Communication

2 WIRE System

TECHNICAL GUIDE 07

The simplest solution for all installations

2 WIRE System

CM07DF/GB

2 WIRE SYSTEM
The simplest solution for all installations

The 2 wire system lets you create any type of system in an easy, quick and intuitive way, whether it is for a large country house or for large complexes of apartment blocks.

YOUR JOB IS EASIER
The 2 wire system technology enables you to achieve a system in a large country house or in a large block of flats with the same effortlessness.

SAVING TIME AND GETTING MORE

A 2 wire system can be created easily and quickly: no more errors will be made, hence saving time on your next installations.

THE CUSTOMER IS ALWAYS HAPPY ABOUT YOUR JOB

Bticino provides the 2 wire system with a wide range of handsets and entrance panels.
You can offer your customer audio, video, colour or black and white solutions, all related to the domestic lines.

YOU ALWAYS HAVE THE SOLUTION TO YOUR CUSTOMER'S NEEDS

You can extend the system with all the MY HOME functions with the same methods and devices used for the communication 2 WIRE system.

Your job is easier

The 2 WIRE system technology enables you to achieve a system in a large country house or in a large block of flats with the same effortlessness.

SIMPLICITY
Creating a 2 WIRE system is always as simple as installing a KIT.

HIGH PERFORMANCE

The 2 WIRE system lets you create any type of system, including large systems.

Entrance panel

Farthest handset

← 600 metres →

THE SYSTEM MAY INCLUDE:

3900	apartments	**3900**	apartment video entrance panels
5	handsets per apartment	**39**	risers with indepedent sound mode
96	video entrance panels		

Wiring

Simple and quick error-proofs:
2 unpolarized wires in every part of the system.

Apartment 1

- Video handset

Apartment 2

- Video handset

- Audio handset

Riser

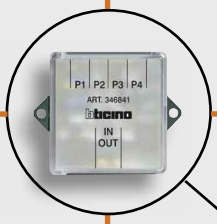
2

2

2

2

2



Floor distribution block 346841

In-Out wiring

Star wiring with floor distribution block

- Entrance panel

WHENEVER AND WHEREVER, TWO UNPOLARIZED WIRES FOR THE ENTIRE SYSTEM

- 2 WIRE cabling is simple and quick; it is easy to learn and it is used to wire the entire system, thus eliminating the risk of error.

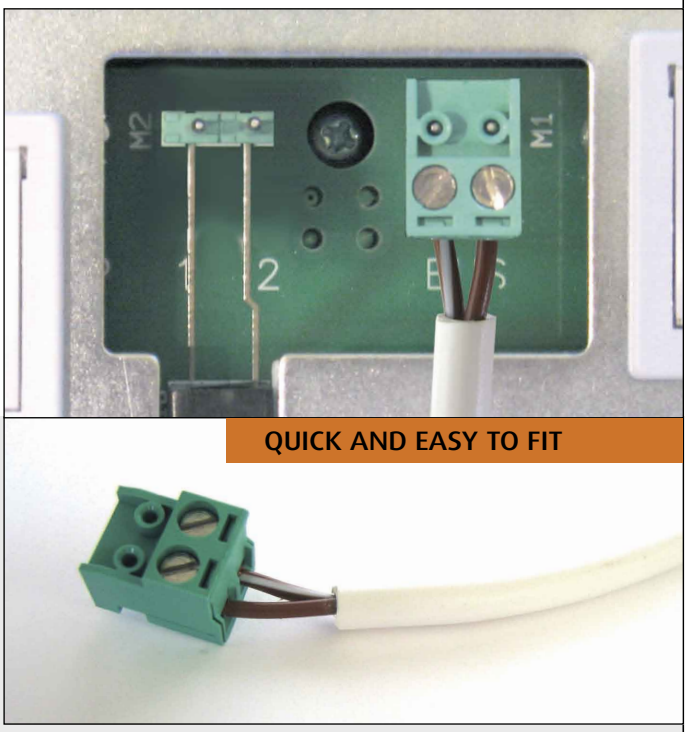
WORKSITE CONVENIENCE AND SAFETY WITH THE PLUG-IN CONNECTOR TERMINAL

- It will be impossible to damage and dirty the devices: with the plug-in connector terminal it is possible to pre-wire the system and install handsets and entrance panels, on completion of work

- The plug-in connector terminal enables you to connect the cable easily and quickly without holding the device in your hand.

QUICK WIRING WHEN RECONSTRUCTING WITH EXISTING PIPES AND CABLES

- You can feed the 2 WIRE cable into the existing cables easily without any masonry work or, in more critical cases, you can use the existing cables without pulling out new ones.



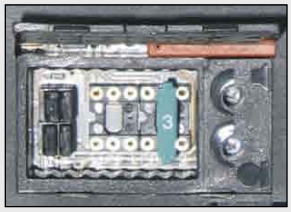
QUICK AND EASY TO FIT

The configuration

The configuration assigns a progressive address to the device within the system and programmes it in a simple, quick and intuitive way.

Entrance panel

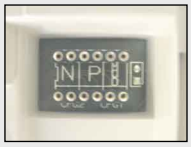
Rear view



Configurator housing

Handset

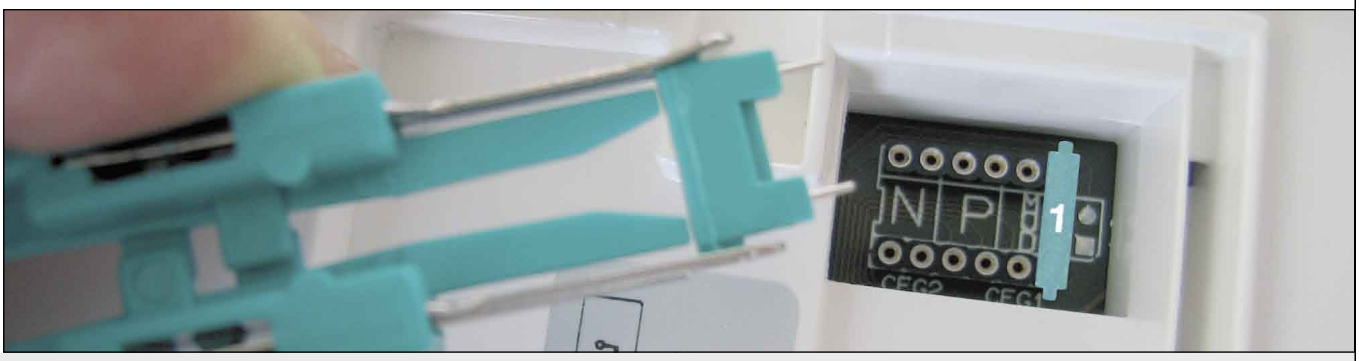
Rear view



Configurator housing

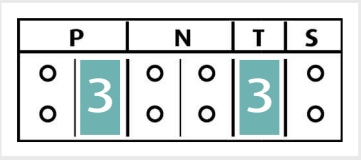
CONFIGURATION IS SIMPLE AND QUICK

- The devices can be configured at your company by one person before being taken to the worksite; in fact, in order to configure them, they do not need to be powered or connected to the system.

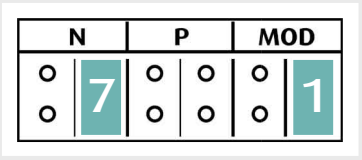


CONFIGURATION IS LOGICAL AND INTUITIVE

- A progressive number assigns the address to the devices within the system
- A well-defined and specific number assigns the functions to the device.



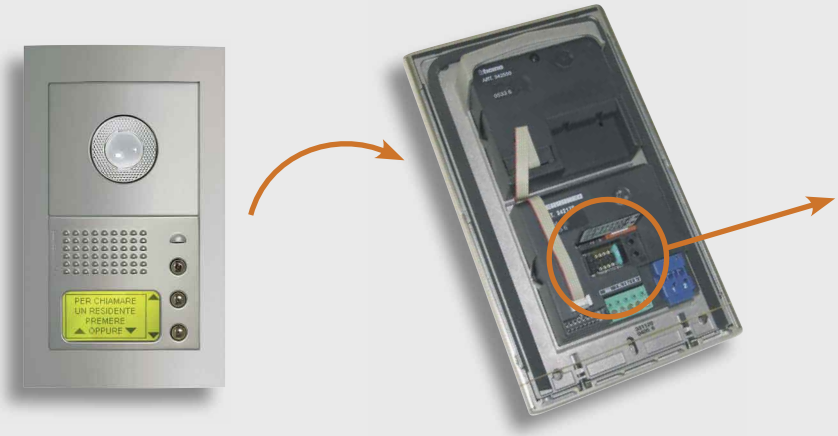
Configuration example
of an entrance panel: P = 3 T=3
the entrance panel 3
controls the associated lock for 3”



Configuration example of a
Handset: N=7 and MOD=1
the handset is number 7 and it
is programmed in mode 1

THE CONFIGURATION CAN BE RECOGNISED WITH TIME

- If a subsequent operation is carried out on the system, the configuration can be recognised visually, even after a long time.



You will just need
to know how
it was configured

Creating the system

In order to create the system, apart from entrance panels and handsets, it is necessary to have just a few accessories which are connected with the customary 2 wires.
The system made by the "2 wire System" is classed as **SELV (Safety Extra - Low Voltage)** due to the fact that it is powered by not grounded safety double insulation independent power supplies, with a maximum voltage of 25Vac (effective) or 60Vdc non-inverted voltage. In addition, all Bticino devices are double insulated.
The conformity to **SELV** classification is only guaranteed subject to **FULL COMPLIANCE** with current installation regulations and with **the GENERAL RULES FOR INSTALLATION** relating to each single device and cable making up the system, as recommended by Bticino.

LEGEND

1. ENTRANCE PANEL: used for making calls to handsets located in the house. It can be an audio or video device (with a colour or black and white camera)

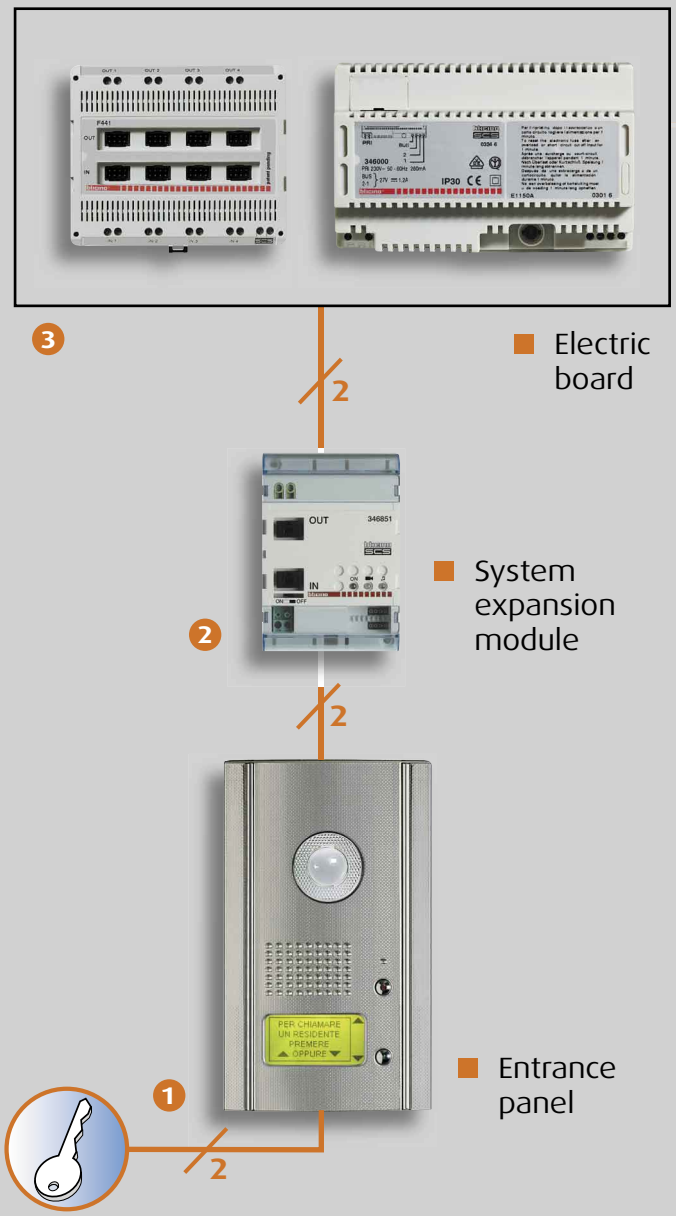
2. SYSTEM EXPANSION MODULE: used for increasing the operational performances of the system, for example the distance between the entrance panel and the handsets

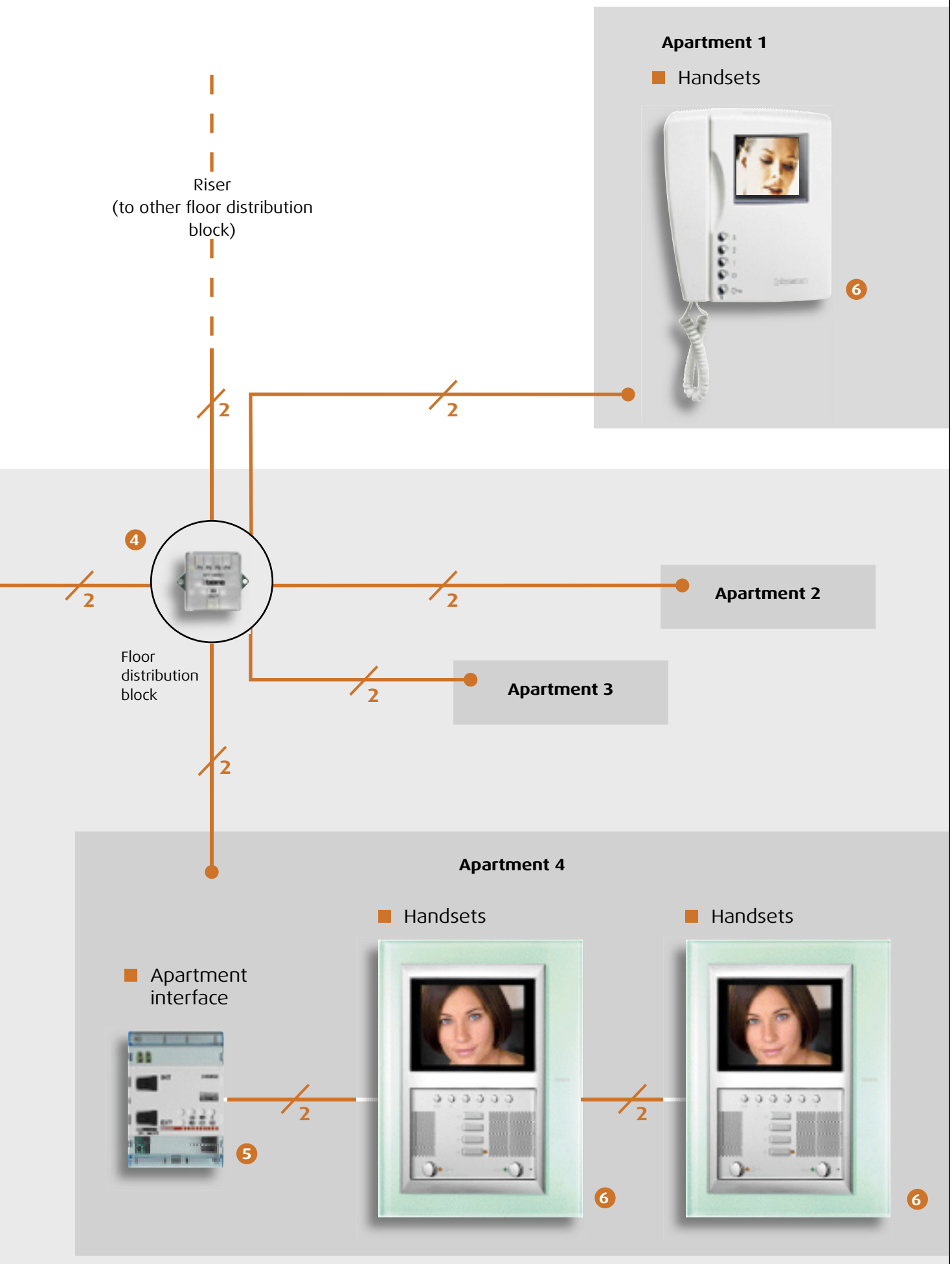
3. ELECTRIC BOARD containing
   - a POWER SUPPLY UNIT: used for supplying power to all the devices in the system
   - an AUDIO - VIDEO NODE: used for mixing the audio and video signals of the external sources (entrance panels, cameras, sound sources...), thus re-transmitting them to the risers (alternatively, a VIDEO ADAPTER can be used)

4. FLOOR DISTRIBUTION BLOCK: used for star-connecting 4 apartments, hence saving a lot of cable. In addition, it lets you reach the maximum extension of the system

5. APARTMENT INTERFACE: used for isolating the apartment from the riser. It is therefore possible to install an independent 2 WIRE system inside the apartment

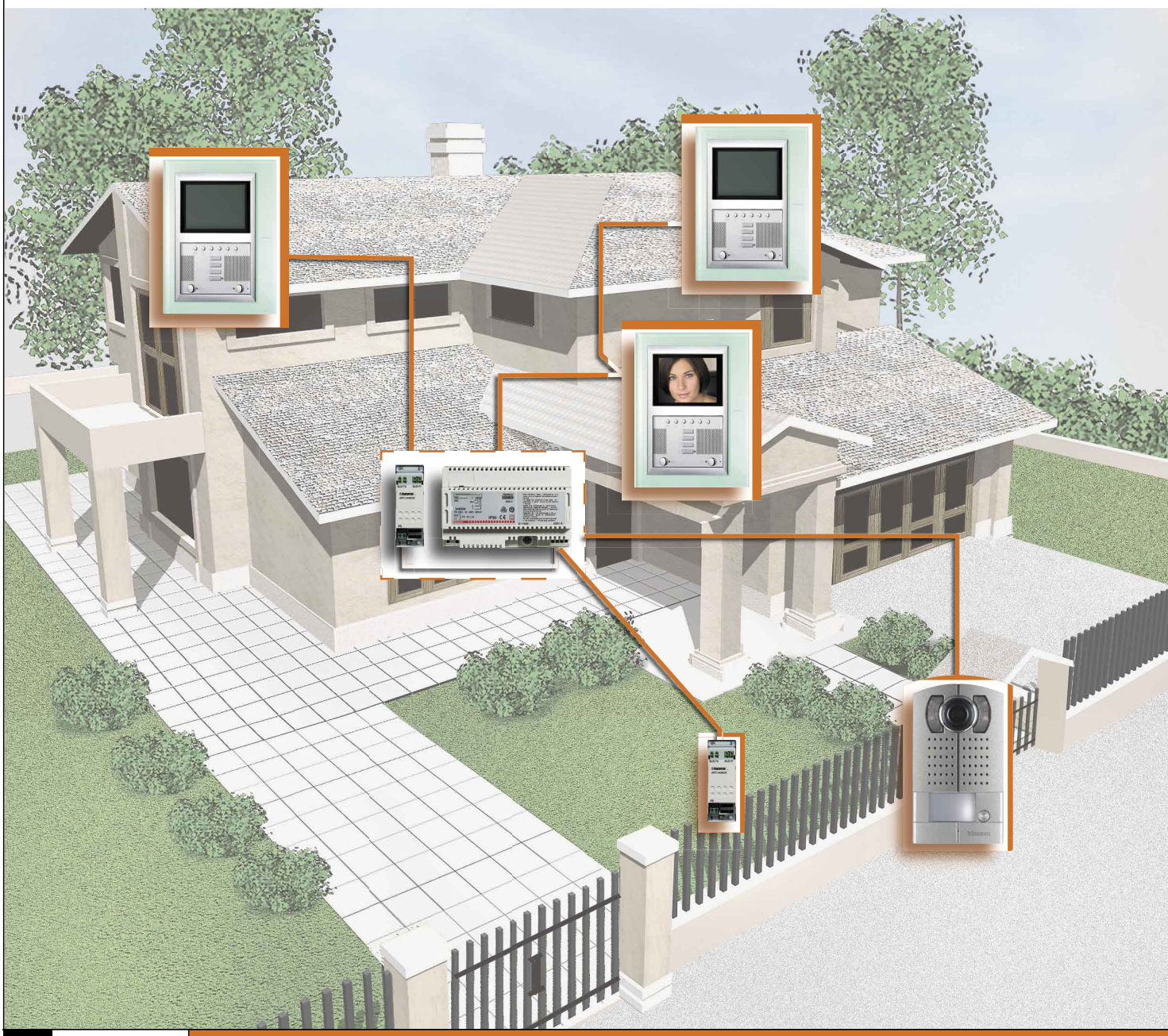
6. HANDSET: audio-video terminal which enables you to receive calls and to see who is calling.

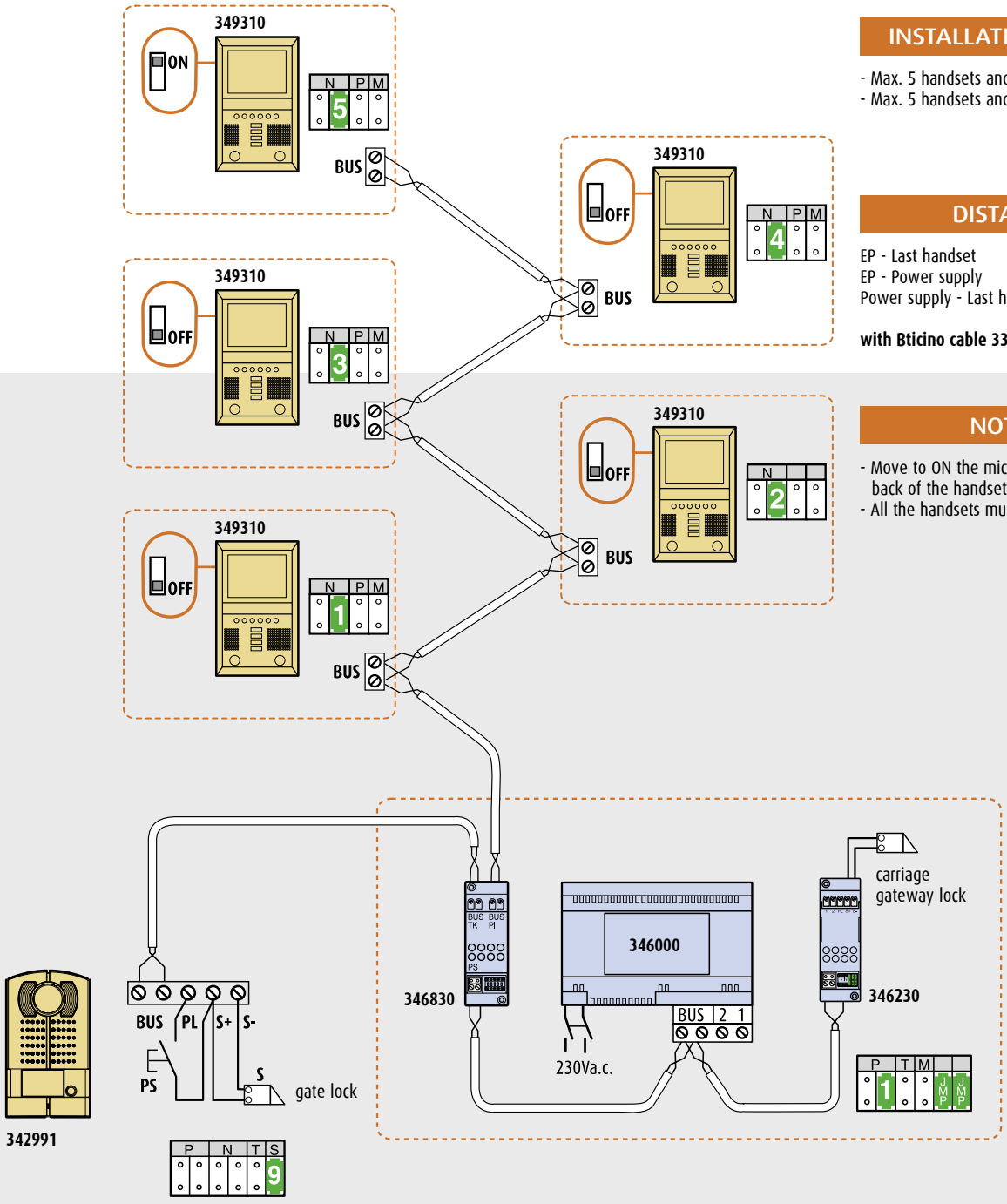



Apartment 1
Handsets
6
Riser
(to other floor distribution block)
2
2
4
2
2
Apartment 2
Floor distribution block
2
Apartment 3
2
Apartment 4
Handsets
Handsets
Apartment interface
2
2
5
6
6

LARGE COUNTRY HOUSE

One-family video door-entry system with an intercom between the handsets.





INSTALLATION LIMITS

- Max. 5 handsets and 2 EP with 346830
- Max. 5 handsets and 4 EP with F441

DISTANCE

EP - Last handset	200m
EP - Power supply	200m
Power supply - Last handset	140m

with Bticino cable 336904

NOTES

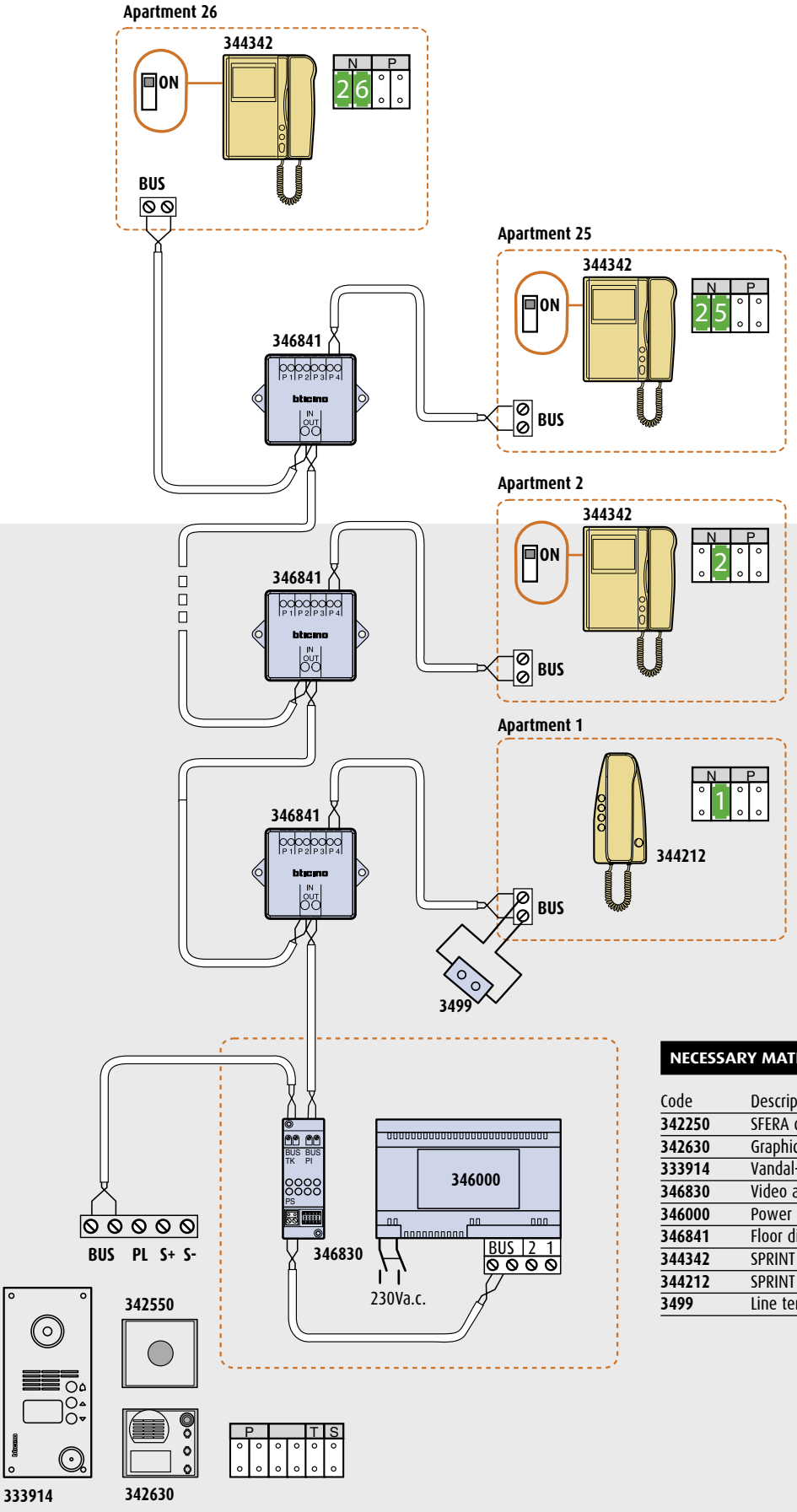
- Move to ON the micro-switch on the back of the handset that ends the line.
- All the handsets must be MASTER

NECESSARY MATERIAL

Code	Description	Quantity
342991	LINEA 2000 METAL video colour	1
346830	Video adapter	1
346000	Power supply	1
346230	Door lock actuator	1
349310	AXOLUTE VIDEO STATION	5
349211	VIDEO STATION surround plate - glass	5

APARTMENT BUILDING

Multi-family audio, video or combined door-entry system.



INSTALLATION LIMITS

- 1 EP, 26 handsets and 7 item 346841
- 2 EP, 18 handsets and 5 item 346841

DISTANCE

EP - Last handset	200m
EP - Power supply	150m
Power supply - Last handset	130m

with Bticino cable 336904

NOTES

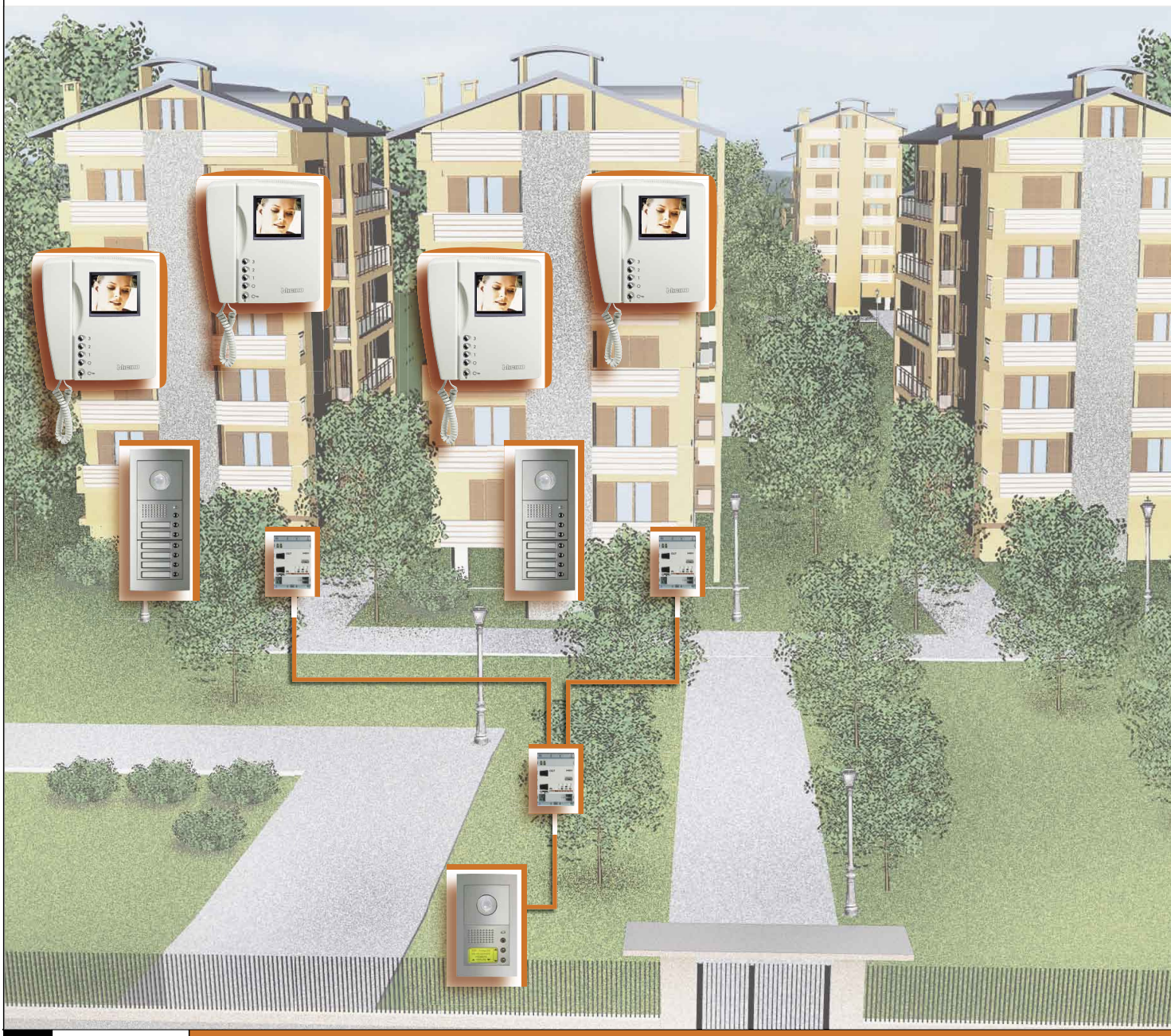
- Move to ON the micro-switch on the back of the audio or video handsets that end the line.
- Provide a line terminator item 3499 for each SPRINT audio handset (344212)

NECESSARY MATERIAL

Code	Description	Quantity
342250	SFERA camera module	1
342630	Graphic call module	1
333914	Vandal-resistant front cover	1
346830	Video adapter	1
346000	Power supply	1
346841	Floor distribution block	7
344342	SPRINT video	20
344212	SPRINT audio handset	6
3499	Line terminator	6

COMPLEXES OF APARTMENT BLOCKS

Multi-family system set up in several apartment buildings, a building entrance panel and extended distances.



INSTALLATION LIMITS

- 39 risers
- for each riser
  1 riser EP and 64 handsets or 100 apartment interfaces

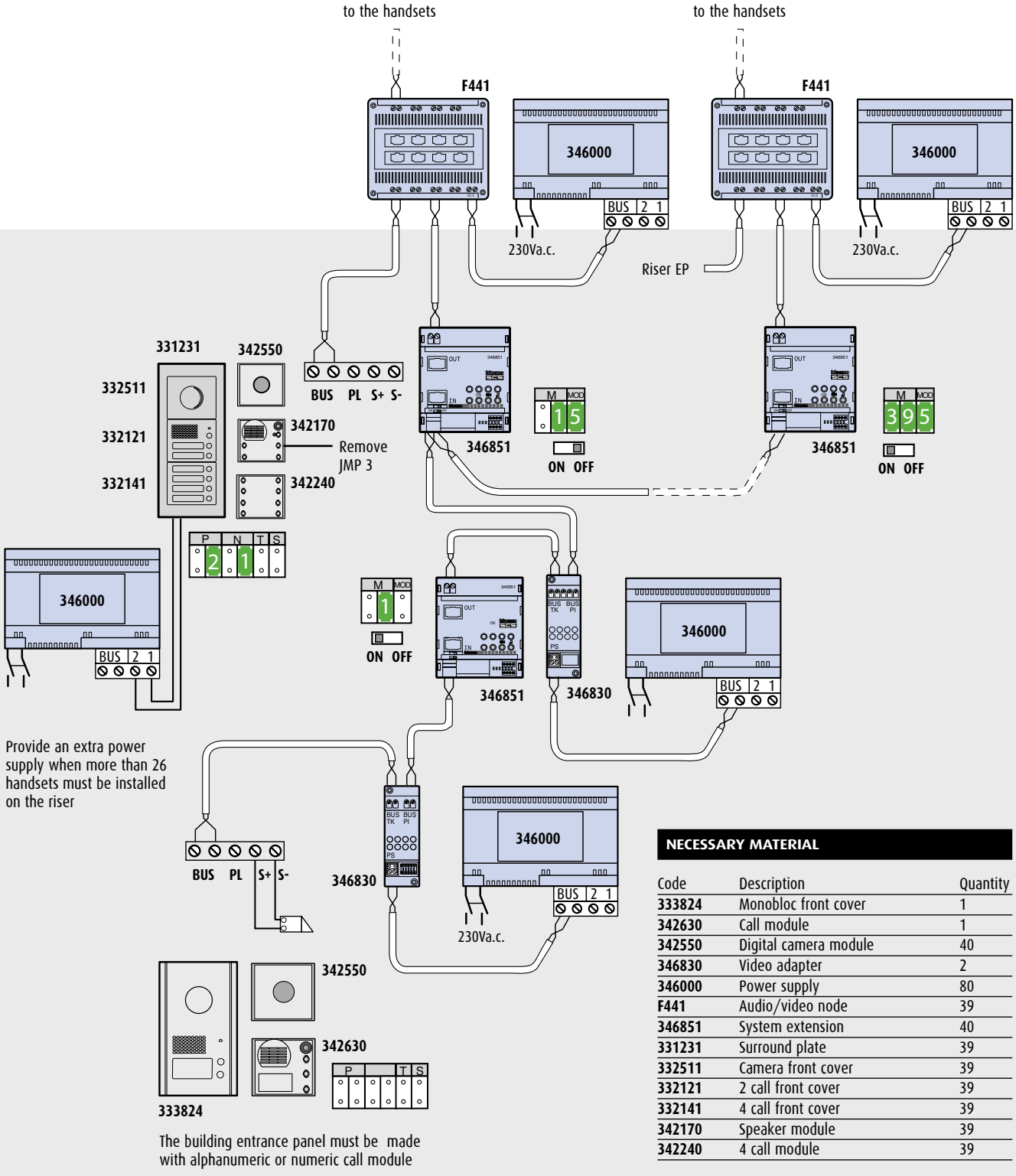
DISTANCE

EP - Last handset of the last riser 600m**

** see “general rules for installation” to subdivide the distance on the various lines

NOTES

- Move to ON the micro-switch on the back of the system expansion module that ends the line.
- Configure the riser EP by missing one configuration step (e.g. P = 2, P = 4, P = 6...)
- Remove the JMP 3 of the riser entrance panels and power them locally.
- Connect max. 26 handsets on each node output

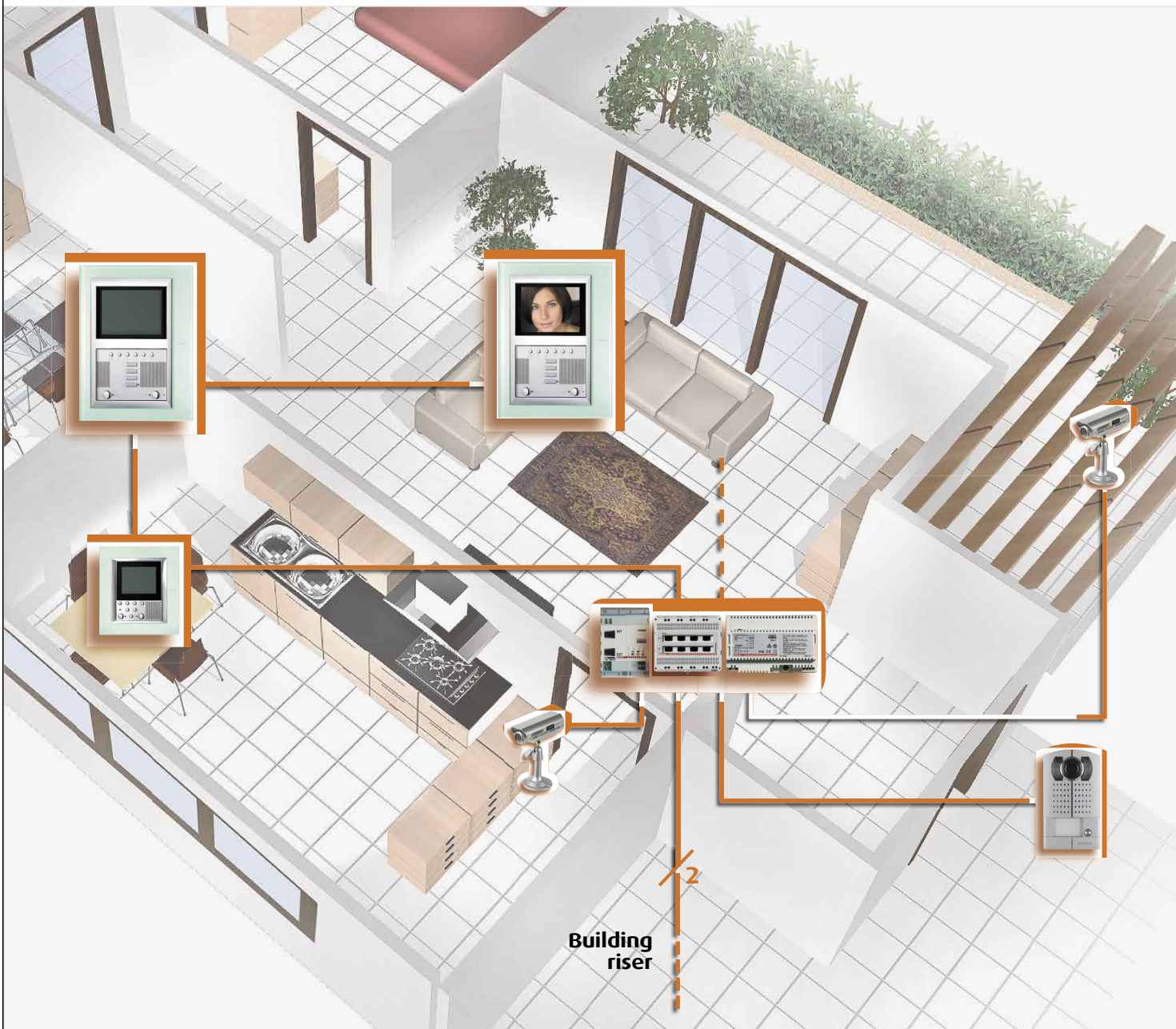


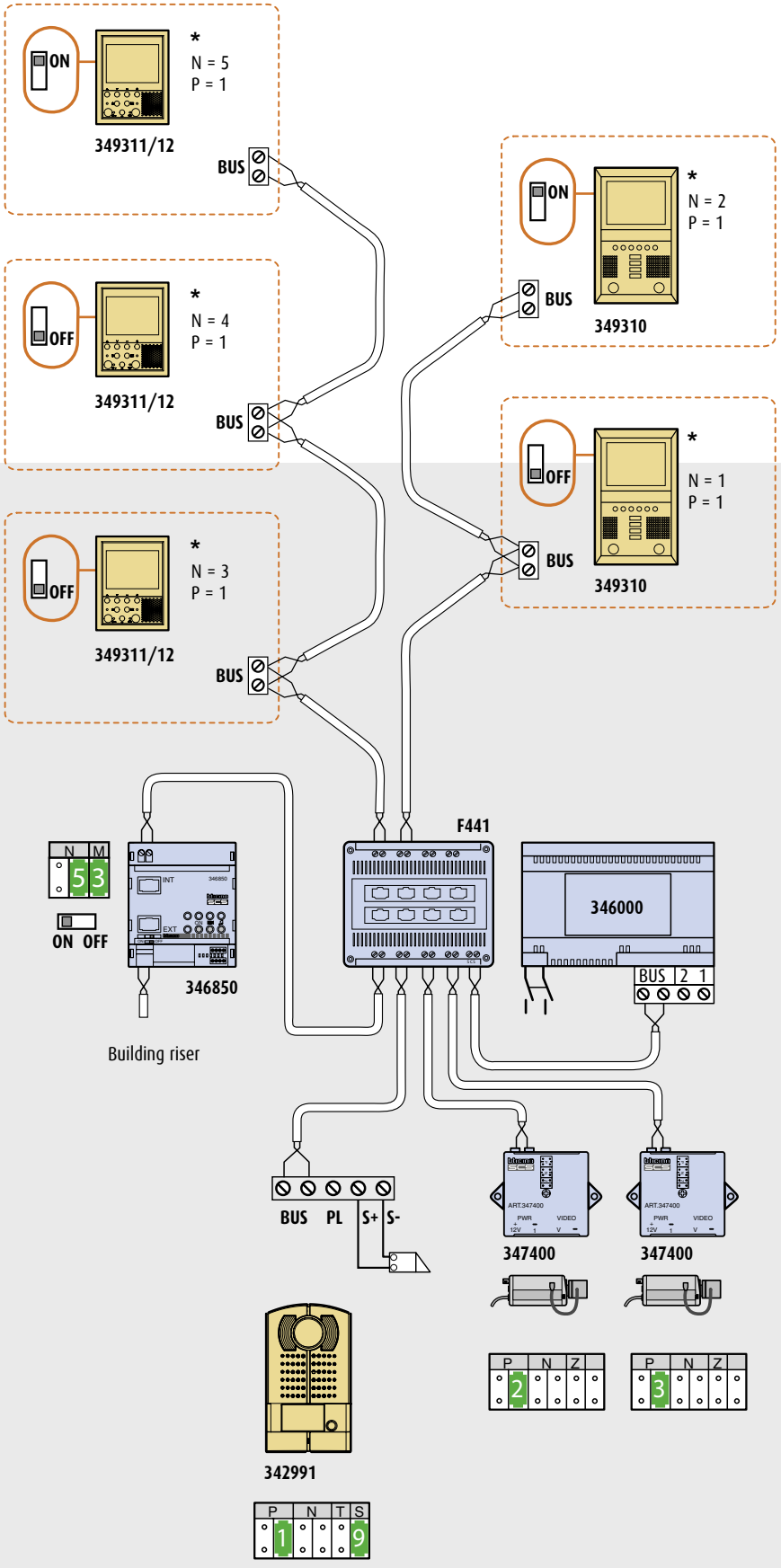
NECESSARY MATERIAL

Code	Description	Quantity
333824	Monobloc front cover	1
342630	Call module	1
342550	Digital camera module	40
346830	Video adapter	2
346000	Power supply	80
F441	Audio/video node	39
346851	System extension	40
331231	Surround plate	39
332511	Camera front cover	39
332121	2 call front cover	39
332141	4 call front cover	39
342170	Speaker module	39
342240	4 call module	39

THE APARTMENT

Multi-family system, inside an apartment building, with private cameras inside the apartment.





INSTALLATION LIMITS

- 5 handsets and 3 EP

DISTANCE

EP - Last handset	200m
EP - Power supply	200m
Power supply - Last handset	140m

with Bticino cable 336904

NOTES

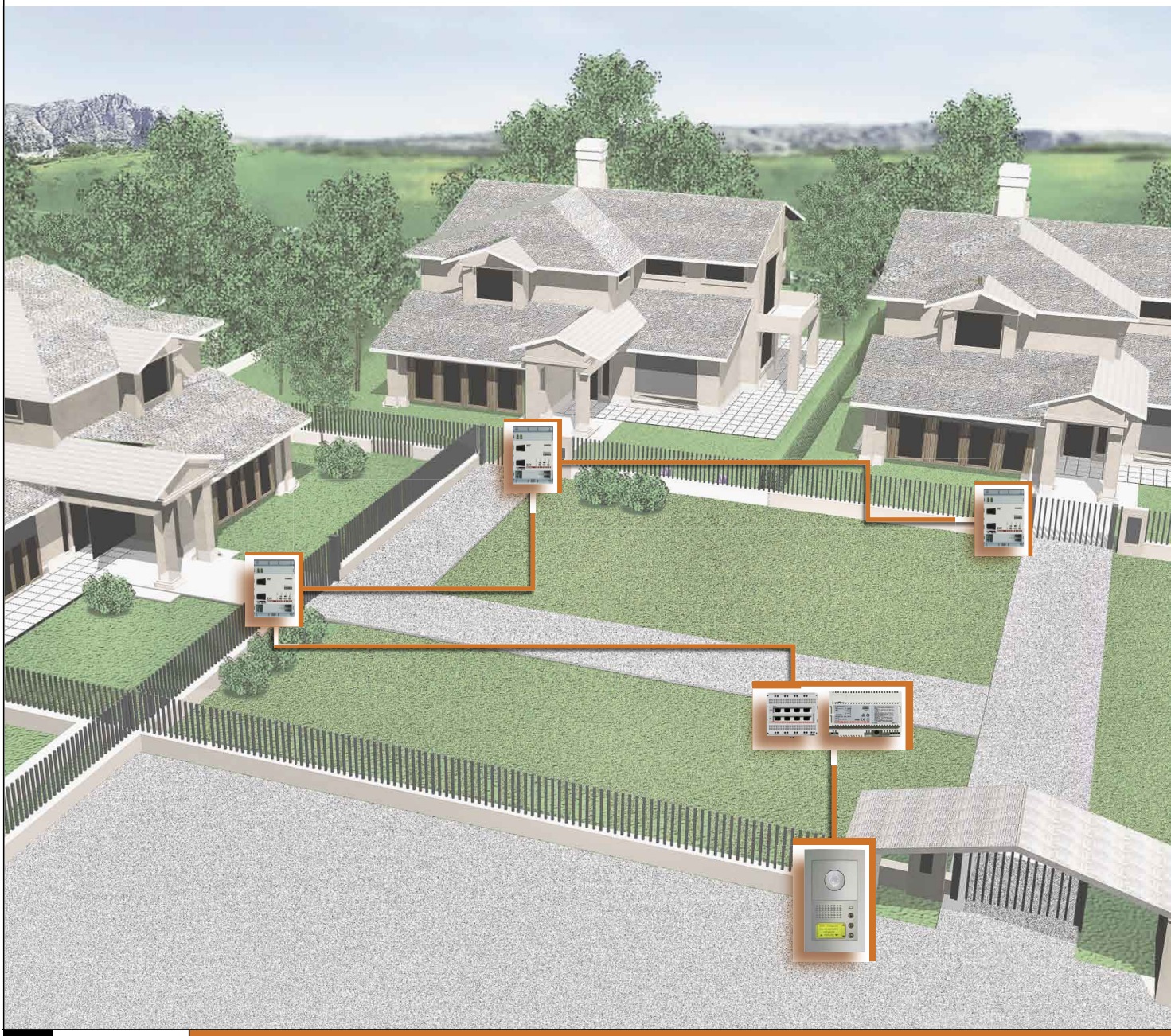
- Move to ON the micro-switch on the back of the handsets that end the line.
- Configure the entrance panels and the apartment cameras, starting from P = 1.
- We recommend that the handsets (*) AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY, POLYX MEMORY STATION and POLYX VIDEO DISPLAY are configured using the configuration wizard or using the set up SW, in order to switch common or apartment cameras on.

NECESSARY MATERIAL

Code	Description	Quantity
346850	Apartment interface	1
342991	LINEA 2000 METAL	1
347400	2 wire coaxial interface	2
F441	Audio/video node	1
346000	Power supply	1
349310	AXOLUTE VIDEO STATION	2
349311/12	AXOLUTE VIDEO DISPLAY	3

COMPLEXES OF LARGE COUNTRY HOUSES

Multi-family system with single independent dwellings and at least one common access point.



INSTALLATION LIMITS

- 1 EP, 99 apartment interfaces

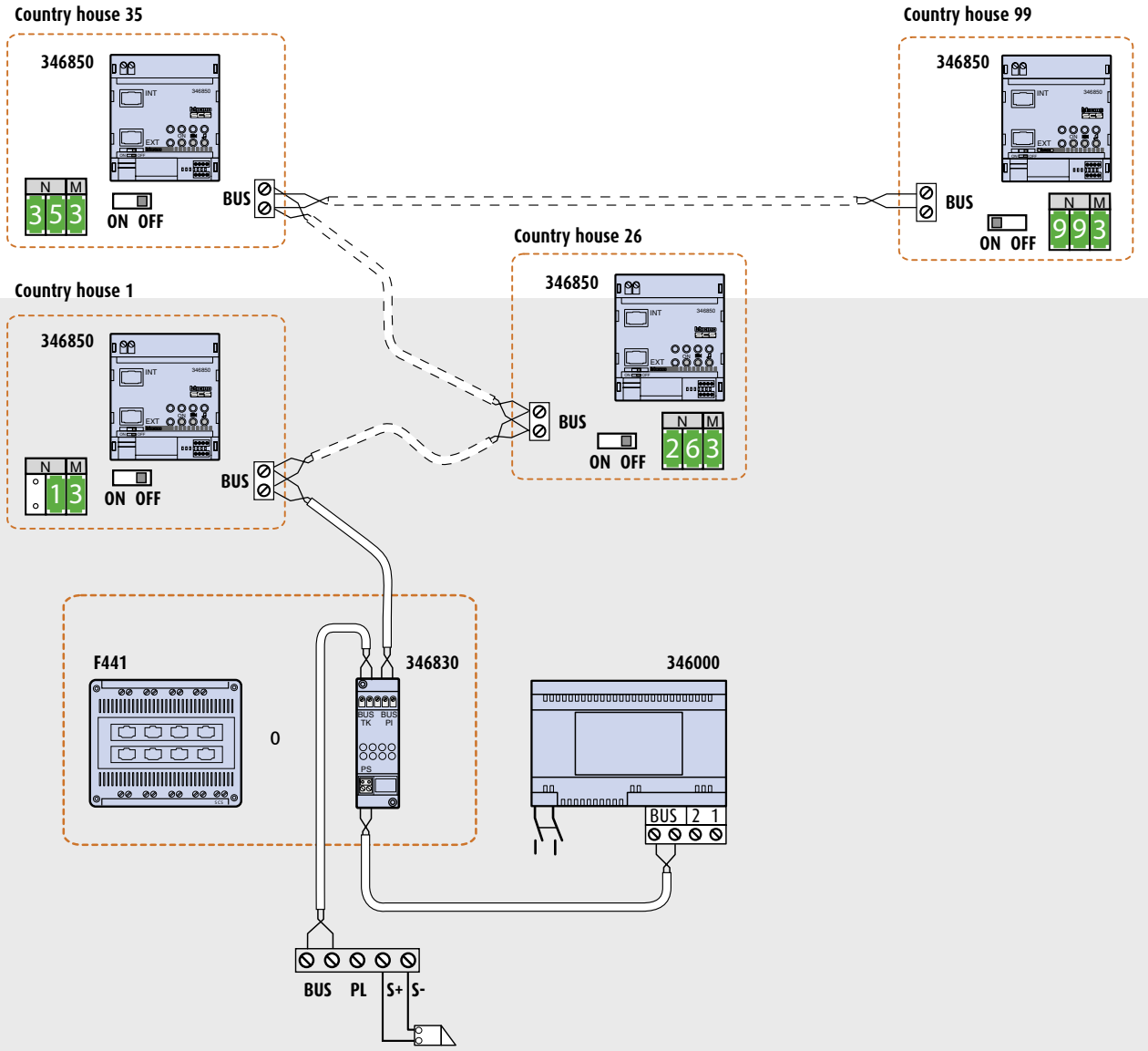
DISTANCE

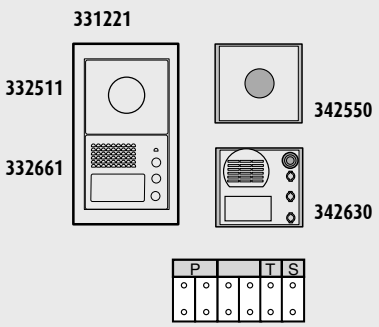
EP - Last apartment handset 400m*

* see “general rules for installation” to subdivide the distance on the various lines

NOTES

- Move to ON the micro-switch of the interfaces that end the line.





NECESSARY MATERIAL

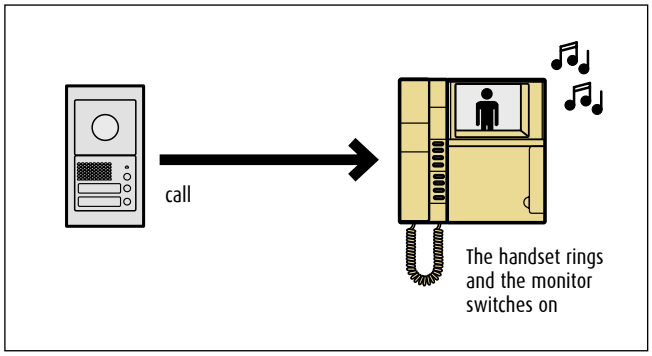
Code	Description	Quantity
332511	Camera front cover	1
332661	Graphic call front cover	1
331221	Entrance panel surround plate	1
342550	Camera module	1
342630	Graphic call module	1
346830	Video adapter	1
366000	Power supply	1
346850	Apartment interface	99

System functions

THE CALL

Pressing the call pushbutton on the entrance panel, the system generates a signal that is only recognised by the handsets the call is addressed to **(the call will have to be answered within 30 seconds from the moment the pushbutton is pressed)**.

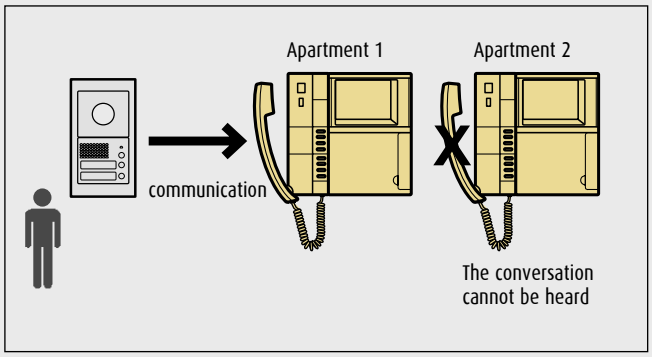
Each handset is configured in a unique specific way. This ensures that the call sent by the entrance panel only reaches the desired handset. When the call is received by the handset, the handset will ring. If a video system is installed, the video handset monitor will also switch on.



The communication with the entrance panel is established by lifting the handset **(max. duration of the communication is 1 minute)**. When the handset is replaced, communication is interrupted and the monitor is automatically switched off.

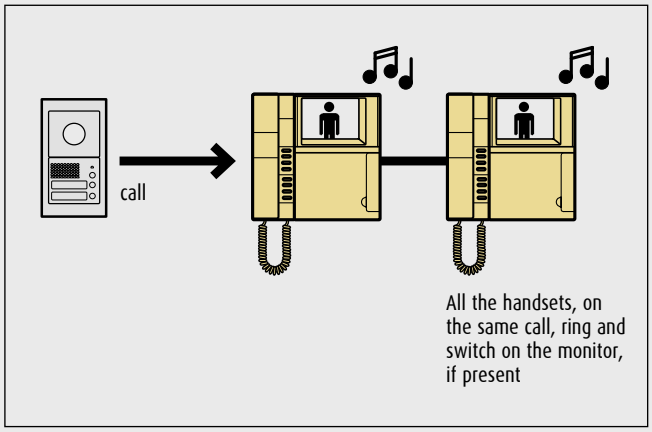
CONVERSATION SECRECY

During the conversation between the entrance panel and the handset, all external panels and handsets that are not involved in the conversation are temporarily excluded in order to guarantee the privacy of door entry and video door entry conversations. When calling from an entrance panel that is temporarily excluded, a time-out tone will be heard, to indicate that the entrance panel is momentarily engaged.



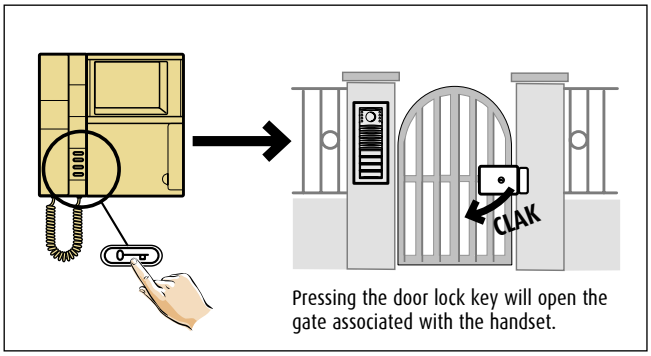
SIMULTANEOUS SWITCHING ON

With the 2 wire video handsets, simultaneous switching on of the monitor is also possible: upon arrival of the call, all handsets ring and the monitors of all video handsets switch on. When the call is answered, only the monitor of the video handset communicating with the entrance panel will remain on.
For this function to operate correctly, with the exception of one, all video handsets must be connected to an additional power supply.



DOOR LOCK PUSHBUTTON

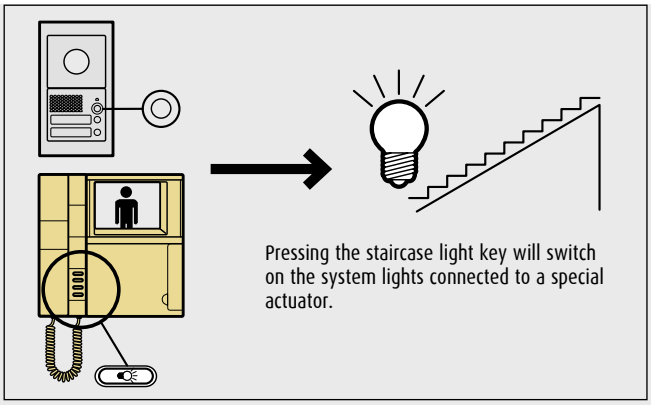
The handsets are fitted with a door lock pushbutton. Pressing this pushbutton will open of one of the door locks of the system.
With the system at rest, the pressure of the pushbutton will cause the opening of the door lock of the entrance panel associated with the handset during the P configuration of the handset itself. On the other hand, if the pushbutton is pressed during the call, the door lock associated to the entrance panel making the call will be opened.



Pressing the door lock key will open the gate associated with the handset.

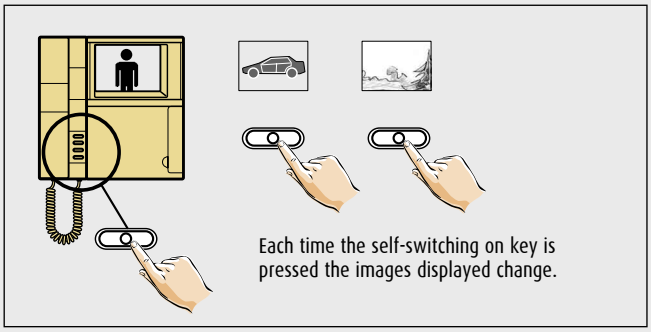
STAIRCASE LIGHT PUSHBUTTON

Entrance panels and handsets are fitted with a staircase light pushbutton. Pressing this pushbutton, will activate a relay for timed lighting or gate opening. This function is only possible if a specific actuator has been installed and configured.


Pressing the staircase light key will switch on the system lights connected to a special actuator.

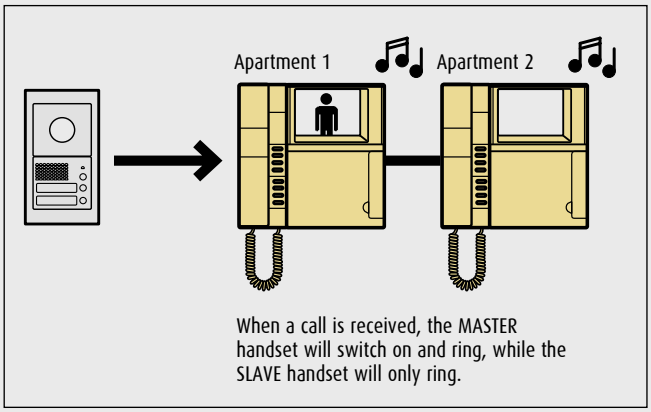
SELF-SWITCHING ON PUSHBUTTON

By pressing the self-switching on pushbutton while the handset is at rest, a connection will be established with the entrance panel associated with the handset during the P configuration of the handset itself.
If a video system is fitted, video and audio monitoring of the entrance panel is possible. Pressing repeatedly on the self-switching on pushbutton, will scroll through the various entrance panels and the cameras connected to the system.


Each time the self-switching on key is pressed the images displayed change.

MASTER-SLAVE FUNCTION

In multi-family installations, with the exception of SPRING and SWING systems, all video handsets can be configured with the MASTER/SLAVE function: upon arrival of the call all handsets will ring, but only the monitor of the video handset configured as MASTER will switch on. By pressing a self-switching on key from a SLAVE, the handset master monitor will switch off and the monitor of that SLAVE will come on (although communication with the entrance panel will not necessarily be established). However, if the handset of a SLAVE unit is lifted, the MASTER monitor will switch off and audio-video communication with the EP will be established. The SPRINT and SWING handsets enable multiple video connection, but only when they are switched on at the same time.



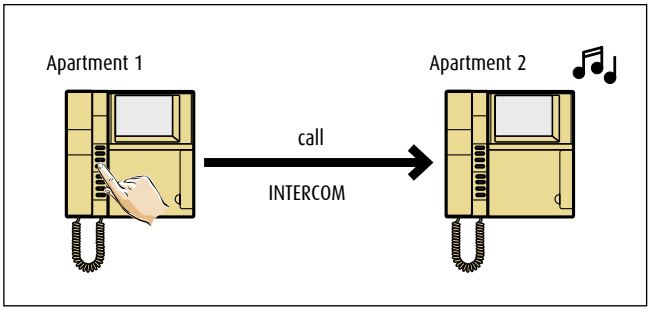
When a call is received, the MASTER handset will switch on and ring, while the SLAVE handset will only ring.

System functions

INTERCOM

The 2 wire system offers an intercom function, with up to **3 minutes** communications between handsets:
- FROM DIFFERENT APARTMENTS
- WITHIN THE SAME APARTMENT

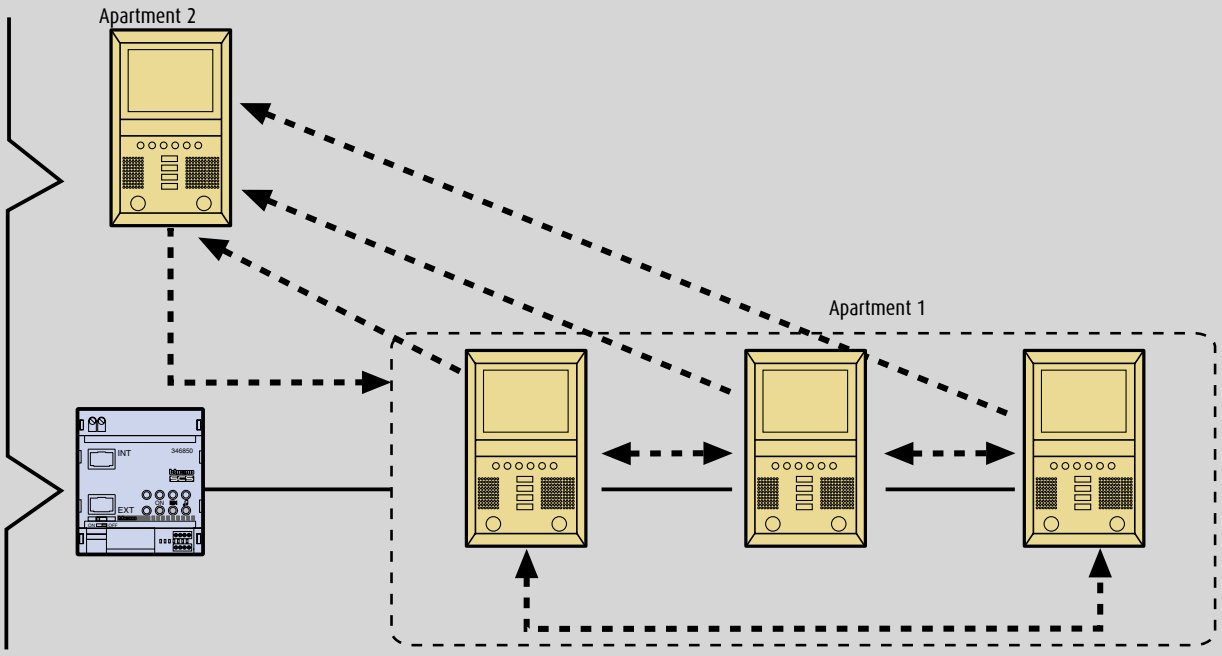
- If the apartment has an apartment interface - item 346850 - or is a one- family apartment, each handset of the apartment can be called individually. The INTERCOM connection can be established at the same time as other external connections.
- If the apartment does not have an apartment interface - item 346850 - any apartment handset can call all other apartment handsets. The INTERCOM connection will not occur at the same time as external connections. Any call received by an EP, even to any other apartment, will terminate the INTERCOM connection.



For those systems where the 8/2 interface is used (item 346150), the intercom communication time is reduced to **1 minute and 30 seconds**, to avoid keeping the riser busy for too long. For systems with 2 wire/PABX interface (item 346810), the intercom time between the telephone devices and other apartments is **1 minute**.

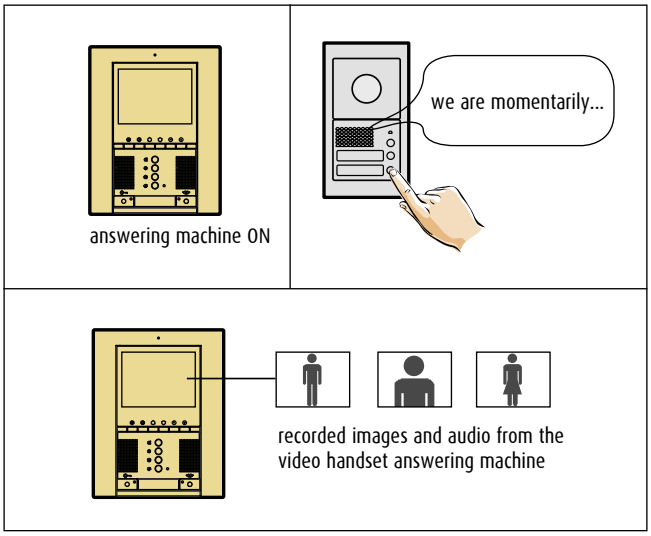
The intercom function is not available with **SPRINT** audio and video handsets.

Item 346850 apartment interface enables the INTERCOM function between the devices within the one apartment and the various apartments fitted with advanced handsets. Traditional handsets offer the intercom function within the apartment **or** between the apartments.



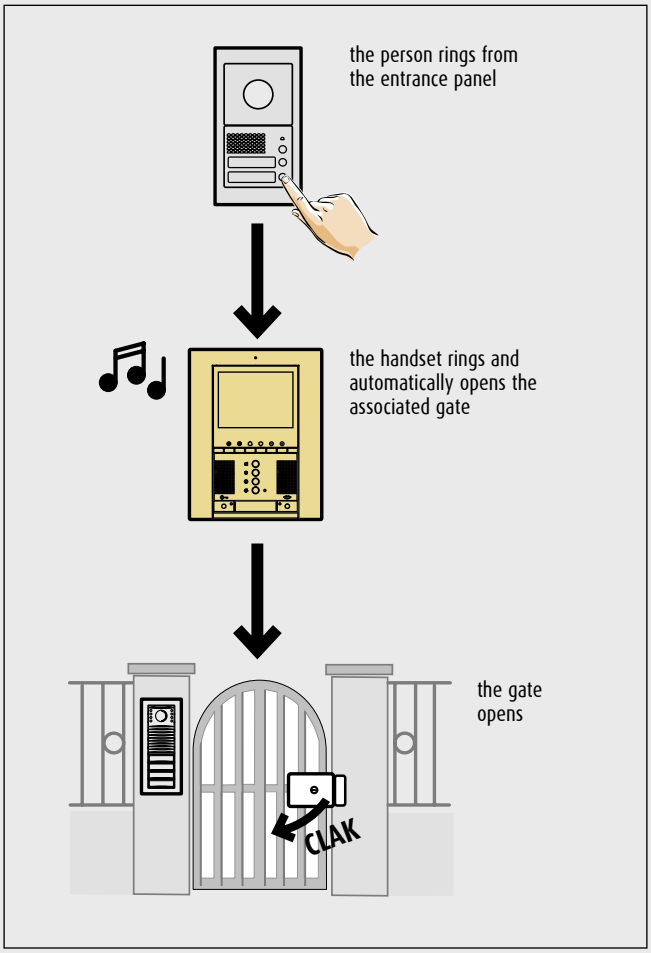
ANSWERING MACHINE FUNCTION

When the handset is fitted with a video answering machine function, voice and images of a call from the entrance panel can be recorded.
It is also possible to record a message, which will then be played to the entrance panel when the call is made.



OFFICE FUNCTION

This function is used mainly in the service sector (offices, doctors, professional) and in all those situations, where the opening of the gate or entrance door without physical interaction with the handset is necessary.
When someone calls from the entrance panel, the handset will ring and the associated gate will open automatically, without the need for someone to press the door lock key on the handset itself. When the function is activated, the video handset red LED will also flash.
The office function and the door status function cannot be activated at the same time.
This function can be set with SWING and advanced handsets.



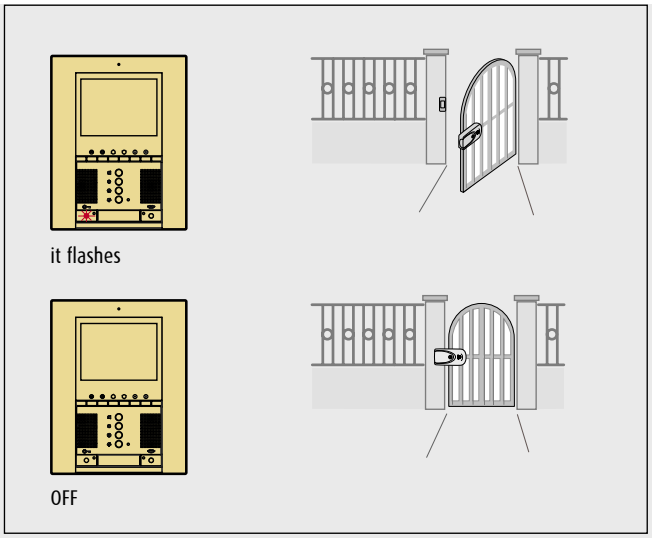
System functions

DOOR STATUS FUNCTION

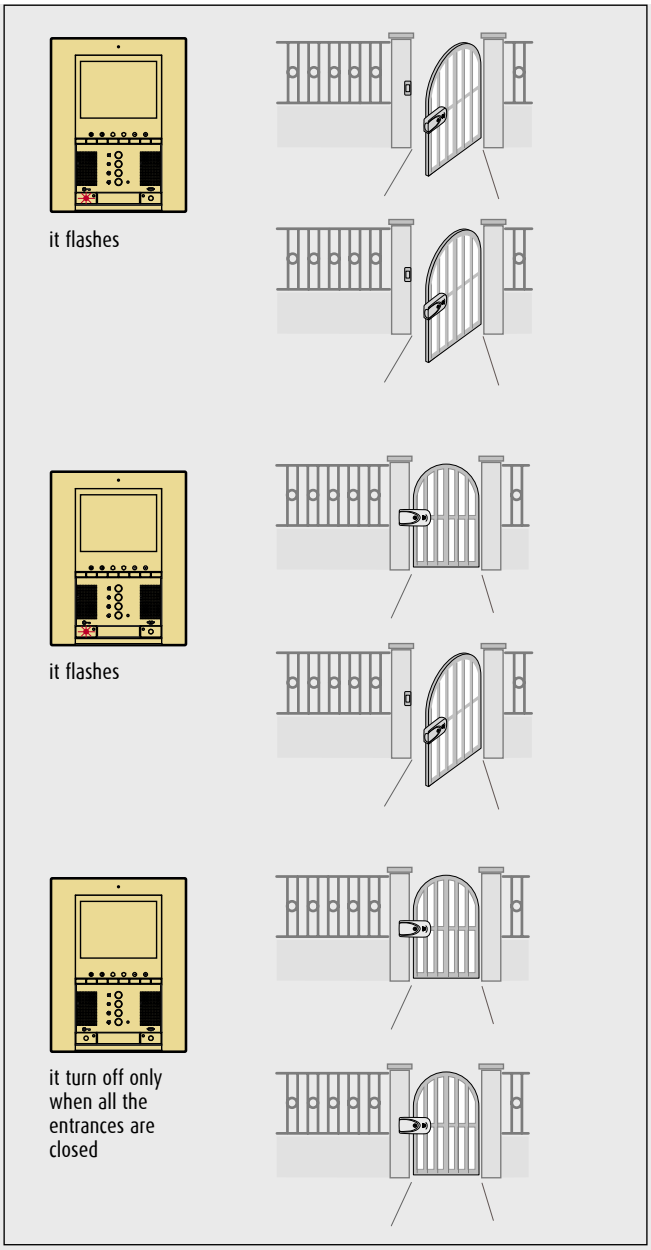
By using the handsets fitted with LED, the door lock actuator item 346230 and the CISA ELETTRIKA door lock (with the accessory item 346240), the status of doors and gates can be controlled.
When the gate is open, the red LED will flash. When the gate is closed, the LED is off.

If 2 or more entrances are associated, the LED will be off when all entrances are closed and will flash when at least one entrance is open.
The DOOR STATUS FUNCTION and the OFFICE FUNCTION cannot be activated at the same time.

ONLY 1 ENTRANCE

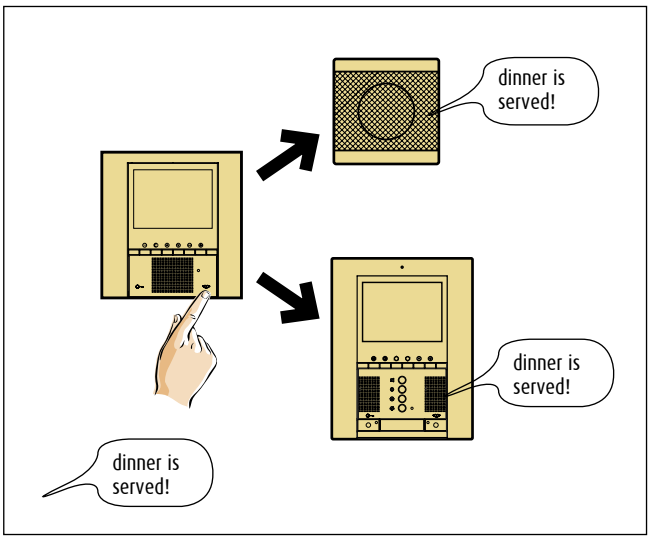


SEVERAL ENTRANCES



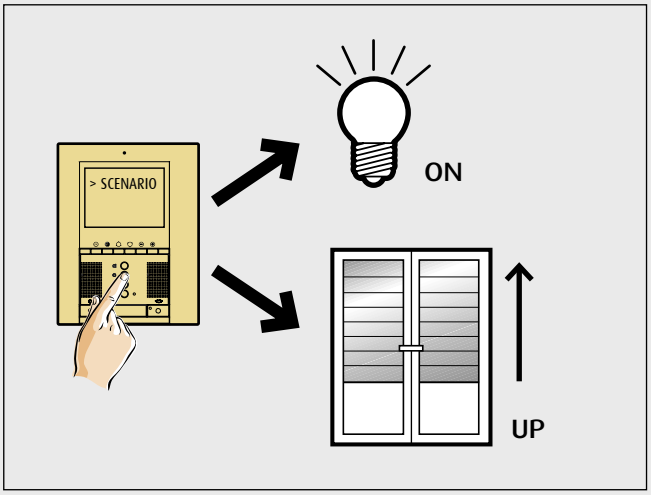
PAGER FUNCTION IN SYSTEMS INTEGRATED WITH SOUND SYSTEM

By pressing the conversation pushbutton on the VIDEO STATION, PIVOT STATION, VIDEO DISPLAY and PIVOT DISPLAY handsets or the pushbutton configured for this function on the SWING and PIVOT handsets and video handsets, a message can be forwarded through all the Bticino 2 wire sound system loudspeakers.



SCENARIO CONTROL FUNCTION IN SYSTEMS INTEGRATED WITH AUTOMATION SYSTEM

From the audio handsets or video handsets, it is possible to recall the scenarios saved in the F420 scenarios module or in the scenario control unit.

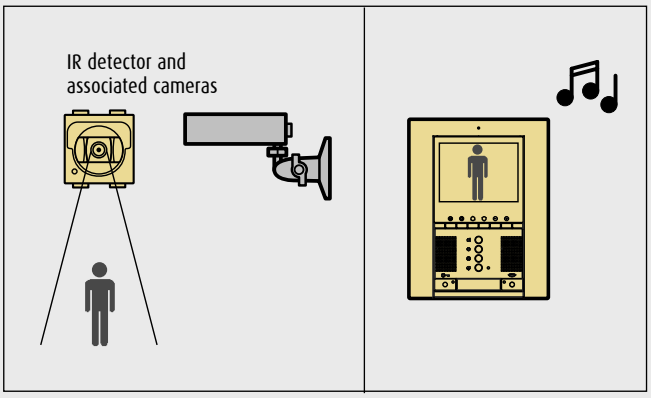


MONITORING AND ALARM CONTROL, TEMPERATURE REGULATION AND SOUND SYSTEM FUNCTIONS

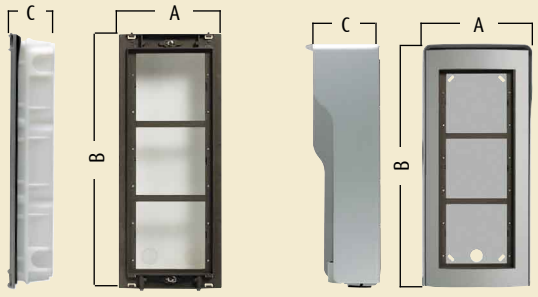
Using the monitoring display menu of the handsets, it is possible to control the MY HOME applications installed in the house.

SWITCHING ON CAMERA FUNCTION IN SYSTEMS INTEGRATED WITH THE BURGLAR ALARM SYSTEM

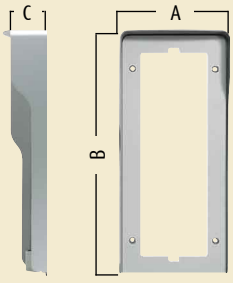
It is possible to associate a zone of the burglar alarm to the cameras. When an alarm situation is detected, the images recorded by the camera are displayed on the video handset.



SFERA entrance panels
Mechanics and function modules



331130 331331



331431

342510
b/w camera
342550
colour camera

342630
graphic display
speaker module

342150
speaker module + 2
pushbuttons for audio
systems - max 26 handsets

342170
speaker module + 2
pushbuttons for audio
and video systems

342240
4 pushbuttons

342640
additional alphanumeric
keypad

342610
numeric digital call

332650
code lock

342200
nameplate

FLUSH-MOUNTING BOX WITH CHASSIS

		Dimensions (mm)		
Item	no. of mod.	A	B	C
331110	1	117	123	45
331120	2	117	214	45
331130	3	117	306	45

WALL ENCLOSURES WITH RAINSHIELDS

			Dimensions (mm)		
Item	no. of mod.	no. of rows	A	B	C
331311	1	1	155	160	92
331321	2	1	155	255	92
331331	3	1	155	360	92
331341	4	2	290	255	92
331361	6	2	290	360	92
331391	9	3	430	360	92

RAINSHIELDS

			Dimensions (mm)		
Item	no. of mod.	no. of rows	A	B	C
331411	1	1	151	151	50
331421	2	1	151	242	50
331431	3	1	151	334	50
331441	4	2	290	242	50
331461	6	2	290	334	50
331491	9	3	430	334	50

SFERA entrance panels
Vandal-resistant front covers

333714

333914

NOTE: the vandal-resistant front covers must be used only with the SFERA function modules:

342510 b/w camera
342550 colour camera

342630

SFERA entrance panels
Modular front covers

Front covers

33210...
speaker module

33211...
speaker module +
1 pushbutton

33212...
speaker module +
2 pushbuttons

33223...
3 pushbuttons

33224...
4 pushbuttons

33220...
nameplate

33251...
camera

33291...
blank module

33295...
blank module

33260...
alphanumeric digital
call

33265...
code lock and
numeric call

33267...
additional keypad

33266...
graphic display speaker
module

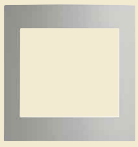
1 Allmetal

3 Alugray

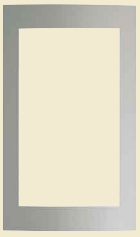
6 Dark Ochre

7 Wagon Green

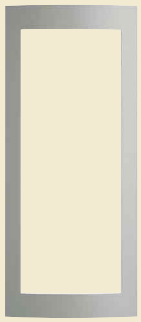
Replace the dots of the item code with the number of the required colour



33121...
1 vertical
module



33122...
2 vertical
modules



33123...
3 vertical modules

SFERA entrance panels
Monobloc front covers

33312...
2 pushbuttons or
alphanumeric call module

33311...
1 pushbutton

33361...
code lock

33310...
10 pushbuttons

33318...
8 pushbuttons

33320...
12 pushbuttons

33386...
6 pushbuttons

33384...
4 pushbuttons

33393...
alphanumeric call

33382...
2 pushbuttons or
alphanumeric call module

33381...
1 pushbutton

33372...
alphanumeric
and/or numeric call

33314...
4 pushbuttons

33316...
6 pushbuttons

33328...
8 pushbuttons

4 Allsteel

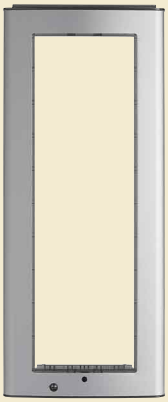
5 Allbrass

Replace the dots of the item code with the number of the required colour:

MINISFERA entrance panels
Function modules and accessories


332710


332711


332721


342702


342708


342704

MINISFERA MODULAR PUSHBUTTON PANELS

Item	Description
332710	flush-mounting box
332711	surface-mounting box
342702	speaker module set up for max. 6 calls
342708	speaker + camera module set up for max. 4 calls
342704	expansion module set up for max. 10 calls
332721	surround plate colour aluminium common to all modules (speaker or expansion module)
332726	surround plate colour titanium common to all modules (speaker or expansion module)

COMMON ACCESSORIES

Item	Description
332712	narrow key 1 module with name label
332715	1 module false key (blank)
332756	1 module false key (blank) brown
332723	1 module false key (blank) grey
332736	audio grid colour brown
332746	video grid colour brown
332733	audio grid colour grey
332743	video grid colour grey
332713	wide key 2 modules with name label
332714	2 modules nameplate with label

LINEA 2000 and LINEA 2000 METAL entrance panels


342911


342951


342971


342991

LINEA 2000 PUSHBUTTON PANELS

Item	Description
342911	LINEA 2000 audio aluminium entrance panel- one-family
342921	LINEA 2000 audio aluminium entrance panel - two-family
342951	LINEA 2000 video b/w aluminium entrance panel - one-family
342961	LINEA 2000 video b/w aluminium entrance panel - two-family

LINEA 2000 METAL PUSHBUTTON PANELS

Item	Description
342971	LINEA 2000 METAL audio entrance panel - ZAMAK finish - one-family
342972	LINEA 2000 METAL audio entrance panel - ZAMAK finish - two-family
342981	LINEA 2000 METAL video entrance panel with b/w camera - ZAMAK finish - one-family
342982	LINEA 2000 METAL video entrance panel with b/w camera - ZAMAK finish - two-family
342991	LINEA 2000 METAL video entrance panel with colour camera - ZAMAK finish - one-family
342992	LINEA 2000 METAL video entrance panel with colour camera - ZAMAK finish - two-family

AXOLUTE handsets

349310

349210

349211

349212

349311

349312

AXOLUTE VIDEO STATION

Item	Description
349310	AXOLUTE speaker phone video handset with colour 5.6″ monitor and OSD menu. To be completed with dedicated surround plate in glass, wood or aluminium
349210	surround plate in satin-finished aluminium
349211	surround plate in KRISTALL glass
349212	surround plate in TEAK wood

AXOLUTE VIDEO DISPLAY

Item	Description
349311	AXOLUTE speaker phone video handset with colour 2.5″ display and OSD menu. To be completed with surround plate for AXOLUTE 506E - light
349312	as above - dark

POLYX and PIVOT handsets

344172

344162

344032

344102 b/w
344122 colour

POLYX MEMORY STATION

Item	Description
344172*	wall-mounting speaker phone video handset with 5.6″ monitor, OSD menu, audio/video memory and video door entry answering machine. Available in WHITE finish.

POLYX VIDEO DISPLAY

Item	Description
344162	wall-mounting video handset with colour 3.5″ monitor and OSD menu. Available in WHITE finish.

PIVOT HANDSETS

Item	Description
344032	PIVOT audio handset which can be fitted with 4 key small block
344033	as above - anthracite
344034	as above - tech
344102	PIVOT video handset with b/w monitor which can be fitted with 4 key small block
344103	as above - anthracite
344104	as above - tech
344122	PIVOT vieo handset with colour monitor which can be fitted with 4 key small block
344123	as above - anthracite
344124	as above - tech

*For availability, please contact the Bticino sales technicians

SWING handsets

344702

344822 colour
344802 b/w

SWING HANDSETS

Item	Description
344702	audio handset - colour ash
344703	audio handset - colour cord
344704	audio handset - colour white
344802	video handset with b/w monitor - colour ash
344803	video handset with b/w monitor - colour cord
344804	video handset with b/w monitor - colour white
344822	video handset with colour monitor - colour ash
344823	video handset with colour monitor - colour cord
344824	video handset with colour monitor - colour white

SPRINT handsets

344202
344212

344342

SPRINT HANDSETS

Item	Description
344202	audio handset which can not be fitted with accessories - can be installed only in 2 wire audio systems
344212	audio handset which can be fitted with accessories and can be installed in audio and video systems
344342	video handset with b/w monitor

Accessories for PIVOT and SPRINT


337202

346812

346813

346814


337122


337102


336982


336983


336984

ACCESSORIES FOR AUDIO AND VIDEO HANDSETS

Item	Description
336803	black cable with plug, length 2 m
336982	LIGHT 8-way socket for table-mounting installation of the SPRINT and PIVOT handsets
336983	as for item 336982, but LIVING INTERNATIONAL
336984	as for item 336982, but LIGHT TECH
349414	as for item 336982, but AXOLUTE light
349415	as for item 336982, but AXOLUTE dark
337102	support for table for PIVOT handset. It can be used also for slanting wall-mounting installation. Colour white
337103	as above - anthracite
337104	as above - tech
337122	support for table for PIVOT video handset. It can be used also for slanting wall-mounting installation. Colour white
337123	as above - anthracite
337124	as above - tech
337140	metal wall bracket for PIVOT handset
337160	metal wall bracket for PIVOT video handset
337242	support for table with 2 m cable and plug for SPRINT handset
346800	call exclusion card and/or extra bell for Item 344212. It has a changeover switch and a LED which signals that the exclusion is taking place
346812	small block 4 pushbuttons for actuator control (PIVOT handsets)
346813	as above - anthracite
346814	as above - tech

To install the PIVOT handsets in MULTIBOX, refer to the “Communication General Catalogue”

Melodic bells


346982


346983


346984


349412


349413

MELODIC BELLS

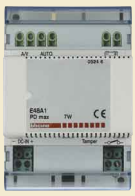
Item	Description
349412	AXOLUTE melodic bell which can be installed in 2 wire systems as a common handset - light
349413	as for item 349412 - dark
346982	as for item 349412 - LIGHT
346983	as for item 349412 - LIVING INTERNATIONAL
346984	as for item 349412 - LIGHT TECH

Installation accessories

346000 ⧈ SELV

346010 ⧈ SELV

E48 ⧈ SELV



E48A2

346200

346230

346902

346841

346870

346903

346810

347400

346850

346833

POWER SUPPLY

Item	Description
346000	power supply for digital 2 wire video and audio systems - 8 DIN modules. Power supply: 230V a.c. 50-60Hz
346010	power supply for digital 2 wire audio systems with max. 26 handsets - 6 DIN modules. Power supply: 230V a.c. 50-60Hz

POWER SUPPLY

Item	Description
E48	base unit for the power supply of MY HOME systems with more installations, to be combined with the accessory module item E48A2. – Power supply 110-230V a.c., output 29-35V c.c. 1.2A, input power 131VA cosφ 0.99 - size 10 DIN modules
E48A2	accessory module to supply the Burglar Alarm, Automation, Temperature Regulation and 2 Wire Video Door Entry systems with 27V d.c. 1.2A – a back-up battery 12V 7.2-24Ah can be connected – size 4 DIN modules – Pd=4.6W

ACTUATORS

Item	Description
346200	relay actuator for digital systems - 4 DIN modules
346230	door lock relay actuator for digital systems. It allows the power supply and the activation of an electric door lock - 2 DIN modules

WIRING ACCESSORIES

Item	Description
346902	pushbutton module connection cable for entrance panels with several rows
346903	connector for pushbutton panels with more than 26 pushbuttons
346841	4-output floor distribution block. Automatically adapt the video signal
346870	video amplifier, to be used in video systems made with untwisted wires
346240	accessory for CISA door lock - when fitted with the lock actuator, item 346230, it enables the "door status" function.
346250	gate relay to be used with LINEA 2000, LINEA 2000 METAL and MINISFERA entrance panels.

INTERFACES

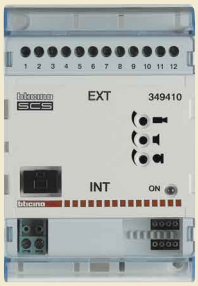
Item	Description
346810	2 wire/PABX interface 3 DIN modules. It allows to interface the 2 wire system with the telephone switchboards Item 335818 and Item 335828
347400	converter to convert the video signal from coaxial to 2 wire BUS for 12V d.c. cameras.
346833	floor call interface. It allows to make - general floor call - addressed floor call - staircase light switching on and door lock opening by means of a traditional pushbutton.

APARTMENT INTERFACE

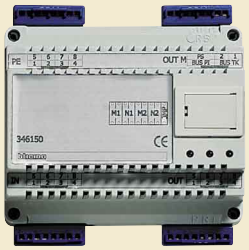
Item	Description
346850	it enables to establish an interface between a 2 wire riser and a dedicated apartment video handset with local CCTV, sound system and MY HOME application control - 4 DIN modules - to be combined with a power supply item 346000 and item F441 or item 346830

Installation accessories

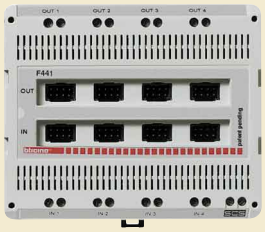
346851



349410



346150



F441

346830

336904

SYSTEM EXPANSION MODULE

Item	Description
346851	it enables doubling of the length of the entrance panel - handset line, creating independent audio risers and widening the range or functions of the apartment system - 4 modules - to be combined with power supply item 346000, and item F441 or 346830

ANALOGUE/2 WIRE COMMUNICATION INTERFACE

Item	Description
349410	it enables to establish an interface between an 8 wire analogue and digital riser, audio Tersystem and Videoporter 2000, a 2 wire dedicated apartment video handset with local CCTV, sound system and MY HOME applications control. 4 DIN modules – to be combined with power supply item 346000 and item F441 or item 346830.

8/2 WIRE INTERFACE

Item	Description
346150	interface for the set up of combined video door entry systems (digital backbone/2 wire risers). The device must be used together with the power supply item 346000 - 6 DIN modules.

AUDIO/VIDEO NODE - VIDEO MIXER

Item	Description
F441	modular device for DIN rail with 4 input terminals and 4 output terminals. Connects up to 4 2 wire audio and video entrance panels in input and up to 4 2 wire audio/video risers in output - 6 DIN modules **NOTE:** to be used as an alternative to the video adapter item 346830.
346830	video adapter to be used in 2 wire video systems. Device to be fitted by the side of the power supply item 346000 - 2 modules DIN

DIGITIZER

Item	Description
346991	universal speaker module, it allows to realize audio and video 2 WIRE systems using all types of pushbuttons panels. MAX 8 calls
346692	call expansion module for item 346991

CABLE FOR SYSTEMS

Item	Description
336904	twisted 2-conductor cable which can be buried in piping, conforms to the standard (CEI 20-13 and CEI 20-14) – 200-metre coil. Can reach best performance in video systems (greater distance between EP and IU than when using other cables).

Cameras

391616

391615

391640

391642

CAMERAS WITH COAXIAL OUTPUT

Item	Description
391615	minidome black and white camera. **Power supply: 12V d.c. - Recommended power supply item 392100**
391616	black and white camera. **Power supply: 12V d.c. - Recommended power supply item 392100**
391640	external b/w minicamera. **Power supply: 12V d.c. - Recommended power supply item 392100**
391642	external colour Night and Day camera. **Power supply: 12V d.c. - Recommended power supply item 392100**

391618
391648
391658
391668

391617
391647
391657
391667

391619
391649
391659
391669

391651
391661

391652
391662

INTERNAL CAMERAS TO BE USED WITH THE BTICINO HOME SERIES

2 wire technology with microphone

Item	Description
391658	colour camera - LIGHT.
391657	colour camera - LIVING.
391659	colour camera - LIGHT TECH.
391661	colour camera - AXOLUTE light.
391662	colour camera - AXOLUTE dark.
391668	B/W camera - LIGHT.
391667	B/W camera - LIVING.
391669	B/W camera - LIGHT TECH.

INTERNAL CAMERAS TO BE USED WITH THE BTICINO HOME SERIES

With video signal output in coaxial

Item	Description
391618	B/W camera - LIGHT **Power supply: 12V d.c. - Recommended power supply item 392100**
391617	B/W camera - LIVING **Power supply: 12V d.c. - Recommended power supply item 392100**
391619	B/W camera - LIGHT TECH **Power supply: 12V d.c. - Recommended power supply item 392100**
391651	colour camera - AXOLUTE light **Power supply: 12V d.c. - Recommended power supply item 392100**
391652	colour camera - AXOLUTE dark **Power supply: 12V d.c. - Recommended power supply item 392100**
391648	colour camera - LIGHT **Power supply: 12V d.c. - Recommended power supply item 392100**
391647	colour camera - LIVING **Power supply: 12V d.c. - Recommended power supply item 392100**
391649	colour camera - LIGHT TECH **Power supply: 12V d.c. - Recommended power supply item 392100**

Numeric index

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342200	SFERA - Nameplate module		227	264
342240	SFERA - 4 key module		227	264
342510	SFERA - B/w camera module		229	264
342550	SFERA - Colour camera module		230	264
342610	SFERA - Numeric call module		226	264
342630	SFERA - Graphic display speaker module	173	225	264
342640	SFERA - Additional alphanumeric keypad		225	264
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342911	LINEA 2000 - Audio 1 call	175	234	266
342921	LINEA 2000 - Audio 2 calls	175	234	266
342951	LINEA 2000 - Video b/w 1 call	175	234	266
342961	LINEA 2000 - Video b/w 2 calls	175	234	266
342971	LINEA 2000 METAL - Audio 1 call	175	234	266
342972	LINEA 2000 METAL - Audio 2 calls	175	234	266
342981	LINEA 2000 METAL - Video b/w 1 call	175	234	266
342982	LINEA 2000 METAL - Video b/w 2 calls	175	234	266
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344103	PIVOT - Anthracite b/w video handset	184	241	268
344104	PIVOT - Tech b/w video handset	184	241	268
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344342	SPRINT - Video handset	197	250	269
344702	SWING - Audio handset colour Ash	193	246	269
344703	SWING - Audio handset colour Cord	193	246	269
344704	SWING - Audio handset colour White	193	246	269
344802	SWING - B/w video handset colour Ash	193	247	269
344803	SWING - B/w video handset colour Cord	193	247	269
344804	SWING - B/w video handset colour White	193	247	269
344822	SWING - Colour video handset colour Ash	193	248	269
344823	SWING - Colour video handset colour Cord	193	248	269
344824	SWING - Colour video handset colour White	193	248	269
346000	Power supply for audio/video systems		208	262
346010	Power supply for audio systems max. 26 calls		214	270
346150	8 wire/2 wire digital interface	202	220	270
346200	Actuator for door lock and staircase lights	199	221	270

Item	Description	Configuration page	Technical features page	Dimensional data page
346230	Actuator for door lock	201	221	270
346240	Accessory for CISA Elettrika door lock	201		
346810	PABX / 2 wire audio interface	178	217	270
346812	PIVOT - 4 key module - White	185	252	
346813	PIVOT - 4 key module - Anthracite	185	252	
346814	PIVOT - 4 key module - Tech	185	252	
346830	Video adapter		215	270
346833	Floor call interface	205	219	270
346841	Floor distribution block	178	216	270
346850	Apartment interface	177	218	270
346851	System expansion module	176	218	270
346870	Video amplifier		216	270
346902	Connection cables for SFERA modules	172		
346903	Connection connector for SFERA modules	172		
346982	Melodic bells - LIGHT	205	251	
346983	Melodic bells - LIVING	205	251	
346984	Melodic bells - LIGHT TECH	205	251	
346991	Universal speaker unit	178	227	265
346992	Expansion module for universal speaker unit		227	
347400	COAXIAL / 2 wire interface	179	217	270
349310	AXOLUTE - VIDEO STATION	180	236	267
349311	AXOLUTE - VIDEO DISPALY light	181	237	267
349312	AXOLUTE - VIDEO DISPALY dark	181	237	267
349410	Analogue / 2 wire communication interface	177	219	270
349412	Melodic bells - AXOLUTE light	205	251	
349413	Melodic bells - AXOLUTE dark	205	251	
391615	Minidome b/w COAXIAL camera - 12 Vd.c.		258	271
391616	B/w COAXIAL camera - 12 Vd.c.		257	271
391617	Flush-mounting COAXIAL b/w camera - LIVING		255	271
391618	Flush-mounting COAXIAL b/w camera - LIGHT		255	271
391619	Flush-mounting COAXIAL b/w camera - LIGHT TECH		255	271
391640	B/w external COAXIAL camera - 12 Vd.c.		260	271
391642	Night&Day external COAXIAL camera - 12 Vd.c.		261	271
391647	Flush-mounting COAXIAL colour camera - LIVING		255	271
391648	Flush-mounting COAXIAL colour camera - LIGHT		255	271
391649	Flush-mounting COAXIAL colour camera - LIGHT TECH		255	271
391657	Flush-mounting 2 WIRE colour camera - LIVING	175	253	271
391658	Flush-mounting 2 WIRE colour camera - LIGHT	175	253	271
391659	Flush-mounting 2 WIRE colour camera - LIGHT TECH	175	253	271
391651	Flush-mounting COAXIAL colour camera - AXOLUTE light		255	271
391652	Flush-mounting COAXIAL colour camera - AXOLUTE dark		255	271
391661	Flush-mounting 2 WIRE colour camera - AXOLUTE light	175	253	271
391662	Flush-mounting 2 WIRE colour camera - AXOLUTE dark	175	253	271
391667	Flush-mounting 2 WIRE b/w camera - LIVING	175	253	271
391668	Flush-mounting 2 WIRE b/w camera - LIGHT	175	253	271
391669	Flush-mounting 2 WIRE b/w camera - LIGHT TECH	175	253	271
392100	Power supply 12 Vd.c.		256	270
E48	Basic power supply for MY HOME integrated sytems		214	270
E48A2	Additional module for E48		214	270
F441	Audio video node		215	270
H-L4651/2	Special control	198		

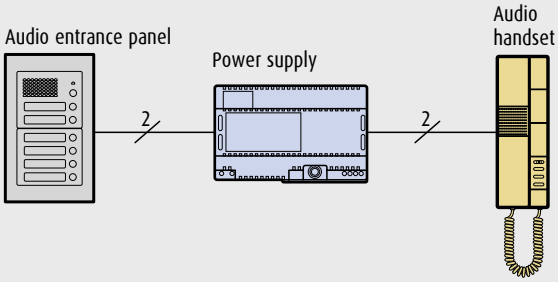
GENERAL RULES FOR INSTALLATION
System composition

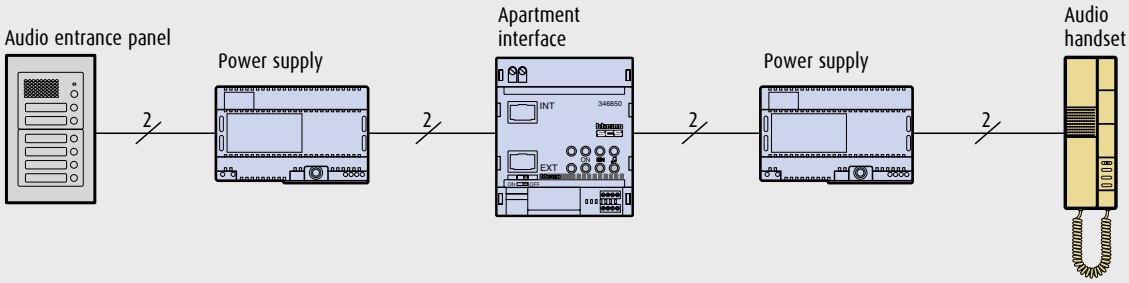
The system made by the "2 wire System" is classed as SELV (Safety Extra – Low Voltage) due to the fact that it is powered by non grounded safety double insulation independent power supplies with a max. voltage of 25 Vac (effective) or 60Vdc non-inverted voltage.
In addition, all Bticino devices are double insulated.

The conformity to SELV classification is only guaranteed only subject to FULL COMPLIANCE with current installation regulations and with the GENERAL RULES FOR INSTALLATION relating to each single device and cable, making up the installation, as indicated by Bticino.

BASIC COMPONENTS OF THE AUDIO SYSTEM

To realize an audio system, it is necessary to buy:
- Entrance panel
- Handset
- Power supply





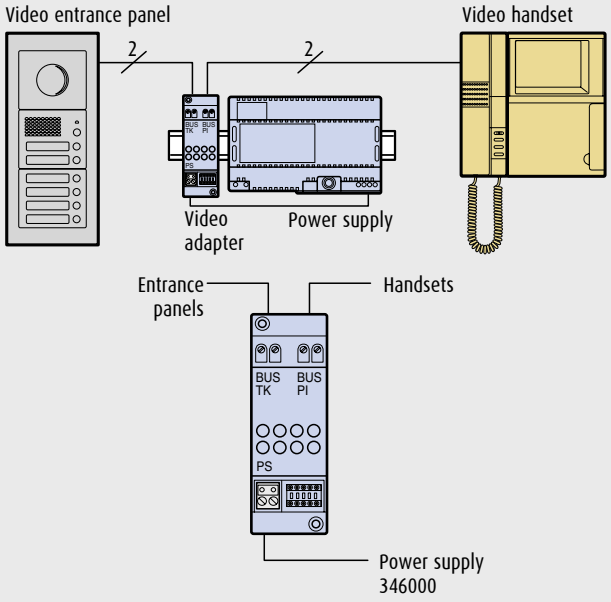
The use of the apartment interface item 346850, enables installing an independent audio intercom in the apartment and to connect the audio handset system with the MY HOME systems.

BASIC COMPONENTS OF THE VIDEO SYSTEM

When installing a video system, in addition to the audio system equipments, also the video adapter (item 346830) or the audio/video node (item F441) and the floor distribution block (item 346841), with the video signal distribution function, must be purchased.

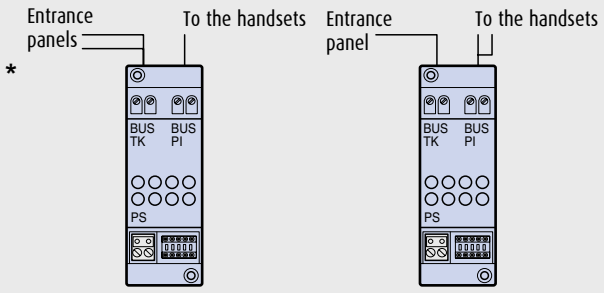
VIDEO ADAPTER ITEM 346830

The video adapter is used to connect entrance panels and handsets to a 2 wire video system.



A maximum of 3 connections are allowed on the video adapter.

A maximum of 3 connections are allowed on the video adapter



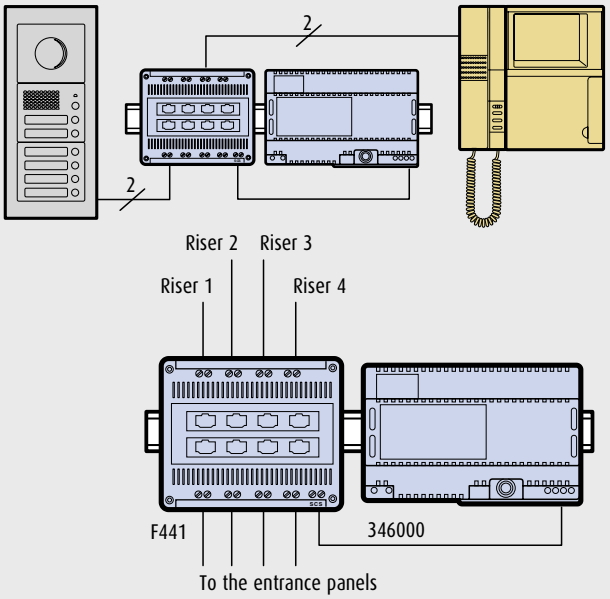
Connection of 2 entrance panels and a riser for the handsets

Connection of 1 entrance panel and 2 risers for the handsets

* If either an interface item 346850 or 346851 is connected to the entrance panel, only one connection on the TK BUS terminal item 346830 is possible.

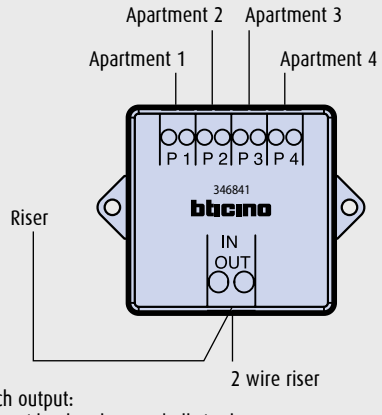
AUDIO/VIDEO NODE

The audio/video node can be used in alternative to the video adapter when more than 2 entrance panels need to be installed or when more than 2 risers are needed.
Up to 26 handsets and 6 floor distribution blocks can be installed on each riser. For the maximum number of handsets that can be connected refer to the tables and/or to the "general calculation method".
One output of the audio/video node should be dedicated to each table-mounted video handset installed.



FLOOR DISTRIBUTION BLOCK (346841)

A floor distribution block (item 346841) can also be used to install video systems. This is particularly suitable for multi-family systems, when more than one living unit on the same floor or in multi-family systems, where max. distance between the entrance panel and all handsets is needed. The floor distribution block enables star connection of up to 4 apartments with a max. of 3 handsets, melodic bells or additional bells for each output. (max. 1 handset per output, if set in simultaneous switching on).
One output of the audio/video node should be dedicated to each table-mounted video handset installed.



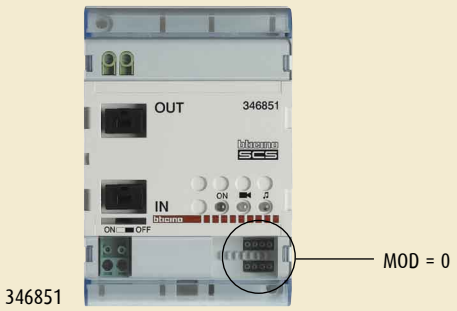
For each output:
- max. 3 video handsets or bells in the same apartment
- max. 1 video handset in simultaneous switching on
- max. 1 table-mounted video handset

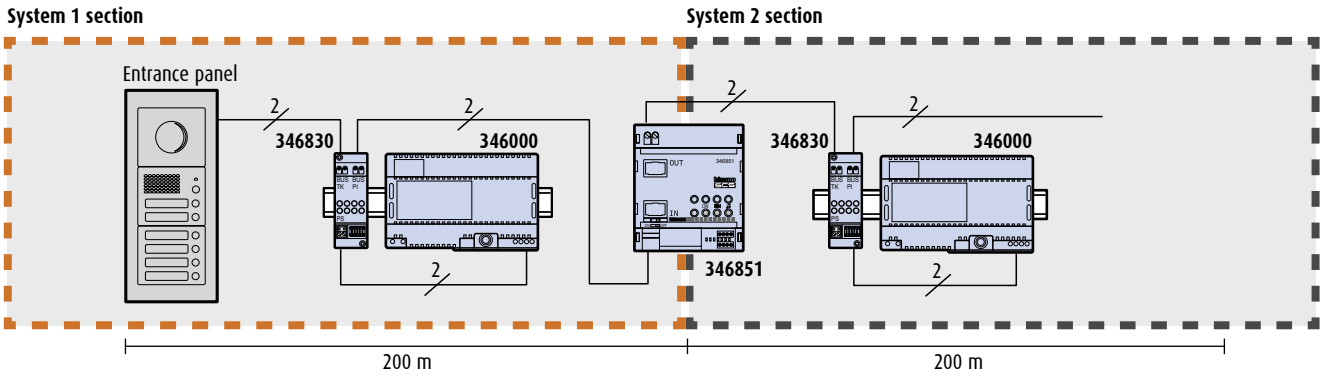
GENERAL RULES FOR INSTALLATION
System composition

SYSTEM EXPANSION MODULE 346851 IN SYSTEM EXPANSION MODE MOD = 0

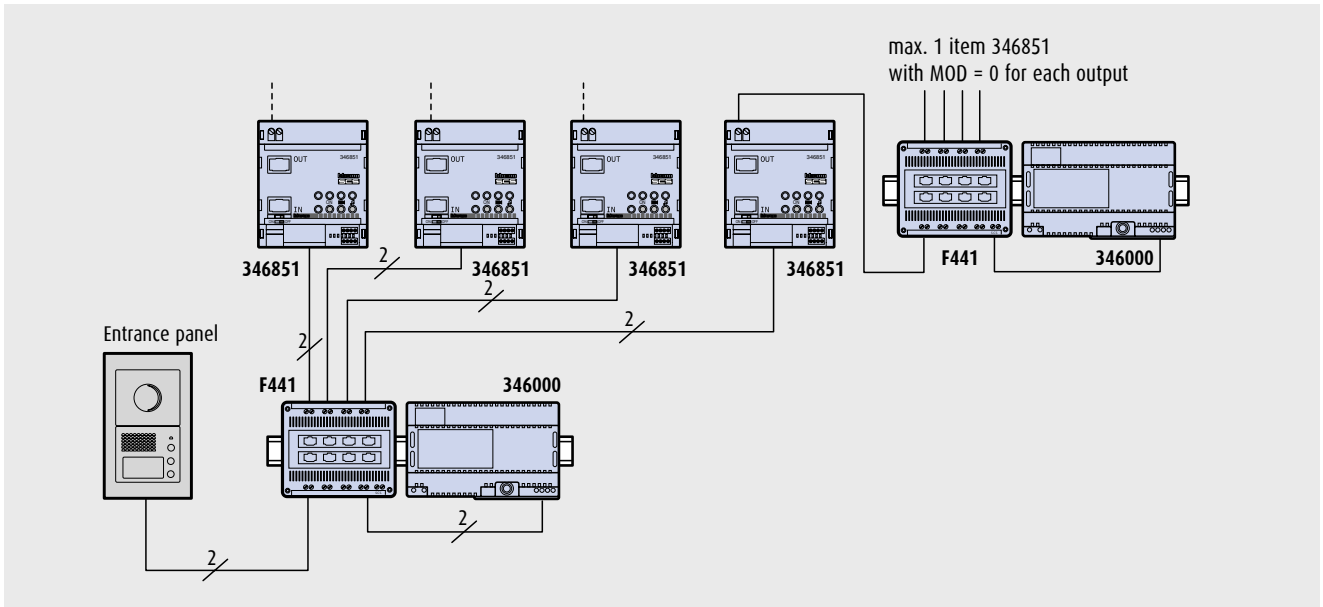
It is used to expand the 2 WIRE system:
- in this way the video signal can be regenerated and a further 200 metres are available after the interface (using the Bticino cable, item 336904)
- in this way the number of devices connected to the BUS can be increased.
- use a max. of 3 items 346851, configured using the MOD = 0 in cascade.

As far as the system composition, distances and topology are concerned, within the system 1 section, the system expansion module item 346851 must be considered as a handset. On the other side, within the system 2 section it should be considered as an entrance panel.



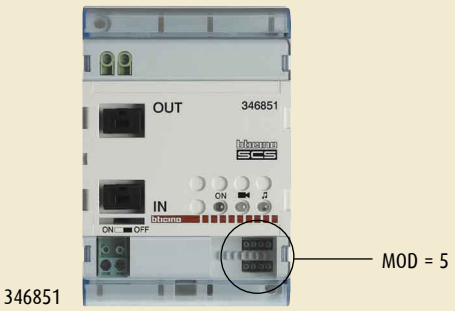


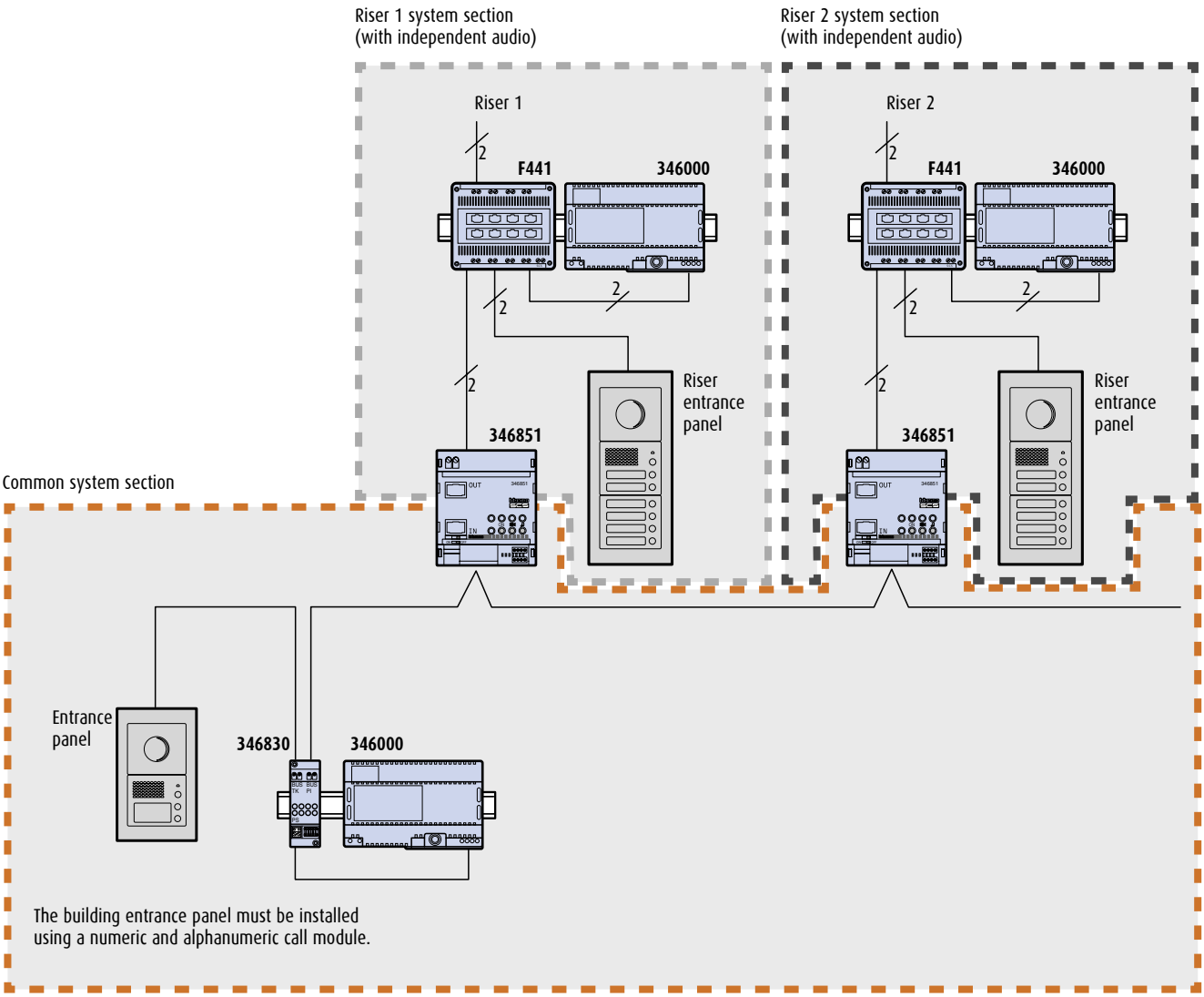
The IN terminal of the system expansion modules with MOD = 0 must be connected to a dedicated output of the audio/video node item F441 or of the floor distribution block item 346841 (as a handset with local power supply).



SYSTEM EXPANSION MODULE 346851 IN "INDEPENDENT AUDIO RISER" MODE MOD = 5

This is used in buildings to have risers with riser entrance panels and independent audio and video functions.





As far as the system composition, distances and topology are concerned, within the common system section, the system expansion modules must be treated as handsets. In the riser system section they must be treated as entrance panels.

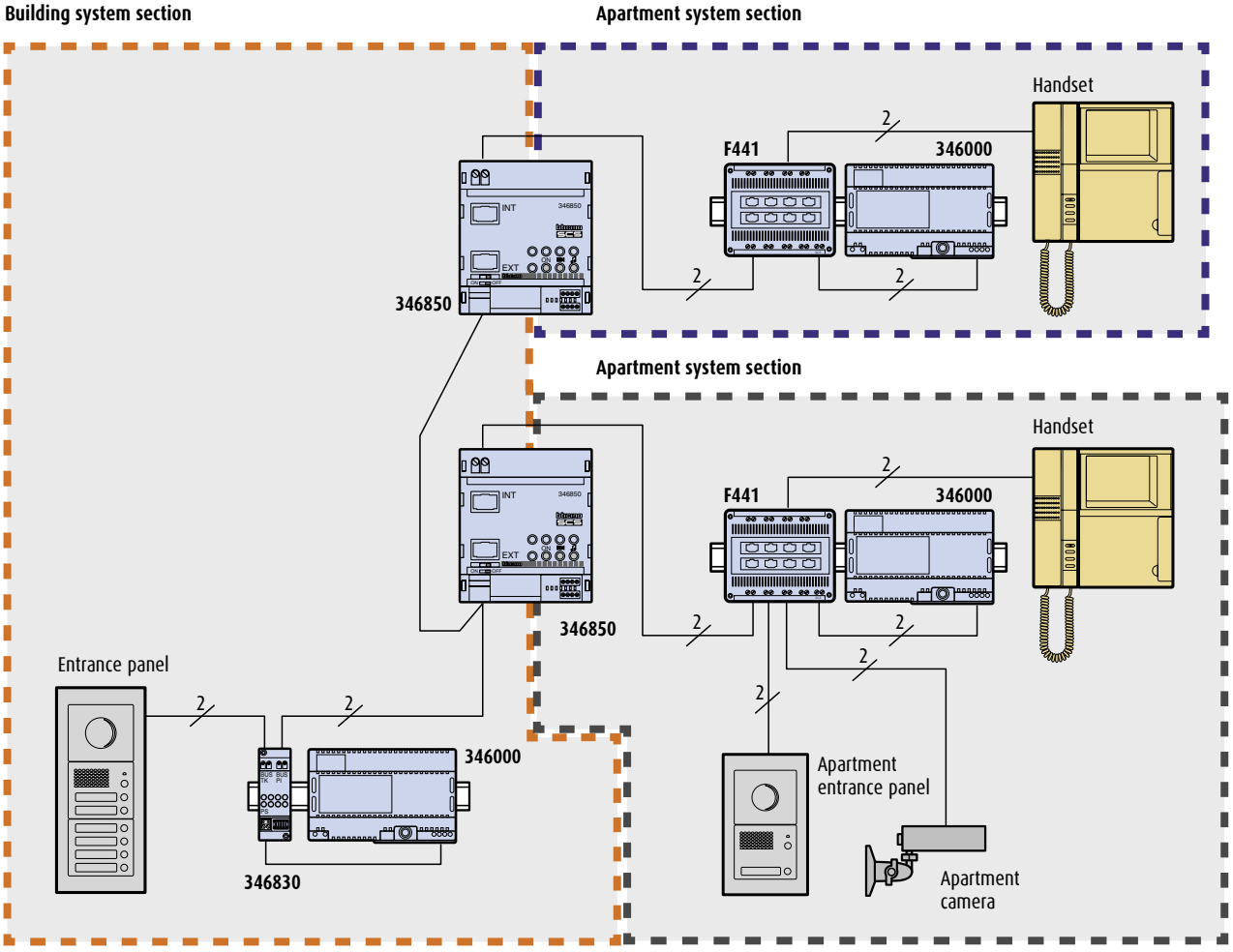
GENERAL RULES FOR INSTALLATION
System composition

APARTMENT INTERFACE ITEM 346850

This is used to have an apartment system independent from the building. In this way, the apartment system can have private cameras and entrance panels and can be integrated with all the MY HOME applications.

As far as the system composition, distances and topology are concerned, within the building system, the interface item 346850 must be treated as a handset. On the other side, within the apartment system, it should be treated as an entrance panel configured with P = 0.

346850



THE CABLE

Any type of cable (even an already existing one) can be used for the installation of a 2 wire system. Maximum performance and distances are possible using the Bticino 2 wire cable (which can be buried in accordance with IEC 21-13 and IEC 21-14 standards), item 336904.

GENERAL RULES FOR INSTALLATION
The configuration

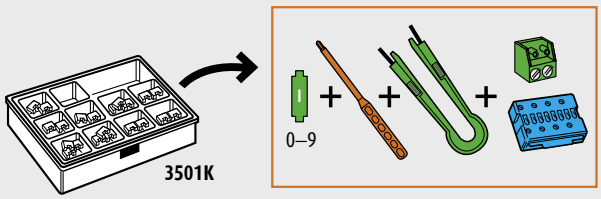
To configure means to program the system. This occurs assigning an identification and operational mode number to the devices.
This operation is made inserting in the appropriate seats some configurators (numbered from 0 to 9), using a clamp provided with the power supply (Item 346000 and Item 346010)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

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

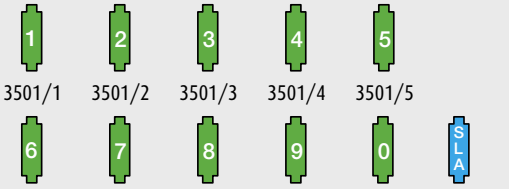
In the system exist two different numerations to identify respectively the entrance panels (EP) and the handsets (handset).
The numeration of the EP (0-96) is generally identified by P, while the address of the handsets (0-99) is identified by N.

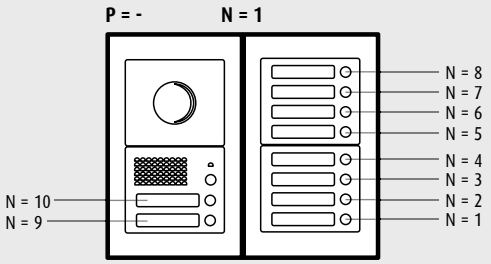
On the EP, in addition to the P address it is necessary to configure also the N address relating to the handset from which we would start to call (associated to the last pushbutton of the keypad).

The configurators can be purchased in a case



or severally



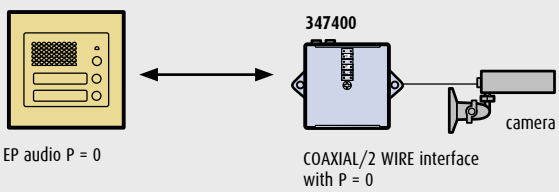


On the handsets in addition to the N address, it is necessary to configure in P the EP associated to the same handset, or the entrance panel on which the door lock and auto-switching ON controls work when the handset is switched OFF.

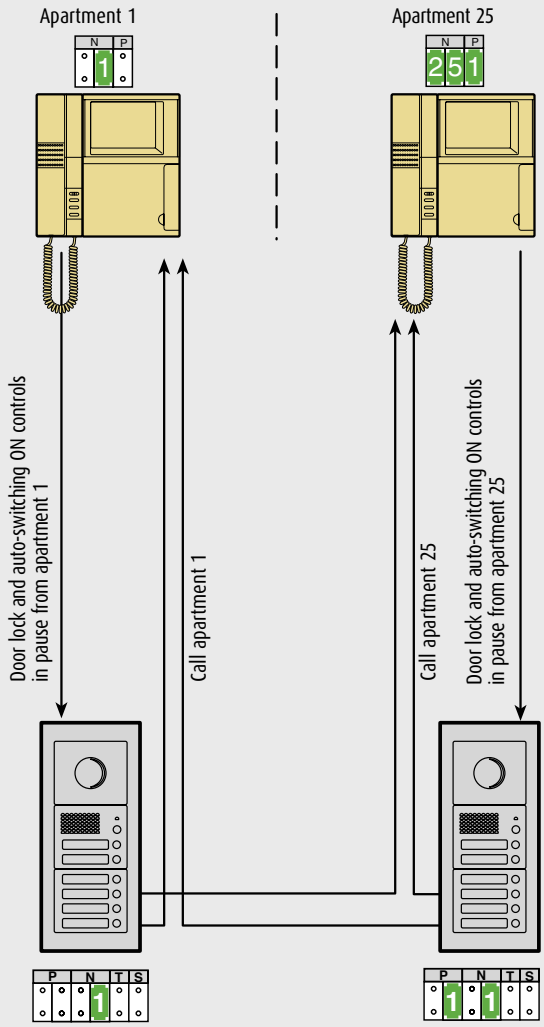
NOTE: Should occur the need to modify the configuration of a device, it is necessary, in addition to change the configurators, take off the power supply to the whole system, wait 1 minute, and then provide voltage again.

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

It is possible to connect separate cameras inside the system.
The separate cameras must have the same address in P of the audio entrance panel to which they are associated.



Example of configured system and its operation

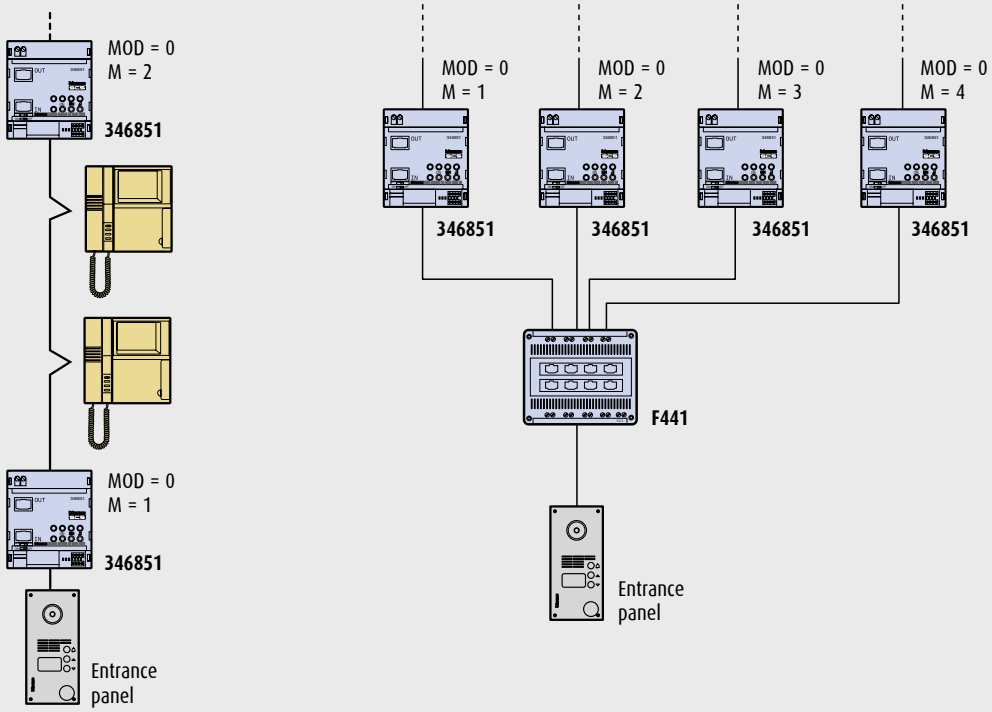


GENERAL RULES FOR INSTALLATION
The configuration

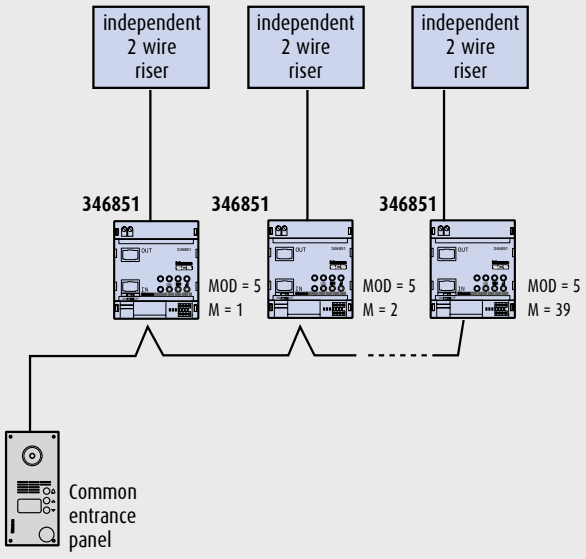
SYSTEM EXPANSION MODULE 346851

The system expansion module can be configured in 2 different ways:
(the addresses in M with MOD = 0 and MOD = 5 do not conflict with each other)

MOD = 0 for system expansion
M = specific progressive number for interface



MOD = 5 for independent audio risers
M = specific progressive number indicating the riser number

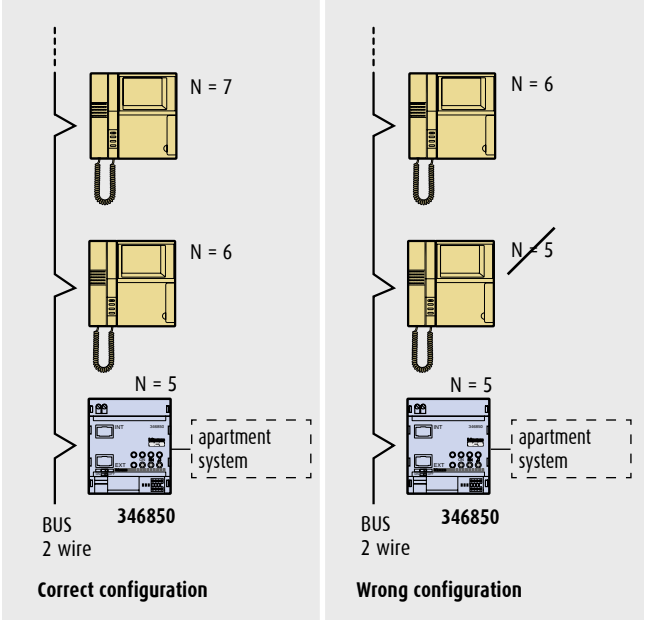


For the common entrance panel, the handsets have address M (riser number) x 100 + N (handset for the riser).

Es. Handset N = 20 of the riser 12
for the common EP = 12 x 100 + 20 = 1220

APARTMENT INTERFACE 346850

The apartment interface is configured as a normal handset. The interface must be configured in a specific unique way. No other handset can be configured in **N** using the same address, in the same system or on the same riser with independent audio. The factory device is configured with 3 in **M**.

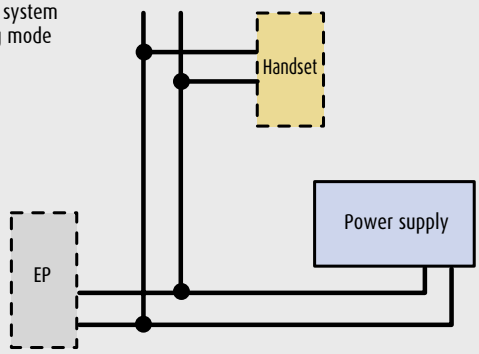


GENERAL RULES FOR INSTALLATION
The wiring

AUDIO 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.

Audio system wiring mode



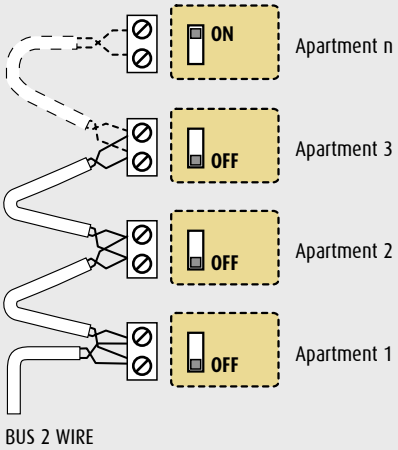
VIDEO 2 WIRE SYSTEMS

The video 2 wire systems can be made in 2 ways:
1- in-out wiring
2- star wiring with floor distribution block Item 346841.

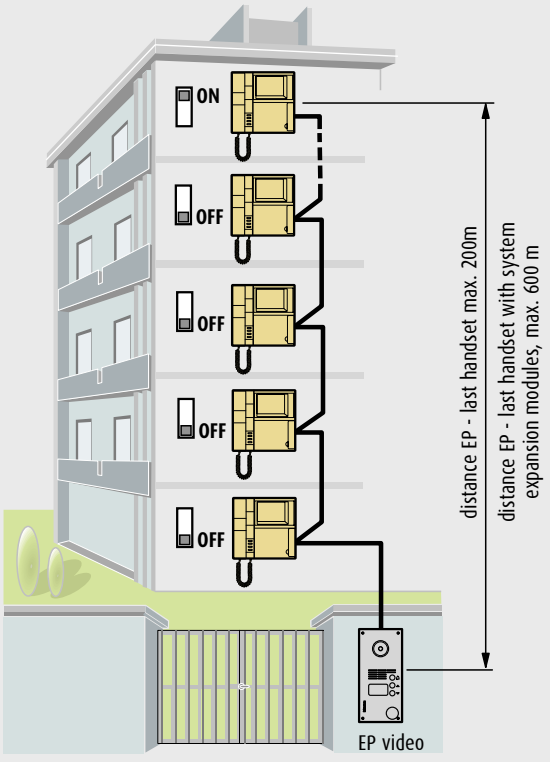
IN-OUT WIRING

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).

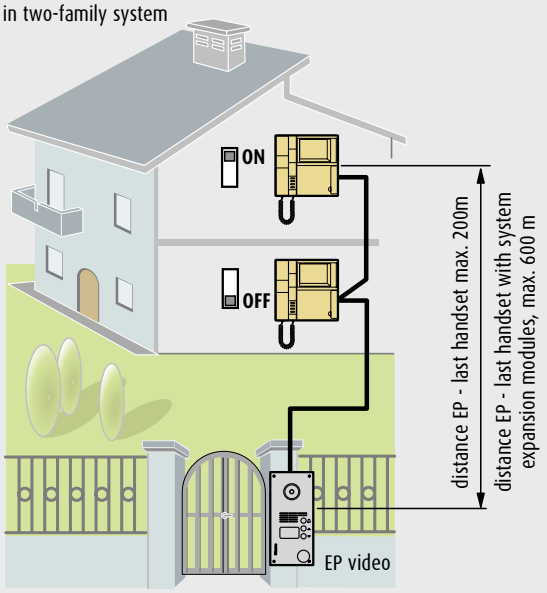
Wiring mode



Wiring in multi-family with homes in rows

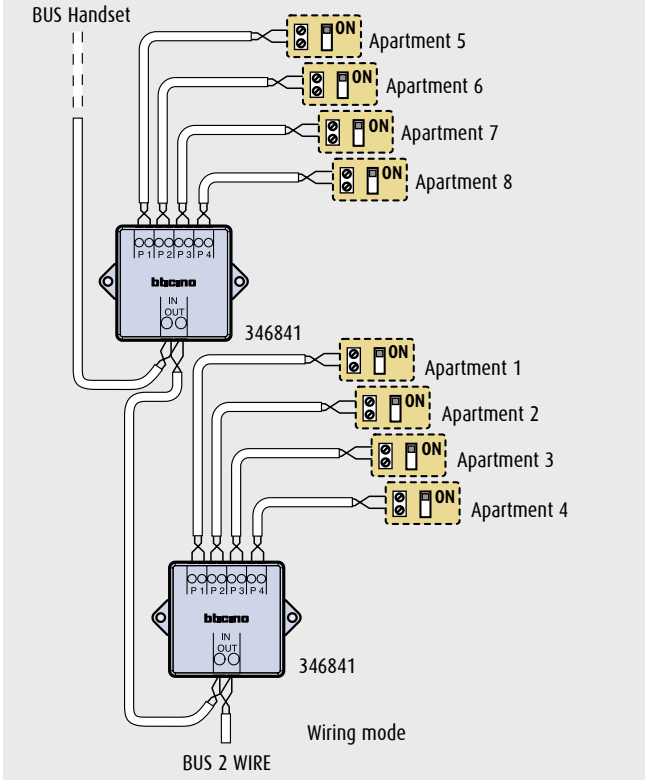


Wiring in two-family system

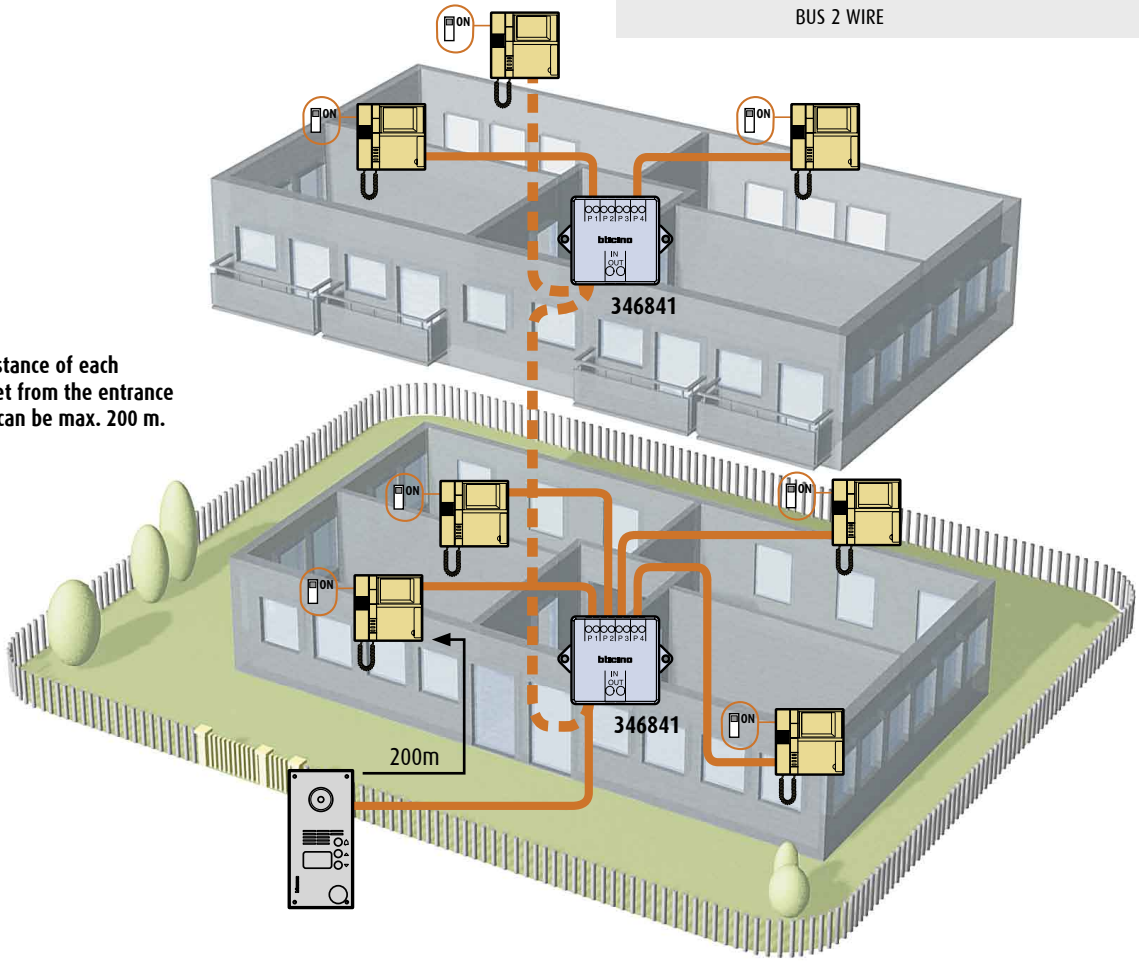


STAR WIRING (ITEM 346841)

The star wiring is made connecting the individual apartment to an output of the floor distribution block Item 346841.
Each line must be terminated by positioning the DIP-SWITCH of the last appliance on ON. The IN-OUT riser must be terminated with a handset with DIP-SWITCH in ON or with item 3499. 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.
A max. of 3 handsets can be connected on each output of the distribution block.
An output of the floor distribution block must be dedicated to each handset with simultaneous switching on or table-mounted handset.



The distance of each handset from the entrance panel can be max. 200 m.

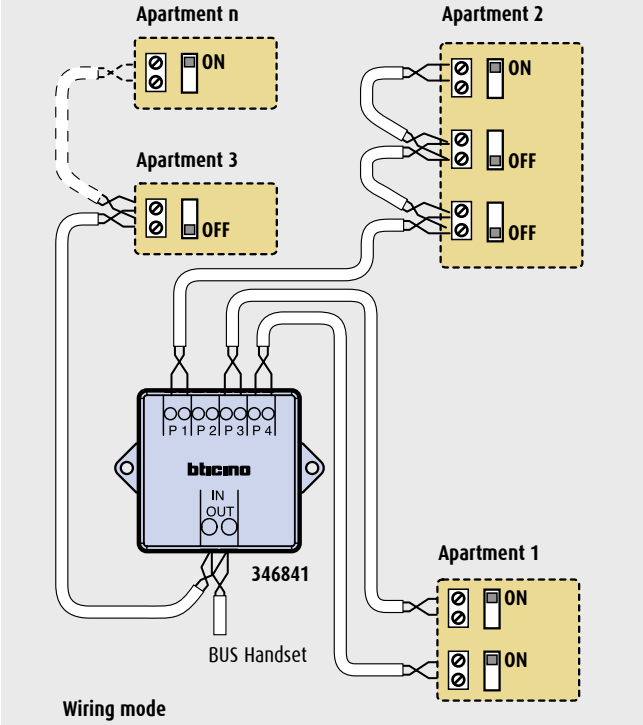


GENERAL RULES FOR INSTALLATION
The wiring

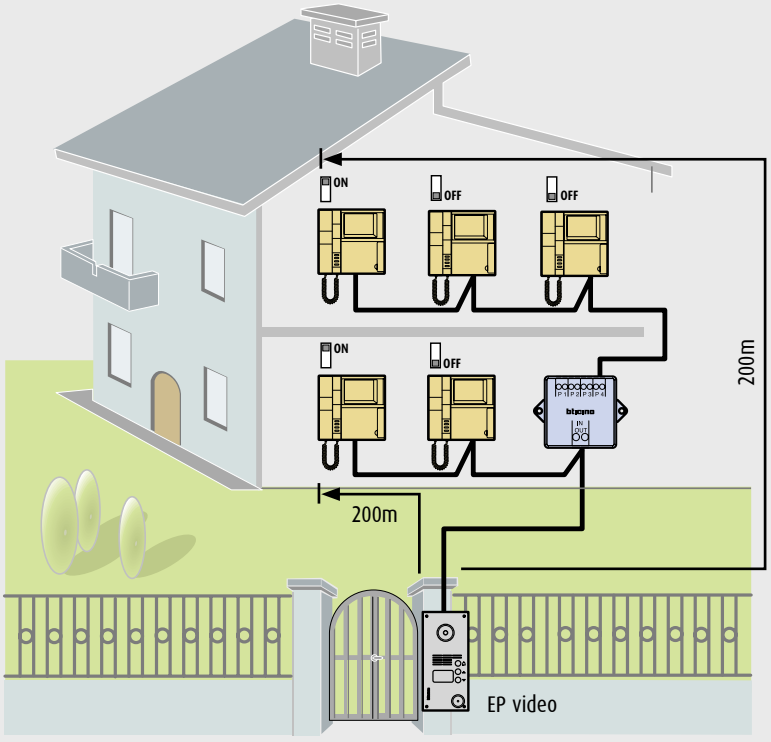
COMBINED WIRING

Both wiring methods described previously can be used together, for the realization of more articulated systems.
The combined 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, without using the apartment interface item 346850).
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).



Wiring mode

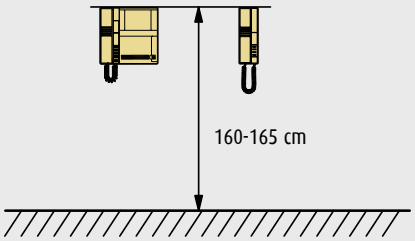


GENERAL RULES FOR INSTALLATION
Installation of entrance panels, handsets and interfaces

HEIGHT OF THE HANDSET

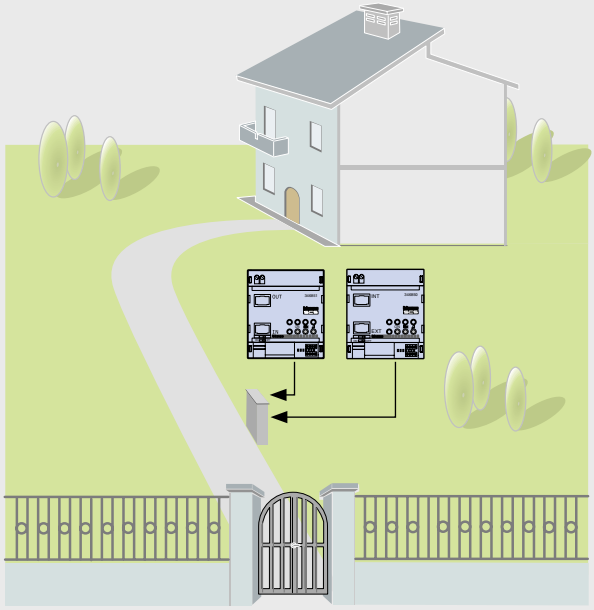
In the handset installation of either the door entry or video door entry, it is advisable to position the devices as indicated here on the right.

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



INTERFACES ITEM 346850 AND 346851

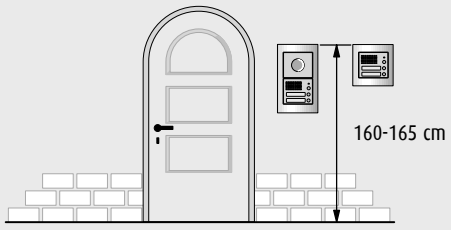
The interfaces item 346850 (apartment interface) and item 346851 (system expansion module) cannot be installed in a manhole. For their installation, a sealed electric cabin with DIN rail must be used.



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.

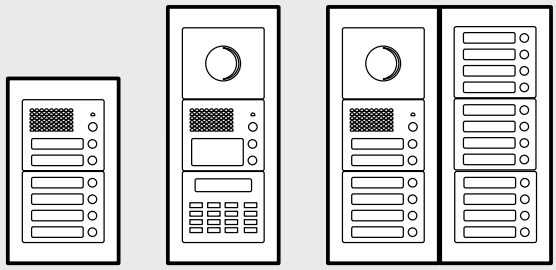
NOTE:
- In bad lighting cameras with colour sensor are less sensitive than black/ white cameras.
An extra lighting source should thus be provided in badly lit places.
- To allow the use by disabled persons or those with handicap, the devices must be installed with a height of 120-125cm.



GENERAL RULES FOR INSTALLATION
Installation of entrance panels, handsets and interfaces

POSITIONING THE SFERA MODULES

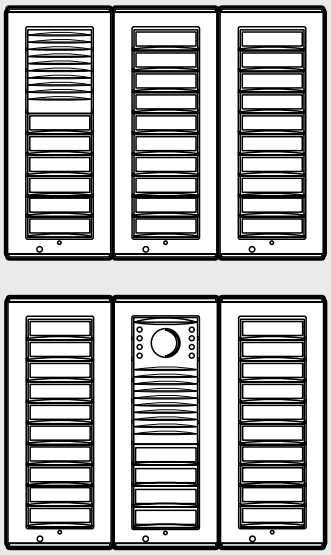
- The camera module must always be at the first highest place.
- The speaker module must always be positioned immediately under the camera module.
- You can not add pushbutton modules to the digital call modules.
- In the last pushbutton module, insert a cover connector.
- Use the flat item 346902 to connect entrance panels on several rows.
- 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

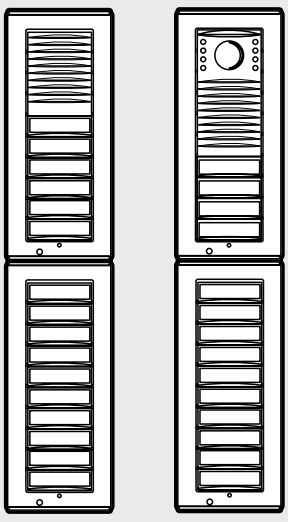
The audio or video speaker module can be indifferently positioned on the left side, the right side or in the middle of the additional call modules.
The central installation of the speaker module can be realized using max. 2 additional call modules.



* Realizable ONLY with 2 additional call modules

VERTICAL POSITIONING

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

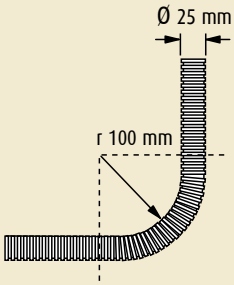


GENERAL RULES FOR INSTALLATION
Installing the cable

ARRANGEMENT AND INSTALLATION OF UNDERGROUND TUBES

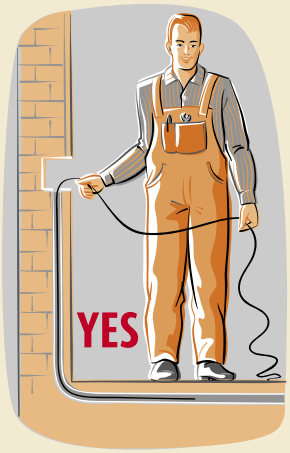
A chased conduit must be installed for each of the usage points inside the house (corrugated tube with a minimum diameter of 20 mm - 25 mm recommended). In case of bends, the maximum bending radiuses recommended by the manufacturer must be complied with. In all cases, the bending radius must not be less than 4 times the diameter of the tube used.

corrugated tube recommended



The minimum bending radius must be at least 4 times the diameter of the tubes.

When installing the conduits avoid too sharp bends



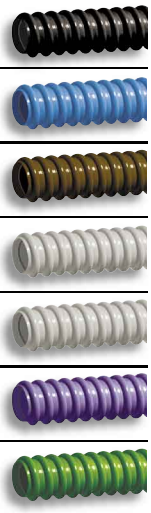
The cable must be run through the tubes with ease

GENERAL RULES FOR INSTALLATION
Installing the cable

COLOURS RECOMMENDED FOR THE TUBES

In order to facilitate the identification of the various types of system, especially in complex systems, the use of tubes colour coded depending on their function is recommended.
The table on the side shows a non compulsory combination, which matches up the colour of the conduits with their function.

Use	Corrugated tube colour
Energy	Black
Video and audio door entry system and Signalling	Blue
Buglar-alarm and Alarms	Brown
Data transmission	White
TV and SAT antenna	White
Sound system	Violet
Telephone system	Green



COEXISTENCE OF CABLES INSIDE THE SAME CONDUIT

When installing video door entry, video control and CCTV systems, it is worth taking into consideration that the cables can be installed in the same conduits used for the traditional electric power supply system.
This enables important savings both in terms of installation works and costs.

1) In order to achieve correct performance, the installation of electric supply cables and audio/video door entry cables in separate conduits is recommended (particularly as far as the 380Vac is concerned).

2) Should it be necessary to install such cables in the same conduits, Bticino guarantees an insulation up to 450/750V. This means that the cables could safely coexist with the 230 Vac power supply.
However, the optimum performance of the system cannot be guarantee, due to the impossibility to ensure immunity from disturbance.

The following table shows the types of systems, which cables can safely coexist and travel together with the electric power supply cables.

Type of system	Coexistence with energy cables
Video door entry system	YES*
Telephone system	NO
Video control	YES*
CCTV	NO

NOTE (*): Using the recommended cables, with **Bticino code.**

It needs to be taken into account that standard utp5 and telephone cables normally available on the market do not satisfy the requirements of the reference standard, and are therefore unsuitable for underground installation, even if suitable tubes are used.

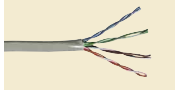
GENERAL RULES FOR INSTALLATION
The cable

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 buried	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
	Sheathed not twisted normal cables Sect. ≥ 0.28 mm² < 1 mm²		NO	usable	usable
	Sheathed not twisted normal cables Sect. = 1 mm²		NO	usable*	usable
	Bticino UTP5 cable	C9881U/5E	NO	usable	usable
	UTP5 multipair cable		NO	usable	usable

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

NOTE: the distance entrance panel - furthest away handset depends on the type of the cable used. For more information see the section "GENERAL RULES FOR INSTALLATION - Maximum distances and features of the conductors"

GENERAL RULES FOR INSTALLATION
General limits

SYSTEM MAXIMUM LIMITS

These are the maximum limits which can be reached by a 2 wire system using apartment interfaces item 346850 and system expansion modules item 346851.

96 main video entrance panel
39 independent audio riser
100 audio handsets for each riser (without 346851)
64 video handsets for each riser (without 346851)
100 video handsets for each riser (with 346851)
3900 apartments (100 interfaces 346850 for each riser)
15 entrance panels or cameras for each apartment (16 in the one-family)
5 handsets for each apartment (without system expansion modules 346851)
20 handsets for each apartment (with system expansion modules 346851)

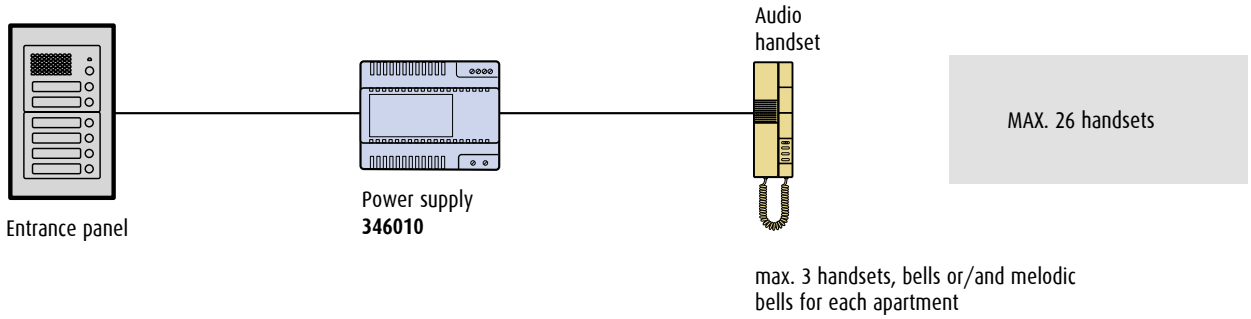
In the following pages a distinction will be made between handsets:

"traditional" HANDSETS
- audio SPRINT
- audio SWING
- audio PIVOT
- video SPRINT
- b/w and colour video SWING
- b/w and colour video PIVOT

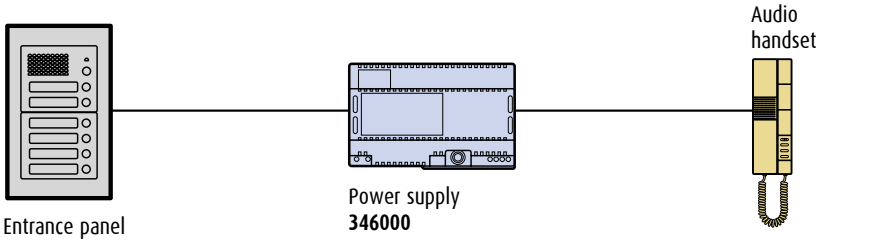
"advanced" HANDSETS
- POLYX VIDEO DISPLAY
- POLYX MEMORY STATION
- AXOLUTE VIDEO DISPLAY
- AXOLUTE VIDEO STATION

POSSIBLE SYSTEMS

AUDIO SYSTEM WITH POWER SUPPLY 346010



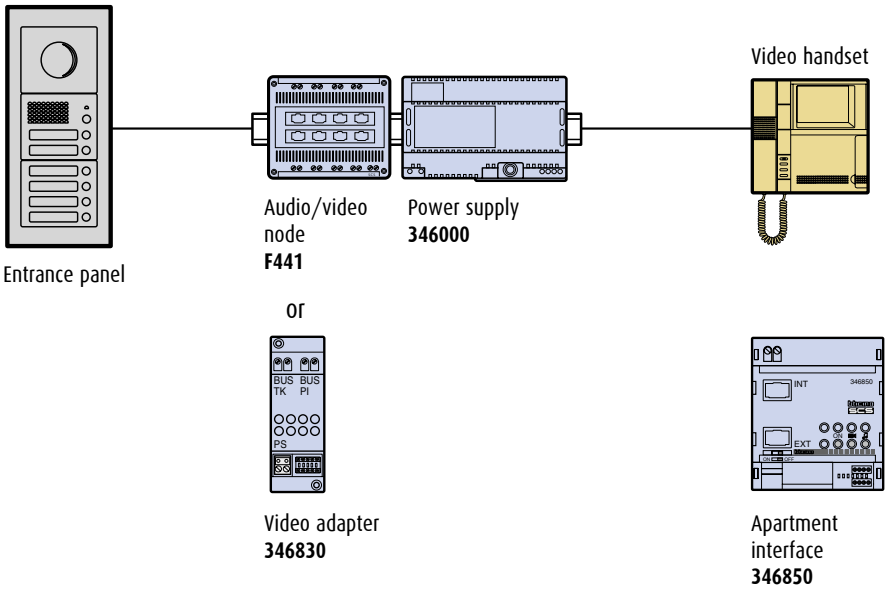
AUDIO SYSTEM WITH POWER SUPPLY 346000



MAX. 100 handsets or apartment interface

- max. 3 handsets, bells or/and melodic bells for each apartment (max. 5 in one-family system)
- max. 5 handsets, bells or/and melodic bells for each 346850

VIDEO SYSTEM



MAX. 100 if only apartment interfaces are used

* MAX. 64 if traditional handsets, apartment interface and advanced handsets in local supply are used

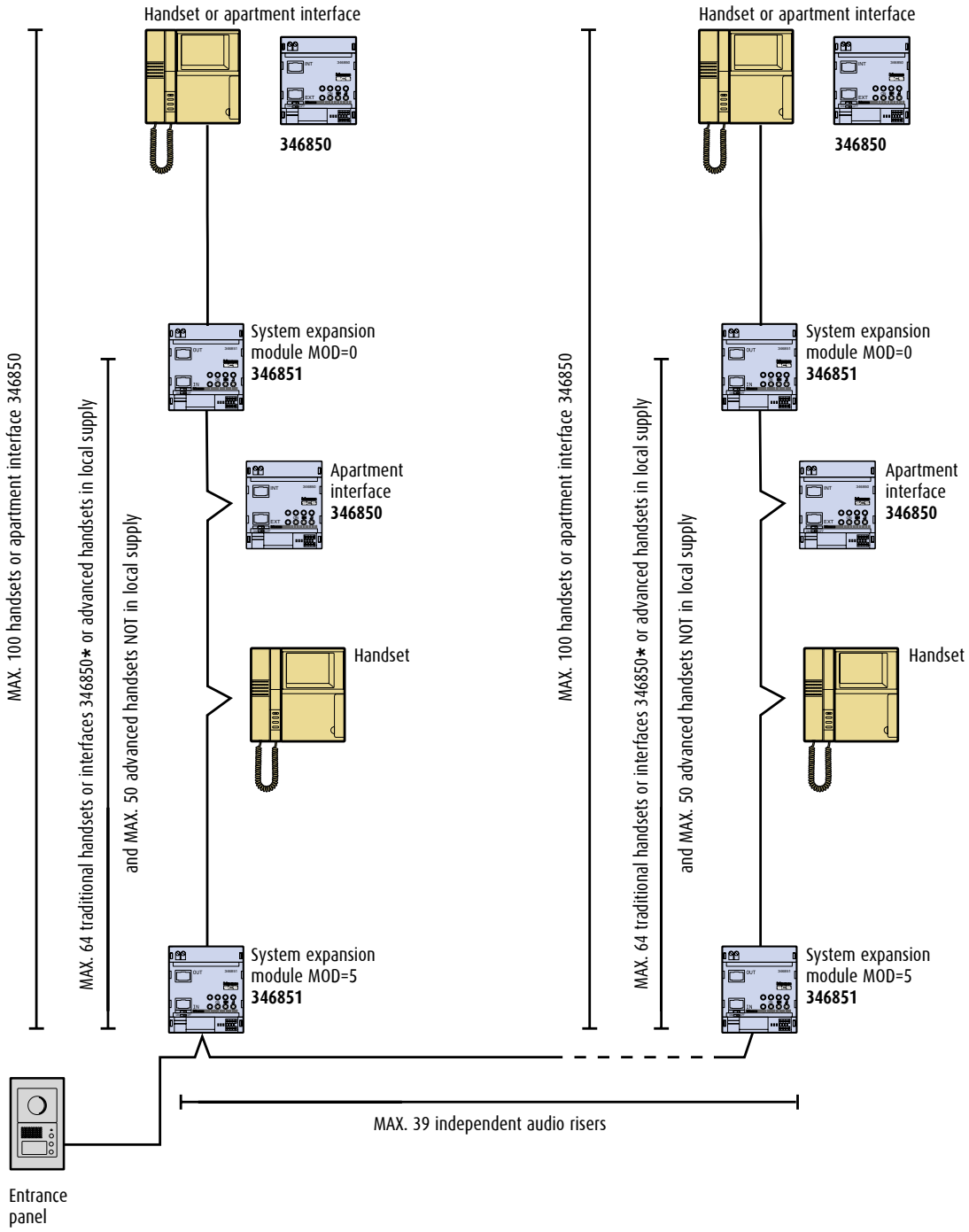
* MAX. 50 if at least an advanced handset NOT in local supply is used

- max. 3 handsets, bells or/and melodic bells for each apartment (max. 5 in one-family system)
- max. 5 handsets, bells or/and melodic bells for each 346850

* with the entrance panels locally supplied

GENERAL RULES FOR INSTALLATION
General limits

VIDEO SYSTEM WITH SYSTEM EXPANSION MODULES ITEM 346851



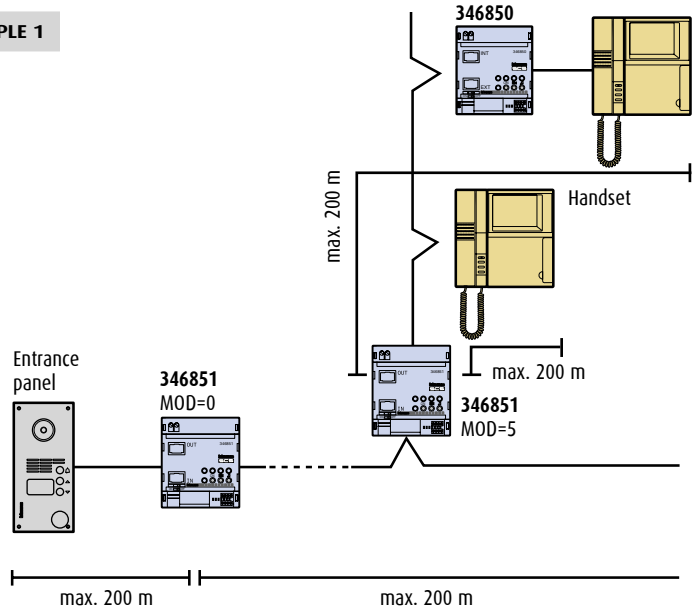
* if only apartment interfaces 346850 are used on a riser, the limit rises from 50 to 100 without using the system expansion module 346851 configured with MOD = 0.

- max. 3 handsets, bells and/or melodic bells for each apartment
- max 5 handsets, bells and/or melodic bells for each 346850

MAXIMUM LIMITS FOR THE USE OF INTERFACES ITEM 346850 AND 346851

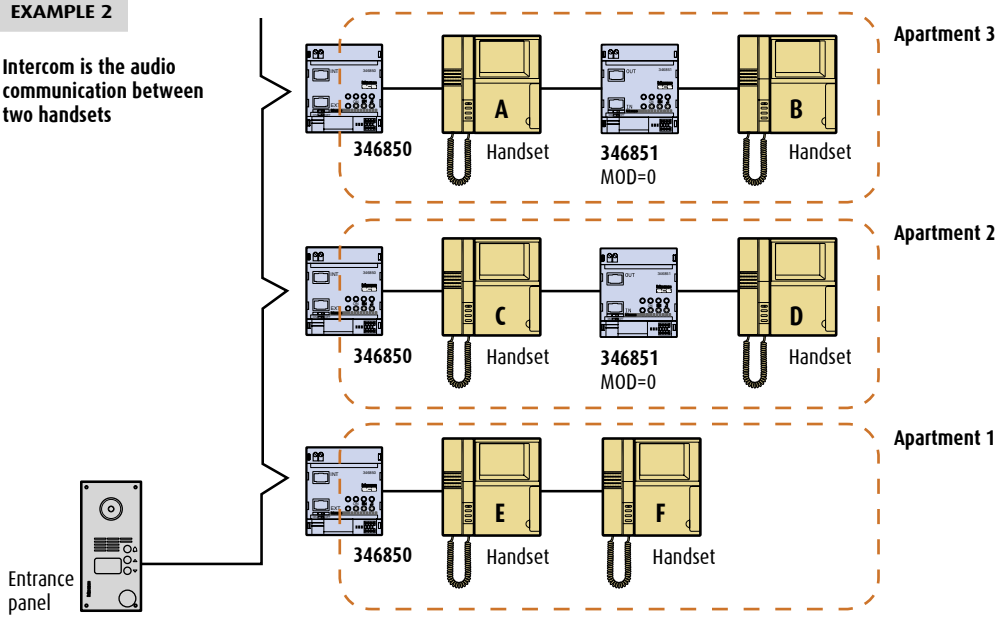
A maximum of 3 interfaces item 346850 and 346851 can be used in cascade. By interfaces used in cascade, it is meant interfaces crossed by an audio/video entrance panel to handset connection or a handset to handset connection (intercom). Only 2 of these, to be selected by the user, will transfer the signal for 200 metres: **the maximum distance between the entrance panel and the furthest handset is 600 m, with each LINE (EP - interface, interface - interface and interface - handset) of 200 m maximum (using a Bticino cable item 336904). The IN terminal of the system expansion modules with MOD = 0 must be connected to the system as if it was a handset with local power supply. Therefore, it must be connected to a dedicated output of the audio/video node, item F441 or the floor distribution block, item 346841.**

EXAMPLE 1



EXAMPLE 2

Intercom is the audio communication between two handsets



System can be made: intercom between apartments is possible only between the handsets divided by a max. of 3 interfaces 346850 and 346851.

EXAMPLE:
If Handset B Apartment 3 calls Apartment 2, all the Handsets (C and D) of the apartment ring but it is possible to answer only from Handset C (the Handset D is after the 4th interface).

GENERAL RULES FOR INSTALLATION
Possible systems

POSSIBLE SYSTEMS

NOTE
For the calculation of the size of the system including interfaces item 346850 and 346851, separate the galvanically insulated system as shown in the "CALCULATION METHOD". The following tables should be applied for each galvanically insulated system. In doing so, during the first approximation, the interfaces 386850 and 346851 should be treated as an EP for the part connected to the TK BUS of the video adapter 346830 or to IN of the audio/video node F441, and as a handset for the part connected to the HANDSET BUS of the video adapter or to OUT of the audio/video node. If using this approximation, the system is shown as non feasible or is NOT shown in the tables, the "CALCULATION METHOD" should be used to verify the real feasibility.

For systems with interface 346150 (8/2 WIRE), see the proper tables.

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, bells and melodic 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 (or apartment interface)
- 80 apartments with 1 handset (or apartment interface) and 10 with 2 handsets (80+(10x2)=100)
- 71 apartments with 1 handset (or apartment interface), 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 (or apartment interface)
- 50 apartments with 1 handset (or apartment interface) and 7 with 2 handsets (50+(7x2)=64)
- 38 apartments with 1 handset (or apartment interface), 10 con 2 handsets, 1 with 3 handsets and 1 actuator for generic loads. (38+(10x2)+(1x3)+3=64)

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. of handsets	max. no. of nameplate modules	max. no. of handsets with 346991
1	26	1	26
2	18	2	18
3	12	-	12
4	8	-	8
	-	-	-
1 main + 2 sec.	16	-	16
1 main + 3 sec.	12	-	12
1 main + 4 sec.	8	-	8

NOTES:
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 tables the systems with "main and secondary" are WITHOUT independent audio.

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 (for secondary entrance panels with a different number of calls, see the section "CALCULATION METHOD").

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
- For each floor call interface item 346833, 1 handset must be taken off

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. of handsets	max. no. of nameplate modules	max. no. of handsets with 346991	max. no. of handsets	max. no. of additional expansion module 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
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
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

SFERA entrance panels realized with digital call modules

	Numeric digital call module item 342610		- Digital call speaker module with graphic display item 342630 - Additional keypad module item 342640
Entrance panels	max. no. of handsets	max. no. of nameplate modules	max. no. of 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
2 main + 2 sec.	60	26	60
2 main + 3 sec.	54	22	54
2 main + 4 sec.	52	22	52
3 main + 2 sec.	54	29	54
3 main + 3 sec.	51	27	51
3 main + 4 sec.	48	27	48

* For systems with a number of pushbuttons > 50, it is necessary to install 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, it is necessary to install two separate keypads.
A maximum of 6 Item 342704 can be connected in cascade to the EP Item 342702.

*** In systems with more than 56 pushbuttons, it is necessary to install two separate keypads.

NOTES:

In the systems the main entrance panels are those which can call all the handsets, while the secondary entrance panels (with pushbuttons) are those which can call only a part of the handsets.

In the tables the systems with "main and secondary" are WITHOUT independent audio.

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 (for secondary entrance panels with a different number of calls, see the section "CALCULATION METHOD").

In the realization of the systems we mu st 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
- For each floor call interface item 346833, 1 handset must be taken off

GENERAL RULES FOR INSTALLATION
Possible systems

VIDEO SYSTEMS

NOTE
For the dimensioning of the system using interfaces 346850 and 346851, separate the galvanically insulated system as shown in the "CALCULATION METHOD". The following tables should be applied for each galvanically insulated system. In doing so, during the first approximation, the interfaces 386850 and 346851 should be treated as an EP for the part connected to the TK BUS of the video adapter 346830 or to IN of the audio/video node F441, and as a handset for the part connected to the HANDSET BUS of the video adapter or to OUT of the audio/video node. If using this approximation, the system is shown as non feasible, or is NOT shown on the tables, the "CALCULATION METHOD" should be used to assess the real feasibility.

The video systems can be realized with 2 different connections:
- with video adapter item 346830
- with audio/video node item F441

When using the audio/video node, up to 4 video entrance panels and 4 risers can be installed. Up to 26 handsets and 2 distribution blocks can be installed on each riser. Audio EP must be connected to the SCS terminal block of the audio/video node.
When a higher number of handsets is needed on a system, an additional power supply can be used to locally supply the SFERA video entrance panels. In alternative to video entrance panels, 12Vdc coaxial cameras with interface item 347400 or 2 wire flush mounted cameras can also be used.
In case of systems fitted with only one system power supply, the entrance panel can be replaced with the interface item 347400, without changing the number of handsets that can be connected.

NOTES
The tables on the side are for a maximum number of floor distribution blocks, item 346841, equal to the number of handsets/4.

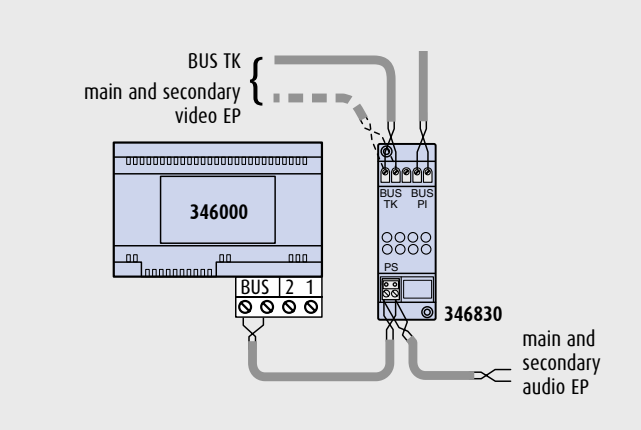
- (e.g. 20 installable handsets ⟶ no. 346841 = 20/4 = **5**
  (e.g. 26 installable handsets ⟶ no. 346841 = 26/4 = 6.5 = **7**)

- **if more than 2 video entrance panels are being used, the audio/video node item F441 must also be used**
- the following tables separate the systems made of traditional handsets only (PIVOT, SWING and SPRING), from those with at least one "advanced" handset (POLYX MEMORY STATION, POLYX VIDEO DISPLAY, VIDEO STATION and VIDEO DISPLAY).
  - any locally supplied advanced handset should be treated as a traditional handset
  - if during refurbishments operations a traditional handset is replaced with an advanced one, this must be locally supplied. Should this not be the case, all system limits must be reassessed.

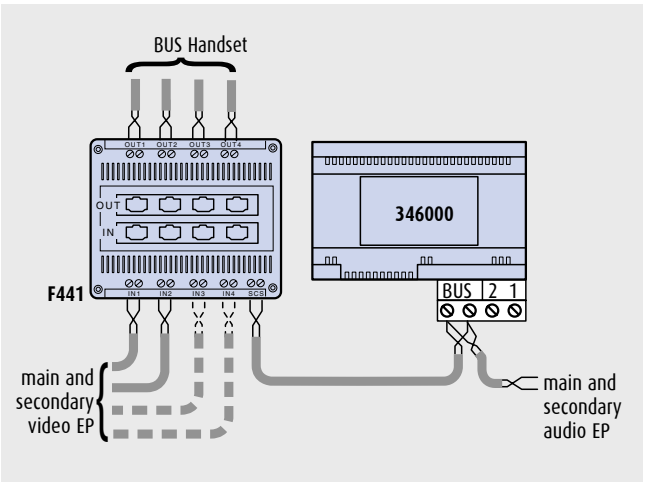
When realizing the system, the need for installing other components must be taken into consideration. These will take the place of handsets.

- for each additional nameplate module (in addition to those already indicated), 3 traditional or 1.5 advanced handsets must be removed.
- for each special control (item L4651/2) 1 traditional handset or 0.5 advanced handsets must be removed.
- for each actuator item 346200, general loads or call repeater, 3 traditional handset or 1.5 advanced handset must be removed
  (if locally supplied using a power supply item 346000, 1 traditional handset or 0.5 advanced handsets must be removed).
- for each actuator item 346230, for door lock, 3 traditional handsets or 1.5 advanced handset must be removed.

Wiring with video adapter item 346830



Wiring with audio/video node item F411



- for each floor call interface item 346833, 1 traditional handset or 0.5 advanced handset must be removed.
  The number of handsets to remove must be rounded by excess. For example if the result is 5.5, 6 handsets must be removed.

The secondary entrance panels shown on the table have been created using pushbutton modules. The number of pushbuttons for each secondary entrance panel is calculated by dividing the total number of handsets that can be installed by the total number of secondary entrance panels (for entrance panels with a different call number, refer to the section "CALCULATION METHOD").

As indicated in a previous note, remember that:
Traditional handsets: PIVOT, SWING, SPRINT and interfaces 346850 and 346851
Advanced handsets: POLYX MEMORY STATION, POLYX VIDEO DISPLAY, AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY

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)	System power supply	Additional power supply	max. no. of handsets (system with only traditional handsets)	max. no. of handsets (system with one or more "advanced" handsets)	max. no. of handsets (system with only traditional handsets)	max. no. of addditional expansion mod. item 342704	max. no. of handsets (system with one or more "advanced" handsets)	max. no. of addditional expansion mod. item 342704
1 video **	1	—	26	16	32	3	22	2
2 video	1	—	18	10	24	4	14	2
3 video	1	—	14	8	16	6	10	3
4 video	1	—	10	6	14	4	6	4
1 main video + 2 sec. audio or video	1	—	16	10	18	4	12	3
1 video **	1	1	50	38	*	*	*	*
2 video **	1	2	50	38	*	*	*	*
3 video **	1	3	50	38	*	*	*	*
4 video **	1	4	50	38	*	*	*	*
1 main video + 2 main audio	1	1	34	24	*	*	*	*
1 main video + 2 sec. audio	1	1	42	26	*	*	*	*
* it is not possible to power supply locally the MINISFERA entrance panels								

SFERA entrance panels with digital call modules

			SFERA					
			Numeric digital call module 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)	System power supply	Additional power supply	max. no.of nameplate module	max. no. of handsets (system with only traditional handsets)	max. no. of nameplate module	max. no. of handsets (system with one or more "advanced" handsets)	max. no. of handsets (system with only traditional handsets)	max. no. of handsets (system with one or more "advanced" handsets)
1 video	1	—	5	26	2	16	26	14
2 video	1	—	4	18	2	12	18	4
3 video	1	—	6	14	3	8	-	-
4 video	1	—	4	10	4	2	-	-
1 main video + 2 sec. audio or video	1	—	4	16	1	12	12	8
1 video	1	1	6	64	4	38	64	38
2 video	1	2	12	64	8	38	64	38
3 video	1	3	12	50	12	38	50	38
4 video	1	4	12	50	16	38	50	38
1 main video + 2 main audio	1	1	7	42	6	24	42	24
1 main video + 2 sec. audio	1	1	7	46	4	28	46	28

****NOTE: if all the handsets of the system are apartment interfaces (346850), it is possible to install up to 100 video apartments.**

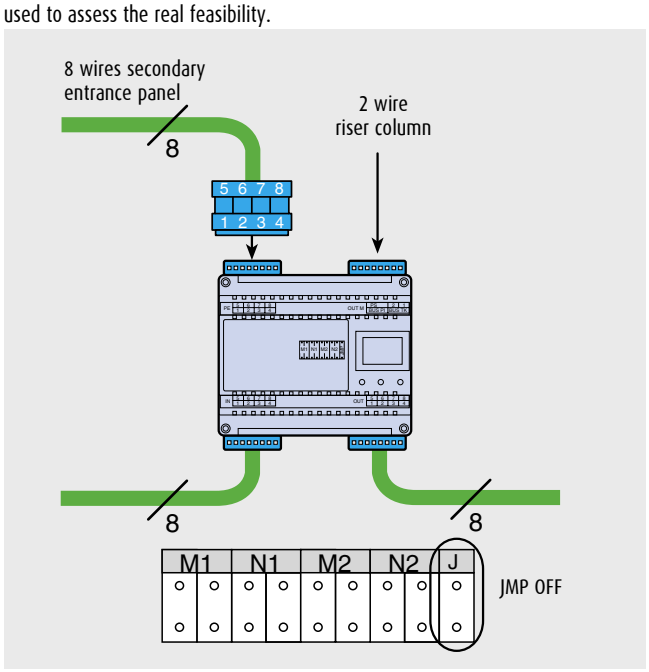
GENERAL RULES FOR INSTALLATION
Possible systems

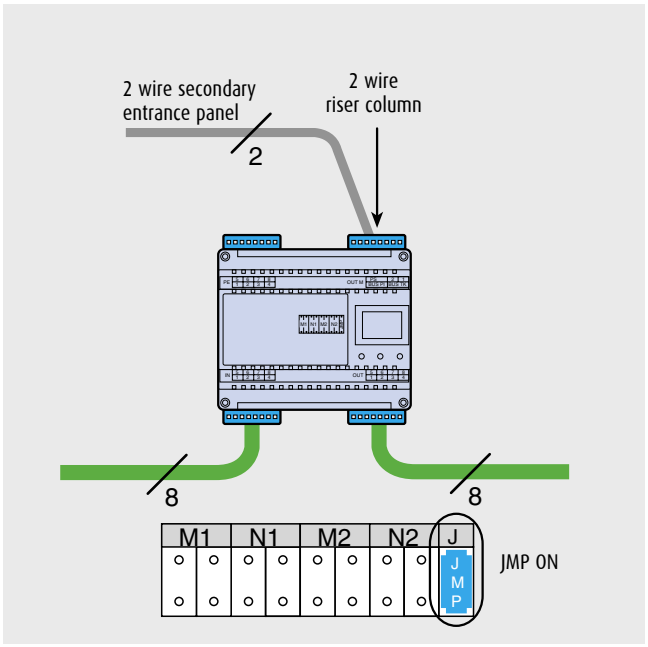
POSSIBLE SYSTEMS WITH 8/2 INTERFACE

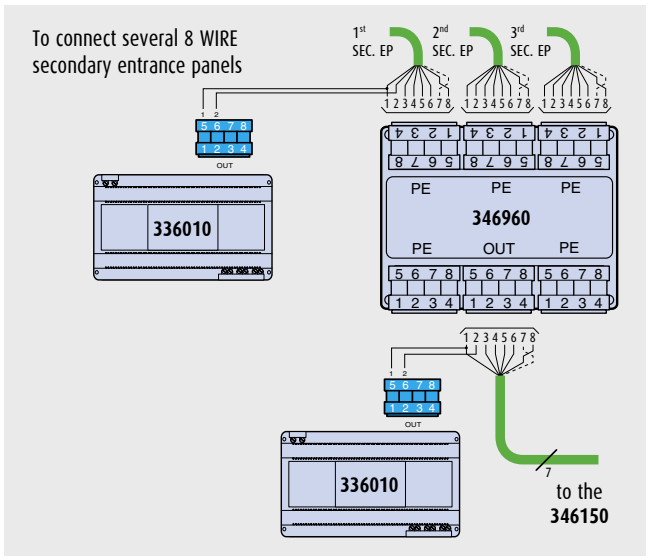
NOTE
For the calculation of the size of the system with interfaces 346850 and 346851, separate the galvanically insulated system as shown in the "CALCULATION METHOD". The following tables should be applied for each galvanically insulated system. In doing so, during the first approximation, the interfaces 386850 and 346851 should be treated as an EP for the part connected to the TK BUS of the video adapter 346830 or to IN of the audio/video node F441, and as a handset for the part connected to the handset BUS of the video adapter or to OUT of the audio/video node. If using this approximation the system is shown as NON feasible or is NOT shown in the tables, the "CALCULATION METHOD" should be used to assess the real feasibility.

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 WIRE AUDIO 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".

2 WIRE VIDEO SECONDARY ENTRANCE PANEL

The following tables separate the systems made of traditional handsets only (PIVOT, SWING and SPRING), from those with at least one "advanced" handset (POLYX MEMORY STATION, POLYX VIDEO DISPLAY, VIDEO STATION and VIDEO DISPLAY).

- any locally powered advanced handset should be treated as a traditional handset
- if during refurbishments operations a "traditional" handset is replaced with an "advanced" one, this must be locally supplied. Should this not be the case, all system limits must be reassessed.

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.

As indicated in a previous note, remember that:
Traditional handsets: PIVOT, SWING, SPRINT and interfaces 346850 and 346851
Advanced handsets: POLYX MEMORY STATION, POLYX VIDEO DISPLAY, AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY

NOTES:
The tables on the side are for a max. number of floor distribution blocks, item 346841, equal to the number of handsets/4.

- (ex. 20 handsets which can be installed ⟶ no. 346841 = 20/4 = **5**
  ex. 26 handsets which can be installed ⟶ no. 346841 = 26/4 = 6.5 = **7**)

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)	System power supply	Additional power supply	max. no. of handsets (system with only "traditional" handsets)	max. no. of handsets (system with one or more "advanced" handsets)	max. no. of additional expansion mod. item 342704	max. no. of handsets (system with only "traditional" handsets)	max. no. of additional expansion mod. item 342704	max. no. handsets (system with one or more advanced handsets)
0 video	1	–	64	38	–	64	–	38
1 video	1	–	18	10	2	24	1	14
1 video + 1 audio	1	–	12	8	3	16	2	10
1 video + 2 audio	1	–	8	6	3	12	1	6
1 video	1	1	64**	38	*	*	*	*
1 video + 1 audio	1	1	40	24	*	*	*	*
1 video + 2 audio	1	1	26	18	*	*	*	*

* it is not possible to power supply locally the MINISFERA entrance panels
** for systems with number of pushbuttons > 32 it is necessary to install the digital call modules (item 346230 and item 342610) or two separate pushbutton panels.

SFERA entrance panels with digital call modules

			SFERA					
			- Numeric digital call modules item 342610 - Nameplate module item 342200				- Digital call module with graphic display item 342630 - Keypad module item 342640	
Secondary entrance panels (both with b/w and colour camera)	System power supply	Additional power supply	max. no. of nameplate modules	max. no. of handsets (system with only "traditional" handsets)	max. no. of nameplate modules	max. no. of handsets (system with one or more "advanced" handsets)	max. no. of handsets (system with only "traditional" handsets)	max. no. handsets (system with one or more advanced handsets)
0 video	1	–	–	64	–	38	64	36
1 video	1	–	2	18	1	12	18	8
1 video + 1 audio	1	–	2	12	2	8	–	–
1 video + 2 audio	1	–	3	8	3	4	–	–
1 video	1	1	5	64	3	36	64	36
1 video + 1 audio	1	1	6	48	4	28	48	28
1 video + 2 audio	1	1	3	36	6	20	36	16

GENERAL RULES FOR INSTALLATION
Possible systems with 8/2 interface

As indicated in a previous note, remember that:
Traditional handsets: PIVOT, SWING, SPRINT and interfaces 346850 and 346851
Advanced handsets: POLYX MEMORY STATION, POLYX VIDEO DISPLAY, AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY

AUDIO 8 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	- Numeric digital call module item 342610		- Digital call speaker module with graphic display item 342620 - Keypad module item 342640
Secondary entrance panels	max. no. of handsets	max. no. of nameplate mod.	max. no. of handsets	max. no. of handsets
1	92*	9	100	100
2	46	12	70	70
3 + Power supply	100	9	100	100

* For systems with a number of pushbuttons > 46, it is necessary to install the digital call modules (Item 342630 and Item 342610) or two separate keypads

VIDEO 8 WIRE SECONDARY ENTRANCE PANEL

NOTES:
The tables on the side are for a max. number of floor distribution blocks, item 346841, equal to the number of handsets/4.

- (e.g. 20 installable handsets n° 346841 = 20/4 = **5**
  e.g. 26 installable handsets n° 346841 = 26/4 = 6.5 = **7**)
- the following tables separate the systems made of "traditional" handsets only (PIVOT, SWING and SPRING), from those with at least one "advanced" handset (POLYX MEMORY STATION, POLYX VIDEO DISPLAY, VIDEO STATION and VIDEO DISPLAY).

- any locally powered advanced handset should be treated as a traditional handset
- if during refurbishments operations a traditional handset is replaced with an advanced one, this must be locally supplied. Should this not be the case, all system limits must be reassessed.

Only one power supply for all system

	SFERA pushbuttons call		SFERA digital call					
	- Speaker module item 342160 - Pushbutton module item 342240		- Numeric digital call module item 342610 - Nameplate module item 342000				- Digital call speaker module with graphic display item 342620 - Keypad module item 342640	
Secondary entrance panels (both with b/w and colour camera)	max. no. of handsets (system with only "traditional" handsets)	max. no. of handsets (system with one or more "advanced" handsets)	max. no. nameplate modules	max. no. of handsets (system with only "traditional" handsets)	max. no. of nameplate modules	max. no. of handsets (system with one or more advanced handsets)	max. no. of handsets (system with only "traditional" handsets)	max. no. of handsets (system with one or more "advanced" handsets)
1 video	18	10	2	18	1	12	18	8
1 video + 1 audio	12	8	2	12	2	8	—	—
1 video + 2 audio	8	6	3	8	3	4	—	—
Additional power supply of 1 or more video EP (using video mixer 346890)								
1 video 1 video + 1 audio 1 video + 2 audio 2 video 3 video	64	38	4	64	3	38	64	36

GENERAL RULES FOR INSTALLATION
Calculation method

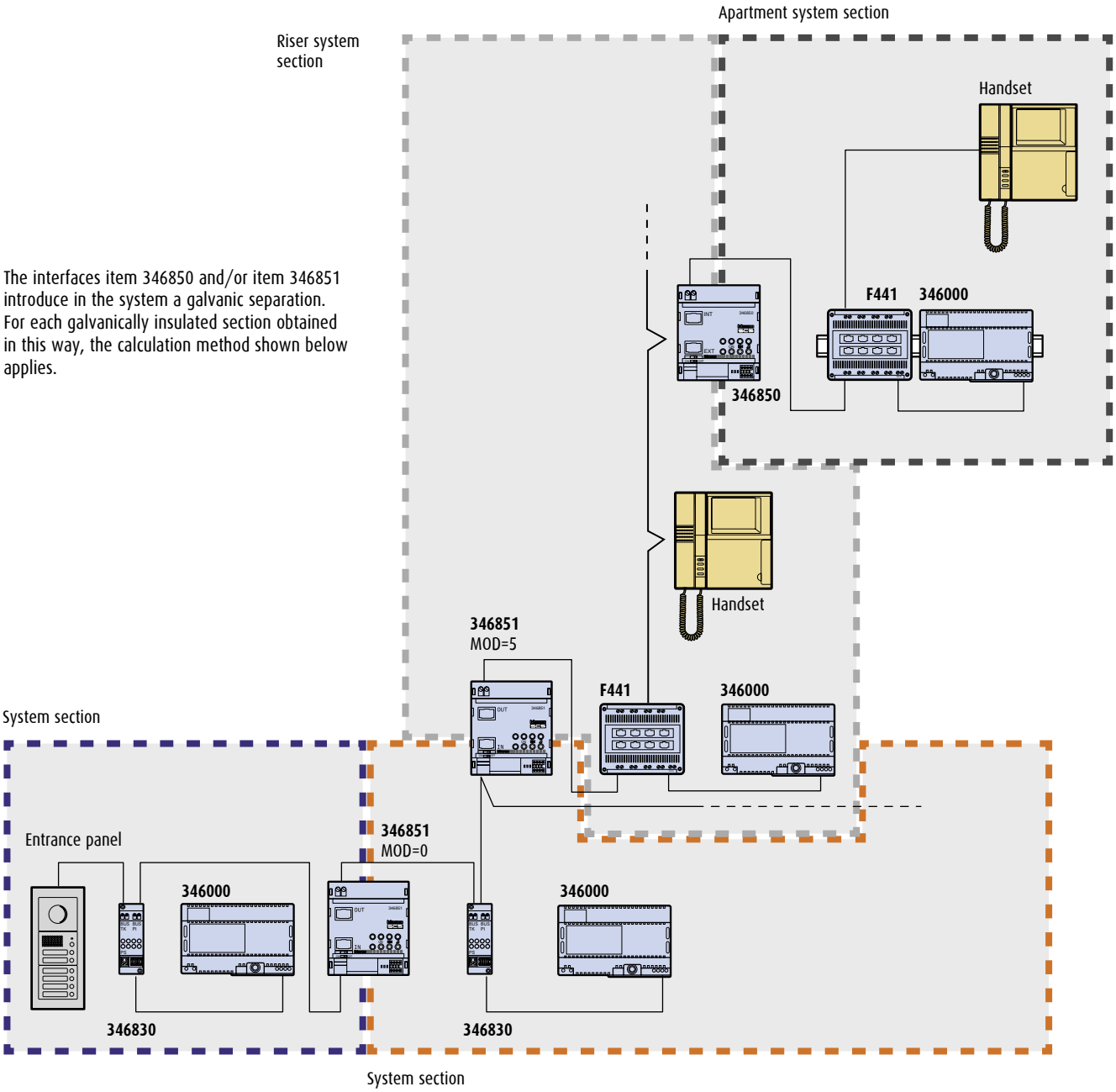
DIMENSION OF VIDEO DOOR ENTRY SYSTEM

It can be used instead of the tables. It enables obtaining higher dimensioning for systems with interfaces 346850 and 346851 and/or systems using only AXOLUTE VIDEO DISPLAY and/or POLYX VIDEO DISPLAY (display < 5.6") as advanced handsets.

The results obtained with the calculation method should always be compared and limited in line with the maximum system limits shown in section "General Limits" - max. system limits.

Example of division of a system in galvanically insulated section

The interfaces item 346850 and/or item 346851 introduce in the system a galvanic separation. For each galvanically insulated section obtained in this way, the calculation method shown below applies.



GENERAL RULES FOR INSTALLATION
Calculation method

AUDIO OR VIDEO SYSTEM?

AUDIO WITH 346000
You have **900**mA available

VIDEO
You have **1200**mA available

In the galvanically insulated system you are considering do you have Sound system sources?

YES
Subtract **35** mA (one-channel system with item F441)
Subtract **35** mA for each source (multi-channel system with item F441M)

NO
Do not subtract anything

In the galvanically insulated system you are considering is there at least
- Entrance panel
- Separate Camera
- 2 WIRE flush-mounting interface
- 8/2 wire interface item 346150

YES
Do not subtract anything

NO
Subtract **35** mA

In the galvanically insulated system you are considering is there at least one entrance panel?

YES
Subtract **50** mA

NO
Do not subtract anything

The system has at least a video entrance panel NOT locally supplied or at least a separate camera

YES
Subtract **235** mA

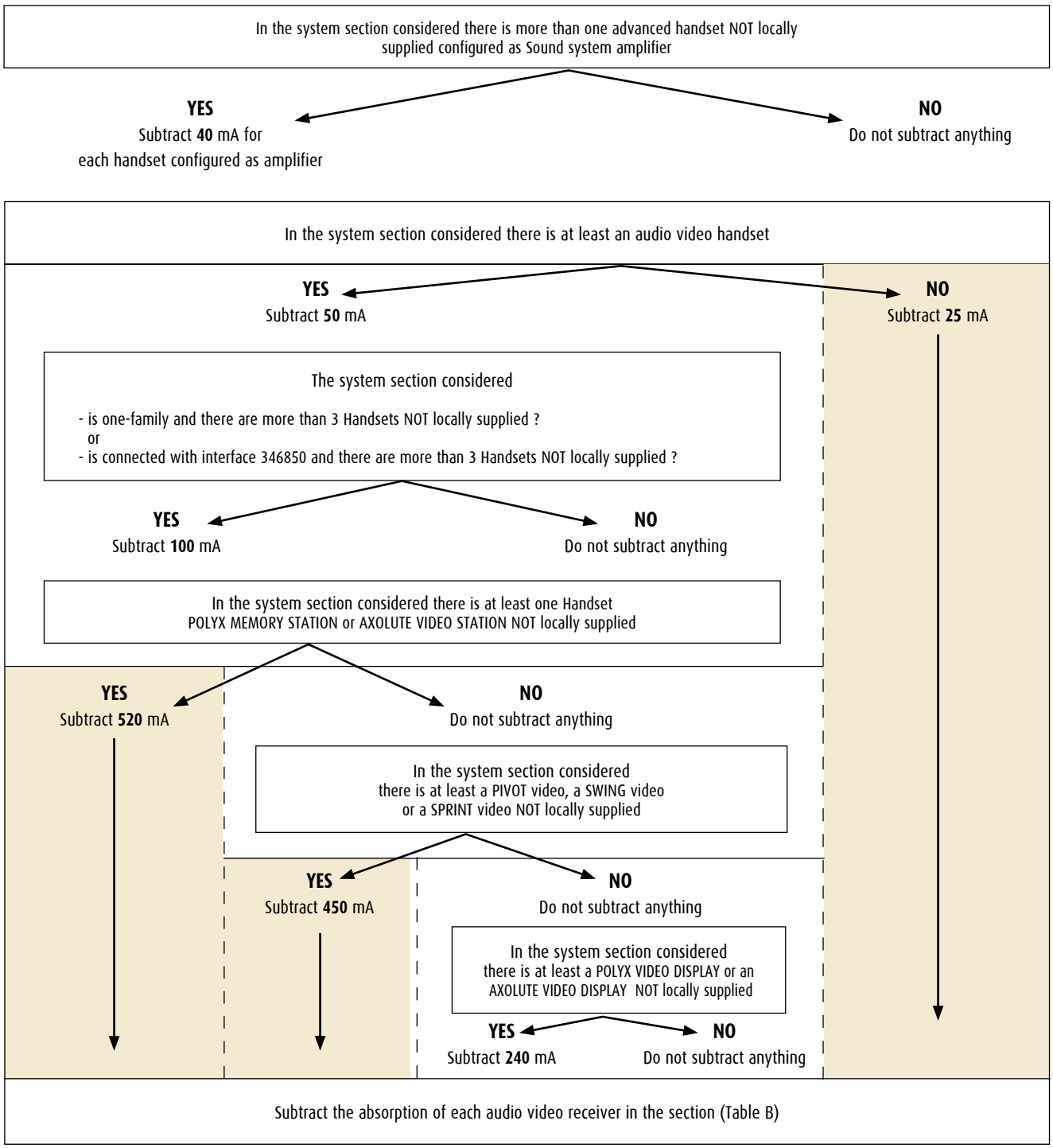
NO
Do not subtract anything

Subtract the absorption of each audio video source in the section (TABLE A)

In the system section considered are there sound system amplifier item H4562 or L4562?

YES
Subtract **35** mA
for each Sound system amplifier

NO
Do not subtract anything



IF THE RESULT IS >=0 mA THE SYSTEM CAN BE CONSTRUCTED, if not insert the local power supplies for entrance panels or handsets and apply again the calculation method.

GENERAL RULES FOR INSTALLATION
Calculation method

Table A

342150	SFERA speaker module	**30 mA**	**342704**	MINISFERA keys	**30 mA**
342170	SFERA speaker module	**30 mA**	**342911** **342921** **342931** **342941** **342971** **342972**	LINEA 2000 Audio	**30 mA**
342200	SFERA nameplate module	**15 mA**	**342951** **342961**	LINEA 2000 video B/W and Colour	**30 mA**
			342981 **342982** **342991** **342992**	LINEA 2000 METAL B/W and Colour	**30 mA**
342240	SFERA 4 pushbutton module	**15 mA**	**346150**	8/2 WIRE interface	**110 mA**
342510	SFERA bw camera module	**15 mA**	**346200**	Actuator for generic loads	
342550	SFERA colour camera module	**15 mA**	**346230**	Door lock actuator	**10 mA**
342600	SFERA alphanumeric pulse-dialling	**110 mA**	**346810**	2 WIRE PABX interface	
342610	SFERA numeric pulse-dialling	**15 mA**	**346850**	Apartment interface (INT terminal)	**15 mA**
342630	SFERA speaker module with graphic call	**110 mA**	**346851**	Expansion module in MOD=5 (OUT terminal)	**15 mA**
342640	SFERA keypad for graphic pulse-dialling	**15 mA**	**346851**	Expansion module in MOD=0 (OUT terminal)	**50 mA**
346991	Universal speaker module	**30 mA**	**347400**	COAXIAL-2 WIRE interface	**15 mA**
346992	Pushbutton extender	**15 mA**	**F500**	SCS radio	**15 mA**
342708	MINISFERA video	**30 mA**	**HC4560** **HS4560** **L4560** **N4560** **NT4560**	RCA input	**15 mA**
342702	MINISFERA audio	**30 mA**	**L4561**	Stereo control	**5 mA**
391647 **391648** **391649** **391651** **391652** **391657** **391658** **391659** **391661** **391662**	2 WIRE flush-mounting camera	**5 mA**			

The consumption values for each single source have bee rounded to multiples of 5 mA.
NOTE: The entrance panels locally supplied must not be considered in the absorption calculation.

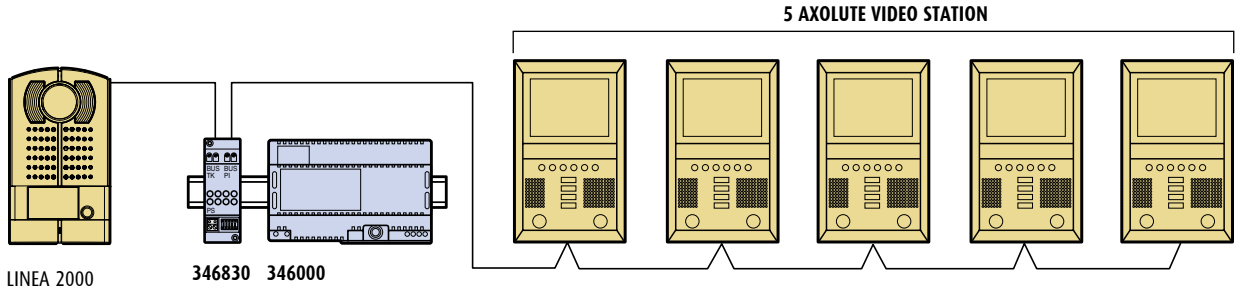
Table B

PIVOT audio and video handset	**5 mA**	346841 Floor distribution block	**15 mA**
SWING audio and video handset	**5 mA**	F441 Audio/Video Node	**20 mA**
SPRINT audio and video handset	**5 mA**	346850 Apartment interface (EXT terminal)	**5 mA**
AXOLUTE VIDEO STATION	**10 mA***	346851 Expansion module in MOD=5 (IN terminal)	**5 mA**
AXOLUTE VIDEO DISPLAY	**10 mA***	346851 Expansion module in MOD=0 (IN terminal)	**30 mA**
POLYX MEMORY STATION	**10 mA***	346230 Door lock actuator	**15 mA**
POLYX VIDEO DISPLAY	**10 mA***	346200 Light actuator	**15 mA**
346833 Floor call interface	**5 mA**	Sound system amplifiers H4562 or L4562	**5 mA**

* If locally supplied they absorb 5mA
The consumption values for each single receiver have bee rounded to multiples of 5 mA.

Example 1

ONE-FAMILY system with LINEA 2000 METAL video door entry entrance panels and 5 AXOLUTE VIDEO STATION not locally supplied.

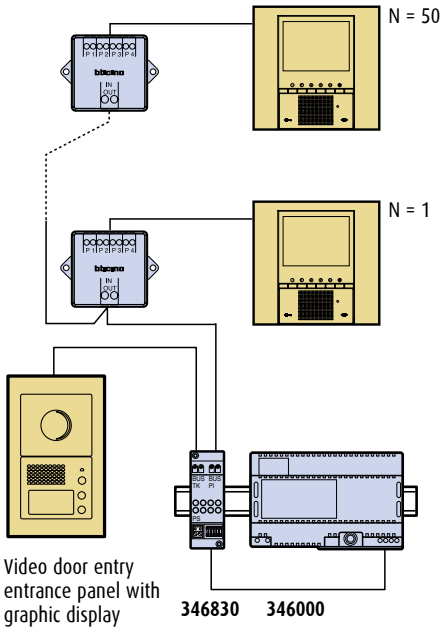


Audio or Video system	**VIDEO**	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate camera - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract **50** mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract **235** mA	1150 – 235 **915**
Subtract the absorption of each audio video source in the section (TABLE A)	**1 LINEA 2000 METAL** Subtract 30 mA	915 – 30 **885 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**885 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**885 mA**
In the system section considered is there at least an audio video handset?	**YES** Subtract **50** mA	885 – 50 **835 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied ?	**YES** Subtract **100** mA	835 – 100 **735 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**YES** Subtract **520** mA	735 – 520 **215 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**5 VIDEO STATION** Subtract 5 x 10 mA **50** mA	215 – 50 **165 mA**
Can the system be constructed?	**165 mA** (>=0 mA)	**YES**

GENERAL RULES FOR INSTALLATION
Calculation method

Example 2

MULTI-FAMILY system with 1 video door entry entrance panel with graphic display, 13 floor distribution blocks and 50 apartments (1 POLYX VIDEO DISPLAY is installed in each apartment).



Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate camera - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract 50 mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract 235 mA	1150 – 235 **915**
Subtract the absorption of each audio video source in the section (TABLE A)	**1 342630** Subtract **110** mA **1 342550** Subtract **15** mA	915 – 125 **790 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**790 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**790 mA**
In the system section considered is there at least an audio video handset?	**YES** Subtract **50** mA	790 – 50 **740 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied ?	**NO** Do not subtract anything	**740 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**NO** Do not subtract anything	**740 mA**
In the system section considered is there at least one PIVOT video, one SWING video or one SPRINT video **NOT** locally supplied?	**NO** Do not subtract anything	**740 mA**
In the system section considered is there at least one POLYX VIDEO DISPLAY handset or AXOLUTE VIDEO DISPLAY **NOT** locally supplied?	**YES** Subtract **240** mA	740 – 240 **500 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**50** **POLYX VIDEO DISPLAY** Subtract 50 x 10 mA **500** mA **13** floor distribution blocks 13 x 15 mA Subtract **195** mA	500 – 695 **-195 mA**
Can the system be constructed?	**-195 mA** (>=0 mA)	**NO**

It is necessary to insert some additional power supplies to realize the system. The entrance panel is locally supplied.

Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate camera - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract **50** mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**NO** Do not subtract anything	**1150 mA**
Subtract the absorption of each audio video source in the section (TABLE A)	Do not subtract anything because the EP is locally supplied	**1150 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**1150 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**1150 mA**
In the system section considered is there at least an audio video handset?	**YES** Subtract 50 mA	1150 – 50 **1100 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied ?	**NO** Do not subtract anything	**1100 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**NO** Do not subtract anything	**1100 mA**
In the system section considered is there at least one PIVOT video, one SWING video or one SPRINT video **NOT** locally supplied?	**NO** Do not subtract anything	**1100 mA**
In the system section considered is there at least one POLYX VIDEO DISPLAY handset or AXOLUTE VIDEO DISPLAY **NOT** locally supplied?	**YES** Subtract **240** mA	1100 – 240 **860 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**50** **POLYX VIDEO DISPLAY** **Subtract 50 x 10 mA** **500** mA **13** floor distribution blocks 13 x 15 mA Subtract **195** mA	860 – 695 **165 mA**
Can the system be constructed?	**165 mA** (>=0 mA)	**YES**

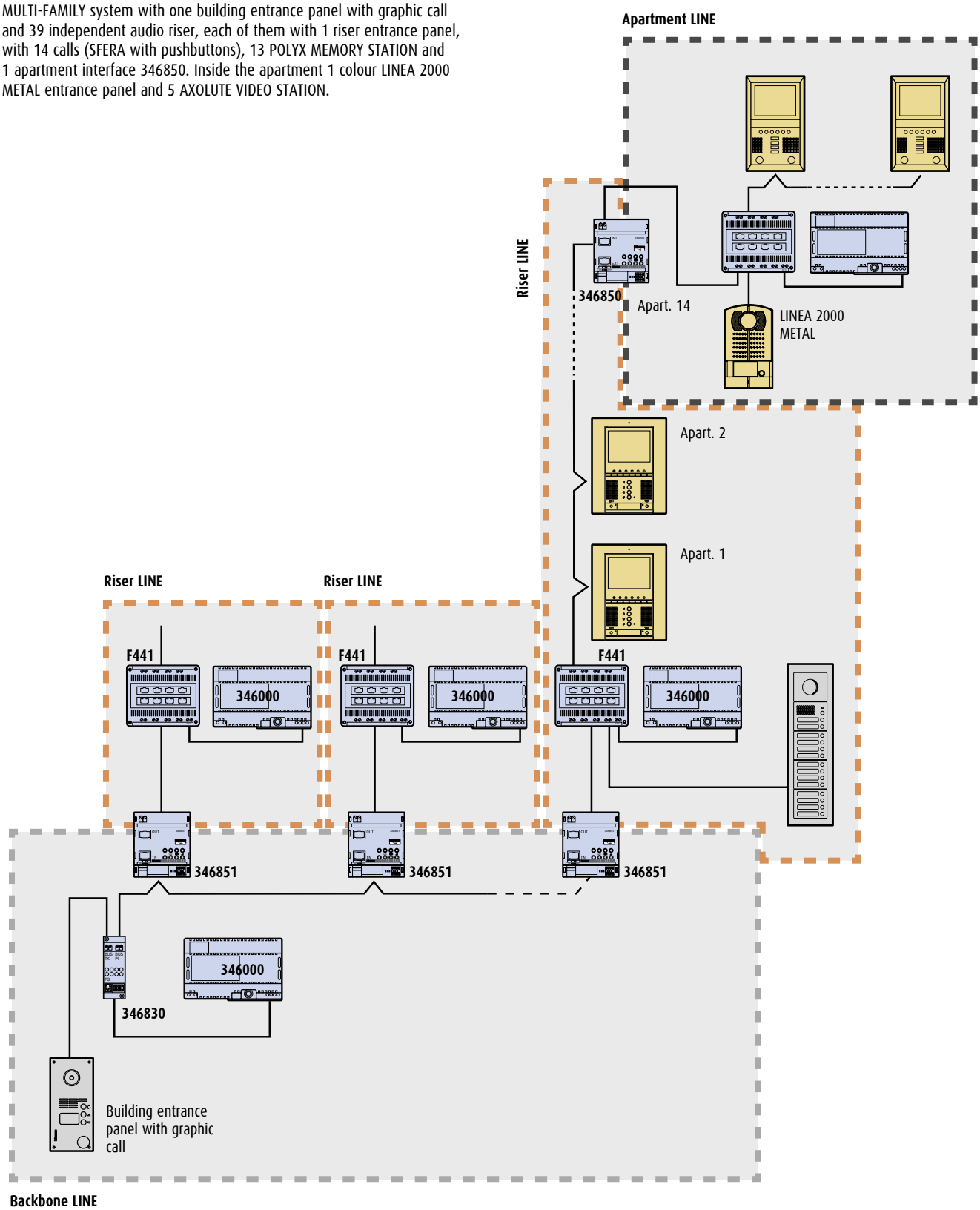
NOTE

This type of system can have up to 6 POLYX VIDEO DISPLAYS (665/10mA) handsets. The limit obtained in this way must be compared with the maximum limits of the system.
A **max. of 64 handsets** can therefore be installed in the system.

GENERAL RULES FOR INSTALLATION
Calculation method

Example 3

MULTI-FAMILY system with one building entrance panel with graphic call and 39 independent audio riser, each of them with 1 riser entrance panel, with 14 calls (SFERA with pushbuttons), 13 POLYX MEMORY STATION and 1 apartment interface 346850. Inside the apartment 1 colour LINEA 2000 METAL entrance panel and 5 AXOLUTE VIDEO STATION.



BACKBONE LINE dimension		
Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate camera - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract **50** mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract **235** mA	1150 – 235 **915**
Subtract the absorption of each audio video source in the section (TABLE A)	**1 342630** Subtract **110** mA **1 342550** Subtract **15** mA	915 – 125 **790 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**790 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**790 mA**
In the system section considered is there at least an audio video handset?	**NO** Subtract **25** mA	790 – 25 **765 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**39 system expansion module 346851 (MOD=5)** 39 x 5 mA **195 mA**	765 – 195 **570 mA**
Can the system be constructed?	**570 mA** (>=0 mA)	**YES**

Riser LINE dimension (valid for all 39 lines)		
Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate cameras - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract 50 mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract 235 mA	1150 – 235 **915**

GENERAL RULES FOR INSTALLATION
Calculation method

Subtract the absorption of each audio video source in the section (TABLE A)	**1 342170** Subtract **30** mA **1 342550** Subtract **15** mA **4 342240** Subtract 4 x 15 mA **60** mA **346851 MOD=5** Subtract **15** mA	915 – 105 **810 mA** 810 – 15 **795 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**795 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**795 mA**
In the system section considered is there at least an audio video handset?	**YES** Subtract **50** mA	795 – 50 **745 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied ?	**NO** Do not subtract anything	**745 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**YES** Subtract **520** mA	745 – 520 **225 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**13** **POLYX MEMORY STATION** Subtract 13 x 10 mA **130** mA **1 apartment interface** **346850** Subtract **5** mA	225 – 130 **95 mA** 95 – 5 **90 mA**
Can the system be constructed?	90 mA (>=0 mA)	**YES**

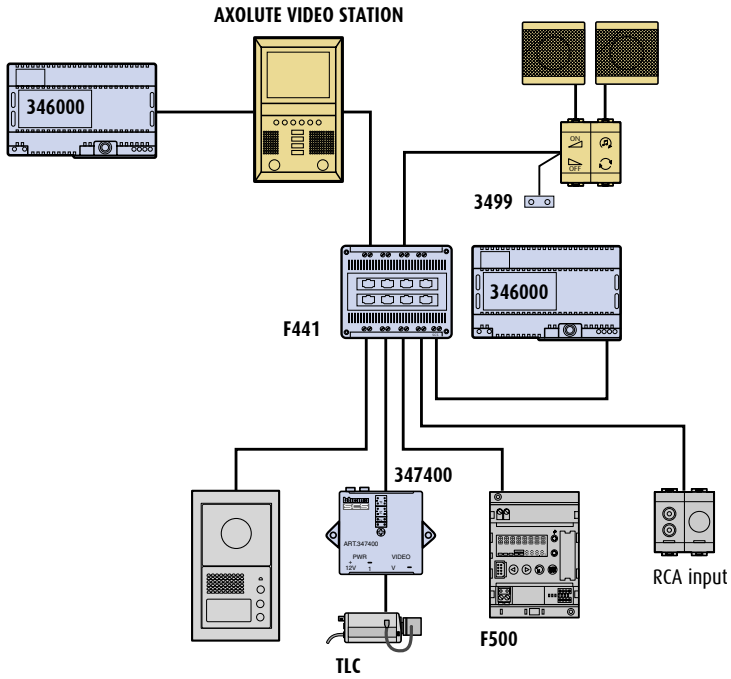
Apartment LINE dimension		
Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**NO** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate cameras - 8/2 wire interface item 346150	**YES** Do not subtract anything	**1200 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract **50** mA	1200 – 50 **1150 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract **235** mA	1150 – 235 **915**

Subtract the absorption of each audio video source in the section (TABLE A)	**1 LINEA 2000** **METAL** Subtract **30** mA **1 apartment interface** **346850** Subtract 15 mA	915 – 30 **885 mA** 885 – 15 **870** mA
In the system section considered are there sound system amplifier item H4562 or L4562?	**NO** Do not subtract anything	**870** mA
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** Do not subtract anything	**870** mA
In the system section considered is there at least an audio video handset?	**YES** Subtract **50** mA	870 – 50 **820 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied ?	**YES** Subtract 100 mA	820 – 100 **720 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**YES** Subtract **520** mA	720 – 520 **200 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**5** **AXOLUTE VIDEO STATION** Subtract 5 x 10 mA **50** mA	200 – 50 **150 mA**
Can the system be constructed?	**150 mA** (>=0 mA)	**YES**

GENERAL RULES FOR INSTALLATION
Calculation method

Example 4

ONE-FAMILY system integrated with sound system, made of 1 entrance panel (SFERA with keys), 1 12Vdc camera, an SCS radio (F500) and an RCA input as sources and 1 AXOLUTE VIDEO STATION (also used as amplifier) and one flush-mounted amplifier as receivers.



- Separate outputs for video door entry systems and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same node output, refer to the Sound System Technical guide.

- It is recommended to locally supply the handset, to avoid MUTING the sound system amplifiers when the monitor is switched on.

To define the size of this system, 2 feasibility tests are needed:

- FEASIBILITY OF THE SOUND DIFFUSION SYSTEM

- FEASIBILITY OF THE VIDEO DOOR ENTRY SYSTEM

FEASIBILITY OF THE SOUND SYSTEM
The system will be feasible when in accordance with the sound system technical guide.

FEASIBILITY OF THE VIDEO DOOR ENTRY SYSTEM
This is assessed using the "GENERAL CALCULATION METHOD".

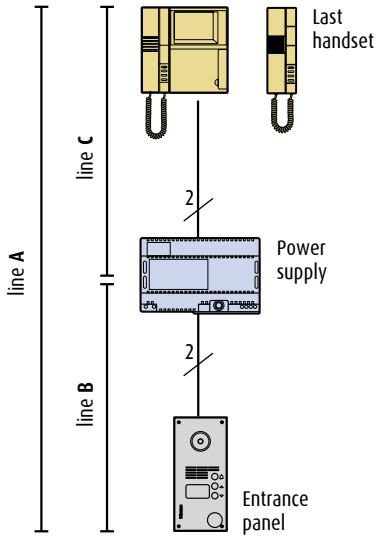
Audio or Video system	VIDEO	**1200 mA**
In the galvanically insulated system you are considering do you have Sound system sources?	**YES** Subtract 35 mA	**1200 mA**
In the galvanically insulated system you are considering is there at least - Entrance panel - 2 WIRE flush-mounting cameras - Separate camera - 8/2 wire interface item 346150	**YES** Do not subtract anything	1200 – 35 **1165 mA**
In the galvanically insulated system you are considering is there at least one entrance panel?	**YES** Subtract 50 mA	1165 – 50 **1115 mA**
Has the system at least a video entrance panel NOT locally supplied or at least a separate camera?	**YES** Subtract **235** mA	1115 – 235 **880**
Subtract the absorption of each audio video source in the section (TABLE A)	**1 342170** Subtract **30** mA **1 342550** Subtract **15** mA **1 347400** Subtract **15** mA **1 F500 radio** Subtract **15** mA **1 RCA input** Subtract **15** mA	880 – 45 **835 mA** 835 – 15 **820 mA** 820 – 15 **805 mA** 805 – 15 **790 mA**
In the system section considered are there sound system amplifier item H4562 or L4562?	**YES** 1 x 35 mA Subtract 35 mA	790 – 35 **755 mA**
In the system section considered is there more than one advanced handset NOT locally supplied configured as Sound system amplifier?	**NO** (only one handset configured as amplifier) Do not subtract anything	**755 mA**
In the system section considered is there at least an audio video handset?	**YES** Subtract **50** mA	755 – 50 **705 mA**
The system section considered - is one-family and there are more than 3 handsets **NOT** locally supplied ? or - is connected with interface 346850 and there are more than 3 handsets **NOT** locally supplied	**YES** Subtract **100** mA	705 – 100 **605 mA**
In the system section considered is there at least one Handset POLYX MEMORY STATION or AXOLUTE VIDEO STATION **NOT** locally supplied?	**NO** (it is in local supply) Do not subtract anything	**605 mA**
In the system section considered is there at least one PIVOT video, one SWING video or one SPRINT video **NOT** locally supplied?	**NO** Do not subtract anything	**605 mA**
In the system section considered is there at least one POLYX VIDEO DISPLAY handset or AXOLUTE VIDEO DISPLAY **NOT** locally supplied?	**NO** Do not subtract anything	**605 mA**
Subtract the absorption of each audio video receiver in the section (Table B)	**1 AXOLUTE VIDEO STATION in local supply** Subtract **5** mA **1 Amplifier** Subtract **5** mA	605 – 5 **600 mA** 600 – 5 **595 mA**
Can the system be constructed?	**595 mA** (>=0 mA)	**YES**

GENERAL RULES FOR INSTALLATION
Calculating the distances

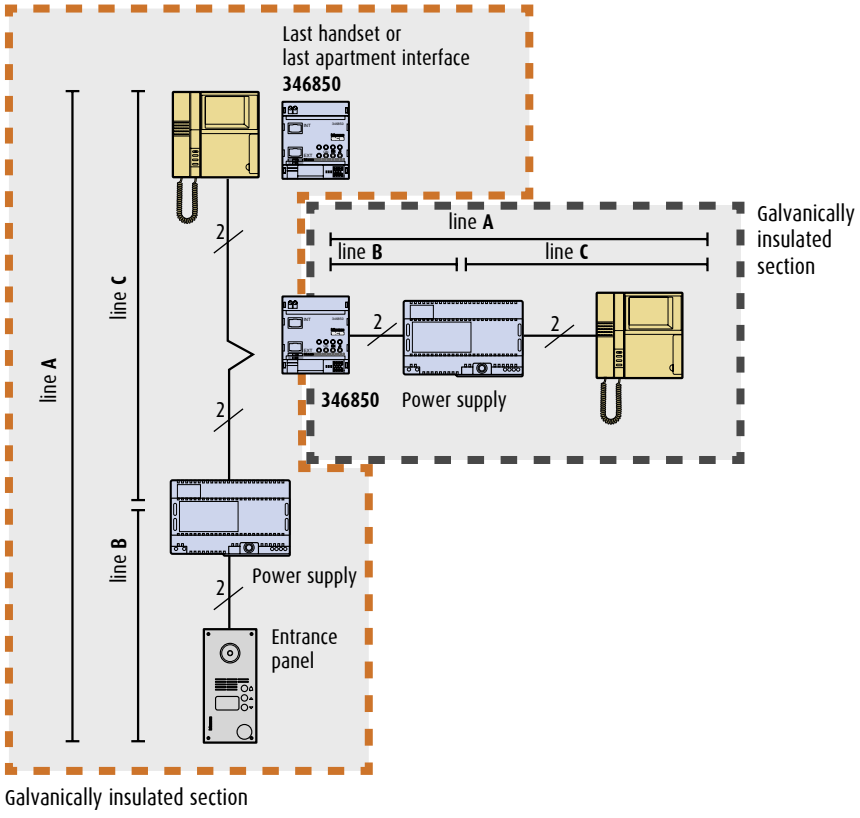
GENERAL RULES FOR THE CALCULATION OF DISTANCES

In video systems the max. distance between the EP and the furthest handset is 600 m when the Bticino cable 336904 and 2 interfaces 346850 and 346851 are used. Interfaces 346850 and/or 346851 introduce a galvanic separation of the system. In audio systems the max. distance between the EP and the furthest handset is 1 km when a sheathed cable 1 mm² is used. If apartment interfaces (346850) or system expansion modules (346851) are included in the system, the max. distance can be extended to 1350 m. In order to calculate the system max. extensions, it is necessary to identify the galvanically insulated sections, as well as the A, B and C line of each section. The max. permitted distance must also be checked on the table, based on the items installed and the cable used. Following are some examples of how to identify the LINES.

AUDIO OR VIDEO SYSTEM WITHOUT INTERFACES OR SYSTEM EXPANSION MODULES

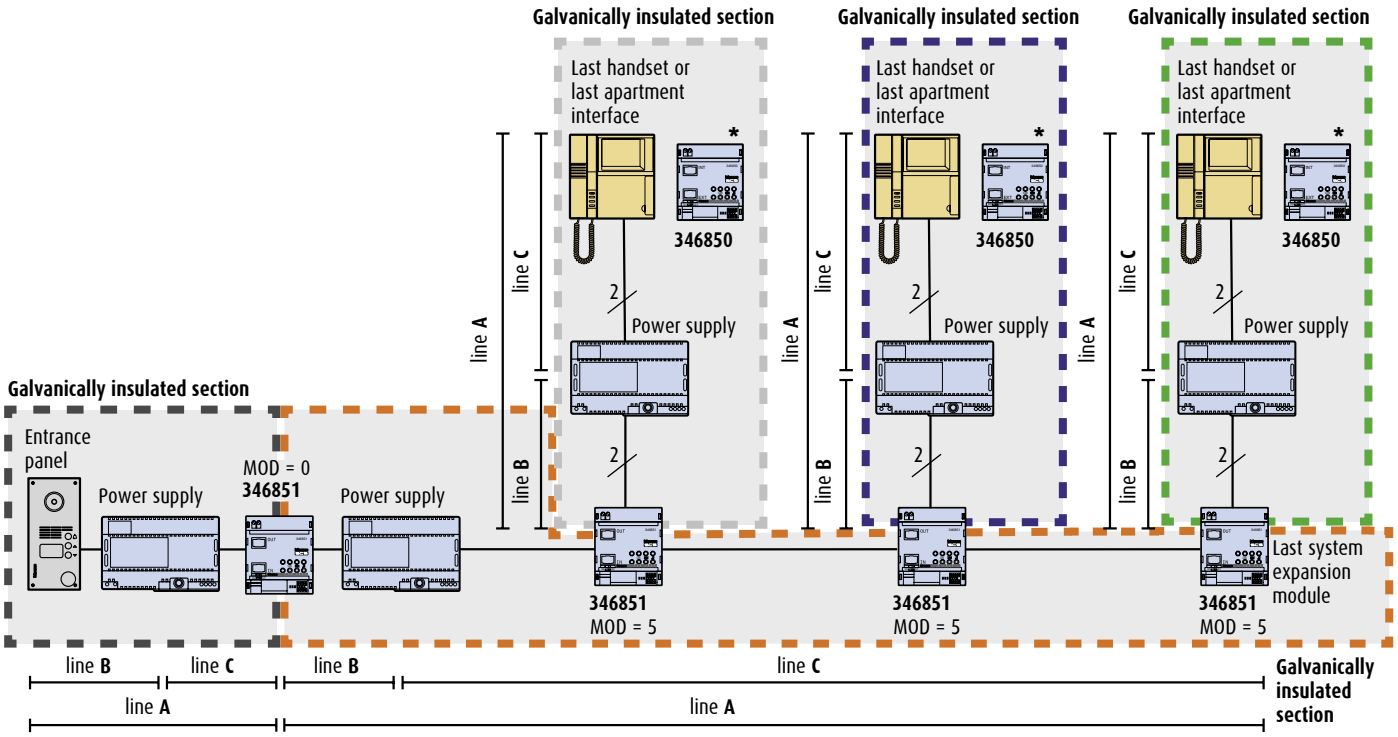


AUDIO OR VIDEO SYSTEM WITH APARTMENT INTERFACE ITEM 346850

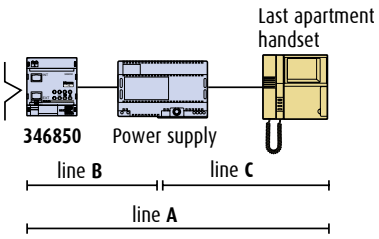


AUDIO AND VIDEO SYSTEM WITH SYSTEM EXPANSION MODULES ITEM 346851

Configured with **MOD = 0** and **MOD = 5**



Calculation of the apartment internal line

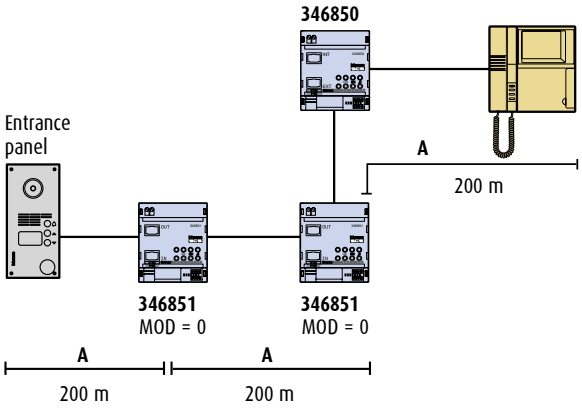


A maximum of 3 interfaces item 346850 and item 346851 can be used in cascade. In this case, by interfaces in cascade it is meant interfaces crossed by an audio/video entrance panel to handset connection. Only 2 interfaces, at the user discretion, can retransmit the signal, making another 200 m available on the A line.

In order to recalculate the distances if 3 interfaces are crossed, it is necessary to decide which interface will NOT retransmit the SIGNAL. This interface will then not be taken into consideration during the identification of LINE A.

Galvanically insulated section

In this case, the interface 346850 galvanically separates the sections of the system but DOES NOT regenerate the signal. The distance of 200 m is not between the system expansion module and the apartment interface, but between the expansion module and the last handset.



(with cable 336904)

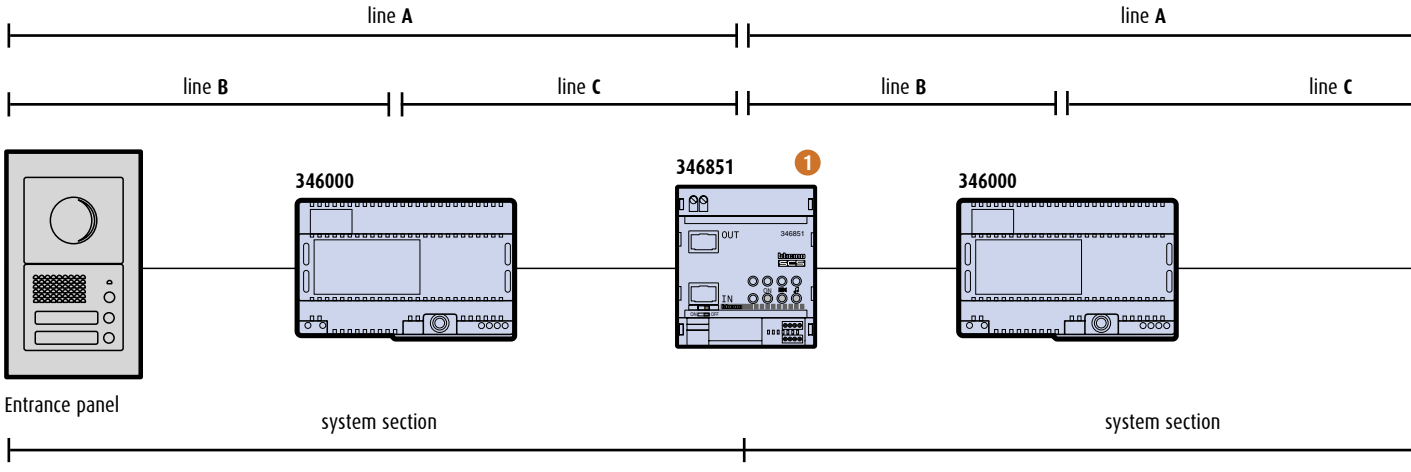
GENERAL RULES FOR INSTALLATION
Calculating the distances

EXAMPLE OF SYSTEM DIMENSION WITH 3 INTERFACES

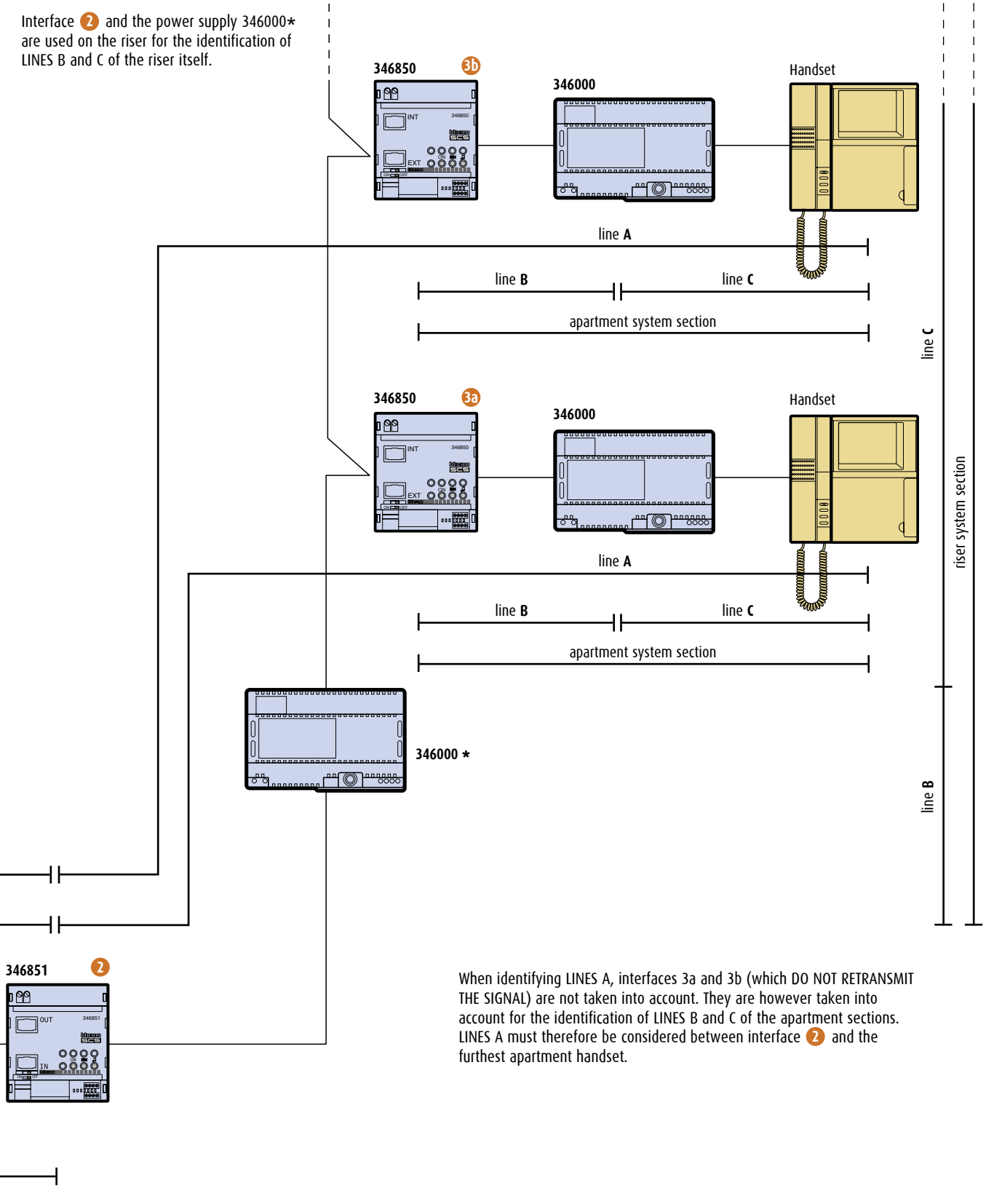
The following example shows A - B and C lines of the various sections of the system, and how they can be identified.

Interface 1 retransmits the signal and is therefore used for the identification of line A, in addition to lines C and B.

Interface 2 retransmits the signal and is therefore used for the identification of line A, in addition to lines C and B.



Interface 2 and the power supply 346000* are used on the riser for the identification of LINES B and C of the riser itself.

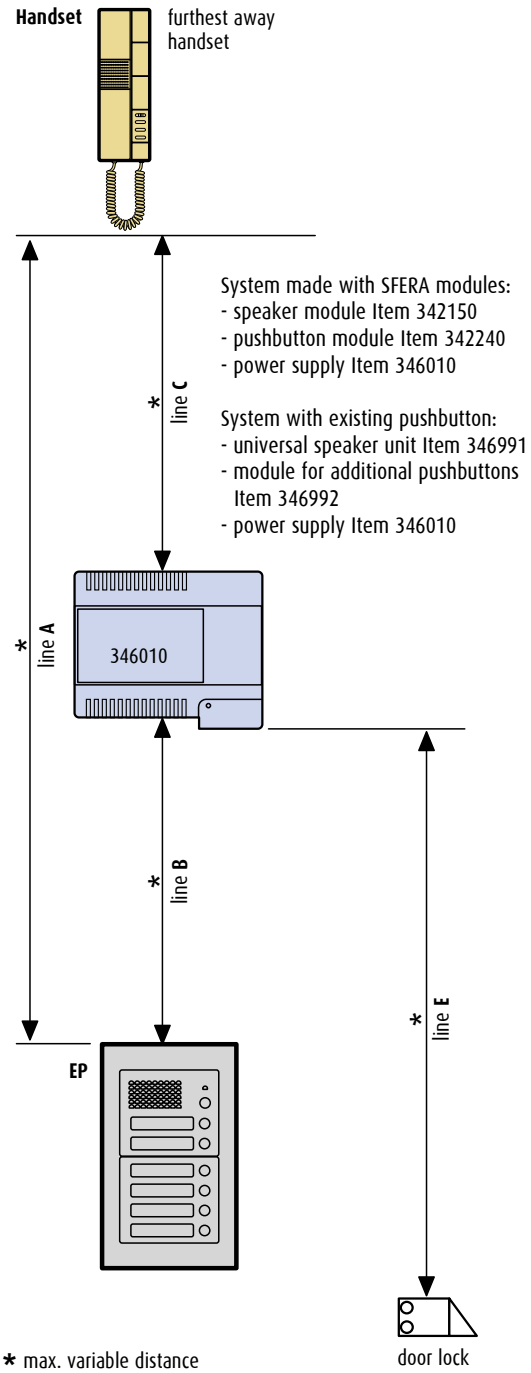


When identifying LINES A, interfaces 3a and 3b (which DO NOT RETRANSMIT THE SIGNAL) are not taken into account. They are however taken into account for the identification of LINES B and C of the apartment sections. LINES A must therefore be considered between interface 2 and the furthest apartment handset.

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. 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

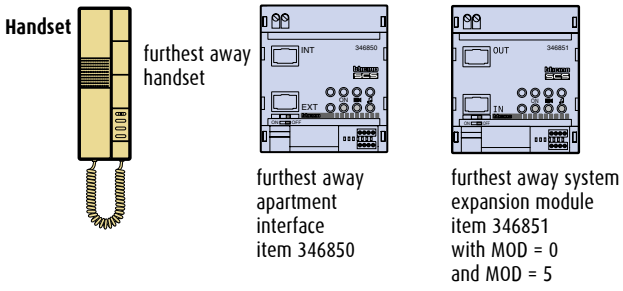
Cable section (mm²)	0.28	Bticino cable Item L4669	Bticino cable Item 336904	1
Transformer voltage 12V a.c.	25 m	25 m	50 m	100 m

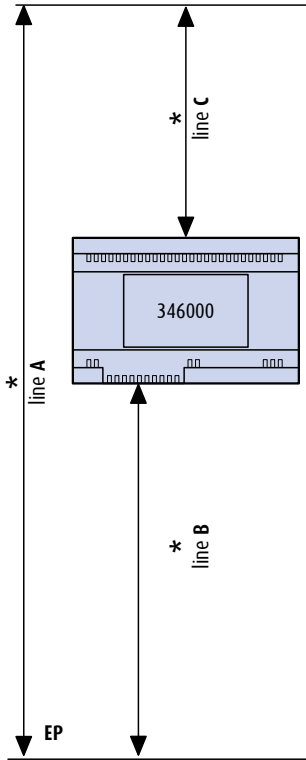
NOTE: To reduce the cable cross-section and reach distances greater between the entrance panel and the door lock, install a transformer near the entrance panel.

The interfaces item 346850 and 346851 can not be used with power supply item 346010.

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.





The distances for the audio system with at least one interface (in bold type) and for the audio system without interfaces **are shown in the tables**.

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	**100 m** 100 m	**110m** 110m	**150m** 150 m	**320 m** 320 m
66 Handsets*	**120 m** 120 m	**130m** 130m	**190m** 190 m	**380 m** 380 m
50 Handsets	**140 m** 150 m	**150m** 160m	**200m** 250 m	**450 m** 450 m
26 Handsets	**140 m** 180 m	**150m** 190m	**200m** 320 m	**450 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** 100 m	**110m** 110m	**180m** 180 m	**310 m** 310 m
66 pushbuttons*	**130 m** 130 m	**140m** 110m	**200m** 240 m	**420 m** 420 m
50 pushbuttons	**140 m** 150 m	**150m** 160m	**200m** 250 m	**450 m** 450 m
26 pushbuttons	**140 m** 200 m	**150m** 210m	**200m** 290 m	**450 m** 580 m
item 342630 + 342640	**130 m** 130 m	**140m** 140m	**200m** 240 m	**420 m** 420 m
item 342610+ no. 9 item 342200	**130 m** 130 m	**140m** 140m	**200m** 240 m	**420 m** 420 m

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

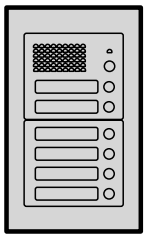
Max. distance - LINE A with Interfaces 346850 and 346851

Cable section (mm²)	0.28	Bticino cable item L4669	Bticino cable item 336904	1
	140 m	150 m	200 m	450 m

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

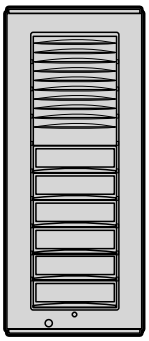
Cable section (mm²)	0.28	Bticino cable item L4669	Bticino cable item 336904	1
S+ S- terminals	30 m	30 m	50 m	100 m

* only with MINISFERA entrance panel

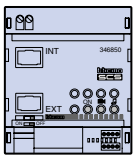


System made with **SFERA** modules:
- speaker module Item 342170
- pushbutton module Item 342240
- power supply Item 346000

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

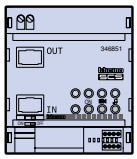


System made with **MINISFERA** modules:
- speaker module item 347202
- expansion module item 342704
- power supply item 346000
- MINISFERA composition with only single pushbuttons item 332712



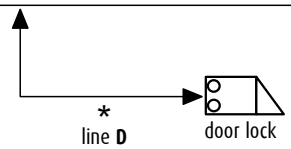
apartment interface

item 346850



system expansion module with MOD = 0 and MOD = 5

item 346851



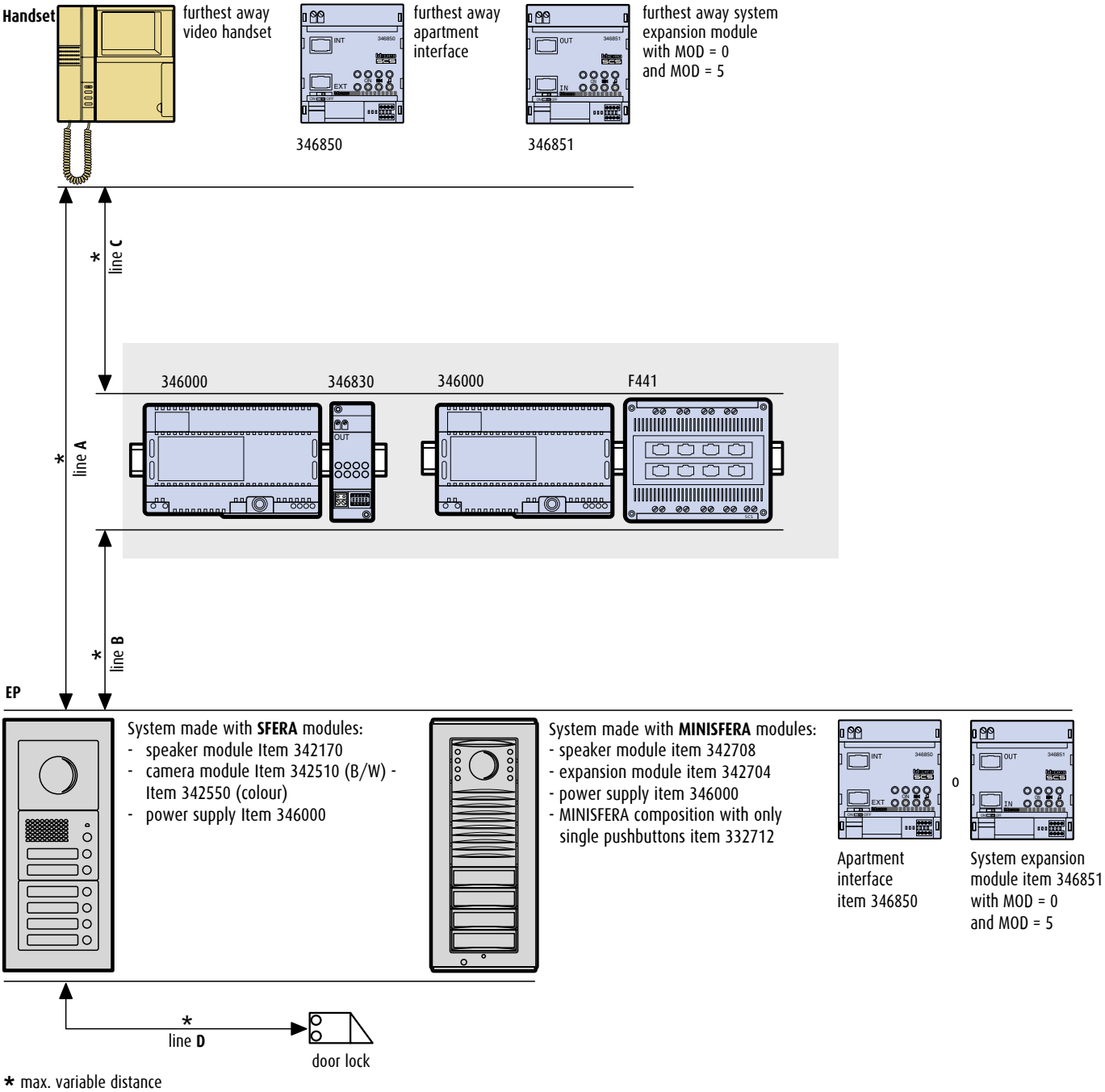
GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

VIDEO 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 346841) 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.

When using the distance tables, interfaces 346850 and 346851 must be treated as a handsets within LINE C and as an entrance panel with 2 pushbuttons within LINE B.

For those systems where only in-out apartment interfaces are installed, the distance of the line C to take into account is the longest one (indicated by *), irrespectively from the number of interfaces installed.



* max. variable distance

As indicated in the previous pages, remember that:
Traditional handsets: PIVOT, SWING, SPRINT and interfaces 346850 and 346851
Advanced handsets: POLYX MEMORY STATION, POLYX VIDEO DISPLAY, AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY.

In the following tables the systems made with only "traditional" handsets (PIVOT, SWING and SPRINT) are divided from those with at least an "advanced" handset (POLYX MEMORY STATION, POLYX VIDEO DISPLAY, AXOLUTE VIDEO STATION and AXOLUTE VIDEO DISPLAY). If all the "advanced" handsets in the system are locally supplied, the system is to be considered made with only "traditional" handsets.
In systems with more than 26 handsets it is recommended to realize risers with max. 26 handsets.

SYSTEM MADE WITH ONLY "TRADITIONAL" HANDSETS

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
2Handsets/2pushbutt.	50	200	140	180
5Handsets/5pushbutt.				155
10Handsets/10pushb.				145
26Handsets/26pushb.				125
38Handsets/38pushb.				110
38Handsets/38pushb. with local supply				170
38Handsets/digital call modules				115
64Handsets/digital call modules	-	200	140	-

Max. distance LINE C Power supply - 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
2Handsets in/out	50	200*	130*	90*
5Handsets in/out	50	200	130	90
10Handsets in/out	50	190	120	80
26Handsets in/out	50	170	110	70
5Ha (with distrib. block)	50	200	110	80
10Ha (with distrib. block)	50	160	100	70
26Ha (with distrib. block)	50	130	80	60
38Ha (with distrib. block)	50	110	70	50
64Ha (with distrib. block)	+	85	55	-

SYSTEM MADE WITH AT LEAST AN "ADVANCED" HANDSET

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
2Handsets/2pushbutt.	50	200	140	145
5Handsets/5pushbutt.				135
10Handsets/10pushb.				130
26Handsets/26pushb.				105
38Handsets/38pushb.				95
38Handsets/38pushb. with local supply				155
38Handsets/digital call modules				90

Max. distance LINE C Power supply - 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
2Handsets in/out	50	150	100	65
5Handsets in/out	50	140	90	60
10Handsets in/out	50	130	80	60
26Handsets in/out	50	110	70	50
5Ha (with distrib. block)	50	140	90	60
10Ha (with distrib. block)	50	120	80	55
26Ha (with distrib. block)	50	95	60	40
38Ha (with distrib. block)	50	80	50	35

Max. distance LINE B Entrance panel - 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 pushbuttons	50	200	115	90
10 pushbuttons	50	170	100	75
26 pushbuttons	50	150	95	65
38 pushbuttons	50	140	90	60
≥ 38 pushbuttons with local supply	50	200	140	120
digital call	50	150	95	65

Max. distance LINE D Entrance panel - Door lock

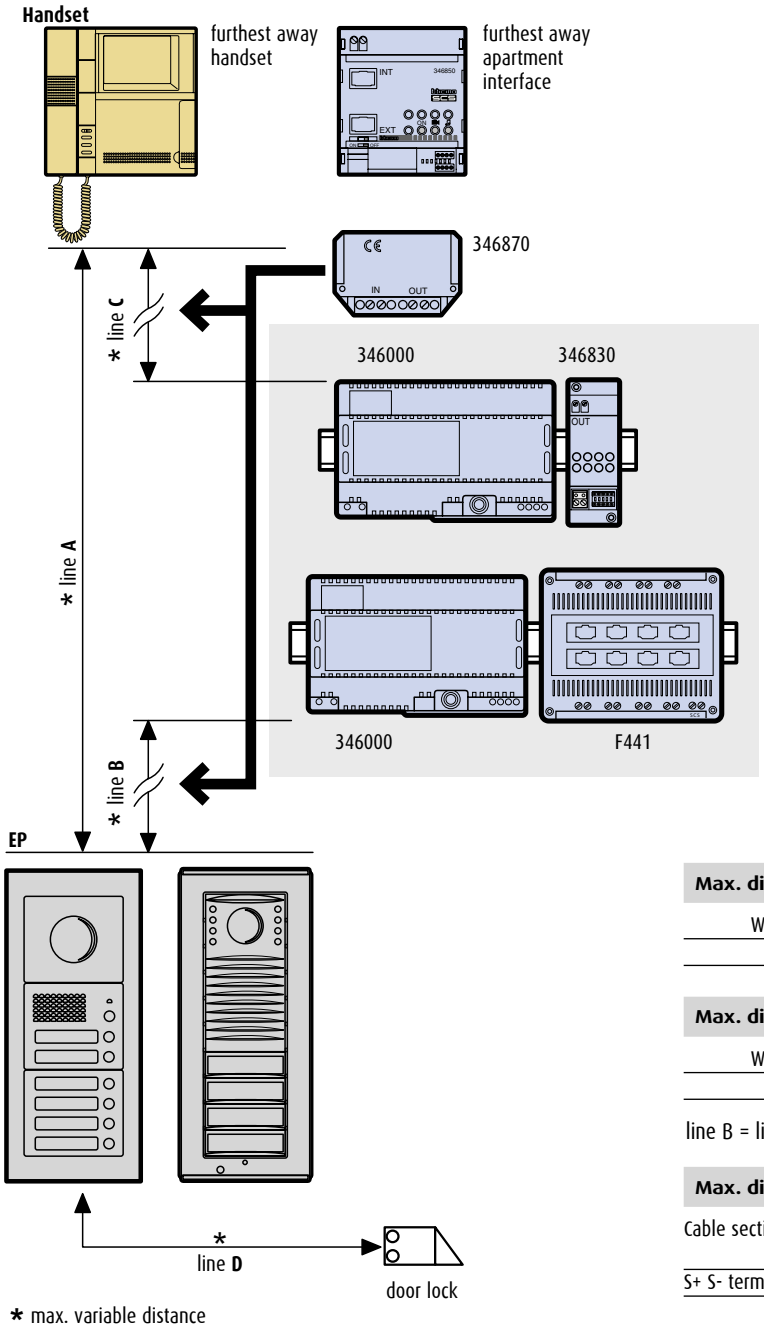
Cable section (mm²)	0.28	SCS cable Bticino item L4669	Bticino cable item 336904	1
S+ S- terminal	30 m	30 m	50 m	100 m

GENERAL RULES FOR INSTALLATION
Maximum distances and features of the conductors

VIDEO SYSTEMS WITH AMPLIFIER ITEM 346870 ONLY WITH NOT TWISTED CABLES

Using the amplifier 346870 enables creating systems using twisted cables longer than 50 m (max 100 m). Its use is ideal for refurbishment and repair of already 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 346841) which can also be directly installed in the round box.
- The signal amplifier must be used with non twisted, non polarized cables, with a section of ≥ 0,28 mm².
- The signal amplifier must be installed at approximately 50 metres from the entrance panel (or camera). Shorter distances may cause distortion of the video signal, while longer distances would make it useless. When using audio/video node F441, in order to avoid distortion of the video signal on the node inputs not needing amplification (<50m), it is recommended that item 346870 is installed on the line B of the amplifier inputs only.
- **A maximum of 18 handsets can be installed downstream the amplifier.**



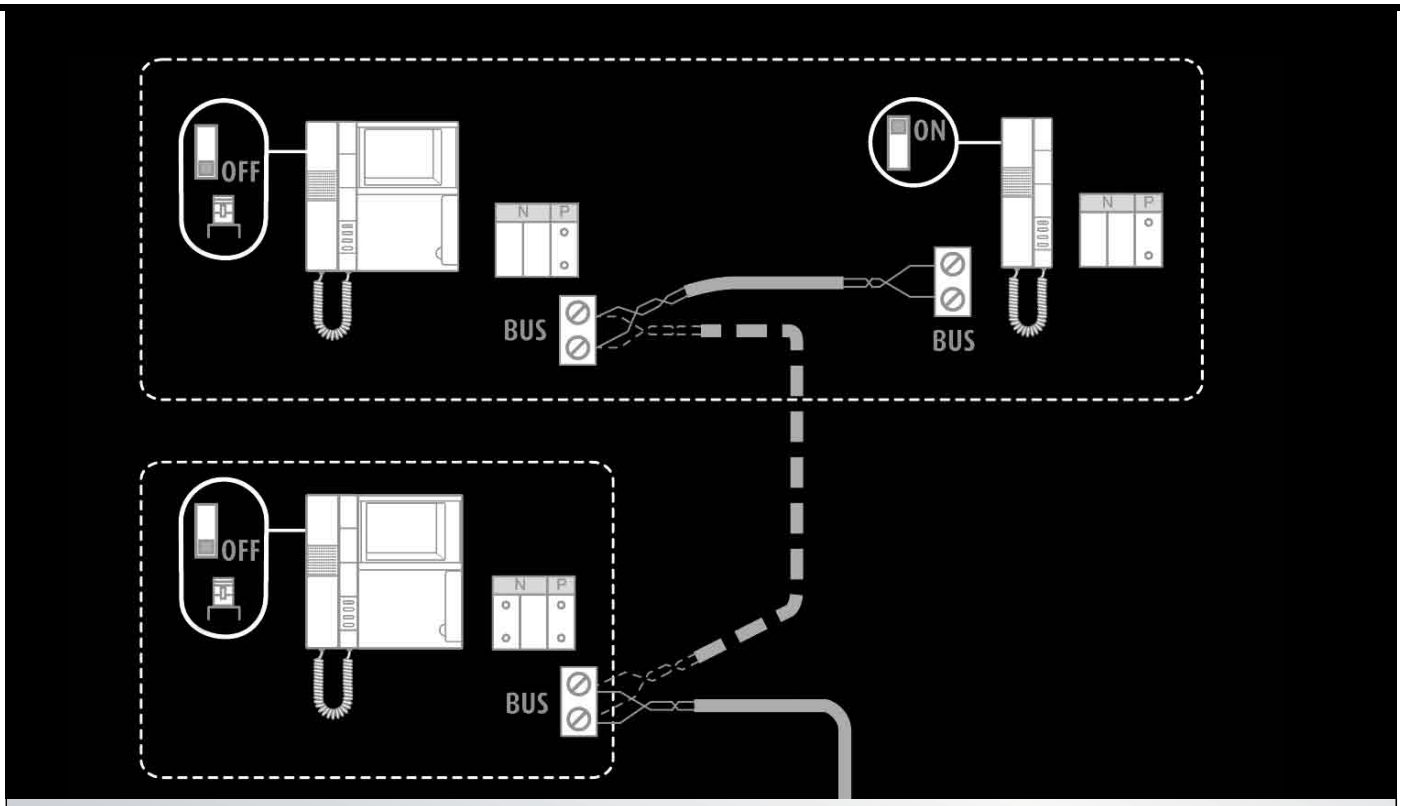
* max. variable distance

Max. distance LINE A Entrance panel - 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 Entrance panel - Door lock				
Cable section (mm²)	0.28	Bticino SCS cable L4669	Bticino cable item 336904	1
S+ S- terminal	30 m	30	50 m	100 m



WIRING DIAGRAMS

SECTION CONTENTS

WIRING DIAGRAMS

2W - DIAGRAM 1 1 OR MORE MAIN AUDIO ENTRANCE PANELSI AND SECONDARY EP - MAX. 26 HANDSETS

Legend

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

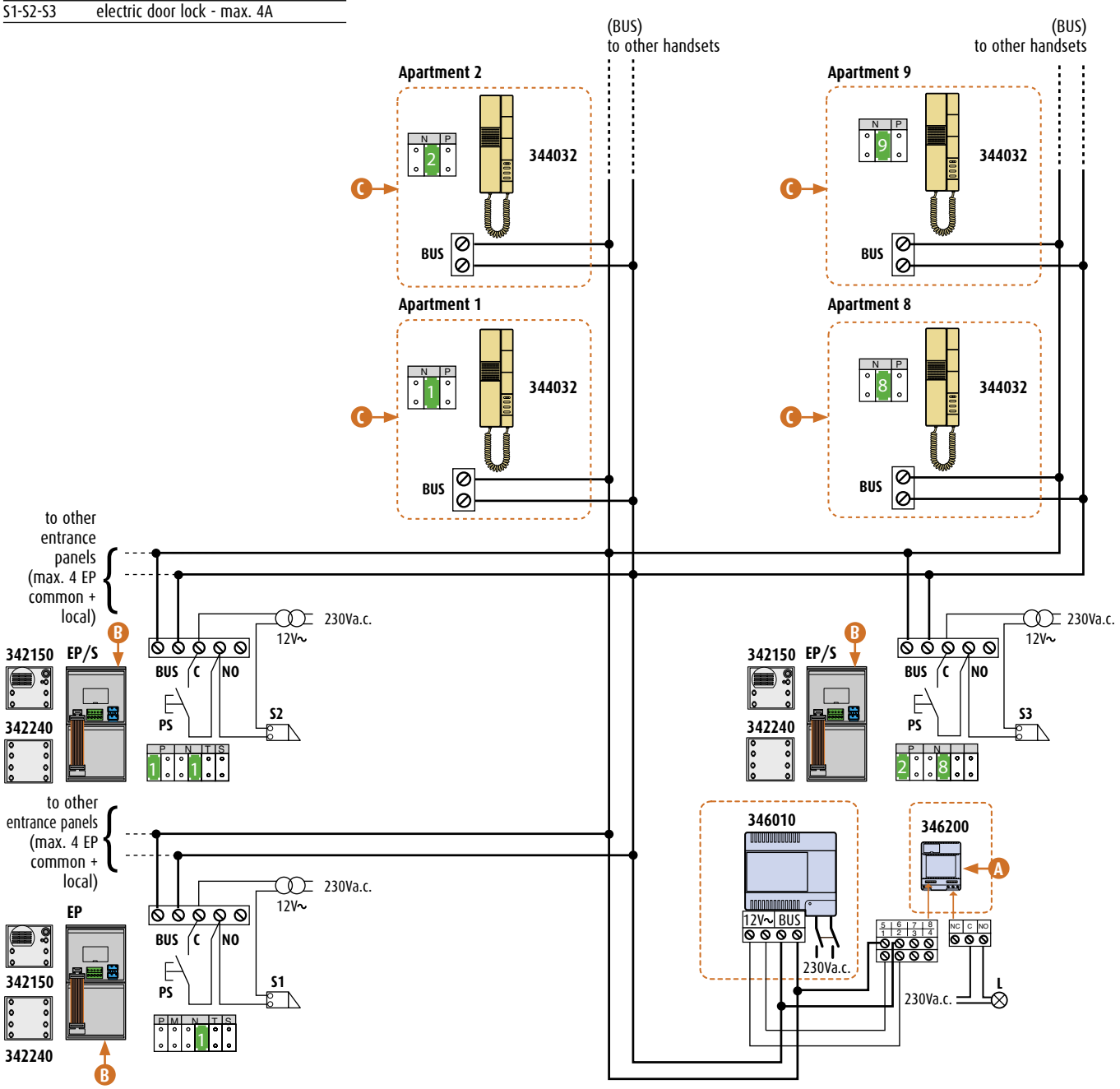
WARNING

- 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.



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

Legend

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

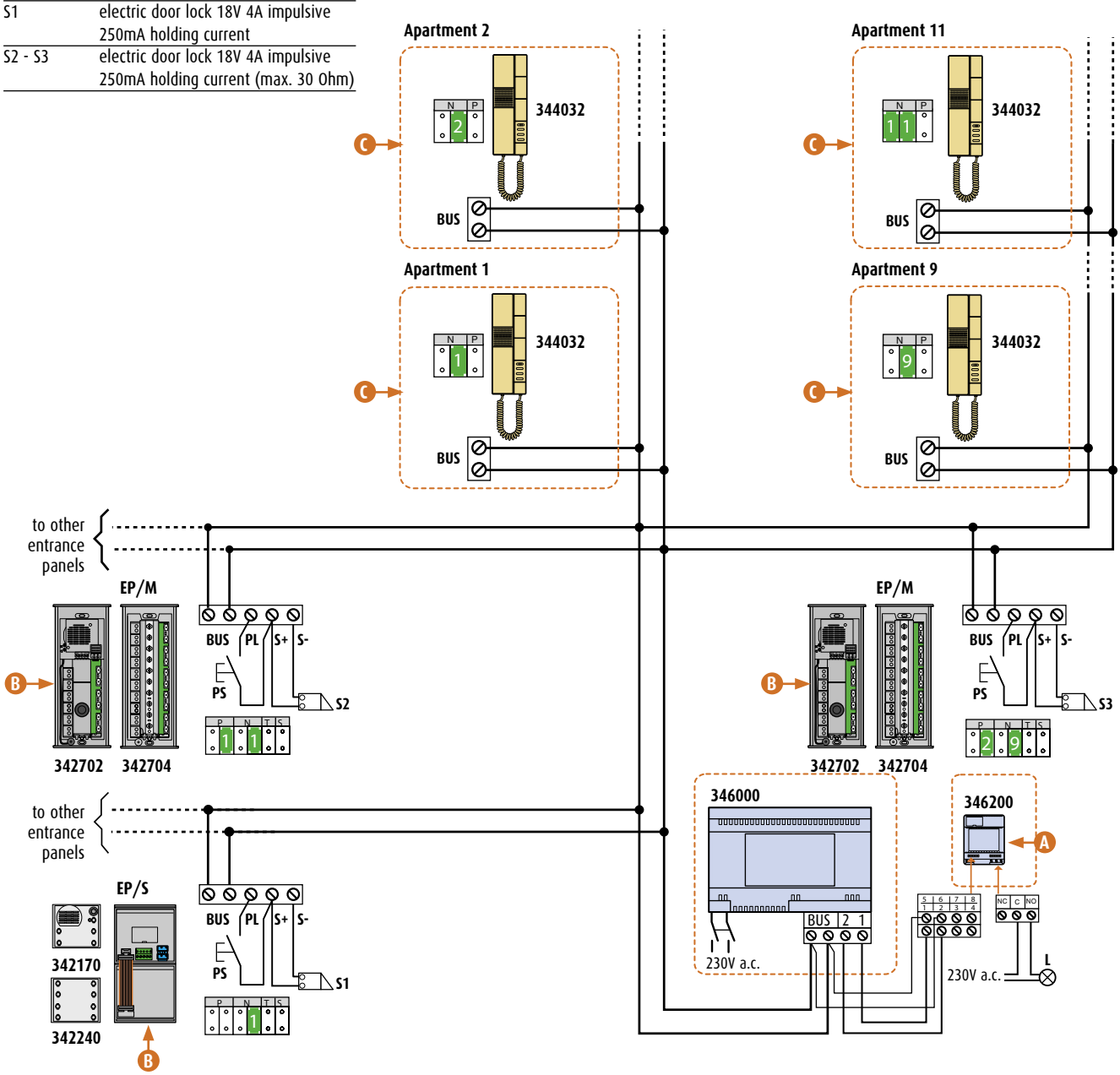
WARNING

- 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

2W - DIAGRAM 3 ONE-FAMILY SYSTEM WITH 1 AUDIO ENTRANCE PANEL AND 5 HANDSETS IN PARALLEL AND INTERCOMMUNICATING

Legend

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

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.

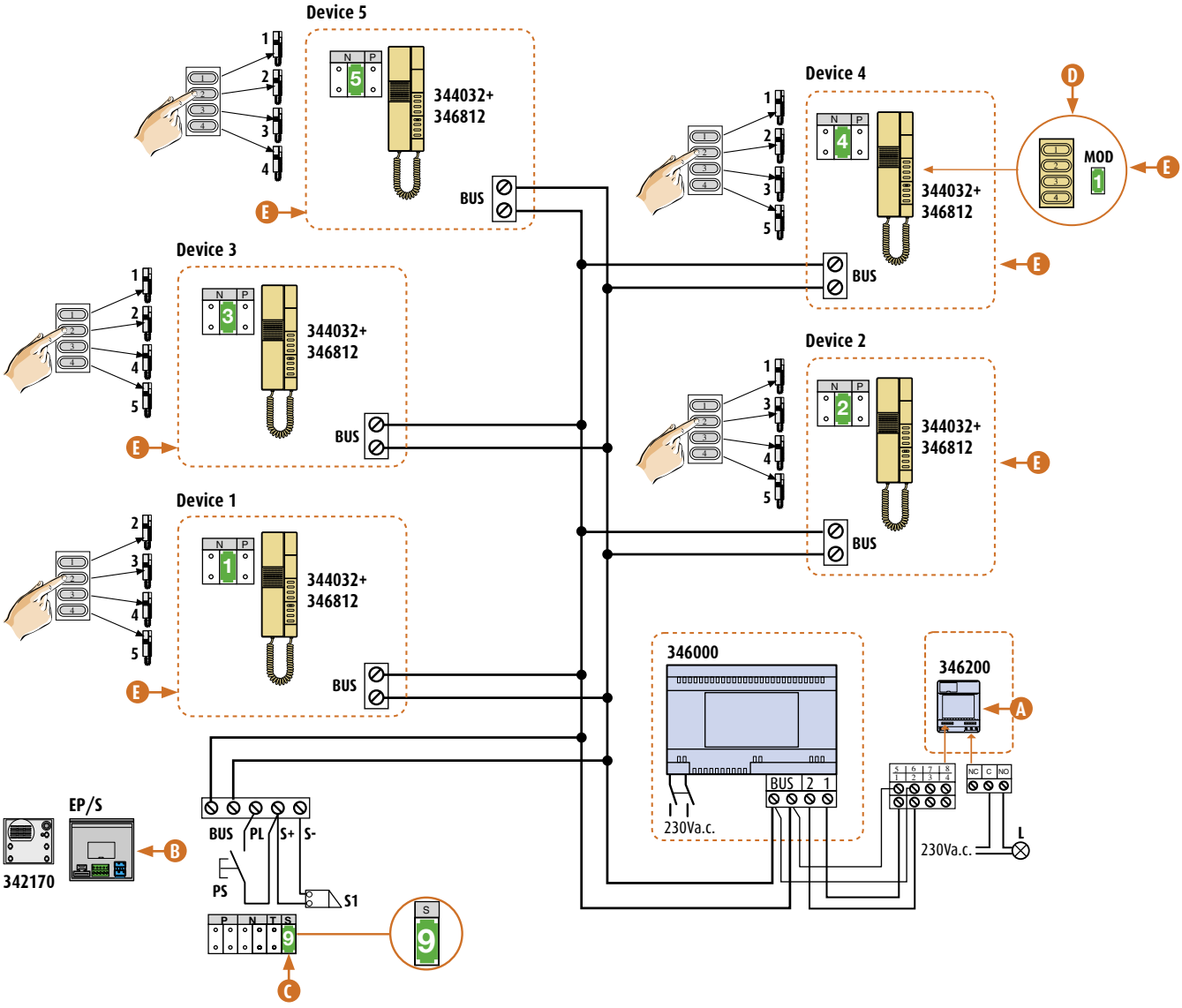
A - Use of the actuator is necessary for the staircase light service or generic actuations. (see configuration actuator page).

B - Either SFERA or MINISFERA (not with digital call) 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.



2W - DIAGRAM 4 TWO-FAMILY SYSTEM, 1 EP AND 3 HANDSETS FOR APARTMENT WITH "INTERCOM BETWEEN APARTMENTS" FUNCTION

Legend

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

To have the intercom function among apartments in two-family systems with SWING handsets configured with MOD = 53 (or 73)

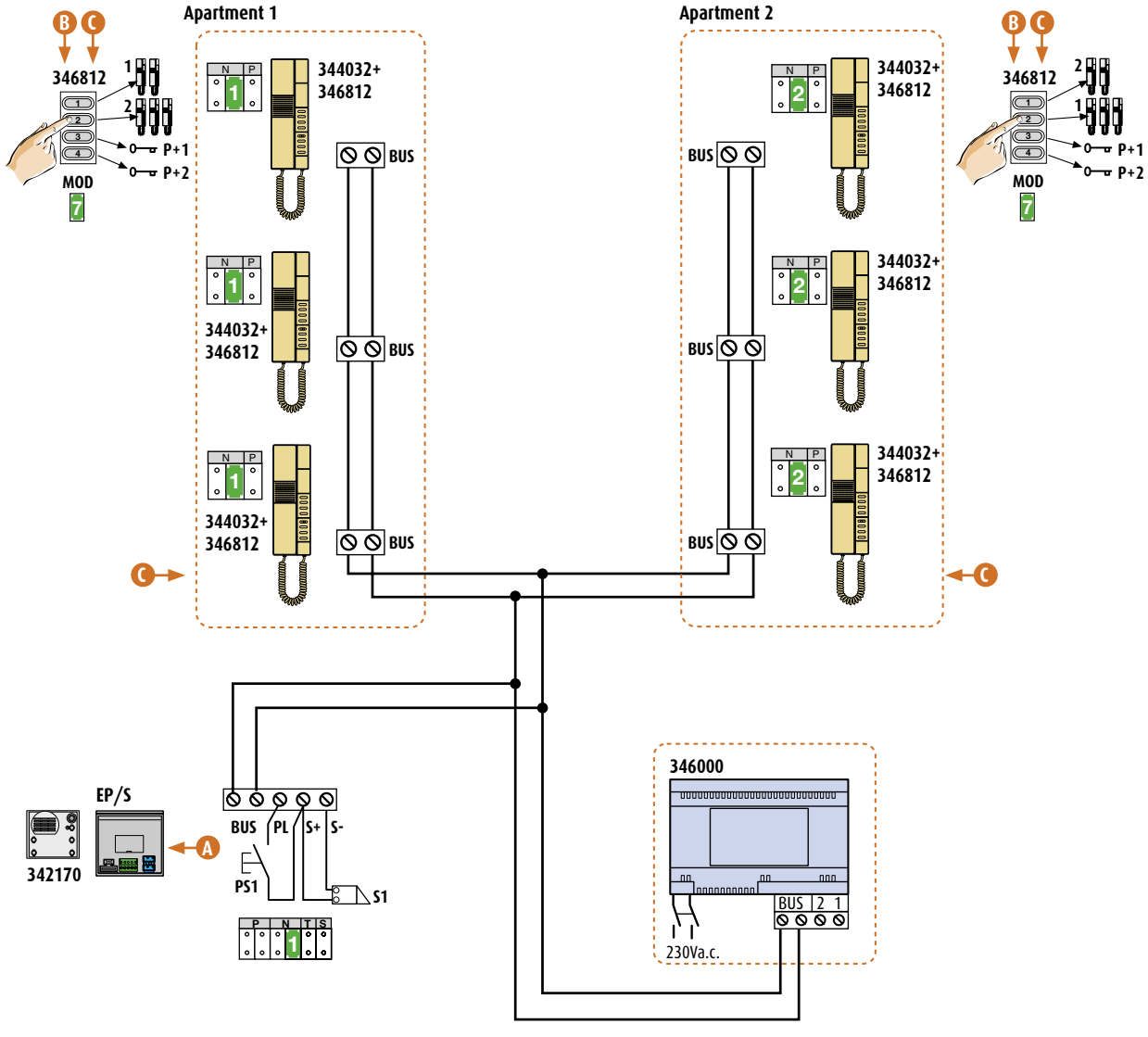
WARNING

- 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.**

A - Either SFERA (not with digital call) 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

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

Legend

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

Entrance panel configuration

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

N = first called apartment

WARNING

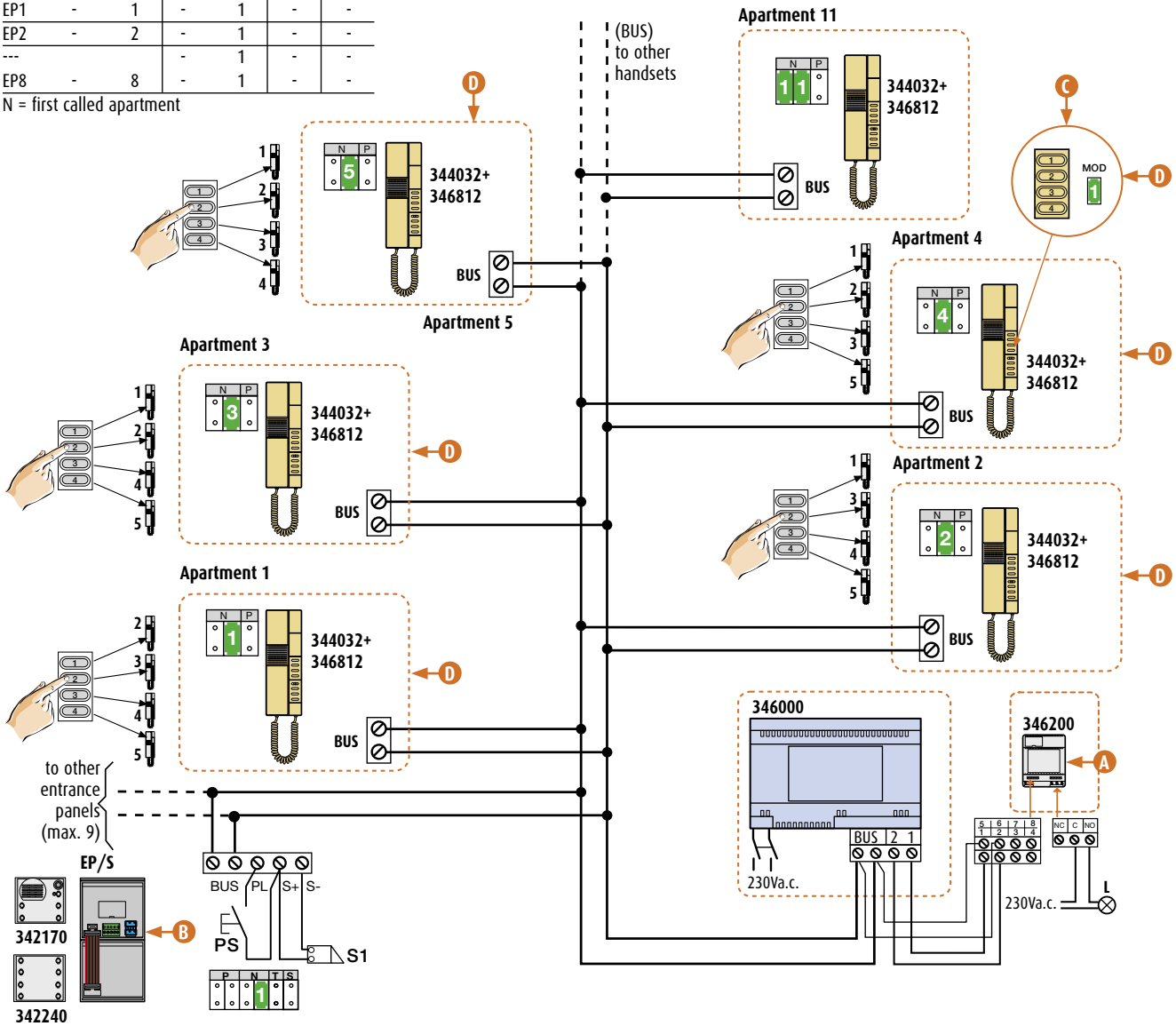
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.
- The Intercom function is operating even with a lack of entrance panel connection.
- The Intercom function can also be used with PIVOT and SWING audio handset configured 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 (not with digital call) or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - All the PIVOT audio handsets used in the intercom function configured (from N1 to N5) 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.



2W - DIAGRAM 6 1 OR MORE MAIN AUDIO ENTRANCE PANELS WITH UNIVERSAL SPEAKER UNIT

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 handsets.

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 handsets).

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.

Legend

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

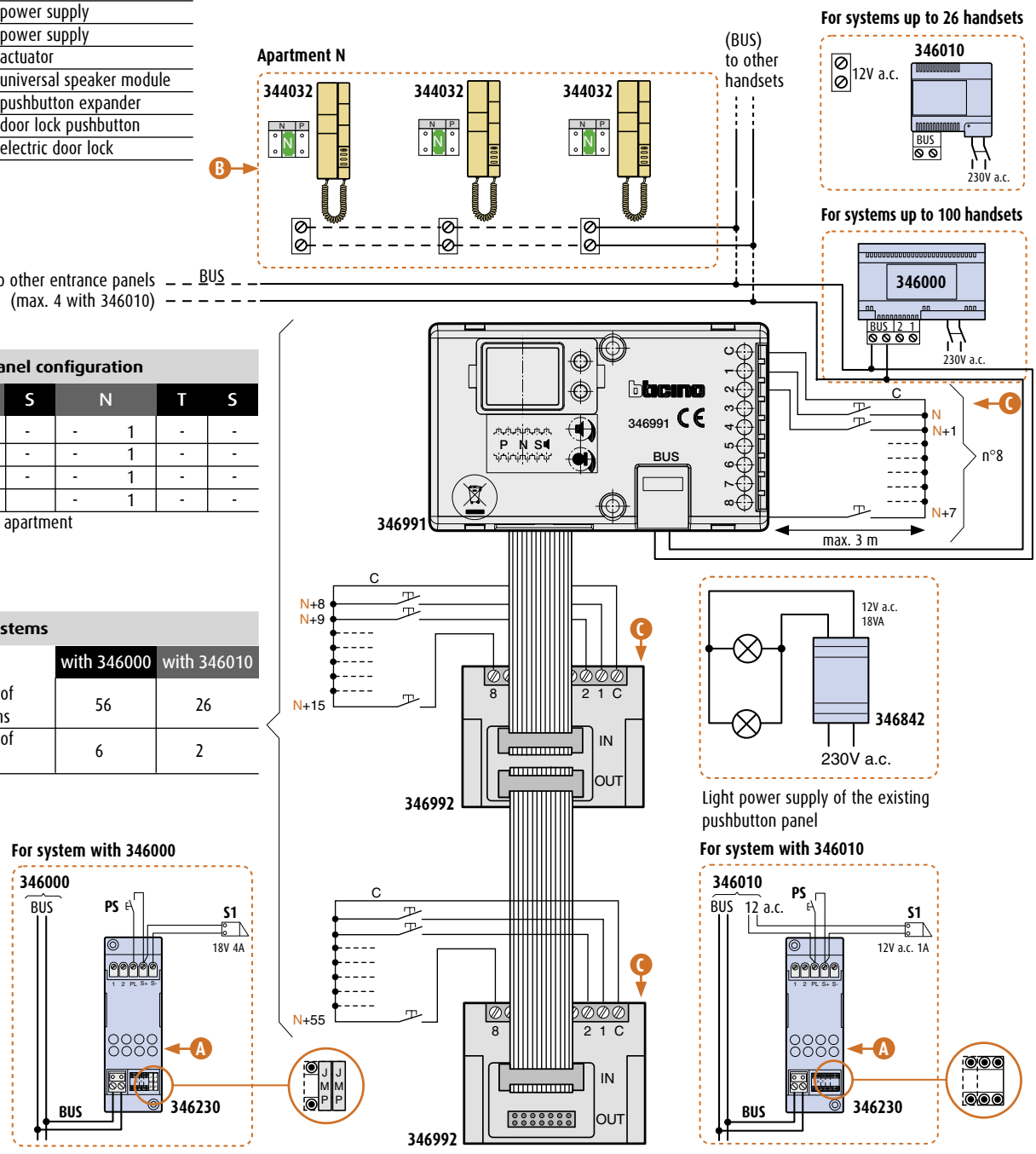
Entrance panel configuration

	P	S	N	T	S
PE0	-	-	- 1	-	-
EP1	1	-	- 1	-	-
EP2	2	-	- 1	-	-
---			- 1	-	-

N = first called apartment

Possible systems

	with 346000	with 346010
maximum No. of call pushbuttons	56	26
maximum No. of expanders	6	2



WIRING DIAGRAMS

2W - DIAGRAM 7 1 MAIN VIDEO ENTRANCE PANEL WITH STAR WIRING, USING UNTWISTED OR PRE-EXISTING CABLES

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
346870	line amplifier
L	staircase light
EP/S	SFERA entrance PANEl (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

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.

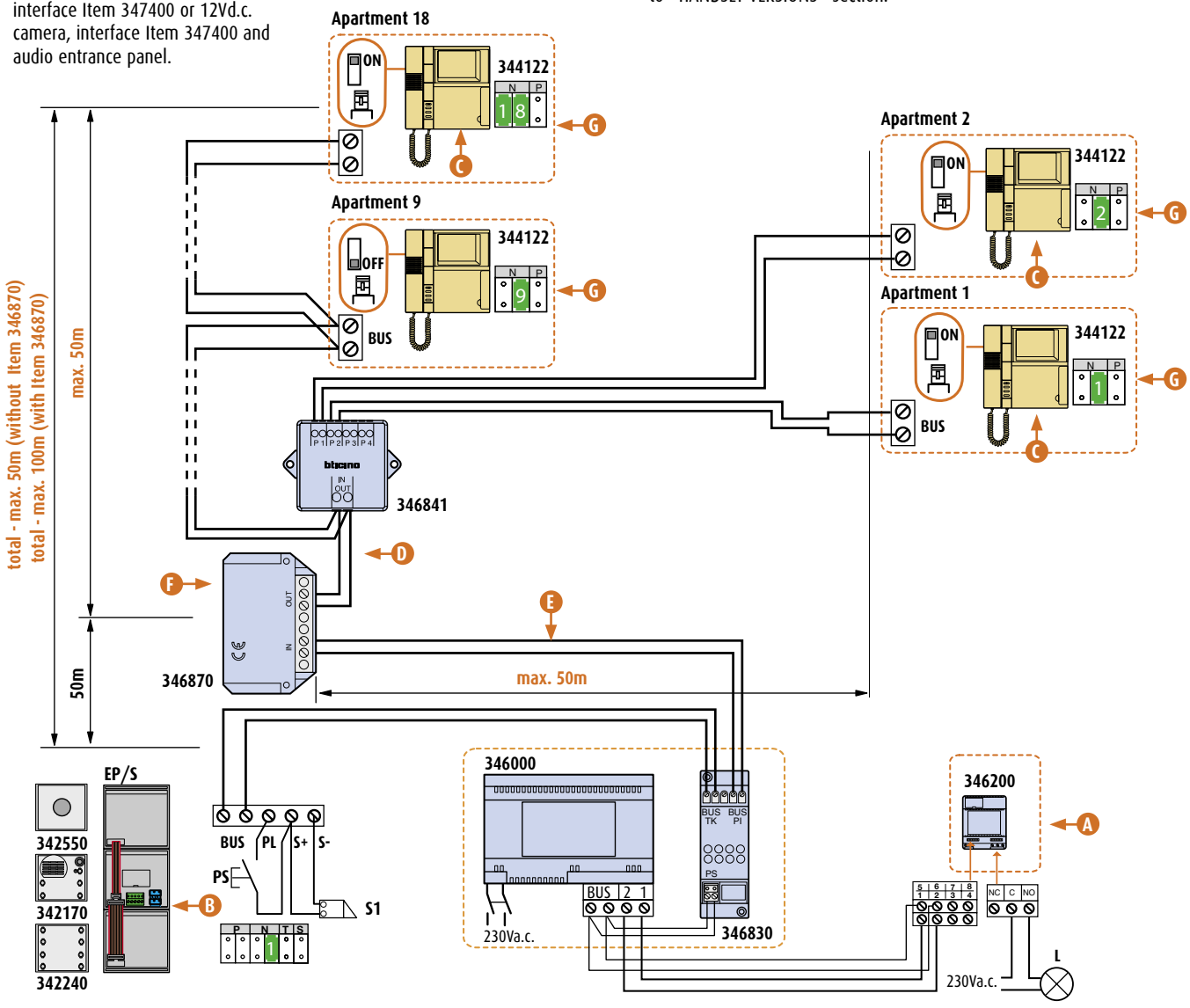
C - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

D - On the riser line after Item 346870, it is possible to install up to a max. of 18 HANDSETS (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.

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



2W - DIAGRAM 8 1 MAIN VIDEO ENTRANCE PANEL WITH IN-OUT WIRING, USING UNTWISTED OR PRE-EXISTING CABLES

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
346870	line amplifier
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

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 to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

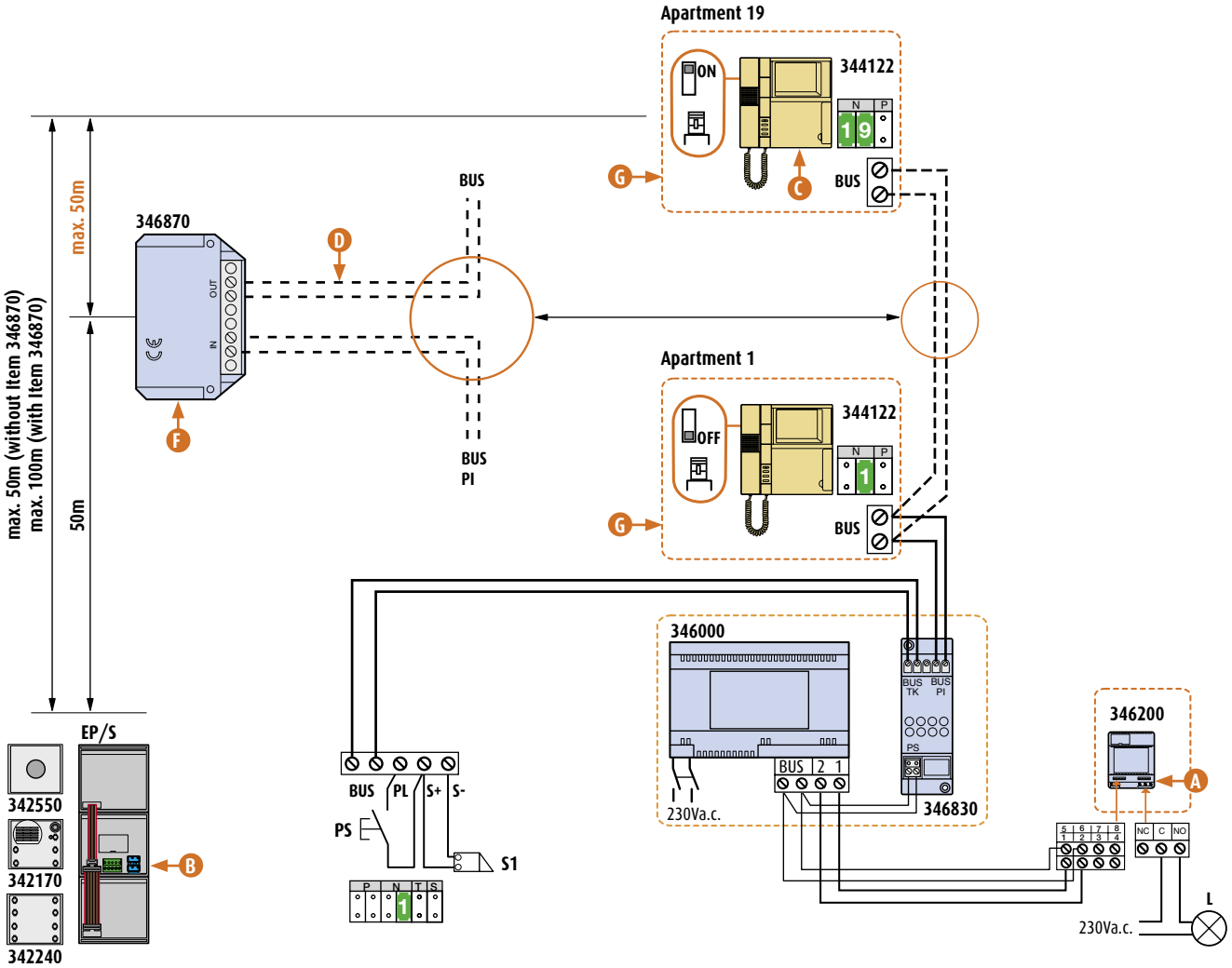
D - On the riser line after Item 346870, it is possible to install up to a max. of 18 HANDSETS (audio handsets or video handsets).

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.

G - 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.



WIRING DIAGRAMS

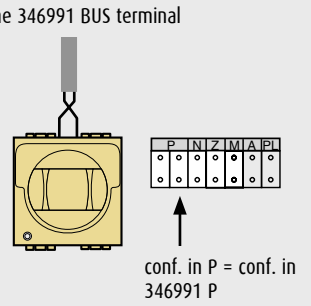
2W - DIAGRAM 9 VIDEO SYSTEM WITH UNIVERSAL SPEAKER MODULE 346991

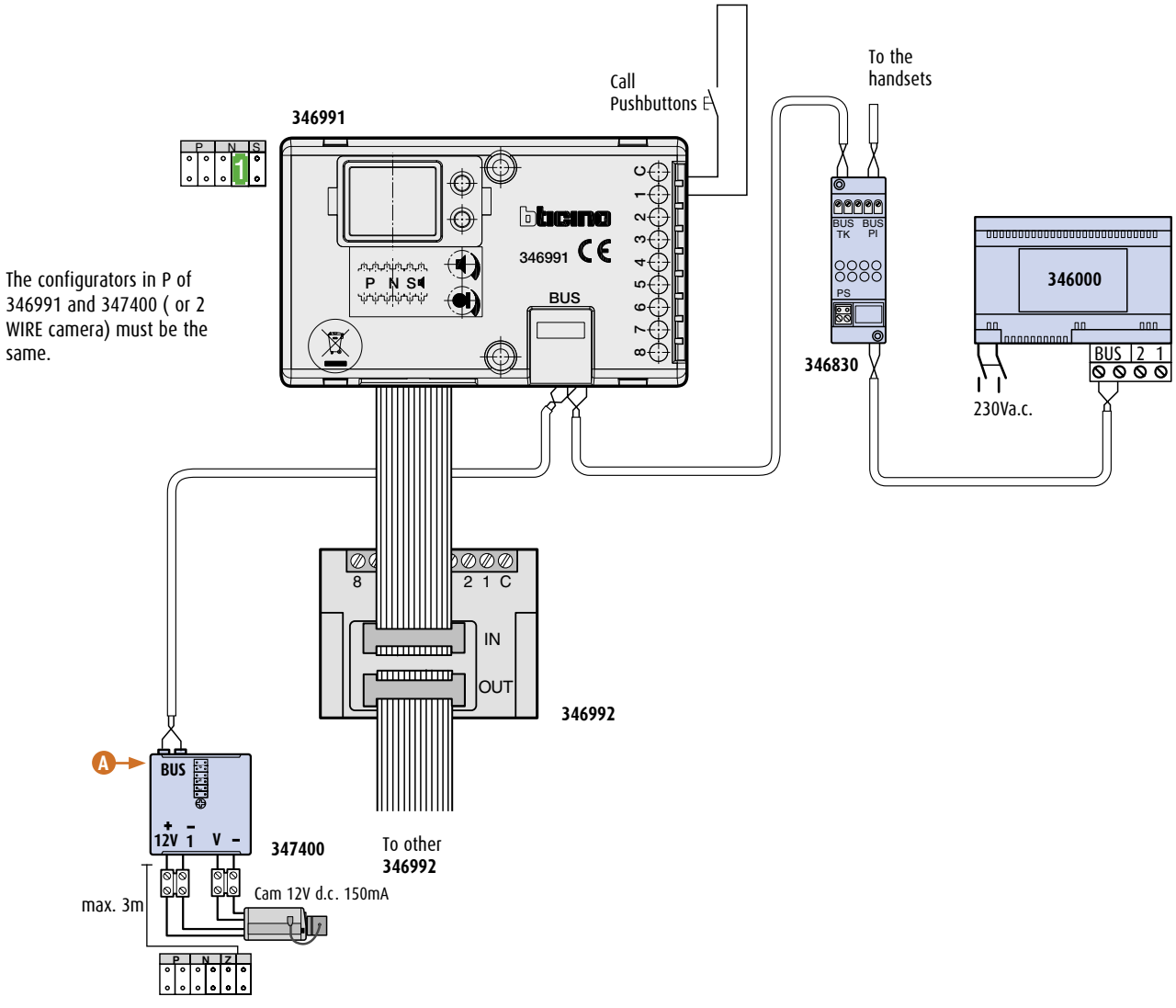
Legend

Ref.	Description
346000	power supply
346830	video adapter
346991	universal speaker module
346992	key expansion module
347400	2 WIRE-COAXIAL interface

WARNING
In alternative to coaxial cameras (with COAXIAL-2 WIRE interface), 2 WIRE cameras can also be used.

b/w or colour 2 WIRE cameras
AXOLUTE (colours): 391661 and 391662
LIVING-LIGHT-LIGHT TECH (colours): 391657 - 391658 - 391659
b/w: 391667 - 391668 - 391669





2W - DIAGRAM 10 1 MAIN VIDEO ENTRANCE PANEL AND 1 RISER WITH FLOOR DISTRIBUTION BLOCK WIRING

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
346841	floor distribution block
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

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.

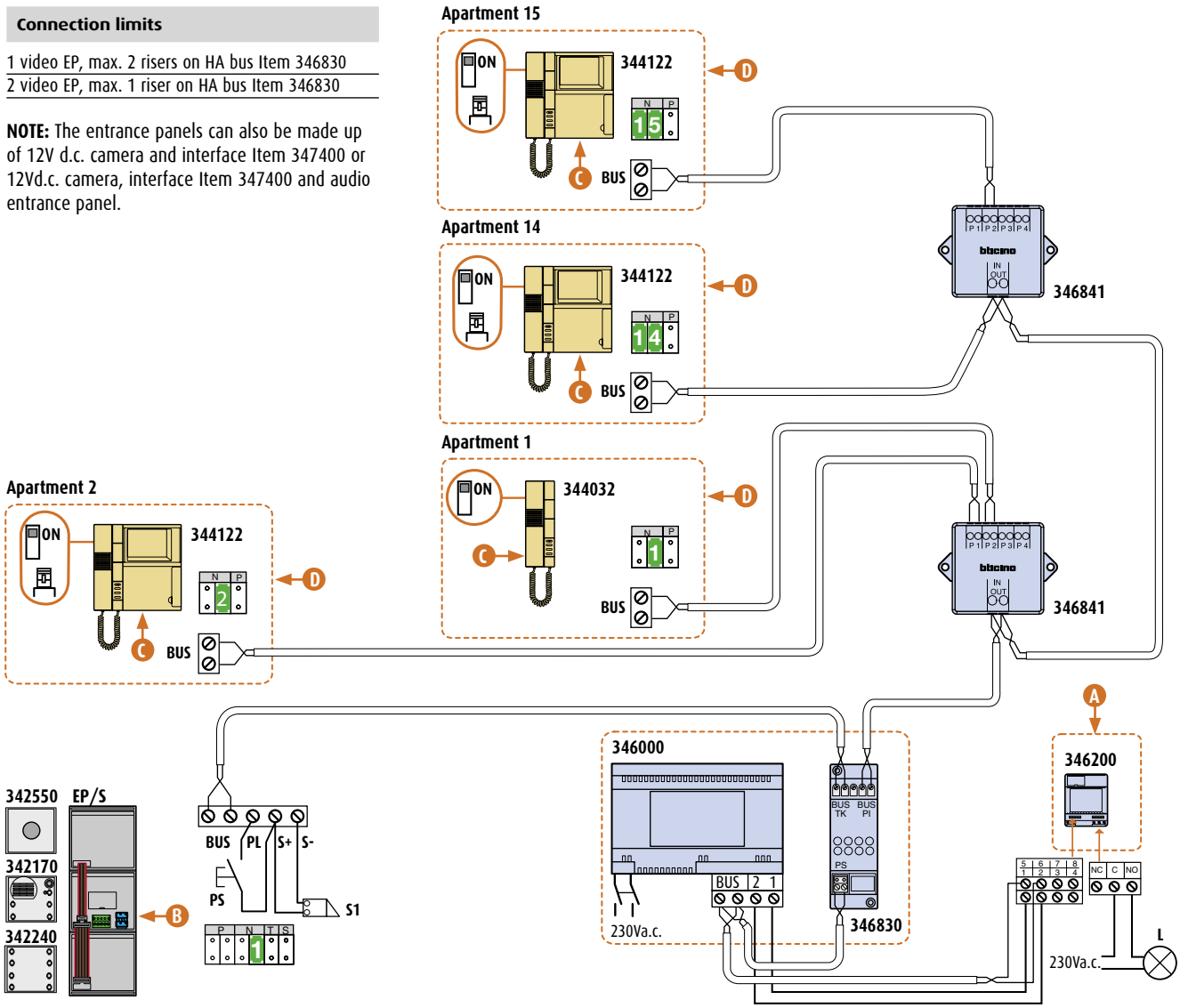
C - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

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

Connection limits

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



WIRING DIAGRAMS

2W - DIAGRAM 11 1 MAIN VIDEO ENTRANCE PANEL AND 2 RISERS WITH IN-OUT WIRING

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344032	PIVOT video handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

Connection limits

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

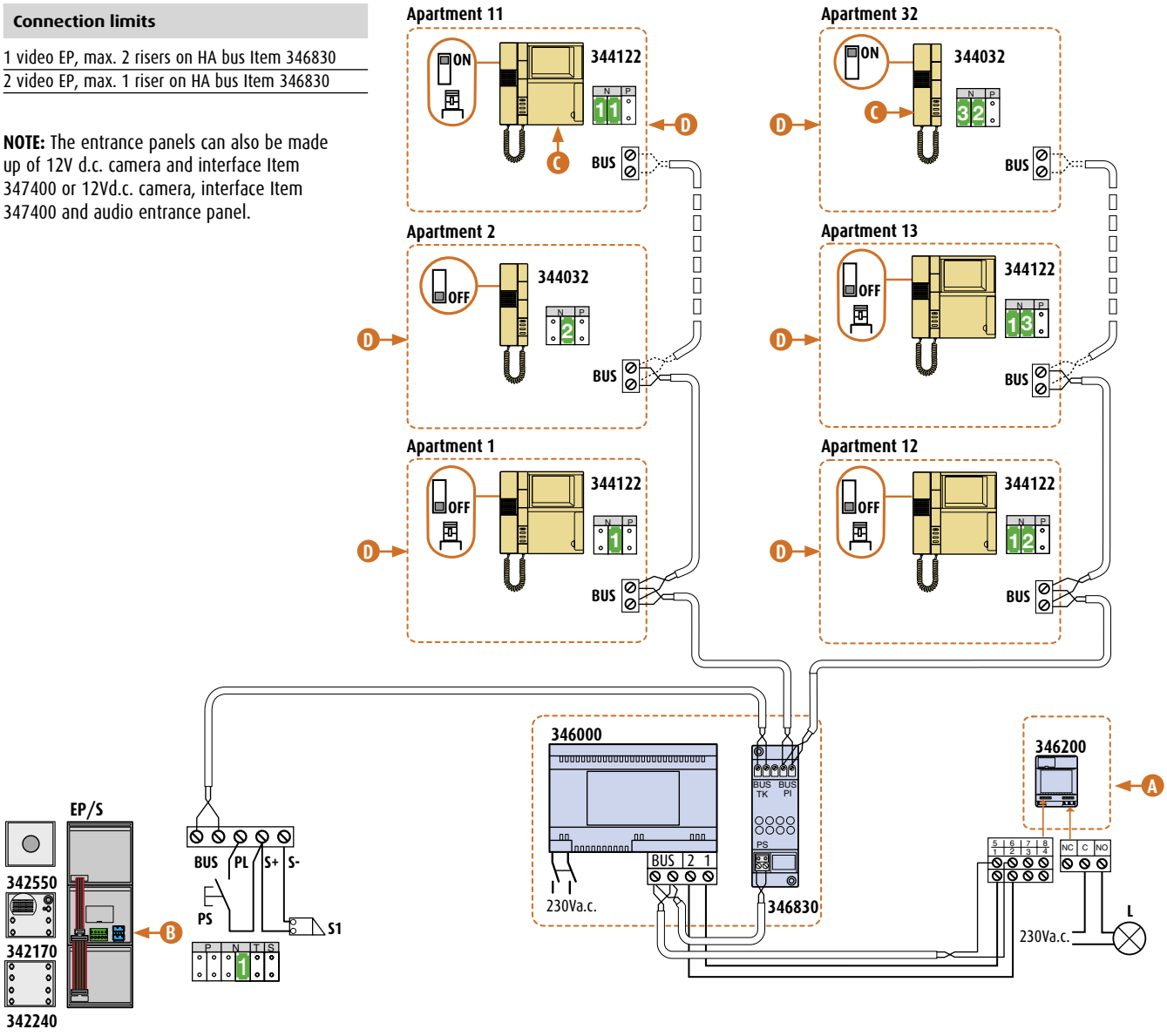
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

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. For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

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



2W - DIAGRAM 12 2 MAIN VIDEO ENTRANCE PANELS AND 1 RISER WITH IN-OUT WIRING

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
342704	pushbutton module
342708	speaker module
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
L	staircase light
EP/M	SFERA entrance panel (main)
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
S2	electric door lock 18V 4A impulsive 250mA holding current

Connection limits

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

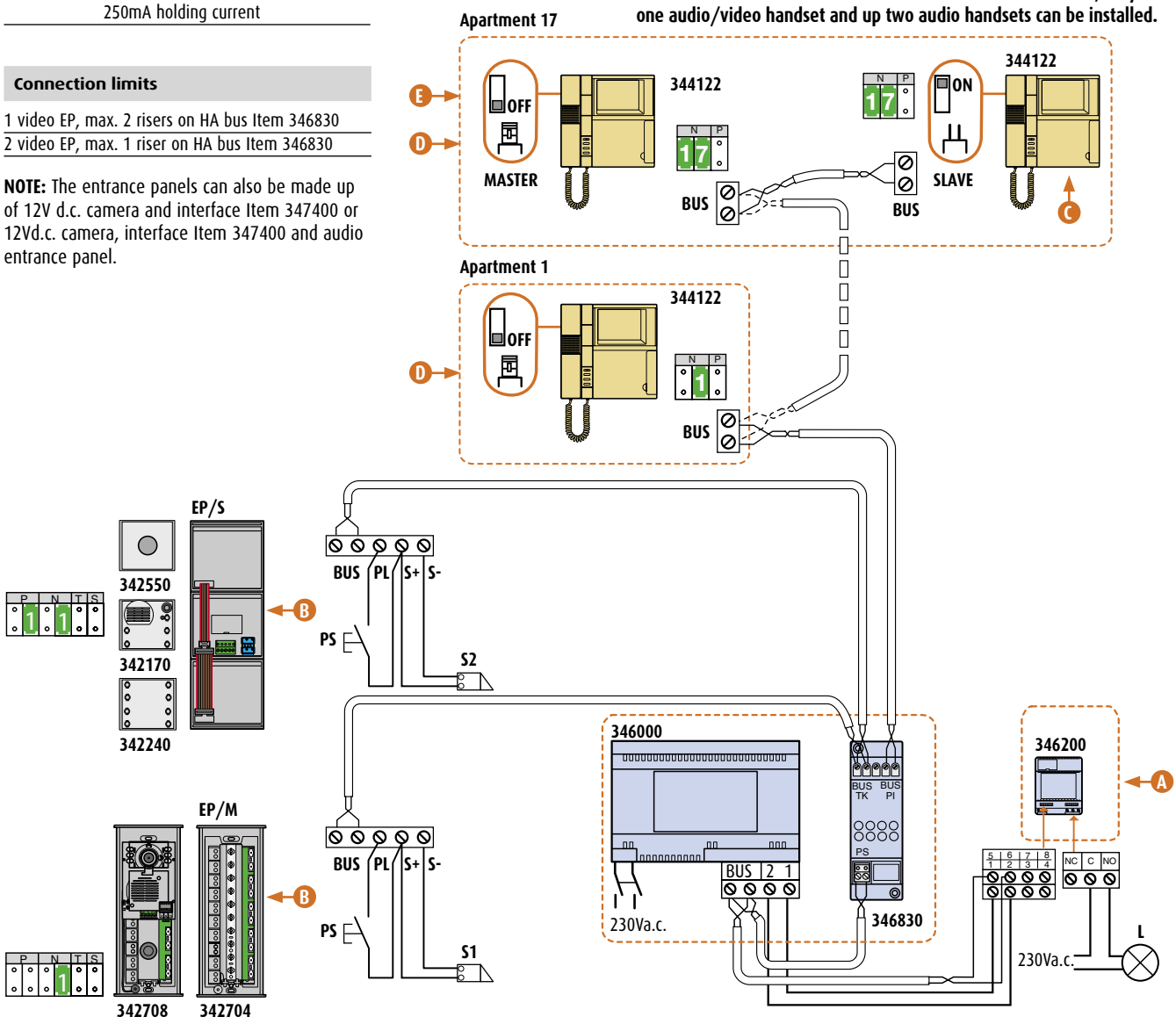
A - Use of the actuator is facoltative for the staircase light service or generic actuations.

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 to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

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

E - The installation inside the apartment of PIVOT, POLYX and AXOLUTE audio/video handsets is completed using the MASTER-SLAVE function. When a call is received, the MASTER unit switches on and rings, while the SLAVE unit only rings. If the call is answered from the SLAVE unit, the master unit switches off again, while the monitor of the SLAVE itself switches on. When SWING and SPRINT handsets are used, only one audio/video handset and up two audio handsets can be installed.



WIRING DIAGRAMS

2W - DIAGRAM 13 MULTI-FAMILY SYSTEM WITH AUDIO/VIDEO NODE ITEM F441

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
347400	2 wire coaxial interface
F441	audio/video node
EP	SFERA entrance panel (main)
PS	door lock pushbutton
S1/S2	electric door lock 18V 4A impulsive 250mA holding current

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 or digital pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

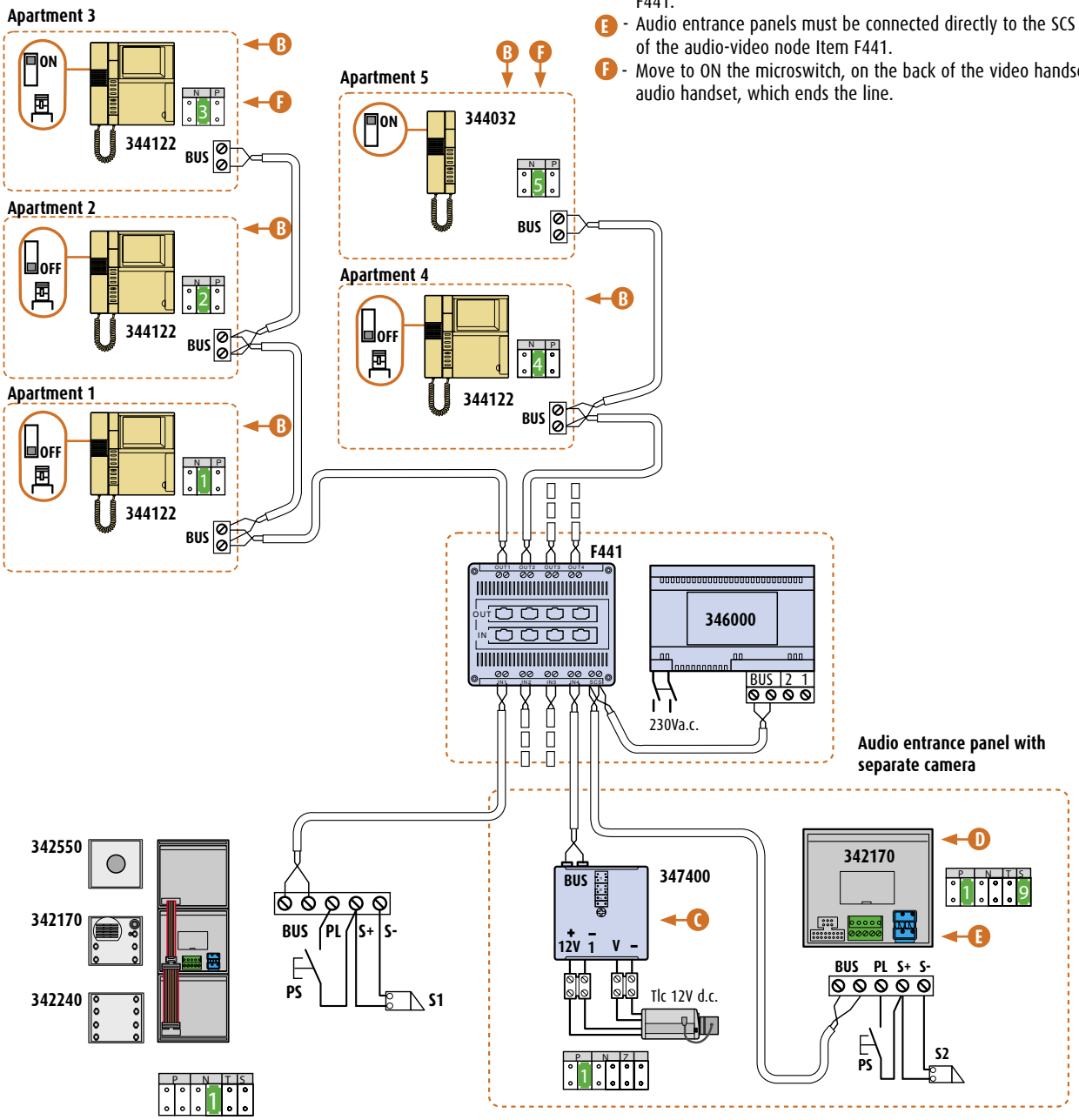
B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

C - The interface Item 347400 supplies directly the camera 12V d.c.

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 , LINEA 2000, LINEA 2000 METAL series and 346991 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 - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.



2W - DIAGRAM 14 2 MAIN VIDEO EP WITH ADDITIONAL POWER SUPPLY

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
342610	numeric call module
342630	digital call speaker module with graphic display
344122	PIVOT video handset
346000	power supply
346200	actuator
346830	video adapter
346841	floor distribution block
L	staircase light
EP/S	SFERA entrance panel (main)
EP/S1	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current (max. 30 Ohm)
S2	electric door lock 18V 4A impulsive 250mA holding current

Connection limits

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

WARNING

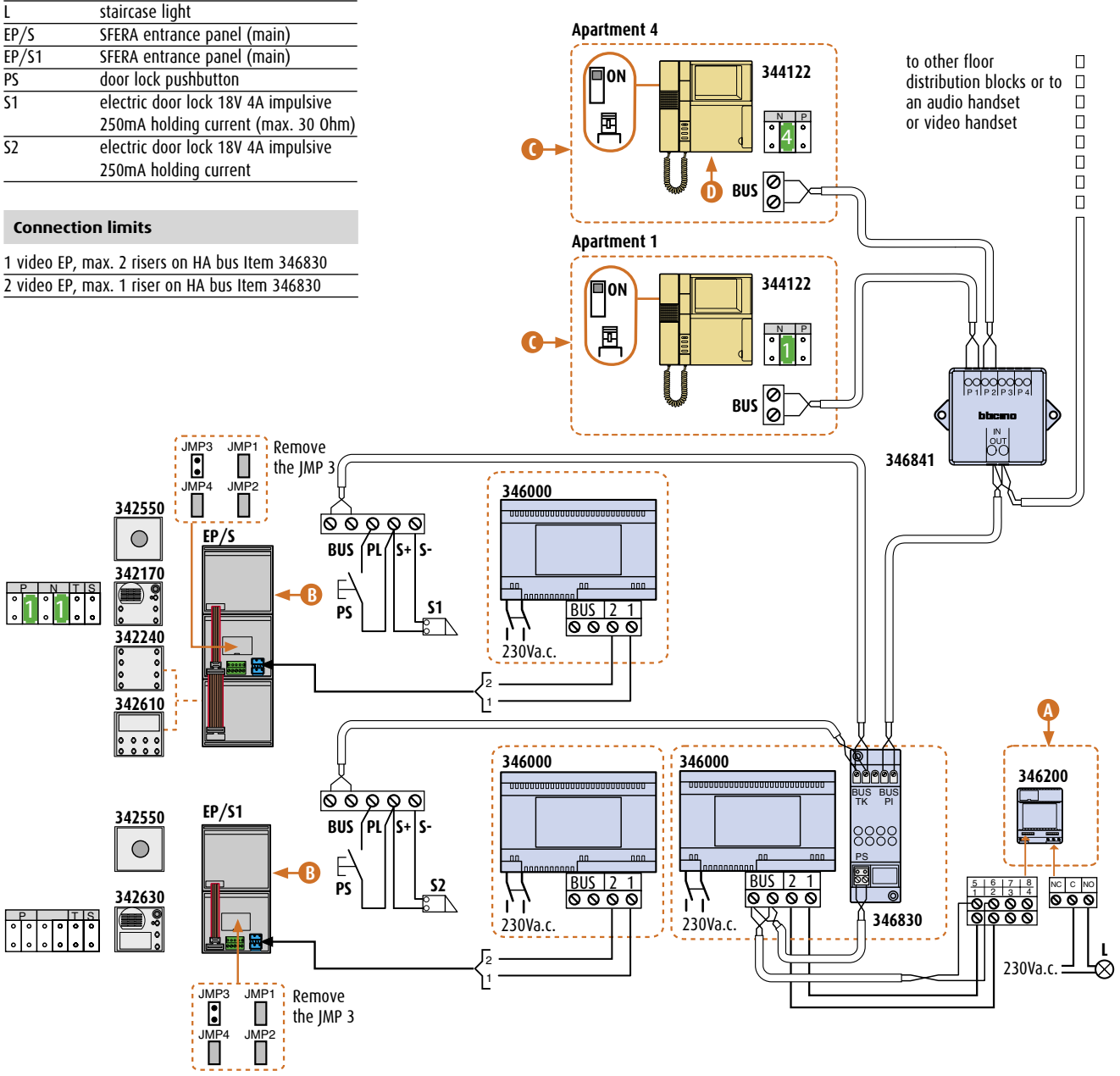
- Configure and insert the Jumpers with the system SWITCHED OFF. Also every time the configuration is modified the power supply to the system must be switched off and on again, waiting about 1 minute.

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

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

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

D - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.



WIRING DIAGRAMS

2W - DIAGRAM 15 ONE-FAMILY SYSTEM WITH 1 VIDEO ENTRANCE PANEL AND 5 HANDSETS IN PARALLEL AND INTERCOMMUNICATING

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346812	4-key accessory
346830	video adapter
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

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 the handsets starting from N = 1
- 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, POLYX MEMORY STATION, AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY, POLYX VIDEO DISPLAY audio and video handset.

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

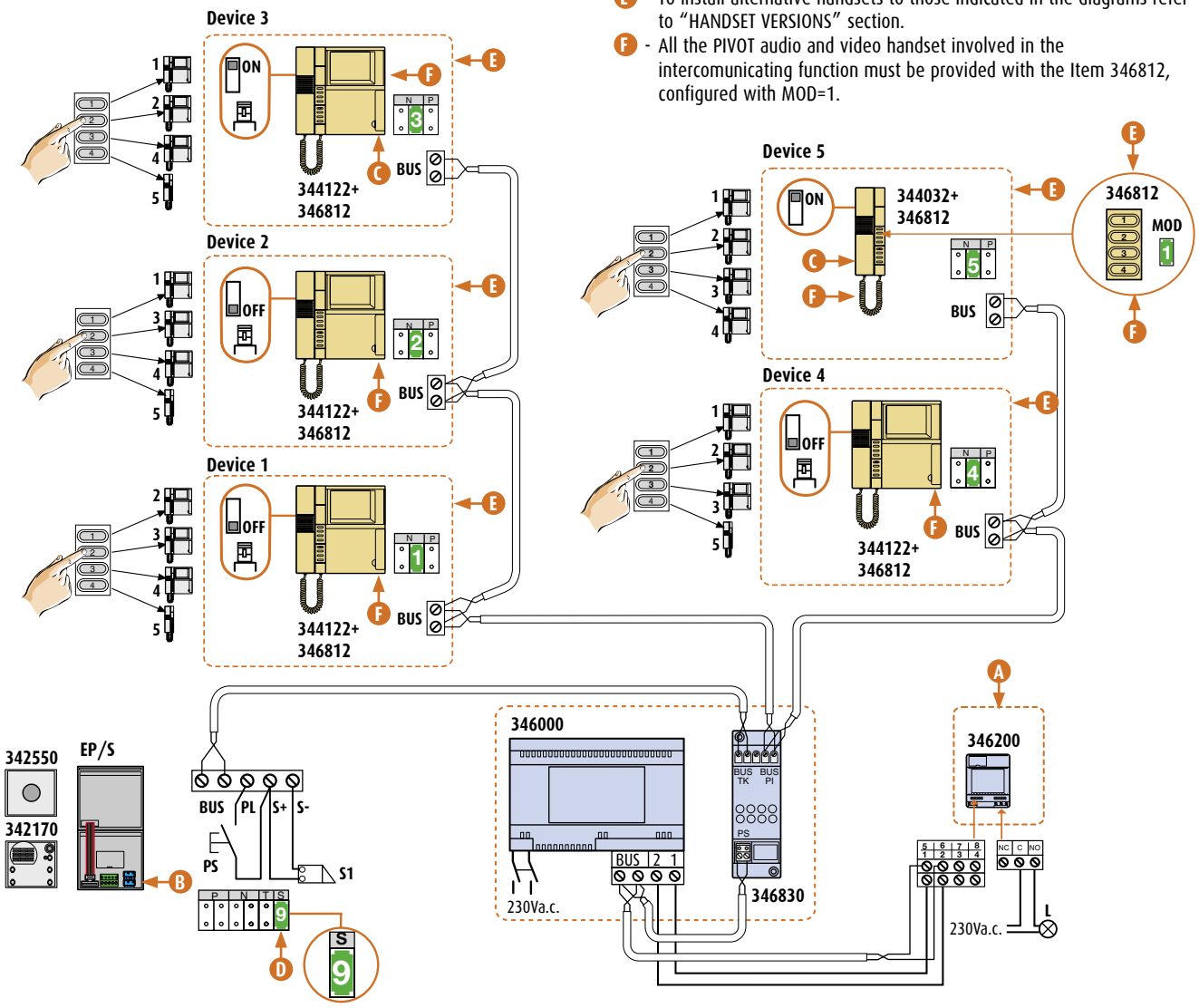
B - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

C - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

D - Fit a "9" configurator to be inserted in S on the speaker module for the general call; the handsets ring as with S = 0, do not insert configurators 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.



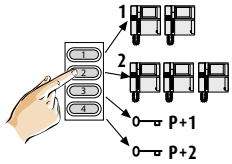
2W - DIAGRAM 16 TWO-FAMILY SYSTEM, 1 EP AND 3 HANDSETS FOR APARTMENT WITH "INTERCOM BETWEEN APARTMENTS" FUNCTION

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
344122	PIVOT video handset
346000	power supply
346812	4 key accessory
346830	video adapter
EP	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive
	250mA holding current

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.

To have the intercom function among apartments in two-family systems with SWING handsets configured with MOD = 53 (or 73)



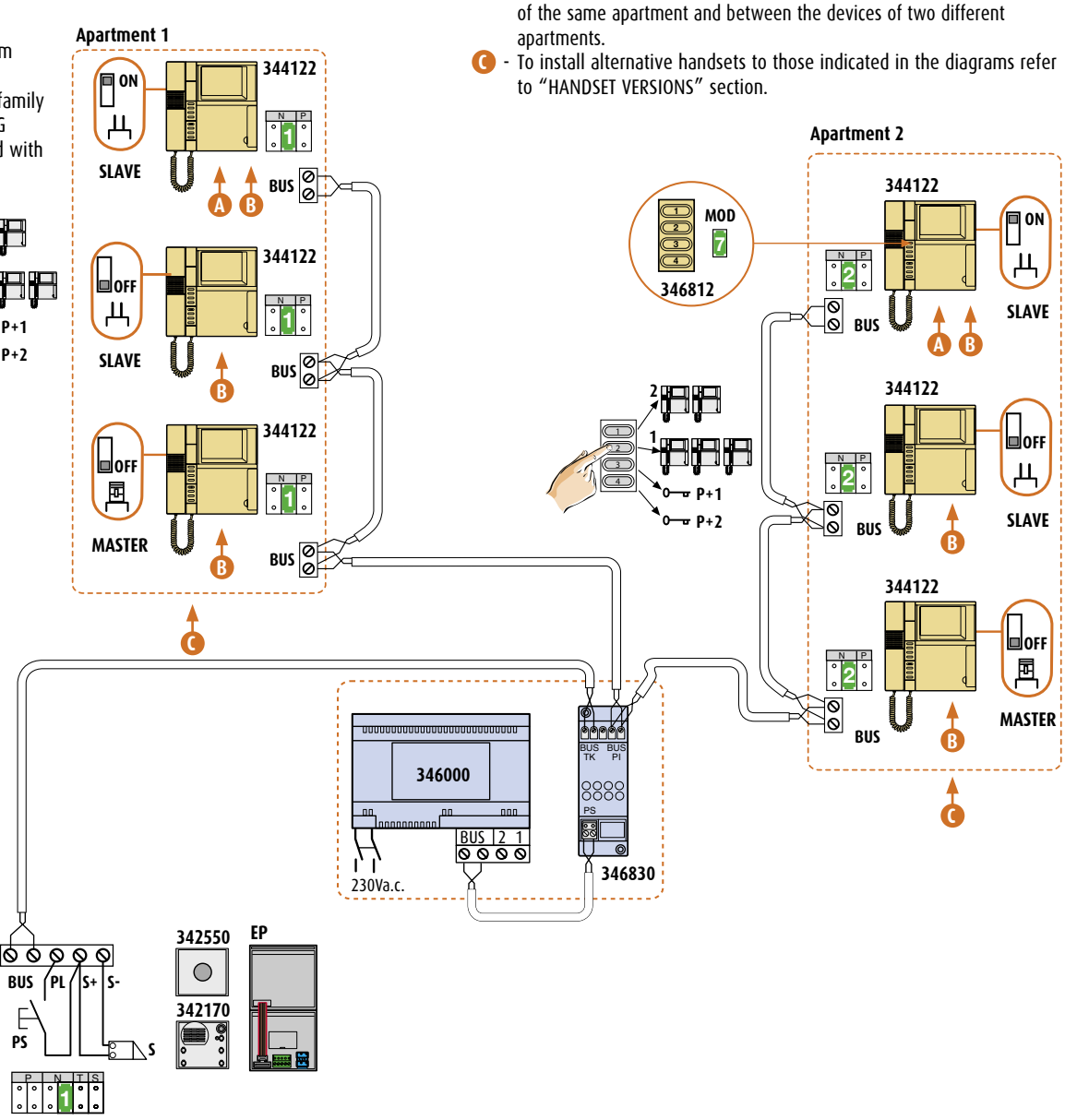
WARNING

- 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 PIVOT, POLYX and AXOLUTE 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.**
  With SWING handsets it is possible to install one video handset and 2 audio handsets or 3 video handsets in simultaneous switching on.

A - Move to ON the microswitch, on the back of the video handset or audio handset, which ends the line.

B - 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

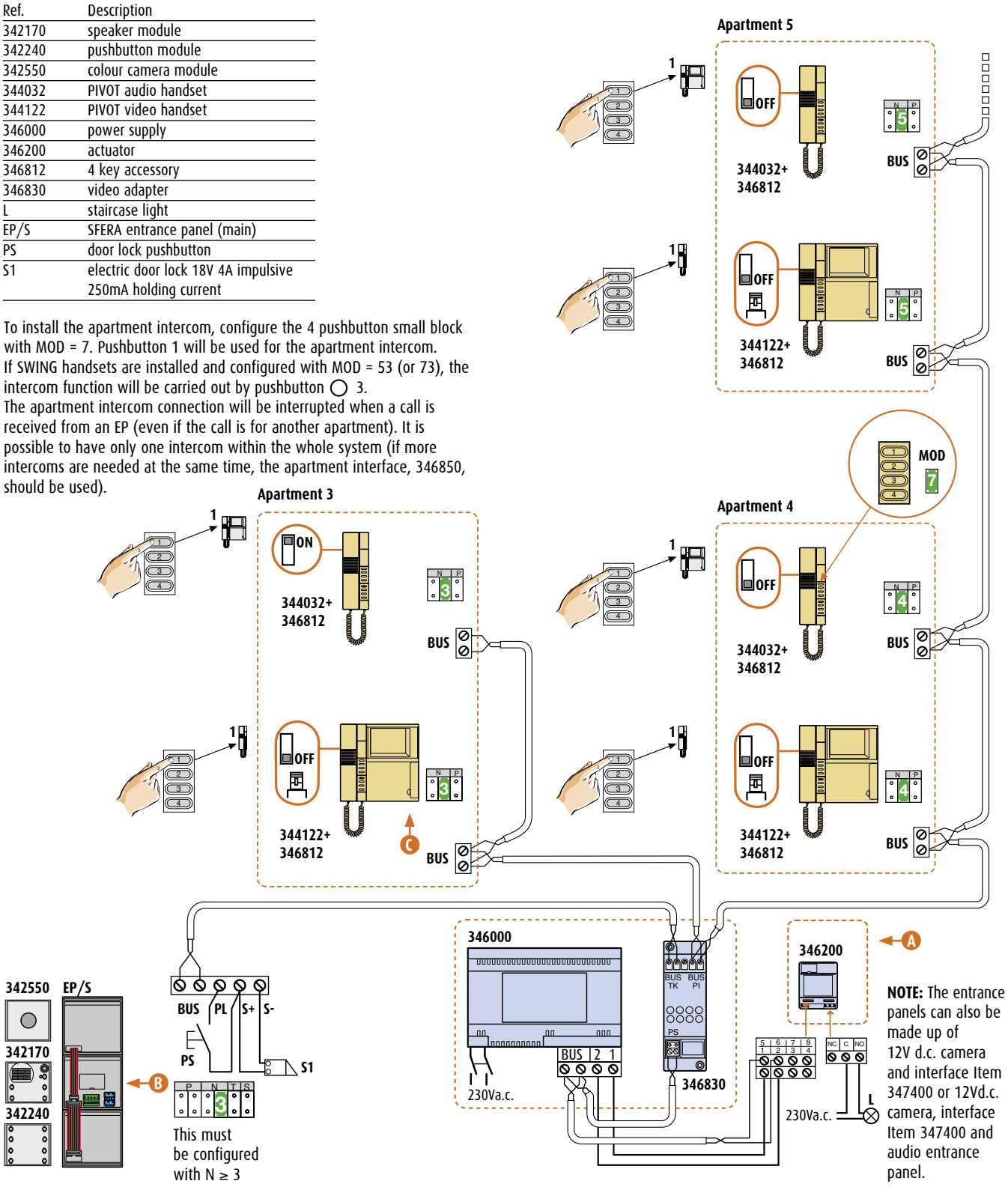
2W - DIAGRAM 17 INTERCOM IN APARTMENT WITHOUT ITEM 346850

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346812	4 key accessory
346830	video adapter
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

Configure the system starting from N = 3.

To install the apartment intercom, configure the 4 pushbutton small block with MOD = 7. Pushbutton 1 will be used for the apartment intercom.
If SWING handsets are installed and configured with MOD = 53 (or 73), the intercom function will be carried out by pushbutton ◯ 3.
The apartment intercom connection will be interrupted when a call is received from an EP (even if the call is for another apartment). It is possible to have only one intercom within the whole system (if more intercoms are needed at the same time, the apartment interface, 346850, should be used).



2W - DIAGRAM 18 MULTI-FAMILY SYSTEM WITH 1 MAIN VIDEO EP, 2 RISERS AND INTERCOM AMONG APARTMENTS

Legend

Ref.	Description
342170	speaker module
342240	pushbutton module
342550	colour camera module
344032	PIVOT audio handset
344122	PIVOT video handset
346000	power supply
346200	actuator
346812	4-key accessory
346830	video adapter
L	staircase light
EP/S	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

Connection limits

1 video EP, max. 2 risers on HA bus Item 346830
2 video EP, max. 1 riser on HA 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.
- **When PIVOT and SWING handsets are used, only up to 5 of them can be configured with the INTERCOM function. When POLYX MEMORY STATION, AXOLUTE VIDEO STATION, POLYX VIDEO DISPLAY and AXOLUTE VIDEO DISPLAY handsets are used, a maximum of 30 can be configured with the INTERCOM function.**

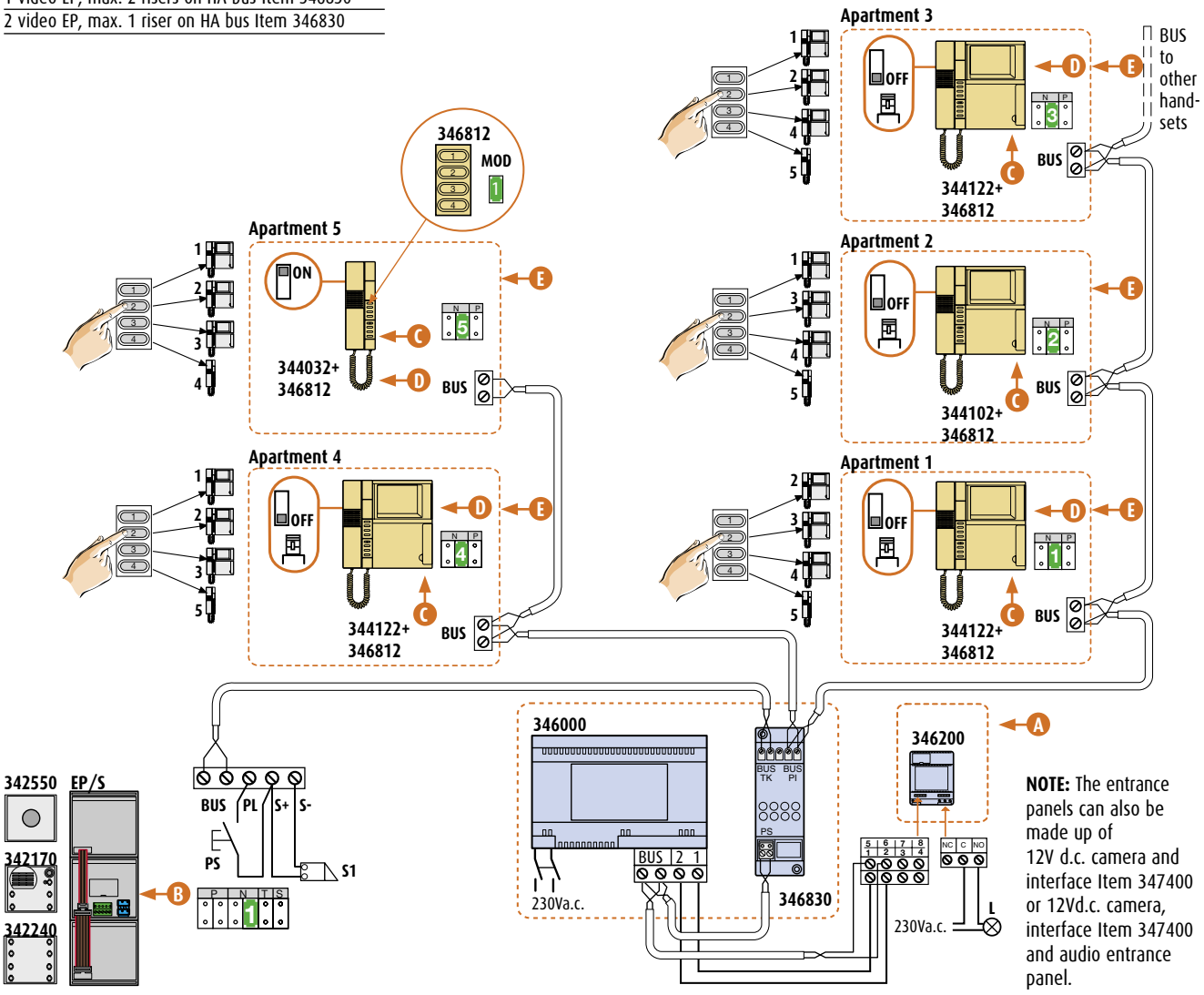
A - Use of the actuator is necessary for the staircase light service or generic actuations.

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 - The PIVOT video handsets 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.

WIRING DIAGRAMS

2W - DIAGRAM 19 MULTI-FAMILY SYSTEM WITH 4 ENTRANCE PANELS AND APARTMENT INTERFACES

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
344122	PIVOT video handset
346000	power supply
346850	apartment interface
347400	2 wire coaxial interface
F441	audio/video node
EP	SFERA entrance panel (main)
PS	door lock pushbutton
S1	electric door lock 18V 4A impulsive 250mA holding current

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.

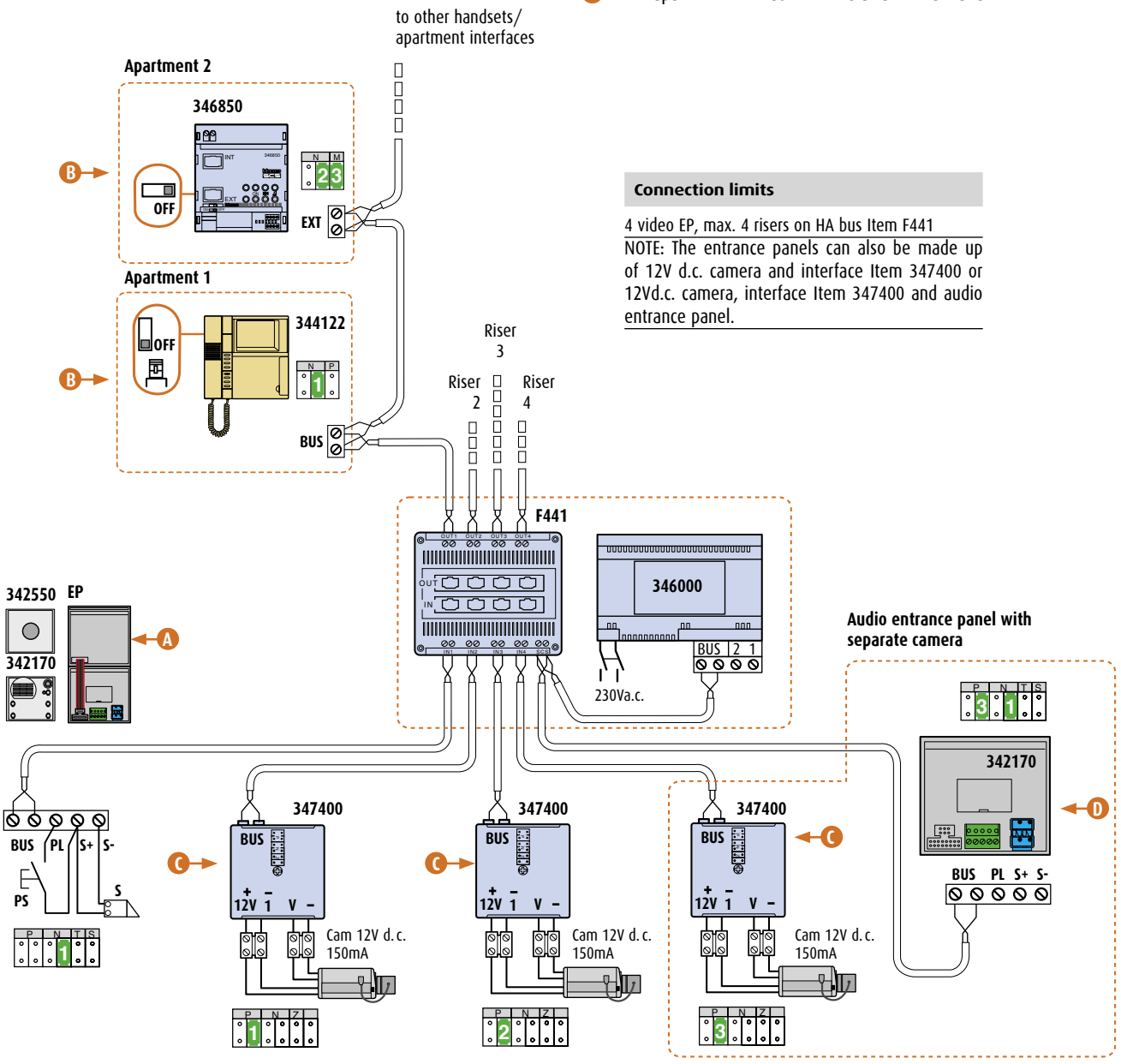
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel.
For more information consult the "ENTRANCE PANEL VERSIONS" section.

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. - max. distance camera/interface 3 m.

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, LINEA 2000, LINEA 2000 METAL series and 346991 and be connected directly to the SCS terminal of the audio-video node Item F441.

E - The apartment interface is wired as a normal handset.



Connection limits

4 video EP, max. 4 risers on HA 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.

2W - DIAGRAM 20 SYSTEM IN APARTMENT WITH APARTMENT INTERFACE

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
344162	POLYX DISPLAY
344172	POLYX MEMORY STATION
346000	power supply
346850	apartment interface
347400	2 wire coaxial interface
F441	audio/video node
AEP	apartment entrance panel

In apartment without 346850, a supplementary power supply should be installed for each 344172. This will avoid engaging the BUS, while listening or viewing messages from the answering machine. Several 344172 can be installed in an apartment. However, **only one** can have the video door entry answering machine or audio/video memory of the call enabled.

WARNING

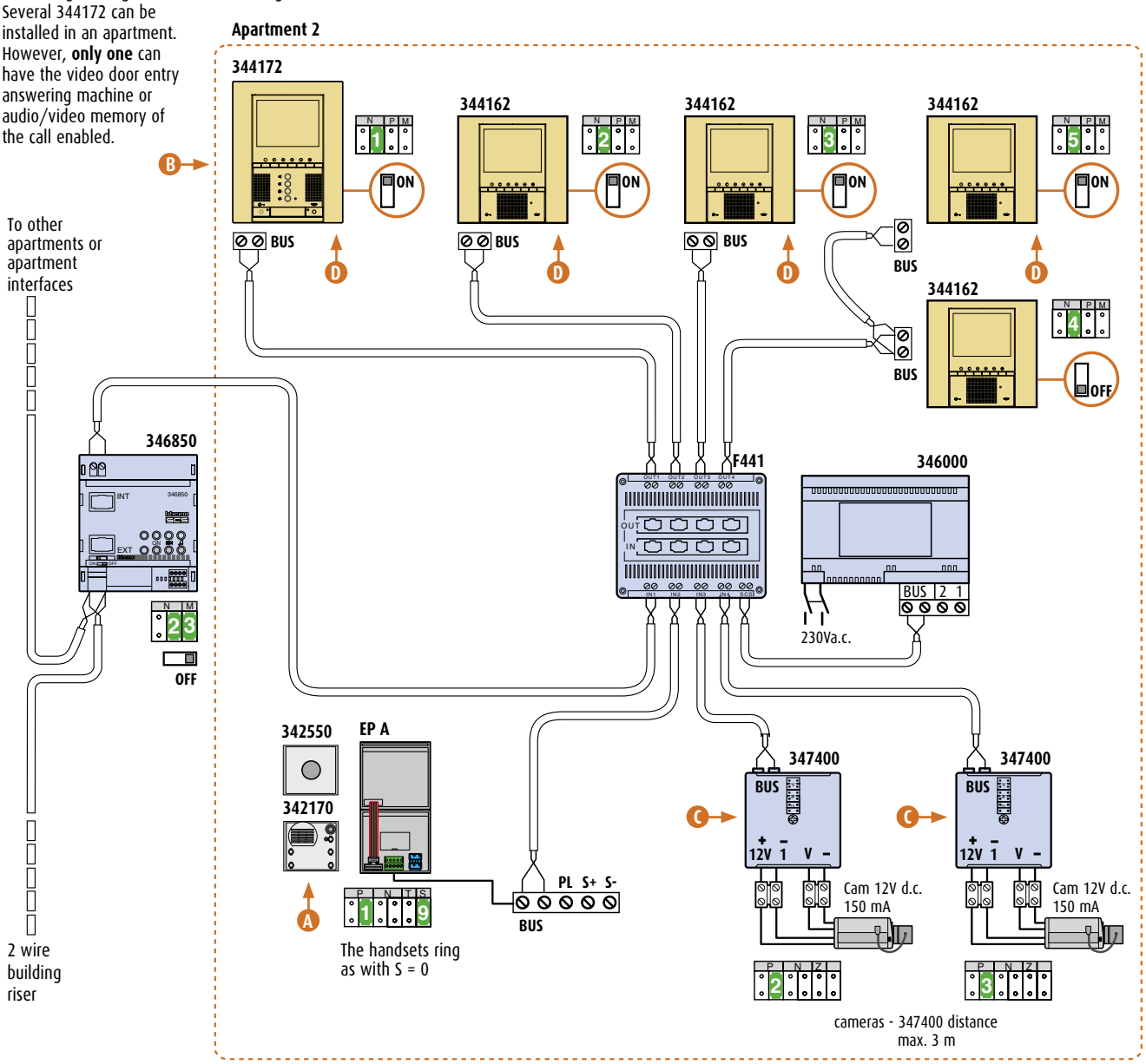
- Configure the apartment entrance panels starting from P = 1.
- Configure the apartment handsets starting from N=1
- As for one-family systems, all handsets must be configured as MASTER. The handset configured with N = 1 will ring and switch on, while all the others will only ring. If the call is answered from a handset with the monitor switched off, the monitor of the handset configured with N = 1 will switch off, while the monitor of the handset the call is answered from will switch on.

A - For the realization of the entrance panel can be used without distinction the SFERA, MINISFERA, LINEA 2000 or LINEA 2000 METAL. 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. 150mA

D - Move the microswitch of the device which ends the line to ON.



WIRING DIAGRAMS

2W - DIAGRAM 21 SYSTEM WITH ANALOGUE/2 WIRE COMMUNICATION INTERFACE

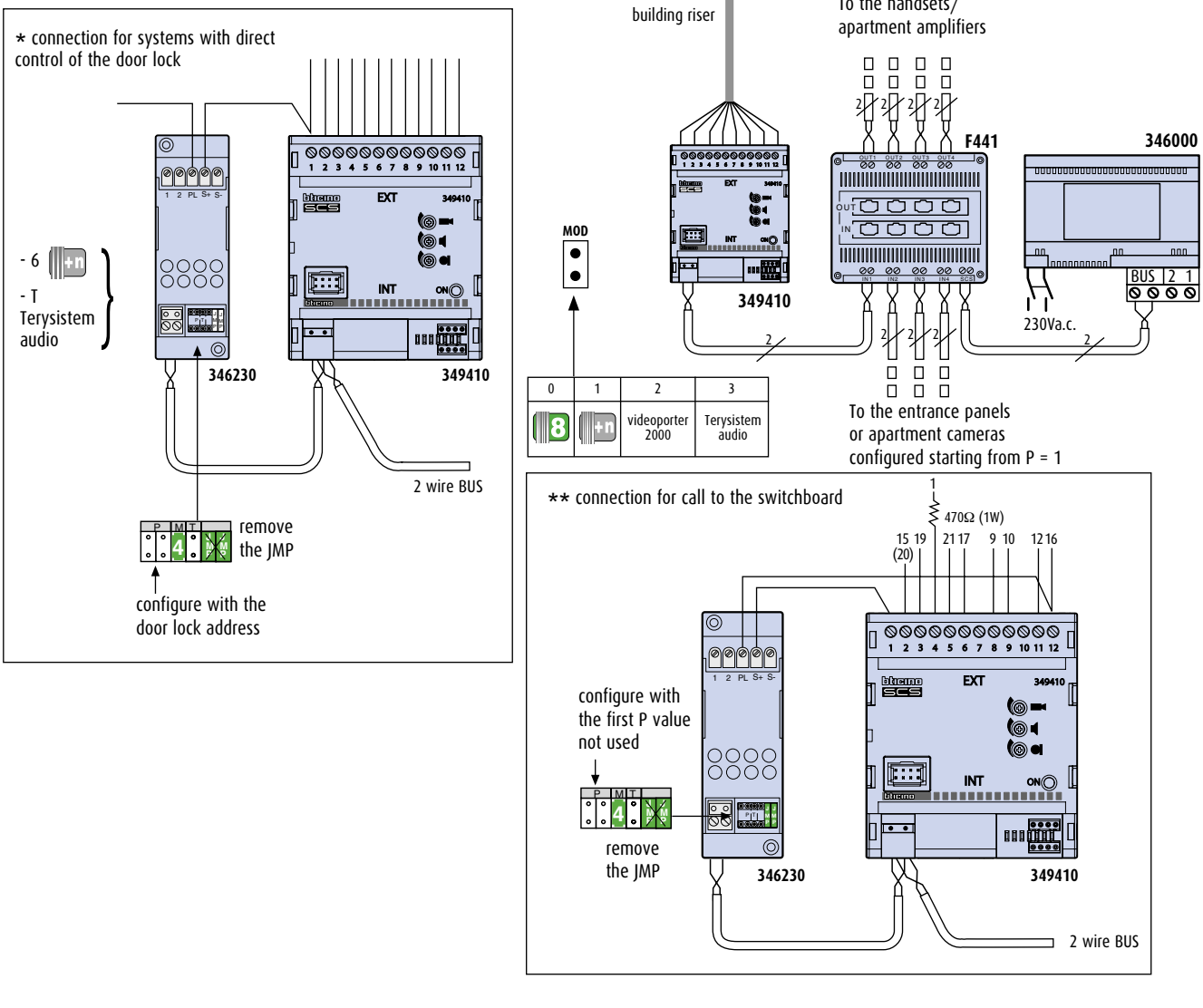
For systems with analogue or digital building riser, the analogue/2 wire communication interface item 349410 must be used in alternative to the apartment interface item 346850.

NOTE: activations on the analogue/2 wire side are not possible

Legend

Ref.	Description
346000	power supply
346230	door lock actuator
349410	2 wire analogue interface
F441	audio/video node

349410 EXT	Audio	Video	Audio	Video	Videoporter 2000	Tersystem Audio
1	1	1	1	1 e S+*	15 (20) and PL**	3 and S+*
2	2	-	2	-	19	-
3	3	3	3	3	1	2
4	4	4	4	4	21	1
5	5	5	5	5	17	6
6	6	6	6	*	13	-
7	7	-	7	-	-	-
8	8	-	8	-	9	-
9	-	-	-	-	10	-
10	-	-	-	-	-	-
11	14	14	14	14	12	-
12	-	-	-	-	16 and S+**	-



2W - DIAGRAM 22 ENTRANCE PANEL LINE EXPANSION

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346830	video adapter
346851	system expansion module
EP	entrance panel
PS	door lock pushbutton
S1	door lock
F441	audio/video node

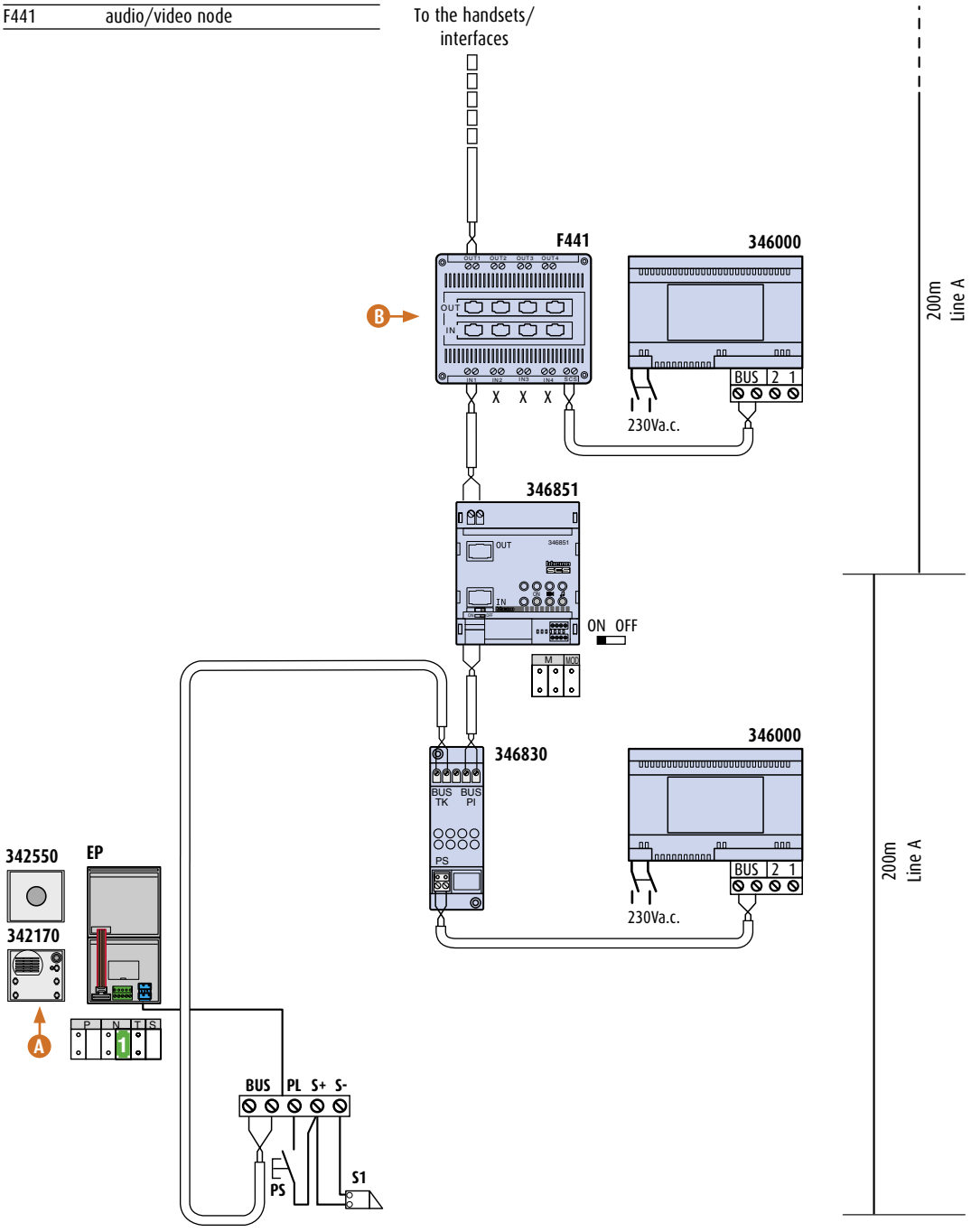
WARNING

After the system expansion module item 346851, 200 m of line A are available (from the interface item 346851 to the furthest handset). Line C depends on the number of handsets installed.

A maximum of 3 interfaces item 346850 and item 346851 can be used in cascade. Only 2 of them will reproduce the signal.

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

B - It is possible to use only one node input.

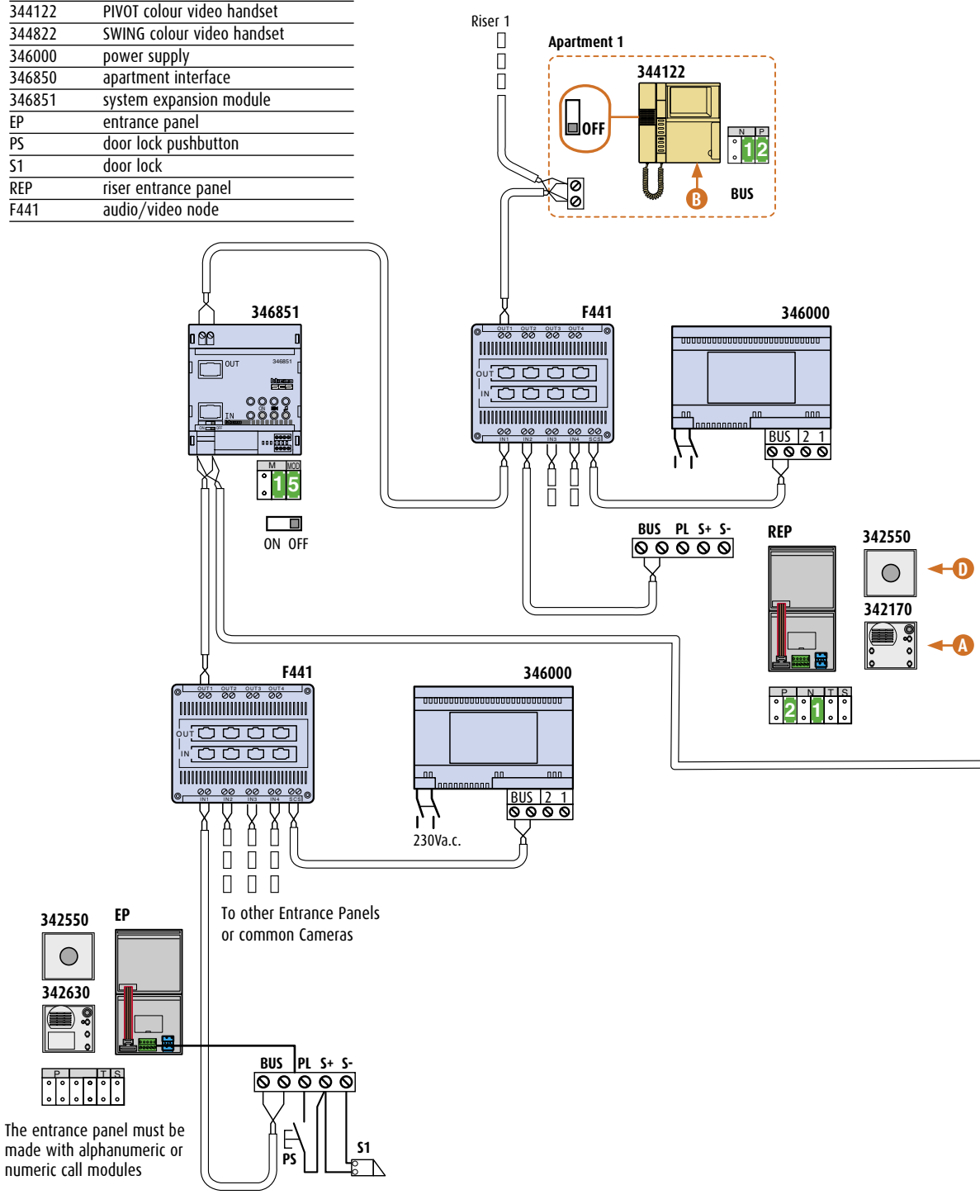


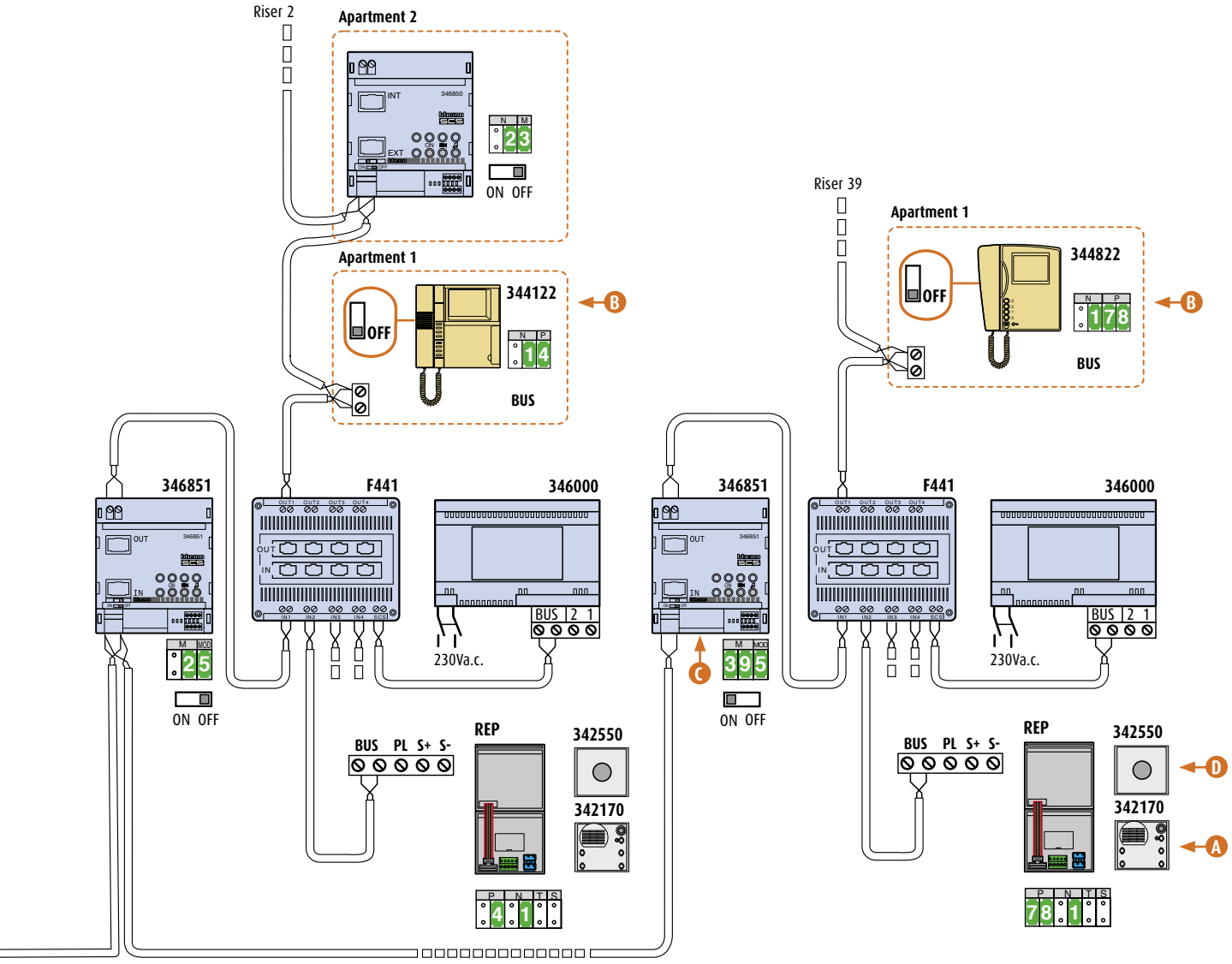
WIRING DIAGRAMS

2W - DIAGRAM 23 MULTI-FAMILY SYSTEM WITH 39 INDEPENDENT AUDIO RISERS

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
342630	digital call module
344122	PIVOT colour video handset
344822	SWING colour video handset
346000	power supply
346850	apartment interface
346851	system expansion module
EP	entrance panel
PS	door lock pushbutton
S1	door lock
REP	riser entrance panel
F441	audio/video node





WARNING

- As far as buildings entrance panels are concerned, the address of the riser's handsets will be equal to (riser no x 100) + handset no.
  e.g. for handset 15 of riser 9 equals the building EP address will be: 9 x 10 + 15 = 915.
- Configure the handsets starting from N = 1
- A maximum of 3 interfaces item 346850 and item 346851 can be used in cascade. Only 2 of them will reproduce the signal.

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 - Move the microswitch of the interface 346851 which ends the line to ON.

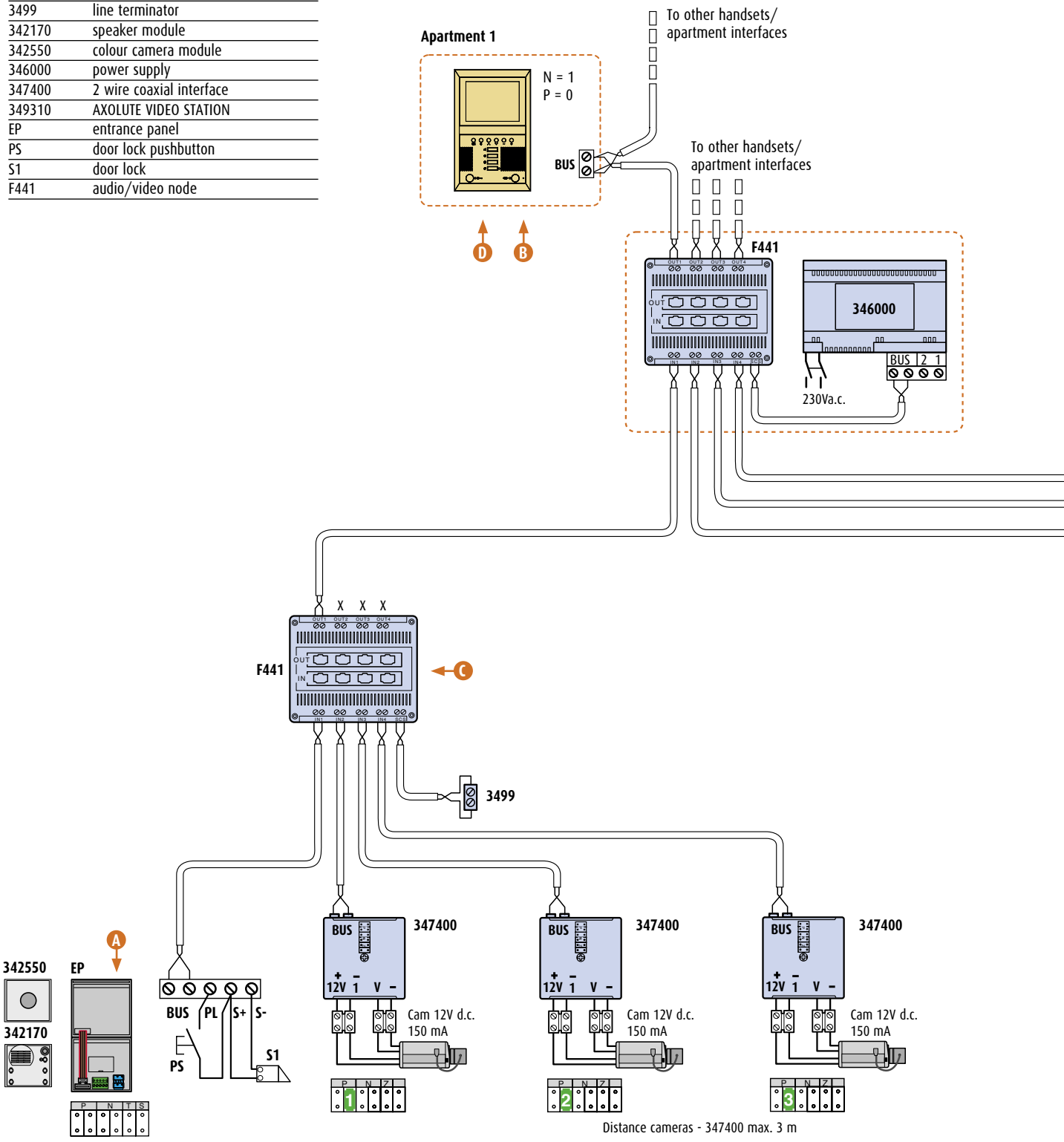
D - Configure the handsets of consecutive risers leaving one free address.
Riser 1 : P = 2 P = 3 P = 4
Riser 2 : P = 6 .....

WIRING DIAGRAMS

2W - DIAGRAM 24 SYSTEM WITH MAX. 16 CAMERAS OR ENTRANCE PANELS

Legend

Ref.	Description
3499	line terminator
342170	speaker module
342550	colour camera module
346000	power supply
347400	2 wire coaxial interface
349310	AXOLUTE VIDEO STATION
EP	entrance panel
PS	door lock pushbutton
S1	door lock
F441	audio/video node



WARNING

By installing the nodes in cascade (line A, line B and line C), distances are cut in half.

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

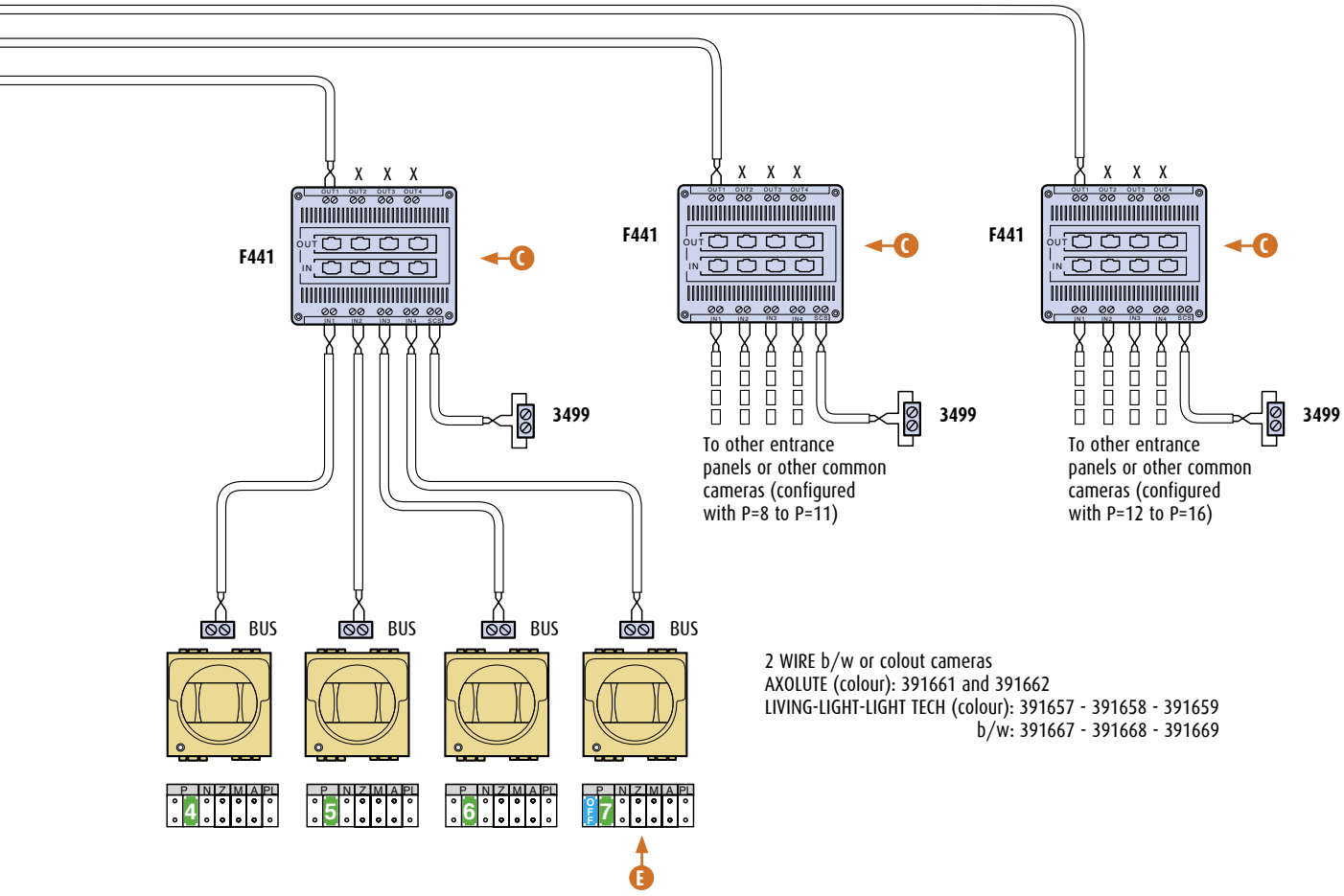
B - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

C - Only use one output for each node and allow for a terminator item 3499 to be connected to the SCS terminal block.

D - Configure advanced handsets using a PC or the OSD procedure.

E - By entering OFF in the first seats of the P configurators, the microphone of the 2 wire cameras is excluded (this function is only possible for cameras 0 to 9. The microphone cannot be excluded on the other cameras).

When installing the nodes "in cascade", the maximum distance between EP and the last handset is 100m when a cable item 336904 is used **(when using other cables, the distances shown on the tables is cut in half).**



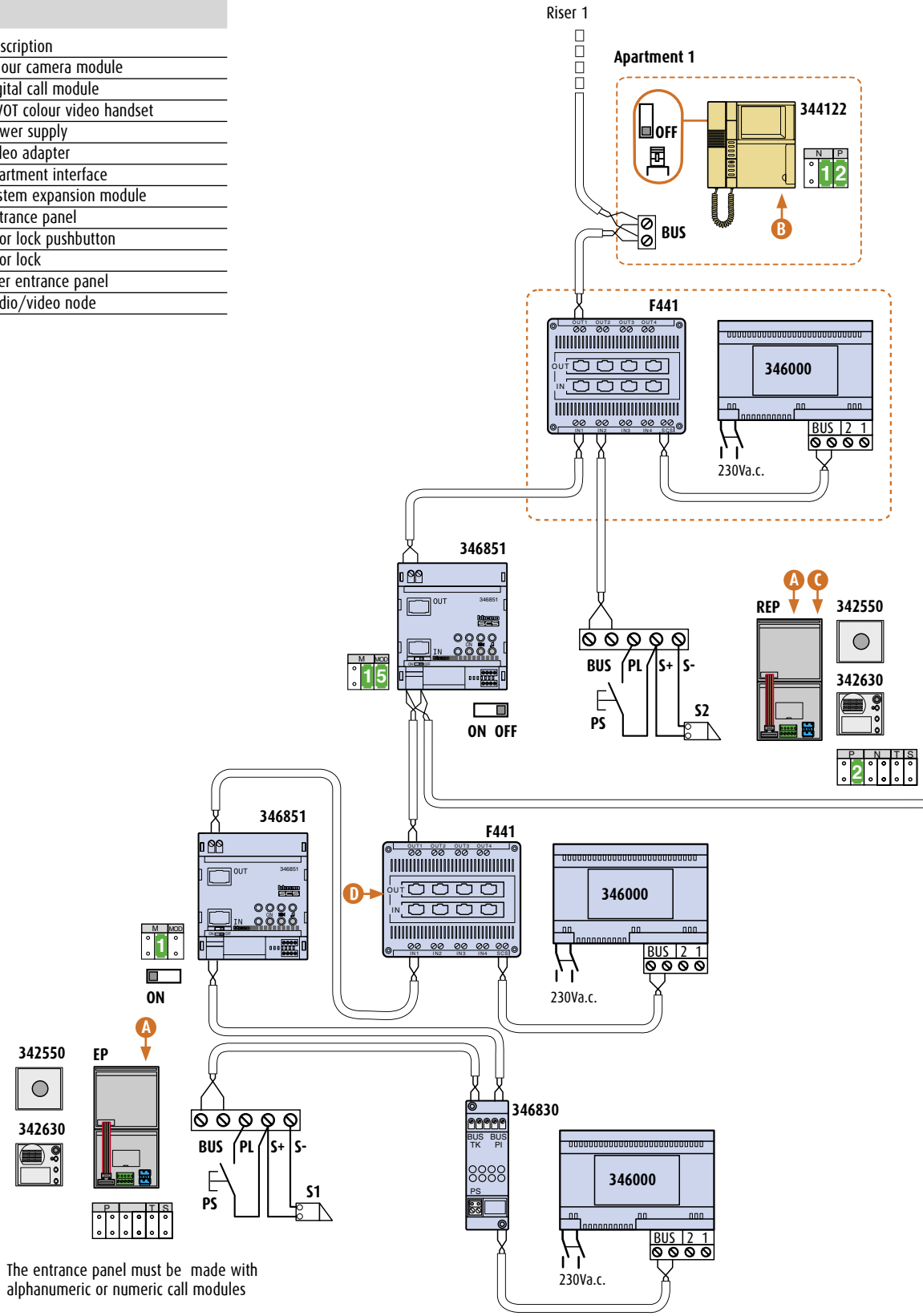
2 WIRE b/w or colout cameras
AXOLUTE (colour): 391661 and 391662
LIVING-LIGHT-LIGHT TECH (colour): 391657 - 391658 - 391659
b/w: 391667 - 391668 - 391669

WIRING DIAGRAMS

2W - DIAGRAM 25 SYSTEMS WITH 346851 TO DOUBLE THE ENTRANCE PANEL LINE - MAX. 39 INDEPENDENT RISERS AND APARTMENT INTERFACES

Legend

Ref.	Description
342550	colour camera module
342630	digital call module
344122	PIVOT colour video handset
346000	power supply
346830	video adapter
346850	apartment interface
346851	system expansion module
EP	entrance panel
PS	door lock pushbutton
S1-S2	door lock
REP	riser entrance panel
F441	audio/video node



The entrance panel must be made with alphanumeric or numeric call modules

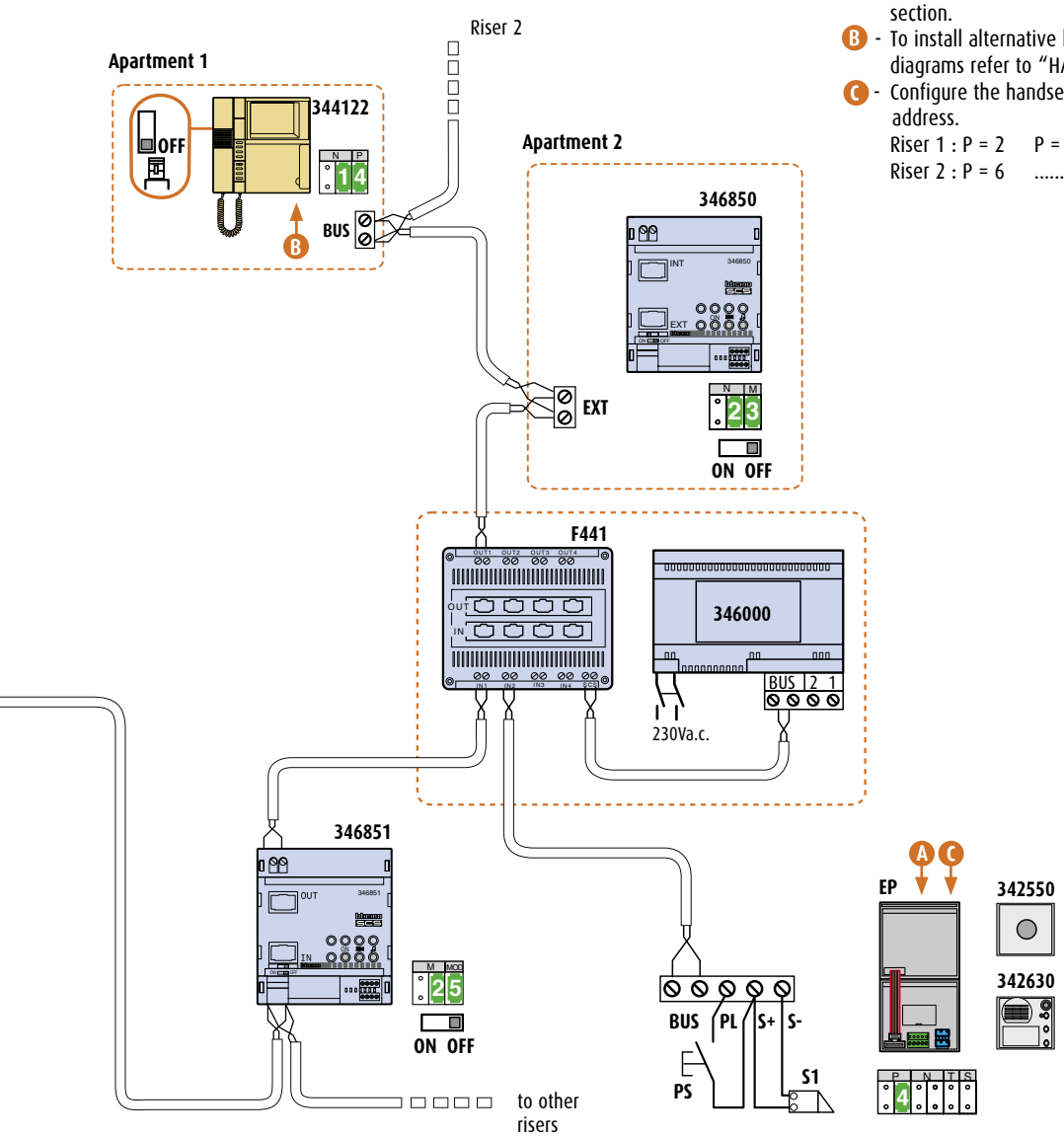
WARNING

- As far as buildings entrance panels are concerned, the address of the riser's handsets will be equal to (riser no x 100) + handset no.
  e.g. for handset 15 of riser 9 equals the building EP address will be: 9 x 10 + 15 = 915.
- Configure the riser handsets starting from N = 1
- A maximum of 3 interfaces item 346850 and item 346851 can be used in cascade. Only 2 of them will reproduce the signal.

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 - Configure the handsets of consecutive risers leaving one free address.
Riser 1 : P = 2 P = 3 P = 4
Riser 2 : P = 6 .....

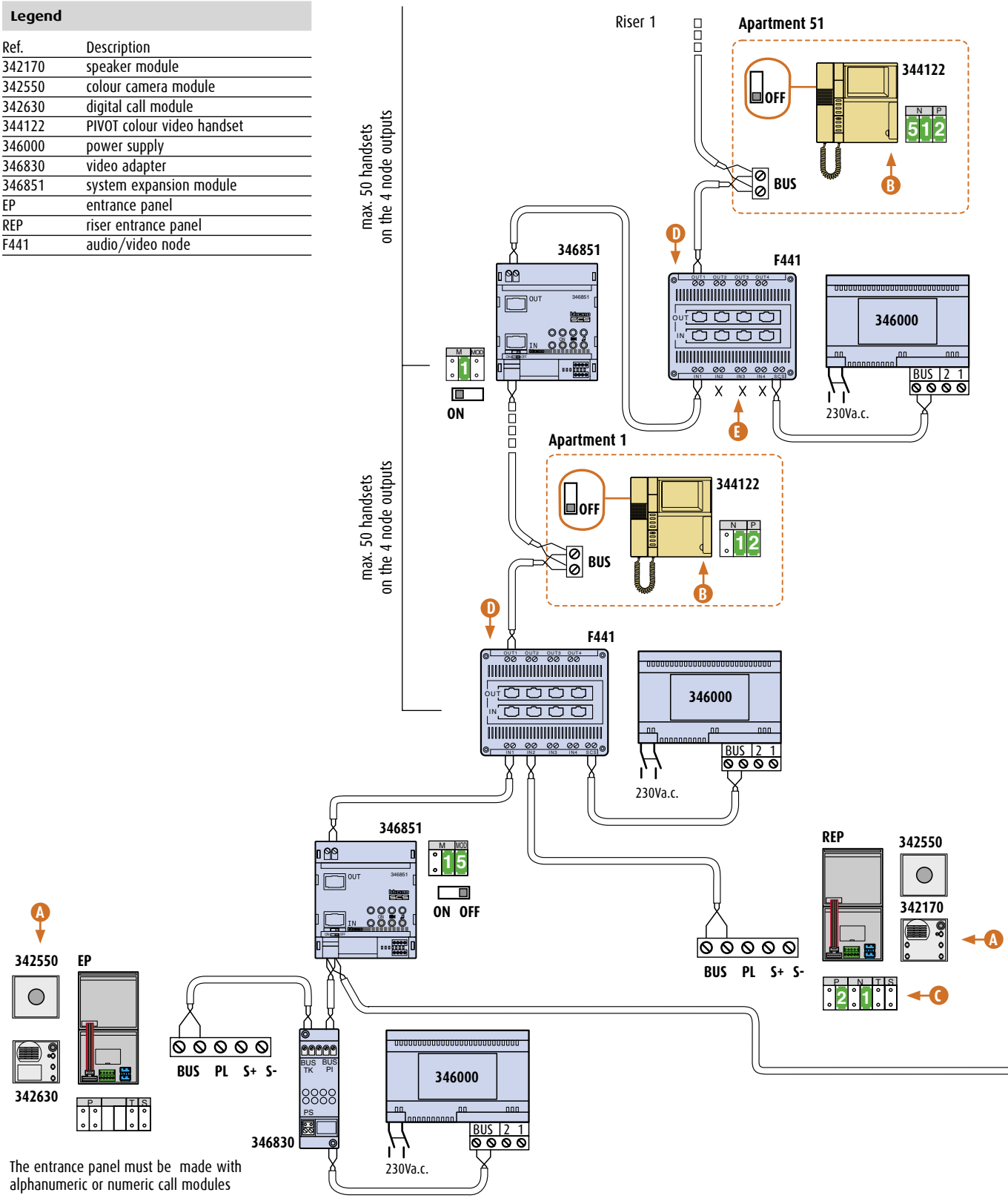


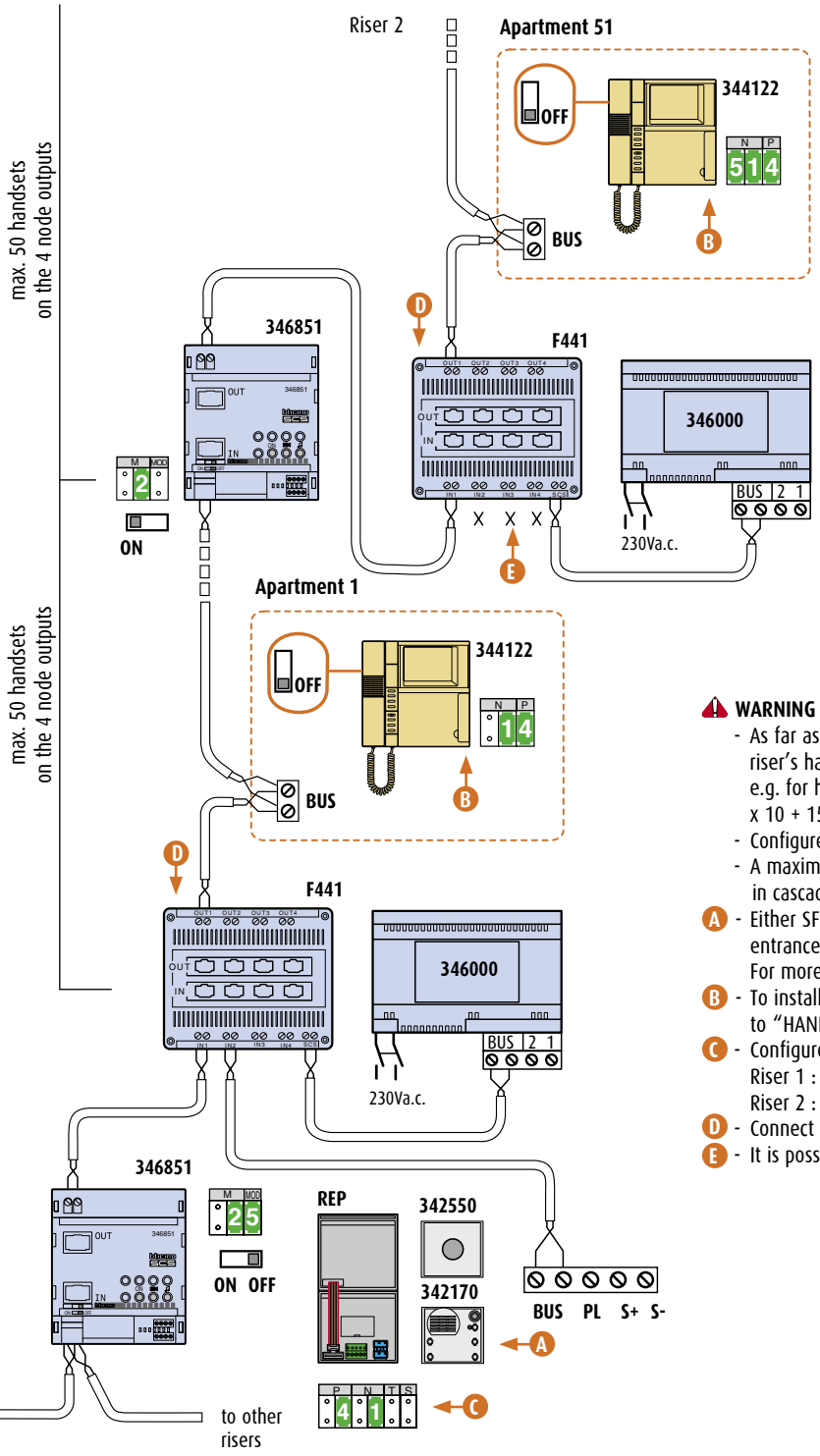
WIRING DIAGRAMS

2W - DIAGRAM 26 SYSTEM WITH MAX. 39 INDEPENDENT RISERS WITH RISER EXTENSION (100 VIDEO HANDSETS)

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
342630	digital call module
344122	PIVOT colour video handset
346000	power supply
346830	video adapter
346851	system expansion module
EP	entrance panel
REP	riser entrance panel
F441	audio/video node





WARNING

- As far as buildings entrance panels are concerned, the address of the riser's handsets will be equal to (riser no x 100) + handset no. e.g. for handset 15 of riser 9 equals the building EP address will be: 9 x 10 + 15 = 915.
- Configure the riser handsets starting from N = 1
- A maximum of 3 interfaces item 346850 and item 346851 can be used in cascade. Only 2 of them will reproduce the signal.

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 - Configure the handsets of consecutive risers leaving one free address.
Riser 1 : P = 2 P = 3 P = 4
Riser 2 : P = 6

D - Connect max. 26 handsets on each node output.

E - It is possible to use only one node input.

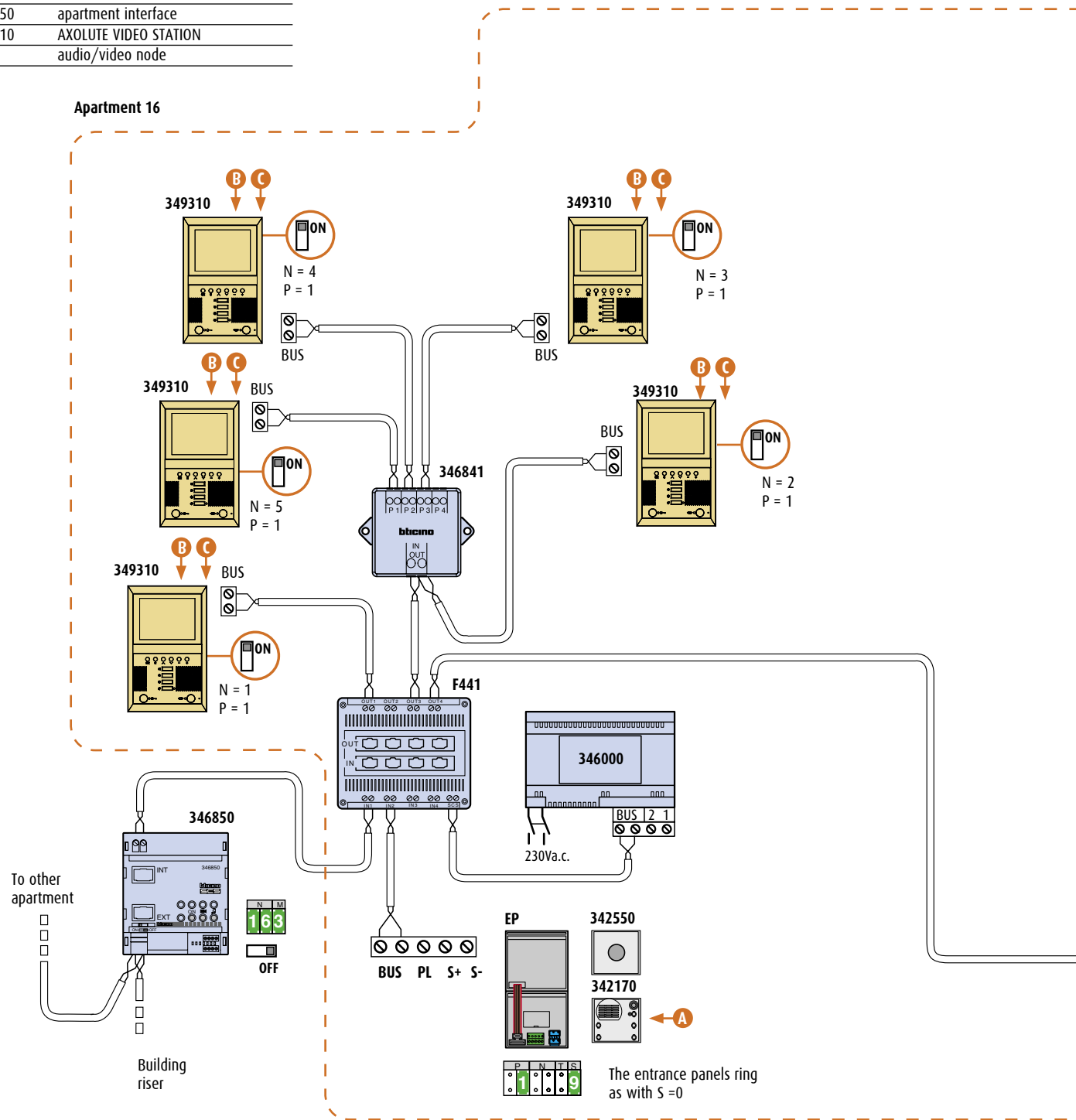
WIRING DIAGRAMS

2W - DIAGRAM 27 HANDSET EXTENSION IN APARTMENT - MAX. 10 HANDSETS

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346841	floor distribution block
346850	apartment interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node

When the handsets are configured as shown, the intercom function for all devices is enabled. Upon receipt of a call from the EP, all handsets will ring, but only the handset configured with N = 1 will switch on.
To set up the system so that more monitors switch on refer to diagram 28.



WARNING

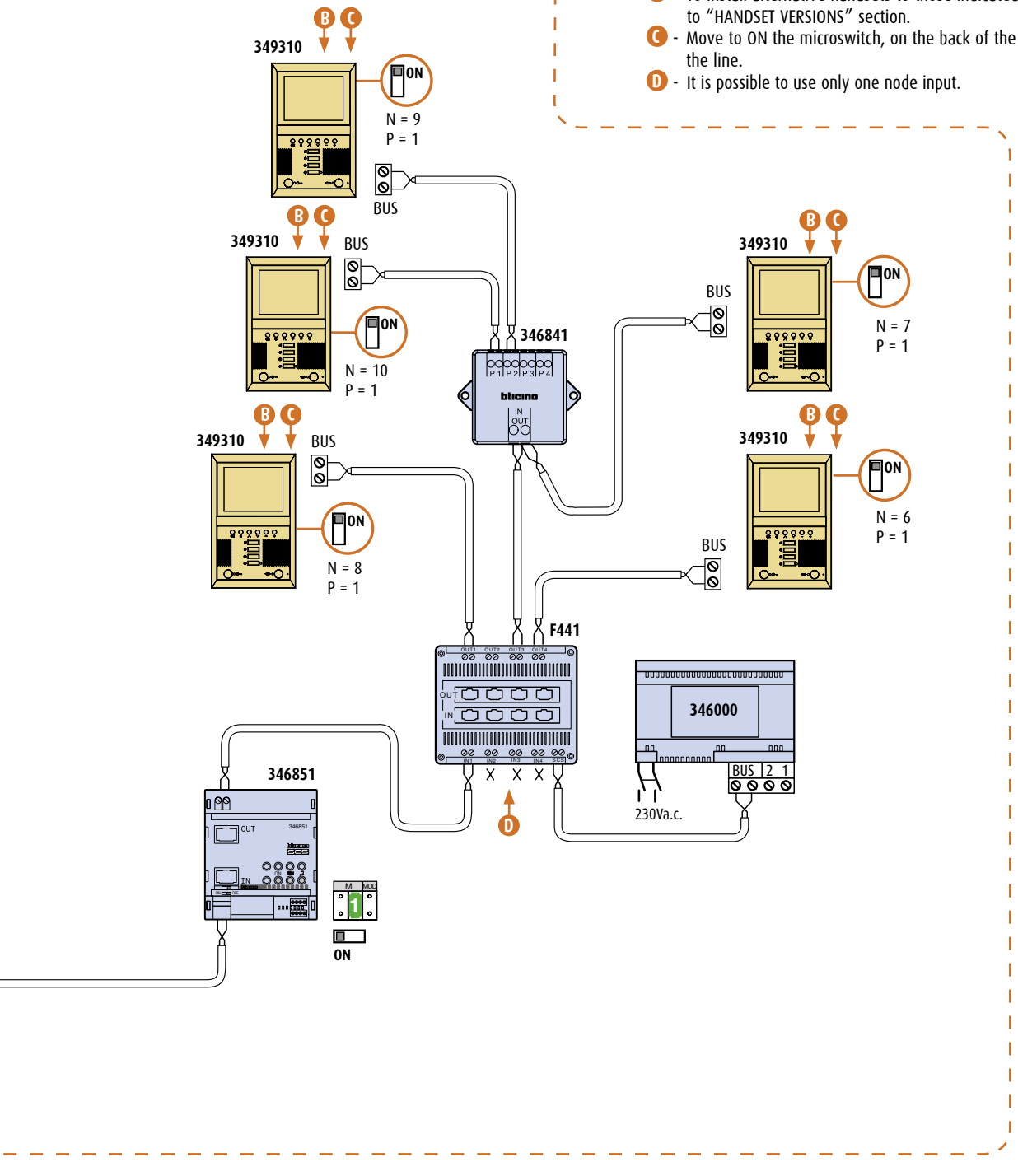
- Configure the apartment entrance panels starting from P = 1
- **The intercom function between apartments cannot be set, if the systems in both apartment have been installed using the handset expansion diagram.**
- All the handsets must be MASTER.

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 - Move to ON the microswitch, on the back of the handset, which ends the line.

D - It is possible to use only one node input.

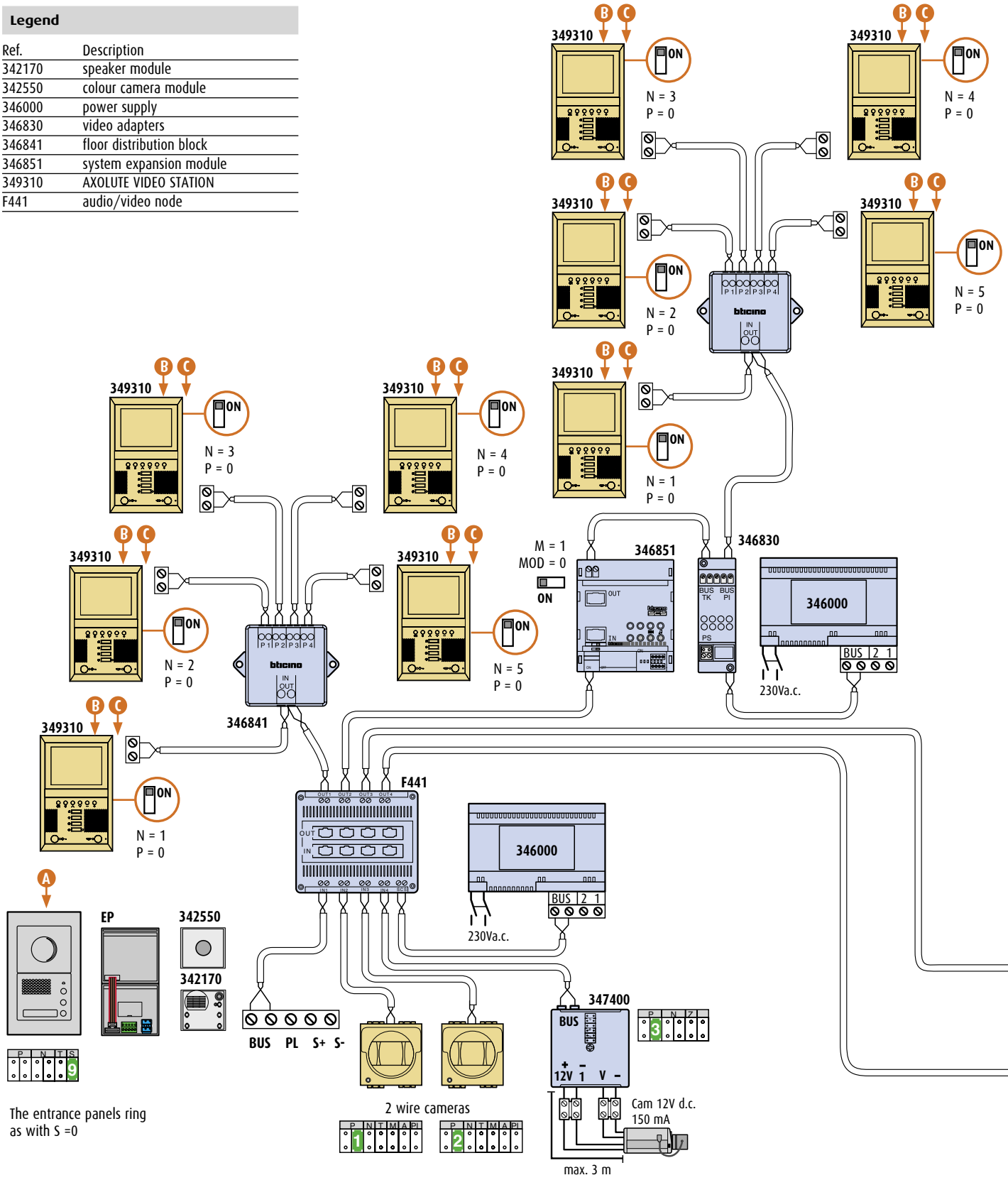


WIRING DIAGRAMS

2W - DIAGRAM 28 ONE-FAMILY SYSTEM WITH 20 HANDSETS

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346830	video adapters
346841	floor distribution block
346851	system expansion module
349310	AXOLUTE VIDEO STATION
F441	audio/video node



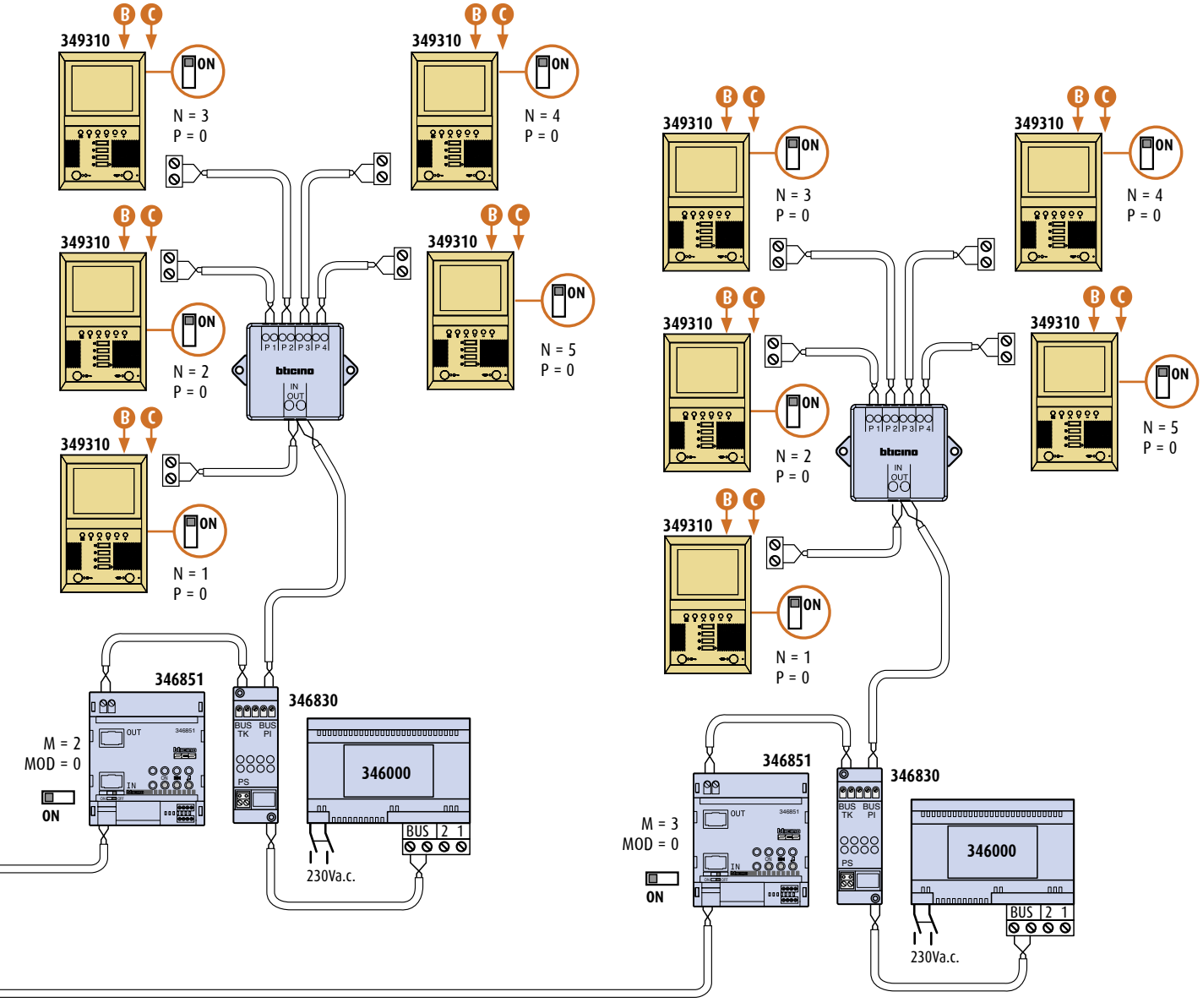
Upon arrival of the call, all handsets ring and all those configured with N = 1 switch on. The INTERCOM call causes all handsets with the same configuration to ring. To set the intercom function to work with all handsets refer to drawing 27.

WARNING

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 - Move to ON the microswitch, on the back of the handset, which ends the line.



WIRING DIAGRAMS

2W - DIAGRAM 29 BASIC ONE-FAMILY SYSTEM INTEGRATED WITH SOUND SYSTEM

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
347400	2 wire-coaxial interface
349310	AXOLUTE VIDEO STATION
EP	entrance panel
PS	door lock pushbutton
SL	door lock

WARNING

- It is recommended to provide an additional power supply to all advanced handsets, to avoid muting the sound system amplifiers when the monitor is switched on.

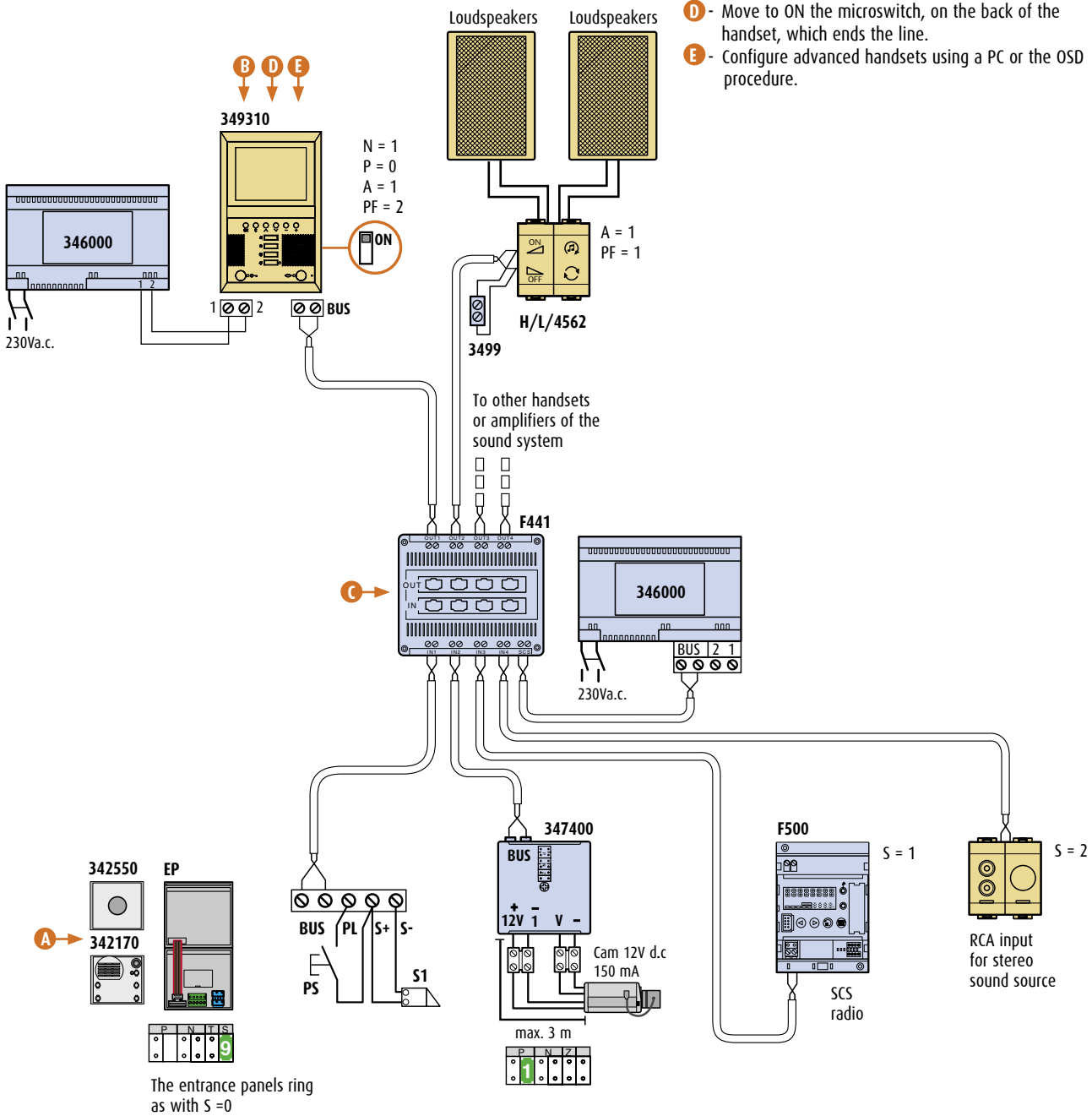
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Separate outputs for video handsets and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same output, refer to the Sound System Technical guide.

D - Move to ON the microswitch, on the back of the handset, which ends the line.

E - Configure advanced handsets using a PC or the OSD procedure.



2W - DIAGRAM 30 MULTI-FAMILY SYSTEM WITH 2 WIRE/SOUND SYSTEM BASIC INTEGRATION IN APARTMENT (APARTMENT 21)

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346850	apartment interface
347400	2 wire-coaxial interface
349310	AXOLUTE VIDEO STATION
EP	entrance panel
PS	door lock pushbutton
S1	door lock

WARNING
- Configure the apartment entrance panels starting from P = 1
- Configure the apartment handsets starting from N = 1

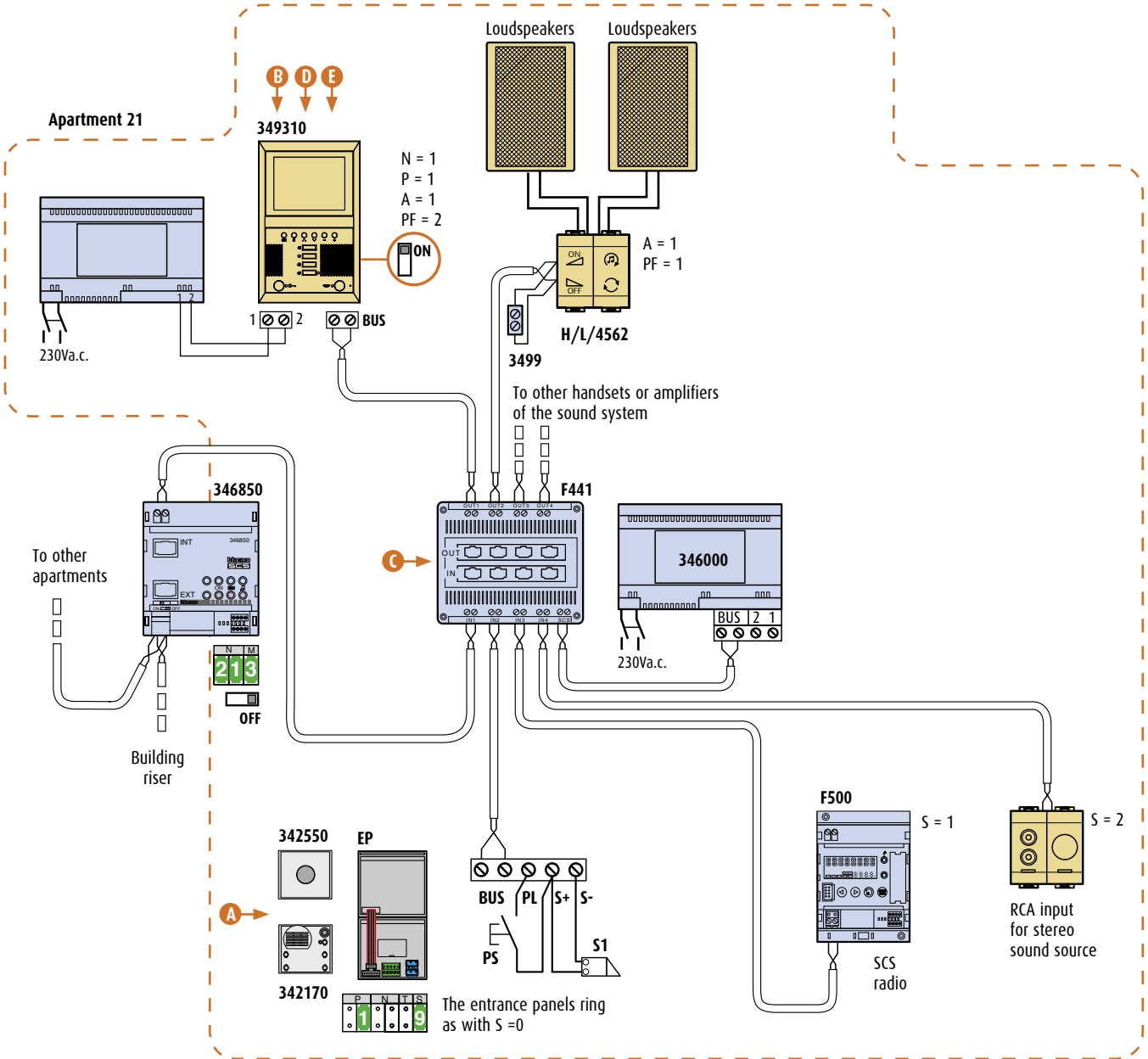
A - It is recommended to provide an additional power supply to all advanced handsets, to avoid muting the sound system amplifiers when the monitor is switched on.

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

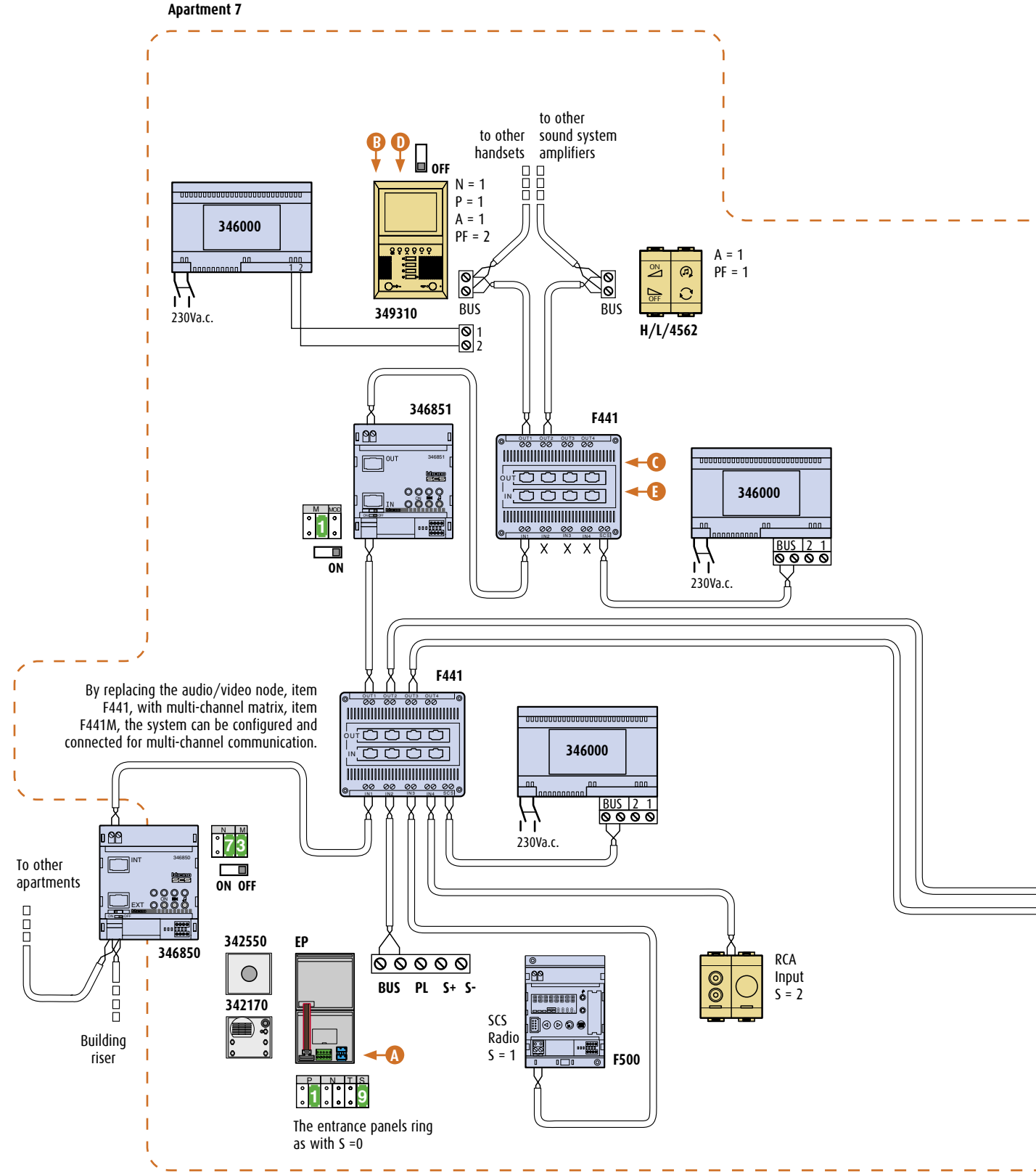
D - Separate outputs for video handsets and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same output, refer to the Sound System Technical guide.

E - Move to ON the microswitch, on the back of the handset, which ends the line.
- Configure advanced handsets using a PC or the OSD procedure.



WIRING DIAGRAMS

2W - DIAGRAM 31 EXTENDED SYSTEM IN APARTMENT INTEGRATED WITH THE SOUND SYSTEM (APARTMENT 7)



Legend	
Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346850	apartment interface
347400	2 wire coaxial interface
349310	AXOLUTE VIDEO STATION
EP	entrance panel
PS	door lock pushbutton
S1	door lock

WARNING

- Configure the apartment entrance panels starting from P = 1
- Configure the apartment handsets starting from N = 1
- It is recommended to provide an additional power supply to all advanced handsets, to avoid muting the sound system amplifiers when the monitor is switched on.

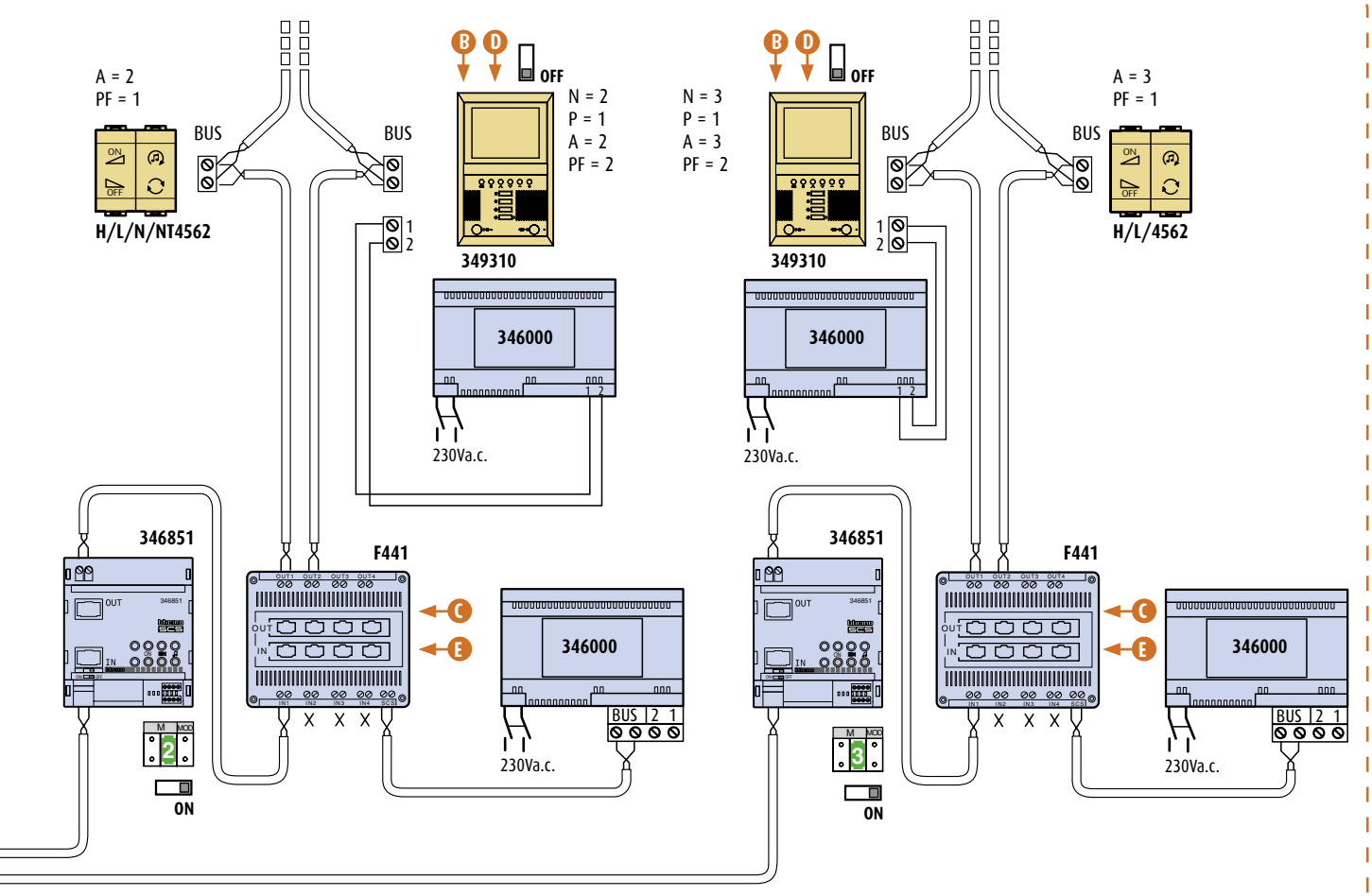
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Separate outputs for video handsets and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same output, refer to the Sound System Technical guide.

D - Configure advanced handsets using a PC or the OSD procedure.

E - It is possible to use only one node input.

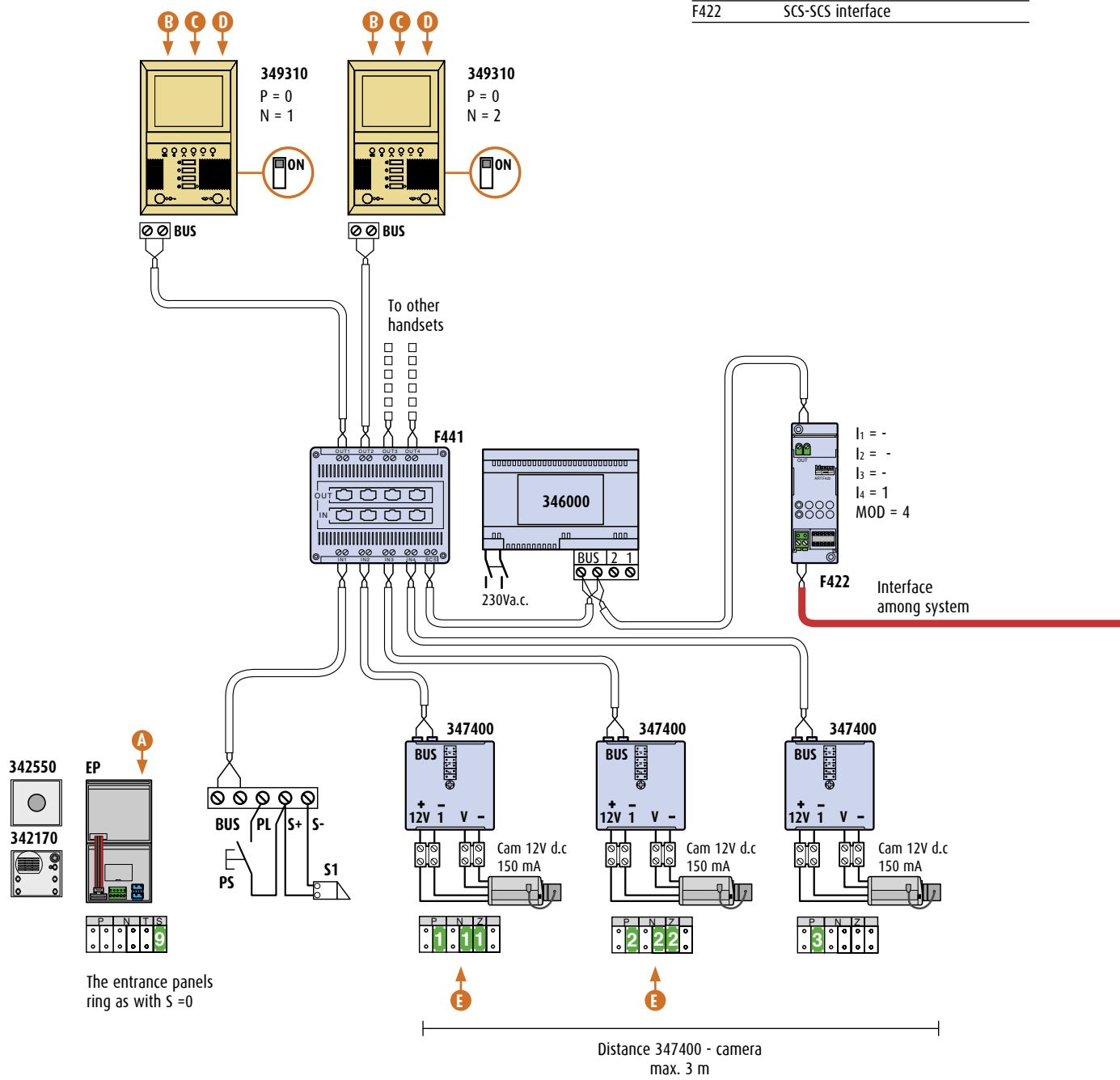


WIRING DIAGRAMS

2W - DIAGRAM 32 ONE-FAMILY SYSTEM INTEGRATED WITH BURGLAR ALARM SYSTEM

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
347400	2 wire-COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface



WARNING

- Configure the handsets starting from N = 1

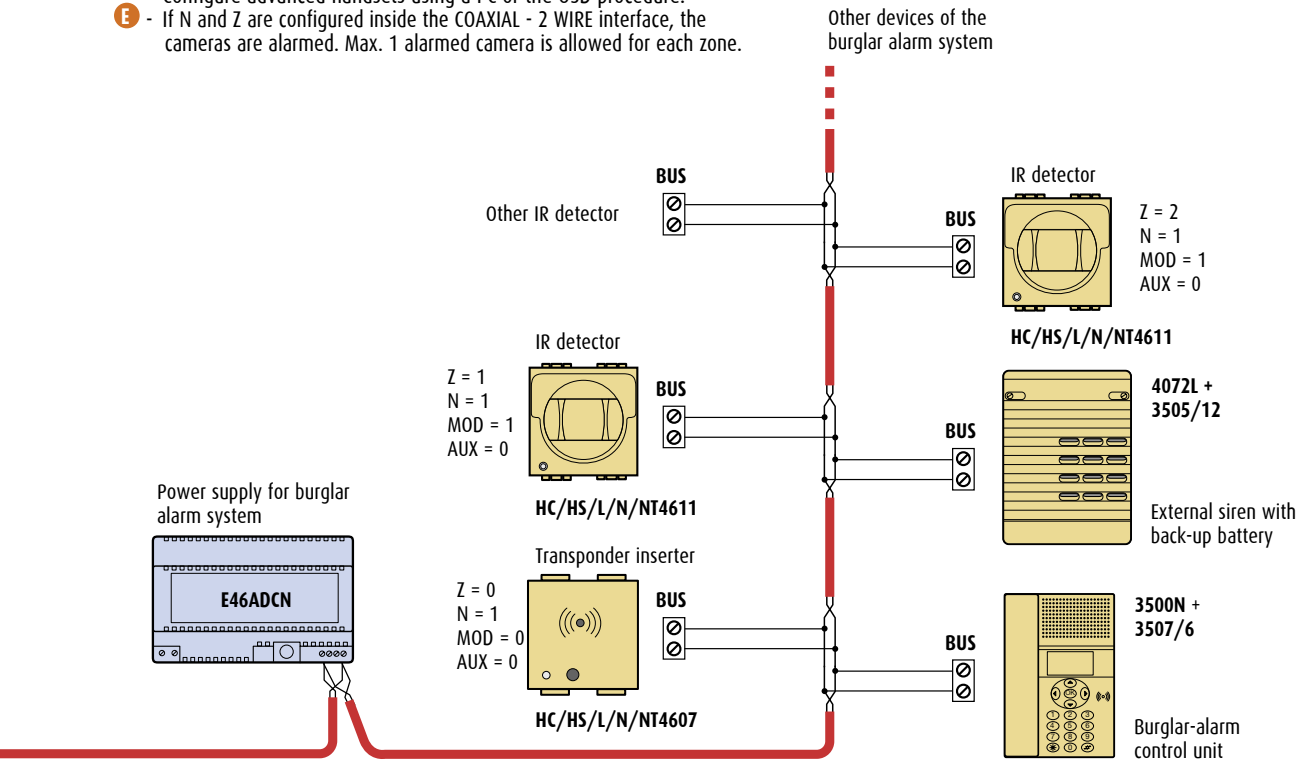
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Move to ON the microswitch, on the back of the handset, which ends the line.

D - Configure advanced handsets using a PC or the OSD procedure.

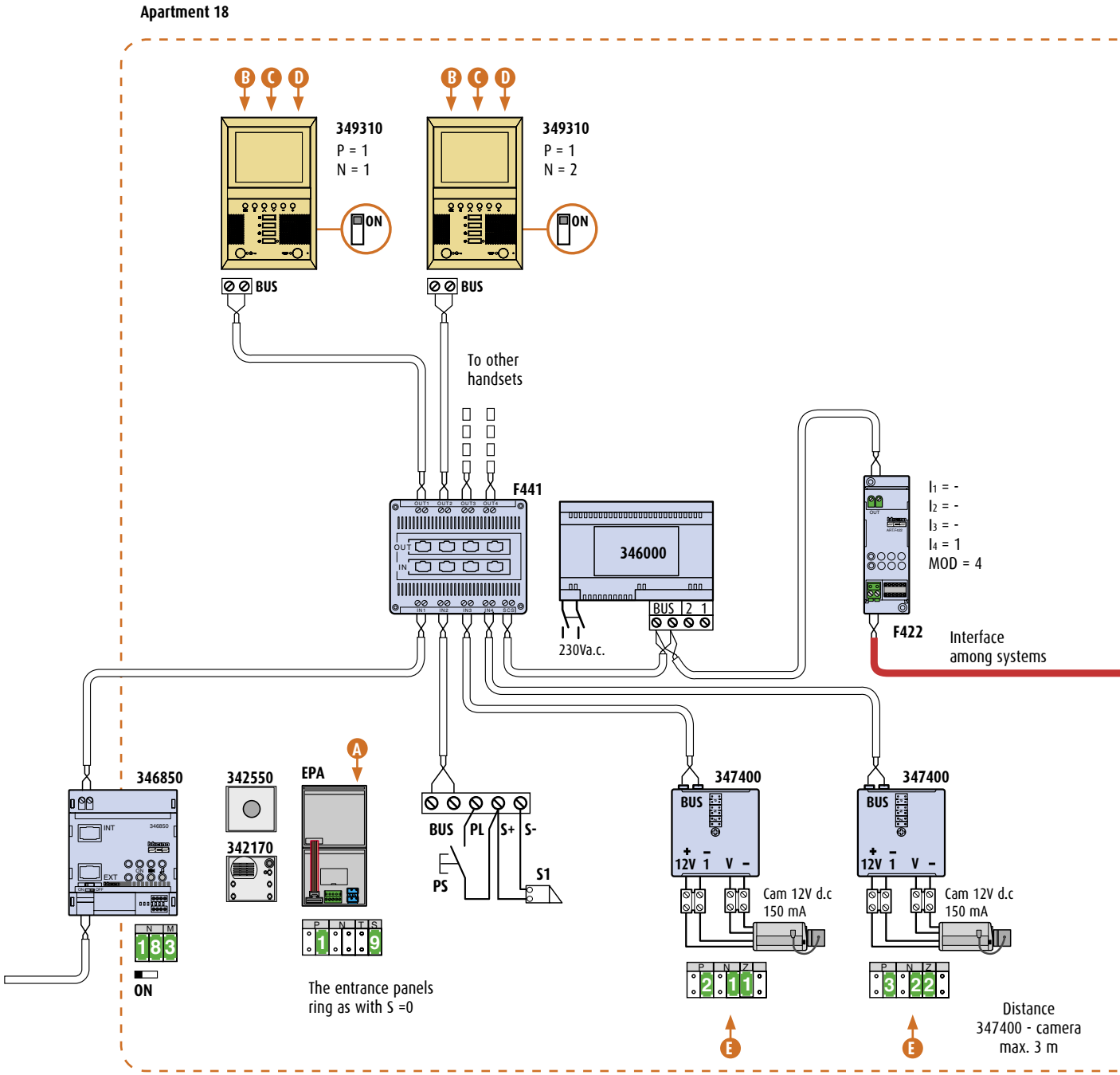
E - If N and Z are configured inside the COAXIAL - 2 WIRE interface, the cameras are alarmed. Max. 1 alarmed camera is allowed for each zone.



WIRING DIAGRAMS

2W - DIAGRAM 33 MULTI-FAMILY SYSTEM WITH 2 WIRE/BURGLAR ALARM INTEGRATION IN APARTMENT (APARTMENT 18)

Legend	
Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346850	apartment interface
347400	2 wire-COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface



WARNING

- Configure the apartment entrance panels starting from P = 1
- Configure the apartment handsets starting from N = 1

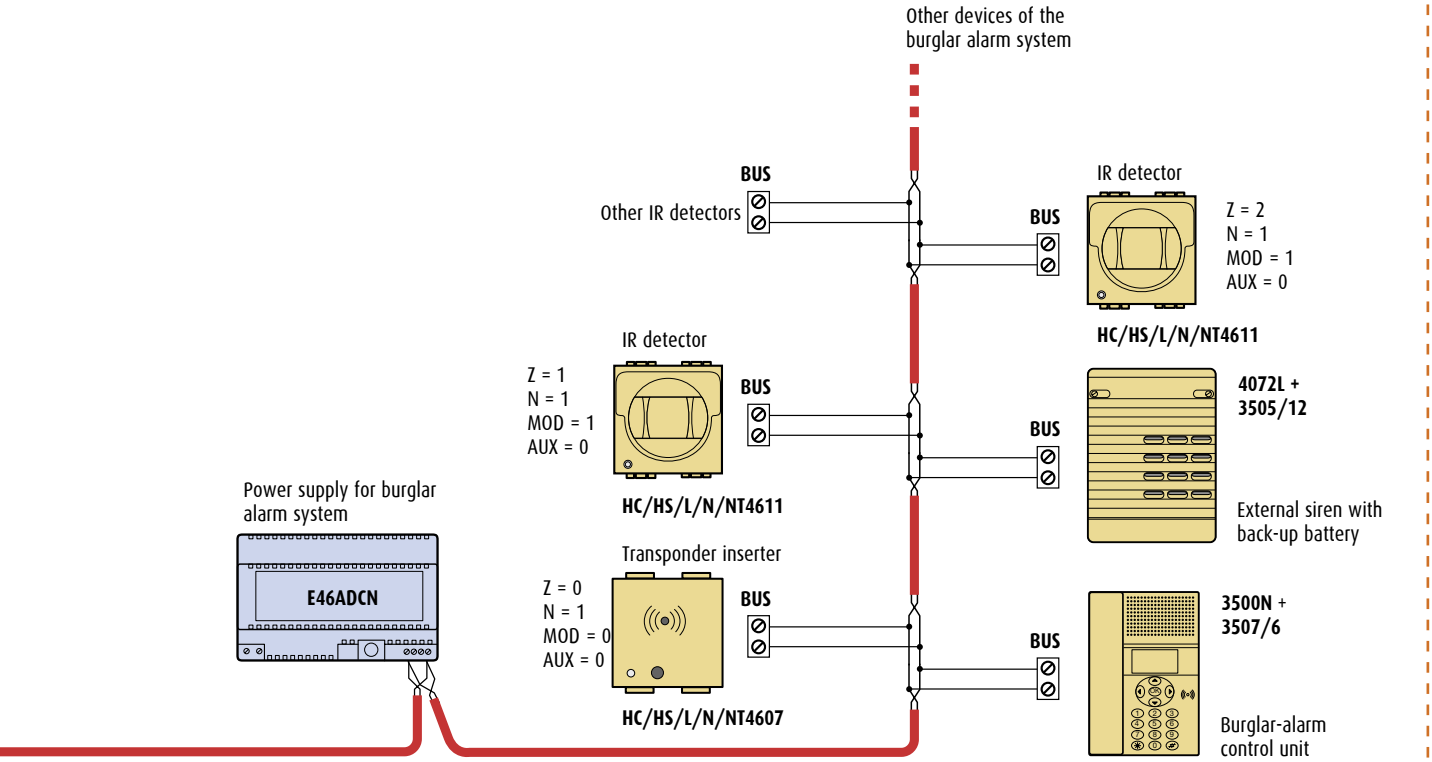
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Move to ON the microswitch, on the back of the handset, which ends the line.

D - Configure advanced handsets using a PC or the OSD procedure.

E - If N and Z are configured inside the COAXIAL - 2 WIRE interface, the cameras are alarmed. Max. 1 alarmed camera is allowed for each zone.

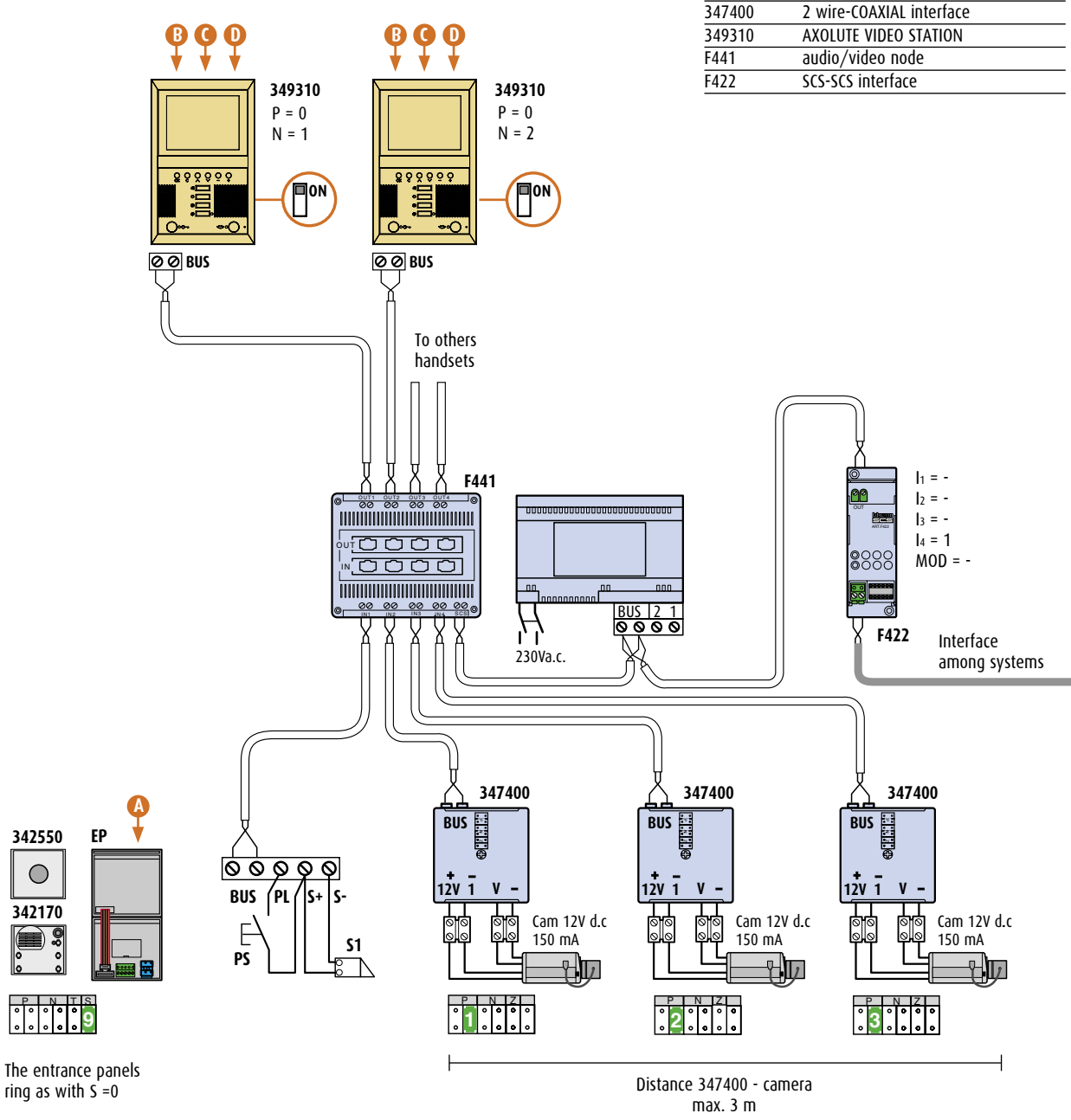


WIRING DIAGRAMS

2W - DIAGRAM 34 ONE-FAMILY SYSTEM INTEGRATED WITH AUTOMATION AND TEMPERATURE REGULATION SYSTEMS

Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
347400	2 wire-COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface



WARNING

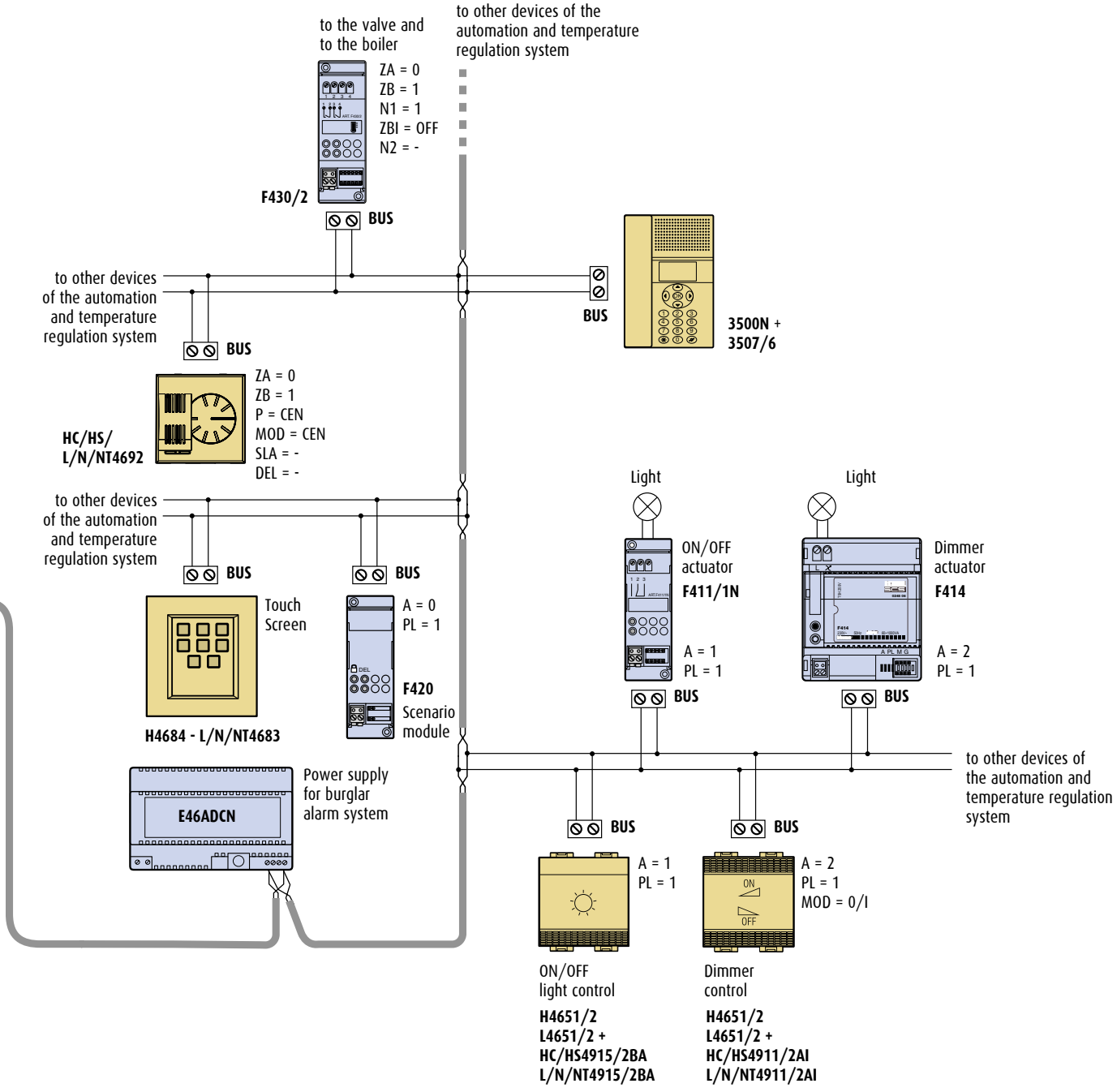
- Configure the apartment entrance panels starting from P = 1

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.

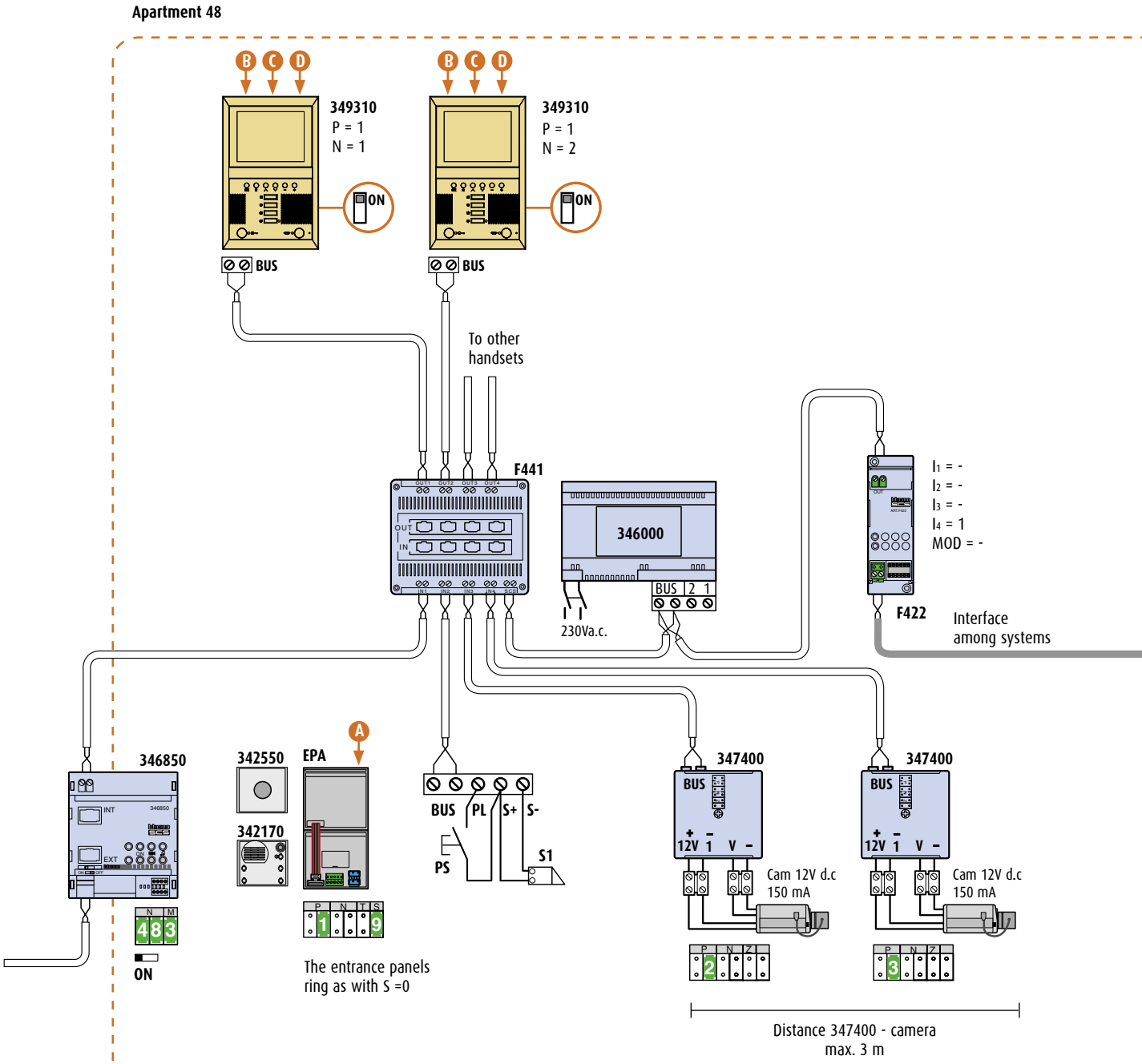
C - Move to ON the microswitch, on the back of the handset, which ends the line.

D - Configure advanced handsets using a PC or the OSD procedure.



WIRING DIAGRAMS

2W - DIAGRAM 35 MULTI-FAMILY SYSTEM WITH 2 WIRE/AUTOMATION-TEMP. REGULATION SYSTEMS INTEGRATION IN APARTMENT (APART. 48)



Legend

Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346850	apartment interface
347400	2 wire COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface

WARNING

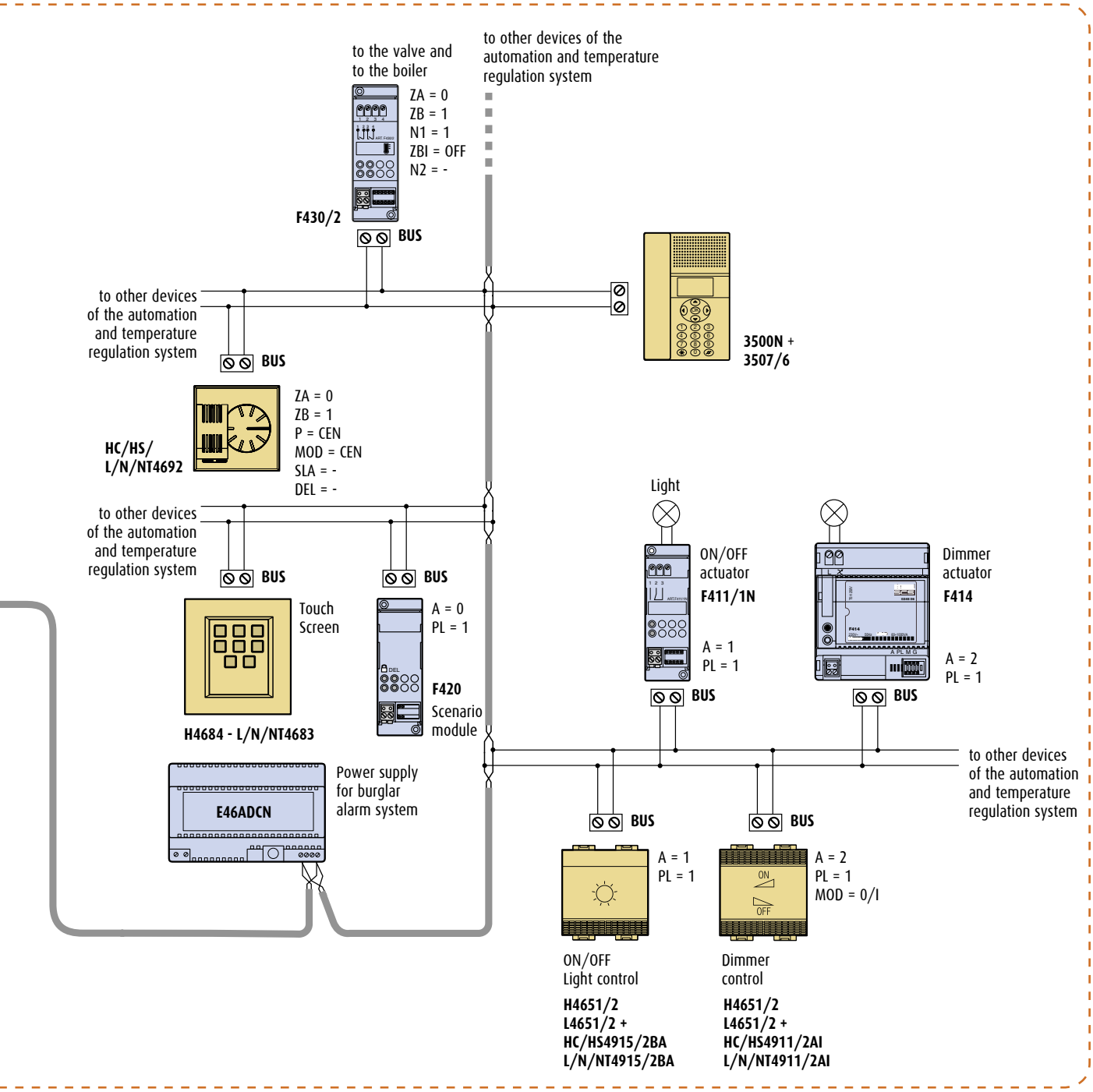
- Configure the apartment entrance panels starting from P = 1
- Configure the apartment handsets starting from N = 1

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.

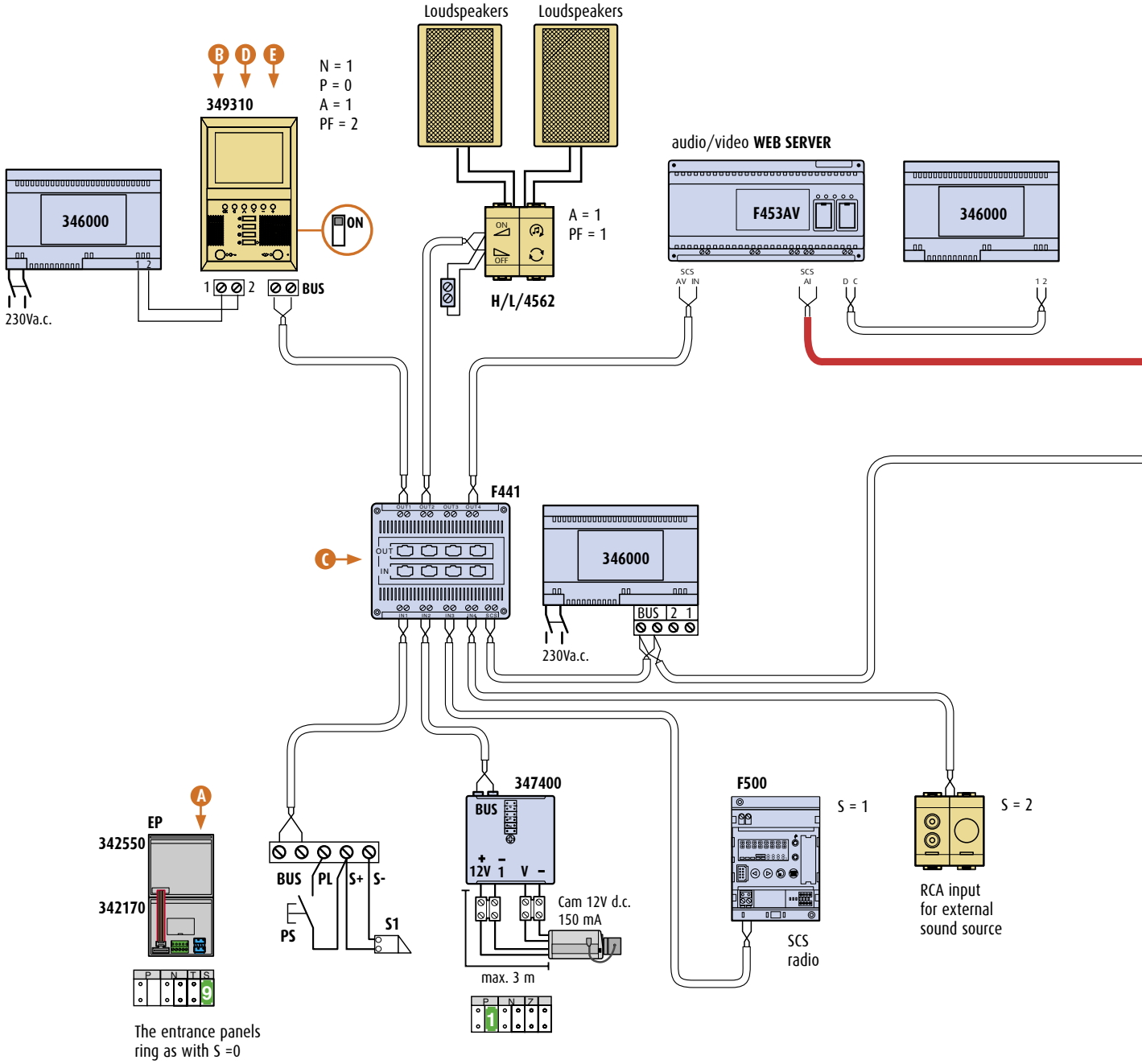
C - Move to ON the microswitch, on the back of the handset, which ends the line.

D - Configure advanced handsets using a PC or the OSD procedure.



WIRING DIAGRAMS

2W - DIAGRAM 36 ONE-FAMILY SYSTEM INTEGRATED WITH MY HOME



Legend	
Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
347400	2 wire-COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface

WARNING
- Configure the handsets starting from N = 1
- It is recommended to provide an additional power supply to all advanced handsets, to avoid muting the sound system amplifiers when the monitor is switched on.

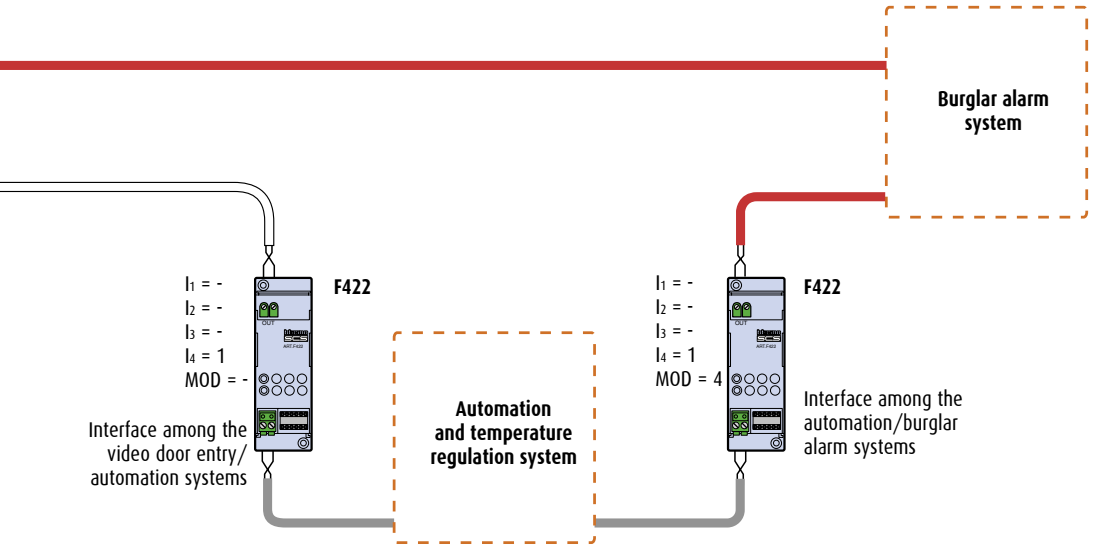
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Separate outputs for video handsets and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same output, refer to the Sound System Technical guide.

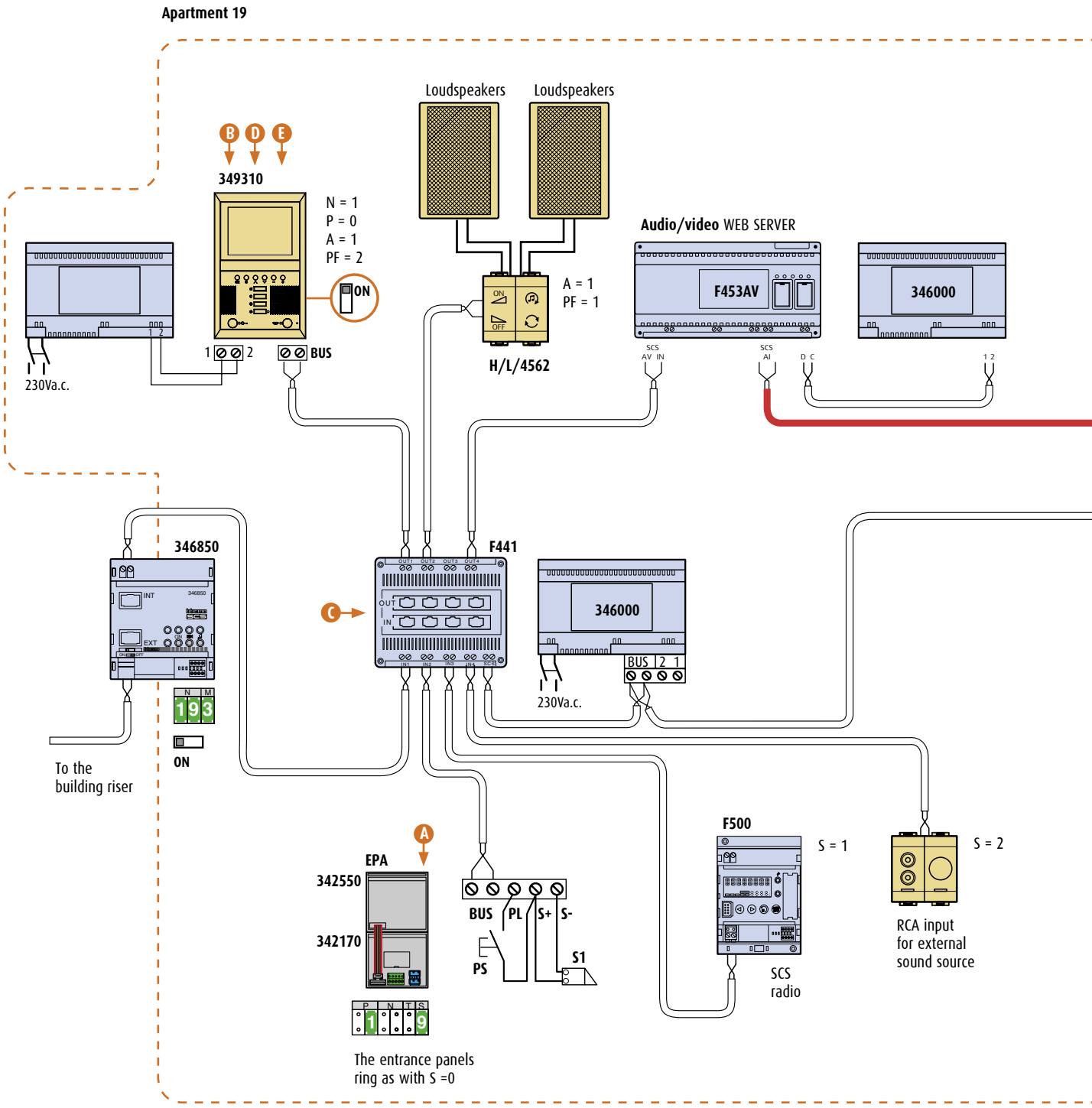
D - Move to ON the microswitch, on the back of the handset, which ends the line.

E - Configure advanced handsets using a PC or the OSD procedure.



WIRING DIAGRAMS

2W - DIAGRAM 37 MULTI-FAMILY SYSTEM WITH 2 WIRE/MY HOME INTEGRATION IN APARTMENT (APARTMENT 19)



Legend	
Ref.	Description
342170	speaker module
342550	colour camera module
346000	power supply
346850	apartment interface
347400	2 wire-COAXIAL interface
349310	AXOLUTE VIDEO STATION
F441	audio/video node
F422	SCS-SCS interface

WARNING
- Configure the handsets starting from N = 1
- Configure the apartment entrance panels starting from P = 1
- It is recommended to provide an additional power supply to all advanced handsets, to avoid muting the sound system amplifiers when the monitor is switched on.

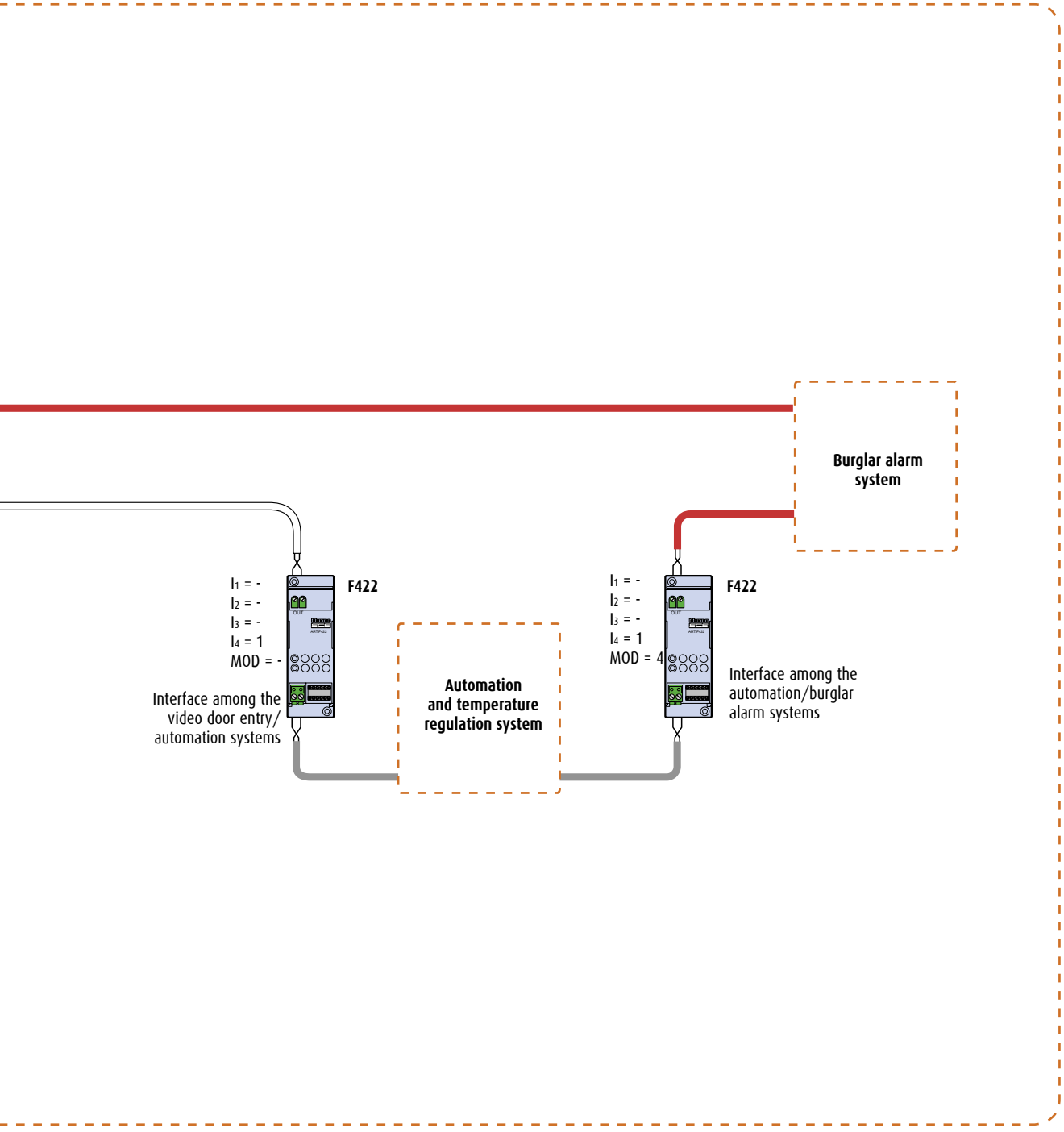
A - Either SFERA or MINISFERA pushbutton panels can be used to make the entrance panel. For more information consult the "ENTRANCE PANEL VERSIONS" section.

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

C - Separate outputs for video handsets and sound system amplifiers are recommended. If handsets and amplifiers are to be installed on the same output, refer to the Sound System Technical guide.

D - Move to ON the microswitch, on the back of the handset, which ends the line.

E - Configure advanced handsets using a PC or the OSD procedure.

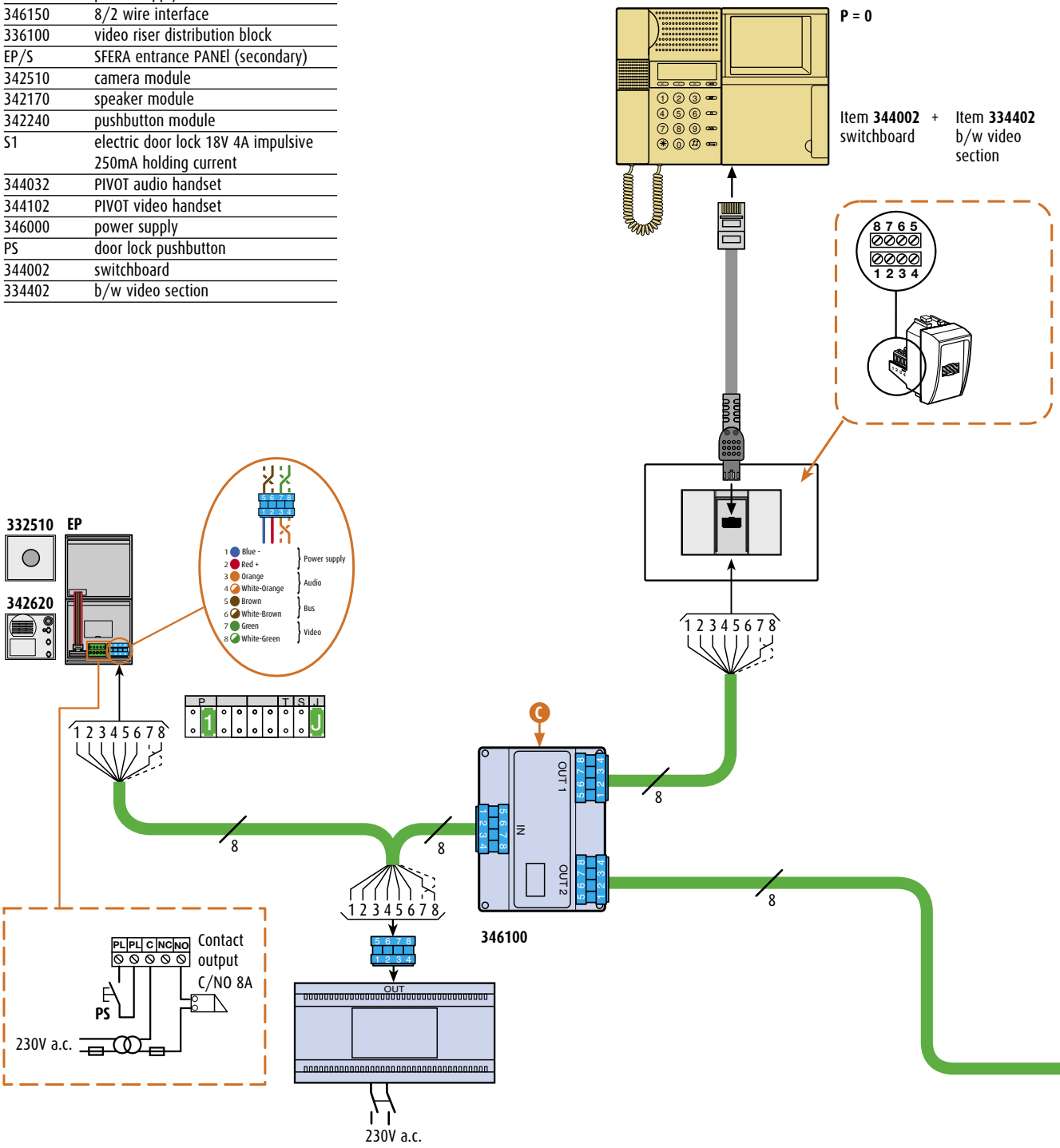


WIRING DIAGRAMS

2W - DIAGRAM 38 SYSTEM WITH VIDEO DIGITAL BACKBONE WITH SWITCHBOARD, 1 MAIN EP AND 1 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 to the switchboard are only audio.

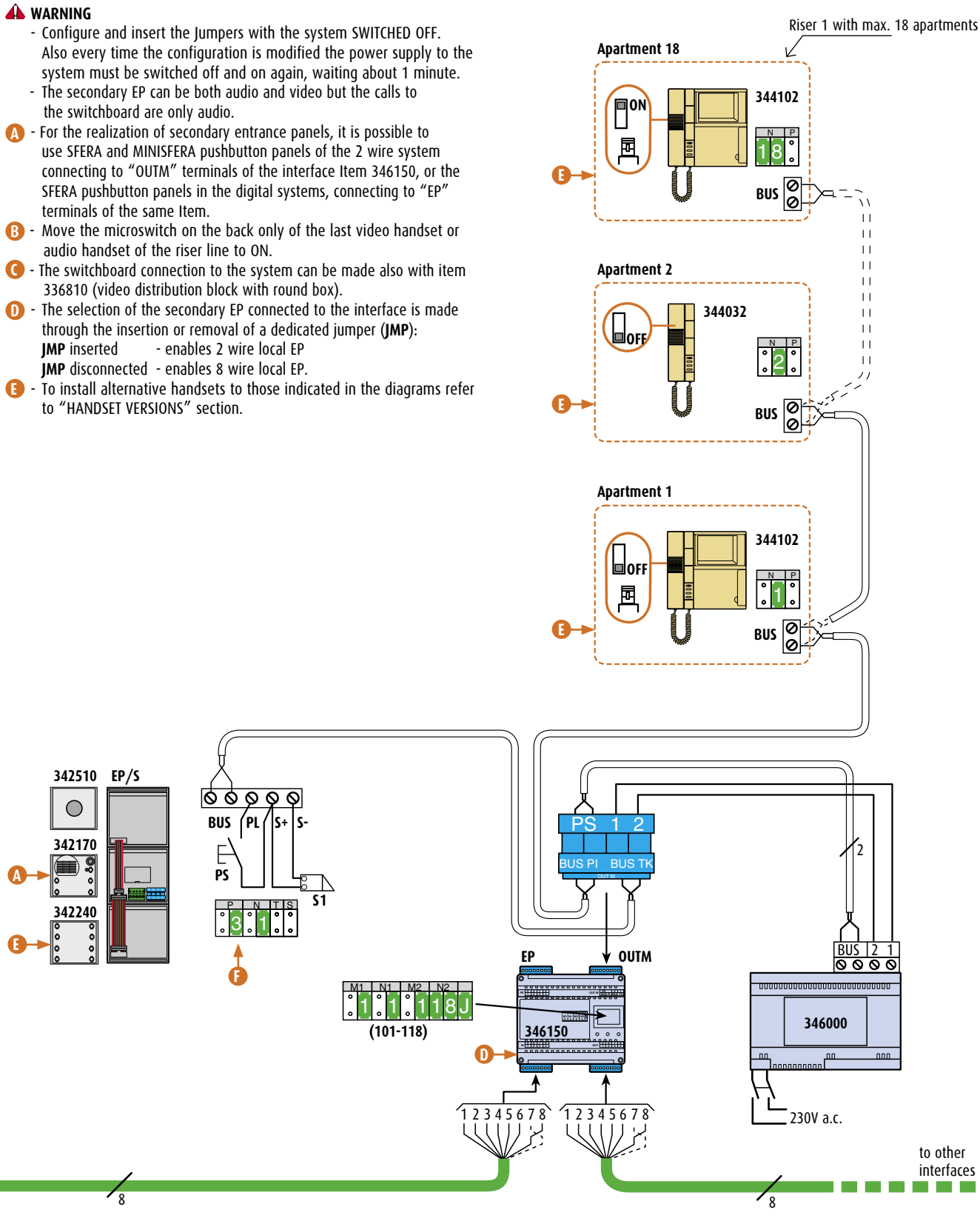
A - For the realization of secondary entrance panels, it is possible to use SFERA and MINISFERA pushbutton panels of the 2 wire system connecting to "OUTM" terminals of the interface Item 346150, or the SFERA pushbutton panels in the digital systems, connecting to "EP" terminals of the same Item.

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

C - The switchboard connection to the system can be made also with item 336810 (video distribution block with 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 - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.



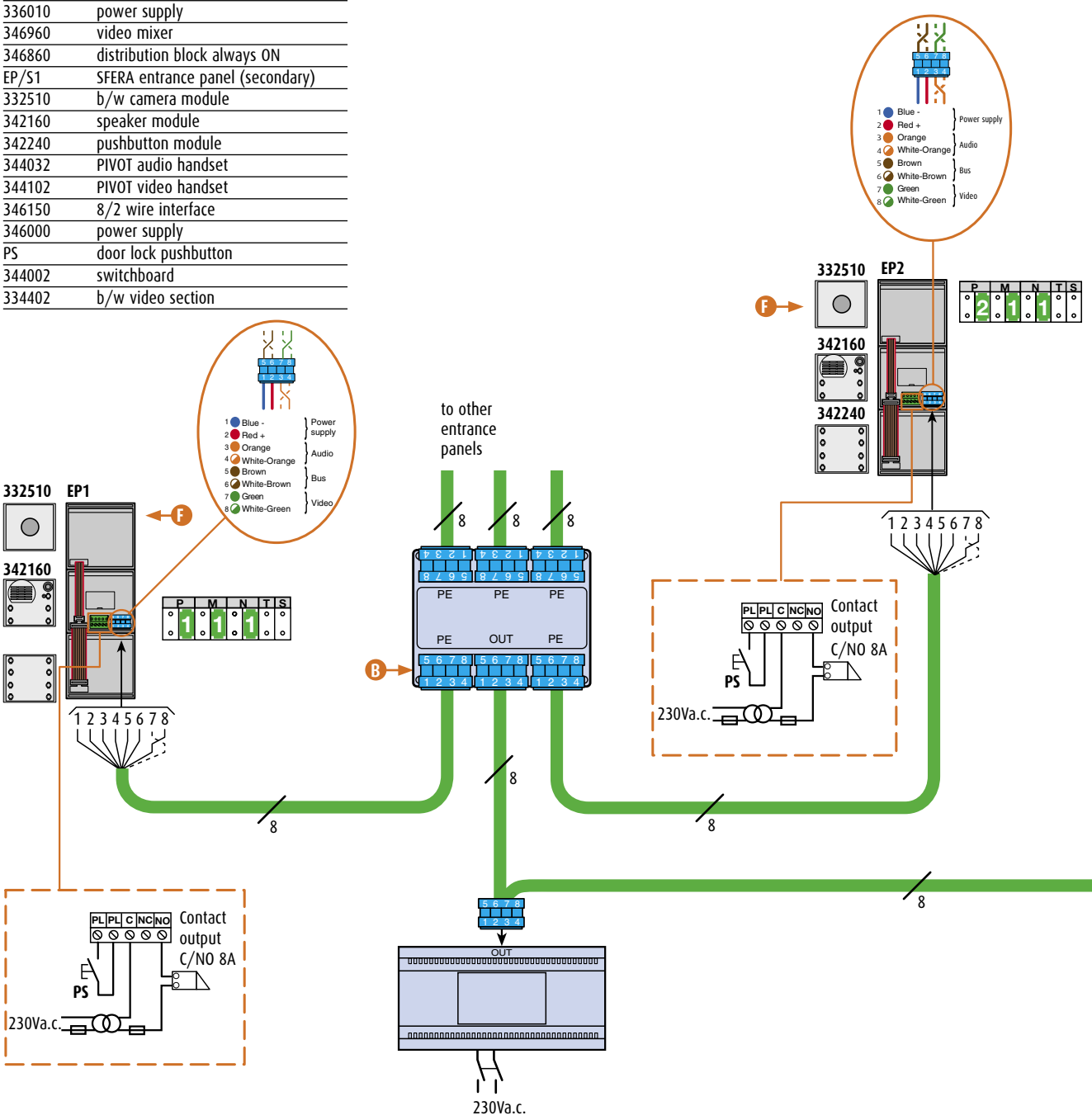
WIRING DIAGRAMS

2W - DIAGRAM 39 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.

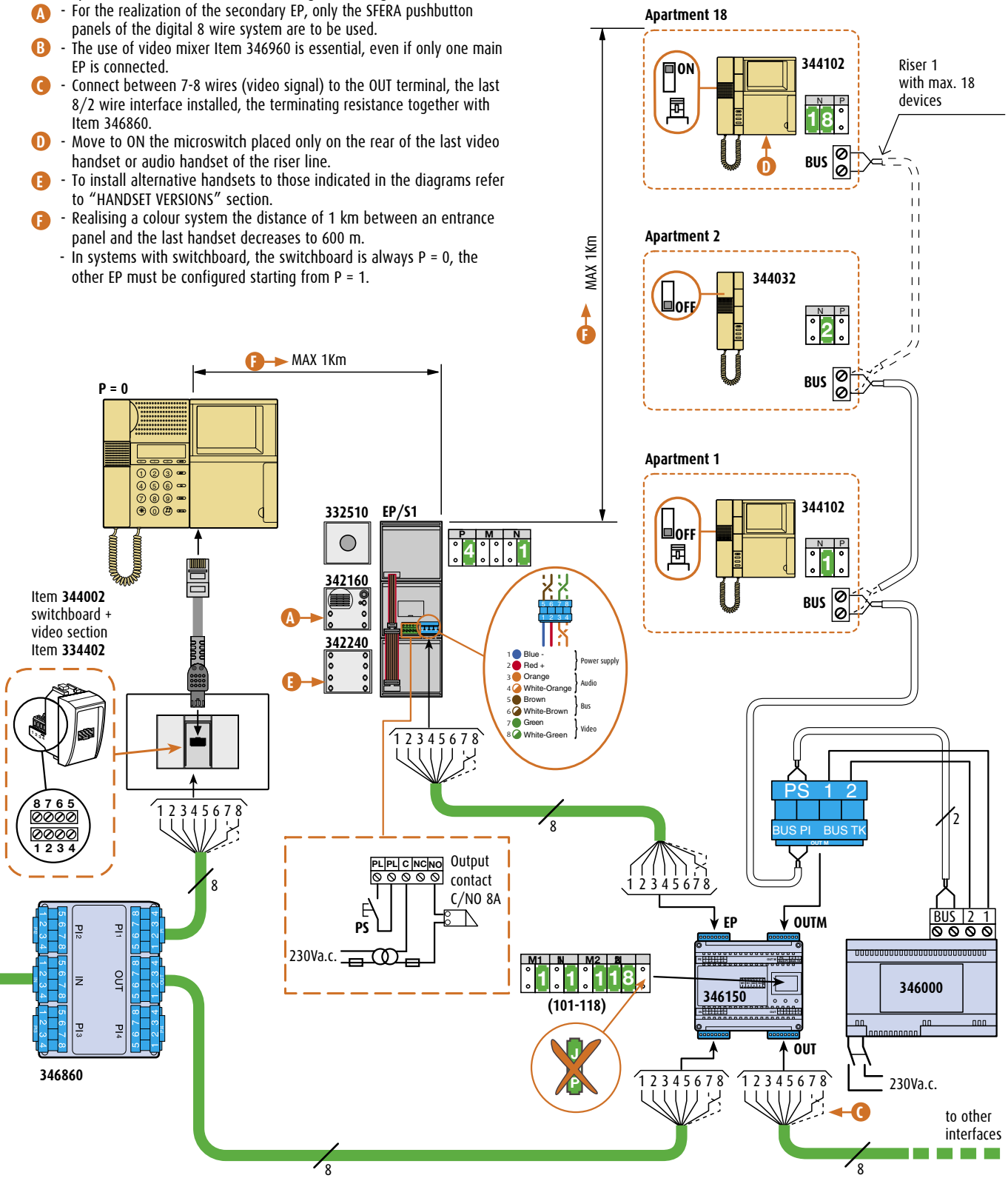
C - Connect between 7-8 wires (video signal) to the OUT terminal, the last 8/2 wire interface installed, the terminating resistance together with Item 346860.

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

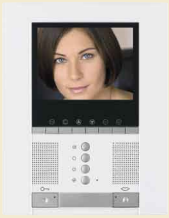
E - To install alternative handsets to those indicated in the diagrams refer to "HANDSET VERSIONS" section.

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

- In systems with switchboard, the switchboard is always P = 0, the other EP must be configured starting from P = 1.



Handset versions
Appearance and functions

HANDSET		ACCESSORIES		NOTES
	349310 AXOLUTE VIDEOSTATION Speaker phone video door entry terminal with TFT 5.6″ colour monitor and OSD menu.		Surround plates 349210 aluminium 349211 glass 349212 wood	It can be installed in all video door entry systems. It enables all video door entry functions (door state, office), and to manage MY HOME applications. It includes two Bticino sound system loudspeakers.
	349311 AXOLUTE VIDEODISPLAY Speaker phone video door entry terminal with TFT 2.5″ colour monitor and OSD menu. Light		AXOLUTE front cover plates for 506E box	It can be installed in all video door entry systems. It enables all video door entry functions (door state, office), and to manage MY HOME applications.
	349312 AXOLUTE VIDEODISPLAY Speaker phone video door entry terminal with TFT 2.5″ colour monitor and OSD menu. Dark		AXOLUTE front cover plates for 506E box	It can be installed in all video door entry systems. It enables all video door entry functions (door state, office), and to manage MY HOME applications.
* 	344172* POLYX MEMORY STATION Speaker phone video door entry terminal with TFT 5.6″ colour monitor and OSD menu and audio-video memory. Colour: white			It can be installed in all video door entry systems. It enables all video door entry functions (door state, office), and to manage MY HOME applications. It includes two Bticino sound system loudspeakers. It also enables the recording of voice and images of people calling from the entrance panel, as well as the recording of a welcome message, to be used when no one is home.
	344162 POLYX VIDEO DISPLAY Speaker phone video door entry terminal with TFT 3.5″ colour monitor and OSD menu. Colour: white			It can be installed in all video door entry systems. It enables all video door entry functions (door state, office), and to manage MY HOME applications.
	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 all video door entry systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the “paging” function in systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.

* For their availability, please contact the Bticino sales technicians

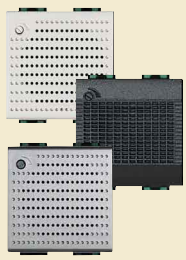
HANDSET		ACCESSORIES		NOTES
	344123 PIVOT video handset with 4" TFT colour monitor Colour: Anthracite		346813 4 additional pushbutton small blocks for PIVOT Colour: Anthracite	It can be installed in all video door entry systems. Intercom possible only with Item 346813 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the "paging" function in 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 all video door entry systems. Intercom possible only with Item 346814 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the "paging" function in 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 all video door entry systems. Intercom possible only with Item 346812 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the "paging" function in 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 all video door entry systems. Intercom possible only with Item 346813 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the "paging" function in 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 all video door entry systems. Intercom possible only with Item 346814 installed. It allows to install video handsets in parallel and to have the apartment intercom. It allows to have the "paging" function in systems integrated with the new Bticino 2 wire sound diffusion. It allows to recall scenarios in systems integrated with the SCS system.
	344822 SWING video handset with 4" TFT colour monitor Colour: Ash			It can be installed in video door entry systems. It allows to have the apartment intercom and the "office" function or the "door lock checking" function. In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.

Handset versions
Appearance and functions

HANDSET		ACCESSORIES	NOTES
	344823 SWING video handset with 4" TFT colour monitor Colour: Cord		It can be installed in video door entry systems. It allows to have the apartment intercom and the "office" function or the "door lock checking" function. In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.
	344824 SWING video handset with 4" TFT colour monitor Colour: White		It can be installed in video door entry systems. It allows to have the apartment intercom and the "office" function or the "door lock checking". In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.
	344802 SWING video handset with b/w monitor Colour: Ash		It can be installed in video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock checking" function. In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.
	344803 SWING video handset with b/w monitor Colour: Cord		It can be installed in video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock checking" function. In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.
	344804 SWING video handset with b/w monitor Colour: White		It can be installed in video door entry systems. It allows to have the apartment intercom in the two-family system and the "office" function or the "door lock checking" function. In addition, it allows to have the "paging" function and to recall scenarios, in systems integrated with MY HOME.
	344342 SPRINT video handset with b/w monitor		It can be installed in video door entry systems. It allows to have the basic audio and video door entry functions.

HANDSET		ACCESSORIES		NOTES
	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 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.
	344702 SWING audio handset Colour: Ash			It can be installed in audio and video systems. It allows to have the apartment intercom and the “office” function or the “door lock checking” function. In addition, it allows to have the “paging” function and to recall scenarios, in systems integrated with MY HOME.
	344703 SWING audio handset Colour: Cord			It can be installed in audio and video systems. It allows to have the apartment intercom and the “office” function or the “door lock checking” function. In addition, it allows to have the “paging” function and to recall scenarios, in systems integrated with MY HOME.
	344704 SWING audio handset Colour: White			It can be installed in audio and video systems. It allows to have the apartment intercom and the “office” function or the “door lock checking” function. In addition, it allows to have the “paging” function and to recall scenarios, in systems integrated with MY HOME.

Handset versions
Appearance and functions

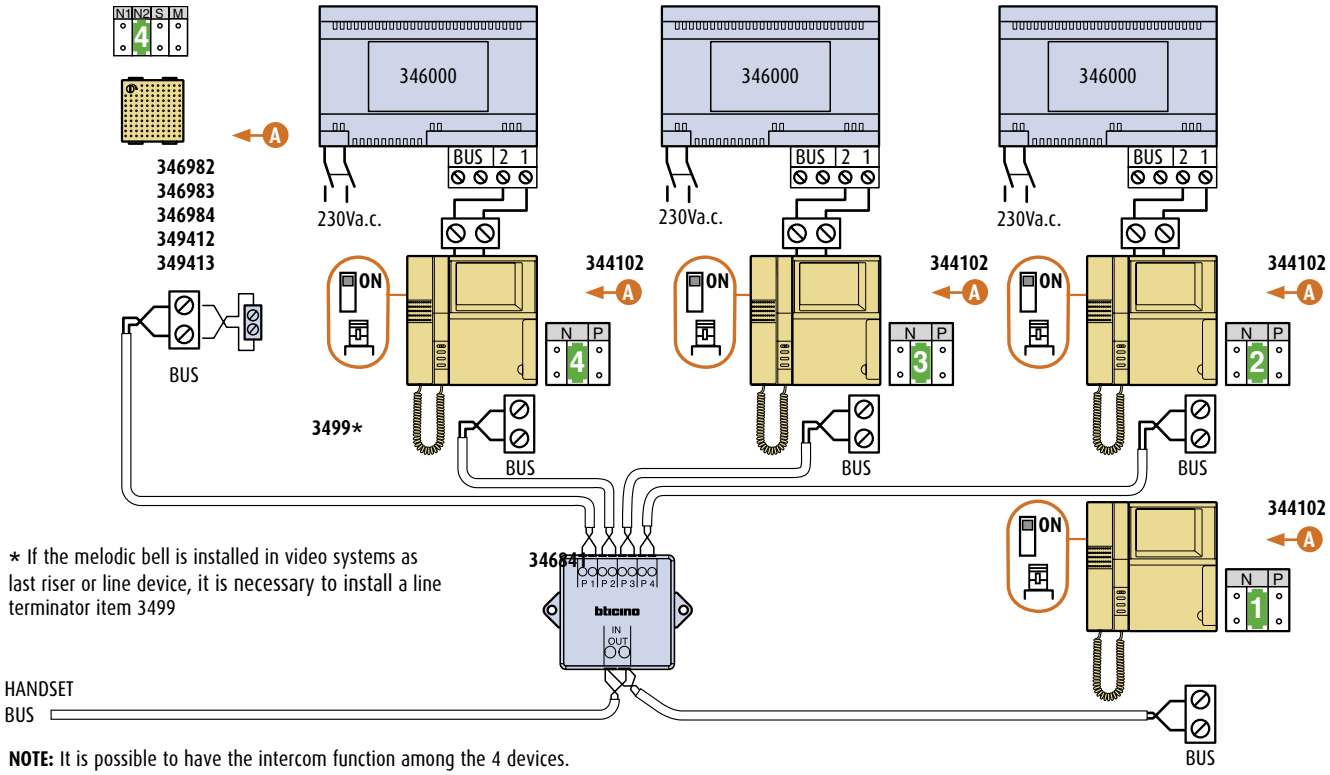
HANDSET		ACCESSORIES		NOTES
	344212 SPRINT audio handset which can be fitted with accessories Colour: White		346800 Accessory for excluding the call tone or the additional bell.	It can be installed in audio and video systems. If it is installed in video systems as last apartment or line device, it is necessary to install a terminator Item 3499 connected in IN-OUT on the same device.
	344202 SPRINT audio handset which can be fitted with accessories Colour: White			It can be installed **only** in audio systems.
	349412 Melodic bell - light 349413 dark			It can be installed in audio and video systems. If it is installed in video systems as last apartment or line device, it is necessary to install a terminator Item 3499 connected in IN-OUT on the same device.
	346982 Melodic bell Colour: White 346983 Colour: Anthracite 346984 Colour: Tech			It can be installed in audio and video systems. If it is installed in video systems as last apartment or line device, it is necessary to install a terminator Item 3499 connected in IN-OUT on the same device.

Handset versions - One-family systems or multi-family after the apartment interface 346850*

EXAMPLE - 4 VIDEO HANDSETS IN SIMULTANEOUS SWITCHING ON AND ONE MELODIC BELL

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

- To install several video handsets so that they switch on at the same time, an output from the floor distribution block must be used for each one of these handsets.

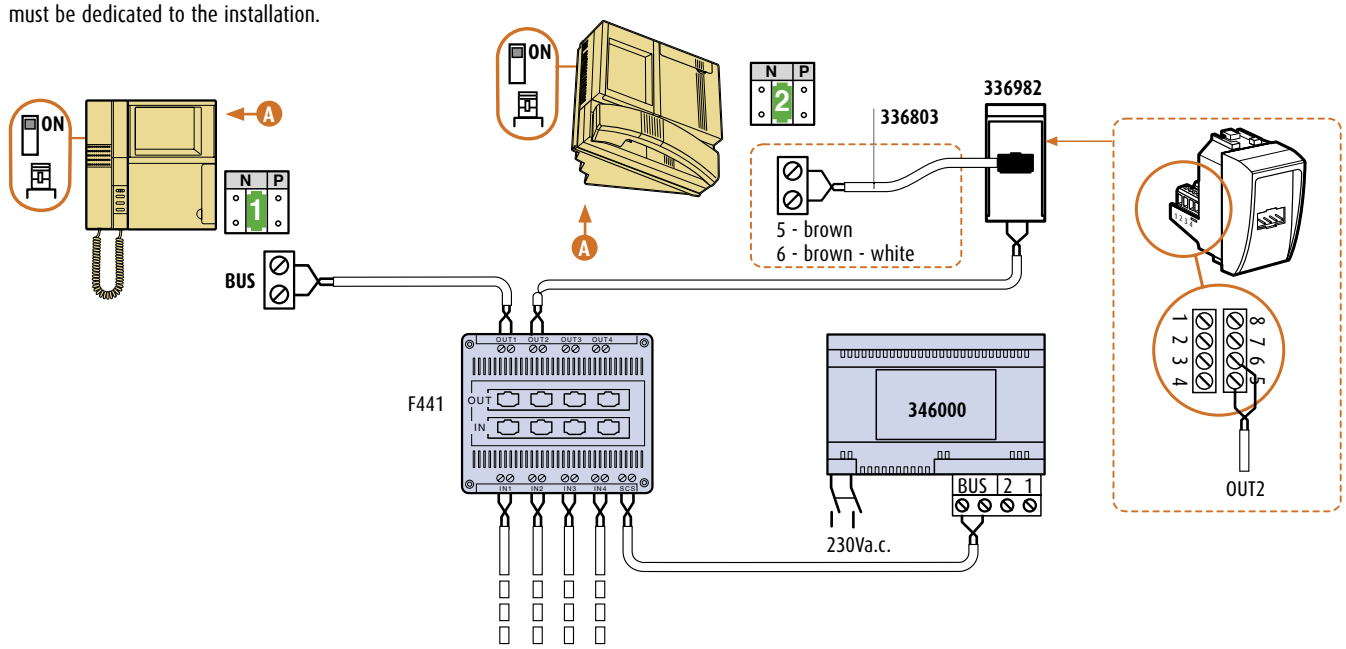


* If the melodic bell is installed in video systems as last riser or line device, it is necessary to install a line terminator item 3499

NOTE: It is possible to have the intercom function among the 4 devices.

EXAMPLE - INSTALLATION OF TABLE-MOUNTED VIDEO HANDSET

To install a table video handset, either the audio/video node (F441), or the floor distribution block, item 346841, must be used. In this case an output must be dedicated to the installation.



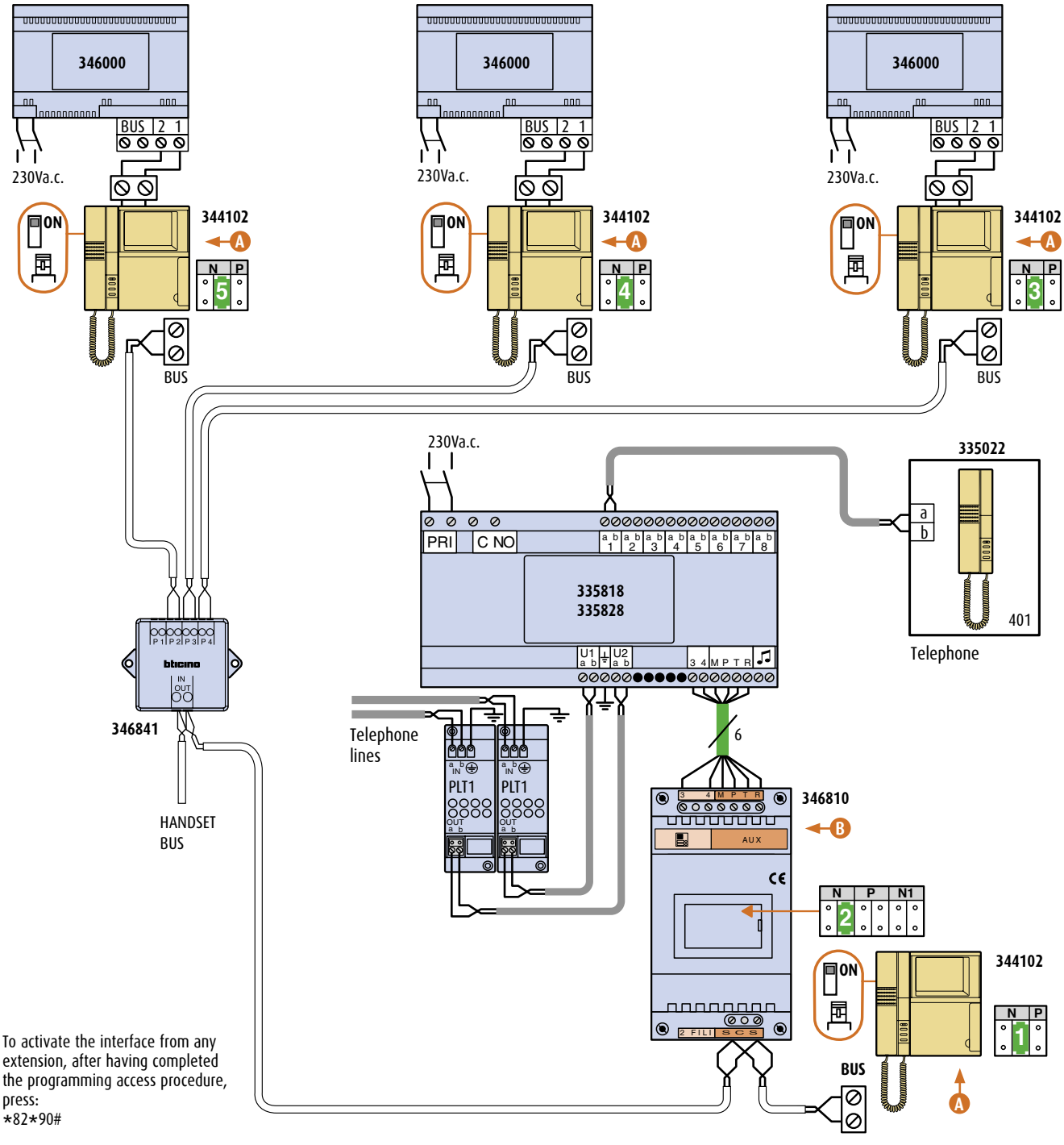
* configure the handsets starting from N = 1

Handset versions
One-family systems*

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

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

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 VIDEO STATION, VIDEO DISPLAY, PIVOT STATION, PIVOT DISPLAY, PIVOT and SWING handset or a line terminator item 3499 connected in IN-OUT to the SCS terminals of the interface.



To activate the interface from any extension, after having completed the programming access procedure, press:
*82*90#

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

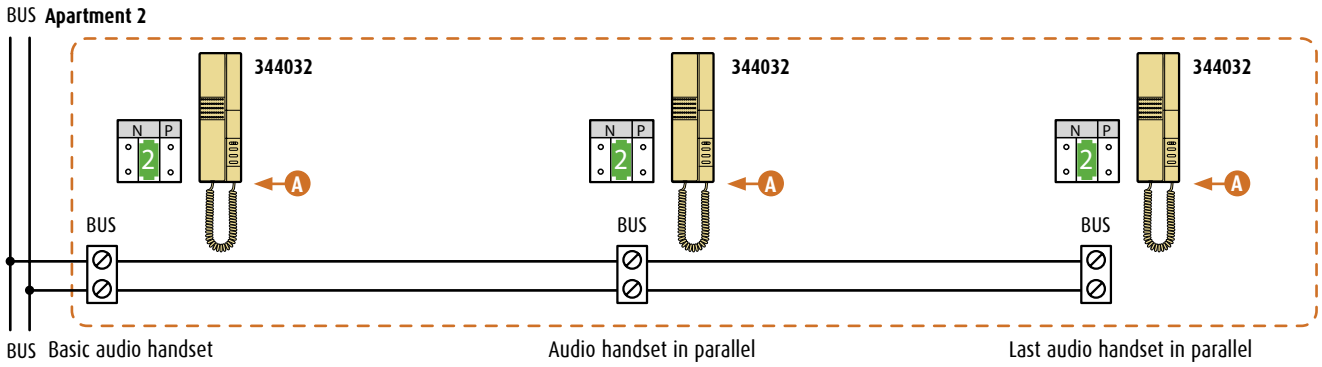
Handset versions - Multi-family systems without using the apartment interface 346850

WARNINGS

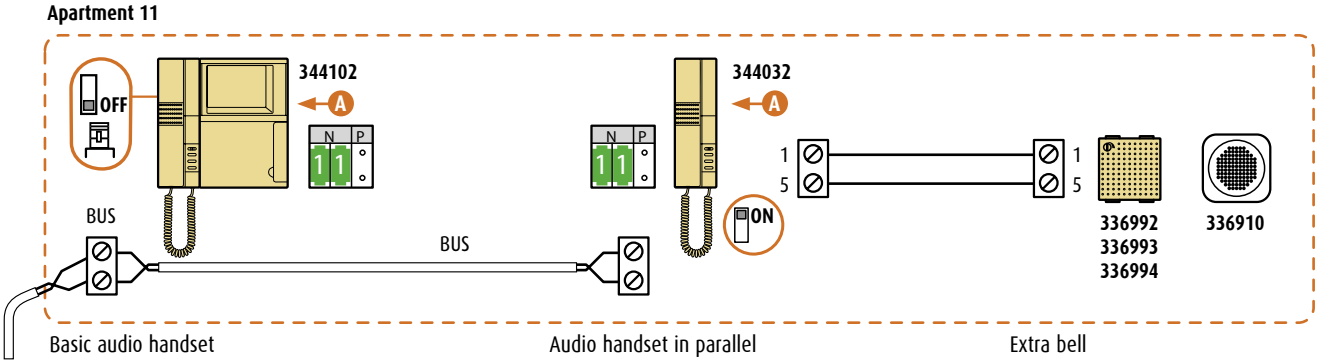
In the same apartment on the same call can be installed max. 3 devices (video handsets, audio handsets or bells).

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

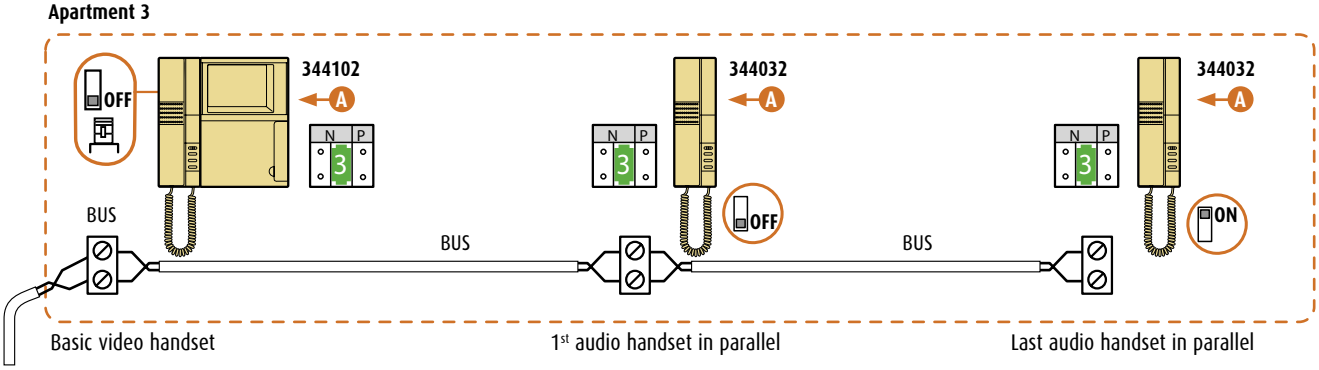


EXAMPLE - ONE ADDITIONAL AUDIO HANDSET AND BELL TO BASIC VIDEO HANDSET



BUS
from floor distribution block (Item **346841**)
or audio/video node (Item **F441**)

EXAMPLE - TWO ADDITIONAL AUDIO HANDSETS TO BASIC VIDEO HANDSET

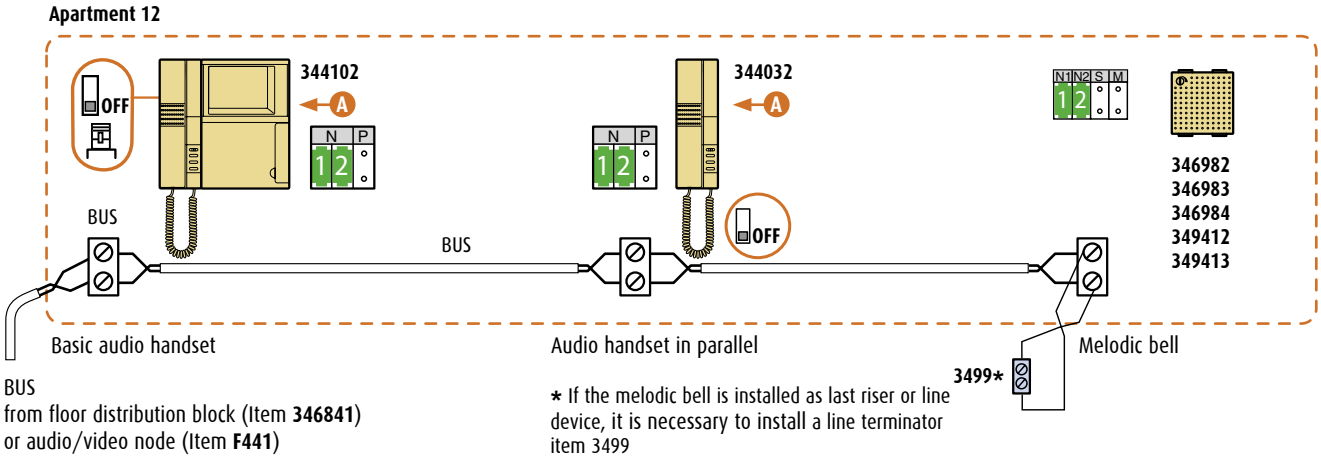


BUS
from floor distribution block (Item **346841**)
or audio/video node (Item **F441**)

Handset versions - Multi-family systems without using the apartment interface 346850

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

EXAMPLE - AN AUDIO HANDSET AND A MELODIC BELL, IN ADDITION TO THE BASIC VIDEO HANDSETS



Basic audio handset

BUS
from floor distribution block (Item **346841**)
or audio/video node (Item **F441**)

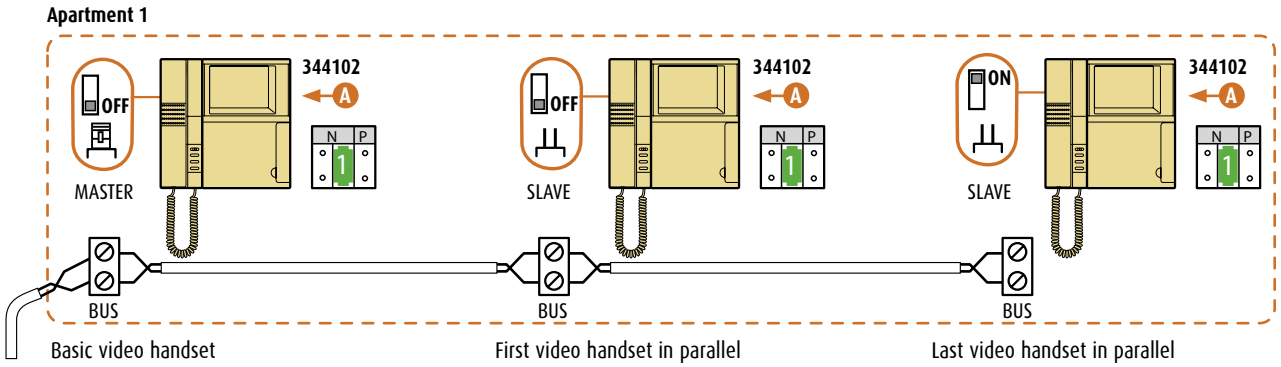
Audio handset in parallel

Melodic bell

* If the melodic bell is installed as last riser or line device, it is necessary to install a line terminator item 3499

EXAMPLE - TWO VIDEO HANDSETS IN ADDITION TO THE BASIC VIDEO HANDSET

The version **CAN NOT** be realized with the SWING and SPRINT handsets.

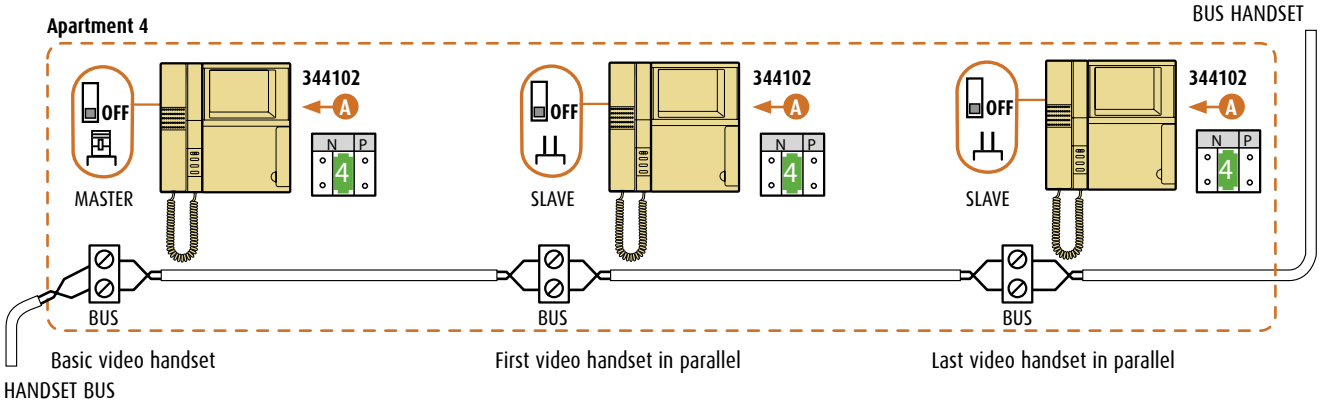


Basic video handset

Handset BUS
from floor distribution block (Item **346841**)
or audio/video node (Item **F441**)

First video handset in parallel

Last video handset in parallel



Basic video handset

HANDSET BUS

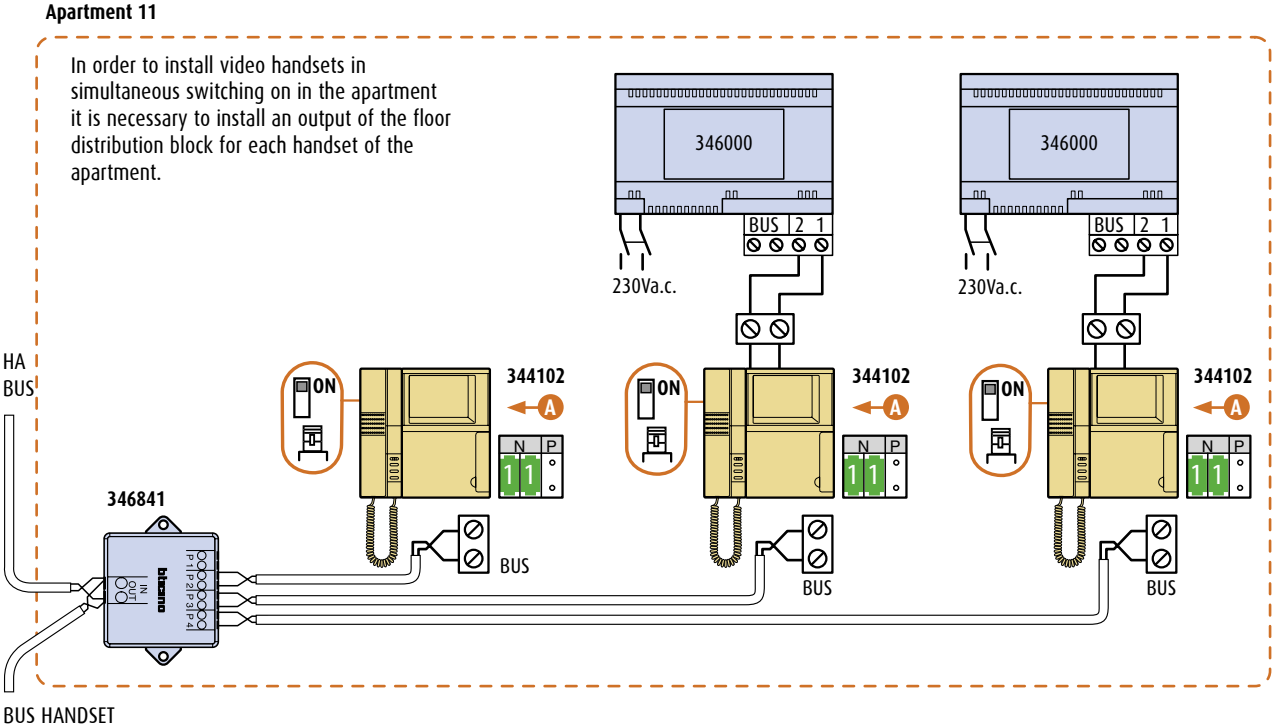
First video handset in parallel

Last video handset in parallel

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

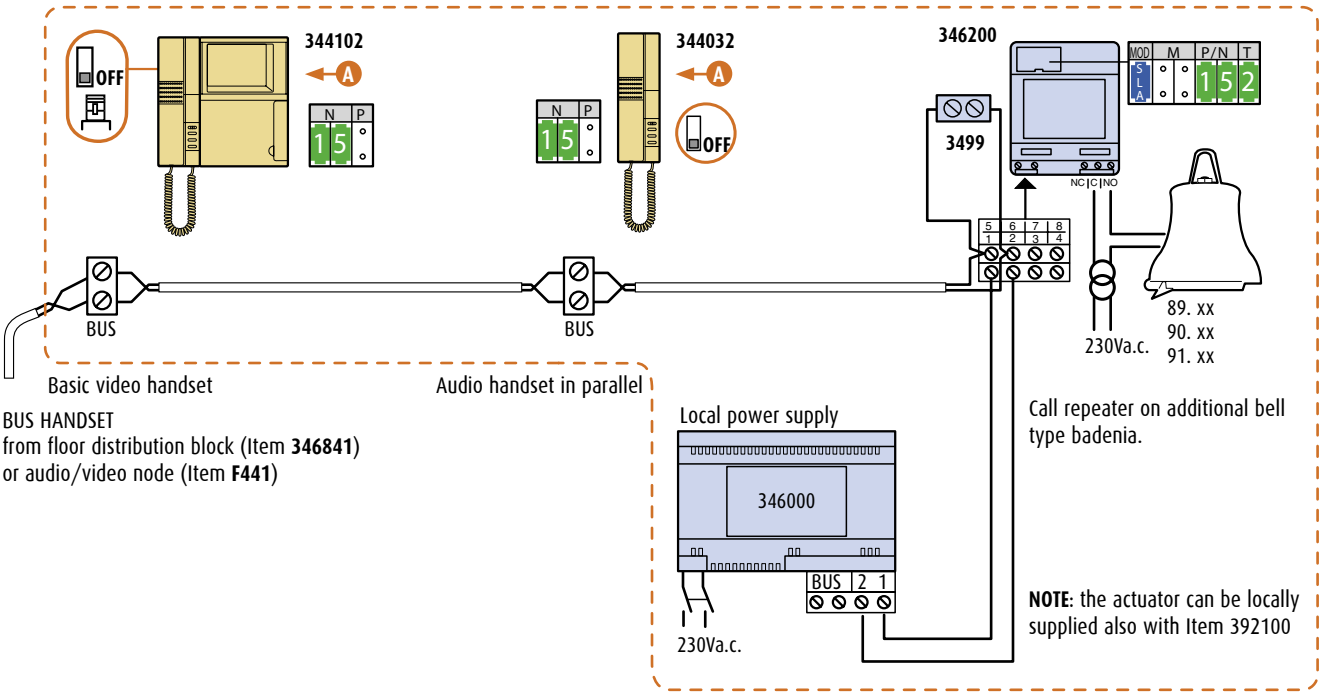
EXAMPLE - THREE VIDEO HANDSETS IN SIMULTANEOUS SWITCHING ON

Apartment 11



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

Apartment 15



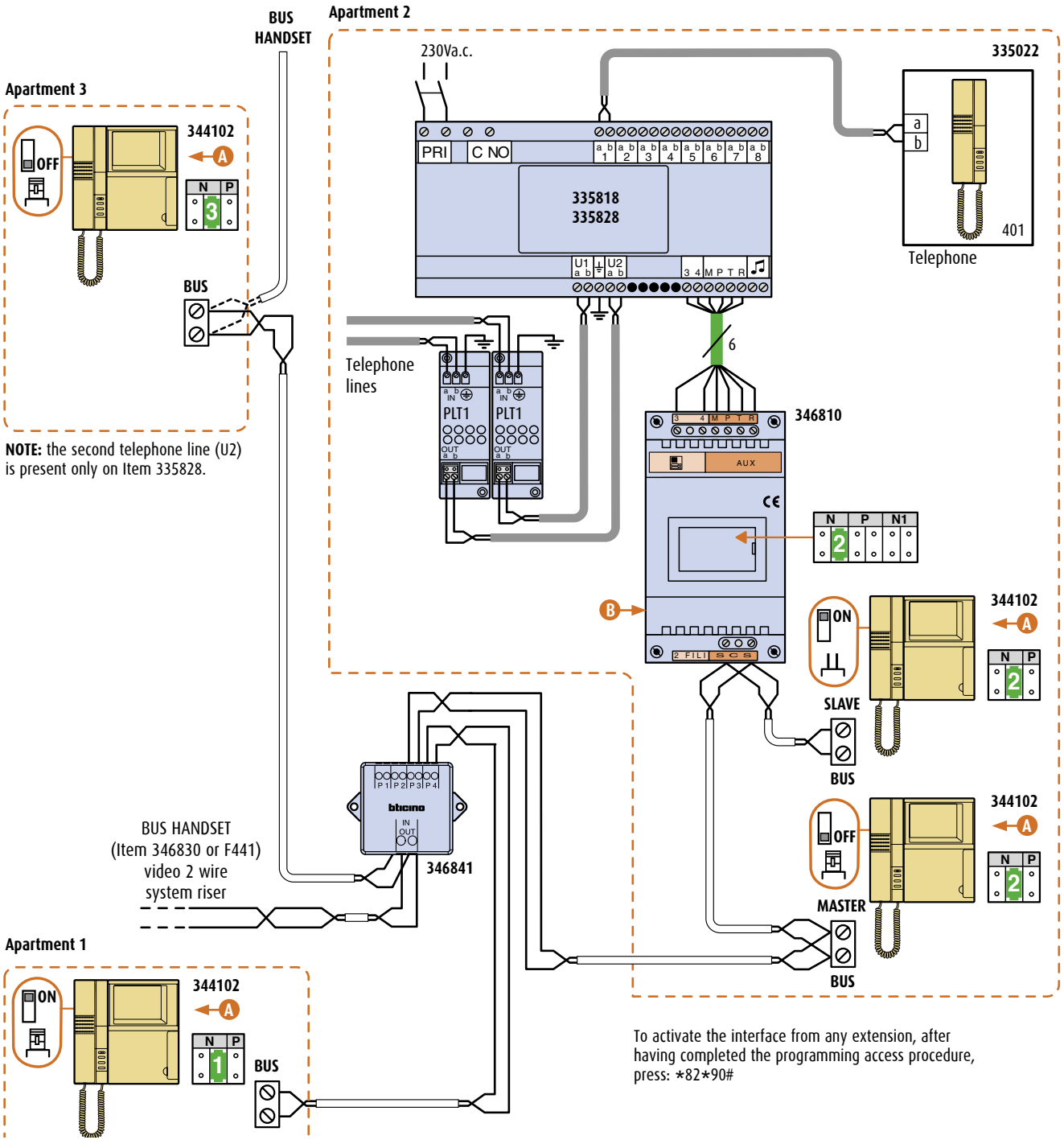
Handset versions - Multi-family systems without using the apartment interface 346850

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.

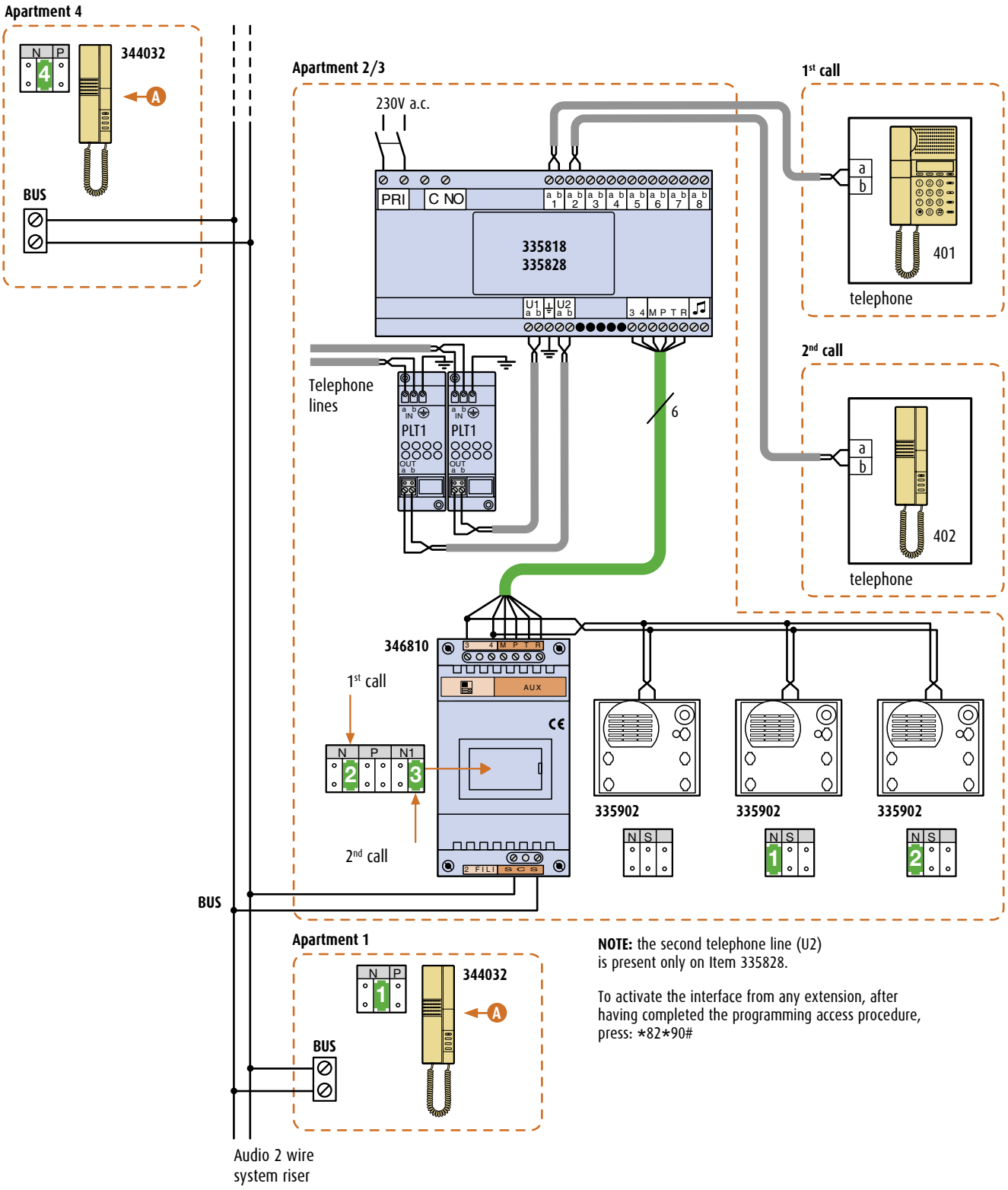
B - do not use the interface as the last device of the line or riser: Connecting the interface in the last line or riser apartment it is necessary to install a PIVOT or SWING handset connected in IN-OUT to the SCS terminals of the interface.



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.



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

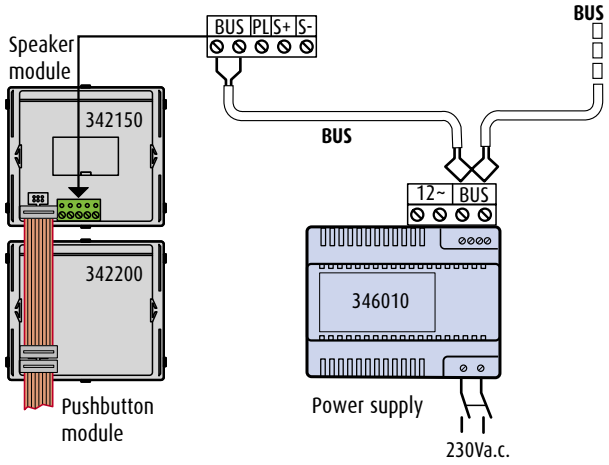
To activate the interface from any extension, after having completed the programming access procedure, press: *82*90#

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.

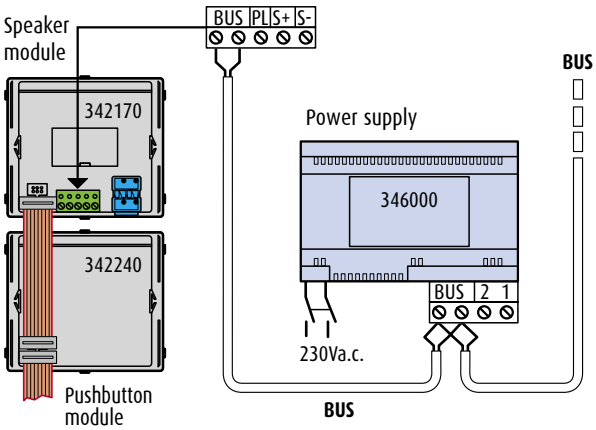
SFERA ENTRANCE PANELS

SFERA entrance panel to be installed on audio system with power supply 346010

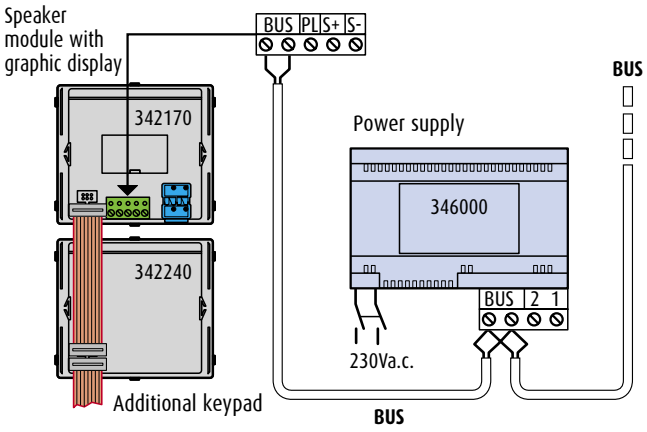


NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.

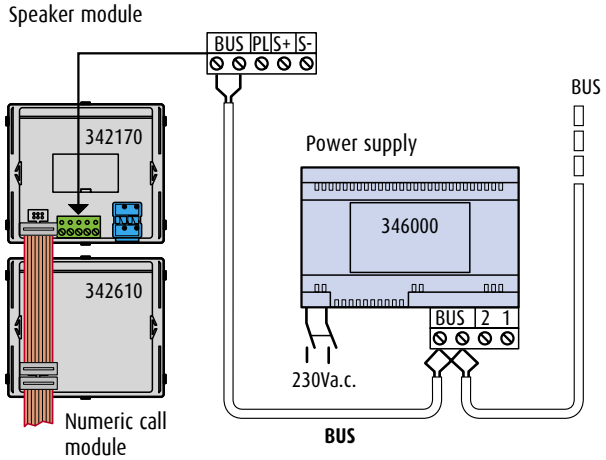
SFERA entrance panel to be installed on audio system with power supply 346000



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

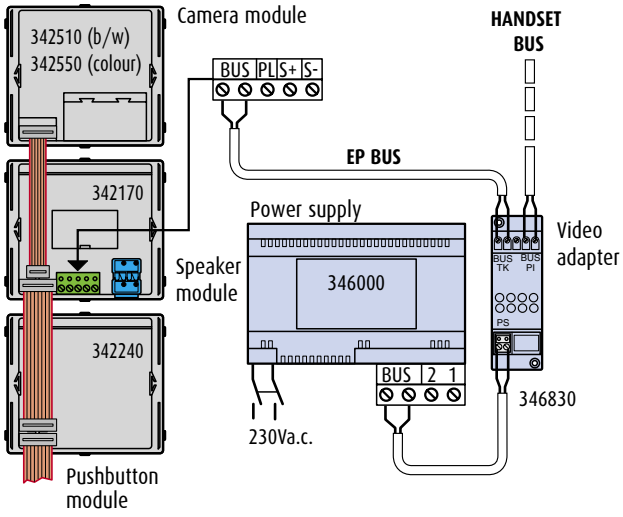


NOTE: using the display call module is not necessary to install other modules. Item 342630 must be programmed downloading by the appropriate interface Item 335919 the directory created with a PC and the SW TICALL (provided with it). The programming can be made also without a PC through an infrared remote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

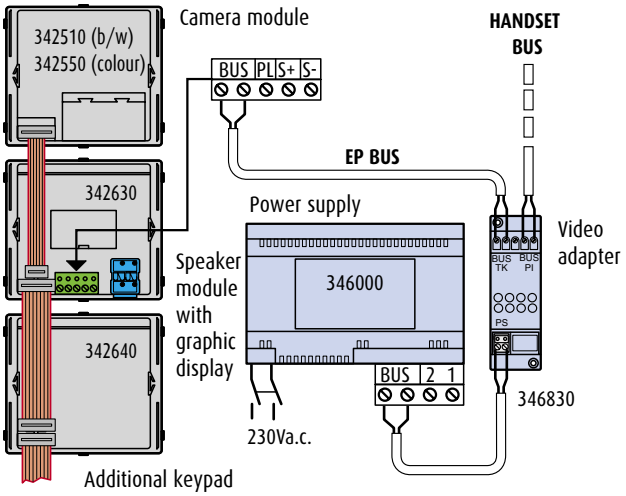


NOTE: other nameplate modules Item 342200 can be installed in respect to the installed standards of the SFERA entrance panels.

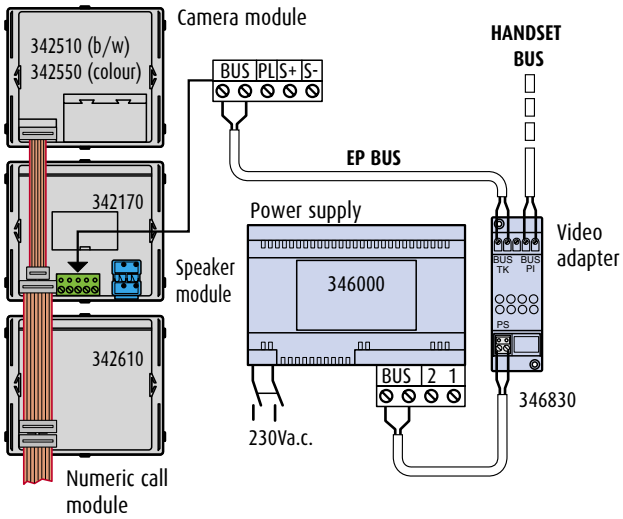
SFERA entrance panel to be installed on video system



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



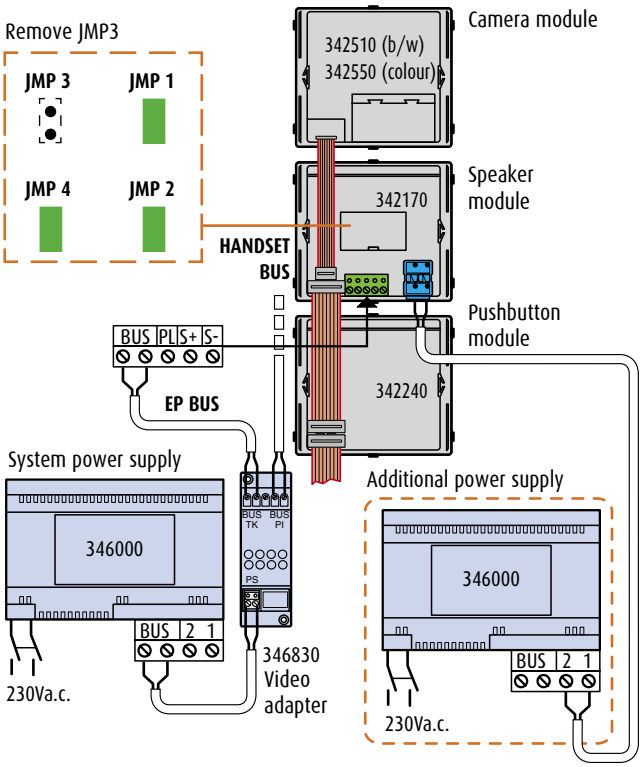
NOTE: using the display call module is not necessary to install other modules. Item 342630 must be programmed downloading by the appropriate interface RS232 (Item 335919) or USB (Item 3559) the directory created with a PC and the SW TICALL (provided with it). The programming can be made also without a PC through an infrared remote control Item 392123.



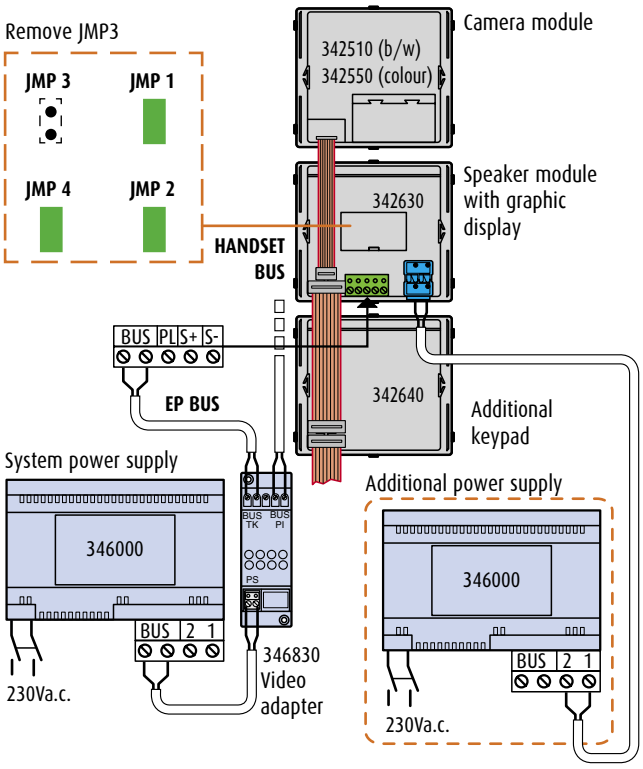
NOTE: other pushbutton module Item 342240 can be installed in respect to the installed standards of the SFERA entrance panels.

Entrance panel versions

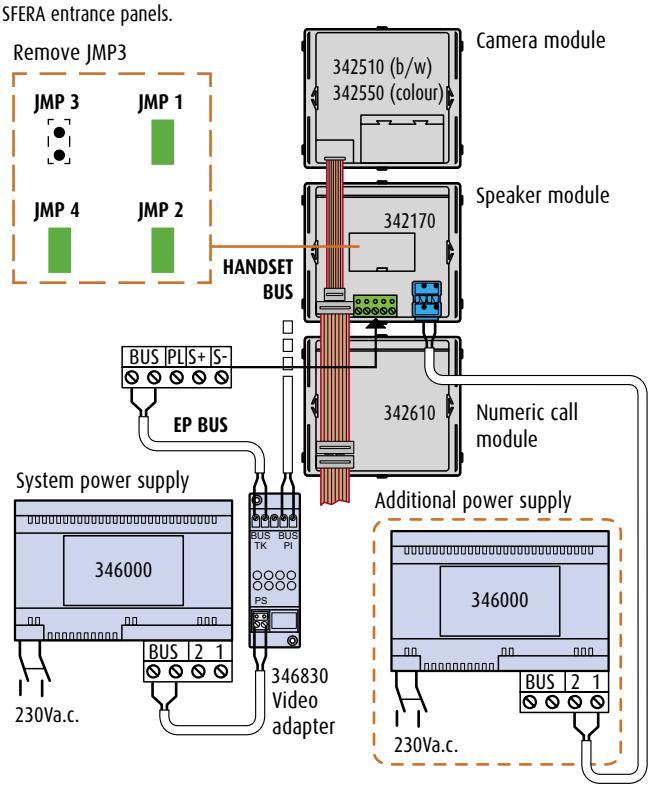
SFERA entrance panel to be installed on video system



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.



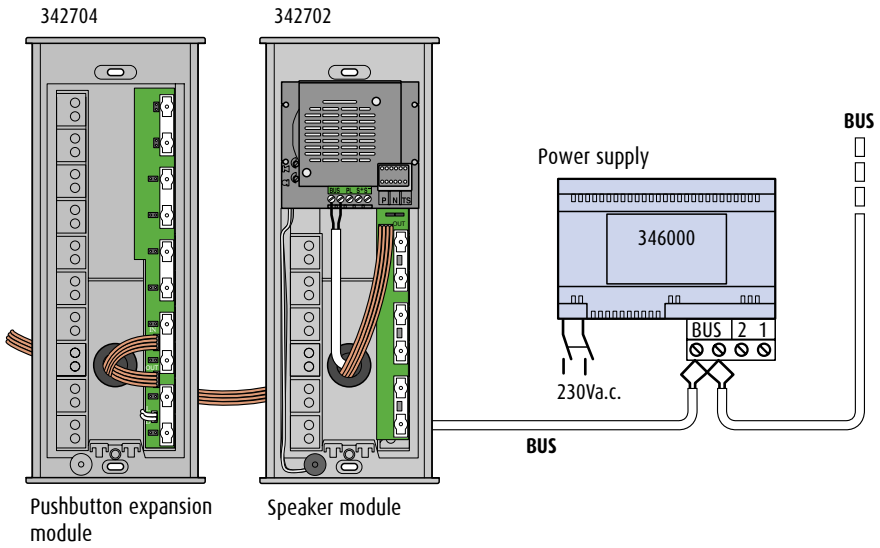
NOTE: in systems with more than 26 handsets install an additional power supply to be connected to speaker module of entrance panel. For connecting the additional power supply remove from the speaker module the JMP3 jumper. Using the display call module is not necessary to install other modules. LItem 342630 must be programmed downloading by the appropriate interface RS232 (Item 335919) or USB (Item 3559) 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.

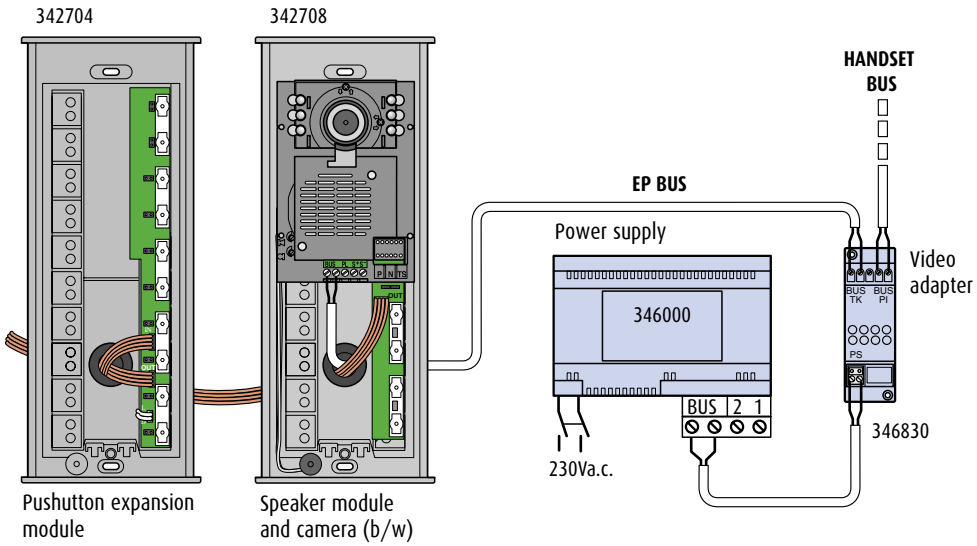
MINISFERA ENTRANCE PANEL

MINISFERA entrance panel to be installed in audio system with power supply 346000



NOTE: other pushbutton expansion module Item 342704 can be installed in respect to the installed standards of the MINISFERA entrance panels.

MINISFERA entrance panel to be installed in video system

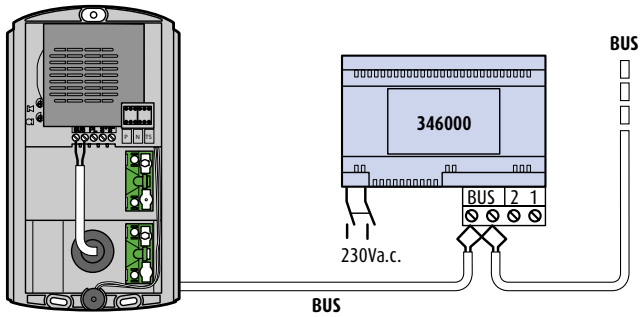


NOTE: other pushbutton expansion module Item 342704 can be installed in respect to the installed standards of the MINISFERA entrance panels.

Entrance panel versions

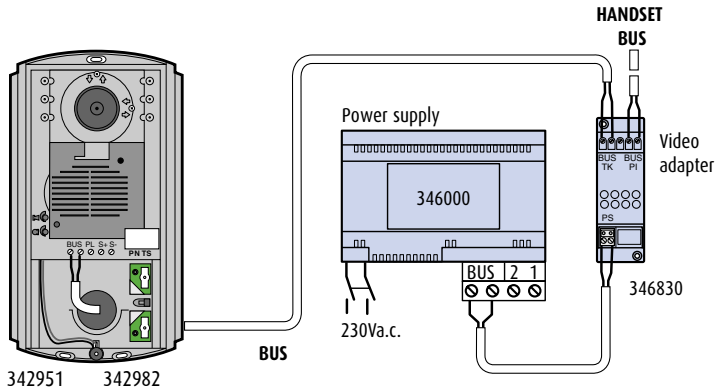
LINEA 2000 AND LINEA 2000 METAL ENTRANCE PANEL

LINEA 2000/LINEA 2000 METAL entrance panel which can be installed in audio one-family and two-family systems



342911 342971
342921 342972

LINEA 2000/LINEA 2000 METAL entrance panel which can be installed in video one-family and two-family systems



342951 342982
342961 342991
342981 342992

12V D.C. INTERFACE MODULE FOR CAMERA

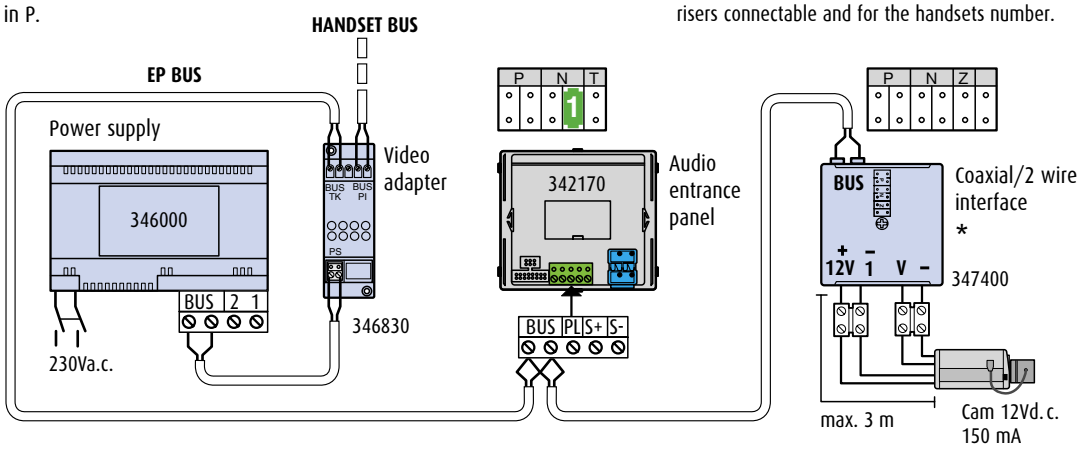
In the diagrams alternative to SFERA or MINISFERA video entrance panels, we can use the coaxal/2 wire interface for cameras at 12V d.c. with relating camera. The camera can be inserted in the system associated to a SFERA audio speaker module (separate camera) or as independent camera.

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

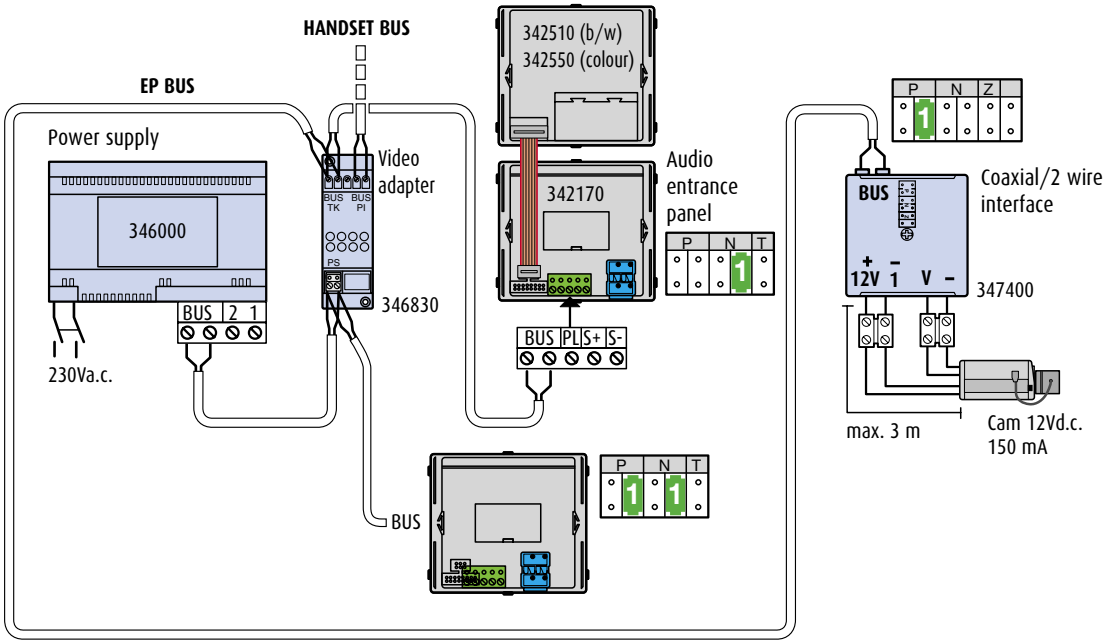
The interface Item 347400 (used for the connection of the separate camera) and the relating speaker module must be configured with the same value in P.

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.



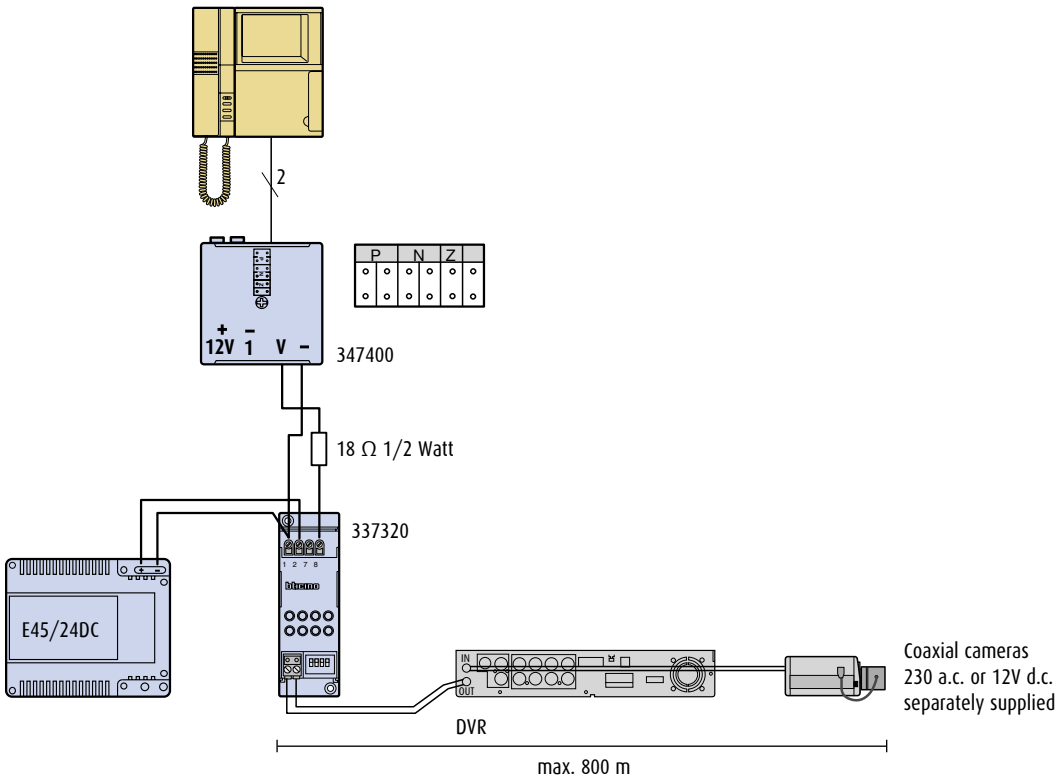
* Connecting the camera in IN-OUT, the interface must be the device which ends the line

Video entrance panel and audio handset with 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.

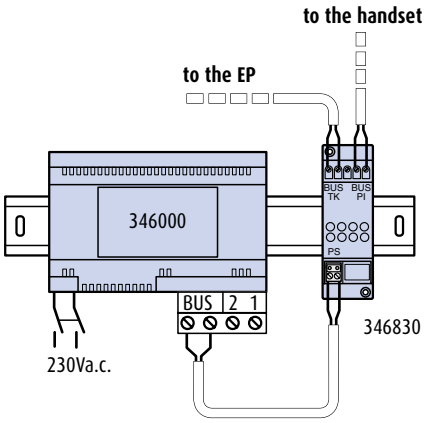
Wiring diagram for TVCC cameras with 2 WIRE monitor

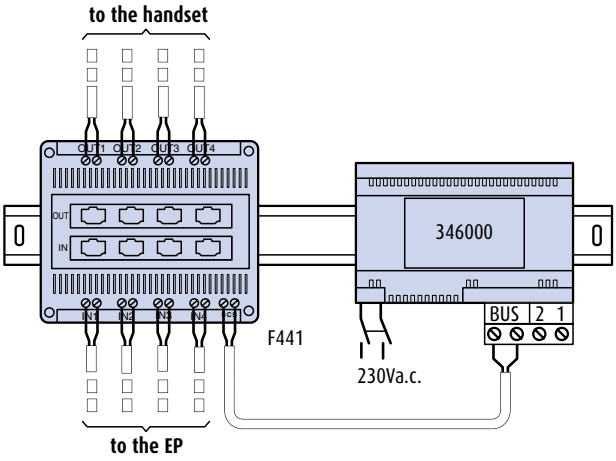


Connection versions for devices on DIN rail

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 HANDSETS and 6 distribution blocks.



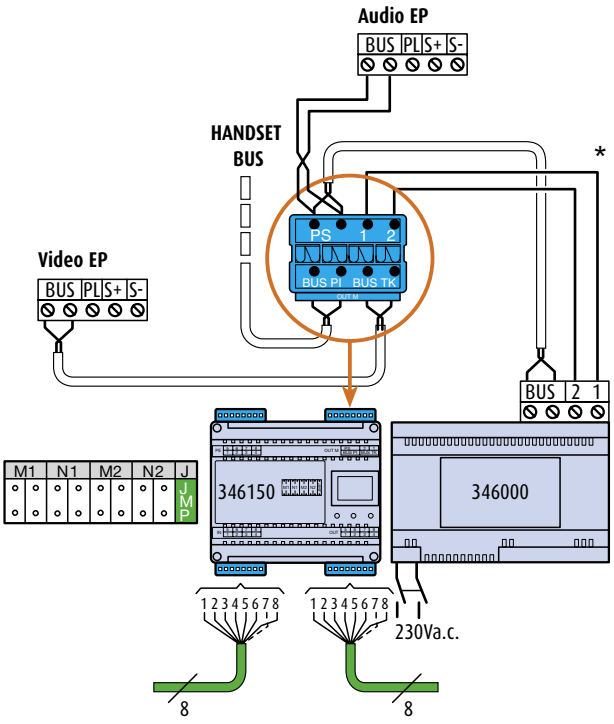


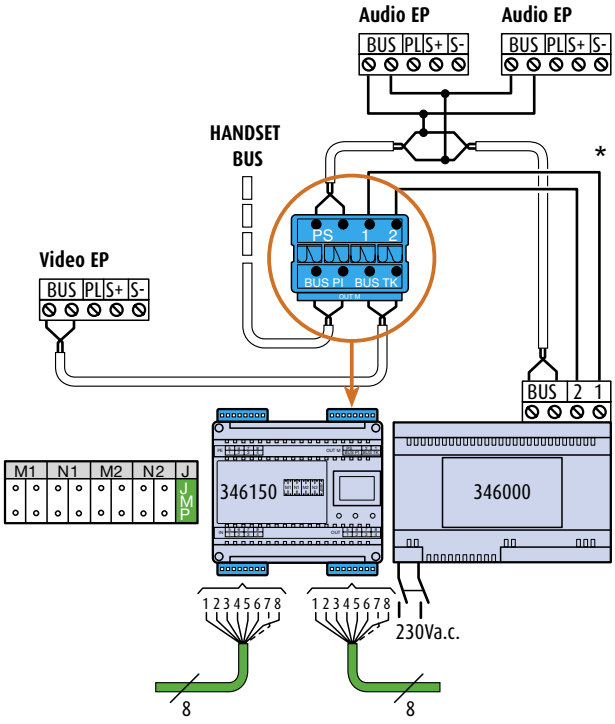
8/2 INTERFACE

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.



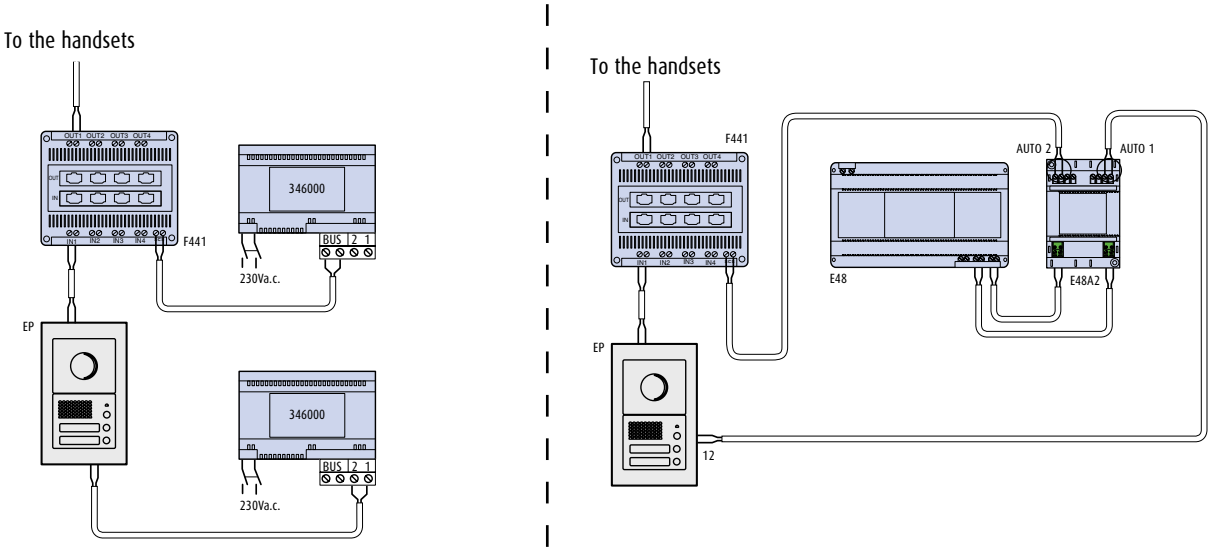


For system limits, please make reference to the General rules for installation.

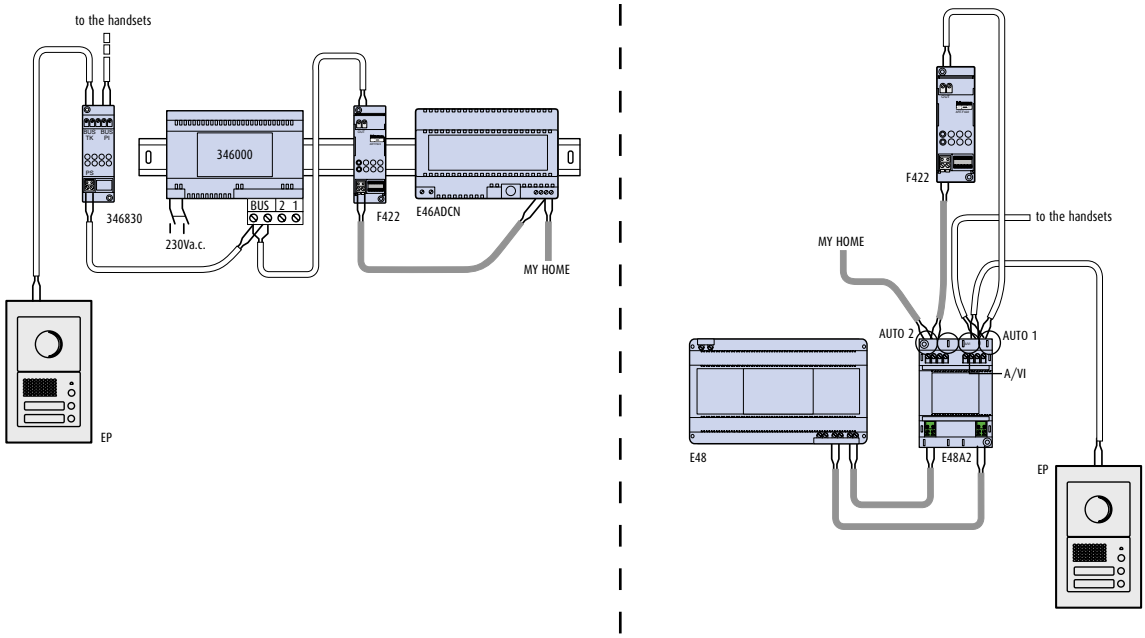
E48 POWER SUPPLY WITH E48A2 MODULES

In alternative to using 3 power supplies item 346000, a power supply E48 with 2 modules E48A2 can also be used.

Example of system connection with entrance panel power supply



Example of connection of E48A2 module instead of video adapter item 346830 in systems integrated with MY HOME



Auxiliary services
Call to the floor

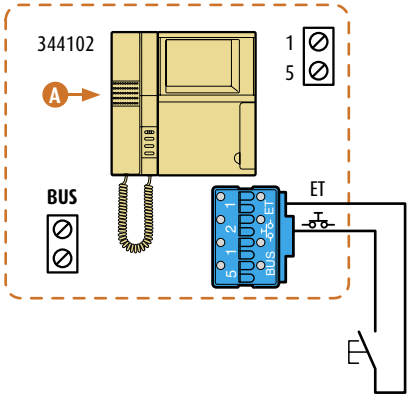
CALL TO THE FLOOR

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

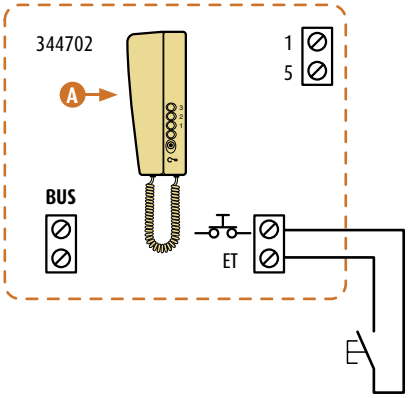
- To have a call to the floor function that causes 2 or more handset to ring. use item 346833.

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

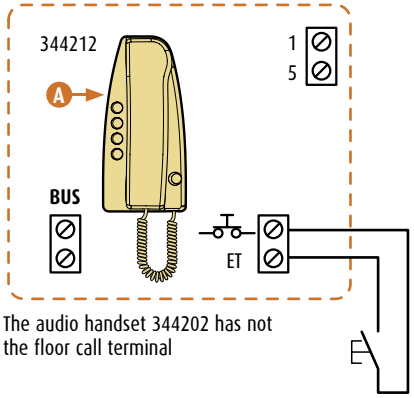
In other words, connecting a pushbutton between the terminals (ET/), the internal bell of the devices is used to realize the call from the main door of the apartment.



EXAMPLE - Connection of PIVOT video handset



EXAMPLE - Connection of SWING audio handset



The audio handset 344202 has not the floor call terminal

EXAMPLE - Connection of SPRINT audio handset which can be fitted

With VIDEO STATION, VIDEO DISPLAY, PIVOT STATION and PIVOT DISPLAY handsets, it is necessary to use the floor call on BUS.

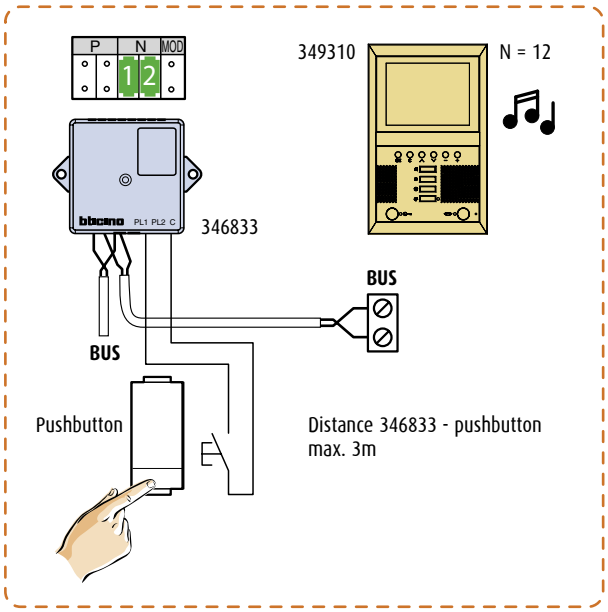
CALL TO THE FLOOR WITH 346833

To be used with all advanced handsets, with SPRINT audio handset item 344202 and in all those cases where more handsets must ring when a single pushbutton is pressed.

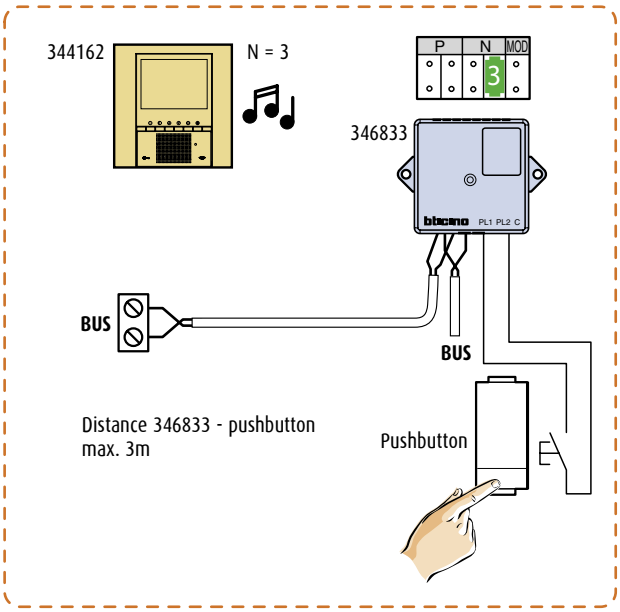
When using the call to the floor interface, the simple pressure of a pushbutton will enable to:
- the addressed floor call MOD = 0
- the general floor call MOD = 1

ADDRESSED FLOOR CALL WITH 346833 CONFIGURED WITH MOD = 0

Apartment 12

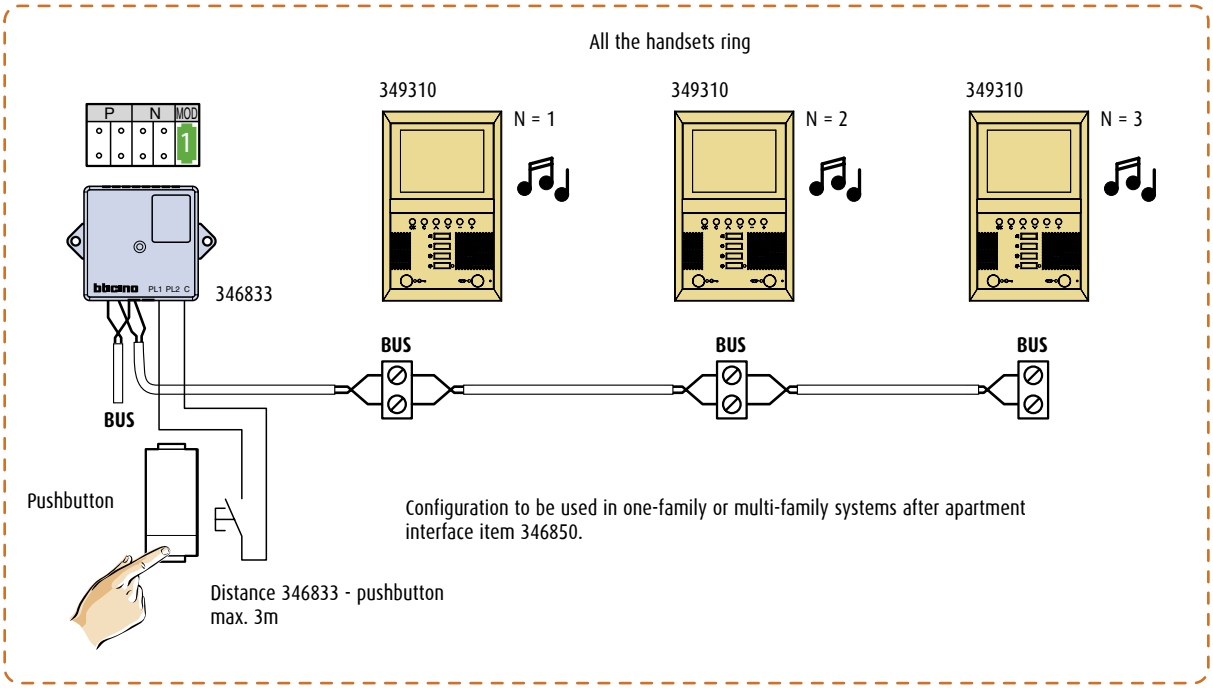


Apartment 3



GENERAL FLOOR CALL WITH 346833 CONFIGURED WITH MOD = 1

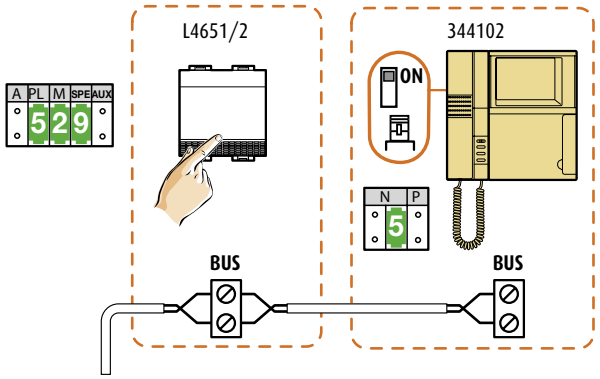
Apartment 24



CALL TO THE FLOOR ON BUS WITH SPECIAL CONTROL

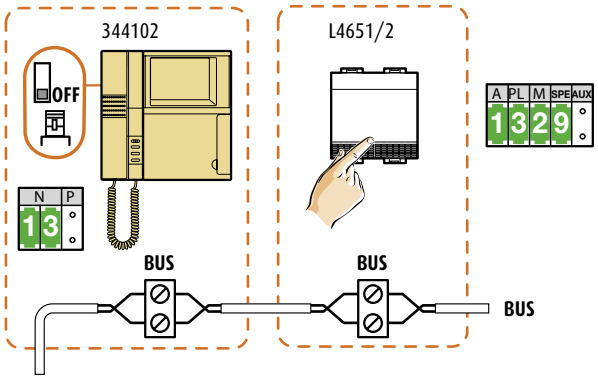
Using the special control Item L4651/2 it is possible to realize the call to the floor on BUS. Introducing the special control on the HANDSETS BUS (in the video systems the special control must be connected in input-output on the HANDSETS BUS) and configuring it for the call to the floor it is possible 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.

Apartment 5



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

Apartment 13



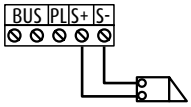
EXAMPLE - Call to the floor on BUS - connection after the handset. If the special control item L4651/2 is connected as the last of the riser or apartment line, it is necessary to install a terminator item 3499 in IN-OUT on the control.

NOTE: the special control Item L4651/2 must be opportunely configured, for further information see the "Configuration" section.

Auxiliary services
Door lock control

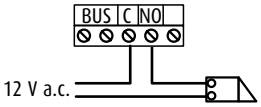
DOOR LOCK CONTROL

SFERA - MINISFERA - LINEA 2000 and LINEA 2000 METAL entrance panels



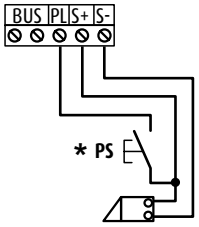
Wiring for door lock control to special pushbutton of handsets

Item 342150



Wiring for door lock control to special pushbutton of handsets

SFERA - MINISFERA - LINEA 2000 and LINEA 2000 METAL entrance panels

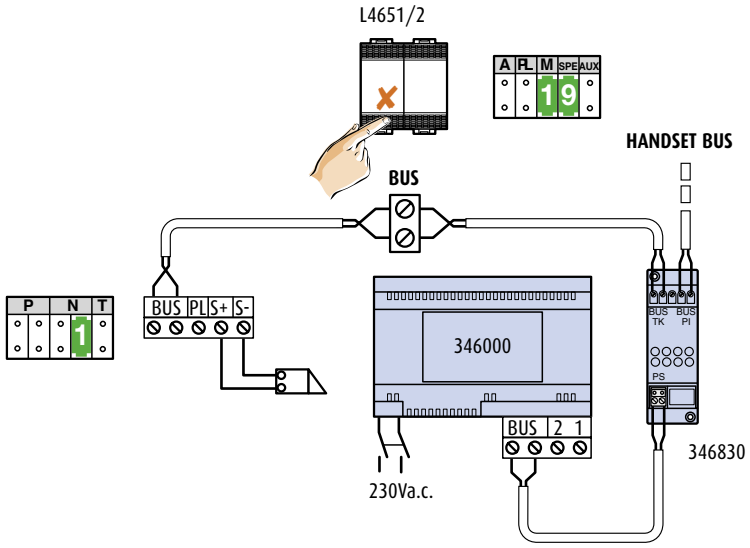


Wiring for door lock control to special pushbutton of handsets and to PS pushbutton
Between S+ and S-, 18V -4A impulsive are available.

*** 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 configured 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.

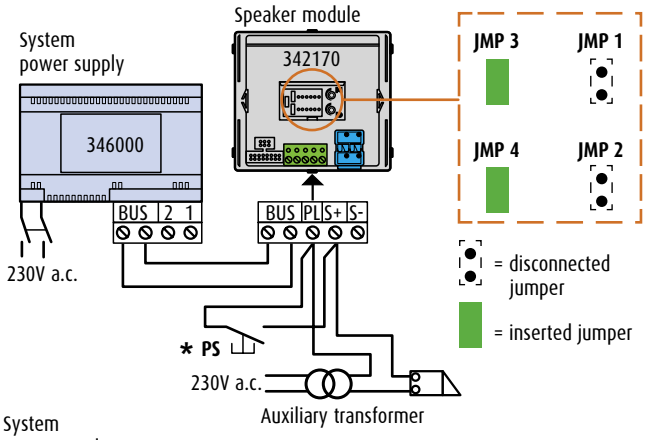
NOTE: in audio systems, the wiring of the special control L4651/0 can occur in any point of the system.

DOOR LOCK CONTROL WITH AUXILIARY TRANSFORMER

With speaker module 342170

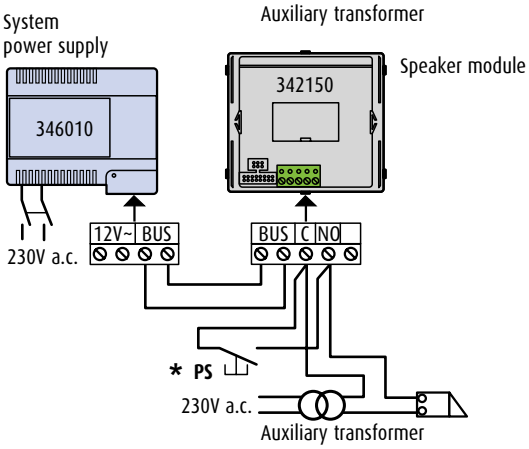
Predispose the jumpers as indicated here.
The PL and S+ contacts can be crossed by a maximum power of 24V a.c./d.c.

The connection is the same for all SFERA, MINISFERA, LINEA 2000 and LINEA 2000 METAL entrance panels.



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.



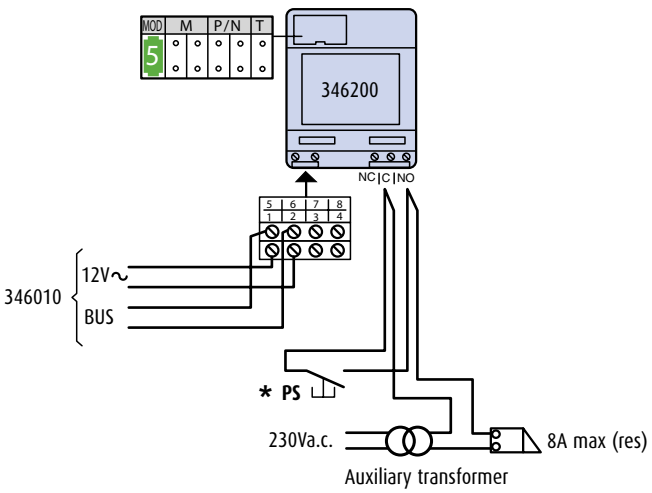
* **NOTE:** the door lock control is not timed from PS pushbutton

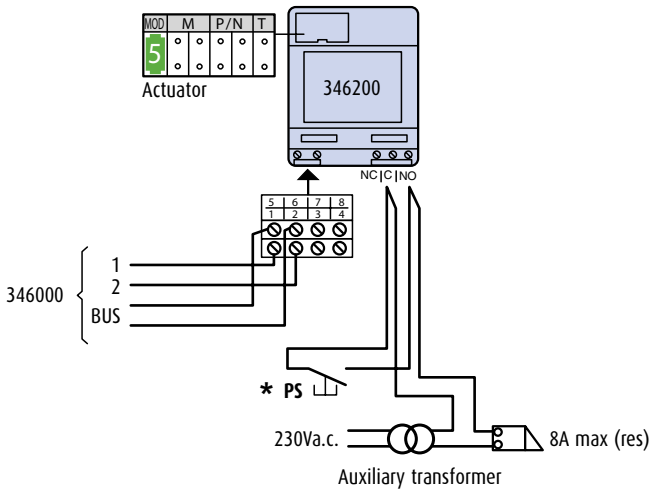
DOOR LOCK CONTROL WITH ACTUATOR ITEM 346200

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





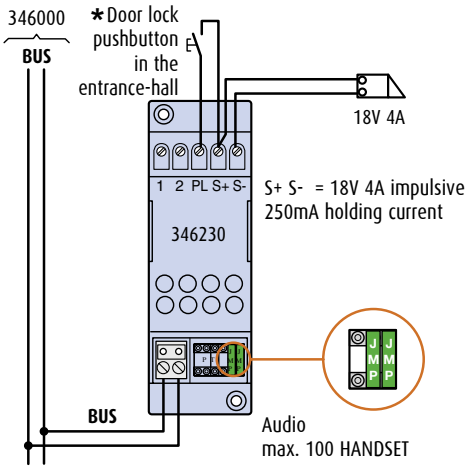
Auxiliary services
Door lock control

CONTROL WITH DOOR LOCK ACTUATOR ITEM 346230

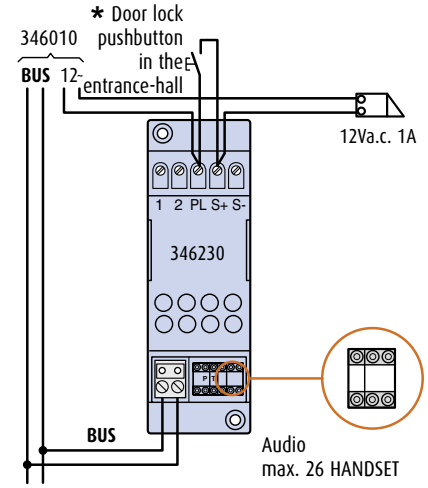
The use of Item 346230 is indicated in the installations where you do not want to connect the electric door lock directly to the speaker module, but you want to realize, always with only 2 wires, an inaccessible wiring from the handset, connecting the actuator that controls the door lock in a dark area from the ill-intentioned people. In addition, it can be used to implement the "Door lock status control" function (with CISA ELETTRICA door lock and accessory item 346240).

In installations with max 100 HANDSETS, 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.

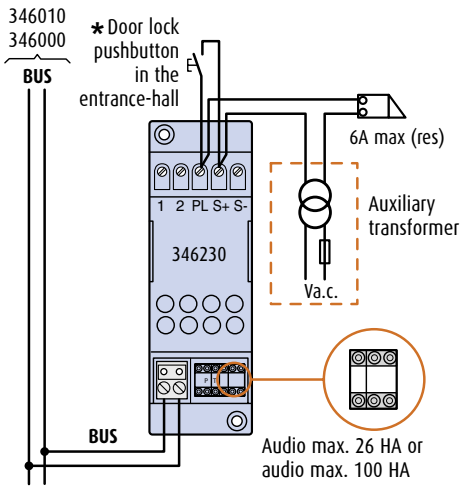


Utilizing, instead, this actuator in systems of max. 26 HANDSETS, the door lock is supplied by 12~ terminals of the power supply Item 346010.
The actuator is controlled by the door lock pushbutton of the handsets. The device must be configured (see "Configuration" section).



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 not be wired).
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.

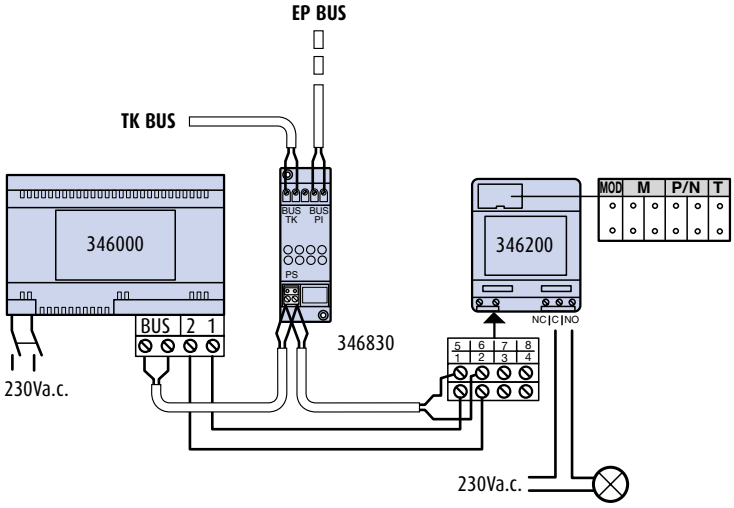


* the control is not timed

Auxiliary services
Staircase lights control

STAIRCASE LIGHTS CONTROL

Installation on video systems

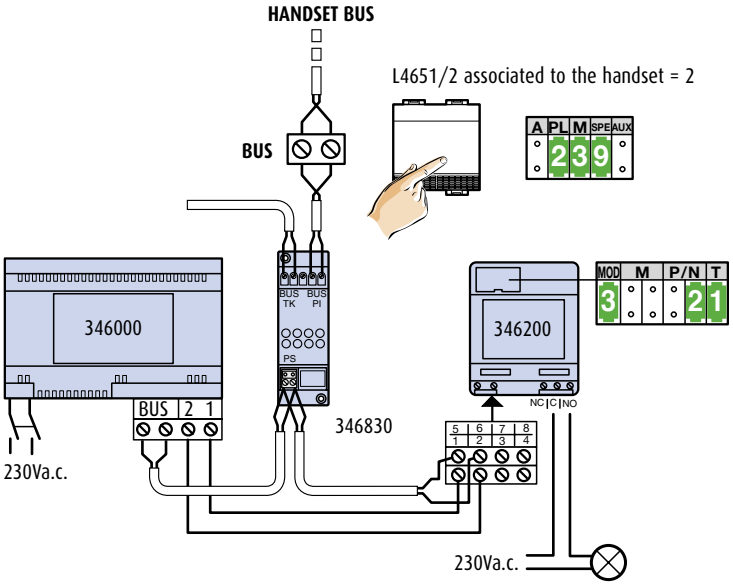


Wiring for door lock control to special pushbutton of handsets and to staircase lights pushbutton of handsets.

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.

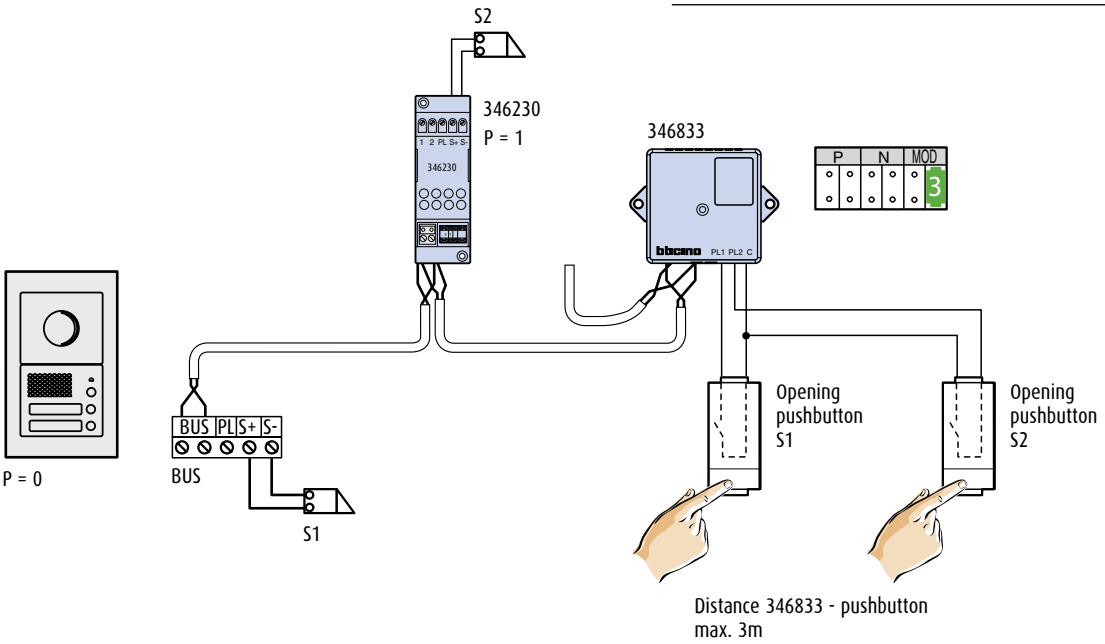
NOTE: in audio systems, the wiring of the special control L4651/0 can occur in any point of the system.

Auxiliary services
Staircase light and door lock control with 346833

DOOR LOCK CONTROL

The floor call interface 346833 also allows to open the door locks simply by pressing a pushbutton.

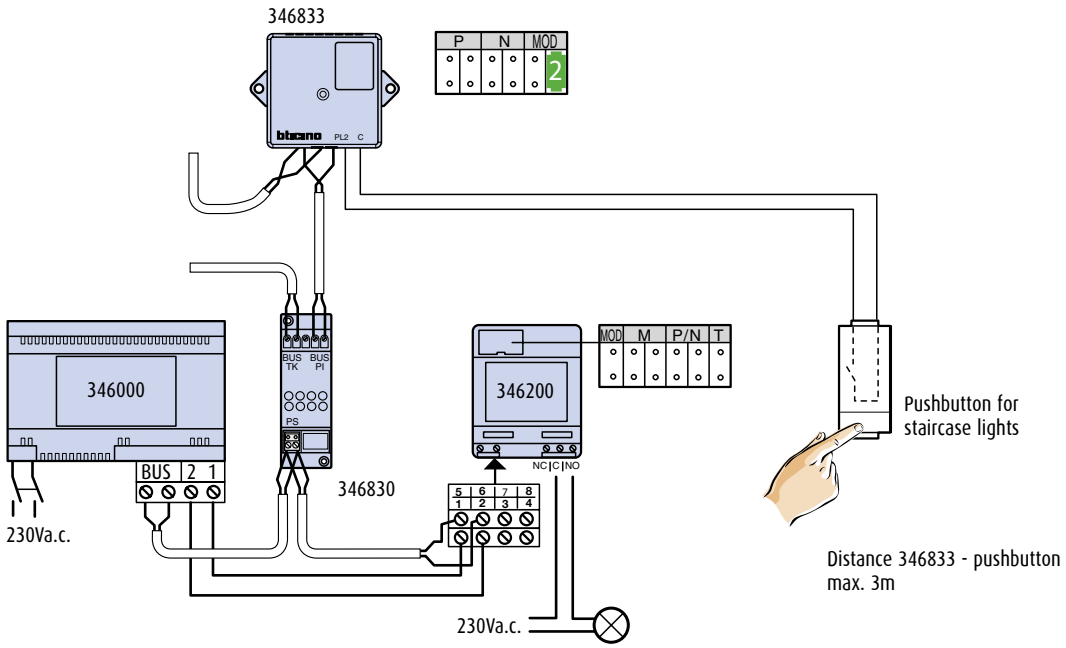
• MOD = 2	Door lock associated in P	PL1-C
• MOD = 3	Door lock associated in P	PL1-C
	Door lock associated in P+1	PL2-C



STAIRCASE LIGHTS

The floor call interface 346833 also allows to switch on the staircase lights simply by pressing a pushbutton.

MOD = 0
MOD = 1
MOD = 2
staircase lights] PL2-C

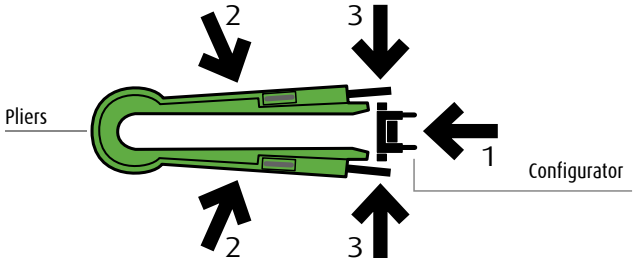


CONFIGURATION

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 3501K).

In the 2 wire systems the following Items must be configured:
- The SFERA, MINISFERA, LINEA 2000 and LINEA 2000 METAL speaker modules
- The universal speaker units
- The AXOLUTE, PIVOT, SWING, SPRINT handsets and the melodic bells
- The 4 keys small blocks for PIVOT
- The actuators
- The apartment interface
- The system expansion module
- Analogue/2 wire communication interface
- 8/2 wire interface
- Coaxial/2 wire interface
- 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, PIVOT, POLYX and AXOLUTE 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 and the handset rings, the same as with the S=0.

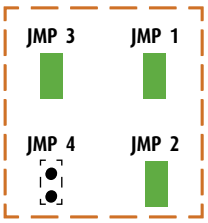
J1 and J2 - critical door lock power supply
Remove the JMP1 and JMP2 Jumpers to connect to the sound module a door lock power supplied independently.

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.

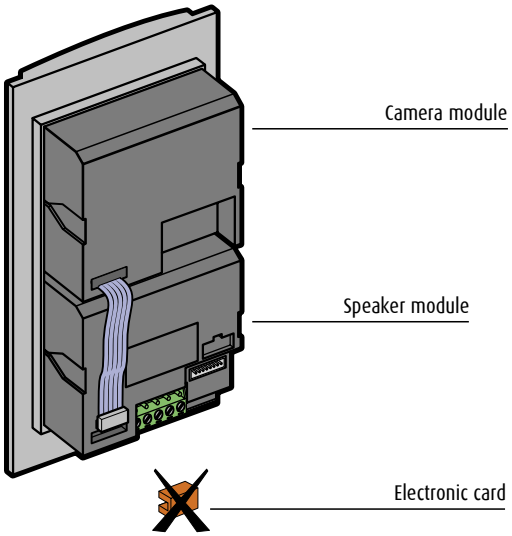
= disconnected jumper

= inserted jumper



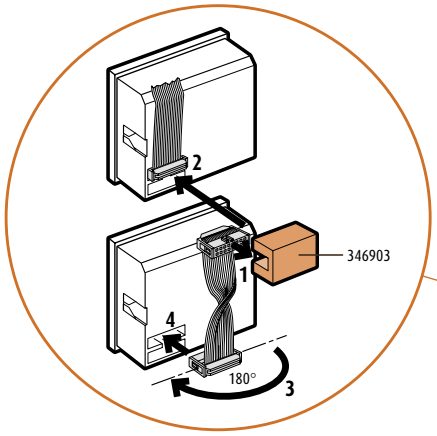
CONFIGURATION

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.

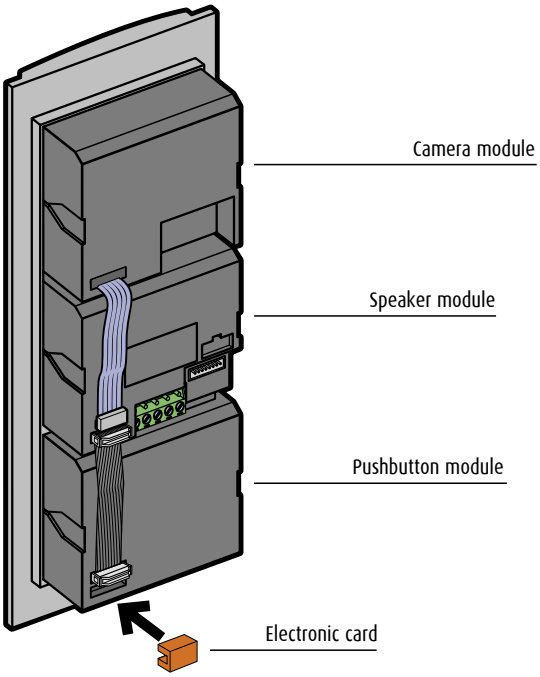


Example - Entrance panel made up by a camera module and a speaker module, does not need of any electronic card.

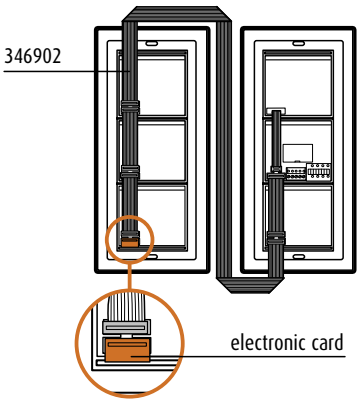
- For the handsets with less than 26 calls connect the modules placed vertically on several columns with Item 346902 and insert the electronic card in the last pushbuttons module.
- For the entrance panels with more than 26 calls connect the modules placed vertically on several columns with Item 346902, 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.



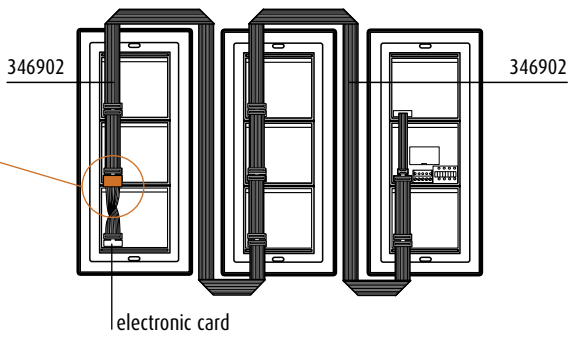
Connection Item 346903 and flat inversion.



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, PIVOT POLYX and AXOLUTE 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 and the handset rings, the same as with the S=0.

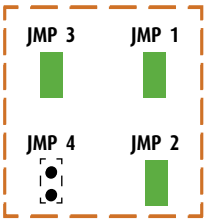
J1 and J2 - critical door lock power supply
Remove the JMP1 and JMP2 Jumpers to connect to the speaker module a door lock power supplied independently.

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.

= disconnected jumper

= inserted jumper



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, PIVOT, POLYX and AXOLUTE 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 and the handset rings, the same as with the S=0.

CONFIGURATION

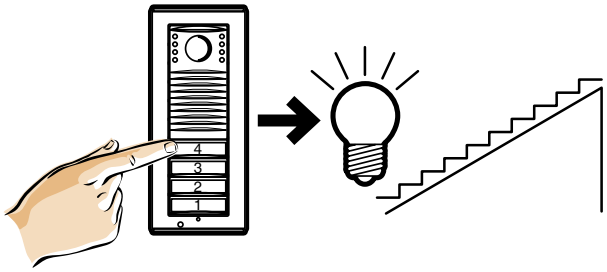
Inside the audio MINISFERA speaker module and MINISFERA with camera there are some JUMPERS which allow to make the following functions:

- **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**

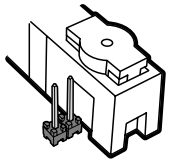
To switch on the staircase light from on the entrance panel using the last call key remove the JUMPER.



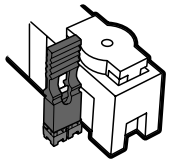
Example - staircase light switching ON from the last pushbutton of a video entrance panel with 4 pushbuttons (the entrance panel has 3 calls and a staircase light switcher).

JUMPER - exclude the call pushbutton

Insert the jumper to exclude the call pushbutton

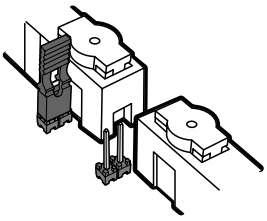


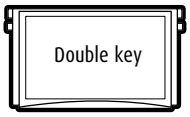
active call pushbutton



non active call pushbutton

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

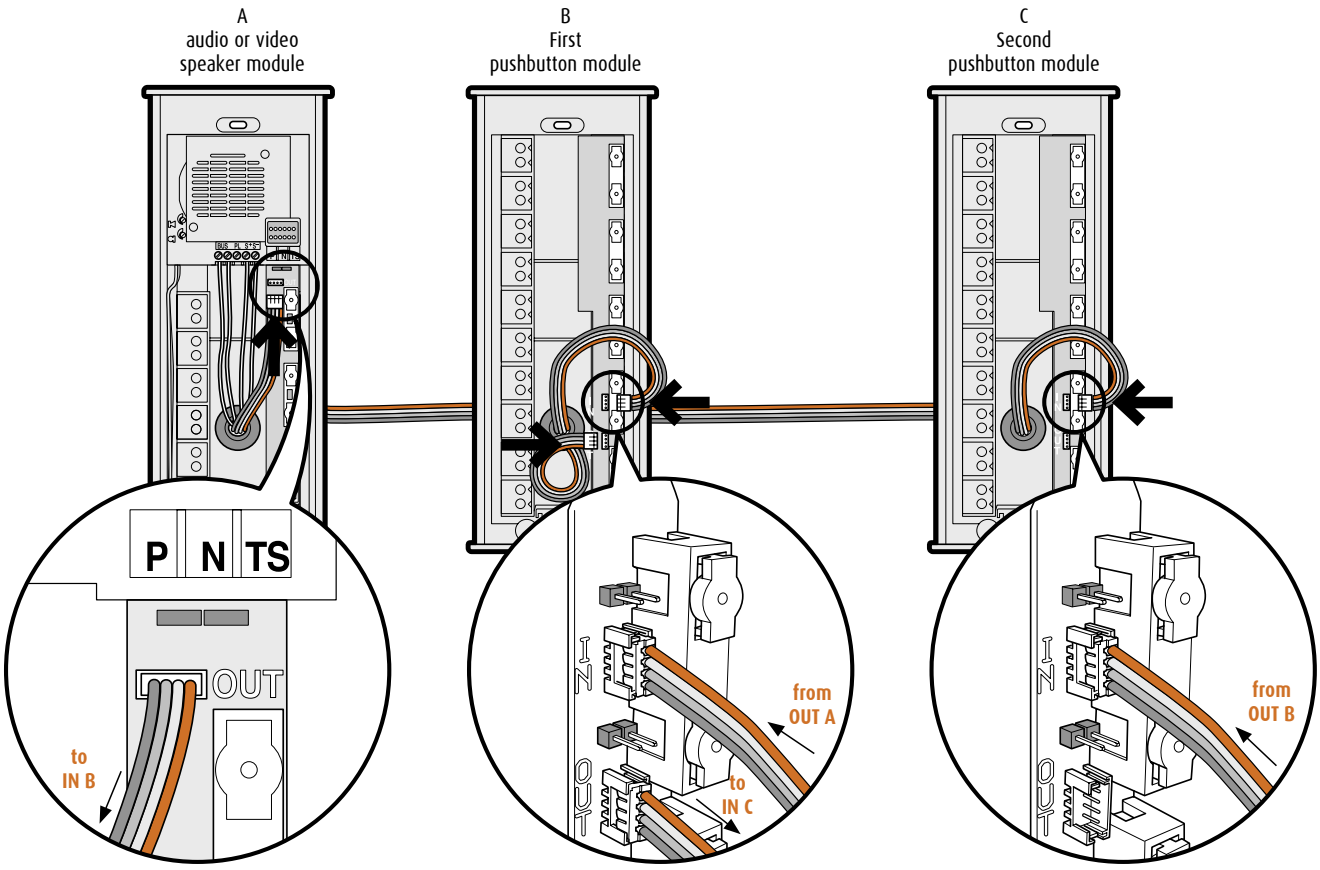




Example - To use the double key, enable the upper call.

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.

LINEA 2000 AND LINEA 2000 METAL SPEAKER MODULE

LINEA2000
b/w audio and video
342911 342921
342951 342961

LINEA2000 METAL
b/w and colour audio and video
342981 342982
342991 342992
342971 342972

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 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, PIVOT, POLYX and AXOLUTE 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 and the handset rings, the same as with the S=0.

2 WIRE CAMERAS

391661
391662

391657
391658
391659

391667
391668
391669

P		N	Z	M	A	PL
○	○	○	○	○	○	○
*						
○	○	○	○	○	○	○

P – camera address
The configurator assigns to the camera the address inside the apartment.

NOTE: insert OFF in this position (*) to disable the microphone. (function available for the cameras from 0 to 9; for the other cameras is not possible to disconnect the microphone).

N – Address of the handset that will be called in case of alarm

Z – Zone of the alarm system the camera is associated to

M – Mode of operation when a camera belonging to a MY HOME integrated system is switched on. Each time a camera is switched on (call, self-switching on, alarm) the MY HOME actuator and the scenario configured in A and PL are activated. When the camera is switched off, the associated actuator also switches off, while the scenario remains active.
If an actuator used by the automation system is also associated to the camera, the actuator will switch itself off when the camera is switched off, even if it was already on when the camera came on. To avoid this problem, the load should be activated using a F411/2, configuring different PL and setting the contacts with parallel connection.

M	A/PL
M = 0	Address of the SCS control device associated to the camera
M = 1-9	Address of the scenarios module associated to the camera

CONFIGURATION

SYSTEM EXPANSION MODULE

System expansion module Item 346851

Operation with galvanic separation

M = progressive number within the system
MOD = 0

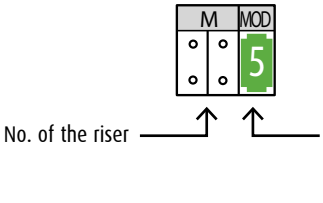
This mode is used to double the length of the line of the entrance panel and/or to double the system performance.

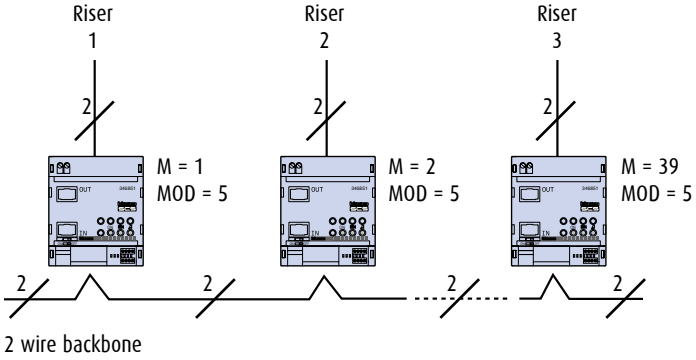
Factory set configuration

The M addresses do not overlap with MOD = 5 and MOD = 0, it will therefore be possible to have 2 items 346851 in the same system, one configured with M = 1 MOD = 0 and one with M = 1 MOD = 5

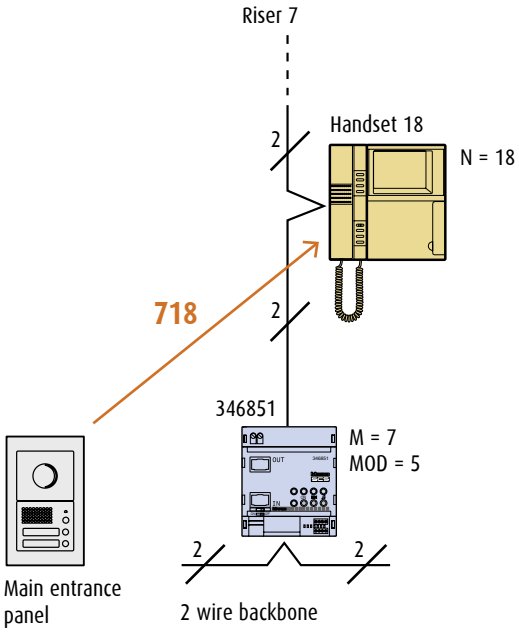
Operation as interface for independent risers

M = Riser number (max. 39)
MOD = 5



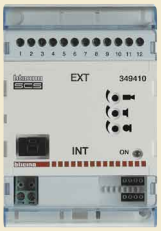


The handsets connected to the single riser will be identified at the main entrance panel by the M configurator of 346851 x 100 + the N configurator of the single handset.

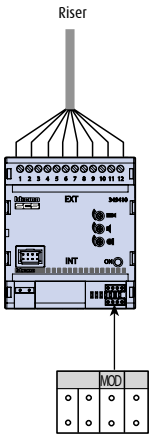


As far as the main EP is concerned, the handset is number 718: this is the M of 346851 (7) x 100 + N of the handset connected to the riser (18).
(7 x 100) + 18 = 718

ANALOGUE - 2 WIRE COMMUNICATION INTERFACE



Analogue/2 wire communication interface item 349410



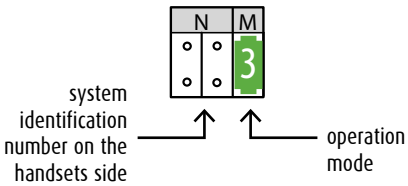
The configuration enables differentiating what type of riser the interface is connected to.

MOD = 0 Audio or video digital riser
MOD = 1 Audio or video analogue riser
MOD = 2 Videoporter 2000
MOD = 3 Tersystem audio

APARTMENT INTERFACE

Apartment interface Item 346850

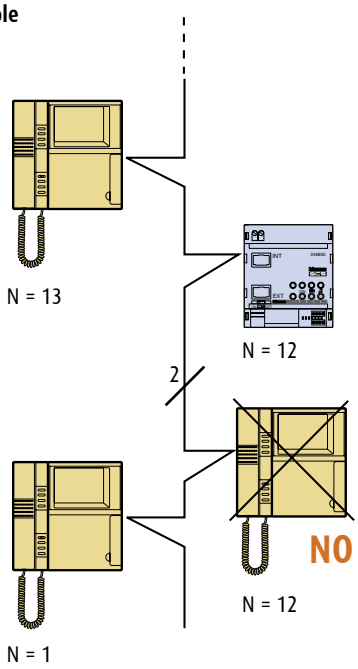
N = the configurator assigns the interface an identification number within the system.
M = configured with3



Example of configuration

the interface must be considered as handset number 12

Installation example

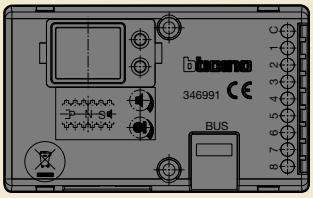


2 wire riser

No handset within the system can be configured with N = 12

CONFIGURATION

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, PIVOT, POLYX and AXOLUTE 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 and the handset rings, the same as with the S=0.

call tone volume control

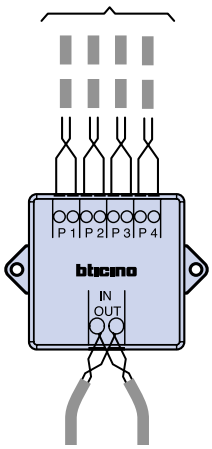
Configurator	8	3	0
Type of bell confirms call	max	min	excluded

FLOOR DISTRIBUTION BLOCK

Floor distribution block
Item 346841

The video floor distribution block has 4 outputs, allowing the distribution up to a max of 4 apartments, making a system with star wiring.

max. 3 devices (audio handsets, video handsets and bells) on each line P1, P2, P3,P4



PABX/2 WIRE INTERFACE

PABX/2 wire interface Item 346810

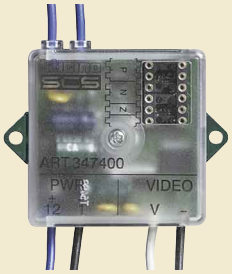
The PABX/2 wire item can interface the telephone switchboards Item 335818 and 335828 to the systems made with the 2 wire system.

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).

COAXIAL/2 WIRE INTERFACE



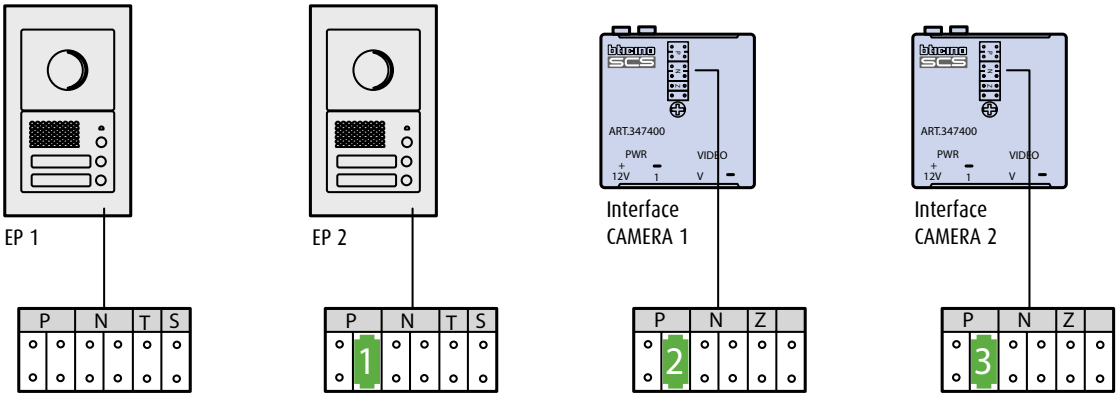
Coaxial/2 wire interface item 347400.

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.

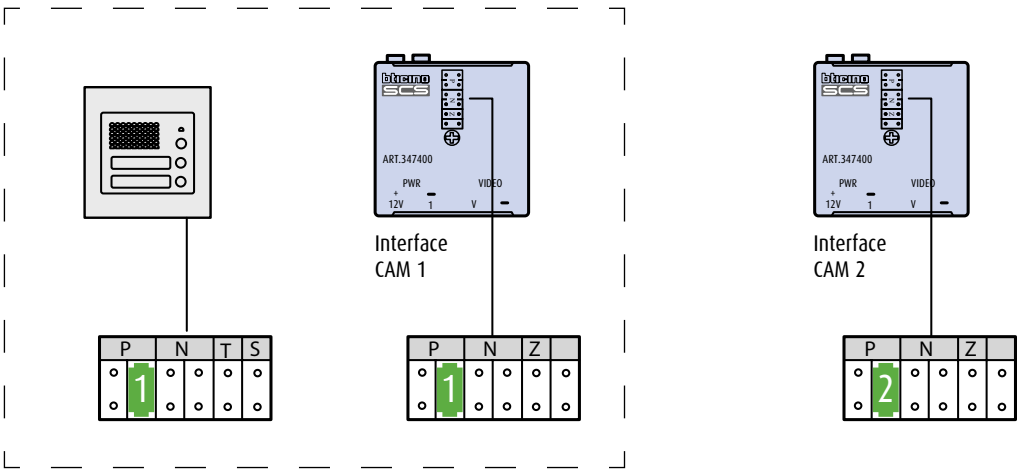
Z = zone of the burglar-alarm system associated to the camera

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.

EP 1



EP1 made up of audio speaker module and separate camera
If the audio speaker module and the camera interface are configured in the same way in P, a video door entry entrance panel with separate camera will be created.
Example - System with 1 video entrance panel (with separate camera) and 1 camera.

CONFIGURATION

AXOLUTE VIDEO STATION

AXOLUTE VIDEO STATION item 349310

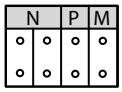
AXOLUTE VIDEO STATION offers the possibility to select among 16 types of bells with programmed melodies, which can be freely associated to the following type of calls:
- Call from entrance panel (configured with S = 0)
- Call from entrance panel (configured with S = 1)
- Floor call
- Intercom call

AXOLUTE VIDEO STATION can be configured with 3 different levels of detail:

1) Advanced configuration*
this gives the user the highest level of customization. The user can:
- create customized menus
- customize messages
- access all the MY HOME functions. This configuration is set up using a PC and a dedicated software (included with the product)

2) Guided configuration *
enables user access to the video door entry system menu screen and to the MY HOME application management section. The customization level will however be lower than the Advanced configuration. This configuration is set up directly from the AXOLUTE VIDEO STATION monitor using the OSD menu. The customer can select the default video door entry system/house automation pages, where the parameters of the devices installed in their own home can be set.

3) Quick configuration
this enables the customer to access the video door entry system menu functions. This is the standard configuration for configurators to be installed in their own position on the back of the device itself.



N – number of the handset
The N configurator assigns each video handset an identification number within the system. The handsets must be configured in progressive mode. Handsets with parallel connection (max 3 are allowed inside the apartment without item 346850) must be configured with the same N configurator. Additional audio handsets, video handsets and/or bells can be installed in parallel to the basic video handset.

P – association of the entrance panel
The P configurator identifies the associated EP, or the first entrance panel that switches itself on when the pushbutton ▭ ○ is pressed the first time, as well as which door lock with video handset at rest is activated, when the pushbutton ◯ ○—⊓ is pressed.

M – operation mode
The M configurator identifies the main menu of the AXOLUTE VIDEO STATION and therefore all the usable functions.

* For more information, please see the "installation manual" attached to the item

AXOLUTE VIDEO DISPLAY

AXOLUTE VIDEO DISPLAY item 349311 (light)
AXOLUTE VIDEO DISPLAY item 349312 (dark)

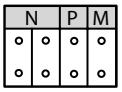
AXOLUTE VIDEO DISPLAY offers the possibility to select among 16 types of bells with programmed melodies, which can be freely associated to the following type of calls:
- Call from entrance panel (configured with S = 0)
- Call from entrance panel (configured with S = 1)
- Floor call
- Intercom call

AXOLUTE VIDEO DISPLAY can be configured with 3 different levels of detail:

1) Advanced configuration*
this gives the user the highest level of customization. The user can:
- create customized menus
- customize messages
- access all the MY HOME functions. This configuration is set up using a PC and a dedicated software (included with the product)

2) Guided configuration *
enables user access to the video door entry system menu screen and to the MY HOME application management section. The customization level will however be lower than the Advanced configuration. This configuration is set up directly from the AXOLUTE VIDEO DISPLAY monitor using the OSD menu. The customer can select the default video door entry system/house automation pages, where the parameters of the devices installed in their own home can be set.

3) Quick configuration
this enables the customer to access the video door entry system menu functions. This is the standard configuration for configurators to be installed in their own position on the back of the device itself.



N – number of the handset
The N configurator assigns each video handset an identification number within the system. The handsets must be configured in progressive mode. Handsets with parallel connection (max 3 are allowed inside the apartment without item 346850) must be configured with the same N configurator. Additional audio handsets, video handsets and/or bells can be installed in parallel to the basic video handset.

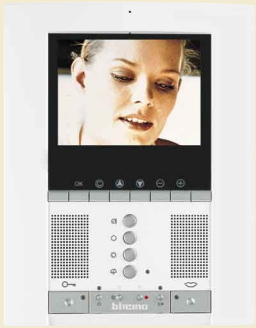
P – association of the entrance panel
The P configurator identifies the associated EP, or the first entrance panel that switches itself on when the pushbutton ◯○ is pressed the first time, as well as which door lock with video handset at rest is activated, when the pushbutton ◯○⊓ is pressed.

M – operation mode
The M configurator identifies the main menu of the AXOLUTE VIDEO DISPLAY and therefore all the usable functions.

* For more information, please see the "installation manual" attached to the item

CONFIGURATION

POLYX MEMORY STATION



344172 POLYX MEMORY STATION

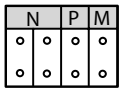
POLYX MEMORY STATION offers the possibility to select among 16 types of bells with programmed melodies, which can be freely associated to the following type of calls:
- Call from entrance panel (configured with S = 0)
- Call from entrance panel (configured with S = 1)
- Floor call
- Intercom call

POLYX MEMORY STATION can be configured with 3 different levels of detail:

1) Advanced configuration*
this gives the user the highest level of customization. The user can:
- create customized menus
- customize messages
- access all the MY HOME functions. This configuration is set up using a PC and a dedicated software (included with the product)

2) Guided configuration *
enables user access to the video door entry system menu screen and to the MY HOME application management section. The customization level will however be lower than the Advanced configuration. This configuration is set up directly from the POLYX MEMORY STATION monitor using the OSD menu. The customer can select the default video door entry system/house automation pages, where the parameters of the devices installed in their own home can be set.

3) Quick configuration
this enables the customer to access the video door entry system menu functions. This is the standard configuration for configurators to be installed in their own position on the back of the device itself.



N – number of the handset
The N configurator assigns each video handset an identification number within the system. The handsets must be configured in progressive mode. Handsets with parallel connection (max 3 are allowed inside the apartment without item 346850) must be configured with the same N configurator. Additional audio handsets, video handsets and/or bells can be installed in parallel to the basic video handset.

P – association of the entrance panel
The P configurator identifies the associated EP, or the first entrance panel that switches itself on when the pushbutton is pressed the first time, as well as which door lock with video handset at rest is activated, when the pushbutton is pressed.

M – operation mode
The M configurator identifies the main menu of the POLYX MEMORY STATION and therefore all the usable functions.

* For more information, please see the "installation manual" attached to the item

POLYX VIDEO DISPLAY

POLYX VIDEO DISPLAY Item 344162

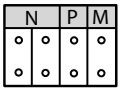
POLYX VIDEO DISPLAY offers the possibility to select among 16 types of bells with programmed melodies, which can be freely associated to the following type of calls:
- Call from entrance panel (configured with S = 0)
- Call from entrance panel (configured with S = 1)
- Floor call
- Intercom call

POLYX VIDEO DISPLAY can be configured with 3 different levels of detail:

1) Advanced configuration*
this gives the user the highest level of customization. The user can:
- create customized menus
- customize messages
- access all the MY HOME functions. This configuration is set up using a PC and a dedicated software (included with the product)

2) Guided configuration *
enables user access to the video door entry system menu screen and to the MY HOME application management section. The customization level will however be lower than the Advanced configuration. This configuration is set up directly from the POLYX VIDEO DISPLAY monitor using the OSD menu. The customer can select the default video door entry system/house automation pages, where the parameters of the devices installed in their own home can be set.

3) Quick configuration
this enables the customer to access the video door entry system menu functions. This is the standard configuration for configurators to be installed in their own position on the back of the device itself.



N – number of the handset
The N configurator assigns each video handset an identification number within the system. The handsets must be configured in progressive mode. Handsets with parallel connection (max 3 are allowed inside the apartment without item 346850) must be configured with the same N configurator. Additional audio handsets, video handsets and/or bells can be installed in parallel to the basic video handset.

P – association of the entrance panel
The P configurator identifies the associated EP, or the first entrance panel that switches itself on when the pushbutton is pressed the first time, as well as which door lock with video handset at rest is activated, when the pushbutton is pressed.

M – operation mode
The M configurator identifies the main menu of the POLYX VIDEO DISPLAY and therefore all the usable functions.

PIVOT HANDSET

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

The PIVOT audio handset offers the possibility to select among 16 types of bells with programmed melodies, which can be freely associated to the following type of calls:
- Call from entrance panel (configured with S=0)
- Call from entrance panel (configured with S=1) (with 4 key small block item 346812/13/14)
- Floor call
- Intercom call (with 4 key small block item 346812/13/14)

N – number of the handset
The N configurator assigns each audio handset an identification number within the system.
The handsets must be configured in progressive mode. Handsets with parallel connection (max. 3 are allowed inside the same apartment without item 346850) must be configured with the same N configurator.

P – association of the entrance panel
The P configurator identifies the associated EP, or the first entrance panel on which the audio is activated when the pushbutton is pressed, as well as which door lock with audio handset at rest is activated, when the pushbutton pressed.

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

Configurator in P	key function
0-9	Door lock opening of the entrance panel with audio handset at rest

* For more information, please see the "installation manual" attached to the item

CONFIGURATION

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 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)
- Floor call
- Intercom call (with 4-key Block Item 346812/13/14 mounted)

N – handset number

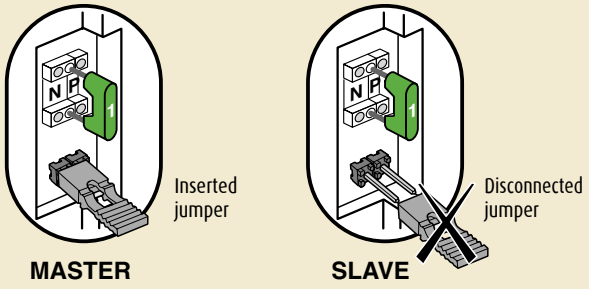
Configurator N assigns to each video handset a recognition number within the system. The handsets must be configured progressively. Handsets connected in parallel (max. 3, in apartment without item 346850) must be configured with the same configurator N. Audio handsets, video handsets and/or extra bells 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

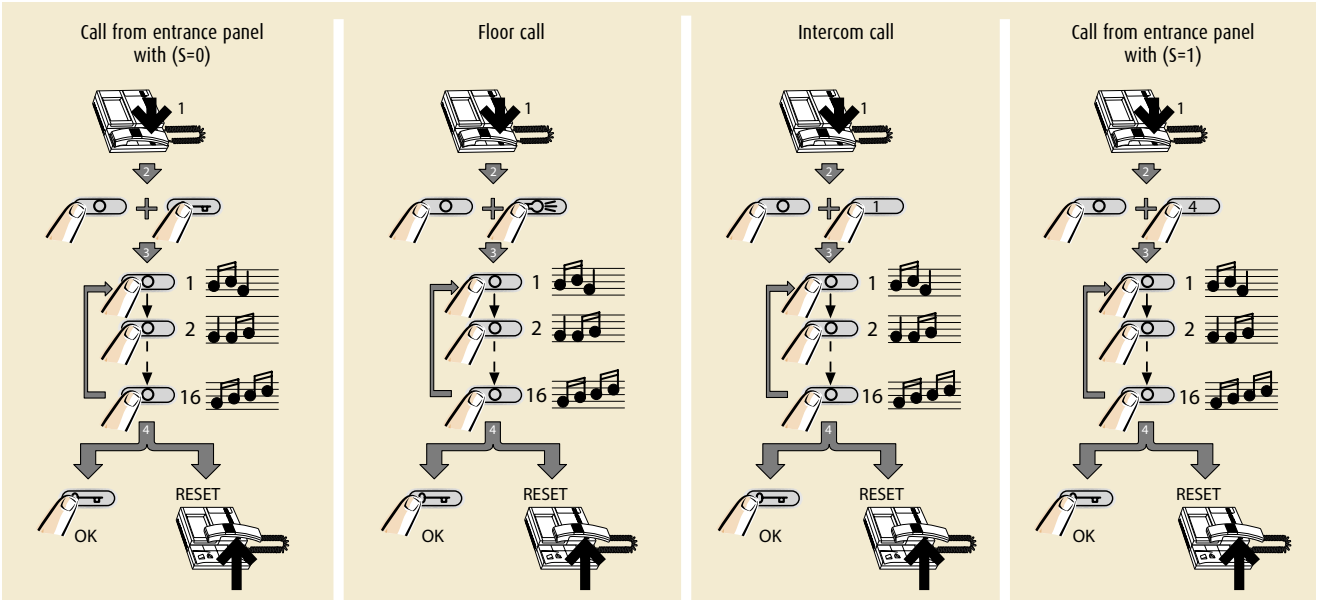
In multi-family systems with many video handsets (max 3) connected in parallel within the same apartment (without using the item 346850) we must determine which device must operate as the MASTER and which devices must operate as SLAVE, inserting or removing the selection Jumper.



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

Valid procedure for audio and video handsets



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).

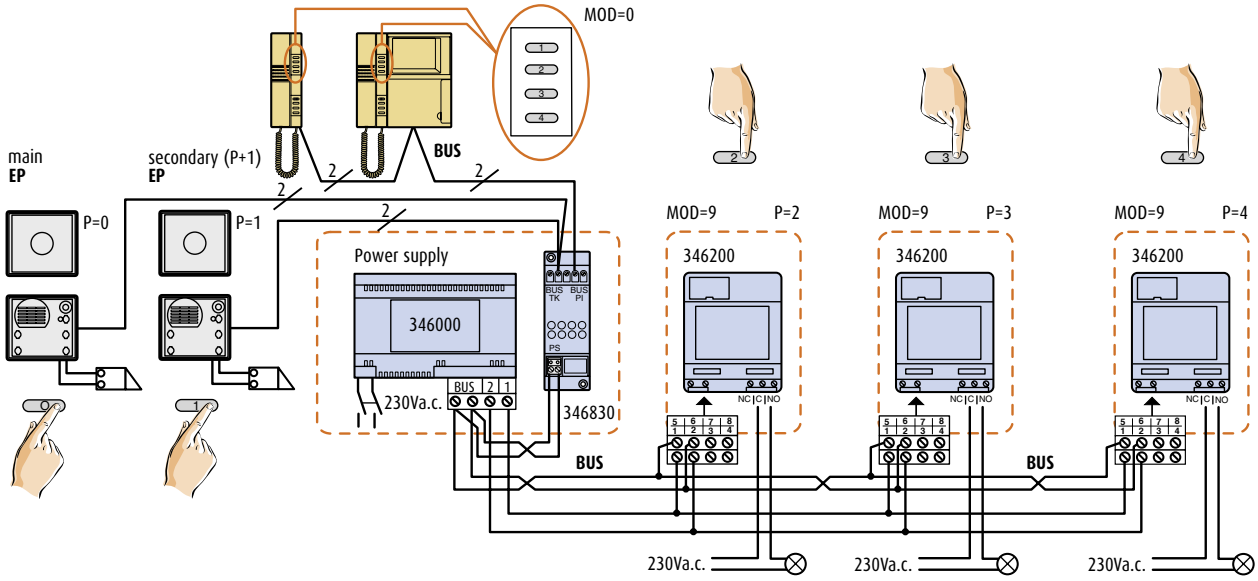
The additional 4 pushbuttons small block is installed on the video handsets Items 344102, 344103, 344104, 344122, 344123, 344124 and PIVOT 2 wire audio handsets Items 344032, 344033, 344034.

Choice the MOD configurators

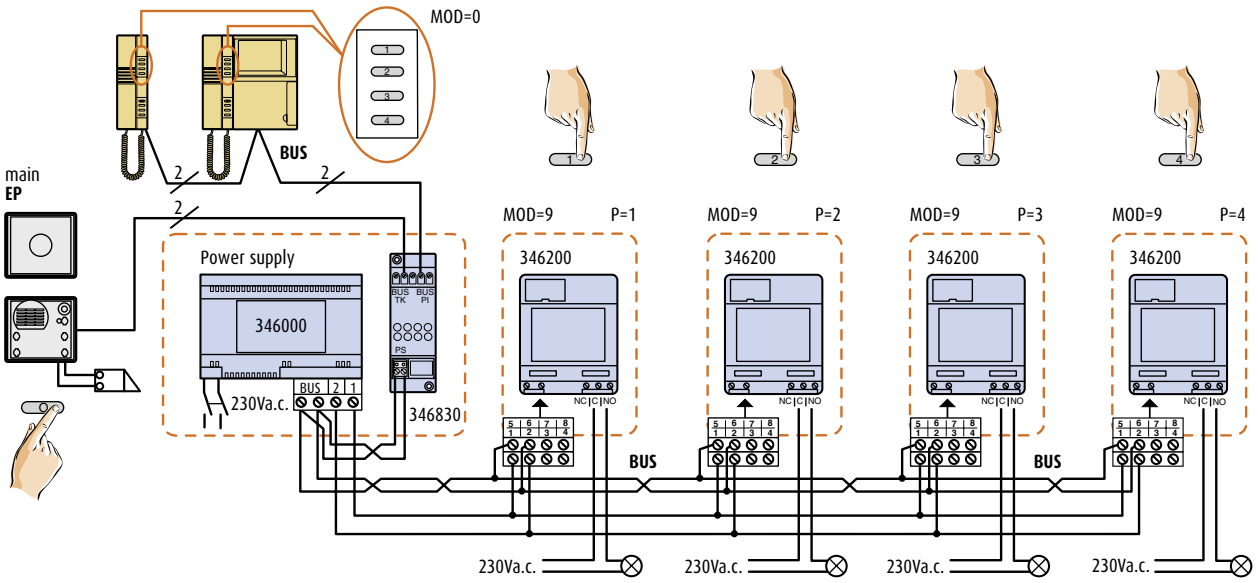
MODE	Keys function WITHOUT ITEM 346850	FOR MULTI-FAMILY SYSTEMS IN APARTMENTS WITH ITEM 346850
MOD= ⚙	EP direct switching	
	1 Direct switching ON of the EP configured with P+1	
	2 Direct switching ON of the EP configured with P+2	
	3 Direct switching ON of the EP configured with P+3	
	4 Direct switching ON of the EP configured with P+4	
	Actuator control for generic loads (Item 346200)	
	1 346200 configured with MOD=9 and P=P+1	
	2 346200 configured with MOD=9 and P=P+2	
	3 346200 configured with MOD=9 and P=P+3	
	4 346200 configured with MOD=9 and P=P+4	
MOD= 1	Intercom among apartments with N=1 - 5	Intercom among Handsets with N=1 - 5
MOD= 3	1 EP auto-switching on configured with P+1	1 Auto-switching on of the local entrance panels
	2 EP door lock control configured with P+1	2 Door lock control of the local EP (in direct mode)
	The keys 3 and 4 intercom among the Handsets configured with N=1 - 3	The keys 3 and 4 intercom among the Ha. 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=P+1	
	2 346200 configured with MOD=5 and P=P+2	
	3 346200 configured with MOD=5 and P=P+3	
	4 346200 configured with MOD=5 and P=P+4	
	Door lock actuator (Item 346230)	
	1 346230 configured with P=1	
	2 346230 configured with =2	
	3 346230 configured with P=3	
	4 346230 configured with P=4	
MOD= 6		The keys 1, 2 and 3 intercom among the Ha. with N=1 - 4
		4 Pager function
MOD= 7 (Two-family systems)	1 Intercom among the devices of the same apartment (general call)	
	2 Intercom with the devices of the other apartment (general call)	
	3 Door lock control on EP configured with P+1	
	4 Door lock control on EP configured with P+2	
MOD= 7 (Multi-family systems config. with N = 3)	1 Intercom same apartment	
	2 NOT USED	
	3 Door lock control on EP configured with P+1	
	4 Door lock control on EP configured 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



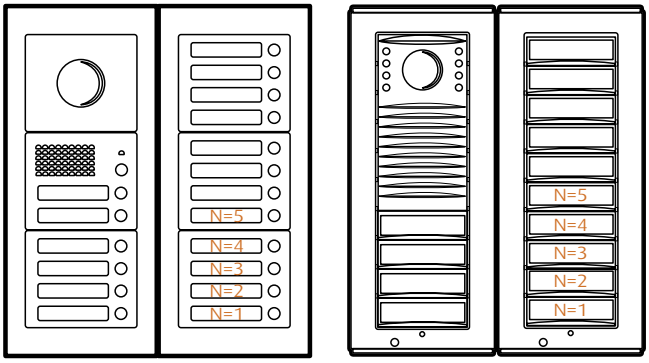
Direct auto-switching ON of the second entrance panel and enabling of actuators for generic uses.



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.

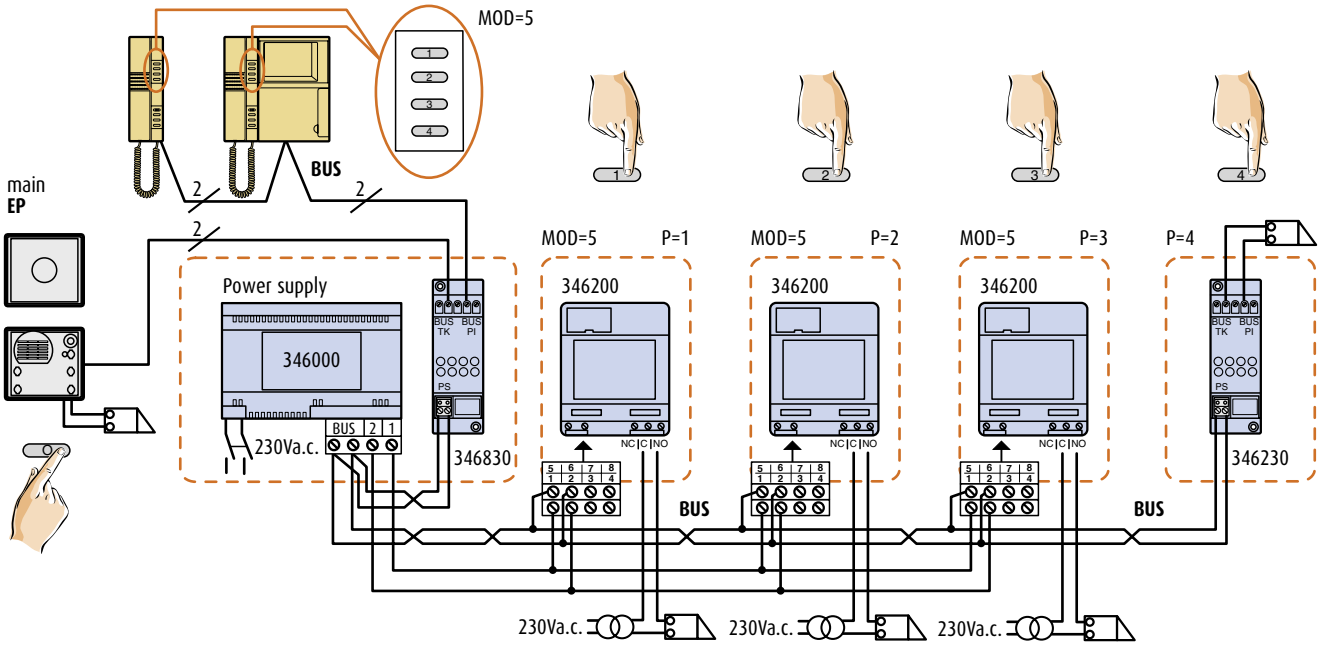


The handset keys call in succession the handsets configured in N from 1 to 5 excluding themselves.
Example: If calling from the handset configured with N=3.
- Key 1 calls the handset configured with N=1
- Key 2 calls the handset configured with N=2
- Key 3 calls the handset configured with N=4
- Key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

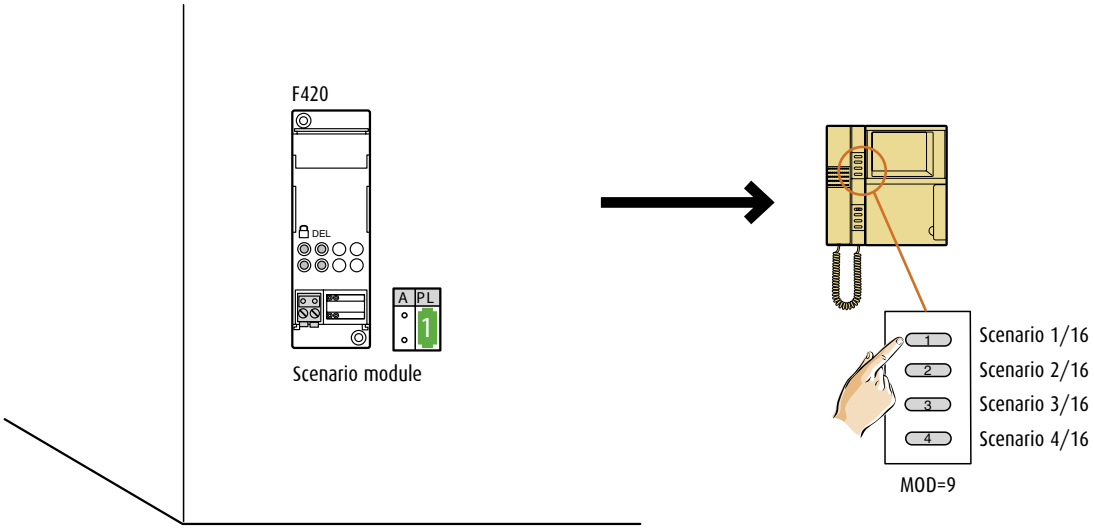
Example 3 - MOD = 5



Activation of extra door locks.

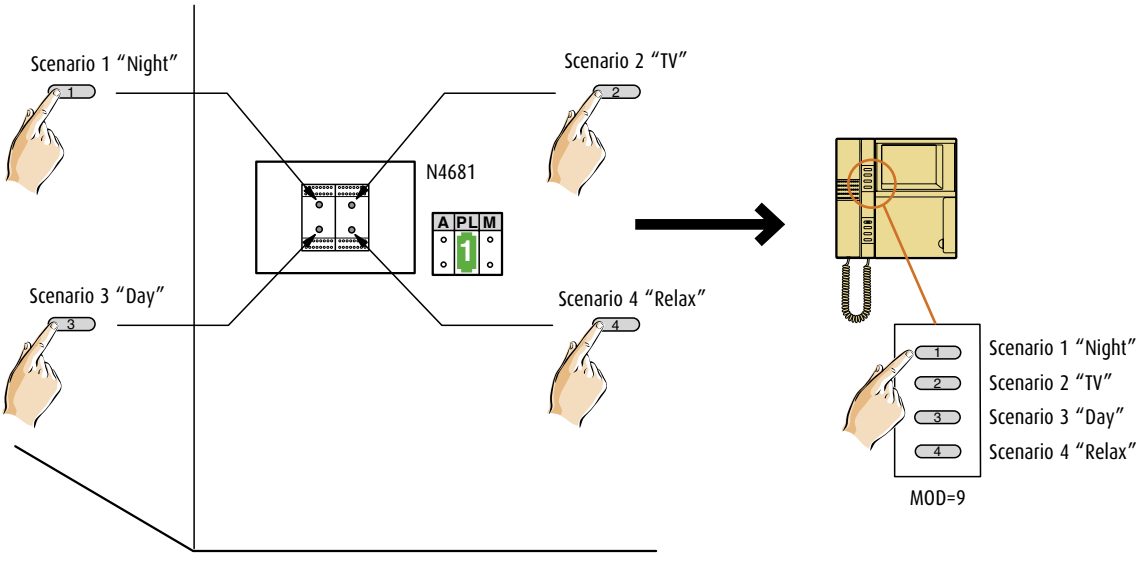
CONFIGURATION

Example 4 - MOD = 9



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

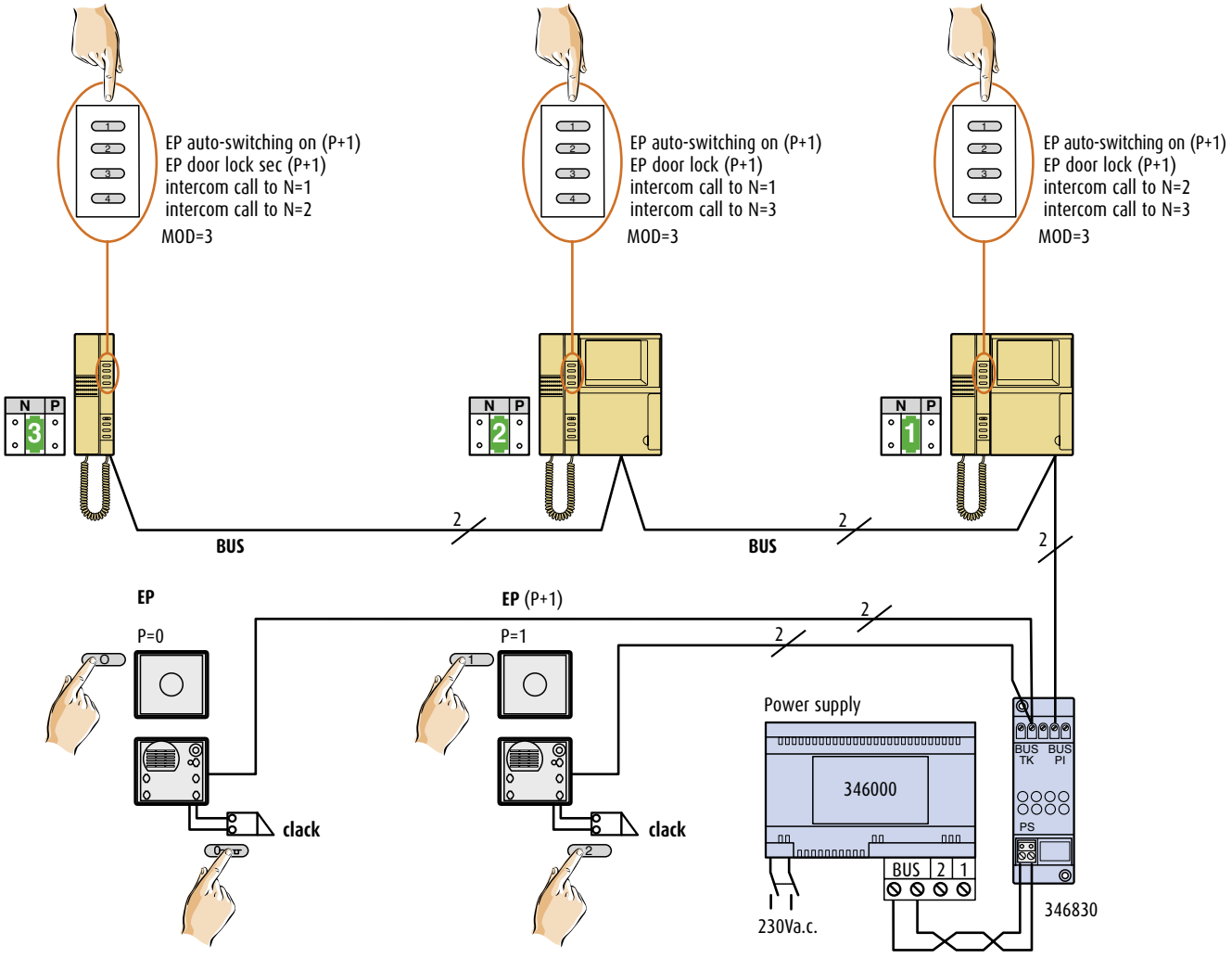
Example 5 - MOD = 9



Scenario units control (Item N4681)

Example 6 - MOD = 3 (combined 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

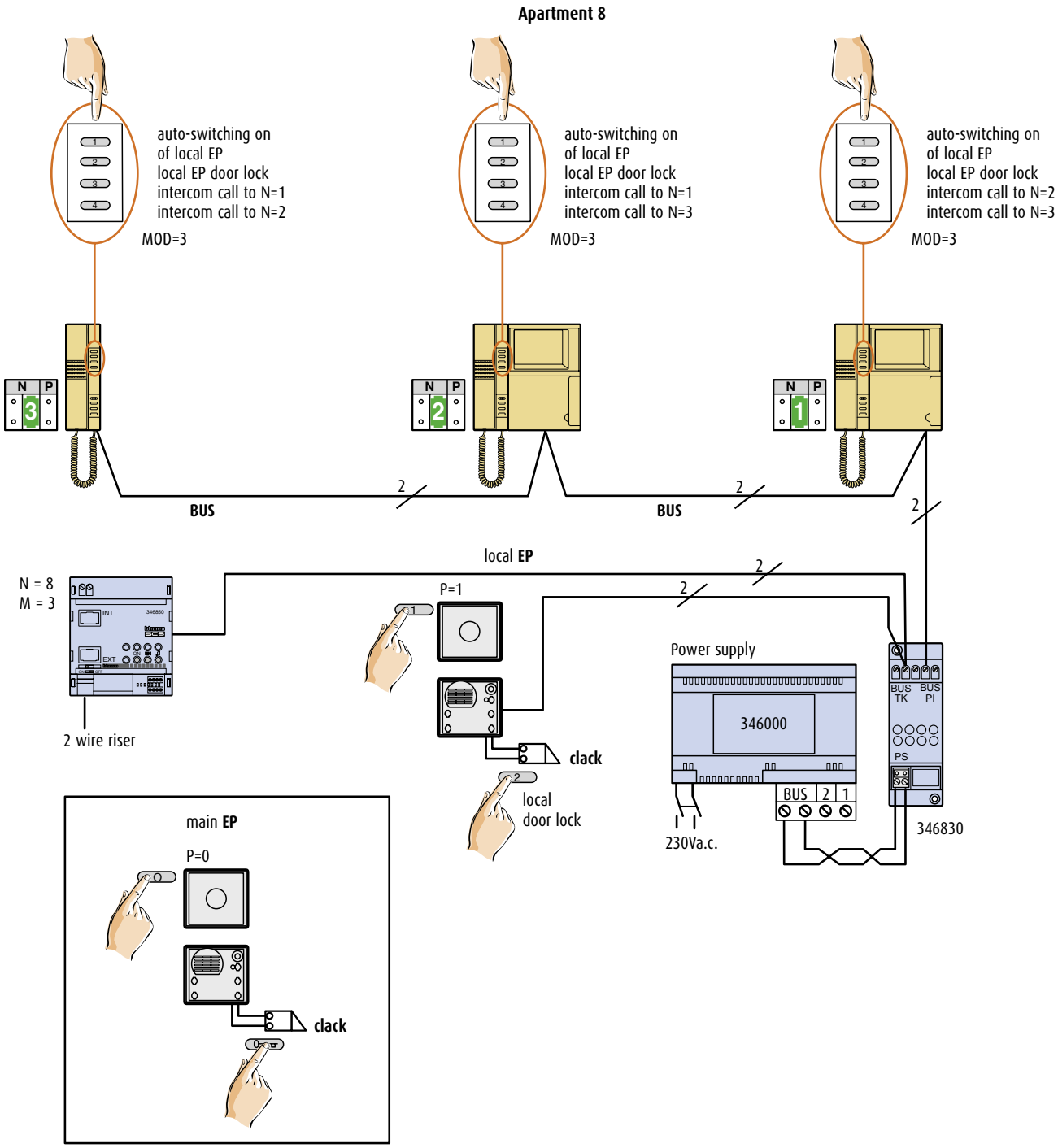


NOTE: The operation mode of the intercom function is equal to that explained for the example 2. But in this case the intercom occurs only among three apartments or three handsets in one-family systems.

CONFIGURATION

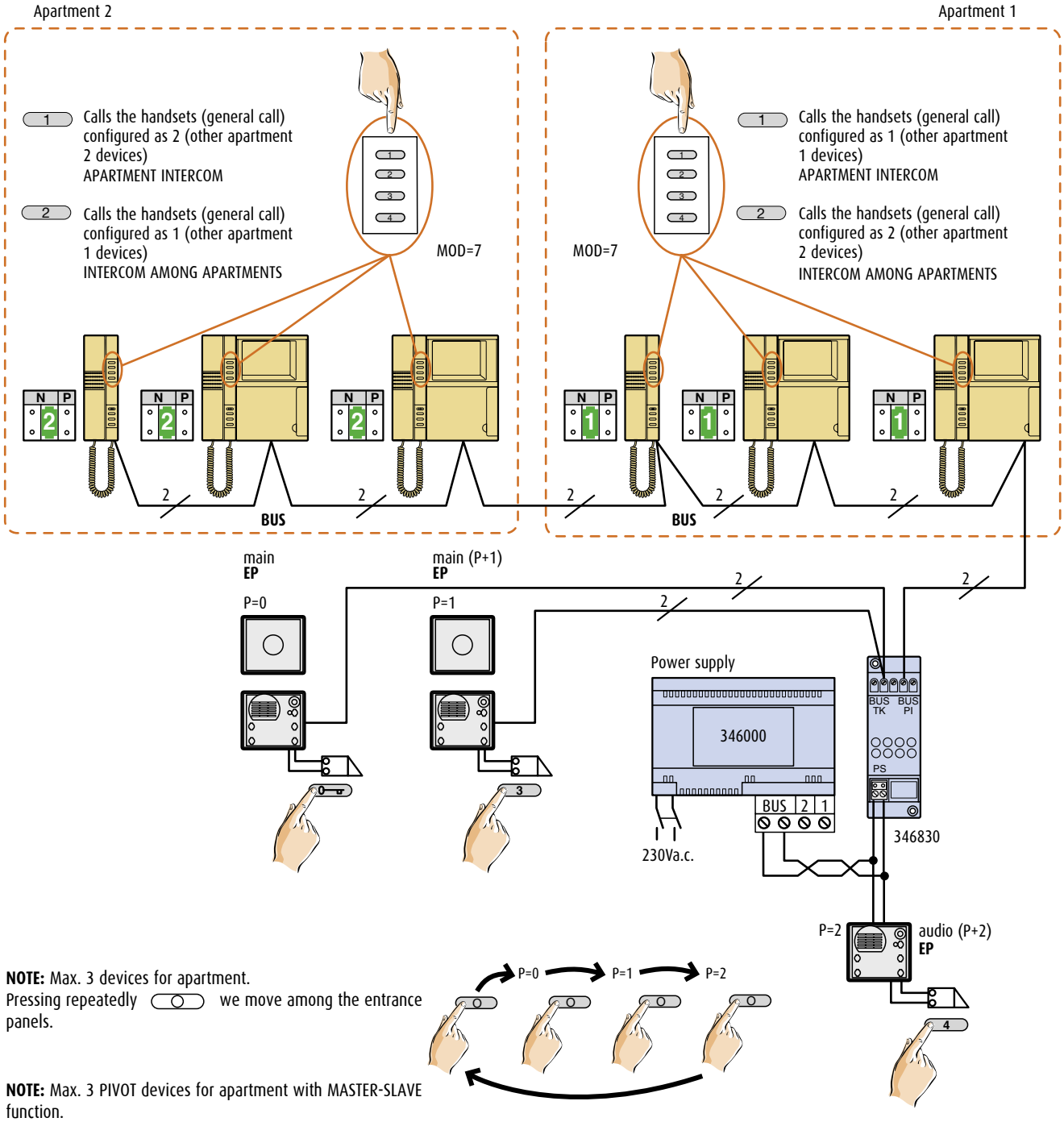
Example 7 - MOD = 3 (combined mode) in systems with apartment interface 346850

- Key 1 Auto-switching on and cycle of the local EP
- Key 2 Activation of local EP door lock in direct mode without the call
- Key 3 Intercom Function among apartment handsets
- Key 4 Intercom Function among apartment handsets



Example 8 - MOD = 7 (Intercom in the two-family system)

- Key 1 Calls the handsets of the apartment (the handsets configured in N like the calling handset)
- Key 2 Calls the handsets of the other apartment (the handsets configured with N different from the N of the calling handset)
- 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



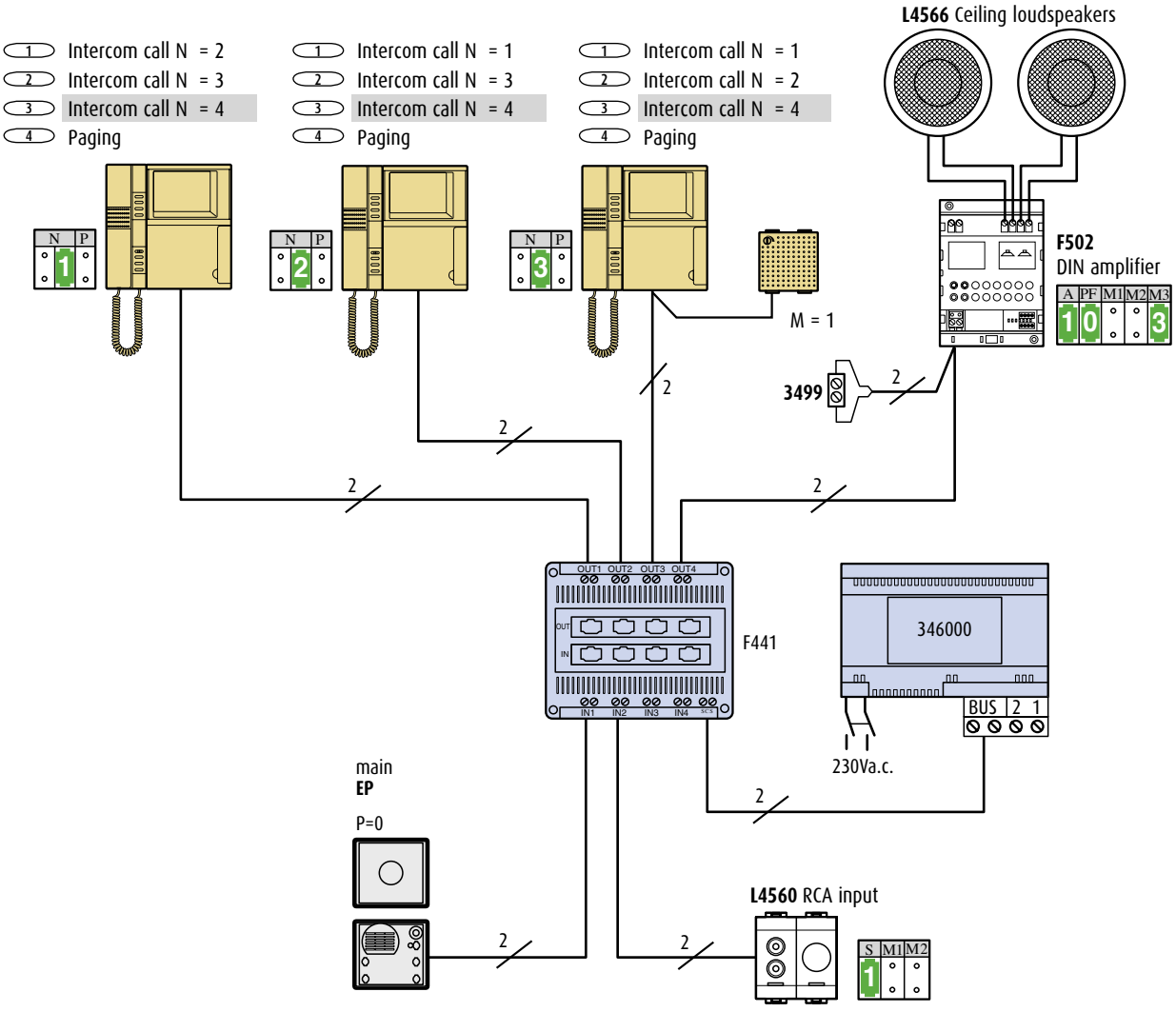
NOTE: Max. 3 devices for apartment.
Pressing repeatedly ○ we move among the entrance panels.

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

CONFIGURATION

Example 9 - MOD = 6

- Key 1 Intercom
- Key 2 Intercom
- Key 3 Intercom
- Key 4 Paging function on 2 WIRE sound system loudspeakers and melodic bells with M = 1



Pressing the key 4 we communicate with outside through the 2 wire sound system loudspeakers and the melodic bells M = 1.
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.

SWING AUDIO HANDSET

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

The SWING 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)
- Floor call
- Intercom call

N – handsets number
Configurator N assigns to each audio handset a recognition number within the system. The handsets can be configured progressively. Handsets connected in parallel (max. 3) in apartment without item 346850, 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)

COLOUR AND B/W SWING AUDIO HANDSET

- SWING video handset with b/w monitor available in: Ash (Item 344802), Cord (Item 344803) and White (Item 344804).
- SWING video handset with colour monitor available in: Ash (Item 344822), Cord (Item 344823) and White (Item 344824).

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)
- Floor call
- Intercom call

N – handset number
Configurator N assigns to each video hanset a recognition number within the system. The handsets can be configured progressively. Handsets connected in parallel (max 3) in apartment without item 346850, 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.

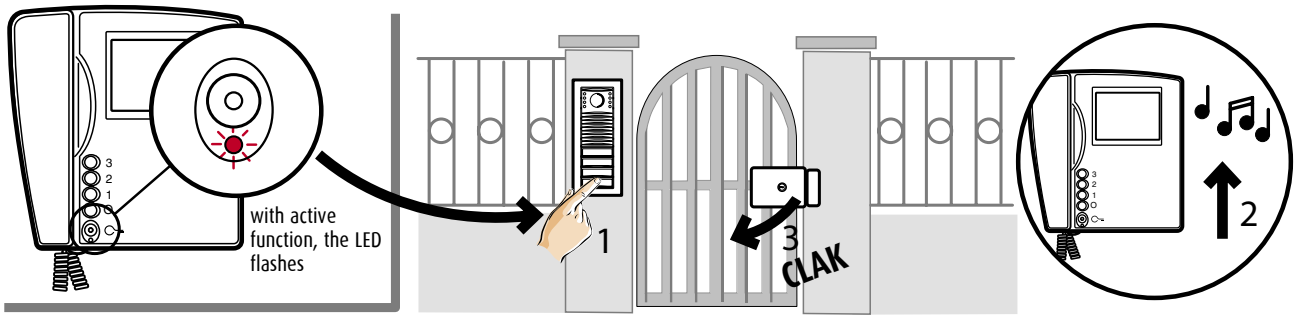
Configurator in P	Key function (0)
0-9	Activation of the sound on the entrance panel (configured with P = 0-9)
0-9	Opening of the EP door lock (configured with P = 0-9)

The SWING handsets have not MASTER-SLAVE function.

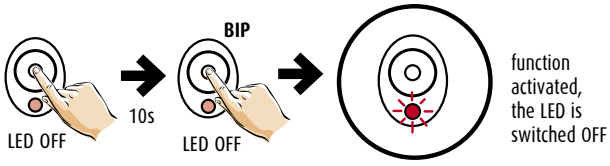
CONFIGURATION

"OFFICE" FUNCTION

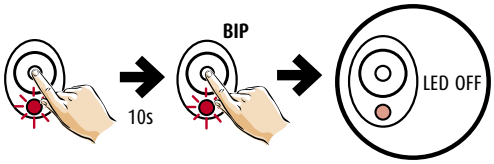
With the function enabled, at the arrival of a call from the entrance panel (1), the SWING audio/video handset rings (2) and the relating door lock is automatically opened without act on the door lock pushbutton of the handset (3).



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



Enabling of athe function

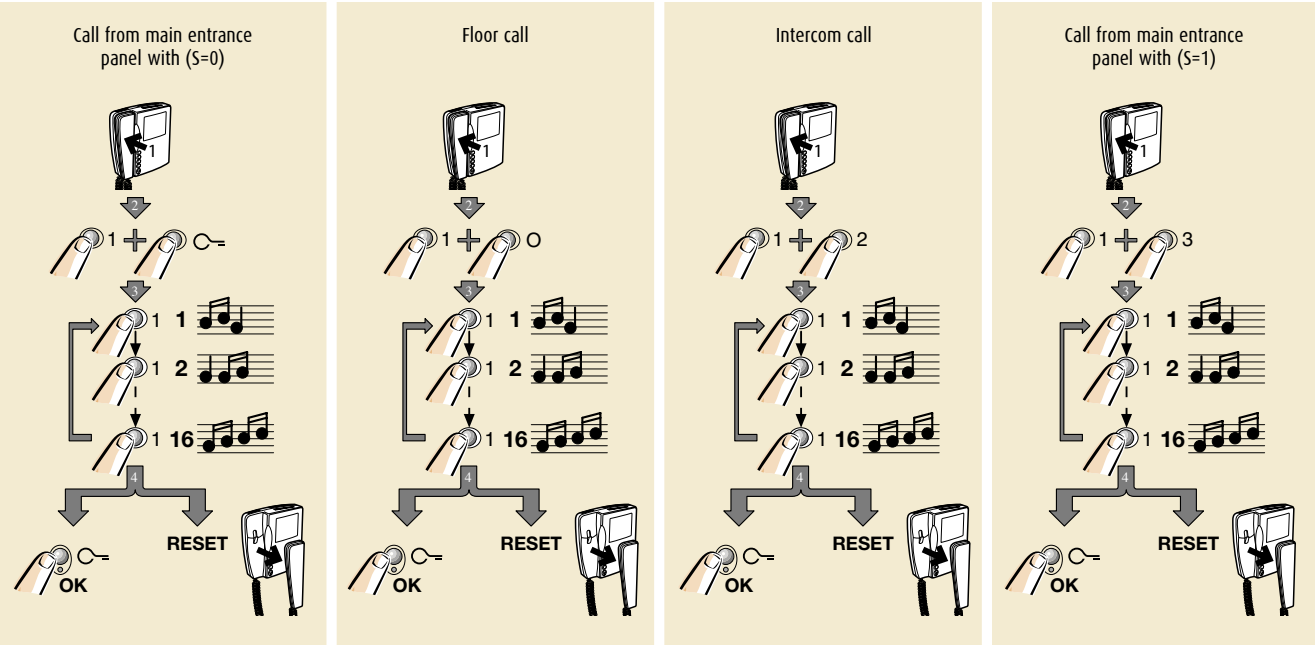


Deactivation of the function

To

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

SWING BELL PROGRAMMING



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

MODE	KEYS FUNCTION WITHOUT INTERFACE 346850	FOR MULTI-FAMILY SYSTEMS IN APARTMENT WITH INTERFACE 346850
MOD= ⁘	○ 3 - Staircase light control	
	○ 2 - Control of the door lock of the EP conf. P+1 Control 346200 with MOD 5 and P+1 Control 346230 with P+1	
	○ 1 - Activation of the EP conf. with P+1 Control 346200 with MOD 9 and P+1	
	○ ○ - Activation of the EP conf. with P	
	⊙○- - Control of the door lock of the EP conf. with P	
MOD = 20 functions chosen for the keys with MOD=0 and "office" function		
MOD= ⁘ 1	○ 3 - Staircase light control	○ 3 - Staircase light control
	○ 2 - Intercom among apartments with N=1-3	○ 2 - Intercom among devices with N=1-3
	○ 1 - Intercom among apartments with N=1-3	○ 1 - Intercom among devices N=1-3
	○ ○ - Activation of the EP conf. with P	○ ○ - Activation of the EP conf. with P
	⊙○- - Control of the door lock of the EP conf. with P	⊙○- - Control of the door lock of the PE conf. with P
MOD = 21 functions chosen for the keys with MOD=1 and "office" function		
MOD= ⁘ 2		○ 3 - Staircase light control
		○ 2 - Intercom among apartments with N=1-3
		○ 1 - Intercom among apartments with N=1-3
		○ ○ - Activation of the EP conf. with P
		⊙○- - Control of the door lock of the PE conf. with P
MOD = 22 functions chosen for the keys with MOD=2 and "office" function		
MOD= ⁘ 3	○ 3 - Staircase light control	○ 3 - Staircase light control
	○ 2 - Intercom among handsets outside the apartment conf. with N=1-2	○ 2 - Intercom among handsets in apartment config. with N=1-2
	○ 1 - Activation of the EP conf. with P+1 Control 346200 with MOD 9 and P+1	○ 1 - Activation of the EP conf. with P+1 Control 346200 with MOD 9 and P+1
	○ ○ - Activation of the EP conf. with P	○ ○ - Activation of the EP conf. with P
	⊙○- - Control of the door lock of the EP conf.	⊙○- - Control of the door lock of the PE conf.
MOD = 23 functions chosen for the keys with MOD=3 and "office" function		
MOD= ⁘ 5	○ 3 - Staircase light control	
	○ 2 - Control of the door lock of the EP conf. P+2 Control 346200 with MOD 5 and P+2 Control 346230 with P+2	
	○ 1 - Control of the door lock of the EP conf. P+1 Control 346200 with MOD 5 and P+1 Control 346230 with P+1	
	○ ○ - Activation of the EP conf. with P	
	⊙○- - Control of the door lock of the EP conf.	
MOD = 25 functions chosen for the keys with MOD=5 and "office" function		
MOD= ⁘ 6		○ 3 - Staircase light control
		○ 2 - Scenario activation 2
		○ 1 - Scenario activation 1
		○ ○ - Activation of the local EP locale conf. with P
		⊙○- - Control of the door lock of the PE conf. with P
MOD = 26 functions chosen for the keys with MOD=6 and "office" function		
MOD= 1 ⁘	○ 3 - Activation of the EP conf. with P+3 Control 346200 with MOD 9 and P+3	
	○ 2 - Activation of the EP conf. with P+2 Control 346200 with MOD 9 and P+2	
	○ 1 - Activation of the EP conf. with P+2 Control 346200 with MOD 9 and P+2	
	○ ○ - Activation of the EP conf. with P	
	⊙○- - Control of the door lock of the EP conf. with P	
MOD = 30 functions chosen for the keys with MOD=10 and "office" function		

CONFIGURATION

MODE	KEYS FUNCTION WITHOUT INTERFACE 346850	FOR MULTI-FAMILY SYSTEMS IN APARTMENT WITH INTERFACE 346850
MOD= 1 1	○3 - Intercom among apartments with N=1-5	○3 - Intercom among devices with N=1-5
	○2 - Intercom among apartments with N=1-5	○2 - Intercom among devices with N=1-5
	○1 - Intercom among apartments with N=1-5	○1 - Intercom among devices with N=1-5
	○○ - Intercom among apartments with N=1-5	○○ - Intercom among devices with N=1-5
	⊙⊶ - Control of the door lock of the EP conf. with P	⊙⊶ - Control of the door lock of the EP conf. with P
MOD = 31 functions chosen for the keys with MOD=11 and "office" function		
MOD= 1 2		○3 - Intercom among apartments with N=1-5
		○2 - Intercom among apartments with N=1-5
		○1 - Intercom among apartments with N=1-5
		○○ - Intercom among apartments with N=1-5
		⊙⊶ - Control of the door lock of the EP conf. with P
MOD = 32 functions chosen for the keys with MOD=12 and "office" function		
MOD= 1 3	○3 - Control of the door lock of the EP conf. P+1 Control 346200 with MOD 5 and P+1 Control 346230 with P+1	
	○2 - Intercom among handsets outside the apartment config. with N=1-3	
	○1 - Intercom among handsets outside the apartment config. with N=1-3	
	○○ - Activation of the EP conf. with P	
	⊙⊶ - Control of the door lock of the EP conf. with P	
MOD = 33 functions chosen for the keys with MOD=13 and "office" function		
MOD= 1 5	○3 - Control of the door lock of the EP conf. P+4 Control 346200 with MOD 5 and P+4 Control 346230 with P+4	
	○2 - Control of the door lock of the EP conf. P+3 Control 346200 with MOD 5 and P+3 Control 346230 with P+3	
	○1 - Control of the door lock of the EP conf. P+2 Control 346200 with MOD 5 and P+2 Control 346230 with P+2	
	○○ - Control of the door lock of the EP conf. P+1 Control 346200 with MOD 5 and P+1 Control 346230 with P+1	
	⊙⊶ - Control of the door lock of the EP configured with P (in direct mode)	
MOD = 35 functions chosen for the keys with MOD=15 and "office" function		
MOD= 1 6		○3 - Scenario activation 3
		○2 - Scenario activation 2
		○1 - Scenario activation 1
		○○ - Scenario activation 4
		⊙⊶ - Control of the door lock of the local EP conf. with P
MOD = 26 functions chosen for the keys with MOD=6 and "office" function		
MOD= 4 0		○3 - Paging function
		○2 - Control of the door lock of the local EP conf. P+1
		○1 - Activation of the local EP conf. with P+1
		○○ - Activation of the local EP conf. with P
		⊙⊶ - Control of the door lock of the local EP conf. with P
MOD = 60 functions chosen for the keys with MOD=40 and "office" function		
MOD= 5 3 (in two-family systems)	○3 - Intercom among handsets in the home	
	○2 - Intercom with handsets of the other home	
	○1 - Activation of the EP conf. with P +1	
	○○ - Activation of the EP conf. with P	
	⊙⊶ - Control of the door lock of the EP conf. with P	
MOD= 5 3 (in multi-family systems conf. with N = 3)	○3 - Intercom in the home	
	○2 - NOT USED	
	○1 - Activation of the EP conf. with P +1	
	○○ - Activation of the EP conf. with P	
	⊙⊶ - Control of the door lock of the EP conf. with P	
MOD = 73 functions chosen for the keys with MOD=53 and "office" function		

SPRINT HANDSET

SPRINT audio handset - fitted with accessories (Item 344212) and not fitted with accessories (Item 344202)

N – number of the handset
Configurator N assigns a recognition number within the system to each audio handset.
The handsets must be configured progressively.
Handsets connected in parallel (max. 3) in apartment without Item 346850, 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 combined 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 configured 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

SPRINT VIDEO HANDSET

SPRINT Video handset with b/w monitor Item 344342

N – number of the handset
Configurator N assigns a recognition number within the system to each video handset. The handsets must be configured progressively.
Handsets connected in parallel (max. 3) in apartment without Item 346850, must be configured with the same configurator N.

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 ◯ and which door lock is enabled by the key  with the audio handset in pause.

The handsets have not MASTER-SLAVE function.

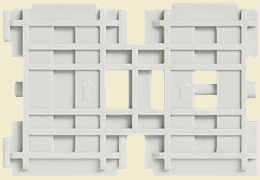
CONFIGURATION

SPECIAL CONTROL

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

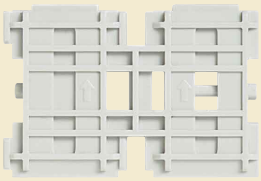
Floor call

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 floor call
A = tens of the configurator in N of the handset to be called
PL = units of the configurator in N of the handset to be called



Staircase light control

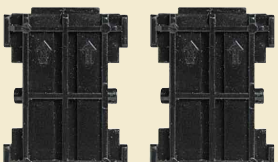
The special control must be equipped with the 2 module grey key-cover support to enable only a pushbutton.
SPE = 9 for 2 wire door entry system and video door entry systems functions
M = 3 for the call at the floor
A = tens of the configurator in N of the handset which switches ON the lights
PL = units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

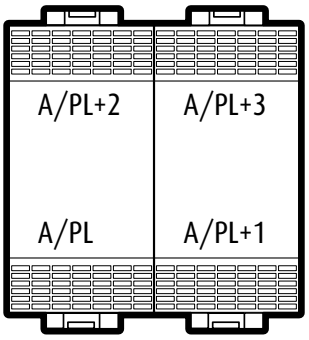


Door lock control and generic activations

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

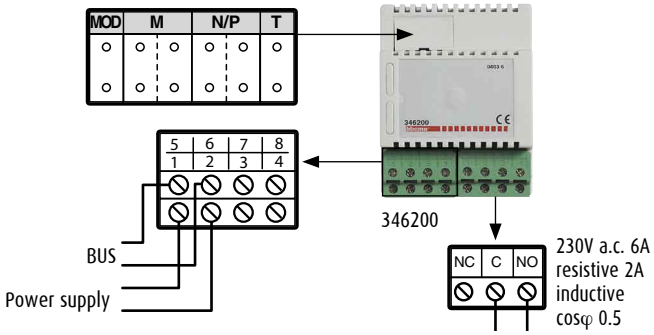




If A/PL = 0 the special control allows to control the door locks associated to the EP configured in P with 0, 1, 2 and 3.

ACTUATORS

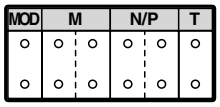
Actuators for generic loads (Item 346200)



LIGHT KEY CONTROLS

MOD 0 - Staircase light from any handset and EP

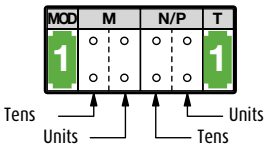
- The actuator is enabled by pressing the light pushbutton of the handset and the light key on the entrance panel. (Customize the time through the configurator T, without configurator t = 3 min)



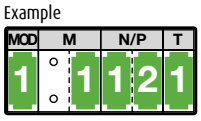
MOD 1 - Sundry services (door lock/open the gate/staircase light) from handset unit

- 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 handsets.



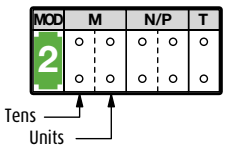
Example



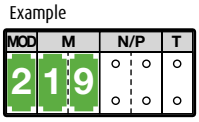
Door lock control from the light key of the handsets configured from 1 to 12

MOD 2 - Staircase lights from all riser handsets

- The actuator is enabled by pressing the staircase light key of all riser handsets
- Customize the time through the configurator T
- Insert in M the configurator M of the item 346851 (with MOD = 5)



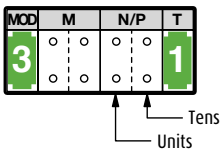
Example



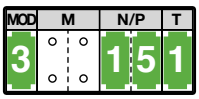
Staircase light control from all handsets of the riser 19

MOD 3 - Sundry services from single handset

- 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



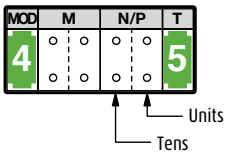
Example



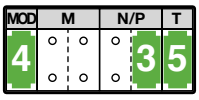
Door lock control from the light key of the handset configured with 15

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

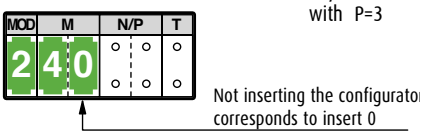


Example



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.)

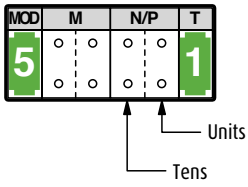


CONFIGURATION

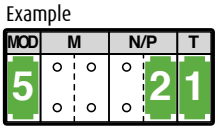
CONTROLS FROM DOOR LOCK KEY

MOD 5 - Door lock control from all handsets

- 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



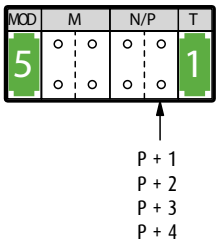
Door lock control of the entrance panel configured with P=2 from the door lock pushbutton of all the associated handsets

CONTROLS FROM PIVOT AND SWING ADDITION KEYS

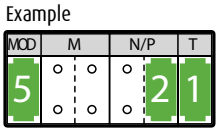
MOD 5 - Door lock control

- 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

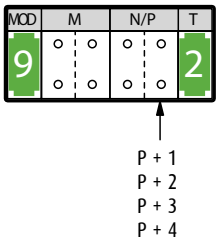


Door lock control by pressing the key 2 of the 4 keys set for PIVOT (PIVOT configured with P = 0)

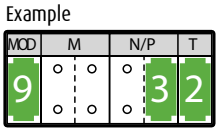
MOD 9 - Sundry services (door lock/open the gate/staircase light)

- 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)

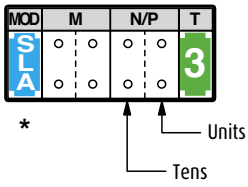
CALL REPEATER ON BADENIA BELL

MOD SLA

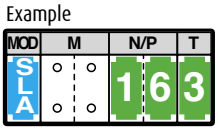
- Repeat the calls coming from the entrance panel on Badenia bell
- Customize the time through configurator T (T=3 the Badenia rings for 6s. If the call is answered, the bell stops ringing)
- Insert in N/P the tens and units of the handset associated to the function

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

With the configurators 0 (-), 5, 6, 7, 8, the bell rings for max. 30s.



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	-	1	2	3	4	5	6	7	8	9
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 handsets

M=1 only with SWING audio handsets and video handsets "CISA Elettrika" door lock - door lock relay operation and "door lock checking" function.

M=4 Only with interface 349410 it allows:
- the direct control of the electric door lock with and Tersystem audio system
- the call to the switchboard with videoporter 2000

P - associated entrance panel number

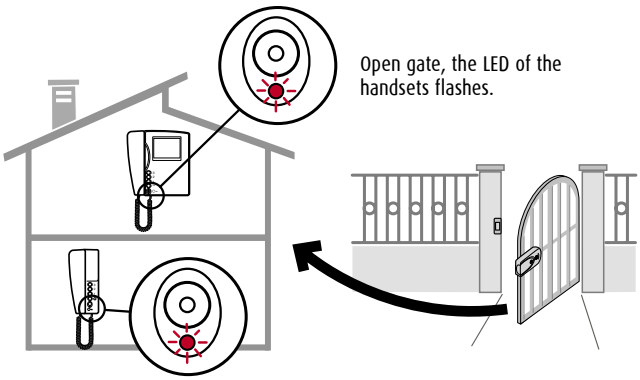
A configurator like that inserted in P of the speaker module (Item 342170, Item 342150, Item 342702 and Item 342708) or the speaker unit (Item 346991) must be entered in this socket. When the actuator is associated to the main entrance panel, no configurator must be inserted in P.

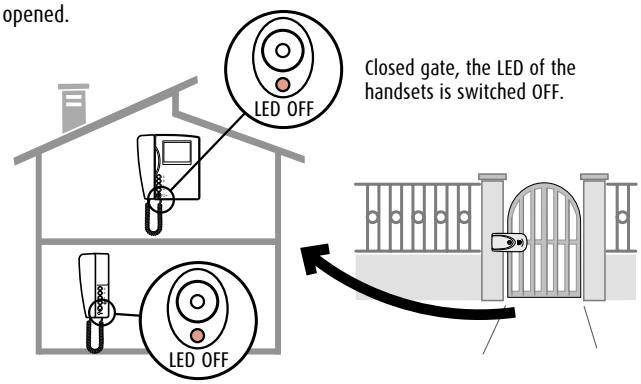
T - door lock relay timing

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.

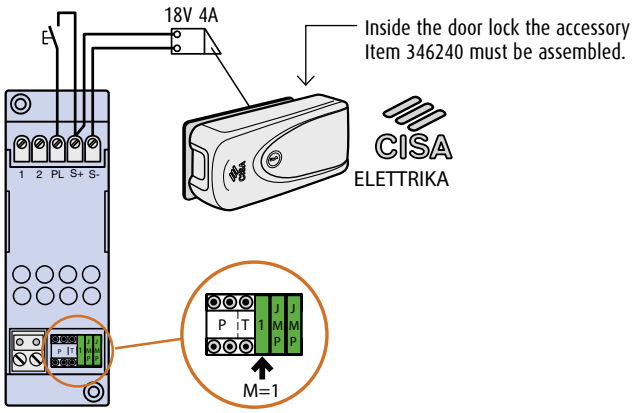
"DOOR LOCK CONTROL" FUNCTION

The use of the handsets with door status signalling LED (AXOLUTE VIDEO STATION, AXOLUTE VIDEO DISPLAY, POLYX MEMORY STATION, POLYX VIDEO DISPLAY and SWING) 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

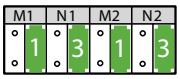
Interface between digital system and 2 wire system (Item 346150)

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.

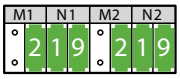
Mode A: it is possible to generate up to 40 risers and on each one of these, it is possible to install up to a maximum of 100 handsets (device).
In the total number of handsets installed on the riser column, the eventual audio handsets or video handsets in parallel must also be included.
With every device 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 handset (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 handsets 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 handsets (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 because the call on the 2 wire line (in this configuration) becomes general.



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



Handsets from 219 to 219 → The handsets 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)

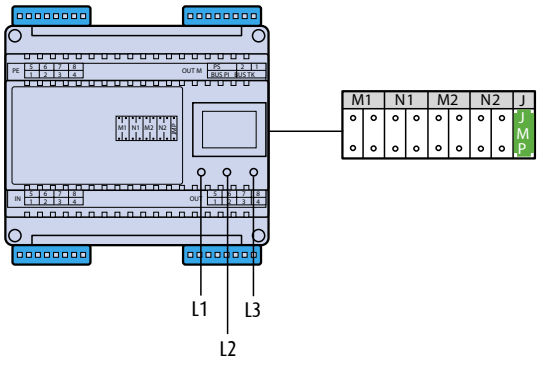
N2 = Call number
Mode A: must not be configured
Mode B: assigns the initial number of the handsets installed on the riser

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

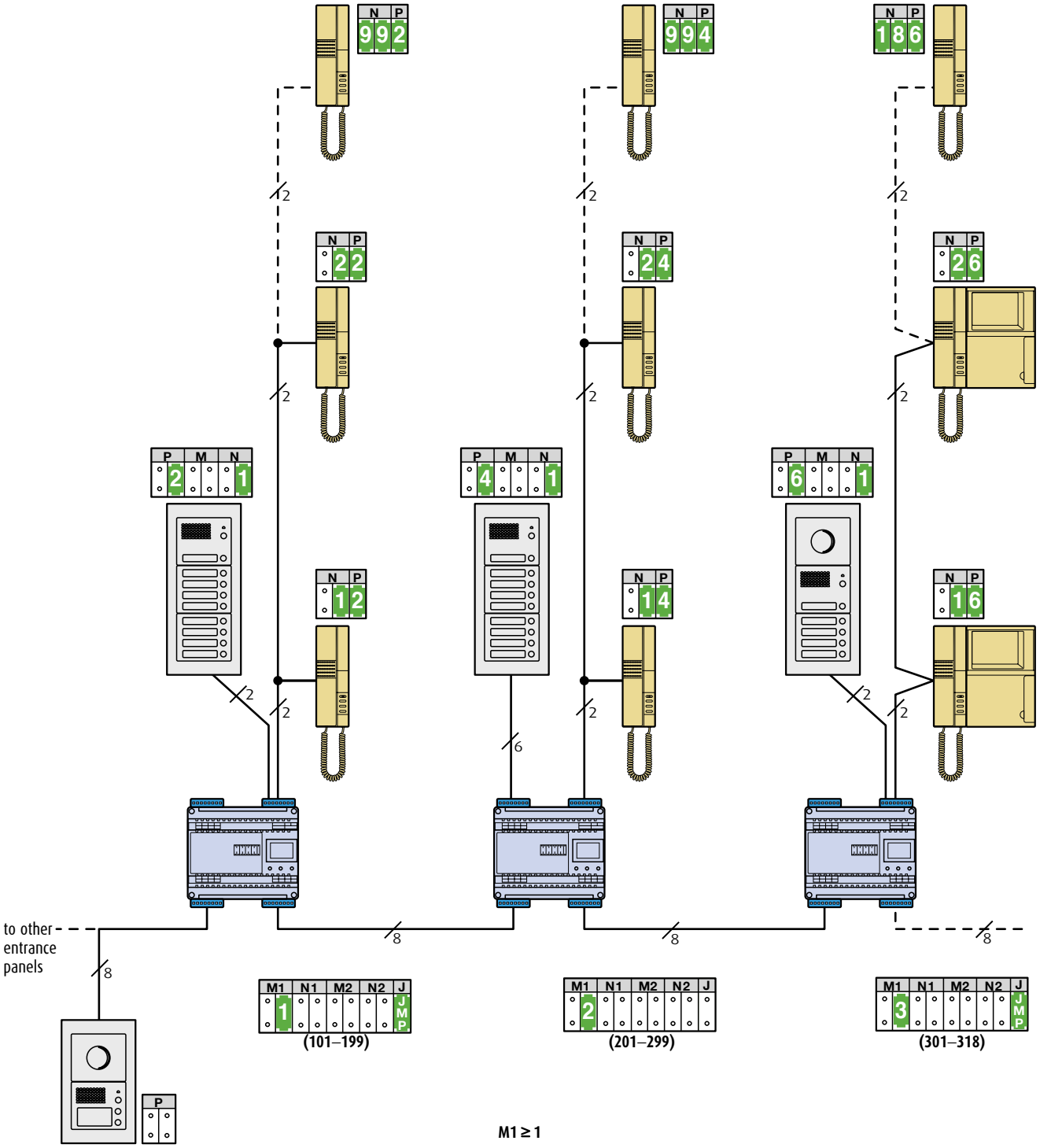
Configurator J disconnected = digital system EP (6 -8 wires)

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.



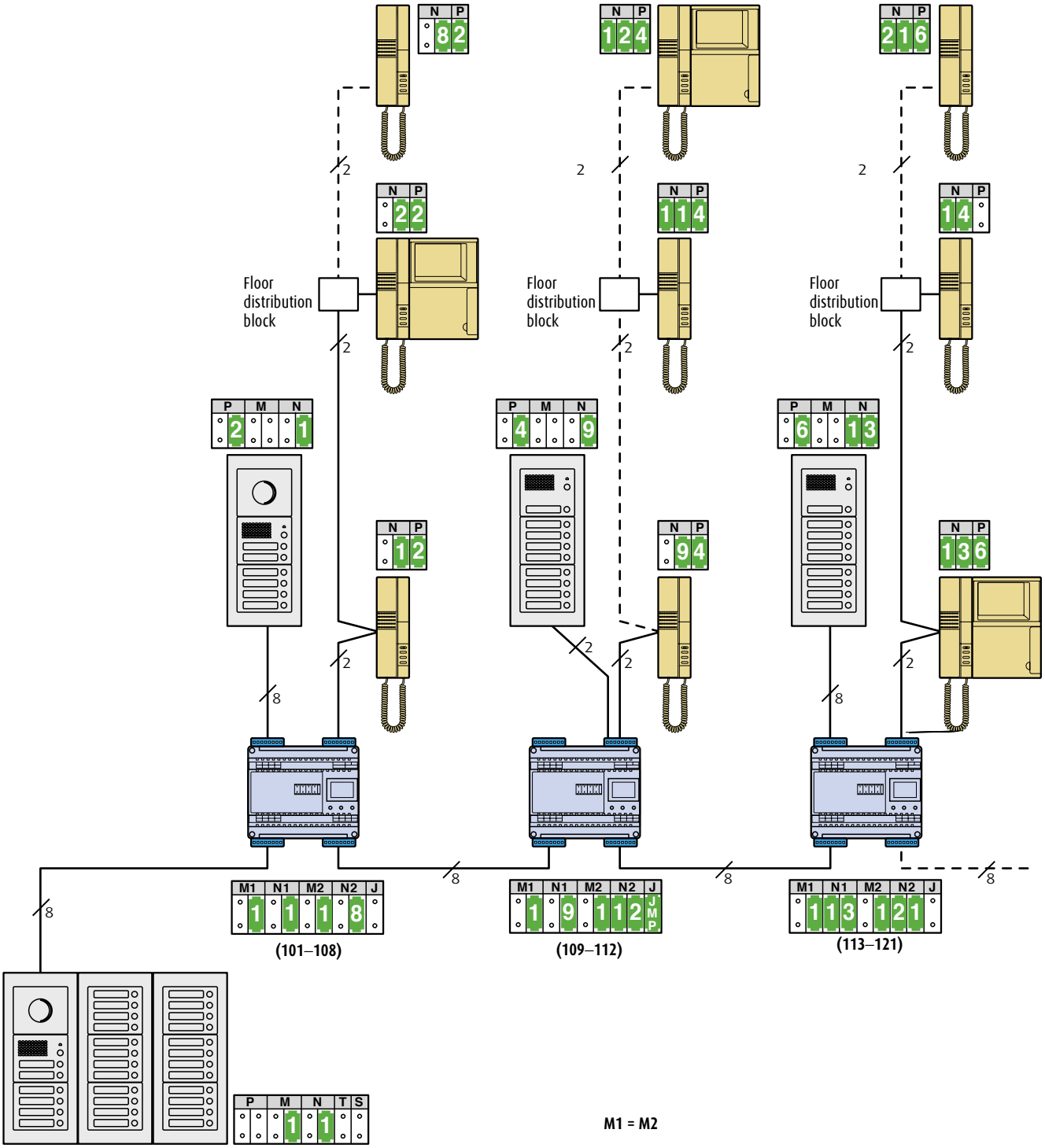
Example of configuration in mode A

The EP must be made with numeric or alphanumeric call modules.
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 handsets have the absolute address that goes from 1250 to 1265; therefore, at the same time, the handset of the riser must be configured in N from 50 to 65.

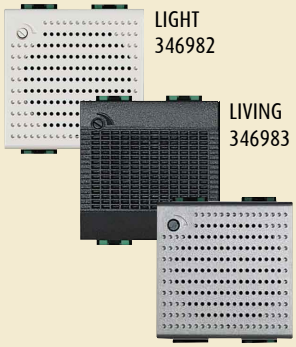


Example of configuration in mode A

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.

MELODIC BELLS

AXOLUTE
349412 (light)
349413 (dark)



LIGHT
346982

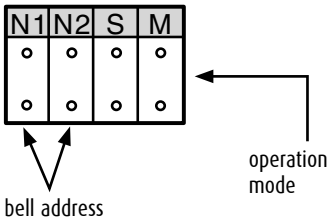
LIVING
346983

LIGHT TECH
346984

N1 and **N2** = they show the address of the melodic bell/pager inside the system. Configure with the same address of an apartment handset.

M	**Operation mode**
M = 0	Additional melodic bell
M = 1	Pager

The tune can be set and configured with TiRing software which can be downloaded from Bticino site.



FLOOR CALL INTERFACE

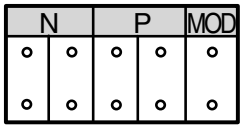
346833

N1 = address of the handset to call.
To be used only with MOD = 0

P = address of the entrance panel associated to the door lock to open..
To be used only with MOD = 2 and MOD = 3

M = Interface operation mode.
The MOD configurator assigns a certain function to the pushbuttons connected between PL1 and C and PL2 and C.

Distance 346833 - pushbuttons connected among PL1 and C and PL2 and C max. 3m.



MOD	N	P
0	handset address (00-99)	-
1	-	-
2	-	door lock address (00-95)
3	-	door lock address (00-95)

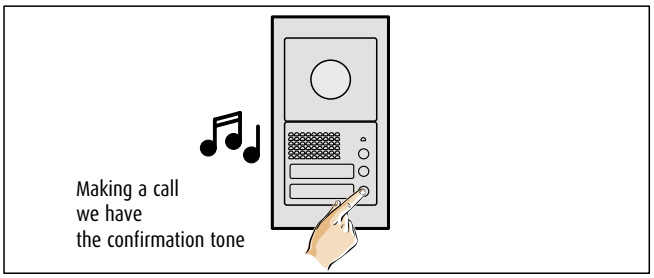
PL1	PL2
Addressed floor call	Staircase lights from Handset with 00
General floor call	Staircase lights from Handset with 00
Door lock opening	Staircase lights from Handset with 00
Door lock opening	Door lock opening (P+1)

TESTING AND STARTING-UP

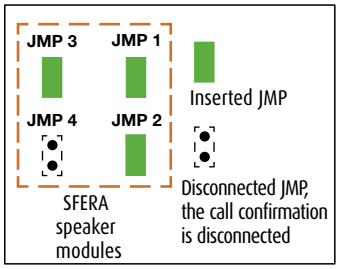
TESTING AND STARTING-UP

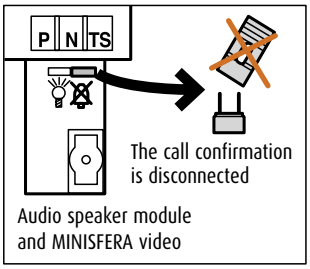
Once realized a 2 wire handset or video handset system, before supply the circuit, control the correctness of the wiring and the configuration of the handsets, the entrance panels and any accessories (4-keys modules, actuators, etc.) present in the system.
If all the checks are positive perform the operation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



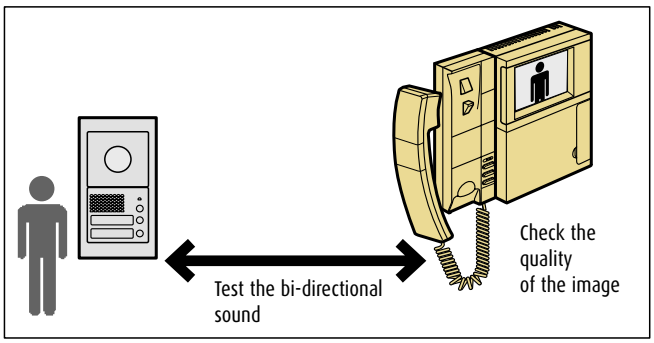
- The confirmation of the call can be excluded removing the appropriate jumper from the speaker module of the SFERA, MINISFERA, LINEA 2000 and LINEA 2000 METAL entrance panels.



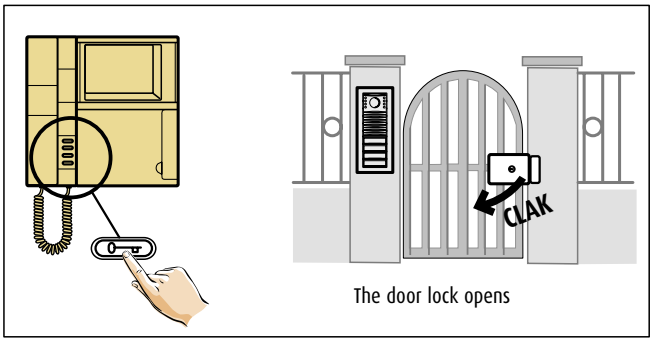


- The handset rings, rising the micro-telephone (receiver) we enter in communication with the entrance panel. In video systems, after the call we have the switching ON of the monitor of the video; if the call comes from an audio entrance panel, the monitor will keep switched OFF. Check the presence of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

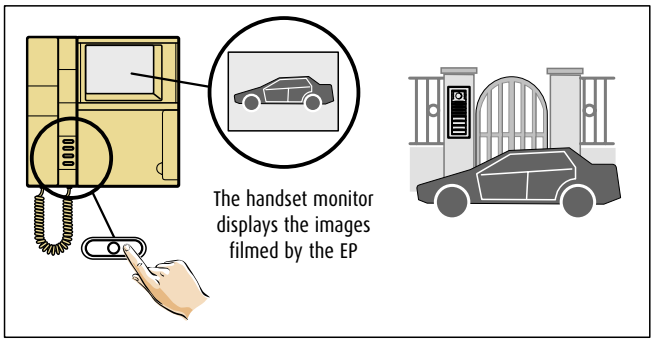


- Check the operation of the door lock keys from all the handsets, auto-switching ON of the entrance panel and staircase light switching ON. Check that the door lock pushbutton acts, with handset in pause (hanged up phone and no ongoing call), on the door lock of the entrance panel associated to the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

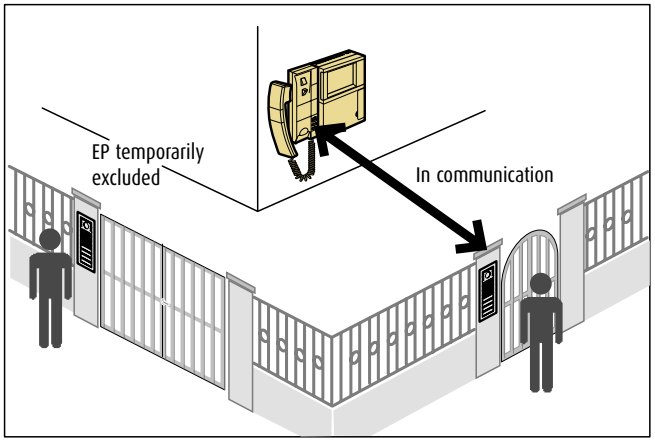


TESTING AND STARTING-UP

- 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.



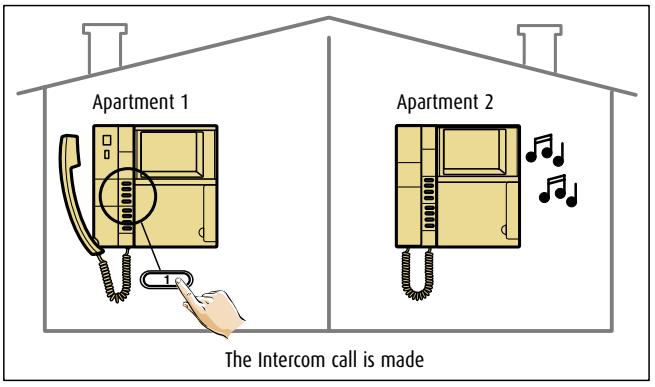
- In addition, check that during a talk and in the 30 seconds after the sent of a call, the handsets and the entrance panels connected to the system are not enabled to make other calls.
  Making a call from the entrance panel there will be a busy tone.
- Check that after 1 minute there is the auto-exclusion 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)

  Note: EP calls have priority on intercom calls.

  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
Ha is the audio or video handset
SUPPLY is the system power supply
FDB is the video floor distribution block

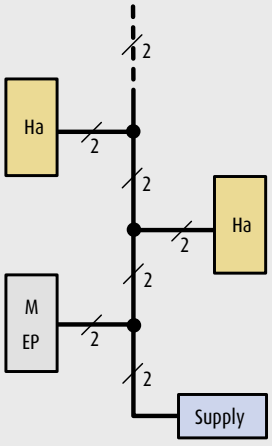


Diagram for 2 wire audio system

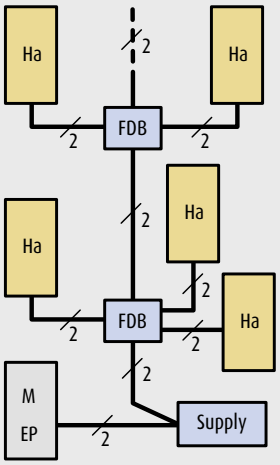


Diagram for 2 wire video system

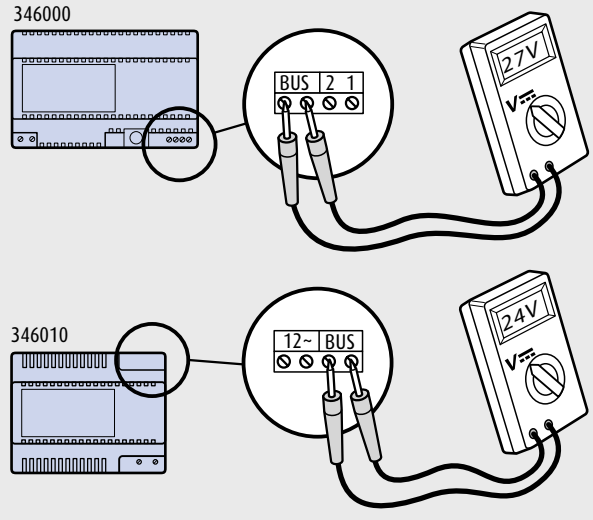
GENERAL CONTROLS

- 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)

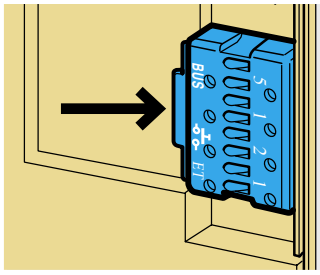
If the above mentioned voltages are not present check the power supply with no component connected.

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

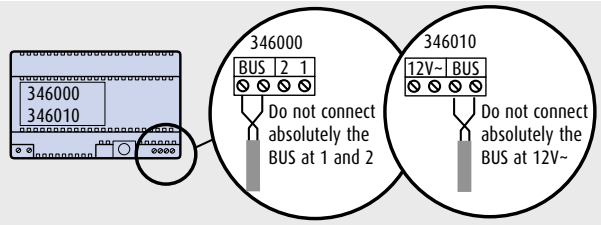


Check also that the connections are made perfectly

SOLUTIONS FOR THE WRONG OPERATIONS

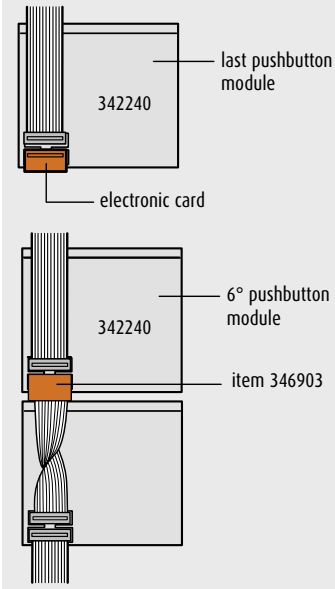
Hereafter there is a list of the most common wrong operations found and their solutions.

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



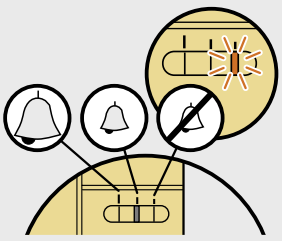
- If the system is video control the wiring on the Item 346830 and the Item F441
- In multi-family systems control the presence and the correct insertion of the orange electronic card Item CT15/11 (equipped with the speaker module) on the last keys module.

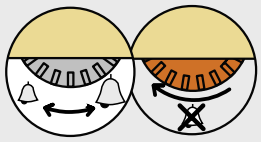
- In multi-family systems with more than 26 call pushbuttons, check that after the 6th keys module (Item 342240) is inserted the accessory (Item 336903) for the inversion of the connection wire

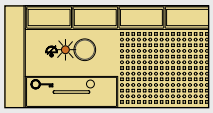


The handset does not ring

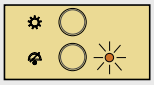
- Control the configuration
- Control that the call exclusion is not inserted and check the position of the volume regulator
- Check the correct connection of the wires on the terminal blue of the handset

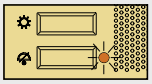

PIVOT audio and video handsets


SWING audio and video handsets

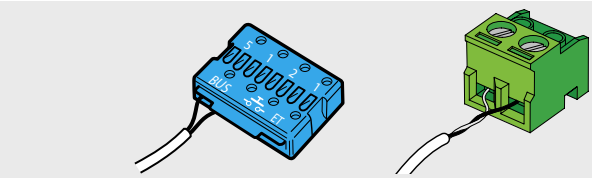
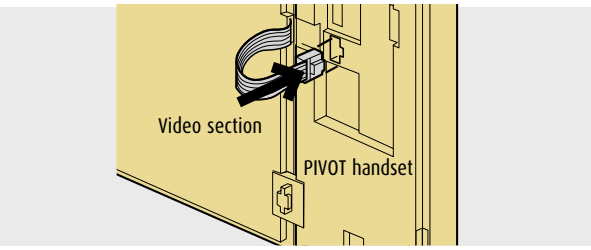
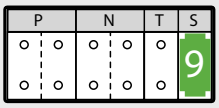
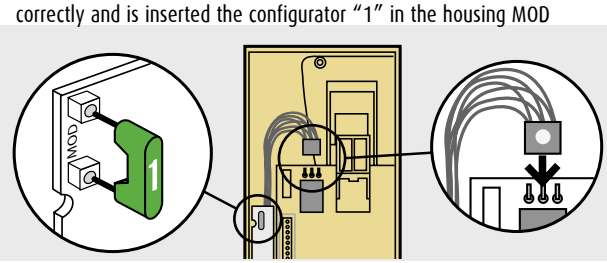

POLYX VIDEO DISPLAY

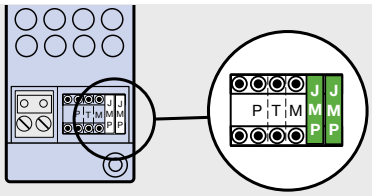
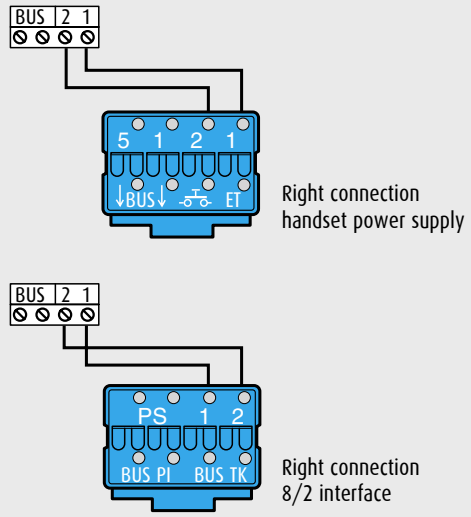
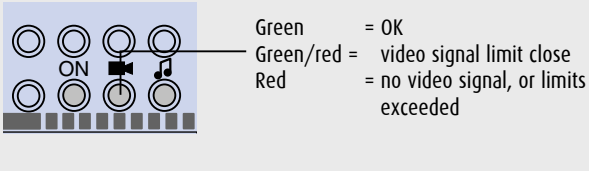
AXOLUTE VIDEO DISPLAY


POLYX MEMORY STATION


AXOLUTE VIDEO STATION

TROUBLESHOOTING

FOUND WRONG OPERATION	SOLUTION
	- Check the correct connection of the wires on the blue terminal or on the green terminal of the handset 
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 all handsets. - 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. - Check the wiring of the BUS and of the terminals 1-2

FOUND WRONG OPERATION	SOLUTION
The actuator 346230 does not work	- Control the configuration. - Check the need of the configurators “JMP” according to the operation mode of use chosen. 
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 
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). - When the apartment interface, item 346850, or the system expansion module, item 346851, are installed, check the level of the video signal indicated by the LED.  If the LED is green/red or red check the effective presence of a video signal and that the installation limits have not been exceeded and the devices DIP-SWITCH position.

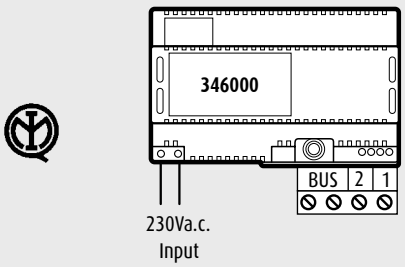
TECHNICAL FEATURES

SECTION CONTENTS

Power supplies

POWER SUPPLY ITEM 346000

Power supply for audio 2 wire system to be used together with speaker module Item 342170 or in universal speaker unit Item 346991, to make systems up to 100 handsets (up to 56 with Item 346991). This device is also used in video 2 wire systems together with Item 346830 or to the audio-video node Item F441.



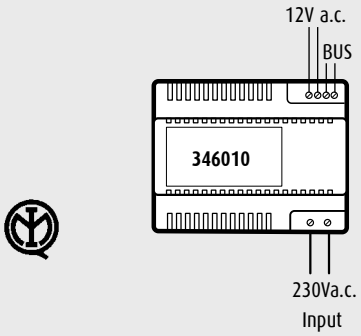
Features

- Safety devices with double insulation SELV
- 8 DIN enclosure
- Input 230V a.c. 50-60Hz
- Outputs:
  - Bus 27V
  - 1-2 27V d.c. } 1.2A
- Dissipated power: 11W

The device must not be configured.

POWER SUPPLY ITEM 346010

Power supply for audio 2 wire system to be used together with speaker module Item 342150 or in universal speaker unit Item 346991, to make systems up to 26 handsets.



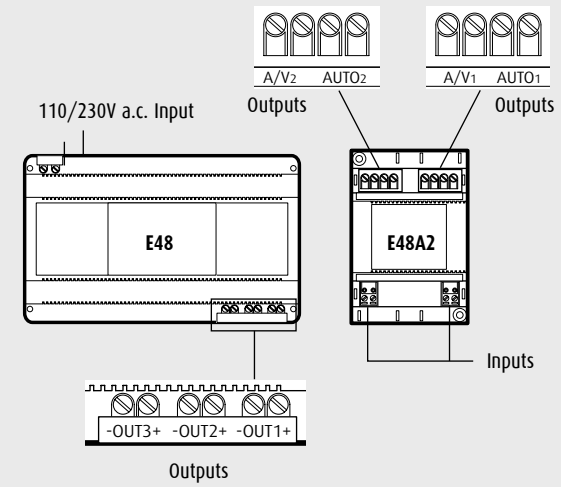
Features

- Safety devices with double insulation SELV
- 6 DIN enclosure
- Input 230V a.c. 50-60Hz
- Outputs:
  - Bus 24V 250 mA
  - 1-2 12V a.c. 1A
- Dissipated power: 9W

The device must not be configured.

POWER SUPPLY ITEM E48 WITH MODULE E48A2

Power supply for video 2 wire system and MY HOME systems to be used with module E48A2.



Features E48

- Safety devices with double insulation SELV
- 8 DIN enclosure
- Input 110/230V a.c. 50-60Hz
- Outputs:
  - OUT1 = 29.1V d.c 1.2A
  - OUT2 and OUT3 = 29-35V d.c. 1,A
- Dissipated power: 25W

Features E48A2

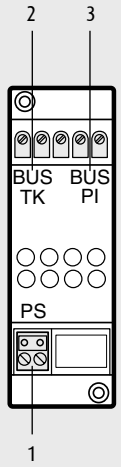
- 4 DIN enclosure
- Dissipated power: 4.6W

The devices must not be configured.

Connection accessories

VIDEO ADAPTER ITEM 346830

Video adapter to be combined to the power supply Item 346000 in the making of only video systems (or audio/video combined).
Allows the connection to its 3 BUS terminals. Hence it is possible to realize installations with 2 video entrance panels and 1 riser and installations with 1 video entrance panel and 2 risers.



Features

- 2 DIN enclosure
- Installed near Item 346000

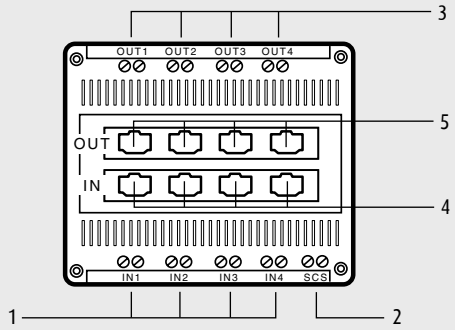
Description

1 - Bus PS input (withdrawable terminal).
2 - Bus TK output (fixed terminal entrance panels).
3 - Bus handset output (fixed terminal handsets).

The device must not be configured.

AUDIO/VIDEO NODE ITEM F441

Audio video node to combine compulsorily with the power supply Item 346000 in the realization of video systems (or audio/video). Allows to connect up to 4 video entrance panels (or separated cameras) and up to 4 risers. It is possible to connect 26 handsets and 6 floor distribution block on each riser. Other audio entrance panels should be wired to the SCS terminal. Moreover, it allows the integration between 2 wire door entry system and a new Bticino sound diffusion system.



Technical features

Supply voltage	18-27V d.c.
No. of DIN modules	6
Input power	17mA a 27V d.c.
No. of INPUT available	4
No. of OUTPUT available	4
Dissipated power	0.5W

Description

1 - 2 wire audio/video source inputs (IN1 - IN2 - IN3 - IN4) - screw terminals
2 - BUS SCS connection (from power supply Item 346000) - screw terminals
3 - Riser outputs (OUT1 - OUT2 - OUT3 - OUT4) - screw terminals
4 - IN connectors for patches or for the entry connection of SCS devices
5 - OUT connectors for patches or for the output connection of SCS devices

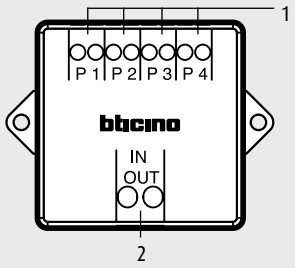
NOTE: by using any screw terminal, the correspondent patch connector should not be used.

The device must not be configured.

Installation accessories

FLOOR DISTRIBUTION BLOCK ITEM 346841

The floor distribution block can make video systems with a star distribution of the wiring.
The distribution block has much reduced dimensions for easier positioning, above all during the refurbishments, even with the installation inside the round boxes.
It is also possible to make systems with combined wiring risers, where a part can be of IN/OUT type and the other part is used for the floor distribution block.
The device automatically adapts the video signal.
Max. 3 devices (handsets, bells or additional bells) on the same output.
The device must not be configured.



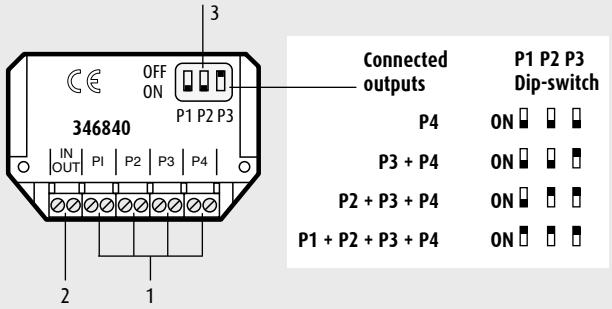
Description

1 - 4 outputs 2 wires (P1, P2, P3, P4)
2 - input/output of riser (IN-OUT) on the same pair of terminals

VIDEO FLOOR DISTRIBUTION BLOCK ITEM 346840*

The floor distribution block can make video systems with a star distribution of the wiring.
The distribution block has much reduced dimensions for easier positioning, above all during the refurbishments, even with the installation inside the round boxes.
It is also possible to make systems with combined wiring risers, where a part can be of IN/OUT type and the other part is used for the floor distribution block.
The dip-switches are normally in OFF position (hypothesis of 4 connected monitors); if one output is not used (P1), the P1 dip-switch must be shifted to ON position; if two outputs (P1 and P2) are not used, so two P1 and P2 dip-switches must be shifted to ON position and so on.
Please remember that on the last floor distribution block placed on a riser, the pair of IN/OUT terminals must always be used for the connection of a monitor; this is necessary to adapt the impedance of the riser itself.

The microswitches must be set on the device.



Connect the outputs starting from P4 and switch ON the microswitches of not connected outputs

Description

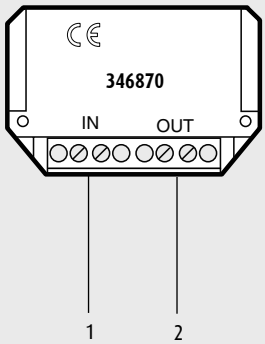
1 - 4 outputs 2 wires (P1, P2, P3, P4) connect starting from P4
2 - input/output of riser (IN-OUT) on the same pair of terminals
3 - three dip-switches, whose function is to adapt the impedance depending on the number of outputs used.

LINE AMPLIFIER ITEM 346870

The line amplifier is an accessory that, in video systems made with non-twisted cables (with section ≥ 0.28mm²), can increase the distance between the entrance panel and the furthest away handset from 50 metres to a maximum of 100 metres.
The device must be installed next to the 50th meter of distance from the entrance panel. Installing it before the 50th meter there should be a distortion of the video image, while installing it further is useless.
Moreover, the amplifier offers the following advantages:
- It must not be configured
- It must not be supplied
- It can be installed in round box, thanks to its reduced dimensions.

It is possible to install up to a maximum of 18 handsets (audio handsets and video handsets) on the new riser line, generated by the amplifier.

The device must not be configured.



Description

1 - BUS input connection terminals
2 - BUS output connection terminals

*Item no more in the catalogue

COAXIAL - 2 WIRE INTERFACE ITEM 347400

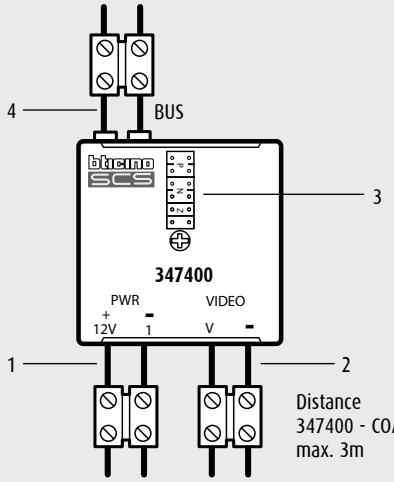
This interface must be used to connect the 12V d.c. cameras with coaxial output Item 391615, 391616, 391617, 391618 and 391619 to the video 2 wire BUS. The interface directly supplies the camera.

Description

1 - Connection for 12Vdc camera power supply. 150 mA
2 - Connection for video signal from the COAXIAL camera
3 - Configurator housing
4 - Connection to the 2 wire BUS 2

NOTE: the device is supplied with the terminals already connected. For the system connection, screw terminals are recommended.

The device must be configured.



2 WIRE/PABX INTERFACE ITEM 346810

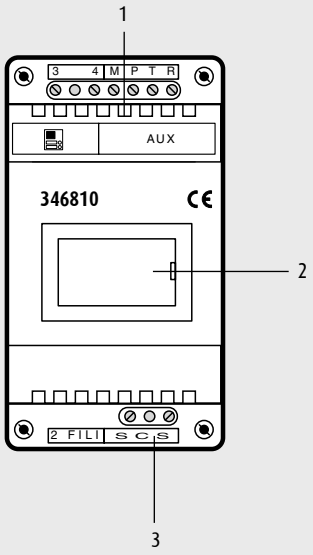
The 2 wire/PABX interface can connect a telephone switchboard (335818 or 335828) to the 2 wire door entry/video door entry system and have the door entry functions directly in the telephones.
By typing the short codes on the telephone pushbutton panel, the item can also perform as follows:
- to open, when unoperative, the door lock of any entrance panel of the system

The intercom function is very important because:
- the limit of the 2 wire system is exceeded by a maximum of 5 intercommunicating apartments
- it is possible to have the intercom between all the apartments of the system keeping the wiring entirely with the 2 wires.

The interface can manage up to two distinct audio handsets and/or two divisions (for a system with PABX Item 335828).

For each interface, it is possible to install from one to three audio entrance panels (Item 335902) for private apartment in which the PABX is installed.
The interface installed in 2 wire video door entry installations allows the interfacing of the sole audio pItem
3 DIN modules.

The device must be configured.



Description

1 - Connection terminals to the telephone switchboard.
2 - Configurator housing.
3 - Connection terminals to the BUS of the 2 wire system, using the video system, connect to the BUS-handset.

Installation accessories

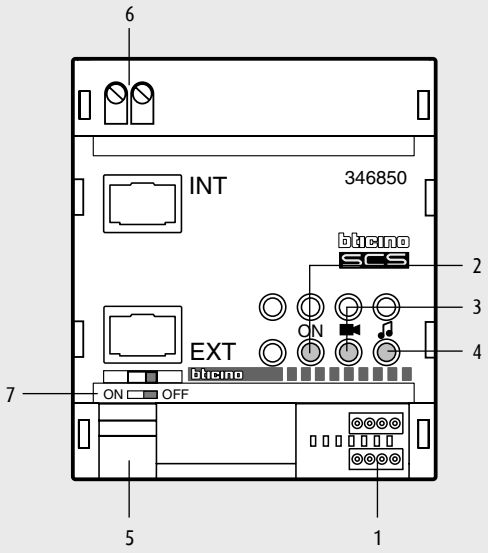
APARTMENT INTERFACE 346850

Interface to be used with the power supply item 346000 and the audio/ video node item F441 (or with the video adapter item 346830) to realize a dedicated 2 wire system, separated by the riser, in the home.

1 - **Configurator housing:** N = handset address M = 3 (already in production)
2 - **INTERFACE STATUS:**
Flashing green LED = stand-by
Fixed green LED = EXT-INT connection active
3 - **VIDEO SIGNAL LEVEL:**
Green = Ok
Green/Red = limit close
Red = no video signal or limits exceeded
4 - Not used
5 - Terminal for the connection to the 2 wire riser
6 - Terminal for the connection of the apartment 2 wire system
7 - Dip-Switch: move to the ON position in the last riser interface.

4 DIN modules.
Dissipated power: 2.25W

The device must be configured.



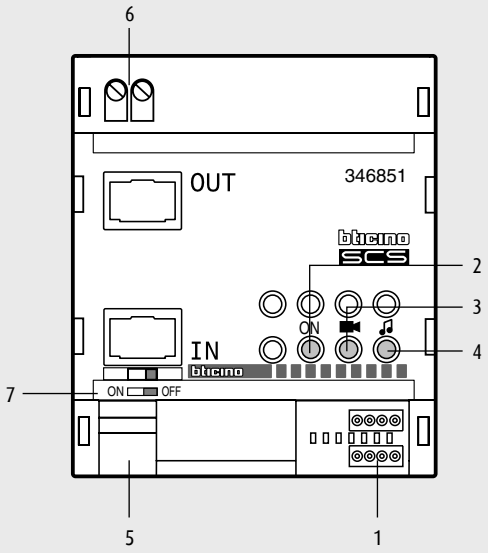
APARTMENT INTERFACE 346851

Module to be used with the power supply item 346000 and the audio/ video node Item F441 (or with the video adapter item 346830) to realize independent risers, to double the length of the riser line or to increase the system performance in one-family or apartment systems.

1 - **Configurator housing:**
MOD = 0 (Galvanic separation) to double the length or increase performance.
M = interface progressive number (from 1 to 99)
MOD = 5 for independent riser
M = interface progressive number (from 1 to 39)
2 - **INTERFACE STATUS:**
Flashing green LED = stand-by
Fixed green LED = connessione IN-OUT attiva
3 - **VIDEO SIGNAL LEVEL:**
Green = Ok
Green/Red = limit close
Red = no video signal or limits exceeded
4 - Not used
5 - Terminal for BUS connection in input
6 - Terminal for BUS connection in output
7 - Dip-Switch:move to the ON position in the last interface

4 DIN modules.
Dissipated power: 2.25W

The device must be configured.



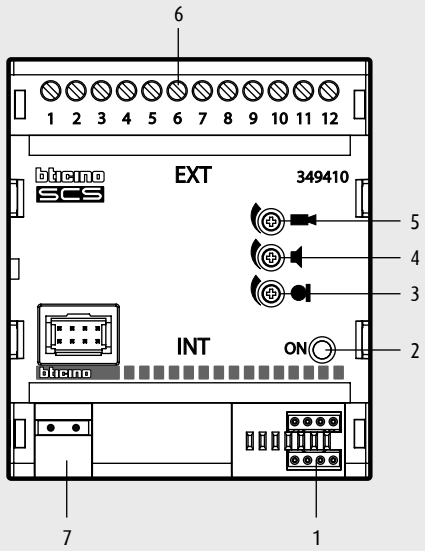
ANALOGUE/2 WIRE COMMUNICATION INTERFACE 349410

Interface to be used with the power supply item 346000 and the audio/video node (or with the video adapter item 346830) to realize 2 wire apartment systems in systems with analogue riser.

1 - **Configurator housing:**
MOD = 0 Riser
MOD = 1 Riser
MOD = 2 Videoporter 2000
MOD = 3 Terysistem audio
2 - **INTERFACE STATUS:**
Flashing green LED = stand-by
Fixed green LED = EXT-INT connection active
3 - Trimmer for audio signal adjustment in transmission
4 - Trimmer for audio signal adjustment in receiving
5 - Trimmer for video signal adjustment
6 - Terminal for connection to the analogue riser
7 - Terminal for connection to the 2 wire BUS in output

4 DIN modules
Dissipated power: 2.3W

The device must be configured.



349410					Videoporter	Tersystem
EXT	Audio	Video	Audio	Video	2000	Audio
1	1	1	1	1 and S+*	15 (20) and PL**	3 and S+*
2	2	-	2	-	19	-
3	3	3	3	3	1	2
4	4	4	4	4	21	1
5	5	5	5	5	17	6
6	6	6	6	*	13	-
7	7	-	7	-	-	-
8	8	-	8	-	9	-
9	-	-	-	-	10	-
10	-	-	-	-	-	-
11	14	14	14	14	12	-
12	-	-	-	-	16 and S+**	-

NOTE: it is not possible to make addressed activations on the analogue/2 wire side

*/** For more information consult the attached instruction sheet and the section "wiring diagrams"

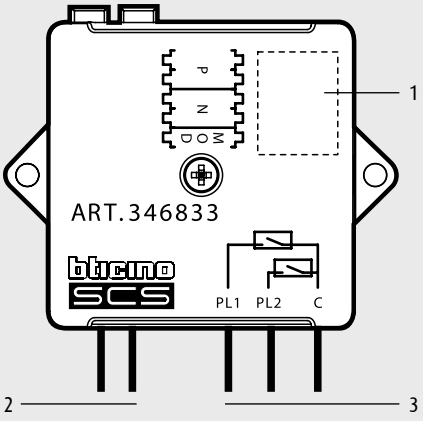
FLOOR CALL INTERFACE

Interface to be used to make general or addressed floor calls. In addition, it allows to switch on the staircase lights and to open door locks.

1 - **Configurator housing**
2 - **BUS CONNECTION**
3 - **OUTPUTS FOR CONTACT CONNECTION**
connect a pushbutton between PL1 and C and one between PL2 and C.

Distance 346833 - pushbuttons max. 3m.

The device must be configured.



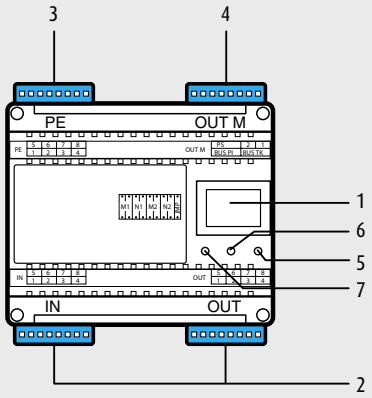
Installation accessories

8/2 WIRE INTERFACE ITEM 346150

The 8/2 wire interface is a device that can make combined video door entry systems with common backbone made with the digital system and many risers made with the 2 wire system. Ideal in making much extended systems because the functional advantages of the digital system (switchboard, CCTV, riser indipendence), are combined with those of the 2 wire installation (simplified wiring, intercom, absence of local power supply of the monitors). The device must be used together with the power supply Item 346000. In making a system with a local entrance panel, the latter can be wired in 2 wire or 8 wire mode. Made in plastic enclosure DIN-6 modules.

6 DIN modules.
Dissipated power: 6W

The device must be configured.

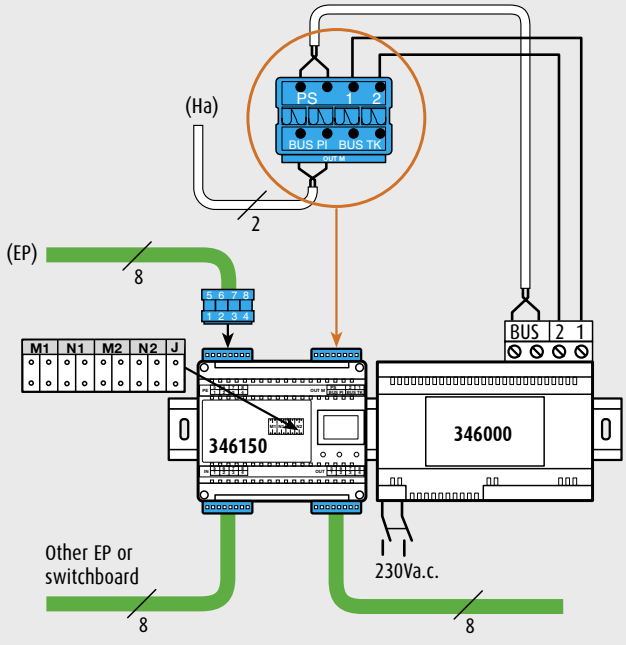


Description

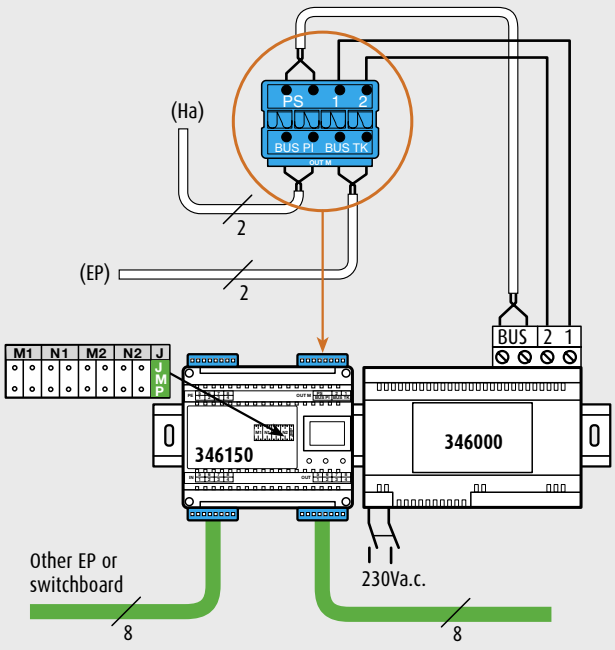
1 - Configurator housing.
2 - Backbone 8 wire connection terminal.
3 - Local 8 wire entrance panel connection terminal.
4 - Power supply and 2 wire riser connection terminal.
5 - Power supplied device signalling LED (stand-by).
6 - Local conversation signalling LED.
7 - Backbone conversation signallling LED.

NOTE: The three flashing LEDs signal a device configuration error.

Local 8 wire EP connection



Local 2 wire EP connection



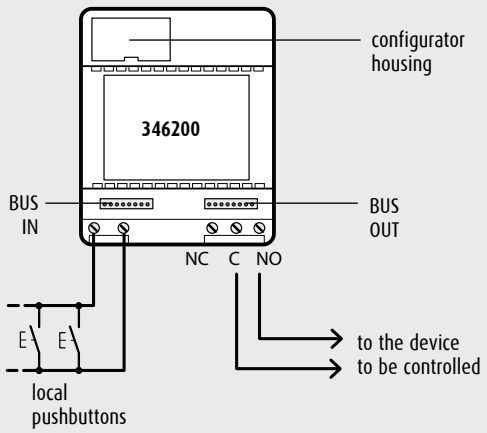
* It is necessary to install a system power supply 336010 on the 8 wire backbone

STAIRCASE LIGHT ACTUATOR OR SUNDRY DEVICES ITEM 346200

It must be used in installations made with 2 wire system, to control the lights or other devices.

Relay features

Voltage: 230V a.c.
Current: 6A resistive
2A inductive cos φ = 0.5
SELV device.



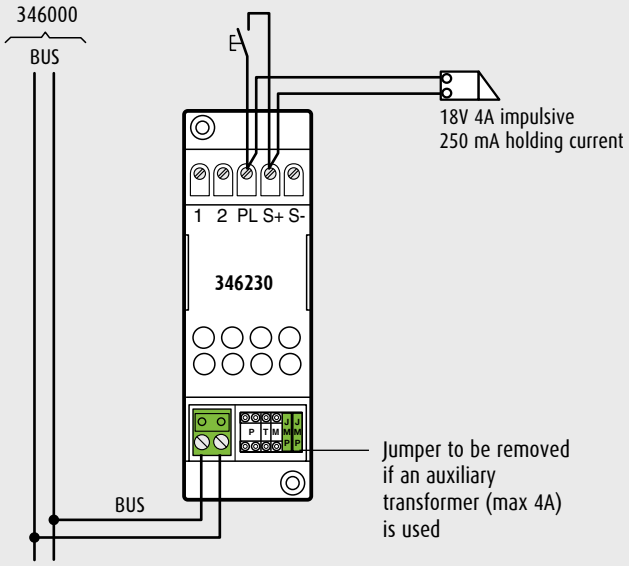
The device must be configured.

DOOR LOCK ACTUATOR ITEM 346230

This device controls an electric door lock using the dedicated handset key.

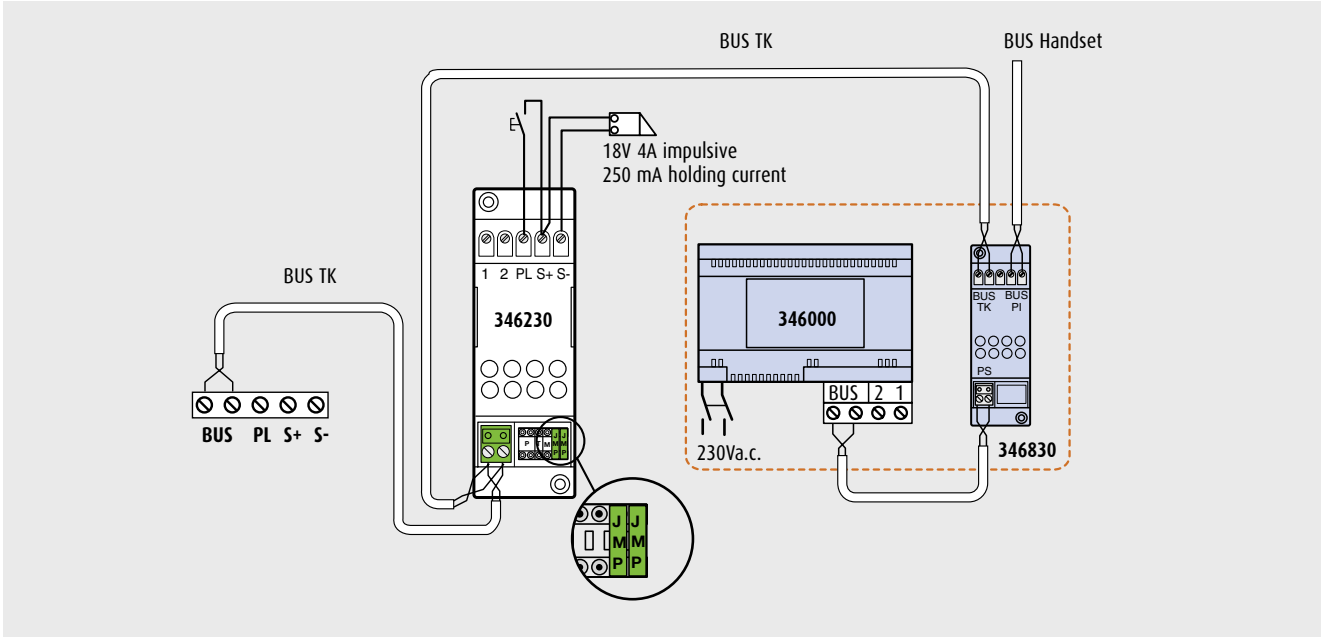
The device must be configured.

2 wire system - audio system
It is connected with just 2 wires to power supply Item 346000 (4 wires to power supply Item 346010) and can supply an electric door lock without any local transformer



Installation accessories

2 wire system - video system
It is connected with just 2 wires to BUS TK to the Item 346000 video adapter and can supply an electric door lock without any local transformer.



The pushbutton between PL and S+ is not timed.

Cables

CABLE FOR SYSTEMS ITEM 336904

The cable has been purposely projected to obtain the maximum performances of the 2 wire video door entry system. Actually, this system also operates correctly with existing cables but it is advisable to use the considered cable to reach distances greater than 100m.
It is made up of a pair of twisted conductors.
The colour of one conductor is brown, while the other is brown/white; both of them have a section of 0.50mm^2 and can be bought by coils of 200 metres.

Features

- External sheath:
  - White RAL 9010 Colour
  - Maximum external diameter 5.00 mm
  - A metric measuring indicator and the year of manufacture are shown on the sheath
  - Section of the single conductors: 0.50mm^2
  - Electric resistance: < 45 Ohm /Km to 20°C
  - Operating temperature: -15°C to +70°C

Conditions for use

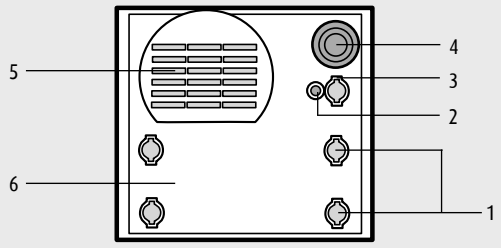
The cable can be laid underground in conformity with the CEI 20-13 and CEI 20-14 standards for underground cables. It is thus suitable to be used as follows:
- In the open air, inside trunkings, passage-ways and pipes
- Laid underground by means of suitable pipes
- Inside walls with suitable pipes.

Please remember that the UTP5 cable and the telephone cables on the market do not satisfy the reference standards requirements and are not suitable to be laid underground even if there are suitable trunkings.
The cable guarantees a isolation limit up to 300/500V (therefore, it could co-exist with the line 230Va.c. on safety conditions).
In spite of this, it is not recommended to make such systems, and the correct functioning of a system is not guaranteed if installed in this way, because consequent problems might not be avoided.

SFERA Handsets

SPEAKER MODULES

The drawing on the side explains all the functions that are common to all the speaker modules and that are available in the "SFERA" pushbutton panels of all the Systems.



Description

1 - Call pushbuttons.
2 - (Red) LED to light the staircase light pushbutton.
3 - Staircase light pushbutton.
4 - Amplified electret microphone.
5 - Amplified loudspeaker with mylar diaphragm.
6 - (Green) LED to light the nameplate.

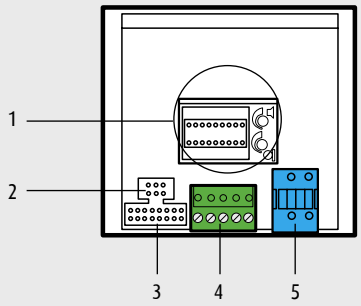
SFERA
Entrance panels

SPEAKER MODULE ITEM 342170

Speaker module for 2 wire digital system to be used together with power supply Item **346000**.
The following devices can be connected to the speaker module:
- Camera module to realize the video system Item 342550
- Black and white camera module to realize video systems - Item 342510
- Nameplate module Item 342200
- Pushbutton module Item 342240
- Numeric digital call module Item 342610
- Alphanumeric digital call module Item 342600

All the described modules are connected to the speaker module by means of the appropriate multi-cables.
The speaker module allows to make systems up to 100 handsets and the opening of an electric door lock directly connected between the terminals S+ S- (18V 4A impulsive, 250mA holding current). The door lock can be locally supplied by a transformer or using the actuator Item 346230.

The device must be configured.



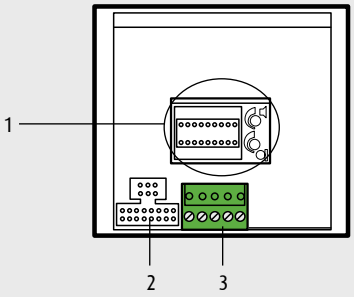
Description

1 - Socket for configurators and potentiometers to adjust the microphone and loudspeaker volume, jumper for adaptation to the type of door lock and the alphanumeric call module.
2 - Connection socket of the camera connector.
3 - Socket for connecting connector with nameplate module or pushbutton module or digital call module.
4 - Socket for the connecting connector of the BUS of the electric door lock and the pushbutton for opening from the hall.
5 - Withdrawable blue connector, for extra power supply.

SPEAKER MODULE ITEM 342150

Speaker module for 2 wire digital system to be used together with power supply Item **346010.**
The nameplate modules (Item 342200) or the pushbutton modules (Item 342240) can be connected to it. It allows the making of audio systems up to 26 handsets.
It is possible to connect an electric door lock to this device which can be supplied by the power supply Item 346010 (with two additional conductors between the power supply and the speaker module), or using a transformer positioned near the speaker module.

The device must be configured.



Description

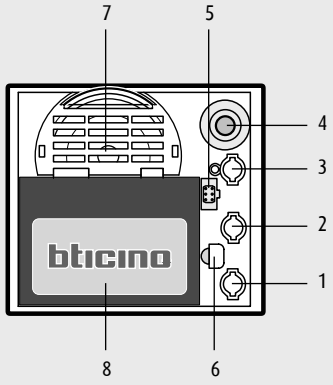
1 - Socket for configurators and potentiometers to adjust the microphone and loudspeaker volume.
2 - Socket for connecting connector with nameplate module or pushbutton module.
3 - Socket for the connecting connector of the BUS of the electric door lock and the pushbutton for opening from the hall.

SPEAKER MODULE WITH GRAPHIC DISPLAY 342630

It allows to send the call to an handset by scrolling on the display, by means of the relative keys, the names or the resident codes (previously programmed).
It combines the function of speaker module and resident research on the graphic display in a single device. The module can save 1000 names and surnames of residents associating them to the SCS address of the apartment. The names are reduced to 500 when one chooses to also associate a message to each of them. If only the resident codes are saved, the maximum capacity is extended to 5000 codes.
It is possible to program the names in the directory in the following ways:
- By means of the module keys
- Using the remote control Item 392123
- Using the dedicated software TICALL
  (can also update the firmware by putting in the password defined by the user).

To make a call:
- Scroll the names with 1 and 2
- Press 3 (flashing) to call

The device must be configured.



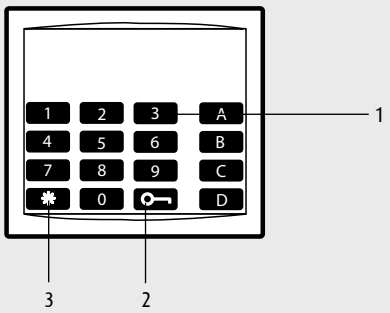
Description

1 - Key for scrolling (Down).
2 - Key for scrolling (Up).
3 - Call sending key.
4 - Microphone.
5 - Connector toward RS-232 of the PC (use cable Item 335919).
6 - IR receiver (programming with remote control).
7 - Loudspeaker.
8 - Graphic display.

Note: When there is a system power cut the data in the memory is not lost.

ADDITIONAL ALPHANUMERIC KEYPAD MODULE ITEM 342640

The device must be used together with the modules Item 342620 and Item 342630.
It allows to make a direct call (digiting the programmed code or the SCS address) and to access the function of door lock opening (digiting the secret code).
It has a multi-cable with a connector to be put into the speaker module socket.
It must always be positioned under a speaker module Item 342630.
To combine with 342630 for numeric call only.
Once the last digit has been entered, the call will start automatically. The digits entered will **NOT** be shown on the 342630 display.



Key function

1 - Alphanumeric keypad
2 - Key for opening door lock
3 - Cancel key

Note: When there is a system power cut the data in the memory is not lost.

The device must not be configured.

SFERA
entrance panels

NUMERIC DIGITAL CALL MODULE ITEM 342610

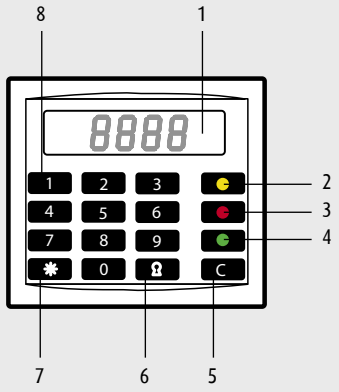
It can send the call to an handset by typing the number (given on a legend made up of nameplate modules Item 342200) on the keypad and open the door lock by typing a secret 5-figure code.
Accessing the programming requires the 4-figure code defined by the user, which can be changed at any time.
By programming one can:
- select the language for the messages on the display;
- modify the programming password;
- set the number of call figures (from 1 to 4).

The call is automatically put through after the last figure has been typed.

Connections

It has a multicable with connector to be put into the speaker module socket.
It must always be positioned under a speaker module Item 342170 and by the side of nameplate modules Item 342200 which give the names corresponding to the numbers which appear on the display.
By pressing the last digit, the call automatically starts.
Note - When there is a system power cut the data in the memory is not lost.

The device must not be configured.



Key functions

1 - Digital display with LEDs (4 digits).
2 - Yellow LED - confirms call.
3 - Red LED - call signal.
4 - Green LED - signals free line.
5 - Key for cancelling.
6 - Key for opening door lock.
7 - Key for programming.
8 - Numeric keypad.

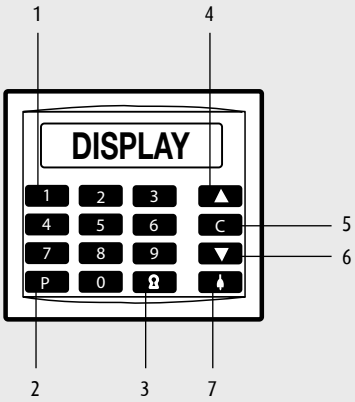
ALPHANUMERIC DIGITAL CALL MODULE ITEM 342600

It can send the call to an handset by typing the number on the keypad and open the door lock by typing a secret 5-figure code.
If the user number is not known all the names can be scrolled until the name required appears on the display.
Accessing the programming requires the 4-figure code defined by the user, which can be changed at any time.
By programming one can:
- select the language for the messages on the display;
- modify the door lock opening code or allow, at certain times of the day, opening without typing the secret code;
- enter or modify user names and numbers;
- check correct operation of the device by self-testing.

Connections

It has a multicable with connector to be put into the speaker module socket.
It must always be positioned under a speaker module Item 342170.
The device must be locally supplied with 1 and 2 of the power supply (remove the JUMPER from 342170). To make the call, scroll the names and press 🔔 or dial the handset number and press 🔔.
Note: When there is a system power cut the data in the memory is not lost.

The device must not be configured.



Key functions

1 - Keys for selecting and programming.
2 - Access to programming with secret code.
3 - Opening door lock.
4 - Key for scrolling names in the directory.
5 - Cancel key.
6 - Key for scrolling names in the directory.
7 - Call after selection.

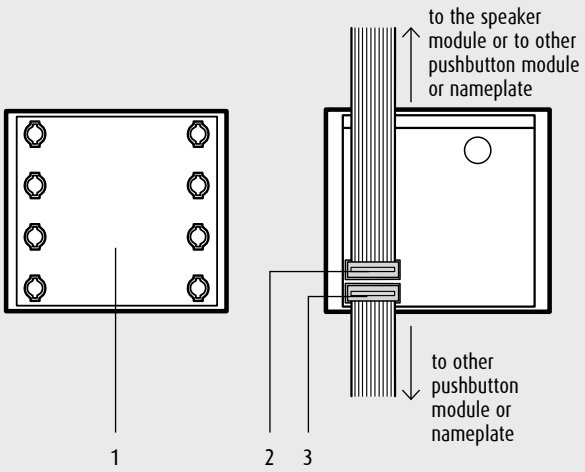
NAMEPLATE MODULE ITEM 342200

Description

1 - Namecard for address number, legend of call addresses or other information.
2 - Socket for the connection connector in input with other modules.
3 - Socket for the connection connector in output with other modules and socket for the electronic card supplied with the speaker module, if the nameplate module is the last one.

Lighting cards with LED (green).
A flat-cable for the connection to other modules is supplied.

The device must not be configured.



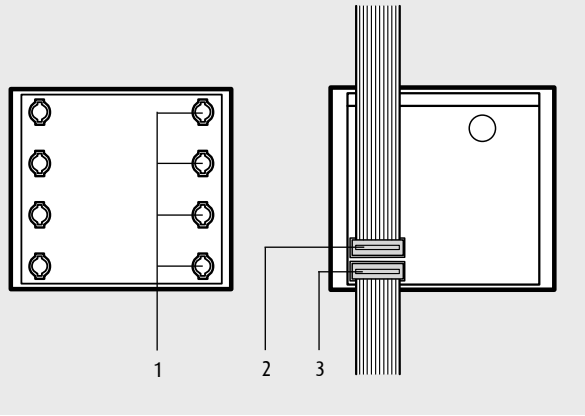
PUSHBUTTON MODULE ITEM 342240

Description

1 - Call pushbuttons.
2 - Socket for the connection connector in input with other modules.
3 - Socket for the connection connector in output with other modules and, for the last pushbutton module, socket for the electronic card supplied with the speaker module.

Lighting cards with LED (green).
A flat-cable for the connection to other modules is supplied.

The device must not be configured.



UNIVERSAL SPEAKER UNIT AND EXPANDER ITEM 346991/2

The universal speaker unit Item 346991 allows to realize systems with the 2 wire audio digital system using all the pushbutton panels and the Postal Boxes.

In systems with more than 8 pushbuttons, an additional Item 346992 for every 8 pushbuttons (max. 56) is needed; a multi-cable with 2 connectors supplied with Item 346992 must be used for the connection.

Terminal Item 346991:
1 BUS for BUS connection
2 Connector housing 346992
3 Configurator housing
- C common pushbuttons
- 1 to 8 pushbuttons

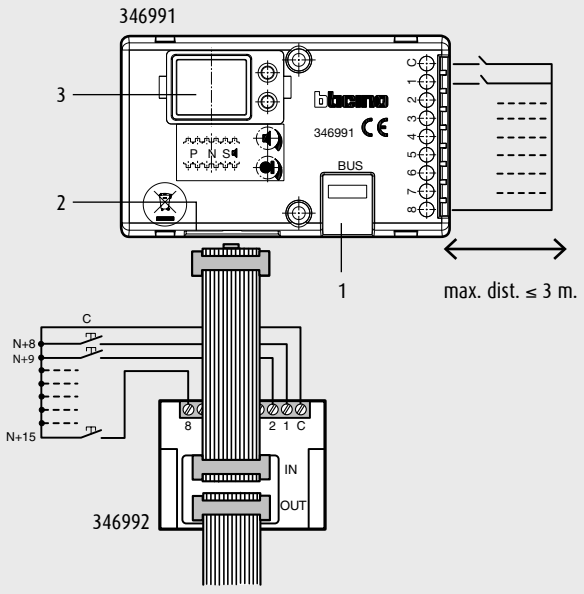
Terminal Item 346992:
- C common pushbuttons
- 1 to 8 pushbuttons

Use the actuator Item 346230 to control the electric door lock.

The microphone can be detached, and positioned at a max. distance of 15 cm.

In video systems, it must be connected to 2 WIRE cameras or to COAXIAL cameras with interface item 347400.

The device must be configured.

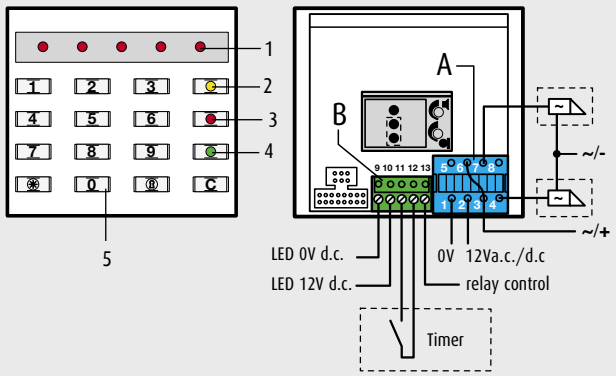


Accessories for SFERA entrance panels

CODE-LOCK MODULE ITEM 332650

Electronic device with microprocessor with lit-up keypad which can operate electric door locks and activate auxiliary systems, dialling numeric codes with 3, 4, or 5 figures. The numeric codes are directly programmed from the keypad, with no need to work inside the pushbutton panel.
Two different codes can be saved to control two different door locks or one door lock and an auxiliary system.
The device is made up of a 12-key keypad and LED to control the correct programming and to show that the function required has been activated: an audible signal confirms that the key has been pressed.
Device that can be combined with the SFERA range. It has independent power supply and operation.

The device must not be configured.



Terminal A

1 - 0V d.c. / 0V a.c.
2 - 12V d.c. / 12V a.c.
3 - Common relay A
4 - NO relay A
5 - NC relay A
6 - Common relay B
7 - NO relay B
8 - NC relay B

Terminal B

9 - 0V d.c. LED for signals
10 - 12V d.c. LED for signals
11 - Day/night timer input
12 - Day/night timer output
13 - Input relay command output A from door lock key of the handset

Terminal A

1 - 0V d.c. / 0V a.c.
2 - 12V d.c. / 12V a.c.
3 - Common relay A
4 - NO relay A
5 - NC relay A
6 - Common relay B
7 - NO relay B
8 - NC relay B

Terminal B

9-0V d.c. LED for signals
10-12V d.c. LED for signals
11 - Day/night timer input
12 - Day/night timer output
13 - Input relay command output A from door lock key of the handset

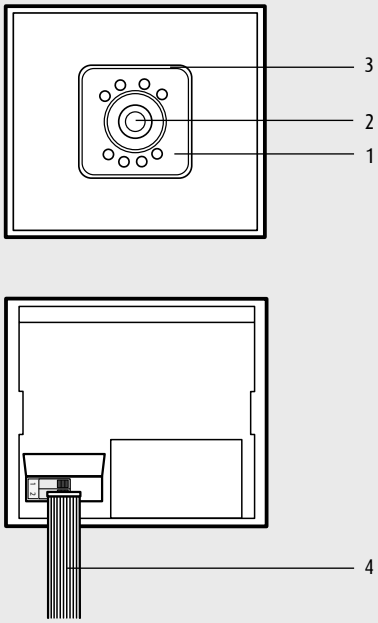
SWIVEL BLACK AND WHITE CAMERA MODULE ITEM 342510

Made in CCD technology, it has infrared lighting so that it can be used in poorly lit surroundings.
The connection to the speaker module Item 342170 is made using a multicable.
The lens can be swivelled when installing.

The device must not be configured.

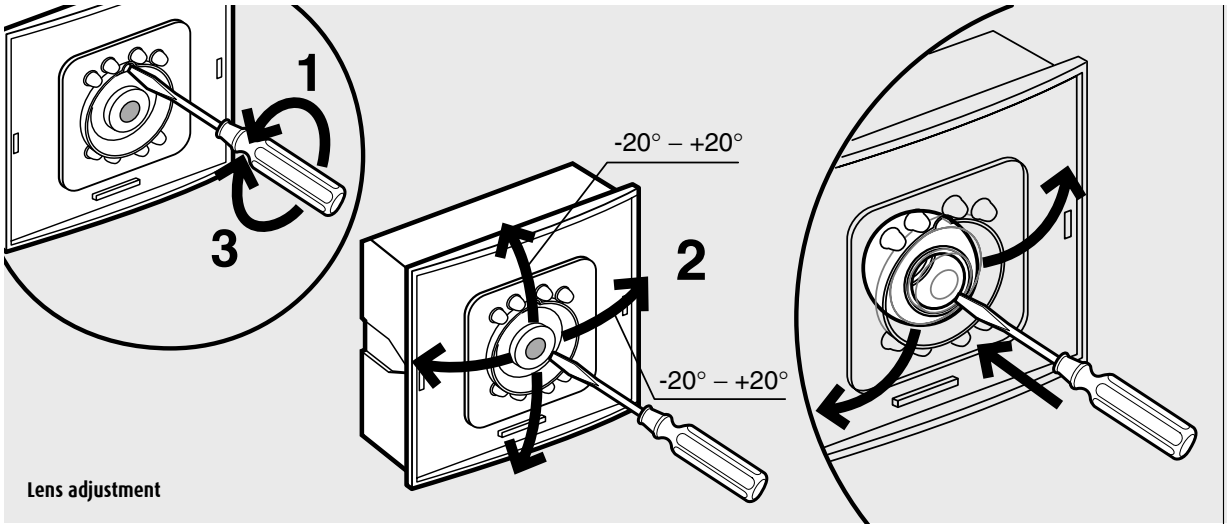
Features

- 1/4" detector
- Lens F2.8 f3 mm
- Power supply 18 to 27V d.c.
- Device ON absorption 250 mA
- Interlace 2:1
- Resolution: >330 lines (horizontal) - 400 lines (vertical)
- Night lighting by infrared LED
- Automatic linear adjustment of the brightness
- Immediate switching on
- Operating temperature -5° +40°C (when installed in the entrance panel)
- The lens slant can be adjusted both vertically and horizontally ±20%



Description

1 - IR LED for night lighting.
2 - Lens.
3 - Lens slant adjustment.
4 - Connection multicable to the speaker module for the 2 wire system Item 342170.



Lens adjustment

MINISFERA
entrance panels

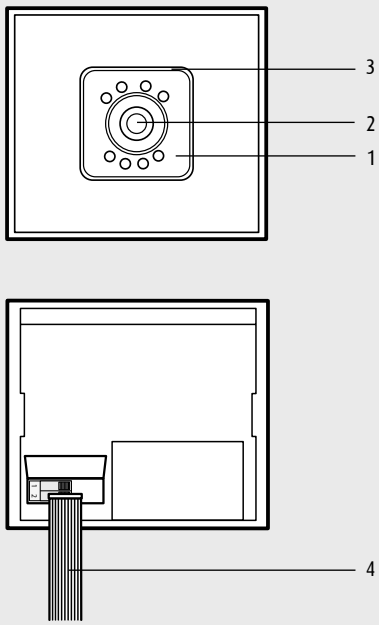
SWIVEL COLOURS CAMERA MODULE ITEM 342550

Made in CCD technology, it has white LED lighting so that it can be used in poorly lit surroundings.
The connection to the speaker module Item 342170 occurs by using a multi-cable. The lens can be swivelled when installing.

Features

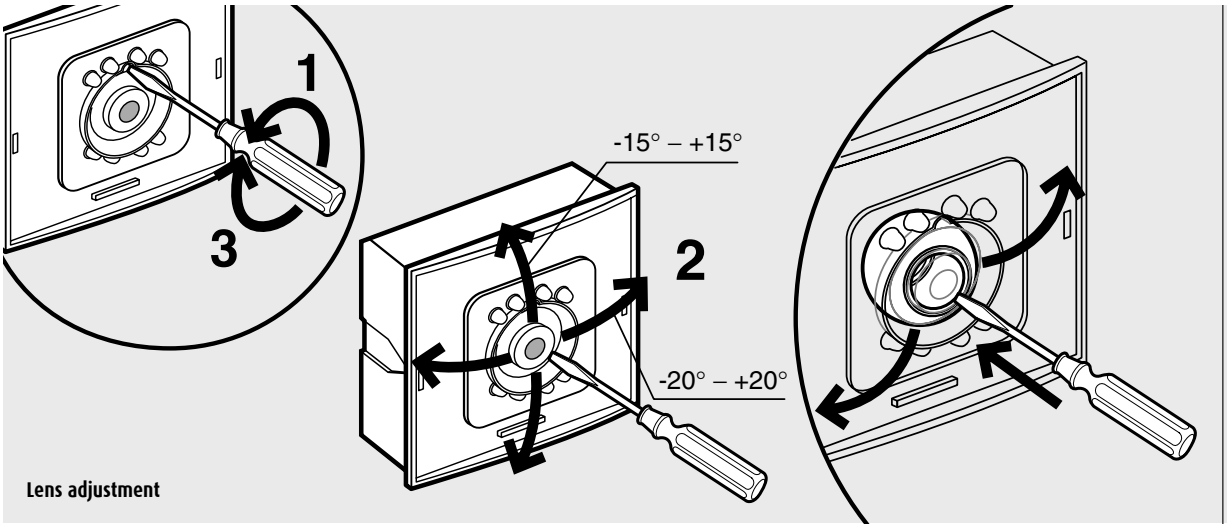
- 1/4" detector
- Lens F2.8 f3 mm
- Power supply 18 to 24V d.c.
- Device ON absorption max. 190 mA
- Interlace 2:1
- Resolution >330 lines (horizontal) - 400 lines (vertical)
- Night lighting by white LED
- Automatic linear adjustment of the brightness
- Operating temperature -5° +50°C (when installed in the entrance panel)
- The lens slant can be adjusted both vertically ±15% and horizontally ±20%

The device must not be configured.



Description

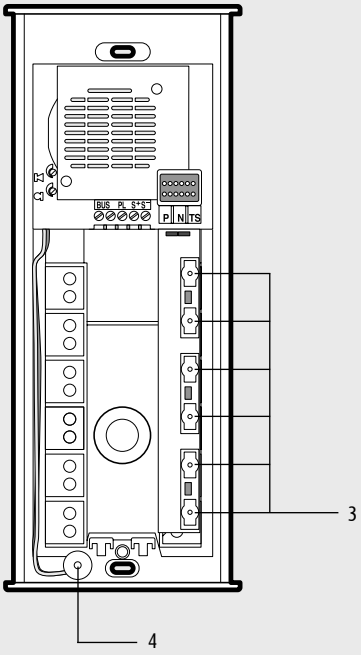
1 - White LED for night lighting.
2 - Lens.
3 - Lens slant adjustment.
4 - Connection multi-cable to the speaker module for 2 wire system Item 342170.



Lens adjustment

AUDIO SPEAKER MODULE ITEM 342702

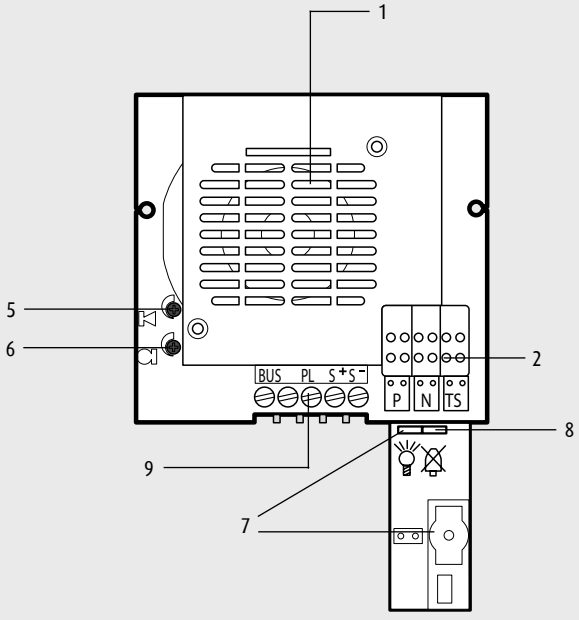
Speaker module for 2 wire systems to be used in audio systems together with power supply Item 346000.
Set up for 6 calls (can be expanded), must have cover frame (Item 332721, Item 332726) and keys (Item 332712, Item 332713, Item 332714, Item 332715, Item 332723, Item 332756) as accessories depending on installation requirements.
The device must be configured depending on the type of key used.
The loudspeaker volume and microphone sensitivity can be adjusted by two potentiometers.
Removing dedicated jumpers allows enabling of the functions: switching on staircase light with dedicated key and exclusion of the call confirmation on the entrance panel.
The speaker module allows the opening of an electric door lock directly connected between the terminals S+ S- (18V 4A impulsive, 250mA holding current on 30 Ω max), with 346250 the contacts S+ and S- are clean. The door lock can also be locally supplied with a transformer or by using the actuator Item 346230. It can not be combined with 347400.



Description

1 - Loudspeaker.
2 - Configurator housing.
3 - Call keys.
4 - Microphone.
5 - Loudspeaker volume adjustment.
6 - Microphone sensitivity adjustment.
7 - Staircase light switching on with dedicated key (can be enabled removing the jumper).
8 - Exclusion of the call confirmation on the entrance panel (can be enabled removing the jumper).
9 - Terminal board for BUS connections, door lock and door lock pushbutton in the entrance-hall.

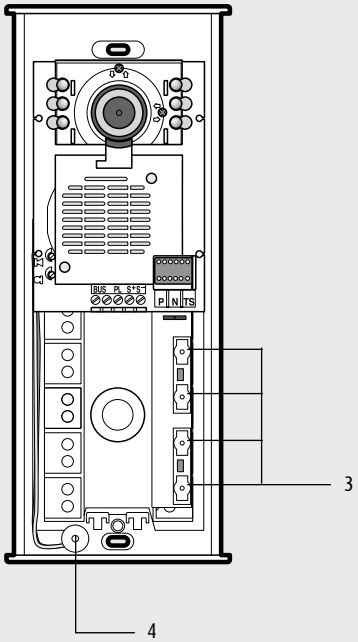
The device must be configured.



MINISFERA
entrance panels

B/W VIDEO SPEAKER MODULE ITEM 342708

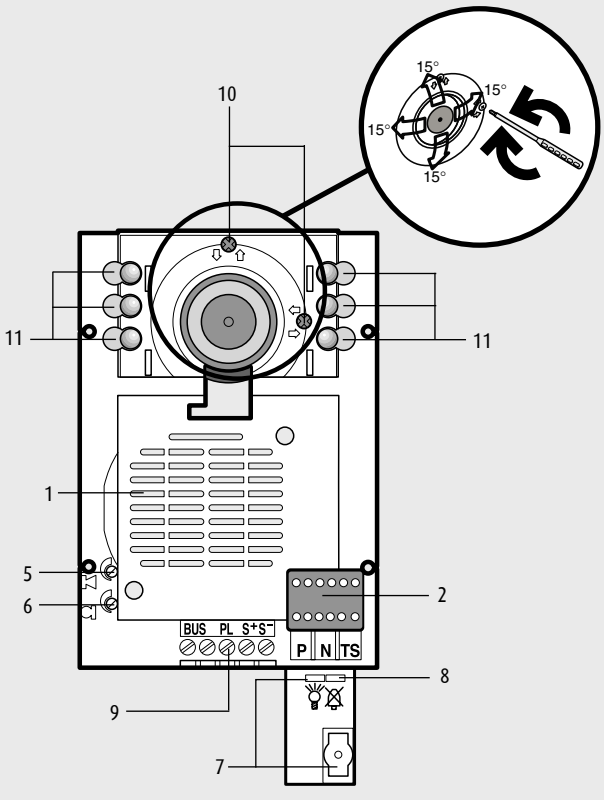
Speaker module for 2 wire systems to be used in audio systems together with power supply Item 346000.
Set up for 4 calls (can be expanded), must have cover frame (Item 332721, Item 332726) and keys (Item 332712, Item 332713, Item 332714, Item 332715, Item 332723, Item 332756) as accessories depending on installation requirements.
The device must be configured depending on the type of key used.
The loudspeaker volume and microphone sensitivity can be adjusted by two potentiometers.
Removing dedicated jumpers allows enabling of the functions: switching on staircase light with dedicated key and exclusion of the call confirmation on the entrance panel.
Six IR LED allow the taking of night views. The camera field of view can be adjusted by +/- 15° horizontally and vertically.
The speaker module allows the opening of an electric door lock directly connected between the terminals S+ S- (18V 4A impulsive, 250mA holding current on 30 W max), with 346250 the contact S+ and S- are clean.The door lock can also be locally supplied with a transformer or by using the actuator Item 346230.



Description

1 - Loudspeaker.
2 - Configurator housing.
3 - Call keys.
4 - Microphone.
5 - Loudspeaker volume adjustment.
6 - Microphone sensitivity adjustment.
7 - Staircase light switching on with dedicated key (can be enabled emoving the jumper).
8 - Exclusion of the call confirmation on the entrance panel (can be enabled removing the jumper).
9 - Terminal board for BUS connections, door lock and door lock pushbutton in the entrance-hall.
10 - Screws for camera field of view adjustment
11 - IR LED for lighting of the field of view.

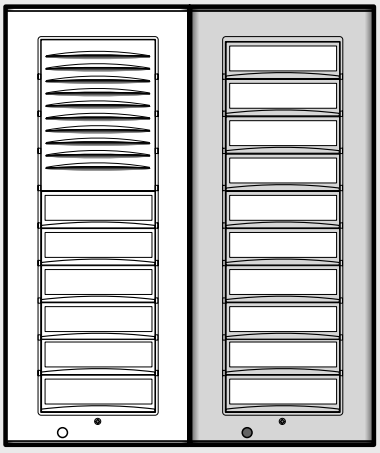
The device must be configured.



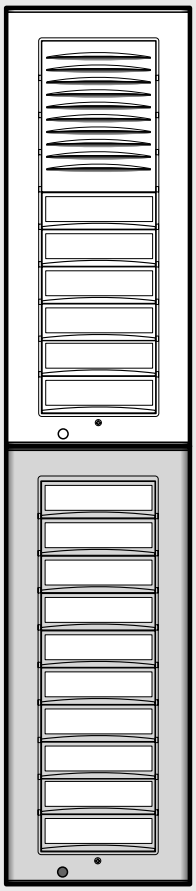
KEY EXPANSION MODULE ITEM 342704

Extra pushbutton module for 2 wire systems to be used in audio systems together with speaker modules Item 342702 and Item 342708.
Set up for 10 calls, must have cover frame (Item 332721, Item 332726) and keys (Item 332712, Item 332713, Item 332714, Item 332715, Item 332723, Item 332756) as accessories depending on installation requirements.
It can be placed either horizontally or vertically with respect to the speaker module.
A maximum of 6 expansion modules can be connected to a speaker module Item 342702 and Item 342708
It comes with a multicable for the connection to the speaker module or to other key expansion modules.
The device must be configured depending on the type of key used, as described for the speaker modules Item 342702 and Item 342708.

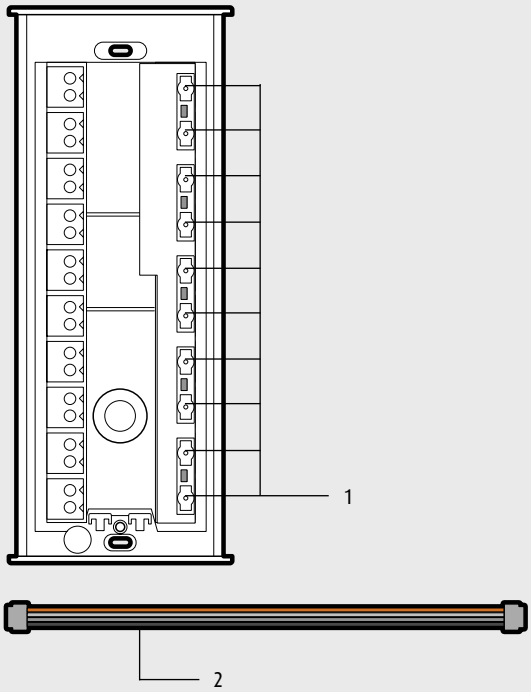
The device must be configured.



Horizontal side-by-side assembly

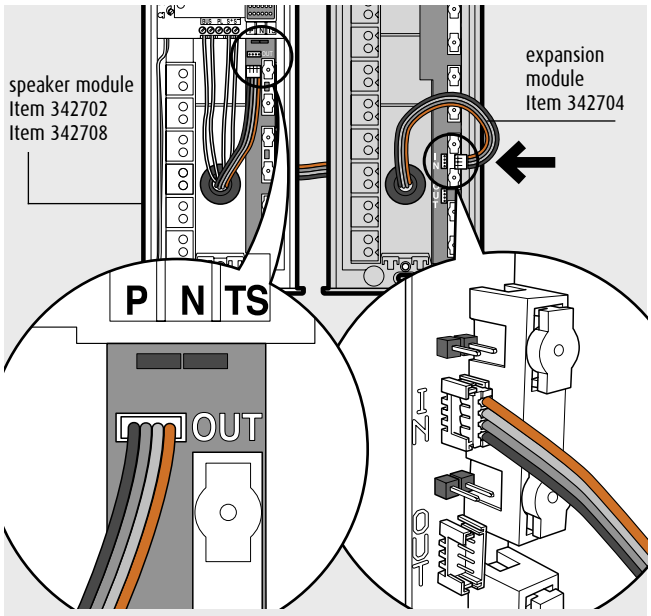


Vertical side-by-side assembly



Description

1 - Call keys.
2 - Multicable supplied.



Connection to the speaker module with the multicable supplied.

LINEA 2000 - LINEA 2000 METAL entrance panels

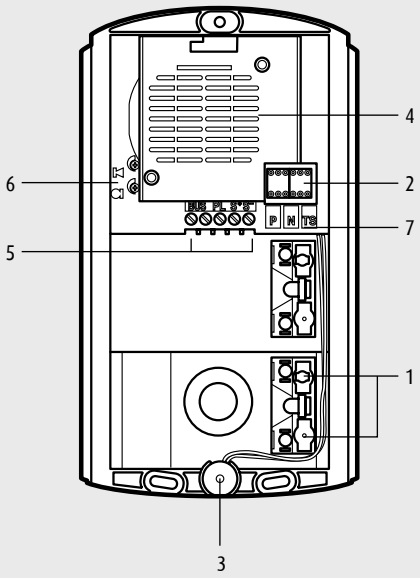
LINEA 2000 AUDIO MODULE ITEM 342911 - ITEM 342921

and LINEA 2000 METAL audio module item 342971 - item 342972.

Description

1 - Call keys.
2 - Configurator housing.
3 - Microphone.
4 - Loudspeaker.
5 - Terminals for BUS and door lock connection: the module allows to control the terminals S+ S- (18V 4A impulsive - 250mA holding current 30Ω max).
6 - Microphone and loudspeaker volume adjustment.
7 - JUMPER for exclusion of the confirmation tone.

The device must be configured.



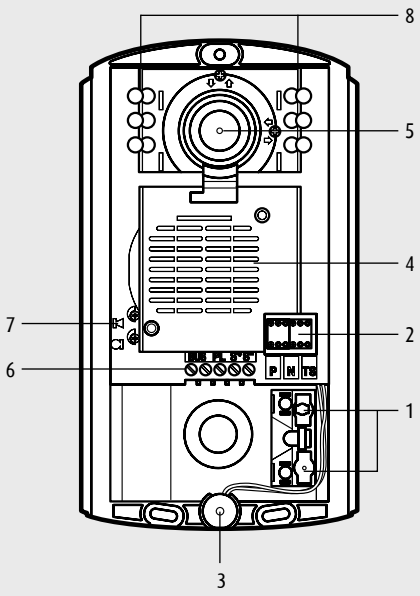
LINEA 2000 VIDEO B/W MODULE ITEM 342951 - ITEM 342961

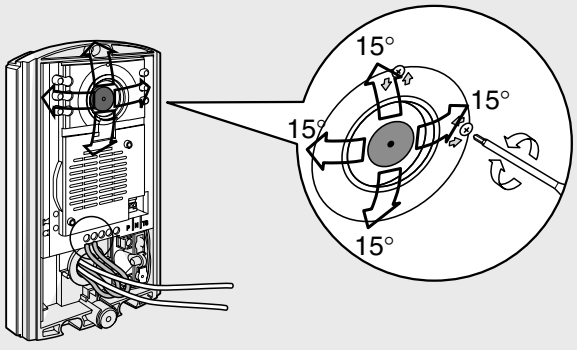
and LINEA 2000 METAL video b/w module item 342981 - item 342982.

Description

1 - Call keys.
2 - Configurator housing.
3 - Microphone.
4 - Loudspeaker.
5 - B/w camera with camera slant adjustment horizontally and vertically by ±15°.
6 - Terminals for BUS and door lock connection: the module allows to control an electric door lock directly connected to the terminals S+ S- (18V 4A impulsive - 250mA holding current 30Ω max).
7 - Microphone and loudspeaker volume adjustment.
8 - IR LED for night lighting.

The device must be configured.





Camera slant adjustment

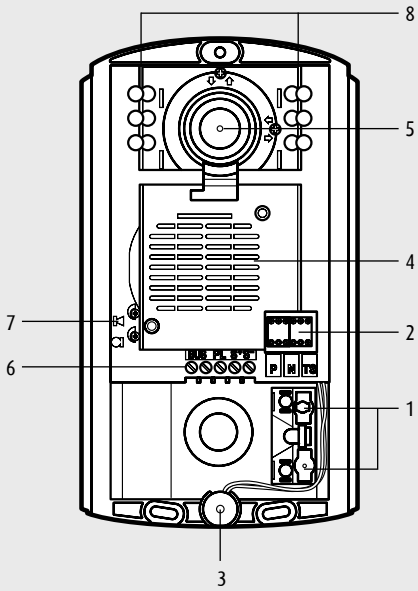
LINEA 2000 METAL entrance panels

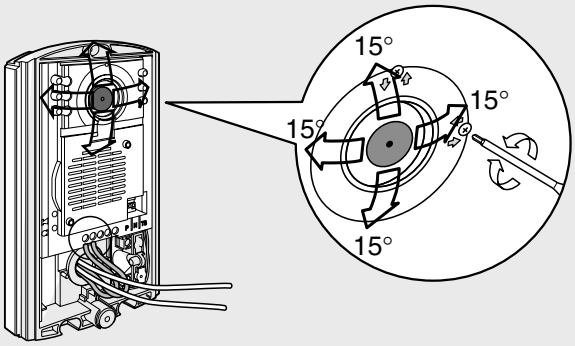
LINEA 2000 METAL VIDEO (COLOUR) MODULE 342991 - 342992

Description

1 - Call keys.
2 - Configurator housing.
3 - Microphone.
4 - Loudspeaker.
5 - B/w camera with camera slant adjustment horizontally and vertically by ±15°.
6 - Terminals for BUS and door lock connection: the module allows to control an electric door lock directly connected to the terminals S+ S- (18V 4A impulsive - 250mA holding current 30Ω max).
7 - Microphone and loudspeaker volume adjustment.
8 - IR LED for night lighting.

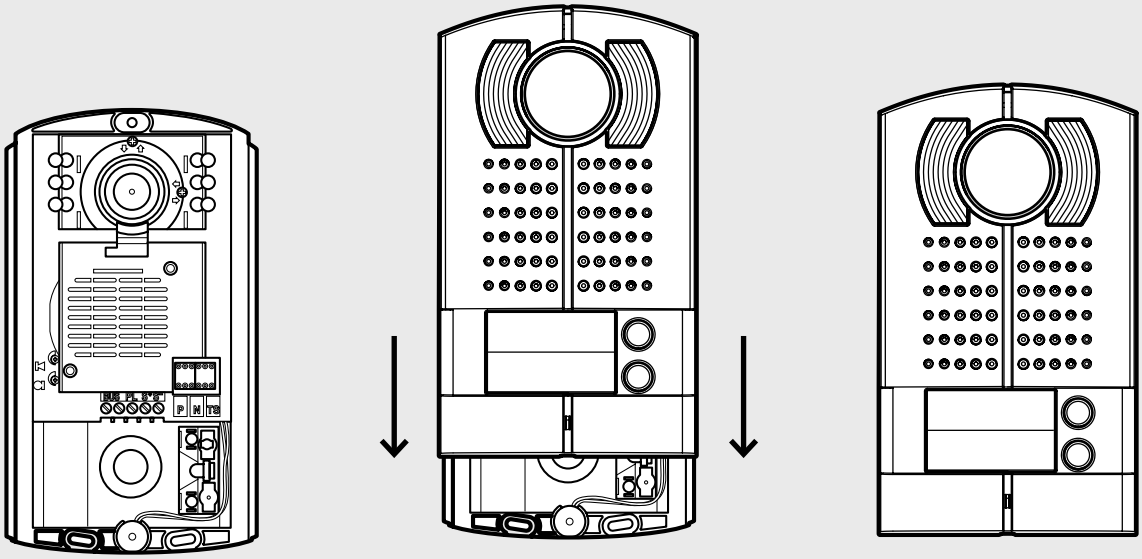
The device must be configured.





Camera slant adjustment

METAL finish mounting



AXOLUTE VIDEO STATION handsets

AXOLUTE VIDEO STATION ITEM 349310

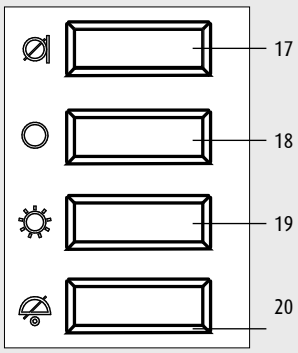
The speaker phone video door entry terminal with 5.6" colour display and OSD menu, includes two Bticino stereo sound system loudspeakers.

Description

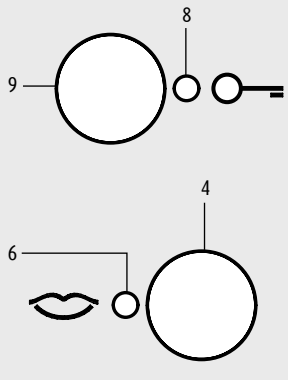
1 - TFT colour 5.6" display.
2 - OSD menu navigation pushbuttons.
3 - Loudspeakers for 2 wire sound system.
4 - Connection/answer key.
5 - Microphone.
6 - LED for active audio-video connection.
7 - Call exclusion LED.
8 - LED for door lock, door status and office.
9 - Door lock opening key (associated EP or connected EP).
10 - Video door entry function keys.
11 - Terminal for BUS connection.
12 - Configurator housing.
13 - Dip Switch to be positioned on ON in the last apartment or riser handset.
14 - Connector for PC connection with RS232 interface item 335919.
15 - Connector for PC connection with MINI-BUS cable.
16 - Connection terminal for additional power supply.

The device must be configured.

Keys and LEDs for video door entry functions



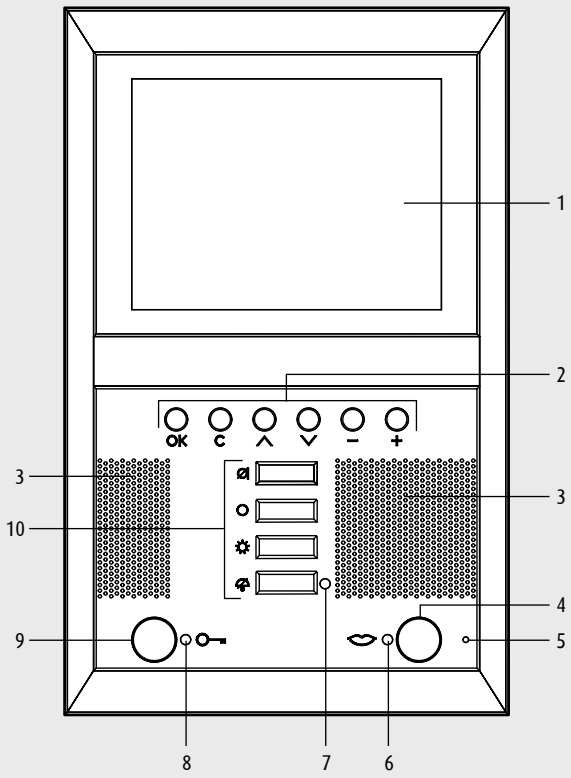
17 - MUTE pushbutton, enables/disables the microphone during the conversations.
18 - EP activation/cycling
19 - Staircase lights on
20 - Call bell exclusion (when the door lock is excluded the red LED (6) switches on)



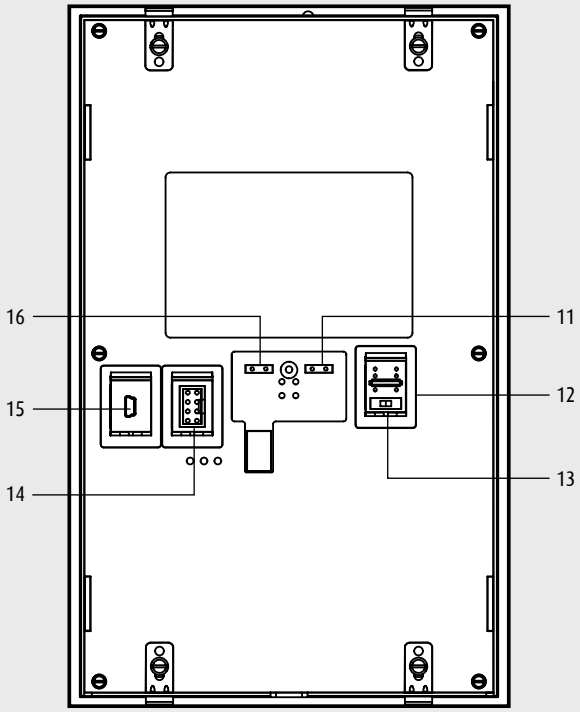
Door lock pushbutton
When the connection is activated, it opens the door lock of the connected Entrance Panel. When at rest, it opens the door lock of the associated Entrance Panel. The (red) LED indicates that the connection is activated.

Connection key
It enables/disables connection. When a call is received, the (green) LED will flash. During the conversation, the LED stays on, but will stop flashing. When at rest, the pager function is activated (if enabled).

Front view



Rear view



AXOLUTE VIDEO DISPLAY handsets

AXOLUTE VIDEO DISPLAY ITEM 349311 - 349312

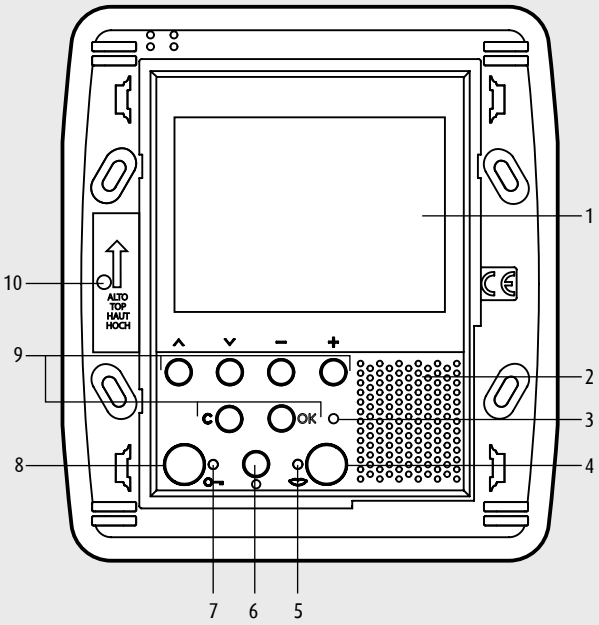
The flush-mounted speaker phone video door entry terminal with 3.5" colour display and OSD menu enables completing the door entry functions and management of the MY HOME applications.

Description

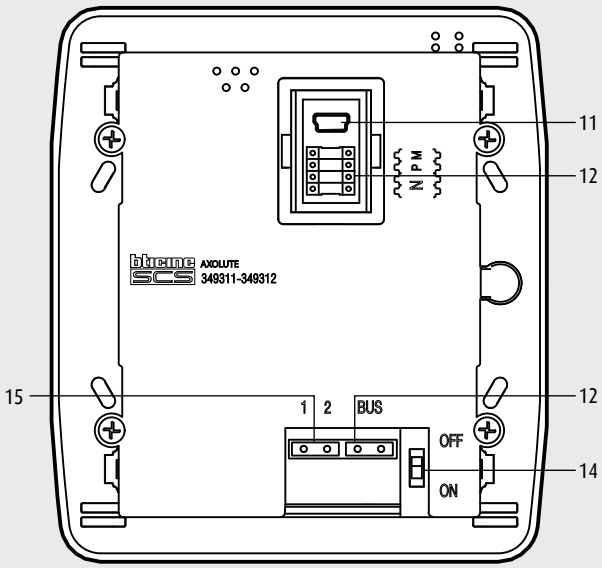
1 - Colour LCD display: it displays the menus operation and programming functions. It shows the images recorded from the entrance panels and other cameras.
2 - Loudspeaker.
3 - LED for call bell exclusion.
4 - Connection key; enable/disable the audio connection.
5 - Connection LED.
6 - Switching on key for entrance panel and cycling.
7 - LED for door lock/door status.
8 - Door lock key; allows the activation of the electric door lock of the associated or connected entrance panel.
9 - Navigation keypad: it is used to navigate around the menu, to confirm (OK pushbutton) or cancel (pushbutton C) the programming operation.
10 - Microphone
11 - Mini-USB connector for PC connection
12 - Configurator housing
13 - Terminals for connection to the Bticino 2 wire digital system BUS
14 - Line termination ON/OFF micro switch. It must be in the ON position in the last riser handset .
15 - Connection terminal for additional power supply

The device must be configured.

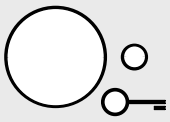
Front view



Rear view

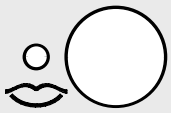


Keys and LEDs for video door entry functions



Door lock pushbutton
When the connection is activated, it opens the door lock of the connected Entrance Panel. When at rest, it opens the door lock of the associated Entrance Panel. The (red) LED indicates that the connection is activated.

Entrance panel/ cycle mode activation
It switches the associated Entrance Panel on and ,if present, enables cycling of any other Entrance Panels or cameras.



Connection key
It enables/disables connection. When a call is received, the (green) LED will flash. During the conversation, the LED stays on, but will stop flashing. When at rest, the pager function is activated (if enabled).

POLYX MEMORY STATION handsets

POLYX MEMORY STATION ITEM 344172

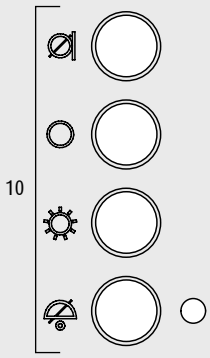
The speakerphone video door entry terminal with 5.6" colour display and OSD menu enables completing the handset functions and management of the MY HOME applications. It also provides the audio/video memory of the video handsets calls and video answering machine.

Description

1 - Microphone
2 - Colour LCD display: it displays the menus operation and programming functions. It shows the images recorded from the entrance panels and other cameras.
3 - Navigation keypad: it is used to navigate around the menu, to confirm or cancel the programming operation.
4 - Call exclusion LED
5 - Connection key; enable/disable the connection
6 - Connection LED
7 - Answering machine functions
8 - Door lock LED
9 - Door lock key; allows the activation of the electric door lock of the associated or connected entrance panel.
10 - Keys for video door entry functions
11 - Loudspeaker
12 - Terminals for connection to the Bticino 2 wire digital system BUS
13 - Configurator housing
14 - Line termination ON/OFF micro switch.
15 - Connector for PC connection by means of cable-RS232 interface item 335919
16 - Mini-USB connector for PC connection
17 - Connector for additional power supply

The device must be configured.

Keys and LEDs for video door entry functions

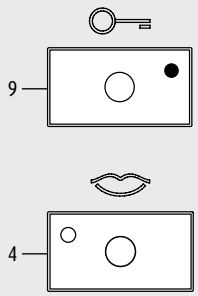


Mute
enable/disable the microphone during an audio connection

Entrance panel/ cycle mode activation
It switches the associated Entrance Panel on and, if present, enables cycling of any other Entrance Panels or cameras.

Staircase Lights
Enable the staircase light relay

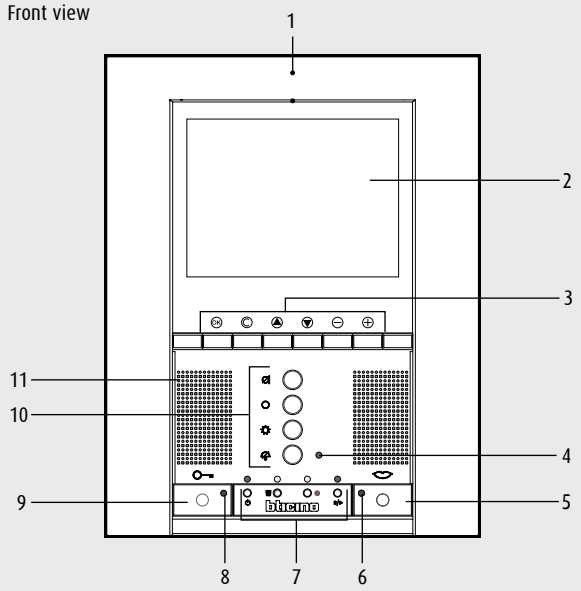
Call Exclusion
Enable/disale the call bell. If the bell is disabled the (red) LED switches on.



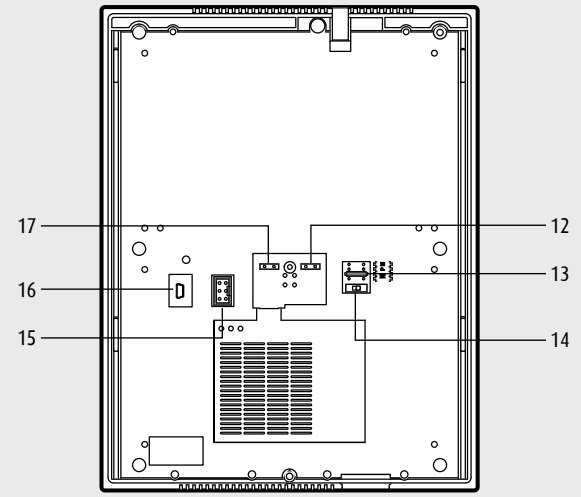
Door lock pushbutton
When the connection is activated, it opens the door lock of the connected Entrance Panel. When at rest, it opens the door lock of the associated Entrance Panel. The (red) LED indicates that the connection is activated.

Connection key
It enables/disables connection. When a call is received, the (green) LED will flash. During the conversation, the LED stays on, but will stop flashing. When at rest, the pager function is activated (if enabled).

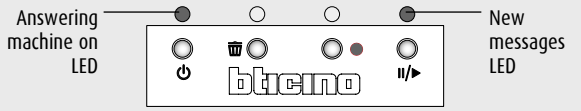
Front view



Rear view



Answering machine functions



ON/OFF
It enables/disables the video door entry answering machine

Bin
The video door entry message is cancelled during playback.

Rec
It enables recording during the connection (connection confirmed by LED green flashing) with the entrance panel.

Play/Pause
It activates/ pauses the playback of video door entry messages.

POLYX VIDEO DISPLAY handsets

POLYX VIDEO DISPLAY ITEM 344162

The speaker phone video door entry terminal with 3.5" colour display and OSD menu enables completing the door entry functions and management of the MY HOME applications.

Description

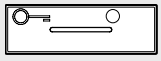
1 - Microphone
2 - Colour LCD display: it displays the menus operation and programming functions. It shows the images recorded from the entrance panels and other cameras.
3 - Navigation keypad: it is used to navigate around the menu, to confirm or cancel the programming operation.
4 - Switching on key for entrance panel and cycling
5 - Connection key; enable/disable the connection with the entrance panel
6 - Connection LED
7 - Loudspeaker
8 - Door lock LED; allows the activation of the electric door lock of the associated or connected entrance panel
9 - Door lock key
10 - Call exclusion key
11 - Call exclusion LED
12 - Mini-USB connector for PC connection
13 - Configurator housing
14 - Connector for additional power supply
15 - Line termination ON/OFF micro switch.
16 - Terminals for connection to the Bticino 2 wire digital system BUS

The device must be configured.

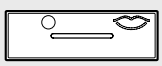
Keys for video door entry functions

Entrance panel/ cycle mode activation
It switches the associated Entrance Panel on and ,if present, enables cycling of any other Entrance Panels or cameras.

Call Exclusion
Enable/disale the call bell. If the bell is disabled the (red) LED switches on.

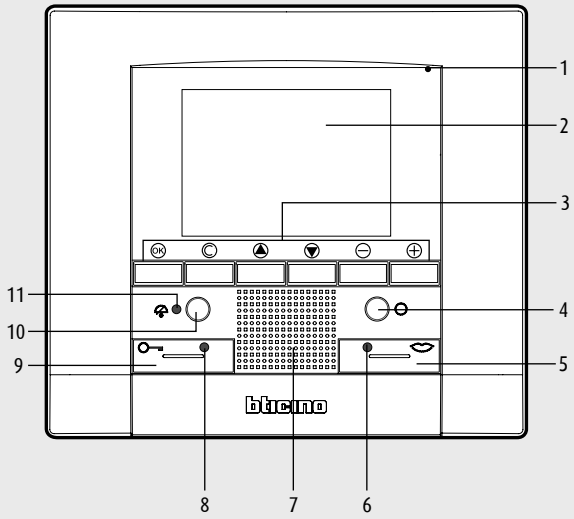


Door lock pushbutton
When the connection is activated, it opens the door lock of the connected Entrance Panel. When at rest, it opens the door lock of the associated Entrance Panel. The (red) LED indicates that the connection is activated.

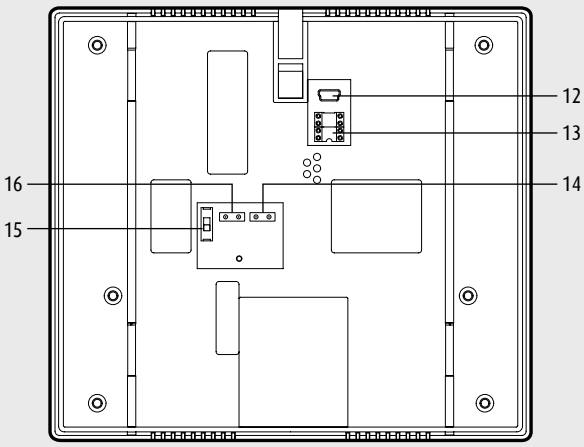


Connection key
It enables/disables connection. When a call is received, the (green) LED will flash. During the conversation, the LED stays on, but will stop flashing. When at rest, the pager function is activated (if enabled).

Front view



Rear view



PIVOT handsets

PIVOT AUDIO HANDSET ITEM 344032 - ITEM 344033 - ITEM 344034

The PIVOT 2 wire audio handset can be used in audio and video 2 wire systems and features great functionality and installing flexibility.

Description

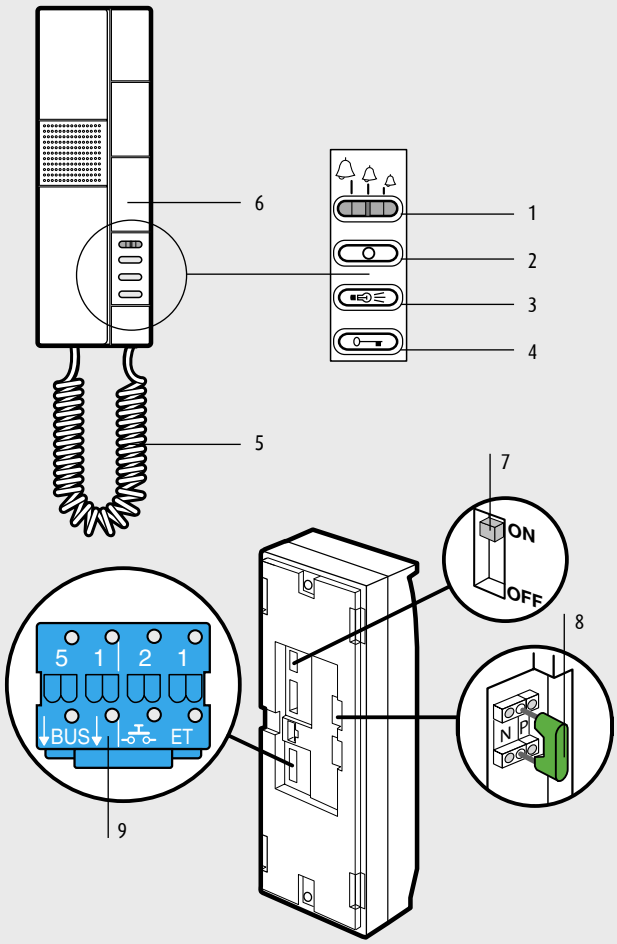
1 - Electronic call with adjustable volume on 3 levels:
  - high;
  - medium;
  - excluded (the excluded call is signalled by a flashing red LED); the audio handset can also select 17 different types of bell melody.

2 - Entrance panel activation pushbutton.
3 - Pushbutton to switch on the staircase light.
4 - Pushbutton to open the door lock.
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily.
6 - Accessory socket
7 - Microswitch to switch ON for closing apartment or riser line
8 - Configurator housing
9 - Extractable connection terminal

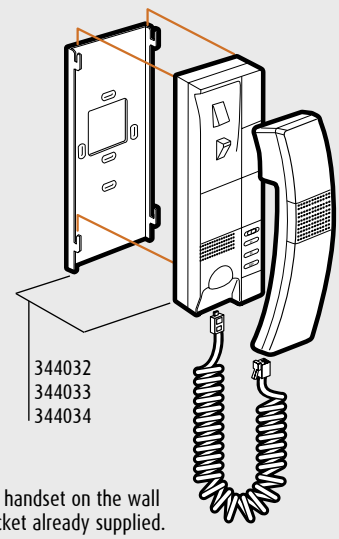
Its most important basic functions include:
- conversation secrecy;
- the audio handset is supplied with bracket for wall-mounting;
- connections by pullout terminals; this allows cabling and the functional test of the system without the devices.

The audio handset can be finished with the following accessories:
- block with 4 additional pushbuttons for intercom or generic actuations (Item 346812, Item 346813 and Item 346814);
- white resin table-mounting support with anti-slip feet;
- black 2-metre cable with an 8-pole plug connector to connect the table-mounting devices to the LIVING INTERNATIONAL, LIGHT or LIGHT TECH 8-way sockets (Item 336982, 336983 or 336984).

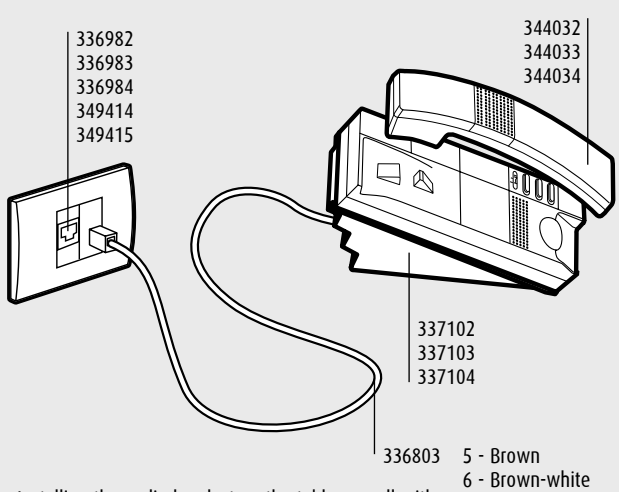
The device must be configured.



WARNING
The installation of the table mounting audio handset is possible in video or combined audio-video systems where the wiring to the device is realized with floor distribution block or by audio/video node Item F441.



Installing the audio handset on the wall with the metal bracket already supplied.



Installing the audio handset on the table or wall with the slanting base Item 337102, Item 337103 and Item 337104.

BLACK AND WHITE PIVOT VIDEO HANDSET ITEM 344103 - ITEM 344104

The PIVOT video handset features great functionality and flexibility of installation.

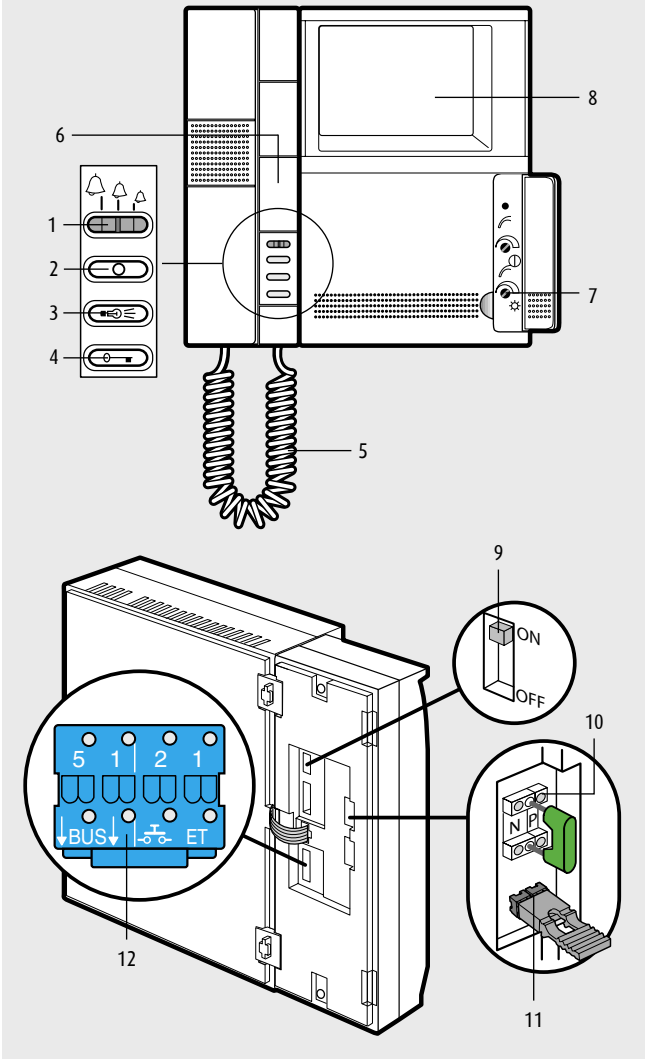
Description

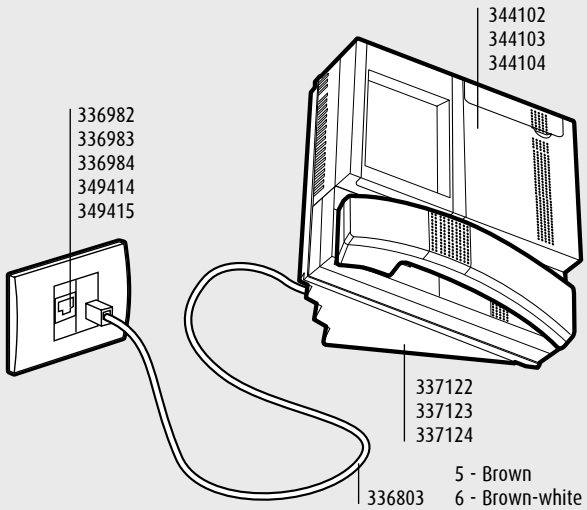
1 - Electronic call with adjustable volume on 3 levels:
  - high;
  - medium;
  - excluded (the excluded call is signalled by a flashing red LED);
  the audio handset can also select 17 different types of bell melody.
2 - Entrance panel activation pushbutton.
3 - Pushbutton to switch on the staircase light.
4 - Pushbutton to open the door lock.
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily.
6 - Accessory socket.
7 - Adjusting the monitor contrast and brightness.
8 - 4-inch black and white monitor.
9 - Microswitch to switch ON for closing apartment or riser line
10 - Configurator housing
11 - Jumper for MASTER-SLAVE function
12 - Extractable connection terminal

Its most important basic functions include:
- the video handset is supplied with bracket for wall-mounting;
- connections by pullout terminals; this allows cabling and the functional test of the system without the devices.

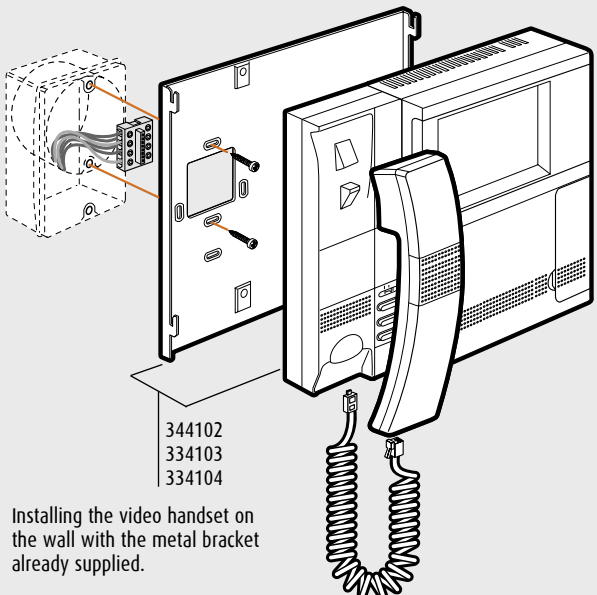
The video handset can be finished with the following ccessories:
- block with 4 extra pushbuttons for intercom or generic actuations (Item 346812, Item 346813 and Item 346814).

The device must be configured.





WARNING: The installation of the table mounting video handset is possible using an audio-video node output Item F441 on the table handset to be installed.



Installing the video handset on the wall with the metal bracket already supplied.

PIVOT handsets

COLOUR PIVOT VIDEO HANDSET ITEM 344122 ITEM 334123 ITEM 334124

The PIVOT video handset features great functionality and flexibility of installation.

Description

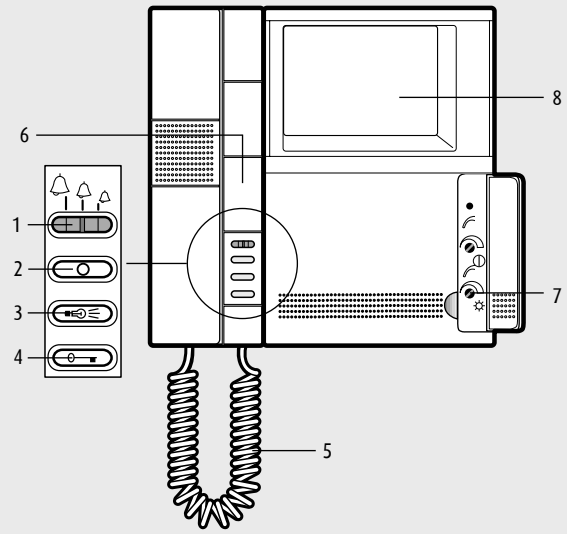
1 - Electronic call with adjustable volume on 3 levels:
  - high;
  - medium;
  - excluded (the excluded call is signalled by a flashing red LED); the audio handset can also select 17 different types of bell melody.

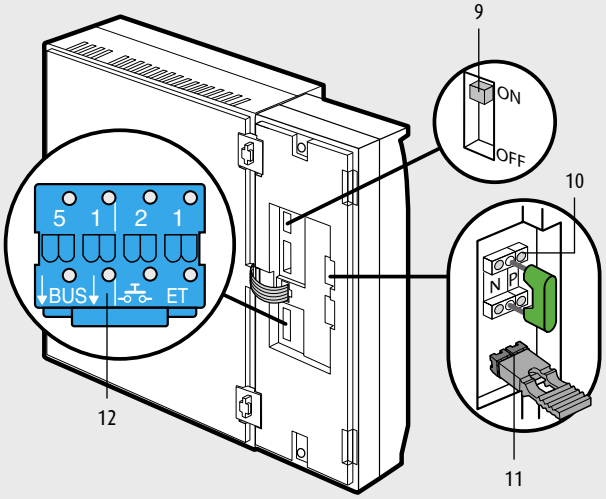
2 - Entrance panel activation pushbutton.
3 - Pushbutton to switch on the staircase light.
4 - Pushbutton to open the door lock.
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily.
6 - Accessory socket.
7 - Adjusting the monitor contrast and brightness.
8 - 4-inch colour monitor.
9 - Microswitch to switch ON for closing apartment or riser distance
10 - Configurator housing
11 - Jumper for MASTER-SLAVE function
12 - Extractable connection terminal

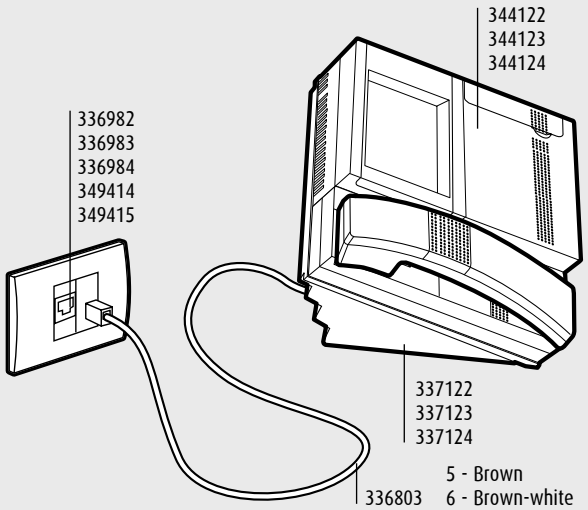
Its most important basic functions include:
- the video handset is supplied with bracket for wall-mounting;
- connections by pullout terminals; this allows cabling and the functional test of the system without the devices.

The video handset can be finished with the following accessories:
- block with 4 extra pushbuttons for intercom or generic actuations (Item 346812, Item 346813 and Item 346814).

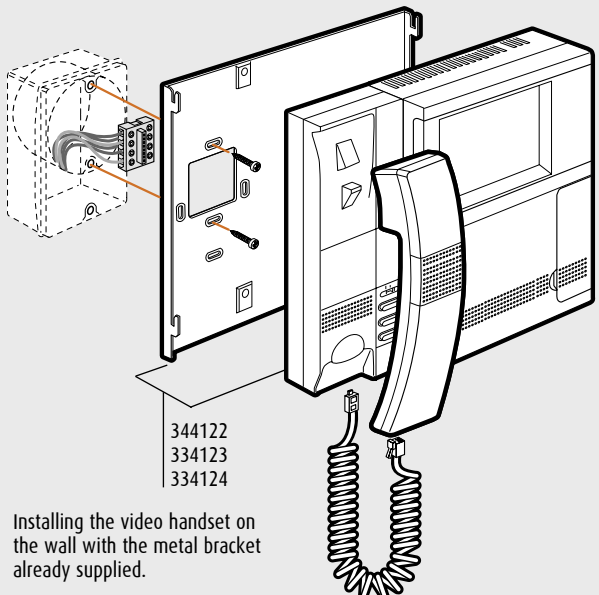
The device must be configured.







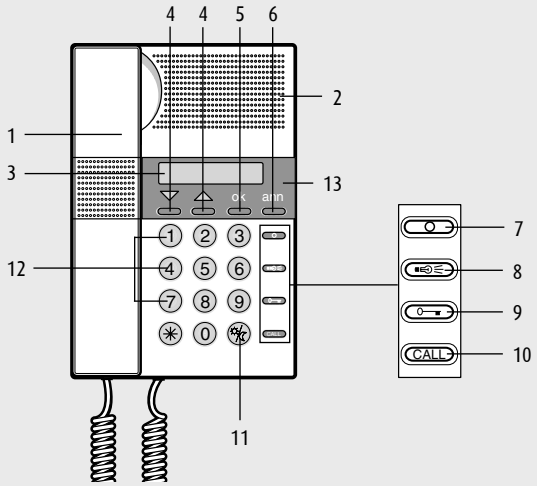
WARNING: The installation of the table mounting video handset is possible using an audio-video node output Item F441 on the table handset to be installed.



Installing the video handset on the wall with the metal bracket already supplied.

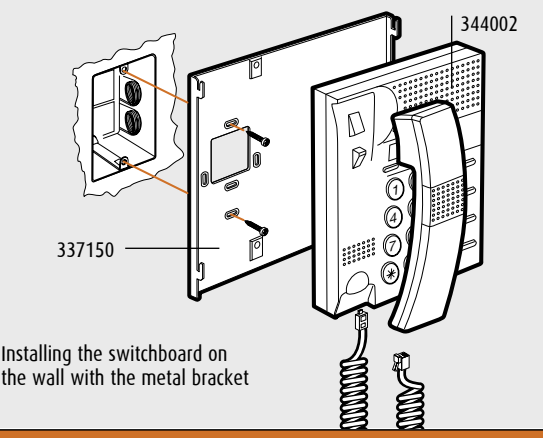
SWITCHBOARD ITEM 344002

Switchboard for audio and video systems made with 2 wire and digital systems.With video systems it can be used with the specific video section b/w Item 334402 or colour Item 335122. Access to the various services from keypad or by programmable phone book. Calls can be received from the entrance panel and put through to an extension. They can be received and sent calls from the handsets and a call queue created in which they are saved. The switchboard can display the pictures of the system cameras cyclically.



Description

1 - microtelephone;
2 - loudspeaker;
3 - message signal display;
4 - keys to scroll phone books and menus;
5 - confirmation key;
6 - cancellation key;
7 - key to activate the entrance panel;
8 - light control key;
9 - open door key;
10 - send call key;
11 - day/night key;
12 - alphanumeric keypad;
13 - red signal LED.



Installing the switchboard on the wall with the metal bracket

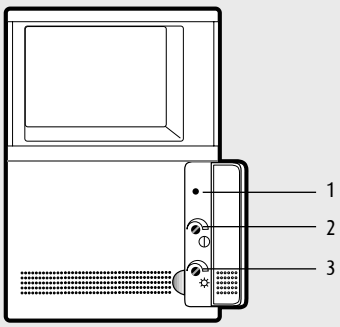
Colour video section
Video section Item 335122 is fitted by the side of switchboard Item 344002 and can display the entrance panel from which a call has been made or where there has been a self-switching on.

B/w video section
Video section Item 334402 is fitted by the side of switchboard Item 344002 and can display the entrance panel from which a call has been made or where there has been a self-switching on.

Features

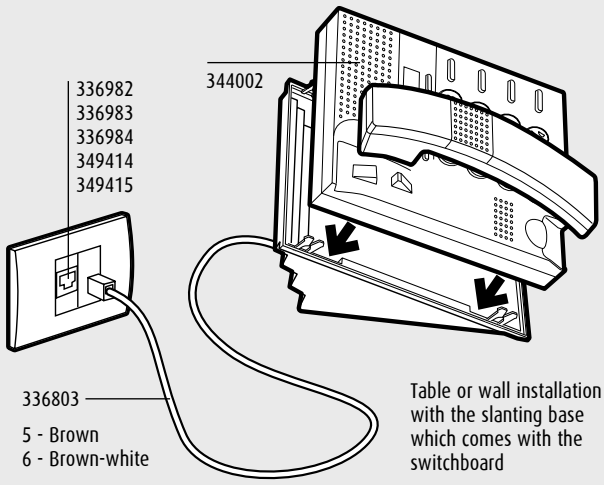
- Power supply 18-24V d.c.
- Self-protected against overload and short-circuit by PTC
- Absorption device ON: 450 mA
- Screen: b/w and colour 4" flat
- Switching-on time: 6 seconds
- Video signal amplitude: 1 Vss video composite 50 Hz
- Television standard: 625 lines

Connection
Comes with multicable and connector for connection to switchboard item 344002. The video section coupled with the switchboard can be table installed using the slanting support Item 337132. Living International, Light or Light Tech sockets dedicated to video door entry functions (Item 336982 and Item 336983) can be used for the connection to the system. The metal bracket Item 337170 can be used for the wall installation.



Description

1 - Video definition adjustment (contrast if colour)
2 - Contrast adjustment (colour if colour)
3 - Brightness adjustment (brightness if colour)



5 - Brown
6 - Brown-white

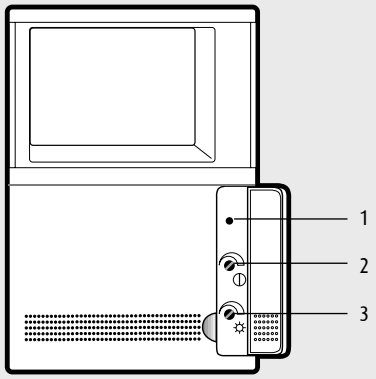
Table or wall installation with the slanting base which comes with the switchboard

PIVOT handsets

B/W VIDEO SECTION FOR PIVOT TELEPHONES AND SWITCHBOARD

Item 334402, Item 334403, Item 334404

The video sections can be fitted side-by-side of the Pivot telephones in both the Compact version and the Standard version, using the accessories supplied with the video section.
The video sections in combination with the Pivot telephones allow to implement the video door entry unit functions in systems in which the telephone systems are managed by a telephone switchboard (PABX).
The same video sections can also be fitted side-by-side of the switchboard (Item 344002) in video systems made with the digital system. It is essential NOT TO USE the accessory supplied when using the video section with the switchboard.



Technical features

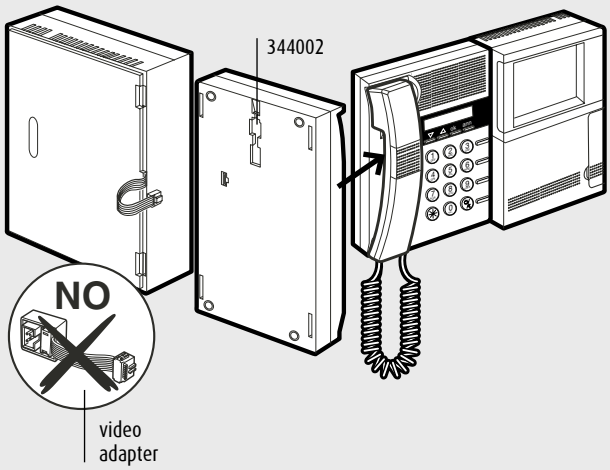
- Power supply: 18 - 24V d.c.
- Self-protected against overload and short-circuit by PTC
- Absorption device ON: 450mA
- Screen: 4″ flat
- Switching-on time: 6 sec
- Video signal amplitude: 1 Vss video-composite 50 Hz
- Television standard: 625 lines

NOTE: the installation possibilities are the same as those described for the video sections Item 335102 - 335103 - 335104.

The device must not be configured.

Description

1 - Video definition adjustment
2 - Contrast adjustment
3 - Brightness adjustment



Video section used with PIVOT telephones

COLOUR VIDEO SECTION FOR PIVOT TELEPHONES AND SWITCHBOARD

Item 335122, Item 335123, Item 335124

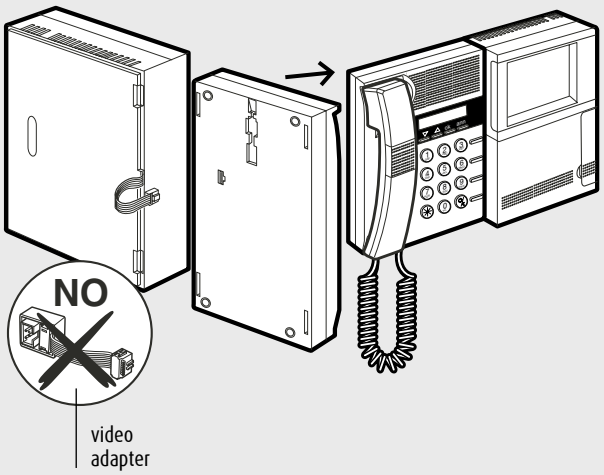
The video sections can be fitted side-by-side of the PIVOT telephones in both the Compact version and the Standard version, using the accessories supplied with the video section.
The video sections in combination with the PIVOT telephones allow to implement the video door entry unit functions in systems in which the telephone systems are managed by a telephone switchboard (PABX).
The same video sections can also be fitted side-by-side of the switchboard (Item 344002) in video systems made with the digital system. It is essential NOT TO USE the accessory supplied when using the video section with the switchboard.

Technical features

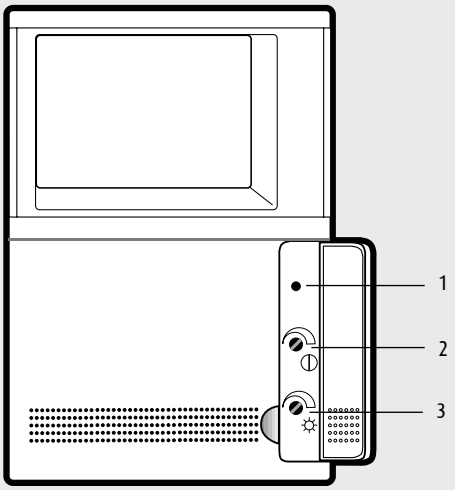
- Power supply: 18 - 24V d.c.
- Self-protected against overload and short-circuit by PTC
- Absorption device ON: 450mA
- Screen: colour 4" flat
- Switching-on time: 6 sec
- Video signal amplitude: 1 Vss video-composite 50 Hz
- Television standard: 625 lines

NOTE: The installation possibilities are the same as those described for the video sections Item 335102 - 335103 - 335104.

The device must not be configured.



Video section used with PIVOT telephones



Description

1 - Video definition adjustment.
2 - Colour adjustment.
3 - Brightness adjustment.

SWING handsets

SWING AUDIO HANDSET ITEM 344702 ITEM 344703 ITEM 344704

The SWING audio handset can be used in audio and 2 wire video system.

Description

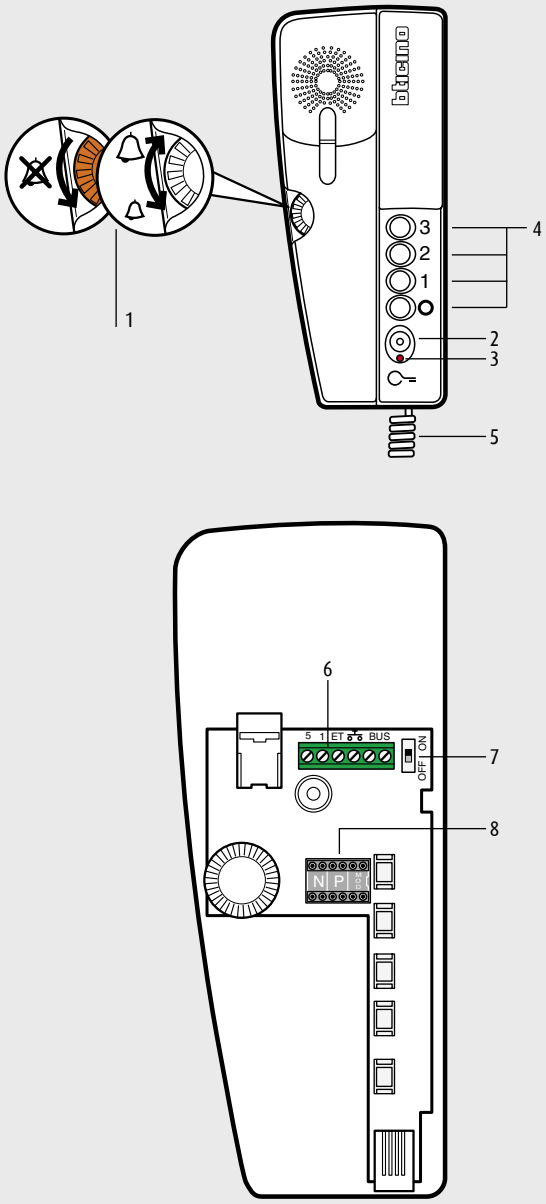
1 - Bell regulator and exclusion
2 - Opening door lock pushbutton
3 - Door status or office signalling LED
4 - Programmable pushbuttons (0-1-2-3)
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily
6 - Connection terminals
7 - Microswitch to switch ON for the closing of apartment or riser line (only in combined audio/video systems)
8 - Configurator housing

Among the basic functional equipment, the most important are:
- Secret conversation;
- "Professional office" function; the activation of this function causes the opening of the lock of the associated handset in case of call. It can be deactivated is needed. The activation is signalled by the ignition of the signal LED on the audio handset.
- "Lock control status" function, by using the SWING audio handset, the lock actuator Item 346230 and the lock "CISA ELETTRIKA" (with accessory Item 346240) it is possible to display on the audio handset the status of the lock (open or closed). The opening of the lock is signalled by the switching on of the signal LED present on the audio handset.

WARNING: it is not possible to have simultaneously the "professional office" function and the "lock control" function.

For further information on the activation/deactivation modes of the function and on the programming of the pushbuttons (0-1-2-3) please refer to the directions accompanying the Item and to the section "Configuration" of the 2 wire system.

The device must be configured.



SWING B/W VIDEO HANDSET ITEM 344802, ITEM 344803, ITEM 344804

Description

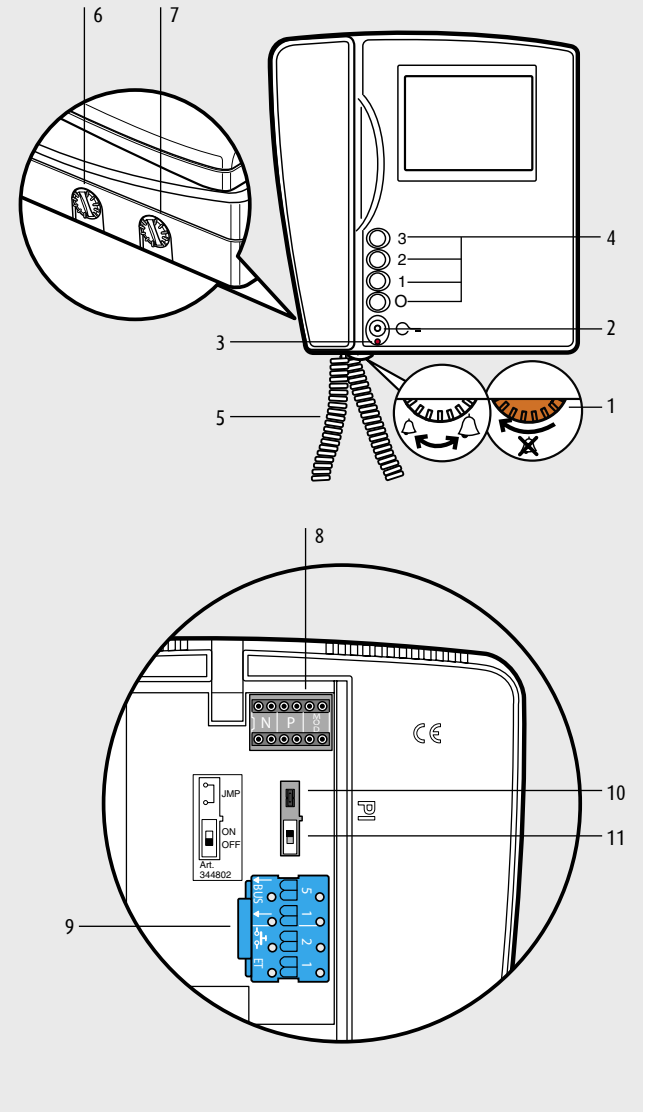
1 - Bell regulator and exclusion
2 - Opening door lock pushbutton
3 - Door status or office signalling LED
4 - Programmable pushbuttons
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily
6 - Monitor contrast adjustment
7 - Monitor brightness adjustment
8 - Configurator housing
9 - Connection terminals
10 - Jumper to remove in case of use of supplementary power supply
11 - Microswitch to switch ON for the closing of apartment or riser distance (only in combined audio/video installations)

Among the basic functional equipment, the most important are:
- Secret conversation;
- connections are performed by extractable terminals; this allows the performance of the wiring and the functional check of the installation without devices;
- "Professional office" function; the activation of this function causes the opening of the lock of the associated handset in case of call. It can be deactivated is needed. The activation is signalled by the ignition of the signal LED on the audio handset.
- "Lock control status" function, by using the SWING audio handset, the lock actuator Item 346230 and the lock "CISA ELETTRIKA" (with accessory Item 346240) it is possible to display on the audio handset the status of the lock (open or closed). The opening of the lock is signalled by the switching on of the signal LED present on the audio handset.

WARNING: it is not possible to have simultaneously the "professional office" function and the "lock control" function.

For further information on the activation/deactivation modes of the function and on the programming of the pushbuttons (0-1-2-3) please refer to the directions accompanying the Item and to the section "Configuration" of the 2 wire system.

The device must be configured.



SPRINT
Handsets

SWING COLOUR VIDEO HANDSET ITEM 344822 - 344823 - 344824

Description

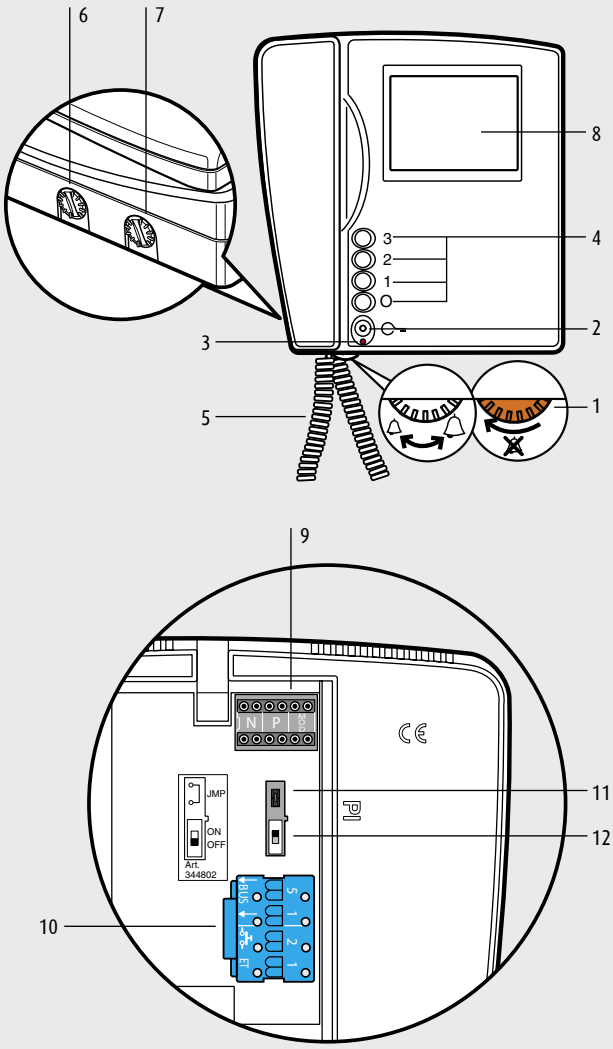
1 - Bell regulator and exclusion
2 - Opening door lock pushbutton
3 - Door status or office signalling LED
4 - Programmable pushbuttons
5 - Extendable cord with two RJ connectors; this allows easy installation, connecting the microtelephone when the work is completed and replacing it very easily
6 - Monitor contrast adjustment.
7 - Monitor brightness adjustment
8 - TFT technology colour monitor
9 - Configurator housing
10 - Connection terminals
11 - Jumper to remove in case of use of additional power supply
12 - Microswitch to switch ON for the closing of apartment riser or line (only in combined audio/video systems)

Among the basic functional equipment, the most important are:
- Secret conversation;
- connections are performed by extractable terminals; this allows the performance of the wiring and the functional check of the installation without devices;
- "Professional office" function; the activation of this function causes the opening of the lock of the associated handset in case of call. It can be deactivated is needed. The activation is signalled by the ignition of the signal LED on the audio handset.
- "Lock control status" function, by using the SWING audio handset, the lock actuator Item 346230 and the lock "CISA ELETTRIKA" (with accessory Item 346240) it is possible to display on the audio handset the status of the lock (open or closed). The opening of the lock is signalled by the switching on of the signal LED present on the audio handset.

WARNING: it is not possible to have simultaneously the "professional office" function and the "lock control" function.

For further information on the activation/deactivation modes of the function and on the programming of the pushbuttons (0-1-2-3) please refer to the directions accompanying the Item and to the section "Configuration" of the 2 wire system.

The device must be configured.



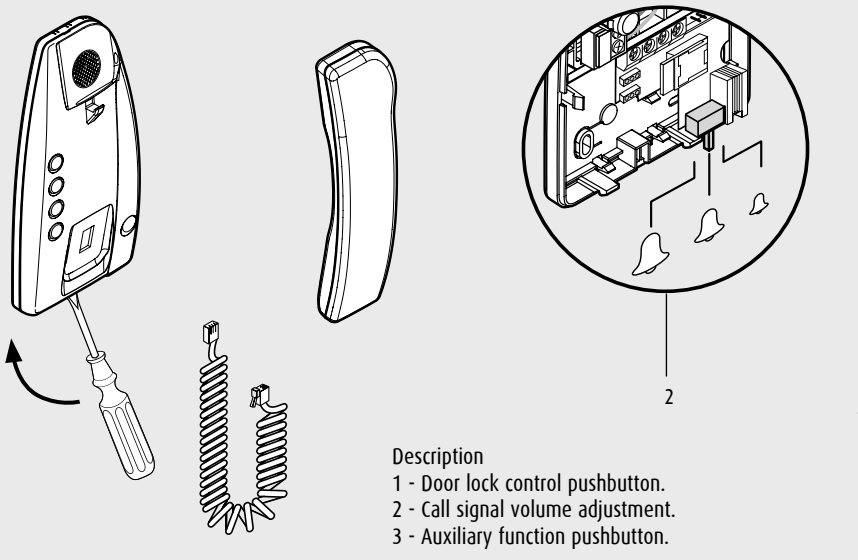
2 WIRE SPRINT AUDIO HANDSET ITEM 344202, ITEM 344212

Item 344212 (can be fitted with accessories)
The SPRINT 2 wire audio handset can be used in audio, video and combined audio/video systems. It can be fitted with accessories, with pushbutton for auxiliary functions and with floor call terminals and it can be used with both the speaker modules (Item 342170 and Item 342150) and the universal speaker unit Item 346991. It can have extra pushbuttons and signal LED as accessories. These will be cabled traditionally. It can also have the call exclusion card Item 346800 as accessory. Which function should be associated to the auxiliary function pushbutton can be defined by configuration.

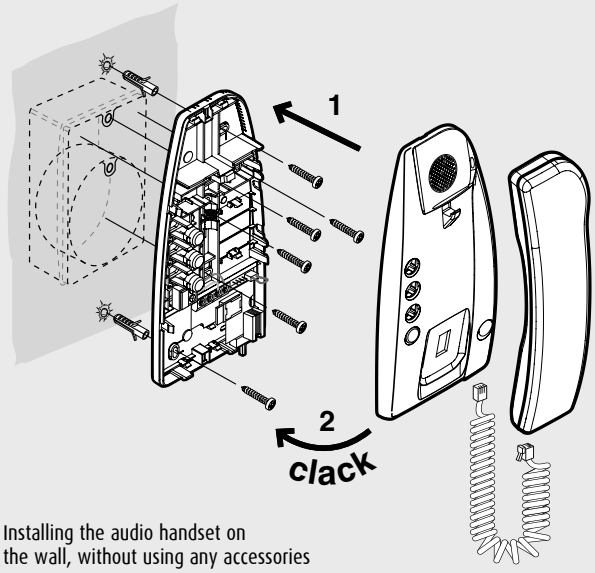
Item 344202 (can not be fitted with accessories)
The audio handset can be used **only** in audio systems.

WARNING
When the audio handset item 344212 is installed on video or combined audio/video systems, as the last device of the riser, or apartment line, an INPUT/OUTPUT terminator, item 3499, must be connected to the device itself.

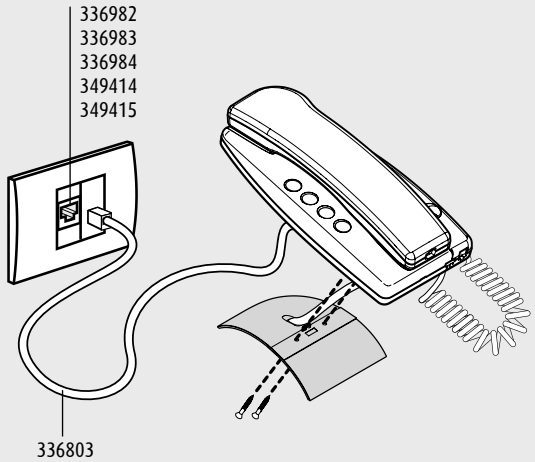
The device must be configured.



Description
1 - Door lock control pushbutton.
2 - Call signal volume adjustment.
3 - Auxiliary function pushbutton.



Installing the audio handset on the wall, without using any accessories



5 - Brown
6 - Brown-white

Installing the audio handset on the table with the base Item 337242

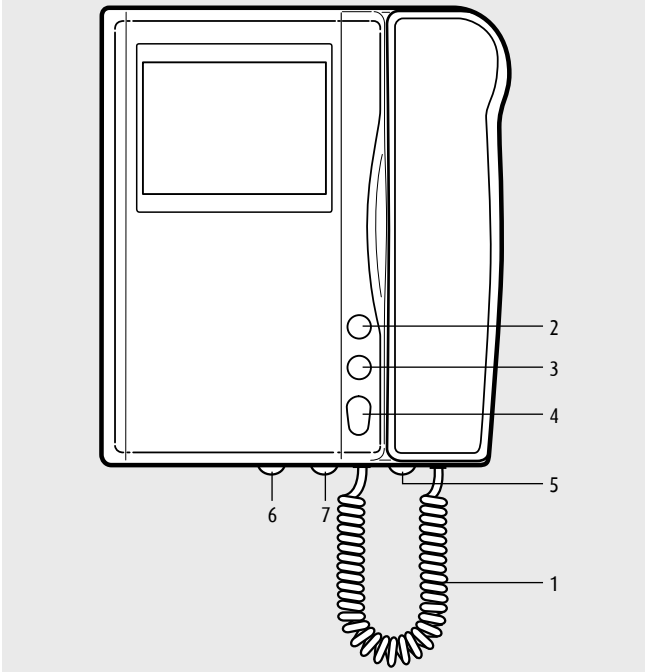
SPRINT
Handsets

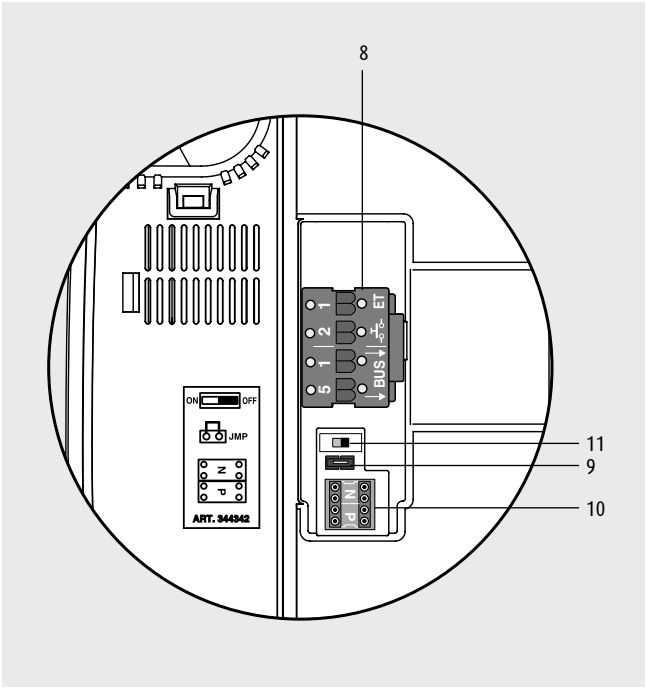
SPRINT B/W VIDEO HANDSET ITEM 344342

The SPRINT video handset has the following technical features:
1 - extendable cord with two RJ connectors;
2 - monitor ON pushbutton;
3 - light command pushbutton;
4 - open door pushbutton;
5 - bell adjustment selector switch;
6 - monitor contrast adjustment;
7 - monitor brightness adjustment.
8 - connection terminals;
9 - jumper, to renew in case of power supply;
10 - configurator housing;
11 - microswitch to switch ON for the closing of riser or line.

It is connected with pull-out terminals; the system can be cabled and its operation checked without the devices.
Wall-mounting installation with bracket.

The device must not be configured.





Handsets
Melodic bells

MELODIC BELLS

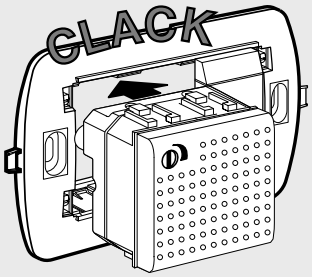
Item 346982, item 346983, item 346984, item 349412, item 349413.

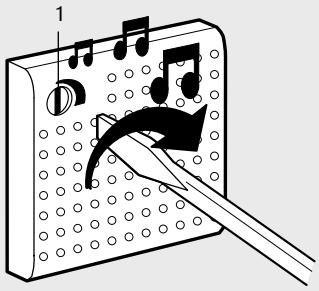
Melodic bells to be used as call repeater or as pager.

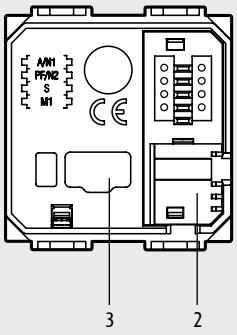
1 - Loudspeaker volume adjustment

2 - Configurator housing

3 - Programming connector housing







Technical features

Supply voltage : 18-27 Vdc
Absorption in stand-by: 10mA (max)
Absorption in operation: 100 mA (max)
Operating temperature: 5°-35°C

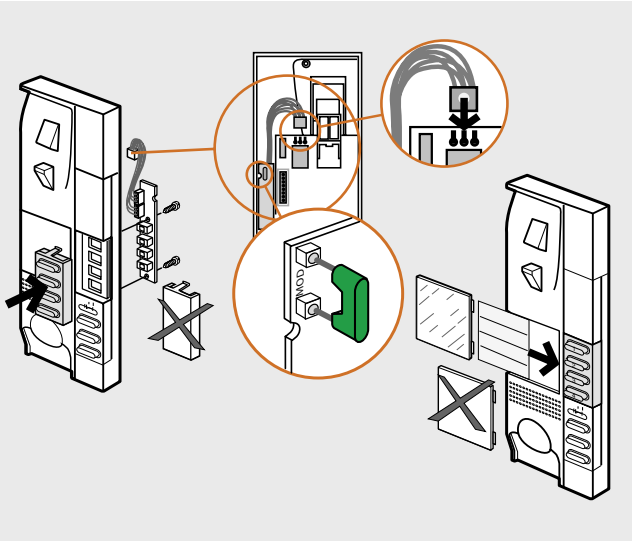
Accessories for handsets

4 ADDITIONAL KEY ACCESSORY ITEM 346812, ITEM 346813, ITEM 346814

The accessory with 4 additional keys is an accessory for the audio handsets Items 344032, 344033, 344034 and video handsets Item 344102, 344103, 344104, 344122, 344123 and 344124 and must be installed inside them.

They can perform the following functions:
- intercom calls through the various apartments of the system (max. 5);
- to control the actuators for extra door locks;
- to control the actuators for general use and self-switching on of the entrance panel;
- combined activations;
- paging system function with the new 2 wire sound diffusion;
- activation/deactivation domotic scenarios;
- apartment intercom in the two-family.

The device must be configured.

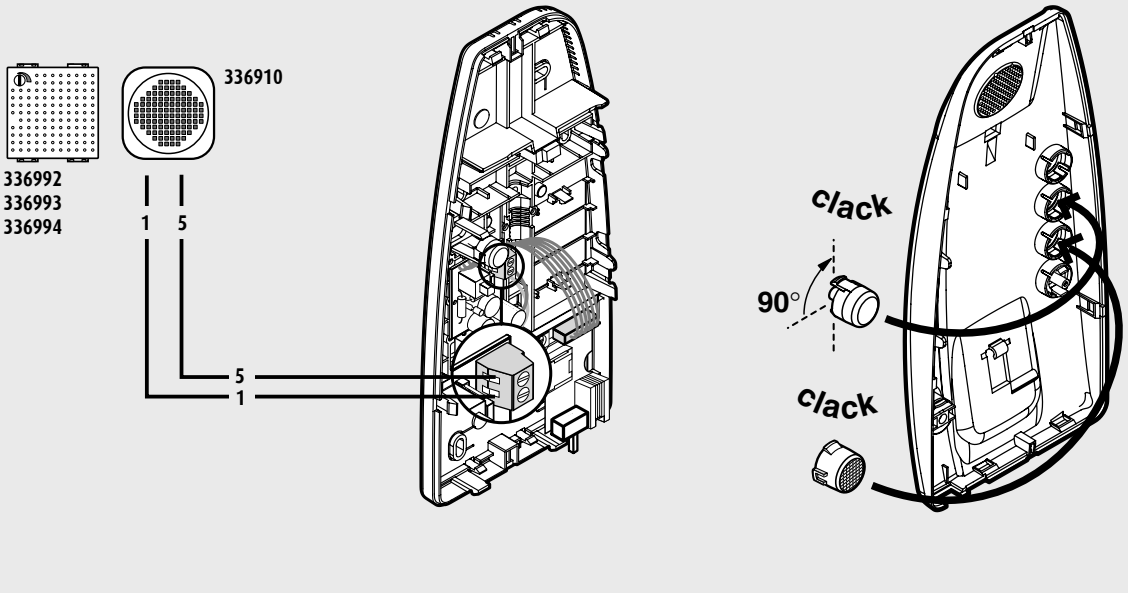


CALL EXCLUSION CARD AND EXTRA BELL ITEM 346800

Call-exclusion card to be inserted in the Sprint 2 wire audio handset (Item 344212).
It can exclude the call from the entrance panel and an extra bell can be connected (Item 336910 and Item 336992-3-4)

The card has a switch and a LED to signal the exclusion.
By means of a jumper one can also decide to exclude the call on both the audio handset and the bell or only on the audio handset.

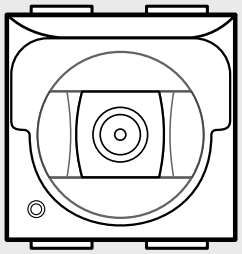
The device must be configured.

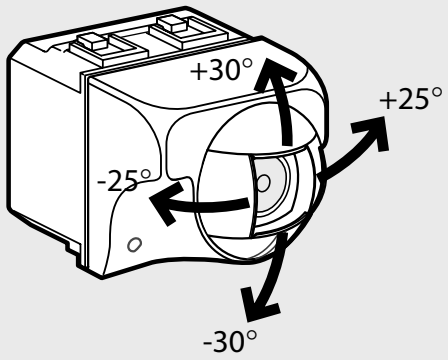


Cameras

2 WIRE FLUSH-MOUNTING CAMERAS

Internal camera with coaxial output. Flush mounted or wall mounted installation using Bticino catalogue articles.
Position the cameras at least 180 cm from the ground.





BLACK AND WHITE CAMERAS ITEM 391667, 391668, 391669

Features

- Sensor: from 1/3"b/w CCD
- Absorption 160 mA max.
- Lens: 3.7 mm "semi pin-hole"
- Power supply 18-27 Vdc
- Interlace 2:1
- Scanning standard CCIR
- Horizontal frequency 15625Hz
- Vertical frequency 50Hz
- Horizontal resolution: 380 TV lines at the image centre
- Operating temperature: from 5°C to 40°C
- Minimum illumination for recording purposes: 1 lux

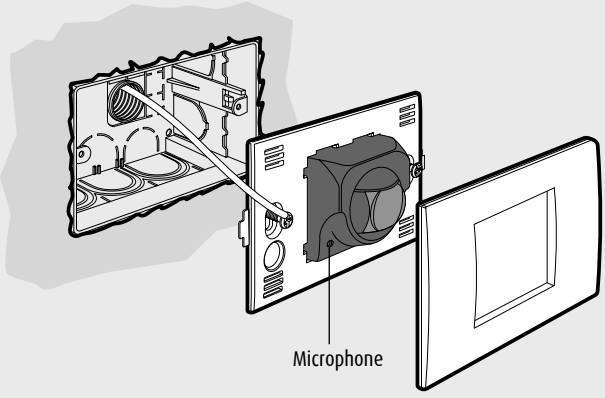
The device must be configured.

COLOUR CAMERAS ITEM 391661, 391662, 391657, 391658, 391659

Features

- Sensor: from 1/3" colour CCD
- Absorption 140 mA max.
- Lens: 3.7 mm "semi pin-hole"
- Power supply 18-27 Vdc
- Interlace 2:1
- Scanning standard CCIR
- Horizontal frequency 15625Hz
- Vertical frequency 50Hz
- Image elements: 537 (H) x 597 (V)
- Horizontal resolution: 380 TV lines at the image centre
- Video signal: PAL compatible
- Minimum illumination for recording purposes: 5 lux
- Operating temperature: from 5°C to 40°C

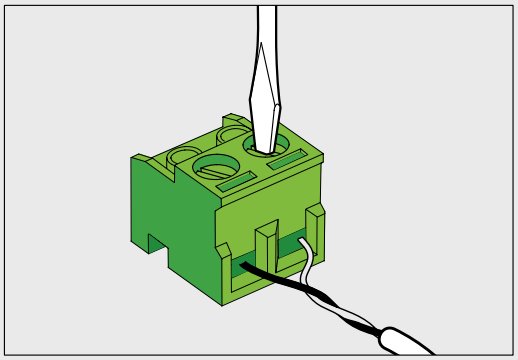
The device must be configured.



Cameras

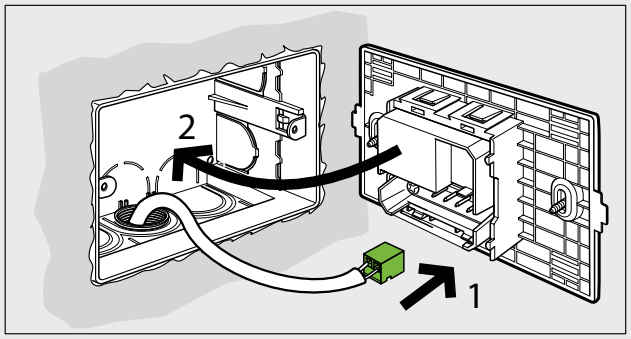
CONNECTION OF 2 WIRE FLUSH-MOUNTING CAMERAS

BUS wiring in the green terminal



Cameras to be used indoor

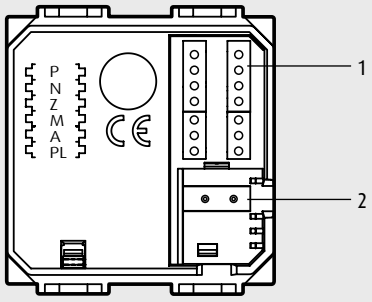
Insertion of the terminal in the camera rear



TECHNICAL FEATURES

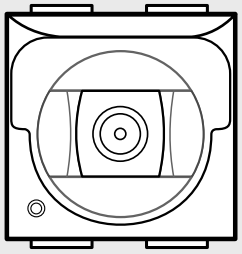
1 - Configurator housing
2 - BUS terminal

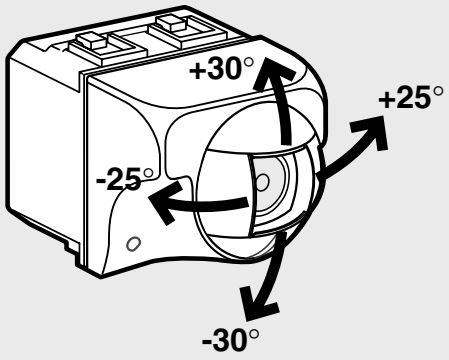
The device must be configured.



COAXIAL FLUSH-MOUNTING CAMERAS

Internal camera with coaxial output, for use with the COAXIAL-2 WIRE interface item 347400. Flush-mounted or wall-mounted installation using the BTicino Catalogue items. It is recommended to install the camera at a minimum height of 180 cm from ground. Coaxial cable wiring accessories are included in the camera package.





BLACK AND WHITE CAMERAS ITEM 391617, 391618, 391619

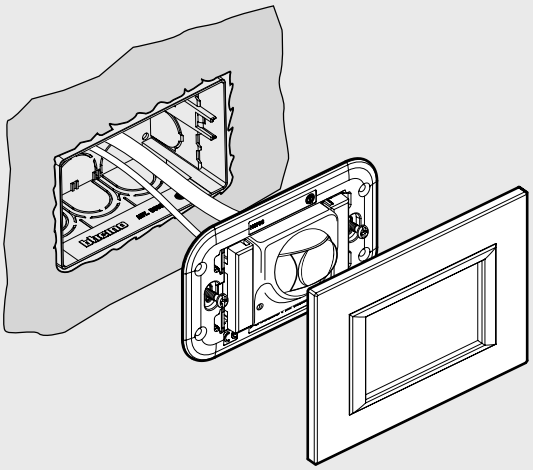
Features

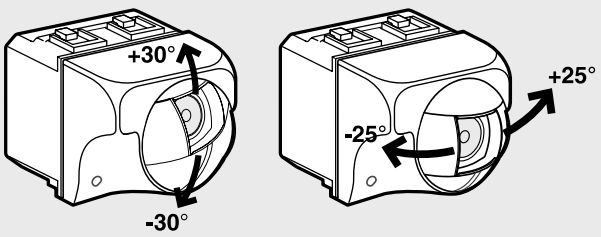
- Sensor: from 1/3" b/w CCD
- Lens: 3.7 mm "semi pin-hole"
- Power supply 12V d.c ±10%
- Interlace 2:1
- Scanning standard CCIR
- Horizontal frequency 15625Hz
- Vertical frequency 50Hz
- Horizontal definition at the image centre: 380 lines
- Video output 1Vpp on 75Ω
- Input current max. 150mA

COLOUR CAMERAS ITEM 391651, 391652, 391647, 391648, 391649

Features

- Sensor: from 1/3" colour CCD
- Absorption 120mA max.
- Lens: 3.7 mm "semi pin-hole"
- Power supply 12V c.c. ± 10%
- Interlace 2:1
- Scanning standard CCIR
- Horizontal frequency 15625Hz
- Vertical frequency 50Hz
- Image elements: 537 (H) x 597 (V)
- Horizontal resolution: 380 TV lines at the image centre
- Video output: CVBS 1Vpp 10% on 75Ohm, PAL compatible
- Minimum illumination for recording purposes: 5 lux
- Operating temperature: from 5°C to 40°C

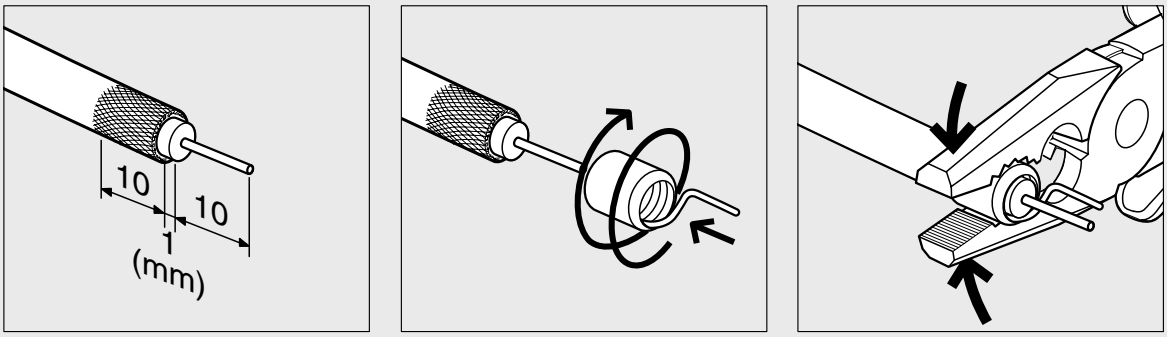




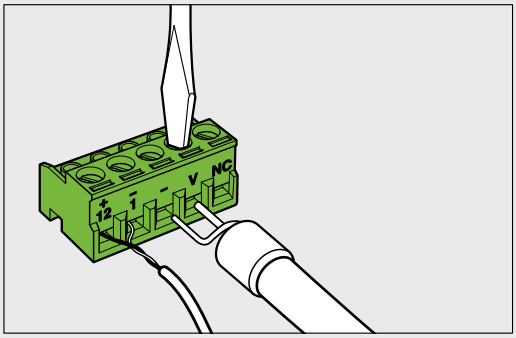
Cameras

CONNECTION OF CAMERAS WITH COAXIAL OUTPUT

Wiring the accessory on the coaxial cable

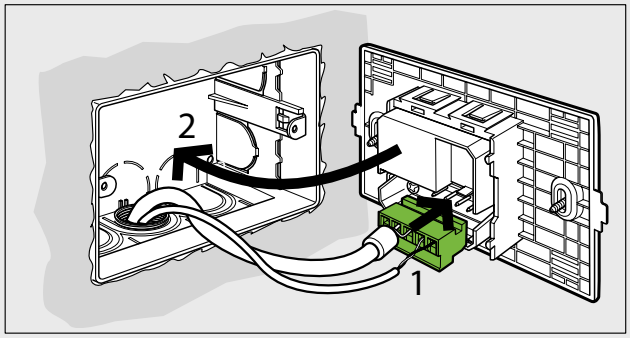


Wiring the coaxial cable and the pair on the green terminal



Cameras to be used indoor

Connecting the terminal on the rear of the camera

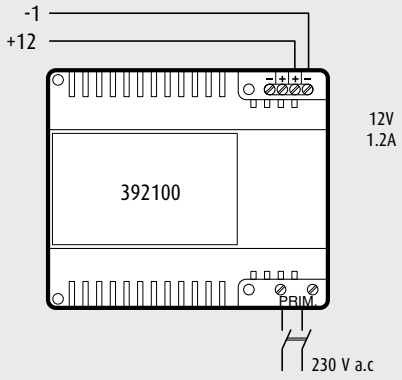


POWER SUPPLY ITEM 392100

Power supply for cameras.

Features

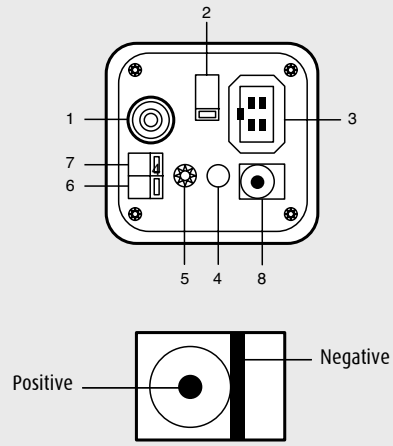
- Safety devices with SELV ⧈ double insulation
- 6 DIN enclosure
- Input 230V a.c. 50-60 Hz
- Output 12V 1.2A
- Dissipated power: 10W



BLACK AND WHITE CAMERA 12V D.C. ITEM 391616

Description of functions

1 Video output BNC.
2 AUTO IRIS changeover for automatic iris lens.
3 Automatic iris output.
4 Power supply indicator light.
5 LEVEL potentiometer, used to adjust the video output level when automatic IRIS lenses are used without amplifier (AUTO IRIS changeover in DC position).
6 BLC changeover for backlight compensation.
7 AES changeover for automatic electronic shutter.
8 12V d.c. power supply pin.



Description

a. Adapter ring to install a C lens (supplied).
b. Adapter ring for CS lens; do not use the adapter ring for C lens when using a CS lens.
c. Holes for fastening (1/4"-20T).
d. BNC connector for video output.
e. Holes for fastening CS lens adapter ring. If you need to adjust the CS adapter ring, use an allen wrench to loosen the screw and then finely adjust the length of the CS ring to the lens focal range. Finally tighten the screw.
f. Enclosure.
g. Fastening base. If a shelf support is used, you can move the base up or down as required.

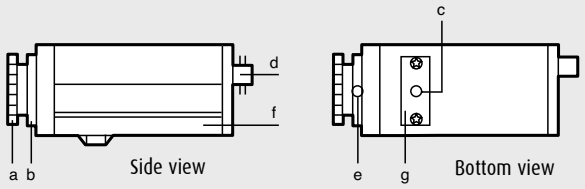
For external installation with housing 391803, use only an automatic iris lens.

Features

Image devices	CCD sensor 1/3" interline
Picture elements	Total: 537(H) x 597(V) Effective: 500(H) x 582(V)
Scanning system	CCIR standard 625 lines 25 frame/sec
Synchronisation system	Internal
Horizontal resolution	420 TV lines
Electronic shutter control	Switch ON/OFF (1/50 - 1/100000) CCIR
Mechanical iris	Video control/ DC control Auto Iris Lens Connector
Gamma	0.45
Minimum lighting	0.1LUX / F 1.2
Video output level	1Vpp / 75Ohm, composite
Video S/N ratio	48dB (AGC OFF)
Operating temperature	-10°C-+50°C
Temperature at rest	-30°C-+80°C
Power supply	12V c.c. ± 1.2Vc.c.
Consumption	Normal 100mA - 12V c.c.
Dimensions (L x A x P)	110 x 50 x 50mm 12V c.c.
Weight	305g

Installation procedure

1. Select a suitable lens to meet installation requirements.
2. Use lenses with CS mount. An adapter is also supplied for use with C mount lenses.
3. Screw the fixing base supplied in the most suitable position (high or low), and secure the camera to the bracket.
4. Plug in 12V c.c. power supply (use for example a power supply item 392100); please check that power supply indicator is switched on.
5. Adjust the focus of the lens. Then decide whether you need to adjust the depth of CS adapter ring.
6. Adjust the camera depending on the installation conditions.

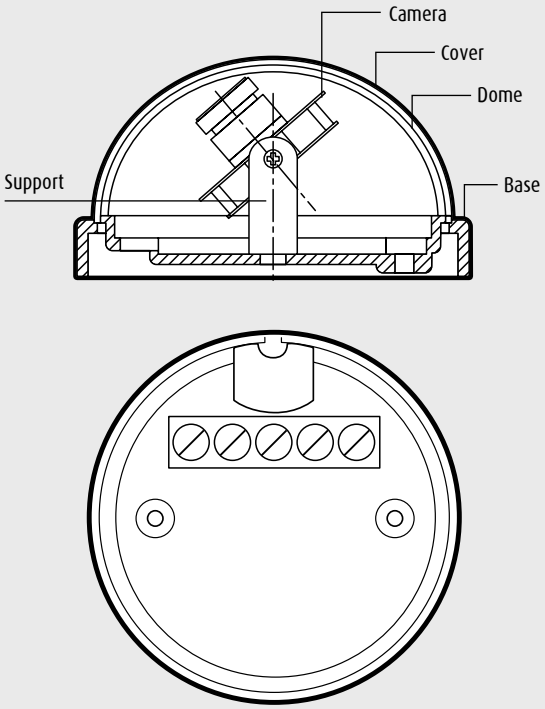


Cameras

MINIDOME BLACK AND WHITE CAMERA ITEM 391615

Operation and adjustment
- Adjust the horizontal angle in the correct position; pivot the camera in the correct position.
- Install the cover making the transparent dome correspond to the camera.

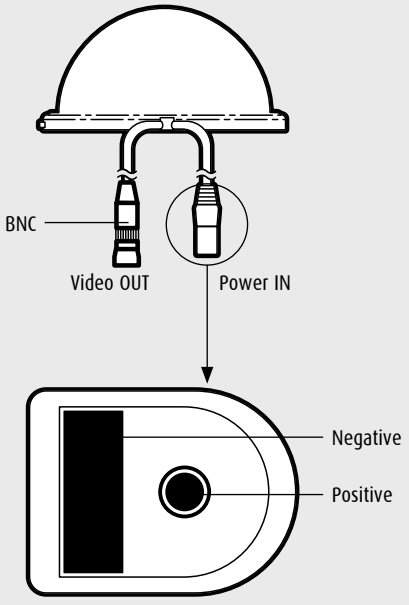
Electronic shutter
The minidome camera incorporates an electronic shutter up to 100000 sec



Features

Model	Standard Resolution B/W Dome Camera
Picture elements	Total: CCIR 537 (H) x 597 (V)
	Effective: CCIR 500 (H) x 582 (V)
Scanning system	CCIR standard 625 lines, 25 frame/sec
Synchronisation system	Internal
Resolution	More than 380 TV lines
Electronic shutter control	Auto-Electronic shutter (1/50 - 1/100000) CCIR
Gamma	0.45
Minimum lighting	0.18 LUX./F2.0
Video output level	1Vpp/75Ω, composite
Video S/N ratio	48dB (AGC OFF)
Operating temperature	-10°C - ~ 50°C
Temperature at rest	-20°C - ~ 60°C
Power supply	12V d.c. ± 1.2V d.c.
Absorption	12V c.c. 100mA typical
Dimensions	110mm (ø) x 80mm (A)
Weight	250g
Lens	3.6mm

Safety instructions
1 - Never expose the unit to rain or moisture to avoid electric shocks.
2 - All service or maintenance should be carried out by qualified service personnel.
3 - Storage temperature from -20 to ~+60°C.
4 - All installation and service should conform to local codes.
5 - Do not open the cover: risk of electric shock
6 - Do not place anything on the unit which maybe spill or fall into the unit.
7 - The equipment has been tested and passed the CE standard which is designed to provide reasonable protection against harmful interference and be insusceptible to other radiating interference when operated in commercial environment. Therefore the equipment can not also generate and cause any interference to radio communication.

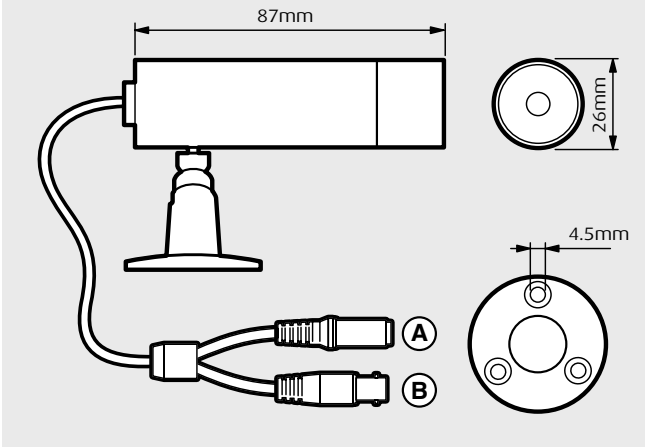


TUBE COLOUR CAMERA ITEM 391637*

Description

The camera uses a reliable and long-time durable CCD 1/4" colour detector in solid state.
It offers an excellent possibility to reproduce the image and a high heat-resistance.

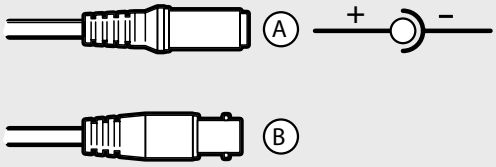
A - Power supply connector 12 Vd.c.
B - BNC connector **(VIDEO OUT)** BNC type



Connections

Connect the output **(Video Out)** of the camera with the input terminal **(Video In)** of the monitor using a coaxial cable (75 ohm).

Supply the camera with 12 Vd.c.+/- 10% recovery
- recommended power supply Bticino Item 392100.



Features

Power supply	12V d.c. ± 10%
Absorption	80mA
Sensor	CCD 1/4" colour
Resolution	512 (H) x 491 (V) NTSC // 512 (H) x 581 (V) PAL
Minimum lighting	1 lux /F 2.0
Signal-to-noise ratio	> 48dB (AGC OFF)
Electronic Shutter	1/60 (1/50) to 1/100.000 sec.
White balancing	AUTO
ALC	3 windows
Output signal	1.0Vpp composite - 75Ω
Mounted optics	f 3.6 mm/F2.0
Lens	angle 70°
Dimensions (mm)	87 x 26mm
Weight	305g

Warnings

- Never point the camera at the sun.
- Never point the camera at the sun even if you are not shooting.
- Do not shoot with very intense light.
- Install the camera in a place where it will not get wet. If it does get wet, immediately disconnect from power source and contact the after-sales service.
- Install the camera away from video interference sources. When camera cables are laid close to electric cables or TV aerials, picture interference may result. In this case, lay the cables again or re-install the camera.
- If the ambient temperature is higher or lower than the one indicated in the specifications, picture quality may be affected or some internal parts of the camera may fail. The camera should not be used in these conditions.
- The same applies in conditions of high humidity.

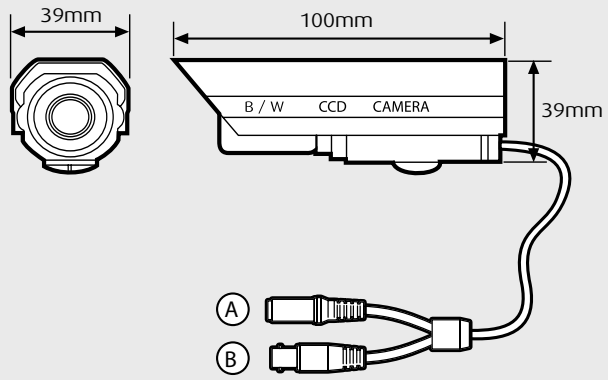
* device no longer available

Cameras

B/W EXTERNAL CAMERA ITEM 391640

Description

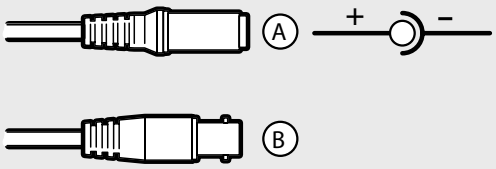
The camera uses a reliable, long lasting 1/3" interline CCD sensor.
It offers an excellent possibility to reproduce the image and a high heat-resistance.



Connections

Connect the output **(Video Out)** of the camera with the input terminal **(Video In)** of the monitor using a coaxial cable (75 ohm).

Supply the camera with 12 Vd.c.+/- 10% recovery
- recommended power supply Bticino Item 392100.



Features

Power supply	12V d.c. 10%
Absorption	100mA
Sensor 1/3"	Interline CCD
Resolution	380 TV lines
Minimum lighting	0.1 Lux F : 2,0
Signal-to-noise ratio	>48dB (ACG off)
Electronic shutter CCIR:	1/50 1/100,000 Sec
Scanning system CCIR:	625 Lines 25 images
Pixels CCIR :	(O) 500 x (V) 582
Output signal	1 Vp-p 75Ω composite
Mounted optics	6 mm
Operating temperature	-10°C + 50° C RH95%Max
Storage temperature	-20°C + 60° C RH95%Max
Dimensions	39 x 100 mm
Weight	about 150g
Housing	Aluminium
Gamma features	0.45
Synchronism	Internal

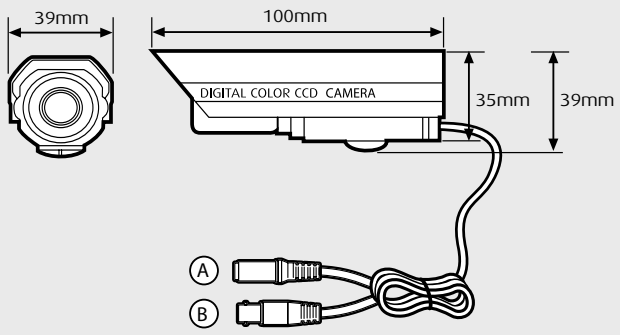
Warnings

- Never point the camera at the sun even if you are not shooting.
- Do not shoot with very intense light.
- Install the camera away from video interference sources. When camera cables are laid close to electric cables or TV aerials, picture interference may result. In this case, lay the cables again or re-install the camera.
- If the ambient temperature is higher or lower than the one indicated in the specifications, picture quality may be affected or some internal parts of the camera may fail. The camera should not be used in these conditions.
- The same applies in conditions of high humidity.

NIGHT AND DAY EXTERNAL CAMERA ITEM 391642

Description

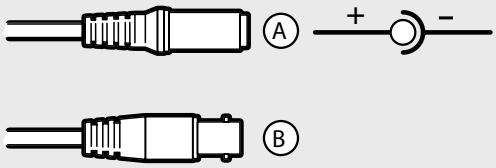
The camera uses a reliable, long lasting 1/3" Exview MAD CCD sensor.
It offers high colour resistance and excellent image reproduction, even in low light conditions.
Thanks to the NIGHT and DAY functions, in low light conditions the images are reproduced in B/W.



Connections

Connect the output **(Video Out)** of the camera with the input terminal **(Video In)** of the monitor using a coaxial cable (75 ohm).

Supply the camera with 12 Vd.c.+/- 10% recovery
- recommended power supply Bticino Item 392100.



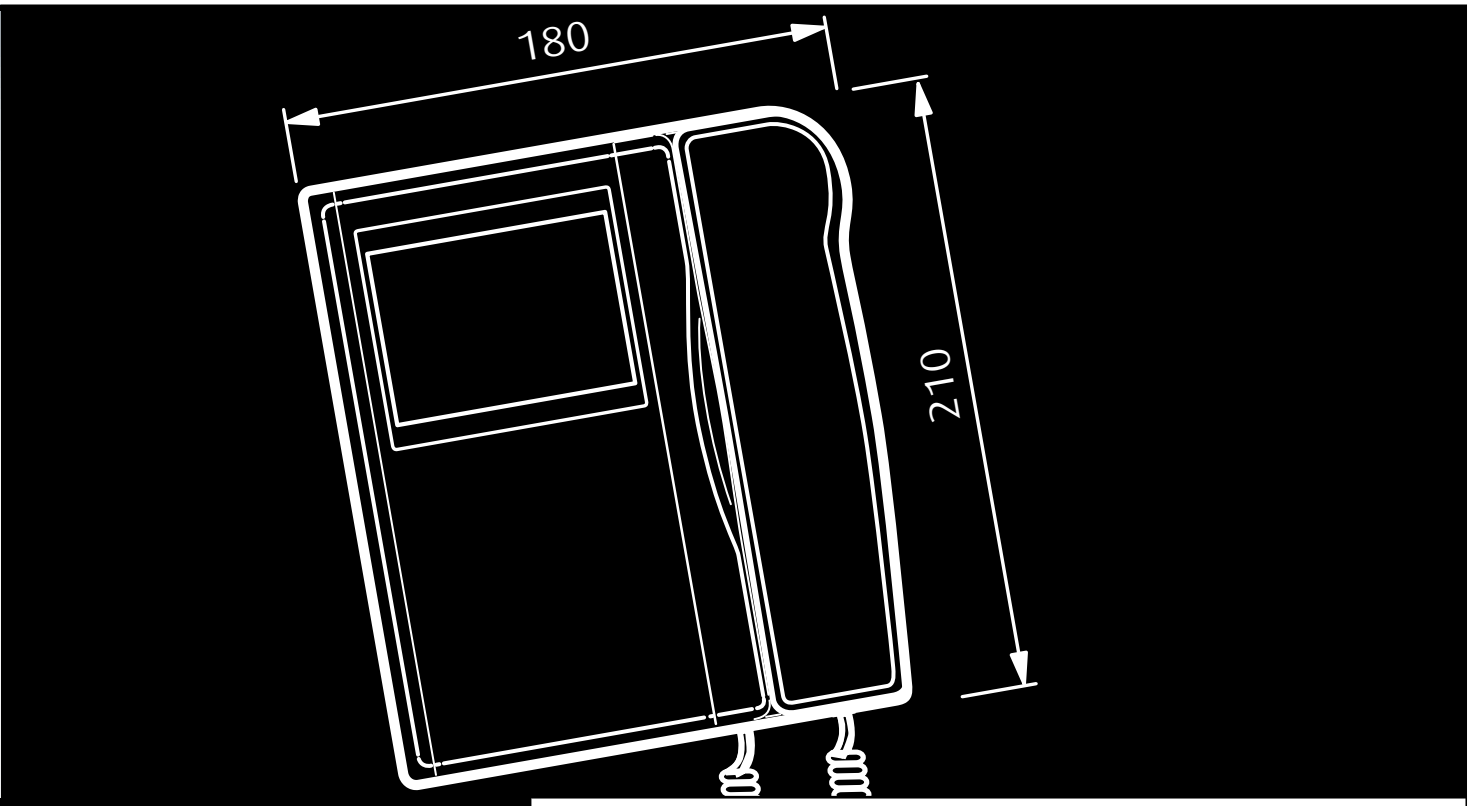
Features

Power supply	12V d.c. 10%
Absorption	100 mA
Detector	1/3" Exview HAD CCD
Resolution	330 TV lines
Minimum lighting	0.5 Lux (b/n) F : 2.0
Signal-to-noise ratio	>48dB (ACG off)
Electronic shutter PAL :	1/50 1/100.000 Sec
Scanning system PAL :	625 lines 25 images
Pixels	270K Pixels
Output signal	1 Vp-p 75Ω composite
Mounted optics	6 mm
Operating temperature	-10°C + 50° C RH 95% Max
Storage temperature	20°C + 60° C RH 95% Max
Dimensions LxPxH	38 x 100 x 39 mm
Weight	about 150g
Housing	Aluminium
Gamma features	0.45
Synchronism	Internal
White balancing	Automatic (AWB)
BLC	Automatic compensation

Warnings

- Never point the camera at the sun even if you are not shooting.
- Do not shoot with very intense light.
- Install the camera away from video interference sources. When camera cables are laid close to electric cables or TV aerials, picture interference may result. In this case, lay the cables again or re-install the camera.
- If the ambient temperature is higher or lower than the one indicated in the specifications, picture quality may be affected or some internal parts of the camera may fail. The camera should not be used in these conditions.
- The same applies in conditions of high humidity.

DIMENSIONAL DATA

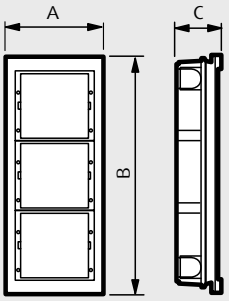


SECTION CONTENTS

Entrance panels

FLUSH-MOUNTING BOX + SFERA MODULAR CHASSIS

Box

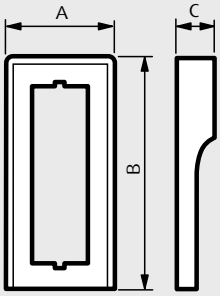


Dimensions - mm

Item	A	B	C
331110	117	123	45
331120	117	214	45
331130	117	306	45

SFERA MODULAR RAINSHIELDS

Rainshields

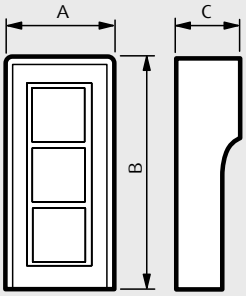


Dimensions - mm

Item	A	B	C
331411	151	151	50
331421	151	242	50
331431	151	334	50
331441	290	242	50
331461	290	334	50
331491	430	334	50

SFERA MODULAR WALL MOUNTING ENCLOSURES

Enclosures

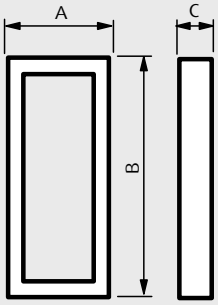


Dimensions - mm

Item	A	B	C
331311	155	160	92
331321	155	255	92
331331	155	360	92
331341	290	255	92
331361	290	360	92
331391	430	360	92

SFERA MODULAR FRAMES

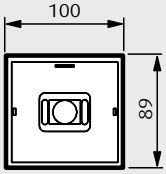
Frames



Dimensions - mm

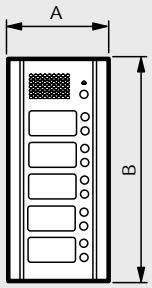
Item	A	B
331211	140	142
331221	140	233
331231	140	325
331821	125	233
331831	125	325

SFERA FUNCTION MODULES



SFERA MONOBLOC

Monobloc pushbutton panels

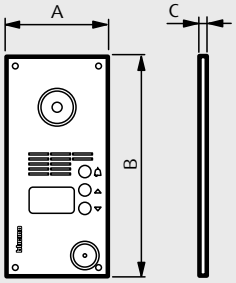


Dimensions - mm

No. of modules	A	B
1	140	142
2	140	233
3	140	325

SFERA MONOBLOC VANDAL-RESISTANT

Video pushbutton panels

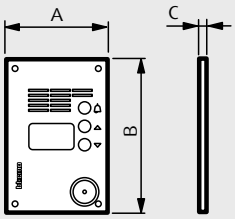


Dimensions - mm

Item	A	B	C
333914	150	284	4

SFERA MONOBLOC VANDAL-RESISTANT

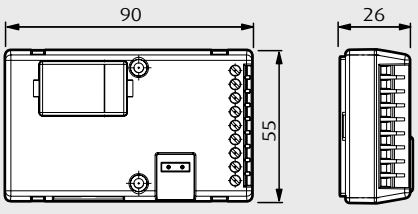
Audio pushbutton panels



Dimensions - mm

Item	A	B	C
333714	150	198	4

UNIVERSAL SPEAKER UNIT

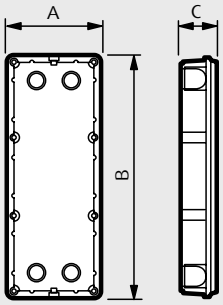


346991

Entrance panels

MINISFERA MODULAR FLUSH-MOUNTING BOX

Box

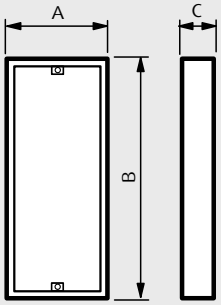


Dimensions - mm

Item	A	B	C
332710	95	235	45

MINISFERA MODULAR WALL-MOUNTING BOX

Box

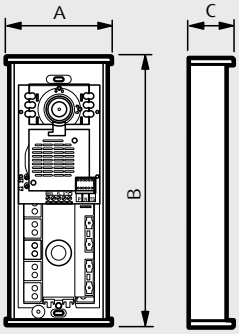


Dimensions - mm

Item	A	B	C
332711	99	245	16

MINISFERA MODULAR FUNCTION MODULES

Function modules

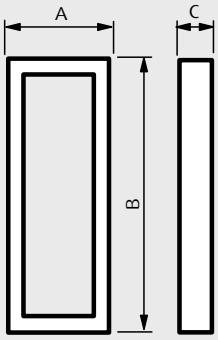


Dimensions - mm

Item	A	B	C
342702	100	245	21
342704	100	245	21
342708	100	245	21

MINISFERA MODULAR FRAMES

Frames

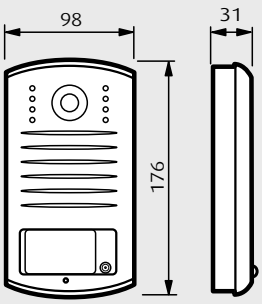


Dimensions - mm

Item	A	B	C
332721	100	237	18
332726	100	237	18

LINEA 2000 MODULES

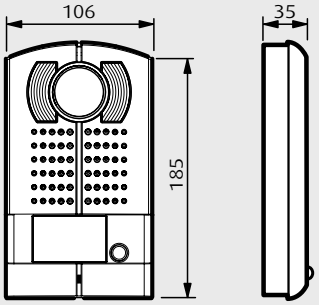
Audio and video pushbutton panels



342911 - 342921
342951 - 342961

LINEA 2000 METAL MODULES

Audio and video pushbutton panels

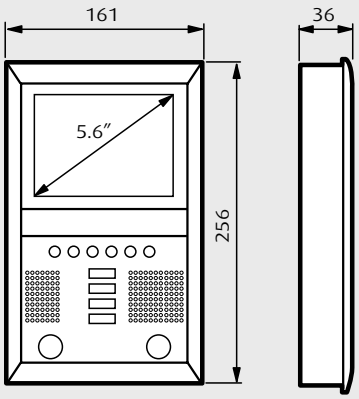


342971 - 342972
342981 - 342982
342991 - 342992

Handsets

AXOLUTE VIDEO STATION

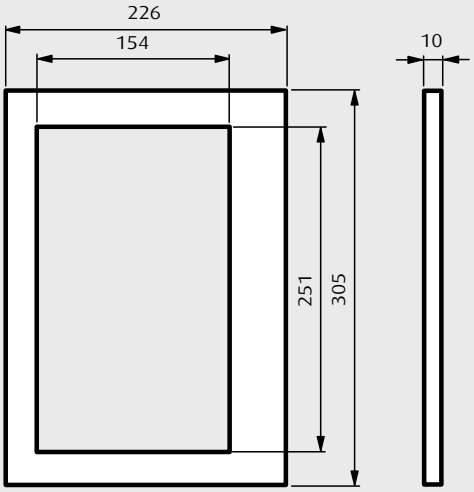
Speaker phone video handset



349310

AXOLUTE VIDEO STATION SURROUND PLATES

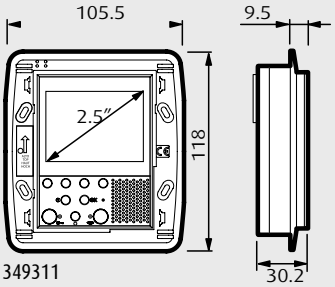
Surround plates



349210
349211
349212

AXOLUTE VIDEO DISPLAY

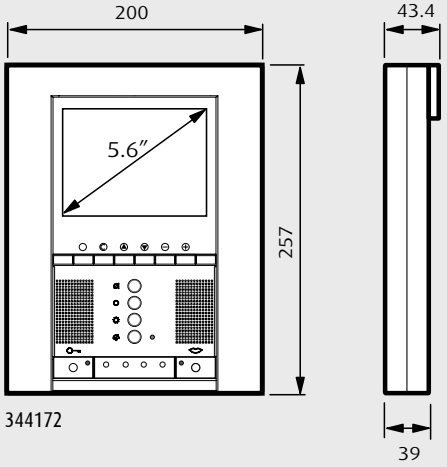
Speaker phone video handset



349311
349312

POLYX MEMORY STATION

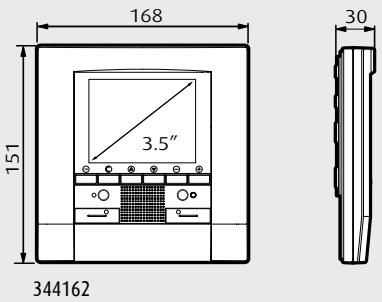
Speaker phone video handset and speaker phone with memory



344172

POLYX VIDEO DISPLAY

Speaker phone video handset

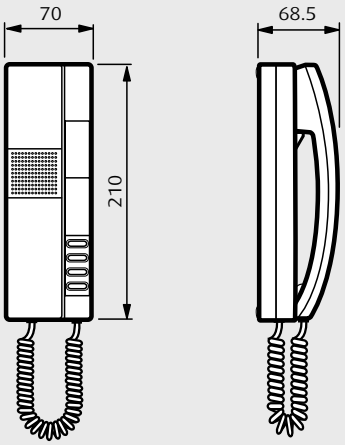


344162

Handsets

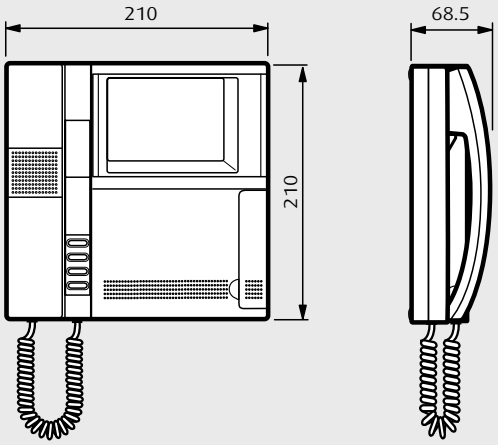
PIVOT AUDIO AND VIDEO HANDSET

Audio handset



34403...

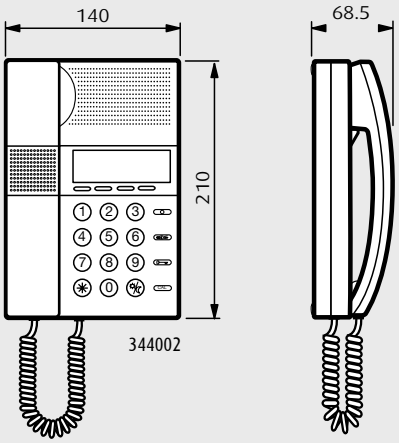
Video handset



34410...
34412...

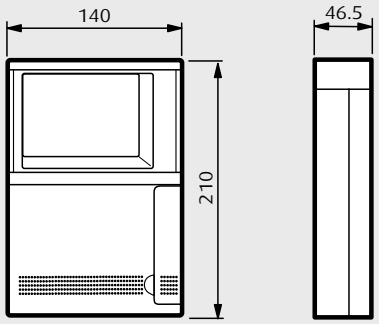
SWITCHBOARD

Switchboard



344002

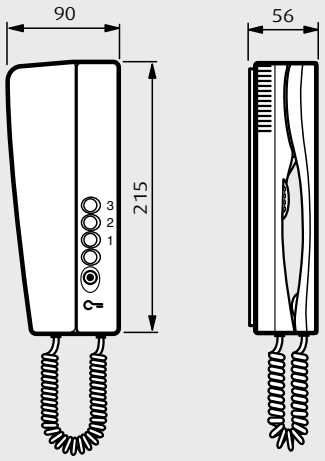
Video section



334402
335122

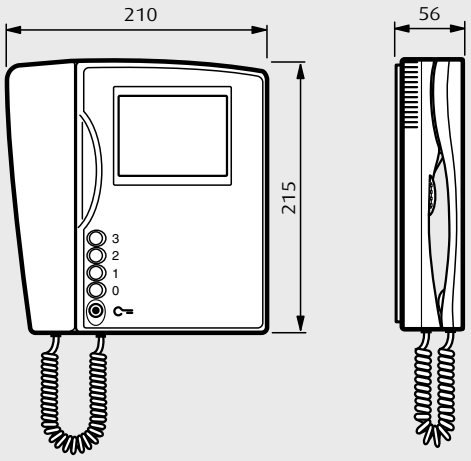
SWING AUDIO AND VIDEO HANDSET

Audio handset



34470...

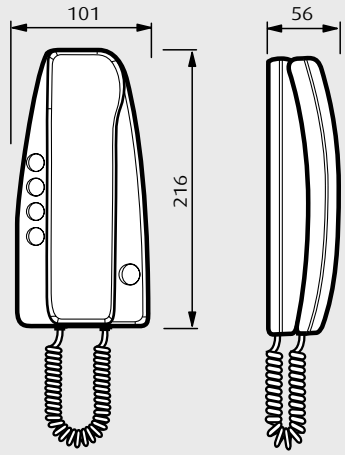
Video handset



34480...
34482...

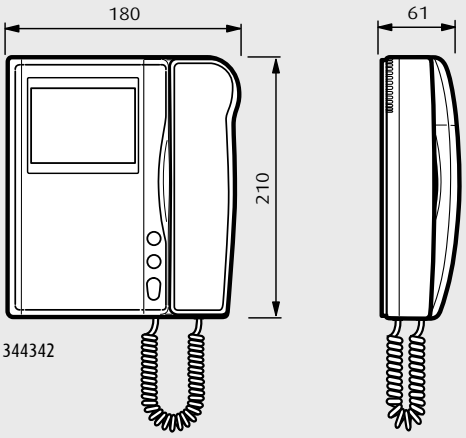
SPRINT AUDIO AND VIDEO HANDSET

Audio handset



334202
344212

Video handset

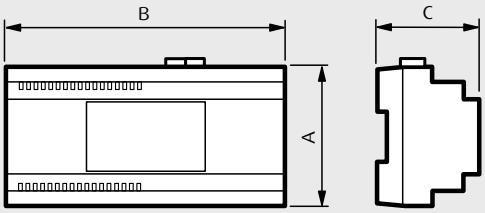


344342

Installation accessories

DEVICES ON DIN RAIL

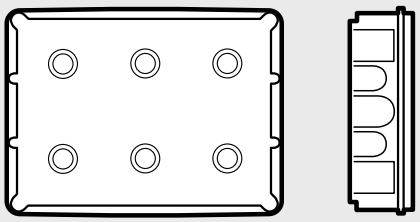
DIN modularity



Item	Dimensions (mm)			No. of DIN modules
	A	B	C	
335818	90	175	60	10
335828	90	175	60	10
336000	90	105	61	6
336010	90	175	61	10
336200	90	175	61	10
336230	90	52.5	37	3
336810	90	52.5	60	3
346150	90	105	61	6
346200	90	70	61	4
346230	105	35	30	2
346850	105	70	30	4
346851	105	70	30	4
349410	105	70	30	4
392100	90	105	61	6
E46ADCN	90	140	60	8
E48	90	175	60	10
E48A2	90	70	30	4
F411/1N	105	35	31	2
F414	105	35	31	2
F420	105	35	31	2
F422	105	35	31	2
F430/2	105	35	31	2
F441	90	105	30	6
F500	90	105	30	6

MULTIBOX FLUSH-MOUNTING BOXES

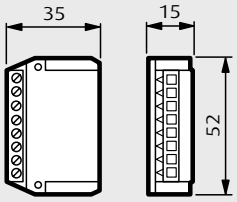
Multipurpose boxes



Item	Internal dimensions (mm)	External dimensions (mm)
16101	84x218x69	110x243x70
16102	154x218x69	180x243x70
16103	224x218x69	250x243x70
16104	294x218x69	320x243x70

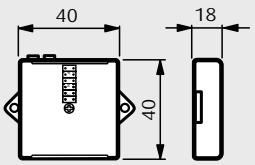
INSTALLATION ACCESSORIES

Signal distribution block and amplifier



346840
346870

COAXIAL / 2 WIRE INTERFACE- FLOOR DISTRIBUTION BLOCK AND FLOOR CALL INTERFACE

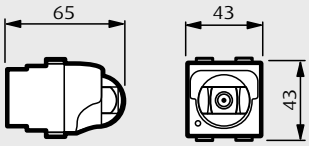


347400
346833
346841

Cameras

INTERNAL FLUSH-MOUNTING COLOUR AND B/W CAMERAS

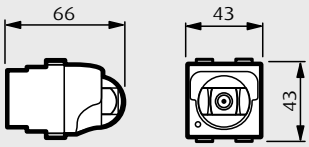
Cameras - LIVING, LIGHT and LIGHT TECH



391617
391618
391619

391647 391657 391667
391648 391658 391668
391649 391659 391669

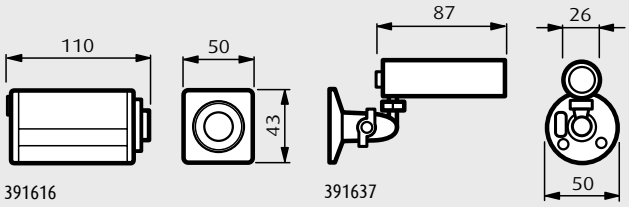
Cameras - AXOLUTE



391651
391652

391661
391662

INTERNAL CAMERAS

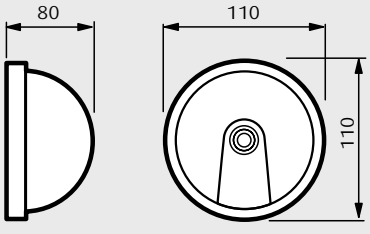


391616

391637

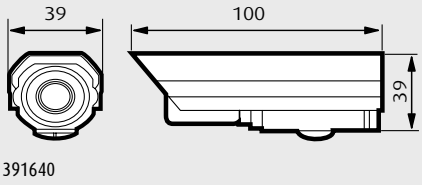
MINIDOME INTERNAL CAMERA

Cameras

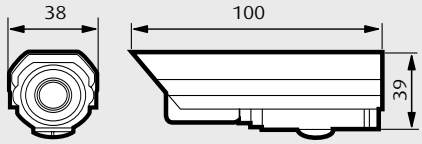


391615

INTERNAL FLUSH-MOUNTING COLOUR AND B/W CAMERAS



391640



391642

NOTES

NOTES

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