

JA-155E-NFC, JA-155E-NFC-AN, JA-155E-NFC-GR

Wireless four-segment keypad with display and NFC reader



JABLOTRON



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The keypad is a wireless component of the JABLOTRON system used to control and signal the status of the system. It is equipped with four segments, the names of which are displayed on the LCD display, and an NFC reader for access cards and chips. The product is intended for installation by a trained technician with a valid Jablotron certificate.

Compatibility with specific control panels can be verified using the QR code at the end of the manual.

This manual must be used in conjunction with the JABLOTRON 100 system installation and user manual.

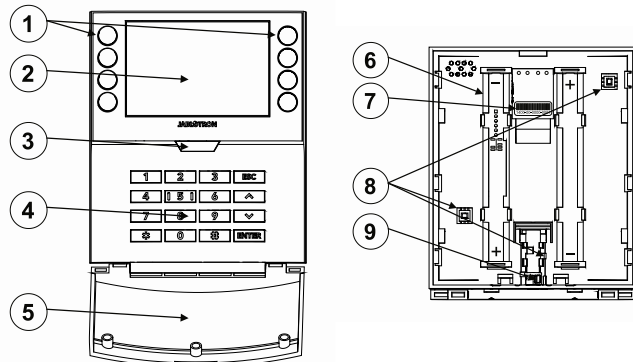


Fig. 1: Description of external and internal parts of the product
1 – control buttons; 2 – LCD display; 3 – system indicator/button;
4 – keypad with NFC reader; 5 – cover; 6 – battery compartment;
7 – serial number; 8 – tamper contacts; 9 – locking mechanism

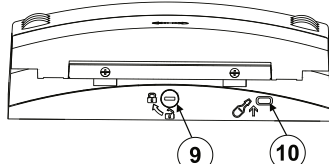


Fig. 2: Description of the side of the product
9 – locking mechanism; 10 – latch

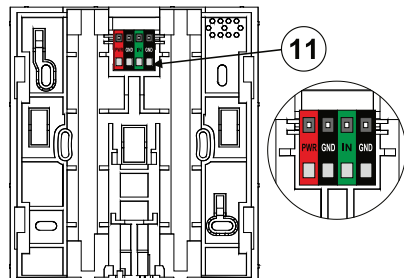


Fig. 3: Description of the rear of the product
11 – terminal block for external power supply and door opening detector

Installation

1. Remove the mounting plate (rear part) of the keypad. If it cannot be easily removed, open the locking mechanism, see disassembly of the keypad.
2. Use 4 screws to screw the rear part of the keypad to a flat wall. To connect the external power supply or door opening detector, use the terminals in the rear part of the keypad, see Fig. 3. For a description of the connection, see the sections Alternative power supply and connecting the door opening detector.
Note: The JA-105PL pad can also be used for surface mounting – this is a non-certified accessory, and when mounted with the keypad pad, it does not meet the declared security grade!
3. The JA-11xR radio module must be installed in the system for assignment to the system.
4. Insert 4 x 1.5 V AA alkaline batteries into the keypad, ensuring correct polarity!
5. To assign it to the system according to the type of control panel, use the recommended software or application; see the control panel installation manual.
6. Assemble the keypad by first placing the bottom edge of the keypad against the rear part and placing the keypad on the rear part (align the bottom sides). Then slide the keypad downwards; you will hear the latch (10) click into place, securing the keypad against falling out of the rear part. Then turn the locking mechanism (9) clockwise by 90° to the position where the groove points to the symbol . This will secure the keypad and activate the tamper contact.

Notes:

- The keypad can also be assigned to the system by entering the serial number (7) in the corresponding software or application. Enter all the digits listed under the barcode (1400-00-0000-0001).
- If the user prefers permanent access, the hinged cover (5) of the keypad can be removed.

Removing the keypad

On the underside of the keypad, turn the cover locking mechanism (9) counterclockwise by 90° to the position where the groove points to the symbol . Then use a screwdriver to release the latch (10) and simultaneously slide the keypad upwards. The keypad can then be easily removed from the mounting pad. (If the mounting pad is not screwed in place, use the same procedure, but slide the mounting pad downwards relative to the keypad).

Setting properties

This is done using the F-Link software – **Devices** tab. Use **Internal Settings** for the keypad position. The available options will be displayed, allowing you to set all its properties. Internal Settings is divided into two basic tabs: **Segments** and **Settings**.

Segments tab:

In the **Segments** tab, you can set the desired functions for individual segments (section control, section status signalling, emergency alarm activation, PG output control, PG output status signalling, etc.).

Segment labels can be edited using the F-Link software by clicking directly on the text of the relevant segment.

Authorisation – user authorisation is required to enable and disable monitoring. After disabling this parameter, the relevant segment can be controlled without authorisation, except for the Unlock section function, for which authorisation is always required. When enabling and disabling PG outputs, the Authorisation / No authorisation function setting applies to both states.

Common segment – settings and description of the function

One of the other segment functions is the so-called **Common segment** (a maximum of 1 common segment can be set on the keypad). This simulates the simultaneous pressing of several segments controlling sections located on this keypad. The selection of sections assigned to the common segment is performed in F-Link – **Devices** tab, select **Internal settings** at the module position, **Segments** tab, and select the function called **Common segment A** for the given segment. An overview of the segments that will be controlled at the same time is visible in the newly displayed **Common segment** tab.

If the status of the segments controlled from the **Common Segment** is different, the remaining segments will be locked/unlocked after its use. If any of the selected segments have the Partial Lock function enabled, the **Common Segment** will respect this setting: 1st press of the Lock button = partial lock, 2nd press of the Lock button = full lock. It is not advisable to combine the **Common Segment** function with the Section/Common Section function.

Common segment indication:

- Green** = all sections unlocked
- Yellow** = sections in various states or all sections partially secured
- Red** = all sections fully secured

In the **Settings** tab, you can adjust the remaining keypad parameters, such as acoustic signalling, light intensity, NFC reader function, optical indication settings, and display. Details about the settings can also be found in the F-Link software's tooltip.

Automatic shutdown

When operating on batteries, the keypad saves energy and, after 8 seconds without pressing any keys, segments or closing the door, it switches off the optical signalling of system statuses, keypad backlighting and NFC reader. However, the keypad continues to communicate with the control panel and can signal, for example, an entry delay. The keypad is fully activated by opening or pressing the keypad door, pressing any key on the keypad, or pressing a segment.

Alternative power supply

The keypad allows connection of an external 12 V DC power supply to the PWR and GND terminals, see Fig. 4. You can use the DE 06-12 power supply for concealed installation, the HLK-PM12JBT miniature power supply or the LT-089.07 plug-in power supply. When an external power supply is connected, leave the batteries inserted to ensure operation in the event of a mains power failure. The inserted batteries are not recharged by the external power supply. If an external power supply is connected, it is possible to switch on the permanent indicator.

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Caution: When using an external power supply or magnetic door contact, the product does not meet Incert (T 031) or EN 50131 requirements!

Door opening detector connection

The keypad allows connection of a door opening detector, internal release button, etc. The IN input responds to disconnection from the common GND terminal, see Fig. 4. The control panel's response to IN input activation can be set using the F-Link software. The input has a status response.

PWR – red, positive pole of external +12 V DC power supply
GND – black, negative pole of external power supply
IN – green, input for connecting an external magnet
GND – black, input terminal for connecting a magnet

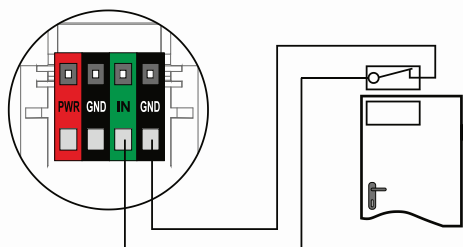


Fig. 4: Door opening detector connection

Battery replacement

The keypad automatically checks the battery status, and if the battery voltage falls below the limit specified in the Technical Parameters section, the keypad informs the system that the batteries need to be replaced. The batteries should be replaced within 2 weeks of the low battery warning. Before removing the keypad from the mounting pad and replacing the batteries, the system must be switched to SERVICE or MAINTENANCE mode (otherwise a tamper alarm will be triggered).

Note: For the module to function properly, we recommend using batteries supplied by the Jablotron distribution network or other high-quality branded alkaline batteries.

Settings tab

Acoustic signalling

This is set independently of the optical signalling. The keypad can signal entry and exit delays or alarms. During the authorisation period, the acoustic signalling of the entry delay is muted. Exit delays and alarms are signalled until the end of the set time, unless the system indicator button (3) / keypad cover (5) is pressed.

Volume – Sets the keypad volume level to one of three levels: *Low, Medium, and High*

Alarm – Continuous tone.

Entry delay – continuous tone

Exit delay – slow beeping

Exit delay with partial arming – slow beeping (disabled by default).

Status changes on the segment – one beep when changing.

Function:

NFC reader – To save energy, the reader's operation can be limited by the following options:

- **Permanently on** – NFC reader permanently on. This setting applies if the keypad is permanently powered from an external source, otherwise the NFC reader always switches off automatically.
- **Press to turn on** – Wake up the NFC reader for 3 seconds after activating the keypad.
- **Off** – NFC reader permanently turned off.
- **Press or authorisation request enabled** – Wakes up the NFC reader by pressing the keypad cover or requesting authorisation in the event of an entry delay, alarm, etc.

Optical signalling

System indicator/button (3) – indicates the system status according to the following priorities from highest to lowest:

1 – Service indication:

- 1) **Flashes yellow twice every 2 seconds** – Service mode
- 2) **Twice every 2 seconds in green** – Maintenance mode
- 3) **Slow yellow flash** – Keypad is in BOOT mode, which is used when updating the firmware

2 – Operational indication:

- 1) **Flashing yellow** – Keypad not programmed into the system
- 2) **Fast red flashes** – Alarm in the system

- 3) **Every 2 seconds, flashes red twice** – Alarm memory signal
- 4) **Fast yellow flash** – Failed locking indication
- 5) **Solid yellow light** – Malfunction
- 6) **Flashing green (0.5 s)** – Authorised user
- 7) **Steady green light** – Normal status. Everything is OK, system without faults

3 – Combined indications:

- 1) **Flashes alternately green/red** – Authorised user and alarm/alarm memory indication
- 2) **Flashing alternately green/yellow** – Authorised user and active fault indication

4 – Power saving mode indication:

- 1) **Flashes red once every 2 seconds** – Alarm memory indication for keypad in power-saving sleep mode (only for EN 50131-1 profile).
- 2) **Flashes yellow once every 2 seconds** – Fault indication (only for EN 50131-1 profile).
- 3) **No indication** – sleep mode

Segments – do not signal if the system is in service or if the segment has the No function. The PG optical indication on the segment can be inverted.

The keypad indication is adjustable in six levels:

- 1) **Indicates continuously** – Indicates continuously; in the event of a mains power failure, it switches down one level. After power is restored, it indicates continuously again.
- 2) **By changing the section status – keypad** – the keypad indicates after a change in the section/PG status. The status change is only indicated on the given segment. The entry delay and alarm are indicated by the entire keypad.
- 3) **By changing the status of the section – segment** – the keypad indicates after a change in the status of the section / PG. A change in the status of the segment, entry delay and alarm is indicated only on the given segment.
- 4) **By changing the status of the segment** – the keypad indicates after a change in the status of the segment (locking, unlocking, PG activation, PG deactivation). The change in status is indicated only on the given segment.
- 5) **Entry and alarm** – the keypad indicates entry delay and alarm on the given segment.
- 6) **Only after pressing** – the keypad indicates visually and acoustically only after opening the front cover (5), pressing a key or segment.

Other optional functions:

- Indicates PG status changes
- Indicates unlocked status
- Indicates locked state
- External input – activates input detection for external magnetic contact

Authorisation unlocks the section with the entry delay in progress

– simply entering the code or placing the chip unlocks the section in which the entry delay is in progress (if the user has authorisation for it). **WARNING:** This option is not suitable for use on the Common section. In such a case, all sections assigned to the common section, or even the entire system, may be unlocked unintentionally (if the unlock button is pressed first and then authorisation is performed). The common section should only be indicated by the keypad, not controlled by it.

Regular communication with the control panel once every 8 seconds – enabling this parameter will extend the battery life. However, this setting will prolong the keypad's response to system states (start of entry and exit delay, alarm, change of state on a segment).

Emergency delay – Function for announcing an emergency alarm (silent or loud) with an adjustable delay during which the alarm can be cancelled. Activation and deactivation are performed by a segment set to the Emergency or Loud Emergency function. Pressing the red button on the segment (on the right) starts the timing, and pressing the green button on the segment cancels the timing. If Authorisation is set, it is required for both activation and deactivation. The delay is adjustable from 1 to 255 seconds.

Keypad brightness intensity in DAY / NIGHT modes

- | | |
|-----------------|---|
| Segments | – setting the brightness of the segment buttons and the system button |
| Keypad | – numeric keypad backlight setting |
| Displays | – LCD display backlight settings |
| *Silence | – In NIGHT mode, the keypad will not emit any acoustic signals. It will not signal departure, alarm, key press, etc. In DAY mode, it will signal according to the "Acoustic signalling of selected sections" setting. |

* - option available only in NIGHT mode

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To set up the keypad according to certification requirements, it is necessary to select the appropriate configuration scheme (system profile) in the F-Link software, parameters tab.

Date and time – the current date and time are automatically displayed on the bottom line of the keypad's LCD display (2) if this segment is not in use.

Temperature – allows you to display the measured temperature of the selected detector on the bottom line of the keypad's LCD display (2) if this segment is not in use.

Import – the import button allows you to copy the keypad settings according to another keypad of the same type in the system. This can be used, for example, if the building has multiple entrances and all keypads need to be set up the same way. The Import button offers a history of the last keypad settings for the given peripheral position. You can also use this function when replacing a faulty keypad with a new one.

Firmware update

1. The update can be performed by a user with Service authorisation using the F-Link software.
2. Start F-Link and open the existing database for the given system.
3. Open the service mode
4. In the toolbar, select: **Control panel** → **Firmware Update**
5. Select the desired device in the peripheral menu table; if Automatic Update is disabled, select the FW package file (included in the F-Link installation or available for download separately, file type *.fwp)
6. Press the **OK** button to upgrade the selected device.
7. After the update is complete, check the keypad settings **using F-Link, Devices / Internal Settings**. Depending on the extent of the changes made during the update, the previous module settings may be retained or reset to factory defaults. If a reset has been performed, you can use the **Import** button to select from the previous settings and restore them without affecting the new firmware.

Technical parameters

Control device type	B
Power	4 x AA (LR6) 1.5 V alkaline batteries Note: Batteries are not included
Typical battery life	1–2 years depending on settings
Low battery detection	<4.5 V
Nominal current consumption	200 µA
Maximum current consumption	110 mA
External adapter 12 V ± 1 V	typ. 45 mA, max. 100 mA
Maximum cable length	3 m
Communication frequency	868.1 MHz, JABLOTRON protocol
Maximum radio frequency power (ERP)	<25 mW
Communication range	approx. 200 m es (open terrain)
NFC operating frequency	13.56 MHz
Maximum NFC magnetic field intensity	-5.4 dBµA/m (at a distance of 10 m)
Dimensions	110 x 136 x 33 mm
Weight (without batteries)	285 g
Classification	security grade 2 / environment class II (according to EN 50131-1)
Environment	Indoor general
Operating temperature range	-10 °C to +40 °C
Average operating humidity	75 % RH, non-condensation
Certification body	Trezor Test s.r.o. (No. 3025), Kiwa Nederlands b.v.
Complies with	ETSI EN 300 220-2, ETSI EN 300 330, EN 62311, EN 50130-4, EN 55032, EN 62368-1, EN IEC 63000, EN 50131-3, EN 50131-5-3, EN 50131-6, T 031
Can be operated according to	ERC REC 70-03
Recommended screw	4x ø 3.5 x 40 mm (half-round head)



JABLOTRON a.s. declares that the product JA-155E-NFC, JA-155E-NFC-AN, JA-155E-NFC-GR is designed and manufactured in accordance with the harmonised legislation of the European Union: Directive No.: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU, when used as intended. The original Declaration of Conformity is available at www.jablotron.com in the Downloads section.

Note: Although the product does not contain any harmful materials, do not dispose of it in the rubbish, but take it to an electronic waste collection point. For more detailed information, visit www.jablotron.com in the Downloads section.



Compatibility table



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