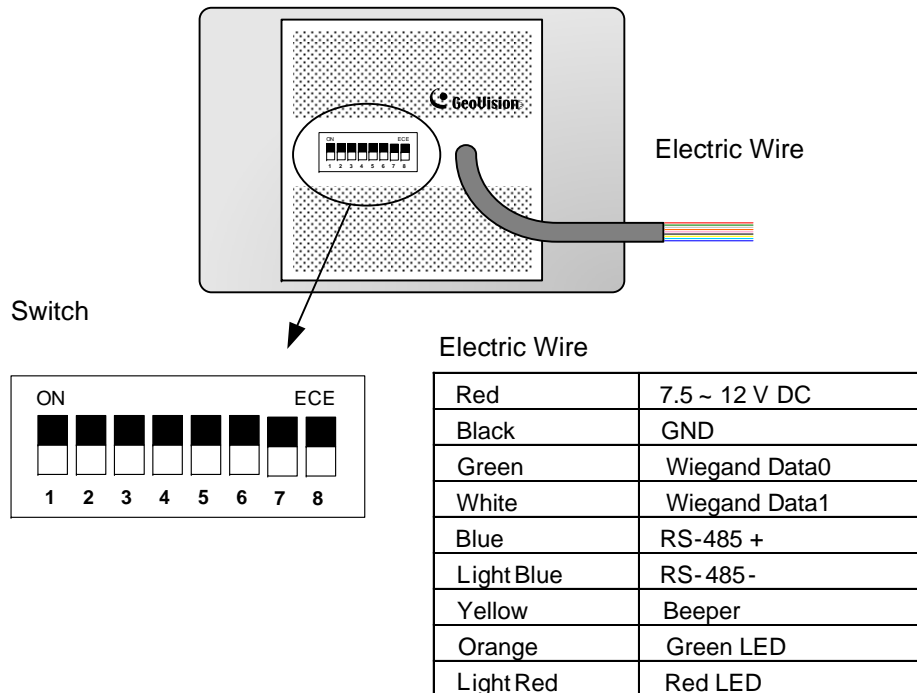# GV-Reader 1251 and 1352 V2

The GV-Reader 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 GV-Reader has a bi-color LED indicator, which is controllable by the host system and changes from red to green to indicate access granted. The GV-Reader also has a host-controllable buzzer.

Packing List

1 GV-Reader x 1

2 Bag of screws x 1

3 GV-Reader Software CD

4 GV-Reader Installation Guide

Overview

Switch

Electric Wire

ON							ECE
1	2	3	4	5	6	7	8

Electric Wire

Red	7.5 ~ 12 V DC
Black	GND
Green	Wiegand Data0
White	Wiegand Data1
Blue	RS-485 +
Light Blue	RS-485 -
Yellow	Beeper
Orange	Green LED
Light Red	Red LED

Switch Setting

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.
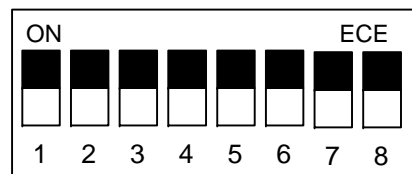
Wiring Connection

The GV-Reader is compatible with any standard access controllers. The following diagrams illustrate how to connect the GV-Reader to GV-AS Controller through Wiegand interface or RS-485 interface, and how to connect the GV-Reader to third-party access controllers and GV-System.

After you wire the connection between the GV-Reader and the access controller, ensure the related switch setting on the GV-Reader is configured correctly.

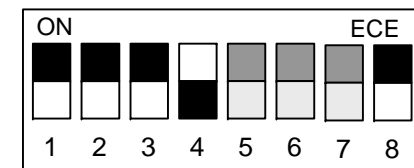## Connecting to GV-AS Controller through Wiegand Interface

Wiegand	GND	(Black)
	BZ	(Yellow)
	RL	(Light red)
	GL	(Orange)
	D1	(White)
	D0	(Green)
	12V	(Red)

GV-AS Controller

GV-Reader

❖ **Switch Setting for Wiegand Connection**

ON ECE
1 2 3 4 5 6 7 8

SW4 must be turned ON.

Connecting to GV-AS Controller through RS-485 Interface

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

GV-AS Controller
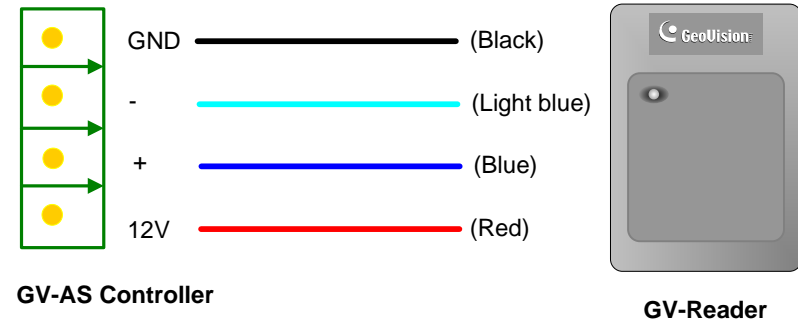
GV-Reader

❖ **Switch Setting for RS-485 Connection**

ON ECE
1 2 3 4 5 6 7 8

SW4 must be turned OFF.

∗ **Switch Setting for Connecting Multiple GV-Readers (RS-485)**

Multiple GV-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.

ON ECE
1 2 3 4 5 6 7 8

ON ECE
1 2 3 4 5 6 7 8

GV-Reader 1

GV-Reader 8
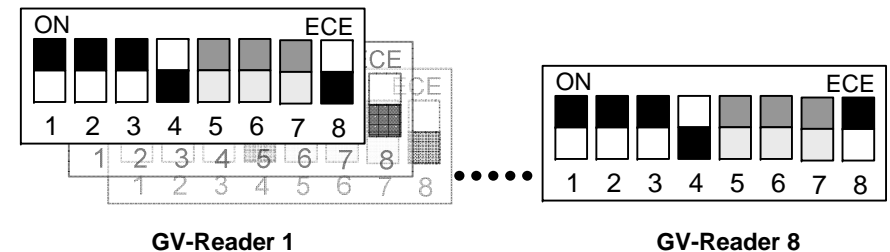
❖ Defining Readers on GV-AS Controller Web Interface

After configuring the switch settings, you need to define the readers' ID number and 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.

4. Select the **RS485** checkbox in front of the ID number.

   The ID number must match the ID you configured using SW5 – SW7.
5. Leave the serial number field blank.
6. Select a door/gate for the reader under **Function**. Click **Submit**.

Connecting to GV-System and Third-Party Access Controllers

GV-Reader is also compatible with third-party access controllers. With its compatibility, you can also add a GV-System to this connection to empower your management.

After connecting the GV-Reader to the access controller through the Wiegand interface, connect the GV-Reader to the GV-System via GV-COM, GV-Hub or GV-NET/IO Card V3.1.

Note: The GV-Reader is not compatible with the GV-NET Card and the GV-NET/IO Card of versions earlier than V3.
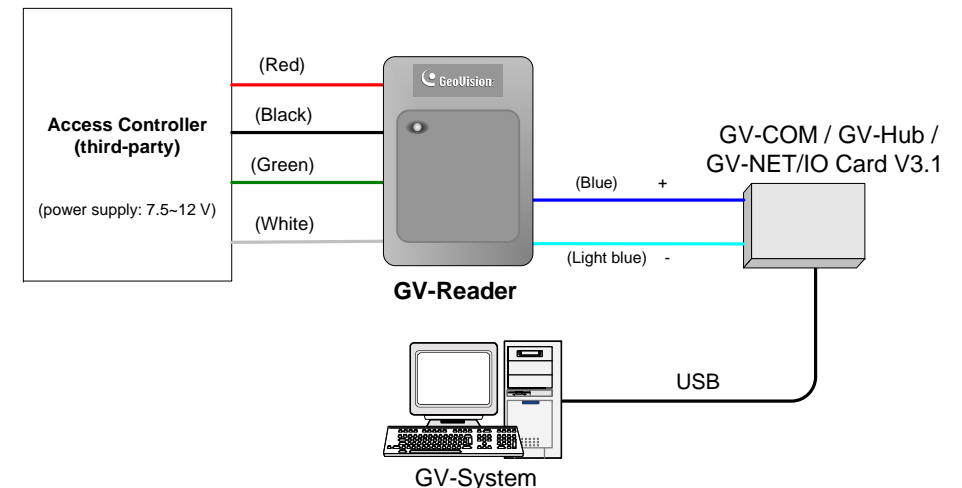
❖ Switch Setting
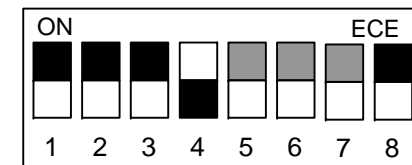
SW4 must be turned OFF.

Specifications

CPU		8-bit microprocessor
Wiegand Interface		Wiegand 26 - 40 bits, distance 30 m / 100 ft
Power		DC 7.5 ~ 12 V
LED		Red, Green LED
Beeper		Buzzer
Frequency	GV-Reader 1251 (V1)	125 KHz (Proximity EM Card)
	GV-Reader 1352 (V2)	13.56 MHz for ISO14443A (Mifare Class)
RS-485		9600 bps
Color		Black
Operation Temperature		-35 ~ 65°C / -31 ~ 149°F
Operating Humidity		10 ~ 90% RH (non-condensing)
Dimensions (W x H x D)		75 x 115 x 15 mm, with enclosure 35 (D) mm 3 x 4.5 x 0.6 in, with enclosure 1.38 (D) in
Weight		150 g / 0.33 lb
Ingress Protection		IP54
Certification		CE, FCC, RoHS

The number of GV-Readers supported by GV-AS Controllers

GV-AS Controller Model	GV-Reader Interface	
	Wiegand	RS-485
GV-AS100	1	1
GV-AS110 / 120	1	Not supported
GV-AS100 / 110 / 120 with GV-ASBox	2	4
GV-AS100 / 110 / 120 with GV-ASNet	Not supported	2
GV-AS210	4	8
GV-AS400 / 410 / 810	8	8