



# Lift I/O

*Elevator Control and I/O Expansion*

Installation Guide

(Ver 1.0)



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# 1 General Information

## 1-1 Introduction

Lift I/O is an elevator access control I/O module catered for installations that desire restrictive access to certain floors. All that is required is a Suprema reader, BioStar SE and a Lift I/O.

Each module can control the access of up to 12 different floors and uses an RS-485 port to provide secure communication with the readers. Furthermore, each reader can connect via daisy chain with up to 10 Lift I/Os. This allows for the potential control of a staggering 120 floors.

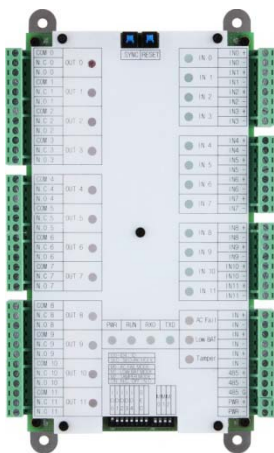
Access to each floor is also highly customizable. Using the BioStar SE software each Lift I/O can be configured to control the access to specific floors as well as assign the access rights to each floor by user or group.

### Key Features

- Control 12 Floors per I/O Module
- Daisy Chain up to 10 I/O Modules per Reader (up to 120 Floors)
- Easy Mounting & Setup
- RS-485 Secure Communication
- Highly Customizable User Access

## 1-2 Package Contents

Please check if the following contents are within the package. If any component is missing contact your nearest Suprema dealer.



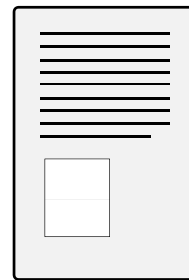
Lift I/O



Wall mounting screws



120 Ohm Resistor

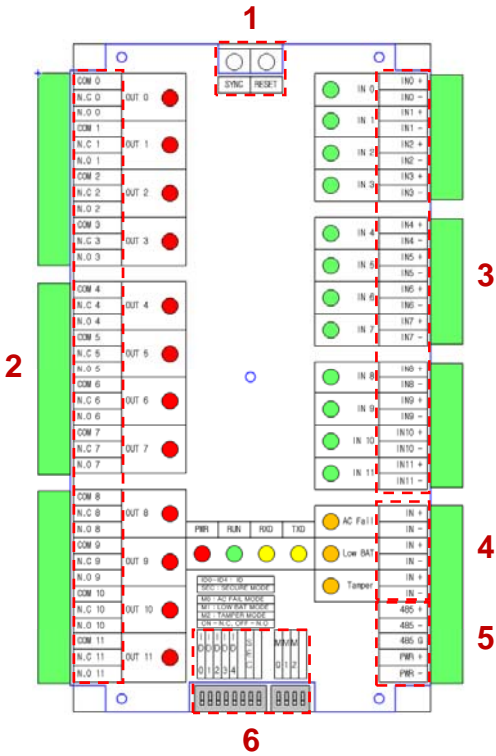


Lift I/O Quick Guide

# 1 General Information

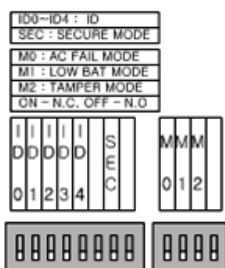
## 1-2 Product Description

### Main Device



#	Item	Description
1	Reset & Sync Buttons	RESET: Resets Lift I/O SYNC: Synchronizes Lift I/O with host device
2	Output Ports	12ch: Form C Relay
3	Input Ports	12ch: Input (Currently Disabled)
4	Aux Input Port	3 Ports: AC Fail, Low Battery, Tamper
5	RS-485 & Power Ports	RS-485: Communication with host device Power: 12VDC, 1A
6	Dip Switches	ID: Lift I/O RS-485 ID SEC: Secure Mode Toggle M: Aux Input Port Modes [N.O. / N.C.]

### Dip Switch Settings



Lift I/O ID	ID 0 State	ID 1 State	ID 2 State	ID 3 State	ID 4 State
0	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF
5	ON	OFF	ON	OFF	OFF
...					
31	ON	ON	ON	ON	ON

ID Setting [Sets the RS-485 ID for the Lift I/O, Range: 0 ~ 31]

- Binary Counting (See Table Above)

SEC Setting [Enables Secure Mode Communication (Must RESET Lift I/O)]

- ON: Secure Mode Enabled, OFF: Secure Mode Disabled

Aux Mode Settings [M0 - AC Fail, M1 - Low BAT, M2 - Tamper]

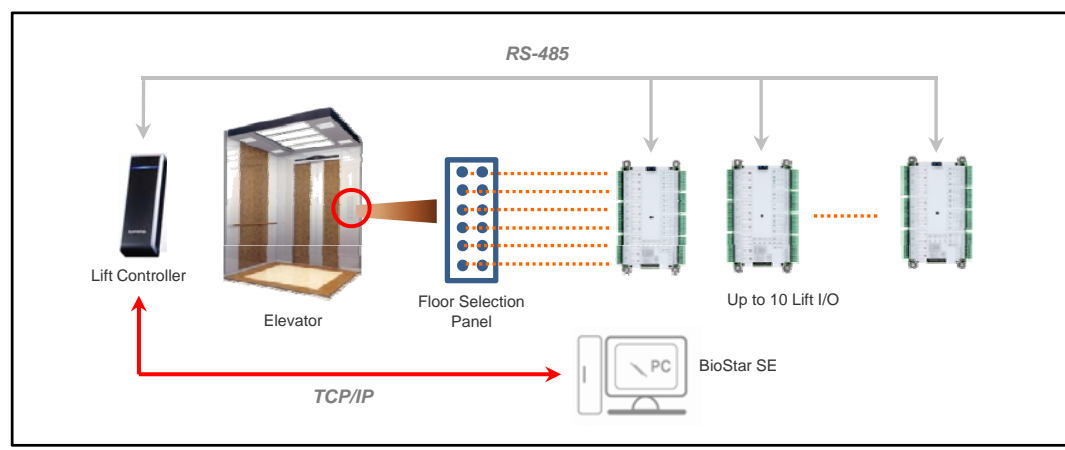
- ON: Normal Open, OFF: Normal Closed

# 2 Installation

## 2-1 System Configuration

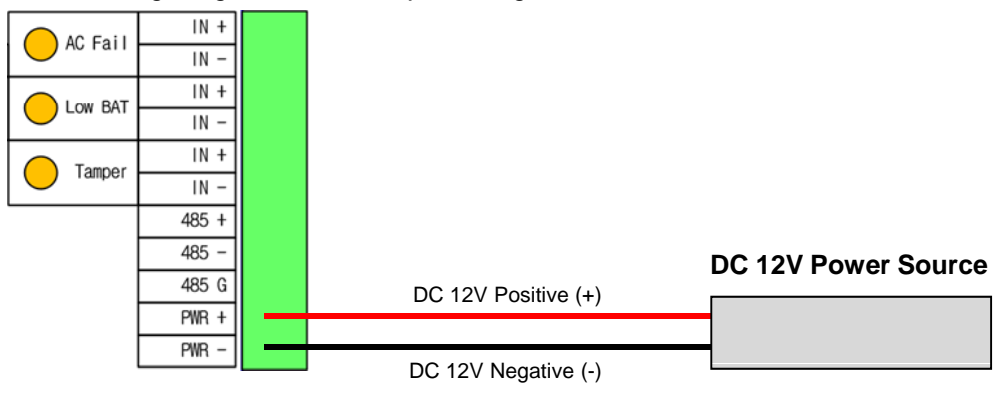
Select Suprema devices can use the Lift I/O expansion module to control access to specific floors. All settings are programmed using the BioStar SE software and then independently controlled by the master device.

*(See the BioStar Manual for more details)*



## 2-2 Power Connection

Use the following diagram to aid in powering the Lift I/O.



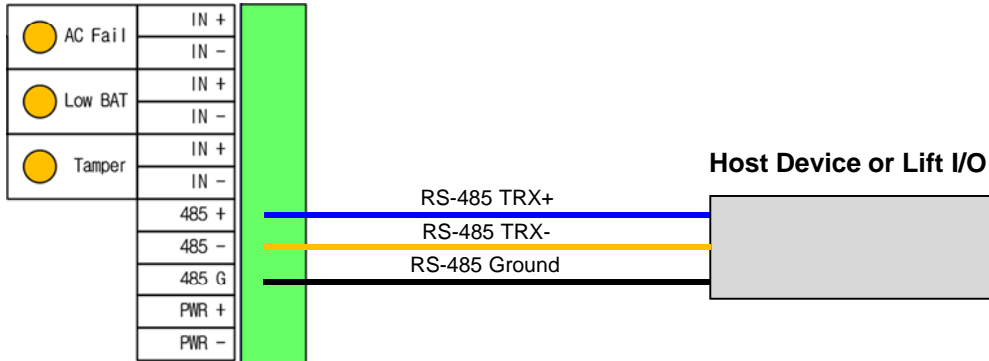
### Recommended Power Supply:

- 12V ± 10%, greater than 1.0A per Lift I/O.
- Compliance with standard IEC/EN 60950-1
- When sharing power with other devices, use a power supply the correct cumulative current rating.

# 2 Installation

## 2-3 RS-485 Connection

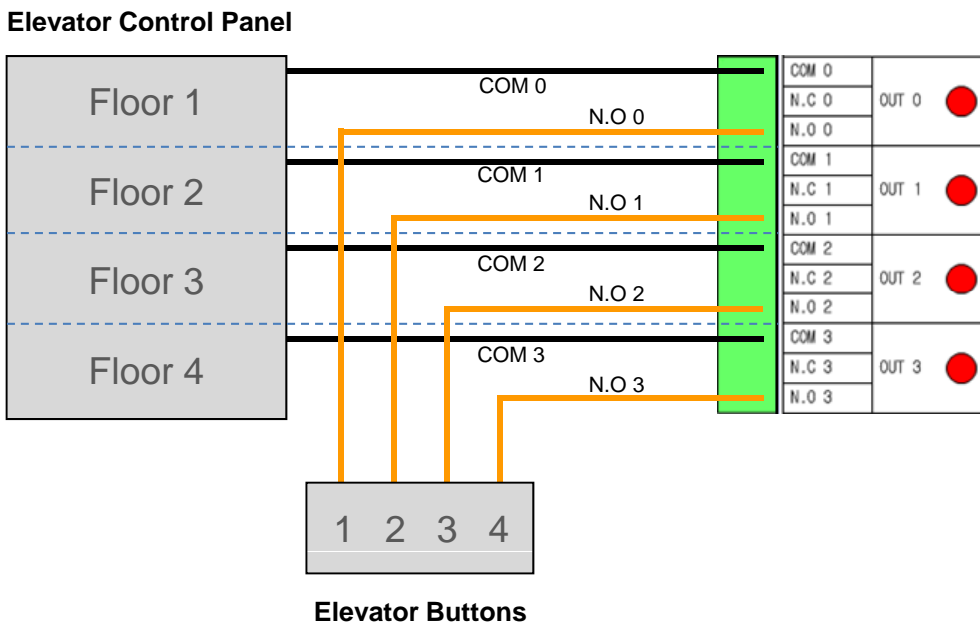
Use the diagram below to aid in connecting Lift I/O to the host device or another Lift I/O. All three lines must be connected to ensure a stable communication. A daisy chain connection must be used when connection to another Lift I/O.



If the communication in the RS-485 is unstable, connect the enclosed 120 Ohm resistor between TRX+ and TRX- connector of Lift I/O for termination.

## 2-4 Relay Connection (Example)

Relay connections may differ from elevator to elevator. Please consult your elevator installer for details. Use the figure below as an example of a suggested connection. Each output has to be linked to the corresponding floor.



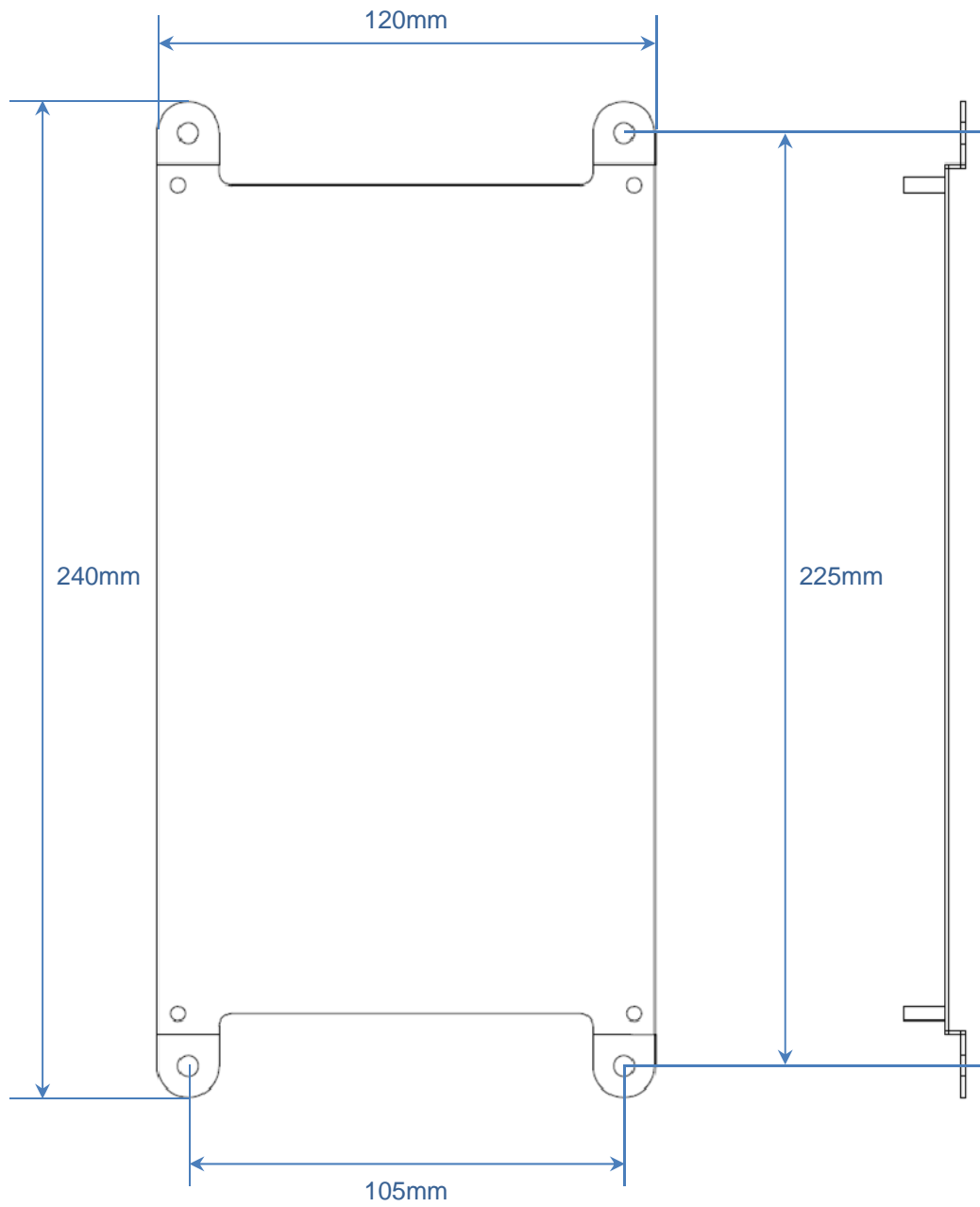
## Appendix A: Specifications

- CPU : 8bit, 16MHz Microcontroller
- Memory : 128Kbyte Flash
- Display : 31ea Status LED
- IO : Input - 12ch, Output - 12ch (Form C Relay), RS-485 - 1port
- Product size : 120 x 140 x 45 mm (width x length x depth)

	Min.	Typ.	Max.	Notes
<b>Power</b>				
Voltage (V)	10.8	12.0	13.2	
Current (A)	-	1.0	1.5	

<b>Relay</b>		
Rating (resistive)	Max. switching power	60W, 125VA
	Max. switching voltage	220VDC, 250VAC
	Max. switching current	2A (DC, AC)
	Max. carrying current	3A (DC, AC)
	Min. Operations	2A, 30VDC

## Appendix B: Bracket Dimensions







**Memo**

Large empty rounded rectangular box for writing a memo.



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