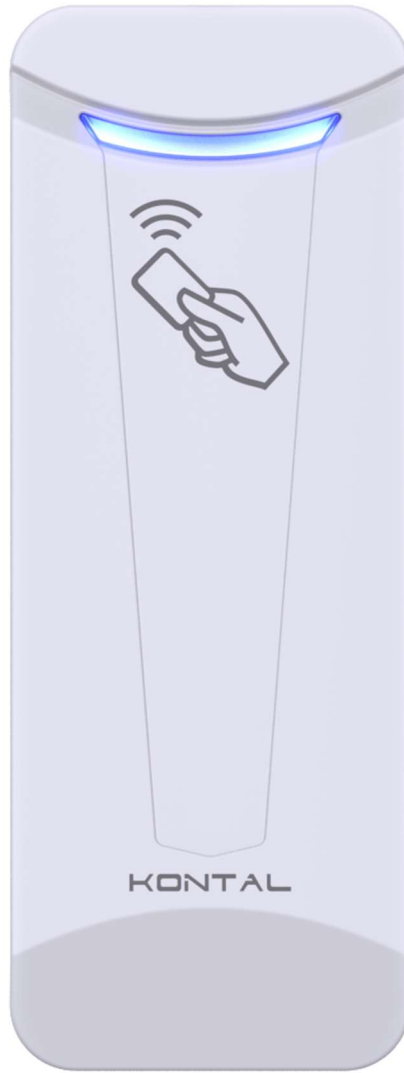


KO125

125KHz Proximity Card Reader



KONTAL

CE

Before operating the device, be sure to read this user manual carefully. Follow the steps described in the installation, electrical connection, and initial startup sections with attention. After completing these steps, the product owner/user must keep this manual in a known and easily accessible location for the entire service life of the product.



- Store the product in a dry environment. Otherwise, malfunctions may occur.
- In battery- or accumulator-powered products, batteries and accumulators are not covered under warranty. Similarly, failures caused by battery discharge or leakage in products that have exceeded their shelf life are not covered under warranty.
- All service and repair operations must be carried out exclusively by Kontal Elektronik technical service. The product must not be tampered with by unauthorized personnel.
- The operating voltage of each product is indicated on the label. Do not supply the device with a voltage different from the specified value.



- ✓ Failure to comply with the above-mentioned conditions may result in fire, serious personal injury, or damage to the product or the structure in which it is installed. In such cases caused by user negligence or misuse, **Kontal Elektronik San. ve Tic. Ltd. Şti.** assumes no responsibility.
- ✓ This symbol will be used to highlight important notes in the following sections.



- ✓ Do not touch the power supply terminals of the device with bare hands.
- This symbol will be used to indicate warnings related to voltage in the following sections.



- This symbol on the label indicates that the device operates with a DC supply voltage.



- This symbol on the label indicates that the device is equipped with reinforced insulation.



- This symbol on the product or its packaging indicates that the product must not be disposed of as household waste. Instead, it should be delivered to designated collection points for the recycling of electrical and electronic equipment. Improper disposal or destruction of the product may have adverse effects on the environment and human health.



- This document and its revisions are the legal property and responsibility of **KONTAL ELEKTRONİK SAN. VE TİC. LTD. ŞTİ.** Any unauthorized modification or alteration is strictly prohibited.



- Ensure that the system is properly grounded for the device to operate reliably.

1. Definition

KO125 is a proximity card reader operating at 125 kHz frequency. It operates with 12 V DC or 24 V DC power supply. The device can store up to 2000 cards in its internal memory. When a registered card is presented, the device provides a dry contact relay output to perform door opening and similar control operations. KO125 is suitable for use in apartments, offices, and other access control applications.

1.1 BOX CONTENT

1x KO125 – 125KHz Card Reader	1x KO125 User Manual 1x 4-Core Internal Cable
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**For special orders, the package contents may vary depending on the project or customer requirements.*

2. TECHNICAL SPECIFICATIONS

Model	KO125
Product Code	K021-01
Operating Voltage	12/24V DC
Operating Current	30mA @ 24V DC
Operating Frequency	125KHz
Operating Temperature	-20 °C +55 °C
Number Of Channel	1
Contact Type	Dry Contact (NO)
Contact Capacity	30V DC 1A / 125V AC 0.3A
Card Capacity	2000
Weight	86gr
Dimensions (Width × Height × Depth)	57 x 148 x 35,5mm



Do not apply power to the device outside the specified operating voltage. Otherwise, the device may be damaged.



When making the power connections, pay attention to the “+” and “-” polarity.

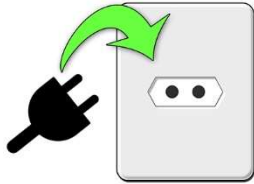


After the power connections are completed, do not touch the connection terminals.



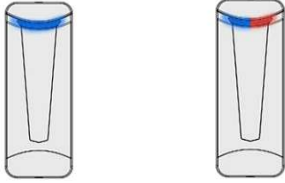
If the lock and the card reader are powered by the same transformer, use a transformer with sufficient capacity for the entire system.

3.KO125 – Teaching the First Card



Step 1:

Make the power supply connections of the device as shown in the wiring diagram. Then apply power to the device.



Step 2:

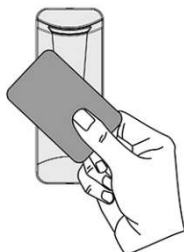
When power is first applied, the BLUE LED on the device will remain on for approximately 2 seconds. After that, the RED and BLUE LEDs will flash.



Step 3:

An audible warning will be heard from the device buzzer indicating that the device is active. There are two types of audible indications:

- 3 beep sounds: No cards have been previously registered to the device.
- 1 beep sound: There are already registered cards in the device memory.



Step 4:

Present the first card you want to register to the reader and hold it in place for approximately 3 seconds.



Step 5:

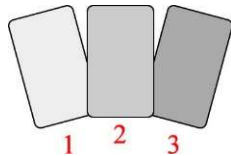
When the card learning process is successful, the BLUE LED will flash twice and the buzzer will emit two beep sounds. After this indication, the first card has been successfully registered. You may remove the card from the device.

4.KO125 – Teaching Administrator and User Cards

At this stage, since there are already cards registered in the reader unit, the system must first be switched to **card learning mode**. The **first three cards** presented to the reader are assigned as **Administrator Cards**. These cards are used to register new cards and to delete existing cards. During card registration or deletion, **at least one of these three Administrator Cards is required**. Any cards registered **after the first three cards** are saved as **User Cards**. User Cards cannot be used for card registration or deletion; they only allow the relay output to be activated when the card is presented. **Take special care not to lose the Administrator Cards**.



Administrator Cards



Step 1:

Present one of the Administrator Cards (or the first card registered to the device) to the reader and wait until the BLUE LED turns on.



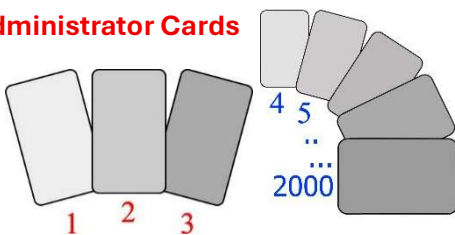
Step 2:

When the BLUE LED turns on, present the cards you want to register to the device one by one. Each time a new card is successfully registered, the BLUE LED flashes twice and the buzzer emits two beep sounds. After this confirmation, the next card may be presented. If no card is presented for 5 seconds, the device will automatically exit card learning mode.

Step 3:

The first three cards registered to the device are defined as Administrator Cards. These cards are used for card registration and card deletion operations. Administrator Cards cannot be used as User Cards and are not intended for access/door opening operations.

Administrator Cards



Step 4:

The 4th card and all subsequently registered cards are stored as User Cards. User Cards can only be used for access / relay output activation.

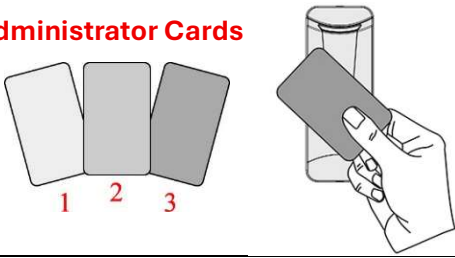
When a card is presented, the **buzzer (audible indicator)** of the device operates differently depending on the card type. This allows the user to easily identify whether the presented card is an **Administrator Card** or a **User Card**.



- **When an Administrator Card is presented:**
The buzzer emits **two beep sounds**.
- **When a User Card is presented:**
The buzzer emits **one beep sound**.

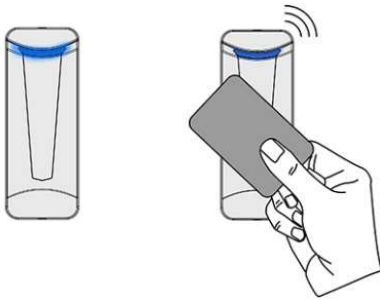
5.KO125 – Deleting User Cards

Administrator Cards



Step 1:

Present one of the Administrator Cards to the reader and wait until the BLUE LED turns on.

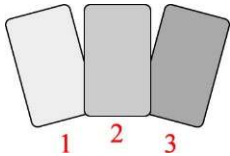


Step 2:

When the BLUE LED turns on, the device enters card learning and card deletion mode. In this mode, you may register new cards by presenting them to the device or delete existing cards by presenting the card to be deleted.

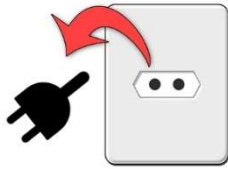
When a card is successfully deleted, the RED LED flashes and the buzzer emits two long beep sounds. This indication confirms that the card has been deleted. After the confirmation, remove the card from the device.

Administrator Cards



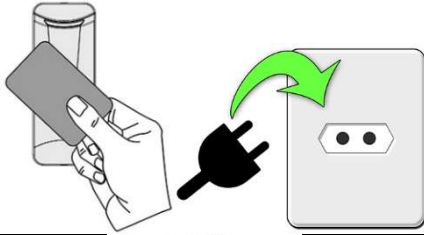
Administrator Cards cannot be deleted using this method. To delete Administrator Cards, follow the procedures described in the next steps.

6.KO125 – Deleting Administrator and User Cards



Step 1:

Disconnect the power supply of the device.



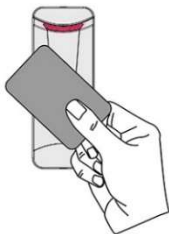
Step 2:

While the device is powered off, present one of the Administrator Cards to the reader area. Keep the card in position and then apply power to the device.



Step 3:

The BLUE LED will begin to flash rapidly.



Step 4:

Keep the card in the same position until the RED LED turns on and a beep sound is heard from the buzzer. When these indications are received, the device will be reset. To register cards again, repeat the same steps.



Deleting All Memory – Method 2:

Disconnect the power supply of the reader unit. While pressing and holding the RESET button located on the rear of the reader, reapply power to the device. After this operation, the BLUE LED will begin to flash rapidly. Continue holding the RESET button until the RED LED turns on and an audible warning is heard from the buzzer. When these indications are received, all memory of the device will be erased.

7.KO125 – Mounting

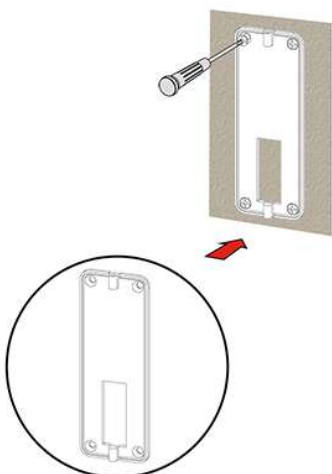


Figure 7.1 – KO125 – Wall Mounting Bracket

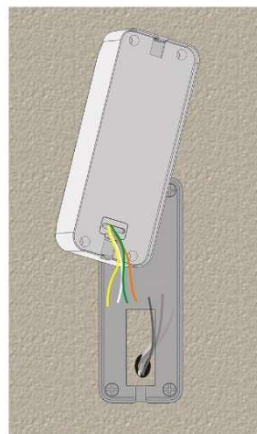


Figure 7.2 – KO125 – Cable Connections

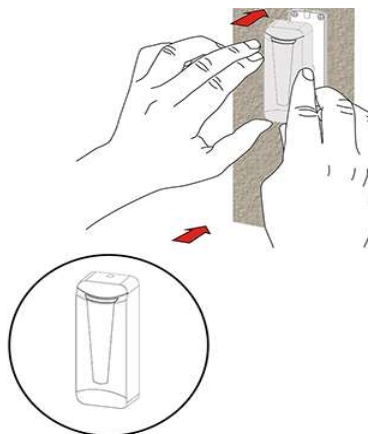


Figure 7.3 – KO125 – Installing the Device into the Mounting Bracket

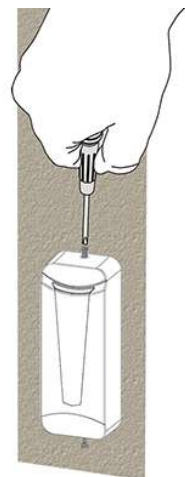


Figure 7.4 – KO125 – Securing the Device

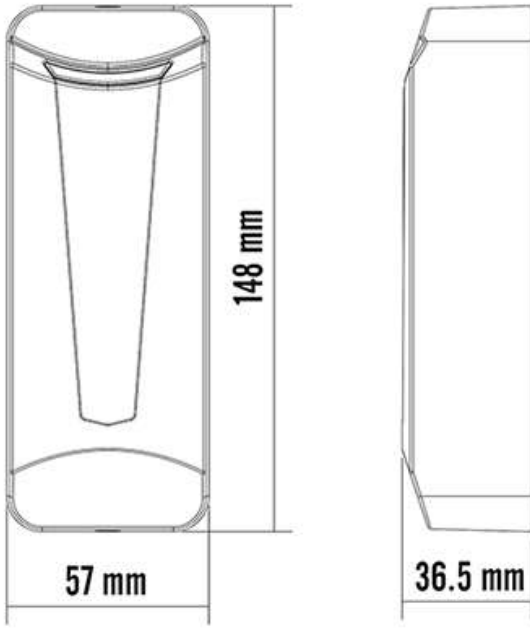
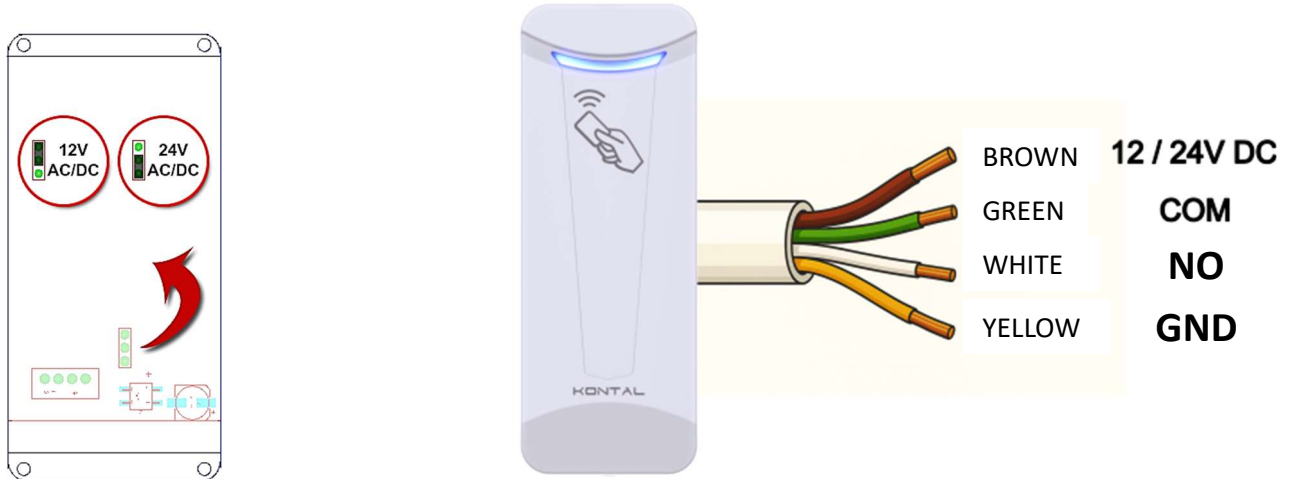


Figure 7.5 – KO125 – Dimensions (Unit: mm)

8.KO125 – Wiring Diagram



The product is manufactured to operate at **24 V DC** by default. If you wish to operate the device with a **12 V DC** power supply, you must disassemble the unit until the electronic board is accessible and set the **jumper selection** as shown in the figure.

WARNING:

Ensure that the system power is **completely disconnected during installation**.

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