

KOMFR

13.56MHz Card Reader



KONTAL

CE



Be sure to read the user manual before starting to use your device. Pay close attention to the required installation, electrical connection, and initial start-up sections, and carry out the specified steps one by one. After this stage, the product owner/user must keep this user manual in a known and accessible place throughout the product's service life.

- Keep the product in a dry environment. Otherwise, a malfunction may occur in the product.
- For products that operate with a battery, the battery is not covered by the warranty. Likewise, malfunctions caused by the battery running down or leaking in products that have reached the end of their shelf life are not covered by the warranty.
- All service and repair operations may only be carried out by Kontal Elektronik technical service. The product must not be tampered with by any other persons.
- The operating voltage of each product is specified on its label. Do not supply the product from any source other than this voltage value.



- ✓ Using the product in a manner that does not comply with the items specified above may cause fire, serious personal injury, or damage to the product or the structure it is installed in. Kontal Elektronik San. ve Tic. Ltd. Şti. accepts no responsibility for such situations caused by the user.
- ✓ This symbol will be used for important points in the following sections.



- ✓ Do not touch the product's power terminals with bare hands.
- This symbol will be used for voltage-related warnings in the following sections.



- This symbol on the label indicates that the product's supply voltage is DC.



- This symbol on the label indicates that the product has reinforced insulation.



- This symbol on the product or its packaging indicates that this product must not be treated as ordinary household waste. Instead, it must be handed over to the applicable collection points for the recycling of electronic equipment. Incorrect disposal of the product may have negative consequences for the environment and human health.



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- Make sure the system grounding has been carried out for the product to operate properly.

1.DESRIPTION

KOMFR is a card reader that operates at a frequency of 13.56 MHz. It operates on a DC 12V or DC 24V power supply. Up to 2000 cards can be registered in the device's memory. When a registered card is presented, it provides a dry contact relay output to perform door opening and similar control operations. KOMFR is suitable for use in apartments, offices, and other areas requiring access control.

1.1 BOX CONTENTS

1x KOMFR – 13.56MHz Card Reader	1x KOMFR User Manual 1x 4-Core Internal Cable
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**For custom orders, box contents may vary depending on the project or customer request.*

2.TECHNICAL SPECIFICATIONS

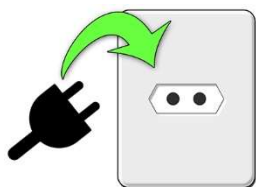
Model	KOMFR
Product Code	K022-01
Operating Voltage	12/24V DC
Operating Current	22mA @ 24V DC
Operating Frequency	13.56MHz
Operating Temperature	-20 °C +55 °C
Number of Channels	1
Contact Type	Dry Contact (NO)
Contact Rating	30V DC 1A / 125V AC 0.3A
Card Capacity	2000
Weight	57
Dimensions (W x H x D)	50 x 92.5 x 19mm

Device Installation and Card Registration

To use the KOMFR system, the administrator cards must first be registered to the device. If 3 administrator cards are not registered to the device, the system will not switch to normal operating mode.

Once the administrator cards have been registered, you can register up to 2,000 (max.) user cards to the product. Please follow the steps below to register and delete cards.

3.KOMFR – REGISTERING ADMINISTRATOR CARDS



Step 1: Connect the power

Make the power connection to the product and turn on the power.

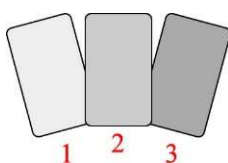


Step 2: Wait for the start-up signal

The blue and red LEDs light up together for about 2 seconds, after which the buzzer beeps 3 times.



Admin Cards



Step 3: Once the red LED becomes steady, present the cards

When the red LED starts staying on steadily, present the 3 administrator cards to the device one by one.

Step 4: Check the confirmation for each card

On each successful registration: the blue LED blinks, the buzzer beeps 3 times quickly, and then the red LED lights up steadily again. After seeing this signal, present the next card.

Step 5: Verify completion

When the red LEDs start blinking in sequence, all 3 cards have been learned; the device has switched to normal operating mode.

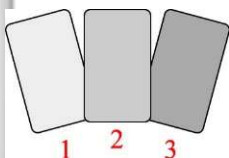


If 3 administrator cards cannot be taught to the product, the product will not enter normal operating mode. Make sure you have taught the correct number of administrator cards.

4. KOMFR – REGISTERING USER CARDS



To register user cards to the product, the product must be in normal operating mode (3 administrator cards registered). To put the product into normal operating mode, carry out the steps above.



Step 1: Present an administrator card in normal operating mode

While the red LEDs are blinking in sequence (normal operating mode), present any administrator card to the device.

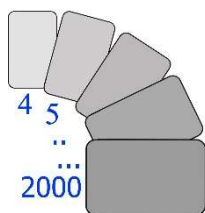


Step 2: Wait for administrator card confirmation

All LEDs light up steadily and the buzzer beeps 2 times. This signal only confirms that the card is an administrator card — learning mode has not been entered yet.

Step 3: Keep presenting the card

Do not remove the card from the device; keep presenting it. Wait until the buzzer beeps once more.



Step 4: Check the signal for entering learning mode

The buzzer beeps once and the blue LEDs start blinking. This indicates that the device has entered learning mode. You can now remove the administrator card.

Step 5: Present the user cards one by one

Present each user card you want to register to the system to the device one at a time.



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Step 6: Check the confirmation for each card

On each successful learning: the buzzer beeps 3 times, the blue LED blinks 3 times quickly. After seeing this signal, present the next card.

Step 7: Finish the process or wait for the timeout

If no card is presented for 5 seconds in learning mode, the device automatically returns to normal operating mode (the red LEDs blink in sequence again).

5.KOMFR – DELETING USER CARDS

Method 1: Deleting a Single Card in Learning/Deletion Mode

Step 1: Put the device into learning/deletion mode

Put the device into learning mode using the method described in the previous section (this mode is also the deletion mode).

Step 2: Present the card to be deleted

Present the registered user card you want to delete to the device.



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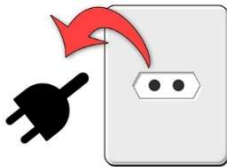
Step 3: Check the deletion confirmation

The red LED lights up and the buzzer beeps once, long. This signal indicates that the card has been deleted from memory.



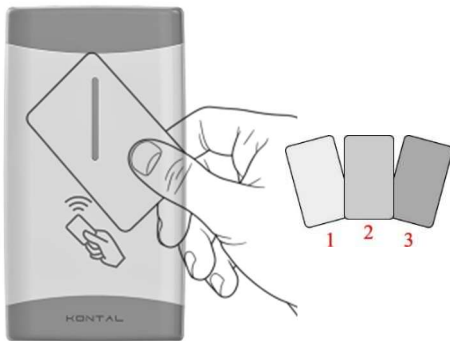
Note: Administrator cards cannot be deleted using this method or Method 2. To delete administrator cards, see section 6.

Method 2: Bulk Deletion (Deleting All User Cards)



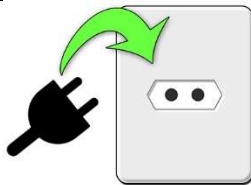
Step 1: Turn off the device's power

Disconnect the device's power connection.



Step 2: Place the administrator card on the device

Place any administrator card over the device's reading area and hold it there without lifting it.



Step 3: Turn on the power while the card is in place

Turn on the power to the device while the card is on it.

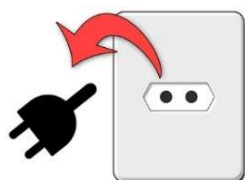
Step 4: Hold the card in place for 3 seconds

Keep holding the card in place for at least 3 seconds. The buzzer beeps 5 times, long, and the red LED blinks throughout this time.

Step 5: Check the bulk deletion confirmation

The red and blue LEDs light up steadily, and the buzzer beeps 3 times. With this signal, all user cards on the device have been deleted.

6.KOMFR – DELETING ADMINISTRATOR CARDS

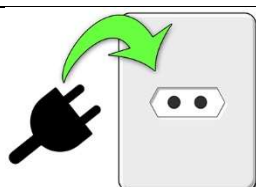


Step 1: Turn off the device's power

Disconnect the device's power connection.

Step 2: Press and hold the reset button on the back

Insert a screwdriver into the small hole on the back of the device and press and hold the button inside.



Step 3: Turn on the power while holding the button

Turn on the power to the device while holding the button.

Step 4: Hold the button for 3 seconds

Keep holding the button for at least 3 seconds. The buzzer beeps 5 times, long, the red LED blinks throughout this time, and then the red and blue LEDs light up steadily and the buzzer beeps once.

Step 5: Register the new administrator cards

This process only deletes the administrator cards registered on the device; user cards remain in memory and continue to work. The device waits for new administrator cards to be registered — repeat the steps in the "Registering Administrator Cards" section from the beginning.

7.KOMFR – LED & BUZZER STATUS TABLE

7.1 During Initial Start-Up

LED & Buzzer Status	Diagnosis
Buzzer beeps 3 times	There is no registered user card in the product's memory.
Buzzer beeps once	There is a user card in the product's memory.
Red LEDs Are Steadily On	3 user cards have not been taught to the product.

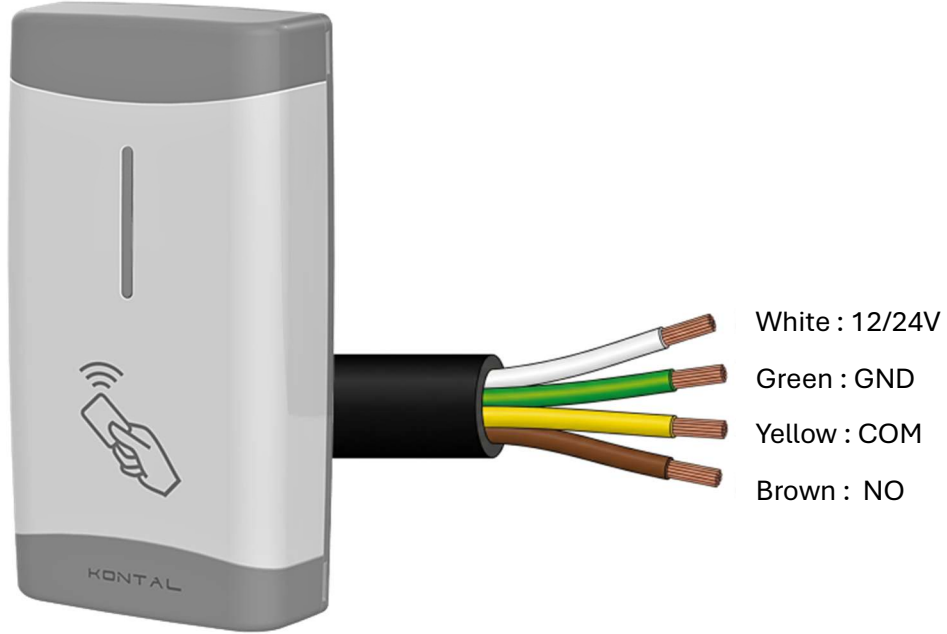
7.2 In Normal Operating Mode

LED & Buzzer Status	Diagnosis
Red LEDs are blinking in sequence	The product is in normal operating mode, waiting for a card to be presented.
Blue LEDs lit up, buzzer beeped once	A user card was presented to the product; a relay output was given for 1 second.
Blue and red LEDs lit up and the buzzer beeped 2 times	An administrator card was presented to the product. (Relay output cannot be obtained with administrator cards.)
After the administrator card was presented, the buzzer beeped once	The product entered learning/deletion mode.

7.3 In Learning/Deletion Mode

LED & Buzzer Status	Diagnosis
Blue LEDs are blinking	The product is in learning/deletion mode.
Blue LEDs blinked, buzzer beeped 3 times	The product learned a user card.
Red LEDs lit up, buzzer beeped once, long	The product deleted the presented user card.

8.KOMFR – WIRING DIAGRAM



9.KOMFR – INSTALLATION

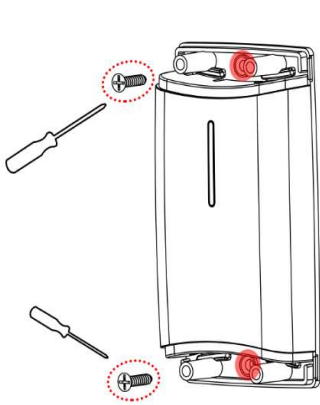


Figure 9.1 KOMFR screwed to flat surface.

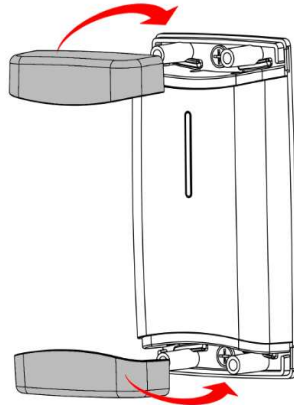


Figure 9.2 Fitting the KOMFR covers.

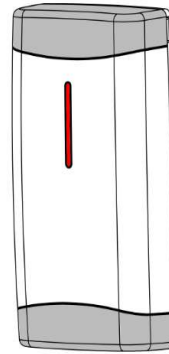


Figure 9.3 KOMFR Installation.

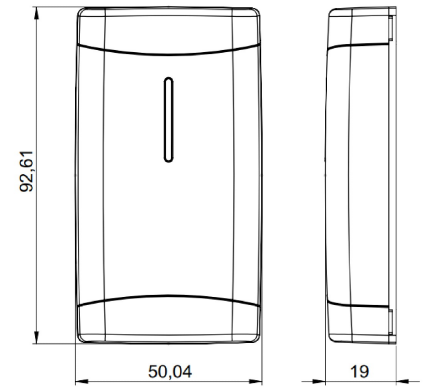


Figure 9.4 KOMFR Dimensions in mm

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