MULTIFUNCTIONAL KEYPAD WITH PROXIMITY CARD READER

INT-SCR-BL

int-scr_e 09/07

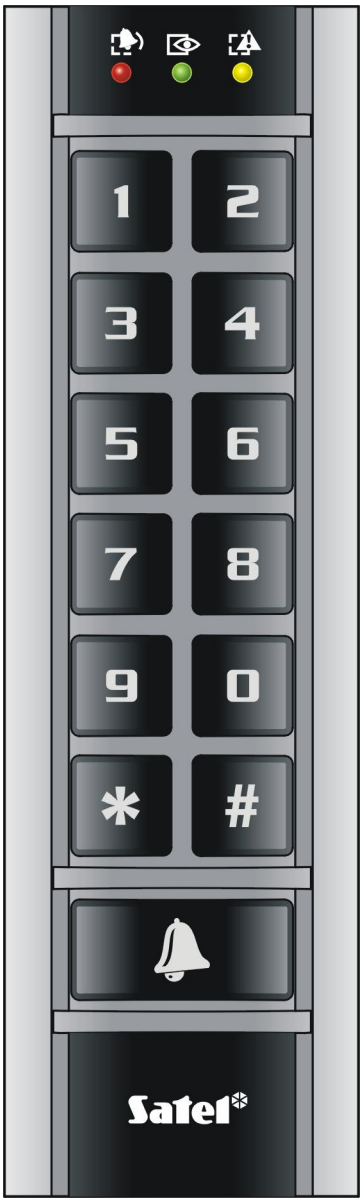
The INT-SCR-BL multifunctional keypad with proximity card reader can operate as:

partition keypad – a device supported by the CA-64 alarm control panel, as well as INTEGRA control panels with any firmware version, and identified as INT-S/SK. It is designed to control arming of one partition. The device makes it possible to execute the functions of access control and electromagnetic door lock operation. It enables changing the user code and calling the control functions for outdoor devices, and identifies users by their access code.

partition keypad with proximity card reader – a device supported by the INTEGRA control panels with firmware version 1.05 or later and identified as INT-SCR. It performs identical functions as the partition keypad, but allows the users to use proximity cards.

entry keypad – a device supported by the INTEGRA control panels with firmware version 1.05 or later and identified as INT-ENT. The main task of the entry keypad is activation of the delay in the partition for the zones with reaction type 3. INTERIOR DELAYED. The time period during which these zones will act as delayed ones is programmable for the keypad. After expiry of the programmed time, the interior delayed zones again act as instant ones, unless the partition is disarmed.

Design of the keypad enables it to be installed outdoors. The device is additionally equipped with a bell button to control the OC type low-current output. Press the button to short the output to the common ground.



Rys. 1. INT-SCR-BL multifunctional keypad.

1. Description of the Keypad

The partition keypad has 13 keys with permanent or temporary (automatically activated) mode backlit and LED indicators:

- **ALARM** (red color),
- **ARMED** (green color),
- **TROUBLE** (yellow color).

Information conveyed by means of the LED indicators depends on the keypad operating mode. Alternative blinking of all the LEDs (from the left to the right) indicates lack of communication between the keypad and the control panel. This situation may take place when the STARTER program is running in the control panel, or when the cable connecting the keypad and the control panel is damaged.

Cable color	Function
red	power supply input (+12 V)
blue	ground (COM)
green	data (DTA)
black	clock (CLK)
yellow	relay NO contact (normally isolated from the relay common contact)
pink	relay NC contact (normally shorted to the relay common contact)
grey	relay C contact (common contact)
brown	door status control input (NC type)
violet	bell input (OC type)

Table 1. Colors and functions of the keypad cables.

2. Installation and Connection of the Keypad

Use the straight-through unshielded cable for the connection (using the twisted pair type of cable is not recommended).

Any connections should only be made in deenergized state, i.e. with power supply disconnected.

1. Remove the locking screw which prevents the casing from being opened and open the casing.
2. Attach the lower part of the casing to the wall.
3. Close the casing and replace the locking screw.
4. Connect the cables: blue (COM), green (DTA) and black (CLK) to the corresponding terminals of the expander bus on the control panel PCB.
5. Connect the door status control detector to the brown and blue cables. If the door status is not to be controlled, connect the brown cable to the blue one.

Note: *In the entry keypad mode, the door status control detector is not supported.*

6. An actuating device (e.g. electromagnetic door lock) can be connected to the relay cables. Use the yellow and gray cables, if the device is to be activated by closing the circuit. If the device is to be activated by opening the circuit, use the pink and gray cables.

Note: *In the entry keypad mode, the relay is not supported.*

7. Connect the module supply to the red (+12 V) and blue (COM) cables. The keypad supply voltage is not to be necessarily provided from the control panel mainboard. A buffer power supply unit or another expander with power supply unit can be used for this purpose.
8. The violet lead (bell) can be connected e.g. to the one of the control panel zones.

3. Operating Mode Selection and Address Setting

By default, address 0 and partition keypad operating mode with proximity card reader (INT-SCR) are set in the keypad.

3.1 Changing the address

1. Turn off the keypad power supply.
2. Disconnect the green and black cables from the terminals of the control panel expander bus.
3. Short together the ends of the green and black cables.

4. Turn on the keypad supply. The keypad will generate 4 short beeps and 1 long beep, and the LEDs designated [ALARM] and [ARMED] will start blinking alternately (the ends of green and black cables can then be separated).
5. Press in turn the [1] and [#] keys. The keypad will confirm with 2 short beeps that the address setting function has been launched, and the LED designated [ALARM] will start blinking.
6. Set the address within the range from 0 to 31, using suitable numerical keys and confirming your selection with the [#] key. The keypad will confirm with 4 short beeps and 1 long beep that the address has been set. The LEDs designated [ALARM] and [ARMED] will start blinking alternately (then, to proceed to setting the operating mode, press in turn the [2] and [#] keys).
7. Turn off power supply.
8. Connect the green and black cables correctly to the expander bus terminals on the control panel mainboard.

3.2 Changing the operating mode

1. Turn off the keypad power supply.
2. Disconnect the green and black cables from the expander bus terminals.
3. Short together the ends of the green and black cables.
4. Turn on the keypad supply. The keypad will generate 4 short beeps and 1 long beep, and the LEDs designated [ALARM] and [ARMED] will start blinking alternately (the ends of green and black cables can then be separated).
5. Press in turn the [2] and [#] keys. The keypad will confirm with 2 short beeps that the operating mode selection function has been launched, and the LED designated [ARMED] will start blinking.
6. Select the operating mode by pressing in turn:

   [1] and [#] – partition keypad with proximity card reader (INT-SCR)

   [2] and [#] – entry keypad (INT-ENT)

   [3] and [#] – partition keypad (INT-S/SK)

   The keypad will confirm with 4 short beeps and 1 long beep that the operating mode has been selected. The LEDs designated [ALARM] and [ARMED] will start blinking alternately (then, to proceed to setting the address, press in turn the [1] and [#] keys).
7. Turn off power supply.
8. Connect the green and black cables correctly to the expander bus terminals on the control panel mainboard.

4. Starting the Keypad

1. **Switch on** the alarm system power supply.
2. **Conduct identification of a new device** in the alarm system. Call the EXPANDER IDENTIFICATION function (→SERVICE MODE →STRUCTURE →HARDWARE) from the LCD keypad.

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) without a new identification, will result in triggering the alarm (module tamper – verification error).*

3. After identification, the keypad will be supported by the alarm control panel, however most options and functions will be disabled. For example, the lack of key press confirmation will make an impression that the keypad does not react to entering the code. Using the LCD keypad or the DLOADX / DLOAD64 program, **assign the users**, who will be authorized to use the keypad and **program functions and options of the device**.
4. Terminate the service mode or communication with the computer and **save the data to FLASH memory**.

5. Operation in the Partition Keypad Mode

The LEDs show following information:

ALARM (red color) – steady light indicates an alarm in the keypad controlled partition, while blinking indicates that an alarm was triggered in the partition (alarm memory). The LED goes off when alarm is cleared.

ARMED (green color) – steady light indicates that the partition to which the keypad is assigned has been armed. Blinking indicates countdown of the exit delay.

TROUBLE (yellow color) – blinking indicates that a technical problem has occurred. The signaling applies to troubles from the entire alarm system, not only from the keypad controlled partition. The type of trouble can be checked on the LCD keypad. Arming the keypad controlled partition will disable the trouble signaling. Disarming the partition will restore the trouble signaling.

Note: *All LEDs may be OFF in the arming mode, depending on the control panel settings.*

Information on the use of the partition keypad can be found in the user manuals of the control panels.

The partition keypad can be programmed by means of the LCD keypad (→SERVICE MODE →STRUCTURE →HARDWARE →EXPANDERS →SETTINGS →*expander selection*) or a computer with the DLOADX / DLOAD64 program. Described below are settings and options available for programming. Abbreviations from the LCD keypad display are shown at some of the functions.

Name – option to give an individual (16-character) name to the module. This option can be accessed in the LCD keypad as follows: →SERVICE MODE →STRUCTURE →HARDWARE →EXPANDERS →NAMES →*expander selection*.

Partition – assignment of the keypad to a partition selected from the list. The keypad controls this partition.

Lock feature – the option available in the LCD keypad – its activation provides access to the **Lock** submenu.

Lock (DLOADX) / **Lock feature** (DLOAD64) – its activation provides access to the lock feature options.

The options "Lock feature" (LCD / DLOAD64) and "Lock" (DLOADX) refer to support of the actuating device (e.g. electromagnetic door lock) by **means of the partition keypad.** This function is made available to any user authorized to use the keypad (see: **MASTER USERS / USERS** function). Control is effected by means of the relay.

Lock features (DLOADX) / **Lock** (DLOAD64)

ON if partition armed – relay is active when the partition is armed (bistable operation).

Note: *When operating in this mode the relay will change its state automatically, if the partition is disarmed from the given keypad. When the partition is disarmed from another keypad, the state of the relay will change on entering the CODE and pressing the* [*] *key on the given partition keypad.*

Fixed ON time [ON time] – the relay gets activated for the time period entered in the RELAY ON TIME function after entering the code (monostable operation).

Fixed ON time – OFF if door open [ON, open→off] – the relay is activated after entering the code and stay active until the door is opened (the door status control input disconnected from the common ground), but not longer than for the RELAY ON TIME.

Fixed ON time – OFF if door closed [ON, close→off] – the relay is activated after entering the code and stay active until the door is open (the door status control input cut off from the common ground) and its normal operating mode is restored 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.

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 – 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 / Dependent on door 2) – the door which must be closed for the lock to operate. Monitoring of the door state is effected through the input in the code lock, partition keypad, or CA-64 SR expander of proximity card readers, or through the control panel 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 triggers the fire alarm.

AUX. alarm – holding down the [0] key triggers the medical alarm.

PANIC alarm – holding down the [*] key triggers 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 (it can also be signaled on the output type 12 SILENT ALARM).

Alarm 3 incorrect codes [3 wrong codes] – entering a code unknown to the control panel three times triggers alarm.

Options

Quick arming – quick arming of the partition:

– fully armed – after pressing in turn the [0] and [#] keys or the [1] and [#] keys;

– armed without internal – after pressing in turn the [2] and [#] keys;

– armed without internal and delayed – after pressing in turn the [3] and [#] keys.

Note: *In case of the INTEGRA control panels with firmware in version 1.00 to 1.04 and the CA-64 control panel, only quick arming by means of the [0] and [#] keys is available.*

Control BI output – the keypad accepts the BI OUTPUTS type of codes.

Control MONO output – the keypad accepts the MONO OUTPUTS type of codes.

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

Guard round control – entering the guard code ended with [*] or [#] key will be recorded as completion of the round.

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

Signaling

Alarm signal (fixed time) – acoustic alarm signaling in the given partition (through the total duration of alarm).

Alarm signal (until canceled / latch) – acoustic alarm signaling in the given partition until the alarm is cleared.

Signaling entry delay – acoustic signaling of the countdown of entry delay time.

Signaling exit delay – acoustic signaling of the countdown of exit delay time.

Auto-Arm delay countdown –acoustic signaling of the countdown of the partition auto-arming delay.

Access code signaling (hardware) – enabling this option will activate the signaling of code entry acknowledgement, which is independent of the control panel. The option is useful in expanded alarm systems, because of a considerable time lag between entering the code and generating the audible signal by the control panel. Option is available only in the INTEGRA control panel.

Confirming – this option defines the way of communication between the control panel and the partition keypad user:

No – the function of keypad operation acknowledgement is disabled.

Sound – the keypad generates beeps as described in the user manual for the alarm control panel.

Backlight – the audible signaling will be replaced by the blinking keypad backlit as described in the user manual for the alarm control panel.

Backlight – defines the mode of keypad illumination.

No – keypad backlit disabled.

Auto – keypad backlit 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** – backlit activated by pressing a key or by violation of the indicated zone,
- **entry delay, part.** – backlit 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 backlit is permanently "ON".

No auto-reset after 3 tampers – each expander automatically disables the tamper alarming 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.

6. Operation in the Mode of Partition Keypad with Proximity Card Reader

Information conveyed by the keypad with LED indicators in this mode is identical to that in the partition keypad mode. Additionally, all LEDs of the partition keypad with reader blinking simultaneously indicate waiting for the card read-in (during the procedure of adding a card to the user).

Information on the use of the partition keypad with proximity card reader can be found in the user manual of the control panels.

The partition keypad with proximity card reader can be programmed by means of the LCD keypad (→SERVICE MODE →STRUCTURE →HARDWARE →EXPANDERS →SETTINGS →*expander selection*) or a computer with the DLOADX program. The operating mode of partition keypad with proximity card reader offers all the functions available for the partition keypad mode. Support of the proximity cards should only be additionally taken into account. Presenting the card to the reader is recognized by the expander as entering the code, confirmed with the [*] key. Holding up the card for approx. 3 sec. is recognized as entering the code, confirmed with the [#] key.

7. Operation in the Entry Keypad Mode

In the entry keypad, only the LED designated is used for signaling. Blinking of the LED informs that the countdown of delay activation time is running (disarming has no effect on the LED blinking).

Information on the use of the entry keypad can be found in the user manual of the control panels.

The entry keypad can be programmed by means of the LCD keypad (→SERVICE MODE →STRUCTURE →HARDWARE →EXPANDERS →SETTINGS →*expander selection*) or a computer with the DLOADX program. Described below are settings and options available for programming.

Name – option to give an individual (16-character) name to the module. This option can be accessed in the LCD keypad as follows: →SERVICE MODE →STRUCTURE →HARDWARE →EXPANDERS →NAMES →*expander selection*.

Partition – assignment of the keypad to a partition selected from the list. The delay activation will apply to the zones with reaction type 3. INTERIOR DELAYED in this partition.

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

Alarm 3 incorrect codes – entering codes / reading cards unknown to the control panel three times triggers alarm.

Control BI output – the keypad accepts the BI OUTPUTS type of codes.

Control MONO output – the keypad accepts the MONO OUTPUTS type of codes.

Guard round control – entering the guard code ended with [*] or [#] key as well as presenting or holding up the card will be recorded as completion of the round.

Signaling

Delay activation sign. – when the option is enabled, the keypad will signal with beeps the countdown of delay unblocking time.

Access code signaling (hardware) – enabling this option will activate the signaling of code entry / card reading acknowledgement, which is independent of the control panel. The option is useful in expanded alarm systems, because of a considerable time lag between entering the code / reading the card and generating the audible signal by the control panel.

Confirming – this option defines the way of communication between the control panel and the keypad user:

No – the function of keypad operation acknowledgement is disabled.

Sound – the keypad generates beeps as described in the user manual for the alarm control panel.

Backlight – the audible signaling will be replaced by the blinking keypad illumination as described in the user manual for the alarm control panel.

Backlight – defines the mode of keypad illumination:

No – keypad backlighting disabled.

Auto – keypad backlighting goes on automatically on pressing any key.

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".

Delay activation time – the time period during which the zones with reaction type 3. INTERIOR DELAYED (belonging to the partition to which the keypad is assigned) will act as delayed ones. The countdown will start running after the code is entered or the card is read in. After expiry of the programmed time, the interior delayed zones will again act as instant ones, unless the partition is disarmed.

No auto-reset after 3 tampers – each expander automatically disables the tamper alarming 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.

8. Technical data

Nominal supply voltage	12 V DC ±15%
Maximum current consumption	110 mA
BELL output load capacity	30 mA
Reader operating frequency	125 kHz
Maximum voltage switched over by relay	24 V
Maximum current switched over by relay	2 A
Operating temperature range	-20...+55 °C
Dimensions	47 x 158 x 24 mm
Weight	297 g

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

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