ekey home

en **OPERATING INSTRUCTIONS** 01

English

Translation of the original instructions – ID163/384/0/234

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General

ekey biometric systems GmbH operates a quality management system in compliance with EN ISO 9001:2008 and is certified accordingly.

Note

These instructions form a component of the product. Ensure that they are stored in a safe place. Please contact your dealer for further information about the product.

Product liability and limitation of liability

Safe operation and function of the devices can be impaired in the following situations. Liability due to malfunctioning is transferred to the operator/user in such cases:

- The system devices are not installed, used, maintained and cleaned in accordance with the instructions.
- The system devices are not used within the scope of proper use.
- Unauthorised modifications are carried out on the system devices by the operator.

These operating instructions are not subject to updating. Subject to optical and technical modifications, any liability for errors and misprints is excluded.

Warranty and manufacturer's warranty

Our general terms and conditions apply as valid at the date of purchase. See http://www.ekey.net.

ekey biometric systems GmbH provides a 24-month warranty for material or processing defects. This warranty is only valid in the country where the product was purchased. The product may only be used with original ekey spare parts and accessories.

Notices, symbols and abbreviations

NOTICE

Denotes additional information and useful tips.

DANGER

Denotes imminent danger which could lead to death or serious injuries.

ATTENTION

Denotes possible property damage which cannot result in injuries.

Symbols:

1.	Step-by-step instructions
	Reference to sections of these instructions
	Reference to the mounting instructions
	Reference to the wiring diagram
□	Listing without specified order, 1st level
ekey home FS OM	Product names
Button	Buttons

Abbreviations:

CP	Control panel

Safety information

DANGER

Life-threatening danger resulting from electricity

All *ekey home* devices are to be operated with safety extra-low voltage (SELV). Only use power supplies rated protection class 2 according to VDE 0140-1.
Failure to do so will result in life-threatening danger due to electric shock.
Only certified electricians are authorised to carry out the electrical installation!

Safety against tampering

Mount the control panel in a safe internal area. This prevents tampering from the outside.

Product description

System overview

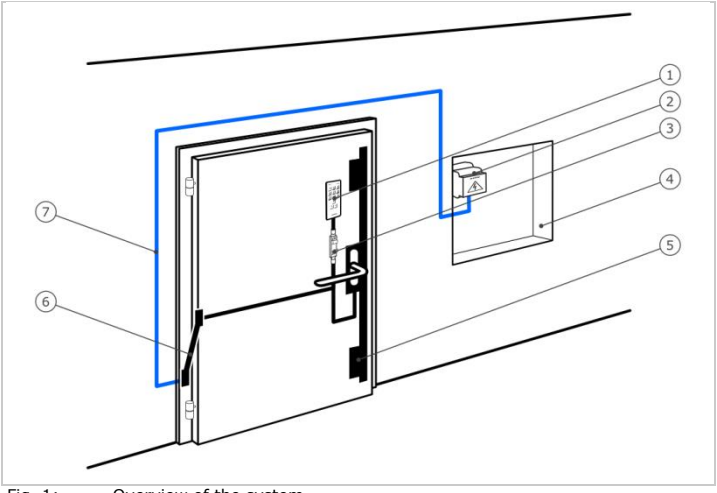


Fig. 1: Overview of the system

1 Code pad
2 Power supply
3 Control panel
4 Distributor
5 Motorised lock
6 Cable transfer
7 Connecting cable

Scope of delivery

- Code pad;
- Control panel;
- Operating instructions, mounting instructions, wiring diagram;
- Optional: matching accessories (cable transfer, power supply, connecting cable, covers, etc.).

Proper use and area of application

This product is an access control system with a non-physical identification feature (pin code). The system is comprised of a code pad and control panel. It is available in various makeups and component combinations. Non-physical identification features (pin codes) are entered and compared with the stored reference codes. If they match up, the door opens.

The system is primarily designed for opening house doors, apartment doors and garage doors in homes and businesses.

Code pad

Function of the code pad

The code pad captures the pin code by means of the capacitive keypad. It compares what has been entered with the stored reference code. The code pad can handle pin codes containing 4 to 8 digits. The digits in the pin code cannot all be the same; at least one of them must be different. There are 2 types of pin code: the admin code for configuring the system and the user code for opening the door.

If the code is entered incorrectly 3 times, there will be a 1-minute lock. If the code is then entered incorrectly a further 3 times, there will be a 15-minute lock. There will be a 15-minute lock each time the code is entered incorrectly after that.

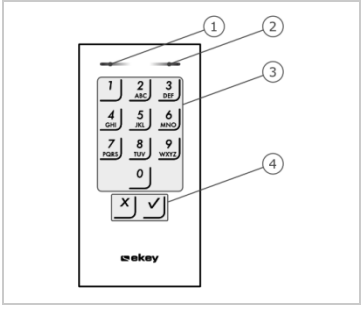
Controls, optical signals and acoustic signals on the code pad

The code pad has 2 sections with controls.

Control	Function
Input buttons	Enter pin code; select menu item.
Confirmation buttons	Confirm pin code input as positive or negative; start menu.

Table 1: Code pad controls

2 status LEDs signal the operating statuses (pin code correct, pin code incorrect, menu item, etc.). An acoustic signal transmitter signals that the button has been pressed and that access has been enabled.



1 Left status LED
2 Right status LED
3 Input buttons
4 Confirmation buttons

Fig. 2: Code pad overview

The back-illumination of the keypad is blue, dimmable and switches on or off according to the lighting conditions.

Admin menu structure of the code pad

There is a range of menu items available in the admin menu for programming purposes. These can be called via the buttons.

Button	Menu item
1	Store user code
2 ABC	Delete user code
3 DEF	Change admin code

Button	Menu item
4 GHI	Reset the system to default settings
5 JKL	Set the code pad (back-illumination, relay switching time, acoustic and optical signal when button is pressed, acoustic signal on opening)

Table 2: Admin menu structure of the code pad

NOTICE

The code pad switches back to normal mode after 10 seconds if nothing has been pressed. When this happens, any inputs or changes that are attempted will be rejected.

Control panels

Control panels are available in 2 makeups. You can only operate a single code pad per control panel. Any code pad works with any control panel.

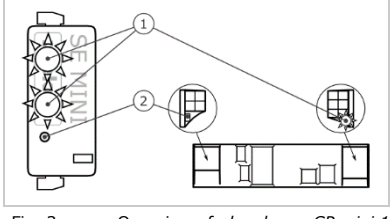
Product name	*ekey home CP mini 1*	*ekey home CP micro 1*
Figure		
Mounting types	Top hat rail mounting 1 relay, 1 input	Integration into doors 1 relay.

Table 3: Control panel makeups

Function of the control panel

The control panel is the actuator of the system. It serves to switch one relay.

Controls and optical signals of the control panel



1 Status LEDs
2 Button

Fig. 3: Overview of *ekey home CP mini 1* and *ekey home CP micro 1*

ekey home control panel mini 1: The upper status LED indicates whether the control panel is connected to the code pad. The lower status LED indicates when the relay switches.

ekey home control panel micro 1: The LED indicates whether the control panel is connected to the code pad and whether the relay switches.

Button operation	Function
Press and hold button for 1 sec.	Coupling control panel/code pad.
Press and hold button for 4 sec.	Reset to default settings.

Table 4: Button operation for *ekey home CP mini 1*

Button operation	Function
Press and hold button for 4 sec.	Reset to default settings.

Table 5: Button operation for *ekey home CP micro 1*

The control panel/code pad coupling takes place automatically in the case of the *ekey home control panel micro 1*, even if the code pad is replaced.

Technical specifications

Description	Unit	Value
Supply	VAC/VDC	12-24/8-24
Power input	W	approx. 1
Temperature range	°C	-25 to +70
Memory	Codes	99
Pin code length	Quantity	4-8 digits
Protection class	IP	54 (front side)
Speed	s	<1 (after input is complete)
Operational lifetime	Button presses	approx. 1 million

Table 6: Technical specifications: *ekey home keypad integra 2.0*

Description	Unit	Value	
		ekey home CP mini 1	***ekey home CP micro 1***
Supply	VDC	8-24	8-24
Power input	W	approx. 1	approx. 1
Relays	Quantity	1	1
Relay switching capacity	VDC/A VAC/A	42/2	42/2
Temperature range	°C	-20 to +70	-25 to +60
Protection class	IP	20	20
Digital inputs (only potential-free contacts may be connected)	Quantity	1	1

Table 7: Technical specifications: *ekey home control panel mini 1* and *ekey home control panel micro 1*

Installation

ATTENTION

Mount and cable the product correctly before connecting power.
Possible property damage!
Do not connect the power supply beforehand!

Mount the system in accordance with the supplied mounting instructions.

Cable the system in accordance with the supplied wiring diagram.

Schritt	Handlung	Anzeige	
1.	Ensure safe installation of the devices. Close the covers.		-
2.	Connect the power supply to the mains.		Only for ekey home CP mini 1: The upper status LED on the control panel flashes red: default setting.
3.	No action required.		Status-LEDs der Codetastatur blinken abwechselnd gelb: Werkseinstellung.
4.	If the LEDs fail to light up, check the wiring and power supply.	-	

Commissioning

Commissioning devices and establishing normal mode

Commissioning the devices couples the control panel and the code pad with one another. The following steps apply to the *ekey home CP mini 1* only. These steps are carried out automatically for the *ekey home CP micro 1*.

Step	Action	Description	Display	
1.		Press and hold the button with the operating rod for 1 sec.		The upper status LED flashes green.
2.	No action required	-		Status LEDs are off.

The devices have now been commissioned. The system is in normal mode.

Entering the admin code

Entering the admin code grants you access to the admin menu. The admin menu is used to configure the system. The default admin code is 9999.

ATTENTION

Change the default admin code immediately after commissioning!
If you do not change the admin code, it may be possible for unauthorised persons to get into your admin menu and then gain access to your premises.
Choose a new admin code and keep it secret.

See Changing the admin code, page 10.

The system is in normal mode.

Schritt	Handlung	Beschreibung	Anzeige	
1.		Press ✓ to start the process of entering the admin code.		The status LED lights up yellow on the left.
2.		Enter the admin code on the keypad.	-	-
3.		Press ✓.		The status LED lights up green on the left.
				The status LEDs light up red.
		The admin code was not recognised. Repeat the procedure beginning at step 1.	-	-

The system is in the admin menu. It automatically switches back to normal mode if you do not press a button within 10 s.

Changing the admin code

This function allows you to change the existing admin code. The admin code may contain between 4 and 8 digits. The digits cannot all be the same; at least one of them must be different.

The admin code can be changed via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.		Press 3.		The status LED lights up green on the left.
2.		Press ✓.		The status LEDs light up green on the left and yellow on the right.
3.		Enter the old admin code on the keypad.	-	-

Step	Action	Description	Display	
4.		Press ☑.		The status LEDs light up yellow.
				The status LEDs light up red.
		The old admin code was not recognised. Enter the admin code from the beginning again.	-	-
5.		Enter the new admin code on the keypad.	-	-
6.		Press ☑.		The status LEDs light up yellow on the left and green on the right.
				The status LEDs light up red.
		The required admin code has already been assigned as a user code. Enter the admin code from the beginning again.	-	-
7.		Enter the new admin code again on the keypad.	-	-
8.		Press ☑.		The status LEDs light up green.
				The status LEDs light up red.
		The two entries do not match. The new admin code has not been saved. Enter the admin code from the beginning again.	-	-
9.	No action required.	-		Status LEDs are off.

The new admin code is saved. The system is in normal mode.

Setting the automatic back-illumination

The brightness threshold for switching on the automatic back-illumination can be set using percentage values. By default, the brightness threshold is set to 10%. Enter the required percentage value:

- 0 = automatic back-illumination off;
- 1 to 100 = brightness threshold settings between highly sensitive and highly insensitive.

The automatic back-illumination is set via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.	5 JKL 1	Press 5, 1 and the value of the required brightness threshold. E.g. 7, 0 for 70%.		The status LED lights up green on the left.
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
	✓	Something has been entered incorrectly. The brightness threshold was not changed. Enter the admin code from the beginning again.	-	-
3.	No action required.	-		Status LEDs are off.

The automatic back-illumination has been set. The system is in normal mode.

Setting the brightness of the back-illumination

The brightness of the back-illumination can be set using 4 predefined modes. By default, the back-illumination is set to 100%. Enter the number of the required mode:

- 0 = back-illumination off;
- 1 = back-illumination at 33%;
- 2 = back-illumination at 66 %;
- 3 = back-illumination at 100%

The back-illumination brightness is set via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.	5 JKL 2 ABC	Press 5, 2 and the number of the required mode.		The status LED lights up green on the left.
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
	✓	Something has been entered incorrectly. The brightness was not changed. Enter the admin code from the beginning again.	-	-
3.	No action required.	-		Status LEDs are off.

The back-illumination brightness has been set. The system is in normal mode.

Setting the relay switching time

The switching time for the relay can be set up to 99.9 in 0.1-second increments. Enter the required relay switching time in tenths of a second. E.g.: 60 for 6 s; 100 for 10 s; 300 for 30 s. By default, the switching time is set to 3 seconds. When the time is set to 0, the relay operates as a switch: the relay changes its switching status when a finger is detected and it remains in that status until another finger is detected.

The relay switching time is set via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.	5 JKL 3 DEF	Press 5, 3 and the value of the required relay switching time. E.g. 1, 0, 0 for 10 s.		The status LED lights up green on the left.
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
	✓	Something has been entered incorrectly. The relay switching time was not changed. Enter the admin code from the beginning again.	-	-
3.	No action required.	-		Status LEDs are off.

The relay switching time was set. The system is in normal mode.

Setting the signalling that indicates when a button has been pressed

4 predefined modes can be used to set the acoustic and optical signalling that indicates when a button has been pressed. By default, the acoustic and optical signals indicating that a button has been pressed are on. Enter the number of the required mode:

- 0 = acoustic and optical signals off;
- 1 = acoustic signals on and optical signals off;
- 2 = acoustic signals off and optical signals on;
- 3 = acoustic and optical signals on.

The signalling to indicate that a button has been pressed is set via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.	5 JKL 4 GHI	Press 5, 4 and the number of the required mode.		The status LED lights up green on the left.
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.

Step	Action	Description	Display	
	✓	Something has been entered incorrectly. The signalling was not changed. Enter the admin code from the beginning again.	-	-
3.	No action required.	-		Status LEDs are off.

The optical and acoustic signalling to indicate that a button has been pressed has been set. The system is in normal mode.

Setting an acoustic signal for opening

The acoustic signal for opening can be switched off and on. By default, the acoustic signal is switched on. Enter the number of the required status:

- 0 for switching off;
- 1 for switching on.

The acoustic signal for opening is set via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.	5 JKL 5 JKL	Press 5, 5 and the number of the required status.		The status LED lights up green on the left.
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
	✓	Something has been entered incorrectly. The signalling was not changed. Enter the admin code from the beginning again.	-	-
3.	No action required.	-		Status LEDs are off.

The acoustic signal for opening was set. The system is in normal mode.

Storing the user code

The system enables a maximum of 99 user codes to be enrolled.

A user code is any pin code which is used for triggering an action on the control panel, e.g. opening a door. The user code may contain between 4 and 8 digits. The digits cannot all be the same; at least one of them must be different.

NOTICE

To ensure the access control system remains secure, please remember the following when selecting a user code:

- Use long user codes.
- Use only numbers if possible.
- Use different codes for each of the authorised persons.

The user codes are stored via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.		Press 1.		The status LED lights up green on the left.
2.		Press ✓.		The status LEDs light up green.
3.		Enter the required user code on the keypad.	-	-
4.		Press ✓.		The status LED lights up green on the right.
				The status LEDs light up red.
		The user code is already present. Enter the admin code from the beginning again.	-	-
5.		Enter the required user code again on the keypad.	-	-

Step	Action	Description	Display	
6.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
	✓	The two entries do not match. The user code was not stored. Enter the admin code from the beginning again.	-	-
7.	No action required.	-		Status LEDs are off.

The user code was stored. The system is in normal mode.

Use

Opening a door

The primary purpose of the product is to open doors. The system is in normal mode.

Step	Action	Description	Display	
1.		Enter a stored user code on the keypad.	-	-
2.	✓	Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
		The user code was not recognised. Repeat the procedure beginning at step 1.	-	-
3.	No action required.	The door opens.		Status LEDs are off.

The system is in normal mode.

NOTICE

If the code is entered incorrectly 3 times, there will be a 1-minute lock. If the code is entered incorrectly another 3 times, there will be a 15-minute lock. There will be another 15-minute lock each time the code is entered incorrectly after that.

NOTICE

You can also open the door using the digital input (PIN 7, 8) on the *ekey home CP mini 1*.

Deleting the user code

You can delete individual user codes for a user. To do this, you require the user code to be deleted.

A user code is deleted via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.		Press 2.		The status LED lights up green on the left.
2.		Press ✓.		The status LEDs light up green on the left and red on the right.
3.		Enter the user code to be deleted on the keypad.	-	-
4.		Press ✓.		The status LEDs light up green.
				The status LEDs light up red.
		The user code is not known. The user code was not deleted. Enter the admin code from the beginning again.	-	-
5.	No action required.	-		Status LEDs are off.

The user code was deleted. The system is in normal mode.

Resetting the system to default settings

You can reset the system to the default settings using the code pad, the control panel or the digital input (*ekey home control panel micro 1* only). Use whichever device is most easily accessible.

The code pad is reset to its default settings. All user codes will be irrecoverably deleted. The admin code is reset to the default setting 9999, the relay switching time to 3 seconds, the brightness threshold to 10% and the brightness value to 100%. The acoustic and optical signalling that indicates when a button has been pressed, and the acoustic signal for door opening, are both switched on. If the settings are reset via

the control panel, the coupling between the control panel and code pad is disconnected.

Via the code pad

Settings are reset to the default via the admin menu. To get to the admin menu, enter the admin code.

See Entering the admin code, page 9.

The system is in the admin menu.

Step	Action	Description	Display	
1.		Press 4.		The status LED lights up green on the left.
2.		Press ✓.		The status LEDs light up red.
3.		Enter the admin code on the keypad.	-	-
4.		Press ✓.		Status LEDs are off.
				The status LEDs light up red.
		The admin code was not recognised. The system was not reset. Enter the admin code from the beginning again.	-	-
5.	No action required.	-		Status LEDs flash yellow alternately.
6.	No action required.	-		The upper status LED flashes green.

The code pad has been reset to its default settings. The system is in normal mode.

Via the control panel

The default settings are reset via the control panel.

Step	Action	Description	Display	
1.		Press the button using the operating rod (*ekey home CP mini 1*) or a small screwdriver (*ekey home CP micro 1*) and hold it down for at least 4 sec.		Status LEDs flash yellow alternately.
2.	No action required.	-		The top status LED on the ekey home CP mini 1 flashes red and the LED on the *ekey home CP micro 1* flashes green.

The control panel and the code pad have been reset to the default settings. You can now re-commission the system.

Via the digital input (ekey home control panel micro 1 only)

The process of resetting to the default settings is triggered by the digital input.

Schritt	Beschreibung
1.	Trennen Sie die *ekey home SE micro 1* von der Netzspannung.
2.	Press and hold the door switch or short-circuit the pins for the digital input and keep them in this state.
3.	Connect the *ekey home CP micro 1* to the mains supply.
4.	Keep the door switch held down or keep the pins for the digital input short-circuited for at least 5 sec.
5.	Release the door switch or remove the short-circuit. Within 5 sec, press the and hold the door switch or short-circuit the pins for the digital input for at least 500 ms.

The control panel and the code pad have been reset to the default settings. You can now re-commission the system.

See Commissioning devices and establishing normal mode, page 9.

Updating the software

We are working to constantly improve our products and add new functionalities. Correspondingly, updates are made available for the code pad and control panel software. More information about this can be obtained from your dealer.

Error displays and troubleshooting

Display		Meaning	Remedy
	The status LEDs light up red.	The user code was not recognised.	Enter the user code on the keypad again.
	The status LEDs light up red.	The numbers in the required user code are all the same. E.g.: 1111, 3333.	Enter a new user code containing at least one number that is different from the others. E.g.: 1115, 3733.
	The status LEDs light up red.	The required user code is too short or too long. E.g.: 321, 987654321.	Enter a new user code with a minimum of 4 digits and a maximum of 8 digits. E.g.: 4321, 87654321.
	The status LEDs light up red.	An error occurred when entering menu items or values.	Carefully read the description of the required function again.
	The status LED lights up red on the right.	An incorrect user code has been entered 3 times. 1-minute or 15-minute system lock.	After the 1-minute or 15-minute lock, enter a correct user code. The 1-minute or 15-minute lock will only count down if the power supply and data connection are present throughout.
	Status LEDs flash yellow alternately.	No bus connection to the control panel.	Check the wiring or commission the device.

If these suggestions fail to solve the problem, contact your reseller. If the system must be returned to ekey biometric systems GmbH, please ship it in suitable packaging. Improper packaging can lead to the warranty being voided.

Maintenance

The system is largely maintenance-free. For safety, clean fingerprints and dirt off the code pad from time to time using a damp (not wet), non-abrasive cloth. Use clean water without adding detergent.

Dismantling and disposal

Pursuant to Directive 2002/96/EC of the European Parliament and Council of 27 January 2003 on the sale, return and environmentally friendly disposal of electrical and electronic equipment (WEEE) supplied after 13/08/2005, electrical and electronic equipment is to be recycled and may not be disposed of with household waste. As disposal regulations within the EU can differ from country to country, please contact your dealer for further information as necessary.

Declaration of conformity

ekey biometric systems GmbH hereby declares that the product conforms to the relevant provisions of the Electromagnetic Compatibility Directive 2004/108/EC of the European Union. The complete text of the declaration of conformity can be downloaded from http://www.ekey.net/downloads.

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