

# Example 1 - The villa

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

Classe 100 video internal unit



Classe 300EOS with Netatmo internal unit



HOME + SECURITY

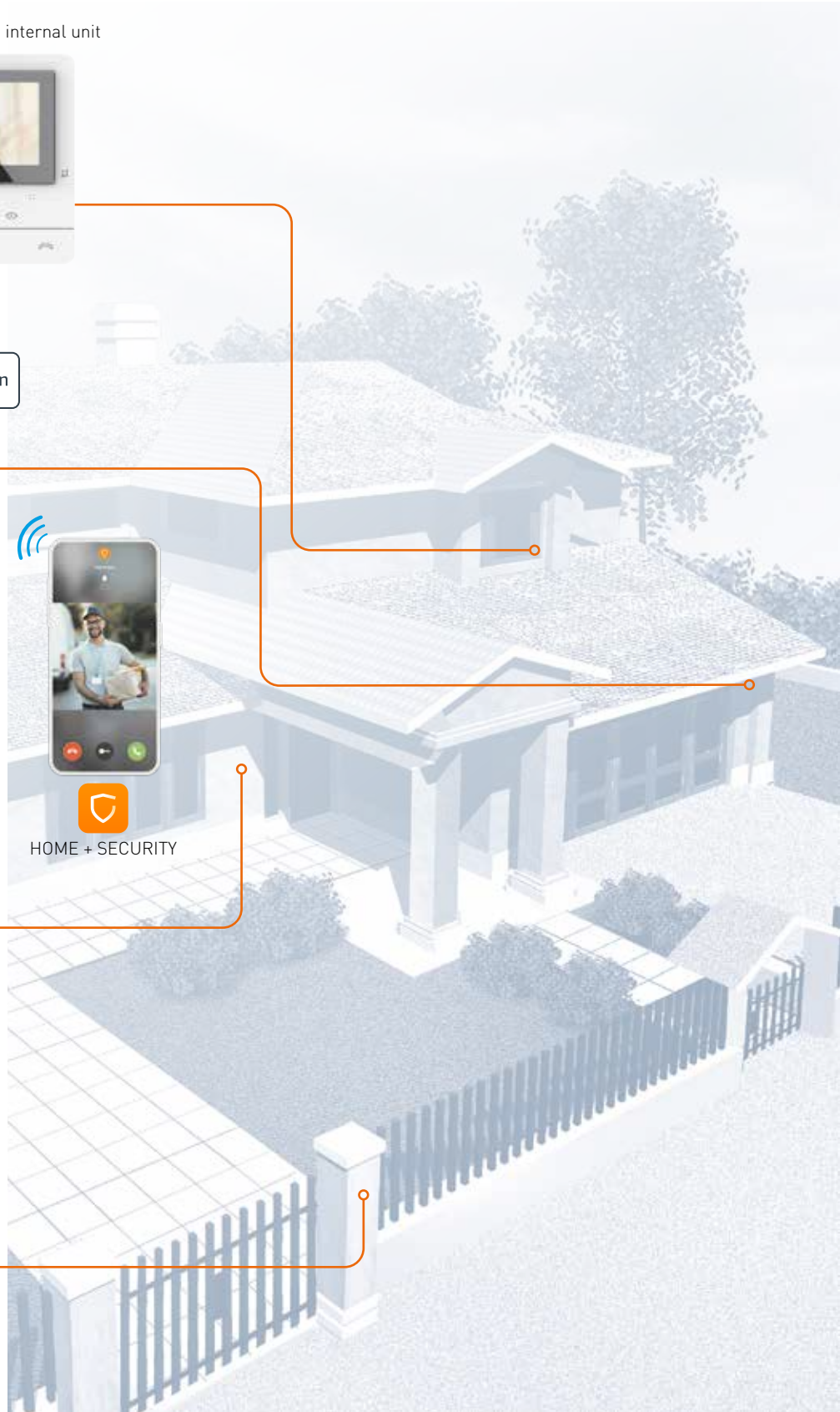
Power supply

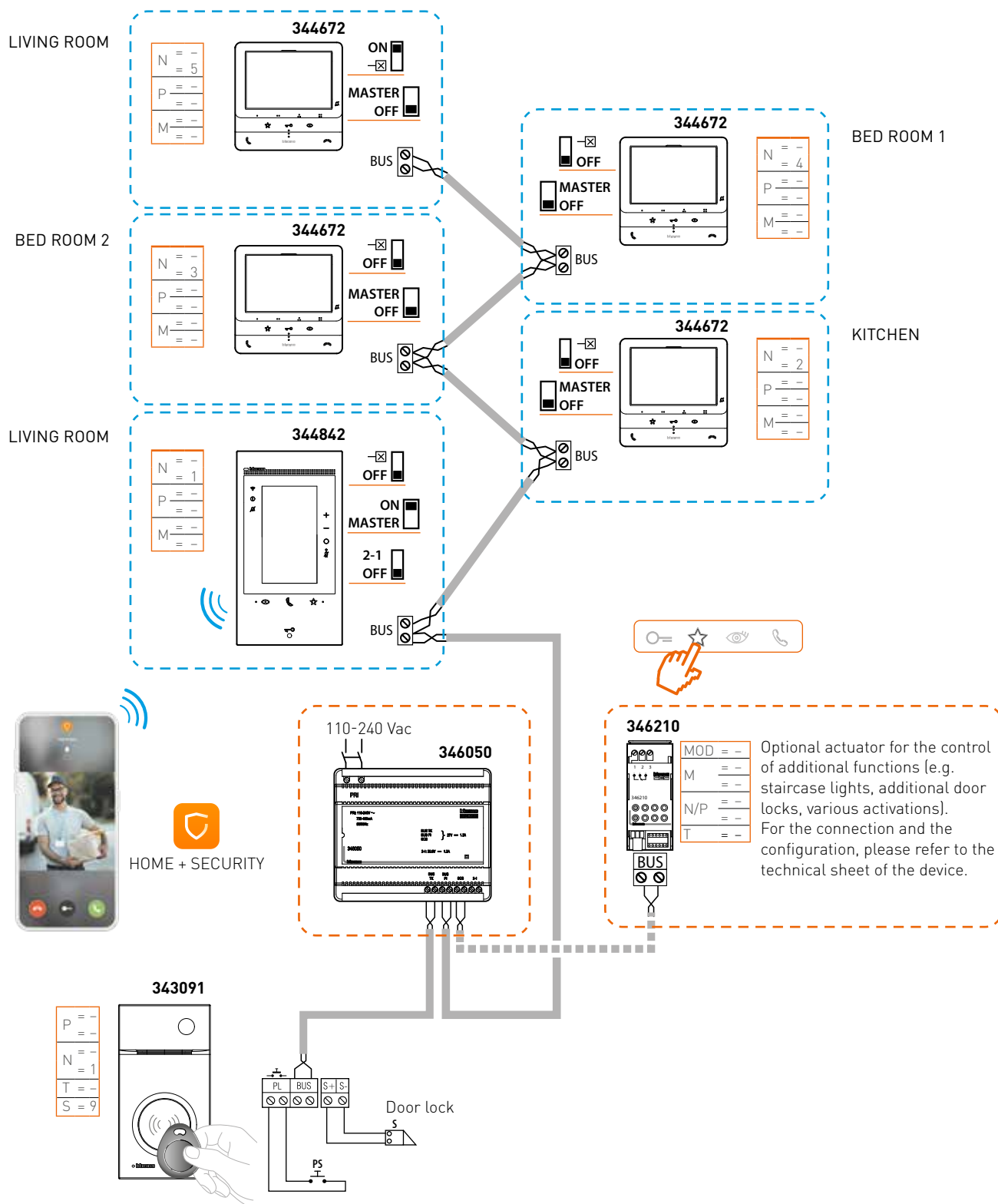


Entrance panel



Door lock release key card





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

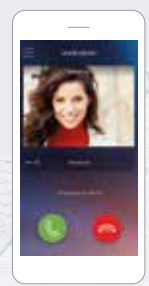
# Example 2 - The two-family villa

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

Classe 300E0S with Netatmo  
internal unit  
HOME 1



Classe 100X video internal unit  
HOME 2



HOME + SECURITY



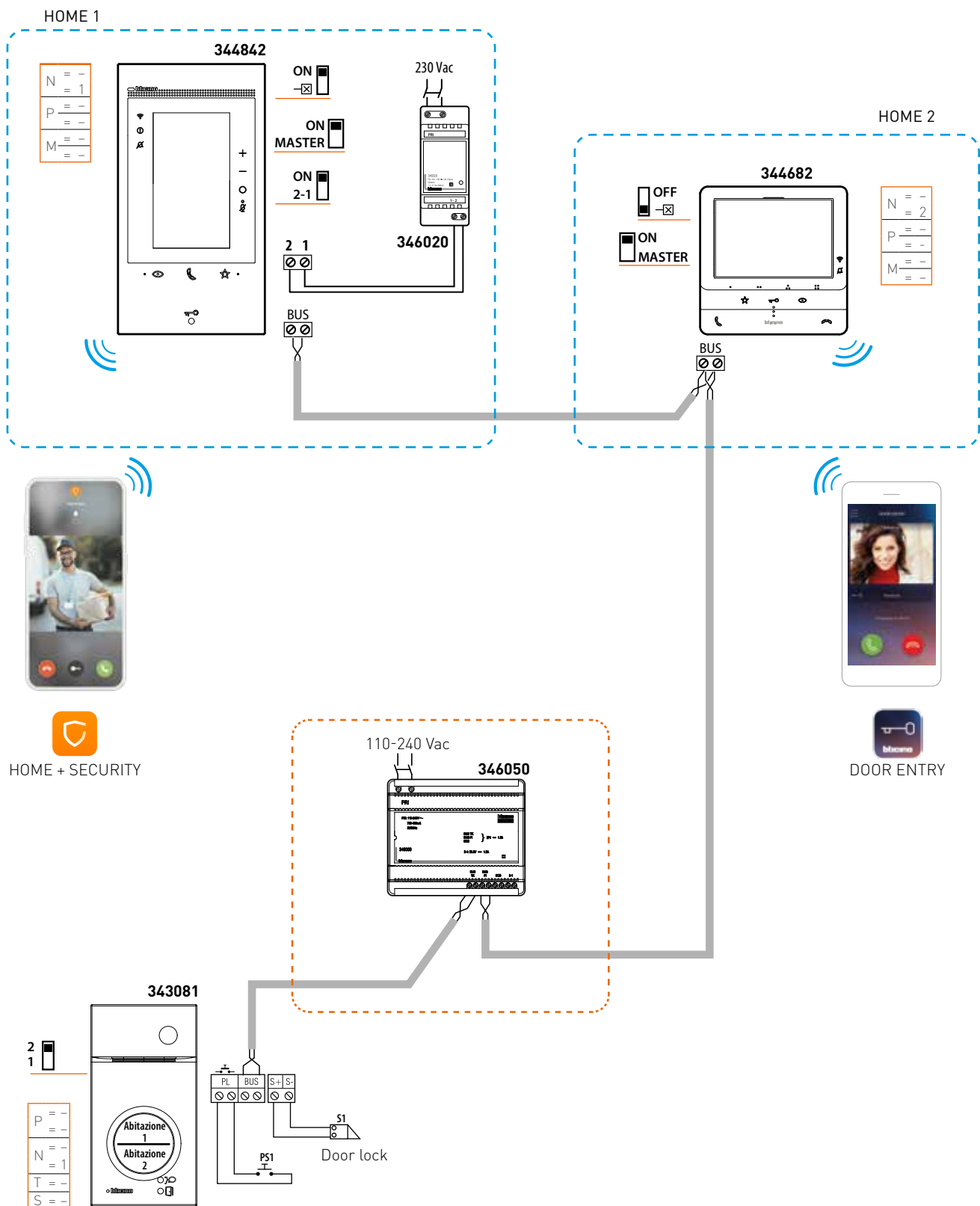
DOOR ENTRY

Power supply



ENTRANCE PANEL

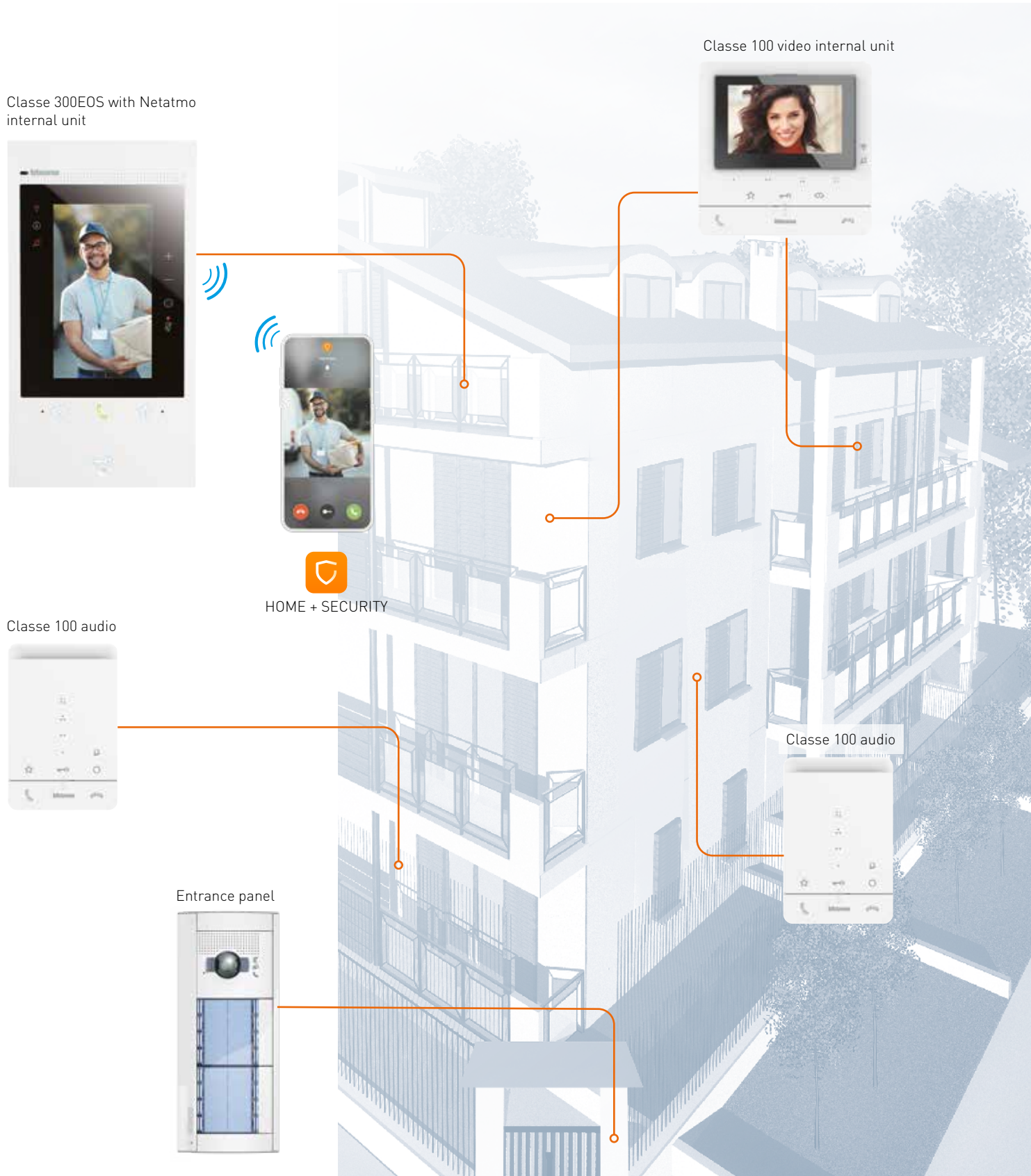


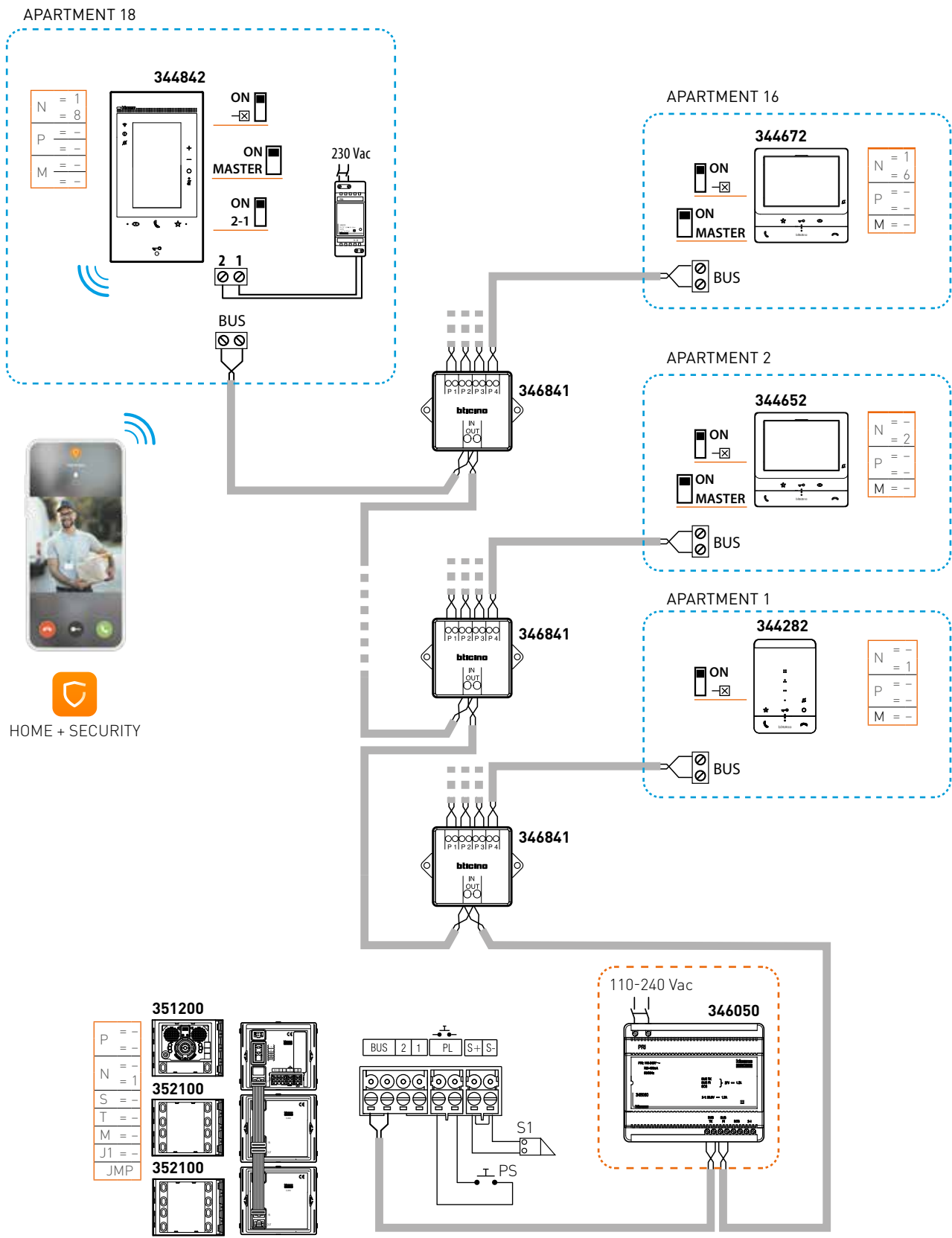


- Max. 3 internal units for each dwelling;
- Max. 200 m between the entrance panel and the last internal unit with cable 336904 / 336905;
- Max. 1 CLASSE 300EOS with Netatmo / CLASSE100X video internal unit connected for each local LAN;
- For the connection between the CLASSE 300EOS with Netatmo / Classe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

# Example 3 - The apartment building

## AUDIO DOOR ENTRY, VIDEO DOOR ENTRY OR MIXED MULTI-FAMILY SYSTEMS WITH SMARTPHONE CALL REPETITION

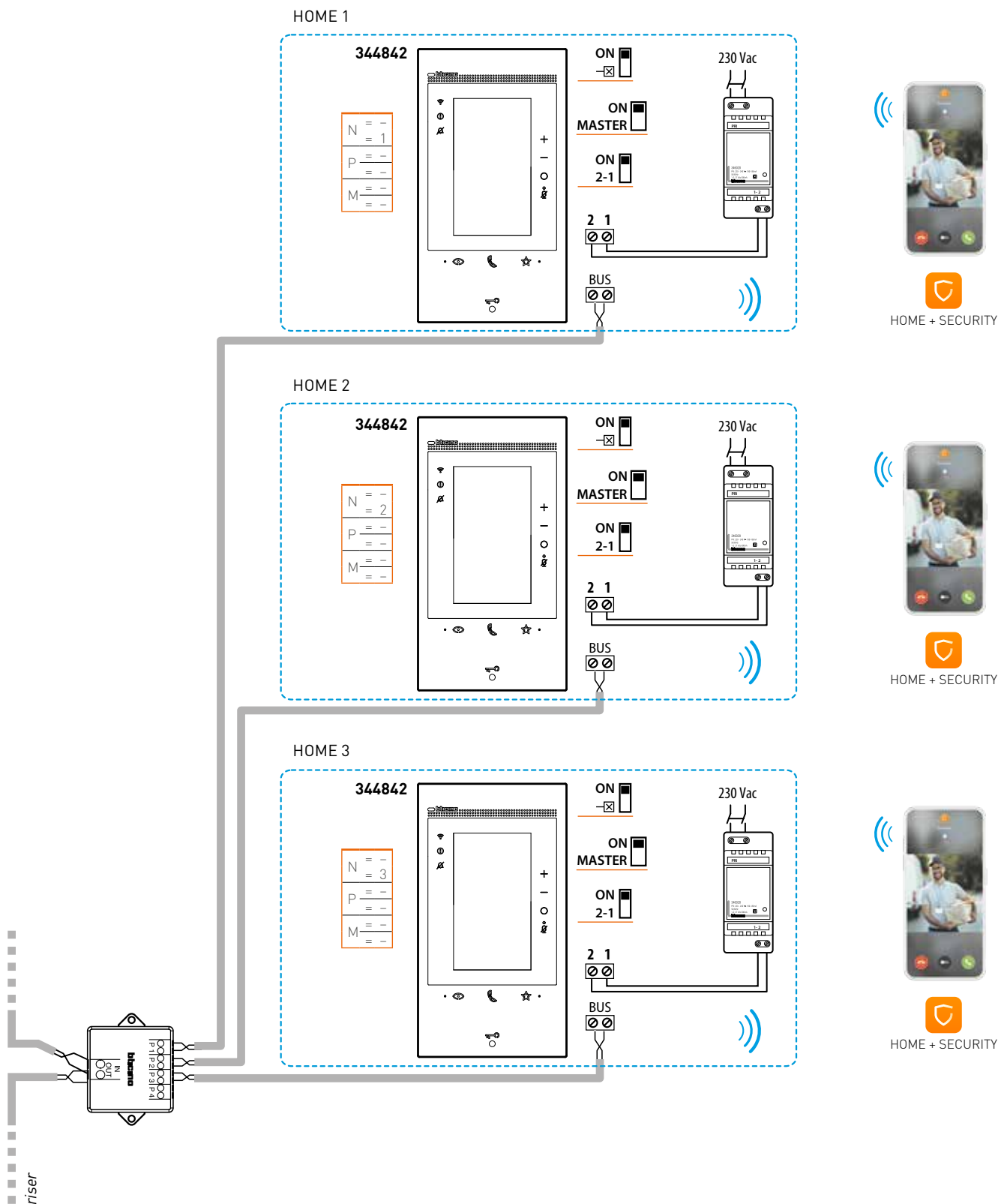




- Max. 3 internal units for each dwelling;
- Max. 200 m between the entrance panel and the last internal unit with cable 336904 / 336905;
- Max. 1 CLASSE 300EOS with Netatmo / Classe 100X video internal unit connected for each local LAN;
- A domestic Wi-Fi with internet access is needed for the connection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

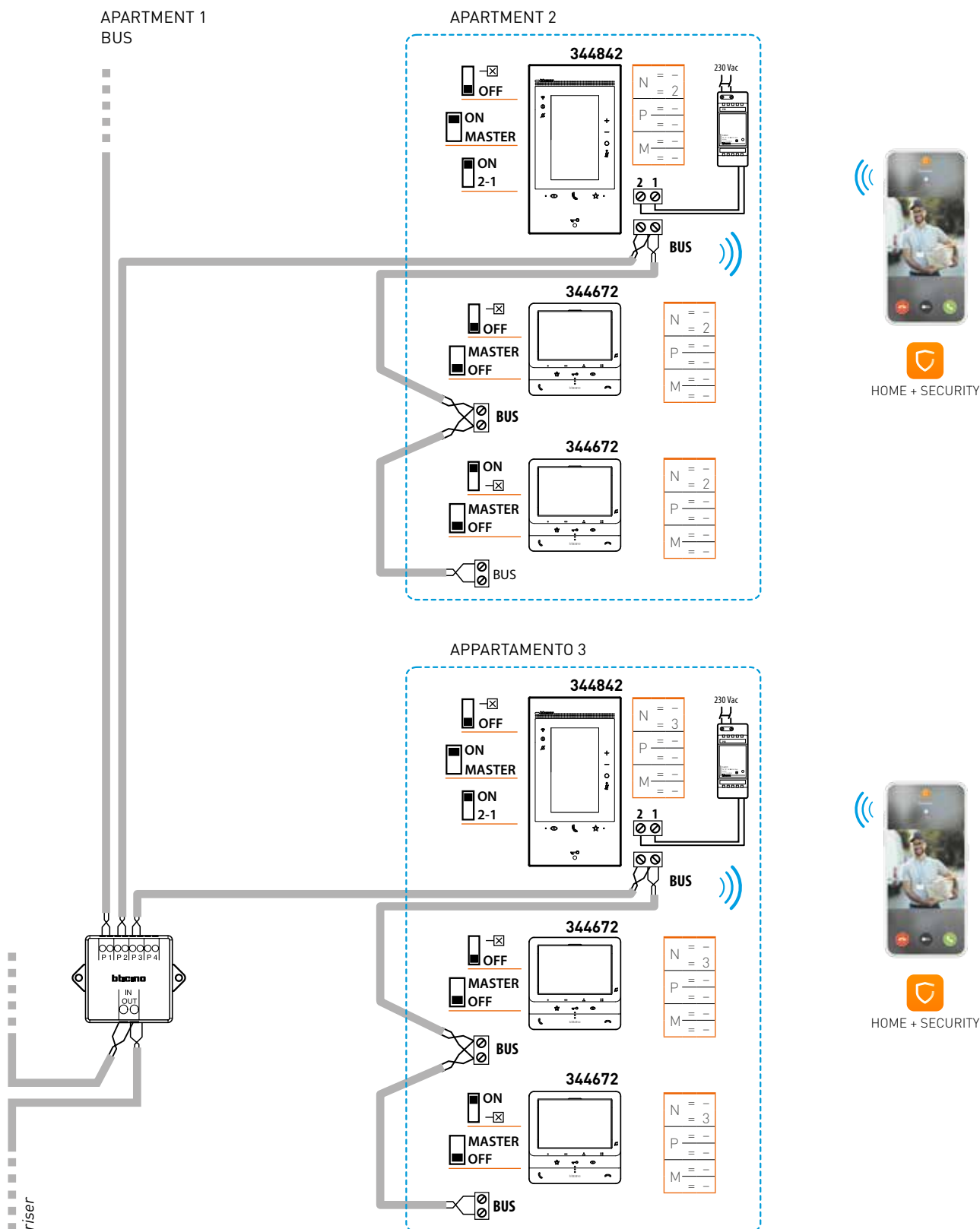


# Example 4 – Variant for multi-family system with additional power supply of the video internal units



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

# Example 5 – Variant for multi-family system with additional video internal units and additional power supply



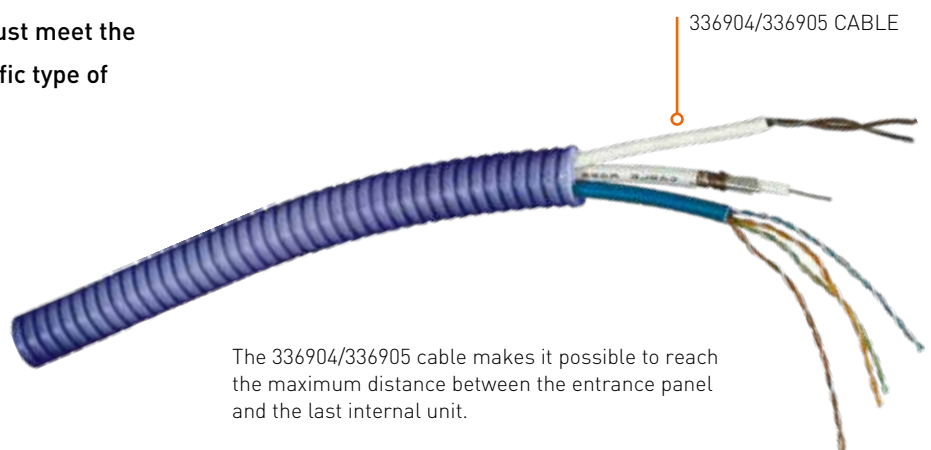
- Max. 3 internal units for each apartment;
- Max. 200 m between the entrance panel and the last internal unit with cable 336904 / 336905;
- Max. 1 CLASSE 300EOS with Netatmo / Classe 100X video internal unit connected for each local LAN;
- A domestic Wi-Fi with internet access is needed for the connection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

## The cable

The 2 WIRES system is easy to wire. Thanks to the **NON-POLARISED 2 WIRES** wiring of each part of the system, connection is simple, easy and fault-proof. The 336904/336905 white BUS-SCS cable has purposely been designed and manufactured for the installation of SCS video door entry systems. This cable is used for the distribution of the power supplies and the operating signals to all BUS devices. It consists of a white external sheath with two brown and brown/white flexible twisted conductors (0,50 mm<sup>2</sup> section). It is sold in a 200 m coil. Therefore, it is suitable to be used in

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

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



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

### Cohabitation with other cables

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









### Cable underground installation

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

## THE CABLES THAT CAN BE USED

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

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

CABLE USED					
Type of cable	Item	Can be installed underground	Audio systems	Video systems	
 BTicino twisted cable - section 0.50 mm <sup>2</sup>	336904 336905	YES	Recommended	Recommended	
 BTicino twisted cable - section 0.35 mm <sup>2</sup>	L4669	NO	Can be used	Can be used	
 Telephone twisted pair - section 0.28 mm <sup>2</sup> < 1 mm <sup>2</sup>		NO	Can be used	Can be used	
 Normal sheathed not twisted cables - section ≥ 0.28 mm <sup>2</sup> < 1 mm <sup>2</sup>		NO	Can be used	Can be used	
 Normal sheathed not twisted cables - section = 1 mm <sup>2</sup>		NO	Can be used	Can be used	
 BTicino UTP5 cable	0327 51	NO	Can be used	Can be used	
 UTP5 Multi-pair cable		NO	Can be used	Can be used	
 BTicino multi-pair green cable (pair of cables: green/white-green) ● Green ● White-green	336900 336903	NO	Can be used	Can be used	

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



Removal of the existing entrance panel



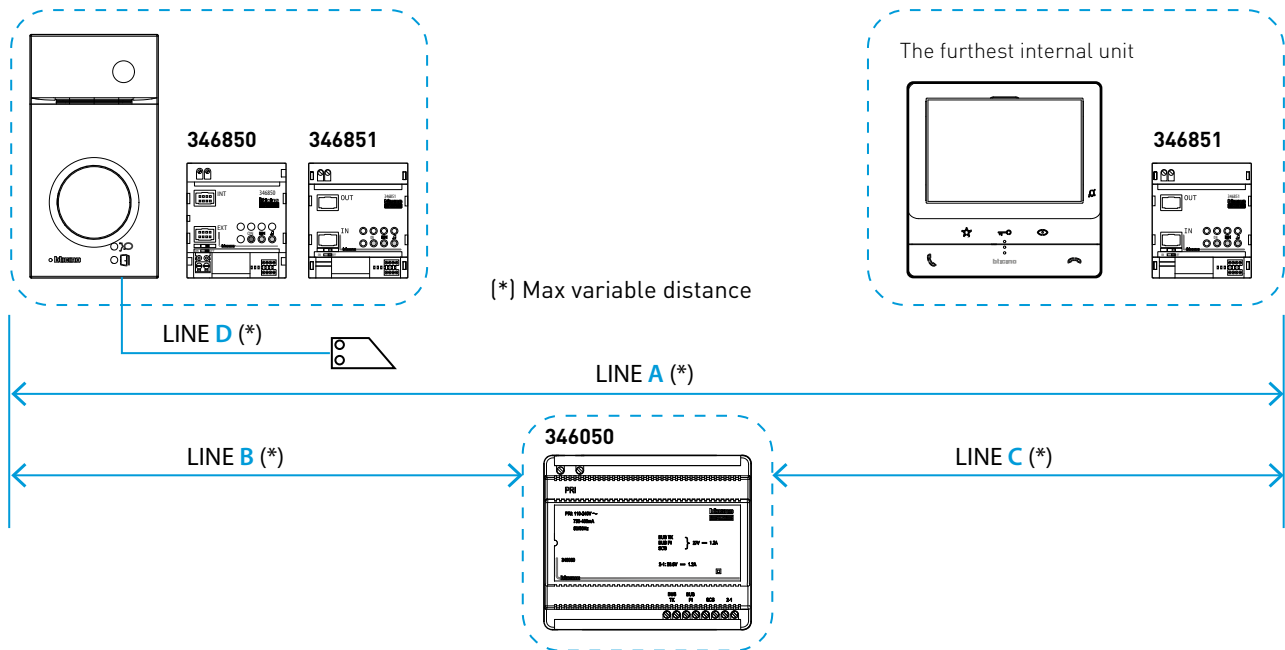
Use of an existing pair of wires to connect the new 2 WIRES entrance panel

# Maximum distances and cable features





## SINGLE FAMILY VIDEO SYSTEMS MADE ONLY WITH CLASSE 100 AND CLASSE 300E0S WITH NETATMO INTERNAL UNITS

### CAUTION !

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



TYPE OF CABLE

	 >0,2 mm	 BTicino L4669 0,35 mm <sup>2</sup>	 BTicino C9881U/5E AWG24 UTP5	 BTicino 336904 336905
LINE A	50 m	140 m	145 m	200 m
LINE B	50 m	115 m	80 m	200 m
LINE C	25 m	50 m	30 m	110 m
LINE D	50 m	30 m	-	50 m

TYPE OF CABLE

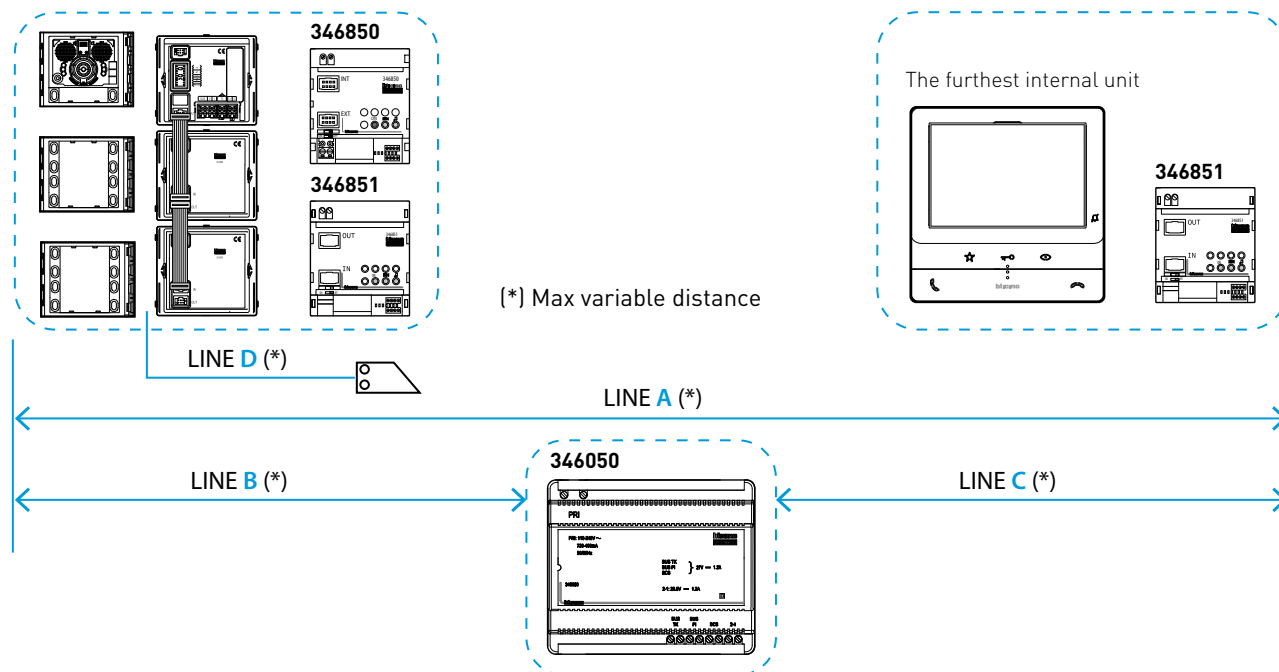
	One PTT 278 TP 0,28 mm <sup>2</sup>	OneSYT +Digital TP 5/10	OneSYT +Num TP 5/10	GIGA TW CAT5E AWG24	OneSYT +Num TP 8/10	Cable ARB.6060-1 6/10	Cable EV6R 6/10	1 mm <sup>2</sup>
LINE A	200 m	150 m			200m	50 m		-
LINE B	115 m	80 m			200 m	50 m		-
LINE C	50 m	30 m			110 m	25 m		-
LINE D	30 m	-			-	-		100 m

In systems where the EP is replaced by apartment interface 346850, and where the distance (B) is less than 1 m, the (C line) can reach the maximum distance of 200 m when using the 336904/336905 cable.

**MULTI-FAMILY VIDEO SYSTEMS MADE ONLY WITH CLASSE 100 AND CLASSE 300EOS WITH NETATMO INTERNAL UNITS.**

**CAUTION !**

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



**MAXIMUM DISTANCE (LINE A) ENTRANCE PANEL - FURTHEST INTERNAL UNIT**

Sezione cavi mm <sup>2</sup>	2 normal cables >0.2 mm <sup>2</sup>	Bticino cable 336904/336905 0.5 mm <sup>2</sup>	Telephone twisted pair 0.28 mm <sup>2</sup>	UA pair of the multi-pair data cable CAT5
2 IU/2 pushbuttons	50 m	200 m	140 m	180 m
5 IU/5 pushbuttons	50 m	200 m	140 m	155 m
10 IU/10 pushbuttons	50 m	200 m	140 m	145 m
26 IU/26 pushbuttons	50 m	200 m	140 m	125 m
38 IU/38 pushbuttons	50 m	200 m	140 m	110 m
38 IU/ display cal	50 m	200 m	140 m	115 m
64 IU/ display cal	50 m	200 m	140 m	-

**MAXIMUM DISTANCE (LINE B) ENTRANCE PANEL - POWER SUPPLY**

Cable section mm <sup>2</sup>	2 normal cables >0.2 mm <sup>2</sup> or L4669	Bticino cable 336904/336905 0.5 mm <sup>2</sup>	Telephone twisted pair 0.28 mm <sup>2</sup>	A pair of the multi-pair data cable CAT5
2 pushbuttons	50 m	200 m	130 m	95 m
5 pushbuttons	50 m	190 m	120 m	85 m
10 pushbuttons	50 m	180 m	110 m	80 m
26 pushbuttons	50 m	150 m	100 m	70 m
38 pushbuttons	50 m	140 m	90 m	65 m
Display call	50 m	150 m	95 m	65 m

**MAXIMUM DISTANCE (LINE C) POWER SUPPLY - FURTHEST INTERNAL UNIT**

Cable section mm <sup>2</sup>	2 normal cables >0.2 mm <sup>2</sup>	Bticino cable 336904/336905 0.5 mm <sup>2</sup>	Telephone twisted pair 0.28 mm <sup>2</sup>	A pair of the multi-pair data cable CAT5
2 IU IN/OU	50 m	200 m	140 m	95 m
5 IU IN/OU	50 m	200 m	135 m	90 m
10 IU IN/OU	50 m	190 m	130 m	85 m
26 IU IN/OU	50 m	170 m	120 m	75 m
5 IU (WITH SHUNT)	50 m	200 m	110 m	80 m
10 IU (WITH SHUNT)	50 m	175 m	100 m	70 m
26 IU (WITH SHUNT)	50 m	145 m	80 m	60 m
38 IU (WITH SHUNT)	50 m	125 m	70 m	50 m
64 IU (WITH SHUNT)	-	95 m	55 m	-

**MAXIMUM DISTANCE (LINE D) ENTRANCE PANEL - DOOR LOCK**

Cable section mm <sup>2</sup>	0.28 mm <sup>2</sup>	Bticino cable L4669 0.35 mm <sup>2</sup>	Bticino cable 336904/336905 0.5 mm <sup>2</sup>	1 mm <sup>2</sup>
(S+/-) clamps	30 m	30 m	50 m	100 m

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