



# ALARM CONTROL PANEL CA-4 MX



ca4mx\_e 11/05

The alarm control panel CA-4MX is designed for small alarm systems. It is dedicated to easy-use-by-user and to work with all motion detector and alarm siren types.

## Description of control panel

- The alarm panel CA-4MX has 4 EOL zones (the resistor value is 2.2k $\Omega$ ) including one 24h zone. Any type of detectors can be attached to the zones (e.g. infrared, magnetic or ultrasound detectors) of both NO and NC types.
- The violation of the zones is indicated by red LEDs. For example, violating of the detector in the zone causes opening or shortening the input circuit, closed with the resistor, what is indicated by corresponding LED. The opening of the housing activates the 24h tampering circuit (tamper is placed on the control panel board).
- Each panel zone is equipped with an individual alarm memory. In the case of a zone alarm the common **ALARM** LED lights and the LED corresponding to the alarming zone blinks quickly. The LED **TAMPER** is an indicator of violating 24h tamper zone. The LED will be blinking until the control panel be armed again.

After alarm is triggered by the tampering circuit when the control panel is disarmed state, LED ALARM will be still lighting also after arming, until it will be disarmed again.

- All zones (excluding the 24h one) can be bypassed. This can be done only in the disarmed state of the panel. The bypassed zones are indicated by a slow blinking of the corresponding LED. In armed state, the switches of zones bypassing are inactive.

Bypassing and unbypassing are realised by pressing for a minimum 0.5s the bypassing switch located under the LED corresponding to a zone. LEDs of the bypassed zones blinks slowly. LEDs of the unbypassed zones are off. While the control panel is armed, the information about the bypassed zones isn't shown.

- The 24h zone can be utilised both as a tamper and a burglary one.
- For zones 1-3 (i.e. all excluding the 24h one) the exit time delay can be adjusted in the range of about 5-128 sec. The exit time delay lasts from switching the key on into the armed state. The exit time delay is indicated by the yellow LED **EXIT DELAY**. The lighting of the yellow LED means that the control panel is armed.
- Only the first zone (Z1) can be a delayed one, if the **DLY** input is shorted to the ground (**COM**). The entry time delay for this zone can be then adjusted in the range of about 5-128 sec. If DLY input isn't shorted to the ground, the control panel indicates alarm immediately after Z1 zone is violated, similar as after violation the others zones.
- The alarm panel CA-4MX has OUT1 and OUT2 outputs for acoustic signalling devices and an independent OUT3 output for an optical signalling device.
- The sirens signal time can be adjusted in the range of about 9-768 sec. The output for optical indication (OUT3) remains in active state until the alarm be cleared with the key. In active state the output voltage is +12V.
- All outputs and detectors supply are fuse protected.

- The alarm control panel CA-4MX is supplied with 230VAC and 12V accumulator for which a place is arranged in the casing (for 7Ah capacity accumulator).
- The control panel power supply adapter charges the accumulator and supplies the detectors attached to the system.

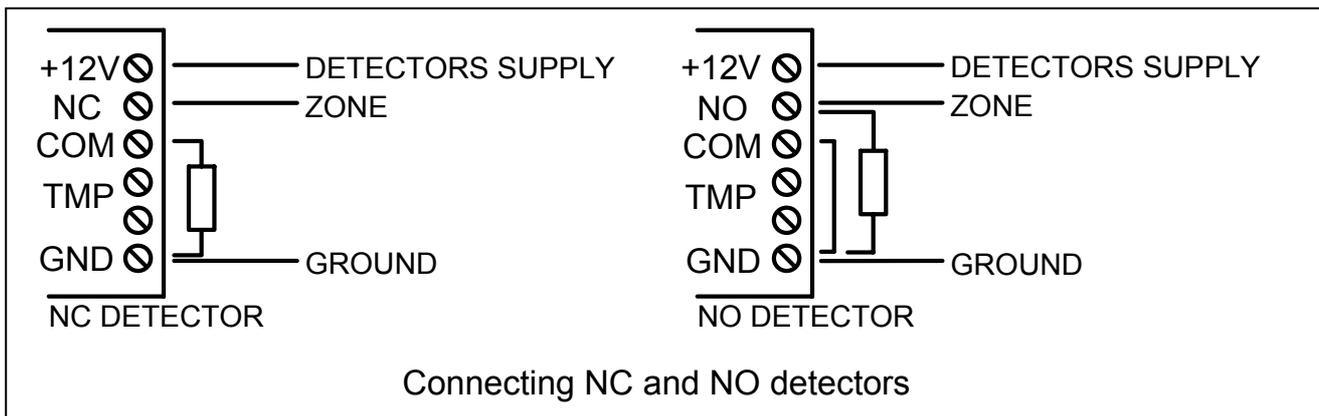
## Mounting

The alarm panel should be connected to the 230VAC instantly. In this connection before installing the system it is recommended to analyse the wiring in the building in which the system will be placed.

Select the wire which will be always supplied with the 230VAC power and is protected with a adequate fuse.

To mount the panel follow the steps give below:

1. Take off the front of the casing, disconnect the ignition lock and fix the casing with the alarm control panel.
2. Connect the detectors. The input of each detector must be shorted to the ground (COM) with a 2.2kohm resistor. This resistor should be placed in the detector casing - parallely in NO detectors and serially in NC ones.



3. Connect the signal devices. Between output and ground (parallel to the acoustic signalling device) the 2.2kohm resistor should be connected. The resistor protect the system from generating of unwanted sounds by some types of signalling devices.
4. Activate the delay initiator (if required in the system) by shorting the **DLY** input to the ground.
5. Connect the 230V alternating voltage leads to the transformer terminals marked "**AC 230V**". Connect the wire of the electric shock protection circuit to the terminal marked with the ground symbol . Start the control panel.
6. Set with potentiometers the following:
  - exit time delay (P1)
  - entry time delay (P2 – delay of Z1)
  - alarm time (P3 – OUT1 and OUT2 activity).
7. Connect a ignition lock to terminals KEY and COM. The shorting of KEY input to the ground disarms the system. The cutting off the KEY input from the ground arms the system.
8. Connect the accumulator and assemble the front part of the casing. The control panel power supply unit has been designed for work with lead batteries or other batteries with

a similar charging curve. It is impermissible to connect a fully discharged battery (voltage on terminals without a load less than 11V) to the alarm panel. To avoid hardware damage, fully discharged or never used battery should be precharged using proper charger.

**CAUTION!**

**The control panel is power supplied from the 230V AC mains. Carelessness or wrong connection may result in electric shock and pose a threat to life!**

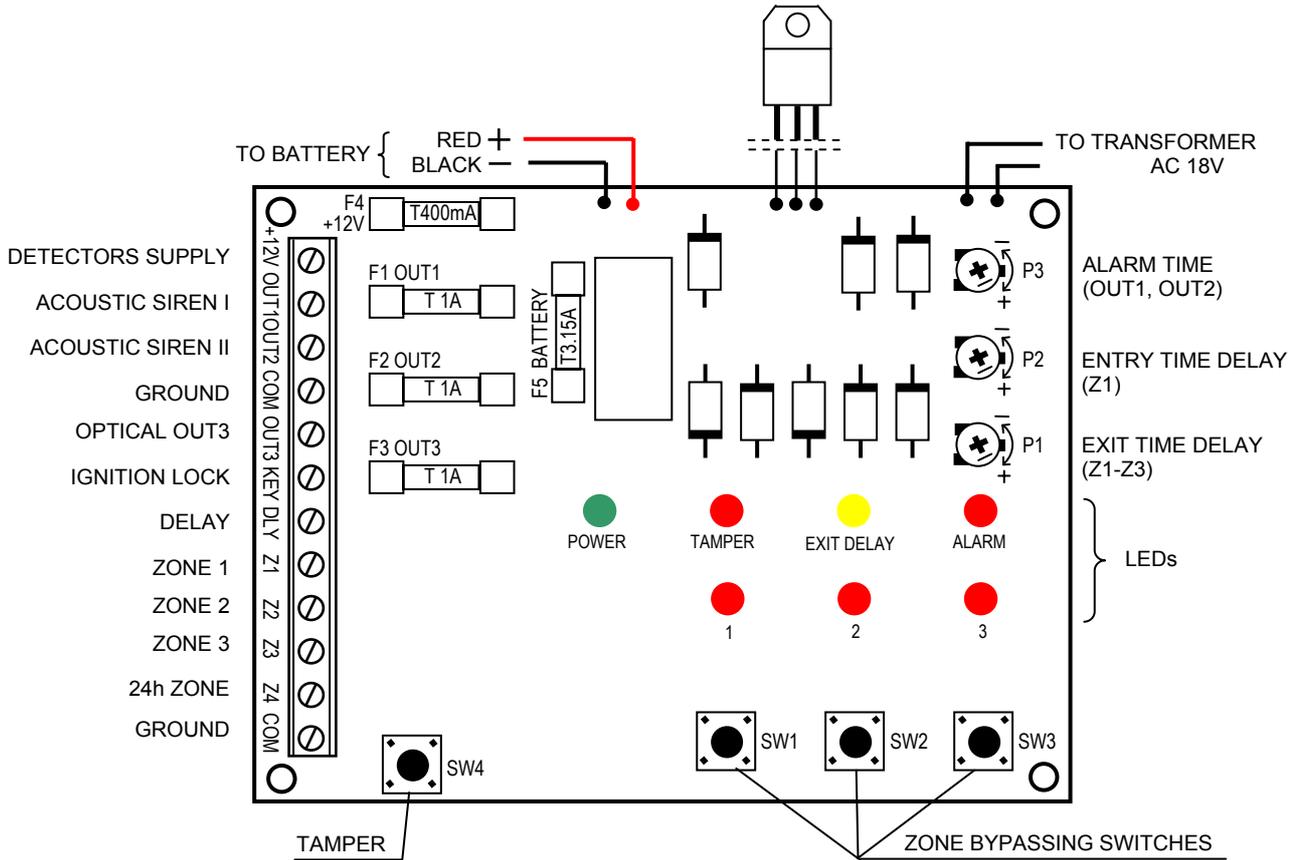
**Therefore, exercise particular caution when connecting the control panel. In the process of installation and connection of the control panel, the cable to be used for mains supply must not be alive!**

**Remarks**

- It is advisable to make a **load balance** for the power supply. The total current inputs for the consumers (detectors, keypads) and the battery charging current may not exceed the power supply capacity. The charging current depends on battery charge level and is about 250mA for 11V on battery terminals.
- In order to avoid sirens activation at the instant of power turning on, remove adequate fuses first.
- Time of activity of the acoustical signalling device should be tested with 12V lamp.
- It is wise to setting up the system with the use of the panel power supply adapter, which is protected from accidental circuit shorting - some of them can cause a large damages to the panel.
- Pay particular attention during the accumulator connecting to its poles.
- It is possible to control remotely the panel arming and disarming operations. In such a case the key in the ignition lock should be turned **ON**, since arming the panel is caused by opening the ignition lock circuit.
- It is possible to control the functioning of Z1 zone delay. The control panel is adapted to bistable switches of entry time delay.

**ATTENTION !**

An efficient security system does not prevent burglary, assault or fire from happening, however it diminishes the risk that such a situation will cause no alarm or notification. Therefore, the SATEL Company recommends that operation of the whole security system be regularly tested.



View of the CA-4MX control panel main board (version 1.2)

**Technical data**

Zones number .....	4
End of line resistors .....	2.2kohm
Current consumption .....	50mA
Battery charging current .....	250mA
Current efficiency of panel power supply adapter .....	0.7A
Max. detectors consumption current .....	400mA
Max. acoustic signalling device consumption current .....	2x1000mA
Max. optical signalling device consumption current .....	1000mA
Dimensions .....	270x170x80mm
Weight .....	1.5kg

Latest EC declaration of conformity and product approval certificates can be downloaded from our Web site <a href="http://www.satel.pl">www.satel.pl</a>	
--	--

SATEL sp. z o.o.  
 ul. Schuberta 79  
 80-172 Gdańsk  
 POLAND  
 tel. + 48 58 320 94 00  
 info@satel.pl  
 www.satel.pl