

SSA-S1000

# Standalone RFID Access Controller user manual

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**SAMSUNG**

# safety information

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK. DO NOT OPEN	
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

## WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple controllers to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
5. When installing the controller, fasten it securely and firmly. The fall of controller may cause personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the controller. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

## CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -20°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lightning storm. Neglecting to do so may cause fire or damage to the product.

## 2\_ Safety information

5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the controller directly towards extremely bright objects such as sun.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.

#### FCC Statement

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.

#### Caution

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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# product introduction

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## FEATURE

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This product is designed for use with one-door access control for security applications. With its compact design, you can install this product on the wall or a doorframe; Its epoxy molding guarantees stable operation in a challenging environment. This product enables you to control the door using the user card and provides a simple method to register or delete cards, and initialize the system, which is, one of the most convenient and safest door controller.




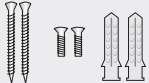



And it is also featured by the 2-color LED indicator and the internal buzzer, enabling you to easily check the current mode and operation of the door lock.

- ◆ 125 kHz Proximity Access Controller
- ◆ Up to 512 users including one Master ID can be registered
- ◆ Standalone (no application S/W required)
- ◆ Direct Control of the Door Lock
- ◆ Can select a lock device type from Power Fail Safe and Power Fail Secure
- ◆ Epoxy Molding
- ◆ Weatherproof

# product introduction

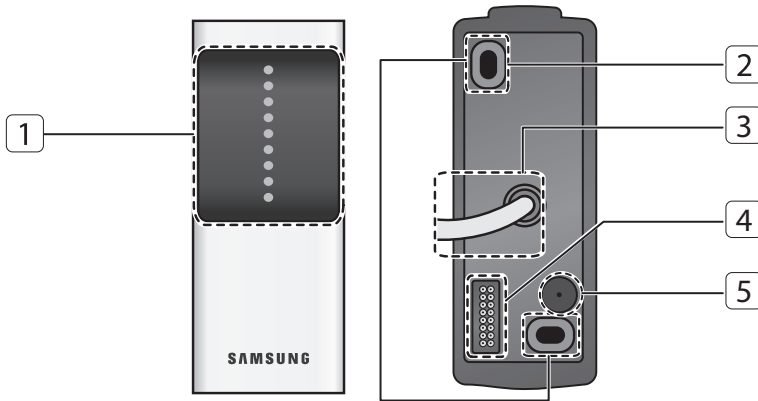
## WHAT'S INCLUDED

Check if the following items are included in the product package.

		
Main Module	Bezel	Master Card (x1) Keytag (x5)
		
3.5 x 40mm Screws (x2) 3.5 x 25mm Screws (x2) 6 x 30mm Plastic Anchors (x2)	Diode (X 2) (UF4004, 1N4001~4007)	Quick Guide
		
CD Manual		

## AT A GLANCE

### Front/Rear



<b>1</b>	<b>LED</b>	Displays the system operation status using red and green indicators.
<b>2</b>	<b>Fixing Hole</b>	Fixing hole for wall-mounting.
<b>3</b>	<b>Connection Cable</b>	Used to connect to the power or I/O cable.
<b>4</b>	<b>Program Port</b>	Port used to upgrade the firmware.
<b>5</b>	<b>Buzzer</b>	Piezo buzzer.

# product introduction

## CABLE COLOR SCHEME

Item	Cable Color	Signal Line	Description
Power	Red	DC+12V	+12V supplied
	Black	GND	Earth-Grounding for Power
Input	Yellow	AUX INPUT#1	Select a Lock Type
	Blue	Door Contact Sensor	Door Sensor Connection Port
	Green	Exit Button	Exit Button Connection Port
Output	Purple	Alarm Out	Alarm Device Connection Port
	White	Door Lock Out	Door Lock device connection port
Not used	Gray		
	Orange		
	Brown		

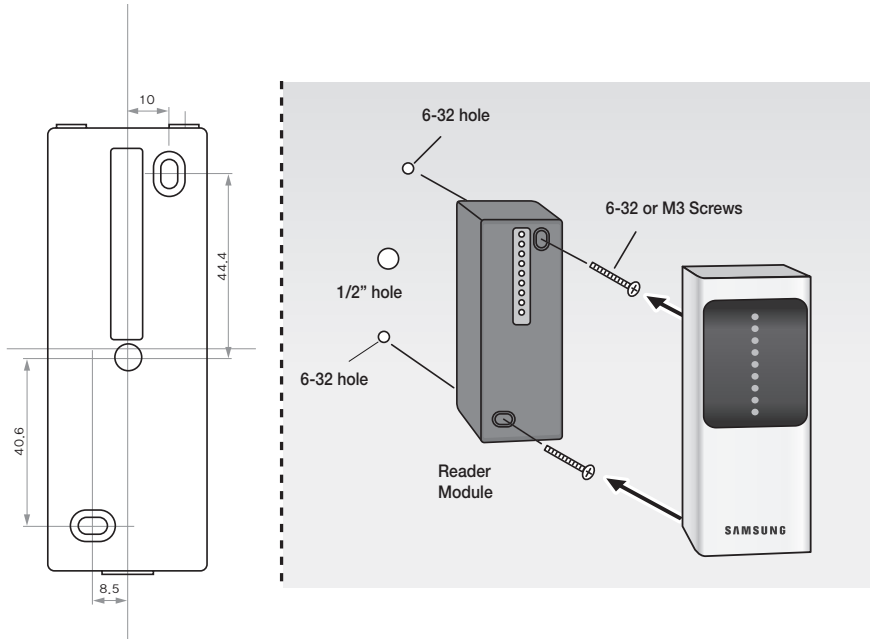
## CABLE SELECTION

Item	Cable Type
<b>1</b> Power (DC +12V)	Belden #9409, 18 AWG 2 Conductor, Unshielded
<b>2</b> Door Contact Sensor Exit Button Sensor Input	Belden #9512, 22 AWG 4 Conductor, Shielded
	Belden #9514, 22 AWG 8 Conductor, Shielded
<b>3</b> Door Lock Alarm Device	Belden #9409, 18AWG 2 Conductor, Unshielded



# installation and external connection

## INSTALLATION



### - On a doorframe or the wall

1. Drill a 1/2-inch (12.7 mm) hole onto the center of the doorframe or the wall where SSA-S1000 is installed, which makes room for the cable of the reader module.
2. Drill two 0.3-inch (7.62 mm) holes: one on the point of 0.39 inch (10 mm) horizontally to the right, 1.74 inch (44.4 mm) vertically up from the center hole, and one on the point of 0.33 inch (8.5 mm) horizontally to the left, 0.3 inch (7.62 mm) vertically down from the point.
3. Insert the reader module cable into the center hole and secure the module using two screws inserted in the upper right and the bottom left corner, respectively.
4. Insert the bezel of SSA-S1000 into the reader module and attach it by pressing the upper and lower corner of the bezel.

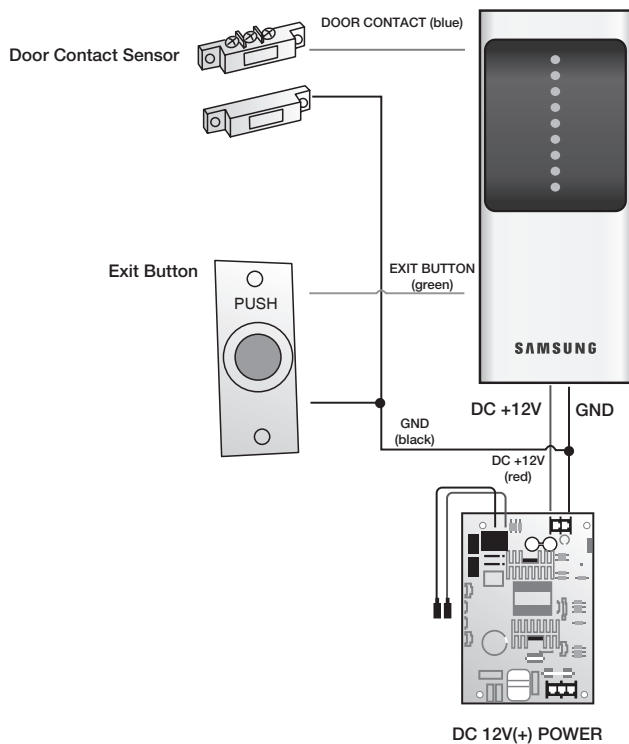
## BYPASS DIODE CONNECTION

If you connected an inductor (door lock or alarm device) to the output relay, there should occur a voltage surge while the inductor was between turning on and turning off. If you do not connect a reverse diode to the relay, the voltage surge will cause damage to the electric circuit of the controller. To reduce this surge, it is recommended to connect the bypass diode to the relay.

# installation and external connection

## I/O CONNECTION

### Input Connection



#### - To connect the power supply unit

1. Connect the DC+12V to the red line.
2. Connect GND to the black line.

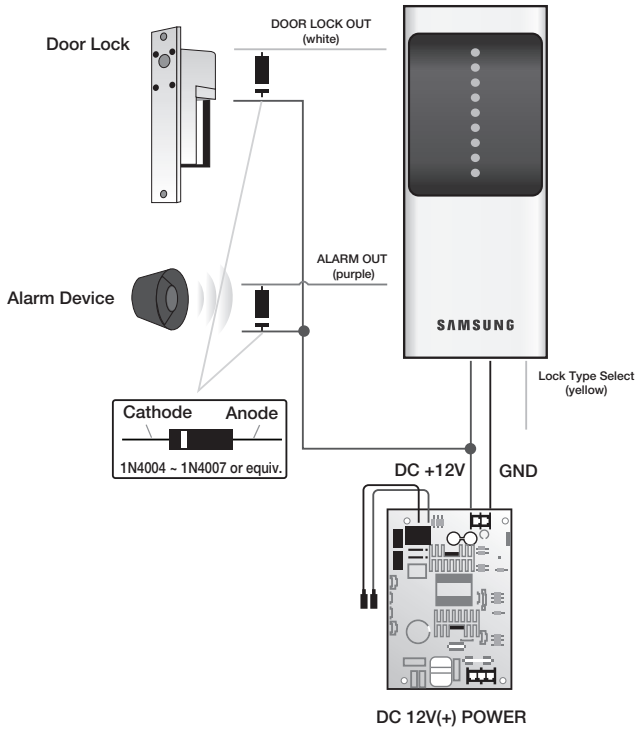
#### - To connect the Door Contact Sensor

1. Connect the COM port of the sensor to the blue line.
2. Connect the NO port of the sensor with the GND line.

#### - To connect the Exit Button

1. Connect one end of the button to the green line.
2. Connect the other end of the button to GND.

## Output Connection



### - To connect the power supply unit

1. Connect the DC+12V to the red line.
2. Connect GND to the black line.

### - To connect the door lock device

1. Connect the plus(+) line of the lock device to DC+12V.
2. Connect the minus(-) line of the lock device to the white line.

### - To connect the alarm device

1. Connect the plus(+) line of the alarm device to DC+12V.
2. Connect the minus(-) line of the alarm device to the purple line.

### - To specify the lock type

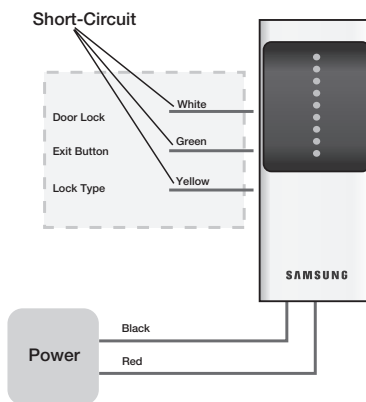
POWER FAIL SAFE: Connect the yellow line to GND.

POWER FAIL SECURE: Leave the yellow line in the floating state.

# system initialization & basic operations

## INITIALIZING THE SYSTEM BY SHORT-CIRCUITING

1. Turn off the product and short-circuit three lines: white line of the door lock device, green line of the Exit button, and yellow line of the lock type.
2. When you turn the product back on, all of the LED indicators turn red or green, repeat turning on/off twice before being completely turned off.
3. In the power-off condition, all LED indicators turn green bottom up in sequence.
4. When you hear a beep 4 times, that indicates that the initialization is completed.



▪ If you initialize the system, all of the data settings will return to the factory default.

## BASIC OPERATIONS

### When the power is supplied

1. All of the LED indicators will turn red or green, and repeat turning ON/OFF twice before being completely turned OFF. In the power-off condition, all LED indicators turn red bottom up in sequence.
2. You will hear a beep once.

### When you present a registered card to the product or press the Exit button

1. All LED indicators turn from red to green, and turn off top down in sequence before turning back red.
2. Then, the door stays open for the specified time with the upper two indicators turning green, which indicates the door is open.
3. You will hear a beep once.

### When you present an unregistered card to the product

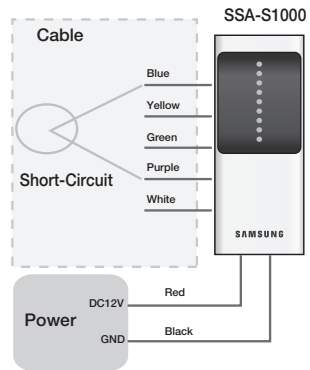
1. All LED indicators turn red, and repeat turning on/off twice before staying in ON.
2. You will hear a beep twice.

### When you present a user card to the product while the door is open

1. The two LED indicators from the top stay green, indicating the door is open; in the mean time, the other indicators reflect the authentication results.

## TO REGISTER /DELETE MASTER ID

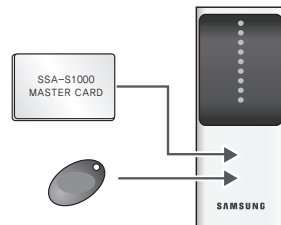
1. First turn off the product, and short-circuit two lines: purple line of Alarm Out and blue line of the Door Contact Sensor.
2. When you turn the product back on, you will hear the beep twice while all of the LED indicators turn red, and repeat turning on/off twice before being completely ON; then the Master card will be deleted.
3. Upon deletion of the Master Card, you will hear a beep once and all of the LED indicators toggle between green and red twice before turning off; in this condition, they turn red from bottom up in sequence.
4. When the deletion is completed, turn off the product. Connect the purple line of Alarm Out and the blue line of the Door Contact Sensor back to their original ports, respectively.
5. When you turn the product back on, it recognizes and registers the first-read card as the Master Card. And if you present a registered user card to the product upon deletion of the Master Card, that card will be registered as the Master Card.



- If you present a registered user card after the Master Card is deleted, that card will be registered as the Master Card.

## TO REGISTER/DELETE ID CARD

1. If you present the Master Card to the product, it will sound the beep once and the first three LED indicators from the top will turn green from the top.
2. If you present a new user card to the product, it will sound the beep once and all of the LED indicators except for the first three ones from the top will turn from red to green. Then, they all turn off and turn back on bottom up in sequence. When all of the LED indicators turn back on, they will turn red except for the first three LED indicators from the top. Then, the user card will be registered.
3. If you present a registered user card, the product will sound the beep twice and all LED indicators except for the first 3 from the top will turn red, and repeat turning on/off twice before being completely ON. Then the user card will be deleted.
4. When you present the Master Card to the product after the user card is deleted, the product will sound the beep once and all of the LED indicators turn red, starting with the first three LED indicators from the top turning from green to red.



- If you present a registered user card after the Master Card is deleted, that card will be registered as the Master Card.

# troubleshooting

## TROUBLESHOOTING

If the product does not function properly, please see the below for trouble shooting. If the trouble persists, please contact the SAMSUNG Customer Service near you.

PROBLEM	SOLUTION
<b>The user card is not deleted.</b>	<ol style="list-style-type: none"><li>1) Check if the product works properly.<ul style="list-style-type: none"><li>- If the product works properly and you have the Master Card<ol style="list-style-type: none"><li>① Read the Master Card.</li><li>② Read the card to delete.</li><li>③ Read the Master Card again to switch to normal mode.</li><li>④ For more information about deleting user cards, refer to the ID registration and deletion section in this manual.</li></ol></li><li>- If you lost the Master Card<ol style="list-style-type: none"><li>① Turn off the product and short-circuit the purple and blue lines, then turn the product back on.</li><li>② The Master ID will be deleted with a flashing LED indicator and beep.</li><li>③ When the Master card is deleted, turn off the product and restore the purple and blue lines to their respective original positions.</li><li>④ The very first card read by the product after turning on the product will be registered as the Master Card.</li><li>⑤ For deleting the ID once the Master Card is registered, refer to the ID registration and deletion section in this manual.</li><li>⑥ Turn off the product and short-circuit the purple and blue lines, then turn the product back on.</li><li>⑦ The Master ID will be deleted with a flashing LED indicator and beep.</li><li>⑧ When the Master card is deleted, turn off the product and restore the purple and blue lines to their respective original.</li><li>⑨ The very first card read by the product after turning on the product will be registered as the Master Card.</li></ol></li></ul></li></ol>
<b>The Exit button does not work at all.</b>	<ol style="list-style-type: none"><li>1) Check if the Exit button is connected to SSA-S1000 properly. (the Exit button should be used with a NO-type button)</li><li>2) Check if the Exit button works normally.<ul style="list-style-type: none"><li>- Check the connection cable between the Exit button and SSA-S1000 for any disconnection or short-circuit.</li><li>- Try to connect the two lines on the Exit button.<ol style="list-style-type: none"><li>① If SSA-S1000 responds when you press the Exit button<ul style="list-style-type: none"><li>√ Replace the Exit button as it is defective.</li></ul></li><li>② If SSA-S1000 does not respond at all<ul style="list-style-type: none"><li>√ Initialize the product as it is damaged or malfunctions. (Initializing the product will lose all user data.)</li></ul></li></ol></li></ul></li><li>3) If the trouble persists after following the procedures above, contact a designated service center.</li></ol>

# product specifications

## PRODUCT SPECIFICATIONS

Item	SSA-S1000
Users	512 Users
Power / Current	DC 12V / Max.110mA
Reading Time (Card)	30ms
Door Open Time	5sec. (Fixed)
Input Port	3ea: Exit Button, Door Sensor, Lock Type Select [Power fail Safe / Power Fail Secure]
Output Port	2ea : TR Output / DC 12V. Rating Max. 300mA Alarm Output, DC 12V. Rating Max. 1A Lock Output
LED Indicator	9 LED Indicators (Red and Green)
Beeper	Piezo Buzzer
Operating Temperature	-20°C to +50°C
Operating Humidity	10% to 90% Relative Humidity Non-Condensing
Color / Material	Silver with Black/ Polycarbonate
Dimension (W x H x D(mm))	45.0 x 122.0 x 25.0
Weight	130g



## **Correct Disposal of This Product (Waste Electrical & Electronic Equipment)**

(Applicable in the European Union and other European countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

## **Correct disposal of batteries in this product**

(Applicable in the European Union and other European countries with separate battery return systems.)



This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.