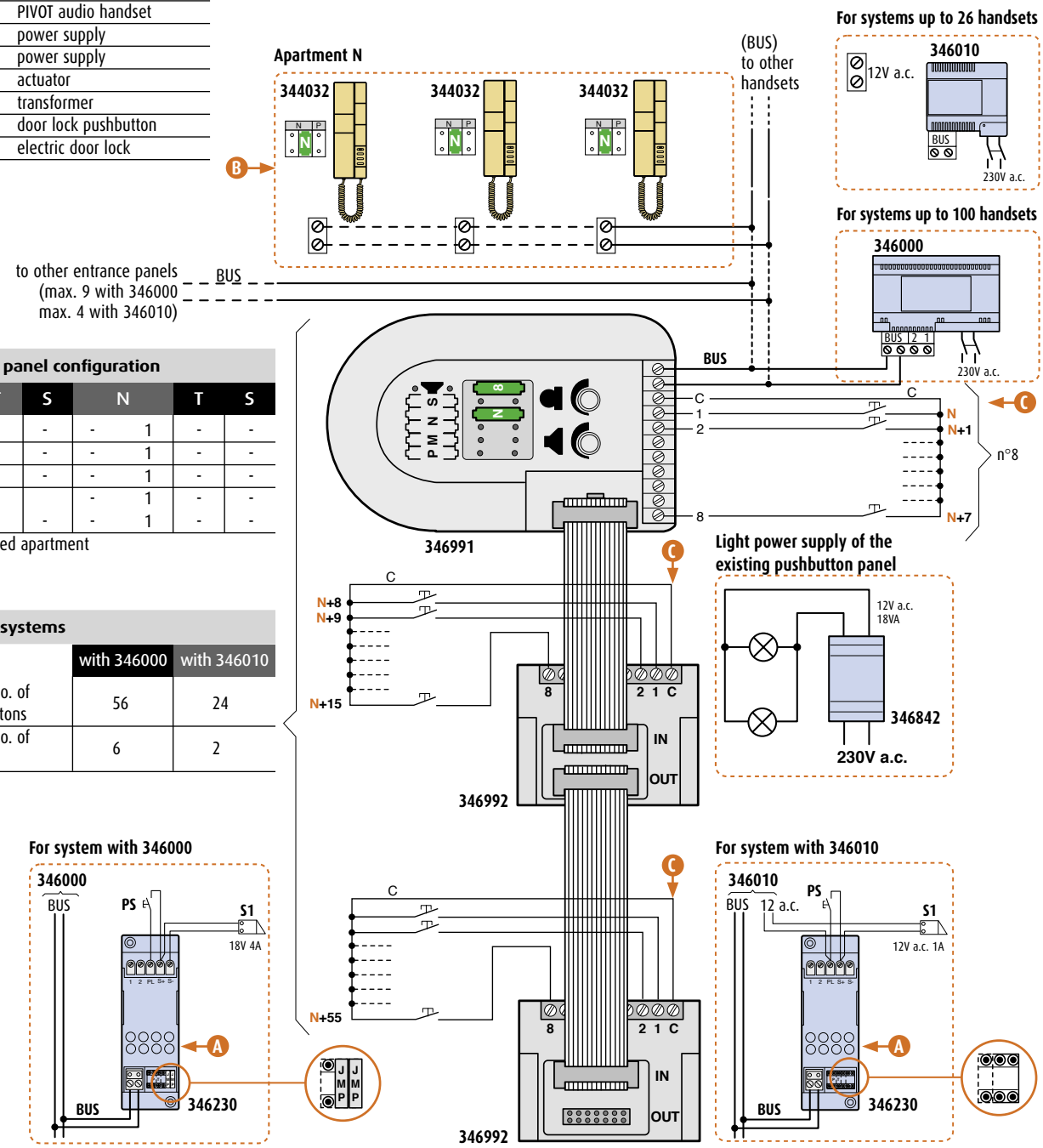
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The 2-wire universal speaker module can be used in both versions of the system (max. 26 and max. 100 internal units).

A - The use of the actuator is necessary if the door lock opening function is desired. (see configuration actuator page).

B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

C - The common wire of the pushbutton must be connected to Item 346991 or 346992 to which the pushbuttons are connected.



2F - DIAGRAM 10 1 MAIN VIDEO ENTRANCE PANEL WITH IN-OUT WIRING, USING UNTWISTED OR PRE-EXISTING CABLES

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video haNDSET
346000	power supply
346830	video adapter
346870	line amplifier
346200	actuator
PS	door lock pushbutton
L	staircase light

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets for star wiring see "2F - DIAGRAM 11".

A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

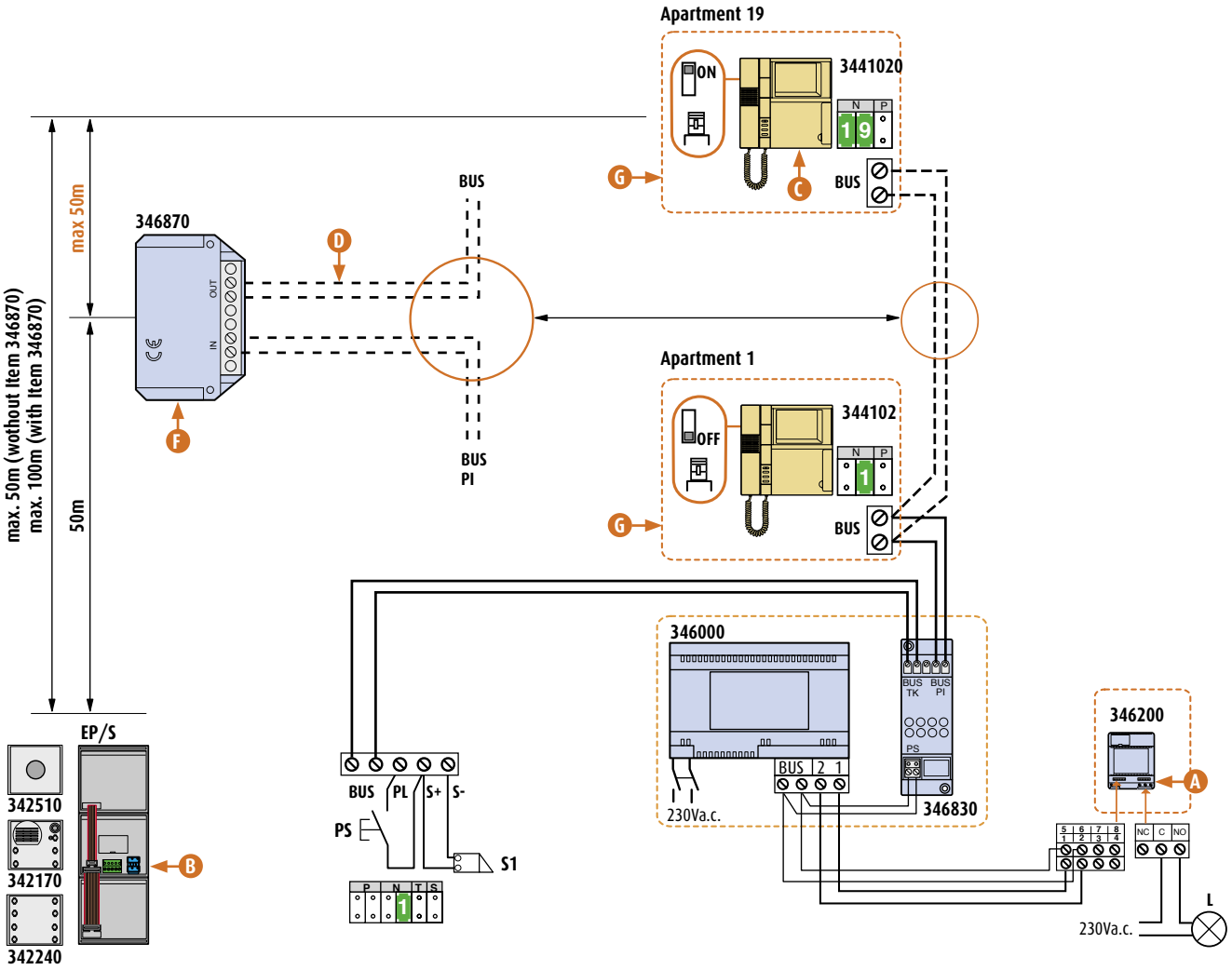
C - Move the microswitch on the back of the last video handset or audio handset of the line of each riser to ON.

D - On the riser line after Item 346870, it is possible to install up to a max. of 18 IU (audio handsets or video handsets).

E - For wiring the system, use the existing cables or cables with section ≥0.28mm^2, see "Installation instructions".

F - Item 346870 must be used only if the distance between EP and the last handset is over 50 metres and it must be installed near the 50th metre from the entrance panel in the line power supply - handset.

G - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 11 1 MAIN VIDEO ENTRANCE PANEL WITH STAR WIRING, USING UNTWISTED OR PRE-EXISTING CABLES

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346870	line amplifier
346200	actuator
PS	door lock pushbutton
L	staircase light

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each riser to ON.

D - On the riser line after Item 346870, it is possible to install up to a max. of 18 IU (audio handsets or video handsets).

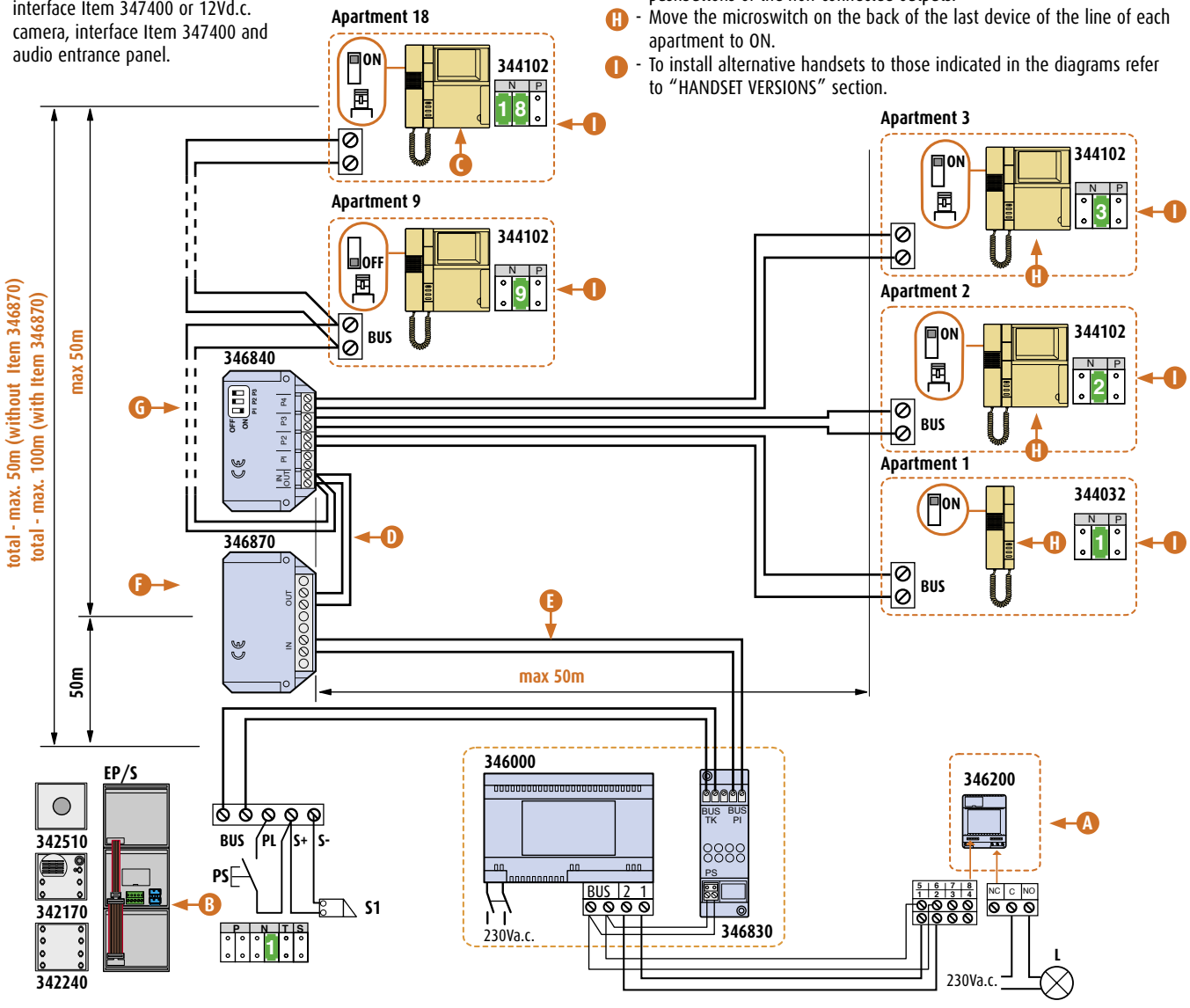
E - For wiring the system, use the existing cables or cables with section ≥0.28mm², see "Installation instructions".

F - Item 346870 must be used only if the distance between EP and the last handset is over 50 metres and it must be installed near the 50th metre from the entrance panel in the line power supply - handset

G - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.

H - Move the microswitch on the back of the last device of the line of each apartment to ON.

I - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 12 1 MAIN VIDEO ENTRANCE PANEL AND 1 RISER WITH IN-OUT WIRING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 26 IU
1 video EP (MINISFERA pushbutton panels) and max. 32 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

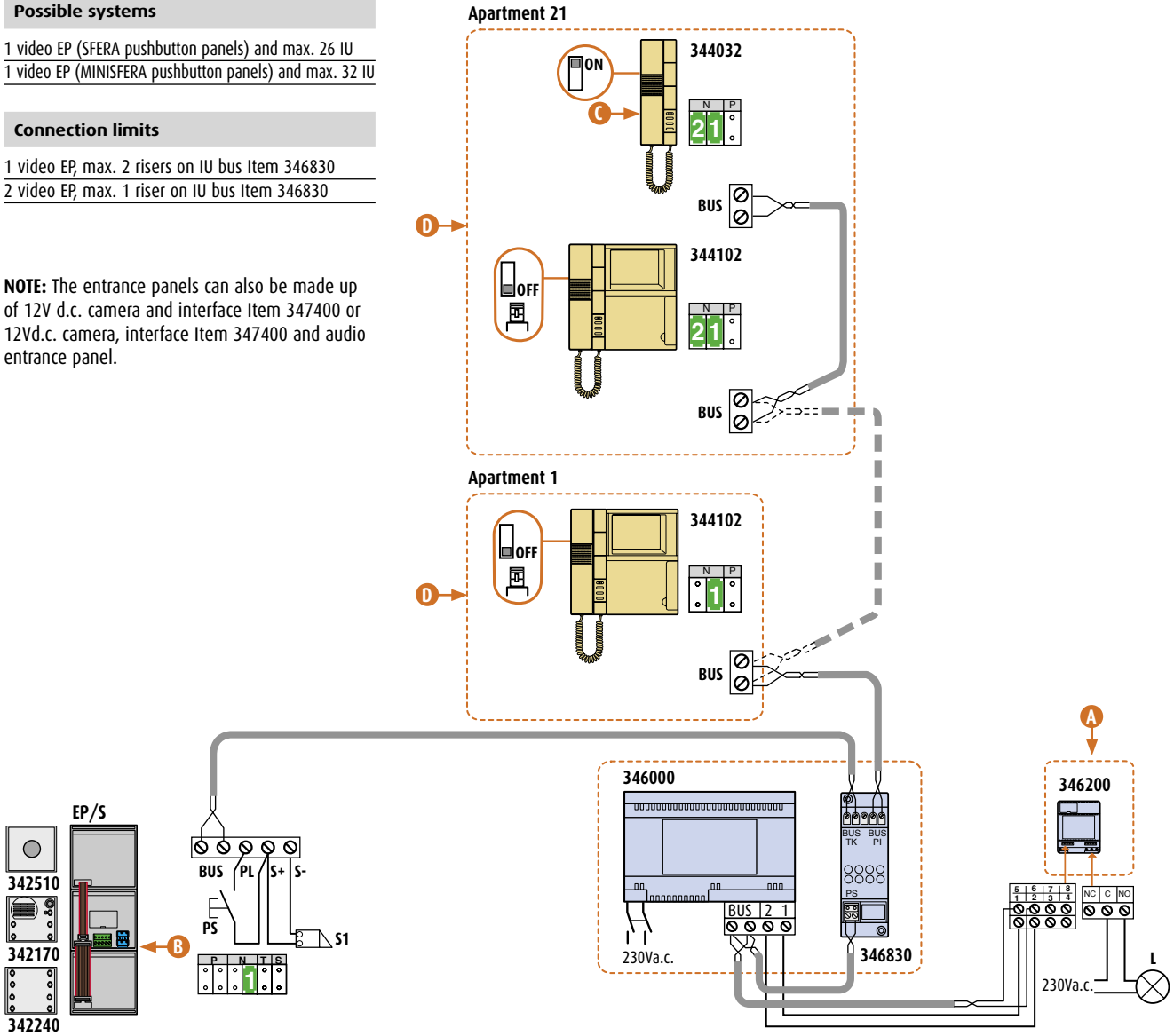
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel both as main or secondary EP. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each riser to ON.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 13 1 MAIN VIDEO ENTRANCE PANEL AND 2 RISERS WITH IN-OUT WIRING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	·PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 26 IU
1 video EP (MINISFERA pushbutton panels) and max. 32 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

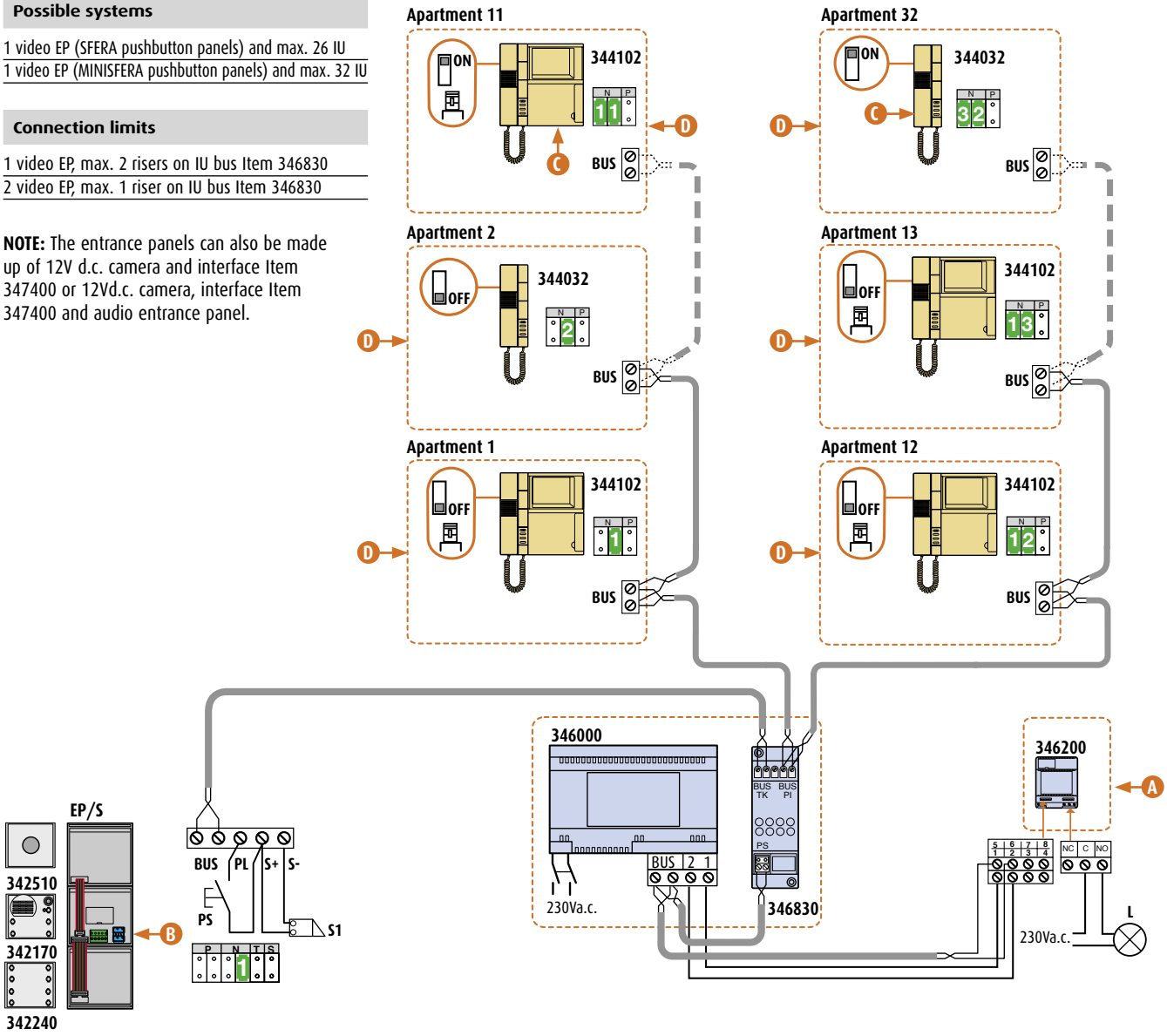
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 14 2 MAIN VIDEO ENTRANCE PANELS AND 1 RISER WITH IN-OUT WIRING

Legend

Ref.	Description
EP/M	MINISFERA entrance panel (main)
342708	speaker module
342704	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S2	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

2 video EP (SFERA pushbutton panels) and max. 18 IU
2 video EP (MINISFERA pushbutton panels) and max. 24 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

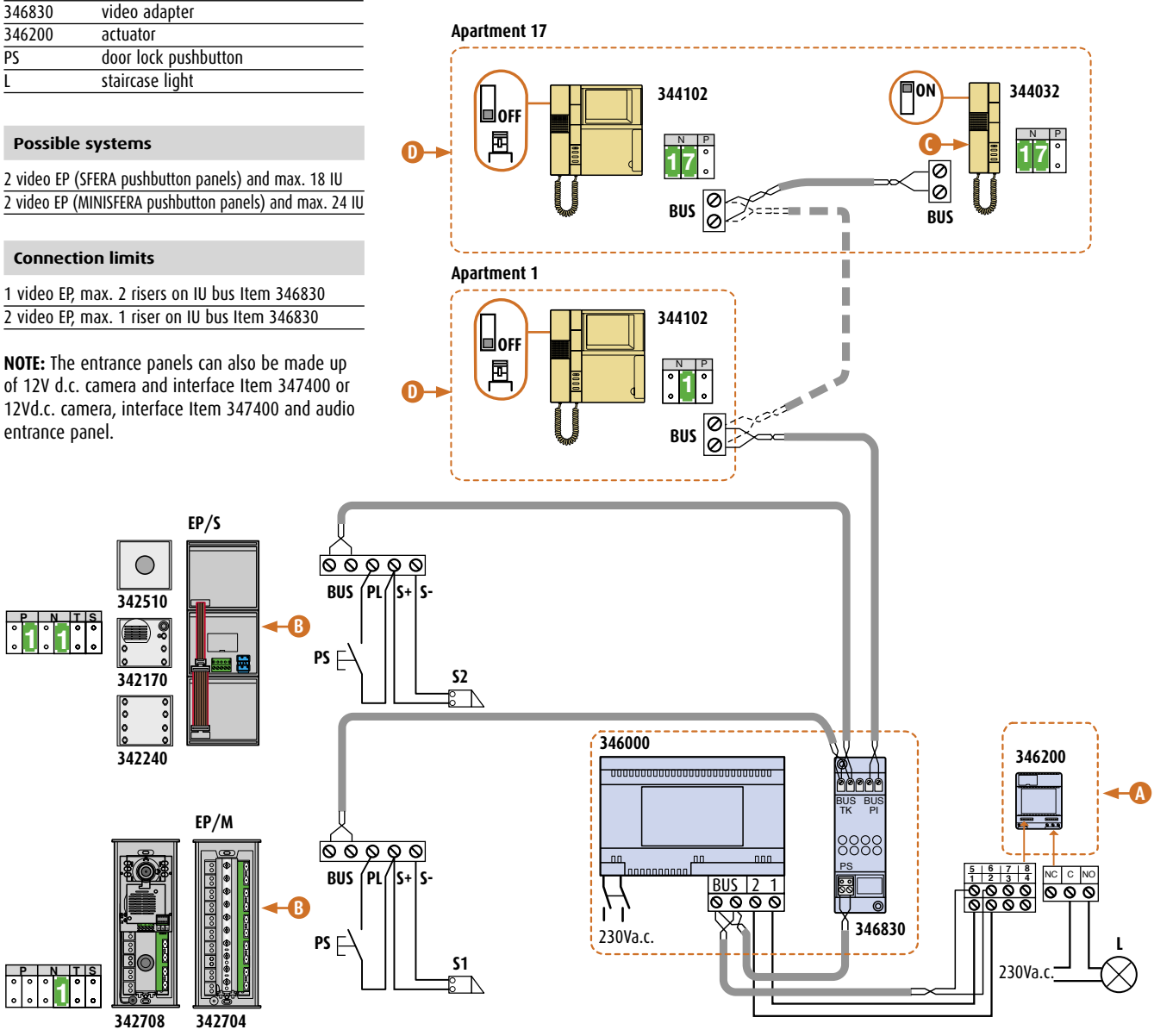
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Use of the actuator is facoltative for the staircase light service or generic actuations.

B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel both as main or secondary EP. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 15 1 MAIN VIDEO ENTRANCE PANEL AND 1 RISER WITH FLOOR DISTRIBUTION BLOCK WIRING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346840	floor distribution block
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 26 IU
1 video EP (MINISFERA pushbutton panels) and max. 32 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

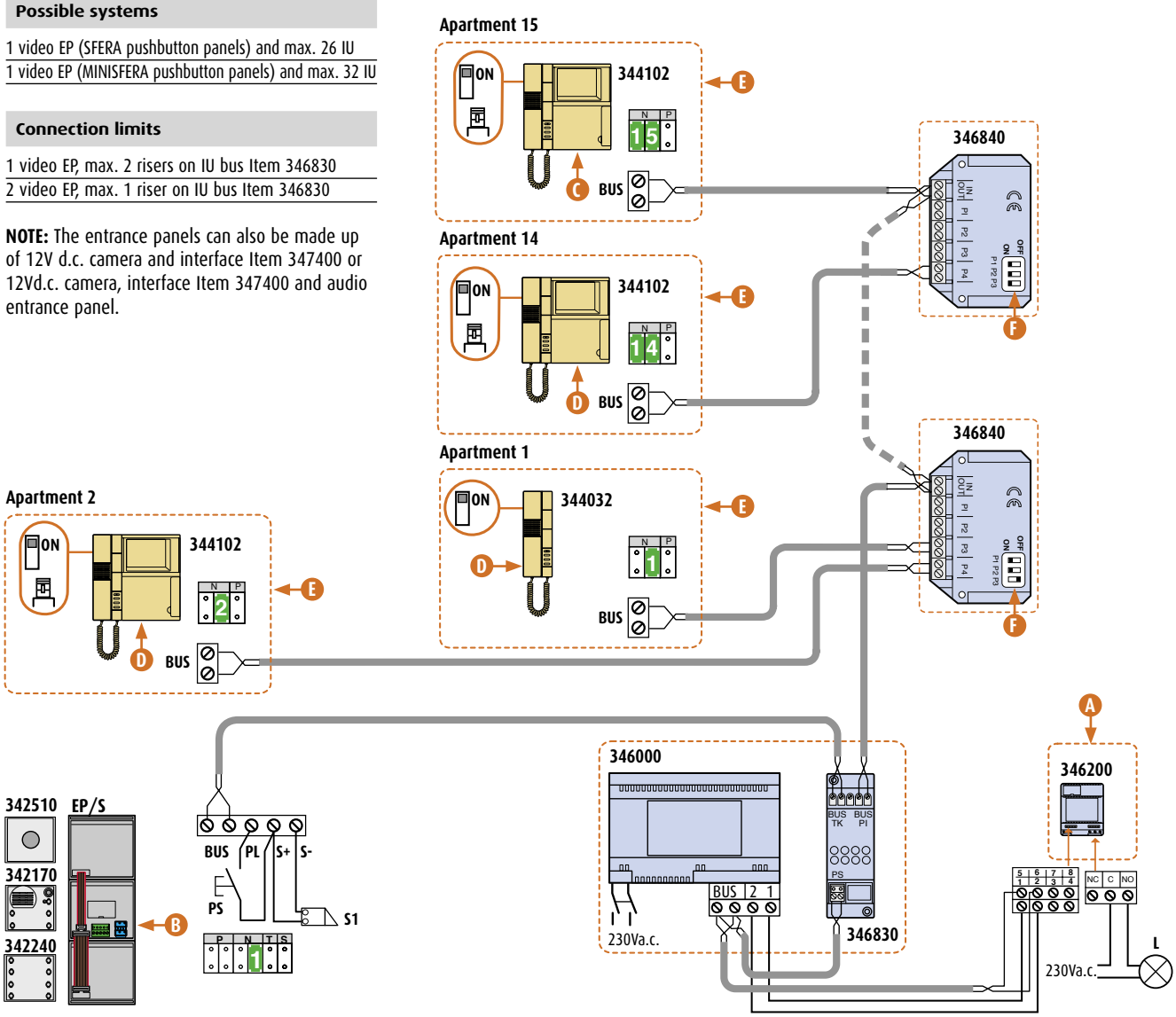
B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel.

C - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

D - Move the microswitch on the back of the last device of the line of each apartment to ON.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

F - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.



2F - DIAGRAM 16 2 MAIN VIDEO ENTRANCE PANELS AND 1 RISER WITH FLOOR DISTRIBUTION BLOCK WIRING

Legend

Ref.	Description
EP/M	MINISFERA entrance panel (main)
342708	speaker module
342704	pushbutton module
S2	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346840	floor distribution block
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

2 video EP (SFERA pushbutton panels) and max. 18 IU
2 video EP (MINISFERA pushbutton panels) and max. 24 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

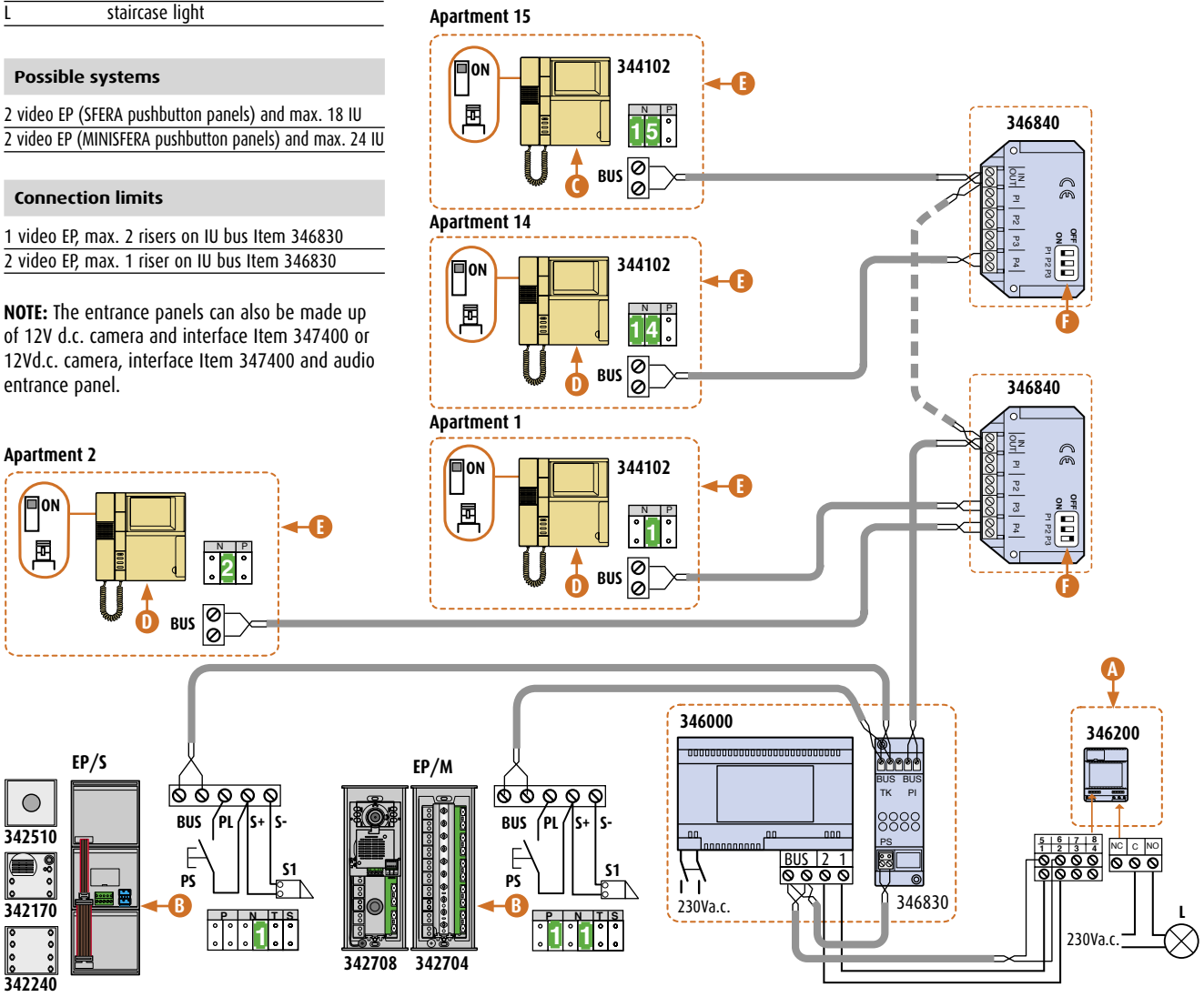
B - Either SFERA or MINISFERA pushbutton panels or digital call can be used to make the entrance panel both as main or secondary EP. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

D - Move the microswitch on the back of the last device of the line of each apartment to ON.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

F - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.



WIRING DIAGRAMS

2F - DIAGRAM 17 1 MAIN VIDEO EP AND 2 RISERS WITH IN-OUT WIRING AND ADDITIONAL POWER SUPPLY OF EP

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342630	digital call speaker module with graphic display
S1	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 64 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

WARNING

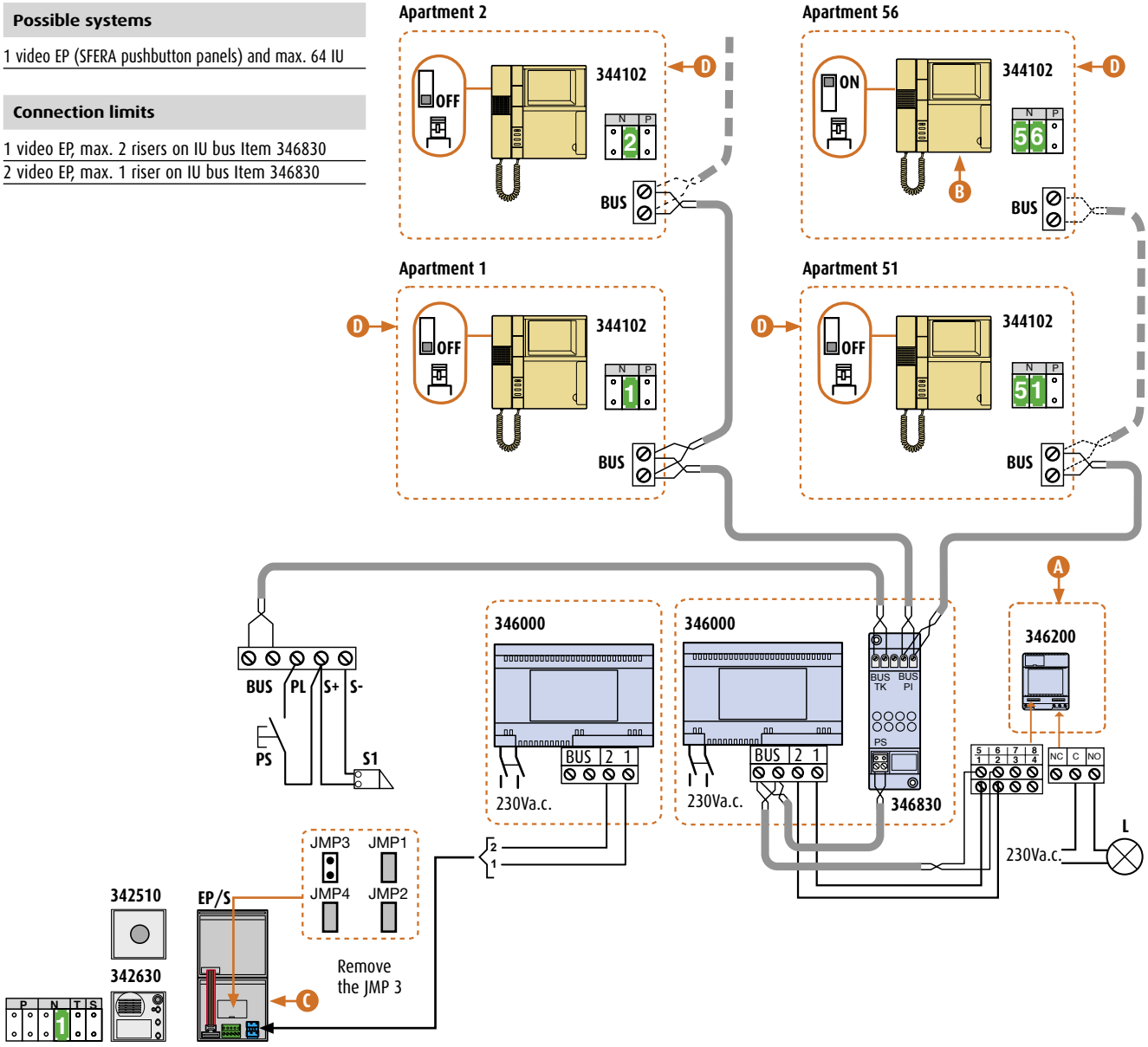
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute..
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

B - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

C - It is not possible to use MINISFERA entrance panels because they can not be supplied with the dedicated Item 346000.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 18 2 MAIN VIDEO EP AND 1 RISER WITH IN-OUT WIRING AND ADDITIONAL POWER SUPPLY FOR EP

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
342610	numerical call module
S1	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
EP/S1	SFERA entrance panel (main)
342510	camera module
342630	digital call speaker module with graphic display
S2	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

2 video EP (SFERA pushbutton panels) and max. 64 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

WARNING

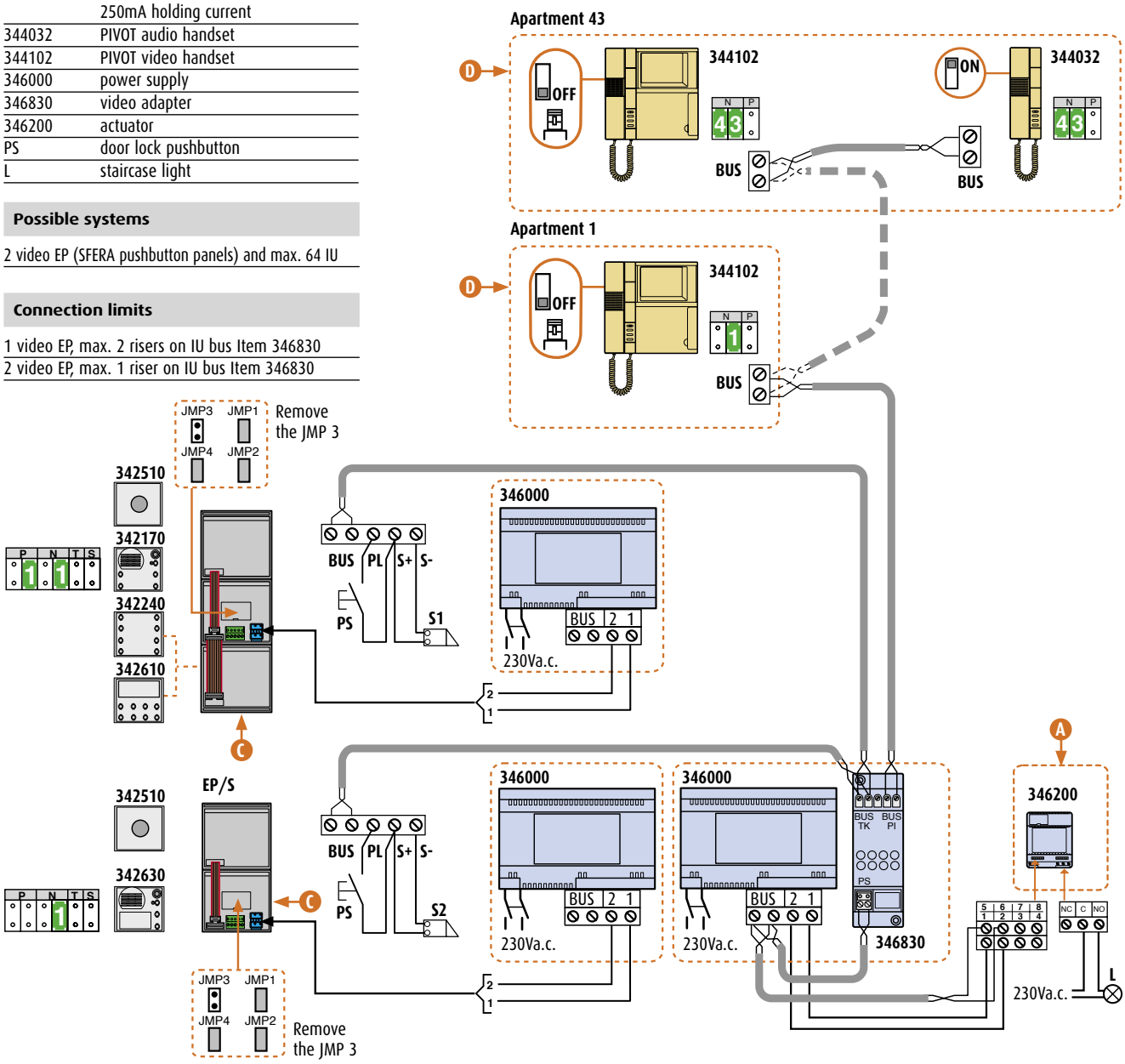
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

B - Move the microswitch on the back of the last video handset or audio handset of the riser line to ON.

C - It is not possible to use MINISFERA entrance panels because they can not be supplied with the dedicated Item 346000.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 19 1 MAIN VIDEO EP VIDEO AND 1 RISER WITH FLOOR DISTRIBUT. BLOCK WIRING AND ADDIT. POWER SUPPLY OF THE EP

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342630	digital call speaker moduel with graphic display
S1	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 64 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

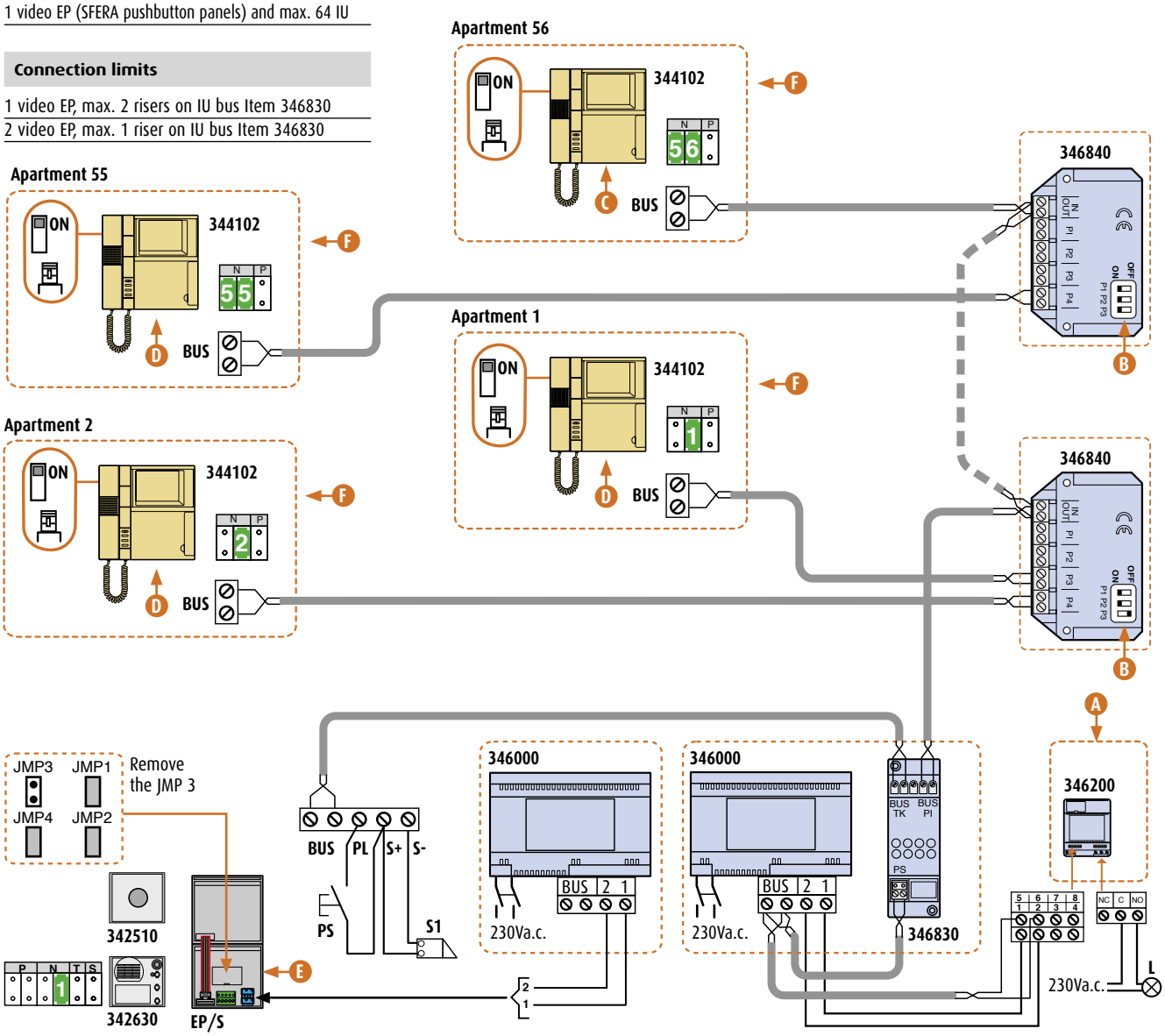
B - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each riser to ON.

D - Move the microswitch on the back of the last device of the line of each apartment to ON.

E - It is not possible to use MINISFERA entrance panels because they can not be supplied with the dedicated Item 346000.

F - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



2F - DIAGRAM 20 2 MAIN VIDEO EP AND 1 RISER WITH FLOOR DISTRIBUTION WIRING AND ADDITIONAL POWER SUPPLY OF THE EP

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
342610	numerical call module
S1	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
EP/S1	SFERA entrance panel (main)
342510	camera module
342630	digital call speaker module with graphic display
S2	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
346000	power supply
346830	video adapter
346840	floor distribution block
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

2 video EP (SFERA pushbutton panels) and max. 64 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830
2 video EP, max. 1 riser on IU bus Item 346830

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

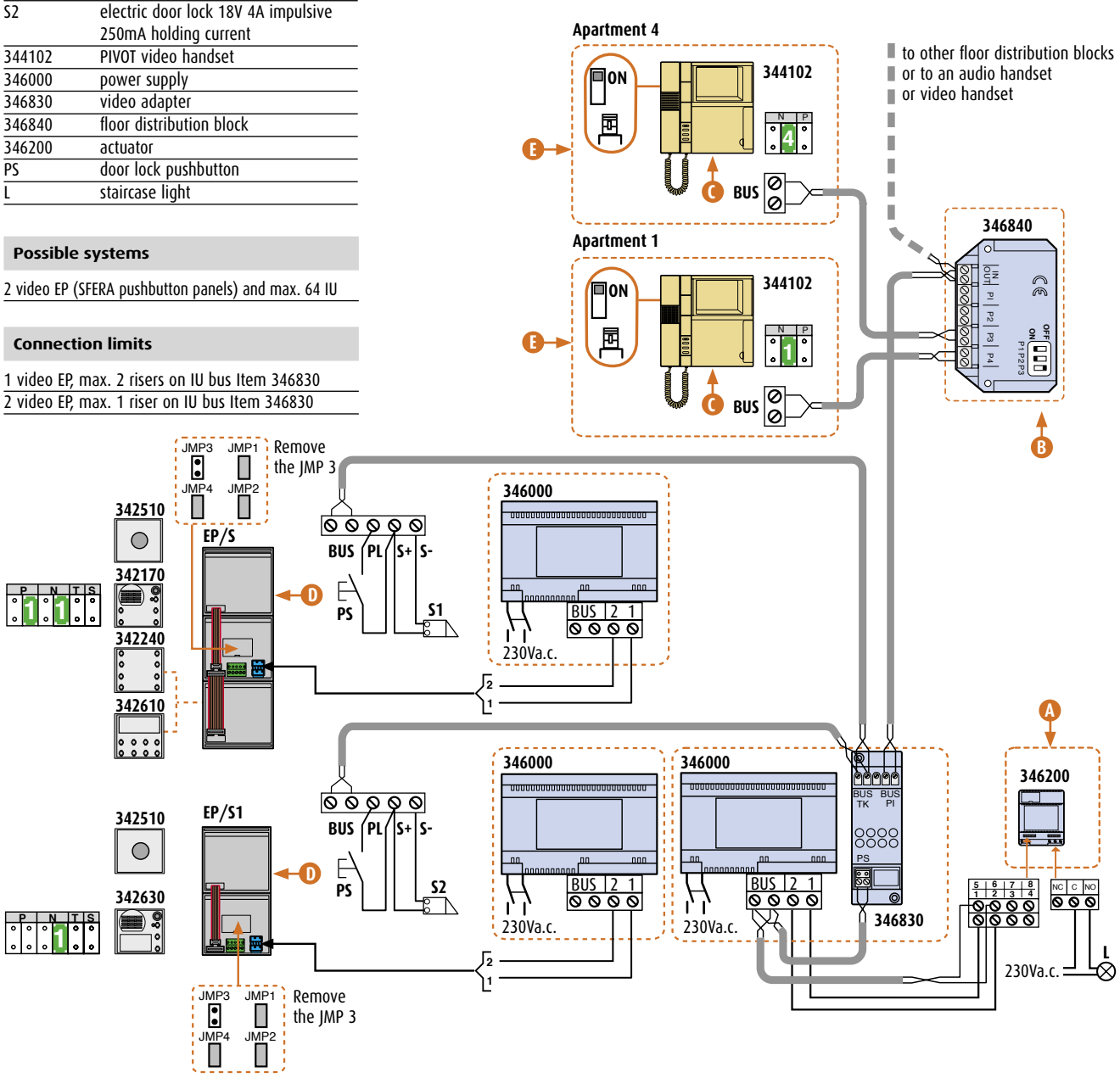
A - Use of the actuator is necessary for the staircase light service or generic actuations.

B - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each riser to ON.

D - It is not possible to use MINISFERA entrance panels because they can not be supplied with the dedicated Item 346000.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 21 ONE-FAMILY SYSTEM WITH 1 VIDEO ENTRANCE PANEL AND 5 HANDSETS IN PARALLEL AND INTERCOMMUNICATING

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
S1	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The Intercom function is operating even with a lack of entrance panel connection.
- The Intercom function can also be used with SWING audio and video handset.

A - Use of the actuator is necessary for the staircase light service or generic actuations.

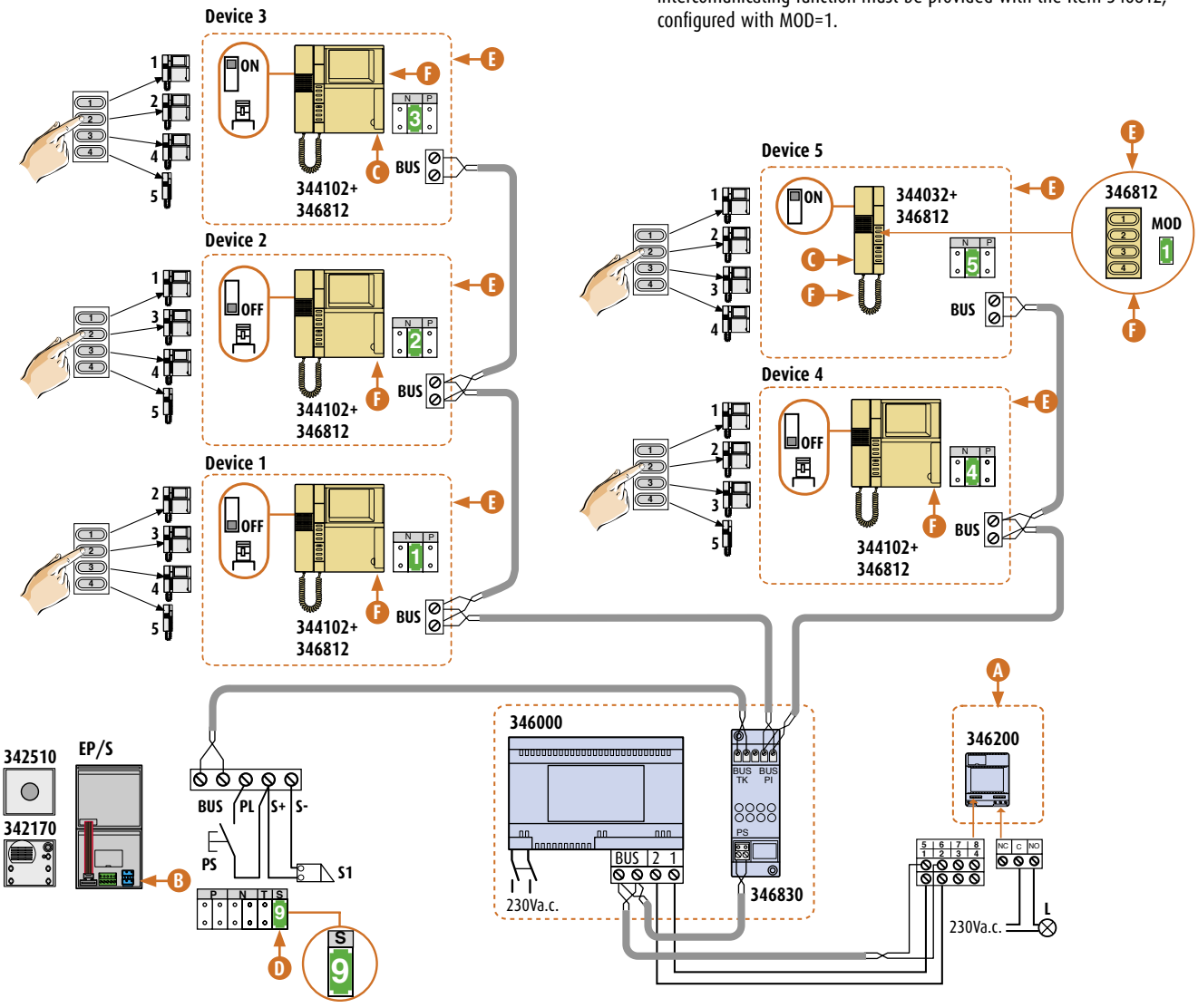
B - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each apartment to ON.

D - Fit a "9" configurator to be inserted in S on the speaker module for the general call; do not insert any configurator in N.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

F - All the PIVOT audio and video handset involved in the intercomunicating function must be provided with the Item 346812, configured with MOD=1.



2F - DIAGRAM 22 TWO-FAMILY SYSTEM, 1 EP AND 3 HANDSETS FOR APARTMENT WITH "INTERCOM BETWEEN APARTMENTS" FUNCTION

Legend

Ref.	Description
EP	SFERA entrance panel (main)
342510	camera module
342170	speaker module
S1	electric door lock 18V 4A impulsive 250mA holding current
346830	video adapter
344102	PIVOT video handset
346812	4-key accessory
346000	power supply
PS	door lock pushbutton

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

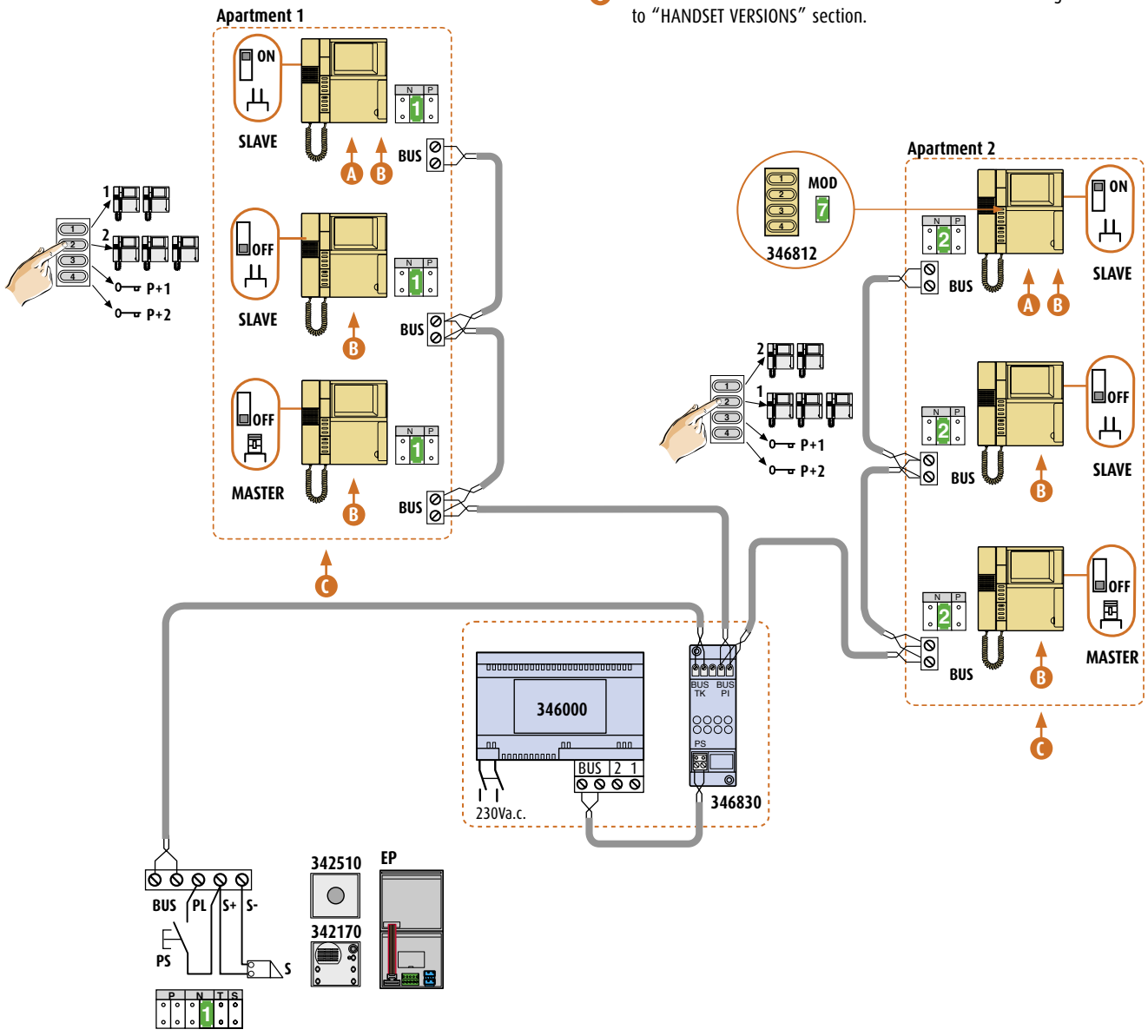
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- **It is possible to install a maximum of 3 video handsets for apartment using PIVOT devices with MASTER-SLAVE function. At the arrival of the call the MASTER rings and switches ON while the SLAVE rings. Answering from a SLAVE, the MASTER switches OFF and the monitor of the SLAVE in use switches ON.**

A - Move the microswitch on the back of the last video handset or audio handset of the line of each apartment to ON.

B - All the PIVOT video handsets used in the intercommunication function must be fitted with Item 346812, that must be configured with MOD=7. In this configuration it is possible to do the Intercom among the devices of the same apartment and between the devices of two different apartments.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



WIRING DIAGRAMS

2F - DIAGRAM 23 MULTI-FAMILY SYSTEM WITH 1 MAIN VIDEO EP 2 RISERS AND MAX. 5 INTERCOMMUNICATING HANDSETS

Legend

Ref.	Description
EP/S	SFERA entrance panel (main)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Possible systems

1 video EP (SFERA pushbutton panels) and max. 26 IU

1 video EP (MINISFERA pushbutton panels) and max. 32 IU

Connection limits

1 video EP, max. 2 risers on IU bus Item 346830

2 video EP, max. 1 riser on IU bus Item 346830

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

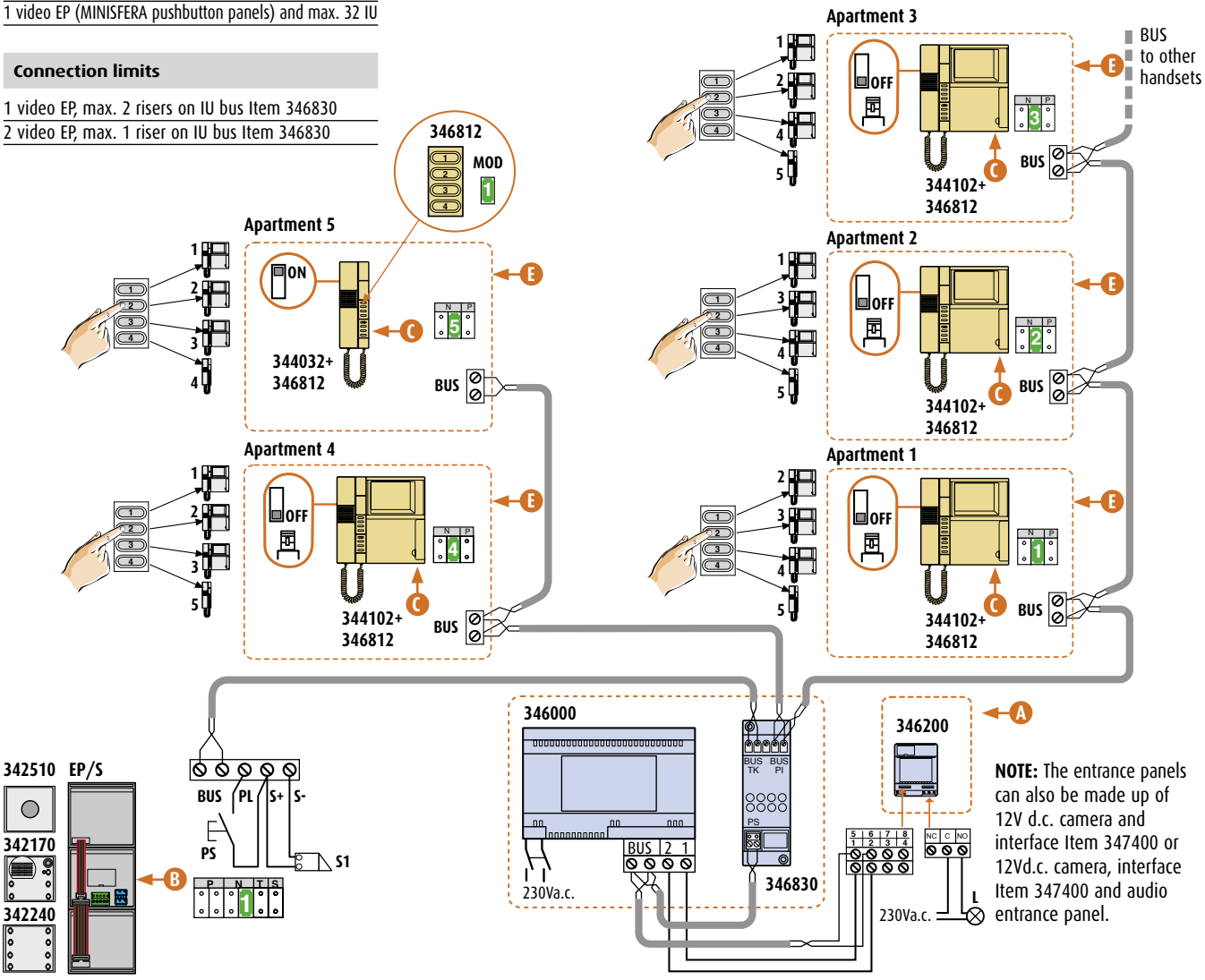
A - Use of the actuator is necessary for the staircase light service or generic actuations.

B - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move the microswitch on the back of the last video handset or audio handset of the line of each apartment to ON.

D - All the video internal units involved (from N=1 to N=5) in the intercom function must be provided with the Item 346812, that must be configured with MOD=1.

E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

2F - DIAGRAM 24 ONE-FAMILY SYSTEM WITH AUDIO/VIDEO NODE ITEM F441

Legend

Ref.	Description
EP	SFERA entrance panel (main)
342170	speaker module
S1/S2	electric door lock 18V 4A impulsive 250mA holding current
F441	audio/video node
344102	PIVOT video handset
346000	power supply
347400	coax/2 wire interface
PS	door lock pushbutton

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

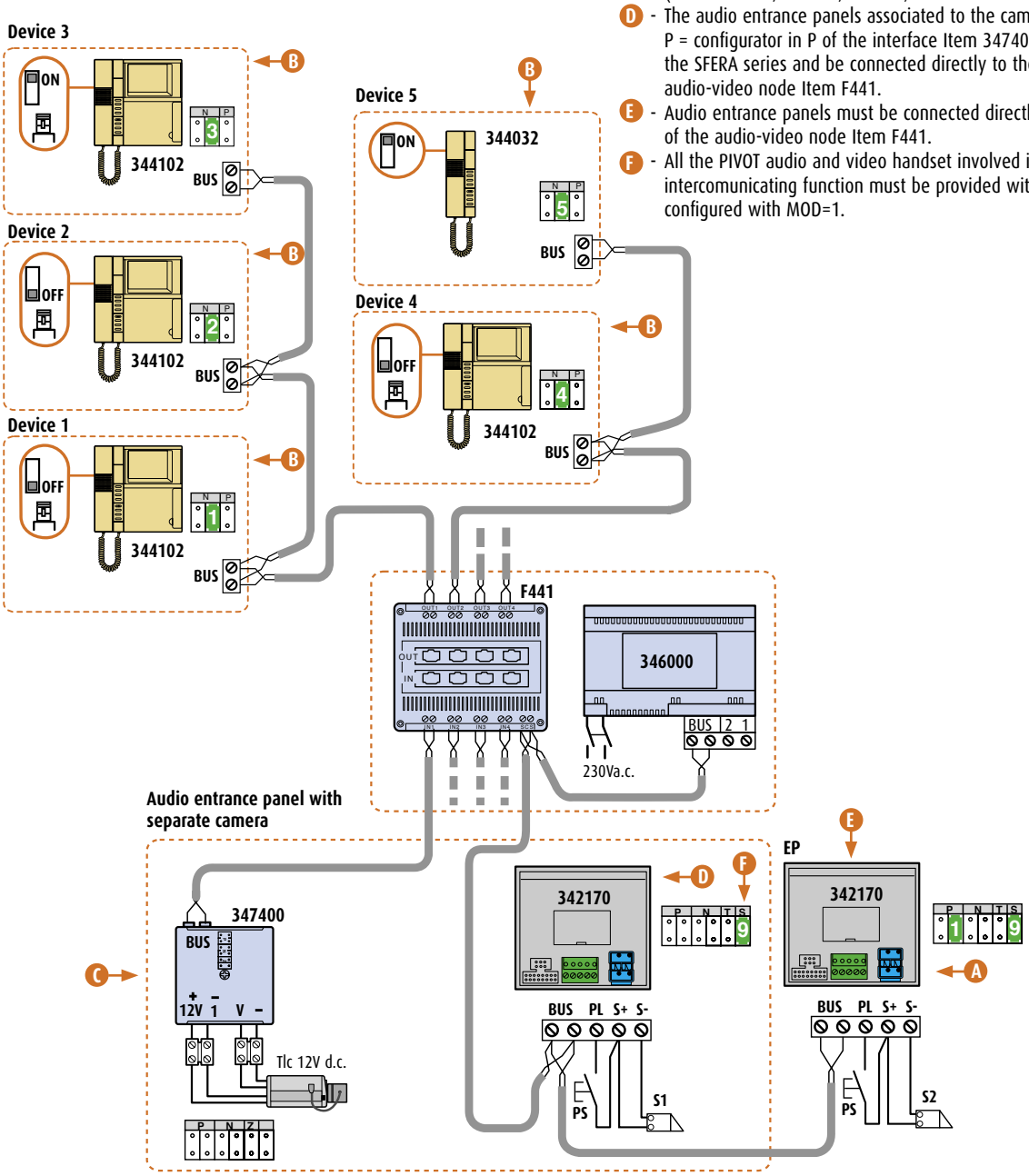
B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

C - The interface Item 347400 supplies directly the camera 12V d.c. (Items 391615, 391616, 391617, 391618 and 391619).

D - The audio entrance panels associated to the cameras (configurator in P = configurator in P of the interface Item 347400) must belong to the SFERA series and be connected directly to the SCS terminal of the audio-video node Item F441.

E - Audio entrance panels must be connected directly to the SCS terminal of the audio-video node Item F441.

F - All the PIVOT audio and video handset involved in the intercomunicating function must be provided with the Item 346812, configured with MOD=1.



WIRING DIAGRAMS

2F - DIAGRAM 25 MULTI-FAMILY SYSTEM WITH 4 ENTRANCE PANELS

Legend

Ref.	Description
EP	SFERA entrance panel (main)
342510	camera module
342170	speaker module
S1	electric door lock 18V 4A impulsive 250mA holding current
F441	audio/video node
344102	PIVOT video handset
346000	power supply
347400	coax/2 wire interface
PS	door lock pushbutton

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The wiring must be realized with the IN-OUT method on handsets. Alternatively, it is possible to realize a STAR wiring using the floor distribution block Item 346840.

A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

C - The interface Item 347400 supplies directly the camera 12V d.c. (Items 391615, 391616, 391617, 391618 and 391619).

D - The audio entrance panels associated to the cameras (configurator in P = configurator in P of the interface Item 347400) must belong to the SFERA series and be connected directly to the SCS terminal of the audio-video node Item F441.

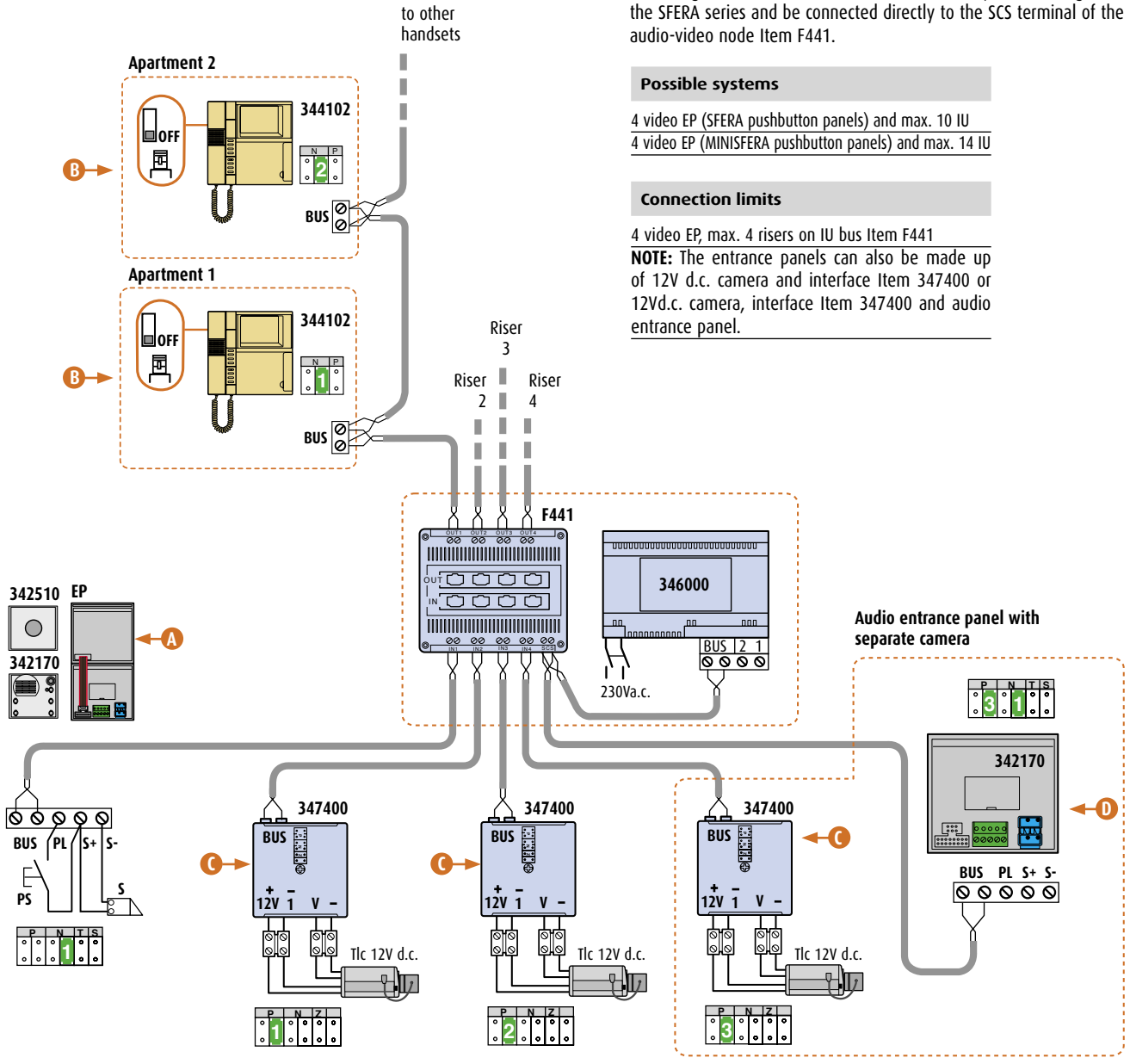
Possible systems

4 video EP (SFERA pushbutton panels) and max. 10 IU
4 video EP (MINISFERA pushbutton panels) and max. 14 IU

Connection limits

4 video EP, max. 4 risers on IU bus Item F441

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.



2F - DIAGRAM 26 COMBINATION WITH 2 WIRE SOUND SYSTEM

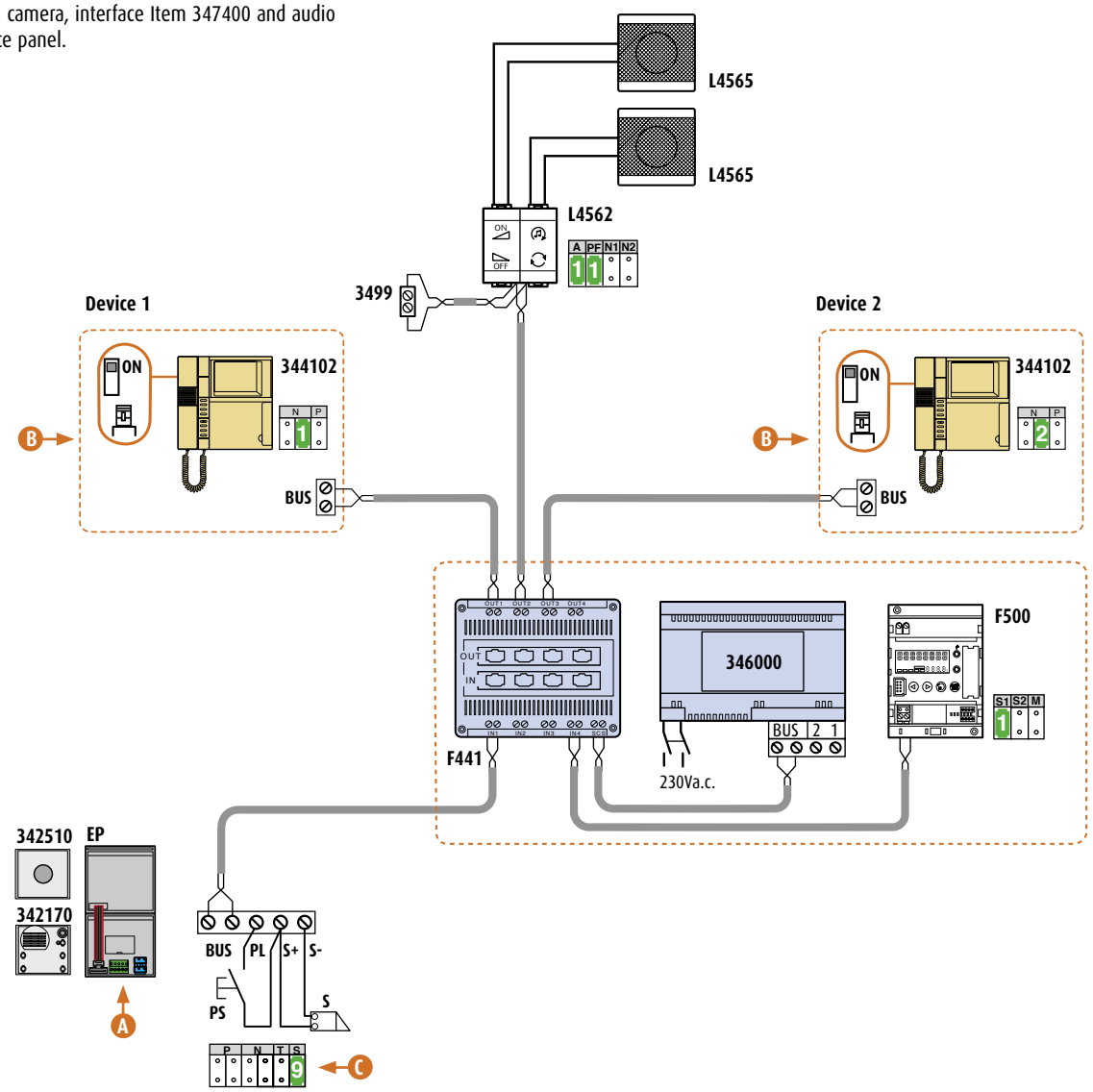
Legend

Ref.	Description
EP	SFERA entrance panel (main)
F500	2 wire radio tuner
L4562	amplifier
L4565	flush-mounted loudspeaker
3499	BUS terminator
342510	camera module
342170	speaker module
S1	electric door lock 18V 4A impulsive 250mA holding current
F441	audio/video node
344102	PIVOT video handset
346000	power supply
PS	door lock pushbutton

NOTE: The entrance panels can also be made up of 12V d.c. camera and interface Item 347400 or 12Vd.c. camera, interface Item 347400 and audio entrance panel.

WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- At the arrival of a call or auto switching ON the EP volume turns down for 20dB in order to not disturb the conversation with the EP.
- Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.
- To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.
- Fit a "9" configurator to be inserted in S on the speaker module for the general call; do not insert any configurator in N.



WIRING DIAGRAMS

2F - DIAGRAM 27 VIDEO SYSTEM FOR SMALL HOUSES (MAX. 6)

Legend

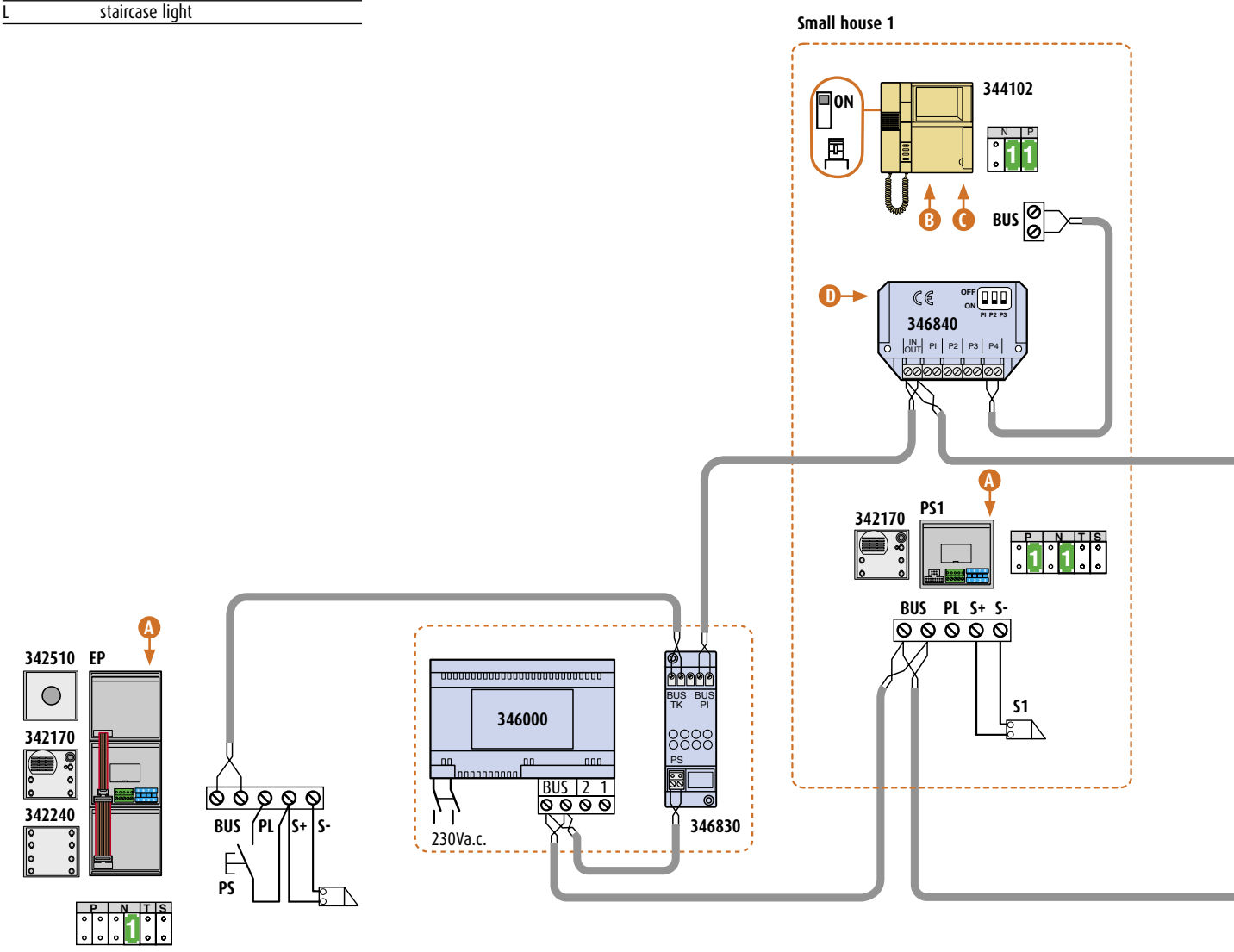
Ref.	Description
EP/S	SFERA entrance panel (main)
PS1-PS2-PS5	secondary audio entrance panel
342510	camera module
342170	speaker module
342240	pushbutton module
S1-S2-S6	electric door lock 18V 4A impulsive 250mA holding current
344102	PIVOT video handset
344032	PIVOT audio handset
346812	4-key accessory
346000	power supply
346830	video adapter
346200	actuator
PS	door lock pushbutton
L	staircase light

Connection scheme for the terraced houses. The main (video) entrance panel calls all the small houses (max 6), while the secondary audio entrance panels call only the relating house.
By pressing the key from the handset of each small house, the lock of its own small house will open.

NOTE: in order to avoid that each small house displays the images of the local video handsets of the other small houses, it is advisable to configure the secondary (or local) EP switching a figure among the different small houses.

Small house 1 P = 1 , small house 2 P = 3.... small house 6 P = 11

Using this type of configuration and PIVOT handsets, the maximum number of connectable small houses is 5.



WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

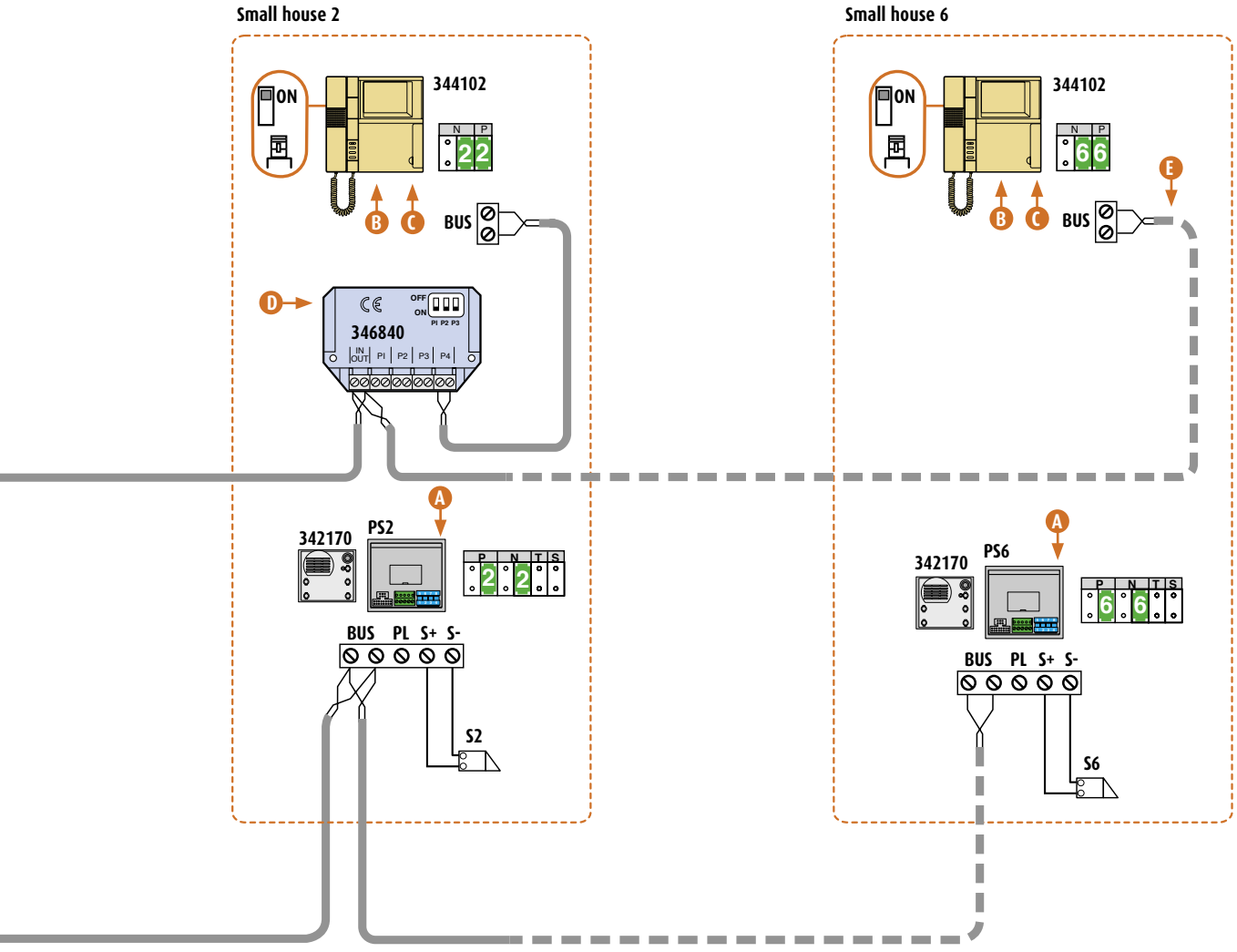
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.

B - Move the microswitch on the back of the last video handset or audio handset of the line of each apartment to ON.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

D - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.

E - Connect the last small house to the terminal IN/OUT of the plan distribution block Item 346840 of the previous small house in order to adapt the video signal.

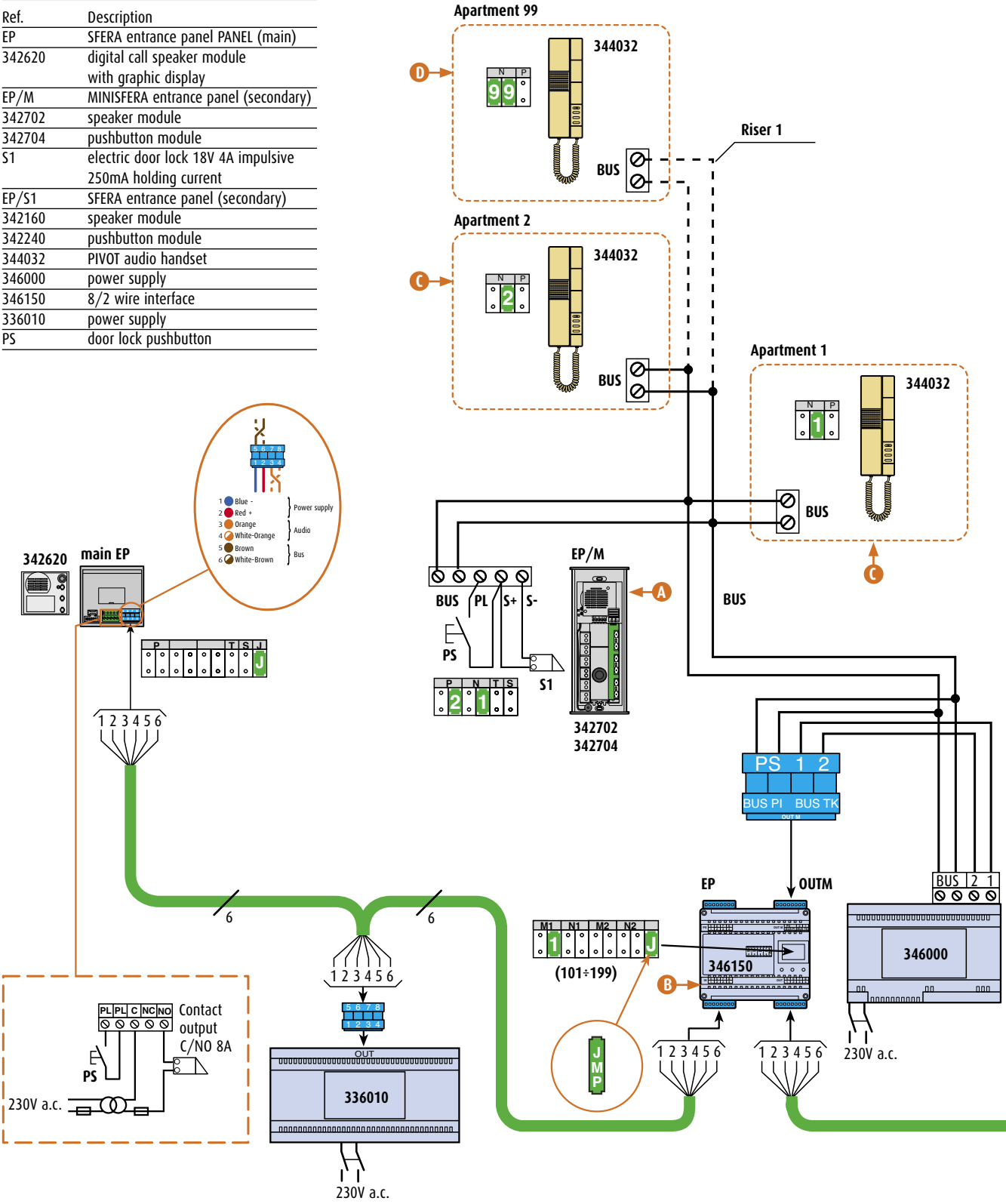


WIRING DIAGRAMS

2F - DIAGRAM 28 SYSTEM WITH AUDIO DIGITAL BACKBONE WITH MAIN EP AND 2 WIRE RISERS WITH SECONDARY EP

Legend

Ref.	Description
EP	SFERA entrance panel PANEL (main)
342620	digital call speaker module with graphic display
EP/M	MINISFERA entrance panel (secondary)
342702	speaker module
342704	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
EP/S1	SFERA entrance panel (secondary)
342160	speaker module
342240	pushbutton module
344032	PIVOT audio handset
346000	power supply
346150	8/2 wire interface
336010	power supply
PS	door lock pushbutton



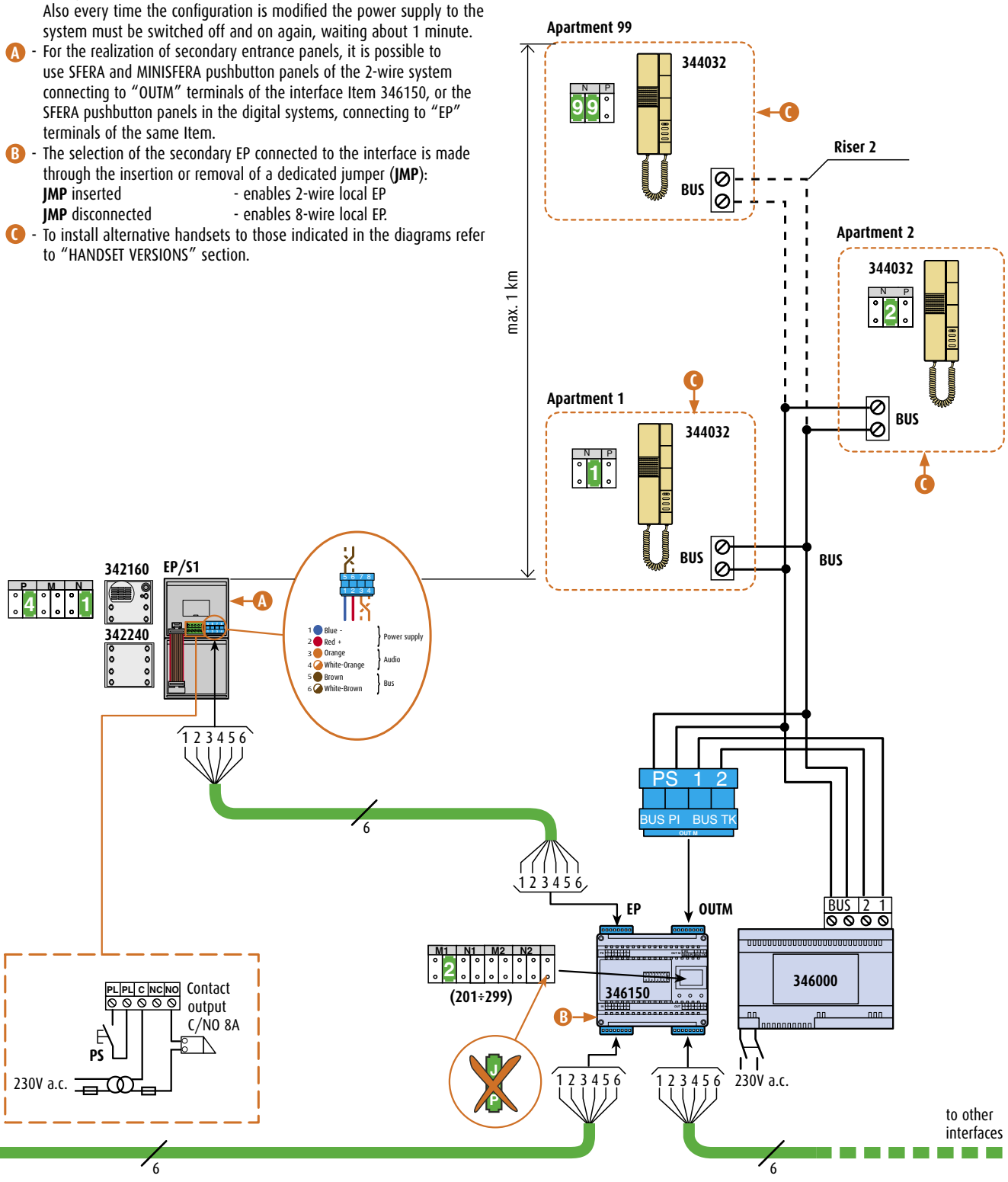
WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - For the realization of secondary entrance panels, it is possible to use SFERA and MINISFERA pushbutton panels of the 2-wire system connecting to "OUTM" terminals of the interface Item 346150, or the SFERA pushbutton panels in the digital systems, connecting to "EP" terminals of the same Item.

B - The selection of the secondary EP connected to the interface is made through the insertion or removal of a dedicated jumper (**JMP**):
JMP inserted - enables 2-wire local EP
JMP disconnected - enables 8-wire local EP.

C - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

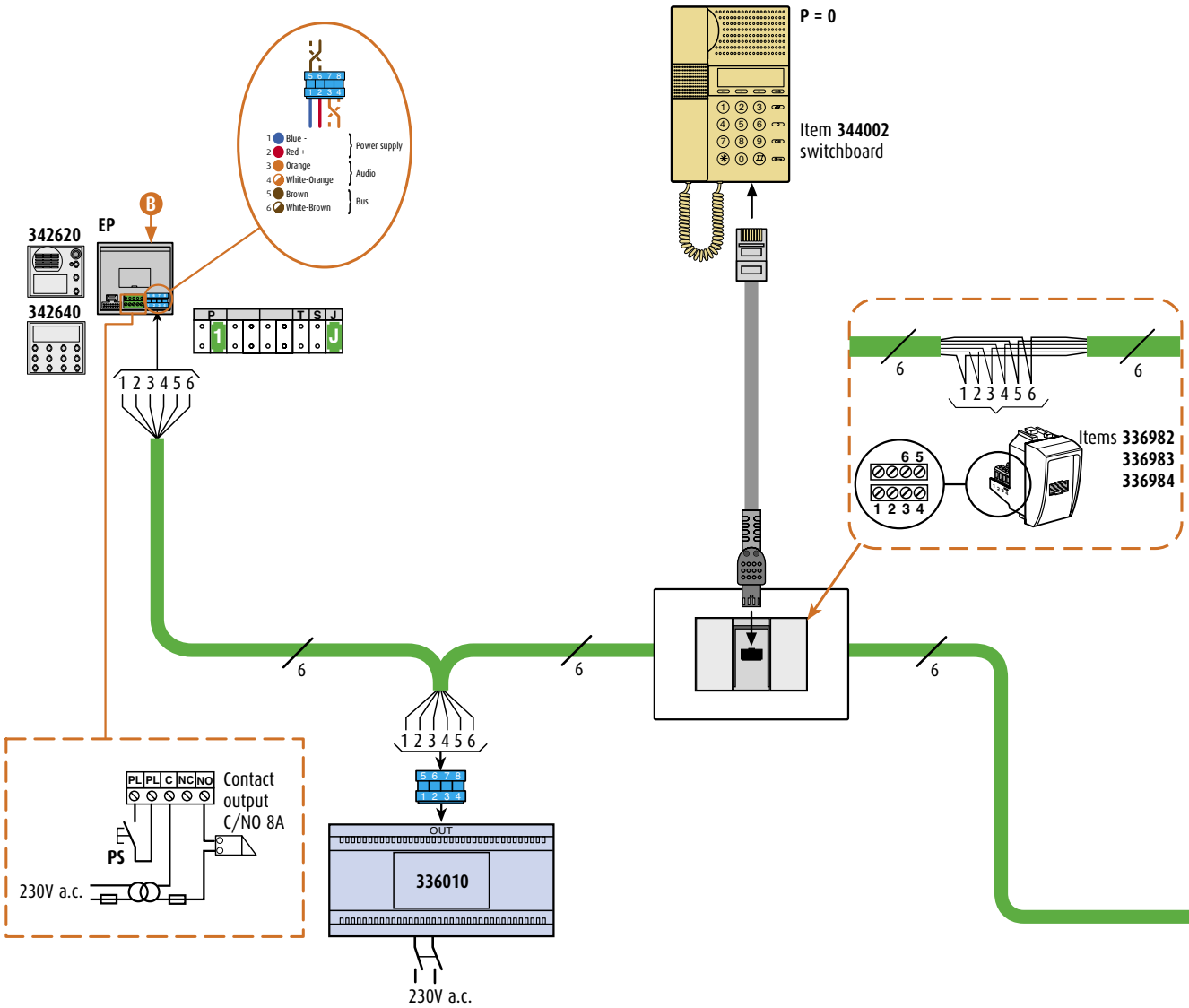


WIRING DIAGRAMS

2F - DIAGRAM 29 SYSTEM WITH AUDIO DIGITAL BACKBONE WITH SWITCHBOARD, MAIN EP AND 2 WIRE RISERS WITH SECONDARY EP

Legend

Ref.	Description
EP	SFERA entrance panel (main)
342620	digital call speaker module with graphic display
342640	additional keypad
EP/S1	SFERA entrance panel (secondary)
342160	speaker module
342240	pushbutton module
346150	8/2 wire interface
346000	power supply
PS	door lock pushbutton
344032	PIVOT audio handset
336010	power supply
344002	switchboard



WARNING

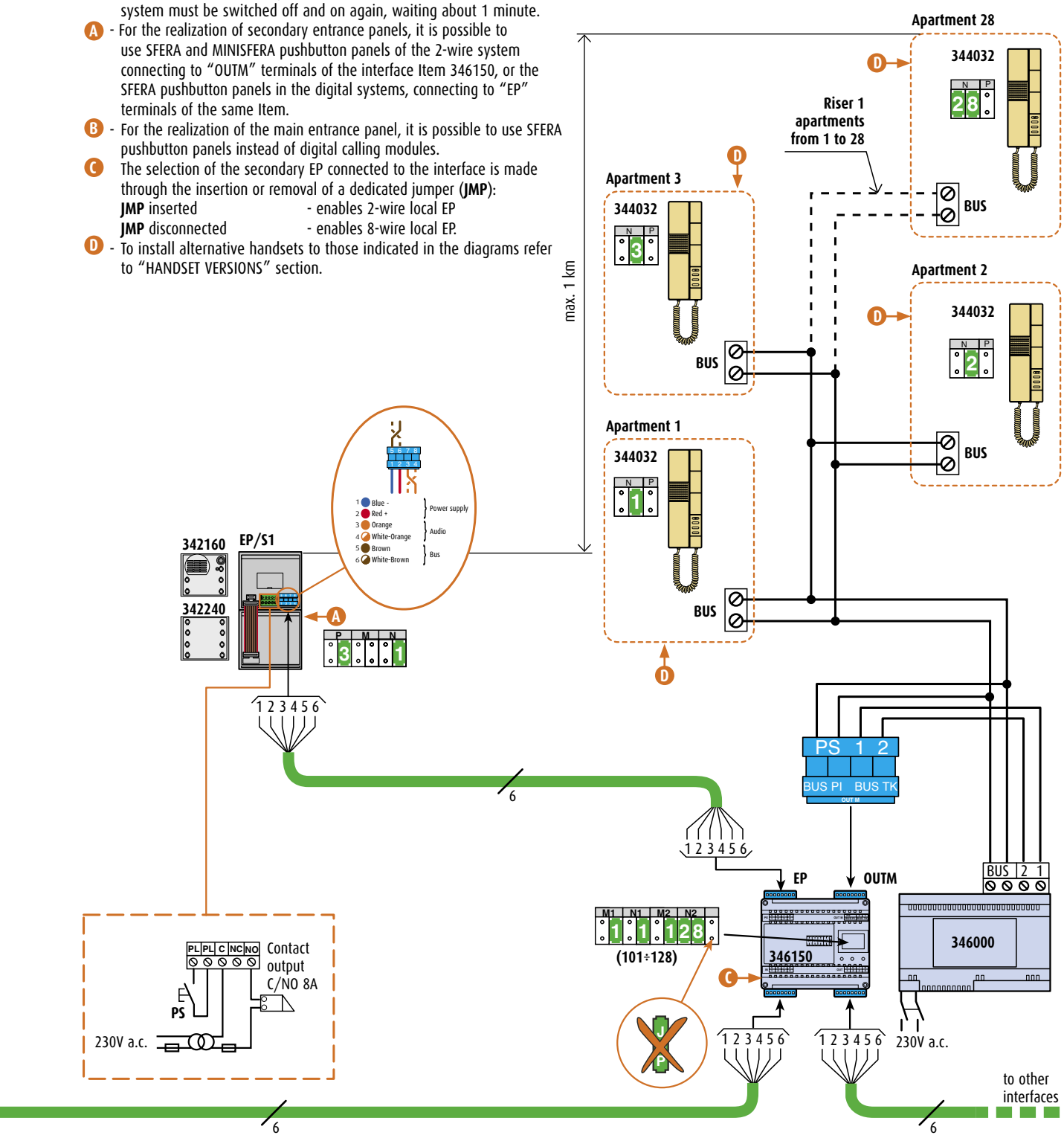
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - For the realization of secondary entrance panels, it is possible to use SFERA and MINISFERA pushbutton panels of the 2-wire system connecting to "OUTM" terminals of the interface Item 346150, or the SFERA pushbutton panels in the digital systems, connecting to "EP" terminals of the same Item.

B - For the realization of the main entrance panel, it is possible to use SFERA pushbutton panels instead of digital calling modules.

C The selection of the secondary EP connected to the interface is made through the insertion or removal of a dedicated jumper (**JMP**):
JMP inserted - enables 2-wire local EP
JMP disconnected - enables 8-wire local EP.

D - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

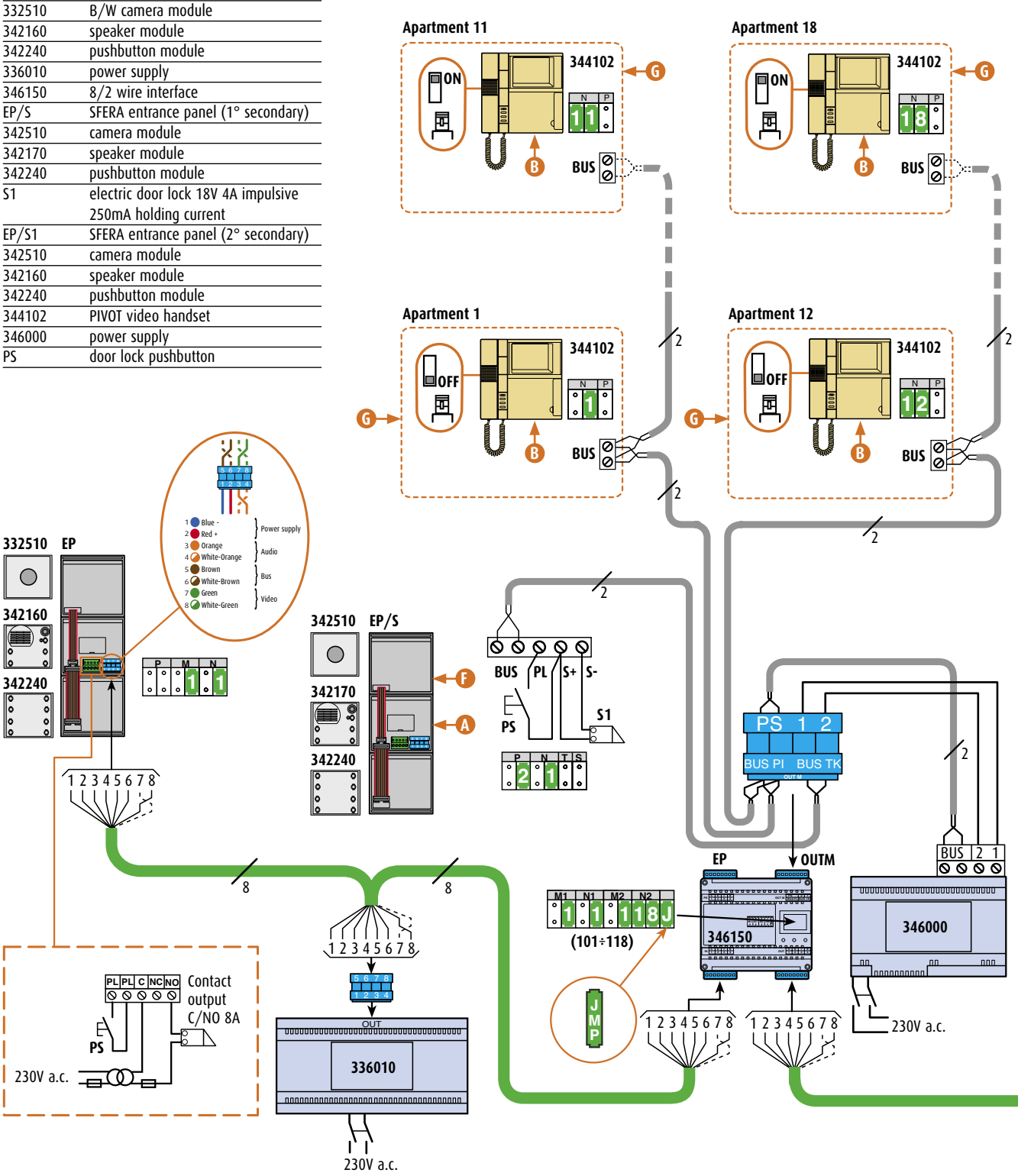


WIRING DIAGRAMS

2F - DIAGRAM 30 SYSTEM WITH VIDEO DIGITAL BACKBONE WITH MAIN EP AND 2 WIRES RISERS WITH SECONDARY EP

Legend

Ref.	Description
EP	SFERA entrance panel (main)
332510	B/W camera module
342160	speaker module
342240	pushbutton module
336010	power supply
346150	8/2 wire interface
EP/S	SFERA entrance panel (1° secondary)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
EP/S1	SFERA entrance panel (2° secondary)
342510	camera module
342160	speaker module
342240	pushbutton module
344102	PIVOT video handset
346000	power supply
PS	door lock pushbutton



WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - For the realization of secondary entrance panels, it is possible to use SFERA and MINISFERA pushbutton panels of the 2-wire system connecting to "OUTM" terminals of the interface Item 346150, or the SFERA pushbutton panels in the digital systems, connecting to "EP" terminals of the same Item.

B - Move to ON the microswitch placed only on the rear of the last video handset or audio handset of the riser line.

C - Connect the outputs starting from P4 and switch on ON the micro pushbuttons of the non-connected outputs.

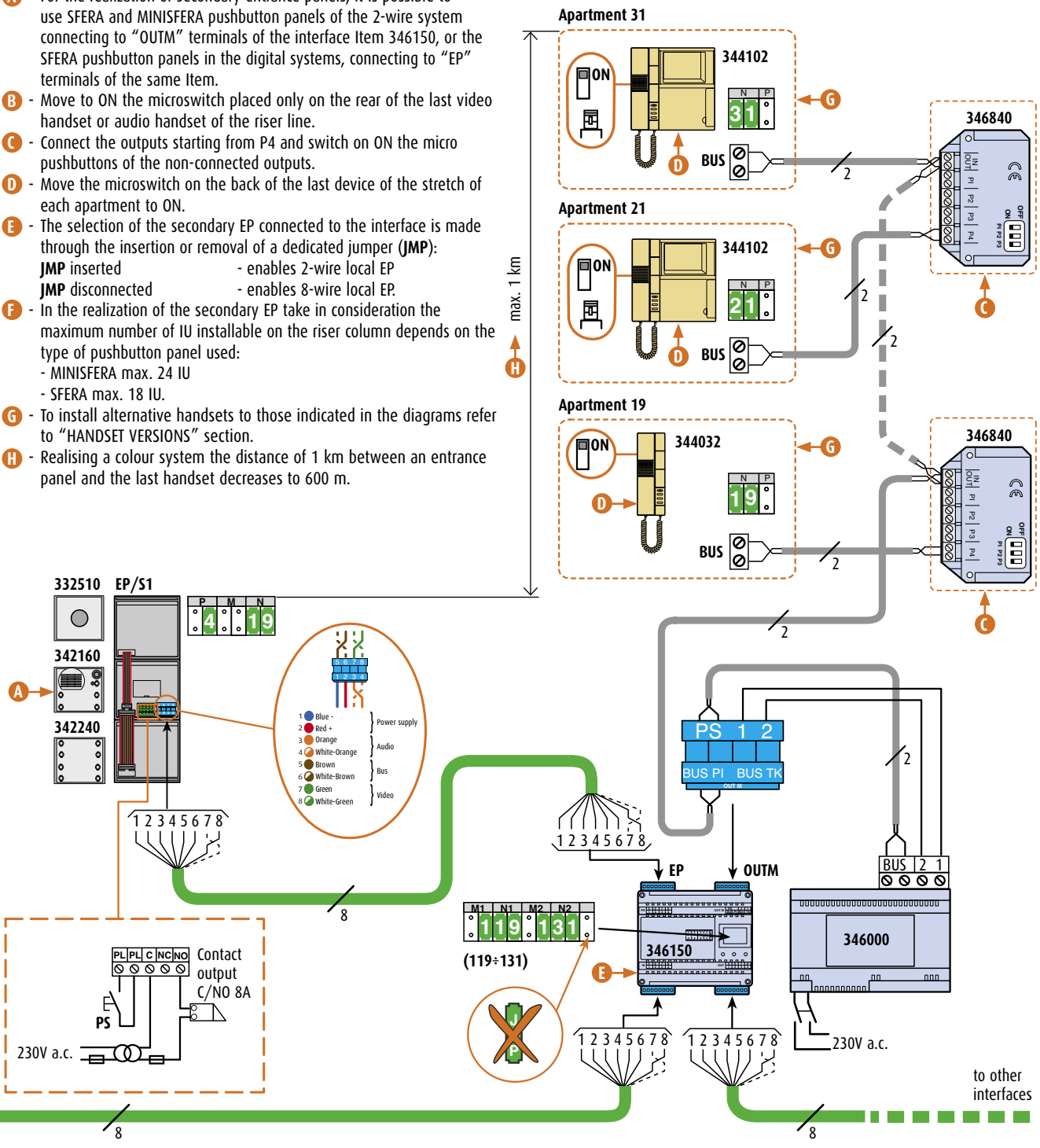
D - Move the microswitch on the back of the last device of the stretch of each apartment to ON.

E - The selection of the secondary EP connected to the interface is made through the insertion or removal of a dedicated jumper (**JMP**):
JMP inserted - enables 2-wire local EP
JMP disconnected - enables 8-wire local EP.

F - In the realization of the secondary EP take in consideration the maximum number of IU installable on the riser column depends on the type of pushbutton panel used:
- MINISFERA max. 24 IU
- SFERA max. 18 IU.

G - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

H - Realising a colour system the distance of 1 km between an entrance panel and the last handset decreases to 600 m.

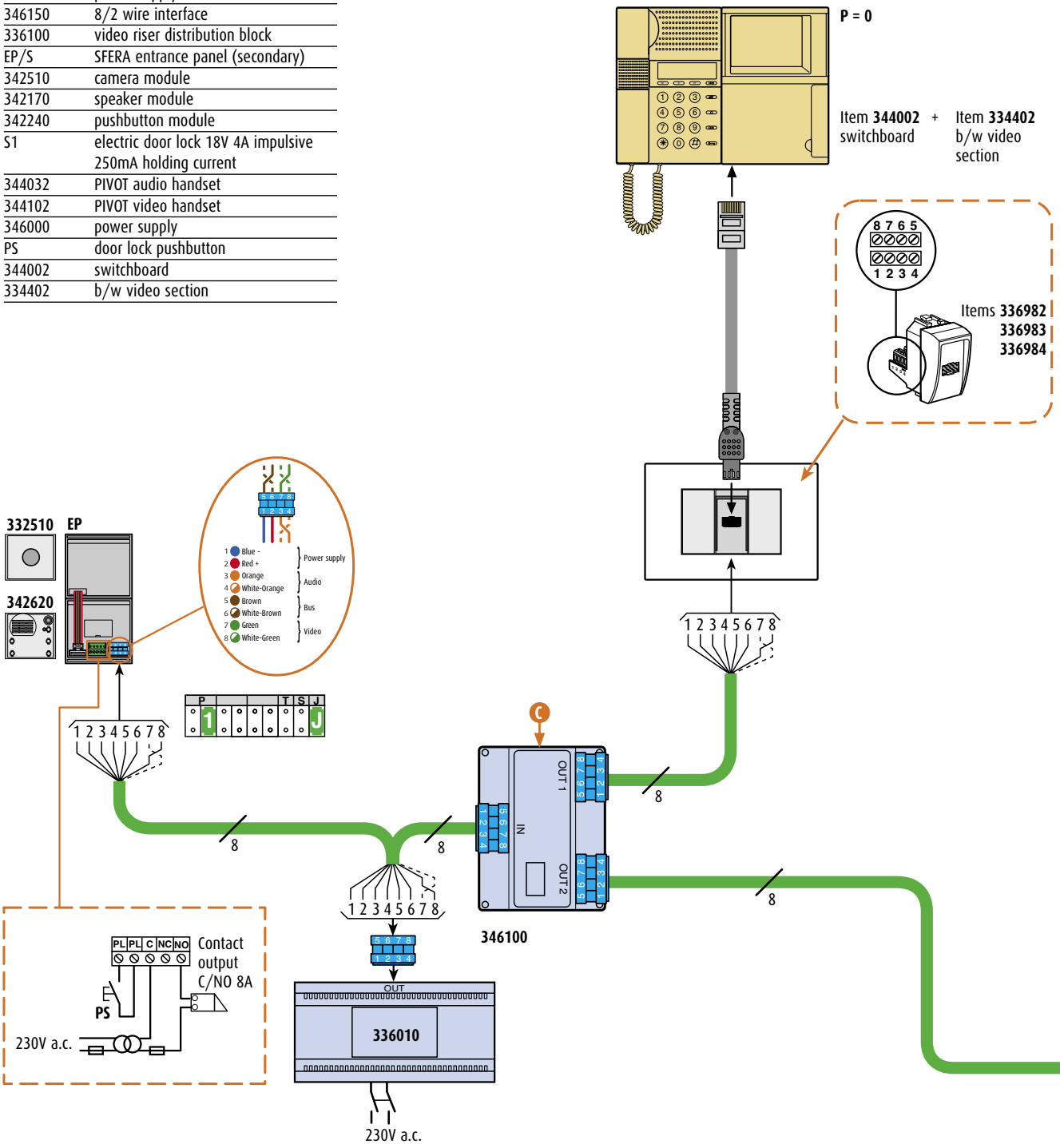


WIRING DIAGRAMS

2F - DIAGRAM 31 SYSTEM WITH VIDEO DIGITAL BACKBONE WITH SWITCHBOARD, 1 MAIN EP AND A 2 WIRE VIDEO RISER WITH SECONDARY EP

Legend

Ref.	Description
EP	SFERA entrance panel (main)
332510	B/W camera module
342620	digital call speaker module with graphic display
336010	power supply
346150	8/2 wire interface
336100	video riser distribution block
EP/S	SFERA entrance panel (secondary)
342510	camera module
342170	speaker module
342240	pushbutton module
S1	electric door lock 18V 4A impulsive 250mA holding current
344032	PIVOT audio handset
344102	PIVOT video handset
346000	power supply
PS	door lock pushbutton
344002	switchboard
334402	b/w video section



WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The secondary EP can be both audio and video but the calls toward the switchboard are only audio.

A - For the realization of secondary entrance panels, it is possible to use SFERA and MINISFERA pushbutton panels of the 2-wire system connecting to "OUTM" terminals of the interface Item 346150, or the SFERA pushbutton panels in the digital systems, connecting to "EP" terminals of the same Item.

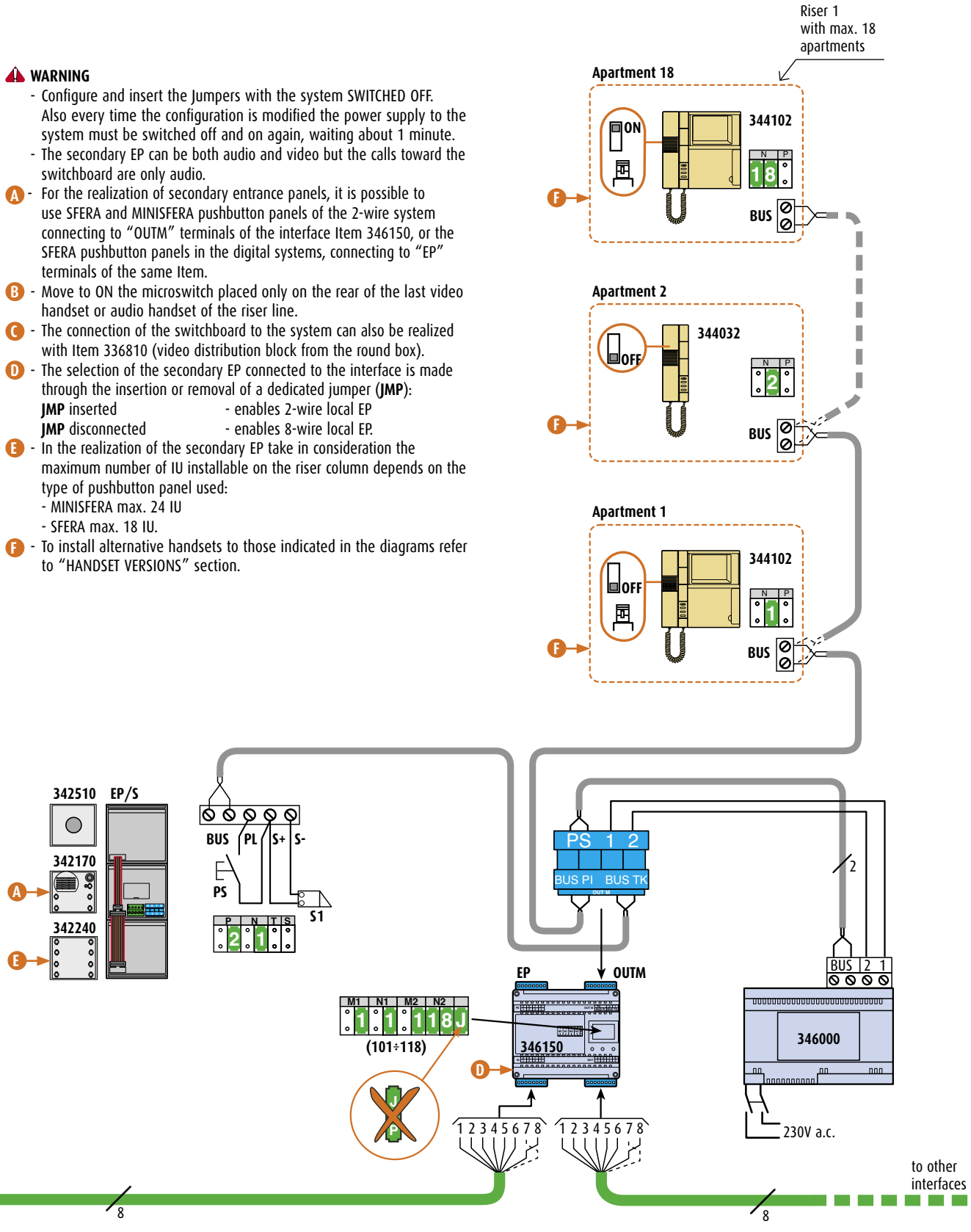
B - Move to ON the microswitch placed only on the rear of the last video handset or audio handset of the riser line.

C - The connection of the switchboard to the system can also be realized with Item 336810 (video distribution block from the round box).

D - The selection of the secondary EP connected to the interface is made through the insertion or removal of a dedicated jumper (**JMP**):
JMP inserted - enables 2-wire local EP
JMP disconnected - enables 8-wire local EP.

E - In the realization of the secondary EP take in consideration the maximum number of IU installable on the riser column depends on the type of pushbutton panel used:
- MINISFERA max. 24 IU
- SFERA max. 18 IU.

F - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



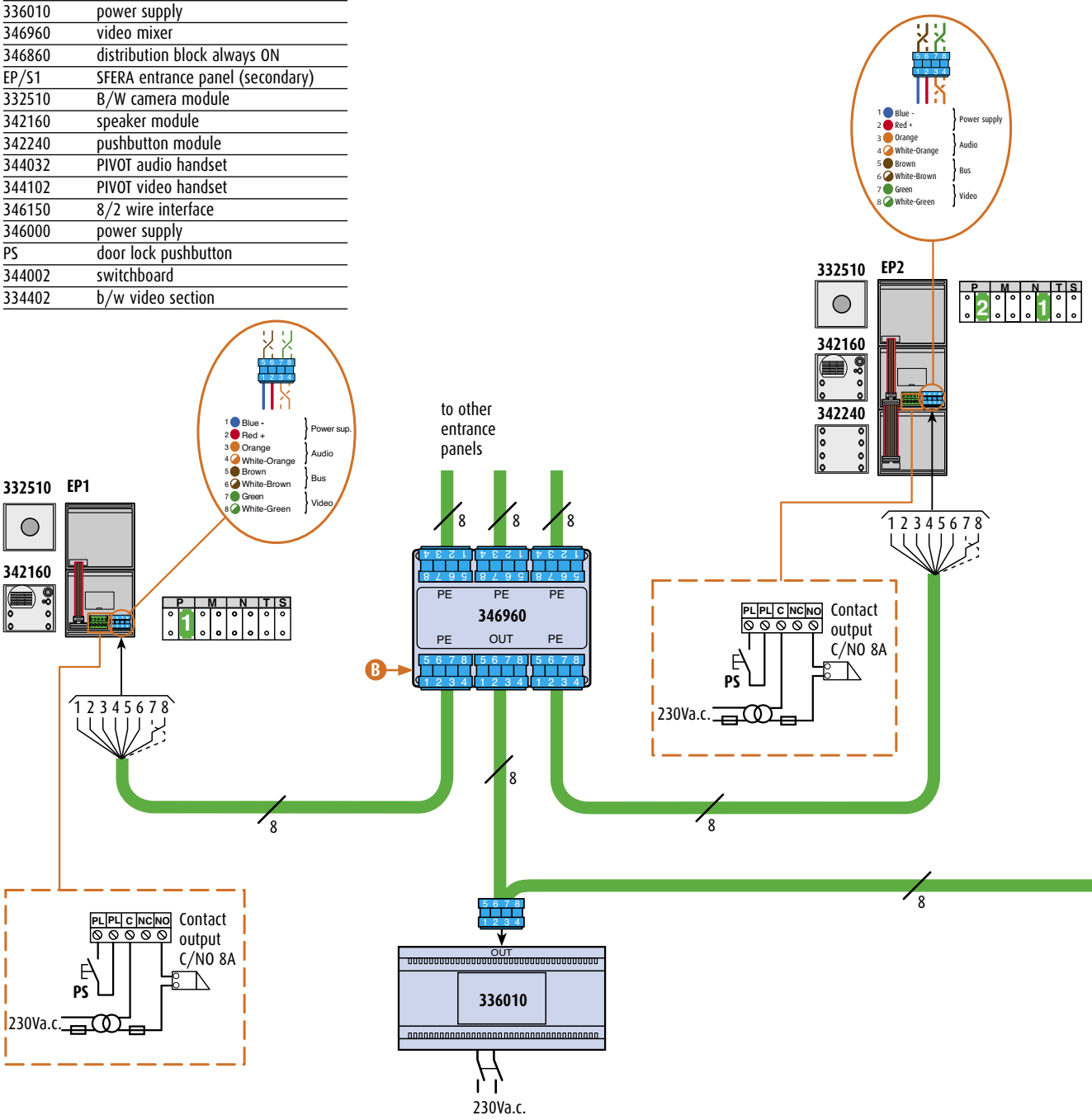
WIRING DIAGRAMS

2F - DIAGRAM 32 SYSTEM WITH DIGITAL BACKBONE, 2 WIRE RISER, VIDEO OF THE RISER SECONDARY VISIBLE ON THE SWITCHBOARD

Legend

Ref.	Description
EP1	SFERA entrance panel (main)
332510	B/W camera module
342620	digital call speaker module with graphic display
EP2	SFERA entrance panel (main)
332510	B/W camera module
342160	speaker module
342240	pushbutton module
336010	power supply
346960	video mixer
346860	distribution block always ON
EP/S1	SFERA entrance panel (secondary)
332510	B/W camera module
342160	speaker module
342240	pushbutton module
344032	PIVOT audio handset
344102	PIVOT video handset
346150	8/2 wire interface
346000	power supply
PS	door lock pushbutton
344002	switchboard
334402	b/w video section

Realizing the following diagram, besides the video communication between the main entrance panels and the switchboard, even those with the secondary entrance panel is available.
Furthermore, the audio and video activation of all main and secondary EP and CCTV functions can be carried out from the switchboard.



WARNING

- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

A - For the realization of the secondary EP, only the SFERA pushbutton panels of the digital 8 wire system are to be used.

B - The use of video mixer Item 346960 is essential, even if only one main EP is connected.

C - Connect between 7-8 wires (video signal) to the OUT terminal, the last 8/2-wire interface installed, the terminating resistance together with Item 346860.

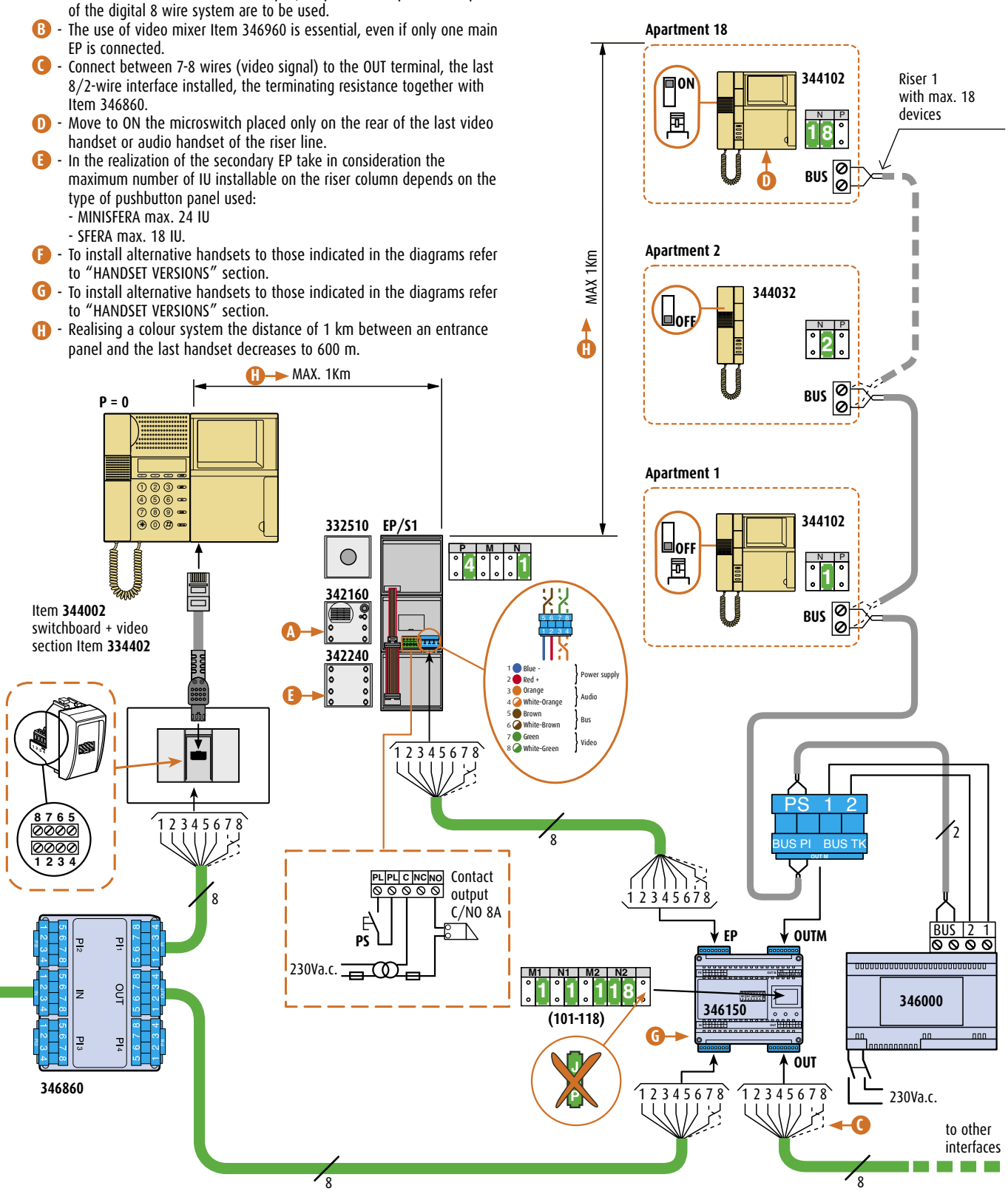
D - Move to ON the microswitch placed only on the rear of the last video handset or audio handset of the riser line.

E - In the realization of the secondary EP take in consideration the maximum number of IU installable on the riser column depends on the type of pushbutton panel used:
- MINISFERA max. 24 IU
- SFERA max. 18 IU.

F - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

G - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

H - Realising a colour system the distance of 1 km between an entrance panel and the last handset decreases to 600 m.



Handset versions
Appearance and functions

HANDSET		ACCESSORIES		NOTES
	344122 PIVOT video handset with 4" TFT colour monitor Colour: White		346812 4 additional pushbutton small blocks for PIVOT Colour: White	It can be installed in audio and video systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344123 PIVOT video handset with 4" TFT colour monitor Colour: Anthracite		346813 4 additional pushbutton small blocks for PIVOT Colour: Anthracite	It can be installed in audio and video systems. Intercom possible only with Item 346813 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344124 PIVOT video handset with 4" TFT colour monitor Colour: Tech		346814 4 additional pushbutton small blocks for PIVOT Colour: Tech	It can be installed in audio and video systems. Intercom possible only with Item 346814 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344102 PIVOT video handset with 4" b/w monitor Colour: White		346812 4 additional pushbutton small blocks for PIVOT Colour: White	It can be installed in audio and video systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344103 PIVOT video handset with 4" b/w monitor Colour: Anthracite		346813 4 additional pushbutton small blocks for PIVOT Colour: Anthracite	It can be installed in audio and video systems. Intercom possible only with Item 346813 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344104 PIVOT video handset with 4" b/w monitor Colour: Tech		346814 4 additional pushbutton small blocks for PIVOT Colour: Tech	It can be installed in audio and video systems. Intercom possible only with Item 346814 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.

HANDSET		ACCESSORIES		NOTES
	344802 SWING video handset with b/w monitor Colour: Ash			It can be installed in all video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock cecking" function.
	344803 SWING video handset with b/w monitor Colour: Cord			It can be installed in all video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock cecking" function._
	344804 SWING video handset with b/w monitor Colour: White			It can be installed in all video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock cecking" function.
	344032 PIVOT audio handset Colour: White		346812 4 additional pushbutton small blocks for PIVOT Colour: White	It can be installed in audio and video systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344033 PIVOT audio handset Colour: Anthracite		346813 4 additional pushbutton small blocks for PIVOT Colour: Anthracite	It can be installed in audio and video systems. Intercom possible only with Item 346813 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344034 PIVOT audio handset Colour: Tech		346814 4 additional pushbutton small blocks for PIVOT Colour: Tech	It can be installed in audio and video systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom in the two-family system. It allows to have the "paging" function in one-family systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.

Handset versions
Appearance and functions

HANDSET		ACCESSORIES		NOTES
	344702 SWING audio handset Colour: Ash			It can be installed in audio and video systems. It allows to have the apartment intercom in the two-family system and the “office” function or the “door lock cecking” function.
	344703 SWING audio handset Colour: Cord			It can be installed in audio and video systems. It allows to have the apartment intercom in the two-family system and the “office” function or the “door lock cecking” function.
	344704 SWING audio handset Colour: White			It can be installed in audio and video systems. It allows to have the apartment intercom in the two-family system and the “office” function or the “door lock cecking” function.
	344212 SPRINT audio handset which can be fitted with accessories Colour: White		346800 Accessory for excluding the call tone or the additional bell.	It can be installed in audio and video systems. It cannot be installed as last line or apartment device.
	344202 SPRINT audio handset Colour: White			It can be installed only in audio systems.

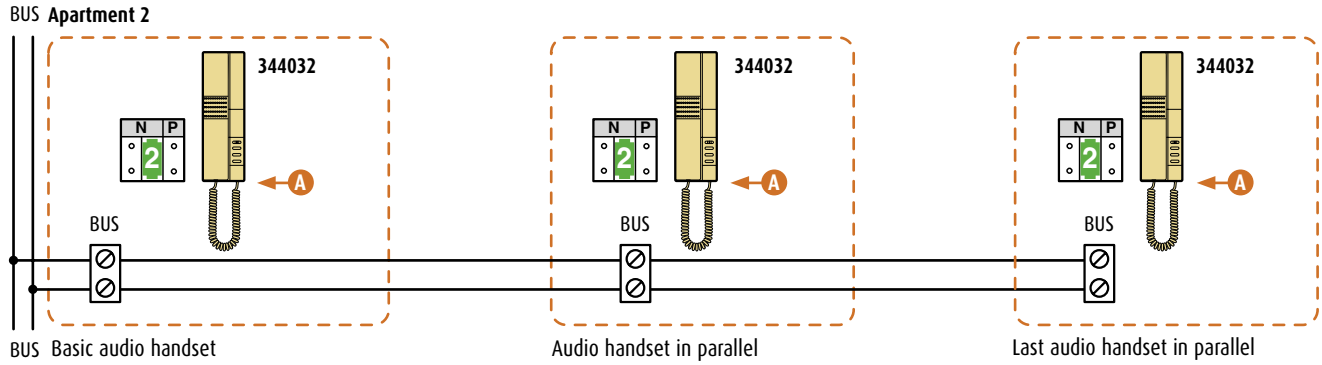
Handset versions
Multi-family systems

WARNINGS

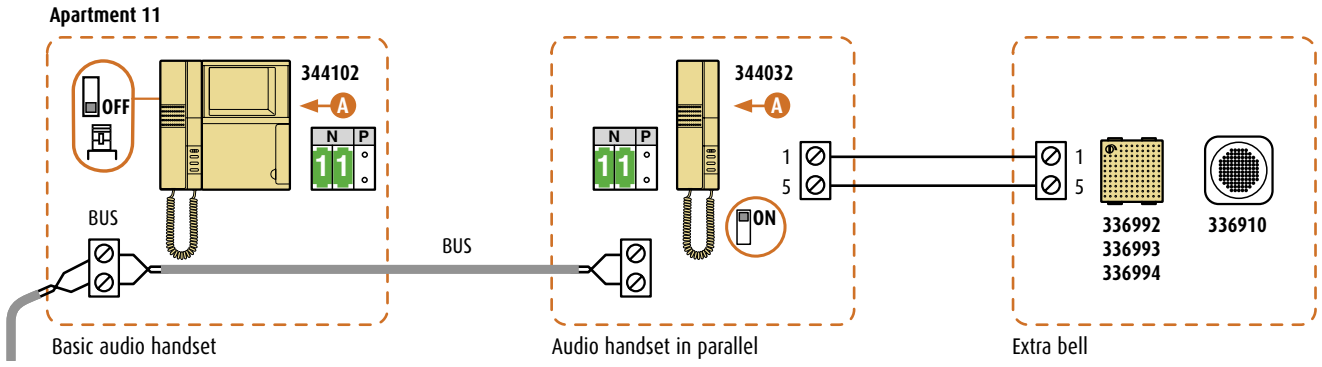
In the same apartment on the same call can be installed max. 3 devices (video handsets, audio handsets or bells).

A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

EXAMPLE - TWO ADDITIONAL AUDIO HANDSETS TO BASIC AUDIO HANDSET

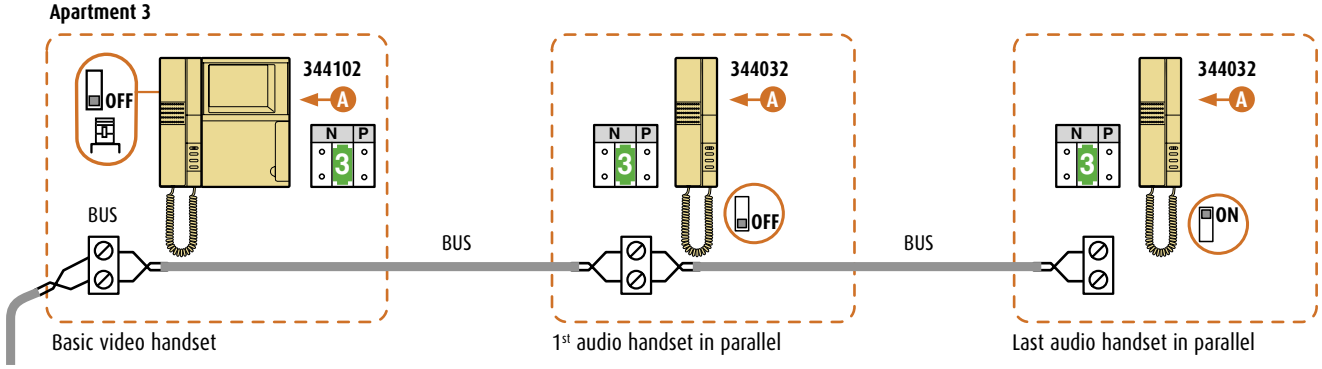


EXAMPLE - ONE ADDITIONAL AUDIO HANDSET AND BELL TO BASIC VIDEO HANDSET



BUS
from floor distribution block (Item **346840**)
or audio/video node (Item **F441**)

EXAMPLE - TWO ADDITIONAL AUDIO HANDSETS TO BASIC VIDEO HANDSET



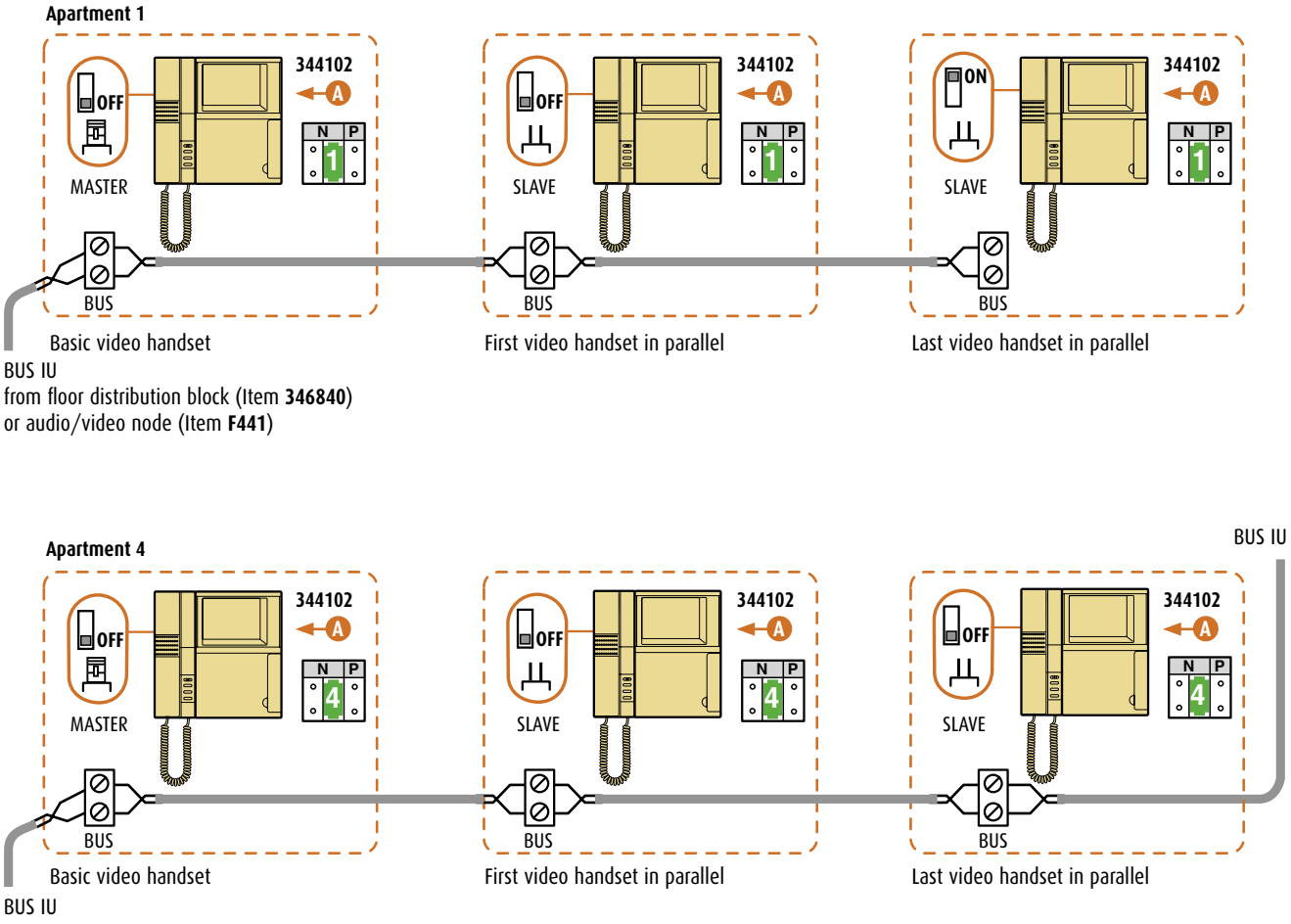
BUS
from floor distribution block (Item **346840**)
or audio/video node (Item **F441**)

Handset versions
Multi-family systems

A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

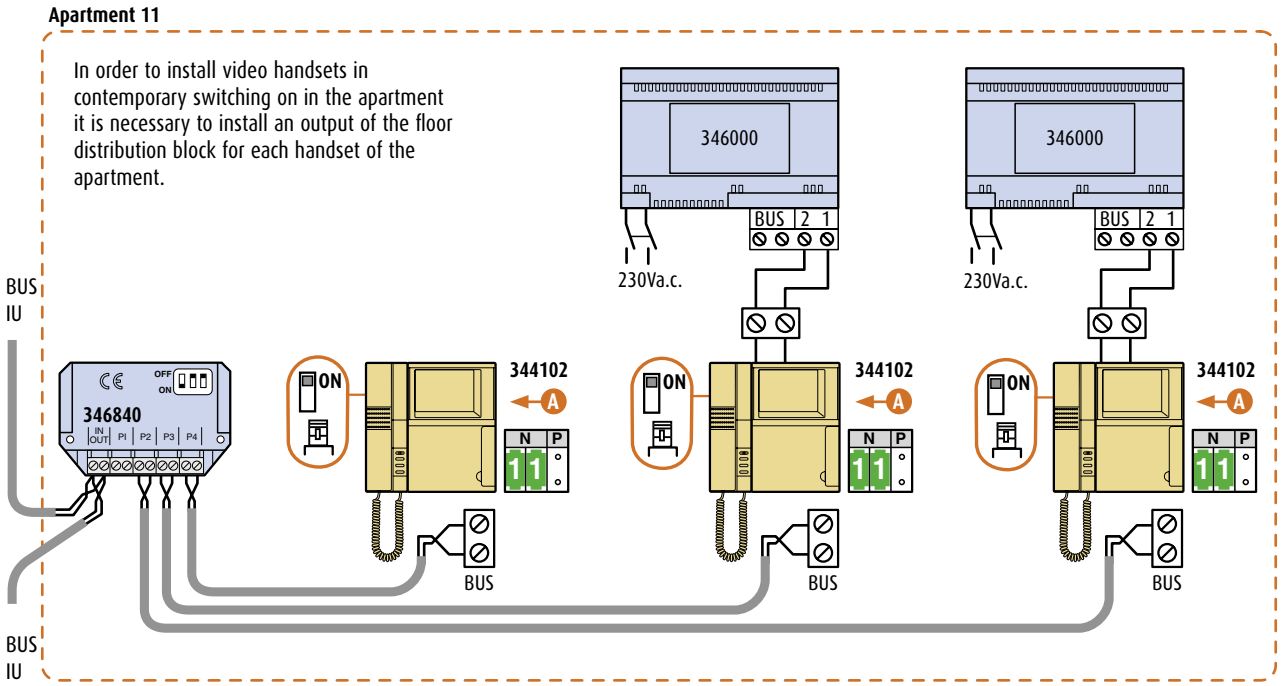
EXAMPLE - TWO ADDITIONAL VIDEO HANDSETS TO BASIC VIDEO HANDSET

The version is realizable only with new PIVOT video handsets configured as MASTER-SLAVE.

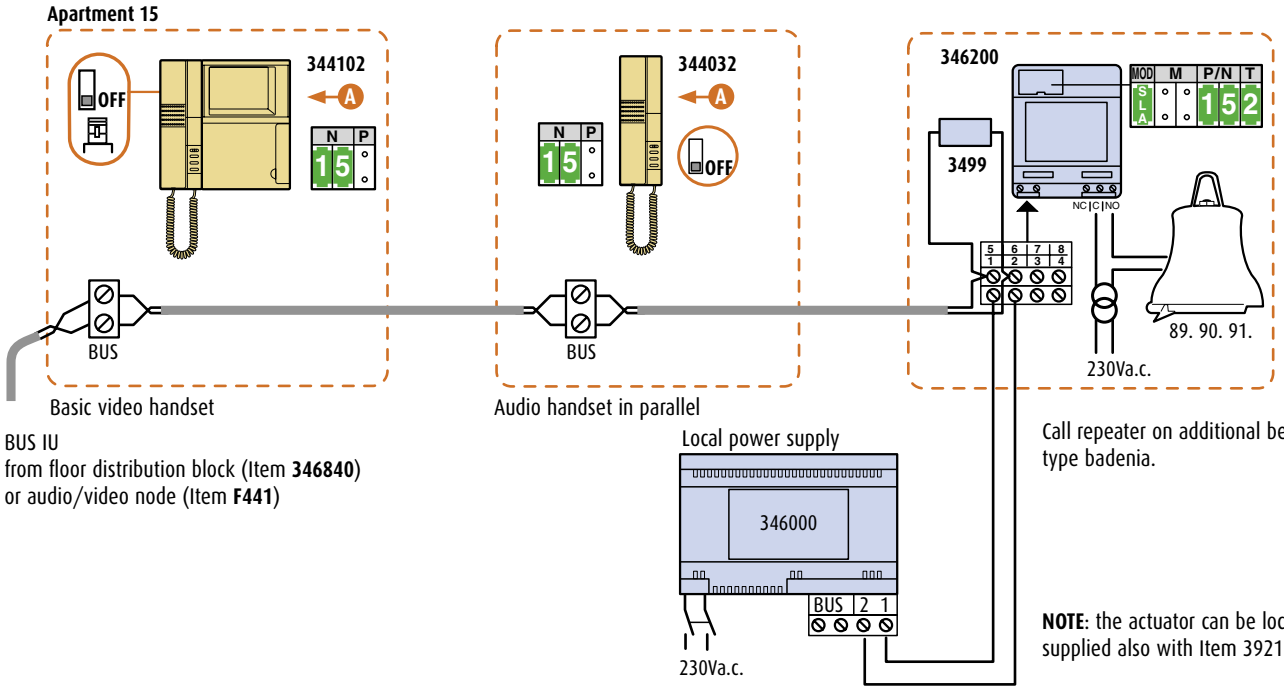


(A) - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

EXAMPLE - THREE VIDEO HANDSETS IN CONTEMPORARY SWITCHING ON



EXAMPLE - ONE HANDSET AND AN ADDITIONAL BELL TYPE BADENIA ADDED TO THE BASIC VIDEO HANDSET

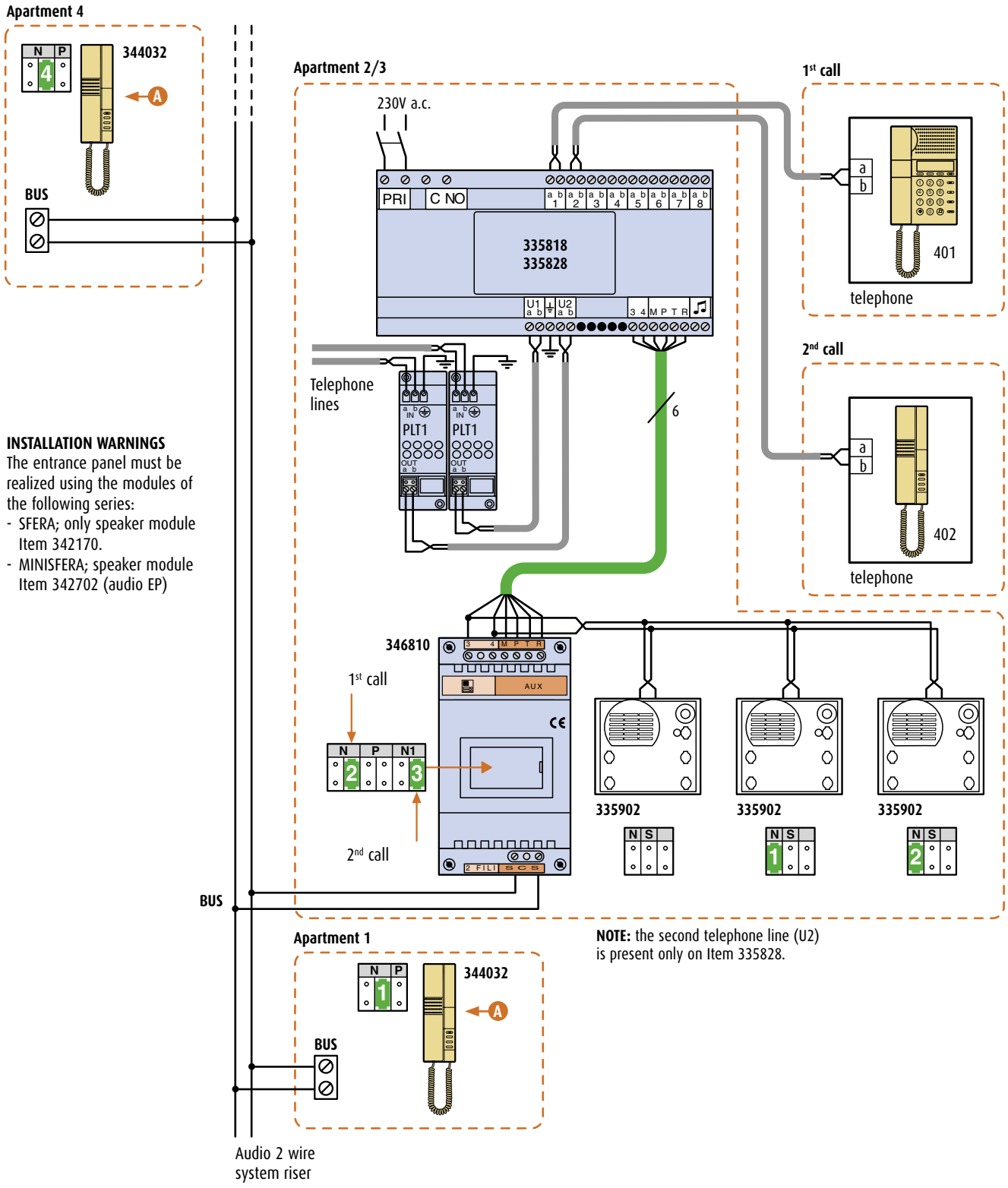


Handset versions
Multi-family systems

EXAMPLE - TELEPHONE SWITCHBOARD CONNECTED TO AUDIO SYSTEM

Connection of a telephone switchboard in an apartment of a multi-family audio system, in alternative to the handsets. Example with two handset riser calls and 3 dedicated calls (Item 335902).

A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.



INSTALLATION WARNINGS
The entrance panel must be realized using the modules of the following series:
- SFERA; only speaker module Item 342170.
- MINISFERA; speaker module Item 342702 (audio EP)

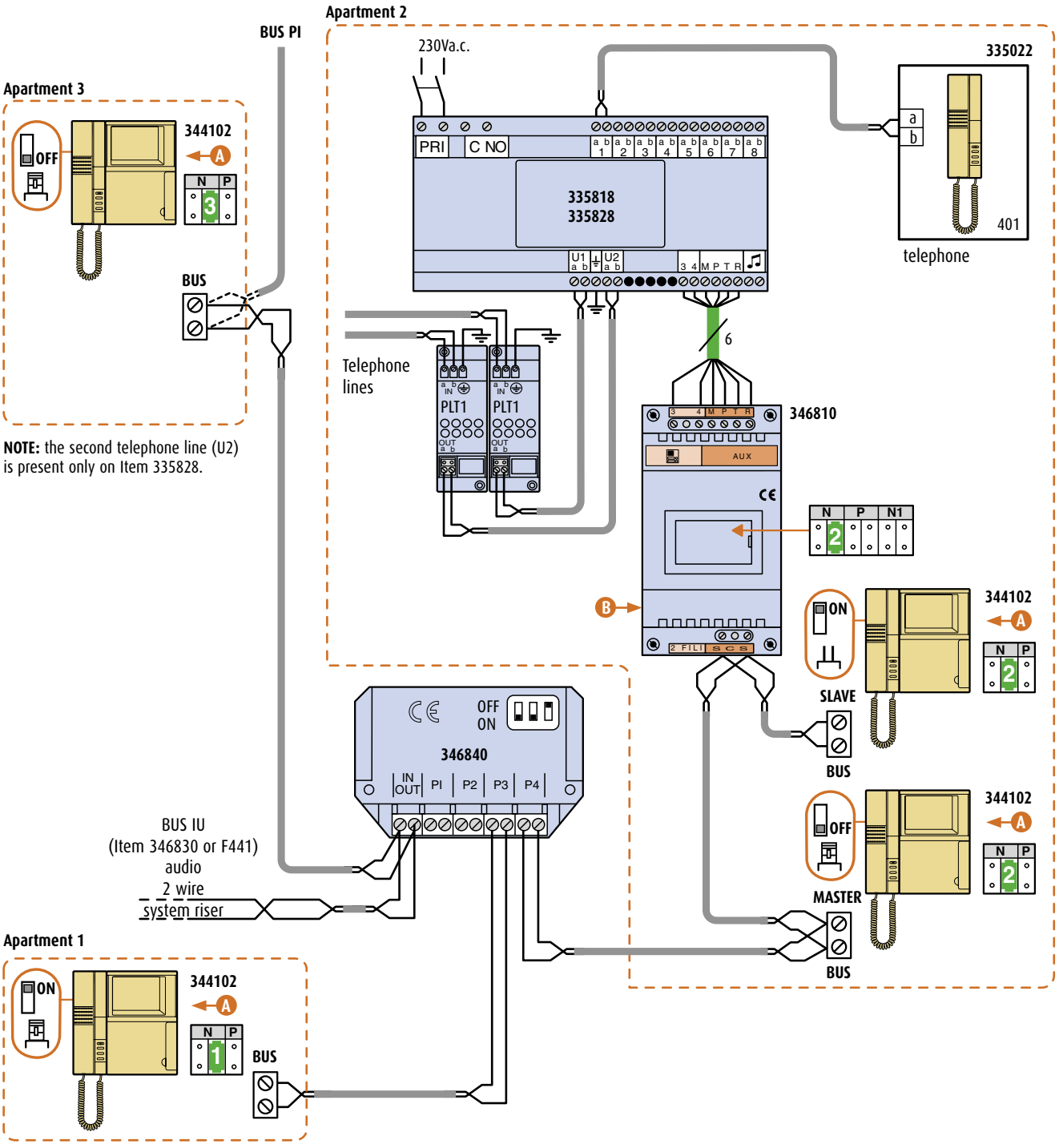
NOTE: the second telephone line (U2) is present only on Item 335828.

EXAMPLE - SWITCHBOARD CONNECTED TO VIDEO SYSTEM

Connection of a switchboard in an apartment of a multi-family audio system, in alternative to the handsets. Example with switchboard and two PIVOT video handsets with MASTER-SLAVE function.

A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

B - do not use the interface as the last device of the line or riser: Connecting the interface in the last line or riser apartment it is necessary to install a PIVOT or SWING handset connected in IN-OUT to the SCS terminals of the interface.

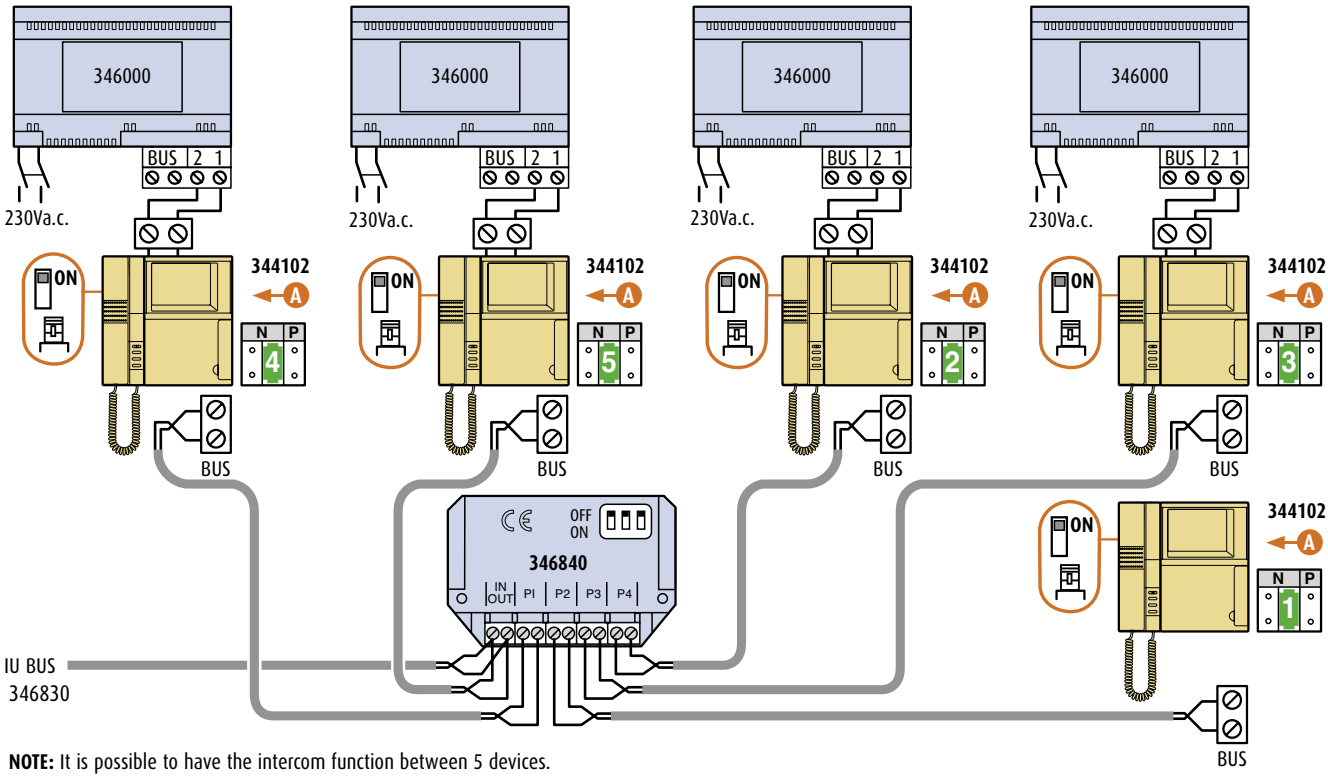


NOTE: the second telephone line (U2) is present only on Item 335828.

Handset versions
One-family systems

EXAMPLE - 5 VIDEO HANDSETS IN CONTEMPORARY SWITCHING ON

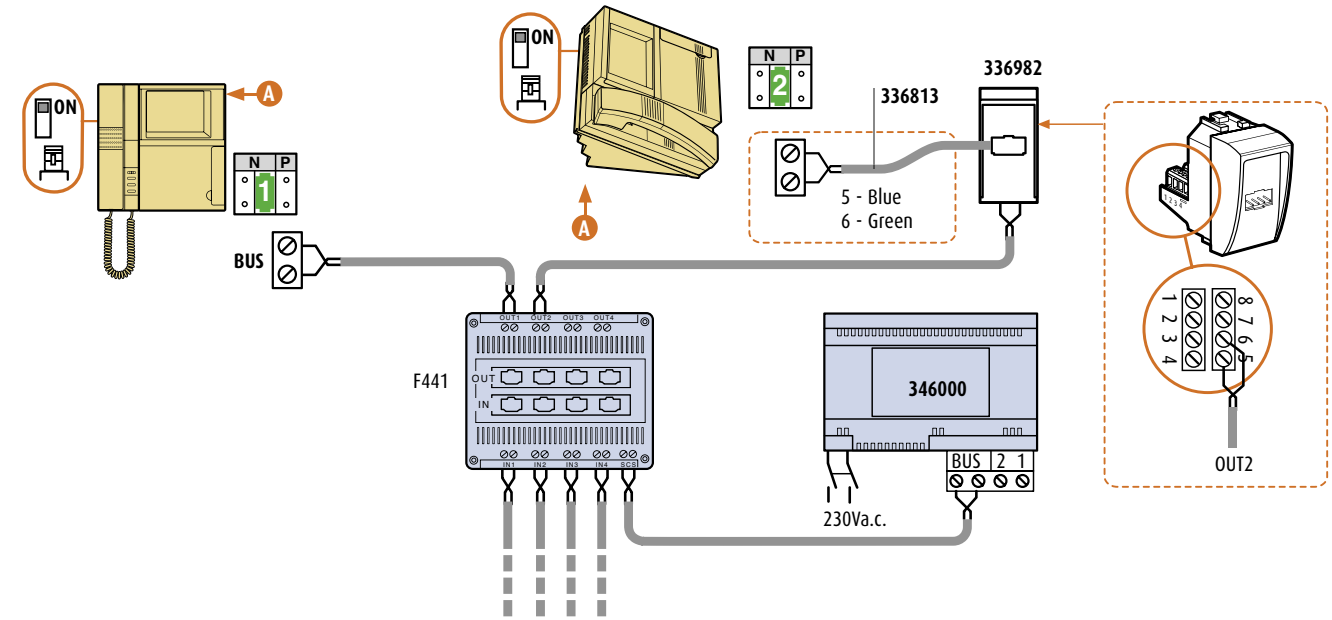
A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.



NOTE: It is possible to have the intercom function between 5 devices.

EXAMPLE - INSTALLATION TABLE-MOUNTING VIDEO HANDSET

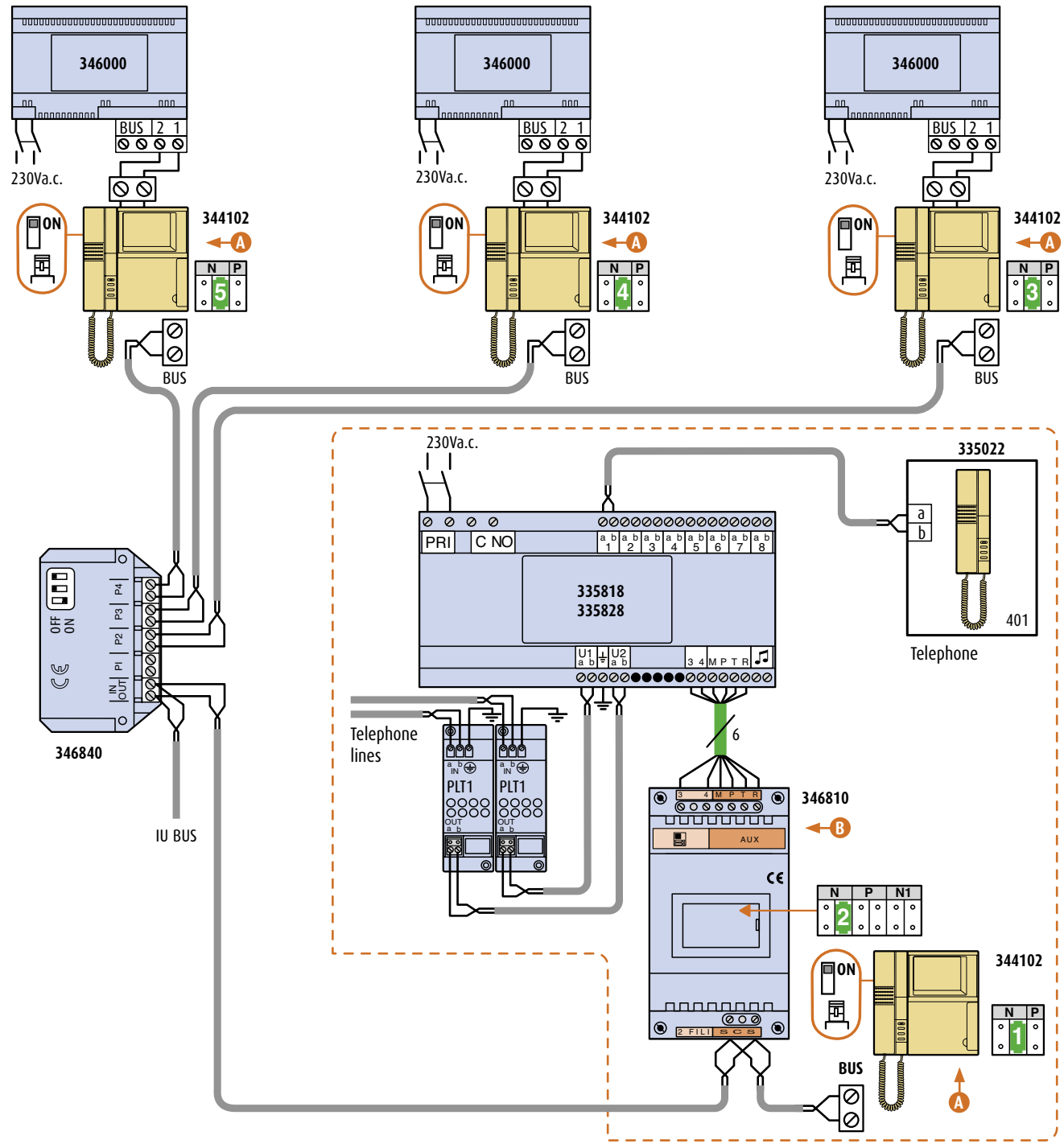
To install a table-mounting video handset use the audio/video node (Item F441) using one of its output to install it.



EXAMPLE - CONNECTION OF 4 HANDSETS IN CONTEMPORARY SWITCHING ON AND A SWITCHBOARD

A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

B - do not use the interface as the last device of the line or riser: connecting the interface in the last line or riser apartment it is necessary to install a PIVOT or SWING handset connected in IN-OUT to the SCS terminals of the interface.



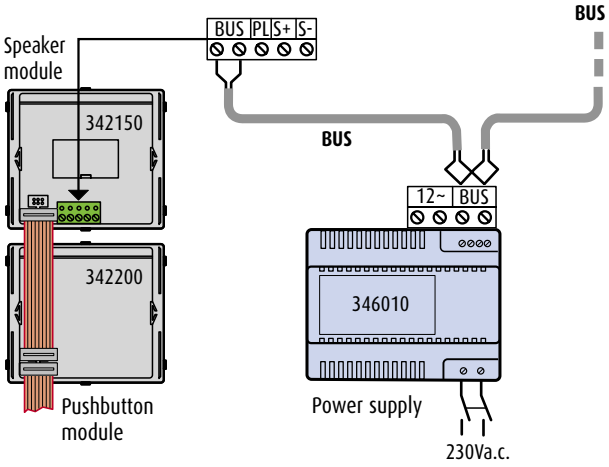
NOTE: It is possible to realize the same system without the contemporary switching on: do not connect the additional power supply to the handsets.

Entrance panel versions

The diagrams in the previous pages mention some examples of installable entrance panels. Hereinafter are mentioned all the types of entrance panels installable in audio or video systems.

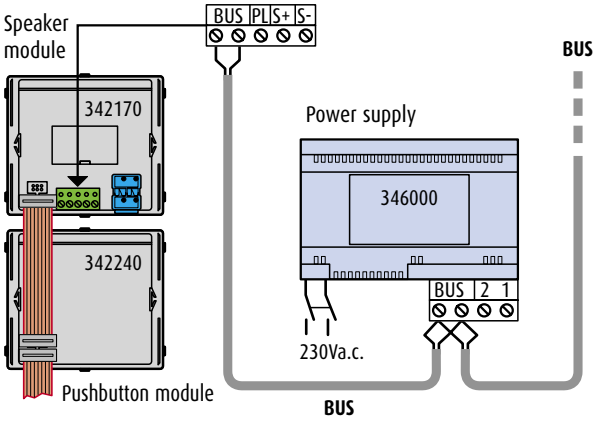
SFERA ENTRANCE PANELS

SFERA entrance panel to be installed on audio system with max. 26 handsets

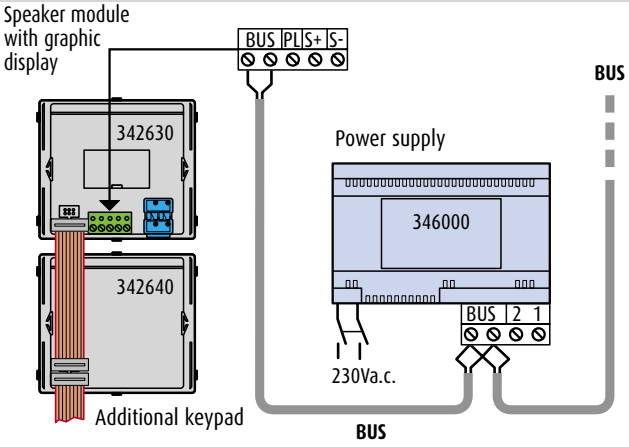


NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.

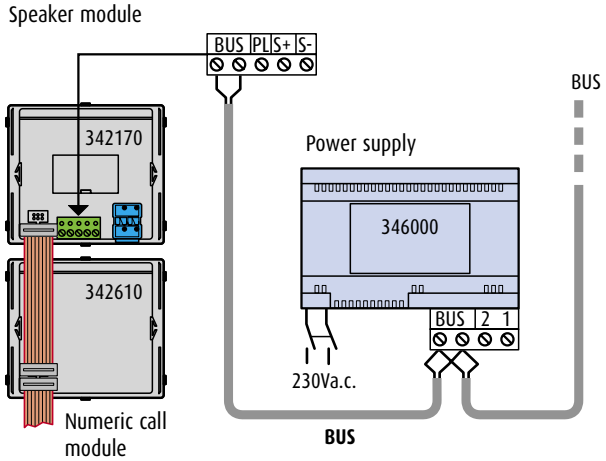
SFERA entrance panel to be installed on audio system with max. 100 handsets



NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.

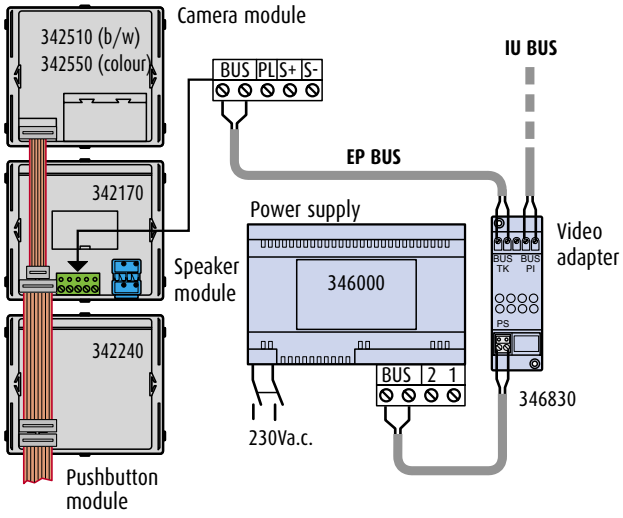


NOTE: using the display call module is not necessary to install other modules. Item 342630 must be programmed downloading by the appropriate interface Item 335919 the directory created with a PC and the SW TICALL (provided with it). The programming can be made also without a PC through an infrared remote control Item 392123.

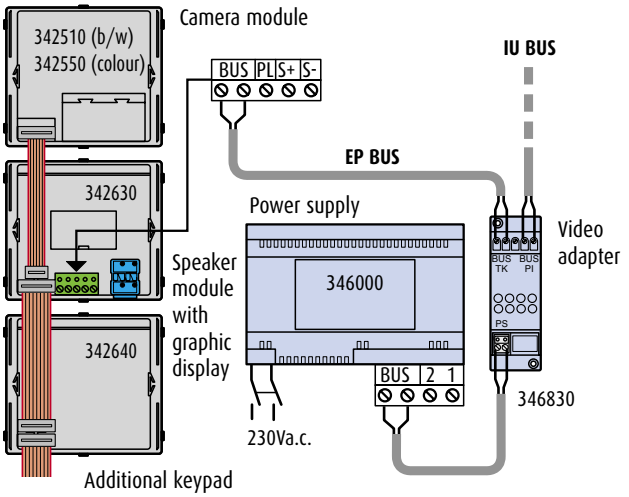


NOTE: other nameplate modules Item 342200 can be installed in respect to the installed standards of the SFERA entrance panels.

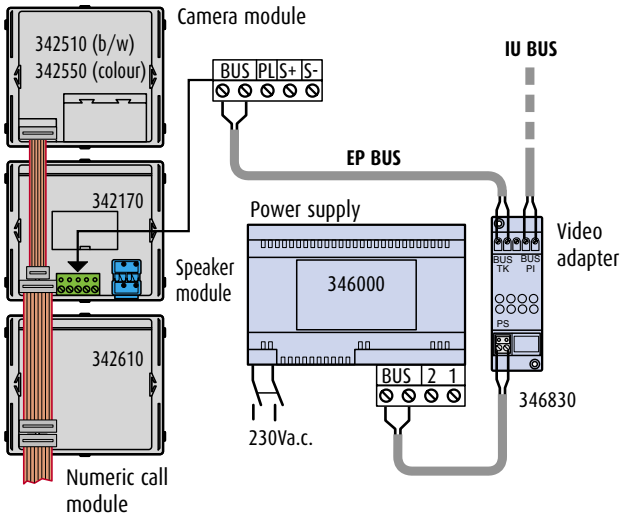
SFERA entrance panel to be installed on video system with max. 26 handsets



NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels..



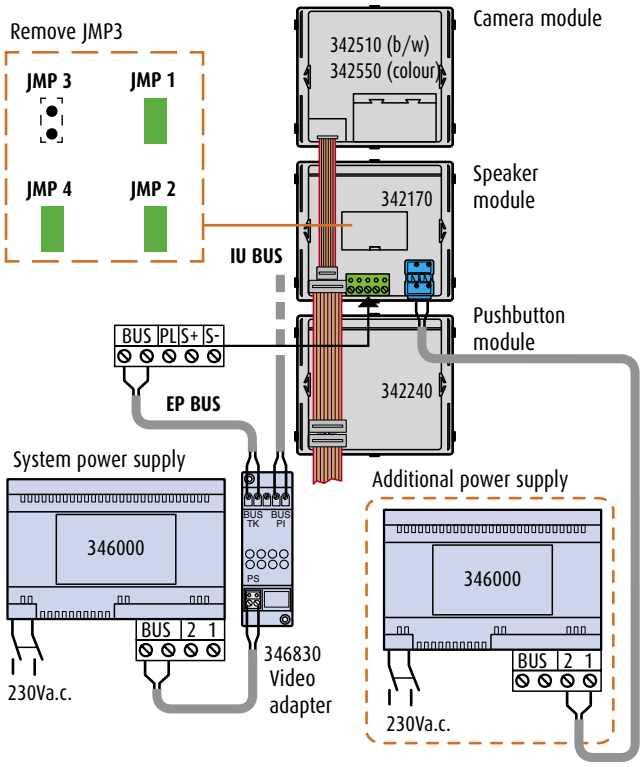
NOTE: using the display call module is not necessary to install other modules. Item 342630 must be programmed downloading by the appropriate interface Item 335919 the directory created with a PC and the SW TICALL (provided with it). The programming can be made also without a PC through an infrared remote control Item 392123.



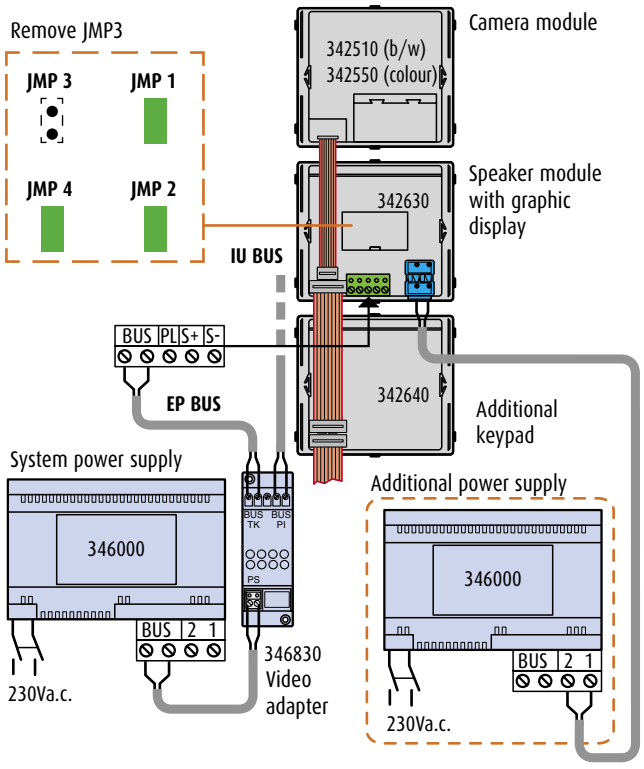
NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.

Entrance panel versions

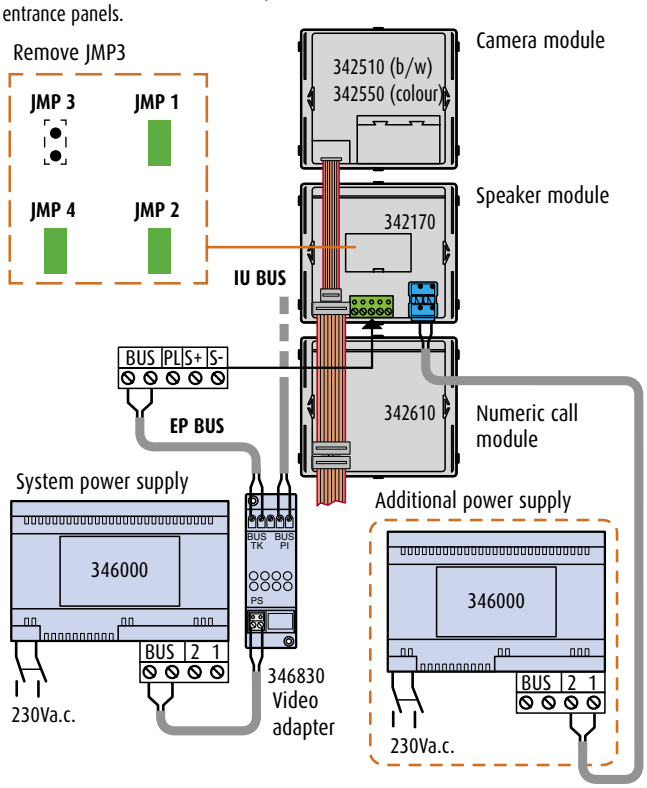
SFERA entrance panel to be installed on video system with max. 64 handsets



NOTE: in systems with more than 26 handsets install an additional power supply to be connected to speaker module of entrance panel. For connecting the additional power supply remove from the speaker module the JMP3 jumper. Other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.



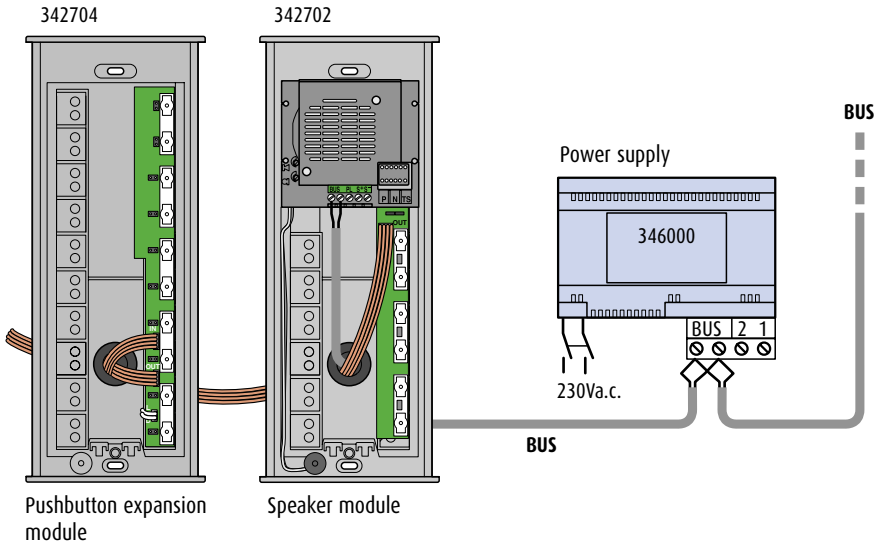
NOTE: in systems with more than 26 handsets install an additional power supply to be connected to speaker module of entrance panel. For connecting the additional power supply remove from the speaker module the JMP3 jumper. Using the display call module is not necessary to install other modules. Item 342630 must be programmed downloading by the appropriate interface Item 335919 the directory created with a PC and the SW TICALL (provided with it). The programming can be made also without a PC through an infrared remote control Item 392123.



NOTE: in systems with more than 26 handsets install an additional power supply to be connected to speaker module of entrance panel. For connecting the additional power supply remove from the speaker module the JMP3 jumper. Other nameplate module Item 342200 can be installed in respect to the installed standards of the SFERA entrance panels.

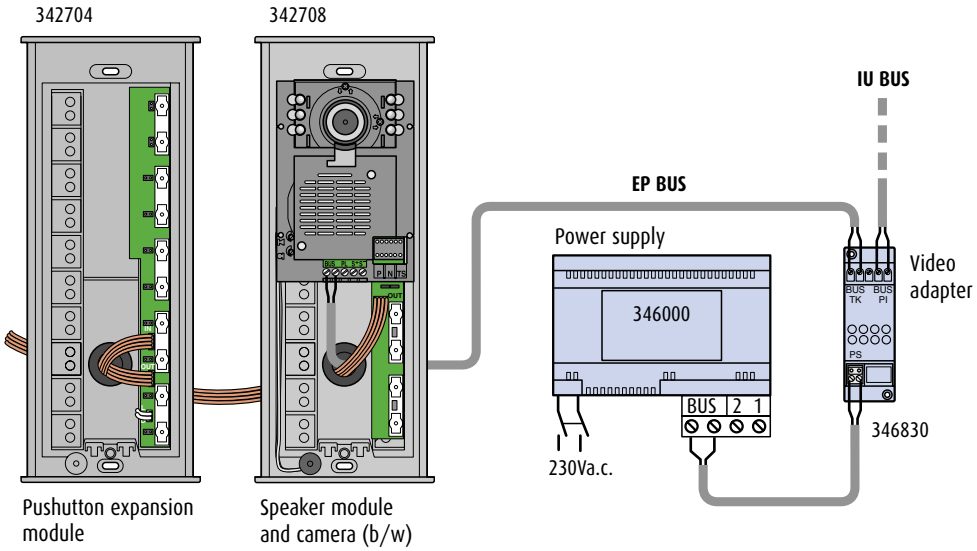
MINISFERA ENTRANCE PANEL

MINISFERA entrance panel to be installed on audio system with max. 100 handsets



NOTE: other pushbutton expansion module Item 342740 can be installed in respect to the installed standards of the MINISFERA entrance panels.

MINISFERA entrance panel to be installed on video system with max. 32 handsets



NOTE: other pushbutton expansion module Item 342740 can be installed in respect to the installed standards of the MINISFERA entrance panels.

Entrance panel versions

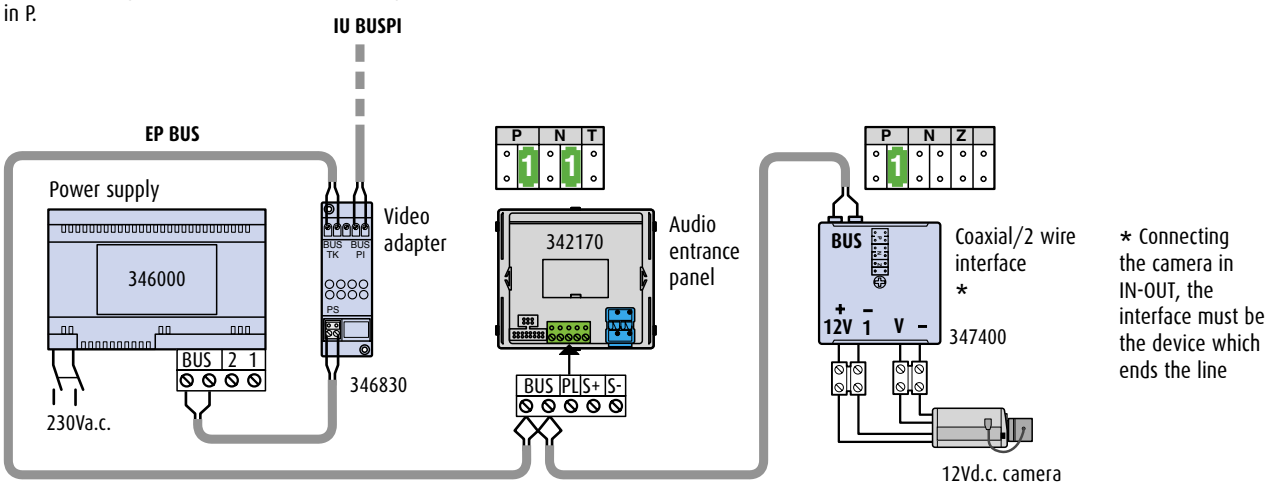
12V D.C. INTERFACE MODULE FOR CAMERA

In the diagrams alternative to SFERA or MINISFERA video entrance panels, we can use the coaxal/2 wire interface for cameras at 12V d.c. with relating camera. The camera can be inserted in the system associated to an audio speaker module (separate camera) or as independent camera.

In the system, the coaxal/2 wire interface (Item 347400) is considered as a video entrance panel (both if installed as separate camera and independent camera).

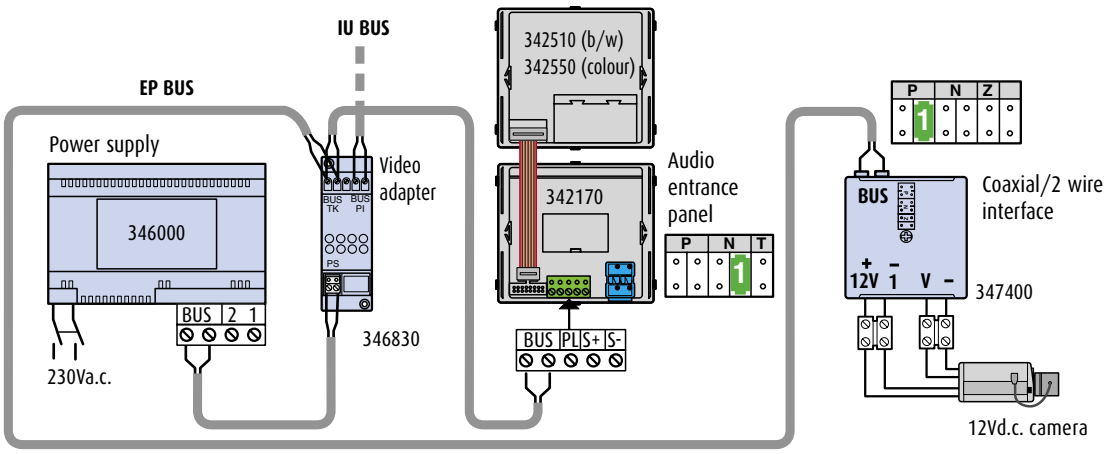
Separate camera connected in IN-OUT on the speaker module Item 342170

The interface Item 347400 (used for the connection of the separate camera) and the relating speaker module must be configured with the same value in P.



NOTE: the entrance panel so created (speaker module Item 342170 and separate camera) must be considered as a video entrance panel both for the number of risers connectable and for the handsets number.

Separate camera

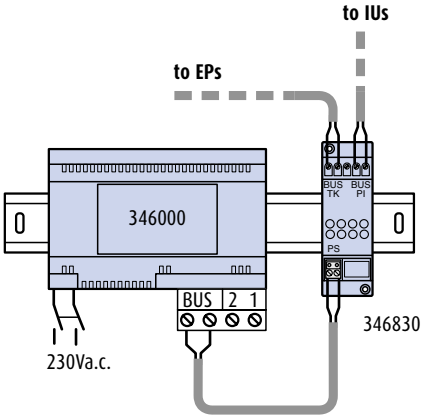


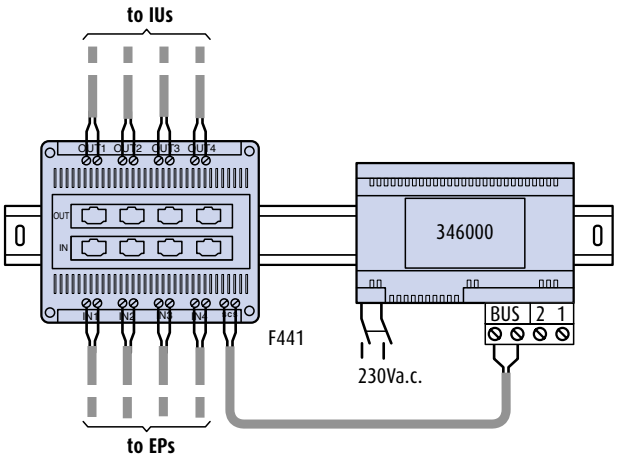
NOTE: the camera must be considered as a video entrance panel both for the number of connectable risers and for the number of handsets.

Connection versions for devices on DIN rail

AUDIO/VIDEO NODE

In the diagrams and in the entrance panel versions the video adapter Item 346830 is used. In alternative, it is possible to install the Item F441 audio/video node. Using the audio/video node is also possible to connect a maximum of 4 video entrance panels and 4 2 wire video risers. The general system limits do not change: on the contrary, on each riser it is possible to install to a maximum of 26 IU and 6 distribution blocks.



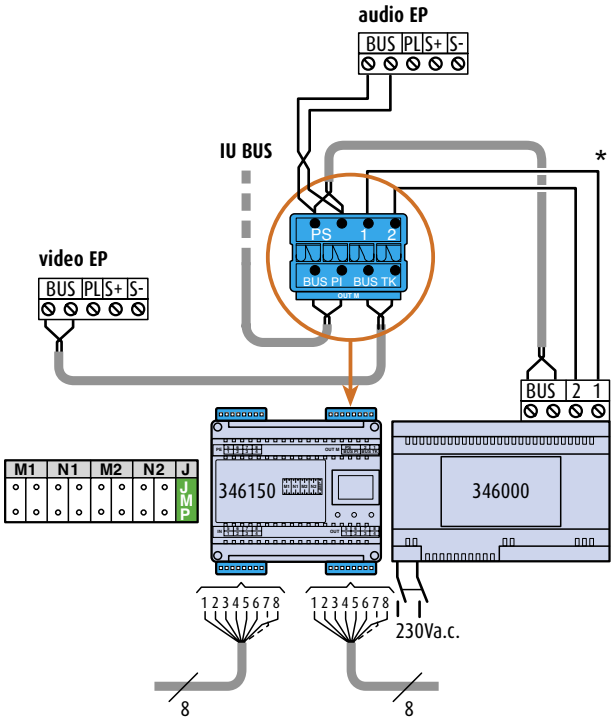


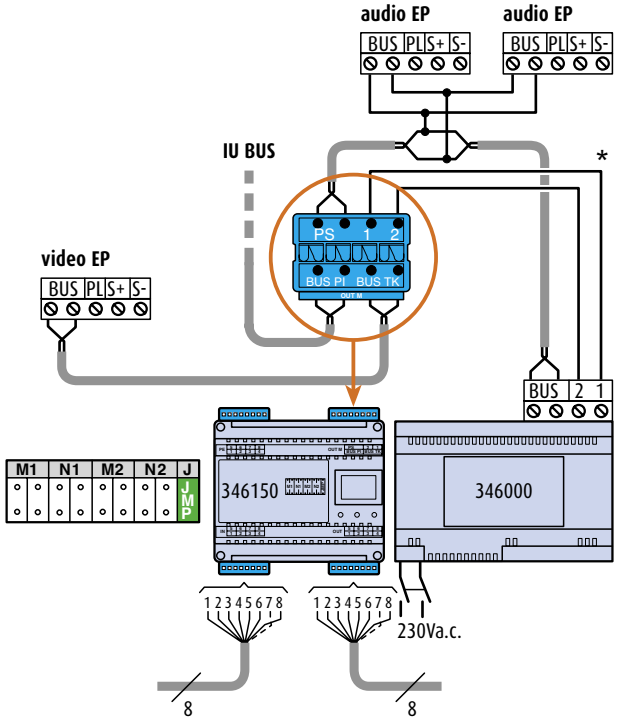
8/2 INTERFACE

The schemes highlight only a 2 wire riser- entrance panel: with these variants it is possible to install a video EP and a maximum of 2 audio EP.

WARNING

* In connecting the 1 and 2 wires we must compulsorily respect the numeric correspondence in order to avoid any wrong operations.





For system limits, please make reference to the General rules for installation.

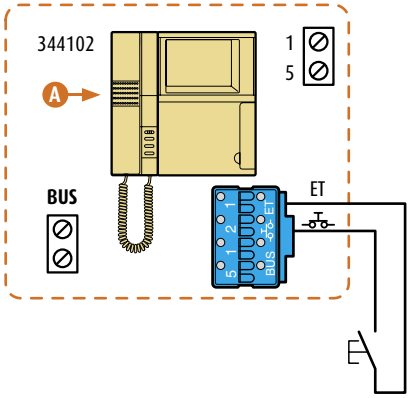
Auxiliary services
Call to the floor

CALL TO THE FLOOR

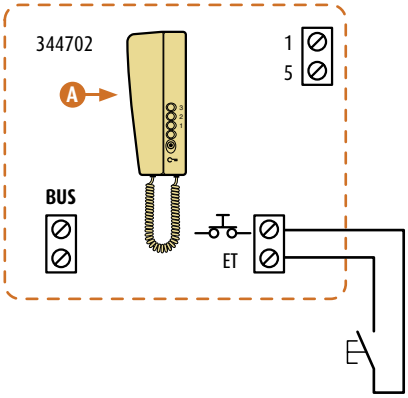
A - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" - Appearance and functions section.

With the PIVOT and SWING video handsets and audio handsets and the SPRINT audio handset Item 344212 which can be fitted with accessory, it is possible to realize the "call to the floor" function.

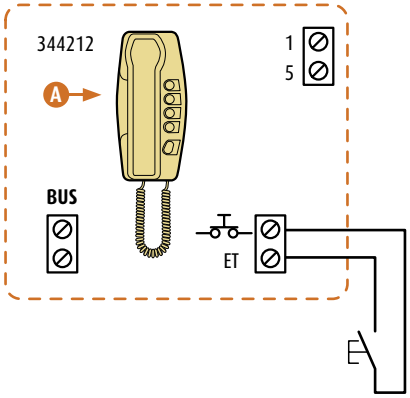
In other words, connecting a pushbutton between the terminals (ET/), the internal bell of the devices is used to realize the call from the main door of the apartment.



EXAMPLE - Connection of PIVOT video handset



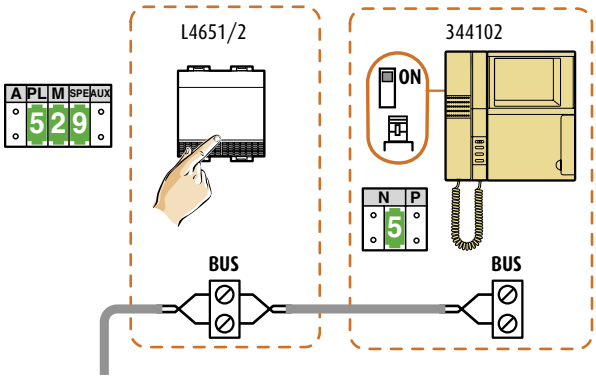
EXAMPLE - Connection of SWING audio handset



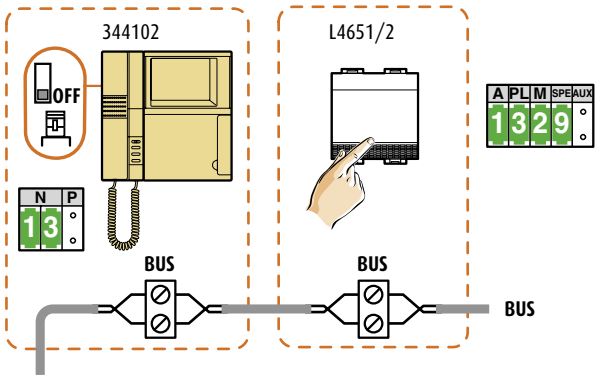
EXAMPLE - Connection of SPRINT audio handset which can be fitted

CALL TO THE FLOOR ON BUS

Using the special control Item L4651/2 it is possible to realize the call to the floor on BUS. Introducing the special control on the IU BUS (in the video systems the special control must be connected in input-output on the IU BUS) and configuring it for the call to the floor it is possible to realize the function without further wiring between the entry and the handset. In installations with handset in parallel, all the handsets of the apartment ring at the arrival of the call to the floor.



EXAMPLE - Call to the floor on BUS - connection before the handset



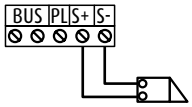
EXAMPLE - Call to the floor on BUS - connection after the handset. The special control Item L4651/2 CANNOT be connected as the last of the apartment or riser line.

NOTE: the special control Item L4651/2 must be opportunely configured, for further information see the "Configuration" section,
Each special control introduced takes a handset to the system (for further information see the "General rules for installation" section).

Auxiliary services
Door lock control

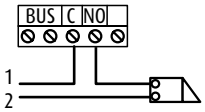
DOOR LOCK CONTROL

Item 342170



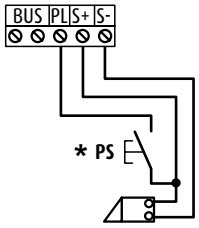
Wiring for door lock control to special pushbutton of handsets

Item 342150



Wiring for door lock control to special pushbutton of handsets

Item 342170

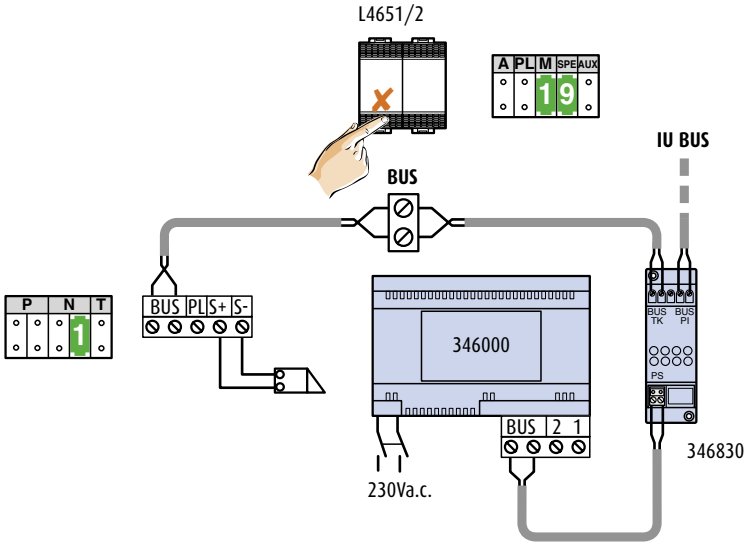


Wiring for door lock control to special pushbutton of handsets and to PS pushbutton

*** NOTE:** the door lock control is not timed from PS pushbutton

DOOR LOCK CONTROL ON BUS

Installation on video system



Using the special control the door lock control is timed

The X pushbutton opened the door lock of the entrance panel configurated with P = 0 (the special control configured with A=0 and PL = 0 act on the entrance panel configured with P=0). The special control must be opportunely configured, for further details see the "Configuration" section.

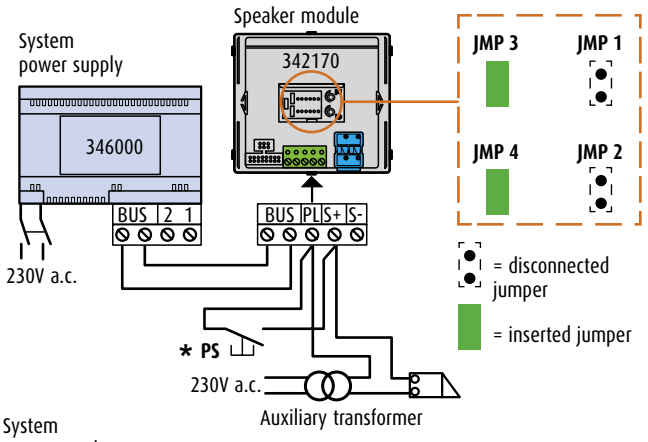
NOTE: in audio systems, the wiring of the special control L4651/0 can occur in any point of the system.

Auxiliary services
Door lock control

DOOR LOCK CONTROL WITH AUXILIARY TRANSFORMER

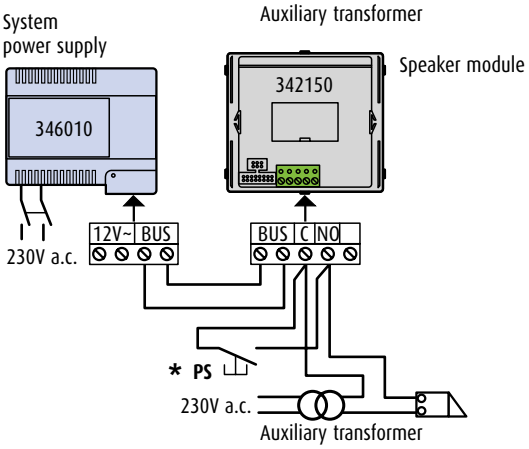
With speaker module 342170

Predispose the jumpers as indicated here.
The PL and S+ contacts can be crossed by a maximum power of 24V a.c./d.c.



With speaker module 342150

The 12~ wires must not be wired through the power supply (Item 346010) and the speaker module (Item 342150). The C and NO contacts can be crossed by a maximum power of 8A (res) to 24V a.c./d.c.



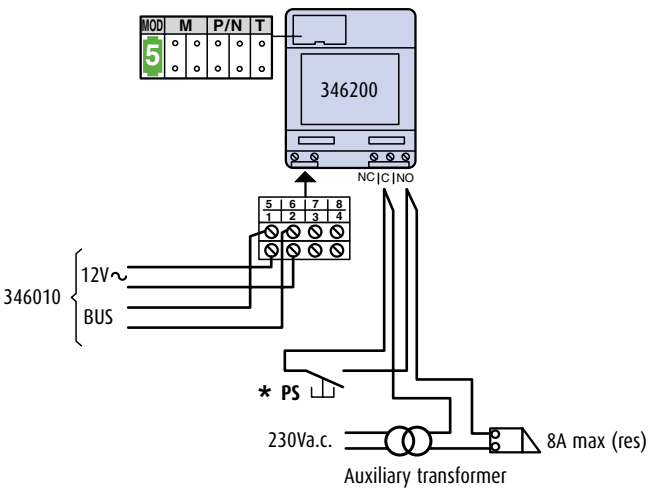
* **NOTE:** the door lock control is not timed from PS pushbutton

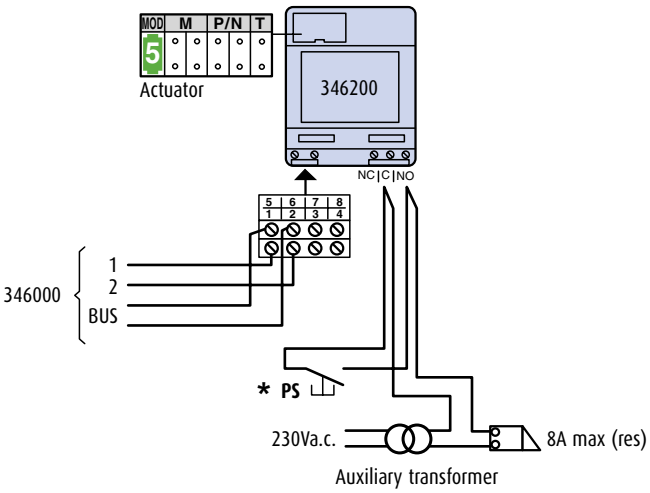
DOOR LOCK CONTROL WITH ACTUATOR ITEM 346200

If you wish to open a door lock together with the one connected to the speaker module or for more security one does not want to control the door lock connected to the speaker module, the actuator Item 346200 and an auxiliary transformer can be used.

The actuator must be configured with MOD=5 and it is controlled by the pushbutton of the handsets (see Chapter "Configuration") The C and NO contacts can be crossed by a maximum power of 8A (res).

* **NOTE:** the door lock control is not timed from PS pushbutton



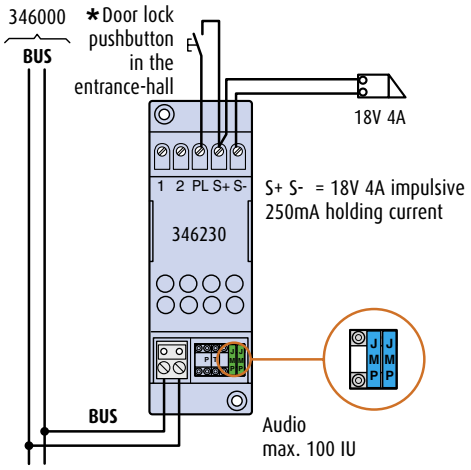


CONTROL WITH DOOR LOCK ACTUATOR ITEM 346230

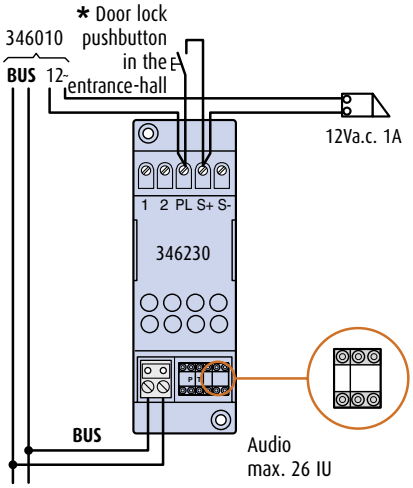
The use of Item 346230 is indicated in the installations where you do not want to connect the electric door lock directly to the speaker module, but you want to realize an inaccessible wiring from the handset, connecting the actuator that controls the lock in a dark area from the ill-intentioned people. It is obligatory to use Item 346230 in systems where the universal porter Item 346991 is used.

In installations with max 100 IU, with the use of the power supply Item 346000, the wiring is entirely of 2 wires including the electric door lock power supply.
This diagram can be used for extra 2-wire door lock commands through Item 346812.
The actuator is controlled by the door lock pushbutton of the handsets.
The device must be configured (see "Configuration" section).

NOTE: in video systems the wiring must be executed in IN-OUT on TK BUS.

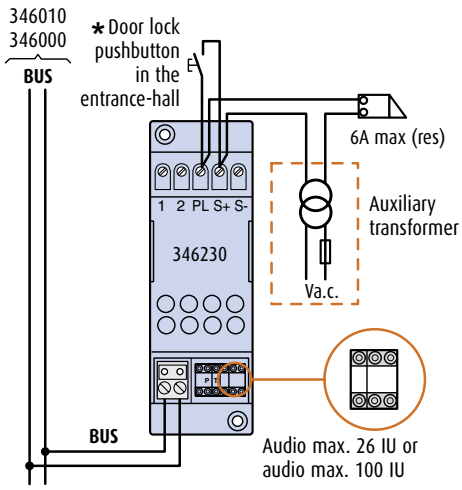


Utilizing, instead, this actuator in systems of max. 26 IU, the door lock is supplied by 12~ terminals of the power supply Item 346010.
The actuator is controlled by the door lock pushbutton of the handsets. The device must be configured (see "Configuration" section).



In case of critical electric door lock, it is possible to use an auxiliary transformer to supply the electric door lock. In this case, the actuator is connected to the 2 wires system in whichever point of the BUS, even in systems with power supply Item 346010 (the 12V~ conductors must be used).
The PL and S+ contacts can be crossed by one maximum power of 6A (res).

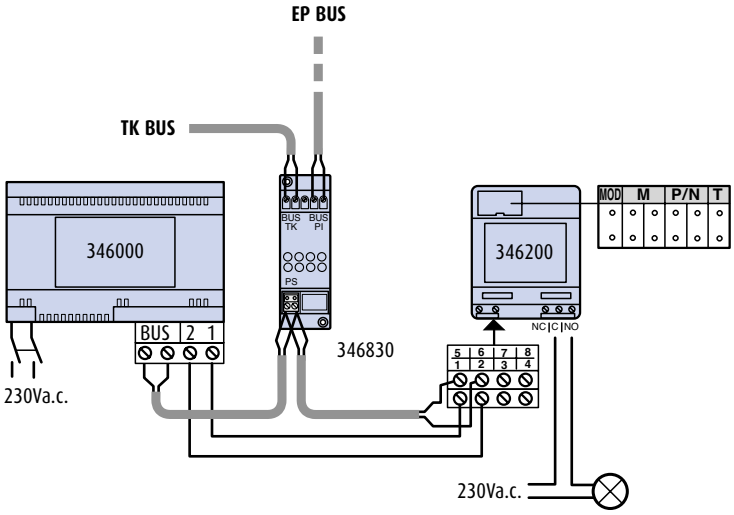
NOTE: in video systems the wiring must be executed in IN-OUT on TK BUS.



Auxiliary services
Staircase lights control

STAIRCASE LIGHTS CONTROL

Installation on video systems

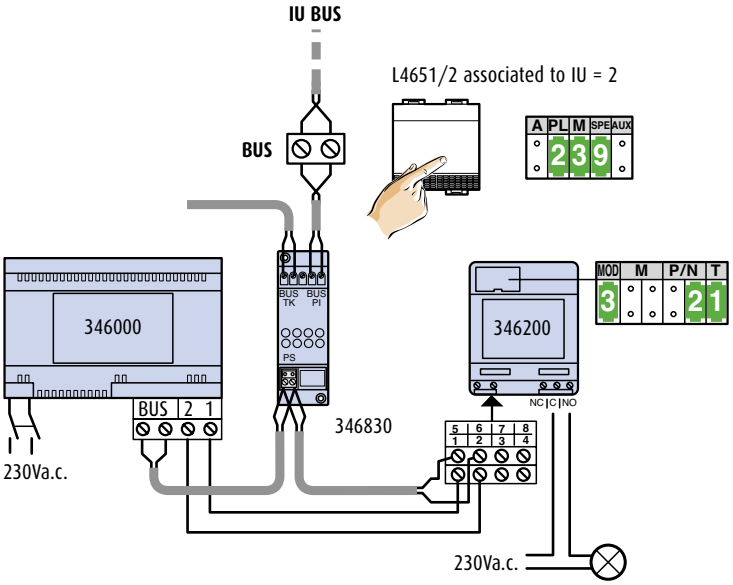


Wiring for door lock control to special pushbutton of handsets and to staircase lights pushbutton of handsets.

STAIRCASE LIGHTS CONTROL ON BUS

Installation on video systems

Using the special control the switching of light is timed.



The special control acts on the actuator configured to switch on the light. For further information see the "configuration" section, both for the special control Item L4651/2 and for the actuator Item 346200.

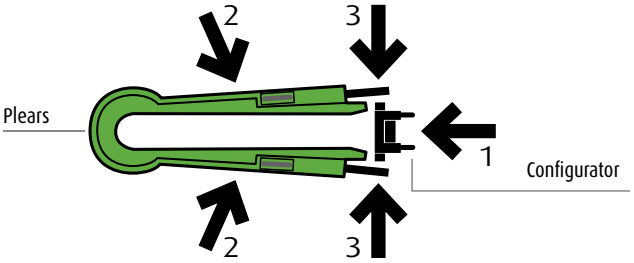
NOTE: in audio systems, the wiring of the special control L4651/0 can occur in any point of the system.

CONFIGURATION

WARNINGS

To configure means to programme the system; this is done by assigning a recognition and operation mode number to the devices. This is done by inserting configurators (numbered from 0 to 9) in the sockets, using pliers supplied with the power supply (Item 346000 and Item 346010) or contained in the configurators case (Item 346900).

In the 2-wire systems the following Items must be configured:
- The SFERA and MINISFERA speaker modules
- The universal speaker units
- The PIVOT, SWING and SPRINT handsets
- The 4 keys small blocks for PIVOT
- The actuators
- The 8/2 wire interface
- The coaxial/2 wire interface
- The 2 wire/PABX interface
- Special control



SFERA SPEAKER MODULE

SFERA speaker module Item 342150 and 342170

P – entrance panel number
The configurator in seat P of the speaker module assigns to it 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 handsets or video handsets.
In the local entrance panels it is made with pushbutton modules, 1 must be inserted in N of the speaker module. The number of the first riser intercom must be inserted in the local entrance panels in N. When the entrance panel is made with speaker module and digital call module (Item 342630 or Item 342610) no configurator must be inserted in N.

T - door lock relay timing

configurator number							
0= No configurator	1	2	3	4	5	6	7
4 sec.	1 sec.	2 sec.	3 sec.	as push-button	6 sec.	8 sec.	10 sec.

S – type of call signal
The configuration of S determines the call tone of the SPRINT handsets. One can thus differentiate the calls from different entrance panels.

Table for call signal SPRINT handsets

Configurator	0	1	2	3
Type of bell	2-tone	2-tone	2-tone	One-tone
	1200Hz	1200Hz	1200Hz	1200Hz
	600Hz	0 Hz	2400Hz	

For the SWING and PIVOT IU, the S configurator associates the Entrance panel to the bell programmed in the same apartment. It's possible to chose between 16 different bells. In one-family systems S=9 configure the general call.

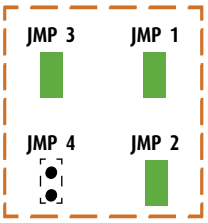
J1 and J2 - critical door lock power supply
Remove the JMP1 and JMP2 Jumpers to connect to the sound module a door lock power supplied independently.

J3 - EP local power supply
Remove the JMP3 Jumpers when the speaker module is power supplied by a dedicated power supplier.

J4 - confirmation of a call on the EP (only on Item 342170)
Remove the JMP4 Jumper to eliminate the call confirmation tone on the entrance panel.

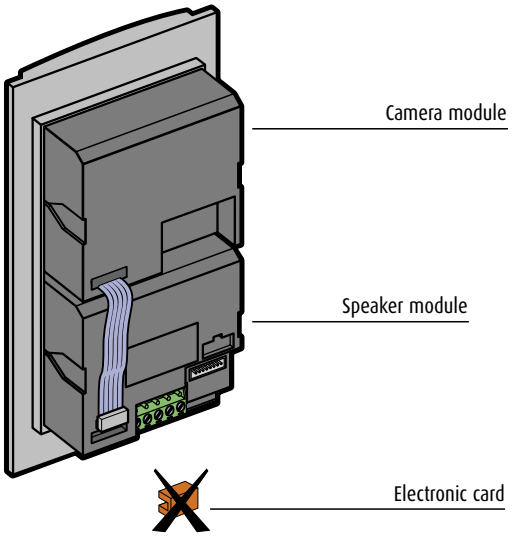
= disconnected jumper

= inserted jumper



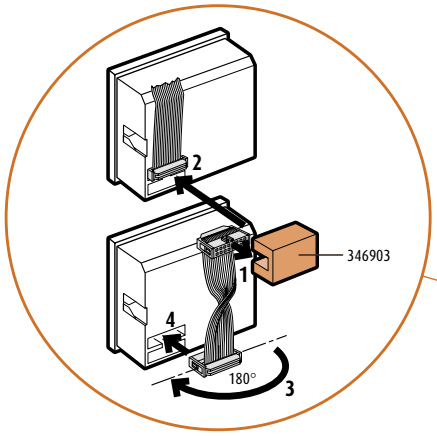
CONFIGURATION

An electronic card with a connector comes with the speaker module.
The card must be inserted in the last pushbutton module of the panel, after having connected between them the modules through the multicables with connectors.
It must not be used if the pushbutton panel is made up of only the 1 or 2 pushbutton speaker module in addition to the camera module in case installed.

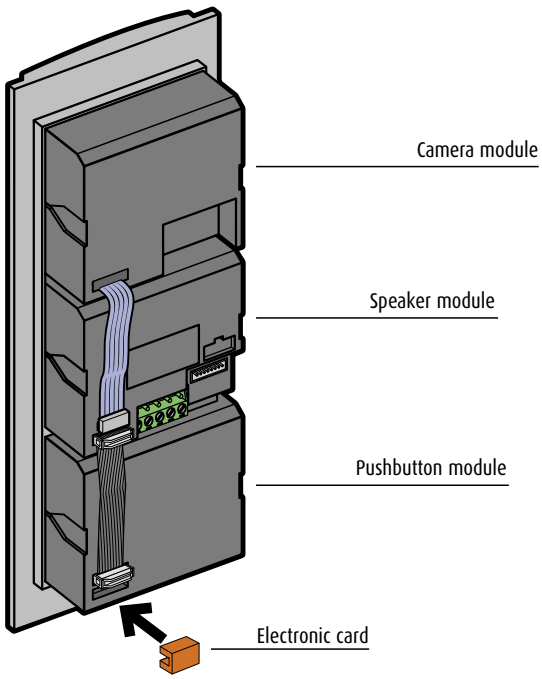


Example - Entrance panel made up by a camera module and a speaker module, does not need of any electronic card.

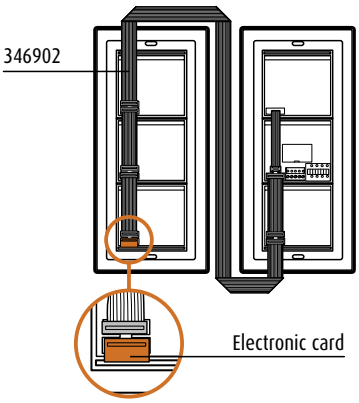
- For the handsets with less than 26 calls connect the modules placed vertically on several columns with Item 346902 and insert the electronic card in the last pushbuttons module.
- For the entrance panels with more than 26 calls connect the modules placed vertically on several columns with Item 346902, insert after the sixth pushbuttons module (i.e. after 26 calls) Item 346903 and invert the connecting flat provided, insert the electronic card in the last pushbutton module.



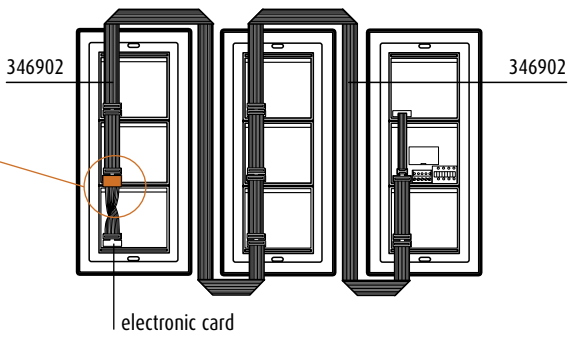
Connection Item 346903 and flat inversion.



Example - speaker module made up by a camera module, a speaker module and 4 pushbuttons module; insert the card elettronica.



Example - Pushbutton panel connection with less than 26 calls.



Example - Pushbutton panel connection with more than 26 calls.

DIGITAL CALL SPEAKER MODULE WITH GRAPHIC DISPLAY

Digital call speaker module with graphic display Item 342630

P – entrance panel number
The configurator in seat P of the speaker module assigns to it 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.

T - door lock relay timing

configurator number							
0= No configurator	1	2	3	4	5	6	7
4 sec.	1 sec.	2 sec.	3 sec.	as push-button	6 sec.	8 sec.	10 sec.

S – type of call signal
The configuration of S determines the call tone of the SPRINT handsets. One can thus differentiate the calls from different entrance panels.

Table for call signal SPRINT handsets

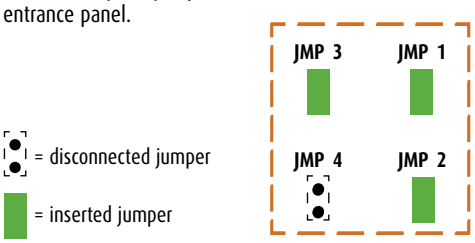
Configurator	0	1	2	3
Type of bell	2-tone	2-tone	2-tone	One-tone
	1200Hz	1200Hz	1200Hz	1200Hz
	600Hz	0 Hz	2400Hz	

For the SWING and PIVOT handsets, the S configurator associates the entrance panel to the bell programmed in the same apartment. It's possible to chose between 16 different bells. In one-family systems S=9 configure the general call.

J1 and J2 - critical door lock power supply
Remove the JMP1 and JMP2 Jumpers to connect to the speaker module a door lock power supplied independently.

J3 - EP local power supply
Remove the JMP3 Jumpers when the speaker module is power supplied by a dedicated power supplier.

J4 - confirmation of a call on the EP (only on Item 342170)
Remove the JMP4 Jumper to eliminate the call confirmation tone on the entrance panel.



MINISFERA SPEAKER MODULE

Audio speaker module
Item 342702

Speaker module with camera
Item 342708

P – entrance panel number
The configurator in seat P of the speaker module assigns to it a recognition number inside the system.
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 handsets or video handsets.
In the local entrance panels it is made with pushbutton modules, 1 must be inserted in N of the speaker module. The number of the first riser intercom must be inserted in the secondary entrance panels in N.

T - door lock relay timing

configurator number							
0= No configurator	1	2	3	4	5	6	7
4 sec.	1 sec.	2 sec.	3 sec.	as push-button	6 sec.	8 sec.	10 sec.

S – type of call signal
The configuration of S determines the call tone of the SPRINT handsets. One can thus differentiate the calls from different entrance panels.

Table for call signal SPRINT handsets

Configurator	0	1	2	3
Type of bell	2-tone	2-tone	2-tone	One-tone
	1200Hz	1200Hz	1200Hz	1200Hz
	600Hz	0 Hz	2400Hz	

For the SWING and PIVOT handsets, the S configurator associates the entrance panel to the bell programmed in the same apartment. It's possible to chose between 16 different bells. In one-family systems S=9 configure the general call.

CONFIGURATION

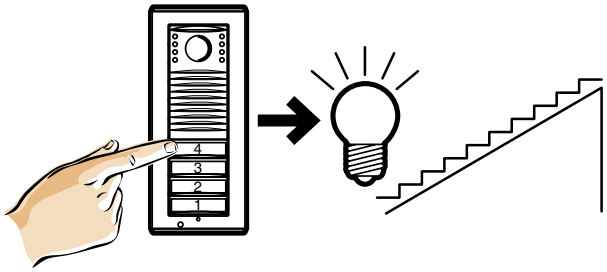
Inside the audio MINISFERA speaker module and MINISFERA with camera there are some JUMPERS which allow to make the following functions:

- **JUMPER - call confirmation on EP**

To eliminate the call confirmation tone on the entrance panel remove the JUMPER.

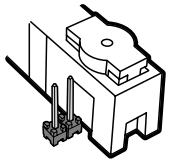
- **JUMPER - staircase light switching on with the call pushbutton**

To switch on the staircase light from on the entrance panel using the last call key remove the JUMPER.

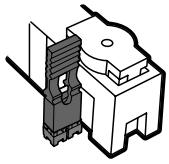


Example - staircase light switching ON from the last pushbutton of a video entrance panel with 4 pushbuttons (the entrance panel has 3 calls and a staircase light switcher).

JUMPER - exclude the call pushbutton
Insert the jumper to exclude the call pushbutton

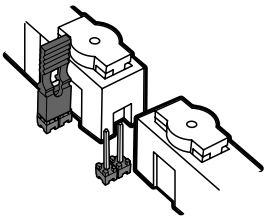


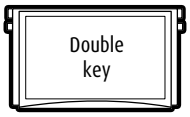
active call pushbutton



non active call pushbutton

NOTE: enable the pushbuttons according to the caps, single or double key inserted.

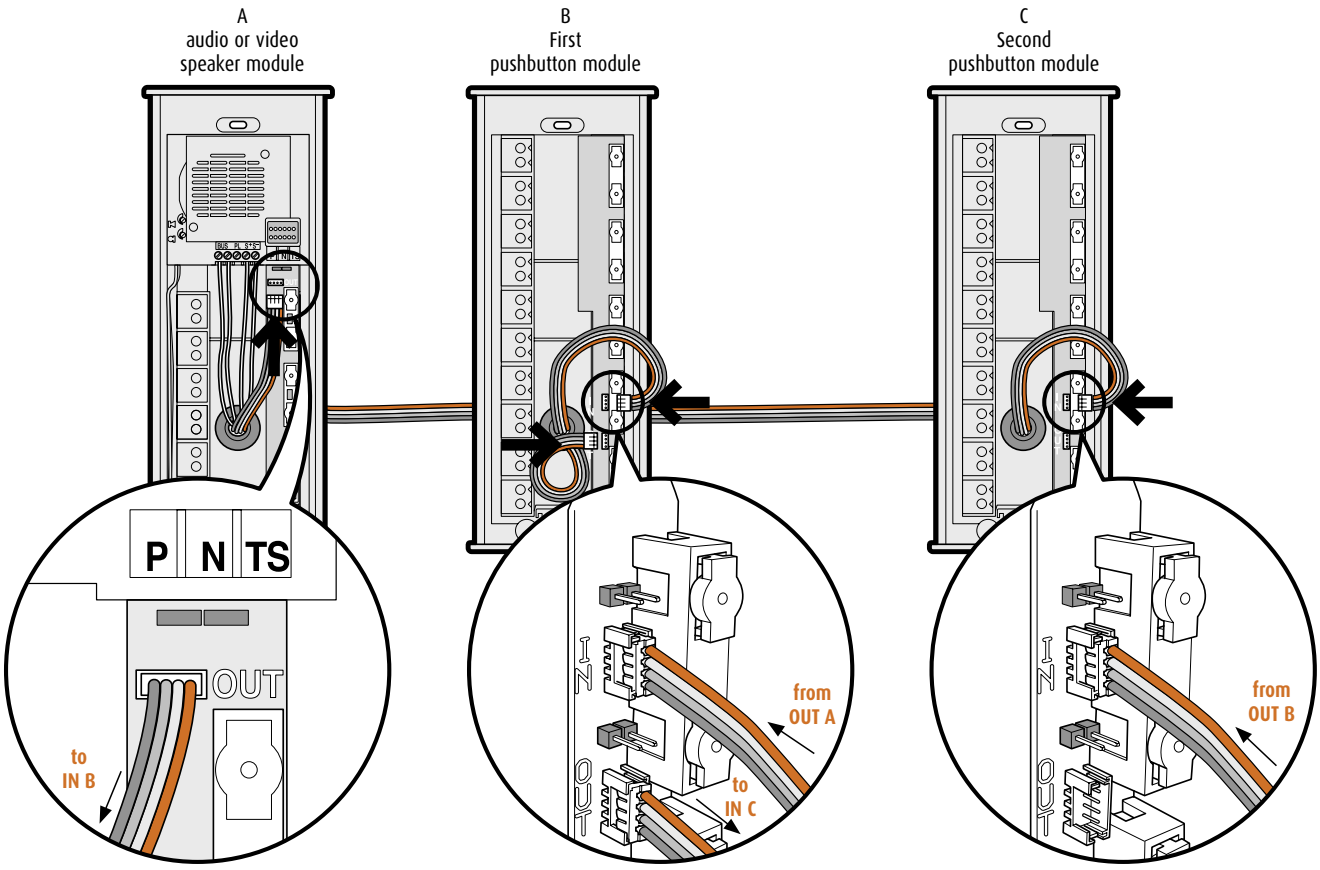




Example - To use the double key, enable the upper call.

To connect the speaker module (audio or video) to the 10 keys module use the supplied cable. This cable must be used to connect other keys module between them.

Connect the cable to OUT of the speaker module and to IN of the first pushbutton module, connect the 2nd cable to OUT of the first pushbutton module and to IN of the second pushbutton module and so on



Example - Connection of 2 expansion modules Item 342704 and of an audio or video MINISFERA speaker module.

UNIVERSAL SPEAKER UNIT

Universal speaker unit Item 346991 only for audio system

N – call number
Assigns the correspondence between the entrance panel pushbuttons and the intercoms. In the communal entrance panels it is made with pushbutton modules, 1 must be inserted in N of the speaker module. The number of the first riser intercom must be inserted in the secondary entrance panels in N.
P – entrance panel number
The configurator in seat P of the speaker module assigns to it 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.

S – type of call signal
The configuration of S determines the call tone of the handset. One can thus differentiate the calls from different entrance panels.

Table for call signal SPRINT handsets

Configurator	0	1	2	3
Type of bell	2-tone	2-tone	2-tone	One-tone
	1200Hz	1200Hz	1200Hz	1200Hz
	600Hz	0 Hz	2400Hz	

For the SWING and PIVOT handsets, the S configurator associates the entrance panel to the bell programmed in the same apartment. It's possible to chose between 16 different bells. In one-family systems S=9 configure the general call.

call tone volume control

Configurator	8	3	0
Type of bell confirms call	max	min	*

* Move configurator 8 from position to position M

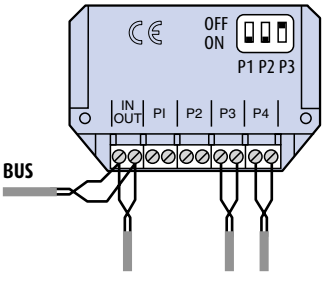
FLOOR DISTRIBUTION BLOCK

Floor distribution block Item 346840

The video floor distribution block has 4 outputs, allowing the distribution up to a max of 4 calls (apartments), making a system with star wiring. There are 3 microswitches on the front, which as a base are positioned on ON.
Depending on the number of outputs used, a number of microswitches the same as the outputs not used must be moved to ON.

Connected outputs	Dip-switch P1 P2 P3
P4	ON
P3+P4	ON
P2+P3+P4	ON
P1+P2+P3+P4	ON

Connect the outputs starting from P4 and switch on ON the micro-switches of the non connected outputs



Example - two connected outputs: connect P3 and P4 (P3+P4) and switch on ON the Dip-Switches P1 and P2

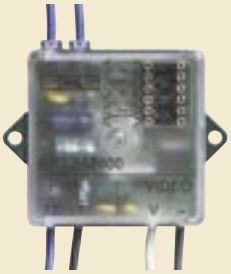
PABX/2 WIRE INTERFACE

PABX/2 wire interface Item 346810

The PABX/2-wire item can interface the telephone switchboards Item 335818 and 335828 to the systems made with the 2-wire system.
P - entrance panel
indicates on which entrance panel the key acts when the system is at rest;
N - call number
assigns the first number of recognition to the telephones inside the video door entry system.
N1 - call number
assigns a second number of recognition to the telephones inside the video door entry system (in case the switchboard has been programmed to manage 2 door entry calls).

CONFIGURATION

COAXIAL/2 WIRE INTERFACE



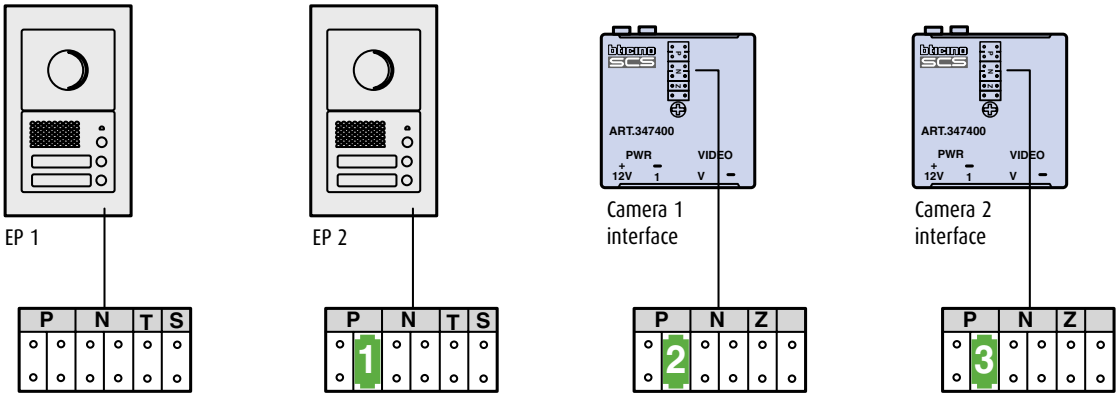
Coaxial/2 wire interface for 2 wire home CCTV, Item 347400.

P = camera address
The configurator in seat P of the interface assigns to it a recognition number inside the system. The interface is considered as a video entrance panel, therefore it must be configured with a progressive number as to the (P) of the entrance panel.

N = address of the handset called in case of alarm
In those systems integrated with Bticino burglar-alarm systems, the configurator inserted in N of the interface, determines which handset must be called in case of alarm occurred in the Z zone configured in the interface. Then, the handset will display the images of the interface associated to the Z zone.

Z = zone of the burglar-alarm system associated to the camera

NOTE: Item 347400 can be used as interface for the missed camera; to associate a camera to an audio entrance panel configure the camera and the entrance panel with the same configurator in P.



Example - System with 2 video entrance panel and 2 cameras.

PIVOT AUDIO HANDSETS

PIVOT audio handset - White (Item 344032), Anthracite (Item 344033) and Tech (Item 344034).

The PIVOT audio handset offers a selection of 16 types of ring tone with already programmed melodies, which can be freely associated to the following calls:
- Call from entrance panel (configured with S=0)
- Call from entrance panel (configured with S=1) (with 4-key Block Item 346812/13/14 mounted)
- Call to the floor
- Intercom call (with 4-key block Item 346812 mounted/13/14)

N – handset number
Configurator N assigns to each audio handset a recognition number within the system.
The handsets can be configured progressively from 1 to 26 (using the power supply Item 346010 and the speaker module Item 342150) and from 1 to 99 (using the power supply Item 346000 and the speaker module Item 342170).
Handsets connected in parallel (max 3) must be configured with the same configurator N.

P – association of the entrance panel
The P configurator identifies the entrance panel associated, that is the first entrance panel on which the sound is inserted pressing once the key and which door lock with audio handset in pause is activated by pressing the key .

Configurator in P	key function
0-9	Activation of the sound on the main entrance panel (configured with P=0-9)

Configurator in P	key function
0-9	Opening of the entrance panel door lock with the audio handset in pause

COLOUR AND B/W PIVOT VIDEO HANDSET

- PIVOT video handset with 4" colour monitor with tecnology TFT - White (Item 344122), Anthracite (Item 344123) and Tech (Item 344124).
- PIVOT video handset with 4" b/w monitor - White (Item 344102), Anthracite (Item 344103) and Tech (Item 344104).

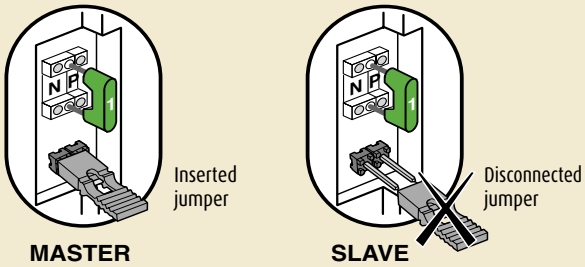
The Pivot video internal unit offers a selection of 16 types of ring tone with already programmed melodies, which can be freely associated to the following calls:
- Call from entrance panel (configured with S=0)
- Call from entrance panel (configured with S=1) (with 4-key block Item 346812/13/14 mounted)
- Call to the floor
- Intercom call (with 4-key Block Item 346812/13/14 mounted)

N – handset number
Configurator N assigns to each video handset a recognition number within the system. The handsets can be configured progressively from 1 to 64 (using the power supply Item 346000 and the speaker module Item 342170). Handsets connected in parallel (max 3) must be configured with the same configurator N.

Audio handsets, video handsets and/or extra bells can be installed in parallel with the basic video handset.

P - association of the entrance panel
The configurator P identifies the entrance panel associated, that is the first entrance panel to auto-switch ON by pressing once the key ⊂○⊃ and which door lock with video handset in pause is activated by pressing the key ⊂○⊃.

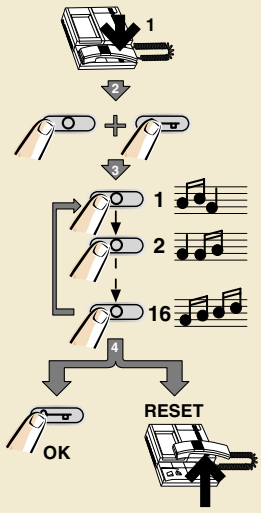
Jumper selection MASTER - SLAVE
In multi-family systems with many video handsets (max 3) connected in parallel within the same apartment we must determine which device must operate as the MASTER and which devices must operate as SLAVE, inserting or removing the selection Jumper.



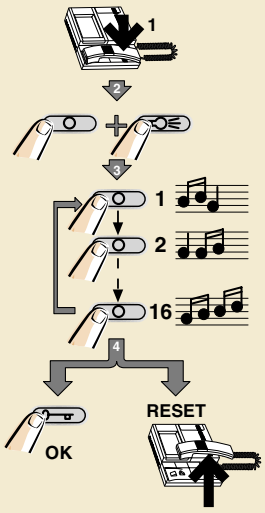
At the arrival of a call, the video handset configures as master rings and switches ON, while the video handsets configured as slave ring only.
Answering from a slave, the monitor of the master switches OFF while the monitor of the answering slave switches ON.
Pressing ⊂○⊃ from a slave before answering, the monitor of the master handset switches OFF and the monitor of the slave from which the pushbutton has been pressed switches ON, without activate the sound.

BELLS PROGRAMMING FOR PIVOT

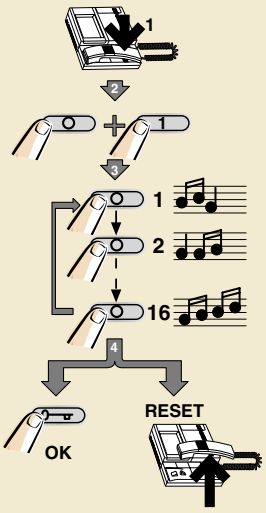
Call from entrance panel with (S=0)



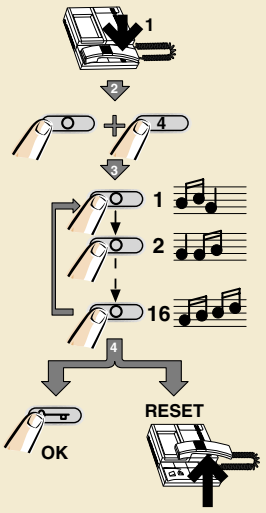
Call to the floor



Intercom call



Call from entrance panel with (S=1)



CONFIGURATION

SPECIAL CONTROL

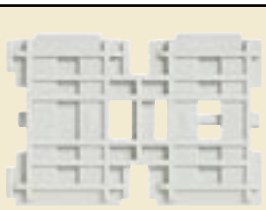
Special control Item L4651/2 using for call to teh floor, door lock controland staircase light control.

Call to the floor

The special control must be equipped with the 2 module grey key-cover support to enable only a pushbutton.
SPE = 9 for 2 wire door entry system and video door entry systems functions
M = 2 for call to the floor
A = tens of the configurator in N of the IU to be called
PL = units of the configurator in N of the IU to be called

Staircase lights control

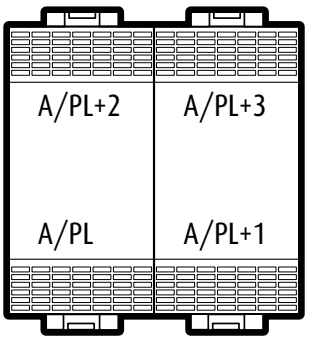
The special control must be equipped with the 2 module grey key-cover support to enable only a pushbutton.
SPE = 9 for 2 wire door entry system and video door entry systems functions
M = 3 for the call at the floor
A = tens of the configurator in N of the handset which switches ON the lights
PL = units of the configurator in N of the handset which switches ON the lights



Door lock control and generic activations

The special control must be equipped with 2 1-module black key-cover supports to enable 4 pushbuttons.
SPE = 9 for 2 wire door entry system and video door entry systems functions
M = 1 for door lock control
A = tens of the configurator in P of the EP or the actuator associated to the door lock to be controlled
PL = units of the configurator in P of the EP or the actuator associated to the door lock to be controlled

A special control can control to a maximum of 4 actuators associated to the EP configured with A/PL, A/PL+1, A/PL+2 and A/PL+3



If A/PL = 0 the special control allows to control the door locks associated to the EP configured in P with 0, 1, 2 and 3.

ACCESSORY 4 KEYS FOR PIVOT

Accessory 4 additional keys programmable for PIVOT audio handsets and video handsets. Available in White (Item 346812), Anthracite (Item 346813) and Tech (Item 346814).

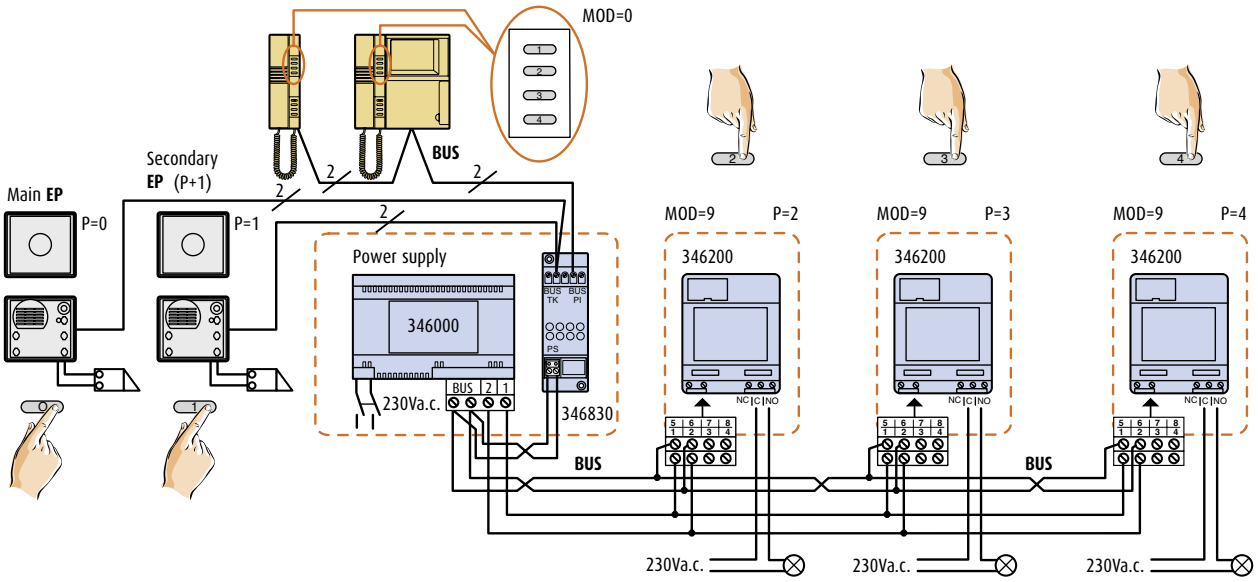
The additional 4 pushbuttons small block is installed on the video handsets Items 344102, 344103, 344104, 344122, 344123, 344124 and PIVOT 2 wire audio handsets Items 344032, 344033, 344034.

Choice the MOD configurators

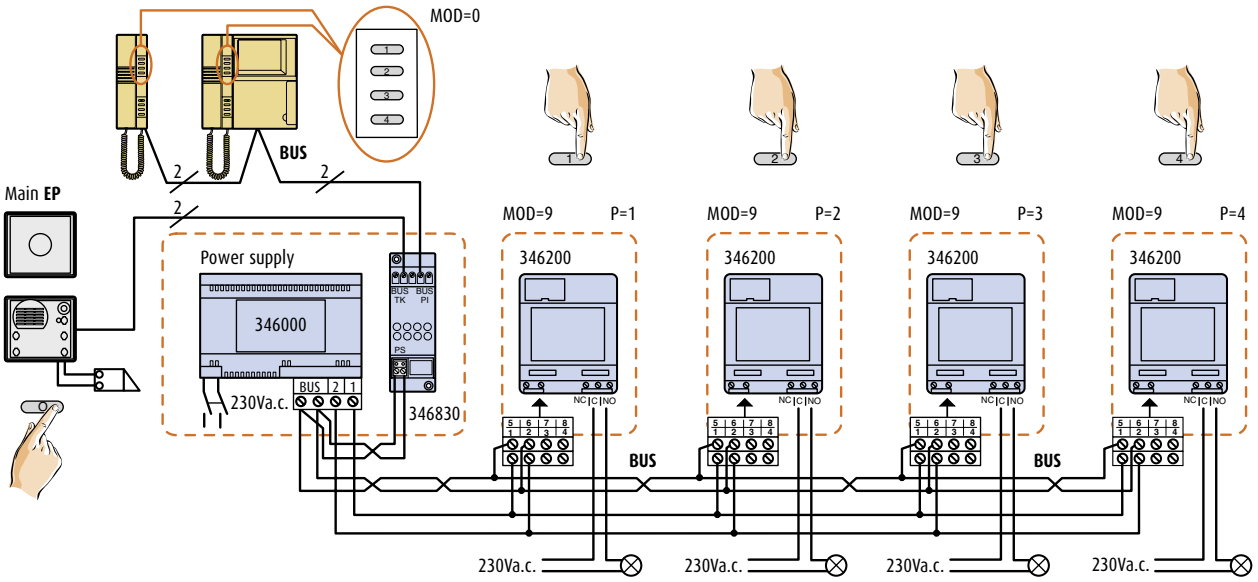
MODE	KEYS FUNCTION
MOD=0	EP direct switching
	1 Direct switching ON of the EP configured with P+1
	2 Direct switching ON of the EP configured with P+2
	3 Direct switching ON of the EP configured with P+3
	4 Direct switching ON of the EP configured with P+4
	Actuator control for generic loads (Item 346200)
	1 346200 configured with MOD=9 and P=1
	2 346200 configured with MOD=9 and P=2
	3 346200 configured with MOD=9 and P=3
	4 346200 configured with MOD=9 and P=4
MOD=1	Intercom tra IU configurati con N=1 ÷ 5
MOD=3	1 EP auto-switching on configured with P+1
	2 EP door lock control configured with P+1
	The keys 3 and 4 intercom function among the handsets configured with N=1 - 3
MOD=5	Door lock relay control with:
	Actuator for generic loads (Item 346200)
	1 346200 configured with MOD=5 and P=1
	2 346200 configured with MOD=5 and P=2
	3 346200 configured with MOD=5 and P=3
	4 346200configured with MOD=5 and P=4
	Door lock actuator (Item 346230)
	1 346230 configured with P=1
	2 346230 configured with P=2
	3 346230 configured with P=3
	4 346230 configured with P=4
MOD=6	The keys 1, 2 and 3 intercom function among the handsets configured with N=1 - 3
	4 Bleeper function on loudspeakers of the new sound system
MOD=7	1 Intercom among the devices of the same apartment (general call)
Two-family systems	2 Intercom with the devices of the other apartment (general call)
	3 Door lock control on EP configurated with P+1
	4 Door lock control on EP configurated with P+2
MOD=9	Control of the scenario units (Item F420 or Item N4681) configured with A=0 and PL=1
	1 Enables scenario 1
	2 Enables scenario 2
	3 Enables scenario 3
	4 Enables scenario 4

CONFIGURATION

Example 1 - MOD = 0



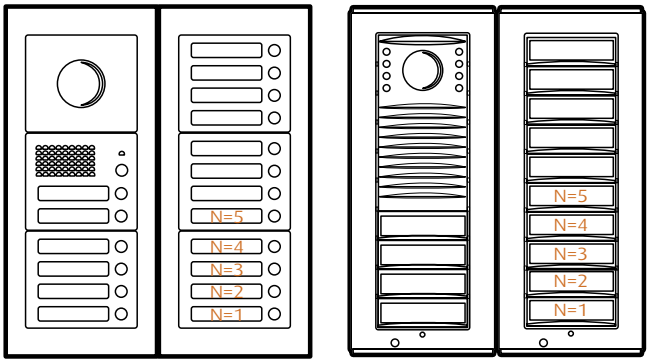
Direct auto-switching ON of the second entrance panel and enabling of actuators for generic uses.



Activation of the actuators for generic uses.

Example 2 - MOD = 1

In multi-family systems using accessory Item 346812/13/14 correctly configured (MOD=1) allows up to 5 system users to intercommunicate.
Inside an apartment block, there may be just one group of a maximum of 5 users who can use the intercom function.
To do this the 5 users involved in the intercom function must be entered in the pushbutton panel as indicated in the figure below.

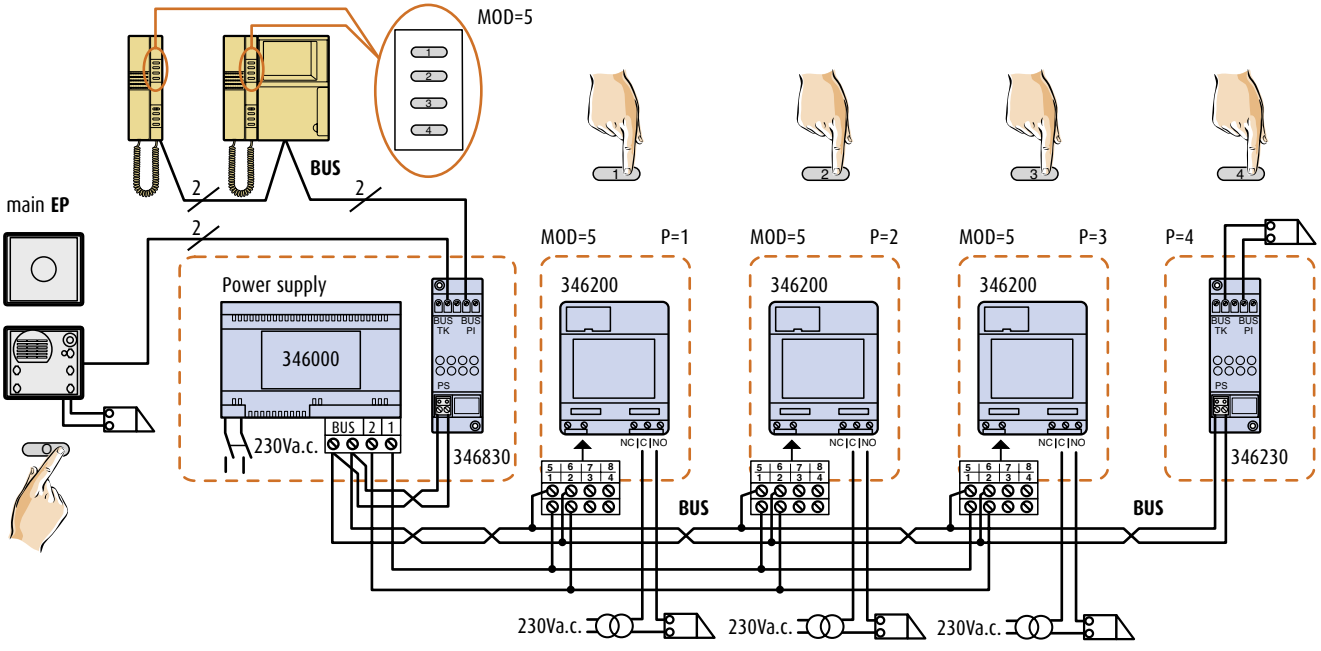


The IU keys call in succession the handsets configured in N from 1 to 5 excluding themselves.
Example: If calling from the handset configured with N=3.
- Key 1 calls the handset configured with N=1
- Key 2 calls the handset configured with N=2
- Key 3 calls the handset configured with N=4
- Key 4 calls the handset configured with N=5

Correspondence of the pushbuttons with the number of the called handset

Handset with N=1	**Call to**
Pushbutton 1 →	Handset 2
Pushbutton 2 →	Handset 3
Pushbutton 3 →	Handset 4
Pushbutton 4 →	Handset 5
Handset with N=2	**Call to**
Pushbutton 1 →	Handset 1
Pushbutton 2 →	Handset 3
Pushbutton 3 →	Handset 4
Pushbutton 4 →	Handset 5
Handset with N=3	**Call to**
Pushbutton 1 →	Handset 1
Pushbutton 2 →	Handset 2
Pushbutton 3 →	Handset 4
Pushbutton 4 →	Handset 5
Handset with N=4	**Call to**
Pushbutton 1 →	Handset 1
Pushbutton 2 →	Handset 2
Pushbutton 3 →	Handset 3
Pushbutton 4 →	Handset 5
Handset with N=5	**Call to**
Pushbutton 1 →	Handset 1
Pushbutton 2 →	Handset 2
Pushbutton 3 →	Handset 3
Pushbutton 4 →	Handset 4

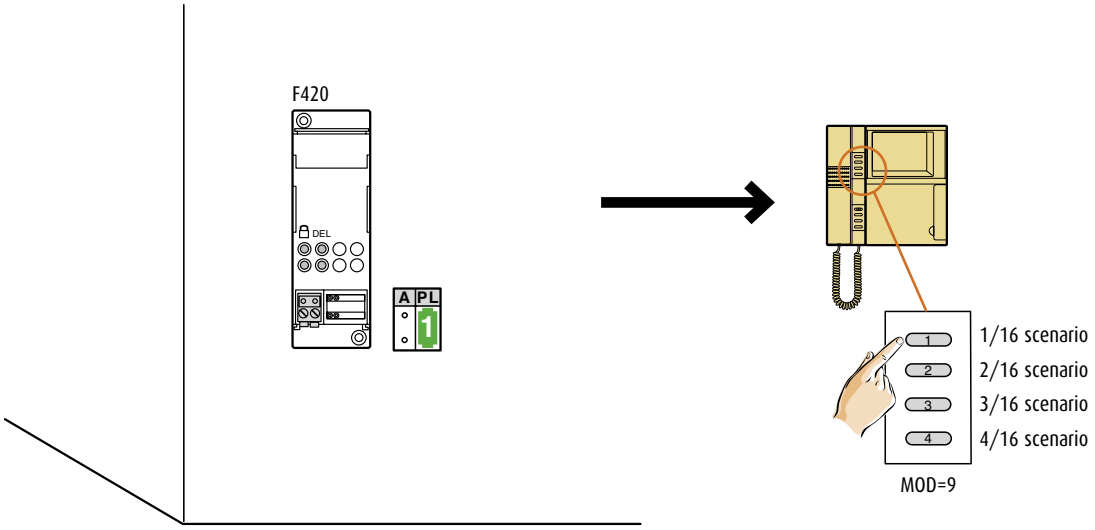
Example 3 - MOD = 5



Activation of extra door locks.

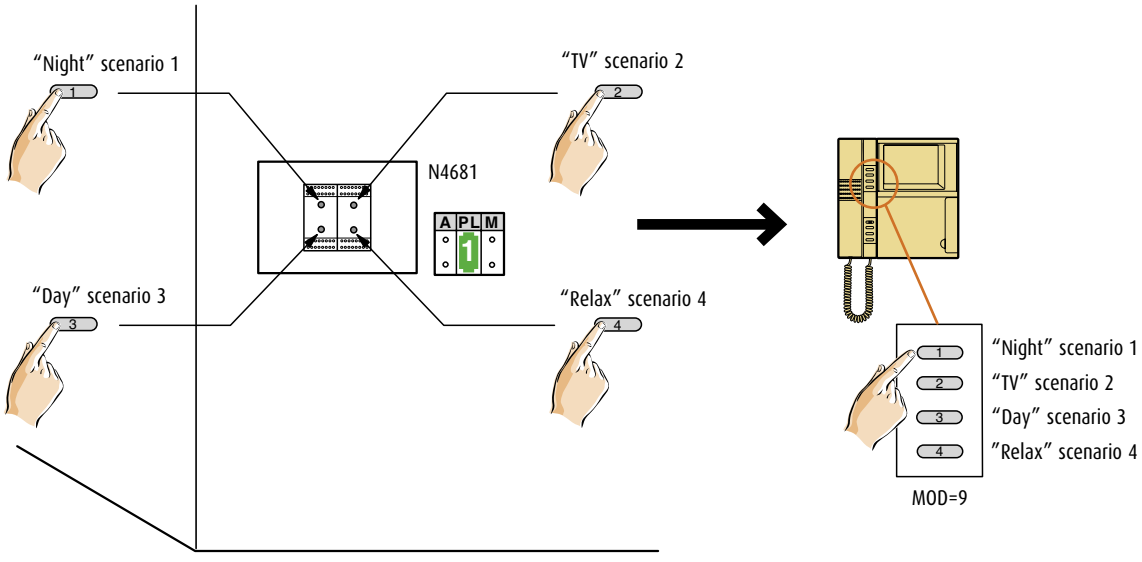
CONFIGURATION

Example 4 - MOD = 9



First 4 scenarios control (1-2-3-4) of the 16 saved in the F420 scenarios module.

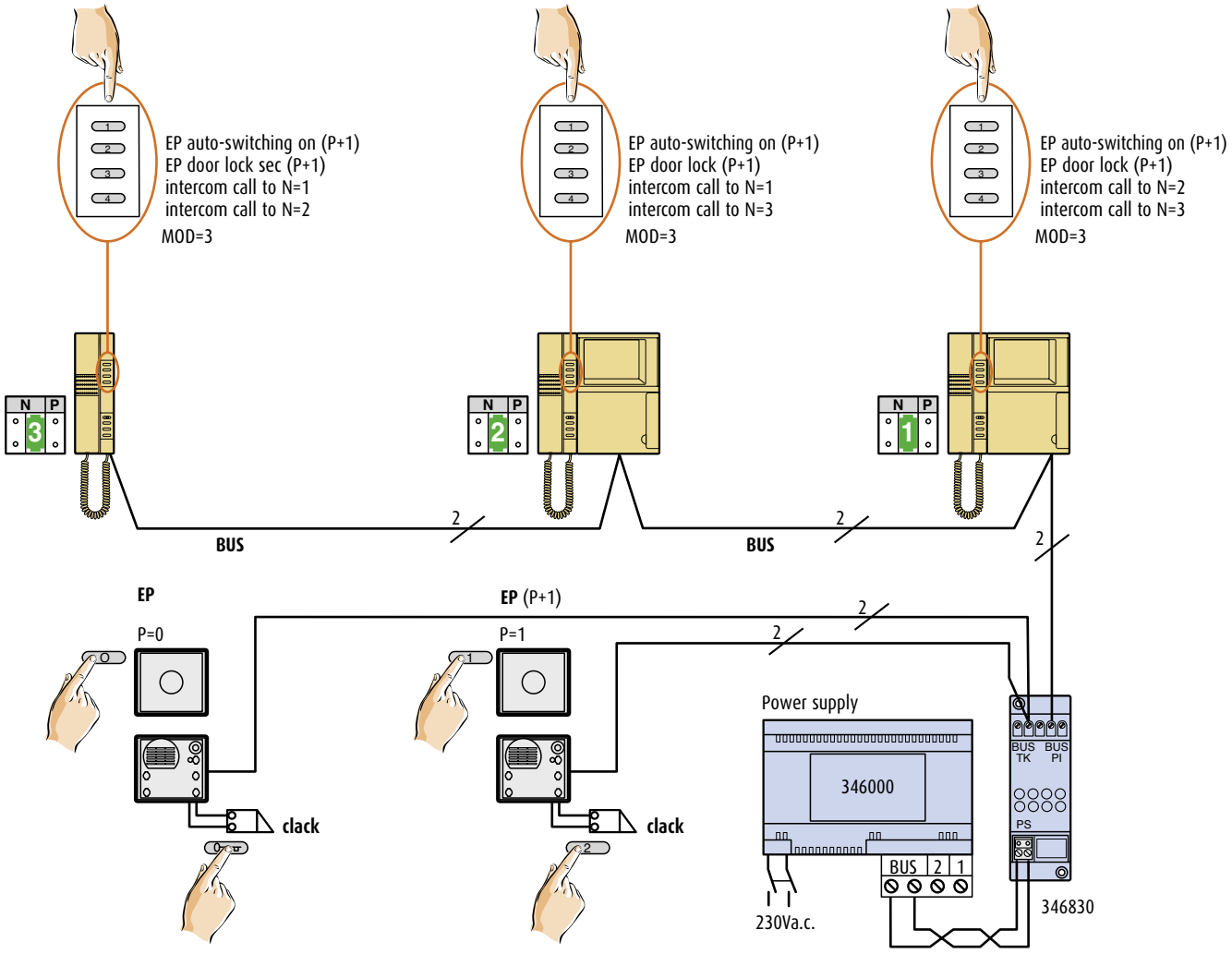
Example 5 - MOD = 9



Scenario units control (Item N4681)

Example 6 - MOD = 3 (mixed mode)

- Key 1 EP auto-switching on (configured with P+1)
- Key 2 EP door lock actication (configured with P+1) directly without the call
- Key 3 Intercom function
- Key 4 Intercom function

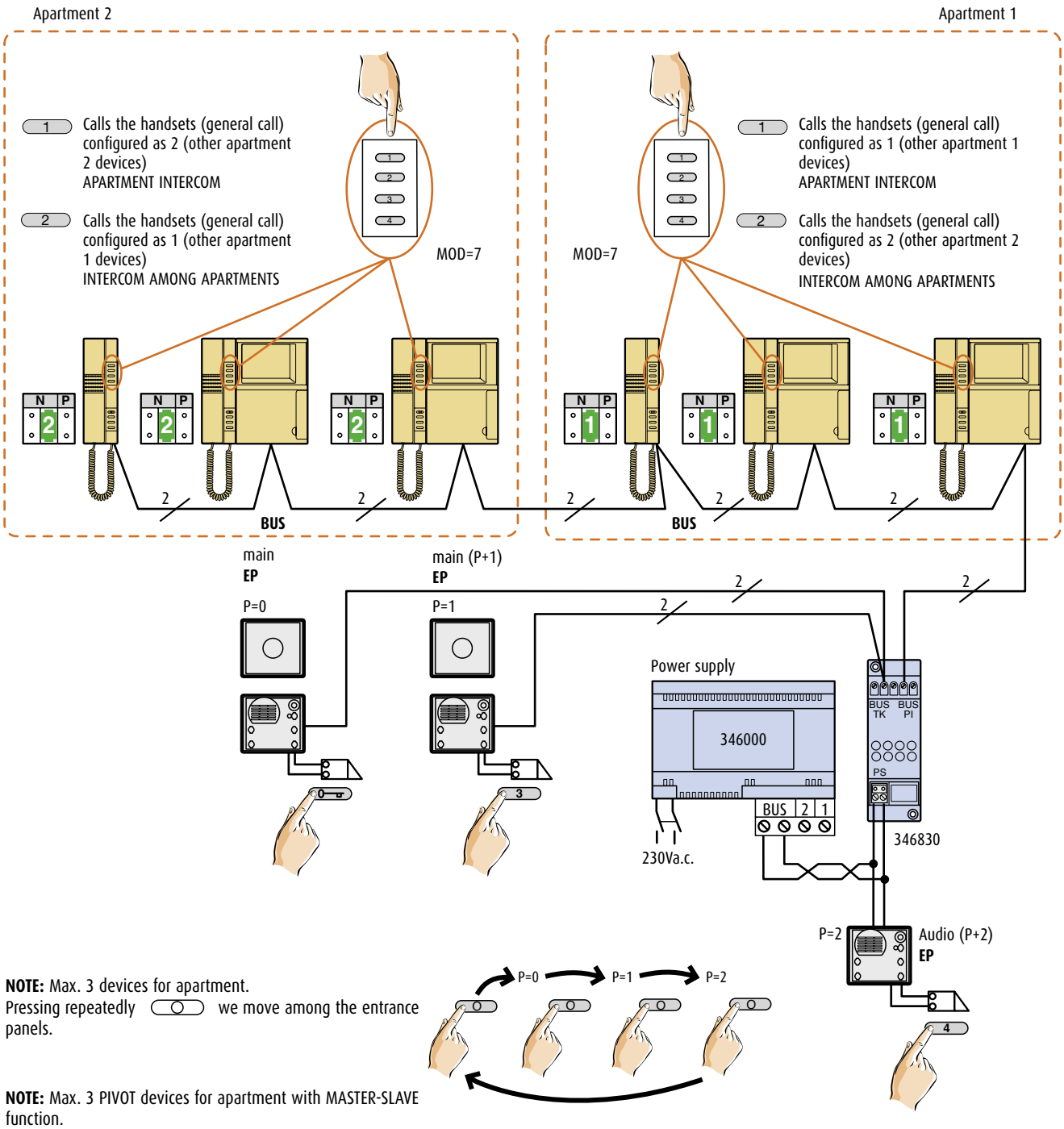


NOTE: The operation mode of the intercom function is equal to that explained for the example 2. But in this case the intercom occurs only among three apartments or three handsets in one-family systems.

CONFIGURATION

Example 5 - MOD = 7 (Intercom in the two-family system)

- Key 1 Calls the handsets of the apartment (the IU configured in N like the calling IU)
- Key 2 Calls the handsets of the other apartment (the IU configured with N different from the N of the calling IU)
- Key 3 Opens the door lock associated to the EP configured with P + 1
- Key 4 Opens the door lock associated to the EP configured with P + 2

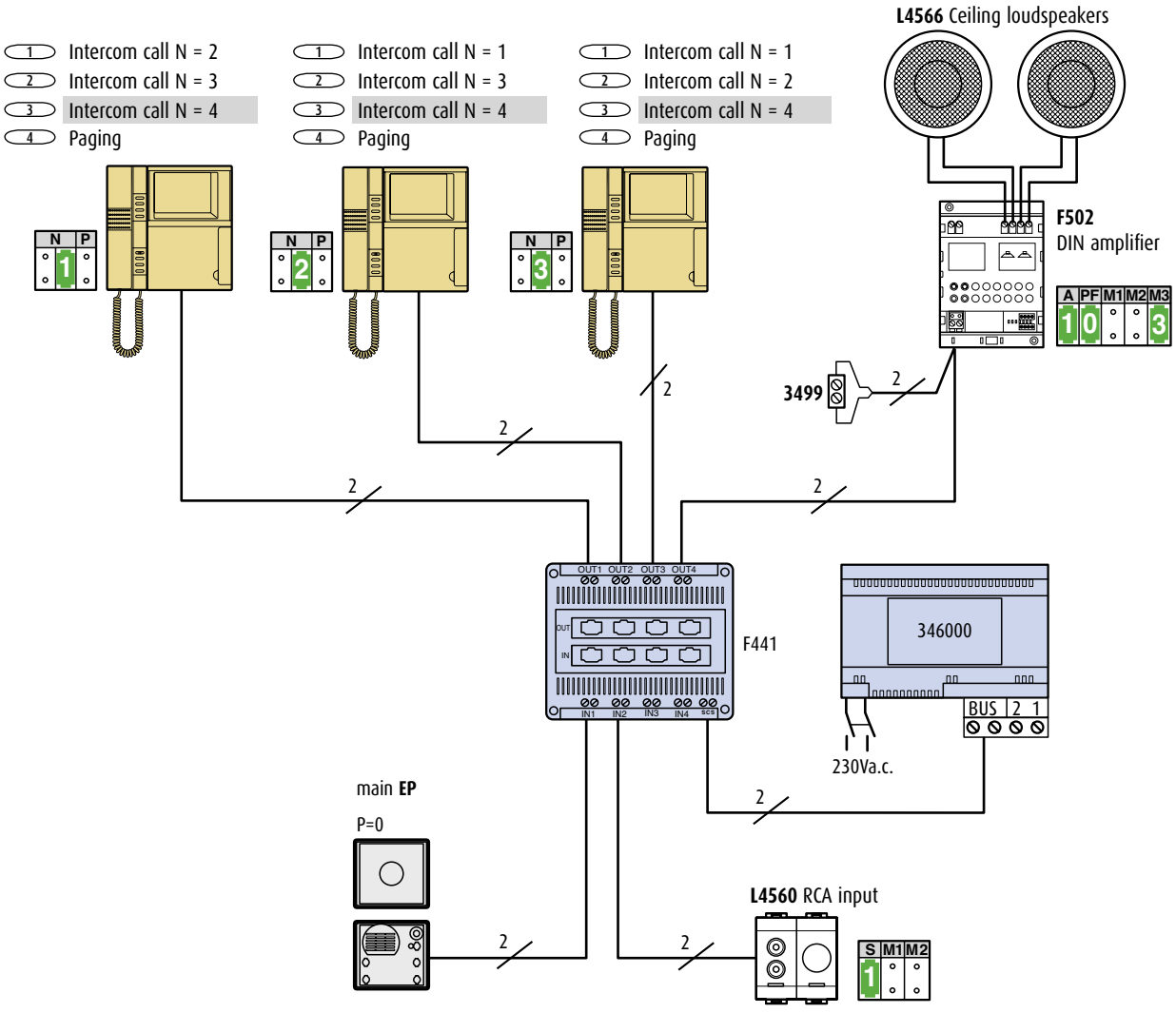


NOTE: Max. 3 devices for apartment.
Pressing repeatedly 0 we move among the entrance panels.

NOTE: Max. 3 PIVOT devices for apartment with MASTER-SLAVE function.

Example 8 - MOD = 6

- Key (1) Intercom
- Key (2) Intercom
- Key (3) Intercom
- Key (4) Paging function on loudspeaker of the new sound system



Pressing the key (4) we communicate with outside through the loudspeakers of the new sound system. The "paging" function allows to make for example some announcements inside supermarkets or offices: pressing the key (4) we switch OFF the speaker source selected and enable the sound on the loudspeakers, when we hang up the speaker source is switched ON again.

CONFIGURATION

SWING AUDIO HANDSET

SWING audio handset - Ash (Item 344702), Cord (Item 344703) and White (Item 344704).

The PIVOT audio internal unit offers a selection of 16 types of ring tone with already programmed melodies, which can be freely associated to the following calls:
- Call from entrance panel (configured with S=0)
- Call from entrance panel (configured with S=1)
- Call to the floor
- Intercom call

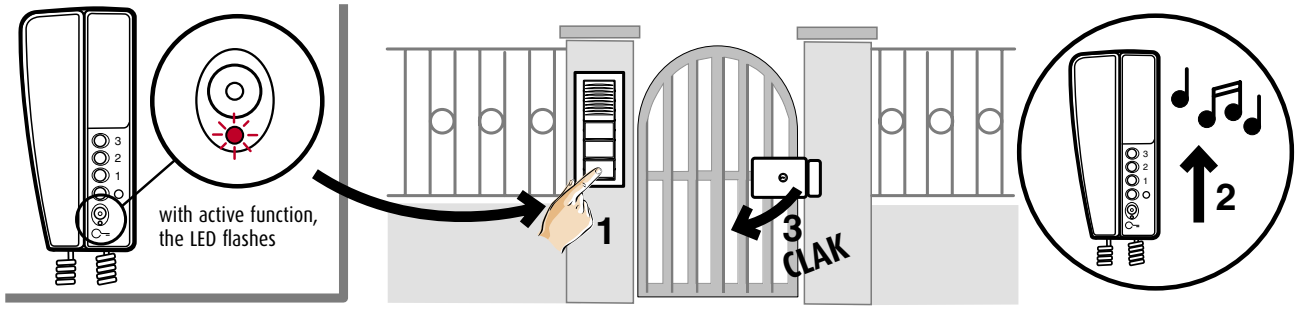
N – handsets number
Configurator N assigns to each audio handset a recognition number within the system.
The handsets can be configured progressively from 1 to 26 (using the power supply Item 346010 and the speaker module Item 342150) and from 1 to 99 (using the power supply Item 346000 and the speaker module Item 342170). Handsets connected in parallel (max. 3) must be configured with the same configurator N.
MOD = Keys operating mode
The SWING audio handset is equipped with the door lock opening pushbutton and 4 programmable pushbuttons (0-1-2-3). The programmable pushbuttons can be associated to different operation modes (ex. enabling of external actuators, intercom, enabling of additional entrance panels, enabling of "office" mode), according to the type of configurators inserted in MOD. For a closer examination about the different operational modes make reference to the instructions provided with the audio handset.
P – association of the entrance panel
The configurator P identifies the associated entrance panel, that is the first entrance panel on which it is inserted the sound by pressing once the key (0) and which door lock is enabled by the key with the audio handset in pause.

Configurator in P	Key function (0)
0-9	Activation of the sound on the entrance panel (configured with P = 0-9)

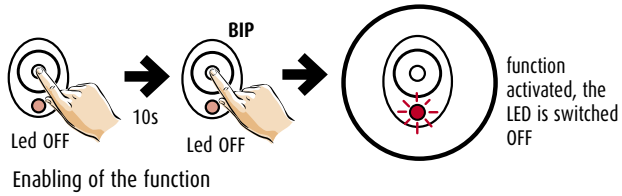
Configurator in P	Key function
0-9	Opening of the EP door lock (configured with P = 0-9)

"OFFICE" FUNCTION

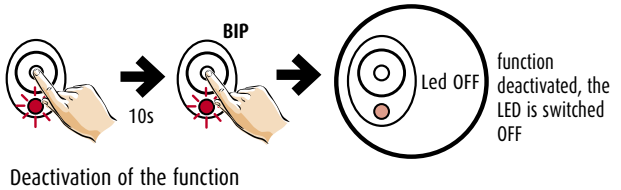
With the function enabled, at the arrival of a call from the entrance panel (1), the SWING audio handset rings (2) and the relating door lock is automatically opened without act on the door lock pushbutton of the handset (3).



To enable/deactivate the function press for 10s the door lock pushbutton, a sound confirmation signal will be heard.



Enabling of the function



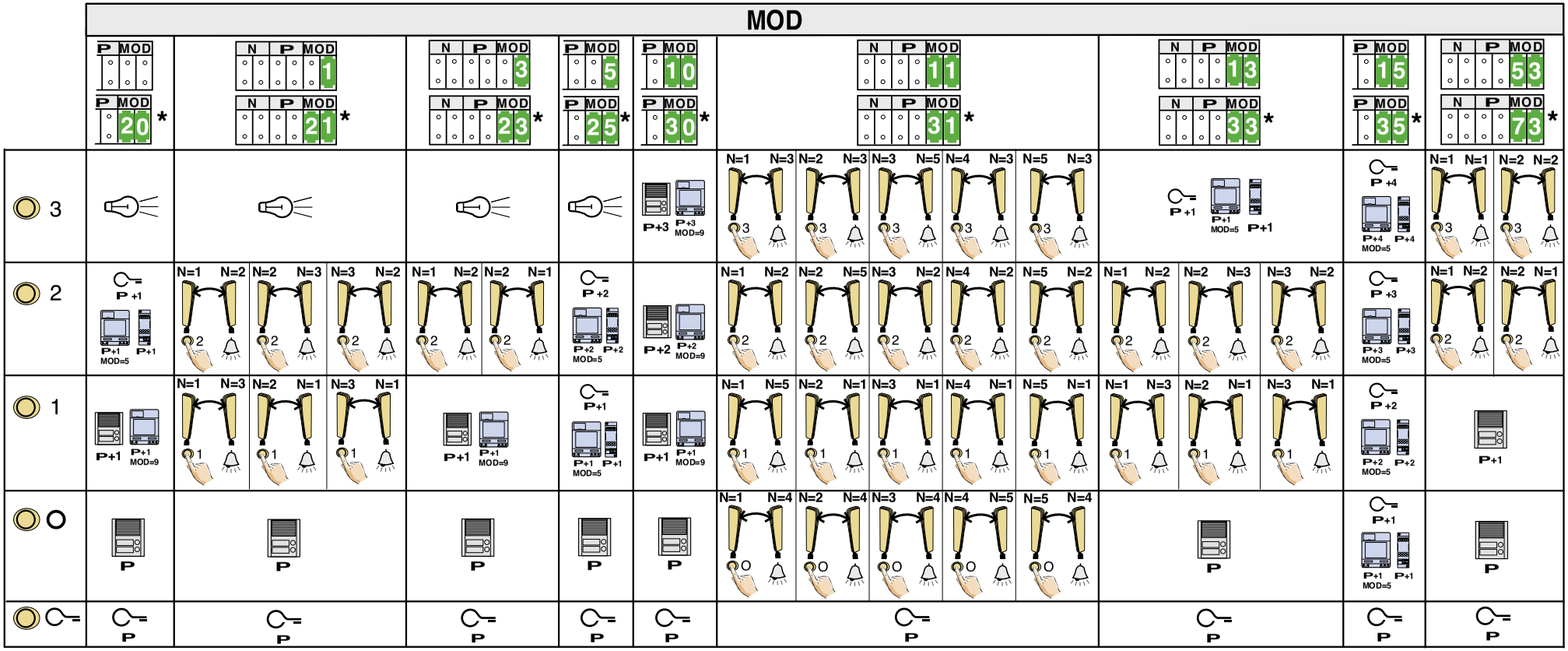
Deactivation of the function

To configure the function within the SWING audio handset, insert in MOD the configurators of the operation choice mode + 20.

Choice mode and "office" function = Choice mode + 20.

MOD configuration choice

The mode (MOD) associates a function to the 0-1-2-3 pushbuttons



* 0-1-2-3 pushbutton function detailed hereafter and "office" function

	Staircase light switching ON.
N=1 N=2	Intercom Example: pressing the key 2 an intercom call is sent from the handset configured with N=1 to the handset configured with N=2.
P	Activation of the audio entrance panel (configured with P) directly without the call and the cyclically.
P+1 P+1 MOD=9	Activation of the audio entrance panel (configured with P + 1) directly without the call or activation of the actuator Item 346200 (configured with P+1 and MOD=9).
P+2 P+2 MOD=9	Activation of the audio entrance panel (configured with P + 2) directly without the call or activation of the actuator Item 346200 (configured with P+2 and MOD=9).
P+3 P+3 MOD=9	Activation of the audio entrance panel (configured with P + 3) directly without the call or activation of the actuator Item 346200 (configured with P+3 and MOD=9).
P	Opening of the entrance panel door lock configured with P indirectly without the call.
P+1 P+1 MOD=5	Opening of the entrance panel door lock (configured with P + 1) directly without the call or activation of the actuator Item 346200 (configured with P+1 and MOD=5) or activation of the actuator Item 346230 (configured with P+1)
P+2 P+2 MOD=5	Opening of the entrance panel door lock (configured with P + 2) directly without the call or activation of the actuator Item 346200 (configured with P+2 and MOD=5) or activation of the actuator Item 346230 (configured with P+2)
P+3 P+3 MOD=5	Opening of the entrance panel door lock (configured with P + 3) directly without the call or activation of the actuator Item 346200 (configured with P+3 and MOD=5) or activation of the actuator Item 346230 (configured with P+3).
P+4 P+4 MOD=5	Opening of the entrance panel door lock (configured with P + 4) directly without the call or activation of the actuator Item 346200 (configured with P+4 and MOD=5) or activation of the actuator Item 346230 (configured with P+4).

CONFIGURATION

SWING VIDEO HANDSET

SWING video handset - Ash (Item 344802), Cord (Item 344803) and White (Item 344804).

The SWING video handset offers a selection of 16 types of ring tone with already programmed melodies, which can be freely associated to the following calls:
- Call from entrance panel (configured with S=0)
- Call from entrance panel (configured with S=1)
- Call to the floor
- Intercom call

N – handset number
Configurator N assigns to each video hanset a recognition number within the system. The handsets can be configured progressively from 1 to 64 (using the power supply Item 346000 and the speaker module Item 342170). Handsets connected in parallel (max 3) must be configured with the same configurator N. Only audio handsets and/or extra bells (max 3) can be installed in parallel with the basic video handset.

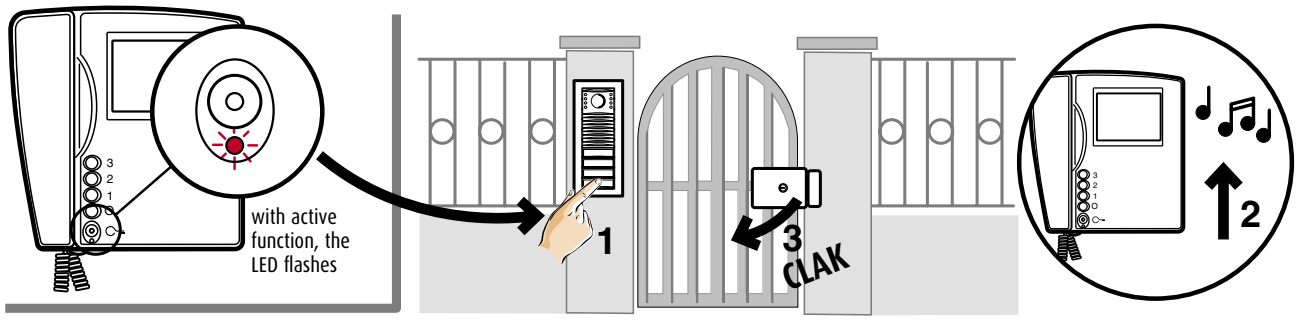
MOD = Keys operating mode
The SWING audio handset is equipped with the door lock opening pushbutton ⊶ and 4 programmable pushbuttons (0-1-2-3). The programmable pushbuttons can be associated to different operation modes (ex. enabling of external actuators, intercom, enabling of additional entrance panels, enabling of "office" mode), according to the type of configurators inserted in MOD. For a closer examination about the different operational modes make reference to the instructions provided with the audio handset.

P – association of the entrance panel
The configurator P identifies the associated entrance panel, that is the first entrance panel on which it is inserted the sound by pressing once the key (0) and which door lock is enabled by the key ⊶ with the audio handset in pause.

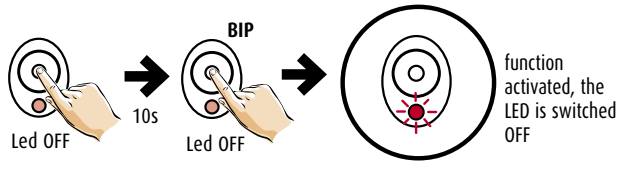
Configurator in P	Key function (0)
0-9	Activation of the sound on the entrance panel (configurated with P = 0-9)
0-9	Opening of the EP door lock (configurated with P = 0-9)

"OFFICE" FUNCTION

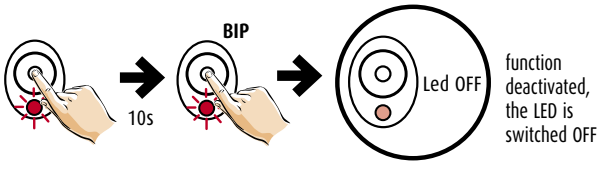
With the function enabled, at the arrival of a call from the entrance panel (1), the SWING video handset rings (2) and the relating door lock is automatically opened without act on the door lock pushbutton of the handset (3)



To enable/deactivate the function press for 10s the door lock pushbutton, a sound confirmation signal will be heard.



Enabling of the function



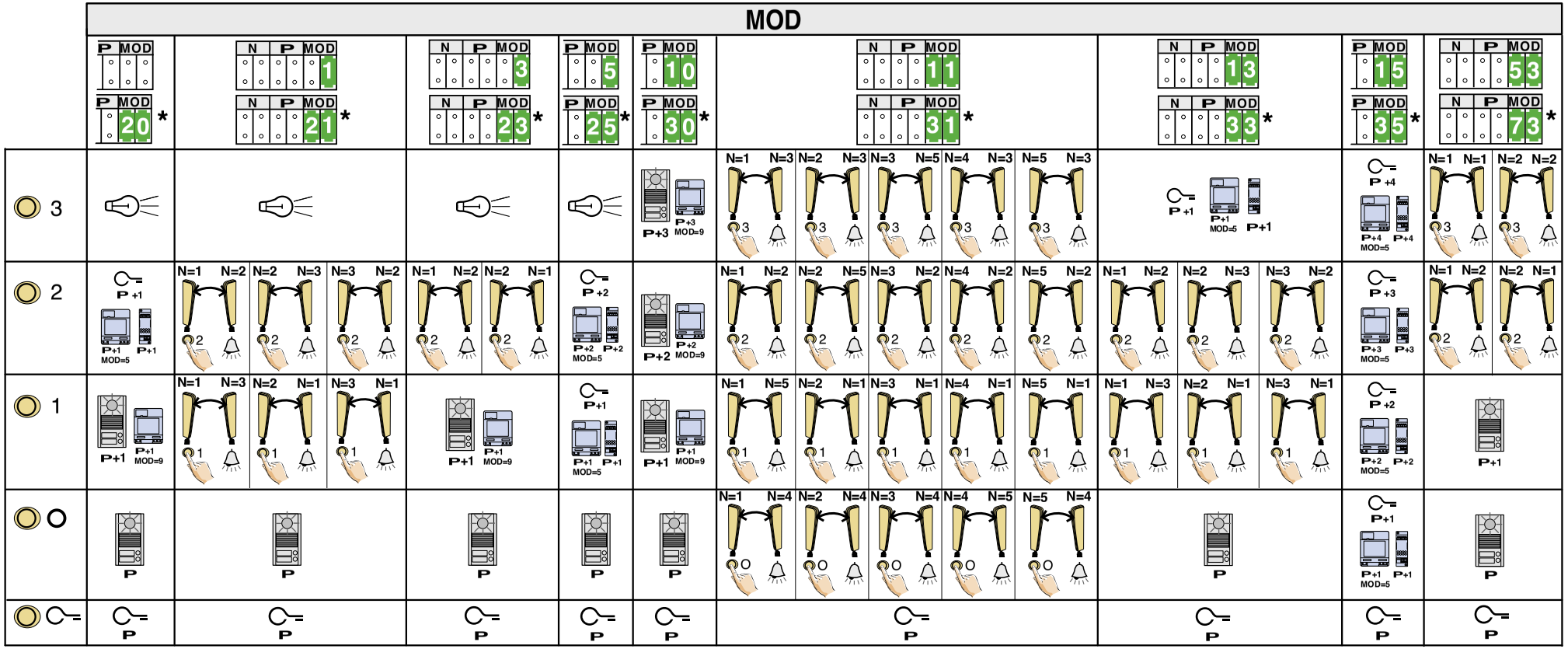
Deactivation of the function

To configure the function within the SWING video handset, insert in MOD the configurators of the operation choice mode + 20.

Choice mode and "office" function = Choice mode + 20.

MOD configuration choice

The mode (MOD) associates a function to the 0-1-2-3 pushbuttons

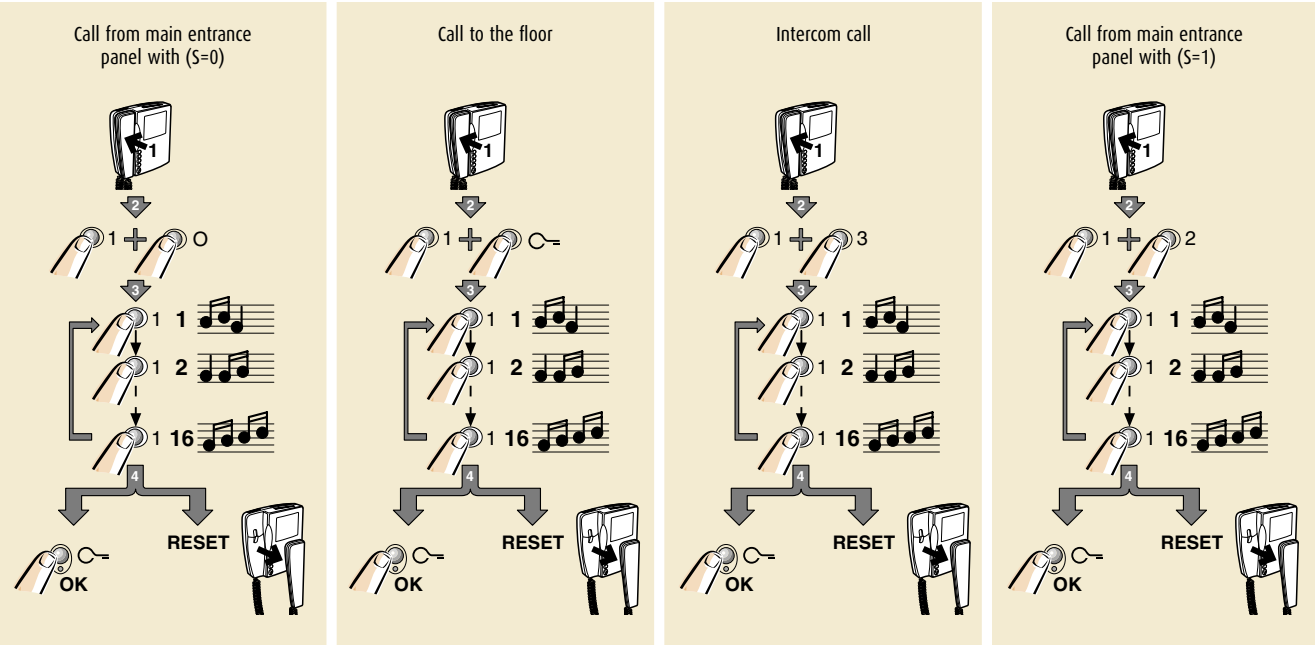


* 0-1-2-3 pushbutton function detailed hereafter and "office" function

	Staircase light switching ON.	P+1 MOD=9	Activation of the audio entrance panel (configured with P + 1) directly without the call or activation of the actuator Item 346200 (configured with P+1 and MOD=9).	P	Opening of the entrance panel door lock configured with P indirectly without the call.	P+3 P+3 MOD=5	Opening of the entrance panel door lock (configured with P + 3) directly without the call or activation of the actuator Item 346200 (configured with P+3 and MOD=5) or activation of the actuator Item 346230 (configured with P+3).
N=1 N=2 2	Intercom Example: pressing the key 2 an intercom call is sent from the handset configured with N=1 to the handset configured with N=2.	P+2 MOD=9	Activation of the audio entrance panel (configured with P + 2) directly without the call or activation of the actuator Item 346200 (configured with P+2 and MOD=9).	P+1 P+1 MOD=5	Opening of the entrance panel door lock (configured with P + 1) directly without the call or activation of the actuator Item 346200 (configured with P+1 and MOD=5) or activation of the actuator Item 346230 (configured with P+1).	P+4 P+4 MOD=5	Opening of the entrance panel door lock (configured with P + 4) directly without the call or activation of the actuator Item 346200 (configured with P+4 and MOD=5) or activation of the actuator Item 346230 (configured with P+4).
P	Activation of the audio entrance panel (configured with P) directly without the call and the cyclically.	P+3 MOD=9	Activation of the audio entrance panel (configured with P + 3) directly without the call or activation of the actuator Item 346200 (configured with P+3 and MOD=9).	P+2 P+2 MOD=5	Opening of the entrance panel door lock (configured with P + 2) directly without the call or activation of the actuator Item 346200 (configured with P+2 and MOD=5) or activation of the actuator Item 346230 (configured with P+2).		

CONFIGURATION

SWING BELL PROGRAMMING



The procedure is valid both for video handsets and audio handsets.

SPRINT AUDIO HANDSET

SPRINT audio handset (Item 344202) and SPRINT audio handset which can be fitted with accessories (Item 344212).

N – handset number
Configurator N assigns a recognition number within the system to each audio handset.
The handsets can be configured progressively from 1 to 26 (using the power supply Item 346010 and the speaker module Item 342150) and from 1 to 99 (using the power supply Item 346000 and the speaker module Item 342170).
Handsets connected in parallel (max. 3) must be configured with the same configurator N.
Item 344202 can be used only in audio systems, while Item 344212 can be used in audio/video mixed systems.

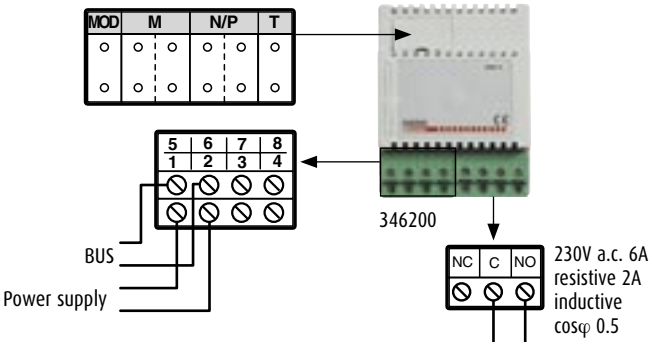
Configuration - P
Auxiliary function pushbutton
The auxiliary function pushbutton on audio handset Item 344212 can perform various functions determined by the value of the configurator inserted in P.

Configurator in P	Auxiliary pushbutton function
0	Light actuator control
1-7	Activation of the sound on the entrance panel configurated in P from 1-7
9	Call to the switchboard, in systems with 8/2-wire interface Item 346150

Door lock pushbutton
Identifies the entrance panel on which controls the opening door lock

ACTUATORS

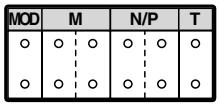
Actuators for generic loads (Item 346200)



LIGHT KEY CONTROLS

MOD 0 - Staircase light from any IU and EP

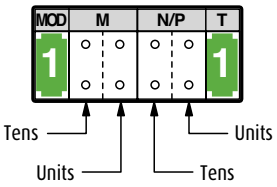
- The actuator is enabled by pressing the light pushbutton of the handset and the light key on the entrance panel. (Customize the time through the configurator T, without configurator t = 3 min)



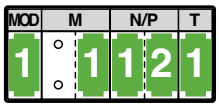
MOD 1 - Sundry services (door lock/open the gate/staircase light) from IU unit

- The actuator is enabled by pressing the light pushbutton of the handset belonging to a group
- Customize the time through the configurator T (T=1 closes the contact for 1s)
- Insert in M the ten and the units of the first handset of the group
- Insert in N/P the ten and the units of the last handset of the group

NOTE: a group is a sequence set of IU.



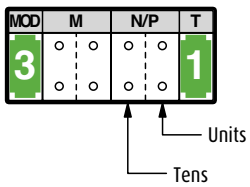
Example



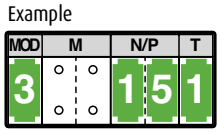
Door lock control from the light key of the handsets configured from 1 to 12

MOD 3 - Sundry services from single IU

- The actuator is enabled by pressing the light pushbutton of only a handset.
- Customize the time through the T configurator (T=1 closes the contact for 1s)
- Put in N/P the ten and the units of the handset that controls the relay



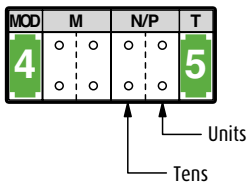
Example



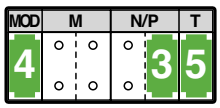
Door lock control from the light key of the handset configured with 15

MOD 4 - MOD 2 Staircase light from EP

- With (**MOD = 4**) the actuator is enabled by pressing the light pushbutton of only an entrance panel.
- Customize the time through the T configurator (T=1 closes the contact for 1s)
- Put in N/P the ten and the units of the handset that controls the relay

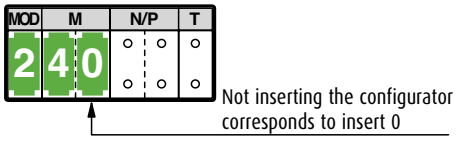


Example



Door lock control from the light key of the handset configured with P=3

- With (**MOD = 2**) the actuator is enabled by pressing the light pushbutton of only an entrance panel.
- Customize the time through the T configurator (without configurator T=3 min.)

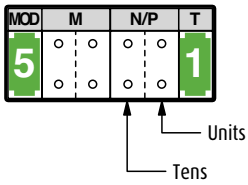


CONFIGURATION

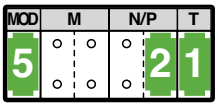
CONTROLS FROM DOOR LOCK KEY

MOD 5 - Door lock control from all IU

- Direct door lock opening with handset in pause.
  The actuator is enabled by pressing the door lock pushbutton of all handsets.
- Customize the time through the T configurator (T=1 closes the contact for 1s)
- Put in N/P the ten and the units of the associated entrance panel that controls the door lock.



Example



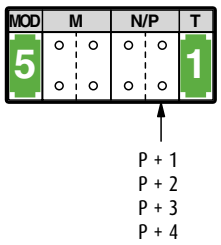
Door lock control of the entrance panel configured with P=2 from the door lock pushbutton of all the associated handsets

CONTROLS FROM PIVOT AND SWING ADDITION KEYS

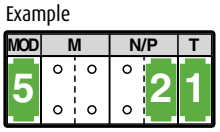
MOD 5 - Door lock control

- Direct door lock opening with handset in pause.
- Customize the time through the T configurator (T=1 closes the contact for 1s)
- Insert in N/P the address that the actuator must take inside the system.

The N/P value insert in the actuator must be included between P + 1 and P + 4 of the P configurator P inserted in the handset which controls the door lock.
For further information on the configurations of the SWING handsets and the 4 additional keys set for PIVOT make reference to the relating sections configurations.



Example

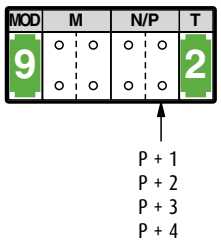


Door lock control by pressing the key 2 of the 4 keys set for PIVOT (PIVOT configured with P = 0)

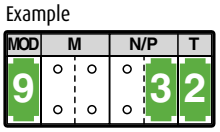
MOD 9 - Sundry services (door lock/open the gate/staircase light)

- Direct control with handset in pause.
- Customize the time through the T configurator T (T=2 closes the contact for 3s)
- Insert in N/P the address that the actuator must take inside the system.

The N/P value insert in the actuator must be included between P + 1 and P + 4 of the P configurator P inserted in the handset which controls the service.
For further information on the configurations of the SWING handsets and the 4 additional keys set for PIVOT make reference to the relating sections configurations



Example



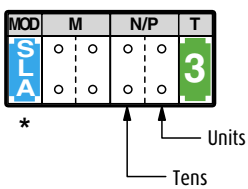
Device control by pressing the key 2 of the 4 keys set for PIVOT (PIVOT congured with P = 2)

CALL REPEATER ON BADENIA

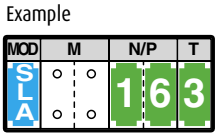
MOD SLA

- Repeat the calls coming from the entrance panel on Badenia bell
- Customize the time through configurator T (T=3 the Badenia rings for 6s)
- Insert in N/P the tens and units of the handset associated to the function

* The configurator SLA must be bought separately from the configurators case (Item 3501K) code item configurator SLA: Item 3501/SLA



Example



The Badenia rings for 6 seconds each time there is a call addressed to the handsets configured with N=16

T CONFIGURATION (TIMING)

The T values mentioned in the examples are only an indication of the times commonly used for the different applications.

Inserting in the T housing a configurator (as mentioned in the table) the relays door locking time is customized

T	-									
Time	3 min	1 s	3 s	6 s	10 s	1 min	6 min	10 min	pushbutton	cyclic (ON/OFF)

ACTUATOR

Door lock actuator (Item 346230)

The actuator Item 346230 enables the electrical door lock associated to a speaker module, a universal speaker group or to the same actuator.

M - operation mode
M=0 door lock relay operation with PIVOT, SWING and SPRINT IU
M=1 only with SWING audio handsets and video handsets "CISA Elettrika" door lock - door lock relay operation and "door lock cecking" function.

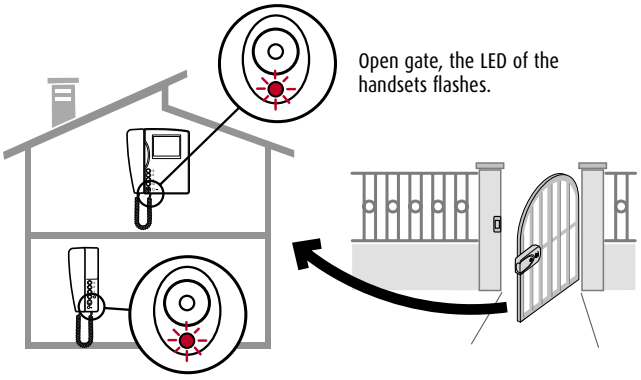
P - associated entrance panel number
A configurator like that inserted in P of the speaker module (Item 342170, Item 342150, Item 342702 and Item 342708) or the speaker unit (Item 346991) must be entered in this socket. When the actuator is associated to the main entrance panel, no configurator must be inserted in P.

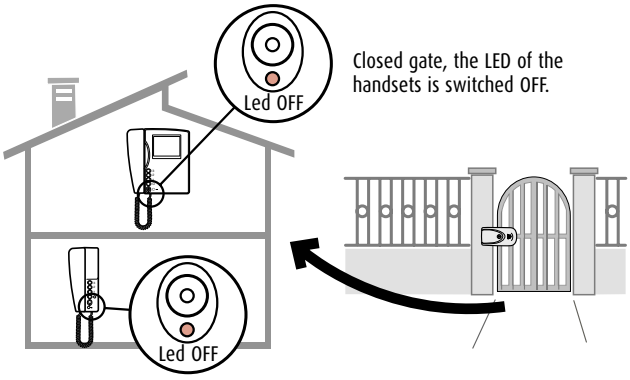
T - door lock relay timing

configurator number							
0= No configurator	1	2	3	4	5	6	7
4 sec.	1 sec.	2 sec.	3 sec.	as push-button	6 sec.	8 sec.	10 sec.

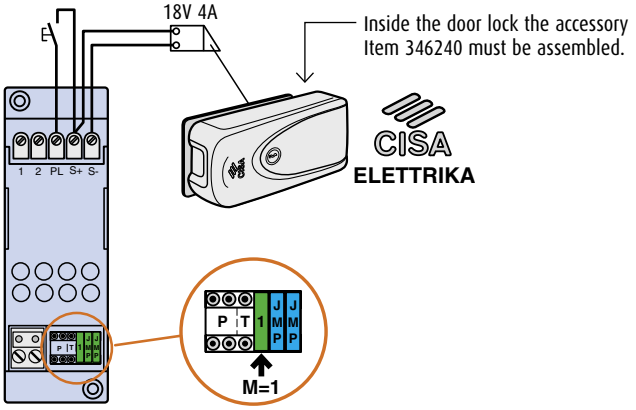
"DOOR LOCK CECKING" FUNCTION

The use of the SWING handsets and CISA "Elettrika" door lock allows to control the status of the door lock connected to the system through the door lock actuator Item 346230. If the CISA "Elettrika" door lock is opened, the LED of the SWING handsets flashes. The LED keeps on flashing until the door lock is opened.





The function can be used only with "CISA Elettrika" and with the wiring of the Item 346230 showed at side.



CONFIGURATION

8/2 INTERFACE

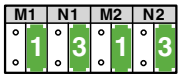
Interface between digital system and 2 wire system (Item 346150)

The interface allows to realize video door entry systems with 2 wire risers, connected to a common backbone realized with a device of the digital system. The interface can be configured to operate in two different mode.

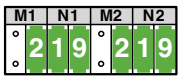
Mode A: it is possible to generate up to 40 risers and on each one of these, it is possible to install up to a maximum of 100 handsets (device).
In the total number of handsets installed on the riser column, the eventual audio handsets or video handsets in parallel must also be included.
With every device added in parallel to the basic one, the total amount of the calls or apartments is reduced by 1. It is advisable to number the risers in M1 beginning from 1.
The configurators must be inserted only in the M1 position. On the generated riser, the IU (max. 100) must be configured (in N) from 1 to 99.

Mode B: you can generate up to 100 risers, on each one it is possible to install a number of IU which depends on the value of the configurator inserted in M1 and N1; however, the total number of calls in the systems is 4000.
The configurators to be used are M1, N1, M2, N2; with which it defines for each riser, the address of the first and the last video handset of the riser.
In this condition, M1 must be equal to M2; therefore, a maximum of 100 IU (N1 and N2) call addresses can be attributed on each riser.

NOTE: if only a handset (M1 = M2 and N1 = N2) can be installed on a riser, the handset will always have to be configured with N = 1.



Handsets from 103 to 103 → The IU connected must be configured with N =1



Handsets from 219 to 219 → The IU connected must be configured with N =1

NOTE:
- in those systems with the switchboard choose between the call towards the switchboard or the moving among the different entrance panels.
- it is advisable to not configure in sequence the secondary (or local) entrance panels, in order to allow to each riser to auto-switch ON only its own secondary entrance panel.
  In a system with 3 secondary entrance panels, configure them with P = 2 P = 4 and P = 6.

M1 = Riser number
Assigns the number of belonging risers to handsets.

N1 = Call number
Mode A: must not be configured
Mode B: assigns the initial number of the handsets installed on the riser.

M2 = Riser number
Mode A: must not be configured
Mode B: assigns the initial number of the handsets installed on the riser (must be the same of M1)

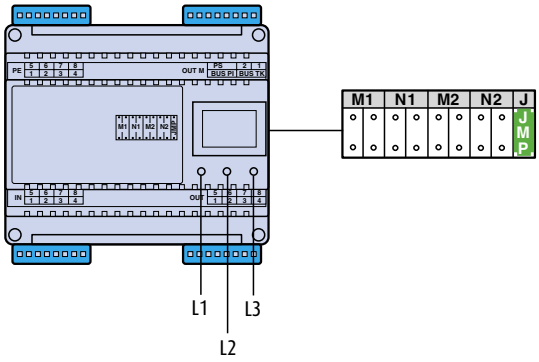
N2 = Call number
Mode A: must not be configured
Mode B: assigns the initial number of the handsets installed on the riser

J = Choosing the riser secondary entrance panel
It is possible to install in the system a riser EP of the 2 wire system or a the digital system EP. It is not possible to simultaneously install both the EPs.

Configurator J inserted = 2 wire system EP

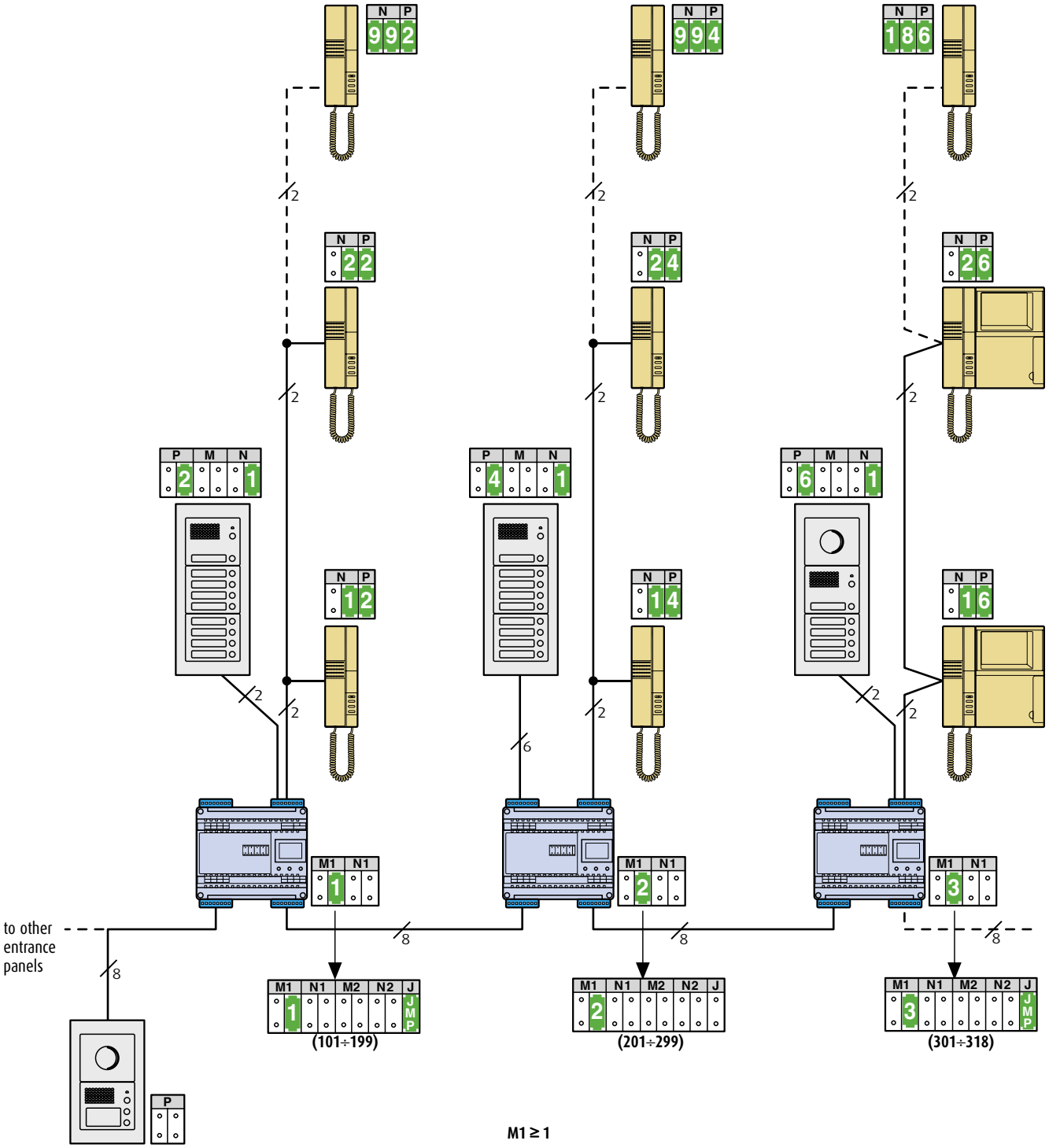
Configurator J disconnected = digital system EP (6 -8 wires)

There are three LED diodes, L1, L2, L3 on the device which indicate the following functions:
- **L1** **on:** ongoing conversation with backbone
- **L2** **on:** ongoing local conversation
- **L3** **flashing:** supplied device (stand by)
- **L1-L2-L3** **flashing:** device configuration error



8/2 INTERFACE - MODE A

If M1=2, the 100 handsets installed on this riser will take the absolute address from 201-299 and will be configured from N=1 to N=99.



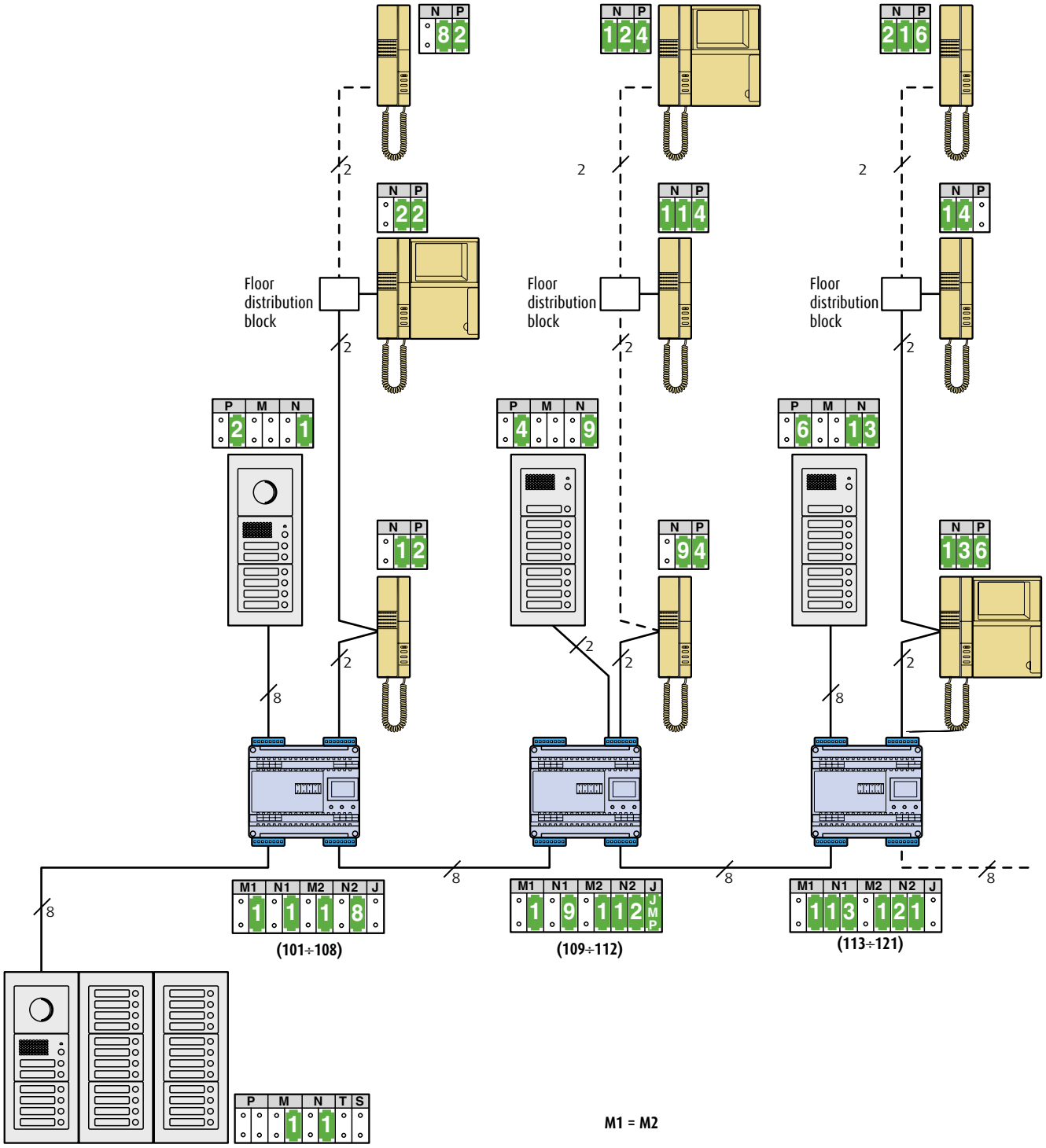
Example of configuration in mode A

Install indifferently 2 or 6/8 wire secondary (or local) entrance panels on the interface 8/2. Installation on the risers of both 2 wire audio and video handsets observing the rules and the installation limits of the same 2 wire system.

CONFIGURATION

8/2 INTERFACE - MODE B

If M1=12 N1=50 and M2=12 N2=65, it means that on the riser the IUs have the absolute address that goes from 1250 to 1265; therefore, at the same time, the IU of the riser must be configured in N from 50 to 65.



Example of configuration in mode B

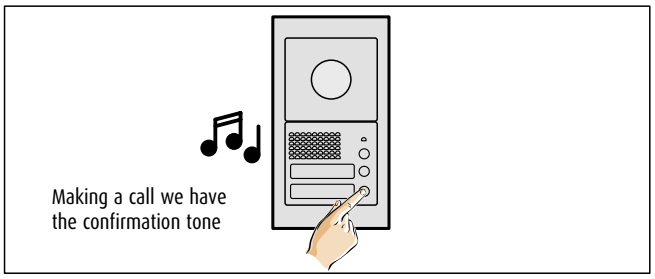
Install indifferently 2 or 6/8 wire secondary (or local) entrance panels on the interface 8/2. Installation on the risers of both 2 wire audio and video handsets observing the rules and the installation limits of the same 2 wire system.

TESTING AND STARTING-UP

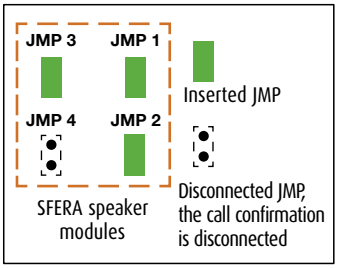
TESTING AND STARTING-UP

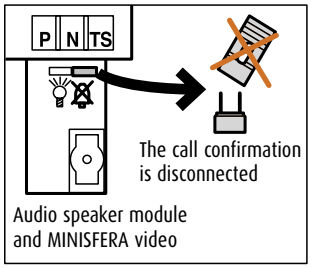
Once realized a 2-wire handset or video handset system, before supply the circuit, control the correctness of the wiring and the configuration of the handsets, the entrance panels and any accessories (4-keys modules, actuators, etc.) present in the system.
If all the checks are positive perform the operation tests of the system.

- Make a call from the entrance panel towards the first handset: therefore an electronic signal is sent to the loudspeaker of the relating handset and a call confirmation tone to the speaker module of the entrance panel which made the call.



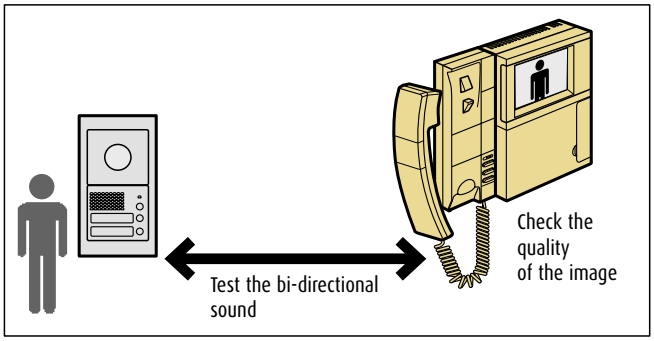
- The confirmation of the call can be excluded removing the appropriate jumper from the speaker module.



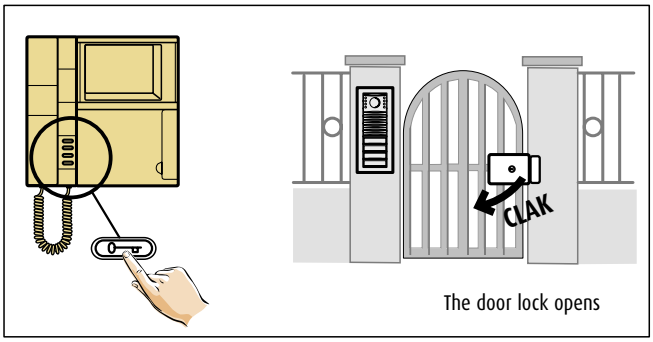


- The handset rings, rising the micro-telephone (receiver) we enter in communication with the entrance panel. In video systems, after the call we have the switching ON of the monitor of the video; if the call comes from an audio entrance panel, the monitor will keep switched OFF. Check the presence of the bidirectional sound (from and to the entrance panel) and the correct display of the images.

- Make the call test from all the entrance panels present and repeat it for all the handsets connected to the system.



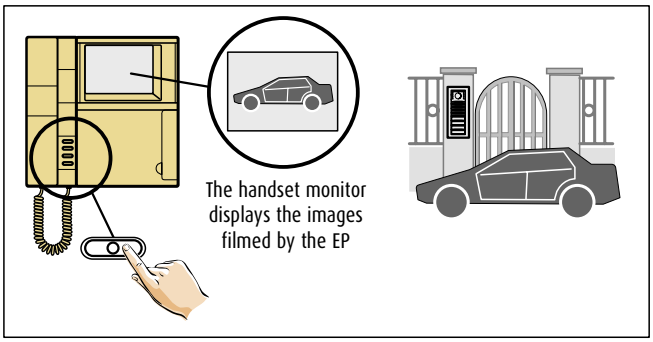
- Check the operation of the door lock keys from all the handsets, auto-switching ON of the entrance panel and staircase light switching ON. Check that the door lock pushbutton acts, with handset in pause (hanged up phone and no ongoing call), on the door lock of the entrance panel associated to the same handset (configurator in P of the entrance panel similar to the configurator in P of the handset) and with ongoing call on the door lock associated to the entrance panel which made the call.



TESTING AND STARTING-UP

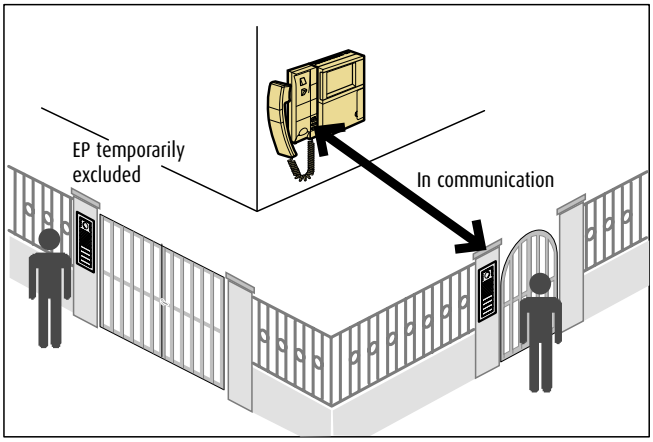
TESTING AND STARTING-UP

- Check that the auto-switching ON pushbutton acts on the entrance panel associated to the same handset, that it make correctly the cyclical and that the door lock pushbutton acts on the door lock of the entrance panel enabled by the cyclical.



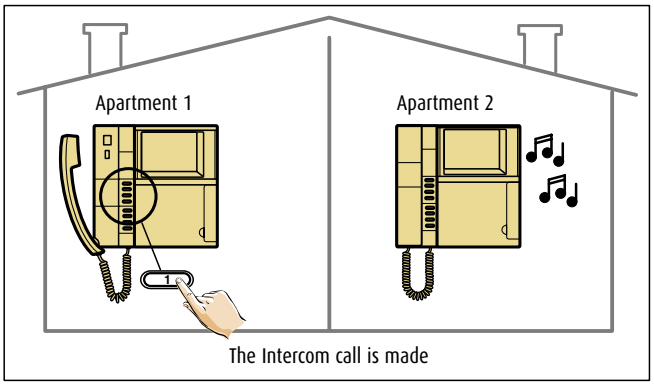
- Check the talk secret: during a call no other handset connected to the system can hear or interfere with the ongoing communication. In addition, check that during a talk and in the 30 seconds after the sent of a call, the handsets and the entrance panels connected to the system are not enabled to make other calls.
  Making a call from the entrance panel there will be a busy tone.

- Check that after 1 minute there is the auto-exclusion of the handset even if the receiver is not hanged up.



- In systems with Intercom function, check that is made the call towards the other devices and that during a call the other handsets involved in the function are temporarily disconnected (making a call we will have a busy tone)

  In case of evident wrong operation look for the probable trouble, for any explication and troubleshooting mode see the section “Testing and Troubleshooting”.



TROUBLESHOOTING

RESEARCH METHOD

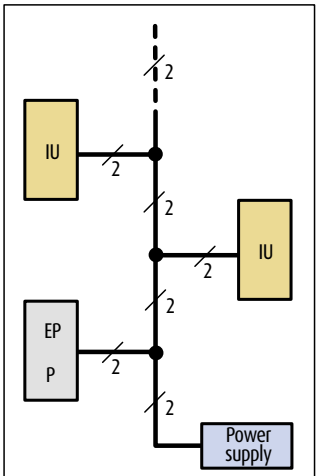
To operate rationally, before acting on the system control the scheme and check the type of the system, its extension, the appropriate use of the devices and their configuration.

All the systems, also complex, can be returned, through appropriate sectioning, to the base system in order to ease the research activity.

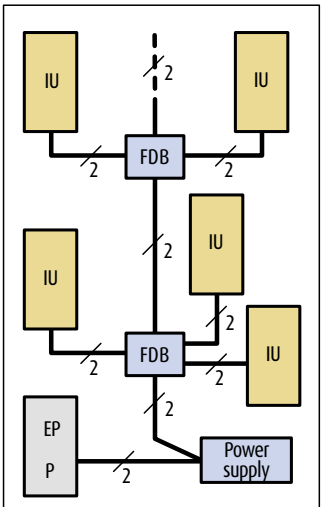
BASE SYSTEM

All the systems of the 2-wire system can be schematized with the following blocks schemes.

Where
M EP is the main entrance panel configured with P=0
IU is the audio or video handset
ALIM is the system power supply
FD is the video floor distribution block



2-wire audio system diagram



2-wire audio system diagram

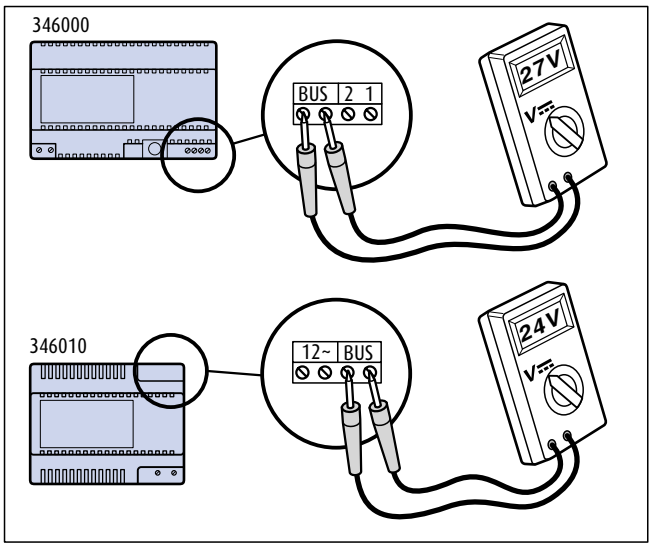
GENERAL CONTROLS

- Check to have respected the installation distances and the type of cables advised

- Check the voltages, with charge, on the terminals to the system power supply (terminals BUS of the Item 346000 = 27V, terminals BUS of the Item 346010 = 24V)

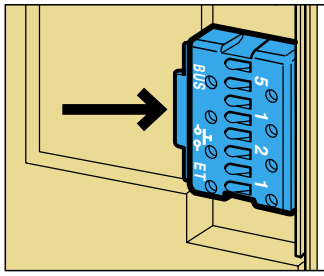
If the above mentioned voltages are not present check the power supply with no component connected.

If the voltages now are present that is a short circuit on the system: section it and repeat the checks.
On the contrary, if they continue to be absent check the network supply and in case replace the system power supply.



- Check the functionality of the devices (introducing them in another point of the system)

- Check that the extractable terminals are inserted correctly in their housing



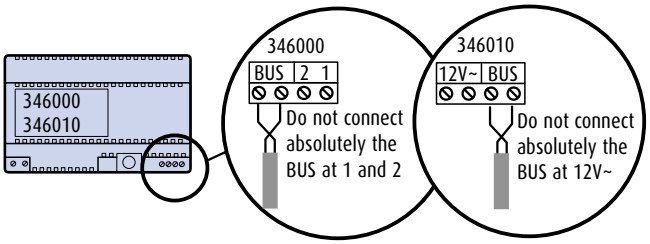
Check also that the connections are made perfectly

TROUBLESHOOTING

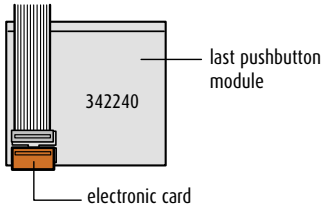
SOLUTIONS FOR THE WRONG OPERATIONS

Hereafter there is a list of the most common wrong operations found and their solutions.

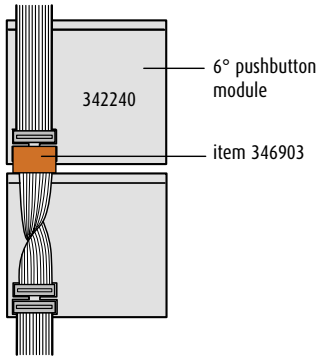
FOUND WRONG OPERATION	SOLUTION
On the EP there is the call tone but no IU rings	- Control the configuration in "N" of EP and IU. - If the system is audio control that the cables are connected correctly on the terminals of the BUS of the power supply.



- If the system is video control the wiring on the Item 346830 and the Item F441
- In multi-family systems control the presence and the correct insertion of the orange electronic card Item CT15/11 (equipped with the speaker module) on the last keys module.

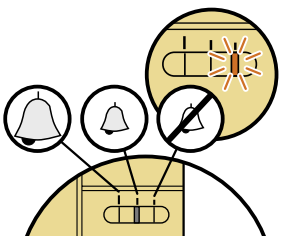


- In multi-family systems with more than 26 call pushbuttons, check that after the 6th keys module (Item 342240) is inserted the accessory (Item 336903) for the inversion of the connection wire

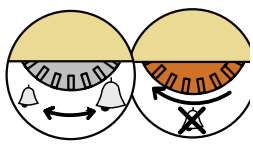


The IU does not ring

- Control the configuration
- Control that the call exclusion is not inserted and check the position of the volume regulator
- Check the correct connection of the wires on the terminal blue of the handset

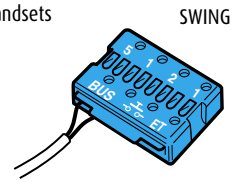


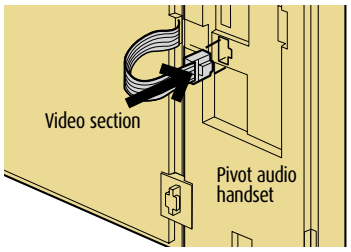
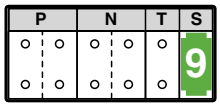
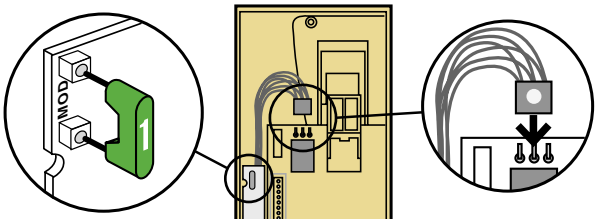
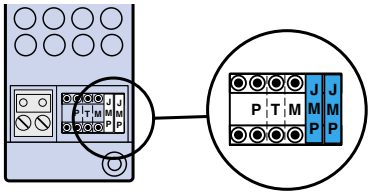
PIVOT audio and video handsets



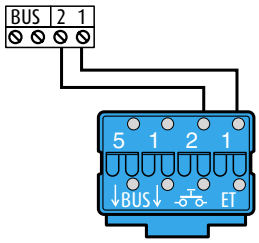
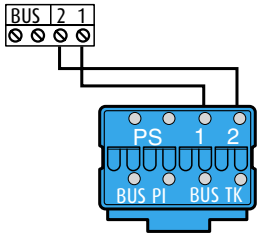
SWING audio and video handset

- Check the correct connection of the wires on the terminal blue of the handset



FOUND WRONG OPERATION	SOLUTION
The monitor does not switches ON, switches ON but there is no image or the quality of the image is bad	- Control that the connector of the video section is correctly inserted in the housing of the audio handset (in PIVOT handset).  - Control the brightness and contrast controls. - Control the dip switch and the settings of the floor distribution blocks and any monitors. - Check the presence of the jumper (JMP) in case of SWING handset.
The lock keeps excited for a too long period of time	- Check, on the speaker module, that the configurator inserted in "T" corresponds to the installation needs (using the table in the "Technical Communication Guide")
In the one-family systems with intercom function any handsets do not ring on the call from the entrance panel	- Control that in the speaker module in "S" is inserted the configurator "9" 
In the one-family systems with intercom function when we call an apartment from another apartment anything occurs	- Control that any 4-key modules Item 346812, 346813 and 346814 are wired correctly and is inserted the configurator "1" in the housing MOD 
The door lock control does not work	- Check the configuration of P on the entrance panels and on the handsets
The actuator 346200 does not work	- Control the configuration - Check the position of the configurators in the relating housing.
The actuator 346230 does not work	- Control the configuration. - Check the need of the configurators "JMP" according to the operation mode of use chosen. 

TROUBLESHOOTING

FOUND WRONG OPERATION	SOLUTION
In those systems with interface 8/2 or with local supply of the handset operation anomalies occur	Control the connection polarity of the wires 1 and 2  Right connection IU power supply  Right connection 8/2 interface
In video systems the image is degraded	- Check that on the last video handset of the riser or the Apartment line is adapted the impedance of the video signal (dip switch su ON). - Check also in presence of floor distribution blocks Item 346840 that the dip switches of the outputs not used are on ON.