2 = silent -panic code works as a valid access code, but the output terminal OUT is also triggered (silently) after you enter the panic code. *Factory default: 1 (audible panic)*

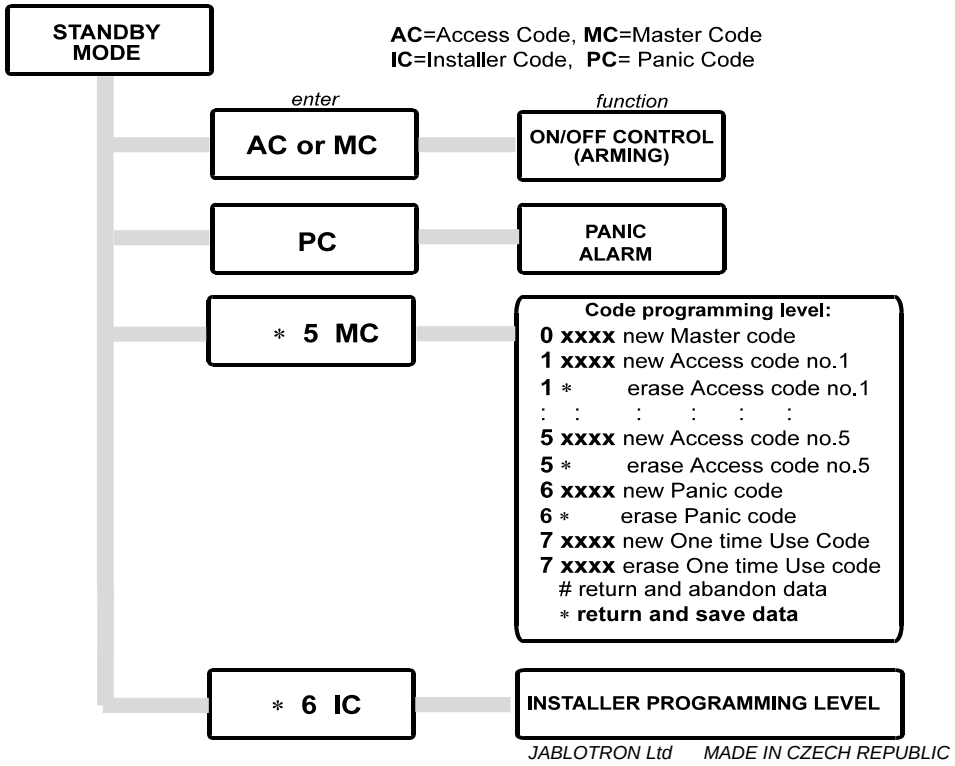
[8] [x] - function of the OUT terminal in the control panel mode (x - 1 to 4), 1 = panic, 2 = alarm memory, 3 = pre-alarm, 4 = armed. This setting will function only under the control panel mode.
Factory default: 4 (armed)

[9] [x] - Quick arming (x - 0 or 1) 0 = disabled, 1 = enabled. You can enter [∗] [0] instead of your access code to arm the keypad if the quick arming is enabled. It can be used only for arming, not for disarming. This command works only for the LATCH and the control panel mode.
Factory default: 0 (disabled)

You can exit the installer programming level by either **pressing the [#]** key, (resulting in **no data being stored** to the memory and the sounding of the shrill sounding beep), **or** by pressing the **[∗]** key **to store the data**. Only if you use [∗] to return to the stand by mode will the data you programmed be valid. All of the data is stored in the non voltage memory, so they will not be lost even if the power is switched off.

COMPLETE RESET: In the event that the master code or installer code is forgotten (or for some other reason), it is possible to completely reset all the settings of the KB-2051 to the factory default. To do this, open the unit (be careful of the tamper switch), disconnect the power for one minute. Then install the jumper RESET on the keypad board. Reconnect the power supply. Wait 2 seconds and remove the jumper.

User guide:



Note: *Although this product does not contain any harmful materials we suggest you to return the product to the dealer or directly to the producer after usage.*

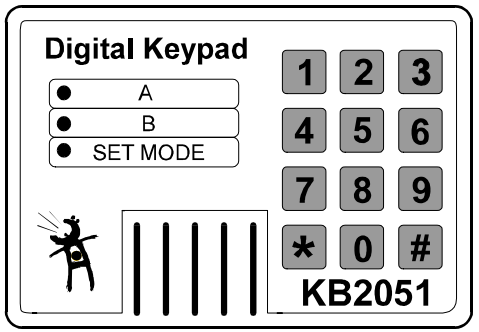
DIGITAL KEYPAD KB-2051

A simple yet powerful device suitable for both Access Control and Command & Control solutions. With this digital controlled keypad, you will not only enjoy a high level of security, but also be freed from carrying your keys with you. This keypad can also be programmed to be used as a small alarm control panel

DESCRIPTION: Output relay contacts are controlled by access codes. It works in a PULSE, LATCH, or CONTROL PANEL mode.
PULSE MODE: When you enter a valid access code, the output relay is switched ON for a designated time period (programmable). LATCH MODE: Each valid access code changes the output relay condition (ON-OFF-ON-OFF....).
CONTROL PANEL MODE: You can use this device as a security control panel with a delay input loop. This way it is possible to arrange small alarm systems without a control panel. There is an input loop where detectors can be connected. In this mode an exit/entrance and an alarm duration timer are programmable. Alarm memory and pre-alarm signals are available as well.

The keypad also provides one output (OUT terminal) which works as a PANIC signal output in the PULSE and LATCH modes. The OUT terminal can have different (programmable) functions in the control panel mode. The panic signal can be activated by a programmable number of unsuccessful attempts to enter the access code. Or, you can trigger this output with an PANIC code. You can choose an audible PANIC signal as a response to the PANIC code, or you can have a silent PANIC signal. This feature can be very useful in the case you are forced to enter your access code under pressure. In such a situation you can operate the keypad with your silent panic code, which will work as your proper access code. At the same time, it will also silently call for help. The KB-2051 is also protected with a tamper switch.

SPECIFICATIONS:
power voltage: 11 - 16VDC
consumption: 10mA (relay off), 50mA (on)
output relay: contacts N.O./N.C. max.1A/100V
output OUT: transistor to GND 0.3A/24VDC
tamper switch: NC contact 1A/100V
built in buzzer: 70dB/0.3m
working temperature: -15 to +75°C
codes: Master Code, five User Codes, Panic Code, One Time Use Code and Installer Code. All codes are four digits.
memory: non-voltage
Complies with the essential requirements of: 89/336/EC EMC Directive - Protection concerning electromagnetic compatibility when is used for its intended purpose. Original of the conformity assessment can be found at the web page www.jablotron.cz, section Technical support.



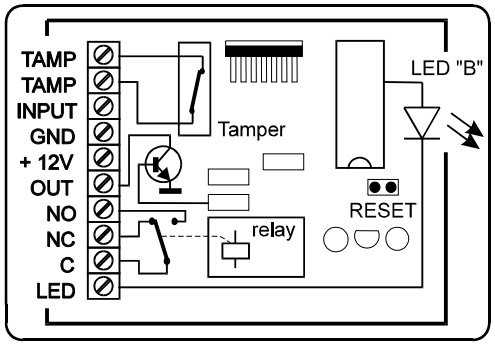
CE

Front panel

A - (Green LED) indicates current status (relay condition in pulse or latch mode, arm indication in control panel mode).
B - (Red LED) free use - this LED lights when the LED terminal is connected to the GND.
SET MODE - (Red LED) indicates that you have entered the programming mode.
Keypad: All keypad functions can be controlled by or programmed with the keypad. Pressing the **[#]** key erases the input buffer (stops the programming) and acts as an ESC function.

INSTALLATION: Mounting the keypad - select a suitable location for both easy operation and wiring. After opening the unit by pressing down on the plastic lock, mount the rear housing on the desired surface (use two screws or double sided adhesive tape).

WIRING:
C, NC, and the **NO** terminals are the output relay over stitching contacts (max 1A/ 100V).
TAMP terminals are the outputs for the tamper switch (normally closed).
GND, **+12V** power supply 12VDC should be connected to these terminals. Voltage must not be switched on before finishing and checking installation!



OUT terminal is the negative switched transistor output (max. 0.3A/24V). This transistor switches to the GND in the panic condition (PULSE or LATCH mode). In the CONTROL PANEL mode it can be programmed as either a panic output, a pre-alarm output, an alarm memory output or an arm condition output.

INPUT terminal is an input of the delay loop in the CONTROL PANEL mode. This terminal should be connected to the GND through normally closed sensor contact (or contacts connected in series). When the loop is open, the input is activated. This input has no function in the PULSE or LATCH modes.

LED terminal is connected to the cathode of the red LED. When you connect this terminal to the GND, the LED will light. You can use this LED for any indication, depending on your requirements.

Operation

There are three levels of operation in the KB-2051: stand by, code programming and installer programming level.

STAND BY is the basic working level of the keypad. The function in this level depends if pulse, latch or the control panel mode was selected.

PULSE MODE: When you enter a valid access code, the output relay is switched ON for the designated time period (programmable). Switching on is confirmed with the LED A and with one beep of the built in buzzer.

LATCH MODE: Each valid access code changes the output relay condition (ON - OFF - ON - OFF....). Switching on is confirmed with one beep and switching off with two beeps of the built in buzzer. The LED A indicates the current relay condition. The relay can also be switched on by entering only [∗][0] if the quick arming function has been selected.

CONTROL PANEL MODE: You can use the keypad as a security control panel with a delay input loop. The built in relay works as an alarm output in this mode.

ARMING - to arm the system, enter your access code. The LED A will start blinking (and the buzzer will sound once). A slow blinking of the LED A indicates that the exit delay is activated. During the exit delay, any sensor in the input loop can be activated without triggering the alarm. After the exit delay, the LED A lights permanently and the KB-2051 will be armed. You can also arm by entering only a [∗][0] if the quick arming function has been selected.

DISARMING - to disarm the system, enter your access code. The ARM LED will switch off (and the buzzer will sound twice). If you trigger any detector before disarming, the system will provide an entrance delay. The entrance delay is indicated by the fast blinking of the LED A and the sounding of the pre-alarm buzzer (internal or external - programmable).

***Note**: If the disarming is confirmed by three beeps instead of two, an alarm memory was triggered (the LED A will flash after disarming, and the memory will be reset for a new arming).*

You can trigger an emergency alarm with the panic code (if programmed). It is possible to stop an alarm with the access code if you are present to enter it.

CODES: There is a **master code**, **five user codes**, a **panic code** and a **one time use code** available for users. There is also an installer code which is used with the [∗] [6] command to enter the installer programming level. This code can be changed by the installer.

MASTER CODE - is one of the user codes with a higher priority. The master code is used for arming control as other access codes, but only the master code can be used for entering the code programming level ([∗] [5] command). A default master code 1234 is programmed into the KB-2051 at the factory. The **master code can be reprogrammed, but it can not be removed.**

CODE PROGRAMMING LEVEL

Pressing [∗] [5] [MASTER CODE] allows you to enter the code programming level (factory default master code is 1234). This level can only be entered when the keypad is disarmed (LED A is off). Eight different codes (from code 0 to 7) can be programmed in this level: new master code (0), up to five access arm-disarm codes (1 - 5), a PANIC code (6) and a "One Time Use" code (7) may be programmed. Entering of the programming level is confirmed by a long beep, blinking of the SET MODE LED and permanent lighting of LED A.

Programming new codes:

1/ Enter the user programming level by pressing **[∗] [5] [MASTER CODE]**

2/ To change master code, press [0] (LED A goes off) then enter new 4 digit code (confirmed with two short beeps). Then you have to enter the new master code once more to confirm that the code is correct. If it is entered twice correctly, you will hear a confirmation beep and the LED A will go on. If the same code is not correctly entered twice, you will hear a shrill sounding beep informing you that the code has not been accepted. (follow instruction 2/ once more). The master code can be only changed; it can not be erased.

3/ To program the first access code, press [1] (LED A goes off) and enter a 4 digit code (confirmed with confirmation beep and the LED A will go on).

4/ To remove the first access code, press [1] [∗]

5/ Follow instructions in 3/ or 4/ for programming or removing any of other access codes from 1 to 5

6/ You should program the PANIC code as code number six. This code can also be used as an access code, but it triggers a panic (OUT) output every time it is used (if the silent panic was selected in the installer programming). This feature can be very useful in the case you are forced to operate the keypad under pressure. Follow instructions in 3/ or 4/ for panic code setting or removing if you do not want this function.

7/ The code number seven works as the "One Time Use" code if programmed. Follow instructions in 3/ or 4/ for its programming or removing. The "One Time Use" code can be used as an access code control, but this code is removed automatically in the moment when it is first used.

Only code number 0 - the master code, is programmed at the factory. All other access codes are blank.

You can exit the code programming level either by **pressing [#]** and **none** of the programming **will be stored** to the memory (you will hear the shrill sounding beep to alert you that the programing was not stored), **or by pressing [∗] to store the programming** you made to the memory.So only if you use the [∗] key to return to the stand by mode will the data you programmed be valid. All the codes are stored in the non voltage memory, so they will not be lost even if the power switched off.

INSTALLER PROGRAMMING

Press [∗] [6] [INSTALLER CODE] to enter the installer programming level (factory default installer code is 2051). It can only be done while the keypad is disarmed (LED A is off). Entering of the programming level is confirmed by a long beep, blinking of the SET MODE LED and the permanent lighting of the LED A. The next step in the installer programming level is to enter a 1 digit section entry for any of the commands described in the following text. As soon as the section digit is entered, the LED A goes off for confirmation. The keypad is now ready to accept data entry for the selected section. The keypad will beep the confirmation signal if the data is entered correctly and the LED A will go on again. After completing one section, you can program other sections or you can **return to standby** either by pressing the **[#] key (no data will be stored)** or by pressing the **[∗] key (programmed data will be stored).**

[0] [xxxx] [xxxx] - New INSTALLER CODE (xxxx = 4 digits code). The installer code has to be entered twice to insure that it is correct.

Example: enter [0] [6789] [6789] to set new installer code 6789. Factory default: 2051

[1] [xx] - the duration of the output pulse in the PULSE mode (xx - 01 to 99sec.) or duration of alarm period in CONTROL PANEL mode (xx - 01 to 99 x 5sec.). *Factory default: 05*

[2] [xx] - Exit/Entrance delay duration (xx - 01 to 99 sec.). It has this function only while in the control panel mode. *Factory default: 20 sec.*

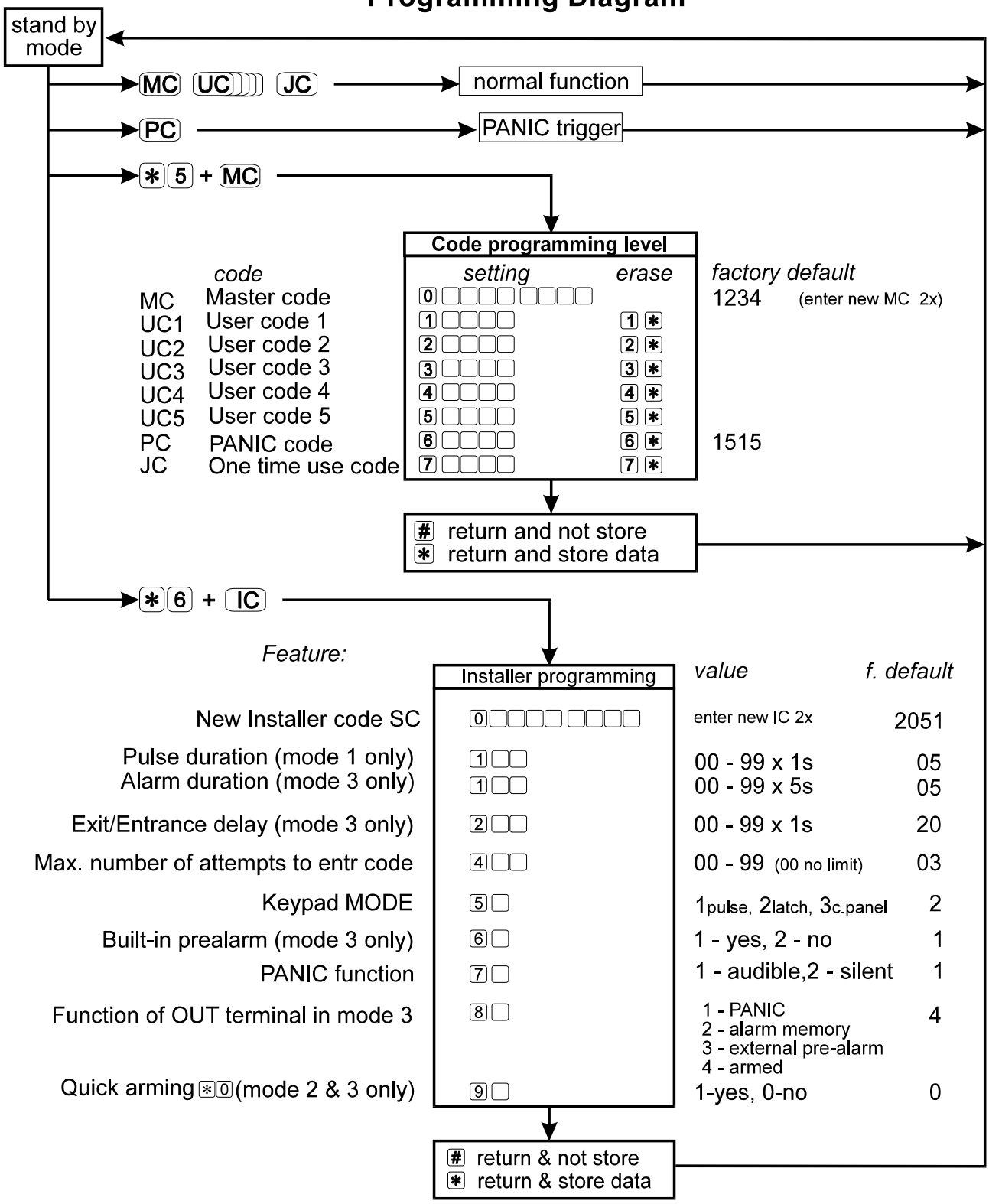
[4] [xx] - max. number of attempts to enter a valid access code before the PANIC function is triggered (xx - 00 to 99), 00 = without limit *Factory default: 03*

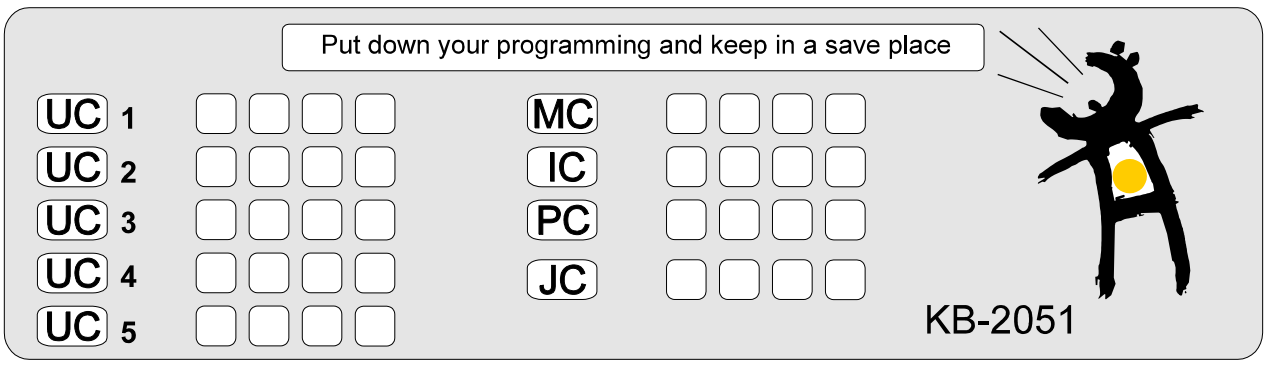
[5] [x] - keypad mode (x - 1 to 3), 1 = PULSE, 2 = LATCH, 3 = CONTROL PANEL mode
Factory default: 2 (LATCH)

[6] [x] - Built in buzzer pre-alarm (x - 1 or 2), 1 = enabled, 2 = disabled. This setting will function only under the control panel mode. *Factory default: 1 (enabled)*

[7] [x] - Panic reaction (x - 1 or 2), 1 = audible - both the output terminal OUT and the buzzer are triggered for 5sec. after you enter the panic code (in control panel mode the alarm is triggered).

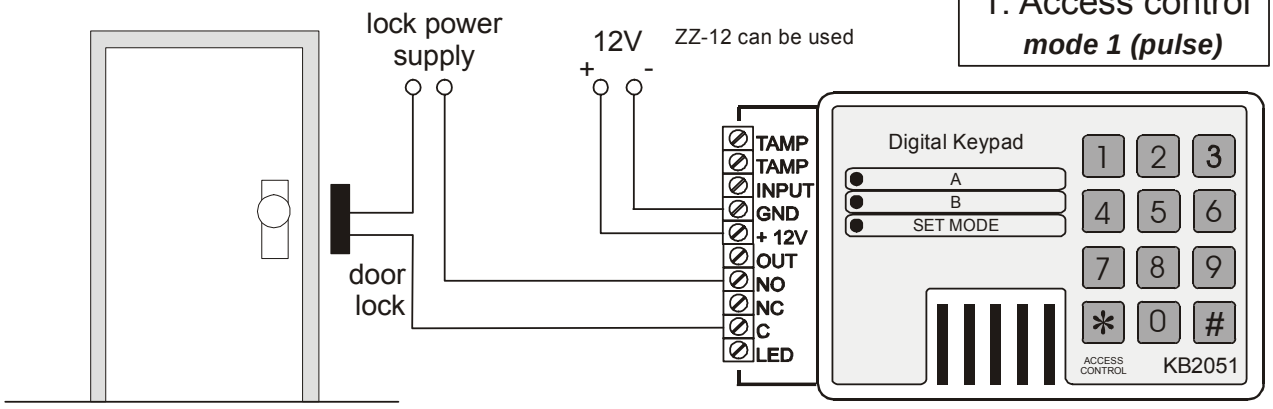
Programming Diagram



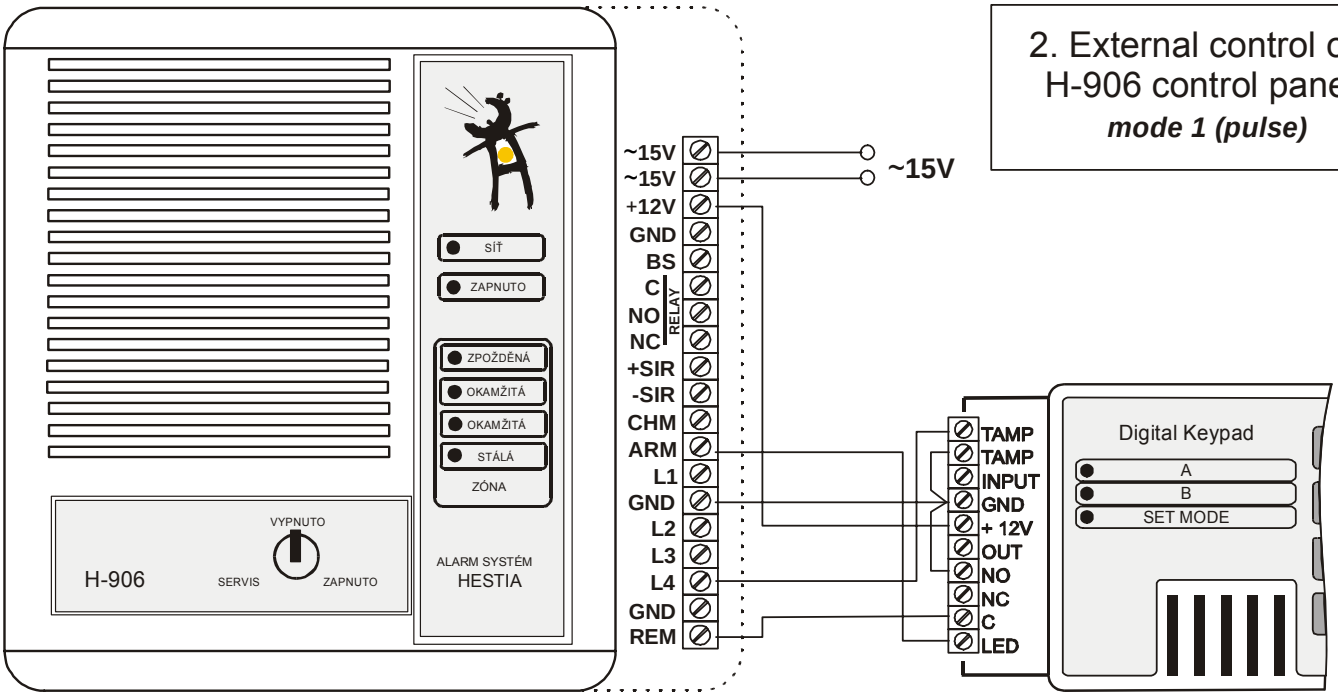
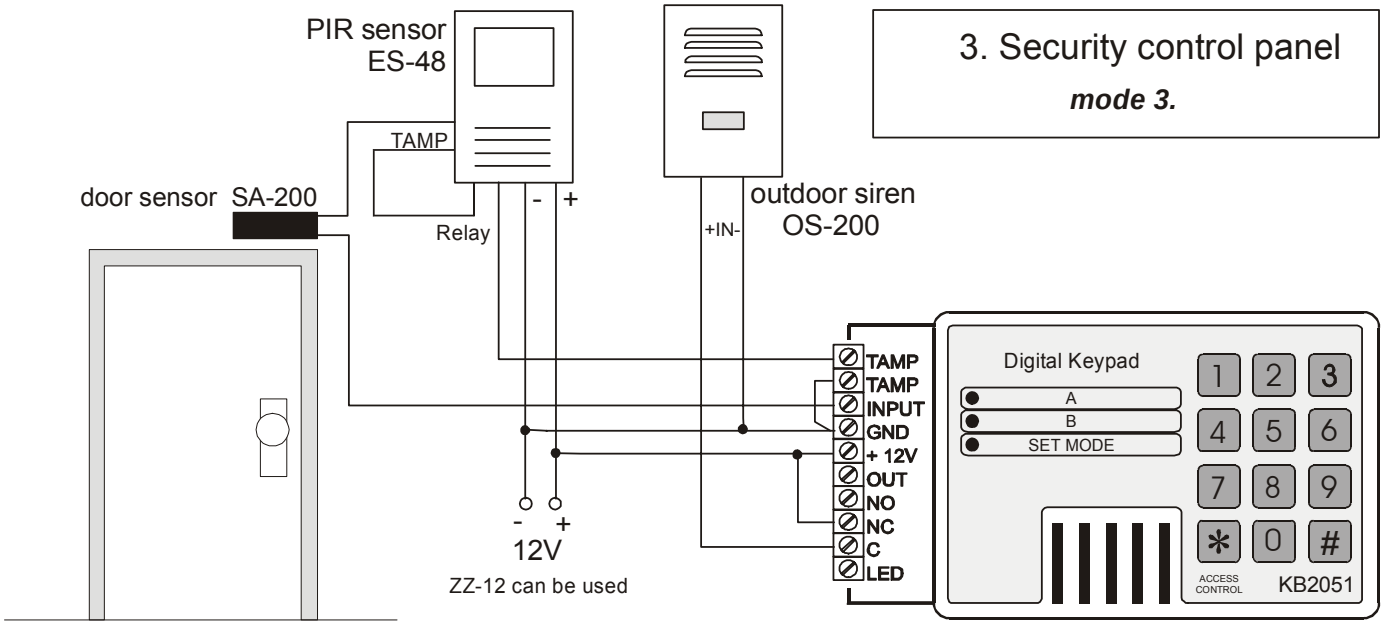


Examples of KB-2051 use

1. Access control
mode 1 (pulse)



2. External control of H-906 control panel
mode 1 (pulse)



3. Security control panel
mode 3.