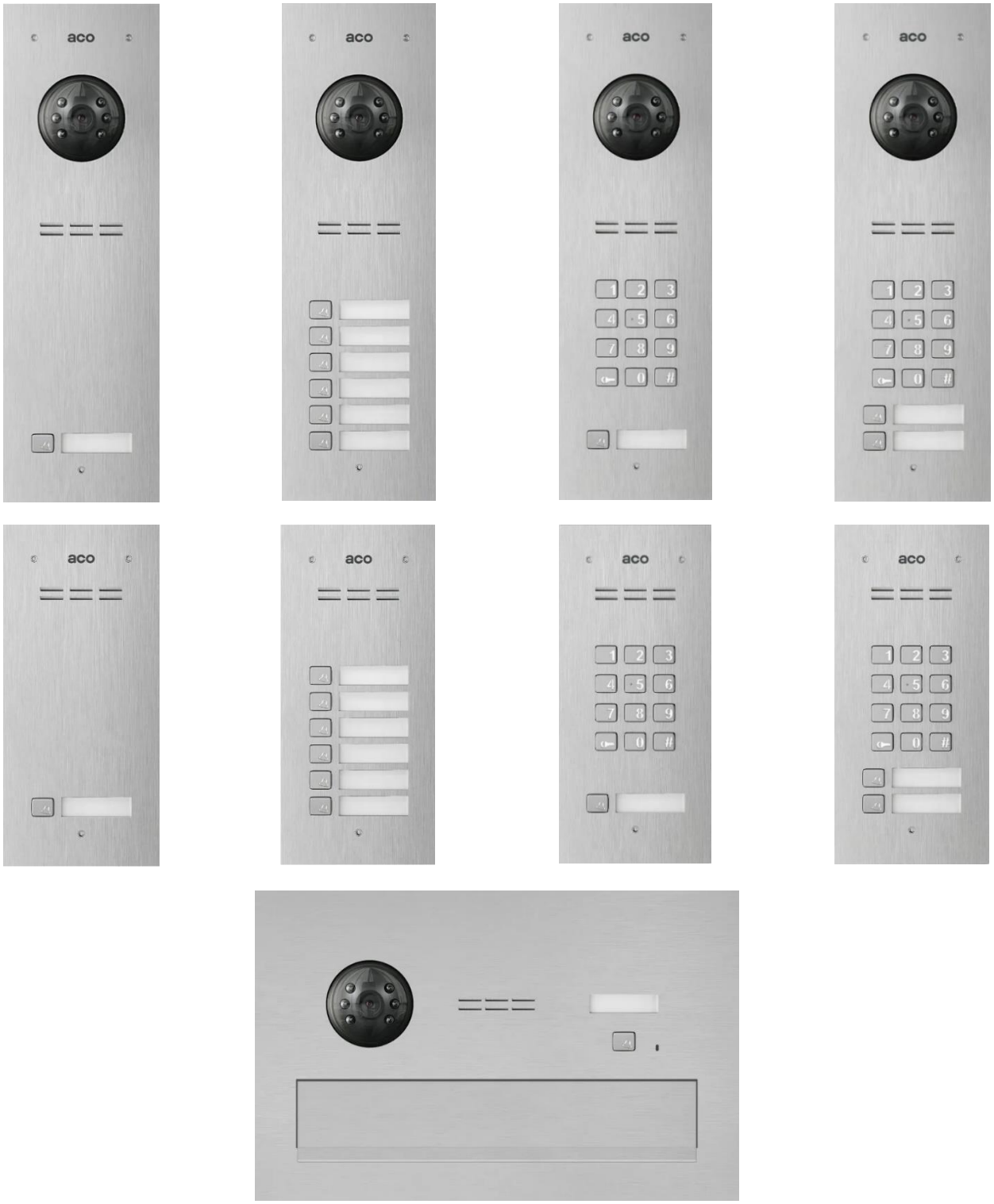
COMO INSTRUCTIONS SYSTEM ASSEMBLY AND CONNECTION INSTRUCTIONS



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I. Overview

The COMO PRO (generation 3) digital video door entry panel is designed for single and multi-residential properties that require the transmission of video and audio signals. The panel can also be used for internal communication between receivers.

The panels are available in four versions:
- the COMO-PRO-Vx version which includes a built-in camera, “x” is number of call buttons (1, 2, 3, 4 or 6)
- the COMO-PRO-Ax audio version which does not include a built-in camera, “x” is number of call buttons (1, 2, 3, 4 or 6)
- the COMO-PRO-CODE-Vx version which includes a built-in camera, keypad for opening gates/doors with a personal 4-digit code, “x” is number of call buttons (1 or 2),
- the COMO-PRO-CODE-Ax audio version which does not include a built-in camera, keypad for opening gates/doors with a personal 4-digit code, “x” is number of call buttons (1 or 2),

The stainless-steel panel offers effective mechanical and weather protection and features a backlit keypad for opening gates/doors with a personal 4-digit code. It has two backlit call buttons that can be assigned to specific apartments and has illuminated description fields for apartment numbers or other information. Additionally, the panel comes with an integrated in the lower description field) proximity key fob reader (two key fobs included) for convenient gate/door access.

Generation 3 PRO Additional Features

- flush or surface mounting (additional surface box required)
- Adding and deleting proximity key fobs using the master fob (separately for each apartment)
- Changing the code to open the door by the user
- Connecting two door entry panels in one system, i.e. master and slave (to switch the camera signal it is necessary to use the PRO-VIDEO-SW2-60 (G3) camera switch module)
- Programming settings and software update via system bus (optional PRO-USB 2.0 module required)
- Connecting additional 4 cameras necessary to use the PRO-VIDEO-SW2-60 (G3) for each camer

An external camera can be connected to the audio version, but it is recommended to contact the Aco technical department for more information on this solution.

Power and Connections

The panel is powered by an energy-saving switched-mode power supply unit with built-in video splitter: 1 panel input, up to 3 outputs for monitors or outputs for audio receivers. The door entry unit supports receivers of the PRO system: video receivers such as: GLASS-PRO-7, MPRO 4, MPRO800 3.5 series, and audio receivers: UPRO or UPRO800 series. An optional PRO-I/O-60 module is also available, which enables control of external devices, such as gates, barriers, roller shutters, and lighting.
(dodać info o ps65 dla audio)

Wiring and Configuration

The wiring for the door entry unit is based on UTP min. cat. 5e for a video door entry unit or any three wires for an audio door entry unit. The panel is preconfigured in a way that its settings are suitable for most cases, so no additional configuration is necessary. However, configuration of **all** settings is only possible via the "PRO 3 MANAGER" PC application and optional PRO-USB 2.0 modules for connecting the system to a PC (to be purchased separately).

Operation and Panel Functionality

The panel will ring when the call button is pressed, provided that the system has a receiver assigned to the button's address. If no such receiver is present, the panel will generate a busy signal. By default, the buttons ring addresses from 1 to 6 (when 1 is the bottom button). The default ringing tone lasts 45 seconds, and a voice connection is possible if a call is received during this time.

Door Opening

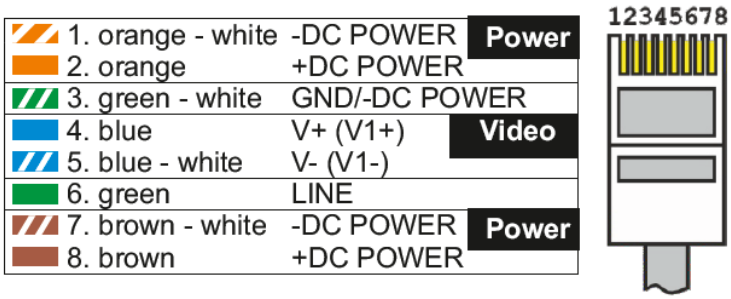
Door opening can be done from the receiver or from the panel by entering a code or using a registered proximity key fob. The default code for the lower button is 1111. The opening time and delay after pressing an external button can be set using the PC application. When two panels are connected, the master panel has priority and performs all functions by default.

II. System Assembly and Connection Instructions

1. General information and recommendations

For proper transmission of video image, it is necessary to use UTP cable min. cat 5e. For connecting other signals, another type of cable can be used, but the manufacturer guarantees correct operation of the system when using cables featuring UTP min. cat 5e parameters. If other wires or distances than recommended are used, a test connection of the kit should be carried out and the correct functioning of the whole system should be checked.

Connect the door entry unit following the diagram with power off. It is recommended to use RJ45 connectors and twisted-pair cable. Make sure that all connections correspond to the diagram, the RJ45 plugs are crimped correctly (according to the **T568B** standard - figure below), and no short circuit is present between wires before turning the power on.

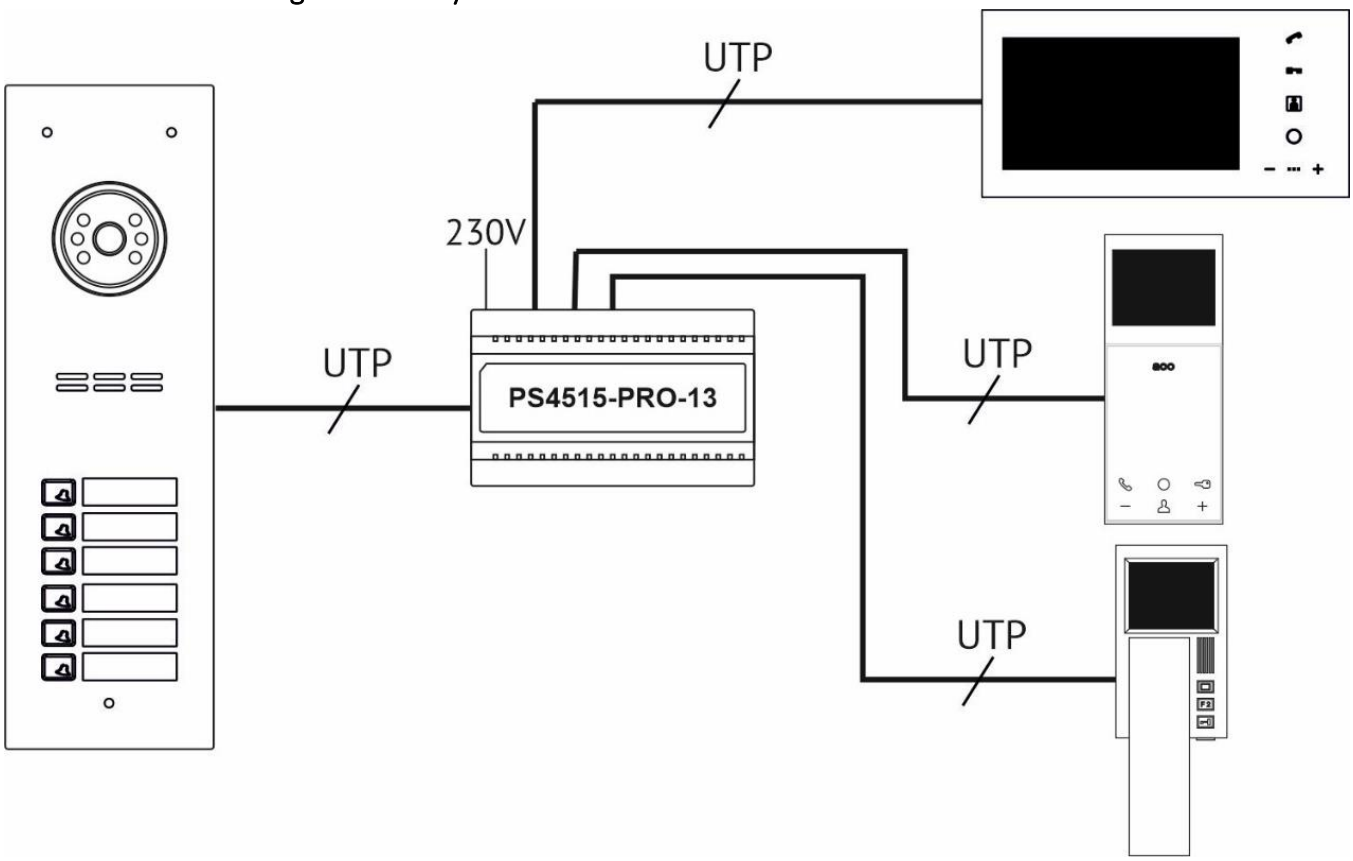


RJ45 plug numbering and colours

1.1 Connecting to Screw Terminals

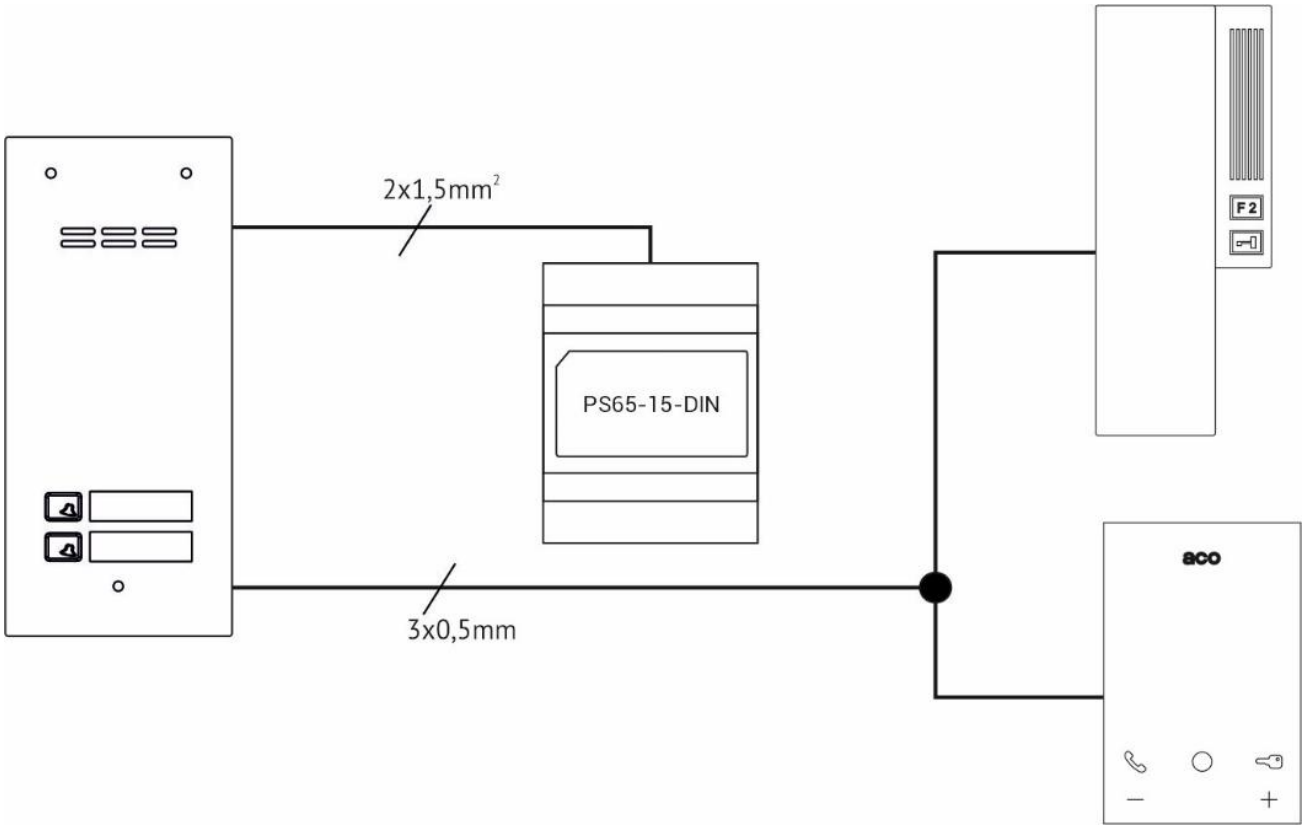
If the RJ45 is not used, connect the power supply to the +DC POWER and -DC POWER (GND) terminals, the signal line (communication / audio) to the LINE terminal, and the video signal to the V+ and V- terminals.

1.2 General cable routing for Video system



* This cable routing can also be used for the audio or mixed audio/video version, or when it is necessary to use RJ45 connectors

1.3 General cable routing for Audio system

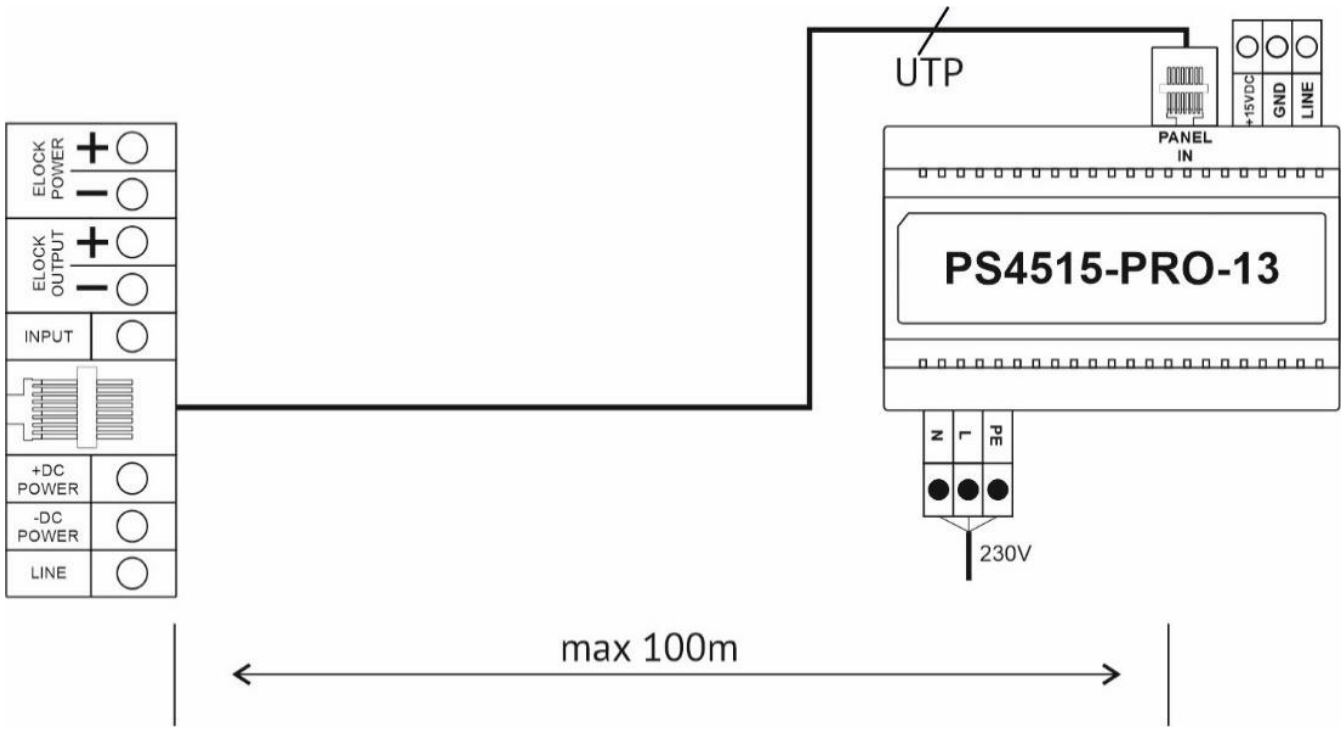


2. Connecting outdoor panel

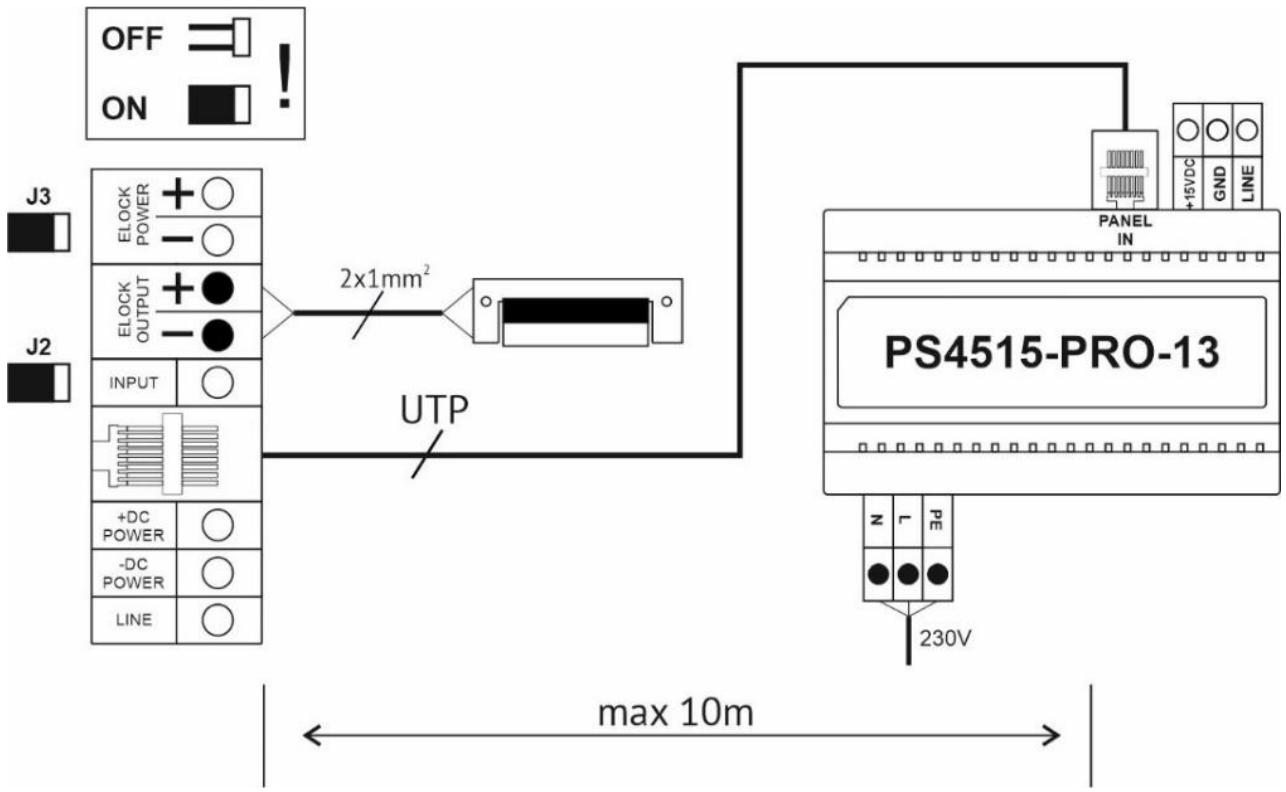
Connection of the outdoor panel with the recommended type of wires and lengths of wires.

2.1. Video or Audio version

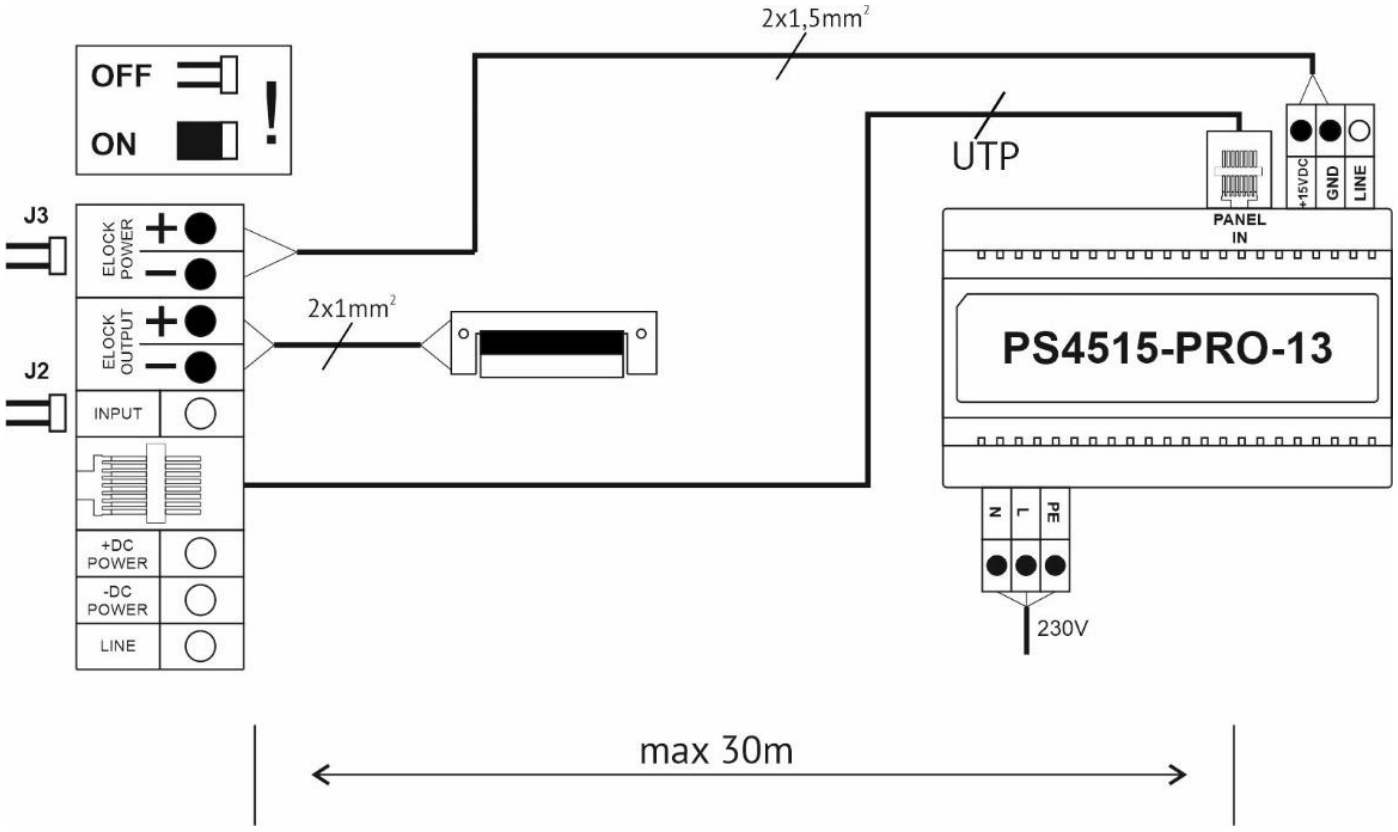
- example 1 (without using E-Lock)



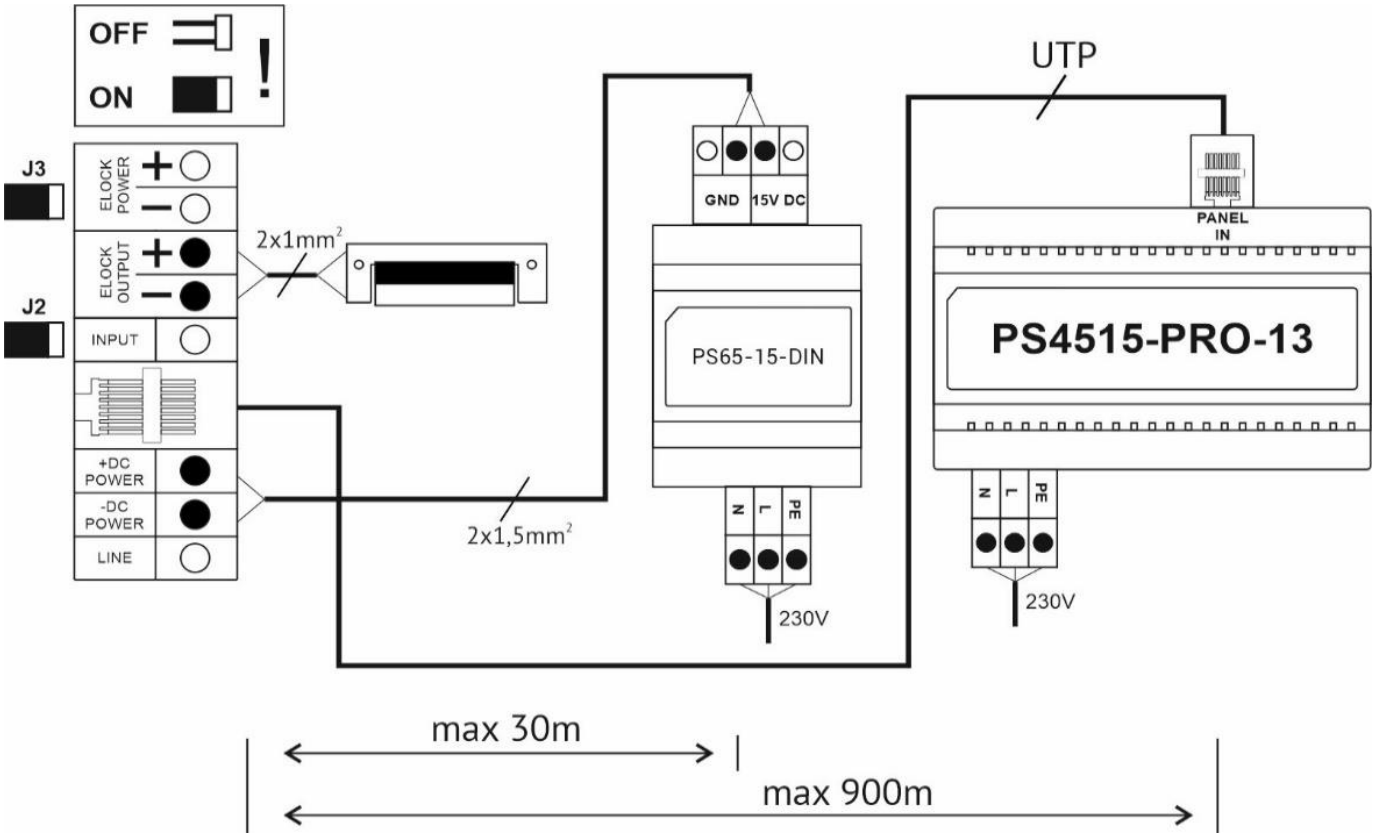
- example 2 (with using E-Lock, short distance, the jumpers must be ON)



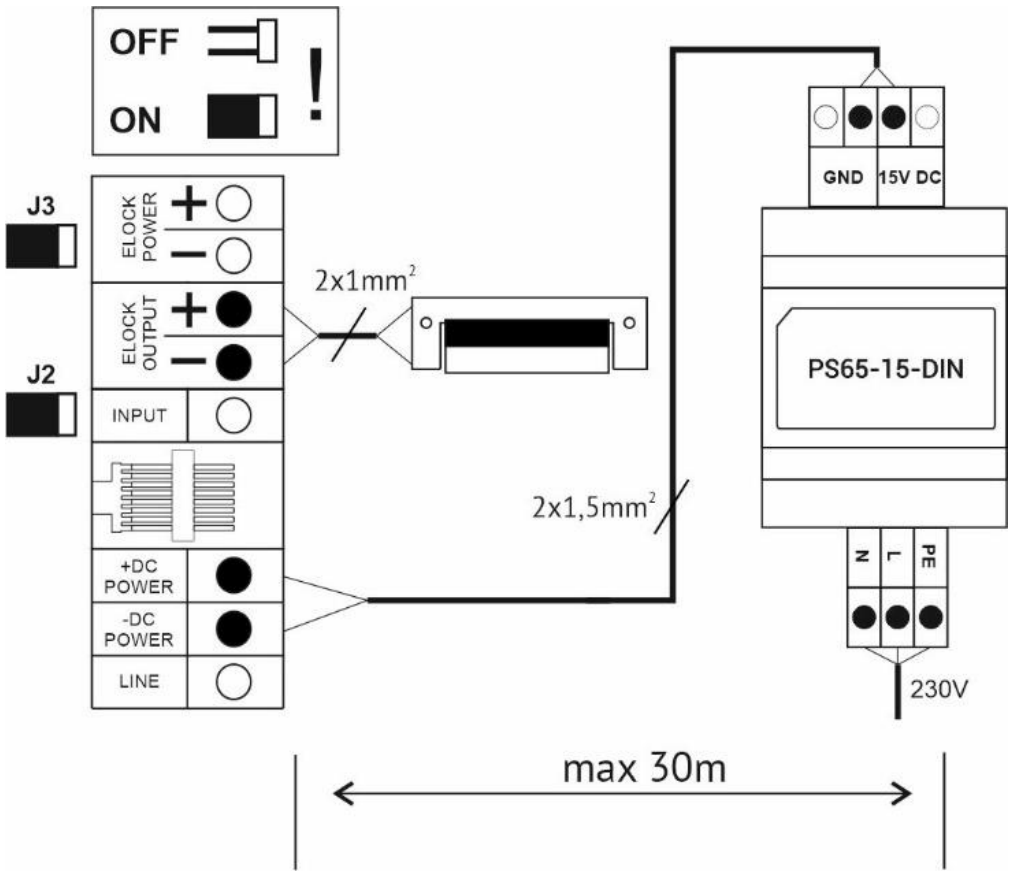
- example 3 (with using E-Lock, middle distance – using additional cable, the jumpers must be OFF)



- example 4 (with using E-Lock, long distance – using additional power supply, the jumpers must be ON)

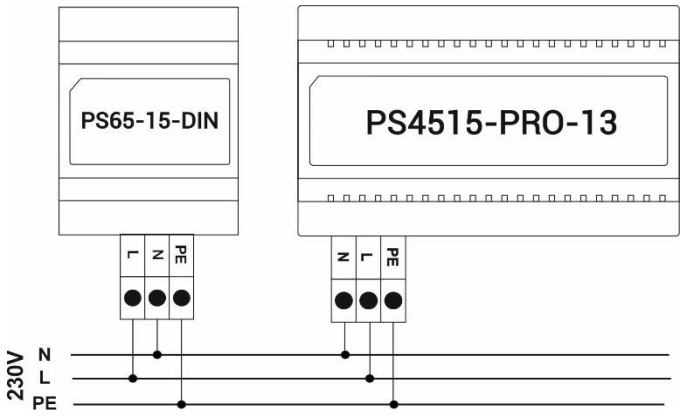


2.2. Audio version (the jumpers must be ON)



3. Power supply and PE terminal

To the Video or Audio systems uses the dedicated and recommended PS45-15-PRO-13 power supply, which features a built-in splitter for connecting more monitors. For Audio only systems PS65-15-DIN power supply can be used. For proper system operation and user safety, it is recommended to connect the PE terminal to the panel housing.

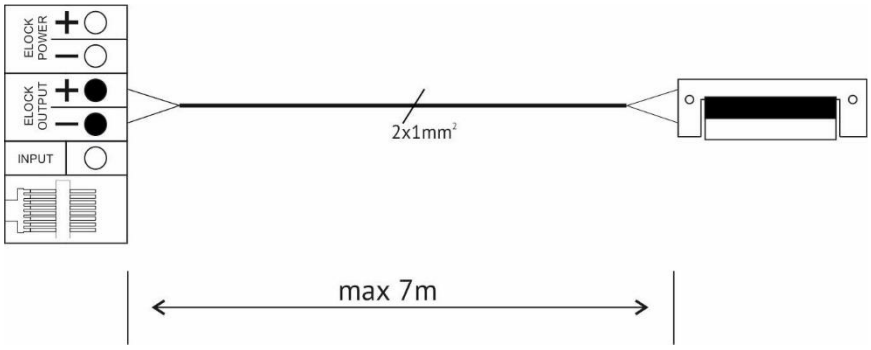


4. Connecting main entrance

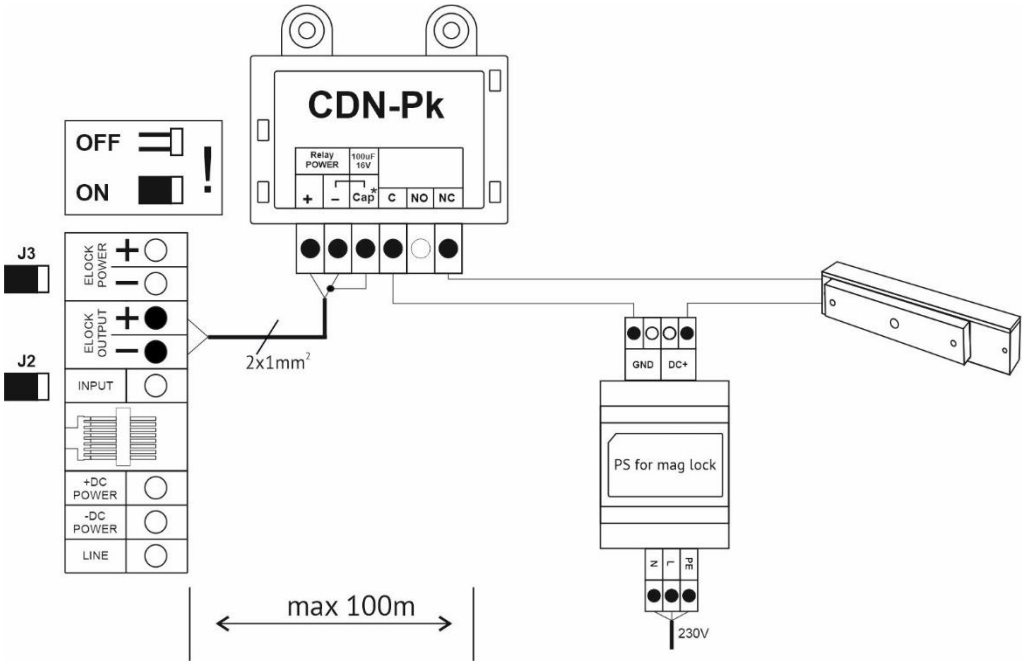
The main entrance is activated by pressing the button with the key icon.

4.1 Connecting E-lock

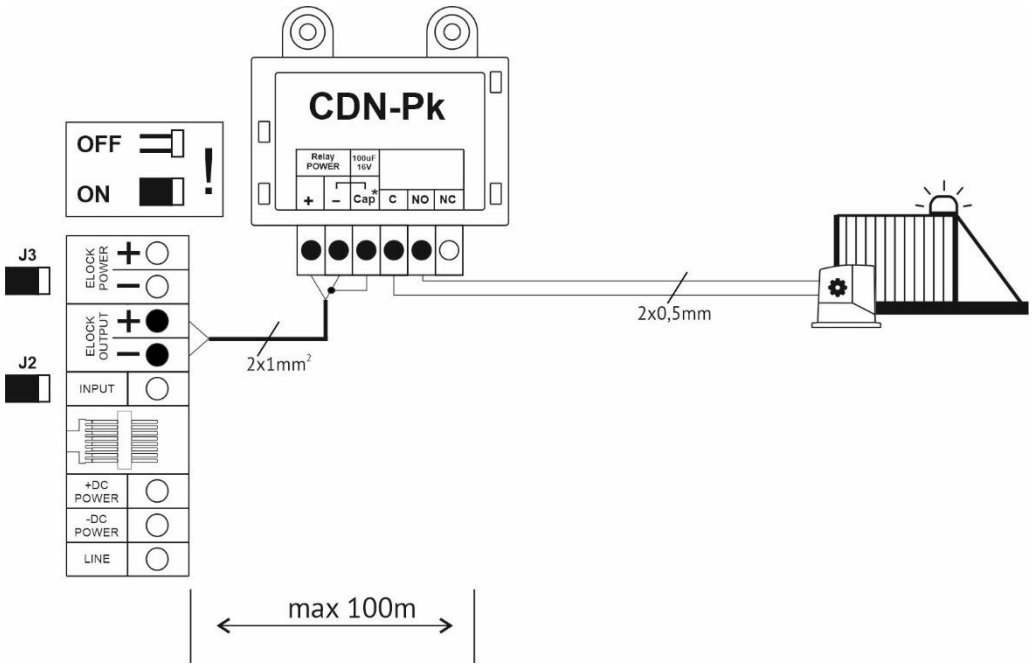
Connect the E-lock to the ELOCK OUTPUT terminals (+ and -) and connect its power supply to the ELOCK POWER (+ and -). It is recommended to use wires that can handle the current drawn by the E-lock (typically 1 mm2) and to ensure the distance. The ELOCK OUTPUT is set to “E-lock" mode by default, where the output voltage will appear during opening and will be modulated accordingly. In the settings, the ELOCK OUTPUT can be changed to “Reversible".



4.2 Connecting Mag-lock (the jumpers must be ON)

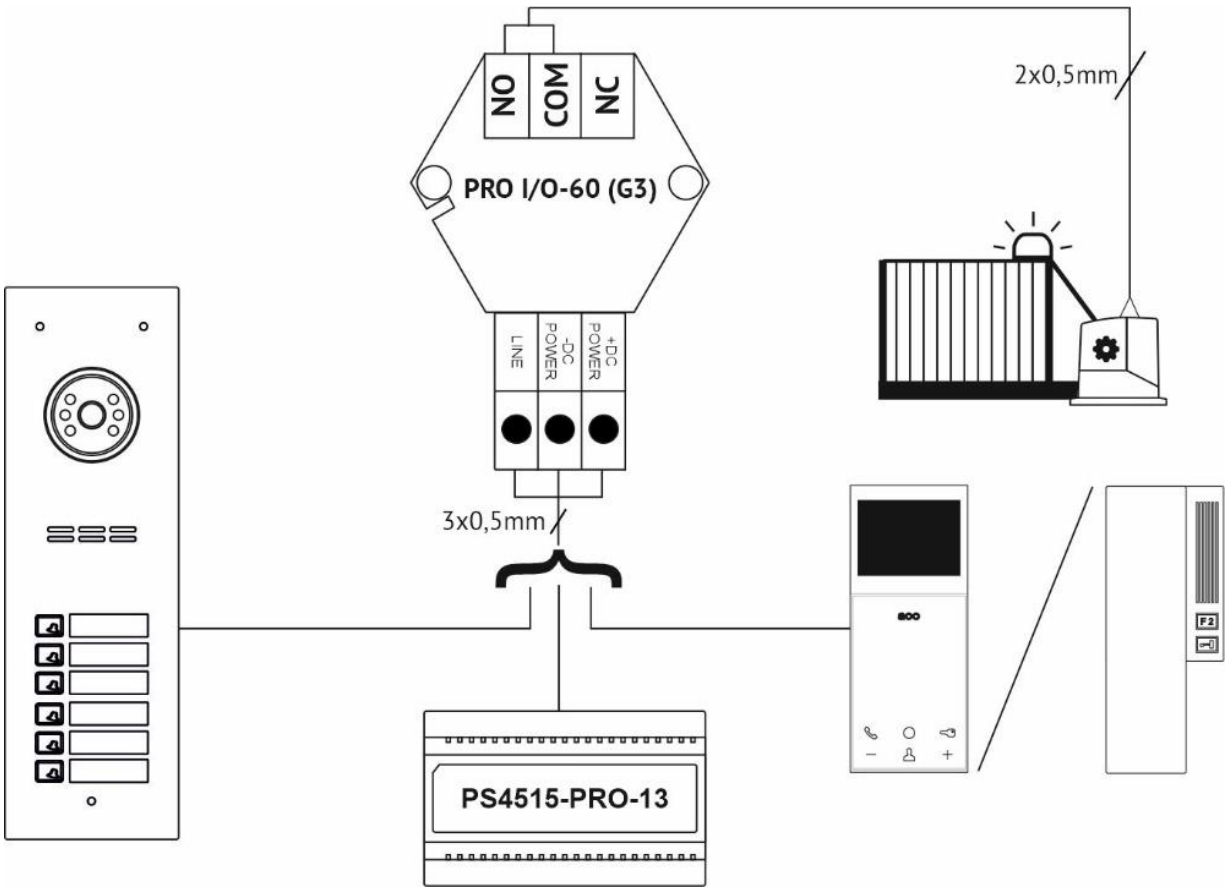


4.3 Connecting gate (the jumpers must be ON)



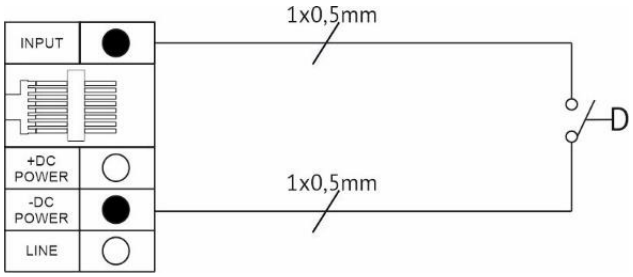
5. Connecting second entrance

To connect a second entrance, use the optional module PRO I/O-60 (G3). The second entrance is activated by pressing the F2 button or circle icon. The module can be connected anywhere in the system according to the diagram below (a minimum of 3 wires are required).



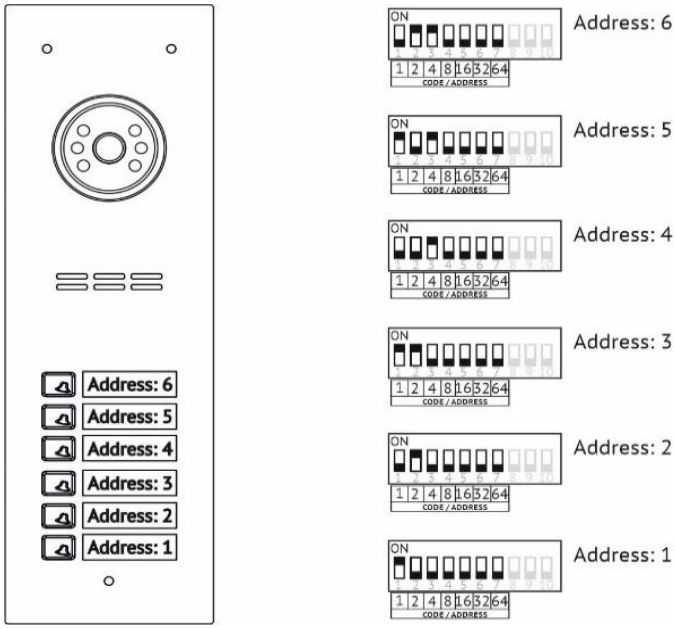
6. Connecting external exit button

Connect the external NO-contact button (“ringing” button) to the INPUT and GND terminals. This button can be used for direct door opening or for calling an apartment after changing settings via the PC application.



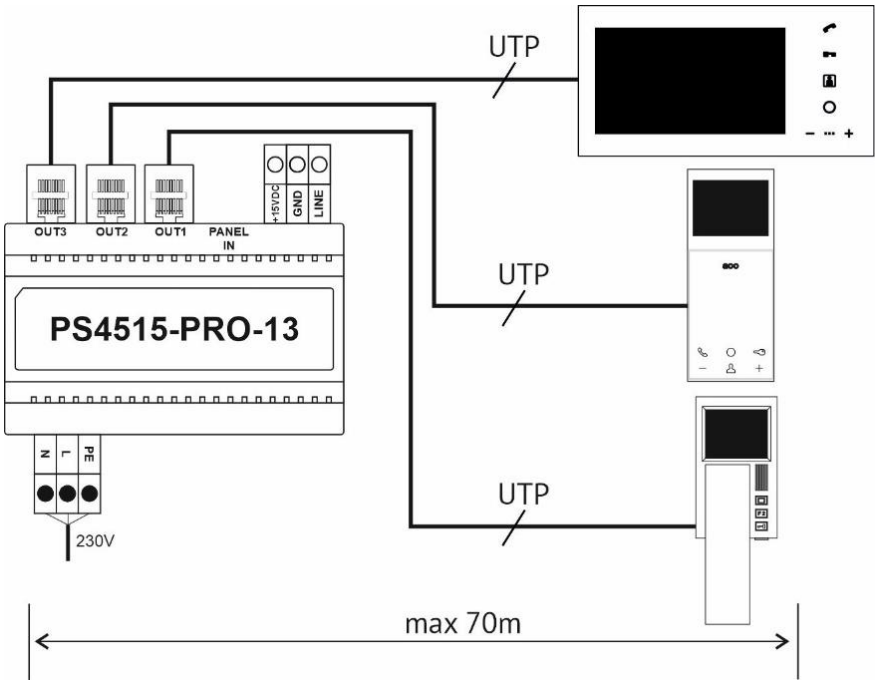
7. Connection and addressing of receivers

7.1 Addressing

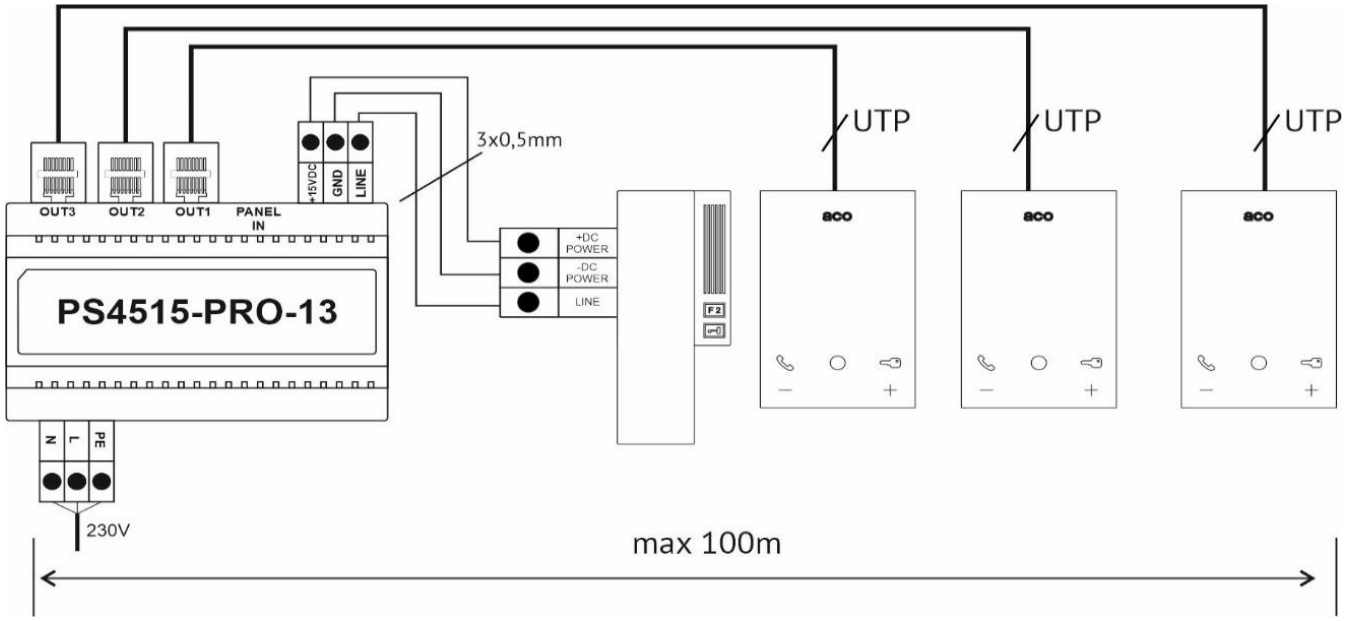


7.2 Connecting Video or Audio receivers using PS4515-PRO-13 (RJ45 connectors)

7.2.1 Video receivers



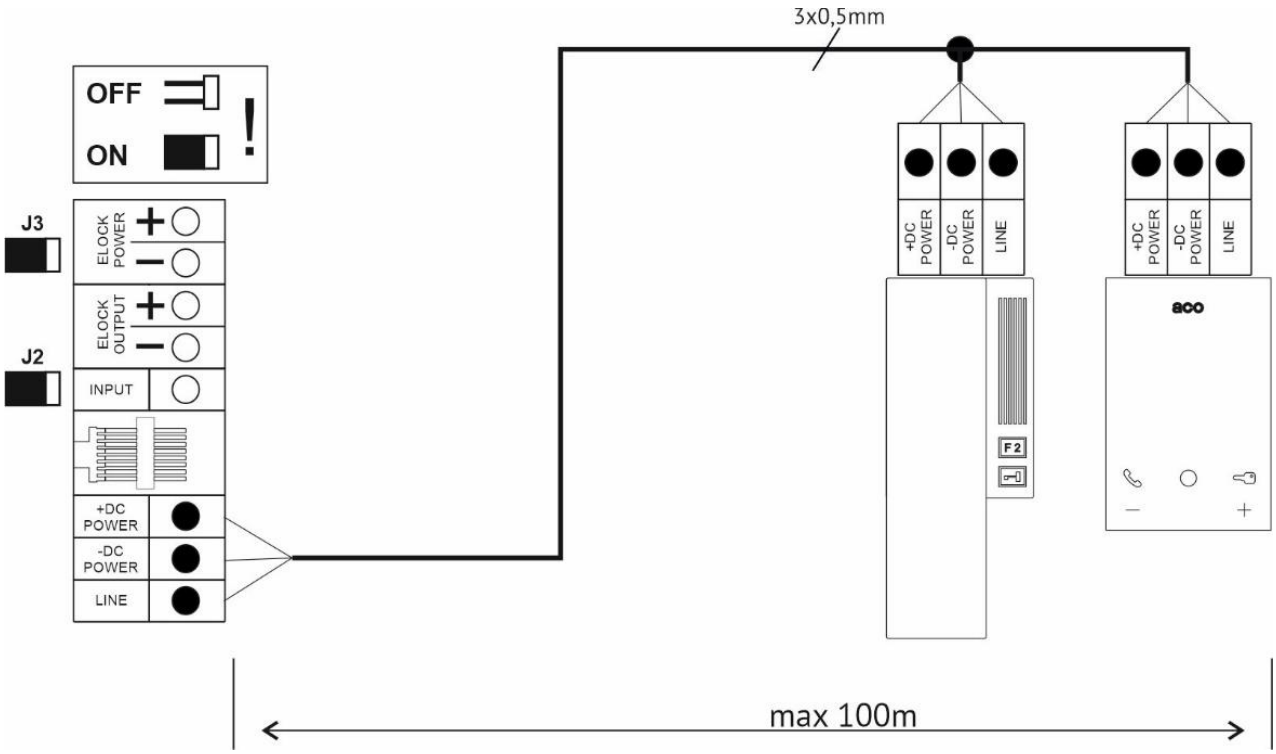
7.2.2 Audio receivers



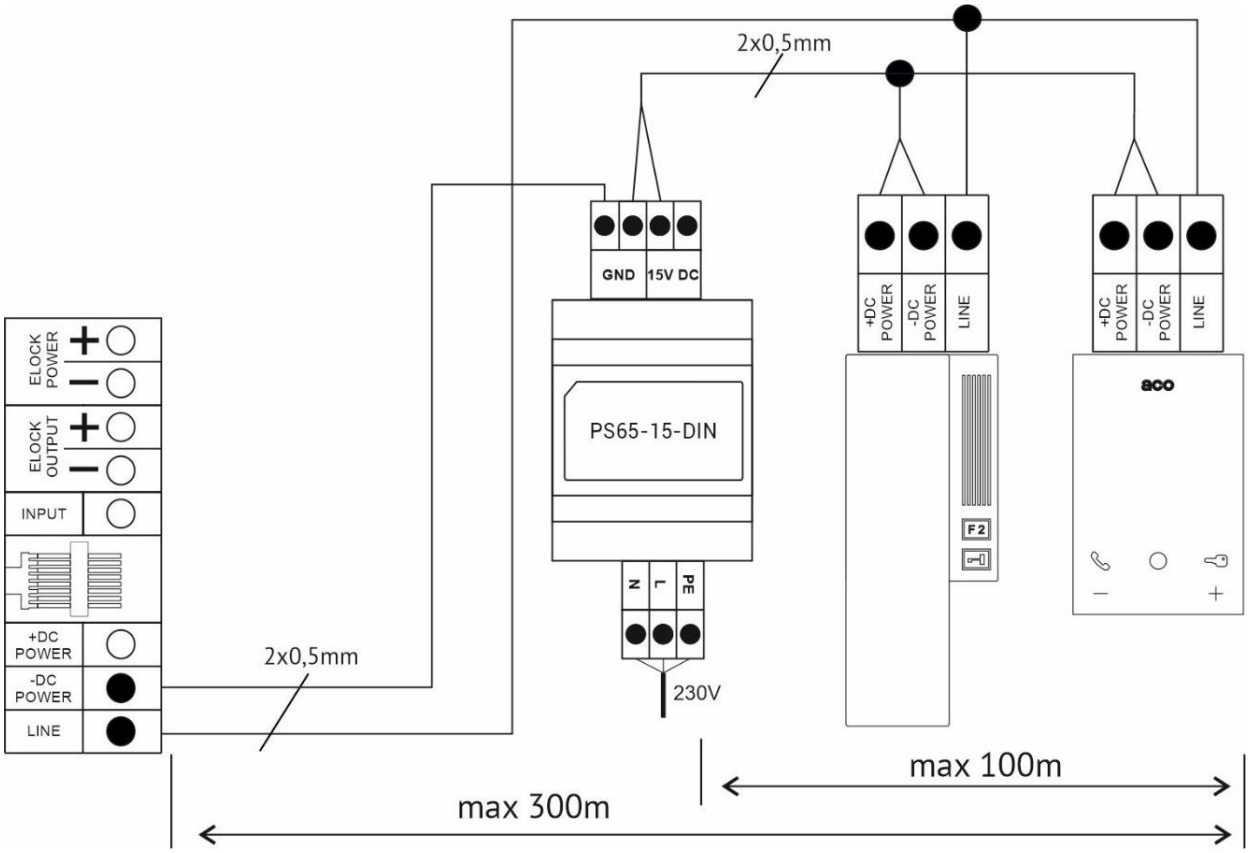
* both cable routing can also be used for the mixed audio/video version

7.3 Connecting Audio receivers

- example 1 (short / middle distance)

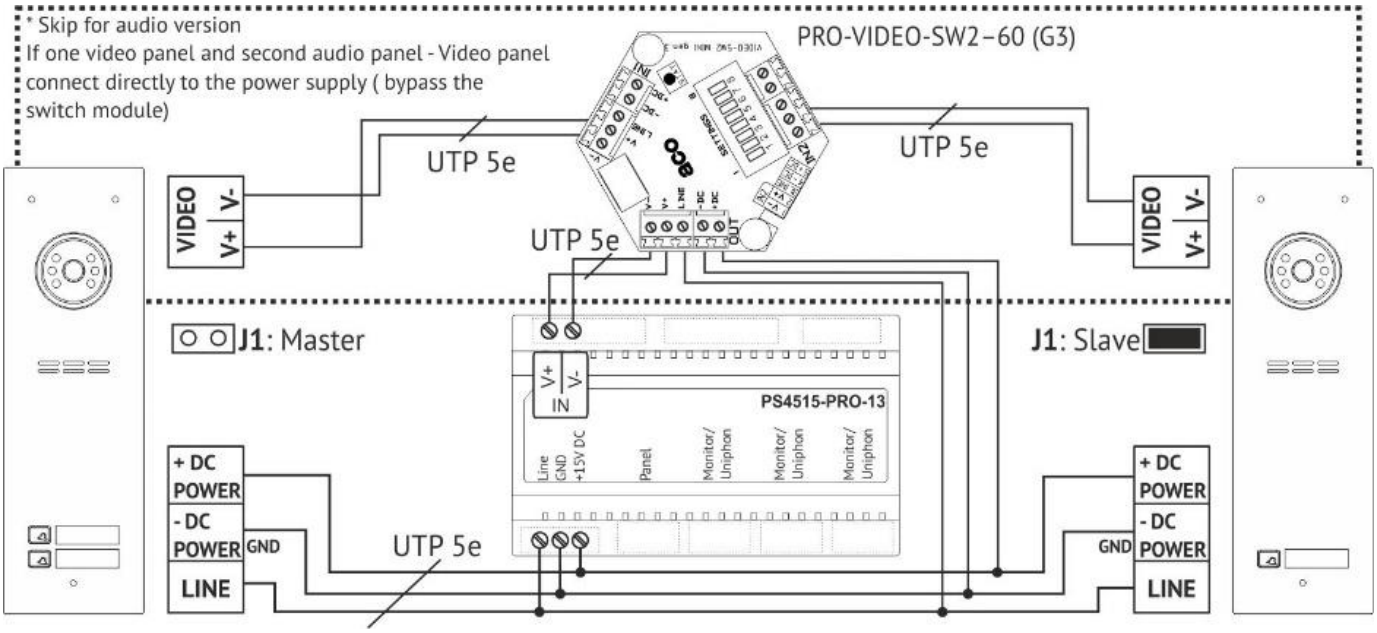


- example 2 (long distance, using additional power supply)



8. Multiple Panels

If the panel is used as a stand-alone device, leave jumper J1 (Master/Slave) open (position: Master). If multiple panels are connected in the system, one of them must be set as the master panel and the others as slave panels (jumper J1 closed). In the video version, up to 2 panels can be connected together and in the audio version, up to 4 panels can be connected together. They are connected directly to +DC POWER and -DC POWER (GND) and LINE terminals.



9. Configurations

9.1 Configuration Call Volume panel, balance and beep volume

Call Volume of Panel

The call volume of the panel is pre-set and does not require re-setting. To change the volume settings, connect to the monitor and use the following potentiometers:

- "MIC" for adjusting the sensitivity of the unit microphone
- "SPK" for adjusting the unit speaker volume level

Balance and Beep Volume

Use the "BALANCE" potentiometer to determine the position of the excitation points in the loudspeaker of the door entry unit and set the potentiometer halfway between these points. The volume of sounds emitted by the module is set using the "BEEP" potentiometer.

9.2 Configuration and settings

Use the **PRO-USB 2.0** Module and PC software: PRO 3 MANAGER to manage all panels settings.

To properly connect the PRO-USB 2.0 module, it is recommended to use RJ45 connectors for connection between the power supply unit and the panel or between the power supply unit and the receiver, or for connection directly to the power supply unit output. Alternatively, screw connectors can be used.

The free PRO 3 MANAGER can be downloaded from www.aco.com.pl/pro3manager/

III. Assembly

Weatherproofing

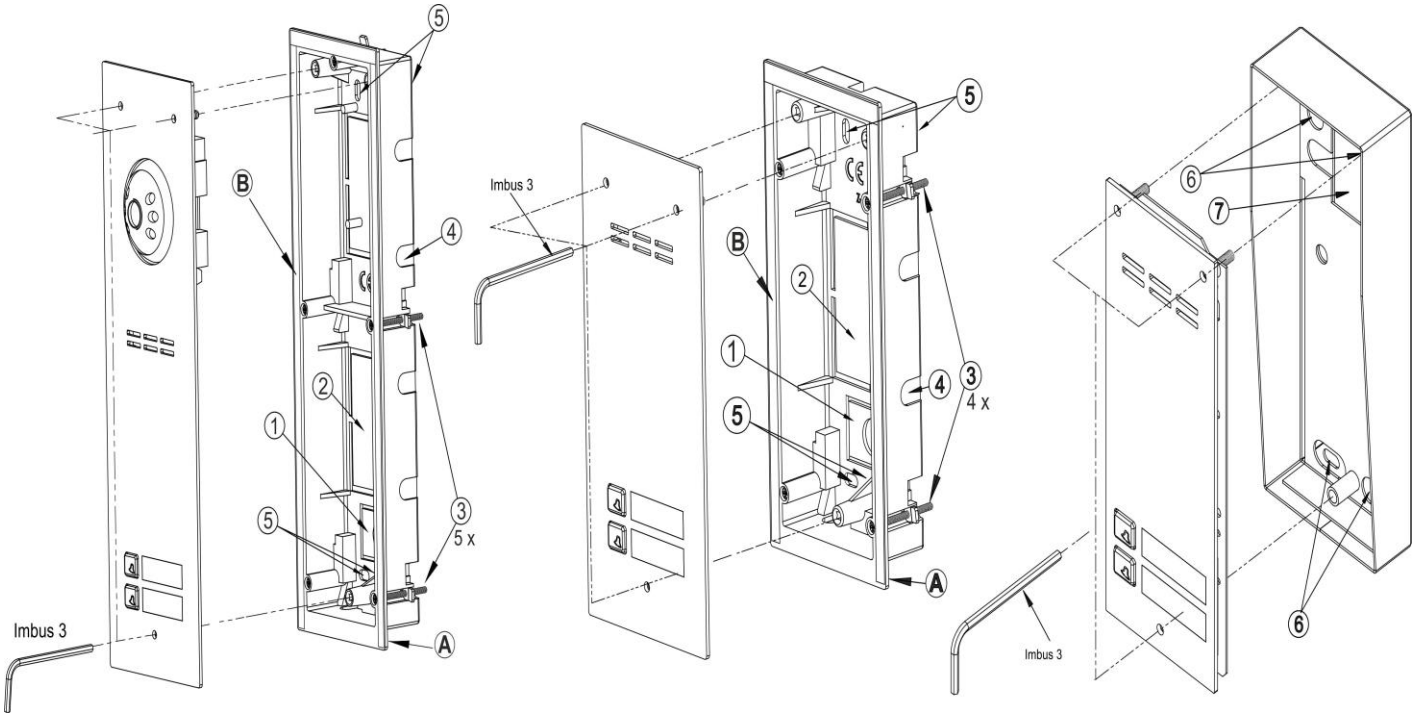
The panel should be assembled to minimize the impact of adverse weather conditions, particularly water.

Camera Installation

Ensure the camera is installed at the desired height, typically 1.60m from the ground. Verify the installation location and position of the panel by trial and error to ensure optimal field of view of the camera. Avoid locations where the camera lens may be exposed to direct, perpendicular light.

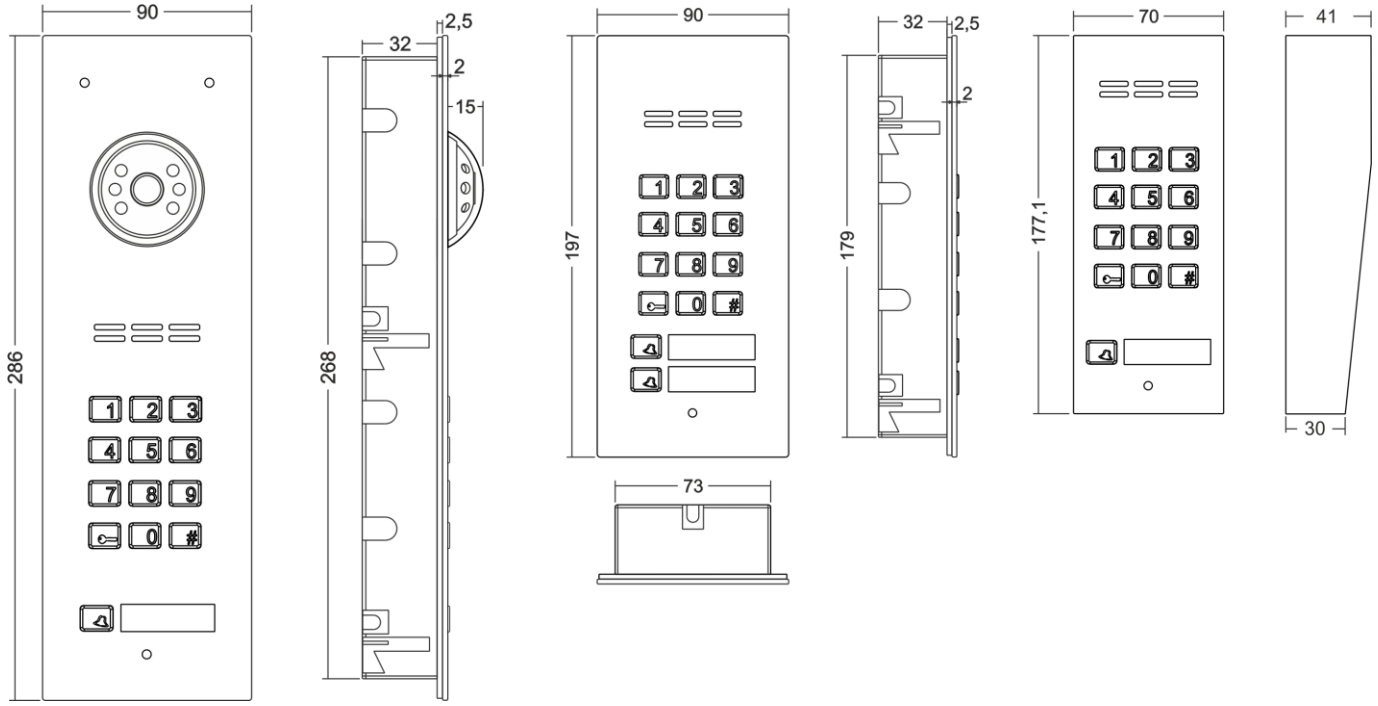
Flush-Mounted Panel

- Install the flush-mounted back box in the appropriate wall opening, using holes 5 and rawlplugs (or screws) as well as gypsum.
- Make sure that the back side of the box flange A is flush with the mounting surface.
- When mounting on a steel pole or similar structure with a maximum wall thickness of 32 mm, use an additional MONT-PPT-FAM set of gaskets and screws (available as an option).
- Run the wires through hole 1 in the box base and cut out the cap if a larger hole is needed.
- Use additional holes 4 for makeshift installation with nails etc. when mounting the unit in soft materials such as polystyrene.
- Holes 4 also make installation easier when using mounting foam.
- The cover cap 2 should be cut out in order to install the add-on module in its place.
- Check the condition of the gasket on box B. Cracks, deformations, and soiling may lead to loss of tightness.



Surface-Mounted Panel

- Install the surface mounted box in a suitable place, using holes 6 holes and rawlplugs or suitable screws.
- Pull the wires out through the hole with gasket 7 in the base of the box - pierce the gasket with a sharp pick (not a knife) and press.



Waste Electrical Equipment

- Waste electrical equipment must not be disposed of with other waste.
- It should be stored in places designated for this purpose.
- Contact the responsible institutions or companies involved in waste recycling for more information.

Changing Codes and Managing Key Fobs

Changing Codes:

The code can be changed by entering the current code, then pressing and holding the "key" button for 4 seconds. The panel will confirm the change with a triple sound.

Adding and Removing Key Fobs

Key fobs can be added and removed directly on the panel using the "Master" key fob, which is always the first one added. Up to 10 key fobs can be added for each address/call button. Key fobs can also be managed using the PC application.

PROXIMITY KEY FOB MANAGEMENT

PROXIMITY KEY FOB MANAGEMENT

- Proximity key fob reader is integrated in the lower description field
- Maximum of 10 key fobs per button/address
- The first key fob programmed will become the Master Key Fob
- Each button/address has its own Master Key Fob (supplied and pre-programmed with kits for first bottom/address))
- The Master Key Fob will then be used to program all subsequent key fobs going forward
- To enter programming mode a Master Key Fob must be used
- All proximity key fobs can be management via the "PRO 3 MANAGER" PC application and optional PRO-USB 2.0 modules for connecting the system to a PC (to be purchased separately).

Where is the RFID Reader?

- The RFID Reader is situated directly behind Call Station 1 name Plate.

Adding user key fobs

- use the Master Key Fob to the panel RFID Reader (You will be automatically entered into Programming Mode at this point)
- During the door opening process hold the new key fob to the panel.
- Hold new key fob to RFID Reader until an audible beep is heard to confirm key fob acceptance
- Repeat holding key fobs to panel RFID
- I*f an unregistered key fob is used at the panel a short triple beep sound will be emitted*

Exiting Programming Mode

- Programming Mode will time out after 5 seconds of no activity.

Deleting key fobs from an allocated call button

- Use Master Key Fob to Panel activating door unlocking process
- Immediately press and hold call button for 4 seconds
- A loud beep will be emitted for about 10 - 15 seconds (optionally now you can add Master Key Fob)
- When it stops beep the call station has been cleared of all key fobs including Master Key Fob in allocated call button
- This can be confirmed by holding Master Key Fob to the panel - as now unregistered you will hear 3 short beeps
- *Deleting individual key fobs is only possible via the software*

Creating a Master Key Fob

- Panel must be off
- Press and hold the call button (to which the Master Key Fob is to be assigned)
- Turn power on > a loud continuous beep will sound
- Take your finger off the call button
- Hold and place an unregistered key fob to the RFID Reader
- You will hear the beep stop for a split second then a second short beep will sound
- The Master Key Fob is now programmed
- This procedure cleared all Key Fobs assigned to the pressed button

Cleaning

- It is important to use alcohol-based cleaning products only when disinfecting the panels to avoid any damage from chlorides present in common cleaning products.

TECHNICAL PARAMETERS

• Supply voltage	15VDC ±5%
• Standby power consumption	~2.5W
• Maximum power consumption	400mA
• E-lock supply voltage	12VDC - 15VDC
• Permitted load of E-lock output	1,5A
• Output type	normal or reversible (by default: normal)
• Lock activation time	0.6 to 25s (by default: 4s)
• Type of output control	pulse to E-lock (default) or fixed to relay
• Camera viewing angle	approx. 90º
• Horizontal and vertical camera adjustment angle	20º
• Connector type	RJ45 socket/removable ARK screw connectors
• Housing material	Stainless steel
• Resistance of external opening input	≤ 20Ω, input type: NO
• INPUT delay time	0 - 25s (default: 0s)
• Front dimensions (H x W)	Video 286 x 90 mm, Audio 197 x 90 mm, Audio surface-mounted 174.8 x 67.8 mm
• Standard of supported proximity cards (RFID)	Unique 125 kHz
• Maximum number of supported proximity key fob	10 for each address/call button (or 10210 available via the PC application)
• Maximum number of supported codes	1 for each address/call button (or 1024 available via the PC application)

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