REX F-0-9 – STANDALONE OR ACCESS CONTROLLER

The Rex is a controller with built-in fingerprint reader. It is designed for residential and business buildings, offices, shops, etc. In various operation modes, the controller allows access for up to 500 users (2 master fingerprints + 500 user fingerprints).
As a standalone controller, the entire set-up procedure is carried out with the master fingerprint. User fingerprints can either be registered or deleted.
As an access controller, the entire set-up procedure is carried out with the software.
The controller signals normal operation with flashing red and green LED. It can also be used as a Wiegand 26-bit reader, if needed.

TECHNICAL DATA

REX F-0-9	
Current consumption	50mA
Operating voltage	From 9V to 14V DC
Operating temperature	From -20°C to 60°C
Communication	RS485
Dimensions (mm)	58x120x17 (WxHxD)
Sensor protection	> 15kV ESD protection
Usage	> 1 million wear cycles
Cabel	Cable through or on the wall – 3m
Mounting height	140cm from the ground
Memory	500 fingerprints 500 events
Inputs	Door status Push button
Outputs	Transistor output for el. strike 0.5A
Inputs	Door status Push button
Clock	Real time clock, battery backup (max. ten hours)

CONNECTION CABLE

Wire-Color	Description/Wiegand 26-bit	Specification
1 – Red	9-14V DC	Power supply
2 – Gray/Black	GND	Ground
3 – Green	El. strike output / Data 0	Max. 0.5A Active = GND
4 – White	Alarm output/ Data 1	Active = GND
5 – Yellow	Door status switch input/ Buzzer input	Active = GND
6 – Orange	Push button input / LED input	Active = GND
7 – Blue	CA	RS485 A line
8 – Brown	CB	RS485 B line

LED DIODES

Color	Description
Flashing red/green	Normal mode
Lit green	El. strike is unlocked
Lit red	Fingerprint has no rights

Power supply

The controller need's external power supply to operate. The Spider W40 power supply is sufficient to power two controllers and two 12V electric strikes or two 12V magnetic locks (0.5A). If you will use it as a standalone controller and low consumption electric strike (0.25A) you can use power supply Spider W5.

Voltage drops and cable signal interferences

When you connect the controller, use cable with a diameter of at least 0.22mm^2. If the cable length exceeds 25m, use one twisted pair of UTP cables for the positive (+) pole and one for the negative (-) pole. The cable length between power supply and the controller should not exceed 50m.
Take into consideration that a 0.22mm^2 cable has a resistance of approximately 9 ohm per 100m. The power supply at the end of cable should be a minimum of 9V. If you are using el. strike, it is highly recommended that the voltage drop is calculated. At greater distances, a thicker cable of 0.5mm^2 or more should be used wherever possible.
If the load is, for example, 0.5A (with el. strike) then, on the 0.22mm^2 cable voltage drop will be 4.5V at 100m. For the device with 60mA consumption, the voltage drop is 0.5V.

Inputs, outputs and environment

Inputs:
Inputs are realized with opto-isolators. The input is active, when pulled to ground with an open collector transistor or mechanical switch, which is connecting the input pin of the controller to the Ground.

Outputs:
Output has a pre-installed protection diode for an inductive load. It is also protected from current overload. The best way is to use a 0.25A el. strike or a 0.5A el. magnet, which has to be connected to the same positive pole (+) as the controller. Connect the negative pole (-) to the door strike output (wire 3). When the output is active it is pulled to ground. This can be changed with function 5 – negate output (for el. magnet).

Environment:
It is designed for indoor, non-condensing, applications. Do not expose the controller to direct contact with the elements such as rain, snow or sunlight. If the plastic housing is in a different color than black, then there is a chance that the color will change (to some extend) in a few months or years if exposed to direct sunlight. The sensor surface is hard and extremely robust, and will withstand years of normal wear-and-tear. Do not subject the sensor to sharp or hard objects since this might cause permanent damage. Cleaning should be done with a lint-free cotton textile. Do not subject the sensor surface to mechanical force.
You must assure good cable joints, protected against moisture, otherwise corrosion may damage the controller. Damage in such cases is not covered by the warranty.

Installation of Rex F

Remove black plastic screw covers on the top and the bottom of the controller. Install the controller to the wall with two supplied screws. Use diagonal holes - it enables a small correction of the position of the controller (up, down, left, right). When the controller is installed, put the screw covers back on.

AS A STANDALONE CONTROLLER

The entire set-up procedure is carried out with the master fingerprint. You can register two master fingerprints.

The master fingerprints cannot be replaced or duplicated. You cannot change any setting without them and neither can we.

Programming with the master fingerprint

First connection to the power supply and registration of the master fingerprints

Register master fingerprints:
Turn on the power supply (2 beeps indicate power on) and place your fingerprint on the sensor, which you have chosen to be the master fingerprint. After the triple beep remove the fingerprint. LEDs will begin to flash rapidly, indicating recording fingerprint. At the end of the recording, when the controller starts beeping rapidly, once again place the fingerprint on the sensor. If the fingerprint is identical to the first one, controller confirms the successful registration with a double beep and with the flashing green LED diode. If the registration has failed the controller signals with a longer beep. If the registration is successful repeat the process for the second master fingerprint.

If you want to register only one master fingerprint, then register the same fingerprint twice.

Usage of master fingerprint

With the master fingerprint you choose the programming function. Functions can be confirmed either with user fingerprint.
Master fingerprint:
Every time you place the master fingerprint on the sensor you hear one beep (successfully read) and a double beep (programming function). To select the different programming functions you need to remove your master fingerprint after the double-beep and place it again on the sensor within 2 seconds. The number of double beeps indicates the programming function.

PROGRAMMING FUNCTIONS WITH MASTER FINGERPRINT

Function	Description
1	Register or delete user fingerprints
2	Pulse time/ Duration of active output or toggle mode
3	Door status switch input/ Time till pre-alarm
4	Duration of pre-alarm
5	Negate / Switch output state
6	Delete fingerprint
7	Delete fingerprint
9	Switch to Wiegand 26-bit or access controller
13	Delete all
15	Sound (off/on), alarm output (off/on), door status switch input NC or NO, set time in minutes or seconds
16	Reset

Description of programming functions

Function 1) User fingerprints

Register or delete user fingerprints. With a registered fingerprint, output (O0, wire 3) for an el. strike is triggered for the time set in the function 2. In the controller, registered fingerprints are arranged in order of their registration. Every registered fingerprint is saved to its own position.
Register user fingerprint with master fingerprint:
Place the master fingerprint on the sensor and remove it (1 double beep). Within a period of 10 seconds place a user fingerprint on the sensor. Remove it after the beep. LEDs will begin to flash rapidly, indicating recording fingerprint. At the end of the recording, when the controller starts beeping rapidly, once again place the fingerprint on the sensor. If the fingerprint is identical to the first one, controller confirms the successful registration with a lit green LED and activated output. If the registration has failed the controller signals with a longer beep. If the registration is successful, the user fingerprint is registered and with it, the user can open output on the controller. If you repeat the process with the same fingerprint, this fingerprint will be deleted. Next registered fingerprint will take the first available position on the list or position of the deleted fingerprint. If you would like to delete the fingerprint of the user that no longer exists, you must maintain a list of registered fingerprints, arranged in order of registrations-positions (functions 6 and 7).

Function 2) Pulse time/ Duration of active output or toggle mode

Set the duration of active output/ the time in which you can open the door or set output to toggle mode. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15. Toggle mode means, if a user fingerprint is registered, output will remain opened (if it was closed) or closed (if it was open) till next registration.
Set the duration of active output with master fingerprint:
Place the master fingerprint two times on the sensor and remove it (2 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute of active output. Duration of active output can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor for confirmation.
Set toggle mode with master fingerprint:
Place the master fingerprint two times on the sensor and remove it (2 double beeps). Place a user fingerprint on the sensor before the first beep.

Function 3) Door status switch input

Set the time till pre-alarm / time in which the door can stay open, without triggering the pre-alarm and consequently the alarm. This function is used when the door status switch on el. strike is connected to Input0/I0/wire 5 on the controller. The input is normally opened (NO) by default. It can be changed to normally closed (NC) by using the function 15. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15.
Set the time till pre-alarm with master fingerprint:
Place the master fingerprint three times on the sensor and remove it (3 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute till pre-alarm. Duration of the time till pre-alarm can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor for confirmation.

Function 4) Pre-alarm and alarm

Set the pre-alarm time. This is the time in which the controller, with short beeps, alerts you that the door was left open. If you don't close the door in the pre-alarm time, the alarm will be triggered and signaled with long beeps by the controller. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15.
Set the pre-alarm time with master fingerprint:
Place the master fingerprint four times on the sensor and remove it (4 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute of the pre-alarm time. Duration of the pre-alarm time can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor for confirmation.

Function 5) Negate / Switch output state

This function is used, when you connect an electric strike or electric magnet which needs power supply to remain in locked state.
Switch output state with master fingerprint:
Place the master fingerprint five times on the sensor and remove it (5 double beeps). Within a period of three seconds place a user fingerprint on the sensor. The output state will be switched from the current one.

Function 6) Delete a fingerprint

Delete the next fingerprint on the list. Use this function if you wish to delete a fingerprint from the controller. In order to use this function you must maintain a list of registered fingerprints, arranged by order of registrations so that you can find the fingerprint, which was registered before the one you wish to delete.

Delete a fingerprint with master fingerprint:

Place the master fingerprint six times on the sensor and remove it (6 double beeps). Within a period of three seconds place a user fingerprint on the sensor, which was registered **before** the one you wish to delete. This will delete the next fingerprint on the list. Next registered fingerprint will take the position of a deleted fingerprint.

Function 7) Delete a fingerprint

Delete the previous fingerprint on the list. Use this function if you wish to delete a fingerprint from the controller. In order to use this function you must maintain a list of registered fingerprints, arranged by order of registrations so that you can find the fingerprint, which was registered after the one you wish to delete.

Delete a fingerprint with master fingerprint:

Place the master fingerprint seven times on the sensor and remove it (7 double beeps). Within a period of three seconds place a user fingerprint on the sensor, which was registered **after** the one you wish to delete. This will delete the previous fingerprint on the list. Next registered fingerprint will take the position of a deleted fingerprint.

Function 9) Switch to Wiegand 26-bit, access controller or back to standalone controller

Switch the controller to a Wiegand 26-bit reader or an access controller. To change the controller back to a standalone controller from an access controller, you need to make a "brainwash" with the Codeks or Codeks Device Manager software.

Switch with master fingerprint:

Place the master fingerprint nine times on the sensor and remove it (9 double beeps). The controller will start to beep every second. Each beep presents a different function, which is selected with a user fingerprint.

Standalone controller – Place the user fingerprint on the sensor before 1 beep.

Wiegand 26-bit reader – Place the user fingerprint on the sensor after 1 beep.

Access controller – Place the user fingerprint on the sensor after 4 beeps.

Function 13) Delete all

Reset/ delete all data to default.

Delete all with master fingerprint:

Place the master fingerprint thirteen times on the sensor and remove it (13 double beeps). The controller will start to beep every second. After three beeps place a user fingerprint on the sensor confirmation.

Delete all with the Codeks Device Manager program:

Set the Rex to the default settings by using the Codeks Device Manager program. Connect the Rex via RS485 communication line to the Spider (communication converter, USB or NET). Connect the Spider to the computer. In Codeks Device Manager, find the device and perform the "Brain Wash" function which sets the device to its default settings.

Default settings

A three-second pulse, five-second open time, four-second pre-alarm time, door status switch input and push button input have NO contact; output is set for fail secure el. strike. The controller is in standalone mode.

Function 15) Sound, alarm output, door status switch input (NC or NO), set the time in minutes or seconds (function 2, 3, 4)

Turn on/off the sound (beep) which is heard as a pre-alarm and alarm, when a user fingerprint is registered.

Turn on/off the accelerometer which triggers the alarm output (output1, O1, wire 4) when the controller is moved.

Set the Input0/I0/wire 5 to normally closed (NC) or normally opened (NO, default).

Set the time in functions 2, 3, 4 in minutes or seconds.

Set with master fingerprint:

Place the master fingerprint fifteen times on the sensor and remove it (15 double beeps). The controller will start to beep every second. Each beep presents a different function, which is selected with a user fingerprint.

Beep	Specification
No beep	Sound is OFF Tamper is OFF Door status switch input-normally opened (NO) Time is set in seconds
1. beep	Sound is ON Tamper is OFF Door status switch input-normally opened (NO) Time is set in seconds
2. beep	Sound is OFF Tamper is ON Door status switch input-normally opened (NO) Time is set in seconds
3. beep	Sound is ON Tamper is ON Door status switch input-normally opened (NO) Time is set in seconds
4. beep	Sound is OFF Tamper is OFF Door status switch input-normally closed (NC) Time is set in seconds
5. beep	Sound is ON Tamper is OFF Door status switch input-normally closed (NC) Time is set in seconds
6. beep	Sound is OFF Tamper is ON Door status switch input-normally closed (NC) Time is set in seconds
7. beep	Sound is ON Tamper is ON Door status switch input-normally closed (NC) Time is set in seconds
8. beep	Sound is OFF Tamper is OFF Door status switch input- normally opened (NO) Time is set in minutes
9. beep	Sound is ON Tamper is OFF Door status switch input- normally opened (NO) Time is set in minutes
10. beep	Sound is OFF Tamper is ON Door status switch input- normally opened (NO) Time is set in minutes
11. beep	Sound is ON Tamper is ON Door status switch input- normally opened (NO) Time is set in minutes
12. beep	Sound is OFF Tamper is OFF Door status switch input- normally closed (NC) Time is set in minutes
13. beep	Sound is ON Tamper is OFF Door status switch input- normally closed (NC) Time is set in minutes

14. beep	Sound is OFF Tamper is ON Door status switch input- normally closed (NC) Time is set in minutes
15. beep	Sound is ON Tamper is ON Door status switch input- normally closed (NC) Time is set in minutes

Function 16) Reset

"HARD" reset. Use it instead off manual reset (power off/on).

Reset with master fingerprint:

Place the master fingerprint sixteen times on the sensor and remove it (16 double beeps).The controller will start to beep every second. After three beeps place a user fingerprint on the sensor for confirmation.

AS AN ACCESS CONTROLLER

As an access controller, it is intended for controlling entries, exits and passes of users in the system and controlling sliding doors, ramp, el. strike, turning alarm on/off… It needs to be set with CODEKS software.

The controller switches to access controller when tables are sent by the software or when it is set to mode 4 with function 9. Change the controller's address from 255 to any number between 1 and 254. If you have more controllers on the communication line, don't duplicate addresses. Add them one by one on the communication line, because every controller has address 255 by default.

Communication

Connect the controller to the computer with one of the power supplies, with built-in communication converter, from the Spider family: Spider W5-USB, Spider W5-NET, Spider W40+NET.

The RS485 communication bus is used between the controllers and Jantar software. Up to 128 controllers can be lined up into one communication line. The maximum length of the communication line is 1000 cable meters. It is recommended that you use an FTP or S-FTP cable. Only a serial connection of controllers in a single communication line is allowed. **Star (parallel) connection is not allowed**.

All shields of S-FTP cables must be wired together and at **one point** connected to the earth. Individual connections to the earth are not allowed. Do not connect the shield of the cable to the ground of the controller.

In the event of problems in communication, a termination resistor needs to be added. We recommend using 120 Ohm resistors on each side of the cable. Converters are, on the RS485 side, protected with slow-blow fuses and transient voltage suppressors.

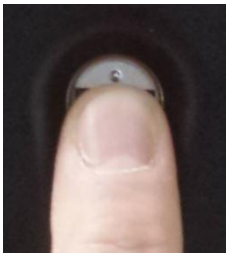
Changing back to standalone controller from access controller:

In the Codeks Device Manager software do the "Brainwash" of the controller. Address of the controller's switches back to 255.

Correct and incorrect position of the finger on the sensor

Correct:

Incorrect:



ORDERING CODES

REX [box]-[card]-[software]
Box: **F**
Card: **0** – only fingerprint reader
Software: **9** – CODEKS

Code	Description
REX F-0-9	Standalone or access controller in **F** box, with fingerprint reader, for CODEKS software

OTHER

Warranty only applies when the controller Rex is used with power supply or/and communication converter from the Spider family.

Please read through our warranty and disclaimer statements.

Connection scheme and additional support for the use of this product can be found on:
http://www.jantar.si/forum/en

CONTACT:
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REX F-1-9 and REX F-3-9 – STANDALONE OR ACCESS CONTROLLER

The Rex is a controller with built-in fingerprint reader and proximity card reader. It is designed for residential and business buildings, offices, shops, etc. In various operation modes, the controller allows access for up to 500 users (2 master fingerprints or 2 master cards + 500 user fingerprints or user cards). The controller can have a proximity card reader with 125kHz or 13.56MHz reading frequency.
As a standalone controller, the entire set-up procedure is carried out with the master fingerprint or master card. User fingerprints and cards can either be registered or deleted.
As an access controller, the entire set-up procedure is carried out with the software.
The controller signals normal operation with flashing red and green LED. It can also be used as a Wiegand 26-bit reader, if needed.

TECHNICAL DATA

REX F	
REX F-1-9 reading frequency	125kHz
REX F-1-9 reading distance	Up to 13cm
REX F-1-9 current consumption	60mA
REX F-3-9 reading frequency	13.56MHz
REX F-3-9 reading distance	Up to 7cm
REX F-3-9 current consumption	90mA
Operating voltage	From 9V to 14V DC
Operating temperature	From -20°C to 60°C
Communication	RS485
Dimensions (mm)	58x120x17 (WxHxD)
Sensor protection	> 15kV ESD protection
Usage	> 1 million wear cycles
Cabel	Cable through or on the wall – 3m
Mounting height	140cm from the ground
Memory	500 fingerprints or cards 500 events
Inputs	Door status Push button
Outputs	Transistor output for el. strike 0.5A
Inputs	Door status Push button
Clock	Real time clock, battery backup (max. ten hours)

CONNECTION CABLE

Wire-Color	Description/Wiegand 26-bit	Specification
1 – Red	9-14V DC	Power supply
2 – Gray/Black	GND	Ground
3 – Green	El. strike output / Data 0	Max. 0.5A Active = GND
4 – White	Alarm output/ Data 1	Active = GND
5 – Yellow	Door status switch input/ Buzzer input	Active = GND
6 – Orange	Push button input / LED input	Active = GND
7 – Blue	CA	RS485 A line
8 – Brown	CB	RS485 B line

LED DIODES

Color	Description
Flashing red/green	Normal mode
Lit green	El. strike is unlocked
Lit red	Fingerprint has no rights

Power supply

The controller need's external power supply to operate. The Spider W40 power supply is sufficient to power two controllers and two 12V electric strikes or two 12V magnetic locks (0.5A). If you will use it as a standalone controller and low consumption electric strike (0.25A) you can use power supply Spider W5.

Voltage drops and cable signal interferences

When you connect the controller, use cable with a diameter of at least 0.22mm^2. If the cable length exceeds 25m, use one twisted pair of UTP cables for the positive (+) pole and one for the negative (-) pole. The cable length between power supply and the controller should not exceed 50m. Take into consideration that a 0.22mm^2 cable has a resistance of approximately 9 ohm per 100m. The power supply at the end of cable should be a minimum of 9V. If you are using el. strike, it is highly recommended that the voltage drop is calculated. At greater distances, a thicker cable of 0.5mm^2 or more should be used wherever possible.
If the load is, for example, 0.5A (with el. strike) then, on the 0.22mm^2 cable voltage drop will be 4.5V at 100m. For the device with 60mA consumption, the voltage drop is 0.5V.

Reading distance depends on where the controller is installed. The presence of metal or interferences can significantly reduce the reading distance. **DO NOT** install the controller directly on metal surfaces and/or cover it with a metal cover.
It is **not recommended** to install controllers closer than **30cm** from each other in any direction. Otherwise, it may result in inaccurate readings or, indeed, in the controller **not reading at all**.

For the Rex F-3-9 to comply with EMC directives (CE), you have to put ferrite core on the cable as close to the controller as possible, making two turns!

Inputs, outputs and environment

Inputs:
Inputs are realized with opto-isolators. The input is active, when pulled to ground with an open collector transistor or mechanical switch, which is connecting the input pin of the controller to the Ground.

Outputs:
Output has a pre-installed protection diode for an inductive load. It is also protected from current overload. The best way is to use a 0.25A el. strike or a 0.5A el. magnet, which has to be connected to the same positive pole (+) as the controller. Connect the negative pole (-) to the door strike output (wire 3). When the output is active it is pulled to ground. This can be changed with function 5 – negate output (for el. magnet).

Environment:
It is designed for indoor, non-condensing, applications. Do not expose the controller to direct contact with the elements such as rain, snow or sunlight. If the plastic housing is in a different color than black, then there is a chance that the color will change (to some extend) in a few months or years if exposed to direct sunlight. The sensor surface is hard and extremely robust, and will withstand years of normal wear-and-tear. Do not subject the sensor to sharp or hard objects since this might cause permanent damage. Cleaning should be done with a lint-free cotton textile. Do not subject the sensor surface to mechanical force.
You must assure good cable joints, protected against moisture, otherwise corrosion may damage the controller. Damage in such cases is not covered by the warranty.

Reading range:
The controller has a program algorithm that, at power start, sets parameters based on the installation environment, so as to ensure an optimal reading range. **DO NOT** install the controller directly on metal surfaces and/or cover it with a metal cover; it may stop working/reading. If you plan to test the controller and move it onto different surfaces, then you have to reset it (power off/on) on each surface.

Installation of Rex F

Remove black plastic screw covers on the top and the bottom of the controller. Install the controller to the wall with two supplied screws. Use diagonal holes - it enables a small correction of the position of the controller (up, down, left, right). When the controller is installed, put the screw covers back on.

AS A STANDALONE CONTROLLER

The entire set-up procedure is carried out with the master fingerprint or master card. You can register two master fingerprints or two master cards. You can also register one master fingerprint and one master card.

The master fingerprints or master cards cannot be replaced or duplicated. You cannot change any setting without them and neither can we.

Programming with the master fingerprint or master card

First connection to the power supply and registration of the master fingerprints or master cards

Register master fingerprints:
Turn on the power supply (2 beeps indicate power on) and place your fingerprint on the sensor, which you have chosen to be the master fingerprint. After the triple beep remove the fingerprint. LEDs will begin to flash rapidly, indicating recording fingerprint. At the end of the recording, when the controller starts beeping rapidly, once again place the fingerprint on the sensor. If the fingerprint is identical to the first one, controller confirms the successful registration with a double beep and with the flashing green LED diode. If the registration has failed the controller signals with a longer beep. If the registration is successful repeat the process for the second master fingerprint.

Register master cards:
Turn the power supply on (2 beeps indicate power on). One by one approach two cards you will use as a master cards (3 beeps indicate a successful registration). The first two cards registered become **master cards.** All the other cards will be registered as **users (user cards)**.

If you want to register only one master fingerprint, then register the same fingerprint twice. You can register only one master card if you approach the same card twice. You can also register one master fingerprint and one master card.

Usage of master fingerprint and master card

With the master fingerprint or master card you choose the programming function. Functions can be confirmed either with user fingerprint or user card.
Master fingerprint:
Every time you place the master fingerprint on the sensor you hear one beep (successfully read) and a double beep (programming function). To select the different programming functions you need to remove your master fingerprint after the double-beep and place it again on the sensor within 2 seconds. The number of double beeps indicates the programming function.
Master cards:
If you hold the master card in front of the controller, every 2 seconds a double beep is heard. The number of double beeps indicates the programming function.

PROGRAMMING FUNCTIONS WITH MASTER FINGERPRINT OR MASTER CARD

Function	Description
1	Register or delete user fingerprints and cards
2	Pulse time/ Duration of active output or toggle mode
3	Door status switch input/ Time till pre-alarm
4	Duration of pre-alarm
5	Negate / Switch output state
6	Delete fingerprint or lost card
7	Delete fingerprint or lost card
9	Switch to Wiegand 26-bit or access controller
13	Delete all
15	Sound (off/on), alarm output (off/on), door status switch input NC or NO, set time in minutes or seconds
16	Reset

Description of programming functions

Function 1) User fingerprints and user cards

Register or delete user fingerprints and cards. With a registered fingerprint or card, output (O0, wire 3) for an el. strike is triggered for the time set in the function 2. In the controller, registered fingerprints and cards are arranged in order of their registration. Every registered fingerprint and card is saved to its own position.
For registration or deletion of user fingerprints and cards you can use the master fingerprint **or** card.

Register user fingerprint with master fingerprint:
Place the master fingerprint on the sensor and remove it (1 double beep). Within a period of 10 seconds place a user fingerprint on the sensor. Remove it after the beep. LEDs will begin to flash rapidly, indicating recording fingerprint. At the end of the recording, when the controller starts beeping rapidly, once again place the fingerprint on the sensor. If the fingerprint is identical to the first one, controller confirms the successful registration with a lit green LED and activated output. If the registration has failed the controller signals with a longer beep. If the registration is successful, the user fingerprint is registered and with it, the user can open output on the controller. If you repeat the process with the same fingerprint, this fingerprint will be deleted. Next registered fingerprint (or card) will take the first available position on the list or position of the deleted fingerprint. If you would like to delete the fingerprint of the user that no longer exists, you must maintain a list of registered fingerprints and cards, arranged in order of registrations-positions (functions 6 and 7).

Register user card with master card:
Approach the master card and remove it after 1 double beep. Within a period of three seconds approach a user card. You can register more cards at once, if you approach them one by one. The user card is now registered and with it, you can open output on the controller. If the card has already been registered, it is now deleted and its position is now empty. Next registered card (or fingerprint) will take the first available position on the list or position of the deleted card. When you have register/deleted all of the cards, wait until the controller confirms it with double beep. To delete a lost user card, you must maintain a list of registered cards and fingerprints, arranged in order of registrations-positions (functions 6 and 7).

Function 2) Pulse time/ Duration of active output or toggle mode

Set the duration of active output/ the time in which you can open the door or set output to toggle mode. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15. Toggle mode means, if a user fingerprint or card is registered, output will remain opened (if it was closed) or closed (if it was open) till next registration.
Set the duration of active output with master fingerprint:
Place the master fingerprint two times on the sensor and remove it (2 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute of active output. Duration of active output can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor or approach a user card for confirmation.
Set toggle mode with master fingerprint:
Place the master fingerprint two times on the sensor and remove it (2 double beeps). Place a user fingerprint on the sensor or approach a user card before the first beep.

Set the duration of active output with master card:
Approach the master card and remove it after 2 double beeps. The controller will start to beep every second. Each beep indicates 1 second or 1 minute of active output. Duration of active output can be max. 120 seconds or 60 minutes. When you hear the required number of beeps, approach a user card or place a user fingerprint on the sensor for confirmation.
Set toggle mode with master card:
Approach the master card and remove it after 2 double beeps. Approach a user card or place a user fingerprint on the sensor before the first beep. Toggle mode is selected.

Function 3) Door status switch input

Set the time till pre-alarm / time in which the door can stay open, without triggering the pre-alarm and consequently the alarm. This function is used when the door status switch on el. strike is connected to Input0/I0/wire 5 on the controller. The input is normally opened (NO) by default. It can be changed to normally closed (NC) by using the function 15. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15.
Set the time till pre-alarm with master fingerprint:
Place the master fingerprint three times on the sensor and remove it (3 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute till pre-alarm. Duration of the time till pre-alarm can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor or approach a user card for confirmation.

Set the time till pre-alarm with master card:
Approach the master card and remove it after 3 double beeps. The controller will start to beep every second. Each beep indicates 1 second or 1 minute till pre-alarm. Duration of the time till pre-alarm can be max. 120 seconds or 60 minutes. When you hear the required number of beeps, approach a user card or place a user fingerprint on the sensor for confirmation.

Function 4) Pre-alarm and alarm

Set the pre-alarm time. This is the time in which the controller, with short beeps, alerts you that the door was left open. If you don't close the door in the pre-alarm time, the alarm will be triggered and signaled with long beeps by the controller. The time can be set in seconds or minutes. Switching time from seconds to minutes and back, can be adjusted by using the function 15.

Set the pre-alarm time with master fingerprint:
Place the master fingerprint four times on the sensor and remove it (4 double beeps). The controller will start to beep every second. Each beep indicates 1 second or 1 minute of the pre-alarm time. Duration of the pre-alarm time can be max 120 seconds or 60 minutes. When you hear the required number of beeps, place a user fingerprint on the sensor or approach a user card for confirmation.

Set the pre-alarm time with master card:
Approach the master card and remove it after 4 double beeps. The controller will start to beep every second. Each beep indicates 1 second or 1 minute of the pre-alarm time. Duration of the pre-alarm time can be max. 120 seconds or 60 minutes. When you hear the required number of beeps, approach a user card or place a user fingerprint on the sensor for confirmation.

Function 5) Negate / Switch output state

This function is used, when you connect an electric strike or electric magnet which needs power supply to remain in locked state.

Switch output state with master fingerprint:
Place the master fingerprint five times on the sensor and remove it (5 double beeps). Within a period of three seconds place a user fingerprint on the sensor or approach a user card. The output state will be switched from the current one.

Switch output state with master card:
Approach the master card and remove it after 5 double beeps. Within a period of three seconds approach a user card or place a user fingerprint on the sensor. The output state will be switched from the current one.

Function 6) Delete a fingerprint or a lost card

Delete the next fingerprint or card on the list. Use this function if you wish to delete a fingerprint or lost card from the controller. In order to use this function you must maintain a list of registered fingerprints and cards, arranged by order of registrations so that you can find the fingerprint or card, which was registered before the one you wish to delete.

Delete a fingerprint or a lost card with master fingerprint:
Place the master fingerprint six times on the sensor and remove it (6 double beeps). Within a period of three seconds place a user fingerprint on the sensor or approach a card, which was registered **before** the one you wish to delete. This will delete the next fingerprint or card on the list. Next registered fingerprint or card will take the position of a deleted fingerprint or deleted card.

Delete a fingerprint or a lost card with master card:
Approach the master card and remove it after 6 double beeps. Within a period of three seconds approach the user card or place a user fingerprint on the sensor, which was registered **before** the one you wish to delete. This will delete the next fingerprint or card on the list. Next registered card or fingerprint will take the position of a deleted card or deleted fingerprint.

Function 7) Delete a fingerprint or a lost card

Delete the previous fingerprint or card on the list. Use this function if you wish to delete a fingerprint or lost card from the controller. In order to use this function you must maintain a list of registered fingerprints or cards, arranged by order of registrations so that you can find the fingerprint or card, which was registered after the one you wish to delete.

Delete a fingerprint or a lost card with master fingerprint:
Place the master fingerprint seven times on the sensor and remove it (7 double beeps). Within a period of three seconds place a user fingerprint on the sensor or approach a card, which was registered **after** the one you wish to delete. This will delete the previous fingerprint or card on the list. Next registered fingerprint or card will take the position of a deleted fingerprint or deleted card.

Delete a fingerprint or a lost card with master card:
Approach the master card and remove it after 7 double beeps. Within a period of three seconds approach the user card or place a user fingerprint on the sensor, which was registered **after** the one you wish to delete. This will delete the previous fingerprint or card on the list. Next registered card or fingerprint will take the position of a deleted card or deleted fingerprint.

Function 9) Switch to Wiegand 26-bit, access controller or back to standalone controller

Switch the controller to a Wiegand 26-bit reader or an access controller. To change the controller back to a standalone controller from an access controller, you need to make a "brainwash" with the Codeks or Codeks Device Manager software.

Switch with master fingerprint or master card:
Place the master fingerprint nine times on the sensor and remove it (9 double beeps) or approach the master card and remove it after 9 double beeps. The controller will start to beep every second. Each beep presents a different function, which is selected with a user fingerprint or user card.

Standalone controller – Place the user fingerprint on the sensor or approach a user card before 1 beep.
Wiegand 26-bit reader – Place the user fingerprint on the sensor or approach a user card after 1 beep.
Access controller – Place the user fingerprint on the sensor or approach a user card after 4 beeps.

Function 13) Delete all

Reset/ delete all data to default.

Delete all with master fingerprint:
Place the master fingerprint thirteen times on the sensor and remove it (13 double beeps). The controller will start to beep every second. After three beeps place a user fingerprint on the sensor or approach a user card for confirmation.

Delete all with master card:
Approach the master card and remove it after 13 double beeps. The controller will start to beep every second. After three beeps approach a user card or place a user fingerprint on the sensor for confirmation.

Delete all with the Codeks Device Manager program:
Set the Rex to the default settings by using the Codeks Device Manager program. Connect the Rex via RS485 communication line to the Spider (communication converter, USB or NET). Connect the Spider to the computer. In Codeks Device Manager, find the device and perform the "Brain Wash" function which sets the device to its default settings.

Default settings

A three-second pulse, five-second open time, four-second pre-alarm time, door status switch input and push button input have NO contact; output is set for fail secure el. strike. The controller is in standalone mode.

Function 15) Sound, alarm output, door status switch input (NC or NO), set the time in minutes or seconds (function 2, 3, 4)

Turn on/off the sound (beep) which is heard as a pre-alarm and alarm, when a user fingerprint or user card is registered.
Turn on/off the accelerometer which triggers the alarm output (output1, O1, wire 4) when the controller is moved.
Set the Input0/I0/wire 5 to normally closed (NC) or normally opened (NO, default).
Set the time in functions 2, 3, 4 in minutes or seconds.

Set with master fingerprint or master card:
Place the master fingerprint fifteen times on the sensor and remove it (15 double beeps) or approach the master card and remove it after 15 double beeps. The controller will start to beep every second. Each beep presents a different function, which is selected with a user fingerprint or user card.

Beep	Specification
No beep	Sound is OFF Tamper is OFF Door status switch input-normally opened (NO) Time is set in seconds
1. beep	Sound is ON Tamper is OFF Door status switch input-normally opened (NO) Time is set in seconds
2. beep	Sound is OFF Tamper is ON Door status switch input-normally opened (NO) Time is set in seconds
3. beep	Sound is ON Tamper is ON Door status switch input-normally opened (NO) Time is set in seconds
4. beep	Sound is OFF Tamper is OFF Door status switch input-normally closed (NC) Time is set in seconds

5. beep	Sound is ON Tamper is OFF Door status switch input-normally closed (NC) Time is set in seconds
6. beep	Sound is OFF Tamper is ON Door status switch input-normally closed (NC) Time is set in seconds
7. beep	Sound is ON Tamper is ON Door status switch input-normally closed (NC) Time is set in seconds
8. beep	Sound is OFF Tamper is OFF Door status switch input- normally opened (NO) Time is set in minutes
9. beep	Sound is ON Tamper is OFF Door status switch input- normally opened (NO) Time is set in minutes
10. beep	Sound is OFF Tamper is ON Door status switch input- normally opened (NO) Time is set in minutes
11. beep	Sound is ON Tamper is ON Door status switch input- normally opened (NO) Time is set in minutes
12. beep	Sound is OFF Tamper is OFF Door status switch input- normally closed (NC) Time is set in minutes
13. beep	Sound is ON Tamper is OFF Door status switch input- normally closed (NC) Time is set in minutes
14. beep	Sound is OFF Tamper is ON Door status switch input- normally closed (NC) Time is set in minutes
15. beep	Sound is ON Tamper is ON Door status switch input- normally closed (NC) Time is set in minutes

Function 16) Reset

"HARD" reset. Use it instead off manual reset (power off/on).

Reset with master fingerprint:

Place the master fingerprint sixteen times on the sensor and remove it (16 double beeps).The controller will start to beep every second. After three beeps place a user fingerprint on the sensor or approach a user card for confirmation.

Reset with master card:

Approach the master card and remove it after 16 double beeps. The controller will start to beep every second. After three beeps approach a user card or place a user fingerprint on the sensor for confirmation.

AS AN ACCESS CONTROLLER

As an access controller, it is intended for controlling entries, exits and passes of users in the system and controlling sliding doors, ramp, el. strike, turning alarm on/off… It needs to be set with CODEKS software.

The controller switches to access controller when tables are sent by the software or when it is set to mode 4 with function 9. Change the controller's address from 255 to any number between 1 and 254. If you have more controllers on the communication line, don't duplicate addresses. Add them one by one on the communication line, because every controller has address 255 by default.

Communication

Connect the controller to the computer with one of the power supplies, with built-in communication converter, from the Spider family: Spider W5-USB, Spider W5-NET, Spider W40+NET.

The RS485 communication bus is used between the controllers and Jantar software. Up to 128 controllers can be lined up into one communication line. The maximum length of the communication line is 1000 cable meters. It is recommended that you use an FTP or S-FTP cable. Only a serial connection of controllers in a single communication line is allowed. **Star (parallel) connection is not allowed**.
All shields of S-FTP cables must be wired together and at **one point** connected to the earth. Individual connections to the earth are not allowed. Do not connect the shield of the cable to the ground of the controller.

In the event of problems in communication, a termination resistor needs to be added. We recommend using 120 Ohm resistors on each side of the cable. Converters are, on the RS485 side, protected with slow-blow fuses and transient voltage suppressors.

Changing back to standalone controller from access controller:

In the Codeks Device Manager software do the "Brainwash" of the controller. Address of the controller's switches back to 255.

Correct and incorrect position of the finger on the sensor

Correct:

Incorrect:

ORDERING CODES

REX [box]-[card]-[software]
Box: **F**
Card: **1** – reading frequency 125kHz (cards)
3 – reading frequency 13.56MHz (cards)
Software: **9** – CODEKS

Code	Description
REX F-1-9	Standalone or access controller in **F** box, with fingerprint reader, integrated proximity card reader frequency 125kHz, for CODEKS software
REX F-3-9	Standalone or access controller in **F** box, with fingerprint reader, integrated proximity card reader frequency 13.56MHz, for CODEKS software

OTHER

Warranty only applies when the controller Rex is used with power supply or/and communication converter from the Spider family.

Please read through our warranty and disclaimer statements.

Connection scheme and additional support for the use of this product can be found on:
http://www.jantar.si/forum/en

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