CD-2502xx

DIGITAL ENTRY PHONE SYSTEM

INSTALLATION, SERVICE
AND PROGRAMMING INSTRUCTION

LASKOMEX®
CD-2502
microprocessor control

Contents

NOTE!

Entry phone CD-2502 is available in two versions: audio and video. In both versions the same electronic cassette EC-2502 and power supply adapters are used, in both versions parameters are set in the same way. The two versions differ mainly with the types of used panels, additional elements in video version (panels in video version, switches, distributors and monitors) and the method of performance of power system. Both versions of entry system are described in the instruction. In case of installation and activation of audio version one should disregard recommendations referring to video version.

In entry phone CD-2502 one type of electronic cassette is used - EC-2502. The use of the device (main or subordinate entrance) is defined by program.
In the description abbreviations are used — exchange configured for the service of the main entrance is designated EC-2502/H and exchange for the service of subordinate entrance EC-2502/U. Cassettes are default configured as EC-2502/U.

1 Conditions of operation

- Prior to the installation and use of an entry phone one should get acquainted with the installation and operation instruction.

- Wiring system should be performed according to standard PN-IEC-60364-1 by an authorized person. It should be made in such a way as to avoid the risk of lightning.

- Monitor should be mounted in a place that is easily accessible for users at a height of min. 1.5 m, in such a way as to eliminate the danger for the users and accidental jostling. Monitor should be installed at a distance of min. 1.5 m from the sources of strong electromagnetic interferences — transformer feeders, magnets, metal sewage and gas pipes because it can result in picture distortion.

- It is forbidden to connect the entry phone elements to installations other than made according to the recommendation of an entry phone producer.

- Monitor, uniphone and electronic cassette should not be exposed to high temperature or humidity. These elements should not be installed in bathrooms or close to heaters.

- Openings in a monitor and uniphone should not be covered because it can result in their improper operation.

- No metal objects can be put into the openings in uniphones or monitors because this can cause electric shock or fire.

- El. supply from external supply sources should not be connected to uniphone terminals because it can cause its damage or fire.

- It is forbidden to hold the receiver at an ear and push the lever in the uniphone base at the same time (this does not refer to door opening pushbutton and internal call). This may cause a loud call signal in a receiver that can result in hearing defect.

- It is forbidden to repair the entry phone equipment by unauthorized persons because it may cause a threat to health and life.

- El. supply from sources of parameters other than recommended by a producer should not be connected to uniphone terminals. Producer will not bear responsibility for losses resulting from the use of improper feeders.

- Neither petroleum nor any solvents or strong detergents can be used for the cleaning of entry phone elements because they may cause damage of the equipment surface.

- Picture distortion appearing during rain or right after raining is transient and connected with collection of water in the area of lens and is not the sign of equipment defect.

- Signals from entry phones should not be sent to RTV sets because his may result in the damage of such sets or entry phone.

- Outside panels should not be sealed with e.g. silicone because it worsens ventilation and leads to corrosion.

2   Installation of entry phone

The following items include the most important stages of design, performance and activation of an entry phone system. Item numbers in instruction containing the detailed information are given in brackets.

- Get acquainted with the operation instructions especially with the entry phone conditions of use.

- Define the final configuration, operation mode and then select the necessary elements

- Define the place of installation of the system elements.

- Design the wiring system for the accepted configuration; select the kind and cross sections of wires.

- Define logical and physical equipment addresses.

- Install the equipment of the entry phone system and connect according to the connection diagram.

- Activate the system

- Set the operation parameters of the entry phone system. If possible, inform occupants about entry phone use and hand out codes of coded locks.

- In case the system of entrance hierarchy is activated, set the range limits for the apartments in cassettes operating as EC-2502/U (for subordinate entrances). Leaving default settings in these cassettes may cause wrong operation of the entry phone system.

- In case of need tune the acoustic path.

- Check the operation of the system using the installation procedure.

3 Elements of entry phone

Electronic cassette

In entry phone CD-2502 one type of electronic cassette is used — EC–2502 for main or subordinate entrances. Its operation mode is defined by an installing specialist. The cassette operates in default setting in U mode and is used for subordinate entrance. Service of the main entrance (operation in mode H) requires the change of cassette configuration (see programming, page 27)

External panel

For CD-2502 system a few types of external panels were designer. Panels are produced in audio and video version (with black and white camera and infra-red lighting). They are made of zinc coated sheet covered with powder paint or of stainless steel; in all panel optical keyboard is used. Panels may be equipped with an electronic touch key reader. Electronic key is an alternative to a combination lock, it is also a very good replacement of a traditional mechanic key because it is lighter and more comfortable in use. Furthermore, an electronic key may be easily programmed in any number of entry phones equipped with readers.
The following external panels are available:

CP–2502/xx	–	standard panel in colour xx
CP–2502T/xx	–	panel with key reader
CP–2502N/xx	–	panel with a list of occupants
CP–2502VT/xx	–	panel in video version with key reader and black-white camera
CP–2510T	–	panel in audio version made of stainless steel (horizontal)
CP–2520T	–	panel in audio version made of stainless steel (vertical)
CP–2510VT	–	panel of stainless steel in video version (horizontal) and colour video camera
CP–2520VT	–	panel of stainless steel in video version (vertical) and colour video camera

Illuminator in panels in version video makes it possible to recognize the face at a distance of approx. 50 cm from the video camera. Lighting diodes are placed behind the display, so they are effective only if the face of a visiting person is directed towards the entry phone keyboard. In CD-2502 system to one electronic cassette only one external panel can be connected.

Uniphones

Uniphones for digital Laskomex entry phones co-operate with digital entry phone system CD-2502. They are models: LF–8, LT–8, LX–8, LR–8 or LM–8 in all varieties.

Uniphone LM–8W/1 has an additional switch to control the gateway drive. The use of uniphones of other producers is not recommended because it may cause the wrong operation of the whole entry phone system.

Uniphone LM–8W/3 is equipped with a highly effective receiver which ensures call signal louder by approx. 6 dB than in standard LM-8 uniphone.

Uniphone LM–8W/4 has a door-bell function. Additional terminals in the uniphone enable the connection of bell button. Pressing the button results in switching on the gong. Uniphone requires additional supply.

Loud speaking Uniphone LG-8 and LG-8D

Uniphone LG-8 is intended for digital entry phone systems produced by Laskomex (CD-2502 and CD-3100). Uniphone LG-8 operates in simplex system — during the conversation the user must press TALK pushbutton when he is speaking. Uniphone LG-8D operates in duplex system (conversation is possible in both directions without activating buttons or switches). Uniphone requires external supply from central feeder 15 V DC/ 4 A (up to 40 uniphones) or own feeder 15 V DC/1A . Uniphone functions also as a door-bell. Bell button is connected to two terminals in uniphone and its pressing results in generating gong signal in uniphone. Detailed information on connection, programming and use of uniphone LG-8 is included in the instruction enclosed to it.

Monitor MVC–6550 and 6650

Colour monitors for Laskomex digital systems. They are loud speaking monitors without receivers with TFT display operating in duplex system. Detailed information on monitor assembly and use are included in the instruction enclosed to them.

Signal distributor CVR-1 and CVR-2.

Vision signal distributor is intended for the entry phone in video version. It enables connecting the monitors to entry phone installation or branching the electrical installation of entry phone. Furthermore, distributor amplifies vision signal.
Electric system, which connects electronic cassette with monitors, is made in form of bus-bar with distributors CVR-x on the floors. Wires from monitors should be

routed to the distributors. The installation method is important - wire should be routed from one distributor to the next one and in the distributor at the end of bus-bar the line load should be configured properly (see dwg 11, page 20).

Signal distributor has one input of signals L+,L-,C+,C- with screw terminals (ARK) and four independent outputs with sockets RJ45 (CVR-1) or ARK (CVR-2).

Distributor CVR-1 does not require power supply adaptor – it is supplied from monitors connected to it, although it has clamps enabling supplying it from other source e.g. electronic cassette EC-2502. It is used when the distributor operates as signal adapter.

Distributor CVR-2 require external power supply adaptor, which can be also used to supply monitors.

In the distributor there is an amplifying and correction system of video signal allowing optimal adjustment of distributor parameters to the parameters of electrical system.

Video signal change-over switch CVP-1

Change-over switch CVP-1 is used for the selection of the source of video signal displayed on the monitor screen of entry phone CD-2502 in video version, operating in a system with main entrance. Switching-over is made between a signal from the video camera in external panel at the main entrance and a signal from the video camera in external panel at the subordinate entrance (staircase). Change-over switch CVP-1 should be mounted at each subordinate entrance possibly close to electronic cassette and power supply adapter.

Power supply

Ac power supply adapter ZS-K-25/01 art.0018 should be used for supplying electronic cassette.

Electro-catch or electromagnetic lock

Entry phone CD-2502 can control electro-catch or electromagnetic lock. Operation time is programmed and can be changed by an installing specialist. It is recommended to use electro-catches for voltage 12V AC/DC and power consumption not exceeding 1A. Default control of electro-catch by run of 50 Hz frequency with characteristic buzzing of electro-catch.

Electromagnetic lock should be supplied by voltage 12 V DC/1A. In order to use the electromagnetic lock, contact ZT1 in electronic cassette should be switched to 'ELECTROMAGNETIC LOCK' position. It is also necessary to set the frequency of voltage run supplying the lock on '0', because supplying the lock with alternating voltage makes that the door blocking force is considerably weaker. Jumper should be put on contact J3. It is intended to liquidate residual magnetism which can hamper opening of door.

Demagnetization system should be absolutely switched off during the operation with electro-catch

Reverse electro-catches work on the similar principle. They keep door blocked as long as voltage is supplied to them. Using reverse electro-catch requires configuration of entry phone for operation with electromagnetic lock.

Door opening pushbutton.

Pushbutton is used for unblocking the electro-catch or electromagnetic lock when leaving the building. Any short circuit pushbutton can be used – e.g. bell or attack pushbutton used in alarm systems; signaling diode can be connected as well.

Additional call module PW-1

The module enables an additional call signal (acoustic or optical) in the uniphone. It is used in a situation when a uniphone is installed in a room of high noise level or there are partially deaf people in a room. It enables - during calling - the activation of any equipment supplied by voltage 12...24 V AC - bell, siren or signaling lamp.

External panel casing

As a standard external panels and lists of occupants are delivered in a frame mounted under plaster, casings enable their mounting on plaster.

- DA1   – one segment casing mounted for panels CP-2502xx
- DA2H   – two segment casing, horizontal, for panels CP-2502xx
- DA2V   – two segment casing, vertical, for panels CP-2502xx
- DA3H   – three segment casing, horizontal, for panels CP-2502xx
- DA3V   – three segment casing, vertical, for panels CP-2502xx
- NP3000   – list of occupants for panels CP-2502xx
- NP-2511 – horizontal list of occupants for panel CP-2510
- NP-2512 – vertical list of occupants for panel CP-2510
- NP-2521 – horizontal list of occupants for panel CP-2520
- NP-2522 – vertical list of occupants for panel CP-2520

Accumulator

An accumulator can be connected to electronic cassette which is used for supplying entry phone in case of loss of voltage in power network. It is recommended to use accumulators 12V/7Ah. Electronic cassette is equipped with an accumulator loading system and protection against complete accumulator unloading. Emergency loading time depends on the capacity of accumulator and intensity of entry phone use and is from a few to several hours.

4   Numbering modes

Digital entry phone as a standard can operate numbers within a range 1...255, however, very often it is necessary to operate higher numbers or numbers of considerably wider range. This is possible owing to different numbering modes.

4.1   Normal mode

In normal mode physical number of uniphone (programmed by jumpers) corresponds to logical number (selected from the keyboard of talking cassette). This is a default mode of operation of entry phone exchange.

4.2   Numbering mode with range shift

In this numbering mode physical number of a uniphone (programmed by jumpers) differs from its logical number (under which a uniphone rings after having selected the number from the keyboard). This numbering mode is used for apartments of numbers higher than 255.

$$\boxed{\textbf{logical number = physical number + range shift}}$$

This numbering mode is switched on in a moment of setting of parameter value 'range shift' to the value higher than '0'.

Example:
In a building an entry phone should be used for apartments Nos. 301...310.

- In uniphones physical numbers should be programmed as follows: in apartment 301 number 1, in apartment 302 number 2 etc.
- Then cassette programming mode should be entered (see item 8, page 25) and the parameter of range shift should be set to value 300.

After having done this and selecting from a keyboard number 301 the uniphone in which number 1 has been programmed will ring, after having selected number 302 uniphone with number 2 will ring etc.

4.3   Hotel numbering mode

This numbering mode is meant for the buildings in which room number starts with a digit defining number of floor on which the room is located (hotels, resort houses, dormitories etc.). Physical number of a uniphone is calculated according to the formula:

$$\boxed{\textbf{Physical number = P * LL + XX (A)}}$$

where P- floor number, LL- amount of rooms on one floor (value of parameter [LPi]) - see dwg. 29), XX- number of room on the floor – number from the range 1 ... [LPi]

This numbering mode will be activated at the moment of setting the value of parameter [LPi] "amount of rooms on a floor" to value higher than zero.

Example: An entry phone should be mounted in a five-storied building in which the numbering system is as follows: on the ground floor 1 . . . 20, on the first floor 101 . . . 102 etc. There are 20 rooms on the ground floor. On next floors, after taking into account full hundred numbers which are also taken into consideration in calculations (100, 200, 300 . . . ...) we get 21 numbers for each floor. First of all the cassette programming mode should be entered and parameter [LPi] (amount of rooms on the floor) should be set to value 21. After quitting the programming mode the exchange operates in hotel numbering mode.
Then it should be defined which logical numbers will correspond to individual physical numbers of uniphones. To do this a formula or a calculator available in one of entry phone programming procedures in the exchange can be used (P-3-5, P-3-6).

numbers of rooms	1... 20	uniphone number	1, 2, ..20	ground floor
numbers of rooms	101...120	uniphone number	21, 22,...41	I floor
numbers of rooms	201...220	uniphone number	42, 42,...62	II floor
....	....	....	....	....
numbers of rooms	601...620	uniphone number	125, 126,...146	VI floor

Finally uniphones should be programmed to the numbers settled before.
Total number of uniphones used in this numbering mode should not exceed 255.

4.4 Mode with building numbering

This numbering mode can be used only in entry phone system with entrance hierarchy. In order to get connection with an apartment from an external panel at the main entrance one should first of all select building number and then apartment number. This numbering mode allows repeating apartment numbers in different buildings. The following operations should be made in order to activate this mode:

- In electronic cassette for subordinate entrance set parameter [n bl] (block number) in procedure P-2 to value higher then zero. (see dwg. 31). To get connection with any apartment in this staircase the apartment number should be preceded by set number. (see dwg. 28).

- The operation should be repeated for other staircases (buildings). Values [n bl] can be repeated in subordinate systems provided that these systems operate with other logical numbers of uniphones.

- In electronic cassette for main entrance set the value of parameter [nrbl] to 1.

4.5 Range of operated numbers

In numbers entry phone the range of operated numbers can be limited. (see dwg. 29). In default setting the operation of all apartment numbers is included. If the

range is limited, selection of a number outside the set range will result in displayed message [OFF].

Limiting is set for physical not logical numbers!

Limiting of the range should be set especially in electronic cassettes for subordinate entrances (multi-entrance system with entrance hierarchy) because leaving default range setting may hamper using or make impossible the activation of the whole entry phone system.
Default set range 1...250.

4.6 Additional numbers

In many cases it is necessary to operate numbers which do not belong to the operated range. In entry phone CD-2502 these numbers can be associated with four physical numbers: 251...254. For each of the mentioned numbers it is possible to set individually any number from the range 1...9998.

4.7 Directing the numbers that are not serviced

In entry phone CD-2502 all numbers which are not operated by entry phone CD-2502 can be directed to one selected number. Owing to this entry phone CD-2502 can be used in a single-family home – entry phone can be configured in such a way that any number selected by the keyboard will result in entry phone ringing at one selected number.

5 Configurations of entry phone operation

5.1 Basic system

In basic version the entry phone operates for one staircase or building with one entrance. The system consists of electronic cassette EC-2502 working in U mode, external panel, feeder and from 1 to 255 uniphones. External panel should be mounted at a distance not exceeding 15 m from the cassette. Basic system can be used for staircases in apartment houses, tenement houses, companies etc. to which there is only one entrance.

5.2 System with entrance hierarchy

In a system with entrance hierarchy there are two types of entrances: the main entrance and subordinate entrances. System CD-2502 can operate for one main entrance and max. 64 subordinate entrances. From the main entrance a connection can be made with each apartment in any building or staircase serviced by the entry phone system. Using panels at the entrance to staircase (subordinate entrance) a connection can be made with the apartments located in this staircase only. Entry
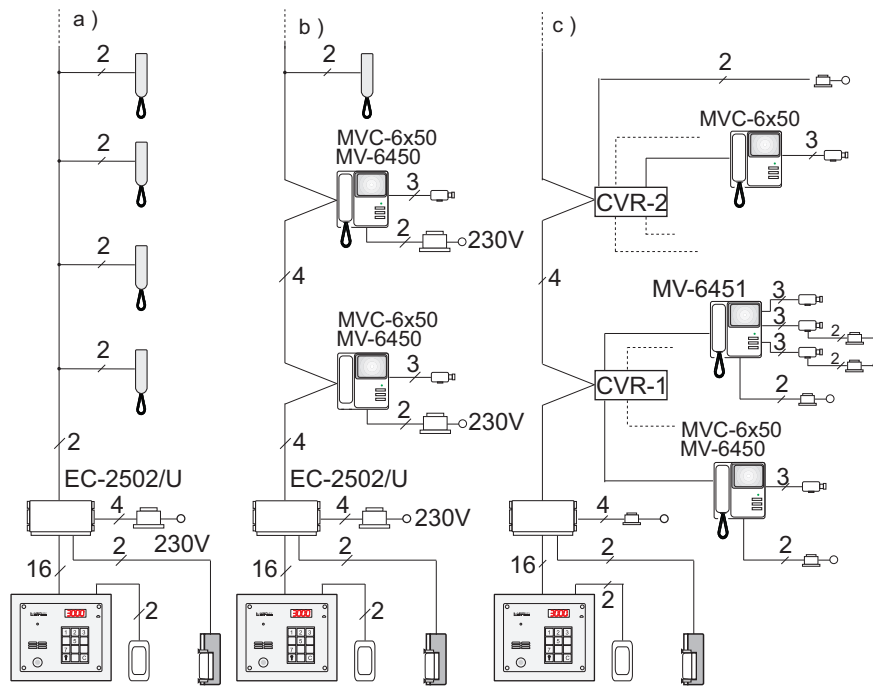
Figure 1: Basic system: a) audio version, b) video version with direct connection of monitors to bus-bar, c) video version with distributors. The diagram shows selected models of monitors.
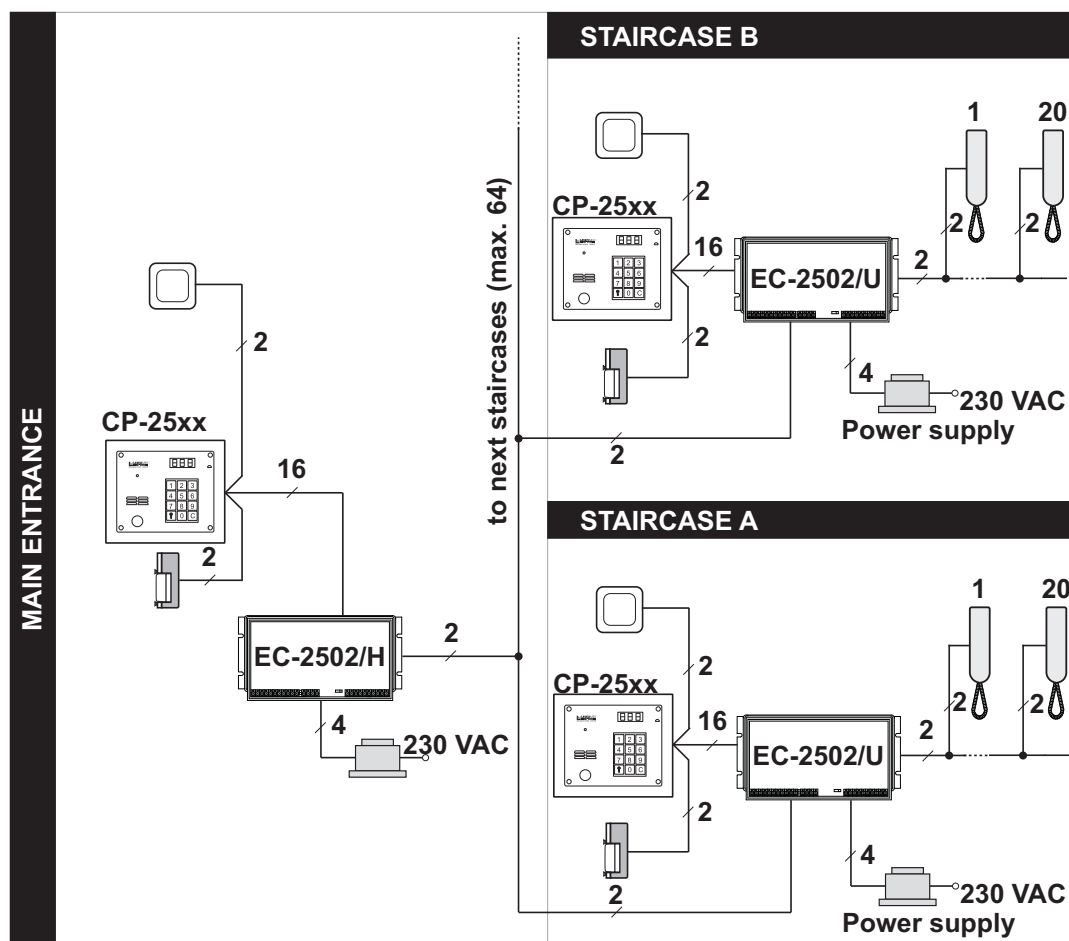

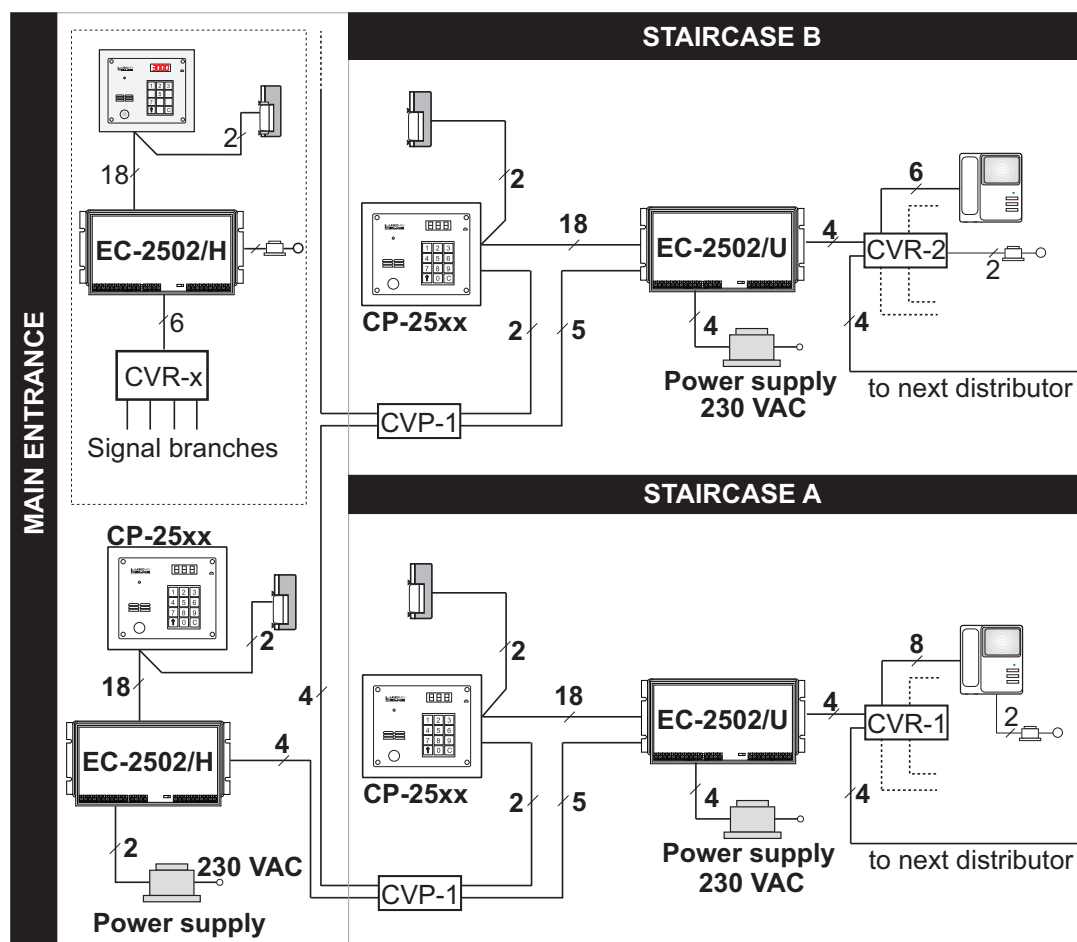Figure 2: System with entrance hierarchy, version audio.

Figure 3: System with entrance hierarchy, version video.

phones at subordinate entrances can be used independently.

During the conversation held between the main entrance and an apartment located in one of the staircases the whole line in this staircase is busy and a message ZAJ will be displayed on the outside panel display at the entrance to this staircase. In order to use the combination lock or get the connection with any apartment one should wait till the conversation from the main entrance is finished. If during the conversation held from the subordinate entrance in one of the buildings (staircases) there will be made an attempt of connection from the main entrance with any apartment in this building (staircase), the conversation started earlier will be interrupted and a connection attempt will be made from the main entrance. Electro-catch is always released at the entrance from which a call has been made. A coded lock or electronic key can be used at both the main and the local entrance. Entry phone is equipped with a "fast entrance" function which facilitates using entry phone system with main entrance. (see dwg. 41). Fig. 2 and 3 show diagrams of multi-entrance systems with the required amounts of wires in the individual sections of entry phone electrical system.

6   Installation and activation of entry phone

6.1   Performance of wiring system

Entry phone CD-2502 is available in audio and video version. Performance of wiring system depends on the version of entry phone.

General recommendations on performance of wiring system

- Electrical system should be made according to standard PN-IEC 60364-1 by a person authorized to make such installations.

- Wire cross section depends on the distance between the elements that are connected (see chapter "Selection of wires", page 55). In order to ensure proper cross section the selected connections can be doubled or wires of larger diameters can be used.

- In installations with the main entrance operation mode is set in electronic cassette. Depending on the selection they can function as cassettes servicing the main entrance (EC-2502/H) or subordinate entrance (EC-2502/U). Default setting of the cassette is configured to operate with the subordinate entrance.

- It is recommended that electronic cassette, power supply adapter and CVP-1 switch be placed possibly close to one another e.g. in an installation box. Power supply adaptor should be installed at such a distance as to enable its connection by means of an original cable.

- Total distance between electronic cassette and uniphone (monitor) should not exceed 150m.

- It is recommended to route all cables as away as possible from other installations. The cables of entry phone system should be routed at a distance not smaller than 20 cm from power cables.

Wiring system of entry phone in audio version

- Section between external panel and electronic cassette should not exceed 15 m. Spiral wire of dia. min. 0.5 mm should be used. Minimal number of entry phone wires amounts 16 for entry phone without gateway drive control and 18 with gateway control.

- Number of wires can be limited if door opening button and list of occupants are not used in the entry phone.

- For the connection of electronic cassette with external panel spiral wire should be used. For routing in the earth, wire protected against moisture should be used. Wires YTDY, YTKSY, UTP, LAN T11 or similar are recommended.

- During wire connection a special attention should be paid to correct pairing of connections. On the diagrams spiral wire is marked with thick and thin line with grey filling between them.

- In a multi-entrance system an electronic cassette at the main entrance (EC-2502/H) should be connected with all electronic cassettes at the sub-ordinate entrances (EC-2502/U). A spiral min. two wires should be used (at gate control two additional wires should be reserved).

- Connection between electronic cassette and uniphones should be made by means of any double wire e.g. YTDY. In case of gate control min. 4 wire conductor should be used.

- In audio version the routing of wiring system from electronic cassette to uniphones does not make any difference. Each uniphone can be connected by a separate wire, wiring can be router from one uniphone to the next one or uniphones can be connected on a common bus-bar. The distance between a uniphone and an electronic cassette should not exceed 150m for wire dia. 0.5 mm. This distance can be extended by increasing the cross-section of connecting wires.
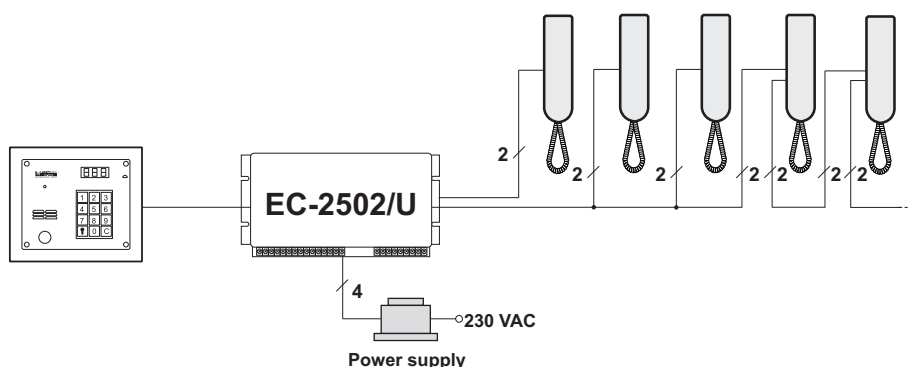

Figure 4: Method of connecting uniphones to electronic cassette.

Wiring system of entry phone in video version

- Section between external panel and electronic cassette should not exceed 15 m. Spiral wire of dia. min. 0.5 mm and impedance 100, 124 or 136 Ω should be used. Minimal number of entry phone wires amounts 18 for entry phone without gateway drive control and 20 with gateway control.

- Number of wires can be limited if door opening button and list of occupants are not used in the entry phone.

- For the connection of electronic cassette with external panel spiral wire should be used. For routing in the earth, wire protected against moisture should be used. Wires YTDY, YTKSY, UTP, LAN T11 or similar are recommended.

- During wire connection a special attention should be paid to correct pairing of connections. On the diagrams a spiral pair is marked with thick and thin line with grey filling between them.

- In a multi-entrance system an electronic cassette at the main entrance (EC-2502/H) should be connected with all electronic cassettes at the subordinate entrances (EC-2502/U). A spiral with min. two wires should be used (at gate control two additional wires should be reserved).

- Connection between electronic cassette and uniphones should be made by means of any double wire e.g. YTDY. In case of gate control min. 4 wire conductor should be used.

- Signal video in CD-2502 system is sent by symmetrical line. Such solution ensures low susceptibility of line to external interferences and enables sending picture at relatively long distances, however it requires observing the regulations during the performance of wiring system.

- It is forbidden to make wire branching (e.g. in junction boxes). Wire should be routed from one receiver (monitor, distributor, switch) to the next one. A rule should be obeyed that signal sent to the receiver by one wire and goes out by the other. Both wires are connected on receiver terminals.

- Wiring system at the section between electronic cassette and monitors should be made in form of bus-bar with distributors CVR-x. To one distributor 4 monitors should be connected.

- Section between electronic cassette and distributors should be made using spiral UTP cat.5 or telecommunication spiral (e.g. YTKSY).

- Section between distributor and monitors should be made using spiral UTP cat.5. In case of CVR-1 plugs RJ45 should be installed on wire ends at the distributors (according to the instruction).

- Total length of a segment electronic cassette − distributor + distributor − monitor should not exceed 150m.

- In entry phones with many occupants a wiring system should be made in form of a branch. In one branch up to 10 receivers (monitors or distributors) can be connected. The next branch can be made by treating one of the outputs from any distributor as a beginning of a branch.

- An attention should be paid to the adjustment of wire wave impedance to the impedance of the connected equipment. In equipment installed at the beginning and at the end of the line a resistor should be installed in parallel to the line of value equal to cable wave impedance. In other equipment connected to the line no load resistors should be installed. Load resistance in external panel, monitors, distributors and switches is set by jumpers.

- Mixed systems, in which uniphones and monitors are used at the same time, are allowed.
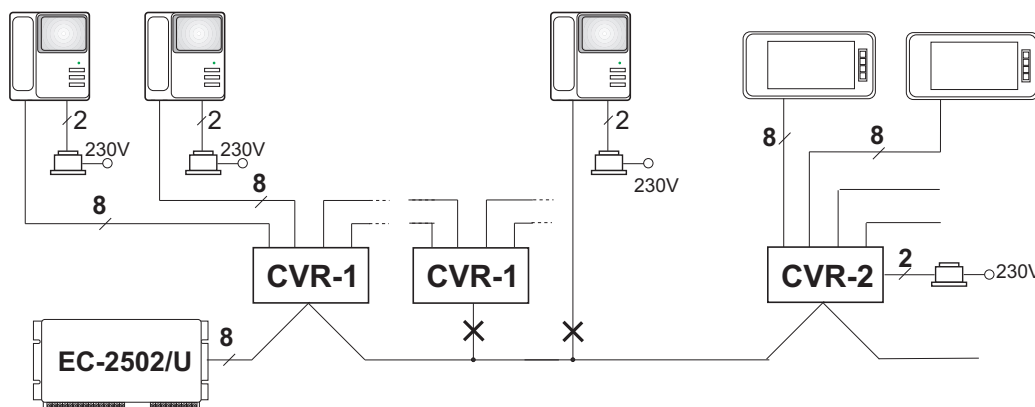
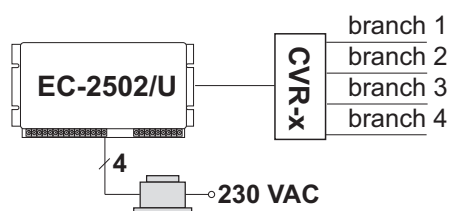Figure 5: Connection of monitors by means of distributors CVR-x

Figure 6: Branching of video entry phone system by means of distributor CVR-x

6.2   Installation of external panel

Mounting under the plaster. In the wall cut out an opening of the dimensions that would enable to place the external panel freely in it and the frame should completely cover the opening edges. Then 4 holes 10 should be drilled for strut pins. The tightening force (important when the cut out opening is deeper than cassette depth) should be matched to avoid bending of a frame. Make electrical connections and fix panel with a keyboard by two M4 screws and two rivets (included in the set). If possible the external panel should be mounted inside wind shields; the panel is better protected against weather conditions. Keyboard soiling (snow, mud) may result in its defective operation – in such cases the dirt should be immediately cleaned.

Mounting on the plaster. Drill openings for mounting the panel casing (mounted on the plaster), place the frame (or frames) in the casing mounted under the plaster and screw both elements by strut pins. Connect the wires and fix the panel with keyboard by screws and rivets. Set correctly contact JP1 in symmetrizator plate (see dwg. 7). Value of selected resistance should correspond to wave impedance of used wire or cable. Standard setting value 100 Ω corresponds to the impedance of UTP spiral and telephone cables (e.g. YTKSY dia. ϕ 0,5)

During the assembly of panels proper ventilation of sub-assemblies should ensured. That is why sealing (with silicone, foam, etc.) of space between frame and panel is not recommended.

Installation of a panel with the list of occupants Panel with the list of occupants CP-2502N cannot be equipped with video camera so it is not used in entry phones in video version.

When installing a cassette with a list of occupants one must remember to place a description prior to placing the rivets. The description should be made on a piece
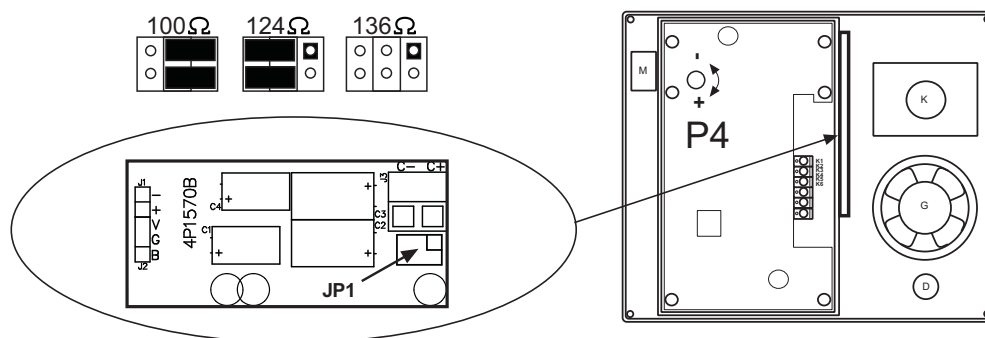
Figure 7: External panel – setting output impedance in a panel in video version.

of paper of dimensions 51 x 90 mm. It is best to make a print on A4 sheet of paper and then it should be cut to get the required size. 4 mm margin should be left at each edge of the sheet. Print should be made on a white sheet of paper of basis weight approx. 100 g/m2 using a laser printer. Ink printer should not be used for this purpose because the print may be smeared due to moisture. That is why it is recommended to laminate the sheet with a printed list. Any graphic program may be used for making the print e.g. Corel Draw or Photoshop.
In video version lists of occupants are not available.

Loosen the mounting screws and move the frame towards the outside edge of a panel
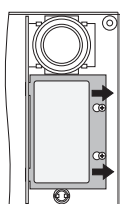
Remove the frame by lifting it slightly and then moving towards the outside edge of a panel
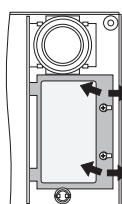
Remove plexi glass plates
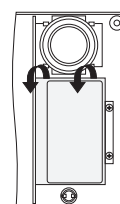
Place a sheet of paper with a description between the plates and put them back in a panel remembering that thin plate should be placed at the casing back side
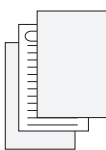
Dents on the frame left side should be put in the openings in a casing panel. The frame should be pushed so that screws are inserted in frame openings
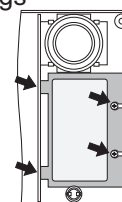
Move the frame as shown on the drawing and tighten the screws
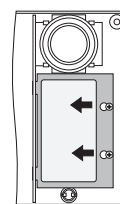
Figure 8: Replacement of a sheet with a list of occupants in panel CP-2502N

6.3   Installation of electronic cassette and Power supply adaptor

Electronic cassette and power supply adaptor should be mounted inside the building, most preferably in a place which is not accessible for unauthorized persons. It is recommended to place both devices in an installation box, the cassette is mounted by means of 4 screws or on a rail DIN. To the place where the power supply adapter

is mounted supply from power network should be routed.

Electronic cassette casing is fixed to the base by means of two screws. Removal of cassette casing requires disassembly of the whole cassette, because screws mounting the casing are placed at the back of the plate.

Wire ends from feeding transformer should be wound on the smaller ferrite core included in the set. Each wire should be wound 2.5 coils as shown on drawing 9. Wire connecting the talking cassette with electronic cassette should be wound similarly – at the side of electronic cassette the wire end should be wound on the bigger core. If this is impossible due to the thickness of wire, insulation should be removed and only those wires which are used for connection should be wound on the core. Connect the wires according to connection diagram. If on the display
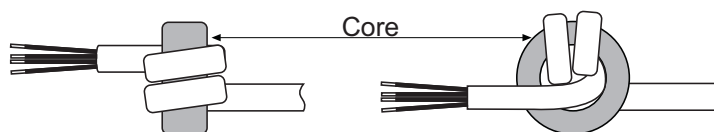
Figure 9: Assembly of ferrite core on wires

appears message [E-2] this means that there is a wire short circuit in entry phone line. Entry phone CD-2502 is resistant to such short circuit, however, it should be repaired as soon as possible. Electronic cassette is preliminarily adjusted and, unless it is necessary, the position of control elements should not be changed.

In case of need the entry phone should be adjusted after the activation of all uniphones.

Then an installation procedure should be started P-3 (see p. 21) and an installation and activation should be carried out.

Entry phone CD-2502 can control electro-catch or electromagnetic lock (or reverse electro-catch). Both elements are controlled in different ways. In case of electro-catch release of entrance interlock takes place after supplying voltage to electro-catch. Electromagnetic lock operates in reverse way - the entrance is blocked as long as voltage is supplied to the lock.

The selection of control method enables jumper ZT1.

If electromagnetic lock is used jumper on joint J3 which is used for lock demagnetization which can hamper opening of door. In case electro-catch is used jumper should be removed from joint J3. **For electromagnetic lock set control frequency to 0!** (see dwg. 28) Setting frequency to value above 0 will result in a considerable decrease of force of blocking the door with electromagnetic lock.

6.4   Installation of modules CVP–1

Switch should be installed in junction box or on the wall inside the building. Four screws should be driven to mount the casing cover to its base. After taking off the cover, make openings in the base for mounting screws (W1, W2) for strut pins and screw the base to the wall. Connect wires to terminals ARK in switch, in casing cover break off plugs in places in which wires will be introduced to casings and screw the cover to the base.
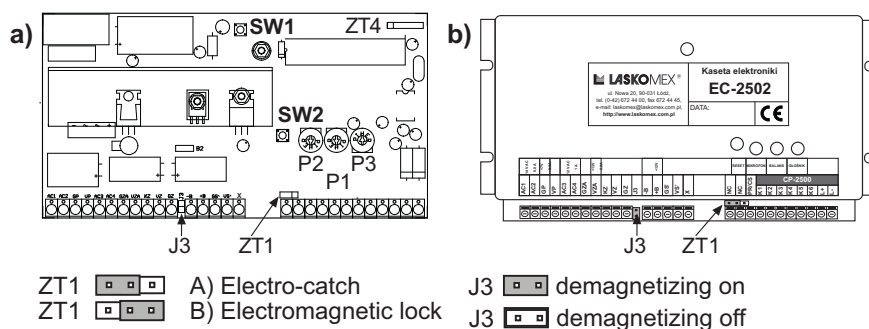
Figure 10: Selection of electro-catch or electromagnetic lock.

Signal from video camera in external panel at the main entrance should be connected to terminals C1, signal from the video camera in panel at the subordinate entrance (e.g. at the staircase) should be connected to terminals C2.

Switch has two signal outputs X and Y from which signal may be sent to monitors or signal distributors CVR-x.

Switch is supplied from electronic cassette EC-2502 (terminals +V and G). Switch control signal is sent to CS input.

Switch functions also as an amplifier and signal correction system. Switching on the correction system and degree of amplification for both outputs X and Y are defined by the position of a jumper on the joint JP3 (see dwg 11).

In order to get picture free from deformation one should perform correctly electrical system and adjust input and output impedance of electrical equipment (monitors, distributors, switches) to wire impedance.

Load at C1 input should be set only in one of the switches - installed at the end of the line (by means of JP1 joint) in others all jumpers should be removed from the joint. Load at input C2 should be set in each switch (joint JP2). Load in outputs X and Y should be set in each switch (joints JP6 and JP7). Load value for inputs and outputs should be selected for connection wire.
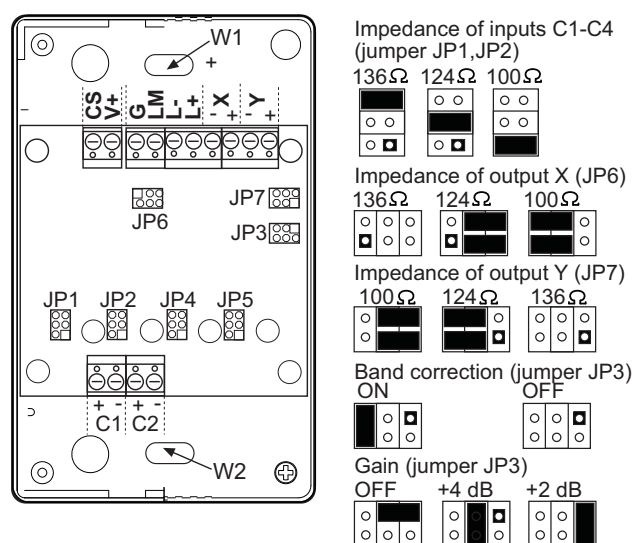
Figure 11: Module CVP-1

6.5 Installation of distributor CVR–1 and CVR–2

Floor distributors CRV-x should be installed in staircases in which video entry phone is installed.

Distributor is fastened to the wall by two screws. Four screws should be driven to mount the casing cover to its base. After taking off the cover, make openings in the base for mounting screws (W1, W2, dwg. 12), apply it to the wall and mark the places for strut pins. Drill openings in the wall, put plastic elements of strut pins in them and screw the base tot the wall. Then connect wires L+, L- and C+, C - to terminals ARK. Wire should be routed from one distributor to the next one. It is forbidden to connect distributors (or their parts) with electronic cassette by separate wires.

Apply for CVR-1

On the ends of wires from monitors converging at the distributor clamp the plugs RJ 45 paying special attention to correct order of wires in the plug. (see dwg. 13). Plugs should be put into distributor sockets. Distributor does not require individual power supply adaptor – it is supplied from any monitor which is connected with them - terminals VC and GND.

Apply for CVR-2

Distributor require 15V DC stab./4A external power supply adaptor which allowed to load each of 4 outputs by the current of 1A to supply monitors (+15V, GND). It is not recommended to use with MV645x series monitors.

It is recommended that wires sections connecting distributor with monitor connected to sockets MON1 and MON2 have comparable length. The same principle refers to wires connected to sockets MON3 and MON4.

To ensure wave adjustment, which is the main condition of getting clear and free of interference picture, at the end of this line load in form of resistor should be connected of value equal to the impedance the wire used in this line. In distributors there are joints with jumpers allowing the connection of resistor of selected value (100, 124 lub 136 Ω). between terminals C+, C-. This resistance should be switched only in one distributor which was installed at the end of line C+,C-. If distortion is visible on the screen or the picture is not clear or pale amplifying and signal correction should be switched on. For MON1 and MON2 outputs correction and amplification are switched by jumpers in joint J2, while for output MON3 and MON4 – by jumpers in joint J3.

6.6 Installation of monitor.

Installation and connection of monitors should be made on the basis of instruction enclosed to models that were used.

6.7 Installation and programming of uniphone

We assume that for each apartment a uniphone connection wire is routed, this wire is connected to terminals L+, L- of the exchange and the line is not shorted. Prior to installation of a uniphone its cover should be removed. Uniphone base
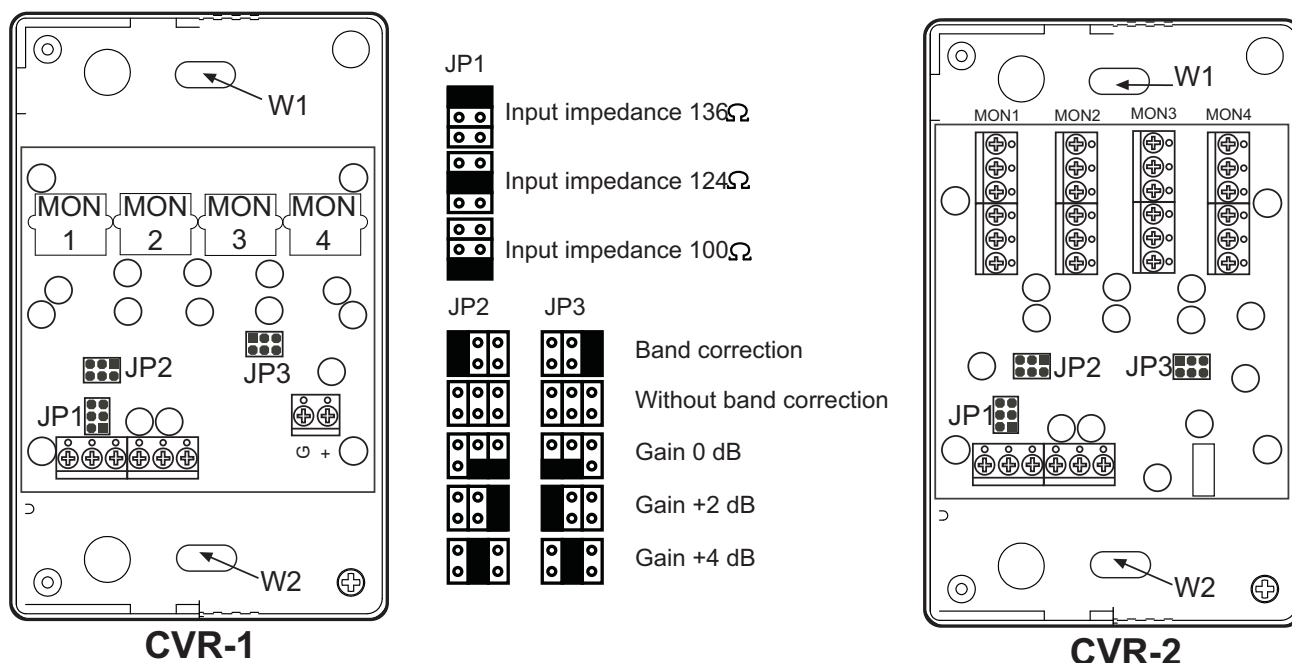
Figure 12: Configuration of distributor CVR-x

nr	clamp	color	function
1	T +	orange-white	uniwersal output
2	T -	orange	uniwersal output
3	Vc	green-white	power supply: +10VDC
4	L +	blue	uniphone line
5	L -	blue-white	uniphone line
6	GND	green	ground
7	C +	brown-white	video signal
8	C -	brown	video signal
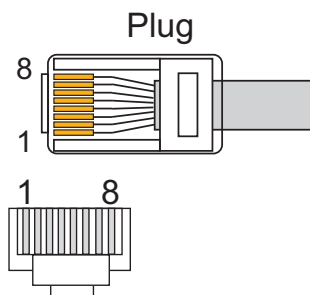
Plug

Plug in accordance with EIA/TIA 568B standard

Figure 13: Joint MON-1 of distributor CVR-1

should be fixed to the wall with strut pins φ6 mm using openings in the uniphone base. Next uniphone number should be programmed. It is allowed to program at the most two uniphones (or monitors) with the same number. Programming is done by proper configuration of jumpers in joint inside uniphones. In uniphone physical number is programmed. Each number from a range 1...255 can be presented as a sum of numbers 1, 2, 4, 8, 16, 32, 64, 128. If a digit is included in the sum of the programmed number then we put a jumper in a position which corresponds to it, otherwise jumper should be removed (see dwg. 14).
Number "0" should not be programmed (removal of all jumpers)! On uniphone plate are marked digits assigned to consecutive positions on the joint. Example: in order to program number 37, jumpers should be put on interfaces in positions 1, 4, 32 (1+ 4 + 32 = 37). Then wires should be connected to uniphone terminals paying attention to their appropriate polarization and the uniphone casing should be closed. Uniphone is ready for operation and it can be checked using procedure P-3.
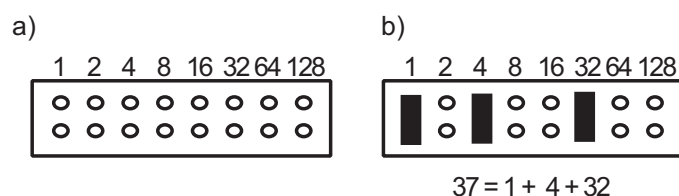
Figure 14: View of interface used for programming uniphone and example illustrating programming of uniphone to number 37.

6.8   Activation

The entry phone was designed in such a way as to enable its activation by one person. After performing entry phone electrical system as well as activating and configuring the electronic cassette assembly and activation of uniphones and monitors can be started. At this stage activation of installation procedure is required. In order to start installation procedure the following activities should be done:

- start programming mode and select procedure No. 3 - see item 8.3, 31).

- set upper and lower range of scanned numbers P-3-1, P-3-2 (option). Owing to this time required for finding of pick up receiver will be shortened

- start installation procedure (P-3-0).

- exit programming mode (e.g. P-8).

On display message $\boxed{U}$ lub $\boxed{LOC}$ will appear informing about installation procedure. Message $\boxed{U}$ informs that installation procedure operates and occupants can use the entry phone. Message $\boxed{LOC}$ informs that there is no possibility of entry phone use.

Install uniphone or monitor in the apartment and connect wires of electric system to it. Line L+, L- is protected against short-circuit, however short-circuits of wires, especially those which supply monitor should be avoided.

Then the uniphone receiver in an apartment should be picked up and electro-catch opening pushbutton should be pressed.

NOTE!
During this operation the receiver should not be kept close to an ear because loud sounds may be heard!

Electronic cassette will start to search the signal with picked up receiver, after it has been found a short signal will be heard in the receiver and the connection will be set with the external panel.

Next step is programming of calling signal. This operation can be ignored by replacing the receiver. In entry phone 8 different calling signals are available which may be individually programmed in each apartment. Calling signal is changed by pressing electro-catch button in the uniphone.

An installing specialist may change calling volume by pressing a lever under the receiver for a moment (approx. 0.5 s), in the receiver calling signal may be heard.

Next pressing will result in next calling signal of different volume. Three short signals of increasing frequency in a receiver mean that calling signal if increasing frequency has been selected.

After having made the selection of calling volume and tone the receiver should be replaced to accept changes.

NOTE!
It is recommended to activate entry phones in apartments in order from the highest to the lowest numbers especially if the apartments are occupied. After the installing specialist has left, the occupants themselves can start installation procedure, in such situation the exchange will find and connect the uniphone of lower number.

After hang up the uniphone, the system will call back and the installing specialist can check correctness of the acoustic line and electro-catch.

7   Entry phone adjustment CD–2502.

Entry phone CD-2502 has the following adjustment elements (see dwg. 15):

- P1 — volume control in external panel loudspeaker

- P2 — volume control in uniphone loudspeaker (amplification of panel microphone)

- P3 — line balance responsible for the lack of acoustic interference

Potentiometers P1, P2 and P3 are placed in the electronic cassette.

- P4 — amplification of microphone path in external panel (potentiometer in external panel)

- P1 — amplification of microphone path in uniphone (potentiometer is in uniphone)

The elements of entry phone system are preliminarily adjusted and, unless it is necessary, the position of potentiometers should not be changed.

Volume control in external panel

There are two elements which control volume in the panel loudspeaker: potentiometer P1 in the electronic cassette which controls the amplification of a signal coming from uniphones and potentiometer P1 in each uniphone which controls microphone amplification. If the conversation heard in the external panel is too silent in case of some uniphones, potentiometers P1 in these uniphones should be controlled. It the conversation is too silent in case of any uniphone, then potentiometer P1 in the electronic cassette should be controlled.
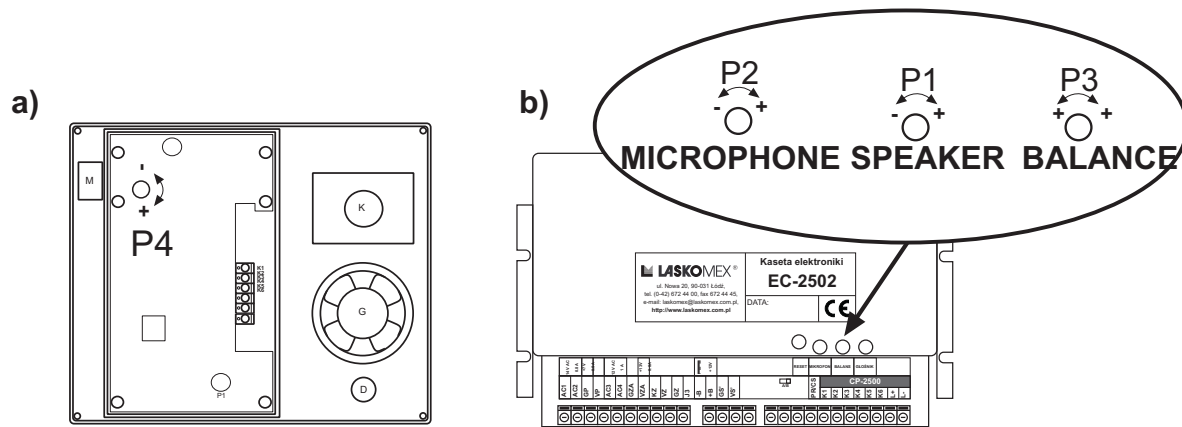
Figure 15: Control elements a) control amplification of microphone in panel, b) control elements in entry phone cassette

Volume control in uniphones

Volume in a uniphone can be controlled by potentiometer P4 in external panel (microphone) or by potentiometer P2 in the electronic cassette. First potentiometer P4 should be controlled, if this does not help potentiometer P2 should be used for control.

Balance control (in case of acoustic interference).

If during a conversation or replacing the receiver there are acoustic disturbances (whistles, squeaks etc.) line balance should be controlled. For this purpose we call a uniphone installed more or less in the middle of the line length L+, L-. By potentiometers P2 and P1 we set preliminarily the volume of conversation in both directions. By potentiometer P3 we find two induction points (upper and lower) and set it in the midway between these points. Loudness of the conversation should be slightly increased by potentiometers P2 and P1 — these steps should be repeated until the maximal volume of the conversation is found. After optimal setting of P3 the volume of conversation in both directions can be decreased to the required value (P2 should be set to minimal sufficient volume, P3 should be set to approx. 25°below induction threshold).If in a few uniphones there is still induction, the amplification in these areas should be decreased by means of potentiometer P3 in a uniphone.

8   Programming of entry phone

In entry phone control program 9 procedures are available in which parameters effecting the operation of the whole system can be changed. In order to change cassette settings, it should be brought to programming mode. For this purpose, field marked with symbol of key should be touched five times. When four horizontal lines appear on display serial number of electronic cassette should be entered. The code can be read from a label placed on cassette bottom, on the exchange processor or sheet with the codes of the combination lock. If administrator key has been defined

earlier, key can be applied to the reader instead of entering the code.

ENTER SUCCESSIVELY 4 DIGITS OF CODE
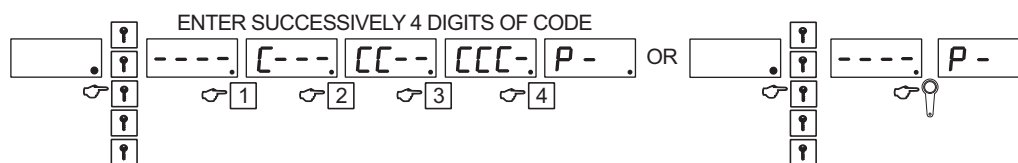
Figure 16: Entering programming mode

If installing specialist's code (serial number of electronic cassette) is correct or administrator's key was applied to the reader symbol $\boxed{\text{P- .}}$ will appear on the display which will inform that entry phone in the main menu of programming mode.

In programming mode 9 procedures are available in which values of consecutive parameters can be edited. In procedures P1 and P2 switching to next parameters is realized by means of pushbuttons 1, 4, 7 (scroll backward) and 3, 6, 9 (scroll forward).

Edition of parameter value takes place after selecting key with symbol KEY . In edition mode flashing current parameter value appears on the display. This value can be changed by selecting a new value by the keyboard or deleting it by key [C] and entering a new value. The role of function keys in programming mode is presented on the following drawing.
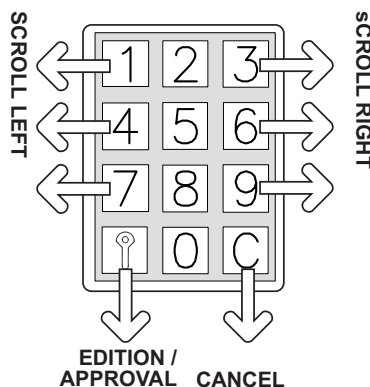
Figure 17: Function keys in programming mode

Function key KEY is used for switching to parameter edition mode and accepting entered values. Using key KEY it is possible to return to main menu level (on the display message) $\boxed{\text{P- .}}$ To exit the programming mode, it is necessary to go back to the main menu [P- .] and use key [C]. Procedures available in entry phone programming mode are described below. Message displayed on external panel during the edition of given parameter is marked with bold type, allowable values of parameters are given in frames, default value of parameter is given in square brackets, while operation modes of electronic cassette, in which edition of a parameter is possible electronic is given in round brackets.

PARAM. No 1	PARAM. No 2	EDITION - OLD VALUE	EDITION - NEW VALUE	CHANGE ACCEPTATION	RETURN
P - .	EtYP.	toc .	30.	123.	toc.	P - .

☞①   ☞③   ☞⚷   ☞①②   ☞⚷   ☞Ⓒ
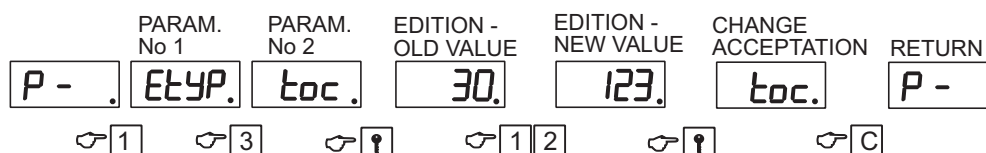
8.1   P-1 Operation parameters of entry phone

EtyP | 0,1 | [0] (U,H)

Operation mode of electronic cassette
Electronic cassette may service the main entrance (e.g..entrance in fence) or subordinate entrance. In default setting electronic cassette operates subordinate entrance e.g. entrance to staircase – operation in U mode (parameter value equal to 0). Setting parameter value to 1 makes that electronic cassette operates the main entrance (operation in H mode).
The change of operation mode of electronic cassette (e.g. which earlier operated in H mode) results in the loss of some information including recorded in memory numbers of electronic. That's why this function should be used carefully. After the change of cassette type the operation of restoring default settings should be made.

tOc | 10...255 | [30] (U,H)
Waiting time for picking up the receiver in seconds.
Parameter defines waiting time for receiver pick up in seconds after finishing of calling.

tro | 10...255 | [120] (U,H)
Time of conversation.
Conversation time after picking up the receiver is limited. 10 s before the lapse of conversation programmed time sound signals will be heard in the receiver, which will inform about approaching time of breaking.

Calling tone
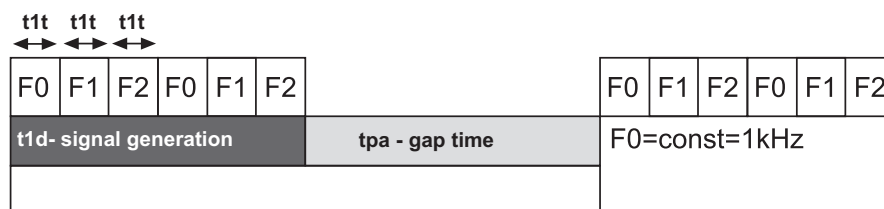
Figure 18: Structure of calling signal

Calling signal consists of three tones of different frequency (F0, F1 i F2) generated in turn for some time (t1d – see dwg. 18), after that there is a break (tPA) – these make the complete calling cycle. Any proportions may be set between the signal generating time and the following break; furthermore time of an individual tone (t1t) as well as tone frequencies F1 and F2 may be changed as well. Owing to this a uniphone calling sound may be changed in a wide range.

t1t | 2...20 | [5] (U,H)
Time of individual tone generation PS.
Duration of an individual tone in ms (parameter value x 10 ms).

t1d | 10...255 | [100] (U,H)
Time of signal generation PD.
Duration of a signal consisting of tones repeated in cycles F1,F2,F3 expressed in ms (parameter value x 10 ms).

tPA | 20...255 | [150] (U,H)
Pause time PA.
Break after signal generation in ms (parameter value x 10ms).

F1 | 50...255 | [125] (U,H)
Signal frequency F1 in Hz (parameter value x 10 Hz).

F2 | 50...255 | [175] (U,H)
Signal frequency F2 in Hz (parameter value x 10 Hz).

Electro-catch
trY | 1...31 | [5] (U,H)
Time of electro-catch operation.

Fry | 0...200 | [50] (U,H)
Frequency of electro-catch supply voltage in Hz.
Electro-catch supplied with alternating voltage from a transformer makes a characteristic sound (humming) which is often associated with opening of door. This parameter makes it possible to simulate the operation of an electro-catch. Entering value "0" makes that an electro-catch will operate without making any sound.

Kind of numbering

nbl | 0...9998 | [0] (U)
Block number.
Value above 0 is set in electronic cassette servicing subordinate entrance switches on mode with building numbering. This mode will operate properly if in electronic cassette, which services the main entrance, mode with building numbering is switched. Details in item "Numbering", see page 9

Pnu | 0...9998 | [0] (U)
Range shift.
Parameter used in numbering mode with range shift. Details in item "Numbering", see page 9

LPi | 0...100 | [0] (U)
Amount of rooms on the floor.

Parameter used in hotel numbering mode in which room number is preceded by a digit which defines the floor on which the room is located. Details in item "Numbering", see page 9

LLo $\boxed{1...250}$ [1] (U)
Range of serviced numbers – low value.
Parameter is used to set number range which is serviced by an entry phone. After selecting a number outside this range a message will appear on the display $\boxed{\text{OFF}}$. Limiting the range is recommended especially in case of an entry phone in a multi-entrance version. Be careful that $\boxed{\text{LLo}} < \boxed{\text{LHi}}$. otherwise selecting of any number will result in displaying a message $\boxed{\text{OFF}}$

LHi $\boxed{1...250}$ [250] (U)
Range of serviced numbers – high value.
Parameter is used to set number range which is serviced by an entry phone.

LdP $\boxed{0...9998}$ [0] (U)
Directing of not serviced numbers
All numbers which are not serviced by entry phone CD-2502, will be directed to uniphone number given as LdP value (see item 4 page 9).

Ld1 $\boxed{0...9998}$ [0] (U)
Additional number not included in the serviced range.
Additional number not included in the serviced range. Number introduced as a value of this parameter will be assigned as a logical number of uniphone of physical number 251.

Ld2 $\boxed{0...9998}$ [0] (U)
Additional number not included in the serviced range.
Additional number not included in the serviced range. Number introduced as a value of this parameter will be assigned as a logical number of uniphone of physical number 252.

Ld3 $\boxed{0...9998}$ [0] (U)
Additional number not included in the serviced range.
Additional number not included in the serviced range. Number introduced as a value of this parameter will be assigned as a logical number of uniphone of physical number 253.

Ld4 $\boxed{0...9998}$ [0] (U)
Additional number not included in the serviced range.
Additional number not included in the serviced range. Number introduced as a value of this parameter will be assigned as a logical number of uniphone of physical number 254.
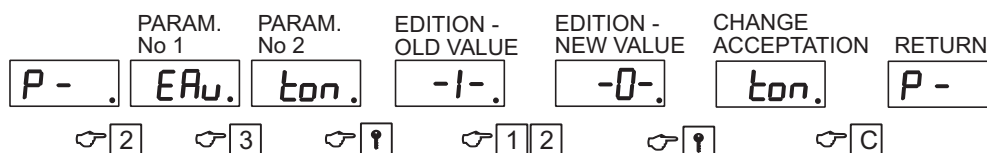
8.2   P-2 Functions realized by entry phone

Parameters P2 can have values [-0-] or [-1-]. In square brackets default value of parameter is given. Value [-1-] means switched on function, value [-0-] – switched off function.

PARAM. No 1	PARAM. No 2	EDITION - OLD VALUE	EDITION - NEW VALUE	CHANGE ACCEPTATION	RETURN
P -	EAu.	ton.	-1-.	-0-.	ton.	P -
☞2	☞3	☞♪	☞1 2	☞♪	☞C

EAu [1] (U,H)
Sound signal of sign selected from the keyboard
Selection of any sign from the keyboard may be signaled with short acoustic signals

tone [1] (U,H)
Multitone signalling of sign selected from the keyboard
Selection of a key may be signalled with the same sound (one tone signalling) or for every key sound of different pitch may be attributed (multitone signalling). The use of this function requires fulfilling the following condition EAu=1 and tone=1.

CEn [1] (U,H)
Switching on coded lock service
Setting 0 value makes that function of coded lock will be switched off for all users regardless of setting for the individual apartments.

CEd [1] (U)
Permission to edition of coded lock codes by occupants.
By default the occupants have the possibility to change the codes of a combination lock in user's menu. Setting this parameter to value "0" blocks this possibility to all occupants regardless of individual settings.

CPo [1] (U)
Permission to confirm the use of lock code.
Each unblocking of door by means of a coded lock makes that three short acoustic signals are generated in a uniphone mounted in an apartment whose code was used to open the door. Parameter set to "0" enables to switch off this signalization in all uniphones. The signaling can be switched off for the selected numbers (see procedure 8.5, page 36).

CEr [1] (U)
Confirming the use of a wrong code of coded lock.
Entering the wrong code to a combination lock makes that two long acoustic signals will be generated in a uniphone mounted in an apartment to which there was an attempt to use a code to open the door. This is a signal for occupants that somebody tries to break the code of a combination lock. This option allows switching off this signalization in all uniphones.

ibE [1] (U,H)
Switching on/off of electronic keys
Setting parameter value to "1" permits using electronic keys iButton (Dallas)

ibA [1] (U,H)
Registration of electronic keys by users
Setting parameter value to "1" permits the users to register new electronic keys
from user's menu.

EUc [0] (U,H)
Video camera supply in external panel
Camera in external panel can be supplied continuously or only during the conver-
sation. If users want to monitor picture from camera in any moment the camera
should be supplied continuously.

3C [0] (U,H)
Switching on three-position display
Function should be switched on when electronic cassette EC-2502 cooperates with
the panel with three position of old type. In such case some messages appearing
on the display will be distorted. Switching on the three position service makes that
some messages appearing on the display will differ from those described in the in-
struction.

Ent [1] (U)
Fast entrance
In order to enter an apartment in a building with the main entrance two entrances
protected by entry phone system should be passed. An occupant must activate
electro-switch twice – the first time at the main entrance and the second time at
the subordinate entrance.(see page. 41)

nbl [1] (H)
Mode with building numbering
Switches on the mode with the building numbering. The function will operate
properly if parameter nbl in U exchanges is above zero.

8.3   P-3 Installation procedure

SWITCH ON THE INSTALLATION PROCEDURE

P - .	P-3.	On .	P-3.	P - .	U .
☞3	☞0	☞⚲	☞⚲	☞C	
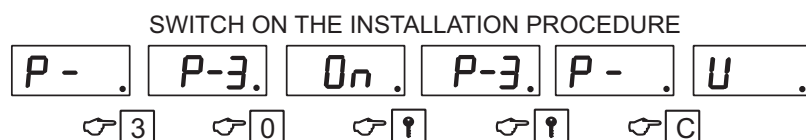
The procedure facilitates the activation of an entry phone system. Starting pro-
cedure P3 enables the installing specialist to check the correctness of functioning
of uniphones mounted in apartments without any help of other persons. Activation
of CD-2502 was described in chapter 6.8, on page 23.

P-3-0 **ON/OFF** - switching on/switching off of installation procedure
P-3-1 **LLO** - low range of searched numbers
P-3-2 **LHi** - high range of searched numbers

P-3-3 Searching for the picked up (incorrectly placed) receiver. When this procedure is started, searching for picked up (incorrectly placed) receivers begins. On the display numbers of successively checked apartments are being indicated. When uniphone with the picked up (incorrectly placed) receiver is found in one of such apartments, then the display of the external panel will show the number of such uniphone for a couple of seconds. In order to start searching for next uniphones, a key with a KEY symbol should be pushed or one must wait a couple of seconds. After that searching will be started automatically.

P-3-4 **LOC/OFF** Blocking the possibility of using an entry phone. In this mode it is not possible to get connection with any apartment, however, entering any number from a keyboard of an entry phone will result in unblocking the entrance. This function can be used during the activation of an entry phone and enables the occupants to enter the staircase with a door equipped with self closing device.

P-3-5 **L-F** Calculator converting uniphone logical number to its physical number. Calculator functions on condition that range shift parameter has been set or the exchange has been set to hotel numbering mode. In order to calculate the physical number of a uniphone, its logical number should be entered from a keyboard and then it should be confirmed by a key with a symbol of key.

P-3-6 **F-L** Calculator converting the physical number to logical number. The principle of operation is similar to procedure P-3-5. In order to calculate the logical number of a uniphone, its physical number should be entered from a keyboard and then it should be confirmed by a key with a symbol of key.

P-3-7 **SYS** Restoring the default parameters of the exchange operation (defined by procedures P-1 and P-2).

P-3-8 **CoL** Restoring the default parameters of the values of the coded lock. Restoring the codes of a combination lock results in restoring the default code of an installing specialist.

P-3-9 **OPL** Restoring the default values of individual settings in electronic cassette.

8.4   P-4 Electronic keys

Entry phone CD-2502 can be equipped with electronic key reader. There are three kinds of keys in entry phone. Service keys enable change of entry phone configuration, special keys are used by postmen, administration etc. and keys for the occupants.
Keys should be registered at both the main and subordinate entrance. At the main
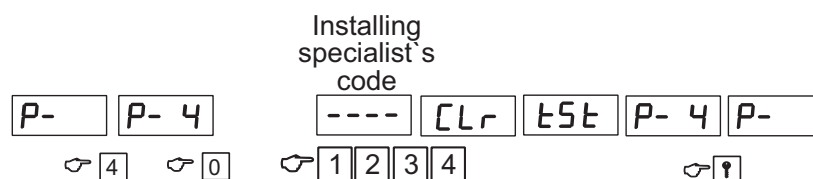
entrance keys attributed to apartment cannot be registered.
Entry phone users can register their own electronic keys (see page. 43). This possibility can be switched off globally in procedure P-2 by setting parameter [iba] to value "0" or individually in procedure P-5.
Electronic keys can be used after their earlier registration in entry phone memory. Registration includes the activation of procedure (P-4-1 or P-4-2) and applying the key to the reader.

*P-4-0* **C 0** (U,H) *Resetting electronic key memory.*
  Procedure is used for resetting all keys stored in entry phone system memory.

<div align="center">

Installing
specialist`s
code

| P- | | P- 4 | | | ---- | | CLr | | tSt | | P- 4 | | P- |
| ☞ 4 | | ☞ 0 | | ☞ 1 2 3 4 | | | | | | ☞ 🔑 |

</div>

Administrator code should be given to protect against accidental resetting. After having given the code or having used the service key during resetting time on display message |CLR| and |tst| will appear. Procedure results in resetting of all user's code and service key codes which lasts approx. 5 sec.

P-4-1 **Add** (U) *Addition of key without attributing to apartment.*
  After applying the key to the reader its serial number will be read and stored in

<div align="center">

CELL
NUMBER
IN MEMORY

| P- | | P- 4 | Add | nEu | 22. | Add | P- 4 |
| ☞ 4 | | ☞ 1 | ☞ 🔑 | | | ☞ C |

</div>
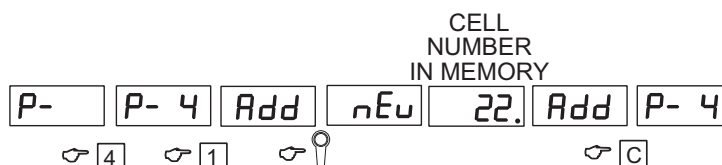
entry phone memory. On the display the following messages will be shown |Add|, |NEU| and |xx|, where xx is a number which defines number of memory cell in which key number was saved. If the key has already been saved in entry phone memory a message |OLD| will appear on the display. An installing specialists cannot change the item in which key number is saved. The key is registered in the next free memory item. An installing specialist can make a list in which key position in memory as well as the name of a person to which the key will be given. It is important in the case when the key has to be deleted from the memory, however this method is not comfortable.

P-4-2 **AdL** (U) *Addition of key with attributing to apartment*
  Procedure enables adding of key and attributing it to selected apartment number, which facilitates keys management. The use of the key is signalled in uniphone receiver as in the case of combination lock. Programming is realized as follows:

  • After activation P-4-2 on the display a flashing message will appear |L—|.

APARTMENT NUMBER   POSITION IN MEMORY   END OF OPERATION

| P- | P- 4 | L---. | 10. | 10. | nEu | 22. | L---. | P- 4 | P- |

☞4   ☞2   ☞10   ☞🔑   ☞🔑   ☞🔑
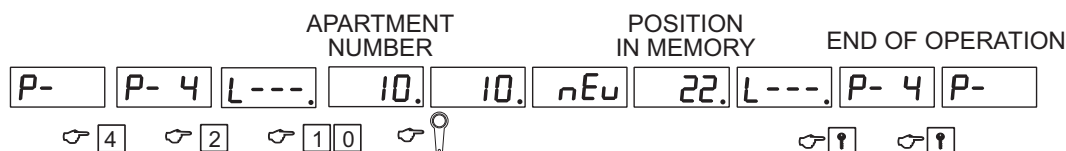
- Give apartment number and confirm it with key KEY . Digit on the display will flash slowly.

- Apply key to the reader. On the display a message $\boxed{\text{Add}}$ will appear for a moment and a number of memory item in which key number is saved.

- When on the display a flashing apartment number reappears next key for this apartment can be registered.

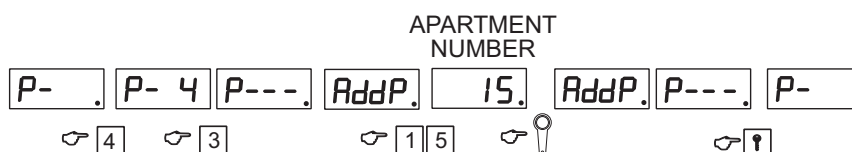- Key KEY . should be used for registration of keys for next apartments. When message $\boxed{\text{L—}}$ appears on the display the operation should be repeated.

P-4-3 **AdP** (U) *Programming of key on the selected item in memory.*

Key can be programmed in the selected item in key memory. Function is used

APARTMENT NUMBER

| P- . | P- 4 | P---. | AddP. | 15. | AddP. | P---. | P- |

☞4   ☞3   ☞15   ☞🔑   ☞🔑

for registering next special keys, because memory cells in which the keys are saved are protected against recording in other way. To reset special key or service key procedure P-4-6 should be used.
Key organization in memory is as follows:

Operation mode	**EC-2502/H**	**EC-2502/U**
Regular keys	0-999	0-1999
Special keys	1000-1019	2000-2039
Administrator's keys	2040	2047

Registration of keys is as follows:

- Start procedure P-4-3. On the display message $\boxed{\text{AddP}}$ will appear and after a while $\boxed{\text{P—}}$

- Give item number and confirm by KEY . Message will stop flashing.

- Apply the key to reader. On the display message $\boxed{\text{Add}}$. will appear.

- Repeat the operations for the following keys or finish it with KEY key

P-4-4 **dEL** (U) *Key resetting.*
Deleting the key from memory will take place after applying it to the reader. On

APARTMENT
NUMBER

| `P-   .` | `P- 4` | `CAS.` | `I5.` | `CAS.` | `P- 4` | `P-   .` |

☞4   ☞4   ☞🔑   ☞🔑
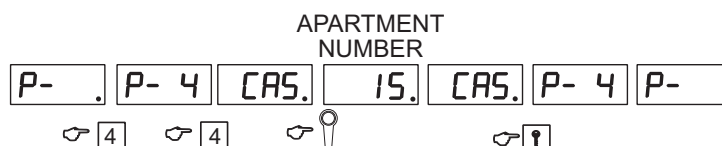
the display a message `CAS` will appear and a digit which defines the memory item in which the deleted key was recorded.

P-4-5 **dEL** (U) *Resetting the key attributed to the apartment.*
  Key resetting procedures:

APARTMENT   CELL
NUMBER   NUMBER
                             IN MEMORY

| `P-   .` | `P- 4` | `LdE I.` | `63.` | `F Ind.` | `P` | `2.` | `CAS.` | `LdE I.` | `P- 4` | `P-` |

☞4   ☞5   ☞63 ☞🔑   ☞C   ☞🔑   ☞🔑
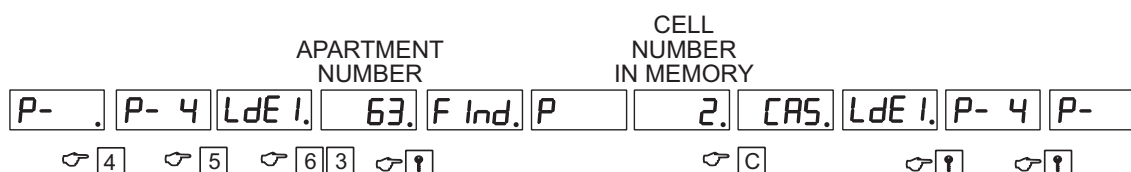
- start program P-4-5. On the display message `LdEl` will appear.

- Give the apartment number and confirm it with key KEY . Entry phone will search the first memory item in which key number attributed to the selected apartment is recorded

- If the key has been located, on the display the following messages will appear successively `P` and `xx` where xx is a number which defines number of memory cell in which key number was saved.

- To reset the key select key C . On the display message `CAS` will appear for a moment. Entry phone will start searching next keys.

- Use key KEY . to pass to the next item. If in the next few seconds none key is used, the entry phone will search automatically the next key attributed to the selected apartment number.

- As soon as the whole base is searched message End will be displayed. `End`

P-4-6 **PdEl** (U) *Resetting key recorded in the defined item.*
  Procedure is used for key resetting after having given the memory item in which

CELL
NUMBER
IN MEMORY

| `P-   .` | `P- 4` | `PdE I.` | `P---.` | `63.` | `CAS.` | `P---.` | `P- 4` | `P-   .` |

☞4   ☞6   ☞63 ☞🔑   ☞🔑   ☞🔑
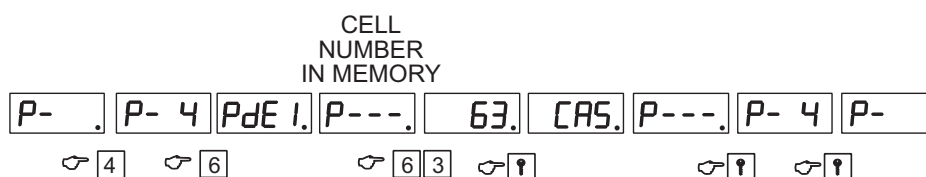
the key was recorded. After starting the procedure on the display a message `P—` will appear. After memory item is given and after confirming with key KEY the key number will be deleted, which will be confirmed by message `CAS`. If given

item is free on the display message FrEE will be shown.
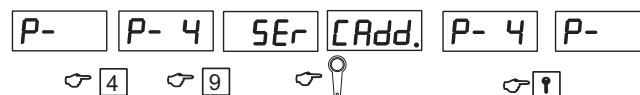
P-4-7 **Id** (U) *Key identification.*
  Procedure is used for key identification. After applying the key to the reader on
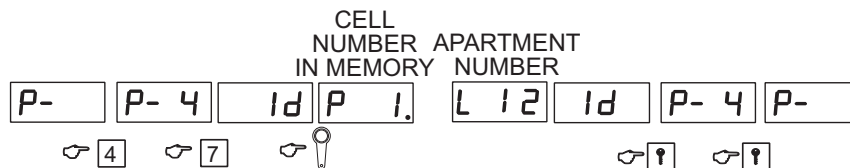
the display an information will appear in which item it will be recorded P - x and to
which apartment it is attributed: L - x , (if it is not attributed L - 0). If identified
key is defined as serviced message SER will appear on the display.

P-4-9 **SEr** (U) *Programming of service key (administrator).*
  Service key functions similarly to administrator's code it enables to enter program-

ming procedures and service key functions independently of administrator's code.
This operation results in replacing the old key with a new one. In order to regis-
ter next service keys one should use procedure P-4-3. Service keys are registered
in memory cells in the range 1020 …1023 w EC-2502/U and 2040…2047 in EC-
2502/H. Keys may be overtyped with other keys or delete from the definite memory
cell with procedure P-4-6.

8.5   P-5 Individual settings

   In system CD-2502 there is a possibility of individual settings of some parameters
of entry phone connected with uniphone calling and functions of combination lock.
Values of parameters 1-3 may be changed by occupants by user's menu (see page.
43), parameters 4-6 are available for the installing specialist only. Parameter values
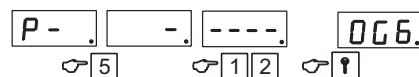
Figure 19: Starting the program of individual settings for the selected apartment (in example
No. 12)

are changed by means of keys 1 - 6. Each pressing of the selected button results in
setting of next value of the parameter. Keys 7 and 9 are used for switching of the
parameter edition mode – the previous and next apartment number.
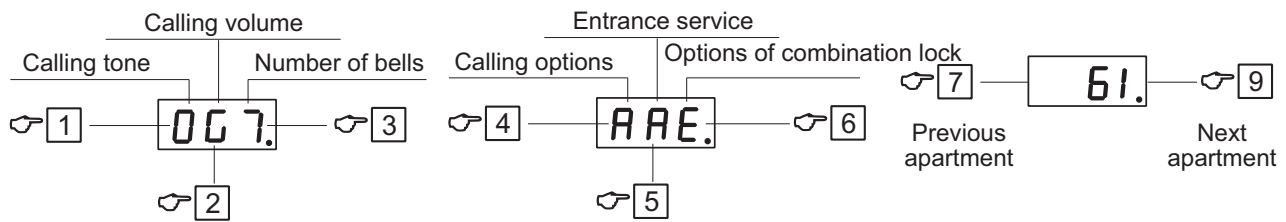
Figure 20: Keys used for changing individual settings

Parameter No. 1. Calling tone, key 1

Parameter can take values from the range 0...7. Parameter value is defined by one of 8 pre-defined calling tones.

Parameter No. 2. Calling volume, key 2

Entry phone enables setting three volume levels and calling of increasinng volume (requires setting at least three bells)

- G — loud bell

- N — increasing bell

- C — silent bell

- U — moderate bell

Parameter nr. 3. Number of bells, key 3

Entry phone allows defining the number of bells which will be generated after calling. From 1 to 8 bells can be set.

Parameter No. 4. Calling options, key 4

If needed entry phone reaction after calling can be changed:

- A — Active uniphone. Uniphone may be called, conversation can be conducted and electro-catch may be controlled.

- − — Uniphone switched off. Selection of this option makes that it is impossible to make a connection with the apartment for which such setting was selected. An attempt to make a connection will be followed by a message OFF

- d — Uniphone functions as a bell. Uniphone may be called, however, conversation cannot be conducted and electro-catch cannot be controlled.

Parameter No. 5. Entrance service, key $\boxed{5}$

In the entry phone it is possible to define how the pushbutton operates the electro-catch at the individual entrances.

- $\boxed{A}$ — Pushbutton activates electro-catch at the main entrance and at the subordinate entrance.

- $\boxed{-}$ — No electro-catch control from the uniphone (monitor).

- $\boxed{U}$ — Pushbutton activates electro-catch at the subordinate entrance only.

- $\boxed{H}$ — Pushbutton activates electro-catch at the main entrance only.

Parameter No. 6. Options of combination lock, key $\boxed{6}$

This parameter defines the operation of combination lock.

- $\boxed{E}$ — Combination lock activated, occupant may change the code and register electronic keys.

- $\boxed{-}$ — Combination lock switched off.

- $\boxed{A}$ — Combination lock activated, occupant can neither change the code nor register electronic keys.

Copying of settings Entry phone CD-2502 enables copying the selected set of settings to group of numbers which is defined by a number range from the lowest number (LLO) to the highest (LHI). The logical range of numbers should be given (taking into account number shifting or hotel numbering).

Copying of settings is realized as follows:

- start procedure P5 and give "0" as a number of apartment (see dwg. 39)

- using keys 1-6 set, according to the above instruction, the desired combination of individual settings.

- selected settings should be confirmed with a KEY symbol. On the display message [CPY] will appear for a moment and then horizontal bars (see dwg. 39).

- give the code of an installing specialist. This a security against an accidental copying of settings.

- give the lowest number from the number range to which the settings will be copied (LLO).

- give the highest number of his range (LHI) and confirm with a key with key symbol.

- on the screen fast changing digits will appear informing about copying of settings.
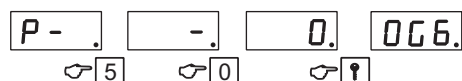
$$\boxed{P-\,.}\quad\boxed{\quad -.}\quad\boxed{\quad 0.}\quad\boxed{0 \Gamma 6.}$$

☞5   ☞0   ☞⚲

Figure 21: Copying of settings - starting the procedure

Installing specialist's code   Range down   Range up

$$\boxed{I\Gamma 5.}\boxed{\Gamma P 4.}\boxed{----.}\boxed{L L 0.}\boxed{\quad I.}\boxed{L H I.}\boxed{\quad 9.}\boxed{I 2 3.}\boxed{\quad -.}$$

☞⚲   ☞1 2 3 4   ☞1   ☞⚲   ☞⚲
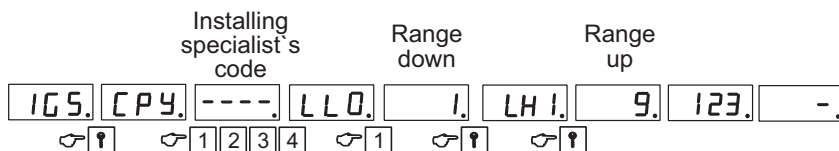
Figure 22: Copying of settings - selection of number ranges

8.6   P-6 Change of installing specialist's code

The code of an installing specialists enables entering the entry phone programming code. In case of installing specialists or property administrators it is convenient to use one common code for all entry phones which should be maintained. After having restored default settings of entry phone or codes of combination lock the manufacturer's value of the code is restored. To change the old code of an installing specialist, the old code should be given and a new one should be entered.

OLD CODE   NEW CODE

$$\boxed{P-\,.}\boxed{0 L d.}\boxed{----.}\boxed{\Gamma---.}\boxed{n E U.}\boxed{----.}\boxed{\Gamma---.}\boxed{P-\,.}$$

☞6   ☞1 2 3 4   ☞1 2 3 4
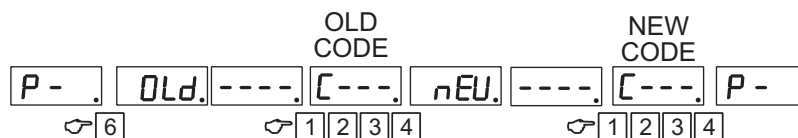
8.7   P-7 Electro-catch test

$$\boxed{P-\,.}\boxed{0 P E n.}\boxed{P-\,.}$$

☞7

This procedure is used during installation and control of electro-catch or electromagnetic lock. Every activation of procedure P-7 causes switching on the electrocatch for the set time and then return to the program main menu.

8.8   P-8 Release of electro-catch in service mode

$$\boxed{P-\,.}\boxed{0 P E n.}\boxed{\quad\quad.}$$

☞8

This procedure enables the installing specialist to enter the staircase e.g. to service the installation. Owing to this he does not have to ask for opening the door by the occupants. Activation of this procedure makes that the door is unblocked

and then the entry phone returns to normal operation mode. This procedure may also be used for quick quitting the programming mode.

8.9   P-9 Change of coded lock code
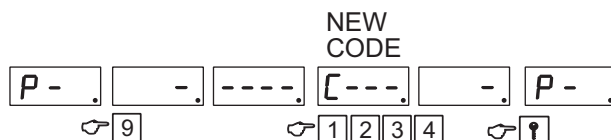
To change the code of coded lock the following activities are done:

- Activate procedure P-9. When on the display of external panel a message $\boxed{-}$ appears number of apartment for which lock code will be changed should given.

- When on the display symbol $\boxed{--}$ appears four digits of a new code should be entered.

- After having entered the last digit on the display a symbol $\boxed{-}$ will appear. The operation can be repeated for the next number or finished by using a key KEY

9   Entry phone use

9.1   Connection with apartment

To make the connection with the apartment, its number should be entered from the keyboard. After the lapse of 3 s a uniphone in this apartment will ring and on the panel display message $\boxed{\text{CALL}}$ will appear. Then on the display message [OuO] will appear which will inform that entry phone waits for picking up the receiver. If the receiver in the apartment is picked up, this symbol changes to $\boxed{\text{ouo}}$ and a conversation can be conducted. If the receiver in the apartment is not picked up then after several seconds the entry phone will return to normal operation mode. Time of conversation is limited and in standard setting it amounts 2 minutes, however, the installing specialist can change it. 10 seconds before the conversation is ended on the display digits will appear while in the uniphone receiver and panel loudspeaker short acoustic signals will be generated informing how many seconds are left till the conversation is ended. The conversation can be finished by hanging up the receiver. In any moment of the conversation the occupant may open the electro-catch by pushing the door opening button in uniphone or monitor. Electro-catch is activated in standard setting for 5 sec. Release of the entrance lock is signaled with acoustic signal from loudspeaker in external panel. In selected apartments an installing specialist may switch off the possibility of activating the electro-catch or limit it to the activation of electro-catch at the main or subordinate entrance. In entry phones with more than one entrance users may see a message $\boxed{\text{ZAJ}}$. This message means that a conversation is conducted at the other entrance and entry phone is busy at the moment. In such situation one must wait until the

first conversation is finished (message ZAJ will disappear and it will be possible to use keyboard). In entry phone with the main entrance a situation may take place when from the main entrance an attempt will be made to connect the number from which a conversation is being conducted with the subordinate entrance. In such situation this conversation will be shortened. Entry phone within 10 sec will automatically finish the conversation, at the same time on the display digits will appear which would inform how many seconds are left till the conversation is ended and in the uniphone receiver short acoustic signals will be generated.

9.2 Connection from the main entrance

Using the entry phone at the main entrance is the same as at the subordinate entrance. If building numbering mode is activated, the number selected from the keyboard consists of two elements: building number and apartment number in this building (or staircase).

Number selection in this mode is as follows:

- Select the block number e.g. 8. On the display message b 8 appears

- Confirm with key KEY . On the display message L will appear

- Enter apartment number

- Wait until entry phone rings and on the display message CALL appears.

Flashing message ZAJ visible on the display means that a conversation is conducted between the selected or other number in the same staircase from the subordinate entrance. This conversation will be broken after 10 sec; no action should be made, it is enough to wait until entry phone rings at the selected apartment which will be signaled with message CALL Entry phone CD-2502 realizes functions "fast entrance" which is used only in entry phone with the main and subordinate entrances. In entry phone without this function one must ring the occupant twice in order to get to his apartment (the first time at the main entrance and the second time at the entrance to the staircase). Function "fast entrance" eliminates the second step. The function is activated by an occupant in his apartment:

- during the conversation with the person at the main entrance, the entrance should be unblocked by pressing the electro-catch pushbutton in uniphone or monitor. Then uniphone forks should be pressed for a while – activation of a function will be confirmed by three increasing sounds in the uniphone receiver.

- the function can be switched off by pressing uniphone forks for the second time. Switching off the function will be confirmed by three decreasing sounds in the uniphone receiver.

- Visiting person comes to the staircase and attempts to make a connection with the apartment by selecting its number from the keyboard. Entry phone instead of making the second connection with the apartment, releases door catch.

- Function remains activated for 4 min and 15 sec from the moment of its activation.

- Each electronic cassette servicing staircase can activate option for two apartments at the same time.

- For one apartment a function cannot be activated twice at the same time.

9.3   Use of uniphone

When holding a receiver close to an ear one should not press forks in the uniphone base for a longer time because a loud signal may be generated in the receiver, which can result in hearing defect.
During the conversation the user can in any moment press the button activating the electro-catch. Activation of electro-catch does not break the conversation.
Uniphone can be equipped with a key to control gate drive.
This key can operate in two ways:

- key operates only during the conversation

- key operates in any moment

9.4   Use of monitor

A few models of monitors cooperate with entry phone CD-2502. Functions and use of monitor are described in the instruction enclosed to each monitor.

9.5   Using coded lock function

To each apartment one four digit number is attributed which is preliminarily defined in the entry phone production process. This code can be changed by an installing specialist or occupant (unless this option is blocked). Door opening with lock code is as follows:

- Enter from the keyboard the number of apartment and confirm by a key KEY

- Enter four digit code.

After having given the correct code the electro-catch will be released. In the uniphone in an apartment whose code was used to open the door three short acoustic signals will be generated to inform the occupants that somebody has used their code. Each failed attempt to enter the code is signaled with two long signals in a uniphone receiver. Occupant can change the coded lock code that was given to him. Changing method is described below.

9.6   Using electric keys

To unblock the entrance with iButton (DALLAS) key it should be put to the reader in a video entry phone. Entry phone will read the key serial number and will compare it with the numbers in the memory. If the read number corresponds to

one of the programmed numbers, the entry phone opens the electro-catch signaling the opening of door with four short sound signals. Occupant can add register next electronic keys (see next item of this instruction). The user can register keys only at the entrance leading to his apartment. Keys for the main entrance can be registered by an installing specialist only.

9.7   User's menu

This menu is available in systems named 2502 or 3100. In order to check which system is present, the button [9] should be chosen four times on the panel keyboard, after a moment on the panel display the system name and software version will appear.
Occupant can change from the entry phone keyboard (this refers to subordinate entrance) some operation parameters such as:

- calling tone,
- volume,
- number of rings,
- code of coded lock,
- register new electronic keys.

To make changes an occupant must activate user's menu. Some person in the apartment must help.

User's menu activation:

a)   Make connection with the apartment (only from the subordinate entrance panel).

b)   Press button with a sign of a key and while pressing it ask a person in the apartment to press the catch button five times. Activation of a function is signaled with three short signals in uniphone receiver and external panel and also with message [OPC] displayed temporarily on the external panel's display.

c)   Finish the conversation.

d)   Enter the apartment number, press button with a sign of a key and enter the code of coded lock. On the display user's menu will be shown, where parameter's edition is available. (see dwg. 23).
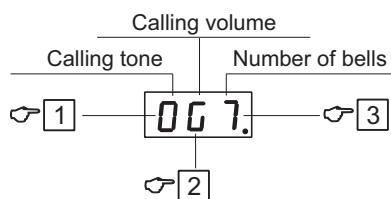

Figure 23: User's menu

1 The first sign on the display defines calling tone (0...7). Calling signal can be changed by pressing the key marked with number [1].

2 The second sign on the display defines volume of calling signal (G - loud, N - increasing, C - soft, U - moderate). Selection of increasing signal is sensible at the number of rings higher than 1. Volume is controlled with key [2].

3 The third sign on the display defines the number of rings (1-8) - decides how long the uniphone rings. Number of signals is controlled with key [3].

Change of coded lock code

To change the code of coded lock, user's menu should be activated and key [0] should be selected. For a moment messages [NEU] and [CODE] and then four horizontal bars will appear and then new code of coded lock should be entered. New code should be entered twice. **Option of changing the code by the user can be blocked by an installing specialist!**

Registering of a new electronic key

In user's menu after selecting 8, message [ADD] will appear on the display. Electronic key should be put to the reader. Message [NEU] means that key was recorded in memory and attributed to the apartment. If a key, which was recorded earlier is put to a reader, on the display message [OLD] will appear.

Exit from user's menu

To exit from edition of user's menu (not to exit from the whole procedure) in order to check and to correct settings, press the key with a symbol of key [KEY]. There is a possibility to make a call.

To finally exit from the whole procedure press the key [C]. In this case the second enter to the menu requires repeating the whole procedure from the beginning.

After about 4 minutes of inactivity, access to the user's menu will be turn off automatically.

In this procedure the necessity of cooperation with other person has been introduced in order to prevent unauthorized changes of entry phone parameters.

10   Restoring the initial settings

NOTE!

Restoring the default settings results in the loss of information recorded in memory EEPROM of electronic cassette (changed codes of coded lock, numbers of electronic keys, individual settings etc.). Prior to this operation one should get acquainted with the content of this chapter.

In system CD-2502 restoring of default operation parameters for electronic cassette can be done in two ways: globally (refers to parameters set by procedures P-1, P-2, P-5, P-6 and P-10) or selectively (default values defined by individual

procedures are restored).

Global restoration of default parameters. Reset of electronic cassette.
In order to restore default parameters of electronic cassette operation pushbutton INIT (SW2) should be pressed and then a pushbutton RESET (SW1, see dwg. 24) should be pressed for a while and released. After approx. 2 seconds pushbutton INIT (SW2) can be released, at that time on the display of the external panel quickly changing digits will appear. When the countdown visible on the display stops, all default settings will be restored in the cassette: default codes of coded locks, code of installing specialist, exchange operation parameters defined in procedures P-1, P-2, P-3 and P-5.
NOTE!
It pushbutton init after having initiated remains pushed in for longer than 10 s, electronic cassette will start resetting all recorded iButton keys.
Operation mode of electronic cassette will not be changed i.e. if before restoring default settings the cassette was configured as EC-2502/H, after finishing of this operation the cassette will still operate in this mode.
Pushbutton RESET is used for momentary stopping the operation of a processor. Its pressing makes that the processor stops working, while the release causes the operation resumption; the processor starts the operation from the program beginning. The pushbutton is used in the case of exchange hang-up (it does not react to key selection and random signs appear on the display) and restoring default settings. Pressing pushbutton INIT is information for the processor that the default settings should be restored – video entry phone checks if this pushbutton was pressed just after switching on the supply or pressing and releasing of RESET pushbutton. That is why the sequence of operations is important during restoring the default values. Selective restoring of default settings of the entry phone system. Enables restoring the default values of the selected parameters without change of other parameters. This function is available for the installing specialist after entering the cassette programming mode and does not require the direct access to entry phone electronic cassette.

- P-3-7 Restoration of operation parameters and configuration of electronic cassette. Restores default values of parameters in procedures P-1 and P-2.

- P-3-8 Restores default values of coded lock codes and preset code the installing specialist. If the code of the installing specialist was changed earlier it should be remembered to change it again because quitting the programming mode will require entering the previous code. If the installing specialist has forgotten the previous code he can read it from a label on the cassette processor.

- P-3-9 Restoring the default values of individual settings for apartments.

11   Maintenance of entry phone

- In case the keyboard of entry phone gets dirty it should be wiped with a damp cloth. Surfaces through which lighting diodes are visible should be cleaned with
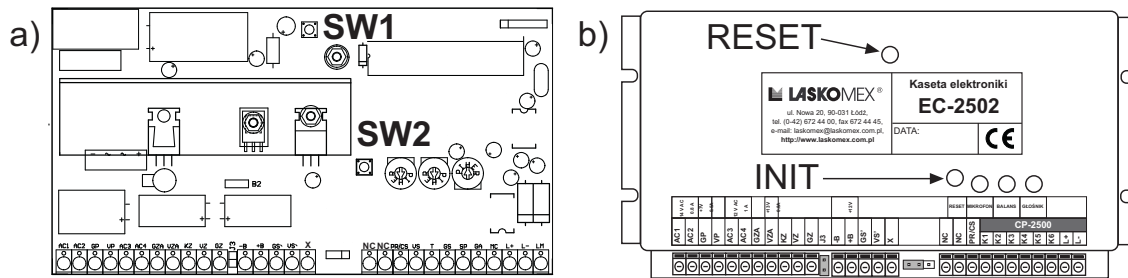
Figure 24: Position of pushbuttons INIT and RESET

special care. No visible dirt should be left on it. This surface should not be cleaned with sharp objects which can scratch the plate.

- External panels should be cleaned with means which do not contain solvents.

- Uniphones should be cleaned with a damp cloth or using the means for cleaning plastics. It is forbidden to use solvents.

- In case the monitor gets dirty it should be cleaned with a soft and damp cloth. It is recommended to do it with power cut off.

- No abrasive materials which might scratch the casing surface can be used. No benzene, solvents or strong detergents can be used because they might cause damage or discolouring of the surface.

12 Conformity with previous versions

12.1 Electronic cassette

Electronic cassettes EC-2502 can be used as replacements of electronic cassettes EC-2200, EC-2200/U, EC-2200H, EC-2500/S, EC-2500/U, EC-2500/H, EC-2501/U and EC-2501H.
Electronic cassettes will co-operate with all previous versions of external panels for the mentioned systems. If a three position display is installed in a panel, in electronic cassette settings an operation of three position display should be activated (procedure P2, parameter 3C).

12.2 External panel

External panels CP-2501xx, CP-2511xx, CP-2521xx can be used instead of panels CP-2500xx with the exception of panels equipped with electronic key readers. In previous versions of entry phones the panels were equipped with separate controllers. In system CD-2502 this function is taken over by electronic cassette so external panels have also been changed. However, there is a possibility of using the controller from the old electronic cassette and connecting it to the reader in the new panel. Using these panels requires modification of electronic cassette. Detailed information on this subject is available in Laskomex service.

12.3   Other entry phone systems

Systems CD-2501 and CD-2502 can cooperate with system CD-3100. This refers to situation when a few buildings should be enclosed with a fence in which there will be more than one entrance. In such case at the main entrance an entry phone CD-3100 should be installed (set consisted of EC-3100, CP-3100 and supplier). Subordinate entrances should be connected in such a way as if entry phone CD-2502 (line L+, L-) was installed at the main entrance. **If CD-3100 is connected with CD-2501 mode with building numbering will not operate**. In multi-entrance system built on the basis CD-2501 or CD-2502, where to one of the staircases the service of the next staircase should be added entry phone CD-2501/U or CD-2502 can be replaced with entry phone CD-3100.

13   Messages about faults

The doorphone CD-2502 can signal the following faults:

- EC: Means that two or more infrared beams are damaged or covered

- E2: Means short-circuit of uniphone line. Installation should be checked, short-circuit should be eliminated or damaged uniphones should be replaced. By measuring current input on uniphone line, the nature of fault can be determined.

- E0: This message means that system memory EEPROM is damaged in the electronic cassette.

- EEr: Means an error in recording or in reading memory with system settings or codes of combination lock

14   Technical data

14.1   Degree of protection

Electronic cassette EC-2502:	IP20
External panel CP-xxx:	IP44
Uniphone (each model for CD-2502):	IP30
Monitor (each model for CD-2502):	IP30
CVR-1, CVP-1, CVR-2, MRL-1:	IP30

14.2   Description of terminals

Electronic cassette

AC1	cassette supply 14,5 V AC
AC2	cassette supply 14,5 V AC
GP	mass of non-stabilized voltage
VP	non-stabilized voltage output
AC3	electro-catch supply 12 V AC
AC4	electro-catch supply 12 V AC
GZA	mass of electro-catch supply
VZA	electro-catch supply
KZ	output of key switching on the electro-catch
VZ	output of key switching on the electro-catch
GZ	mass of the key switching on the electro-catch
GS'	mass of stabilized voltage
VS'	stabilized voltage +12 V
PR	door opening pushbutton
CS	selection of video signal source
K1 (VS)*	stabilized voltage +12 V
K2 (T)*	digital transmission
K3 (GS)*	mass of stabilized voltage
K4 (SP)*	loudspeaker
K5 (GA)*	analogue mass
K6 (MC)*	microphone
L+	uniphone line
L-	uniphone line
LM	master line (for connecting the main exchange)
NC	free terminal (e.g. for connecting two wire sections)
X	input of electronic key reader
B+	connection of accumulator (+)
B-	connection of accumulator (−)
NC	auxiliary terminal

External panel

K1	el. supply of the cassette digital part
K2	digital data from/to cassette
K3	digital mass (display system)
K4	loudspeaker of talking cassette
K5	analogue mass
K6	microphone of talking cassette
C1+	video signal output (only CP-2500VTM)
C1-	video signal output (only CP-2500VTM)
X+	electronic key reader
GX-	electronic key reader − mass

Uniphones

L+   Uniphone line
L-   uniphone line mass
BR   control of entrance gate drive

CVR1

T+, T-   universal outputs
L+, L-   digital-analogue line
C+, C-   video output
VC   supply (+)
GND   mass

CVR2

L+, L-   digital-analogue line
C+, C-   video output
+15V   supply (+)
GND   mass

CVP-1

CS   selection of video input
V+   supply of switch (+)
V-   supply of switch (−)
LM   LM line
L-   line L+
L+   line L-
X+,X-   vision signal output
Y+,Y-   vision signal output
C1+,C1-   video input
C2+,C2-   video input

15   Dimensions of elements
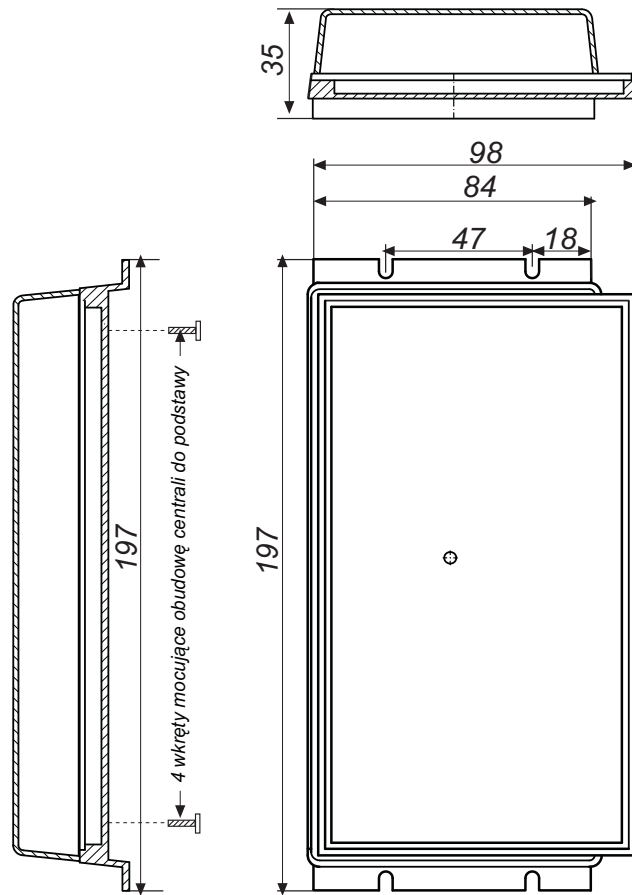
Figure 25: Dimensions of electronic cassette EC-2502
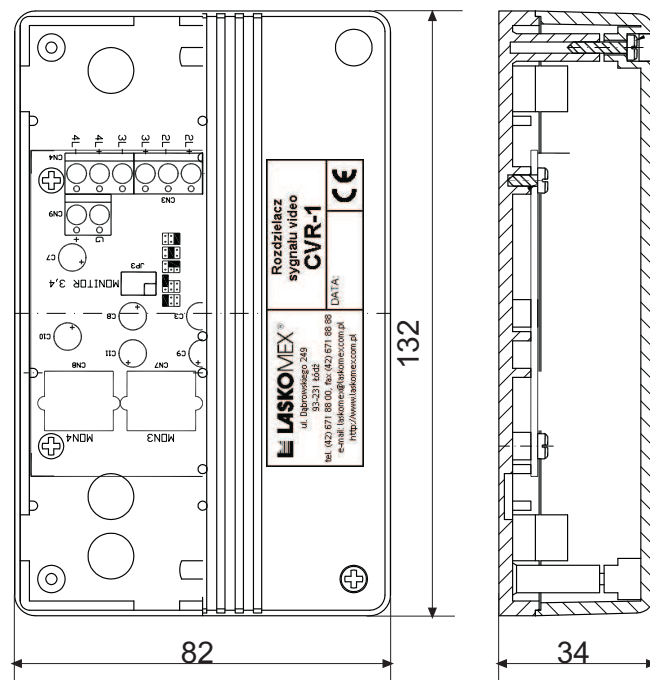
Figure 26: Dimensions of distributor CVR-1, CVR-2 and switch CVP-1
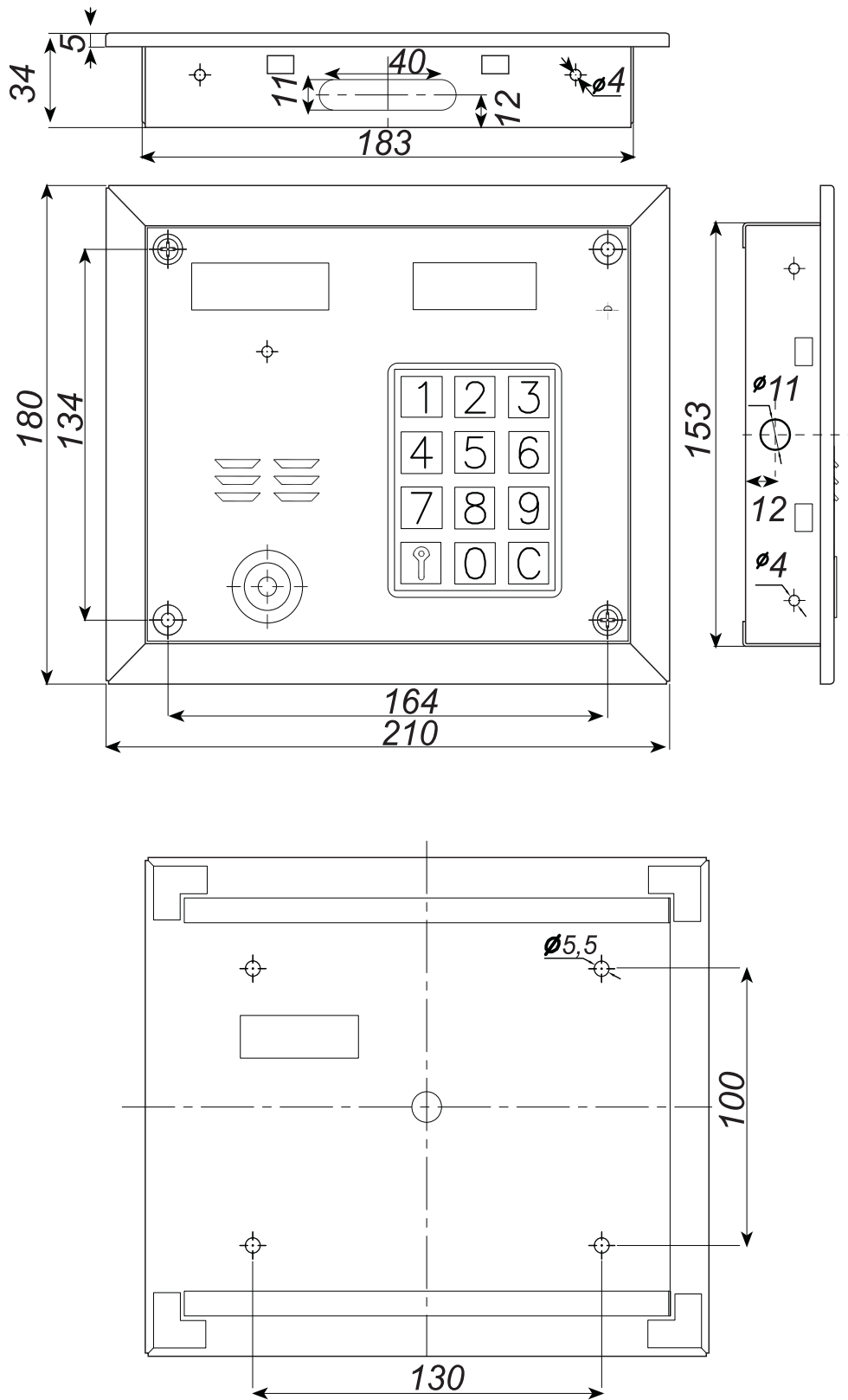
Figure 27: Dimensions of panels CP-2501xx with a frame for mounting under plaster
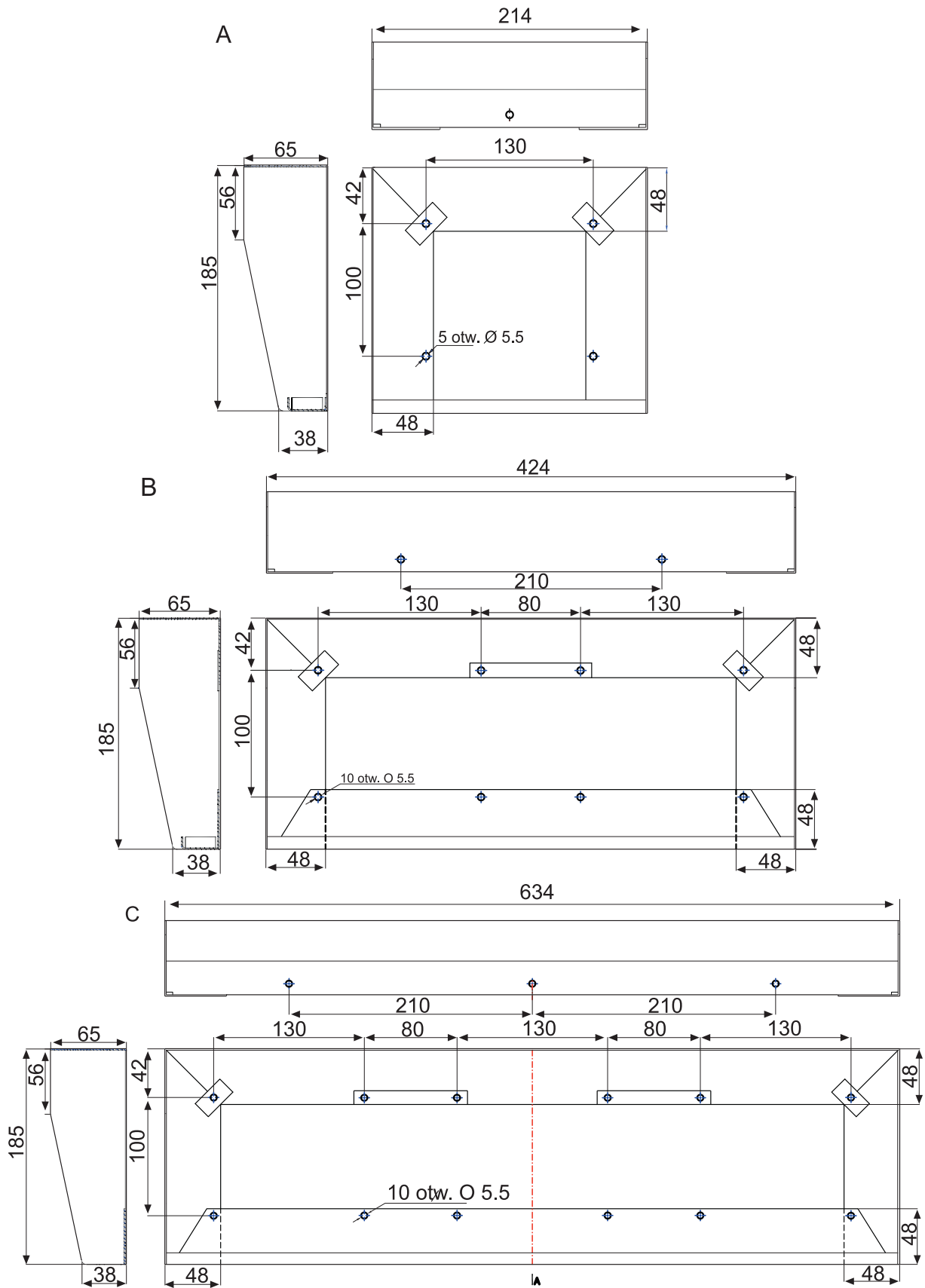
Figure 28: Dimensions of casings mounted on plaster in horizontal arrangement, for panels CP-2501xx
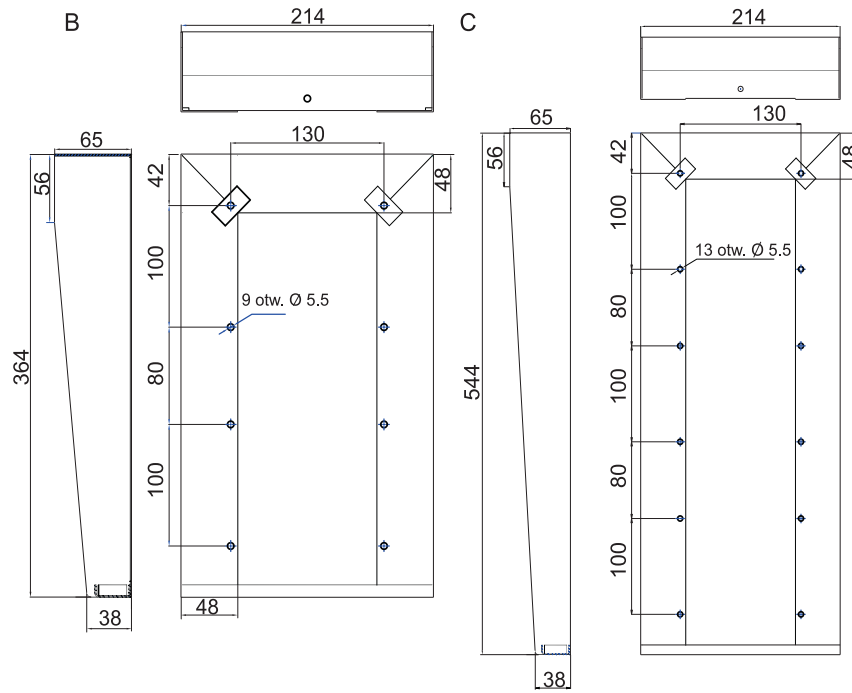
Figure 29: Dimensions of casings mounted on plaster in vertical arrangement, for panels CP-2501xx
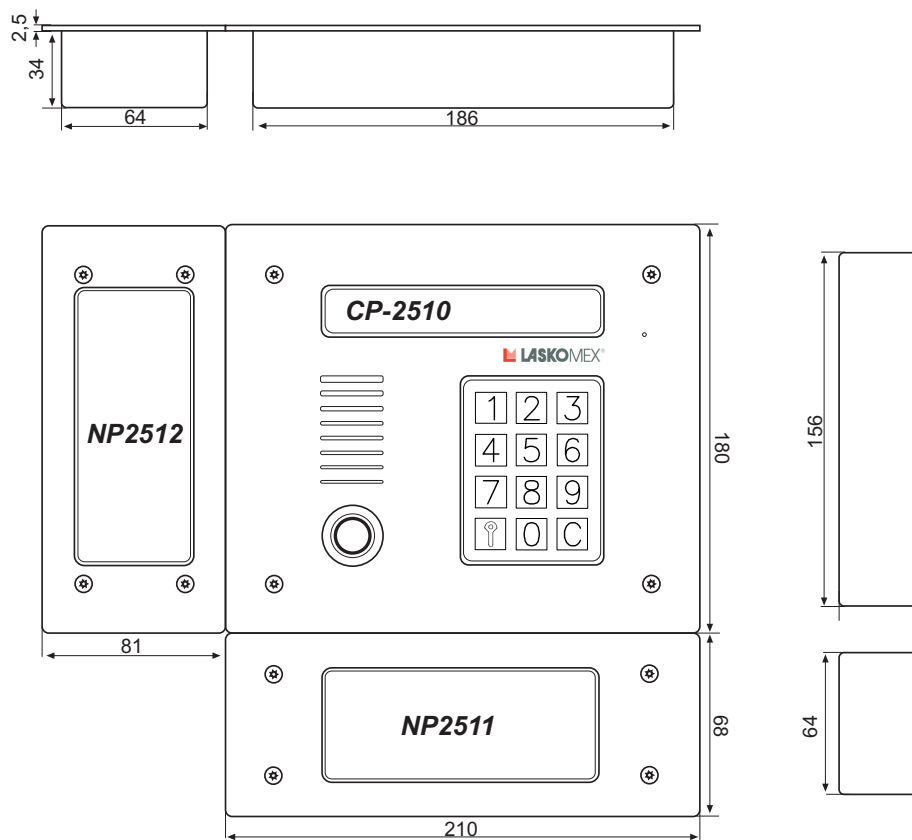
Figure 30: Dimensions of panels CP-2510 and panels NP2512, NP2511
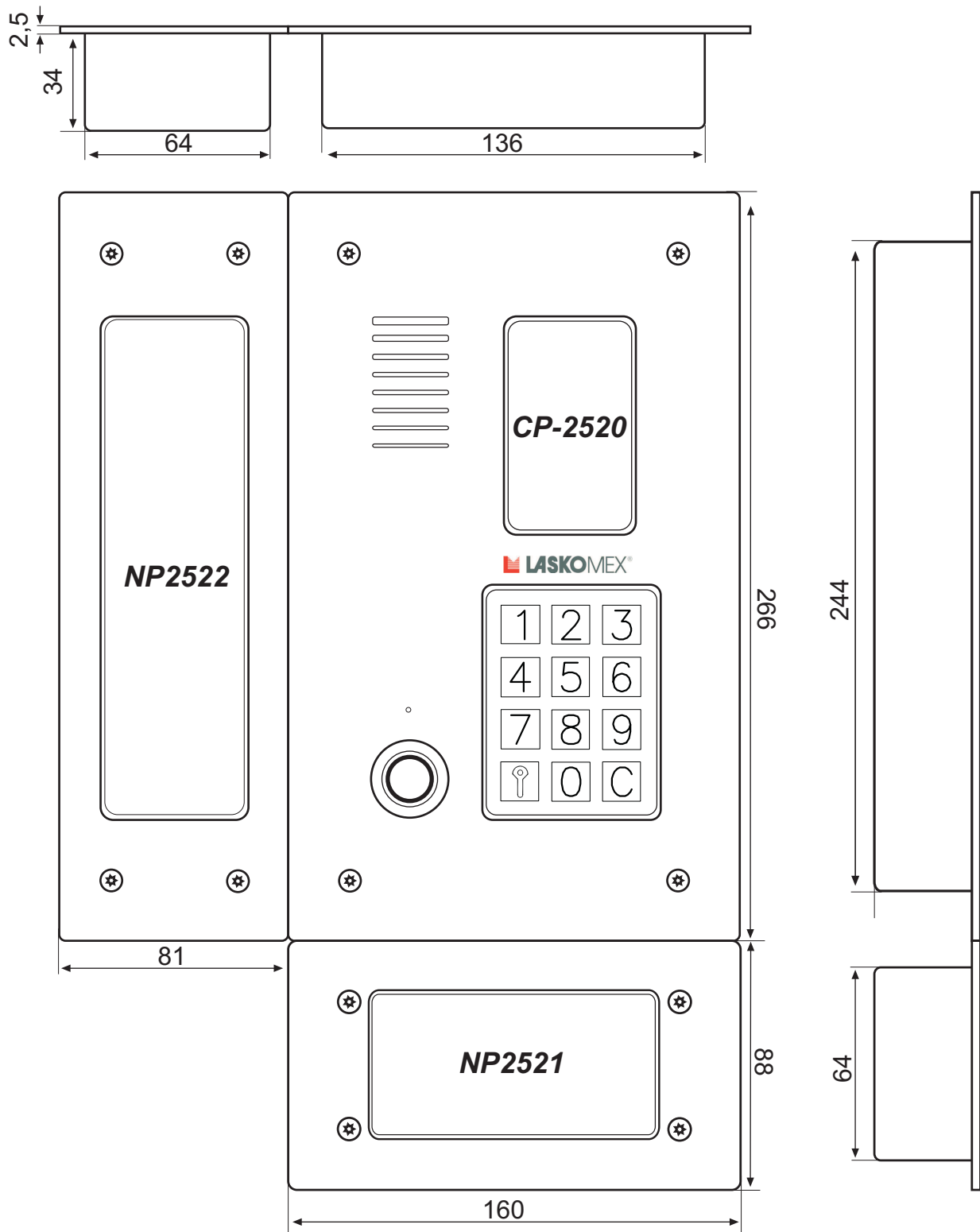
Figure 31: Dimensions of panels CP-2520 and panels NP2522, NP2521

16   Selection of wires and connection diagrams

E - the furthest uniphone

2 (B1,B2)   Doorbell button

LG-8d

Distance feeder-LG-8d		
Clamps	<50m	<100m
VS,GS	0,5mm	2x0,5mm

YTKSY,UTP,LAN T11

15V DC/1A

LG-8d   **2**

	Distance
Clamps	<15m
GS,VS	1mm^2

any

uniphone

Distance U-E		
Clamps	<50m	<150m
L+,L-,	0,5mm	2x0,5mm

YTKSY,UTP,LAN T11

2

U

OPTION
15V DC/4A

EC-2502/U   **4**

Staircase 1

8   **CP-25xx**

2

to another staircases   **2**

| Distance H-U			
Clamps	<50m	<150m	<250m
EC/H	EC/U			
L+,L-	LM,L-	0,5mm	2x0,5mm	3x0,5mm

YTKSY,UTP,LAN T11

	Distance
Clamps	<15m
AC1,AC2, AC3,AC4	1mm^2

any

H

Option
Accumulator 12V/6Ah   **2**
(B+,B-)
0,5mm
<1m

EC-2502/H   **4**

ZS-K-25/01

Clamps		Distance
CP	EC	<15m
Kx	Kx	0,5mm
X,GX	X,GS	0,5mm

YTKSY,UTP,LAN T11

8

2

	Distance
Clamps	<15m
GZ,KZ	1mm^2

any

2(K1,K3)

List of occupants   **CP-25xx**

2

	Distance
Clamps	<15m
GS,PR	0,5mm

any

Electro-catch   **Dooropen button**

Figure 32: Selection of wires for entry phone CD-2502 in audio version.

E – the furthest monitor

to another CVR

	Distance
Clamps	<30m
L+,L-,C+,C-	0,5mm
VC,GV/GC	0,5mm

YTKSY,UTP

CVR-1

6   MON1

M

MV-645x   15V DC

MON4 MON3 MON2

CVR-2   MON4   MON3

	Distance	
Clamps	<15m	<30m
L+,L-,C+,C-	0,5mm	
+15V,GND	0,5mm	2x0,5mm

YTKSY,UTP

	Distance
Clamps	<15m
+15V, GND	1mm²

any

2

15V DC /4A

MON2

M

MVC-6x50

	Distance U-E	
Clamps	<50m	<150m
L+,L-,	0,5mm	2x0,5mm
C+,C-	0,5mm	

YTKSY,UTP,LAN T11

4

4   MON1

MVC-6x50   13,5V DC

	Distance
Clamps	<30m
L+,L-,C+,C-	0,5mm

YTKSY,UTP

Staircase 1

DISTRIBUTION CABINET   **U**

EC-2502/U   **4**

8

0,5mm
YTKSY,UTP,LAN T11   **6** (LM,L+,L-,
V+,G,CS)

CP-25xx

CVP-1   **2** (C+,C-)

connections the same like in EC-2502/H

to another staircases   **4**

4

		Distance H-U		
Clamps		<50m	<150m	<250m
EC/H	**CVP-2**			
L+,L-	LM,L-	0,5mm	2x0,5mm	3x0,5mm
NC,NC	C+,C-		0,5mm	

YTKSY,UTP,LAN T11

	Distance
Clamps	<15m
AC1,AC2, AC3,AC4	1mm²

any

H

OPTION

Accumulator 12V/6Ah   **2**

(B+,B-)
0,5mm
<1m

EC-2502/H   **4**

ZS-K-25/01

Clamps	**Distance**	
CP	**EC**	<15m
Kx	Kx	0,5mm
X,GX	X,GS	0,5mm
C+,C-	NC,NC	0,5mm

YTKSY,UTP,LAN T11

10

2

	Distance
Clamps	<15m
GZ,KZ	1mm²

any

2(K1,K3)

List of occupants   **CP-25xx**

2

	Distance
Clamps	<15m
GS,PR	0,5mm

any

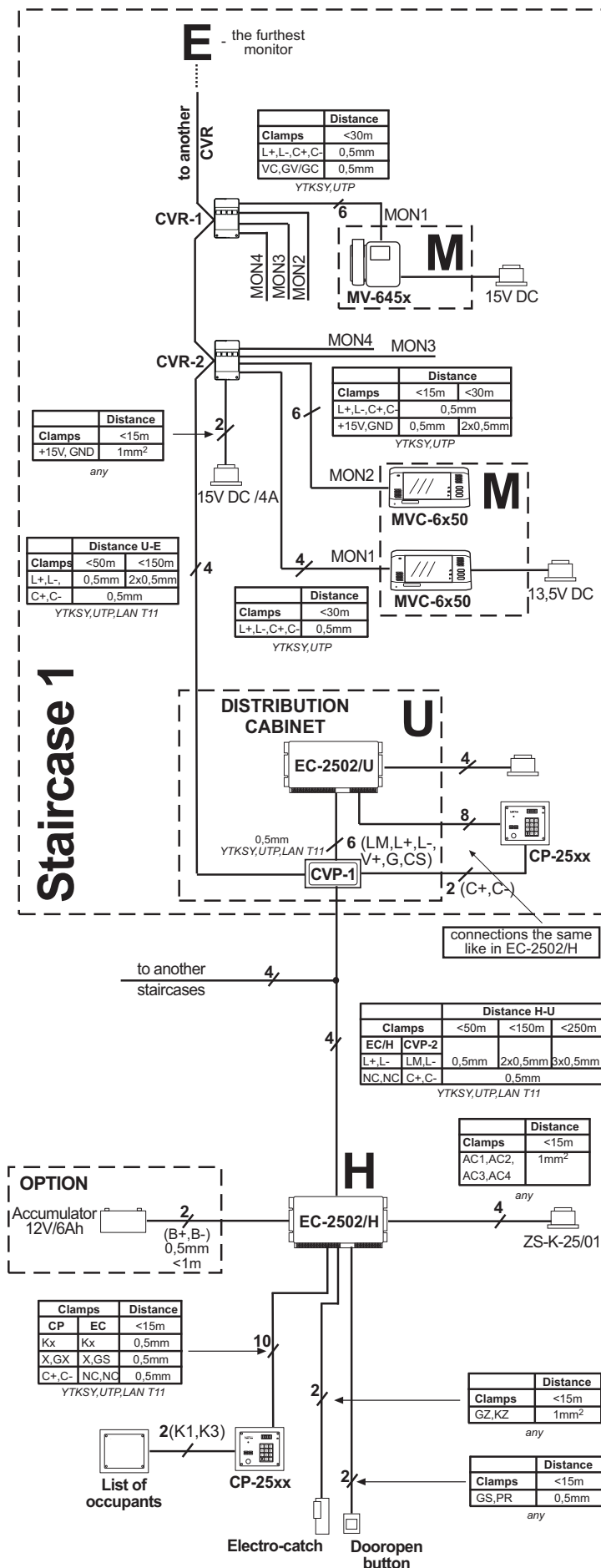**Electro-catch**   **Dooropen button**

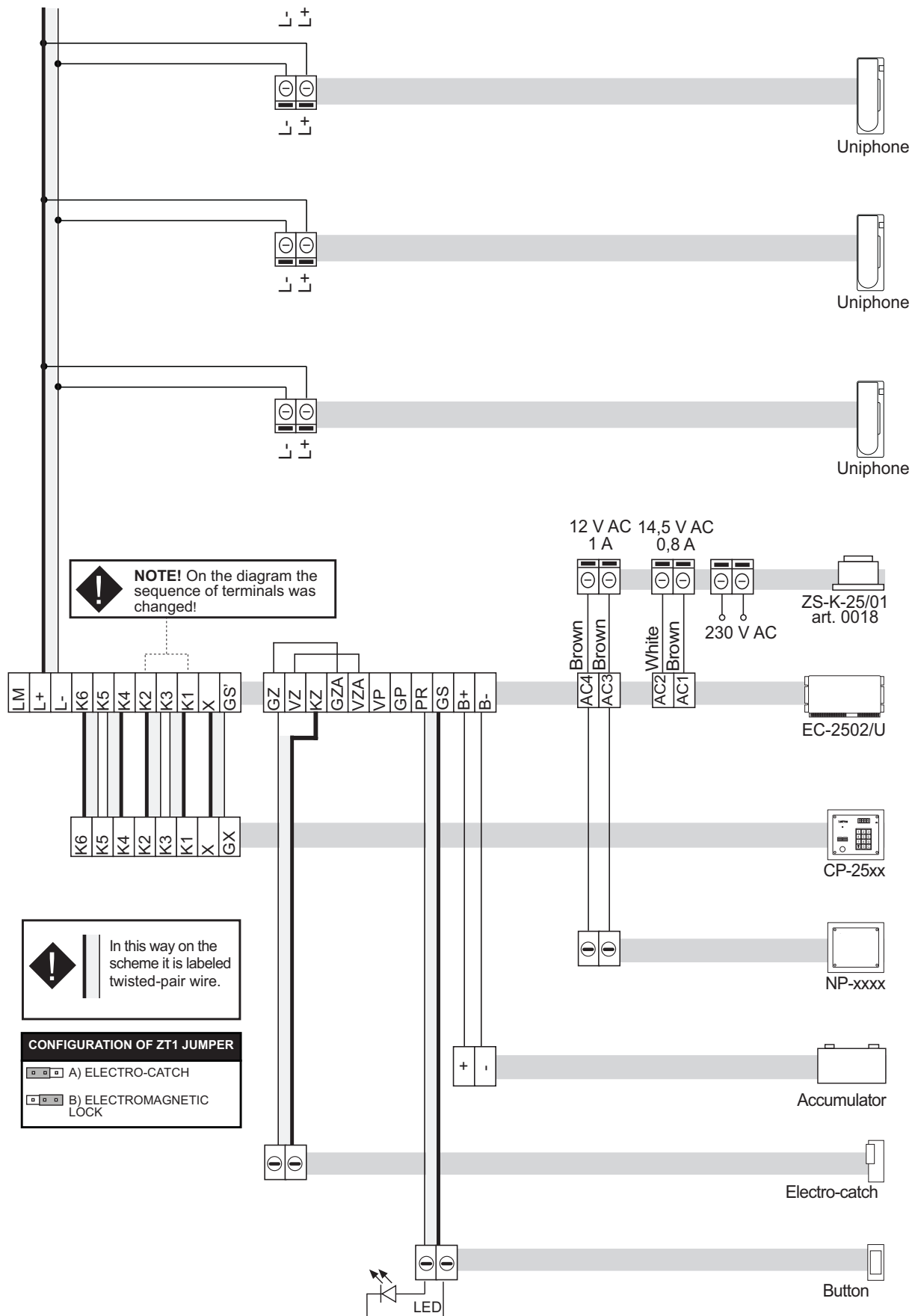Figure 33: Selection of wires for entry phone CD-2502 in video version.

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Figure 34: Entry phone CD-2502 audio – basic system. **NOTE!** For electromagnetic lock set parameter [Fry] to value '0'! For ensuring clarity of the diagram terminals are not shown in sequence!
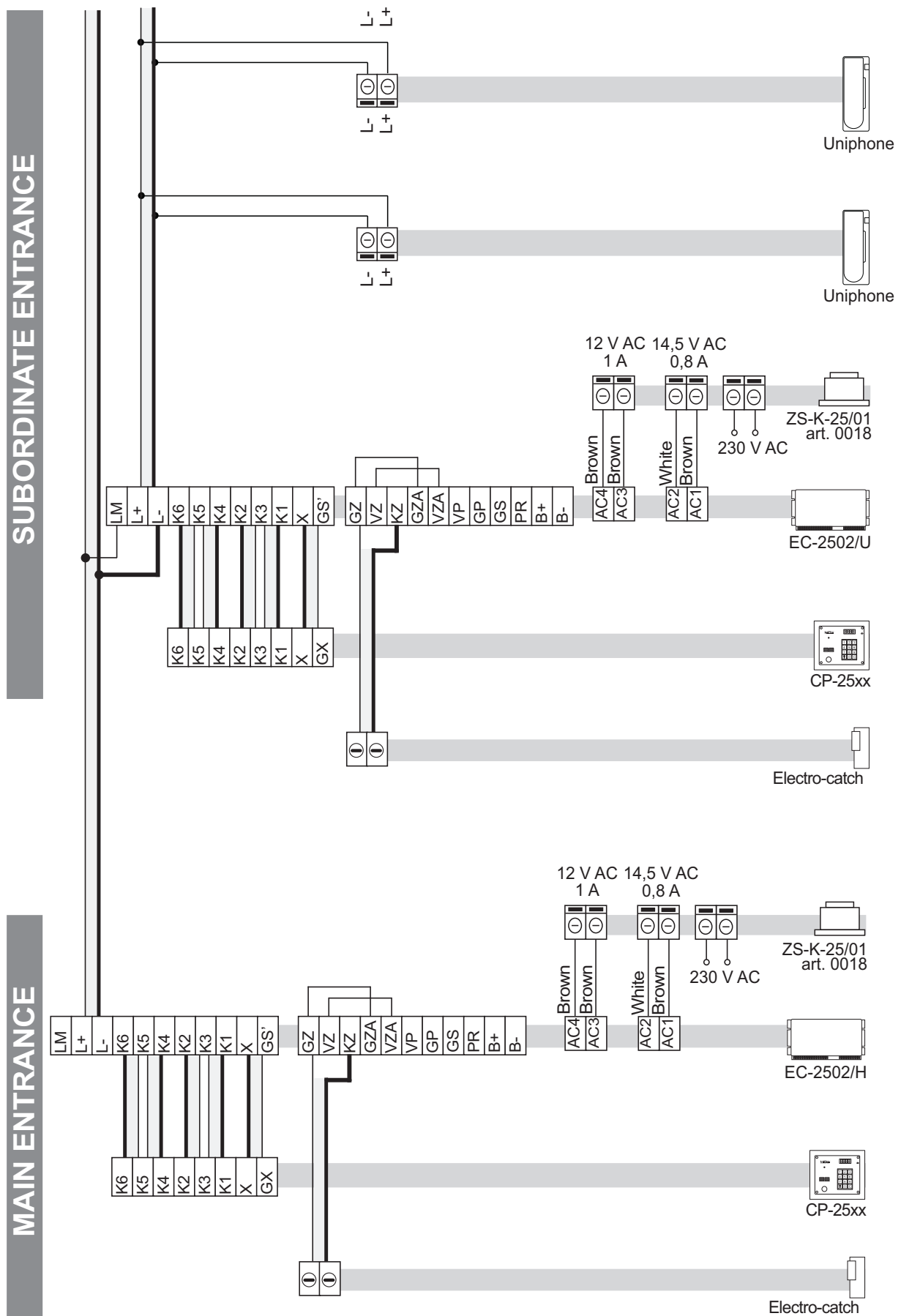
Figure 35: Entry phone CD-2502 audio – multi-entrance system. Connection of other elements such as accumulator, list of occupants etc. according to dwg. 34
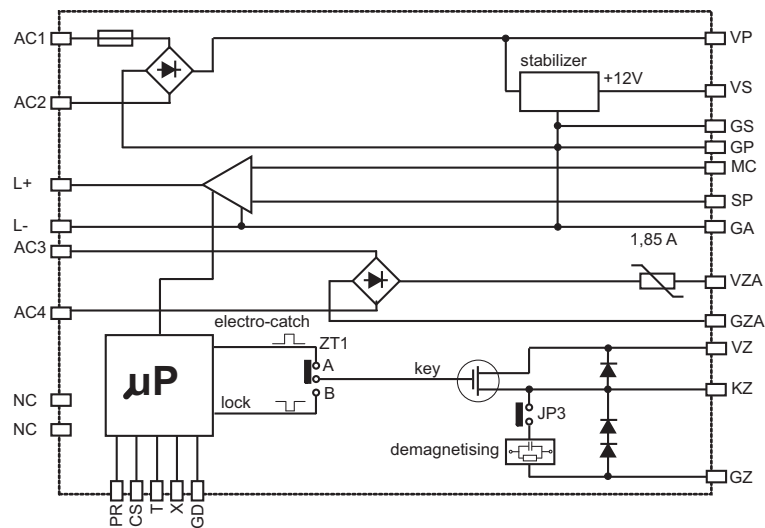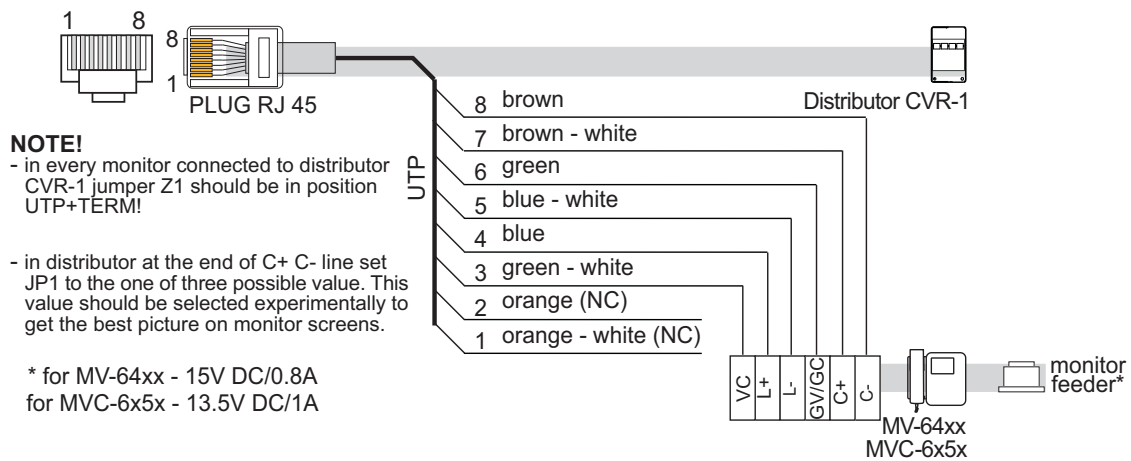
Figure 36: Electronic cassette block diagram

NOTE!
- in every monitor connected to distributor CVR-1 jumper Z1 should be in position UTP+TERM!

- in distributor at the end of C+ C- line set JP1 to the one of three possible value. This value should be selected experimentally to get the best picture on monitor screens.

  * for MV-64xx - 15V DC/0.8A
  for MVC-6x5x - 13.5V DC/1A

8 brown
7 brown - white
6 green
5 blue - white
4 blue
3 green - white
2 orange (NC)
1 orange - white (NC)

Figure 37: System CD-2502 video. Connection of monitor – description of plug and socket RJ-45 used for connecting the monitor in use with CVR-1 distributor.
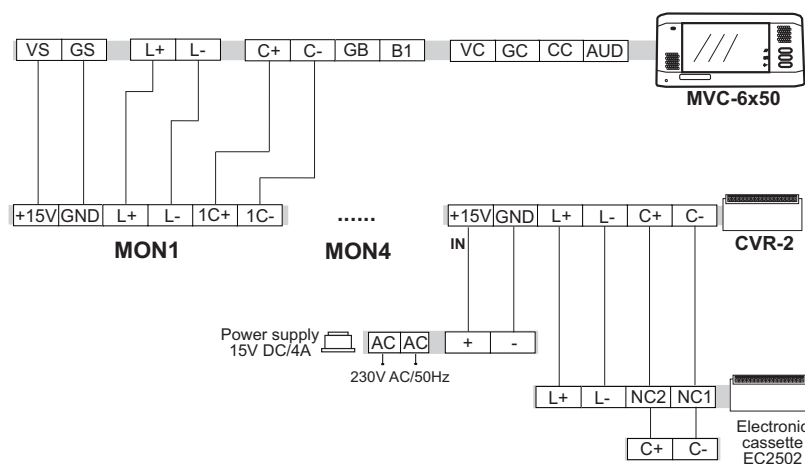
Figure 38: System CD-2502 video. Connection of monitors using CVR-2 distributor - central power supply of monitors
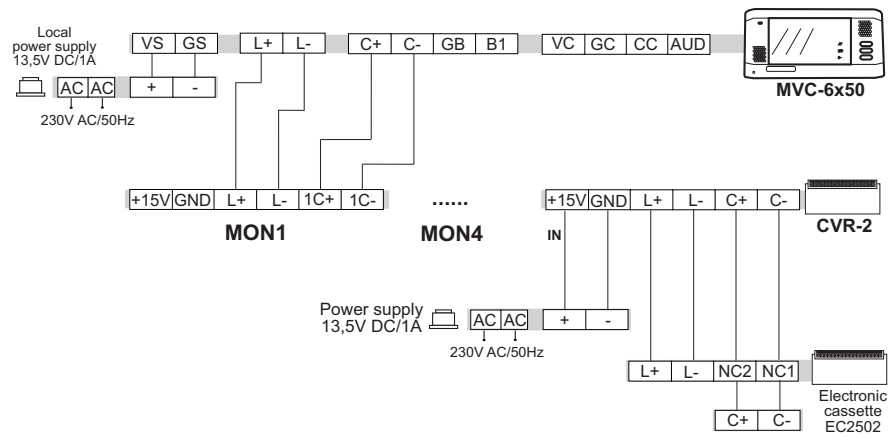
Figure 39: System CD-2502 video. Connection of monitors using CVR-2 distributor - local power supply of monitors
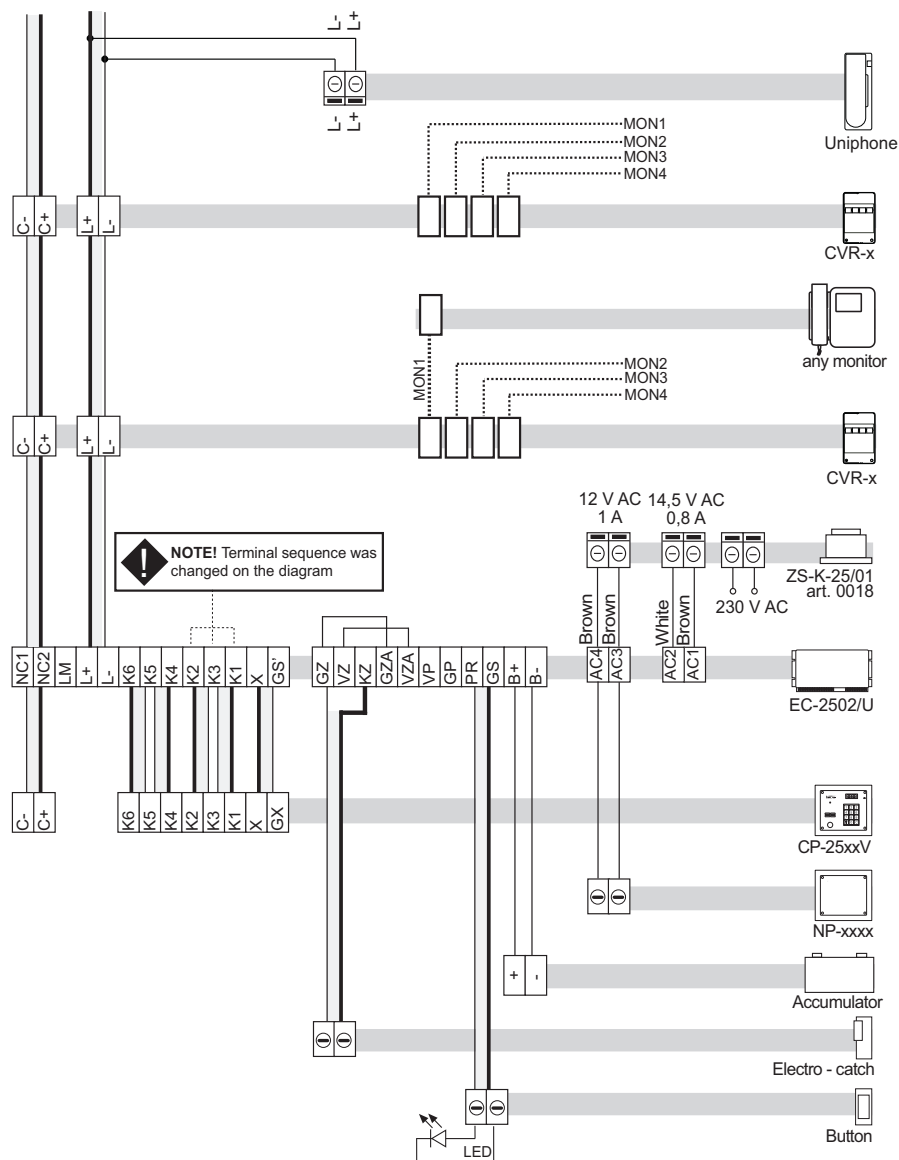

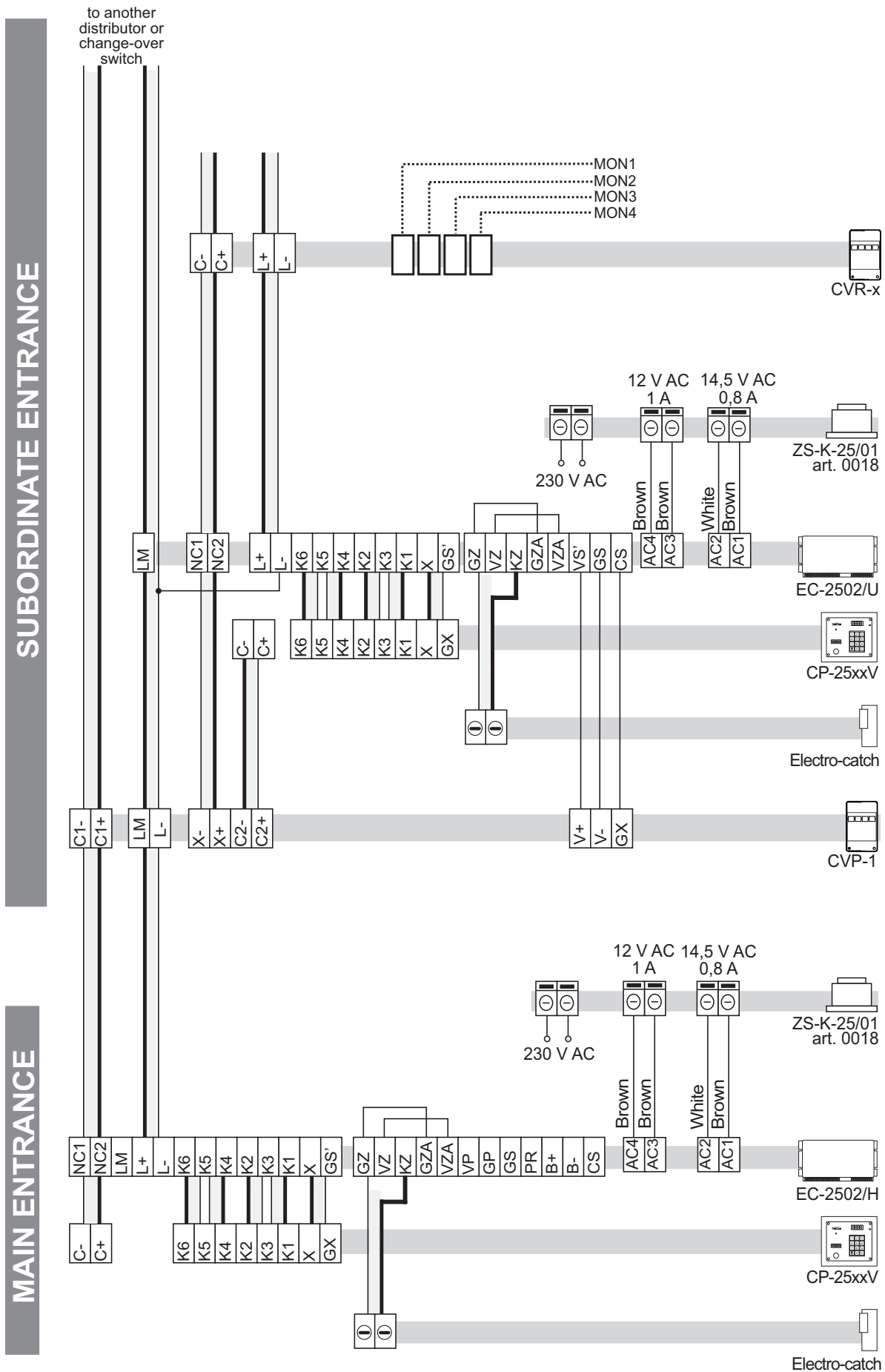Figure 40: Entry phone CD-2502 video – basic system for one staircase.

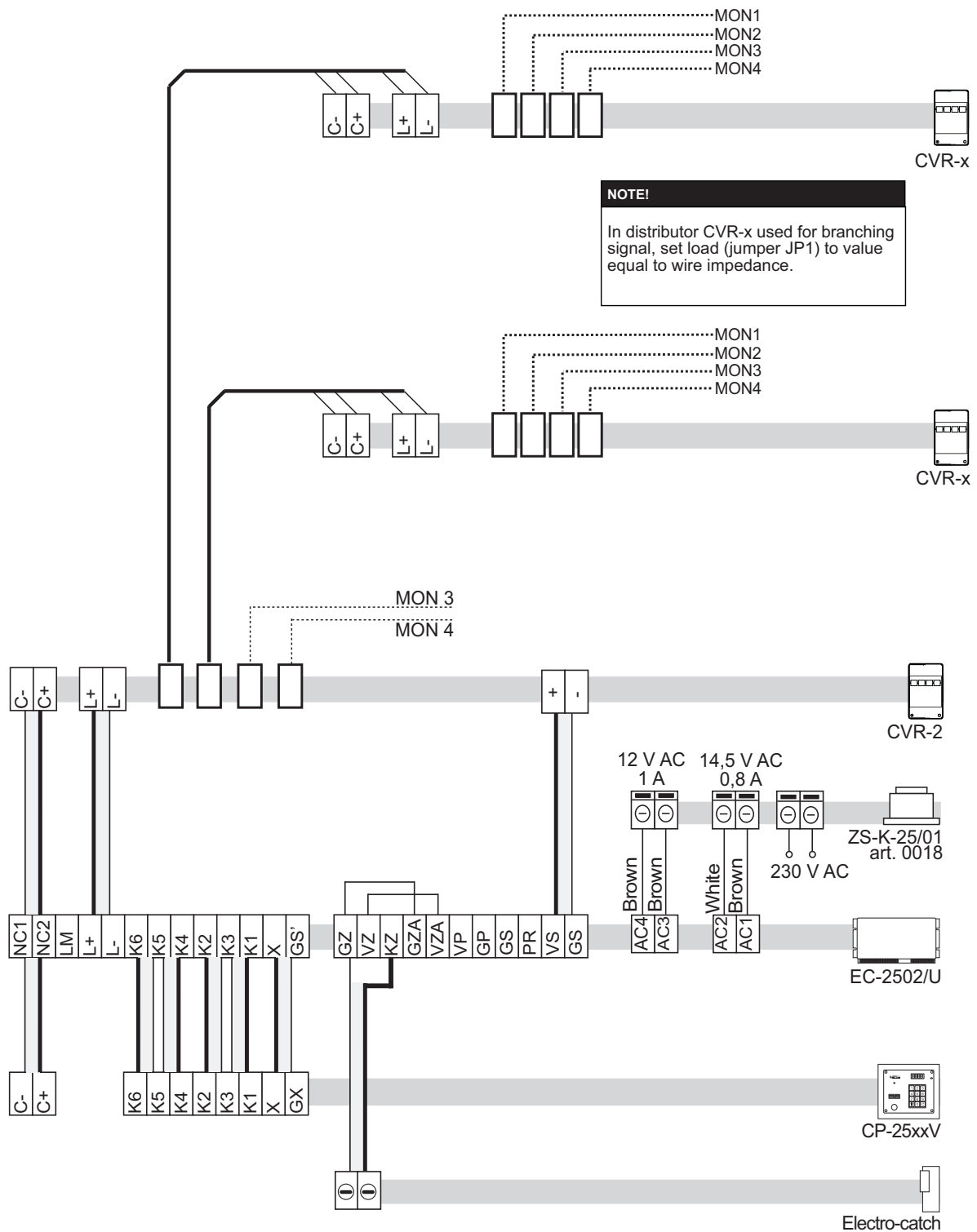Figure 41: Entry phone CD-2502 video – multi entrance system.

Figure 42: Entry phone CD-2502 video – branching of the signal by means of distributor CVR-2.

INSTRUCTION ON ENVIRONMENT PROTECTION

This product was marked with a symbol of crossed dustbin according to European Directive 2002/96/WE on used electric and electronic equipment. Used equipment cannot be placed with other wastes from households. Product user is obliged to give it to the firm which collects used electronic or electric equipment such as local collection points, shops, places appointed by the producer or commune waste collection units.

List of collecting units of used Laskomex equipment is available on www.laskomex.com.pl website   or telephone No. 42 671 88 68.

Product packing should be removed according to environment protection regulations.

Remember!
Selective collection and recycling of used electronic and electric equipment considerably contributes to the protection of human health and life as well as protection of natural environment.
Return of packaging materials for the material recycling saves raw materials and reduces generating of wastes.

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