OPERATING MANUAL for Familio PRO audio version
FAM-PRO-A-xNPxx-x (ACC, ZS)

GENERAL INFORMATION

Familio PRO digital system is designed for houses with up to three families. This system can be easily transformed into video with additional external analog camera. Audio installation is based on 3 wires bus line with UPRO handset and video requires cat 5e cable with MPRO7 (7” handsfree) or 4” handset inside units MPRO4.

The audio system requires 15V DC power supply (DR-45-15) and for the video system adder module (CDNVS-60) is essential for camera connection and dedicated power supply with integrated video signal splitter (PS45-15-PRO-13).

Using MPRO7 offers additional futures for users that are constantly developing, for now one of them is intercom.

The outside unit can have up to 3 calling buttons, but you may connect larger amount of inside stations to one calling address. It has also integrated RFID reader which allows quick door opening by swiping the key tag. The units with code lock can open doors by typing 4 digit code.

The stainless steel housing gurantess effective protection against vandalism and bad weather conditions.

TECHNICAL PARAMETERS

• Power-supply voltage	15VDC ±5%, 120mA
• Power consumption in stand-by mode	~2,5W
• Power-supply voltage of electric strike	12VDC – 15VDC
• Admissible loading of the electric strike output	1A
• Output type	regular or reverse (factory default: regular)
• Lock activity time:	0.6 to 15s (factory default: 4s)
• Output control type: constant control signal	pulse to electric strike (factory default) or to the relay
• Number of supported users	up to 3
• Camera's angle of view	about 75 degrees
• Connectors	RJ45 socket / ARK-type screwed terminal
• Front panel material	Stainless steel
• Type of the input contact for external opening	NO switch
• Resistance of the INPUT contact for external opening	≤ 20Ω
• INPUT contact action delay	0 – 25s (default: 0s)
• Room required for surface mounting of the panel	177 x 70 mm (high x wide x thickness max. 45 mm)
• Dimensions of the opening for flush-mounted box	180 x 74 x 33mm (high. x wide x thick)
• Room required for flush mounting of the panel	197 x 90 mm (high/wide)
• Communication with PC	USB (CDN-USB and Familio PRO app)
• Maximum number of different opening codes	4 (1 per user + 1 for admin)
• Maximum number of supported proximity keycards	40 (10 per apartment + 10 for admin)
• Standard of the supported proximity keycards (RFID)	Unique 125 kHz

OPERATING

Calling from the outside unit

In order to establish communication, press the call button on the panel. If the called monitor is in the system, it will startto ring (the call lasts for 45 s). Otherwise, the panel will generate a "busy" signal. Ringing volume is adjusted with switch on the inside unit – there are 3 available settings: mute, low and high (mute status is signalised with backlit switch).
To receive a call, touch the telephone receiver icon. In the conversation mode, volume can be adjusted with + and – icons. An established connection can last up to 4 minutes. After this period, it is terminated.

Using the code and proximity cards

In order to open the door (usually by activating the electric strike), the user should key in a correct code or bring a proximity keycard close to the bottom field with a surname (by default, no keycards are registered in the device). If a non-registered keycard is brought close to the device, the panel will generate a sequence of three sound signals. It is easiest to manage codes and keycards with the Family PRO computer application. The following codes are factoryset:

- the lowest buttons: 1111,
- the 2nd button: 2222,
- the 3rd button: 3333,
- admin code: 4444.

Attention! It is recommended to change all the codes, once the Panel has been installed.
If the key button is pressed before code keying or using a proximity keycard, an additional device is activated, e.g. a gate(a special PRO-I/O module is required). The user can modify codes in the following manner: Introduce the current code. Then, during 1.5 second, press and hold the “key” button, until (after about 4 s) the panel will issue a single sound. Then, introduce the new four-digit code. The panel will confirm with a sequence of three sound that it has been accepted.

Restoring factory-defined codes and adding/deleting keycards

It is possible to restore factory-defined opening codes and add/delete proximity keycards if “Block restoration of factorydefined codes and keycards” option is not enabled. To do this, switch the panel power supply off, wait 5 seconds, press the call button corresponding to the flat, which an ascribed code and cards are to be restored/deleted, switch the panel power supply on, hold the button, until the panel issues a long continuous sound. After this operation, the panel will start to generate a fast intermittent sound signal, which means that it has restored the factory-set code and entered the keycard adding procedure (while deleting all the keycards that could have been ascribed before). If a keycard is applied to the bottom surname field, when this sound is being issued (it lasts about 5 seconds), the panel will start to open the door, which means that the first keycard (master) has been correctly read and recorded. If another unregistered card is applied during 5 seconds after door opening, the panel will issue a short double sound signal – the next keycard has been correctly read and recorded (if the keycard is held against the field for too long, the panel will start to open the door again). After that, one can register other keycards. Up to 10 keycards can be ascribed to one flat (button). To finish the keycard registration process, wait 5 seconds or press the “#” button. The keycard registration procedure will get terminated. It is possible to restore the code and delete/add cards corresponding to the administrative account only with the PC application.

Adding keycards by means of the “master” keycard”

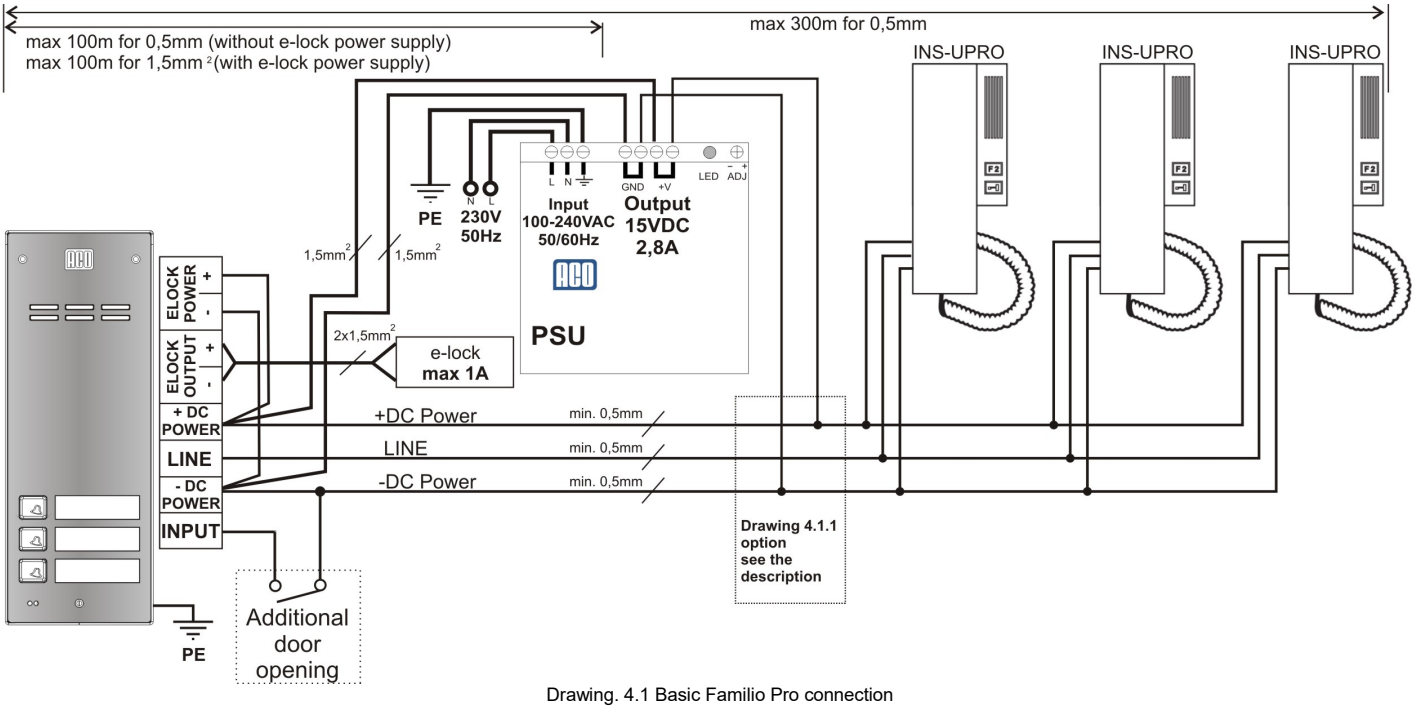
Every first keycard that is added to a particular flat and administrative account has the status of the “master” card that can be used to add further cards. To do this, open the door with the master card and apply an unregistered card to the field during 5 seconds after the door was opened. The panel will start to open the door again, which means the next keycard has been correctly read and registered. The procedure is analogous to the one described above.

SYSTEM CONNECTION AND ASSEMBLY

All connections should be made before the power is switched on.
Drawing 4.1 shows basic diagram of audio installation. Between the oustide and inside unit 3-wires installation is required and the connection can be made with a simple wire (door phone / alarm / telephone) that has diameter at least 0,5 mm. Power of 15VDC should be brought to the outside station's terminals (+DC POWER, -DC POWER) and if there is need, to the e-lock's terminlas (ELOCK POWER +, -).
The e-lock connects to the terminals ELOCK OUTPUT (+ and -), and the terminals will get the same voltage value that is present on the ELOCK POWER terminals. To supply power to the e-lock a seperate DC power supply can be used. If the unit is connected to a reverse e-lock, the jumper “REWERS” has to be on and ELOCK OUTPUT has to be switched in the computer software.
The power and the e-lock should be connected using the cable that is able to work with the voltage we are using (usually 2x1,5mm2). If you do not have e-lock in your system or the distance between the outside unit and power source, the outside unit's power can be connected directly to the power wires between the outside and inside units: drawing 4.1.1. (outside unit gets only 3 wires). In case of closer distances (up to 10m) between the outside unit and power supply it is possible to power up the e-lock directly from the wires that are between outside and inside units (drawing 4.1.1.) - in such case connect the terminal +DC POWER with ELOCK POWER+ and +DC POWER with ELOCK POWER-. It is not recommended but acceptable, in case of malfunctions of the system, power up the e-lock with seperate cable.
Basic infomration about max. distance of the line with regard to the applied cables is presented on the drawing 4.1. (Max. distance between the outside unit and the furthest inside unit and between the power supply and the outside unit). The cables should not run in the vicinity of other installations wires (energy, telecomunication, alarm systems) because it can influence function of the system negatively. More information about the line length, wire types and more possibilities of the FAMILIO PRO system like: connecting to the computer and configuration with Familio PRO app, update of outside unit's software, installing more inside units in one system and list of typical issues can be found in the Familio PRO System Manual available at www.aco.com.pl

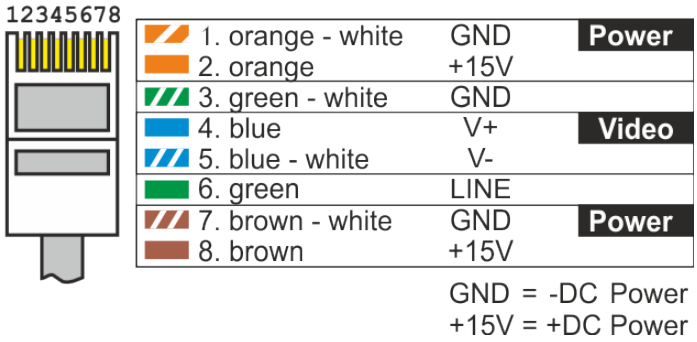
INPUT terminals allow connecting outside button (usually inside the building or on the other side of the gate than the outside station is) in order to instantly activate the ELOCK OUTPUT. The max. INPUT circuit resistance cannot exceed 20Ω. The button (NO type for e.g. ring) connects to the INPU and – DC POWER (GND). With computer it is possible to set the delay time of the output (the time after the elock starts buzzing when you press the button).

The inside units are connected to the power supply (+DC POWER, -DC POWER) and communication audio signal line (LINE).



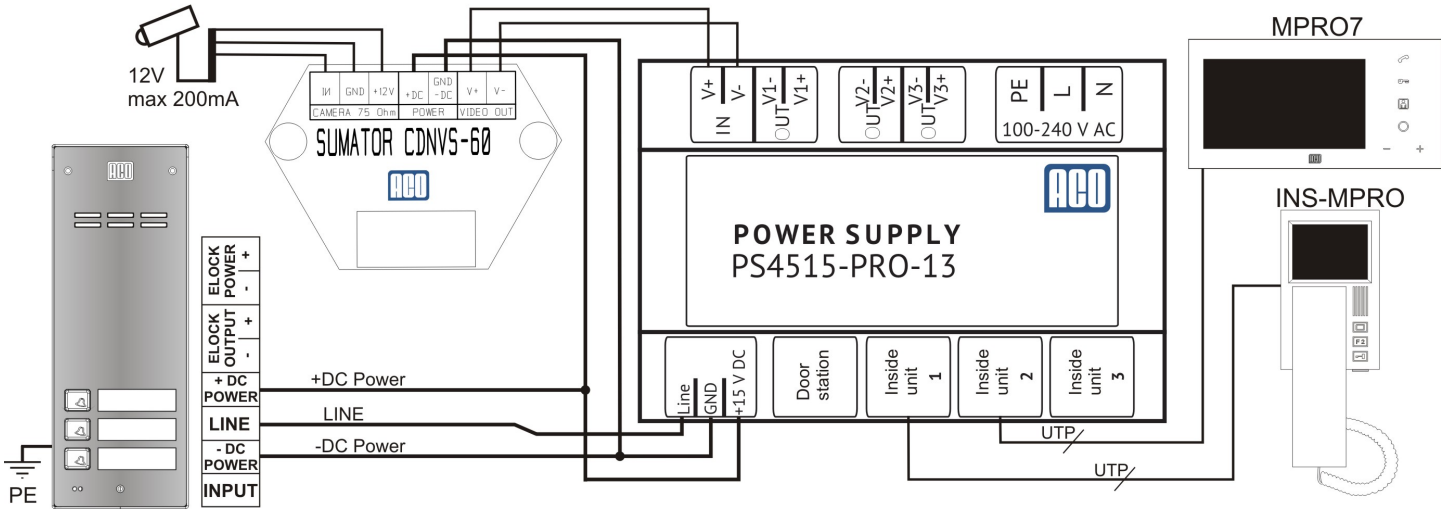
Drawing. 4.1 Basic Familio Pro connection

In case of video installation with external camera an CAT5e cable is required between the power supply PS45-15-PRO-13 (recommended model with integrated video splitter) and the inside stations. An adder module CDNVS-60 is also required to connect the external camera. The RJ45 plug has to be crimped according to the T568B standard, and signals in every line are shown on the drawing 4.2. Connections of the outside unit and inside unit can be made either with RJ45 pugs or with screw terminals. Video installation diagram is shown on the drawing 4.3.



INPUT		Switch input for additional opening
- DC POWER (GND)		Chasis ground and potential for switch input
LINE		Audio communication signal line
+DC POWER		Input for power supply voltage
ELOCK OUTPUT	**-**	Elock output, potential „-”
	+	Elock output, potential „+”
ELOCK POWER	**+**	Elock power supply, potential „+”
	-	Elock power supply, potential „-”

Drawing 4.2 Wires distribution in a RJ45 plug and description of terminals



Drawing. 4.3 Diagram for installation with external camera

Max. distance of the inside units from the power supply is 70m, in order to enhance the distance use additional power supply or increase the diameter of the UTP wires (more information in the Familio PRO system manual at www.aco.com.pl)

Before turning the power on make sure that alle connections are done according to the diagram and the RJ45s are crimped properly and there are no short circuits between the wires.

The outside unit has default settings of volume and conversatio (as presented on the drawing below), individual adjustment should be made during a connection with an inside unit the way as follows:

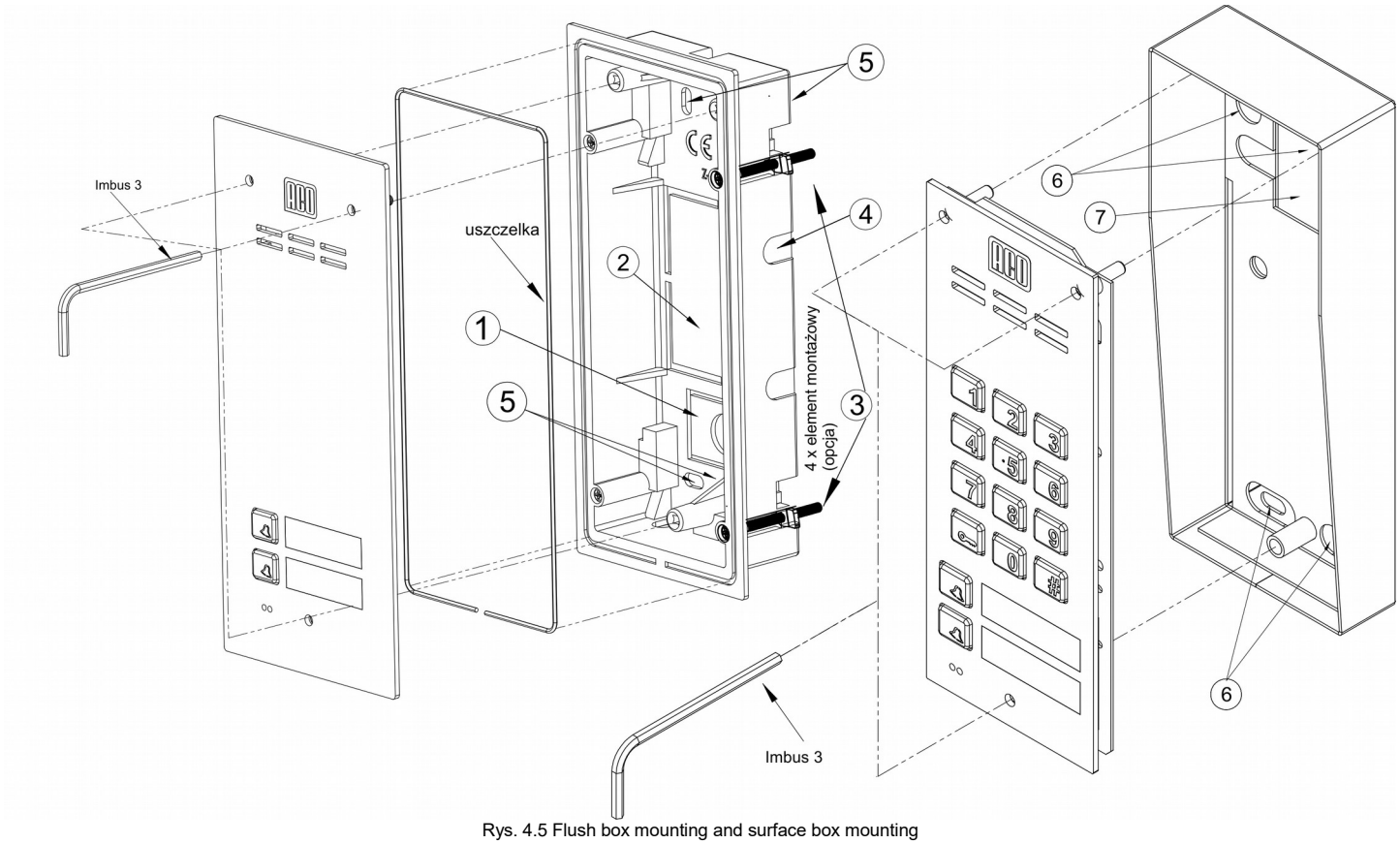
- poteniometer „**MIC**” sets microphone's sensitivity
- potentiometer „**SPK**” sets outside unit speaker's volume.

After setting the aboce use “**BALANCE”** potentiometer in order to set the points when a peep signal can be heard in the outside unit's speaker and set potentiometer in the middle of these points. Volume of sounds from the outside unit can be adjusted with „**PIC**” potentiometer.

The panel should be mounted in such a way, as to minimize the impact of adverse atmospheric conditions, especially

that of water. The camera should be installed at the required height, typically 1.6 m above the ground. To ensure the visual field is optimum, one should experiment with the actual place of mounting and panel position. Avoid places, where the camera lens could be exposed to direct, perpendicular light rays (sunlight, street lamps, etc.). The box for flush-mounting (or a flush-mounting adapter) should be mounted in an appropriate opening in the wall (or a brick column by means of plaster and expansion plugs (5) (or appropriate screws) inserted into boreholes, so that the box flange surface is flush with the wall/column surface. *In case the device is to be mounted on a steel post (or similar structure, where the max. wall thickness is 32 mm), one should use an additional set of seals and bolts (3) that can be purchase separately.* Cables should be introduced into the box through opening (1) in the box base (to get a bigger opening, remove the hole plug). Auxiliary openings (4) are used for temporary mounting, for instance, with nails, when the device is mounted on soft material surfaces (e.g. styrofoam).

Openings (4) also facilitate mounting, when caulking foam is used. Hole plug (2) should be removed, to mount the additional module in its place. To ensure the enclosure is as hermetic as possible, cut only the openings that are indispensable to mount the panel. **The seal should be installed just before mounting the interphone panel (to prevent it from getting soiled or covered with dust).** Implement a seal made of a single section of silicone cord. Cut the seal only when it has been set in the housing. Check the condition of the seal and the groove. If there are cracks, deformations in the seal and/or the groove or the seal and/or the groove are soiled, the enclosure will not be hermetic. Place the seal in the box groove, press it inside by passing a finger along the groove, do not stretch (stretching reduces the diameter), cut with scissors at the end. Do not remove the seal with pointed or metal tools. Such objects may scratch or damage the box groove or the seal. The flush-mounting box should be mounted in an appropriate place with openings (6) and expansion plugs or appropriate screws. Cables are introduced throug opening (7) in the box base. Then, all housing bolts are screwed down to the assembly box by means of a 3 mm Allen key.



Rys. 4.5 Flush box mounting and surface box mounting

PRINCIPLES OF STORING USED-UP ELECTRIC EQUIPMENT

Used-up electric equipment may not be stored together with other waste products. They should be stored in special places assigned for this purpose. When disposing of used-up equipment, please address appropriate institutions or companies that provide waste recycling services. - Directive 2002/96/ECC/ of 27.01.2003