QUICK-START GUIDE

ekey multi CP DRM 4

Networked access system without PC, with fingerprint scanning

ekey
Europe´s # 1
for fingerprint access solutions

ID17/6: 801398
Version 1 dated
19.1.2011

CONTACT

Should you have any technical questions, please contact an ekey reseller!

NOTE ON THE DOCUMENT

This quick-start guide as well as the additional information and instructions on the supplied DVD are not subject to updating. You can find the most up-to-date version of these documents on **www.ekey.net**. Subject to optical and technical modifications, any liability for misprints excluded.

WARNING !
In addition to these instructions, also observe the information on the DVD supplied together with the product.

START-UP

Please follow the steps below to start up the system:

1.) Make everything you need ready to mount the devices as described in the mounting instructions supplied with the devices.

2.) Wiring

🛑 **Do not connect the system to the mains yet! The electrical connection of the system can only be carried out by a specialist!**

Connect the wires as described in the ekey home wiring plan supplied with the devices.

3.) Check the wiring.

4.) Conclude mounting the devices. Close all the device housings which you had to open in order to be able to proceed with the wiring.
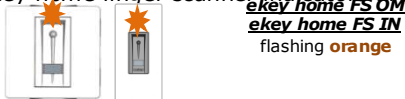
5.) Read carefully the following chapter

⚠️ **„Operating the finger scanner". The correct operation (i.e. swiping the finger over the sensor) of the fingerprint scanner is decisive for the proper functioning of the whole system. Also see the short movie in the „Tips & Tricks" folder on the DVD supplied with the product.**

6.) Connect the power adaptor to the mains.

🛑 **The electrical connection of the system can only be carried out by a specialist!**

The _ekey multi CP DRM 4_ displays the language selection

4SEREG   2.01.08.16
Deutsch
English
Italiano
Français
Slovenščina
Česky
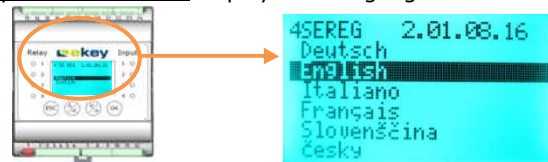
The ekey home finger scanner indicators are as follows:

ekey home FS OM
ekey home FS IN
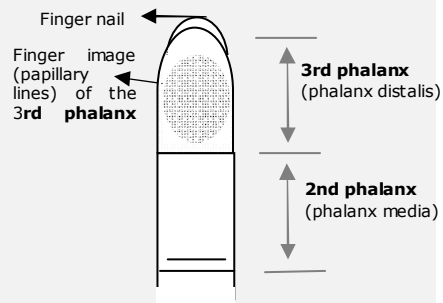flashing **orange**

7.) Now start at point **1: INITIALIZING THE DEVICES** of „Programming the system".

---

2 Operating the finger scanner

2.1.Function of the finger scanner

The function of the finger scanner is to capture and analyze the image of your finger, and then compare it with a reference template. Which part of your finger should be captured?

Finger nail

Finger image (papillary lines) of the 3rd phalanx

3rd phalanx (phalanx distalis)

2nd phalanx (phalanx media)

It is necessary to capture an image of the **3rd** phalanx. On the contrary, your finger scanner will not function properly.
In order to ensure this, take care to operate the finger scanner correctly. It is fundamental to place your finger correctly in the finger recess and move it down across the sensor at the right speed. Ergonomically speaking, the best fingers are the index, the middle finger and the ring finger. **The thumb and the little finger may not be used!**

A finger scanner works like a camera. It makes a picture of the bottom side, the papillary lines, of your finger´s third phalanx. However, this picture must be of good quality, so that physical access can be granted whenever necessary.

Imagine you wish to make a picture of someone, and this person

- keeps fidgetting
- runs by and you try to make a picture of him at that exact moment
- hides half of his face behind a tree
- etc.

What do you think these pictures will look like? On some of the pictures you will not even be able to recognize the person.

The finger scanner works in the same way. The finger scanner can only read all the information contained in your finger, and consequently open your doors securely and reliably, if you move your finger down across the sensor evenly and in the right position.
Let us now look at where you should place your fingers and at which speed you should move them across the sensor, so that the „pictures" of your fingers are perfect.

2.2 The finger recess – the control element

Left and right recess edge
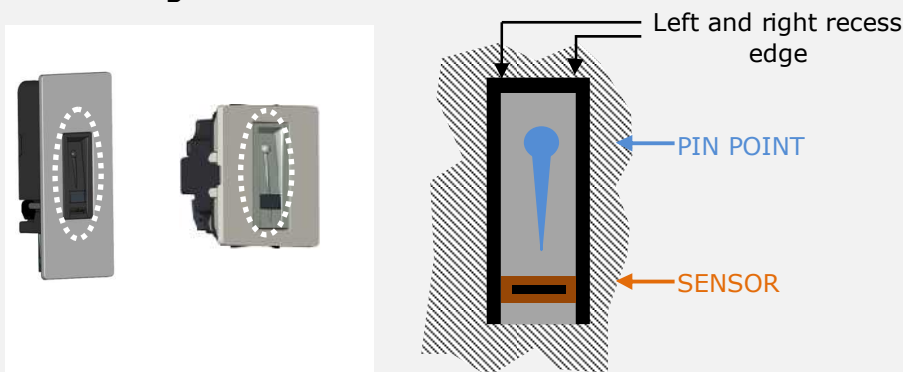
PIN POINT

SENSOR

The finger recess allows to place the finger correctly so that a finger picture of good quality can be captured. It actually is the control element and consists of
- **Pin point** - **Sensor** - **right and left recess edges**

---

3. Programming the _ekey multi CP DRM 4 system_

3.1.Function of the control panel

The _ekey multi CP DRM 4_ in the _ekey multi_ system is meant to program and parametrize the system.
Using the
- LCD display and the
- 4 buttons,

you can

- **Register users and enroll their fingers**
- **Delete users**
- **Enter the security code**
- **Change the security code**
- **Set time zones**
- **Change the relay switching times**
- **Retrieve LOG data**
- **Reset to factory settings**

The menu navigation is intuitive and very easy. You will find step-by-step detailed explanations of each specific menu function on page 2.

3.2.Controls and their symbols

The LCD display guides you through the menu, allows you to read status messages and to set given features.

(OK) The **OK** button allows you to register values and move to the next menu level.

(V >) The **Down arrow** and the **Right arrow** buttons allow you to set values and to navigate in the menu.

(Λ <) The **Up arrow** and the **Left arrow** buttons allow you to set values and to navigate in the menu.

(ESC) The **ESC** button ⊠ allows you to exit a menu level or to cancel entries.

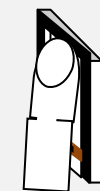### 2.3. Operating correctly the finger scannner

Lay your finger straight and flat on the finger recess.
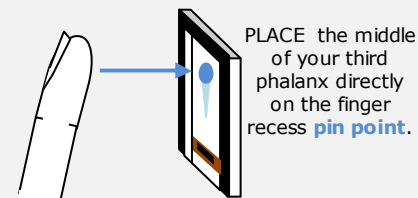
PLACE the middle of your third phalanx directly on the finger recess **pin point**.
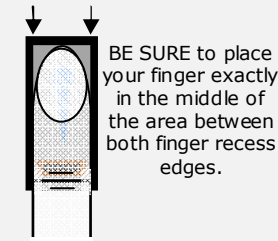
BE SURE to place your finger exactly in the middle of the area between both finger recess edges.

Take care to position your finger as flat as possible over the finger recess. There should be only a small slit left between sensor and finger.
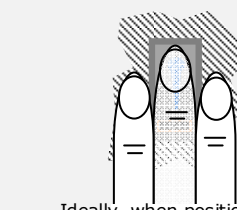
Ideally, when positioning your finger on the finger recess, stretch the remaining fingers, holding them close to the „swiping" finger. This helps keep the „swiping" finger even.
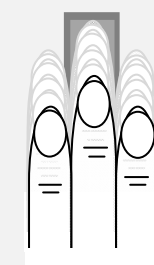
Now without changing the inclination of your finger, move it down across the sensor (the entire hand). Take care to swipe your finger at the right speed. BEWARE: The entire movement (swipe) should take about
1–1,5 sec.
Use this as a benchmark. You should not need much more or much less than that. If you swipe your finger **too fast**, then the status LED shows „**red**".
Do not modify the position of the finger phalanges during the swipe (e.g. by bending the third phalanx).
There is no need to exert any **stronger pressure**. Move your finger across the sensor as if you would wipe bread crumbs off a table.

2.4. What you should not do
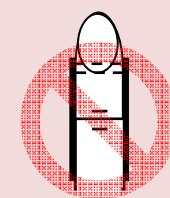
Place your third phalanx higher than the pin point
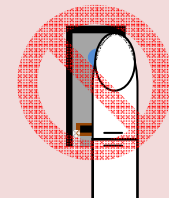
Not place your finger in the middle of the finger recess, or not place it parallel to the finger recess edges.
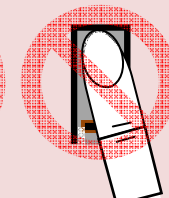
Rotate your finger in the finger recess.
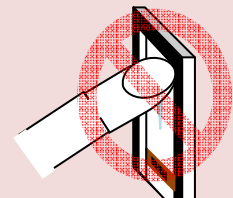
Place your finger at a too steep angle with the finger recess.
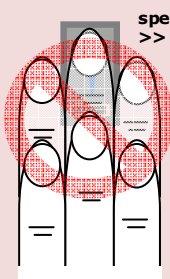
speed >>   speed <<

Move your finger too fast or too slowly across the sensor.

If you move your finger across the finger scanner in one of the ways mentioned here, then the scanner will not be able to extract the information it needs about your finger image. It will therefore not function properly:
- **Poor recognition performance:** You will have to swipe your finger several times across the sensor before being able to induce the door to open.
- **Reference templates cannot be saved:** You are not able to save a finger in the system, because the finger scanner gets less information.

3.3. Programming the system

Now start programming the system. **The menu sequences for each single function are explained below.** Let us not forget to mention the security code. You need it in order to be able to make changes in the system. **The factory default setting for this code is 99. Change this code to another one of your choice as soon as you have started up the system.**

┌─────────────────────┐
│ **Security code** │
│ **Factory setting** │
│   **99**   │
└─────────────────────┘

1: INITIALIZING THE DEVICES

The ekey multi CP DRM 4 must be given notice of new or replaced devices. It can administrate up to 4 finger scanners.

Front door Relay 1
Side entrance door Relay 2
Garage door Relay 3

Your finger scanners are for instance mounted at the front door, the side entrance door and the garage door. The electrical connection alone is not enough for the ekey multi CP DRM 4 to know which scanner is mounted where. You must inform the ekey multi SE REG 4 about the mounting position of the finger scanners. Thereto, please follow the steps below.

2 x

START → DISPLAY → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY

4SEREG 2.01.08.16
Deutsch
English
Italiano
Francais
Slovenščina
Česky

Select language

OK

FS assignment / Coupling

OK

FS assignment
FS1
FS2
FS3
FS4   - search FS

OK

SELECT FINGER SCANNER POSITION

FS assignment
FD -
FS2 -
FS3 -
FS4   - search FS

OK

ENTER 3-DIGIT NAME

Please swipe any finger across:
FD
or
Press [ESC]

Repeat for each finger scanner

SWIPE FINGER

Swipe any finger of your choice over the scanner you wish to assign to this position.

DISPLAY → KEY STROKE → DISPLAY

FS assignment
FD - 80131010010405
FS2
FS3
FS4   - search FS

OK

FS assignment
FD - 80131010010405
FS2
FS3
FS4   - search FS

SELECT NEXT FINGER SCANNER POSITION

All the finger scanners have been registered

KEY STROKE → DISPLAY → FINISHED

ESC

Sa 01.01.2000
00:07:24
80132450110222
Security Code: --

The devices have been initialized. Now you need to define the master key plan. Please check **3:**

2: ENTERING THE SECURITY CODE (Factory setting = 99)

The security code allows you to avoid system manipulations by unauthorized people. Change this code as soon as you have started up the system, in order to be protected against manipulations. For more details about how to change the security code, please check the Operating Instructions on the DVD supplied with the product.

START → DISPLAY → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY → FINISHED

Sa 01.01.2000
00:07:24
80132450110222
Security Code: --

OK

System ok   99
Security Code: 9_

SECURITY CODE Digit 1

OK

System ok   99
Security Code: 99

SECURITY CODE Digit 2

OK

Enroll User
Delete User
Logging
Set Relay Time
Set Time
Security Code
Master key plan

You now are in the main menu and can proceed with changes in the system.

Should you have entered 3 times in a row a wrong security code, then your system will be locked for half an hour!

3: MASTER KEY PLAN

What is a key?   **IMPORTANT INFORMATION!**

Your finger is the key!

In the ekey multi CP DRM 4 system, it is possible to define up to 4 keys (K1 – K4). Each user may be assigned one or more virtual keys by assigning his fingers to this/these key(s). But first you need to set Keys 1-4 with the help of this **master key plan**.

Depending on the number of finger scanners registered in Part **1:**, a standard master key plan is defined which is immediately enabled. You may however customize this master key plan at any time.

In order to generate a master key plan, you need to know which relay of the ekey multi CP DRM 4 opens which door. If you do not know this, enable the **Test mode** and switch the relays in sequence to see which door opens with which relay. Details about how to enable the Test mode can be found in the Operating Instructions on the DVD supplied with the product.

In this example,
Relay R1 actuates the front door
Relay R2 actuates the side entrance door
Relay R3 actuates the garage door
Relay R4 actuates the back entrance door
To generate a master key plan, you need the following allocation: relay to door

RELAY R2   **RELAY R3**   **RELAY R4**
RELAY R1

The ekey multi CP DRM 4 master key plan:

Key number	Relay			
Finger scanner	1	2	3	4
FS1=FD	K1			K2
FS2=SE		K1		K2
FS3=GD			K1	K2
FS4				

The master key plan shows which relays the keys actuate in the system. For instance:
Key „K1":
- If a K1 finger is swiped over the FD finger scanner, then Relay 1 switches.
- If a K1 finger is swiped over the SE finger scanner, then Relay 2 switches.
- If a K1 finger is swiped over the GD finger scanner, then Relay 3 switches.
Key „K2":
- If a K2 finger is swiped over any of the 3 finger scanners, then Relay 4 switches.
Keys K3 and K4 are not used here but are available for any upcoming needs.

How to undertake changes in the master key plan

Follow this procedure for each position = 16x

START → DISPLAY → **Security code** → ANZEIGE → KEY STROKE → DISPLAY Select key → KEY STROKE → DISPLAY → KEY STROKE → DISPLAY

Sa 01.01.2000
00:07:24
80132450110222
Security Code: --

See 2:

Enroll User
Delete User
Logging
Set Relay Time
Set Time
Security Code
Master key plan

OK

Master key plan
      1 2 3 4
FD - - K1 K2
      - K1 - K2
      - - K1 K2

OK

Select key (K1- K4)

Master key plan
      1 2 3 4
FD - K1 - K2
      - - K1 K2

OK

Enroll User
Delete User
Logging
Set Relay Time
Set Time
Security Code
Master key plan

FINISHED

4: RECORDING FINGERPRINTS AND ASSIGNING KEYS

Now you will define which functions you can carry out with your fingers, i.e. how the system reacts when you swipe a specific finger over one of the finger scanners. To do so you must first enroll your finger in the system and then assign a key defined in the master key plan (**3:**) to this one finger. You can save up to 99 fingers in the ekey multi system.

Tom   **Lukas**   **Jack**

Picture it this way: Your finger is a key.
You have here as many keys available as those you defined in the master key plan. You can assign fingers to them now. You can assign the number of fingers you wish to each key.

The keys defined in the master key plan (**3:**) are to be assigned to the fingers during the finger enrollment procedure. *1 finger can only be 1 key! You can therefore only assign one key to one finger!*

START → DISPLAY → **Security code** → DISPLAY → KEY STROKE → DISPLAY Select user number → KEY STROKE → Enter USER NAME, TIME ZONE AND STATUS

Sa 01.01.2000
00:07:24
80132450110222
Security Code: --

See 2:

Enroll User
Delete User
Logging
Set Relay Time
Set Time
Security Code
Master key plan

OK

Enroll User
01U
02U
03U
04U
05U
06U

Select user number

OK

LUKAS
enabled
Always
le small finger
le ring finger
le middle finger
le index finger

LUKAS
enabled
le small finger
le ring finger
le middle finger
le index finger

NAME: 9-digit
STATUS: enabled locked
TIME ZONE A, B or ALWAYS

Use ∨/∧ to navigate in the menu and OK to enter data!

Select FINGER → KEY STROKE → SET KEY → KEY STROKE → Select FINGER → **SWIPE THE FINGER OVER THE SENSOR**

LUKAS
enabled
Always
le thumb finger
re thumb finger
re index finger
re middle finger

OK

LUKAS
      Key 1
      Key 2

OK

Swipe finger over sensor or press [ESC]

Select FINGER   **Select key number**   **Key number**

red = finger denied. Try it again!

Swipe finger over sensor or press [ESC]

→ DISPLAY → FINISHED

green = finger accepted

LUKAS
enabled
Always
le thumb finger
re thumb finger
re index finger
re middle finger

Key number

The finger has been enrolled. Now you can enroll additional fingers or jump back to the main menu by striking the ESC key!