GV-Card Reader

User's Manual

Before attempting to connect or operate this product, please
read these instructions carefully and save this manual for future use.

READER-C

GeoVision Inc.

Note: No memory card slot or local storage function for Argentina.

GeoVision, Inc.
9F, No. 246, Sec. 1, Neihu Rd.,
Neihu District, Taipei, Taiwan
Tel: +886-2-8797-8377
Fax: +886-2-8797-8335
http://www.geovision.com.tw

September 2017

Preface

Welcome to the *GV-Card Reader User's Manual.*

This Manual applies to the following GV-Card Readers:

Product	Version
GV-Reader1251 and 1352 V2	V1.0
GV-SR1251	V1.2
GV-RK1352 / R1352 Card Reader	V1.2
GV-DFR1352 (Rev. B)	V1.2

Federal Communication Commission Interference Statement
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
. Reorient or relocate the receiving antenna.
. Increase the separation between the equipment and receiver.
. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Contents

Chapter 1 GV-Reader1251 / 1352 V2 and GV-SR1251

The GV-Reader1251 / 1352 V2 / SR1251 includes transmit-receive antenna and electronics. It has both Wiegand and RS-485 outputs that can be connected to any standard access control panel. The LED indicator is controllable by the host system and changes from red to green to indicate access granted. The GV-Reader1251 / 1352 V2 / SR1251 also has a host-controllable buzzer.

1.1 Packing List

If any of the items are missing or damaged, contact your dealer to arrange a replacement.

For GV-Reader 121 / 1352 V2

1. GV-Reader1251 / 1352 V2
2. Bag of screws
3. GV-Reader Software CD
4. Warranty Card

For GV-SR1251

1. GV-SR1251
2. Screw x 6
3. Plastic Screw Anchor x 4
4. Plastic Case
5. Warranty Card

GeoVision inc

1.2 Installation

1.2.1 Electric Wire

Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Yellow	Beeper
Orange	Green LED
Light Red	Red LED

1.2.2 Switch Setting of GV-Reader1251 / 1352 V2
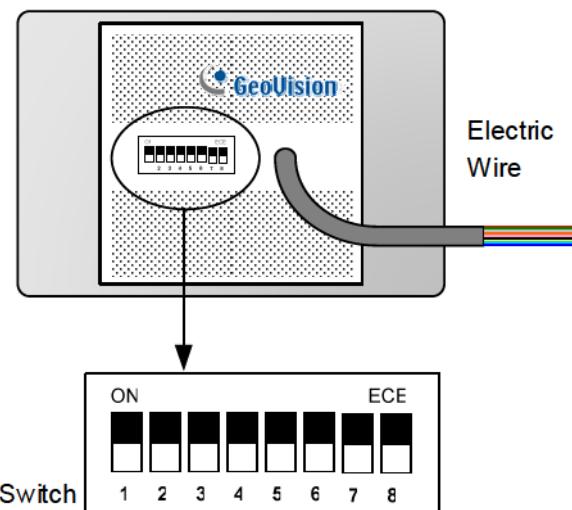
Default settings are all ON.

■ **SW 1 Beeper Control:** The default mode for the Beeper Control is the internal control. When the setting is "On", the Reader is sounded after a card is read. When the setting is "Off", the Beeper is controlled externally. You can use the external beeper control line to activate the beeper.

■ **SW2-SW3 Green/Red LED Control:** The default mode for the Green/Red LED Control is the internal control. The LED is normally red. When a card is read, the LED flashes green. When the setting is "Off", the Green/Red LED is controlled externally. The external control lines can then be used to operate the LEDs.

■ **SW4 Master/Slave:** The switch is used to select the Reader's communication interface. When the setting is "On", the Reader is controlled by Wiegand signal. When the setting is "Off", the Reader is for RS-485 signal.

■ **SW5-SW7 ID Setting:** Switch 5 to switch 7 is used to set the Reader's ID during a chain connection.

ID	0	1	2	3	4	5	6	7
SW5	OFF	OFF	OFF	OFF	ON	ON	ON	ON
SW6	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW7	OFF	ON	OFF	ON	OFF	ON	OFF	ON

■ **SW8 RS-485 Terminal Resistor:** When the setting is "On," a 120-ohm resistor is connected between RS-485+ and RS-485-. This setting is used in the last device when multiple RS-485 devices are connected together.

Note: After changing the dip switch settings, the unit must be reset by powering down then up again before the new switch setting will take effect.

1.2.3 Defining the ID Number of GV-SR1251 by Using the GV-Reader Config Utility

Through a single RS-485 cable, you can connect up to 8 GV-Reader1251 / 1352 V2 / SR1251 to the GV-ASController. To form a chain connection, follow the steps below to define each reader's ID number by using the GV-Config Utility.

1. Install and download the GV-Reader Config Utility. For details, refer to *2.4 Installing the GV-R/RK/DFR Config AP*.

2. Run **GV-R/RK/DFR Config AP**.
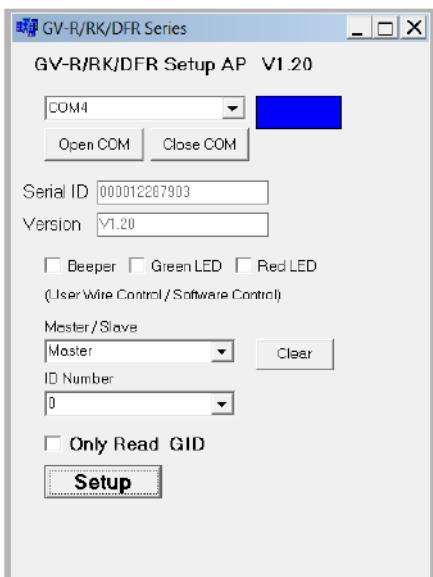
3. Select the COM port that is connected to the reader and click **Open COM**. The red square next to the COM port box should change to blue to indicate the COM port is correct.

4. Select an **ID number** for the reader. The ID number ranges from 0 to 7.

5. Click **Setup**. The serial number and firmware version of the reader will be automatically detected. The settings are sent to the reader.

Note:

1. To define the ID number of GV-Reader1251 / 1352 V2, you must use the switches at the back of the reader.

2. The GV-SR1251 only reads UID. Therefore, the **Only Read GID** option in the GV-R/RK/DFR Series dialog box is not functional for GV-SR1251.

1.3 Connecting the Reader to GV-AS Controller

The GV-Reader1251 / 1352 V2 / SR1251 is compatible with any standard access controllers. The following diagrams illustrate how to connect the GV-Reader1251 / 1352 V2 / SR1251 to GV-AS Controller through Wiegand interface or RS-485 interface, and how to connect the GV-Reader1251 / 1352 V2 / SR1251 to third-party access controllers and GV-DVR/NVR.

For GV-Reader1251 / 1352 V2, after you wire the connection between the reader and the access controller, ensure the related switch setting on the GV-Reader1251 / 1352 V2 is configured correctly.

Note: Each reader consumes 60 mA of power. The total power consumption of the output devices and readers connected to the GV-AS Controller must be under **3A** (for GV-AS210 / 2110 / 2120), **3.5A** (for GV-AS410 / 4110) or **5A** (for GV-AS810 / 8110). Connect an external power supply if the power supplied from GV-AS Controller is insufficient.

1.3.1 Connecting GV-AS Controller through Wiegand Interface

- Switch Setting for Wiegand Connection (GV-Reader1251 / 1352 V2 only)
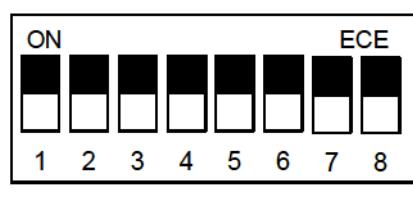
SW4 must be turned ON.

![GeoVision Inc. logo]

1.3.2 Connecting to GV-AS Controller through RS-485 Interface

GND	———————— (Black)
-	———————— (Light blue)
+	———————— (Blue)
12V	———————— (Red)

GV-AS Controller　　　　　　　　　　　　**GV-Reader**
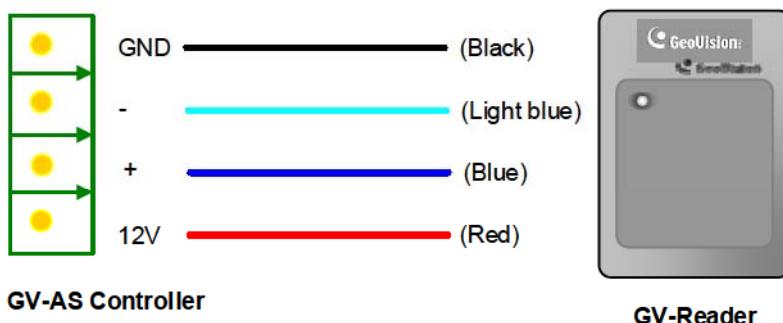
● Switch Setting for RS-485 Connection (GV-Reader1251 / 1352 V2 only)
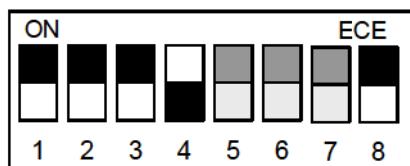
SW4 must be turned OFF.

● Switch Setting for Connecting Multiple GV-Readers (RS-485) (GV-Reader1251 / 1352 V2 only)
  Multiple readers can be connected to the GV-AS Controller through a single RS-485 cable. When you connect more than one GV-Reader to the GV-AS Controller, on the last connected GV-Reader turn SW8 to ON. Make sure to define the ID of each reader with SW5 to SW7 first.

GV-Reader 1　　　　　　　　　　　　**GV-Reader 8**
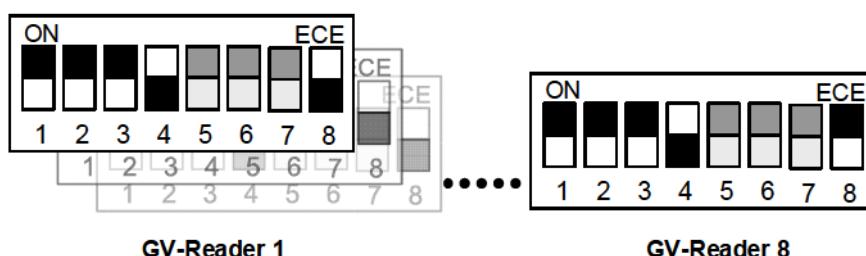
● ID Number Setting for Connecting Multiple GV-Readers (RS-485) (GV-SR1251 only)
  Multiple readers can be connected to the GV-AS Controller through a single RS-485 cable. To define the ID of each GV-SR1251, see *1.2.3 Defining the ID Number of GV-SR1251 by Using the GV-Reader Config Utility*.

6

Defining Readers on GV-AS Controller Web Interface

After configuring the switch settings of GV-Reader1251 / 1352 V2 or defining the ID number of GV-SR1251 with the GV-Reader Config Utility, you need to specify which door each reader controls on the Web interface of the GV-AS Controller.

1. Type the GV-AS Controller's IP address in the Web browser.

2. Type the username and password to login.

3. In the left menu, click **Extended Reader**. This page appears.

```
AS210 Extended Reader Configuration

GV-Reader/CR420/GF1921/GF1922 Function

  RS485  Serial Number        Function              Connection Status
   ☑     ID 0  [          ]   [Door/Gate 1 Entry ▾]
   ☐     ID 1  [          ]   [No Function      ▾]
   ☐     ID 2  [          ]   [No Function      ▾]
   ☐     ID 3  [          ]   [No Function      ▾]
   ☐     ID 4  [          ]   [No Function      ▾]
   ☐     ID 5  [          ]   [No Function      ▾]
   ☐     ID 6  [          ]   [No Function      ▾]
   ☐     ID 7  [          ]   [No Function      ▾]

GeoFinger Server IP Address [192].[168].[0].[1] : [2167]  (from 1025 to 65535)

GF1901/GF1902/GF1911/GF1912 Function

  RS485  Serial Number        Function              Connection Status
   ☐     [          ]         [No Function      ▾]
   ☐     [          ]         [No Function      ▾]
```

4. If the readers are connected using RS-485, select the **RS485** checkbox in front of the ID number. The ID number must match the ID you configured using SW5 – SW7 (for GV-Reader1251 / 1352 V2) or GV-R/RK/DFR Config AP (for GV-SR1251).

5. Leave the serial number field blank.

6. Select a door/gate for the reader under **Function**. Click **Submit**.

![Geovision Inc logo]

1.3.3 Connecting to GV-DVR/NVR and Third-Party Access

Controllers

GV-Reader1251 / 1352 V2 / SR1251 is also compatible with third-party access controllers. With its compatibility, you can also add a GV-DVR/NVR to this connection to empower your management.

After connecting the GV-Reader1251 / 1352 V2 / SR1251 to the access controller through the Wiegand interface, connect the reader to the GV-DVR/NVR via GV-COM, GV-Hub or GV-NET/IO Card V3.1.

Note: The GV-Reader1251 / 1352 V2 / SR1251 is not compatible with the GV-NET Card and the GV-NET/IO Card of versions earlier than V3.

GV-Reader

Access Controller (third-party)
(power supply: 7.5~12 V)

(Red)
(Black)
(Green)
(White)

GV-COM / GV-Hub / GV-NET/IO Card V3.1

(Blue)   +
(Light blue)   -

USB

GV-System
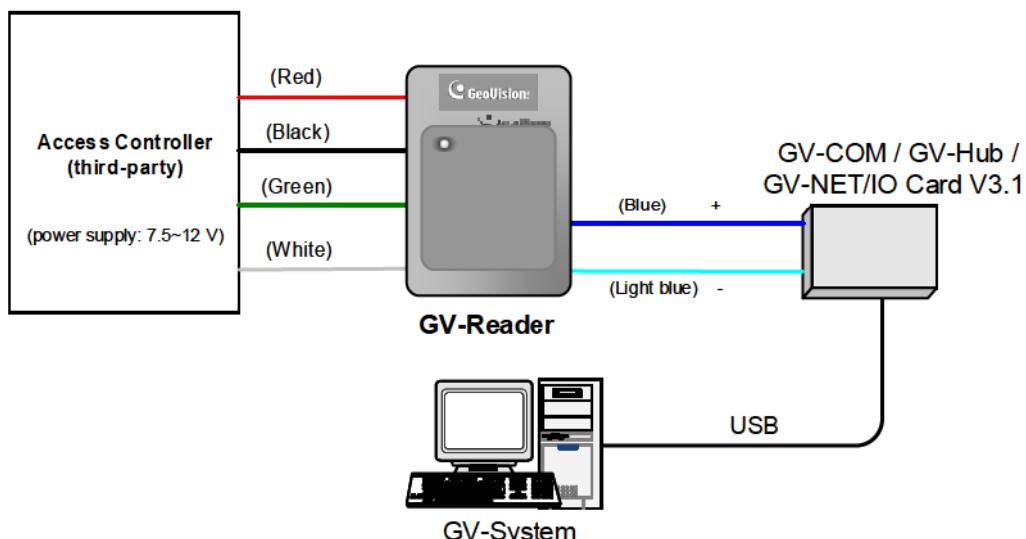
● Switch Setting (GV-Reader1251 / 1352 V2 only)

ON   ECE
1 2 3 4 5 6 7 8

SW4 must be turned OFF.
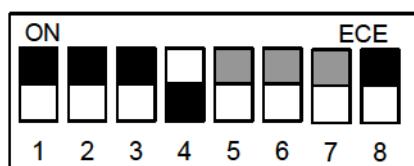
1.4 Overlaying Card Numbers on GV-DVR/NVR Live View

You can overlay card numbers recognized at the GV-Reader1251 / 1352 V2 / SR1251 onto a camera channel on GV-DVR/NVR. To overlay card numbers on GV-DVR/NVR channel, the reader needs to be connected to a GV-DVR/NVR through GV-COM, GV-Hub or GV-NET/IO Card V3.1. For details, refer to *2.5 Overlaying Card Numbers on GV-DVR/NVR Live View*.
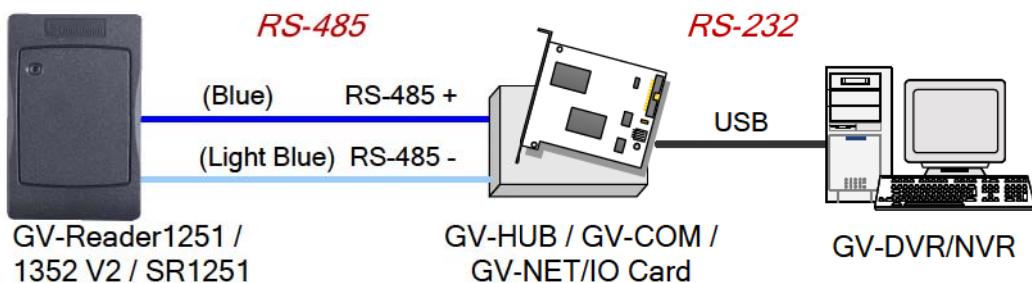
Note:

1. For GV-Reader1251 / 1352 V2, make sure to define the ID number and set the reader to slave by configuring the switch settings. For details, refer to *1.2.2 Switch Setting of GV-Reader1251 / 1352 V2*.

2. For GV-SR1251, make sure to define the ID number and set the reader to slave with the GV-Reader Config Utility. For details, refer to *2.5.1 Defining the ID cumber and Setting the Reader to Slave*.

1.5 Changing the Default Settings of Beeper and LED

You can change the default settings of the LED and the beeper by enabling a GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110 to externally control the LED and Beeper. Through the Web interface of the controller, you can set the controller to trigger the red LED, green LED or beeper when the specified alarm events occur.

1. For GV-SR1251, enable external control of the reader's Beeper and LED by using the **GV-R/RK/DFR Config AP**. For details, refer to *2.6.1 Setting up Beeper and LED on GV-R/RK/DFR Config AP*.

2. For GV-Reader1251 / 1352 V2, enable external control of the reader's Beeper and LED by configuring the switch settings. For details, refer to *1.2.2 Switch Setting*.

3. Wire the Beeper, Red LED and Green LED from the reader to the GV-AS Controller. For details, refer to *2.6.2 Wiring the Beeper and LED to the GV-AS Controller*.

4. Specify the Beeper and LED settings for each door through the Web interface of GV-AS Controller. For details, refer to *2.6.3 Configuring the Beeper and LED Settings for Each Door/Gate*.

1.6 Specifications

	GV-Reader1251	GV-SR1251	GV-Reader1352 (V2)
CPU	8-bit microprocessor		
Wiegand Interface	Wiegand 26 bits, Distance 30 m (98.43 ft) with GV-AS210 / 410 / 810, Distance 100 m (328.1 ft) with GV-AS2110 / 2120 / 4110 / 8110		Wiegand 26 / 34 bits, distance 30 m (98.43 ft)
Power Source	DC 7.5~12V		
Power Consumption	60 mA		
LED	Red, Green LED	Red, Green, Blue LED	Red, Green LED
Beeper	Buzzer		
Frequency	125 KHz (Proximity EM Card)		13.56 MHz for ISO14443A (Mifare Class)
RS-485	9,600 bps, connect up to 8 GeoVision readers (GV-CR420 / GV-Reader1251 / GV-SR1251 / GV-Reader1352 V2 / GV-R1352 / GV-RK1352 / GV-DFR1352)		
Color	Gray		
Operating Temperature	-35 °C ~ 65 °C (-31 °F ~ 149 °F)		
Operating Humidity	10 ~90% RH (non-condensing)		
Dimensions (W x H x D)	75 (W) x 115 (H) x 15 (T) mm, with enclosure 35 (T) mm 3 (W) x 4.5 (H) x 0.6 (T) in, with enclosure 1.38 (T) in		
Weight	150 g / 0.33 lb	125 g / 0.27 lb	150 g / 0.33 lb
Ingress Protection	IP54	IP66	IP54
Certification	CE, FCC, RoHS		

1.6.1 The number of GV-Reader1251 / GV-SR1251 supported by GV-AS Controllers

GV-AS Controller Model	GV-Reader1251 / GV-SR1251 Interface	
	Wiegand	RS-485
GV-AS100	Not supported	Not supported
GV-AS110 / 120	Not supported	Not supported
GV-AS1010	Not supported	Not supported
GV-AS1110	Not supported	Not supported
GV-AS100 / 110 / 120 with GV-ASBox	Not supported	Not supported
GV-AS100 / 110 / 120 with GV-ASNet	Not supported	Not supported
GV-AS210 / 2110 / 2120	4	8
GV-AS410 / 4110	8	8
GV-AS810 / 8110	8	16
GV-EV48	Not supported	2
GV-CS1320	Not supported	2

1.6.2 The number of GV-Reader 1352 V2 supported by GV-AS Controllers

GV-AS Controller Model	GV-Reader 1352 V2 Interface	
	Wiegand	RS-485
GV-AS100	1	1
GV-AS110 / 120	1	Not supported
GV-AS1010	Not supported	2
GV-AS1110	Not supported	Not supported
GV-AS100 / 110 / 120 with GV-ASBox	2	4
GV-AS100 / 110 / 120 with GV-ASNet	Not supported	2
GV-AS210 / 2110 / 2120	4	8
GV-AS410 / 4110	8	8
GV-AS810 / 8110	8	16
GV-EV48	Not supported	2
GV-CS1320	Not supported	2

Chapter 2 GV-RK1352 / R1352 / DFR1352 Card Reader

GV-RK1352 / R1352 / DFR1352 are card readers capable of recognizing identification cards. GV-RK1352 comes with keypad, allowing it to also recognize PIN codes. GV-DFR1352 is designed to be installed on the door frame.

Featured with the Wiegand and RS-485 outputs, the readers can be connected to any standard access control panel. The readers are protected by a weather sealed and IP66 compliant housing for outdoor use.

![GeoVision Inc logo]

2.1 Packing List

GV-RK1352

1. GV-RK1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. Front Cover Plate x 1

5. Software CD
6. Installation Guide
7. Warranty Card

GV-R1352

1. GV-R1352 Card Reader
2. Screw x 3
3. Screw Anchor x 2
4. Security Torx
5. Software CD
6. Installation Guide
7. Warranty Card

GV-DFR1352

1. GV-DFR1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. Front Cover Plate x 2
5. Software CD
6. Installation Guide
7. Warranty Card

2.2 Physical Descriptions

2.2.1 Electric Wire

GV-RK1352

Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
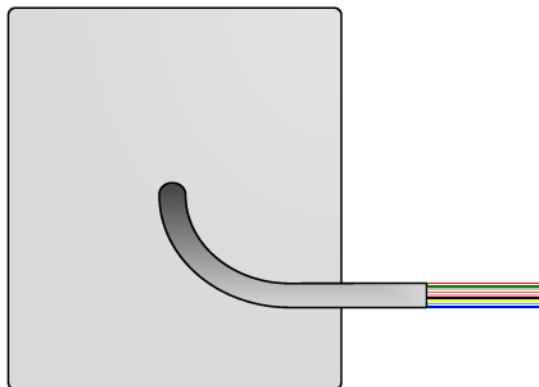
Rear View

GV-R1352

Wire Color	Function
Red	DC 7.5 ~ 12V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Gray	N/A
Purple	N/A
Brown	N/A
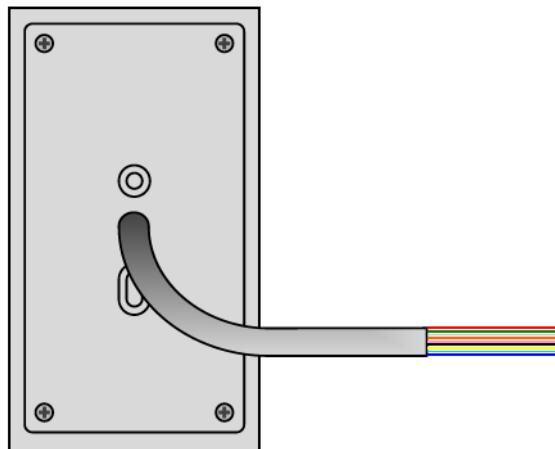
Rear View

GV-DFR1352

Wire Color	Function
Red	DC 7.5 ~ 12V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Gray	N/A
Purple	N/A
Brown	N/A
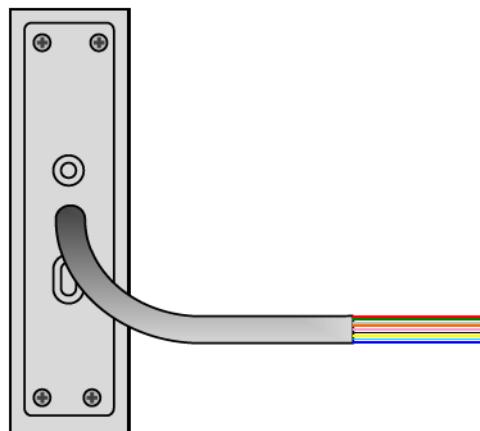
Rear View

Install the GV-DFR1352 to the door frame using the supplied screws and screw anchors. Before placing and sticking the front cover plate to the GV-DFR1352, remove the Plastic Cover to prevent scratches to the cover after installed.

Screw

Screw

Plastic Cover

Front Cover Plate

GV-DFR1352