RE-1K • RE-2K

RADIO REMOTE CONTROLLER

re12k_en 05/18

The RE-1K / RE-2K controller allows you to use keyfobs to control devices connected to relay outputs.

1. Features

- 1 [RE-1K] or 2 [RE-2K] control channels.
- Support for up to 16 keyfobs.
- Transmissions secured by KeeLoq code hopping.
- 1 [RE-1K] or 2 [RE-2K] relay outputs.
- OC type output signaling the activation of the relay output.
- LED indicator.
- Tamper switch activated by cover removal.

2. Electronics board

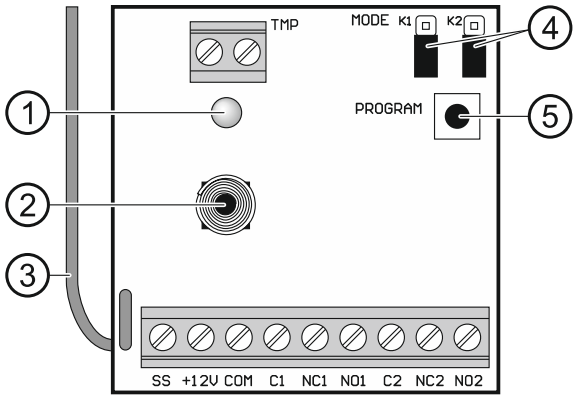

Fig. 1. Electronics board of the RE-2K controller.

(1) bicolor LED indicator:
ON in green – power OK,
ON in red – transmission has been received from keyfob,
flashing red – transmission has been received from keyfob with low battery.

(2) tamper switch.

(3) antenna.

(4) K1 and K2 pins. To be used for setting the operating mode of relay outputs. The digit stands for the number of the relay output.

Note: *The RE-1K controller has no K2 pins.*

(5) PROGRAM button. Allows you to enroll keyfobs, define the cut-off time of relay output or restore the factory default settings.

Terminals

SS - output signaling the activation of the relay output (turning the relay on in the pulse and monostable modes; switching the relay over in the bistable mode). The indication is provided in the form of three short (0.16 second) pulses. OC type output (shorted to common ground when active). You can connect e.g. a siren to the SS output.

+12V - power input (9...16 V DC).

COM - common ground.

TMP - NC type tamper output (opening the tamper switch opens the output). You can connect the TMP output to the appropriately programmed output of the alarm control panel.

C1, C2 - relay output common contact.

NC1, NC2 - relay output normally closed contact.

NO1, NO2 - relay output normally open contact.

Note: *The RE-1K controller has no terminals of relay output 2.*

3. Keyfobs

The controller supports the following SATEL 433 MHz keyfobs:

MPT-300 – 5-button keyfob,

T-4 – 4-button keyfob,

T-2 – 2-button keyfob,

T-1 – 1-button keyfob,

P-4 – 4-button keyfob,

P-2 – 2-button keyfob.

The controller is delivered with two T-2 keyfobs.

3.1 Keyfob battery replacement

The battery life depends on how the keyfob is used. The more frequently the buttons are pressed, the faster the battery drains. When the controller indicates that the battery is running low (LED; LV output), replace the battery as soon as possible.

There is a danger of battery explosion when using a different battery than recommended by the manufacturer, or handling the battery improperly.

Be particularly careful during installation and replacement of the battery. The manufacturer is not liable for the consequences of incorrect installation of the battery.

The used batteries must not be discarded, but should be disposed of in accordance with the existing rules for environment protection.

4. Installation

Disconnect power before making any electrical connections.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

The controller should be installed indoors, in spaces with normal air humidity. When selecting the installation place, take into consideration that thick walls, metal partitions, etc. will reduce the radio signal range. It is recommended that the controller be mounted high above the floor. This will allow you to get a better range of radio communication and avoid the risk of the controller being accidentally covered by people moving around the premises. Mounting the controller near electrical installations is not advisable, as this may cause malfunction of the device.

Note: *When closing the enclosure, make sure that the programming button is not pressed by the cables.*

5. Configuring

You can configure the controller using PROGRAM button and K1 and K2 pins.

5.1 Enrolling a keyfob

1. Press the PROGRAM button. The LED will start flashing green.
2. Press the keyfob button. The LED will start flashing red.

Note: *If the LED will turn on in green, it means that no more keyfobs can be enrolled or the keyfob is not supported.*

3. Press the same keyfob button again. The LED will turn on in green.

5.2 Restoring factory default settings and deleting keyfobs

When restoring the factory default settings, you can delete all keyfobs.

1. Press and hold down the PROGRAM button.
2. After about 7 seconds, when the LED starts flashing red, release the button.
3. When the LED stops flashing red and turns on in green, it means that the factory default settings of the controller have been restored.

5.3 Setting the operating mode for a relay output

You can set a different operating mode for each relay output. The output 1 pins are used as an example in the table below.

	**Pulse mode** [jumper set on the two lower pins] – the relay output is turned on when the keyfob button is pressed (up to 30 seconds – then the keyfob stops transmitting to prevent the battery discharge).
	**Monostable mode** [jumper set on the two upper pins] – pressing the keyfob button turns on the relay output for a preset time.
	**Bistable mode** [jumper removed from pins] – each pressing the keyfob button changes the relay output status to the opposite one.

5.4 Programming the relay output cut-off time

If the relay output works in the monostable mode, you can program the cut-off time for it ranging from 1 to approx. 250 seconds (by default: 5 seconds).

1. Press twice the PROGRAM button. The LED will go off.
2. Press the keyfob button that controls the relay output for which you want to set the time. The LED will start flashing green and red alternately.
3. Measure the time during which the relay output is to be turned on and press the keyfob button again. The LED will turn on in green.

6. Specifications

RE-1K / RE-2K controller

Supply voltage ..... 9...16 V DC
Standby current consumption ..... 16 mA
Maximum current consumption
RE-1K ..... 40 mA
RE-2K ..... 60 mA
Operating frequency band ..... 433.05 ÷ 434.79 MHz
Relay output ..... 2 A / 24 V DC
SS output ..... 500 mA / 12 V DC
Operating temperature range ..... -10°C...+55°C
Maximum humidity ..... 93±3%
Dimensions ..... 118 x 72 x 24 mm
Weight
RE-1K ..... 71 g
RE-2K ..... 76 g

T-2 keyfob

Operating frequency band ..... 433.05 ÷ 434.79 MHz
Radio communication range (in open area) ..... up to 200 m
Battery ..... 23A 12 V
Operating temperature range ..... -20°C...+55°C
Dimensions ..... 35 x 70 x 15 mm
Weight ..... 27 g

Hereby, SATEL sp. z o.o., declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The declaration of conformity may be consulted at www.satel.eu/ce