

# PAR-EK3 Black standalone controller - connection and setup



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## PAR-EK3 Black controller description and characteristics

- Standalone single door controller with integrated reader and integrated keyboard
- Supported cards: EM-Marin, with operating frequency 125 kHz
- Supports the identification by: card / password / card + password
- Operating mode: standalone controller / reader
- Reader interface: Weigand 26
- Controlled relay regulated outputs: NO / NC (electric current up to 2A)
- Connection of the exit button
- Sound and light identification
- Tamper availability
- Power: DC 12V / 60mA
- Protection level: IP44
- Operating temperature: from 0 to + 50

## Appearance and purpose of outputs

1. LED indicator
2. Built-in keyboard
3. Built-in reader
4. Built-in call button
5. Contact group with a jumper J2, meant to reset the controller to factory settings
6. Sound beep
7. Relay contact group NO / NC / COM
8. Contact group for connection to an external controller in reader mode
9. Contact group for connecting an external reader
10. Contact group for power, button, and bell connection (detailed at fig. 3)
11. Contact group with a jumper for programming a master card
12. Tamper button



## 1. Controller connection

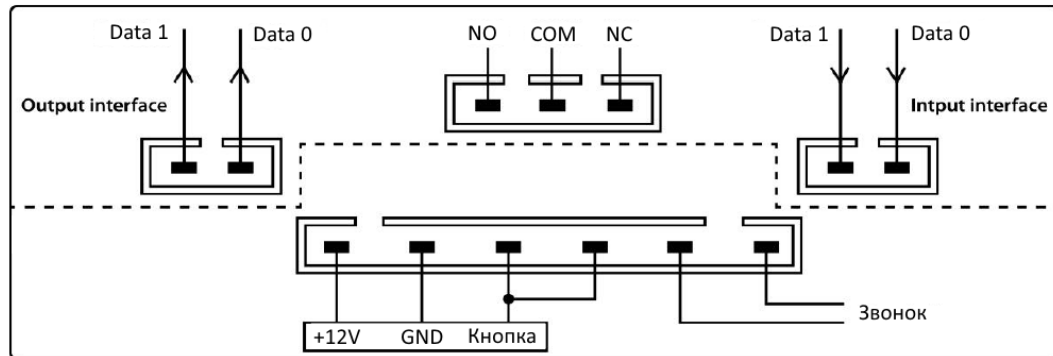


Fig. 3

## 2. Controller setup and operation modes switching

This controller is a universal solution. It can work both in **EM-Marin card reader mode** and in **standalone mode**.



**The controller is in STANDALONE MODE by default.**

### 2.1 Resetting the controller to factory settings

To reset the controller to the factory settings, follow these steps:

- turn off the power of controller;
- Install jumper 5 **J2** so that pins 2-3 are connected;
- turn on the power of controller;
- the LED on the controller will blink and the controller will emit short beeps - 1 signal per 1 second;
- turn off the power of controller, remove the jumper, turn on the power of controller;
- after switching on, the controller will be reset to the factory settings and is ready for operation.

### 2.2. Saving master card to the controller memory



**Only one master card can be added to the controller.  
If you try to add a second master card, the previous one will be deleted from memory.**

To write a master card to the controller memory follow these steps:

- turn off the power of controller;
- install the jumper 11 **J3** so that the pins 2-3 are connected;
- turn on the power of controller;
- the controller is ready for reading the master card, LED starts blinking;

- after reading the master card, LED is on continuously and does not accept any card;
- turn off the power of controller, remove the jumper, turn on the power of controller;
- after starting, the controller will accept the added card as a master card.

### 2.3 Switching the controller into the READER mode

To set the controller to reader mode by the built-in keyboard you must sequentially dial the following combination of characters and numbers:

\* → 12345 → 4 → #



*Hereinafter the "→" sign means a sequence of actions, i.e. first we type "\*", then a combination of numbers and end input operation with "#"*

## 3. Controller work and setup in standalone mode

Using the master card you can add or remove user cards either individually or continuously.

### 3.1 Adding user access cards

To add a user access card (one or several) to the controller memory using a master card, follow these steps:

- scan the master card three times in a row by the controller - three short beeps will confirm entering in the mode of adding cards
- Scan against the reader all user cards that you need to add to the controller memory

To exit the adding cards mode scan master card once.

### 3.2 Deleting user access cards

To delete user access cards continuously or individually scan the master card 10 times in a row by the controller. After scanning of each card, the controller will emit a confirmation long beep. Now you can delete user cards.

Scan the master card once to exit this mode.

### 3.3 Deleting all user access cards

To delete all user access cards, scan the master card by the controller 20 times. After each card scanning, the controller will emit a confirmation long beep. When the controller gets to “delete all user cards” mode it will signal with frequent short beeps.

## 4. Entering setup mode and setting up the controller using keyboard commands

To enter the controller setup mode use the master password.

**Default master password: 12345**

### 4.1 Master-password changing

To change the master password, enter the following command on the controller keyboard. For example, let's set the master password **88888**

### Master-password changing:

- press the # symbol (the controller waits for the master password to be entered)
- dial the numbers **12345** and then 1 (function number)
- dial **XXXXXX** (new 5-digit master password)
- re-enter **XXXXXX** (re-enter the password)
- end the command by pressing “\*” symbol

As a result, an example of this command shall look like this:

# → **12345** → **1** → **88888** → **88888** → \*

### 4.2 Door unlock password setup

To set the door unlock password enter the command on the controller keyboard. For example, let's set the master password **2580**

To set or change the unlock password you must successively dial the following combination of characters and numbers:

# → **12345** (master password) → **2** (function number) → **NNNN** (new 4-digit password) → \*

As a result, an example command shall look like this:

# → **12345** → **2** → **2580** → \*

### 5. Security modes setting

The built-in controller can operate in one of three modes:

1. The mode code is **00**. The controller allows the door to be opened only by cards.
2. The mode code is **01**. The controller allows the door to be opened by cards or PIN code.
3. The mode code is **02**. The controller allows the door to be opened only by cards + entering a PIN code for the card.

To set the required security mode enter the following command on the controller keyboard. For example, let's set the operating mode **01** - i.e. by card or PIN code.

To set or change the security mode, dial:

# → **12345** → **3** (function number) → **01** (security mode code) → \*

As a result, an example command shall look like this:

# → **12345** → **3** → **01** → \*

### 6. Unlock time setting

The unlock time is set in seconds from 00 to 99. Setting 05 will be equal to 5s of unlocking. If 00 is set, the controller will be unlocked by the card and will wait for scanning another card to lock.

For example, let's set the unlock time to 5 seconds (05).

To set the unlock time dial:

# → **12345** → **0** (function number) → **05** (setting the time in seconds) → \*

As a result, an example command shall look like this:

# → **12345** → **0** → **05** → \*

## 7. Adding a card (one card by number)

You can add a card by its number to the controller memory. When adding a card by its number, we indicate the number printed on the card for its identification. Number consists of 8 characters (example: 146, 11899 when adding, indicate the number 14611899).

The command looks as follows:

# → **12345** → **4** (function number) → **0** (add card mode) → # → **14611899** (card number) → ##  
(exit adding card mode) → \*

# → **12345** → **4** → **0** → # → **14611899** → ## → \*

## 8. Adding cards (continuous reading mode)

You can add cards to the controller's memory in continuous reading mode.

To do this, the controller must be switched to the mode of reading and adding cards.

Run the following command on the controller:

# → **12345** → **4** (function number) → **1** (add cards mode) → # → **scan cards in turn** → # (end of adding cards in continuous reading mode) → \*

# → **12345** → **4** → **1** → # → **scan cards in turn** → # → \*

## 9. Adding cards by number (cards from one lot by the number of the first card)

It is possible to add cards from one lot where the card identifier increases by 1. In this case it is enough to know the number of the first card and the number of cards that we want to add to the controller.

Example: we have a set of 100 cards, the first one has the number 14611899, all subsequent numbers increase by 1 (14611900, 14611901, etc.). We want to add 20 cards to the controller.

To do this, run the command on the controller:

# → **12345** → **5** (function number) → **0** (mode number) → # → **14611899** (first card number) → #  
→ **20** (number of added cards) → # → \*

# → **12345** → **5** → **0** → # → **14611899** → # → **20** → # → \*

## 10. Adding cards (cards from one lot by reading of the first card)

Similar to adding cards from one lot by the number of the first card, it is possible to add cards from one lot by scanning the first card.

To do this, run the command on the controller:

# → **12345** → **5** (function number) → **1** (mode number) → # → **scan the first card by the reader**  
→ # → **20** (the number of added cards) → # → \*

# → **12345** → **5** → **1** → # → **scan the first card by the reader** → # → **20** → # → \*

## 11. Deleting card (one card by number)

You can delete a card from the controller memory by its number. When deleting a card by its number you should indicate the number marked on the card for its identification. This number consists of 8 characters. For example: when deleting 146, 11899, specify the number 14611899.

The command looks as follows:

# → **12345** → **6** (function number) → **0** (card deletion mode) → # → **14611899** (card number) → ## (exit deletion mode) → \*

# → **12345** → **6** → **0** → # → **14611899** → ## → \*

## 12. Deleting cards (continuous reading mode)

You can delete cards from the controller memory in the continuous reading mode. To do this, the controller must be put into the mode of reading and deleting cards.

Run the following command on the controller:

# → **12345** → **6** (function number) → **1** (deletion of cards) → # → **scan the cards** → # (end of deleting of cards in continuous reading mode) → \*

# → **12345** → **6** → **1** → # → **scan the cards** → # → \*

## 13. Deleting cards by number (cards from one lot by the number of the first card)

It is possible to delete cards from one lot where the card identifier is increased by 1. In this case it is enough to know the number of the first card and the number of cards that we want to delete from the controller memory.

Example: we have a lot of 100 cards, the first one has the number 14611899, all subsequent numbers increase by 1 (14611900, 14611901, etc.). We want to delete 20 cards previously added to the controller.

To do this, run the command on the controller:

# → **12345** → **7** (function number) → **0** (mode number) → # → **14611899** (first card number) → # → **20** (number of added cards) → # → \*

As a result, an example command shall look like this:

# → **12345** → **7** → **0** → # → **14611899** → # → **20** → # → \*

## 14. Deleting cards (cards from one lot by reading of the first card)

Similar to deleting cards from one lot by the number of the first, it is possible to delete cards of one set by scanning the first card.

To do this, run the command on the controller:

# → **12345** → **5** (function number) → **1** (mode number) → # → **scan the first card by the reader** → # → **20** (the number of cards to be deleted) → # → \*

As a result, an example command shall look like this:

# → **12345** → **5** → **1** → # → **scan the first card by the reader** → # → **20** → # → \*



### 15. Deleting all added cards from the controller memory

If you want to delete all previously added cards from the controller memory, run the following command:

# → **12345** → **8** (function number) → **88** (code to delete all cards) → # → \*

As a result, an example command shall look like this:

# → **12345** → **8** → **88** → # → \*

If the command is successful, the controller will emit a long beep.

### 16. Alarm triggering upon controller quick dismantling (tamper activation)

To activate an alarm when a controller is ripped off, you must enable the controller's response to tamper.

To do this, run the command: \* → **12345** → **1** → #

If the controller is removed from the mounting bracket, this command will immediately trigger an alarm. To disable the controller's response to the tamper, run the same command again.

An example command shall look like this:

\* → **12345** → **1** → #