

DEO-KR3

Proximity Card Reader & Remote Control



User Manual

INTRODUCTION

The KR3 is a compact, weather resistant programmable access control card reader that provides proximity entry for up to 2000 users, it reads both EM & HID card or key fob. It uses Atmel micro controller to ensure maximum performance in any environment, and the low-power circuit makes its service life prolonged. The KR3's unique feature is simple in design, easy to operate/program, and high reliability.

Features

- Weather resistant to IP66
- Reads 125KHz EM & HID card or key fob
- One programmable relay operation
- Pulse mode, Latch mode operation
- Remote infrared programmer
- Master Add/Master Delete cards
- 2000 users
- Card block enrolment
- Tri-colour LED status display
- Built in light dependent resistor (LDR) for anti tamper
- Buzzer for audible or silent mode
- Low temperature resistance(-40°C)

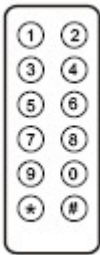
Specifications:

User Capacity Card/key fob	2000 EM card and HID card
Operating Voltage Idle Current	9~24V DC <40mA
Proximity Card Reader Radio Technology Read Range	EM&HID 125KHz Proximity Card 3-10cm
Wiring Connections	Relay Output, Exit Button
Relay Adjustable Relay Output Time Lock Output Load	One (NO, NC, Common) 1-99 Seconds (5 seconds default) 2 Amp Maximum
Environment Operating Temperature Operating Humidity	Meets IP66 -40°C ~60°C 20%RH-98%RH
Physical Colour KR3 Dimensions Unit Weight Shipping Weight Remote Dimensions	ABS Shell Black H:102 x W:48 x D:20mm 150g 250g H:85 x W:32 x D:5mm

Package Contents



KR3 Card Reader



Infrared Remote Control



Manager Cards & 10 user cards or key fobs



Diode IN4004 (For relay circuit protection)



Self Tapping Screws: 3*25mm



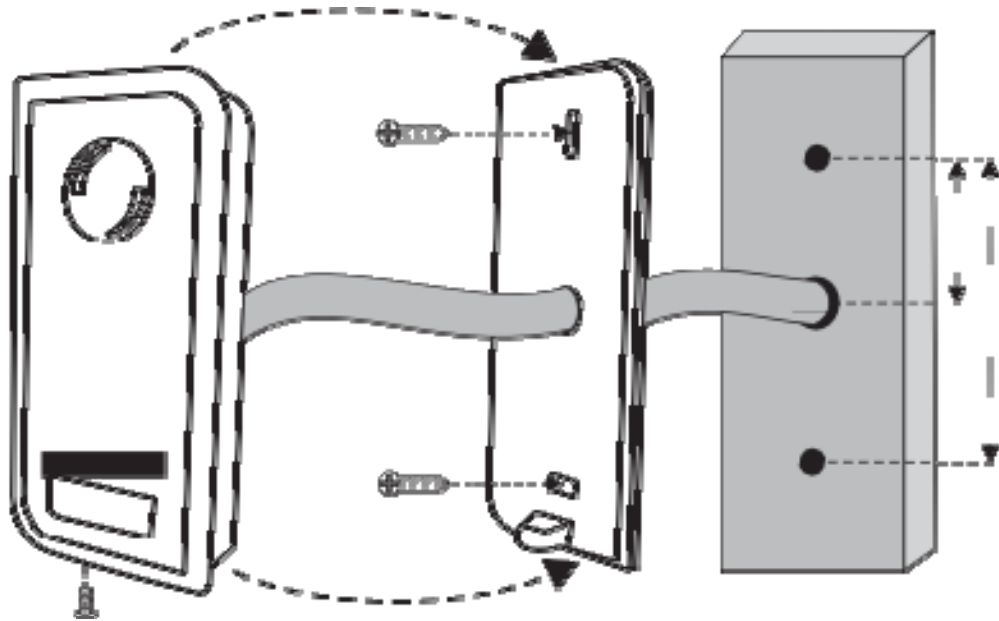
Wall Anchors



Screw Driver

INSTALLATION

- Remove the back cover from the unit
- Drill 2 holes(A,C) on the wall for the screws and one hole for the cable
- Knock the supplied rubber bungs to the screw holes(A,C)
- Fix the back cover firmly on the wall with 4 flat head screws
- Thread the cable through the cable hole(B)
- Attach the unit to the back cover

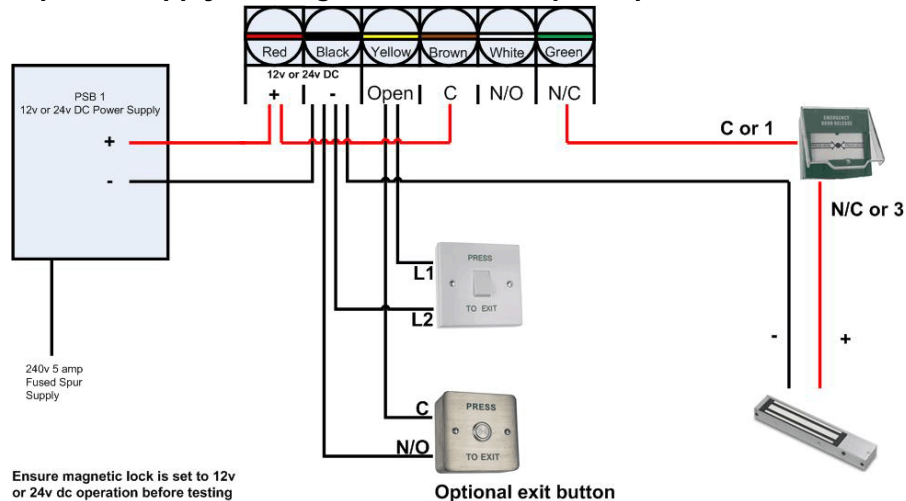


Wiring

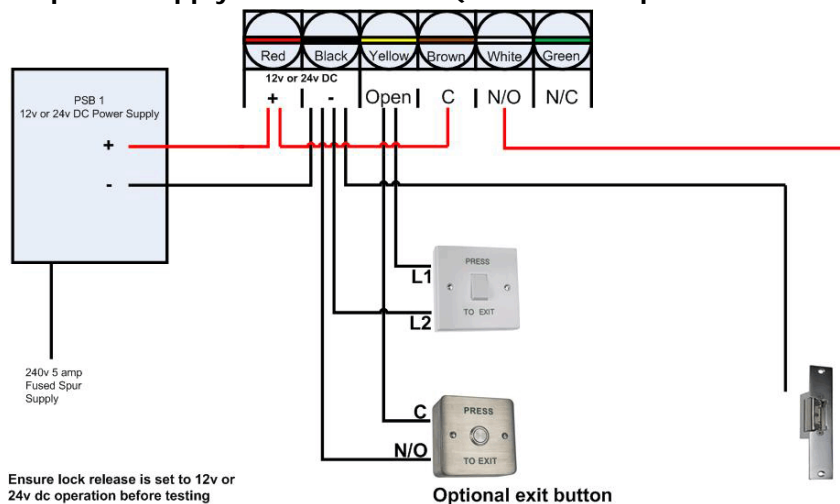
Wire Insulation Colour	Function	Notes
Red	Power +	9~24 Volts DC Regulated Power Input
Black	GND	Ground
White	NO	Normally Open Relay Output
Brown	COM	Common Connection for Relay Output
Green	NC	Normally closed Relay Output
Yellow	OPEN	Request to Exit input (REX)

Connection Diagram Examples

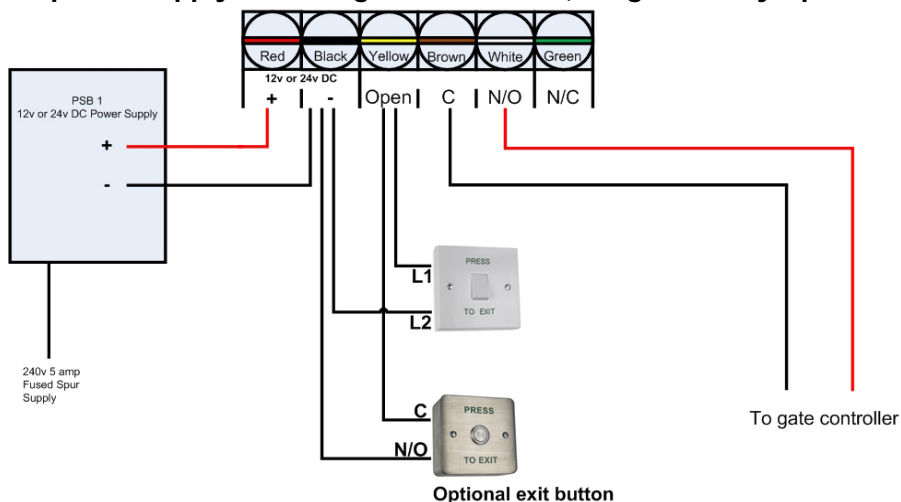
Common power supply for magnetic lock (Fail open – power to lock)



Common power supply for lock release (Fail secure – power to unlock)



Common power supply for auto gate controller (using Normally Open contact)



Attention: Install a 1N4004 or equivalent diode across the locking device when using a common power supply to prevent any back E.M.F as the reader might damage. (1N4004 is included in the packing)

PROGRAMMING

Programming will vary depending on access configuration. Follow the instructions according to your access configuration

General Programming Information – Two ways

- **Remote Control:** Please use the Infrared Remote Control to program the Reader. The infrared receiver head is near the LED, so when you program the reader, please direct the Remote Control to the LED.
- **User ID number:** Assign a user ID to the access card in order to track it. The user ID number can be any number from 1-2000. **IMPORTANT:** User IDs do not have to be preceded with any leading zeros. Recording of User ID is crucial. Modifications to the user require the User ID to be available.
- **Proximity Card:** Any 125KHz industry standard 26 bit EM and HID Proximity card or key fob.

Sound and Light indications

Operation Status	LED	Buzzer
Stand by	Red light bright	-
Enter into programming mode	Red light shines	One bleep
In the programming mode	Yellow light bright	One bleep
Operation error	-	Three bleeps
Exit from the programming mode	Red light bright	One bleep
Open lock	Green light bright	One bleep
Alarm	Red light Shines quickly	Bleeps

Enter and Exit Program mode for remote control programming

Programming Step	Keystroke Combination
Enter Program Mode	* (Master Code) # <i>Factory default is 123456</i>
Exit Program Mode	*

Set Master Code

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Update Master Code	0 (New Master Code) # (Repeat New Master Code) #
3. Exit Program Mode	*

Add User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Card: Using Auto ID number (Allows the DR1 to assign Card to next available User ID number) OR 2. Add Card: Select Specific ID number (Allows manager to define a specific User ID to associate the card to) OR 2. Add Card: by Card Number	1 (Present Card) # Repeat Step 2 for additional user cards 1 (User ID) # (Present Card) # The user ID is any number from 1-2000 1 (Input the 8/10 digit Card number) #
3. Exit	*

Delete User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Delete Card: By read card OR 2. Delete Card: Select Specific ID OR 2. Delete Card: by Card Number	2 (Read Card) # Repeat Step 2 for additional user cards 2 (User ID number) # The user ID is any number from 1-2000 2 (Input the 8/10 digits Card number) #

Set Relay Configuration

The relay configuration sets the behaviour of the output relay on activation

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Pulse Mode OR 2. Latch Mode	3 (1-99) # The relay time is 1-99 seconds. (1 is 50mS.) Default is 5 seconds 3 0 # Sets the relay to ON/OFF Latch mode
3. Exit	*

Set Strike-out Alarm

The strike-out alarm will engage after 10 failed card attempts. Default setting is OFF. The strike-out alarm can be set to deny access for 10 minutes after engaging or it can be set to disengage only after entering a valid card or Master code

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Strike-Out OFF OR 2. Strike-Out ON OR 2. Strike-Out ON (Alarm) Set alarm time	4 0 # (factory default) 4 1 # Access will be denied for 10 minutes 4 2 # 5 (0 ~ 30) # factory default is 1 minute Enter Master code # or valid user card to silence
3. Exit	*

Set Audible and Visual Response

Programming Step	Keystroke Combination	
1. Enter Program Mode	* (Master Code) #	
2. Control LED OR 2. Control Sounds	OFF = 6 1 # OFF = 6 3 #	ON = 6 2 # ON = 6 4 # (Factory defaults are ON)
3. Exit	*	

Add cards by Master Add Card

Programming Step	Action
1. Present the Master Add Card	Present the user card/s to be added
2. Re-present the Master Add Card	This confirms addition of the user card/s

Delete cards by Master Delete Card

Programming Step	Action
1. Present the Master Delete Card	Present the user card/s to be deleted
2. Re-present the Master Delete Card	This confirms deletion of the user card/s

Reset Procedure

Reset to Factory Default:

To reset to factory default, power off, press the Exit Button or short circuit the Black (GND) and Yellow (Open) wires, and then power on, there will be two bleeps, and the LED light will turn yellow, keep this condition until you hear a long bleep after 10 seconds. The LED will turn red to confirm factory default is successful

Reset to Factory Default to add new Mater Cards:

To reset to factory default, power off, press the Exit Button, or short circuit the Black (GND) and Yellow (Open) wires, and then power on, there will be two bleeps, and the LED light will turn yellow

Release the exit button or the Black (GND) and Yellow (Open) wires, then present any two 125KHz EM cards, HID cards or key fobs and the LED will turn red to confirm factory default is successful

The first card presented will be the Master Add Card, and the second card will be the Master Delete Card

Note: Reset to factory default, the user's card/key fob information is still retained

Erase all Cards

This will delete ALL User data

1, Enter Program Mode via the remote control: *(Master Code) #

2, Press 2 and enter the Master code again

3, Exit: *

All configuration data is retained

KR3 - Simplified Instruction	
Function description and input	Choose from the relevant functions below
Enter the programming mode	* - 123456 - # <i>then you can do the programming</i> <i>(123456 is the default factory master code)</i>
Change the master code	0 - new code - # - repeat the new code - # <i>(code: 6 digits)</i>
Add card user	1 - Read Card - # <i>(can add Cards continuously)</i>
Delete card user	2 - Read Card - # <i>(can delete Cards continuously)</i>
Exit from the programming mode	*