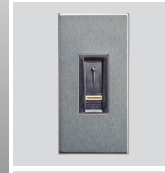
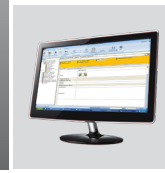
ekey

YOUR FINGER. YOUR KEY.





ekey home

en **OPERATING INSTRUCTIONS**

English

Translation of the original instructions - ID224/517/0/369

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General

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

These operating instructions are not subject to updating. We reserve the right to make technical modifications and change the product's appearance; any liability for errors and misprints is excluded.

Warranty and manufacturer's guarantee

The version of our general terms and conditions in force on the date of purchase shall apply. See http://www.ekey.net.

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
	References to sections of these instructions
	References to the mounting instructions
	References to the wiring diagram
□	Listing without specified order, 1st level
Displayed value	Displayed values
ekey home FS OM	Product names
MENU ITEM	Menu items
Button	Buttons

Abbreviations and terminology

CP	Control panel
DRM	DIN-rail mounted
ETS5	Engineering tool software; software used for planning and configuring home automation systems with KNX bus system
FS	Finger scanner
IN	*integra*; *ekey control panel* model
KNX	Name given to a field bus (data transmission facility) for home automation systems
WM	*Wall-mounted*; *ekey control panel* model

Event	Automated switching of individual or multiple consumers or actuators in an electrical system over the KNX bus system
Gateway	Data transfer point from one electronic system to another.
Home automation system	All electrical and electronic sensors and actuators in buildings which are connected via data transfer lines for the purpose of control and regulation.

Safety information

Risk of electrocution

DANGER

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 create a risk of fatal electrocution.
Only certified electricians are authorized to carry out the electrical installation work!

Tamper-proofing

Mount the *ekey home converter KNX RS-485* in a secure internal area in the distributor. This prevents tampering from the outside.

Product description

System overview

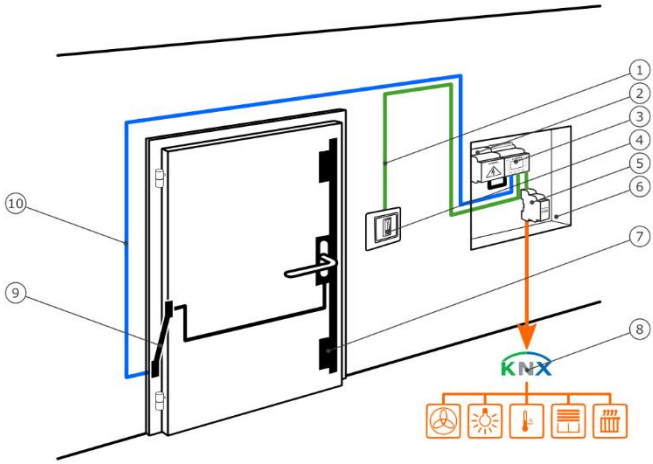


Fig. 1: Overview of the system

1 Connection to finger scanner
2 Power supply
3 ekey control panel
4 ekey home finger scanner
5 ekey home converter KNX RS-485
6 Distributor
7 Motorized lock
8 Home automation system with KNX bus system

Scope of delivery

Your *ekey home converter KNX RS-485* includes the following components:

- *ekey home converter KNX RS-485*
- Operating instructions
- Wiring diagram

Proper use and area of application

This product is a gateway. The product detects access information from an ekey biometric access control system. It processes this information and triggers events in KNX systems. This product is intended for installation in the distributor in the home and in small businesses.

Purpose of the product

Function of the *ekey home converter KNX RS-485*

The *ekey converter KNX RS-485* functions exclusively with the *ekey home* and *ekey multi* biometric access control systems from ekey. The *ETS5* software for planning and installing KNX systems is used to configure the *ekey home converter KNX RS-485*. The *ekey home converter KNX RS-485* can trigger 12 events in the KNX system.

Controls of the *ekey converter KNX RS-485*

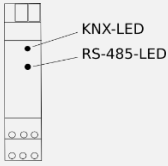
Controls	Function
	The LEDs display the system statuses of the *ekey converter KNX RS-485*.

Table 1: LED display table

Technical specifications

Name	Unit	Values
Supply	VDC	12-24
Power consumption	W	0.5
Temperature range	°C	0 to +50
IP code	IP	IP20
DIN-rail mounted	HP	1

Table 2: Technical specifications

System identification

The *ekey converter KNX RS-485* can be operated using different ekey access control systems. Before you begin the activation process, determine which access control system you have. This is indicated by the *ekey control panel*:

ekey home control panel mini 1
ekey home control panel mini 2

See Use with *ekey home control panel mini*, page 9.

ekey home control panel WM 1
ekey home control panel WM 3

See Use with *ekey home control panel WM/IN*, page 10.

ekey home control panel IN 1
ekey home control panel IN 2

See Use with *ekey home control panel WM/IN*, page 10.

ekey home control panel DRM 1
ekey home control panel DRM 2

See Use with *ekey home control panel DRM*, page 10.

ekey multi control panel DRM 4

See Use with *ekey multi control panel DRM*, page 14.

Installation

ATTENTION

Mount and wire 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.

Wire the system in accordance with the supplied wiring diagram.

NOTICE

The wiring diagram displays the wiring of the *ekey home converter KNX RS-485*. Refer to the wiring diagram for the finger scanner for the wiring of the *ekey home finger scanner* and the lock.

Activation

NOTICE

Extensive specialist knowledge is needed to configure a KNX system.
Activation should be carried out by a KNX specialist.

The *ekey home converter KNX RS-485* is ready for operation once the wiring configuration has been carried out and it has been connected to the power supply.

The KNX LED lights up green. The RS-485 LED flashes green irregularly.

The *ETS5* engineering tool software and the required hardware components are used to configure the *ekey home converter KNX RS-485*. The *ekey home converter KNX RS-485* is a KNX-certified device and can be found in the device database of the KNX organization using the ETS5.

Use

Configuring in a KNX system

The *ekey home converter KNX RS-485* can trigger 12 events in a KNX system.

Event "ekey Event 1" - "ekey Event 10"

Events are triggered when an authorized finger is recognized on the *ekey finger scanner*. Up to 10 events can be triggered. These events are referred to as "ekey Event 1" to "ekey Event 10". Every identified finger can trigger an event.

You can set the following functions for "ekey Event 1" to "ekey Event 10":

Function	Settings	Description
switch	on/off	Switches an actuator on or off.
send value	0–100%	A control value between 0 and 100% is defined.
call scene	[scene number]	A scenario programmed in the KNX system with the [scenario number] is triggered.

Table 2: Description of ekey event 1-10

All 3 functions can also be activated simultaneously.

Event "Unknown"

The ekey event "Unknown" is triggered when the *ekey finger scanner* does not recognize a finger.

NOTICE

No settings need to be adjusted for this function in the ekey system (ekey control panel).

You can set the following functions for the ekey event "Unknown":

Function	Settings	Description
switch	on/off	Switches an actuator on or off.
send value	0–100%	A control value between 0 and 100% is defined.
call scene	[scene number]	A scenario programmed in the KNX system with the [scenario number] is triggered.

Table 4: Description of event "Unknown"

Event "Security"

The ekey event "Security" is triggered when the ekey finger scanner does not recognize a finger several times in a row within a specified time span.

NOTICE

No settings need to be adjusted for this function in the ekey system (ekey control panel).

You can set the following functions for the ekey event "Security":

Function	Settings	Description
switch	on/off	Switches an actuator on or off.
amount of failed attempts	0–50	The ekey event is triggered when a finger is not recognized by the *ekey finger scanner* the selected number of times.
time zone	1-10 min	The number of unrecognized fingers must occur within this time span.

Table 5: Description of event "Security"

ekey home control panel mini 1
ekey home control panel mini 2

Use with *ekey home control panel mini*

No settings need to be configured on the *ekey home control panel mini*. The following ekey events are automatically triggered in the KNX system:

- If a finger is recognized, the event "ekey Event 1" is triggered.
- If a finger is not recognized, the ekey event "Unknown" is triggered.
- The ekey event "Security" is triggered when the set conditions are met.

Use with *ekey home control panel WM/IN*

ekey home control panel WM 1
ekey home control panel WM 3

ekey home control panel IN 1
ekey home control panel IN 2

NOTICE

For storing fingers, please see the *ekey home CP WM/IN* operating instructions.

When a finger is stored (see *ekey home CP WM/IN* operating instructions, section "Storing fingers"), it is assigned a number in the range of F1-F10. This assigned finger number defines which ekey event is triggered in the KNX system:

- If a finger is stored as finger number F1, then the event "ekey Event 1" is triggered in the KNX system.
- If a finger is stored as finger number F2, then the event "ekey Event 2" is triggered in the KNX system.
- Etc.

The ekey events "Security" and "Unknown" do not need to be configured in the *ekey home control panel WM/IN*. They are automatically triggered when the conditions are met.

Use with *ekey home control panel DRM*

ekey home control panel DRM 1
ekey home control panel DRM 2

NOTICE

In order to configure the *ekey home control panel DRM* for use with the *ekey converter KNX RS-485*, please see the *ekey home CP DRM* operating instructions.

Activating KNX

When operating the *ekey converter KNX RS-485* with the *ekey home control panel DRM*, the KNX function must be activated in the control panel.

Enter the security code into the control panel. The system displays the main menu.

Step	Action	Description	Display
1.		Press ^ or v until **SETTINGS** is selected.	Save user Delete user Fair mode Settings Reset
2.		Press OK.	Settings Digital input LED brightness Test mode Demo mode Security code KNX settings
3.		Press ^ or v until **KNX SETTINGS** is selected.	Settings Digital input LED brightness Test mode Demo mode Security code KNX settings
4.		Press OK.	KNX settings CV KNX available: N E01: F00 E02: F01 E03: F02 E04: F03
5.		Press ^ or v until **CV KNX AVAILABLE** is selected.	KNX settings CV KNX available: N E01: F00 E02: F01 E03: F02 E04: F03
6.		Press OK and set **CV KNX AVAILABLE** to **Y.**	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
7.		Press v until the desired ekey Event (E01–E10) is selected.	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
8.		Press OK	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
9.		Press ^ or v to select character 1. You are assigning a name to the ekey event 1.	KNX settings CV KNX available: Y E01: S00 E02: F01 E03: F02 E04: F03
10.		Press OK.	KNX settings CV KNX available: Y E01: S00 E02: F01 E03: F02 E04: F03
11.		Repeat steps 9 and 10 until you have finished entering the name of the ekey event.	KNX settings CV KNX available: Y E01: HOME SCENARIO E02: F01 E03: F02 E04: F03

Step	Action	Description	Display
12.	No action required	Repeat steps 7 to 11 for all additional ekey events.	KNX settings CV KNX available: Y E01: HOME SCENARIO E02: CHILDREN E03: F02 E04: F03
13.	ESC	Press ESC twice.	Enroll user Delete user Fair mode Settings Reset

The *ekey home control panel DRM* is now ready for operation with the *ekey converter KNX RS-485*.

NOTICE

If you do not wish to give the ekey Events 1-10 (E01-E10) descriptive names, then you can skip steps 7 to 12. Assigning descriptive names is helpful when carrying out further configurations of the system.

Configuring KNX

ekey events 1-10 are assigned to a finger via the **SAVE USER** process (see *ekey home CP DRM* operating instructions, section Saving users). In the storing process, the ekey event is assigned before the switching relay.

See *ekey home CP DRM* operating instructions, section “Saving users”.

Select **SAVE USER** in the menu. Carry out all steps up to **FINGER SELECTION**.

Step	Action	Description	Display
1.		Press ^ or v to select the desired finger.	Max 01N R K le thumb ri thumb finger ri index finger ri middle finger ri ring finger
2.		Press OK.	KNX event OK HOME SCENARIO CHILDREN F03 F04
3.		Press ^ or v to select the **EKEY EVENT**.	KNX event OK HOME SCENARIO CHILDREN F03 F04
4.		Press OK.	Max ri index finger Relay 1 Relay 2 Double relay
5.		Press ^ or v to select the relay function.	Max ri index finger Relay 1 Relay 2 Double relay
6.		Press OK.	Swipe finger or Press [ESC]
7.		Swipe your finger.	Save user Max -------1-------- 02N -------1-------- 03N -------1-------- 04N -------1-------- 05N -------1-------- 06N -------1--------

The ekey events “Security” and “Unknown” do not need to be configured in the *ekey home control panel DRM*. They are automatically triggered when the conditions are met.

Use with *ekey multi control panel DRM*

ekey multi control panel DRM 4

NOTICE

In order to configure the *ekey multi control panel DRM* for use with the *ekey converter KNX RS-485*, please see the *ekey multi CP DRM* operating instructions.

Activating KNX

When operating the *ekey converter KNX RS-485* with the *ekey multi control panel DRM*, the KNX function must be activated.

Enter the security code into the control panel. The system displays the main menu.

Step	Action	Description	Display
1.	^/< / v/>	Press ^ or v until **SETTINGS** is selected.	Save user Delete user Logging Special mode **Settings** Reset
2.	OK	Press OK.	Settings Set time Master key plan Change relay times Config input DEV configuration DEV assignment
3.	^/< / v/>	Press ^ or v until **DEV CONFIGURATION** is selected.	Settings Set time Master key plan Change relay times Config input **DEV configuration** DEV assignment
4. +	OK	Press OK.	DEV configuration DEV1 - 80131004110777 DEV2 - DEv3 - DEV4 - KNX - converter
5.	No action required	Press ^ or v until **KNX-CONVERTER** is selected.	DEV configuration DEV1 - 80131004110777 DEV2 - DEV3 - DEV4 - **KNX - converter**
6.	OK	Press OK.	KNX settings CV KNX available: N E01: F00 E02: F01 E03: F02 E04: F03
7.	^/< / v/>	Press ^ or v until **CV KNX AVAILABLE** is selected.	KNX settings **CV KNX available: N** E01: F00 E02: F01 E03: F02 E04: F03

Step	Action	Description	Display
8.	OK	Press OK and set **CV KNX AVAILABLE** to **Y.**	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
9.	^/< / v/>	Press V until the desired ekey Event (E01–E10) is selected	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
10.	OK	Press OK.	KNX settings CV KNX available: Y E01: F00 E02: F01 E03: F02 E04: F03
11.	^/< / v/>	Press Λ or V to select the first character. You are assigning a descriptive name to the ekey event 1.	KNX settings CV KNX available: Y E01: S00 E02: F01 E03: F02 E04: F03
12.	OK	Press OK.	KNX settings CV KNX available: Y E01: S00 E02: F01 E03: F02 E04: F03
13.	^/< / v/>	Repeat steps 11 and 12 until you have finished entering the name of the ekey event.	KNX settings CV KNX available: Y E01: HOME SCENARIO E02: F01 E03: F02 E04: F03
14.	No action required	Repeat steps 9 to 13 for all additional ekey events.	KNX settings CV KNX available: Y E01: HOME SCENARIO E02: CHILDREN E03: EXIT E04: F03
15.	ESC	Press ESC three times to return to the main menu.	Enroll user Delete user Logging Special mode Settings Reset

The *ekey multi control panel DRM* is now ready for operation with the *ekey converter KNX RS-485*.

ekey events 1-10 are assigned to a finger and a finger scanner via the **SAVE USER** process (see *ekey multi CP DRM* operating instructions, section **SAVING USERS**). In the storing process, the ekey event is assigned after selecting the user, key, and finger.

NOTICE

In an *ekey multi* system, different ekey events can be triggered on the various finger scanners with one user finger.

See ekey home CP DRM operating instructions, section “Saving users”.

Select **SAVE USER** in the menu. Carry out all steps up to **FINGER SELECTION**.

Step	Action	Description	Display
1.		Press ∧ or ∨ to select the desired finger	Max S1 le middle finger le index finger le thumb ri thumb finger ri index finger ri middle finger
2.		Press OK.	KNX ri index finger OK DEV1: empty DEV2: empty DEV3: empty DEV4: empty
3.		Press ∧ or ∨ to select the desired **DEVICE**.	KNX ri index finger OK DEV1: empty DEV2: empty DEV3: empty DEV4: empty
4.		Press OK to select the desired ekey event 1.	KNX ri index finger OK DEV1: HOME SCENARIO DEV2: empty DEV3: empty DEV4: empty
5.	No action required	Repeat steps 3 and 4 in order to assign the ekey event to be triggered for the next finger scanner. If it is left **EMPTY**, identification on the respective finger scanner will not trigger an ekey event	KNX ri index finger OK DEV1: HOME SCENARIO DEV2: HOME SCENARIO DEV3: EXIT DEV4: empty

Step	Action	Description	Display
6.		Press Λ or V and select **OK**.	KNX ri index finger OK DEV1: HOME SCENARIO DEV2: empty DEV3: empty DEV4: empty
7.		Press OK.	Swipe finger or Press [ESC]
8.		Swipe your finger	Max enabled always S Finger R P S1 ----------X---- - - S2 ---------- - - S3 ---------- - -

The ekey events “Security” and “Unknown” do not need to be configured in the *ekey multi control panel DRM*. They are automatically triggered when the conditions are met.

Error displays and troubleshooting

Display	Meaning	Remedy
KNX LED and RS-485 LED off	There is no connection to the KNX bus system. OR There is no power supply.	Check the wiring of the KNX bus system. Check the function and the wiring of the power supply
KNX LED continuously green, RS-485 LED continuously green	There is no data connection to the *ekey finger scanner*.	Check that the *ekey finger scanner* is functioning properly. Check the wiring between the *ekey converter KNX RS-485* and the *ekey finger scanner*.

Maintenance

The product is installed in the distribution box. The mounting location protects the device from damage caused by dirt, dust, etc.; maintenance measures are not necessary.

Disposal

Pursuant to Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment, electrical and electronic equipment supplied after August 13, 2005 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 European Union directives.

Copyright

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ekey biometric systems GmbH operates a quality management system in compliance with EN ISO 9001:2015 and is certified accordingly.