ELVOX®
Communicating in style

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INTRODUCTION

This manual describes the products and audio/video door entry systems using DIGIBUS technology. The DIGIBUS technology presented in this manual is the updated version with 8-digit encoding system.

Technical specifications of audio door entry systems

	Digibus®
Audio door entry system with conversation privacy.	Yes
System with porter switchboard.	Yes (maximum 4)
System with switchboard controlled by PC and dedicated software.	Yes
Building complex type system, with electronic main and secondary entrance panels	Yes
Building complex type system, with non-electronic (analogue) main and secondary panels.	Yes
Possibility of connecting ELVOX telephone switchboards.	Yes
Maximum distance between furthest devices (interphone and entrance panel/switchboard)	1 km
Maximum number of users (interphones).	10,000
Maximum number of entrance panels in the same system.	99
Max. number of entrance panels connected in parallel.	10
Number of standard wires for interphone cable riser connection.	4 polarised wires
Encoding system.	4/8 digits
Number of auxiliary functions activated from interphone	8 (with 8-digit system)
Landing call function.	Yes
Possibility of connecting additional external ring tone.	Yes
Intercommunicating function (via porter switchboard).	Yes
Interphones in Petrarca series.	Yes
Interphones in 8870 series.	Yes
Entrance panels in Galileo series	Yes
Entrance panels in Galileo Security series	Yes
Entrance panels in Patavium series.	Yes (with 4 digit encoding)

Technical specifications of video door entry systems

		Digibus®
Video door entry system with B/W monitor and conversation privacy.		Yes
Video door entry system with colour monitor and conversation privacy.		Yes
System with porter switchboard.		Yes (maximum 4)
System with switchboard controlled by PC and dedicated software.		Yes
Building complex type system, with electronic main and secondary entrance panels		Yes
Building complex type system, with non-electronic (analogue) main and secondary panels.		Yes
Possibility of connecting ELVOX telephone switchboards.		Yes
Maximum distance between furthest devices (interphone/monitor and panel/switchboard)		1 km
Maximum number of users (interphones/video interphones).		10,000
Maximum number of entrance panels in the same system.		99
Max. number of entrance panels connected in parallel.		10
Number of standard wires for video interphone cable riser connection.	6 polarised wires + coaxial cable	Yes (optional; depending on distance)
Video signal on 2 wires and with coaxial cable.		4/8 digits
Device encoding system.		8 (with 8 digit system)
Number of auxiliary functions activated from interphone/video interphone.		Yes
Landing call function.		Yes
Possibility of connecting additional external ring tone.		Yes (with maximum 3 panels)
Self-start function.		Yes
Intercommunicating function (via porter switchboard).		Yes
Interphones/video interphones in Petrarca series.		Yes
Interphones in 8870 series.		Yes
Video interphones in Giotto series.		Yes
Entrance panels in Galileo series		Yes
Entrance panels in Galileo Security series		Yes
Entrance panels in Patavium series.		Yes (with 4 digit encoding)

WARNINGS FOR INSTALLERS

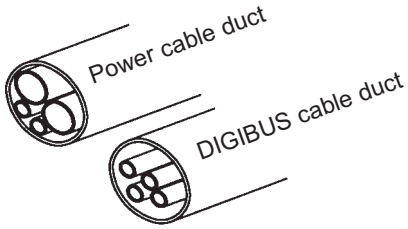
- Carefully read the instructions in this manual: they give important information on the safety, use and maintenance of the installation.
- After removing the packing, check that the device is complete and undamaged. Packing components (plastic bags, expanded polystyrene etc.) are dangerous for children. Installation must be carried out according to national safety regulations.
- Upstream of the audio or video door entry system, it is necessary to install a suitable bipolar switch with distance between contacts of at least 3mm.
- Before connecting the device, ensure that the data on the label correspond to those of the network.
- Before cleaning or maintenance, disconnect the device.
- In the event of a fault and/or poor operation of the device, switch off the mains power with the bipolar switch on the audio or video door entry system and do not tamper with the device. For repairs contact only the technical assistance centre authorized by the manufacturer. Safety may be compromised if these instructions are disregarded.
- Do not obstruct ventilation/heat extraction apertures or grilles.
- Installers must ensure that manuals with the above instructions are left on connected units after installation, for users' information.
- The unit must be used only for the purpose for which it was expressly designed, i.e. for audio door entry systems. Any other use is deemed improper and hence dangerous. The manufacturer can accept no responsibility for any damage deriving from improper, incorrect or unreasonable use.

GENERAL CABLE INSTALLATION INSTRUCTIONS

Correct DIGIBUS installation requires the following factors to be taken into account:
– the installation site
– the size of the installation

The equipment is fully compliant with the following directives: "CE" 89/336/EEC regarding Community safety standards and electromagnetic compatibility.

For correct installation, the following precautions must be taken:
– the system cables must be layed taking into account the overall length of the system cabling; the cross-section of the cables increases with the overall length of the installation as shown in the tables given below.
– the cables connecting the speech unit/internal units and the power supply must not be run together with power cables (230V or greater), but must be installed in their own ducts.



POWER SUPPLY INSTALLATION

The power supply must be installed in a dry place away from direct heat or dust. Ensure easy access for inspection and maintenance. Secure the unit to the wall with the anchor bolts provided or insert it into a rack with an omega DIN rail. Before connecting the unit use a tester to make sure that the cables are not broken or short-circuited. For user safety, the equipment operates at a low voltage and is separated from the mains by a high-insulation transformer. We recommend installation of an overload cutout of appropriate capacity between the mains and the unit. To complete the installation, proceed as follows:

1) Make the cabling connections to the terminal block in accordance with the diagrams enclosed with this manual.
2) Connect the power terminal block located beneath the rear cover.
3) Connect power supply to the mains: after the initial settling phase of the installation, only the 'Power ON' LEDs of the entrance panel, interphones and monitors must remain lit. Remember that these warnings are valid for all other appliances in the installation. With regard to the entrance panel with camera and the external cameras, make sure that the following conditions are met:
4) Camera operates from - 5° to + 50° C; to avoid overheating protect it against the sunlight with some form of shelter.
5) Lens must be protected agains direct light (sun, car headlights, etc.)
6) Person to be framed by camera must be illuminated from the front. If lighting is insufficient use an additional external lamp powered directly by the network.
7) Before closing unit, clean protective glass and lens, repeat this operation from time to time.

Comparison table of sections, diameters and relative resistances for 100 m standard conductors.

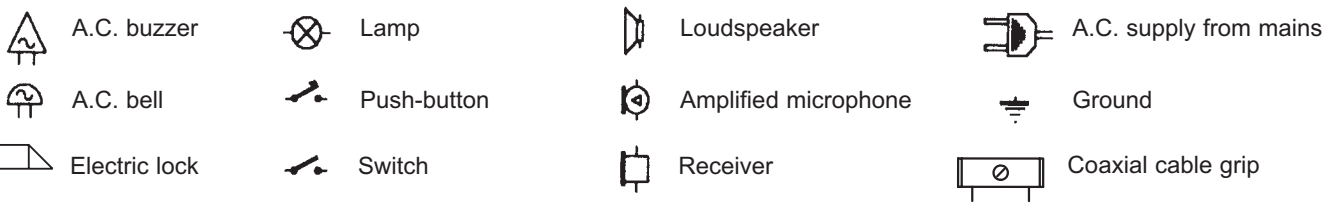
Section mm^2	0.12	0.25	0.35	0.50	0.75	1.00	1.50	2.50	4.00	6.00
Diameter mm.	0.40	0.58	0.68	0.80	1.00	1.15	1.40	1.80	2.30	2.80
Decimal diameter	4/10	6/10		8/10	10/10	12/10	14/10	18/10		
Resistance Ω 100m.	14.00	6.60	4.80	3.50	2.20	1.70	1.14	0.69	0.39	0.28

Digibus®

Minimum wire section (in mm^2) for systems with DIGIBUS technology

Conductors	Ø up to 50 m.	Ø up to 100 m.	Ø up to 200 m.	Ø up to 500 m.
4. 5	0.75 mm^2	1 mm^2	1.5 mm^2	4 mm^2
+, -, 15, 0, S1, lock	1 mm^2	1.5 mm^2	2.5 mm^2	-
Others	0.5 mm^2	0.75 mm^2	1 mm^2	2.5 mm^2
Video	Coaxial cable 75 Ohm (RG59 or RG11 double insulation)			

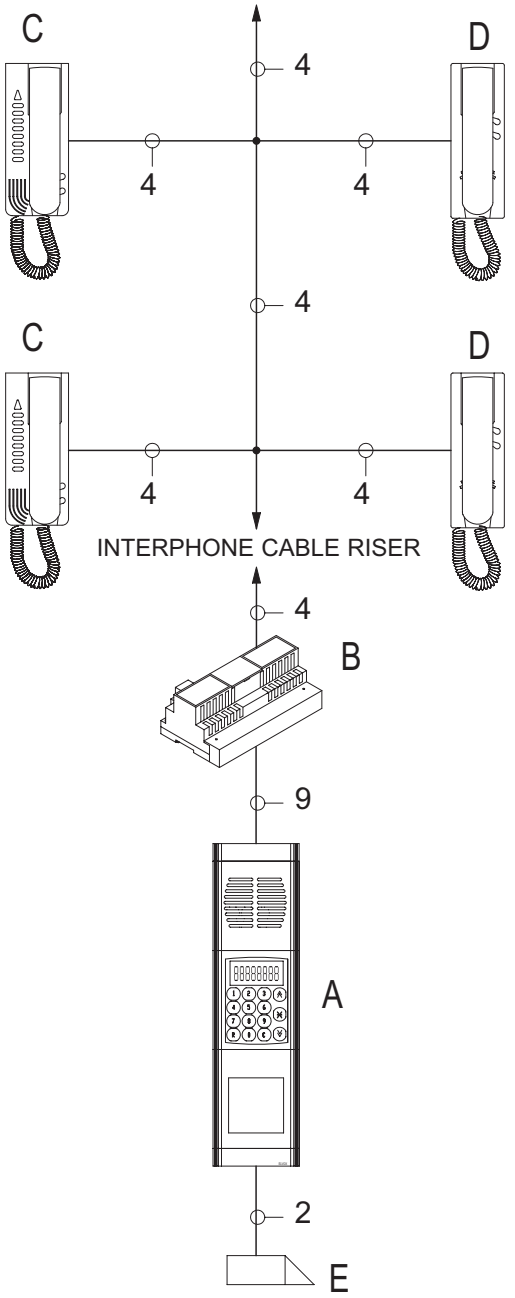
DIAGRAM SYMBOLS



AUDIO AND VIDEO DOOR ENTRY SYSTEMS WITH DIGIBUS TECHNOLOGY

1- SIMPLE CONDOMINIAL INSTALLATION WITH ENTRANCE PANELS WITH INTERNAL DECODING.

Diagram ref. P3062 (page 111)



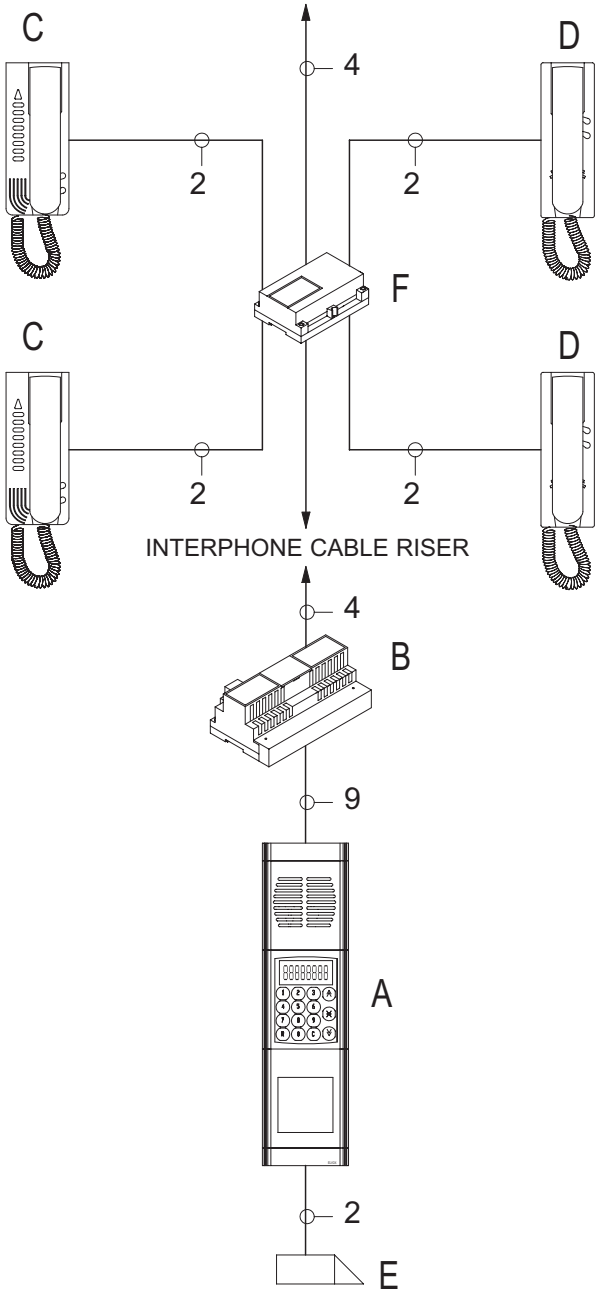
N° SB1241.dwg

A- Entrance panel Type 8942 - 8943 - 3942 -3943
B- Power supply Type 6941
C- Interphone Type 6204
D- Interphone Type 887B
E- Electric lock 12V~ 1A

NOTES:
- To make the call from the apartment door see version no. 3B.
- To control the auxiliary functions see version no. 2B

2 - SIMPLE CONDOMINIAL INSTALLATION WITH FLOOR DISTRIBUTORS WITH INTERNAL DECODING.

Diagram ref. P3063 (page 120)

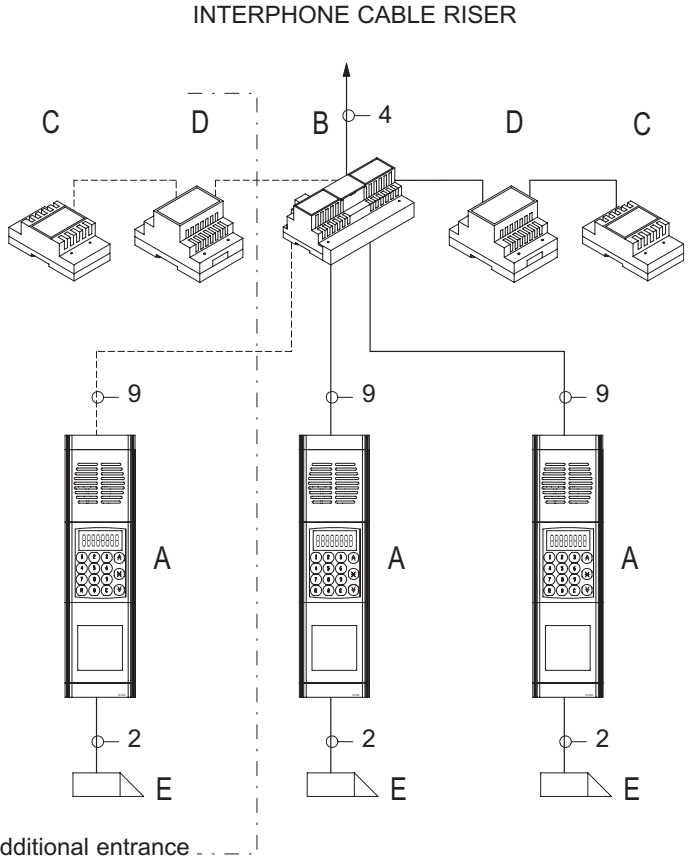


N° SB1242.dwg

A- Entrance panel Type 8942 - 8943 - 3942 -3943
B- Power supply Type 6941
C- Interphone Type 6201
D- Interphone Type 8877
E- Electric lock 12V~ 1A
F- Digital distributor Type 949B

NOTES:
- To make the call from the apartment door see version no. 3A.
- To control the auxiliary functions see version no. 2A

3 - SIMPLE CONDOMINIAL INSTALLATION WITH ONE OR MORE PANELS IN PARALLEL. Diagram ref. p2709 (page 121)

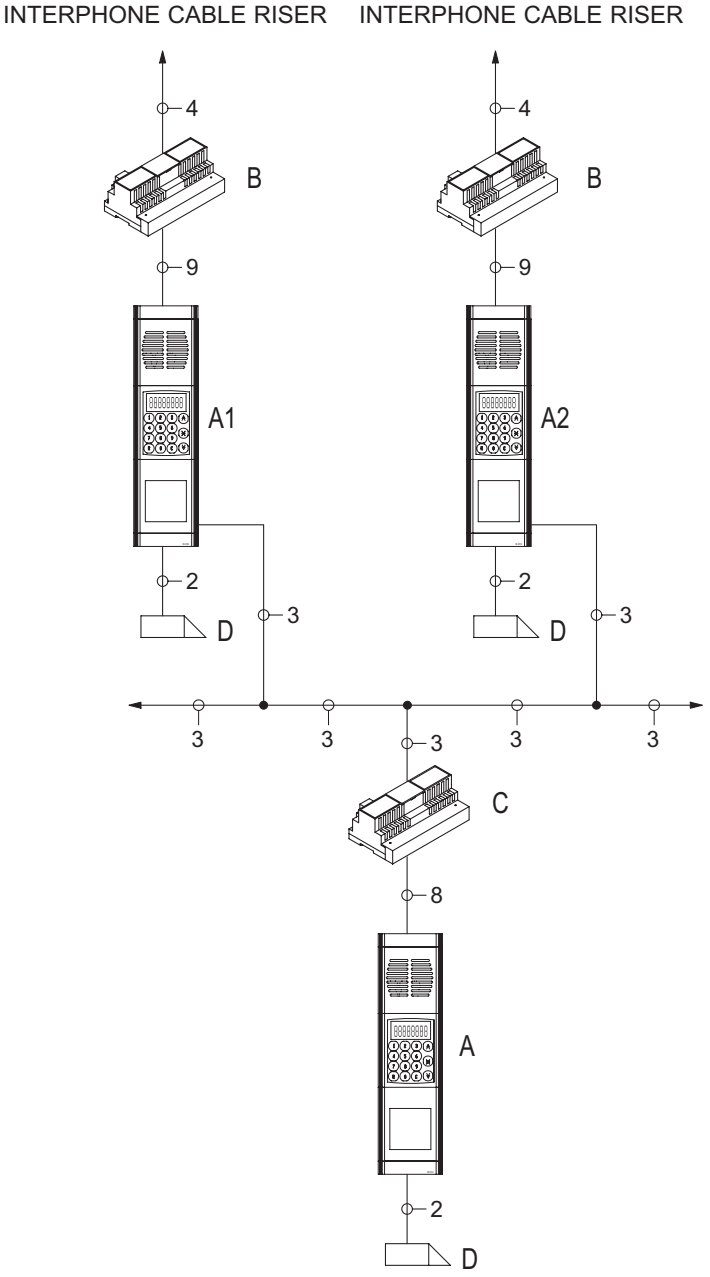


N° SB1243.dwg

A- Entrance panel Type 8942 - 8943 - 3942 -3943
B- Power supply Type 6941
C- Relay Type 170/001
D- Transformer Type M832
E- Electric lock 12V~

NOTES
In two of the three entrance panels cut the metallic jumper on the terminal block side.
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

4 - SIMPLE CONDOMINIAL INSTALLATION WITH ONE OR MORE PANELS ON EACH ENTRANCE. Diagram ref. p2765 (page 124)

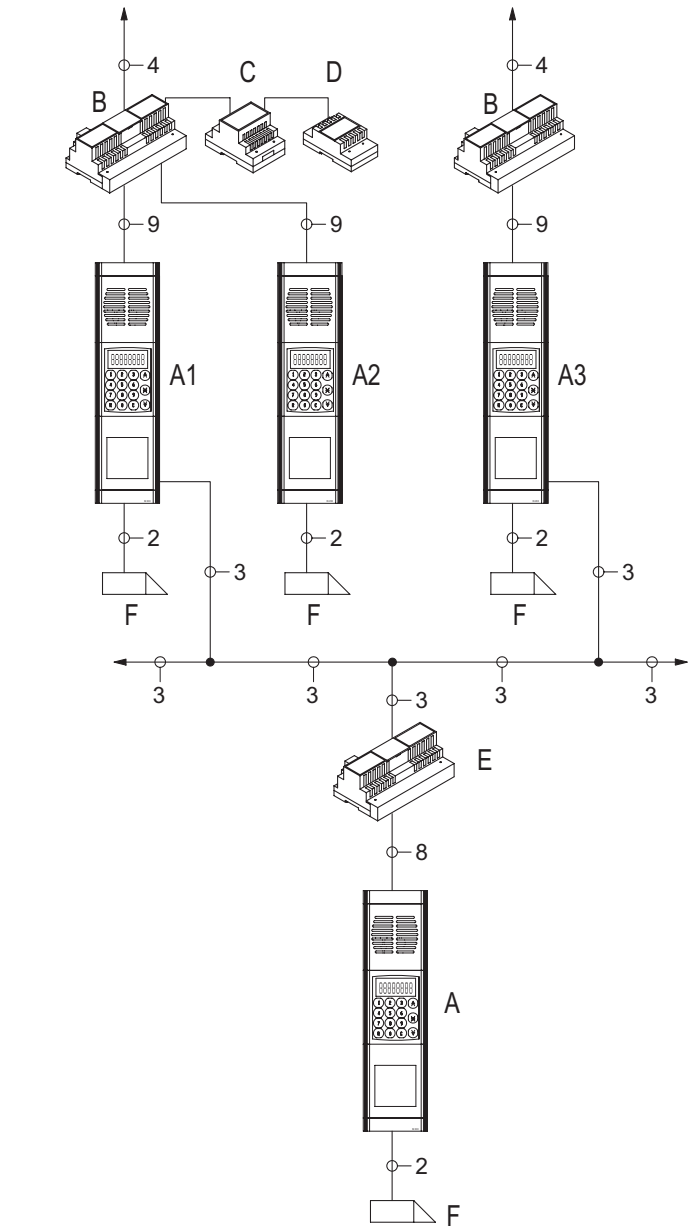


N° SB1269.dwg

A- Main entrance panel Type 8942 - 8943 - 3942 -3943
A1-A2- Secondary entrance panel Type 8942 - 8943 - 3942 -3943
B- Power supply Type 6941
C- Power supply Type 6942
D- Electric lock 12V~

NOTES
The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming).
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

5 - CONDOMINIALINSTALLATION WITH ONE MAIN ENTRANCE PANEL AND ONE OR MORE PANELS INSTALLED ON EACH ENTRANCE IN PARALLEL (building complex). Diagram ref. PE3871 (page 125)



N° SB1278.dwg

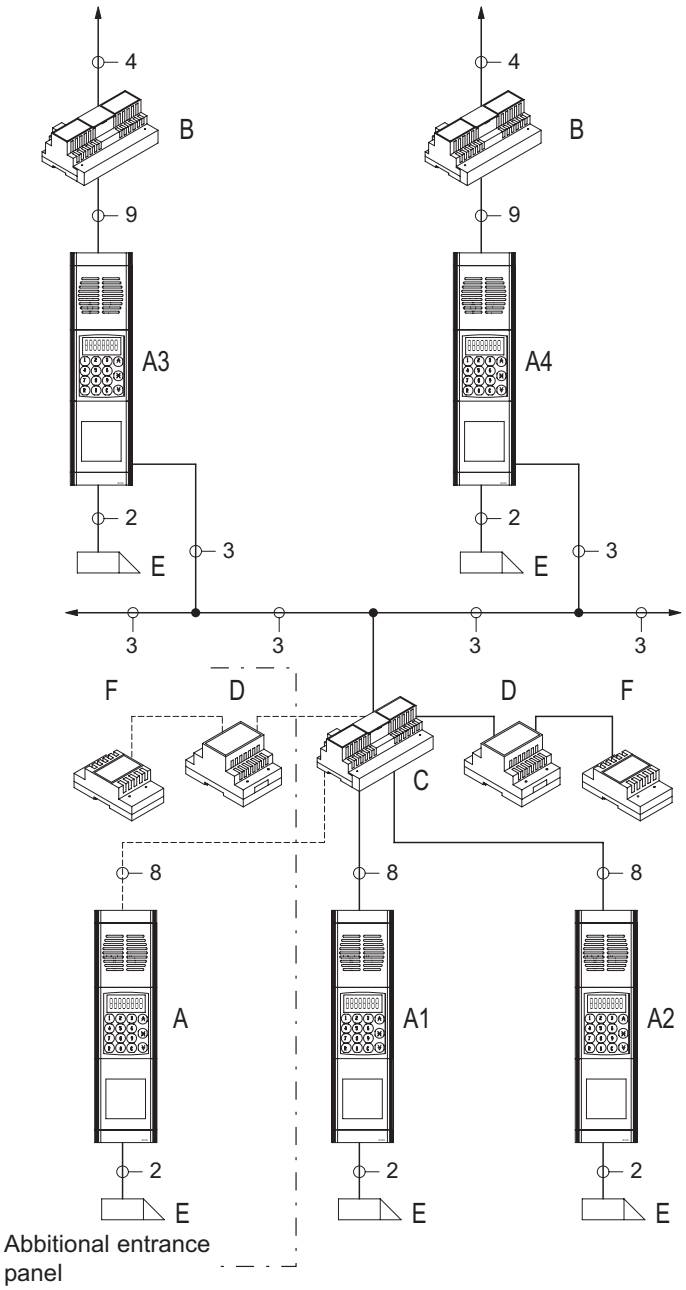
A-	Main entrance panel Type 8942-8943-3942-3943
A1-A2-Ax	Secondary entrance panels Type 8942-8943-3942-3943
B-	Power supply Type 6941
C-	Transformer Type M832
D-	Relay Type 170/001
E-	Power supply Type 6942
F-	Electric lock 12V~.

NOTES

The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming).

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B.

6 - CONDOMINIAL INSTALLATION WITH ONE OR MORE MAIN ENTRANCE PANELS AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PE2766 (page 128)



N° SB1246.dwg

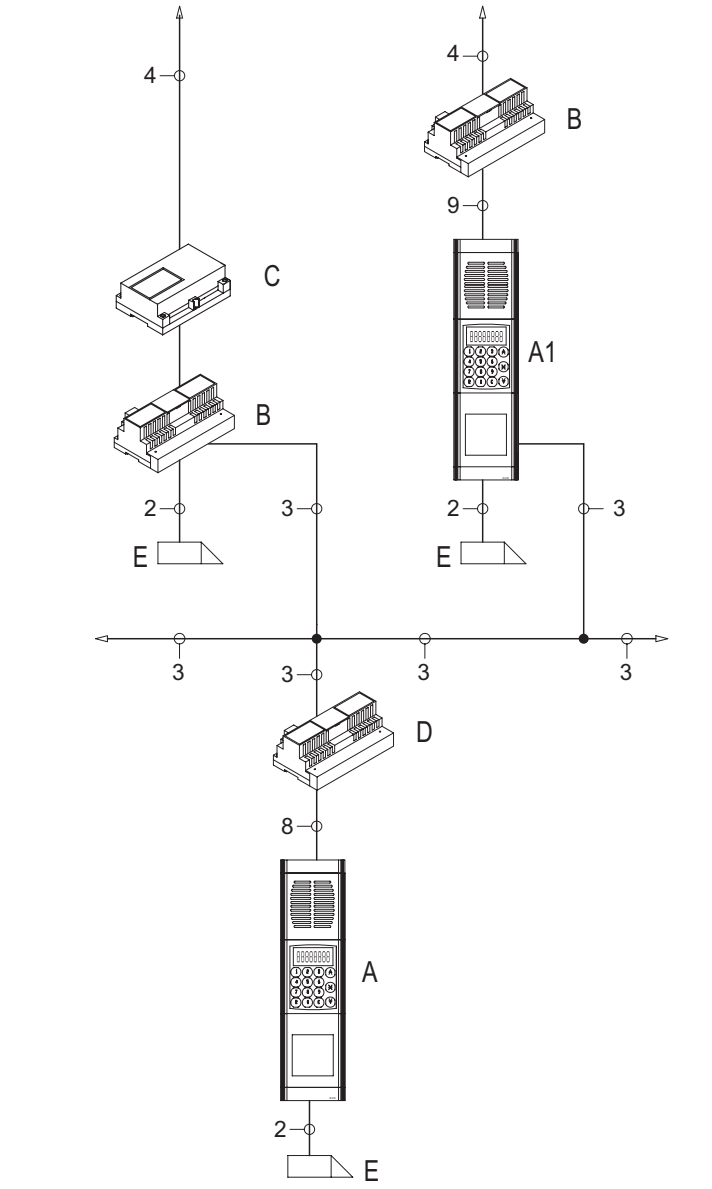
A-A1-A2-	Main entrance panel Type 8942-8943-3942-3943
A3-A4-Ax	Secondary entrance panels Type 8942-8943-3942-3943
B-	Power supply Type 6941
C-	Power supply Type 6942
D-	Transformer Type M832
E-	Electric lock 12V~
F-	Relay Type 170/001

NOTES

The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming). In two of the three main panels A-A1-A2 cut the metallic jumper on the interphone cable riser terminal block side.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

7- CONDOMINIAL INTERPHONE INSTALLATION WITH ONE MAIN PANEL AND TWO OR MORE SECONDARY ENTRANCES WITH/WITHOUT PANELS (residential complex). Ref. diagram PE2770R2 (page 129)



N° SB1253.dwg

A- Main entrance panel Type 8942-8943-3942-3943
A1-Ax Secondary entrance panel Type 8942-8943-3942-3943
B- Power supply Type 6941
C- Multifunction device Type 6949
D- Power supply Type 6942
E- Electric lock 12V~

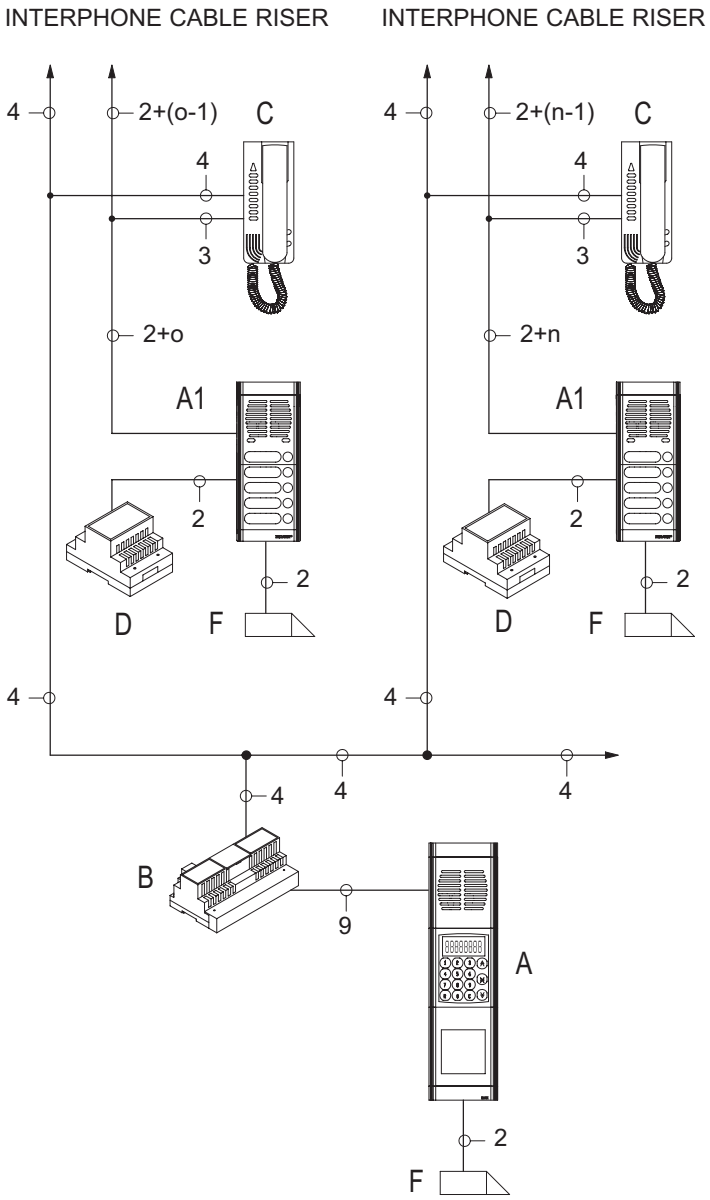
NOTES

Device 6949 is fitted with a LED that flashes when a call is made from the main entrance panel to the cable riser served by Type 6949. The minimum and maximum number of users must be programmed in the secondary entrance panels (see entrance panel parameter programming and Type 6949).

The device Type 6949 must have the jumper GEN CORR located in the vicinity of the integral PLUG connector.

- To make the call from the apartment door see version no. 3A or 3B

8- CONDOMINIAL INSTALLATION WITH ELECTRONIC MAIN ENTRANCE PANEL AND TWO OR MORE NON-ELECTRONIC STAIRWAY PANELS (building complex). Ref. diagram: P3470 (page 130)



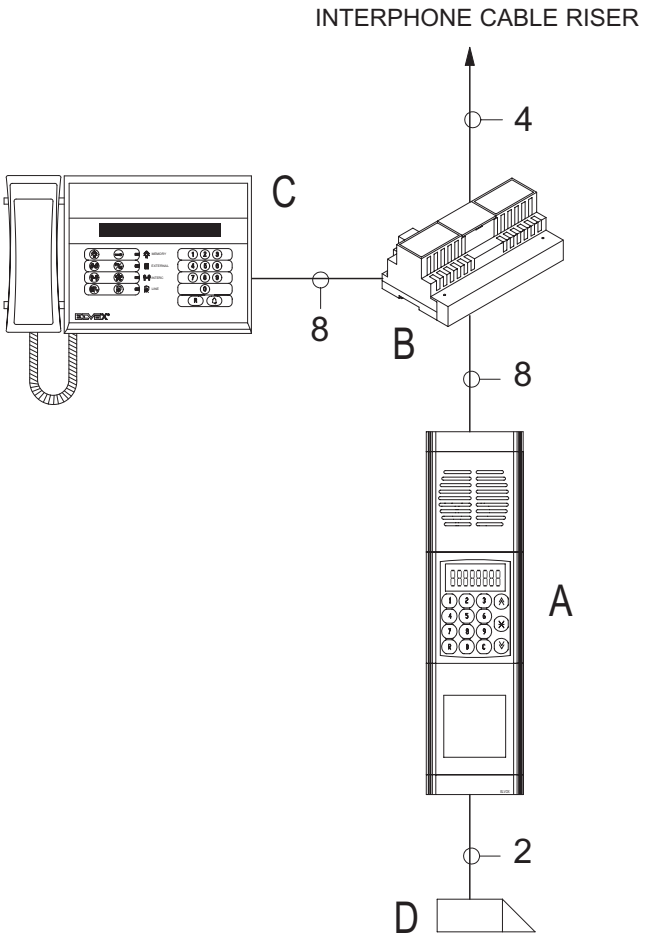
N° SB1270.dwg

A- Main entrance panel Type 8942-8943-3942-3943
A1 Patavium, Galileo or Galileo Security series secondary entrance panel with speech unit Type 930D
B- Power supply Type 6941
C- Phone Type 6204
D- Transformer Type 832/030
E- Electric lock 12V~
n- Number of users 1° buiding
o- Number of users 2° buiding

NOTES

- To make the call from the apartment door see version no. 3B
- To control the auxiliary functions see version no. 2B

9- SIMPLE CONDOMINIAL INSTALLATION WITH PORTER SWITCHBOARD.
Diagram ref. PC2767 (page 122)

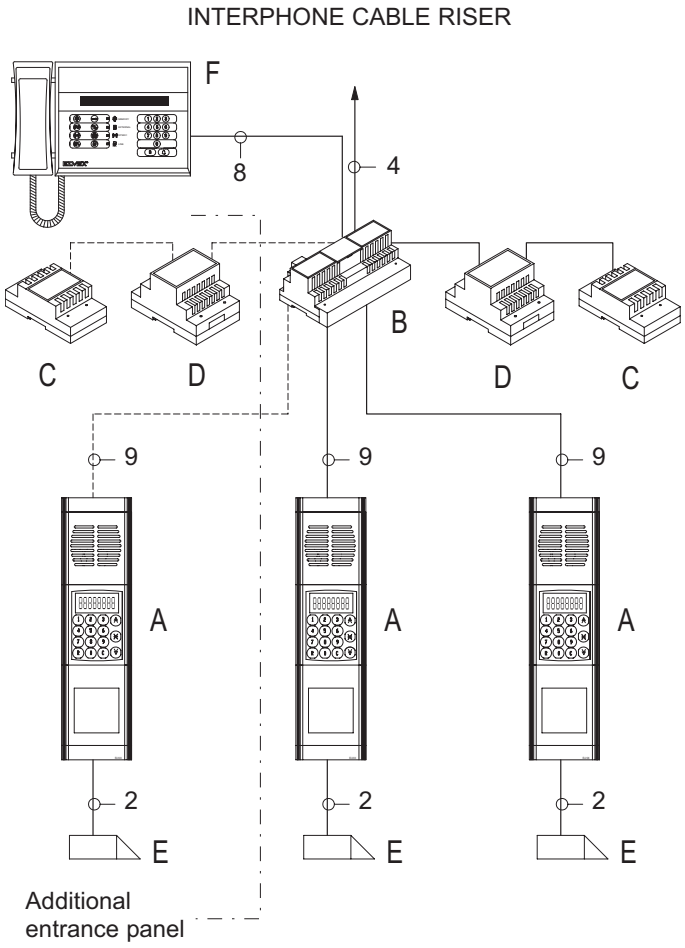


N° SB1244.dwg

A- Entrance panel Type 8942-8943-3942-3943
B- Power supply Type 6941
C- Switchboard Type 945B - 945B/I - 955
D- Electric lock 12V~

NOTES
- To make the call from the apartment door see version no. 10A or 10B.
- To control the auxiliary functions see version no. 2A or 2B.

10- SIMPLE CONDOMINIAL INSTALLATION WITH SWITCHBOARD, ONE OR MORE PANELS IN PARALLEL. Diagram ref. PC3870 (page 123)

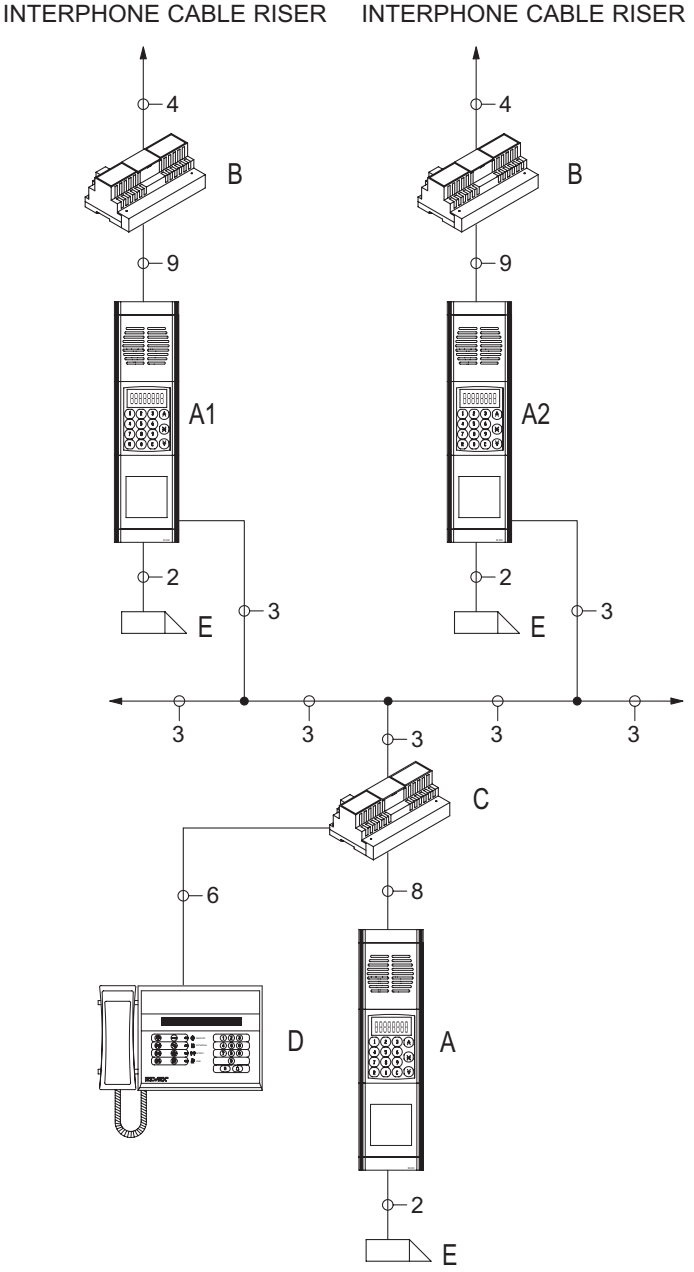


N° SB1279.dwg

A- Entrance panel Type 8942-8943-3942-3943
B- Power supply Type 6941
C- Relay Type 170/001
D- Transformer Type M832
E- Electric lock 12V~
F- Switchboard Type 945B - 945B/I - 955

NOTES
In two of the three entrance panels cut the metallic jumper on the terminal block side.
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

11- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND ONE OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref: PC2786 (page 126)

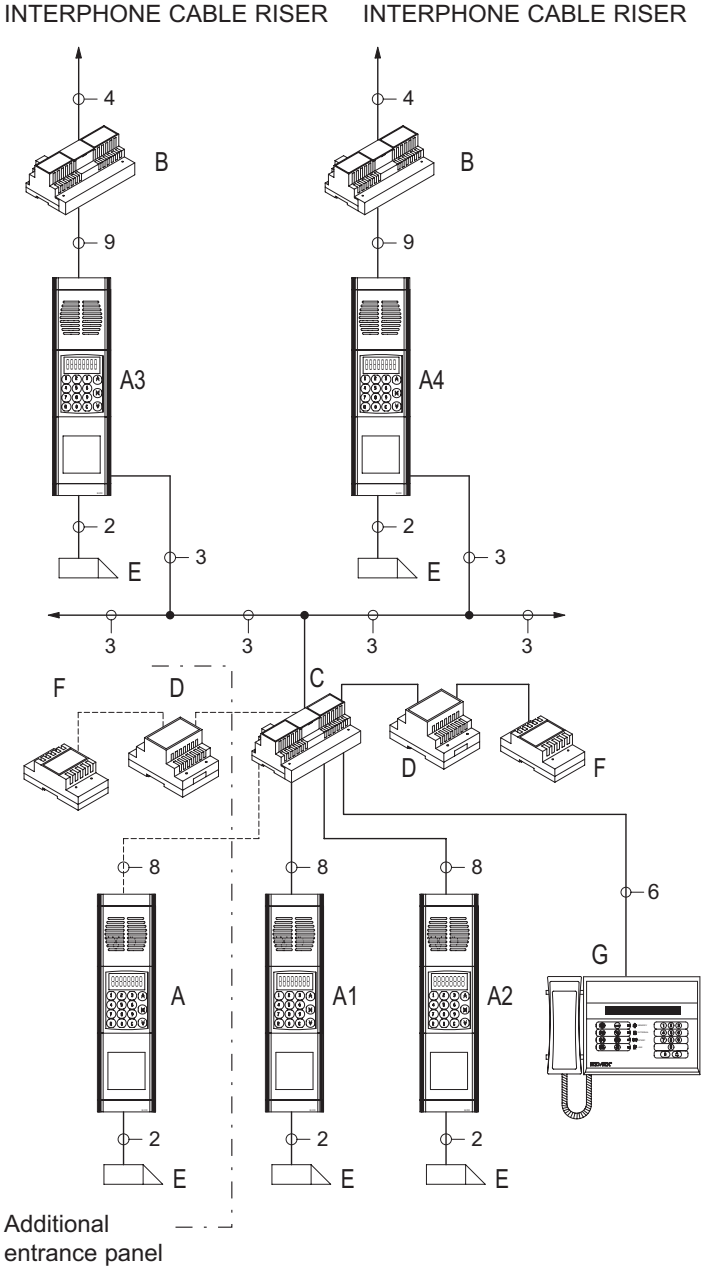


N° SB1245.dwg

A- Main entrance panel Type 8942-8943-3942-3943
A1-A2- Secondary entrance panels Type 8942-8943-3942-3943
B- Power supply Type 6941
C- Power supply Type 6942
D- Switchboard Type 945B - 945B/I - 955
E- Electric lock 12V 12V~.

NOTES
The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming).
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

12- CONDOMINIAL INSTALLATION WITH SWITCHBOARD, TWO MAIN ENTRANCE PANELS AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PC3869 (page 127)

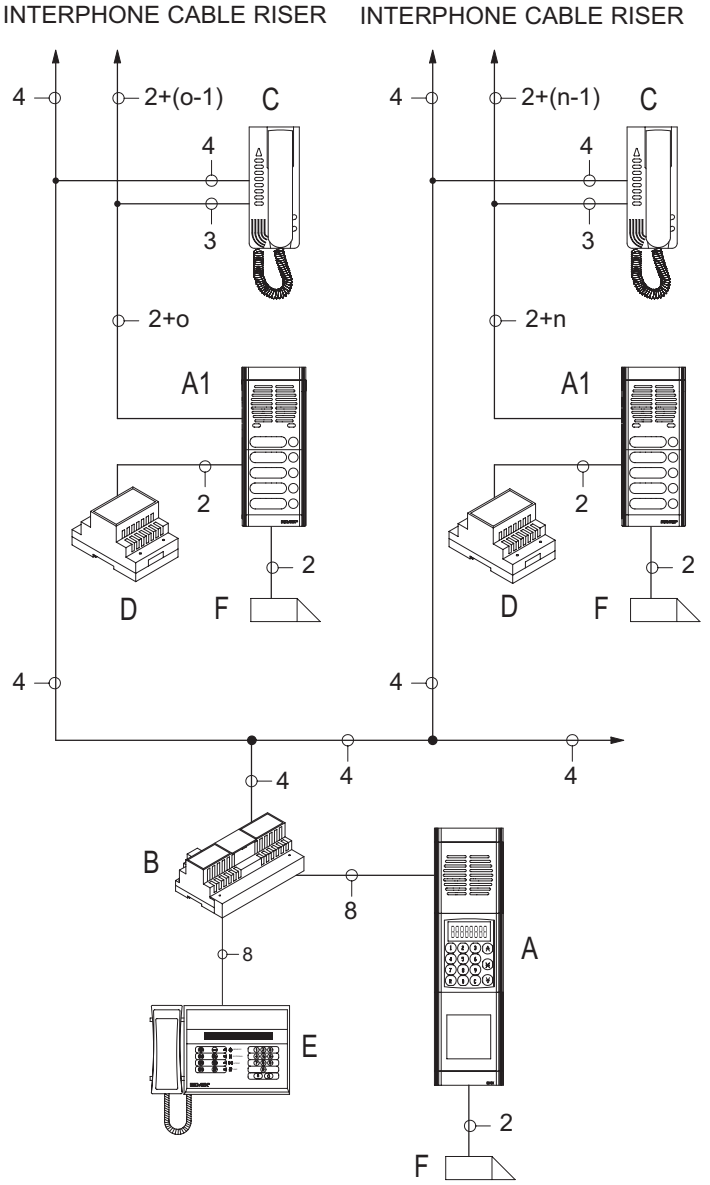


N° SB1280.dwg

A-A1-A2- Main entrance panel Type 8942-8943-3942-3943
A3-A4-Ax Secondary entrance panels Type 8942-8943-3942-3943
B- Power supply Type 6941
C- Power supply Type 6942
D- Transformer Type M832
E- Electric lock 12V~
F- Relay Type 170/001
G- Switchboard Type 945B - 945B/I - 955

NOTES
The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming). In two of the three main panels A-A1-A2 cut the metallic jumper on the interphone cable riser terminal block side.
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

13- CONDOMINIAL INTERPHONE INSTALLATION WITH SWITCHBOARD, ONE MAIN ELECTRONIC PANEL AND TWO OR MORE NO ELECTRONIC SECONDARY ENTRANCES PANELS (building complex). Diagram ref: PC3872 (page 131)

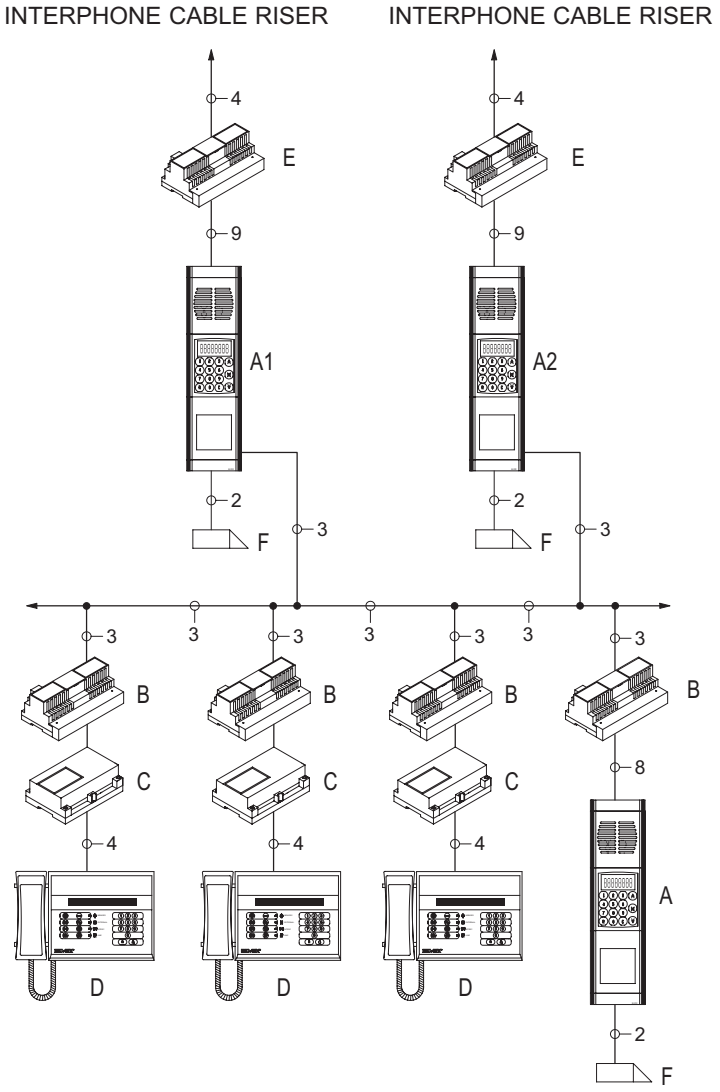


N° SB1281.dwg

A- Main electronic entrance panel Type 8942-8943-3942-3943
A1 Patavium, Galileo or Galileo Security secondary entrance panels with speech unit Type 930D
B- Power supply Type 6941
C- Phone Type 6204
D- Transformer Type 832/030
E- Switchboard Type 945B - 945B/I - 955
F- Electric lock 12V~
n- Number of users 1st building
o- Number of users 2nd building

NOTES
- To make the call from the apartment door see version no. 3B
- To control the auxiliary functions see version no. 2B

14- CONDOMINIAL INTERPHONE INSTALLATION WITH 3 SWITCHBOARD, MAIN ELECTRONIC PANEL AND TWO OR MORE SECONDARY ENTRANCES PANELS (building complex)
Diagram ref: PC4702 (page 132)



N° SB1282.dwg

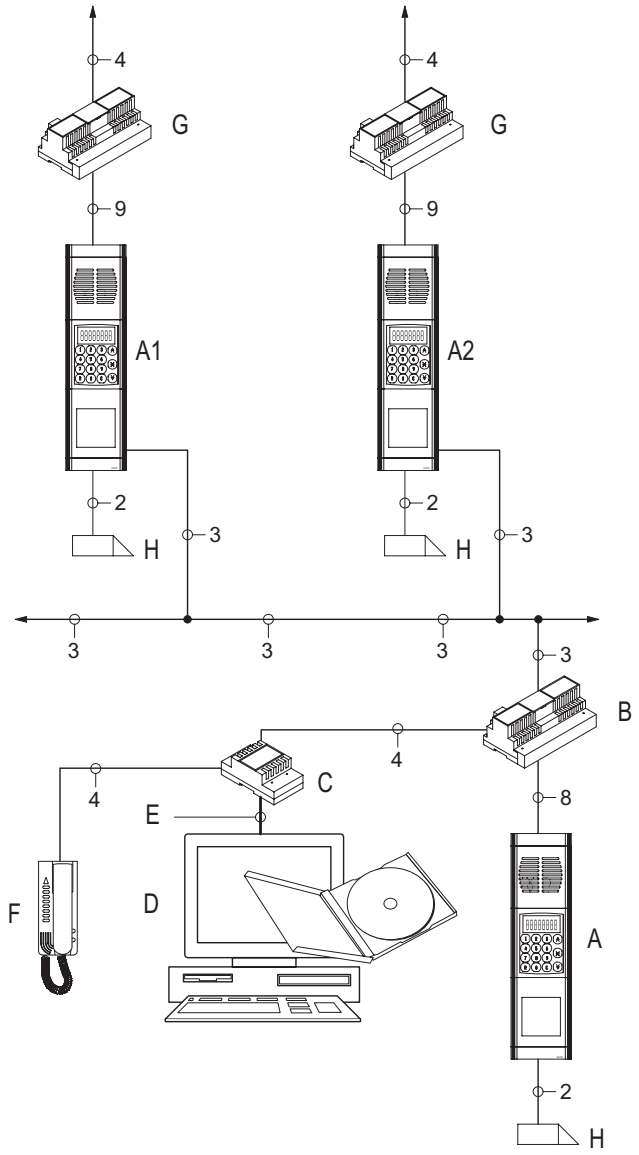
A- Main electronic entrance panel Type 8942-8943-3942-3943
A1-A2- Secondary entrance panels Type 8942-8943-3942-3943
B- Power supply Type 6942
C- Switching module Type 6949
D- Switchboard Type 945B - 945B/I - 955
E- Power supply Type 6941
F- Electric lock 12V~

NOTES
The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming).
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

15- CONDOMINIAL INSTALLATION WITH ELECTRONIC MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY PANELS (building complex).

Ref. diagram: PC4705 (page 133)

INTERPHONE CABLE RISER INTERPHONE CABLE RISER



N° SB1291.dwg

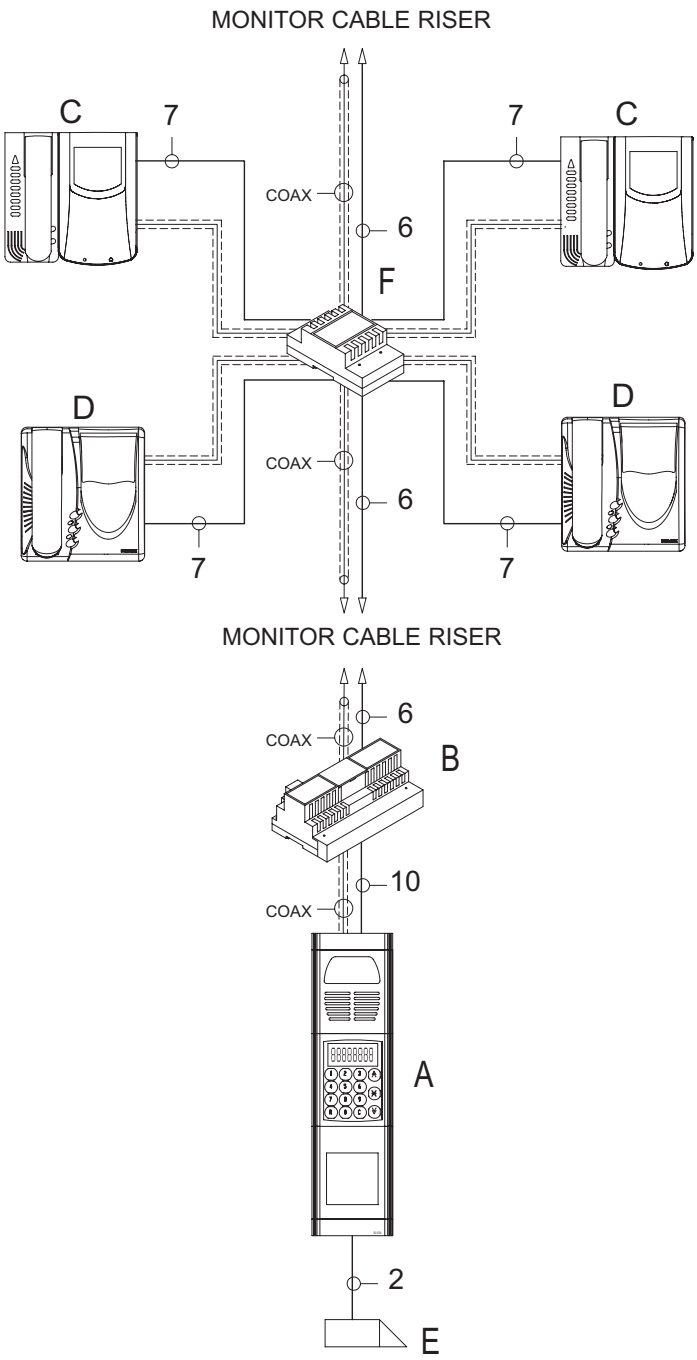
A-	Main entrance panel Type 8942-8943-3942-3943
A1-A2-	Secondary entrance panels Type 8942-8943-3942-3943
B-	Power supply Type 6942
C-	Interface of Type 94CD
D-	Personal Computer with Windows (98, ME, 2000, XP) and software Type 94CD
E-	Serial cable RS232 (DB9)
F-	Phone Type 6201 - 8877
G-	Power supply Type 6941
H-	Electric lock 12V~

NOTES

The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming).

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B

16- SIMPLE CONDOMINIAL INSTALLATION WITH INTERPHONES WITH INTERNAL DECODING. Diagram ref. PV3002 (page 136)

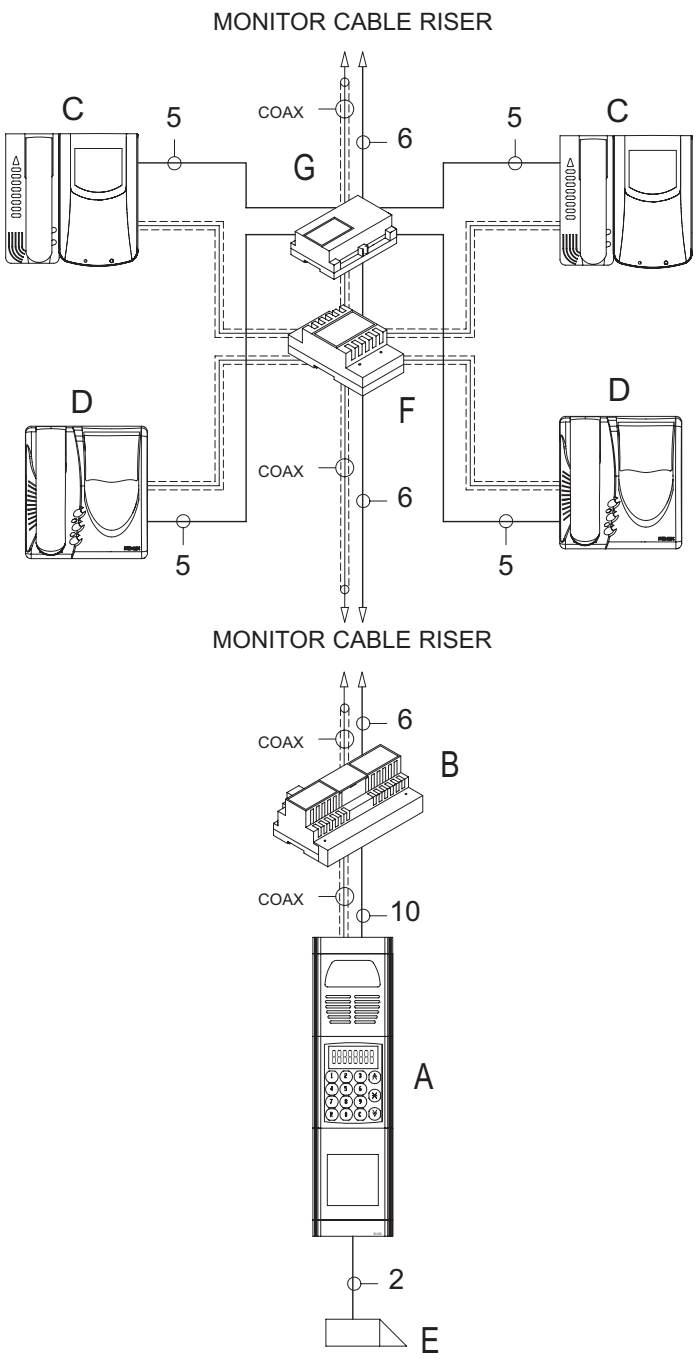


N° SB1247.dwg

A- Entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
B- Power supply Type 6948
C- Monitor Type 6000+6204+6145, 6003+6204+6145
D- Monitor Type 6304, 6504, 6304/C
E- Electric lock 12V~
F- Distributor Type 5556/004 - 6554

NOTES
- To make the call from the apartment door see version no. 3B
- To control the auxiliary functions see version no. 4B.

17- SIMPLE CONDOMINIAL INSTALLATION WITH FLOOR DISTRIBUTORS EQUIPPED WITH INTERNAL DECODING. Diagram ref. pv3064 (page 137)

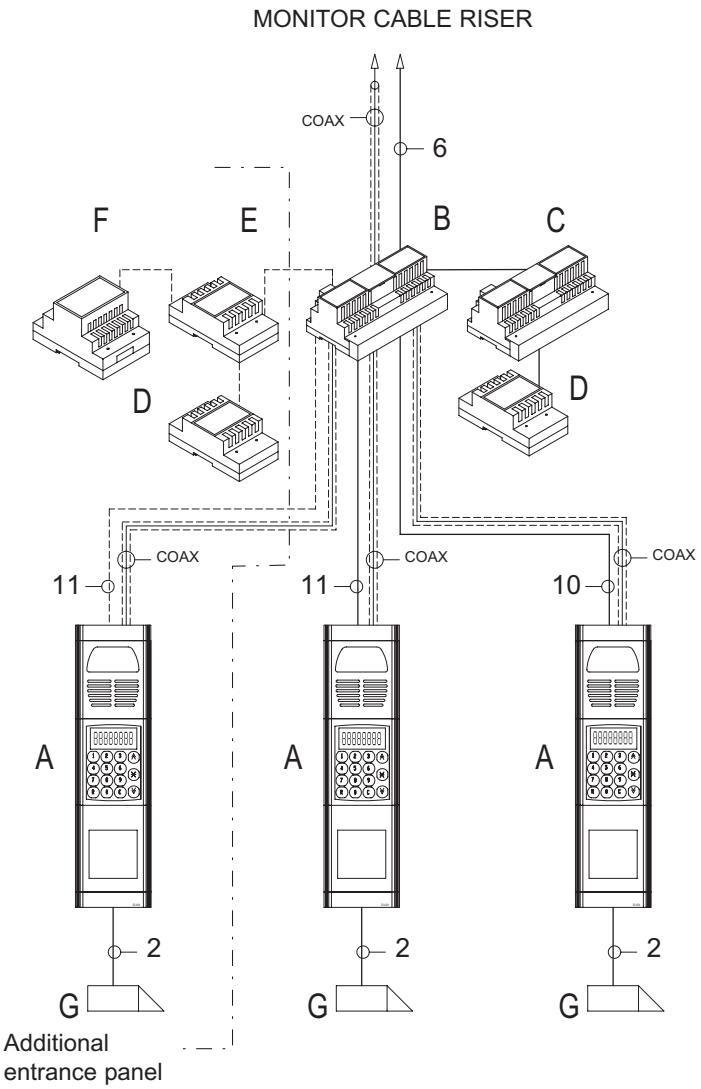


N° SB1248.dwg

A- Entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
B- Power supply Type 6948
C- Monitor Type 6000+6204+6145, 6003+6204+6145
D- Monitor Type 6304, 6504, 6304/C
E- Electric lock 12V~
F- Distributor Type 5556/004 - 6554
G- Distributor Type 949B

NOTES
- To make the call from the apartment door see version no. 3B
- To control the auxiliary functions see version no. 4B

18- SIMPLE CONDOMINIAL INSTALLATION WITH ONE OR MORE ENTRANCE PANELS CONNECTED IN PARALLEL. Diagram ref. PV2712 (page 138)



N° SB1249.dwg

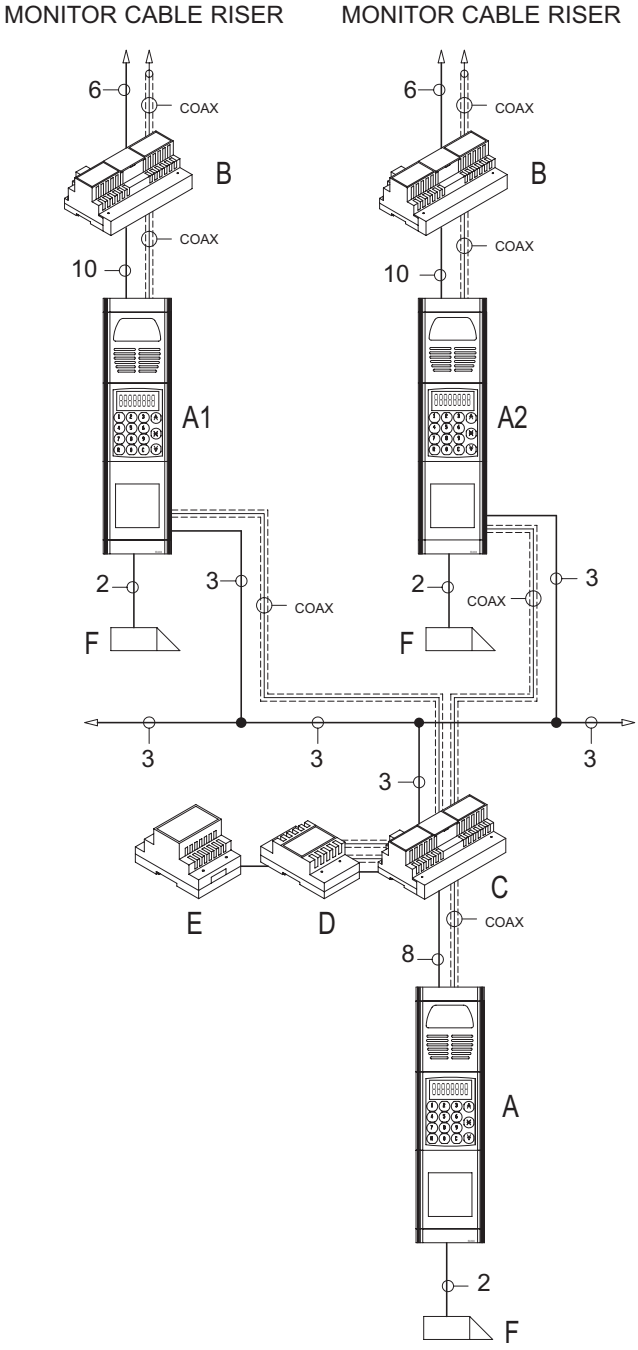
- A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
- B- Power supply Type 6948
- C- Additional power supply Type 6942
- D- Relay Type 170/051
- E- Relay Type 170/001
- F- Transformer Type M832
- G- Electric lock 12V~

NOTES

In two of the three entrance panels cut the metallic jumper on the terminal block side.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

19- SIMPLE CONDOMINIAL INSTALLATION WITH ONE OR MORE PANELS ON EACH ENTRANCE. Diagram ref. PS2559 (page 143)



N° SB1268.dwg

- A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
- A1-A2- Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
- B- Power supply Type 6948
- C- Additional power supply Type 6942
- D- Distributor Type 5556/004 - 6554
- E- Power supply Type 6582
- F- Electric lock 12V~

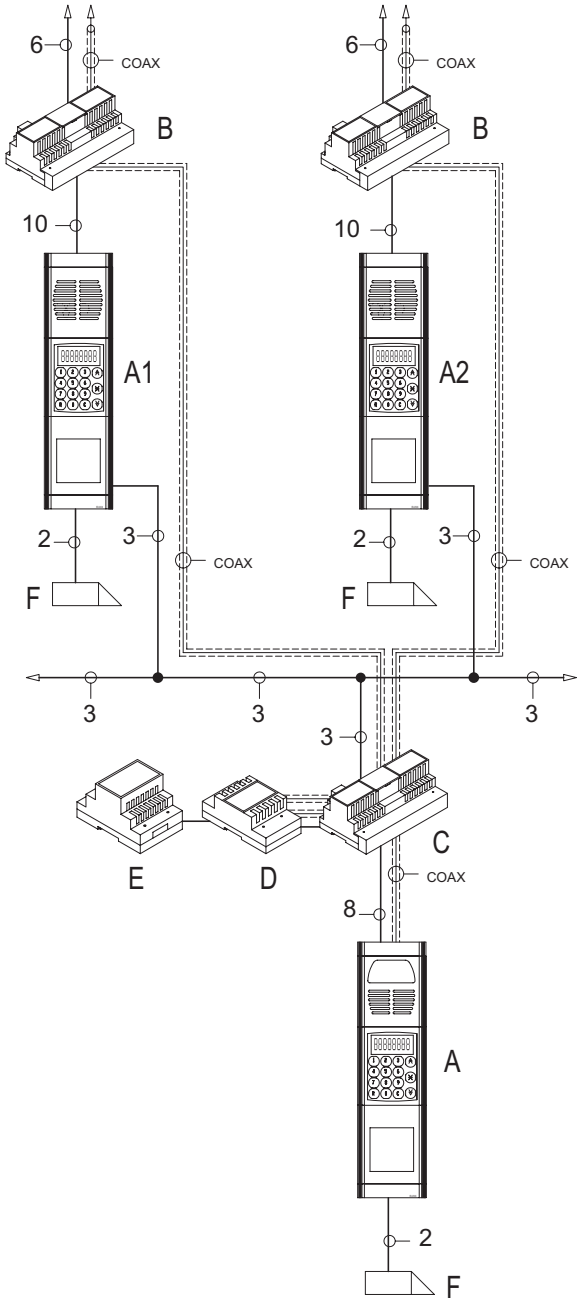
NOTES

The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming).

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

20- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PS3189 (page 142)

MONITOR CABLE RISER MONITOR CABLE RISER



N° SB1283.dwg

A-	Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1-A2-3942-	Secondary video entrance panel Type 8943-8942-3943
B-	Power supply Type 6948
C-	Additional power supply Type 6942
D-	Distributor Type 5556/004 - 6554
E-	Power supply Type 6582
F-	Electric lock 12V~

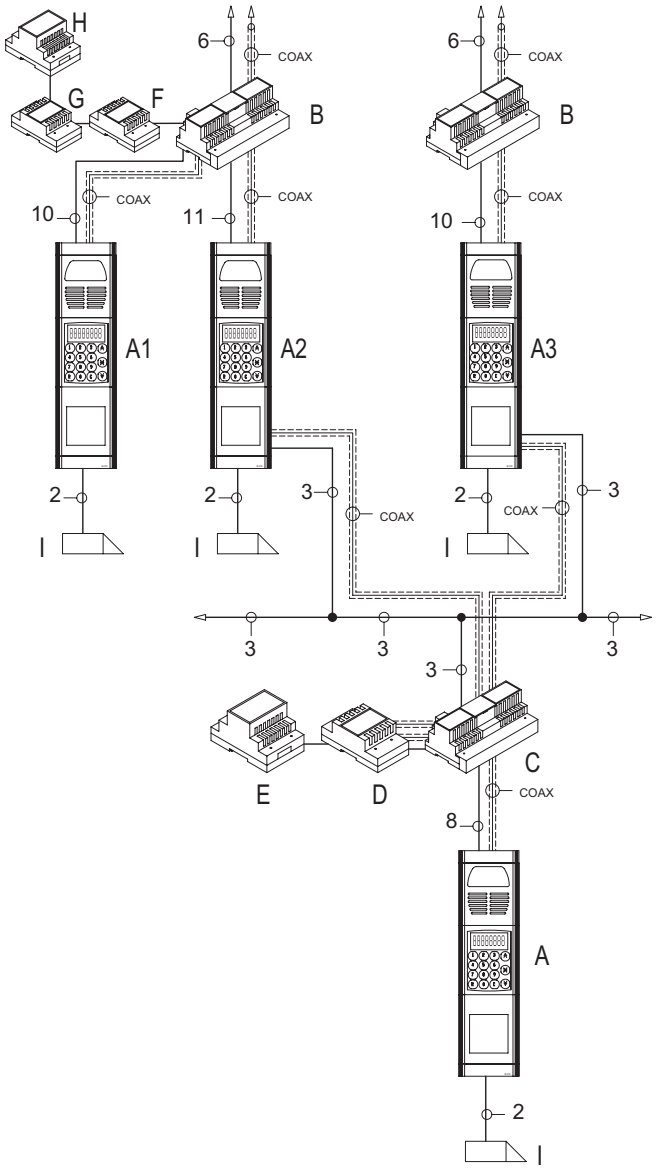
NOTES

The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming).

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

21- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE IN PARALLEL. Diagram ref. PS4699 (page 152)

MONITOR CABLE RISER MONITOR CABLE RISER



N° SB1284.dwg

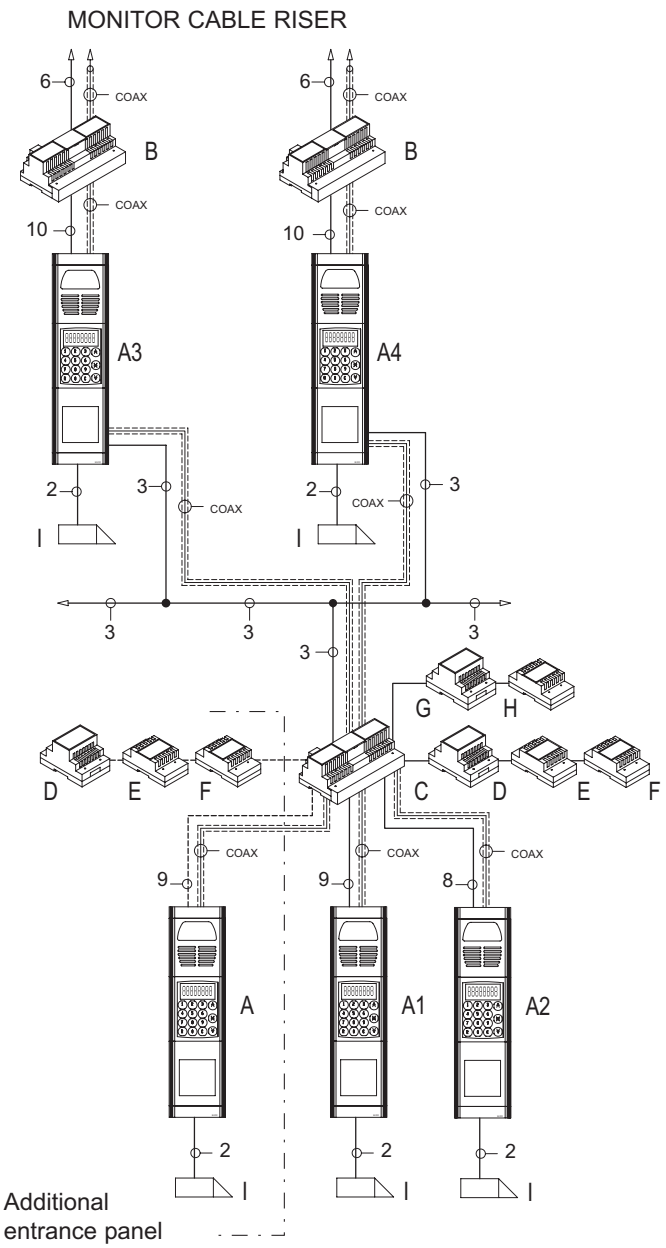
A-	Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1-A2-A3-	Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B-	Power supply Type 6948
C-	Additional power supply Type 6942
D-	Distributor Type 5556/004 - 6554
E-	Power supply Type 6582
F-	Relay Type 170/051
G-	Relay Type 170/001
H-	Transformer Type M832
I-	Electric lock 12V~

NOTES

The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming). In secondary panels A1 cut the metallic jumper on the interphone cable riser terminal block side.

- To make the call from the apartment door see version no. 3A or 3B

22- CONDOMINIAL VIDEO INSTALLATION WITH TWO OR MORE MAIN ENTRANCE PANELS AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PS2768 (page 145)



N° SB1252.dwg

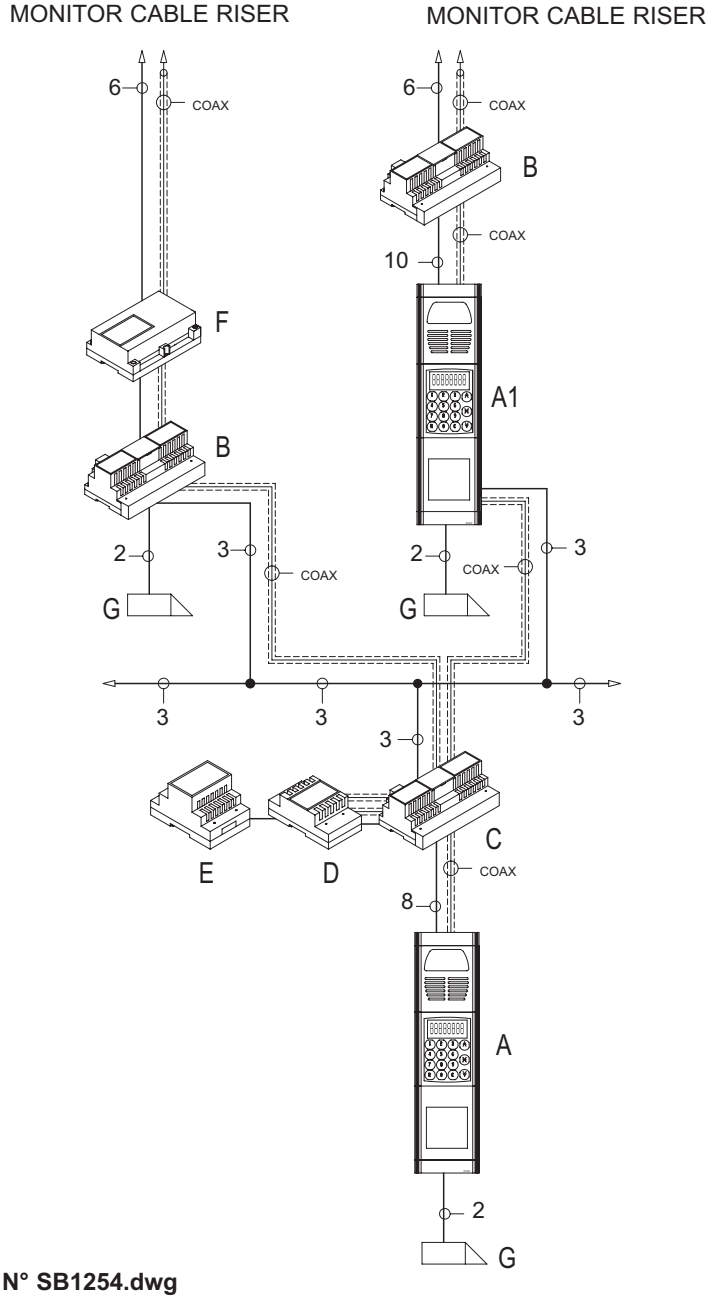
A-A1-A2- Main entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A3-A4- Secondary entrance panels Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B- Power supply Type 6948
C- Additional power supply Type 6942
D- Transformer Type M832
E- Relay Type 170/001
F- Relay Type 170/051
G- Power supply Type 6582
H- Distributor Type 5556/004 - 6554
I- Electric lock 12V~

NOTES

The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming). In two of the three entrance panels A-A1-A2 cut the metallic jumper on the interphones riser terminal block side.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B.

23- CONDOMINIAL VIDEO INSTALLATION WITH MAIN ENTRANCE PANEL AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE WITH/WITHOUT PANELS (building complex). Diagram ref. PS2771 (page 146)



N° SB1254.dwg

A- Main entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1- Secondary entrance panels Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B- Power supply Type 6948
C- Additional power supply Type 6942
D- Distributor Type 5556/004 - 6554
E- Power supply Type 6582
F- Switching module Type 6949
G- Electric lock 12V~

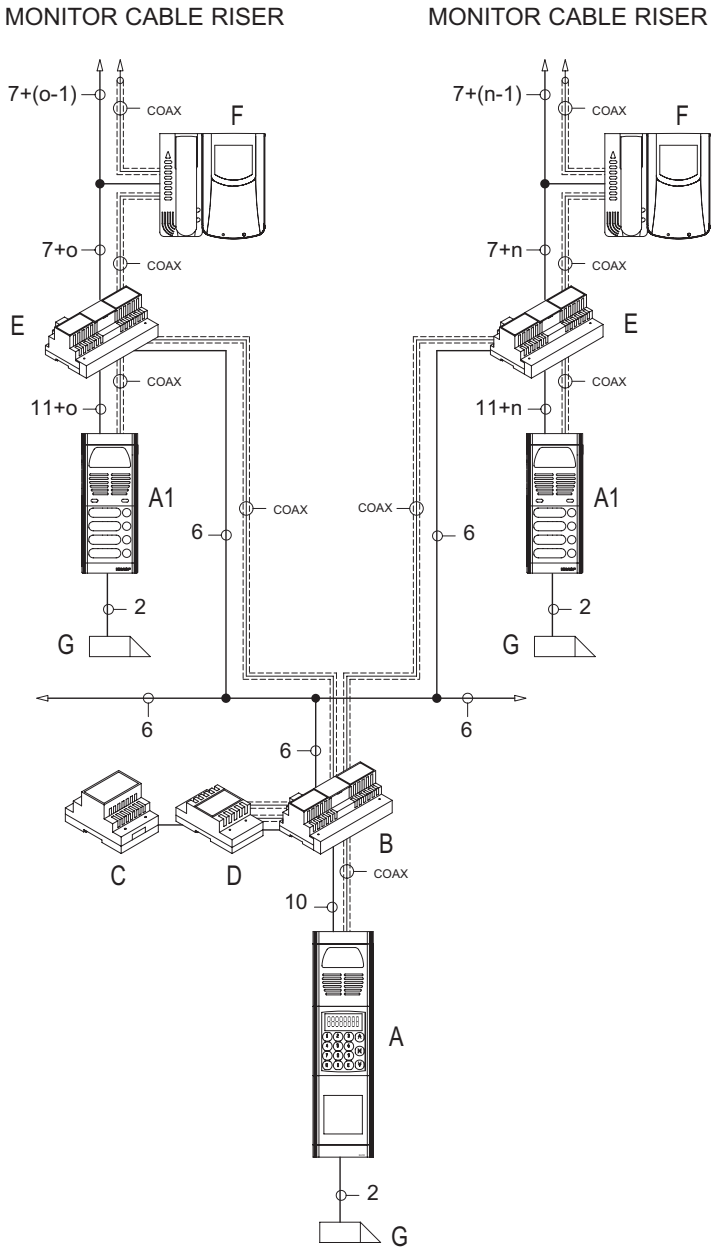
NOTES

Device 6949 is fitted with a LED that flashes when a call is made from the main entrance panel to the cable riser served by Type 6949. The minimum and maximum number of users must be programmed in the secondary entrance panels (see entrance panel parameter programming and Type 6949).

The device Type 6949 must have the jumper GEN CORR located in the vicinity of the integral PLUG connector.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 2A or 2B.

24- CONDOMINIAL VIDEO INSTALLATION, ONE MAIN ELECTRONIC PANEL AND TWO OR MORE NON-ELECTRONIC SECONDARY ENTRANCES PANELS (building complex). Diagram ref: PV3931+PV3800 (page 149-150)



N° SB1285.dwg

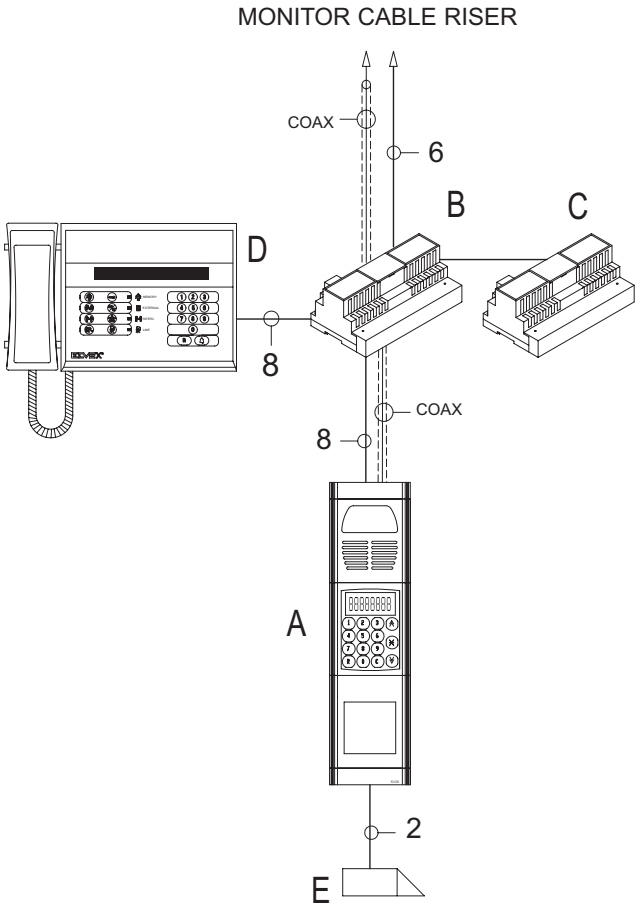
A- Main electronic video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1- Patavium, Galileo or Galileo Security series secondary entrance panels with cameras Type 559A, 559B and LEDs 27/005 or 2/994
B- Power supply Type 6948
C- Power supply Type 6582
D- Distributor Type 5556/004 - 6554
E- Power supply Type 6946
F- Videophone Type 6204+6000+6145 - 6204+6003+6145
G- Electric lock 12V~
n- Number of users 1st building
o- Number of users 2nd building

NOTES

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B.

25- SIMPLE CONDOMINIAL INSTALLATION WITH PORTER SWITCHBOARD.

Diagram ref.: PC2769 (page 139)



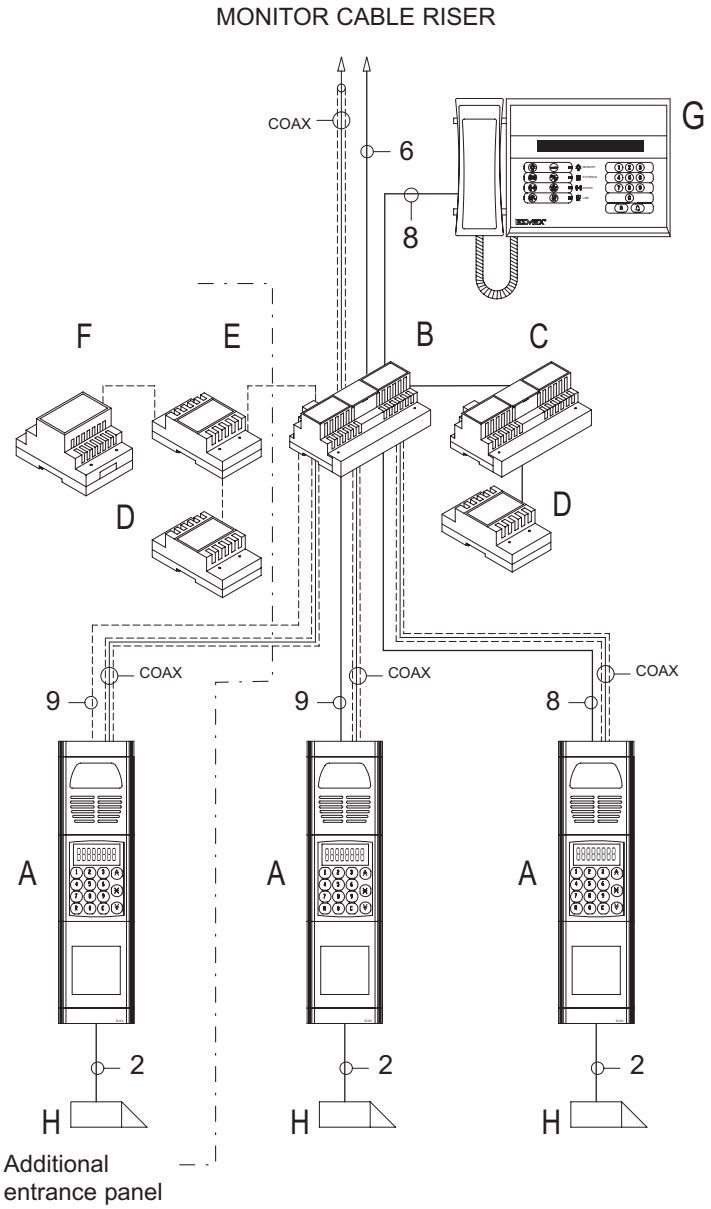
N° SB1250.dwg

A- Video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
B- Power supply Type 6948
C- Additional power supply Type 6942
D- Switchboard Type 945B - 945B/I - 955
E- Electric lock 12V~

NOTES

- To make the call from the apartment door see version no. 10A or 10B
- To control the auxiliary functions see version no. 4A or 4B.

26- CONDOMINIAL INSTALLATION WITH SWITCHBOARD AND ONE OR MORE PANELS IN PARALLEL Diagram ref. PC3874 (page 140)



N° SB1287.dwg

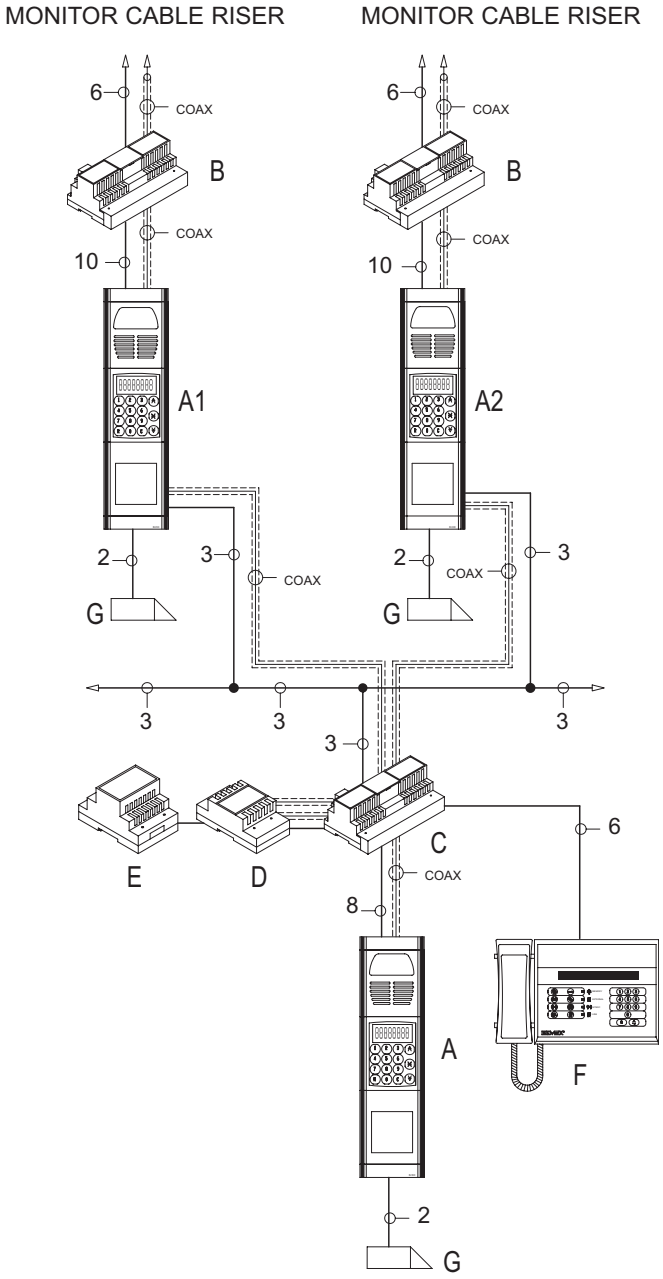
- A- Main entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
- B- Power supply Type 6948
- C- Additional power supply Type 6942
- D- Relay Type 170/051
- E- Relay Type 170/001
- F- Transformer Type M832
- G- Switchboard Type 945B - 945B/I - 955
- H- Electric lock 12V~

NOTES

In two of the three entrance panels cut the metallic jumper on the terminal block side.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

27- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PC2560 (page 144)



N° SB1251.dwg

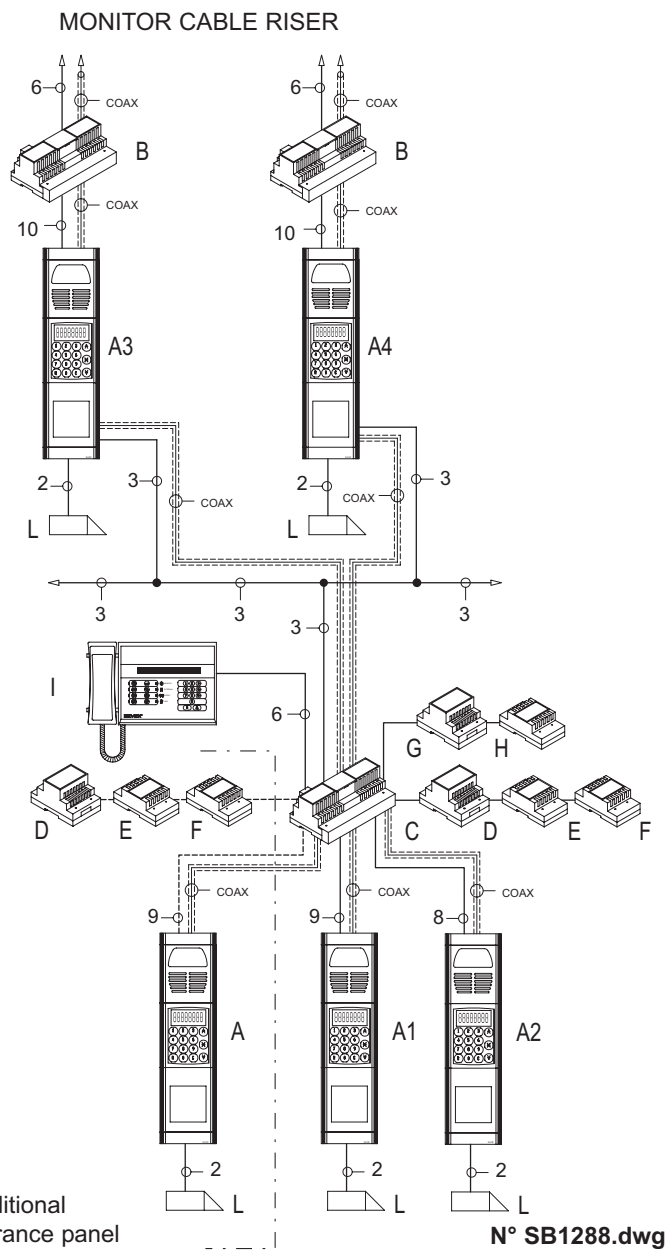
- A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
- A1-A2- Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
- B- Power supply Type 6948
- C- Additional power supply Type 6942
- D- Distributor Type 5556/004 - 6554
- E- Power supply Type 6582
- F- Switchboard Type 945B - 945B/I - 955
- G- Electric lock 12V~

NOTES

The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming).

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

28- CONDOMINIAL INSTALLATION WITH SWITCHBOARD, TWO OR MORE MAIN ENTRANCE PANELS AND TWO OR MORE PANELS INSTALLED ON EACH ENTRANCE (building complex). Diagram ref. PC3875 (page 141)



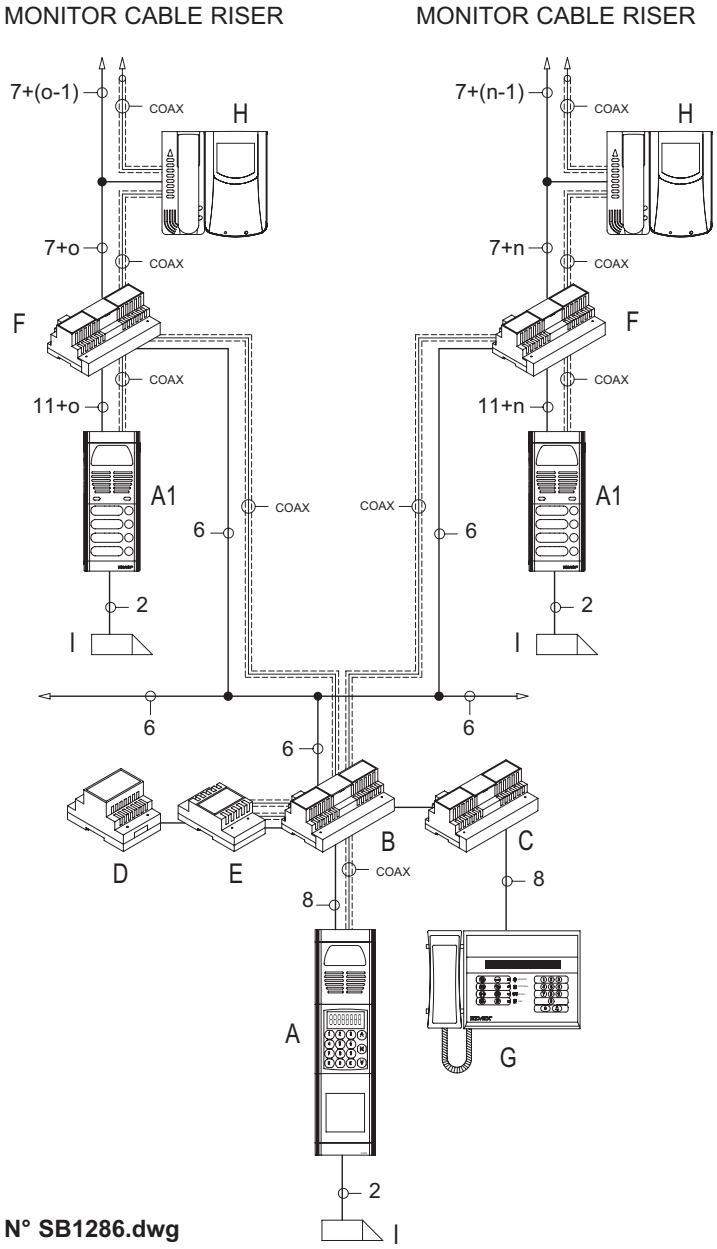
A-A1-A2- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A3-A4- Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B- Power supply Type 6948
C- Additional power supply Type 6942
D- Transformer Type M832
E- Relay Type 170/001
F- Relay Type 170/051
G- Power supply Type 6582
H- Distributor Type 5556/004 - 6554
I- Switchboard Type 945B - 945B/I - 955
L- Electric lock 12V~

NOTES

The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming). In two of the three entrance panels A-A1-A2 cut the metallic jumper on the interphones riser terminal block side.

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B.

29- CONDOMINIAL VIDEO INSTALLATION WITH SWITCHBOARD, ONE MAIN ELECTRONIC PANEL AND TWO OR MORE NON-ELECTRONIC SECONDARY ENTRANCES PANELS (building complex). Diagram ref. PV3931+PC3801 (page 146-147)

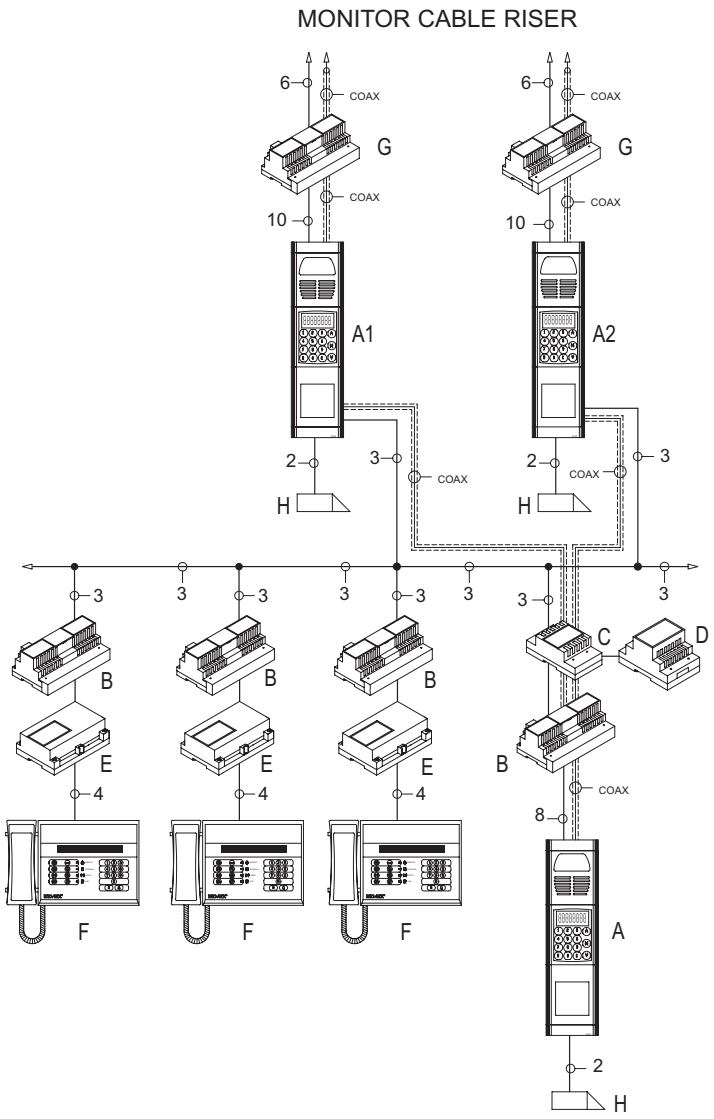


A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1- Patavium, Galileo or Galileo Security secondary video entrance panel series with camera Type 559A, 559B and diodes 27/005 or 2/994
B- Power supply Type 6948
C- Power supply Type 6942
D- Power supply Type 6582
E- Distributor Type 5556/004 - 6554
F- Power supply Type 6946
G- Switchboard Type 945B - 945B/I - 955
H- Video interphone Type 6204+6000+6145 - 6204+6003+6145
I- Electric lock 12V~
n- Number of users 1st building
o- Number of users 2nd building

NOTES

- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B.

30- CONDOMINIAL INTERPHONE INSTALLATION WITH 3 SWITCHBOARDS, MAIN ELECTRONIC PANEL AND TWO OR MORE SECONDARY ENTRANCES PANELS (building complex). Diagram ref: PS4703 (page 153)

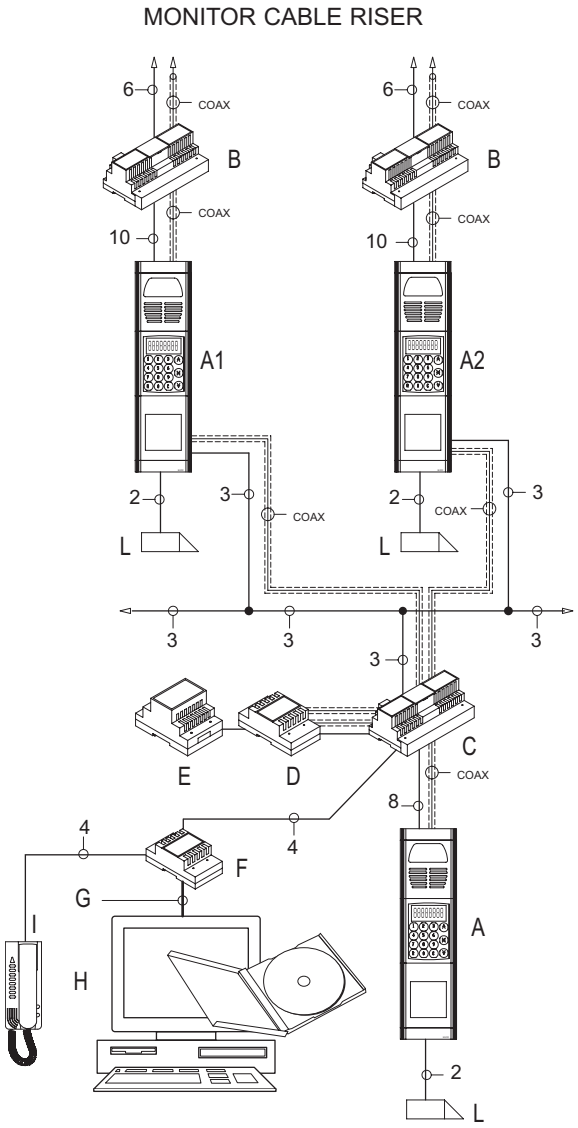


N° SB1289.dwg

A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1-A2- Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B- Additional power supply Type 6942
C- Distributor Type 5556/004 - 6554
D- Power supply Type 6582
E- Multifunction device Type 6949
F- Switchboard Type 945B - 945B/I - 955
G- Power supply Type 6948
C- Additional power supply Type 6942
H- Electric lock 12V~

NOTES
The maximum and minimum number of users must be programmed on the secondary entrance panels (see panel parameter programming).
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

31- CONDOMINIAL INTERPHONE INSTALLATION WITH SWITCHBOARD ON MAIN ELECTRONIC PANEL AND TWO OR MORE SECONDARY ENTRANCES PANELS (residential complex). Diagram ref: PC4704 (page 151)



N° SB1290.dwg

A- Main video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946
A1-A2- Secondary video entrance panel Type 8945-8946-8945/C-8946/C-3945-3946 or audio Type 8943-8942-3942-3943
B- Power supply Type 6948
C- Additional power supply Type 6942
D- Distributor Type 5556/004 - 6554
E- Power supply Type 6582
F- Interface for Type 94CD
G- RS232 (DB9) serial cable
H- Personal Computer with Windows (98, ME, 2000, XP) and software Type 94CD
I- Phone Type 6201 - 8877
L- Electric lock 12V~

NOTES
The maximum and minimum number of users must be programmed on the secondary panels (see panel parameter programming).
- To make the call from the apartment door see version no. 3A or 3B
- To control the auxiliary functions see version no. 4A or 4B

INTERPHONE Type 887B

Dimensions (LxHxD): 75x220x60 mm

DESCRIPTION

DIGIBUS entry system interphone for desk-top or wall-mounted installation. Equipped with 4 or 8 digital call signal decoding, two-position call volume adjustment and door lock button (active only after reception of call - when the interphone is waiting, the same button calls the porter and sends the user code to the switchboard).

The second pushbutton ( ) is used to activate the single additional function F1.

The call volume is adjusted by moving the speaker wire from the A+ position (maximum) to the A- position (minimum).
This interphone is used together with power supplies Type 6941 and Type 6948.

PROGRAMMING AND OPERATION

The following operations must be performed after programming parameters of the panel or switchboard associated with the interphone.
To program the interphone number, remove the cover, press the PS1 or PGR button on the circuit board and hold down the . button. If the procedure has been effected correctly, the unit will assume programming mode with LED on circuit lighting up. At which point push-button can be released. If the LED does not light up, the sequence must be repeated.
The interphone is now enabled to receive the identification code, to be entered via the entrance panel keypad.
As the code is transmitted from the entrance panel or from the switchboard to the phone, it will be memorized by the unit and remain stored until further programming, even in the event of the panel being disconnected from the power supply.
The interphone generates a call sound to confirm the programming operation, and the LED switches off.
In case of installations with several entries, the connector for the entrance panel interphone riser must be removed, leaving only one entrance panel in operation for the programming phase.
This operation can be repeated any number of times, using other numbers between 00000001 and 00009999.

TERMINAL BLOCK FOR CONNECTION

1) Digital transmission/reception line.
3) Voice and call line.
4) Earth reference line (power supply).
5) +13.5V D.C. line (power supply).
6) Interphone line ON (earthed when the interphone is activated by a digital call).

INTERPHONE Type 8877

Dimensions (LxHxD): 75x220x60 mm

DESCRIPTION

Interphone for DigiBus audio door entry systems without encoding/decoding circuit for the digital signal (present on digital distributor Type 949B), with two pushbuttons, one ( ) for door lock release and the other ( ) for auxiliary functions.
This interphone is always used in conjunction with digital distributor Type 949B which can connect up to 4 interphones/monitors.

The pushbutton is only enabled after a call has been made to the interphone; the same pushbutton is also used for the porter call function with transmission of the specific decoding number when the interphone is in the rest position. The pushbutton can be connected to the digital distributor Type 949B to activate functions F1 or F2.

TERMINAL BLOCK

1) Phone line
3) Negative line
6) Additional ringtone/Entrance panel call
7) Additional push-button

INSTALLATION TYPE 887B - 8877

Fig. 1 -
To separate the base of the interphone from the cover, insert a screwdriver in the slit in the middle and turn it until the unit clicks open.

Fig. 1

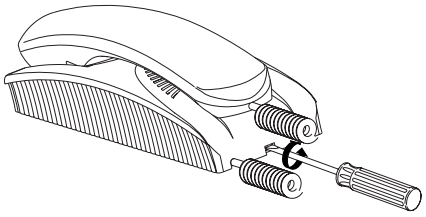
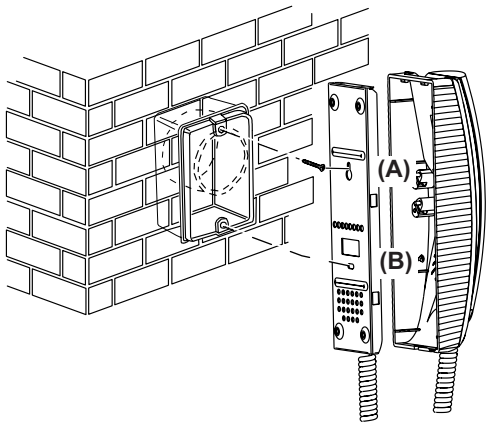


Fig. 2 -
Fix the top screw (A) in the flush-mounted box (or wall plug), leaving the screw head to protrude by 2 mm.
Hook the interphone onto the top screw using the appropriate hole in the back, by placing it close to the wall and then pulling downwards
Complete mounting by screwing the bottom screw (B) into the appropriate hole.

Fig. 2



INTERPHONE Type 6204

Dimensions (LxHxD): 89x226x65 mm

DESCRIPTION

Type 6204 is an interphone in the Petrarca series for DigiBus systems with internal 4 and 8 digit encoding/decoding circuit. It can be combined with the monitors in the Petrarca series (type 6000 and 6003) by means of brackets and conversion kits. Door lock button is active only after reception of call - when the interphone is waiting, the same button calls the porter and sends the user code to the switchboard. The additional functions F1, F2, F3, F4, F5, F6, F7, and F8, can be used by means of additional push-buttons type 6C59 (to connect to connectors T1, T2, T3) while the "user-absent" function can be enabled by means of type 6153.

The interphone can be fitted with auxiliary function buttons. It can be used with systems with speech unit Type 930D and is used together with power supplies Type 6941 and Type 6948.

PROGRAMMING AND OPERATION

The following operations must only be performed after programming the panel and/or switchboard. To program the number of the interphone, remove the cover, press the "PRG" push-button on the circuit and then press and hold the "LOCK" push-button for the door lock. If the operation is performed correctly, the interphone enters programming mode and the LED on the circuit illuminates. After this, release the "LOCK" push-button. If the LED does not illuminate, repeat the procedure. The interphone is now enabled to receive the identification code, to be entered via the entrance panel keypad. The interphone emits the ringtone to confirm completion of programming and the LED turns off. In the case of systems with several stairway entrances, the connectors for the interphone cable risers of the panels must be detached, leaving only the connector of the panel being programmed connected. The programming procedure can be repeated as required with numbers from 0000 0001 to 9999 9999.

"TOUCH" KEY programming procedure for entrance panels Type 8942/TK, 8946/TK and 8946/CTK.

To program the "TOUCH" keys, proceed as follows:

1) Call the monitor from an entrance panel with digital keypad.
2) Enter the number again and press the intercommunicating call pushbutton on the panel *.
3) Select the position in the memory by means of the Up and Down arrows to memorise the key and then press "C"
4) Place the "TOUCH" key in the relative slot in the panel. An acoustic signal is emitted from the interphone handset.
5) There is now a 5-second interval to memorise the key by pressing the interphone push-button ; on completion of programming three beeps are emitted and the interphone switches off. If the programming interval elapses without pressing the push-button, the interphone switches off without programming the key and the entire procedure must be repeated.

CONNECTORS

T1 For auxiliary functions F1 and F2 to be connected to the pair of push-buttons type 6C59.

T2 For auxiliary functions F3, F4, F5 and F6 to be connected to the pair of push-buttons type 6C59. The first push-button activates functions F3, F4 and F5 sequentially and the second activates function F6.

T3 For auxiliary functions F7 and F8 to be connected to the pair of push-buttons type 6C59.

Program. Reserved. To be used only on specification by the manufacturer.

U.A. For the "user-absent" function, to be connected to type 6153.

Monit. For connection to the monitor interconnection card.

BL, BI Handset connection (blue and white wire)

C Call loudspeaker common contact

A+ Call loudspeaker for maximum power

A- Call loudspeaker for muted ringtone

CONNECTION TERMINAL BOARD

1) Digital transmission/reception line.
3) Voice and call line.
4) Earth reference line (power supply).
5) +13.5 V D.C. line (power supply).
6) Interphone line ON (earthed when the interphone is activated by a digital call).
11) Landing call line.
12) Additional voice line for speech unit Type 930D.

INTERPHONE Type 6201

Dimensions: 89x226x65 mm

DESCRIPTION

This interphone is used exclusively in conjunction with digital distributor Type 949B which can connect up to 4 interphones/monitors.

Type 6201 is an interphone in the Petrarca series for DigiBus audio door entry systems without encoding/decoding circuit for the digital signal (present on digital distributor Type 949B), with one push-button for door lock release. The pushbutton is only enabled after a call has been made to the interphone; the same push-button is also used for the porter call function with transmission of the specific decoding number when the interphone is in the rest position. The interphone has a provision to add 8 further push-buttons (type 6152) which can be connected to digital distributor Type 949B for activation of functions F1 and F2. The interphone can be combined with the monitors in the Petrarca series (type 6000 and 6003) by means of brackets and conversion kits.

INSTALLATION TYPE 6204 - 6201

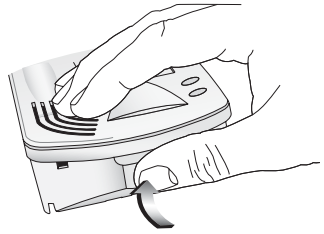


Fig. 1-
Open the interphone, split the cover from the bottom making pressure on the lower side of the cover.

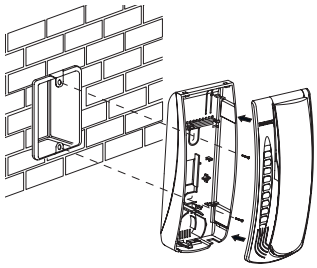


Fig. 2-
Fix the interphone to the rectangular, vertical flush-mounted backbox with the 2 screws supplied, or fix the screws with the ø5 expansion plugs. Connect the wires to the terminals. You are advised to fix the top of the interphone at a height of about 1.5 m above the ground.

Type 6152

Pack of 8 additional push-buttons (normally open) for insertion in interphones in the Petrarca series Type 6200 and Type 6201. Capacity 24V A.C. 0.5A

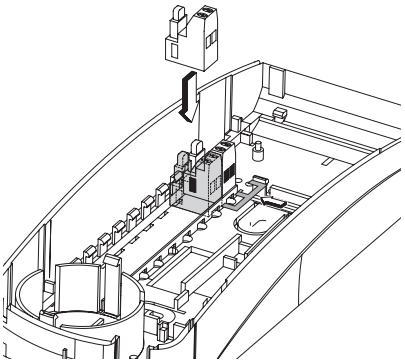
Type 6157

Additional push-button (normally closed) for automation control, for insertion in interphones in the Petrarca series Type 6200 and Type 6201. Capacity 24V A.C. 0.5A

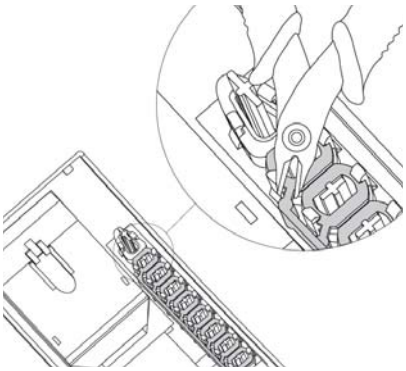
Type 6C59

Pair of push-buttons for activation of additional functions for interphone Type 6204.

INSTALLATION TYPE 6152 - 6157 - 6C59



Insert the push-button(s) inside the left hand side of the interphone.



Divide the keys according to the push-button(s).

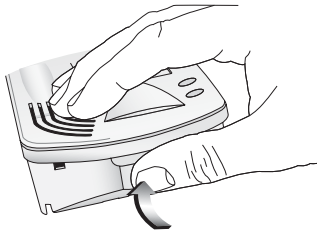
Type 6153

Switching module type 6153 is used to adjust the call volume or to switch off the call function on PETRARCA series interphones type 6200 - 6201 - 6204 with call loudspeaker. The device is equipped with two optical devices, one to display the call exclusion (red LED) and the other for the open door lock status (green LED); the use of these two devices requires additional wiring as shown in the wiring diagrams.
In type 6204 interphones, type 6153 is also used for the "user absent" function for use with digital DIGIBUS switchboards.

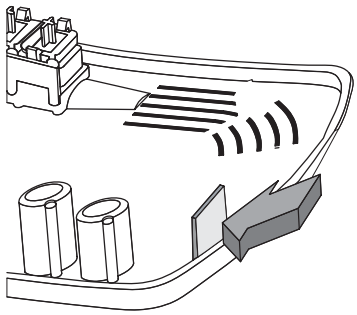
CONNECTION TERMINAL BOARD

6-CN2)	Call loudspeaker connection for volume adjustment.
7)	Negative power supply red LED.
8)	Positive power supply +13.5V green LED.
9)	Negative power supply green LED.
10)	Positive power supply +13.5V red LED for call excluded. The LED is powered when the switching module is set to the last position on the left.
CN1)	Connection of "user absent" function for type 6204.

INSTALLATION TYPE 6153

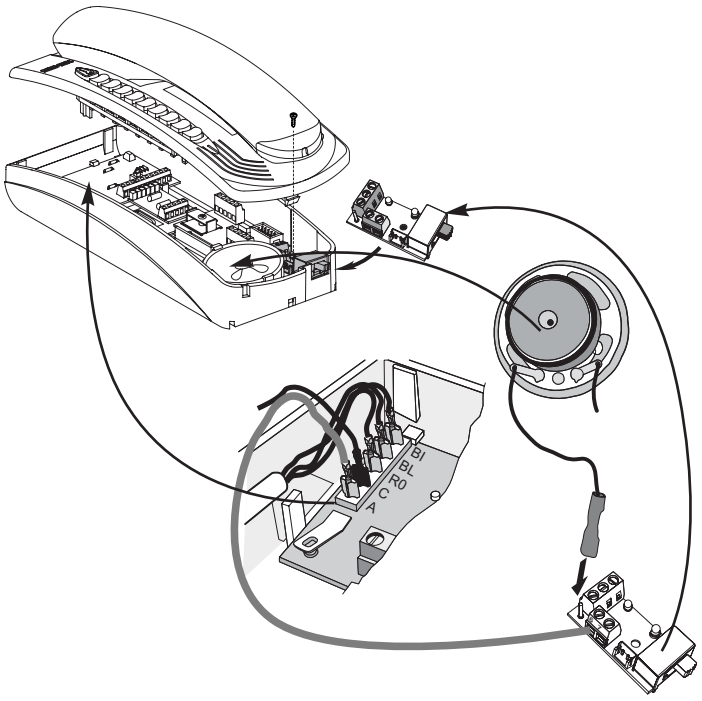


Open the interphone, split the cover from the bottom making pressure on the lower side of the cover.



Snap off the plastic lamina by exerting pressure on it.

Insert the electronic card in its seat and fix with the screw supplied Disconnect the loudspeaker wire from "A" on the interphone. Insert the removed wire onto the pin (CN2) on card Type 6153. Insert the wire pre-connected to terminal n° 6 of type 6153, into pin "A" of the interphone.



N.B. On terminal n° 7 of card type 6153, there is a wire used for the optical signal for call excluded.
On interphones Type 6204 use the wire to connect terminal 10 of type 6153 to 6204 and the wiring to connect the connector CN1 of type 6153 to the AU connector of the interphone.
For connections to the system, see the variants regarding Type 6153.

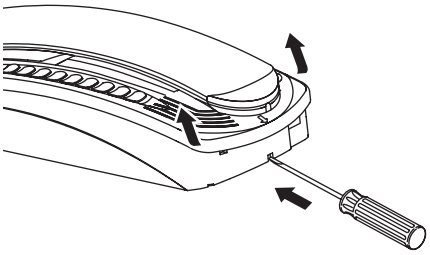
Type 6140

White desk-top conversion. Supplied with 2-metre, 6-wire cable and fixed terminal block.

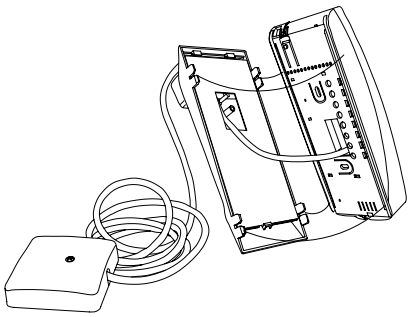
Type 6A40

White desk-top conversion. Supplied with 2-metre, 16-wire cable, complete with plug and socket.

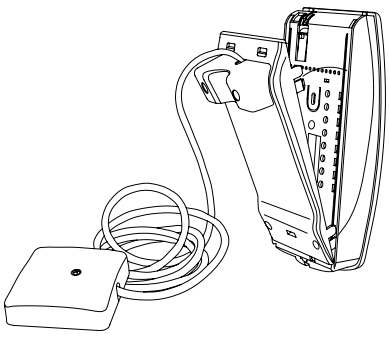
INSTALLATION TYPE 6140 - 6A40



To separate the base of the interphone from the cover, insert a screwdriver in the slit in the middle and push inwards until the unit clicks open



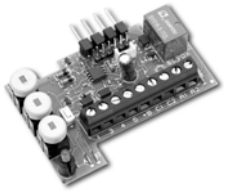
Insert the kit wires in the interphone.



Attach the base of the interphone to the conversion kit.

Type 615T

Strip of 8 transparent keys for Petrarca interphones for use with Type 6158. Use in place of the standard interphone keys for indicator lights.



Type 6158

The Digi-Bus alarm card is an accessory for fitting in Petrarca series Digi-Bus interphones (e.g. Type 6204) for the purpose of integrating a simple alarm system (burglar alarm) into the interphone. The card controls the state of an external sensor (e.g. connected to the opening of a door), and if it detects a signal from the sensor, it activates a contact (alarm actuator) which can be used to trigger an alarm signal (lamp, siren, etc.), while simultaneously sending an alarm message on the digital Digi-Bus line, which can be immediately recorded by a switchboard (e.g. Type 945B or 94CD), if present. The card has: two dedicated buttons for keying in the alarm code, a safety button to prevent the interphone from being opened (sensor for immediate activation of the alarm), a red LED and the necessary wiring for connection with Type 6153.
In the event of a power failure, the card Type 6158 saves the operating state at the time of the black-out in its memory, and when power is restored, the card returns to its previous operating state without resetting. The card can, however, be powered by an additional power supply provided by an optional 12V D.C. backup battery.

Terminals

1 - Digi-Bus digital line.
3 - Digi-Bus voice line.
4 - Negative interphone and card Type 6158 power supply.
5 - Positive (13.5V D.C.) interphone and card Type 6158 power supply.
+B - Positive (12V D.C.) for supplementary power supply to card Type 6158 for backup battery.
C1-C2 - Terminals for connecting alarm sensors.
R1-R2 - Normally Open contact (maximum load 1A 24V D.C./120V A.C.) for connecting external alarm indicators.

INSTALLATION TYPE 6158

The card can be installed in two ways: card Type 6158 with call volume controller Type 6153 or card Type 6158 with transparent keys Type 615T. The difference between the two methods lies in the LED used for indicating alarms, which will be either the green LED of Type 6153 or the red LED supplied with card Type 6158.

- **Installing Type 6158 with Type 6153.**
  Insert the terminals of card Type 6158 between terminals 1, 3, 4 and 5 of the interphone Type 6204, and fix the card with the screw supplied (fig. 1).
  Install Type 6153 in the interphone.
  Connect the wiring supplied with Type 6158 to Type 6153, by connecting the red wire to terminal 8 and the black wire to terminal 9 of Type 6153 (fig. 2).
  Cut the metal jumper "A" located next to the red LED on the card.

  Release the first 2 keys of the interphone by cutting the key lock on the back of the housing (fig. 3).
  Take care not to release the subsequent keys of the interphone. The third key must remain locked with the others, so as to keep the third button on card Type 6158 pressed down for the "anti-interphone tampering" function.
  Connect the interphone and the cards in accordance with the attached wiring diagrams.

- **Installing Type 6158 with Type 615T.**
  Insert the terminals of card Type 6158 between terminals 1, 3, 4 and 5 of the interphone Type 6204, and fix the card with the screw supplied (fig. 1).
  Release the first 4 keys of the interphone by cutting the key lock on the back of the housing (fig. 3).
  Remove the third and fourth key from the housing and fit the corresponding transparent keys of Type 615T.
  Take care to keep the transparent keys 3 and 4 joined together and not to remove the key lock, so as to keep the third button on card Type 6158 pressed down for the "anti-interphone tampering" function.
  Connect the interphone and the cards in accordance with the attached wiring diagrams.

Then connect the alarm sensors to the card.
The alarm sensors that can be connected to the card are of three types: sensor with Normally Open contact for immediate activation of the alarm system (**SA**), sensor with Normally Closed contact for delayed activation of the system by the alarm (**SC**), and sensor with 10K Ohm resistance and Normally Closed contact for delayed activation of the system by the alarm (**SCR**). The sensor with the 10K Ohm resistance can be simulated with a sensor with Normally Closed contact with a 10K Ohm resistance in series.
The sensors must be connected in the order shown in the attached wiring diagrams.
N.B.: The network of sensors must include a sensor with Normally Closed contact and 10K Ohm resistance.
If it is not possible to connect a sensor with 10K Ohm resistance, this can be done by cutting the metal jumper "B" located next to the red LED on the card. The use of this solution prevents the card from recognising manipulation of the timed sensors by short-circuiting them.
The choice to use, on the external sensor harness, an external sensor with N.C. contact with internal 10K Ohm resistor (SRC) or only external sensors without 10K Ohm external resistor requires two different harness wiring diagrams: see enclosed wiring diagrams (type A connection, type B connection).

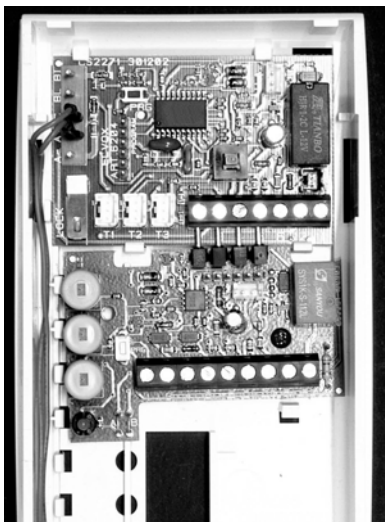


Fig. 1

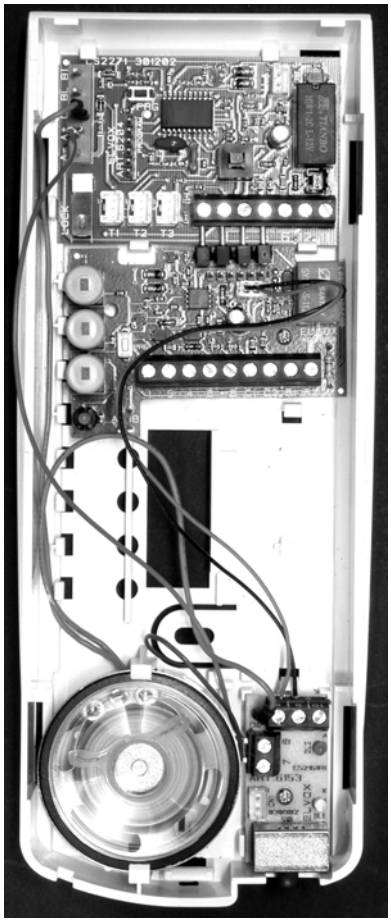


Fig. 2

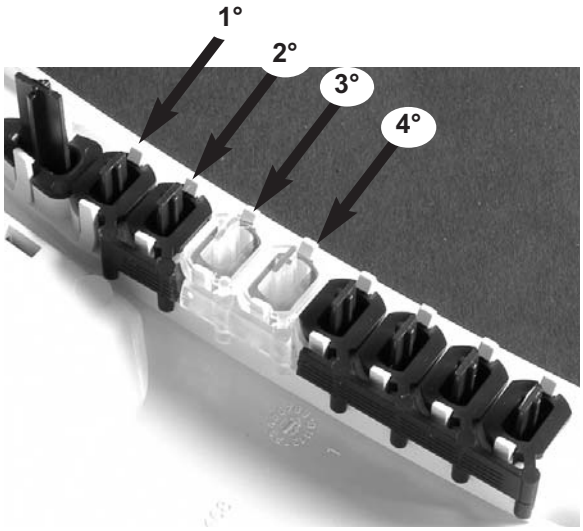


Fig. 3

CARD PARAMETERS

The card must be programmed after completing the connection of the system and programming the call code of the interphone. The parameters to be programmed on card Type 6158 are as follows:

- **Card identification code:** this is the code that the card sends on the digital line to the Digi-Bus switchboard if the alarm is activated. For the identification code, it is preferable to use the same code as the interphone call code.

- **Activation delay time:** this is the time that elapses between activation of an SC or SCR sensor and indication of the alarm with the activation of contact R1-R2 and sending of the identification code on the digital line. When the delay time expires, the card indicates the alarm only if one of the sensors is still active; otherwise it returns to the control state. The delay time enables a user to enter the control area and disactivate or momentarily suspend the alarm system by means of the User Code or Master Code, without setting it off. The following time only has an effect on delayed sensors (SC or SCR) and not on immediate sensors (SA).
  The factory-set value is 30 seconds

- **Activation time:** this is the time for which the contact R1-R2 remains active when the alarm is set off.
  The factory-set value is 1 minute.

- **Master Code:** the following code makes it possible to momentarily suspend the alarm system without disactivating it, which can only be done with the User Code. The Master code can be used as a master key for carrying out inspections in areas controlled by the alarm system, without having to disactivate it. The Master code is entered by pressing a sequence on buttons P1 and P2 of card Type 6158, of up to a maximum of 8 presses. The Master code also determines the length of the User code, which must be as long as the Master code. It is therefore necessary to enter the Master code first and then the User code. The Master code can be disactivated by assigning it the same value as the User code. The factory-set value is P1 - P2 - P2 (it is advisable to change the code after installing the system).

- **User Code:** the following code makes it possible to activate and disactivate the alarm system. The User code is entered by pressing a sequence on buttons P1 and P2 on card Type 6158, of up to a maximum of 8 presses. The length of the User code is determined by the length of the Master code, as the length of the two is the same. The factory-set value is P1 - P2 - P1 (it is advisable to change the code after installing the system).

PROGRAMMING

The parameters must be programmed with the card Type 6158 in the rest state (alarm not active) and with the interphone housing off. When you have finished programming the card, close the interphone.

Programming the identification code.

Press the PRG button on the card and then keep button P2 pressed down for at least 8 seconds. When the LED on the card lights up (continuously), release the button. Send the identification code from an entry panel or from a Digi-Bus series switchboard. When the identification code is received and saved, the card will automatically switch off the LED and will exit the programming phase. If the code is not sent within 30 seconds of the LED lighting up, the card will automatically exit the programming phase and the LED will switch off. In the case of an error, repeat the operation.

Programming the identification code.

Press the PRG button on the card and then keep button P2 pressed down for at least 8 seconds. When the LED on the card lights up (continuously), release the button. Send the identification code from an entry panel or from a Digi-Bus series switchboard. When the identification code is received and saved, the card will automatically switch off the LED and will exit the programming phase. If the code is not sent within 30 seconds of the LED lighting up, the card will automatically exit the programming phase and the LED will switch off. In the case of an error, repeat the operation.

Programming the activation delay time.

Press the PRG button on the card and then keep button P2 pressed down for at least 8 seconds. When the LED lights up, release the button and press it for a further 2 seconds. The LED will then start flashing with a recurrent single flash. Release button P2. Set the delay time by repeatedly pressing (up to a maximum of 51 times) button P1; the delay time will be equal to the number of presses x 5 seconds (e.g. 6 presses = 6 * 5 = 30 seconds). Save the time and exit the programming phase by pressing buttons P1 and P2 simultaneously. In the case of an error, repeat the operation.

Programming the activation time.

Press the PRG button on the card and then keep button P2 pressed down for at least 8 seconds. When the LED lights up, release the button and press it for a further 2 seconds. Release button P2 and press it again for a further 2 seconds. The LED will start flashing with a recurrent double flash. Release button P2. Set the activation time by repeatedly pressing (up to a maximum of 51 times) button P1; the activation time will be equal to the number of presses x 5 seconds (e.g. 6 presses = 12 * 5 = 60 seconds). Save the time and exit the programming phase by pressing buttons P1 and P2 simultaneously. In the case of an error, repeat the operation.

Programming the Master code.

Press the PRG button on the card and then keep button P2 pressed down for at least 8 seconds. When the LED lights up, release the button. Press button P2 again for a further 2 seconds and then release it. Repeat this operation twice more until the LED starts flashing with a recurrent triple flash. Enter the Master code by pressing buttons P1 and P2 in sequence so as to enter a code; the maximum number of presses is 8.

Example of codes: P1 - P2 - P2 (factory-set code).
P2 - P1 - P2 - P2 - P1
P1 - P1 - P2 - P2 - P2 - P1 - P1 -P2 (maximum length).

The code will be saved automatically 30 seconds after the time at which you entered the programming phase. In the event of an error, press buttons P1 and P2 simultaneously to exit the programming phase without saving the changes.

Programming the User code.

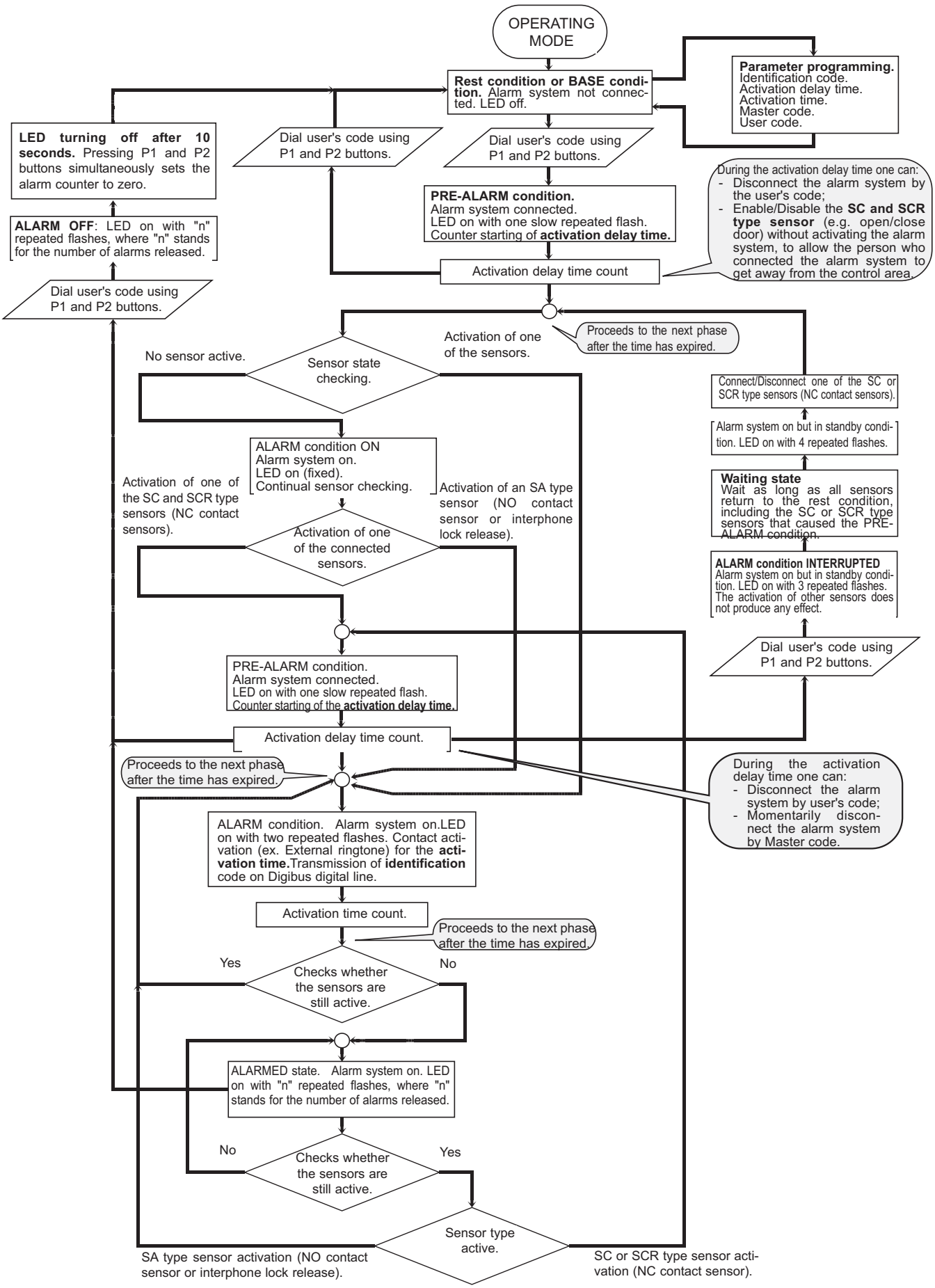
With card Type 6158 in the rest state, press buttons P1 and P2 for at least 5 seconds, until the LED starts flashing rapidly and repeatedly. Enter the User code by pressing buttons P1 and P2 in sequence so as to enter a code; the number of presses is determined by the length of the Master code. The User code must be neither longer nor shorter than the Master code.

Example of codes: P1 - P2 - P1 (factory-set code).
P2 - P1 - P2 - P2 - P1
P1 - P1 - P2 - P2 - P2 - P1 - P1 -P2 (maximum length).

The code will be saved automatically 5 seconds after the time at which you entered the programming phase. In the event of an error, press buttons P1 and P2 simultaneously to exit the programming phase without saving the changes.

Operating principle

When the system is switched on, card Type 6158 takes up the **BASIC** or rest state, keeping the indicator LED 'Off'. From the BASIC state, it is possible to programme the parameters, as described above, or activate the alarm system. The alarm system is activated by entering the User code by means of buttons P1 and P2 on the card. For the operating phases of the alarm system, follow the diagram below.



MONITOR Type 6000 - 6003

Dimensioni (LxHxD): 135x226x45 mm

DESCRIPTION

PETRARCA series monitor Type 6000 can work in conjunction with interphones 6200 - 6201 - 6204 for "SOUND SYSTEM", "A.C. CALL", "DIGIBUS" and “Without coaxial cable” series video door entry systems and with telephone type 3562. In addition, the monitor may be installed on its own using the corresponding accessories.

TECHNICAL CHARACTERISTICS OF Type 6000

- Slim-line surface wall-mounted monitor with 4” flat screen
- Minimum supply voltage: 15 V D.C. (maximum 20 V D.C.)
- Video signal standard: CCIR with 625 lines and 50 frames (EIA standard available on request)
- Passband: 4 MHz
- Video signal input voltage: 1Vpp via 75 Ohm coax cable or twisted pair.

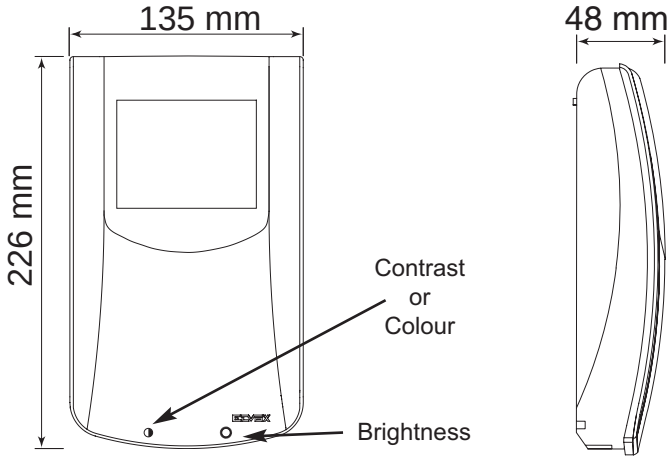
TECHNICAL CHARACTERISTICS OF Type 6003

- Slim-line surface wall-mounted monitor with 4” LCD colour screen
- Minimum supply voltage: 15 V D.C. (maximum 20 V D.C.)
- Video signal standard: PAL
- Video signal input voltage: 1 Vpp via 75 Ohm coax cable.

TERMINALS FOR MONITOR TYPE 6000, 6003

V1: Input for connection of 75 Ohm video cable in systems with coax cable; input for connection of video signal V1 in systems without coax cable.
V2: Output for connection of 75 Ohm video cable or 75 Ohm resistor in last monitor in systems with coax cable.
V3: Input for connection of video signal V2 in systems without coax cable.
N.B. Terminal V3 must be shorted to terminal M in systems with coax cable.
M: Earth for terminals V1, V2 and V3.
+A: Not used
+: Power supply (positive), minimum input voltage 15 V D.C.
-: Power supply (negative), minimum input voltage 15 V D.C.
+D: +12 V D.C. output for video distributor
CH: Monitor activation call
CN2: Monitor interface connector

N.B. The rear of monitor Type 6000 is fitted with a microswitch to set the connection "coaxial cable/no coaxial cable".



Type 6145

Bracket for wall-mounting of monitor (6000, 6003) and interphone (6201, 6204)
Bracket dimensions (WxH): 213x187 mm
Dimensions of interphone + monitor (WxHxD): 223x226x65 mm
Equipment supplied: 4 screws for wall mounting

Type 6A47

Bracket for flush-mounting of single monitor (6000, 6003)
Bracket dimensions (WxH): 123x187 mm
Monitor dimensions (WxHxD): 135x226x45 mm
Equipment supplied: 4 screws for wall mounting
Note: requires 3-module box to house interconnection card supplied with monitor.

Type 6A41

Desk-top conversion kit for single monitor (6000, 6003)
Monitor+desk-top conversion kit dimensions (WxHxD): 135x80x200 mm
Note: 2 metres of cable with 8 wires + 1 coaxial cable, socket with removable plug

Type 6142

Desk-top conversion kit for monitor (6000, 6003) and interphone (6201, 6204)
Dimensions of monitor + interphone + desk-top conversion kit (WxHxD): 223x235x200 mm
Note: 2 metres of cable with 12 wires + 1 coaxial cable, socket with removable plug.

Type 6A42

Desk-top conversion kit for monitor (6000, 6003) and interphone (6201, 6204)
Dimensions of monitor + interphone + desk-top conversion kit (WxHxD): 223x235x200 mm

Type 6160

Additional power supply for desk-top conversion kits type 6142, 6A42 and 6143
Supply voltage: 230V 50Hz (different voltages also available: 110V A.C., 117V A.C. and 240V A.C.)
Input voltage: + I/-: 10÷20V D.C.
Output voltage: +U/-: 16V D.C. 0.8A non stabilised
Note: used in the event of connections of several monitors in parallel or on very long connection lines with significant voltage drops

INSTALLATION OF TYPE 6145 WITH PETRARCA MONITOR AND INTERPHONE

Fig.1 -
Fix the bracket type 6145 to the wall at a height of approximately 1.4 m above the ground.
Fig. 2 - 3
Open the interphone, and separate the cover from the base by inserting a screwdriver into the slit in the bottom until the unit clicks open.
Fig.4 -
Inside the interphone, fit the connection card supplied with monitor type 6000 or type 6003 and connect the card to the interphone by means of the connectors CN2 (card) and CN1 (interphone 6200) or CN4 (interphone 6201).
Fig.5 -
Fit the base of the interphone into the appropriate seats to the left of the bracket. Slide the base of the interphone downwards until it is completely fastened. Connect the wires to the terminals of the interphone and monitor card.
Fig.6 -
Connect the wiring of the monitor to the connection card by means of connector CN1 on the card.
Fit the monitor in the appropriate seats in the bracket. Slide the base of the monitor downwards until it is completely fastened.
Fig.7 -
Close the interphone by hooking the cover onto the base and pressing the bottom of the cover until it clicks shut. To remove the interphone or monitor from the bracket, press the safety tab with a screwdriver in the direction of the arrows.

Fig. 1

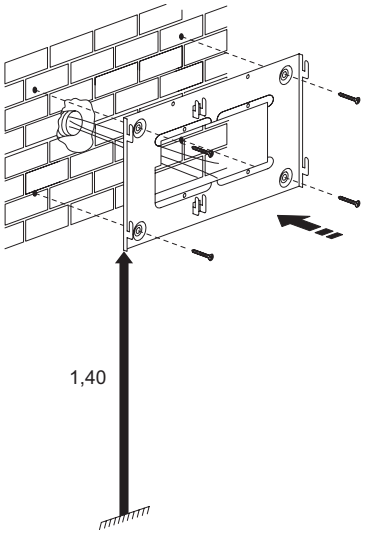


Fig. 2

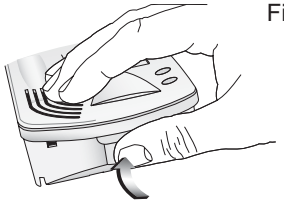
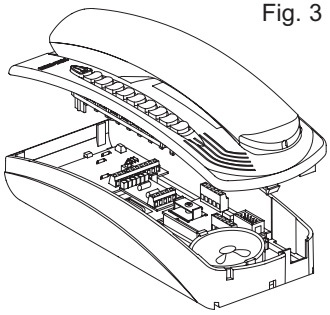


Fig. 3



CN4 o Monit

Fig. 4

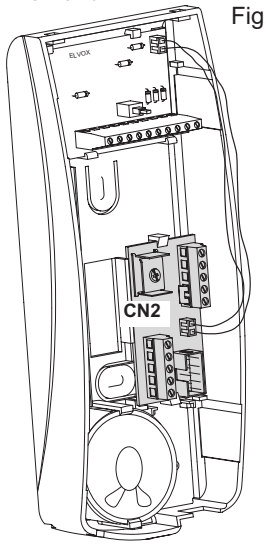


Fig. 5

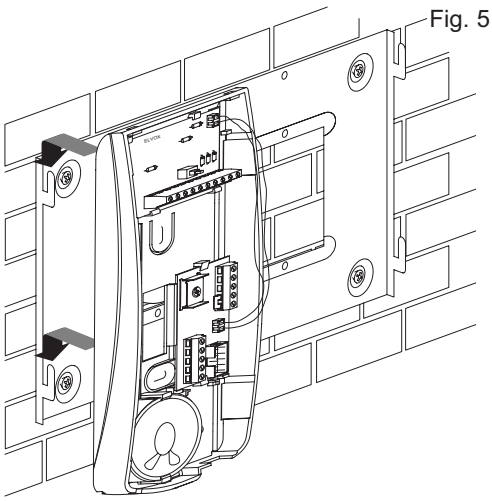


Fig. 6

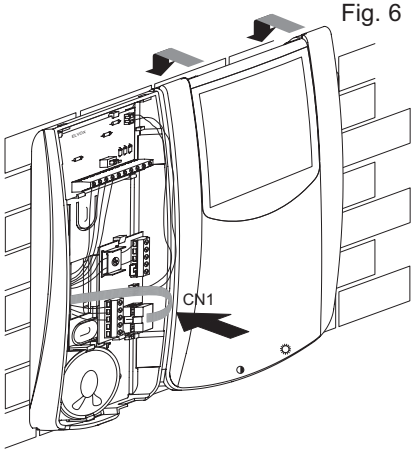
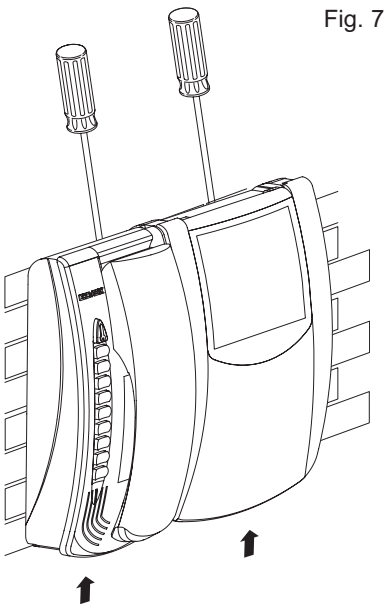


Fig. 7

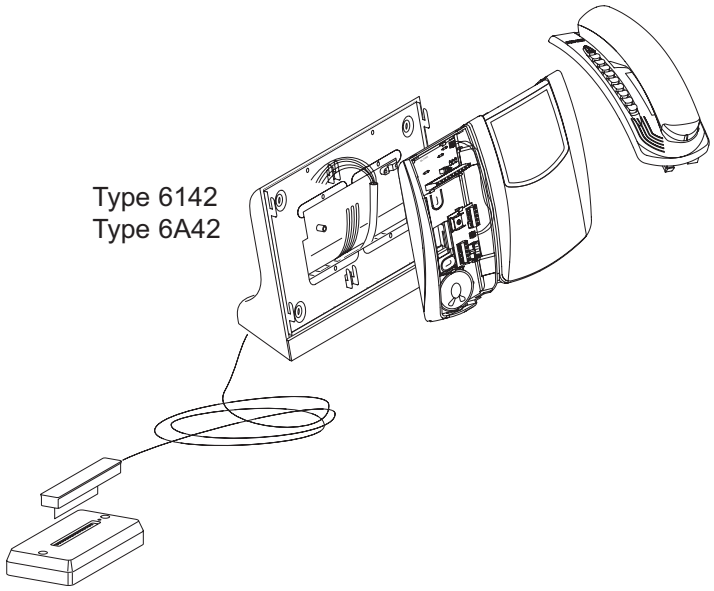


INSTALLATION OF TYPE 6142 OR 6A42 WITH PETRARCA MONITOR AND INTERPHONE

Fig. 8 -

Assemble the base of the interphone as illustrated in figures 2-3-4-5. Connect the cable on the base to the terminal blocks. Then fit the monitor as illustrated in figures 6-7.

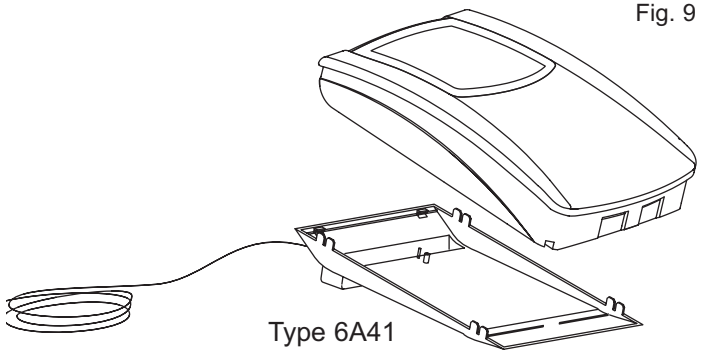
Fig. 8



INSTALLATION OF TYPE 6A41 WITH PETRARCA MONITOR

Fig. 9 - Fix the interconnection card supplied with the monitor onto the base. Fasten the monitor to the base with the appropriate tabs.

Fig. 9

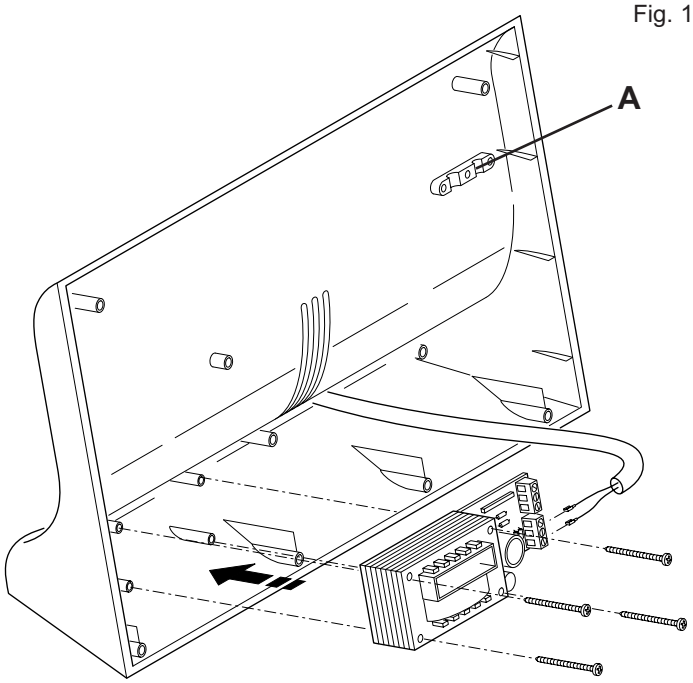


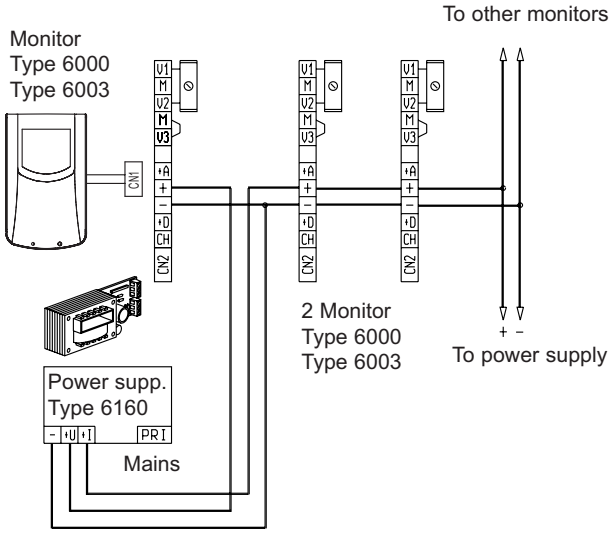
INSTALLATION TYPE 6160

Fig. 10 - Insert the power supply in the relative housing in the desk-top conversion kit and secure by means of the 4 screws supplied (see figure). Insert the power cable through the existing hole in the base, secure in the cable clamp (detail A) and connect to the terminals marked "PRI".

Make the remaining connections as specified in the diagram.

Fig. 10





MONITORS
Type 6304 - 6304/C - 6504

DESCRIPTION

Monitors for electronic control unit with microcontroller for 4 and 8 digit encoding and decoding. Supplied with fixing bracket and terminal board, with 3 pushbuttons (door lock release and 2 additional functions). Supplied with call volume adjustment for 3 levels and call disable with red LED. The green LED is used for an additional signal when connected. These monitors are used in conjunction with power supply Type 6948.

Technical specifications Type 6304
- Surface wall-mounted B/W monitor with low profile flat 4" screen.
- Dimensions (WxHxD): 204x220x71mm
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- Video standard signal: CCIR 625 lines, 50 images (to EIA standards on request)
- Pass band 4 MHz
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm or twisted pair.

Technical specifications Type 6304/C
- Surface wall-mounted colour monitor with low profile 4" screen
- Dimensions (WxHxD): 204x220x71mm
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- PAL video standard signal
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm.

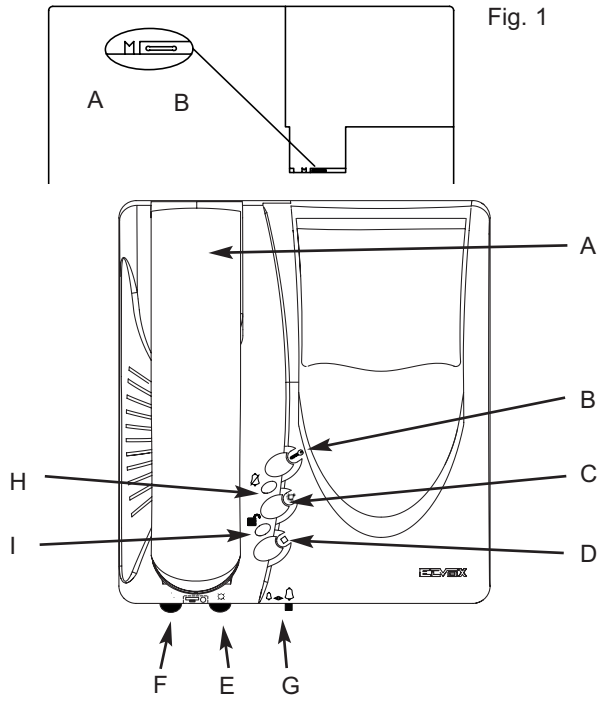
Technical specifications Type 6504
- Semi-flush wall-mounting monitor with 5" low-profile, black/white screen.
- Dimensions (LxHxD): 204x220x90mm + 50mm (for flush-mounting)
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- Video standard signal: CCIR 625 lines, 50 images (to EIA standards on request)
- Pass band 4 MHz
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm or twisted pair.

CONNECTION TERMINAL BOARD Type 6304 - 6304/C - 6504

V1) For systems with coaxial cable, input for connection of 75 Ohm video cable. For systems without coaxial cable, input for connection of V1 signal.
V2) For systems with coaxial cable, output for connection of 75 Ohm video cable or for connection of 75 Ohm load resistance of last monitor on cable riser.
V3) For systems without coaxial cable, input for connection of V2 signal.
M) Ground for terminals V1, V2, V3
13) Positive power supply +13.5V green LED.
12) F1 - connection for auxiliary functions when specified in connection diagrams.
11) F2 - connection for auxiliary functions when specified in connection diagrams.
10) 12V D.C. output for video distributor
9) Line for landing call.
8) Positive power supply for monitor unit (minimum voltage 15V D.C.).
7) Negative power supply for monitor unit.
6) Monitor line ON (earthed when the monitor is enabled by a digital call).
5) +13.5VD.C. line (digital unit power supply).
4) Earth reference line (digital unit power supply).
3) Voice and call line.
2) Secondary voice line.
1) Digital transmission/reception line.

N.B. The switch at the rear of the monitor (Fig. 1 detail A) must be positioned to the left for versions with coaxial cable, or on the right for versions without. The jumper at the rear of the monitor enables the function VIDEOMOVING on the relative panels or the function F2; if cut the same jumper enables the self-start function (Fig. 1 detail B), see panel programming.

Fig. 1



A) HANDSET: allows communication with speech unit.
B) PUSH-BUTTON " ": electric lock release.
C) PUSH-BUTTON " ": **function F1** for additional services (Stairlight, etc.), it is always active in any monitor state.
D) PUSH-BUTTONS " ": **function F2**, with jumper present on the rear side of monitor, manages the F2 and VIDEOMOVING functions (on appropriately predisposed entrance panels); with the jumper cut, it manages the self-start function.
E) BRIGHTNESS CONTROL KNOB : adjusts monitor brightness.
F) CONTRAST/COLOUR : internal trimmer for adjustment of contrast (monitor type 6304, and 6504) or colour (monitor type 6304/C).
G) CALL/USER ABSENT FUNCTION ADJUSTMENT
Moving the switch completely to the left disables the ringtone: the red LED lights up and the "user absent" function is activated. The "user absent" function indicates the number of calls received with 1, 2, 3 or 4 flashes, and routes the calls back to the switchboard (on installations where it is installed).
H) RINGTONE OFF INDICATOR : The lighting of the red LED indicates that the call is disabled (see point "G").
I) DOOR OPEN INDICATOR : The lighting of the green LED indicates that the door is open (the function is optional in relation to the type of installation).

PROGRAMMING AND OPERATION

To program the monitor number press (by inserting a small screwdriver through the hole Fig. 1, detail A) the push-button present on the lower side of monitor and then press and keep pressed the push-button. If the operation has been carried out correctly, the unit enters programming mode and lights the LED (Fig. 1, detail B), which is visible through the hole under the monitor. Now the push-button can be released. If the LED does not light up repeat the operation. Lifting the monitor handset it is possible to communicate with the secondary entrance panel in order to send the code related to the monitor to be programmed. When the code coming from the entrance panel arrives at the monitor, the latter stores it in its memory until the next programming, even during a mains failure. The monitor will switch the LED off confirming the programming. During the programming phase the lock release command is not active. In case of installations with stairs with more than one entry, for the programming phase only, it is necessary to remove the connector related to the entrance panel monitor riser, leaving only one in operation. The programming operation may be repeated several times by using numbers between 00000001 and 99999999.

PROCEDURE FOR "TOUCH KEY" PROGRAMMING

To program a "touch key" in the monitor memory, use the following procedure:

1) Call the monitor from a digital keypad entrance panel [*].
2) Re-dial the number and press the intercommunicating call push-button from the entrance panel
3) Use the "Up" and "Down" arrow keys to select the position in the memory in which you want to memorize the key, and press C.
4) Place the "TOUCH" key in the appropriate slot in the entrance panel; you will hear an acoustic signal on the monitor handset.
5) From now you will have 5 seconds to memorize the key by pressing the monitor "lock" push-button; once the programming has been carried out you will hear three beeps and the monitor will switch off. If the programming time expires before you press the lock push-button, the interphone will switch off without programming the key and the whole procedure must be repeated from the beginning.

ADJUSTMENT OF CALL/USER ABSENT FUNCTION

The 4-position selector (Fig. 1, detail C) allows the loudspeaker volume to be adjusted and, if set to the last position on the left, it disables the audio and lights the red LED. If a call is made during this period, the monitor does not sound and it is not activated, but it signals the call by making the LED flash and sending a call to the switchboard. The number of flashes (max 4) indicates the number of incoming calls. Setting the selector again, normal operation is re-establised and the number of incoming calls stored in the memory on this mode is cancelled.

Type 6304 - 6304/C

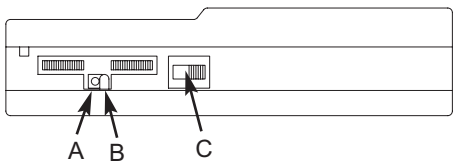
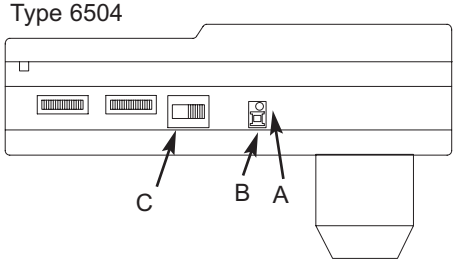


Fig. 2

Type 6504



MONITOR
Type 6307 - 6307/C - 6507

DESCRIPTION

Monitors for electronic door entry systems without encoding, for connection to the floor digital distributor Type 949B.
Provided with fixing bracket with terminal block, 3 push-buttons (lock release and additional functions), 3 level call volume adjustment and exclusion of call signalled by red led. The green LED indicates "open door" when connected to a proper door lock or door.
This monitor is used in conjuction with power supply type 6948.

Technical specifications Type 6307

- Surface wall-mounted B/W monitor with low profile flat 4" screen.
- Dimensions (WxHxD): 204x220x71mm
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- Video standard signal: CCIR 625 lines, 50 images (to EIA standards on request)
- Pass band 4 MHz
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm or twisted pair.

Technical specifications Type 6307/C

- Surface wall-mounted colour monitor with low profile 4" screen
- Dimensions (WxHxD): 204x220x71mm
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- PAL video standard signal
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm.

Technical specifications Type 6504

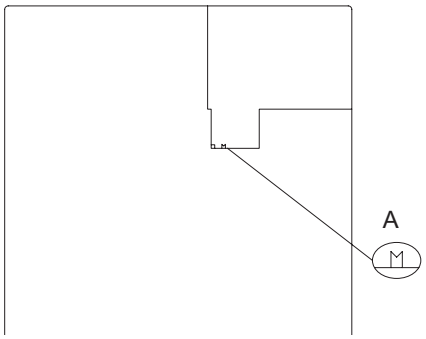
- Semi-flush wall-mounting monitor with 5" low-profile, black/white screen.
- Dimensions (LxHxD): 204x220x90mm + 50mm (for flush-mounting)
- Minimum supply voltage 15V D.C. (maximum 20V D.C.)
- Video standard signal: CCIR 625 lines, 50 images (to EIA standards on request)
- Pass band 4 MHz
- Video signal input voltage 1Vpp via coaxial cable 75 Ohm or twisted pair.

CONNECTION TERMINAL BOARD Type 6307 - 6307/C - 6507

V1) For systems with coaxial cable, input for connection of 75 Ohm video cable. For systems without coaxial cable, input for connection of V1 signal.
V2) For systems with coaxial cable, output for connection of 75 Ohm video cable or for connection of 75 Ohm load resistance of last monitor on cable riser.
V3) For systems without coaxial cable, input for connection of V2 signal.
M) Ground for terminals V1, V2, V3
13) Positive power supply +13.5V green LED.
12) F1 - connection for auxiliary functions when specified in connection diagrams.
11) F2 - connection for auxiliary functions when specified in connection diagrams.
10) 12V D.C. output for video distributor
9) Not used
8) Positive power supply for monitor unit (minimum voltage 15V D.C.).
7) Negative power supply for monitor unit.
6) Monitor line ON (earthed when the monitor is enabled by a digital call).
5) Not used
4) Not used.
3) Voice and call ground
2) Not used.

N.B. The switch on the back of the monitor (Fig. 1 detail A) must be set to the left for the version with coaxial cable or to the right for the version without coaxial cable.

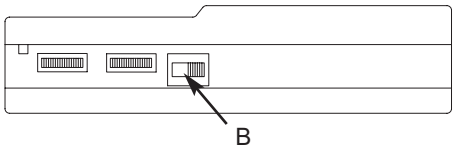
Fig. 1

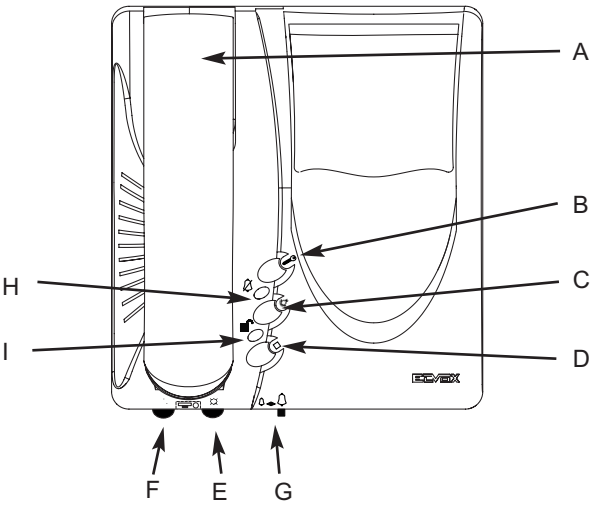


ADJUSTMENT OF CALL/USER ABSENT CALL FUNCTION

The 4-position selector (Fig. 2, detail B) allows the loudspeaker volume to be ajusted and, if set to the last position on the left, it excludes the audio and lights the red LED. If a call is made during this period, the monitor does not sound and it is not activated.

Fig. 2





A) HANDSET: allows communication with speech unit.

B) PUSH-BUTTON " " - : for electric door lock/call to switchboard (if porter switchboard is installed)

C) PUSH-BUTTON " ": 1st additional function, if connected the function allows the auxiliary services (stair light, etc.) to be activated.

D) PUSH-BUTTON " ": 2nd additional function, if connected the function allows the auxiliary services (stair light etc.) to be activated.

E) BRIGHTNESS CONTROL KNOB : internal potentiometer to adjusts monitor brightness.

F) CONTRAST/COLOUR : internal trimmer for adjustment of contrast (monitor type 6307, and 6507) or colour (monitor type 6307/C).

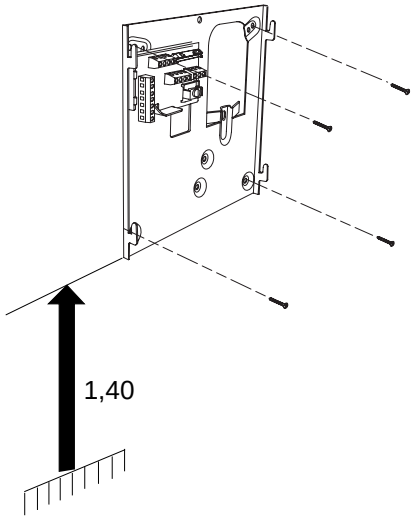
G) CALL TONE ADJUSTMENT: four-position slide to adjust the intensity of call tone or to exclude the call tone.

H) RINGTONE OFF INDICATOR : The lighting of the red LED indicates that the call is disabled (see point "G") .

I) DOOR OPEN INDICATOR : The lighting of the green LED indicates that the door is open (the function is optional in relation to the type of installation).

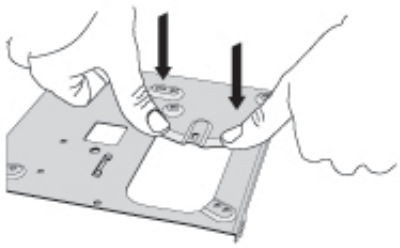
INSTALLATION TYPE 6304-6304/C-6307-6307/C-6504-6507

Install the monitor away from sources of light and heat.



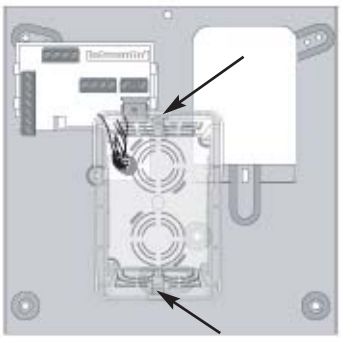
Fix the mounting plate to the wall with a distance of about 1.4 m between the bottom edge and the ground.

Fix the mounting plate to the wall, for monitors Type **6304, 6304/C, 6307 and 6307/C**, according to one of the following procedures.

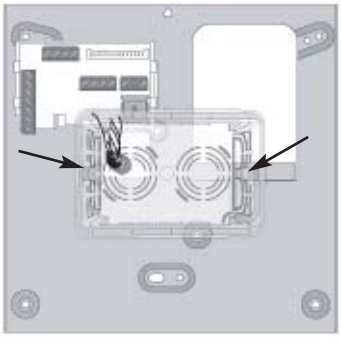


On monitors Type **6304, 6304/C, 6307 and 6307/C**, straighten the mounting plate tabs.

→ Mounting points

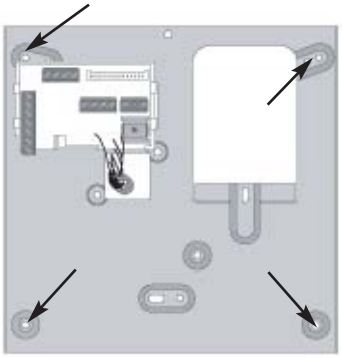


Use a vertical 3-module enclosure and fix the plate to the box. Pass the connection wires through the central hole below the terminal boards.

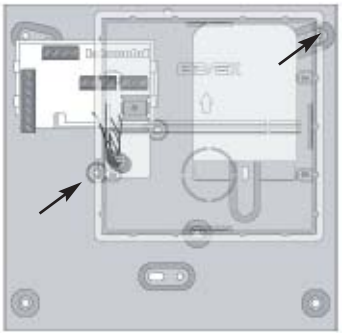


Use a vertical 3-module enclosure and fix the plate to the box. Pass the connection wires through the central hole below the terminal boards.

→ Mounting points



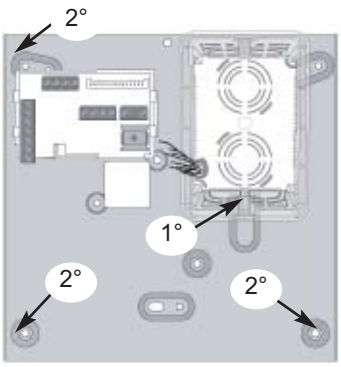
Fix the plate to the wall using the four screws with ø5 expansion plugs, as shown in the figure. Pass the connection wires through the central hole below the terminal boards.



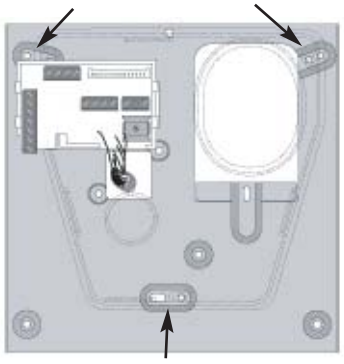
Use back box Type 6149, and fix the plate to the box (see figure). Pass the connection wires through the central hole below the terminal boards.

Fix the mounting plate to the wall, for monitors Type **6504, 6507**, according to one of the following procedures.

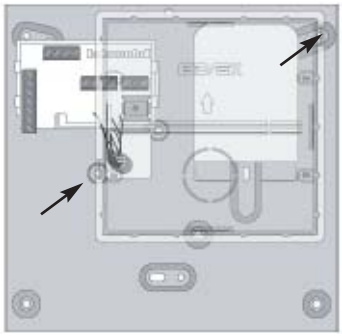
→ Mounting points



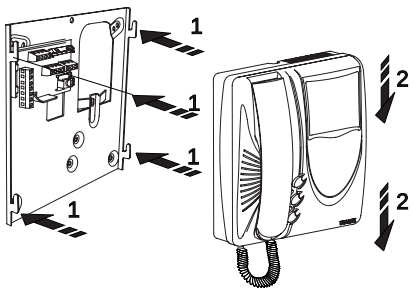
Fix the plate to point 1, placing the plate tabs on the base of the box and then secure points 2 using three screws with ø5 expansion plugs, as shown in the figure.
Pass the connection wires through the central hole below the terminal boards.



Use flush-mounting box Type 5609/000, and fix the plate to the box as shown in the figure. Pass the connection wires through the central hole below the terminal boards.



Use back box Type 6149, and fix the plate to the box (see figure). Pass the connection wires through the central hole below the terminal boards.



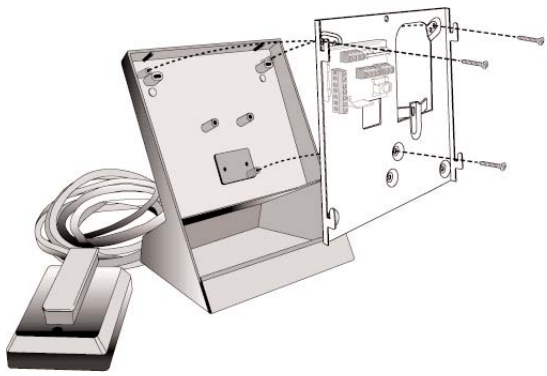
Fit the monitor following the direction of arrows 1 and 2

Type 661A
Type 661B

Desk-top conversion kit Type 661A is used with GIOTTO 6300 (or 5300) series 4" flat screen monitors . Type 661B is equipped with a power supply for the connection in parallel of several monitors with simultaneous switching on, or to avoid excessive voltage drops on very long lines. 230V 10VA 50-60Hz supply voltage (other voltages on request). This kit is provided with removable terminal block. Available colours:
white (Type 661A, 661B),
anthracite (Type 661B/21, 661B/21),
titanium (Type 661A/37, 661B/37)

MOUNTING INSTRUCTIONS

Mount back plate of monitor as indicated on drawing of first page and carry out connection of coloured conductors to terminal block by following the correspondence tables shown below. Hook the monitor to back plate. Carry out installation wiring on socket terminals.



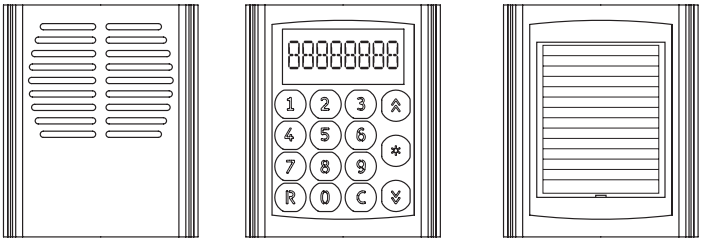
FOREWORD

The Galileo series of Digibus electronic entrance panels is designed to operate both on DigiBus systems with 4-digit codes (old type) and on DigiBus systems with 8-digit codes (new type). Operation with 4-digit codes is recommended only for existing installations which use this coding system, otherwise use the 8-digit codes for new installations, regardless of the number of internal units. The parameter which determines the type of code is the number 8 "Digit Number" (see table on page 15). The elements which make up the Galileo series of entrance panels make it possible to execute different types of panel according to the components selected and assembled.

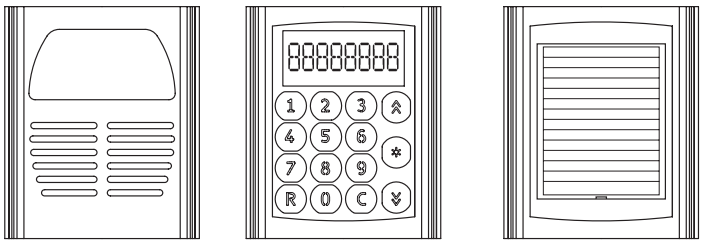
The following parts are required for assembly of the entrance panels: basic electronic modules, any supplementary modules, module holder frames for electronic entrance panels, flush-mounted or surface-mounted wall boxes, bezels or frames with rainproof cover. The choice of parts depends on the model of entrance panel and its dimensions.

Selecting the parts starts with: the basic electronic modules, supplied in packs of three, which determine the model of entrance panel (audio panel with keypad and numerical display, video panel with keypad and numerical display, audio panel with conventional pushbuttons, video panel with conventional pushbuttons). It continues with the addition of any supplementary modules for expanding the basic modules, and is followed by selection of the module holder frames for assembling the modules. Lastly, to complete the entrance panel, you select the version of box and frame according to the type of entrance panel installation i.e. flush or surface wall

ENTRANCE PANEL MODULE Type 8942



ENTRANCE PANEL MODULE Type 8946 - 8946/C



DESCRIPTION

Articles **8942, 8946, 8946/C** correspond to 3 packs of 3 modules respectively, each for the composition of 3 models of electronic entrance panel: electronic audio entrance panel with keypad and numerical display (Type 8942), electronic video entrance panel with B/W camera and keypad and numerical display (Type 8946), and electronic video entrance panel with colour camera, keypad and numerical display (Type 8946/C).

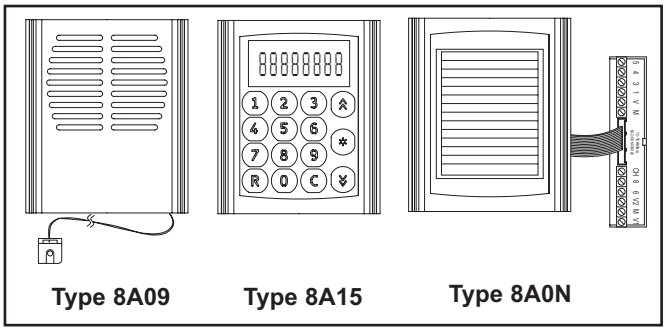
The electronic entrance panels have the capability of generating 99999999 digital calls with different codes by means of the 15-key keypad supplied with the panels. The dialled number between 1 and 99999999 is shown on a display and sent to the interphones by pressing the "C" key. The "R" key is used for cancelling the operation.

The entrance panels are set up to operate either alone or in conjunction with other entrance panels and switchboards by suitably connecting the pull-out terminal blocks located on the back of the panels themselves. As well as the connection terminal block, the back of the entrance panel also accommodates the "External Volume - P1", "Internal Volume - P3" and "Balance - P2" controls, which are factory-set. If necessary, you are advised to adjust only the "External Volume" and, if appropriate, the "Balance" in the case of feedback on the speech unit, by slowly turning the trimmer in one direction or the other until the whistling stops. The entrance panels are supplied with back-lit (with LEDs) name-tag modules in versions for 13 users. For programming the technical parameters, the panel can also be interfaced with the programmer Type 950B or with a Personal Computer using the software Type 94CT and interface 6952.

COMPONENTS

MODULES Type 8942

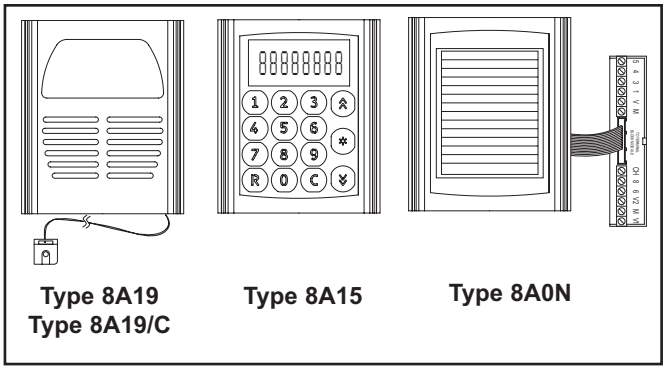
Type 8942 is a pack containing 3 basic electronic modules for executing an audio entrance panel with keypad and numerical display with 8 digits. The three modules are: one audio module, one module with display and numerical keypad and one name-tag module for 13 names, with terminal blocks for connecting the panel.



Type 8A09 Type 8A15 Type 8A0N

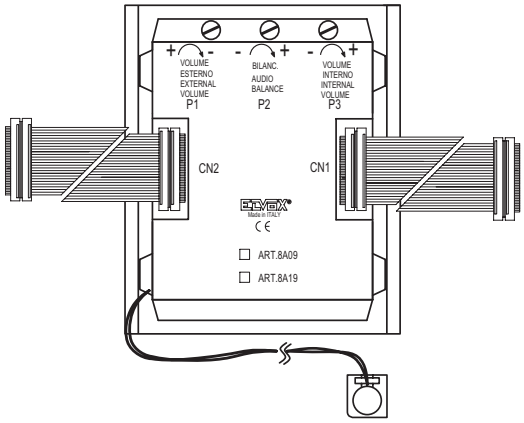
MODULES Type 8946 and 8946/C

Type 8946 and 8946/C are packs containing 3 basic electronic modules for executing video entrance panels with keypad and 8-digit numerical display. The modules are: one audio/video module with camera, one module with display and numerical keypad and one name-tag module for 13 names, with terminal block for connecting the entrance panel. Type 8946 uses one B/W camera with ¼" CCD sensor (white light LED) and fixed 3 mm lens (infrared LED lighting), whereas article 8946/C uses one colour camera with ¼" CCD sensor and 3 mm fixed lens.



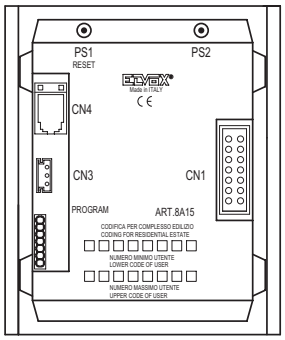
Type 8A19 Type 8A19/C Type 8A15 Type 8A0N

BACK OF MODULES
Type 8A09, 8A19, 8A19/C



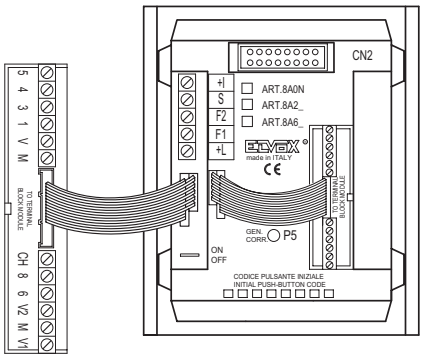
Electronic audio module with speech unit. The following controls are located on the back of the panel:
- P1 external volume control (speaker).
- P2 external/internal audio volume balance.
- P3 internal volume control (microphone).
- CN1 wiring for connecting the module Type 8A15 with the connector CN1.
- CN2 wiring for connecting the module Type 8A0N with connector CN2.
- Microphone (to be fixed to the bottom end fixing element of the frames 8D81, 8D82, 8D83 or 8D84).

Type 8A15



Electronic module with numerical keypad and 8-digit display.
The following elements are located on the back of the panel:
- PS1 RESET button.
- PS2 input button for programming- CN1 connector for connecting module Type 8A09 or 8A19 or 8A19/C with wiring CN1.
- Connector CN4 for connecting programmer Type 950B.
- Connector CN3 not used.
- PROGRAM connector for “software” updating.

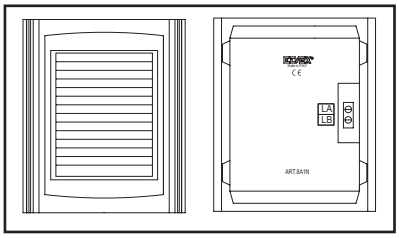
Type 8A0N



Electronic module with LED back-lit name-tag holder (for 13 names). For description of terminals, see page 34 appendix A. The following elements are located on the back of the entrance panel:
- CN2 connector for connecting module Type 8A09 or 8A19 or 8A19/C with CN2 wiring.
- P5 current generator control (typical value 25mA) - Terminal blocks for connecting the entrance panel to the system.
- ON/OFF jumper for activating/ disactivating the current generator (ON = jumper connected, OFF = jumper interrupted).

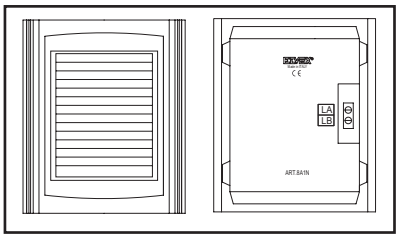
BACK OF MODULES

MODULES Type 8A1N



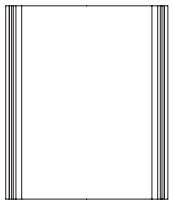
Additional module with LED back-lit name-tag holder (for 13 names), to be added to the basic electronic modules for expansion of the entrance panel.
The back of the entrance panel accommodates the two terminals LA (negative) and LB (positive) for powering the LEDs, to be connected as shown in the wiring diagrams.

MODULES Type 8A1N/E



Supplementary module with LED back-lit name-tag holder (for 13 names), to be added to the basic electronic modules for expansion of the entrance panel.
The back of the panel accommodates the two terminals LA (negative) and LB (positive) for powering the LEDs, to be connected as shown in the wiring diagrams.

MODULES Type 8000



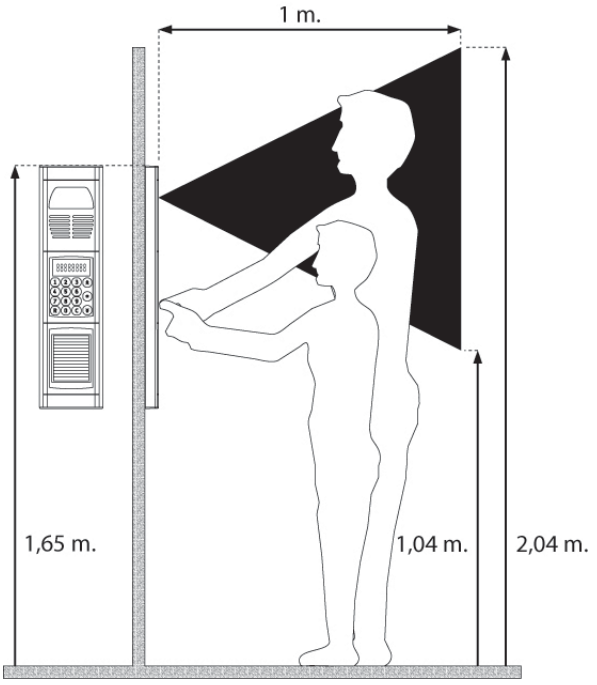
Neutral additional module, to be added to the electronic modules to complete the entrance panel.

N.B: for the other components, see “Appendix A” starting on page 171 for composition of the entrance panels, bezels and back boxes.

Installation of Type 8942 - 8946 -8946/C

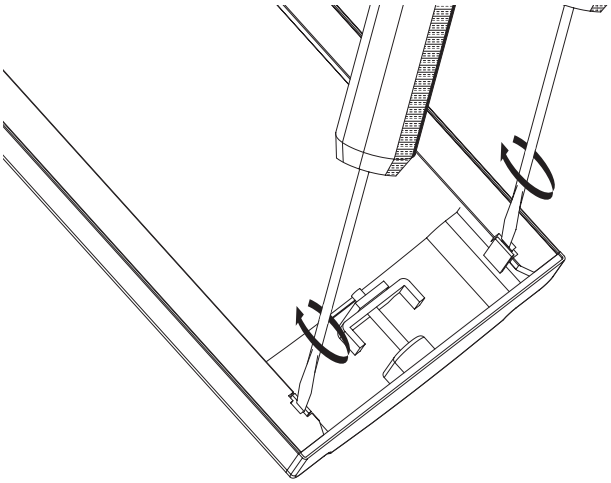
Installation and assembly of the Galileo series electronic entrance panels requires the following phases:

1 - Select the standard and additional modules required.
2 - Select the module holder frames (type 8D81, 8D82, 8D83 or 8D84) according to the modules to be combined.
3 - Select the boxes and frames for wall-mounted or surface mounted installations.
4 - Insert the electronic modules inside the module holder frames.
5 - Wire the modules.
7 - Install the flush-mounted box or surface wall-mounted box with the bottom edge at a height of approx. 1.65 m from the ground. Use the hole at the bottom of the box to route the wires.
8 - Connect the panel to the system as shown in the wiring diagrams.
9 - Only if specified in the wiring diagram, cut the ON-OFF jumper located next to the terminal board.
10 - Fix the panel microphone on the lower end section.
11 - Close the panel.
12 - Program the panel as required: see "Technical parameters" programming.

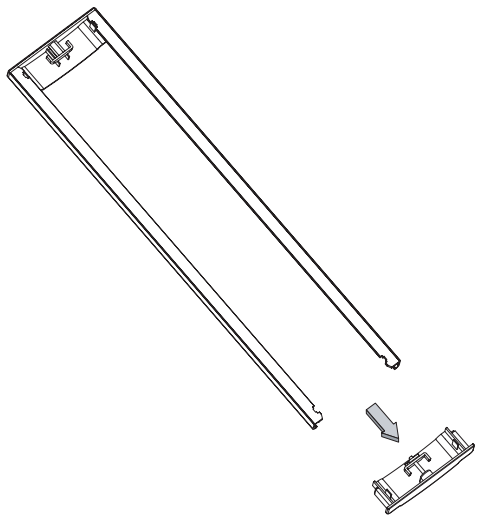


INSERTING THE MODULES IN MODULE HOLDER FRAMES

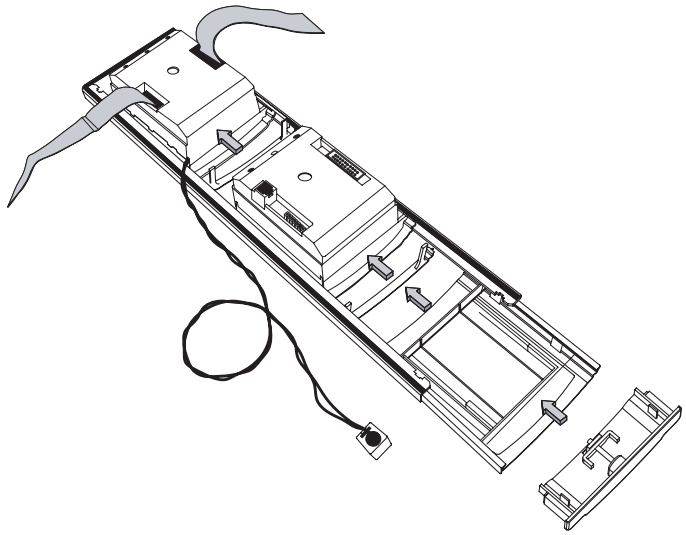
Open the module holder frames by inserting a screwdriver in the two slots on the lower side of the lower end section.

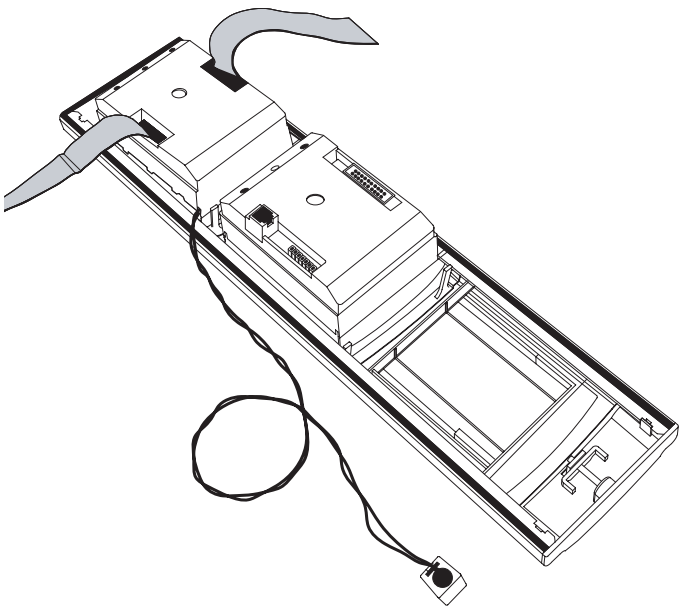


Withdraw the lower end section.

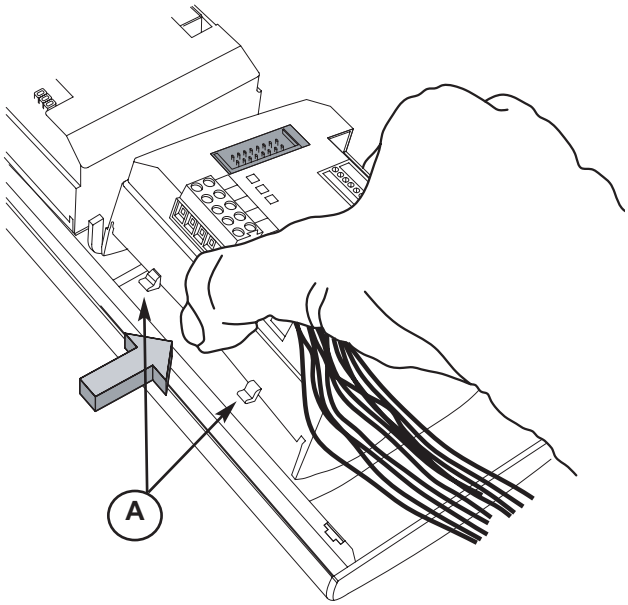


Insert the modules in the holder frames and the plate of the module with the name tag holder. On module holder frames 8D82, 8D83 and 8D84 insert the intermediate element between the modules. Insert the lower end section in the module holder frame.

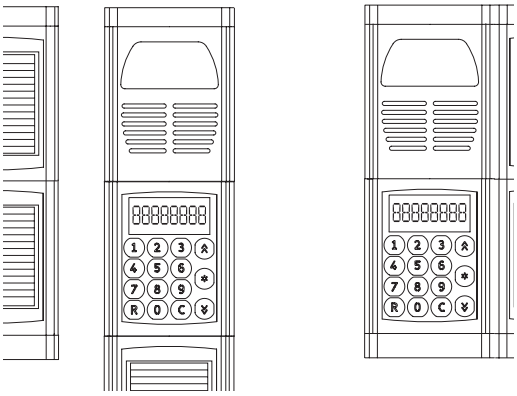




In the back of the name-tag holder, fit the module box with the terminal blocks (fig. 4). Fit the RH clips of the box under the RH side-member of the frame and, while pressing the box, fit the LH clips under the LH side-member (part A).



Example of an assembled entrance panel.

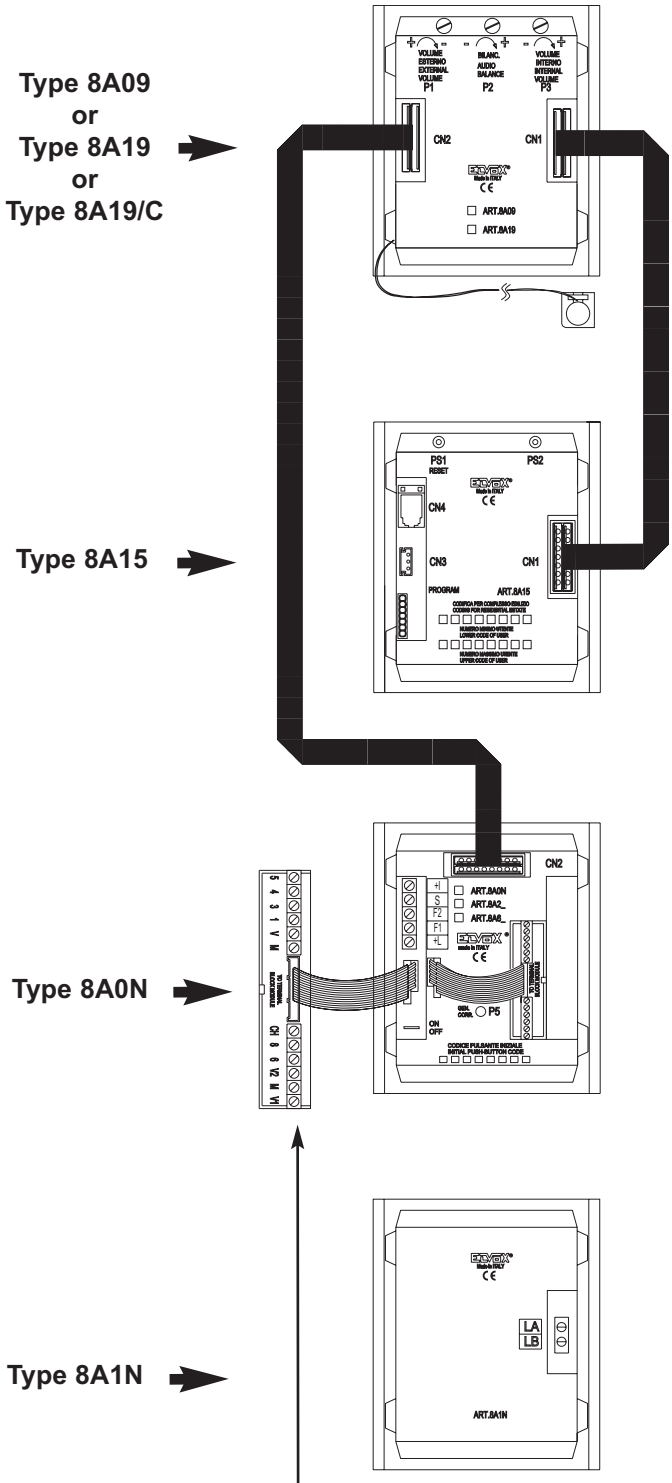


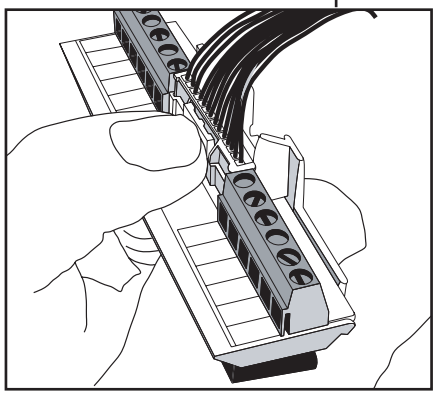
GALILEO PANEL FIXTURE, FLUSH-MOUNTED OR SURFACE WALL-MOUNTED VERSIONS

For installation of the GALILEO entrance panel versions:
Flush-mounted.
Flush-mounted with bezel.
Flush-mounted with rainproof cover.
Surface wall-mounted with rainproof cover.
See "Appendix C" page 178.

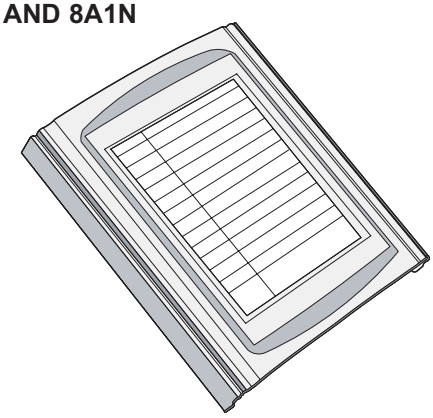
WIRING THE MODULES

Connect module Type 8A09 or 8A19 or 8A19/C to module 8A15, by means of the flat cable and connector CN1 (Fig. 17-18).
Connect module Type 8A0N to module 8A09 or 8A19 or 8A19/C, by means of the flat cable and connector CN2 (Fig. 17-18).
The supplementary modules Type 8A1N are to be connected directly to the power supply units as shown in the wiring diagrams (Fig. 18). To disconnect the terminal block from module 8A0N, press the connector and extract the cable (see fig. 19).

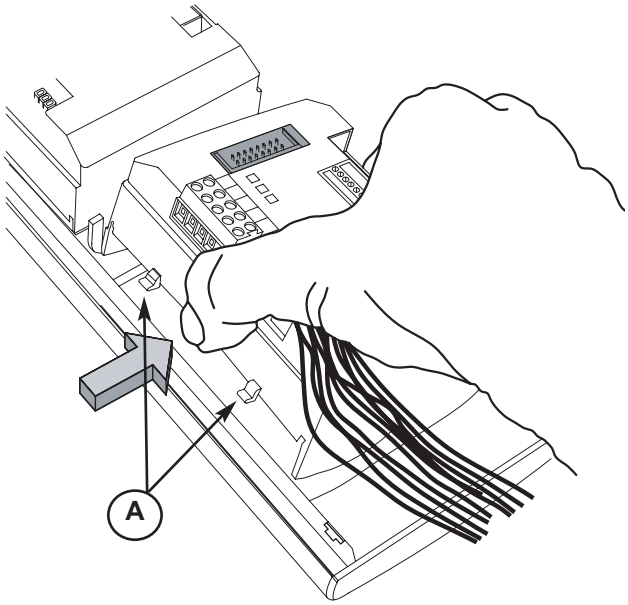




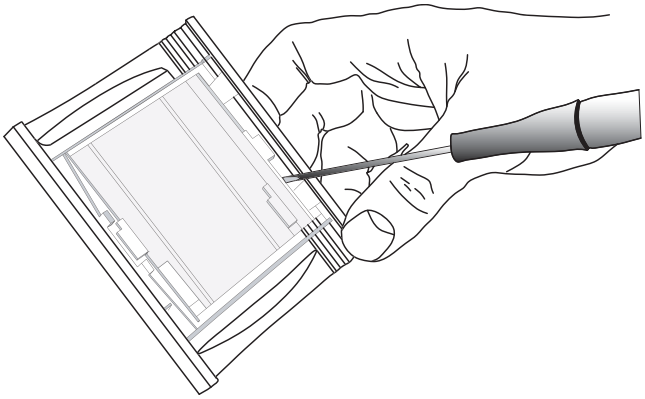
EXTRACTING THE NAME-TAG HOLDER ON MODULES 8A0N AND 8A1N



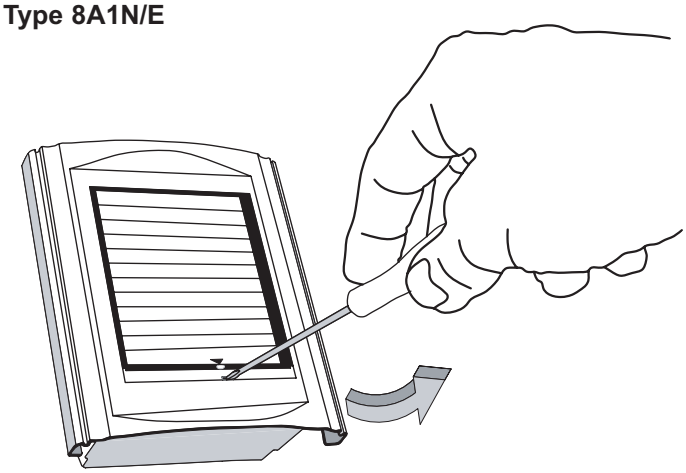
At the back of the panel, remove the box of the module by pressing the sides of the box.



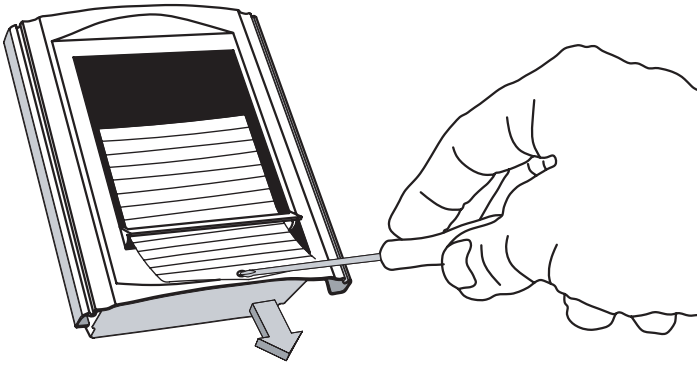
Use a screwdriver to remove the name-tag fixing element.



EXTRACTING THE NAME-TAG HOLDER ON MODULES Type 8A1N/E



At the back of the panel, remove the box of the module by pressing the sides of the box.



Use a screwdriver to remove the name-tag fixing element.

OTHER PANEL FUNCTIONS

Types 8942/TK, 8946/TK and 8946/CTK are similar to entrance panels type 8942, 8946 and 8946/C with the following additional function:

- Option of managing an access control system via TOUCH-KEY (TK version): an intelligent lock opening system can be inserted on the plate to receive special TOUCH type keys (with individual 64 bit code for each key). In this way the number of personal keys is practically unlimited. New keys can be enabled or deleted autonomously, and several locks can be opened by a single key at the same time. All accesses can also be recorded by a special control system.

Entrance panels Type 8946/TK and 8946/CTK do not have the name tag holder module, which is replaced by the TOUCH function module.

INTRODUCTION

The Galileo Security series electronic Digibus entrance panels have been designed to operate either on Digibus systems with 4 digit coding (1st version) either on Digibus systems with 8 digit coding (2nd version). For new systems, 8-digit encoding is recommended, regardless of the number of internal units. The elements in the Galileo series entrance panels enable the configuration of different types of panels. Assembly of the entrance panels requires use of the following elements: standard electronic modules, additional modules if required, module holder frames for electronic entrance panels, back boxes or surface-mounted boxes, bezels or frames with rainproof covers. The choice of elements depends on the entrance panel model and relative dimensions.

Selection of the elements starts with: standard electronic modules, supplied in 3-piece packs, (audio entrance panel with keypad and numerical display, video entrance panel with keypad and numerical display, audio entrance panel with conventional push-buttons, video entrance panel with conventional pushbuttons), after which additional modules can be added to enable expansion of the standard modules, and the selection of module holder frames to assemble the units. To complete the entrance panel, the box and frame versions are selected according to the type of panel installation; surface wall-mounted or flush-mounted.

MODULES Type 3942

MODULES Type 3946

DESCRIPTION

Types 3942 and 3946 correspond to 2 packages of two modules respectively, each one for the assembling of two models of electronic entrance panels:

3942 audio electronic entrance panel with numeric keypad and display , name-tag.

3946 video 1/4" B/W CCD camera electronic entrance panel with numeric keypad and display, name-tag.

The electronic entrance panels have the possibility of generating 99999999 digital calls with different codings by using the 15 push-button keypad supplied with the entrance panel. The number, included between 1 and 99999999, is shown on the display and routed to the interphones by pressing the "C" push-button.

The "R" push-button is used to cancel the operation. Entrance panels are preset to operate on their own or in conjunction with other entrance panels and switchboards by effecting the appropriate terminal connections at rear. The rear of the panels carries the "External Volume P1", the "Internal Volume - P3 " and the "Balance - P3" controls, which are factory set. It is recommended, should the need arise, that any adjustment to eliminate feeback at the outdoor speaker be limited to "External Volume" and possibly "Balance", turning the trimmer slowly in one direction or the other until the whistle disappears.

The panels are supplied with back-lit name-tag modules (with LED) in versions for 14 users. Moreover, for the programming phase of the technical parameters, the panel can also be interfaced with programming module type 950B or with a Personal Computer by means of the software type 94CT and the interface type 6952.

COMPONENTS

MODULES Type 3942

Type 3942 is a pack containing 2 standard electronic modules for executing an audio entrance panel with keypad and numerical display with 8 digits. The two modules are: one module with display and numerical keypad and one name-tag module for 14 names (Type 3A15), with terminal blocks for connecting the panel (Type 8A0N).

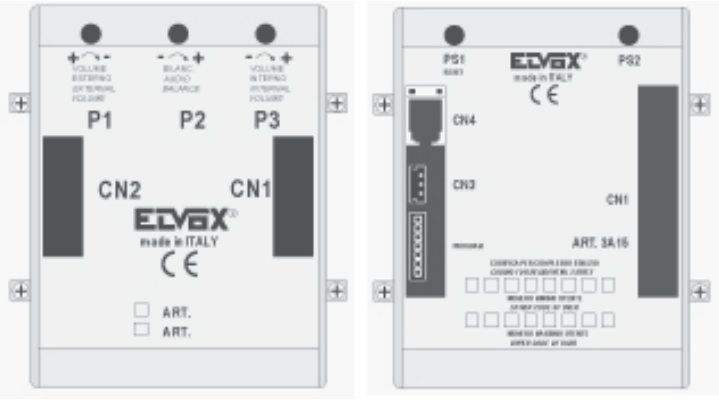
Type 3A15 **Type 3A0N**

MODULES Type 3946

Type 3946 are packs containing 2 standard electronic modules for executing video entrance panels with keypad and 8-digit numerical display. The modules are: one audio/video module with camera, and display and numerical keypad (type 3A14) and one name-tag module for 14 names, with terminal block for connecting the panel (type 3A0N).

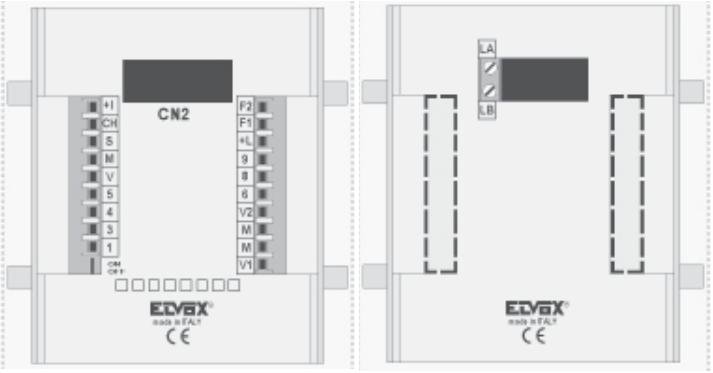
Type 3A14 **Type 3A0N**

BACK OF MODULES
Type 3A15, 3A14



Audio and/or video electronic module with speech unit, numerical keypad and 8-digit display.
The rear is fitted with:
- P1 external volume control (speaker).
- P2 external/internal audio volume balance.
- P3 internal volume control (microphone).
- CN1 connector for connection to CN1 of the module below (display with numerical keypad)
- CN2 connector for connection to CN2 of module type 3A0N (name-tag).
- Microphone (to be fixed to the bottom end fixing element of the frames 3942 or 3946)
- PS1 RESET button.
- PS2 input button for programming
- CN4 connector for programmer Type 950B.
- CN3 connection for possible use of touch key.
- PROGRAM connector for “software” updating (reserved for manufacturer).
- CN1 connector for connection to CN1 of the module above.

BACK OF MODULES
Type 3A0N

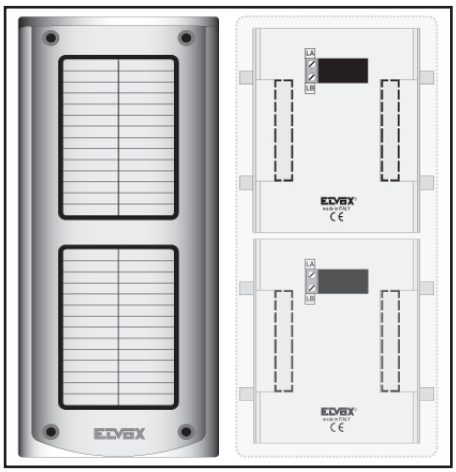


Electronic module with 2 name-tag holders (for 28 names) back-lit with LEDs. The rear is fitted with:
- CN2 connector for connecting module type 3A15 or 3A14 with CN2 wiring (see page 8 modules cabling).
- Terminal blocks for connecting the entrance panel to the system.
- ON/OFF jumper for activating/ disactivating the current generator (ON = jumper connected, OFF = jumper interrupted).
- LA (negative) - terminal 4
- LB (positive) - terminal 5

To be connected as shown in the wiring diagrams.

ADDITIONAL MODULE

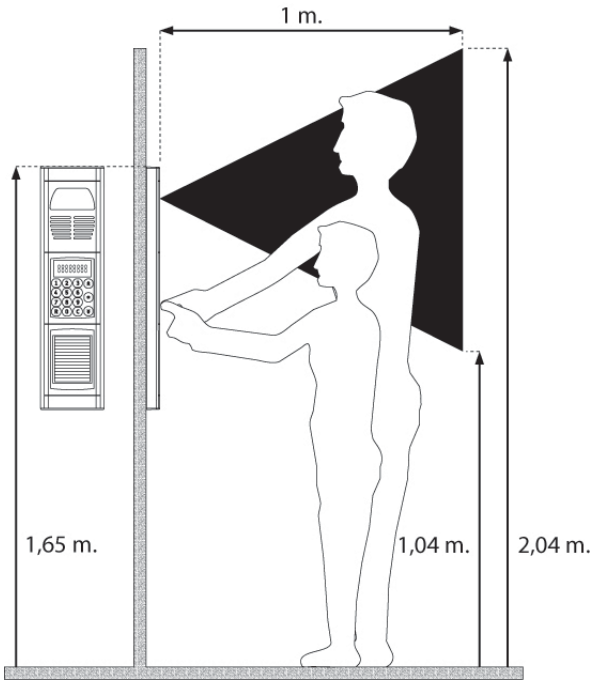
MODULES Type 3A1N



Additional module with 2 name-tag holders (for 28 names) back-lit with LEDs, to be added to the standard electronic modules for panel expansion.
The rear is fitted with two terminals: LA (negative) and LB (positive) to power the LEDs, to be connected as specified in the wiring diagrams.

N.B: for other components required for panel composition, i.e. frames and boxes, refer to "Appendix B" page 177.

INSTALLATION:
The assembly and installation of Galileo Security series entrance panels require the following phases:
1 Define the standard and additional modules
2 Define the back boxes and the possible rainproof covers for surface wall-mounted and flush-mounted installation.
3 Wire the modules
4 Install the flush-mounted or surface wall-mounted back box 1.65 m high from the back box upper border to the ground level. Use the hole placed at the back of the back box to install the cables.
5 Connect the back box to the installation as indicated on the wiring diagram.
6 Cut the ON-OFF jumper placed on the upper module of type 3942 (name-tag), only if indicated on the wiring diagram.
7 Carry out the entrance panel programming (if any): "Technical Parameters" programming.
8 Close the entrance panel



EXTRACTING THE NAME-TAG HOLDER

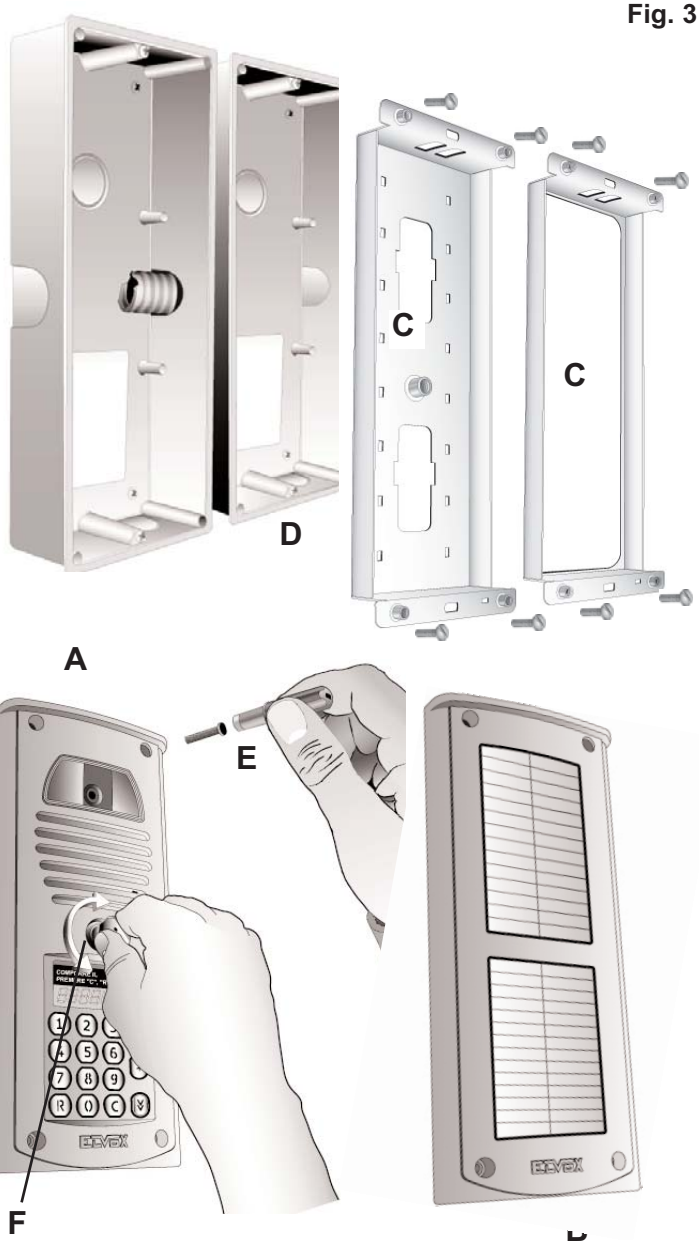
Fig. 1 - At the back of the panel, remove the box of the module by pressing the sides of the box.

Fig. 2 - Remove the transparent name-tag holder by pressing on both sides

Fig. 1

Fig. 2

Fig. 3



INSTALLING FLUSH-MOUNTED ENTRANCE PANELS

Fig. 3 The diagram shows the components of the panel:

A - Entrance panel with keypad and numerical display

B - Additional panel

C - Frame

D - Flush-mounted back box type 320S

E - Special key for security screws

F - Anti-theft security key.

Fig. 4 These entrance panels may be matched either horizontally or vertically. In this case back-boxes are separated from the panels and frames and assembled as shown in figure 3A, in order to mount them at the same height. For this purpose, special brackets are used for holding back-box in position. These brackets may be vertically or horizontally fitted.

Fig. 5 Make the holes for the electric wires to pass through, placing the wires in the correct position.

After installling the flush-mounted back box (Fig. 3, point “D”), connect the various modules as follows. After testing the equipment, fasten the plate with the security screws (detail “E” Fig. 3) then definitively lock in place with the special key supplied (detail "F" Fig. 3).

Fig. 4

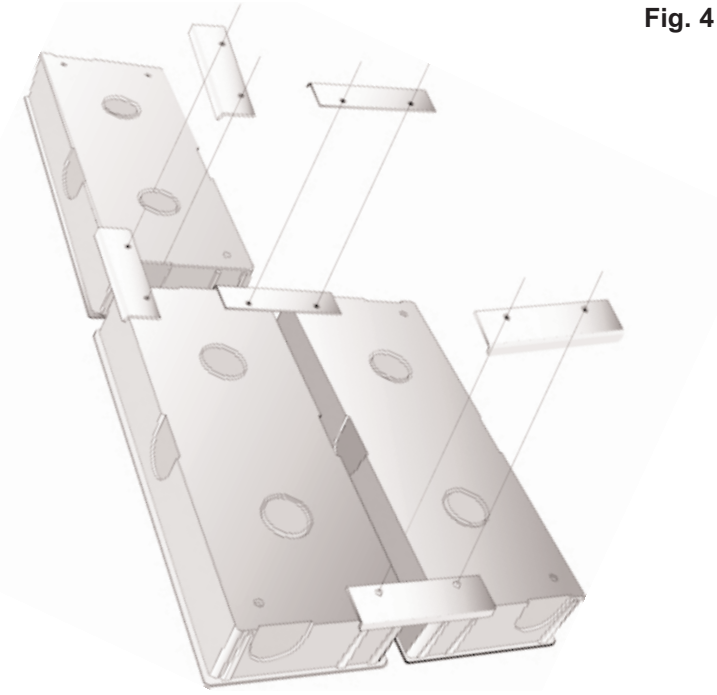
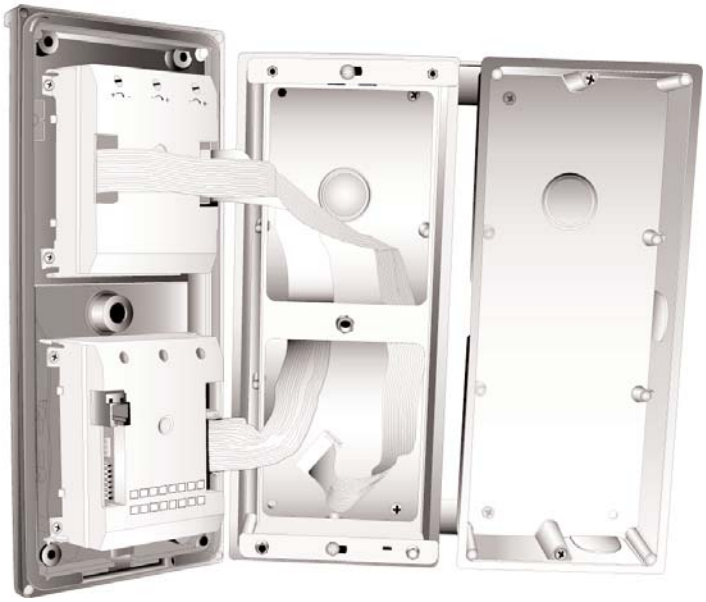


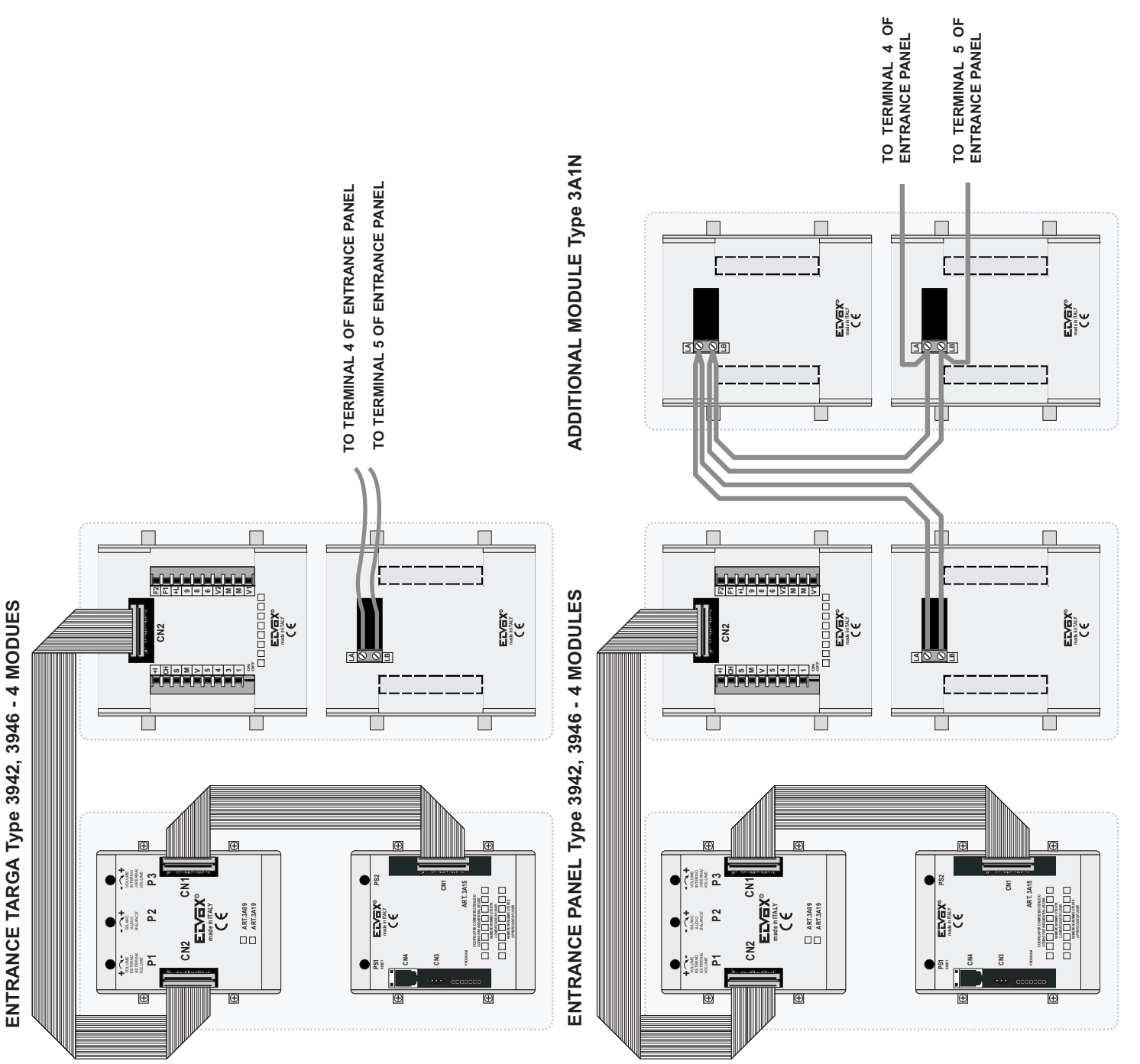
Fig. 5

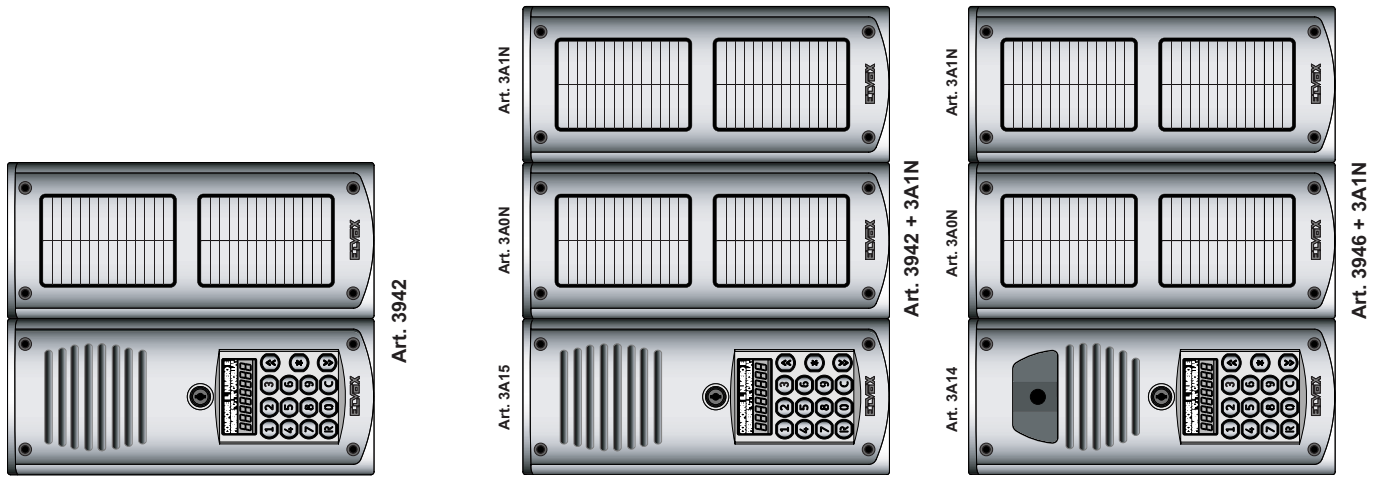
Fig. 6 - The figure shows in detail the passage of connectors and respective flat cables for the cabling of different modules through the corrugated tube.

Fig. 7 - Example of installation of the flat cables on the back of the entrance panel with keypad and numerical display.



WIRIND DIAGRAM OF MODULES





PRELIMINARY OPERATIONS

Having installed and connected all the devices, power up the system and check the LEDs on the power supply units to make sure that they all supply power. Before carrying out any programming operations on the devices, wait for at least ten seconds from the moment at which the system is powered up. Then check and, if necessary, programme the operating parameters of the entrance panels and/or switchboard.

It is advisable to programme the call codes of the interphones and monitors after programming (if required) the technical parameters of the entrance panels and/or switchboard.

PROGRAMMING THE TECHNICAL PARAMETERS OF THE ENTRANCE PANEL

The entrance panel is supplied with a basic programme already loaded, which can be modified by following the instructions below. Programming must be carried out if the pre-set parameters do not meet the requirements of the system. There are three ways of programming the entrance panel: with the entrance panel keypad, with programmer Type 950B and with a Personal Computer by means of the software Type 94CT and interface 6952.

Programming the entrance panel with the numerical keypad (with entrance panel connected and powered up):

A) Entry to programming with the entrance panel keypad using the password.

Cancel all operations by pressing R; the display must be OFF. While keeping "R" pressed down, press "4".

When the symbols "- - - - - - - - " appear on the display, enter the code "123 or 0123" (standard password) and press "C".

If the operation has been carried out correctly, the message "PROGRAM" will appear on the display.

If it does not appear, repeat the procedure.

B) Direct entry to programming for programming with the entrance panel keypad (if you have lost the password).

Cancel all operations by pressing R; the display must be OFF. Press button "PS2" and hold it down with a suitable tool.

The button is located on the back of the module Type 8A15. If the operation has been carried out correctly, the message "PROGRAM" will appear on the display. If it does not appear, repeat the procedure.

Once you have entered the programming phase, press "C" to go to the first parameter ("INITI_US" = "Initial User"). The display will alternately show the name of the parameter "INITI_US" and its value (e.g. 0000 0001). To modify the value, use the number keys; if you make a mistake, use the number keys only to correct the value entered. To confirm the change, press "C". Pressing only the "C" key does not change any saved parameters, but displays the set values one after the other. On completion of programming, press "C" and "R" to exit the technical programming phase.

The parameters can be programmed or consulted repeatedly.

The set values remain in the memory until you next programme them (if applicable) even if the power is switched off.

PROGRAMMING WITH Type 950B: (refer to the relevant manual for a complete description)

With the entrance panel powered up, disconnect 950B (by means of telephone plug CN4 or terminals 1, 4 and 5), select "PROG.PARAMETERS" from the menu and press "OK" to confirm. The entrance panel then goes immediately into programming mode, the message "Ser.PROG" appears on the display and the panel emits a short acoustic signal (it is not necessary to carry out operations on the entrance panel to access programming). To scroll through the parameters (without changing them) press "OK" or the "down" arrow key repeatedly. Change the number on the display if necessary and press "OK" to confirm. To complete programming, press "EXIT" and make a call to check, for the sake of certainty, that the entrance panel has exited programming mode.

PROGRAMMING WITH SOFTWARE ON PC Type 94CT "ANALYZER" :

By means of a graphic interface, the software enables you to simultaneously display/modify all the relevant parameters. It also enables you to save the programmes you set for the purpose of filing or future replacements (and for rapid, multiple programming). For user instructions, refer to the relevant manual.

N.B.: the term optional indicates that parameter modification is not necessary, but is left to the installer's discretion (e.g. conversation time, codes for door lock release etc.).

ENTRANCE PANEL TECHNICAL PARAMETERS TABLE

No.	Parameter	Abbreviation on entrance panel display English	Abbreviation on programmer display English	Minimum value	Maximum value	Default	Description	When to change the value
1	Initial User	INITI_US	Initial User	1	99999999	1	Lowest call number (filter on the codes in transit from terminal 6 to terminal 1).	Required in building complexes.
2	Final User	FINA_US	Final User	1	99999999	99999999	Highest call number (filter on the codes in transit from terminal 6 to terminal 1).	Required in building complexes.
3	Entrance panel code	PANEL_N	Entrance panel number	0	99999999	0	Identification/call number of the panel (for calls/analysis from switchboard).	In systems with porter switchboard and several electronic entrance panels.
4	Pre-code	CIF_PRE	Preset digits	0	9999	0	Changes up to the first 4 digits of the call code selected on the panel in accordance with parameter (26) "Number of digits in pre-code"; (e.g. with the parameter at 9999, sets the first 4 digits to 9999 and the remaining 4 as selected). e.g. with 0001, the entered digits are forced into the form 0001xxxx, with 0090 they are forced into the form 0090xxxx, and with 9001 they are forced into the form 9001xxxx.	Optional, but only for building complexes.
5	Technical programming code	TECH_PAS	Tech. Prog. Key	1	9999	123	Password for access to technical parameters programming with the "R + 4" function.	Required in all cases.
6	Not used	-------					Not used.	
7	Code for door release	LOC_COD	Key 0, R-1, C	0	2	1	Password for door release from keypad (0 = 0, 1 = R+1, 2 = C).	Optional.
8	Coding system	N_DIG	Number of Digits	4	8	8	Selects 4 or 8-digit system.	For systemswith 4-digit coding, set the value to 4.
9	Language	LANGUAGE	English Language	0	1	0	(0 = Italiano, 1 = English).	Optional.
10	Enables entrance panel operation	PA_BLOC	Lock Entrance Panel	0	1	0	Disables operation of the entrance panel (0 = No, 1 = Yes).	Optional,
11	Enables priority	PRIOR_A	Enables priority	0	1	0	Entrance panel with priority (0 = No, 1 = Yes).	Optional, but only for entrance panels in parallel.
12	Enables sequential	LOC_AB	Enables lock	0	4	1	Enable the door lock activation: 1 = the door lock is activated only by the interphone called by the respective entrance panel. 2 = The door lock is activated in sequence with that of a main entrance panel. The panel must be placed between the main entrance panel and the called interphone. 3 = Enables both points: 1 and 2. 4 = The door lock is activated in any case, also when the interphone has not been called. 6 = Function 4 + Function 2	Optional
13	Enables camera	CAMER_E	Enables camera	0	1	1	Indicates whether the entrance panel is fitted with a camera (0 = No, 1 = Yes).	Required with entrance panels supplied with internal or external camera.
14	Enables sound on	P_SOU_E	Enables sound Panel	0	1	1	Enables repetition of the call sound on the panel itself (0 =No, 1 =Yes).	Optional.
15	Enables self-start	AUTOS_E	Enables self-start	0	7	0	Enables self-activation of the monitor /interphone by means of commands F3, F4 and F5. Add up the values of F3, F4 and F5 to indicate which functions enable self-start (0 = No, 1 = F3, 2 = F4 and 4 = F5). With 7=1+2+4 switches on automatically with F3, F4 and F5.	Optional.
16	Enables intercom	INTPH_E	Enable Intercom	0	1	0	Not available	
17	Enables conference	CONF_E	Enable conference	0	1	0	Enables activation of conference between the entrance panel and 2 interphones/monitors (the second interphone/monitor is called with the "*" key).	To be used only for diagnostic operations.
18	Enables call to switchboards	S_CAL_E	Enable Call to Switchboard	0	1	0	Enables calling to main switchboards with respect to the entrance panel. (by pressing the key ⌄⌄)	Optional.
19	Duration of conversation	CON_T	Duration of conversation	1	255	12	Maximum conversation time (in seconds x 10, i.e. 12 = 120 seconds).	Optional.
20	Duration of ringone	SOUND_T	Duration of ringtone	1	255	1	Activation time of call signal (in seconds).	Optional.
21	Answer time	ANS_T	Answer time	1	255	30	Maximum waiting time for reply (in seconds).	Required in building complexes.
22	F1 function time	T_F1	Function 1 time	0	255	1	Activation time of function F1 (in seconds). If set to 0, activation is reduced to 0.5 sec.	Optional.
23	F2 function time	T_F2	Function 2 time	0	255	1	Activation time of function F2 (in seconds). If set to 0 activation time is reduced to 0.5 sec.	Optional.
24	Door lock time	LOC_T	Door lock time	0	255	1	Lock activation time (in seconds). If set to 0, activation is reduced to 0.5 sec.	Optional.
25	End of conversation With warning time	NOTIC_P	End Con. Warn.	0	255	0	End of conversation warning: after a call from an entrance panel with priority, the existing communication receives a warning that it is about to be interrupted, and is suspended after the number of seconds set (0 = no warning).	Optional.
26	Number of digits in pre-code	NC_PRED	Number digits Pre-code	1	4	4	Sets the number of digits to use for the parameter "Pre- code" (No. 4). e.g.: when set to 4, the code sent is XXXX YYYY in which (XXXX corresponds to the pre-code and YYYY to the code selected from the keypad; when set to 3 the codes sent is XXX YYYYY.	Optional, but only for building complexes.
27	Enables the window above	A_FINUP	Enable Window Up	0	1	1	Enables the "initial user" - "final user" filter also for data in transit from terminal 1 to terminal 6 of the entrance panel (0 = No, 1 = Yes).	Optional, but only for building complexes.
28	Enables display of the control parameters	DEBUG_A	Enable Debug viewing	0	1	0	Enables the debug messages on the entrance panel display (0=No, 1=Yes).	
29	Not used	-------					Not used.	
30	Reserved parameter	RESERV	Param.Reserved	0	255	1	Reserved parameters can be displayed by entering a secret code.	As indicated by the manufacturer
31	Coded door lock release	CH1_n 01	Key code N°01	0	99999999	0	Memory location for 1st door release code.	Optional.
32	Coded door lock release	CH1_n 02	Key code N°02	0	99999999	0	Memory location for 2nd door release code.	Optional.
50	Coded door lock release	CH1_n 20	Key code N°20	0	99999999	0	Memory location for 20th door release code.	Optional.
51	1st number in memory	1 N_MEM	Door lock key	0	99999999	0	This is a pre-saved preferential number which can be associated with the pressing of key ⌃⌃	Optional.
52	2nd number in memory	2 N_MEM	2nd number in memory	0	99999999	0	This is a pre-saved preferential number which can be associated with pressing of the key ⌄⌄	Optional.

Description of functions:

- **Initial User "INITI_US" (1) and Final User "FINA_US" (2).** To be programmed in the case of a system for a building complex. The two values must be set only on the secondary entrance panels. These two parameters serve to switch the secondary entrance panel to the engaged state when a call is being made from another entrance panel or from a switchboard with a number between the lowest and the highest number. The call must originate from a main entrance panel or from a switchboard and not from another secondary entrance panel. When the entrance panel is in the engaged state, no operations can be performed. If the call number is not between the lowest and the highest number, the secondary entrance panel does not go into the engaged state and it is therefore possible to make calls to the riser.

- **Entrance panel code "PANEL_N" (3).** This is the call code to assign to the entrance panel (similar to the interphone code). It does not need to be set on systems with 4-digit coding. It may be necessary to programme this code in the following cases:
  1) On systems for building complexes consisting of secondary entrance panels and a 945B switchboard, when you want to make calls from the secondary entrance panels (upstream) to the porter switchboard. In this case it is possible to call back the secondary entrance panel from the switchboard and communicate.
  2) When you want to use the entrance panels in conjunction with the "Software" switchboard (Type 95CD). In this case, it is possible to activate the various functions from the switchboard (door release, F1, F2, etc.) on each entrance panel in the system. It is also possible to analyse (and change) the individual parameters of each panel from the switchboard.

  NB: In either case, bear in mind that the entrance panel number must be unique and different from the call codes of the interphones and monitors.

- **Pre-code "CIF_PRE" (4).** To be programmed at your discretion in the case of a system for a building complex. By setting the parameter with a value other than 0000 (maximum 9999), the number dialled on the entrance panel keypad, in order to call an interphone, is modified with a new number. The new number which will be sent to call the interphone is the combination of the value recorded in the parameter and the number dialled from the keypad. This operation takes place only for call numbers dialled on the entrance panel keypad and not for call numbers originating from other entrance panels or from the switchboard. N.B.: the number of digits is determined by the parameter "Number of digits in pre-code" (NC_PRED) "26".

Number dialled on entrance panel	**Number of digits Pre-code (parameter "26")**	**Pre-code (parameter "4")**	**Number sent on called entrance panel**
0000 0001	4	*1010*	***1010*** 0001
0000 8090	4	*1010*	***1010*** 8090
0022 2785	4	*1010*	***1010*** 2785
0000 0001	2	00*12*	***12***00 0001
0000 8090	2	00*12*	***12***00 8090
0022 2785	2	00*12*	***12***22 2785

- **Technical programming code "TEC_PAS" (5).** It is advisable to change the value. This is the number that is requested when you enter the technical parameter programming phase using the entrance panel keypad. If the value is set to "0000" the entrance panel goes automatically into programming by pressing "R" and "4" simultaneously. To enter the programming phase press "R" and "4" simultaneously, dial the password (e.g. 0123) and press "C".

- **Code for door release "LOC_COD" (7).** To be programmed at your discretion. Indicates the way in which you can access the door release function, by using the entrance panel keypad. By setting the parameter with the numbers 0, 1 and 2, you select the following three methods respectively: 0) With display OFF and entrance panel not in communication, press "0".
1) With display OFF and entrance panel not in communication, press "R" and "1" simultaneously.
2) With display OFF and entrance panel not in communication, press "C". To release the door, refer to the codes recorded in parameter 31 to parameter 49.

- **Coding system "N_DIG" (8).** The parameter is to be set to 4 only if there are DigiBus series products with a 4-digit rather than an 8-digit coding system present in the system.

- **Language "LANGUAGE" (9).** To be programmed at your discretion. The function refers only to the programming phase of the entrance panel with Type 950B. If the parameter is set to "1", the programmer Type 950B displays the parameters in English; otherwise they are displayed in Italian.

- **Enable entrance panel operation "PA_BLOC" (10).** To be programmed at your discretion. If the parameter is set to "1", this prevents calls from being made to the monitor/interphone riser covered by the entrance panel.

- **Enable priority "PRIOR_A" (11).** To be programmed at your discretion in the case of a system with entrance panels in parallel. By activating this function, the entrance panel does not go into the engaged state when another entrance panel, in parallel with the first, makes a call. In this state, the entrance panel with priority can interrupt a conversation in progress to make another call. This function only affects entrance panels connected in parallel with each other; for systems for building complexes the secondary entrance panels still go into the engaged state if the call originates from a main entrance panel or a switchboard.

- **Enable sequential lock "LOC_AB" (12).** To be programmed in the case of a system for a building complex. The function refers to secondary entrance panels. If enabled, makes it possible to activate the terminal "S" for door release on the secondary entrance panel, when a monitor or an interphone sends the door release code while in conversation with the main entrance panel. This makes it possible to activate both the door release for the secondary entrance panel and the door release for the main entrance panel. Adding 2 to this value also enables the possibility of door release "from below" (e.g. from an underlying switchboard in communication with the entrance panel itself).

- **Enable camera "CAMER_E" (13).** To be programmed with type 3946 entrance panels. Indicates that the entrance panel is of video type equipped with a camera. This makes it possible to manage switch-on and switch-off of the monitors in the system in the correct way.

- **Enable sound in entrance panel "P_SOU_E" (14).** To be programmed at your discretion. Activating this function activates the sound signal emitted by the entrance panel at the same time as sending of the call.

- **Enable self-start "AUTOS_E" (15).** Enables the entrance panel itself to be self-activated by an interphone/monitor. To operate in this mode, the interphone/monitor must be configured with the appropriate key and the entrance panel must have the 8-digit "coding system" parameter.
  In this case the self-start key, on the interphone/monitor (which enables self-start on a maximum of 3 different entrance panels), sends cyclically each time it is pressed, the

commands F3, F4 and F5; i.e. the first press sends the F3 command (and emits the confirmation sound), the second press sends the F4 command (emitting 2 sounds) and the third press sends the F5 command (3 sounds). If you press the key again, the sequence repeats itself (NB: 30 seconds after pressing the key, the sequence returns to its initial state, i.e. F3 command).
To enable the self-start function according to one of the commands F3, F4 and F5 or according to a combination of the three, assign to the parameter the values set out in the table below:

Command parameter value	Command
0	None
1	F3
2	F4
3 (1+2)	F3 and F4 (with either F3 or F4)
4	F5
5 (1+4)	F3 and F5 (with either F3 or F5)
6 (2+4)	F4 and F5 (with either F4 or F5)
7 (1+2+4)	F3, F4, F5 (with either F3, F4 or F5)

- **Enable intercom "INTPH_E" (16).** Function not available. Enables the entrance panel to put two interphones/monitors, at their request, into internal communication with each other even without the switchboard.

- **Enable conference "CONF_E" (17).** Enabling this parameter allows the entrance panel to call 2 or 3 interphones simultaneously. In this case, the first interphone will be called with the code followed by the "C" key, and the others must be called by keying in the codes followed by the "*" (asterisk) key.

- **Enable call to switchboards "S_CAL_E (18)**. This parameter affects systems for building complexes with 8-digit coding (parameter "8") and with porter switchboard Type 945B. If enabled on secondary entrance panels, it allows entrance panels to call a switchboard located "downstream" of the entrance panels (the entrance panels in question are those with terminals 6-8 connected to the switchboard). The other relevant parameters are the entrance panel code (parameter No. 3) and the corresponding parameter of the switchboard Type 945B. To call the switchboard press "double arrow down" key, which will, in turn, call the relevant entrance panel.

- **Duration of conversation "CON_T" (19).** To be programmed at your discretion. This is the time, expressed in tens of seconds (e.g.: 12=120 sec), which the entrance panel controls from the moment at which the handset is picked up after the call. On expiry of this time, the entrance panel switches off the interphone.

- **Duration of ringtone "SOUND_T" (20).** If the system includes secondary entrance panels (building complex) or a switchboard, the activation time of the call signal of the main entrance panel must be greater than 1 second compared with the corresponding time, set on the secondary entrance panels or the switchboard. In other cases, the parameter can be changed at the discretion of the installer. This parameter represents the time, expressed in seconds, for which the entrance panel activates the terminal CH. Terminal CH activates the call generator in the power supplies Type 6941 and 6948.

- **Answer time "ANS_T" (21).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel waits from the moment at which the call is terminated to the moment at which the handset of the interphone is picked up. If the handset is not picked up within the reply time, the entrance panel switches off the interphone.
If, however, the handset is picked up before the time expires, the entrance panel starts counting the conversation time (see parameter 19 "Duration of conversation").

- **Function time F1 "T_F1" (22).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal F1. Terminal F1 serves to activate a relay connected to terminals R1 and 4 of the power supplies Type 6941, 6942 and 6948.

- **Function time F2 "T_F2" (23).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal F2. Terminal F2 serves to activate a relay connected to terminals R2 and 4 of power supplies Type 6941, 6942 and 6948.

- **Door lock release "LOC_T" (24).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal S. Terminal S serves to activate the lock connected to terminals 15 and S1 of the power supplies Type 6941, 6942 and 6948.

- **End of conversation warning time "NOTIC_P" (25).** This function relates to systems for building complexes. The parameter indicates the time, in seconds, that elapses from the call of a main entrance panel to the interruption of a conversation in progress on a secondary entrance panel. Interruption of the conversation will be indicated by an acoustic signal and the message "END CON" before going into the engaged state. NB: in normal use it is advisable to leave the parameter at 0.

- **Number of digits in pre-code "NC_PRED" (26).** The parameter determines the number of digits (maximum 4) to be used for the pre-code in reference to parameter "4".

- **Enables the window above "A_FINUP" (27).** If the parameter is enabled, the parameters "initial user" (1) and "final user" (2) are used for filtering the codes descending from terminal 1 to terminal 6 of the secondary entrance panels. This function is for use in systems for building complexes in which there are several secondary entrance panels connected in double parallel (as well as the connection of terminals 1, terminals 6 are also connected). Connection in double parallel is necessary so as to make it possible to make calls from all the secondary entrance panels to the switchboard Type 945B. On secondary entrance panels in double parallel the parameter must be set to 1 on all the panels except for one, which must be kept at 0. Enabling of this parameter means that the "initial user" (1) and "final user" (2) parameters of each secondary entrance panel must be suitably modified: the secondary entrance panels with the parameter 27 to 0 must have the parameters "initial user" (1) and "final user" (2) set in accordance with the lowest and highest numbers of the interphones (as for normal use), while for the secondary entrance panels with the parameter 27 to 1, they must have the parameters "initial user" (1) and "final user" (2) respectively coinciding with the parameter "entrance panel code" (3).

- **Enable display of control parameters "DEBUG_A" (28).** If enabled, this parameter makes it possible to show diagnostic messages on the entrance panel display. The messages are activated in response to calls, door release, activation of functions, etc. Enabling the debug can be very useful for checking the reception of "digital" commands from and to the entrance panel, and in general, for checking the connected devices (e.g. by pressing the call key of an interphone above, if the call is successful, reception of the command is shown on the display).

- **Reserved parameter "RESERV" (30).** This parameter makes it possible to enable the display of further parameters reserved for special uses. The parameter must only be changed if directed by the manufacturer.

- **Coded door lock (31, 32, ...50).** To be programmed at your discretion. In these 20 parameters it is possible to save 20 different codes of 8 digits each, to release the door from the entrance panel. First use the 0 key or the R and 1 keys or the C key (see parameter 7) to activate the function, then key in one of the saved codes to activate terminal "S" on the entrance panel.

- **Memory number (51, 52).** To be programmed at will. In these two parameters it is possible to store 2 different 8-digit codes in order to carry out calls in a quick way using the entrance panel push-buttons ^^ and vv.

KEYPAD DESCRIPTION

Keys 0 - 9 DIAL NUMBER: serve to dial the user number for calls and change the values of technical parameters during entrance panel programming.

Key R RESET: serves to cancel and interrupt each conversation. The key is also used to exit the technical programming phase.

Key C USER CALL: serves to send the call after dialling the number. In the technical programming phase, the key is used to confirm the changes made and move onto the next parameter.
If the following conditions are met, the C key can also be used to access the door release function from the entrance panel. The conditions are: parameter "7" must be "2", the entrance panel must not be in communication with an interphone and the display must be OFF.

Key * Asterisk * key:
Conference call key, enables simultaneous communication with 2 interphones/monitors and the entrance panel. To use this function, refer to parameter "17".

Key ^^ Up arrow key:
During programming of the technical parameters, enables you to move from the 1st parameter (initial user) to the 31st parameter (coded door lock).
It is also possible to assign a pre-saved number to this key for rapid calling. In this case, the name-tag must show the name of the corresponding interphone.

Key vv Down arrow key:
During programming of the technical parameters, enables you to move from the 1st parameter (initial user) to the 31st parameter (coded door lock). The key is also used for calling the porter switchboard Type 945B if the parameter "18" is enabled. It is also possible to assign a pre-saved number to this key for rapid calling. In this case, the name-tag must show the name of the corresponding interphone.

Key 0 DOOR RELEASE FROM ENTRANCE PANEL:
If the following conditions are met, the 0 key can also be used to access the door release function from the entrance panel. The conditions are: parameter "7" must be "0", the entrance panel must not be in communication with an interphone and the display must be OFF.

Keys R and 1 DOOR RELEASE FROM ENTRANCE PANEL:
If the following conditions are met, pressing keys R and 1 simultaneously gives access to the door release function from the entrance panel. The conditions are: parameter "7" must be "1", the entrance panel must not be in communication with an interphone and the display must be OFF.

Keys R and 4 ENTRY TO PROGRAMMING: when pressed simultaneously, these keys give access to the technical programming phase.

ENTRANCE PANEL OPERATION

Call from entrance panel to user; on the keypad, dial the number of the user in question and press "C". When you press "C" the entrance panel will send the call to the interphone. If parameter "14" is enabled, the call signal sent to the interphone will be repeated by the entrance panel receiver. On completion of the call, the entrance panel will start to count down the reply time (parameter 21), until the handset of the interphone is picked up. On expiry of the time, the entrance panel will disconnect automatically from the interphone. If the handset is picked up before the reply time expires, the entrance panel will go into communication with the interphone for the full conversation time (parameter 19). If the handset is hung up before the conversation time expires, the entrance panel will disconnect from the interphone after about 5 seconds. To open the entrance panel lock, from the interphone or from the monitor or from the switchboard, press the key marked with the symbol  . Bear in mind that the lock can only be opened when the entrance panel is in communication with an interphone or the switchboard; whereas the auxiliary functions can be activated regardless of whether the entrance panel is in communication or not. If you want to interrupt any operation from the entrance panel, use the "R" key.

DOOR RELEASE FROM ENTRANCE PANEL

If the entrance panel is not engaged in a conversation or is not locked in the engaged state, indicated by the message "ENGAGED", it is possible to release the door covered by the entrance panel by means of the entrance panel keypad. To access this function, refer to the value set in parameter 7 of the entrance panel; if its value is 0, press "0"; if its value is 1, press "R" and "1" simultaneously; and if its value is 2, press "C". Before pressing the key for access to the function, it is advisable to cancel any operation in progress, by means of the "R" key, and then use the keys indicated previously. After activating the function on the display, the following symbols will appear "- - - - - - - -". To release the door, dial one of the codes recorded in parameters 30- to 49 and then press "C". Note that the code 0000 0000 cannot be used for door release.

DESCRIPTION

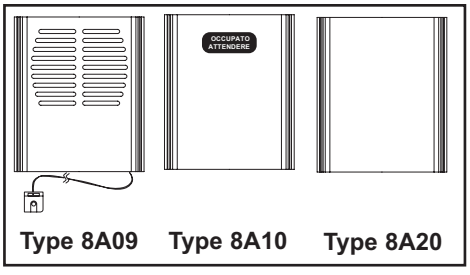
Articles **8943/…, 8943/D.., 8945/…., 8945/C..** and **8945/D..** correspond to 3 packs of 3 modules respectively, each for the composition of 5 models of electronic panels: electronic audio panel with traditional push-buttons in one row (type 8943, 8943/6…8943/0), electronic audio panel with traditional push-buttons in two rows (type 8943/D, 8943/D12…8943/D2), electronic video panel with B/W camera and traditional push-buttons in one row (type 8945, 8945/6….8945/0), electronic video entrance panel with colour camera and traditional push-buttons in one row (type 8945/C, 8945/C6…8945/C0) and electronic video entrance panel with B/W camera and traditional push-buttons in two rows (type 8945/D, 8945/D12…8945/D2).

The electronic entrance panels have the capability of generating up to 99999999 digital calls with different codes. Entrance panels are preset to operate alone or in conjunction with other entrance panels by properly connecting terminal blocks placed on the back of the entrance panels themselves. As well as the terminal block, the back of the panel accomodates the "External Volume - P1", "Internal Volume - P3" and "Balance - P2" controls, which are factory-set. If necessary, you are advised to adjust only the "External Volume" and, if appropiate, the "Balance" in case of feedback on the speech unit, by slowly turning the trimmer in one direction or the other until the whistling stops. For programming the technical parameters, the panel can also be interfaced with the programmer type 950B or with a personal computer using the software type 94CT and interface type 6952.

COMPONENTS

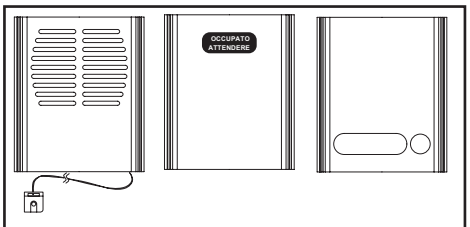
MODULES Type 8943/0, 8943/1, 8943/2, 8943/3, 8943/4, 8943/5, 8943/6, 8943.

Types **8943/…**correspond to a pack of 3 standard electronic modules to execute an audio entrance panel with traditional push-buttons in one row. See the 3 module configurations below, according to the article and the push-button number.



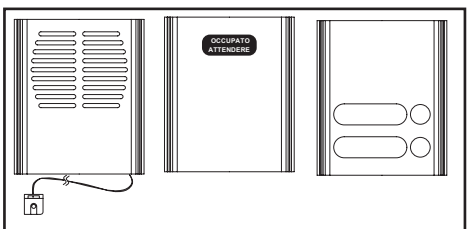
Type 8A09 Type 8A10 Type 8A20

Type 8943/0
(without push-buttons)



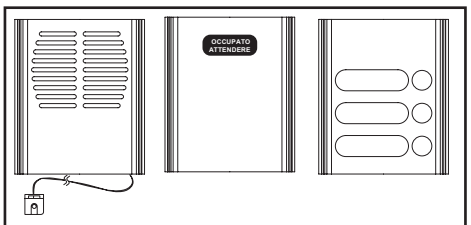
Type 8A09 Type 8A10 Type 8A21

Type 8943/1
(1 push-button)



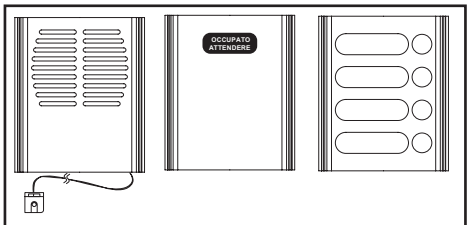
Type 8A09 Type 8A10 Type 8A22

Type 8943/2
(2 push-buttons)



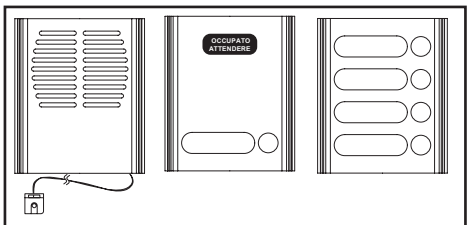
Type 8A09 Type 8A10 Type 8A23

Type 8943/3
(3 push-buttons)



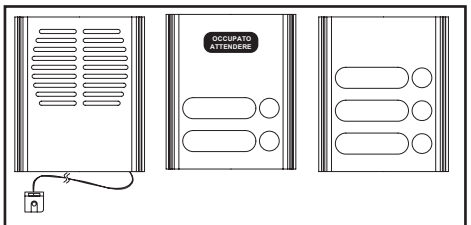
Type 8A09 Type 8A10 Type 8A24

Type 8943/4
(4 push-buttons)



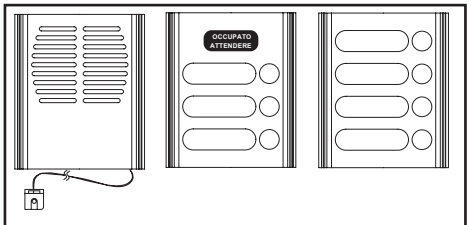
Type 8A09 Type 8A11 Type 8A24

Type 8943/5
(5 push-buttons)



Type 8A09 Type 8A12 Type 8A23

Type 8943/6
(6 push-buttons)

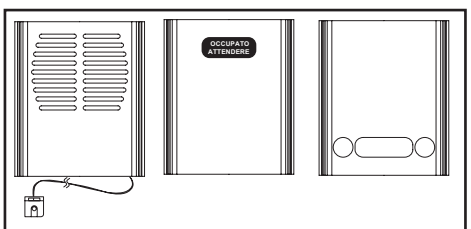


Type 8A09 Type 8A13 Type 8A24

Type 8943
(7 push-buttons)

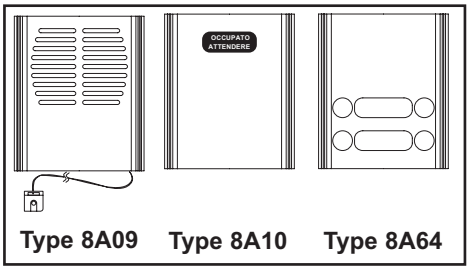
MODULES Type 8943/D2, 8943/D4, 8943/D6, 8943/D8, 8943/D10, 8943/D12, 8943/D14

Types **8943/D…** correspond to a pack of 3 standard electronic modules to execute an audio entrance panel with traditional push-buttons in two rows. See the 3 module configurations below, according to the article and number of push-buttons.



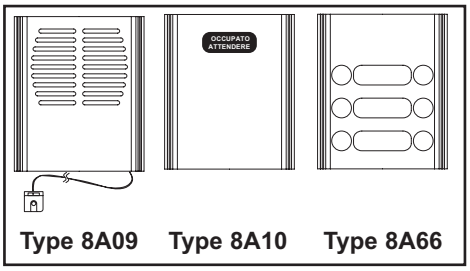
Type 8A09 Type 8A10 Type 8A62

Type 8943/D2
(2 push-buttons)



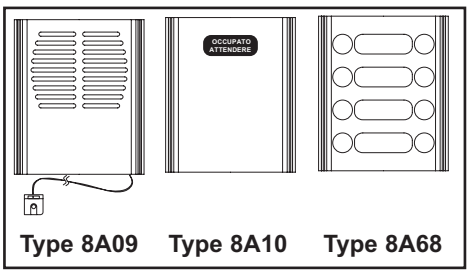
Type 8A09 Type 8A10 Type 8A64

Type 8943/D4
(4 push-buttons)



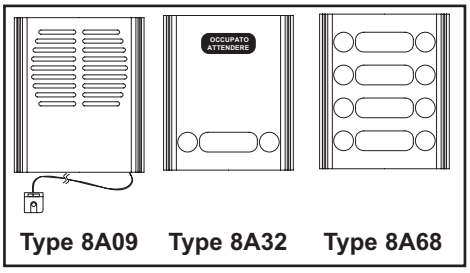
Type 8A09 Type 8A10 Type 8A66

Type 8943/D6
(6 push-buttons)



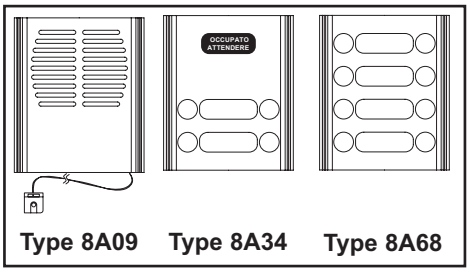
Type 8A09 Type 8A10 Type 8A68

Type 8943/D8
(8 push-buttons)



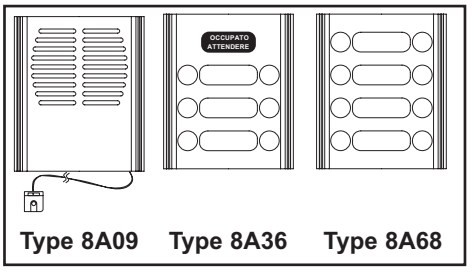
Type 8A09 Type 8A32 Type 8A68

Type 8943/D10
(10 push-buttons)



Type 8A09 Type 8A34 Type 8A68

Type 8943/D12
(12 push-buttons)

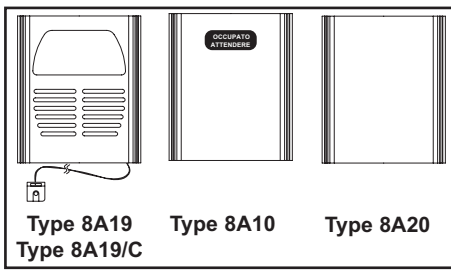


Type 8A09 Type 8A36 Type 8A68

Type 8943/D14
(14 push-buttons)

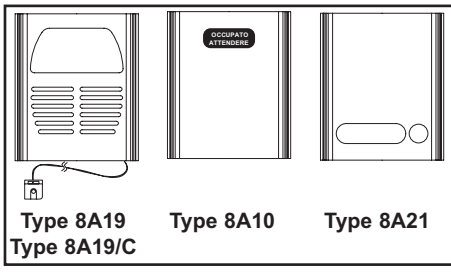
MODULES Type 8945/0, 8945/1, 8945/2, 8945/3, 8945/4, 8945/5, 8945/6, 8945, Type 8945/C0, 8945/C1, 8945/C2, 8945/C3, 8945/C4, 8945/C5, 8945/C6, 8945/C

Types **8945/… and 8945/C...** correspond to a pack of 3 standard electronic modules to execute an audio entrance panel with traditional push-buttons in one row. Types 8945/… are fitted with a B/W CCD ¼" camera and fixed 3 mm lens, whereas types 8945/C are fitted with a colour CCD ¼" camera and fixed 3mm lens. See the 3 module configurations below, according to the article and number of push-buttons.



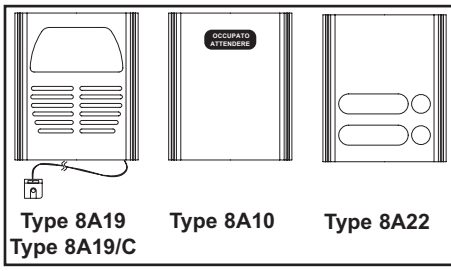
Type 8A19
Type 8A19/C Type 8A10 Type 8A20

Type 8945/0 and 8945/C0
(0 push-buttons)



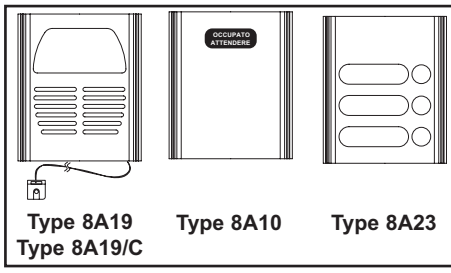
Type 8A19
Type 8A19/C Type 8A10 Type 8A21

Type 8945/1 and 8945/C1
(1 push-buttons)



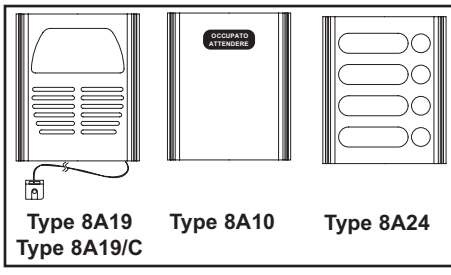
Type 8A19
Type 8A19/C Type 8A10 Type 8A22

Type 8945/2 and 8945/C2
(2 push-buttons)



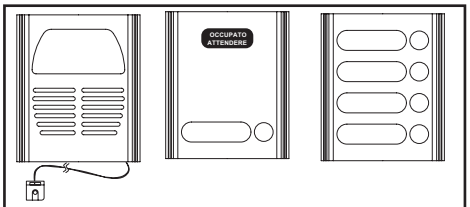
Type 8A19
Type 8A19/C Type 8A10 Type 8A23

Type 8945/3 and 8945/C3
(3 push-buttons)



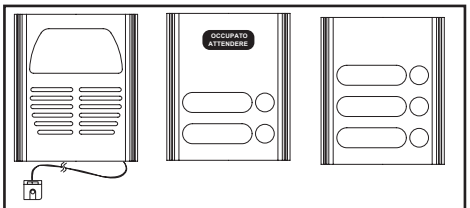
Type 8A19
Type 8A19/C Type 8A10 Type 8A24

Type 8945/4 and 8945/C4
(4 push-buttons)



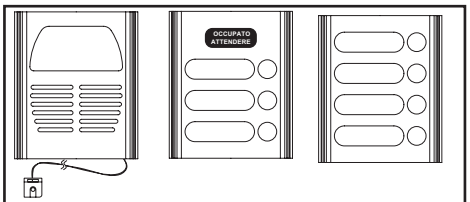
Type 8A19 Type 8A11 Type 8A24
Type 8A19/C

Type 8945/5 and 8945/C5
(5 push-buttons)



Type 8A19 Type 8A12 Type 8A23
Type 8A19/C

Type 8945/6 and 8945/C6
(6 push-buttons)

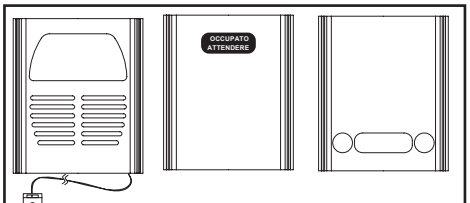


Type 8A19 Type 8A13 Type 8A24
Type 8A19/C

Type 8945 and 8945/C
(7 push-buttons)

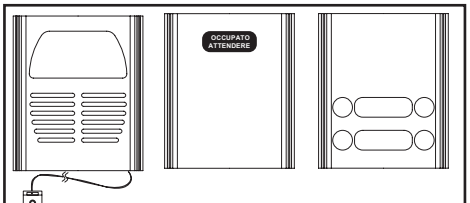
MODULES Type 8945/D2, 8945/D4, 8945/D6, 8945/D8, 8945/D10, 8945/D12, 8945/D14.

Types **8945/D...** etc comprise a pack containing 3 standard electronic modules for installation of a video entrance panel with conventional pushbuttons in two rows. The camera inserted in the audio/video module is fitted with a ¼" CCD sensor, infrared LED lighting and fixed lens of 3 mm. The 3 modules are shown below according to the function of the model and the number of pushbuttons.



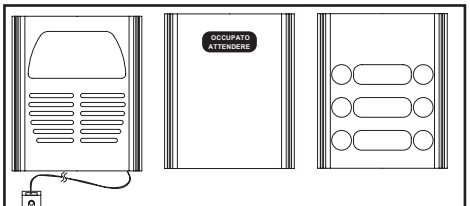
Type 8A19 Type 8A10 Type 8A62

Type 8945/D2
(2 push-buttons)



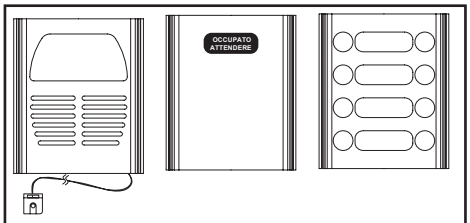
Type 8A19 Type 8A10 Type 8A64

Type 8945/D4
(4 push-buttons)



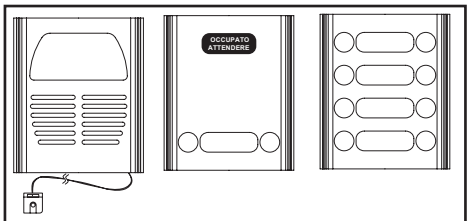
Type 8A19 Type 8A10 Type 8A66

Type 8945/D6
(6 push-buttons)



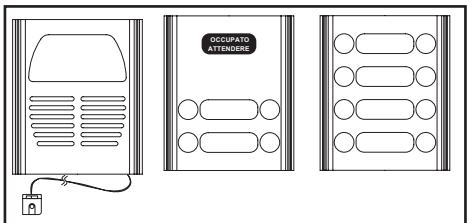
Type 8A19 Type 8A10 Type 8A68

Type 8945/D8 (8 push-buttons)



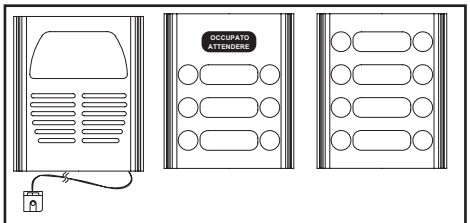
Type 8A19 Type 8A32 Type 8A68

Type 8945/D10
(10 push-buttons)



Type 8A19 Type 8A34 Type 8A68

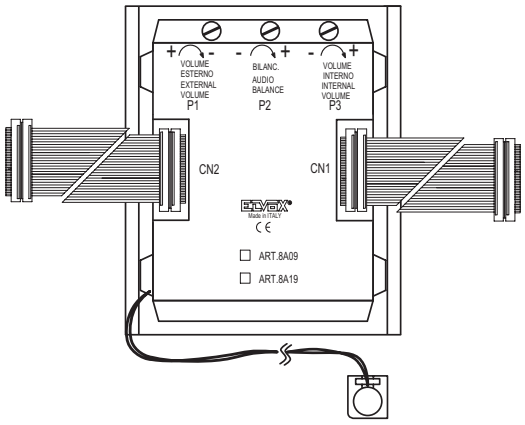
Type 8945/D12
(12 push-buttons)



Type 8A19 Type 8A36 Type 8A68

Type 8945/D
(14 push-buttons)

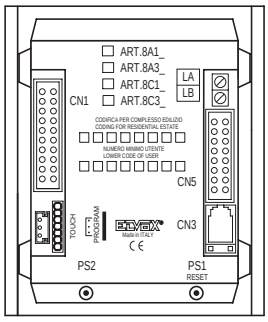
BACK OF MODULES
Type 8A09, 8A19, 8A19/C



Electronic audio module with speech unit. The following controls are located on the back of the panel:

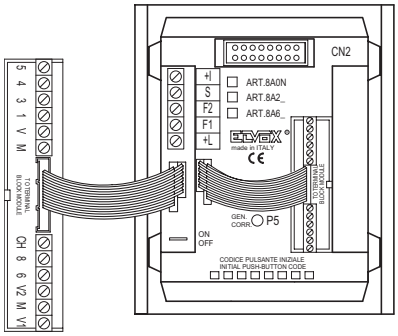
- P1 external volume control (speaker).
- P2 external/internal audio volume balance.
- P3 internal volume control (microphone).
- CN1 wiring for connecting the module Type 8A10, 8A11, 8A12, or 8A13 with the connector CN1.
- CN2 wiring for connecting the module Type 8A20, 8A21, 8A22, 8A23 or 8A24 with connector CN2.
- Microphone (to be fixed to the bottom end fixing element of the frames 8D81, 8D82, 8D83 or 8D84).

Type 8A10, Type 8A11, 8A12, Type 8A13, 8A10, Type 8A32, 8A34, Type 8A36.



Electronic module with "Engaged - Please wait" signalling.
The following elements are located on the back of the panel:
- PS1 RESET button.
- PS2 input button for programming
- CN1 connector for connecting module Type 8A09 with wiring CN1.
- Connector CN3 for connecting programmer Type 950B.
- CN5 connector to connect additional modules with push-buttons to CN5 harness.
- PROGRAM connector for software up-dating.

Type 8A20, 8A21, 8A22, 8A23, 8A24, 8A62, 8A64, 8A66, Type 8A68

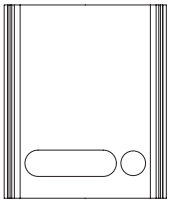


Electronic module with terminal blocks. The following elements are located on the back of the panel:
- CN2 connector for connecting module Type 8A09 with CN2 wiring.
- P5 current generator control (typical value 25mA)
- Terminal blocks for connecting the entrance panel to the system.
- ON/OFF jumper for activating/ deactivating the current generator (ON = jumper connected, OFF = jumper interrupted).

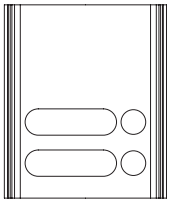
ADDITIONAL MODULES Type 8A51, 8A52, 8A53, 8A54, 8A5N

Types **8A51, 8A52, 8A53 and 8A54** are additional modules with traditional push-buttons in one row to be connected to basic modules type 8945, 8945/6, 8945/5, 8945/4, 8945/3, 8945/2, 8945/1, 8945/0, 8943, 8943/6, 8943/5, 8943/4, 8943/3, 8943/2, 8943/1, 8943/0 to extend the push-button number.

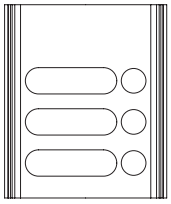
Type 8A51
(1 push-button)



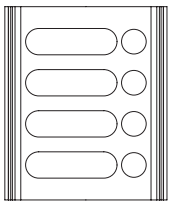
Type 8A52
(2 push-buttons)



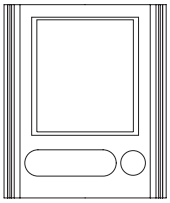
Type 8A53
(3 push-buttons)



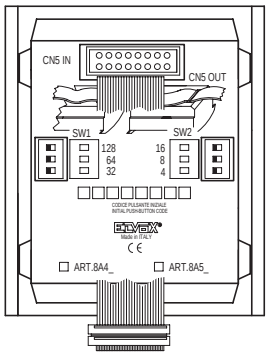
Type 8A54
(4 push-



Type 8A5N
(1 push-button and house No.)



BACK OF MODULES Type 8A51, 8A52, A53, 8A54, 8A5N

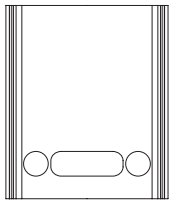


Electronic module with push-buttons in one row.
On the back are located the following items:
- CN5 IN connector for connection in series of additional modules with push-buttons to harness CN5 OUT.
- CN5 OUT harness for connection in series of additional modules to push-buttons with CN5 IN connector or for connection of basic modules type 8A10 (8A11, 8A12, 8A13) to CN5 connector.
- SW1 and SW2 dip-switches for "HARDWARE" programming of module push-buttons.

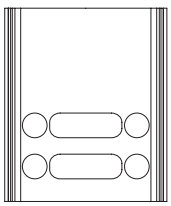
ADDITIONAL MODULES Type 8A42, 8A44, 8A46, 8A48

Types **8A42, 8A44, 8A46 and 8A48** are additional modules with traditional push-buttons in two rows to be connected to basic modules type 8945/D, 8945/D12, 8945/D10, 8945/D8, 8945/D6, 8945/D4, 8945/D2, 8943/D, 8943/D12, 8943/D8, 8943/D6, 8943/D4, 8943/D2 to extend the number of push-buttons.

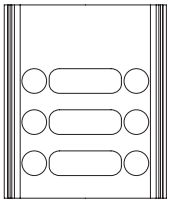
Type 8A42
(2 push-buttons)



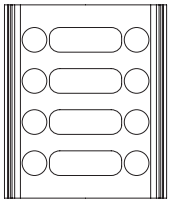
Type 8A44
(4 push-buttons)



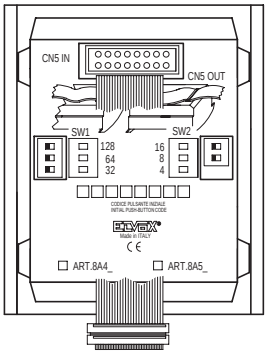
Type 8A46
(6 push-buttons)



Type 8A48
(8 push-buttons)

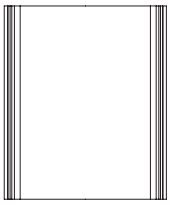


BACK OF MODULES Type 8A42, 8A44, A46, 8A48.



Electronic module with push-buttons in two rows.
On the back are located the following items:
- CN5 IN connector for connection in series of additional modules with push-buttons to harness CN5 OUT.
- CN5 OUT harness for connection in series of addition modules with push-buttons to CN5 IN connector or for connection of basic modules type 8A10 (8A32, 8A34, 8A36) to CN5 connector.
- SW1 and SW2 dip-switches for "HARDWARE" programming of module push-buttons.

MODULES Type 8000

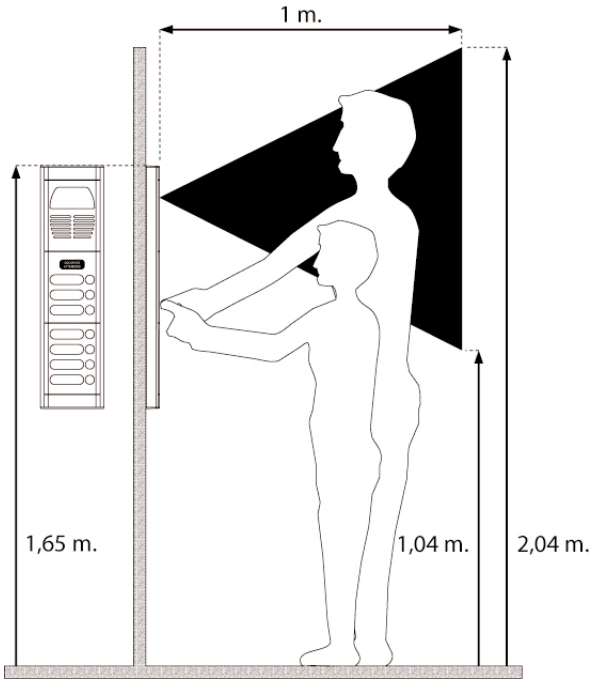


Additional neutral module, to add to electronic modules for completion of the entrance panel.

N.B: for other components required for panel composition, i.e. frames and boxes, refer to "Appendix A" page 171.

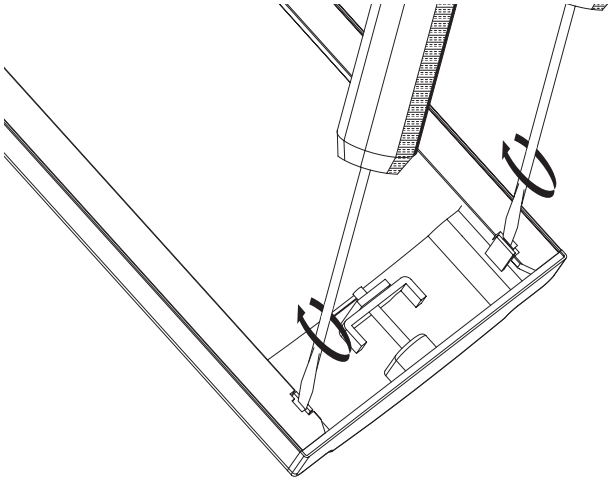
INSTALLATION

Assembly and installation of the Galileo electronic entrance panels involves the following phases:
1 - Defining the basic modules and supplementary modules.
2 - Defining the module holder frames (Type 8D81, 8D82, 8D83 or 8D84) according to the modules to be joined.
3 - Defining the boxes and frames for flush or surface wall mounting.
4 - Fitting the electronic modules inside the module holder frames.
5 - Wiring the modules.
6- Programming push-buttons of additional modules on "Hardware" mode using (SW1 and SW2) located on the back of each module.
7 - Installing the flush or surface-mounted wall box at a height of approximately 1.65 m measured between the top edge of the box and the ground. Use the hole drilled in the bottom of the box to insert the wires.
8 - Connecting the entrance panel to the system as illustrated in the wiring diagrams.
9 - Cutting the ON-OFF jumper adjacent to the terminal block only if indicated in the wiring diagram.
10 - Programming the entrance panel if necessary: programming "Technical Parameters" and the push-button “software”.
11 - Fixing the entrance panel microphone on the bottom end fixing element.
12 - Closing the panel.

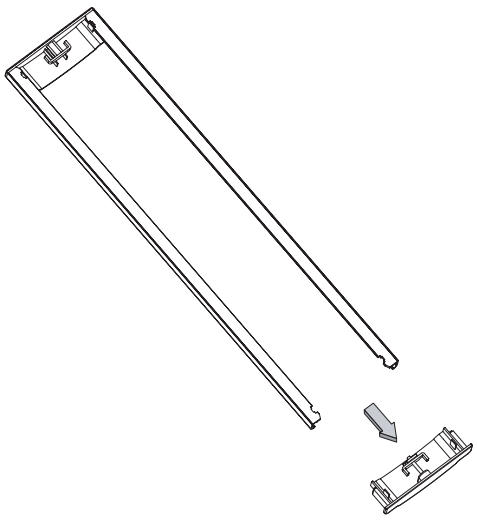


INSERTING THE MODULES IN MODULE HOLDER FRAMES

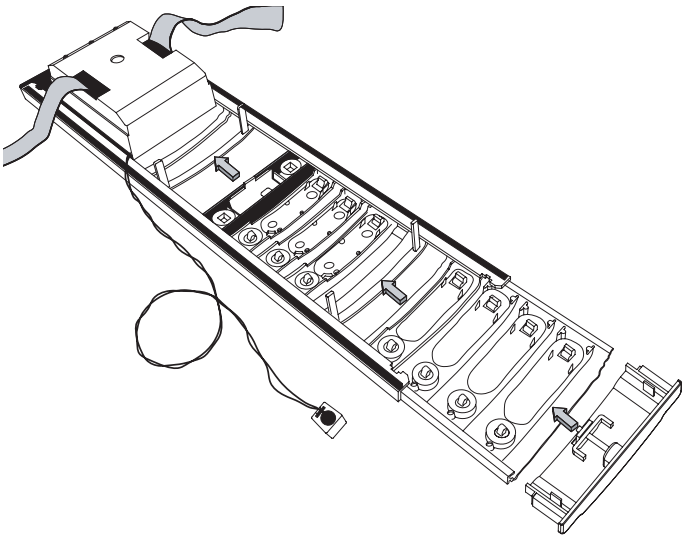
Open the module holder frames by inserting a screwdriver in the two slots on the lower side of the lower end section.

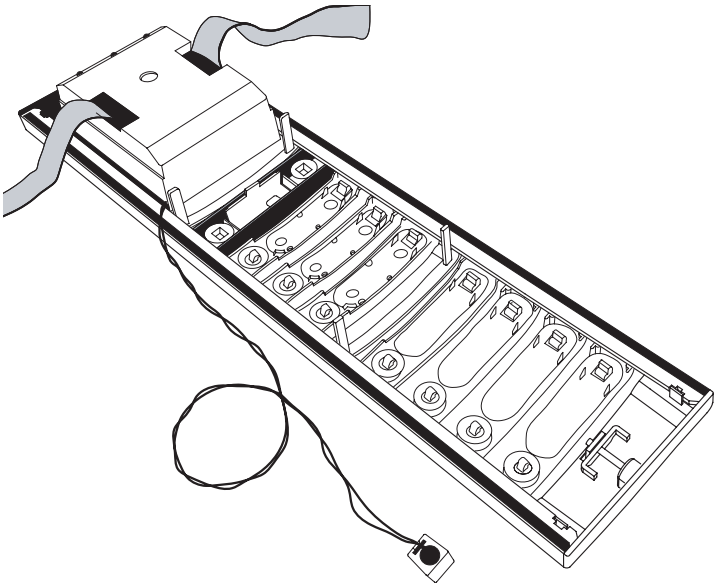


Withdraw the lower end section..

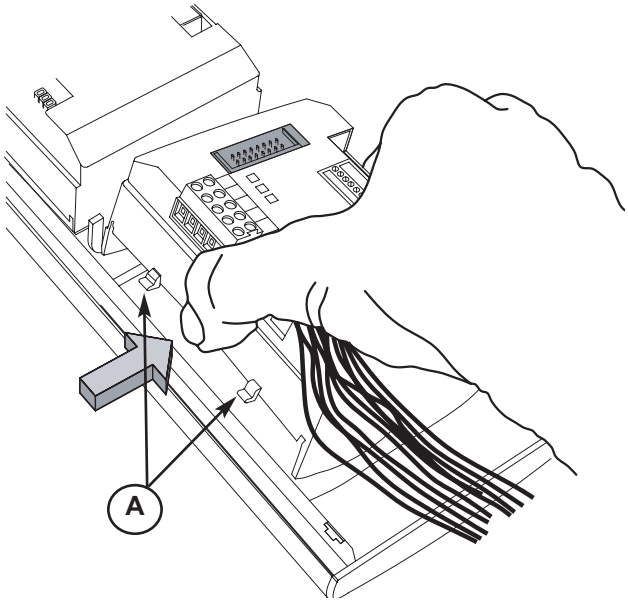


Insert the modules in the holder frames and the plate of the module with the name tag holder. On module holder frames 8D82, 8D83 and 8D84 insert the intermediate element between the modules. Insert the lower end section in the module holder frame.

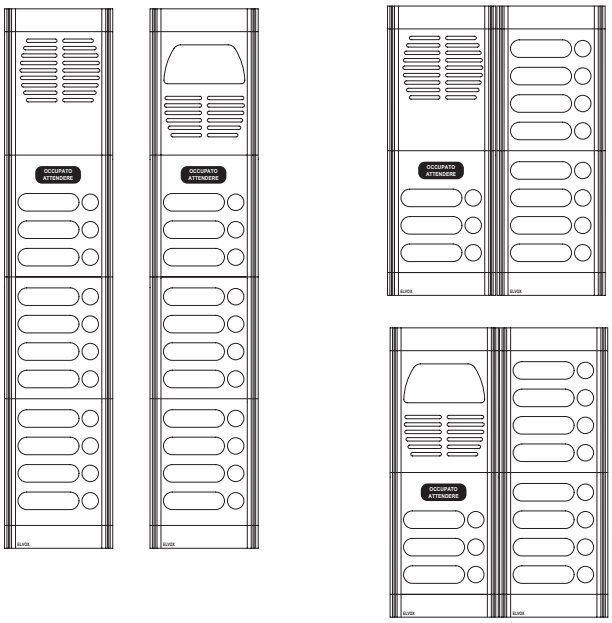




On the rear of the name-tag holder, insert the module box with the terminal boards. Insert the right hand hooks of the box below the right-hand side of the frame, keep the box pressed down and insert the left-hand hooks under the left side (detail A).



Assembled panel example.

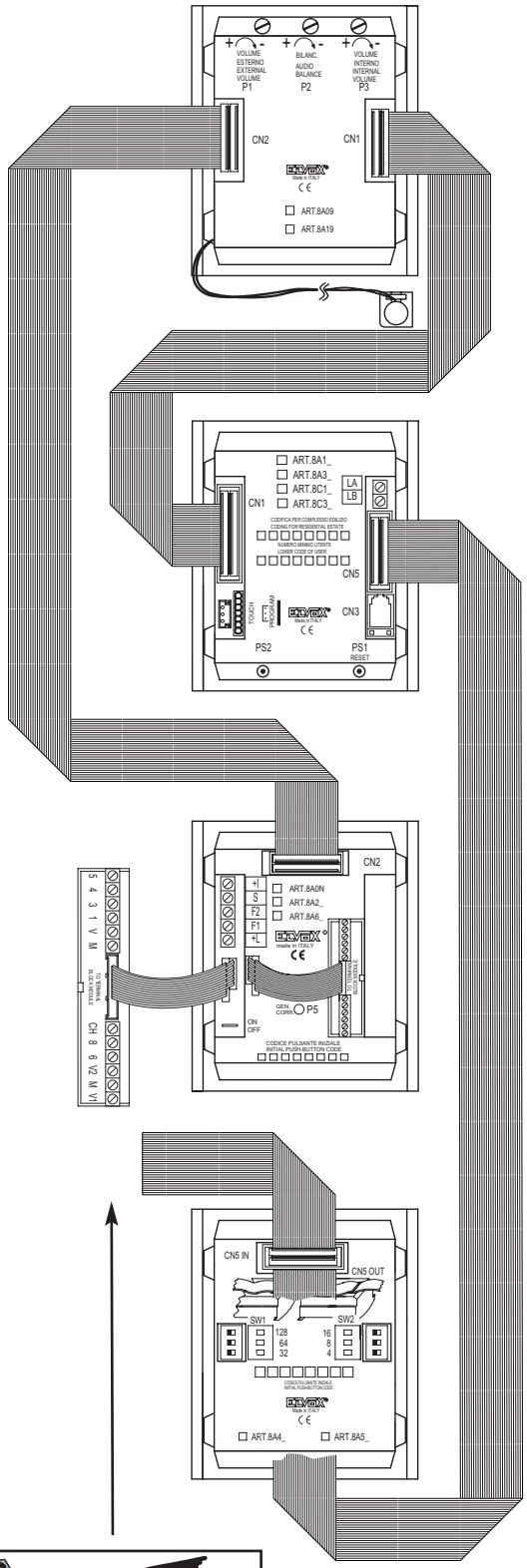


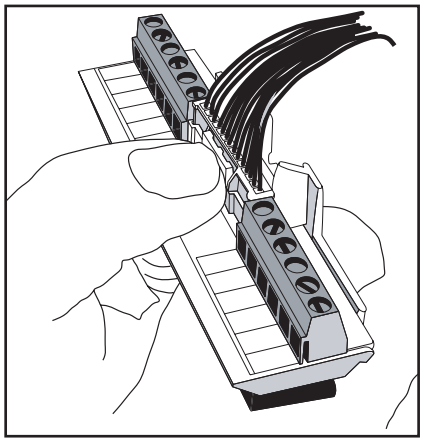
GALILEO ENTRANCE PANEL INSTALLATION: FLUSH-MOUNTED OR SURFACE WALL-MOUNTED VERSIONS

For installation of the GALILEO entrance panel versions:
Flush-mounted.
Flush-mounted with bezel.
Flush-mounted with rainproof cover
Surface wall-mounted with rainproof cover
See "Appendix C" page 178.

WIRING THE MODULES

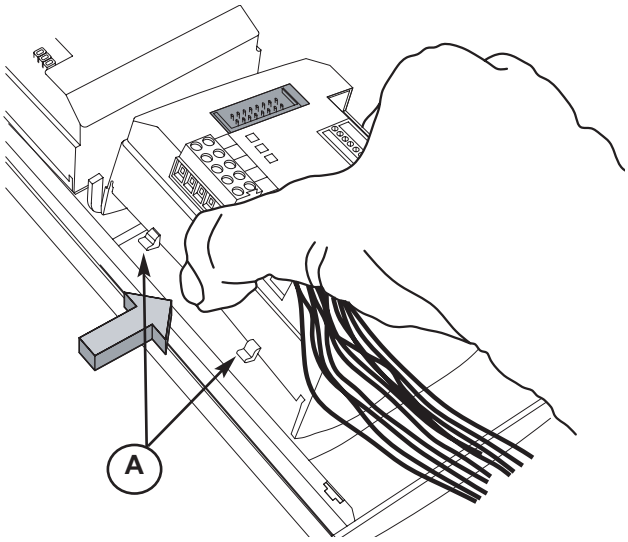
Connect module art. 8A09 or 8A19 or 8A19/C to module 8A10 (8A11, 8A12, 8A13, 8A32, 8A34, 8A36, 8A38), by means of the flat cable CN1 and connector CN1. Connect module art. 8A09 (8A19, 8A19/C) to module 8A20 (8A21, 8A22, 8A23, 8A24, 8A62, 8A64, 8A66, 8A68), by means of the flat cable CN2 and connector CN2. Additional modules type 8A51, 8A52, 8A53, 8A54, 8A42, 8A44, 8A46, 8A48 must be connected in series between them using strip harness CN5 OUT and connector CN5 IN. To connect the additional modules to the standard modules, connect harness CN5 OUT of first additional module to CN5 connector of standard module type 8A10 (8A11, 8A12, 8A13, 8A32, 8A34, 8A36).
To disconnect the terminal block from module 8A10 (8A11, 8A12, 8A13, 8A32, 8A34, 8A36), press the connector and extract the cable.



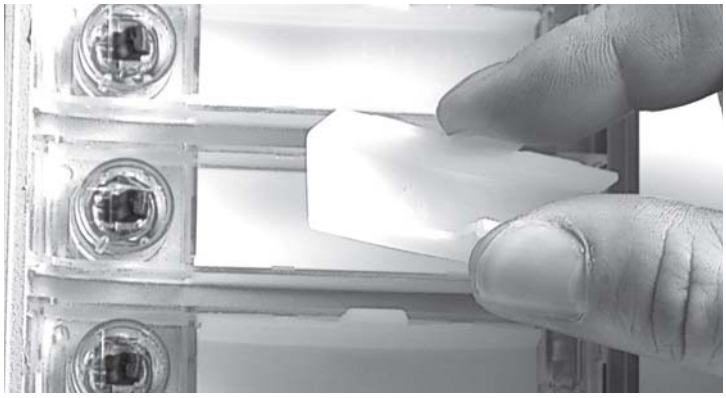


NAME-TAG HOLDER EXTRACTION FOR PUSHBUTTONS

For pushbuttons with extraction of the rear name-tag holder, remove the module back box by pressing on the sides of the box (detail A).

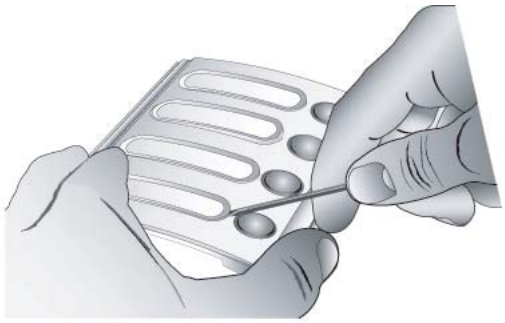


To remove the tag holder, remove the tag retainer on the upper and lower sides.



For pushbuttons with extraction of the front name-tag holder:

1) Lift the name-tag holder from the right-hand side.
2) Remove the name-tag holder by extracting the support, by means of the removable tab at the side of the tag holder.
3) To restore the name-tag holder: place on the support and re-insert in the name-tag holder.
4) Close the name-tag holder by pressing towards the plate.



PROGRAMMING ADDITIONAL MODULES

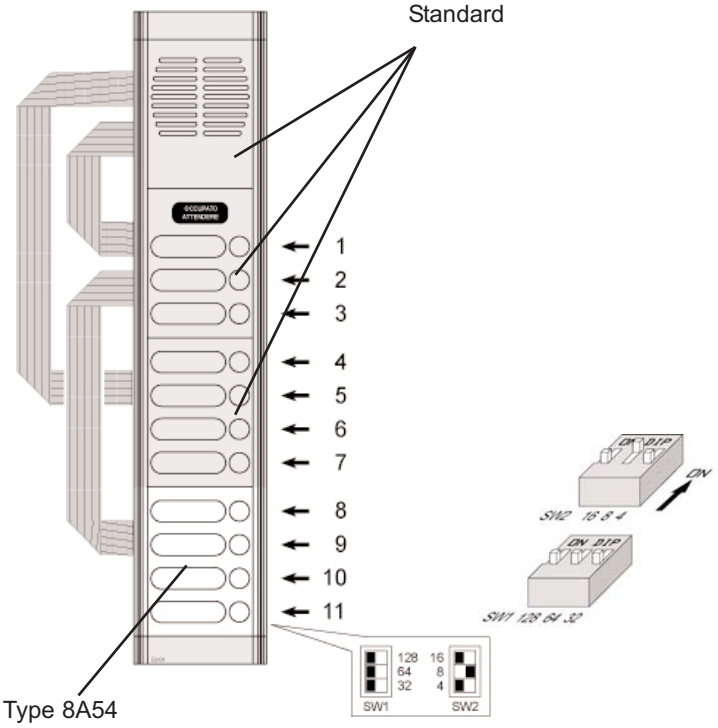
Once the additional modules have been installed and wired to the standard modules carry out the push-button "HARDWARE" programming.

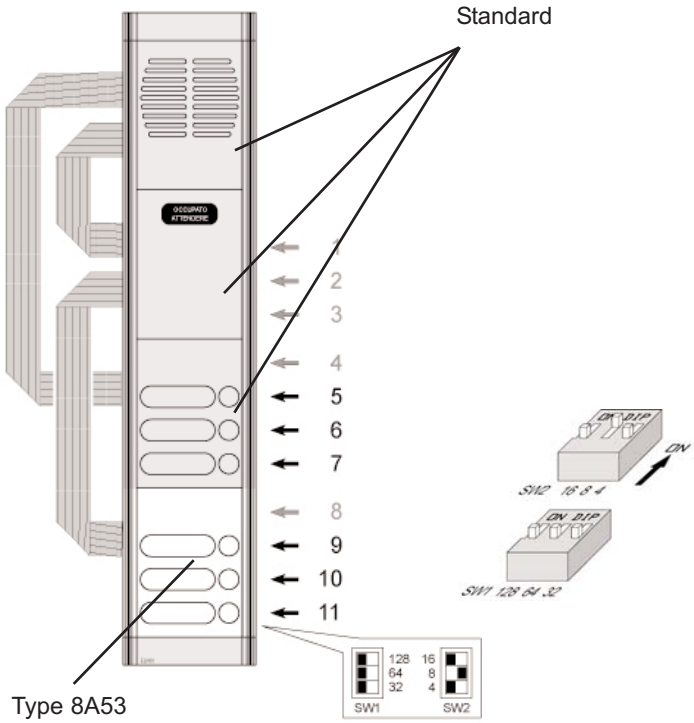
The "HARDWARE" programming allows the panel push-buttons to be unambiguously identified with a code. If the panel "Abil. Num. Softwar" parameter is set to 0, the push-button identification codes will also be the same as the coding codes and interphone call codes or the monitor call codes. The principles for the modules "Hardware" programming of additional modules change when using entrance panels with push-buttons in one row or when using entrance panels with push-buttons in two rows.

N.B. The panel parameter relating to enabling double push-buttons, besides entering the condition of entrance panel with push-buttons in one row (value = 0) or entrance panel with push-buttons in two rows (value = 1), distinguishes also two ways of code/push-button association, therefore you should use the following tables (tab 1 and tab 2) in order to program push-buttons according to their location.

Programming push-buttons in one row (type 8A51, 8A52, 8A53, 8A54, 8A5N)

On the back of each additional module are located two rows of dip-switches (SW1 and SW2) which allow you to enter the push-button identification codes according to the following table (tab 1). The identification code, entered using the dip-switches, corresponds to the 1st push-button located on top at the right hand side of the module, the other push-buttons are associated in an automatic way with the values (in decreasing sequence) following the entered code (Fig. 20 and 21). Note that the standard modules are not equipped with dip-switches for push-button programming and that the push-button codes are entered automatically using values from 1 to 7 (for entrance panels with push-buttons in one row). For personalised programming of push-buttons, use the "Software" programming mode by means of the 950B programming module.





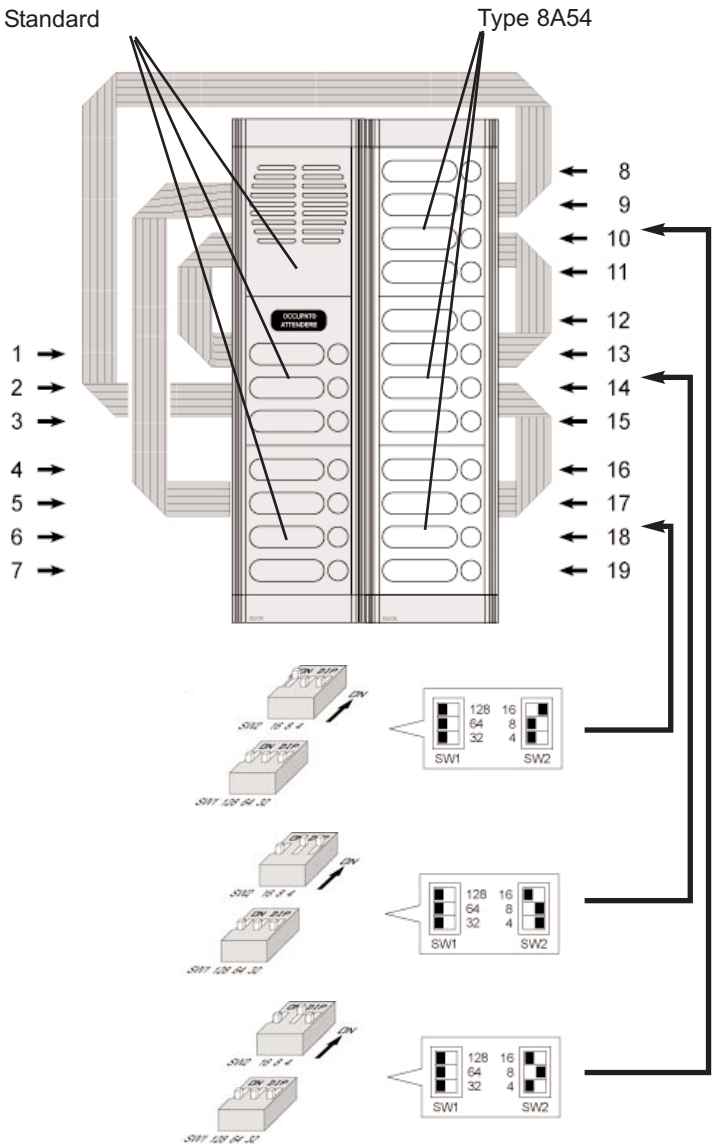
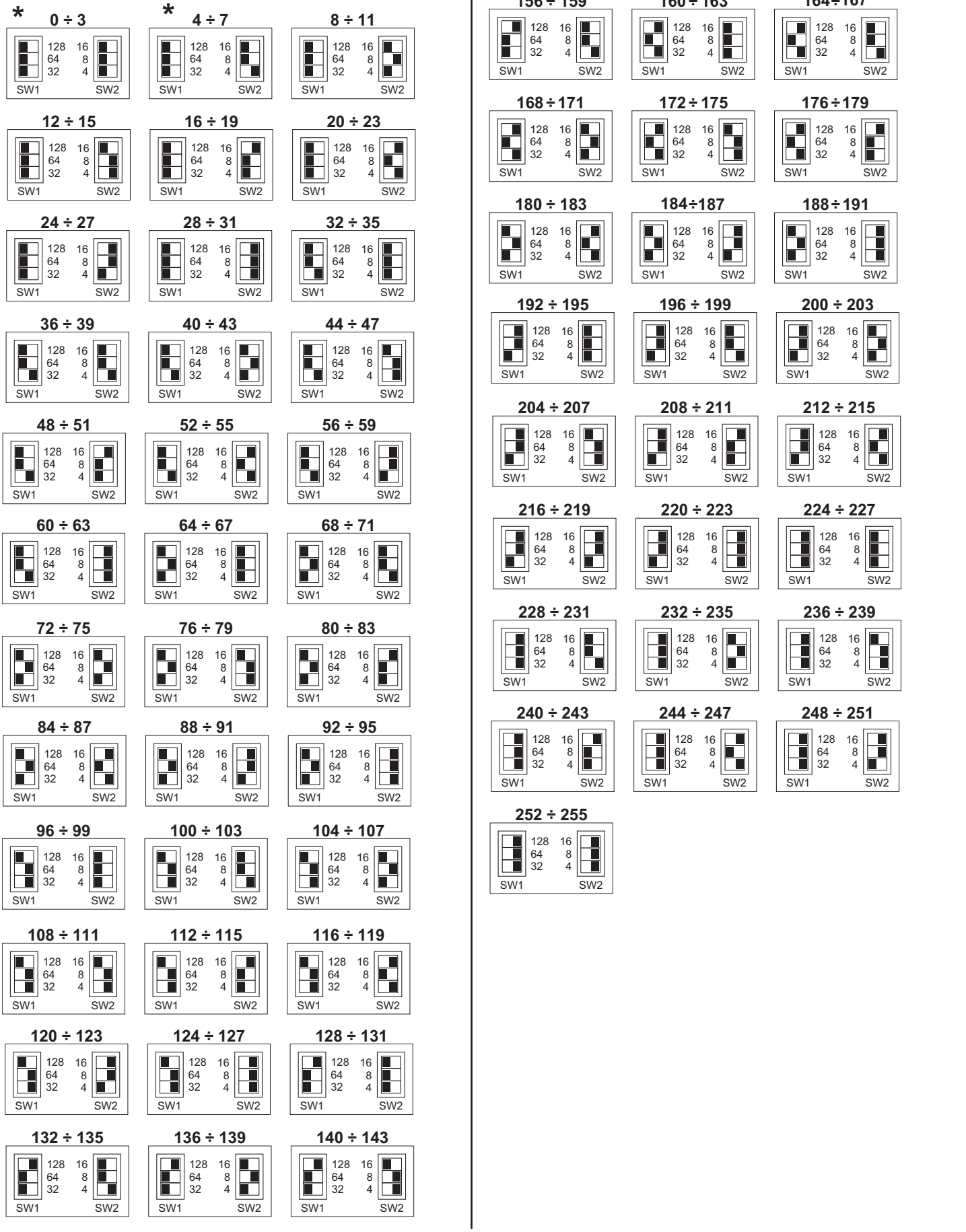


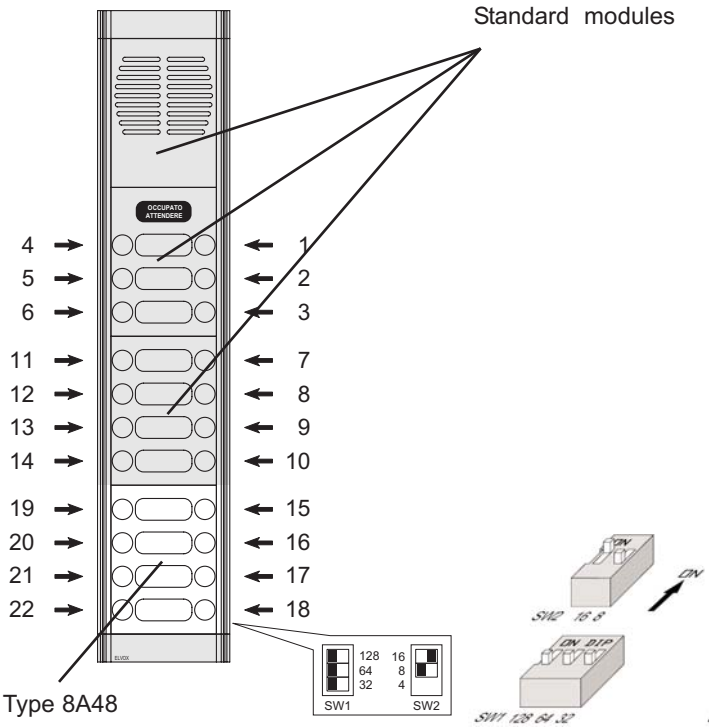
Table 1 (for modules type 8A51, 8A52, 8A53 and 8A54)

* Attention: Codes from 0 to 7 may interfere with the standard module push-button codes.

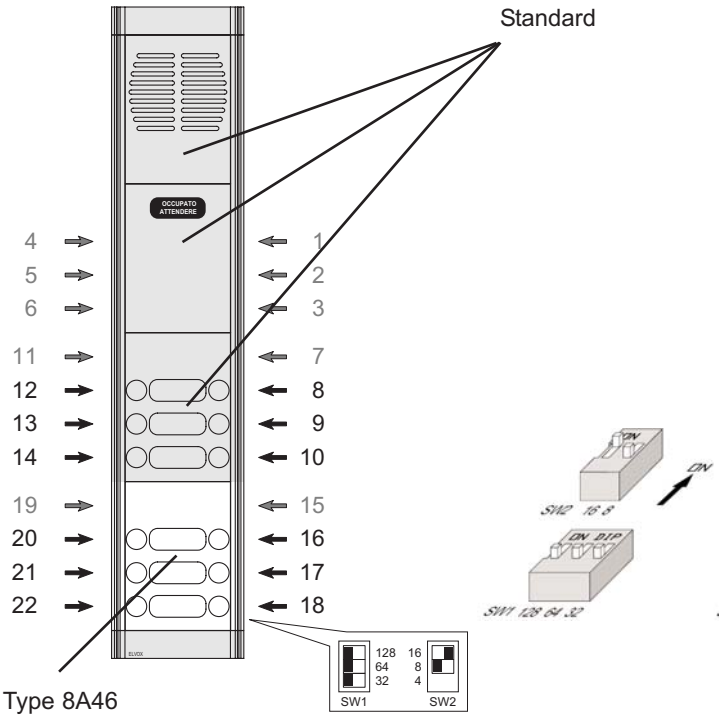


PROGRAMMING PUSH-BUTTONS IN TWO ROWS (type 8A42, 8A44, 8A46, 8A48).

On the back of each additional module are located two rows of switches (SW1 and SW2) which allow you to enter the push-button identification codes according to the following table (table 2). The identification code, entered using the dip-switches, corresponds to the 1st push-button located on top at the right-hand side of the module, the other push-buttons are associated automatically with the values (in decreasing sequence) following the code entered (Fig. 22 and 23). Note that the standard modules are not equipped with switches for push-buttons programming and that the push-button codes are entered automatically using values from 1 to 14 (for entrance panels with push-buttons in two rows). For personalsed programming of push-buttons, use the "Software" programming mode by means of the 950B programming module.



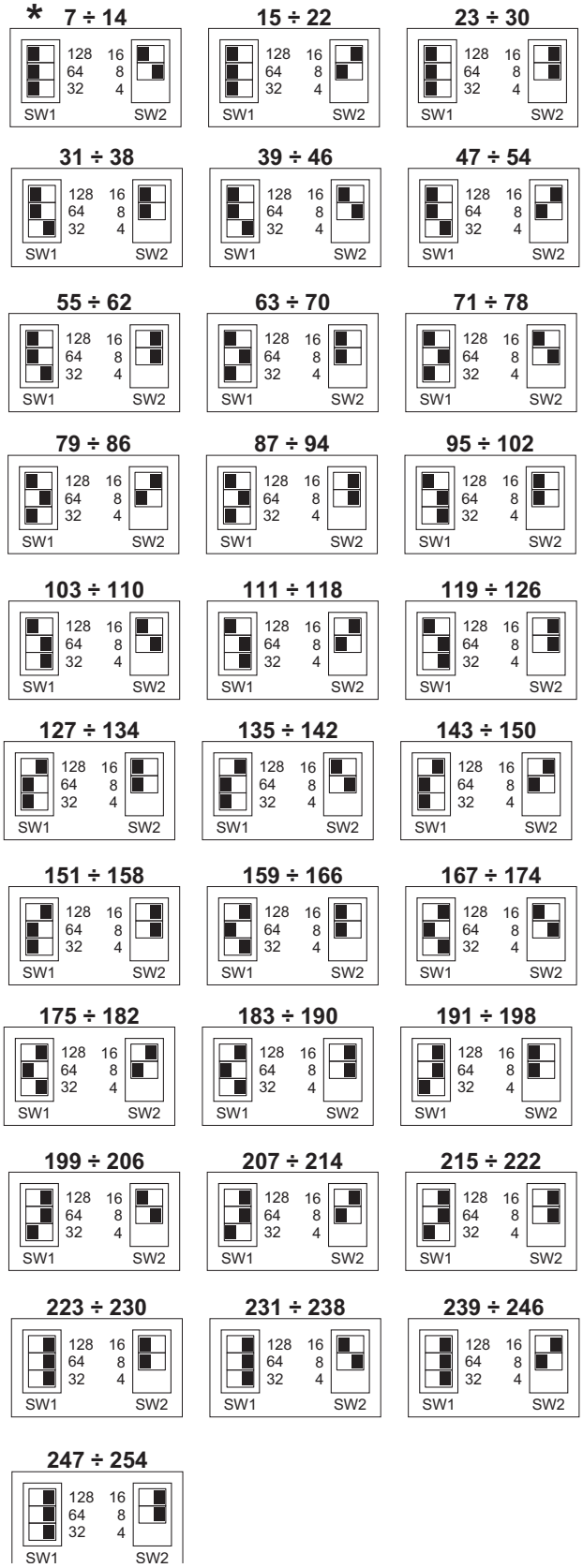
Type 8A48



Type 8A46

Tab 2 (for modules types Type 8A42, 8A44, 8A46, 8A48)

* Attention: codes from 1 to 14 may interfere with codes of the standard module push-buttons.



FOREWORD

The Galileo series of Digibus electronic entrance panels is designed to operate both on DigiBus systems with 4-digit codes (1st version) and on DigiBus systems with 8-digit codes (2nd version). For new systems, 8-digit encoding is recommended, regardless of the number of internal units. The elements in the Galileo series entrance panels enable the configuration of different types of panels. Assembly of the entrance panels requires use of the following elements: standard electronic modules, additional modules if required, module holder frames for electronic entrance panels, back boxes or surface-mounted boxes, hole cover frames or frames with rainproof covers. The choice of elements depends on the entrance panel model and relative dimensions.

Selection of the elements starts with: standard electronic modules, supplied in 3-piece packs, (audio entrance panel with keypad and numerical display, video entrance panel with keypad and numerical display, audio entrance panel with conventional push-buttons, video entrance panel with conventional push-buttons), after which additional modules can be added to enable expansion of the standard modules, and the selection of module holder frames to assemble the units. To complete the panel, the box and frame versions are selected according to the type of panel installation; surface wall-mounted or flush-mounted.

Type 3943

Type 3943/14

Type 3945

Type 3945/14

DESCRIPTION

Types **3943, 3943/14, 3945, 3945/14** correspond to 2 packages of two modules respectively, each one for the assembling of two models of electronic entrance panels:

3943 Electronic audio entrance panel with 7 push-buttons in one row and "Engaged - Please wait" LED

3943/14 Electronic audio entrance panel with 14 push-buttons in two rows and "Engaged - Please wait" LED

3945 Electronic video entrance panel with B/W ¼" CCD camera, 7 push-buttons in one row and "Engaged - Please wait" LED

3945/14 Electronic video entrance panel with B/W ¼" CCD camera, 14 push-buttons in two rows and "Engaged - Please wait" LED

The electronic entrance panels have the capability of generating up to 99999999 digital calls with different codes. Entrance panels are preset to operate alone or in conjunction with other entrance panels by properly connecting terminal blocks placed on the back of the entrance panels themselves.

The rear of the panels carries the "External Volume P1", the "Internal Volume - P3 " and the "Balance - P3" controls, which are factory set. It is recommended, should the need arise, that any adjustment to eliminate feeback at the outdoor speaker be limited to "External Volume" and possibly "Balance", turning the trimmer slowly in one direction or the other until the whistle disappears.

The panels are supplied with back-lit name-tag modules (with LED) in versions for 14 users. Moreover for the programming phase of the technical parameters, the panel can also be interfaced with programming module type 950B or with a Personal Computer by means of the software type 94CT and the interface type 6952.

COMPONENTS

Type 3A09 **Type 3A57**

Type 3943 comprises a pack containing 2 standard modules for installation of an audio entrance panel with 7 push-buttons in a single row.

The modules comprise: an audio module with speech unit (Type 3A09), a 7-push-button module with connection terminal board (Type 3A57).

Type 3A09 **Type 3A64**

Type 3943/14 is a pack containing 2 standard modules for installation of an audio entrance panel with 14 push-buttons in two rows.

The modules comprise: an audio module with speech unit (Type 3A09), a 14-push-button module with connection terminal board (Type 3A57).

Type 3A19 **Type 3A57**

Type 3945 comprises a pack containing 2 standard modules for installation of a video entrance panel with 7 push-buttons in a single row.

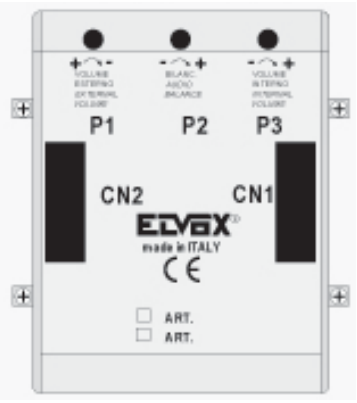
The modules comprise: an audio/video module with 1/4" b/w CCD camera and speech unit (Type 3A19), a 7-push-button module with connection terminal board (Type 3A57).

Type 3A19 **Type 3A64**

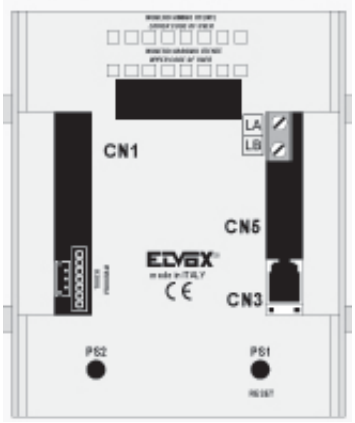
Type 3945/14 is a pack containing 2 standard modules for installation of a video entrance panel with 14 push-buttons in two rows.

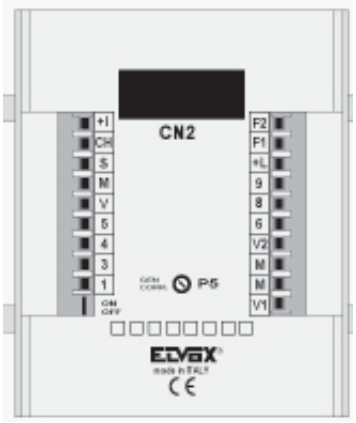
The modules comprise: an audio/video module with 1/4" b/w CCD camera and speech unit (Type 3A19), a 14-push-button module with connection terminal board (Type 3A64).

BACK OF MODULES
Type 3A09, 3A19



Electronic audio module with speech unit. The following controls are located on the back of the panel:
- P1 external volume control (speaker).
- P2 external/internal audio volume balance.
- P3 internal volume control (microphone).
- CN1 connector for connection to CN1 of module type 3A57 or 3A64 (name-tag).
- CN2 connector for connection to CN2 of module type 3A57 or 3A64 (name-tag).
- Microphone (to be fixed to the bottom end fixing element of the frames)





MODULES WITH 7 PUSH-BUTTONS (Type 3A57) OR 14 PUSH-BUTTONS (TYPE 3A64), BOTH BACK-LIT WITH LED
- PS1 RESET push-button
- PS2 Push-button to enter the programming phase.
- CN1 Connector for connection to CN1 of module type 3A09 or 3A19 with speech unit/camera.
- CN3 Connector for connection of programming module type 950B
- CN5 Connector for connection of additional modules with push-buttons type 3A38 and 3A46.
- TOUCH Connection for possible use of TOUCH KEY.
- PROGRAM Connector for updating of software (reserved for manufacturer)

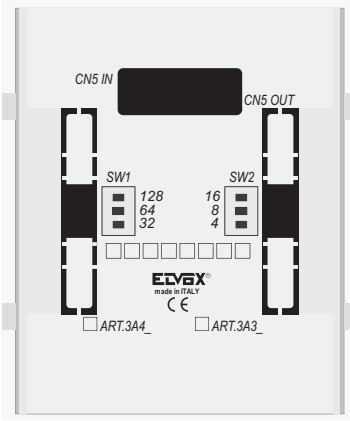
LA negative - for LED lighting (see terminal 4)
LB positive - for LED lighting (see terminal 5).
LA and LB to be connected according to the wiring diagrams.
- CN2 Connector for connection to CN2 of module type 3A09 or 3A19 with speech unit/camera.
- P5 Adjustment of the current generator (typical value 25mA)
- Terminal blocks for connection of the installation entrance panel.
- ON/OFF jumper for activation/disactivation of the power generator (ON = jumper inserted, OFF = jumper cut).

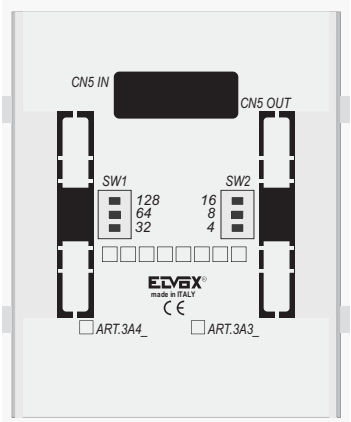
ADDITIONAL MODULES Type 3A48 and 3A46

Types **3A38, and 3A46** are additional modules with traditional push-buttons in one row (3A38) and two rows (3A46) to be connected to standard modules type 3943, 3943/14, 3945, 3945/14.
Dimensions: 120x280x30 (WxHxD)., flush-mounted back box dimensions: 111x265x45 (WxHxD).

Type 3A38

Type 3A46





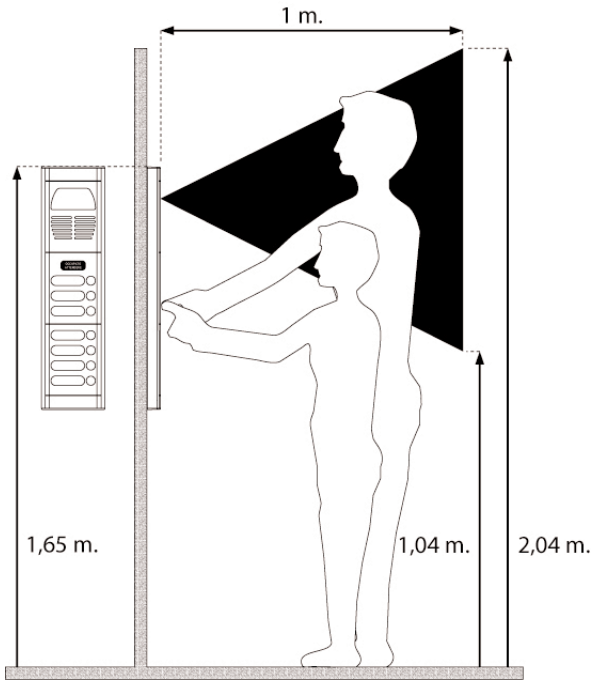
On the back of types 3A38 and 3A46 there are two units:
- CN5 IN connector for connection in series of additional modules with push-buttons to harness CN5 OUT.
- CN5 OUT harness for connection in series of additional modules to push-buttons with CN5 IN connector or for connection of standard modules type 3A57 or 3A64 to CN5 connector.
- SW1 and SW2 dip-switches for "HARDWARE" programming of module push-buttons.

N.B: for other components required for panel composition, i.e. frames and boxes, refer to "Appendix B" page 177.

INSTALLATION

The assembly and installation of the Galileo Security series entrance panels require the following phases:

1 Define the basic modules and the additional modules
2 Define the back boxes and the possible rainproof covers for surface wall-mounted and flush-mounted installation.
3 Wire the modules
4 Install the flush-mounted or surface wall-mounted back box 1.65 m high from the back box upper border to the ground level. Use the hole placed at the back of the back box to install the cables.
5 Connect the entrance panel to the installation as indicated on the wiring diagram.
6 Only if indicated in the wiring diagram cut jumper ON-OFF placed on the module with terminal blocks.
7 Carry out the panel programming (if any): "Technical Parameters" programming.
8 Close the panel



INSTRUCTIONS FOR FLUSH-MOUNTED PANEL MOUNTING

Fig. 1 The diagram shows the components of the panel:
A - Entrance panel with speech unit and/or camera
B - Entrance panel with push-button and "Engaged - Please wait" sign
C - Frame
D - Flush-mounted back box type 320S (supplied separately).
E - Special key for security screws
F - Anti-theft security key.

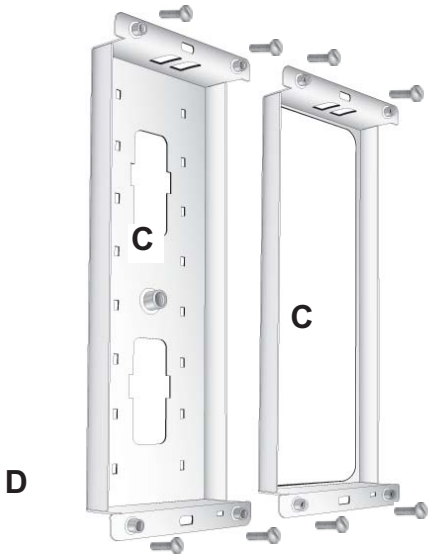
Fig. 2 These entrance panels may be matched either horizontally or vertically. In this case back-boxes are separated from the panels and frames and assembled as shown in figure 2, in order to mount them at the same height. For this purpose, special brackets are used for holding back-box in position. These brackets must be vertically or horizontally fitted.

Fig. 3 Make the holes for the electric wires to pass through, placing the wires in the correct position.

After installling the flush-mounted back box (Fig. 1, point “D”), connect the various modules as follows. After testing the equipment, fasten the plate with the security screws (point “E” Fig. 1) then definitively lock in place with the special key supplied (point "F" Fig. 1).

For the installation of surface wall-mounted entrance panels use surface wall-mounted back boxes type 330P, 332P and 333P, to be used (respectively) for the mounting of one, two or three entrance panels fitted horizontally.

Fig. 1



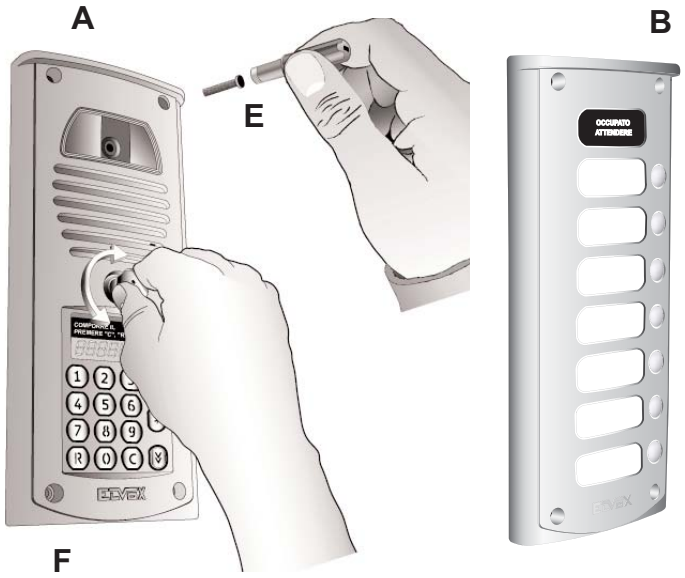


Fig. 2

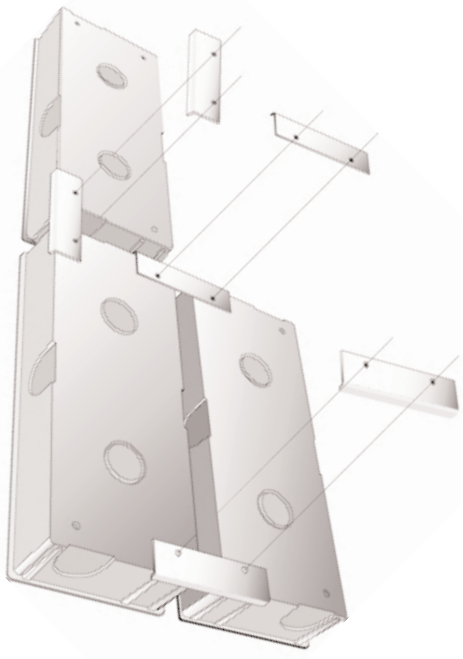


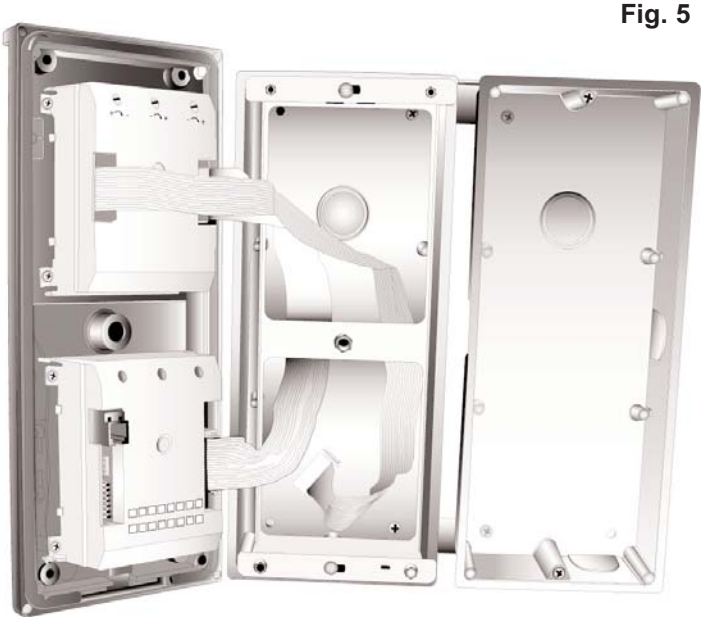
Fig. 3

Fig. 4 - The figure shows in detail the passage of connectors and respective flat cables for the cabling of different modules through the corrugated tube.

Fig. 4

Fig. 5 - Example of installation of the flat cables on the back of the entrance panel with keypad and numerical display.

Fig. 5



EXTRACTING THE NAME-TAG HOLDER

Fig. 6 - At the back of the panel, remove the box of the module by pressing the sides of the box.

Fig. 6

Fig. 7 - Press gently on the module with push-buttons to remove the name-tag holder.

Fig. 7

PROGRAMMING ADDITIONAL MODULES

Once the additional modules have been installed and wired to the standard modules carry out the push-button "HARDWARE" programming.
The "HARDWARE" programming allows the entrance panel push-buttons to be unambiguously identified with a code. If the panel "Abil. Num. Softwar" parameter is set to 0, the push-button identification codes will also be the same as the coding codes and interphone call codes or the monitor call codes. The principles for the modules "Hardware" programming of additional modules change when using entrance panels with push-buttons in one row or when using entrance panels with push-buttons in two rows.
N.B. The panel parameter relating to enabling double push-buttons, besides entering the condition of entrance panel with push-buttons in one row (value = 0) or entrance panel with push-buttons in two rows (value = 1), distinguishes also two ways of code/push-button association, therefore you should use the following tables (tab 1 and tab 2) in order to program push-buttons according to their location.

Programming push-buttons in one row (type 3A57)

On the back of each additional module are located two rows of dip-switches (SW1 and SW2) which allow you to enter the push-button identification codes according to the following table (tab 1). The identification code, entered using the dip-switches, corresponds to the 1st push-button located on top at the right hand side of the module, the other push-buttons are associated automatically with the values following the entered code (Fig. 20 and 21). Note that the basic modules are not equipped with dip-switches for push-button programming and that the push-button codes are entered automatically using values from 1 to 7 (for entrance panels with push-buttons in one row). To

Fig. 8

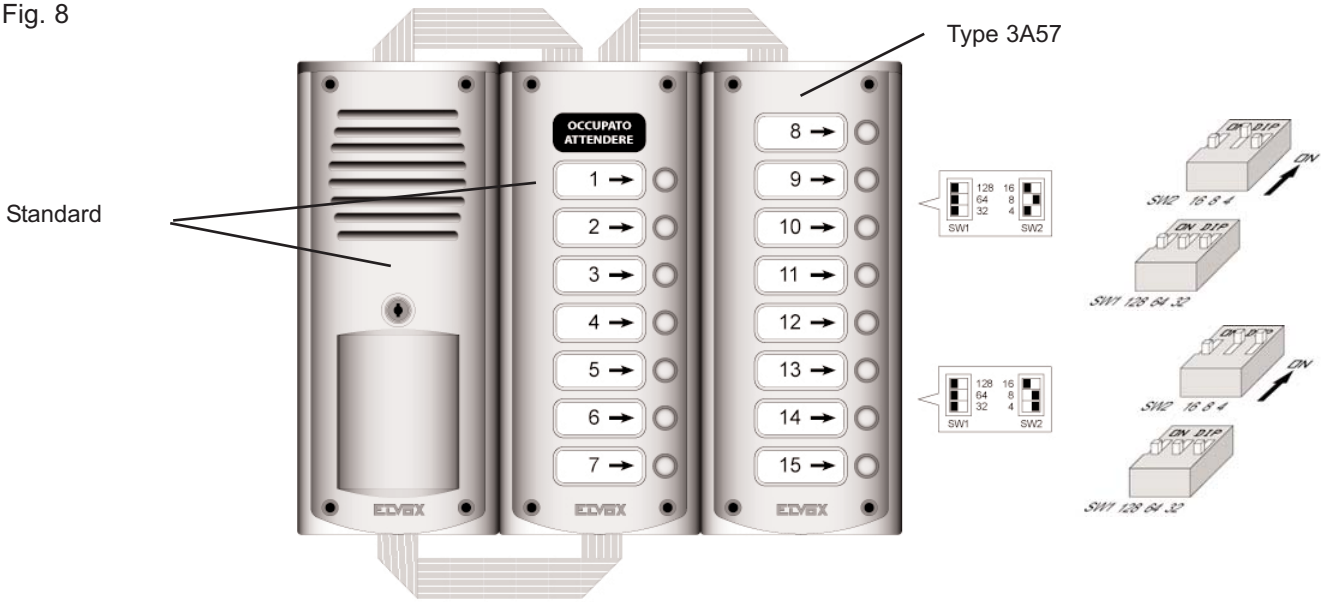


Fig. 9

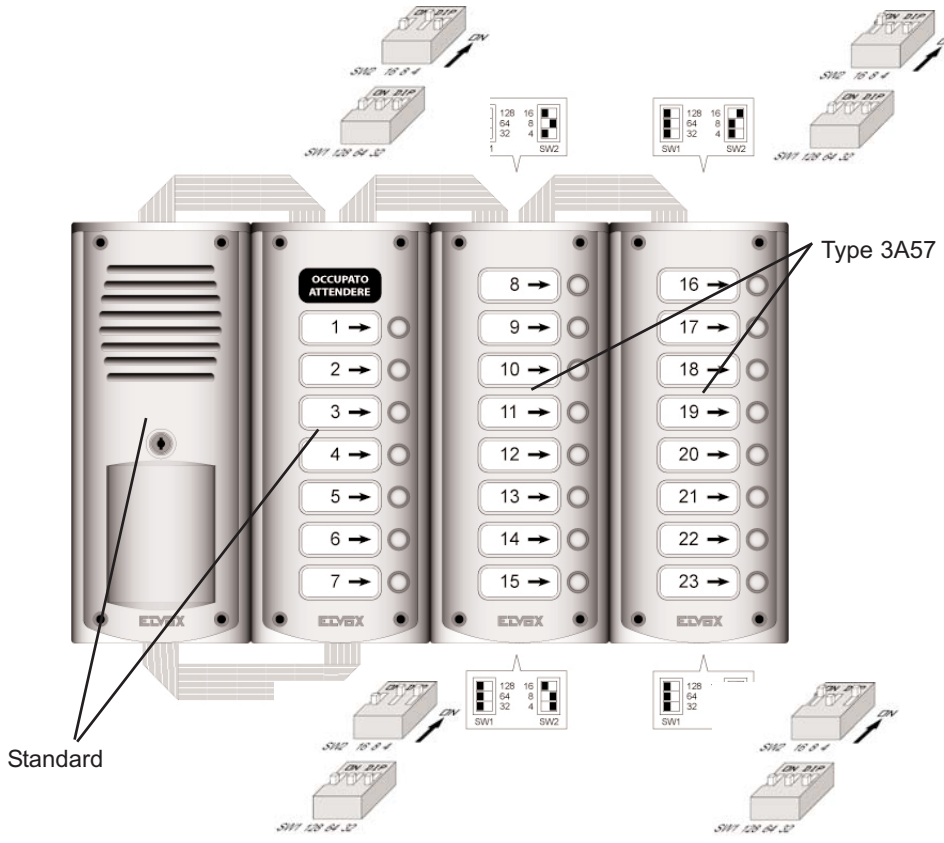
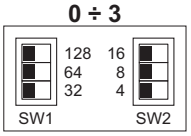


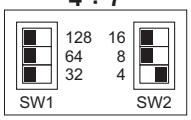
Table 1 (for modules type 3A57)

* Attention: Codes from 0 to 7 may interfere with the standard module push-button codes.

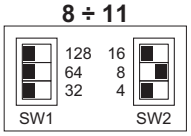
0 ÷ 3



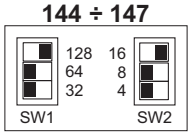
* 4 ÷ 7



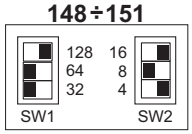
8 ÷ 11



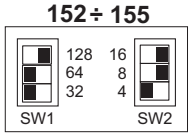
144 ÷ 147



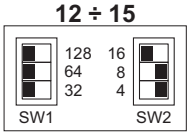
148÷151



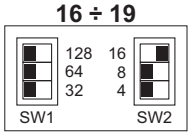
152÷ 155



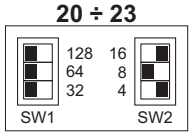
12 ÷ 15



16 ÷ 19



20 ÷ 23



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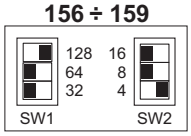
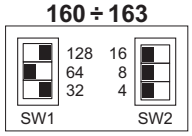
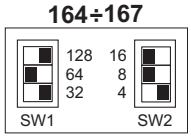


160 ÷ 163



164÷167



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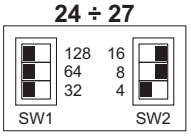

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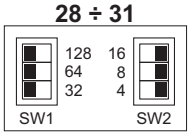

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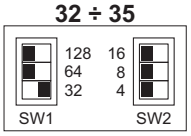

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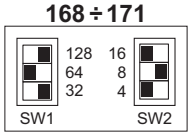
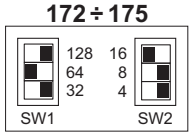


172÷175



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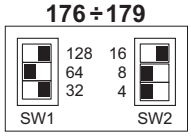

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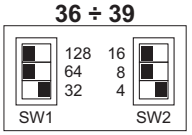

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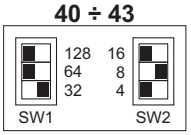

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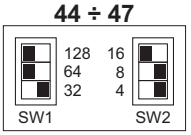

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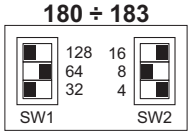

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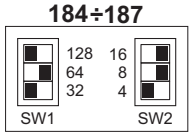

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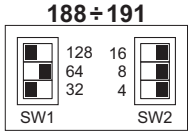

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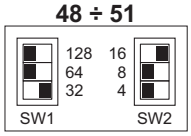

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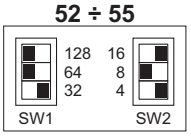

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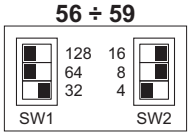

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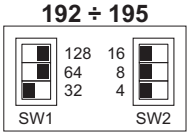

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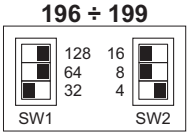

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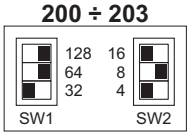

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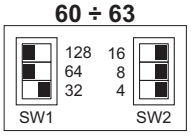

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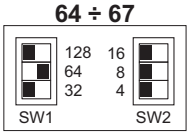
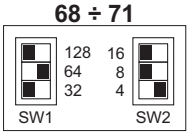


68 ÷ 71



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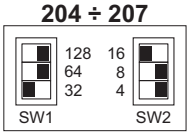

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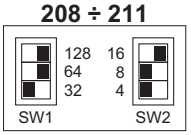
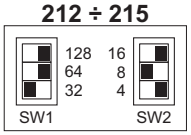


212 ÷ 215



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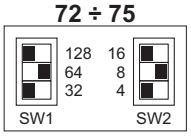
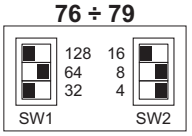
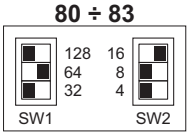


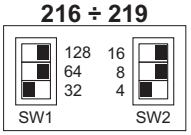
76 ÷ 79



80 ÷ 83



216 ÷ 219



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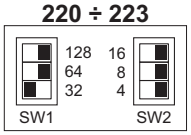
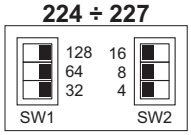


224 ÷ 227



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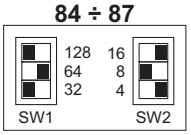
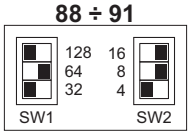
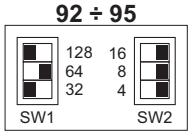


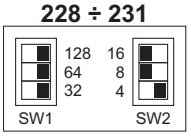
88 ÷ 91



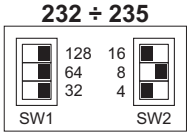
92 ÷ 95



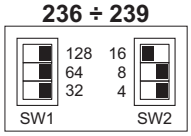
228 ÷ 231



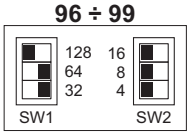
232 ÷ 235



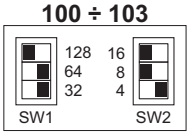
236 ÷ 239



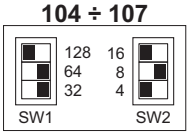
96 ÷ 99



100 ÷ 103



104 ÷ 107



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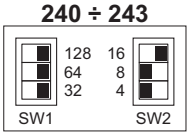
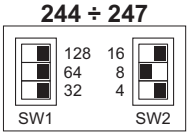
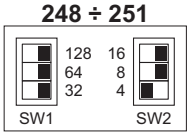


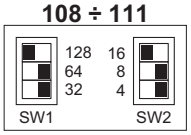
244 ÷ 247



248 ÷ 251



108 ÷ 111



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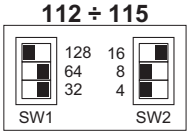
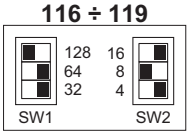
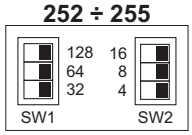


116 ÷ 119



252 ÷ 255



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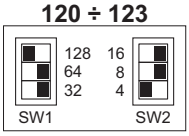

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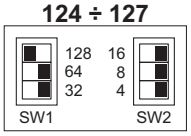

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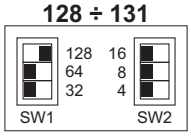
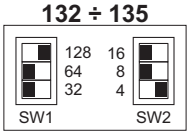
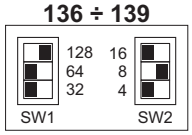


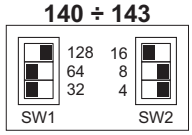
132 ÷ 135



136 ÷ 139



140 ÷ 143



PROGRAMMING PUSH-BUTTONS IN TWO ROWS (type 3A64)

On the back of each additional module are located two rows of switches (SW1 and SW2) which allow you to enter the push-button identification codes according to the following table (table 2). The identification code, entered using the dip-switches, corresponds to the 1st push-button located on top at the right hand side of the module, the other push-buttons are associated automatically with the values following the code entered (Fig. 22). Note that the basic modules are not equipped with switches for push-button programming and that the push-button codes are entered automatically using values from 1 to 14 (for entrance panels with push-buttons in two rows). For personalised programming of push-buttons , use the "Software" programming mode by means of the 950B programming module.

Fig. 10

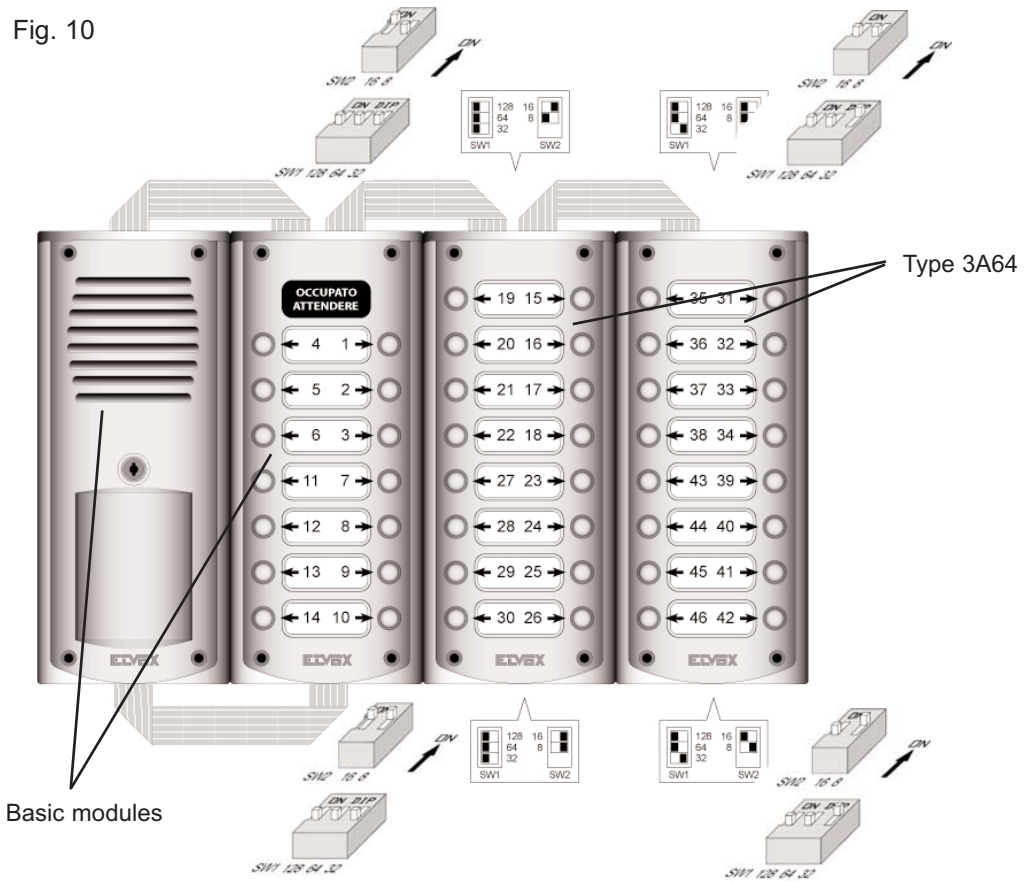
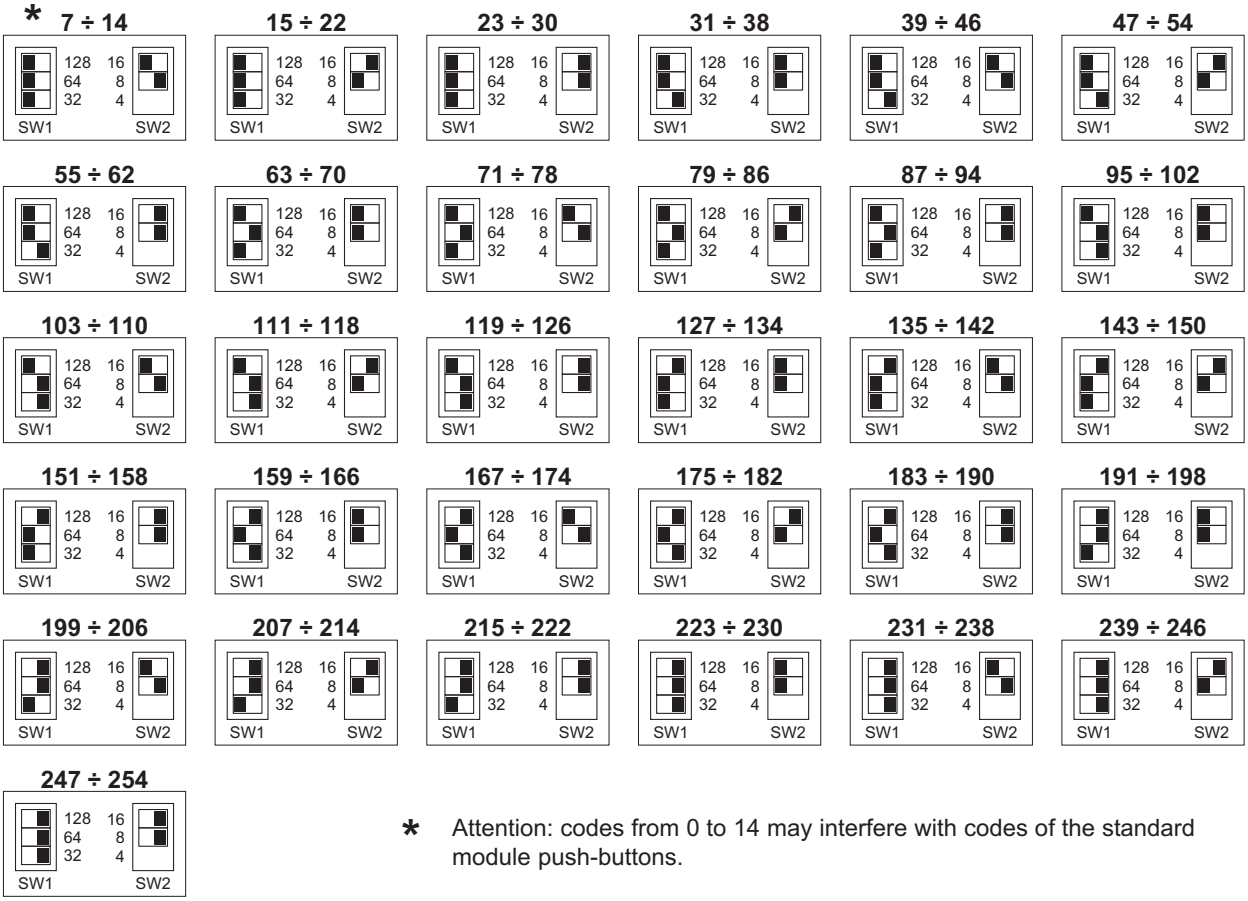


Table 2 (for modules Type 3A64)



* Attention: codes from 0 to 14 may interfere with codes of the standard module push-buttons.

PRELIMINARY OPERATIONS

Having installed and connected all the devices, power up the system and check the LEDs on the power supplies to make sure that they all supply power. Before carrying out any programming operations on the devices, wait for at least ten seconds from the moment at which the system is powered up. Then check and, if necessary, programme the operating parameters of the entrance panels and/or switchboard.

It is advisable to programme the call codes of the interphones and monitors after programming (if required) the push-buttons, the technical parameters of the entrance panels and/or switchboard.

PROGRAMMING THE TECHNICAL PARAMETERS OF THE ENTRANCE PANEL

The entrance panel is supplied with a basic programme already loaded, which can be modified by following the instructions below. Programming must be carried out if the pre-set parameters do not meet the requirements of the system. There are two ways of programming the entrance panel, with programmer Type 950B and with a Personal Computer by means of the software Type 94CT and interface 6952.

As far as the programming with type 950B and software type 94CD is concerned, see instructions concerning the two articles.

PROGRAMMING WITH TYPE 950B (for complete description refer to respective manual)

Connect type 950B (by using the CN4 telephone plug or terminals 1, 4 and 5), power the entrance panel and select "PROG.PARAM" from the 950B menu and press "OK" to confirm. The entrance panel immediately enters the programming phase, showing the message "Ser.PROG" on the display and emitting at the same time an acoustic signal (entering programming does not need any operation on the entrance panel). To scroll through the parameters (without making modifications) press the "OK" or "Arrow down" push-button several times. If necessary, modify the number on display and confirm with push-button (OK). To complete programming press "EXIT" and check (carrying out a call) for safety that the entrance panel exits programming mode.

PROGRAMMING WITH SOFTWARE TYPE 94CT "ANALYZER" ON YOUR PC:

The software allows, through a graph, the simultaneous display/modification of all useful parameters. It also allows the saving of all the programmings carried out for archiving or future replacements (and also for rapid multiple programmings). For use, see respective instruction manual.

ENTRANCE PANEL TECHNICAL PARAMETERS TABLE

No.	Parameter	Abbreviation on entrance panel display English	Abbreviation on programmer display English	Minimum value	Maximum value	Default	Description	When to change the value
1	Initial User	INITI_US	Initial User	1	99999999	1	Lowest call number (filter on the codes in transit from terminal 6 to terminal 1).	Required in building complexes.
2	Final User	FINA_US	Final User	1	99999999	99999999	Highest call number (filter on the codes in transit from terminal 6 to terminal 1).	Required in building complexes.
3	Entrance panel code	PANEL_N	Entrance panel number	0	99999999	0	Identification/call number of the panel (for calls/analysis from switchboard).	In systems with porter switchboard and several electronic entrance panels.
4	Pre-code	CIF_PRE	Preset digits	0	99999999	0	Changes the call code adding the value inserted in the parameter to the push-buttons value. This is effective only when the parameter 26 “enable is set to 0.	Optional, it allows to traslate the value of all push-buttons without modifying them one by one
5	Not used.	-------					Not used.	Not used.
6	Not used	-------					Not used.	Not used.
7	Push-button in two rows	LOC_COD	Enable double push-buttons	0	1	0	It indicates the type of “push-button” configuration: in one row (=0) or in two rows (=1)	To program in function of modules
8	Coding system	N_DIG	Number of Digits	4	8	8	Selects 4 or 8-digit system.	For systems with 4-digit coding, set the value to 4.
9	Language	LANGUAGE	Language English	0	1	0	For use with programmer Type 950B (0 = Italiano, 1 = English).	Optional.
10	Enables entrance panel operation	PA_BLOC	Lock Entrance Panel	0	1	0	Disables operation of the entrance panel (0 = No, 1 = Yes).	Optional,
11	Enables priority	PRIOR_A	Enables priority	0	1	0	Entrance panel with priority (0 = No, 1 = Yes).	Optional, but only for entrance panels in parallel.
12	Enables sequential	LOC_AB	Enables lock	0	4	1	Enable the door lock activation: 1 = the door lock is activated only by the interphone called by the respective entrance panel. 2 = The door lock is activated in sequence with that of a main entrance panel. The panel must be placed between the main entrance panel and the called interphone. 3 = Enables both points: 1 and 2. 4 = The door lock is activated in any case, also when the interphone has not been called. 6 = Function 4 + Function 2	Optional
13	Enables camera	CAMER_E	Enables camera	0	1	1	Indicates whether the entrance panel is fitted with a camera (0 = No, 1 = Yes).	Required with entrance panels supplied with internal or external camera.
14	Enables sound on camera	P_SOU_E	Enable sound Panel	0	1	1	Enables repetition of the call sound on the panel itself (0 =No, 1 =Yes).	Optional.
15	Enables self-start	AUTOS_E	Enables self-start	0	7	0	Enables self-start of the monitor /interphone by means of commands F3, F4 and F5. Add up the values of F3, F4 and F5 to indicate which functions enable self-start (0 = No, 1 = F3, 2 = F4 and 4 = F5). With 7=1+2+4 switches on automatically with F3, F4 and F5.	Optional.
16	Enables intercom	INTPH_E	Enable Intercom	0	1	0	Not used.	Not used.
17	Not used.	-------					Not used.	Not used.
18	Enables call to switchboards	S_CAL_E	Enable Call to Switchboard	0	255	0	Enables calling to main switchboards with respect to the entrance panel.	Optional.
19	Duration of conversation	CON_T	Duration of conversation	1	255	12	Maximum conversation time (in seconds x 10, i.e. 12 = 120 seconds).	Optional.
20	Duration of ringtone	SOUND_T	Duration of ringtone	1	255	1	Activation time of call signal (in seconds).	Optional.
21	Answer time	ANS_T	Answer time	1	255	30	Maximum waiting time for reply (in seconds).	Required in building complexes.
22	Time function F1	T_F1	Time function 1	0	255	1	Activation time of function F1 (in seconds).	Optional.
23	Time function F2	T_F2	Time function 2	0	255	1	Activation time of function F2 (in seconds).	Optional.
24	Door lock time	LOC_T	Door lock time	0	255	1	Lock activation time (in seconds).	Optional.
25	End of conversation With warning time	NOTIC_P	End Con. Warn.	0	255	0	End of conversation warning: after a call from an entrance panel with priority, the existing communication receives a warning that it is about to be interrupted, and is suspended after the number of seconds set (0 = no warning).	Optional.
26	Enables software coding of push-buttons	NC_PRED	Enables software coding of push-buttons	0	1	0	Enables push-button coding in "Software" made the push-button coding is to made by programmer type 950B	Optional
27	Enables the window above	A_FINUP	Enable Window Up	0	1	1	Enables the "initial user" - "final user" filter also for data in transit from terminal 1 to terminal 6 of the entrance panel (0 = No, 1 = Yes).	Optional, but only for building complexes.
28	Not used.	-------					Not used.	Not used.
29	Reserved parameter	RESERV	Param.Reserved	0	255	1	Reserved parameters can be displayed by entering a secret code.	As indicated by the manufacturer Not used.

N.B.: The heading "optional" indicates that it is not necessary to change the parameter, but that it can be changed at the discretion of the installer (e.g. conversation time, door release codes, etc.).

Description of functions:

- **Initial User "INITI_US" (1) and Final User "FINA_US" (2).** To be programmed in the case of a system for a building complex. The two values must be set only on the secondary entrance panels. These two parameters serve to switch the secondary entrance panel to the engaged state when a call is being made from another entrance panel or from a switchboard with a number between the lowest and the highest number. The call must originate from a main entrance panel or from a switchboard and not from another secondary entrance panel. When the entrance panel is in the engaged state, no operations can be performed. If the call number is not between the lowest and the highest number, the secondary entrance panel does not go into the engaged state and it is therefore possible to make calls to the riser.

- **Entrance panel code "Panel number" (3).** This is the call code to assign to the entrance panel (similar to the interphone code). It does not need to be set on systems with 4-digit coding. It may be necessary to programme this code in the following cases:
  1) On systems for building complexes consisting of secondary entrance panels and a 945B switchboard, when you want to make calls from the secondary entrance panels (upstream) to the porter switchboard. In this case it is possible to call back the secondary entrance panel from the switchboard and communicate.
  2) When you want to use the entrance panels in conjunction with the "Software" switchboard (Type 94CD). In this case, it is possible to activate the various functions from the switchboard (door release, F1, F2, etc.) on each entrance panel in the system. It is also possible to analyze (and change) the individual parameters of each panel from the switchboard.

  NB: In either case, bear in mind that the entrance panel number must be unique and different from the call codes of the interphones and monitors.

- **"Preset digits" (4):** It is a constant number which is added to the push-button "Hardware" value, modifying the call code sent from the panel to the interphones or monitors. This parameter allows you to tranfer automatically the value of all push-buttons. The following parameter is not involved if parameter 26 "Soft Num. Enable" is active.

- **Technical programming code "TECH_PAS" (5)**. You are advised to modify this value. It is the number required for programming technical parameters using the programming module type 950B. If the value is set to "0000" no code is required, otherwise enter the code on the programming module keypad and press  .

- **Push-buttons in two rows: "LOCK-CODE" (enable double push-buttons) (7)**. The parameter must be programmed according to the push-button location on the modules: set it to 0 for push-buttons in one row and to "1" for push-buttons in two rows. The following parameter determines also the push-button "Hardware" programming mode.

- **Coding system for "N_ DIGIT" (number of digits) (8)**. Parameter with 4 digits is to be used only when Digibus range products using 4 digit code (not 8 digits code) are installed.

- **Language (9).** To be programmed at your discretion. The function refers only to the programming phase of the entrance panel with Type 950B. If the parameter is set to "1", the programmer Type 950B displays the parameters in English; otherwise they are displayed in Italian.

- **Enable entrance panel operation "PA_BLOC" (10).** To be programmed at your discretion. If the parameter is set to "1", this prevents calls from being made to the monitor/interphone riser covered by the entrance panel. The same happens if the entrance is not connected.

- **Enable priority (11).** To be programmed at your discretion in the case of a system with entrance panels in parallel. By activating this function, the entrance panel does not go into the engaged state when another entrance panel, in parallel with the first, makes a call. In this state, the entrance panel with priority can interrupt a conversation in progress to make another call. This function only affects entrance panels connected in parallel with each other; for systems for building complexes the secondary entrance panels still go into the engaged state if the call originates from a main entrance panel or a switchboard.

- **Enable sequential lock (12):** To be programmed at your discretion. The function affects the activation of terminal "S" for the lock release and refers to the entrance panel when it is in secondary position (secondary entrance panel) as to other panel or switchboard.
  Its possible combinations are:
  0 = Lock is realeased only by the interphone called by the calling entrance panel.
  1 = Lock is released in sequence with the lock of a main entrance panel. The panel must have been installed between the main entrance
  panel and the called interphone.
  2 = The lock is released by the switchboard
  3 = Enable both points: 1 and 2.
  4 = The lock is released in any case, also when the interphone has not been called.

- **Enable camera (13).** To be programmed with type 3943/... - 3943/14 entrance panels. Indicates that the entrance panel is of video type 3945/... - 3945/14. This makes it possible to manage switch-on and switch-off of the monitors in the system in the correct way.

- **Enable sound in entrance panel (14).** To be programmed at your discretion. Activating this function activates the sound signal emitted by the entrance panel at the same time as sending of the call.

- **Enable self-start (15).** Enables the entrance panel itself to be self-started by an interphone/monitor. To operate in this mode, the interphone/monitor must be configured with the appropriate key and the entrance panel must have the 8-digit "coding system" parameter (see parameter number of digits). In this case the self-start key on the interphone (which enables self-start on a maximum of 3 different entrance panels) sends cyclically each time it is pressed, the commands F3, F4 and F5; i.e. the first press sends the F3 command (and emits the confirmation sound), the second press sends the F4 command (emitting 2 sounds) and the third press sends the F5 command (3 sounds). If you press the key again, the sequence repeats itself (NB: 30 seconds after pressing the key, the sequence returns to its initial state, i.e. F3 command). To enable the self-start function according to one of the commands F3, F4 and F5 or according to a combination of the three, assign to the parameter the values set out in the table below:

Command parameter value "Self-start enabling"	Command "Self-start commands"
0	None
1	F3
2	F4
3 (1+2)	F3 and F4 (with either F3 or F4)
4	F5
5 (1+4)	F3 and F5
6 (2+4)	F4 and F5
7 (1+2+4)	F3, F4, F5

- **Enable call to switchboard (18):** the parameter value indicates the panel push-button (0 = none) to be used to call the porter's switchboard, when the latter is a main unit with respect to the entrance panel.

- **Duration of conversation (19).** To be programmed at your discretion. This is the time, expressed in tens of seconds (e.g.: 12=120 sec), which the entrance panel controls from the moment at which the handset is picked up after the call. On expiry of this time, the entrance panel switches off the interphone.

- **Duration of ringtone (20).** If the system includes secondary entrance panels (building complex) or a switchboard, the activation time of the call signal of the main entrance panel must be greater than 1 second compared with the corresponding time, set on the secondary entrance panels or the switchboard. In other cases, the parameter can be changed at the discretion of the installer. This parameter represents the time, expressed in seconds, for which the entrance panel activates the terminal CH. Terminal CH activates the call generator in the power supply units Type 6941 and 6948. If terminal CH is connected to power supply, the call duration is determined by the time programmed on the panel.

- **Answer time (21).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel waits from the moment at which the call is terminated to the moment at which the handset of the interphone is picked up. If the handset is not picked up within the reply time, the entrance panel switches off the interphone. If, however, the handset is picked up before the time expires, the entrance panel starts counting the conversation time.

- **Function time F1 (22).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal F1. Terminal F1 serves to activate a relay connected to terminals R1 and 4 of the power supply units Type 6941, 6942 and 6948. If terminal F1 is connected to the power supply, the relay activation time is determined by the time programmed on the panel.

- **Function time F2 (23).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal F2. Terminal F2 serves to activate a relay connected to terminals R2 and 4 of power supply units Type 6941, 6942 and 6948.
  If terminal F2 is connected to the power supply, the relay activation time is determined by the time programmed on the panel.

- **Lock time (24).** To be programmed at your discretion. This is the time, expressed in seconds, for which the entrance panel activates terminal S. Terminal S serves to activate the lock connected to terminals 15 and S1 of the power supply units Type 6941, 6942 and 6948.
  If terminal S is connected to the power supply, the lock time is determined by the time programmed on the panel.

- **End of conversation warning time (25):** Used in building complexes. If different from 0, it avoids the panels with priority 0 ("Enable priority" paramater = 0) (which should be interrupted because of a call in transit) to be put on stand-by. Practically, when a call is routed, the panel which should be engaged, first emits an acoustic notice signal displaying the message "END CONV", then it waits for the set time (it is the set value expressed in sec. (for example: 3 = 3 sec.) to go on with the call.

- **Enables software coding of push-buttons (26):** If set to 1, the press of a push-button, instead of sending its Hardware number (which depends on the physical location of push-buttons) sends the corresponding previously associated Software number to a proper internal storage. To do this job correctly every push-button on the panel must be associated with its corresponding software number. This can be done using the programming module Type 950B or Type 94CD.
  Through this association the location of the routed numbers becomes completely independent from the physical location of push-buttons.

- **Enables the window above (27).** If set to 1 (default value) the window (i.e. the interval between the "first user" and the "last user") operates also with commands from "upstream" to "downstream" (i.e. coming from the interphone [or from who is upstream] and routed to the external). This function is meaningful (and therefore the parameter must be modiflied correctly) only in case of a building complex with entrance panels in parallel connected in parallel even underneath (i.e. with terminals 6 in parallel between them and terminals 1 between them). This configuration allows calls to be made backwards even on entrance panels connected in parallel. In this case among the n entrance panels in "double" parallel, only one must have the "enable window up" parameter set to 0, while the others must have it set to 1.

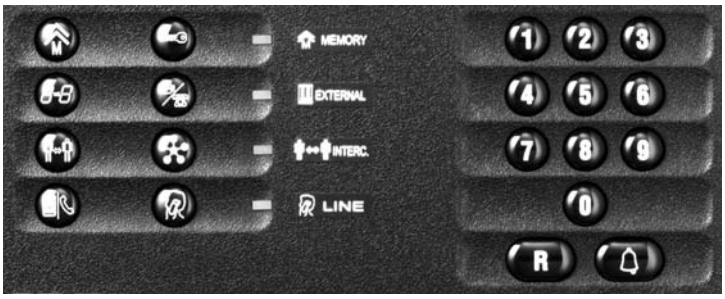
- **Reserved parameter (29).** The parameter must only be changed if directed by the manufacturer.

Terminals		Description
+I)	Monitor shutdown control terminal	The terminal is activated to switch off the monitor connected to the cable riser at the start of a call and at the end of a conversation. The terminal must be connected to power supply 6948 if specified on the diagram.
S)	Electric lock activation control terminal.	The terminal is activated when the entrance panel receives a door lock release code or when the lock is released via the panel keypad. The terminal remains active for the time set in parameter 24. The terminal must be connected to power supply 6941, 6942 or 6948 if specified on the diagram.
F2)	Auxiliary function 2 activation control terminal.	The terminal is activated when the entrance panel receives the code for the second auxiliary function. The terminal remains active for the time set in parameter 23. The terminal must be connected to power supply 6941, 6942 or 6948 if specified on the diagram.
F1)	Auxiliary function 1 activation control terminal.	The terminal is activated when the entrance panel receives code for the first auxiliary function. The terminal remains active for the time set in parameter 22. The terminal must be connected to power supply 6941, 6942 or 6948 if specified on the diagram.
+L)	Panel active terminal	A voltage of 11V D.C. is delivered from the terminal each time a call is made from the entrance panel. The voltage is set to zero at the end of a conversation. The terminal can be connected to the relay Type 170/001.
CH)	Call signal activation control terminal.	The terminal is activated when a call is made from the entrance panel or when the entrance panel is used to call an internal unit via a main entrance panel or switchboard. The terminal remains active for the time set in parameter 20. The terminal must be connected to power supply 6941 or 6948 if specified on the diagram.
8)	Terminal for voice signal in building complex.	The terminal enables the changeover of a conversation between the interphone/monitor cable riser (terminal 3) and the main entrance panel or switchboard.
6)	Terminal for digital signal in building complex.	The terminal enables the transmission and reception of digital codes between the entrance panel and the switchboard or between an entrance panel and main panel.
V2)	Video signal earth terminal.	A 75 Ohm closure resistance is connected to the terminal as specified on the diagram, or the core of the coaxial cable as output of the video signal for connection of entrance panels in series.
M)	Video signal earth terminal.	The terminal used as a sheath of the coaxial cable.
V1)	Video signal input terminal.	The coaxial cable from the main entrance panel or from the power switchboard camera is connected to the terminal.
5)	+13.5V D.C. supply voltage terminal.	The supply voltage must be between 11.5V D.C. and 13.5V D.C.. Maximum entrance panel consumption is approx. 300mA.
4)	Negative supply voltage terminal.	
3)	Terminal for voice signal to interphone/monitor cable riser.	The terminal enables conversation between the panel, the switchboard, the monitor, interphone and the digital distributor. The call signal from the power supply is also connected on this terminal.
1)	Terminal for digital signal to interphone/monitor cable riser.	The terminal enables digital communication between the switchboard, monitor, interphone, digital distributor and the stairway entrance panel.
V)	Video signal output terminal.	The core of the coaxial cable related to the monitor cable riser is connected to the terminal.
M)	Video signal earth terminal.	The terminal used as a sheath of the coaxial cable.

PORTER SWITCHBOARD Type 945B AND 945B/I

DESCRIPTION

Porter switchboard in desk-top version with black thermoplastic housing. This switchboard can call up to 99999999 users using a 20-key keypad which serves to enter user numbers, make calls, activate intercom or conference functions (excluding the building complex), release the door lock and for F1-F2 functions and to cancel the operation currently in progress. The switchboard can store up to 30 different calls (displayed by using the memory scroll button) and is equipped with a clock (with time and date) and two wake-up call functions. Option to manage a printer (use switchboard Type 945B/I with printer interface).



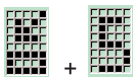
MANAGING THE DISPLAY (40X2):

The switchboard display is (in its typical operation state) divided into 5 main zones in order to allow an easy and immediate distinction of all data displayed.

UPPER LINE
3 zones may be distinguished:
Left hand side: display of all outgoing messages, and also particular information signalling.
Centre: display of the number to be dialled (8 digits) or the respective message on its left hand side
Right hand side: display of the current time.

LOWER LINE
- Left hand side: display of all incoming messages (from internal units or from external lines), followed by respective number.
- Right hand side: display of a series of "icons" able to show in a graphic way a wide series of states/functions.

"ICON" DESCRIPTION

 (box with an arrow, followed by a number): It shows that there are calls (or other commands) in the memory (5 = number of queued calls)

 (Telephone handset): It means the handset is lifted.

 (Arrow toward the wire at the left hand side): It indicates intervention in the conversation line by the switchboard's operator).

 (Key): It means there is a lock release or a function activation in progress.

 (Bell in movement): It means there is a call in progress (ring). Is then being replaced by an "A" indicating a "Wait for the answer" and then by a "C" indicating a "Conversation in progress" (NOTE: with handset hung up).

 or  (Telephone in movement): It means there is a connection with the telephone line.

 (Lock): Indicates "locked keypad" by an external key. (Int) (Ext): Indicates the switchboard state (Internal or External mode).

 Exclusion of sound (by using R+3).

 (Lock in movement): Indicates 'locked keypad'. Moreover, the display switches its operation if there is any particular function.

QUICK GUIDE

- Parameter programming (R+4) + code
- Displaying the date-time-wake up (R+2), (or R+"8->8")
- Entering the code for keypad lock (R+1)
- Activation of accessory functions (KEY)
- Programming the events to store (R+ M)
- Programming the events to print (Press again the M push-button)
- Setting the time for wake up service 1 (Press again the M push-button)
- Setting the time for wake up service 2 (Press again the M push-button)
- Setting the time (Press again the M push-button)
- Setting the date (Press again the M push-button)
- Exclusion - Re-activation of audio sound  R + 3

STORED CALLS

- Possibility of storing different types of "events": calls from interphones, activation of: different functions, door lock release, calls from switchboard. The selection of the type of events to store is managed by interactive menu type display (see "OPERATION OF MENU PROGRAMMING").
- Besides the type of message concerning the type of event and the calling number, the time of the event is stored.
- Maximum number of stored messages: 30 with circular queue (i.e. the latest 30 more recent events are stored).
- Storage of events on the watch backed up RAM (by means of a proper capacitor). In case of mains failure there is no loss of stored data.
- The events may be sent to a printer simultaneously (option with interface type 945B/I).
- In case of events stored in the memory, a special flashing icon is activated (arrow toward the box ) on the display and also the number of stored messages. As soon as a message is read it gets cancelled and the number decreases .
- A sound simultaneous with the event reception is generated (programmable).

INTERNAL CLOCK WITH DATE AND TIME AND 2 WAKE UP SERVICES

It is always possible to display the present date and time. The internal clock is "backed up" (by means of a capacitor) in case of mains failure **(capacitor supply duration: about 4 days)**. Two wake up services may be also programmed.

AUDIO EVENTS

Different types of sounds are used for different types of event (call from riser, from external lines, wake up service etc.). The sounds may be also programmed with musical melodies by means of a special software and an interface connected to a personal computer.

"SOFTWARE" LOCK KEY

The switchboard keypad may be locked by means of the "software key".

SIMPLIFIED MANAGEMENT OF THE "INTERNAL-EXTERNAL" MODE PUSH-BUTTON.

Now the "Internal-External" push-button (I/E) has only the function to switch from the internal to the external mode. In this new version there is no keypad lock activation. At any time it is possible to recognize the switchboard state: a symbol on the bottom on the right hand side of display (icon zone) indicates the mode ("I" for internal mode and "E" for external mode). On external mode also the respective "EXTERNAL" mode LED switches on. NOTE: the state is memorized in EEPROM and is kept stored even in the event of mains failure.

MANAGING THE PRINTER

- The printer is connected by means a special optional interface, which can be fitted in the switchboard.
- Any printer equipped with a parallel circuit may be connected (but not a dedicated printer). The internal software manages the different models.
- A wide range of data may be selected (either on reception or on transmission).

CIRCUIT BOARD RE-PROGRAMMING "IN-CIRCUIT".

The circuit board may be easily programmed "in-circuit" by means of a suitable connector (particularly useful for special versions).

POSSIBLE CONNECTION TO A PC

By means of a computer equipped with appropriate software and interface it is possible to download the data (events in memory), to manage the configuration parameters, to manage the names in the memory (optional), and to set various functions.
It is also possible to modify the musical melodies, to record events directly and to run a partial switchboard self-test.

PROGRAMMING THE SWITCHBOARD PARAMETERS

The switchboard is delivered with a basic program already installed, which can be modified by following the instructions. Programming is necessary if the pre-programmed parameters do not satisfy the installation requirements.

A) Entry to programming mode using the front switchboard keypad

Press push-buttons "R" and "4" simultaneously on the front keypad. When a series of symbols "########" is displayed on the screen, type in code "123". If the above sequence has been correctly performed "PROGRAM" will be displayed on the LCD screen. If this is not the case, repeat the entire procedure.

Once you have entered programming mode use the bell button  to scroll the following parameters and the number keys to modify the associated values. In the case of error, only use the number keys to correct the value entered. Press push-button  to confirm any changes. On completion of programming, press push-button  and then R to exit the technical programming function.
Parameters may be programmed and consulted as and when required.
Parameter settings are stored in the memory even in the event of power failure until next edited.

Switchboard technical parameters table

Parameter	Minimum value	Maximum value	Set value	Description
Initial user	1	99999999	00000001	Only for building complex
Final user	1	99999999	99999999	Only for building complex
System Number	1	99999999	00000000	Assigns a code to the switchboard (for direct call from entrance panel or remote programming).
----------	1	99999999	00000000	Not used
Technical prg. key	0	9999	00000123	Technical programming access code
Dis switch keypad	0	9999	0000027	Switchboard keypad disable code
* Number of digits	4	8	000004	4/8 digit selection
Language	0	1	000000	0 = Italian language 1 = English language
Entr. Pan. Prefix	0	99	000099	The two digits indicate the call function from the entrance panel to the switchboard
Lock abilit	0	1	00001	Enables transit of door lock activation (0 = NO, 1 = YES)
Camera abilit	0	1	00001	Indicates camera/monitor for switchboard (0=NO, 1=YES).
Sound enable	0	2	00002	0= Disable all ringtones 1= Enables internal call ringtone 2= Enables external and internal call ringtone
Ring time enable	0	1	00001	Sound enabling for the clock signal
Function Vis. enable	0	1	00001	Function display enabling
Switchoard dialling code	1	255	00000000	The two digits indicate the call function from switchboard to switchboard
Call rip. number	1	255	00003	Enables the switchboard ringtone for the programmed intervals
Conversation time	1	255	00012	Maximum conversation time (time = value x 10 seconds; 12 = 120 seconds)
Ring duration	1	255	00001	Call signal activation time (time = value x 1 second)
Answer time	1	255	00030	Relay delay time (time = value x 1 second)
F1 time	1	255	00001	EM1 auxiliary function activation time (time = value x 1 second)
F2 time	1	255	00001	EM2 auxiliary function activation time (time = value x 1 second)
Lock time	2	255	00001	Door lock activation time (time = value x 1 second)
Printer Set	0	255	00001	Printer setup
Reserved parameter	0	1	00000000	Reserved parameter

press R to exit

Same parameter as that of the entrance panel and internal product programming (interphone-monitor).

OPERATION

DISPLAYING THE TIME - DATE - WAKE UP TIME-TABLE

The time is always displayed at the top on the right hand side of display.

To display other data press push-buttons R+2 (or R+Number transf. [8->8]), and the following message will appear:

DATE: 14/02 15:30:35
AL.RING: 12:30 & 18:30

ACTIVATION OF LOCK RELEASE, F1, F2 AND OF THE ACCESSORIES FUNCTIONS F6, F7, F8:

If you press the “Key” push-button, the following menu will appear:

SELECT OPEN?
(0=LOCK; 1=F1; 2=F2; 6=F6; 7=F7; 8=F8).

If you press a number push-button, the respective command is activated. Besides the normal door lock ("O" push-button) it is possible to activate Function 1 (push-button 1) and F2 (push-button 2). In this case, activation acts on the appropriate pin and sends the corresponding digibus command downwards (to any main entrance panels).

Pressing number push-buttons 6, 7 or 8, however, sends an auxiliary command (F6, F7 or F8) to a possible auxiliary relay (type 170D) in order to allow other possible external functions (stair light, irrigation etc.) to be activated (other 5 external functions (max) may be activated besides the door lock).

In all cases, during activation time the "key" icon is simultaneously activated.

SWITCHBOARD LOCK BY MEANS OF A SOFTWARE KEY

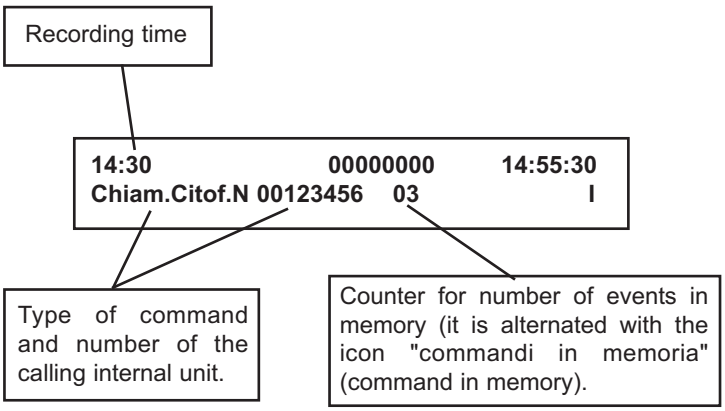
The keypad can be completely locked by inserting a password. This password must be previously stored in the technical parameters (parameter = "SW LOCK PASSWORD") with a number between **1 and 32000**.

To lock the keypad with a password, press the R+1 keys simultaneously. You will be asked to enter a password:

```
Cod. Bloc. Tas. ?
--------
```

Enter the password and press C (default password=27)
The switchboard keypad is now blocked. The display shows the "keypad locked" message . Transit and calls toward the switchboard are in any case completely active.
To release it repeat the same procedure repeating the same password.
To modify the password go into parameter programming (by pressing "R+4")and set the parameter "Chiave Bloc. Sw." with the desired password value.
NOTE: The lock operates even during a mains failure.
CONFIDENTIAL: If you forget the password enter programming mode by using the push-buttons on the lower side. Press PS2 and release it, press PS1 and keep it pressed until the message PROGRAM appears and check the password in the analog parameter in the memory.

QUEUE OF STORED CALLS:
The buffer memory keeps the last 30 requests from internal units (calls and/or F1 and/or F2 and/or door lock releases, according to the programming) complete with the reception time. In this case a special event counter with icon (box with arrow) signals the number of events in the memory on the display (and the appropriate LED illuminates).



You can scroll the events by pressing the "MEM" push-button. Pressing the "transfer number" push-button (8->8) retrieves the number from the memory and transfers it to the call display, so that it can be called upon request. The event counter therefore decreases the event number.
To clear the buffer memory completely and automatically press push-button  and keep it pressed for about 3 seconds. A short tone and the event counter cancellation will confirm the complete clearance of the buffer.

PROGRAMMING MENU

In the switchboard it is possible to program a series of accessory functions, such as:
- TIME AND DATE
- 2 WAKE-UP SERVICES
- THE TYPE OF COMMAND YOU WANT TO MEMORIZE IN THE RECEPTION BUFFER (AND SIGNAL IT WITH A MELODY)
- THE TYPE OF COMMAND YOU WANT TO SEND TO THE PRINTER (OPTIONAL).

There is a specific menu for entering these functions, which can be selected by pressing push-buttons R+  simultaneously (memory). The first selection function appears on the display (COM. TO MEMO?). If it is the desired item you must type in the required value and then press C, or go to the next function by pressing push-button  several times until reaching the required item. The various functions are described below (in the order in which they appear):

1) PROGRAMMING THE COMMANDS TO BE STORED ("COM. TO MEMO" on display):
Selects the commands (received by the serial) to be memorized in

```
COM. TO MEMO ?                015
1=CH; 2=F1; 4=F2; 8=LOCK
```

As shown on display, press 1 to activate the storage of calls from interphone (CH), 2 for command F1, 4 for F2, and 8 for door lock release (LOCK). If you want to enable the storage of more functions press the sum of values (For example: if you want to memorize CH, F1 and F2, type in 7 (1 =CH +2 (=F1) + 4 (=F2). On the right hand side of the upper line the current programmed value is displayed (15 = all commands).
Press C to enter the new value or R to exit without modifying.

2) PROGRAMMING THE COMMANDS TO PRINT ("COM. TO PRINT" on display):
Selects the commands to be sent to the connected printer (optional).
Obviously in this case the switchboard must be connected to an external printer by means of a proper interface (on a parallel port).

```
COM. TO PRINTER ?             031
1=CH; 2=F1; 4=F2; 8=LOCK; 16=CENT
```

According to display, press 1 to activate the printing of calls from interphone (CH), 2 for commands F1, 4 for commands F2, 8 for door lock release (LOCK) and 16 for all calls made by the switchboard. If you want to enable the printing of more functions press the sum of the values (for example: if you want CH and F2, type in 5 (1 = CH) + 4 (=F2).
On the right hand side of the upper line the current programmed value is displayed (31 = all commands).
Press C to enter the new value or R to exit without modifying.
NOTE: If a printer is not connected, it is advisable to set this parameter to 0 (so as to avoid unnecessary delays).

3) PROGRAMMING THE WAKE UP SERVICE N. 1 ("RING 1 (hhmm) on display):
Sets an internal daily wake-up call. It will be repeated every day at the programmed time.

```
RING 1 (hhmm) ?               1230
(NB:  9999=No Ring)
```

If you want to enable the wake-up call time, type in the hour and the minutes written in a single 4-digit number (hhmm as prompted by the display, hh=hour, mm=minutes). (For example: to set the wake-up call for 8:15, type in 0815). Then press C.
On the upper line of the right hand side the value previously programmed is displayed (12:30).
Dial 9999 to disable the wake-up (No ring).

4) PROGRAMMING THE WAKE UP SERVICE N. 2 ("RING 2 (hhmm)" on display):
It is possible to set a second wake-up call.
Operation is the same as for the first.

5) PROGRAMMING THE TIME ("TIME (hhmm) on display):
To set the present time operate in the same way as you do for the wake-up services (For example: to enter 17:08 dial 1708 followed by push-button C).

TIME (hhmm) ?	1530

To enter the hour and the minutes press push-button "C".
On the upper line of the right hand side the present programmed value is displayed.
N.B. Press push-button R if you do not want to modify the value.

6) PROGRAMMING THE DATE (DATE "dd mm aa" on display)
To program the date operate in the same way as the previous ones by dialling first the day and then the month (1-12) (For example: to enter February 25 enter 2502 followed by push-button C).

PRINTING ACTIVATION
By means of the switchboard it is possible to print (with the reception time) all incoming calls, and possibly also the activations of functions F1, F2, lock release and calls made by the same switchboard.

1) To carry out the printing you must have, besides the printer with parallel cable, a proper interface Type 945/I (installed on the base of the same switchboard). The printer parallel cable must be connected to the socket for printer (CANNON 25 pins) placed on the rear panel of the same switchboard.

2) From the programming menu (push-button R+ (M)), select option (2) “Programming of commands to be sent for printing” ("COM. TO PRINT" on display) to select the command you want to be sent for printing (for its use see above, point 2 of programming menu).
3) By means of the "Printer Setup" parameter, whose default value is 0, it is possible to set printing mode according to the type of printer connected (see below, "Setting the type of printer”).
4) Now on receiving each chosen command, i.e. call from interphone, function F1, F2, DOOR LOCK RELEASE and CALLS FROM SWITCHBOARD) the switchboard will print a line including the reception time, the command description and the calling number.

SETTING THE TYPE OF PRINTER
Using the “Printer Setup" parameter, whose default value is 0, it is possible to adapt the printing to the connected printer.
With 0 default value the interface sends the completed line to the printer only with "Carriage-Return" command (CR=13).
This printing mode is usually suitable for all dot matrix printers. Pratically, on receiving the line completed by the CR, the printer edits immediately the line and forces a "new line" (i.e. it goes to the following line).
In some printers, besides the CR character, also the "Line Feed" character is required (LF = 10). If the printer does not print the lines you can attempt to add this character by entering the "PRINTER SETUP" parameter = 16.

With "ink-jet " printers or similar, it is not usually possible to print the single lines one at time. Such printers memorize line by line and then print them on receiving a proper character, which, unfortunately, forces also the paper expulsion.
It is possible to send such command (paper expulsion) = 12+11) by pressing "R" push-button simultaneously with "C" push-button.
It is also possible to expel the page after a certain number of lines (for example, every 30 lines there is a data printing).
To do so ADD to "PRINTER SETUP" (whose value is 0 or 16 according to the above mentioned instructions) the number of the wanted tens of lines (for example 2 to print every 20 lines, max = 7). Doing so the printer will carry out the printing with the paper expulsion each time it receives the required lines.

It is clear from the above that dot matrix printers are the most suitable, even in "industrial" versions with 40 columns (typically with thermal paper).

PROGRAMMED VALUES USE	DESCRIPTION
0	Printing line by line followed by character "CR" Typical for matrix printers (suggested)
16	Printing line by line followed by character "CR" + "LF" If the previous setting does not work with ink-jet printers. To be added nearly always when using ink-jet printers.
16+3=19 (or 16+1…7)	The same as above but with expulsion of paper every 30 lines (3x10). For ink-jet (with required number of lines).
3+0=3 (or 1..7)	Printing line by line followed by the character "CR" only. If the previous ones do not work. There is a paper expulsion every 30 lines.

NOTE: For the various tests after reception, if the printers do not work properly, try also pressing push-buttons R+C.

TO FORCE THE EXPULSION OF THE PRINTER PAPER
If the printer is connected and it has a printing buffer, press R+C to force the printing of the buffer in memory (with paper expulsion).

ADVISED PRINTERS
Dot matrix printers, even with only 40 columns. (Ink jet printer: HP-Deskjet 600 when printing only full pages).

ASSOCIATING MELODIES:
In the memory there are 5 different melodies (numbered from 1 to 5) associated to different types of events. Their duration is variable according to the maximum number of tones (25,15,15,12,10 respectively). NOTE: at present: 1 Pink Panther, 2=Chopin, 3=Vivaldi, 4=List of notes, 5= Happy Birthday)
The association between events and melodies is set out below (numbers from 1 to 5).
- Reception of a command to be stored: 2 (i.e. melody 2 is played / max. 15 tones).

- Repetition (every minute for the programmed number of times) of a programmed command: 2
- Reception of a command not to be memorized: 2 (stop at the 3rd tone)
- Reception of an external call: 3
- Pressing of Scrolling Menu push-button: 4 (stop at the 3rd note)
- Pressing of Menu push-button signalling the last scrolling: 4
- Pressing of INT/EXT push-button: 4 (stop at the 2nd tone).
- Wake-up services: 1
- Sound every quarter of an hour: 5 (stop at the 2nd tone)
- Clock sound (repeated every hour): 5

Note that the sounds for command reception are activated by the "Sound enable" parameter (0=never, 1 only for Int mode, 2 = Int and Ext mode).
Make sure that the audio has not been excluded by pressing R+3 push-buttons (if the audio is not excluded the loudspeaker icon appears on the right hand side of display; to exclude it press R+3 again).

TO LISTEN TO/SHORTEN THE MELODIES:

Pressing R+" " the request of the melody number, to be listened to, appears on display:

N° SOUND (1-5) ?
1=RING; 2=C_UP; 3=C_DW; 4=KEYB; 5=TIME

By pressing a push-button (from 1 to 5) followed by C, the corresponding melody is activated with the request of the tone number to which it should be limited (the maximum duration according to the melody appears at the bottom, on the right hand side the present number to which it is limited). Inserting a number >= to the maximum proposed, no limitation is applied.
NOTE: Note limitation is used to reduce the melody duration when it is too long.

DOWNLOADING A NEW MELODY:
There are two possibilities:
1) With proper software through serial interface. The software consists of a musical composer used to compose/copy the melody, coupled with a software which allows you to download the melody inside the switchboard at the required position (i.e. it is possible to modify a single melody).
2) Copying all the 5 melodies from another memory 24C02 connected to the strip for IIC. Pressing push-buttons R+INT/EXT the melody downloading in an external memory is activated (IIC ADDR. 160), pressing R+INTROMISS the programmed melodies are downloaded from an external memory (only in case it has already been programmed). In these cases a "wait" message appears, during which the memory interface must not be disconnected (nearly 2-3 seconds).

MEANING OF THE MAIN TECHNICAL PARAMETERS
- **Entrance panel number**: the digibus number assigned to the switchboard (to allow a numerical call toward the same switchboard, for example from another switchboard or from a secondary entrance panel).
- **Digit number**: selects 4- or 8-digit operating mode. Select according to the type of installation.
- **Software lock key**: to lock keypad (see above)
- **Call rep. number**: the number of times you want the call sound to be repeated (further to memorization).
  Is repeated every minute for the programmed number of times.
- **Sound enable:** It allows you to decide if and when to activate the melodies. If set to 0 the melodies are excluded, if set to 1 the sounds are produced only at reception of commands if set to INTERNAL mode (I on the right hand side, i.e. when the operator is present). If set to 2 the melodies are produced either in INT mode either in Ext mode (at night). If set in Ext mode the melody is never repeated more than once.
- **Set Printer (a reserved parameter)**: Particular parameter which allows you to select different printing modes.

DESCRIPTION OF SWITCHBOARD KEYPAD
The switchboard is equipped with a 20-key keypad divided into two sections: the right hand section is used to make calls, program the switchboard and cancel operations currently in progress. The left hand zone is used to activate porter call, door lock release, intercom, conference, call transfer to internal unit and notification functions.

DESCRIPTION OF KEYPAD

Left hand section:

Button — MEMORY SCROLL:
Use to scroll through calls from interphones or monitors

Button — DOOR LOCK RELEASE:
Activates terminal S on the switchboard and opens the door lock at the main entrance panel communicating with the switchboard.

Button — TRANSFER:
Transfers the number in order to make a call to an internal unit, activate the intercom or conference function or cancel the number.

Button — TELEPHONE:
This button is used to connect the telephone line (terminals a-b) to the interphone cable riser.

Button — INTERCOM:
This function enables conversation between two users: two interphones (monitors) or interphone (monitor) and entrance panel. Intercommunicating, conferencing or conversations between the entrance panel and interphone (monitor) are indicated by illumination of the lamp "INTERC."

Button — CONFERENCE:
This function enables conversation between two or three users (interphones or monitors). Activation of the conferencing function is indicated by illumination of the lamp "INTERC.".

Button — INTERNAL/EXTERNAL:
Use to manually switch the switchboard from internal to external mode and vice versa.
Illumination of the lamp "EXTERNAL" indicates that the switchboard is in external mode.

Button — NOTIFICATION:
This button allows the switchboard to enter a conversation already in progress. An acoustic signal announces activation of this function to users.

Right hand section:

Button 0-9 NUMBER SELECTION:
Use to enter user call numbers and change technical parameter settings during switchboard programming operations.

Button R DISPLAY RESET:
Cancels and interrupts all conversations. This button is also used to exit the technical parameter programming function.

Button USER CALL:
Routes the call once the number has been entered. In technical parameter programming mode, this button is also used to confirm any changes made to settings and pass onto the next parameter.

Buttons R and 4 PROGRAMMING ACCESS:
Press these buttons simultaneously to enter the technical parameter programming function.

Keypad LEDs in central section of switchboard:

LINE: The LED is lit on the audio line (Terminal 3) when there is at least one device connected and the handset is lifted. The LED is also lit when there is a call signal on the audio line.

Interc.: The LED is lit when two or more interphones (monitors) or an interphone (monitor) and a door entry panel are communicating together.

External: When the LED is switched off, the switchboard is in "internal" mode, otherwise it is in "external" mode.

OPERATION OF SWITCHBOARD

Introduction

Switchboard Type 945B can operate in two modes: internal and external mode. To select the mode required use INTERNAL/EXTERNAL key to select EXTERNAL mode or INTERNAL mode. The "EXTERNAL" LED indicates the status of the switchboard (LED "on" = external mode; LED "off" = internal mode).
In EXTERNAL mode all calls from the main entrance panel are routed directly to the interphone/monitor cable riser without being intercepted by the switchboard.
In this mode however, it is still possible to receive porter calls, make direct calls to the switchboard and receive notification of a conversation between the main entrance panel and interphone (monitor).
In INTERNAL mode all functions are activated and authorised by the switchboard operator.

EXTERNAL operation (EXTERNAL LED "on").

- ***Call from entrance panel to user:*** when the switchboard is in external mode it is possible to call internal units directly from the entrance panel without the switchboard intercepting the call. The switchboard however is notified that a conversation is in progress by illumination of the LINE LED and by viewing the number in transit. If you wish to interrupt the line from the switchboard, return the switchboard to INTERNAL mode and press button R. If instead, you wish to enter the conversation, return the switchboard to INTERNAL mode, transfer the code in transit by pressing push-button (8<>8) and then push button . Entry into a conversation by the switchboard operator is announced to the units by an acoustic signal. To exclude the switchboard from the conversation, press button again.

To release the main entrance panel door lock from the switchboard, press the lock button .

- ***Direct call to switchboard from main entrance panel:*** when the switchboard is in EXTERNAL mode it is possible to communicate with the switchboard from the entrance panel using the direct call number (see parameter "SYSTEM NUMBER"). Each time this number is used, the switchboard activates the call signal, displays "CALL YOU FROM EXT." on LCD screen and automatically connects up to the entrance panel by activating its phonic line and monitor. To open the entrance panel door press buttons .

- ***Porter call:*** when the switchboard is in EXTERNAL mode calls to the switchboard by monitors or interphones are recorded and displayed on the LCD screen. Only the acoustic call signal is disabled. The switchboard must be set to INTERNAL mode to manage the calls.

INTERNAL operation ("EXTERNAL" LED "off").

- ***Call from switchboard to internal unit:*** to make calls from the switchboard to one of the internal units, use the number keys to enter the required user is number and press the bell button . After placing the call, the switchboard will connect its phonic line and activate its video camera and monitor (which displays the image filmed by the switchboard video camera). The switchboard frees the line with the internal unit if no handset is raised within the set reply time (see “answers time” parameter) or the maximum conversation time (see “conversation time” parameter) elapses if the user does answer the call. When the reply time or maximum conversation time elapses the switchboard automatically interrupts the connection by switching off its monitor and video camera. The line is also disconnected if the handset is replaced before the permitted conversation time has elapsed - the switchboard frees the line 5 seconds after the handset has been replaced. The operator may also disconnect a conversation at any time by pressing button R on the switchboard.

- ***Call from main entrance panel to switchboard:*** when the switchboard is in INTERNAL mode, all incoming calls from the entrance panel are intercepted by the switchboard which automatically switches to the entrance panel by activating its monitor. Calls to the switchboard are indicated by an acoustic signal and by showing the called number on the display.
When the switchboard switches to the entrance panel it is possible to release the door lock. If the switchboard is communicating with an internal unit, and a call is routed from the entrance panel to the switchboard (see device code parameter) the message "call you from ext." appears on display. If a user number is keyed in at the main entrance panel (not the same as the switchboard "SYSTEM NUMBER"), the call will be displayed on the LCD screen with the called user’s number.
To communicate with the entrance panel, the switchboard can be switched to the entrance panel using button without disconnecting the interphone or monitor. When the switchboard is connected to the entrance panel the "EXTERNAL" LED illuminates.

- ***Call from entrance panel with switchboard in internal mode:*** when the switchboard is in INTERNAL mode, each incoming call from the entrance panel is intercepted by the switchboard which then routes the call to the relative internal unit.

After receiving a call from the entrance panel, the operator calls the relative internal unit by pressing push-buttons "8<>8" and bell button . When the internal unit answers the call the operator can then transfer the line to the entrance panel by pressing button (the "EXTERNAL" LED illuminates).
While the entrance panel is waiting to be connected to the required internal unit, the switchboard transmits an acoustic "hold" signal to the entrance panel which lasts for the duration of the conversation between the switchboard and internal unit. This signal terminates as soon as the line is transferred to the entrance panel.

- ***Call from user to switchboard:*** users can use the door lock release button on the interphone or monitor to call the switchboard. The number of the internal unit which has made the call is displayed on the LCD screen. If the switchboard is set to INTERNAL mode, the call is also accompanied by an acoustic signal. To communicate with the internal unit, press button to transfer the number and press the bell button . If instead you wish to cancel the call, press buttons and R.
If more than one call is made to the switchboard (up to 30 different calls) the switchboard notifies the operator by flashing the respective icon. To scroll through the different calls, simply press button .

  Pressing push-button for more then 3 seconds cancels all stored numbers.

  Note: interphones and monitors can only call the switchboard using the door lock button when they are not engaged in a conversation. Otherwise activation of the door lock button would transmit a door lock release code.

- ***Intercommunication between internal units connected on the same riser:*** to activate the intercom facility between two internal units, one of the two units must first call the switchboard. The operator then calls the internal unit which has made the call followed by the other internal unit using the bell button . This done, the operator then presses button to connect the two units.
When the two units are connected the switchboard is excluded from the conversation.
If an incorrect user number is entered, only use the numerical keys to change the number. Do not press button R unless you wish to permanently disconnect the intercom function.
The duration of conversations using the intercom facility is determined by the conversation time set on the switchboard.

- ***Conference between internal units connected on the same riser:*** the conferencing function permits conversations with up to three internal units. To activate this function from the switchboard, the operator must first call one of the units using the bell button and then connect the other units one by one by entering the corresponding number and pressing button .

  Each time button is pressed, the switchboard routes the call to an internal unit without disconnecting those already connected. In conferencing mode the switchboard remains connected to the conversation line. To exclude press button .

If an incorrect user number is entered, only use the numerical keys to change the number. Do not press button R unless you wish to permanently disconnect the conferencing function. The duration of conversations using the conference function is determined by the conversation time set on the switchboard.

- ***Conversation with telephone line:*** the switchboard can connect an internal unit to the external telephone line to both receive incoming telephone calls and make outgoing telephone calls. To activate this function, connect a telephone to the switchboard (terminals aa-bb) and telephone line (terminals a-b). Incoming telephone call: to reply to incoming telephone calls, use the telephone connected to the switchboard. To transfer the call to an internal unit, call the relative unit using the bell button and press button . Connection of the internal unit to the telephone line is indicated by illumination of the "LINE" LED and by the telephone icon on the LCD screen.

- ***Outgoing telephone call:*** if an internal unit wishes to make an outgoing telephone call, use the telephone connected to the switchboard to call the external user. Next call back the internal unit using the code and bell button and press button .
Connection of the internal unit to the telephone line is indicated by illumination of the "LINE" LED and by the telephone icon on the LCD screen.
The duration of the telephone conversation is determined by the conversation time set on the switchboard.

- ***Notification:*** this function allows the switchboard to enter a conversation already in progress. Using this function the switchboard can interrupt intercommunicating, conferencing or telephone conversations as well as conversations between an interphone (monitor) and entrance panel. Each time the switchboard enters a conversation an acoustic warning signal is transmitted to all the units. Press the notification button again to exclude the switchboard from the conversation.

ADJUSTMENTS AND DESCRIPTION OF TERMINALS

Adjustment trimmers
The following trimmers are fitted on the back of the switchboard:

P1- Adjusts the digital signal current generator (D.C. value 25 mA must not be changed unless otherwise specified).
P2- Adjusts the volume of the switchboard acoustic call signal.
P3- LCD contrast.

Switchboard terminals.
H) Not used by switchboard Type 945B.
CH) Terminal controlling call signal activation.
S) Terminal controlling electric door lock activation.
F1) Terminal controlling activation of auxiliary function 1.
F2) Terminal controlling activation of auxiliary function 2.
3C) Acoustic call terminal.
4) Supply voltage negative terminal.
5) Supply voltage terminal + 13.5 V D.C.
R+ e R-) Additional bell connection terminals.

+I) Terminal controlling monitor deactivation.
I) Terminal controlling switchboard monitor deactivation.
T) Terminal controlling switchboard video camera deactivation.
1) Terminal controlling digital signal to interphone/monitor cable riser.
3) Terminal controlling phonic signal to interphone/monitor cable riser.
6) Terminal controlling digital signal to main entrance panel.
8) Terminal controlling phonic signal to main entrance panel.
9) Supply voltage negative terminal.
10) Supply voltage terminal + 13.5 V D.C.
aa e bb) Telephone connection terminals.
a e b) External telephone line connection terminals.

DIGITAL ALPHANUMERIC SWITCHBOARD Type 955

DESCRIPTION

The alphanumeric switchboard Art.955 belongs to the "DIGI-BUS" series and is completely compatible with all the products in this range. The special feature of this product is the database and emergency signal management system.

The switchboard is fitted with a display and alphanumeric keyboard to enable full control of all operative phases of these functions: database programming and/or consultation, time and date settings, printout of names or events related to an emergency signal, etc.

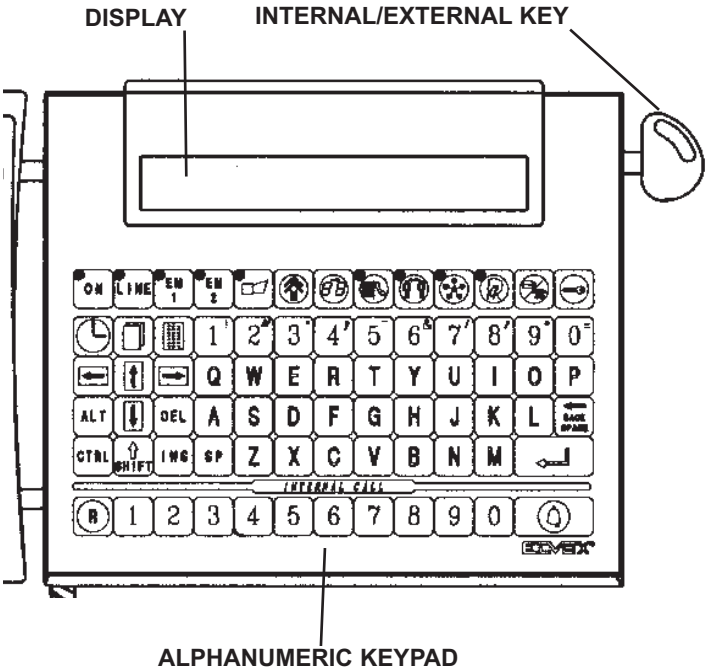
Furthermore, the switchboard has two connectors, placed on the back, for connection with a printer and with the Type 950 programming module. For a description of the switchboard, the keys have been grouped together in four zones according to their function. These zones are:

Special keys: for management of the following functions: emergencies, intercommunication and/or conference calls, internal/external switching, door lock release etc.

Menu management keys: for entry and exit to/from switchboard menus, movement within the menu, the use of special characters, and the printout of names stored in the database.

Database management keys: correspond to the alphanumeric keypad for entry of names in the database.

Call management keys: enable the entry of call numbers. However these functions can be carried out by different keys (e.g. numerical keys and call keys can perform the same functions).



Setup

Each time the Type 955 switchboard is connected to the system and switched on, you must wait until the initialization phase ends before you carry out any other operation, otherwise all operations would be interrupted. The end of the initialization phase is signalled by the appearance of the word ELVOX on the display.

To set the switchboard in internal or external mode, use the key-operated switch located on the right of the switchboard. Switchboard external mode is indicated by the illumination of the LED on the key with the symbol  ; this mode inhibits use of the switchboard keyboard.

Another necessary operation to be made the first time the switchboard is connected to the system is the programming of technical data on the switchboard so it may be personalized to the needs of the system.

To enter the technical data programming menu, press the PS1 key located beneath the switchboard.

Furthermore, it would be a good idea to totally delete the database, as described afterwards, before you add names to the database.

Technical data programming

The technical data programming menu enables switchboard personalisation by editing the parameters shown in the table below. Press both push-buttons CTRL and INS simultaneously. On display will appear 4 symbols (- - - -) and the request for access code. The code (other than zero) selected, confirm it with ↵ push-button. If the access code is zero, press both push-buttons simultaneously and the access to menu will be automatic. By pressing "PS1" push-button, at the botton of switch-board, the menu access will be automatic.

Entry to the menu is indicated by the display message "PGM.TECHNICAL". Use the CTRL key to move forward and/or to confirm the entered values, use the numerical keys to edit the preset values and press the key DEL to exit the menu.

Database programming

The database programming menu enables entry of a list of names associated with a given number, so that names as well as numbers can be used to call a user.

In addition to the above, the emergency functions EM1 and EM2 can be assigned labels defining the type of emergency for each name stored in the database. Obviously this is only possible if the functions EM1 and EM2 are enabled (see technical data programming). To access the menu, press  , after which four dashes ("-") appear with the request to enter the access code. Enter the code and press ↵ to confirm.

When the access code is entered, the database programming menu is displayed. If the menu access code is set at zero, direct access is granted simply by pressing  . Once you have entered the database, indicated by the message "PGM. DATABASE" on the display, you can enter the names in the list and/or assign labels to the emergency functions.

Switchboard technical parameters table

POSITION	TYPICAL VALUES	DESCRIPTION
ENGLISH DATA	0000	Displays data in Italian or English (0 = Italian, 1 = English)
INITIAL USER	0001	Fixed value (not modifiable)
FINAL USER	9999	Fixed value (not modifiable)
ANSWER TIME	0030	Maximum time between call and start of conversation (1 to 90 seconds)
CONVERSAT. TIME	0060	Maximum duration of conversation (10 to 90 seconds)
CALL TIME	0001	Call duration (1 to 10 seconds)
LOCK TIME	0001	Switchboard lock activation time (1 to 90 seconds)
EM1 TIME	0001	EM1 activation time (1 to 90 seconds)
EM2 TIME	0001	EM2 activation time (1 to 90 seconds)
ENABLED EM1	0000	Associates activation of EM1 function with emergency signal (0 = no, 1 = yes)
ENABLED EM2	0000	Associates activation of EM2 function with emergency signal (0 = no, 1 = yes) only if “ENABLE CAMERA” is set at “0000”.
ENABLE CAMERA	0000	Presence of video camera/monitor on switchboard (0000 = no, 0001 = yes): if function is activated, the EM2 Function is disabled.
ENABLE SERIAL	0000	Enables serial transmission via switchboard and programming module Art.950
N. SWITCHBOARD	9999	Number to call switchboard from entrance panels. The message of the entered numbers in database is displayed
CALENDAR CODE	0000	Code for access to time and date setting function (if setting = 0000, the access code is not requested)
DATABASE CODE	0000	Code for access to programming names in DATABASE (if setting = 0000, the access code is not requested)
TECHNICAL CODE	0000	Code for access to technical data programming function (if setting = 0000, the access code is not requested)

1) Name entry: To enter names, first enter the associated call number, as requested on the display and press [↵] to confirm. The switchboard then searches the list to see if the number is already associated with a name; if already associated, the relative name is displayed, otherwise the message “IT DOESN’T EXIST” appears. In both cases name entries or modifications are carried out as described below. If you wish to proceed without modifying previously entered names, press [↵] and enter a new number.

   Use the database management keys to enter the names (made up of a maximum of 16 characters, including spaces). By pressing the letter keys, the corresponding letter will be entered in capital letters. If you press letter keys while simultaneously pressing the key [SHIFT], you will enter lower case letters. You can insert special characters or numbers only after having inserted at least one capital letter at the beginning of the name.

   Special characters are inserted by simultaneously pressing the key [SHIFT] and one of the numerical keys that indicate a special character.

   Also, the following keys can be used for name entries: [SP] for blank spaces, [BACK SPACE] to cancel the character to the left of the cursor, the [DEL] key to cancel the character following the cursor, keys [←] and [→] to move along the line and key [INS] to insert characters (this function is enabled when the cursor type is changed; to deactivate, press the same key). When the name is entered, press [↵] to store the name and pass onto to a new phase.

2) Label assignment for emergency functions: to assign labels, enter the call number, as requested on the display and press [↵] to confirm. On confirmation, the switchboard searches the list to check if the number is already associated with a name. If already associated, the relative name is displayed, otherwise the message “IT DOESN’T EXIST” is displayed. Next press keys [EM 1] or [EM 2].

At this point the switchboard indicates whether the number and function have already been assigned with a label. If not, the message “NO LABEL!” is displayed. In any event, to modify the label, follow the procedure for name entries described above. Press  to save the modifications or to pass onto a new phase and enter a new number.

Note: In correspondence of the direct dial number called by the switchboard, you must insert the phrase (16 characters) in the database you want to display when calling. Press  to exit the programming function.

Total Deletion of the Database

You can automatically delete the entire database without having to delete each stored name one at a time. To delete the entire database, enter the database programming menu as described earlier. Once you are in the DATABASE PGM menu, simultaneously press the CTRL and INS keys. When the keys are pressed, the phrase DELETE? (Y/N) will appear on the display for confirmation of the operation. Press the Y key to delete the database, or the N key to exit the operation.

If deletion is authorized, the procedure will be confirmed with the words “CLEAR” on the display.

Once the procedure has started, data retrieval is no longer possible. The end of the procedure is indicated when the “CLEAR” message disappears from the display.

Time/Date settings

To access this menu, press the key  , after which four dashes (“-”) appear on display with the request for entry of the access code. Enter the code and press  to confirm, whereupon access to the time and date setting menu is granted. If the access code is set at zero, you enter the menu directly by pressing  . Once inside the menu, the cursor positions itself below the clock numbers. Use keys  and  to move to the hours, minutes, day, month and year and use keys  and  to modify the date and time. To exit the menu press key  (the clock starts as soon as you exit the menu).

Exit due to time-out

Attention: each time you enter in a menu, if one minute passes without any key being pressed, exit from the menu occurs automatically.

Transmission of data from the switchboard to the programming module and vice versa.

The Type 950 programming module was designed to simplify programming of the entrance panel and switchboard Type 955. In fact, the module permits data for the entrance panel and switchboard Type 955 to be prepared beforehand, then transferred afterwards through a telephone cable (4-wire cable). The only type of data that can be transferred in both directions from the switchboard Type 955 are names in the database.

Data transfer from the switchboard to the programming module: enter the DATABASE PGM menu and simultaneously press keys CTRL and T : After you have pressed the keys, insert the first and last numbers of the data to be transferred corresponding to the users programmed in the database. The request of the two numbers appears with the FIRST NUMBER and LAST NUMBER message, which is confirmed with the  key. After the last number has been confirmed, the switchboard goes on stand-by, and the message PLEASE WAIT appears. To start the transfer, press the R key on the programming module. During data transfer, both the switchboard and programming module will display the data transferred along with the DATA message.

Data transfer from the programming module to the switchboard (two different methods):

1) Press the T key on the programming module and insert the first and final numbers of the data to be transferred corresponding to the users programmed in the database. The request of the two numbers appears with the FIRST NUMBER and LAST NUMBER message, which is confirmed with the  key. After the last number has been confirmed, the modules goes on stand-by, and the message PLEASE WAIT appears. To start the transfer, enter the DATABASE PGM menu on the switchboard and simultaneously press the CTRL and R keys. During data transfer, both the switchboard and programming module will display the data transferred along with the DATA message.

2) Press the T key on the programming module and insert the first and last numbers of the data to be transferred. After the last number has been confirmed, the module goes on stand-by, and the message PLEASE WAIT appears. At this point, enter the TECHNICAL PGM menu on the switchboard, set the SERIAL ENABLING to 0001, confirm the change with the key  , and exit the menu with the key DEL. Data will start transferring from the module to the switchboard when you exit the menu. After data transfer has taken place, reprogram the SERIAL ENABLING function to 0000. **WARNING!** The data that is being transferred will replace the existing data in the spaces between the first and final numbers.

Print function

If you wish to print the names stored in the database, press  after entering the database programming menu.

To interrupt print-out, press the key ALT.

As regards the printout of calls received by the switchboard, the signals transmitted are sent automatically to the printer when the events actually occur but only if EM1 and/or EM2 are active. In any case, reports will be sent to the printer only if they correspond to different users and only if the call has not been cancelled from the switchboard memory by pressing the button marked  .

Emergency functions
If the functions EM1 and EM2 are disabled (see technical data programming), each time the user presses the relative keys on the intercom unit or monitor, the switchboard only activates the outputs on terminals F1 and F2 for the set function times (output activation is indicated by the illumination of the relative LEDs on keys 

and 

on the switchboard). The same occurs if keys 

and 

on the switchboard are pressed.
However, if the EM1 and EM2 functions are enabled each time a user presses the relative keys on the intercom unit or monitor, the switchboard signals the event as follows: the user name and the label associated with the type of emergency are displayed, the switchboard audio alarm is activated, the output to terminals F1 and F2 is activated, the output to terminal H is activated (corresponds to key ) and the date, time of event, relative user and type of emergency are recorded on the printer.
N.B. each time an emergency signal is transmitted, the time interval during which the outputs of keys EM1 and EM2 remain activated depends on the values set in the technical data programming menu. However, the output related to the key  remains activated until the same key is pressed again on the switchboard.
NOTE: if the "ENABLE TV CAMERA" function is activated, the EM2 function will be automatically deactivated, even if it is set at 0001 in the TECHNICAL PGM to reserve the panning function of the TV camera in the entrance panels.

Call to user
N.B: This option is only available with the key in the "internal" position.
There are two modes to call a user from the switchboard: by entering the user number and pressing key  or by entering the database to identify the name of the user and then calling by pressing key  . In both cases, the calls must be activated with the switchboard in standby status indicated by the display message "DIGI-BUS".
As regards calls via the database there are two modes for access to the list: direct access or by entering the first letter of the user's name.
Press keys  and  for direct access to and movement inside the database.
N.B. the message "END OF LIST" appears each time you reach the beginning or end of the list. However, to consult the database by entering the first letter of the user name, press the relative key, and the switchboard displays the first name that begins with the selected or, if not present, subsequent letter. Use the keys 

Direct call to switchboard from panel
N.B: This option is only available with the key in the "internal" position.
If you call the switchboard number from the panel, voice switching between the switchboard and panel is automatic. The audio connection is indicated by the illumination of the LEDs on keys  and  .

Call from panel to user via switchboard.
N.B: This option is only available with the key in the "internal" position.
When a call is sent from a panel, with the switchboard in internal mode, the signal is received by the switchboard which then warns the operator by activating the switchboard audio signal and displaying the number called (if the panel has a video camera and the switchboard is fitted with a monitor, the image filmed at the panel is displayed). At the same time the audio connection is made with the caller panel, indicated by the illumination of LEDs on keys  and  .To contact a user called from the panel, press key  to make the audio connection between the user and switchboard and disconnect the panel from conversation mode and an acoustic wait tone sounds until the connection is re-established. To make the audio connection between the user and panel caller after entering the user, press key  which disconnects the switchboard from conversation mode and illuminates the LED on the relative push-button.

User call
N.B: This option is only available with the key in the "internal" position.
Press the lock release pushbutton on the intercom unit or monitor to transmit a call to the switchboard, which will warn the operator by activating the audio signal and displaying the user's name. To connect with the user, press key  and then  . In the case of several calls by different users, use key  to consult the calls and key  to select the user (to select, move the incoming call message to the top line on the display).

Intercommunicating calls
This function enables conversation between two users. To use the intercommunication function, one of the two users must have previously called the switchboard by pressing the lock release pushbutton. After this, press key  to call the users alternately. To enable conversation between them, press key  . Activation of this function is indicated by the illumination of the LED on key  . If the number is incorrect, do not press R; simply redial the number.

Conference calls
N.B: This option is only available with the key in the "internal" position.
As for intercommunicating calls, the conference function is only possible after one of the users calls the switchboard by means of the lock release push-button. The switchboard operator then connects the user by pressing keys  and  . The switchboard operator can then connect other users to the conversation by entering the relative user number (or by means of the database) and pressing key  . As the switchboard remains activated during the conversation, press  to disconnect; the relative LED on key  will switch off. The difference between the conference function and the intercommunicating function is that in conference mode three users can be connected simultaneously.

Call monitoring

Use the key  to activate or deactivate switchboard call monitoring of a conversation. This function can be used for intercom calls, conference calls, or conversations between the entrance panel and user. Each time you press the key, the operation will be indicated by a beep in the receiver and the switching on or off of the light near the key  .

Direct call from the panel
N.B: This option is only available with the key in the "external" position.
In this mode, all calls from the panel are sent to the respective internal units; the switchboard is excluded.

KEYPAD

Special keys, from left to right:

Switchboard power supply.

Phone signalling LED. This indicates a signal on the phone line.

Key activating the EM1 function, with light. The light remains for the time set in the TECHNICAL PGM menu.

Key activating the EM2 function, with light. The LED remains for the time set in the TECHNICAL PGM menu.

Key deactivating the alarm function, with led. The LED remains on until it is deactivated through the same toggle key.

Key for cyclical reading of calls to the switchboard.

Key for transferring the call to the right-hand side of the display. This removes the call from the buffer.

Internal/external key, with light. When the light is on, this means the switchboard is on external mode.

Intercom key, with LED. When the LED is on, this means conversation is under way between two or more users or between a user and entrance panel.

Conference key, with LED. When the LED is on, it means there is a three-way conference call between three users or between two users and the switchboard.

Call monitoring key, with LED. When the LED is on. This means the switchboard is monitoring the phone line.

Key for activating the panning function of the TV camera in the entrance panel, after the panel has called the switchboard. Otherwise, this key serves to transfer the call from the switchboard telephone to the user who was called.

Key for releasing the lock. This key releases the lock associated with terminal S on the switchoboard and the lock on the entrance panel, if the switchboard was called by the entrance panel.

KEYPAD

Keys for menu management, from left to right, top to bottom:

Key for entering and exiting the DATE/TIME menu.

Key for exiting the TECHNICAL PGM menu. If you press this key when you are in the DATABASE PGM menu, you will delete the characters to the right of the cursor.

Key for entering and exiting the TECHNICAL PGM menu.

If you simultaneously press this key with a letter, the letter will be inserted in a lower case format. If this key is simultaneously pressed with a number, the special character associated to the number will be inserted.

Key for activating a print-out of names in the database.

[ALT] Key for interrupting the print-out of the names inserted in the database.

[INS] Key for activating and deactivating the function for inserting characters between other characters.

[←] In the DATABASE PGM and DATE/HOUR menus, the key is used to move to the left.

[→] The key transfers the call sent by a user to the right-hand side of the display. In the DATABASE PGM and DATE/HOUR menus, the key is used to move to the left.

[↑] Key for consulting names in the database. In the DATE/HOUR menu, the key is used to increase values.

[↓] Key for consulting names in the database. In the DATE/HOUR menu, the key is used to decrease values.

[CTRL] & [DEL] These keys must be pressed simultaneously. The switchboard is initialized if these keys are pressed while the switchboard is in the stand-by mode. If you press these keys while transmission is under way with the Type 950 programming module, transmission will be interrupted.

[CTRL] & [INS] These keys must be pressed simultaneously. If these keys are pressed while the switchboard is in the stand-by mode, you enter the TECHNICAL PGM menu. If you press these keys while you are in the DATABASE PGM menu, you will delete all the names in the database.

[CTRL] & [R] These keys must be pressed simultaneously. If you press these keys during the transmission phase from the programming module to the switchboard, the switchboard will switch to the receive mode.

[CTRL] & [T] These keys must be pressed simultaneously. If you press these keys during the transmission phase from the switchboard to the programming module, the switchboard will switch to the transmission mode.

KEYPAD

Keys for inserting names in the database:

[SP] Inserts a space when programming names.

[BACK SPACE] Moves the cursor from right to left, deleting the characters to the left of the cursor.

[SHIFT] & [1] Pressing these two keys simultaneously inserts the **!** character

[SHIFT] & [2] Pressing these two keys simultaneously inserts the **“** character

[SHIFT] & [3] Pressing these two keys simultaneously inserts the . character

[SHIFT] & [4] Pressing these two keys simultaneously inserts the , character

[SHIFT] & [5] Pressing these two keys simultaneously inserts the - character

[SHIFT] & [6] Pressing these two keys simultaneously inserts the & character

[SHIFT] & [7] Pressing these two keys simultaneously inserts the / character

[SHIFT] & [8] Pressing these two keys simultaneously inserts the ‘ character

[SHIFT] & [9] Pressing these two keys simultaneously inserts the * character

[SHIFT] & [0] Pressing these two keys simultaneously inserts the = character

[↵] If you press this key while in the “TECHNICAL PGM” and “DATABASE PGM” menus, you confirm the values and names entered in the switchboard and go on to the next phase. When the switchboard is in the stand-by mode, pressing the key activates the call to the selected user.

Letter keys also belong to this group.

Keys for making calls:

[🔔] If you press this key while you are in the TECHNICAL PGM and DATABASE PGM menus, you confirm the values or names entered in the switchboard and go on to the next phase. When the switchboard is in the stand-by mode, pressing this key activates the call to the selected user.

[R] If this key is pressed, the conversation under way is cut off and the switchboard initialization phase is interrupted.

Numerical keys also belong to this group.

DISTRIBUTOR UNIT Type 949B

DISTRIBUTION UNIT

This distribution unit, to which four interphones type 6201 - 8877 or monitor type 6307 - 6507 - (6000 + 6201) - (6003 + 6201) are connected, typically on the same floor, is able to select and assign four electronic calls directed to the respective users. The unit will discriminate between a control signal generated to open the door and a switchboard call to the exchange originating from interphones with only one button, as well as controlling two types of auxiliary function.

INSTALLATION

The 949B distribution unit must be located in a dry, dust-free place away from heat sources. The location should afford ease of access for the purposes of inspection and setting operations. The unit can be mounted either to the wall, using the fixing plugs provided, or to an equipment panel with DIN omega rails. Before any connections are made, checks should be made (using a normal tester) to ensure that there are no conductors broken or short circuiting. It is good practice to run system wiring and mains wiring through separate conduits.Wire up the connection terminals as in diagrams provided. Connect the installation to the mains.

PROGRAMMING AND OPERATION

To program the number of the distributor and consequently of the 4 sets connected with it, press button “P1”, then press and hold “P2”. If the procedure has been effected correctly, the unit will assume programming mode with LED “A” lighting up, at which point “P2” can be released. If the LED does not light up, the sequence must be repeated. The handset is now lifted to establish communication with the entrance panel, so that the code for the set wired to terminals A1-A3 can be received. Replace the handset and wait for the call on interphone or monitor. As the code is transmitted from the panel to the distribution unit, it will be memorized for good by the unit and remain stored until further reprogramming, even in the event of the panel being disconnected from the power supply.

The other three interphones, connected to the distribution unit, are programmed as the previous one. By pressing and holding button “P2” the LEDs A-B-C-D, corresponding to the interphones or monitor, connected to the distribution unit, are selected in sequence.

In installations with several entries, the connector for the interphones risers of other entrance panels must be removed, thus leaving only one entrance panel in operation, for the programming phase only.

This operation can be repeated any number of times, using other numbers between 00000001 and 99999999.

The switchboard is called simply by pressing, on the set at rest, the button with the key symbol. If, however, the interphone receives a call from entrance panel, pressing this same button will open the door lock associated with that particular panel. The distribution unit affords two auxiliary functions common to the system (stair or passage lights, sundry services, etc.); these can be operated from each of the interphones or monitors. Different push-buttons must be used for each function, in addition to push-button already available for door lock release/porter call. To program just one auxiliary function, position the “F1-F2” jumper on “F1”; for two auxiliary functions, position the jumper “F1-F2” on “F2”.

The functions should be selected only if indicated in the wiring diagram (see variations).

ENTRANCE PANEL SIDE CONNECTION TERMINALS

A) F1 auxiliary function - connect if indicated in diagram
B) F2 auxiliary function - connect if indicated in diagram
4) Common for auxiliary functions - connect if indicated in diagram
1) Digital call line
2) Not used
3) Voice line
4) Negative line
5) +13.5 V D.C.

INTERPHONE SIDE CONNECTION TERMINALS

C) F1 auxiliary functions - connect if indicated in diagram
D) F2 auxiliary functions - connect if indicated in diagram
4) Common for auxiliary functions - connect if indicated in diagram
1) Digital call line
2) Not used
3) Voice line
4) Negative line
5) +13.5 V D.C.

INTERPHONE CONNECTION TERMINALS

A1) Voice connection line - 1st interphone
A3) Common connection line - 1st interphone
B1) Voice connection line - 2nd interphone
B3) Common connection line - 2nd interphone
C1) Voice connection line - 3rd interphone
C3) Common connection line - 3rd interphone
D1) Voice connection line - 4th interphone
D3) Common connection line - 4th interphone

NOTE

When programming the distributor the proper code directory label, placed on the housing, MUST BE FILLED IN.

MULTIFUNCTION DEVICE Type 6949

TECHNICAL SPECIFICATIONS

Type 6949 is a programmable multifunction device for use with DIGIBUS systems. The device solves specific requirements in DIGIBUS systems.

Type 6949 can be used as:

- **Converter of codes from 4 to 8 digits and vice versa.** Type 6949 enables the combination of interphones and monitors with 4-digit encoding/decoding with entrance panels and switchboards with 8-digit encoding/decoding. Type 6949 converts the call codes and the commands F1, F2 and door lock release, from 4 to 8 digits and vice versa by adding or removing the 4 digits set in the parameter "Predigit".

- **Pseudo stairway entrance panel with 8-digit encoding.** Type 6949 is used as a stairway entrance panel (secondary) in building complex type systems with 8-digit encoding/decoding, where there are buildings with secondary entrances fitted with stairway panels and buildings without stairway panels. Type 6949 performs all functions of a standard stairway panel without the need for a secondary input.

- **Pseudo stairway entrance panel with 4-digit encoding.** As per the above application but for systems with 4 digit encoding/decoding.

- **Digital signal amplifier with 8-digit encoding.** Type 6949 is used in systems where the same cable riser column has a high number of interphones or monitors and there is the need to amplify/regenerate the digital signal with 8-digit encoding/decoding. If the parameters "Initial user" and "Final user" are used, type 6949 filters the call codes, passing on only those within the set range.

- **Digital signal amplifier with 4-digit encoding.** As per the above application but for systems with 4 digit encoding/decoding.

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- **Call filter with switchboards in parallel.** Type 6949 is used to filter calls from interphones or monitors to switchboards type 945B when there is more than one switchboard in parallel in the same system (maximum 4 switchboards). A 6949 is connected to each switchboard between the switchboard and the interphone/&monitor cable riser, which will filter the calls, auxiliary commands (F1, F2, F3, F4, F5) and the door lock release control from the interphones/monitors, to use them as switchboard calls. The filter control is managed by the parameter "Predigit". If two external switches are connected to terminals P1 and P2 of type 6949, the filter configuration can be modified in remote mode, enable switching of calls from one switchboard to another.

CONTROLS AND ADJUSTMENTS

A - B) Pushbuttons for programming parameters of type 6949.
C) Trimmer for adjustment of current generator (typical value 25mA D.C., already factory-set).
D) DIP-switch for function programming.
E) LED for function programming phase.
F) ON/OFF jumper for current generator on/off activation (ON = jumper activated, OFF = jumper deactivated).
G) Connector for connection of programmer type 950B.

TERMINALS

+I) The terminal is activated to switch off the monitor connected to the cable riser at the start of a call and at the end of a conversation. The terminal is connected to power supply 6948 if specified on the diagram.

CH) The terminal is activated when a call is made from the entrance panel or when the entrance panel is used to call an internal unit via a main entrance panel or switchboard. The terminal remains active for the time set in parameter 7. The terminal is connected to power supply 6941 or 6948 if specified on the diagram.

P1, P2) The terminals enable control, by means of two external switches, of the conversion of functions in switchboard call mode. To be used when there is more than one switchboard in the same system.

-) Common contact terminal for P1 and P2.

F2) The terminal is activated when type 6949 receives the code for the second auxiliary function. The terminal remains active for the time set in parameter 5. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

F1) The terminal is activated when type 6949 receives the code for the first auxiliary function. The terminal remains active for the time set in parameter 5. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

SR) The terminal is activated when type 6949 receives a door lock release code. The terminal remains active for the time set in parameter 6. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

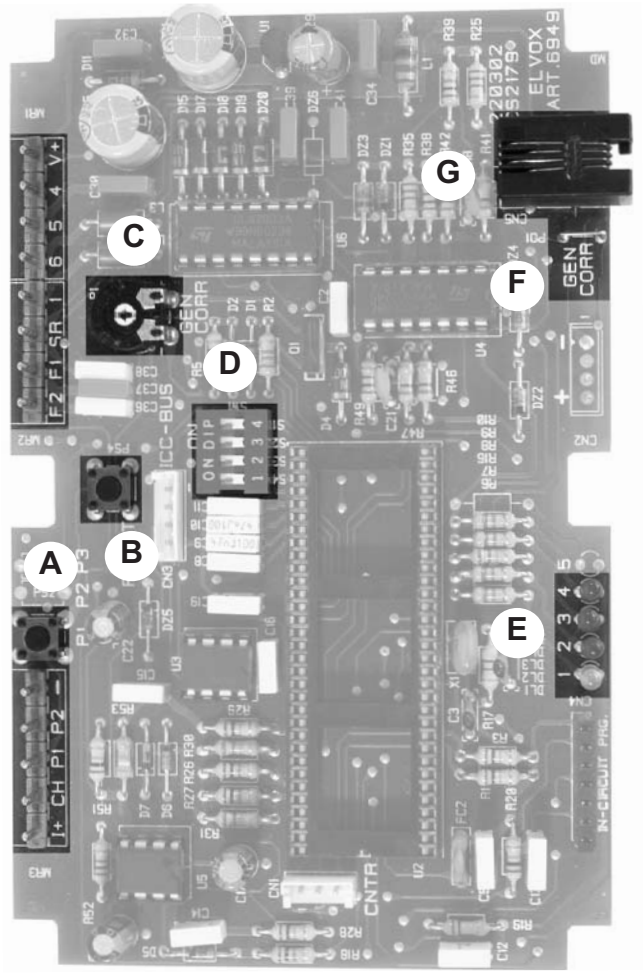
1) The terminal enables digital communication between the switchboard, monitor, interphone, digital distributor and the stairway entrance panel.

6) The terminal enables the transmission and reception of digital codes between type 6949 and the switchboard or between type 6949 and a main entrance panel.

5) Supply voltage terminal. The supply voltage must be between 11.5V D.C. and 13.5V D.C.

4) Negative supply voltage terminal.

V+) +5V D.C. output terminal. Connected only if specified on the wiring diagram



PRELIMINARY OPERATIONS

On completion of installation of all devices and connections, power up the system, and check, by means of the LEDs on the power supplies, that all the power supplies used are in fact supplying power.

Before programming devices, wait at least ten seconds after the system has been powered up.

Then check and, if necessary, program the operating parameters of the entrance panels and/or switchboard.

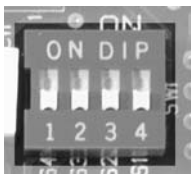
The interphone and monitor call codes should be programmed after programming (if required) the technical parameters of the entrance panels and/or switchboard and other specific devices.

PROGRAMMING

Type 6949 requires two programming phases: configuration of the device type and technical parameter programming.

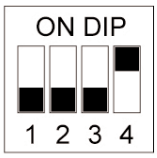
Configuration

The operating mode of type 6949 is selected on the DIP-switch (as shown in the figures below).

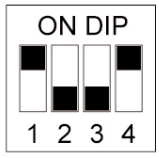


Configuration

The operating mode of type 6949 is selected on the DIP-switch (as shown in the figures below).

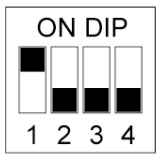


Operation as converter of codes from 4 to 8 digits and vice versa, from panel to panel. Converts codes without activation of terminals CH and +I.

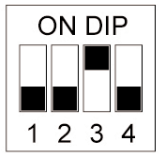


Operation as converter of codes from 4 to 8 digits and vice versa, from panel to interphones/monitors. Enables replacement of a panel by converting the codes and executing commands CH and +I.

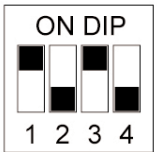
Digital signal amplifier with 4-digit encoding, from panel to panel. Executes code repetition without activation of terminals CH and +I.



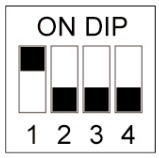
Digital signal amplifier with 4-digit encoding, from panel to interphones/monitors. Enables replacement of a panel by repeating the codes and executing commands CH and +I.



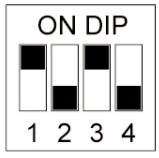
Digital signal amplifier with 8-digit encoding, from panel to panel. Executes code repetition without activation of terminals CH and +I.



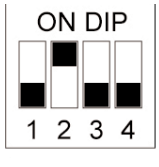
Digital signal amplifier with 8-digit encoding, from panel to interphones/monitors. Enables replacement of a panel by repeating the codes and executing commands CH and +I.



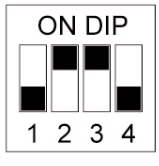
Pseudo stairway panel for building complexes with 4-digit encoding.



Pseudo stairway panel for building complexes with 8-digit encoding.



Call filter with switchboards type 945B in parallel and 4-digit encoding.



Call filter with switchboards type 945B in parallel and 8-digit encoding.

Technical parameter programming
The technical parameters are programmed according to the configuration of type 6949. There are three programming modes: via the keypad on a main entrance panel (type 8946, type 8942, 3942, 3946) or a porter switchboard (type 945B), with programmer type 950B, or with a Personal Computer by means of type 94CT.

A) Programming with panel or switchboard.
Programming is via an entrance panel or a switchboard connected to terminal 6 of type 6949. The following settings are recommended with the switchboard or panel in the vicinity of type 6949.
Entry to programming mode:
1) Press pushbutton "PS4-Reset" (point B of figure on page 91).
2) Wait for LEDs 1 and 4 to flash simultaneously.
3) Press and hold pushbutton "P1" (point A of figure on page 91), until LED 1 (green) illuminates.

Repeat the operation from point 1 if the LED does not light up within approx. 5 seconds.

4) On illumination of the LED release the pushbutton.

In the following conditions, type 6949 is set to parameter 1; to move through the parameters in sequence, press pushbutton "P1" as required.
The parameter number is indicated by illumination of the LEDs, as shown in the table below. To modify the value of a parameter, enter the code on the panel or switchboard and press "C" to confirm. Confirmation of reception and memorisation of the code is indicated by deactivation of the LED(s). Each time a code is memorised, type 6949 exits programming mode; to program other parameters, repeat the procedure from point 1. To exit programming mode without modifying parameters, press the pushbutton "PS4-Reset".

LED	N° parameter	Minimum value	Maximum value	Default value	N° parameter	Description
✸ ● ● ● 1 2 3 4	**1**	**0**	**9999**	**0**	Predigit number	Description-Used as converter from 4 to 8 digits, modifies codes from/to panel or switchboard from 4 to 8 digits. Used as filter for calls to switchboards, modifies calls and functions as specified in the table on page 71.
● ✸ ● ● 1 2 3 4	**2**	**1**	**99999999**	**1**	Initial user	Minimum number of call (filter on calls in transit from terminal 6 to 1).
● ● ✸ ● 1 2 3 4	**3**	**1**	**99999999**	**99999999**	Final user	Maximum number of call (filter on calls in transit from terminal 6 to 1).
● ● ● ✸ 1 2 3 4	**4**	**0**	**99999999**	**0**	Panel number	ID code of type 6949 (for calls/analysis from switchboard).
✸ ● ● ✸ 1 2 3 4	**5**	**1**	**255**	**1**	Time of functions F1 and F2	Time of activation of functions F1 and F2 in seconds.
● ✸ ● ✸ 1 2 3 4	**6**	**1**	**255**	**1**	Door locktime	Time of door lock activation in seconds.
● ● ✸ ✸ 1 2 3 4	**7**	**1**	**255**	**1**	Ringtone duration	Time of activation of call signal in seconds.
✸ ✸ ✸ ✸ 1 2 3 4	**8**	**-**	**-**	**-**	Programming parameter	Enables programming of type 6949 with previous programmer type 950.

✸ LED on ● LED off

B) Programming with programmer 950B.
Power up type 6949 and connect it to the programmer type 950B by means of the plug connector (point G of the figure on page 91).
1) Wait for the text "ELVOX 950B PRG" to appear on the programmer display.
2) Press one of the arrow keys (up or down) on the programmer to display the text "PROGRAM. PARAM."
3) Press the pushbutton "OK" on the programmer and wait for the text "PROGRAM [Tecn. Prog.]" to be displayed
4) Press the down arrow key to scroll through the parameters listed in the table below.
5) To modify and assign a new value to the parameter, use the numerical keys.
6) To confirm modifications and move on to the next parameters, press "OK".
7) To exit the programming mode, press "EXIT".
N.B. the parameters can only be scrolled though from top to bottom, without the option to move back through the list; to return to a previous parameter, exit the programming mode and re-enter.

N° parameter	Display 950B	Minimum value	Maximum value	Default value	Description
1	Initial user	1	99999999	1	Minimum number of call (filter on calls in transit from terminal 6 to 1).
2	Final user	1	99999999	99999999	Maximum number of call (filter on calls in transit from terminal 6 to 1).
3	Panel number	0	99999999	0	ID code of type 6949 (for calls/analysis from switchboard).
4	Digit number	0	9999	0	Used as converter from 4 to 8 digits, modifies codes from/to panel or switchboard from 4 to 8 digits. Used as filter for calls to switchboards, modifies calls and functions as specified in the table on page 71.
5	--->--------	-	-	-	Not used
6	---->-------	-	-	-	Not used
7	Panel prefix	1	99	0	Enables changeover of codes with the same first two digits equal to the value set in the parameter, also when the codes are outside the range between the initial and final users. If the value is 0 the function is disabled.
8	----->------	-	-	-	Not used
9	English	0	1	1	Modifies the descriptions on the display of 950B. 0 = Italian 1 = English
10	->----------	-	-	-	Not used
11	-->---------	-	-	-	Not used
12	Door lock enable	0	3	1	Door lock enable - For building complexes, enables activation of the door lock in sequence (0 = No, 1 = Yes). If the value is set to 3 the door lock opening "in reverse" is also enabled, i.e. from a switchboard below.
13	----------	-	-	-	Not used
14	-->---------	-	-	-	Not used
15	--->--------	-	-	-	Not used
16	---->-------	-	-	-	Not used
17	----->------	-	-	-	Not used
18	----->------	-	-	-	Not used
19	------>-----	-	-	-	Not used
20	Ringtone duration	1	255	1	Time of activation of call signal
21	----------	-	-	-	Not used
22	Time of function F1	1	255	1	Time of activation of function F1 in seconds.
23	Time of function F2	1	255	1	Time of activation of function F2 in seconds.
24	Door locktime	1	255	1	Time of door lock activation in seconds.
25	----------	-	-	-	Not used
26	Reserved parameter	0	255	1	Not used

C) Programming with software 94CT.
See description of type 94CT.

SWITCHBOARD CALL CONVERSION TABLE

Value of parameter Predigit and Digit Preset	Command converted to Switchboard call	Command passed without conversion
0001	Switchboard call	None
0002	Switchboard call	F1
0003	Switchboard call	F2
0004	Switchboard call	F1 e F2
0005	F1	None
0006	F1	F2
0007	F2	None
0008	F2	F1
0009*	F3 e F4 e F5	None

*** Set the value PREDIGIT to 0009 in the case of 4 switchboards in parallel.**

Using two external switches, connected to terminals P1 and P2, commands received from other switchboards in parallel can also be switched to output to the switchboard as interphone calls, as shown in the following table.

Value of parameter Predigit and Digit Preset	Command converted to Switchboard call with terminal P1	Command converted to Switchboard call with terminal P2
0001	F2	F1
0002	F2	Switchboard call
0003	F1	Switchboard call

In the case of 4 switchboards in parallel, the switchboard that receives the calls from interphones via commands F3/F4/F5 cannot receive other commands if the external switches are used; vice versa the other switchboards receive the commands F3/F4/F5 (not converted).

DESCRIPTION OF FUNCTIONS:

Initial User (2) and Final User (3). To be programmed in the case of building complex type systems. The two values must only be set when type 6949 is used as a pseudo stairway panel. These two parameters ensure that 6949 only passes calls from another main entrance panel or switchboard with a number within the minimum and maximum set range. This application is required in building complexes with stairway panels (secondary) and with interphones/monitors connected directly to the main entrance panel or switchboard without stairway panels.

Entrance panel number (4). This is the identification code of type 6949 to be programmed when using switchboard type 94CT, to enable remote programming and analysis of type 6949 parameters. NB: Note that the panel number must be individual and different from the call codes of the interphones and monitors.

Digit Preset (1). The meaning of this parameter changes according to the application of type 6949.
If type 6949 is used as a converter from 4 to 8 digits (and vice versa), the parameter is used to identify the first 4 digits of the 8 of the call/function codes.
Example: if the parameter is 1213 and the 4-digit code of the interphone is 0720, the call code received from an 8-digit switchboard is 12130720.
If type 6949 is used as a filter for calls to switchboards, the following parameter controls the conversion of the functions in switchboard call mode according to the table alongside.

Panel prefix. Enables changeover of codes with the first two digits equal to the value set in the parameter. Code changeover is enabled also when the codes are outside the range between "initial user" and "final user". If the parameter value is 00 the function is disabled.

English To be programmed as required. The function refers exclusively to the programming phase of the panel with type 950B. If the parameter is set to "1", the programmer Type 950B displays the parameters in English, otherwise in Italian.

Door lock release enable. To be programmed in the case of building complex type systems. If enabled allows activation of terminal "S" for door lock release of type 6949 used as a stairway panel, when a monitor or interphone sends an opening code while in conversation with the main entrance panel. This enables activation of the lock related to 6949 and the lock related to the main entrance panel. If the value is 3, the lock connected to 6949 can be opened from a main entrance switchboard to 6949, using the Panel Number to call type 6949 from the switchboard and the key button to activate terminal S.

Ringtone duration (7). If the system envisages stairway panels (building complex) or the presence of a switchboard, the duration of the call signal from the main entrance panel must be greater than 1 second with respect to the time set on the stairway panels or switchboard. In other cases the parameter can be modified as required by the installer. This parameter represents the time, expressed in seconds, for which the panel activates terminal CH. Terminal CH enables activation of the current generator on power supplies Type 6941 and 6948.

F1 function time (5). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal F1. Terminal F1 enables activation of a relay connected to terminals R1 and 4 of power supplies type 6941, 6942 and 6948.

F2 function time (5). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal F2. Terminal F1 enables activation of a relay connected to terminals R2 and 4 of power supplies type 6941, 6942 and 6948.

Door lock release time (6). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal S. Terminal F1 enables activation of a relay connected to terminals 15 and S1 of power supplies type 6941, 6942 and 6948.

PROGRAMMING MODULE
Type 950B

DESCRIPTION
Programming module 950B was developed to replace the previous version 950/A (which is no longer fully compatible with the Digibus 8-digit system), but in fact, significantly extends the functions of the previous model, and constitutes a complete analysis system for the management of Digibus and Digit2Video installations.
The device operates with both 8 and 4 digits, and as well as being extremely manageable, includes a handy selection menu (similar to the menus used on modern mobile phones), which provides you with the following functions (structured as a menu):

DIGITAL TEST:
Analyses the "traffic" of Digibus commands at the point at which it is inserted. In essence, the device displays all the commands in transit, complete with a description and the number of the sender of the command. At the same time, the commands received are saved to a circular buffer, for the purpose of subsequent or more complex analyses of the recorded traffic.
In this way, it is possible to send a vast range of commands simultaneously (calls from entrance panel, calls from interphone, door lock releases, F1, F2, F3, etc.) from the programming module itself. For analytical purposes, all the principal situations can be simulated, to ascertain whether the system responds correctly.
Note that in this mode, it is therefore possible to programme the interphone directly "in situ" (i.e. on the interphone itself, by a single operator), and if necessary, without powering the device up.

PARAMETER PROGRAMMING:
For programming all the technical parameters of the control unit. Operation is basically the same as for the previous model 950/A, but with the added advantage that access to programming is automatic (the operator does not have to perform any operations on the entrance panel).

KEY ASSOCIATION:
On "single-key" entrance panels (without display), this enables you to set the association you want between the keys and the number sent by them (i.e. the association between the "Hardware" number (determined by the position of the key) and the "Software" number (that is to say, the number sent). Again, operation is similar to that of the 950/A, but with the advantages of also operating on 8-digit systems and being fully automatic (the operator does not need to carry out any operations on the entrance panel).

VOLTMETER:
Select this mode to measure the power supply voltage (between terminals 4 and 5) and the digital signal voltage (terminal 1). With the digital signal shoe, it is also possible to measure other relevant voltages (e.g. for the voice line or the positive of the monitors). The max. measurable voltage must be less than 28V D.C.

CURRENT MEASURING DEVICE:
Select this mode to measure the short circuit current between the digital line (1) and ground (4). Basically, it is possible to calibrate the current generator controller immediately. The measuring device is equipped with self-protection against accidental current overloads.

DATA SCOPE:
This is a complementary function for recording the voltage pattern over time, with programmable sampling speed. Basically, it simulates a simple oscilloscope with sampling frequencies that can be set to between 40Khz and 1Hz, memory length of 512 samples and the possibility of setting triggers with the desired threshold voltage and direction.
The samples in the memory can be displayed on the screen semi-graphically (i.e. with a low level of representation, but a level which nonetheless provides the useful facility of "in situ" display, due in part to the inclusion of a zoom function), or can be downloaded onto a PC (by connecting the programming module 950B with a normal serial cable and using the relevant software "SCOPE-950B"), and can thus be analysed by the software, which simulates all the effects of an oscilloscope.
In this mode, therefore, and with a little practice, it is possible to take a range of measurements on the relevant signals, which can be useful for ascertaining, for example, the level of distortion (capacitive type) on the digital signal (due to the length of the cables), the presence of disturbances on the digital signal or excessive ripples on the power supply lines.

RESET COMMAND:
Selecting this function sends a reset command to the control unit (switching it off and back on again) in order to restore the control unit to the state it was in when first powered up.

CONTROL PANEL

Top panel with the connectors to the system (for power supply and programming).

Miscellaneous indicator LEDs (receipt of commands, sampling in progress, etc.).

Back-lit display (with 2 lines)

Indicator LED showing that digital signal amplifier is ON (by means of F1 key).

LED showing that the CURRENT GENERATOR on the digital signal is ON.

Control keypad

Bottom panel with reset key, DB9 connector and external power supply jack.

Battery compartment (at rear). The compartment can accommodate 2 x 9V D.C. batteries (rechargeable or otherwise). It is not imperative to install the batteries.

KEYPAD DESCRIPTION:

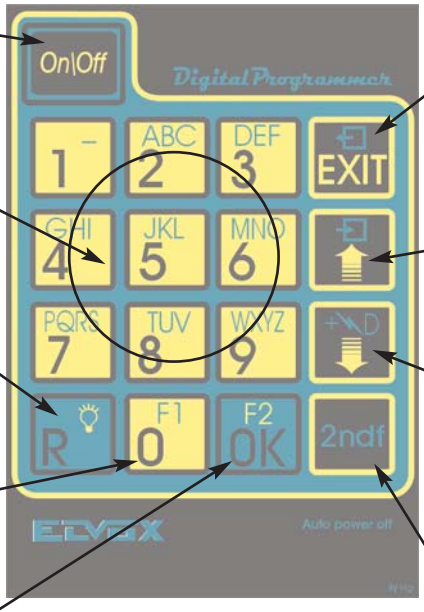
"ON/OFF" key. Briefly pressing this key switches the battery power supply ON or OFF (not necessary in other cases)

Group of keys for dialling numbers. In 2^ "alphanumeric" dialling (not used).

"RESET" key. Pressing this key when in "digital analysis" mode resets the system.
In 2^, switches the back-lighting of the display ON or OFF

Numerical key 0.
In 2^ Special function F1 (Digital signal amplifier) used).

"OK" key for confirming the option or going down to the "sub-menu".
In 2^ Special function F2 (Check accuracy of frame with "data-scope").



from context to previous menu).
In 2^ function " SAVE DATA " (for the DATA SCOPE function, saves the plot to EEPROM)

"SCROLL BACK" (for menu-type operation, moves back to the previous option).
In 2^ "RETRIEVE DATA FROM MEMORY" (for DATA SCOPE function, calls up the data from EEPROM onto the display)

"SCROLL FORWARD" key (for menu-type operation, moves to next option).
In 2^ function switches the current generator of the programming module ON/OFF

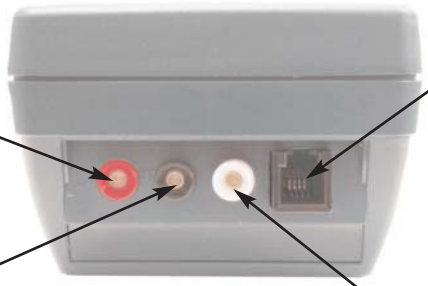
"2^ FUNCTION" key. Pressing this key activates the keys in "2^ function". When pressed, the secondary function assigned to each key will be activated (2^)

TOP PANEL DESCRIPTION:

The top panel accommodates the power supply connections for the device and the connections to the Digibus device to be programmed/tested.

Bushing for the connection shoe to the POSITIVE power supply line (10-18 V D.C.). This need not be connected when the batteries are active

Bushing for the connection shoe to GROUND. Also the reference for measurements.



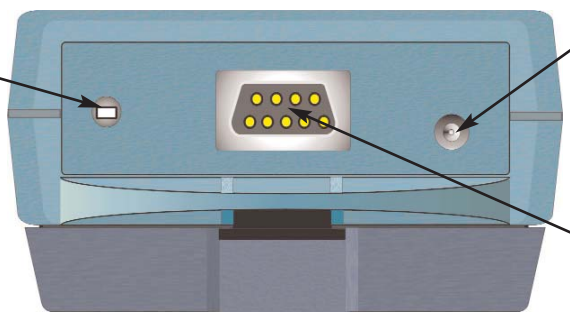
Telephone PLUG. Enables connection to the same plug as on the control unit to be programmed. Used for parameter programming and in the case of key association (do NOT use it for other functions). In this case, also provides the power supply for the programming module (i.e. no other connections are needed) by drawing power from the connected device.

Bushing for the connection shoe to the DIGITAL line. For measuring functions (Voltmeter, Current Measuring Device, Data Scope) this is the "mobile" measuring shoe (max 28V D.C.)

BOTTOM PANEL DESCRIPTION:

The bottom panel accommodates the "DB9" interfacing connector with the PC. Connection to the PC must be made using a serial cable (9 wires) to the "COM" port of a PC ("RS232" connection).
The bottom panel also accommodates the reset button (press it with a pointed tool in the event of malfunction of the instrument), and the jack for possible supply by means of an external power supply (especially useful in the case of connection with the PC).

Reset key.
Press in the event programming module crash.



Jack for external power supply.
Can be connected to an external power supply (12-18 V D.C. MAX/ central positive).

DB9 connector for connection to the serial port of the PC. To use for data exchange by means of "SCOPIO" software.

SWITCHING ON AND POWER SUPPLY MODE

The programming module can be powered in 4 different ways, and does not therefore necessarily require the presence of batteries, which in fact need only be used in the event that other modes of power supply are not available. The 4 power supply modes are as follows:

A) **By means of the shoes:** Connecting the 2 power supply shoes (Black = Ground, Red= Positive) to an external source. The most practical case is to connect the negative to wire 4 (GND) of the Digibus bus and the positive to wire 5 (+13V). In this case, the device switches on automatically, and when you also connect the WHITE shoe to wire 1 (DIGITAL) is ready to use on the system. This mode is strongly recommended, because as well as avoiding the use of batteries, it enables simultaneous analysis of all the functions (programming of the entrance panel, analysis of the digital signal, analysis of the voltages and currents).

B) **By means of telephone plug.** By connecting the plug, by means of the appropriate cable to the analogue connection on the entrance panel, the programming module switches on immediately, and shows the message "PLUG" on the display to identify the mode of use. This mode is useful (because it is immediate and does not require batteries) for programming parameters or associating keys. Furthermore, it does not allow the use of the programming module for other functions (Voltmeter, Scope, Amperometer or analysis of traffic).

C) **By means of internal batteries (if fitted).**

If batteries are fitted (2x9 V), pressing the 

key for about 1 second switches the programming module on autonomously. To take measurements or carry out programming, however, it is now necessary to connect the ground and digital shoes to the system. Because operating in this mode leaves only the connection of the positive wire free, we advise strongly against it for normal uses. The reason for which this mode has been provided, is to allow autonomous programming of interphones which have no connection to the system. In fact by connecting the 3 shoes of the programming module to the disconnected interphone, and supplying power by means of the battery, the interphone can be programmed.

D) **By means of power supply jack:** allows the connection of a power supply unit (not supplied) with output voltage of between 12 and 18 V D.C. (with external ground and central positive).

NB: When operating with batteries, the circuit is equipped with a system for switching itself off automatically (after about 5 minutes without use). It can be switched off manually by pressing the "ON/OFF" key for about 1 second.
The display of the programming module can be back-lit (by pressing the "2ndf" and "R" keys). Because operation in this mode consumes a lot of power, the back-lighting switches off after about 30 seconds (10 seconds when operating with batteries).

OPERATION OF THE SELECTION MENU

The programming module 950B has a "menu-type" operating structure. The desired options are in fact selected by using "menus" which operate in a similar way to the menus on modern mobile phones. There are 4 selection keys with the following functions:

"NEXT" key: scrolls to the next function. When pressed repeatedly, it shows the various available functions one at a time (depending on the context).

"BACK" key: scrolls to the previous function (where available). If you press it repeatedly, it takes you back through the previous functions (depending on the context)

"OK" (CONFIRM) key: pressing this key confirms the data shown on the display. In practice, you "enter" the selected option and activate it, or display a new menu depending on the new context. This is also the CONFIRM key for all the requests made from the programming module.

"EXIT" key (RETURNS TO PREVIOUS CONTEXT). By pressing this key, you exit the menu you were in and return to the previous menu. By pressing it repeatedly, you always return to the "BASIC" initial state (i.e. the state that arises immediately after switching on the programming module).

When you switch the programming module on, the message "Ready" appears.
To select the desired operating mode, press "NEXT". The first time you press it, the first operating mode, known as "DIGITAL TEST" appears. If this is the operating mode you want, press "OK", otherwise scroll down to the next function by pressing "NEXT" again. The message "PROG.PARAMETERS" then appears. If you want to go into programming mode, press "OK", otherwise keep pressing the "NEXT" key until the function you want appears.
If you go past the function you want, simply press "BACK" to return to the previous available function.
The menu is, in any event, "cyclical", in other words, by going beyond the last option you return automatically to the first option.

When you select a function with the "OK" key, one of 2 situations can arise:
- You enter the desired function and a question appears or you confirm the execution of a command (e.g. if you select the "DIGITAL TEST" with the "OK" key, a message appears, followed by a request for the number to send ("NUMBER?")).
- You now enter a new submenu with new options but with the same procedures for moving and selecting as in the previous menu (e.g. if you press "SCOPIO" a menu appears, in which you can scroll through the functions of "ACQUISITION" or "VISUALIZATION")

Once you have passed from the main menu to another submenu, you can go back to the previous context by pressing the "EXIT" key (repeatedly, if you wish, until you get back to the initial menu).
NB: The device can be switched off or disconnected in any context. When switched back on, it always starts from the initial state.

"DIGITAL TEST" FUNC. (opt.1):

PURPOSE OF THE FUNCTION:
With this function it is possible:
1) To analyse the Digibus traffic in transit across the point at which the shoe of the digital line is connected. Each time a recognised command is received, the RED LED flashes (and an acoustic signal is emitted at the same time) and the type of command together with the Digibus number of the device which sent it is shown on the display.

The description and the command are also saved to an internal circular memory and can can therefore be analysed later.
The memory is also useful for seeing commands which are transmitted very close to each other, and which would not otherwise be visible (e.g. if you want to see the packet sent from the entrance panel and the corresponding reply of the interphone dialled).

2) Simulate a call from the entrance panel to activate an interphone. This is extremely useful for checking whether the interphone is programmed correctly and whether a problem lies with the interphone, the entrance panel or the wiring (see "FINDING THE DIGITAL SIGNAL FAULT POINT !!!!").

3) Simulate the sending of any useful command of the Digibus system (see attachment "RECOGNISED AND SIMULATABLE COMMANDS"). Basically, you can send door lock release commands to an entrance panel, to check the operation of the lock (or similarly, the auxiliary functions F1,F2, F3,F4,…). You can also simulate an "Interphone Call" to see if a switchboard responds correctly. By means of a manual command, it is also possible to send any command (including future commands).

4) It is possible to programme the Digibus number of an interphone on the interphone itself (with a single operator), regardless of whether the device is connected to a powered up system or whether it is disconnected (provided there are batteries in the 950B) (see "INTERPHONE PROGRAMMING").

OPERATING PROCEDURE:
From the main menu select the option "DIGITAL TEST". When you press "OK", the display shows the message:

4 o 8 DIGIT ?

By keying in 4 or 8, the programming module sets the relevant Digibus mode (depending on the type of system on which you are operating) and shows on the display:

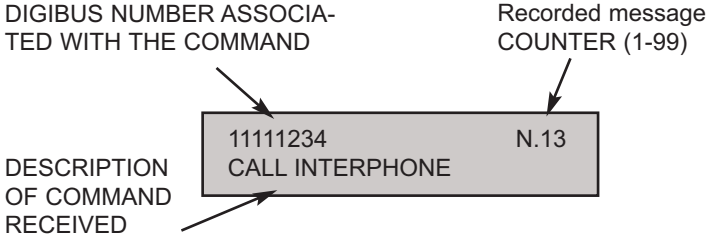
Trasm./Ricez. Digibus command

And after a short interval, shows the message:

Number ?

At this point, the programming module is ready to receive or send commands on the Digibus line.

FOR RECEPTION:
Each time it detects a correct message, the programming module emits a short sound, sets the red indicator LED flashing and shows, on the display, a description of the command received, the number associated to it (it was contained in the string received) and a counter (0-99) relating to the number of messages recorded (useful in the event of reception of commands in rapid succession, which would not otherwise be visible).



The commands recorded are also saved to a temporary memory, which can be analysed by pressing (in this "DIGITAL TEST" mode) the keys 2ndf + EXIT.
By then repeatedly pressing the "NEXT" key, you can scroll through the sequence of commands recorded in the memory. During this phase, reception is temporarily disabled. To go back to transmission/reception, press "EXIT".

FOR TRANSMISSION:
All the time for which reception is active, it is possible to make a call to an interphone by keying in the number of the interphone you want to call and then pressing "OK" (the programming module then sends an equivalent command to a "Call from Entrance Panel with Camera" on the digital line, thus simulating what would happen if a call was made from an entrance panel with camera) . If you want to simulate the sending of a COMMAND of a DIFFERENT type from a "Call from Entrance Panel with Camera", press "NEXT" (adjacent). A scroll-through menu will then appear, and the first available command will be shown on the display:

Select Command CALL INTERPHONE

If this is the command you want, press "OK", otherwise scroll to the next command by pressing "NEXT" again. Once you have selected the command you want (by pressing "OK"), the display will ask you for the Digibus number to associate with it. In practice, you usually want to test a type of command (e.g. "door lock release") and you can therefore associate any Digibus number to it (other than 0 of course, and if necessary, within the range of numbers envisaged for the item on which you wish to operate). Always remember that the command is sent at the point at which you connected the shoe of the DIGITAL LINE (white). If you want to check a door lock release on an entrance panel, the shoe must be connected on the terminal 1 side of the digital line, whereas if you want to test the entrance panel in "transit", the shoe must be connected to terminal 6 of the digital line.

COMMANDS ON UNPOWERED DIGITAL LINES:
When using programming module 950B as a "DIGITAL TEST", the shoe of the digital line is connected to the same wire of the Digibus bus (wire 1 or wire 6). The programming module, however, normally has its "CURRENT GENERATOR" disabled, in other words, the positive of the digital line must be supplied by others (usually the one located "downstream"). In this case, the digital line will, of itself, be at approximately 12/14 V D.C.
It is possible, however, that you may want to work on devices which are not capable of powering the digital line autonomously (e.g. an interphone with digital line "disconnected", to test its correct operation, to programme it, or alternatively, you may want to test the entrance panel from lines 1 or 6 of the digital line after disconnecting it). In these cases, if you attempt to go into "DIGITAL TEST" the following message appears on the programming module's display:

> DIGIT. POWER LOW (ACTIV. CURR. GEN)

The flashing message indicates that there is insufficient voltage on the digital line, and at the same time requests switch-on of the current generator of the programming module 950B.
To SWITCH ON THE CURRENT GENERATOR simply press the keys 2ndf + .

The programming module activates a current generator (of approximately 24mA) and indicates that it has been switched on by lighting the corresponding LED on the front panel.
By pressing the same 2 keys again, it is possible to switch the current generator off again.
NB: Remember that the generator inside the programming module supplies a limited current (max 24mA) and is not always ideal for supplying an entire interphone cable riser (this will not damage it, but it will not function correctly), but is useful for programming and for testing individual, unpowered devices.

NOTE:
To check whether the digital line is active or correctly powered up, it is convenient to use the appropriate functions of the programming module (which can be selected from the initial menu):
- "VOLTMETER": for checking correct voltage (ideal 12/13V, also operates with 10-14V). For further details, see the section entitled "VOLTMETER FUNC."
- "DIGITAL CURRENT": for checking the correct calibration of the current generator of the digital line (typical 25mA). For further details, see the section entitled "CURRENT MEASURING DEVICE FUNC.".

"PARAMETER PROGRAMMING" FUNC. (opt.2):

PURPOSE OF THE FUNCTION:
With this function it is possible to programme all the technical parameters of the control unit connected to it (numerical entrance panel, single key, switchboard, distributor, etc.).

OPERATING PROCEDURES:
After connecting to the control unit, usually by means of the telephone plug, the programming module switches on the display.
From the main menu, select the option "PROGRAM PARAM". Pressing "OK" takes you into programming mode; the entrance panel emits a short sound and the programming module displays the following:

PROGRAM (Press OK)

and after a short time

PROGRAM (Tecn. Prog.)

If this does not happen (the entrance panel failed to enter programming mode), press "EXIT" and repeat the procedure (if it repeatedly fails to work, try pressing the reset key on the entrance panel).

Once you have entered programming mode, if you press "OK", the first programmable parameter will appear on the display. A description of the parameter always appears on the first line of the display, and on the second, the value currently set (see example in adjacent figure).

Initial user 00000001

If you want to move on to the next parameter, press "OK" again; if, however, you want to change the value, use the numerical keys to key in the new number. The next time you press "OK", the new value is saved in the entrance panel permanently. If, however, you press "EXIT", you exit the procedure without changing the last parameter displayed (remember!! If you want to change a parameter, you must always press "OK" after keying in the new value). By continuing to repeat the procedure, you can scroll through or change the subsequent parameters.

After pressing "EXIT", the entrance panel exits programming mode and returns to its normal state; the programming module 950B displays "EXIT" and also returns to its basic state.

NB: The sequence of parameters shown depends on what is included on the item to be programmed (entrance panel, distributor, etc.) and not on the programming module itself.

PROBLEMS WITH ACCESSING PROGRAMMING MODE:

Because the programming module 950B goes into programming mode "automatically", i.e. without the need to carry out any operation on the entrance panel (unlike with the old programming module 950/A), problems may arise when attempting to access programming mode on items which are not predisposed for this type of operation (e.g. the old Digibus entrance panels, or even the new models produced some time ago). If you continue to experience difficulties after repeating the procedure several times, you can get round the problem by first going into programming mode on the entrance panel, as with the previous programming module, and then selecting the programming option on the 950B.

"KEY ASSOCIATION" FUNC. (HW-SW) (opt.3):

PURPOSE OF THE FUNCTION:
When working with "SINGLE-KEY" entrance panels (i.e. those without display), this function enables you to change the association between the key pressed and the number actually sent.
This has the clear purpose of allowing you to create entrance panels with key setup of your choice.
Remember that the "Hardware" number means the number associated with a key and due entirely to its position and the setting of the DIP-switches, whereas the "Software" number means the number which is actually sent when the key is pressed, and which is associated with the key itself by means of previous programming.

OPERATING PROCEDURES:
After connecting to the control unit, usually by means of the telephone plug, the programming module switches on the display.
From the main menu, select the option "KEY ASSOC.". By pressing "OK", you enter the function for programming the association between the "Hardware" keys and the "Software" number.
The entrance panel emits a short sound and the programming module displays the following:

If this does not happen (the entrance panel failed to enter key association mode and does not respond to subsequent commands), press "EXIT" and repeat the procedure (if it repeatedly fails to work, try pressing the reset key on the entrance panel).

PRESS TAST to CHANGE

At this point, if you press a key on the connected entrance panel, the following appears on the display (depending on previous programming):

HARDWARE number pressed (depending on position and setting of the DIP-SWITCHES) →

Associated SOFTWARE number (i.e. the number that will be sent when the key is pressed) →

N.HW= 013
N.SW= 99990003

If you want to change the software number, key in the new number by means of the numerical keys on the programming module (the number appears on the display) and press "OK" to confirm. If you want to go onto another key, press the new key that you want to change on the entrance panel and repeat the above steps. Lastly, by pressing "EXIT", you exit from "key association" mode and return to the initial menu (the entrance panel exits programming mode).

NB: Use this function for "Single-Key" type entrance panels only

PROBLEMS WITH ACCESSING PROGRAMMING MODE:
See solution given in the section "PARAMETER PROGRAMMING"

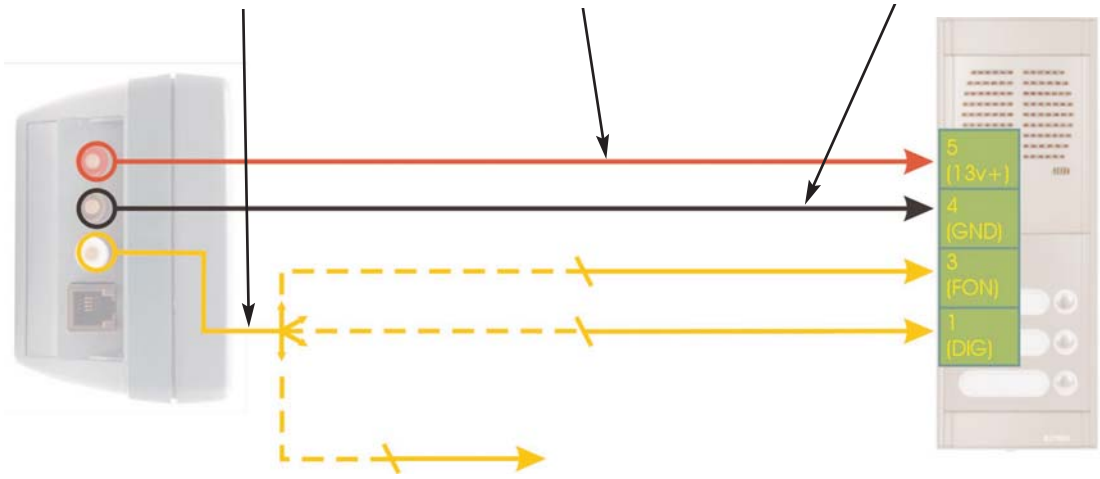
"VOLTMETER" FUNC. (opt.4):

PURPOSE OF THE FUNCTION:
With this function, you can immediately measure the voltages on the POSITIVE POWER SUPPLY line (5) and the DIGITAL line (1 or 6) in relation to ground.
By then touching different points of interest (e.g. the voice line, or the actuators F1, F2, Lock, etc.) with the white shoe (DIGITAL) of the programming module, it is possible to measure their voltages.

Mobile measuring shoe. To be connected to the point at which you want to take the measurement (MAX 28V D.C.).

Programming module positive power supply shoe (can be avoided if the batteries are switched on). Usually connected to the positive line of the "DIGIBUS" bus (5=13V D.C.)

Programming module negative power supply shoe. This is also the point of reference for the voltages measured. Usually connected to the ground line of the "DIGIBUS" bus (4=GND)



IMPORTANT!!!: The built-in digital voltmeter must never exceed voltages of more than 28 V D.C. between the ground wire (black) and the digital input line (white). In the same way, voltages of more than approximately 20V must not be exceeded between the ground terminal (black) and the positive terminal (red).

OPERATING PROCEDURES:
"Voltmeter" mode works by measuring the voltages on the 3 shoe connection "bushings" located in the rear panel. There is no point, therefore, in using it by switching on the programming module by means of the "TELEPHONE PLUG".
The recommended means of power supply is via the 3 bushings, connected respectively to ground, to positive (12-14V D.C.) and to the relevant measuring point on the Digibus system.
Once powered up, select the "VOLTMETER" option from the main menu. If you press "OK", the programming module activates the envisaged measurements, and the following appears on the display:

Voltage measured between the ground terminal (BLACK) and the positive terminal (RED) [max 20V D.C.].

Voltage measured between the ground terminal (BLACK) and the digital terminal (WHITE) [max 28V D.C.]. This is the voltage of the "mobile" measuring shoe.

V. POW.= 13.5V
V.DIG= 11.9V

The first voltage measured (V.POWER) is the voltage of the 2 power supply shoes (i.e. the ones supplying power to the programming module 950B). This is supplied for completeness, because it also allows instantaneous measurement of the power supply voltage (which should never exceed 15V D.C.).
The second voltage (V.DIGITAL) is the voltage between the ground shoe (BLACK) and the digital shoe (WHITE). If the second shoe really is connected to the digital line, the voltage measured is precisely that of the digital (usually about 12-13V D.C.). If you want, however, it is possible to move the white shoe and go and measure the various voltages of interest to you. Specifically, the following voltages can be measured:

- Voltage on VOICE line (usually 12-13V D.C. with the voice line off, about 6-7V D.C. with the voice line active)
- Supply voltages of the video cable riser (usually 18V D.C.)
- Voltages on the terminals of the actuators (lock, F1, F2, call, etc.) or on the power supplies of accessories connected to a common ground connection (e.g. LEDs)
- Voltage of internal circuitry (stabilisers, etc.) in fault diagnosis phase.

MUST NEVER BE USED IN THE FOLLOWING CASES:
- For measuring mains voltages (220-110)
- For measuring > 28 V D.C. voltages (for small voltage overloads, the circuit is protected)
- Measuring negative voltages (it does not measure them)
- Measuring alternating voltages (it would only display an estimate of the effective value of the positive semi-wave)

The measurement shown on the display is updated continuously, approximately every second.

NB: If you activate the programming module with battery power, the voltmeter enables you to measure the voltages between ground (BLACK) and the digital contact (RED). The measurement displayed for "V.POWER" is not therefore valid. There is the advantage, however, apart from needing only 2 connection wires, of thus being able to measure voltages that do not necessarily refer to ground of the Digibus system. For example, it is possible to measure the voltage at the ends of a device/component (e.g.: handset, loudspeaker, relay, LED) regardless of the fact that it has a contact to ground. It goes without saying that the voltage limits envisaged for the instrument must always be complied with, and that it is designed for taking measurements on Digibus systems and not as a generic tester.

"CURRENT MEASURING DEVICE" FUNC. (opt.5):

PURPOSE OF THE FUNCTION:
With this function it is possible to calibrate the current for the digital line (terminal 1). Basically, the instrument measures the Short Circuit current between terminals 1 (DIGITAL) and 4 (GROUND), and shows the current in question on the display.
The measurement of this current is limited to approximately 150mA. It is not therefore possible to measure higher currents on other items (if this happens, the 950B triggers an internal self-protection system).

OPERATING PROCEDURES:
"CURRENT MEASURING DEVICE" mode works only by connecting the 3 shoes to the ground, positive and digital wires of the system. There is no point, therefore, in using it by switching on the programming module by means of the "TELEPHONE PLUG".
Once powered up, select the "DIGITAL CURRENT" option from the main menu. If you press "OK", the programming module activates the envisaged measurements and the display shows the following:

```
I.DIG.CC=123 mA
```

The value measured (updated approximately once every second) is the short circuit current between the digital input line (WHITE) and ground (BLACK). Basically, the instrument applies a current measuring device between the two terminals and measures the short circuit current for very short intervals. Measurement of the current is internally limited to 150 mA. If this limit is exceeded, the programming module temporarily displays the value measured and then cuts out, disabling measurement (it goes into the self-protection state). The following then appears on the display:

```
I.DIG.CC=320 mA
STOP-ICC ALTA!!!
```

If this happens, to re-activate measurement, rectify the cause of the cut-out, go to the main menu and go back into the current measuring procedure.

AUTOMATIC CURRENT MEASUREMENT:
The programming module 950B also measures the current automatically when in "DIGITAL TEST" mode. The purpose of this is to protect the digital signal transmission circuit if the shoe is connected to a high power generator (a typical example of this is if it is connected to the power supply line, which can also supply > 2° currents).

"SCOPE" FUNC. (standard built-in Digital Oscilloscope) (opt.6):

PURPOSE OF THE FUNCTION:
With this function, the instrument simulates a standard "DIGITAL OSCILLOSCOPE". Its capacities are obviously limited, chiefly because of the limitations of the display (alphanumeric rather than graphic), and because of the absence of an adequate control panel (to use it effectively, you need a certain amount of practice).
The electrical capacities, however, are more extensive, for this type of instrument, and can be summed up as follows:
- Recording of the plot on 512 samples with 8 bits of resolution (256 vertical values).
- Possibility of saving a wave form saved to the EEPROM internal memory (which cannot be cancelled by loss of power)
- Adjustable sampling speed from 1Hz to a maximum of 40KHz (it is therefore possible to record very slow variations (up to about 255 sec.) or very fast variations (25 uS per sample).
- Manual or automatic trigger on adjustable threshold (both voltage and direction).
- Possibility of downloading the recorded data onto a PC and displaying its progress by means of dedicated software (thus overcoming its main limitations).

The purpose of this function in the instrument is to enable significant distortions in the digital signal to be displayed (typically occurring on long or disturbed lines).

OPERATING PROCEDURES:
Power up the unit, go to the main menu and select the option "DATA SCOPE". When you press "OK", the programming module goes into a sub-menu and displays the message "SCOPE REGISTER". Using the "NEXT" key, you can scroll through this menu and select which of the 2 functions you want, namely "SCOPE REGISTER" for recording signals and "SCOPE VISUAL" for showing them on the display. To carry out these two phases, proceed as follows:

"SCOPE REGISTER" (Recording a plot):
When the display shows the message "SCOPE REGISTER", press "OK".
The programming module then asks you to select which type of sampling you want to use:

```
Type Scope ?
1= Digib.; 2=Gen.
```

You therefore have the following 2 possibilities:

1=DIGIB (IDEAL SAMPLING TYPE FOR DIGITAL SIGNAL)
The recommended type of sampling for recording a digibus signal. This mode is ideal for recording the plots of the digibus signal, without having to set any other type of parameter. The sampler is set with the appropriate parameters for this type of measuring. If you press 1 (WHICH IS ALWAYS RECOMMENDED IF YOU DO NOT WANT TO HAVE TO CARRY OUT ANY SPECIAL OPERATIONS) the display shows the following:

```
WAIT TRIG
(RED LED = GO CAMP)
```

Basically, the instrument waits until it picks up (trigger) a digibus message on the digital line. As soon as it picks it up, it carries out the type of sampling selected (the red LED lights up while it is doing this), after which it goes automatically into display mode.
NB: If you want to interrupt the wait for the trigger (if you do not want to proceed with measurement), press EXIT
NB2: By doing this, the programming module will take up the following default parameters:
- sampling time ~= 0.416 ms (approximately 4 samples per bit). (Enables you to see the !trama! and, with reasonable clarity, the capacitive effects of the line)
- trigger level: ~7 V D.C. (half-way between the two levels 1 and 0)
- trigger front: descent

2=GENERIC SAMPLING (ACCORDING TO SETTINGS)
In this mode, the 950B simulates the main settings of a normal oscilloscope. Because a number of parameters have to be set, however, its use requires a minimum of technical knowledge and is therefore less immediate than the previous mode. On the plus side, however, this mode enables you to make more complex signal analyses, according to your specific needs at the time (e.g. checks on the voice line or more precise reading of the capacitive effects caused by the electric wiring). In this case, the programming module first asks you to select the sampling speed you want. The following then appears on the display:

```
TIM. CAM. (0-255ms)
```

NR: For the moment, set a maximum of 20mS!!!

Then key in the desired speed (e.g. for 1 KHz the period is equal to (1/1000) 1mS, so key in 1). If you want higher speeds (<1mS) key in 0. Then press "OK"
Only if you have pressed 0, the display will now ask you the times expressed in tenths of mS (see below).

```
tenths of Sec (0-9)
```

If you want to select 0.3 mS, for example, press 3. If, on the other hand, you press 0, this selects maximum sampling speed (25micro seconds, i.e. 40KHz). If you press 255 (for the moment selecting 3 from the subsequent start menu), however, this sets a specific speed (0.417 mS), which is ideal for measuring the digibus frame (exactly 4 samples per bit). In either case, press "OK" to confirm.
At this point, in all cases, the following message appears on the display:

```
1= GO; 2=AUTO
```

A) MANUAL START: In this case, when you press 1 (=GO), signal sampling starts instantaneously. During the sampling time (depending on the sampling speed previously set), the following message appears on the display:

and at the end of sampling, the following message appears -> (with acoustic signal)

```
AQ.RUNNING
>>>
```

At this point, sampling of the plot has been completed. Pressing "EXIT" takes you back to the oscilloscope operating mode selection menu, and the following message appears again:

```
SCOPE VISUAL
```

By pressing "OK", you go into plot display mode.
If, however, you want to repeat sampling, press "NEXT": the message "SCOPE REGISTER" will appear again, and pressing "OK" will take you into recording mode. To exit the OSCILLOSCOPE function and return to the start menu, press "EXIT".

B) AUTOMATIC START: By pressing 2 (=AUTO), you go into acquisition procedure with automatic trigger.
In this case, sampling will start only once the input signal has exceeded a certain voltage threshold. Crossing of the threshold can be selected for "ascending threshold" or "descending threshold". In the first case, sampling starts when the signal rises above the selected voltage, and in the second case, when it falls below the selected voltage.
For operation in this mode, when you press 2 (=AUTO), a prompt will ask you for the trigger voltage you want to set:

```
Lev.Trig (Vx10)
(Range: 1-300)
```

Key in the level you want (in volts with decimals but without the point: e.g. for 13.2V key in 132). Remember that this range corresponds to voltages of between ~0 and 30V.

NB: Be sure to set valid trigger values for the input signal. If you set excessively high or low trigger values (especially values close to 0), sampling may not start.

Once you have set the threshold and pressed "OK", a prompt asks you to select the start mode when the trigger threshold is crossed:

```
1=TV; 2=T1
```

By selecting 1, you set the trigger threshold to start for "descending" signals (i.e. when the signal with a voltage above the threshold drops below the threshold). By selecting 2, you set the trigger threshold to start for "ascending" signals (from below to above).

```
WAIT TRIG
(LED 2 GO CAMP)
```

When you press one of the two keys (1 or 2), the search for the start point is launched immediately (according to what has been set). During the search for the trigger, the following message appears:
This message remains ON until the start trigger is found. At this point, sampling starts (in accordance with what has been set previously) and, as the message indicates, LED2 lights up to show that sampling is in progress. The duration of sampling depends on the sampling speed set. On completion of sampling, the following appears on the display:

COMPLETE (OK FOR VISUAL)

At this point, sampling of the plot has been completed. Pressing "OK" takes you back to the oscilloscope operating mode selection menu, and the following message appears again:

SCOPE VISUAL

By pressing "OK" again, you go into plot display mode.
If, however, you want to repeat sampling, press "NEXT": the message "SCOPE REGISTER" will appear again, and pressing "OK" will take you into recording mode. To exit the OSCILLOSCOPE function and return to the start menu, press "EXIT".

NB: DURATION OF SAMPLING: this is the time taken to complete the acquisition of the whole plot. Bearing in mind that the plot is made up of 512 samples, this is equal to the sampling time set (from 0.025mS up to 1 sec) multiplied by 512 samples (so it can range from 12.5ms to 255 sec!!!)

"SCOPE VISUAL" (Display of the recorded plot):
When the message "VISUAL" appears on the display, press "OK". The programming module then asks you to select the level of vertical ZOOM you want:

ZOOM (1-2-4-8-16)

In practice, the normal display range (1) is 0-30V. If you select 2, the display range is reduced to between 0 and15V. Similarly:
with 4 -> 0-7.5V with 8 -> 0-3.75V with 16 -> 0- ~1.88V

At this point, when you press OK, the screen confirming the maximum visible voltage level set appears momentarily on the display:

V. MAX= 15.0

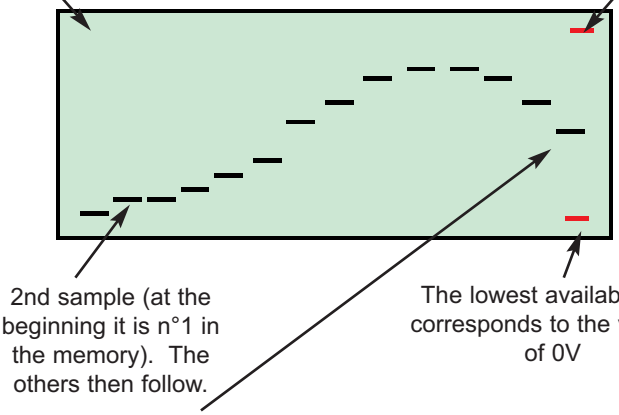
This screen is followed, again momentarily, by the screen indicating the number of the first sample displayed on the LH side:

Camp.n.=000

This is immediately followed by the appearance of the first display screen showing the graphic progress of the first 16 samples saved:

The screen displays the first 16 points in the memory, with 16 possible levels of vertical value

The limit of the highest lines corresponds to the maximum voltage that can be displayed (and depends on the selected zoom, e.g. with ZOOM=2, it corresponds to 15V).



2nd sample (at the beginning it is n°1 in the memory). The others then follow.

The lowest available line corresponds to the voltage of 0V

16th and last sample of the range displayed (at the beginning it is n°15 in the memory)

By pressing "NEXT"  , you move onto displaying the next 16 samples.

Camp.n.=016

Before showing the new samples, the display again momentarily shows the number of the first sample to the left of the new screen, after which it shows the graph of the subsequent 16 samples.
By continuing to press the "NEXT" key, you gradually scroll through all 512 samples recorded (displayed in the subsequent 32 screens).

DISPLAY LIMITATIONS:
This display system (due to the non-graphic nature of the display) obviously has three types of limitation:

- The plot must be displayed by scrolling through it a little at a time. The complete plot must therefore be reconstructed mentally (in many cases, however, it is enough to analyse the first samples only, and this problem is thus minimised).

- The samples have a vertical resolution of 255 values (i.e. they can be recorded with 255 possible different values). The vertical resolution of the screen thus has only 16 possible values (with evident loss of the vertical resolution). To attenuate this problem, the instrument has a vertical zoom function (which, if set to = 16, for example, enables you to display the real samples in the memory).

- Because the plot is divided into screens of 16 points (with apparent expansion of the times) which are vertically compressed (voltages), it tends to make the images look "stretched". Even quite steep fronts appear to be slow.

All these limitations can be overcome, however, by using the appropriate software for downloading the data in the memory. The graphic and calculation power of the software thus enables you to make a highly sophisticated analysis of the plot. The obvious limitation of this approach is that the data needs to be downloaded onto a PC (which can be done at a later stage, if necessary, thanks to the possibility of saving the data to a permanent EEPROM memory).

SAVING THE PLOT IN THE PERMANENT MEMORY (EEPROM):

During the display phase it is possible to save the entire plot to the instrument's permanent memory. To do this, press the keys 

+  (SAVE); a "wait" message will appear, followed by a message confirming that the data has been saved. When the message disappears, the plot is saved to the permanent memory (even without batteries the data cannot be lost).

DISPLAY OF THE PLOT IN THE PERMANENT MEMORY (EEPROM):

During the display phase, it is possible to load into the display, the entire plot present in the instrument's permanent memory. To do this, press the keys 

+ 

(RETRIEVE FROM MEMORY); a "wait" message will appear, followed by a message confirming that the data in the memory has been read. When the message disappears, the plot is displayed on the screen by means of the same procedure for displaying an acquired plot.

DIGIBUS FRAME QUALITY CHECK:

This function enables you to check the "quality" of the digibus signal in numerical form.
If you press F2 (2ndf+OK) in display mode, the programming module calculates the following parameters (which are only valid for the digibus plot or, in any event, for digital signals):

VL: is the low level (0) calculated on the plot (medium level). It should be close to 0 volt. If it is much higher (higher than 1 V) the devices could have problems in communicating (if so, check the current generators, and if necessary, the section and length of the wires).

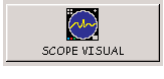
VH: is the high level (1) calculated on the plot (medium level). It should be close to 11-13 volts.

OUT LEVEL: This is a measurement which calculates the number of points that deviate significantly from the 2 levels. The higher this value, the poorer the quality of the digibus signal, and the more it is affected by errors. This defect is typically due to the poor quality of the fronts (ascending or descending) of the digital signal and it is therefore linked with the capacitive effects induced by the wiring.

SOFTWARE FOR ANALYSIS ON PC:

Type 950B is supplied with the CD containing the "SCOPIO" software, which enables you to display the recorded wave forms on a PC.
Using this software, which has an intuitive graphic interface, it is also possible to use the 950B in a similar way to a normal digital oscilloscope. The measurements are all taken by the programming module and are transferred to the PC by means of a serial connection.
The software also enables you to correct or modify the calibration of the measurements taken by the instrument.

OSCILLOSCOPE SIMULATION SCREEN:

To enter this screen, press the key 

on the start screen

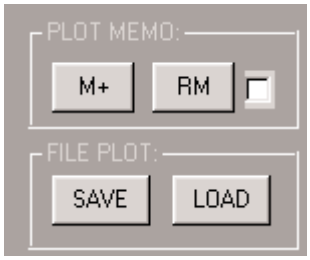
On this screen you can set sampling speed, levels and direction of the trigger threshold voltage, start of sampling, saving to file/display of the recorded wave forms, saving/reading of plots on the EEPROM of the 950B, comparison with waves in the memory, and the execution of operations on the plot (measurement of voltages/times/frequencies, magnification of certain parts of the signal, etc.). All these operations are carried out by means of the relevant buttons, or by means of cursors which operate in the same way as physical selectors.
On the above screen, the plot is displayed with the maximum resolution envisaged for the instrument (512 points with a resolution of 256 possible levels).

LOADING A WAVE FORM FROM THE 950B:

To load the wave form sampled by the 950B, simply (check the serial connection) press the key on the side ("LOAD PLOT"). The plot is thus loaded and displayed, and all the corresponding parameters read by the 950B (times and trigger levels) are updated on the screen. If you want to load the wave form present in the EEPROM memory in the 950B (permanently saved previously), it is first necessary to transfer it to the RAM of the 950B. This can be done by the software, by pressing the key 

in the appropriate window

SAVING THE WAVE FORM:



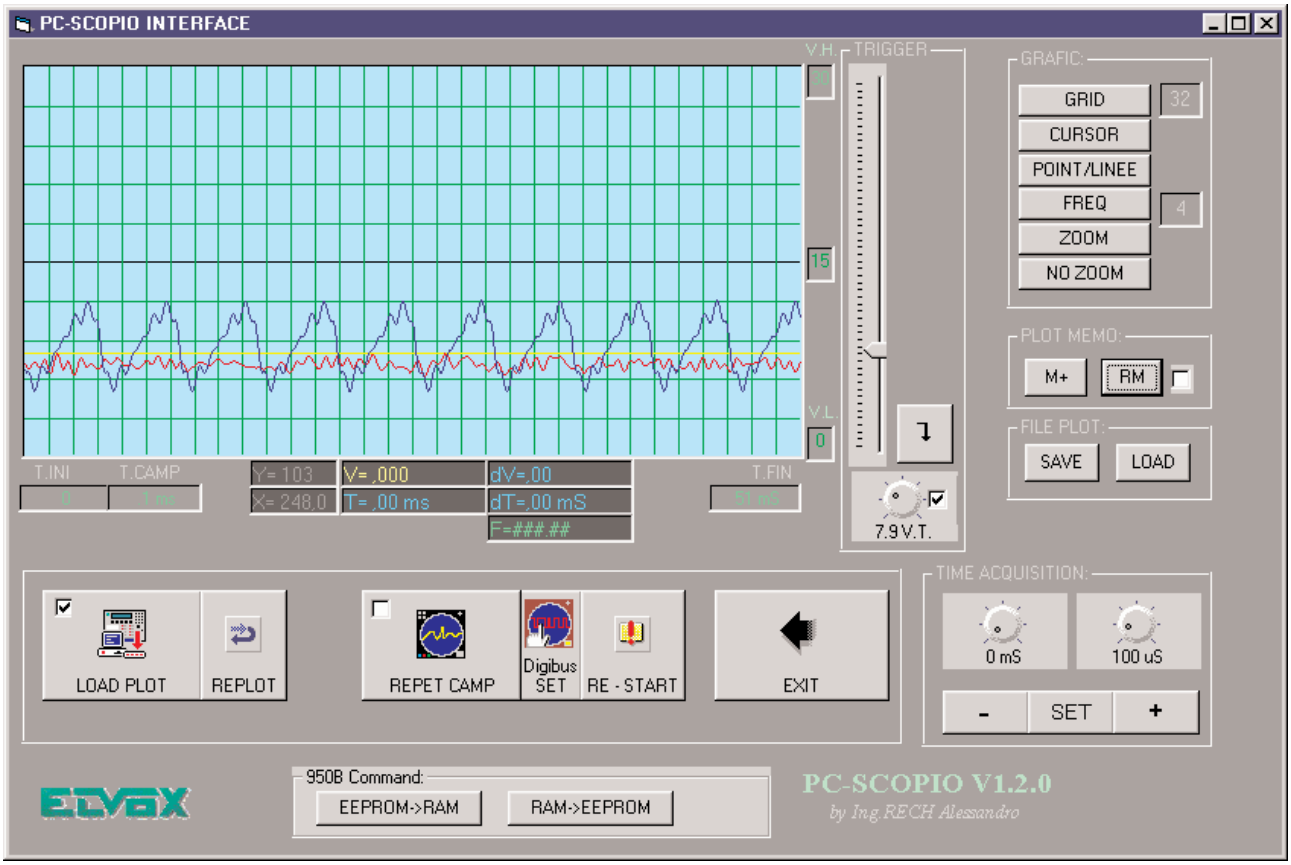
There are two different ways of saving the displayed wave form:
SAVE TO FILE: By means of the "SAVE" key, the wave form, including temporal parameters, is saved to appropriate files on the hard disc, which can be displayed later by pressing the "LOAD" key.
TEMPORARY SAVE TO MEMORY: By means of the "M+" the wave form is saved to the temporary memory, and from here it can be re-loaded onto the screen at any time by pressing the "RM" key. This is useful for making comparisons between one wave form and subsequent acquisitions. If you check the adjacent box, the wave form in the memory is re-loaded after each sampling session (in order to make continuous comparisons).

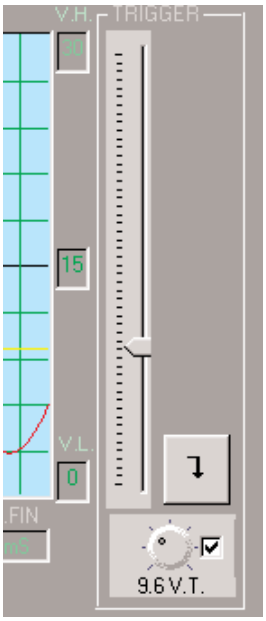
ACQUISITION AND SAMPLING OF NEW PLOTS:

By means of the key 

it is possible to run (on the 950B) a new sampling session, with subsequent display on the screen. Because sampling is carried out according to the criteria set on the screen, before starting, make sure that the Trigger and Time parameters are set correctly.
If you check the box on the sampling key, sampling is repeated continuously ("free running"), thus allowing almost continual display of the input signal (NB: still in accordance with the trigger settings).

OSCILLOSCOPE SCREEN





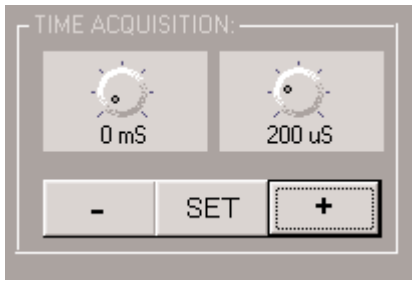
SETTING THE TRIGGER:

This function enables you to set or disable a trigger threshold voltage. In practice, it is only possible to start sampling after the relevant voltage has been passed (ascending or descending). To set the threshold voltage, move the appropriate cursors by pressing the LH mouse button on top of them (and keeping it pressed down as you move them). The set voltage is visible both in numerical form and in the form of a yellow line on the screen (which can be maintained by checking the relevant box). To change the direction of the trigger, repeatedly press the key ↴; the following keys will then appear, which have the following meanings:

↥ Sampling starts only once the voltage has crossed the signal from below to above the set level

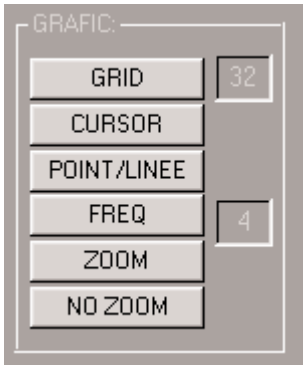
↴ Sampling starts only once the voltage has crossed the signal from above to below the set level

↔ Sampling starts instantaneously when the "REPEAT SAMPLING" key is pressed.



SETTING TIMES:

This function enables you to set the sampling speed of the signal (and thus the resolution in frequency). The shorter the sampling session, the more clearly rapid variations in the signal will be visible. The times that can be set range from 100uS (10 KHz) to about 20 ms (50Hz). There is also a rapid mode, at 0.25uS (40Khz). To change the times, move the rotary cursors (by clicking on them with the left mouse button and turning them while keeping the mouse button pressed down). It is also possible to use the "+" or "-" keys or set the value by using "SET".



SPECIAL FUNCTION KEYS:

The special function keys provide the following functions:

GRID: Pressing this button enables or disables display of the grid (each subdivision equals one interval on the screen of the 950B).

POINT/LINES: Changes the signal display mode into continuous line, points or large points.

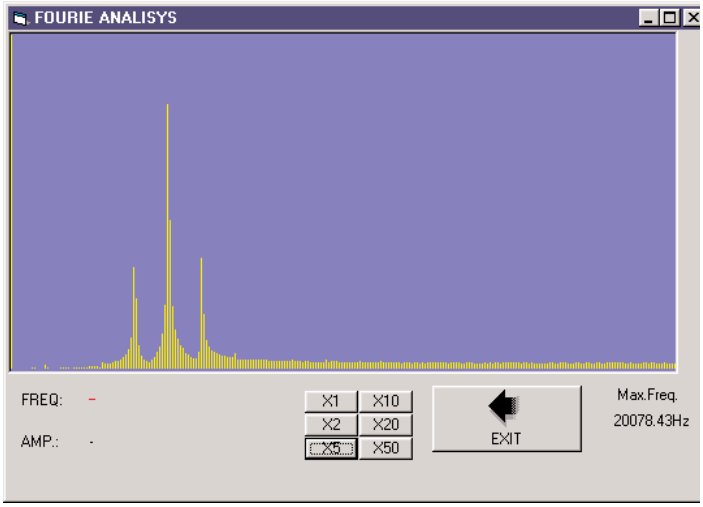
FREQ: In the appropriate box on the screen, calculates the frequency of the signal (valid only if the signal is periodical)

CURSOR: Activates 2 mobile cursors on the screen for taking measurements of amplitude, times, periods and frequencies. After pressing it, move the cursor on the screen to the desired positions and fix the cursors with the LH (1st cursor) and RH (2nd cursor) buttons. The amounts calculated will be displayed in the area at the bottom of the screen.

ZOOM : Active only after enabling the 2 cursors. Pressing this button magnifies the display of the selected area only. Selection can be repeated.
NO ZOOM: Returns to full display of the plot.

SIGNAL SPECTRUM ANALYSIS (FOURIER):
After displaying the signal you want, pressing the key

activates a screen which shows the calculated spectrum (Fourier frequency analysis). The function is basically the same as a spectroscope. It enables you to analyse the frequencies that make up the signal, by means of bars corresponding to each frequency. If you position the mouse pointer on the bar and press the LH button below it, the corresponding frequency (and amplitude) values are shown.
NB: For example, in the case of a sinusoidal signal at 1000 Hz, the spectrum should show a very wide bar (or 2 close to each each other) only corresponding to the frequency of 1000 Hz. If this does not occur, it means that the signal is distorted.
With the keys X1, X2… it is possible to expand the amplitude of the spectrum bars (to improve their visibility).



OTHER SOFTWARE SCREENS AND FUNCTIONS:

These functions are included for the sake of completeness (slow sampling), or are to be used for technical reasons only (CALIBRATING THE INSTRUMENT).

OTHER FUNCTIONS OF THE 950B

MEASUREMENT OF BATTERY VOLTAGE (if batteries are fitted):

AUTO POWER-OFF:

DISPLAY BACKLIGHTING:

PROTECTION AGAINST INCORRECT ACCIDENTAL MEASUREMENTS:

READING OF SERIAL NUMBER AND SOFTWARE VERSION:
Not implemented

POSSIBILITY OF FOCUSING ON A SPECIFIC ENTRANCE PANEL:
Not implemented

RESET ENTRANCE PANEL

POWER SUPPLY
Type 6941

TECHNICAL SPECIFICATIONS

The basic power supply unit for all DIGIBUS electronic door opener systems, housed in a grey thermoplastic case. Designed for mounting to equipment panels with DIN omega rails (12 modules), or wall fixing with masonry plugs.

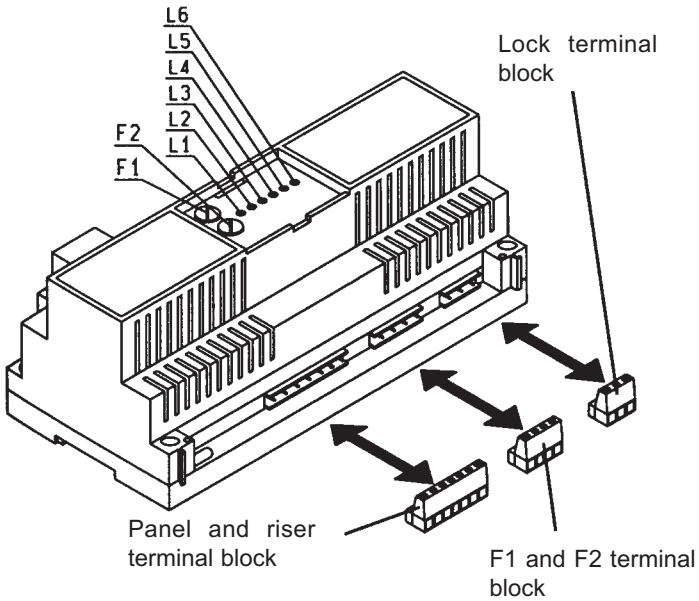
- Dimensions: 208x135x72 Weight 1.5 kg
- Supply voltage: 230 V A.C. 50 - 60Hz
- Maximum absorbed power: 60 VA
- Low voltage supply: 13.5 V D.C. 1.5 A (maximum 50 distribution units and one entrance panel or 200 phones Type 887B and one entrance panel)
- Panel illumination output: 15V rectified, 0.4A continuous duty (max 3 lamps rated 24V 3 W)
- Lock output: 15V rectified 1A
- Interchangeable card for quick maintenance
- Removable terminal strips
- Indication circuit with LEDs showing current operating status
- Frequency modulated acoustic call circuit.

Built-in protection features:

- Transformer primary: PTC SIEMENS type C840
- 3.15 A 250 V fuse (F1) on 1st secondary, driving internal electronic circuits
- 3.15 A 250 V fuse (F2) on 2nd secondary, driving electric doorlock circuit
- Electronic interphone riser or panel short-circuit or overload cutout

LEDS

L1- Lock voltage
L2- Lock activation
L3- Auxiliary function F1
L4- Auxiliary function F2
L5- Audio
L6- Supply



POWER SUPPLY OPERATING PRINCIPLE ART. 6941

When the door lock button is pressed on the internal unit (or an auxiliary function F1 or F2), terminal 1 sends a digital signal to the panel which decodes it and enables the power supply to execute the command (terminals S1 for the lock or outputs R1 or R2 for F1 or F2 respectively).

N.B: The call functions, switching between panels and supplementary functions are not controlled by the power supply, but by the panel. The panel must therefore be supplied with current within the specified limits.

The illumination power for push-buttons with name-tag holders is provided by the 0-15 output line from the power supply: a maximum of three lamps (24 V 3 W) can be connected.

When the panel is equipped with several bulbs, additional transformers must be fitted: 1x Type M832 for 10x 24V 3W bulbs or 1x Type 832/030 for 16x 24V 3W bulbs.

TERMINAL BLOCKS AND LEDS

CH- Acoustic call enable line

S- Electric doorlock control line YELLOW LED L2 - lights up when door opener button is pressed at an interphone

F1- 1st auxiliary function control line
GREEN LED L3 - lights up when button F1 is pressed at an interphone

F2- 2nd auxiliary function control line
YELLOW LED L4 - lights up when button F2 is pressed at an interphone

3- Acoustic call line
GREEN LED L5 - lights up when an acoustic call is activated or when an interphone is switched on and the relative handset is off the hook

4- Negative line to interphones

5- +13.5V D.C. 1.5A power supply to maximum 50 distribution units or 200 internal code type interphones and one entrance panel.
RED LED L6 - lights up when voltage through terminal measures +13.5 V D.C.

TERMINALS "4-R1-4-R2"

4- Negative line

R1- Timed line for activation of first auxiliary function. F1 max. load 12V D.C. 0.1A.

4- Negative line

R2 Timed line for activation of second auxiliary function. F2; max. load 12V D.C. 0.1A.

LOCK TERMINALS S1-15-0

S1: Electric doorlock time control line, protected by 3.15 A fuse (F2)
YELLOW LED L1 - lights up when voltage across terminals S1 and 15 measures 15V rectified (doorlock activated)

15-0: Power line to auxiliary functions, protected by 3.15 A fuse (F1)

"PRIM" TERMINALS

These terminals are located beneath the thermoplastic shield bearing the symbol " ", and are used for making the connection to the mains supply. There is no earth wire as this is a class 2 power supply.

POWER SUPPLY
Type 6942

TECHNICAL SPECIFICATIONS

Additional power supply for DIGI-BUS audio or video entry systems. Mainly used for supplying the monitors or interphones, for the switchboard or main panel in building complexes. Housed in a grey thermoplastic case and designed for mounting to equipment panels with DIN omega rails (12 modules), or wall fixing with masonry plugs.

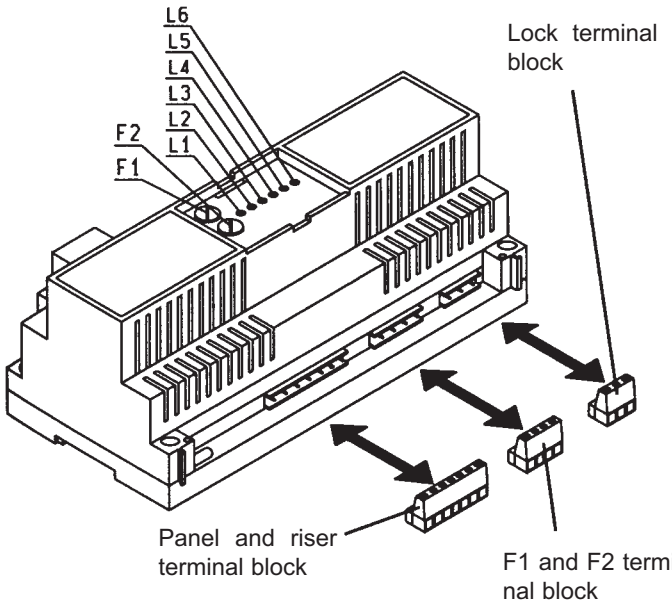
- Dimensions: 208x135x72 Weight 1.5 kg
- Power supply: 230 V A.C. 50 - 60Hz
- Maximum absorbed power: 60 VA
- Interphone, panel or switchboard power output: 13.5V D.C. 1.5 A.
- Panel illumination output: 15V rectified, 0.4A continuous duty (max 3 lamps rated 24V 3 W)
- Lock output: 15V rectified 1A
- Interchangeable card for quick maintenance
- Removable terminal strips
- Indication circuit with LEDs showing current operating status

Built-in protection features:

- Transformer primary: PTC SIEMENS type C840
- 3.15 A 250 V fuse (F1) on 1st secondary, driving internal electronic circuits
- 3.15 A 250 V fuse (F2) on 2nd secondary, driving electric door-lock circuit
- Panel or interphone riser overload/short-circuit cutout.

LEDS

L1- Lock voltage
L2- Lock activation
L3- Auxiliary function F1
L4- Auxiliary function F2
L5- Not used



For examples of installation see diagrams:

1. **page 6 n° 5; wiring diagram ref. P2786: the power supply is used to power a main panel in a building complex installation**
2. **page 8 n° 10; wiring diagram ref. PC2769: the power supply is used as additional unit to power a porter switchboard**
3. **page 88-89 versions 7-8; the power supply is used to power an interphone (monitor) riser in installations with more than 50 distributors Type 949B and 200 interphones (monitors) with internal coding.**

TERMINAL BLOCKS AND LEDS

CH - Not used
S- Electric door lock control line YELLOW LED L2 - lights up when door opener button is pressed at an interphone
F1- 1st auxiliary function control line
GREEN LED L3 - lights up when button F1 is pressed at an interphone
F2- 2nd auxiliary function control line
YELLOW LED L4 - lights up when button F2 is pressed at an interphone
3- Not used
4- Negative line to interphones
5- +13.5V D.C. 1.5A power supply to maximum 50 distribution units or 250 internal code type interphones and one entrance panel.
RED LED L6 - lights up when voltage through terminal measures +13.5 V D.C.

TERMINALS "4-R1-4-R2"

4- Negative line
R1- Timed line for activation of first auxiliary function. F1; max. load 12V D.C. 0.1A.
4- Negative line
R2 Timed line for activation of second auxiliary function. F2 max. load 12V D.C. 0.1A.

LOCK TERMINALS S1-15-0

S1 Electric door lock time control line, protected by 3.15 A fuse (F2)
YELLOW LED L1 - lights up when voltage across terminals S1 and 15 measures 15V rectified (doorlock activated)
15-0 Power line to auxiliary functions, protected by 3.15 A fuse (F1)

"PRIM" TERMINALS

These terminals are located beneath the thermoplastic shield bearing the symbol " ", and are used for making the connection to the mains power supply. There is no earth wire as this is a class 2 power supply.

DIGITAL POWER SUPPLY Type 6946

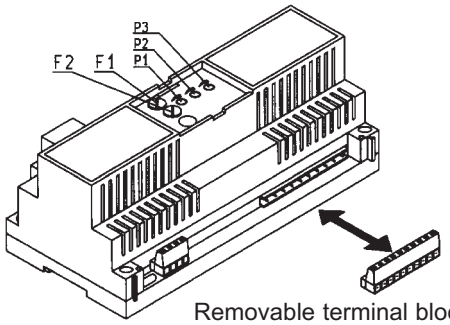
Digibus systems with secondary video door entry panels connected to single monitors.
Power supply Type 6946 allows connection to a video door entrance panel corresponding to a single user inserted on a "DIGIBUS" installation. The connection is made using additional wires to make a non-digital communication line. Calls from the DIGIBUS electronic entrance panel are sent on the DIGIBUS line by means of a code, whereas calls from the secondary entrance panels are made using Sound System.
When a visitor calls from the secondary video door entry panel the monitor in the apartment comes on, the lock release corresponding to the secondary door entry panel is activated by pressing (on the monitor) the push-button with the lamp symbol. After the time preset on the same power supply, the monitor switches off automatically. The secondary panel has no priority, therefore if during a conversation a call is made by the digital panel, the secondary panel assumes the engaged state, thus disabling the call push-button, and communication is switched to digital panel. The power supply offers the facility for connecting an "engaged - wait" LED to the secondary entrance panel.

TERMINAL BLOCK

IMPORTANT
Before making the terminal block connections, make sure that the entire system is switched off. Only switch on the system after all the devices, audio/video panels, power supplies, switchboards etc. have been connected.

ADJUSTMENTS
P1 - Activation time adjustment for monitor and camera.
P2 - Volume adjustment of speech unit.
P3 - Activation time adjustment for electric lock.
Dimensions: 208x135x72 - Weight: 1.4 kg.

Protection devices on power supply:
- PTC SIEMENS type C840 primary coil of transformer.
- 1st secondary coil for internal electronic supply: F3A 250V (F1) fuse.
- 2nd secondary coil for lock supply and electronic calls: F34 250V (F2) fuse.
- Electronic protection against short-circuits and overloading on monitor cable riser.
- Electronic protection against overloads to speech unit.



Removable terminal block

POWER AND DIGITAL RISER SIGNAL TERMINAL BLOCK

M3-V3)	Video signal from secondary camera
M1-V1)	Video signal from main digital entrance panel
M2-V2)	Video signal output for monitor riser
P2)	Common for landing call
AU)	Self-start
+)	18V 0.8A positive output for monitor supply
-)	18V 0.8A negative output for monitor output
C)	Switching control between panel with analogue camera and digital panel
-)	Monitor supply input
+I)	Monitor supply input
AM+)	Control for switching off monitor for secondary panels without camera
LO)	12V D.C. "Engaged-Wait" LED supply
2 5 6 7	Voice line for speech unit
- +T	13V D.C. 0.25A camera supply
P1)	Common terminal for push-buttons for secondary panel
S1 15	15V rectified, 1A door lock supply with intermittent operation
15 0	15V rectified, 0,25A lamps supply

POWER SUPPLY TYPE 6947

TECHNICAL SPECIFICATIONS

Additional power supply for DIGI-BUS video entry systems, used for boosting monitor power and the call tone. Housed in a grey thermoplastic case and designed for mounting to equipment panels with DIN omega rails (12 modules), or wall fixing with masonry plugs.

- Dimensions: 208x135x72 Weight 1.5 kg
- Power supply: 230 Vac 50 - 60Hz
- Maximum absorbed power: 60 VA
- Interphone and/or monitor power output: 13.5V D.C. 1.5 A.
- Interchangeable card for quick maintenance
- Removable terminal strips
- Indication circuit with LEDs showing current operating status

Built-in protection features:

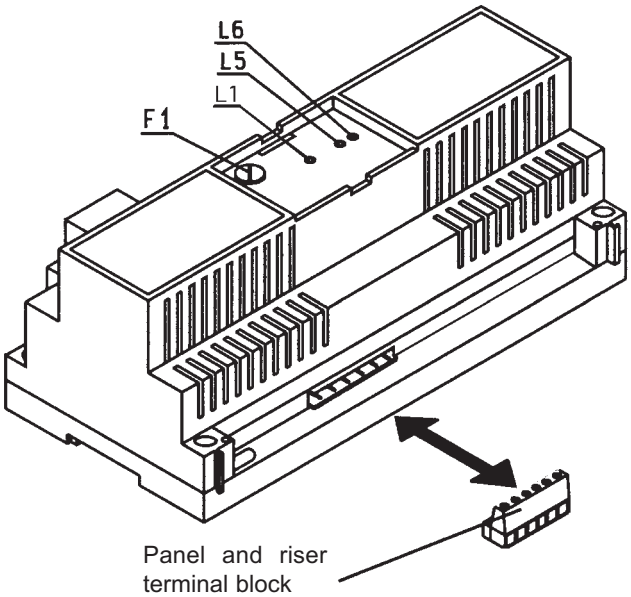
- Transformer primary: PTC SIEMENS type C840
- 3.15 A 250 V fuse on secondary, driving internal electronic circuits
- Monitor riser overload/short-circuit cutout.

POWER SUPPLY Type 6947 OPERATION

This power supply is installed in systems with long cable runs between the central power supply and the monitor. It is intended to boost both the monitor (interphone) call tone and the monitor line power (18V D.C. +/-), to ensure optimal values. See page 87 variant n°9 for the hook up.

LEDS

L5- Audio
L6- Power



LEDS

LED L5 lights up for the duration of the call tone when a call is sent from the entrance panel. It lights up again when the handset is lifted and switches off when the handset is replaced or the maximum conversation time has elapsed. Led L6 lights up when the power supply is connected to the mains.

CONNECTION TERMINALS

+I : Monitor switching off enable line.
CH: Acoustic call enable line
3: Audio/call tone line.
GREEN LED L5 - lights up when an acoustic call is activated or when a monitor is switched on and the relative handset is off the hook
4: Negative line to interphone
+: Positive supply line for monitor riser 18V D.C. 0.8A
-: Negative supply line for monitor riser

"PRIM" TERMINALS

These terminals are located beneath the thermoplastic shield bearing the symbol " ", and are used for making the connection to the mains supply. There is no earth wire as this is a class 2 power supply.

POWER SUPPLY TYPE 6948

TECHNICAL SPECIFICATIONS

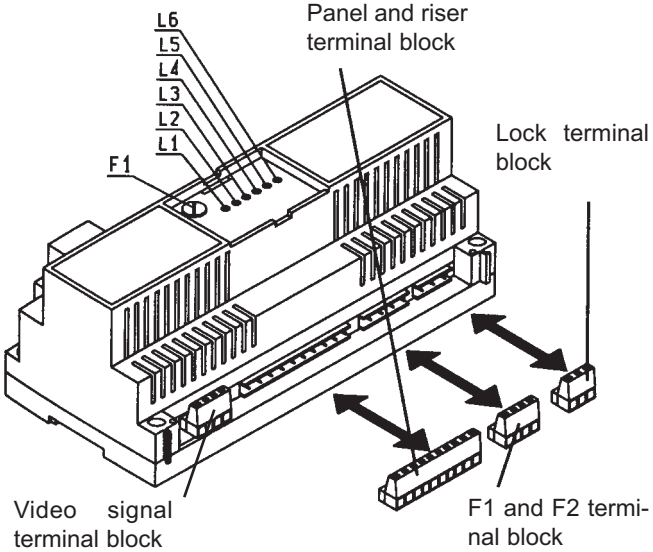
The basic power supply unit for all video electronic door opener systems, housed in a grey thermoplastic case. Designed for mounting to equipment panels with DIN omega ralls (12 modules), or wail fixing with masonry piugs.

- Dimensions: 208x135x90 Weight 1.5 kg
- Power supply: 230 V A.C. 50 - 60Hz
- Maximum absorbed power: 60 VA
- Low voltage supply: 13.5V DC 1 A (maximum 10 distribution units Art. 949B and one entrance panel or 60 monitors Art. 6504 and one entrance panel)
- Monitor supply output: 18V DC. 0,8A
- Panel illumination output: 15V rectified, 0.4A continuous duty (max 3 lamps rated 24V 3W)
- Lock output: 15V rectified 1A
- interchangeable card for quick maintenance
- Removable terminai strips
- Indication circuit with LEDs showing current operating status
- Frequency modulated acoustic cali circuit. Buiit-in protection features:
- Transformer primary: PTC SIEMENS type C840
- 3.15 A 250 V fuse (F1) on 1st secondary, driving internai eiectronic circuits
- PTC SIEMENS C945 on 2nd secondary, driving functions supply
- Eiectronic interphone riser or panel short-circuit or overload cutout

IMPORTANT: each apartment can be equipped with one 5604 - 5601 series monitor or one 6304, 6307, 6000, 6003 monitor in parailel. To connect a greater number of monitors in parailel in the same apartment, one or more 6582 or 6583 power supplies must be instailed (see hook up variants).

LEDS

Li- Monitor supply
L2- Lock activation
L3- Auxiliary function Fi
L4- Auxiliary function F2
L5- Audio
L6- Digital suppiy



POWER SUPPLY ART. 6948 OPERATION

When a cali is sent from the entrance panel, the CH terminai sends a signal to the power supply to enable the acoustic cali tone which is transmitted to the riser by terminai 3. When the door iock button is pressed on the internai unit (or an auxiiiary function Fi or F2), terminai 1 sends a digital signal to the panel which decodes it and enabies the power supply to execute the command (terminai Si for the lock, or outputs Ri and R2 for F1 or F2, respectiveiy).

N.B: The cali functions, switching between panels and suppiementary functions are not controiled by the power supply, but by the panel. The panel must therefore be supplied with current within the specified limits.

The illumination power for buttons with name indicator slots is provided by the 0-15 output line from the 6941 unit: a maximum of three lamps (24V 3W) can be connected.

CONNECTION TERMINALS

+I Monitor switching off enabie line.
CH: Acoustic cali enable fine
5: Electric doorlock controi iine YELLOW LED L2 - iights up when door opener button is pressed at a monitor
Fi: 1st auxiiiary function controi line
GREEN LED L3 - iights up when button Fi is pressed at a monitor
F2: 2nd auxiliary function control fine
YELLOW LED L4 - iights up when button F2 is pressed at a monitor. Functions used for VIDEOMOV1NG.
3: Acoustic cali fine
GREEN LED L5 - lights up when an acoustic cali is activated or when a monitor is switched in and the relative handset is off the hook
4: Negative me to interphones
5: +13.5 VD.C. IA power supply to maximum 10 distribution units Art. 949A or 60 internal code type interphones and one entrance panel.
RED LED L6 - iights up when voltage through terminal measures +135 Vdc
+: Positive suppiy line for monitors 18V D.C. 0,8A
-: Negative supply line

TERMINALS "4-R1-4-R2"

4- Negative me
R1- Timed line for activation of first auxiliary function. Fi max. ioad 12V D.C. 0.1A.
4- Negative me
R2- Timed me for activation of the 2nd function F2. Used for "V1DEOMOVING'.

S1 and 15-0 TERMINALS

S1: Eiectric dooriock time control me, protected by PTC type C945.
YELLOW LED L1: Lights up when voltage through terminai Si and i5 measures 15V rectified (lock release in function).
15-0: Power iine to auxiliary functions, protected by PTC type C945.

"PRIM" TERMINALS

These terminals are iocated beneath the thermoplastic shield bearing the symbol" ",and are used for making the connection to the mains supply. There is no earth wire as this is a class 2 power supply.

POWER SUPPLY

Type 6583

Power supply for additional video door entry systems in 12-module DIN housing for long lines and lines with significant voltage drops or for simultaneous switch-on of several monitors.
Dimensions: 208x135x72
Supply voltage: 230V A.C. 50 - 60 Hz
Maximum absorbed power: 60 VA

Type 6582

Additional power supply for video door entry systems in 4-module DIN housing to use for simultaneous switch-on of several monitors and for long lines or lines affected by significant voltage drop. Can power video distributors type 5556/004, 6554 and amplifier type 5559. Supply voltage 230V A.C. 50Hz.

TRANSFORMER

Type M832

Safety transformer with B.T. 12V~ 20 VA output. Transformer with copolymer case on 4-module DIN housing, PTC circuitry against short circuits and temperature variations.
Dimensions: 75x100x65 mm.

Type 832/030

Safety transformer with B.T. 15V~ 30 VA output. Transformer with copolymer case on 4-module DIN housing, PTC circuitry against short circuits and temperature variations.
Dimensions: 75x100x65 mm.

AMPLIFIER

Type 5559

Video amplifier in ABS with 4-module DIN housing, for connection lines with 75 Ohm coaxial cable over 200 metres long, compensated up to 1000 metres. Power supply 12 - 18V D.C.. Can be powered by power supply type 6582.
Dimensions: 70x105x65 mm.

INTERFACE

Type 3551

Telephone interface module for use in DIGIBUS installations. To be fitted in video door entry systems together with telephone switchboards Type 3528/N to enable the use of telephones in place of the normal interphones.
Dimensions: 140x115x50 mm.

VIDEO DISTRIBUTOR

Type 6554

Video floor distributor, 4 outputs with 75 Ohm coaxial cable. Power supply 12 to 18V D.C..
Dimensions: 48x70x19 mm.

Type 5556/004

Video signal floor distributor or for several cable risers, with 4 outputs, in copolymer with 4-module DIN housing. Power is supplied from the monitor or from power supply type 6582. Power supply 12V D.C.. Dimensions: 70x105x50 mm.

RELAY

Type 170/001

Relay for switching on stair light or other system. Load to contacts 3A 230V. Power supply 12V D.C. or A.C.
Dimensions: 70x105x50 mm.

Type 170/002

Pair of 170/001 relays in a single container.
Dimensions: 70x105x50 mm.

Type 170/101

Repeater relay, for additional ringtones etc. Load to contacts 3A 230V. Power supply 12V D.C.,
12V A.C. or electronic call.
Dimensions: 70x105x50 mm.

Type 170/051

Relay for switching the video signal from the entrance panel camera to an additional camera.
Power supply 12V D.C. or A.C.
Dimensions: 70x105x50 mm.

Type 170/945

Device for switch-on and switch-off of the monitor for a porter switchboard.

DEVICE
Type 170D

DESCRIPTION
Device with microcontroller for 4-8-digit encoding/decoding. Fitted with three OPEN-COLLECTOR outputs to control 3 relays type 170/001.
The 3 outputs are independent and can be activated by means of 4 or 8-digit digital calls; they are also programmable with different activation times.

ENCODING RELAY ART.170D
The relay enables the activation of S1, S2 and S3 outputs simply by keying in a 4 or 8 digit number from a Digibus entrance panel (942, 946) either by means of the standard procedure (number + C) or by pressing one of the interphone function push-buttons.
The standard application enables the door lock release using 3 different codes and 3 different activation times when the device is connected to timers with programmed output.
The 3 outputs can be programmed with different activation times for particular applications. The procedure for programming the code and the activation time is the following:

1) Press PROGR. push-button inside the relay Type 170D and keeping it pressed, press also SHIFT push-button, release PROGR. and then SHIFT. The illumination of LED S1 means that you can programme the corresponding output S1.
2) By pressing SHIFT push-button several times in series the output programming changes (LEDs S1, S2, S3 switch on sequentially).
3) Select a 4 or 8 digit number from the entrance panel or the interphone function push-buttons using the standard procedure (number + C) or the secret procedure (R1 + number or 0 + number or C + number related to the panel programming).
4) The LED which was ON, switches off for a while showing that the code has been entered.
5) Introduce the standard activation time by pressing 1 + C (for particular applications you can introduce activation times from 0001 to 9999).
6) The LED switches off definitively, showing that the code has been entered and that programming is over.
7) The programming of the other outputs is carried out repeating the procedure from 1 to 6.

Operation with JUMPER 6-7 INSERTED
Each output may be programmed by keying in a number on the entrance panel or interphone. In the latter case the device will enable the programmed output only if it receives the interphone number and the respective command.
In both cases the activation time must be programmed from a numerical entrance panel.

JUMPER 6 - 7 INSERTED

Number	Enabled output
4 or 8 digit code and respective command	S1/S2/S3
(according to the type of panel/interphone)	(according to the programmed code)

For example:
S1: output activated by command from entrance panel and number 123
S2: output activated by command F1 from interphone number 12345678
S3: output activated by command F6 from interphone number 12345678

Operation with JUMPER 6 - 7 CUT
Outputs S1, S2 and S3 are activated by any of the interphone function push-buttons without distinguishing the particular interphone number. The programming procedure is the same as before: the command is sent by an interphone, whereas the activation time is sent by a numerical entrance panel.

JUMPER 6 - 7 CUT

Commands possible from the interphone	Activated output
DOOR LOCK RELEASE/ INTERPHONE CALL	S1/S2/S3
F1/F2/F3/F4/F5/F6/F7/F8	(according to the programmed code)

For example
S1: output activated by command F6 from EACH interphone
S2: output activated by command LOCK RELEASE from EACH interphone
S3: output activated by command F2 from EACH interphone.

Operation with JUMPER 2 - 5 CUT:
Cutting jumper 2 - 5 and pressing push-button R on entrance panel all the outputs are DEACTIVATED at any moment without taking into consideration the activation time previously programmed.
With the jumper inserted, the device is not influenced by pressing the R push-button.

JUMPER 2 - 5 CUT

Command from entrance panel	Deactivated output
R	ALL

Programming is necessary even if the device receives the commands only from the interphone. In this case the code entered in point 3 may be any, provided it corresponds to the type of interphone (4 or 8 digits).

From relay type 170D it is possible to communicate with the external entrance panel by inserting a handset accessory, supplied as an option, connected to connector CN1.

DEVICES

TYPE 2/831

Sound System type electronic double call generator in 4-module DIN housing. Supply voltage 15V~ Dimensions: 70x115x50 mm.

TYPE 2/851

This is a device that can be used in all digital call audio and video door entry systems, and is able to suppress any interference or atmospheric disturbance which could cause damage to system devices.

TYPE 685A

Protection device against disturbance caused by "transient currents" or "surge" type "over voltages" on connection lines. To be used to protect 18 V D.C. lines (monitor power supply) and 13.5V D.C. lines (for power supply of monitors, interphones, electronic entrance panels and switchboard). The device serves to bring existing installations into compliance with standards 50081-1 and 61000-6-1 Dimensions: 48x70x19 mm.

TYPE 685B

Protection device against disturbance caused by "transient currents" or "surge" type "over voltages" on connection lines. To be used to protect 13.5V D.C. lines (for power supply of monitors, interphones, electronic entrance panels and switchboard). The device serves to bring existing installations into compliance with standards 50081-1 and 61000-6-1 Dimensions: 48x70x19 mm.

TYPE 685C

Protection device against disturbance caused by "transient currents" or "surge" type "over voltages" on connection lines. To be used to protect 18V D.C. lines (monitor power supply). The device serves to bring existing installations into compliance with standards 50081-1 and 61000-6-1 Dimensions: 48x70x19 mm.

TYPE 6951

Protection device against disturbance caused by "transient currents" or rapid "burst" type "over voltages" on connection lines. To be used for protection of: D.C. power lines (for monitors, entrance panels, interphones, and switchboard), for the digital line, voice line and command lines. The device serves to bring existing installations into compliance with standards 50081-1 and 61000-6-1. Dimensions: 48x70x19 mm

TYPE 2/841

Loudspeaker / electronic call repeater for installations with Sound System call and electronic installations: fixture on rectangular box or expansion plugs. Dimensions: 120x75x30 mm.

CABLE

Type 61/001

Cable for video connections in P.V.C. NPI 12-48V CEI 20-22 II CEI 20-35 CEI 20-37 I, consisting of 12 coloured conductors and one 75 Ohm coaxial cable, in 100 m rolls. For internal installation. Cable diameter 10 mm.

Type 61/001.500

Cable for video connections in P.V.C. NPI 12-48V CEI 20-22 II CEI 20-35 CEI 20-37 I, consisting of 12 coloured conductors and one 75 Ohm coaxial cable, in 500 m rolls. For internal installation. Cable diameter 10 mm.

Type 61/002

Cable for video connections in P.V.C. NPI 12-48V CEI 20-22 II CEI 20-35 CEI 20-37 I, consisting of 10 coloured conductors and one 75 Ohm coaxial cable, in 100 m rolls. For internal installation. Cable diameter 8 mm.

Type 61/001.500

Cable for video connections in P.V.C. NPI 12-48V CEI 20-22 II CEI 20-35 CEI 20-37 I, consisting of 10 coloured conductors and one 75 Ohm coaxial cable, in 500 m rolls. For internal installation. Cable diameter 8 mm.

Type 61/003

Cable for video connections in special ABS 12-48V CEI 20-22 CEI 20-37, consisting of 12 coloured conductors and one 75 Ohm coaxial cable, in 100 m rolls. For underground installation protected with piping. Cable diameter 10.5 mm.

Type 2/060

Cable for video in P.V.C. NPI CEI 20-22 II CEI 20-35 CEI 20-37 I, with 75 Ohm coaxial cable (type RG174), in rolls of 200 m. Cable diameter 3 mm.

5 - DIGIBUS INSTALLATION ELECTRICAL SPECIFICATIONS

- NOTES FOR TESTING -

CURRENT/VOLTAGE CHECKS FOR Type 887B INTERPHONE AND DIGITAL DISTRIBUTOR Type 949B

TERMINAL/TERMINAL VALUES FOR UNIT SWITCHED ON AND ON STAND-BY

TERMINALS	NOMINAL VALUE	TOLERANCE
1-4	+12.0 V D.C.	+/- 1 V D.C.
3-4	+13.0 V D.C.	+/- 0.5 V D.C.
5-4	+13.0 V D.C.	+/- 0.5 V D.C.
CURRENT 1-4	+25 mA D.C.	+/- 3 mA D.C.

The last measurement must be made with an ammeter.

NOTES:
WHEN PROGRAMMING THE INTERPHONE, ENSURE THAT THE RED (INTERPHONE ON) LED SWITCHES OFF 10 SECONDS AFTER THE HANDSET IS REPLACED. IF THIS DOES NOT HAPPEN, FIRST CHECK THE CONNECTION OF THE WIRES TO TERMINALS 1 (DIGITAL) AND 3 (AUDIO), AND ENSURE THAT THEY ARE NOT INVERTED. THE INTERPHONE RISER MUST BE SWITCHED ON TOGETHER WITH THE STAIRWAY PANEL (IN A BUILDING COMPLEX) OR THE MAIN PANEL.

CURRENT/VOLTAGE CHECKS FOR MONITORS Type 5601/940, 5604/940, 5340

TERMINAL/TERMINAL VALUES FOR UNIT SWITCHED ON AND ON STAND-BY

TERMINALS	NOMINAL VALUE	TOLERANCE
1-4	+12.0 V D.C.	+/- 1 V D.C.
3-4	+13.0 V D.C.	+/- 0.5 V D.C.
5-4	+13.0 V D.C.	+/- 0.5 V D.C.
8-7	+18.0 V D.C.	+/- 0.5 V D.C.
CURRENT 1-4	+25 mA D.C.	+/- 3 mA D.C.

The last measurement must be made with an ammeter.

NOTES:
IF THE MONITOR IMAGE IS NOT PERFECTLY CLEAR, CHECK THAT THE 75 OHM RESISTOR IS FITTED ON THE V2-M TERMINAL OF EACH MONITOR IN INSTALLATIONS WITH VIDEO FLOOR DISTRIBUTORS OR OF THE LAST MONITOR IN THE RISERS IF THE MONITORS ARE CONNECTED IN CASCADE.

CURRENT/VOLTAGE CHECKS FOR POWER SUPPLY Type 6941

TERMINALS	PANEL IN STAND-BY	PANEL ACTIVE	NOTES
CH-4	+13 V D.C.	+13 V D.C.	At the moment of the call LED L5 switches on and the CH terminal goes to 0 V D.C. momentarily. LED L1 switches on at low intensity.
S-4	+13.5 V D.C.	+1.5 V D.C. during lock activation	Lock button enabled only if interphone is active. LEDS L1 and L2 switch on.
R1-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function enabled with interphone in stand-by or active.
R2-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function enabled with interphone in stand-by or operating.
3C-4	+13.5 V D.C.	-4.5 V D.C. when call is sent from panel, otherwise +13.5 V D.C.	LED L5 on for duration of call, then off; On again when called unit handset lifted.
15-0	22.5 V D.C.	15 V D.C.	Voltage measured in D.C..
S1-0	22.5 V D.C.	0 V D.C. during lock activation	S1 is controlled by panel which receives digital lock open command code from terminal 1.

CURRENT/VOLTAGE CHECKS FOR POWER SUPPLY Type 6942

TERMINALS	PANEL IN STAND-BY	PANEL ACTIVE	NOTES
S-4	+13.5 V D.C.	+1.5 V D.C. during lock activation	Lock button enabled only if panel active. LEDs L1 and L2 on.
R1-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function enabled with interphone in stand-by or active.
R2-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function enabled with interphone in stand-by or active.
3C-4	+13.5 V D.C.	-4.5 V D.C. when call is sent from panel, otherwise +13.5 V D.C.	LED L5 on for duration of call, then off; on again when called unit handset lifted.
15-0	22.5 V D.C.	15 V D.C.	Voltage measured in D.C..
S1-0	22.5 V D.C.	0 V D.C. during lock activation	S1 is controlled by panel which receives digital lock open command code from terminal 1.

CURRENT/VOLTAGE CHECKS FOR POWER SUPPLY Type 6948

TERMINALS	PANEL IN STAND-BY	PANEL ACTIVE	NOTES
CH-4	+13 V D.C.	+13 V D.C.	At the moment of the call led L5 switches on and the CH terminal goes to 0 V D.C. momentarily. LED L1 switches on at low intensity.
S-4	+13.5 V D.C.	+1.5 V D.C.	Only for duration of lock activation. Lock button enabled only if video interphone has been called from a panel. LEDS L1 and L2 switch on.
R1-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function enabled with video interphone in stand-by or active.
R2-4	0 V D.C.	+12 V D.C. during function activation (programmable)	Function reserved for camera tilt on external unit.
3C-4	+13.5 V D.C.	-4.5 V D.C. when call is sent from panel, otherwise +13.5 V D.C.	LED L5 on for duration of call, then off; On again when called unit handset lifted.
15-0	22.5 V D.C.	15 V D.C.	Voltage measured in D.C..
(+)(-)	18 V D.C.	18 V D.C.	When the monitor is activated and the handset lifted, the voltage goes to 0 V D.C. momentarily.
+1-4	+13 V D.C.	0 V D.C. at the moment of the call, otherwise 13 V D.C.	Allows the panel to control monitor de-activation from the power supply.
S1-0	22.5 V D.C.	0 V D.C.	S1 is controlled by panel which receives digital lock open command code from the interphone.

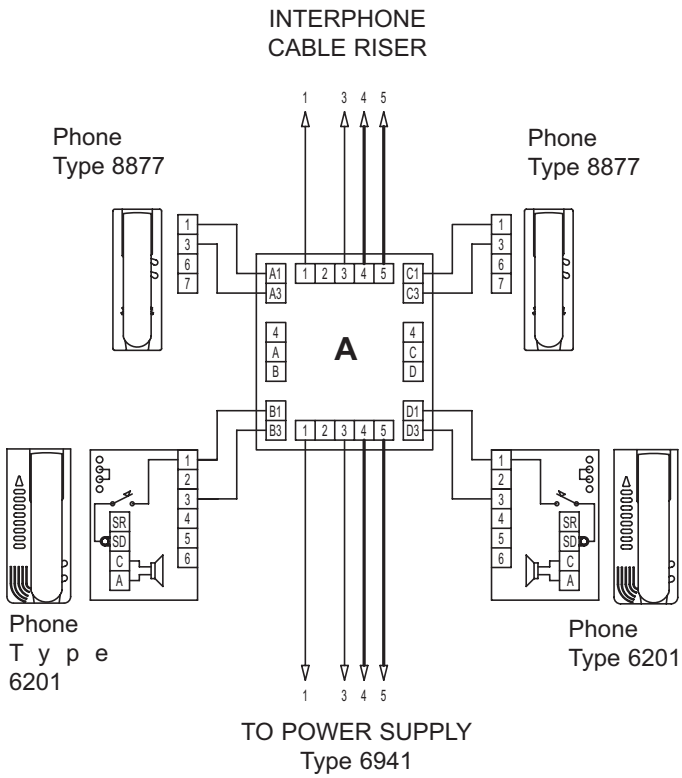
For the current/voltage checks for power supply Type 6947 see power supply Type 6948 terminals.

FAULT	SOLUTION
1- No internal or external audio	Adjust the internal and external volume trimmers on the panel. Check the connection between the 3rd terminals on the panel and internal unit.
2- No internal audio	Check connection of panel terminals CH and 3C with the corresponding power supply terminals. Check that on calling the LED L5 on the power supply lights up.
3- Conversation between internal and external unit cuts off immediately	Measure the current between internal unit (or floor distributor) terminals 1 and 4 and check that it is 25mA. Check the voltage between panel terminals 1 and 4 (11.0 - 12.0 V). Check that the internal unit is working by replacing it with a perfectly working unit.
4- The internal unit does not memorise the sent code	Check the connection between the 1st terminals of the panel and the internal unit or floor distributor.
5- External unit feedback (whistle)	Turn the “BALANCING” trimmer slowly clockwise and then anticlockwise; if the problem persists then lower the “INTERNAL” and “EXTERNAL” volumes and then repeat the “BALANCING” trimmer adjustment.
6- External unit camera does not pan/tilt	Make sure that the ”MOTOR SPEED” trimmer is set to maximum. Check that the panel is correctly installed in its mount.
7- Call not sent to riser	Make sure that the ON-OFF switch on the rear of the panel is in the ON position. (For a system with several panels in parallel, check that only one of these is ON and the others OFF). Check that the current between panel terminals 1 and 4 is 25mA and 11.0-12.0 V D.C..
8- Distorted audio in some interphones in a building of a residential complex	Check the maximum and minimum number of users programmed on the stairway panels.
9- Lock does not open	Check that there are 15V D.C. between power supply terminals S1 and 15 when the lock is actuated and check the connection of terminal S between the power supply and the panel (L1 and L2 light up when the lock is actuated).
10- All panel parameters lost after a few days of normal operation	Check that the panel circuits have not been damaged by atmospheric charges, power line short-circuits (terminals 4 and 5) or on the digital line (terminals 1 and 6). Make sure that the unit has not been tampered with.
11- The stairway panel in a residential complex does not lock in stand-by state when a call is being made from the main panel	Check the stairway panel programming, especially the parameter “PRIORITY” which must be set to 0000.
12- The interphone does not call the porter	Check the internal unit button contact and the switchboard.
13- Monitor off 	Check the voltage between terminals 7 and 8 (15-20 V D.C.).
14- Horizontal lines on the monitor 	Adjust the horizontal frequency.
15- Vertical hunting 	Adjust the vertical frequency.
16- Monitor on / no image 	Inspect the coaxial cable by unplugging it from the camera and testing it: it must measure 75 Ohm (due to the last monitor’s burden resistor). Check that the panel is powered up (Voltage 11-13.5 V D.C.).
17- Black bars 	Check the voltage between terminals 7 and 8 (minimum 15 V D.C.) and between the red and black camera wires (minimum 11 V).
18- Distorted or ghost image 	Check that the last monitor’s 75 Ohm burden resistor is inserted.
19- Strong call return on the panel loudspeaker	In residential complexes or installation with porter’s switchboard, check the panel programming (point 4, Call time).

INTERPHONE RISER WITH FLOOR DISTRIBUTOR Type 949B (A) AND WITHOUT DISTRIBUTOR (B). Ref. diagram P2787

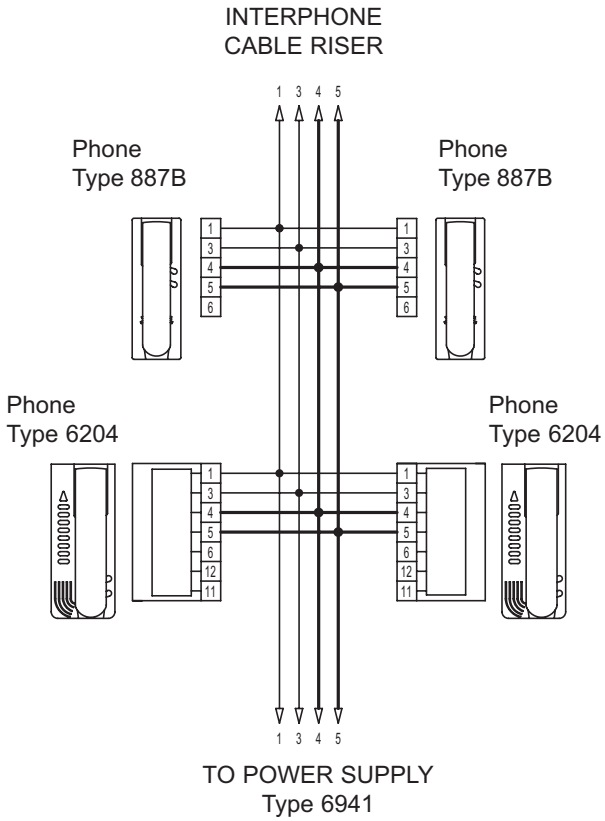
The risers shown (Type A or B) must be included in all interphone diagrams given in this collection.

A

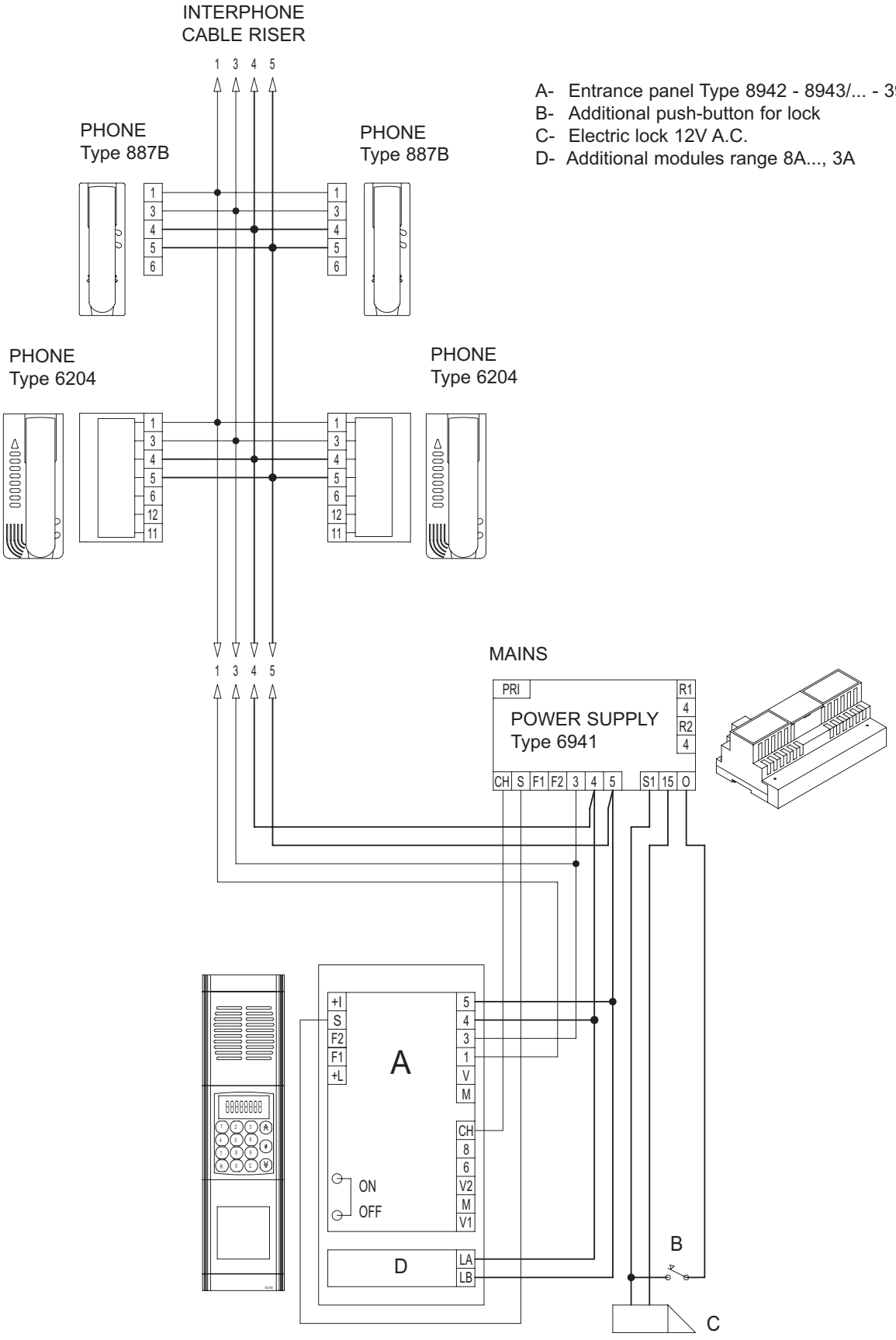


A - Distributor Type 949B

B



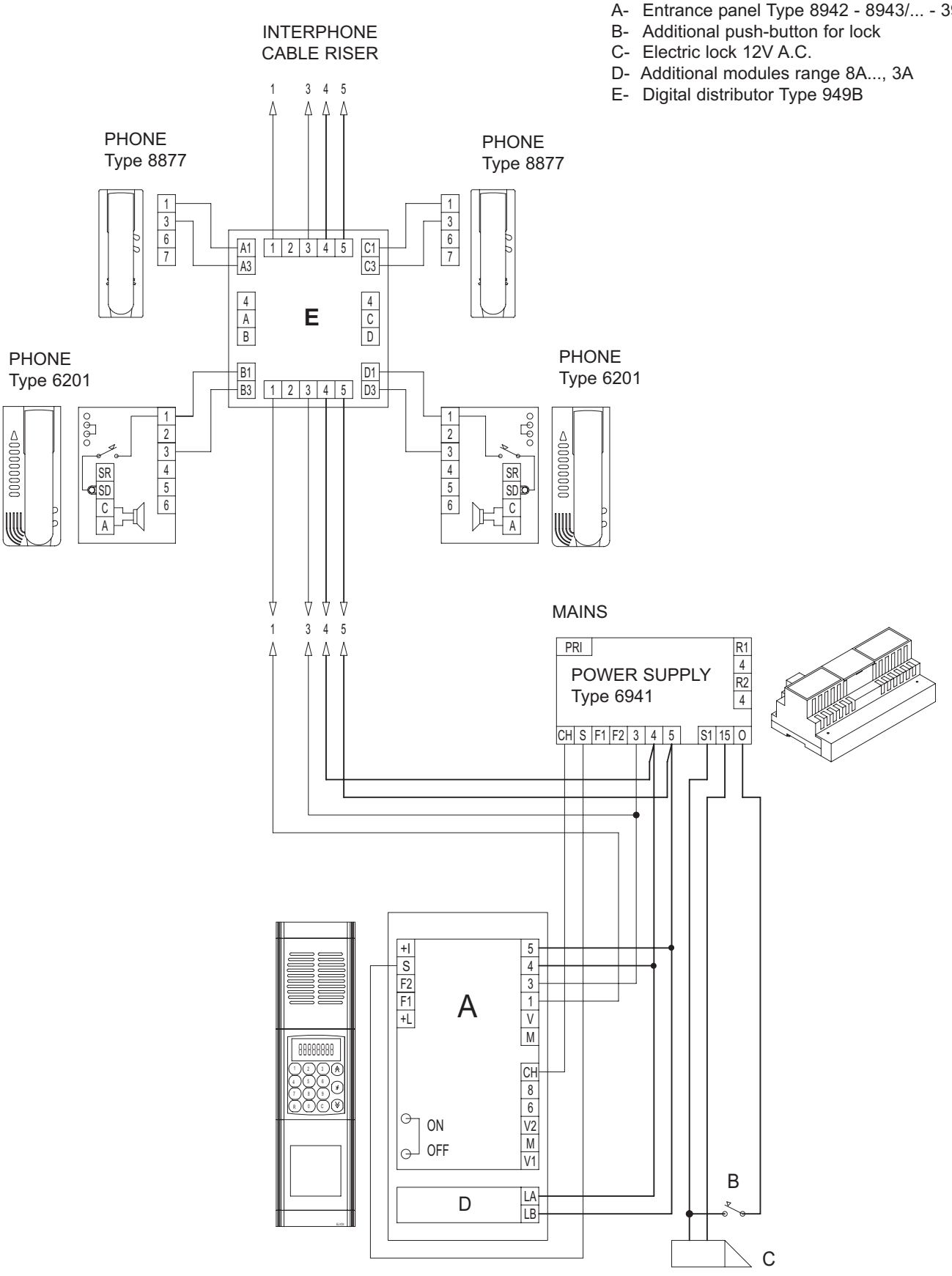
1- SIMPLE CONDOMINIAL INSTALLATION WITH INTERPHONES EQUIPPED WITH INTERNAL DECODING. Ref diagram P3062R4



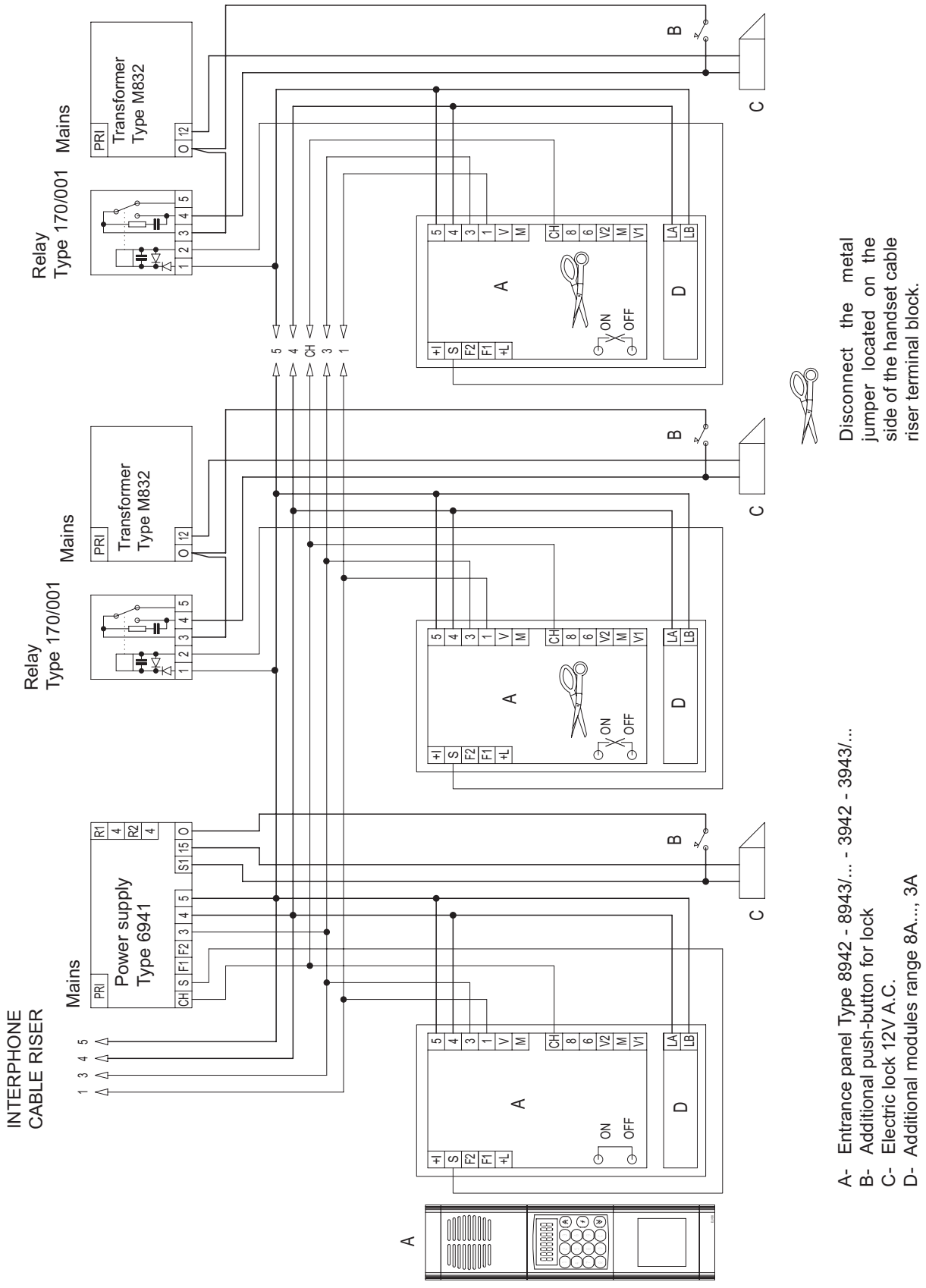
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A

2- SIMPLE CONDOMINIAL INSTALLATION WITH FLOOR DISTRIBUTORS EQUIPPED WITH INTERNAL DECODING. Ref. diagram P3063R4

A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A
E- Digital distributor Type 949B

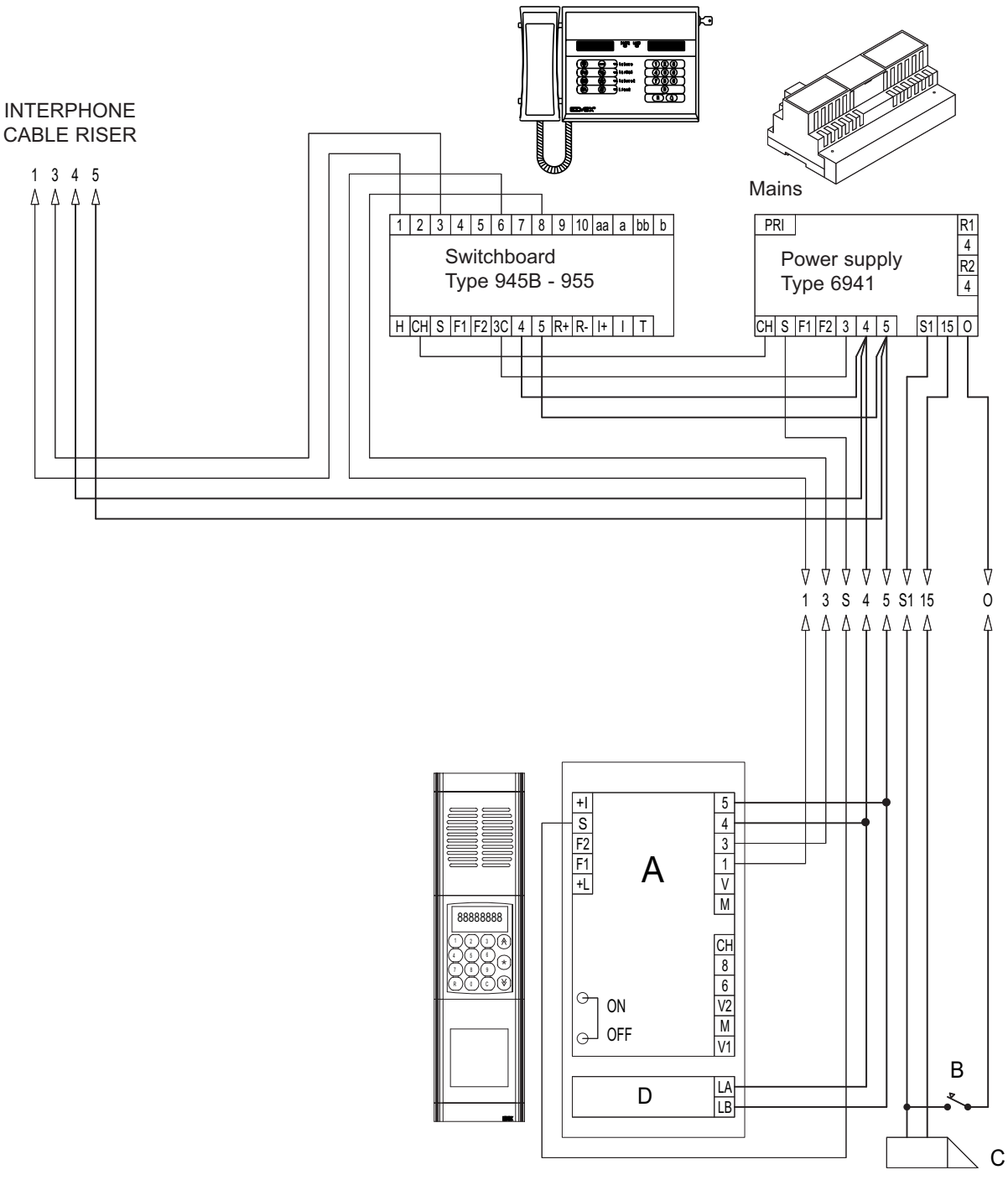


3- SIMPLE CONDOMINIAL INSTALLATION WITH TWO OR MORE PANELS IN PARALLEL. Ref. Diagram P2709R3

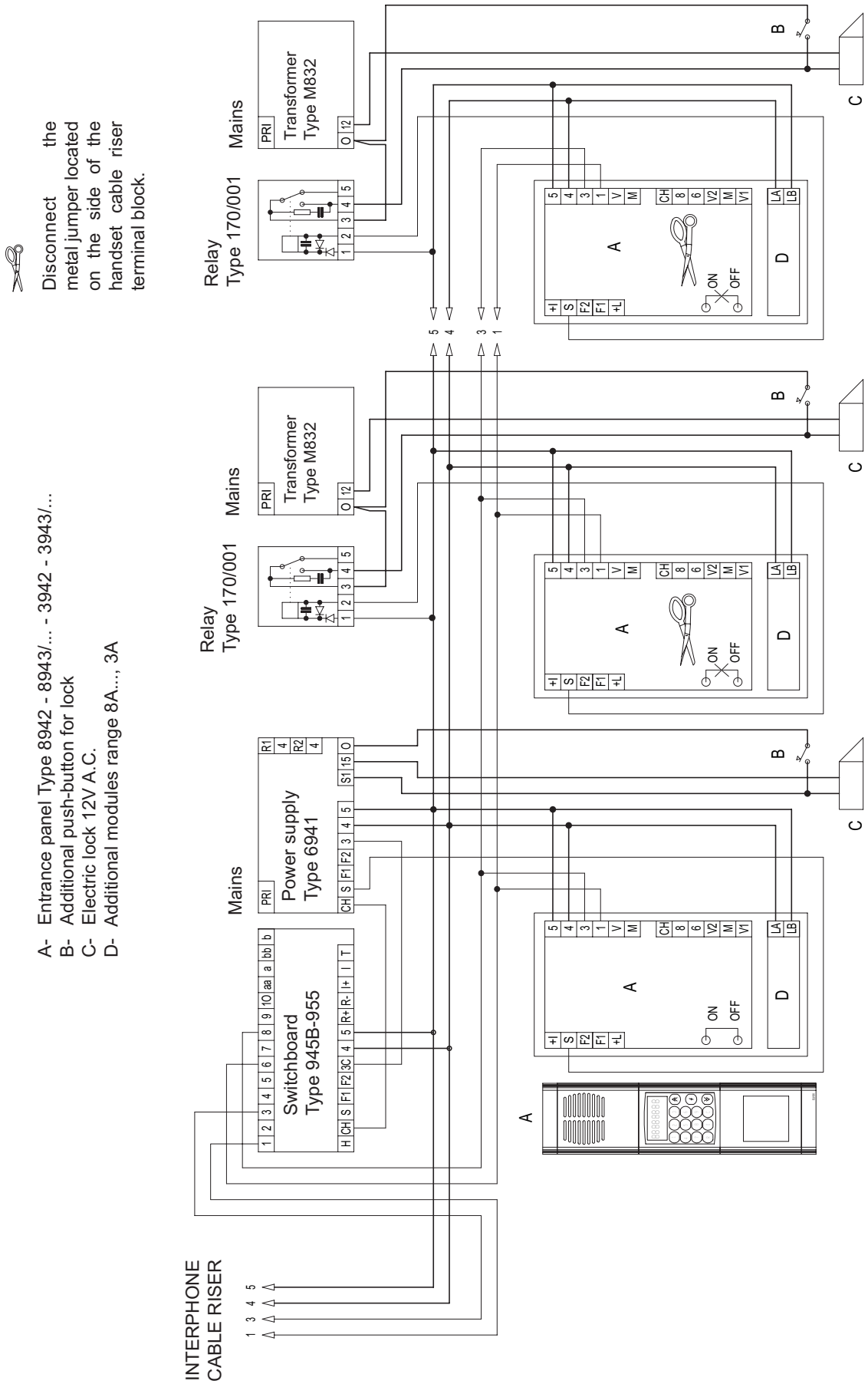


4- SIMPLE CONDOMINIAL INSTALLATION WITH PORTER SWITCHBOARD
Ref. diagram PC2767R4

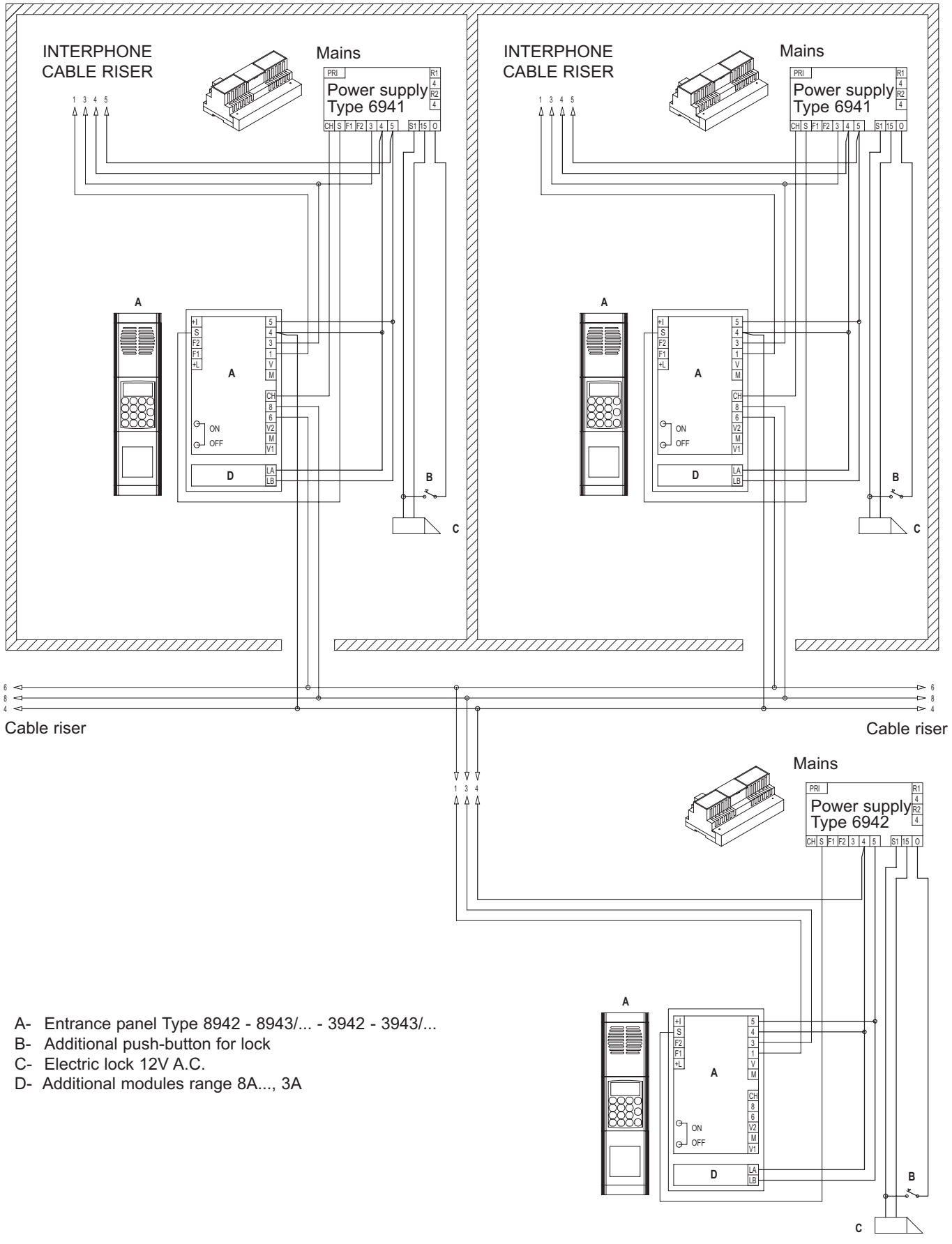
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A



5- SIMPLE CONDOMINIAL INSTALLATION WITH TWO OR MORE PANELS IN PARALLEL AND SWITCHBOARD. Ref. diagram PC3870R2

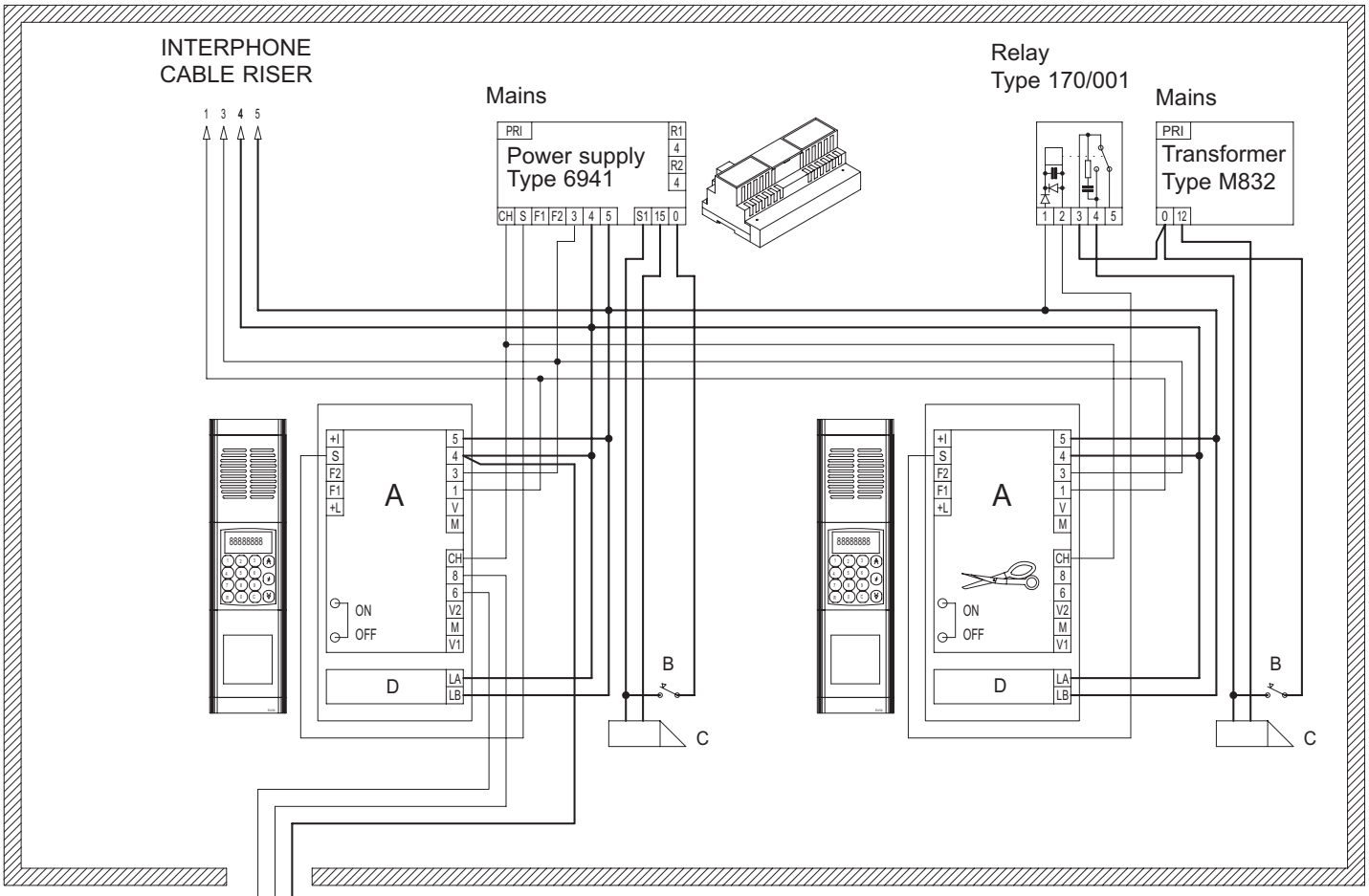


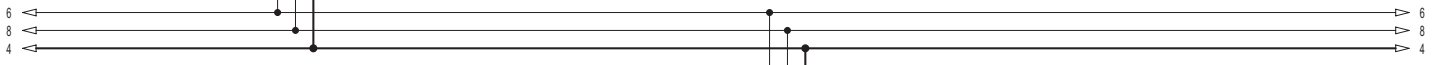
6- CONDOMINIAL INSTALLATION WITH ONE MAIN PANEL AND TWO OR MORE SECONDARY PANELS. Ref. diagram PE2765R3



A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A

7- CONDOMINIAL INSTALLATION WITH ONE MAIN DOOR ENTRANCE PANEL AND TWO OR MORE SECONDARY PANELS CONNECTED IN PARALLEL. Ref. diagram PE3871R2

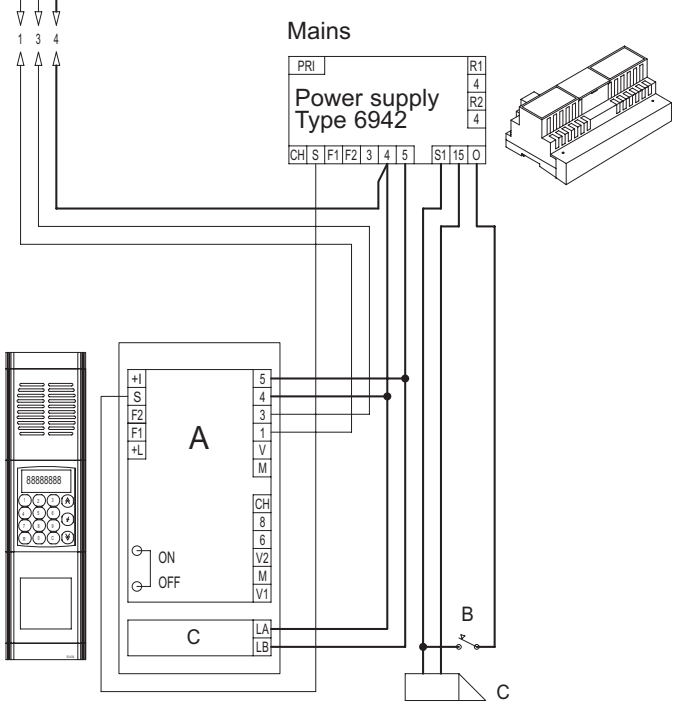




Cable riser

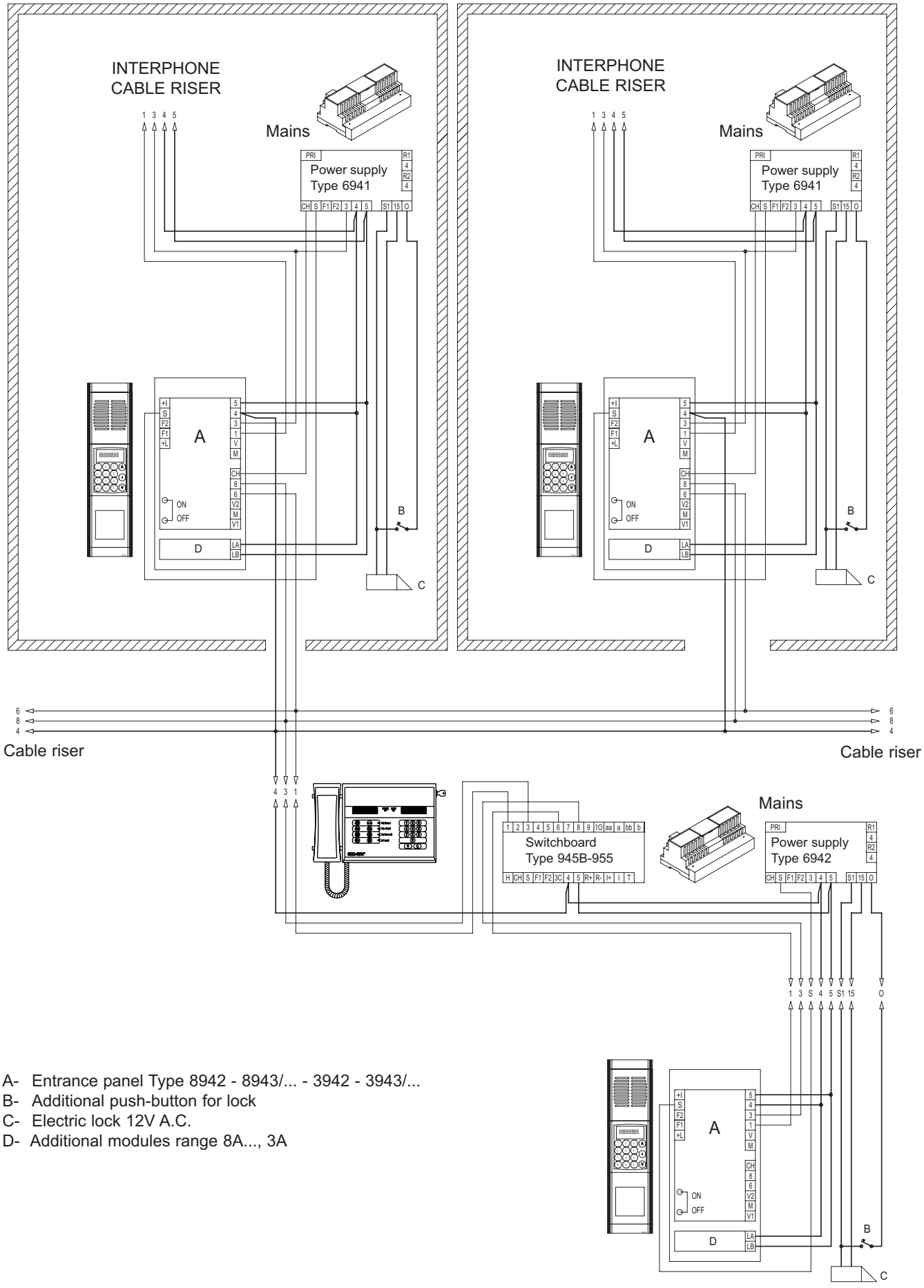
Cable riser

A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A



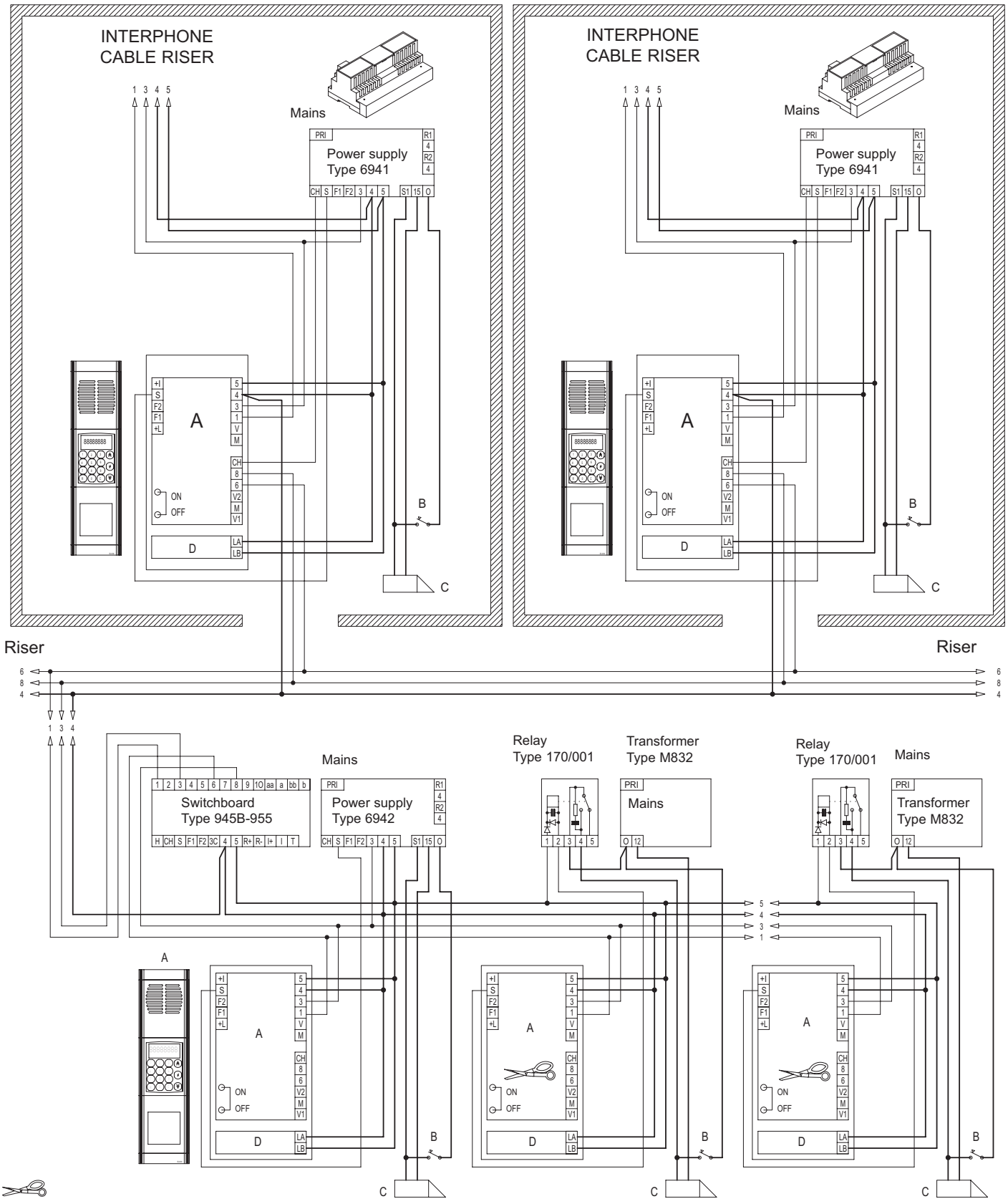
Disconnect the metal jumper located on the side of the handset cable riser terminal block.

8- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL, PORTER SWITCHBOARD AND TWO OR MORE SECONDARY PANELS (building complex). Ref. diagram PC2786R2



A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A

9- CONDOMINIAL INTERPHONE INSTALLATION WITH TWO OR MORE MAIN PANEL, PORTER SWITCHBOARD AND TWO OR MORE SECONDARY PANELS (building complex). Ref. diagram PC3869R2

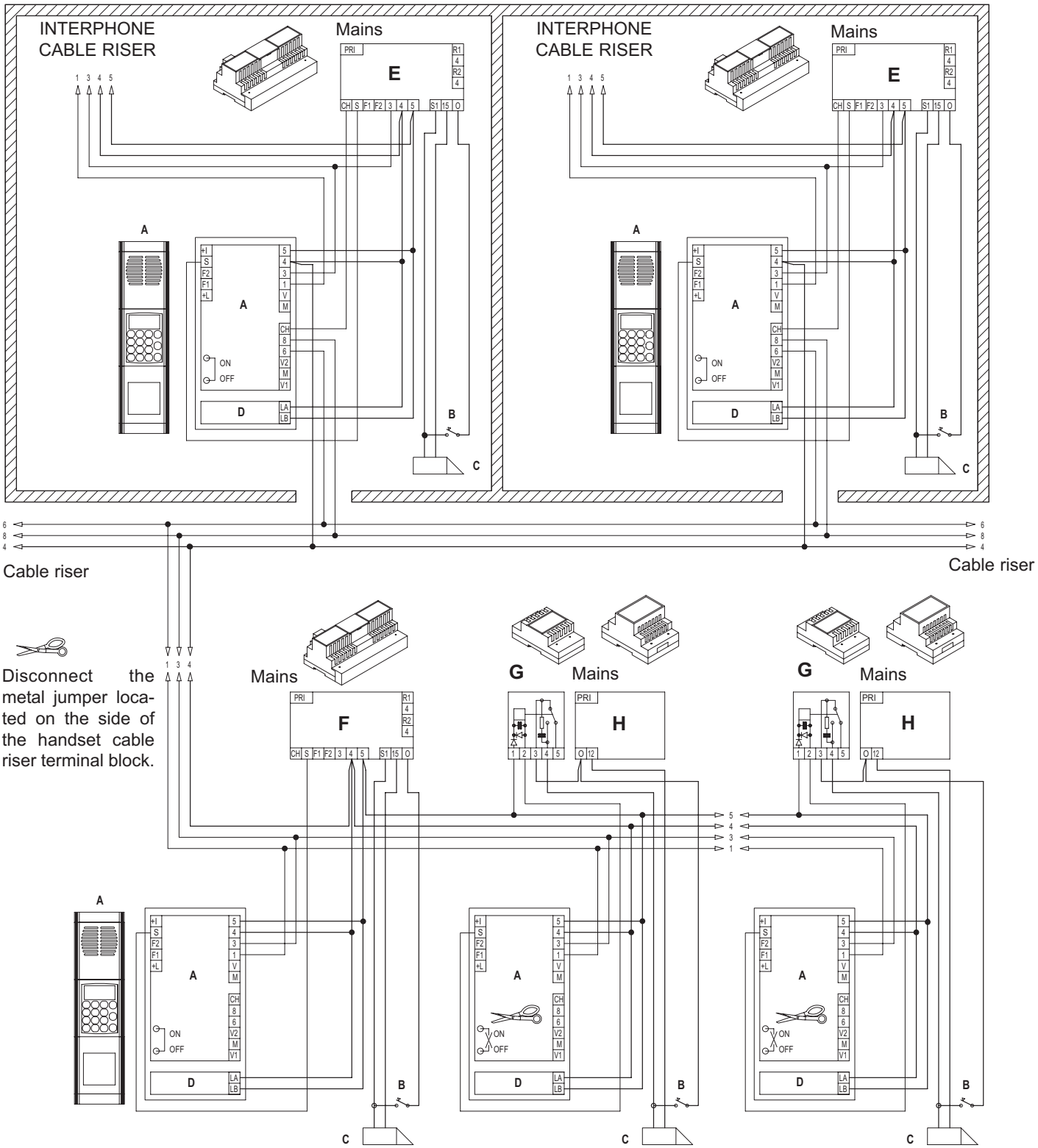


Disconnect the metal jumper located on the side of the handset cable riser terminal block.

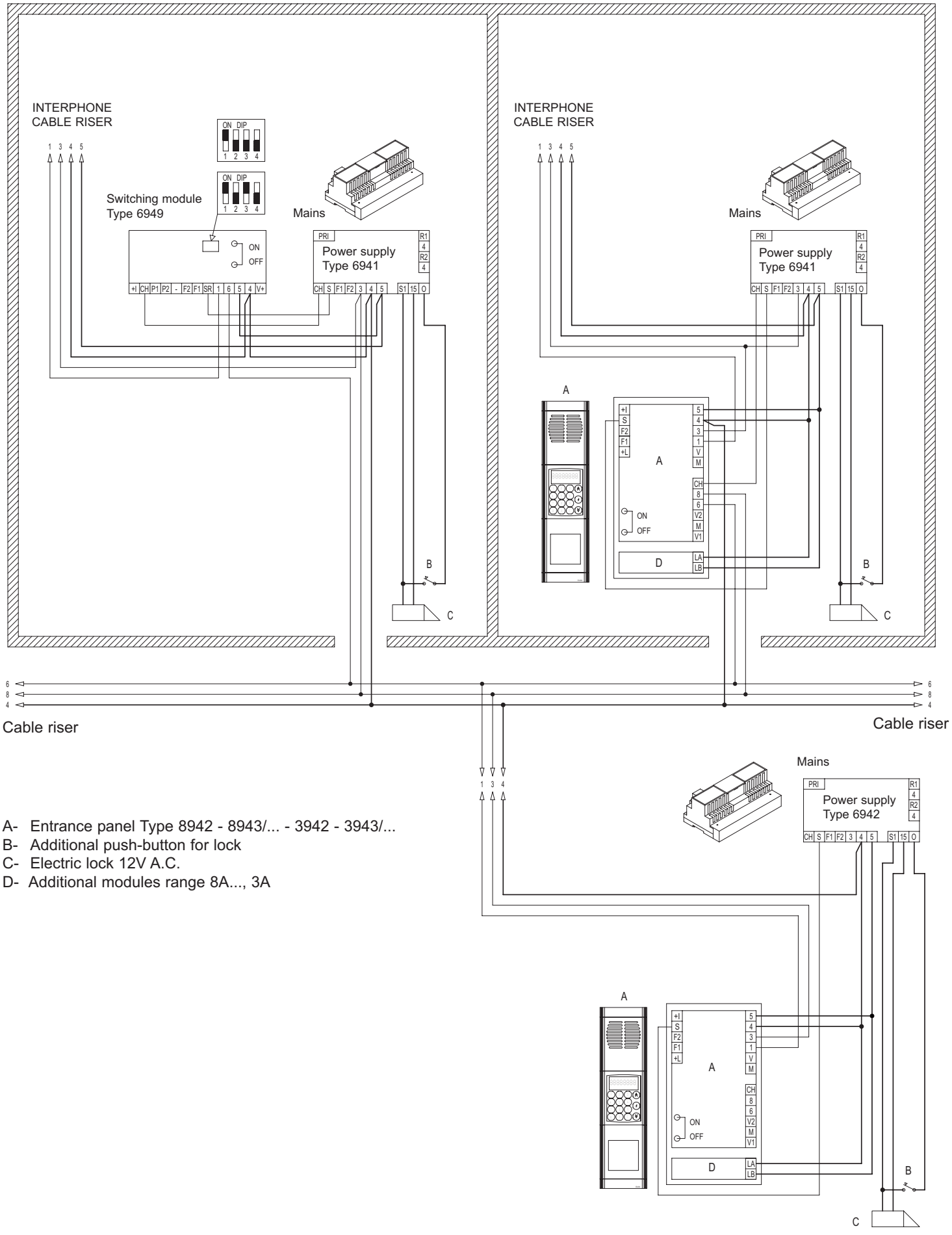
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A

10- CONDOMINIAL INSTALLATION WITH TWO OR MORE MAIN PANELS AND TWO OR MORE SECONDARY PANELS. Ref. diagram PE2766R4

A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A
E- Power supply Type 6941
F- Power supply Type 6942
G- Relay Type 170/001
H- Transformer Type M832

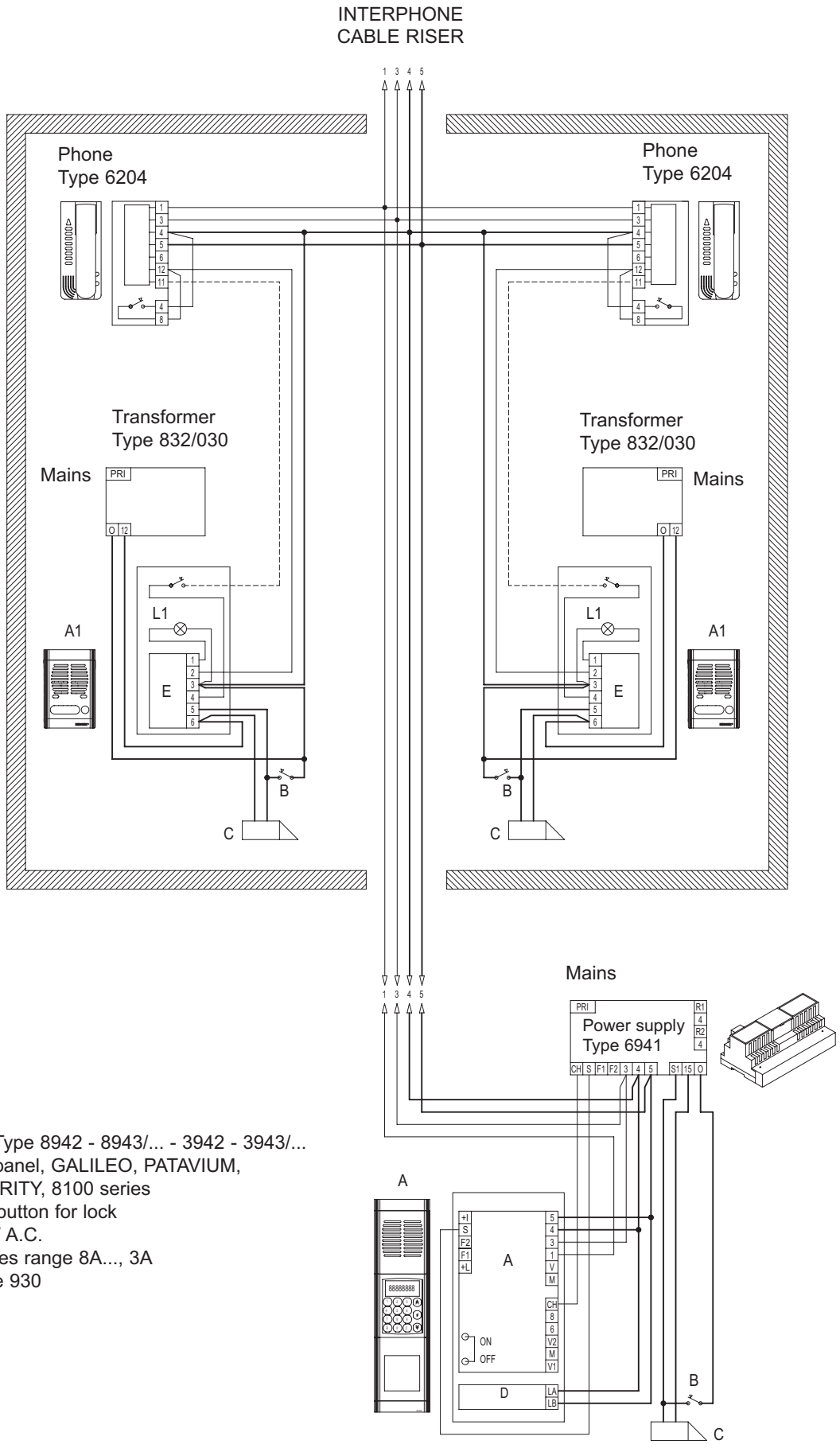


11- CONDOMINIAL INTERPHONE INSTALLATION WITH ONE MAIN PANEL AND TWO OR MORE SECONDARY ENTRANCES WITH/WITHOUT PANELS (building complex). Ref. diagram PE2770R3



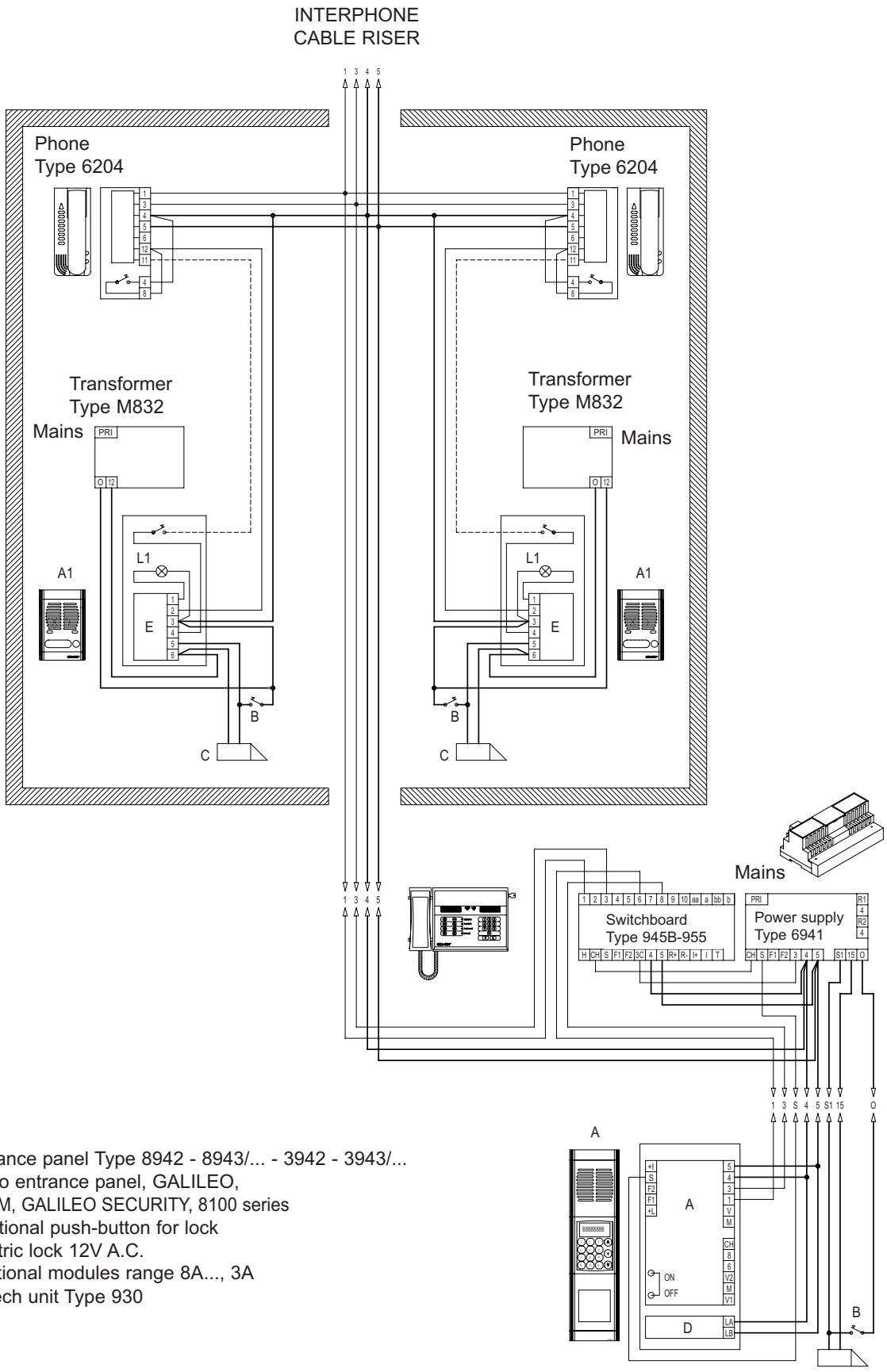
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A

12- CONDOMINIAL INSTALLATION WITH INTERPHONES Type 6204 AND SPEECH UNIT Type 930D (BUILDING COMPLEX). Ref. diagram P3470R2



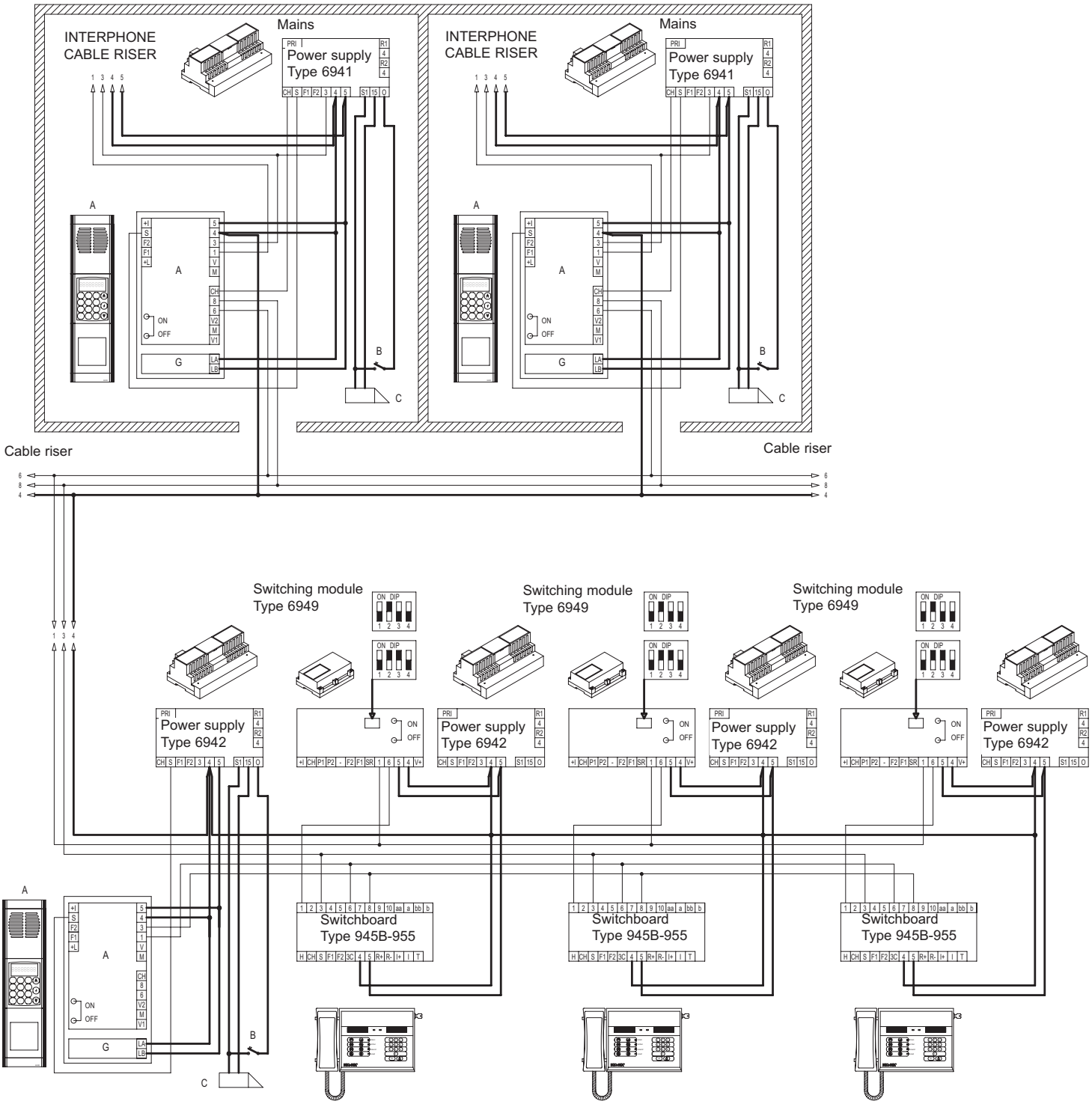
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
A1- Audio entrance panel, GALILEO, PATAVIUM, GALILEO SECURITY, 8100 series
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A
E- Speech unit Type 930

13- CONDOMINIAL INSTALLATION WITH INTERPHONES Type 887B AND 6204 AND SPEECH UNIT Type 930/037 (BUILDING COMPLEX). Ref. diagram PC3872R2



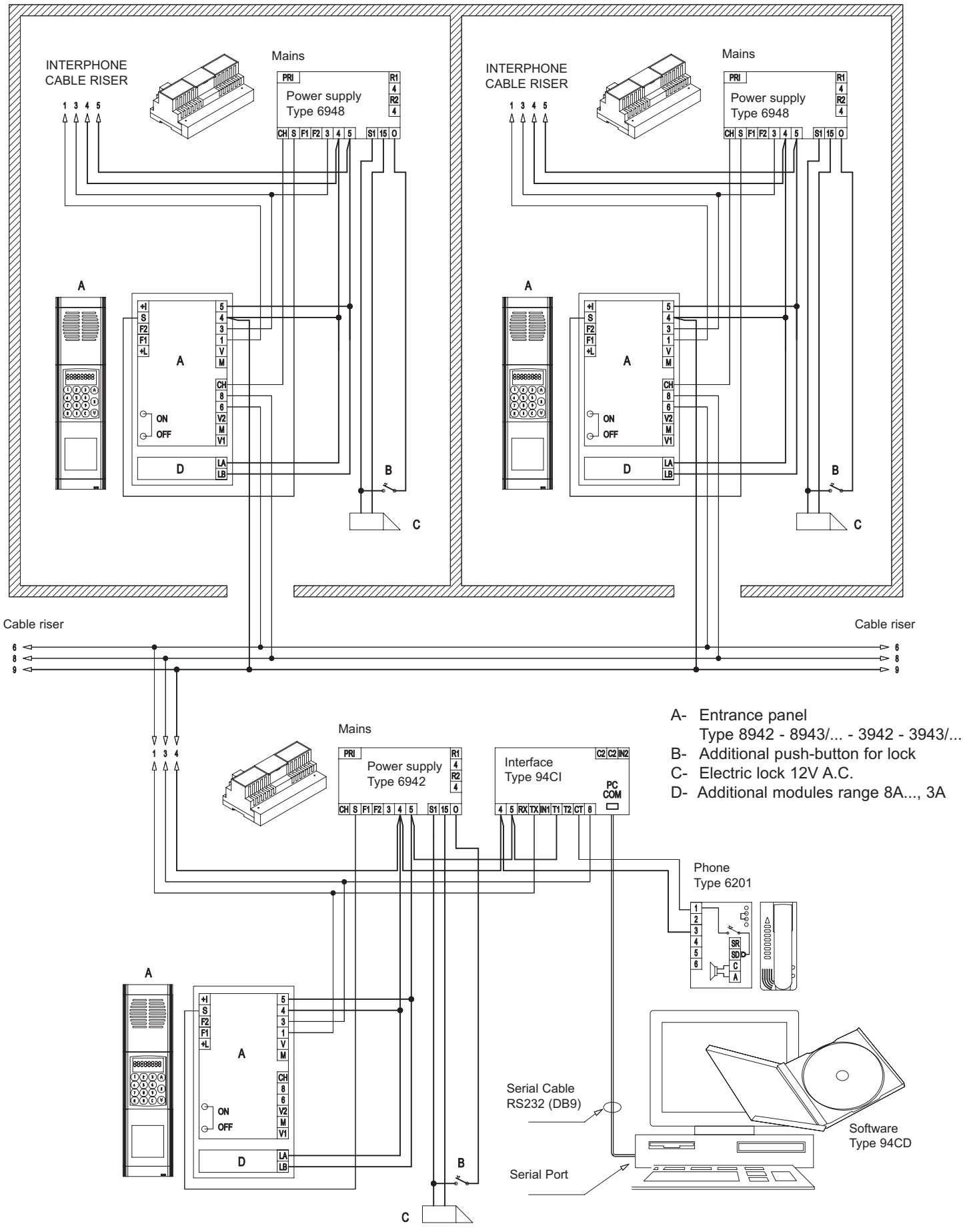
A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
A1- Audio entrance panel, GALILEO,
PATAVIUM, GALILEO SECURITY, 8100 series
B- Additional push-button for lock
C- Electric lock 12V A.C.
D- Additional modules range 8A..., 3A
E- Speech unit Type 930

14- CONDOMINIAL INSTALLATION WITH 3 PORTER SWITCHBOARDS, ELECTRONIC MAIN ENTRANCE PANEL AND 2 OR MORE STAIRWAY ENTRANCE PANELS (BUILDING COMPLEX). Rif schema PC4702

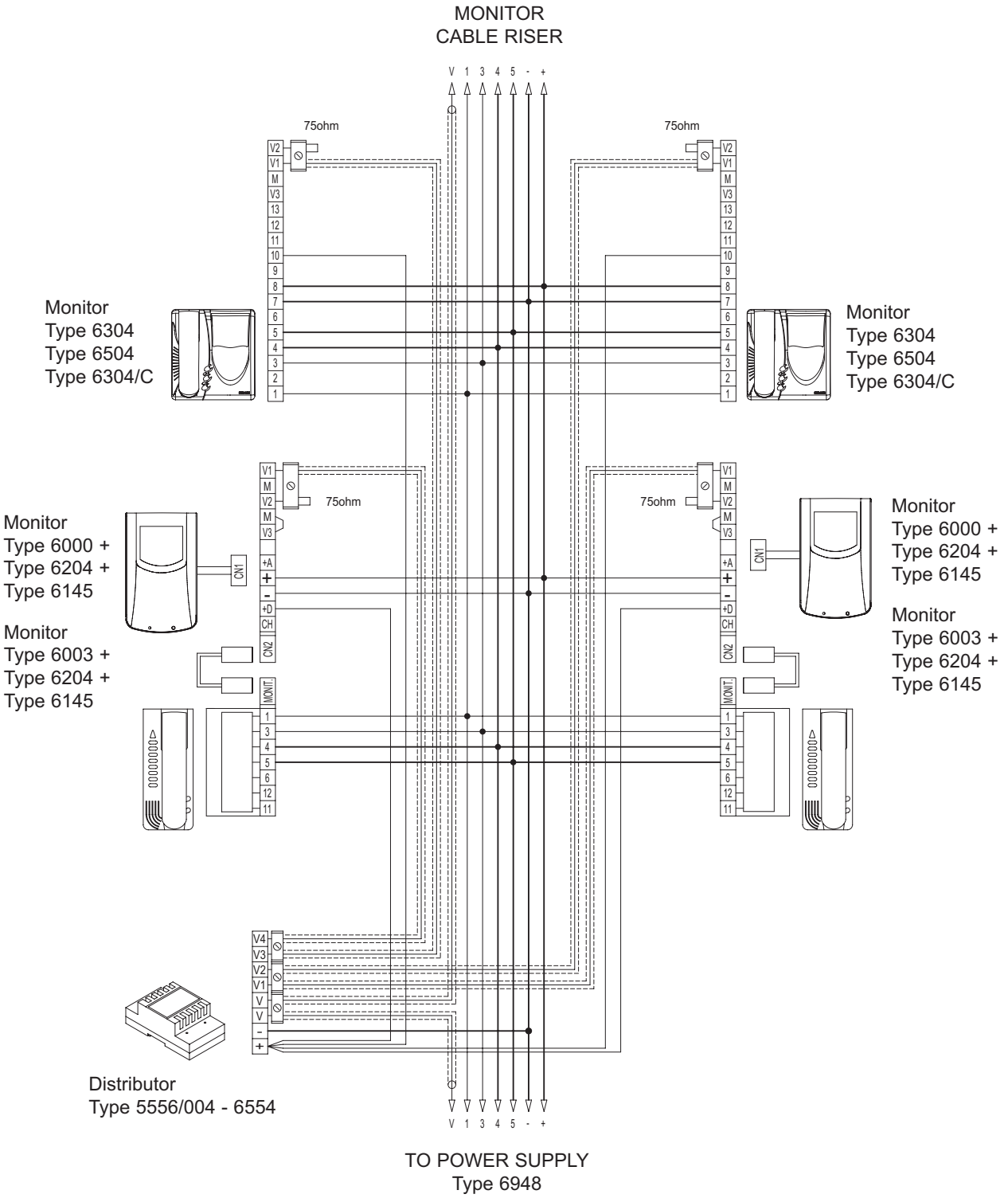


A- Entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V A.C.

15 - "DIGIBUS" ELECTRONIC AUDIO DOOR ENTRY SYSTEM WITH SWITCHBOARD ON PC FOR BUILDING COMPLEX. Ref diagram PV4705

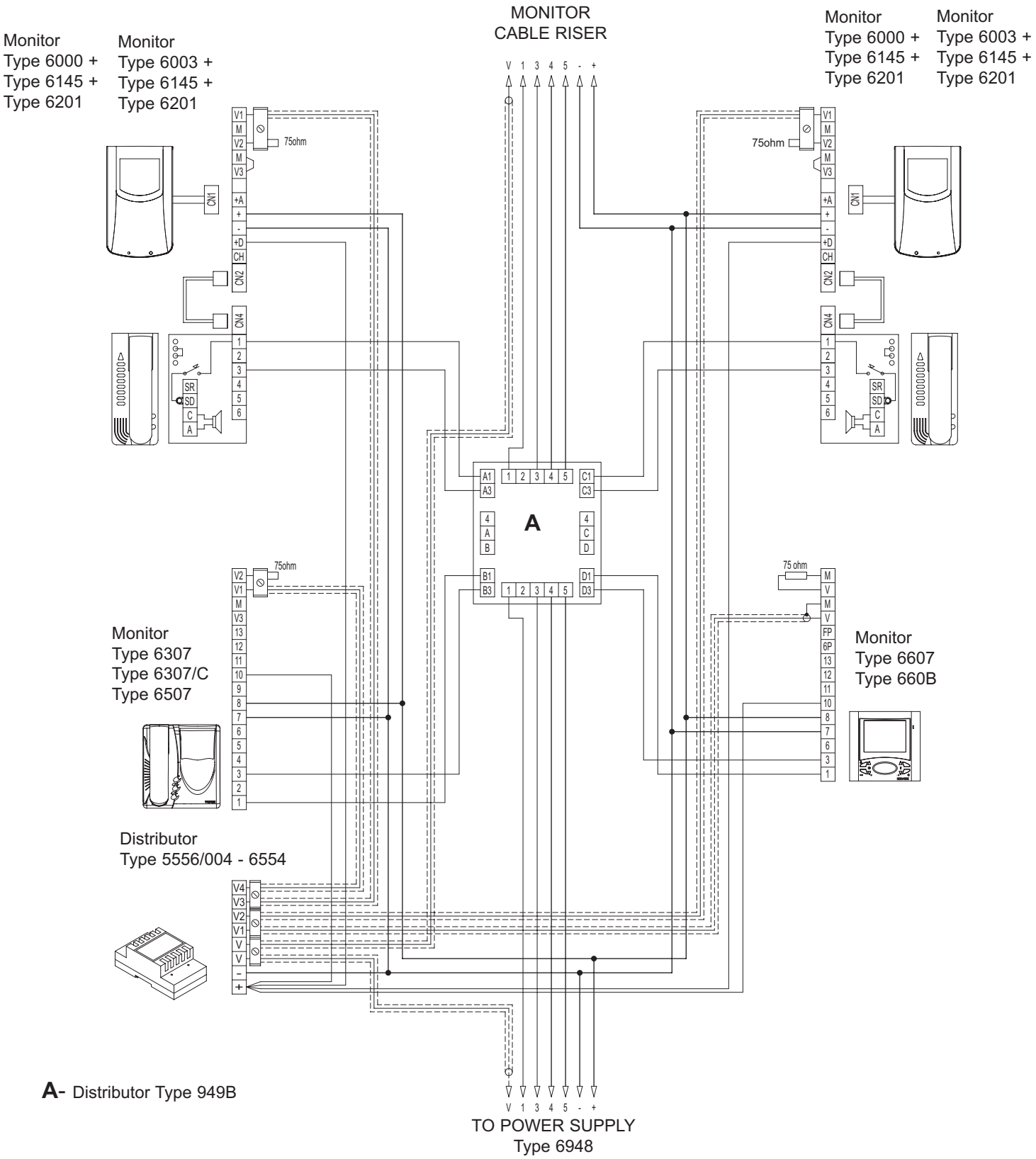


16- MONITOR CABLE RISER WITH UNITS EQUIPPED WITH INTERNAL DIGITAL SIGNAL DECODING. Ref. diagram PV4407R1



The riser shown must be included in all the video interphone diagrams in this collection (this diagram is an alternative to diagram PV4440)

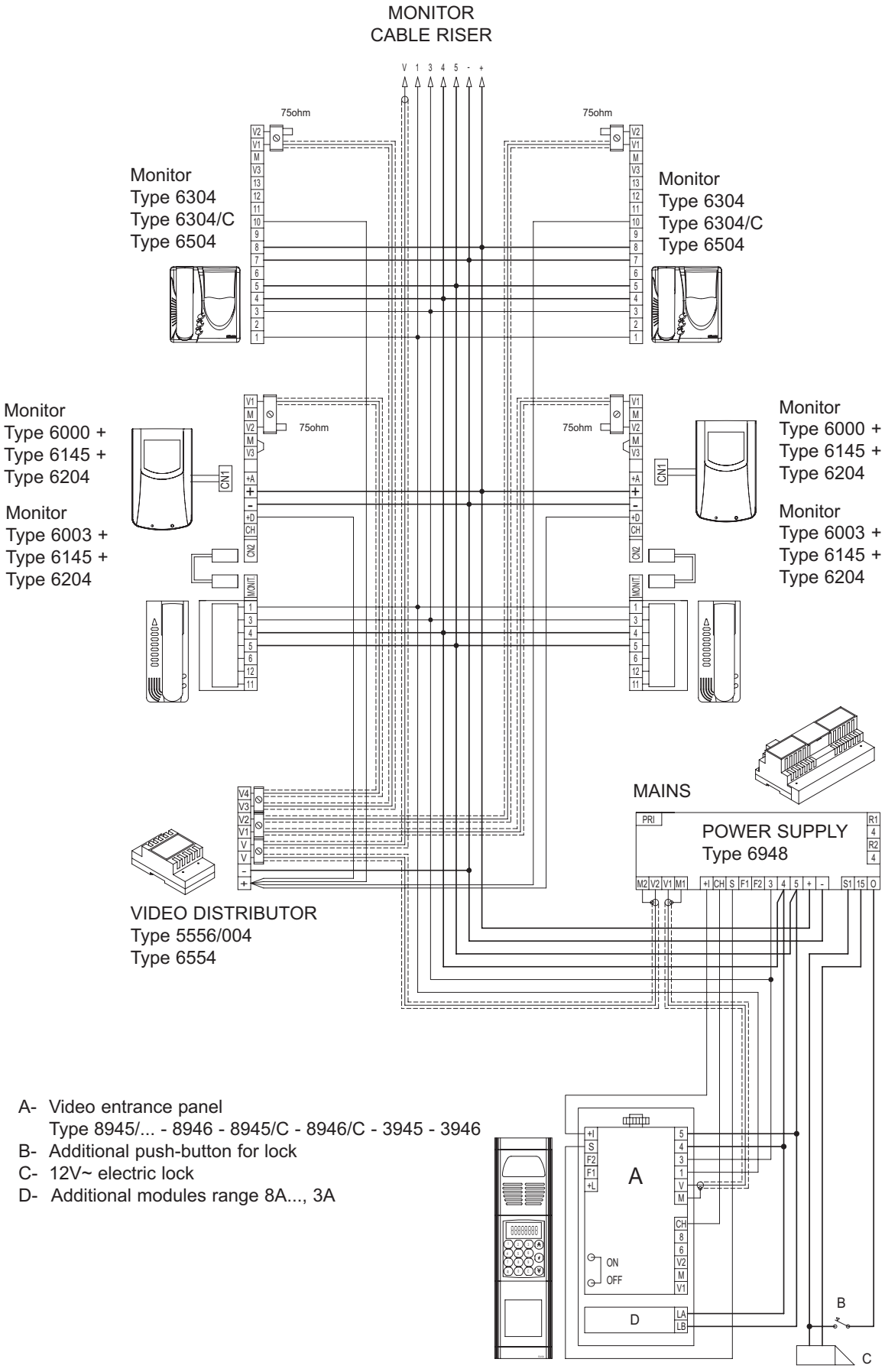
17- MONITOR RISER WITH FLOOR DISTRIBUTOR Type 949B
Ref. diagram PV4440R1



A- Distributor Type 949B

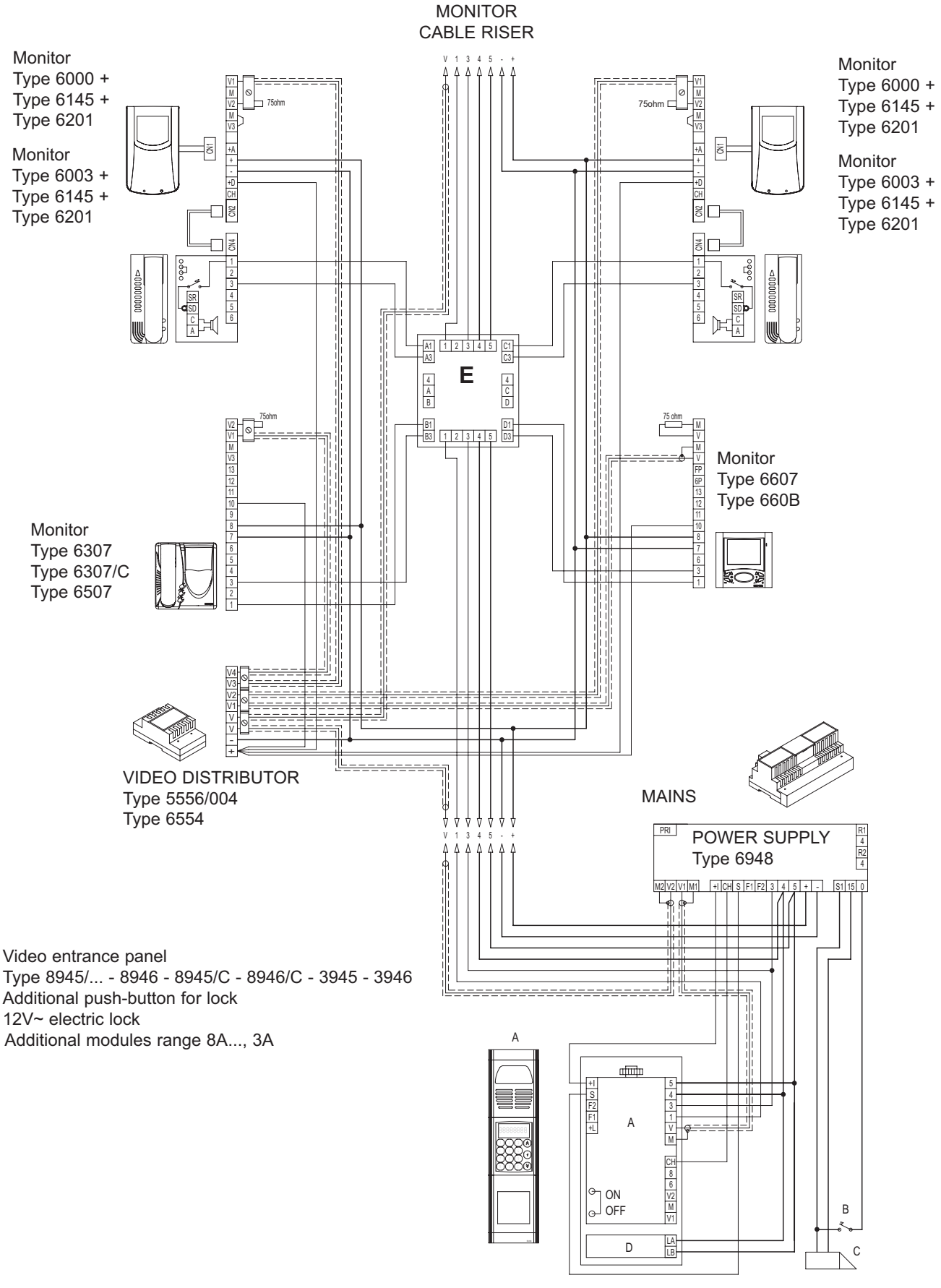
The riser shown must be included in all the video interphone diagrams in this collection (this diagram is an alternative to diagram PV2406)

18- SIMPLE CONDOMINIAL INSTALLATION WITH MONITORS EQUIPPED WITH INTERNAL DECODING. Ref. diagram PV3002R3



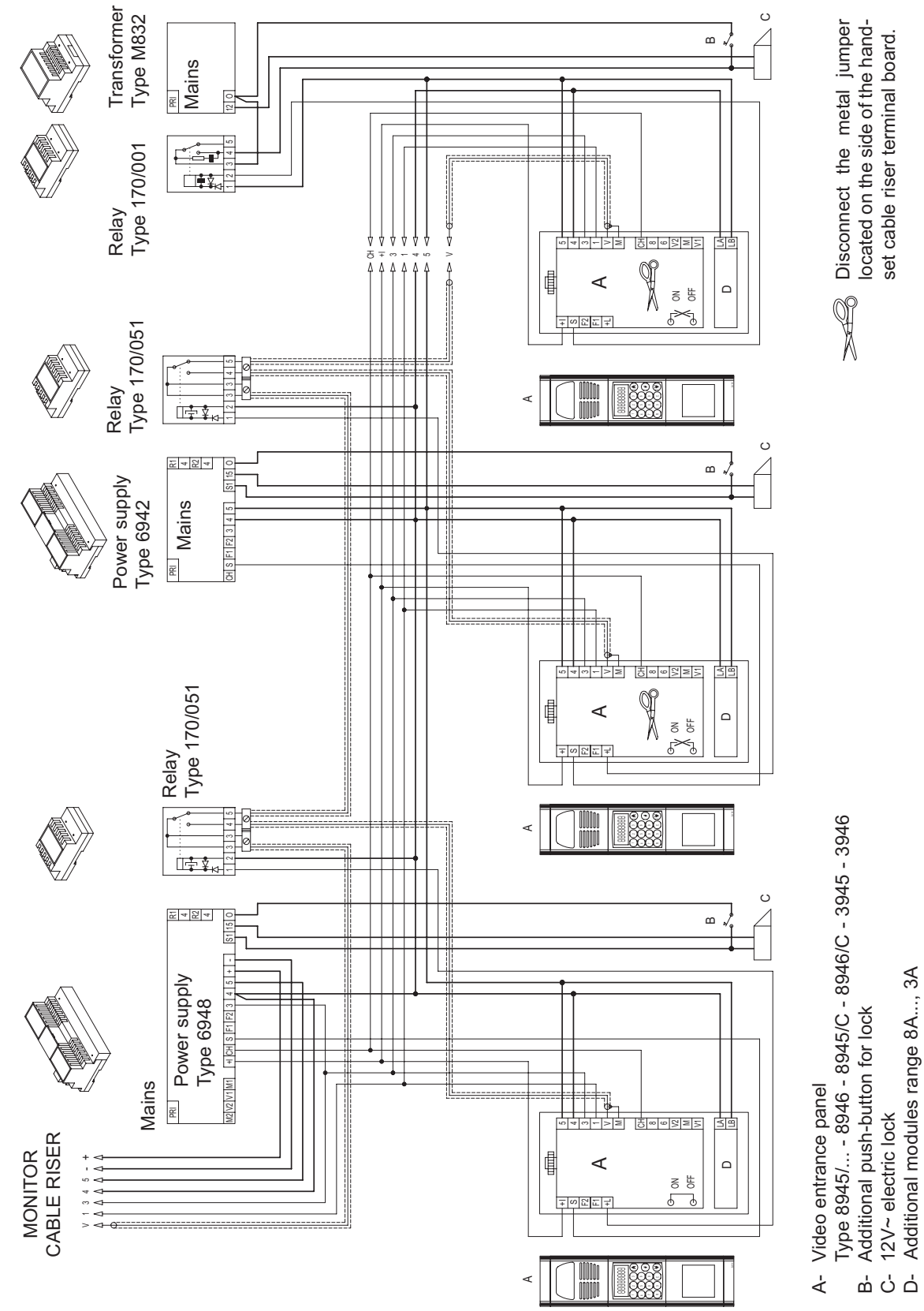
A- Video entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

19- SIMPLE CONDOMINIAL INSTALLATION WITH DISTRIBUTORS EQUIPPED WITH INTERNAL DECODING. Ref. diagram PV3064R2



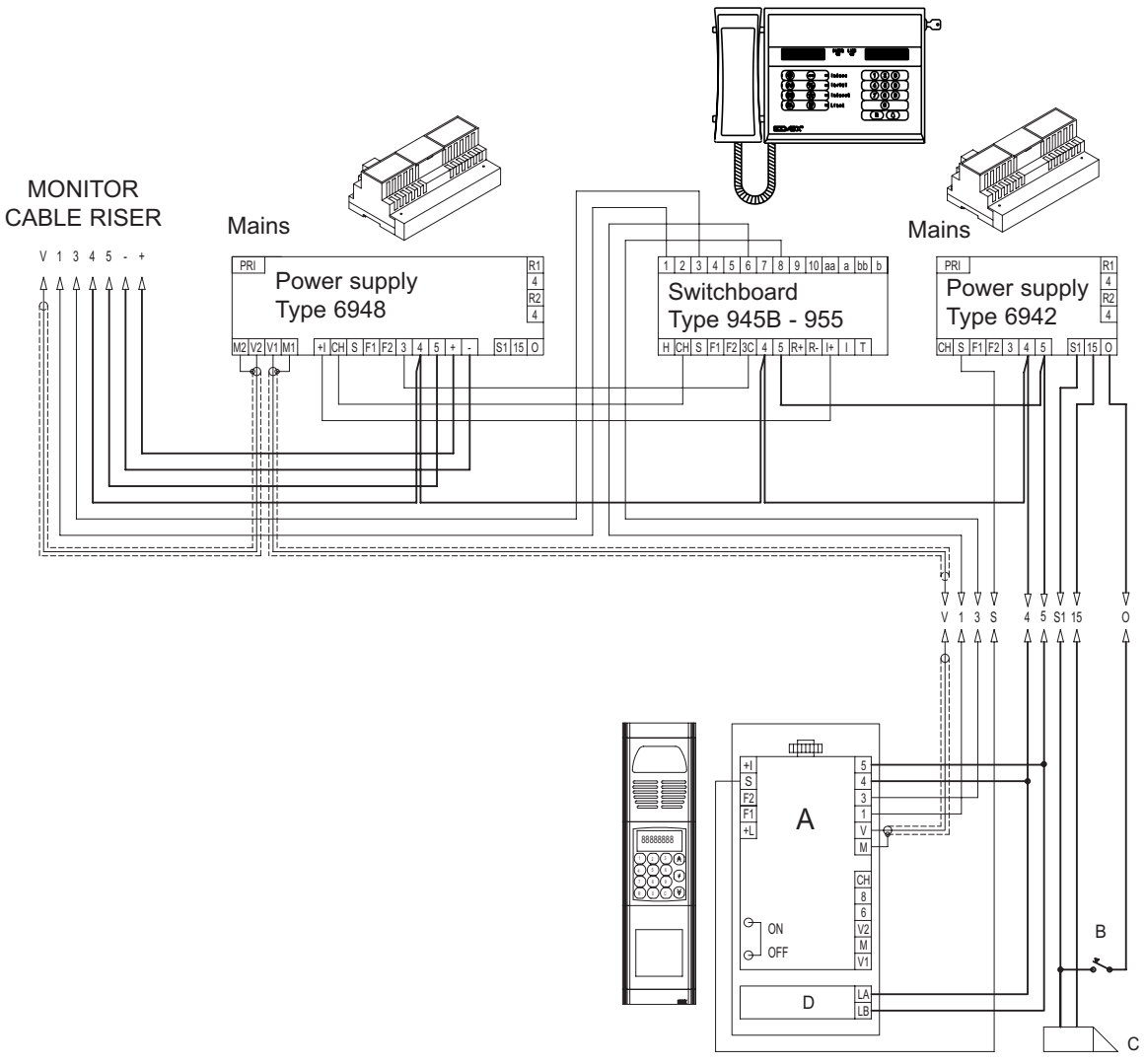
A- Video entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

20- SIMPLE CONDOMINIAL INSTALLATION WITH TWO OR MORE PANELS IN PARALLEL. Ref. diagram PV2712R6

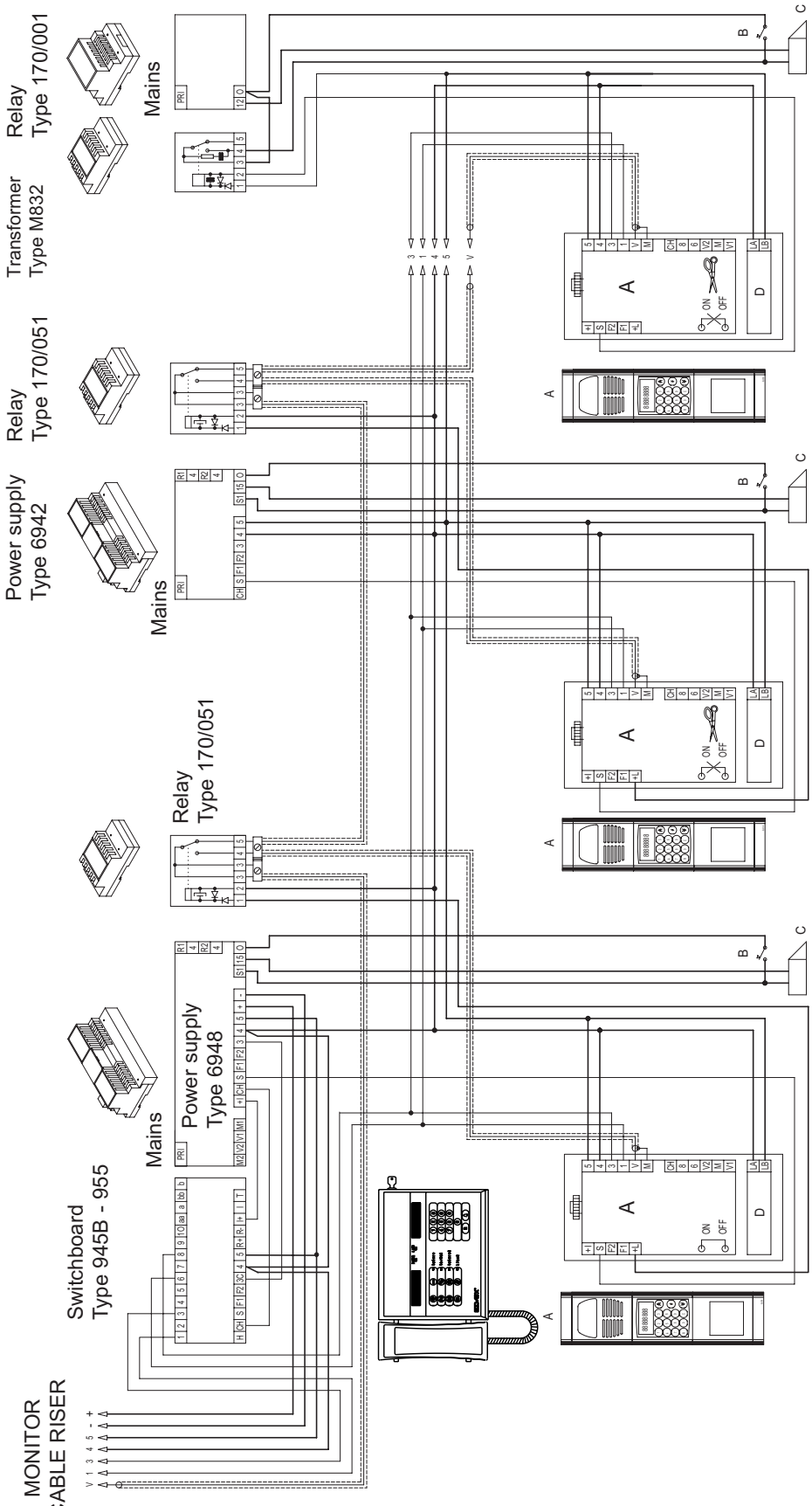


21- SIMPLE CONDOMINIAL INSTALLATION WITH PORTER SWITCHBOARD
Ref. diagram PC2769R4

A- Video entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A



22- SIMPLE CONDOMINIAL INSTALLATION WITH TWO OR MORE PANELS IN PARALLEL. Ref. diagram PC3874R2

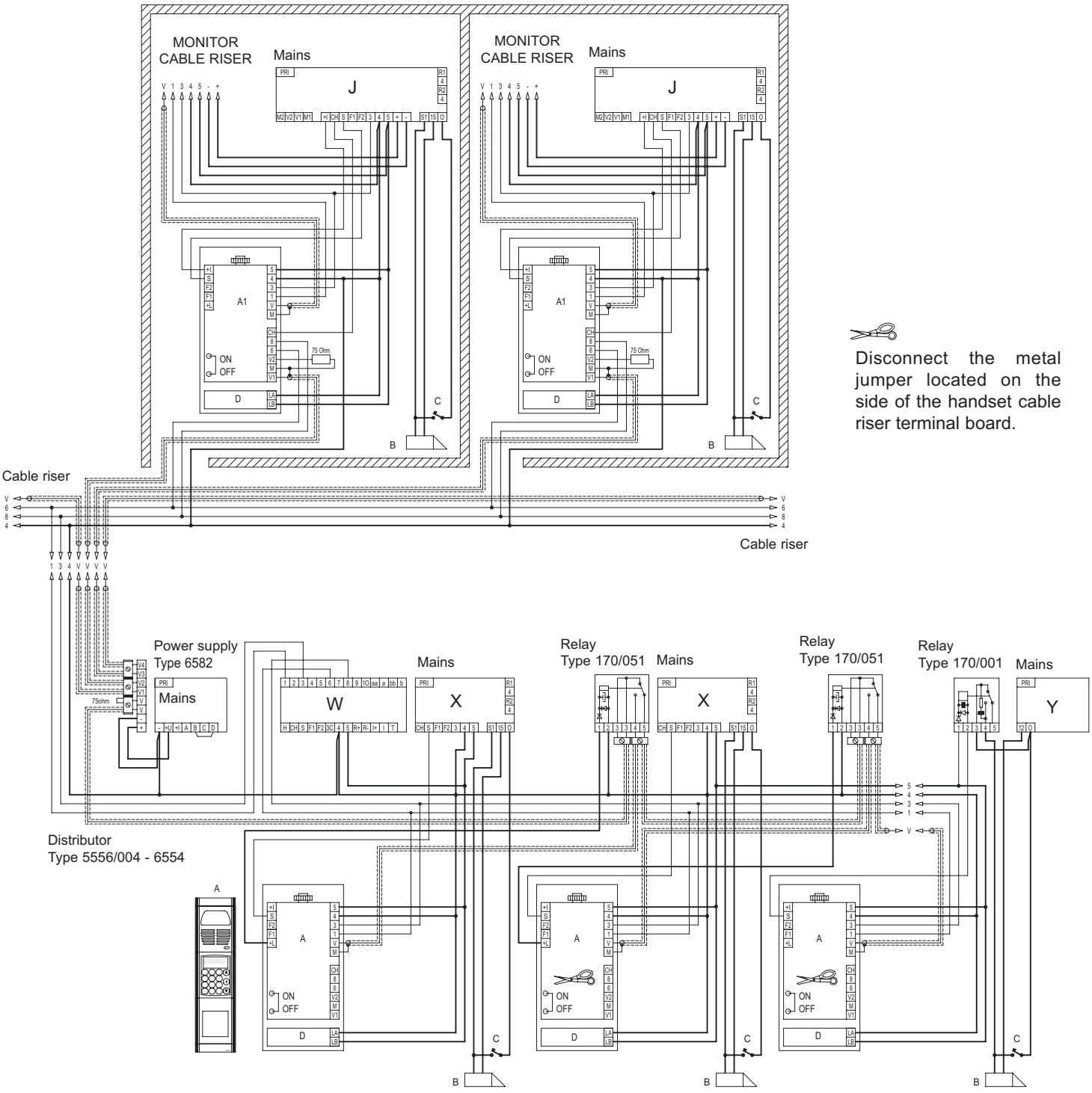


Disconnect the metal jumper located on the side of the hand-set cable riser terminal board.

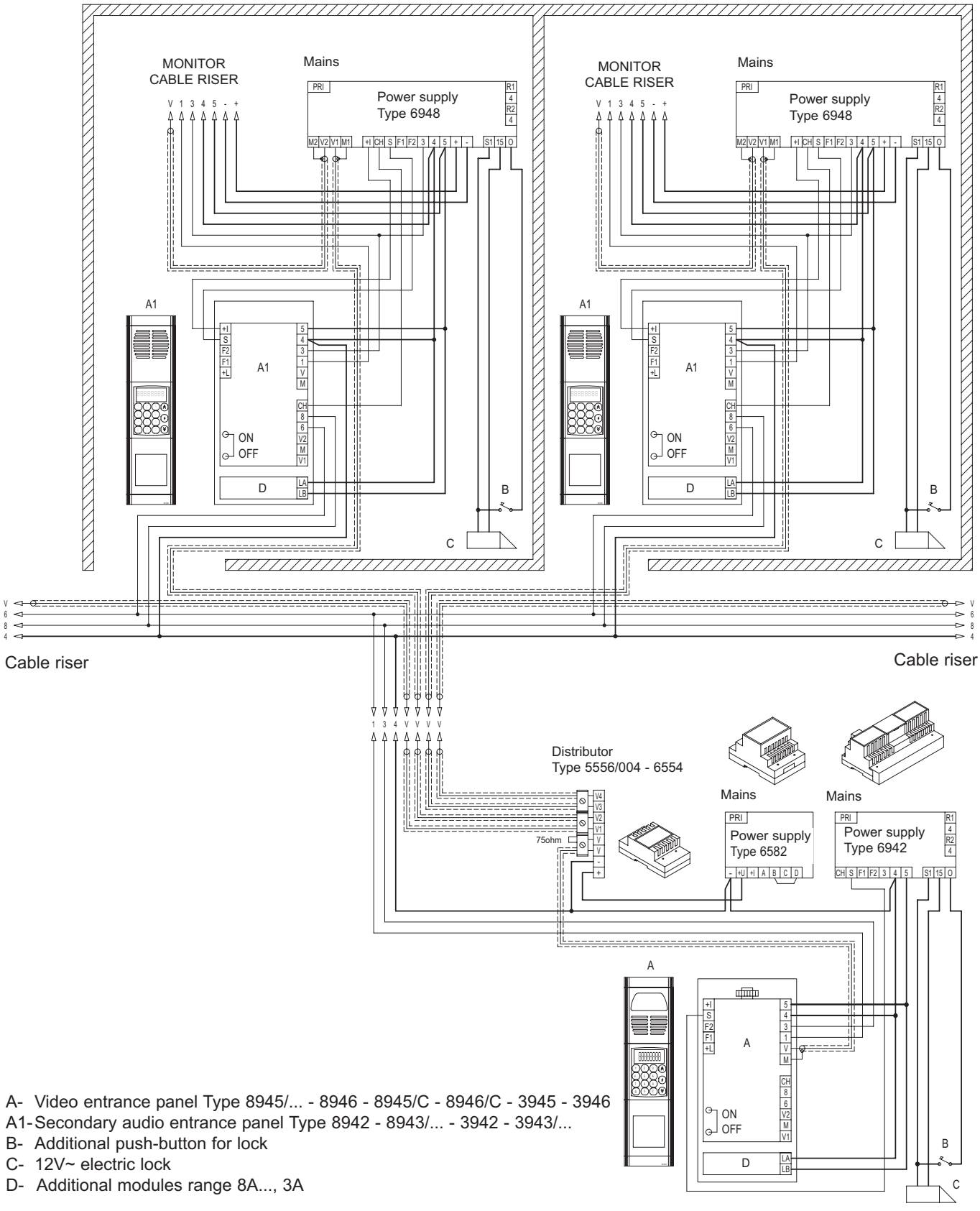
A- Video entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

23- CONDOMINIAL INSTALLATION WITH TWO OR MORE MAIN ENTRANCE PANELS AND TWO OR MORE STAIRWAY ENTRANCE PANELS WITH SWITCHBOARD (BUILDING COMPLEX). Ref. diagram PC3875R1

A- Video entrance panel Type 8945/... - 8946 - 8945/C - 8946/C
A1- Audio or video entrance panel
Type 8942 - 8943/... - 3942 - 3943/... or
Type 8945/... - 8946 - 8945/C - 8946/C - 3946 - 3945/...
B- 12V~ electric lock
C- Additional push-button for lock
D- Additional modules range 8A..., 3A
J- Power supply Type 6948
X- Power supply Type 6942
Y- Transformer Type M832
W- Switchboard Type 945B - 955

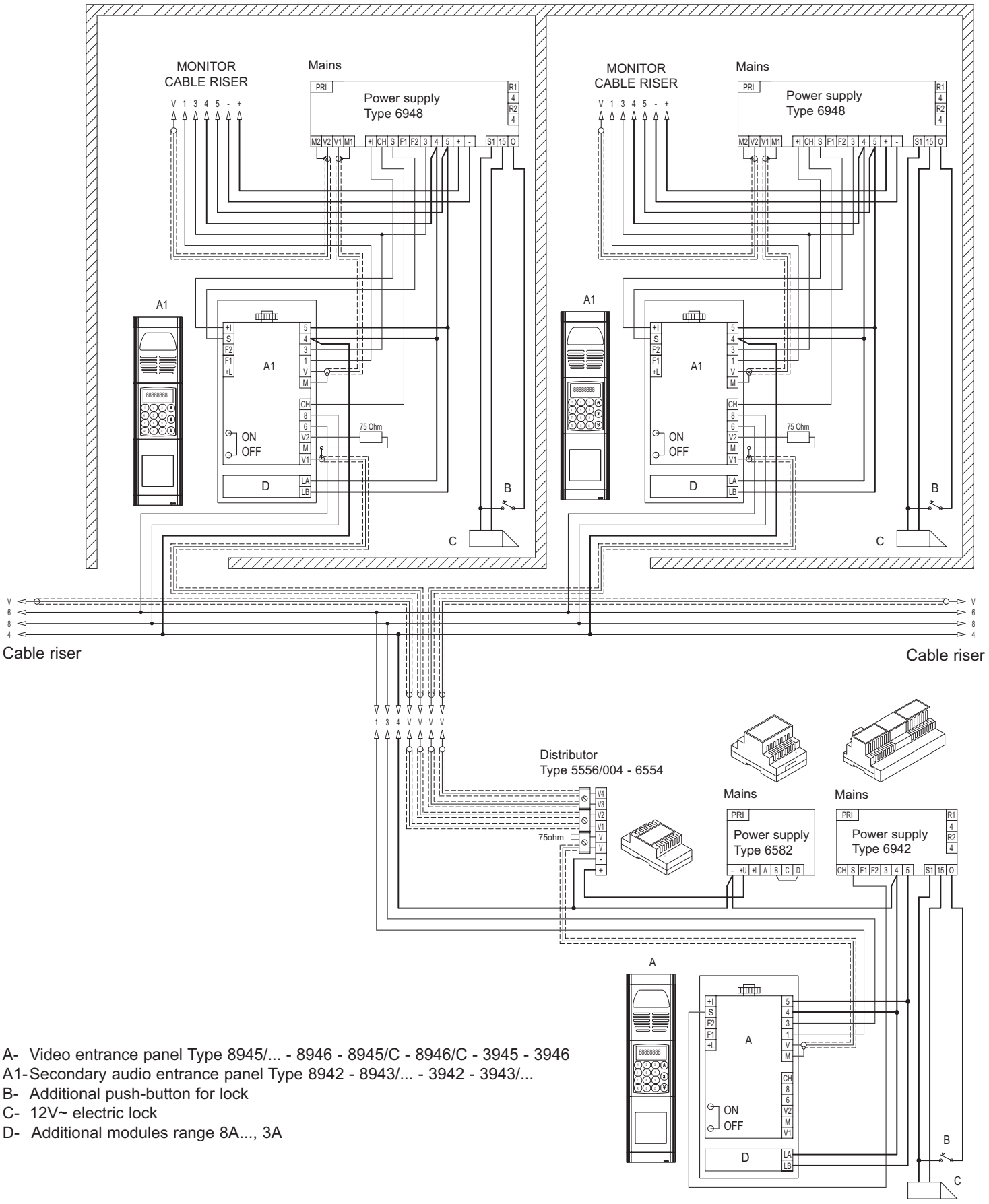


24- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY ENTRANCE PANELS (BUILDING COMPLEX). Ref. diagram PS3189R2



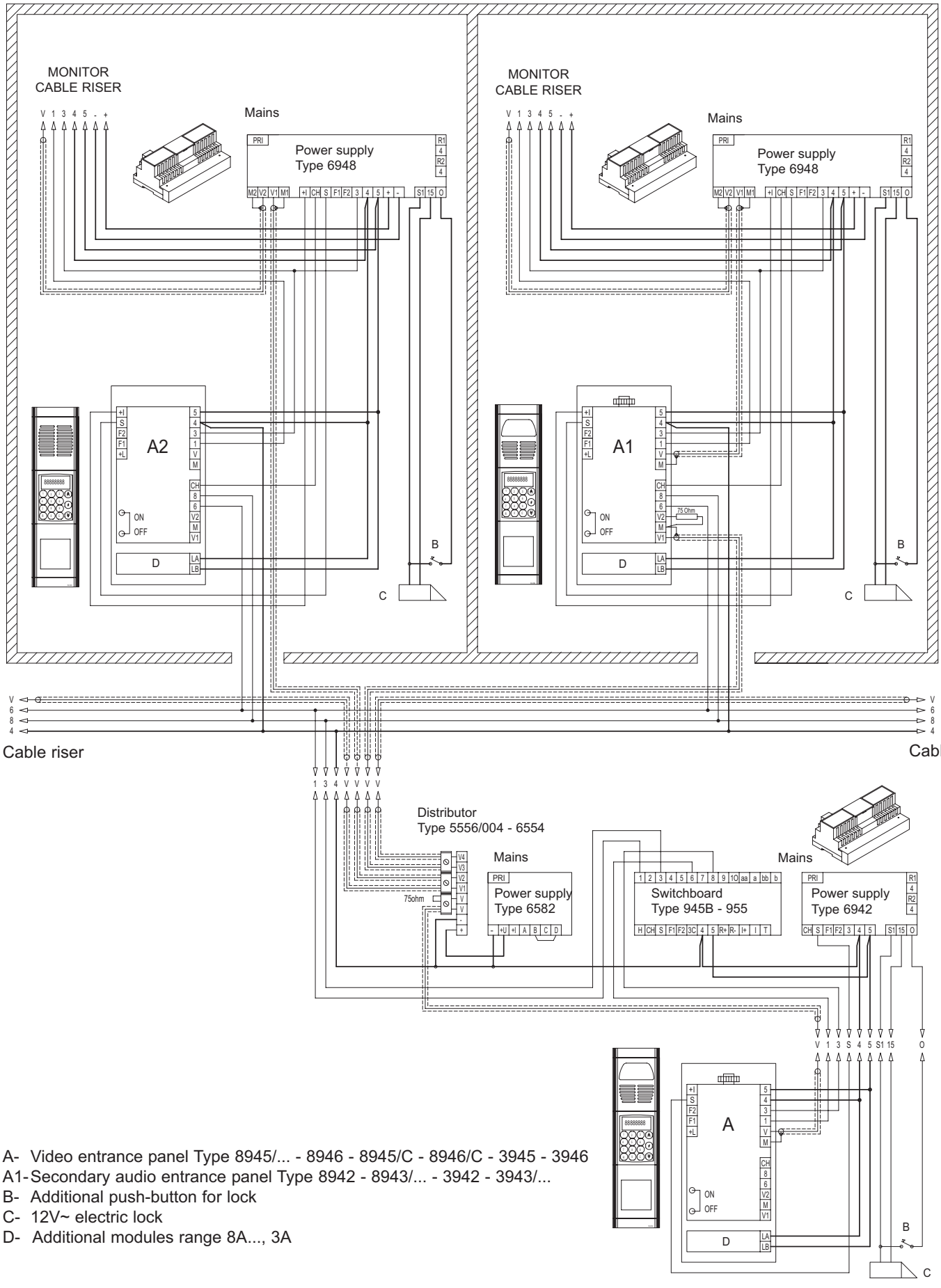
A- Video entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
A1- Secondary audio entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

25- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY ENTRANCE PANELS (BUILDING COMPLEX). Ref. diagram PS2559R5



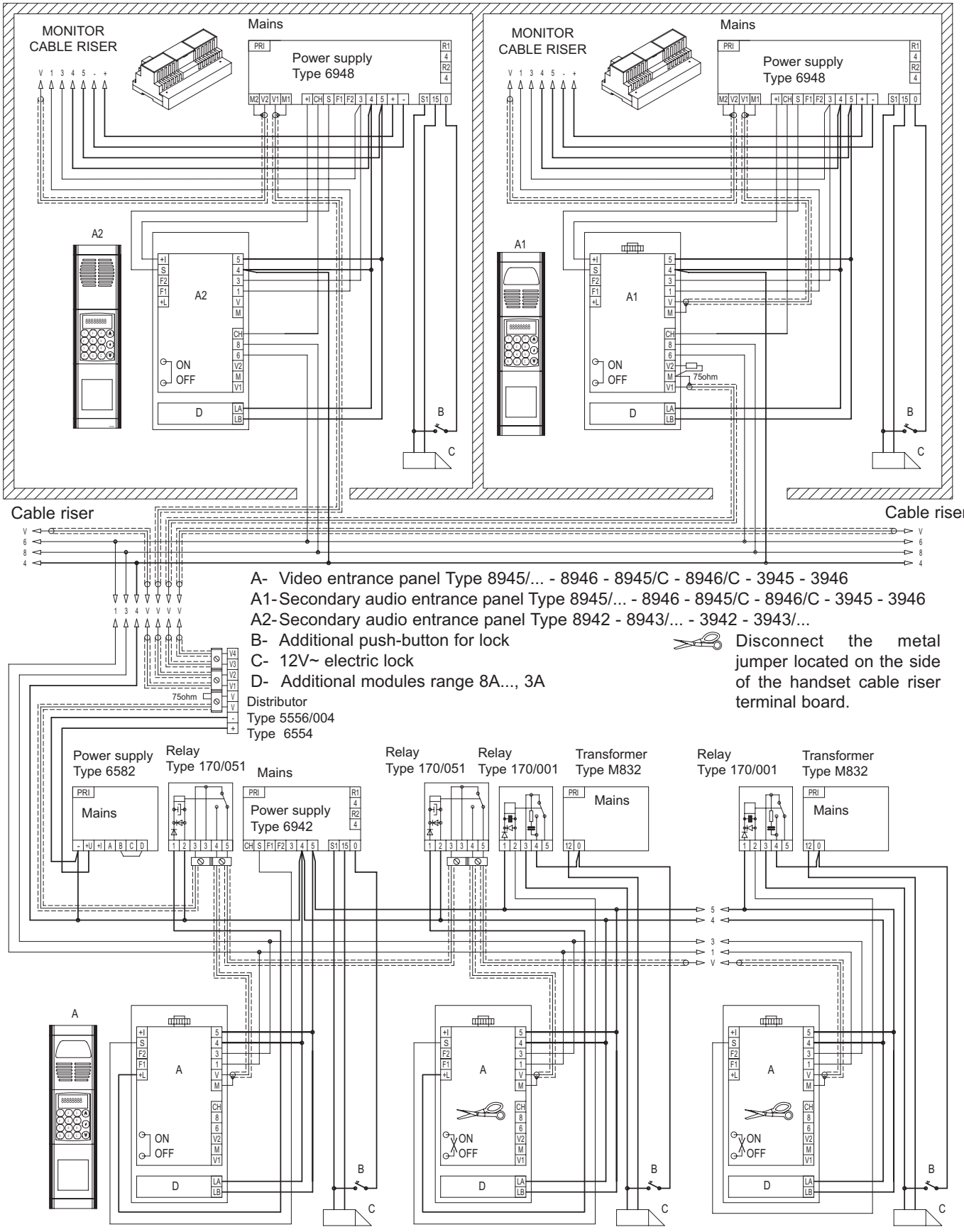
A- Video entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
A1- Secondary audio entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

26- CONDOMINIAL VIDEO ENTRY INSTALLATION WITH ONE MAIN PANEL, PORTER SWITCHBOARD AND TWO OR MORE SECONDARY ENTRANCE PANELS (building complex). Ref. diagram PC2560R2

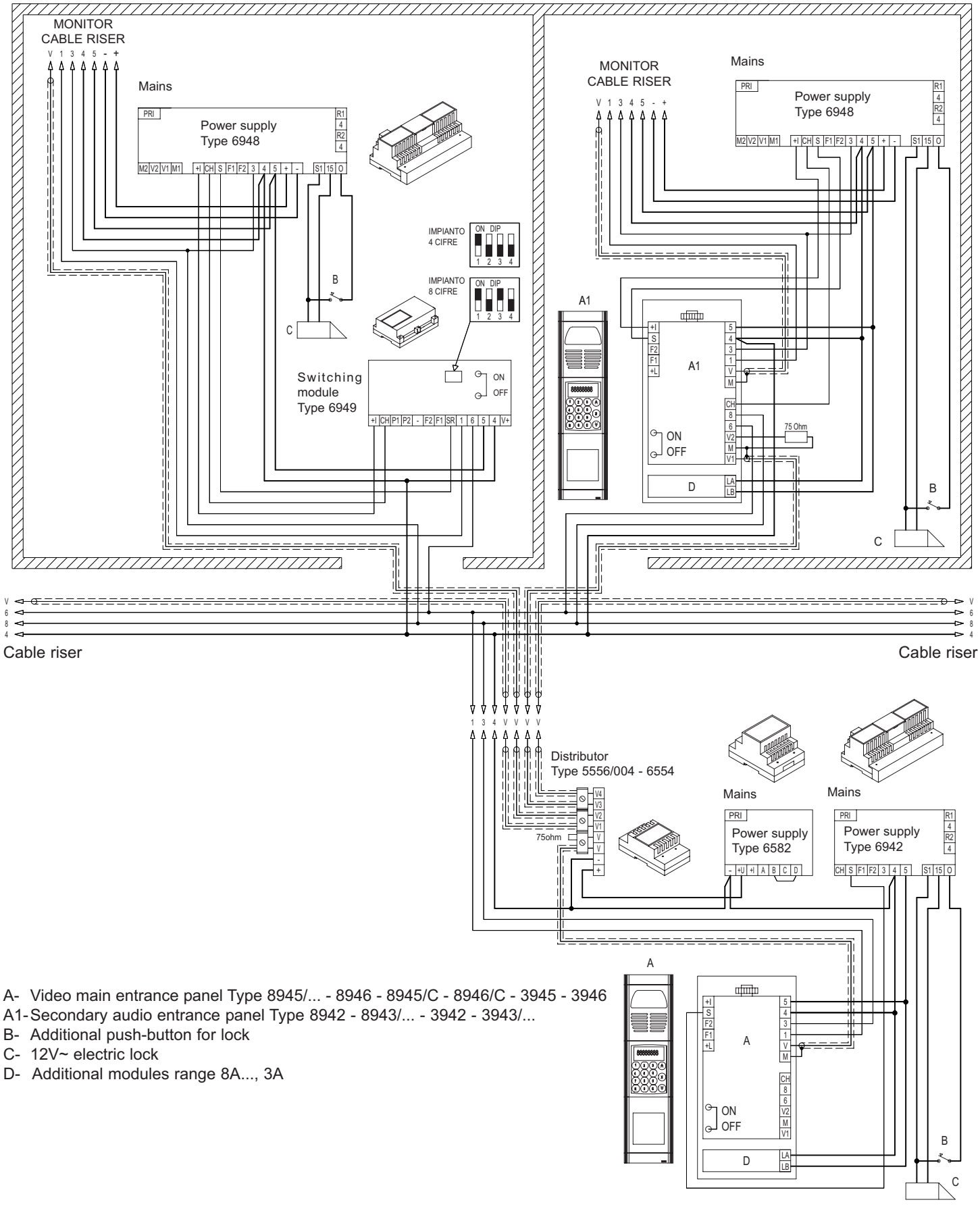


A- Video entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
A1- Secondary audio entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

27- CONDOMINIAL INSTALLATION WITH TWO OR MORE MAIN ENTRANCE PANELS AND TWO OR MORE SECONDARY ENTRANCE PANELS (building complex). Ref. diagram PS2768R3

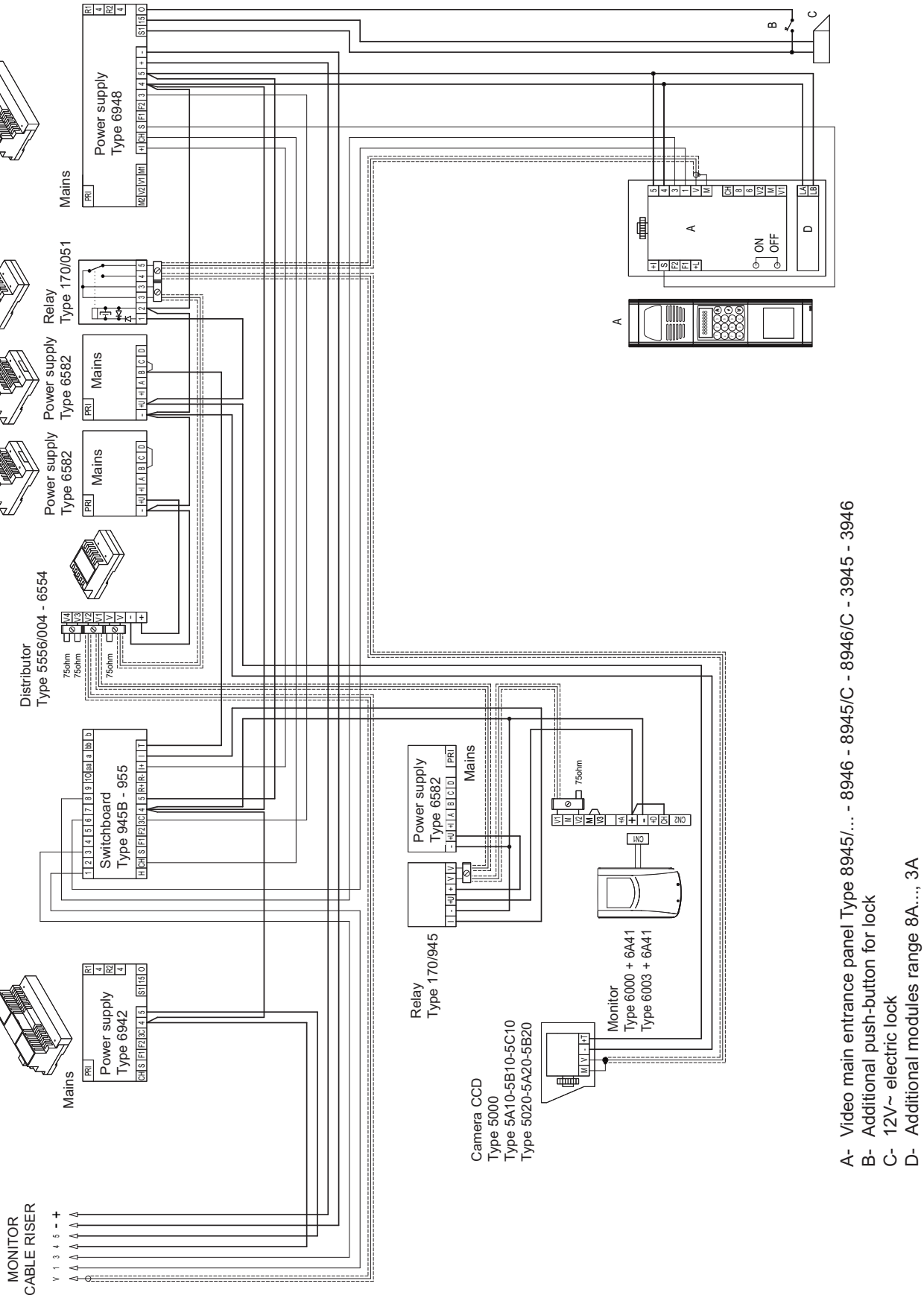


28- CONDOMINIAL VIDEO DOOR ENTRY INSTALLATION WITH MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY UNITS WITH OR WITHOUT ENTRANCE PANEL (Building complex). Rif schema PS2771R4



A- Video main entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
A1- Secondary audio entrance panel Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

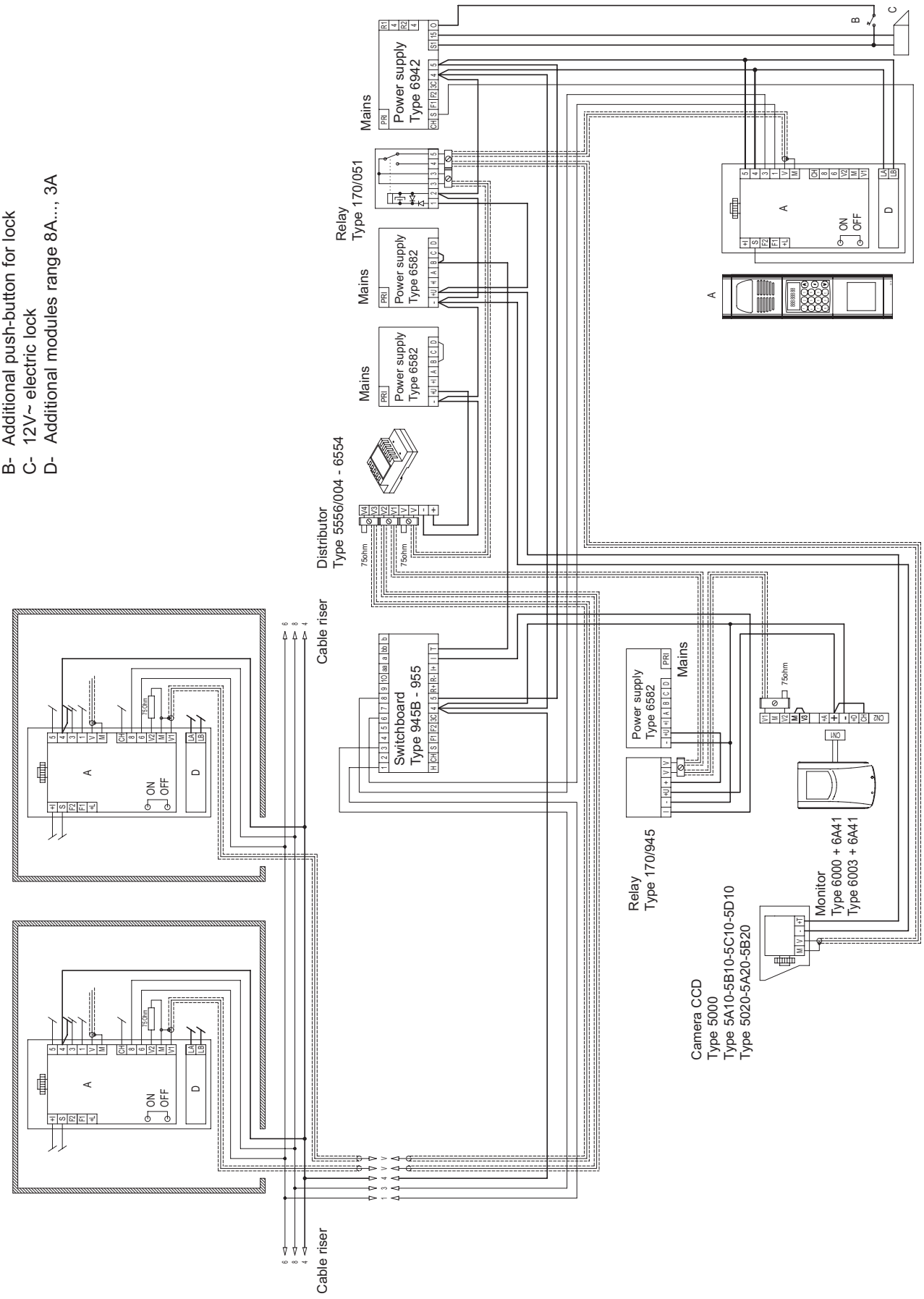
29- CONDOMINIAL VIDEO DOOR ENTRY INSTALLATION WITH PORTER SWITCHBOARD MONITOR AND CAMERA. Ref. diagram PC2727R7



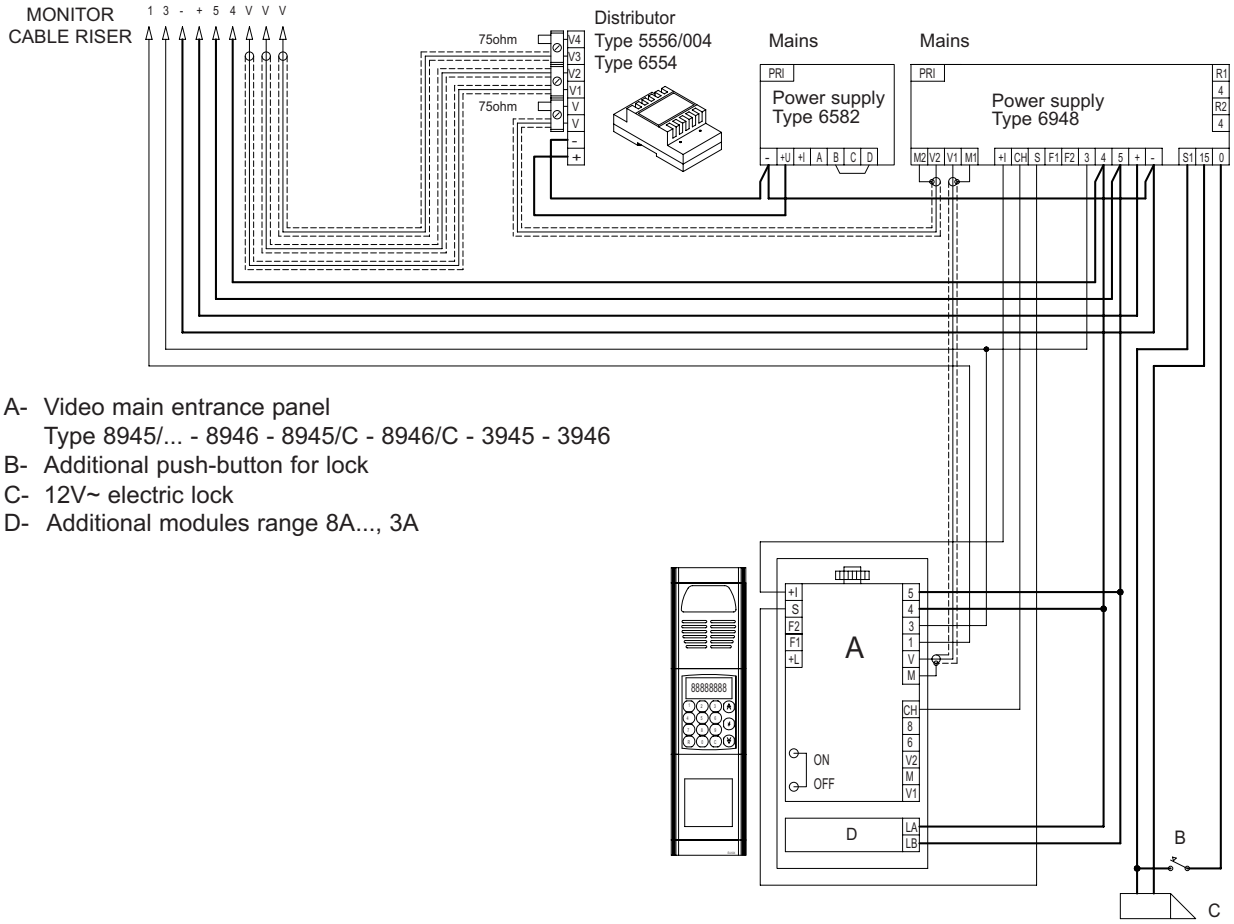
A- Video main entrance panel Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

30- CONDOMINIAL VIDEO DOOR ENTRY INSTALLATION WITH ONE MAIN ENTRANCE PANEL, PORTER SWITCHBOARD, PORTER MONITOR AND CAMERA AND TWO OR MORE SECONDARY ENTRANCE PANELS (building complex). Ref. diagram PC2785R4

A- Video main entrance panel
Type 8945/.... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

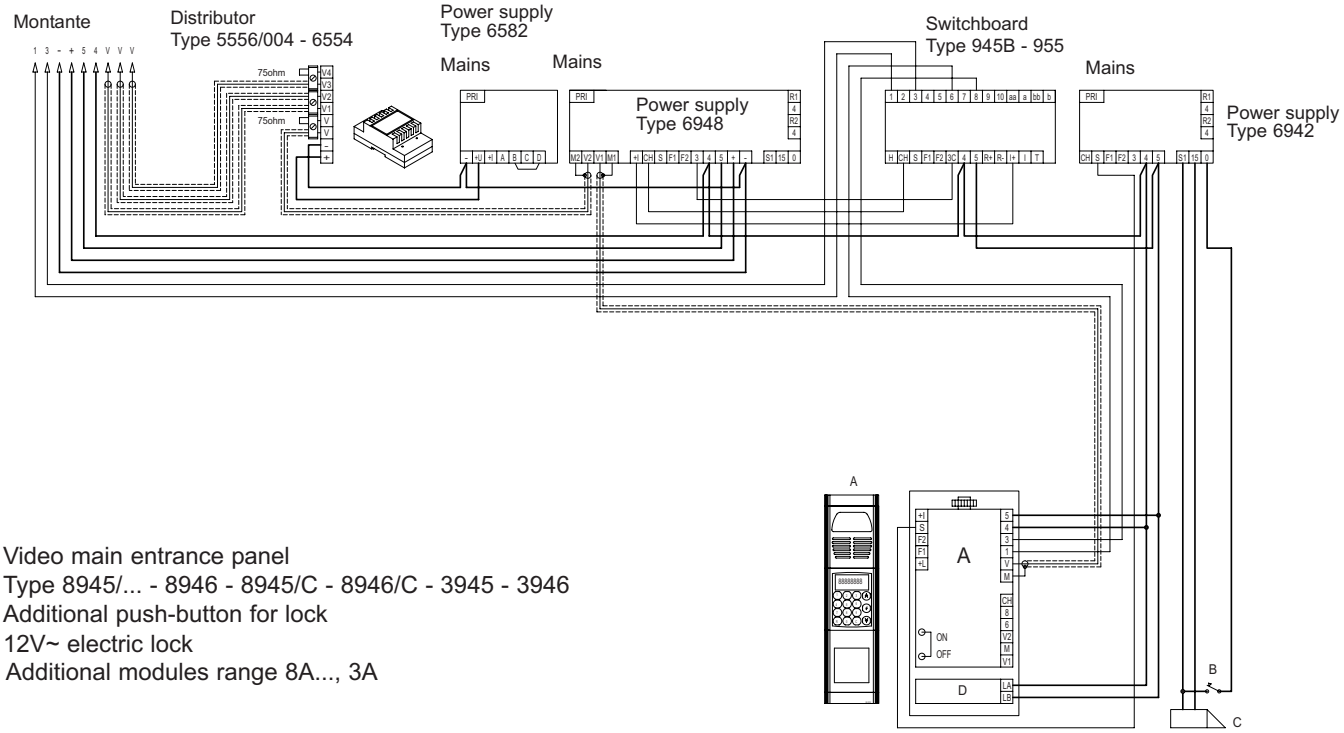


31A- CONDOMINIAL INSTALLATION WITH "DIGIBUS" VIDEO DOOR ENTRY SYSTEM FOR BUILDING COMPLEX WITH POWER SUPPLY Type 6946 FOR SECONDARY PANEL (CONNECTION OF MAIN VIDEO ENTRANCE PANEL). Ref. diagram PV3800R2



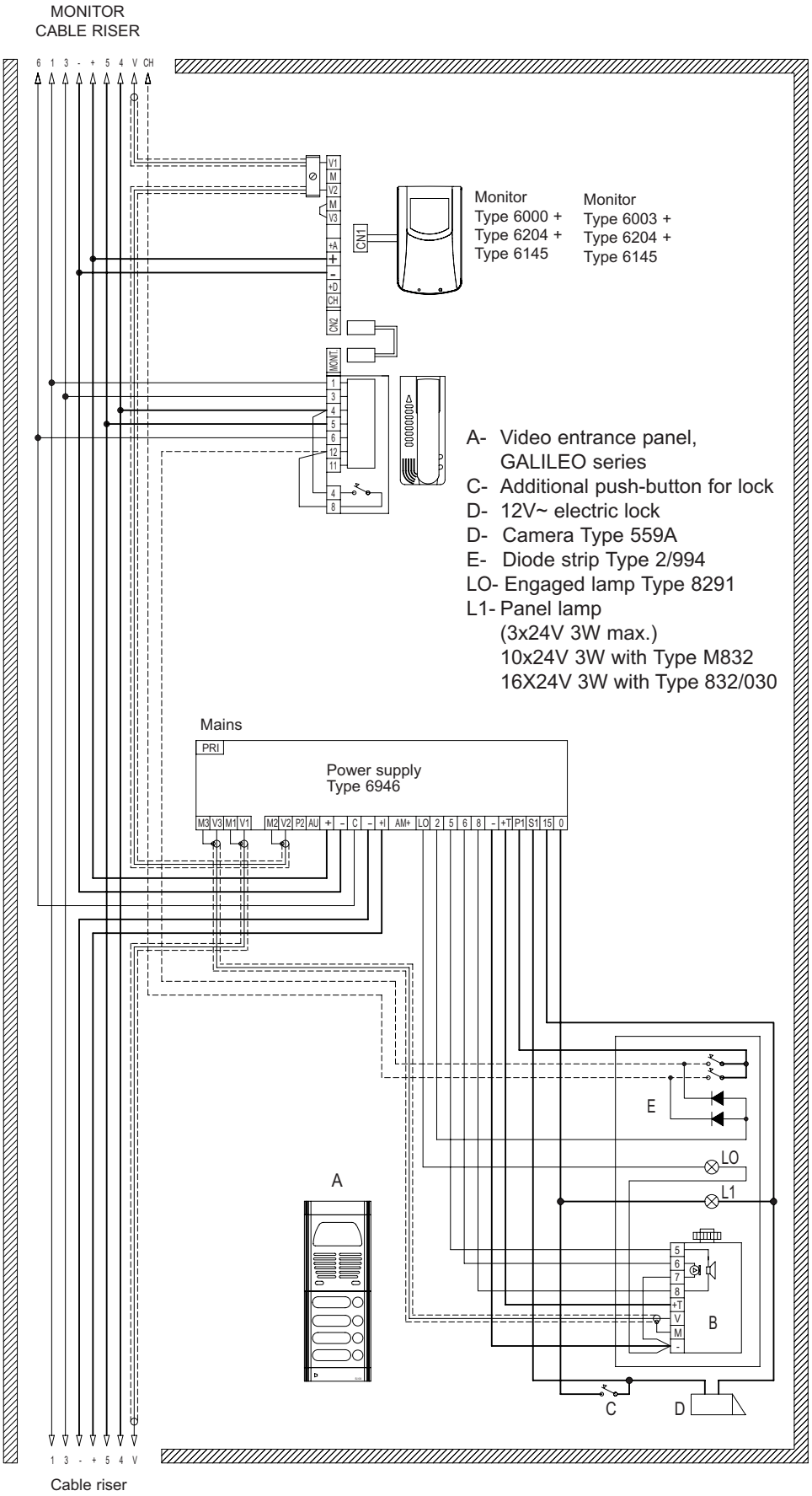
A- Video main entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

31B- CONDOMINIAL INSTALLATION WITH "DIGIBUS" VIDEO DOOR ENTRY SYSTEM FOR BUILDING COMPLEX WITH POWER SUPPLY Type 6946 FOR SECONDARY PANEL (CONNECTION OF MAIN VIDEO ENTRANCE PANEL AND PORTER SWITCHBOARD). Ref. diagram pc3801R2

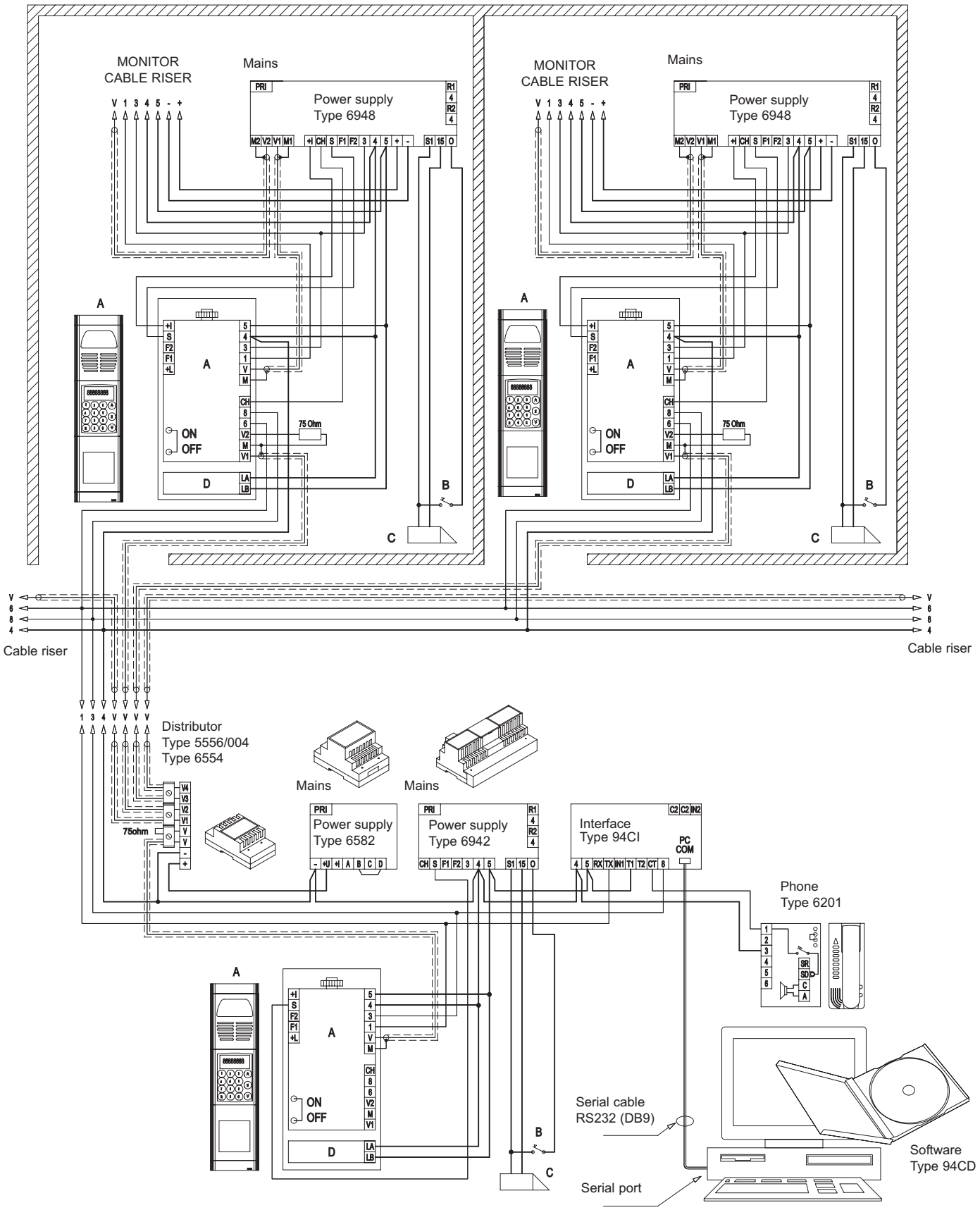


A- Video main entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

32- CONDOMINIAL INSTALLATION WITH "DIGIBUS" VIDEO DOOR ENTRY SYSTEM FOR BUILDING COMPLEX WITH POWER SUPPLY Type 6946 FOR SECONDARY PANEL (CONNECTION OF SECONDARY ENTRANCE PANEL). Ref. diagram PV3931R2



33- WIRING DIAGRAM OF "DIGIBUS" ELECTRONIC VIDEO DOOR ENTRY SYSTEM WITH SWITCHBOARD ON PC FOR BUILDING COMPLEX. Ref diagram PC4704



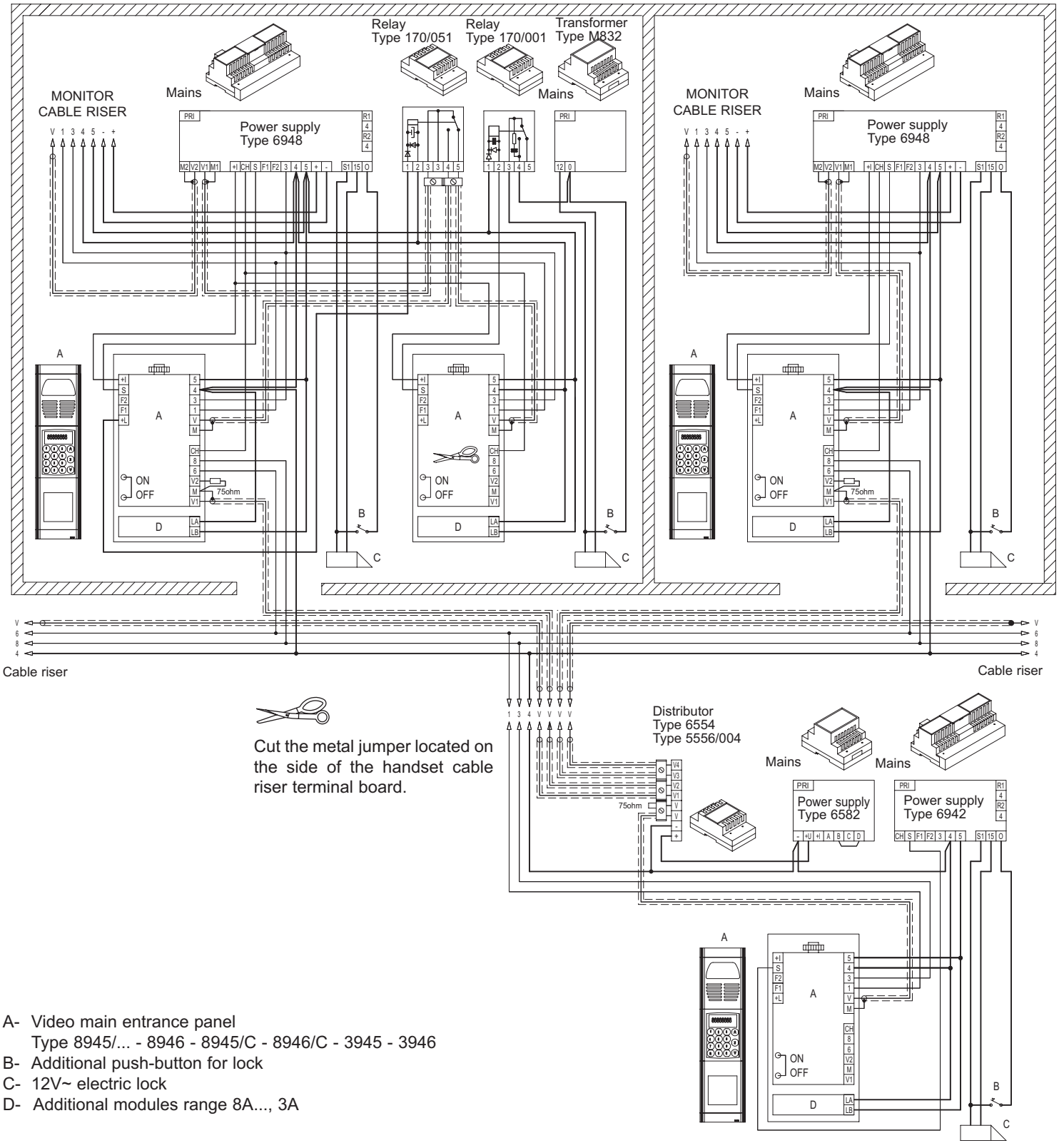
A- Video main entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946

B- Additional push-button for lock

C- 12V~ electric lock

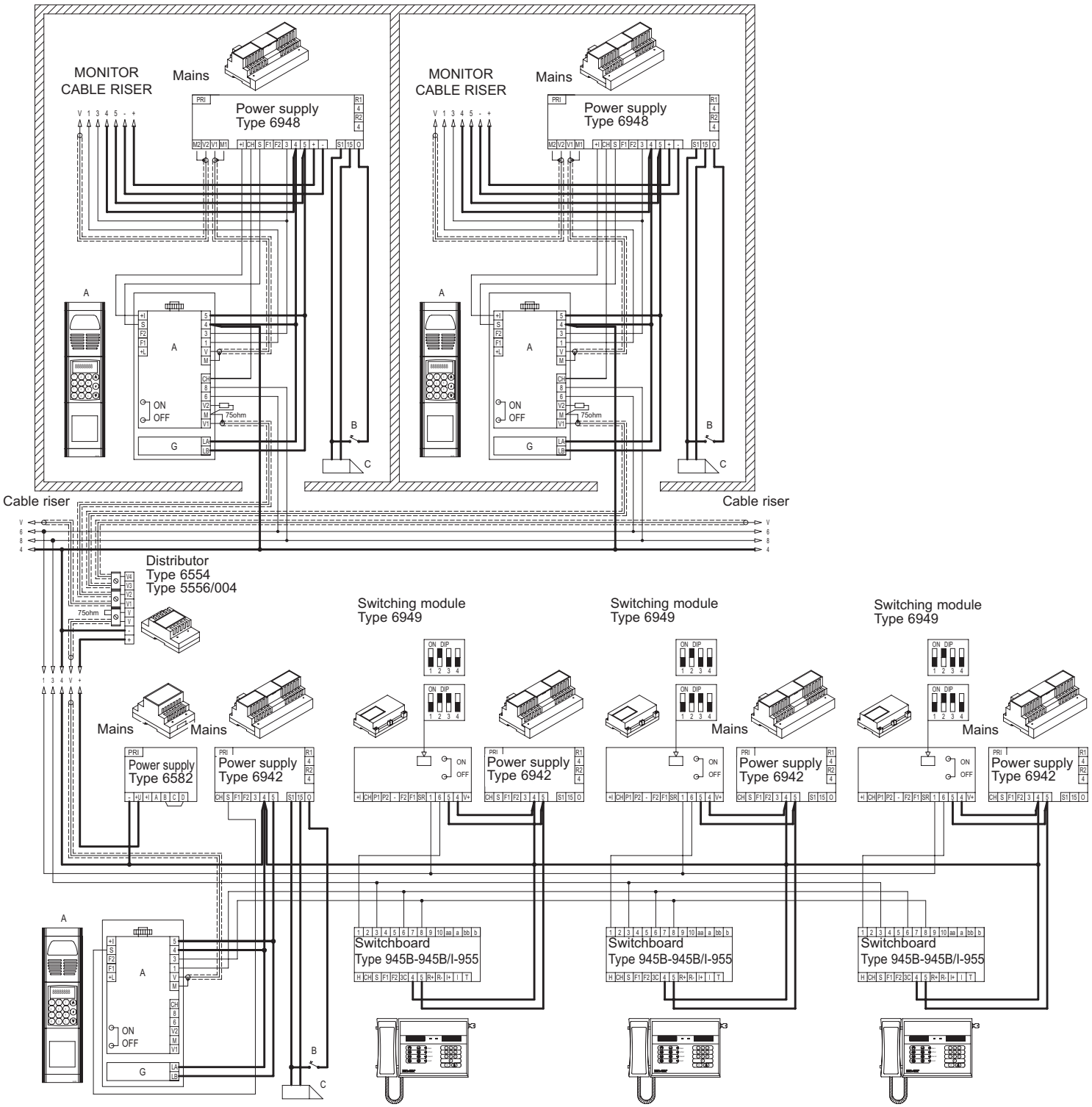
D- Additional modules range 8A..., 3A

34- CONDOMINIAL INSTALLATION WITH ONE MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY PANELS IN PARALLEL. Ref diagram PS4699



A- Video main entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

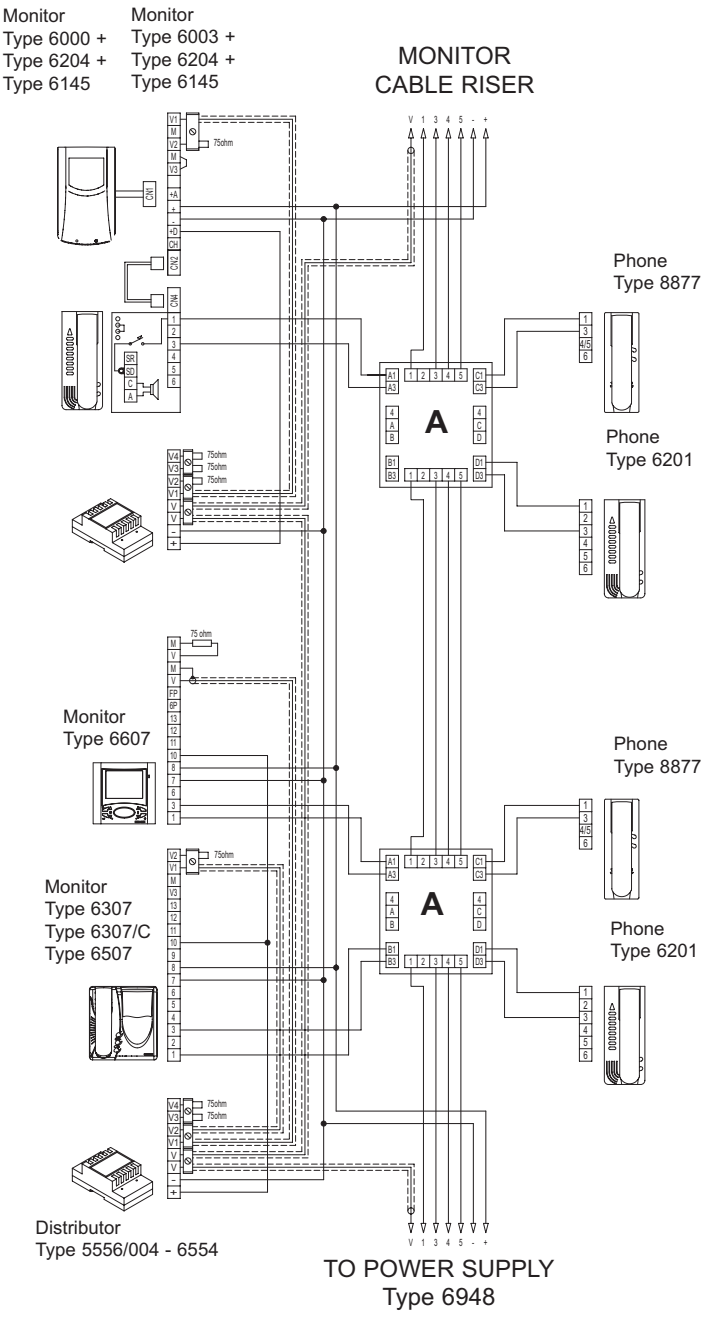
35- CONDOMINIAL INSTALLATION WITH 3 PORTER SWITCHBOARDS, ELECTRONIC MAIN ENTRANCE PANEL AND TWO OR MORE STAIRWAY PANELS. Ref diagram PS4703



A- Video main entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

VERSION 1A

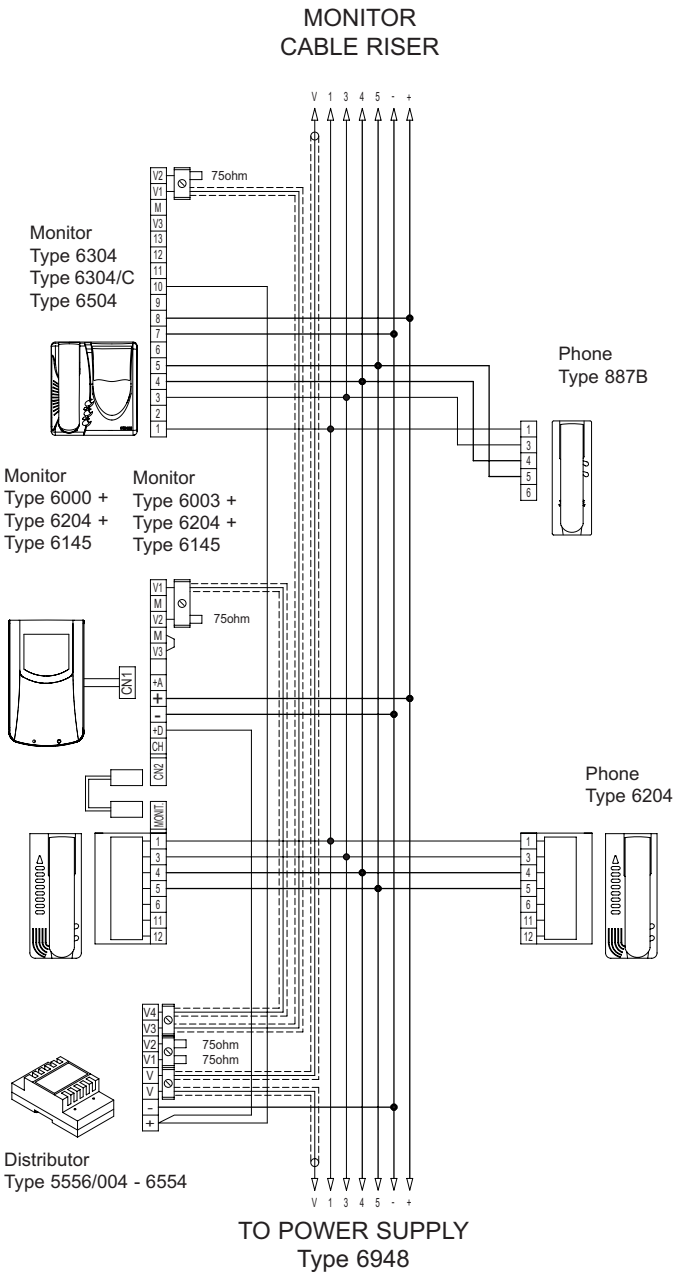
Mixed interphone/monitor installation without internal decoding in the same distributor Type 949B.



A- Distributor Type 949B

VERSION 1B

Mixed interphone/monitor installation with internal decoding in the same building.



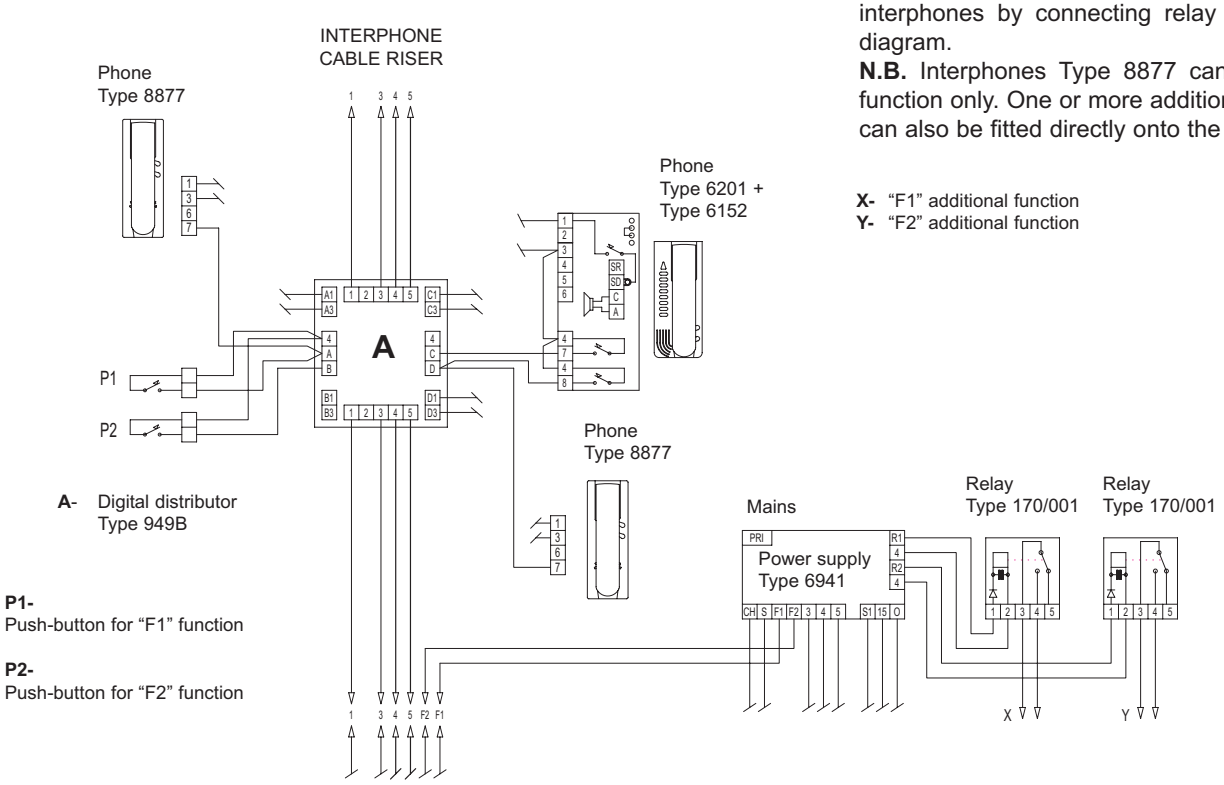
VERSION 2A

Supplementary function F1-F2 connections in installations with interphones without internal decoding.

Two auxiliary functions (F1-F2) can be activated from the interphones by connecting relay Type 170/001 as per diagram.

N.B. Interphones Type 8877 can control one auxiliary function only. One or more additional alarm push-buttons can also be fitted directly onto the distributor (P1-P2).

X- "F1" additional function
Y- "F2" additional function



A- Digital distributor Type 949B

P1-
Push-button for "F1" function

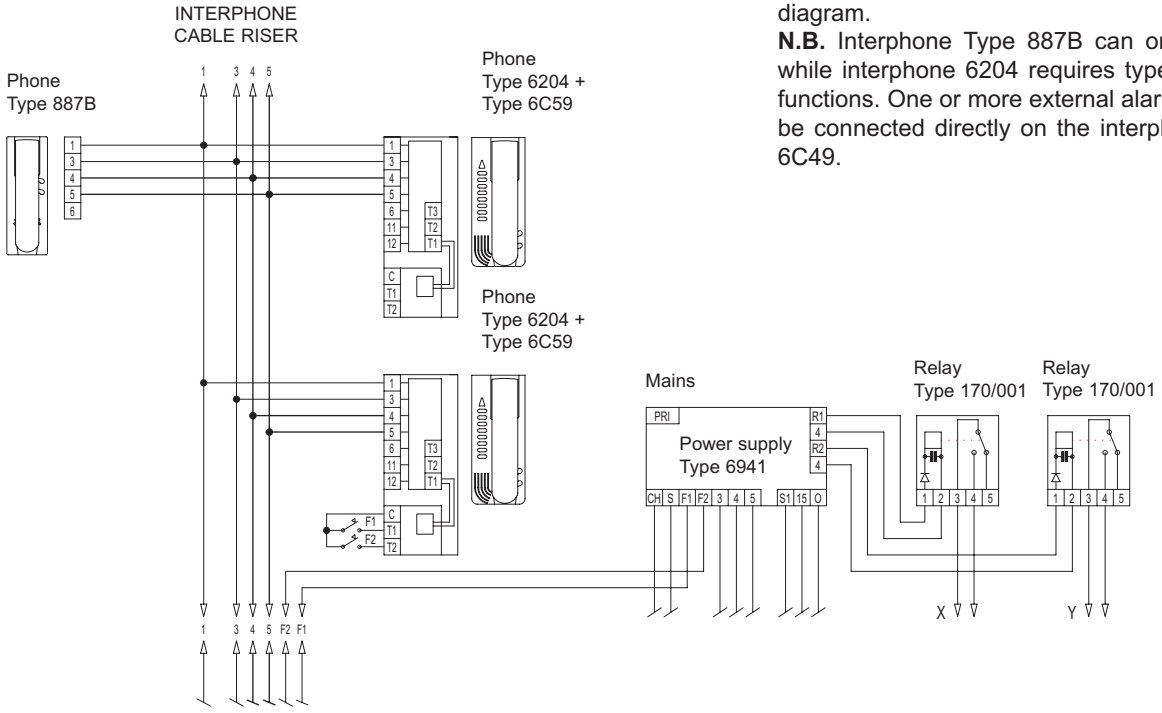
P2-
Push-button for "F2" function

VERSION 2B

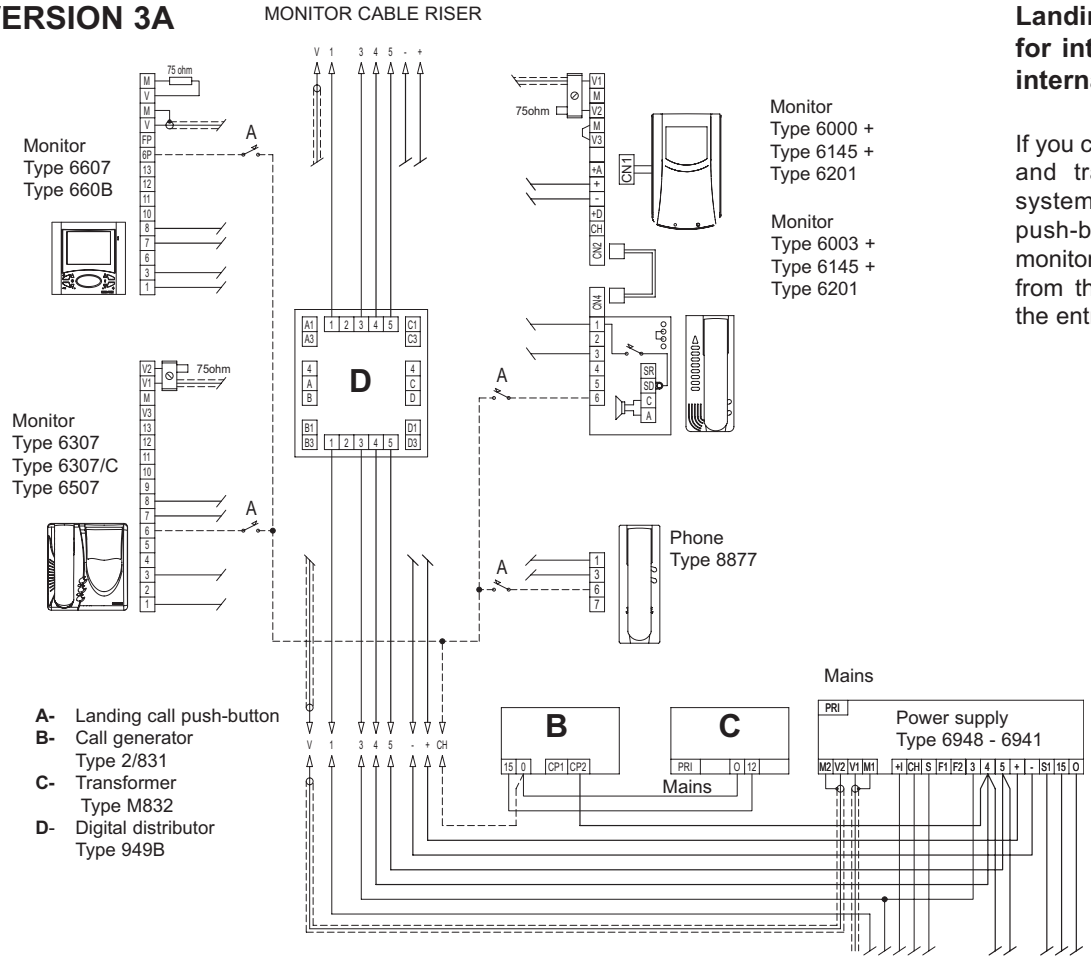
Auxiliary function F1-F2 connections in installations with interphones with internal decoding.

Two auxiliary functions (F1-F2) can be activated from the interphones by connecting two relays Type 170/001 as per diagram.

N.B. Interphone Type 887B can only control function F1, while interphone 6204 requires type 6C59 to control the 2 functions. One or more external alarm pushbuttons can also be connected directly on the interphone by means of type 6C49.



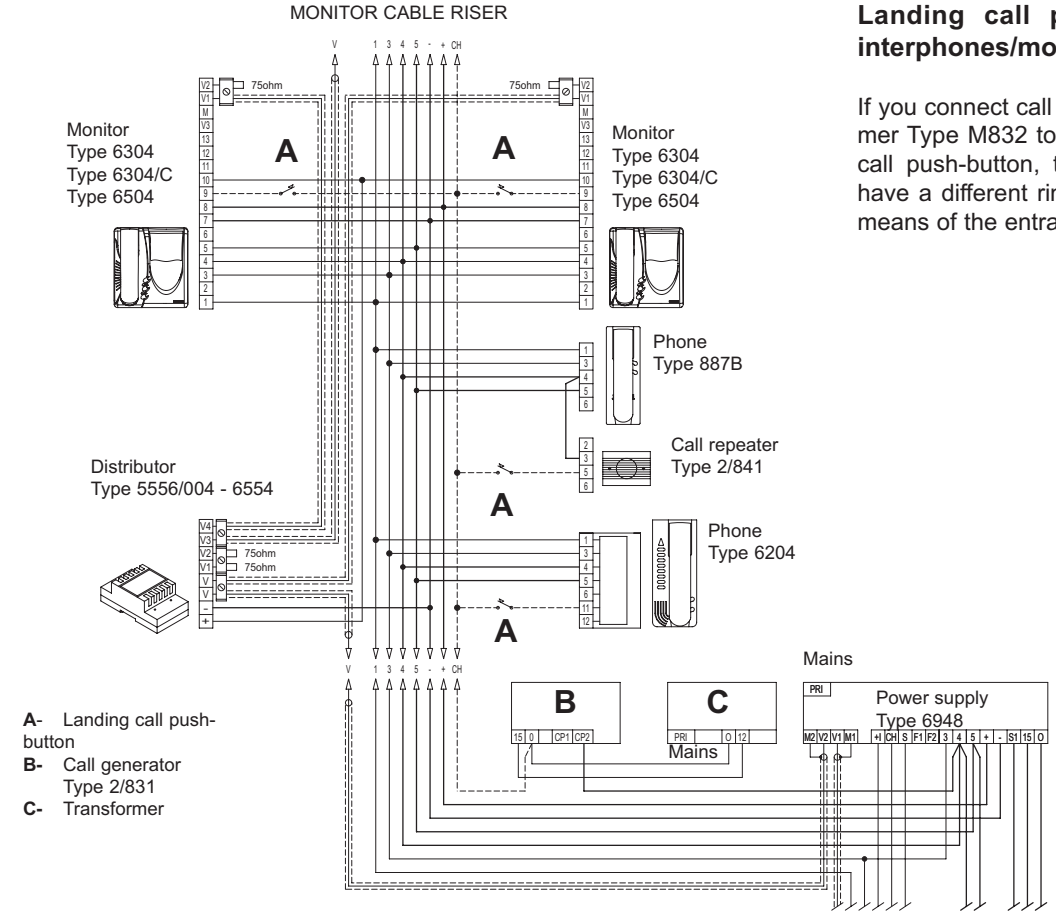
VERSION 3A



Landing call button connection for interphones/monitors without internal decoding.

If you connect call generator Type 2/831 and transformer Type M832 to the system, and press the landing call push-button, the interphone and/or monitor will have a different ringtone from the sound obtained by means of the entrance panel.

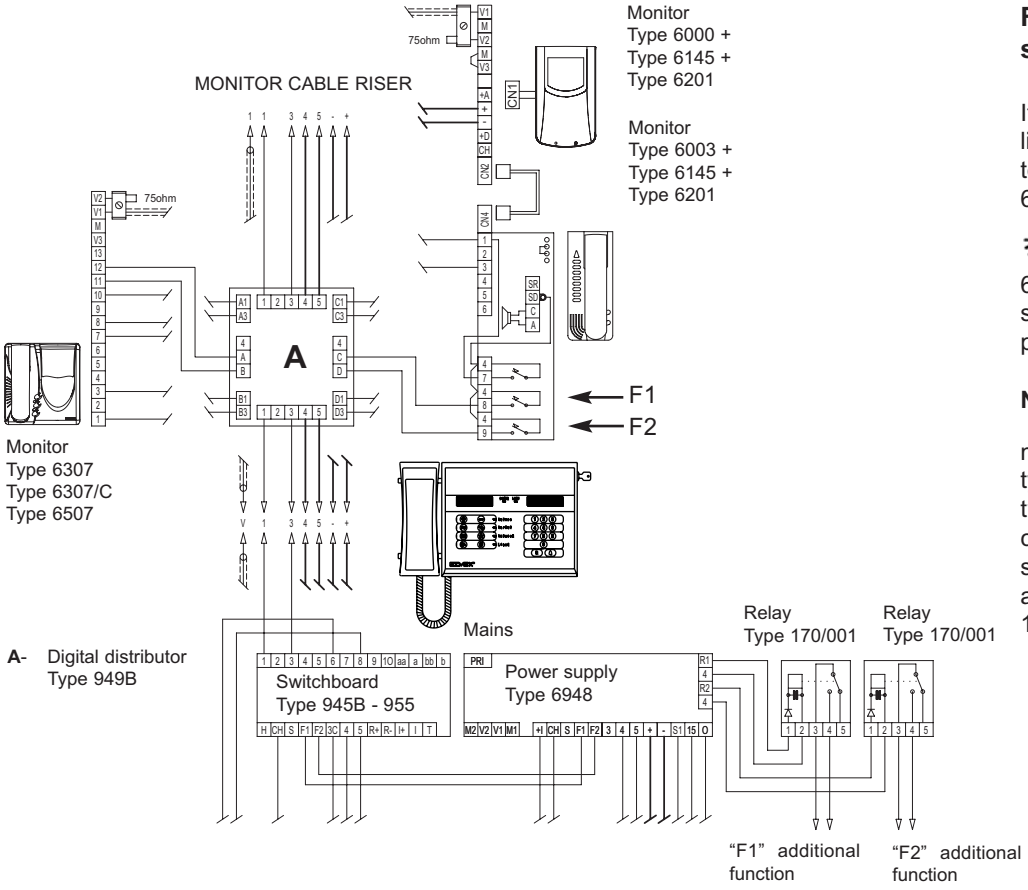
VERSION 3B



Landing call push-button connection for interphones/monitors with internal decoding.

If you connect call generator Type 2/831 and transformer Type M832 to the system, and press the landing call push-button, the interphone and/or monitor will have a different ringtone from the sound obtained by means of the entrance panel.

VERSION 4A



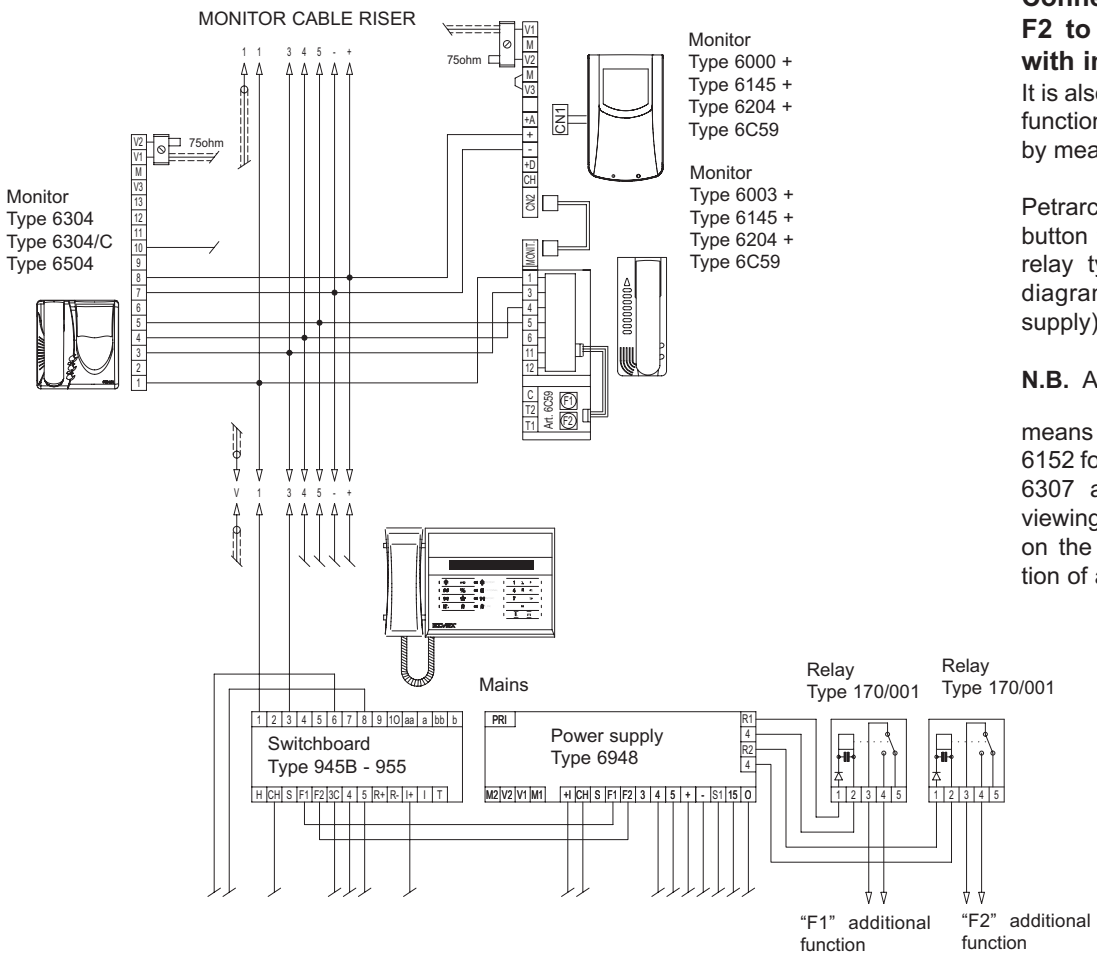
A- Digital distributor
Type 949B

Connecting auxiliary functions F1-F2 to video door entry systems with internal decoding.

It is also possible to activate an auxiliary function F1 controlled via the monitors by means of push-buttons type 6152 for Petrarca monitors and the push-button for types 6307 and 6507, and a relay type 170/001, as shown in the diagram (terminals R1-4 of power supply).

N.B. Auxiliary function F2 is used by means of another push-button □, type 6152 for Petrarca monitors and for types 6307 and 6507, to vary the camera viewing range (VIDEOMOVING system) on the envisaged panels or for activation of another relay type 170/001.

VERSION 4B



Connecting auxiliary function F1-F2 to video door entry systems with internal decoding.

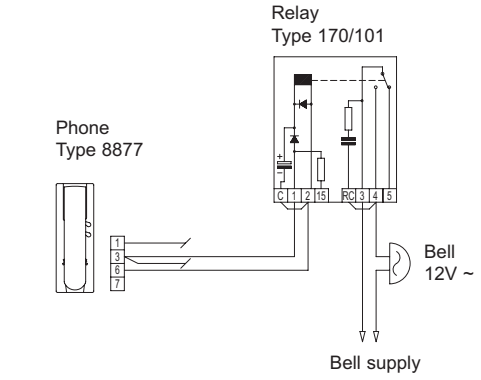
It is also possible to activate an auxiliary function F1 controlled via the monitors by means of push-buttons type 6152 for Petrarca monitors and the push-button for types 6307 and 6507, and a relay type 170/001, as shown in the diagram (terminals R1-4 of power supply).

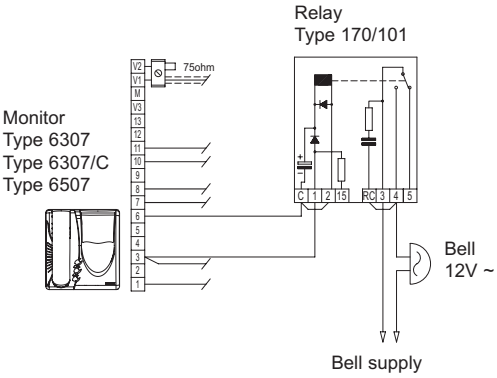
N.B. Auxiliary function F2 is used by means of another pushbutton □, type 6152 for Petrarca monitors and for types 6307 and 6507, to vary the camera viewing range (VIDEOMOVING system) on the envisaged panels or for activation of another relay type 170/001.

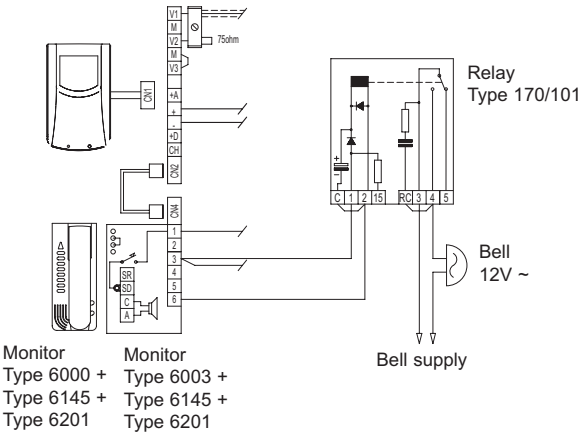
VERSION 5A

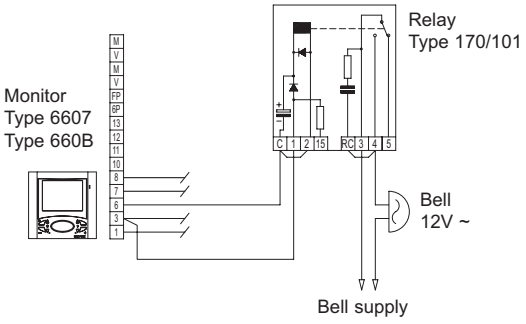
Additional mechanical doorbell connection for interphones/monitors without internal decoding.

12V A.C. additional bells can be fitted using the relay Type 170/101 connected as shown in the diagram.
Contact rating 3A - 250V







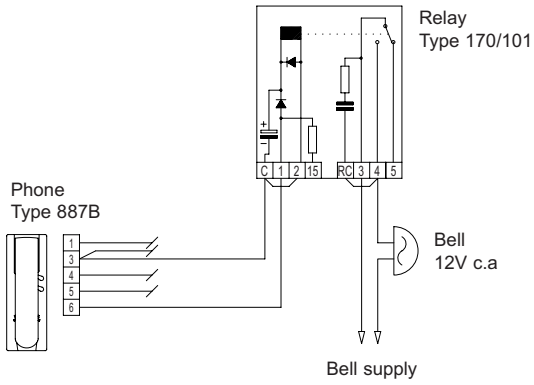


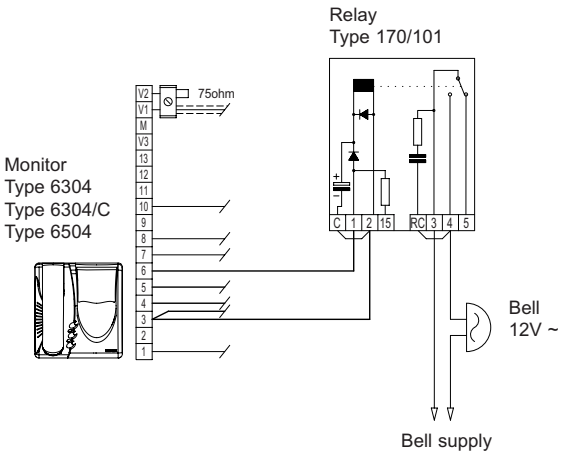
N.B: If additional bells with high absorption are fitted, also connect terminals RC-4 of relay Type 170/101.

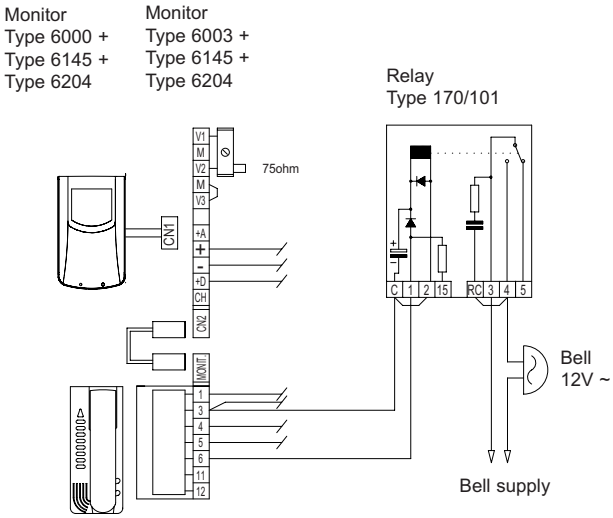
VERSION 5B

Additional mechanical doorbell connection for interphones/monitors with internal decoding.

12V A.C. additional bells can be fitted using the relay Type 170/101 connected as shown in the diagram.
Contact rating 3A - 250V





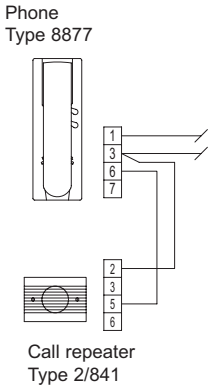


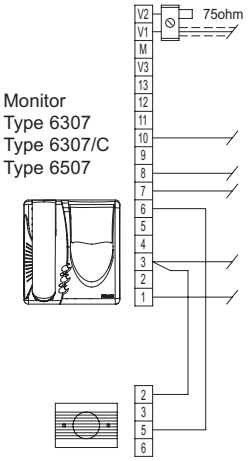
N.B: If additional bells with high absorption are fitted, also connect terminals RC-4 of relay Type 170/101.

VERSION 6A

Call repeater Type 2/841 connection for units without internal decoding.

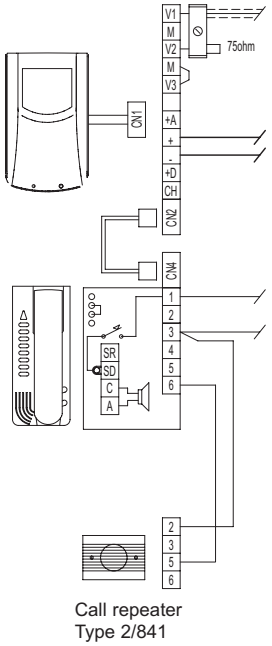
Loudspeaker model Type 2/841 emits the same electronic sound produced by the entry phones and monitors.

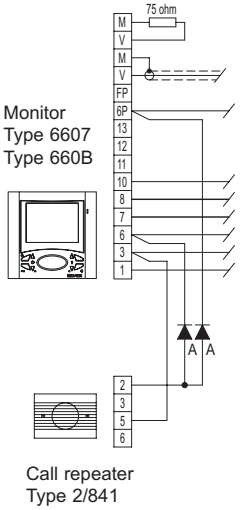




Monitor
Type 6000 +
Type 6145 +
Type 6201

Monitor
Type 6003 +
Type 6145 +
Type 6201

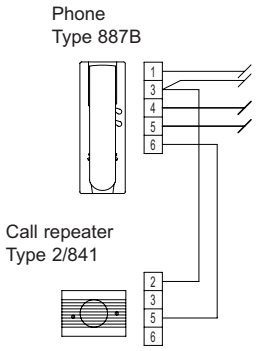


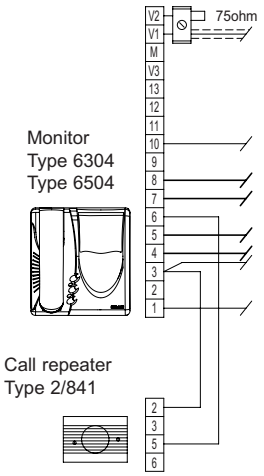


VERSION 6B

Call repeater Type 2/841 connection for units with internal decoding.

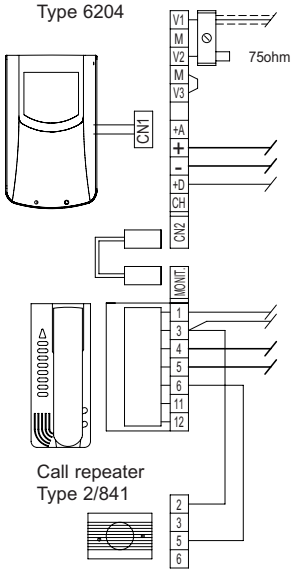
Loudspeaker model Type 2/841 emits the same electronic sound produced by the entry phones and monitors.





Monitor
Type 6000 +
Type 6145 +
Type 6204

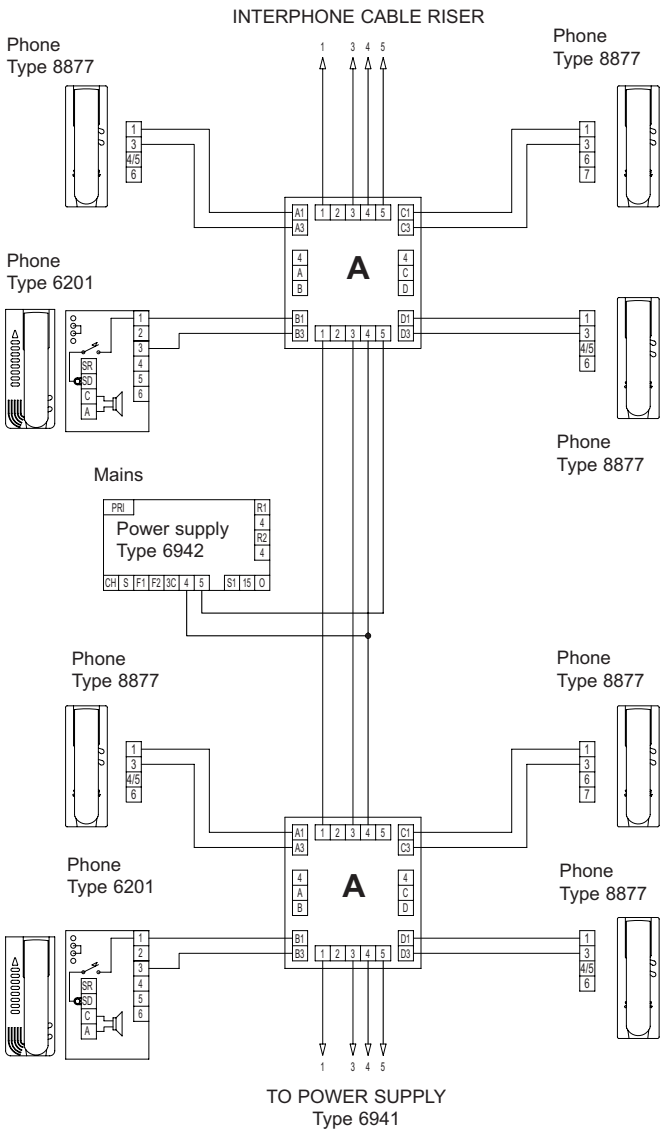
Monitor
Type 6003 +
Type 6145 +
Type 6204



VERSION 7A

Power supply Type 6942 connection in interphone installations with many users or subject to strong voltage drops (units without internal decoding).

The power supply is installed in systems with long cable runs or more than 10 distributors Type 949B.

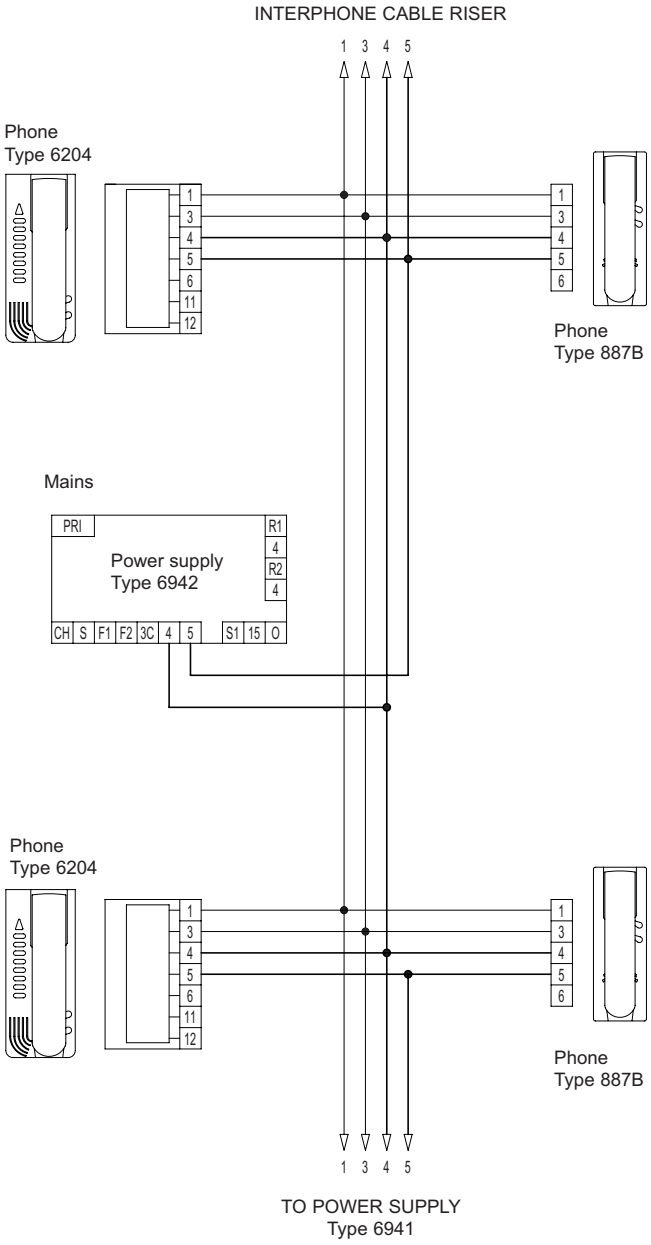


A- Digital distributor Type 949B

VERSION 7B

Power supply Type 6942 connection in interphone installations with many users or subject to strong voltage drops (units with internal decoding).

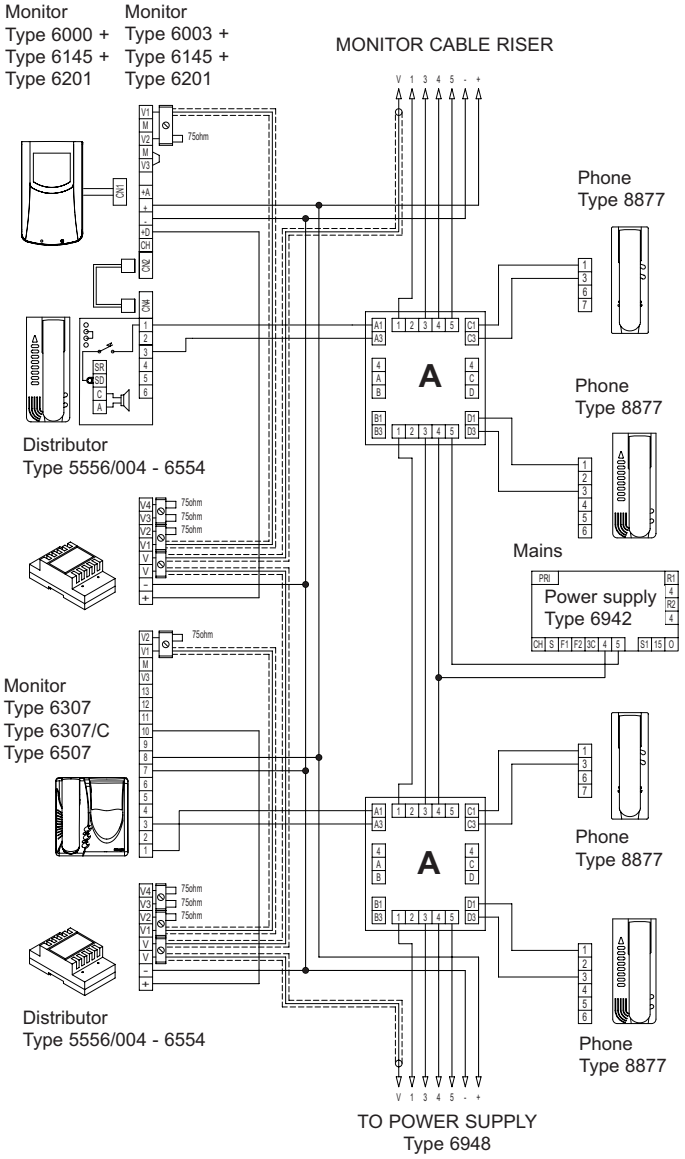
The power supply is installed in systems with long cable runs or more than 60 interphones.



VERSION 8A

Power supply Type 6942 connection in video entry installations with many users or subject to strong voltage drops (monitors without internal decoding).

The power supply is installed in systems with long cable runs or more than 10 distributors Type 949B.

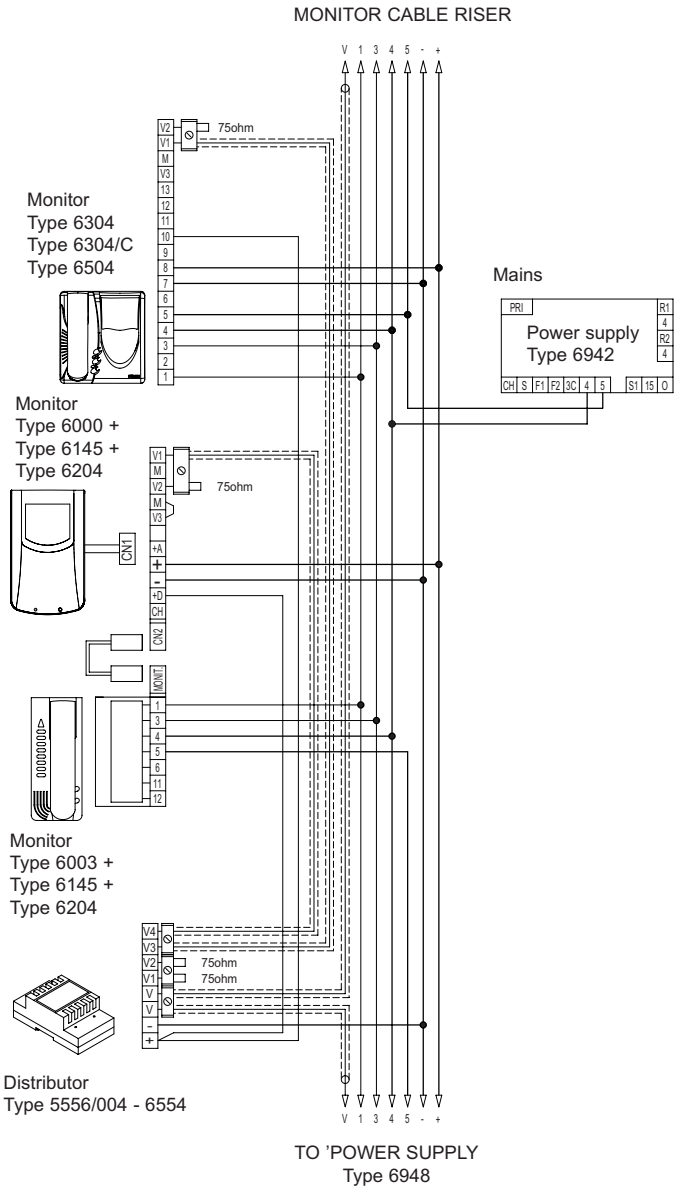


A- Digital distributor
Type 949B

VERSION 8B

Power supply Type 6942 connection in video entry installations with many users or subject to strong voltage drops (monitors with internal decoding).

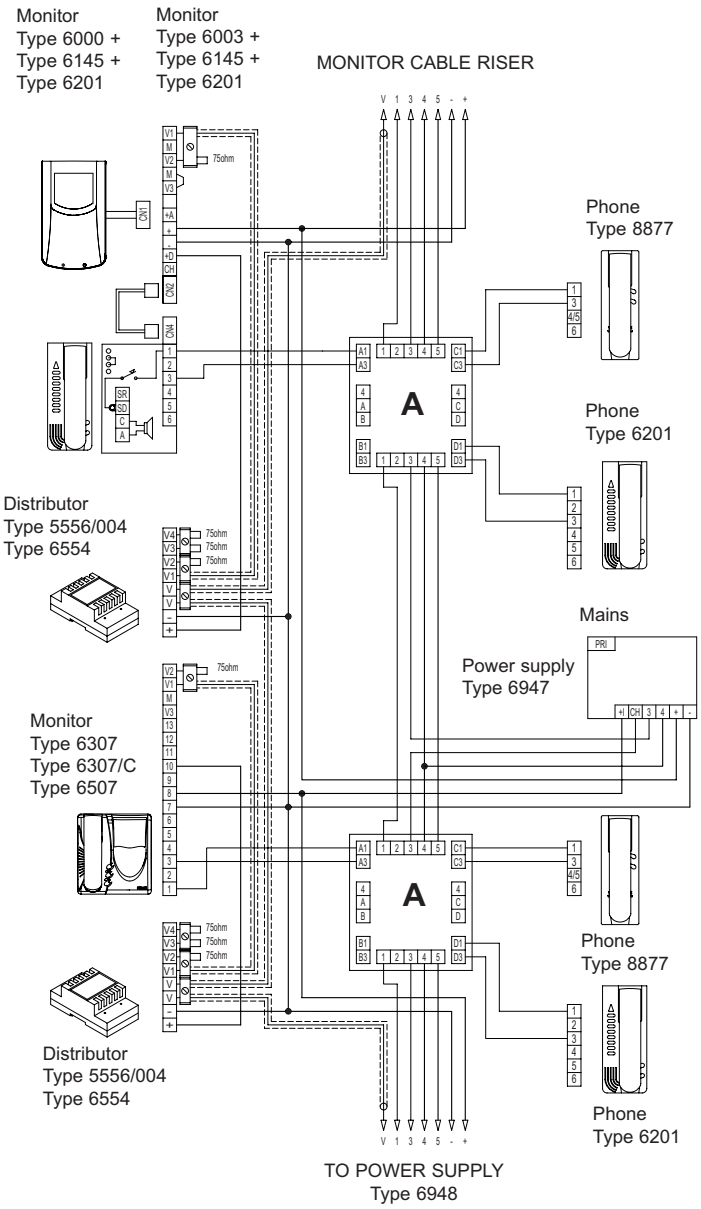
The power supply is installed in systems with long cable runs or more than 60 interphones.



VERSION 9A

Power supply Type 6947 connection in video entry installations with many users or subject to strong voltage drops (monitors and interphones without internal decoding).

The power supply is installed in systems with long cable runs.

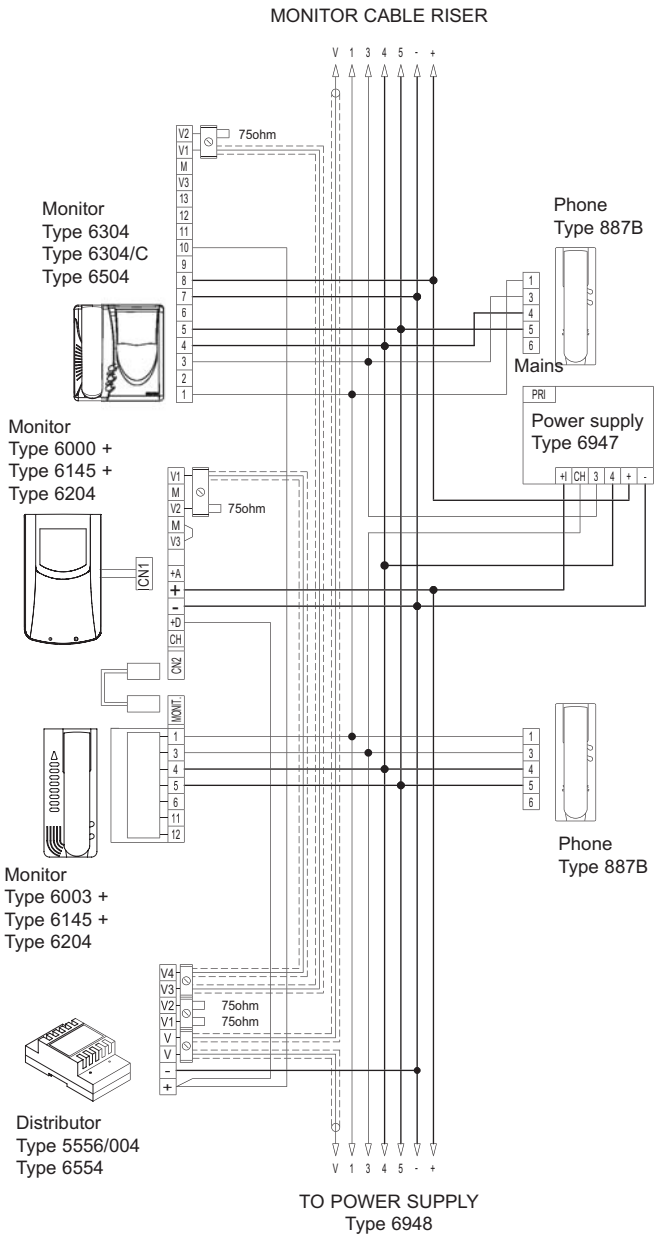


A- Digital distributor
Type 949B

VERSION 9B

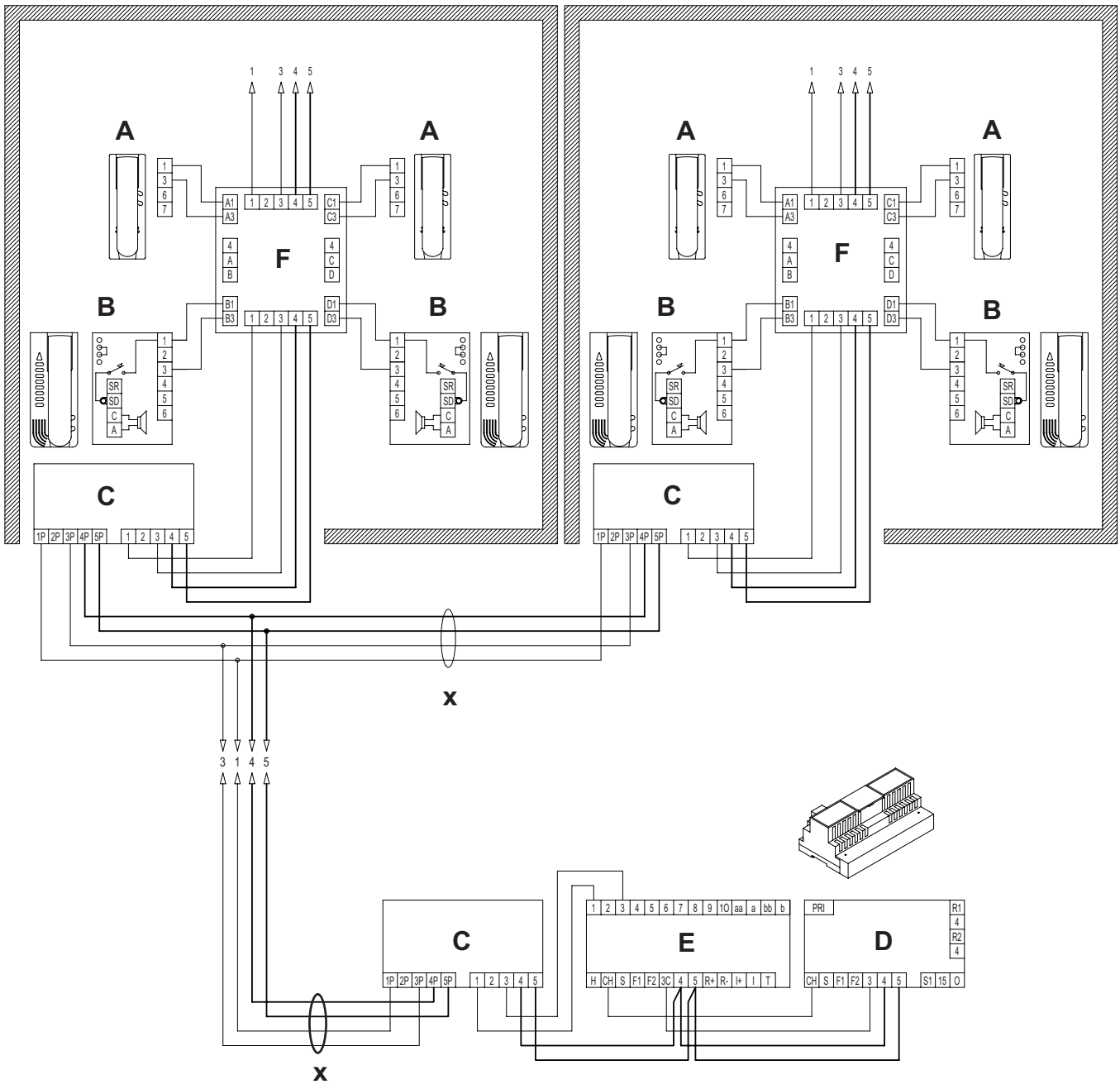
Power supply Type 6947 connection in video entry installations with many users or subject to strong voltage drops (monitors and interphones with internal decoding).

The power supply is installed in systems with long cable runs.



VERSION 9B

WIRING DIAGRAM FOR "DIGIBUS" ELECTRONIC SYSTEM WITH SWITCHBOARD AND PROTECTION AGAINST ATMOSPHERIC DISCHARGES. Ref. diagram P3882R1



A- Phone
Type 8877

B- Phone
Type 6201

C- Device against athmospheric interferences and discharges Type 2/851.

D- Power supply
Type 6941

E- Switchboard
Type 945B

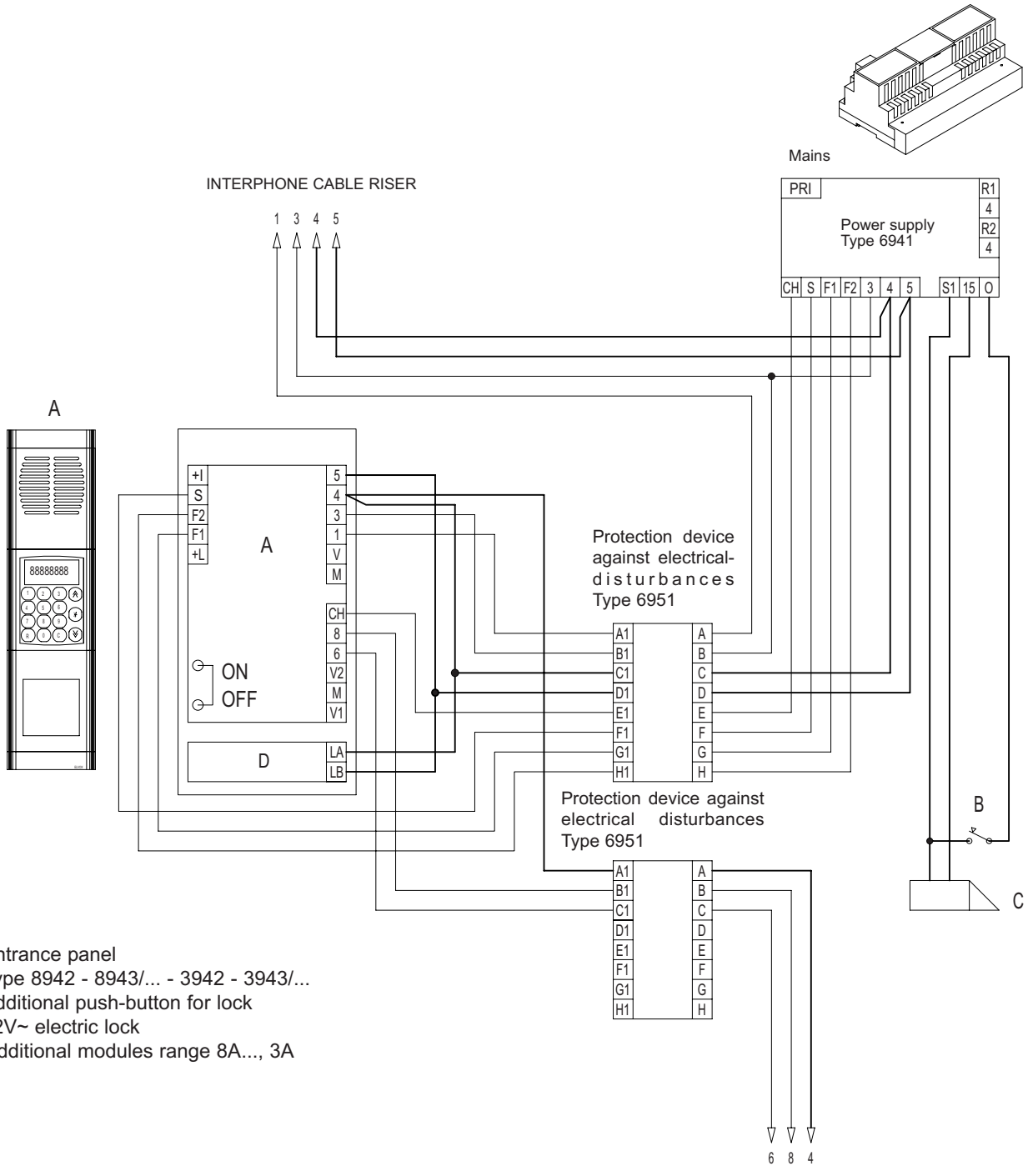
F- Distributor
Type 949B

X- Zone protected against atmospheric discharges.

N.B.
Use Type 2/851 to protect appliances from atmospheric discharges on the connection cables. Zones subject to possible discharges are marked with an “X” on the wiring diagram.
It is not possible to use this device to protect the video signal coaxial cable

VERSION 12

WIRING DIAGRAM FOR "DIGIBUS" ELECTRONIC INSTALLATION WITH PROTECTION AGAINST ELECTRICAL DISTURBANCES. Ref. diagram P3902R2



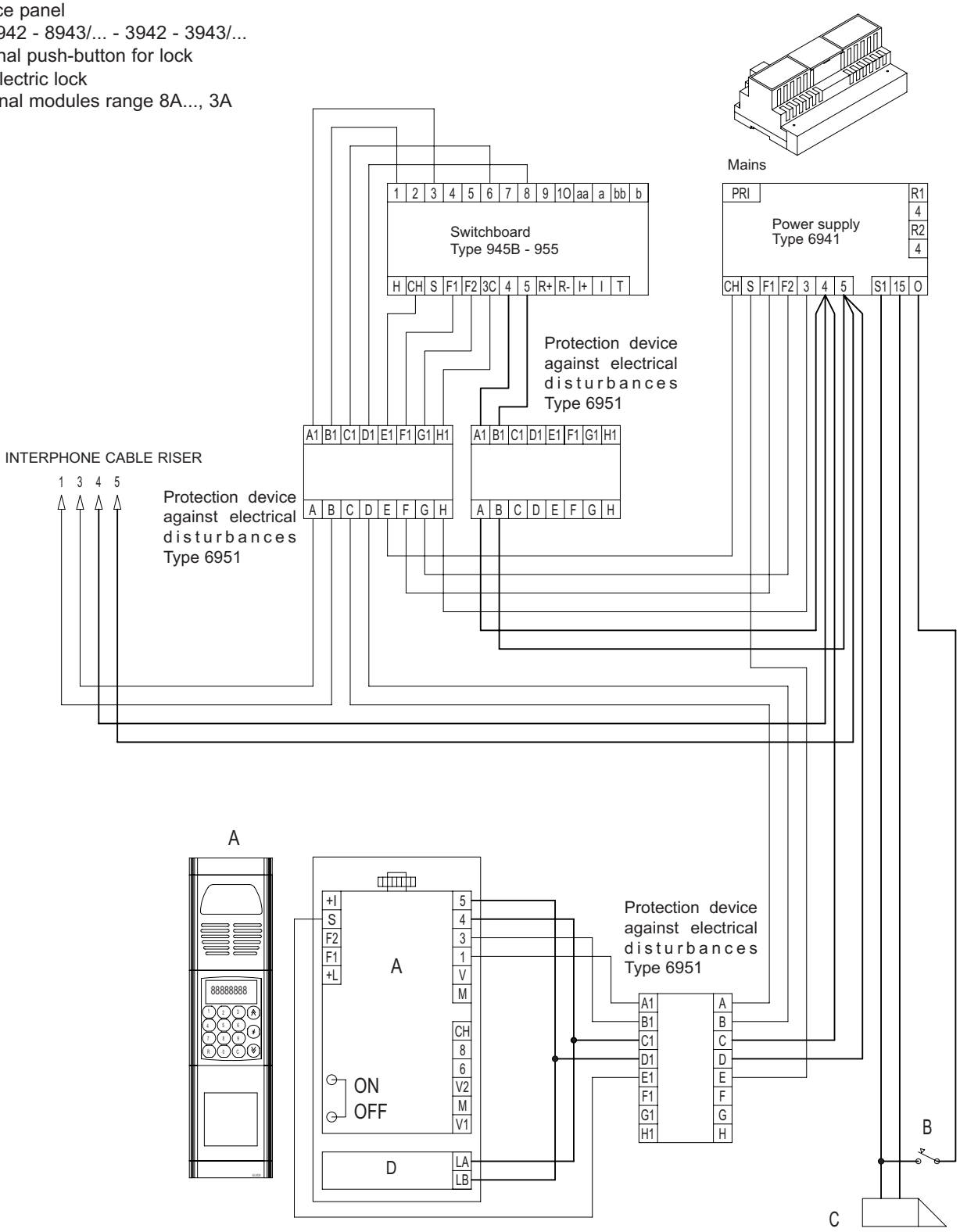
A- Entrance panel
Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

N.B.
Type 6951 is requred when there are electrical disturbances on the connection lines which impede the correct operation of the electronic entrance panel and switchboard. Connect Type 6951 close to entrance panels and switchboards.

VERSION 13

WIRING DIAGRAM FOR "DIGIBUS" ELECTRONIC INSTALLATIONS WITH SWITCHBOARD AND PROTECTION AGAINST ELECTRICAL DISTURBANCES. Ref. diagram PC3901R2

A- Entrance panel
Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

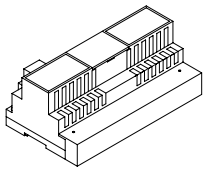


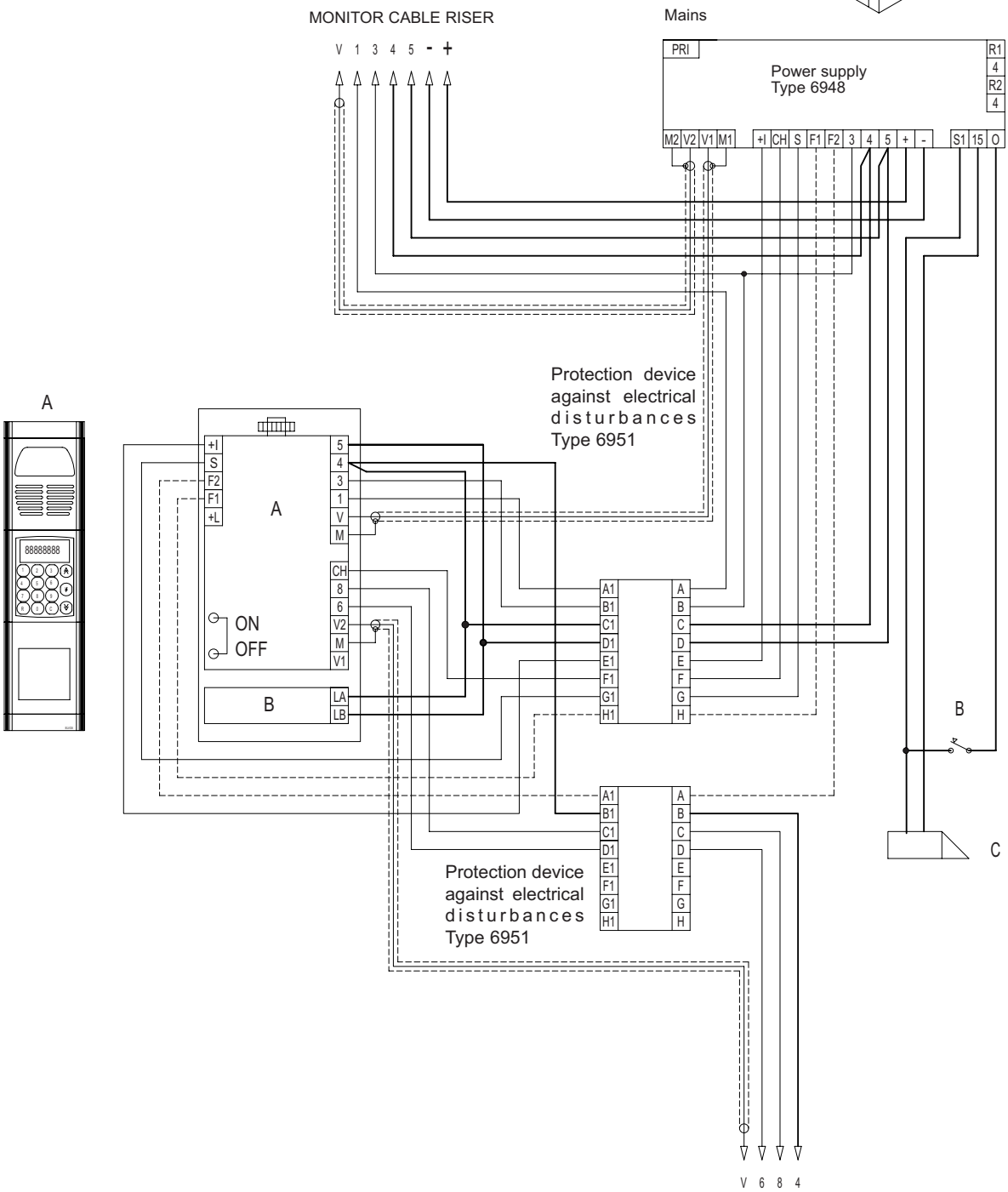
N.B.
Type 6951 is required when there are electrical disturbances on the connection lines which impede the correct operation of the electronic entrance panel and switchboard. Connect Type 6951close to entrance panels and switchboards.

VERSION 14

WIRING DIAGRAM OF "DIGIBUS" ELECTRONIC INSTALLATION AND PROTECTION AGAINST ELECTRICAL DISTURBANCES. Ref diagram pv3903R2

A- Video entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

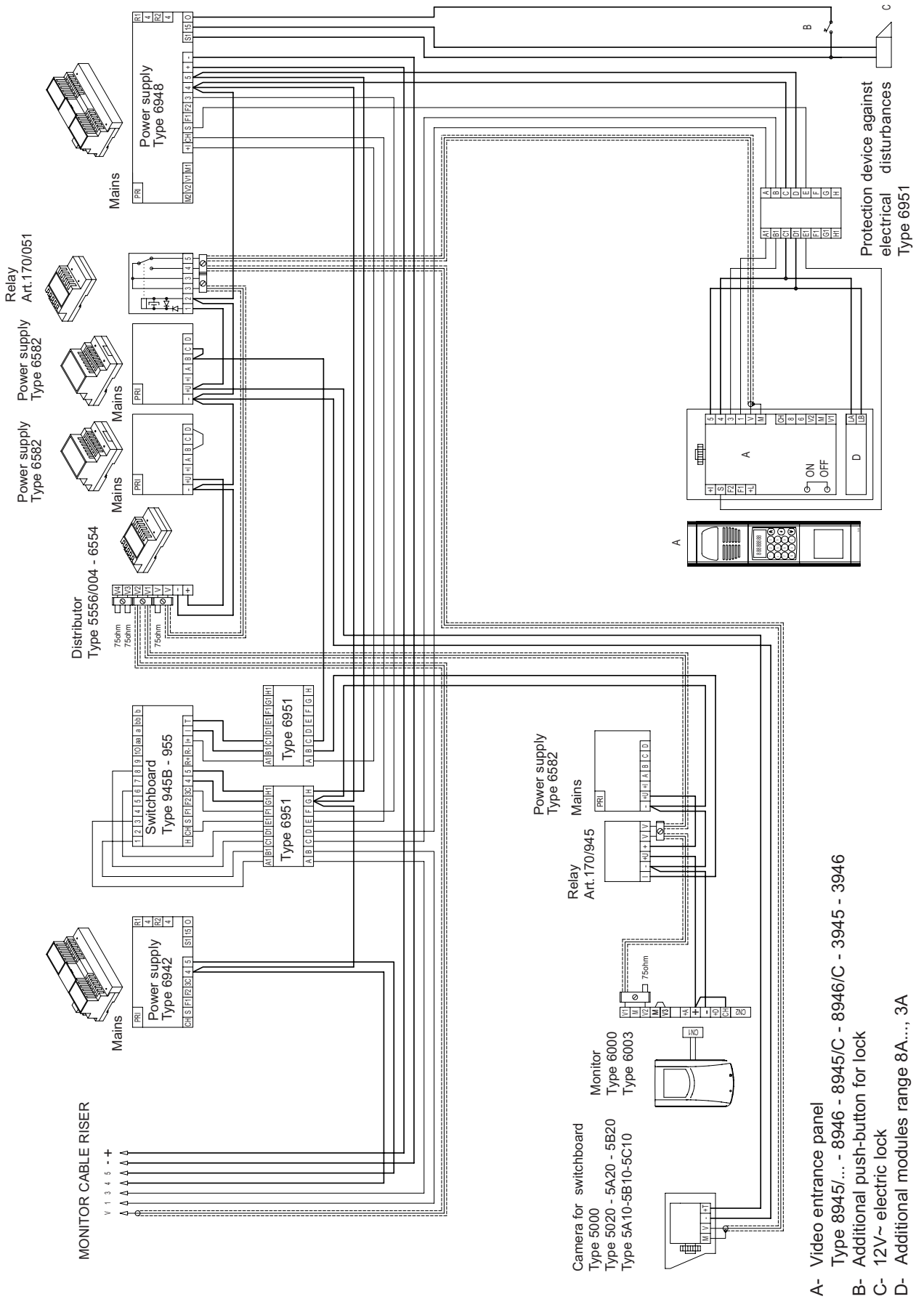




N.B.
Type 6951is required when there are electrical disturbances on the connection lines which impede the correct operation of the electronic entrance panel and switchboard. Connect Type 6951 close to entrance panels and switchboards.

VERSION 15

WIRING DIAGRAM FOR "DIGIBUS" ELECTRONIC VIDEO DOOR ENTRY SYSTEM WITH SWITCHBOARD AND PROTECTION AGAINST ELECTRIC DISTURBANCES. Ref. diagram PC3881R2

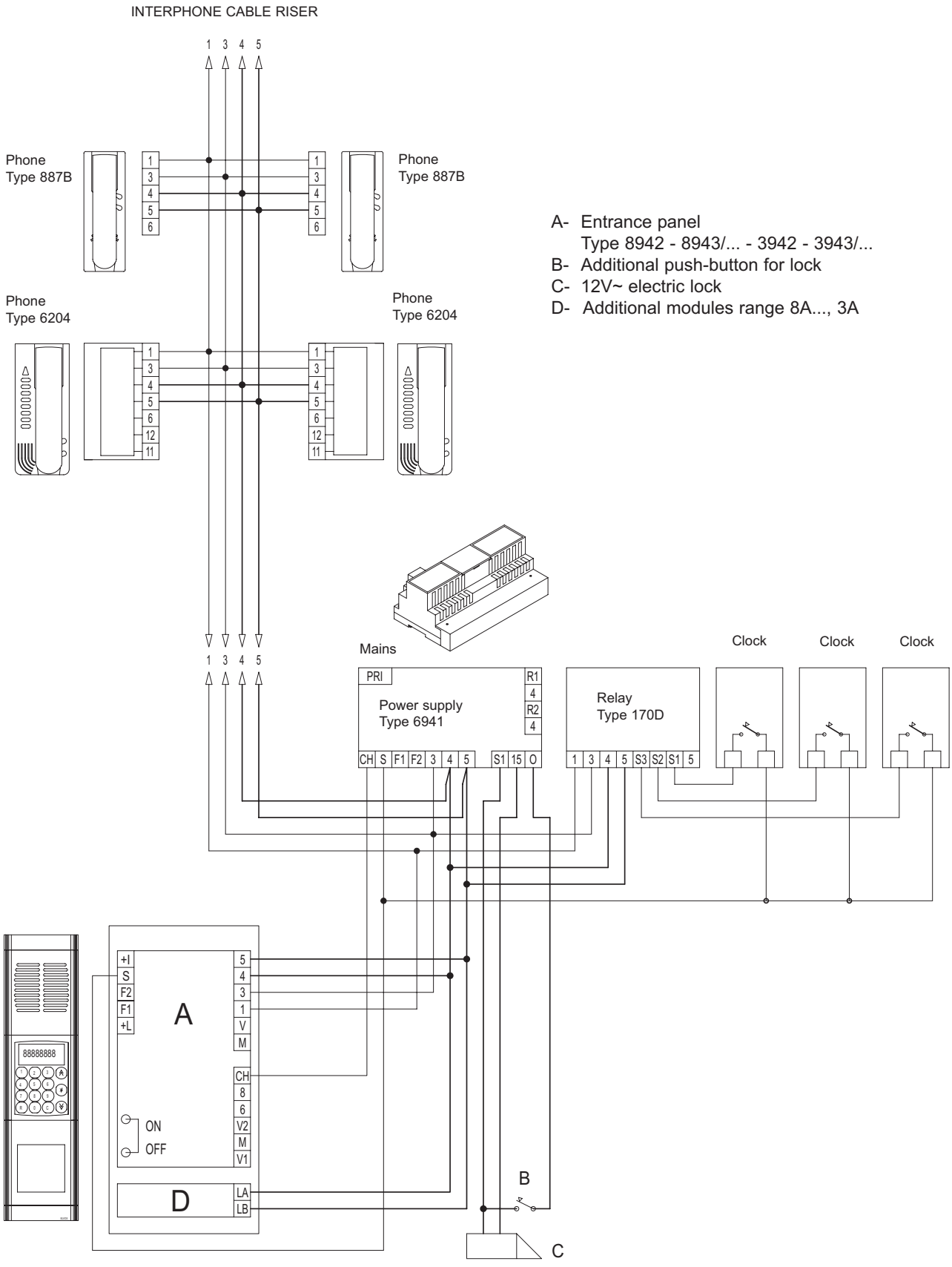


A- Video entrance panel
Type 8945/... - 8946 - 8945/C - 8946/C - 3945 - 3946
B- Additional push-button for lock
C- 12V~ electric lock
D- Additional modules range 8A..., 3A

N.B.
Type 6951 is required when there are electrical disturbances on the connection lines which impede the correct operation of the electronic entrance panel and switchboard . Connect Type 6951 close to entrance panels and switchboards.

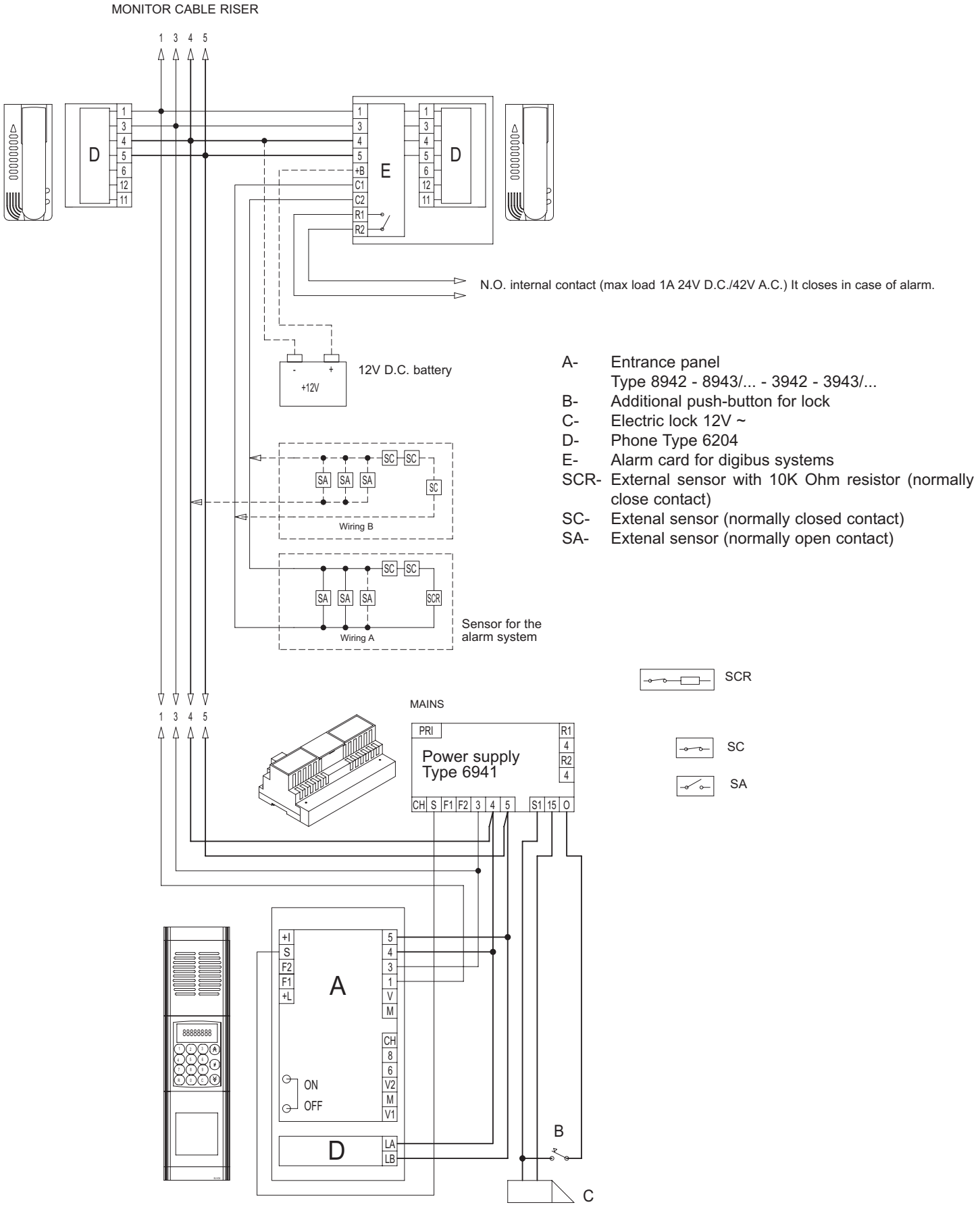
VERSION 15

WIRING DIAGRAM FOR RELAY Type 170D. Ref. diagram p3603R4



VERSION 16

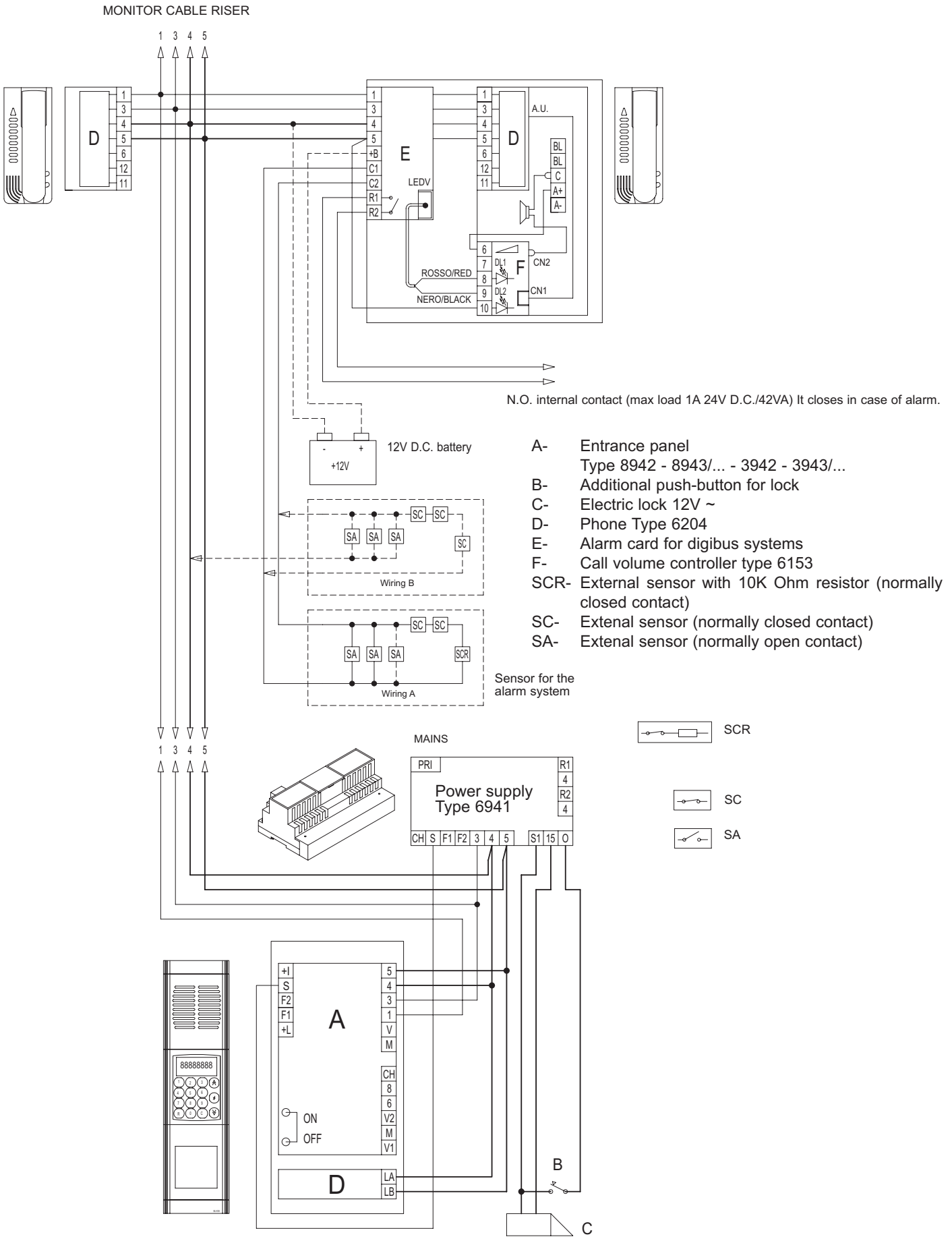
WIRING DIAGRAM FOR DIGIBUS ELECTRONIC DOOR ENTRY SYSTEM WITH INTERPHONE Type 6204 AND ALARM CARD Type 6158. Ref. diagram P4591.



A- Entrance panel
Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V ~
D- Phone Type 6204
E- Alarm card for digibus systems
SCR- External sensor with 10K Ohm resistor (normally close contact)
SC- Extenal sensor (normally closed contact)
SA- Extenal sensor (normally open contact)

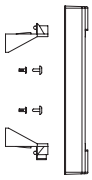
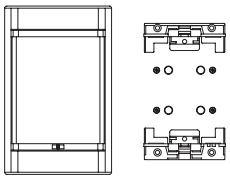
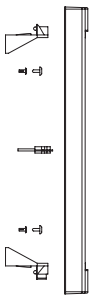
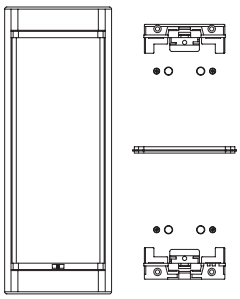
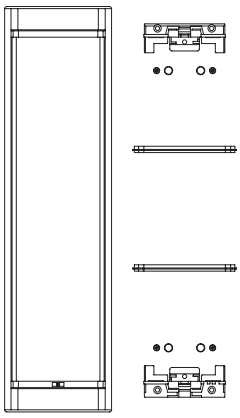
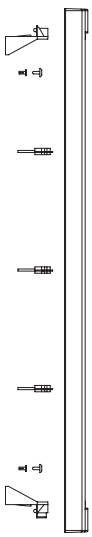
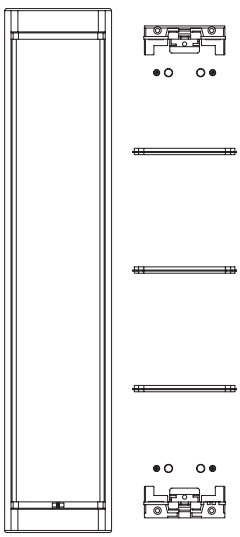
VERSION 15

WIRING DIAGRAM FOR DIGIBUS ELECTRONIC DOOR ENTRY SYSTEM WITH INTERPHONE Type 6204, ALARM CARD Type 6158 AND CALL VOLUME CONTROLLER Type 6153 (Drawing P4590.

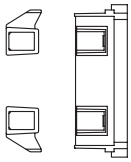
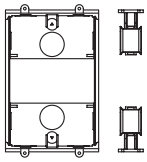
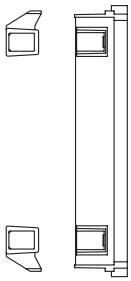
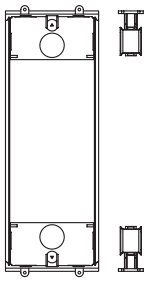
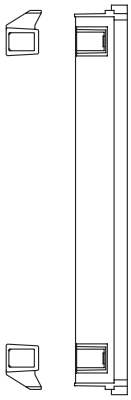
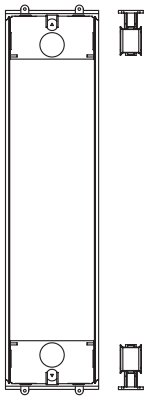
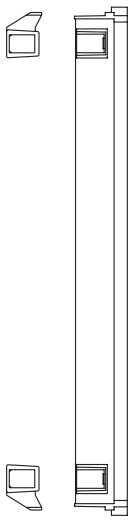
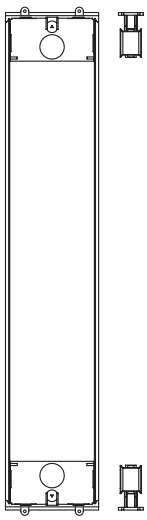


A- Entrance panel
Type 8942 - 8943/... - 3942 - 3943/...
B- Additional push-button for lock
C- Electric lock 12V ~
D- Phone Type 6204
E- Alarm card for digibus systems
F- Call volume controller type 6153
SCR- External sensor with 10K Ohm resistor (normally closed contact)
SC- Extenal sensor (normally closed contact)
SA- Extenal sensor (normally open contact)

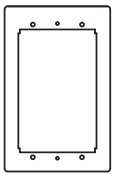
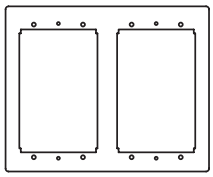
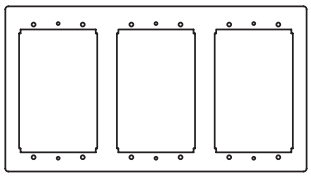
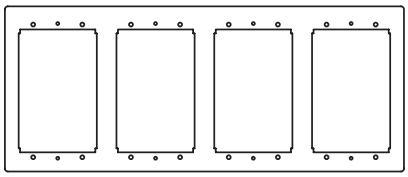
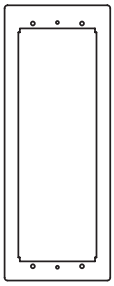
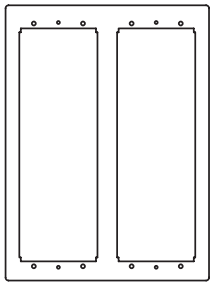
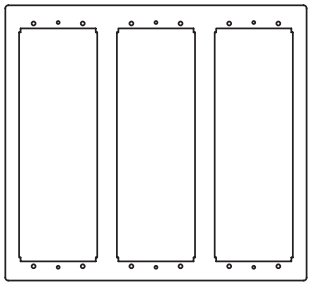
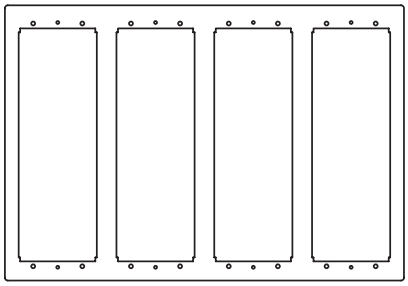
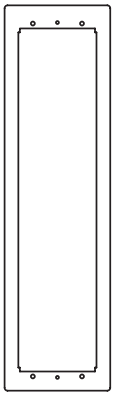
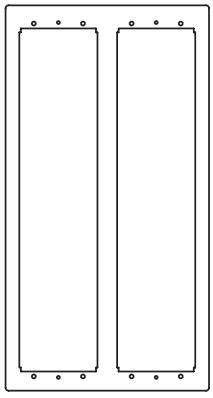
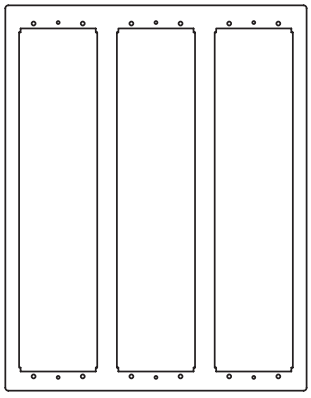
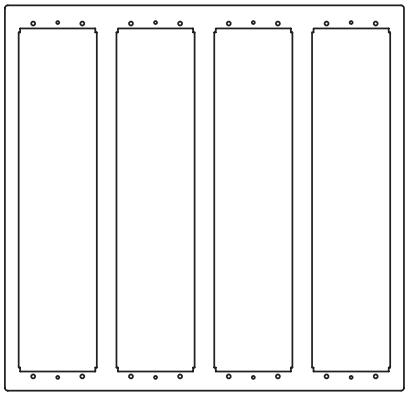
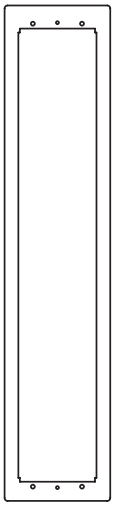
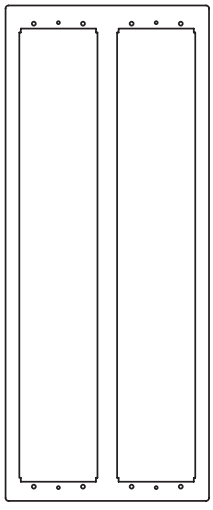
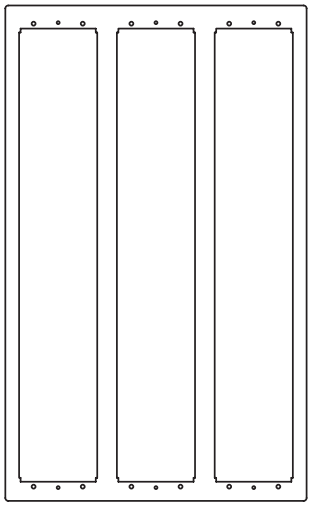
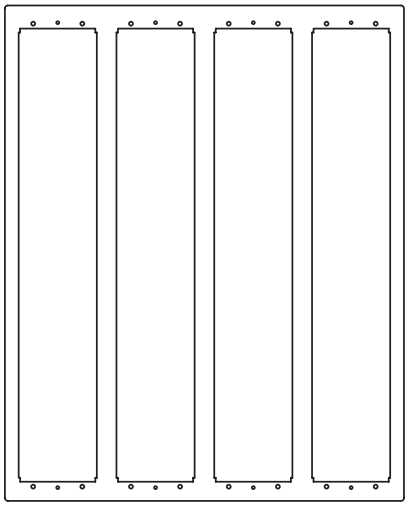
ACCESSORIES: MODULE HOLDER FRAMES

Thickness 21 mm	1 horizontal module (width 101 mm)	No. vertical modules (height)
	 Art. 8D81	1 module (159 mm)
	 Art. 8D82	2 module (271 mm)
	 Art. 8D83	3 module (383 mm)
	 Art. 8D84	4 module (495 mm)

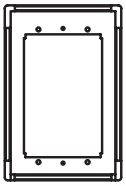
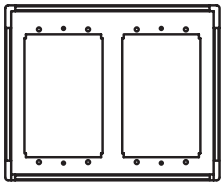
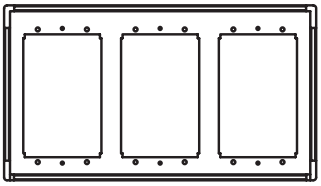
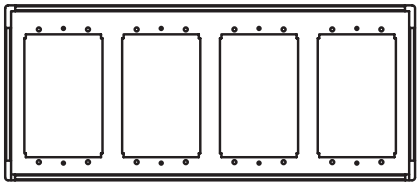
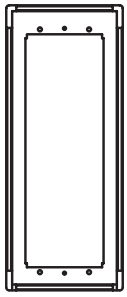
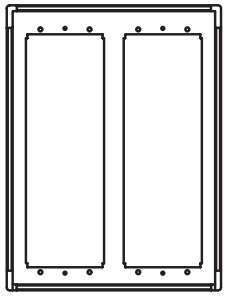
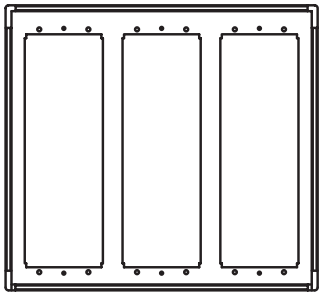
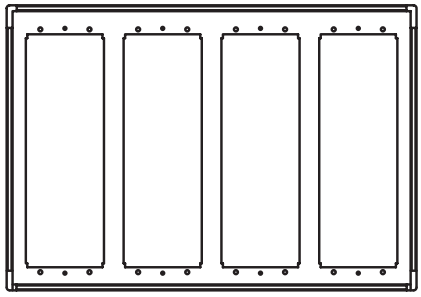
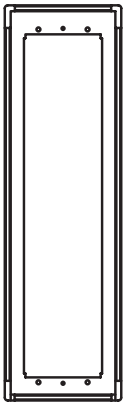
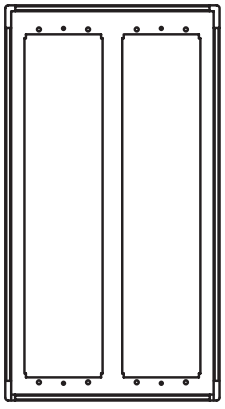
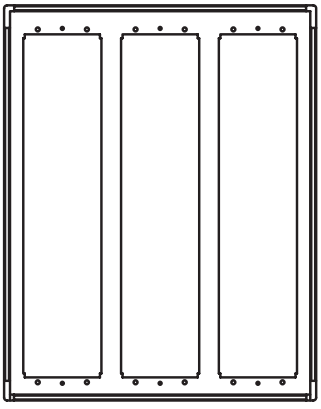
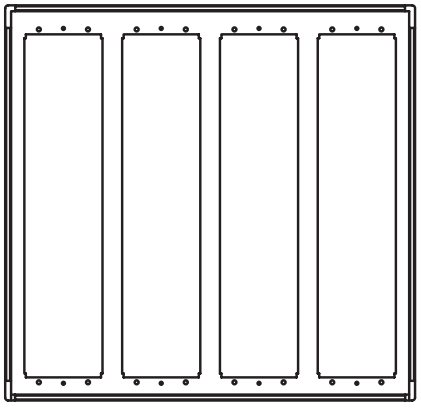
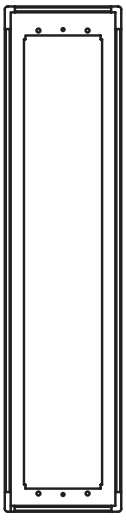
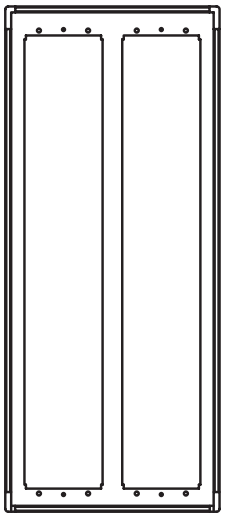
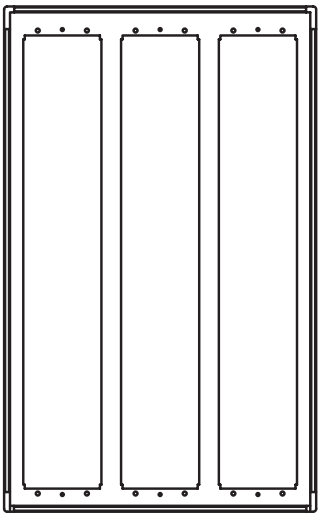
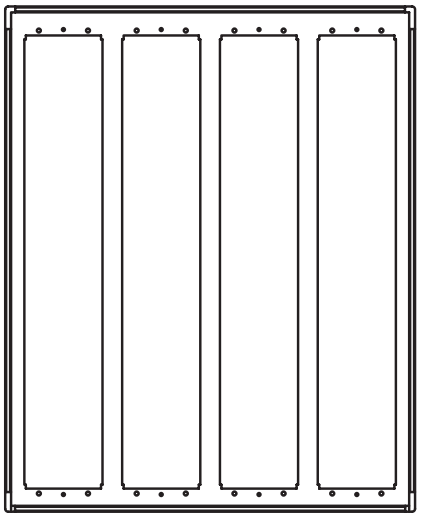
ACCESSORIES: FLUSH-MOUNTED BACK BOXES

Thickness 50 mm	1 horizontal module (width 88 mm)	No. vertical modules (height)
	 Art. 9091	1 module (145 mm)
	 Art. 9092	2 modules (271 mm)
	 Art. 9093	3 modules (383 mm)
	 Art. 9094	4 modules (481 mm)

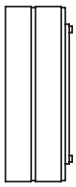
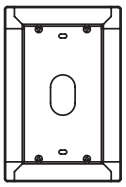
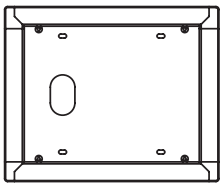
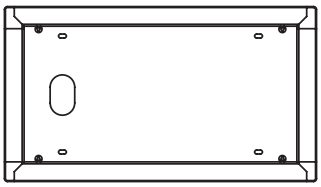
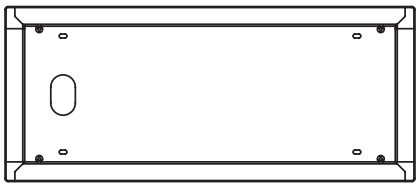
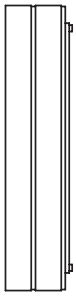
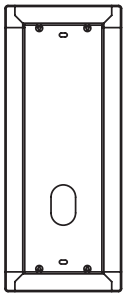
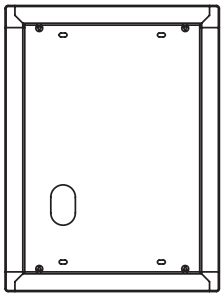
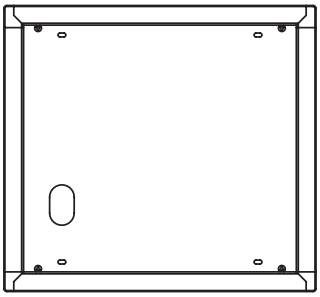
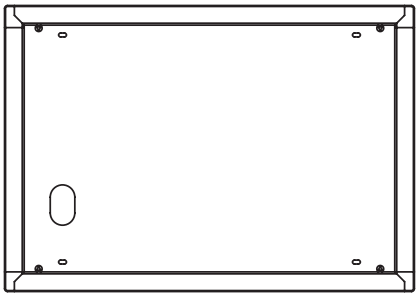
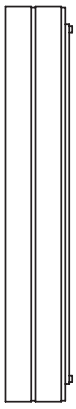
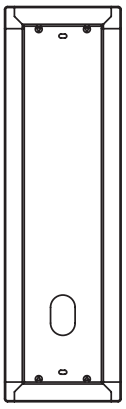
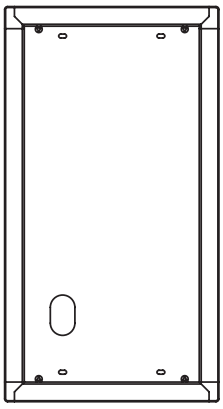
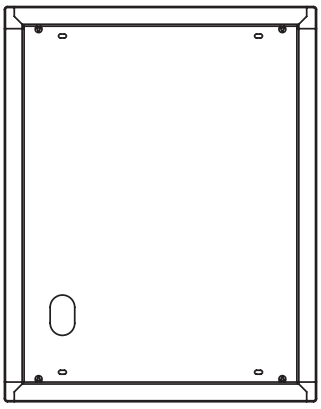
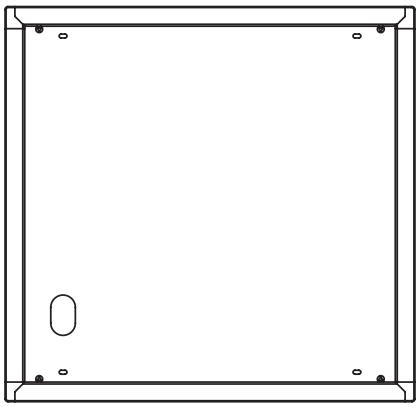
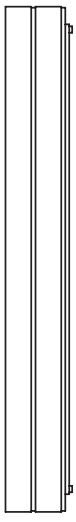
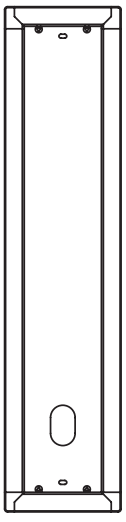
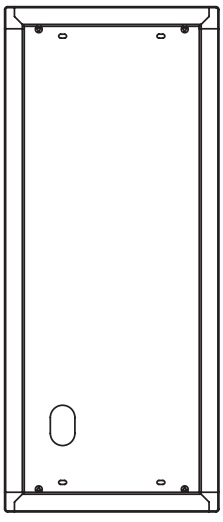
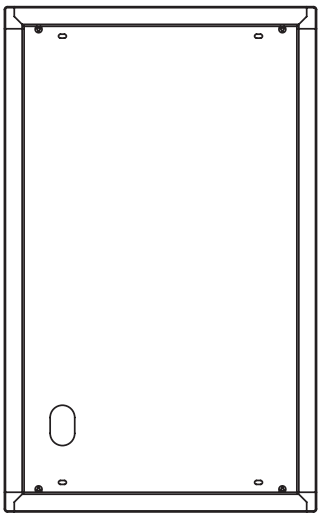
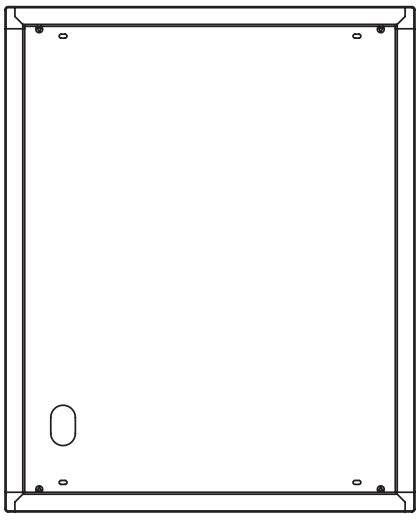
ACCESSORIES: BEZELS

Thickness 2 mm	No. horizontal modules (width) No. Vertical modules (height)				No. Vertical modules (height)
	1 module (108 mm)	2 modules (208 mm)	3 modules (308 mm)	4 modules (408 mm)	
	 Art. 9111	 Art. 9121	 Art. 9131	 Art. 9141	1 module (169 mm)
	 Art. 9112	 Art. 9122	 Art. 9132	 Art. 9142	2 modules (281 mm)
	 Art. 9113	 Art. 9123	 Art. 9133	 Art. 9143	3 modules (393 mm)
	 Art. 9114	 Art. 9124	 Art. 9134	 Art. 9144	4 modules (505 mm)

ACCESSORIES: FRAMES WITH RAINPROOF COVER

Thickness 38 mm	No. horizontal modules (width)				No. Vertical modules (height)
	1 module (118 mm)	2 modules (218 mm)	3 modules (318 mm)	4 modules (418 mm)	
	 Art. 9211	 Art. 9221	 Art. 9231	 Art. 9241	1 module (178 mm)
	 Art. 9212	 Art. 9222	 Art. 9232	 Art. 9242	2 modules (290 mm)
	 Art. 9213	 Art. 9223	 Art. 9233	 Art. 9243	3 modules (402 mm)
	 Art. 9214	 Art. 9224	 Art. 9234	 Art. 9244	4 modules (514 mm)

ACCESSORIES: SURFACE-MOUNTED WALL BOXES

Thickness 50 mm	No. horizontal modules (width)				No. Vertical modules (height)
	1 module (118 mm)	2 modules (218 mm)	3 modules (318 mm)	4 modules (418 mm)	
	 Art. 9411	 Art. 9421	 Art. 9431	 Art. 9441	1 module (178 mm)
	 Art. 9412	 Art. 9422	 Art. 9432	 Art. 9442	2 modules (290 mm)
	 Art. 9413	 Art. 9423	 Art. 9433	 Art. 9443	3 modules (402 mm)
	 Art. 9414	 Art. 9424	 Art. 9434	 Art. 9444	4 modules (514 mm)

ACCESSORIES: FLUSH-MOUNTED BACK BOX AND SURFACE-MOUNTED WALL BOX

320S
Flush-mounted back box in die-cast aluminium, with brackets for adjacent fitting of additional entrance panels.
Dimensions: 111x265x45 mm. (WxHxD)

330P
Surface-mounted rainproof cover for one module.
Dimensions: 130x290x100 mm. (WxHxD)

332P
Surface-mounted rainproof cover for two modules.
Dimensions: 250x290x100 mm. (WxHxD)

333P
Surface-mounted rainproof cover for three modules.
Dimensions: 370x290x100 mm. (WxHxD)

INSTALLING FLUSH-MOUNTED ENTRANCE PANELS WITH OR WITHOUT BEZELS

To install a flush-mounted entrance panel you need flush-mounted back boxes Type 9091, 9092, 9093 or 9094 for 1, 2, 3 or 4 modules respectively. If the entrance panel is made with more than one back box it is necessary to use bezels (series 91xx) or frames with rain-proof cover (series 92xx) according to the number of modules disposed vertically and horizontally.

Installation:

- If installation requires a combination of more than one box, use the clips supplied with the boxes to fix them together (fig. 6).
- If you do not use the bezels, mount the boxes on the wall and fasten onto them the end fixing elements supplied with the module holder frames Type 8D81, 8D82, 8D83 and 8D84. Use the screws supplied with the end fixing elements to fix them (fig. 7A - 8A).
  If using the bezels: mount the boxes on the wall, place the series 91xx or 92xx bezel on top of the back boxes (fig. 7B - 7C), and join the bezel to the boxes using the end fixing elements supplied with module frame holders Type 8D81, 8D82, 8D83 and 8D84. Use the screws supplied with the end fixing elements to fix the whole assembly without tightening the screws, leaving a slight clearance between the boxes and the frame (fig. 8B -8C).
- Fix the terminal block of module 8A0N to the bottom of the back box using the adhesive supplied with the terminal block. Position the terminal block on the bottom edge of the box into which the wires are routed (part A, fig. 9A - 9B - 9C).
- If using the bezels, route the flat cables which join the modules between the boxes and the bezels (fig. 10A - 10B - 10C). - Fix the microphone of module Type 8A09 or 8A19 or 8A19/C onto the bottom end fixing element of the frame, taking into account the furthest bottom end fixing element to enable wiring of the microphone. The RH side of the end fixing element has two plates onto which to fit the microphone. With the bezels, route the wires of the microphone between the boxes and the bezels (fig. 9A - 9B - 9C).
- If using the bezels, tighten the screws joining the end fixing elements to the bezel and the boxes.
- Fasten the plates to the end fixing elements and fix them using the special ELVOX wrenches (fig. 10A - 10B - 10C).

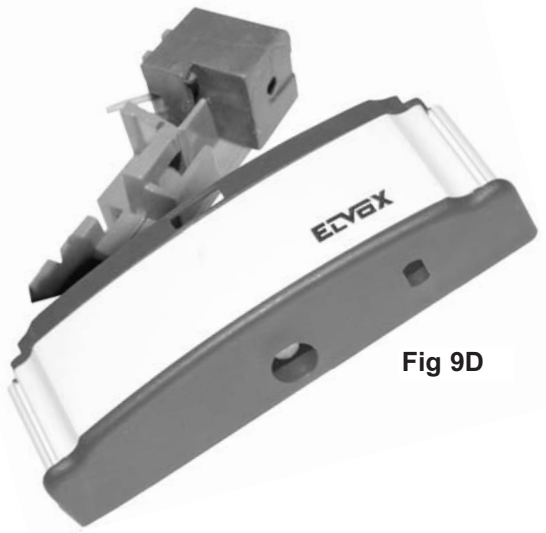


Fig 9D

Fig 6

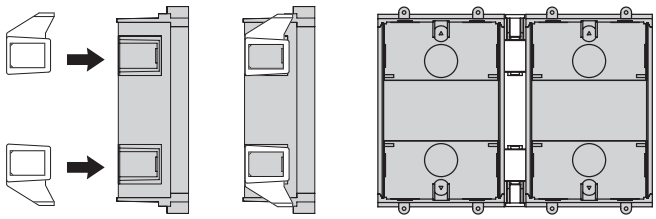
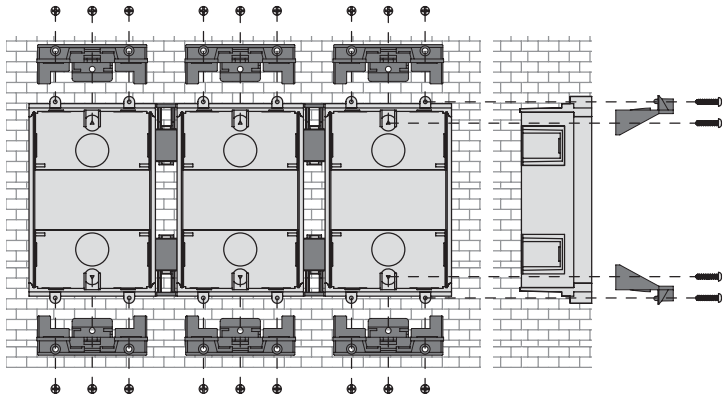


Fig 7A



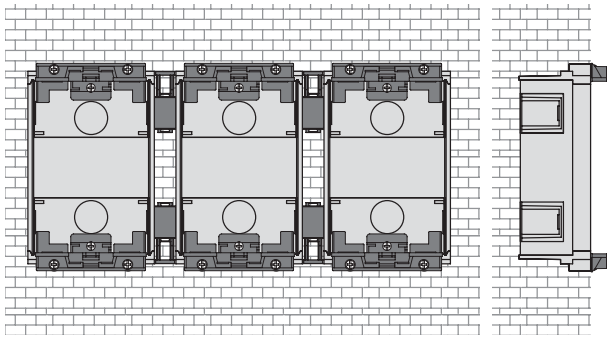


Fig 8A

Fig 9A

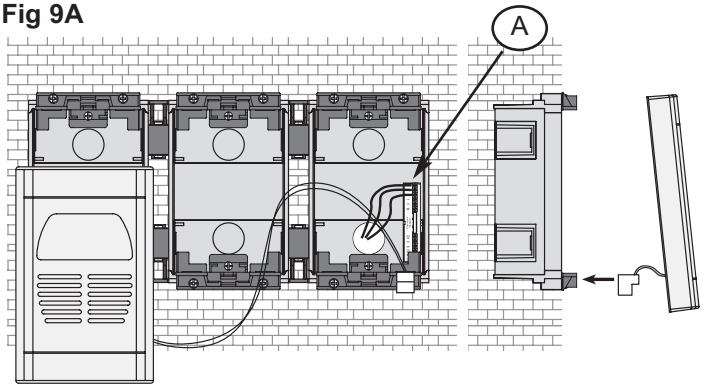


Fig 10A

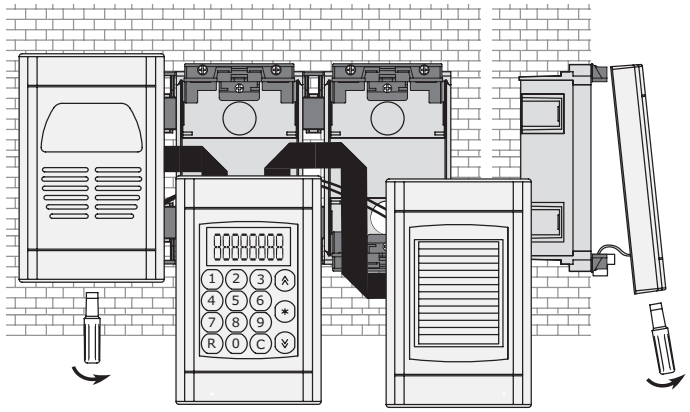


Fig 7B

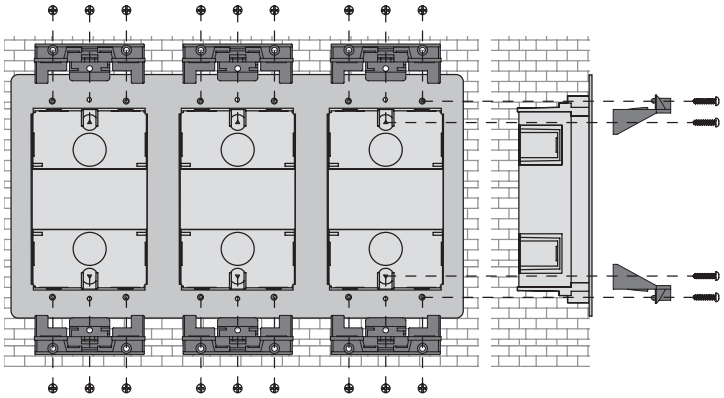


Fig 7C

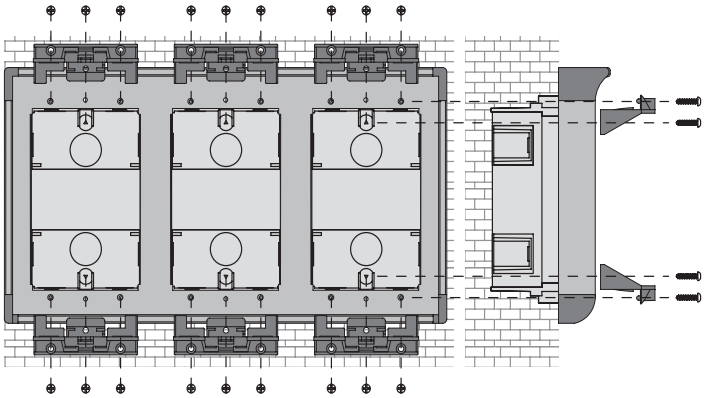


Fig 8B

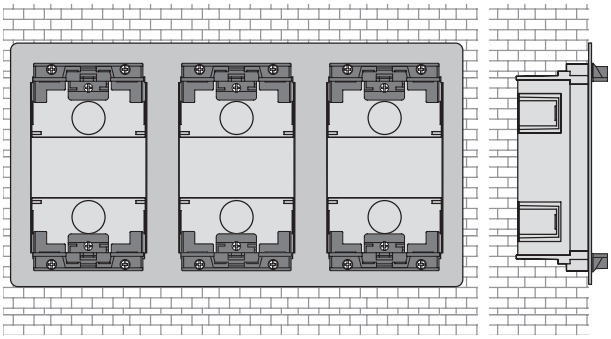


Fig 8C

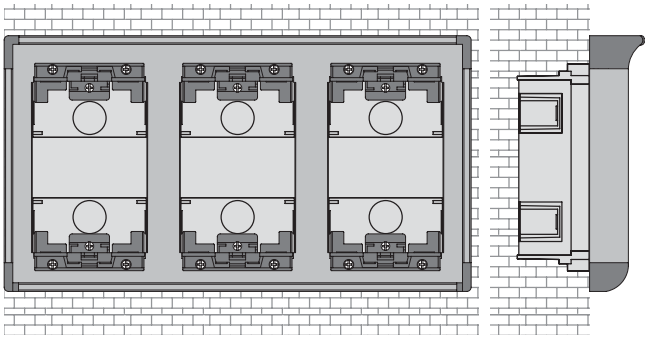


Fig 9B

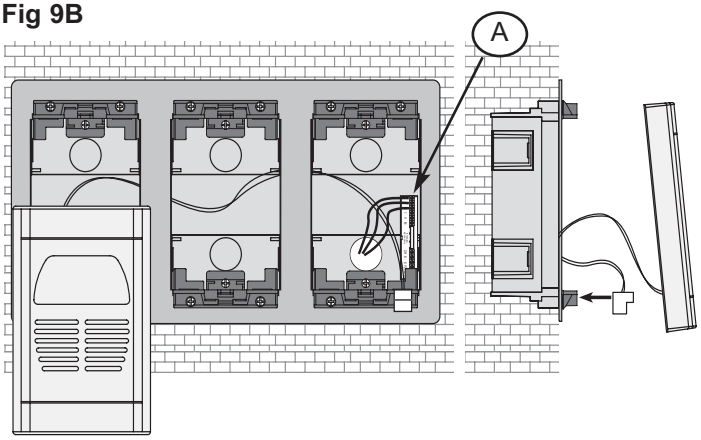


Fig 9C

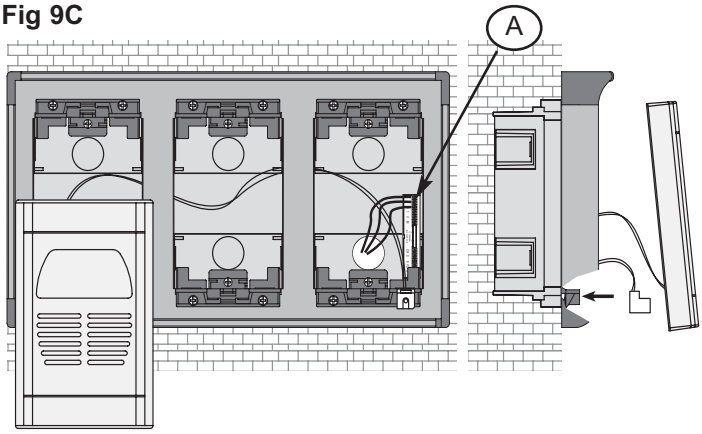


Fig 10B

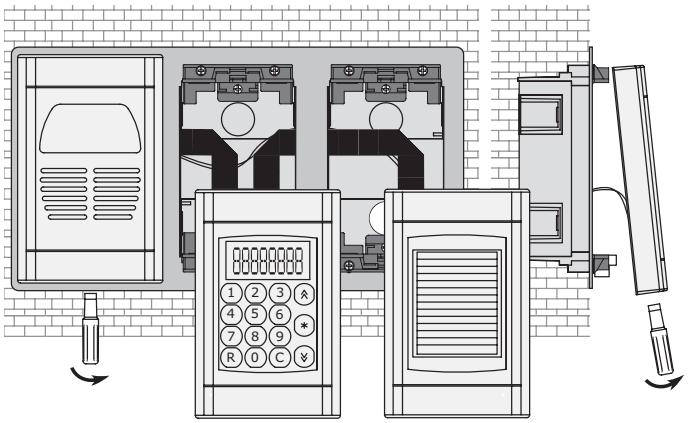
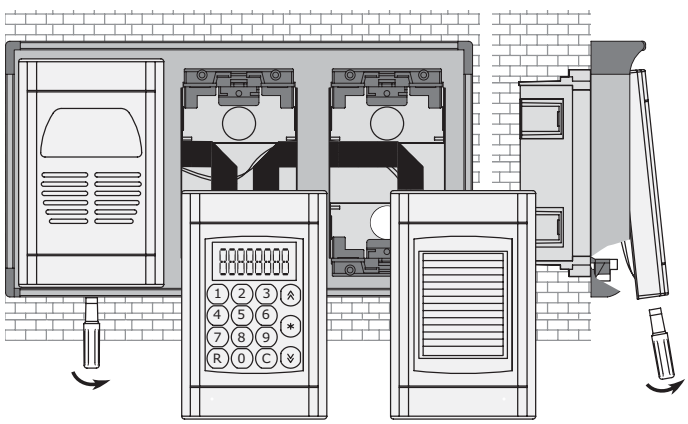


Fig 10C



INSTALLING SURFACE WALL-MOUNTED ENTRANCE PANELS WITH RAINPROOF COVER

To install a surface wall-mounted panel you need to use the series 94xx surface-mounted wall box and series 92xx bezels with rainproof cover, according to the number of vertically and horizontally arranged modules.

Installation:
- Fix the surface-mounted box to the wall (fig. 11).
- Place the series 92xx bezel with rainproof cover on top of the box (fig. 12).
- Fix the bezel to the box by means of the end fixing elements supplied with the module holder frames Type 8D81, 8D82, 8D83 and 8D84. Use the fixing screws and pins (supplied with the frames) to fix the end fixing elements to the box and bezel (fig. 12 - 13).
- Fix the terminal block of module 8A0N to the bottom of the box, fastening it on the profile of the box (fig. 16). Position the terminal block on the bottom edge of the box next to the wire inlet (part A, fig. 14).
- Fix the microphone of module Type 8A09 or 8A19 or 8A19/C to the bottom end fixing element of the frame (fig. 14), **taking into account the furthest bottom end fixing element to enable wiring of the microphone**. The RH side of the end fixing element has two plates on which to fit the microphone.
- Route the flat cables joining the modules between the boxes and the bezels. Fasten the plates to the end fixing elements and fix them using the special ELVOX wrenches (fig. 15).

Fig 11

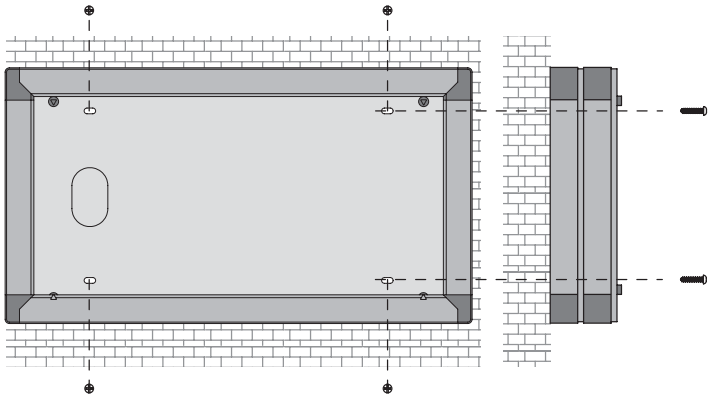


Fig 12

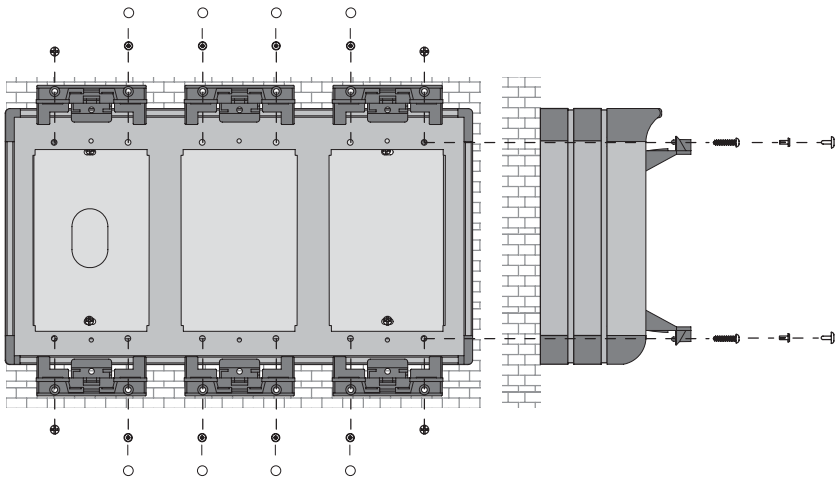


Fig 13

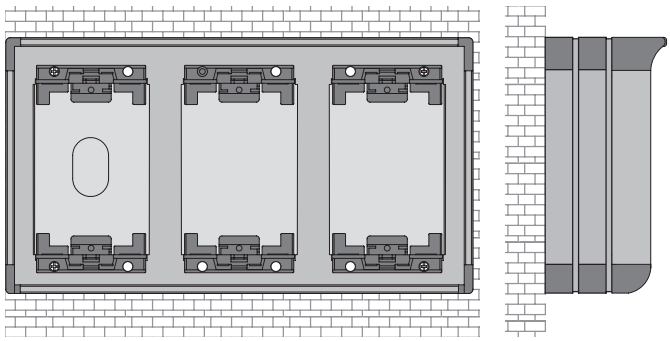


Fig 14

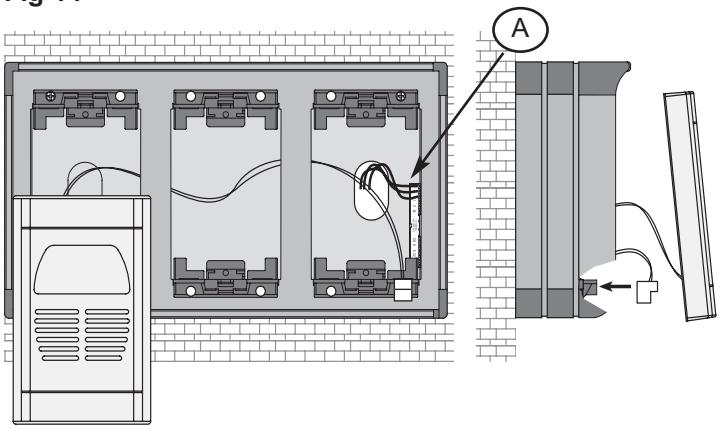


Fig 15

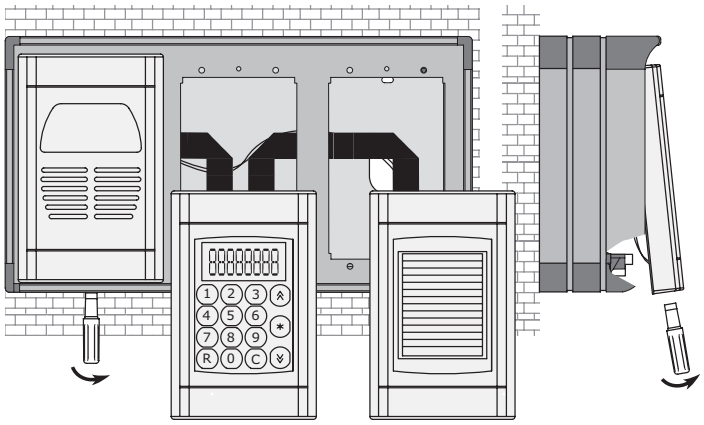


Fig 16