

# INSTALLATION WITH ELECTRONIC CALL IN A COMPLEX WITH SEVERAL BLOCKS

## MICROPROCESSOR-BASED 4+N SYSTEM

Basic circuit diagram of a door entry system installation in a complex with several blocks.

Alcad multiple entrance systems are based on the use of microprocessor-controlled audio units (microprocessor-based 4+N system). Rather than using changeover switches to select one of the entrance panels, the audio unit has been fitted with a microprocessor that decides which entrance panel should be activated, and deactivates the rest of the panels in the system.

This system simplifies the cabling of the installation, reduces the number of components and improves system operation.

This type of installation can be treated as several installations with two entrances each joined together. On the main entrance to the complex or residential there are as many entrance panels as buildings inside the complex. Thus, each entrance panel at the main entrance is associated with the entrance panel of one of the buildings. Each pair of panels works in the same way as a two-entrance installation.

### Operation

Each entrance panel at the main entrance end is selected as the main panel of the system. Just one panel per installation can be defined as the main one. To select it, remove jumper J1 from the buildings entrance panels. The main panel is the one which is connected by default to the system's telephones. The other panels are only activated when one of the call buttons is pressed.

When a call button is pressed, the corresponding panel is activated to allow communication with the telephones. The system busy indicator light on the associated panel will start to flash to indicate that it is disabled. If the call is made from an entrance panel from the main entrance to the residential, it's possible to disable not only the building associated to that panel but also the rest of the panels of the main entrance. To do so the various panels need to be interconnected via terminal 16.

When one of the push buttons on one of the entrance panels is pressed the electronic call signal generated by the audio unit (7) is sent via the call line to the corresponding telephone (5), where it is heard on the loudspeaker of the handset. At the same time the audio unit's own loudspeaker generates a sound to confirm to the visitor that the call has been made. The audio unit also generates a control signal (17) that deactivates the associated entrance panel. When the visitor is calling from the main entrance, the audio unit generates a control signal (16) which disables the rest of the panels at the entrance.

The audio unit starts a 30 second timer while it waits for the telephone handset to be picked up. If the handset is not picked up during this time, the control signal (17) and (16) (in the case of the main entrance) is removed and the panels go into the standby state.

If the handset is picked up during this time, the electronics associated to the telephone's audio lines (3 and 4) is internally connected to the entrance panel. This connection sets up the communication between the telephone and the entrance panel. The audio unit starts a fresh 60 second period before removing the control signals (17) and (16) (in the case of the main entrance) and putting the panels into standby state. When only 10 seconds are left a buzz will be heard. It is possible to restart the timer from the dwelling end by pressing and releasing the telephone handset's hook switch. After finishing the communication, when the audio unit detects that the telephone handset has been hung up, it removes the control signals (17) and (16) (in the case of the main entrance) and the panels go into the standby state.



When the door lock release button on the telephone is pressed, the active audio unit detects the closing of the lock release circuit (1). The audio unit then sends an a/c voltage (11 and 12) to the electric lock connected to the active entrance panel, thus allowing the entrance door to be opened.

The common wire (2) of the telephone and entrance panel provides the return path for all the telephone signals.



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TABLE CROSS SECTIONS			
Up to 150 meters			
			AWG
	0,5 mm <sup>2</sup>	0,8 mm	20
	0,25 mm <sup>2</sup>	0,6 mm	22

