



**EXTENDED USER MANUAL OF CDPN7ACC AND INSPIRO+
DIGITAL DOOR ENTRY SYSTEMS**



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It is forbidden to install the units without first reading the following instructions.

I. GENERAL INFORMATION

The 700 series is a range of modern digital door entry units with apartment number display and access control function. These units feature a large, backlit LCD display and backlit keypad (with blue backlight in case of CDNP7 and white backlight in INSPIRO+). The keypad can be used both to call any apartment, selecting a number in the range from 0 to 999999 as well as to unlock the door using 4-digit, individual user code. Units with a proximity reader also support cards and RFID proximity key fobs in Unique 125 kHz standard (CDNP7ACC supports proximity key fobs, while INSPIRO+ supports both cards and key fobs).

Backlit and modern keypad made of stainless steel means failure-free operation for a long time. Keypads like this are widely used by telecoms in modern equipment, easily accessible to the public particularly vulnerable to devastation (vending machines, telephone booths, etc.). Also available are Braille keypads. A special sensor activates a display heater when the temperature drops (below 5°C) to greatly improve display readability.

The 700 series door entry units require double wire installations (audio version) or a T568B standard UTP (Video version). They are suitable for use with uniphones featuring digital decoding: INS-UP, INS-UP720, UP800 or INS-MP, INS-MP7 and MP800/UP800V video inside units. It is possible to expand them with different additional modules. They will also work with door entry units of other CDNP series (Master / Slave mode).

Housing of CDNP7 units is made of aluminium alloy, while INSPIRO+ panels are made of stainless steel. This type of housing ensures effective protection against devastation and weather conditions, while still being a modern design. The 700 series units are easy to operate, functional, their installation is simple and are adaptable to the changing requirements of contemporary housing construction.

The 700 series door entry units can be expanded to complex multi-entry systems that combine a number of devices operating in a single system, for instance residential estates with access control, gate house, main gate, building entrances etc. In practice this makes it possible to call an apartment both at the entrance to the site as well as the entrance to a building or staircase. To enable this, the 700 series door entry units are available in both Master (primary unit in the system or a stand-alone unit) as well as Slave versions (secondary units in the system). One unit will support up to 255 apartments as a standard (receiver addresses), however INSPIRO+ panels are capable of supporting up to 1020 units apartments if optional modules extending the system to 4 zones (SW4S-DIN) are used.

Their other advantage is the possibility to individually program the ringing parameters for each apartment, by choosing one of the four available signals, signal repetition in the ringing cycle, door opening signal and automatic opening. With eight programmed additional numbers it is possible to call one uniphone using many different numbers (each with different ringing settings), such as in a

tenement house where one uniphone is used by several apartments on the same floor.

Door entry units feature one built-in input activated by short circuit to ground. It is used to connect an external "doorbell" button, such as INS-OB. The default operating mode is direct opening of the door (E-lock activation) - for instance when leaving the staircase. It is also possible to set door opening delay or switch to direct call mode. The door opening delay is programmable in installer's menu and the mode settings can be changed using a computer software.

The units also feature a second built-in relay output (only Master panels), which can be used to control additional devices such as another gate, lighting, etc. These additional devices can be controlled both from the uniphone (F2 button) as well as by using individual resident codes or proximity cards/key fobs. Slave panels require an optional CDN-I/O input/output module with 2 NO/NC relay outputs and two inputs activated by short circuit to ground. The CDN-I/O module may also be used in Master panels and can support a number of applications, described in the computer program or on the website.

The unit features an output for connection of a standard or reversible E-lock. Use CDN-PK relay module to connect another device in place of the E-lock. It is also possible to use one door entry unit to control two pairs of doors - to open the right apartment door (CDN-I/O module required). Apartments can be freely assigned for opening specific door.

Use the optional CDN-USB cable and the computer software that can be downloaded free of charge from www.support.aco.com.pl to program settings, create backups and transfer settings to other units. Use the "x700" software to manage unit's settings and the "ACC_v70" software (version v7.0 or later) to manage proximity cards or key fobs

The 700 series door entry units are also highly resistant to theft and tampering. Even stolen unit is useless without the installer password.

II. TECHNICAL PARAMETERS

- ⊕ Number of subscribers (individual addresses): up to 255 programmable, possible expansion to 1020 (INSPIRO+ only) with 4-zone module (SW4S-DIN).
- ⊕ Six characters, large and heated LCD display (improved readability at low temperatures),
- ⊕ Audio system power supply: (12V ± 0.5V) AC or 15V^{+0.5V}_{-1.5V} DC,
- ⊕ Video system power supply (including Audio):
15V^{+0.5V}_{-1.2V} DC,
- ⊕ Minimum power consumption in standby mode ~0.6W,
- ⊕ Current consumption of door entry units (without E-lock and additional modules):
- CDNP7ACC: 290mA

- INSPIRO+ 1: 250mA
 - ⊕ Current consumption of additional modules:
- electronic resident list module (230E module): 90mA
- RFID proximity card and key fob reader module: 40mA
- camera module: 150mA
- illuminated description window modules: 5mA
 - ⊕ Permitted load of E-lock output: 1A (0.5A for reversible)
 - ⊕ Permissible load - second output (relay): 2A, 30VDC;
 - ⊕ Maximum line length: Audio 300m*, Video: 70m to last power supply - max 300m* using additional power supplies, (*length for cable cross sections 0.5mm - refer to page 13 for more information)
 - ⊕ CDNP7 housing: powder coated aluminium alloy casting with 3mm hexagon screws.
 - ⊕ Frames for flush-mounting of CDNP7:
 - CDN-R2-S small frame: dimension 229x111, mounting dimension: 210x92x33.5 (including 1.5mm flange); suitable only for CDNP7 or other module of the same height (such as CDN-10N);
 - CDN-R2-M medium frame: dimension 290.5x111, installation dimension: 271.5x92x33.5 (including 1.5mm flange); suitable for CDNP7 and small modules (such as CDN-5N)
 - CDN-R2-L large frame: dimension 352.5x111, mounting dimension: 333.5x92x33.5 (including 1.5mm flange); suitable for CDNP7 and medium modules (such as CDN-6N)
 - any number of frames of the same size can be combined horizontally or vertically using mounting components
 - ⊕ INSPIRO+ housing: stainless steel mounted using 4mm Allen screws for 3mm Allen key,
- Panel dimensions: width 111mm, other dimensions depend on panel version - refer to product data sheets (catalogues) of individual panels for detailed information or visit www.aco.com.pl
- Refer to product data sheets (catalogues) of individual products for detailed information or visit www.aco.com.pl for dimensions required for installation of relevant panels:

III. OPERATION

In standby (factory settings) the display shows "aco". Using a PC, this can be changed to any other 6-character inscription or to 6 different screens (6 characters each), displayed in cycles with any interval in the range of 1 second to 16 seconds. The displayed text can also be set as a scrolling message with pre-set scrolling rate, by typing "_" after the last character.

To call an apartment, its number must be selected using the keypad (the number will appear on the display). Within 3 seconds the receiver in the apartment will start ringing. The pre-set number range is 1 to 255, which corresponds to the physical addresses in the receivers. Using the computer program ("List of call numbers") it is possible to set any call number in the range 0 to 999999 (with "0"

also being recognisable) and assign it to the address of the receiver (1 - 255). In order to limit the range of supported receivers, unsupported numbers should be disabled (such disabled number may not be called then) - by deleting such numbers and leaving the cell empty.

In 230E module, the entry (such as resident or company name) needs to be selected using arrow keys and followed by pressing the "doorbell" key. Press and hold the arrow key to display letters of the alphabet to be displayed - then select a letter and press the "doorbell" key to display the first surname starting with the selected letter. Alphabetical sorting and first letter search is a default setting - it can be changed using the computer program (230E, version 7.0 or later). After disabling this option, pressing and holding the arrow key will display entries one after another.

The unit will first send the ringing tone (twice by default) and will switch to standby mode awaiting for the call to be answered. If the call is not answered within 20s, another single signal is sent and the unit goes into standby again for another 20 seconds. While awaiting for the call to be answered, the display backlighting will blink. If the call is not answered within some 40s, the door entry unit will automatically switch from calling to standby mode. Calling can always be cancelled with the "#" button.

If the call is answered, communication is possible, door can be opened and additional devices can be controlled (F2). The connection can be ended by hanging up the handset on the receiver, pressing the "#" key or automatically after approximately 2 minutes (this time can be set shorter using the computer program).

The unit also supports eight additional numbers (to be configured using the computer program). These can be any number, up to six digits, to which physical addresses of the receivers can be assigned. Additional numbers can be assigned to the same receiver so that it can be called using different numbers (for instance two additional numbers and one basic number). Each such additional number may be configured with different ringing parameters: ring tone, volume, number of signals, automatic opening and door opening signal when using the access code (these will be used when additional numbers are the same as basic numbers). If such additional number is not answered when called, the call can be redirected to another number (receiver address).

Individual access codes for each apartment are the codes in the table, corresponding to physical addresses of the receivers (set in uniphones using jumpers).

When the door is being opened (usually by releasing the E-lock) the display shows "**Enter!**" (for persons with hearing impairment) and a signal is heard from the loudspeaker (for persons with sight impairment). The opening time can also be changed directly at the door entry unit (it is pre-set to 4 seconds).

The door can be opened:

1. With the "key" button on receiver in the apartment

The door will open upon pressing the opening button ("key") on the receiver. Typically, the door can be opened **only** during connection (conversation). During one connection the door can be opened three times (that together with enabling the second output - F2), after which the connection will terminate automatically (the parameter can be set to: 1, 2 or 3). The door can also be opened without having to connect with the apartment - refer to the I/O module settings in the computer program for details. In this case, on classic uniphones the handset must be picked up and the open button pressed three times, on active receivers (INS-UP720MR, UP800/MP800, INS-MPx) the open button must be pressed once.

2. With user's access code

Use the keypad to select the apartment number to which the code is assigned, confirm with the "**key**" button and enter the four-digit code. The code is unique for each apartment and can be easily changed. Access codes are pre-set by the manufacturer as a code table. Each table has its unique 4-digit number, used to generate 255 different access codes for residents. INSPIRO+ supports up to 4 different code tables, thus making it possible to use 1020 different codes.

Full table with residents' codes or residents' name tags together with use instruction can be printed using the "ACO Code Generator" available at www.aco.com.pl - user zone ("download"). A name tag may include a logo and one line of text for company name and phone number etc..

In Master panels the code table is entered at the factory as a 4-digit number at the back of the unit; the same table must then be entered in Slave panels. The installer can check (in P1 program) the current value of each code and change it if necessary.

For the code table number "**9999**" opening with a user's code is disabled.

Access codes may also be changed by the users (this function must be activated using the computer program: "Code change activation"). To change the code, press the "key" button during the first seconds of door opening (as the "Enter" sign is displayed). The unit will switch to code change mode (it will display "OpenCode"); enter the new code when "----" is displayed, then enter the new code again when prompted by the "Repeat" message. Successful code change will be confirmed by "Done" on the display. The code change process can be cancelled by pressing the "#" key.

3. With proximity card or key fob

Units with the ACC proximity reader can be used with proximity card or key fob (resident's or administrator/installer's), programmed in the unit. A card or key fob which is not programmed will generate a "beep" sound twice.

4. With administrator's access code

To get access using the administrator's code, press the "**key**" button on the keypad and then enter the six-digit administrator's code (it can be modified to a

four-digit code). This code is used by persons such as technicians, postmen, housekeepers, etc. Up to five administrator's codes can be pre-set.

5. With any key on the keypad in case of a malfunction

If calling an apartment is not possible due to a failure (such as short circuit on uniphone lines - message: "Zwar.L"), door can be opened with any key on the keypad.

6. With additional external button

Opening is always possible when additional INPUT is short circuited to ground, even in absence of connection with the apartment or when a call is not being made. Opening delay can be pre-set. Any normally open button, such as INS-OB, can be connected to the input. The input is protected against short circuit (short circuit triggers its disconnection from the system). Also, door opening delay can be pre-set (options configurable in installer's menu: P14).

7. Further door opening function in Slave panels.

Slave door entry units support the further door opening option. This option is activated automatically upon receiving the "further door opening signal" from upstream door entry units. Upstream door entry units send this signal at every door opening upon calling an apartment or at door opening using the code (or proximity card/key fob). Downstream Slave panels automatically activate the "waiting time" (marked with the key symbol on the display; the signal also activates waiting time countdown). During this waiting time door can be opened by simply pressing the "**key**" button. The waiting time will only be activated in those Slave panels where the call originated or which must be used (passed) to reach the apartment, assigned to the access code (or proximity card/key fob) used. The waiting time can be deleted with the "#" button. With the "open after delay" option enabled, door can be opened after the waiting time without having to press the "key" button.

All parameters for further door opening option may only be configured via the computer program. The waiting time is set in seconds ("further door delay" parameter) and "further door opening signal" needs to be enabled. By default, this function is disabled.

8. Input from additional module.

Door opening is also possible via additional module such as: CDN I-O.

9. Automatic opening when calling

Automatic door opening after the first ringing tone. When the handset is not hung up and this function is enabled, the door will open automatically after the first ringing tone. If the handset was hung up during the first ringing tone, the unit works normally - the handset can be picked up and communication is possible. This function most commonly used in commercial buildings - letting people in is done by simply lifting the handset; after business hours the handset is hung up and the door entry unit works normally.

Control of the built-in second relay OUTPUT:

The OUTPUT exit (Master panels only) can be activated upon pressing the F2 button in the receiver or entering the user code - in which case the "key" button must be pressed twice before entering the code, which is the same as the basic access code. Typically, exit is possible only during the connection (conversation). Exit can also be activated without having to connect with the apartment - refer to the I/O module settings in the computer program for details.

In this case, on classic uniphones the handset must be picked up and the open button pressed three times, on active receivers (INS-UP720MR, UP800/MP800, INS-MPx) the open button must be pressed once.

The response time and functions of the OUTPUT exit can be changed via the computer program (similar as for port 2 of the CDN-I/O module). The default response time is 1s. Slave panels must feature an optional CDN-I/O module.

At exit the display shows "**Exit-2**"

Exit control for individual premises can be disabled.

In units with the ACC proximity reader, the second output can also be activated without pressing the "key" button and the proximity card or proximity key fob (resident's or administrator/installer's).

The unit detects a short-circuit of uniphone lines - displaying the "**LineEr**" message. During this time, E-lock can be activated by pressing any button and building can be exited. When the correct state of the line is detected (when short circuit ceases), it is automatically restored to normal operation.

Refer to the "Solving common problems" section at the end of this manual for more information and description of common problems.

IV. DESCRIPTION OF ADDITIONAL AND SPECIAL MODULES

The 700 series door entry units support a great number of additional and special modules. For CDNP7 series additional modules can be added independently (can be purchased as separate modules), while the INSPIRO+ series is available in specific versions with modules already installed. Refer to www.aco.com.pl for full list of additional modules and versions of INSPIRO+. All transparent parts are made of scratch-resistant polycarbonate.

PLEASE NOTE! Modules may only be connected with the power supply switched off.

The following module types are available:

1. **230E** module (v7.0 version) - electronic directory of names with information displayed on a two-line LCD display. Names are arranged alphabetically and can be viewed using the two arrow keys. Pressing the call button activates calling the name or being displayed. The module supports as many 1020 items of 30 characters each (16 characters in the top line and 14 in the bottom line). It only displays apartments with assigned tags (such as names). The display time is limited to some 10s. After 10 seconds the display switched to Intro, where any text can be typed in two lines of 16 characters each, for instance building address, name, servicing company telephone number, etc. Up to 4 different Intro's can be

uploaded (2 x 16 characters); they will be displayed in sequence at the interval of 1s to 15s, depending on the setting.

Press and hold the arrow key to display letters of the alphabet to be displayed - then select a letter and press the "doorbell" key to display the first surname starting with the selected letter - press the door bell key to call. Alphabetical sorting and first letter search is a default setting - it can be changed using the computer program. After disabling the search option, pressing and holding the arrow key will display entries one after another. First letter search is only possible with alphabetical sorting enabled. If alphabetical sorting is disabled, entries will be displayed in sequence by addresses of the receivers to which they assigned, for instance 1-255 for zone 1, 1-255 for zone 2, etc.

Upon selecting the apartment number on unit's numeric keypad, after a short moment the display will show data for that number (option enabled by default). Data displaying can be disabled when the numeric keypad is used to call the apartment - for this purpose, the "230E v7x module" option must be disabled via the computer program.

The module uses the "EXTMOD" port in the door entry unit and is only programmed using the optional CDN-USB cable and computer software, version v7.0 or later: "**230E_v70**." Access to the module can be secured with "Installer's password" and module "reset lock" can be activated (refer to chapter XIV for details). It is not possible to enter or edit data in the 230E module directly from a 700 series unit.

An earlier version of 230E (before v70, such as v4.3) supports only zone 1; use the computer software, version v3.0: "**230E_v32**" and follow the module operation description in the "Extended user instruction for the CDNP5, CDNP6 (CDNP6ACC) digital door entry system".

The programs are available for free download at www.support.aco.com.pl

2. The **ACC** module is the reader of proximity cards and key fobs in Unique 125 kHz standard (RFID). The module operates at radio frequency and is used for door opening with a card or key fob. In CDNP7ACC, the reader occupies the openings for the speaker, and in some specific models of INSPIRO+ it is installed as a separate window (under openings for the speaker).

The module supports up to 6144 access cards or key fobs. It supports any number of cards or key fobs for each unit and any number of additional cards or key fobs (administrator's and installer's) that are not assigned to any apartment. After pressing the "key" button on the numeric keypad, the same proximity cards or key fobs can be used to open an additional gate etc. (in Master panels opening is activated by built-in second relay output, in Slave panels by activating the relay output of the optional CDN-I/O module).

Adding cards/key fobs is possible directly from the numeric keypad of the unit, in the installer's menu P12: "**M-ACC**." Full programming of the module (adding, deleting, moving and archiving cards/key fobs) is possible only via a PC, using the optional CDN-USB cable and software, version v7.0 or later: "**ACC_v70**." Access to the module can be secured with "Installer's password". The programs are available for free download at www.support.aco.com.pl

Note! For versions of the ACC module other than the ones described above, use computer program in v3.0 version: "**ACC_v35**." In this case, the reader works

only in zone 1 and supports 6 cards or key fobs for each apartment and 6 administrator's cards or key fobs: 1530 in total. Refer to the "Extended user instruction for the CDPN5, CDPN6 (CDNP6ACC) digital door entry system" for detailed description of this operation of the reader.

3. The **INS-DM** module (only the INSPIRO+ series) is intended for persons with disabilities; it features a T-loop, light and audible signalling (voice messages) of the unit's status. The module generates sound, which can be received by persons with hearing impairment through T-loop, which can be found in almost every hearing aid. Owing to this function, hearing aid users may use the door entry unit comfortably, with sound being clear to them, with no external interference or distortion. This module is marked with the international symbol of hearing loop. It also features three signalling LEDs to show the unit's status. The red LED is used to signalling the call. When the call is answered, the yellow LED comes on. The green LED comes on when the door is open.

The module also broadcasts three audible messages: "Calling, please wait", "Door is open, please enter" or "No answer, please try again later". These messages can be broadcast in three languages: Polish, English and French. The language is changed automatically upon change of the language of messages displayed on the door entry unit.

The module can be adjusted with potentiometers:

- VOICE VOLUME: volume level of broadcast messages
- T-LOOP POWER: volume level of the sound sent to the hearing aid through T-loop.

The module is connected to the "EXTMOD2" (top) port of the unit. The module also features an EXTMOD2 port which can be used to connect other modules in the unit.

4. Modules **5N**, **6N** and **17N** are backlit windows of different sizes which can be used to enter address information, calling information, business name tags or list of names, etc.

Dimensions of **5N** module window:

- in CDPN7: width 68 mm, height 40 mm
- in INSPIRO+: width 73 mm, height 39 mm

Dimensions of **6N** module window:

- in CDPN7: width 68 mm, height 102 mm
- in INSPIRO+: width 73 mm, height 99.5 mm

Dimensions of **17N** module window:

- in CDPN7: width 68 mm, height 160 mm
- in INSPIRO+: width 73 mm, height 166 mm

Power supply voltage of window backlight: 12VAC or 15VDC. Terminals of the module are connected to 12VAC power supply terminals of the panel with a two-wire cable - parallel to power supply wires or (in Video systems) to 15VDC, or to terminals of the panel: +DC (+ ELOCK) and GND (- LINE).

Modules 6N and 17N for CDNP7 are also available with the ACC reader of proximity cards and key fobs hidden under the window. Modules can be connected to any EXTMOD port in the unit and adding cards/key fobs is possible directly from the numeric keypad of the unit, in the installer's menu P12: "**M-ACC**." Full programming of the module (adding, deleting, moving and archiving cards/key fobs) is possible only via a PC, using the optional CDN-USB cable and software, version v3.0: "ACC_v35."

Note! In this case, the reader works only in zone 1 and supports 6 cards or key fobs for each apartment and 6 administrator's cards or key fobs: 1530 in total. Refer to the "Extended user instruction for the CDNP5, CDNP6 (CDNP6ACC) digital door entry system" for detailed description of this operation of the reader.

5. **xNP** series modules, like **2NP**, **6NP** and **10NP**, are backlit windows of different sizes with call buttons (x marks the number of buttons). Buttons can be programmed for calling any apartment in zone 1, while windows can be used for entering, next to the button, names, company names or other information about the address, calling, etc.

The following modules are available for the CDNP7 series:

- **2NP** - 2 call buttons as well as 52 mm wide and 46 mm high window
- **6NP** - 6 call buttons as well as 52 mm wide and 102 mm high window
- **10NP** - 10 call buttons as well as 52 mm wide and 160 mm high window

Refer to www.aco.com.pl for push-button versions available for the INSPIRO+ series.

Module can be connected to any EXTMOD port in the unit and programmed directly from the numeric keypad of the unit, in the installer's menu P13: "**M-xNP**" or using the optional CDN-USB cable and computer software: "**FAM_P**" (version v15 or later). The programs are available for free download at www.support.aco.com.pl

6. **Camera** module for video door entry systems

CDNVK camera module is available for CDNP7 series units; some INSPIRO+ are offered with built-in camera module.

For both unit models it is the same high-resolution colour camera (min. 600 lines) with a 2.8 mm wide-angle lens. It features IR LED (infrared) backlight that automatically switches on after dusk and ensure image visibility in the dark (monochrome).

The video output of the camera is a PAL (symmetrical) signal, so it requires a combiner, which can be connected to the camera module. Typically, the combiner is installed directly in the door entry unit and provides power supply to the camera module as well as converts the PAL signal into a differential signal transmitted in ACO video door entry system bus, based on UTP (min. cat 5e). This type of bus is used for all video inside units.

CDNVS combiner mode must be used for Master panels and CDNVS_p - for Slave panels.

Combiner modules are connected only to the "EXTMOD2" port (top port).

7. CDN-I/O module (additional 2 inputs and 2 outputs)

The module features two programmable ports: **P1** and **P2**. Each of these ports has an INPUT and a relay OUTPUT.

Inputs can be used for calling or opening and outputs can be used as control of opening an additional entrance gate, switching on the staircase lighting, etc. Module parameters can be configured in the unit using the intercome software (**x700**) in section "CDN I/O".

General description of module functions:

The **inputs of** both ports can be used independently:


- to call opening
- to call apartments
- to enable OUTPUT

The **outputs of** both ports can be used independently:

- to activate output for pre-set time after setting the input of the same port
- to activate output for pre-set time before each opening call (this function can be disabled for selected apartment, for instance to control two pairs of doors using one unit)
- to activate output for pre-set time after pressing the second F2 button in the receiver during connection, or to call opening with an additional code or proximity card/key fob (this function can be disabled for selected apartment)
- to activate output for pre-set time after pressing any button on unit's keypad or additional modules
- to activate output for pre-set time without conversation (upon picking up the handset and pressing the open button on passive receivers three times or only upon pressing once the open button on active receivers)

The following function is available without physically connected module

- calling the opening without conversation (upon picking up the handset and pressing the open button on passive receivers three times or only upon pressing once the open button on active receivers)

Refer to **x700** program for detailed description of functions and some examples of module applications (click "  " in outside unit parameters, section CDN I/O).

V. RECEIVERS - INFORMATION AND ASSEMBLY

1. Information:

Door entry units work with receivers with digital address decoding:

- INS-UP, INS-UP720, UP800 series audio receivers
- INS-MP (2.5-inch, 3.5-inch and 4-inch), INS-MP7 (7-inch) and MP800/UP800V (2.5-inch, 3.5-inch) series monitors.

Available receivers:

1. Passive audio receivers, connected using a 2-core cable (INS-UP, INS-UP720B, INS-UP720M). For these receivers, all terminals of receivers and units: "LINE +" and "LINE -" are connected in parallel. These receivers can be supplied by an AC, 11.5VAC (12VAC) / 1.2A transformer. Alternatively, by a DC power supply: 15VDC / min. 1.5A.

2. Active audio receivers that require additional power supply (INS-UP720MR, UP800). These receivers also require at least a 4-core cable or UTP for connection. For these receivers, all terminals of receivers and units: "LINE +" and "LINE -" are connected in parallel; power supply must be provided to receivers. These receivers require a DC power supply: 15VDC / min. 2.8A. Small installations will run on one power supply, supporting the unit and appropriate number of receivers. Refer to relevant receiver manuals for more information.

When using UTP, receivers can be connected via CDNARu-DIN Audio Splitter.

3. Video inside units for video door entry systems. These receivers require UTP, min. cat 5e, for connection. They also require a 15VDC / min. 2.8A power supply. Small installations will run on one power supply, supporting the unit and appropriate number of receivers. Refer to relevant receiver manuals for more information.

CDNVRa or CDNVRau-DIN video splitter (or similar) must be used to connect receivers.

2. Installation:

Install the receivers according to installation instructions. When connecting the device make sure that the physical address is correctly set by jumpers or switches (default physical address of the uniphone corresponds to the number selected using the keypad).

In case of passive receivers, it is very important to avoid having receivers with the same addresses in the system (in the same zones), each receiver in the system must have its individual physical address set.

The above condition can be ignored in case active receivers that are designed to work with the same physical address. In this case, the system (the same zone) may feature several receivers with the same address.

For audio receivers, it is necessary to make sure that connection (polarity) to the "LINE" terminals of the unit is correct. Before connecting video display units make sure that all RJ connectors are properly clamped (in T568B standard), that no short circuits on wires are present and that wires conduct properly. If even one RJ connector is badly clamped or in case of a short circuit between wires, the video inside unit, splitters, the combiner or the unit may be damaged.

VI. INSTALLATION

Visit www.aco.com.pl for information on installation, including exact dimensions of the units, and refer to data sheets of individual products. Refer to the website also for a long list of mounting components (which is expanding by the day).

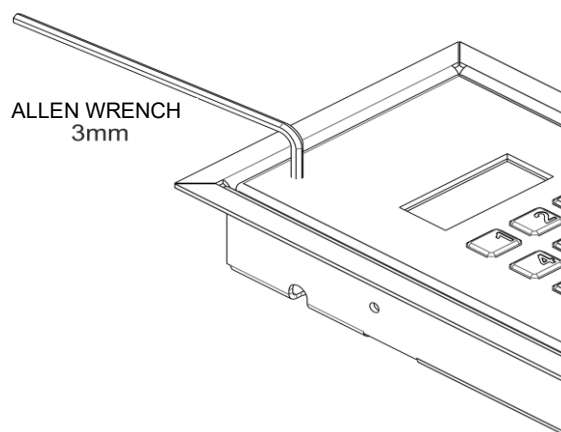
Install the unit on building wall (vestibule, sheltered wall, east wall, etc.) so that to minimise the effect of adverse weather conditions. The recommended height

of installation is such that the unit can be used by children (some 1.35 m) and persons with disabilities (persons with sight impairment, in wheelchairs, etc.). Make sure that the camera of video systems is installed at the desired height. Typically that height is 1.60 m from the ground. For optimal field of view of the camera, verify the installation location and position of the panel by trial and error. Avoid locations where the camera lens may be exposed to direct, perpendicular, light (from the sun, streetlamps, etc.).

CDNP7 series:

Install the flush-mounting frame in the appropriate wall opening using rawlplugs and gypsum (wait for the gypsum to dry before screwing the outside unit to the mounting frame). Lead the wires through the holes in the frame. Auxiliary holes around the frame are used for makeshift installation with nails etc. when mounting the unit in soft materials such as polystyrene. These holes also help when mounting the unit using mounting foam.

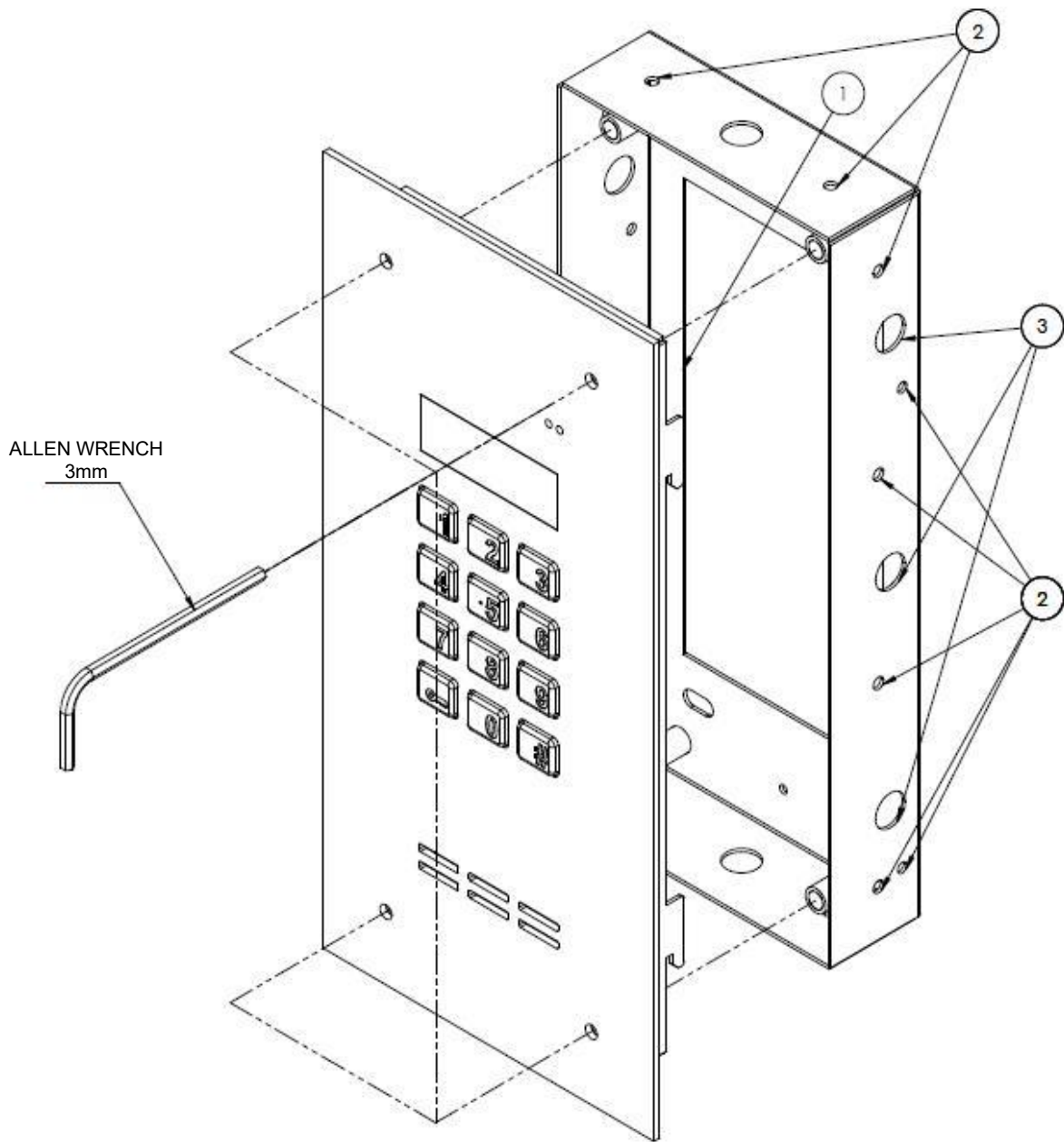
Upon completion of the installation the top holes of the frame must be plugged (with mounting foam or plaster). Then screw evenly all screws of the housing to the frame using a 3mm Allen wrench.



Screwing the housing

INSPIRO+ series:

Install the flush-mounting back box in the appropriate wall opening using rawlplugs and gypsum; make sure that the box edge is flush with the wall surface (wait for the gypsum to dry before screwing the unit to the mounting frame). Lead the wires through holes 1 in the box base. Auxiliary holes 2 are used for makeshift installation with nails etc. when mounting the unit in soft materials such as polystyrene. Holes 3 help when mounting the unit using mounting foam. Upon completion of the installation the top holes of the box must be plugged (with mounting foam or plaster). It is also necessary to install gaskets around the panel; gaskets are included in the set. Attach the gaskets using double-sided tape so that when the unit is screwed to the back box, gaskets form sealing of the gap between the unit and the surface, on which it is mounted (such as wall). Then screw evenly all screws of the housing to the back box using a 3mm Allen wrench.



VII. CONNECTION

1. Wiring information

The following wires need to be arranged to the unit:

- 2 wires x 1mm² - power supply to the Audio system transformer or power supply to the DC power supply (15VDC) for the Audio/Video system
 - 1 wire in yellow green insulation - to connect the housing's grounding
- 2 wires x 0.75mm² - for E-lock,
- 2 wires x 0.5mm of intercom cable to connect receivers - for the Audio system, or
- 1 x UTP (min. cat 5e) - for Video system (first Master panel [first in the system])
- 2 x UTP (min. cat 5e) - for Video system (for downstream slave panels in the system)

Note! All RJ45 plugs on UTP must be crimped in **T568B** standard.

Maximum lengths of signal cables (of the line or bus).

The cross section (resistance) of the bus for digital transmission and audio track (LINE terminals) has a significant impact on the maximum bus length for both Audio and Video systems. For typical cable cross sections (0.5mm) the maximum distance is 300 m. This distance increases with increasing wire cross section:

- with 1 mm² wire the maximum distance is 400 m
- with 1.5 mm² wire the maximum distance is 600 m
- with 2.5 mm² wire the maximum distance is 1000 m

Use CDNV-RJ45 module to increase the cross-section of the above mentioned cables (UTP) in the video system.

For extensive video installations, use the **CDNVRau-DIN** splitter that features a special output with video signal amplification.

PLEASE NOTE! To ensure proper functioning and use safety, connect the unit panel (in metal frame) in its installation point to earth by connecting the grounding terminal on unit's body with relevant protective installation (PE).

Use a 1 mm² wire (such as LY1.0) for power supply connection of the door entry unit and the E-lock.

For wires of other cross-sections use the following formula to calculate the voltage drop:

$$U = \frac{2 \times L[m] \times I[A]}{57 \times S[mm^2]} [V]$$

Where: L - panel to transformer wire length, for instance: - 15m.

I - current - panel during opening	- 0.44A (panels with backlit name tag module)
------------------------------------	---

S - wire cross section, for instance:	- 1.0 mm ²
---------------------------------------	-----------------------

$$\Delta U = \frac{2 \times 15 \times 0.44}{57 \times 1.0} = 0.23V$$

PLEASE NOTE! The maximum voltage drop is 1.2V, or 10% of power supply voltage. The maximum cable length for E-lock circuit is 7 m, for power supply circuit - 15 m.

Too small cross-sections and extensive wire lengths may cause voltage drops during connections or opening (E-lock release), leading to interference or resetting (restart) of the unit.

2. Power supply connection:

In case of passive audio receivers (2-wire receivers) the door entry unit is supplied from a mains transformer, the supply voltage is 12VAC (min. 11.5VAC), connection to AC/AC terminals (12V~). Recommended mains transformer is TR 12V 1.2A or TR DIN 12V 1.2A, available from ACO.

In case of active audio receivers (that require power supply), the door entry unit uses 15VDC DC power supply, connection to +DC (ELOCK+) and GND (LINE-) terminals. Same can also be used for passive receivers.

For VIDEO systems, 15VDC supply voltage is connected to combiner module terminals: +15V and GND. In both cases the recommended power supplies are available from ACO.

It is possible to connect a buffer power supply to the same terminals (buffer power supply must ensure 15V, alternatively use an off-the-shelf inverter that supplies 15V from 12V to 15V input voltage).

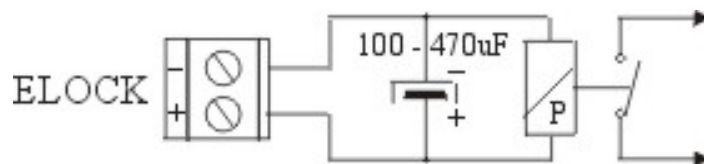
3. Connecting the E-lock:

E-locks without any specific polarity are connected to "ELOCK" output terminals. This output is used for direct connection of the E-lock; it generates AC voltage during opening (hence the outside unit may be supplied from a DC voltage source). It is recommended to use (non-reversible) E-locks that work on 8V to 12V.

It is also possible to connect a reversible E-lock (opens when de-energised). This option can be activated by in the installer's menu No. P10 and upon closing the Z13 jumper (if present). In this case, "ELOCK" is energised when in standby and de-energised during opening. When power supply is provided from a transformer and a reversible E-lock is used, transformer power is calculated using the following formula: $P[W] = (12V * E\text{-lock current [A]} + 4W) * 1.6$. Insufficient transformer power causes "buzzing" during conversation. 15VDC power supply is recommended. **Note!** In case of reversible E-locks, voltage appears at the "ELOCK" output depending on the power supply or transformer used - use suitable reversible E-lock. It is also possible to use the MOD-DC-12V module for 12VDC power supply of reversible E-lock if the door entry unit is supplied by a 15VDC power supply or a transformer.

4. Connecting another device in place of an E-lock:

If E-lock needs to be replaced by another device instead, use a relay (12V coil) connected to "ELOCK" terminals with an additional 100 - 470 μ F electrolytic capacitor (depending on relay type), as per the diagram:



ACO offers off-the-shelf CDN-PK modules.

Relay contacts can be used as needed - it is recommended to power the unit connected to relay contacts from a separate power supply. Do not connect other inductive loads (such as an E-lock) via a relay from the same transformer that powers the door entry unit.

5. Connection of the receivers (wiring - topology):

Refer to chapter V for details on receiver wiring.

Passive audio receivers (2-wire) are wired using a 2-wire intercom cable, and the terminals of all receivers are connected in parallel and connected to the "**LINE**" terminals of the door entry unit. Make sure that **+** terminals of the receiver are properly connected to **LINE+** of the door entry unit and **-** terminals of the receiver properly connected to **LINE -** the door entry unit. Improper wiring of even one receiver will cause bad operation of the entire system.

Same with active audio receivers that need two additional wires for power supply. All power and LINE terminals of the receivers are to be connected in parallel. In small systems one power supply will support both the receiver and the door entry unit - in each case a DC power supply. For larger installations that require additional power supplies for receivers, LINE and -DC (GND) terminals of all receivers should always be connected in parallel then connected to door entry unit, and the +DC to -DC terminals for additional power supplies.

For Video systems, the entire wiring must be made using UTPs in T568B standard, min. cat 5e standard (all wires to be used); these systems also require optional combiner modules : **CDNVS** for Master panels and **CDNVSp** for Slave panels.

Note! All UTPs should be ended with an RJ-45 plug, making sure that the same wire sequence is maintained.

UTP should origin at the door entry unit (combiner output), to the main input of the first splitter, then the main output of the splitter is to be connected to the main input of the next splitter and so on. The last splitter must be a terminal splitter or a video terminator jumper.

All splitter in video systems must be active and the monitors are to be connected using relevant outputs of the splitter. Monitors on cat 5e UTPs should be connected at a distance of 70m or less from the connection point, while the whole system must remain within 300 m. Additional power supplies can be connected directly to the splitters - then the right jumper in specific splitter must be removed. Another way to wire the installation is to keep all active splitters in one place and branch to each monitor. In system with multiple video door entry units (Master / Slave), panels must also be connected with UTPs.

In simple video installations with only power supply unit (connected to the combiner), the maximum distance between the door entry unit and terminal monitor is 70 m. Connect additional power supplies to distributors or directly to monitors in order to couple monitors over longer distances.

With additional wires (refer to the beginning of the chapter for information) and with CDNVRau-DIN active splitters (offered by ACO) to amplify the video signal, video installations may have up to 1000 m.

Typically, the monitor is powered using UTPs (double pair) via a combiner, intermediate combiner or splitter and turns on automatically when its address is called and turns off when the connection is ended. In this setup one 15VDC / 2.8A power supply supports 5 splitters. When the option of image viewing at any time is enabled in the monitor (without having to call from the panel), the monitors

should be powered via splitters following the rule of one 15VDC / 2.8A power supply per 8 monitors. When several monitors may call at the same time (have the same address) this must be taken into consideration when selecting the number of power supplies (assume one 15VDC / 2.8A power supply per 6 monitors calling at the same).

Combiners supply power to the door entry unit via a ribbon cable connected to the EXTMOD2 port. Combiners can be installed at a further distance from the door entry unit - in which case the door entry unit must be supplied using a dedicated wire: +DC and GND panel terminals connected to +15V and GND combiner terminals . In CDNVS combiner the ribbon cable needs not be plugged in. In CDNVS intermediate combiner the ribbon cable must be plugged in (control of the camera image in slave door entry unit) - use the ARK-RS module, offered by ACO, as ribbon cable extension.

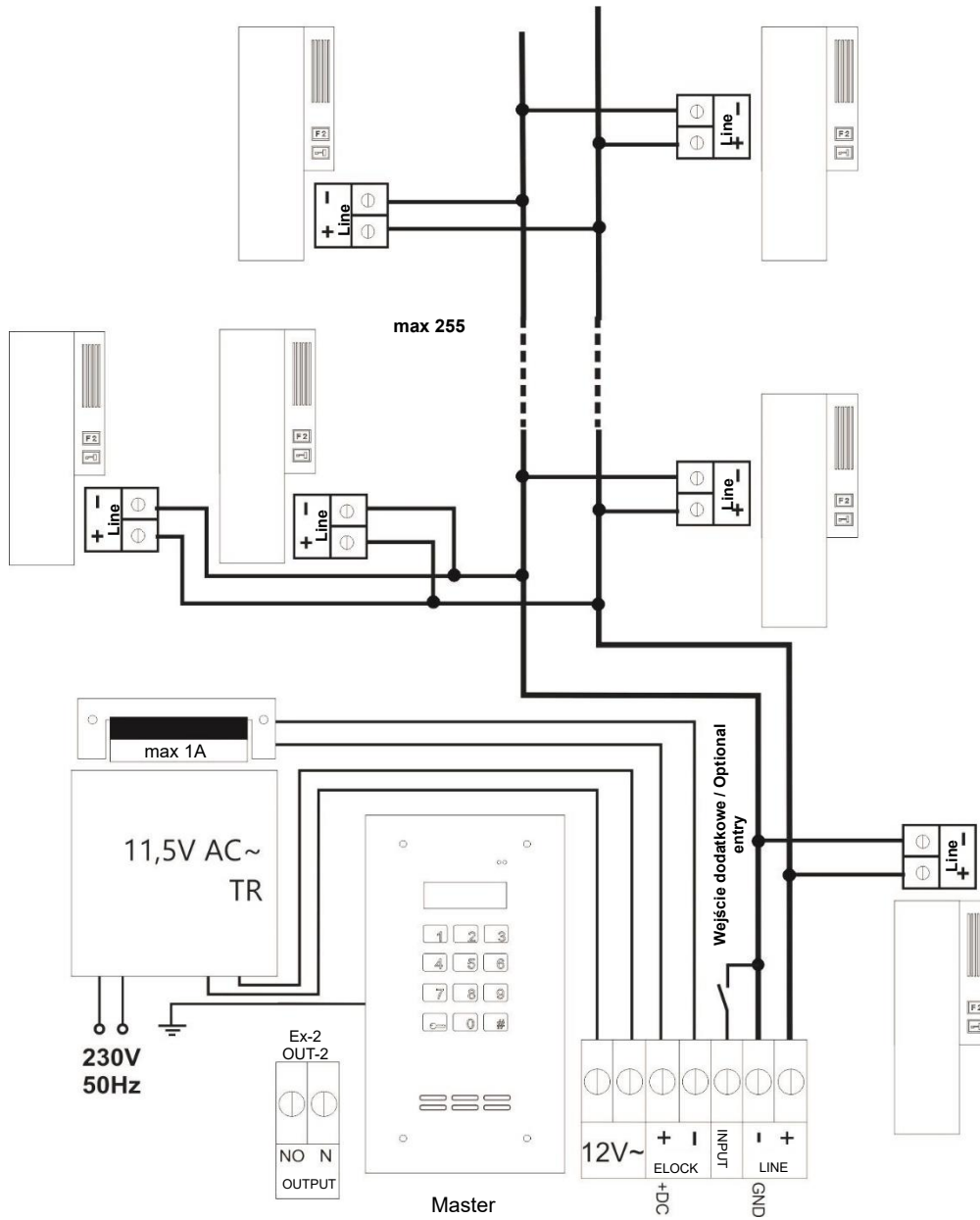
Refer to chapter "Connecting more door entry units in the system" for more information on master/slave systems. Visit www.support.aco.com.pl to download sample video installation diagrams.

6. Before initial power-up:

When wiring is completed and verified as correct (use a meter to check for possible short circuit in the uniphone line and between other terminals). Before plugging UTP to the monitor, splitter and combiner, it is absolutely necessary to check if all RJ-45 plugs are properly crimped, check for short circuits between wires and for continuity of cables.

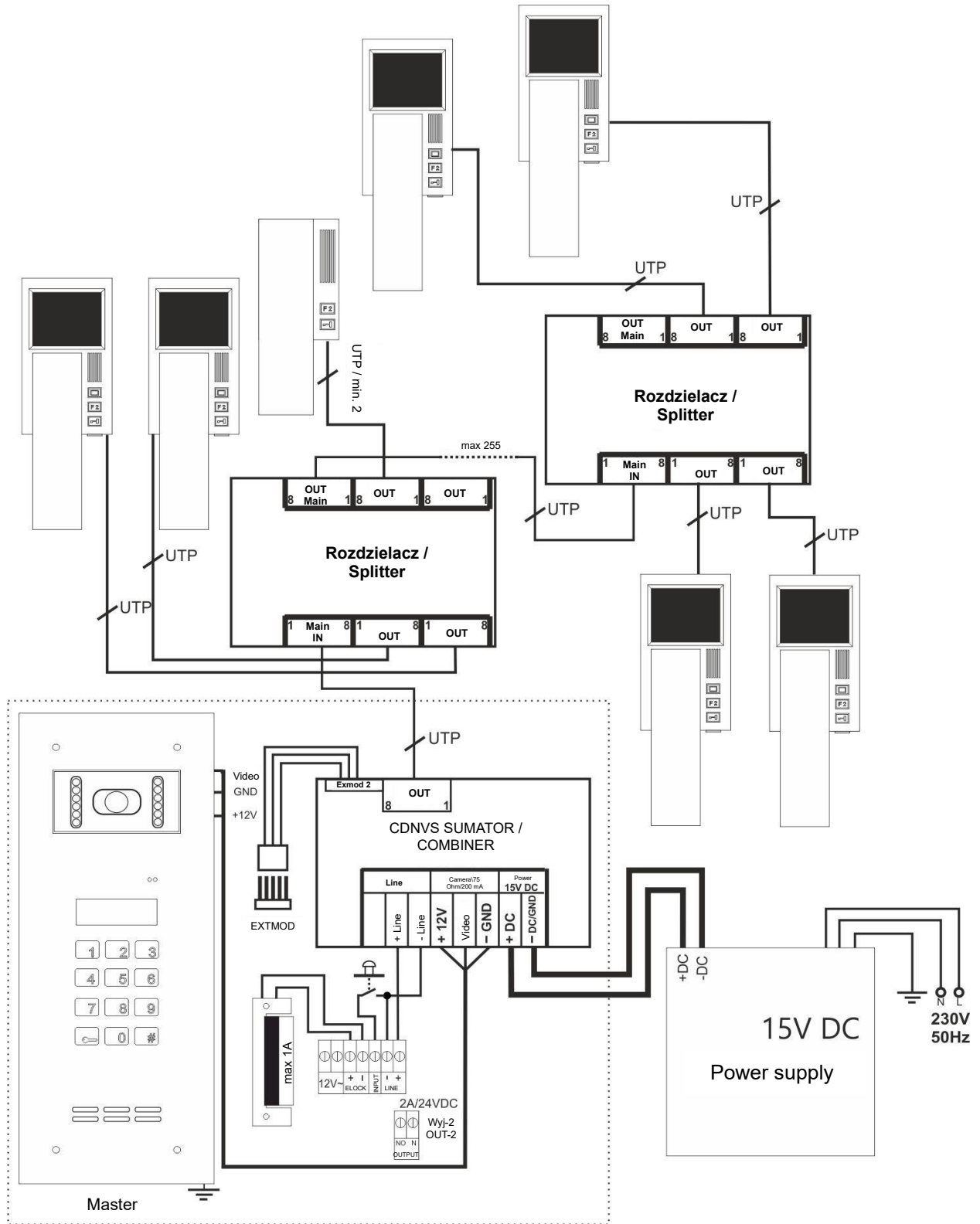
WIRING DIAGRAM - INSTALLATION WITH ONE DOOR ENTRY UNIT

Installation with one door entry unit and passive Audio receivers is wired as shown below:



Note! All connections in the installation must be soldered!

Video installation with one door entry unit is wired as shown below:



VIII. SYSTEMS WITH LARGER NUMBER OF DOOR ENTRY UNITS

A larger number 700 series units can be connected together in one system. In this setup the same receiver can be called from different door entry units: at entry gates, at building entrances or floor entrances, etc.. Typically, the first door entry unit in the system is a Master unit and all downstream units are **Slave** units, in any number. The exception is a system with optional modules such as SW4S-DIN (support up to 1020 apartments, only in INSPIRO+) or CDN-MM (multi master module). In both cases, more Master units can be connected (refer to the introduction of this manual or to CDN-MM manual for details).

A system with multiple door entry units is operated same way as a single door entry unit, refer to "OPERATION" for description.

The receiver will open the door or control the second output (F2) only in that unit from which connection was made. In video systems, the image in the monitor will be displayed from the camera of the unit, from which connection is made. Other units in the system that can communicate with the receiver being called (from which a call to the receiver can be made) will display "**Busy**" and their keypad will be locked. Then door can only be opened using the ACC proximity reader. When the call is completed (line is released), "Busy" will automatically disappear and the keypad will unlock.

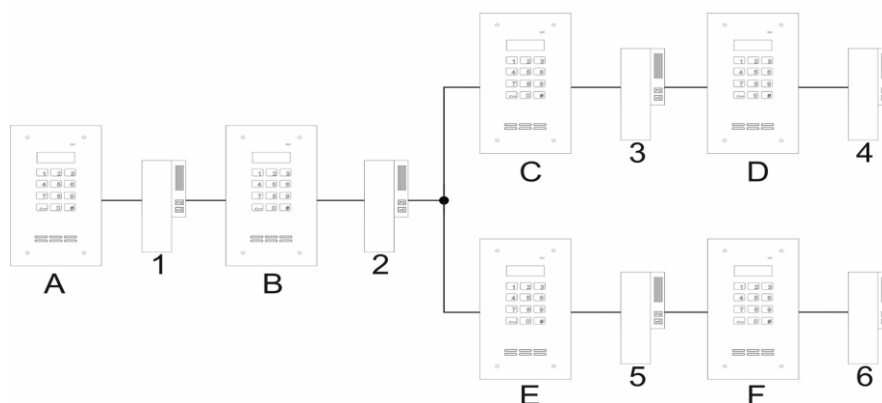
In extensive systems, several calls can be made simultaneously from different units. If the display shows no "Busy", the unit can be used to call a receiver connected to the line which is free at this moment. If the line is busy with another call, "Busy" will appear a short while after attempting to make a call.

Note! Only those receivers that are physically connected "behind" (or downstream) the door entry unit - can be called. No "reverse" call is possible - a call to receivers connected "before" (or upstream) the unit from which the call is to be made.

Calling and connection topology "Slave" units is presented in the figure below ("A": Master, "B, C, D, E, F": Slave).

Door entry unit "A" can call all receivers, "B" can call all receivers except "1", "C" can call "3" and "4", "D" can call "4". Similarly, "E" can only call "5" and "6", and "F" can only call "6". Several calls in the system: when calling receiver "4" from door unit A, units "E and F" can be used at the same time (others will display "busy"). When using "B" to call "3", "A" can be used to call "1", "D" can be used to call "4", E can be used to call "5 and 6", "F" can be used to call "6", and so on. It is possible to set any number of parallelly connected C, D and E, F branches.

Call direction $\xrightarrow{\hspace{10em}}$



In systems with multiple door entry units it is important to make that the supported numbers of apartments are correctly set in all panels. Individual panel allow any setting of the numbers of receivers supported by these panels (numbers of apartments that can be called using a specific door entry unit). This configuration is set with the computer program ("List of call numbers"). In order to limit the range of supported receivers, unsupported numbers should be disabled (such disabled number may not be called then) - by deleting such numbers and leaving the cell empty.

Slave panels support the further door opening function. Refer to point 7 "Further door opening function in Slave panels", Chapter III "Operation", for description of this function. For this function to work as intended all supported apartment numbers must be correctly configured in all door entry units, "further door delay" parameters must be set and "further door opening signal" must be enabled.

Each panel in the system must be configured independently. Settings can be transferred between units using the computer program. Slave panels have no pre-set code table - if all panels are to support the same user access codes, the same code table must be entered in all of them. The code table is available by default only for Master panels. With the possibility of setting different ringtones in each panel (4 to choose from and different number of ringtones) it is easy to identify the calling panel.

Selecting apartment number when numbers are repeating.

When different apartments have the same numbers, it is up to the tenants to arrange assignment of apartments' numbers in the panel. For example, with three staircases of 10 apartments each, the numbers assigned in the Master panel can be 101 to 110 for staircase 1, 201 to 210 for staircase 2, 301 to 310 for staircase 3, etc. Slave panels on staircases, on the other hand, can be assigned directly to specific apartment numbers, like 1 to 10, etc.

Numbers and calling method need to be described in detail in the description module. Physical addresses of receivers must be unique and in each door entry unit they must be assigned to numbers to be called. With 700 series units, numbers in the range 0 to 999999 can be freely assigned (with "0" also being recognisable) to address of the receiver (1 - 255).

CONNECTION OF SLAVE PANELS

Connection of slave panels is similar to that of Master panels - follow the general rules in chapter VI CONNECTION. The only difference is that Slave panels feature an additional "ML" terminal, to connect another panel (Master or Slave). An important principle to follow for a multiple panel system is cascade connection (one after another), i.e.: the output from **LINE+** terminal can only be connected to **receiver** terminals and **ML** terminals of other panels. One **LINE+** terminal can be connected to several **ML** terminals at a time.

PLEASE NOTE! Connecting the LINE+ terminals of different panels can cause their malfunctioning!

Refer to the drawing on page 26 ("call direction") for connecting multiple panels: on the **right-hand** a panel will always feature a **LINE+** terminal and on the **left-hand** side - an **ML** terminal.

To build extensive and large installations, it is possible to connect several Master panels and combine the door entry system in a "star" arrangement - all wires come together in one point (which greatly reduces the length of wires and simplifies wiring). This can be done using the optional CDN-MM Multimaster module (refer to CDN-MM module manual for more information) or the 4-zone SW4S-DIN switch module - (refer to chapter "Supporting up to 1020 apartments").

For Video systems, the entire wiring must be made using UTPs in T568B standard, min. cat 5e standard (all wires to be used); these systems also require optional combiner modules : and .

- **CDNVS** combiner for **Master** panels,
- **CDNVSp** intermediate combiner for Slave panels or **CDNVSbk** combiner without camera (for slave panels without camera).

Master panels without cameras the combiner module is not necessary and the CDNVS combiner module can be used with the first slave panel that features a camera (the line from the Master panel is connected ML terminal of the Slave panel).

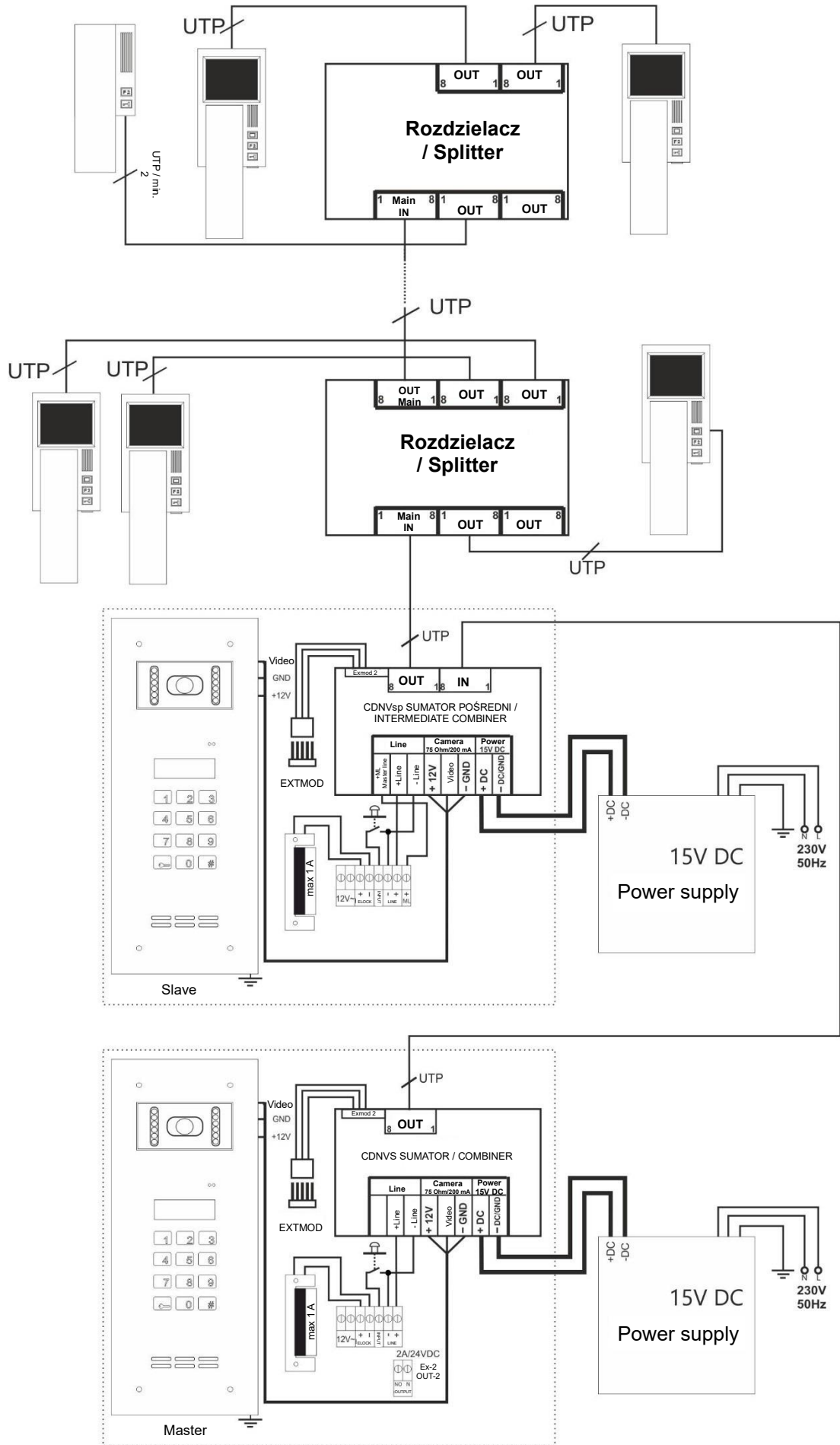
Combiners supply power to the door entry unit via a ribbon cable connected to the EXTMOD2 port. Combiners can be installed at a further distance from the door entry unit - in which case the door entry unit must be supplied using a dedicated wire: +DC and GND panel terminals connected to +15V and GND combiner terminals . In CDNVS combiner the ribbon cable needs not be plugged in. In CDNVSp intermediate combiner the ribbon cable must be plugged in (control of the camera image in slave door entry unit) - use the ARK-RS module, offered by ACO, as ribbon cable extension.

Power supply

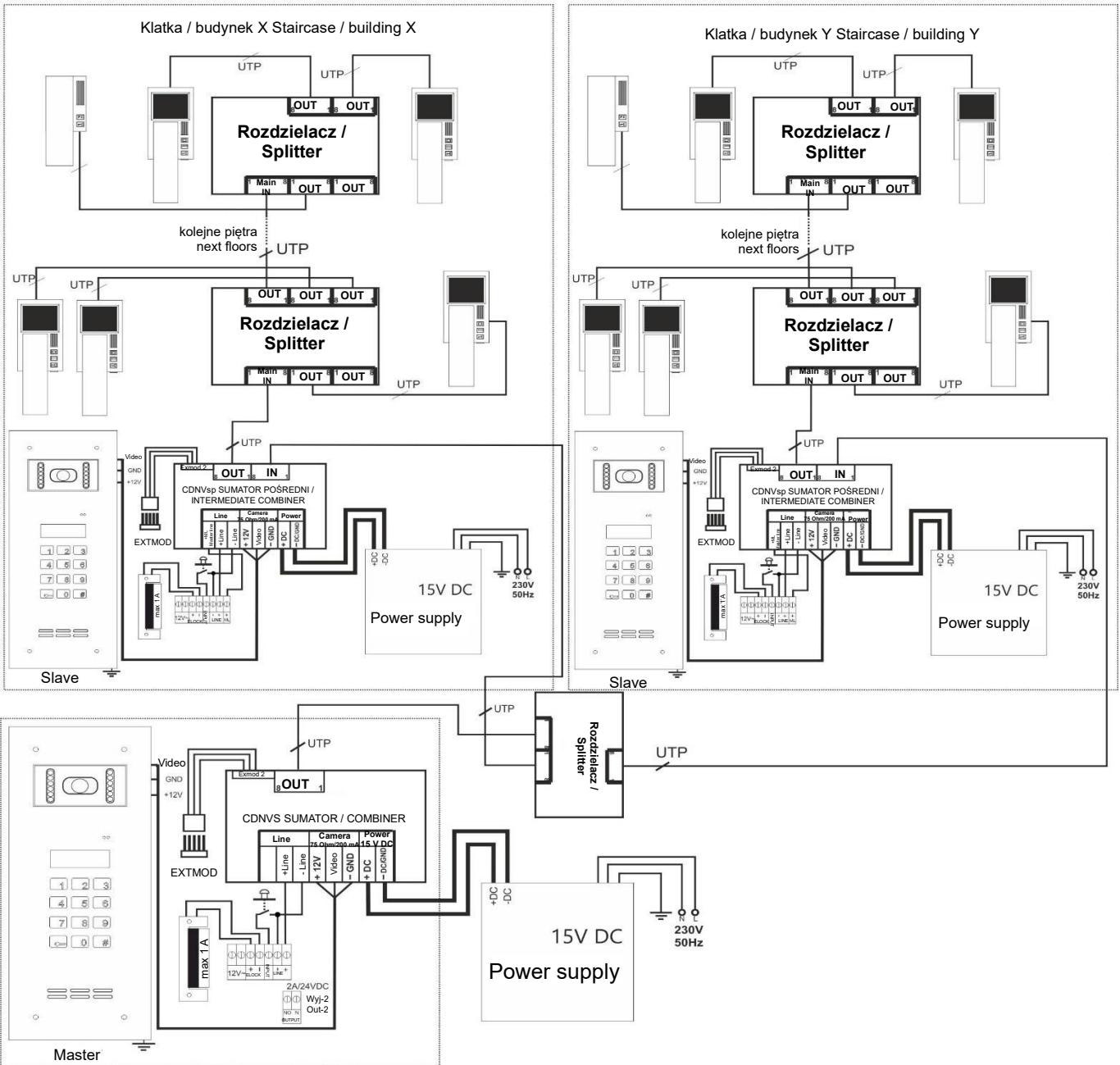
The system must run on one type only of power supply (either AC or DC - **never both!**). When units are powered by transformers, each unit must be powered by a dedicated transformer.

The entire system needs to be powered from the same phase.

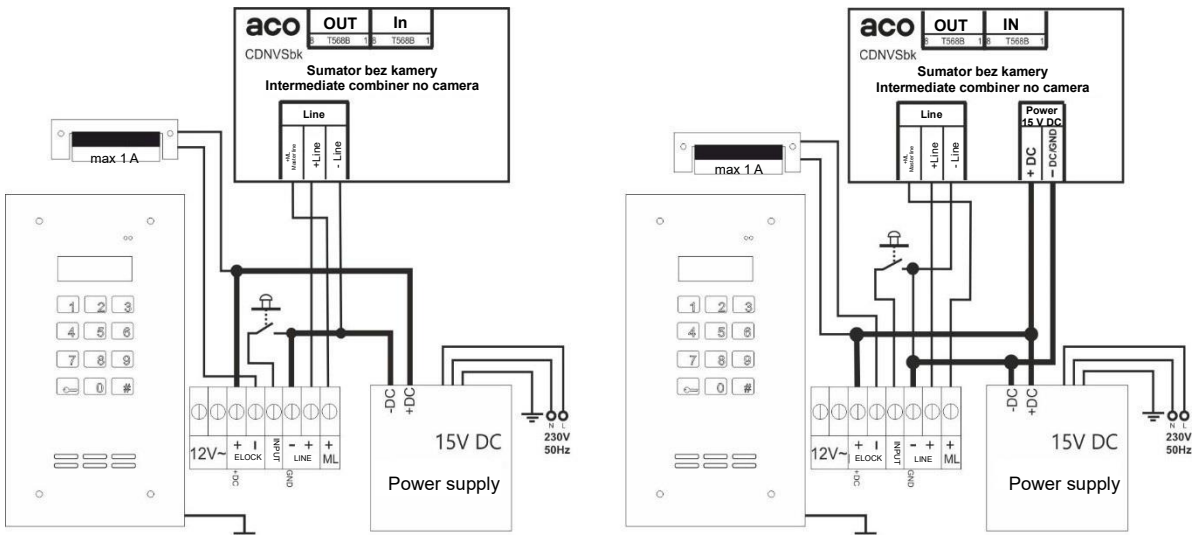
Diagrams No. 2 - Video system:



Diagrams No. 3 - Video system:



Diagrams No. 4: "Combiner without camera" (CDNVSbk) for slave panels without camera:



SUPPORTING UP TO 1020 APARTMENTS

INSPIRO+ units support up to 1020 premises. To expand the number of supported addresses from 255 to 1020, use the optional SW4S-DIN 4-zone switch module. This module may only work with Master panels and can support an unlimited number of Master panels in one door entry system.

SW4S-DIN modules can be used to separate 4 independent zones in the system. Each zone is an independent bus which works and can be installed similarly to a standard connection of INSPIRO+ panels or CDPN outside units.

Each zone means 255 receiver addresses, a separate access code table and individual call parameters. Receiver addresses of each zone can be assigned to individual call numbers of 1 to 6-digit (selected using the keypad).

The module of 4 zones is primarily suitable for Video systems (it features RJ45 connectors), but it can also be used in audio installations (using Audio wires and -DC (GND) lines, for instance using RJ45 converter module with ARK (CDNV-RJ45) screw connectors).

Refer to the diagram below for the principle of module wiring. The unit features an input (RJ45) to connect the Master panel ("Main Panel"), screw terminals for optional power supply ("POWER"), and screw terminals for Audio Line ("LINE") of the Master Panel - Audio systems. Each zone features two equivalent outputs (2 x RJ45) to connect the bus of that zone and to connect another module. To be able to use the module, the zone must have at least one slave panel - receivers cannot be connected directly to zone outputs (the output will not introduce power supply voltage to the bus and idle Audio line is not present).

With multiple Master panels, the module will support up to four call at a time (one call using a master panel with one zone).

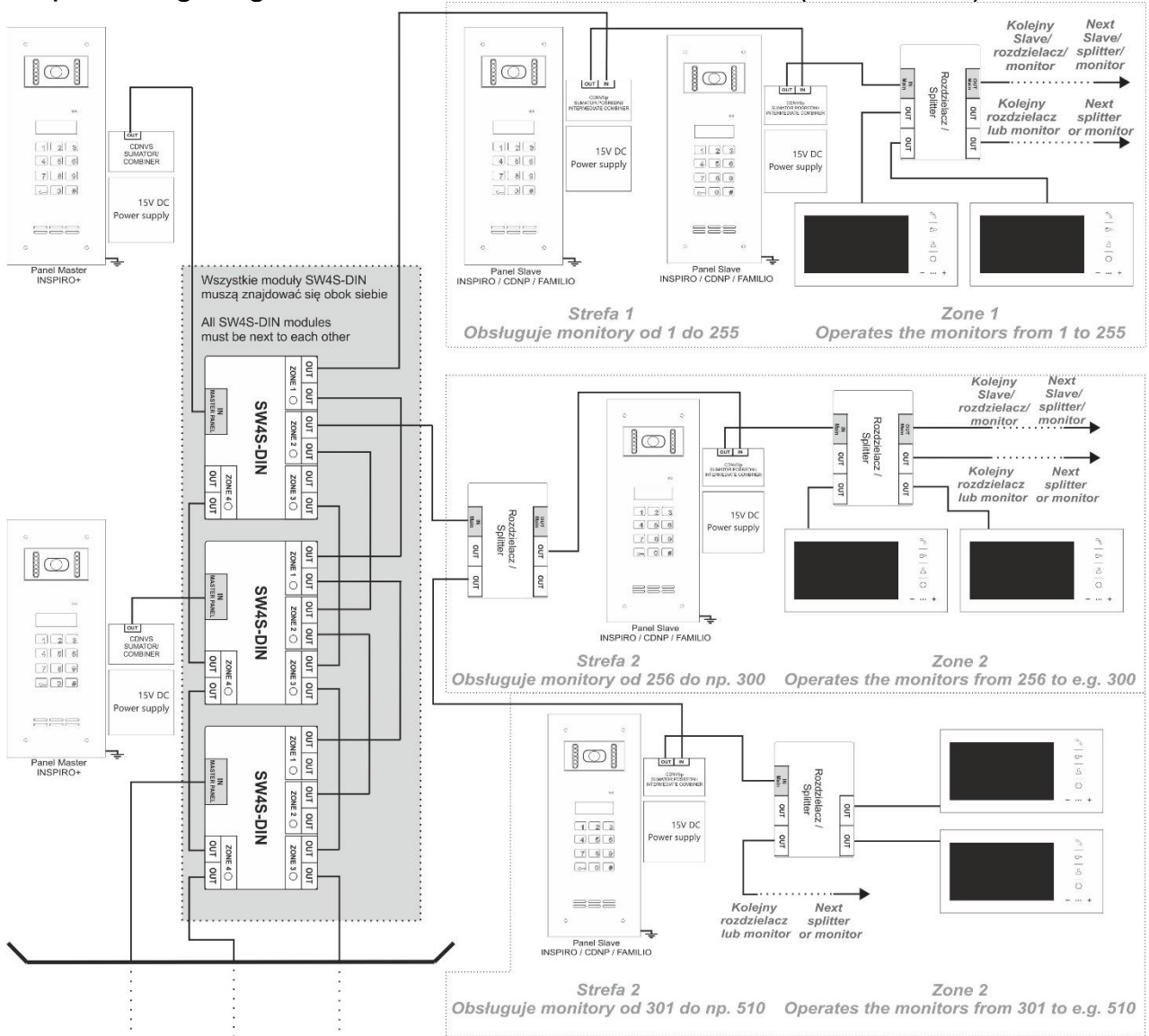
4 zone modules can be powered via the "Main Input" bus (from the combiner module of the Master panel) - up to 100 m from the panel, or via an optional power supply ("Power" terminals): 12-15VDC, min. 50mA.

PLEASE NOTE! In audio systems, all outside units/panels in the system should be powered with 15VDC DC power supplies, and the -DC module terminal and -DC terminal of all outside units/panels in the system should be connected with a separate wire. In SW4S-DIN audio systems it is recommended to supply power from the same power supply as the MASTER outside units/panels (min. 4 wires are required).

The 4 Zone Module can be used to build both extensive and large installations in star arrangements to significantly reduces the length of the line (modules are installed in the central point of the star).

Each Master panel, which is to support more than 255 addresses, must feature a SW4S-DIN module; the module must be enables in settings (via the computer program).

Sample wiring diagram of a 4 zone module installation (SW4S-DIN)

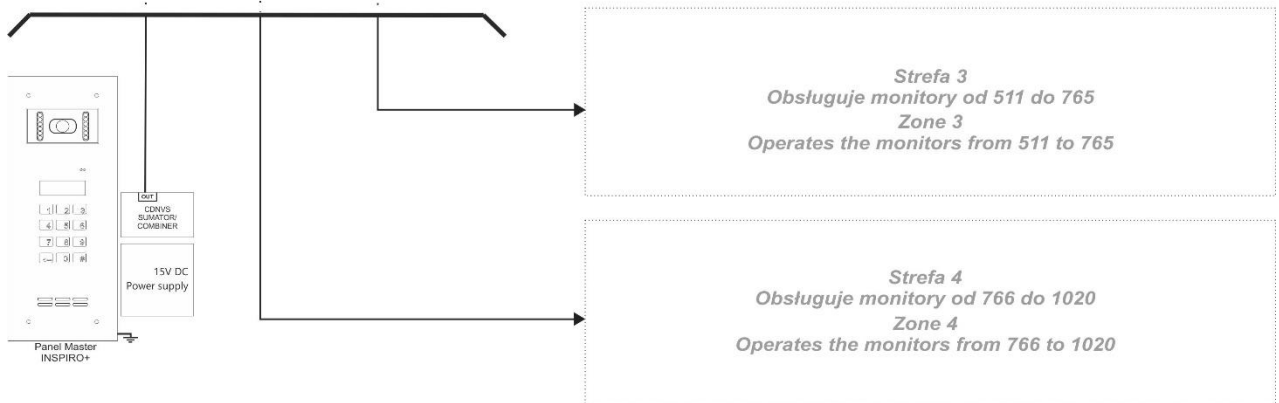


Kolejne panele Master i SW4S-DIN

Next Master panels and SW4S-DIN

Blokowy schemat zasady prowadzenia instalacji z modułem 4 stref w systemie videodomofonowym INSPIRO+ oraz przełącznika 4 stref (SW4S-DIN)

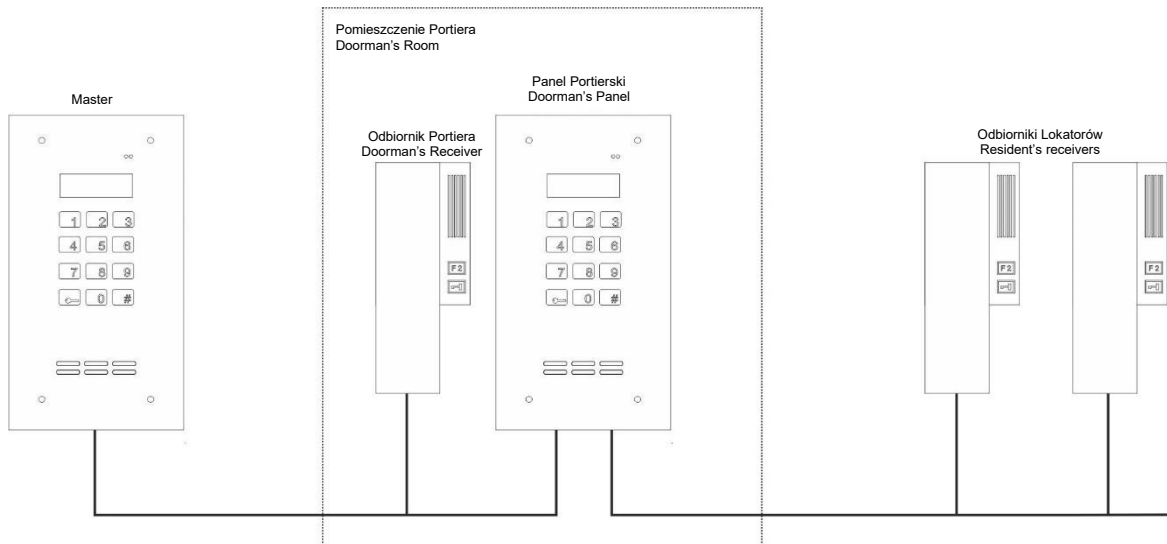
Block diagram of the principle installations with a 4 zone module in the INSPIRO+ door entry system and 4 zones switch (SW4S-DIN)



SU0103VC.2102

IX. DOORMAN

Doorman's functions include "doorman's call" and "doorman's call forward". In doorman's call, **upon contact short circuit of the additional INPUT** in the Master panel, each call to any number will be forwarded to doorman's receiver. Doorman's uniphone address is set as the value of the additional INPUT. Auxiliary input contacts can be activated by a clock etc.



Doorman's call forward means that a call is answered by the doorman, the doorman can forward the call to the desired resident, using the doorman's panel. Upon answering the call, the doorman will press the "KEY" button and hang up the handset, thus forwarding the calls. Making this connection is possible only if doorman's call forward is enabled in the doorman's panel.

Doorman functions can be used in residential estates with access control, office buildings, etc. They can only be configured using a computer program.

Doorman's panel features a built-in, typical slave panel suitable to make calls. When designing a system with a doorman's panel, follow all the rules for systems with multiple Master panels/Slave panels. If doorman's panel is to be used to call all receivers, it must be installed as yet another door entry unit at the main entrance. Doorman's receiver must have a separate physical address in the system, disabled from the slave unit support in the doorman's panel.

The doorman's unit which operates as described is **INS-PORTIERNIA S+**, with a slave panel and INS-MPR video inside unit.

This doorman's panel will only work with master/slave system topology.

Another available doorman's unit is **INS-PORTIERNIA+**, with a master panel and INS-MPR video inside unit.

This doorman's panel will work with master/slave system topology as a master unit and with SW4S-DIN modules, which are used in system topology which supports for up to 1020 apartments (description on page 32: SUPPORTING UP TO 1020 APARTMENTS). INS-PORTIERNIA+ when working with SW4S-DIN module will not support doorman's call (possible only in master/slave topology) and doorman's call forward (not possible in master/slave topology). Doorman's units working with SW4S-DIN modules need a dedicated and exclusive zone (a

system may feature several doorman's panels). NS-PORTIERNIA+ video door entry unit should be connected directly to the output of SW4S-DIN modules, to doorman's zone.

X. OPERATION

In standby mode the voltage on LINE terminals (uniphone line) is approximately 8.7 V, to increase to some 12 V during a call. As the handset is picked up (the receiver activated), the line is loaded and the voltage drops to approximately 5 V, which the unit recognises as permission to connect the call. Voltage drop below 5V other than during a connection or a call is recognised as a short-circuit - the display shows "**LineEr**". The line is then de-energised and checked, at certain time intervals, if the short circuit is still present. When the correct state of the line is detected (when short circuit ceases), it is automatically restored to normal operation.

When re-energised, the unit will start counting down for some 30 seconds, displaying digits in order. This time is necessary to determine the operating conditions of the system and to charge passive audio receivers. Do not interrupt the countdown when the system is finally on (this may initially cause the system to malfunction).

Then the following will be displayed, in sequence: manufacturer: "aco", software version, for instance "K-10"; "I700 M" (where K stands for number of software version compilation, I for INSPIRO+ or P for CDNP, 700-version software, M for master or S for slave) and display message language (for instance PL vx, where x is the message version). Units with the ACC proximity reader will display "ACC OK" for a short moment. Units without ACC will display "No ACC"; the same message will be displayed when the reader is damaged (or in malfunction of communication between the main board of the unit and additional modules).

A while later the unit should display Intro during standby mode (by default "ACO", it can be changed with the computer program).

PLEASE NOTE! When setting up a panel-uniphone call, unwanted acoustic signals may appear; their level will not distort the content of the transmitted message neither will it significantly impair the comfort of conversation.

XI. VOLUME LEVEL ADJUSTMENT

The volume level of the outside unit is pre-set, but it can be changed to suit individual conditions and needs.

The volume level settings can be accessed, when connected to the receiver, as follows:

- with "**MIC**" potentiometer to adjust the sensitivity of the unit microphone (or the volume in the receiver)
- with "**SOUNDS**" potentiometer to adjust the sound volume (sound generated by the unit, for instance at door opening)
- with "**SPK**" potentiometer to adjust the sound volume of the speaker (or the sound level in the unit from the microphone of the receiver)


As these values are set, turn the "**BALANCE**" potentiometer to determine the position of the excitation points (squeak, feedback) in the loudspeaker and set the potentiometer halfway between these points.

XII. PROGRAMMING

All available parameters in the 700 series units can be modified, settings can be programmed, it is also possible to create backup copies and transfer settings to other units.

ACO units can be connected to a PC with an optional CDN-USB cable and computer software (which can be downloaded free of charge from www.support.aco.com.pl).

The software for the 700 series units is "x700". Proximity cards or key fobs can be managed using the **ACC_v70** software (version v7.0 or later).

Click "  " for detailed description of parameters available in x700.

Parameters can be also modified directly at the unit, using the installer's menu. All settings are stored in unit's memory and are maintained when the power is turned off. In multiple unit systems, modifications are effective only in the unit in which they were introduced. Transfer settings to other units using the computer program.

Before connecting the CDN-USB cable to PC for the first time, first install drivers downloaded from www.support.aco.com.pl

It is only possible to run computer software if the drivers for the CDN-USB cable are installed and the cable is connected with the PC at least once (necessary for Windows to register the drivers of the connected unit in the system).

To communicate with the software, the unit must be in the standby mode (default intro on the display: "ACO"). The CDN-USB cable (as well as other modules) should be connected with the power supply of the unit is off.

Installer's passwords:

Access to the computer programs and the installer menu is secured by the "Installer's Password".

By default, the installer's password "0000" and it must be changed after installation!

PLEASE NOTE! In the latest release of the door entry units, "0000" is replaced by the last four digits of the product serial number, which can be found on the electronics board label.

The password can be changed either from the computer program or from the installer's menu (menu 7).

Installer's menu:

To enter the installer's menu, press and hold the "key" button and type "1507xxxx" within 5 seconds, where "xxxx" is the four-digit "Installer's password", (by default "0000" or the last four digits of the unit serial number). Access to the installer's menu is confirmed with a beep, the software version and then program No. 0: "**Open**" on the display. Use "2" to navigate the menu up and "8" - to navigate it down. Press the "key" button to enter the menu item being displayed or to confirm the entered value.

When the maximum possible value is entered, the unit will confirm it automatically (no need to press the "key" button) - "Done" will appear on the display; the unit will revert to the main menu. Installer's menu enables resetting (restarting) the unit by pressing buttons 7 and 9 simultaneously. Before any modifications can be made, the unit will display the current setting value, only then a new setting can

be entered; the new setting must be confirmed with the "**Key**" button or can be cancelled with the "#" button (if no new value is entered, the unit will automatically exit this menu item, without changing any value of the setting).

Exit the installer's menu by pressing the "#" button or leave the unit idle for a longer while for it to exit the menu automatically. Upon exiting the installer's menu, the unit will display its current inner temperature.

Relevant functions (or programs) available in the installer's menu are described below

P0 SERVICE ACTIVATION OF E-LOCK



Maintenance function - verification of E-lock operation and proper opening time. When the function is called (by pressing the "key" button), the opening procedure starts: release for a pre-set time of the E-lock connected to the ELOCK output and exiting the installer's menu. Calling the function also disables the installer's uniphone calling function from apartment and the service uniphone calling function from apartment.

P1 MODIFICATION OF USER'S ACCESS CODE



Modification of the 4-digit resident's access code.

Upon entering this function, the display will show "**Lokal?**"; enter the apartment number, confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The current code will be displayed for a short while (press # now to leave the function without changing the code), and then "----" will be displayed; now the four digits of the new code can be entered. The unit will display "**Ready**"; the new code is now stored in unit's memory.

Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). Please note that the access codes in the **Code Table** correspond to the physical addresses set in the receivers.

When factory settings are restored, so are the codes, to the pre-set code table. To lock the access codes completely, set the "9999" code table.

Code modification example

Changing the code of apartment 9 to 4256: Enter the program, wait for "**Local?**" to be displayed, then enter 9, confirm with "**key**". The current code will be displayed for a short while, followed by "----"; now enter 4256. "**Ready**" will be displayed and code 4256 for apartment 9 will be stored in unit's memory.

Access codes may also be changed by residents - using the "Code change activation" function, via the computer program. Refer to "Opening with user's code" in Chapter III OPERATION for description of the procedure of code change by the user.

P2 CHANGING THE ADMINISTRATOR'S ACCESS CODE AND ADDING PROXIMITY CARDS / KEY FOBS FOR ADMINISTRATORS



Modification of the 6-digit administrator's access code and adding administrator's proximity cards/key fobs to the ACC reader.

Enter the program and wait for "**0AKey**" and "**1M-ACC**" to be displayed alternately. Press 0 to add the administrator's access code, press 1 to add administrator's proximity cards/key fobs.

Upon selecting the option of adding administrator's code, wait for "**CodNr?**" to be displayed, then select any number between 1 and 5 as the order number of the administrator's code - the current code will be displayed briefly. Wait for "-----", then enter six digits of the code in sequence. Upon entering the last digit, the unit will display "**Ready**"; the new code is now stored in unit's memory (previous code is deleted). Do not enter a code that starts with 1507, as these are the initial digits of the installer's password (the unit will display "**Err!**" and will exit the programming mode).

The E-lock is activated by pressing the "**key**" button and entering the administrator's code, and the second output (F2) is activated by double pressing the "**key**" button and entering the administrator's code. The code may be abbreviated to the initial four digits, (the option "4 digits of the administrator's code" must be enabled in the computer program). The administrator's code is not pre-set.

All administrator's codes are deleted when the factory settings are restored.

Upon selecting the option of adding administrator's card/key fob, the unit will display "**ACC>>**"; now bring administrator's cards/key fobs close to the reader, one by one - successful adding of the cards/key fobs will be confirmed by "**OK**", displayed for a brief moment. Cancel adding the cards/key fobs by pressing the "**#**" button.

Touching the reader with administrator's card/key fob will open the door. Pressing the "**key**" button before using the card/key fob will activate the second output (F2). To remove administrator's cards/key fobs from unit's memory, use the computer program. Administrator's cards are stored in the memory in zone 1, position 0 (address 0).

3 Rings

Resetting the number of primary ringtones.

Between 0 and 7 ringtones can be configured (2 ringtones are set as default).

Upon entering this function, the display will show "**Local?**"; enter the number of the apartment where the number of ringtones is to be reset and confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The unit will display the current number of ringtones - or "**Off**" for unconnected apartment. When "-?- " appears, enter the desired number of ringtones (0 - 7). The unit will display "**Ready**"; now the selected setting is stored in unit's memory. Use the "# " button to exit the function without changing the setting. Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). To change the settings for all apartments, use the computer program.

As many as 7 ringtones can be configured; "0" will disconnect an apartment - it will not be possible to call it. When attempting to call an apartment with zero ringtones the unit will display "**Locked**".

Instead of ringtones, the receiver in a disconnected apartment will emit the door opening signal (use P4 menu to disable it).

P4 TURNING ON - OFF THE DOOR OPENING SIGNAL IN THE APARTMENT

4 OpInf

This function is used to turn off or on the door opening signal in the receiver. As the door is being opened (with a code or card / key fob) a short, triple beep is emitted in the apartment to which the code/card/key fob is assigned. This option is enabled for all apartments by default. Upon entering this function the display will show "**Local?**"; enter the number of the apartment for which the door opening signal is to be disabled or enabled and confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The unit will then display the current setting for a short while: "**On**" on or "**Off**" - respectively. While "???? " is being displayed, enter "1" to enable the door opening signal (confirmed briefly by "**On**" on the display) or "0" to disable it (confirmed briefly by "**Off**" on the display). The unit will display "**Ready**"; now the selected setting is stored in unit's memory. Press the "# " button to exit the function without saving any changes. Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). To change the settings for all apartments, use the computer program.

5 Tones

This function is used to change ringtone(s). One of the four ringtones can be configured for each apartment (the default ringtone is 3). Ringtone(s) can be set for each door entry unit independently; so, by setting different ringtones it is easy for the resident to identify the calling panel.

Upon entering this function, the display will show "**Local?**"; enter the number of the apartment where the ringtone is to be changed and confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The current ringtone (1 to 4) will then be displayed for a short while. When "-?- " is being displayed, enter the ringtone number, selecting from 1 to 4. The ringtone will sound briefly upon each entering of the value, then the unit will display "**Ready**" and the selected ringtone will be stored in unit's memory. Press the "**#**" button to exit the function without saving any changes. Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). To change the settings for all apartments, use the computer program.

P6 SETTING THE E-LOCK TIME

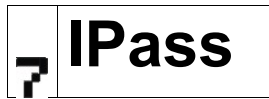
6 LTime

This function is used set the E-lock time (time for which the E-lock connected to the ELOCK output will release the door). This can be any time in the range 1s to 9s (default setting: 4s).

Each time this function is accessed, the "**service E-lock activation function**" is enabled, which is useful for E-lock resetting or installation. It is available after exiting the installer's menu and is indicated with "🔑➔" on the display. Now, each time the "**key**" button is pressed, the E-lock is released for the pre-set time. Use the "**#**" button to turn the function off.

Upon selecting the function, the unit will briefly display the current value of the pre-set time in seconds followed by "? " - now a new value in the range 1 to 9 can be entered. The unit will then display "**Ready**"; now the selected setting is stored in unit's memory. Press the "**#**" button to exit the function without saving any changes.

It is possible to set (function P14) E-lock release delay after the terminals of the additional INPUT are shorted.



Modification of the 4-digit installer's password and adding installer's proximity cards/key fobs to the ACC reader. Installer's password is used to access the installer's menu and settings from the computer program. The default password is "0000" or the last four digits of the serial number.

Upon selecting the function, the unit will display "**Pass?**", current installer's password must be entered. When the password is correct, the unit will display "OK", then "**0IPass**" and "**1M-ACC**". Press 0 to change the installer's password, press 1 to add installer's proximity card/key fob.

Upon selecting the option to change the installer's password, the unit will display "----"; now enter the new installer's password. Upon entering the last fourth digit, the unit will display "**Ready**" the new code is now stored in unit's memory.

Upon selecting the option of adding installer's card/key fob, the unit will display "**ACC>>**"; now bring installer's cards/key fobs close to the reader, one by one - successful adding of the cards/key fobs will be confirmed by "OK", displayed for a brief moment. Cancel adding the cards/key fobs by pressing the "#" button.

Touching the reader with installer's card/key fob will open the door. Pressing the "key" button before using the card/key fob will activate the second output (F2).

Pressing the "key" button before using the card/key will open the installer's menu.

PLEASE NOTE! From the K-14 compilation of the software, for security reasons, the option to enter the installer's menu using the installer card/key fob is disabled.

To remove installer's cards/key fobs from unit's memory, use the computer program. Installer's cards are stored in the memory in zone 2, position 0 (address 0).

Installer's password cannot be restored!!! Setting the password to 0000 requires restoring factory settings, which will lead to losing all previously changed settings. The installer's password may only be restored if the "Reset lock" option is disabled. If "Reset Lock" is enabled, the password cannot be restored. "Reset lock" is deactivated by default and can be activated using the computer program.

PLEASE NOTE! As of version K-15 of the software, the installer's password is not deleted when restoring factory settings.

If the installer's password needs to be reset with reset lock enabled, the unit should be shipped to the service centre together with a proof of purchase (ownership) of the unit or proof of the permit to operate/maintain it.

Fobs

Verification of the assignment of proximity cards and key fobs to apartments or to administrator or installer.

Upon selecting the function, the unit will display "===="; when a card or key fob is brought closer to the ACC reader, the unit will display the number of the apartment to which the card (key fob) is assigned. Use the "#" button to turn the function off. If a triple beep can be heard upon touching the reader with the card/key fob and no message is displayed, the card/key fob is not registered in the ACC reader. If the unit displays "**Admin**", the card/key fob is used by the administrator, if it displays "**Instal**" - it is used by the installer.

P9 ENTERING NEW ACCESS CODE TABLE

Table

Entering the four-digit number of the code table, used to generate 255 individual access codes for residents. In systems with multiple units (Master / Slave), by entering the same number of the code table in each unit, the same codes are set across the whole system. In case of INSPIRO+ series, the code table works only for zone 1, code tables for the remaining zones needs to be entered using the computer program.

Upon selecting the function, the unit will display the current code table. When it will display "----"; now the new table number can be entered. Use the "#" button to exit the function without changing the setting. Upon entering the last fourth digit of the table, the unit will generate 255 codes (confirming with a beep sound). Then the unit will display "**Ready**"; all codes and the code table number are now stored in unit's memory.

The code table for Master panels is a 4-digit number, which can be found on the back of the unit. The code table for Slave panels must be the same as the for Master panels. Order numbers in the code table (1 to 255) always correspond to the physical addresses in the uniphones (irrespective of shifts and other settings). If the code table number 9999 is entered, using the access codes is disabled

P10 E-LOCK

ReEL

Activation of reversible E-lock - switching on constant voltage at the "ELOCK" output, which ceases during door opening.

Upon selecting the function, the unit will display the current setting: "**On**" if reversing E-lock is activated, "**Off**" if it is not. When "???" is being displayed, the setting can be changed. Press "**1**" to enable the reversing E-lock (the unit will display "**On**" briefly), press "**0**" to disable it (the unit will display "**Off**" briefly). Use the "#" button to exit the function without changing the setting.

Then the unit will display "**Ready**"; settings are now stored in unit's memory.

P11 DISABLING FACTORY SETTINGS RESET



Disabling and enabling factory settings reset - or deleting the memory settings (by default, factory settings reset is disabled).

Upon selecting the function, the unit will display "**Pass?**", current installer's password must be entered. When the password is correct, the unit will display "**OK**", then the current setting: "**On**" if factory settings reset is enabled and "**Off**" if it is disabled. When "**???**" is being displayed, the setting can be changed. Press "**1**" to lock factory settings reset (the unit will display "**On**" briefly), press "**0**" to unlock it (the unit will display "**Off**" briefly). Use the "**#**" button to exit the function without changing the setting. Then the unit will display "**Ready**"; settings are now stored in unit's memory.

When the lock is disabled ("0"), upon turning on the power supply of the unit and when the countdown is completed (when the unit displays "**ACO**" briefly), pressing "2,5,8" at the same time will initiate the factory settings restore procedure.

If the factory settings reset lock is on and the installer's password is not known, it may not be recovered (refer to details in P7 function description).

P12 ADDING RESIDENTS' PROXIMITY CARDS / KEY FOBs



Adding proximity cards/key fobs to the ACC reader for residents or other users. Each proximity card / key fob is assigned to a specific call number (receiver). Any number of cards/key fobs can be assigned to each call number.

The card/key fob added to the ACC module memory becomes active and when it is used, it starts the opening procedure. If the door opening signal is enabled (function P4), the receiver of the number to which card/key fob is assigned, will receive the door opening confirmation signal.

Upon entering this function, the display will show "**Local?**"; enter the apartment number, to which the card/key fob is to be assigned, confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The unit will then display "**ACC>>**"; now bring cards/key fobs close to the reader, one by one - successful adding of the cards/key fobs will be confirmed by "**OK**", displayed for a brief moment. Cancel adding the cards/key fobs by pressing the "**#**" button. If a card/key fob has already been added to the module, the unit will display "**Err!**" and will exit the function. Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). To remove cards/key fobs from unit's memory, use the computer program. Use the P8 function to verify if the card/key fob is assigned correctly.

P13 PROGRAMMING THE MODULE USING xNP DIRECT CALL BUTTONS (x - number of buttons)



Programmable function in modules with xNP direct call buttons (x - number of buttons). Buttons can be assigned to directly call a specific number.

Upon entering this function, the display will show "**Local?**"; enter the number of the apartment to which the direct call button is to be assigned, confirm with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit). The unit will then display "**xnP>>**" - when it does, press the direct call button for about 10 seconds. Then the unit will display "**Ready**"; settings are now stored in module's memory. Each of the buttons is programmed individually and the settings are stored in module's memory.

Now the value "**Local?**" is the new call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit).

P14 OPENING DELAY FROM INPUT



Setting the time between the moment the terminals of the additional INPUT are shorted and the door is opened. This can be any time in the range 1s to 255s (default setting: disabled).

Upon entering this function, the display will show current setting and "???? " - enter a new value from 0 to 255 and confirm with the "**key**" button. Any one/two-digit value entered must be confirmed with the "**key**" button, while a three-digit value will be saved automatically. The values 1 - 255 are seconds, enter 0 to disable the delay. The unit will then display "**Ready**"; now the selected setting is stored in unit's memory. Press the "**#**" button to exit the function without saving any changes.

P15 TIME TO MESSAGE: "CALL SERVICE"



Setting the time (in months) to the message followed by "Wezwij Serwis" on the unit (default setting: disabled).

Upon entering this function, the display will briefly show the number of months ("M") and days ("d") to the message (for instance "**49M01d**") or "**Off**" if the function is disabled. When "??" is being displayed, enter the number of months from the range 1 to 49 (days are automatically reset) and confirm with the "**key**" button. Any one-digit value entered must be confirmed with the "**key**" button, while a two-digit value will be saved automatically. The longest time that can be set is 49 months. Any higher value will disable this function. "0" will cause immediate display of the message.

The time entered is indicative - over one year the difference may be even a few days. Any power failure periods are excluded from the time countdown. As of version K-15 of the software, the message "Call service" also indicates memory corruption - refer to chapter XX: troubleshooting.

P16 INSTALLER'S CALL FROM APARTMENT



Installer's call from the receiver in an apartment during installation of the system. This function is dedicated to installers and used to verify if the receiver works properly - if ringing, audio track and door opening is as expected. The function uses physical addresses of the receivers.

This function is only available for "Master" panels (or "Slave" panels where the "ML" terminal is not connected). In operating mode with 4 zone switch ("SW4S-DIN") the function is not available.

If the function is activated and the open button is pressed three times when the handset is not hung up, the unit will automatically start searching for the receiver where the handset is not hung up. The search range is "**Frm**" - "**To**" (from-to) set during function activation. When the receiver is found, the unit will confirm this with a triple beep on the receiver. Then the handset needs to be hung up and after a short while the unit will automatically call that receiver (the display will show its call number which needs to be selected on the keypad). Operating of the received can be verified upon answering the call. "**Frm**" - "**To**" range is the physical address of the receiver.

Upon entering this function, the display will show "**Frm**" and while "?????" is being displayed, enter the value of the start of the search range (0 to 255) - confirm with the "**key**" button. Then the unit will display "**To**" and while "?????" is being displayed, enter the value of the end of the search range (0 to 255) - confirm with the "**key**" button. One/two-digit values entered must be confirmed with the "**key**" button, while three-digit values will be saved automatically (press the "#" key to exit the function). The unit will then display "**Ready**" and will exit the installer's menu.

When the function is activated, the unit displays "____" and the unit can be use. The function is active for some 5.5 hours or can be deactivated earlier by activating the E-lock in the service mode (function P0).

The function only works for receivers with handsets and may not be available when using other manufacturers' receivers.



Service call from the receiver in an apartment during system maintenance. This function is dedicated to service technicians and used to verify if the receiver works properly - if ringing, audio track and door opening is as expected. The function uses call numbers to apartments, selected on the keypad.

This function is only available for "Master" panels (or "Slave" panels where the "ML" terminal is not connected). In operating mode with 4 zone switch ("SW4S-DIN") the function is not available.

It is activated for specific receiver. If the open button is pressed three times when the handset is not hung up the unit generate a triple beep that can be heard in the handset; then the handset is hung up and after a short while the unit will automatically call that receiver (the display will show its call number which needs to be selected on the keypad). Operating of the received can be verified upon answering the call.

Upon activating the function, the unit will display "**Local?**", which is to be replaced by the call number, to be selected with the keypad (the physical address of the receiver is calculated by the unit). The entered digit is confirmed with the "**key**" button (the 6-digit apartment is confirmed automatically upon entering the last digit); to exit the function, press the "#" button. The unit will then display "**Ready**" and will exit the installer's menu.

When the function is activated, the unit displays "____" and the unit can be use. The function is active for some 30 minutes or can be deactivated earlier by activating the E-lock in the service mode (function P0).

The function only works for receivers with handsets and may not be available when using other manufacturers' receivers.

P18 SEARCHING MISPLACED OR DEFECTIVE UNIPHONES



Search function used to find misplaced or defective receivers.

It helps detect which receiver may be overloading the line (cause it is damaged or its handset is not hung up), which in turn may cause the whole system to malfunction (impaired address selection, calling two different receivers, etc.). The function uses physical addresses of the receivers and cannot be used if P16 or P17 (installer's or service call from apartment) is active.

This function is only available for "Master" panels (or "Slave" panels where the "ML" terminal is not connected). In operating mode with 4 zone switch ("SW4S-DIN") the function is not available.

Upon entering this function, the display will show "**Frm**" and while "?????" is being displayed, enter the value of the start of the search range (0 to 255) - confirm

with the **"key"** button. Then the unit will display **"To"** and while **"????"** is being displayed, enter the value of the end of the search range (0 to 255) - confirm with the **"key"** button. One/two-digit values entered must be confirmed with the **"key"** button, while three-digit values will be saved automatically (press the **"#"** key to exit the function). Then the unit will start searching for receivers by displaying successive addresses from the pre-set range. If a misplaced or damaged receiver is found, the unit will stop searching with this address and will signal it with a beep. When the **"key"** button, the unit will start searching for new receivers. When the **"#"** button is pressed, the search is ended and the unit returns to the installer's menu.

The function only works for receivers with handsets and may not be available when using other manufacturers' receivers. P19 function is an additional receiver test.

P19 LINE TESTING



This function is used to check whether or not the receivers cause any interference in the system (for instance when selecting addresses). The program will find potential receivers with faulty address switching or decoding system.

This function is only available for "Master" panels (or "Slave" panels where the "ML" terminal is not connected). In operating mode with 4 zone switch ("SW4S-DIN") the function is not available.

Upon activating the function, the unit will display **"LTest"**; all receivers will be reset and a test signal will be generated in the line. Each faulty receiver should receive the test signal - to find those faulty receivers, one needs to walk around the building and identify those apartments, where the test signal is received. If the unit also displays **"LineEr"**, it indicates that one or more receivers are actually faulty. Faulty receivers should be disconnected from the system as they may cause the whole system to malfunction. If the system works as intended, no faulty receiver is detected during the test, and the unit should display **"LTest"**. Use the **"#"** button to turn the test off.

Enable the P18 function for further testing of the installation.

XIII. CHANGE OF MESSAGE LANGUAGE

The language displayed in the 700 series units can be changed. The units are provided with four languages to choose from 1: Polish (PL), 2: English (EN), 3: German (DE) and 4: French (FR). Any of these languages (1 to 4) can be selected using the computer program.

If it is possible to restore factory settings, changing the language to language No. 2 is done by pressing "456" at the same time when switching on the unit when the countdown stops (while "aco" is displayed briefly). Press "123" at the same time to restore language No. 1.

PLEASE NOTE! As of version K-15 of the software the launch of the language change procedure is different - enter the installer's menu and at the same time press the combination "123" or "456", depending on which language is to be set.

XIV. RESTORING FACTORY SETTINGS AND DELETING MODULE MEMORY

1.- restoring factory settings

All settings configured in the unit's memory can be deleted by launching the restore factory settings procedure.

PLEASE NOTE! As of version K-15 of the software, the procedure of restoring memory settings is different: enter the installer's menu and press 2,5,8 at the same time. Without the password to the installer's menu, factory settings restore is not possible. If the factory settings restore is locked, the unit will display "Err!" In software versions earlier than K-15, factory settings restore can be done by turning off the power for about 10s and turning it back on. After the countdown, while the unit briefly displays "aco", press 2,5,8 at the same time. If the factory settings restore is enabled, the unit will display "Reset!" and will generate an acoustic signal - factory settings will be restored (as per chapter XV). If the factory settings restore is locked, the unit will display "Err!"

The factory settings restore work only for "unit parameters" as well as "numbers and call parameters" for zone 1 only, the code table number remains unchanged and all access codes are restored according to that code table number. To restore the factory settings of "numbers and call parameters" in the remaining zones, use the "New settings" option from the "File" menu in the computer program and select "Save settings". The reset procedure will not change the settings of additional modules, such as 230E, ACC or INTRO.

2.- restoring the default INTRO message

Follow the procedure for factory settings restore, but use "2,5,8,0" button combination to be pressed at the same time.

When the procedure is completed, the unit will display "aco".

PLEASE NOTE! As of version K-15 of the software, the Intro message cannot be restored using "2,5,8,0" buttons. It can only be changed using the computer program.

3.- deleting the memory settings of the CDN-230E name tag module

If all entries (names) in the CDN-230E module need to be deleted, turn the power off, wait approximately 10s and turn it on again by pressing any three module buttons at the same time. If the reset lock is disabled, the 230E module will display " **SETTINGS RESET** ". This operation will delete all the data, will restore the default intro (main screen with manufacturer's data) and will set the installer's password to 0000.

If the reset lock is enabled, no reset is possible. Disable the reset lock must using the computer program. Note! Installer's password cannot be restored!!! If the installer's password needs to be reset with reset lock enabled, the unit should be shipped to the service centre together with a proof of purchase (ownership) of the unit or proof of the permit to operate/maintain it.

4.- Deleting all cards in the ACC module

Deleting all cards registered in the module is only possible using the computer program.

XV. FACTORY SETTINGS

- ⊕ Messages supported in English
- ⊕ Code table with the default number or last entered number
- ⊕ Access codes according to the code table
- ⊕ Installer's password: 0000; As of version K-15: last four digits of the serial number
- ⊕ No admin codes.
- ⊕ E-lock release time: 4s.
- ⊕ Reversible E-lock disabled
- ⊕ The number of the first supported apartment: 1.
- ⊕ The maximum number of supported apartments: 255
- ⊕ All apartments call enabled
- ⊕ Call volume for all apartments: 1
- ⊕ Ringtone for all apartments: 3
- ⊕ The number of ringing signals for all apartments: 2
- ⊕ Auto opening disabled for all apartments
- ⊕ Additional function (Fd) disabled for all apartments
- ⊕ No additional numbers
- ⊕ No "Call only" receivers
- ⊕ Display of "Call service" message disabled
- ⊕ Further door opening disabled (no further door delay, no further door opening signals)
- ⊕ Code change by the user disabled
- ⊕ Additional exit - opening (value "0")
- ⊕ Number of openings during conversation: 3
- ⊕ Maximum conversation time: 120s
- ⊕ Factory settings reset enabled
- ⊕ Parameters of the additional I/O module: Port 1 off;

Port 2: control of the built-in OUTPUT - 1s. from "F2" and from the outside unit (input = 0, output=1, Function No. 2)

- ⊕ Multimaster module (CDN-MM) not supported
- ⊕ 4-zone switch (SW4S-DIN) not supported

XVII. CLEANLINESS

Cleaned the door entry unit with a damp or antistatic cloth.
Do not use any solvents!

XVIII. SAFETY RULES FOR INSTALLATION AND USE

- Installation should be carried out by a qualified installer.
- Turn off the power supply before opening the panel housing.
 - Avoid unstable power sources and electrical surges as this may cause malfunction or damage to the panel.
 - When using a metal frame, **it is mandatory** to ground the housing (using the marked terminal on the base) with a suitable protective installation (PE).
 - When trained to operate the panel, the user should be briefed that any errors in its operation may only be corrected by a qualified and authorised person.
 - Do not expose the panel to any kind of corrosive chemicals, as this may damage the unit.
 - The applicable OHS regulations must be observed when working on the door entry system.

XIX. RULES FOR STORING WASTE ELECTRICAL EQUIPMENT

Waste electrical equipment must not be disposed of with other waste. It should be stored in places designated for this purpose. For this purpose, please contact the responsible institutions or companies involved in waste recycling. - Directive 2002/96/EC of 27.01.2003

XX. TROUBLESHOOTING

Display and keypad won't work	Check for power supply. Turn the power off for approx. 15s and turn it on again; if this doesn't work - notify the maintenance staff.
Upon selecting the number, the call is made to two or more receivers	The probable cause of failure is damage to one or more receivers
	Check whether or not the receivers have the same physical addresses assigned.
Message " LineEr "	Short-circuit on the uniphone line (LINE+) to ground (correct line voltage - approx. 9V) - remove the short circuit. If " LineEr " is still on upon disconnecting the unit from the uniphone line - notify the maintenance staff.
Message " LineEr " and bright display backlight	Short-circuit of the uniphone line (LINE+) to more than 11V (correct line voltage - approx. 9V) - remove the short circuit. If " LineEr " is still on upon disconnecting the unit from the uniphone line - notify the maintenance staff.
Message " Locked "	Calling the selected apartment locked - program P3.
Message " Err! "	The number being called is out of the range of the number of supported apartment - reset using computer program
Distortion of during conversation or buzzing.	When connected, see whether or not the supply voltage is lower than 12VAC . Each door entry unit in the system must feature a dedicated transformer/power supply
Door opening signalled by the unit but E-lock won't work	Check E-lock or E-lock connection. Check whether or not the supply voltage during door opening drops below 12VAC / 15VDC
Squeaking sound during connection with the receiver	Set the microphone and speaker volume and balance (XI).
Message " No ACC "	The proximity card/key fob reader module (ACC) is disconnected from the unit or is damaged. Restart the unit, if the message reappears the ACC reader won't work, it may be damaged or in error condition or communication between unit's mainboard and additional modules failed.
	The door entry unit features no proximity card/key fob (ACC) reader
Message " t.Err "	Memory error - notify the maintenance staff
Message " Call Service "	<ol style="list-style-type: none"> 1. Check in unit settings whether or not the time after which this message should appear is set (refer to Chapter XII: P15 program for details) 2. Data in unit's memory corrupted. Restore factory settings (refer to chapter XIV for details). If resetting factory settings does work, contact service staff.
After call and picking up the handset, the unit won't initiate the connection (continues ringing)	Check the resistance of the uniphone line. The resistance between the farthest ends of the line must be less than 60Ω. Otherwise, solder the connections, check, replace the wiring or align the uniphone line (increase the cable cross section). For testing, disconnect all receivers and connect one receiver on short wires (near the door entry unit)
	Make sure that the voltage at line terminals is approx. 9V (LINE+ and -). Master panels should be in standby mode, Slave panels after pressing a call number or after disconnecting the ML terminal

Note! In order to facilitate contact with the service, keep the software version information, for instance I700 or P700 and compilation version, for instance K-00 (where 00 in both cases may be different), handy. Versions are displayed when the power is turned on (after the countdown) or upon entering the installer's menu.

XXI. LIST OF CHANGES IN SOFTWARE VERSIONS

- **K-00 to K-12:** Correction of minor errors. Calling in the first position when selecting the apartment number.

Change the logo when calling to "bells".

- **K-13:** Correction of ACC operating commands for 4 zones .
Correction of installer's program 8 show the card.
Correction of access procedures to unit's memory - improved

communication with the PC.

- **K-14:** Access to the installer's menu using installer's card/key fob - disabled.

Correction of the line short circuit to power supply + procedure

- **K-15:** Change in the factory settings reset procedure. Data control in unit's memory. Installer's code non-resettable and is factory pre-set as the last four digits of the unit serial number. The serial number is stored in unit's memory. Resetting Intro message using buttons on the unit - disabled.