



## USER MANUAL

# KERC609

RF and Wi-Fi Relay Controllers

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Manufacturer: KONSTRUCTHOR ALL S.R.L., Str. Teleorman nr. 53A, ap. 2, 400573 Cluj-Napoca, Cluj County, Romania

Read this manual before installation and keep it. Version v3, October 2026.

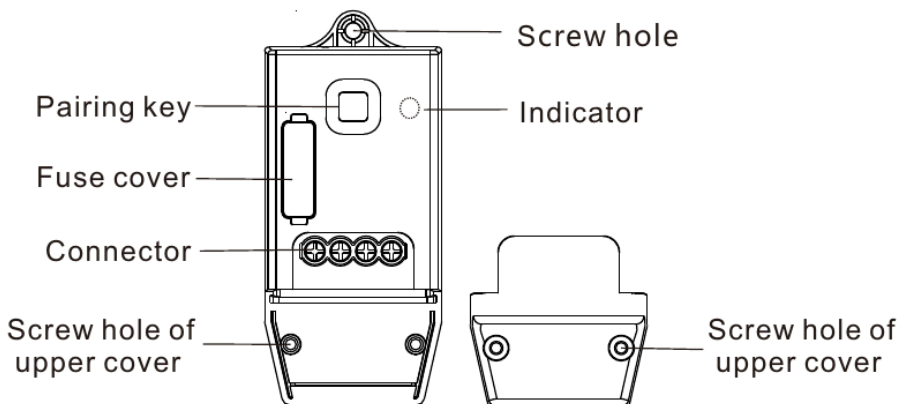
## Overview

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The KERC609 is a single-channel relay controller that switches lighting circuits or other loads on and off on command from KINETIC ENERGY switches (wireless, battery-free). It fits in a box, in a false ceiling or next to the luminaire.

- One channel, RF 433 MHz and Wi-Fi 2.4 GHz; you can also control it from the Tuya Smart / Smart Life app and by voice, through Amazon Alexa or Google Home.

You can combine switches and controllers freely: several rockers can control one controller (up to 10 rockers) and one rocker can control any number of controllers.



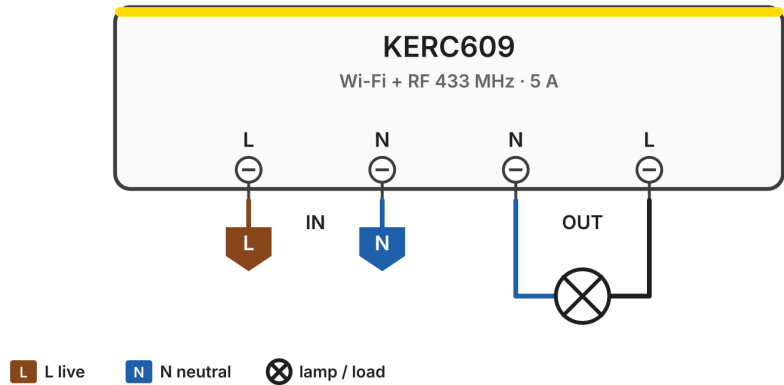
Pairing button, indicator, fuse cover, terminals and fixing holes

# Specifications

| Parameter                     | KERC609                                        |
|-------------------------------|------------------------------------------------|
| Supply voltage                | 100–240 V AC, 50/60 Hz                         |
| Number of channels            | 1                                              |
| Maximum current               | 5 A                                            |
| Maximum LED power             | 600 W                                          |
| Communication                 | RF 433 MHz + Wi-Fi 2.4 GHz (IEEE 802.11 b/g/n) |
| App                           | Tuya Smart / Smart Life                        |
| KINETIC ENERGY buttons stored | up to 10                                       |
| Receiver sensitivity          | -110 dBm                                       |
| Operating range               | up to 80 m outdoors / 25 m indoors             |
| Operating temperature         | -20...+55 °C                                   |
| Dimensions                    | 70 × 44 × 29 mm                                |

Note: Operating ranges are laboratory values. In practice they depend on the building (walls, reinforcement, metal enclosures).

# Connection



Wiring diagram — KERC609

Installation must be carried out only by a qualified electrician, with the power disconnected at the circuit breaker. Follow the L (phase) and N (neutral) symbols on the

housing: supply phase and neutral on the input, lamp on the output.

1. Disconnect the power at the circuit breaker.
  2. Connect the supply phase (L) and neutral (N) to the input terminals.
  3. Connect the lamp to the output terminals (L, N).
  4. Close the terminal cover and secure it with the screws.
- Method 1: stick the controller with the double-sided tape supplied, on a clean surface.
  - Method 2: fix the controller with self-tapping screws into wall plugs.

## Pairing with KINETIC ENERGY switches

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Each controller stores up to 10 rockers. One rocker can be paired with any number of controllers. You can pair with any rocker of a single, double or triple switch.

### Standard pairing

1. Power the controller.
2. Press and hold the pairing button for approximately 3 seconds, until the indicator blinks slowly (once per second). Release the button.
3. Press the selected rocker of the KINETIC ENERGY switch once. Do not press several times in a row.
4. The indicator goes out: pairing succeeded.
5. To pair more switches, repeat the steps.

After pairing, the switch controls the controller. With no load connected, the state is shown by the indicator: on when the relay is on.

### Directional pairing

Directional pairing separates switching on from switching off: one rocker switches on, the other switches off. This way, several controllers controlled by the same switch always stay in the same state. It works only with rocker switches and with 2-gang or 6-gang switches.

1. Power the controller.
2. Press and hold the pairing button for approximately 3 seconds, until the indicator blinks. Release the button.
3. For a rocker switch: press once at the top and once at the bottom, within a maximum of 0.5 seconds.
4. For a switch with rockers: press any rocker 4 times quickly, within a maximum of 1 second.

5. The indicator goes out: pairing succeeded.
6. Rocker switch: press the bottom to switch on and the top to switch off. Switch with rockers: the left rocker switches off, the right rocker switches on.

## Clearing pairings

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1. Press and hold the pairing button for approximately 12 seconds.
2. The indicator blinks, stays on, then goes out. Release the button.
3. All switches paired with the controller are cleared.
4. To use the controller again, pair it again.

## Tuya Smart / Smart Life app

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Use a 2.4 GHz Wi-Fi network; 5 GHz networks are not supported. The phone must be connected to the same network.

1. Install the Tuya Smart or Smart Life app and create an account.
2. Power the controller and check that the indicator blinks quickly (2 times per second).
3. If the indicator does not blink quickly: press and hold the pairing button for approximately 10 seconds. The indicator changes from slow blinking to fast blinking, then stays on. Release the button. After a few seconds the indicator blinks quickly.
4. In the app, tap "+" → "Add Device". The app detects the controller automatically (it appears as a Wi-Fi switch). Confirm.
5. Enter the Wi-Fi network name and password and follow the steps in the app.
6. After adding the device in the app, you can control the controller from anywhere and use it in scenes and schedules.

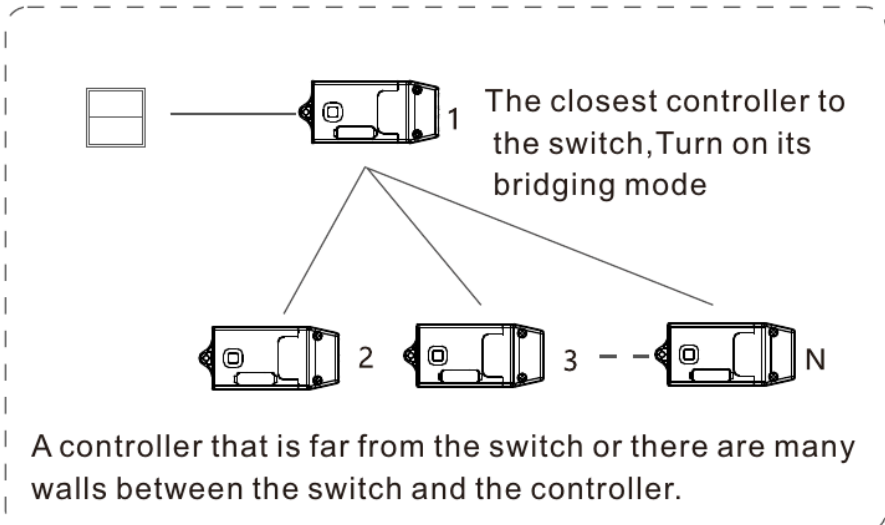
Keep the phone, controller and router as close together as possible while adding the device (under 5 m). If you change the router or the Wi-Fi password, repeat from step 2.

## Amazon Alexa and Google Home

1. Rename the controller in the app with an easy-to-pronounce name, for example "bedroom light".
2. In the Amazon Alexa or Google Home app, add the "Smart Life" skill and sign in with the account from the Tuya Smart / Smart Life app.
3. Let the assistant discover the devices.
4. Give a voice command, for example: "Alexa, turn on the bedroom light".

## Repeater mode (bridge)

Repeater mode (bridge) helps when the switch is far from one of the controllers, or when the signal passes through many walls, in a setup with one switch and several controllers. A controller with repeater mode active retransmits the commands it receives to the other controllers.

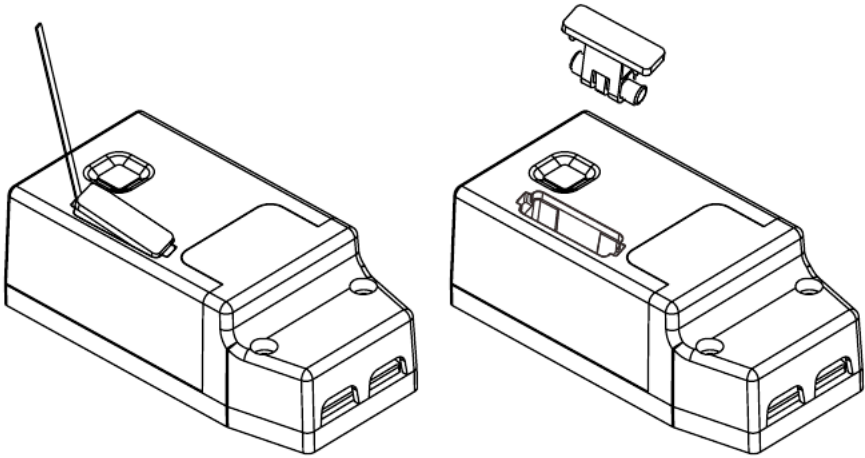


Controller 1, closest to the switch, has repeater mode active; controllers 2...N are further away or behind walls

1. Pair the switch with all controllers using directional pairing.
2. Choose the controller closest to the switch (controller 1 in the figure).
3. Press and hold its pairing button for approximately 7 seconds. The indicator changes from slow blinking to fast blinking.
4. Release the button.
5. After a few seconds, the indicator blinks once every 2 seconds: repeater mode is active.
6. To deactivate, repeat steps 3–4.

## Fuse

The controller has an internal fuse, under a separate cover. If the load exceeds the rated current or there is a short circuit, the fuse can blow and the controller stops responding.



Opening the fuse cover

1. Remove the cause: check that there is no short circuit and that the load does not exceed the rated current.
2. Disconnect the power at the circuit breaker. **Do not open the cover while the controller is live.**
3. Open the fuse cover.
4. Check the fuse. If it has blown, replace it with one of the same type and specifications.
5. Close the cover, then restore power to the circuit.

## Troubleshooting

| Problem                                                                            | What to do                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| After power-up, the indicator does not light up when the pairing button is pressed | The fuse has probably blown (overload or short circuit). Remove the cause and check the fuse as described in the "Fuse" section, with the power disconnected.                                                                                                   |
| The LED lamp glows faintly when off                                                | Check that phase (L) and neutral (N) are connected to the input as shown by the symbols on the controller.                                                                                                                                                      |
| The controller does not react to the switch                                        | Pair again. If the switch is far away or behind thick walls, use repeater mode (bridge) on a closer controller.                                                                                                                                                 |
| KERC609 does not connect to Wi-Fi                                                  | Check that the indicator blinks quickly (2 times per second) before adding the device. If not, follow step 3 in the app section. Use a 2.4 GHz network, with a name without special characters. Keep the phone, controller and router within 5 m of each other. |
| KERC609 appears offline from time to time                                          | The router has probably reached its maximum number of connected devices (around 15 on typical routers). Disconnect devices you do not need or use a higher-performance router.                                                                                  |

## Safety instructions

- Installation must be carried out only by a qualified electrician, with the circuit switched off at the circuit breaker.
- For indoor use in dry rooms only, installed in a wall box, false ceiling or distribution board, out of direct reach.
- Do not exceed the maximum load in the specifications. For motors, transformers or other inductive loads, check compatibility before installation.
- Do not modify the product and do not use it if it is damaged.
- The product contains a radio transmitter. Metal enclosures and metal distribution boards reduce the operating range.

## Compliance and legal information

### Manufacturer

KONSTRUCTHOR ALL S.R.L. · Str. Teleorman nr. 53A, ap. 2, 400573 Cluj-Napoca, Cluj County, Romania. Phone +40 765 999 915 · office@konstructhor.ro · www.kinetic-energy.eu.

### Simplified EU declaration of conformity

Hereby, KONSTRUCTHOR ALL S.R.L. declares that the radio equipment type KERC609 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: [www.kinetic-energy.ro/declaratie-de-conformitate](http://www.kinetic-energy.ro/declaratie-de-conformitate)

### Frequency bands and maximum radio-frequency power transmitted

| Model   | Frequency band            | Maximum power transmitted                               |
|---------|---------------------------|---------------------------------------------------------|
| KERC609 | 433.31 MHz; Wi-Fi 2.4 GHz | -14.18 dBm e.r.p. (0.04 mW); 9.87 dBm e.i.r.p. (9.7 mW) |

There are no geographical restrictions on putting into service in the EU Member States.

### Waste electrical and electronic equipment (WEEE)



The crossed-out wheeled bin symbol means that the product must not be disposed of with household waste. At the end of its life, take it to a collection point for electrical and electronic equipment or return it to the shop where you bought it. Batteries must be taken separately to a collection point for used batteries.

## Warranty

For consumers, the seller is liable for any lack of conformity that exists at delivery and becomes apparent within two years of delivery (Directive (EU) 2019/771; in Romania, Government Emergency Ordinance no. 140/2021). Defects caused solely by incorrect installation, overload, moisture or unauthorised work are not covered. Keep your invoice.

KINETIC ENERGY is a registered trademark. Up-to-date manual and declaration of conformity: [www.kinetic-energy.eu](http://www.kinetic-energy.eu). Manual version: v3, October 2026.