WIRELESS ACCESS CONTROLLER

CE

RoHS
Compliar

DA-2311
Operating Instructions

FOR ELECTRIC LOCK AND SECURITY SYSTEM

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INTRODUCTION

DA-2311 is a 4-channel access control receiver designed to work in conjunction with its remote control keyfobs and/or the optional DK-2310 wireless keypad to build up a wireless access control system. The four controlling channels control the master output relay, the two open collector auxiliary outputs and the built-in door chime. The controller can also work independently with the two supplied remote control keyfobs (DA-12) and the optional egress button and door bell button wired to their connect terminals.

FEATURES & SPECIFICATIONS

The Controller of The Receiver :

- **Operating Voltage:** 12V-24V DC, Auto Adjusting
- **Operating Current:** 60mA (quiescent) to 90mA (Output relay active)
- **Operating Temperature:** -20 °C to +70 °C
- **Environmental Humidity:** 5-95% Relative Humidity Non-condensing
- **Timing for Output Relay (Output 1):** 1-60 Seconds Adjustable Timer (For Door Lock)
- **Timing for Output 2 & 3 :** 2 Seconds Momentary Approximately (For Auxiliary Controls)
- **Door Lock Compatibility :** Fail-safe or Fail-secure Electric Lock
- **Input Sensing Terminals:**
  a) Egress – For Connection of Normally Open (N.O.) Egress Button(s)
  b) Door Bell – For Connection of Normally Open (N.O.) Bell Button(s)
- **Output Control Terminals:**
  a) Output 1 – N.C. & N.O. Relay Dry Contacts, 5A/24VDC Maximum Rating
  b) Output 2 – Transistor Open Collector, 24VDC/100mA Sink Maximum
  c) Output 3 – Transistor Open Collector, 24VDC/100mA Sink Maximum
- **Compatibility:** DK-2310 Wireless Keypad, DA-12 Remote Control Keyfob
- **Dimensions:** 32.5(H) X 120(W) X 87(D)mm Plastic Box
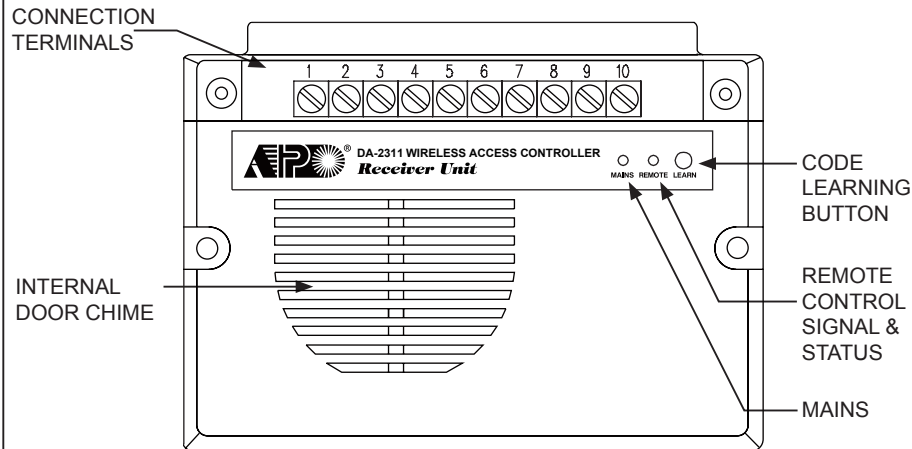- **Weight:** 250g net

The Remote Keyfob + Receiver :

- **Number of ID Codes for The Keyfobs :** Over 1 Million
- **Number of Wireless Keypads & Keyfobs Accommodated by The Receiver :** 40 Maximum
- **4 Control Channels :** Output 1, 2, 3 & Door Chime
- **Operation Frequency :** 433㈁㎒MHz
- **Control Distance :** 50 Meters Approx. in Open Space
- **Receiver Type :** Super-heterodyne
- **Operation Voltage of The Keyfob (DA-12) :** 12V Alkaline Battery, Type 27A (not included)
- **Weight :** 32g

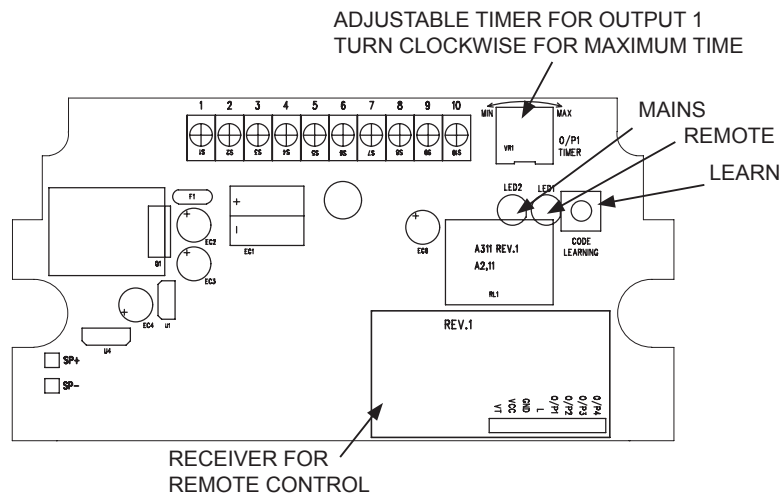**Specifications are subject to change for modification without notice**

PACKAGE CONTENTS

- One Access Control Receiver (DA-2311)
- Two Remote Control Keyfobs (DA-12)
- One Pack of Mounting Screws
- One Owner's Manual

THE RECEIVER UNIT --- (Figure 1)

CONNECTION TERMINALS

DA-2311 WIRELESS ACCESS CONTROLLER
Receiver Unit

MAINS REMOTE LEARN

CODE LEARNING BUTTON

REMOTE CONTROL SIGNAL & STATUS

INTERNAL DOOR CHIME

MAINS

THE MAIN CIRCUIT BOARD --- (Figure 2)

ADJUSTABLE TIMER FOR OUTPUT 1
TURN CLOCKWISE FOR MAXIMUM TIME

MAINS
REMOTE
LEARN

RECEIVER FOR REMOTE CONTROL

NOTE: Factory suggests that the timer adjustment should be done by the Installer only.

I) PRECAUTIONS

1) Installation Location:

The receiver is working at the frequency of 433.92Mhz. To get the best receiving result of the signals from the wireless keypad or the remote control keyfob(s), a correct installation location is important.

i) Install it on a location inside the house facing to the open space and there has no strong electro-magnetic wave signals near it.

ii) Do not install it in a concrete room or under a concrete stair, which shortens the control distance.

2) Prevent Accidental Short Circuit:

In the previous experience, most of the damages caused in the installation are accidental touching of the components on circuit board with the wires carrying power. Please be patient in the installation. Study the manual to become familiar with the system beforehand is also important.

i) Do not apply power to the system while it is in installation.

ii) Check carefully all the wirings are correct before applying power to the system for testing.

II) CONNECTION TERMINALS

● **1 - 2 : 12-24V DC -- (Power Input Terminal)**
Connect to a 12-24V DC power supply. Terminal 1 is the (+) power input point. The (-) supply Terminal 2 is the common grounding point of the system. The system accepts full input voltage range.

● **3 - 4 - 5 : OUTPUT 1 -- (Output Relay)**
5 Amp relay dry contact controlled by Channel 1 of the wireless keypad or the remote keyfob(s). It is for door strike. Terminal 3 is Normally Closed contact (N.C.), terminal 5 is Normally Open contact (N.O.) and terminal 4 is the common point of the two contacts. Use N.C. output for Fail-safe locking device; and N.O. output for Fail-secure locking device.
The operation timing is controlled by the Adjustable Timer (1-60 seconds), which is located on the main circuit board inside the box. See Figure 2.

● **6 : OUTPUT 2 -- (An Open Collector Output)**
A two seconds momentary open collector output controlled by Channel 2 of the wireless keypad or the remote keyfob(s) for auxiliary control. Such as arm-disarm control of an alarm system or actuation of an electronic automatic operator. It is equivalent to a Normally Open contact (N.O.) switching to (-) ground. The maximum rating of this output is 24V/100mA sink, which is sufficient to drive a small device, such as a relay.

● **7 : OUTPUT 3 -- (An Open Collector Output)**
A two seconds momentary open collector output controlled by Channel 3 of the wireless keypad or the remote keyfob(s) for auxiliary control. Such as arm-disarm control of an alarm system or actuation of an electronic automatic operator. It is equivalent to a Normally Open contact (N.O.) switching to (-) ground. The maximum rating of this output is 24V/100mA sink, which is sufficient to drive a small device, such as a relay.

● **8 : EG IN -- (Egress Input)**
A Normally Open (N.O.) input terminal referring to (-) ground. With the help of a normally open button to activate Output 1 for door open in the same manner of using the wireless keypad or keyfob.
Egress button is usually installed inside the house near the door for exit convenience. More than one egress buttons can be connected in parallel to the terminal. Leave the terminal open if not used.

- **9 : (-) GND -- (Common Ground of The System)**
  A grounding point that is common to terminal 2.

- **10 : DOOR BELL -- (Door Bell Button Input)**
  A terminal prepared for the connection of a Normally Open (N.O.) external bell button referring to (-) ground to activate the built-in door chime in the same manner of using the bell button on the wireless keypad or keyfob. More than one door bell buttons can be connected in parallel to the terminal. Leave the terminal open if not used.

III) REMOTE CONTROLLED KEYFOBS & WIRELESS KEYPAD

The DA-2311 receiver comes with two remote control keyfobs and is also compatible with the wireless keypad DK-2310. Total 40 keyfobs and/or wireless keypads can be accommodated by the receiver.
The ID codes of them are required to be learned by the receiver prior to use for controlling the Output 1, 2, 3 and the built-in door chime.

(A) Procedures of Recording The ID of A Keyfob or A Wireless Keypad -- (Learning)

The keyfobs and the keypads that prepare to work with the receiver are required to be registered first. The receiver learns the ID of them one by one with the following procedures:

1) Press and hold the **LEARN** button on the receiver unit for 1 second until the **REMOTE** LED turns ON. (The button is inside the hole. Use a pin or the tip of a ball pen to reach it)
2) The receiver is now in **Waiting Mode for 10 seconds** waiting for the signal from the Keyfob or the keypad after the Remote LED turning ON.
3) Press any button of the Keyfob or the Bell Sign Button of the keypad ONCE within the 10 seconds for the receiver to learn the ID Code transmitting from it.
4) The **REMOTE** LED on the receiver unit turns **OFF** after the ID Code is learned.
5) Take the above learning procedures 1-4 for other Keyfobs or Keypads

(B) Procedures of Deleting The ID of A Keyfob or A Wireless Keypad from Memory -- (Clearing)

If a keyfob or keypad is lost it is necessary to delete it from the memory of the receiver to make it invalid. Every time the system will clear all the ID Codes in the deletion. Re-learning of the existing keyfobs and keypads are necessary.

1) Press and hold the **LEARN** button on the receiver unit for 8 seconds (Remote LED turns ON) until the **REMOTE** LED gives 2 flashes to confirm that all the IDs are erased. Then the LED turns OFF.
2) Record the ID Code of the existing Keyfobs and Keypads (not lost) into the memory again one by one with the procedures stated in the procedures A "**Recording The ID of A Keyfob or A Wireless Keypad**"

(C) Operating The System with Keyfob or Wireless Keypad -- (Operation)

The system can be operated with the supplied Keyfobs or the optional Keypads.

Operate with Keyfob:

1) Press button A to operate Output 1
2) Press button B to operate Output 2
3) Press button C to operate Output 3
4) Press button D to operate the built-in Door Chime

Operate with Wireless Keypad:

1) Key in one of the User Codes of Group 1 to operate Output 1
2) Key in one of the User Codes of Group 2 to operate Output 2
3) Key in one of the User Codes of Group 3 to operate Output 3
4) Press the Bell Sign button to operate the built-in Door Chime

APPLICATION EXAMPLES

1) A Wireless Access Control Door Lock System
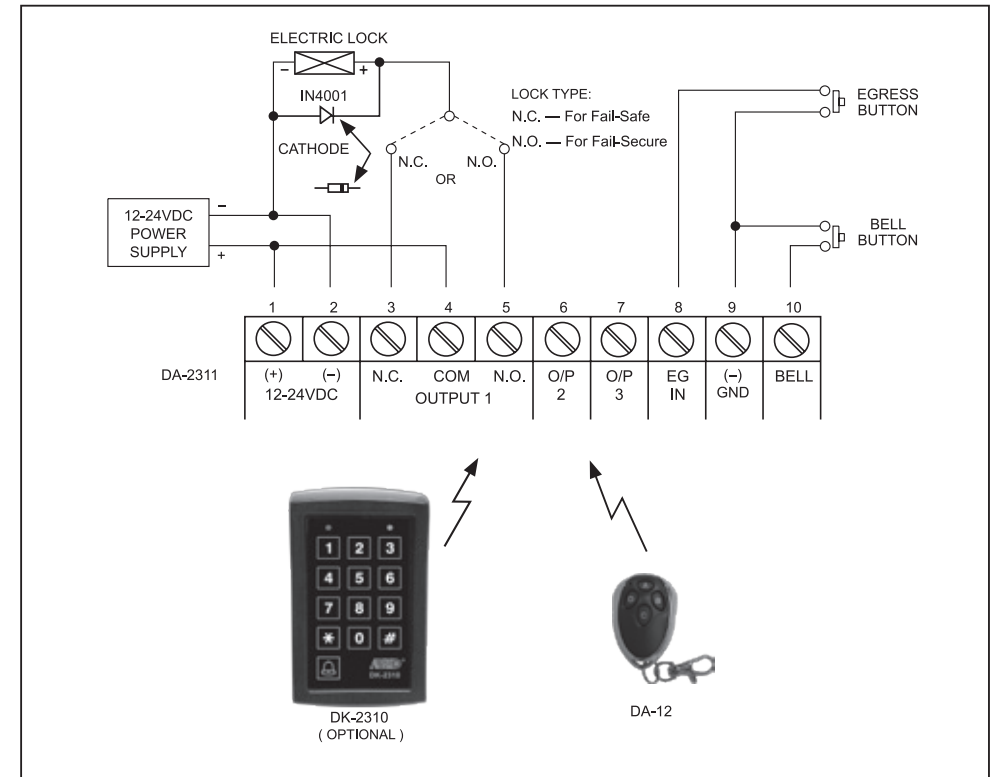
2) Directly Use An Open Collector Output for Alarm Arm-Disarm Control