JA-155E, JA-155E-GR, JA-155E-AN Wireless four-segment keypad with display and RFID reader

Typ: 5KPAD2202LU

*The keypad is a wireless component of the **JABLOTRON** system. It serves for the controlling and displaying system status indication. It is equipped with four segments; their descriptions are displayed on the LCD display. The device should be installed by a trained technician with a valid certificate issued by an authorized distributor. **The keypad is compatible with following control panels JA-102K, JA-103K and JA-107K.***

*It is necessary to use this manual in combination with the **JABLOTRON 100 installation and user manuals.***

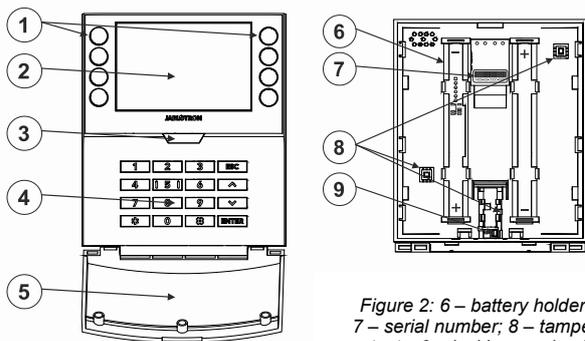The keypad comprises of 4 segments (1), LCD display (2), keypad and RFID card/tag reader (4).

Figure 2: 6 – battery holder; 7 – serial number; 8 – tamper contacts; 9 – locking mechanism

Figure 1: 1 – control buttons; 2 – LCD display; 3 – system indicator / button; 4 – keypad with RFID reader; 5 – cover;
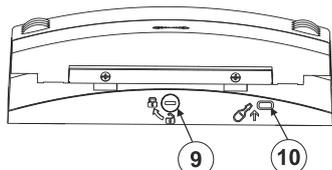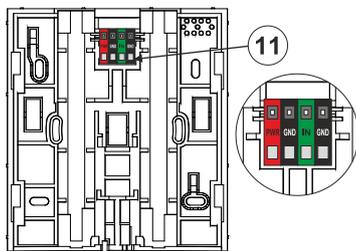

Figure 3: 9 – locking mechanism; 10 – tab

Figure 4: *11 – terminals of an external power supply and an external magnetic contact*

Installation

1. Remove the mounting pad (rear part) of the keypad. If you can´t remove it easily, open the locking mechanism, see paragraph Alternative power supply and Installation of a magnetic contact.
2. Mount the back of the keypad to a flat wall using 4 screws. To connect an external power supply or magnetic contact, use the terminals on the back of the keypad, see Figure 4. See the connection description in the paragraphs the Alternative Power Supply and Installation of a magnetic contact.
3. For enrolling to the system, the JA-11xR radio module must be installed in the system.
4. Insert 4x 1.5V AA alkaline batteries into the keypad, mind the correct polarity!
5. Enrollment to the system according to the type of control panel use the recommended software or application, see the installation manual of the control panel.
6. First attach the bottom edge of the keypad to the mounting pad (rear part) of housing (align the bottom sides). Then slide the keypad downwards, until you hear the click of the tab (10). This will secure the keypad against falling out of the installation pad. Then turn the locking mechanism (9) clockwise 90° to the position where the groove points to the 🔒 symbol). This locks the keypad in place and engages the tamper contact.

Notes:
- *Enrollment is also possible by entering its serial number (7) in the F-Link software or using a bar code scanner. All numbers stated under the bar code must be entered (1400-00-0000-0001).*
- *The tilting cover (5) can be removed if the user prefers permanent access.*

Keypad disassembly

On the underside of the keypad, turn the locking mechanism (9) anticlockwise 90° until the groove points to the symbol 🔓 . Then use a screwdriver to release the tab (10) while sliding the keypad up. The keypad can then be easily removed from the mounting pad. (If the mounting pad is not screwed on, use the same procedure, just slide the mounting pad downwards against the keypad).

Setting the properties

The settings are configured by the F-Link software - **Devices** tab. Use the **Internal settings** option on the device position. A dialogue window will appear in which all the keypad functions can be set. The internal settings are divided into two basic tabs: **Segments** and **Settings**.

The Segments tab:

Within the **Segments** tab, the required functions can be set for individual segments (control of sections, indication of section status, triggering of a panic alarm, control of PG output, indication of PG output status, etc.).

The segment descriptions can be edited in F-Link directly by clicking on the segment text.

Authorization – setting and unsetting requires user authorization. When this parameter is disabled, the segment can be operated without authorization. By disabling the parameter, the specific segment can be controlled without authorization, except for the Unset section function, for which authorization is always required. When switching PG outputs on and off, the Authorization / No Authorization function is enabled for both states.

Common segment – settings and description of function

One of the other functions of the segment is called Common segment (max 1 common segment can be set per keypad). This simulates the simultaneous pressing of several segments controlling sections located on this keypad. The selection of sections assigned to a common segment is done via F-Link - **Devices** tab, at the module position select **Internal Settings**, **Segments** tab and select the function called **Common segment A** by selecting the segment. The overview of segments that will be controlled at once is visible in the newly displayed **Common Segment** tab.

If the status of the segments controlled by the **Common segment** is different, the remaining segments will be set/unset after its use. If one of the selected segments has the Partial setting function enabled, then the Common Segment respects this setting: 1st press of the Set button = partial setting, 2nd press of the Set button = full setting.

The Common segment function should not be combined with the Section / Common section function.

Common segment indications:

Green	= all sections are unset fully
Yellow	= sections are in various states or all of them are set partially
Red	= all sections are set fully

In the **Settings** tab, you can adjust the remaining keypad parameters such as acoustic indication, backlight intensity, RFID reader function, optical indication and display settings. Details of the settings can also be found in the F-Link SW mouseover help bubble.

Automatic stand-by mode

When the keypad is powered from batteries, it saves energy and turns off system optical indication, backlight and RFID reader after 8 seconds without pressing a key or closing the keypad cover. However, the keypad also maintains communication with the control panel and can indicate, for example, entry delay. The keypad will be completely active when the keypad cover is opened or pressed, or any button or segment pressed.

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Alternative power supply

The keypad can be supplied from an external power supply with 12 V DC connected in PWR a GND terminals, see figure no. 5. You can use the DE 06-12 Power adaptor suitable for concealed installation. If the alternative power supply is connected, leave the batteries inserted to ensure operation in the event of a mains power failure or an external power supply being disconnected. The inserted batteries are not recharged by an external power supply. If an external power supply is connected, a permanent indication can be switched on.

Installation of a magnetic contact

The keypad supports connection of a door detector. The IN input reacts to being disconnected from the common GND terminal, see figure no. 5. The control panel´s reaction to an activated IN input is configurable in the F-Link SW. The input has a status response.

PWR – red, positive pole of an external power supply +12 V DC
GND – black, negative pole of an external power supply
IN – green, input terminal for door (magnetic) contact
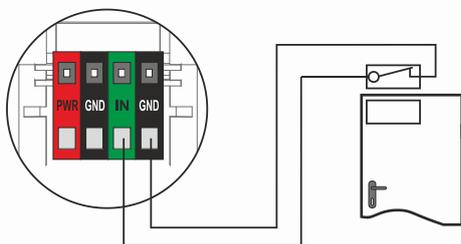**GND** – black, input terminal for door (magnetic) contact

Figure 5: magnetic contact connection

Changing the batteries

The keypad automatically checks the status of the batteries, and if the battery voltage drops below the limit specified in the Technical Parameters section, the keypad informs the system that the batteries need to be replaced. Batteries should be replaced within 2 weeks of the low battery report. The control panel must be switched into Service or Maintenance mode before removing the keypad from the back part (otherwise a tamper alarm will be triggered).

Note: In order to make sure the keypad works correctly, we recommend using batteries supplied by the distributor or other quality brand alkaline batteries.

The Settings tab

Acoustic indication

It is set without dependence on the optical indication. The keypad can indicate alarms, entry and exit delays. The acoustic indication of the entry delay is silenced for the duration of the authorization. Exit delays and alarms are indicated until the end of the pre-set time period unless the system indicator button (3)/keypad cover (5) is pressed.

Volume - Adjusts the keypad volume level in three levels: *Low, *medium and high*
Alarms – continuous tone
Entry delay – continuous tone
Exit delay – slow beeping
Exit delay when partially set – slow beeping (disabled from default).
Segment status change – beeps once when a status is changed

Function:

RFID reader – In order to save energy, you can limit the reader´s operation with the following options:

- **Permanently ON** – The RFID reader is always ON. This setting is valid only if the keypad is permanently powered from an external source, otherwise their RFID reader is always switched off automatically.
- **Activated by pressing** – when the keypad is activated the RFID reader wakes up for 3 seconds.
- **Disabled** – the RFID reader is permanently disabled.
- **Activated by pressing or authorization request** – the keypad wakes up after pressing a button on a keypad cover or by an authorization request.

Optical indication

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) **Flashes green 2x every 2 seconds** – Maintenance mode
3) **Slow flashing yellow** – Keypad is in BOOT mode, which is used when updating firmware

2 – Operational indications:
1) **Flashing yellow** – Keypad is not enrolled into system
2) **Rapidly flashing red** – Alarm in system
3) **Flashes red 2x every 2 seconds** – Alarm memory indication
4) **Flashes yellow (8 Hz)** – Unsuccessful setting indication
5) **Permanent yellow light** – Fault
6) **Flashes green (2 Hz)** – Authorized user
7) **Permanent green light** – Normal operation. Everything is OK, no faults

3 – Combined indication:
1) **Flashes alternately green / red** – Authorized user and alarm / alarm memory indication
2) **Flashes alternately green / yellow** – Authorized user and an active fault indication

4 – Indication in power save mode:
1) **Flashes red once every 2 seconds** – Alarm memory indication for keypad in power save (sleep) mode (only valid for system profiles EN 50131-1 and Incert)
2) **Flashes yellow once every 2 seconds** – Fault indication (only valid for system profiles EN 50131-1 and Incert).
3) **No indication** – Sleep mode

Segments – there is no indication if the system is in the service mode or if the segment has no function programmed. The PG optical indication on the segment can be inverted.

Keypad indication is adjustable in six levels:

1. **Indicates permanently** – the keypad indicates permanently. When the mains power to the control panel is disconnected it switches to a lower indication level. Then the mains power is restored the keypad indicates permanently again.
2. **Section / PG status change on keypad** – the keypad indicates when the section / PG status changes. The change of state is indicated only on that segment. Entry delay and alarm is indicated by the entire keypad.
3. **Section / PG status change on segment** - the keypad indicates when the section / PG status changes. Segment status change, arrival delay and alarm are indicated only on that segment.
4. **Segment status change on keypad** – the keypad indicates when the segment status changes (setting, unsetting, PG on, PG off). The status change is indicated only on the segment.
5. **Entry delay / Alarm on segment** – the keypad indicates the entry delay and alarm on a specific segment.
6. **Wake-up by pressing** – the keypad optically indicates only after opening the front cover (5), pressing a key or segment.

Other optional functions:

- Indicates PG status changes
- Indicates Unset status
- Indicates Set status
- External input – enables the input for an external magnetic contact

Unset a section by authorization only during entry delay - using an access code or an RFID tag/card will unset a section where an entrance delay has been triggered (if the user has access to the section).

WARNING: This function is not recommended when the control panel is configured to use a Common section. Unwanted unsetting may occur to all sections assigned to the Common section or it may even occur to the whole system (when pressing the Unsetting button is followed by authorization).

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Periodical communication with CP once every 8 s – Enabling the parameter to extend the battery lifetime. However, this setting will increase the response time of the keypad in response to system states (entry and exit delay, alarms, segment status change).

Delayed panic – this function triggers a panic alarm (silent or loud) with an adjustable delay during which the alarm can be cancelled. Activation and deactivation are done by a segment button configured to Silent panic or Audible panic. Pressing the red segment button (right) starts the timing and pressing the green segment button cancels the timing. When authorization is enabled then it is required for activation and deactivation. The delay is adjustable from 1 to 255 seconds.

Keypad light intensity in DAY / NIGHT mode.

Segment	– segment button light intensity setting
Keypad	– numeric keypad backlight setting
Display	– LCD backlight setting
*Mute	– in the NIGHT mode, the keypad will be without any acoustic indication. It will not indicate exit delay, alarm, key press, etc. In the DAY mode, it will indicate according to the setting "Acoustic indication of selected sections"

* - the option is available only in NIGHT mode

⚠️ **A keypad configuration which complies with certification requirements must be selected from the list of System profiles in the Parameters tab of the F-Link SW.**

Date and time – the current date and time is automatically displayed on the bottom line of the LCD display (2) of the keypad if this segment is without function.

Temperature – displays the measured temperature of the selected detector on the bottom line of the LCD display (2) of the keypad if this segment is without function.

Import – the import button allows you to copy keypad settings to another keypad in the system of the same type. This can be used, for example, if an object has multiple entrances and it is necessary to set all keypads in the same way. The Import button provides a history of the last keypad settings at a given device position. This function can also be used when replacing a faulty keypad with a new one.

Keypad FW update

1. Updates can only be done by a Service technician with the F-Link SW.
2. Start the F-Link SW and open the appropriate database.
3. Enter the service mode
4. In a toolbar click to: ***Control panel → Update firmware***
5. In the devices menu table, select the required device; if Automatic Update is disabled, select the FW package file (included in the F-Link installation or can be published for download separately, file type *.fwp).
6. Press **OK** to upgrade the selected device.
7. When the update is complete, check the keypad setting in the ***F-Link, Devices / Internal settings***. Depending on the changes made during the update, the previous settings of the module may be retained or reset to factory defaults. If a reset has been performed, the ***Import*** button can be used to select from the previous settings and restore them without breaking the new firmware.

Technical specifications

Power supply	4 x alkaline batteries, type: AA (LR6) 1.5 V
	Please note: Batteries are not included.
Typical lifetime of batteries	1–2 Years
LowBatt state	<4.5 V
Quiescent current consumption (6 V)	245 µA
Maximum current consumption (6 V)	115 mA
External power supply 12 V +/-1 V	typ. 45 mA, max. 100 mA
Maximum cable length	3 m
Communication band	868.1 MHz, JABLOTRON protocol
Maximum radio-frequency power (ERP)	<25 mW
Communication range	approx 200 m (open area)
RFID frequency	125 kHz
Maximum RFID magnetic field strength	-5.4 dBµA/m
	(measured at 10 m)
Dimensions	110 x 136 x 33 mm
Weight (w/o batteries)	285 g
Classification	
Security grade 2/Environmental class II (according to EN 50131-1)	
Environment	indoor general
Operating temperature range	-10 °C to +40 °C
Average operating humidity	75% RH, w/o condensation
Certification body	Trezor Test s.r.o. (no. 3025)
In compliance with	ETSI EN 300 220-1,-2, ETSI EN 300 330, EN 50130-4, EN 55032, EN 62368-1, EN 50131-1, EN 50131-3, EN 50131-5-3, EN 50131-6,
Operating conditions according to general authorization	
	ERC REC 70-03
Recommended screw	4 x ⌿ ø 3.5 x 40 mm (half-round head)

JABLOTRON ALARMS a.s. hereby declares that the 1KPAD2201LU is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com – Section Downloads

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