perfecta micra

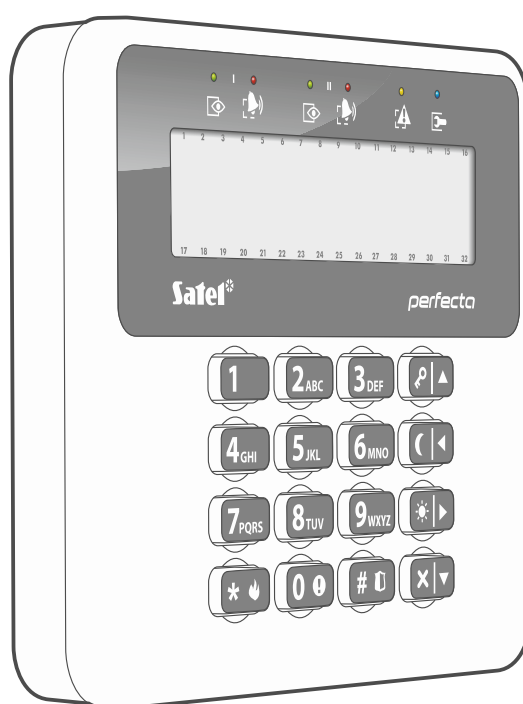## Wireless keypad
PRF-LCD-WRL

Firmware version 2.01

CE

IMPORTANT

The device should be installed by qualified personnel.

Read carefully this manual before proceeding to installation.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

The name plate of the device is located on the enclosure base.

CE The device meets the requirements of the applicable EU directives.

The device is designed for indoor installation.

The device must not be disposed of with other municipal waste. It should be disposed of in accordance with the existing rules for environment protection (the device was placed on the market after 13 August 2005).

SATEL aims to continually improve the quality of its products, which may result in changes in their technical specifications and software. Current information about the changes being introduced is available on our website.
Please visit us at:
https://support.satel.pl

Hereby, SATEL sp. z o.o. declares that the radio equipment type PRF-LCD-WRL is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.satel.pl/ce

The following symbols may be used in this manual:

i - note;

⚠ - caution.

The PRF-LCD-WRL wireless keypad enables operation and programming of the PERFECTA control panels equipped with the WRL module.

i *The PRF-LCD-WRL keypad with firmware version 2.01 is fully supported by PERFECTA control panels with firmware version 1.04 from 2022-05-17 (or newer) / 2.00 from 2022-05-17 (or newer).*

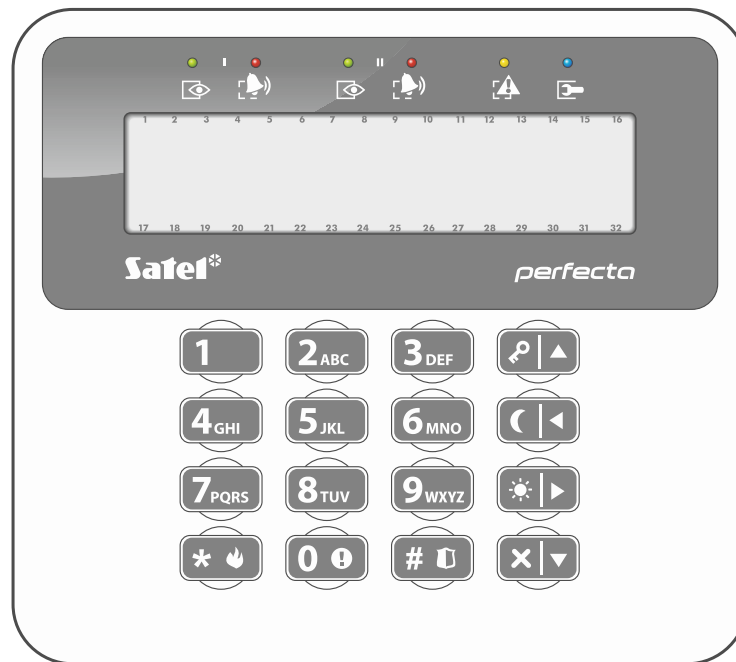This manual applies to the keypad with electronics version 2.2 (or newer).

Fig. 1. PRF-LCD-WRL keypad.

1. Features

- Two-way encrypted radio communication in the 433 MHz frequency band.
- Display 2 x 16 characters with backlight.
- LEDs indicating the state of partitions and system.
- 12 keys, bearing designations according to telephone standard and intended for entering data.
- 4 additional keys for menu navigation and arming/disarming.
- Backlit keys.
- Built-in sounder.
- Tamper protection against enclosure opening and removal from mounting surface.
- Power supply:
  - two CR123A 3 V batteries (required),
  - SATEL APS-055 power supply (optional).

2. Description

Operating modes

When the keypad is powered by the APS-055 power supply, it operates similarly to a wired LCD keypad. When the keypad is powered by the batteries, it operates in one of the two modes:

Wake-up – this mode is started by pressing any key. Additionally, the keypad can be woken up automatically after entry or exit delay countdown begins, the system is armed, or an alarm occurs (see description of the "Wake-up duration" parameter p. 8). When the keypad is in the wake-up mode, the keypad operates in much the same way as the LCD wired keypad. The display is ON and the backlight, LED signaling and sound signaling are active.

Sleep – this mode is started:

- after 20 seconds since the last key press,
- after signaling is over for the event that has woken up the keypad (see description of the "Wake-up duration" parameter p. 8).

The purpose of this mode is to save energy. The display is off. Backlight, LED indication and sound signaling are disabled (if a time different from 0 is preset for the "Wake-up duration" parameter, the CHIME from zones will be signaled).

Periodic transmissions

Every 15 minutes, the keypad sends a periodic transmission. The purpose of such transmissions is to monitor presence and condition of the keypad.

Power supply

You must install two CR123A 3 V batteries in the keypad. Optionally, you can connect the keypad to the SATEL APS-055 power supply (external power supply). The APS-055 is a flush-mounted 5 VDC / 0.5 A power supply. When the keypad is connected to the power supply, the batteries are used only in case of loss of external power supply.

Battery status control

The keypad controls the status of the batteries. If the voltage is lower than 2.75 V:

- low battery information is sent during each periodic transmission,
- a low battery message will be displayed.

i | *The battery life depends on how the keypad is used. When the keypad is powered by the batteries, the more frequently it is woken up, the quicker the batteries will be depleted.*

3. Installation

⚠ | **Disconnect power before making any electrical connections.**

There is a danger of battery explosion when using a different battery than recommended by the manufacturer, or handling the battery improperly. Do not crush the battery, cut it or expose it to high temperatures (throw it into the fire, put it in the oven, etc.).

Do not expose the battery to very low pressure due to the risk of battery explosion or leakage of flammable liquid or gas.

Be particularly careful during installation and replacement of the batteries. The manufacturer is not liable for the consequences of incorrect installation of the battery.

The used batteries must not be discarded, but should be disposed of in accordance with the existing rules for environment protection.

The keypad is designed for indoor installation. The place of installation should be readily accessible to the system users. When selecting the mounting location, take into account the range of radio communication.

1. Open the keypad enclosure (Fig. 2).

Fig. 2. Opening the enclosure.
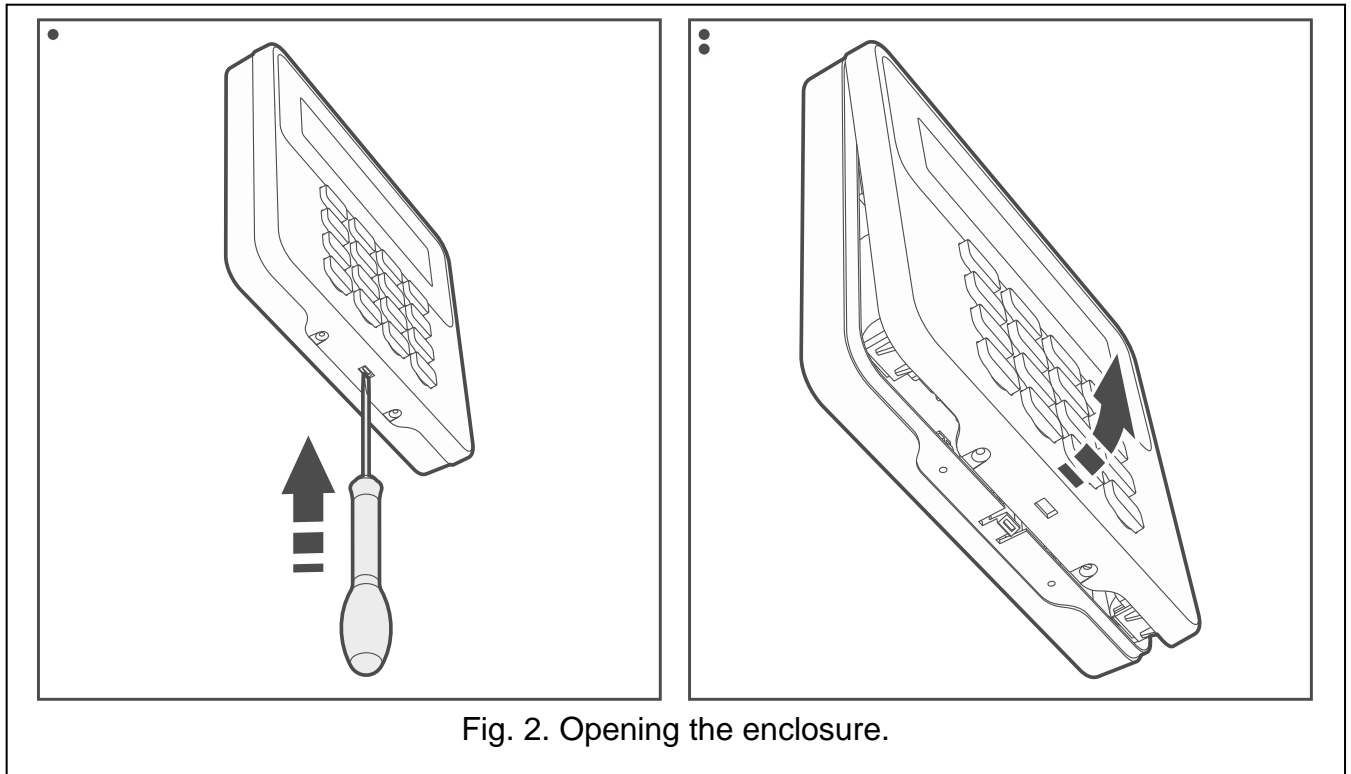
2. Install the batteries and enroll the keypad in the control panel (see: "Adding the keypad to the system").
3. Put the cover on the catches and snap the enclosure shut.
4. Place the keypad in the location intended for its installation.

i *If you want to hold the keypad in your hand when checking the radio signal level, grab the device from its left side (on its right side, there is the antenna, which must not be covered).*

5. Press any key on the keypad. Time should be displayed on the keypad. If the time is not displayed, the keypad cannot connect to the control panel and, therefore, you must choose another place for installation. Sometimes, it is sufficient to shift the device ten or twenty centimeters.

i *On the keypad or in the PERFECTA SOFT program, you can check the level of radio signal received by the control panel from the keypad. The signal level should not be lower than 40%.*

6. Open the keypad enclosure (Fig. 2).
7. Place the enclosure base against the wall and mark location of the mounting holes.
8. Drill the holes in the wall for wall plugs (screw anchors).

9. If you want to connect the keypad to the APS-055 power supply, run the power wires through the opening in the enclosure base. Use flexible wires with a cross-section of 0.5-0.75 mm^2.

10. Using wall plugs (screw anchors) and screws, secure the enclosure base to the wall Select wall plugs specifically intended for the mounting surface (different for concrete or brick wall, different for plaster wall, etc.). When installed, the device must withstand a pull-off force of at least 50 N.

11. Put the cover on the catches and snap the enclosure shut.

12. If the APS-055 power supply is to be used, connect the power wires to the "**+**" and "**–**" terminals (Fig. 3). Use a 1.8 mm flathead screwdriver.

13. Lock the cover using screws.
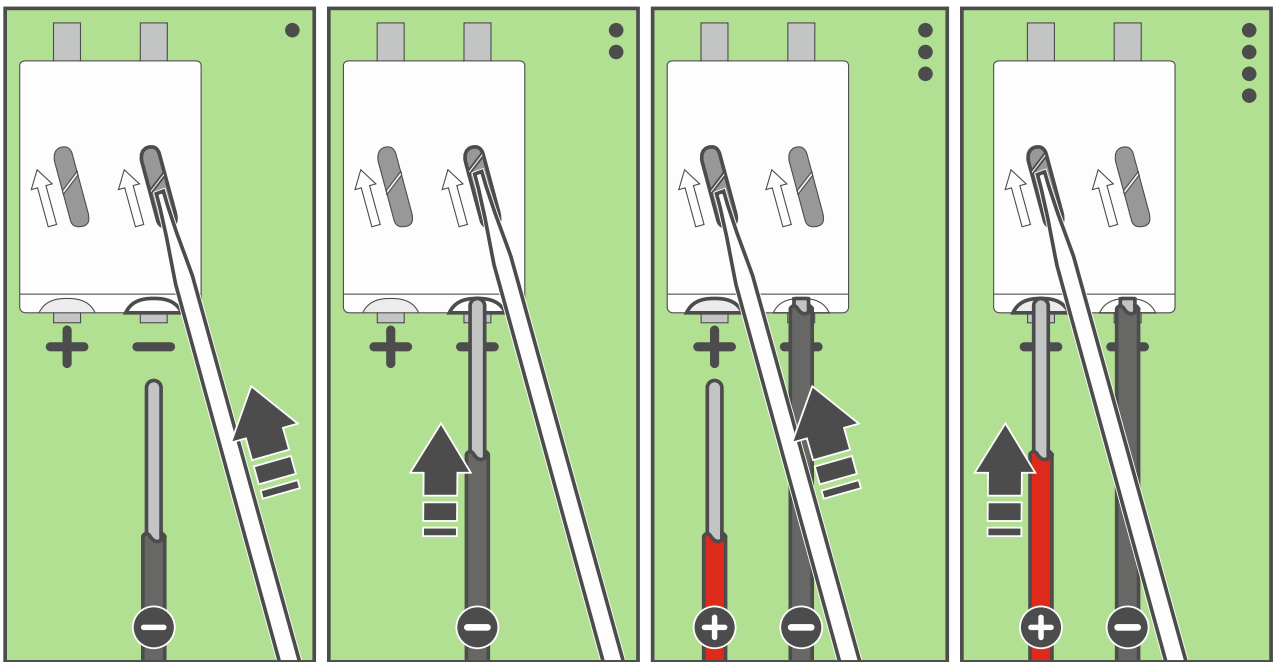
Fig. 3. Connecting the power wires.
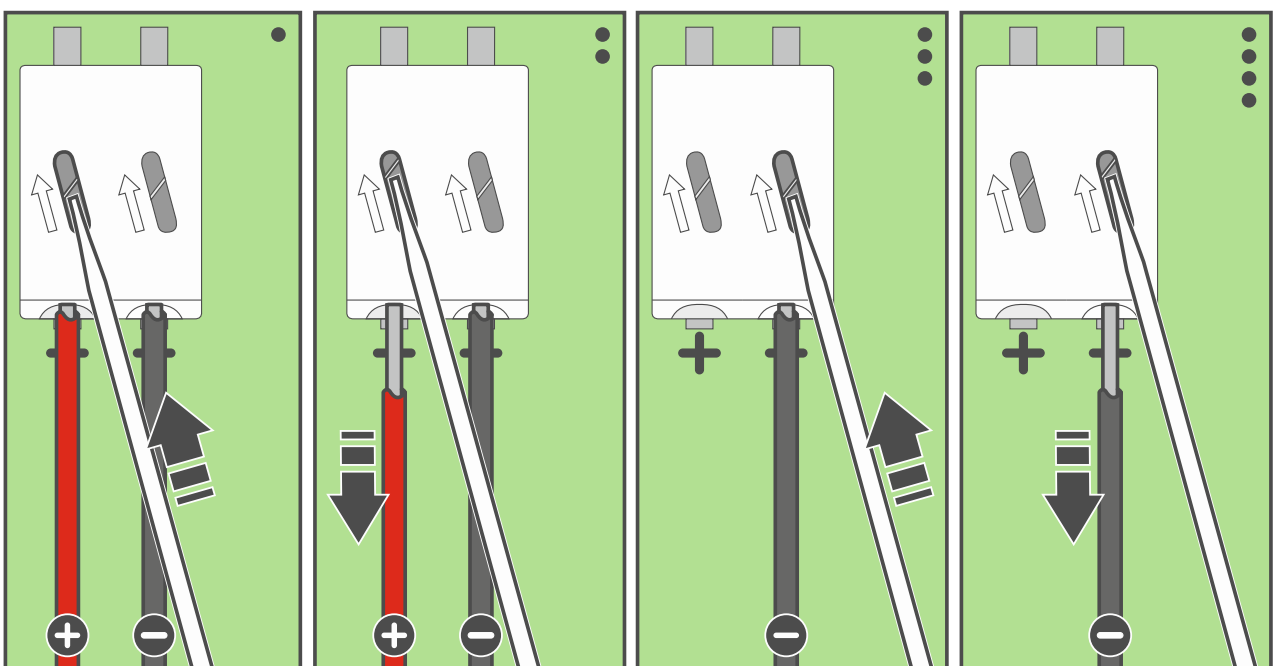

Fig. 4. Disconnecting the power wires.

3.1 Adding the keypad to the system

You can add the wireless keypad to the system by using either a computer with PERFECTA SOFT program installed, or an LCD keypad. The control panel allows for enrolling of up to 4 PRF-LCD-WRL keypads. If no wired keypad is connected to the control panel, you can only add the first wireless keypad using the PERFECTA SOFT program.

3.1.1 PERFECTA SOFT program

1. Click on the "Hardware" tab.
2. Click on one of the unused keypads. Address of this keypad will be assigned to the wireless keypad after the adding procedure is finished.
3. Click on [+] .
4. The wireless device adding panel will be displayed.
5. In the "Serial no." field, enter the serial number of the keypad. You will find it on the keypad electronics board.
6. Press any key on the keypad being added.
7. When the "Device's data read" message appears, click "OK".
8. Click [⇧] to save changes to the control panel.

3.1.2 Keypad

1. Start the service mode.
2. Press successively [1] [2ABC] [7PQRS] [1] [# ▯] to run the 1271.ADD function.
3. Enter the serial number of the keypad. You will find it on the keypad electronics board.
4. Press [# ▯].
5. When the "Open tamper device" command is displayed, press any key on the keypad being added.
6. The type and serial number of the keypad being added will be displayed (if nothing happens, you may have entered a wrong serial number – if this is the case, press [✱ ✺], to exit the function).
7. Press [1].
8. When the "SELECT..." command is displayed, use the [✖ ▼] and [🔎 ▲] keys to select the address to be assigned to the keypad.
9. Press [# ▯]. The keypad will be added.

3.2 Removing the keypad from the system

3.2.1 PERFECTA SOFT program

1. Click on the "Hardware" tab.
2. Click on the wireless keypad that is to be removed.
3. Click on [+] .
4. In the window that will be displayed, click on "Delete" to confirm that you want to remove the keypad.
5. Click [⇧] to save changes to the control panel.

3.2.2 Keypad

1. Start the service mode.

2. Press successively [1] [2ABC] [7PQRS] [3DEF] [# 🔲] to run the 1273.REMOVE function.
3. Use the [✖ ▼] and [🔑 ▲] keys to select the keypad you want to remove.
4. Press [# 🔲].
5. The type and serial number of the keypad to be removed will be displayed.
6. Press [1]. The keypad will be removed.

4. Configuring

You can configure the wireless keypad settings by using a computer with PEFECTA SOFT program installed, or an LCD keypad. Names of parameters and options from the PERFECTA SOFT program are used in this manual. At the description of each parameter or option, you will find one of the following data in square brackets:

- name of the function which is used for configuring a parameter or option on the keypad,
- name of a parameter or option from the keypad.
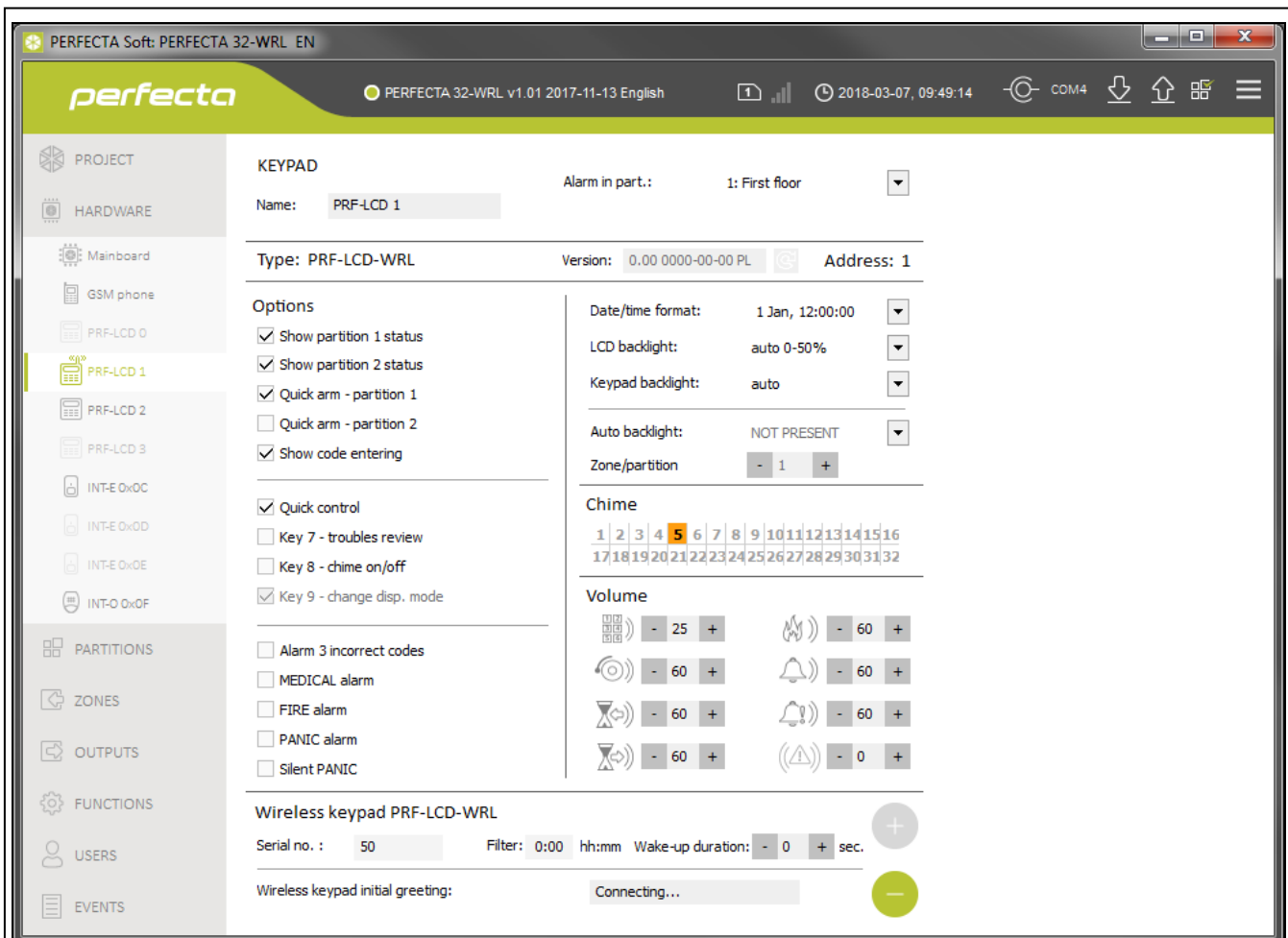
4.1 Keypad settings

Fig. 3. PERFECTA SOFT program: keypad settings.

Name [28.Names] – individual name of the keypad (up to 16 characters).

Alarm in part. [22.Partitions] – the partition in which alarm will be generated in the event of keypad tamper (opening of enclosure or loss of communication).

Options

To configure on the keypad the options described below, use the 212.OPTIONS and 211.ALARMS functions.

Show partition 1 status [Show part.1] – if this option is enabled, the keypad LEDs and display indicate the status of partition 1. The keypad will indicate the status of partition 2 only after entering code by the user who has access to partition 2.

Show partition 2 status [Show part.2] – if this option is enabled, the keypad LEDs and display indicate the status of partition 2. The keypad will indicate the status of partition 1 only after entering code by the user who has access to partition 1.

Quick arm - partition 1 [Quickarm part.1] – if this option is enabled, quick arming (without user authorization) of the partition 1 is possible.

Quick arm - partition 2 [Quickarm part.2] – if this option is enabled, quick arming (without user authorization) of the partition 2 is possible.

Show code entering [Show code enter.] – if this option is enabled, entering the code is presented on the keypad display by asterisks.

Quick control [Quick control] – if this option is enabled, the users can control the outputs by using the number keys. The "15. Controlled" outputs must be assigned to the keys (see: PROGRAMMING manual for PERFECTA control panels).

Key 7 - troubles review [Troubles review] – if this option is enabled, the users can press ⑦ₚQRS and hold down for 3 seconds to view the troubles.

Key 8 - chime on/off [Chime on/off] – if this option is enabled, the chime signal can be enabled/disabled by means of the ⑧ₜᵤᵥ key (the key is to be pressed and hold down for about 3 seconds).

Alarm 3 incorrect codes [3 wrng codes al.] – if this option is enabled, entering incorrect code three times will generate the alarm.

MEDICAL alarm [Medical alarm] – if this option is enabled, pressing the ⓪ key for approx. 3 seconds will generate the medical (auxiliary) alarm.

FIRE alarm [Fire alarm] – if this option is enabled, pressing the ✱ key for approx. 3 seconds will generate the fire alarm.

PANIC alarm [Panic alarm] – if this option is enabled, pressing the #⓪ key for approx. 3 seconds will generate the panic alarm.

Silent PANIC [Silent panic] – if this option is enabled, the panic alarm generated from the keypad will be a silent one, i.e. the keypad will not indicate it, there will be no audible signal, but the alarm will be reported to the monitoring station. The silent panic alarm is useful when the control panel is sending events to the monitoring station, but unauthorized persons should not be aware of the alarm being generated. The option is available, if the "PANIC alarm" option is enabled.

Display and keys

Date/time format [210.ClockFormat] – mode of presentation of time and date on the display.

LCD backlight [26.LCDbacklight] – the way how the display backlight will work. If the keypad is powered by the batteries, the backlight will work only when the keypad is woken up, and the available settings should be interpreted as follows:

not present – disabled.

permanent 50% – enabled: brightness 50%.

permanent 100% – enabled: brightness 100%.

auto 0-50% – enabled: brightness 50%.

auto 0-100% – enabled: brightness 100%.

auto 50%-100% – enabled: brightness 100%.

Keypad backlight [27.KEYbacklight] – the way how the keys backlight will work. If the keypad is powered by the batteries, the backlight will work only when the keypad is woken up, and the available settings should be interpreted as follows:

not present – disabled.

auto – enabled.

permanent – enabled.

Chime

The keypad can audibly signal violation of selected zones.

> *i* *When the wireless keypad is powered by the batteries:*
> – *the CHIME signaling is enabled no more than once every 30 seconds,*
> – *the keypad in the sleep mode signals the CHIME if "Wake-up duration" is different from 0.*

Volume

[251.Keys] – volume of the beeps generated during keypad operation (key pressing, confirmation of performed operation, etc.).

[252.Chime] – volume of the beeps generated after zone violation (CHIME).

[253.Entry delay] – volume of the entry delay signaling.

[254.Exit delay] – volume of the exit delay signaling.

[255.Fire alarm] – volume of the fire alarm signaling.

[256.Burg.alarm] – volume of the burglary, panic and medical (auxiliary) alarm signaling.

[257.Warn.alarm] – volume of the warning alarm signaling.

[258.New trouble] – volume of the trouble signaling.

Wireless keypad

Filter [1272.Filter] – the time counted from receiving of the transmission from the keypad. After it has elapsed and no other transmission is received, lack of communication with the keypad will be reported. You can enter 0 or hours from 1 to 48. If you enter 0, you will disable the device presence control.

Wake-up duration [213.Wake up] – maximum length of time for which the keypad can be woken up automatically (applies to the keypad powered by the batteries). If you enter a value different from 0:

– the keypad will be woken up automatically when entry or exit delay countdown has begun, the system has been armed, or alarm has been generated,

– the CHIME from zones will also be signaled when the keypad is in the sleep mode.

If you enter 0, the keypad will not be woken up automatically.

> *i* *If the "Wake-up duration" is different from 0, the keypad will be awaiting for transmissions with information on events. As a result, the energy consumption will be growing and the battery life will be considerably reduced.*
>
> *The keypad is woken up automatically not more frequently than every 30 seconds. If the event that is to wake up the keypad occurs before the 30 seconds have elapsed since the last automatic wake-up, the keypad will stay asleep.*

> *The "Wake-up duration" is the maximum time, i.e. if the event signaling takes less time, the sleep mode will be resumed in the keypad earlier.*
>
> *It may take a few seconds for the keypad to wake up after the event occurred.*

Wireless keypad initial greeting [218.Connect msg] – message displayed on the wireless keypad after wake-up (applies to the keypad powered by the batteries). The message is the same for all keypads.

Buttons

 – click to add the wireless keypad.

 – click to delete the wireless keypad.

5. Operation

You can use the wireless keypad in the same way as the wired LCD keypad.

> *If the wireless keypad is powered by the batteries, first press any key to wake up the keypad. In addition to waking up the keypad, pressing a key will also have other consequences, as appropriate for the given key. The keypad will treat each key pressing exactly in the same way.*

For instructions on how to use the keypad, refer to the control panel manuals. The manuals are available in electronic form on the www.satel.pl website.

6. Specifications

Operating frequency band	433.05 ÷ 434.79 MHz
Radio communication range (in open area)	up to 200 m
Batteries	2 x CR123A 3 V
Standby current consumption from battery	4 µA
Maximum current consumption from battery	55 mA
Power supply voltage (external power supply)	5 VDC
Standby current consumption from power supply	17 mA
Maximum current consumption from power supply	48 mA
Environmental class according to EN50130-5	II
Operating temperature range	-10°C...+55°C
Maximum humidity	93±3%
Enclosure dimensions	139 x 124 x 22 mm
Weight	280 g