



MODEL NUMBER: SGI910-1-0-GB-XX

IMPROX SUPAGATE LITE

ImproX SupaGate Lite INSTALLATION MANUAL

SPECIFICATIONS

ImproX SupaGate Lite Controller

Working Environment	The Controller is designed to work in an indoor or protected outdoor environment similar to IP20. The Controller is, therefore, NOT sealed against water.	
Passive Frequency	125 kHz.	
Input Voltage	10 V DC to 14 V DC.	
Power Requirements	Current (mA)	Power (W)
Input Voltage 12 V DC, Antenna Reader, Relay OFF	60	0.72
Input Voltage 12 V DC, Antenna Reader, Relay ON	100	1.2
Relay		
Relay Output	1 Relay, with NO, COM and NC contacts.	
Relay Contact Ratings	10 A at 28 V DC, 5 A at 220 V AC.	
Installer Interfaces		
LED Indicators		
7-Segment Display	2 Displays, Red (externally visible).	
Push-buttons	4 Push-buttons (externally accessible).	

ImproX (SKA) SupaGate Keypad Antenna Reader

Working Environment	Designed to work in an indoor or outdoor environment similar to IP53. The ImproX SKA is, therefore, sealed (potted) against water.
Buzzer	Single tone, 4 kHz.
Keypad	12 Alphanumeric keys.
Status Indicators	
Status LED	Bi-coloured Red or Green.

INSTALLATION INFORMATION

Accessories

Find the following when unpacking the Controller:

- An ImproX SupaGate Lite Controller housed in a Black tinted, Polycarbonate Plastic Cabinet. The Controller consists of a 2-piece Top Cover and a Base.

CAUTION: DO NOT use the Metal-oxide Varistor (25 Vrms, 500 A, 77 V max clamping) with mains power applications.

- One Metal-Oxide Varistor, 25 Vrms, 500 A, 77 V max clamping.
- Four Black tinted, Polycarbonate Plastic Standoffs.
- Two Brass Wood Screws (3.50 mm x 25 mm) and two Wall Plugs (7 mm).
- An extra Serial Number Label.

Find the following when unpacking the Antenna Reader:

- An ImproX SKA Antenna Reader housed in a Black tinted, Polycarbonate Plastic Housing. The ImproX SKA consists of the Front Cover Antenna Reader Assembly (fully potted) and a Backing Plate. The Front Cover Antenna Reader Assembly includes a 2 m (7 ft) shielded multi-strand 3-pair twisted open-ended connection cable.
- Four Brass Wood Screws (3.5 mm x 25 mm).
- Four Wall Plugs (7 mm).
- An extra Serial Number Label.

General

Remember the following when installing the Controller and Antenna Reader:

Read Range

The passive read range varies from between 25 mm to 76 mm (1 in to 3 in) depending on the Antenna Reader and Tag used.

Antenna Reader Distance

The ideal cable distance between the Controller and the ImproX SKA ranges between 2 m to 16 m (7 ft to 53 ft). Achieve this by using a good quality shielded multi-strand 3-pair twisted cable. The cross-sectional area of the cable must not be less than 0.2 mm² (0.0003 in²).

Cable Specifications

The cable specifications should be similar to the following:

Conductor Resistance:	< 2 ohms.
Capacitance, Core to Earth:	< 160 pF/m.
Capacitance, Core to Core:	< 100 pF/m.

Distance between Antenna Readers from DIFFERENT SupaGates

To avoid mutual interference, install the Antenna Readers alongside each other at least 500 mm (20 in) apart.

Arc Suppression

Snubber devices are recommended for EMF Flyback and Arc Suppression when driving an inductive load with the Relay, see Figure 1.

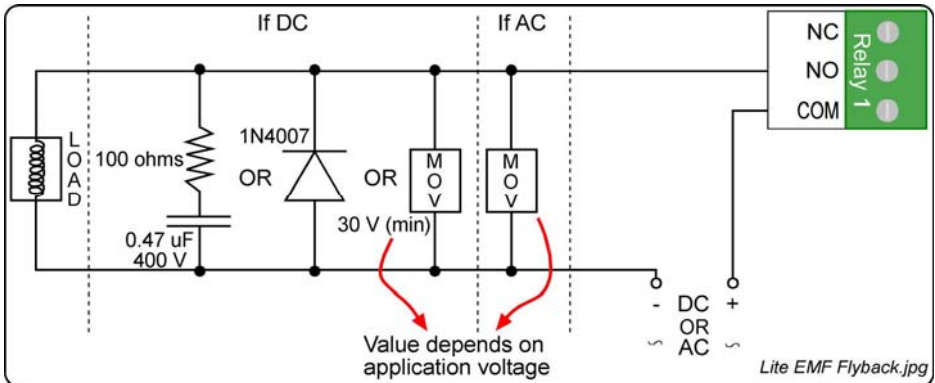


Figure 1: EMF Flyback and Arc Suppression

Mounting Details

CAUTION: Make certain that you mount the Controller and Antenna Reader on a vibration-free surface.

ImproX SupaGate Lite Controller

Secure the Cabinet to the mounting surface, using two suitable screws and wall plugs (supplied), nuts and bolts or rivets.

Mounting the ImproX SKA

CAUTION: Once clipped together, separation of the Backing Plate and Front Cover is likely to cause damage to the Antenna Reader.

Select the mounting position of the ImproX SKA, considering accessibility, routing of wires and visibility of the Status LED.

Secure the ImproX SKA to the mounting surface, using four suitable screws and wall plugs (supplied), nuts and bolts, rivets or double-sided adhesive tape.

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CONNECTION DETAILS

Figure 2 shows the layout of the Controller.

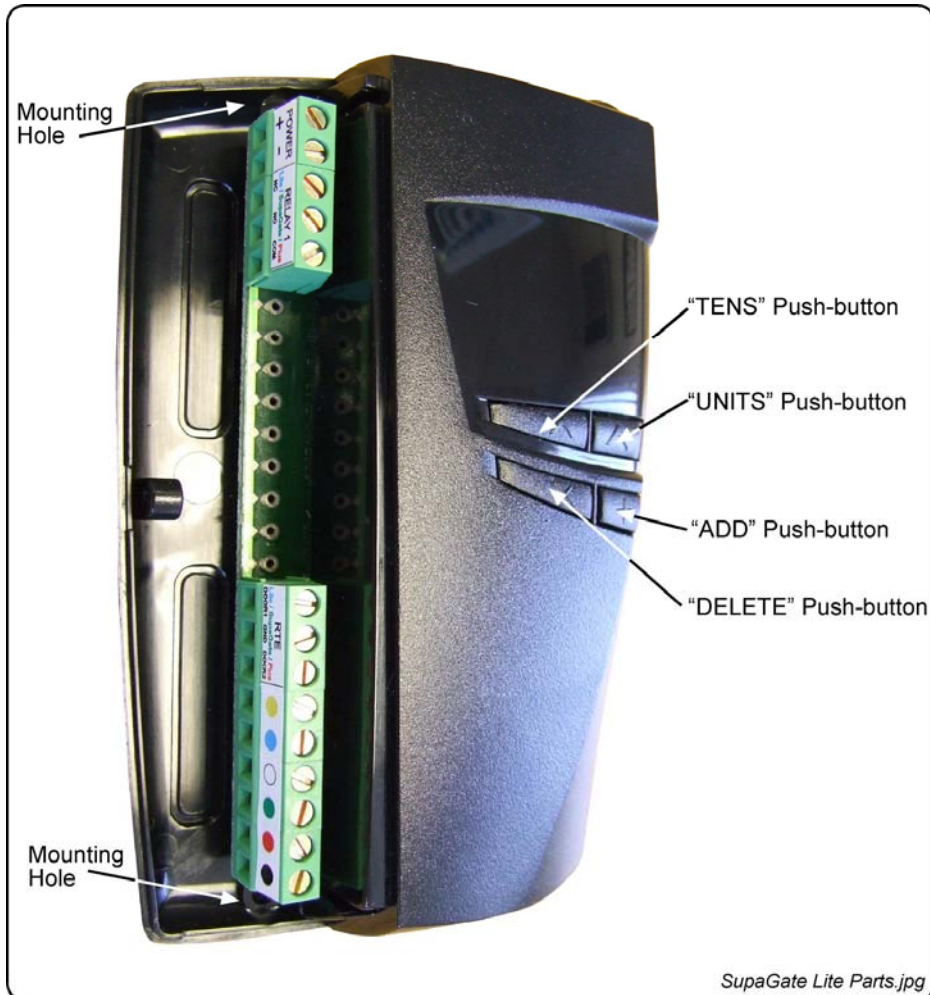


Figure 2: Controller Layout

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Figure 3 shows a typical connection diagram for the SupaGate Lite.

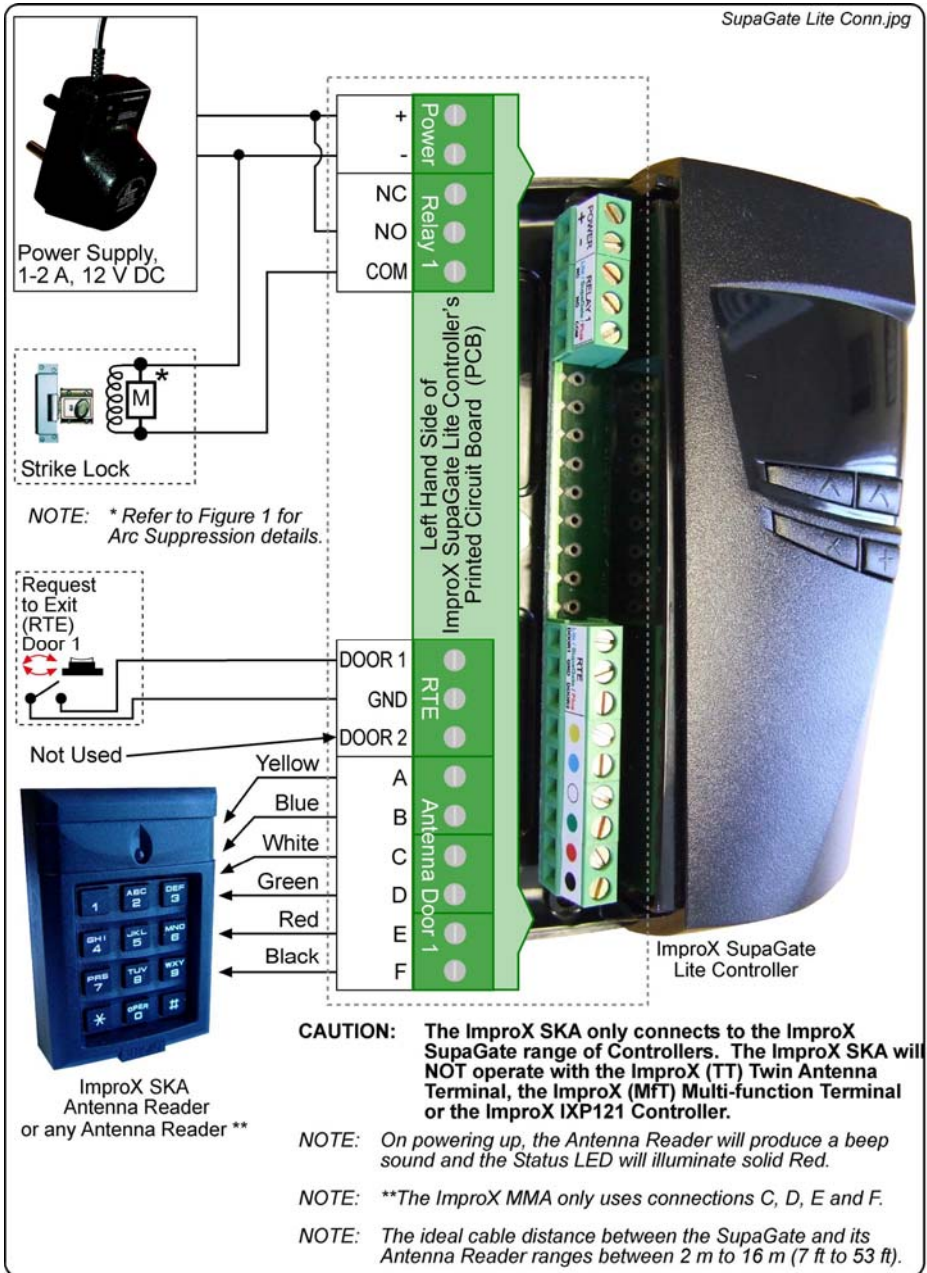


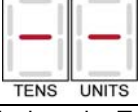


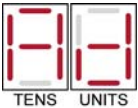

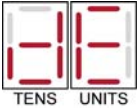

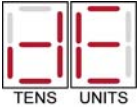
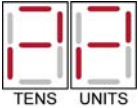
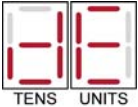


Figure 3: Typical SupaGate Lite Electrical Connections


USER INFORMATION

Mode and Action	7-Segment Display LED	
	Displays	Display Duration
POWER-UP		2 seconds then enters Run Mode
RUN MODE Reading Tags		Rotates in a circular manner
Unknown Tag		2 seconds
Tag Found	Displays the Tag Memory Location (01-99)	2 seconds
PROGRAMMING MODE Adding Passive Tags 1. In Run Mode press the "ADD" Push-button for less than 1 second. 2. Press the "TENS" and "UNITS" Push-buttons until the desired Tag Location is shown. 3. Present the Passive Tag to the Antenna Reader. 4. Press "ADD" to return to Run Mode. NOTES: <ul style="list-style-type: none"> Each new Tag Code received will display the Location at which it is being added. If the Tag already exists, it will be deleted and re-added in the same location. 		1 second
	Displays the first free Location (01-99)	2 seconds
	Displays the Passive Tag (Card) number as follows: 	

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Mode and Action	7-Segment Display LED	
	Displays	Display Duration
Adding PIN-code 1. In Run Mode press the “ADD” Push-button for less than 1 second. 2. Press the “TENS” and “UNITS” Push-buttons until the desired Tag Location is shown. 3. Enter your 4-digit PIN-code on the Keypad Antenna Reader, followed by the “#” Key on the Keypad Antenna Reader. 4. Press “ADD” to return to Run Mode. NOTE: <ul style="list-style-type: none"> Ensure you enter the complete 4-digit code, followed by the “#” Key to gain entry. If the incorrect PIN-code is entered 3 times in succession, the Keypad locks for 20 seconds. 		1 second
	Displays the first free Location (01-99)	2 seconds
	Displays the PIN-code as follows: 	
Deleting Tags or PIN-codes 1. In Run Mode press the “DELETE” Push-button. 2. Press the “TENS” and “UNITS” Push-buttons until the desired Tag Location is shown. 3. Press “DELETE” to delete the desired Location. 4. Specify more Locations to be deleted, or press “DELETE” to return to Run Mode.		1 second
		
		2 seconds
Bulk Delete 1. Power down the SupaGate. 2. Power up the SupaGate while pressing the “ADD” and “DELETE” Push-buttons. 3. “??” is displayed, after 2 seconds all is deleted and “dE” is displayed.		
		

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Mode and Action	7-Segment Display LED	
	Displays	Display Duration
Replacing Lost Tags 1. Delete the lost Tag from its Tag Location. (See the “Deleting Tags” section). 2. Add the new Tag to the abovementioned Tag Location. (See the “Adding Tags” section).	Displays the first free Location (01-99)	2 seconds
	Displays selected Tag Memory Location	
Set Relay Duration 1. In Run Mode press the “ADD” Push-button for longer than 1 second. 2. Press the “TENS” and “UNITS” Push-buttons to specify the duration of the Relay in seconds (00 = Toggled Mode). 3. Press the “ADD” Push-button four times (pressing the Push-button for less than 1 second each time) to go back to Run Mode. NOTE: <ul style="list-style-type: none"> The factory default setting is 01. Relay 2, Relay 3 and Relay 4 are not available in the SupaGate Lite. 		1 second
	Displays the Relay Drive Time in seconds (01–99 seconds)	

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TAG LOCATIONS

Document all Tag owners at their respective Tag Memory Locations (in the SupaGate) using Table 1. This list provides an easy reference when you need to delete Tags from the SupaGate.

Owner		Relay or PIN-code				Owner		Relay or PIN-code			
		1	2	3	4			1	2	3	4
01						27					
02						28					
03						29					
04						30					
05						31					
06						32					
07						33					
08						34					
09						35					
10						36					
11						37					
12						38					
13						39					
14						40					
15						41					
16						42					
17						43					
18						44					
19						45					
20						46					
21						47					
22						48					
23						49					
24						50					
25						51					
26						52					

	Owner	Relay or PIN-code					Owner	Relay or PIN-code			
		1	2	3	4			1	2	3	4
53						77					
54						78					
55						79					
56						80					
57						81					
58						82					
59						83					
60						84					
61						85					
62						86					
63						87					
64						88					
65						89					
66						90					
67						91					
68						92					
69						93					
70						94					
71						95					
72						96					
73						97					
74						98					
75						99					
76											

Table 1: Tag Location Table

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GUARANTEE OR WARRANTY

CAUTION: We reserve the right to nullify the products guarantee or warranty where you have not properly installed the Metal-oxide Varistors.

This product conforms to our Guarantee or Warranty details placed on our Web Site to read further please go to www.impro.net.

USER NOTES



This manual is applicable to the ImproX SupaGate Lite, SGI910-1-0-GB-01.
(The last two digits of the stock code indicate the issue status of the product).

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