

CR-2000 Keypad / Card Reader



Instruction Manual

Read instructions carefully before installation

Product Overview

The CR-2000 is an inductive contact-less card reader in a metal water proof housing that also acts as a keypad control. The CR-2000 provides safe secure access control for any combination of 2000 users by the use of the Mifare pass card or individual user pass codes.

The CR-2000 has low power consumption (30mA standby) luminous keypad for nighttime use, Short circuit protection, tamper alarm output, and the Wiegand output for monitoring of user access.

The CR-2000 may also be used stand alone for access control of doors, gate and barrier arms.

Features

- Low 30 mA standby current
- Luminous keypad: for nighttime operation
- 2000 user support
- Independent password support (may use code or card for access)
- Keypad user delete (for lost or stolen cards or codes)
- Output short circuit protection
- Wiegand output: Wg26 for cards
- Tamper alarm output
- Doorbell button: Independent from circuit works with any doorbell
- User pass card code change (allows user to use code they can remember in case card is lost or forgotten)

Technical Specifications

| | |
|--------------------------------------|---|
| Operating Voltage | 9-25 VDC |
| Current draw standby | < / = 30 mA |
| Read range | 1.1 in (3cm) – 3.1in (8cm) |
| Capacity (users) | 2000 card and or pass codes |
| Operating Temperature | -13°F (-25°C) to 140°F (60°C) |
| Operating Humidity | 10% ~ 90% |
| Electric Lock output | < / = 3A |
| Alarm output | < / = 20A |
| Short circuit protection time | < / = 100 μ S |
| Activation time | 0 ~ 99 seconds (adjustable) |
| Size | 4.74in (120mm) x 2.2in (56mm) x 0.71in (18mm) |
| Certifications | CE |

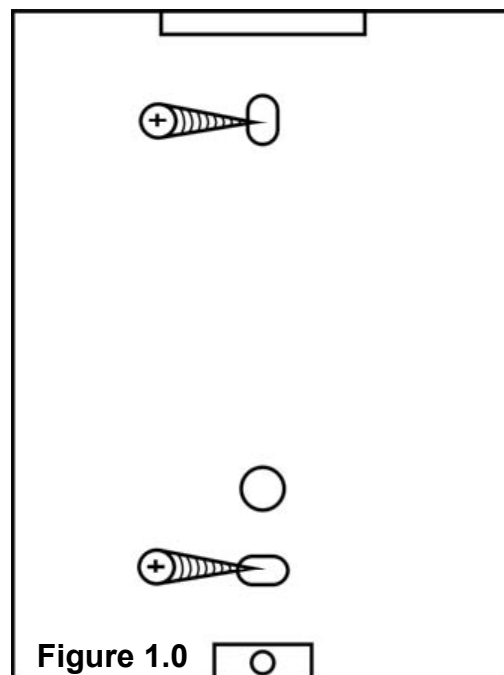
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Installation

Find location on mounting surface that has an opening of at least 5 x 2.2 inches.

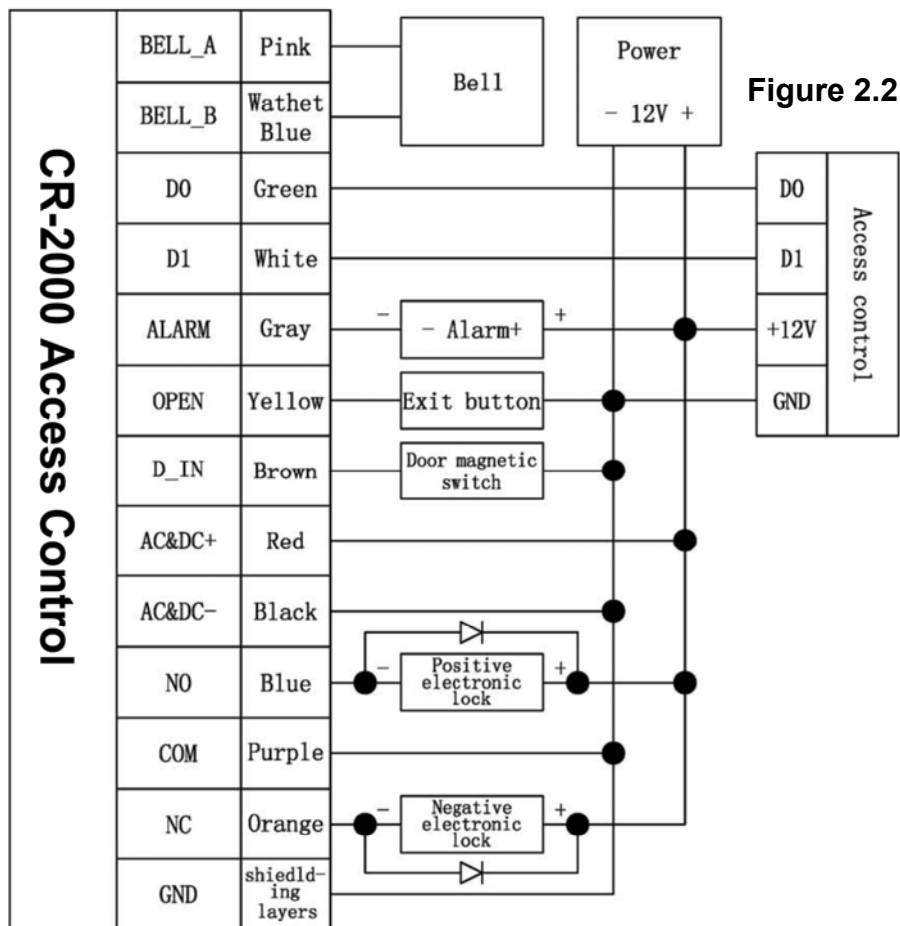
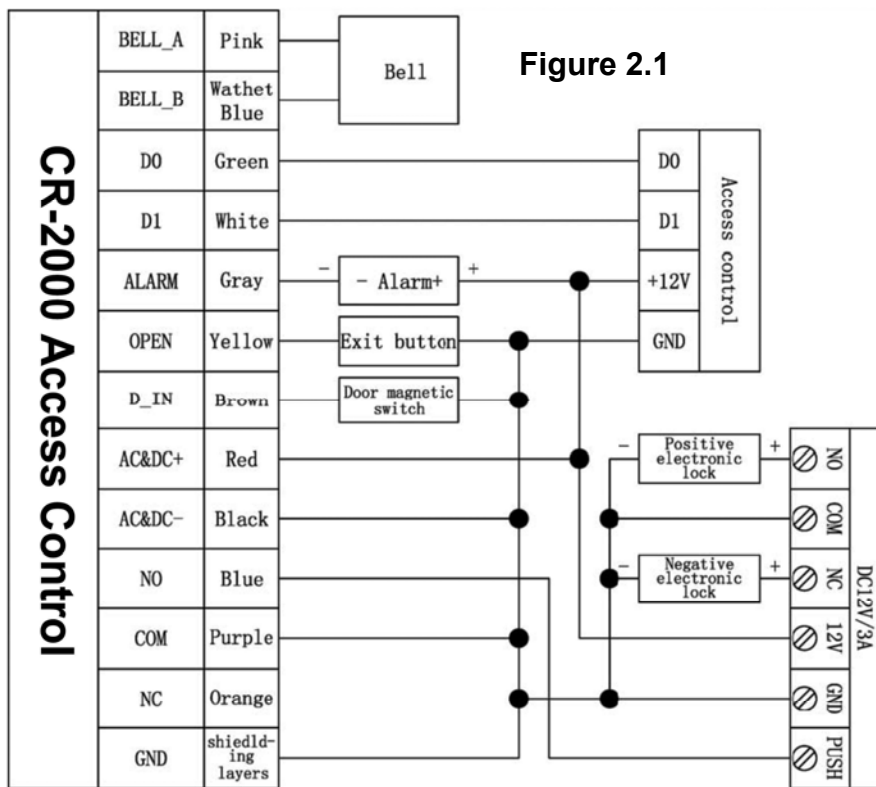
1. Remove mounting plate from the back of the unit to use as a template for the mounting screws. (Figure 1.0)
2. Drill mounting holes and affix mounting plate to the surface. Also fits to ordinary wall outlet junction boxes.
3. Make sure wires are routed so they are not damaged or shorted
4. Make connections per site requirements see schematics (Figure 2.0, 2.1, 2.2)
5. Install front cover to back cover and tighten unit in place.
6. Proceed to programming



Wiring

| No. | Designation | Color | Function |
|-----|-------------|-----------|---|
| 1 | BELL-A | PINK | DOOR BELL TERMINAL A |
| 2 | BELL-B | PALE BLUE | DOOR BELL TERMINAL B |
| 3 | D0 | GREEN | WG OUTPUT LINE (D0) |
| 4 | D1 | WHITE | WG OUTPUT LINE (D1) |
| 5 | ALARM | GREY | ALARM NEGATIVE (alarm positive connected to +12v) |
| 6 | OPEN | YELLOW | EXIT BUTTON (Other end of exit button connected to GND) |
| 7 | D-IN | BROWN | MAGNET SWITCH (Other end of magnet sw connected to GND) |
| 8 | AC/DC + | RED | POWER 9 – 25V DC + input |
| 9 | AC/DC - | BLACK | POWER 9 – 25V DC – input |
| 10 | N/O | BLUE | RELAY INTERNAL CONTACT (normally open) |
| 11 | COM | PURPLE | RELAY INTERNAL CONTACT (common) |
| 12 | N/C | ORANGE | RELAY INTERNAL CONTACT (normally closed) |
| 13 | GND | SHIELD | GROUND (earth ground) |

Figure 2.0



Programming

To enter programming mode press (system default)

1. To change Administrator pass code press , repeat

Note administrator pass code is 6 ~ 8 random numbers.
Please remember to record this new pass code for future reference.

2. Add Users

2.1 Adding cards automatic increase. Press , ,

... Press to end adding cards and exit program mode.

2.2 Adding designated card(s) manually. Press ,

, Press to end adding card(s).

2.3 Adding cards to designated ID locations, scan cards.

Press , , ...

2.4 Adding cards to designated ID locations manually.

Press ,

,

Note: Input ID number is 1 ~ 4 digits Example (1), (01), (001), (0001) with the range being 1 ~ 2000.

2.5 Adding ID number and Password number manually.

Press , , ...

This is for users with pass code only no cards. Code may be any four digit combination except for (1234, this is reserved by the system).

Note: represents the pound symbol key in all instruction sequences.

Programming

3. Deleting Users

3.1 Delete card(s) by swiping. Press , , ...

3.2 Delete designated card.

Press , , ...

3.3 Delete Designated ID number.

Press , , ...

3.4 Delete all: Press ,

4. Door Opening Setting

4.1 Card Open: Press , .

4.2 Card Plus Password Open: Press , .

4.3 Card or Password Open (Factory default): Press , .

5. Unlock Time Setting

5.1 Press , , Range 0 to 99 seconds, (factory default is 5 seconds).

6. Alarm Output Time Setting

6.1 Press , , Range is 0 to 3 minutes, (factory default is 1 minute).

7. Door Ajar Alarm Function

7.1 Press , Ignore (factory default)

7.2 Press , Send alarm signal

A. If door is ajar after 1 minute the alarm will trip sounding the built in buzzer for 1 minute and then turn off.

B. If door is forced open the built in alarm and the external alarm will trigger.

8. Security Mode

8.1 Press , Normal (factory default)

8.2 Press , Invalid Lock

Within 10 minutes multiple swipes of invalid card or input of invalid pass code 10 times the internal and external alarms will trigger.

User Operation

9. User password modify

9.1 With Pass Card: Press , ,
 , If this is first time use on a new card the default password is (1234).

9.2 With Pass Code Only: Press ,
 , For user without pass cards.

10. Door Open Operation

10.1 Card Open

10.2 Password open. Press If correct door will open. If incorrect code is entered you have 9 more attempts before unit locks and needs reset by administrator or swipe of valid card.

10.3 Card plus Password Open: If card is valid and user password is correct the door will open. If card or password is incorrect you will have 9 more attempts before unit locks and needs reset by administrator or valid card swipe and correct password entry.

11. Administrator Functions

11.1 Remove Alarms See section 1 page 3

11.2 Administering users, passwords, alarm settings, timing functions

Restore Factory setting

12. Restore factory settings:

- 12.1 Disconnect power
- 12.2 Press the # button
- 12.3 Restore power while holding the # button for 4 seconds
- 12.4 The CR-2000 will beep twice
- 12.5 Release the # button
- 12.6 Reset should be complete

Note: Restoring to factory setting will not delete user(s) data.

13. Audio / Visual Indication

| Operation State | Red LED | Green LED | Beeper | Notes |
|-------------------|------------|-----------|---------------|---------------------|
| Standby | Slow blink | Off | | |
| Key Activation | | | Beep | |
| Success | Off | On | Long beep | |
| Fail | | | 3 short beeps | |
| Enter Programming | On | Off | Long beep | Indicator is Orange |
| Set condition | On | On | | |
| Exit Programming | Slow blink | Off | Long beep | |
| Unlock | Off | On | Long beep | |
| Alarm | Fast blink | Off | Alarm Sound | |

Packing List

| Part | Model | Quantity | Notes |
|----------------------|-------------|----------|----------------------------|
| Keypad / Card Reader | CR-2000 | 1 | |
| Instruction Manual | CR-2000 | 1 | |
| Mounting screws | M4 x 28mm | 4 | |
| Molly | 6mm x 30mm | 4 | For mounting |
| Star Wrench | 20mm x 60mm | 1 | For Tamper resistant screw |
| Star screws | M3 x6mm | 1 | Tamper resistant screw |

Accessories

| | | |
|---------|----------------------|------------|
| CR-2000 | Card Reader / Keypad | 2000 users |
| CARX-20 | 1.8mm Mifare | |
| | | |
| | | |
| | | |
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Contact information

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Warranty

EMX Industries, Inc. warrants all products to be free of defects in materials and workmanship for a period of 2 years under normal use and service from the date of sale to our customer. This warranty does not cover normal wear and tear, abuse, misuse, overloading, altered products, damage caused by incorrect connections, lightening damage or use other than the intended design.

There is no warranty of merchantability. There are no warranties expressed or implied or any affirmation of fact or representation except as set forth herein.

EMX Industries, Inc. sole responsibility and liability, and the purchaser's exclusive remedy shall be limited to the repair or replacement at EMX Industries option of a part or parts found not conforming to the warranty. In no event shall EMX Industries, Inc. be liable for damages of any nature, including incidental or consequential damages, including but not limited to damages resulting from non-conformity, defect in material or workmanship.

