

The INTEGRA SZ code lock is a device designed to work in conjunction with alarm control panels of the INTEGRA series. It provides an easy way to control access to spaces where doors with electrically-operated lock are installed, and to control closing status of those doors. Additionally, the code lock module can exercise access control in respect of other equipment.

1. Description of Electronics Board

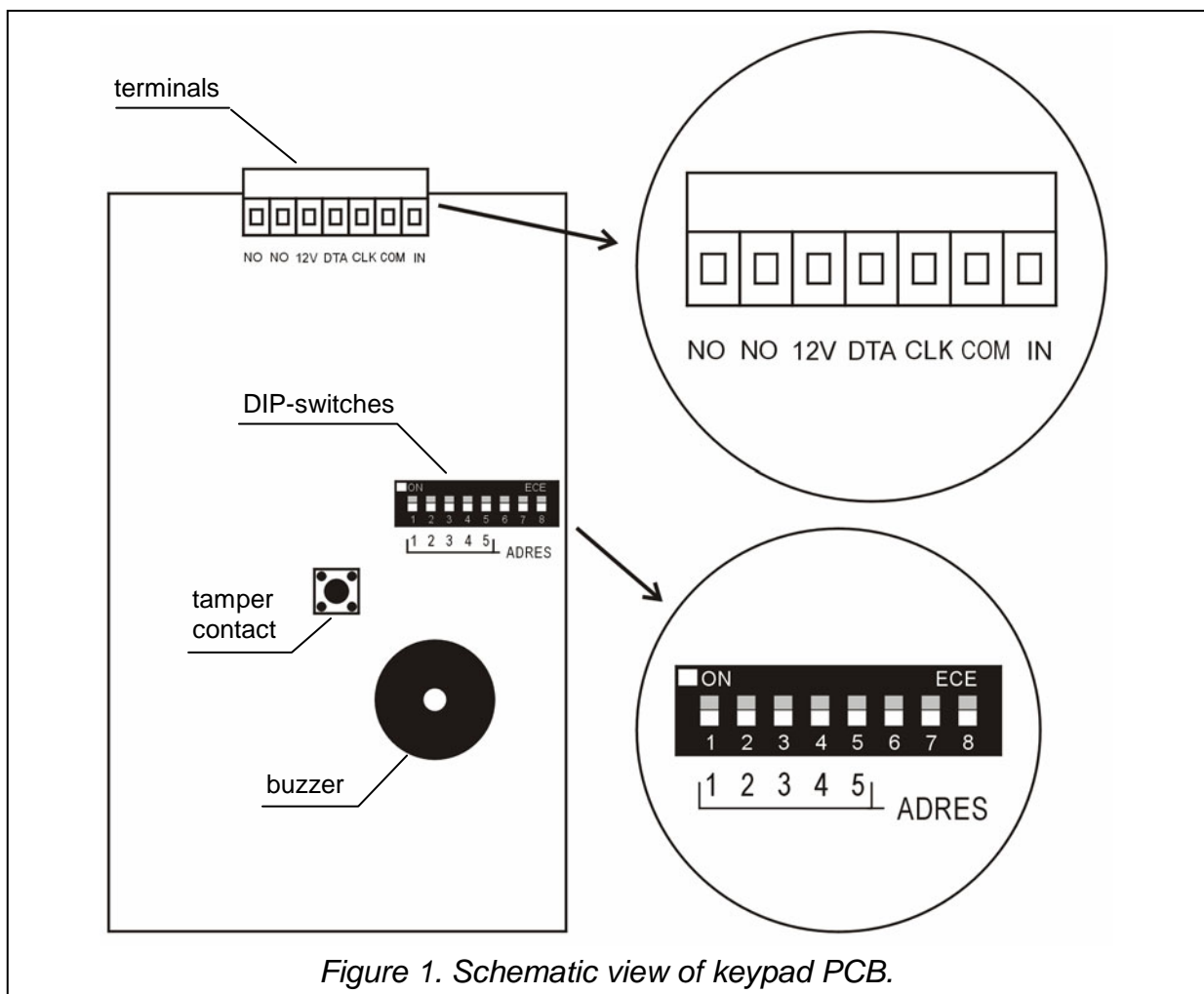


Figure 1. Schematic view of keypad PCB.

MODULE TERMINALS:

- NO** - relay terminal
- IN** - door status control input (NC)
- COM** - common (ground)
- +12V** - supply input
- DTA, CLK**- expander bus

Two **NO** relay terminals are designed for control of the electromagnetic door lock. If not used, the **IN** door status control input should be shorted to ground.

The set of on-board DIP-switches is intended for setting individual address of the module. In a properly installed module, the tamper contact spring should be pressed to the wall.

2. Installation and Connection of the Module

Caution: Before you start to hook up the module to the existing alarm system, make sure that the whole system is disconnected from power supply source.

1. Push in the snap catch in the lower part of module plastic casing and remove the casing.
2. Attach the lower part of the module plastic casing directly to the wall. The module leads should be passed through the rectangular opening provided in the lower part of the casing.
3. Connect the expander bus cables to the terminals DTA, CLK and COM. One bus can accept up to 32 modules of various types.
4. Using the DIP-switches, set the expander address. The address should be set with the switches from 1 to 5. The status of other switches (6, 7, 8) is irrelevant. In order to determine the expander address, add up the numbers corresponding to the switches set to **ON** position, as shown in the table below:

Switch number	1	2	3	4	5
Numerical equivalent	1	2	4	8	16

Addressing examples:



address = 4



address = 2+8=10



address = 1+8+16=25

Five switches make it possible to assign addresses to 32 expanders (numbers from 0 to 31). Addresses of the expanders connected to one bus may not repeat, while the addressing sequence is optional. It is recommended to assign consecutive addresses, starting from zero, to expanders and other modules connected to one bus. This will permit problems to be avoided during extension of the alarm system.

5. Connect the module power supply to the +12V terminal. The keypad supply voltage need not be provided from the control panel mainboard. A buffer power supply unit or another expander with power supply may be used for this purpose. For details concerning the cable connections see the INSTALLATION GUIDE for INTEGRA alarm panels.
6. Connect the leads of the door status control detector to the terminals IN and COM.
7. Connect the leads for operation control of the electromagnetic door lock (or another device) to the NO terminals.
8. Secure the keypad module, snapping its plastic housing in place.

3. Starting the Module

1. Switch on power supply of the alarm system.
2. Call the "*Expander identification*" function in the LCD keypad (→Service mode →Structure →Hardware). After identification, the value of all settings is either zero or "None", and the options are deactivated. Lack of key operation acknowledgement gives the impression that the module does not respond to entering the password.

Note: *During the identification process, the control panel saves in the module memory a special (16-bit) number, used for checking the module presence in the system. Replacement of the module with another one (even having the same address set on the switches) without a new identification, will result in triggering the alarm (module tamper - verification error).*

3. Using the LCD keypad or DLOADX program, configure the keypad functions and define the users authorized to use the given keypad.
4. Save the data in the FLASH memory and quit the service mode.

4. Programming the Code Lock Settings

The code lock can be programmed by means of the LCD keypad (→Service mode →Structure →Hardware →Expanders →Settings →*expander selection*) or a computer with DLOADX program. Described below are settings and options available for programming. Abbreviations from the LCD keypad display are shown at some of the functions in square brackets.

Name – makes it possible to give an individual (16-character) name to the module. In the LCD keypad, this option can be accessed in the following way: →Service mode →Structure →Hardware →Expanders →Name →*expander selection*.

Partition - assignment of the keypad to a partition selected from the list.

Lock feature - defines the operating mode of the lock control relay. The control function is effected by controlling the state of NO contacts of the relay (electromagnetic switch) installed on the board inside the code lock housing. The relay operation is monostable. Basic state of the relay terminals is set by a separate option. Opening the door by means of the user function ([CODE][#] or [CODE][*]) changes the terminal status to the opposite one for a predetermined period of time.

Fixed ON time - after the door opening function is called by the user ([CODE][*]), the relay gets activated for the "**Relay ON time**" and then returns to its normal state.

Fixed ON time - OFF if door open [ON, open→off] - the relay is active until the door is opened (the IN input disconnected from common ground), but not longer than for the "relay ON time".

Fixed ON time - OFF if door closed [ON, close→off] - the relay is active during the time when the door is open (the IN input cut off from the common ground) and deactivates on closing the door (reconnection of the IN input to common ground), but not longer than for the "relay ON time".

Relay ON time – the time period during which the relay is active. Duration of the "relay ON time" can be from 1 to 255 seconds.

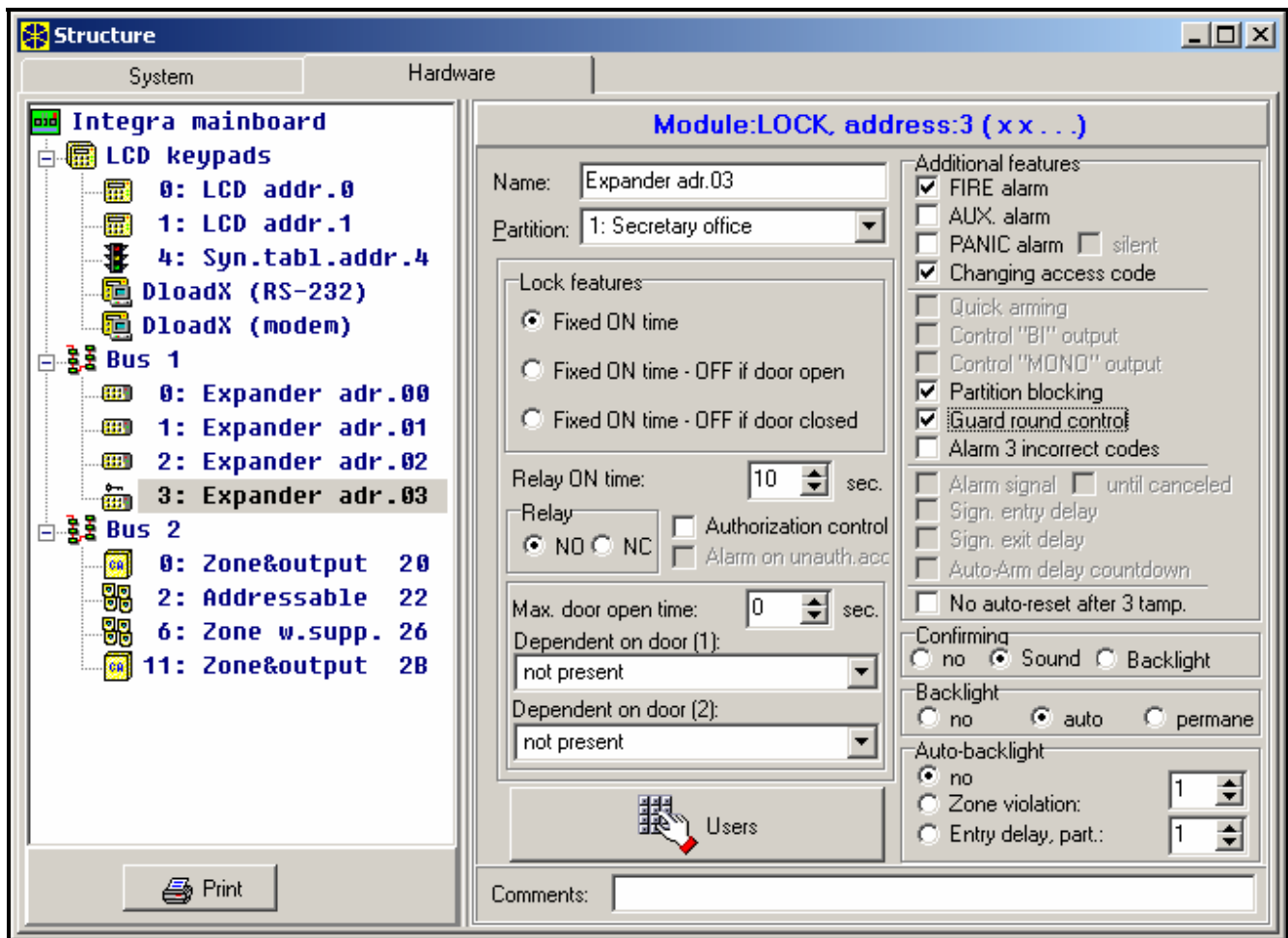


Figure 2. DLOADX program window with options for the code lock.

Relay type - this option defines the operating mode of the relay contacts:

- NO** - the NO contacts are normally open, they close on activating the relay (during its active state),
- NC** - the NC contacts are normally closed, they open on activating the relay (during its active state).

Authorization control [Unauth. event] – opening the door without entering a password from the keypad (e.g. with the key) will generate an „Unauthorized door opening” event, it can also be signaled on the output type 93 (UNAUTHORIZED ACCESS).

Alarm on unauth. access [Unauth. alarm] – when the partition to which the module is assigned is armed, unauthorized opening of the door will trigger the alarm and can be additionally signaled on the output type 94 (ALARM – UNAUTHORIZED ACCESS).

Max. door open time - this option defines the time after expiry of which the module will report the „Long opened door” event to the control panel and activate the audible alarm. The duration can be set from **0** to **255** seconds.

Dependent on door 1 (or Dependent on door 2) - this function provides a list to choose the door which must be closed for the lock to operate. Monitoring of the door state is effected through the IN input in the code lock or partition keypad, or the zone (input) type 57 (TECHNICAL - DOOR MONITORING). Two dependent doors can be selected. The function allows to create a "sluice" type passage".

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effected through the IN input in the partition keypad or code lock or the zone type 57 (TECHNICAL - DOOR OPEN). Two dependent doors can be selected. The function allows to create a „sluice” type passage.

Master users / Users - this function defines master users / users authorized to use the given keypad.

Alarms

FIRE alarm - holding down the 🔥 key will trigger the fire alarm.

AUX. alarm [Medical alarm] - holding down the ⚠ key will trigger the auxiliary alarm.

PANIC alarm - holding down the 🚒 key will trigger the PANIC alarm.

Silent PANIC alarm - with this option selected, triggering the panic alarm from the keypad will not set off the loud signaling; instead, a message will be sent to the monitoring station and the output type 12 (SILENT ALARM) will be activated.

Alarm 3 incorrect codes [3 bad codes] - entering a code unknown to the control panel three times will trigger alarm.

Options

Partition blocking - entering the guard code when the partition is armed will temporarily bypass the partition.

Guard round control - entering the guard code ([CODE][#] or [CODE][*]) will be recorded as completion of the round.

Changing access code - this option enables the function of the user code changing.

Confirming - this option defines the way of communication between the control panel and the code lock user:

No – the function of keypad operation acknowledgement is disabled.

Sound - the keypad will generate beeps as described in the USER MANUAL for the INTEGRA alarm control panel.

Backlight - the audible signaling will be replaced by the blinking keypad illumination as described in the USER MANUAL for the INTEGRA alarm control panel.

Backlight - defines the mode of keypad illumination

No - keypad backlighting disabled.

Auto - keypad backlighting goes on automatically on pressing any key; the function has additional options (submenu „Auto-backlight” in LCD keypad):

- **no auto-backlight** - illumination only activated by pressing one of the keys,
- **zone violation** - backlighting activated by pressing a key or by violation of the selected zone,
- **entry delay, part.** - backlighting activated by pressing a key or by starting the countdown of entry delay time in the indicated partition.

Note: *Automatic keypad illumination is ON for approx. 40 seconds from the moment of its activation or from the last press of any key.*

Permanent - keypad backlighting is permanently "ON".

No auto-reset after 3 tampers - each expander automatically disables the tamper alarming in the given expander after three consecutive (not cleared) tamper alarms. This prevents multiple recording of the same events in the control panel memory. The option allows this feature to be disabled.

5. Technical Data

Nominal supply voltage	12V DC
Maximum current consumption	50mA
Maximum voltage switched over by relay.....	24V
Maximum current switched over by relay	2A

The latest EC declarations of conformity and certificates are available for
downloading on the website **www.satel.pl**



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