HCB WIRING GUIDE

EP.S3150
EP.S3200
EP.S3400

EP.N5150
EP.N5200
EP.N5400

Version: 1.18

Last Updated: 18-07-2018

Notes:

N5150, N5200 and N5400 are network enabled controllers
S3150, S3200 and S3400 are serial enabled controllers

N5150 and S3150 have 4 inputs and 2 Outputs (2 Relays – Support 2 Doors, 2 Readers)
N5200 and S3200 have 8 inputs and 4 outputs (4 Relays - Support 2 Doors, 2 Readers). N5400 and S3400 have 8 inputs and 4 outputs (4 Relays – Support 4 Doors, 4 Readers)

N5200, S3200, N5400 and S3400 support unlimited access level
N5150 and S3150 not support unlimited access level

S3150, S3200, S3400, N5150, N5200 and N5400 support HID (AGK00, 09, 10, 11, 14, 19, 20), Wiegand Multi-Bit, Keyed Card + Pin

N5150, N5200 and N5400 support AES Encryption

S3200, S3400, N5200, N5400 support event trigger

See http://www.entrypass.net/ for updates, revisions, and download the latest installation manual

Platform1 version 3 support 6 and 10 digits format
For existing site, P1 will detect its card database to determine 6 or 10 digits; For new site, user can change the digits as long as the card database is empty

Please refer to separate EntryPass Platform1 User Manual for detail operation help. The Official EntryPass Platform1 User Manual can be downloaded from our website under “Download” section or inside the Platform1 Server setup CD

BEFORE YOU BEGIN

Technical Support

If you cannot find the answer to your question in this manual or in the Help files, we recommend you contact your system installer. Your installer is familiar with your system configuration and should be able to answer any of your questions.

Should you need additional information, please call our Technical Support Help desk, Monday to Friday 9:00 AM to 6:00 PM (GMT +8:00)

Method Details
Phone + 60 (3) - 8068 1929
Fax + 60 (3) - 8068 1922
Internet www.entrypass.net
Email support@entrypass.net

Considerations Prior to Installation

Preparing Your EntryPass Controllers

EntryPass controller contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instruction below:

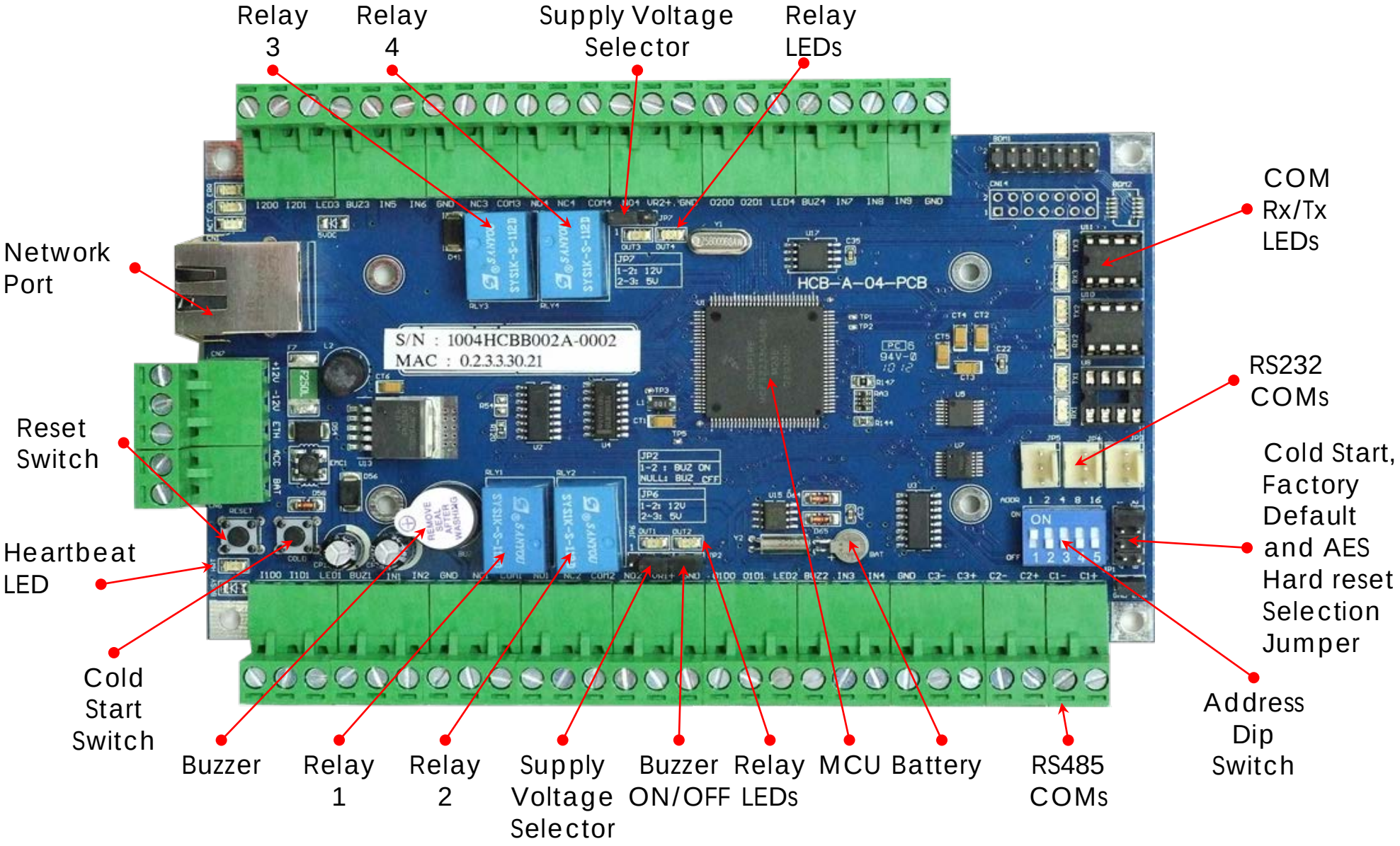
- Observe precautions while handling the circuit board assembly by using proper grounding straps and handling precautions at all
- Visually ensure no onboard parts is broken, damage or contains burn mark
- Do not turn on the power supply until you completed all wiring and external add on devices installations

CAUTION
Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire. To prevent a risk of explosion do not pry the battery out with a metal or conductive tool.

Instances of Non-Warranty

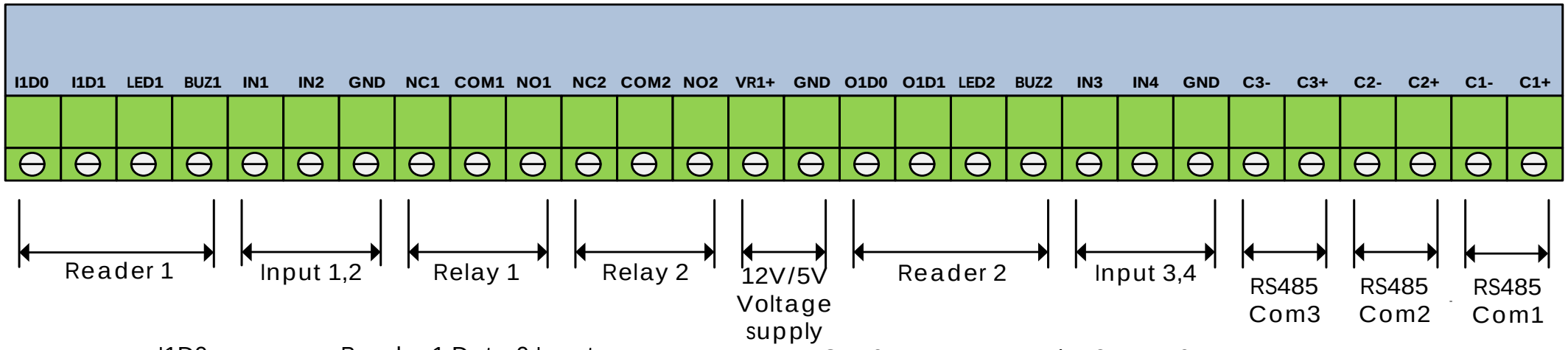
- Damage due to natural disaster, accident or human cause.
- Damage as a result of violating the conditions recommended in the user manual
- Damage due to improper installation
- Damage due to use of uncertified components
- Damage due to use exceeding the permitted parameters

Components Description



Legend Description

Lower Connector

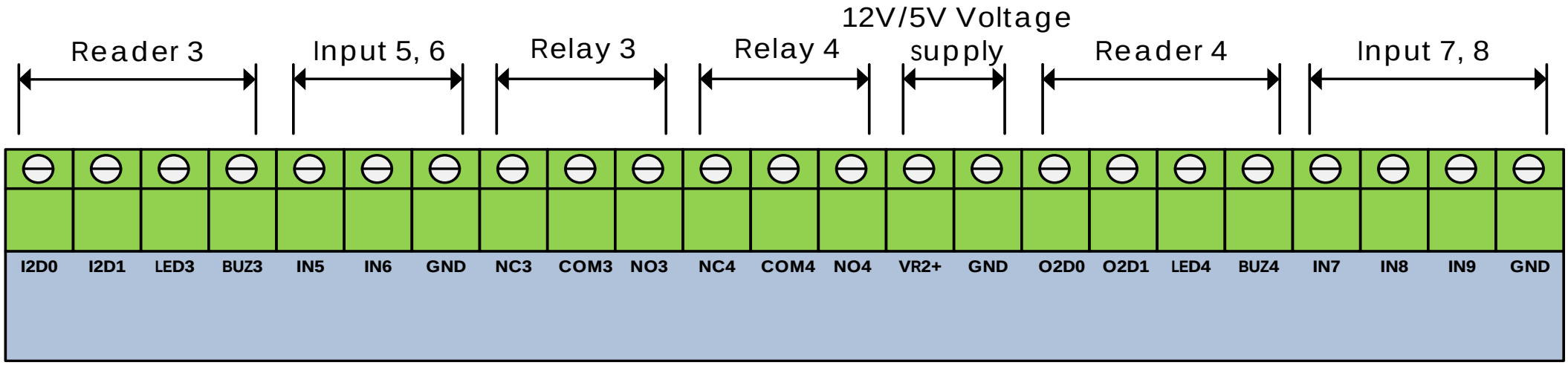


I1D0	- Reader 1 Data 0 Input
I1D1	- Reader 1 Data 1 Input
LED1	- Reader 1 LED
BUZ1	- Reader 1 Buzzer
IN1	- Input 1 (Default: Door Sensor)
IN2	- Input 2 (Default: Exit Push Button)
GND	- Inputs Ground
NC1	- Relay 1 Normally Close Connection
COM1	- Relay 1 Common Input
NO1	- Relay 1 Normally Open Connection
NC2	- Relay 2 Normally Close Connection
COM2	- Relay 2 Common Input
NO2	- Relay 2 Normally Open Connection
VR1+ (12V/5V)	- Supply Voltage Positive Connection
GND	- Supply Voltage Ground Connection

O1D0	- Reader 2 Data 0 Input
O1D1	- Reader 2 Data 1 Input
LED2	- Reader 2 LED
BUZ2	- Reader 2 Buzzer
IN3	- Input 3
IN4	- Input 4
GND	- Inputs Ground
C3-	- RS485 COM3 (-) Connection
C3+	- RS485 COM3 (+) Connection
C2-	- RS485 COM2 (-) Connection
C2+	- RS485 COM2 (+) Connection
C1-	- RS485 COM1 (-) Connection
C1+	- RS485 COM1 (+) Connection

For VR1+ to supply 12V, please make sure JP6 is at 1-2 pins
For VR1+ to supply 5V, please make sure JP6 is at 2-3 pins

Legend Description

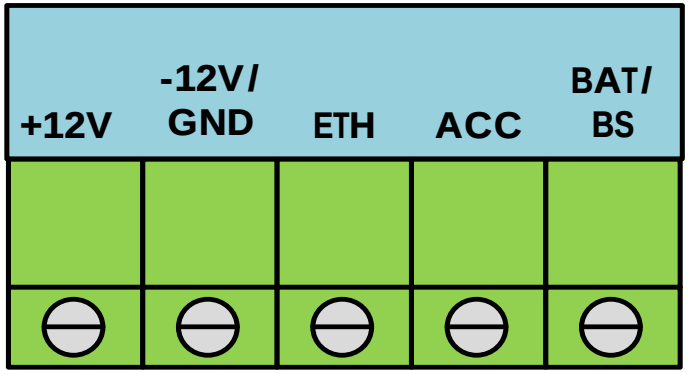


Upper Connector - Only for EP.S3200, EP.S3400, EP.N5200, EP.N5400

I2D0	- Reader 3 Data 0 Input
I2D1	- Reader 3 Data 1 Input
LED3	- Reader 3 LED
BUZ3	- Reader 3 Buzzer
IN5	- Input 5
IN6	- Input 6
NC3	- Relay 3 Normally Close Connection
COM3	- Relay 3 Common Input
NO3	- Relay 3 Normally Open Connection
NC4	- Relay 4 Normally Close Connection
COM4	- Relay 4 Common Input
NO4	- Relay 4 Normally Open Connection
VR2+ (12V/5V)	- Supply Voltage Positive Connection
GND	- Supply Voltage Ground Connection
O2D0	- Reader 4 Data 0 Input
O2D1	- Reader 4 Data 1 Input
LED4	- Reader 4 LED
BUZ4	- Reader 4 Buzzer
IN7	- Input 7
IN8	- Input 8
IN9	- Reserved
GND	- Inputs Ground

For VR2+ to supply 12V, please make sure JP7 is at 1-2 pins
For VR2+ to supply 5V, please make sure JP7 is at 2-3 pins

Legend Description

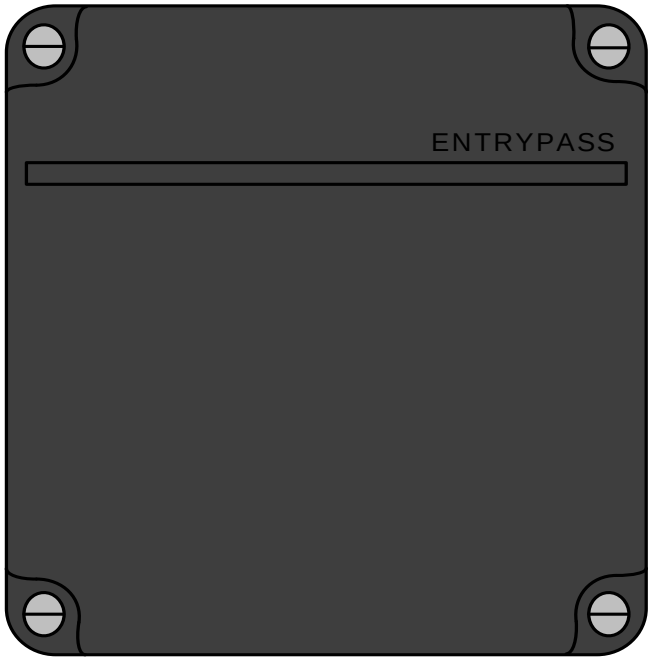


Power Supply Connector

+12V	-	Power Supply Positive 12V DC
-12V/GND	-	Power Supply Ground
ETH	-	Power Supply Earthing
ACC	-	AC Fail Monitoring
BAT/BS	-	Backup Battery Monitoring

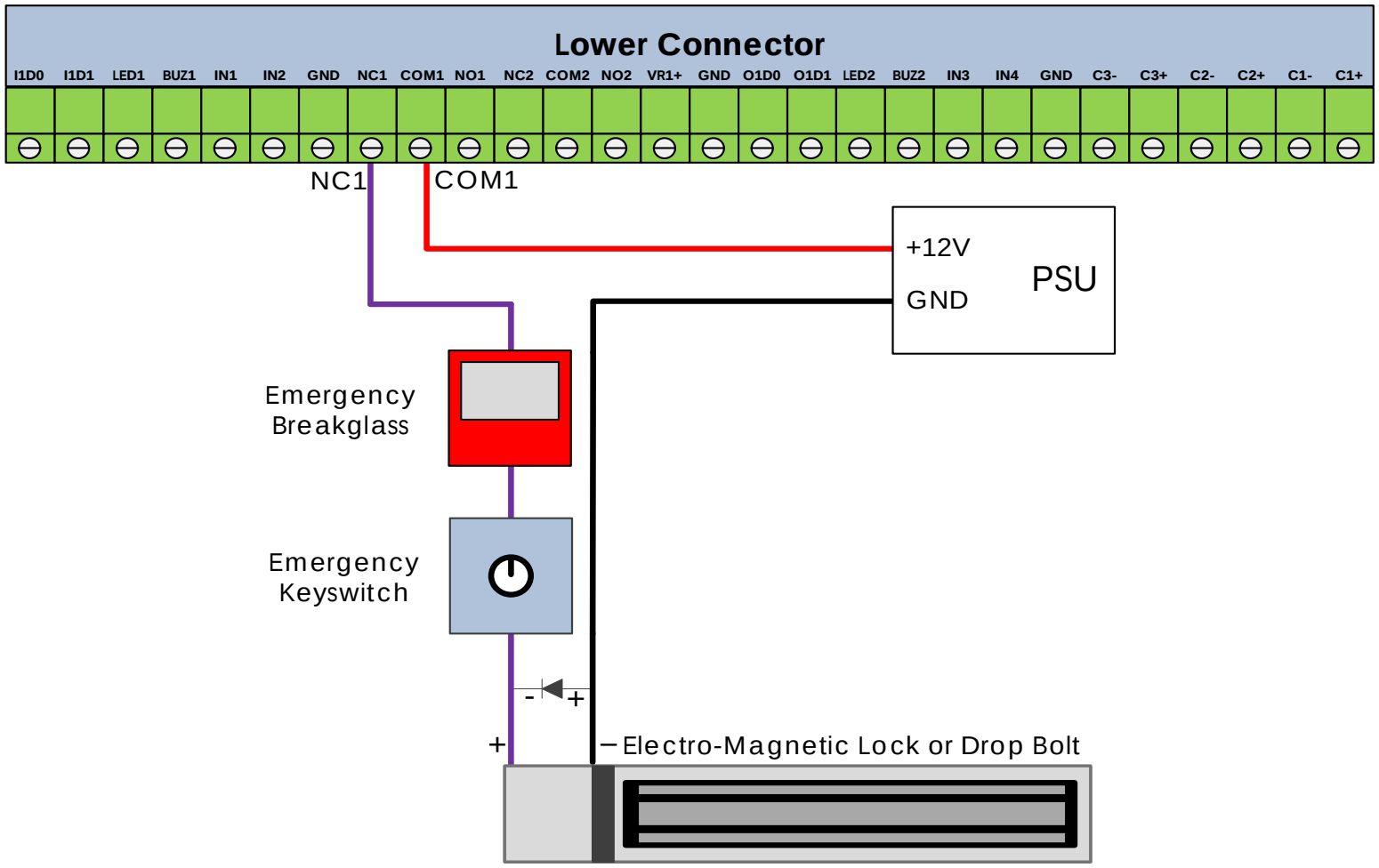
BAT/BS (Backup Battery Monitoring) point will monitor the backup battery voltage which will supply power to the board when AC power is cut off The minimum voltage for cutoff while using backup battery is 10.8V

Power Supply Unit Specification



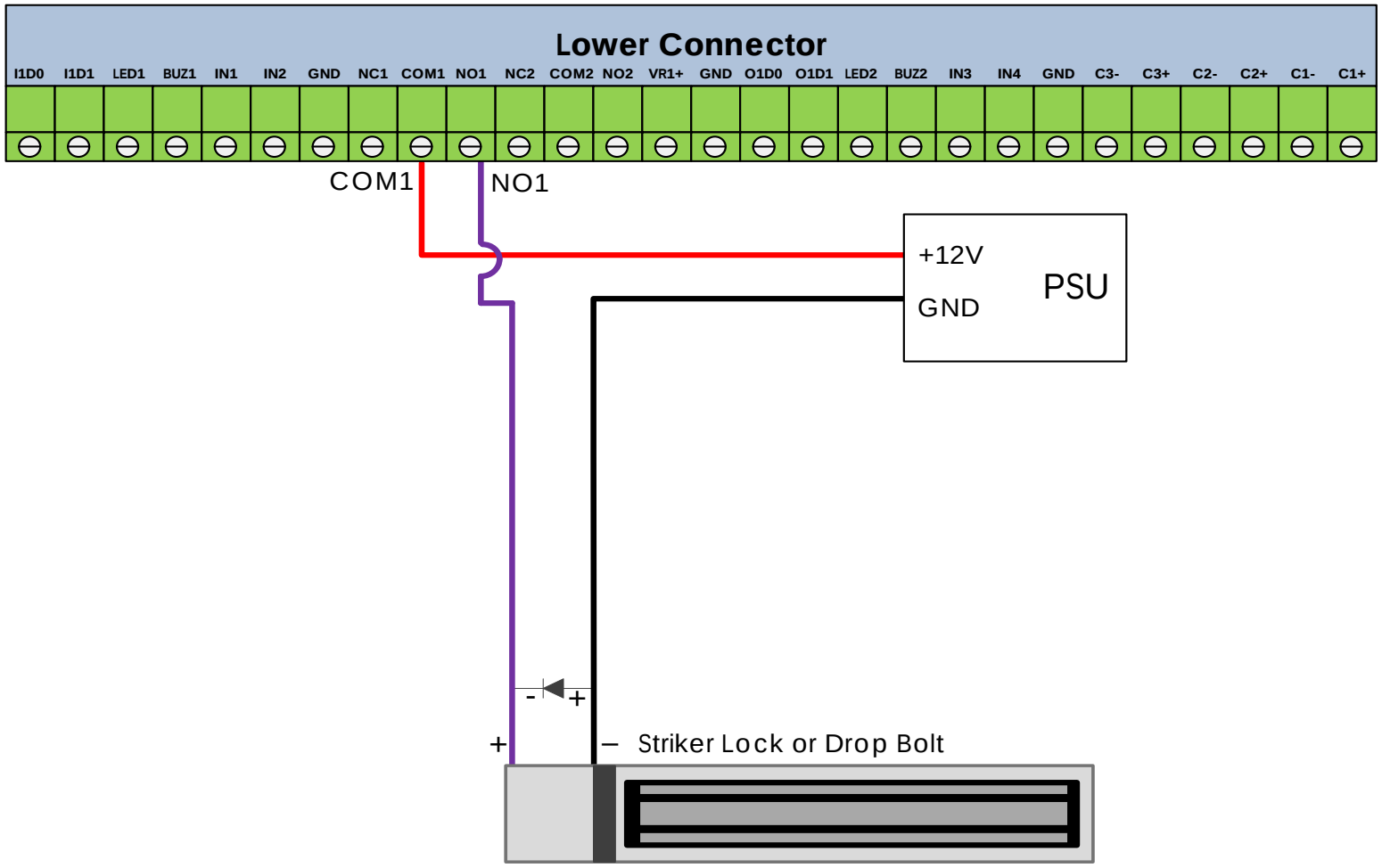
Power Supply Unit Specification:
- Switching Power Supply
- 12V DC
- 3 Amp (Minimum)

Connecting the Lock (NC), Breakglass and Keyswitch



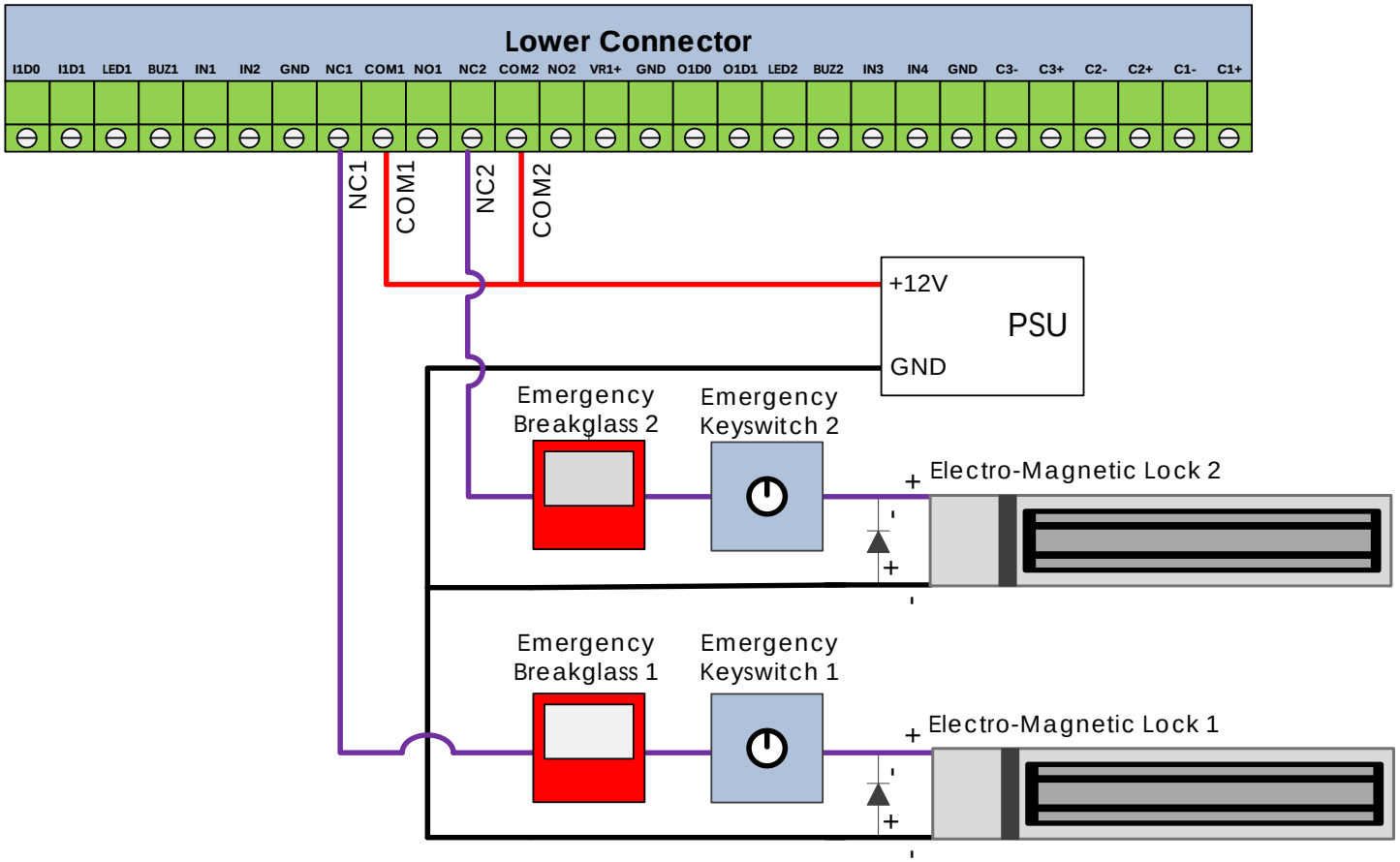
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF. It is advisable to connect EM lock COM to +12Vof PSU (Power Supply Unit)

Connecting the Striker Lock or Drop Bolt (NO)



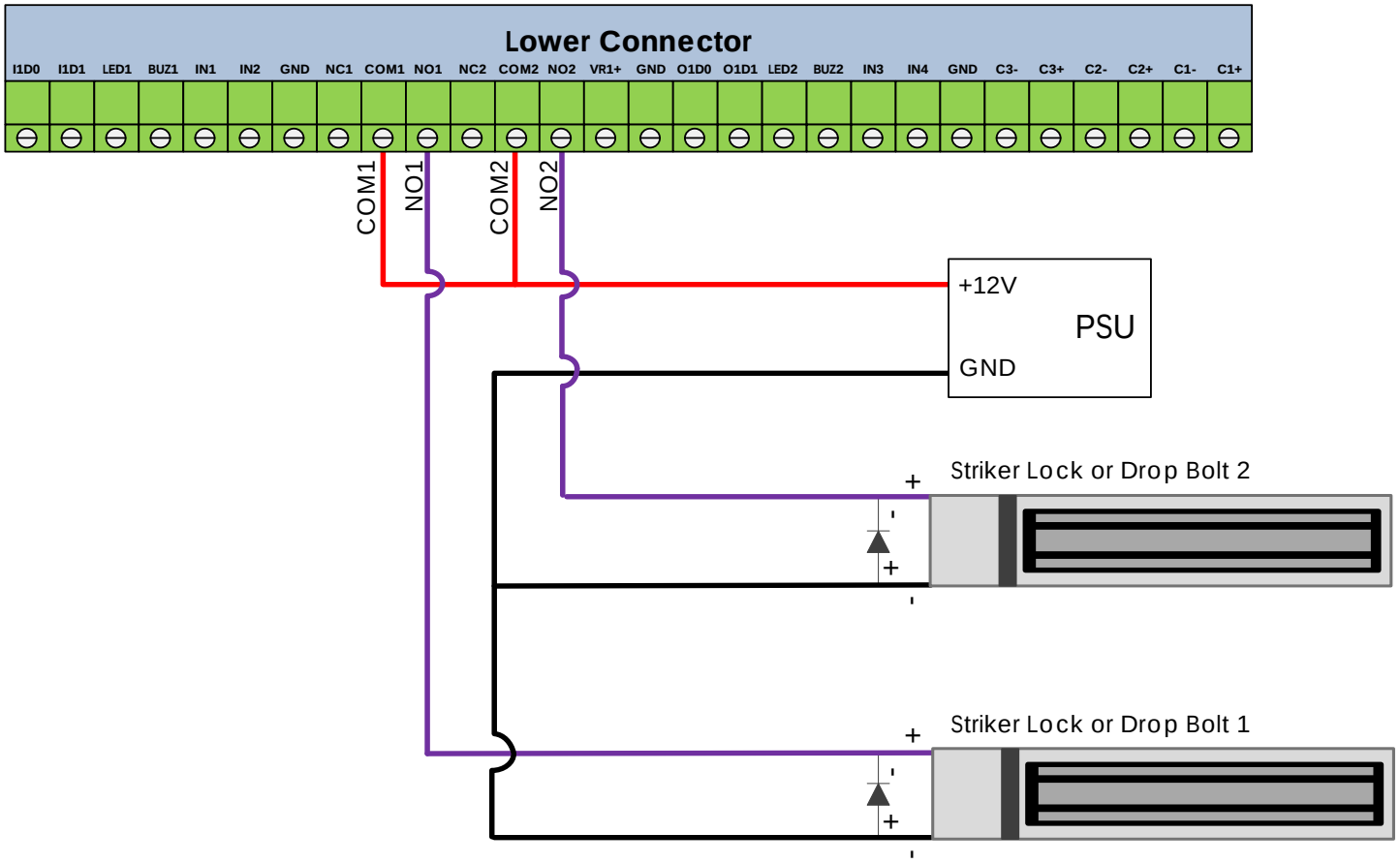
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF

Connecting the Lock (NC), Breakglass and Keyswitch (2 Doors Mode Only)



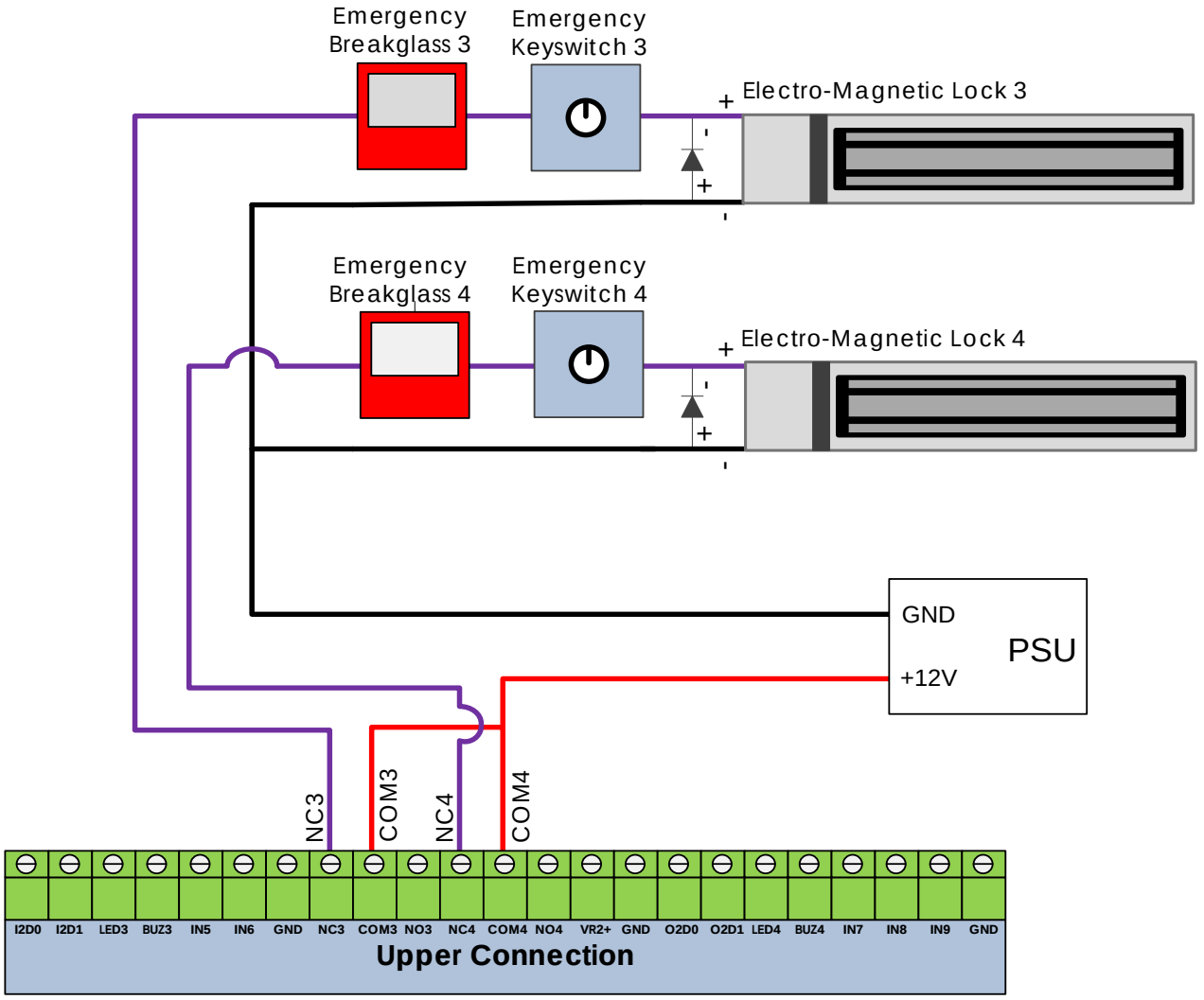
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF

Connecting the Lock (NO), Breakglass and Keyswitch (2 Doors Mode Only)



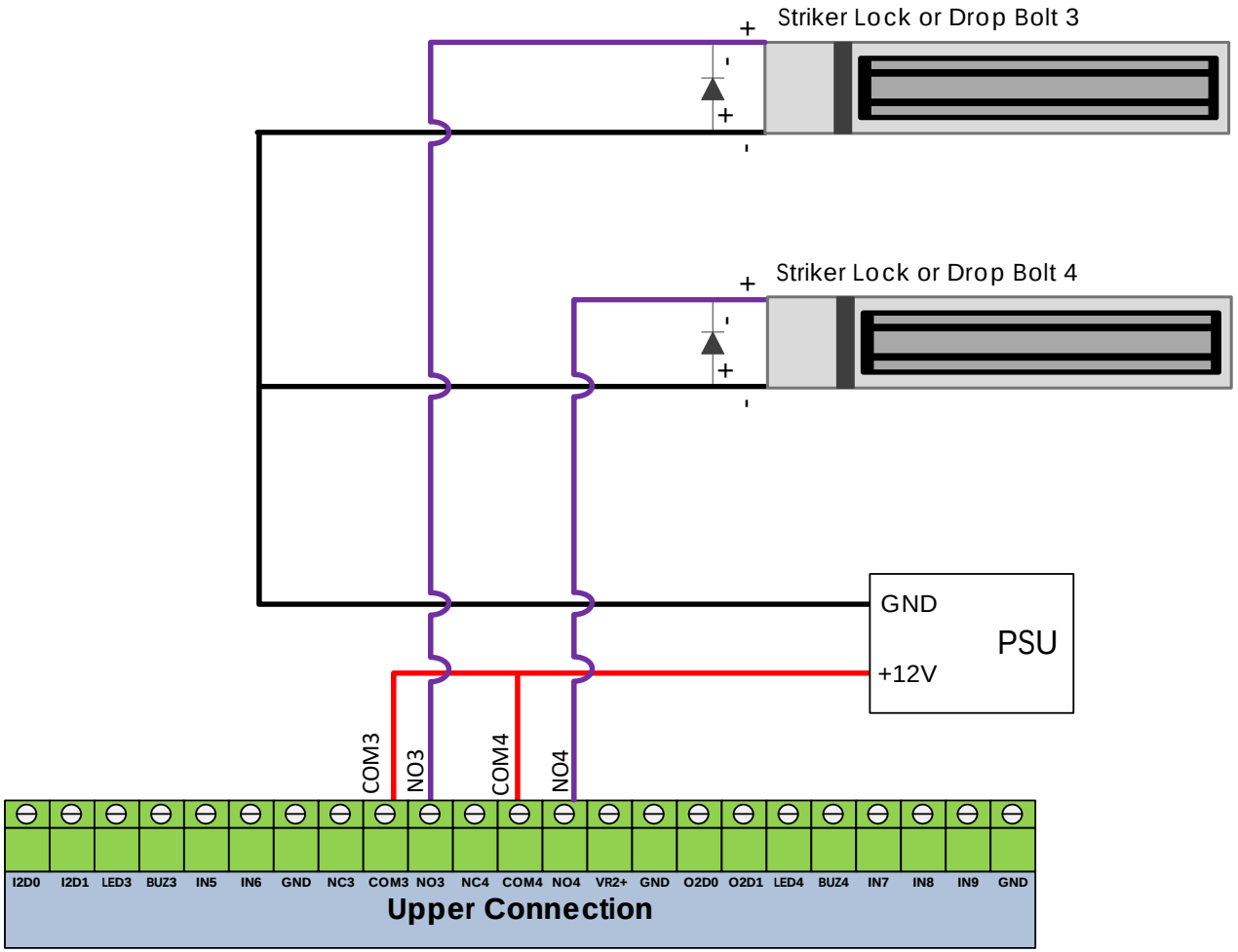
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF

Connecting the Lock (NC), Breakglass and Keyswitch (4 Doors Mode Only)



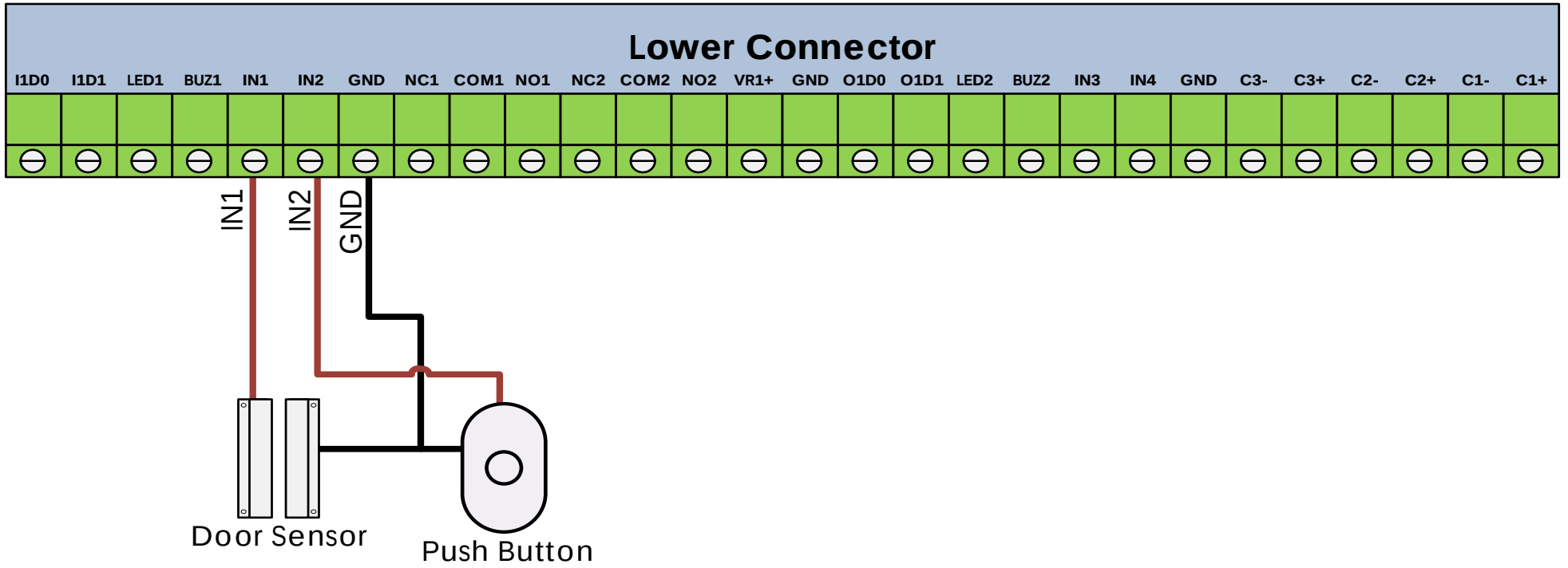
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF
NC1 and NC2 connection for 4 Doors Mode, please refer to 2 Doors Mode NC connection
4 Doors Mode only applicable for N5400 and S3400

Connecting the Lock (NO), Breakglass and Keyswitch (4 Doors Mode Only)

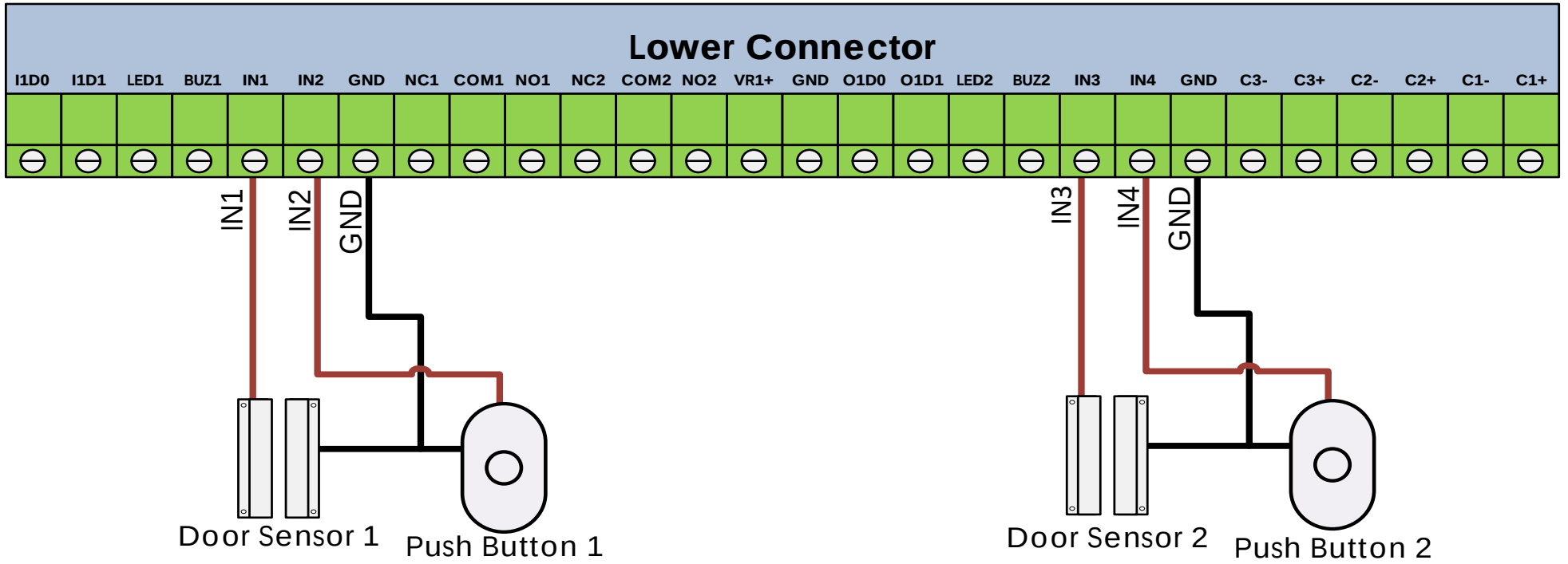


Diode(1N4002) must be installed at the locking devices in order to protect against back EMF
NO1 and NO2 connection for 4 Doors Mode, please refer to 2 Doors Mode NO connection
4 Doors Mode only applicable for N5400 and S3400

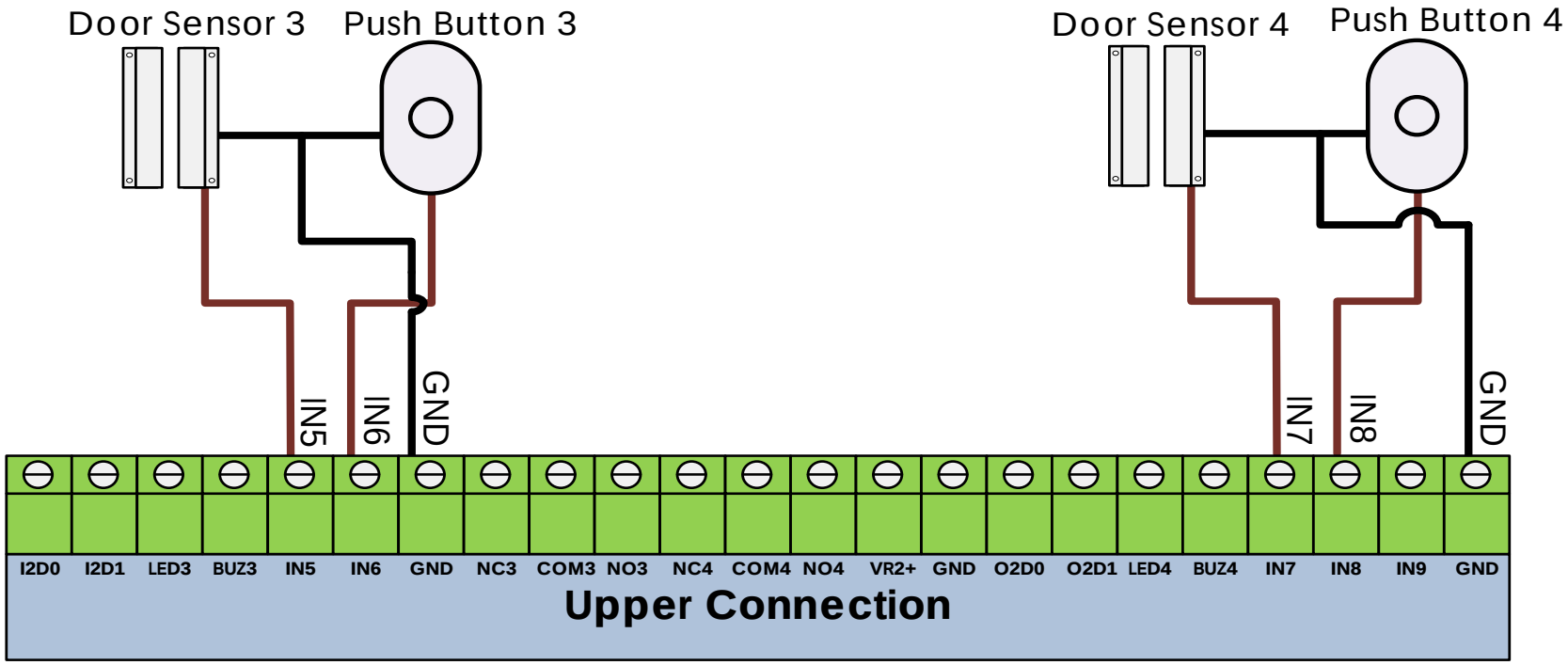
Connecting the Door Sensor and Push Button



Connecting the Door Sensor and Push Button (2 Doors Mode)

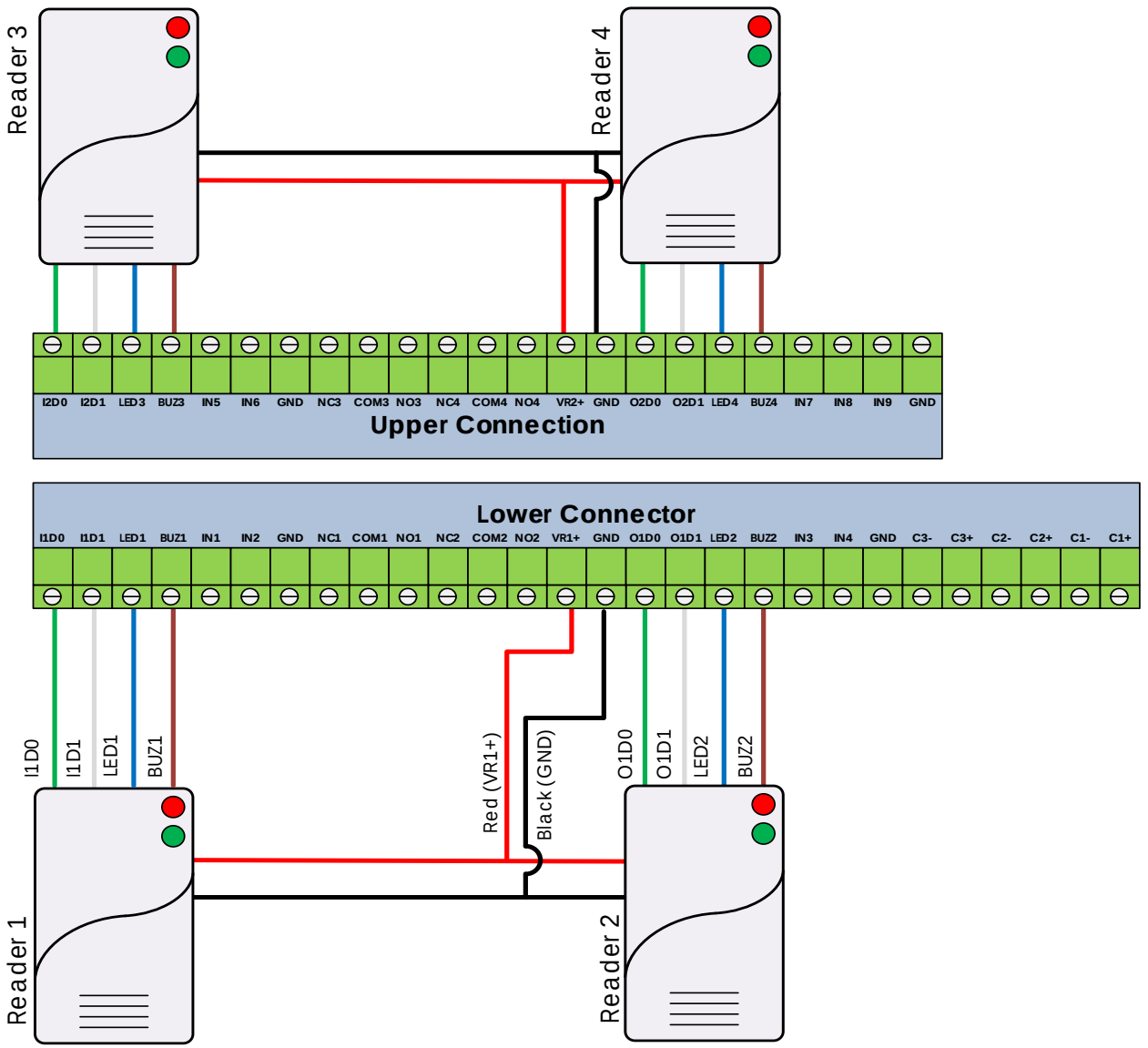


Connecting the Door Sensor and Push Button (4 Doors Mode)



IN1,2,3,4 Connections for 4 Doors Mode please refer to 2 Doors Mode IN1,2,3,4 connections 4 Doors Mode only applicable for N5400 and S3400

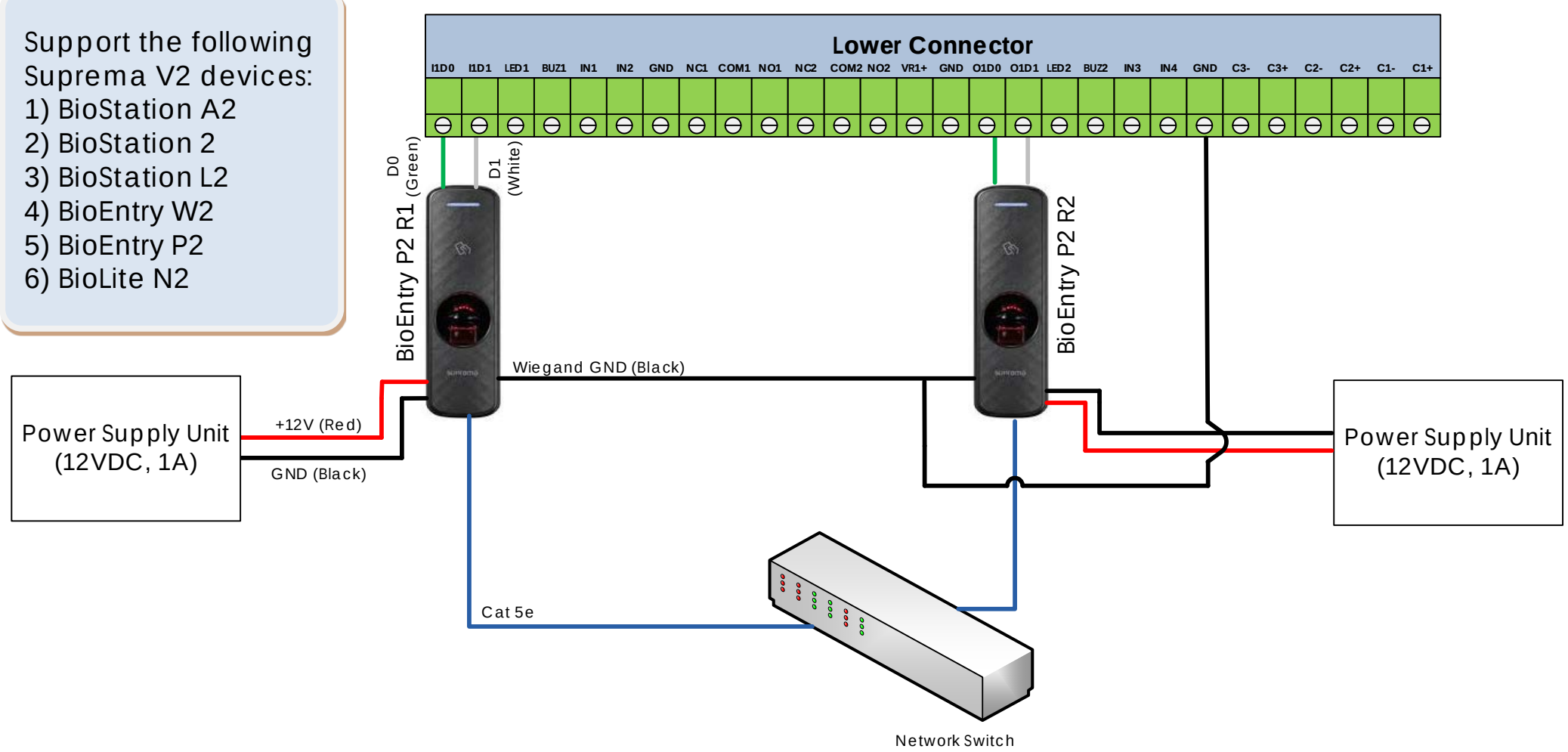
Connecting the Reader – 3rd Party Reader



Reader 3 and Reader 4 only applicable for N5400 and S3400

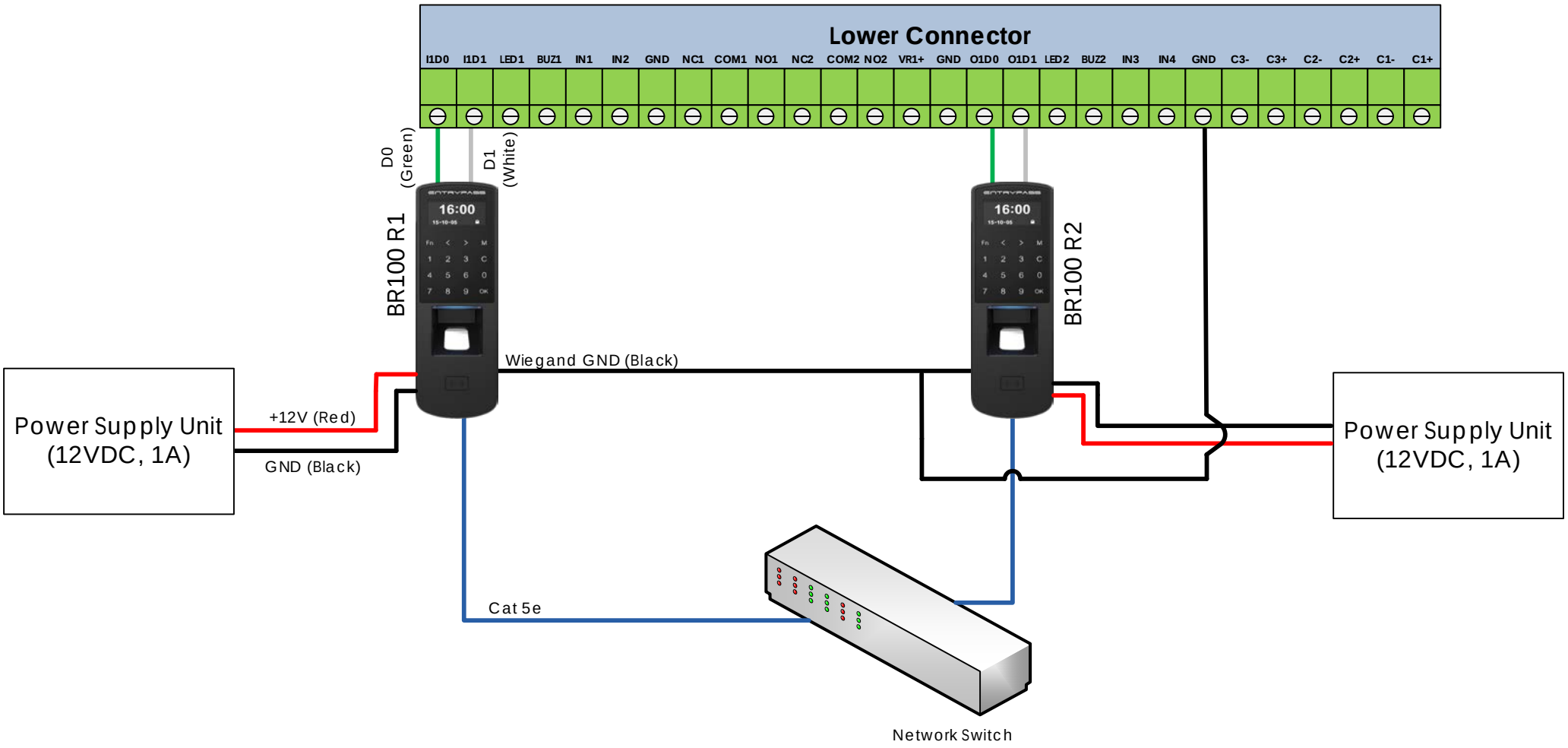
Connecting the Reader – Suprema V2 Devices

Support the following Suprema V2 devices:
1) BioStation A2
2) BioStation 2
3) BioStation L2
4) BioEntry W2
5) BioEntry P2
6) BioLite N2



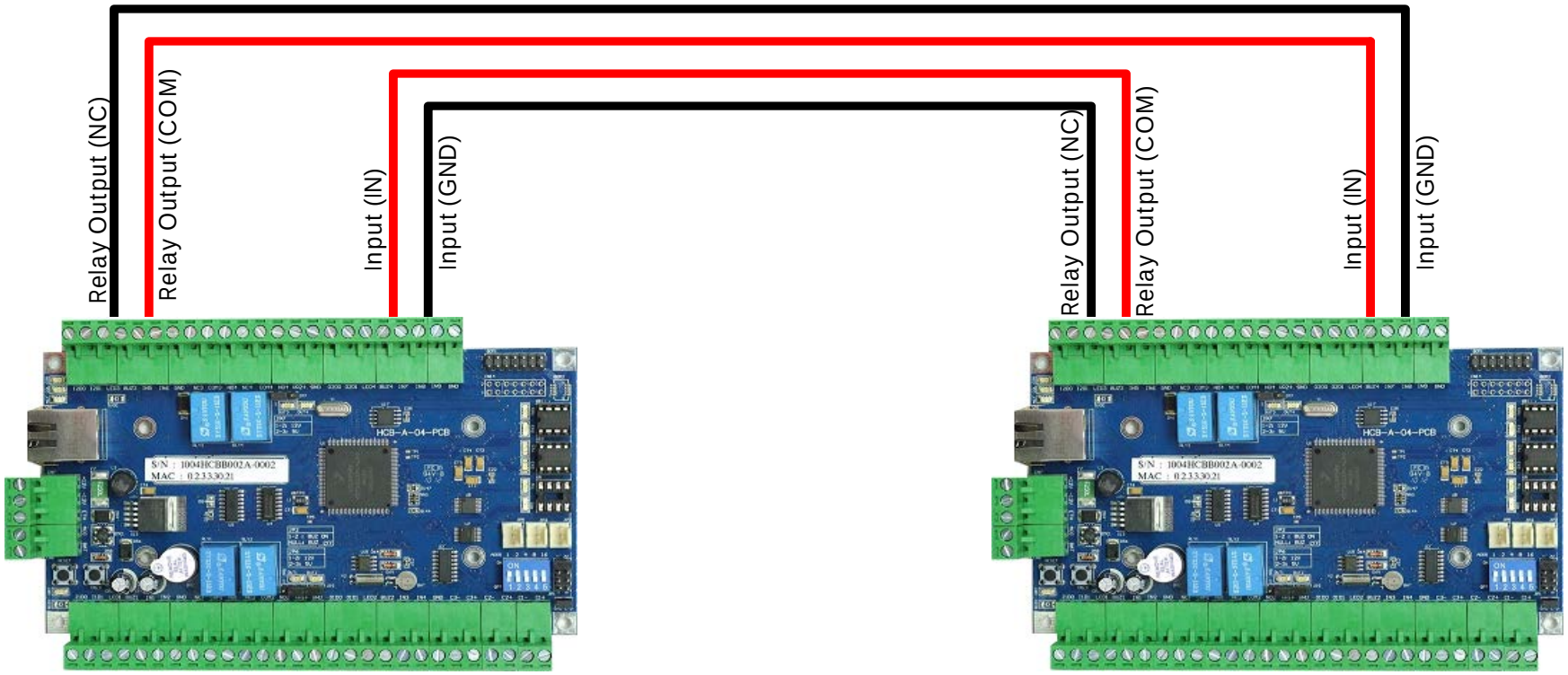
Each of the Suprema device require power of 12VDC, 500mA ~ 1A depend on the model

Connecting the Reader – Entrypass BR100 Devices



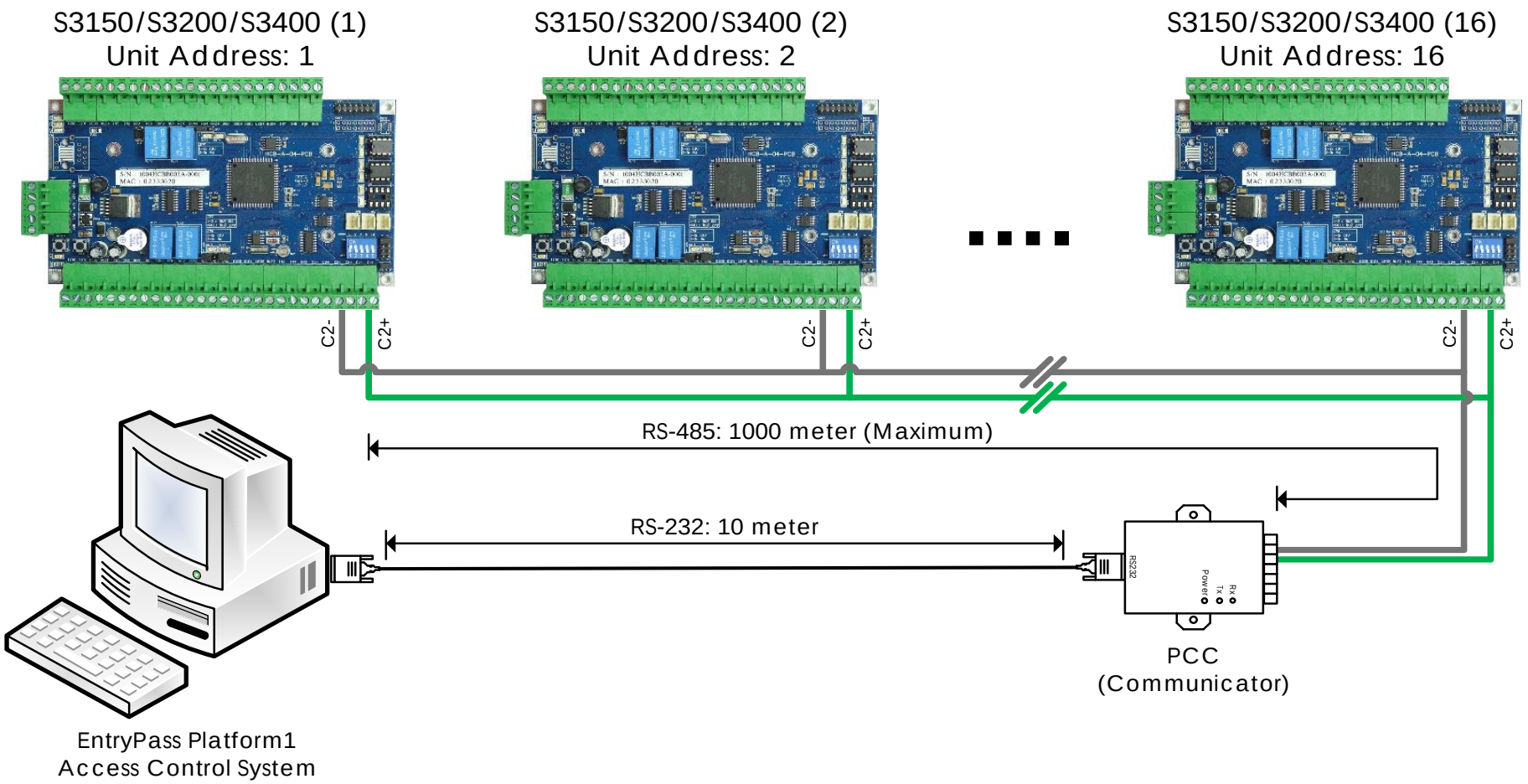
Each of the BR100 device require 12VDC, 1A power supply

Connecting to Another Controller for Cross-Board Interlock



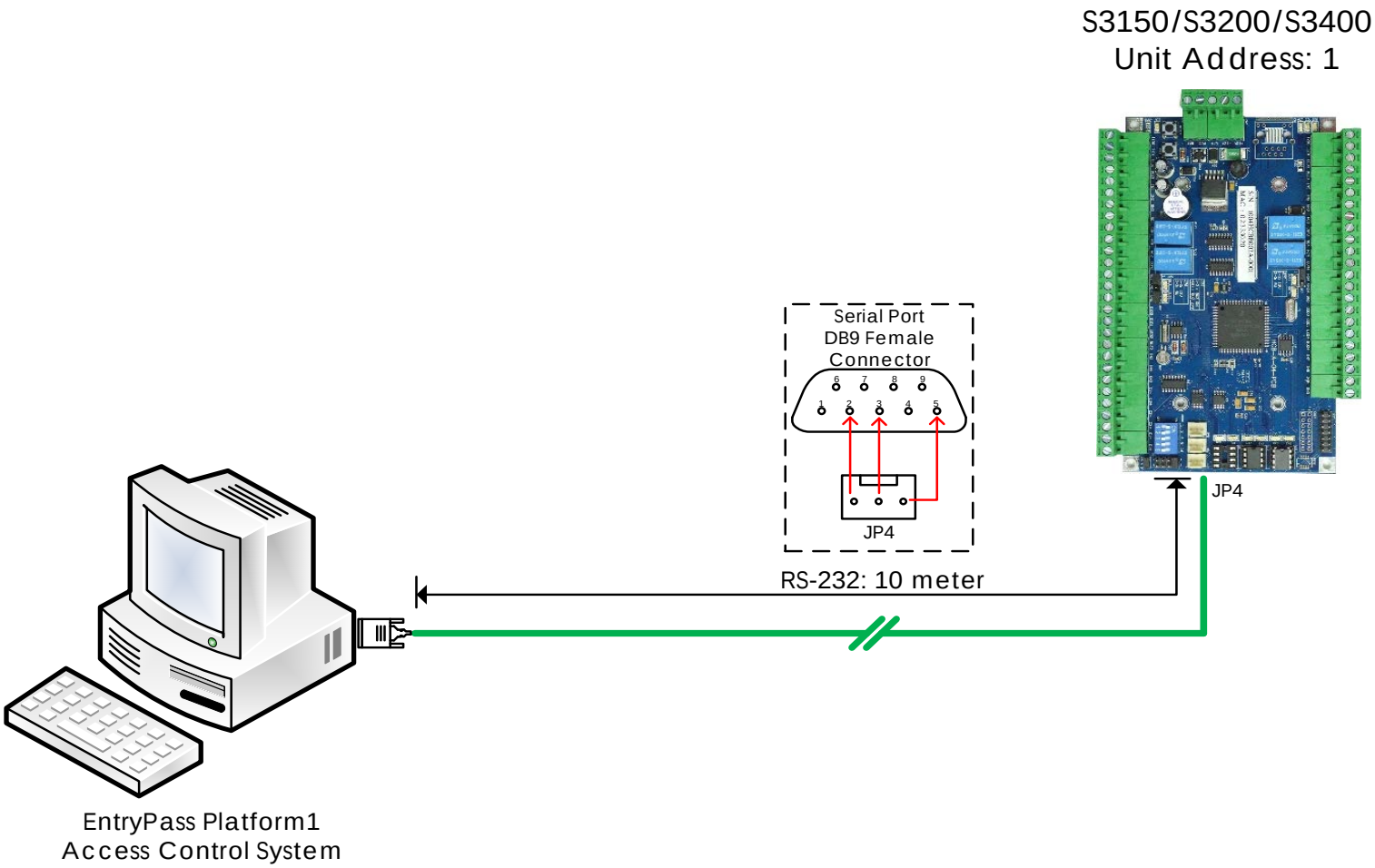
Maximum 2 controllers can be connected each others for cross-board interlock purpose
An interlock input and interlock relay need to be assigned using Platform1 Server for cross-board interlock on each controller
Please configure the interlock input as 'Open Trigger' in Platform1 Server, if interlock input is connected with NC relay output. Advisable to use analog input for detecting line open condition
The cabling distance for cross-board interlock connection can up to 100 meter

Connecting to the PC via RS485 Mode



Serial connection (RS485) only applicable for maximum 16 sets S3150/S3200/S3400
The serial address format in Platform1 is 255.255.255.X where X is unit address

Connecting to the PC via RS232 Mode



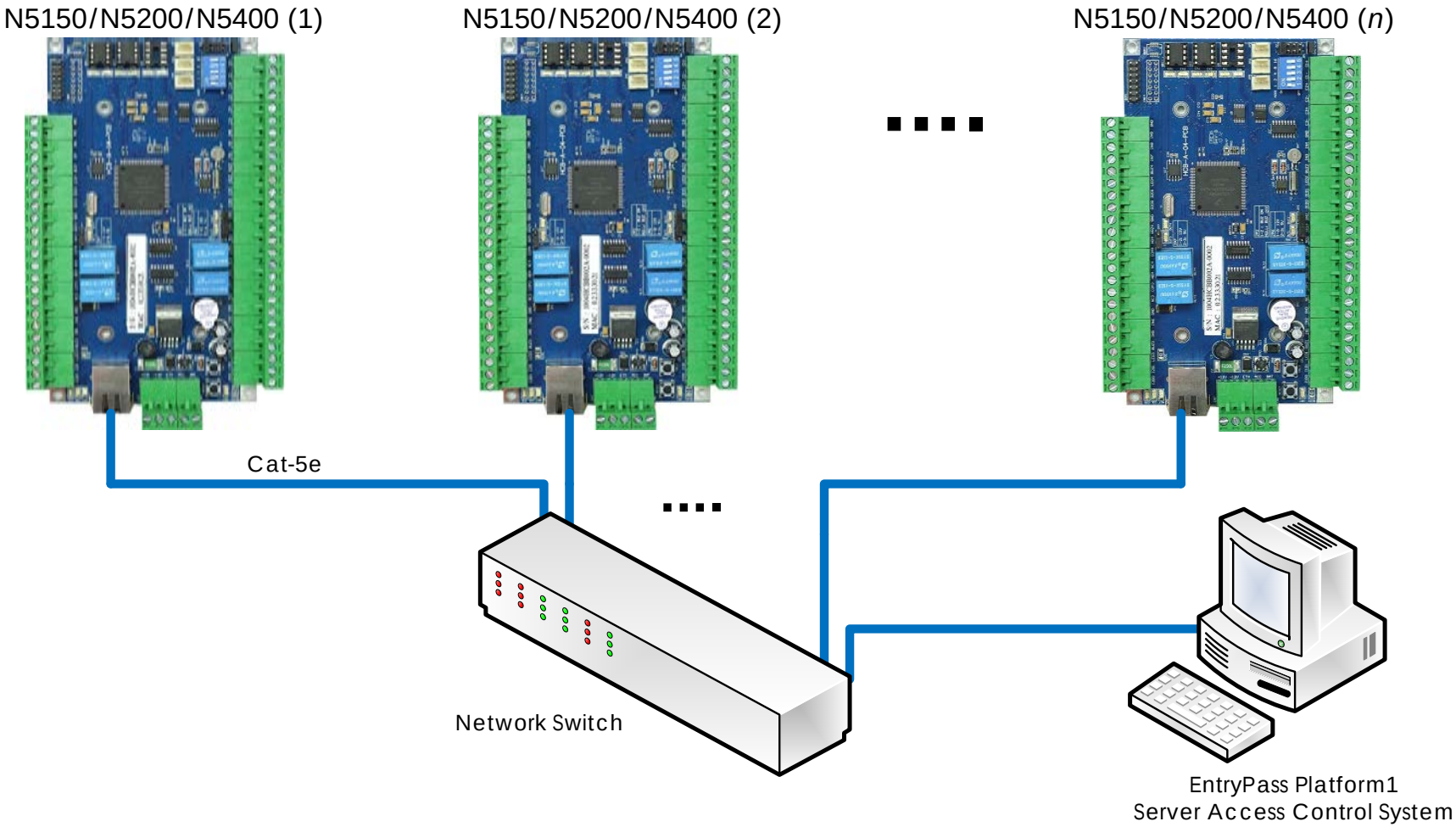
Serial connection (RS232) only applicable for a single S3150/S3200/S3400
The serial address format in Platform1 is 255.255.255.1

Connecting to the PC via Serial: Dip Switch Addressing Table

	Switch 1 (1)	Switch 2 (2)	Switch 3 (4)	Switch 4 (8)	Switch 5 (16)
Address 01	**ON**	OFF	OFF	OFF	OFF
Address 02	OFF	**ON**	OFF	OFF	OFF
Address 03	**ON**	**ON**	OFF	OFF	OFF
Address 04	OFF	OFF	**ON**	OFF	OFF
Address 05	**ON**	OFF	**ON**	OFF	OFF
Address 06	OFF	**ON**	**ON**	OFF	OFF
Address 07	**ON**	**ON**	**ON**	OFF	OFF
Address 08	OFF	OFF	OFF	**ON**	OFF
Address 09	**ON**	OFF	OFF	**ON**	OFF
Address 10	OFF	**ON**	OFF	**ON**	OFF
Address 11	**ON**	**ON**	OFF	**ON**	OFF
Address 12	OFF	OFF	**ON**	**ON**	OFF
Address 13	**ON**	OFF	**ON**	**ON**	OFF
Address 14	OFF	**ON**	**ON**	**ON**	OFF
Address 15	**ON**	**ON**	**ON**	**ON**	OFF
Address 16	OFF	OFF	OFF	OFF	**ON**

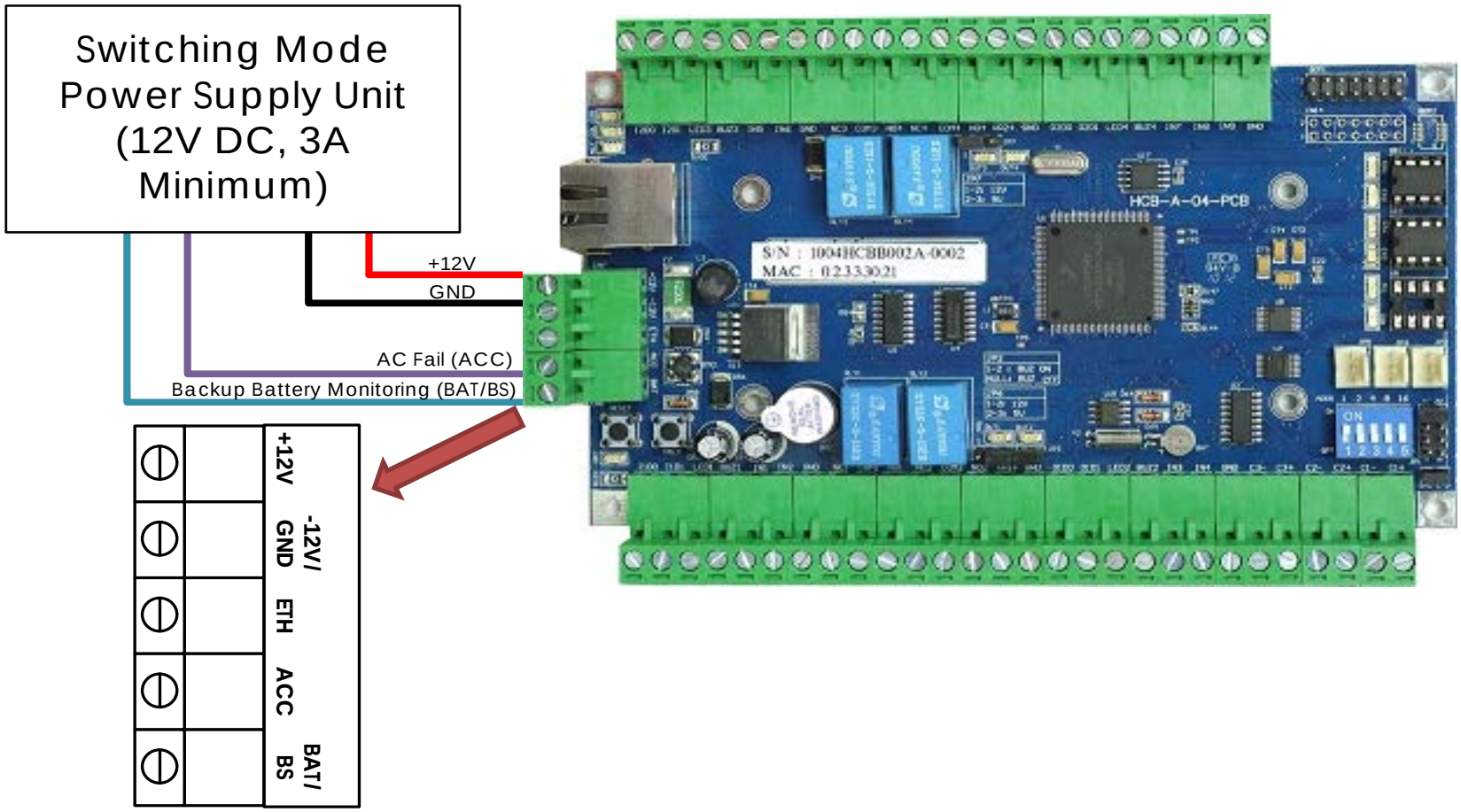
Each switch is represent by an address, the sum of the switch address will be the controller address
The number in ( ) is the address of each individual switch of the dip switch
Example: To obtain Address 11, 1 + 2 + 8 = 11, So just switch on switch 1, 2, 4

Connecting to the PC via Network

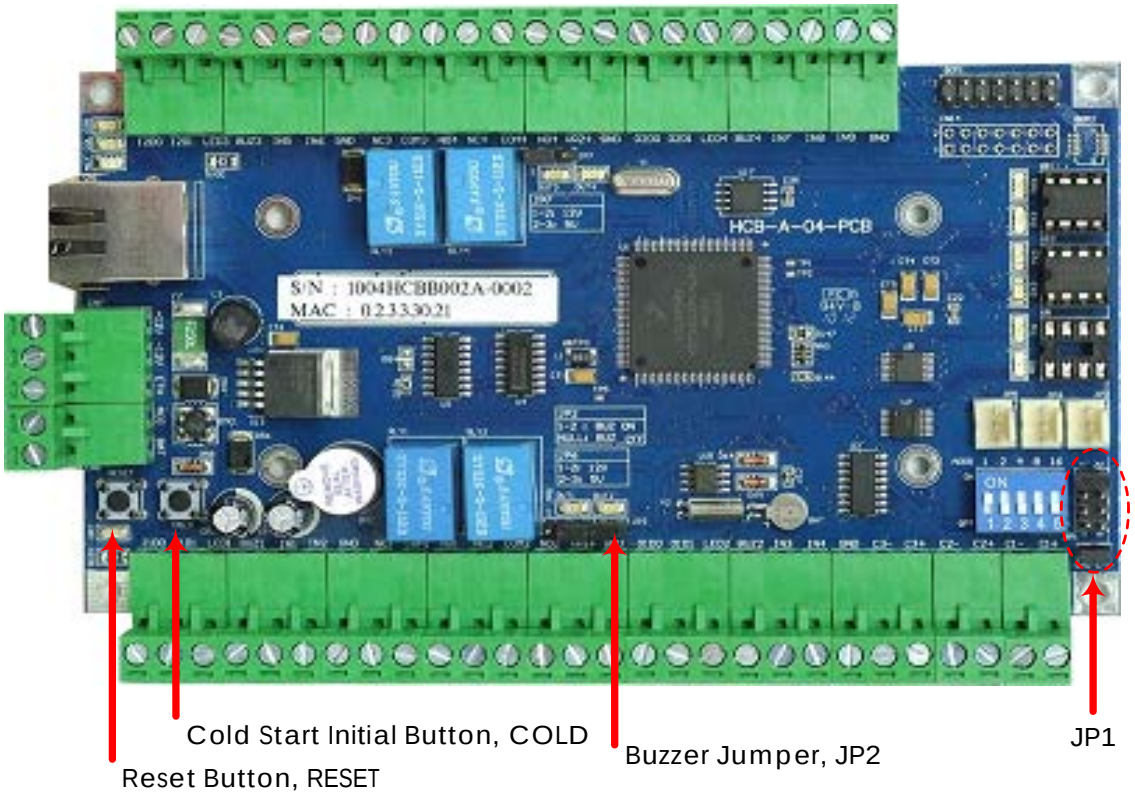


Network connection only applicable for N5150, N5200 and N5400
Factory default IP address for network controller is 192.168.1.100

Connecting to Power Supply Unit



Performing Cold Start

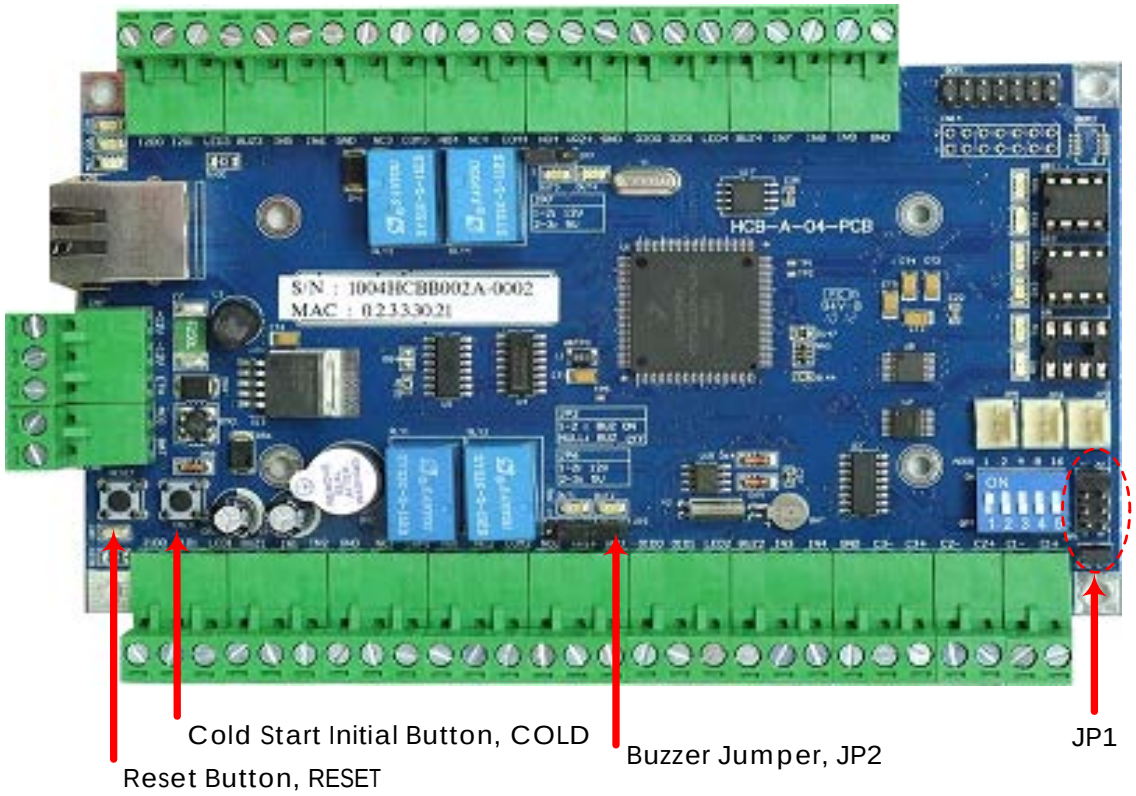


Steps of performing cold start:

1. Please ensure that the jumper is inserted on JP1 1-2
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a long beeping sound heard

Advisable to perform cold start for the first time you turn on the power
The buzzer will only beep if jumper is placed on (JP2) 1-2

Performing Factory Default

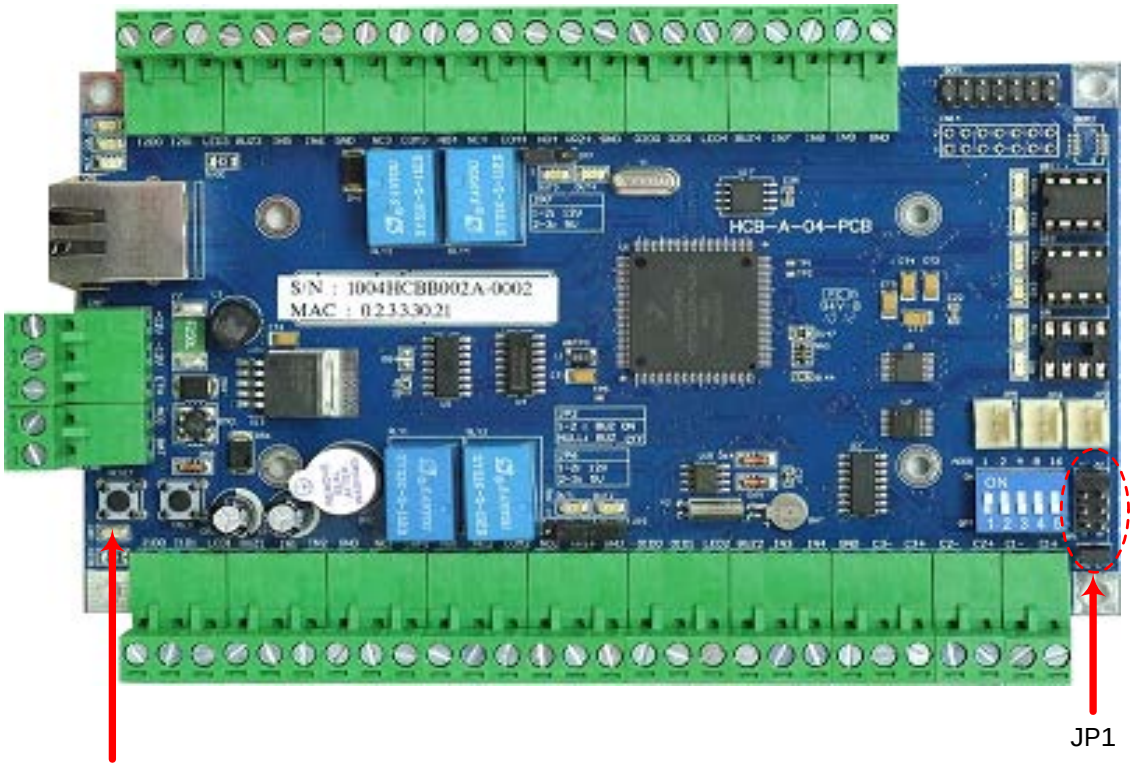


Steps of performing Factory Default:

1. Please ensure that the jumper is inserted on JP1 7-8
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a long beeping sound heard

Factory Default will change the IP Address back to 192.168.1.100, Server IP to 192.168.1.254 and Port to 2020
For the network controller support AES Encryption feature, factory default will disable the AES feature

Performing AES Hard Reset

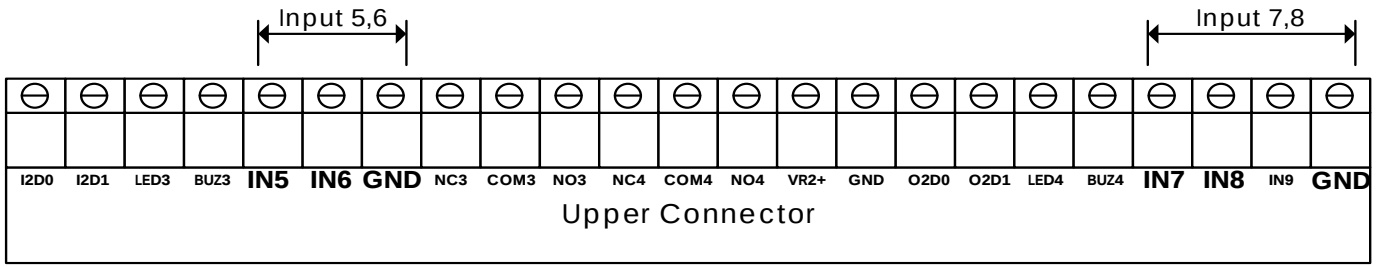


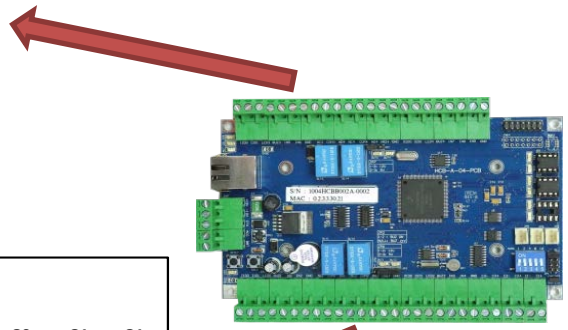
Steps of performing AES Hard Reset:

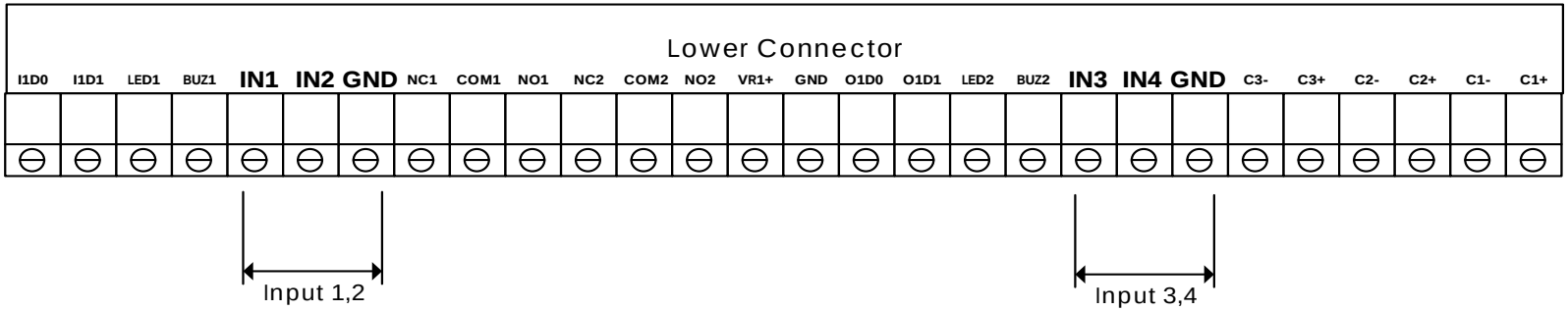
1. Please ensure that the jumper is inserted on JP1 3-4
2. Press RESET Switch and Release RESET switch

AES setting in the controller will be reset
If the controller is connected with AES enabled Platfrom1, Platfrom1 will sync and update AES setting with the controller

Input Point Connection

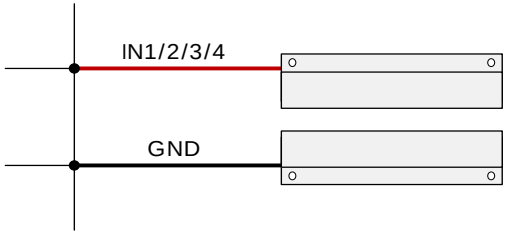






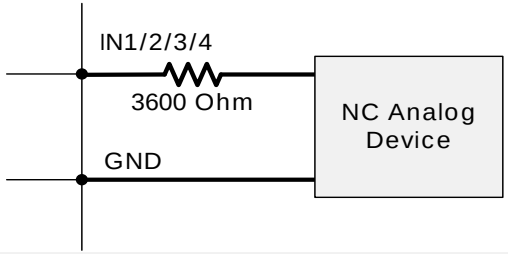
Digital Input Connection

By manufacturer default setting, IN1 is configured as Door Sensor and IN2 is configures as Push Button.



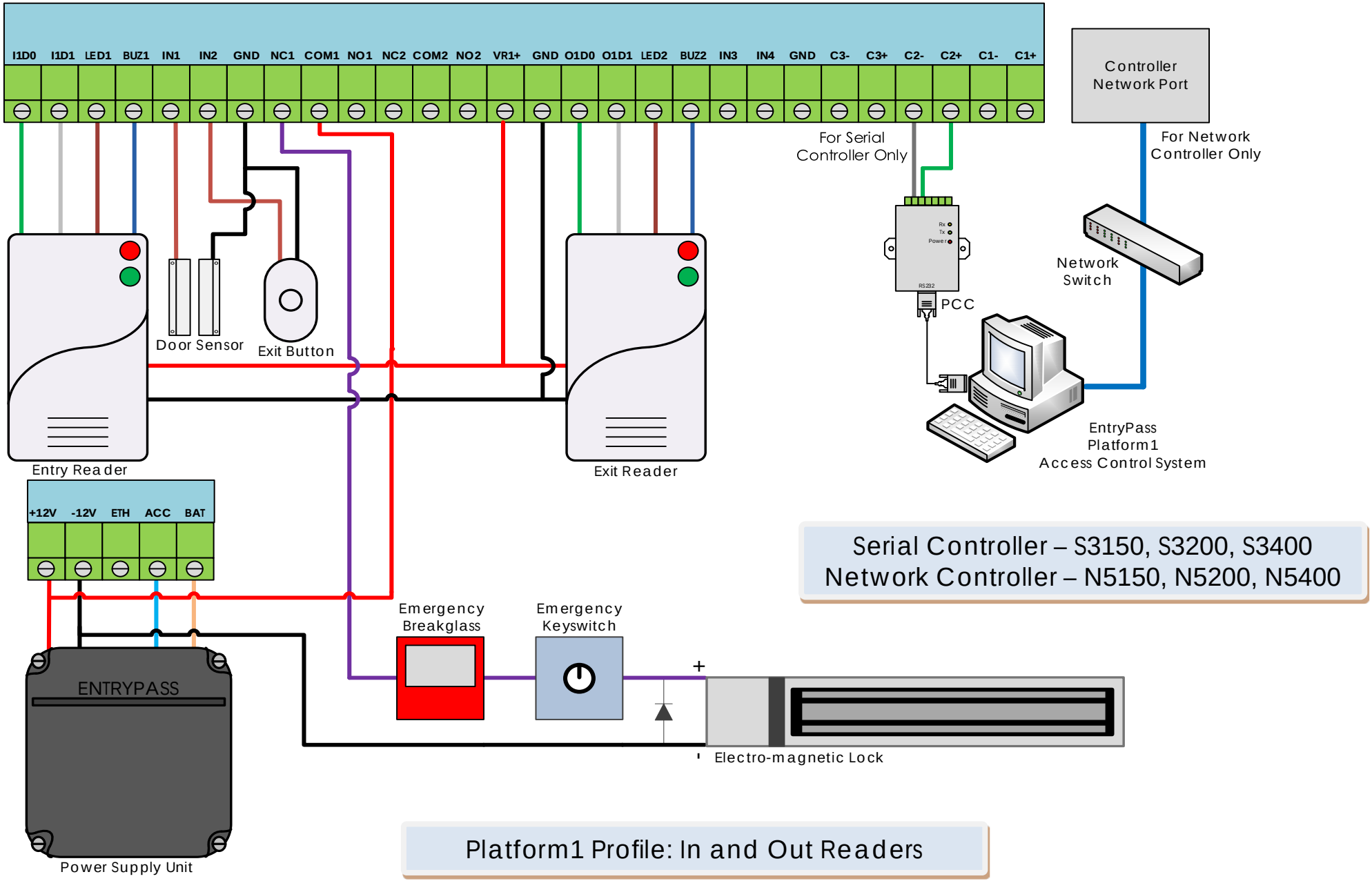
Analog/Supervised Input Connection

A resistor of 3.6kΩ is required when user connect the device to the input connection.



The Inputs are configurable to digital (default) or analog using Platform1
A resistor of 3600 ohm is required when using analog input
This system is not support NO Analog device due to the architecture

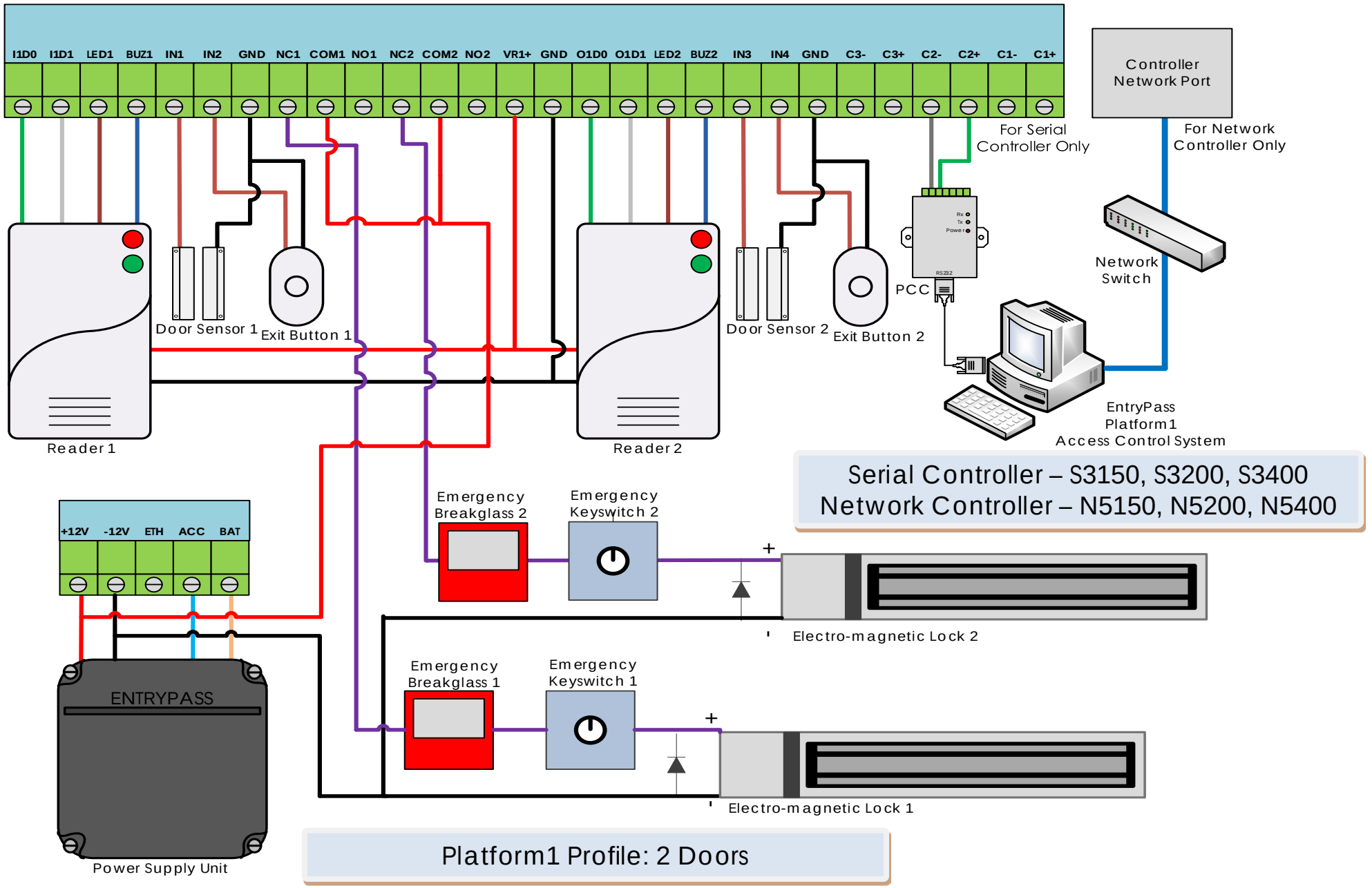
Complete Overview (In and Out Door Mode)



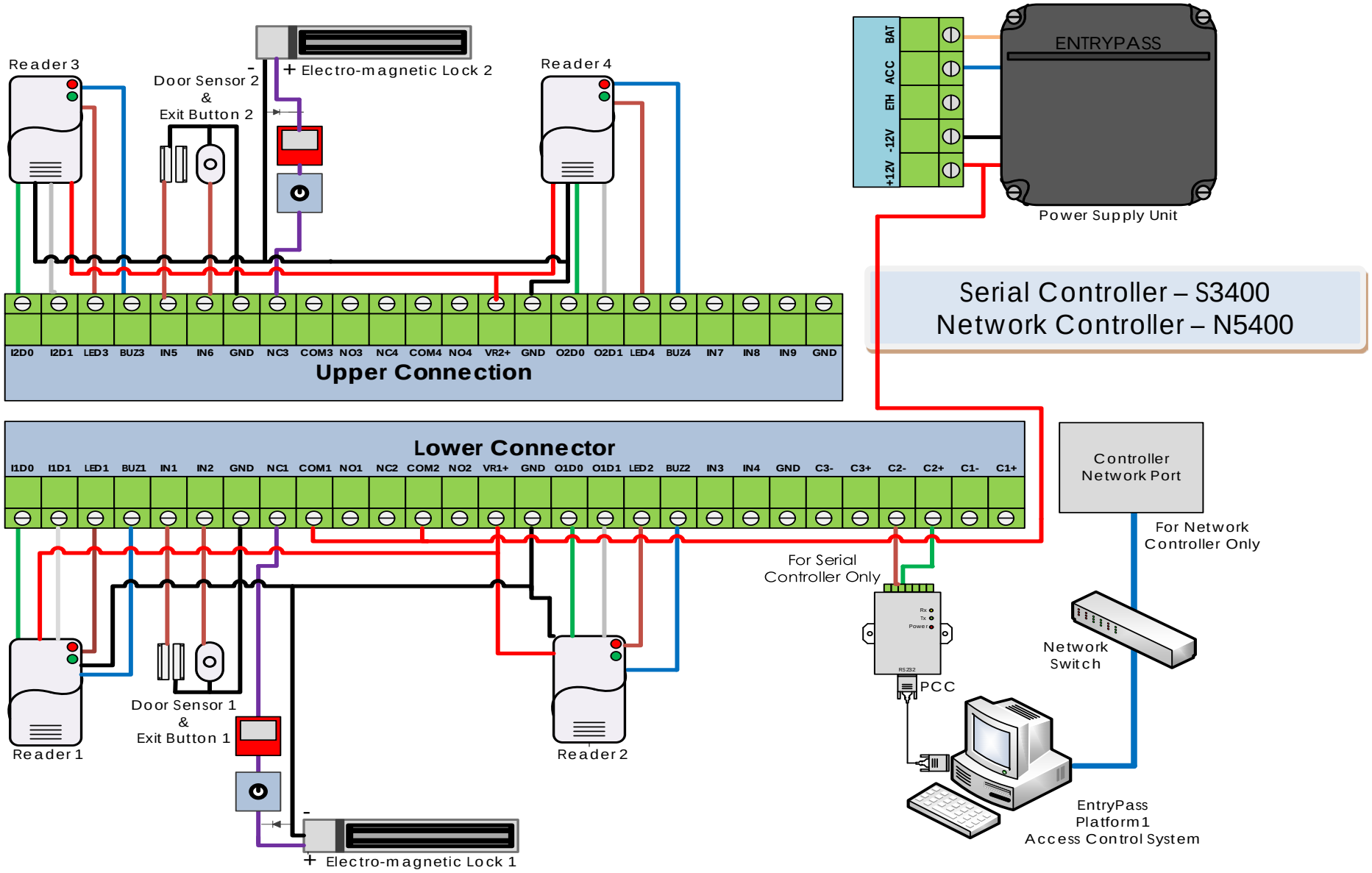
Serial Controller – S3150, S3200, S3400
Network Controller – N5150, N5200, N5400

Platform1 Profile: In and Out Readers

Complete Overview (2 Doors Mode)

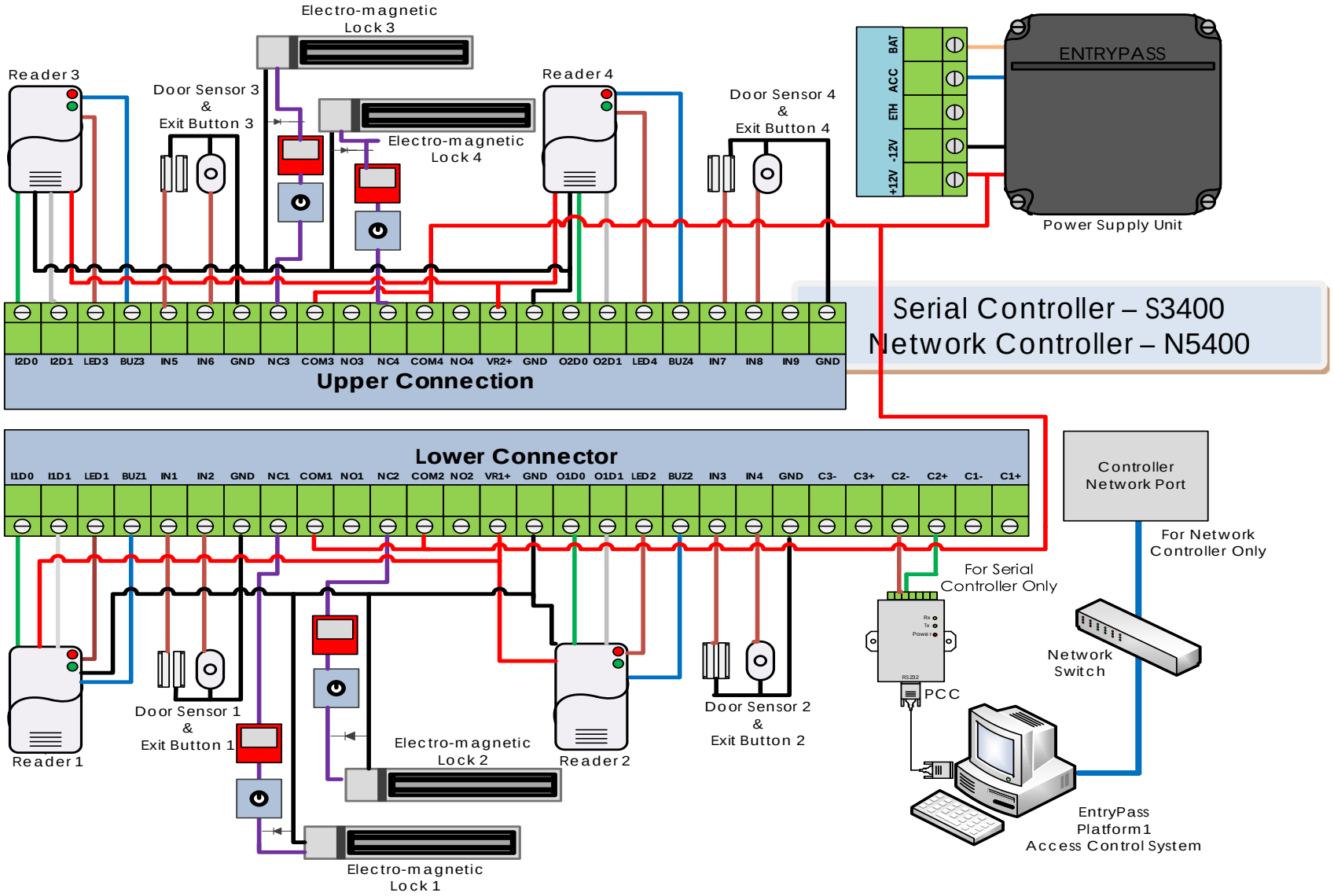


Complete Overview (2 x In and Out Doors Mode)



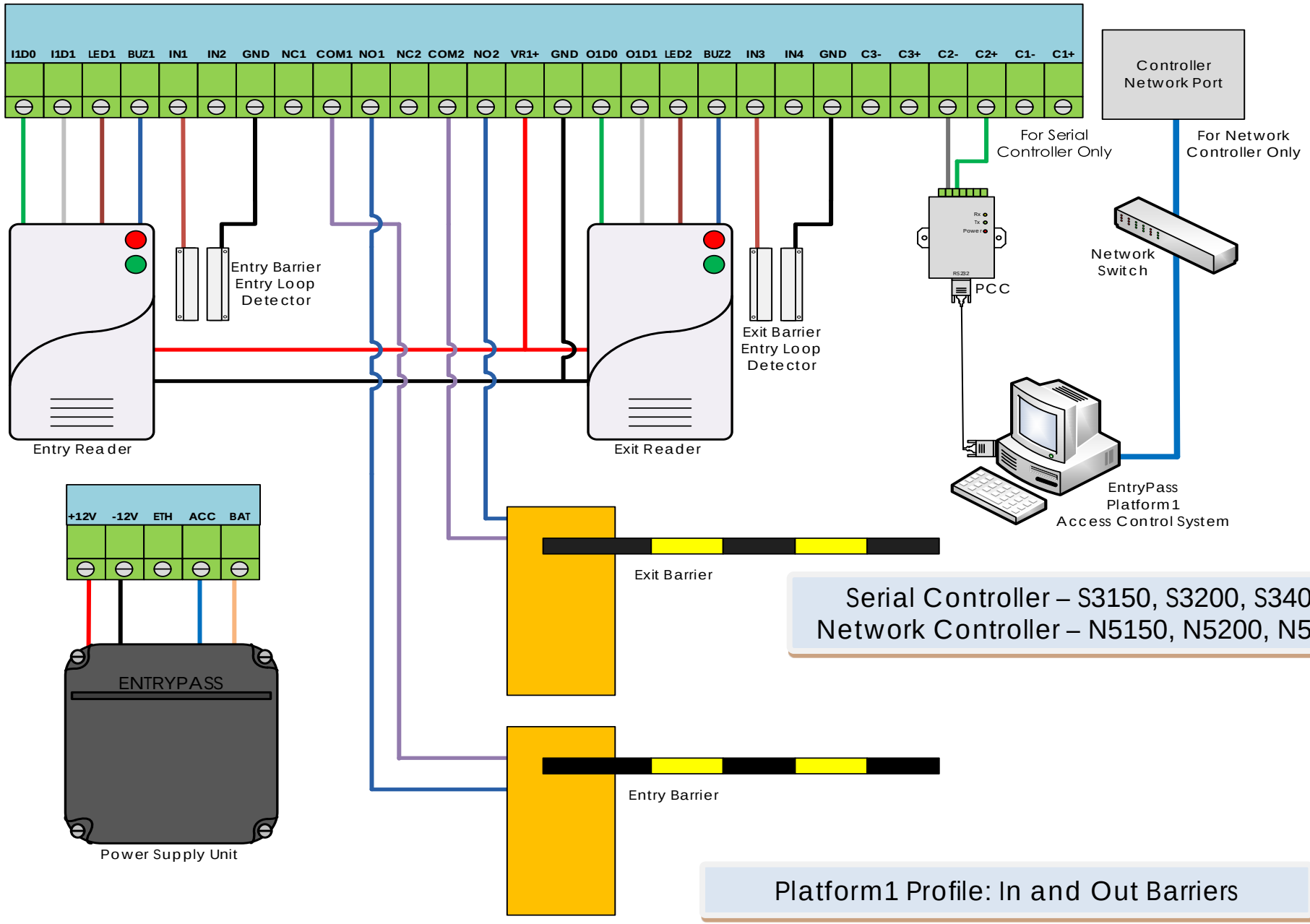
Platform1 Profile: 2 x In and Out Doors

Complete Overview (4 Doors Mode)

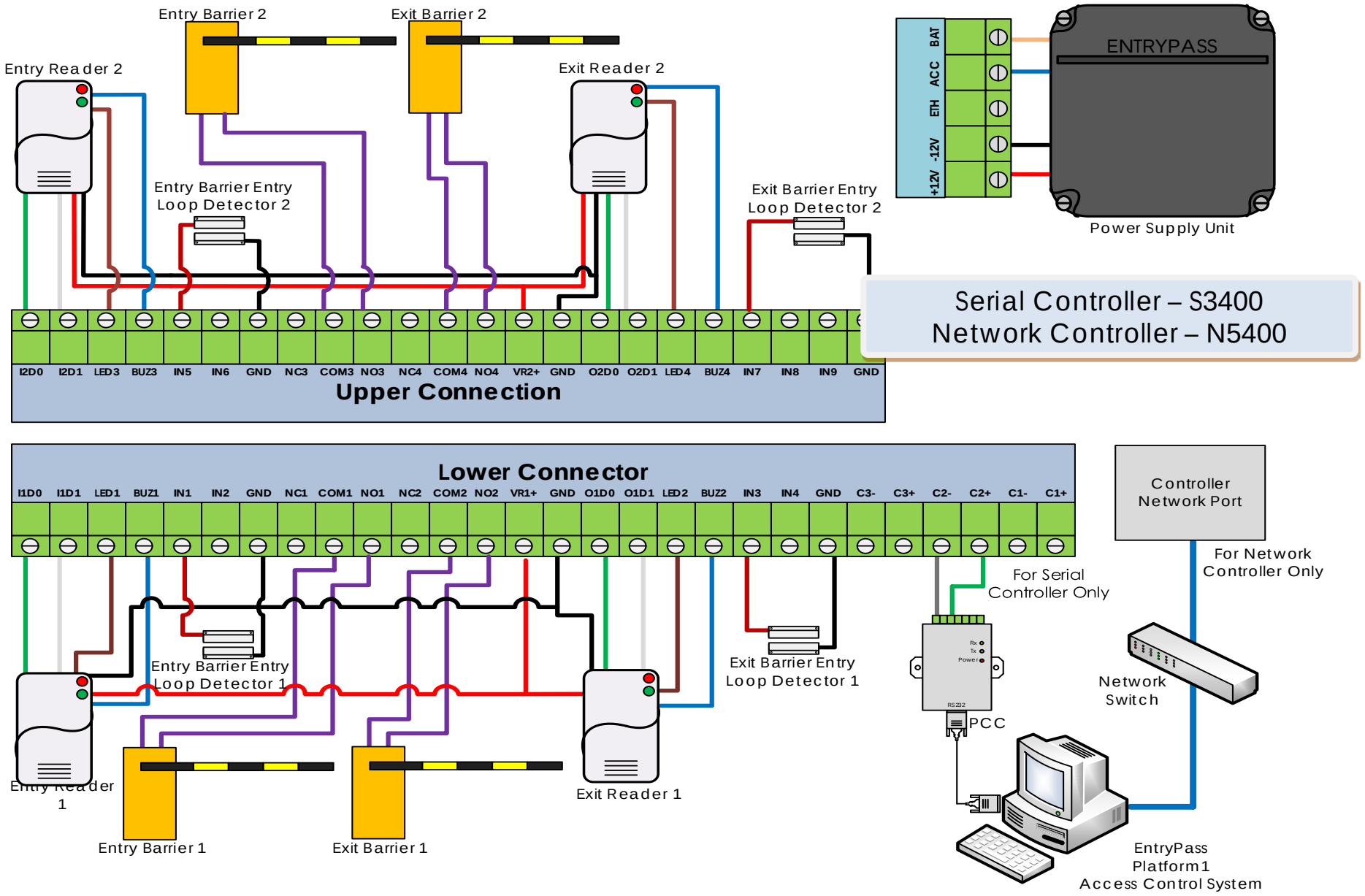


Platform1 Profile: 4 Doors

Complete Overview (In and Out Barriers)

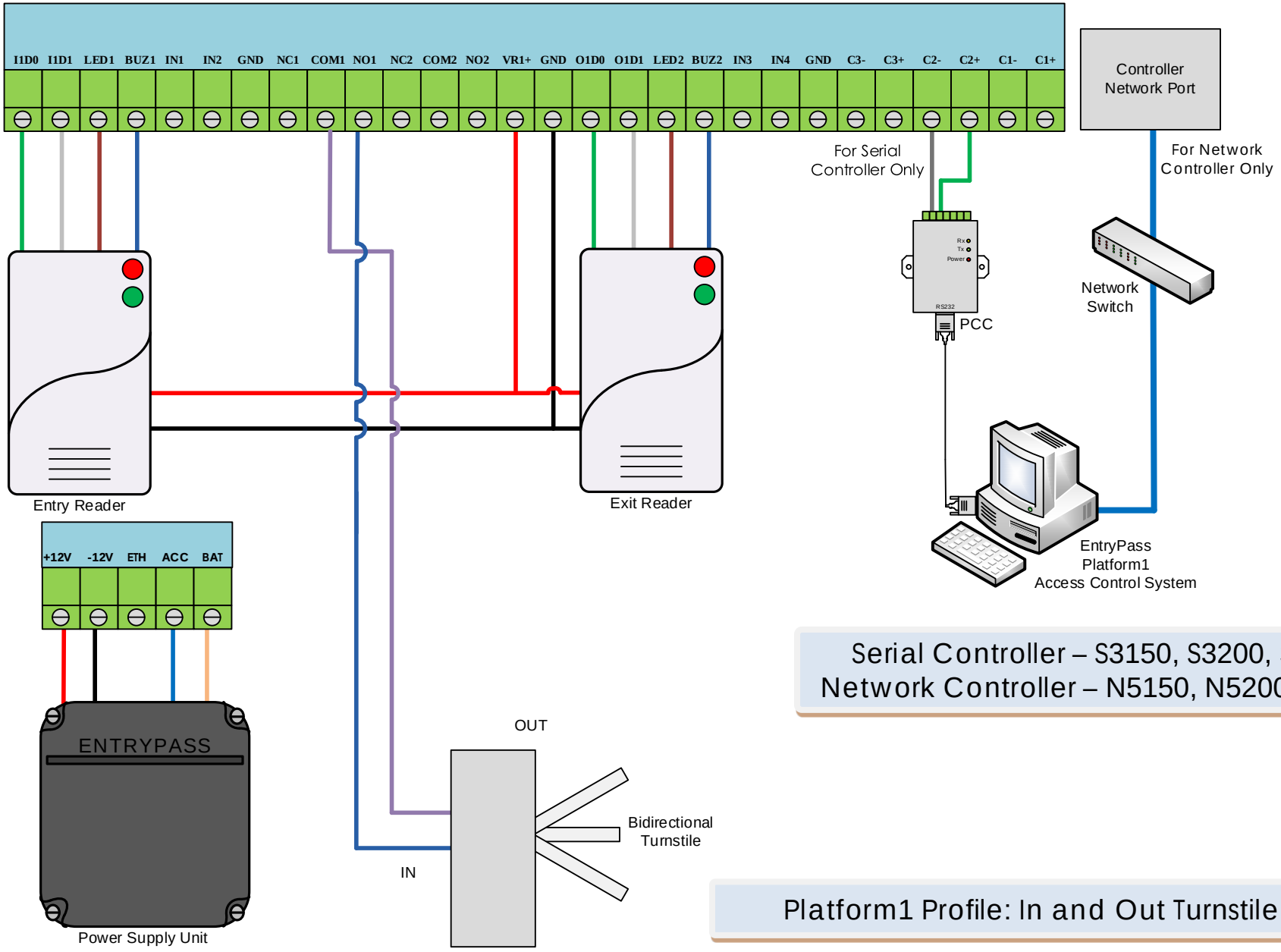


Complete Overview (2 x In and Out Barriers)



Platform1 Profile: 2 x In and Out Barriers

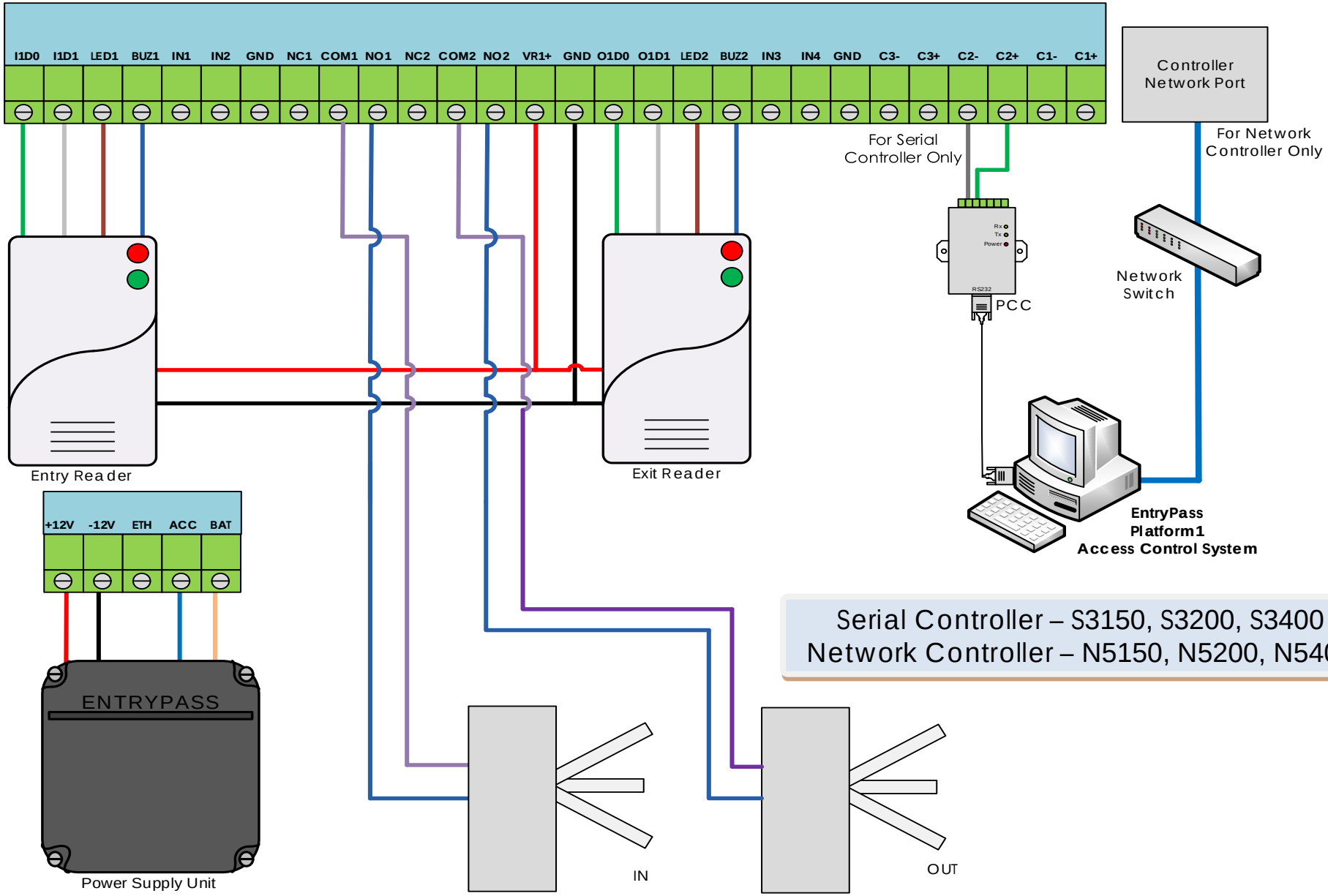
Complete Overview (In and Out Turnstile Mode)



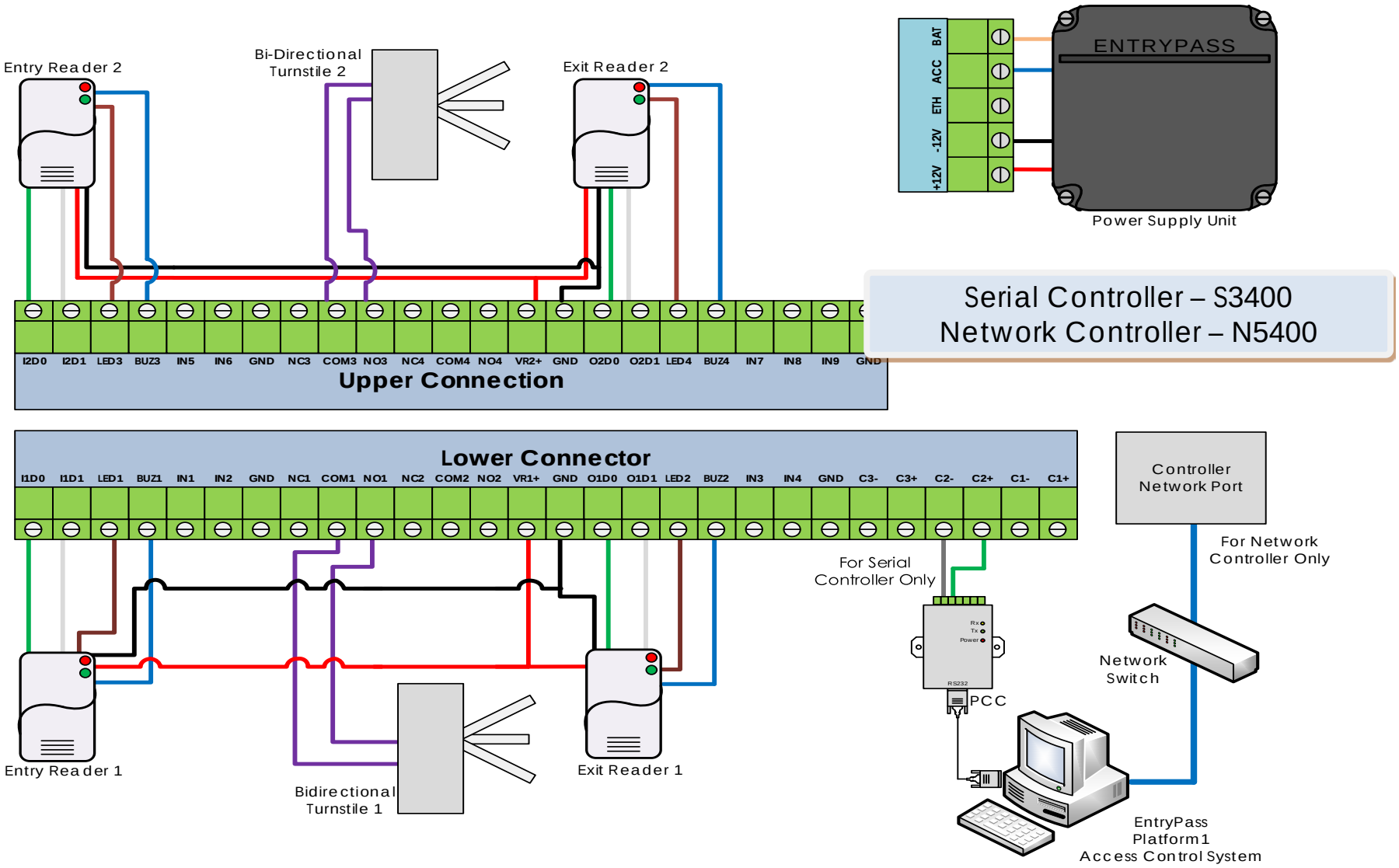
Serial Controller – S3150, S3200, S3400
Network Controller – N5150, N5200, N5400

Platform1 Profile: In and Out Turnstile

Complete Overview (2 Turnstiles Mode)

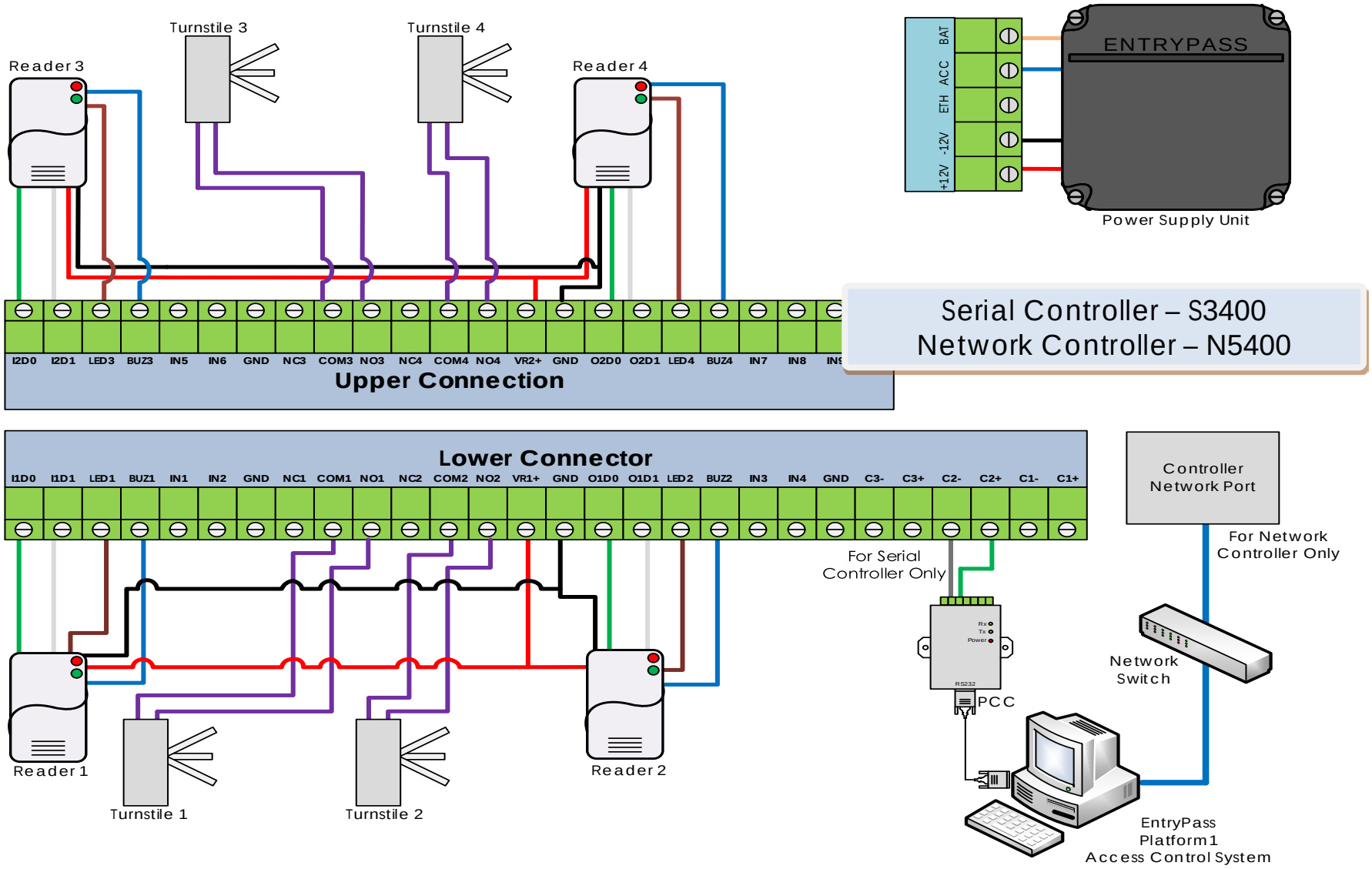


Complete Overview (2 x In and Out Turnstiles Mode)



Platform1 Profile: 2 x In and Out Turnstiles

Complete Overview (4 Turnstiles Mode)



Cabling Information

Communication	Data Signal	Max Distance	Description
PC to PCC	RS232	10m (30 ft)	22 AWG, 2 Pairs, Shielded
PCC to Serial Controller	RS485	1000m (3000 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
Network Controller or Reader to PC or Network Switch	Network	100m (300 ft)	24 AWG, 4 Pairs (Cat 5e)
Controller to Reader	Wiegand	30m (100 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
Controller to Electro-Magnetic Lock	Power	30m (100 ft)	18 AWG, 1 Pair
Controller to Push Button	Contact	30m (100 ft)	22 AWG, 1 Pair
Controller to Door Sensor	Contact	30m (100 ft)	22 AWG, 1 Pair
Controller to Controller for Cross-Board Interlock	Contact	100m (300 ft)	22 AWG, 1 Pair

Serial Controller – S3150, S3200, S3400
Network Controller – N5150, N5200, N5400