UHPPOTE UT0111-08X

UHPPOTE UT0111-08X Wiegand 26-bit 125KHz RFID Proximity Card Reader Instruction Manual

Model: UT0111-08X

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the UHPPOTE UT0111-08X Wiegand 26-bit 125KHz RFID Proximity Card Reader. This device is designed for use in various access control applications, including parking systems, elevators, and logistics.
Important Note: This RFID reader functions as a component of an access control system and cannot operate independently. It requires connection to a compatible access controller.

Product Overview

The UHPPOTE UT0111-08X is a middle-range RFID proximity card reader operating at 125KHz. It supports EM-ID cards and outputs data in Wiegand 26-bit format. The reading distance varies based on the card type and thickness.

Key Features:

- **Data Output Format:** Wiegand 26-Bit.
- **Card Type Support:** 125KHz EM-ID Cards (EM4100/TK4100 compatible). *Does not support encrypted cards such as HID, Indala, Cobra, APCiK, Paradox, Radio, or Honeywell.*
- **Proximity Range:** Varies from 30cm to 100cm (11.8 inches to 39.4 inches) depending on card quality and thickness.
- **Applications:** Primarily used for parking, elevator, and logistics access control systems.
- **Construction:** Plastic casing with epoxy saturation, built-in antenna and buzzer.

Reading Distance Information:

The term "Middle Range" refers to the unit's capability when used with specific long-range cards (typically 2mm thickness). For standard EM cards, the reading range is as follows:

- **Special Long Range Card (2mm thickness):** Up to 80-100cm (31.5-39.4 inches).
- **Normal 2mm/0.08" Thickness Card:** Up to 60cm (23.6 inches).
- **0.8mm/0.03" Thickness Card:** Up to 40cm (15.7 inches).
- **Keyfob:** Approximately 30cm (11.8 inches).

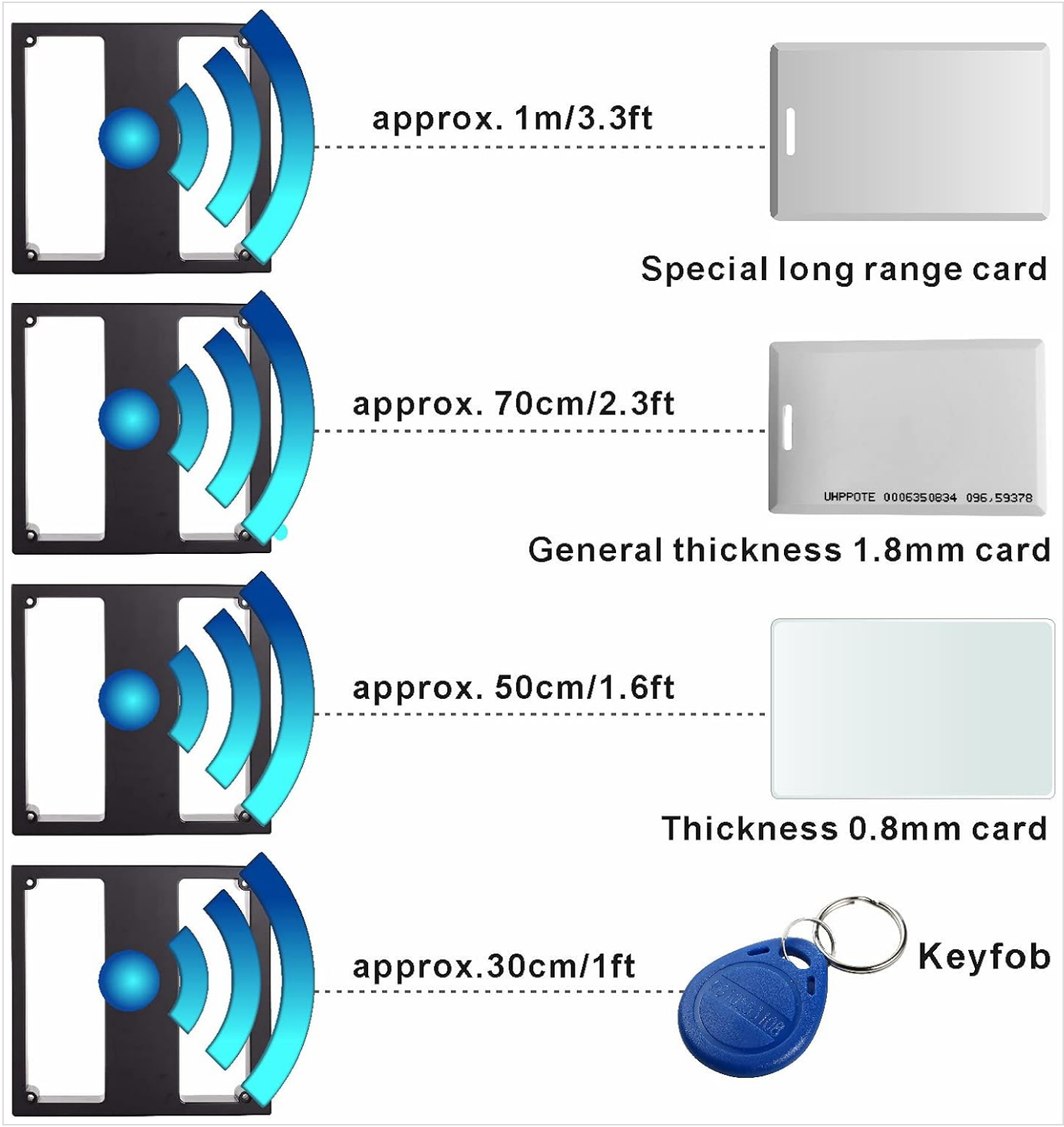

Image: This diagram illustrates the approximate reading distances for various card types and keyfobs with the UHPPOTE RFID reader. Distances range from approximately 1 meter for special long-range cards down to 30cm for keyfobs.

SPECIFICATIONS

Decode Time	<0.2s
Communication	Wiegand 26 bit
Card Type	EM card, EM compatible card, EM4100/TK4100
Frequency	125kHz
Induction Distance	Common Card: 30-40cm (11.8-15.7 inches) Long Range Proximity Card: 80-100cm (31.5-39.4 inches)

Power Supply	12VDC
Current Consumption	Data transfer range: max. 80mA Operating current: <200mA
Working Temperature	0°C ~ 70°C (32°F ~ 158°F)
Working Humidity	Less than 80%
Dimensions (LxWxH)	230x230x35mm (9.06x9.06x1.38 inches)
Material	Plastic casing & epoxy saturated
Built-in Features	Antenna, Buzzer
Item Weight	3.08 pounds
Model Number	UT0111-08X
UPC	701385687977

Setup and Installation

Proper installation is crucial for the optimal performance of the RFID reader. This device is designed to be integrated into an existing access control system.

Wiring Instructions:

Connect the reader to your access controller using the provided wiring. Ensure all connections are secure and follow the color-coded scheme below. The reader requires a 12VDC power supply.

Image: Rear view of the RFID reader with clearly labeled wiring connections. The labels indicate Red for VCC +12V, Black for GND, Green for D0/RX/4R+, White for D1/TX/4R-, and Blue for LED/CS, Yellow for BEEP.

- **Red:** VCC +12V (Power Supply)
- **Black:** GND (Ground)
- **Green:** D0 / RX / 4R+ (Wiegand Data 0)
- **White:** D1 / TX / 4R- (Wiegand Data 1)
- **Blue:** LED / CS (LED Control / Chip Select)
- **Yellow:** BEEP (Buzzer Control)

Connection Diagram:

Refer to the following diagram for connecting the RFID reader to an access controller. This diagram illustrates a typical setup for a single door access control system.

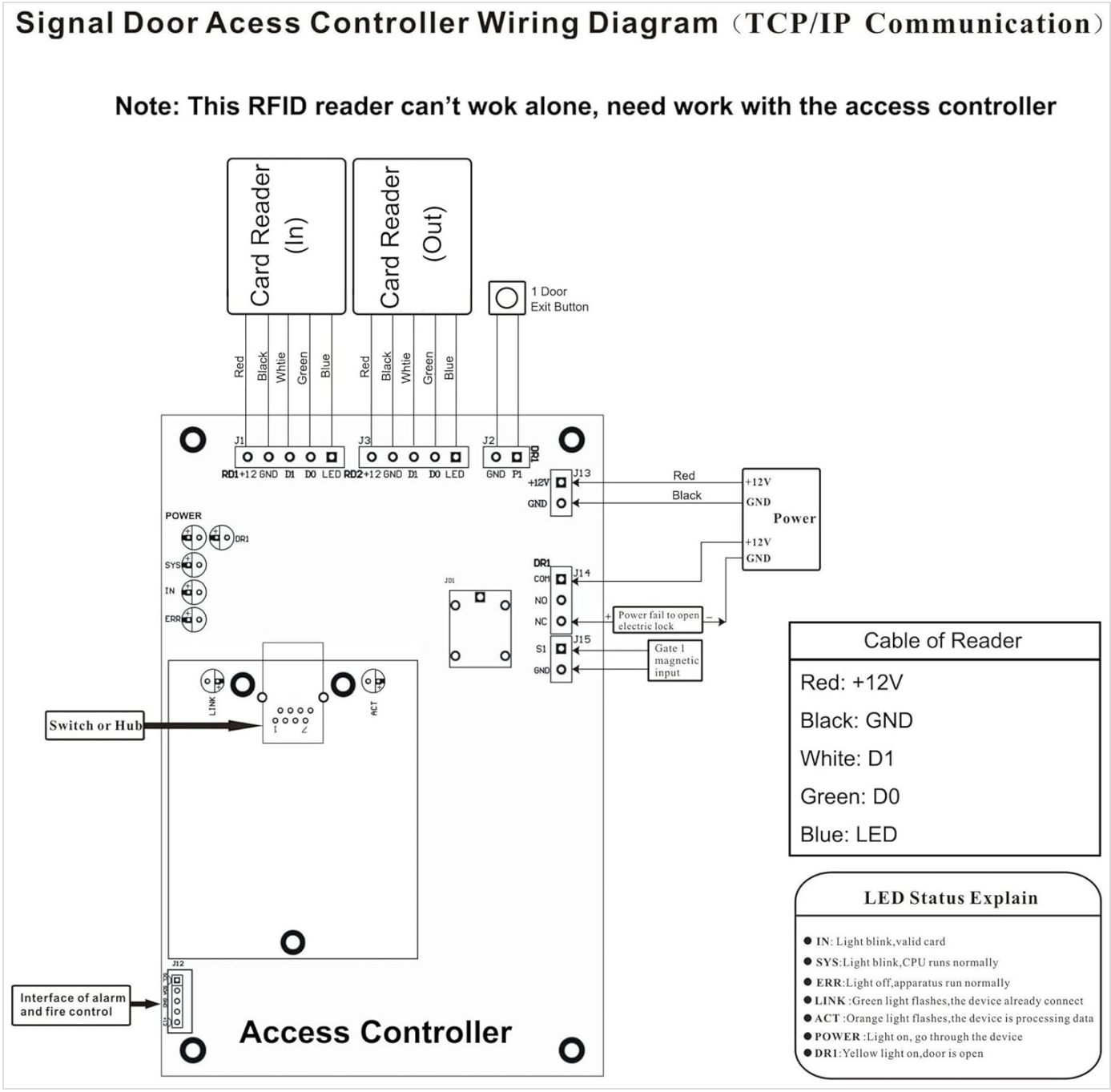

Image: A detailed wiring diagram showing how to connect the RFID reader (both 'Card Reader In' and 'Card Reader Out' sections) to an access controller, including power supply, data lines (D0, D1), LED, and an exit button. It also includes an explanation of LED status indicators.

LED Status Explanation (as per diagram):

- **IN:** Light blink, valid card
- **SYS:** Light blink, CPU runs normally
- **ERR:** Light off, apparatus run normally
- **LINK:** Green light flashes, the device already connect
- **ACT:** Orange light flashes, the device is processing data
- **POW:** Red light on, go through the device
- **DRV:** Yellow light on, door is open

Caution: This device is static sensitive. Handle with care and ensure proper grounding during installation to prevent damage.

Operating Instructions

Once properly installed and connected to an access controller, the UHPPOTE UT0111-08X reader operates by detecting compatible 125KHz EM-ID cards or keyfobs.

1. **Power On:** Ensure the reader is powered by a stable 12VDC source. The LED indicator on the reader should show a status indicating normal operation (refer to the LED Status Explanation in the Setup section).
2. **Present Card:** Hold a compatible 125KHz EM-ID card or keyfob within the reader's proximity range. The optimal reading distance varies by card type and thickness (see "Reading Distance Information" in Product Overview).
3. **Access Granted/Denied:** The reader will transmit the card's data to the connected access controller. The controller will then process this information and determine whether to grant or deny access. The reader's buzzer may sound, and the LED indicator may change to signal a successful read or access event.
4. **System Response:** The access controller will activate the connected lock or gate mechanism if access is granted.

The decode time for a card read is typically less than 0.2 seconds, providing quick authentication.

Maintenance

The UHPPOTE UT0111-08X RFID reader is designed for durability and requires minimal maintenance. Follow these guidelines to ensure its longevity and reliable performance:

- **Cleaning:** Gently wipe the reader's surface with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or excessive moisture, which can damage the casing or internal components.
- **Environmental Conditions:** Ensure the reader operates within the specified working temperature (0°C ~ 70°C) and humidity (less than 80%). Avoid exposing the device to extreme temperatures, direct sunlight for prolonged periods, or high humidity environments.
- **Physical Protection:** Protect the reader from physical impact or excessive vibration. The epoxy-saturated casing provides some protection, but severe impacts can still cause damage.
- **Wiring Integrity:** Periodically inspect the wiring connections for any signs of wear, corrosion, or loose connections. Ensure all cables are securely fastened and protected from environmental elements if installed outdoors.
- **Static Electricity:** As a static-sensitive device, avoid touching internal components without proper anti-static precautions.

Troubleshooting

If you encounter issues with your UHPPOTE UT0111-08X RFID reader, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Reader is unresponsive / No power.	No power supply, incorrect voltage, or loose wiring.	◦ Verify the 12VDC power supply is connected and functional. ◦ Check all wiring connections (Red for +12V, Black for GND) for security and correct polarity. ◦ Ensure the power source is providing stable 12VDC.
Reader does not read cards.	Incompatible card type, card presented out of range, or interference.	◦ Confirm you are using a 125KHz EM-ID card (EM4100/TK4100 compatible). Encrypted cards (e.g., HID, Indala) are not supported. ◦ Ensure the card is presented within the specified reading range (30-100cm). ◦ Check for metallic objects or strong electromagnetic fields near the reader, which can cause interference and reduce reading range. ◦ Verify data lines (Green D0, White D1) are correctly connected to the access controller.

Access is denied despite a successful card read.	Issue with the access controller or card programming.	◦ This reader only transmits card data. The access decision is made by the connected access controller. ◦ Check the access controller's logs and configuration to ensure the card is properly enrolled and has appropriate access permissions. ◦ Verify the Wiegand 26-bit communication between the reader and controller.
Reduced reading distance.	Interference, card quality, or mounting location.	◦ Avoid mounting the reader directly on or near large metal surfaces, as this can significantly reduce the reading range. ◦ Ensure the card being used is of good quality and appropriate thickness for the desired range. ◦ Check for other RF devices operating nearby that might cause interference.

Warranty and Support

For warranty information and technical support regarding your UHPPOTE UT0111-08X RFID Proximity Card Reader, please contact UHPPOTE customer service directly or refer to the official UHPPOTE website. Specific warranty terms may vary by region and purchase date.
When contacting support, please have your model number (UT0111-08X) and purchase details readily available.