Satel®

INDOOR CODE LOCK

SZW-02

(Program Version 2.0)

CE

USER MANUAL

I. PURPOSE

The **SZW-02** indoor code lock is designed to control the alarm systems (by initiating time delay, arming/disarming the system), or electromagnetic door fasteners, or any other devices with current consumption up to 2A. Made to the advanced Surface Mount Technology (SMD), the indoor code lock has an aesthetic plastic casing with illuminated silicone keypad. It is only suitable be installed in closed spaces.
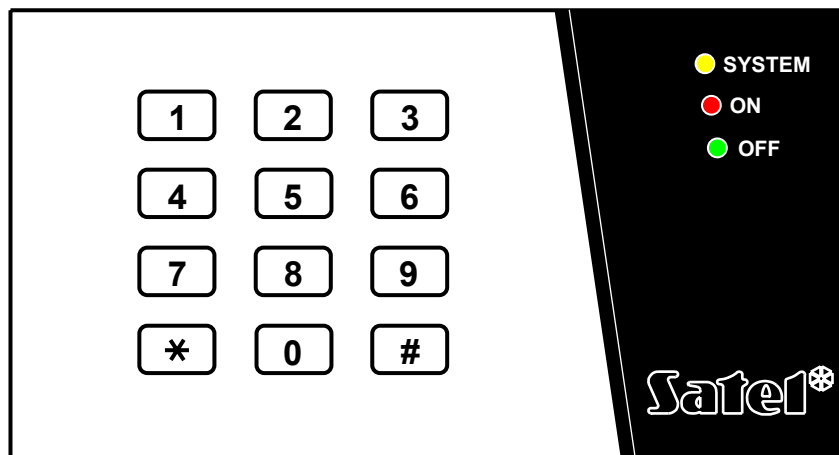
II. TECHNICAL DESCRIPTION

Fig. 1.   General view of the code lock.

The lock has three LEDs which indicate its current state and help to program the basic functions.

SYSTEM - (yellow) LED controlled from outside, its function to be determined by the installer.
ON - (red) LED indicates active state of the lock.
OFF - (green) LED indicates inactive state of the lock.

The control function is performed by making or breaking the lock contacts (terminals C-C). The lock state can be changed by entering the valid access code (composed of up to 12 digits) and pressing the [**#**] key. The lock can be operated by means of two access codes, one of them being the service code, which enables the programmed operating parameters to be changed.

Entering an invalid access code generates a warning two-beep signal. In the event an invalid code is entered three times, the **ALM** output is activated. Entering the valid code deactivates the **ALM** output.

The ALM output can be used to control the alarm panel input, however it is not suitable for a direct control of the relay.

The **SZW-02** code lock can operate in two modes:

BI-stable mode – entering the valid access code changes the lock state from **OFF** (the green LED is on) to **ON** (the red LED is on) or vice versa, until the valid access code is entered again.

MONO-stable mode – entering the valid access code changes the lock state from **OFF** to **ON** for a time within the programmable range of 1s-999s.

The state of relay contacts (NC-closed/NO-open) in the basic state of the lock (i.e. **OFF** – the green LED is on) can be set by programming.

The keypad backlighting can be switched off, or can go on automatically (upon pressing any key), or be permanently on. The operating mode is set by programming.

The lock has an anti-tampering contact (**TMP** terminals) which opens when the casing is opened or torn off from its mounting surface, as well as an additional LED indicator (SYSTEM – terminals **+LD**, **-LD**) for signaling the information such as alarm, alarm system armed mode, etc.

The programmed access codes and parameter settings of the lock are stored in the non-volatile memory, thus they are not lost when the power supply is off.

III. INSTALLATION

TERMINALS OF THE LOCK:

GND	- ground
C	- control relay contact
+12V	- supply voltage input
TMP	- anti-tampering contact
ALM	- three successive wrong codes alarm output
+LD, -LD	- **SYSTEM** LED terminals

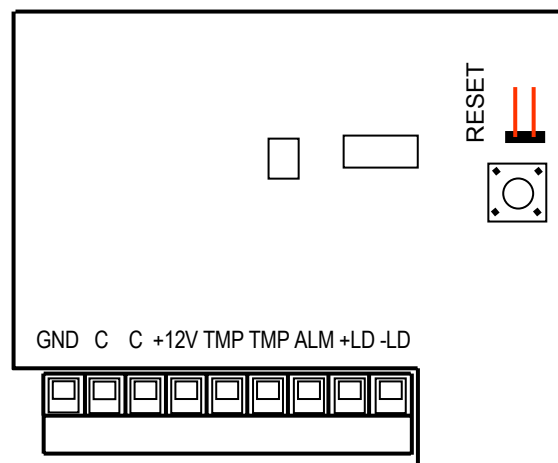GND C   C +12V TMP TMP ALM +LD -LD

RESET

Fig. 2.   Partial view of the PCB, version 2.1 (seen from the designations side).

The lock is designed for wall mounting. It should be secured by screwing the bottom part of the casing to a **flat surface**. The cable should be led through the large rectangular opening.

The lock is supplied with **direct voltage 9V ÷ 16V** – the supply should be connected to the terminals **+12V** and **GND**.

The leads of the controlled device should be connected to the terminals **C** (current-carrying capacity **2A,** permissible change-over voltage **28V**).
On activation, the **ALM** output (OC type) is **shorted to the ground**. The output current-carrying capacity is **30mA**.

The terminals TMP make it possible to cut in the lock in the system anti-tampering circuit.

CAUTION!   Never switch power supply on before making connections.

The „**RESET**" pins enable programming the lock parameters when the service code is not known. To enter the service mode (see below), switch off the lock power supply, set a jumper on the RESET pins, switch on the power supply again and remove the jumper. The lock will generate four short and one long beeps and enter the service mode.

IV. PROGRAMMING

There are two codes that can control the lock operation i.e. the user code and the service code. The codes can be from 1 to 12 digits long and can be changed. To increase the safety of the lock operation, it is advisable to use codes consisting of at least four digits.

USER CODE (default code [1234])

[CODE][#]   -   controlling the lock
[CODE][*]   -   calling the user code change function

To change the access code, enter the current user code and press the [*] key – the lock will confirm readiness to change the code by the red and green LEDs blinking simultaneously.
Then, enter the new code and press the [#] key. The lock will confirm making the change with four short and one long beeps and re-enter the normal operating mode. Pressing the [*] key will exit the function without saving the change.

SERVICE CODE (default code [12345])

[CODE][#]   -   control of the lock
[CODE][*]   -   entering the lock **service functions mode**

Calling the **service mode** will be confirmed with four short and one long beeps. The lock will stay in this operating mode, signaling its state by the red and green LEDs blinking alternately, and periodically generating a short beep. The service mode can only be quitted by calling the function [0][#] or switching the power supply off.

The service mode provides access to **seven functions**, which can be called by pressing the function key with corresponding number and the [#] key. Calling of the function is confirmed with three short beeps, while performance of the function – with four short and one long beeps. Pressing the [*] key will exit the function without saving the change.

V. LIST OF SERVICE FUNCTIONS

[0][#]   EXIT SERVICE MODE – return to the normal operating mode.

[1][#] CHANGE SERVICE CODE – after calling the function, only the red diode starts blinking faster. Enter a new code (1 to 12 digits long) and press the **[#]** key.

[2][#] LOCK OPERATING MODE – after calling the function, the LED indicating the current operating mode will go on. If required, change this mode by pressing:
[1] (green LED is on) – **BI** mode;
[2] (red LED is on) – **MONO** mode.
Confirm your selection by pressing the **[#]** key.

[3][#] RELAY CONTACTS POSITION FOR LOCK IN **OFF** STATE – after calling the function, the LED indicating the current operating mode goes on. If required, change this mode by pressing:
[1] (green LED is on) – **NO** mode (contacts open);
[2] (red LED is on) – **NC** mode (contacts closed).
Confirm your selection by pressing the **[#]** key.

[4][#] MONO CHANGEOVER TIME – after calling the function, only the green LED starts blinking faster. Enter from 1 to 3 digits indicating the number of seconds (1-999). Confirm the number with the **[#]** key.

[5][#] KEYPAD BACKLIGHTING MODE – press to select:
[1] (green LED is on) – **no** backlighting;
[2] (red LED is on) – **automatic** mode;
[3] (both LEDs are on) – **permanent** backlighting.
Confirm your selection by pressing the **[#]** key.

[6][#] RESTORE DEFAULT SETTINGS – calling the function will restore the following parameter values:
- default access codes: user [1234], service [12345];
- operating mode: MONO;
- relay contacts changeover time: 5 seconds;
- position of relay contacts in inactive state: NO;
- keypad backlighting mode: automatic.

If, after calling a function (user code change or service function), no key is pressed for 45 seconds, the lock will quit the function without saving the changes (it will return to its basic state or service mode).

VI. TECHNICAL DATA

Power supply ....DC 9V to 16V
Minimum current consumption (no keypad backlighting) 18mA
Maximum current consumption (backlighting, active relay) 60mA
ALM output current-carrying capacity („open collector") 30mA
Relay contacts current-carrying capacity 2A
Maximum relay change-over voltage 28V
Weight 156g

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